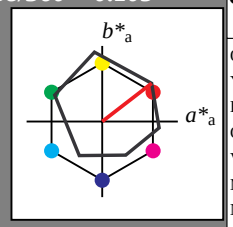
Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

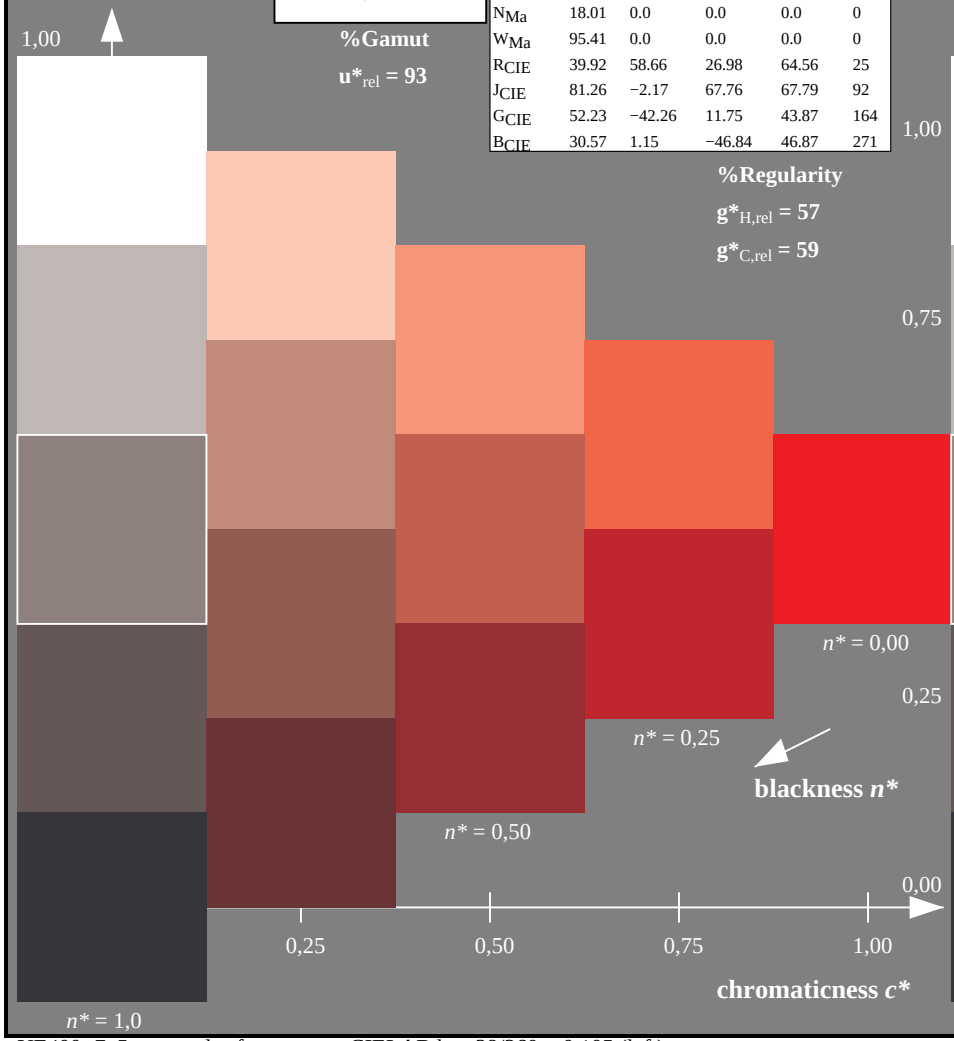
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

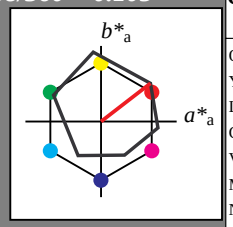
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

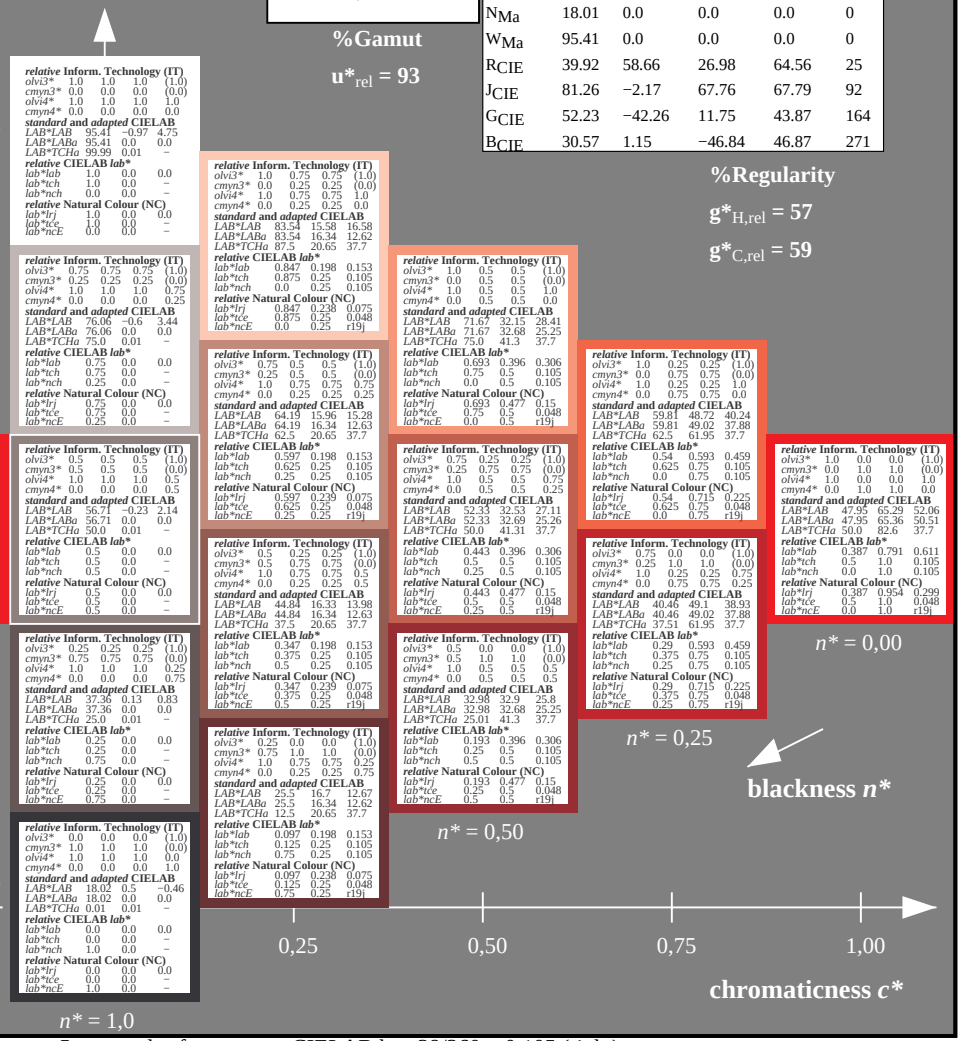
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



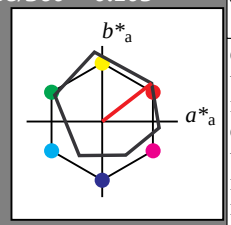
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

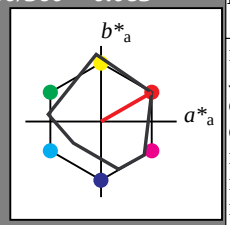
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

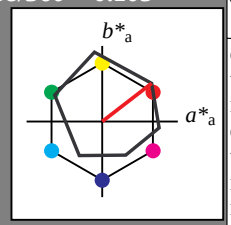
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 30/360 = 0.083 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 38/360 = 0.105*
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

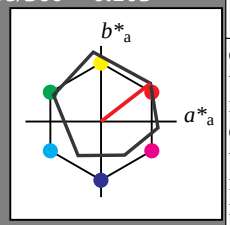
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 38/360 = 0.105*
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness *n**
0,25 0,50 0,75 1,00
chromaticness *c**

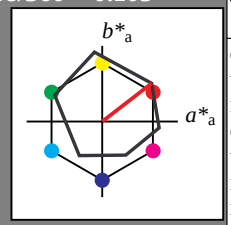
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

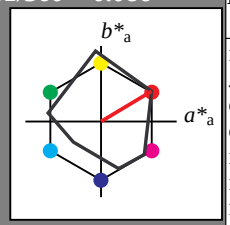
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

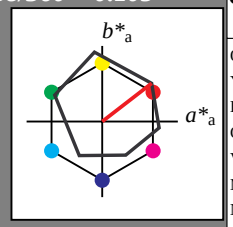
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

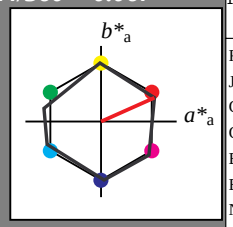
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

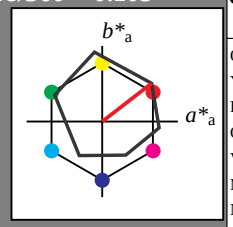
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

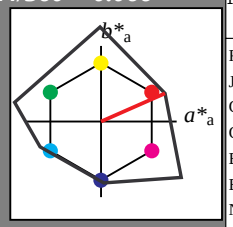
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

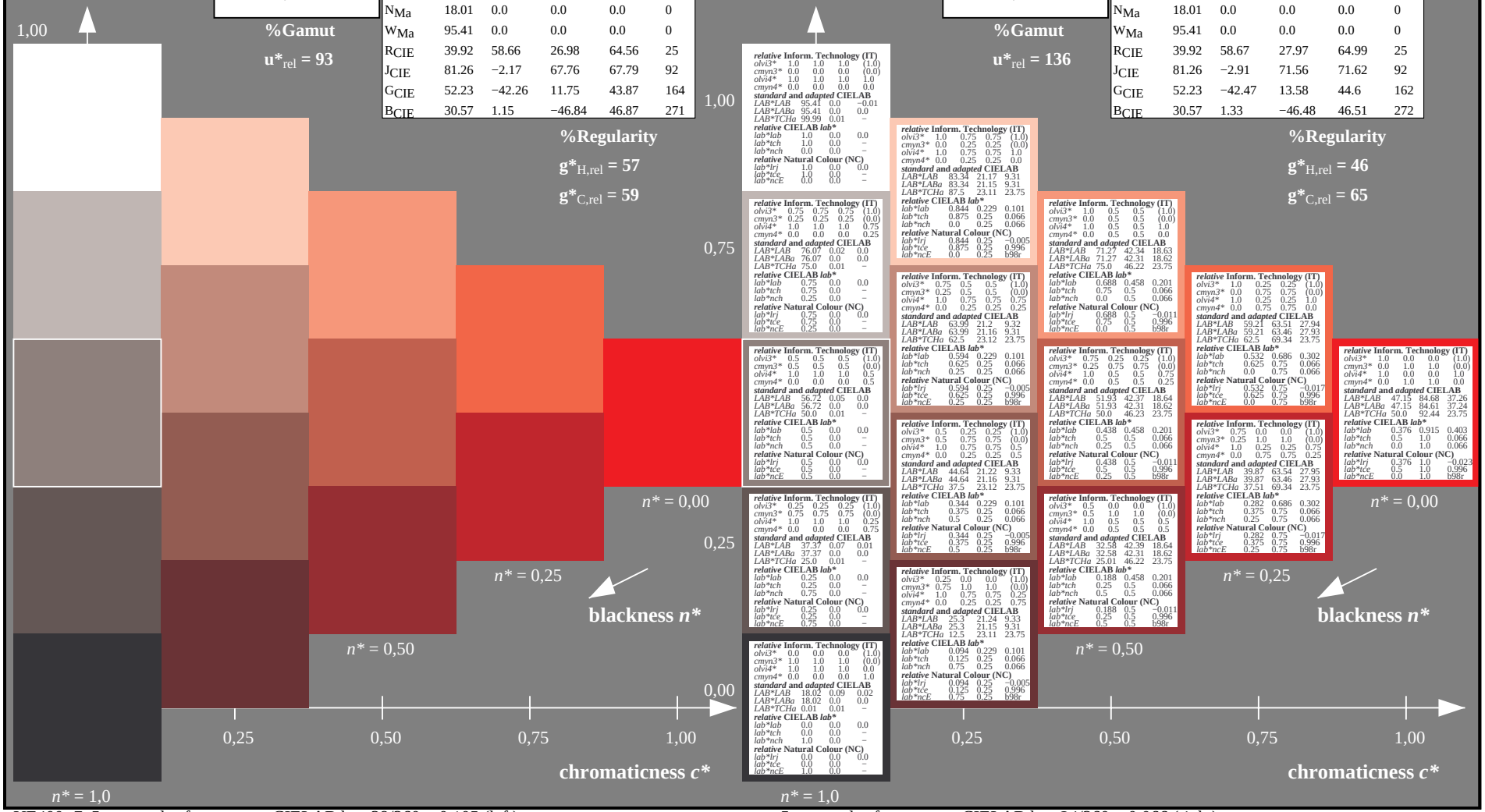
%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



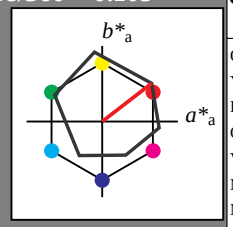
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

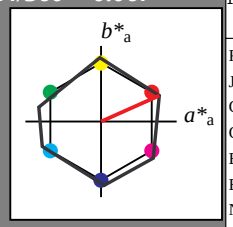
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

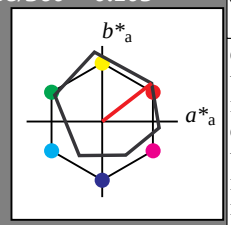
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 93

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59

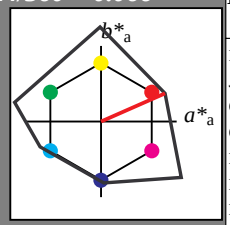
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness

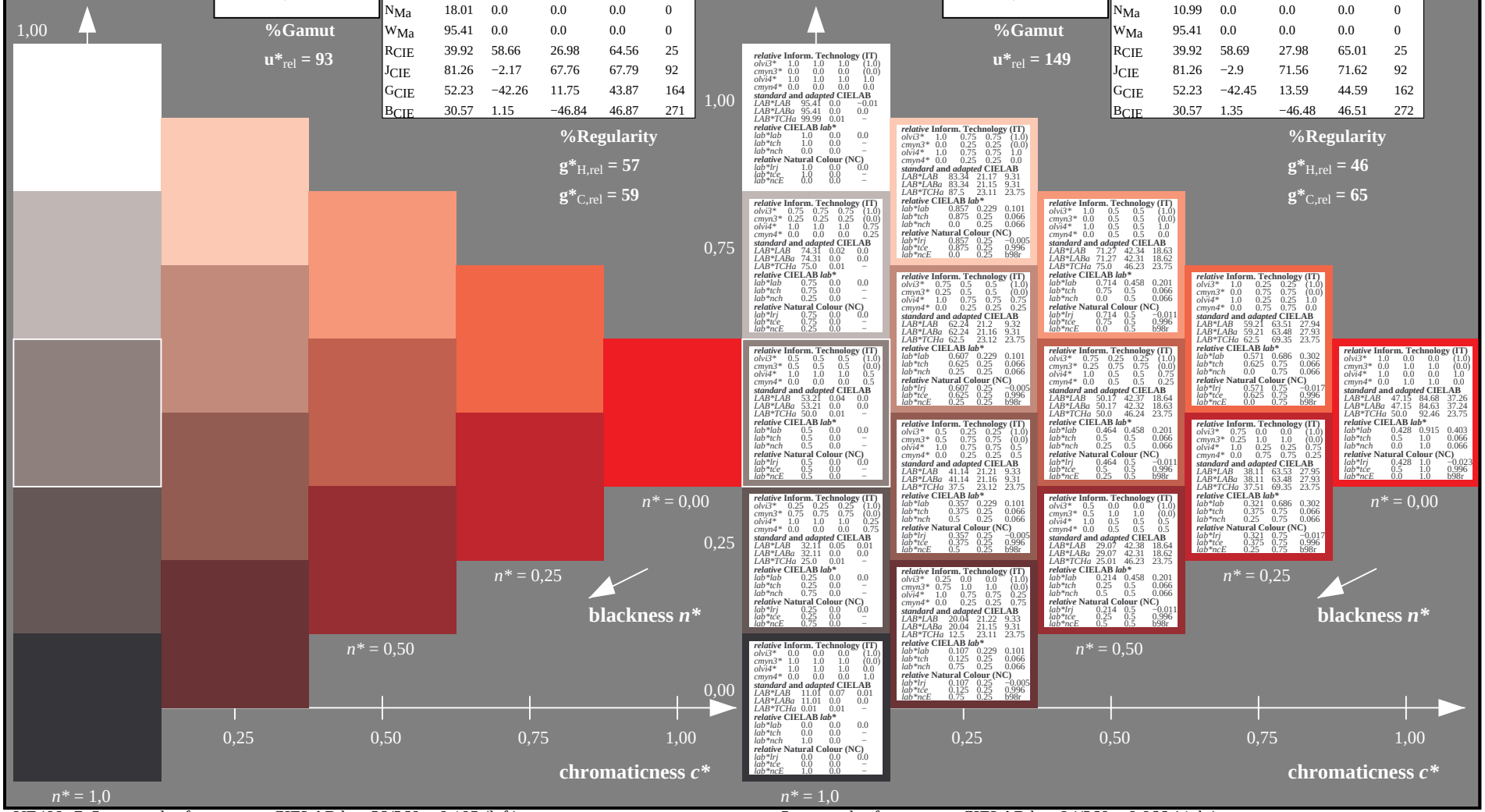


%Gamut
u^*_{rel} = 149

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



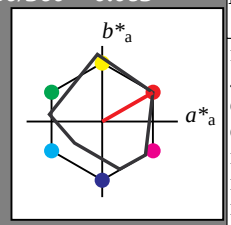
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

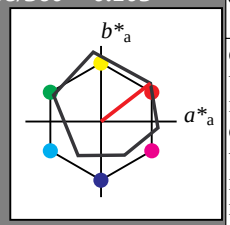
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

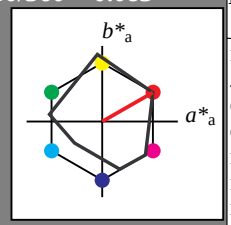
UE400−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0{,}00$

$n^* = 0{,}25$

$n^* = 0{,}50$

$n^* = 1{,}0$

blackness n^*

0,25 0,50 0,75 1,00

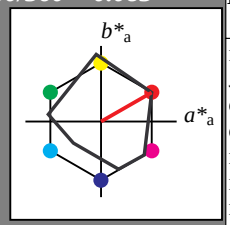
chromaticness c^*

UE400−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0{,}00$

$n^* = 0{,}25$

$n^* = 0{,}50$

$n^* = 1{,}0$

blackness n^*

0,25 0,50 0,75 1,00

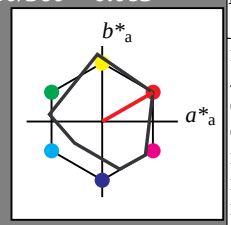
chromaticness c^*

5 step scales for constant CIELAB hue 30/360 = 0.083 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

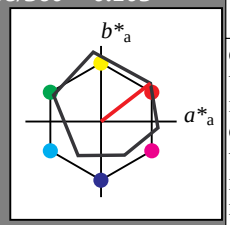
$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

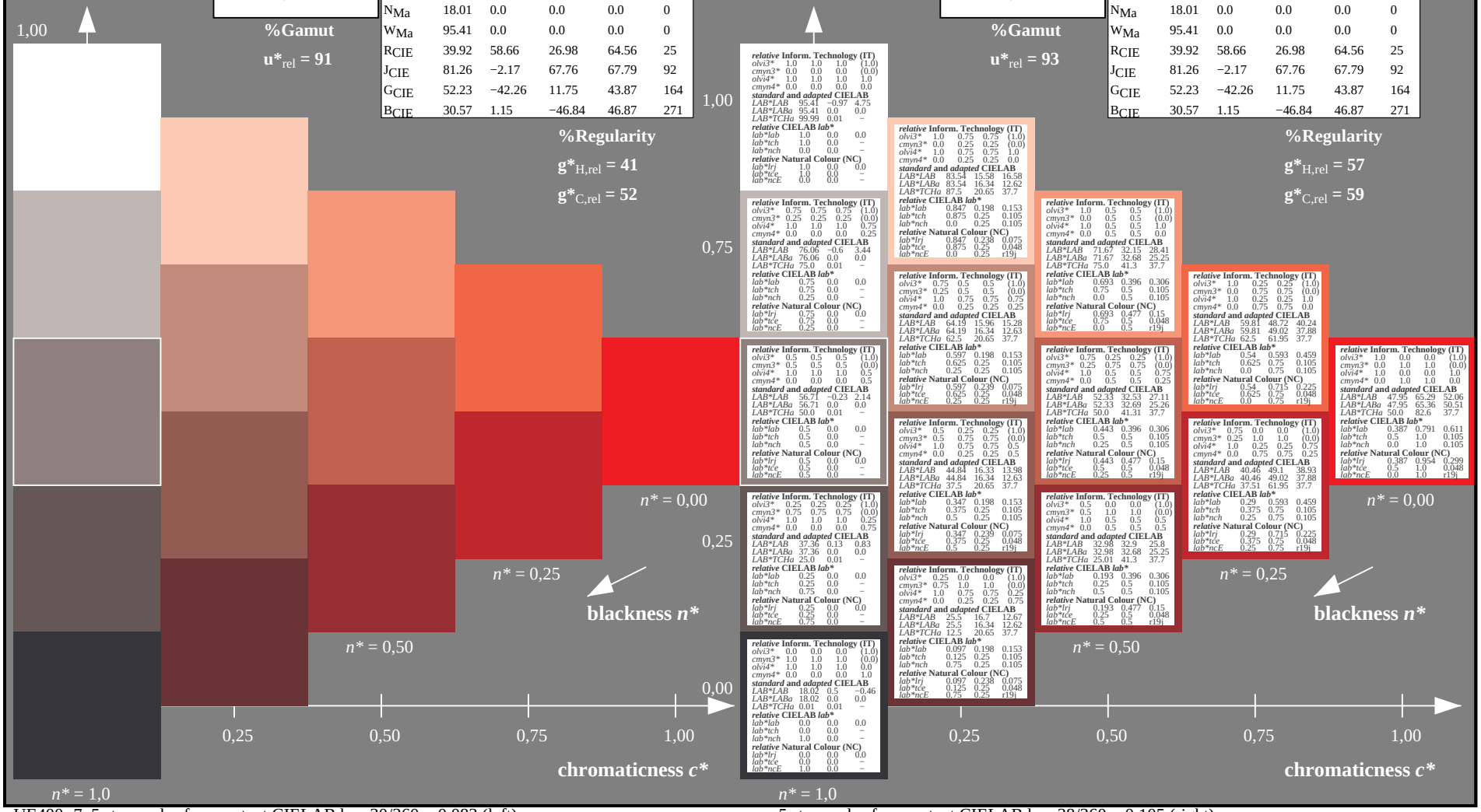
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



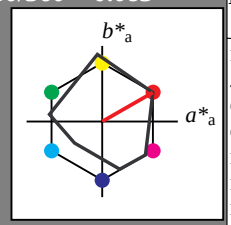
UE400−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

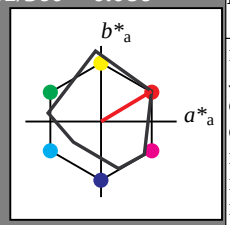
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

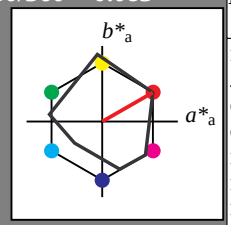
UE400−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

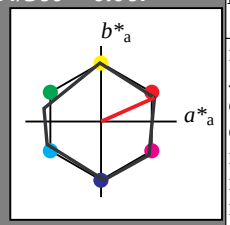
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

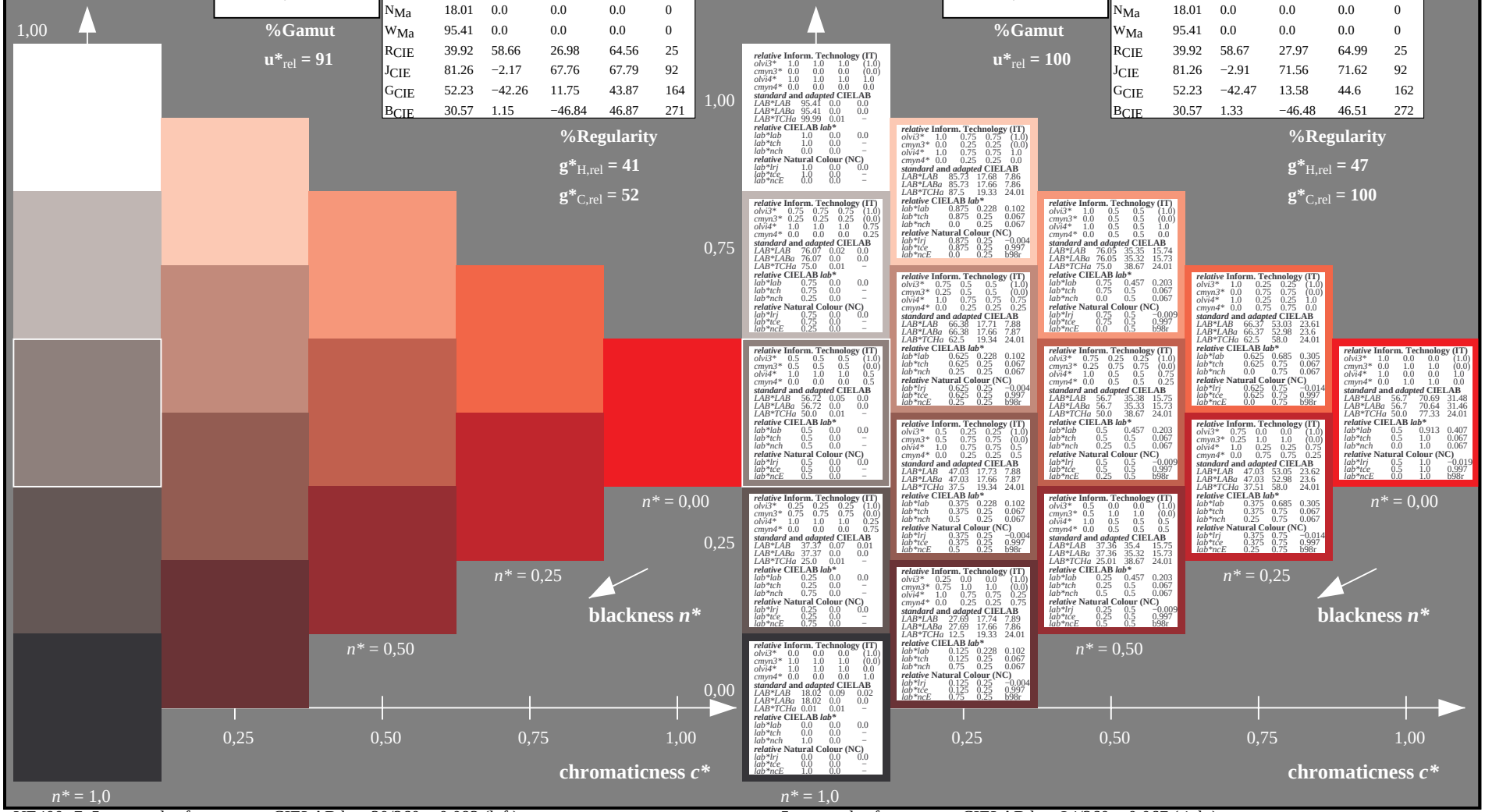
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



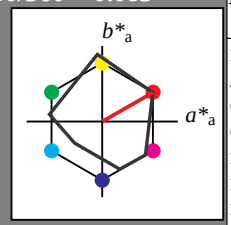
UE400−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

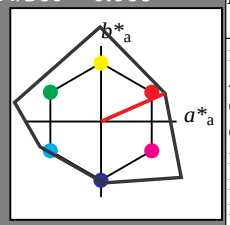
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

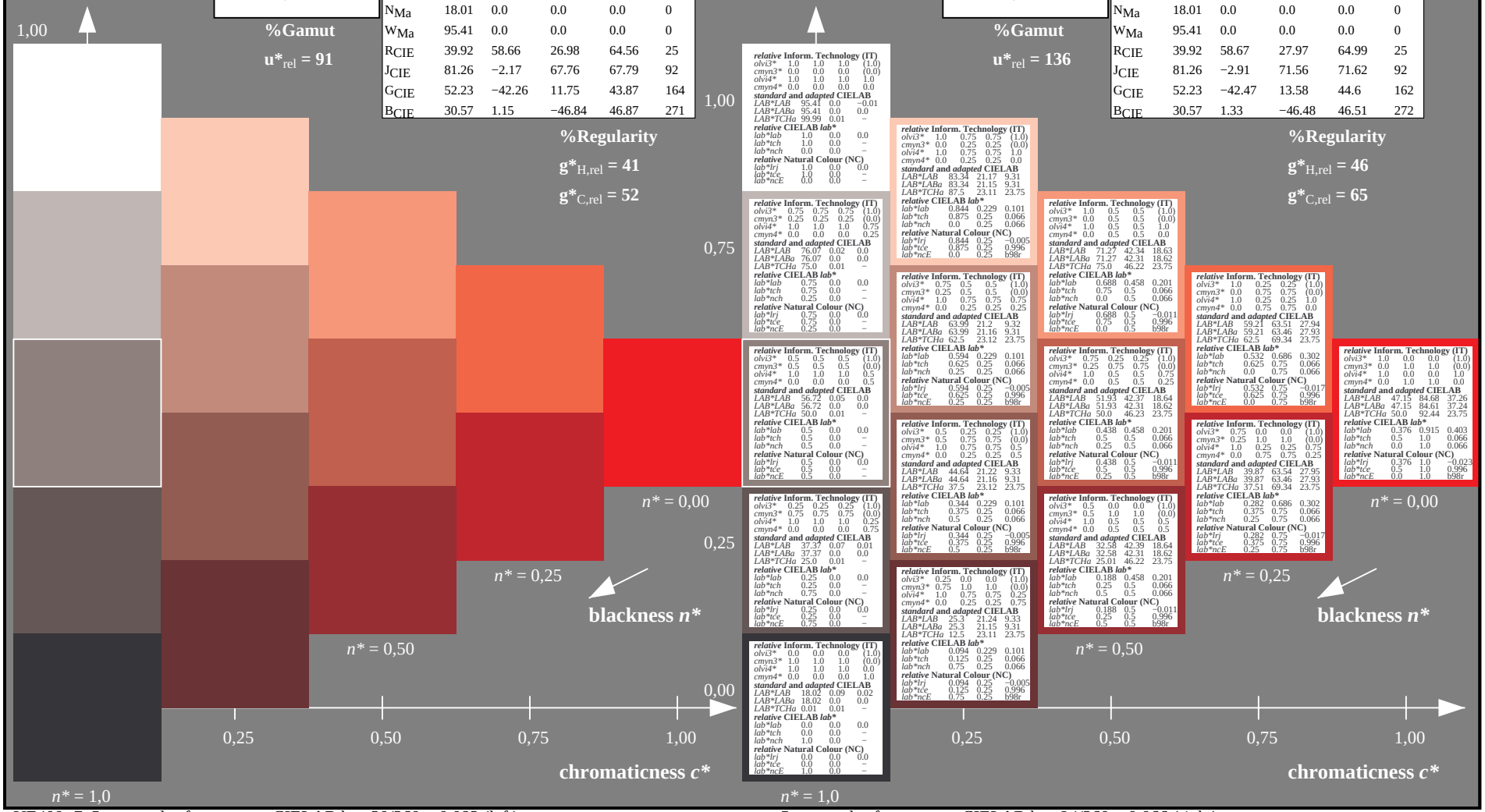
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



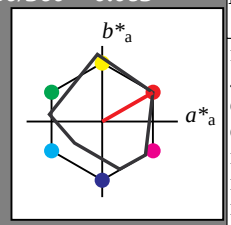
UE400−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

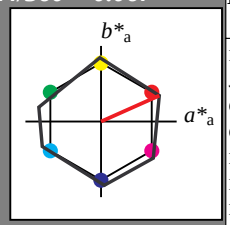
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

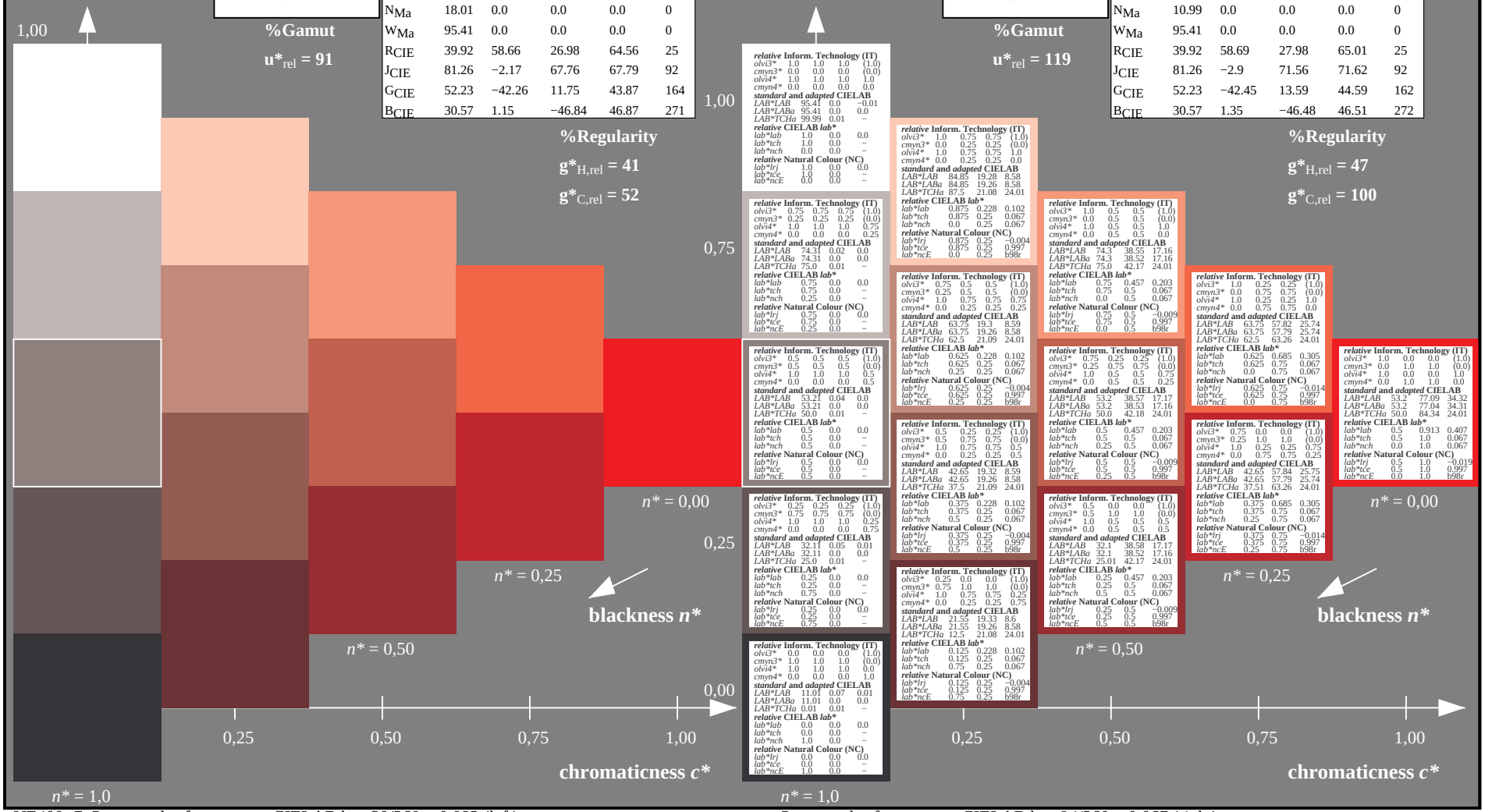
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



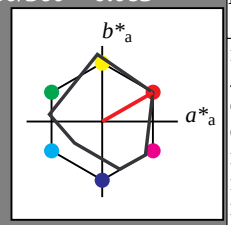
UE400−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

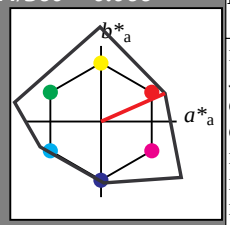
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

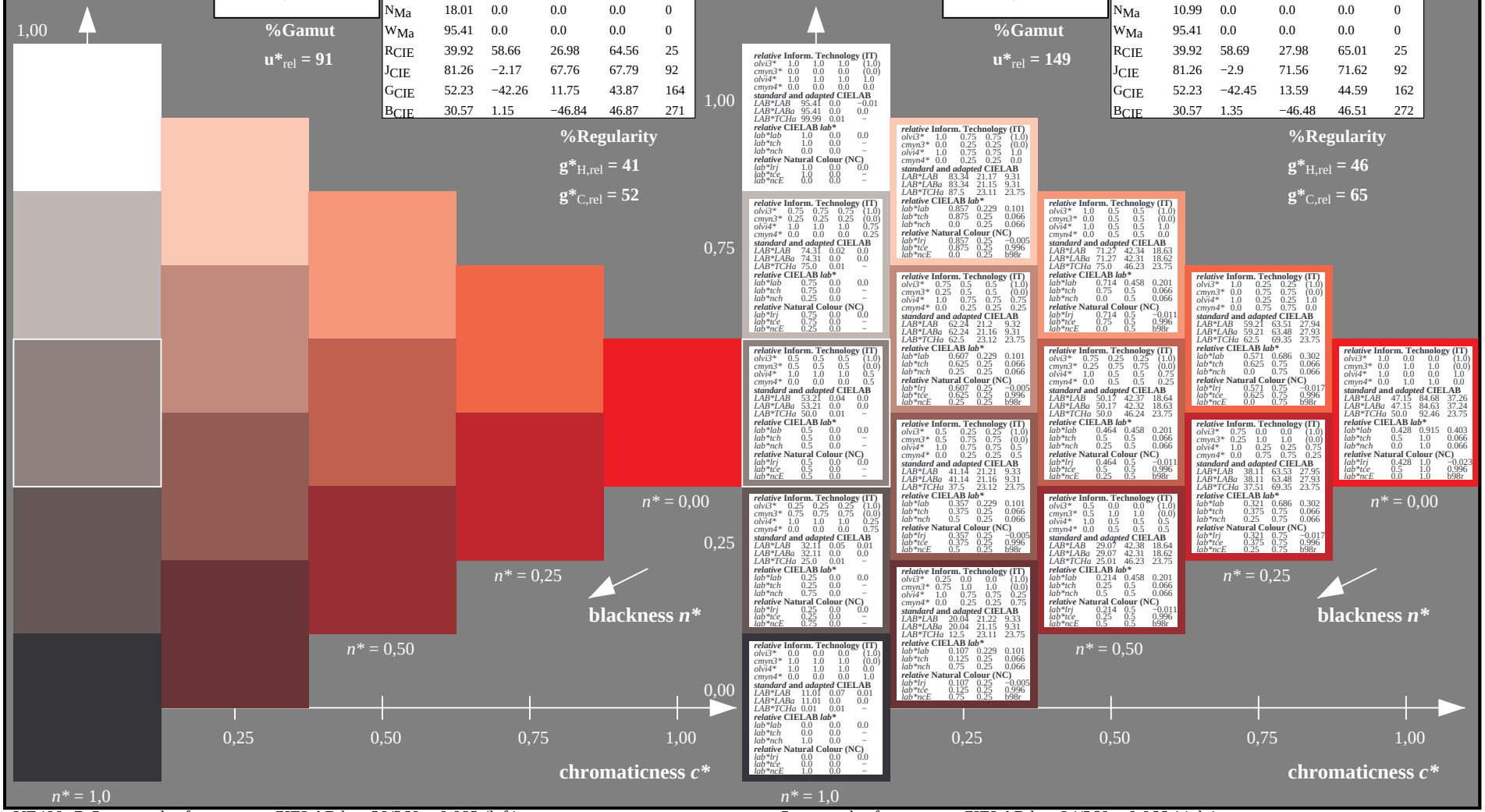
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



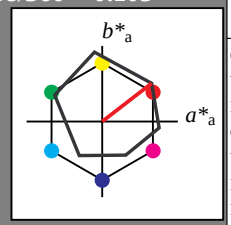
UE400−7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

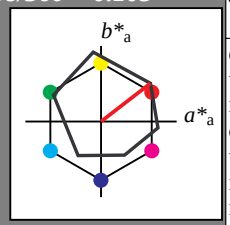
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

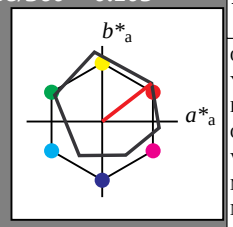
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

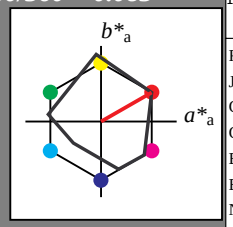
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

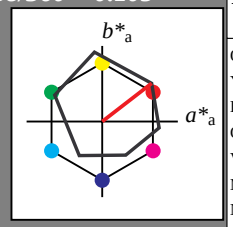
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 30/360 = 0.083 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

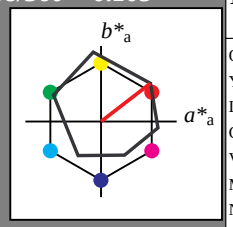
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

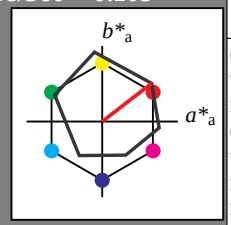
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

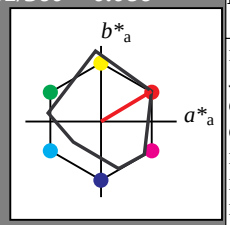
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

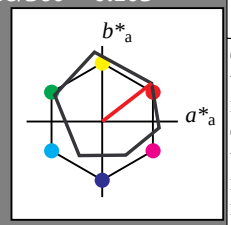
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

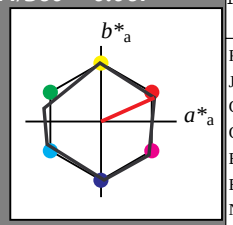
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

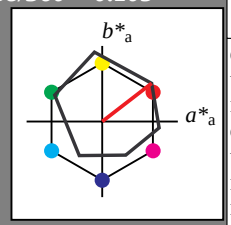
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

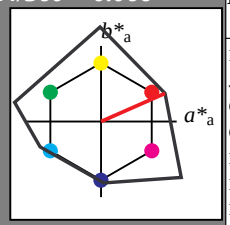
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

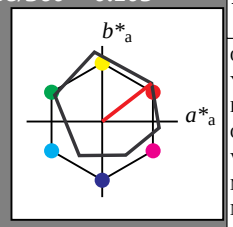
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

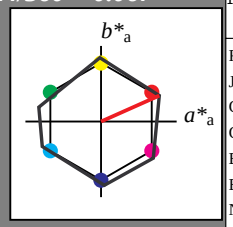
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

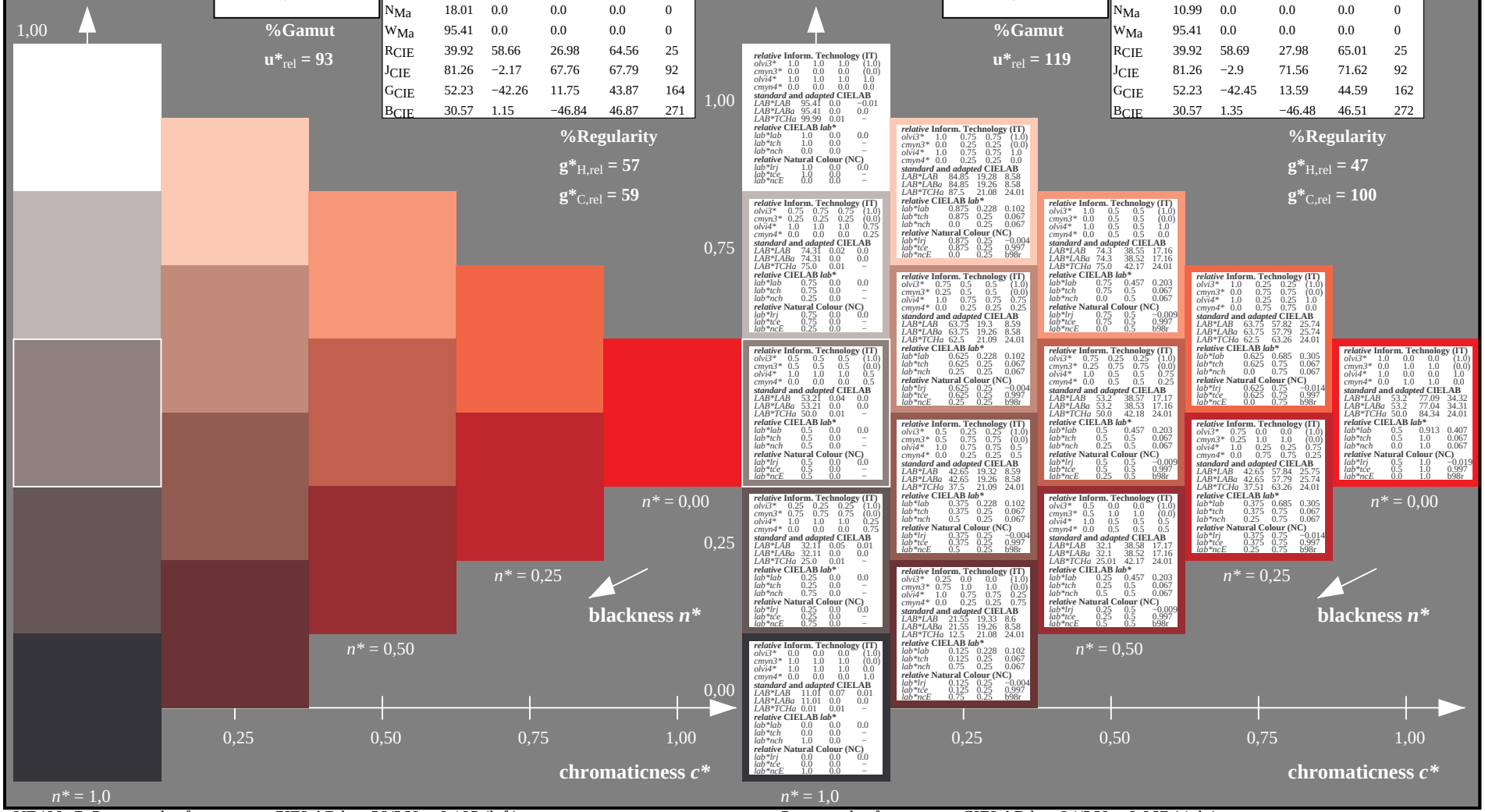
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



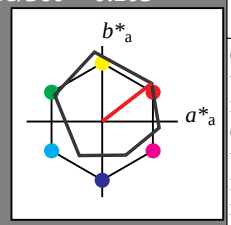
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

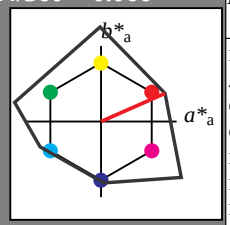
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

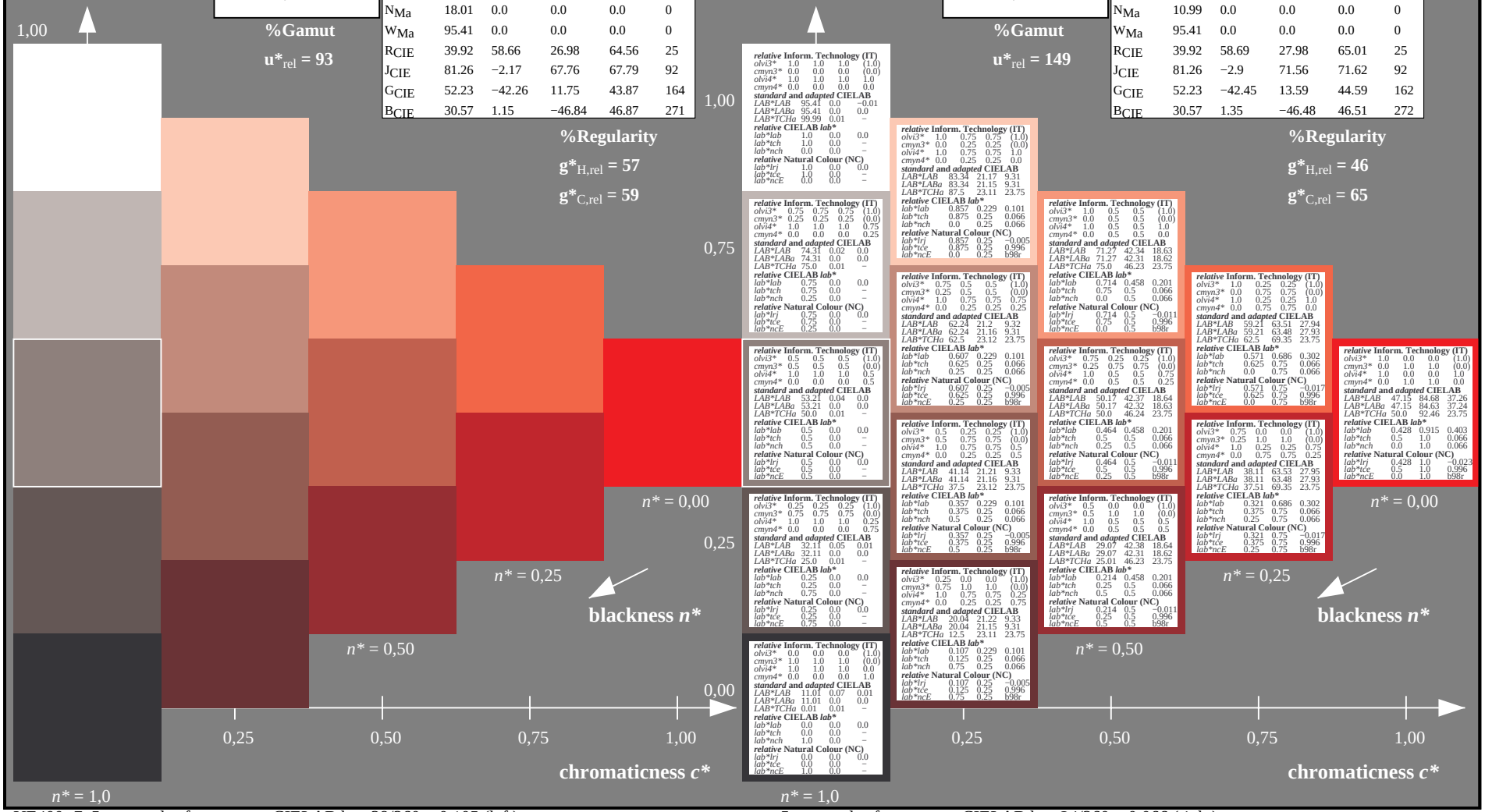
%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



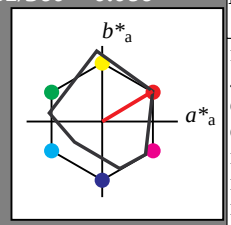
UE400−7, 5 step scales for constant CIELAB hue 38/360 = 0.105 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

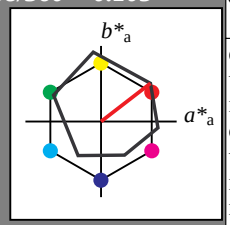
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

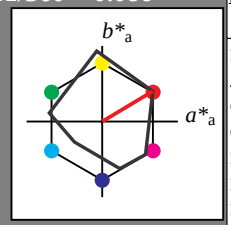
UE400−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

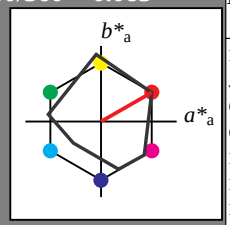
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

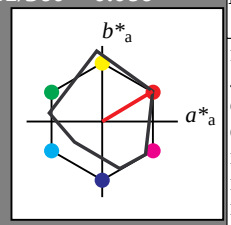
UE400−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 30/360 = 0.083 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

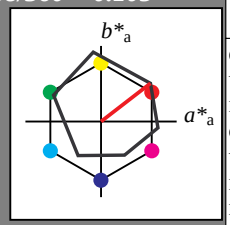
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

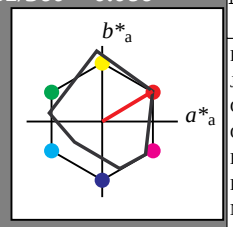
UE400−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

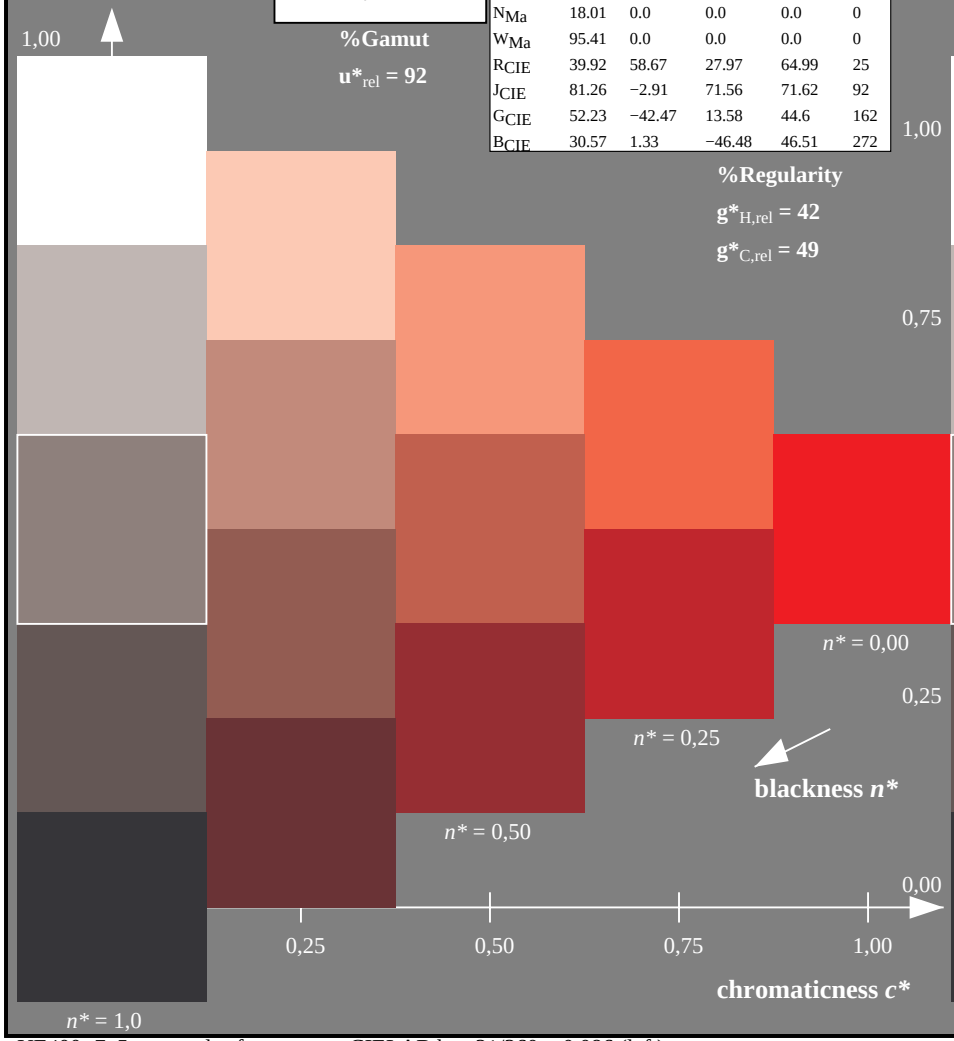
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

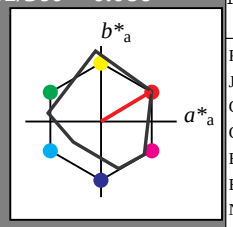
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

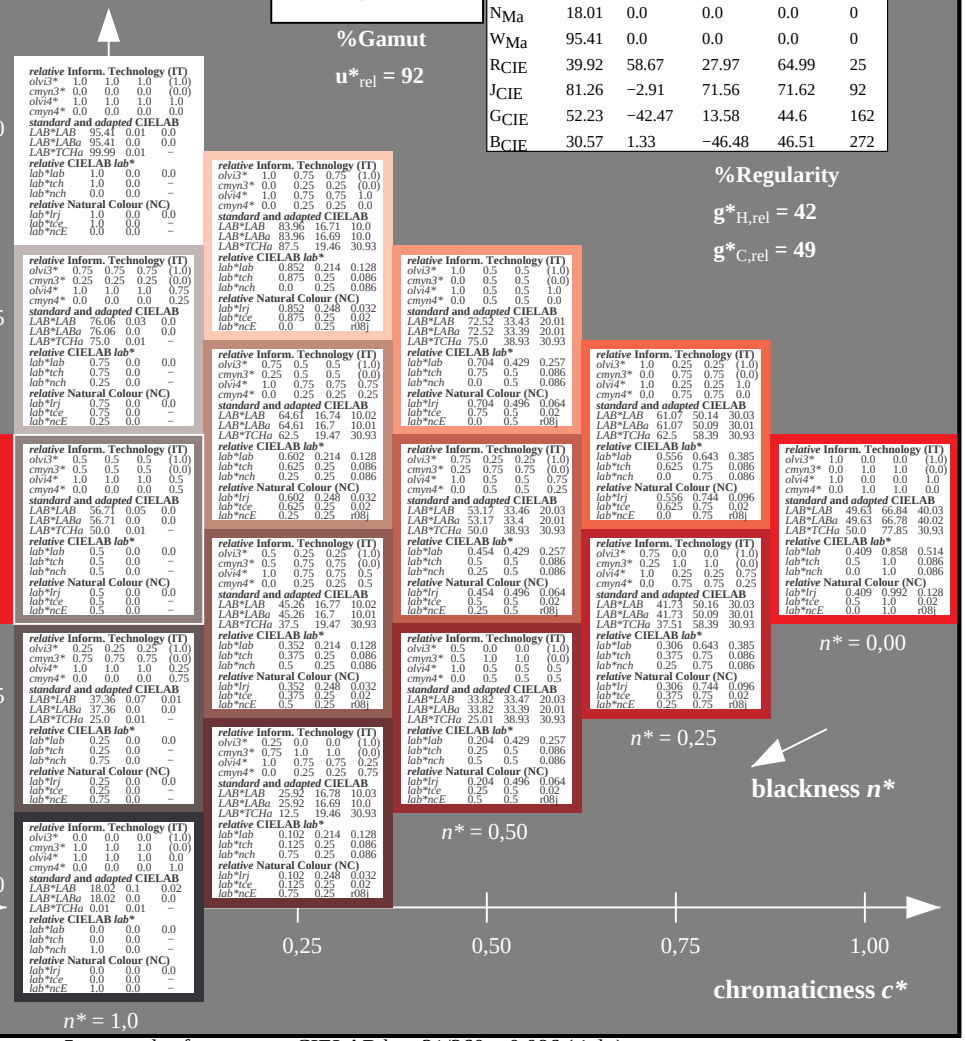
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



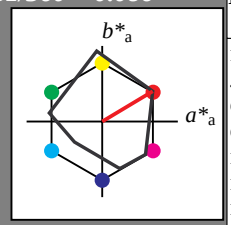
UE400−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

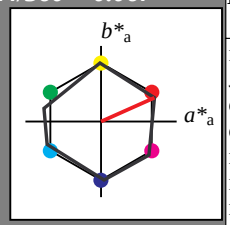
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

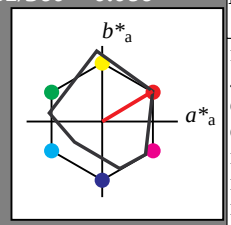
UE400−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

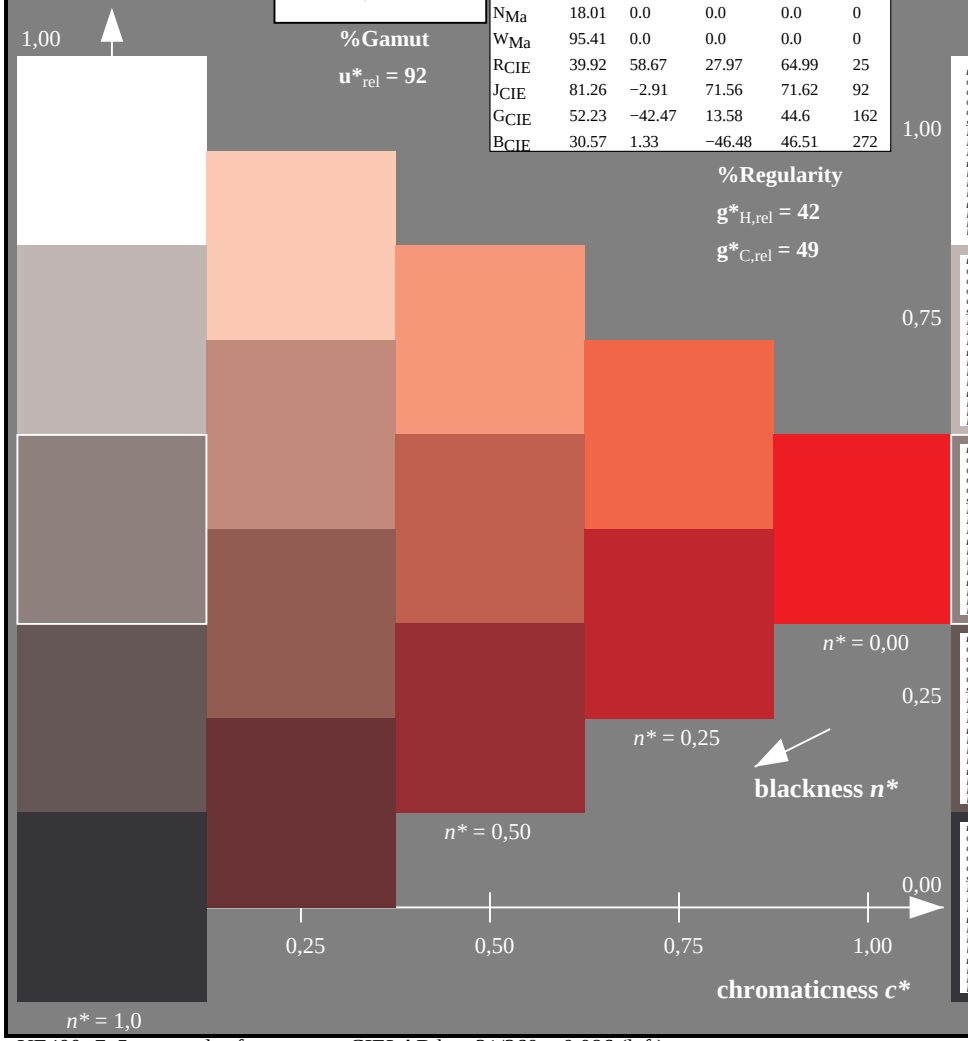
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

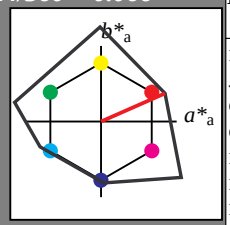
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

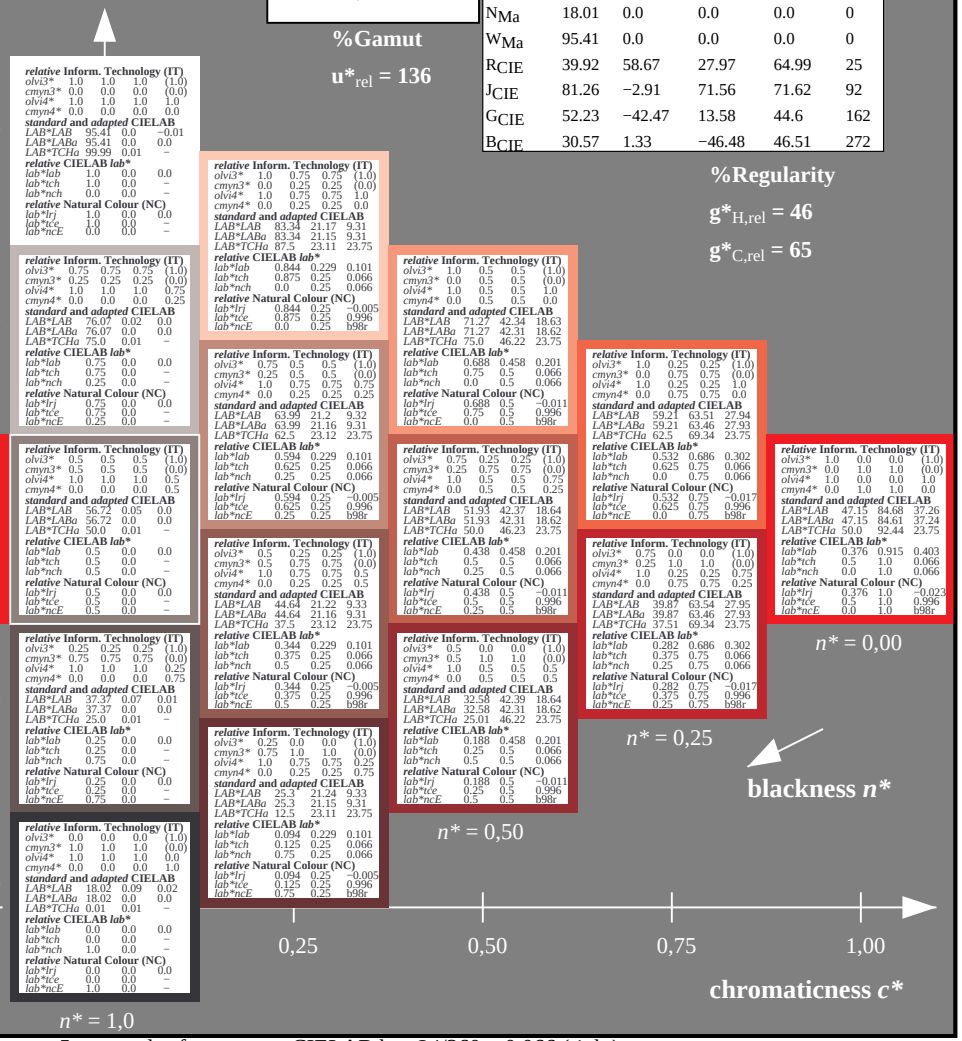
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



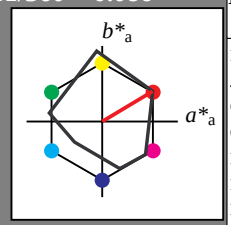
UE400−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

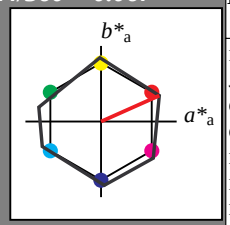
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

$u^*_{rel} = 119$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

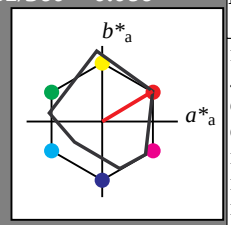
UE400−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

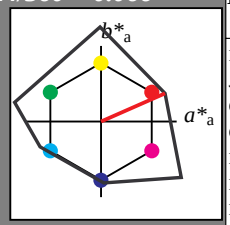
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

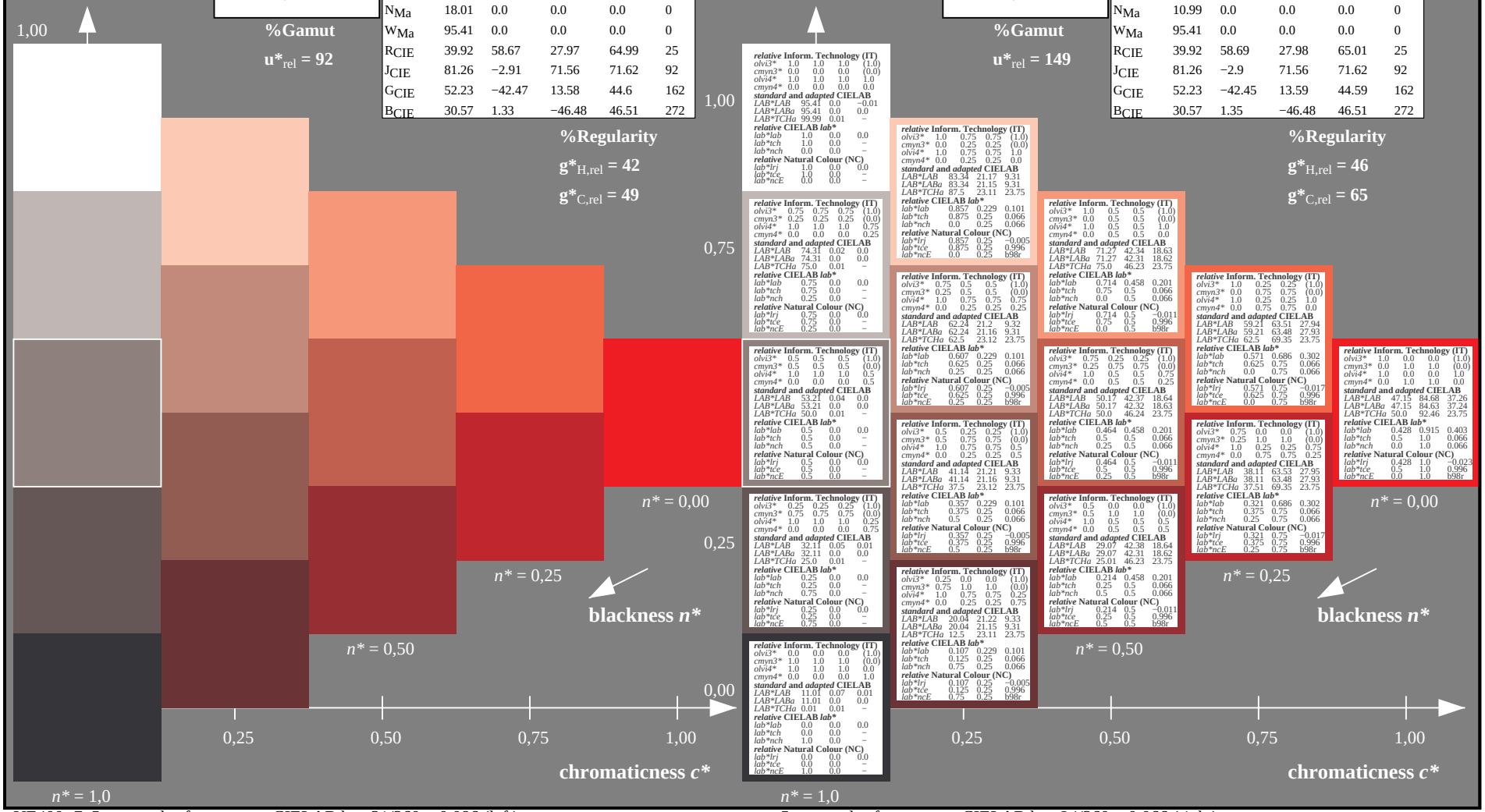
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



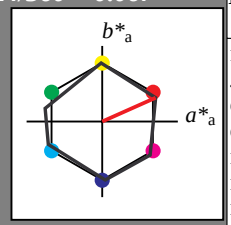
UE400−7, 5 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

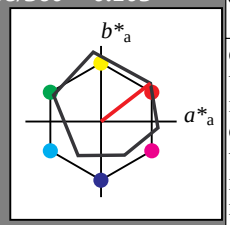
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

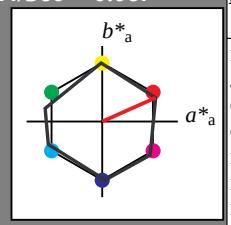
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

$n^* = 0{,}00$

$n^* = 0{,}25$

$n^* = 0{,}50$

$n^* = 1{,}0$

blackness n^*

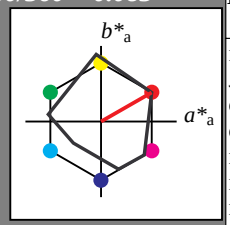
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

$n^* = 0{,}00$

$n^* = 0{,}25$

$n^* = 0{,}50$

$n^* = 1{,}0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

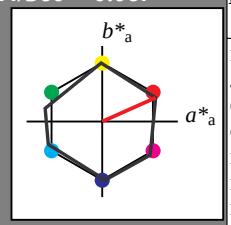
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 30/360 = 0.083 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

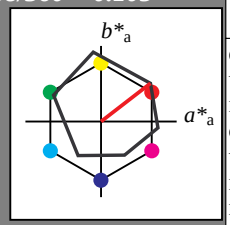
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

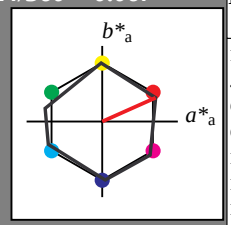
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

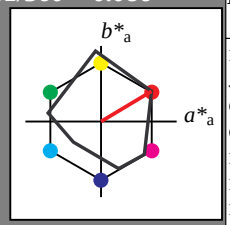
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

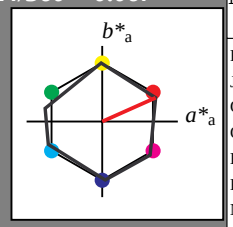
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

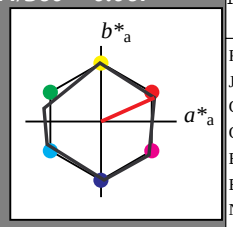
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

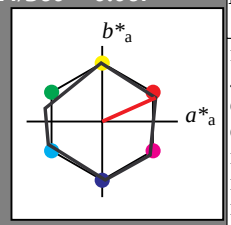
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

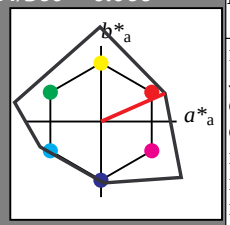
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

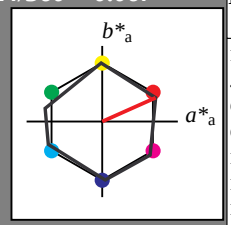
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

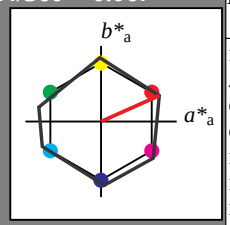
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

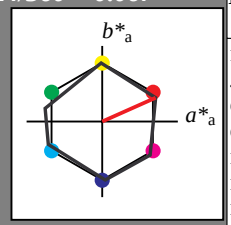
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

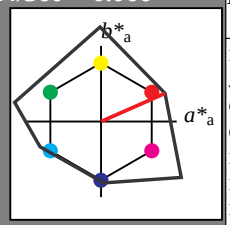
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

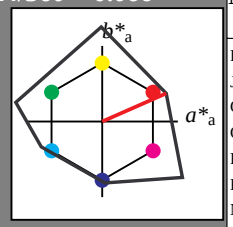
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

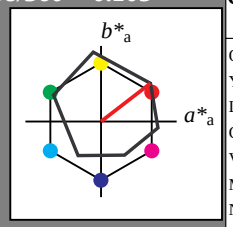
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

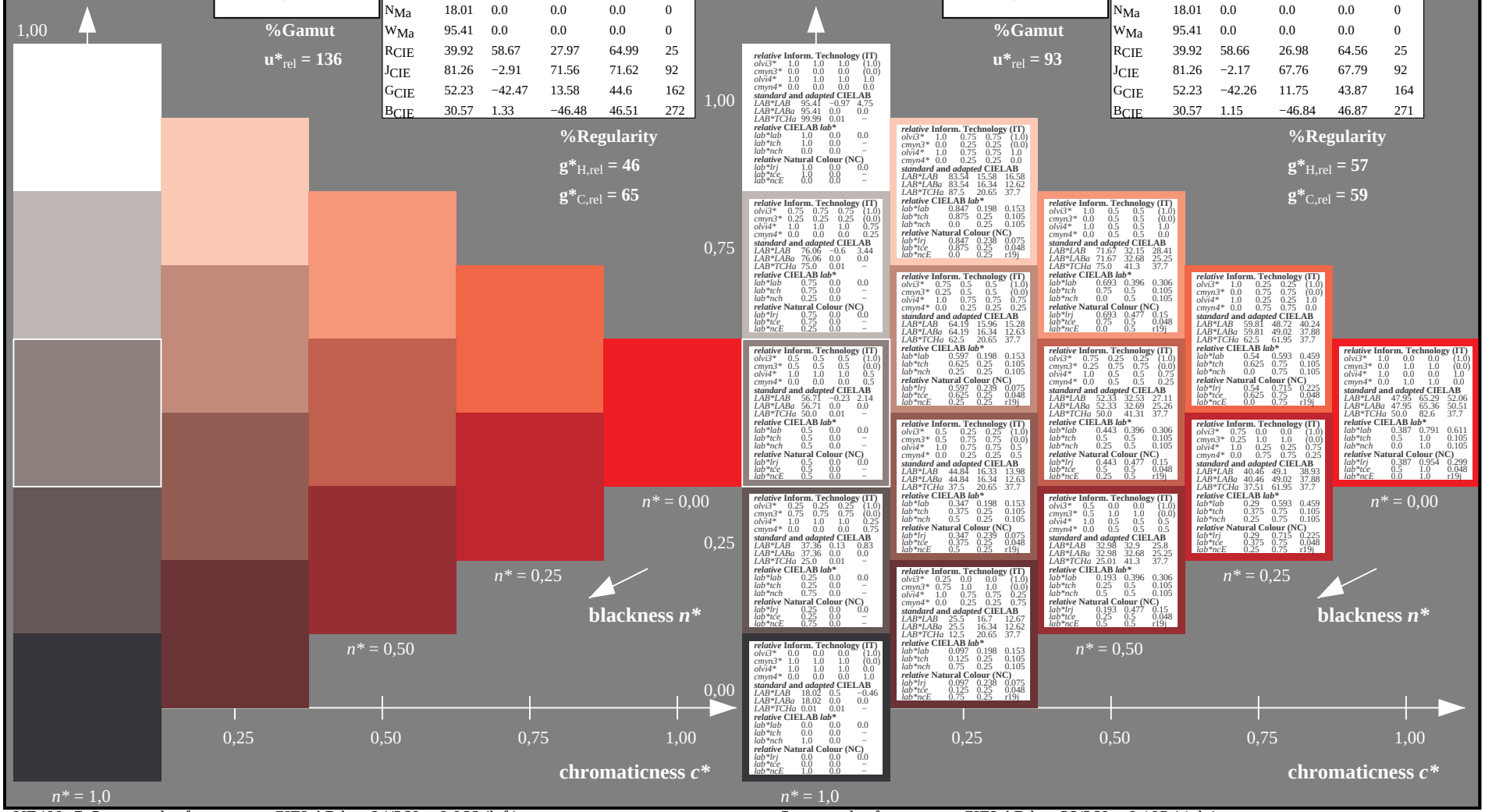
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



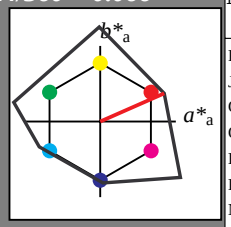
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

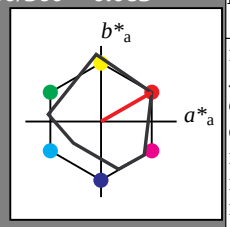
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

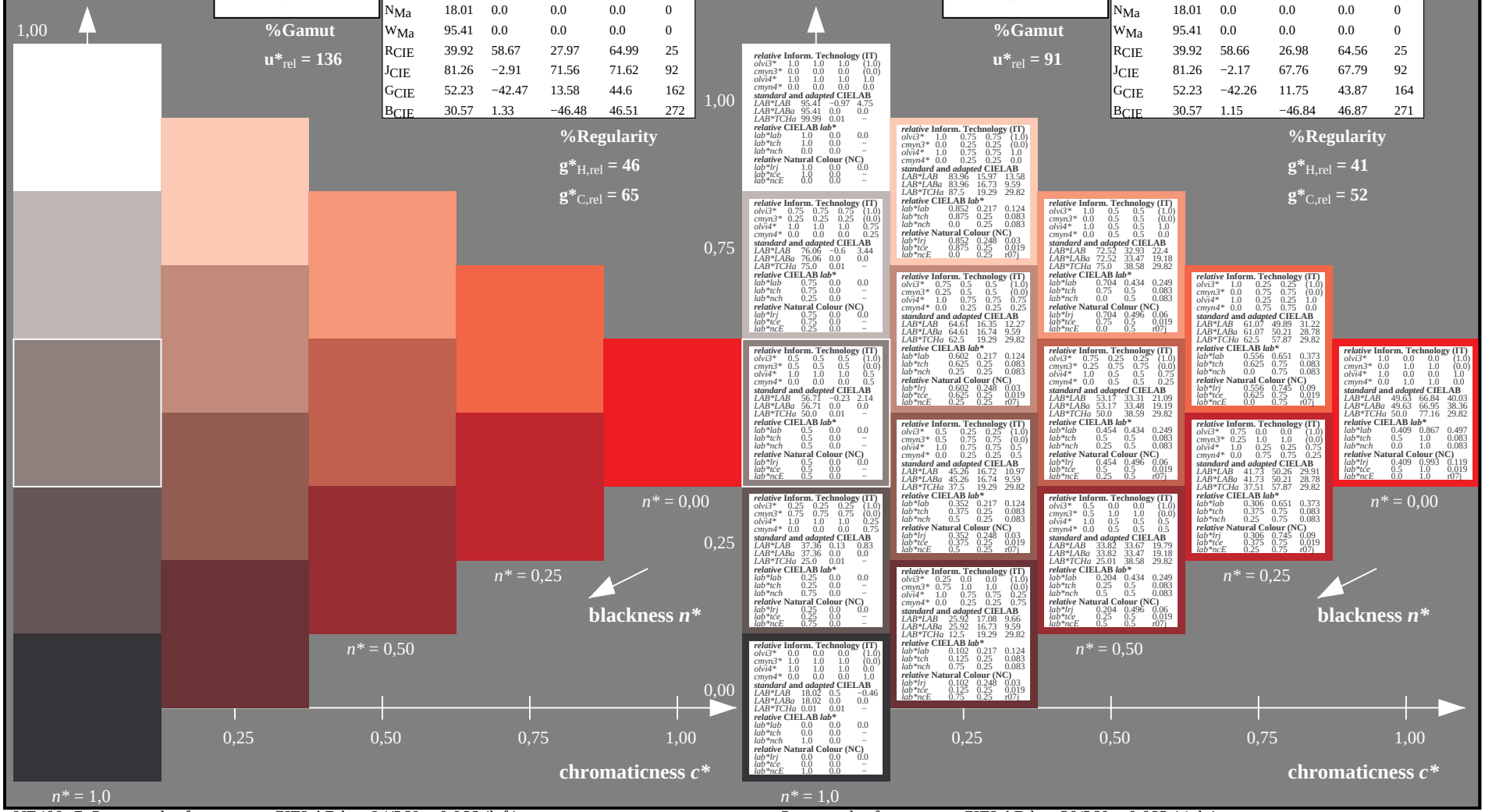
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



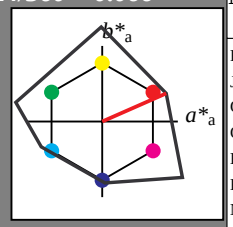
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 30/360 = 0.083 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

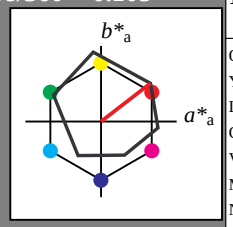
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

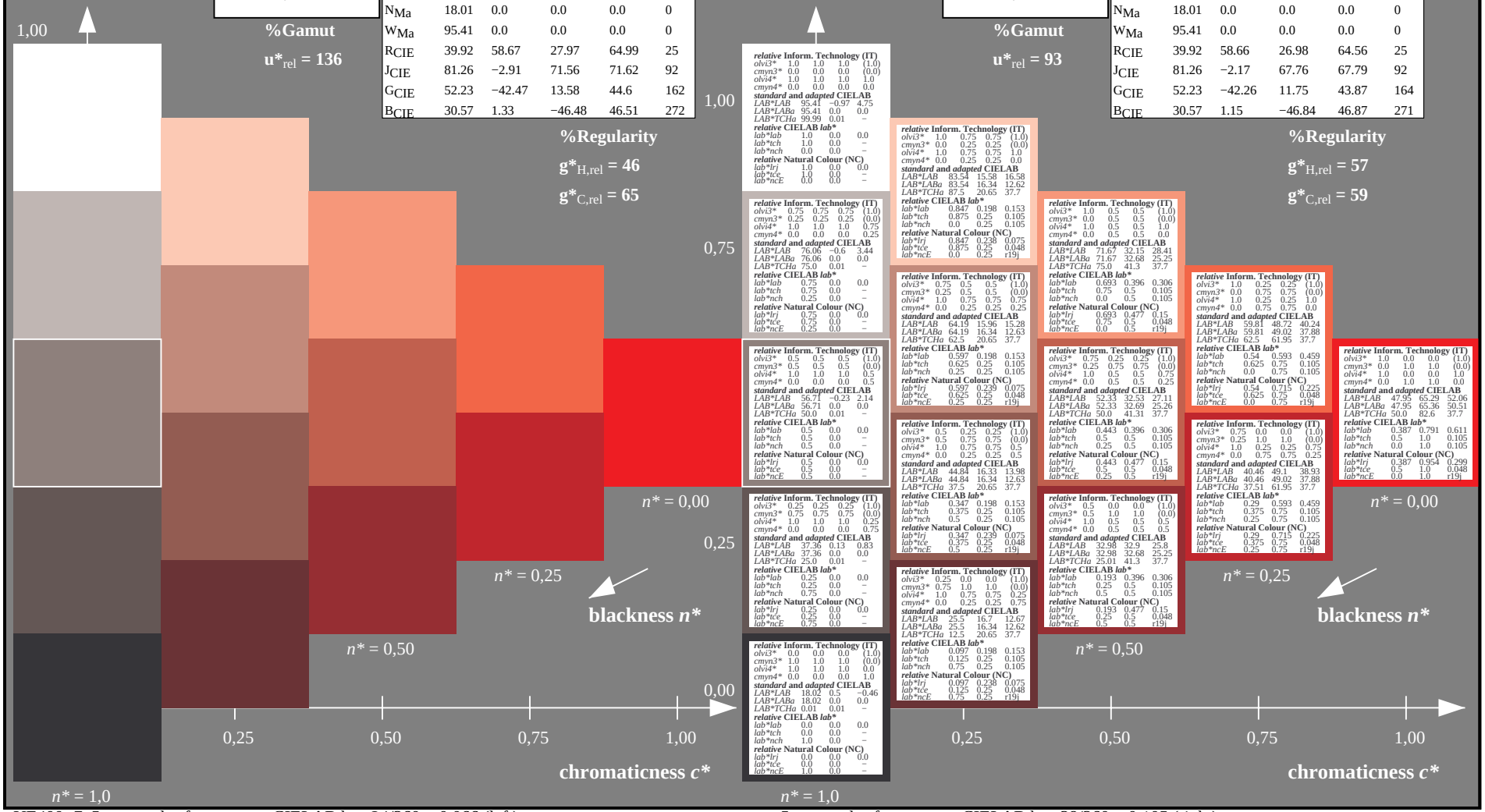
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



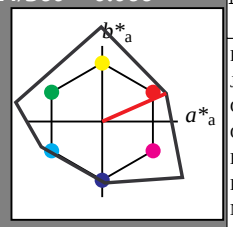
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

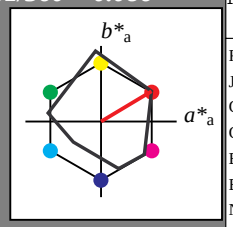
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

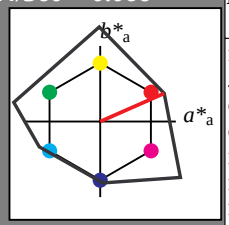
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

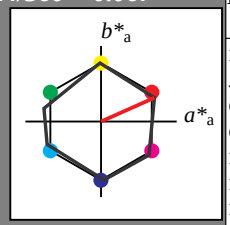
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

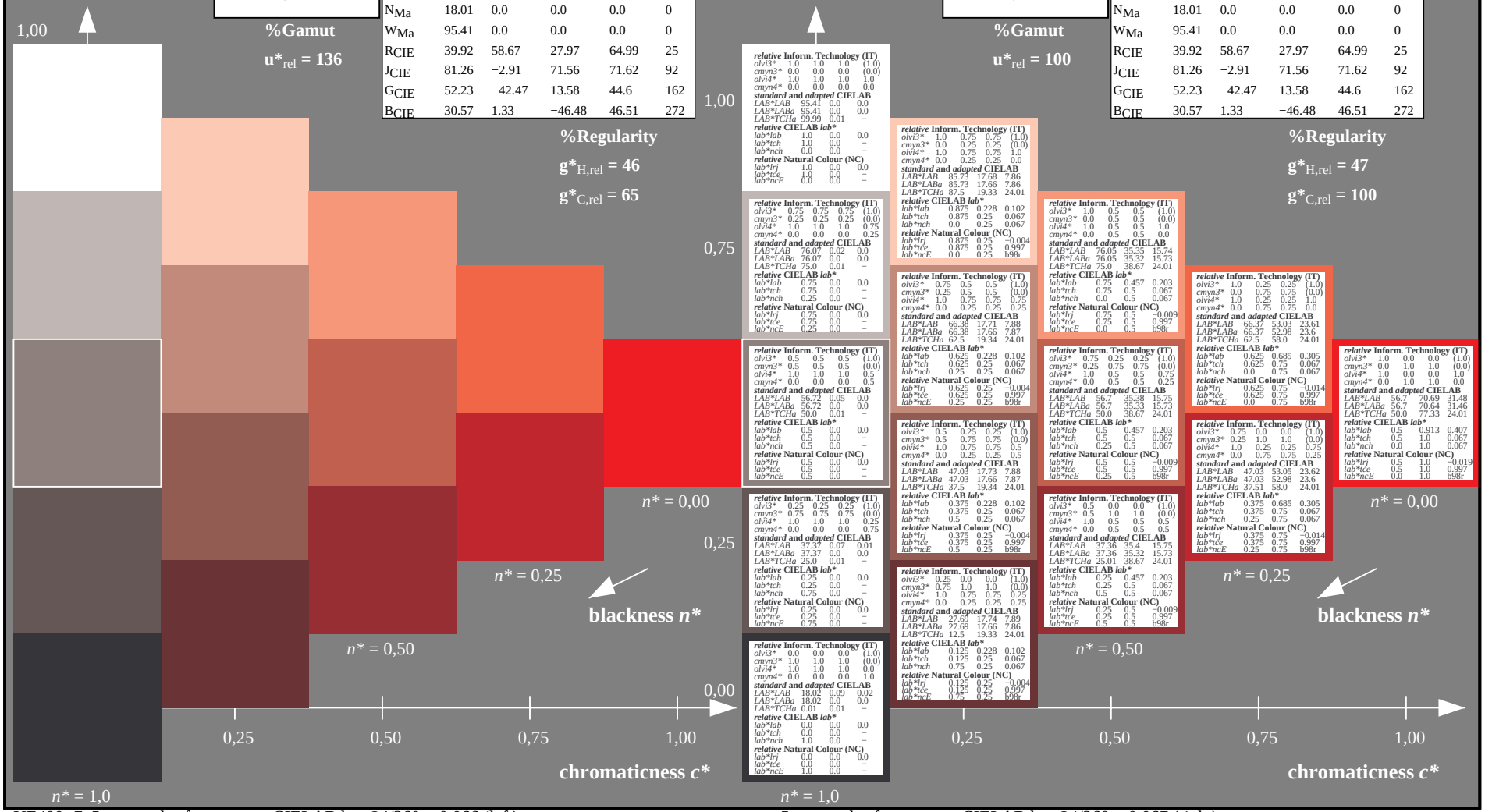
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



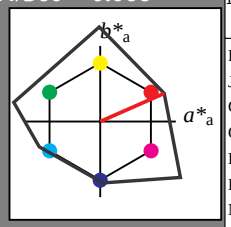
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

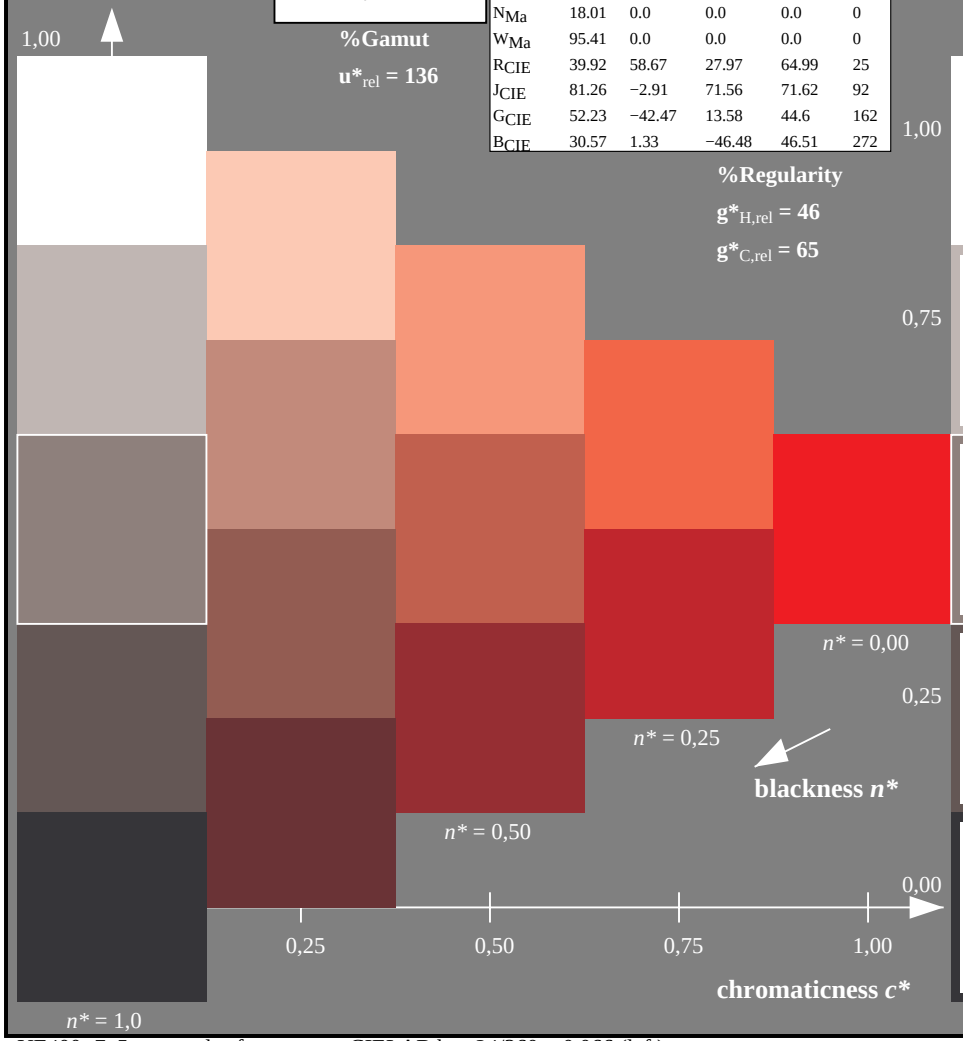
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

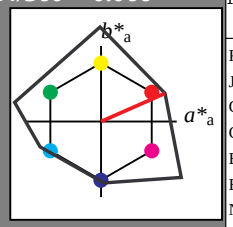
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

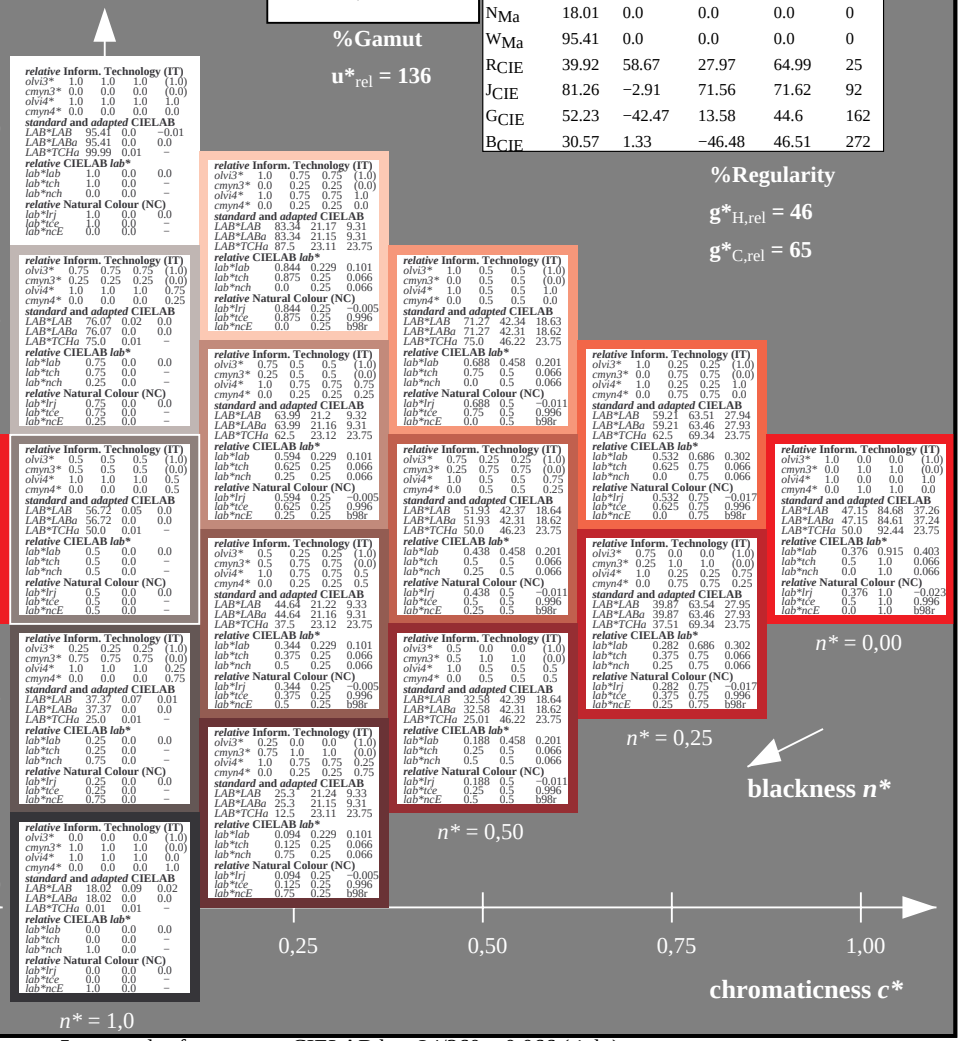
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



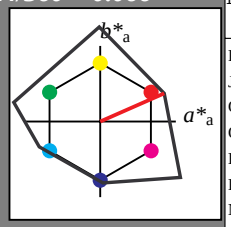
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

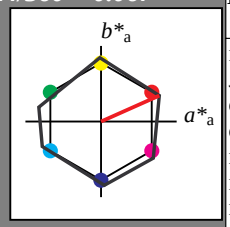
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

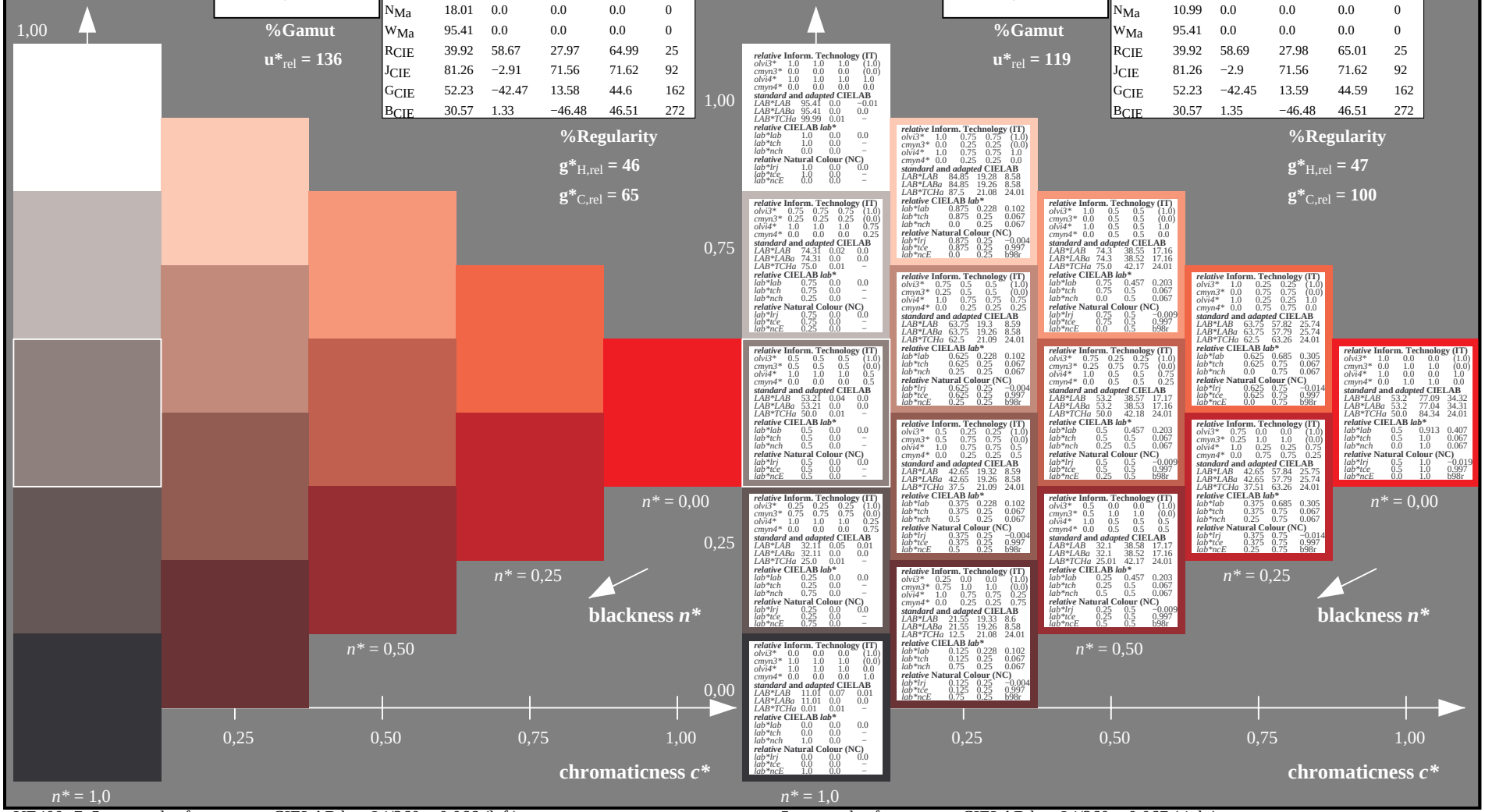
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



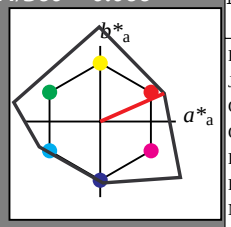
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

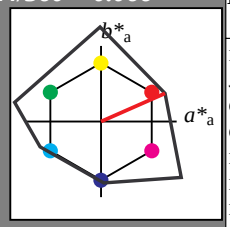
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

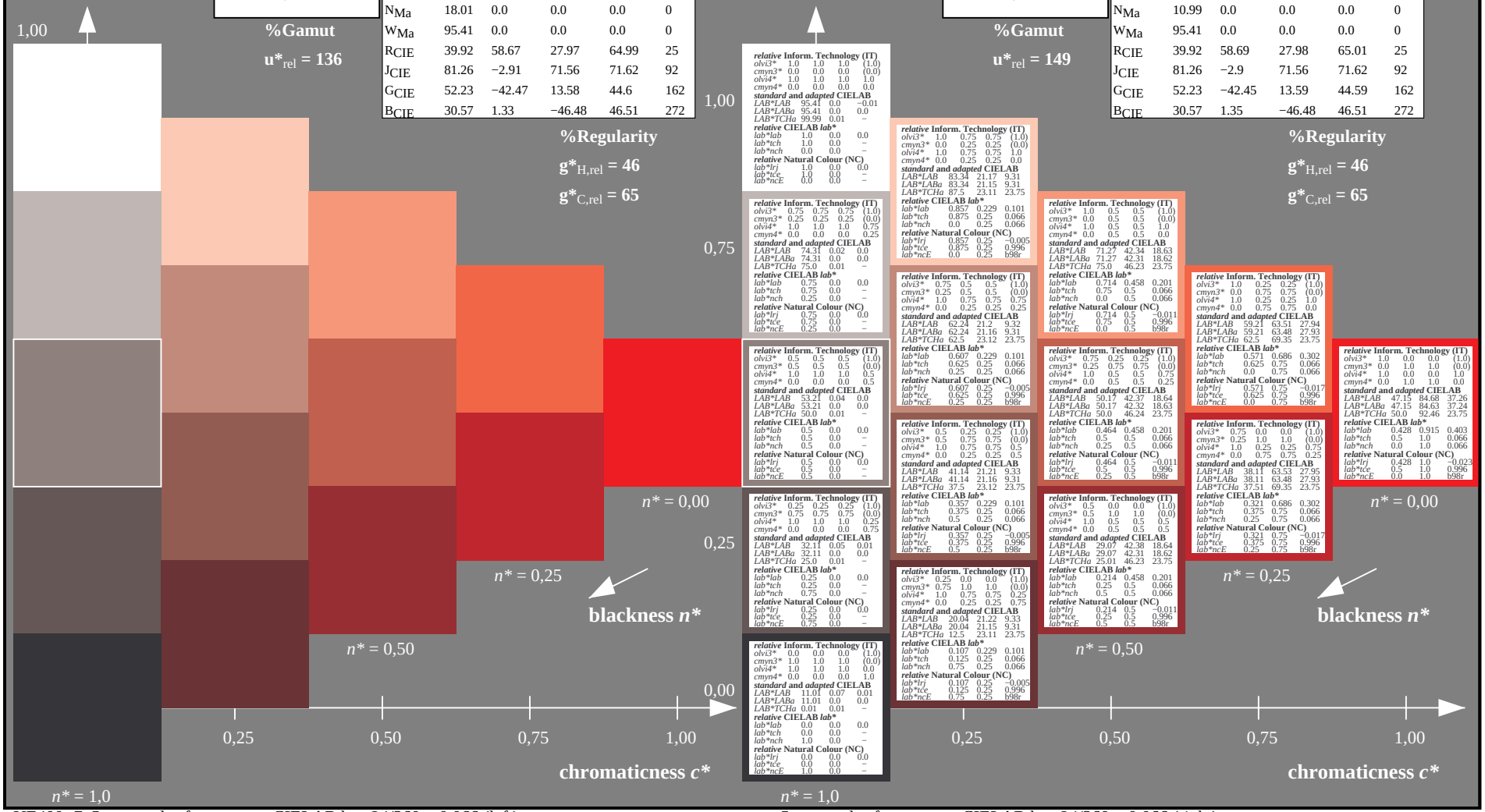
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



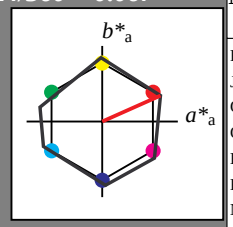
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

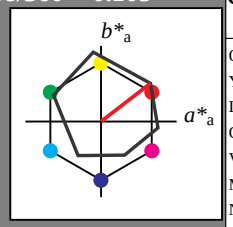
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

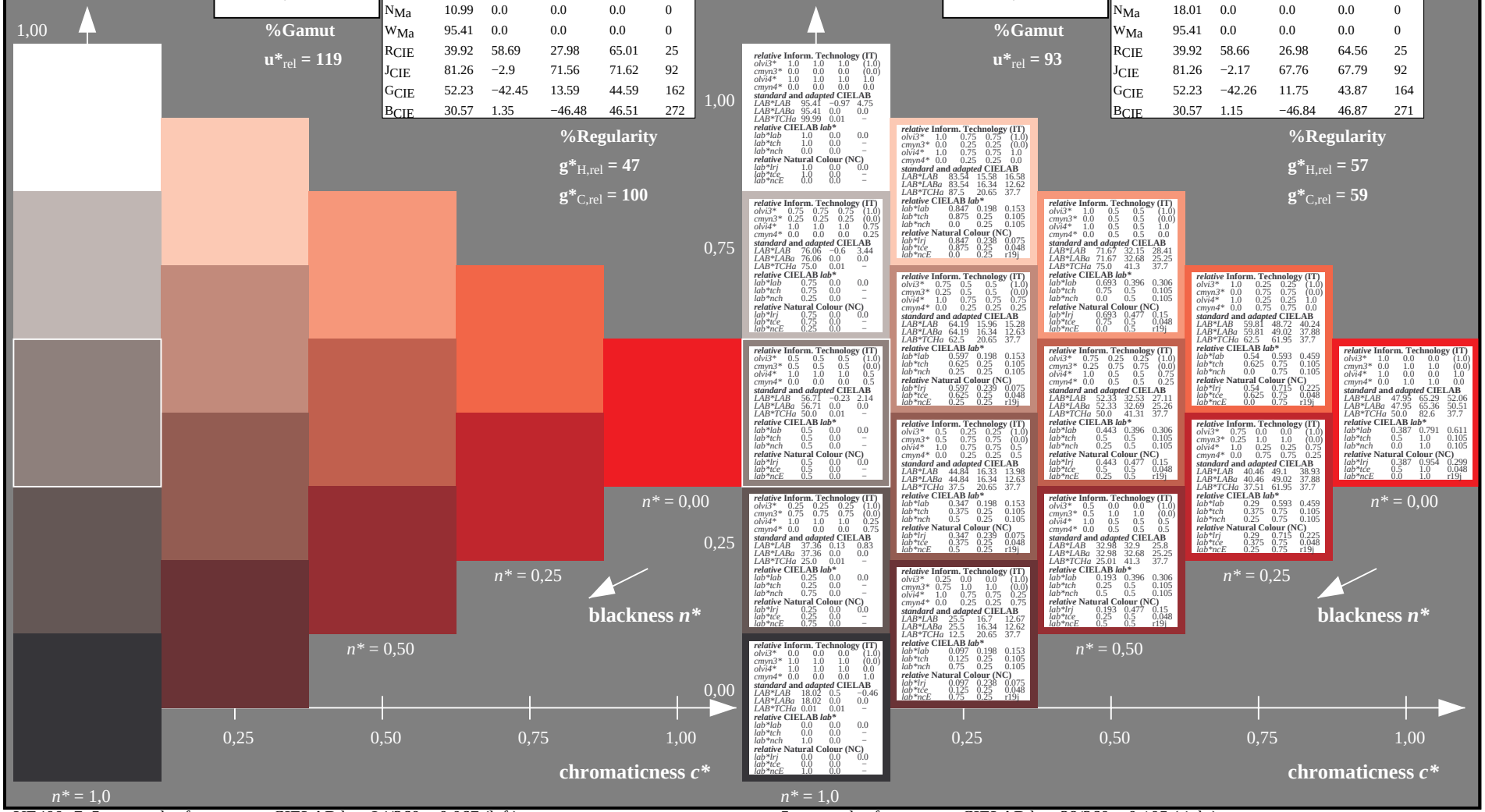
%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



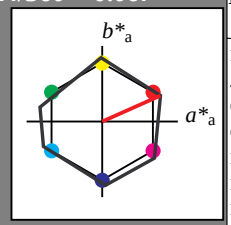
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

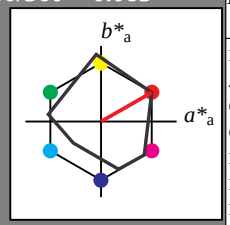
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

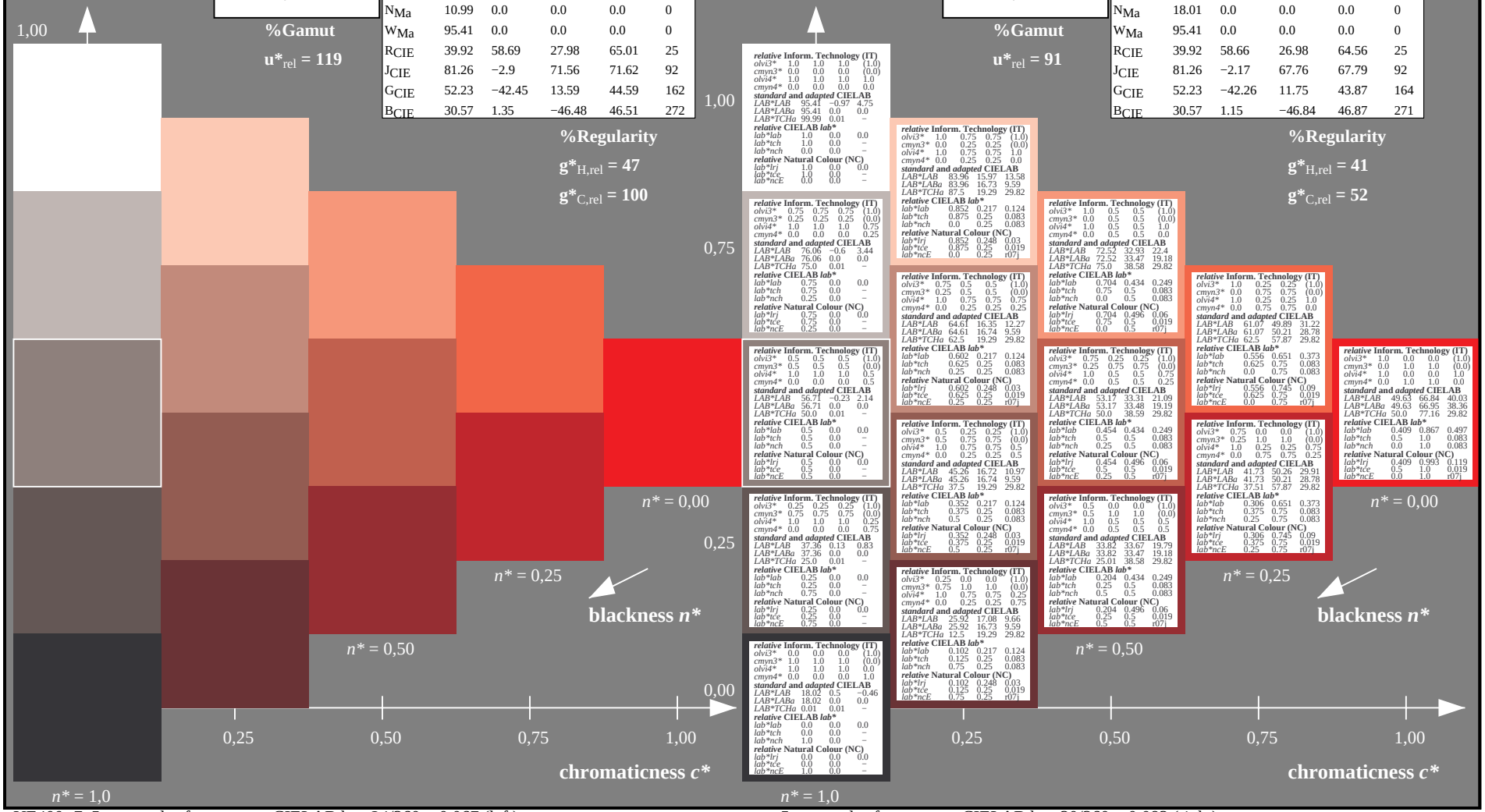
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



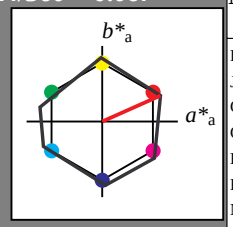
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 30/360 = 0.083 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

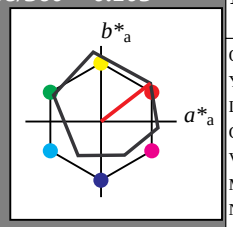
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

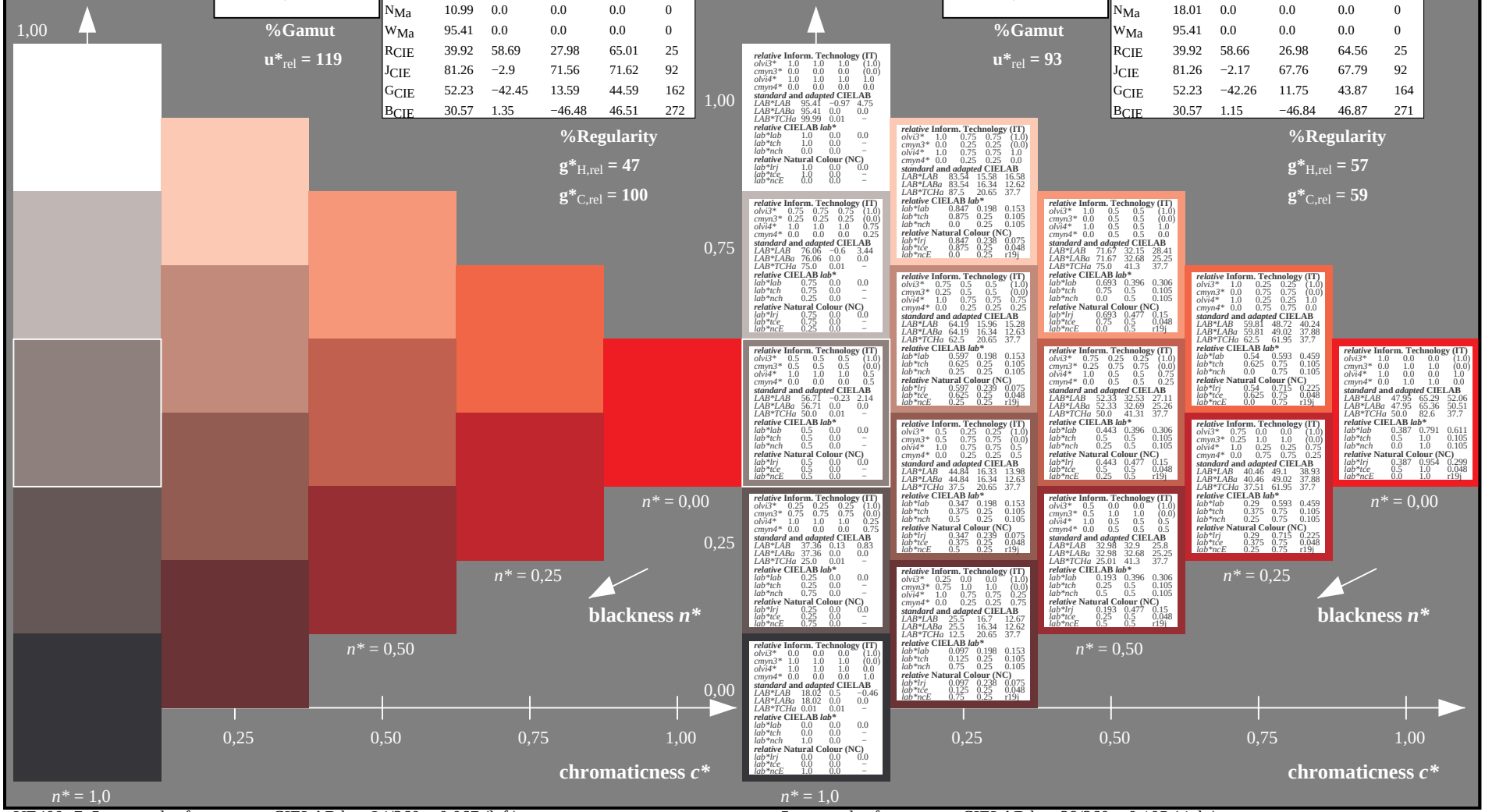
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



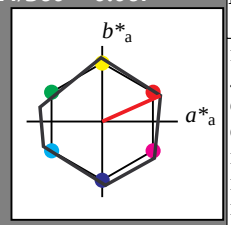
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

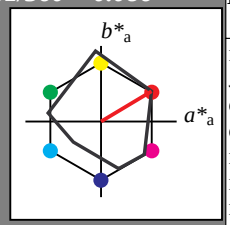
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

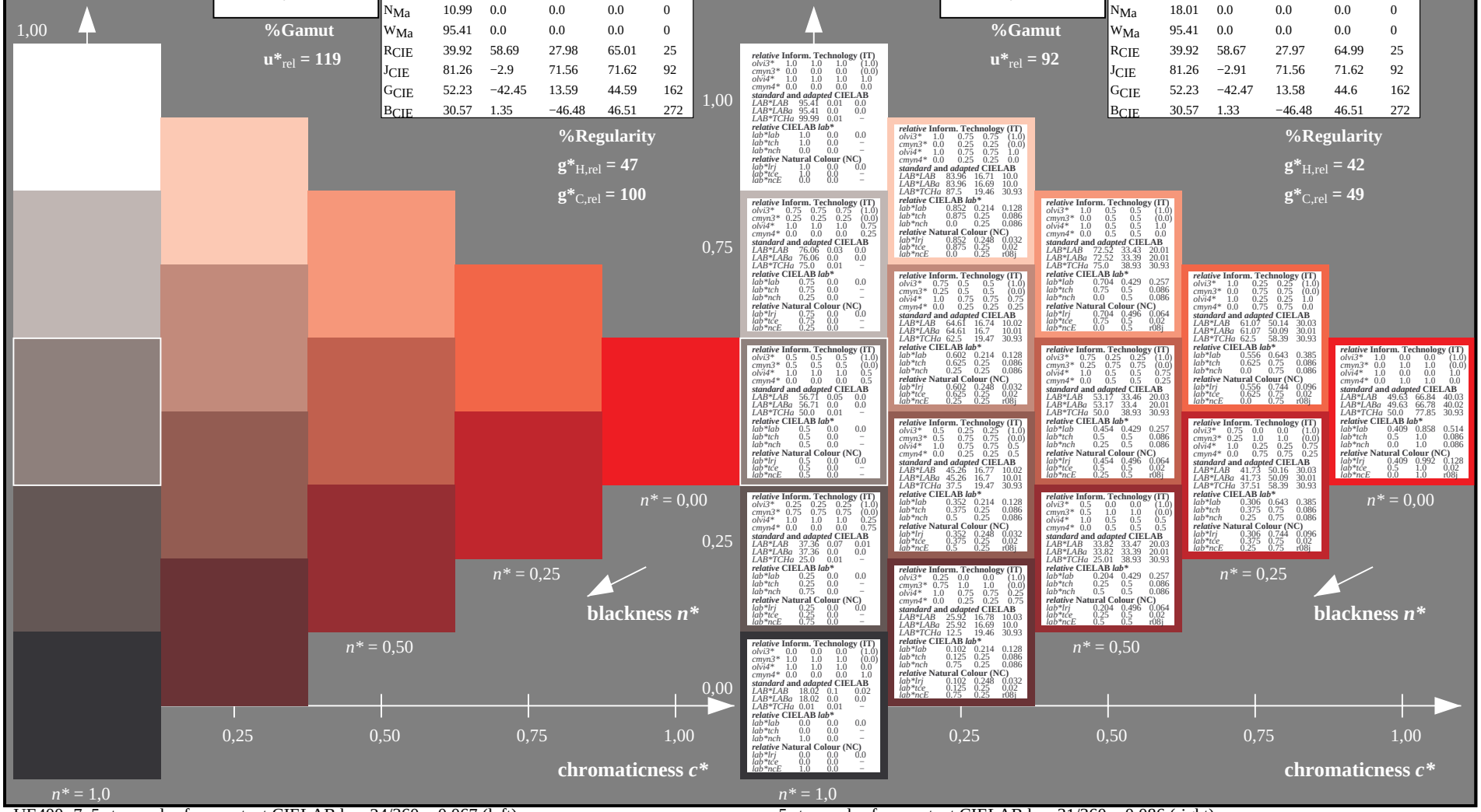
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



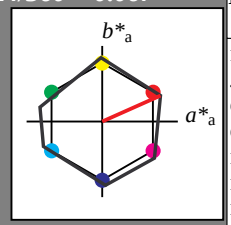
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

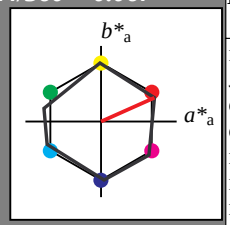
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00 0,75 0,25 0,00

n^* = 0,00 n^* = 0,25 n^* = 0,50 n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

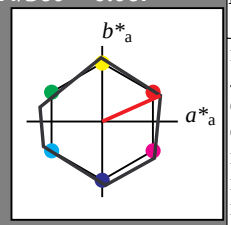
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

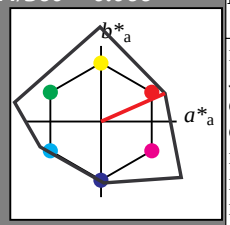
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

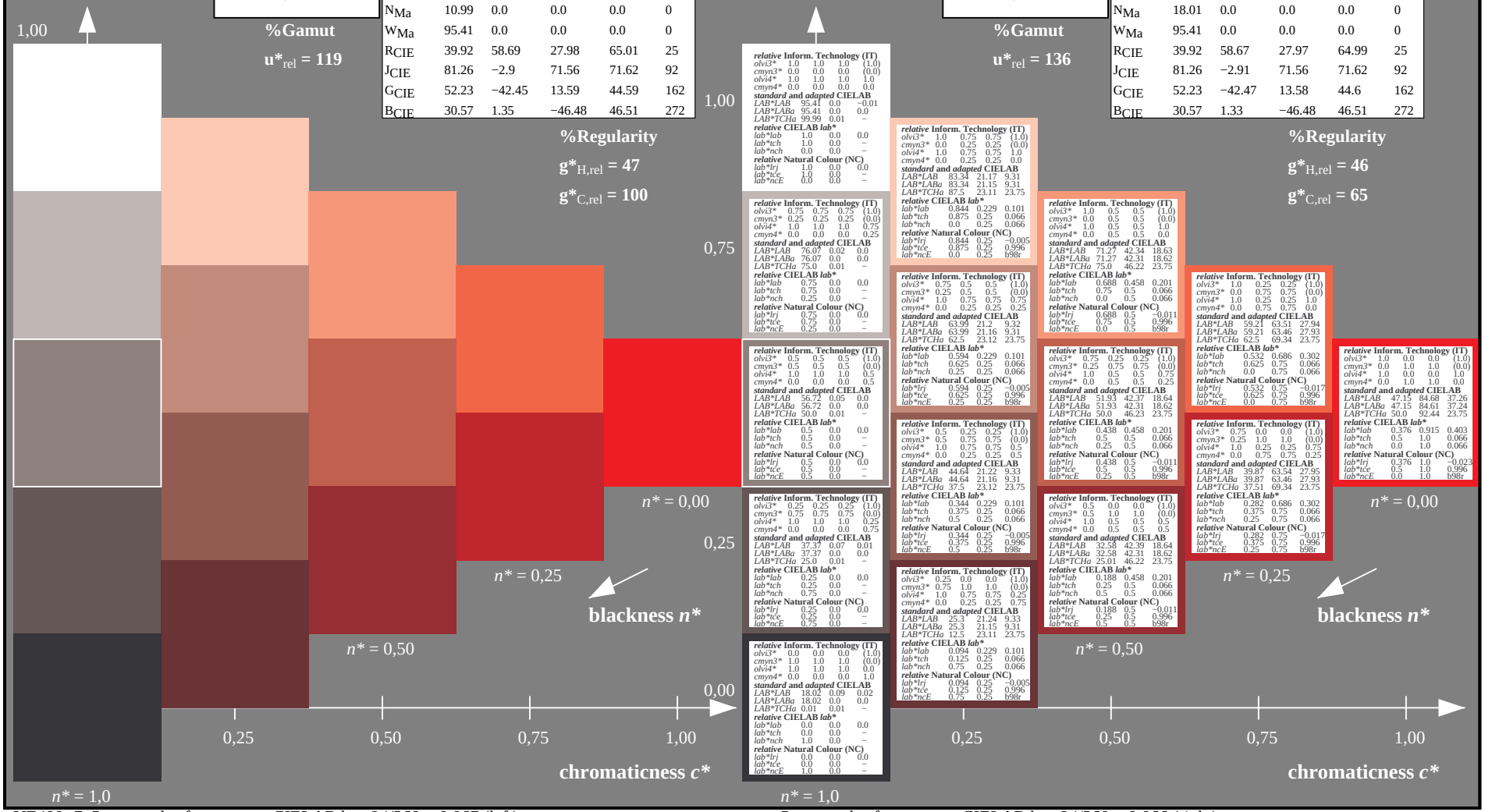
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



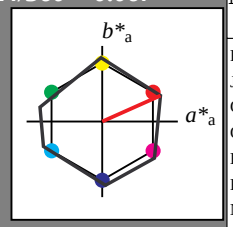
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

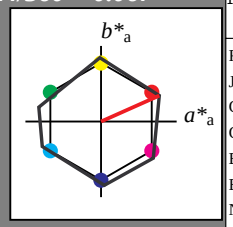
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

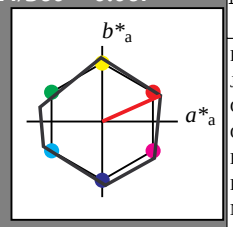
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

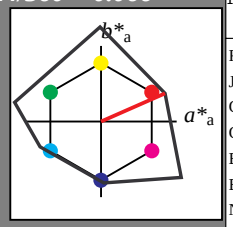
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

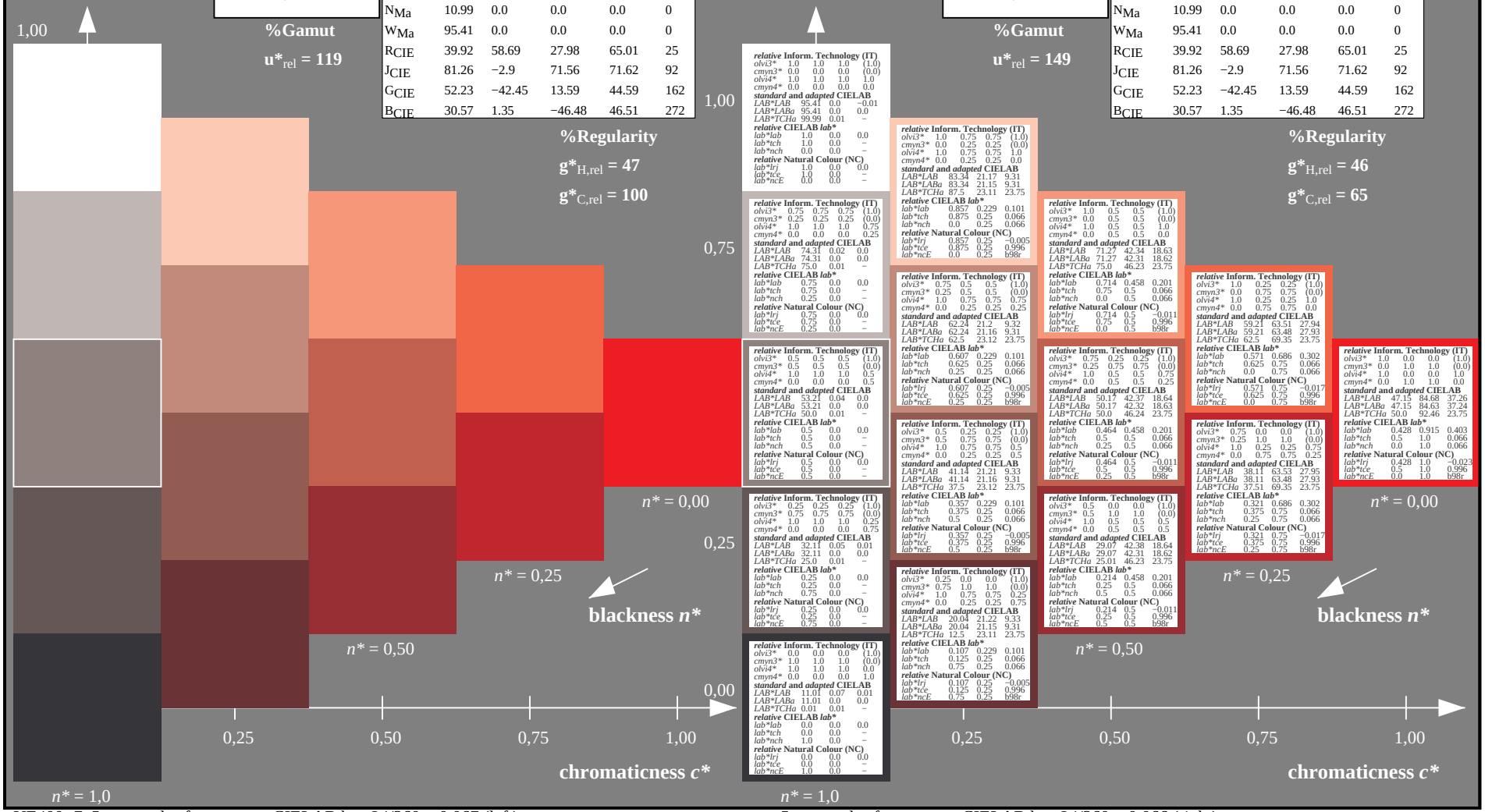
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



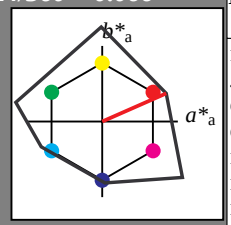
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.067 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

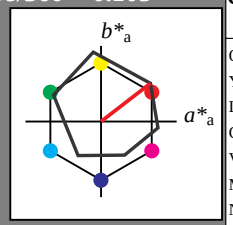
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

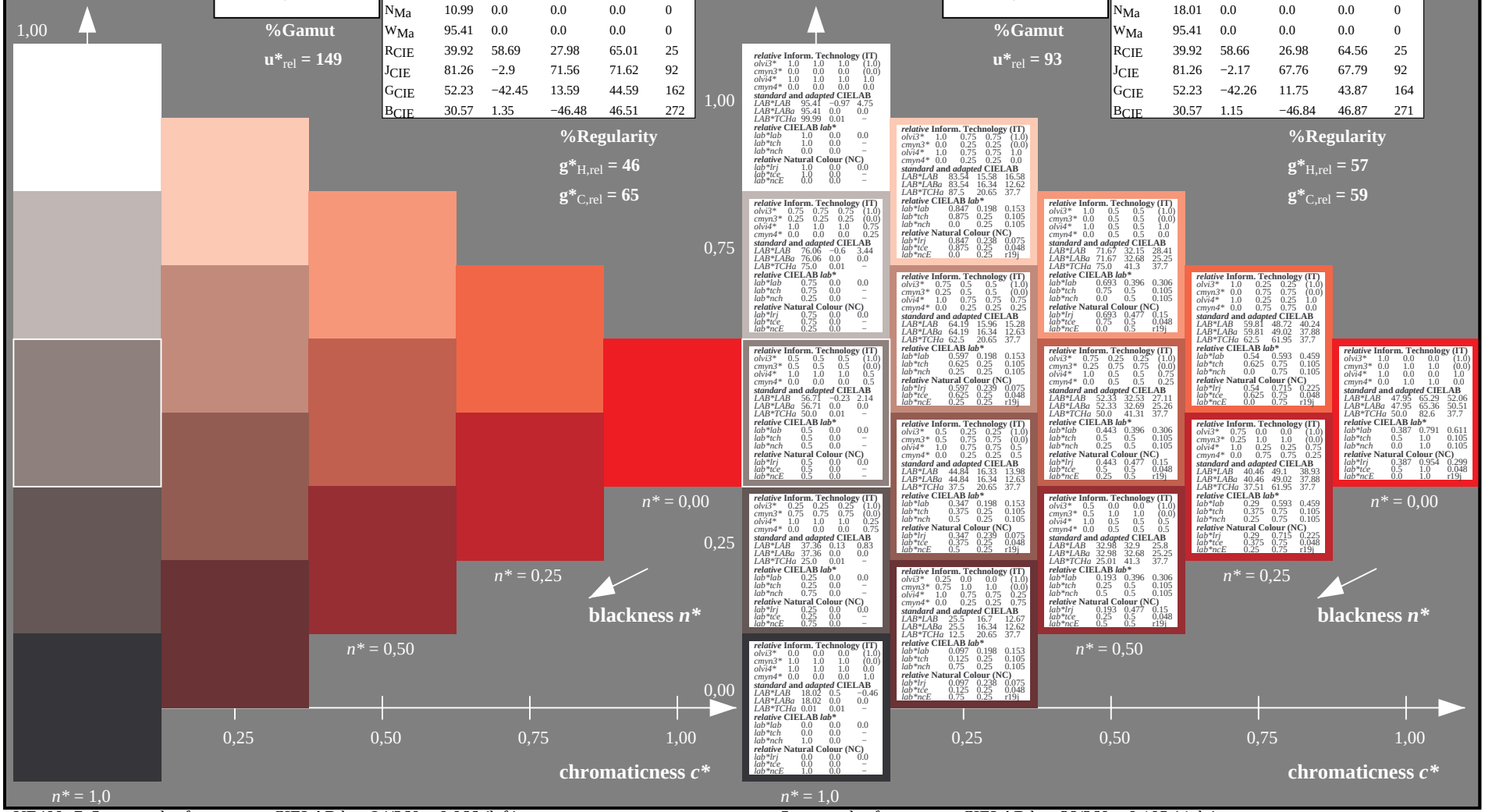
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



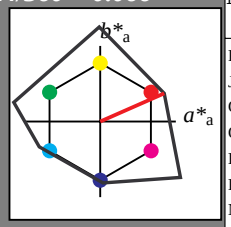
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

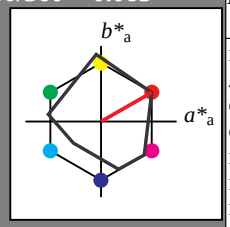
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 30/360 = 0.083$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 77 30
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

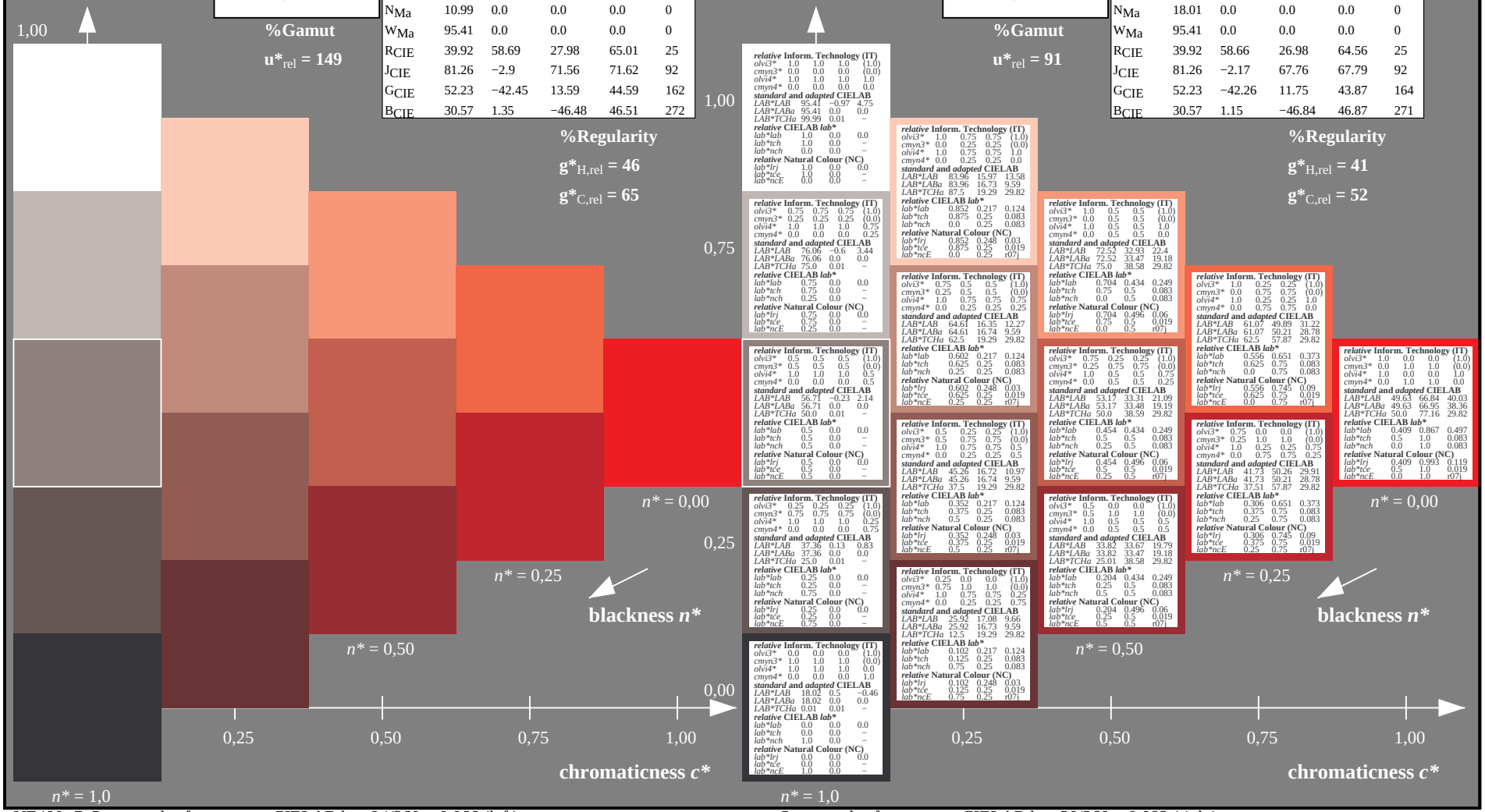
%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



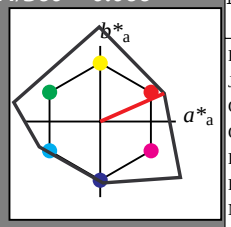
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 30/360 = 0.083 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

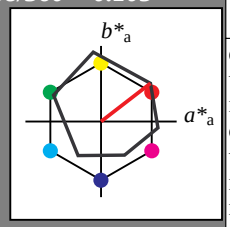
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 38/360 = 0.105$
lab*tch* and *lab*nch

D65: hue O
LCH*Ma: 48 83 38
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

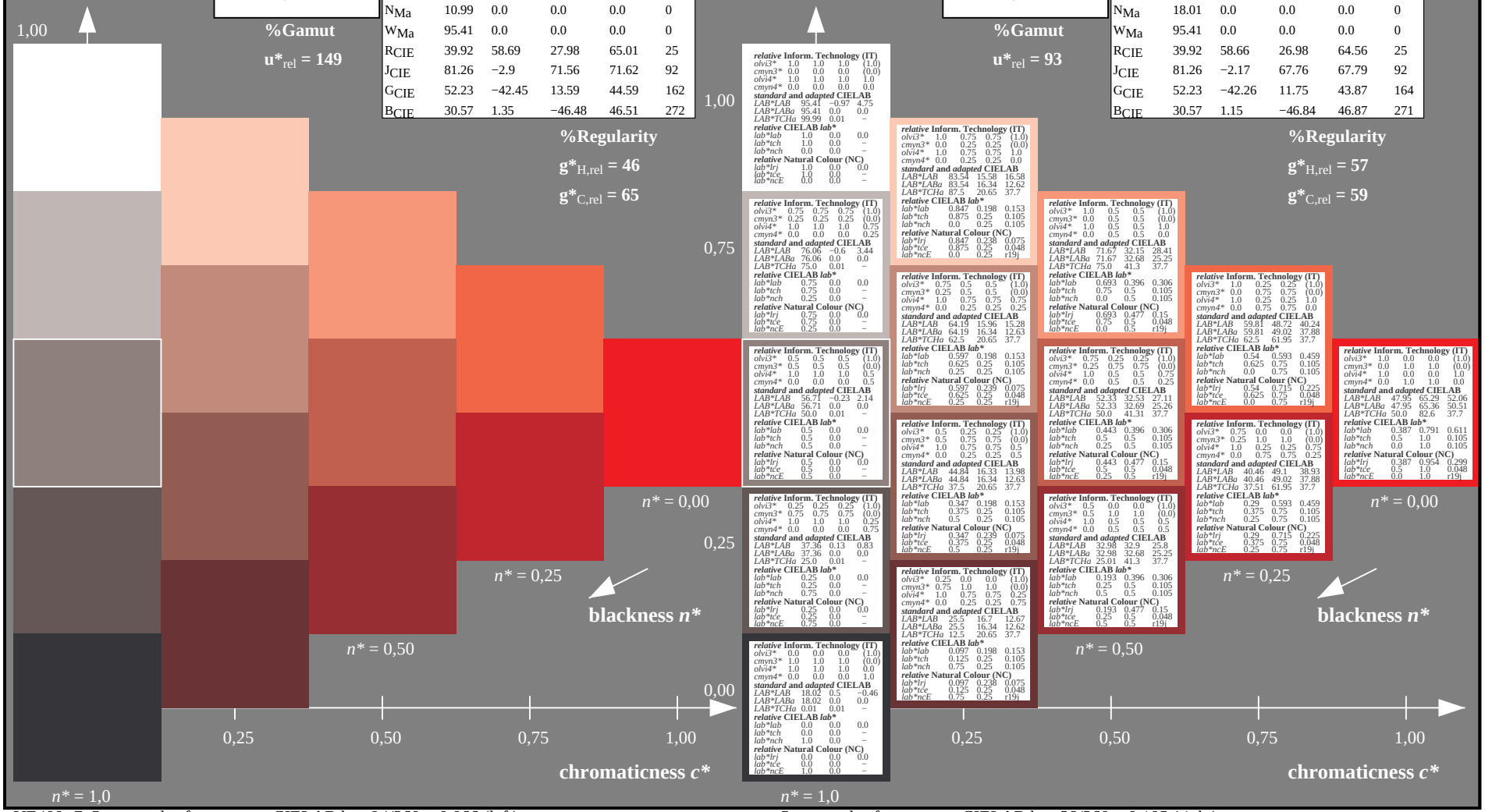
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



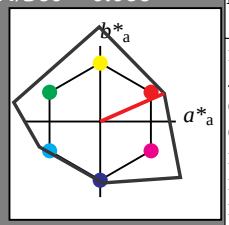
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

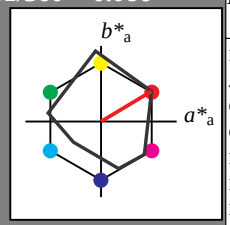
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 31/360 = 0.086$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 50 78 31
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

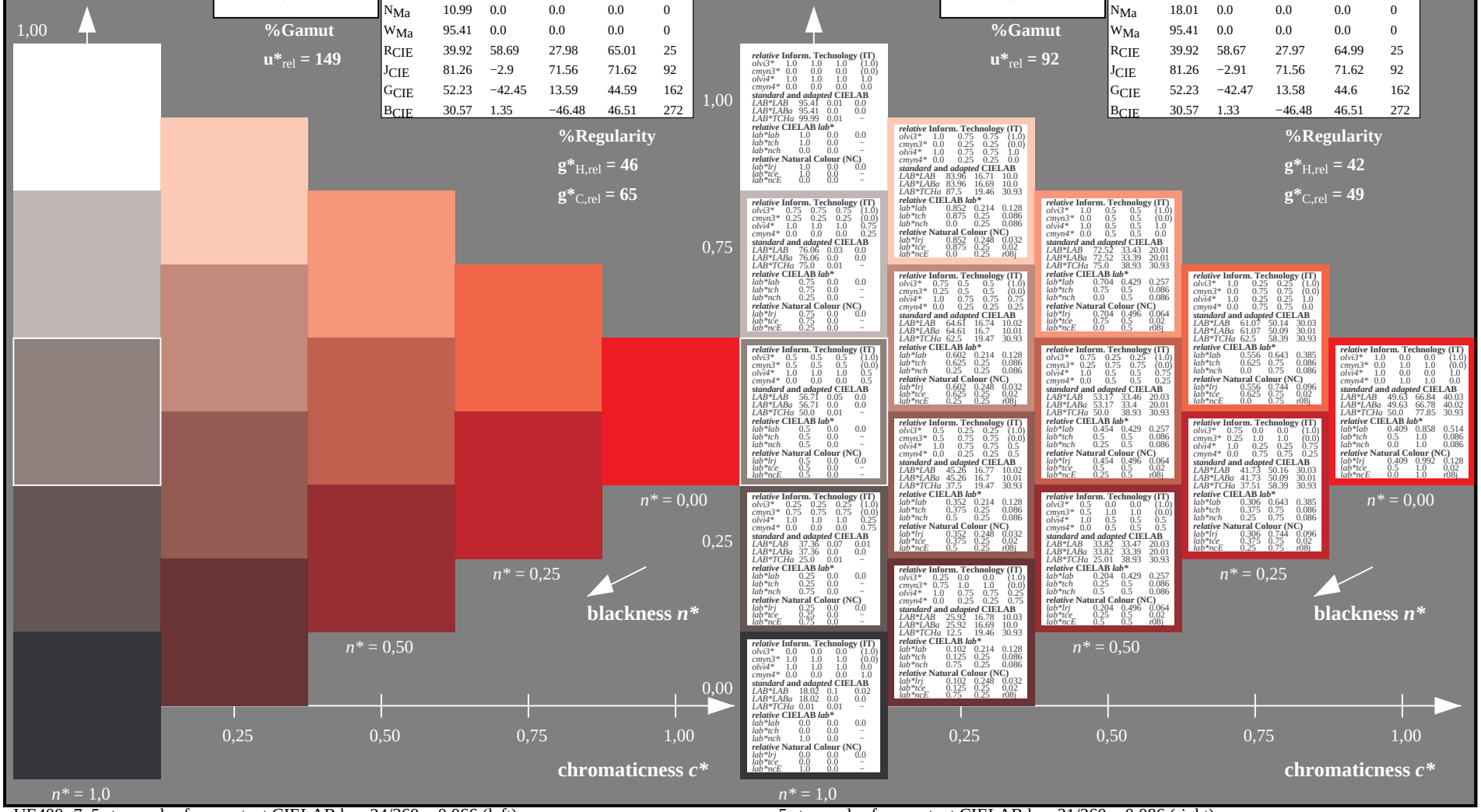
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



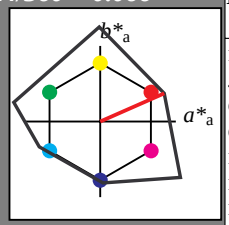
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 31/360 = 0.086 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

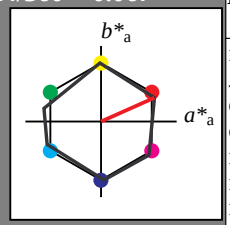
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 77 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

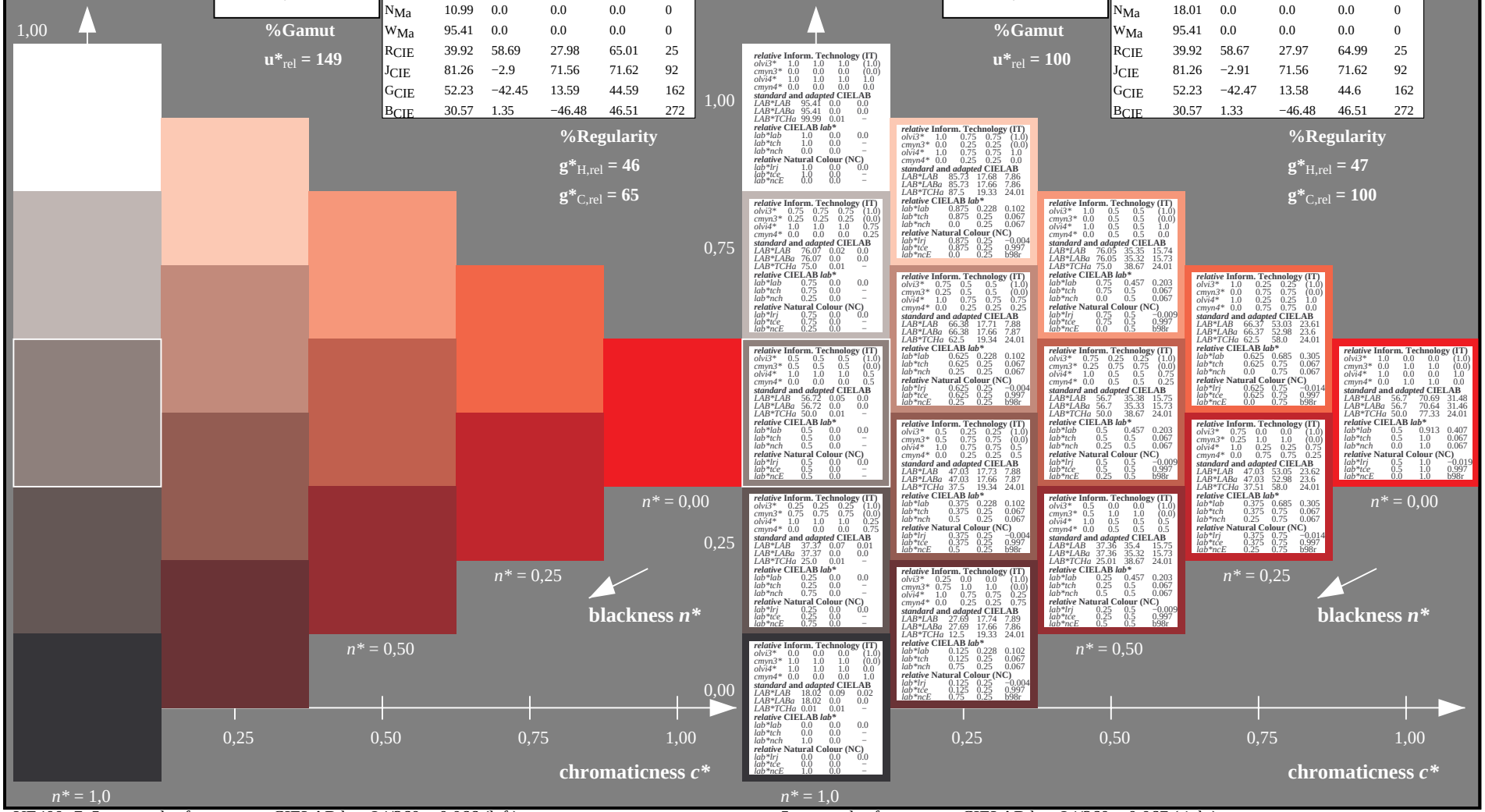
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



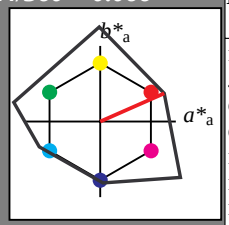
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

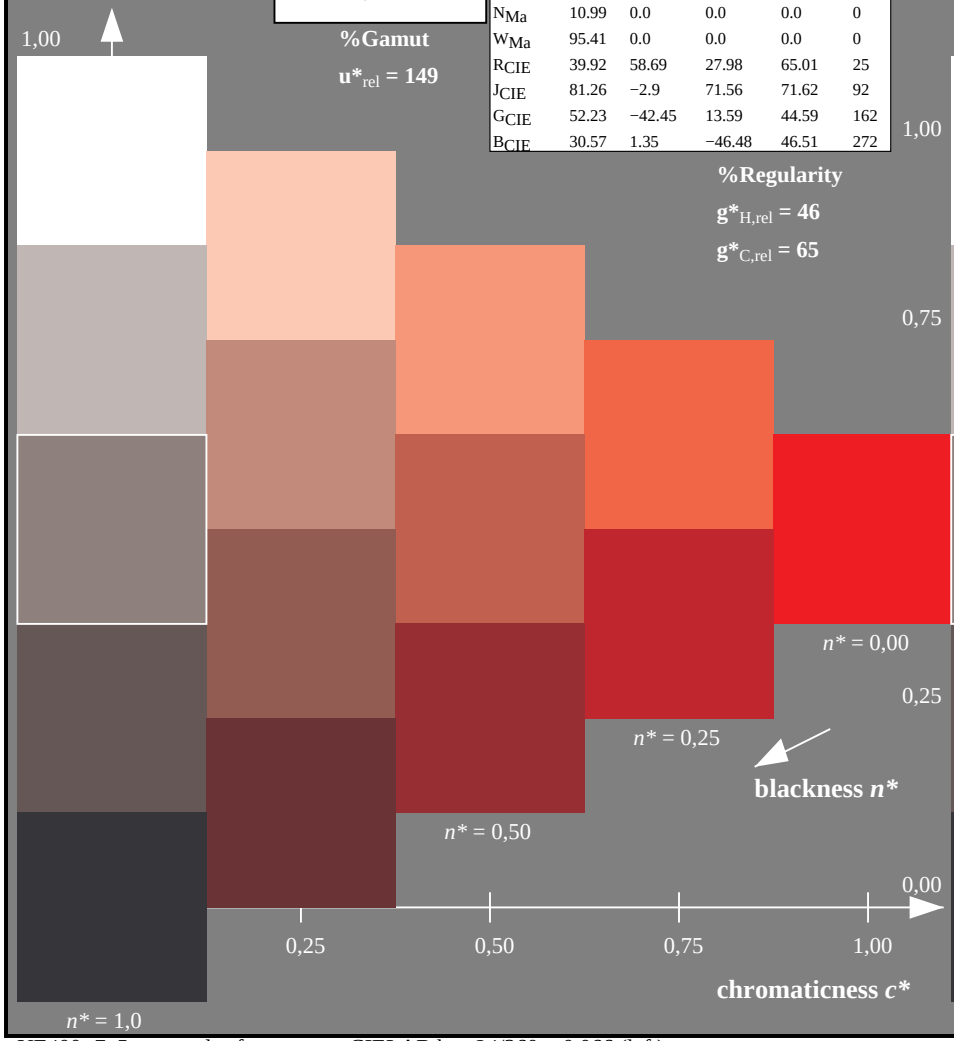
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

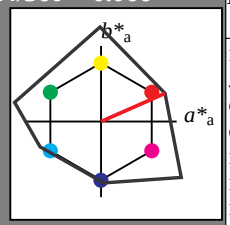
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

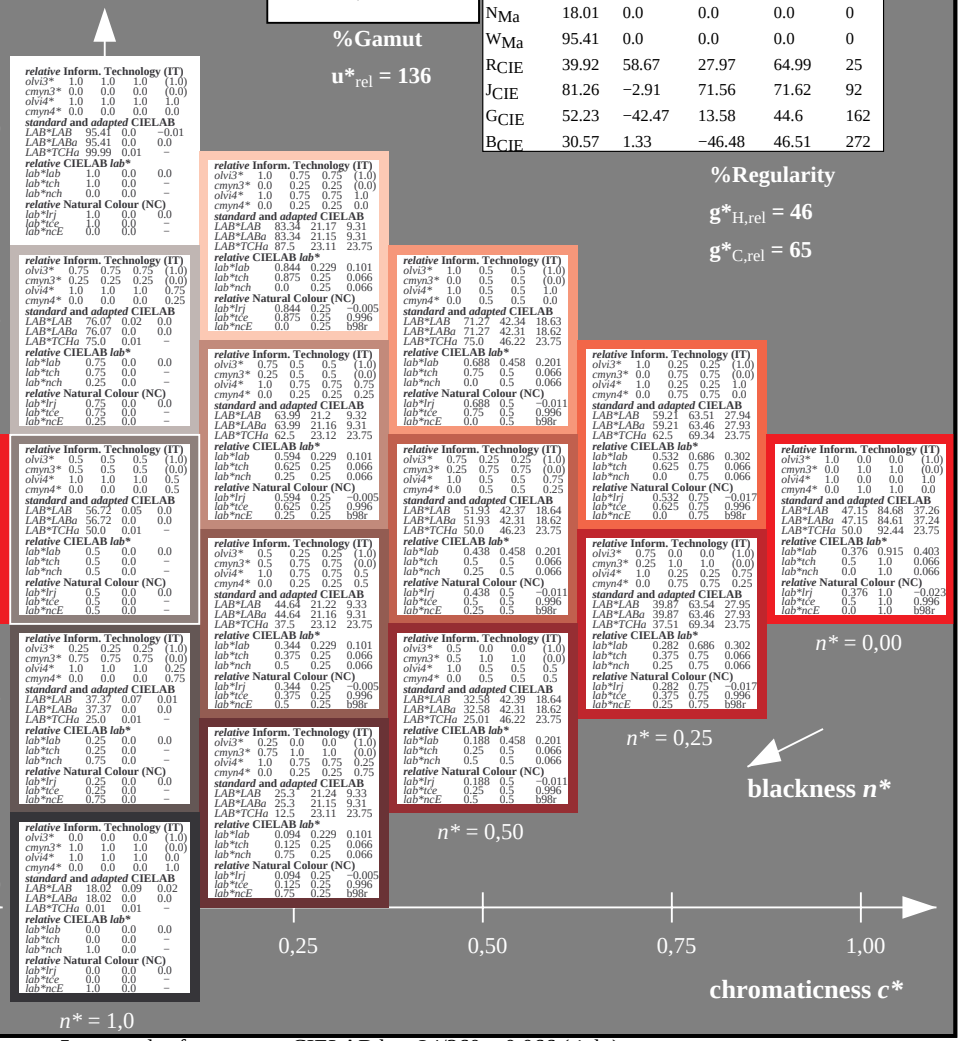
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



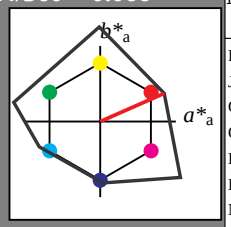
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

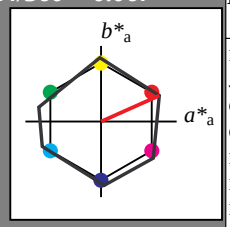
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 24/360 = 0.067$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 84 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

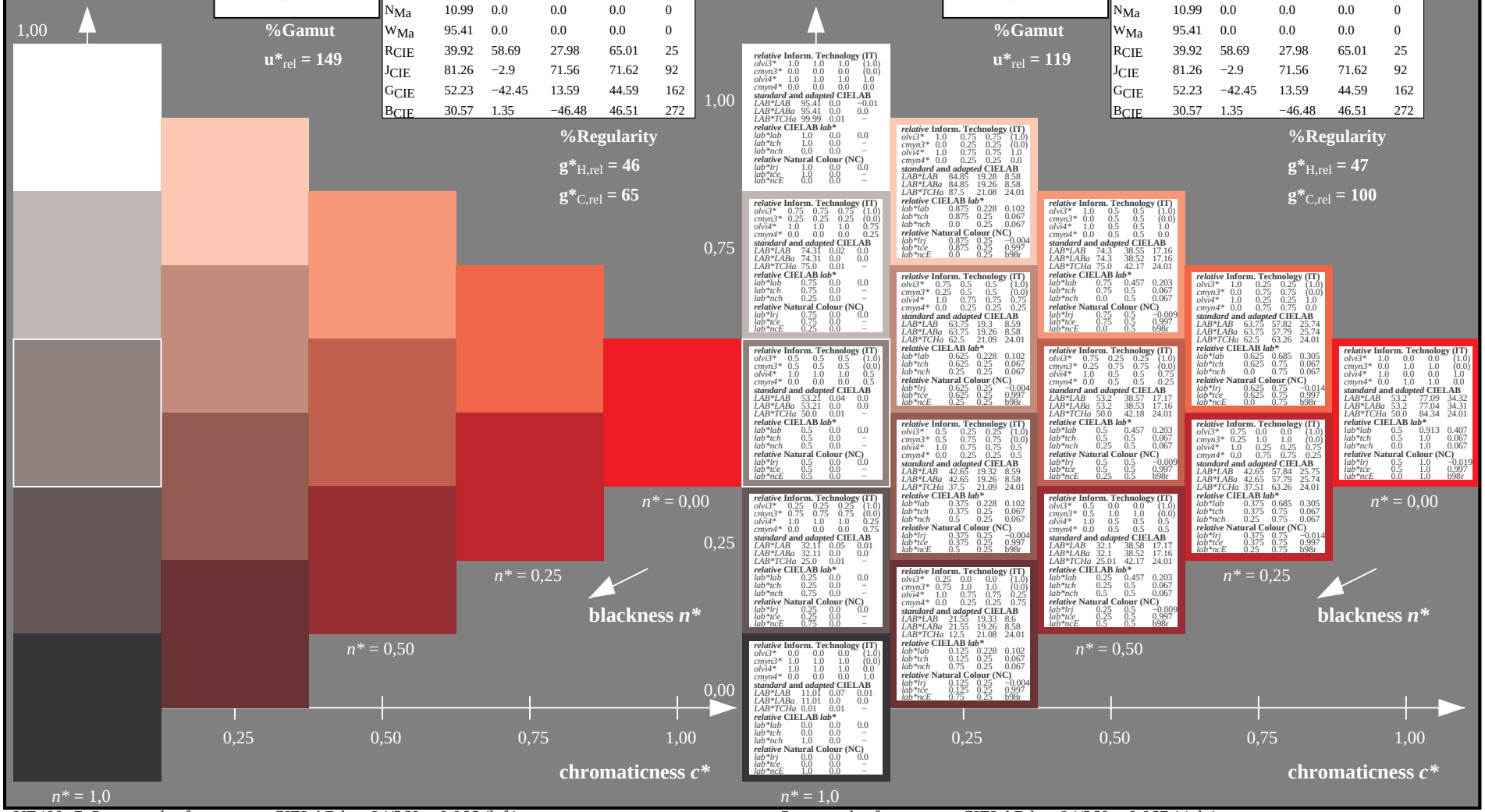
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



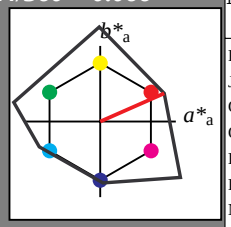
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.067 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

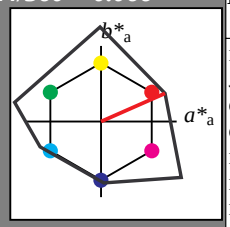
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 24/360 = 0.066$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 47 92 24
rgb*Ma: 1.0 0.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

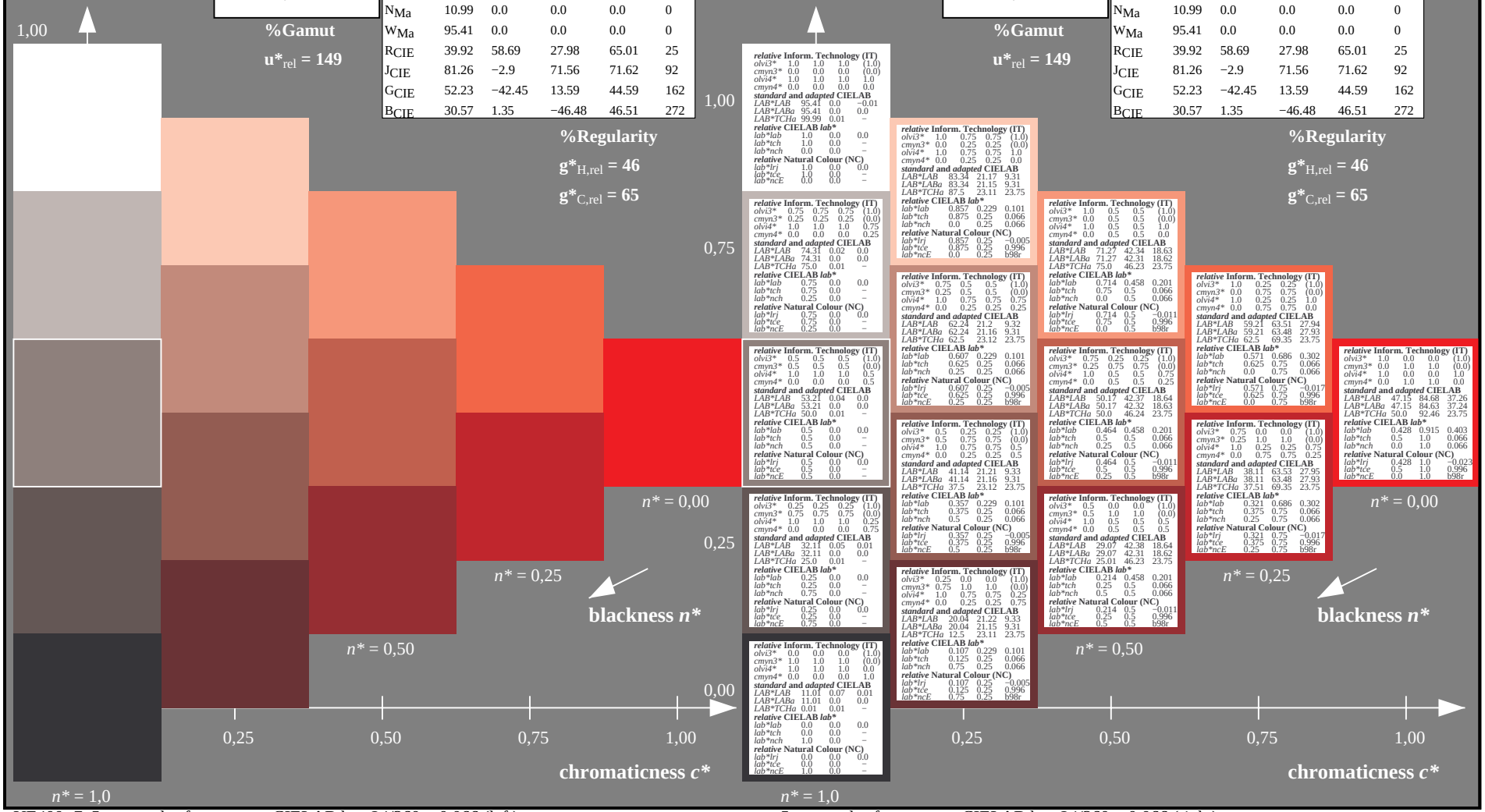
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



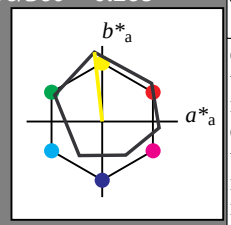
UE400−7, 5 step scales for constant CIELAB hue 24/360 = 0.066 (left)

5 step scales for constant CIELAB hue 24/360 = 0.066 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

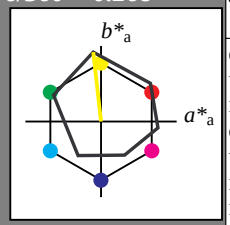
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 57$

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

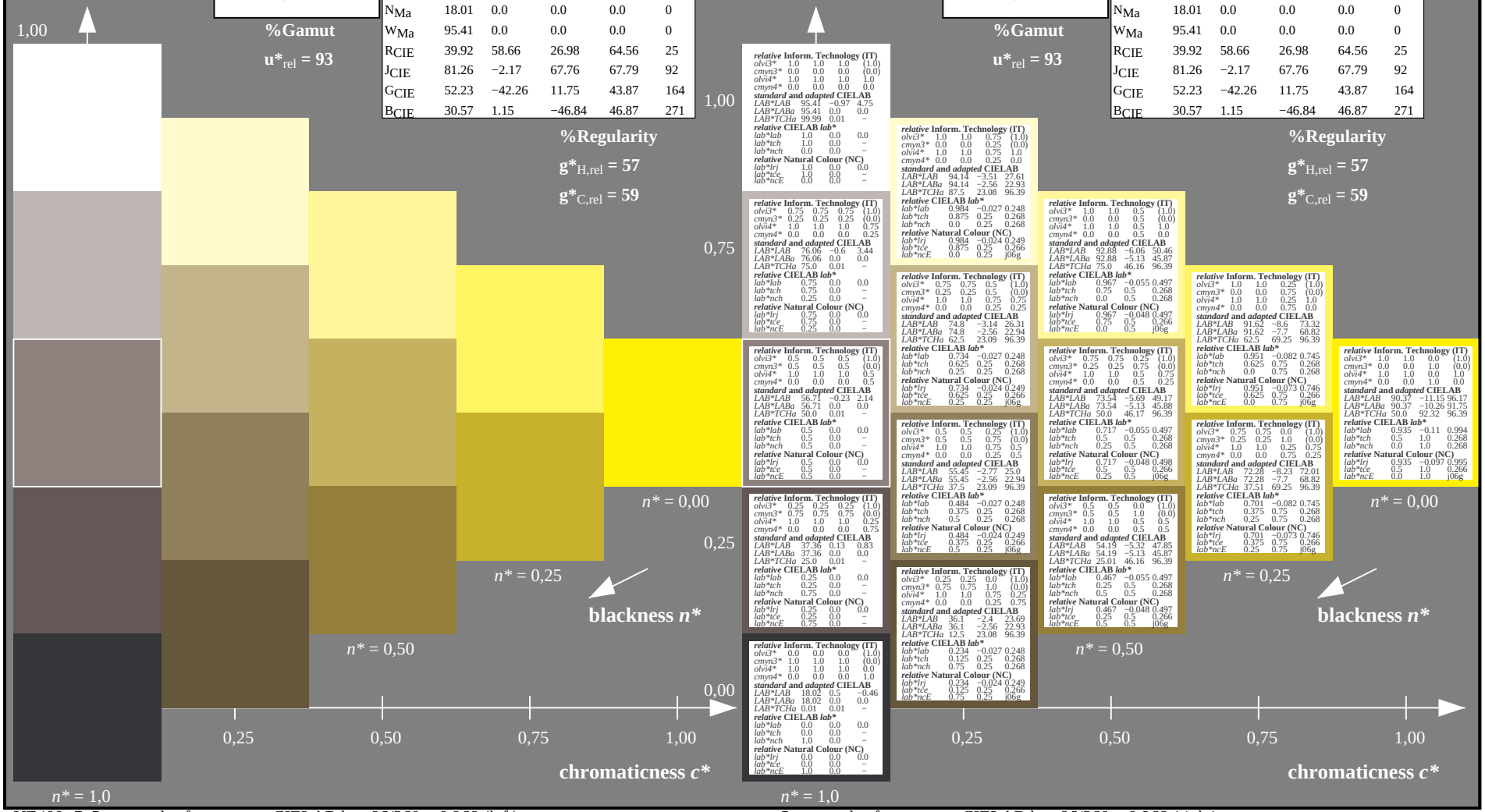
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



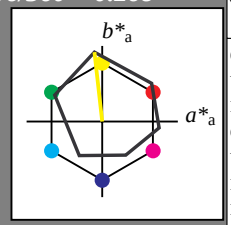
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

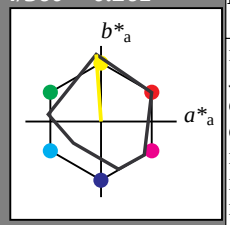
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

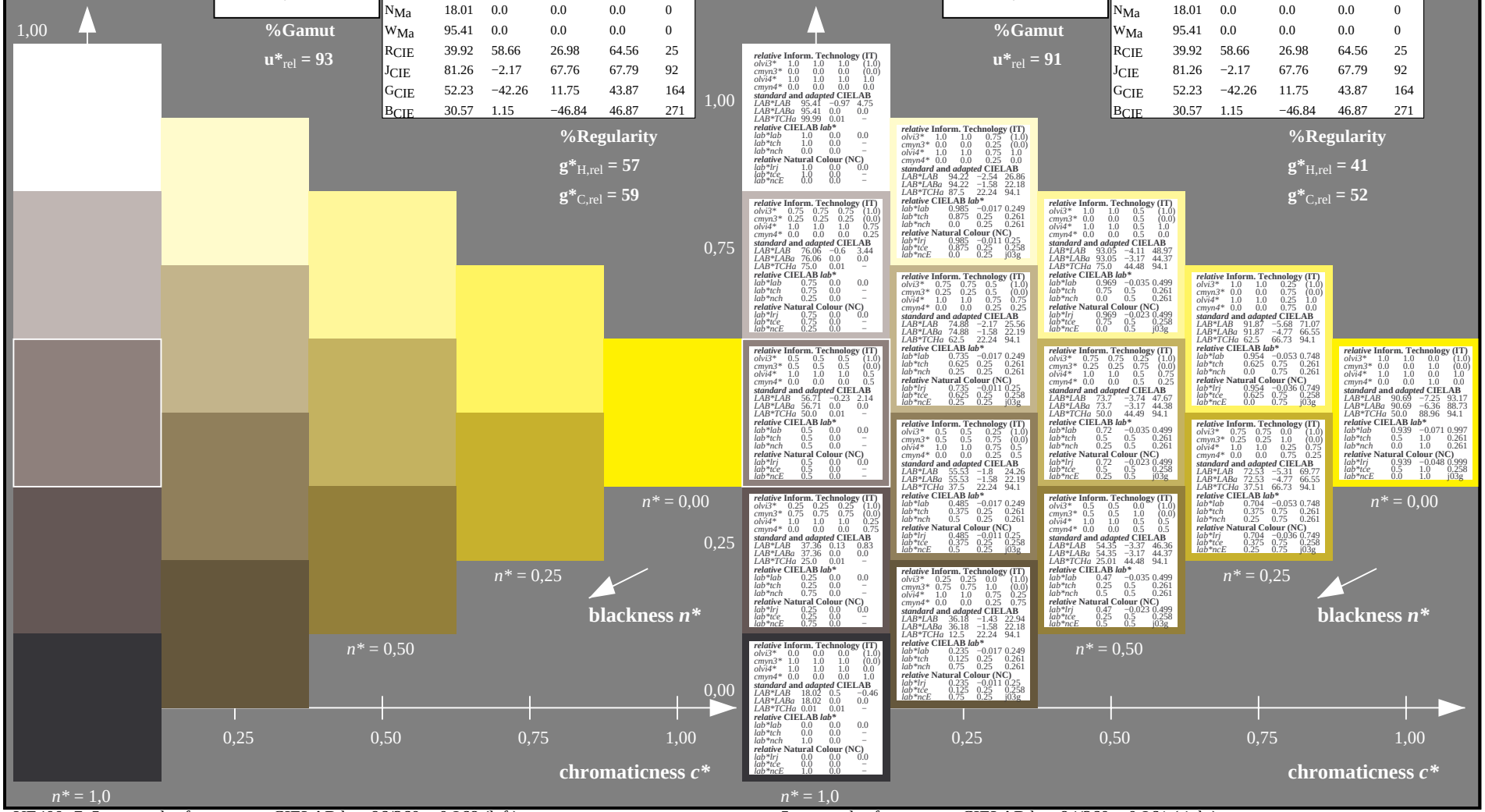
%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



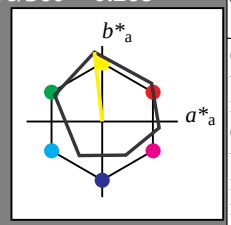
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

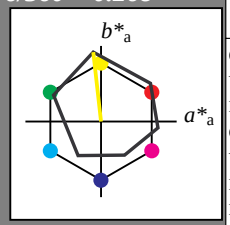
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

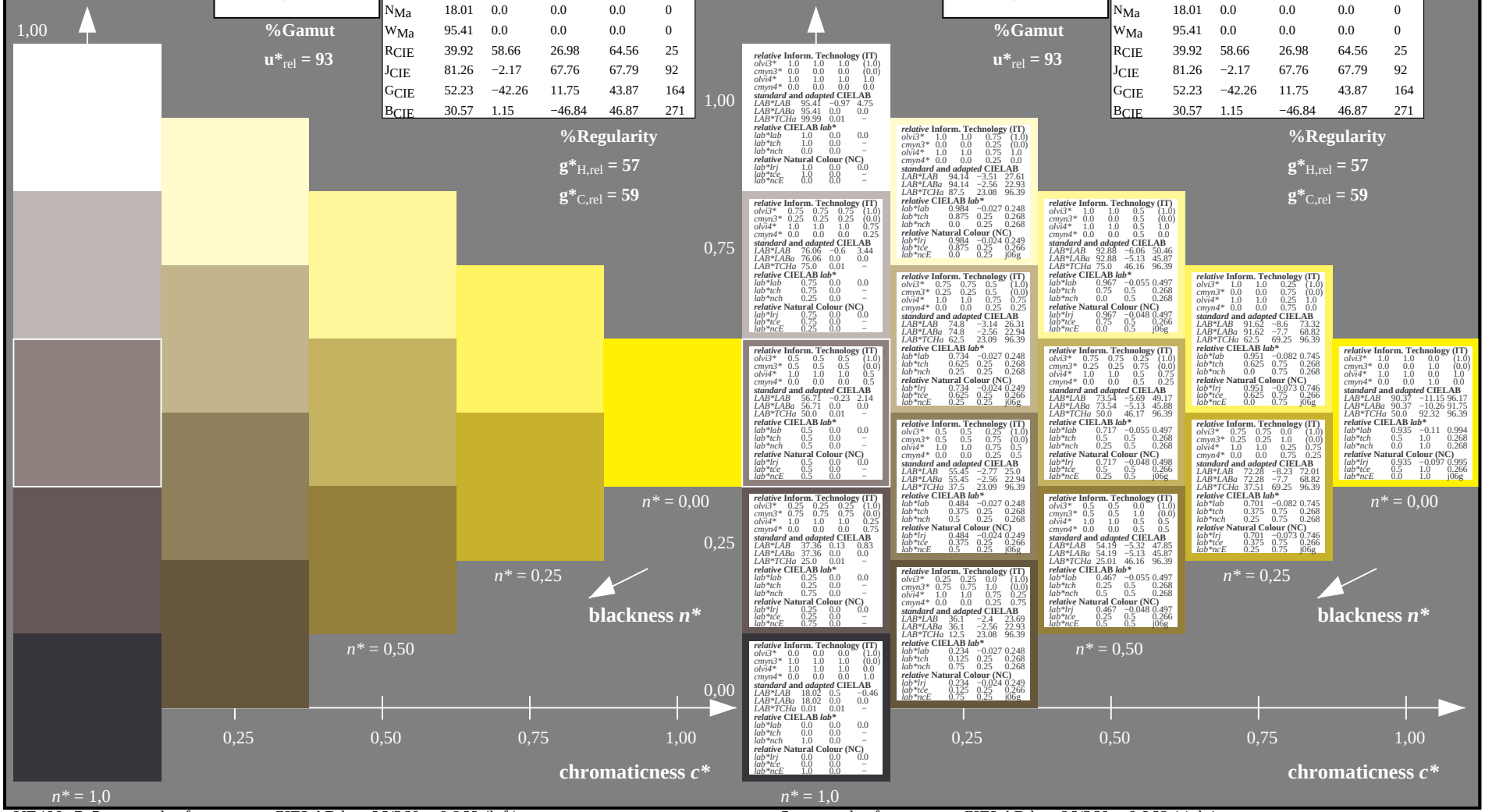
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



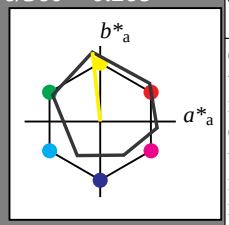
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

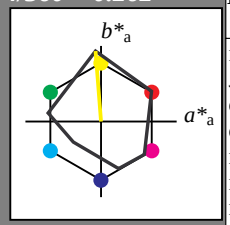
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

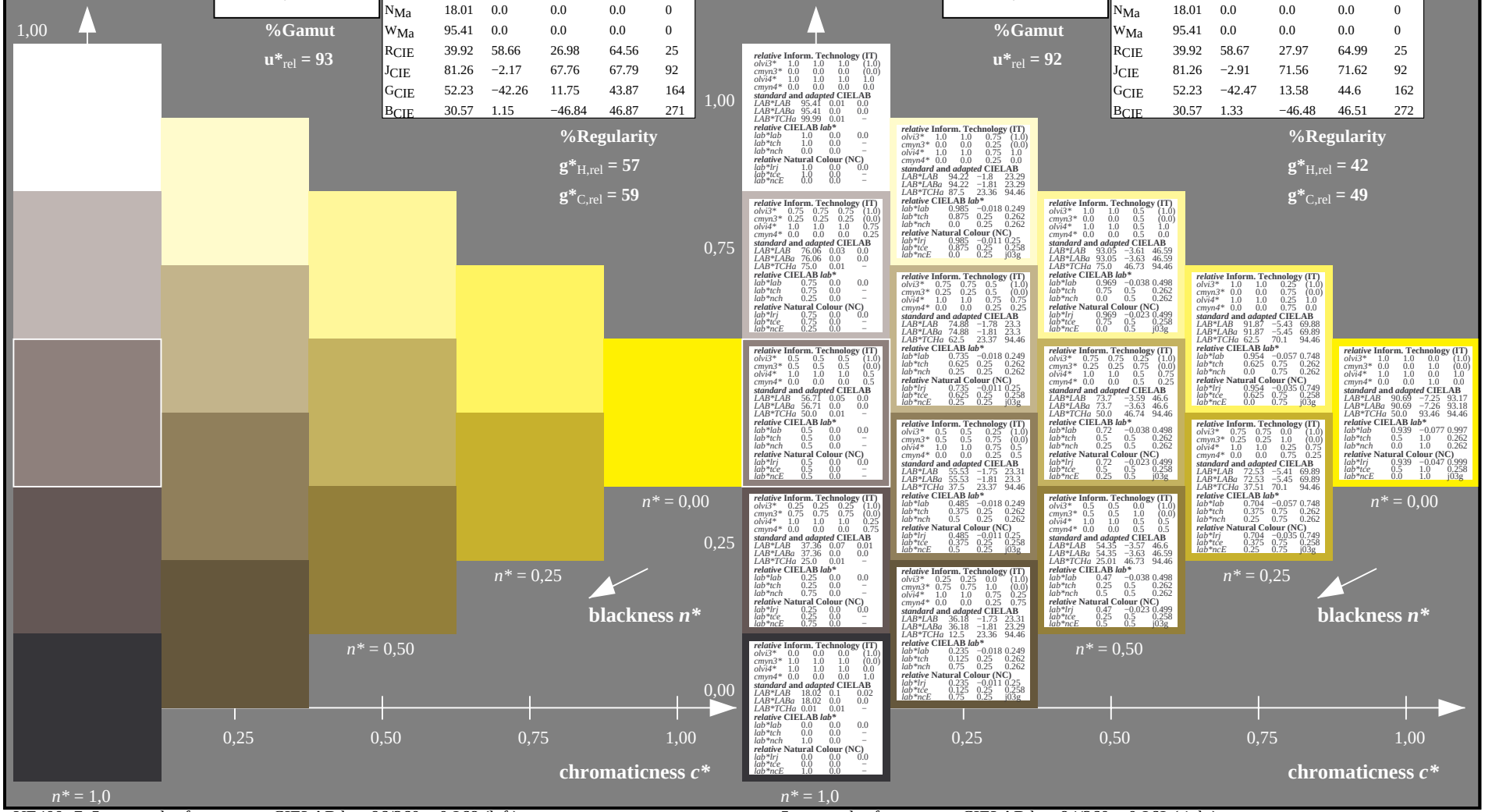
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



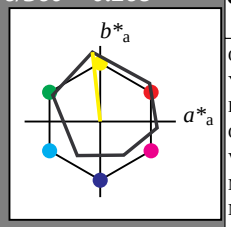
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

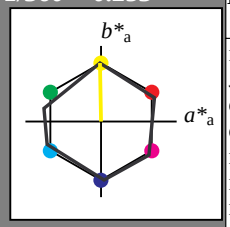
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

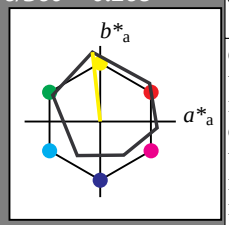
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

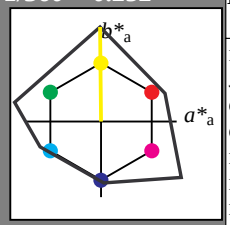
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

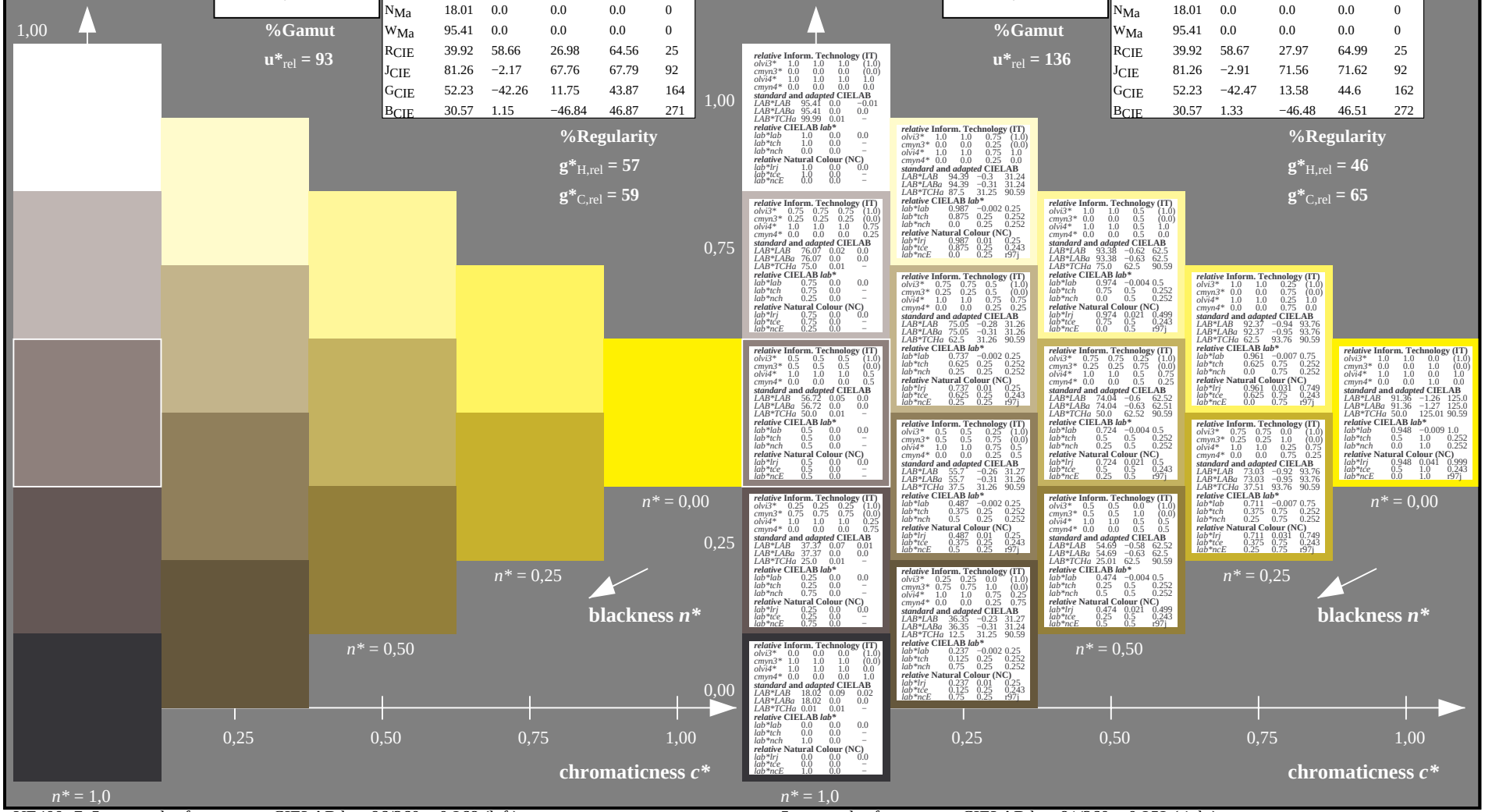
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



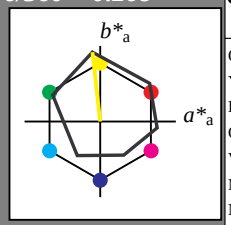
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

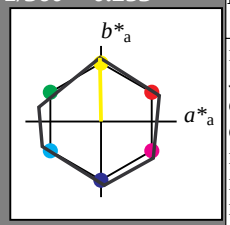
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

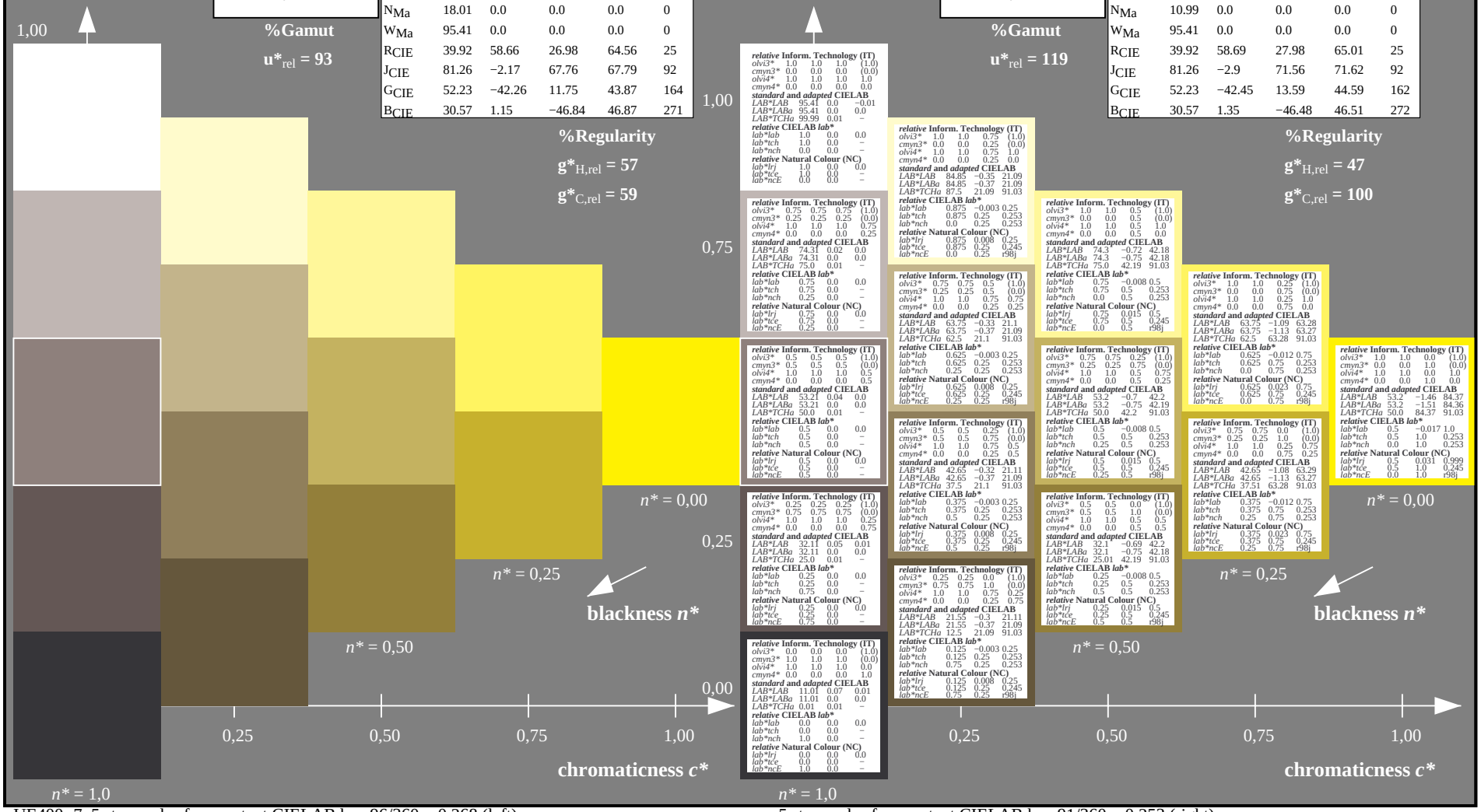
%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



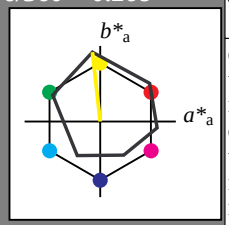
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

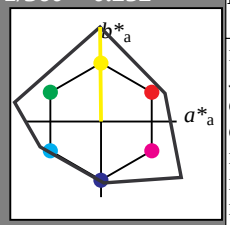
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

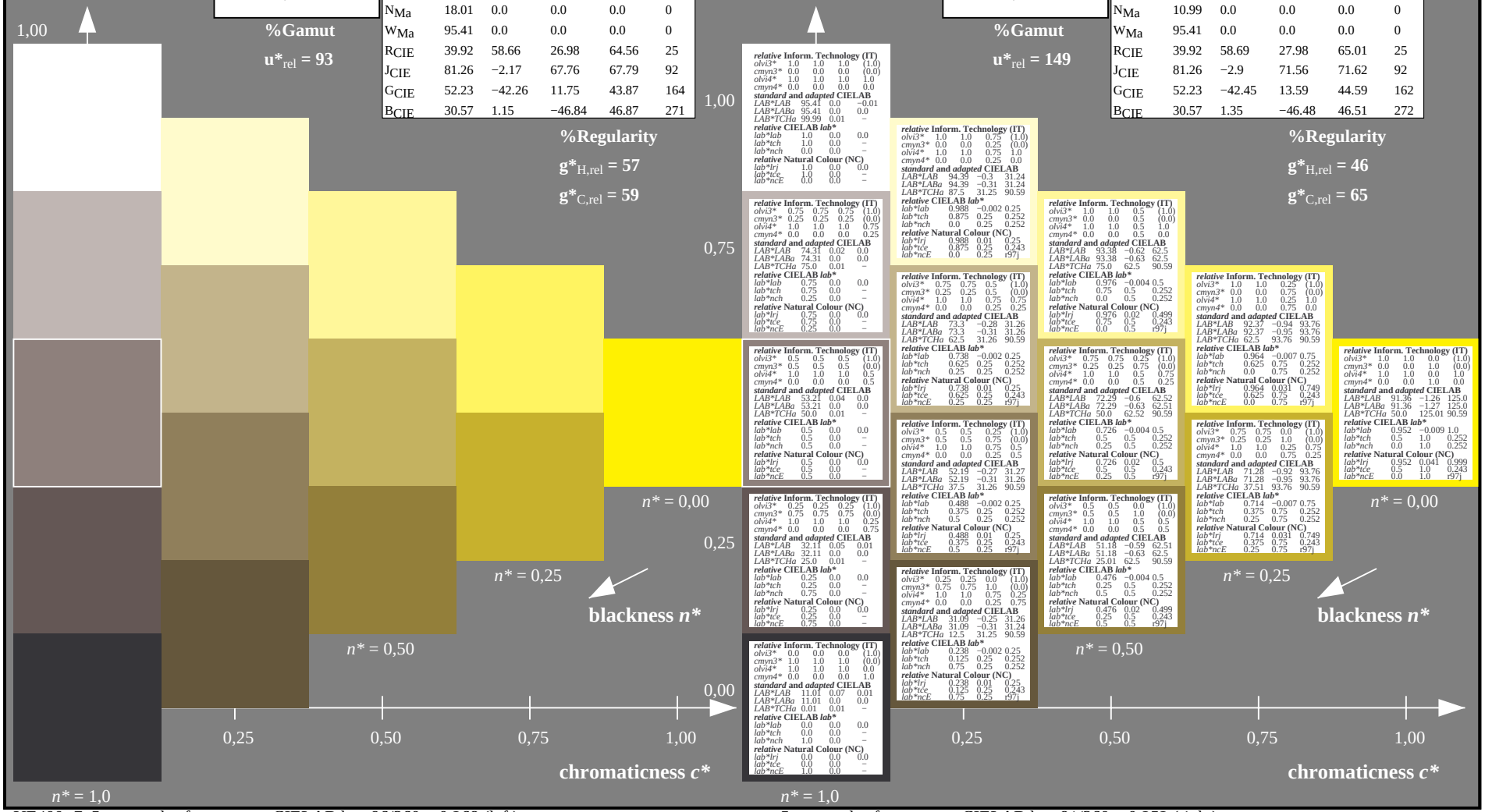
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



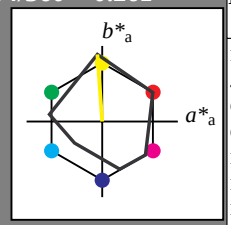
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

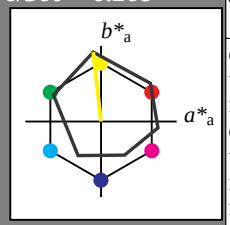
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

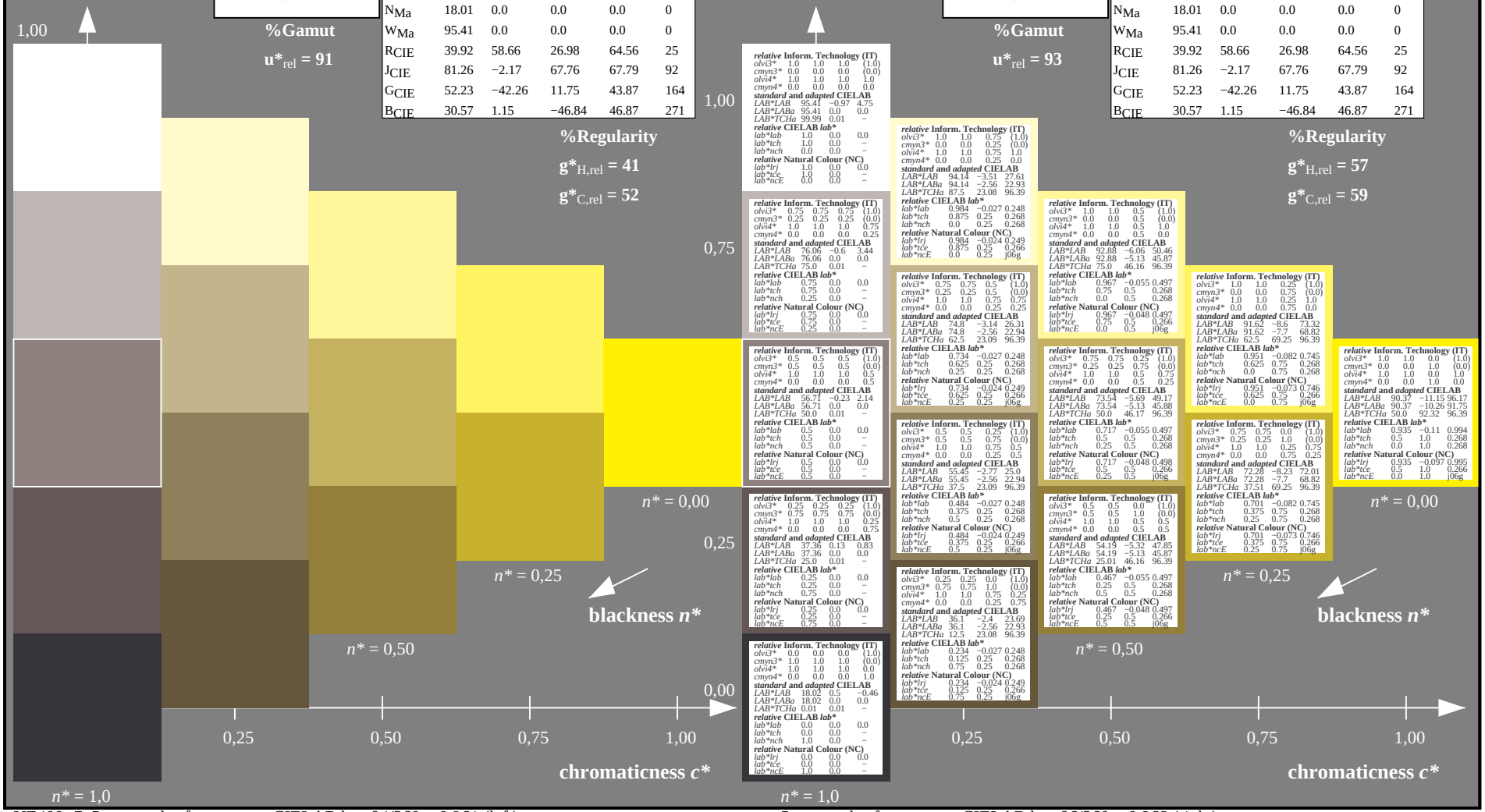
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



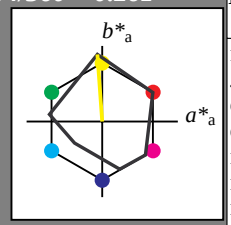
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

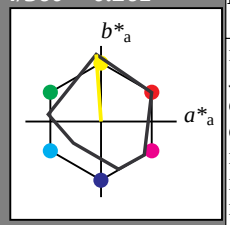
chromaticness c^*

UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

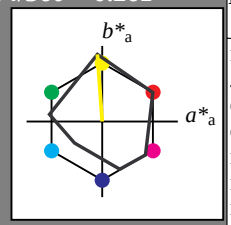
chromaticness c^*

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

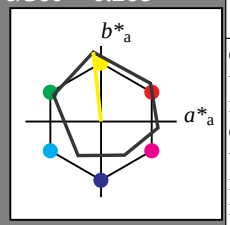
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

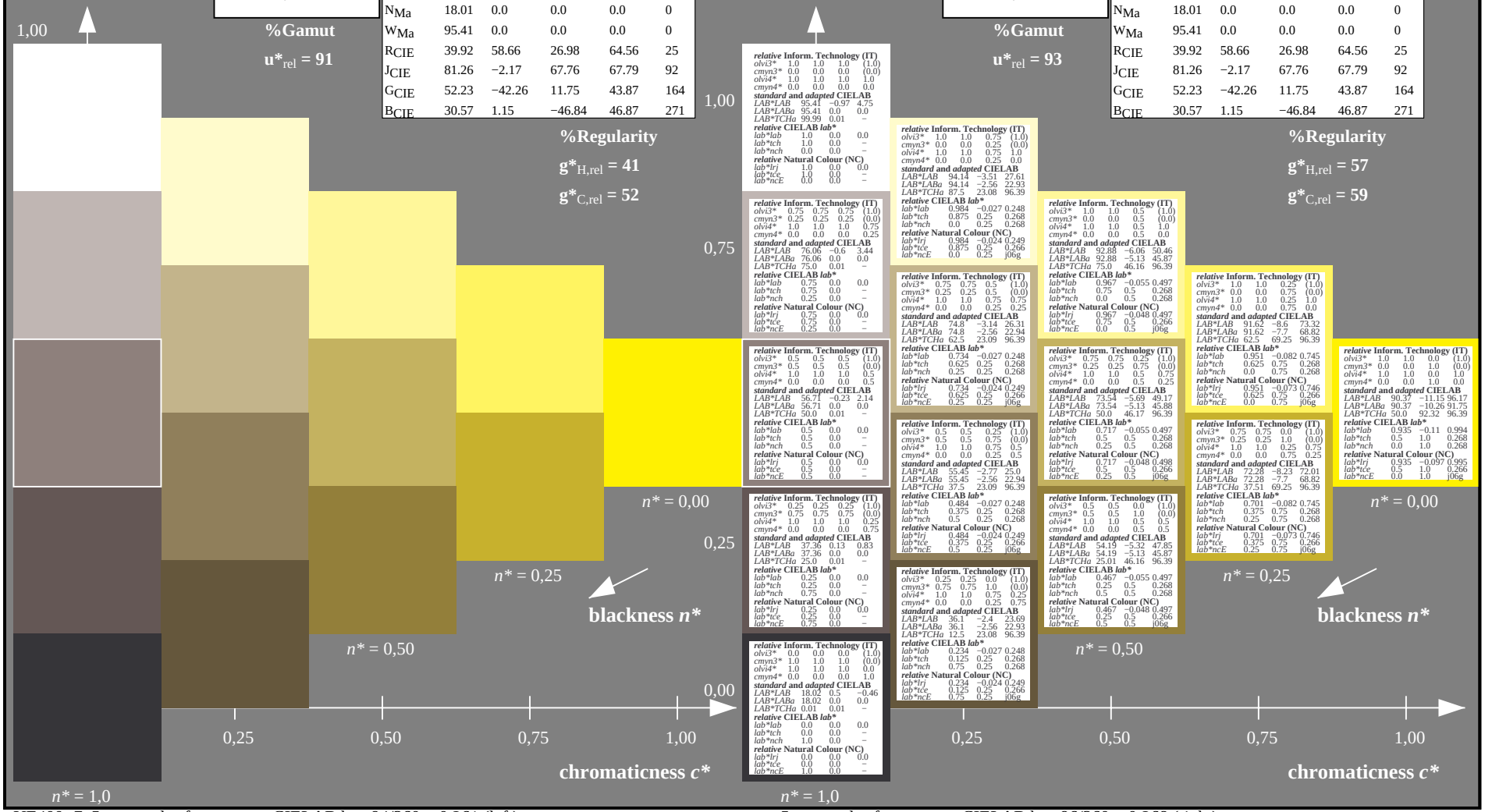
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



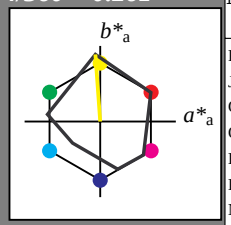
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

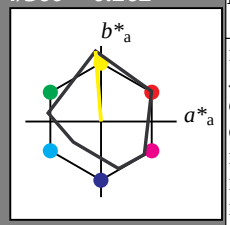
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

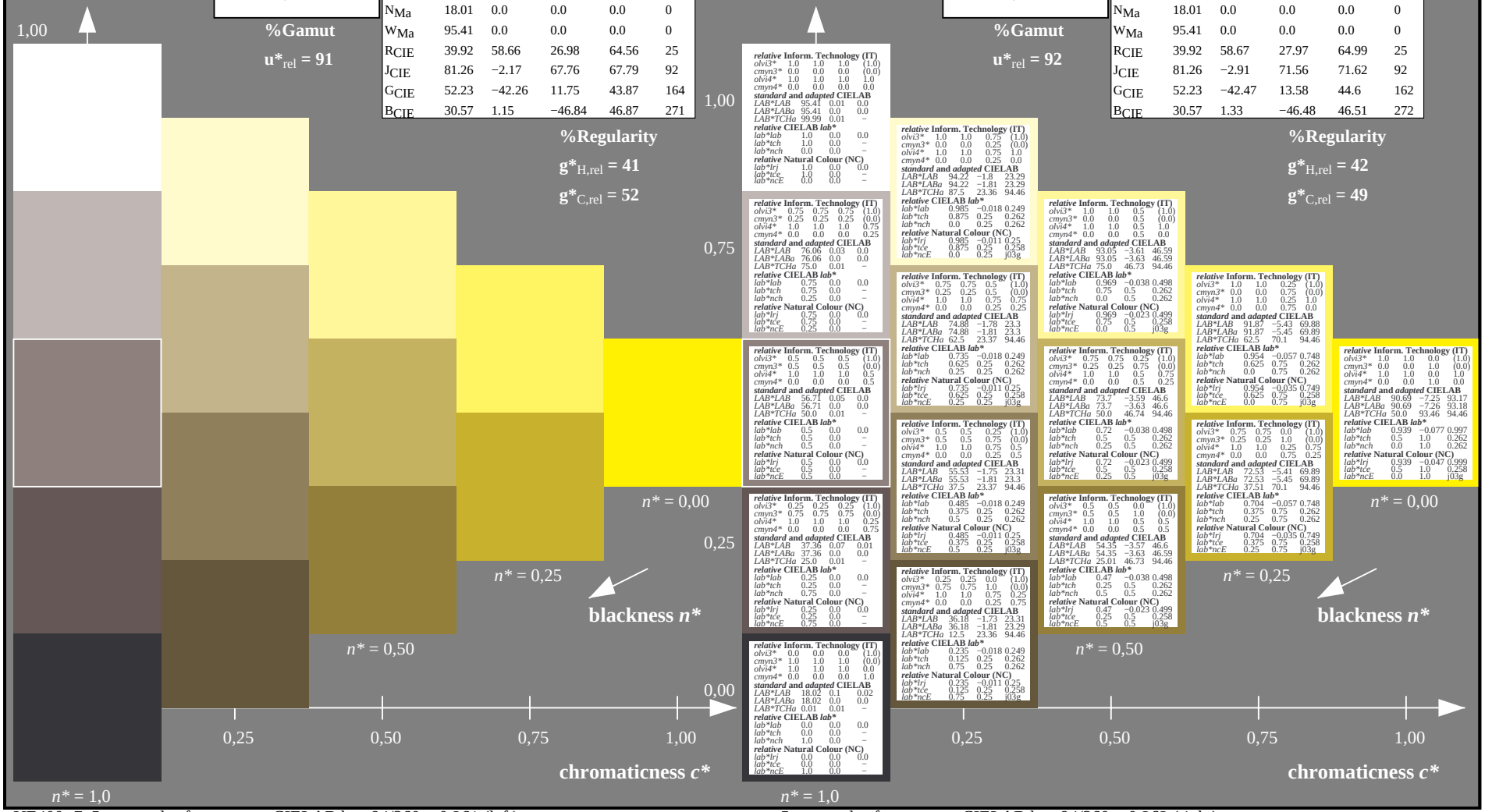
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



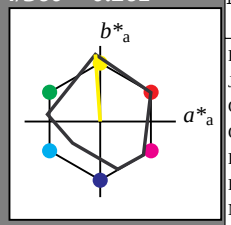
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

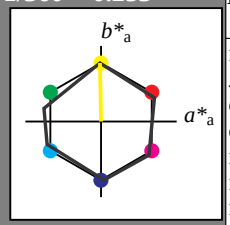
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

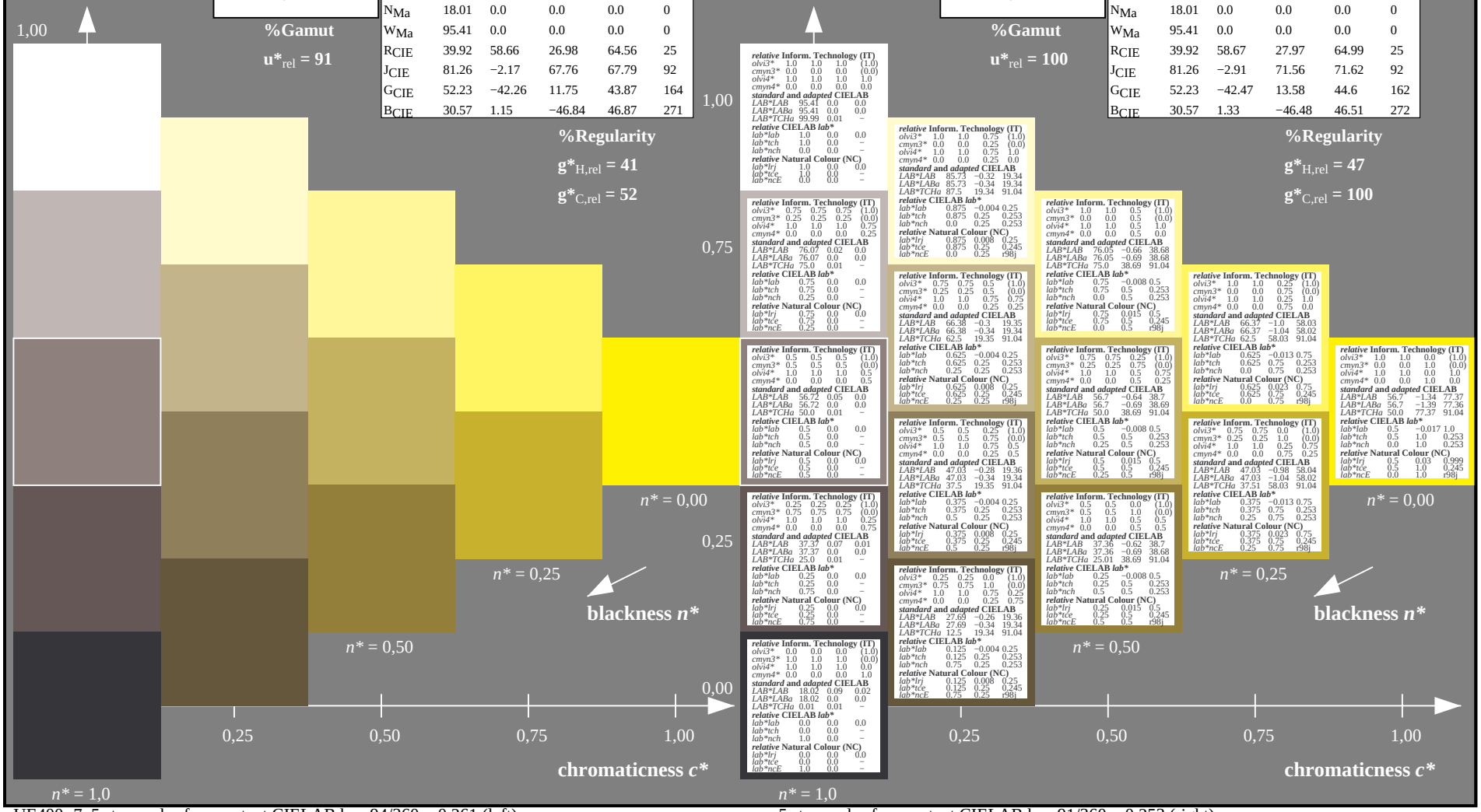
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



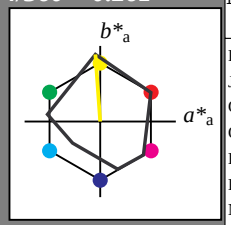
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

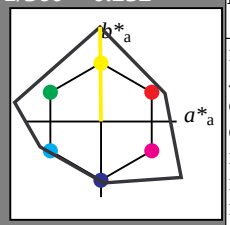
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

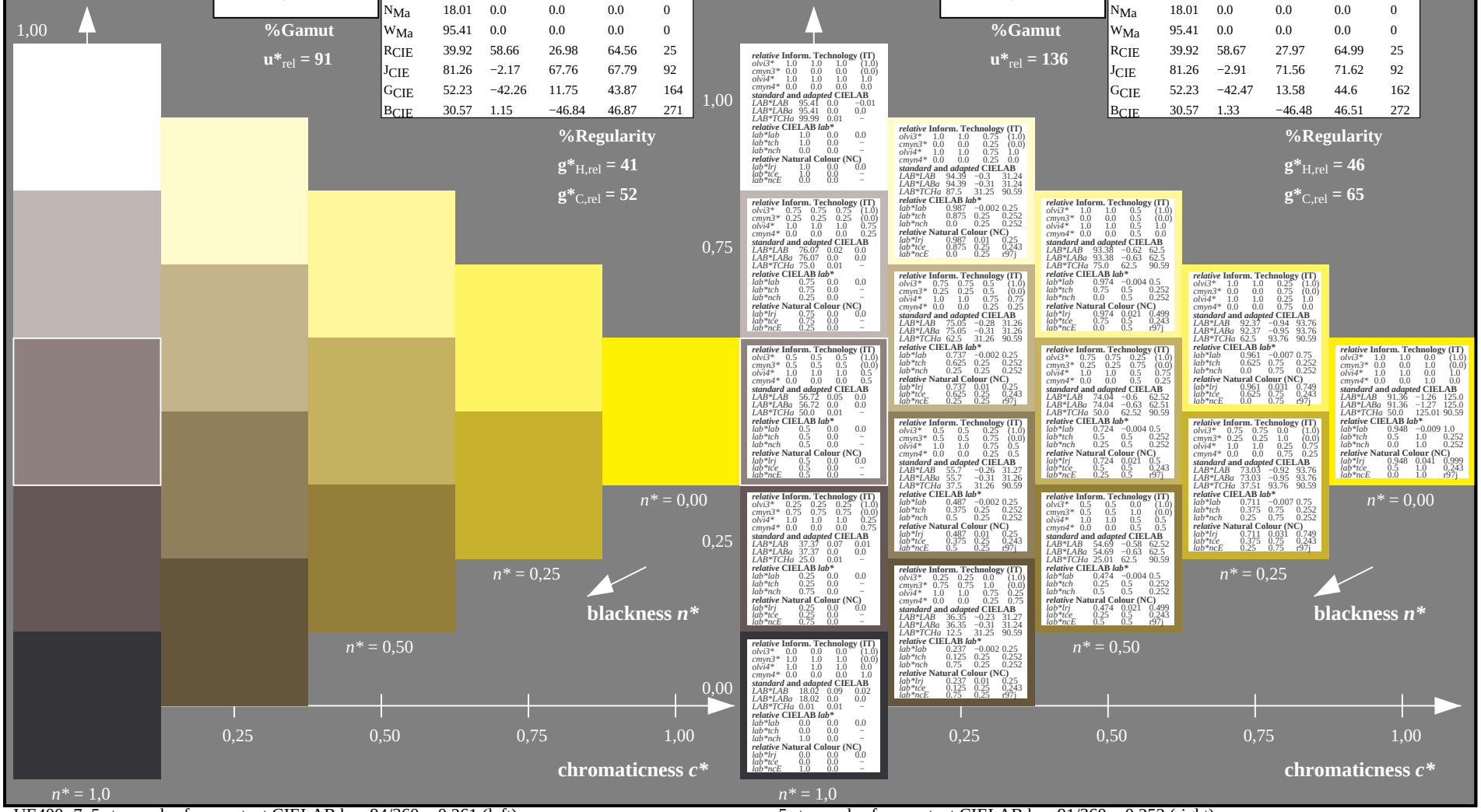
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



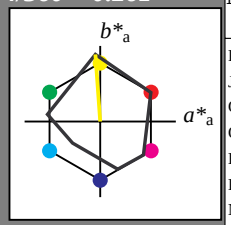
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

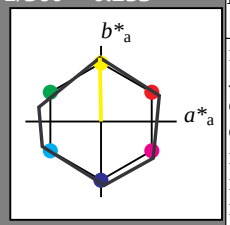
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

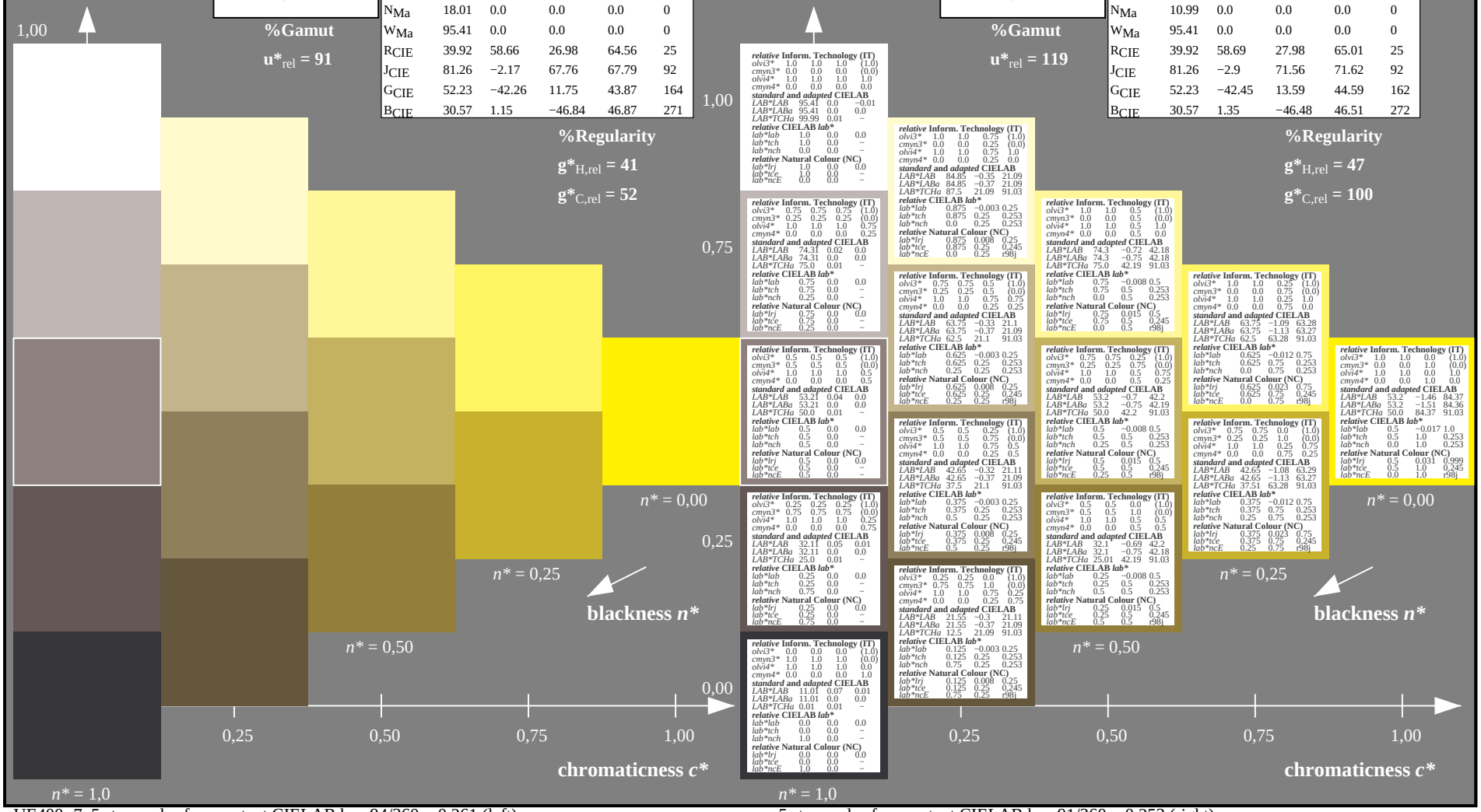
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



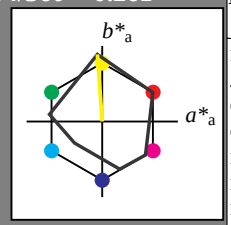
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

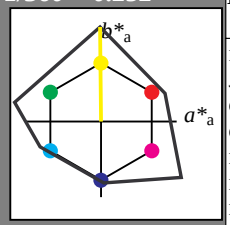
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

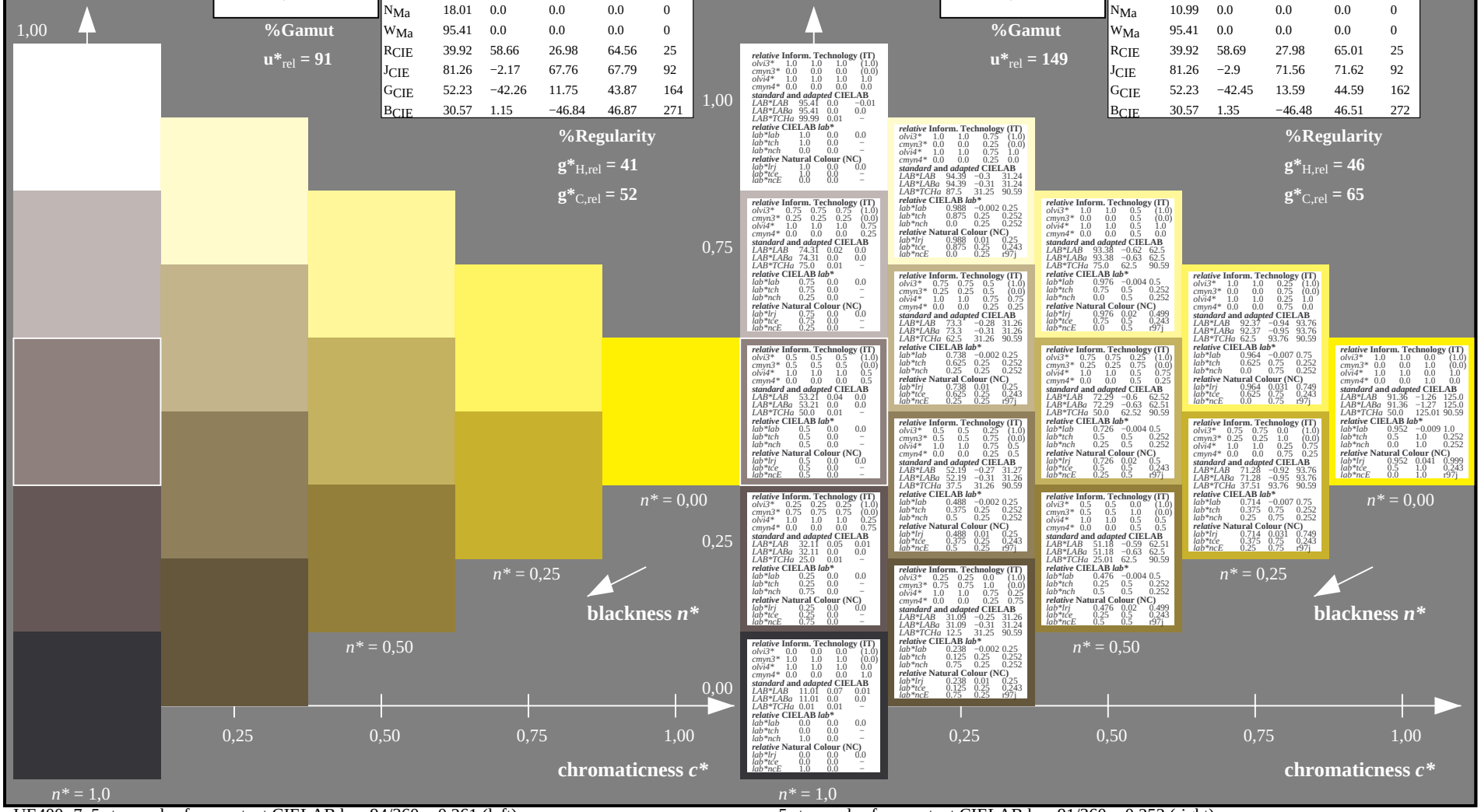
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



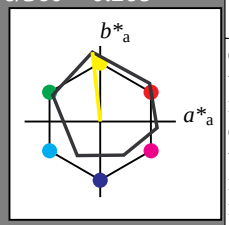
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

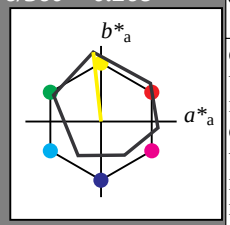
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

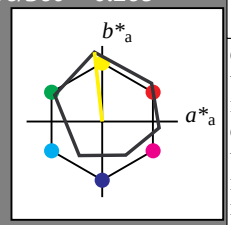
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

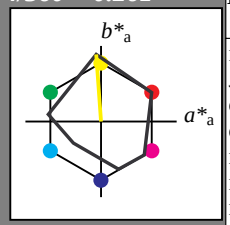
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

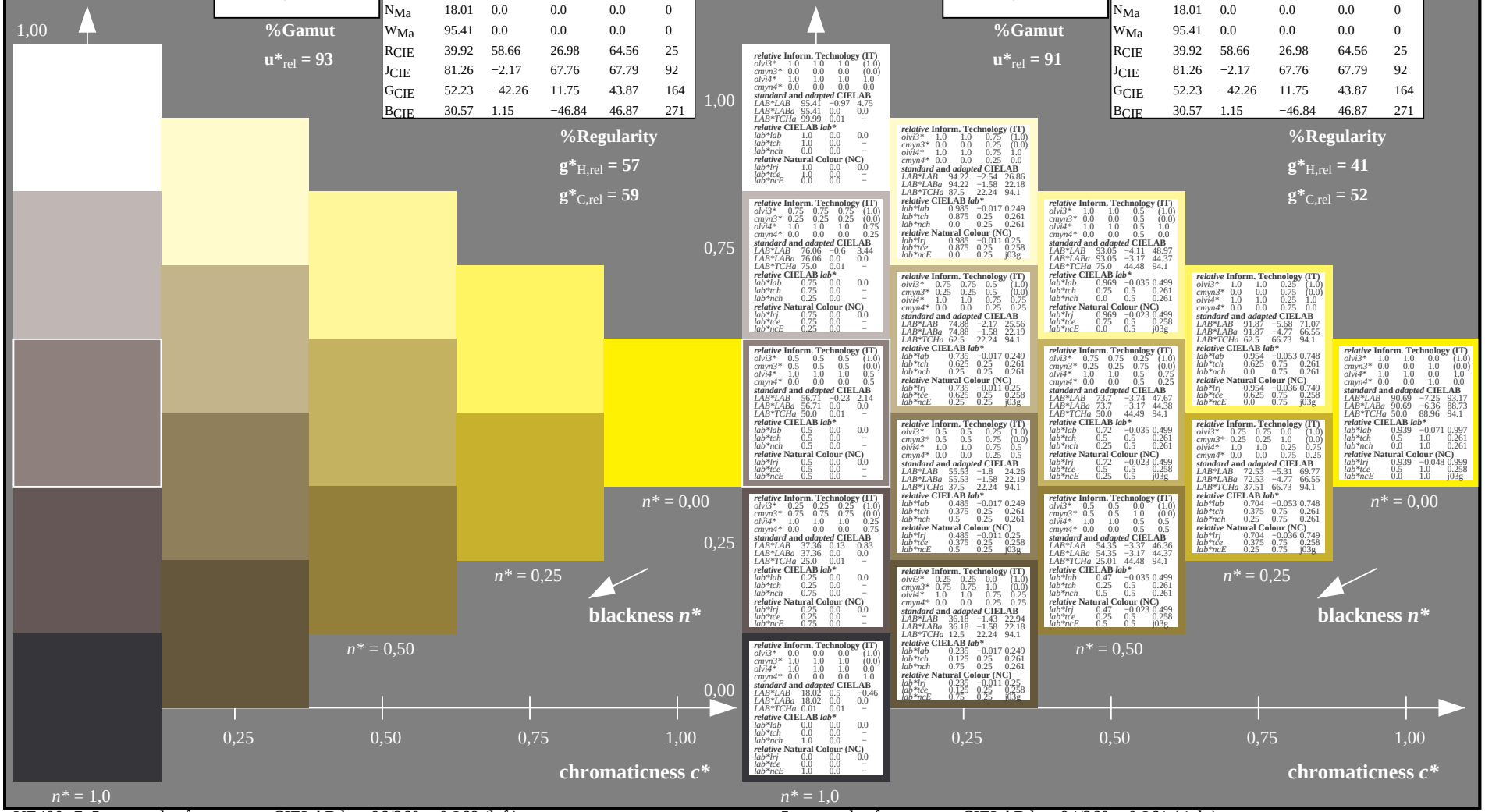
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



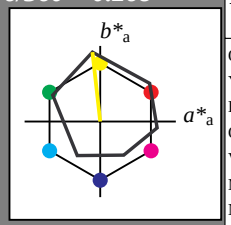
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

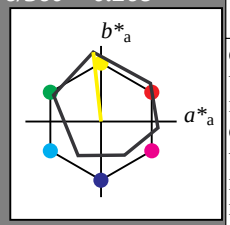
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

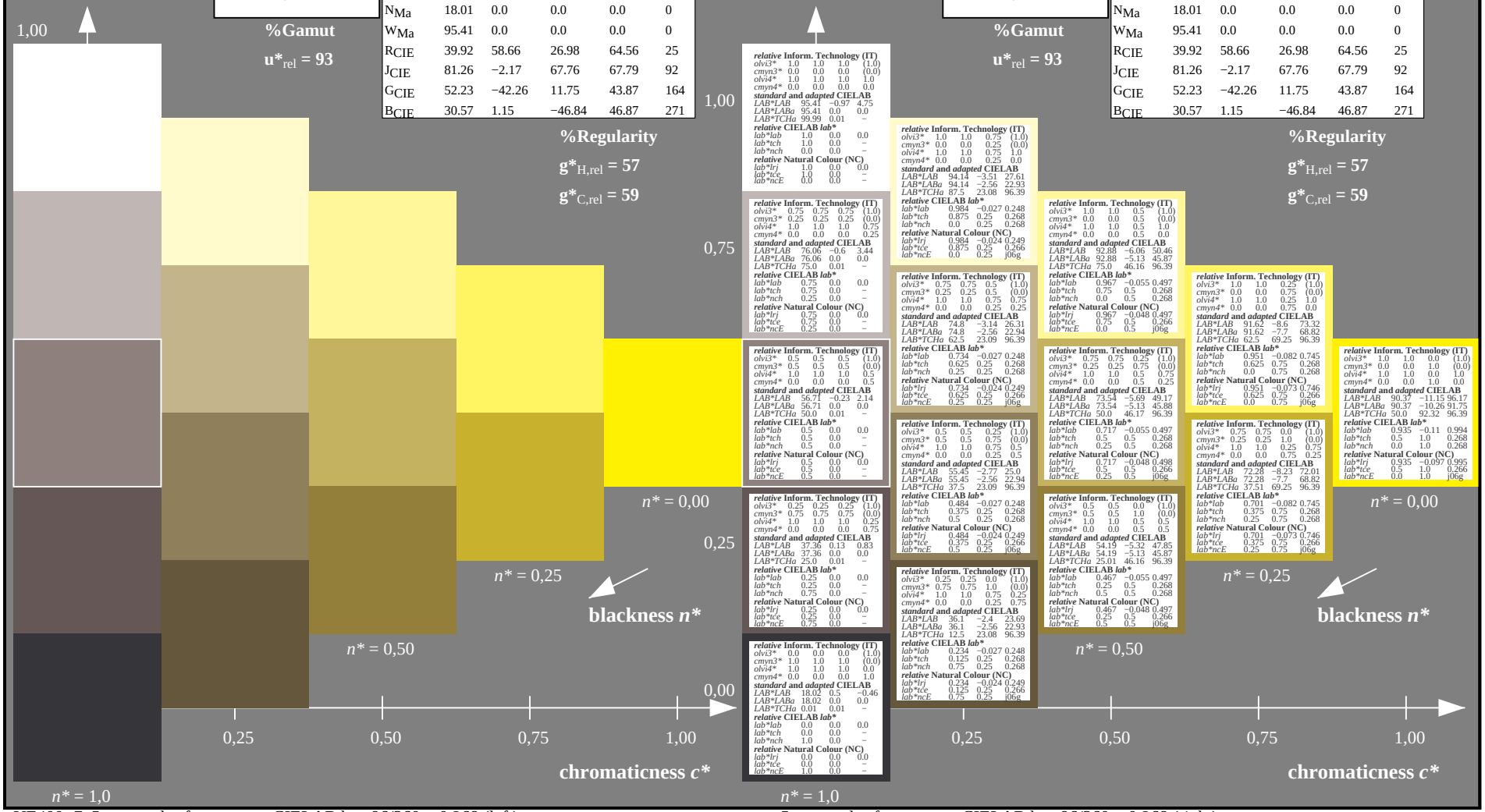
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



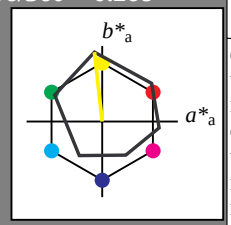
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

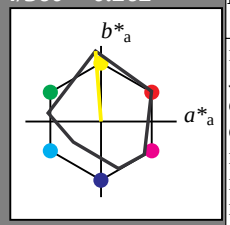
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

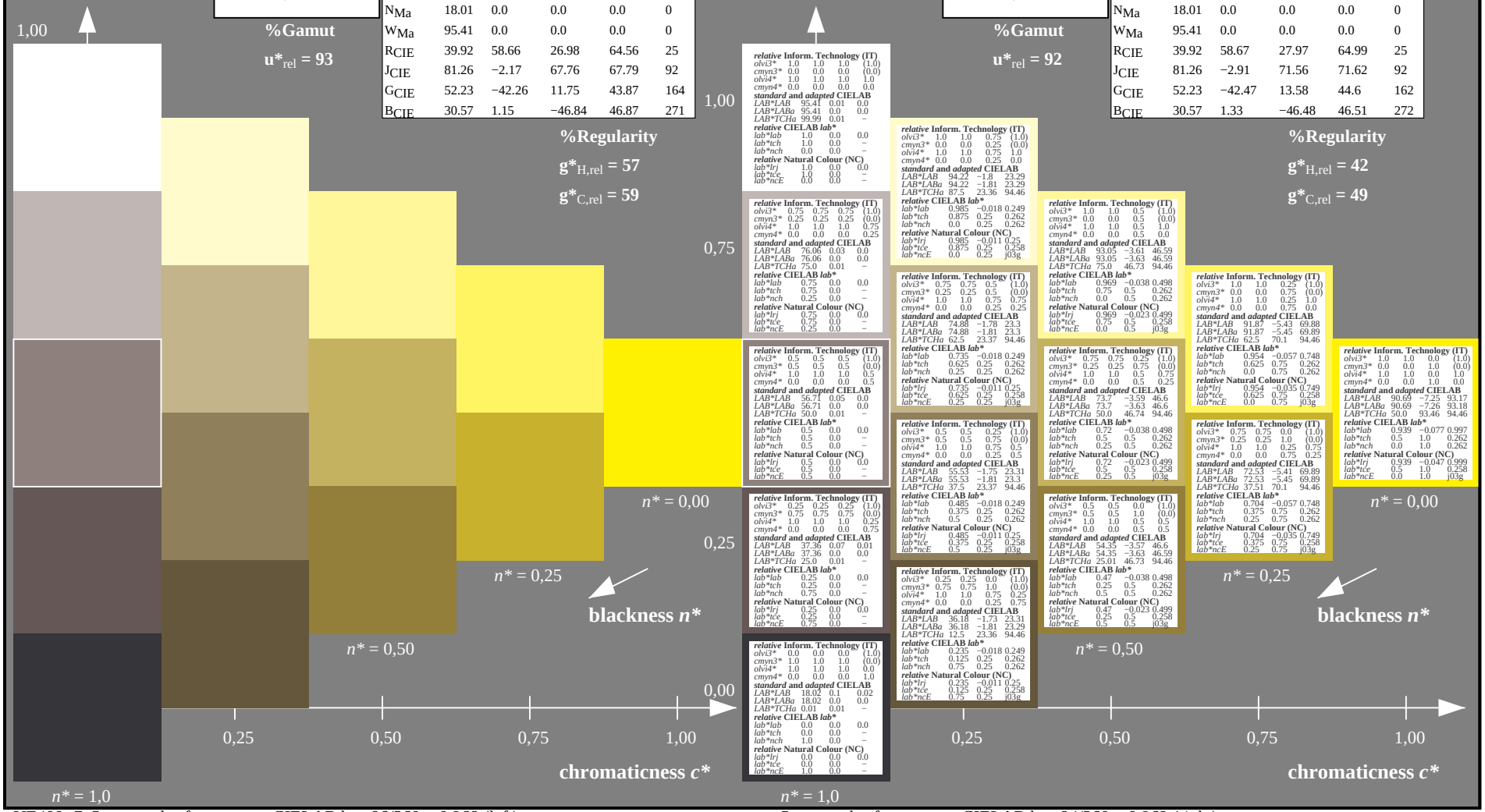
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



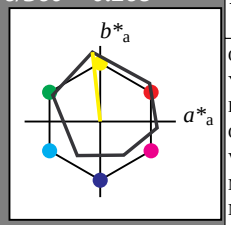
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

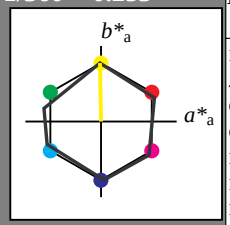
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

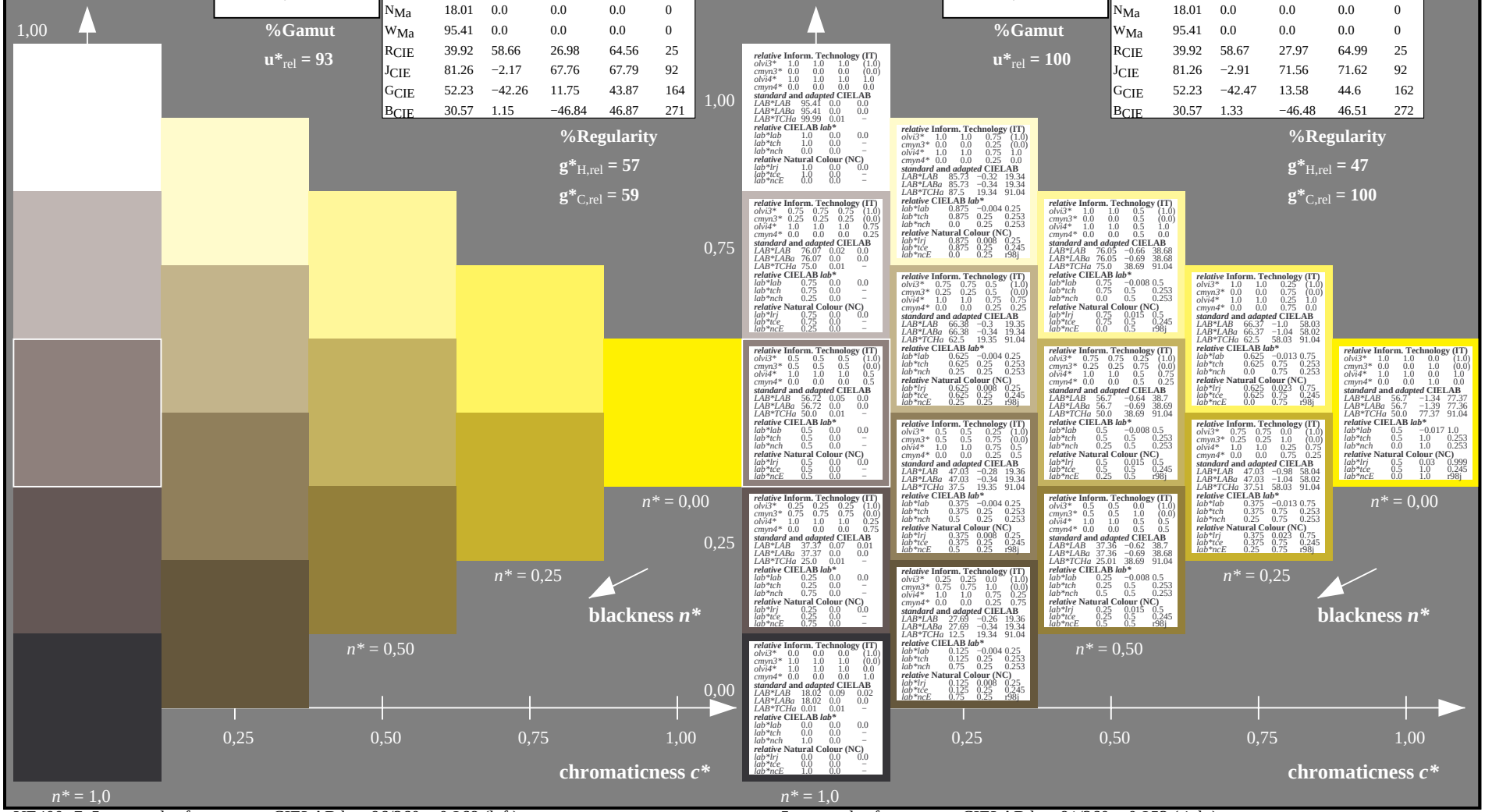
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



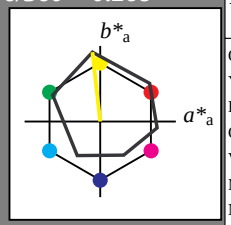
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

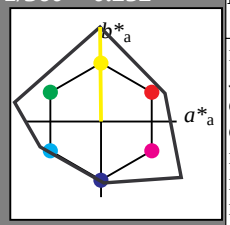
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

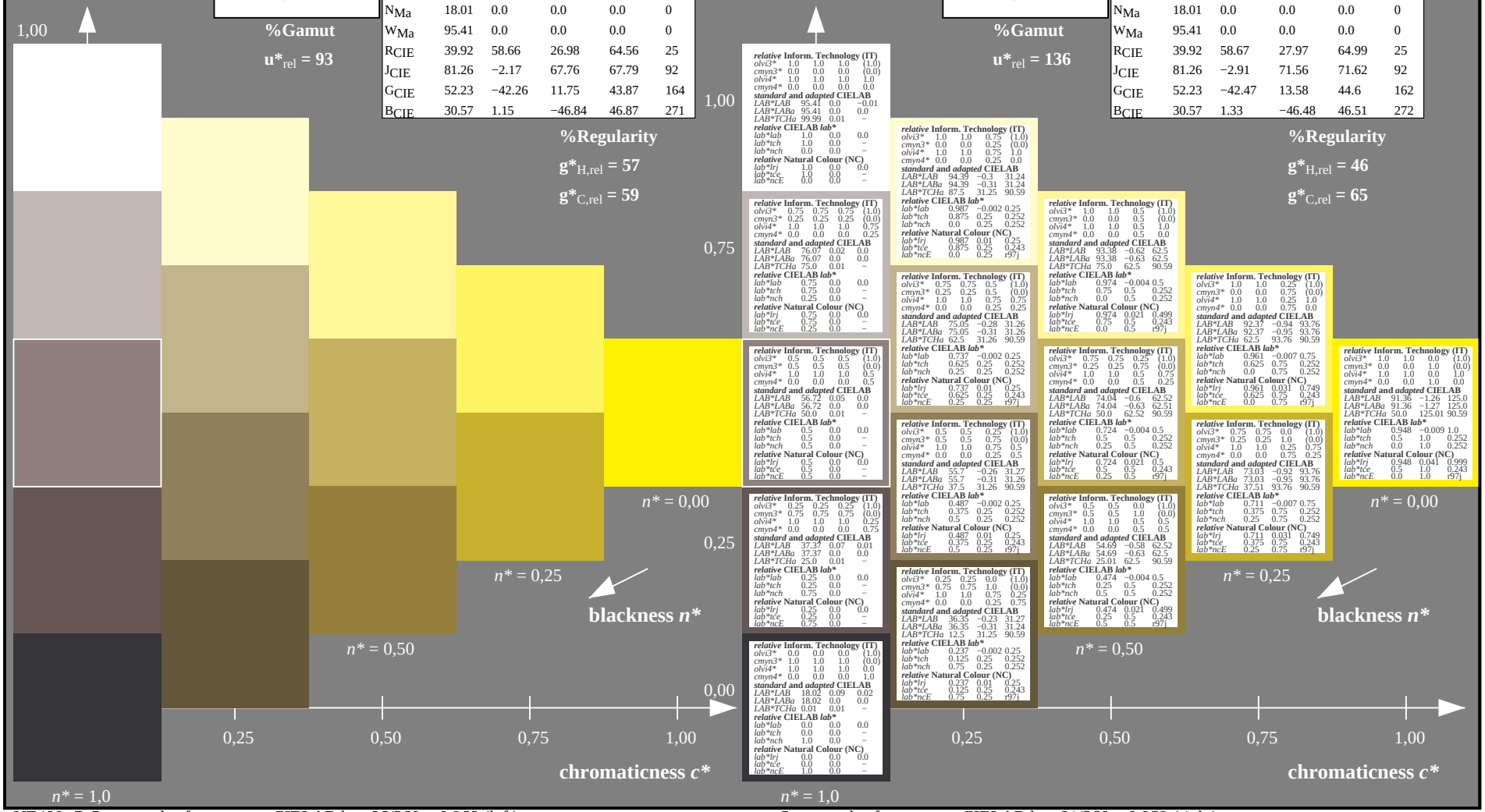
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



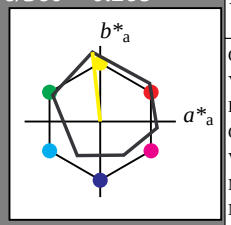
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

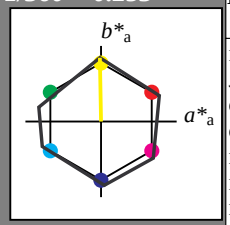
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

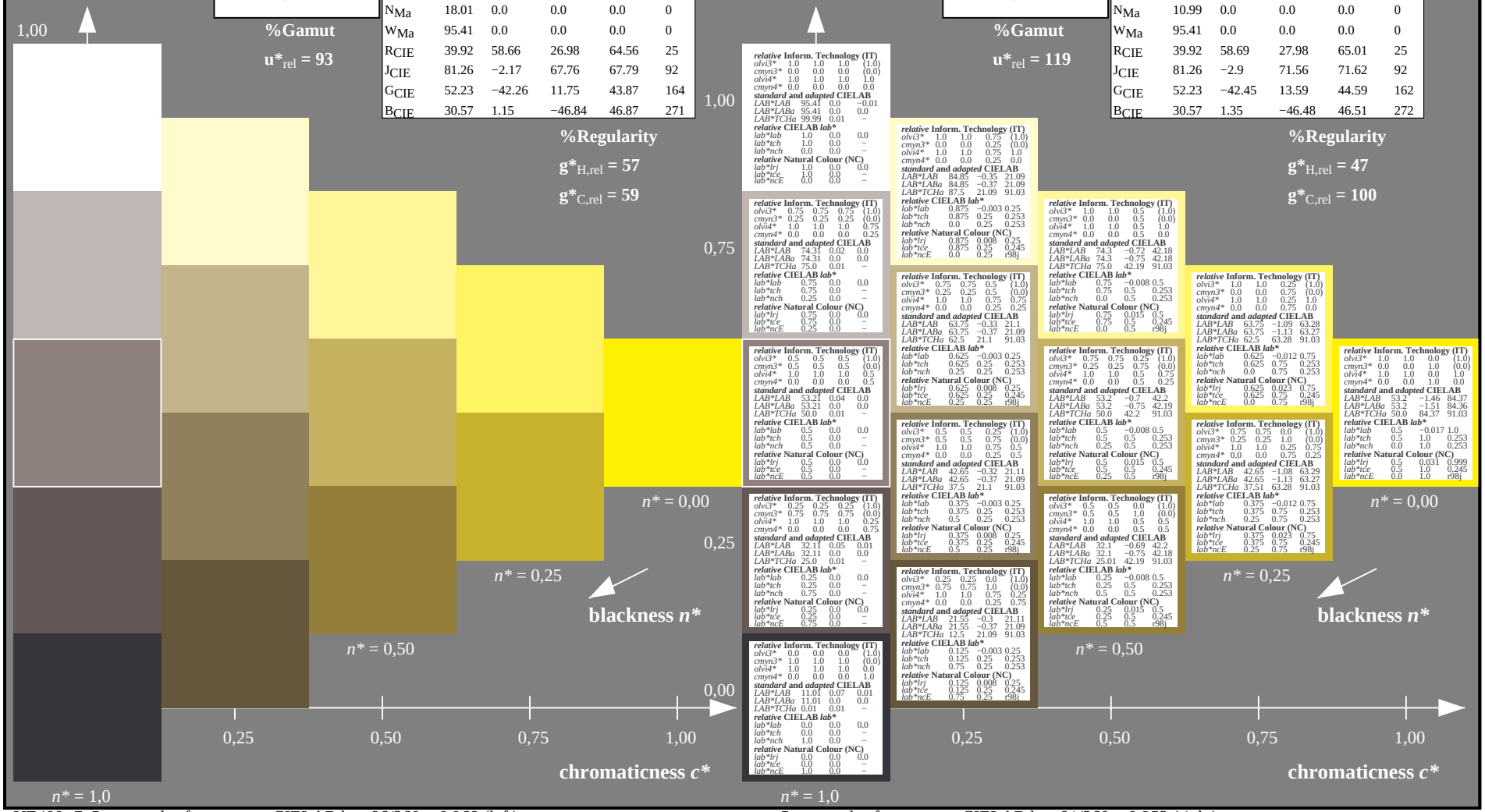
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



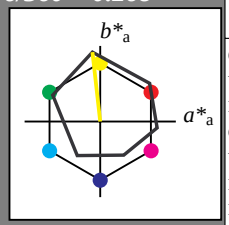
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

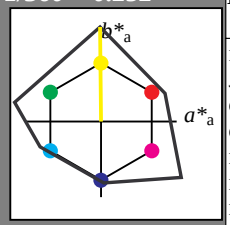
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

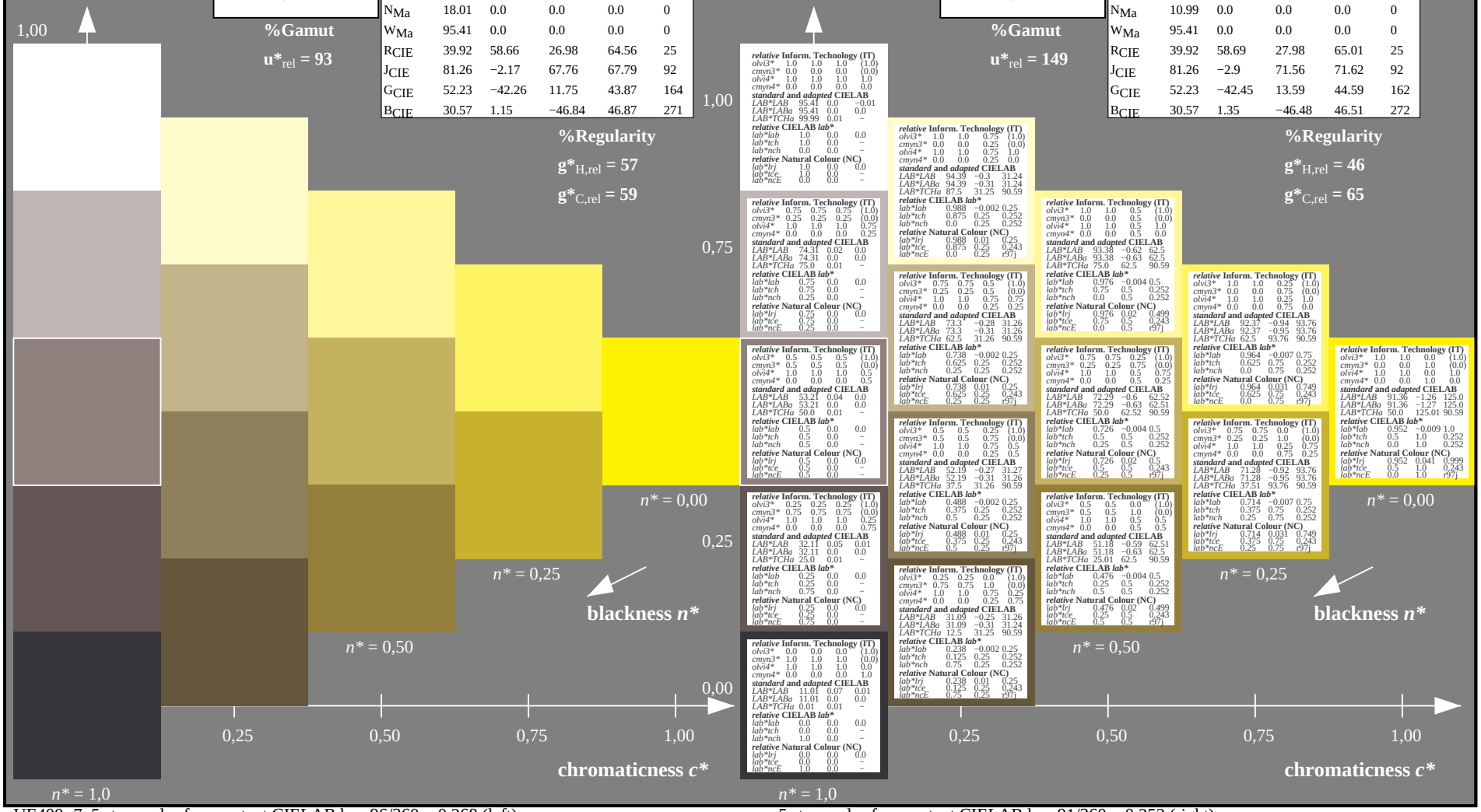
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



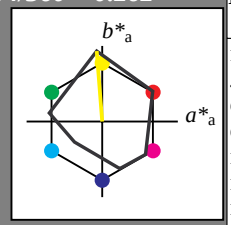
UE400−7, 5 step scales for constant CIELAB hue 96/360 = 0.268 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

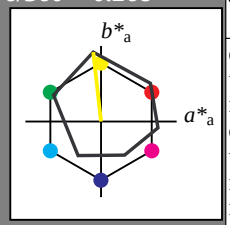
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

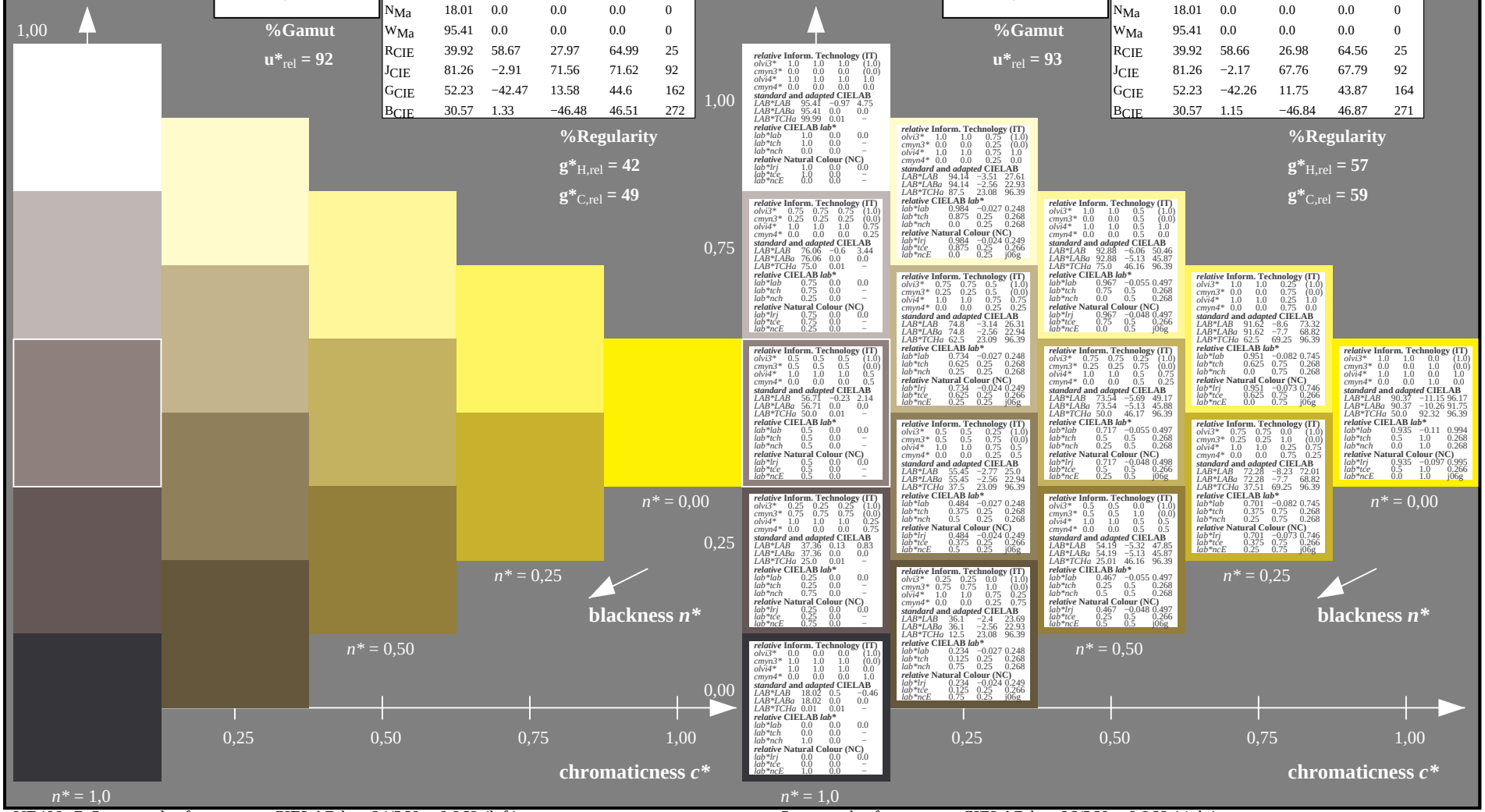
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



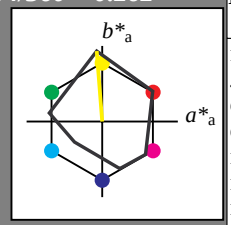
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

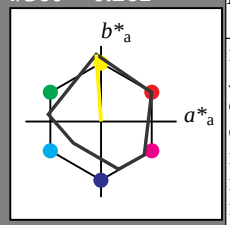
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness

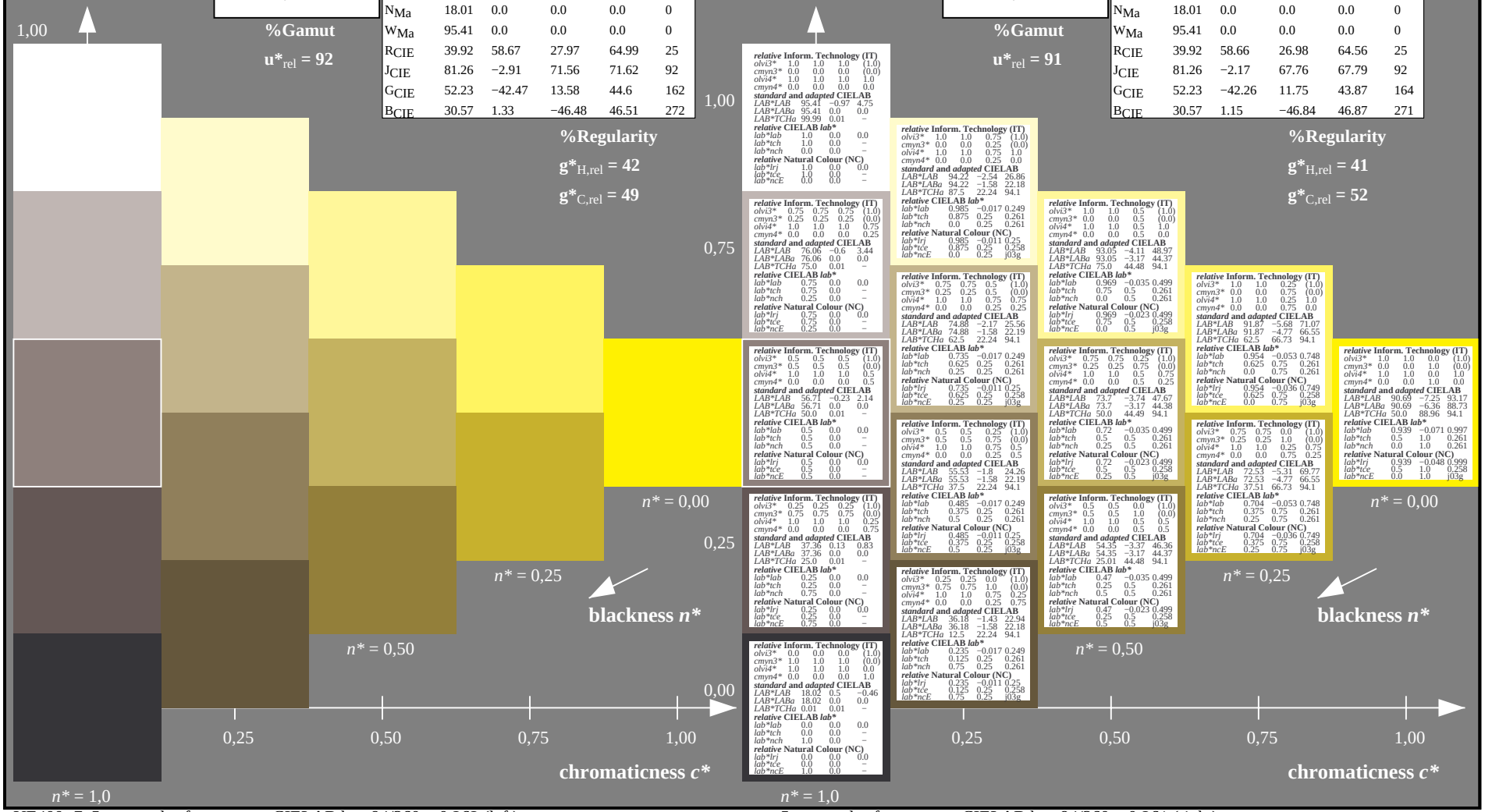


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



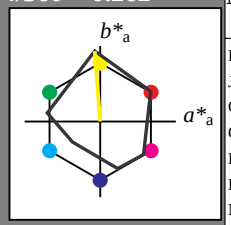
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 94/360 = 0.262*
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

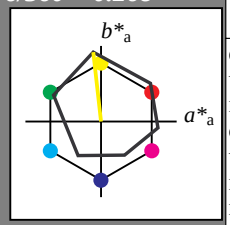
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 96/360 = 0.268*
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

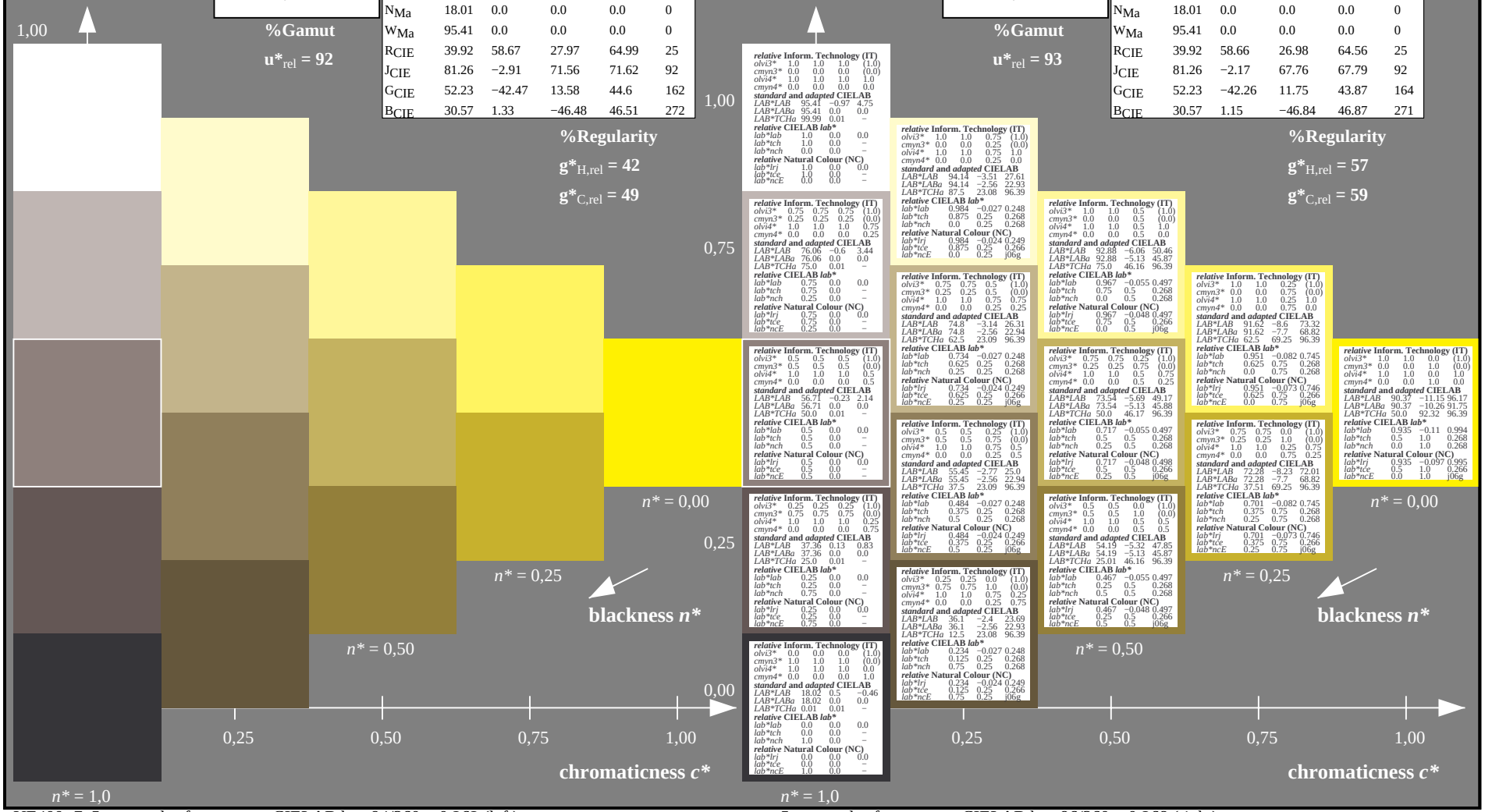
%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



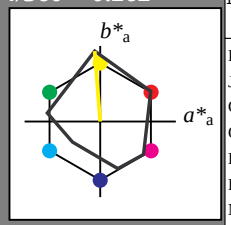
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

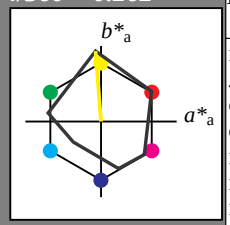
chromaticness c^*

UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

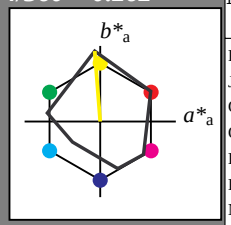
chromaticness c^*

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

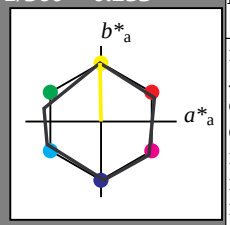
$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

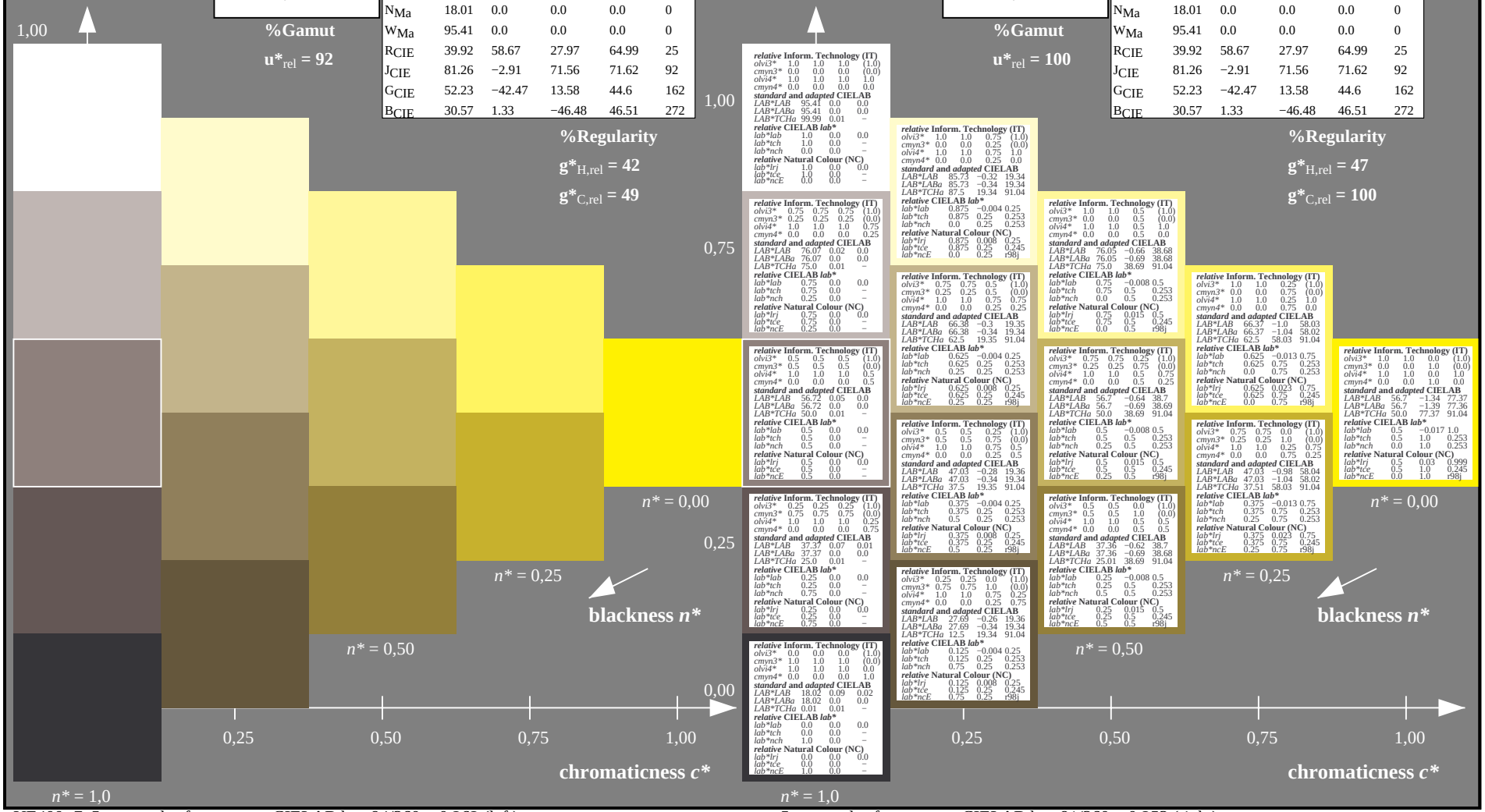
%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



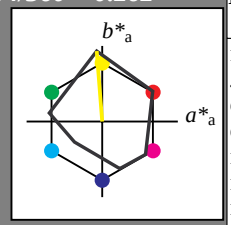
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

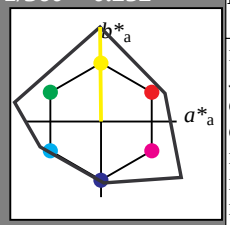
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

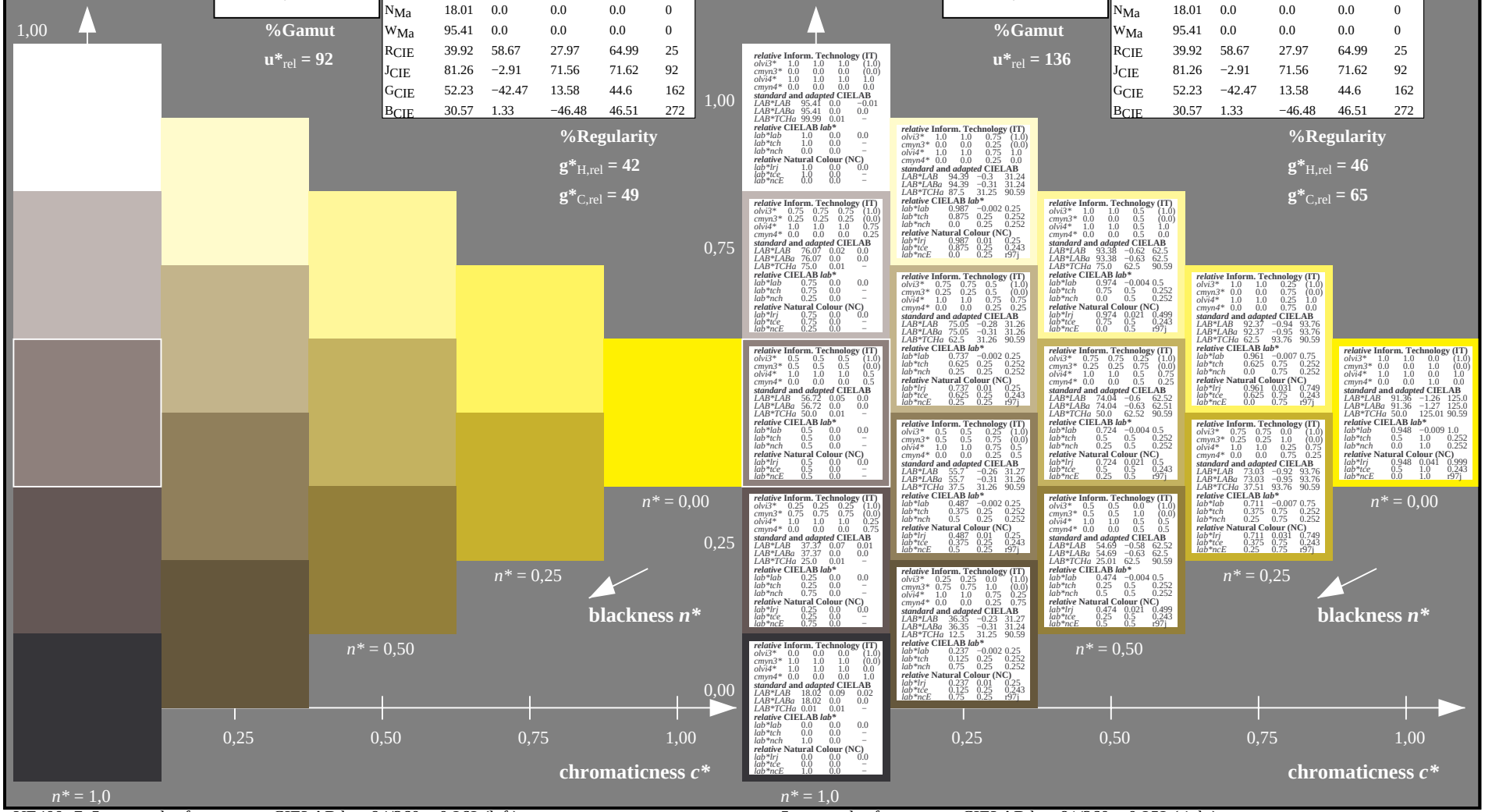
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



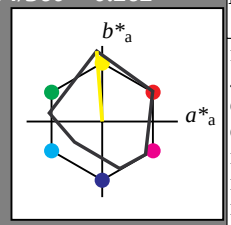
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

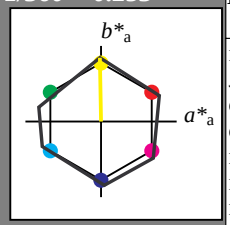
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

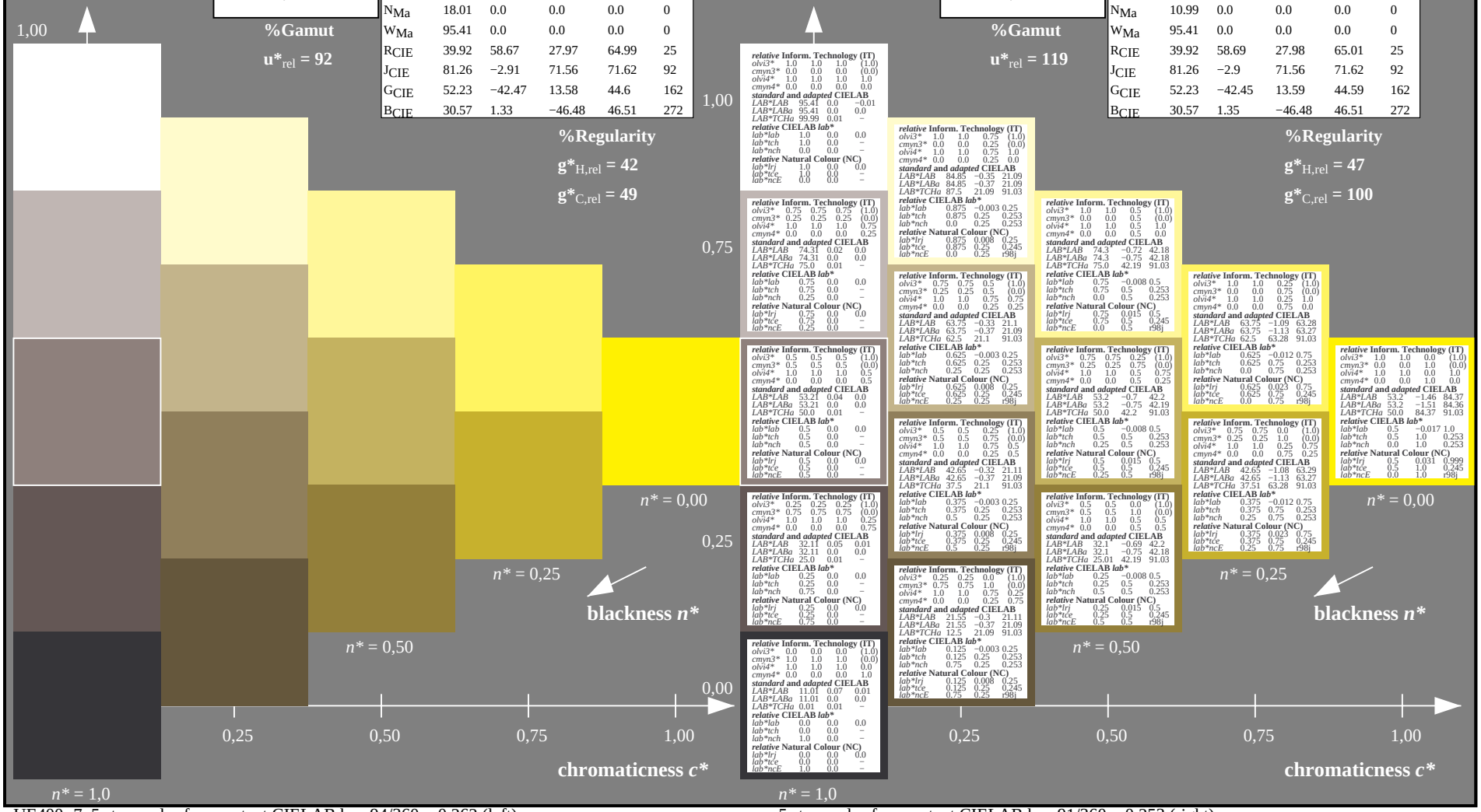
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



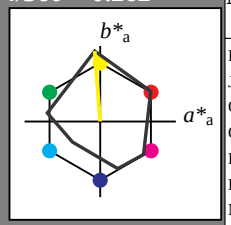
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

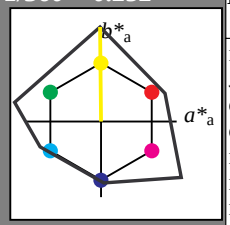
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

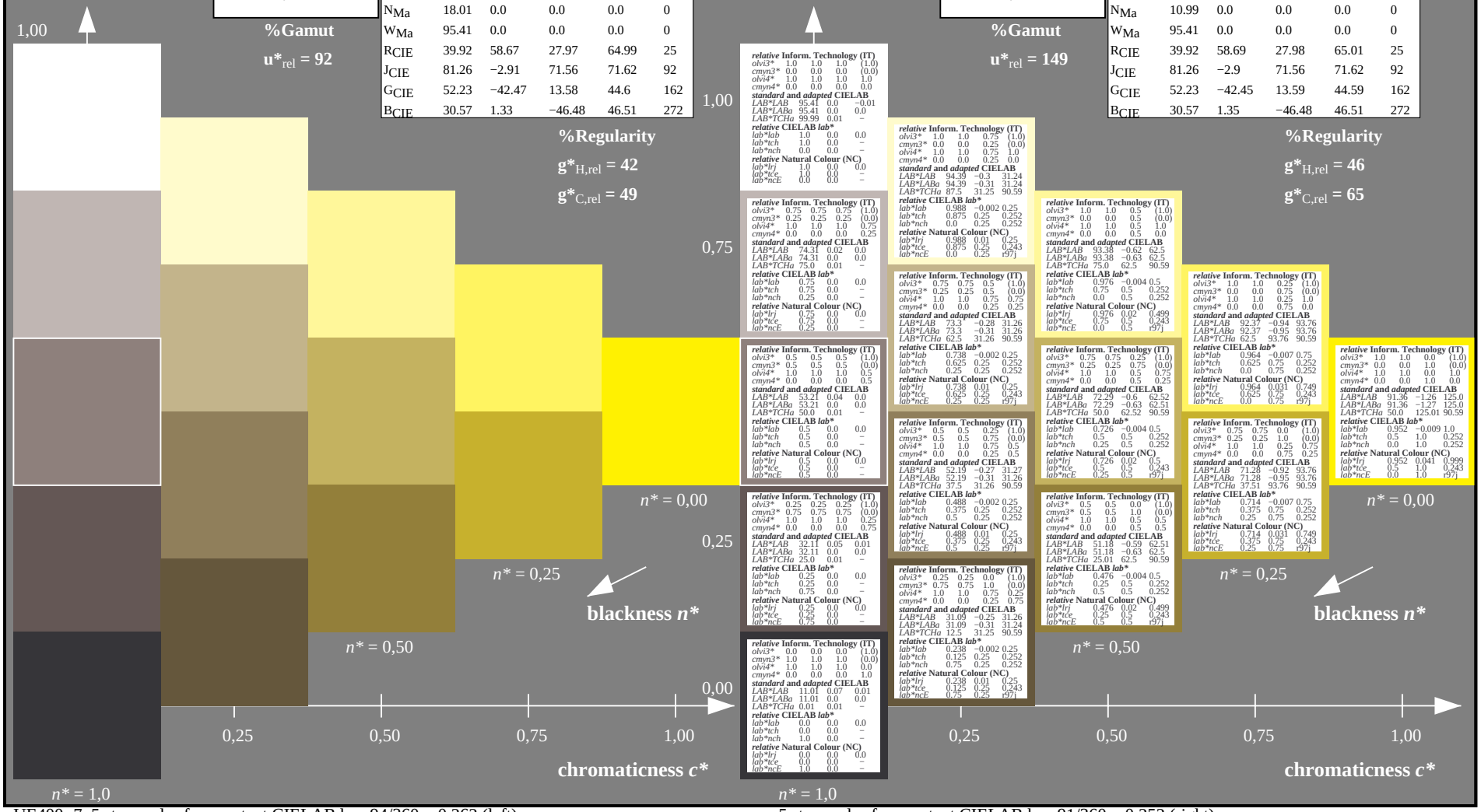
%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



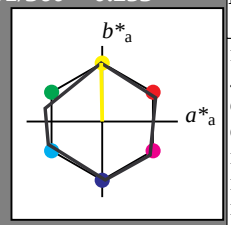
UE400−7, 5 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

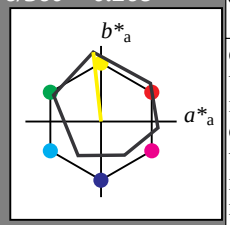
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

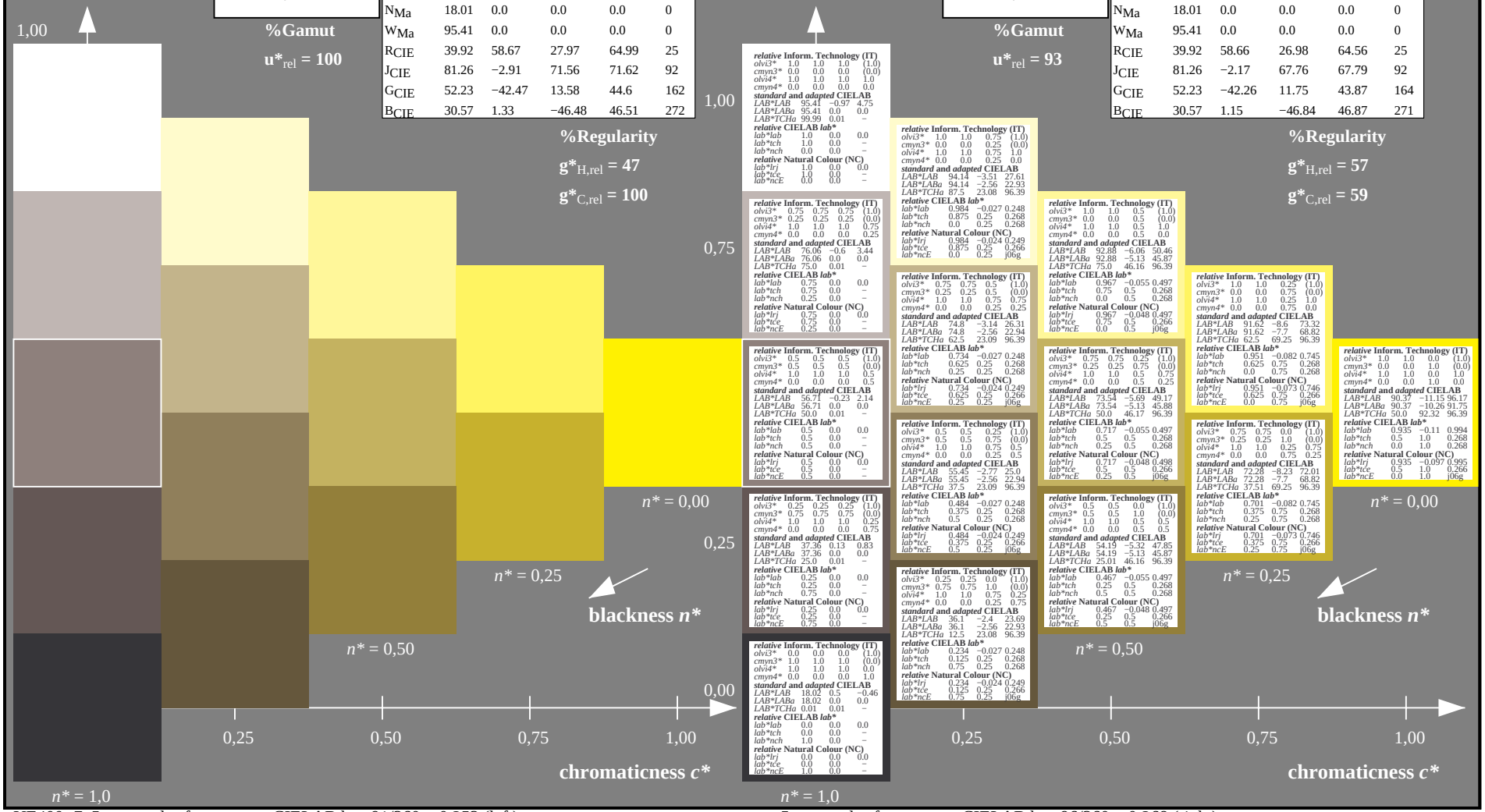
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



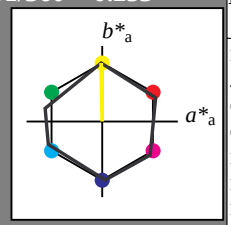
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

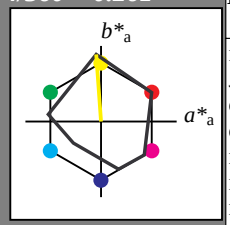
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness

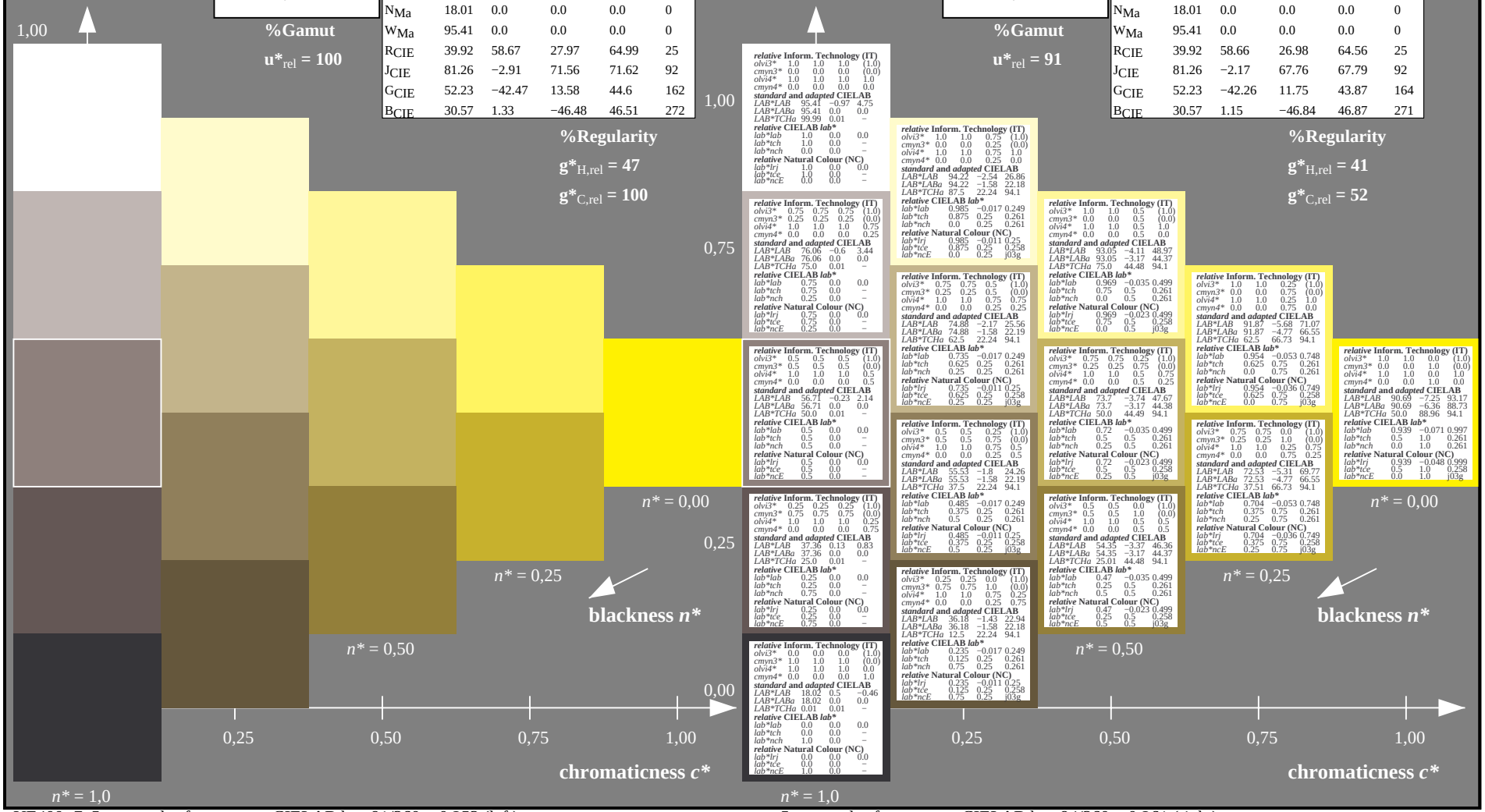


%Gamut
u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 41
$g^*_{C,rel}$ = 52



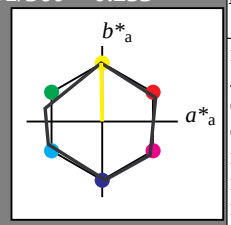
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

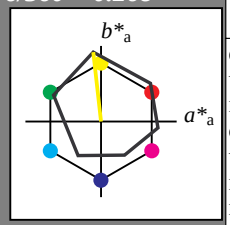
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

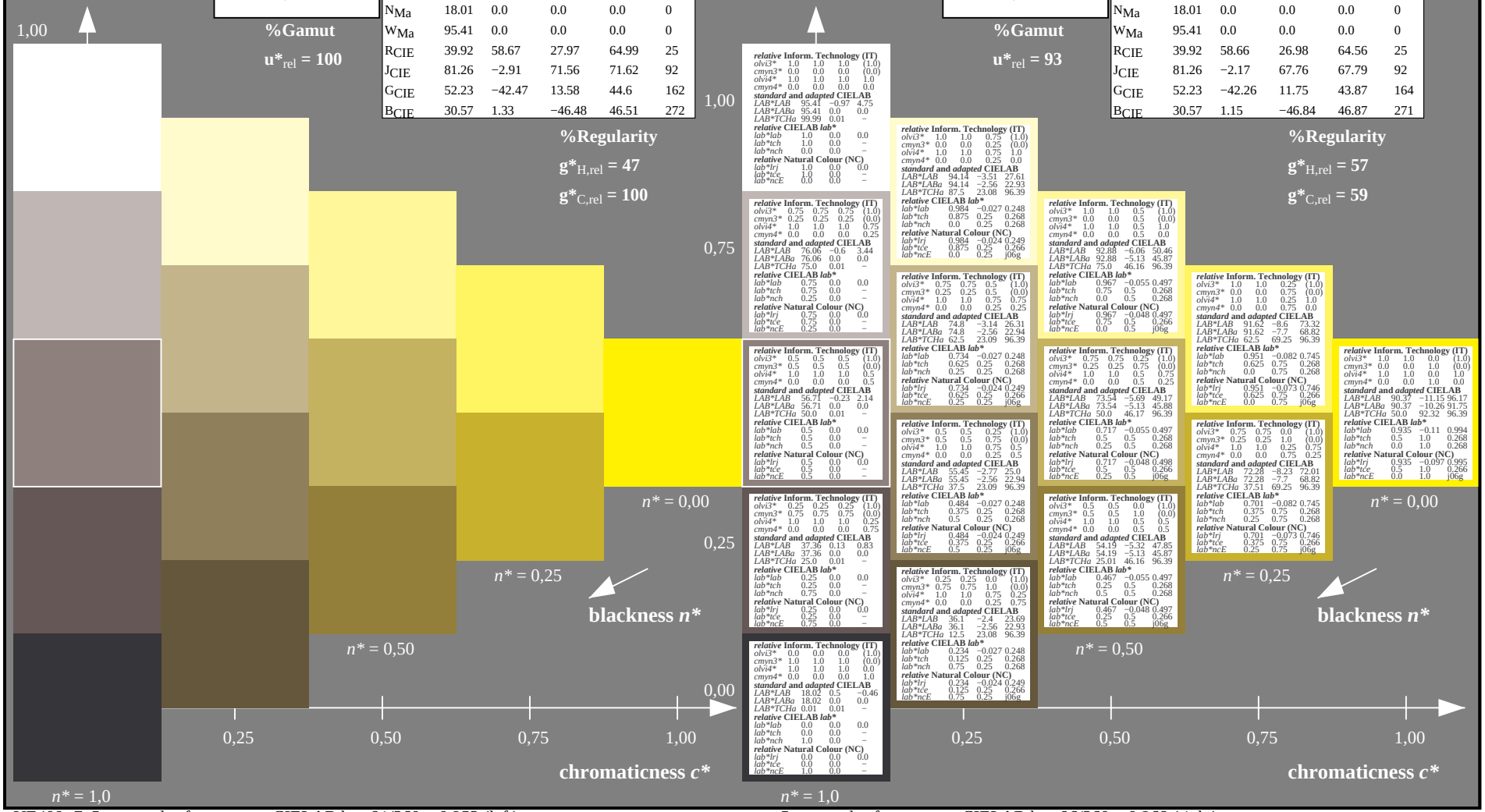
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



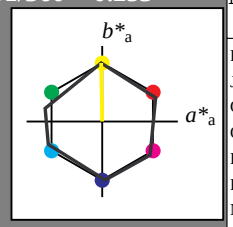
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 100

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

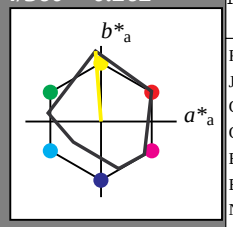
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness

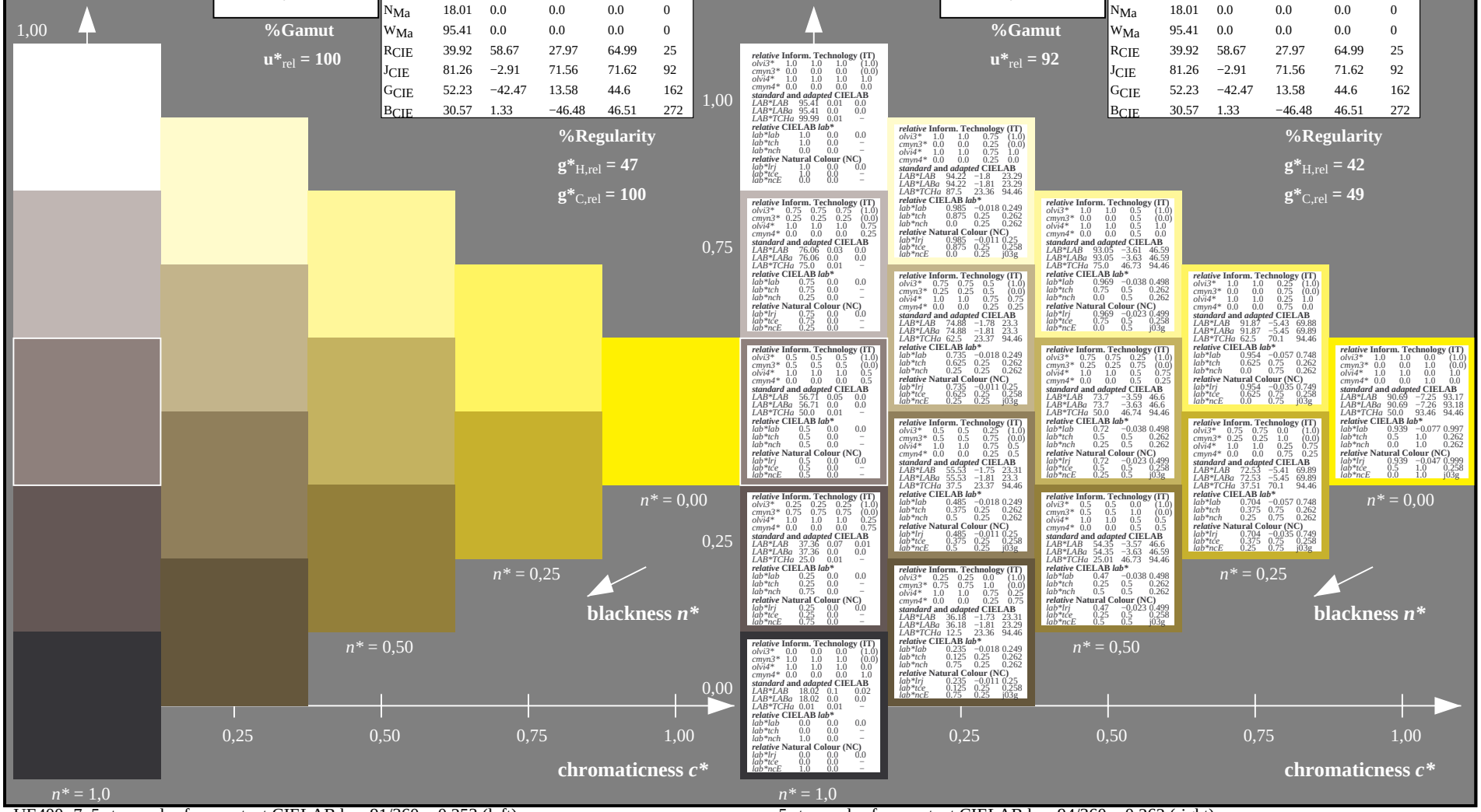


%Gamut
u^*_{rel} = 92

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



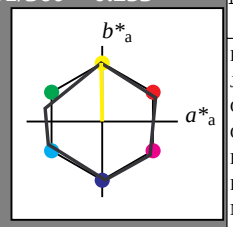
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 100$

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

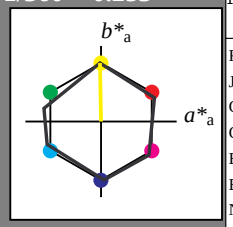
$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 100$

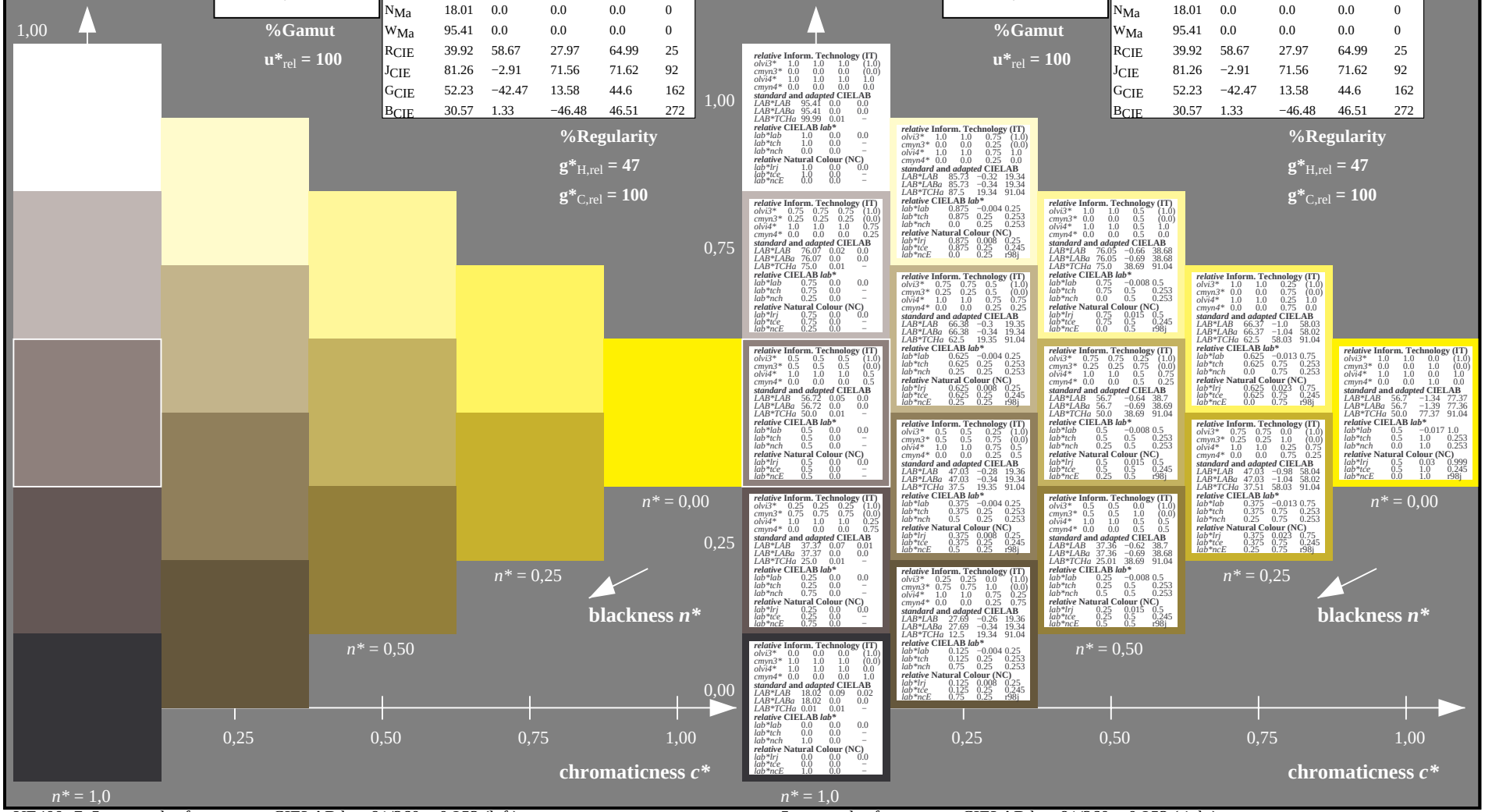
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



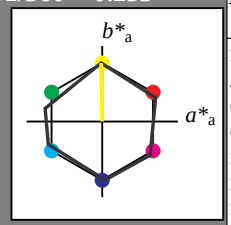
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

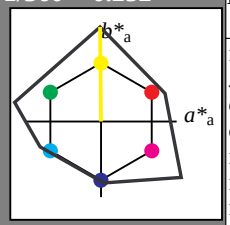
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

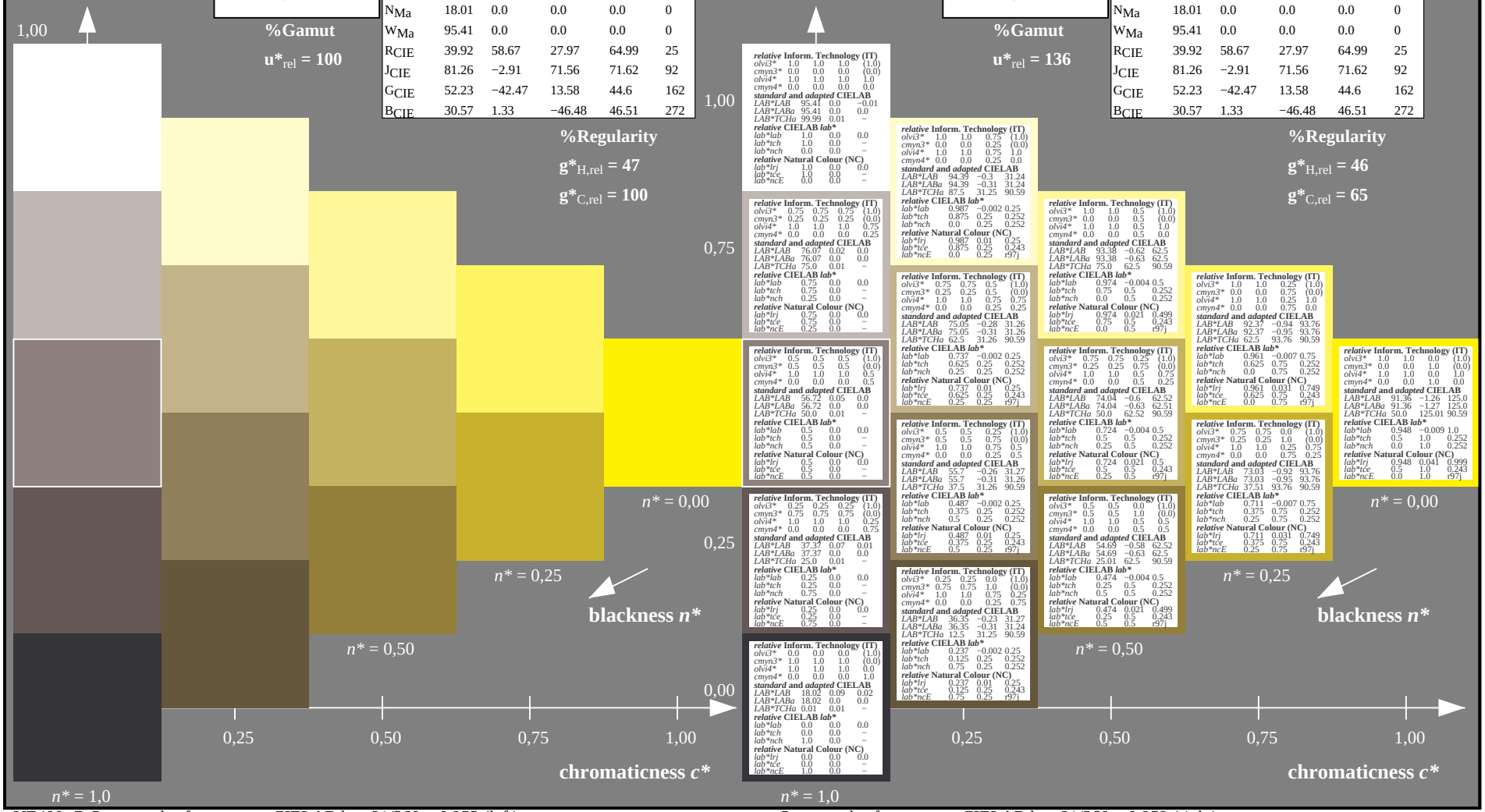
%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



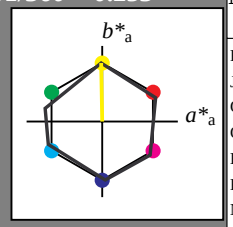
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

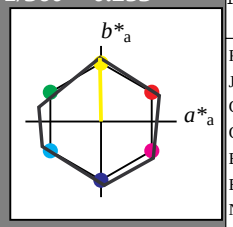
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness

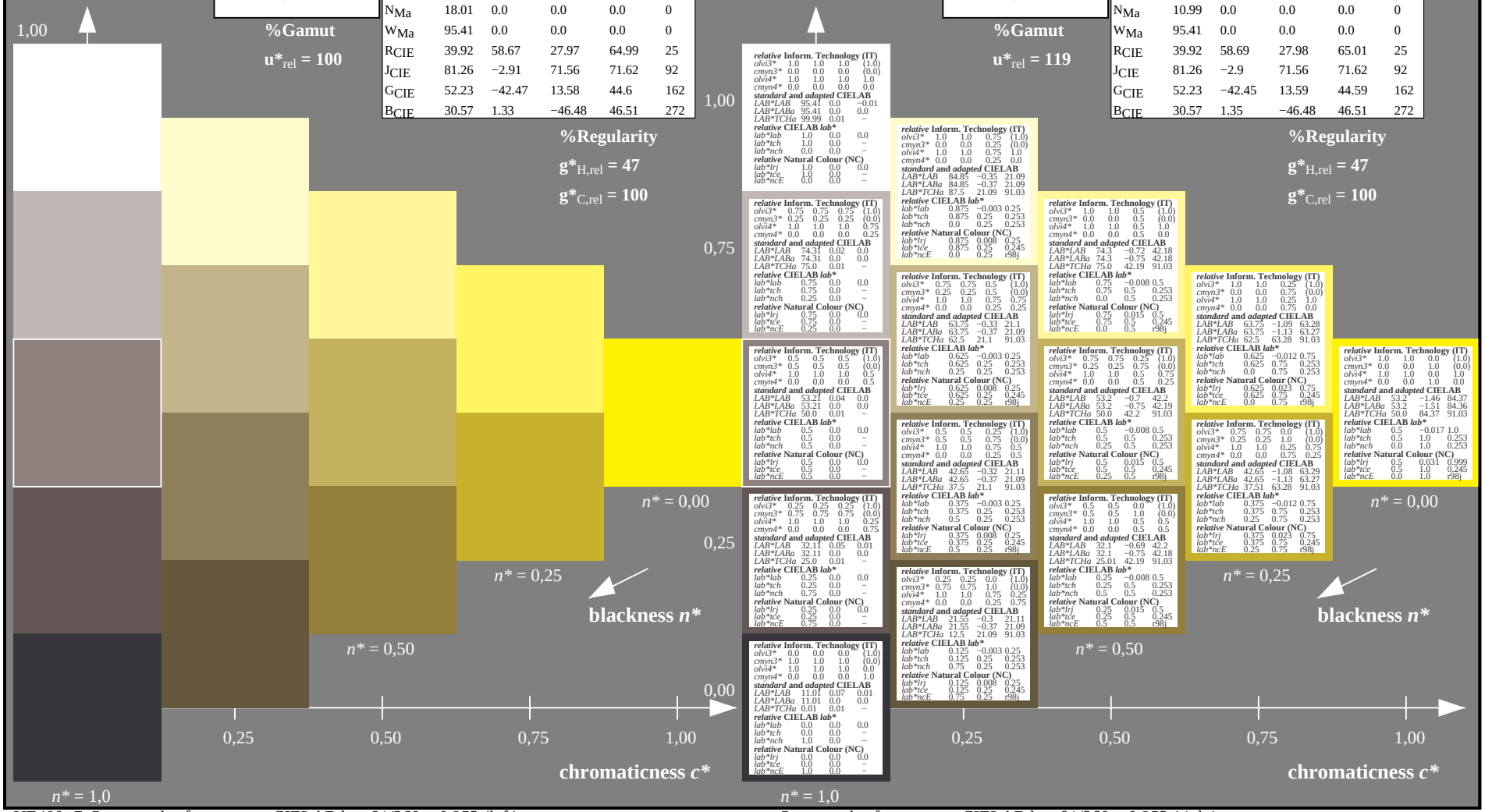


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



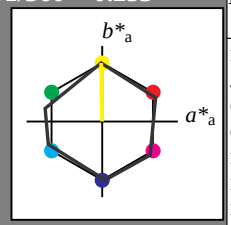
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

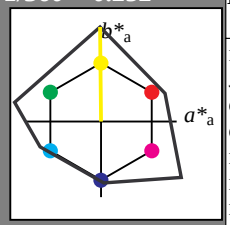
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness

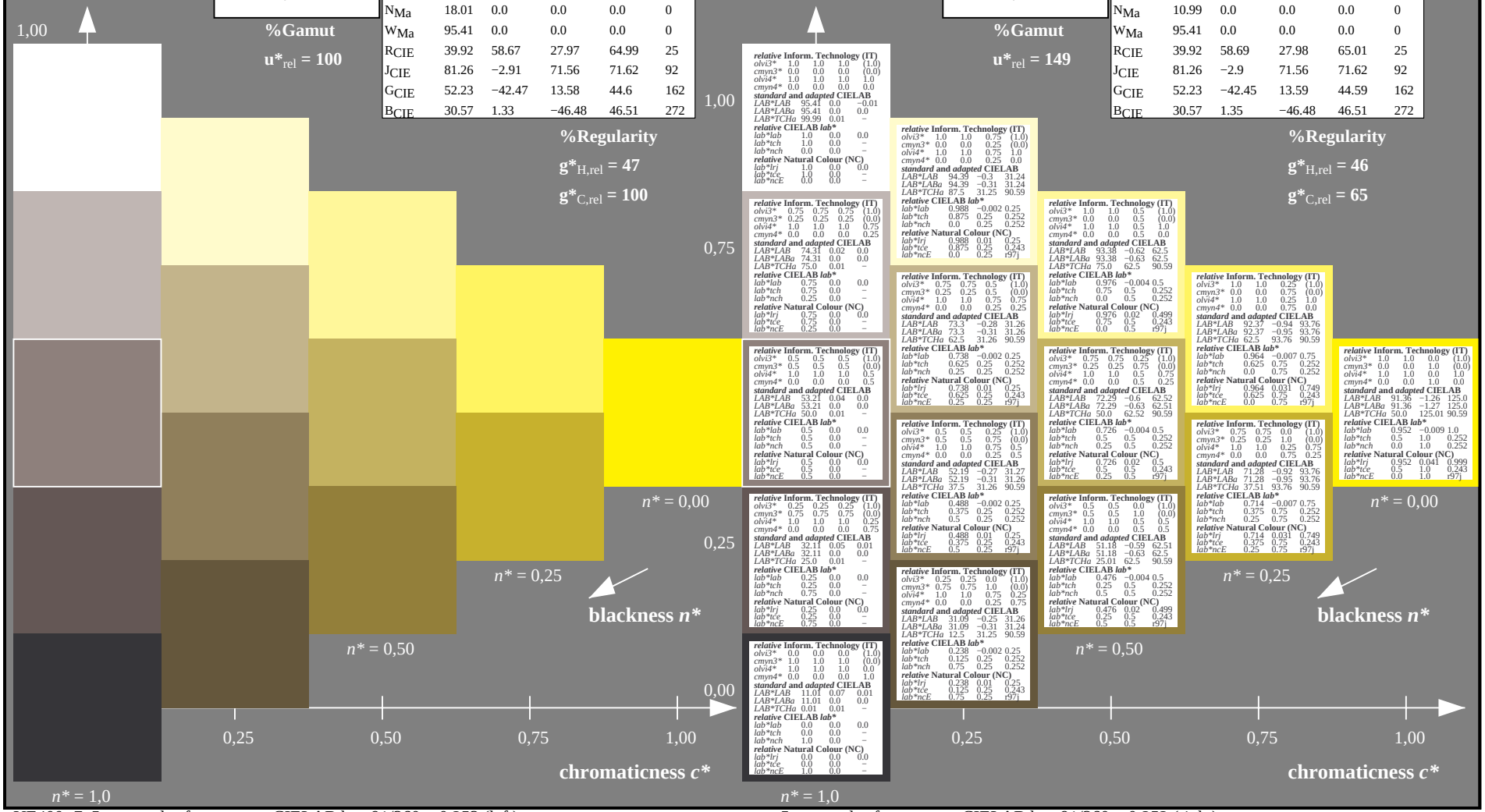


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



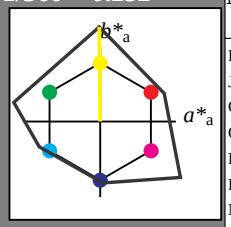
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

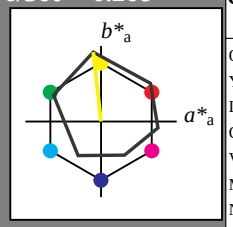
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

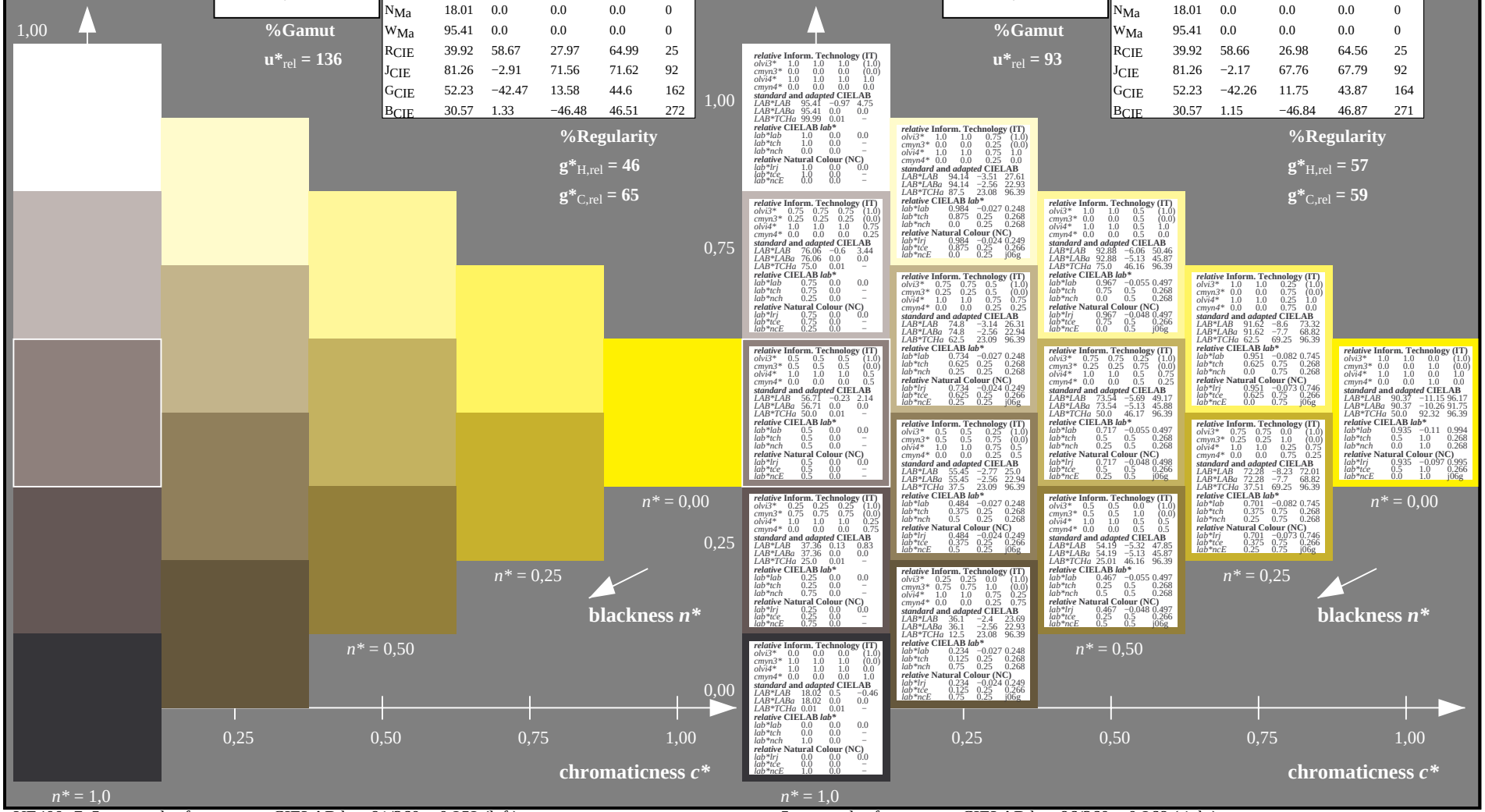
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



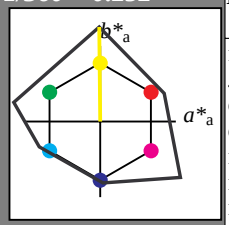
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

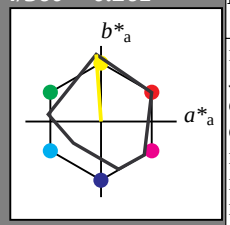
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

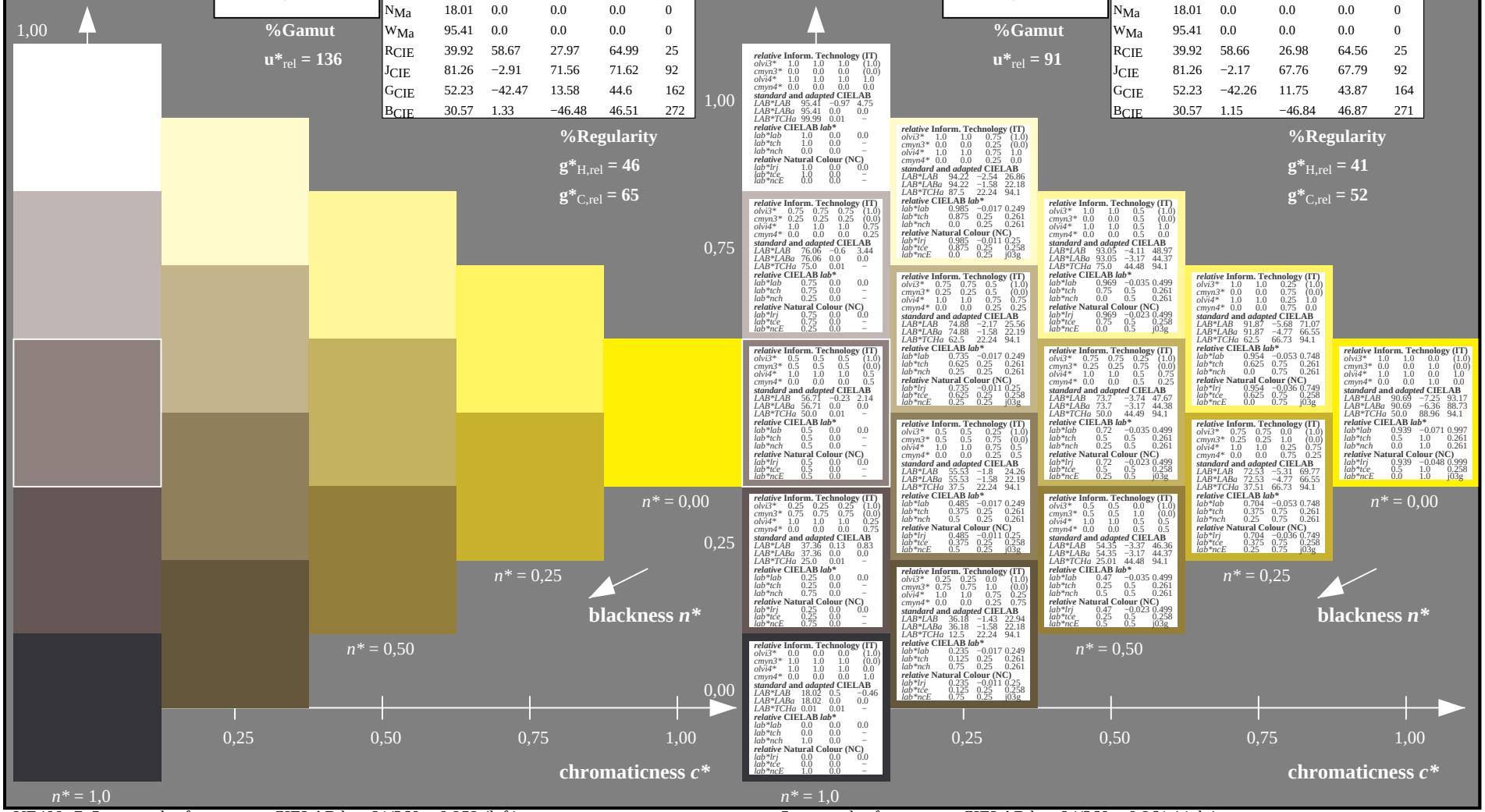
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



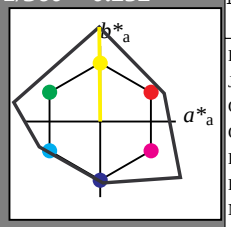
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

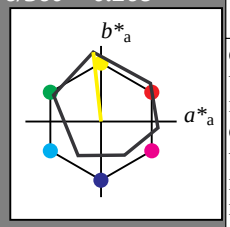
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

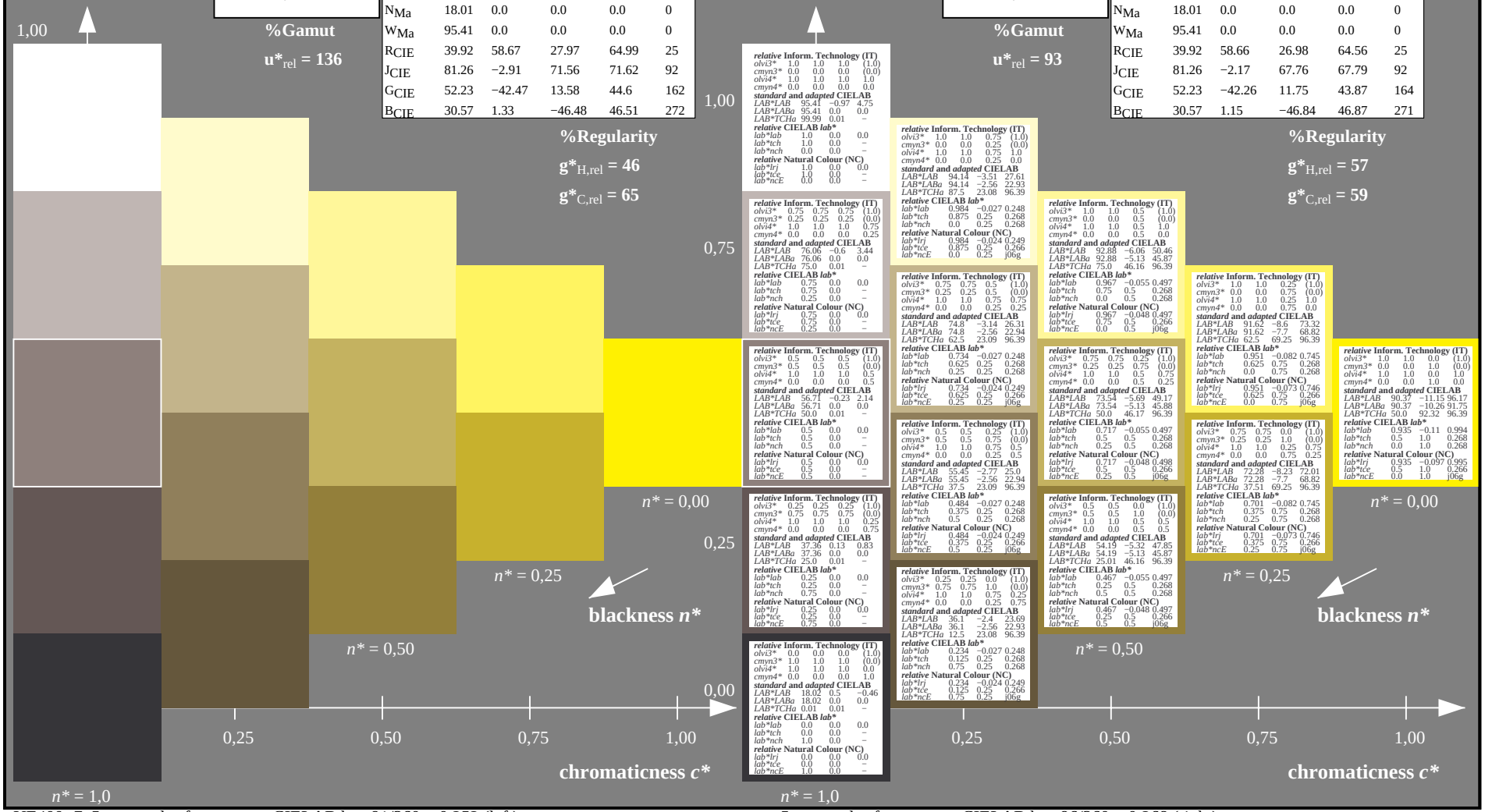
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



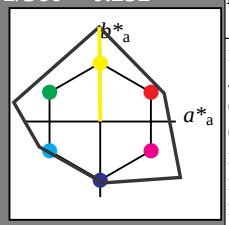
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

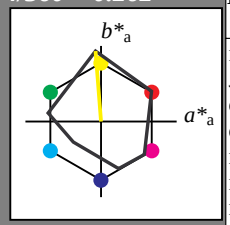
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

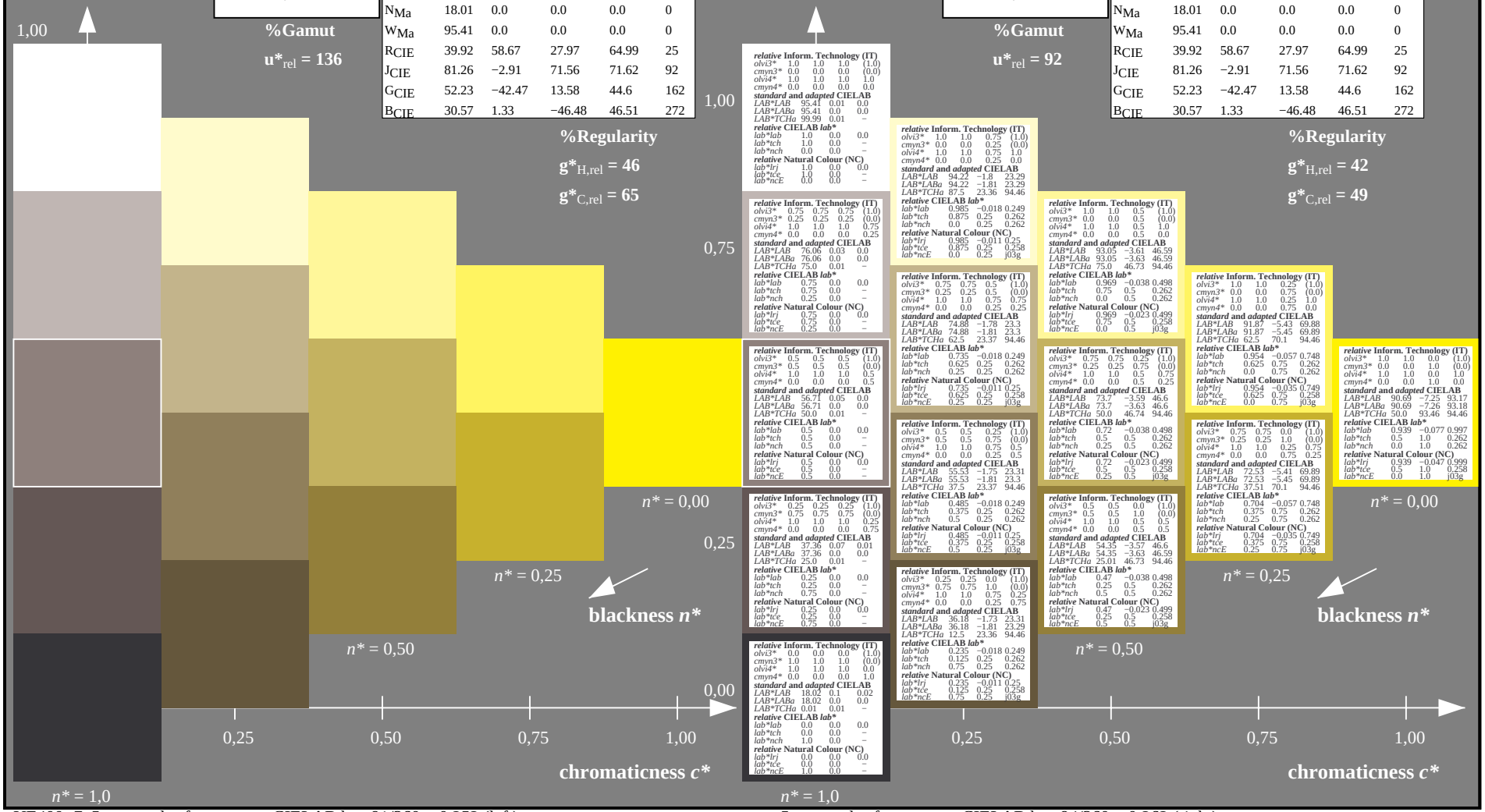
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



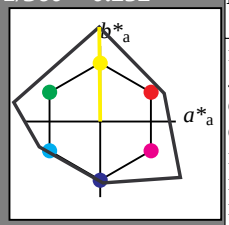
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

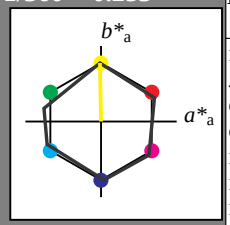
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

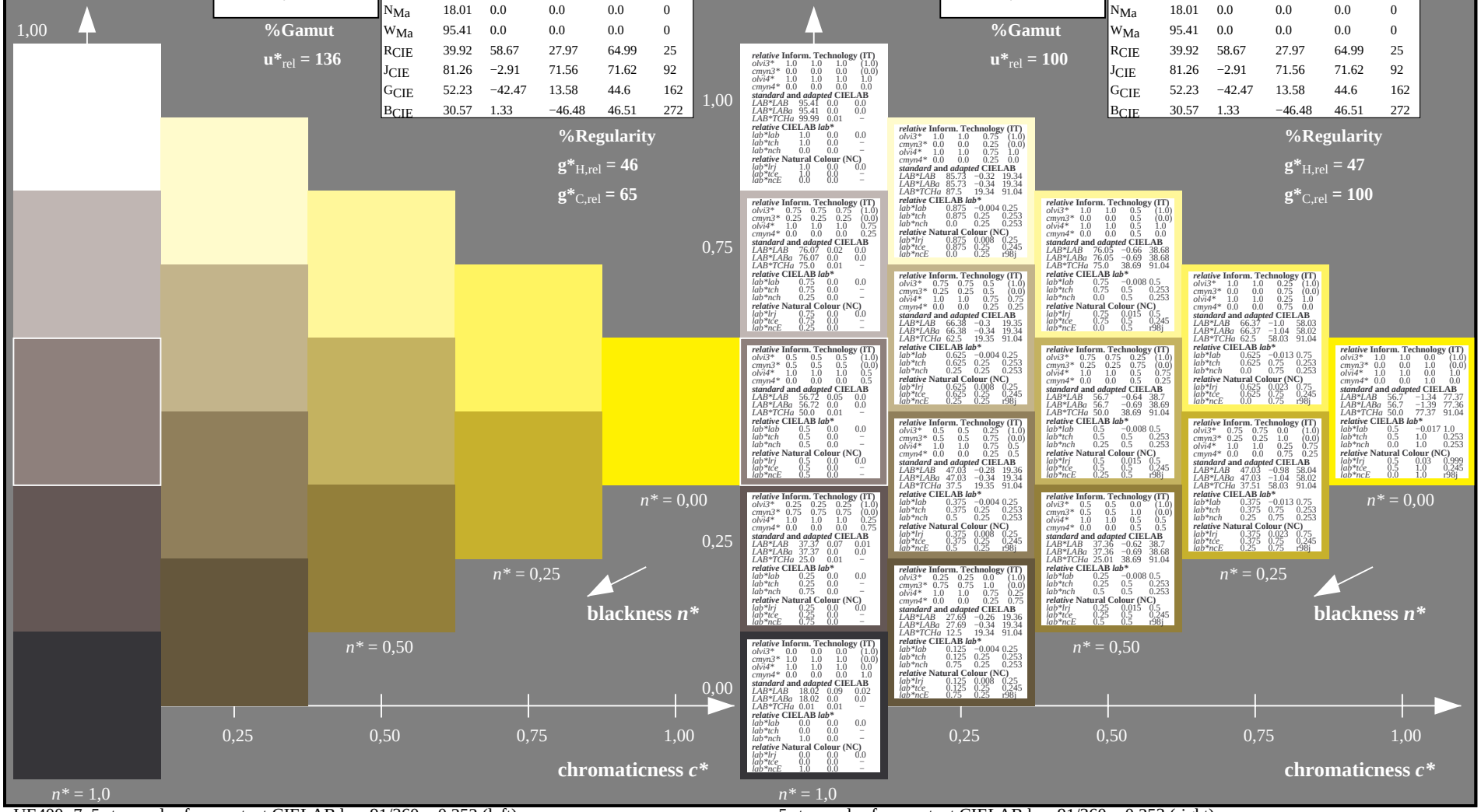
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



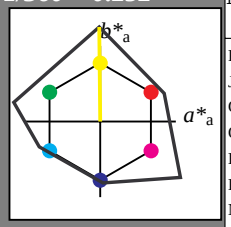
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

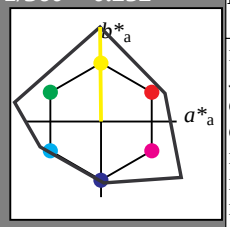
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

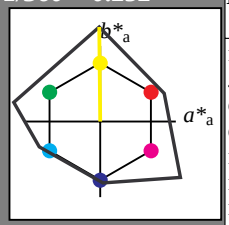
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

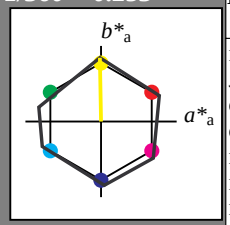
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

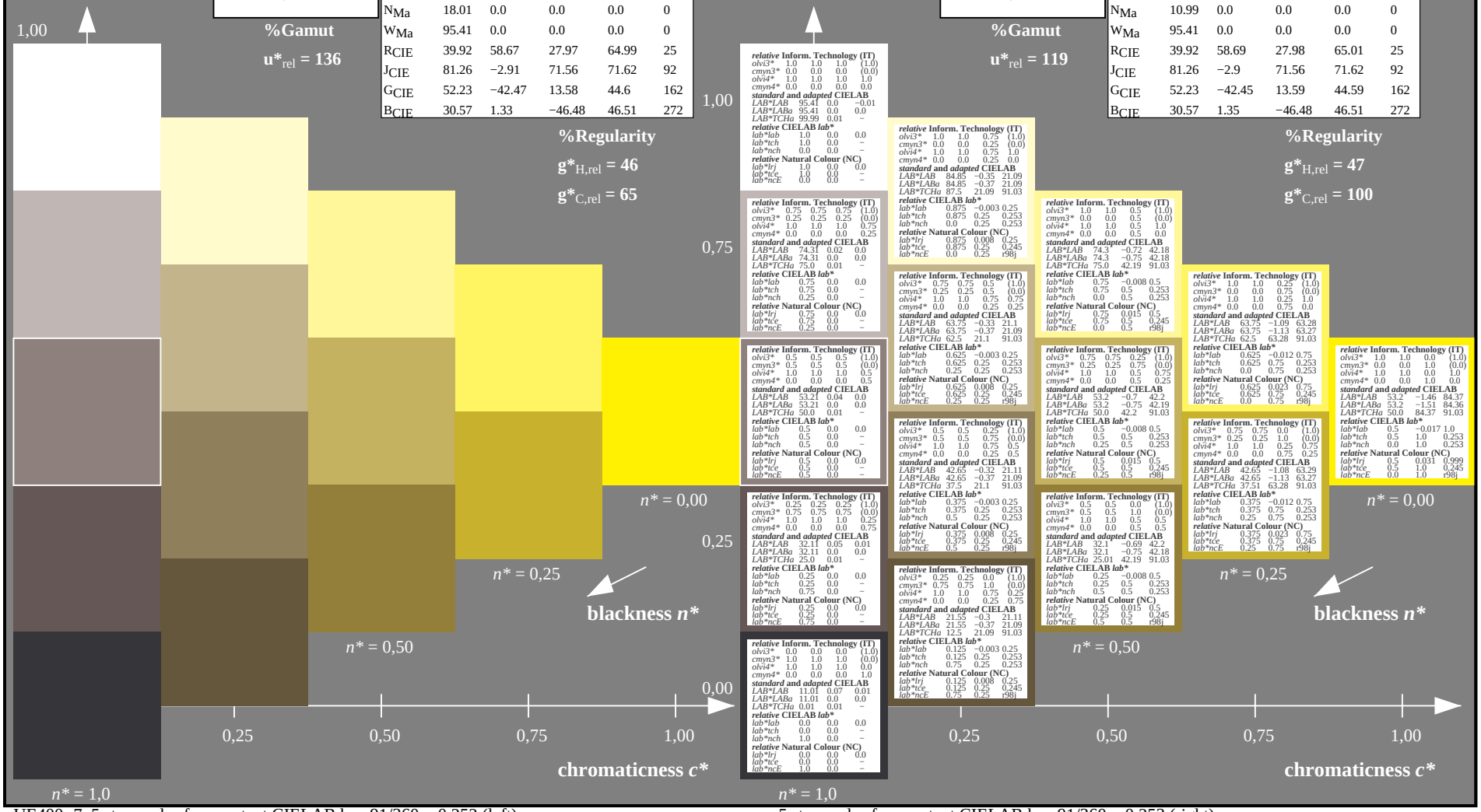
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



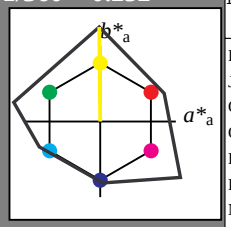
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

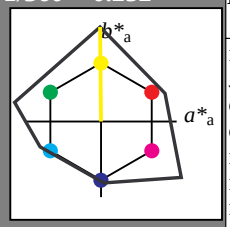
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

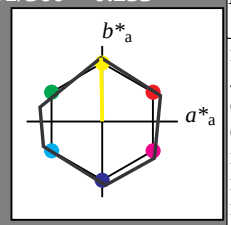
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

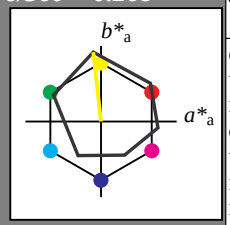
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

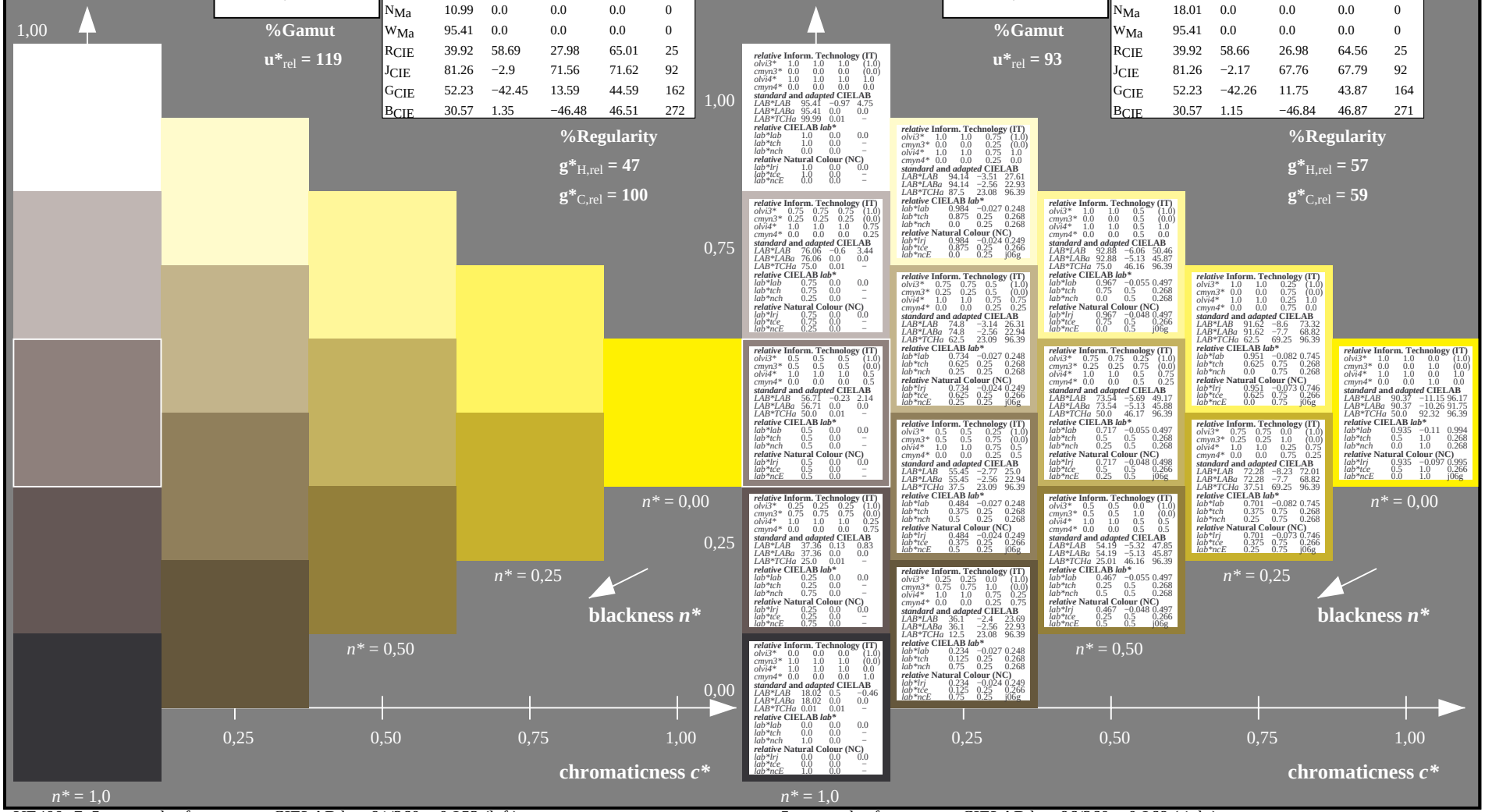
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



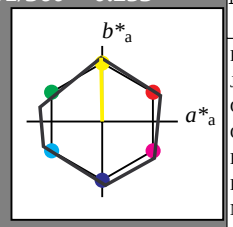
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

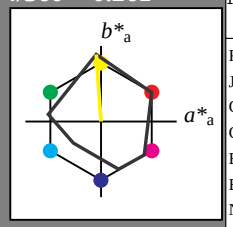
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

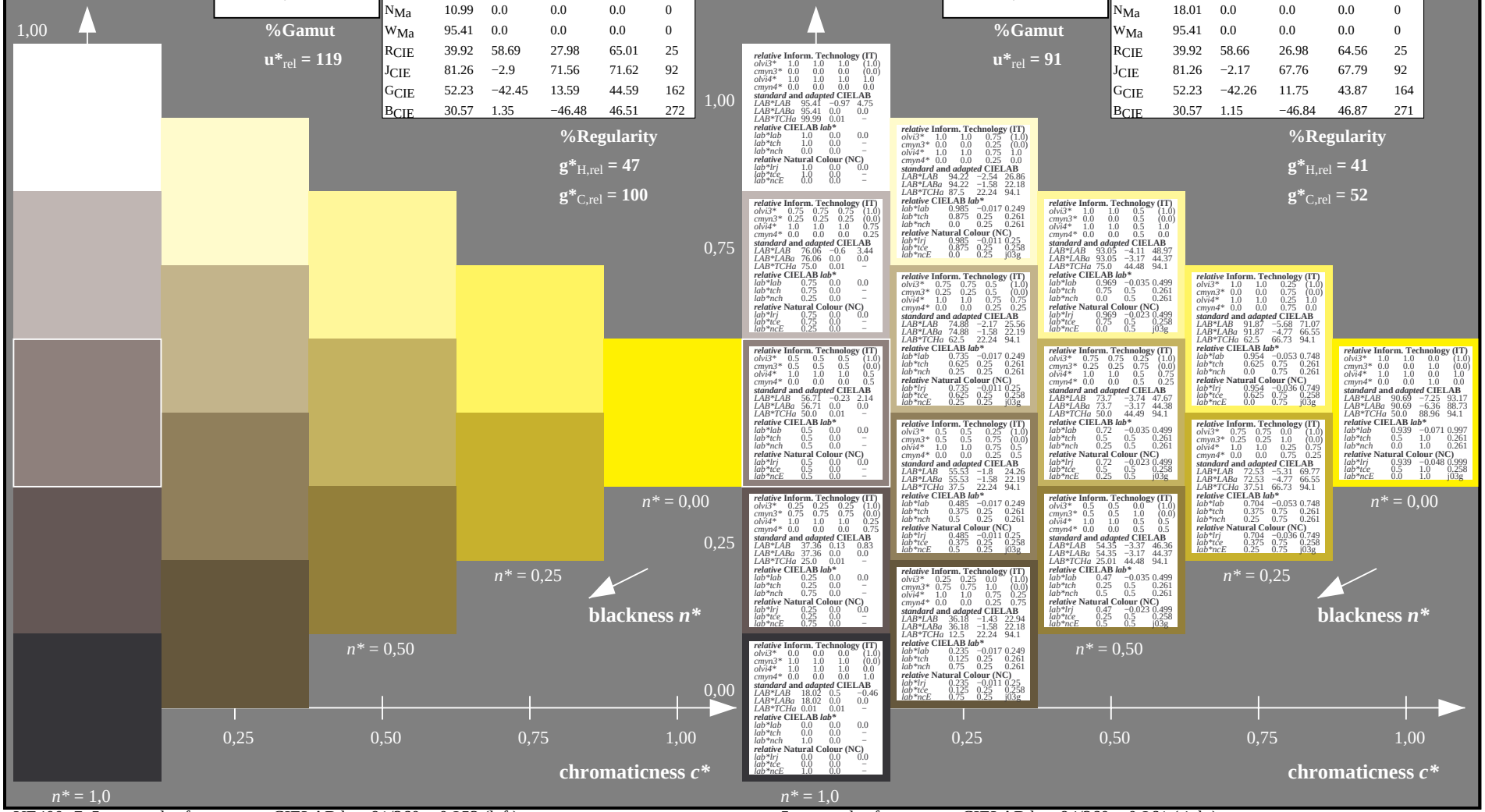
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



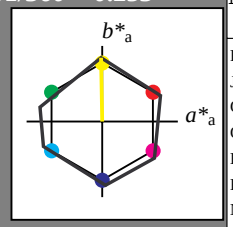
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

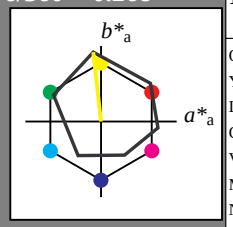
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

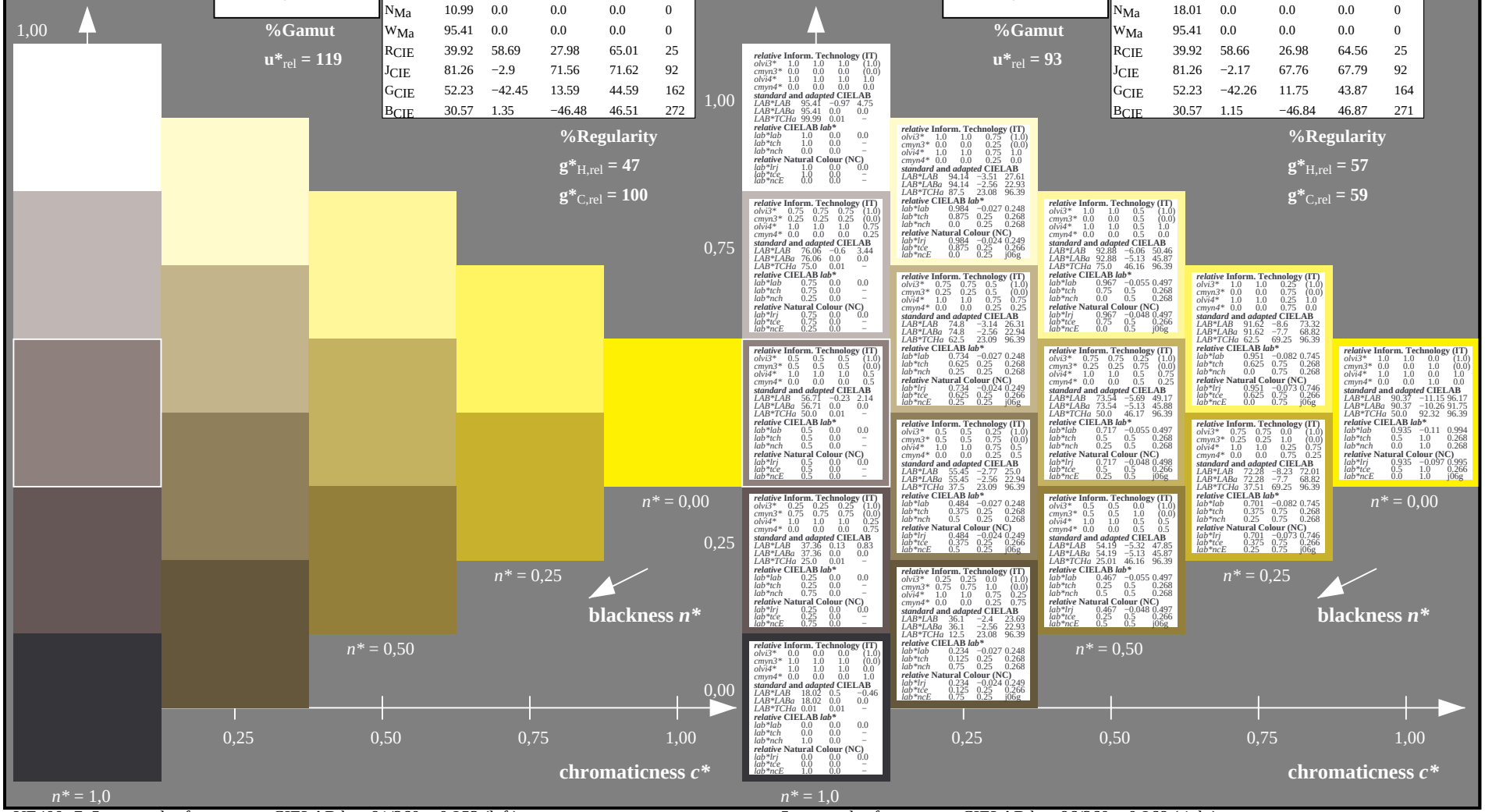
%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



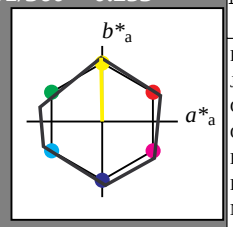
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

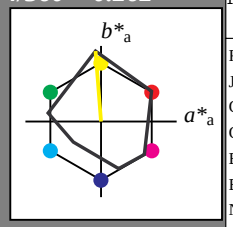
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

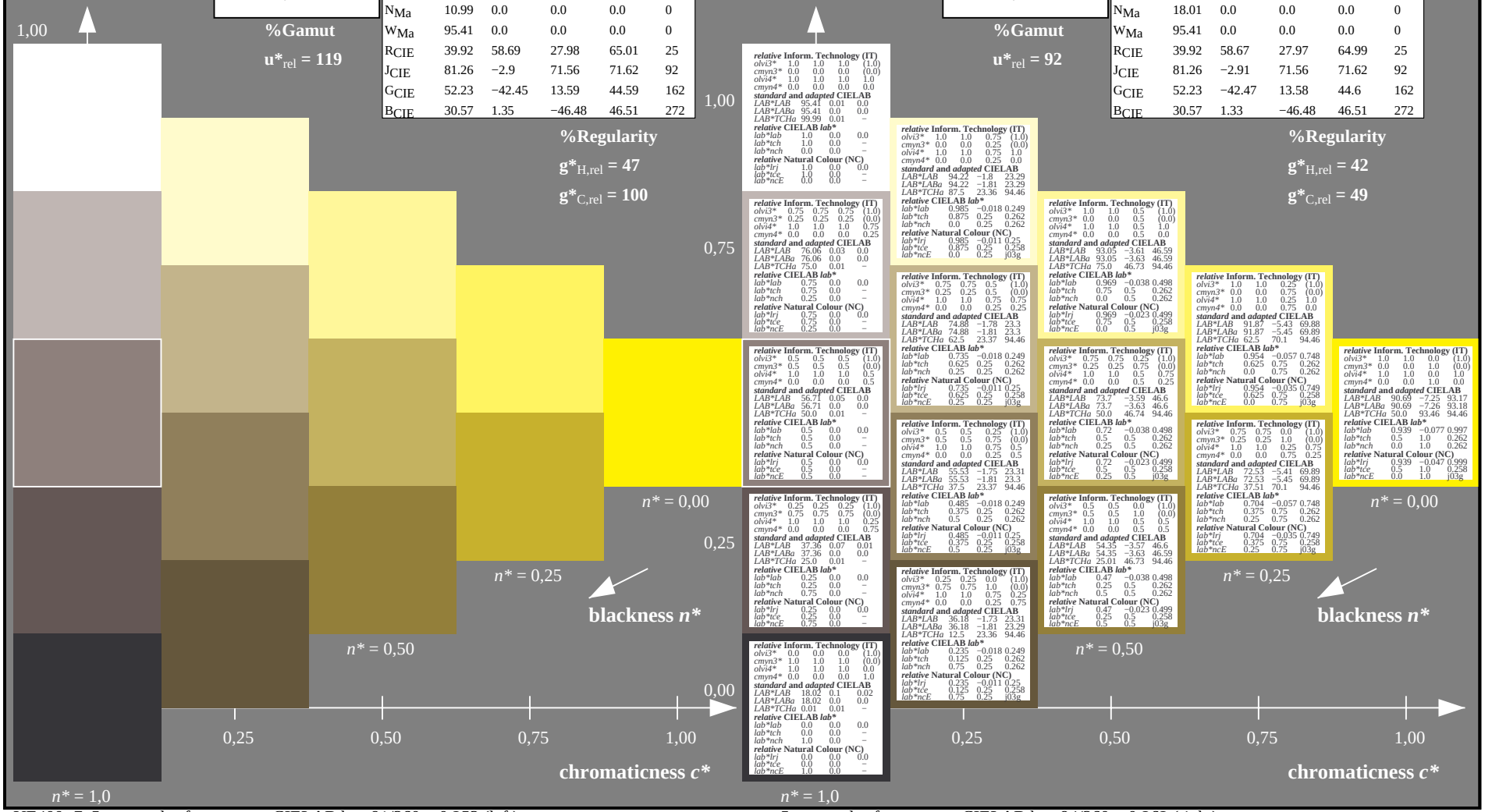
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



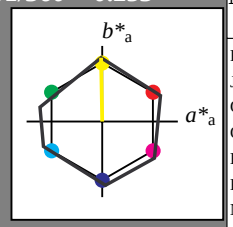
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

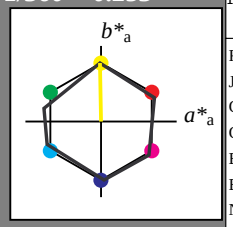
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

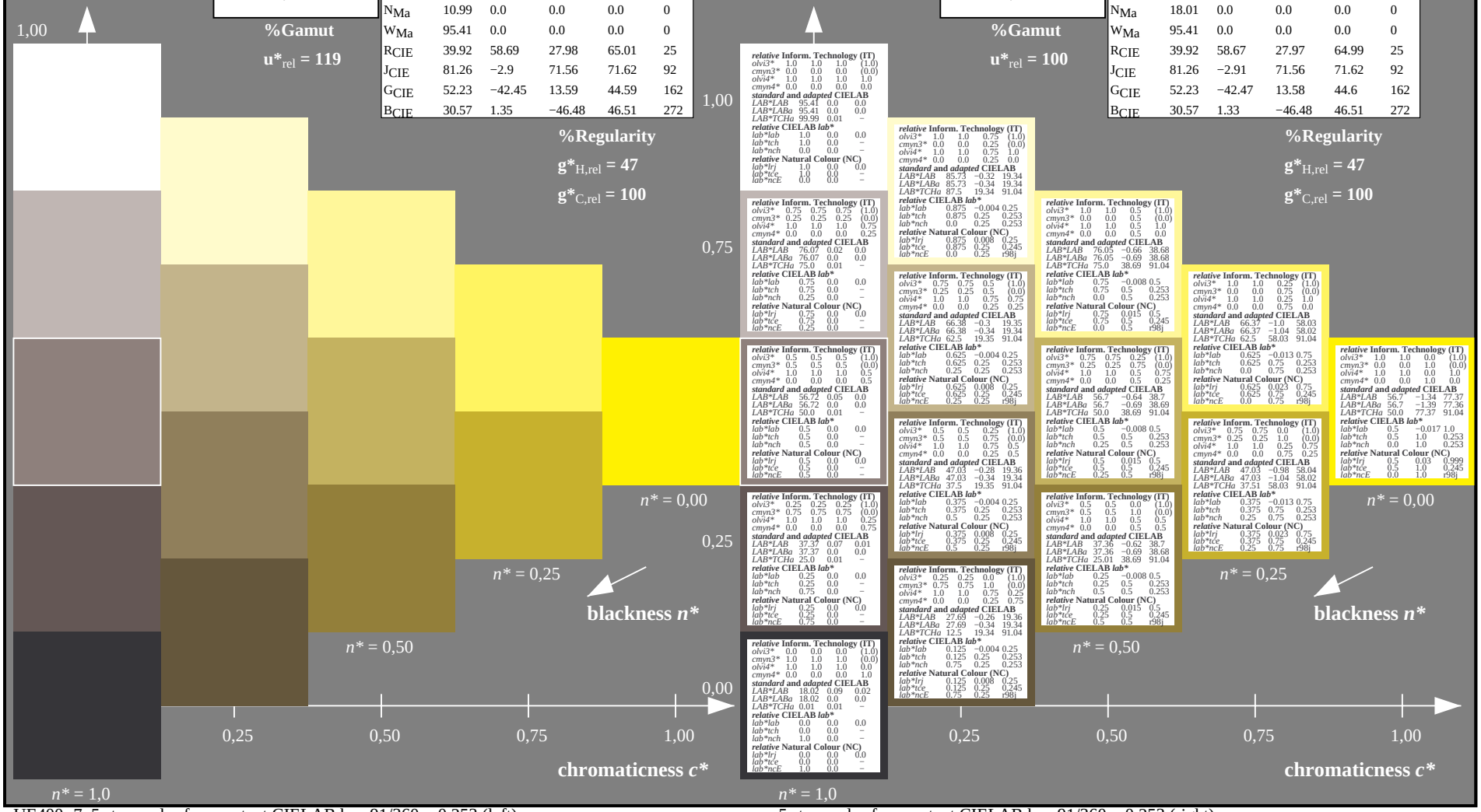
%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



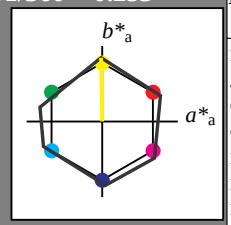
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

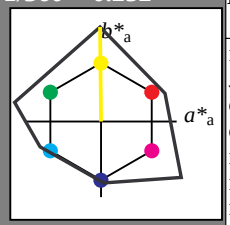
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness

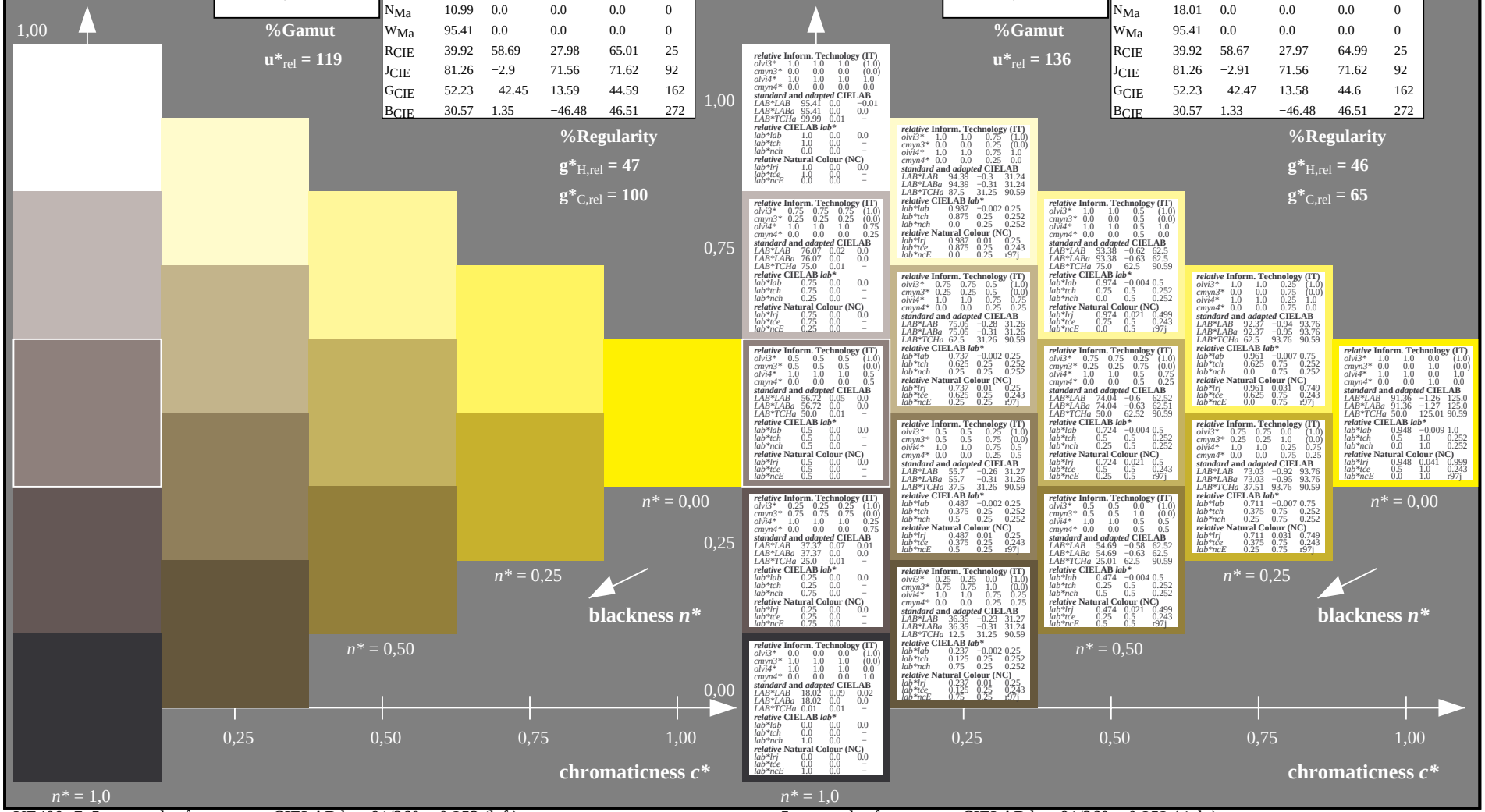


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



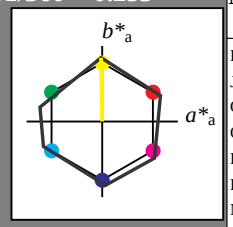
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

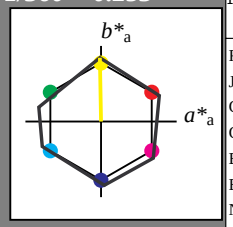
chromaticness c^*

UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

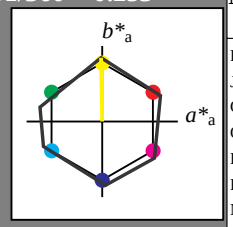
chromaticness c^*

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

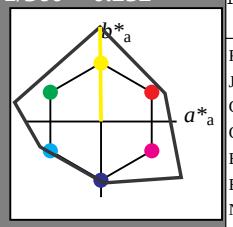
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness

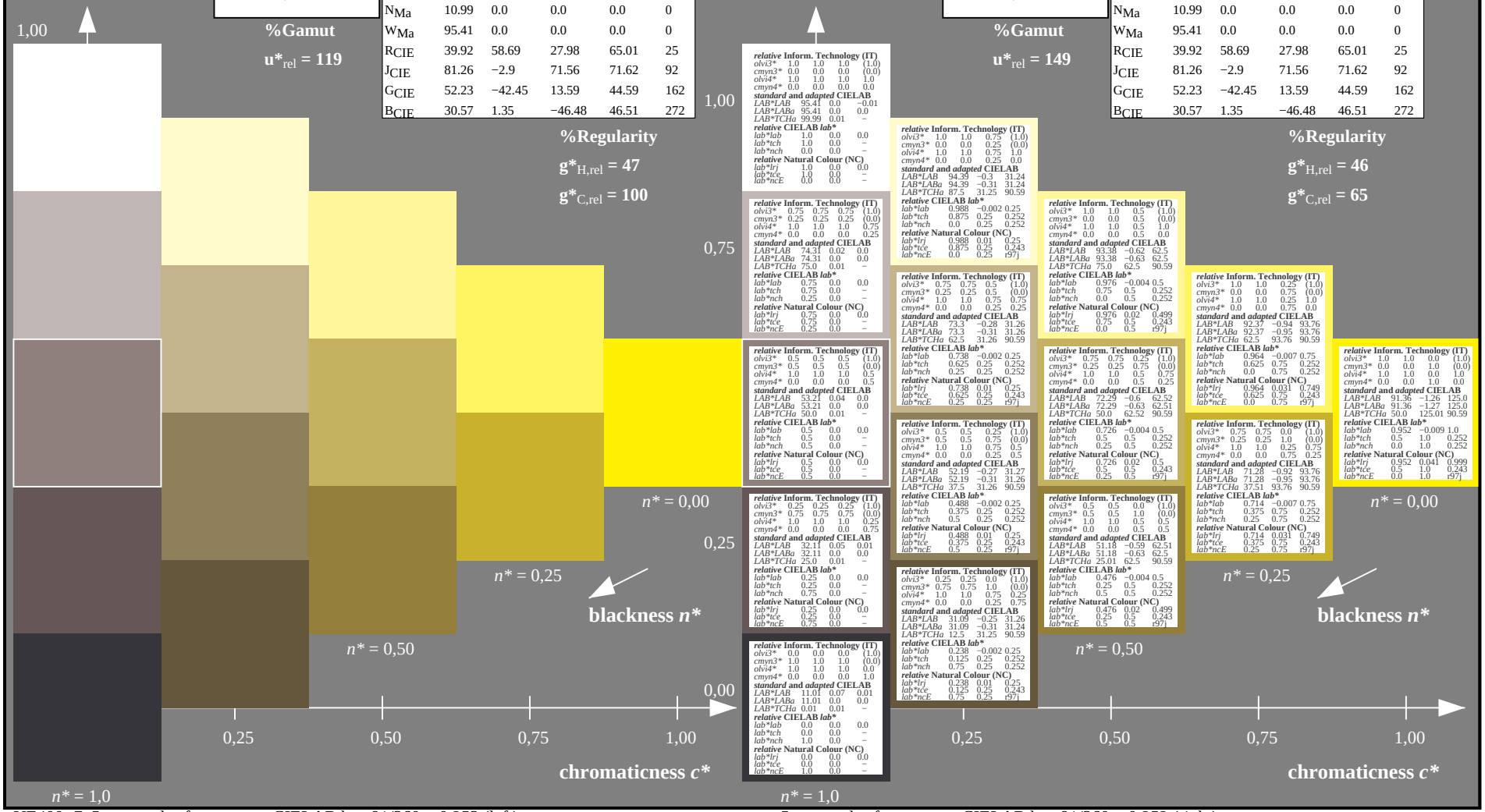


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



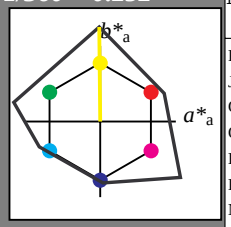
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.253 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

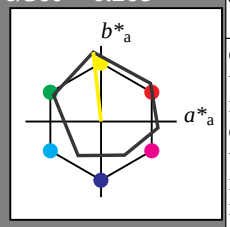
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

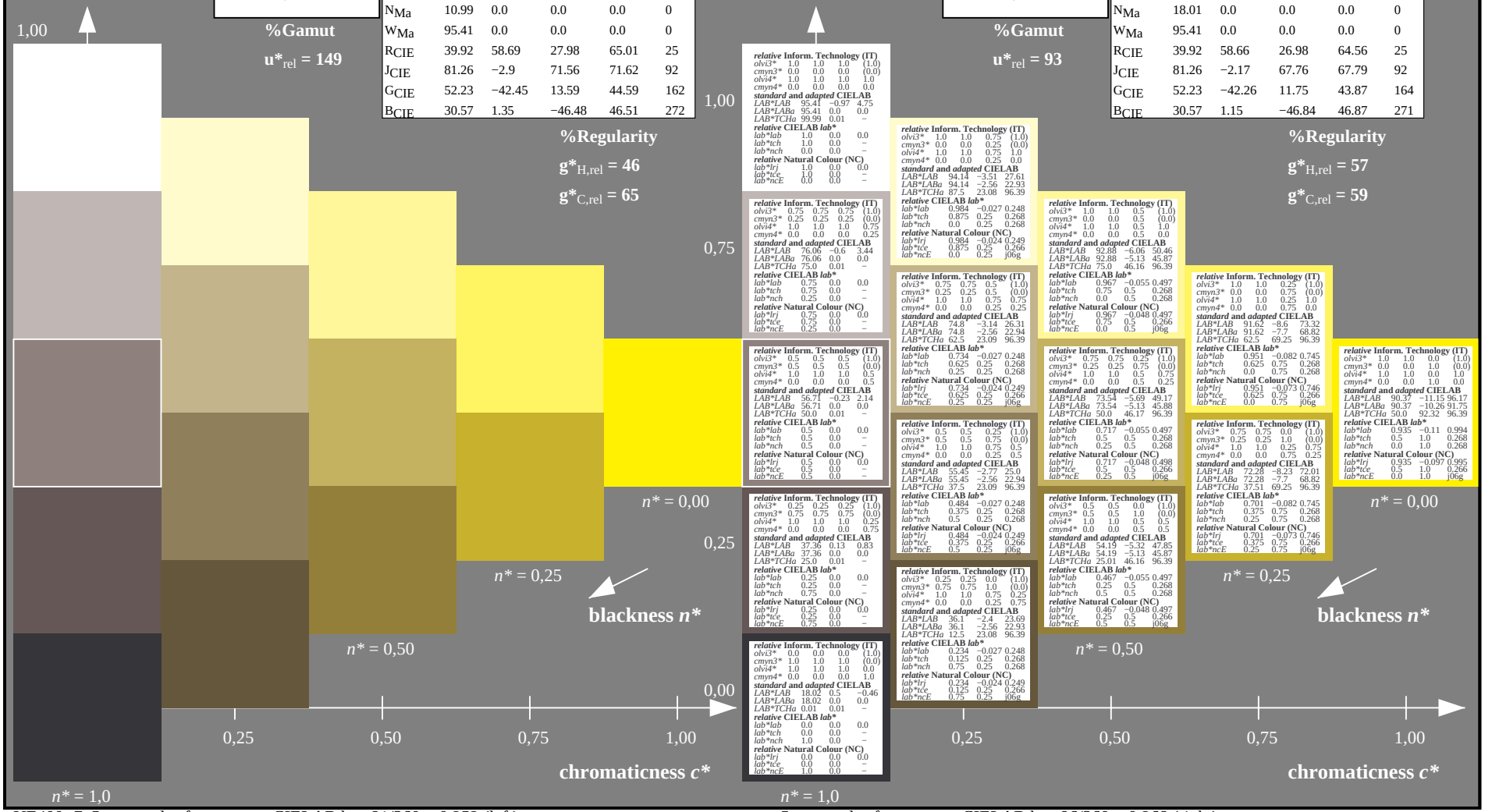
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



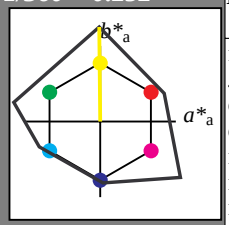
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

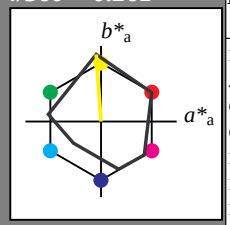
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 94/360 = 0.261$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 89 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

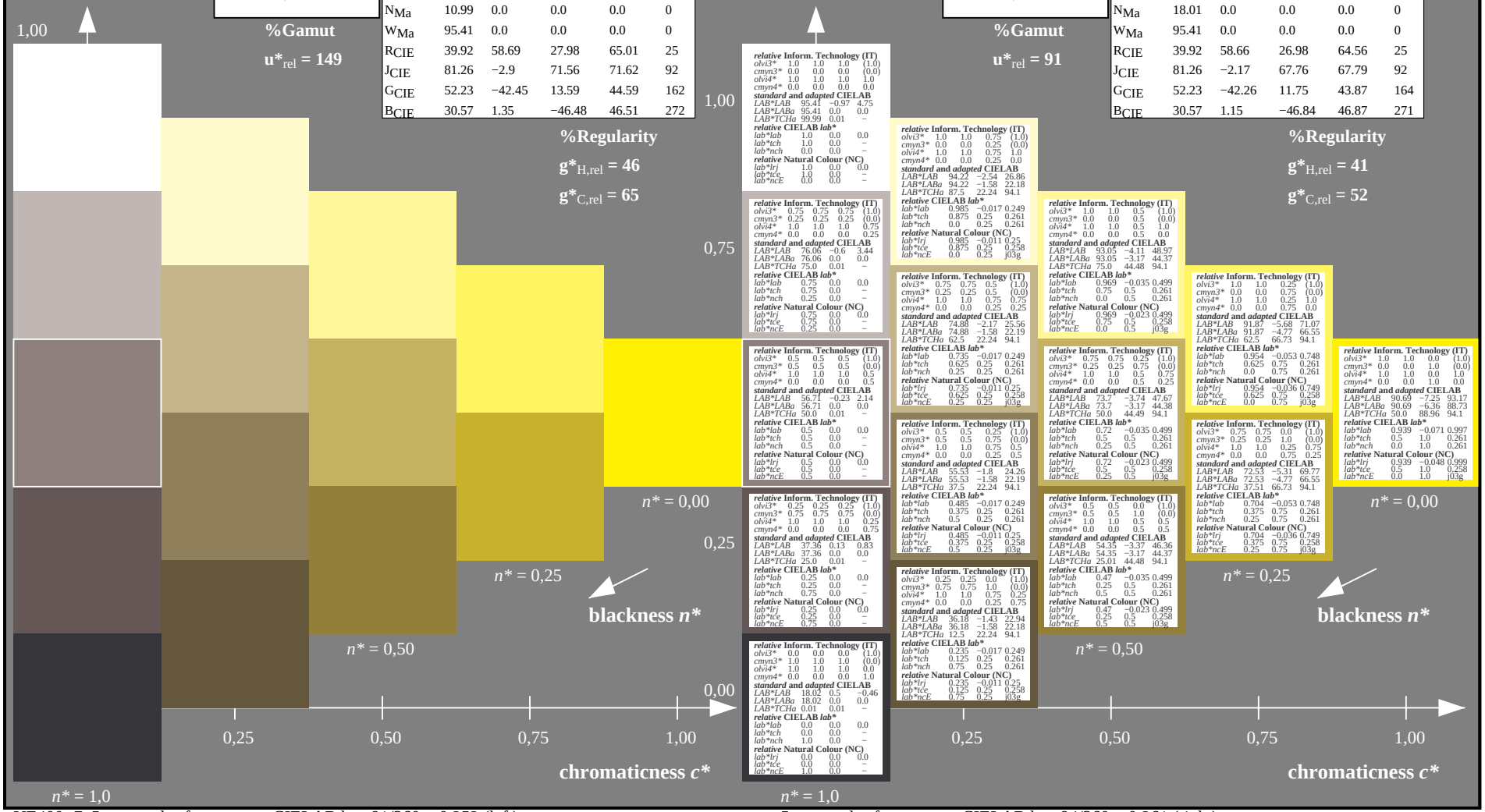
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



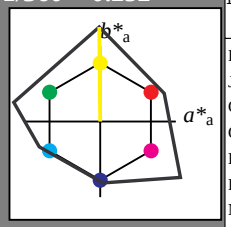
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

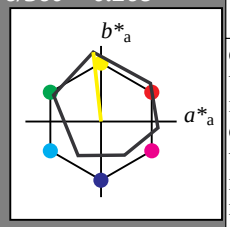
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 96/360 = 0.268$
lab*tch* and *lab*nch

D65: hue Y
LCH*Ma: 90 92 96
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

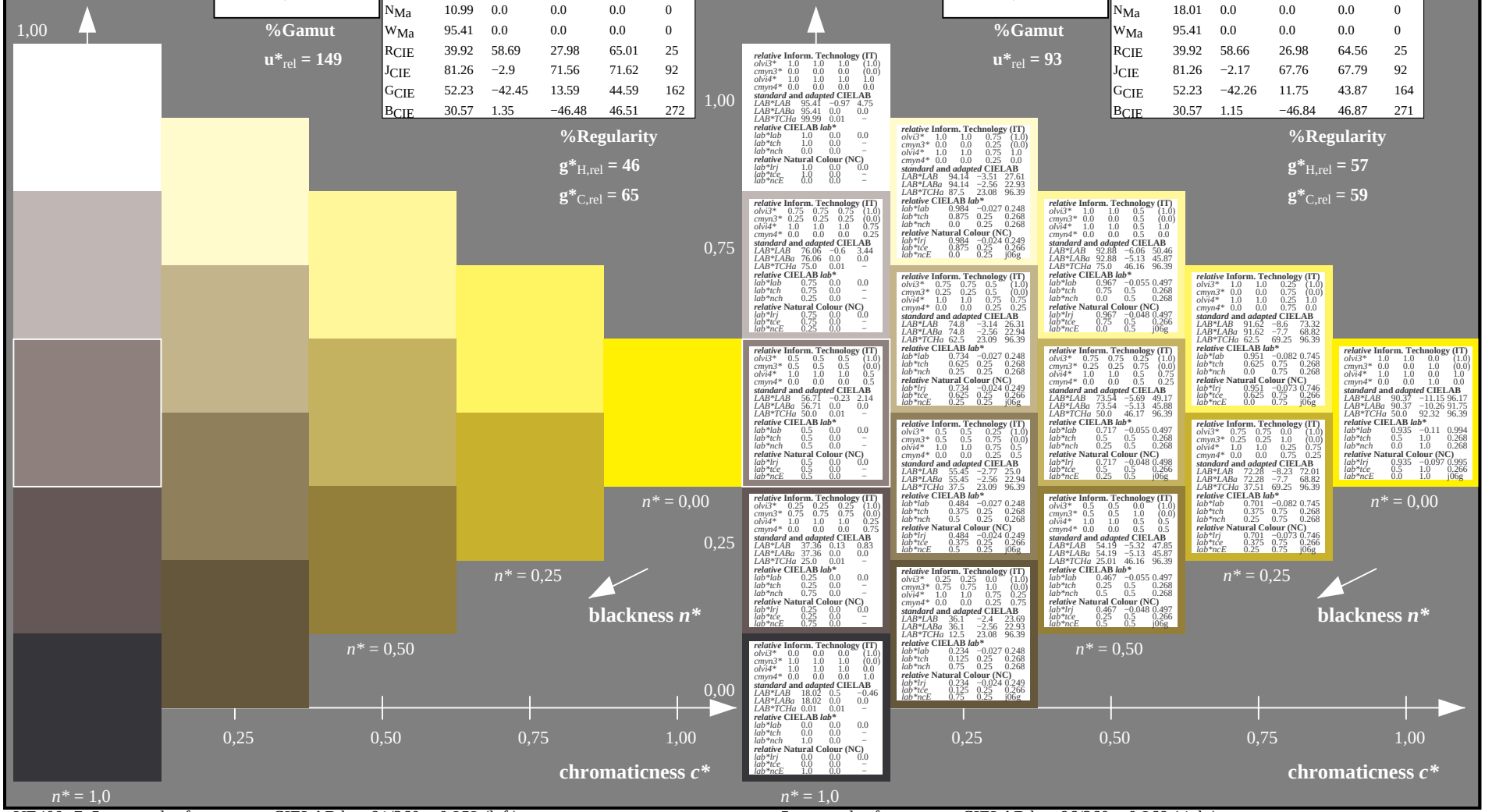
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



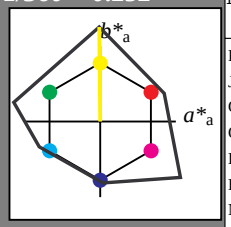
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

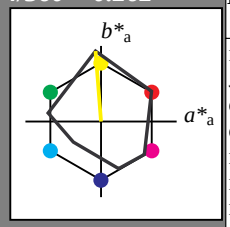
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 94/360 = 0.262$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 93 94
rgb*Ma: 1.0 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

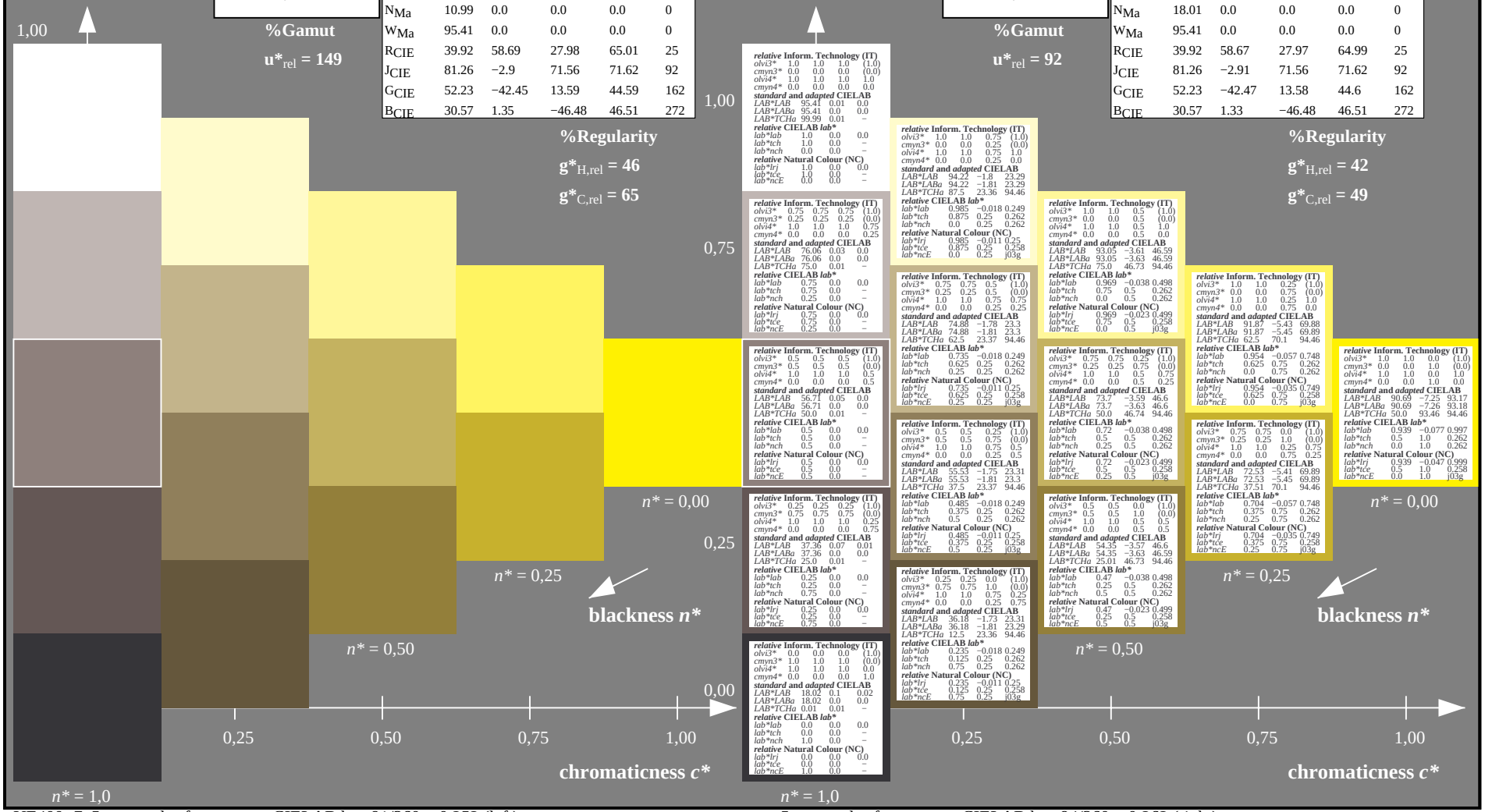
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



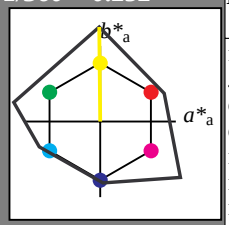
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 94/360 = 0.262 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

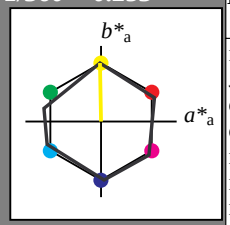
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 77 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

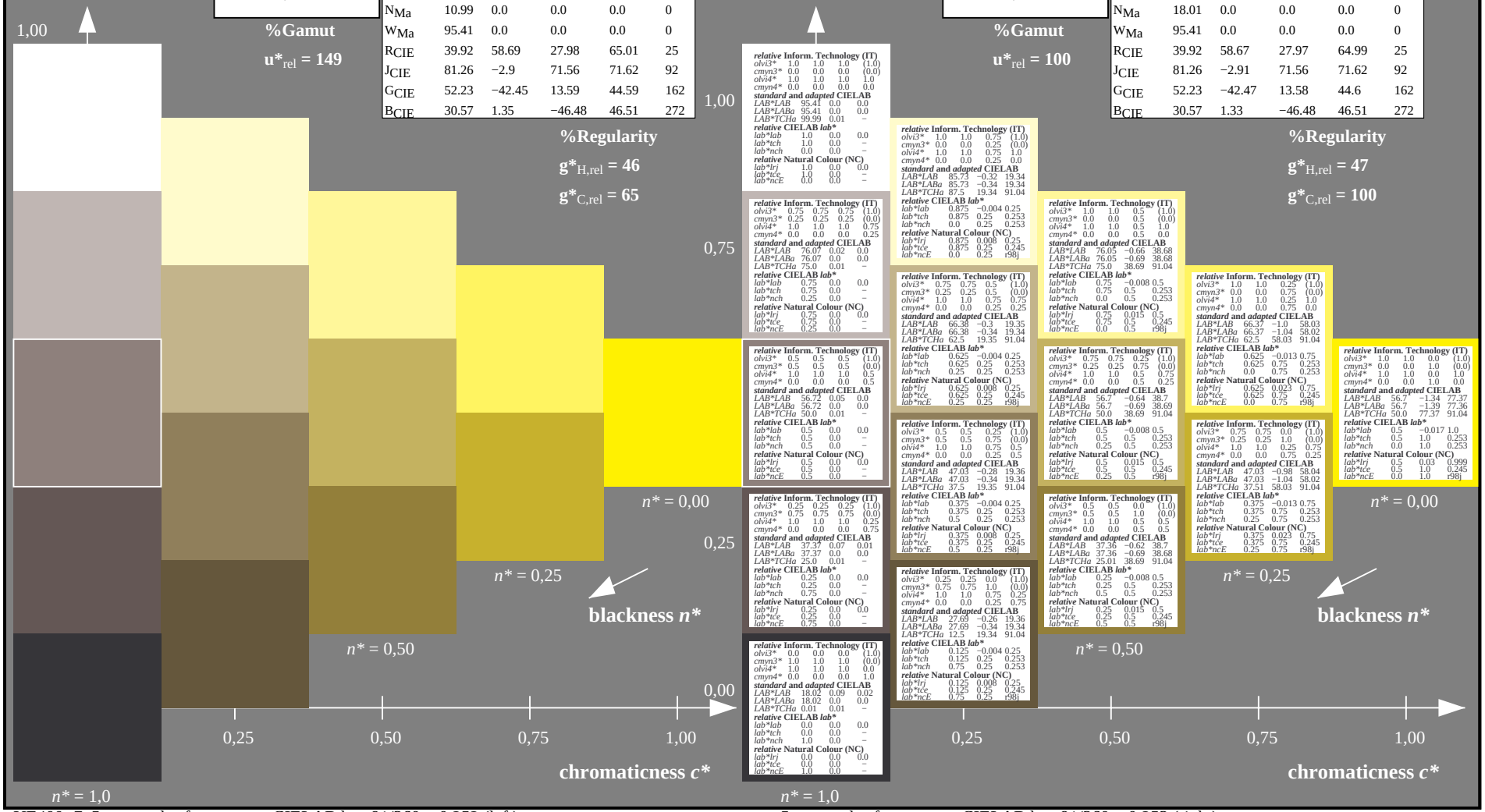
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



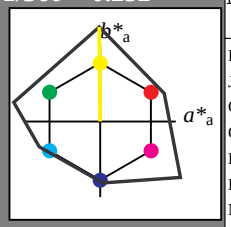
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

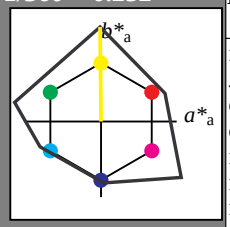
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

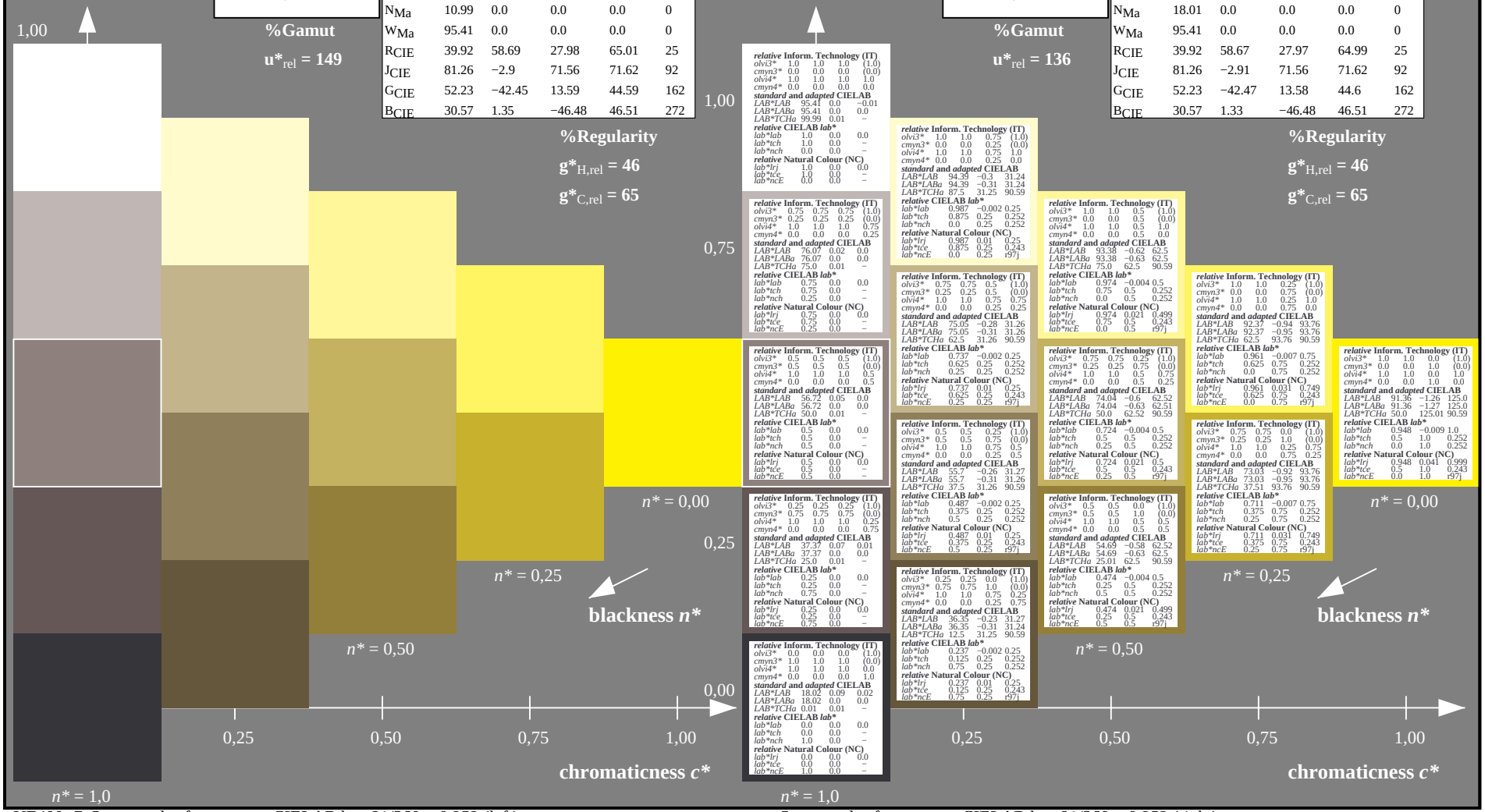
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



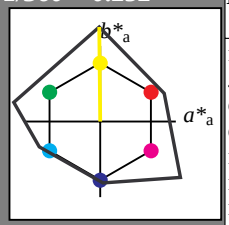
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

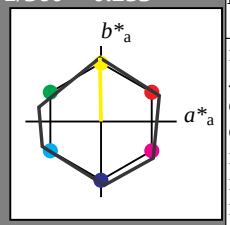
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 91/360 = 0.253$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 84 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

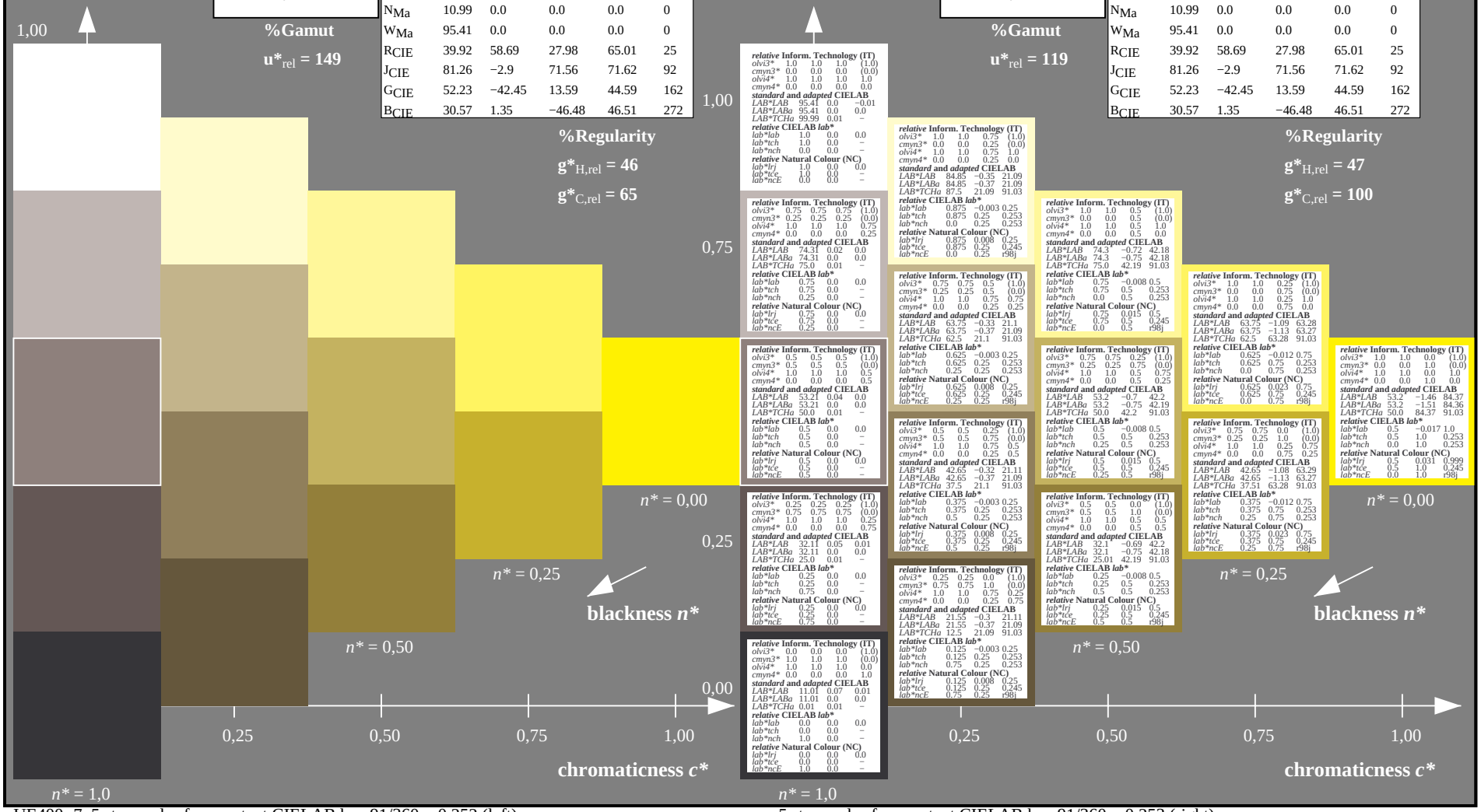
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



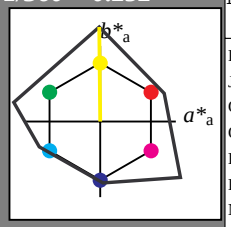
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.253 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

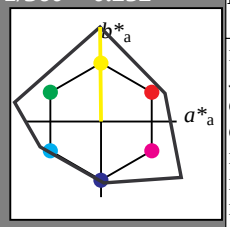
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 91/360 = 0.252$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 91 125 91
rgb*Ma: 1.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

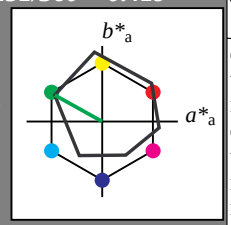
UE400−7, 5 step scales for constant CIELAB hue 91/360 = 0.252 (left)

5 step scales for constant CIELAB hue 91/360 = 0.252 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

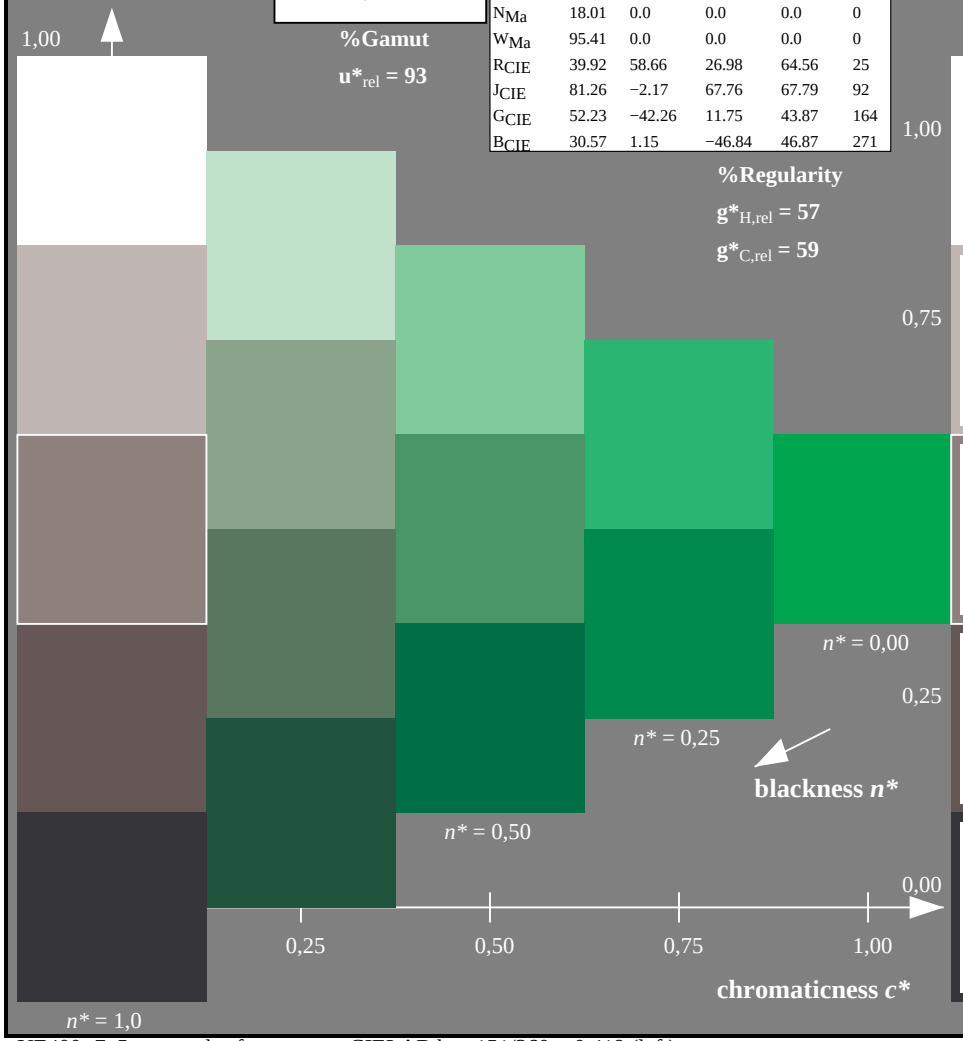
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

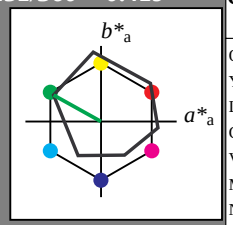
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

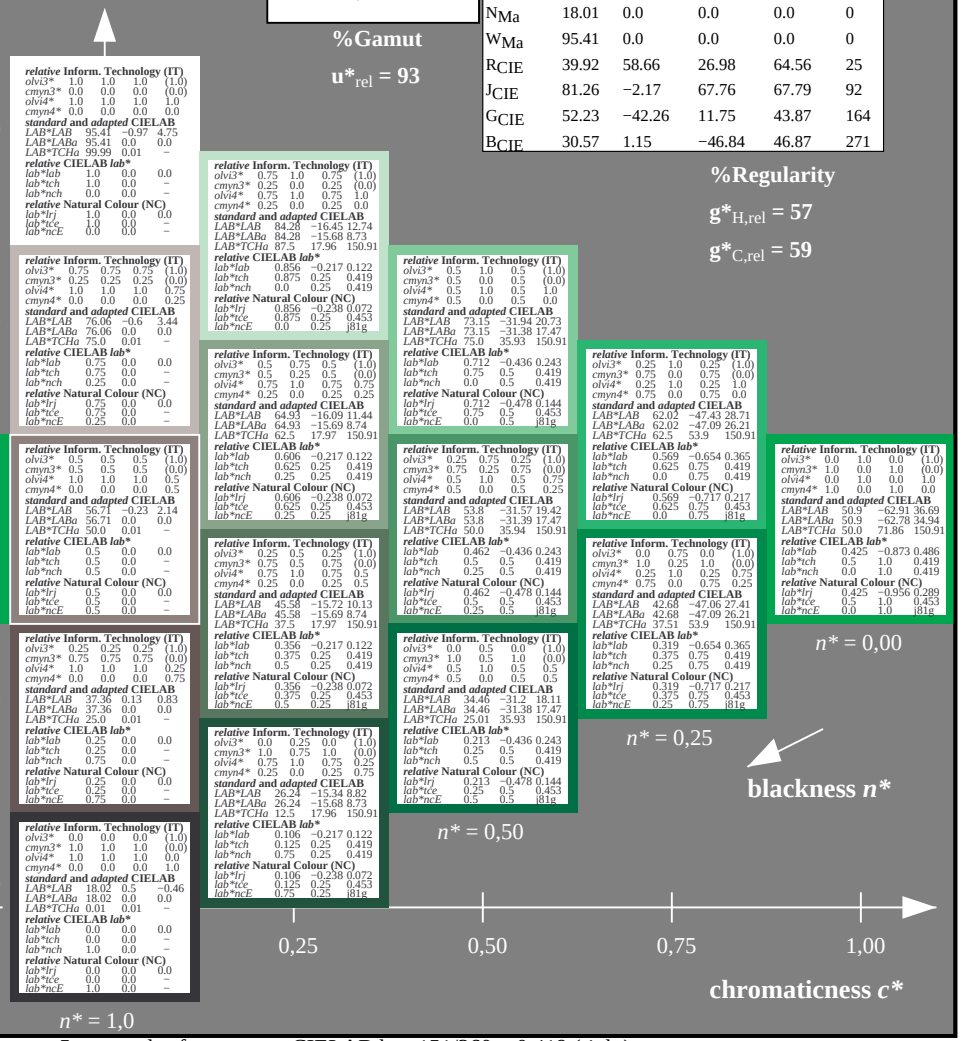
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



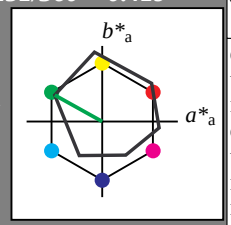
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 151/360 = 0.419*
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

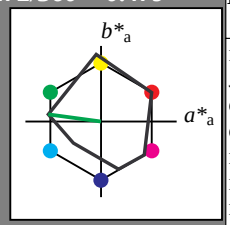
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 172/360 = 0.479*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

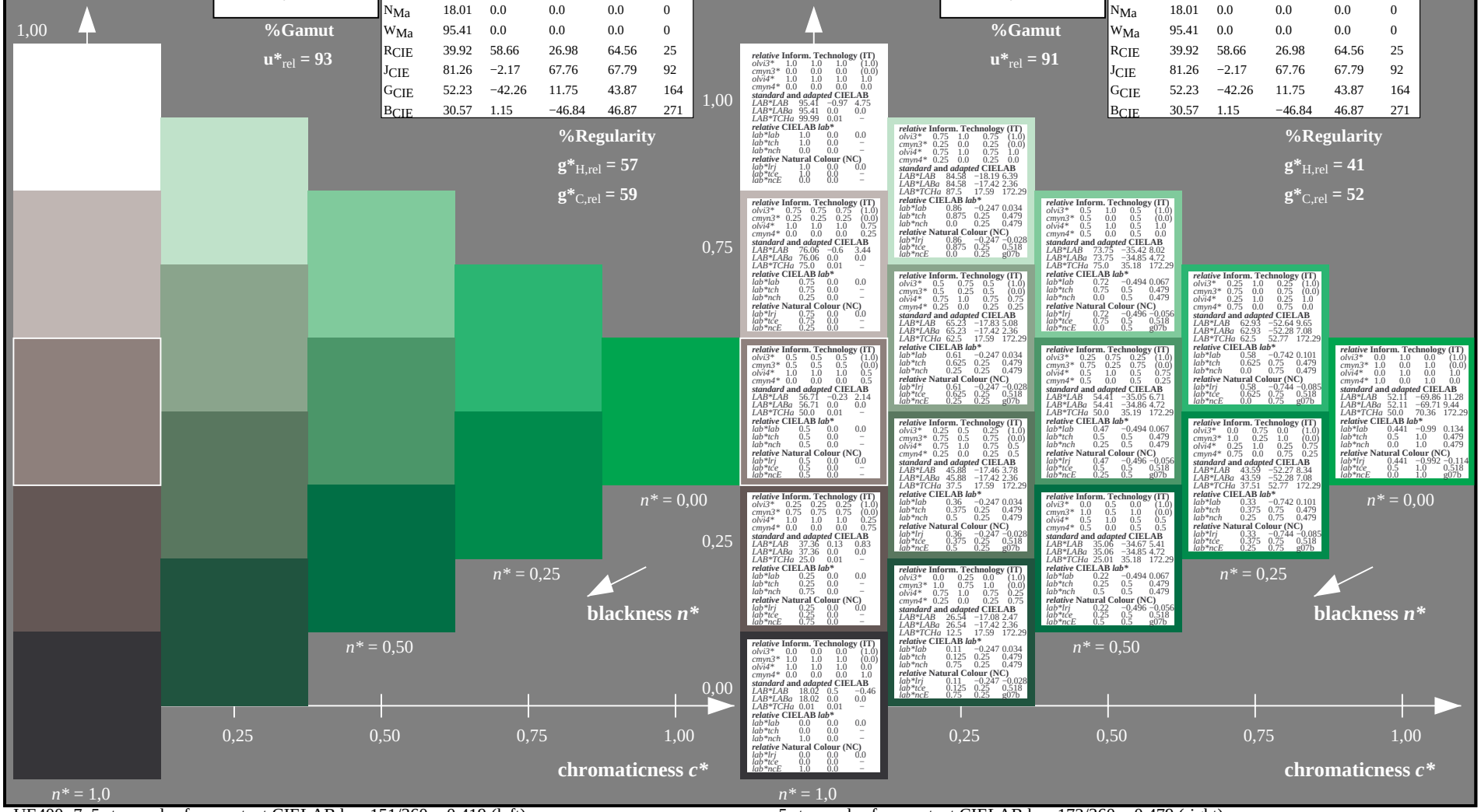
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



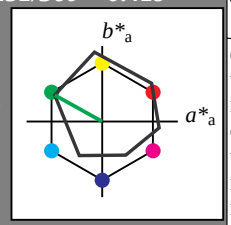
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

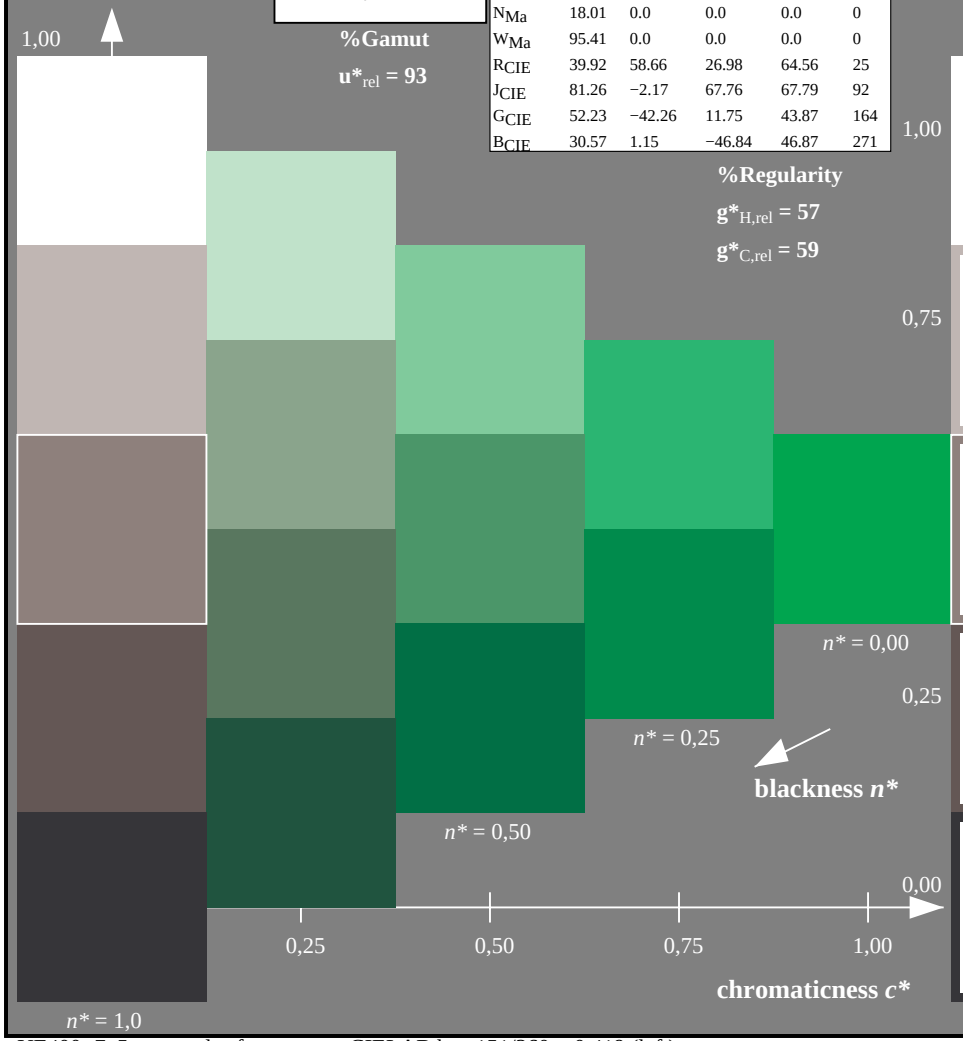
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

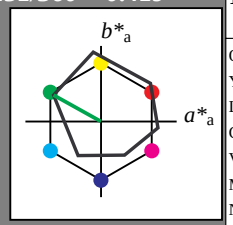
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

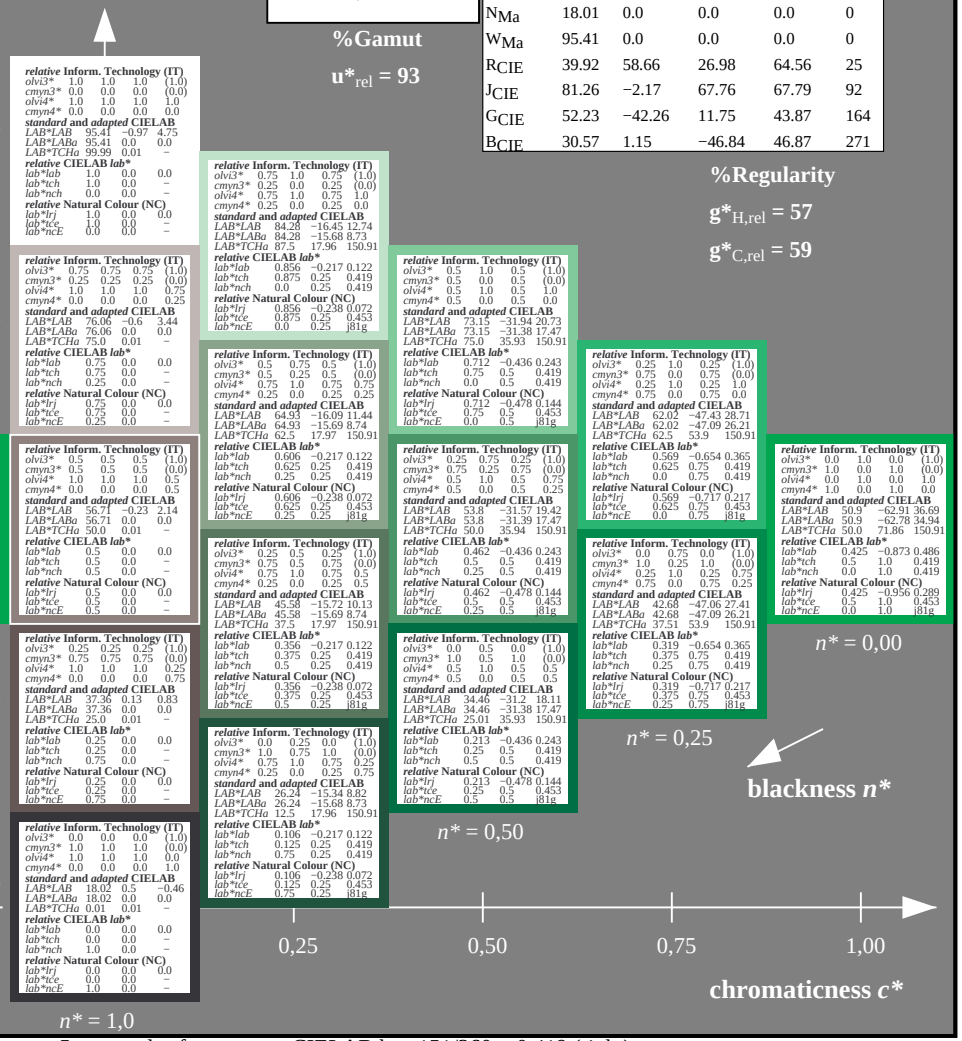
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



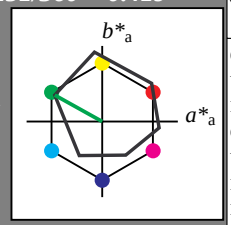
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

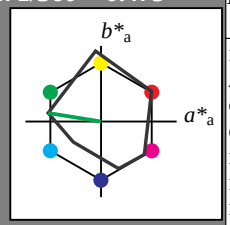
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

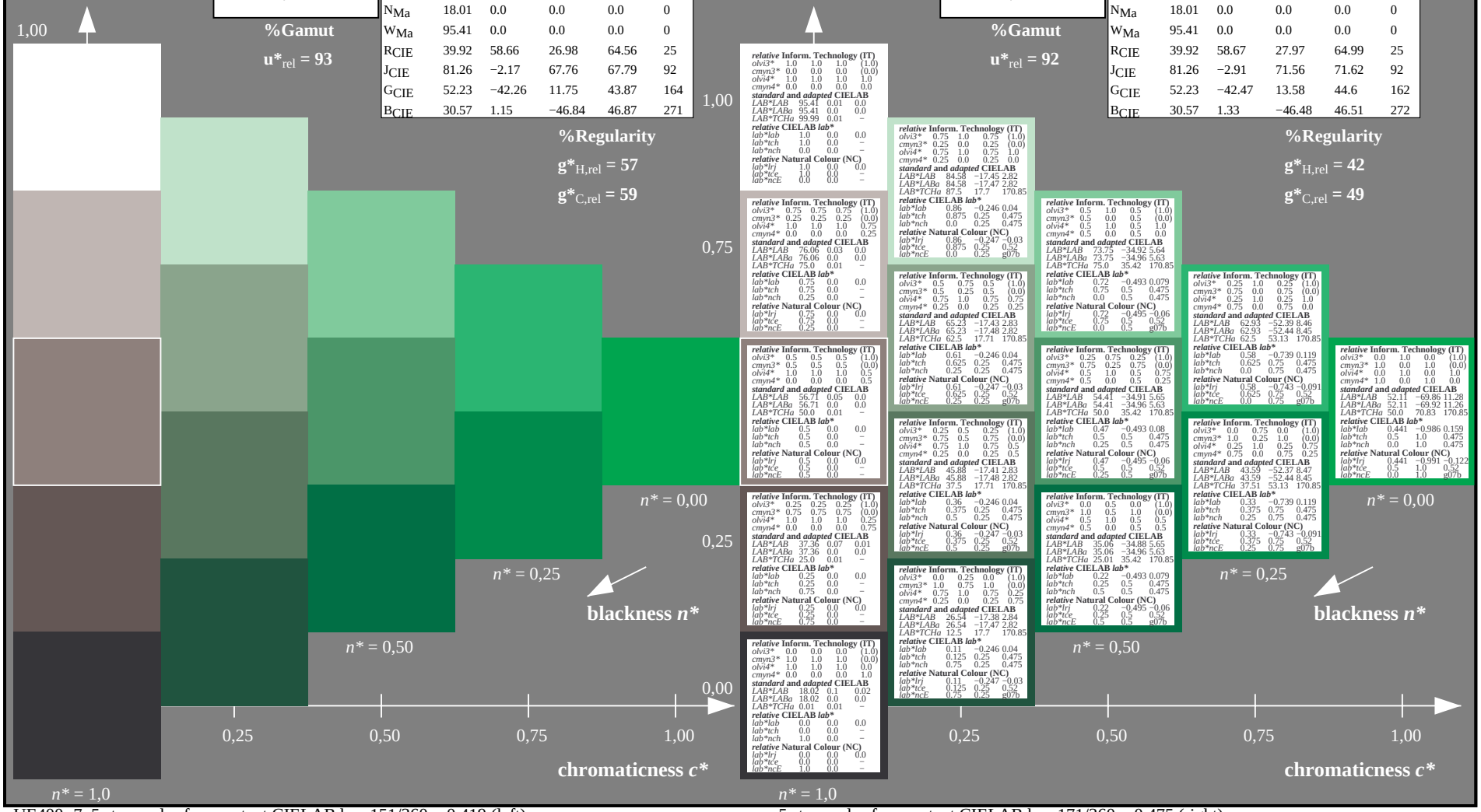
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



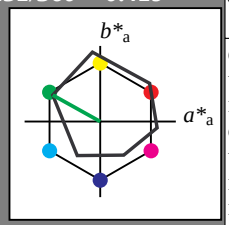
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 151/360 = 0.419*
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

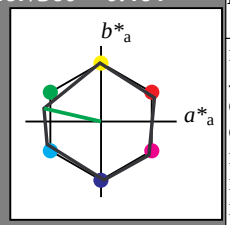
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 167/360 = 0.464*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

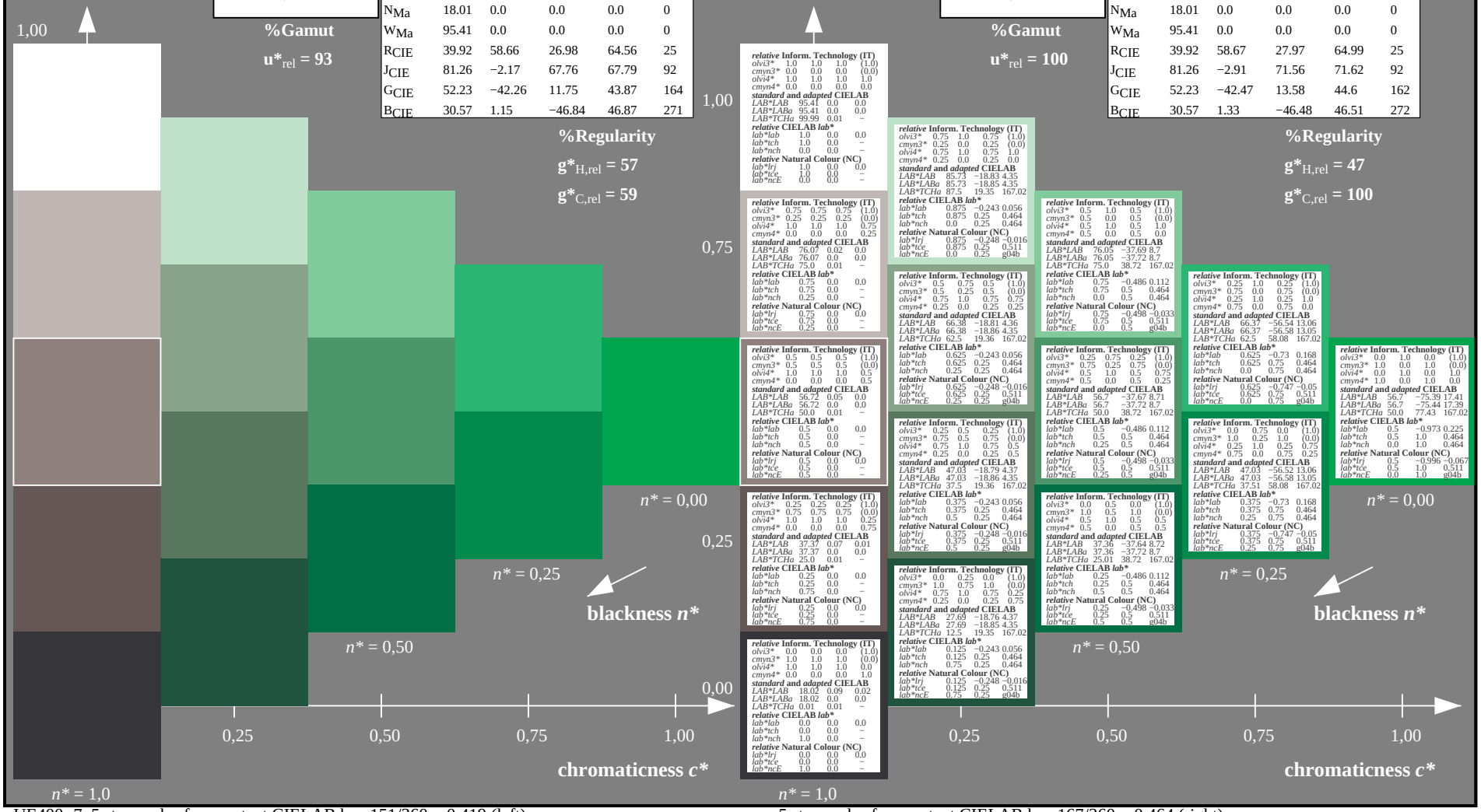
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



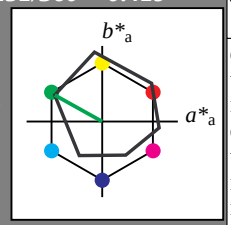
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 151/360 = 0.419*
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

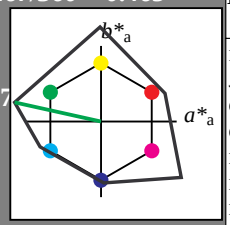
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue *h* = lab*h = 167/360 = 0.465*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

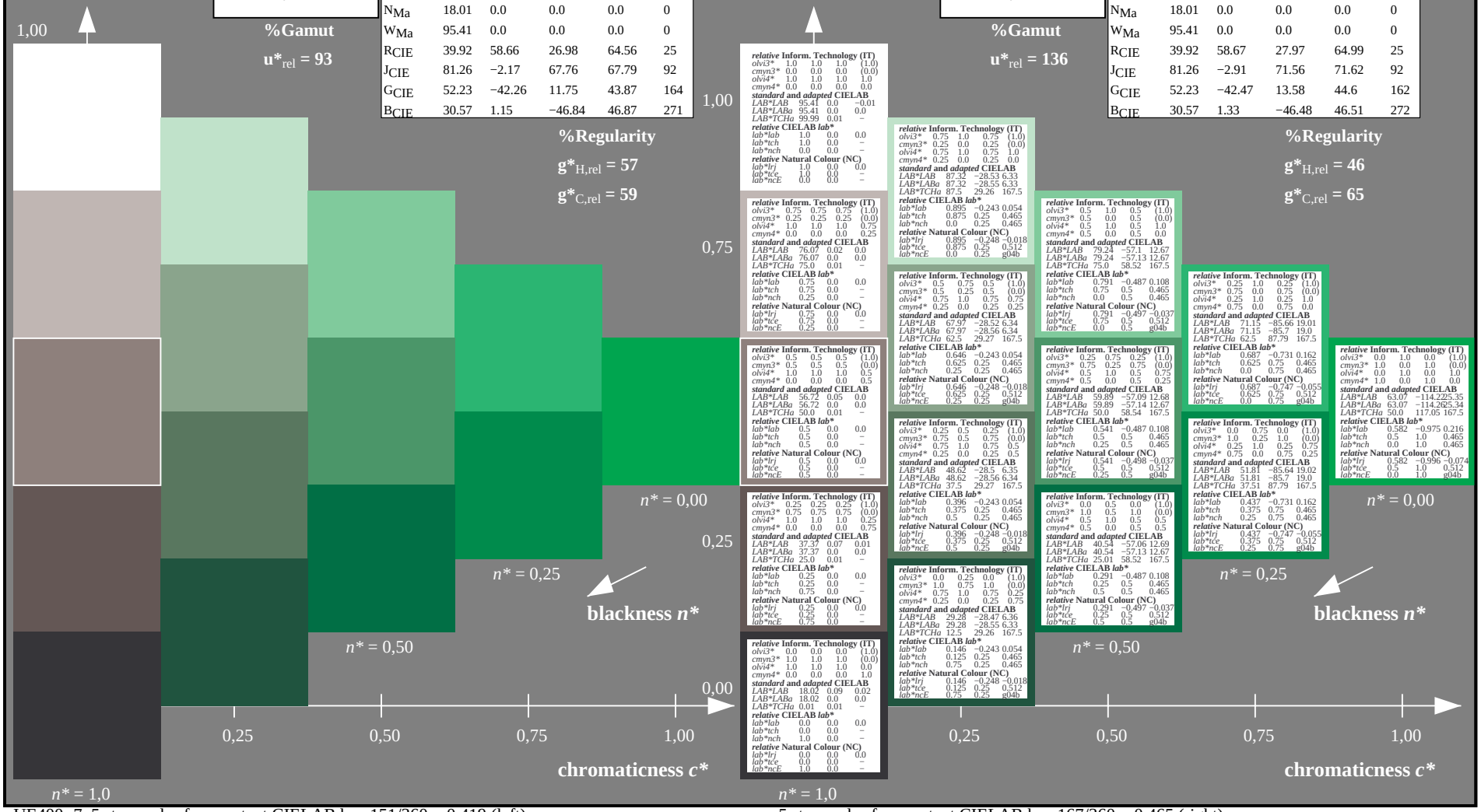
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



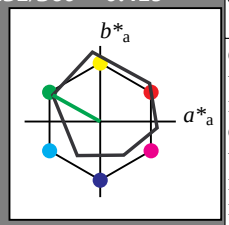
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 151/360 = 0.419*
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

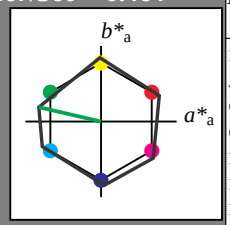
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 167/360 = 0.464*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

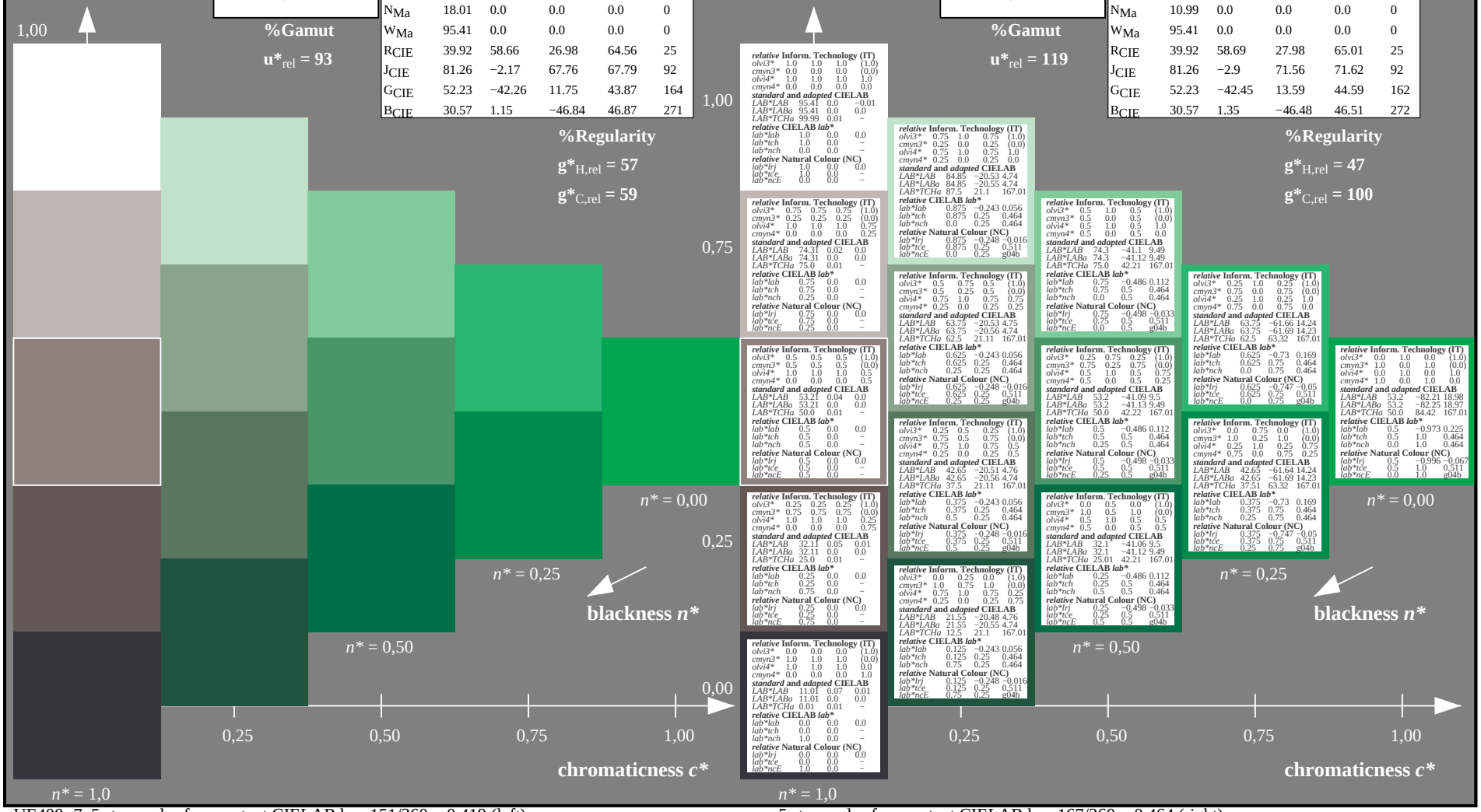
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



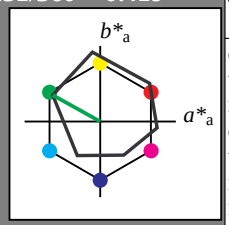
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 151/360 = 0.419*
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

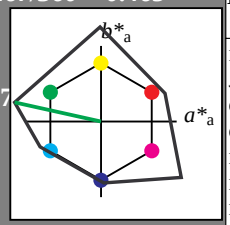
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue *h* = lab*h = 167/360 = 0.465*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

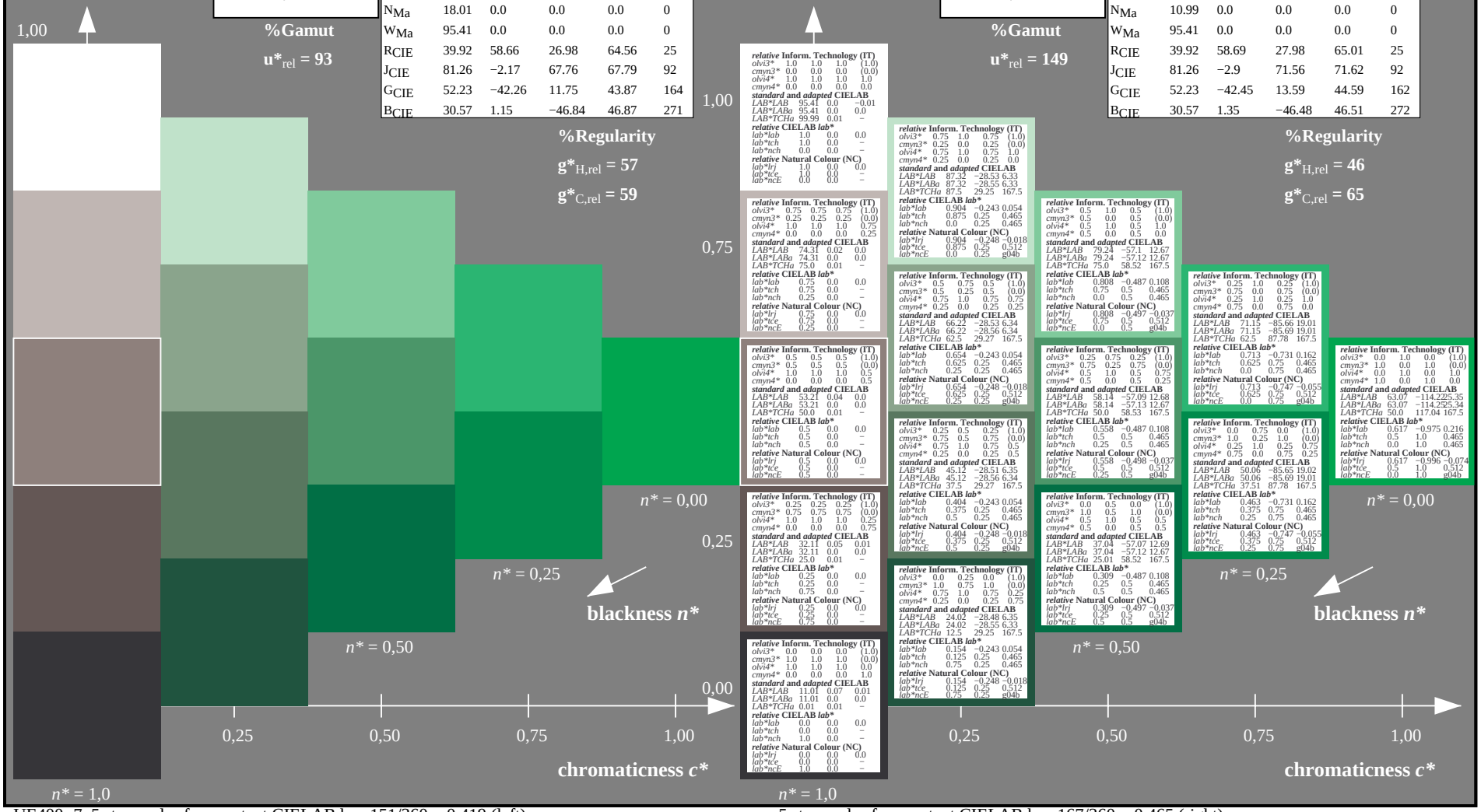
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



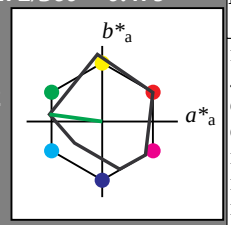
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

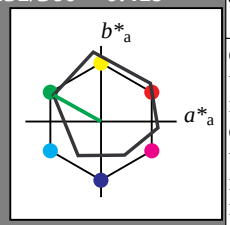
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

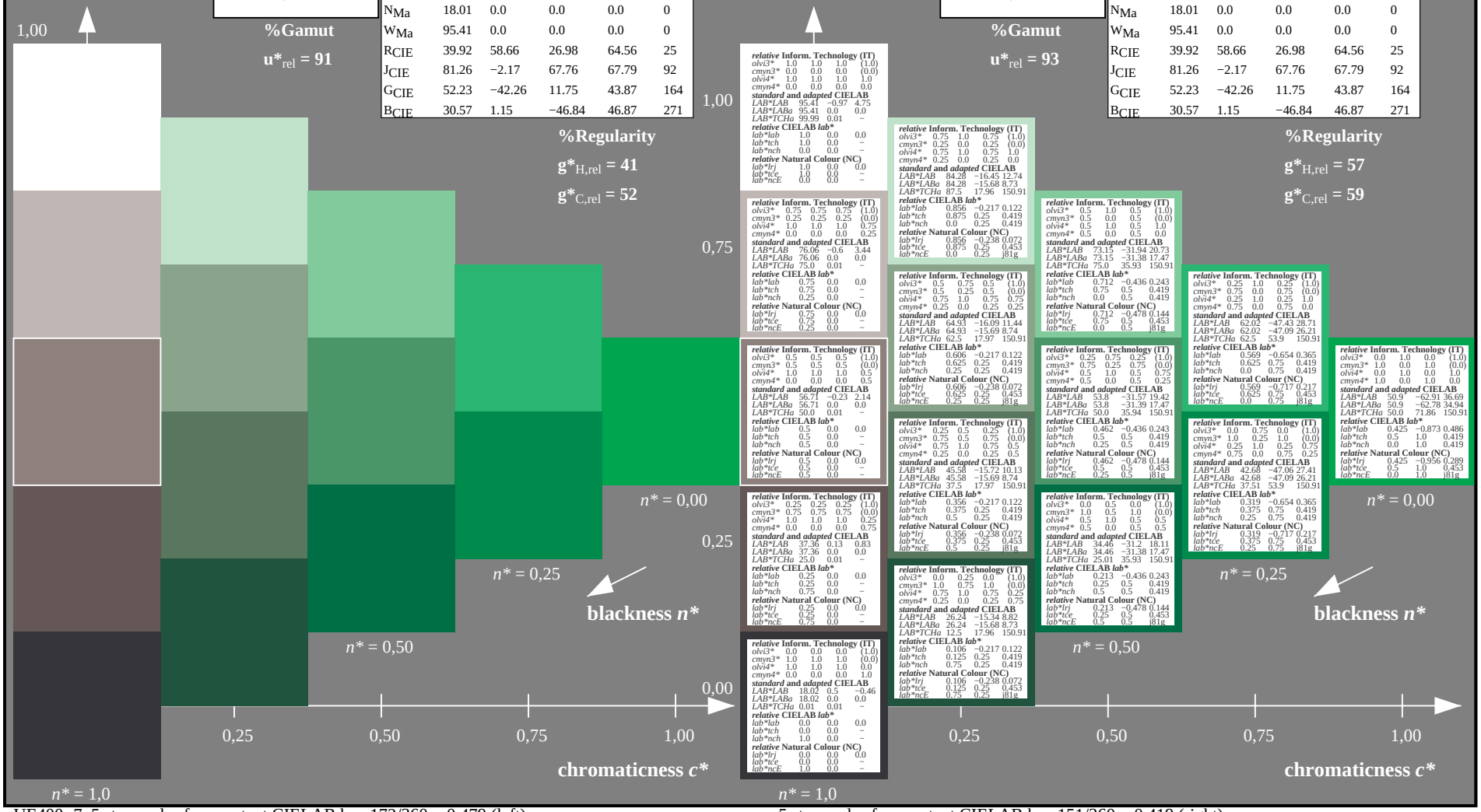
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



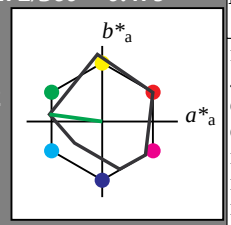
UE400−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

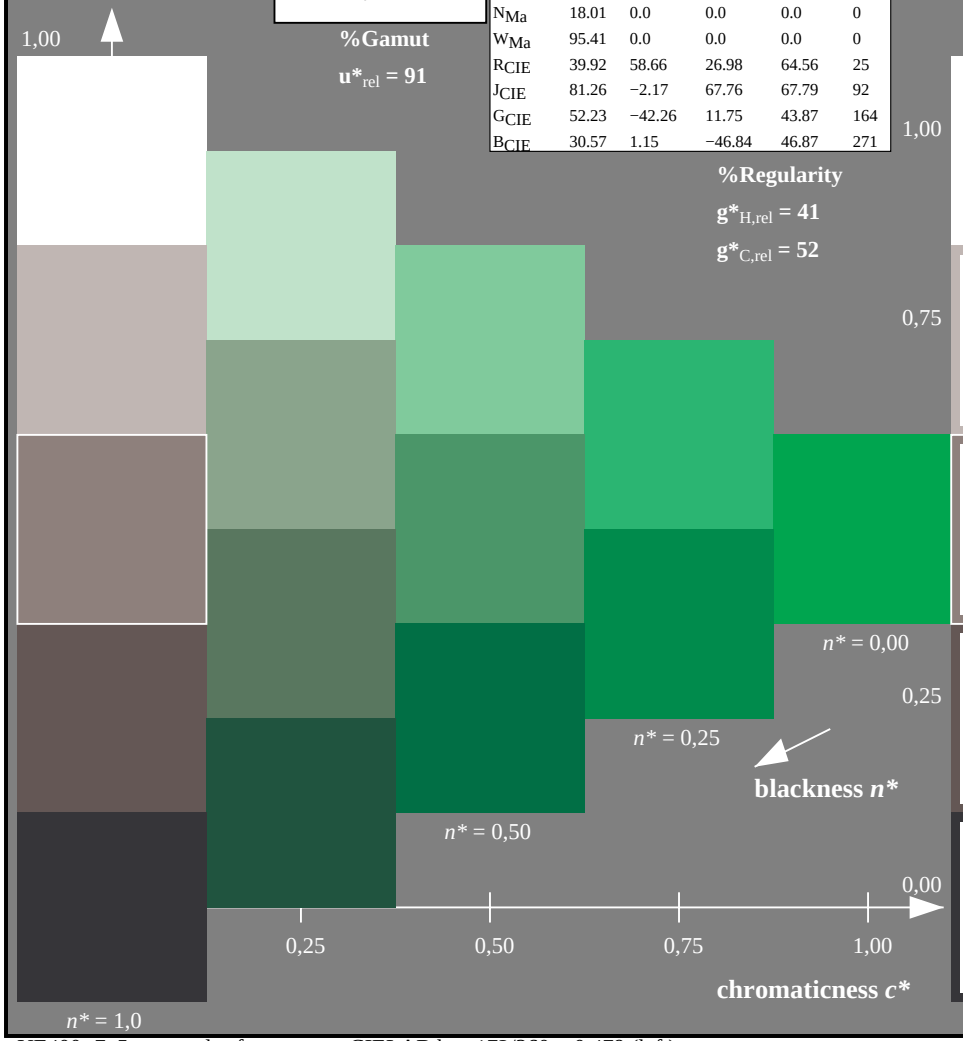
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

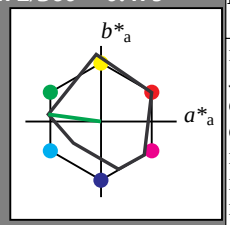
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

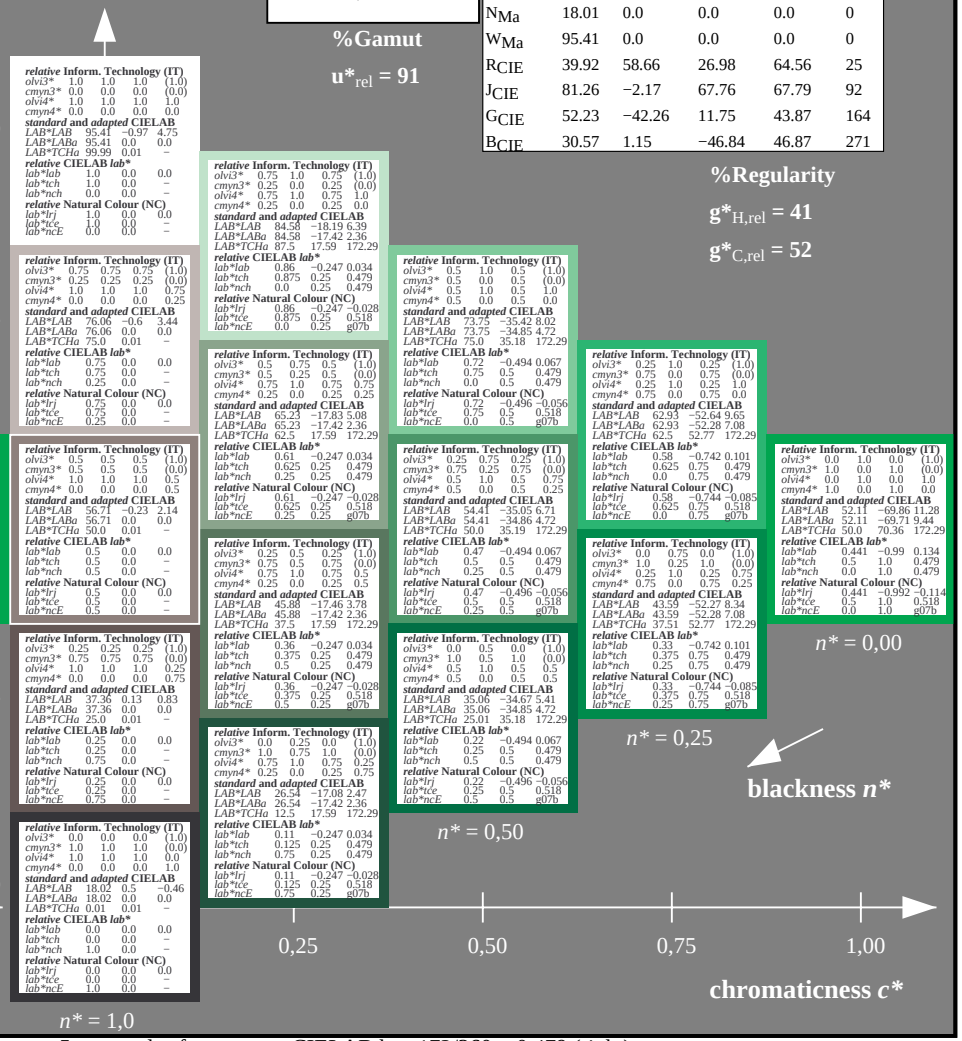
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



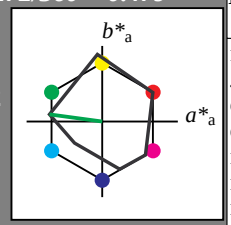
UE400−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

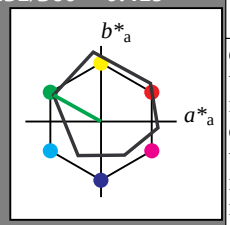
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

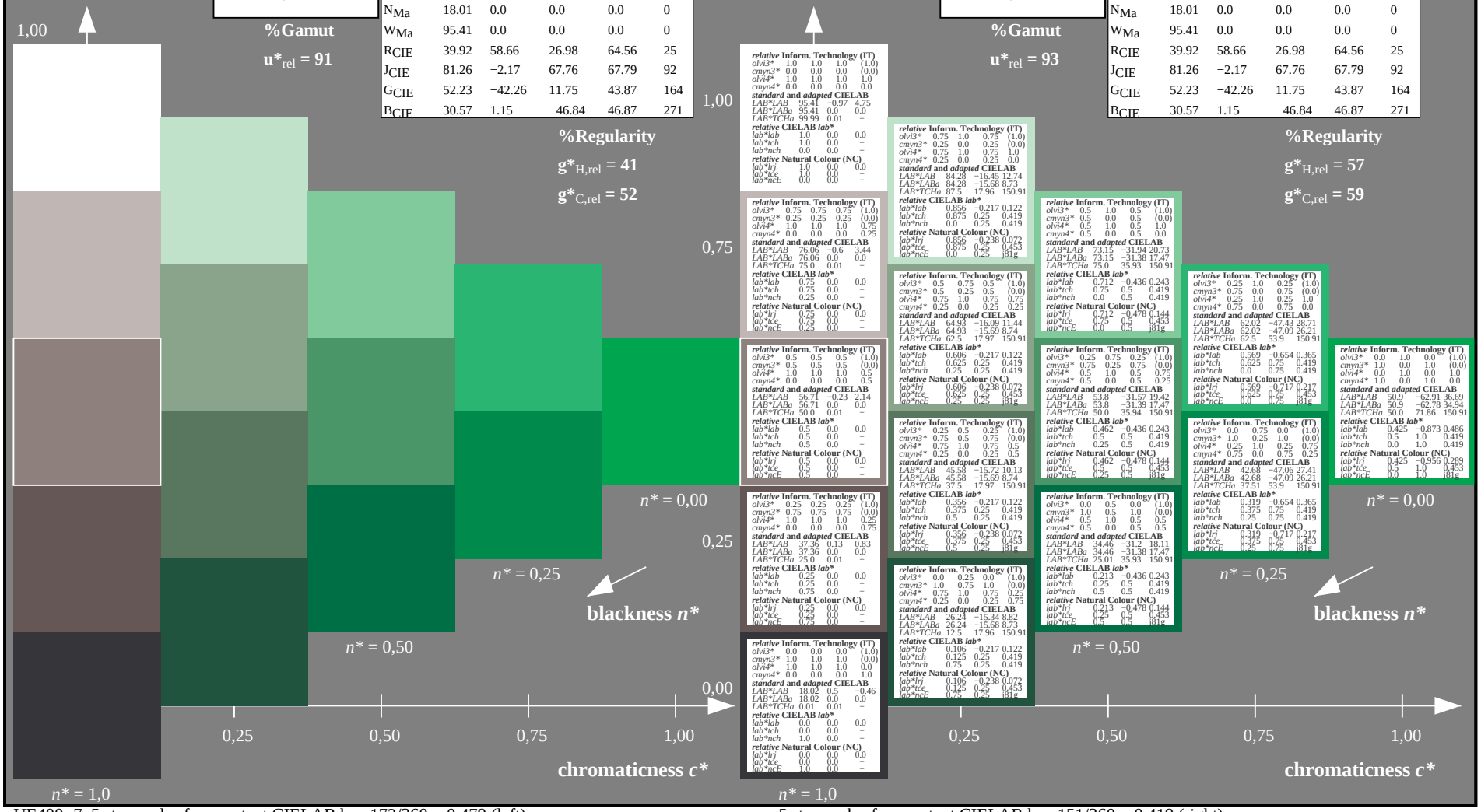
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



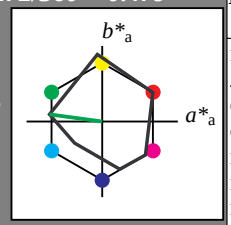
UE400−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

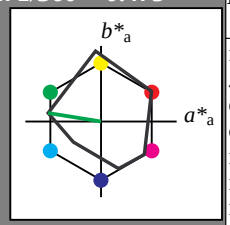
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

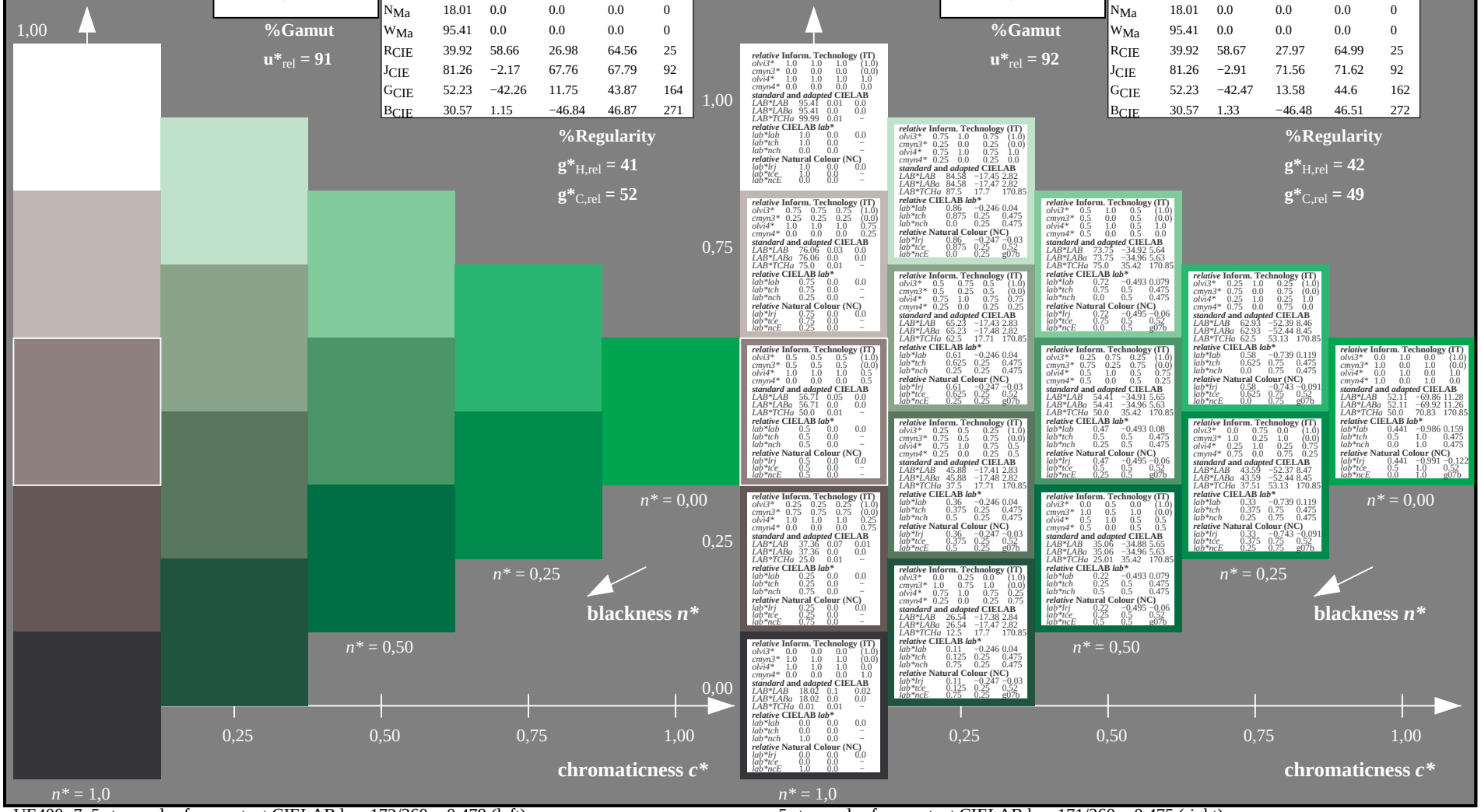
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



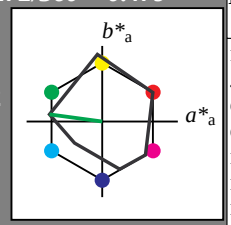
UE400−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

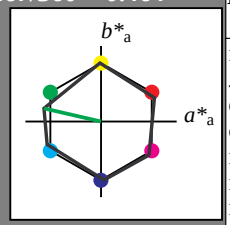
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

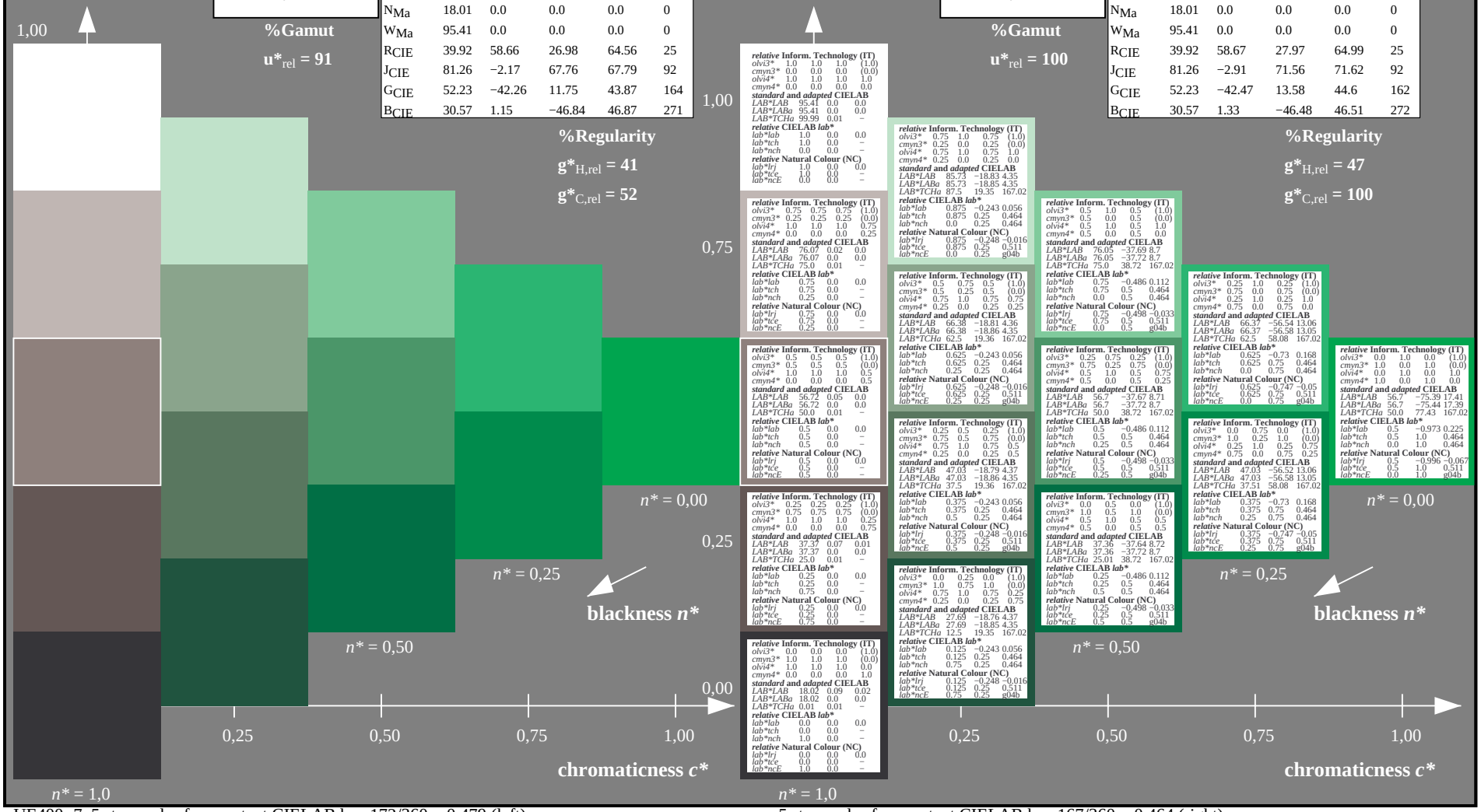
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



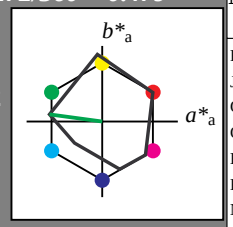
UE400−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

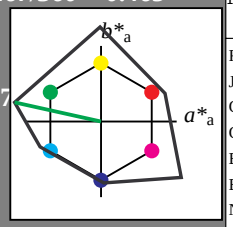
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

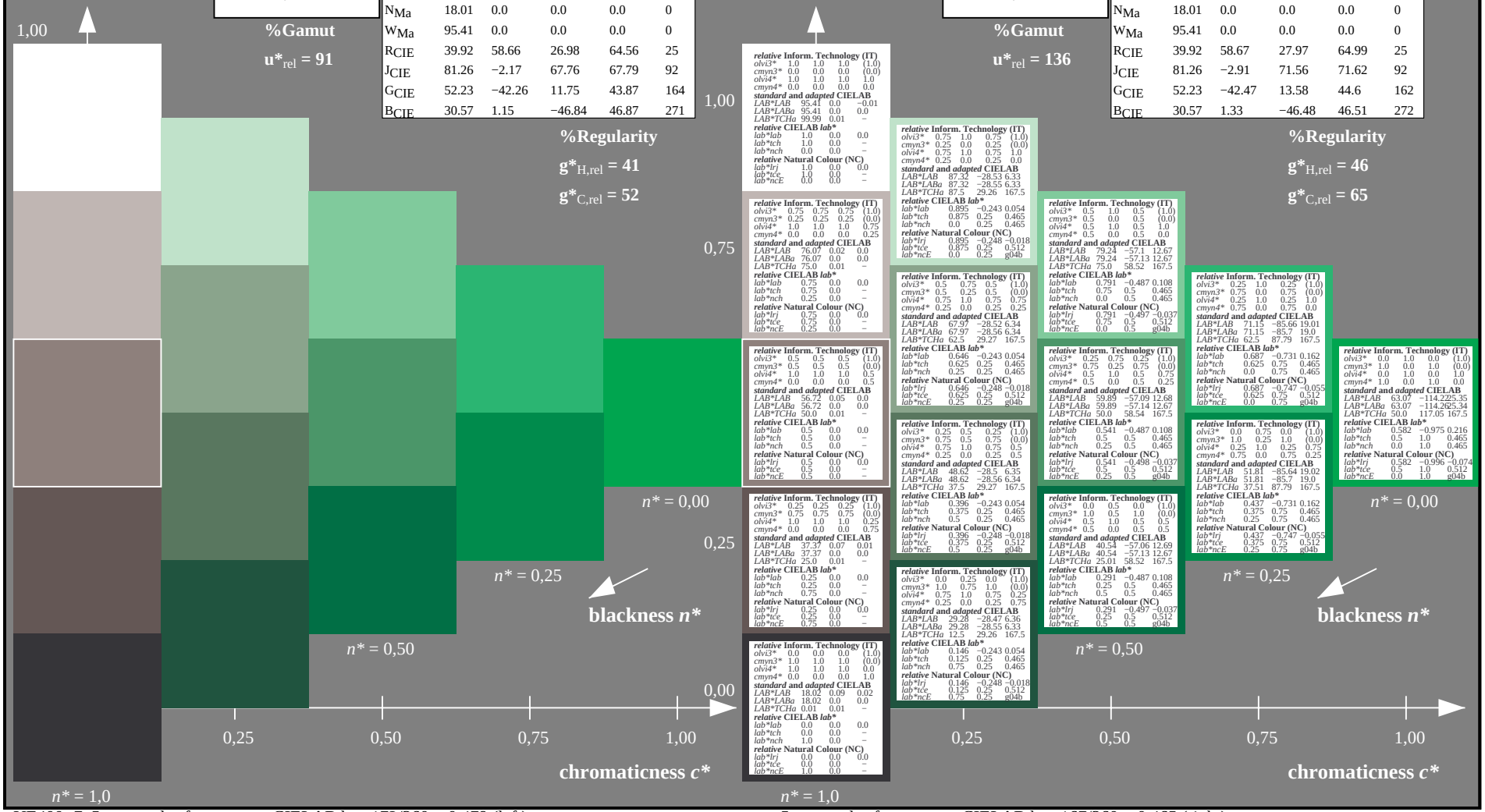
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



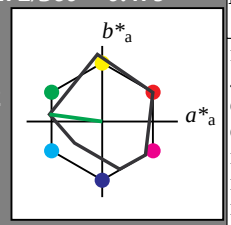
UE400−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

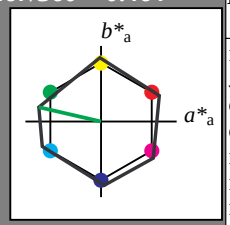
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

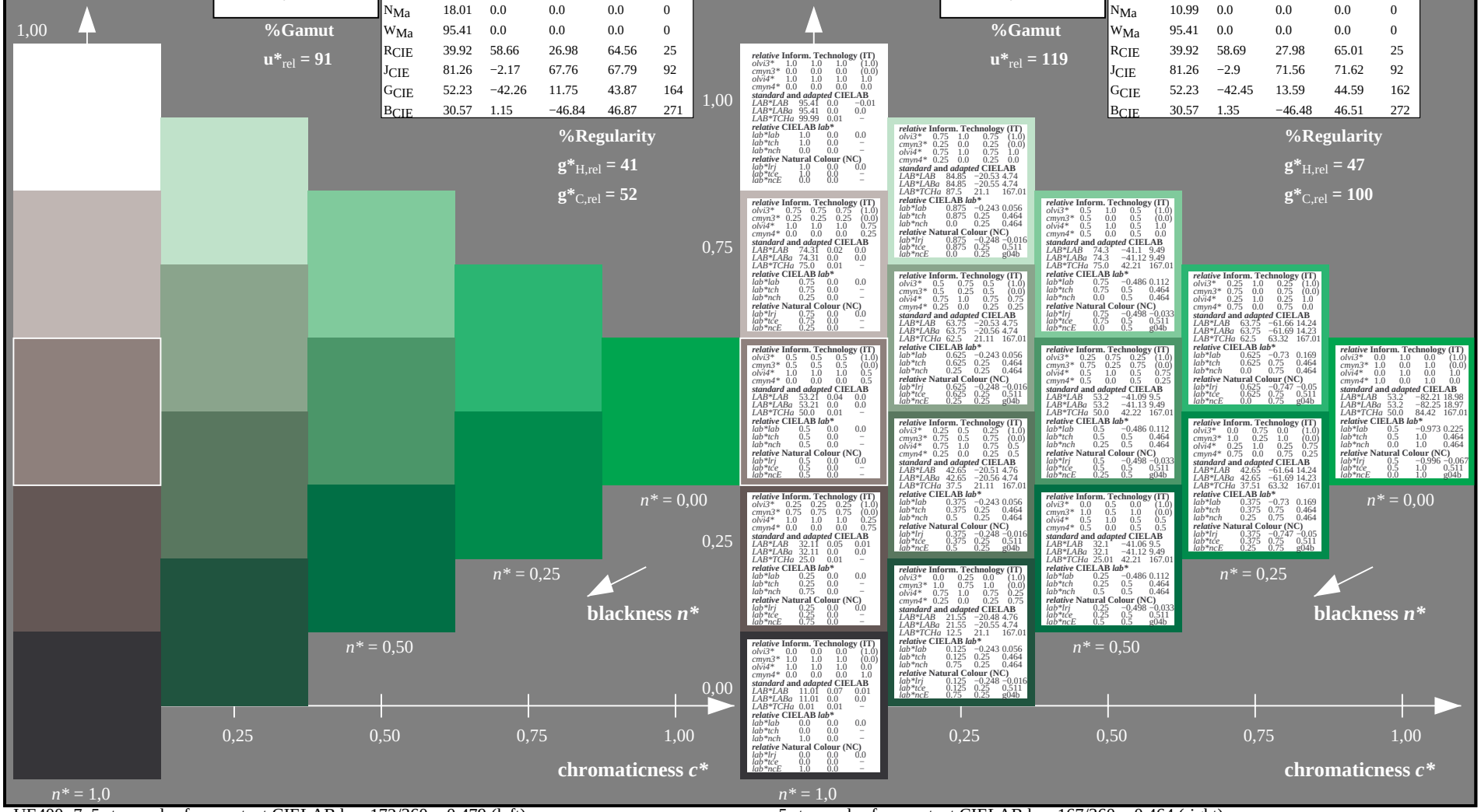
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



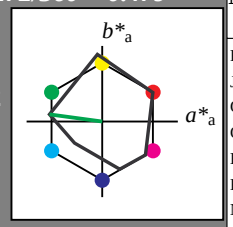
UE400−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

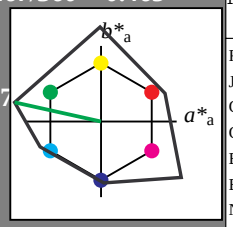
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

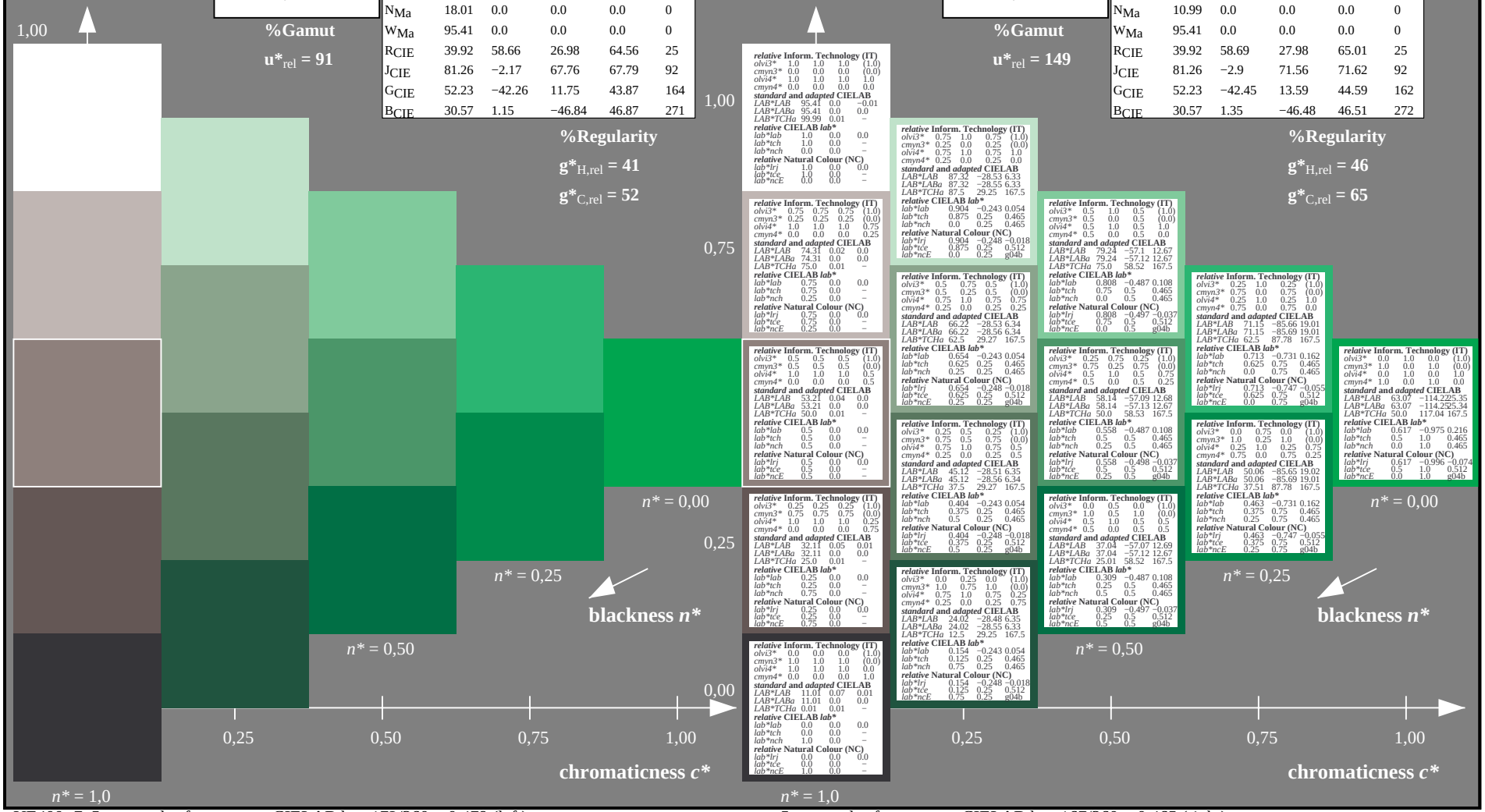
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



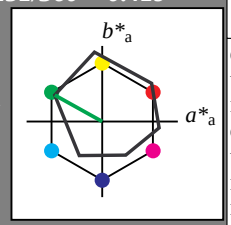
UE400−7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

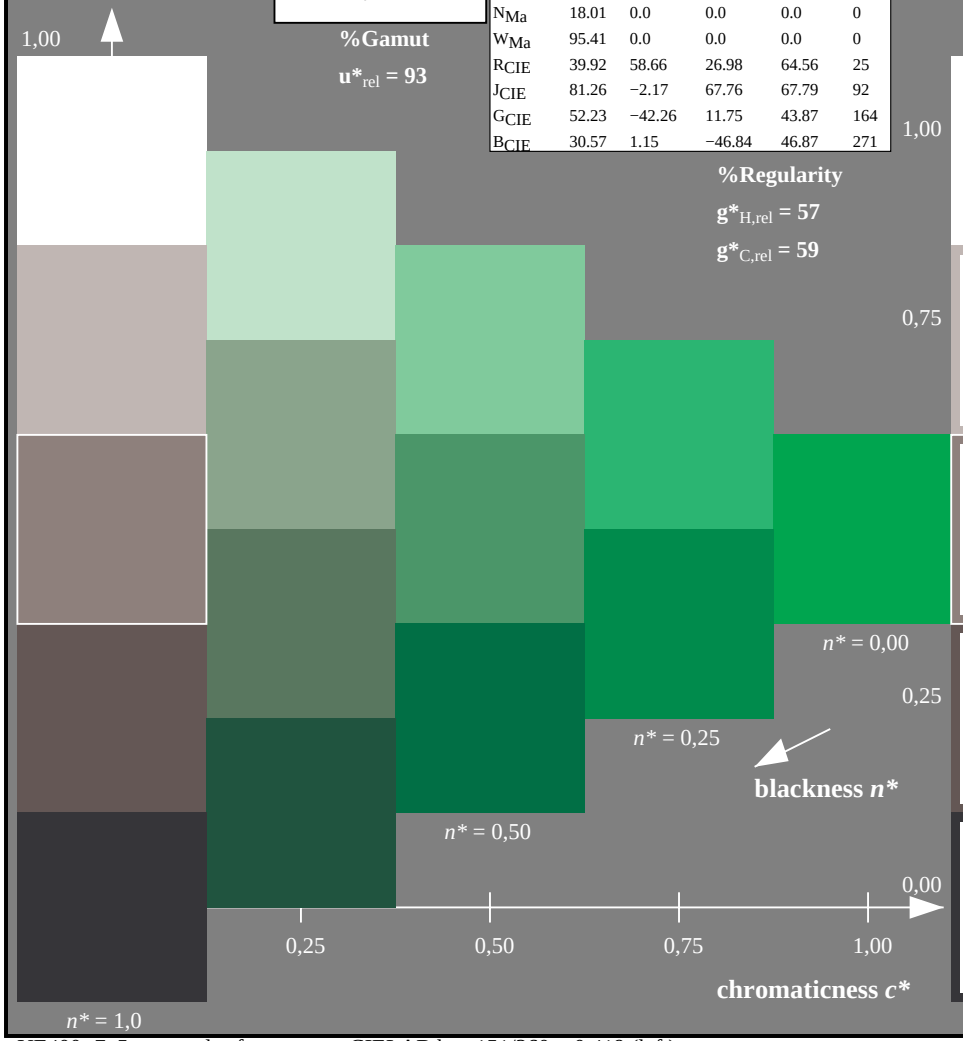
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

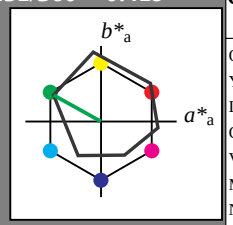
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

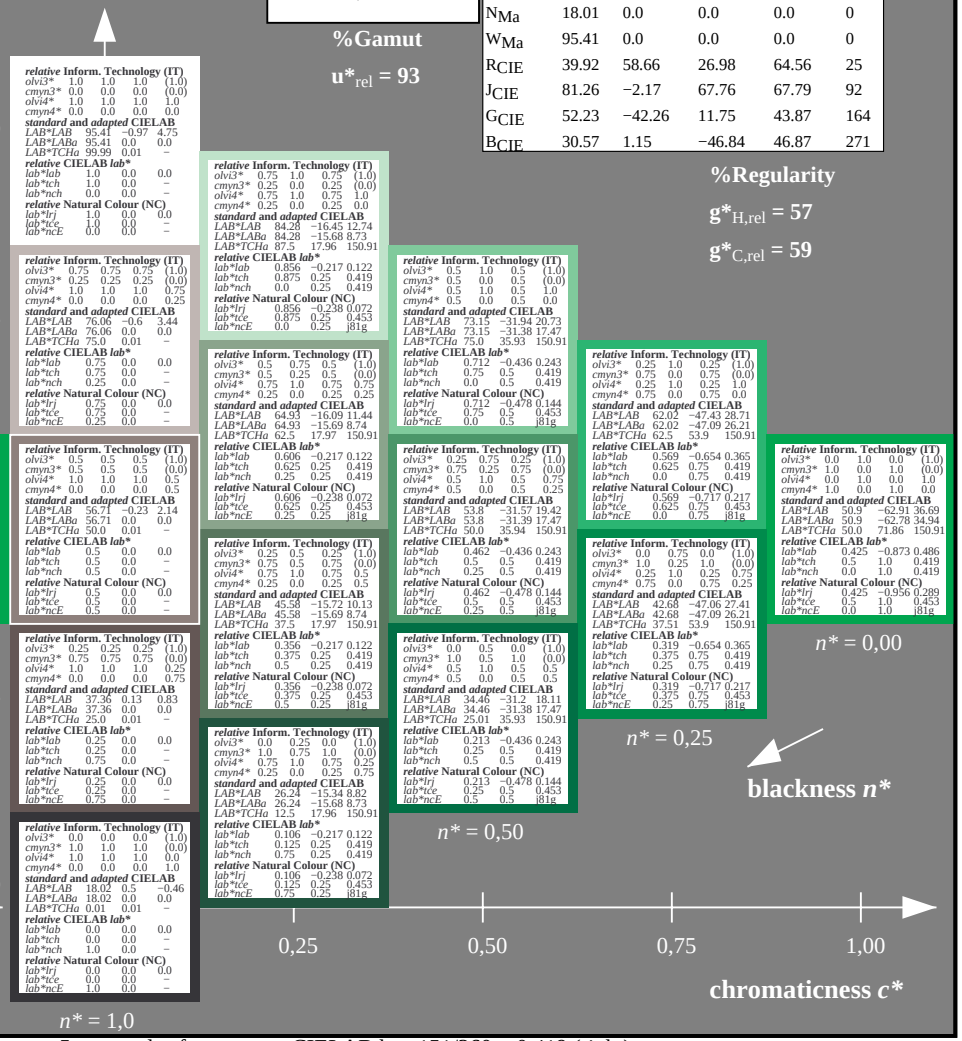
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



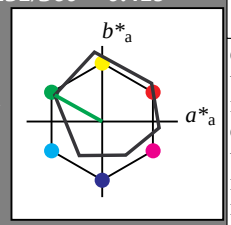
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

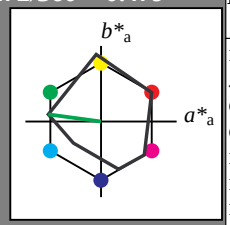
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

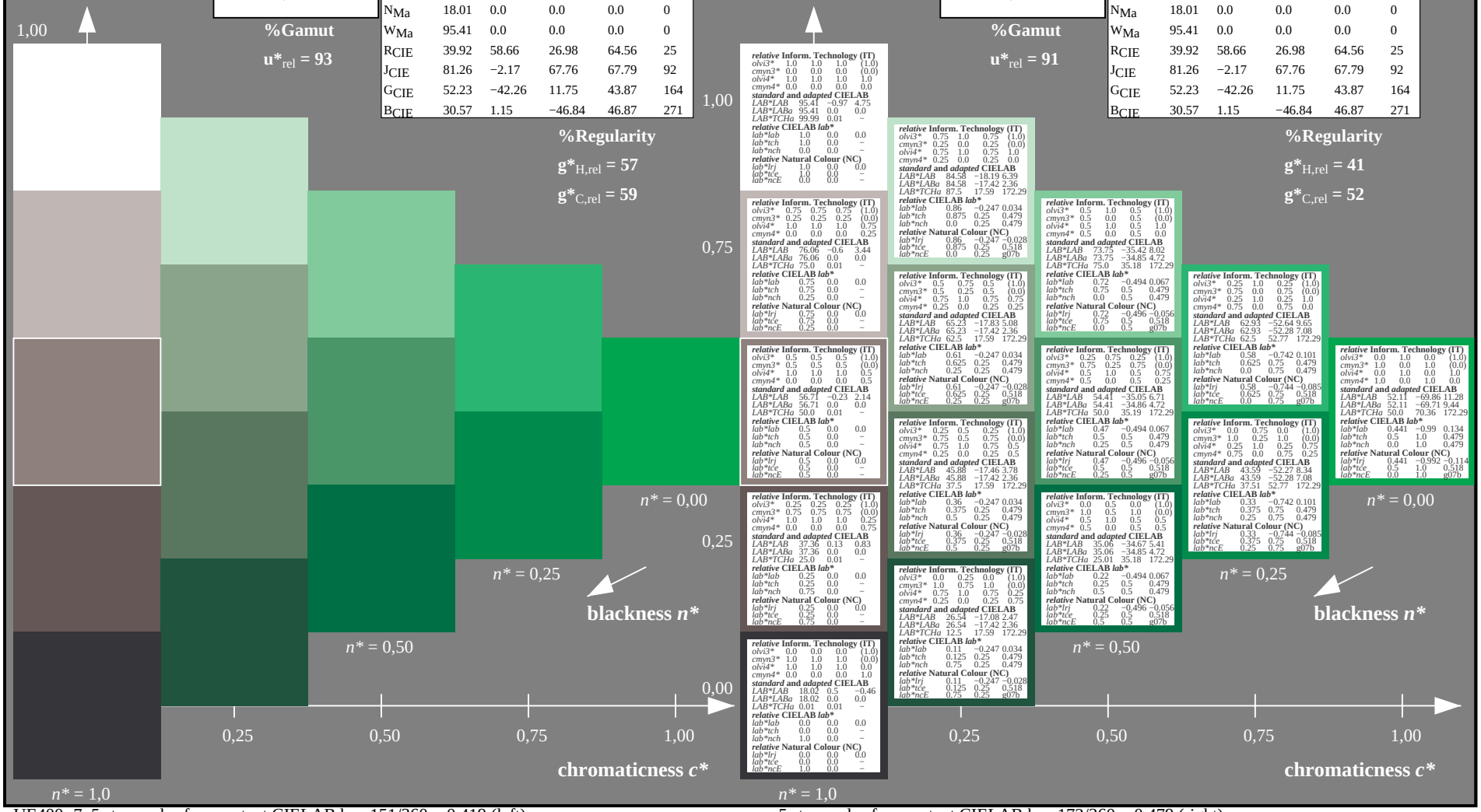
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



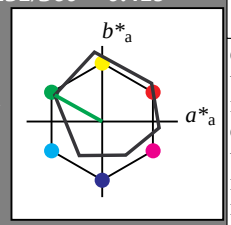
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

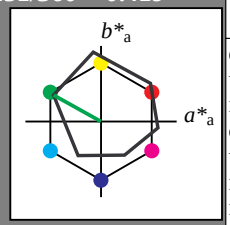
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

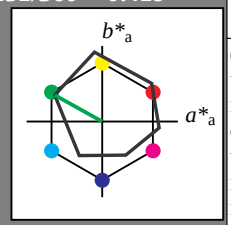
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

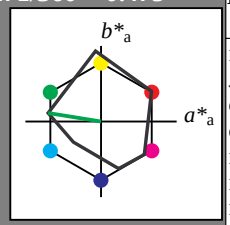
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

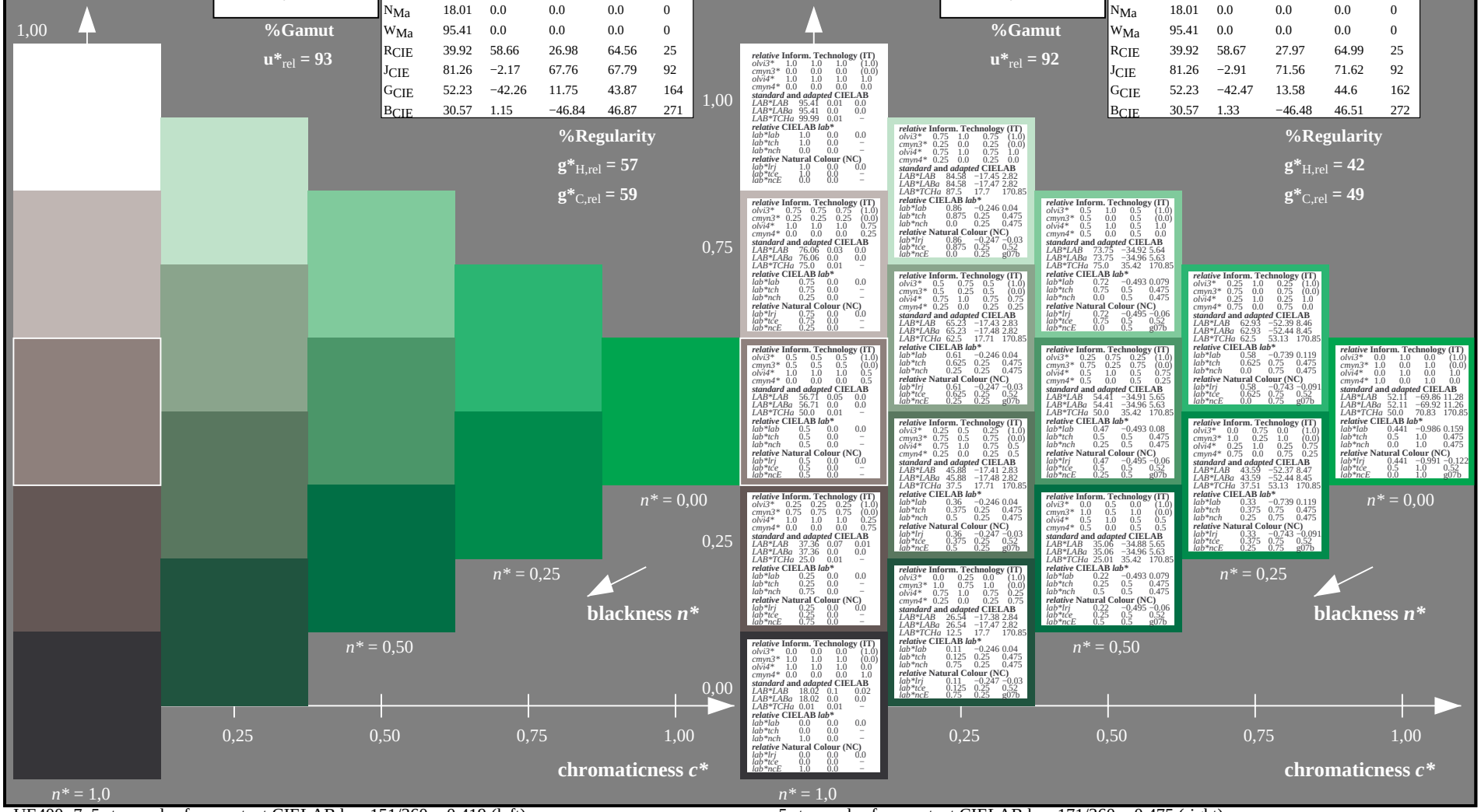
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



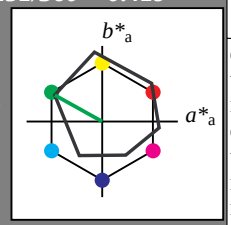
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 151/360 = 0.419*
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n = 0,00*

n = 0,25*

n = 0,50*

n = 1,0*

blackness *n**

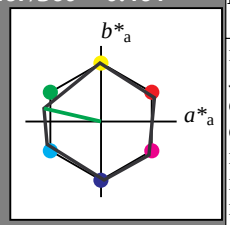
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 167/360 = 0.464*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n = 0,00*

n = 0,25*

n = 0,50*

n = 1,0*

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

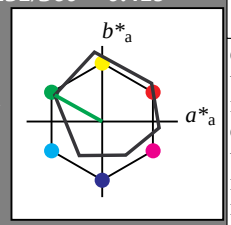
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 151/360 = 0.419*
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

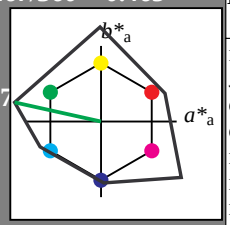
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue *h* = lab*h = 167/360 = 0.465*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

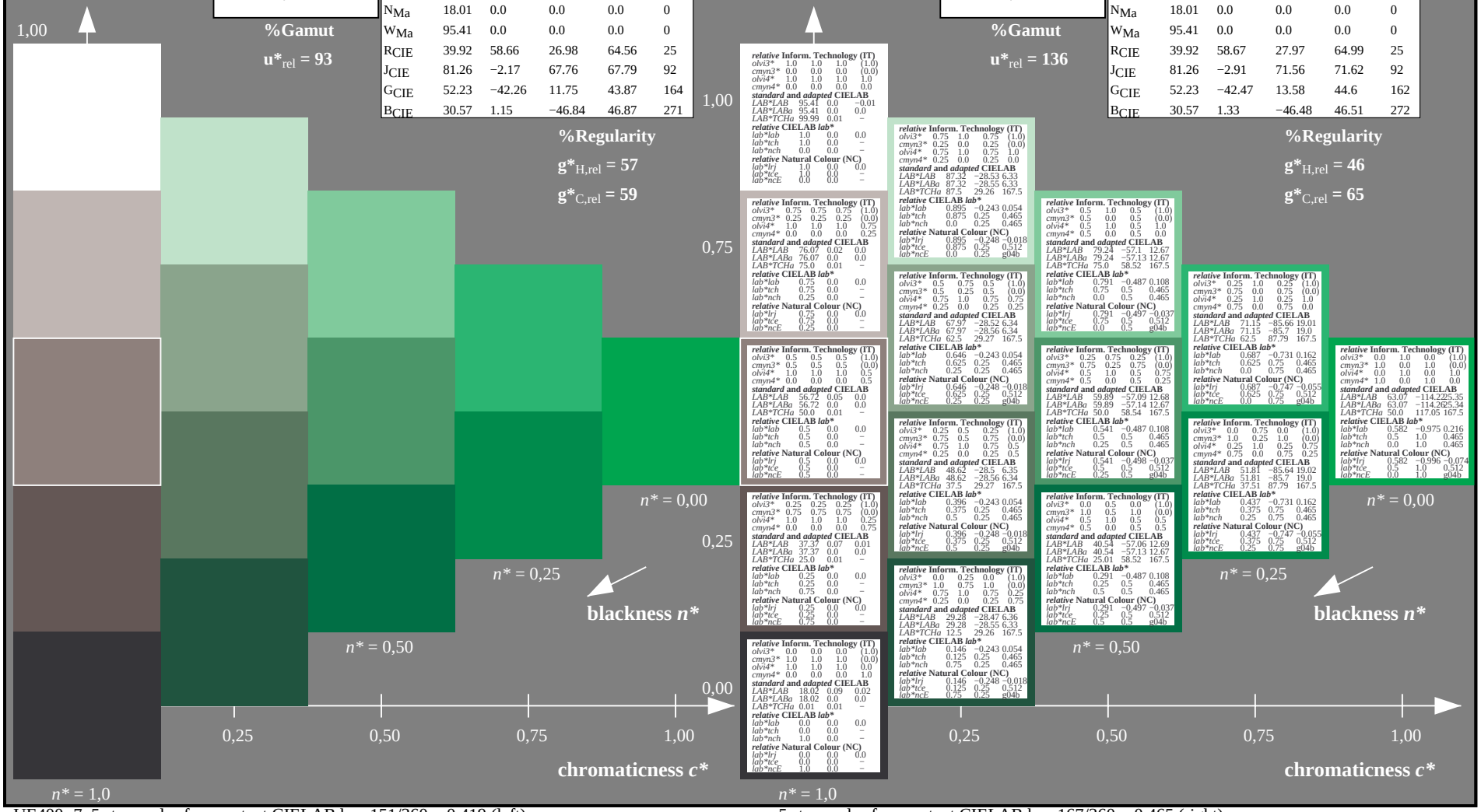
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



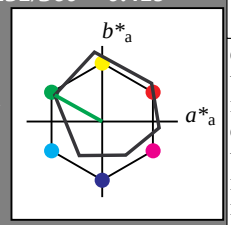
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 151/360 = 0.419*
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

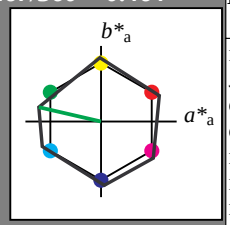
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 167/360 = 0.464*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

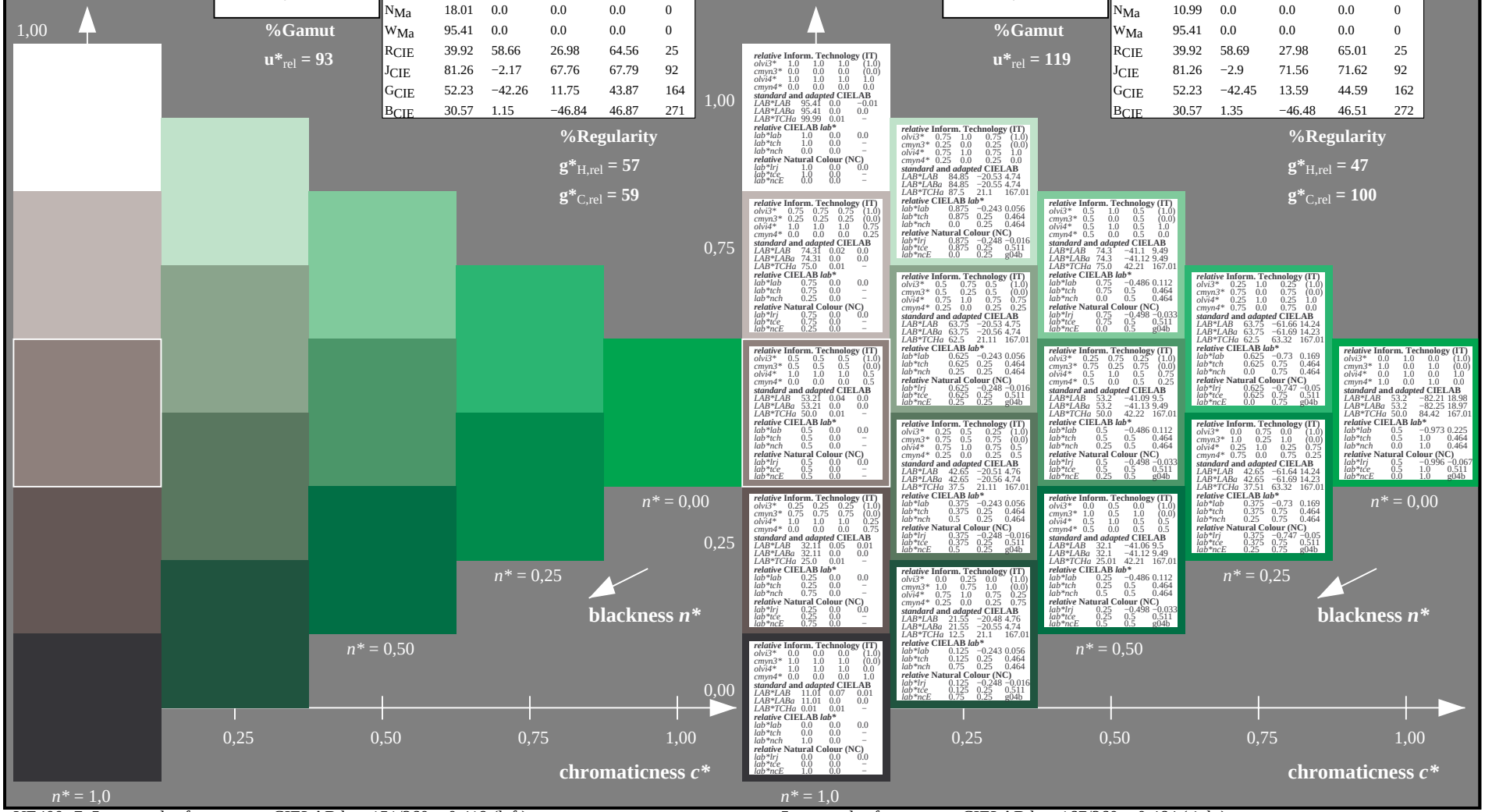
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



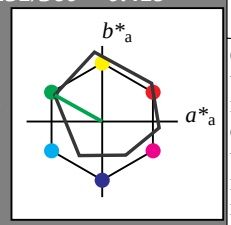
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 151/360 = 0.419*
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

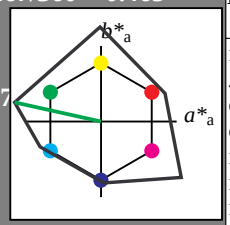
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue *h* = lab*h = 167/360 = 0.465*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

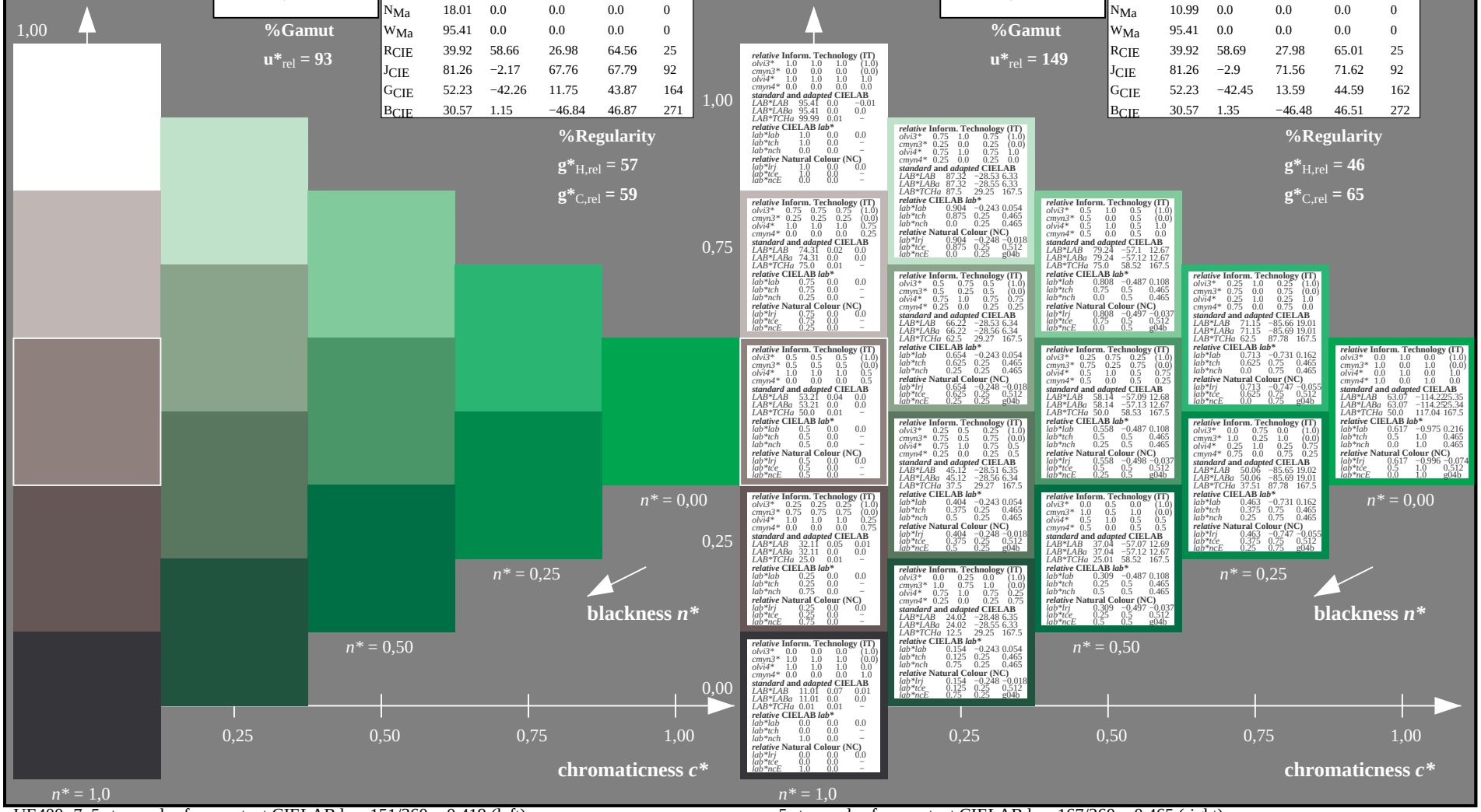
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



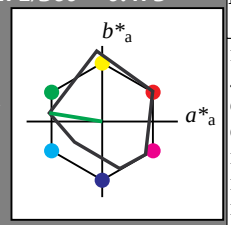
UE400−7, 5 step scales for constant CIELAB hue 151/360 = 0.419 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

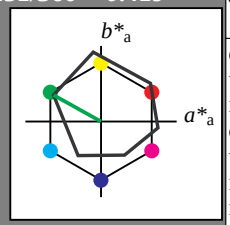
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

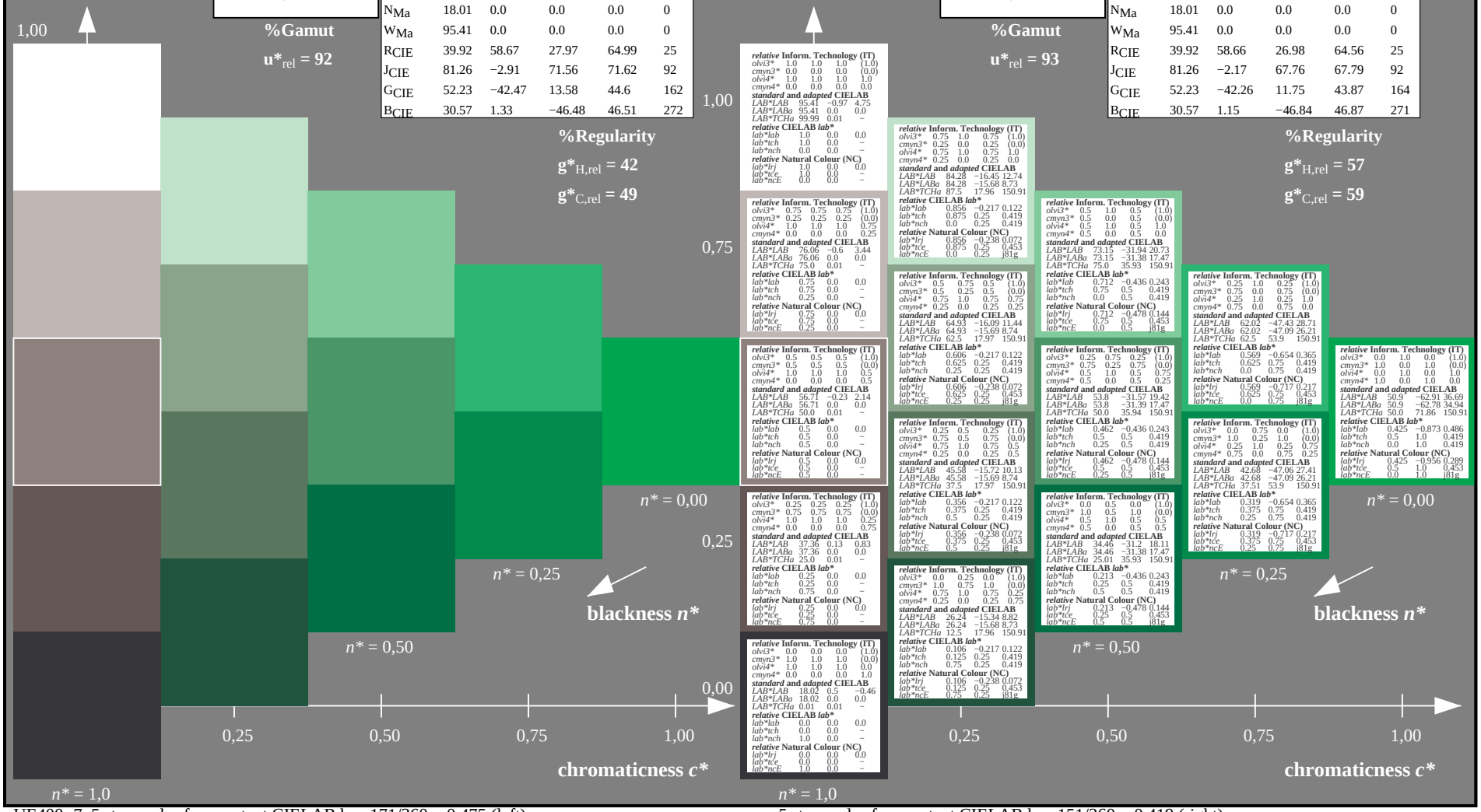
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



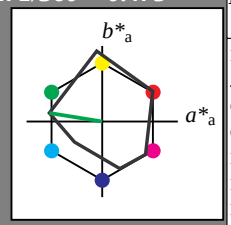
UE400−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

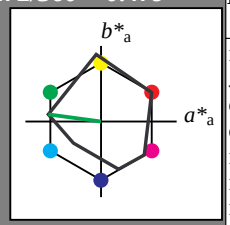
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

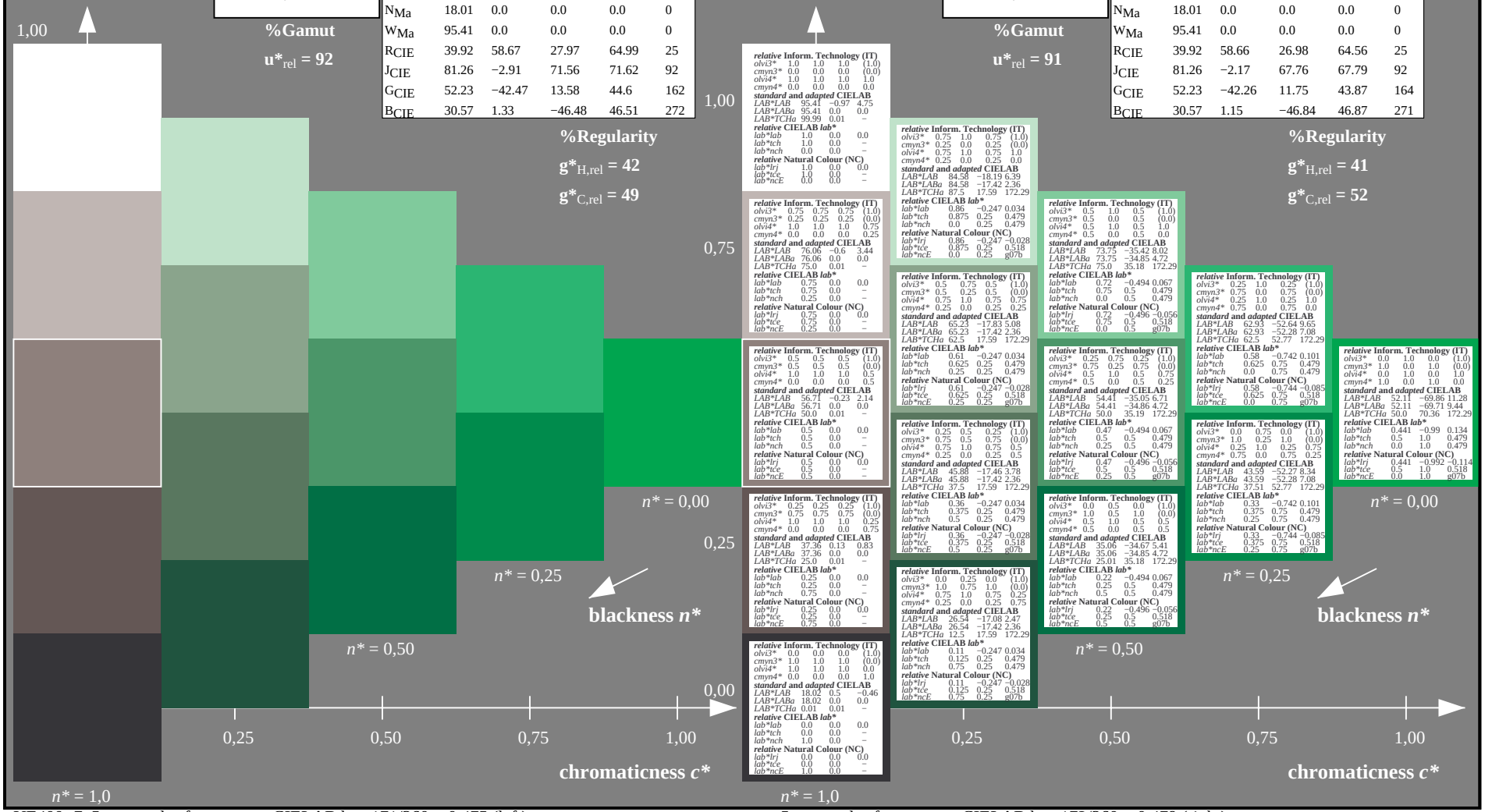
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



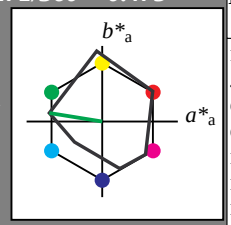
UE400−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

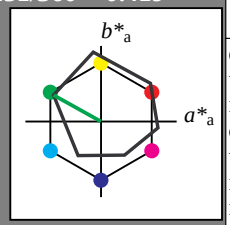
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

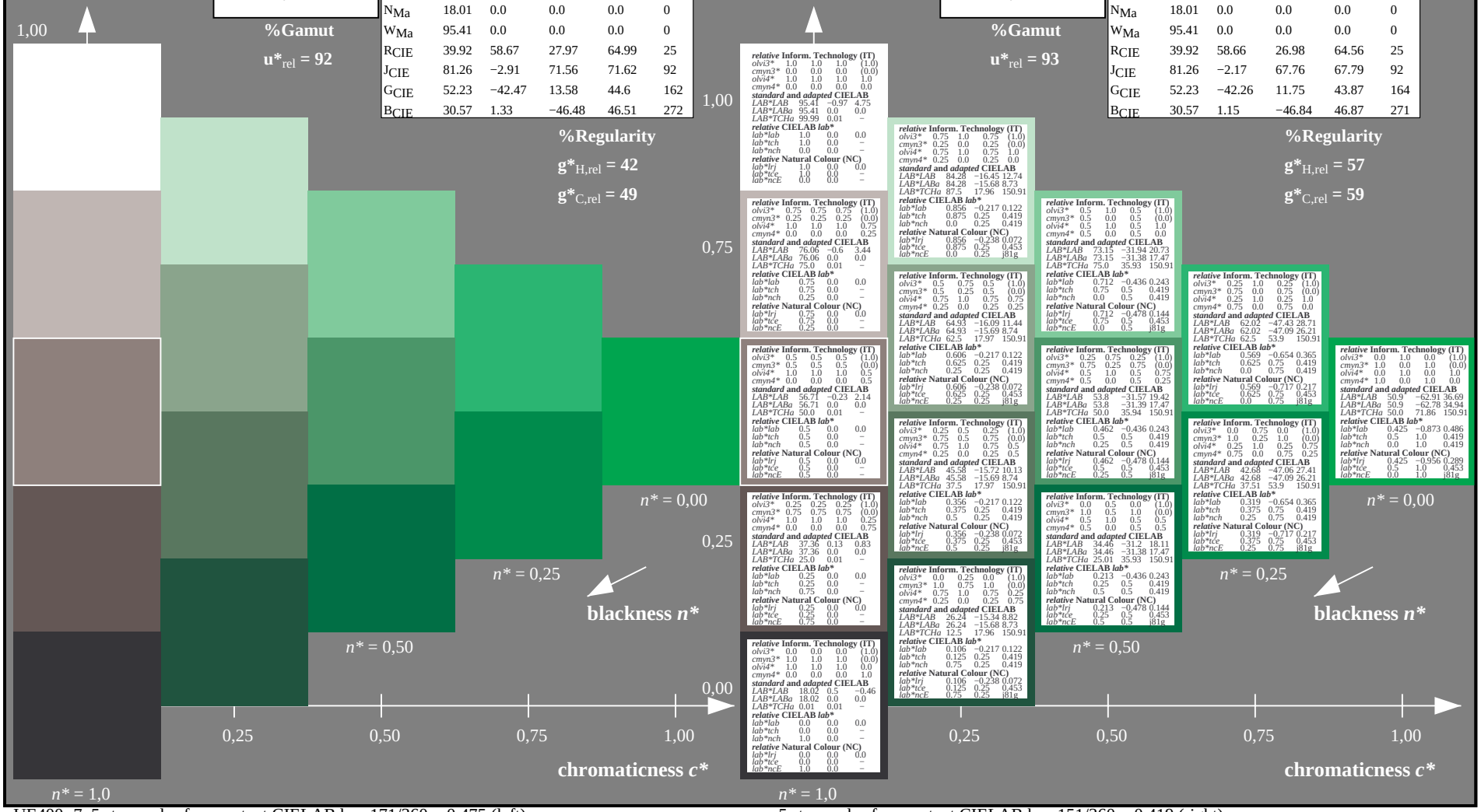
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



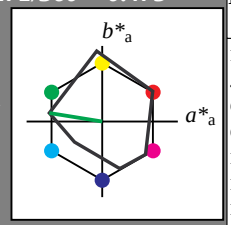
UE400−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

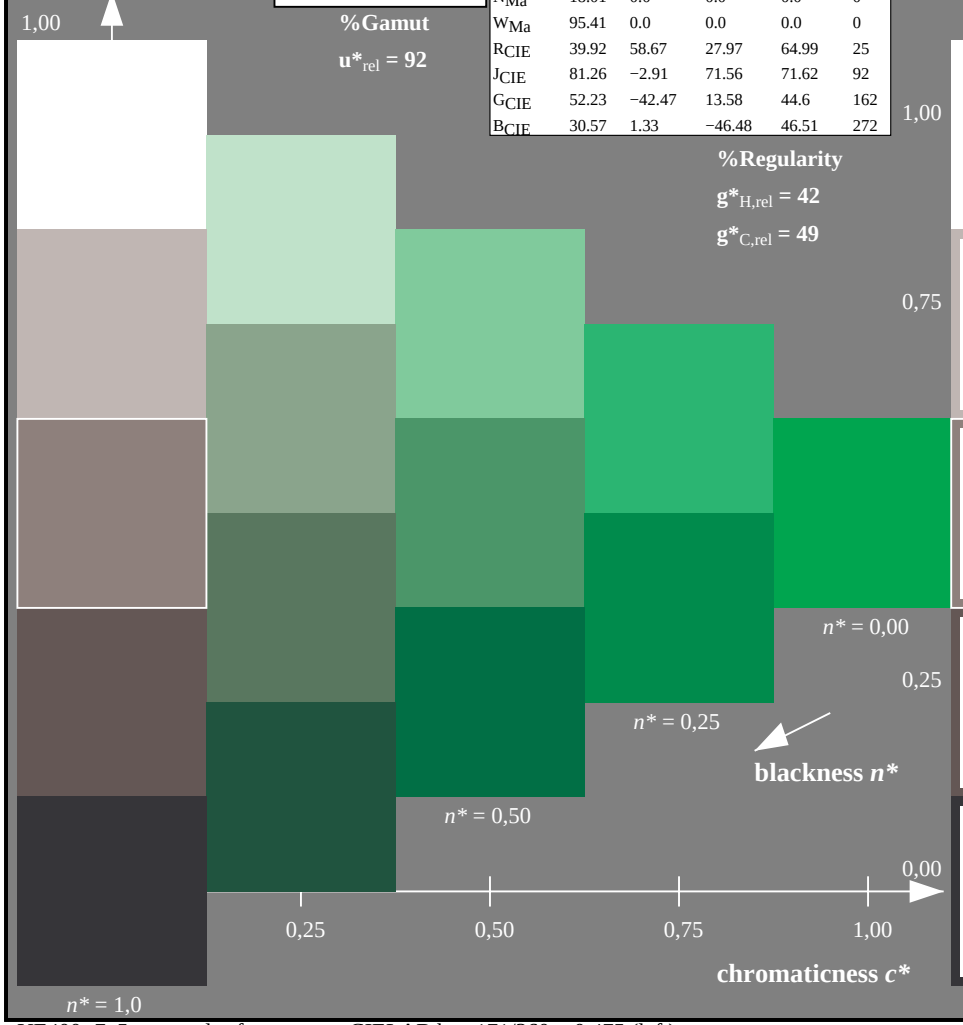
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

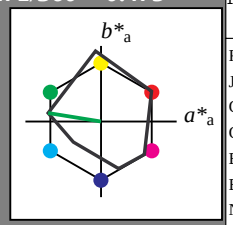
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

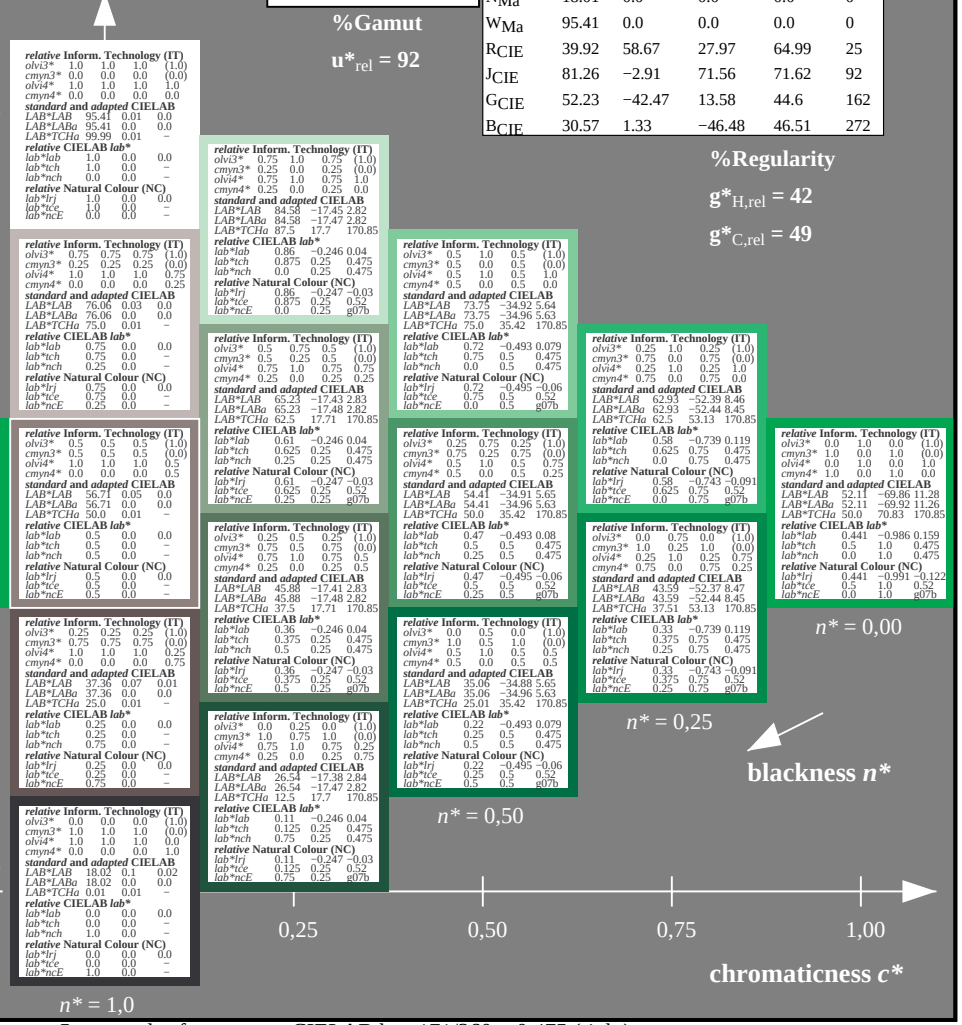
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



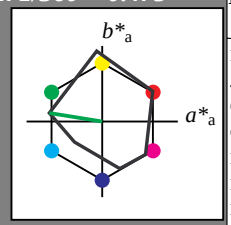
UE400−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

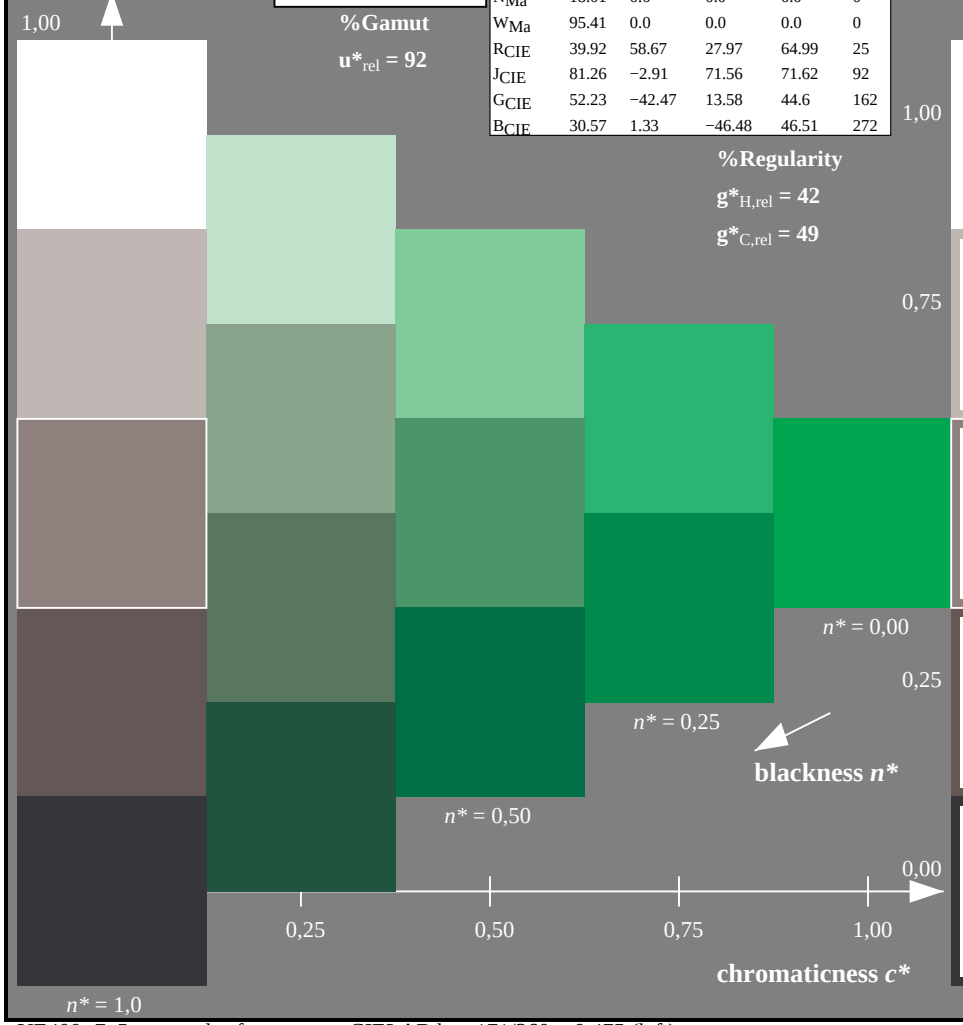
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

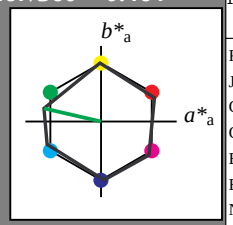
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

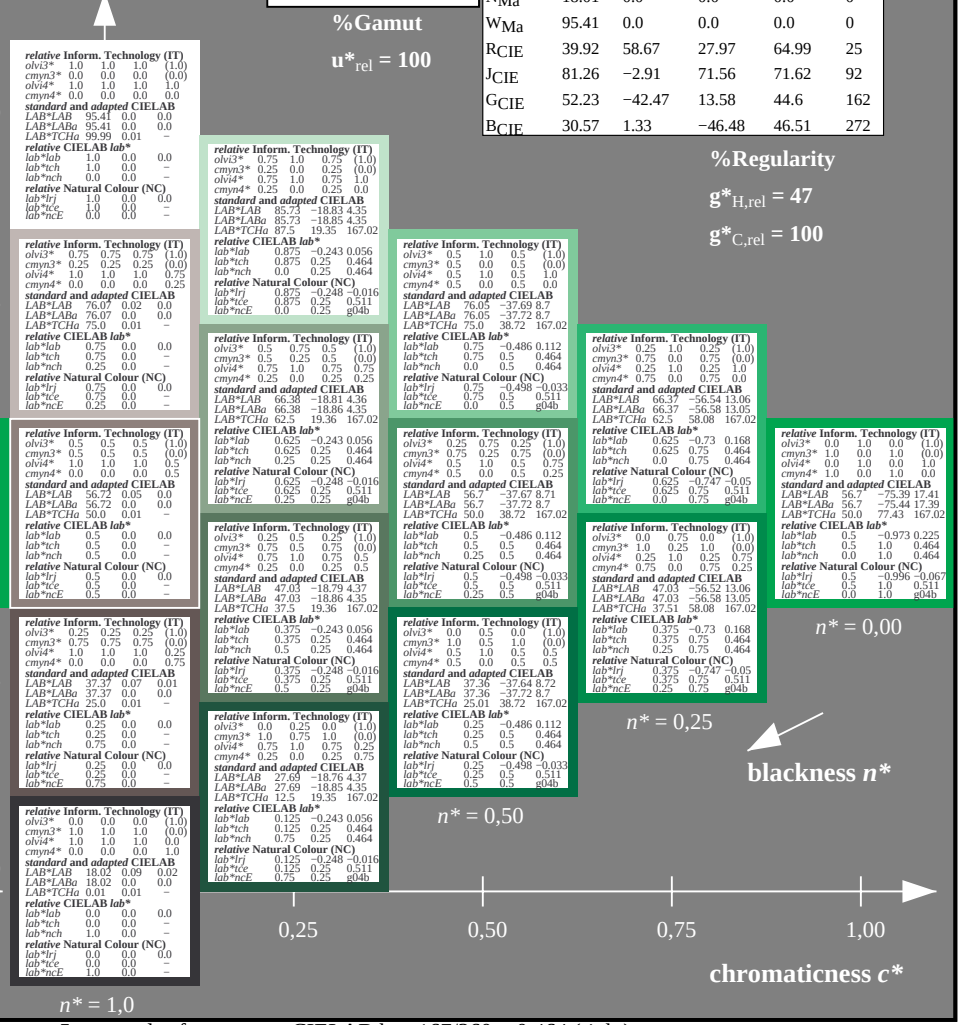
%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



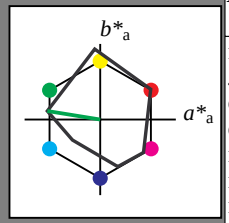
UE400−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

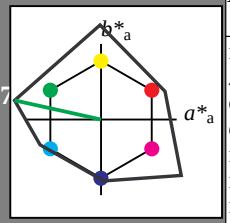
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

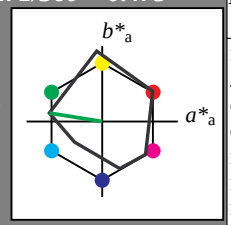
UE400−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

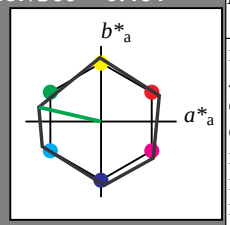
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

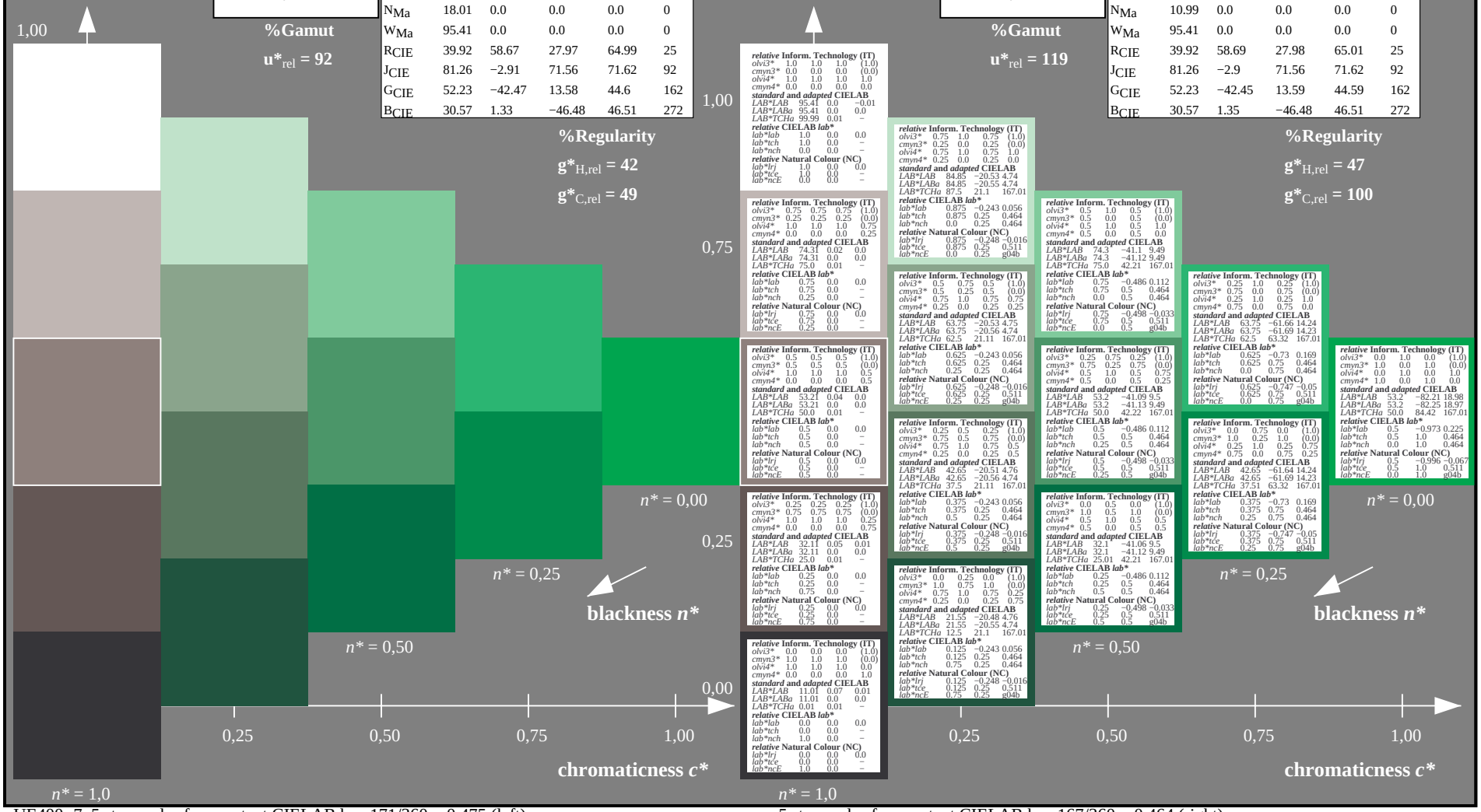
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



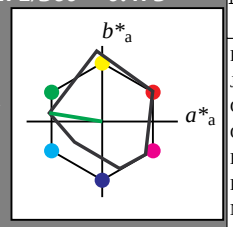
UE400−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

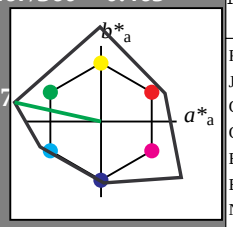
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

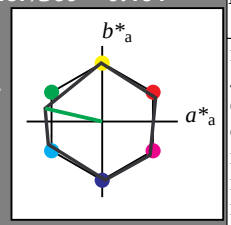
UE400−7, 5 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

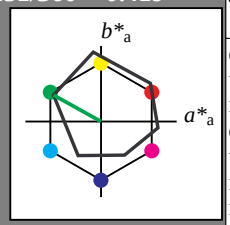
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

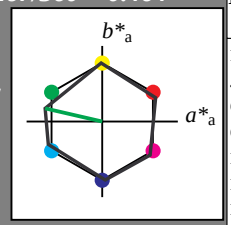
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

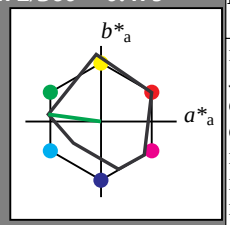
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

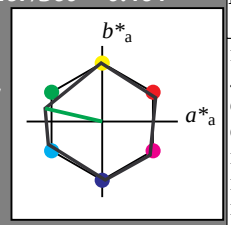
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

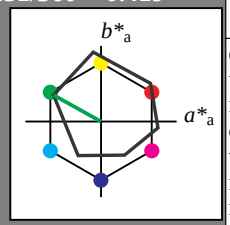
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

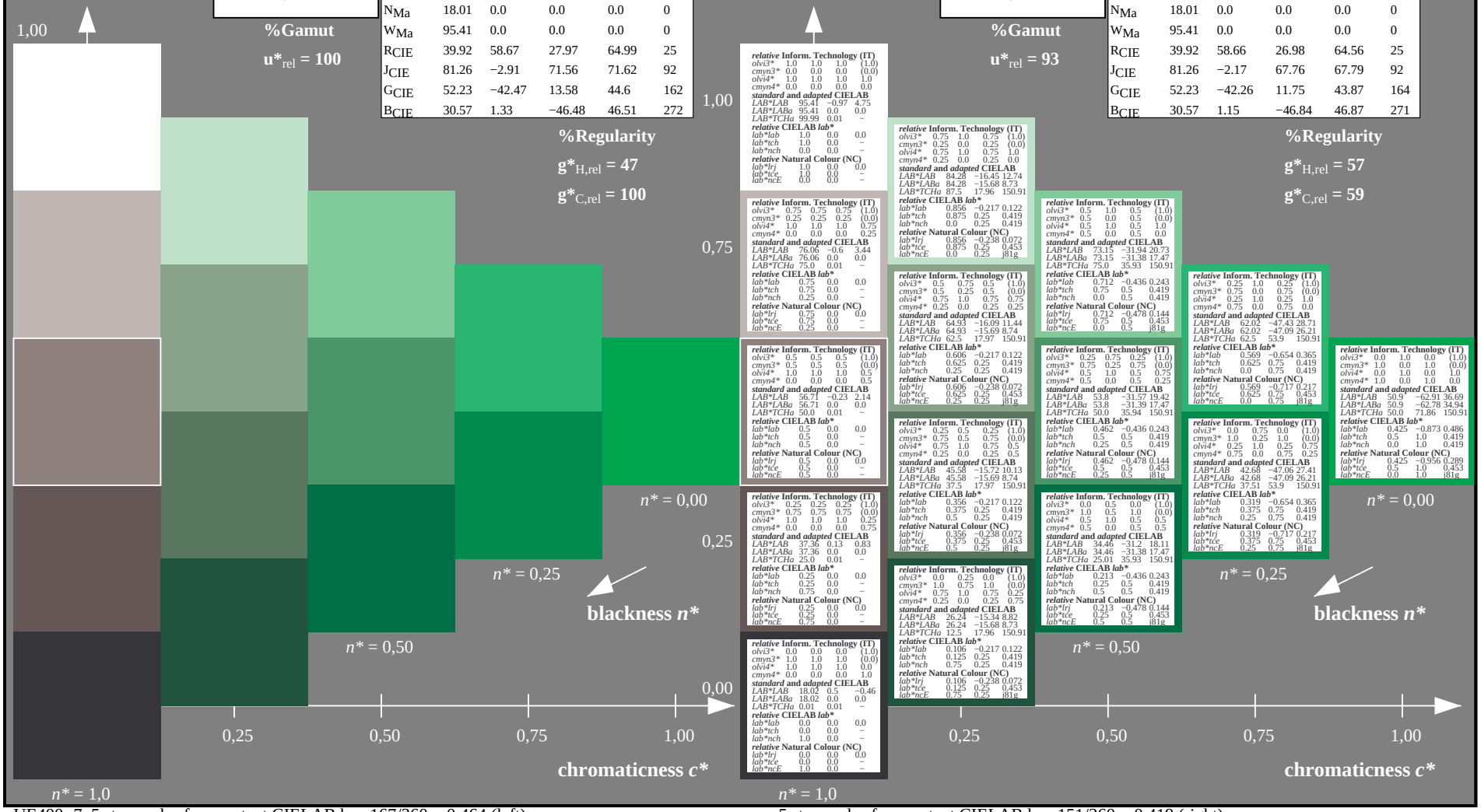
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



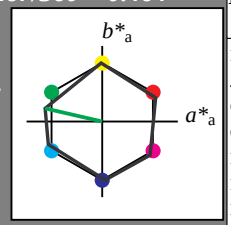
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

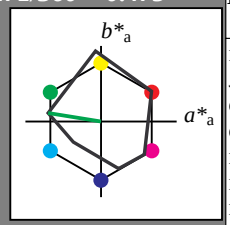
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

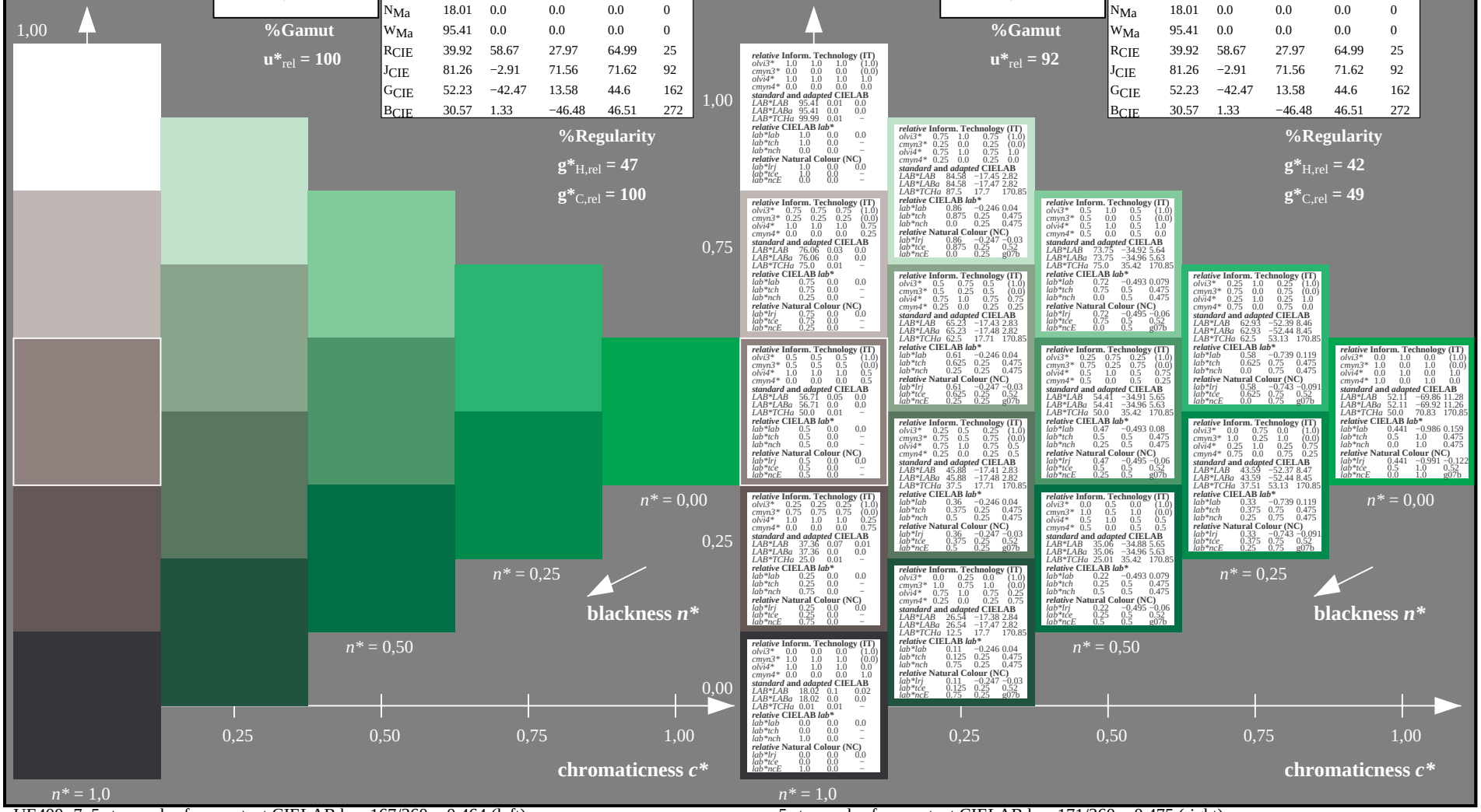
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



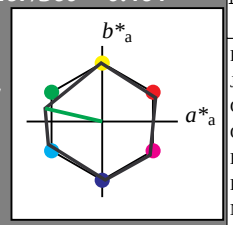
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

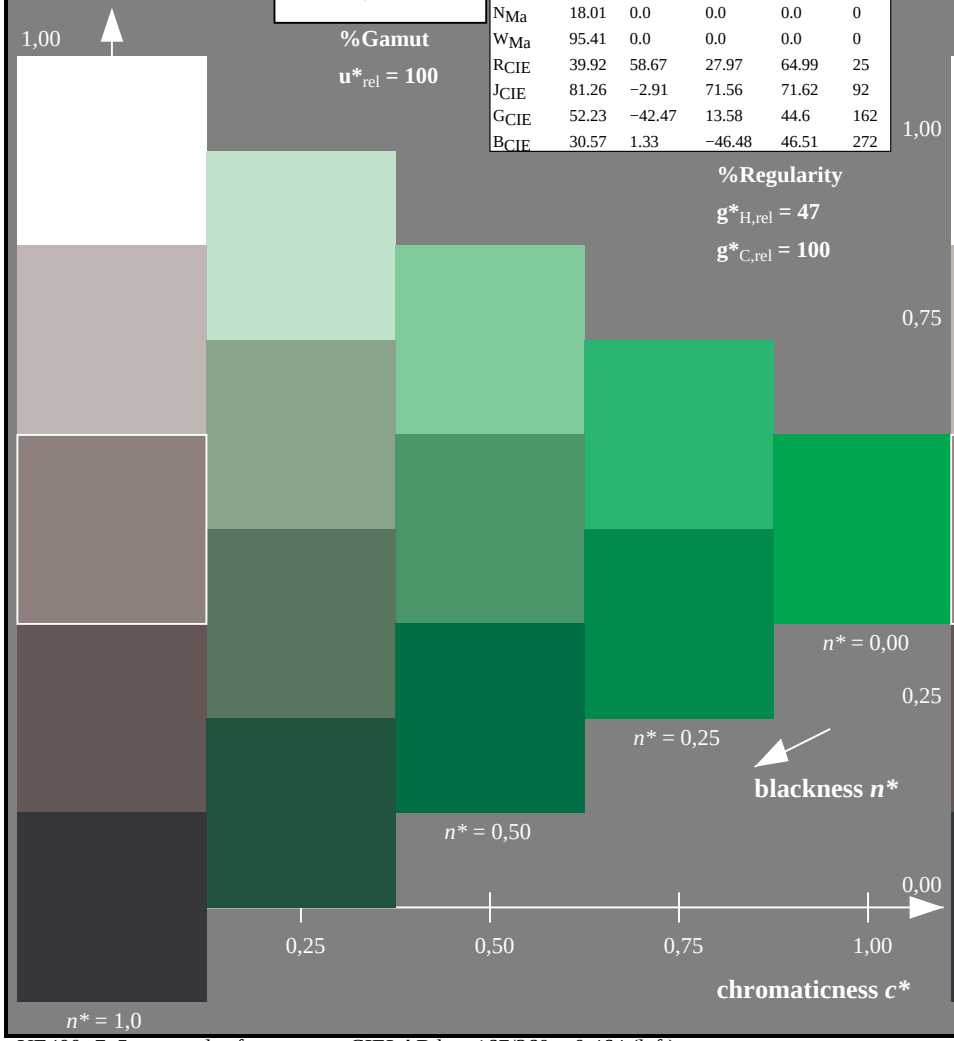
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

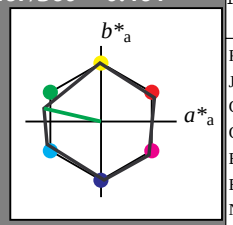


UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

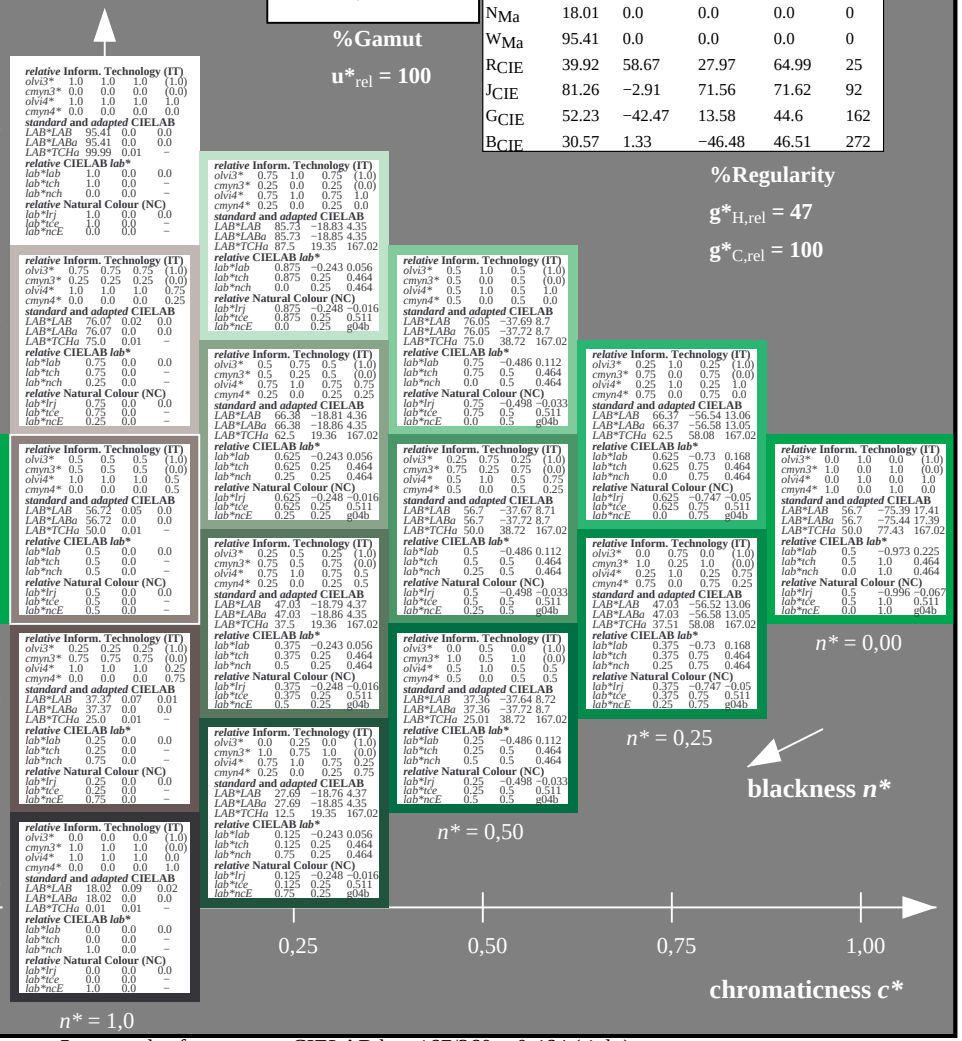
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

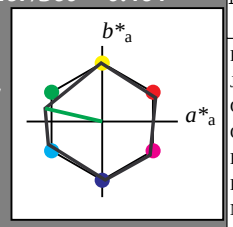


5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

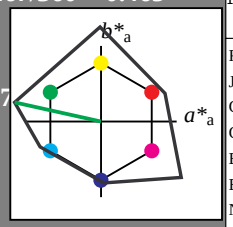
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

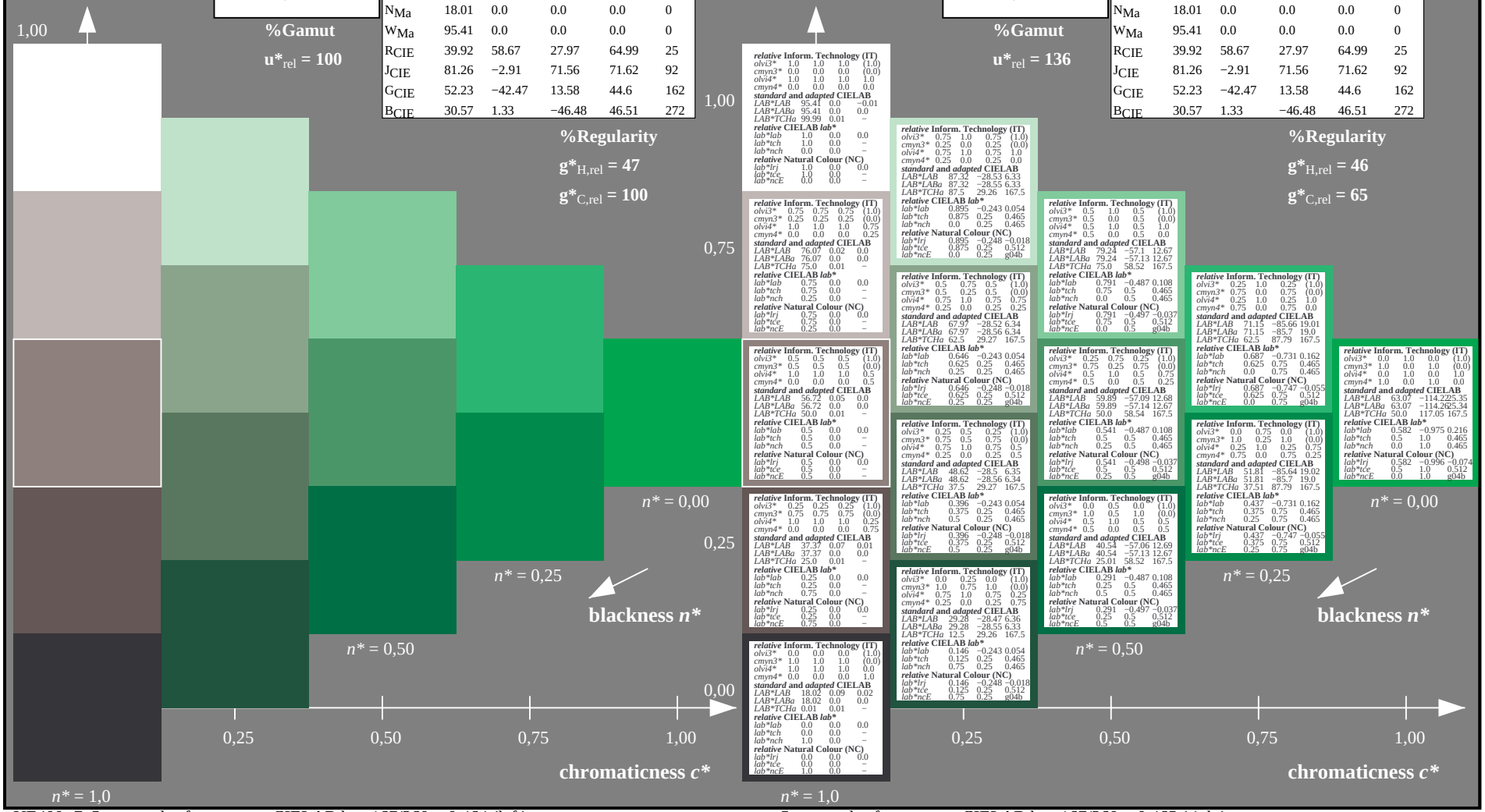
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



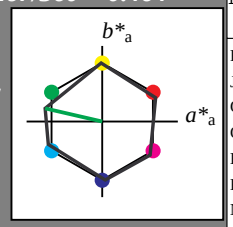
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

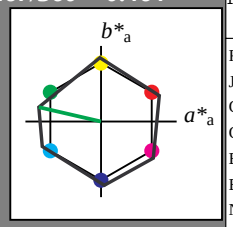
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

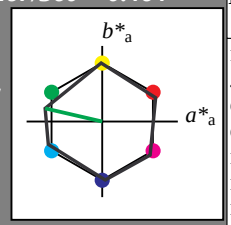
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

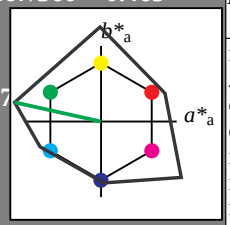
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

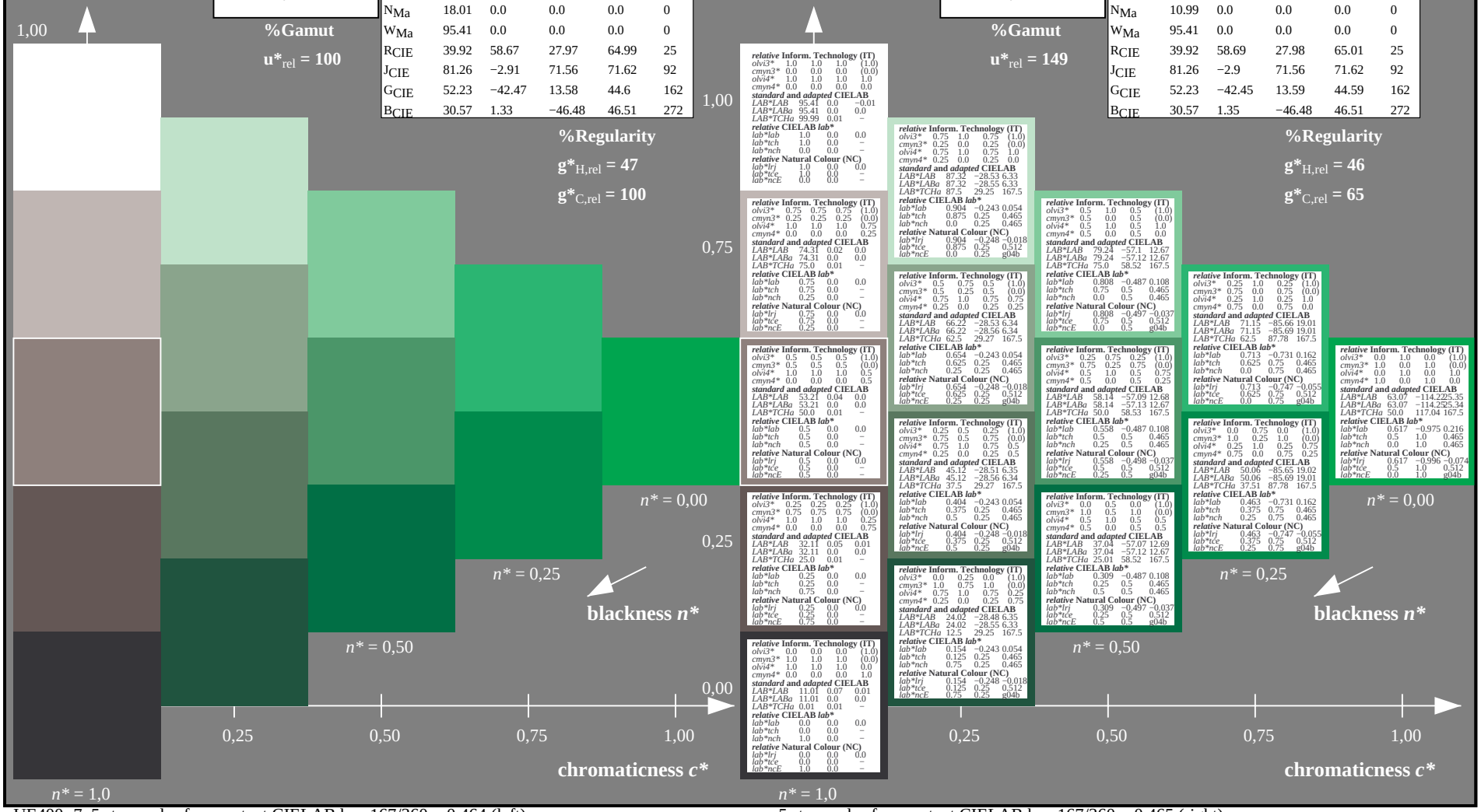
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



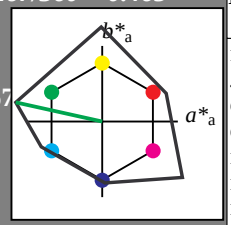
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

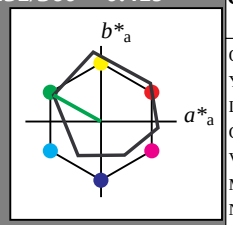
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

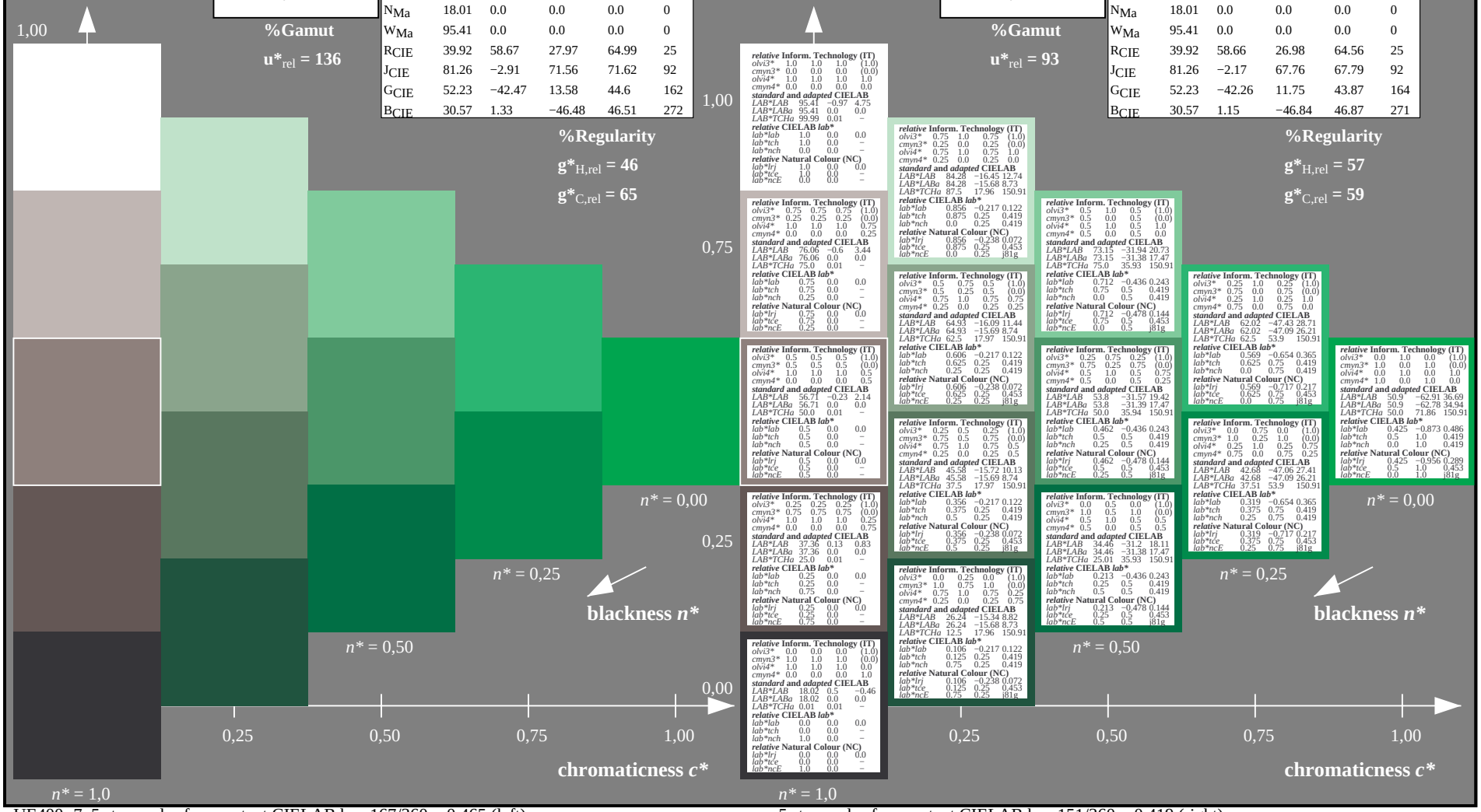
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



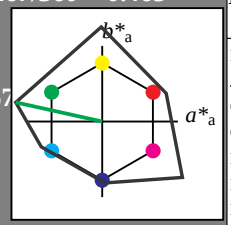
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

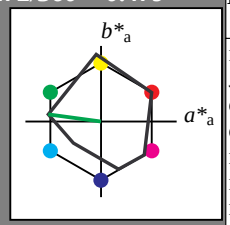
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

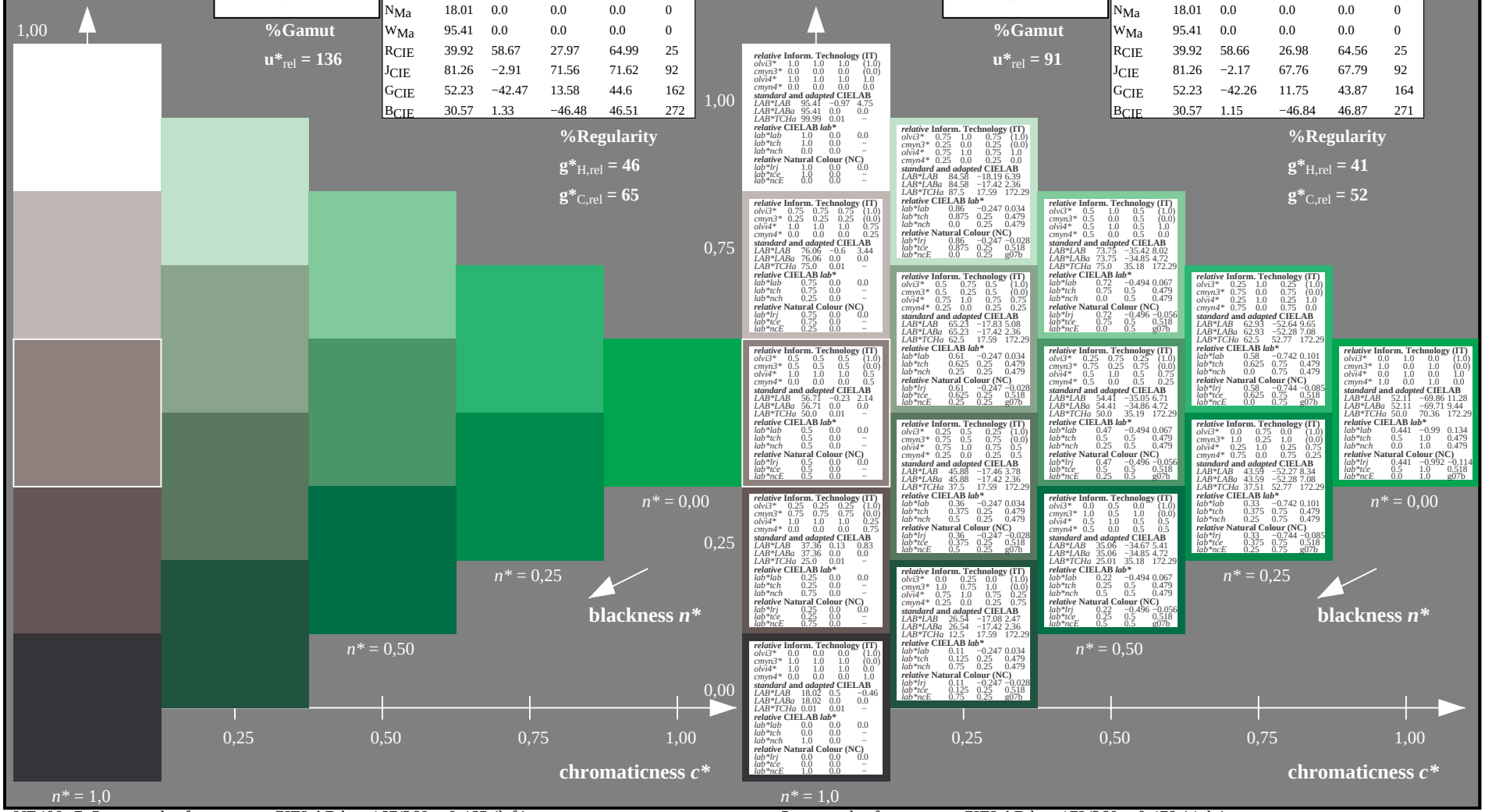
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



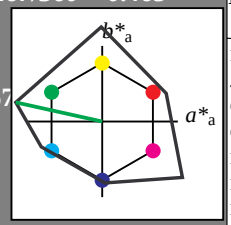
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

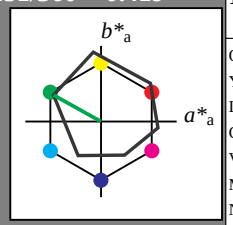
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

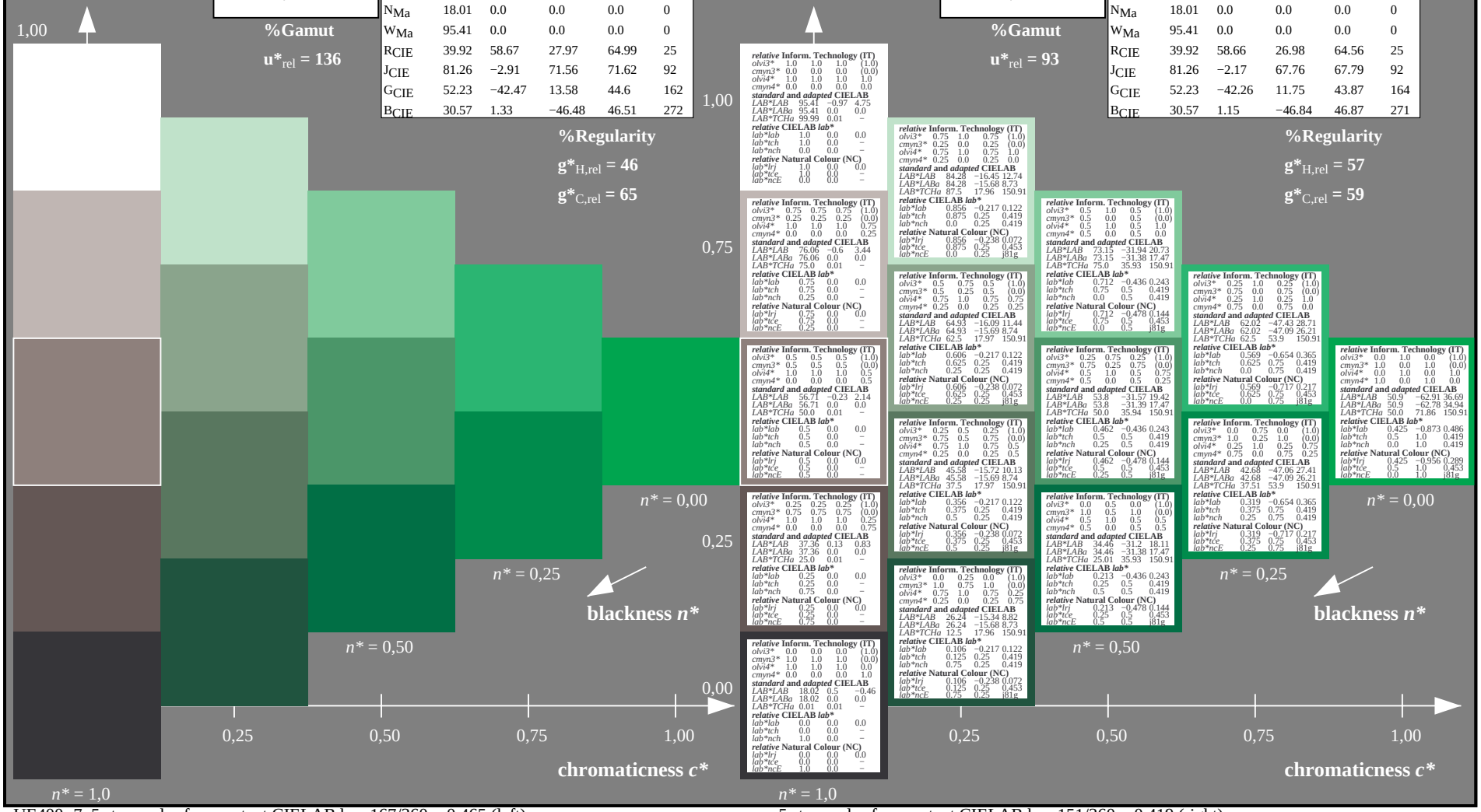
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

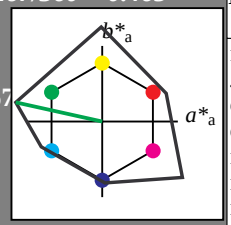


UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

triangle lightness

1,00

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

n^* = 0,00

0,25

n^* = 0,25

blackness n^*

n^* = 0,50

0,00

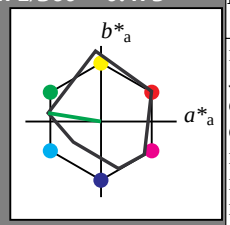
0,25 0,50 0,75 1,00

chromaticness c^*

n^* = 1,0

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

triangle lightness

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

n^* = 0,00

0,25

n^* = 0,25

blackness n^*

n^* = 0,50

0,25 0,50 0,75 1,00

chromaticness c^*

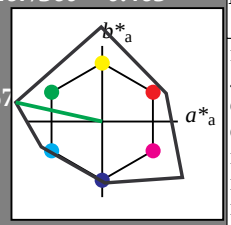
n^* = 1,0

UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

triangle lightness

1,00

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

n^* = 0,00

0,25

n^* = 0,25

blackness n^*

n^* = 0,50

0,00

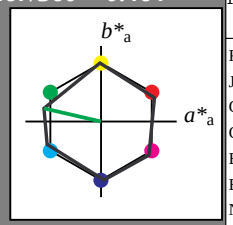
0,25 0,50 0,75 1,00

chromaticness c^*

n^* = 1,0

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

triangle lightness

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 1.0
cmyn4* 0.0 0.0 0.0 0.0
standard and adapted CIELAB
LAB*LAB 95.41 0.0 0.0
LAB*LABa 95.41 0.0 0.0
LAB*TCHa 99.99 0.01 –
relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 –
lab*nch 0.0 0.0 –
relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 –
lab*ncE 0.0 0.0 –

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 0.75
cmyn4* 0.0 0.0 0.0 0.25
standard and adapted CIELAB
LAB*LAB 76.07 0.02 0.0
LAB*LABa 76.07 0.0 0.0
LAB*TCHa 75.0 0.01 –
relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 –
lab*nch 0.25 0.0 –
relative Natural Colour (NC)
lab*lrj 0.75 0.0 0.0
lab*tce 0.75 0.0 –
lab*ncE 0.25 0.0 –

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (1.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 0.5
cmyn4* 0.0 0.0 0.0 0.5
standard and adapted CIELAB
LAB*LAB 56.72 0.05 0.0
LAB*LABa 56.72 0.0 0.0
LAB*TCHa 50.0 0.01 –
relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 –
lab*nch 0.5 0.0 –
relative Natural Colour (NC)
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 –
lab*ncE 0.5 0.0 –

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 0.25
cmyn4* 0.0 0.0 0.0 0.75
standard and adapted CIELAB
LAB*LAB 37.37 0.07 0.01
LAB*LABa 37.37 0.0 0.0
LAB*TCHa 25.0 0.01 –
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 –
lab*nch 0.75 0.0 –
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 –
lab*ncE 0.75 0.0 –

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0
standard and adapted CIELAB
LAB*LAB 18.02 0.09 0.02
LAB*LABa 18.02 0.0 0.0
LAB*TCHa 0.01 0.01 –
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 –
lab*nch 1.0 0.0 –
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 –
lab*ncE 1.0 0.0 –

relative Inform. Technology (IT)
olvi3* 0.75 1.0 0.75 (1.0)
cmyn3* 0.25 0.0 0.25 (0.0)
olvi4* 0.75 1.0 0.75 1.0
cmyn4* 0.25 0.0 0.25 0.0
standard and adapted CIELAB
LAB*LAB 85.73 −18.83 4.35
LAB*LABa 85.73 −18.85 4.35
LAB*TCHa 87.5 19.35 167.02
relative CIELAB lab*
lab*lab 0.875 −0.243 0.056
lab*tch 0.875 0.25 0.464
lab*nch 0.0 0.25 0.464
relative Natural Colour (NC)
lab*lrj 0.875 −0.248 −0.016
lab*tce 0.875 0.25 0.511
lab*ncE 0.0 0.25 g04b

relative Inform. Technology (IT)
olvi3* 0.5 0.75 0.5 (1.0)
cmyn3* 0.5 0.25 0.5 (0.0)
olvi4* 0.75 1.0 0.75 0.75
cmyn4* 0.25 0.0 0.25 0.25
standard and adapted CIELAB
LAB*LAB 66.38 −18.81 4.36
LAB*LABa 66.38 −18.86 4.35
LAB*TCHa 62.5 19.36 167.02
relative CIELAB lab*
lab*lab 0.625 −0.243 0.056
lab*tch 0.625 0.25 0.464
lab*nch 0.25 0.25 0.464
relative Natural Colour (NC)
lab*lrj 0.625 −0.248 −0.016
lab*tce 0.625 0.25 0.511
lab*ncE 0.25 0.25 g04b

relative Inform. Technology (IT)
olvi3* 0.25 0.5 0.25 (1.0)
cmyn3* 0.75 0.5 0.75 (0.0)
olvi4* 0.75 1.0 0.75 0.5
cmyn4* 0.25 0.0 0.25 0.5
standard and adapted CIELAB
LAB*LAB 47.03 −18.79 4.37
LAB*LABa 47.03 −18.86 4.35
LAB*TCHa 37.5 19.36 167.02
relative CIELAB lab*
lab*lab 0.375 −0.243 0.056
lab*tch 0.375 0.25 0.464
lab*nch 0.5 0.25 0.464
relative Natural Colour (NC)
lab*lrj 0.375 −0.248 −0.016
lab*tce 0.375 0.25 0.511
lab*ncE 0.5 0.25 g04b

relative Inform. Technology (IT)
olvi3* 0.0 0.25 0.0 (1.0)
cmyn3* 1.0 0.75 1.0 (0.0)
olvi4* 0.75 1.0 0.75 0.25
cmyn4* 0.25 0.0 0.25 0.75
standard and adapted CIELAB
LAB*LAB 27.69 −18.76 4.37
LAB*LABa 27.69 −18.85 4.35
LAB*TCHa 12.5 19.35 167.02
relative CIELAB lab*
lab*lab 0.125 −0.243 0.056
lab*tch 0.125 0.25 0.464
lab*nch 0.75 0.25 0.464
relative Natural Colour (NC)
lab*lrj 0.125 −0.248 −0.016
lab*tce 0.125 0.25 0.511
lab*ncE 0.75 0.25 g04b

relative Inform. Technology (IT)
olvi3* 0.5 1.0 0.5 (1.0)
cmyn3* 0.5 0.0 0.5 (0.0)
olvi4* 0.5 1.0 0.5 1.0
cmyn4* 0.5 0.0 0.5 0.0
standard and adapted CIELAB
LAB*LAB 76.05 −37.69 8.7
LAB*LABa 76.05 −37.72 8.7
LAB*TCHa 75.0 38.72 167.02
relative CIELAB lab*
lab*lab 0.75 −0.486 0.112
lab*tch 0.75 0.5 0.464
lab*nch 0.0 0.5 0.464
relative Natural Colour (NC)
lab*lrj 0.75 −0.498 −0.033
lab*tce 0.75 0.5 0.511
lab*ncE 0.0 0.5 g04b

relative Inform. Technology (IT)
olvi3* 0.25 0.75 0.25 (1.0)
cmyn3* 0.75 0.25 0.75 (0.0)
olvi4* 0.5 1.0 0.5 0.75
cmyn4* 0.5 0.0 0.5 0.25
standard and adapted CIELAB
LAB*LAB 56.7 −37.67 8.71
LAB*LABa 56.7 −37.72 8.7
LAB*TCHa 50.0 38.72 167.02
relative CIELAB lab*
lab*lab 0.5 −0.486 0.112
lab*tch 0.5 0.5 0.464
lab*nch 0.25 0.5 0.464
relative Natural Colour (NC)
lab*lrj 0.5 −0.498 −0.033
lab*tce 0.5 0.5 0.511
lab*ncE 0.25 0.5 g04b

relative Inform. Technology (IT)
olvi3* 0.0 0.5 0.0 (1.0)
cmyn3* 1.0 0.5 1.0 (0.0)
olvi4* 0.5 1.0 0.5 0.5
cmyn4* 0.5 0.0 0.5 0.5
standard and adapted CIELAB
LAB*LAB 37.36 −37.64 8.72
LAB*LABa 37.36 −37.72 8.7
LAB*TCHa 25.01 38.72 167.02
relative CIELAB lab*
lab*lab 0.25 −0.486 0.112
lab*tch 0.25 0.5 0.464
lab*nch 0.5 0.5 0.464
relative Natural Colour (NC)
lab*lrj 0.25 −0.498 −0.033
lab*tce 0.25 0.5 0.511
lab*ncE 0.5 0.5 g04b

relative Inform. Technology (IT)
olvi3* 0.25 1.0 0.25 (1.0)
cmyn3* 0.75 0.0 0.75 (0.0)
olvi4* 0.25 1.0 0.25 1.0
cmyn4* 0.75 0.0 0.75 0.0
standard and adapted CIELAB
LAB*LAB 66.37 −56.54 13.06
LAB*LABa 66.37 −56.58 13.05
LAB*TCHa 62.5 58.08 167.02
relative CIELAB lab*
lab*lab 0.625 −0.73 0.168
lab*tch 0.625 0.75 0.464
lab*nch 0.0 0.75 0.464
relative Natural Colour (NC)
lab*lrj 0.625 −0.747 −0.05
lab*tce 0.625 0.75 0.511
lab*ncE 0.0 0.75 g04b

relative Inform. Technology (IT)
olvi3* 0.0 0.75 0.0 (1.0)
cmyn3* 1.0 0.25 1.0 (0.0)
olvi4* 0.25 1.0 0.25 0.75
cmyn4* 0.75 0.0 0.75 0.25
standard and adapted CIELAB
LAB*LAB 47.03 −56.52 13.06
LAB*LABa 47.03 −56.58 13.05
LAB*TCHa 37.51 58.08 167.02
relative CIELAB lab*
lab*lab 0.375 −0.73 0.168
lab*tch 0.375 0.75 0.464
lab*nch 0.25 0.75 0.464
relative Natural Colour (NC)
lab*lrj 0.375 −0.747 −0.05
lab*tce 0.375 0.75 0.511
lab*ncE 0.25 0.75 g04b

relative Inform. Technology (IT)
olvi3* 0.0 1.0 0.0 (1.0)
cmyn3* 1.0 0.0 1.0 (0.0)
olvi4* 0.0 1.0 0.0 1.0
cmyn4* 1.0 0.0 1.0 0.0
standard and adapted CIELAB
LAB*LAB 56.7 −75.39 17.41
LAB*LABa 56.7 −75.44 17.39
LAB*TCHa 50.0 77.43 167.02
relative CIELAB lab*
lab*lab 0.5 −0.973 0.225
lab*tch 0.5 1.0 0.464
lab*nch 0.0 1.0 0.464
relative Natural Colour (NC)
lab*lrj 0.5 −0.996 −0.067
lab*tce 0.5 1.0 0.511
lab*ncE 0.0 1.0 g04b

n^* = 0,00

n^* = 0,25

blackness n^*

n^* = 0,50

0,25 0,50 0,75 1,00

chromaticness c^*

n^* = 1,0

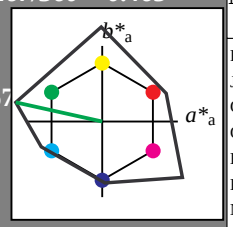
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

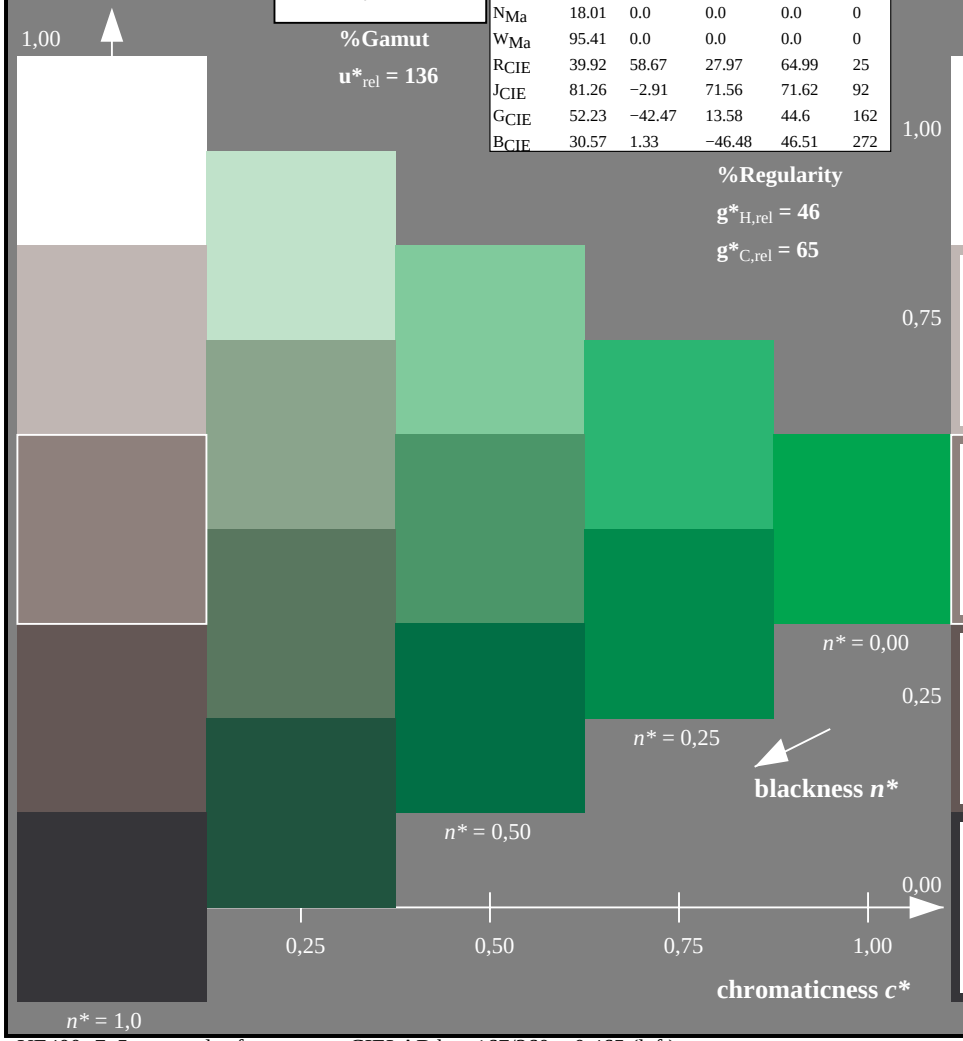
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

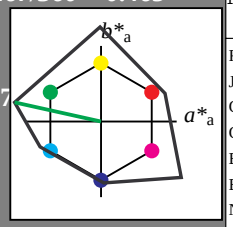


UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

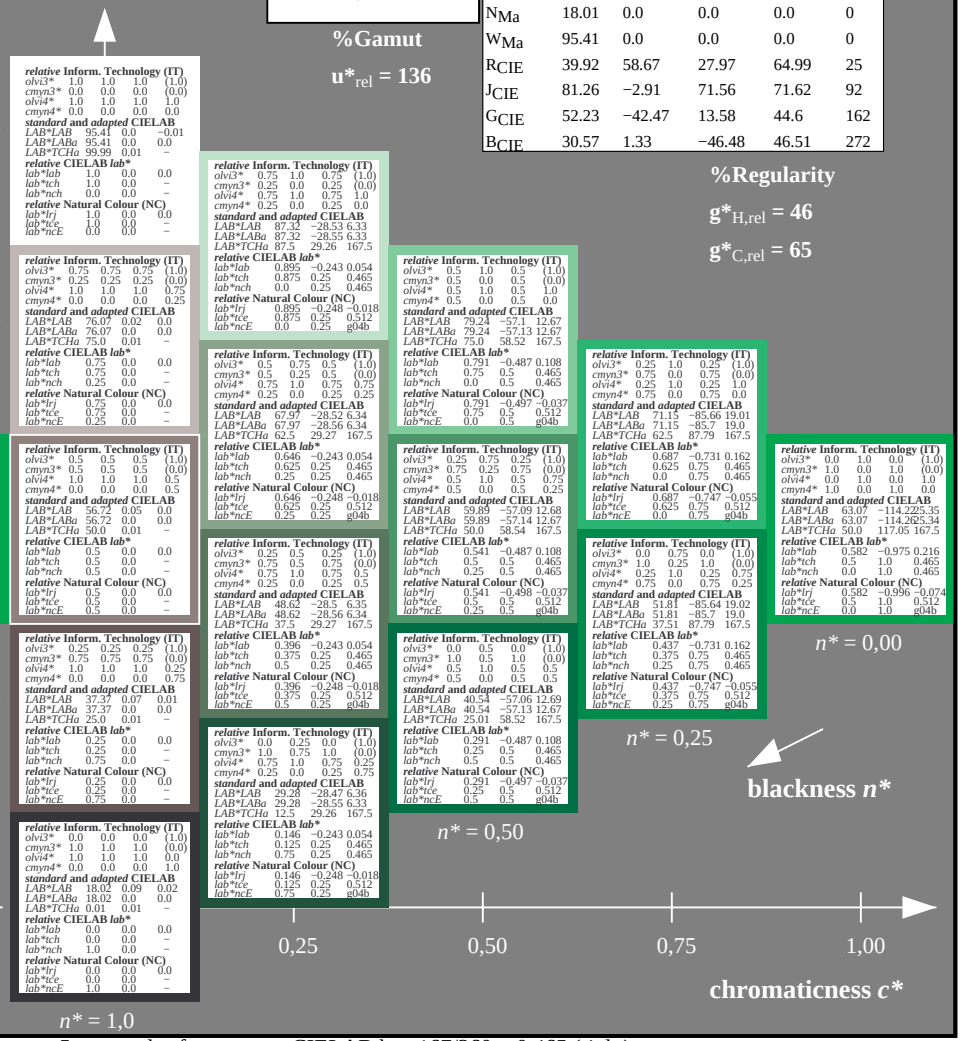
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

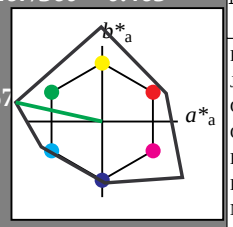


5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

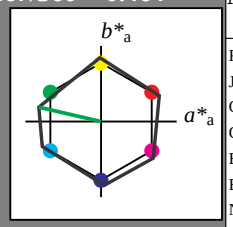
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

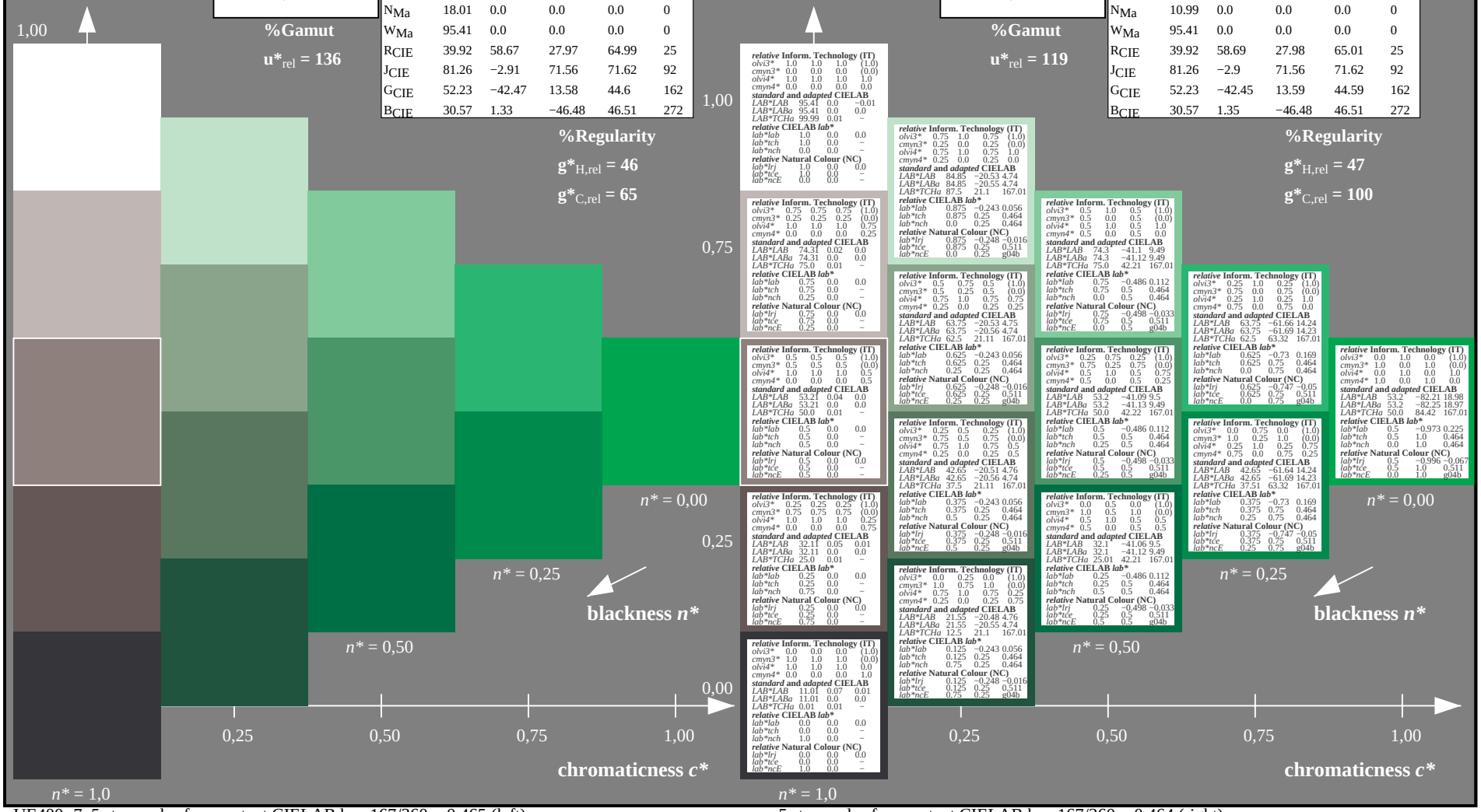
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



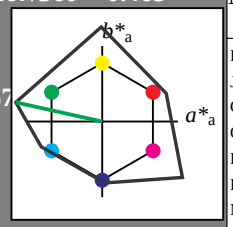
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

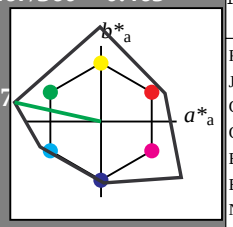
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

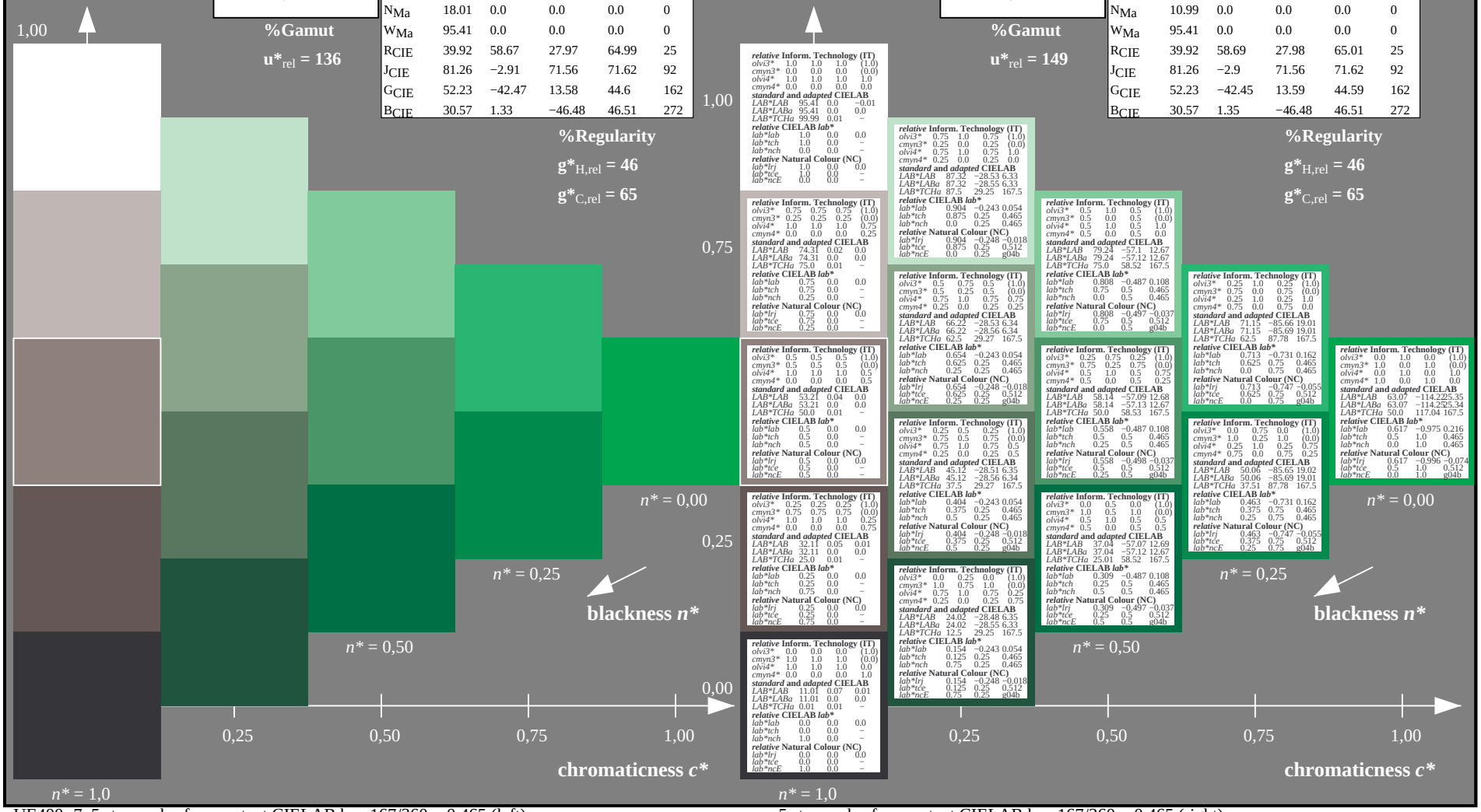
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



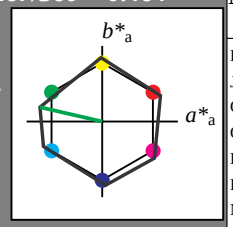
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

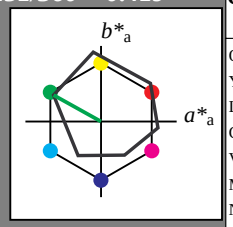
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

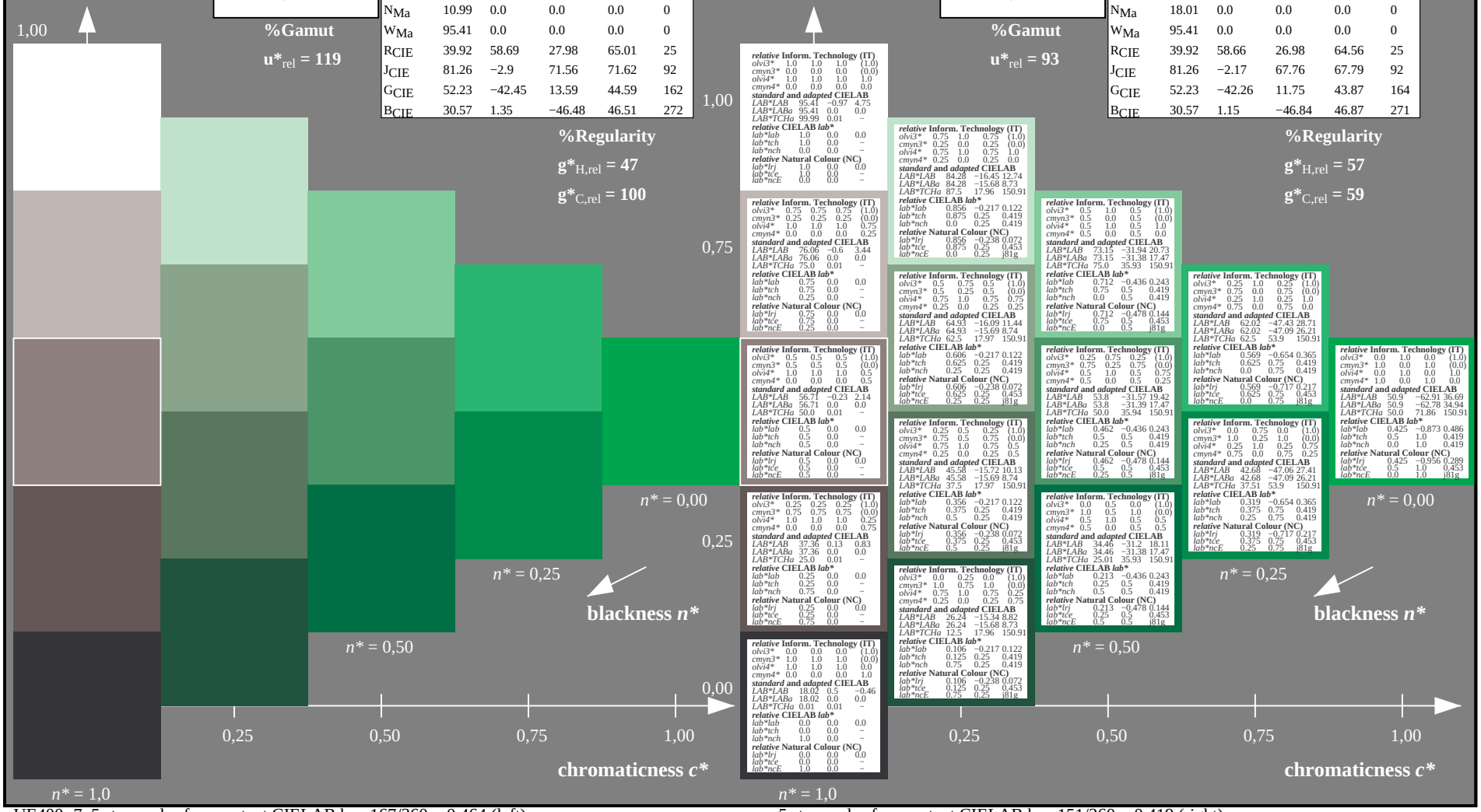
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



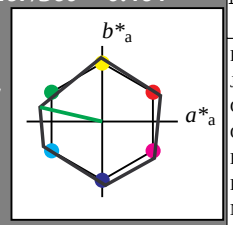
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 167/360 = 0.464*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

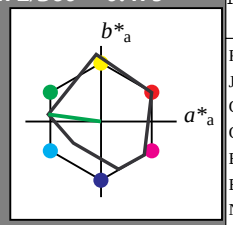
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 172/360 = 0.479*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

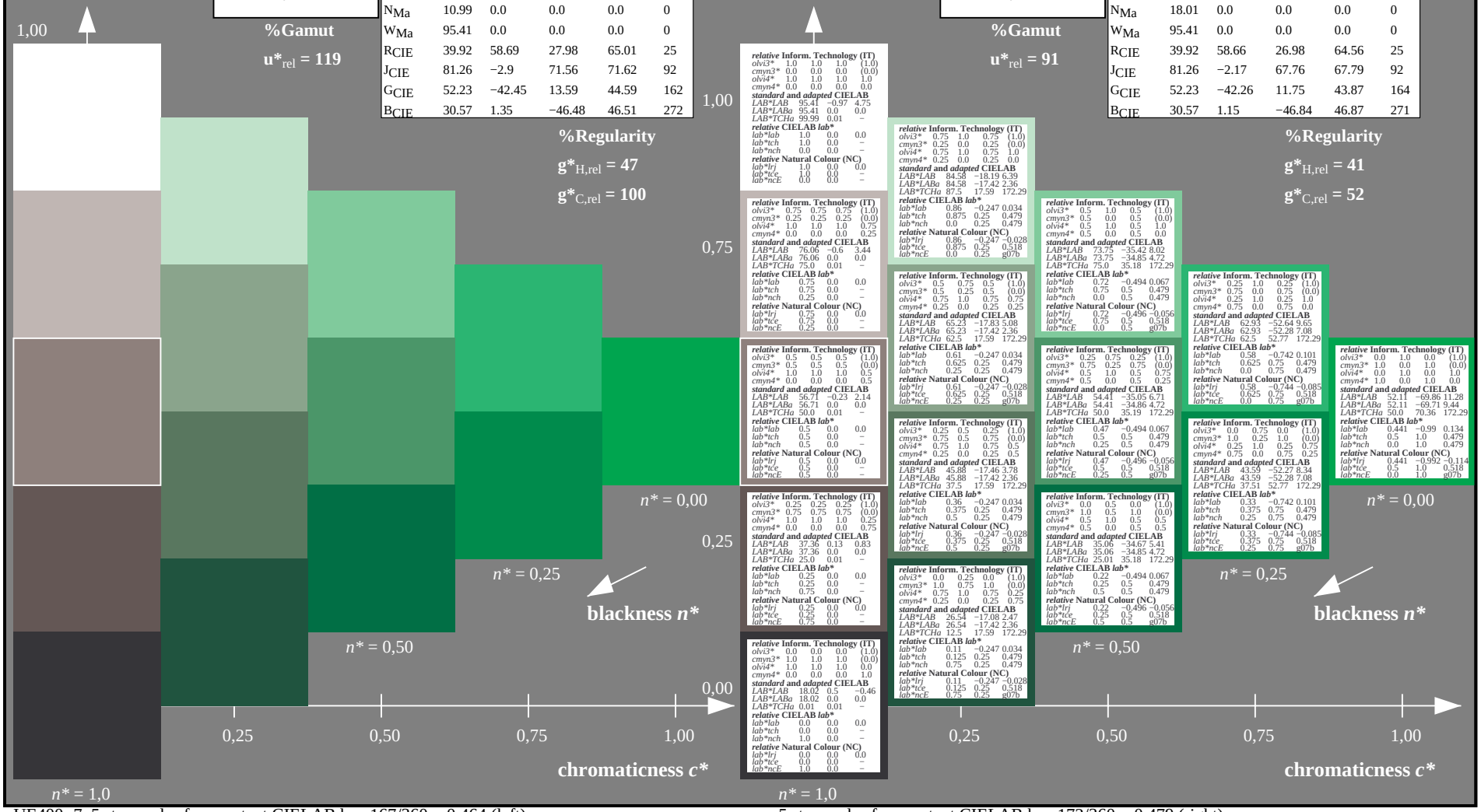
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



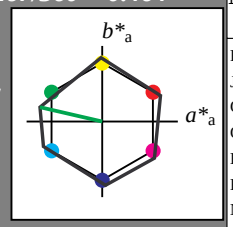
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System NRS11
for hue *h = lab*h = 167/360 = 0.464**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

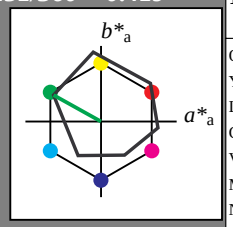
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue *h = lab*h = 151/360 = 0.419**
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness

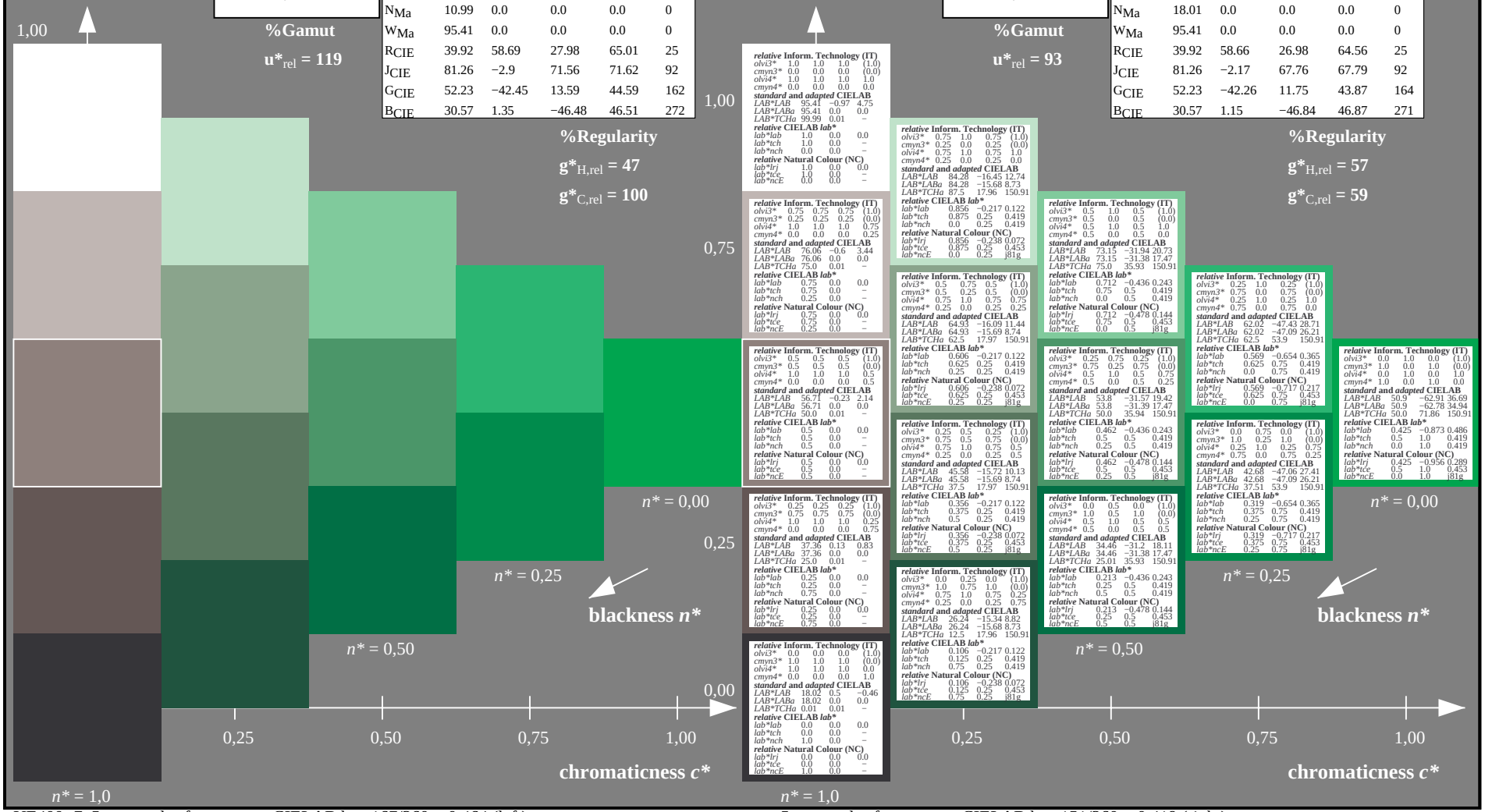


%Gamut
u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59



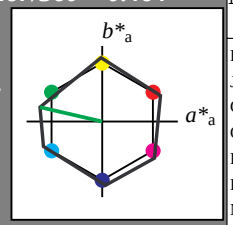
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

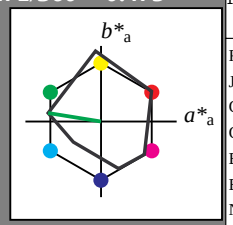
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

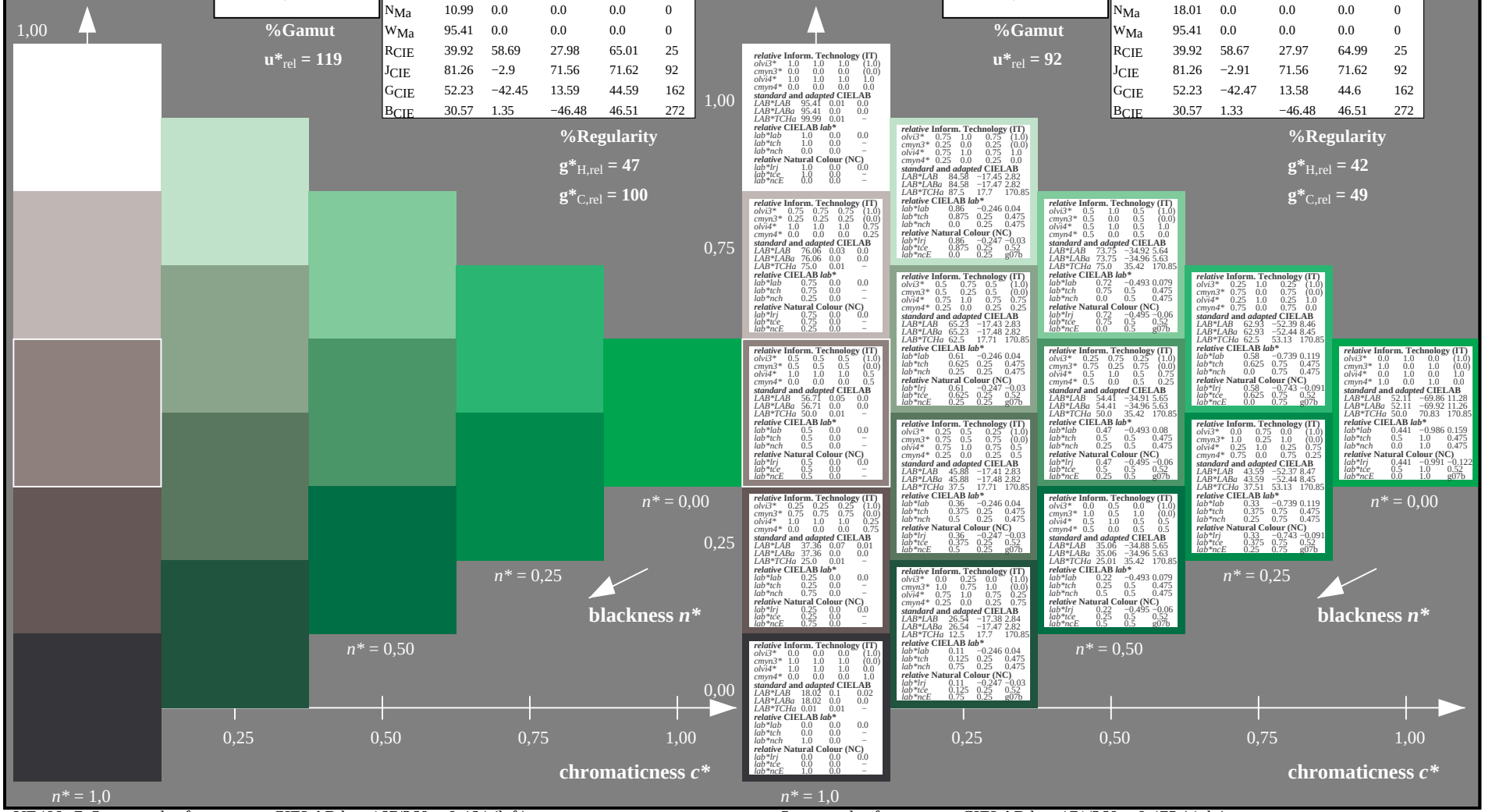
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



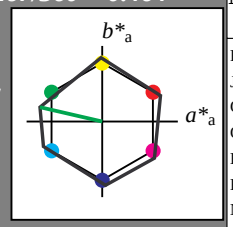
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

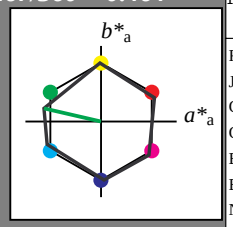
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

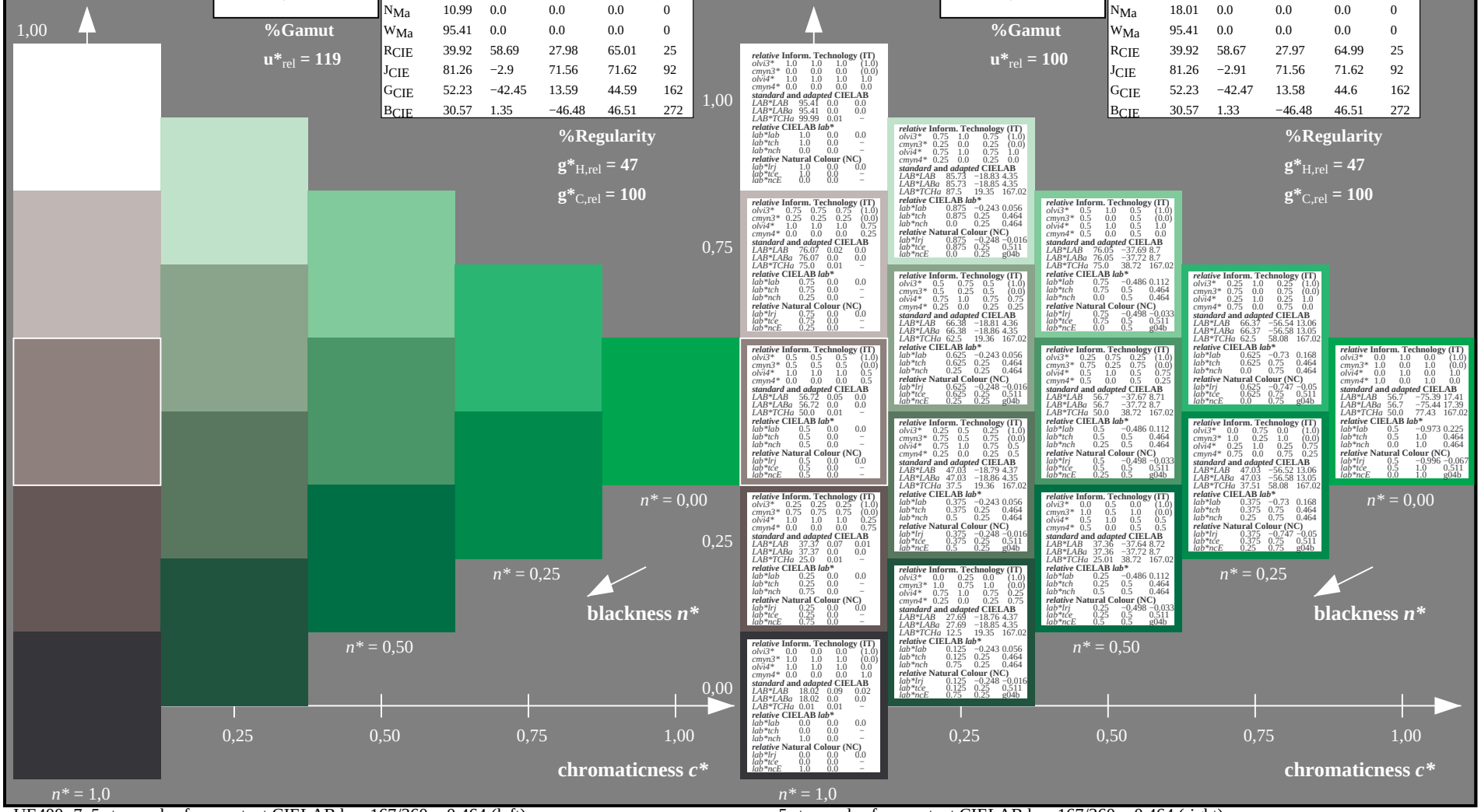
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



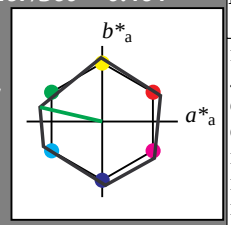
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

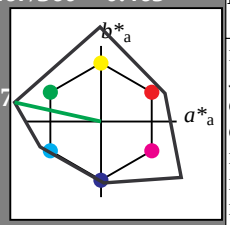
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

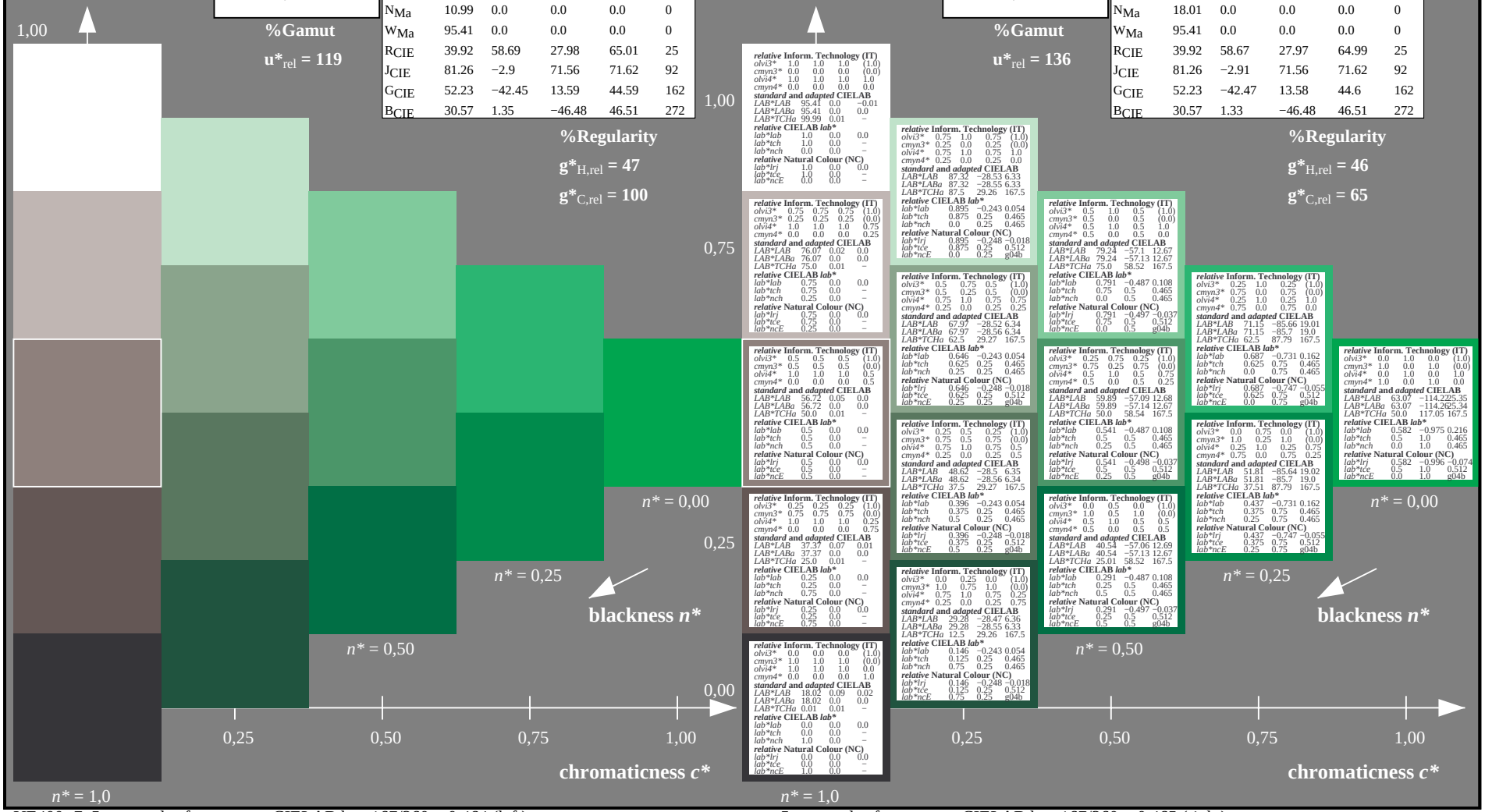
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



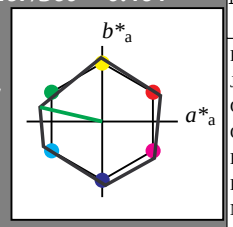
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

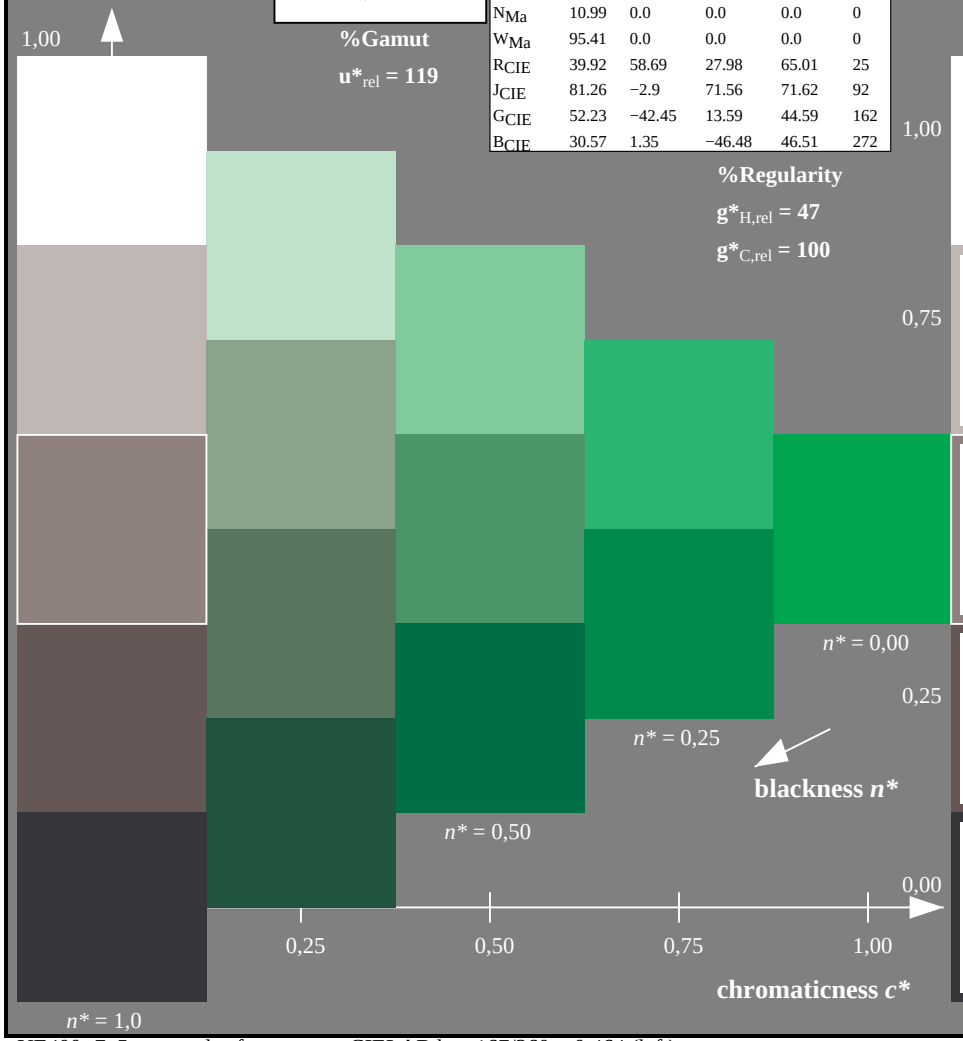
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

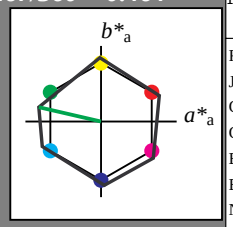
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

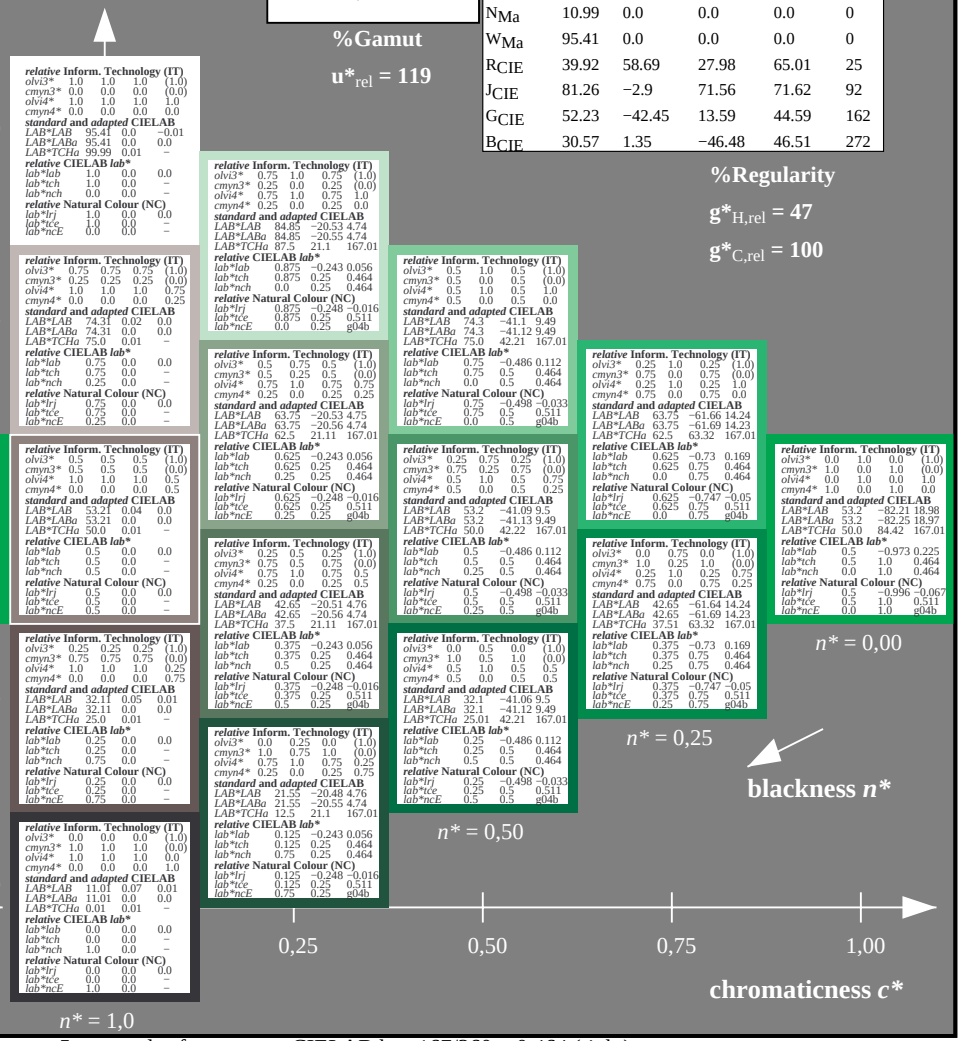
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



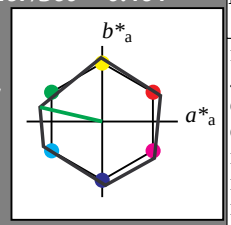
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

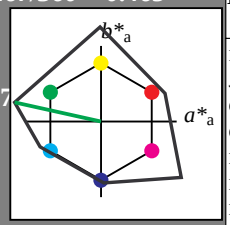
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

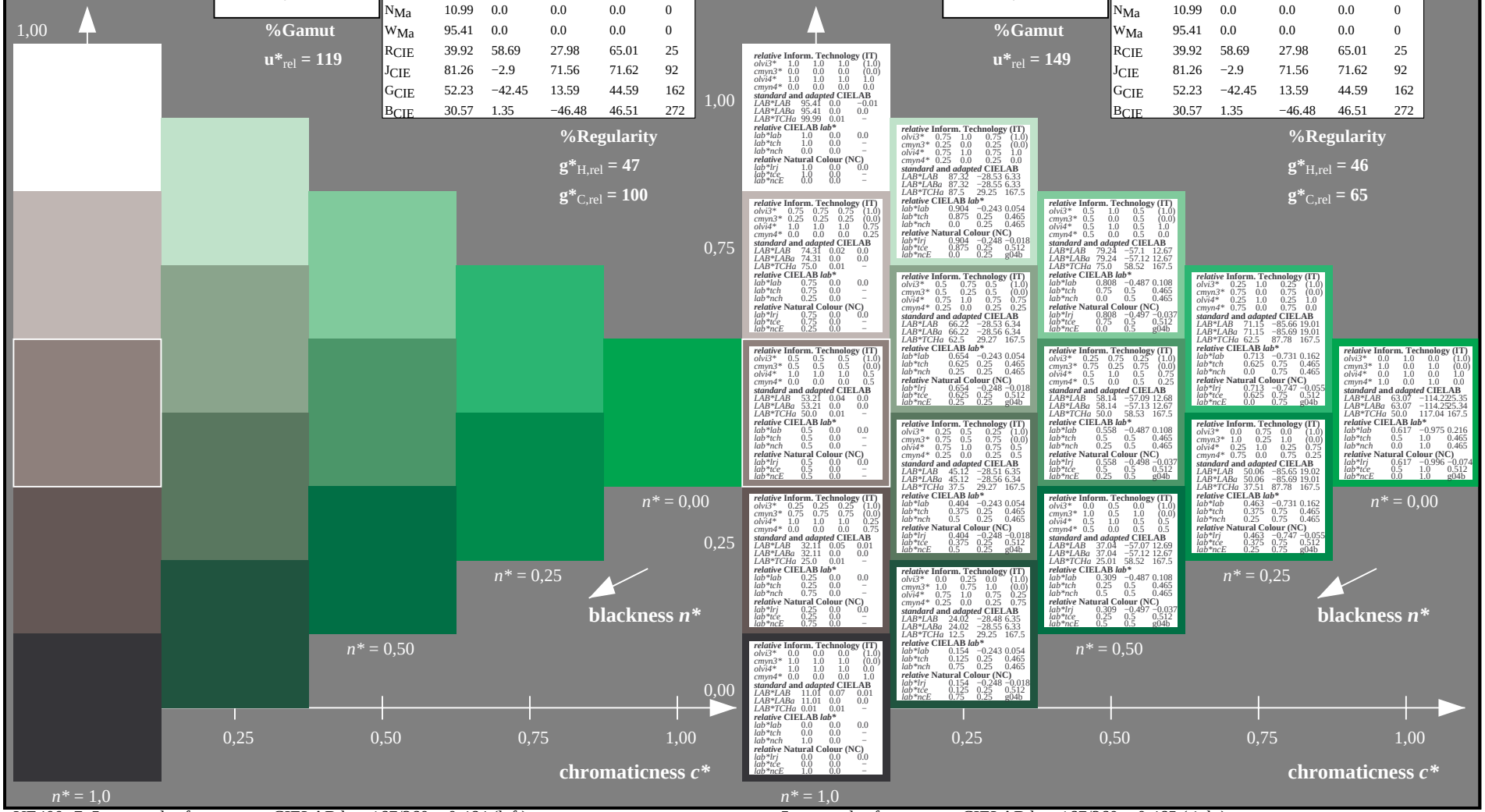
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



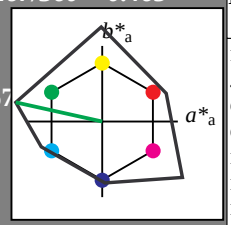
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.464 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

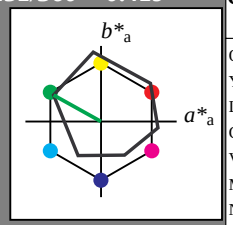
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

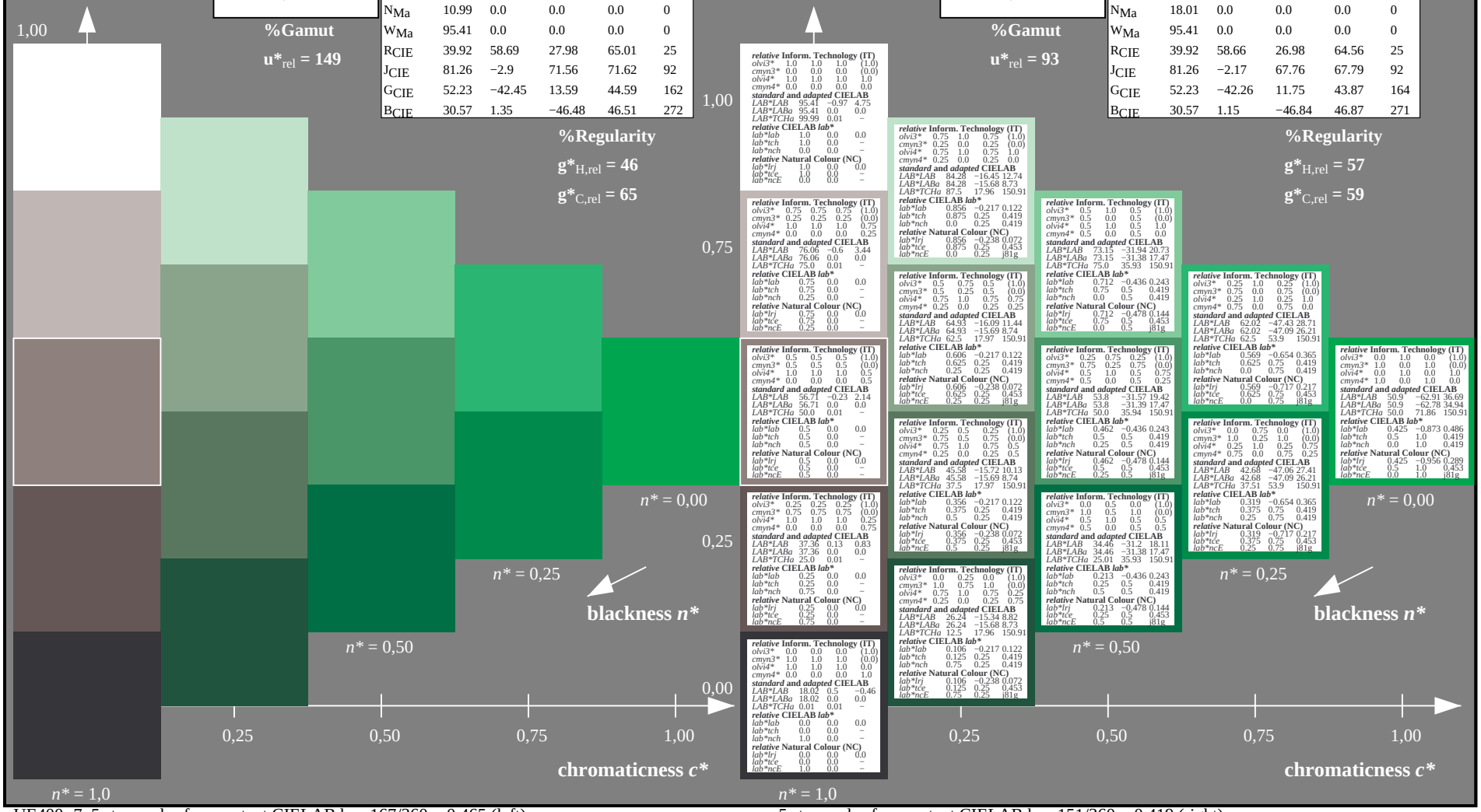
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



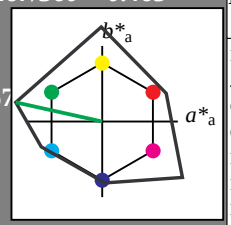
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

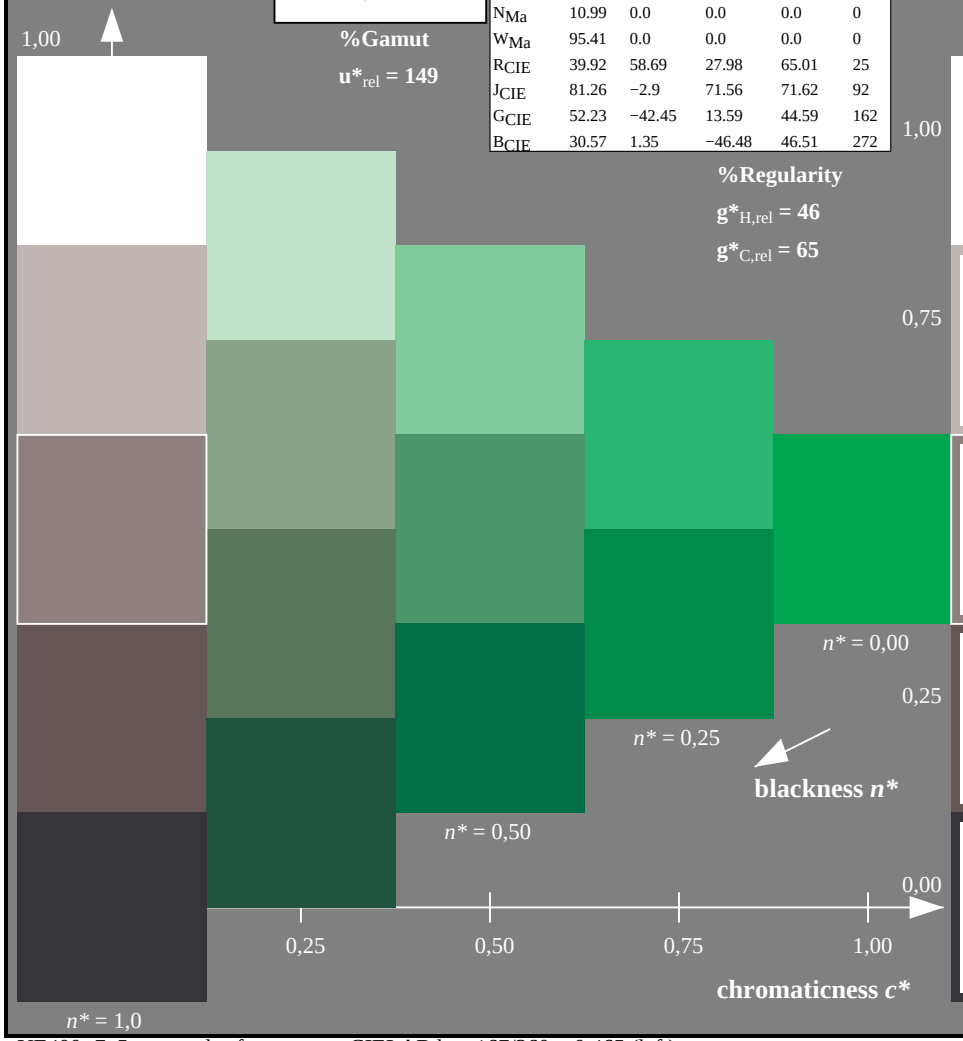
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

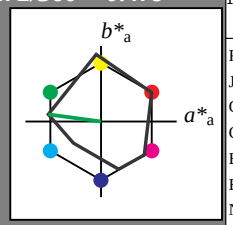
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 172/360 = 0.479$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 70 172
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

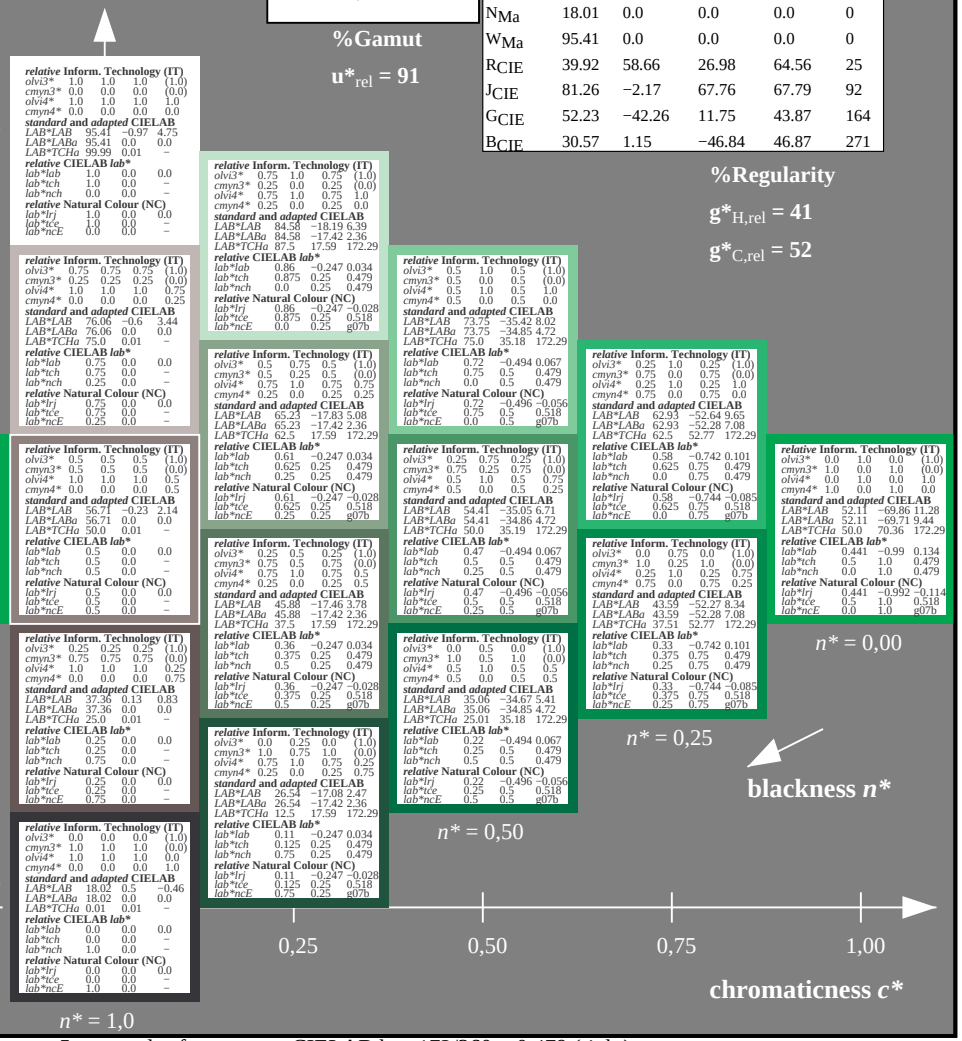
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



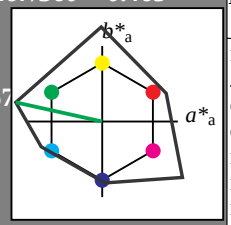
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

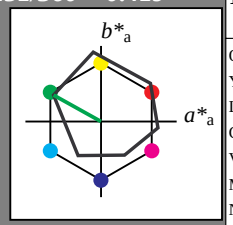
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 151/360 = 0.419$
lab*tch* and *lab*nch

D65: hue L
LCH*Ma: 51 72 151
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

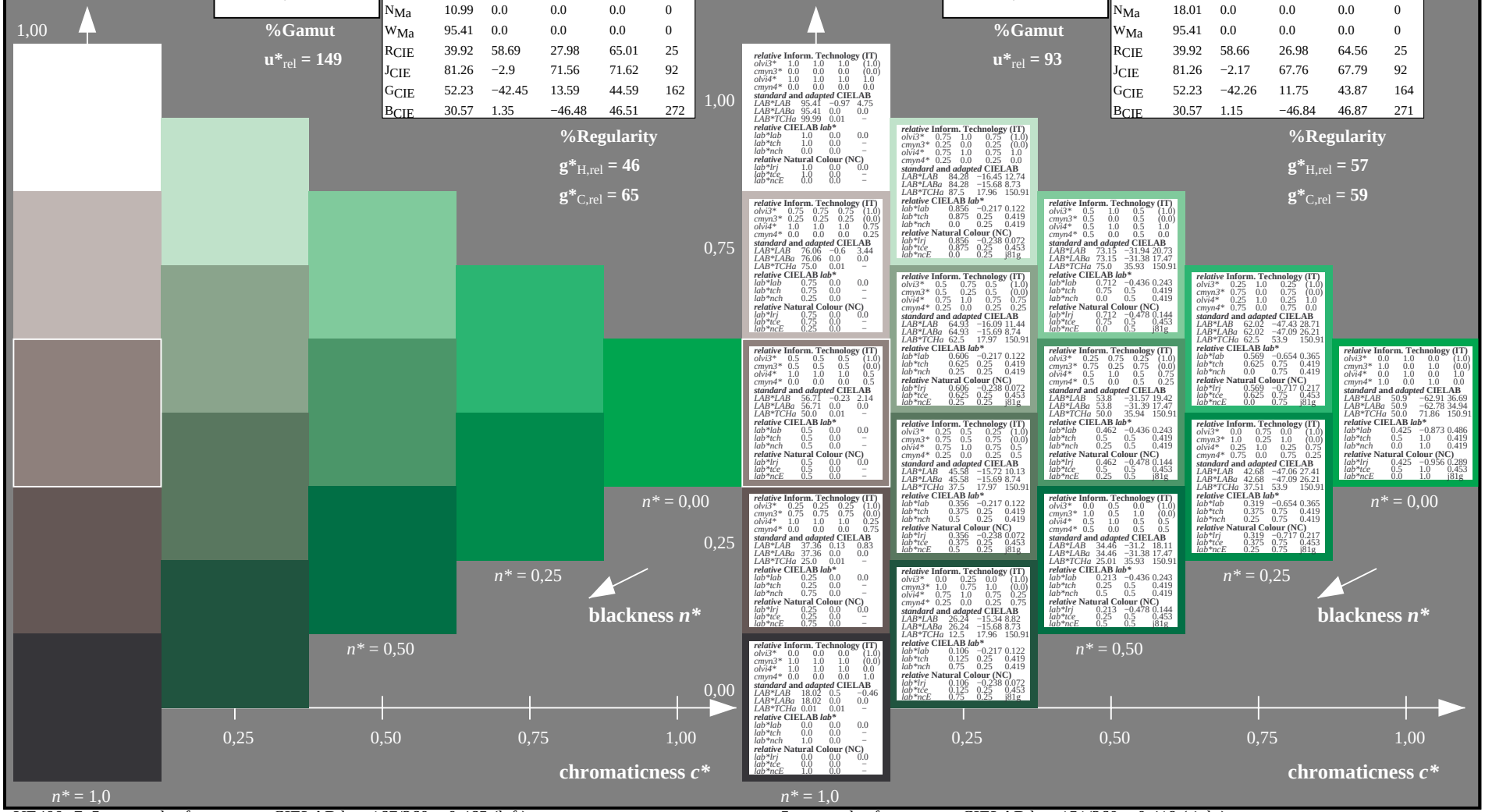
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



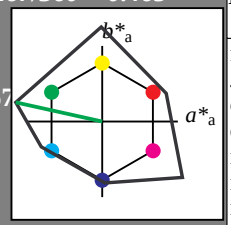
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

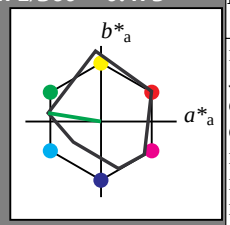
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 171/360 = 0.475$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 52 71 171
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

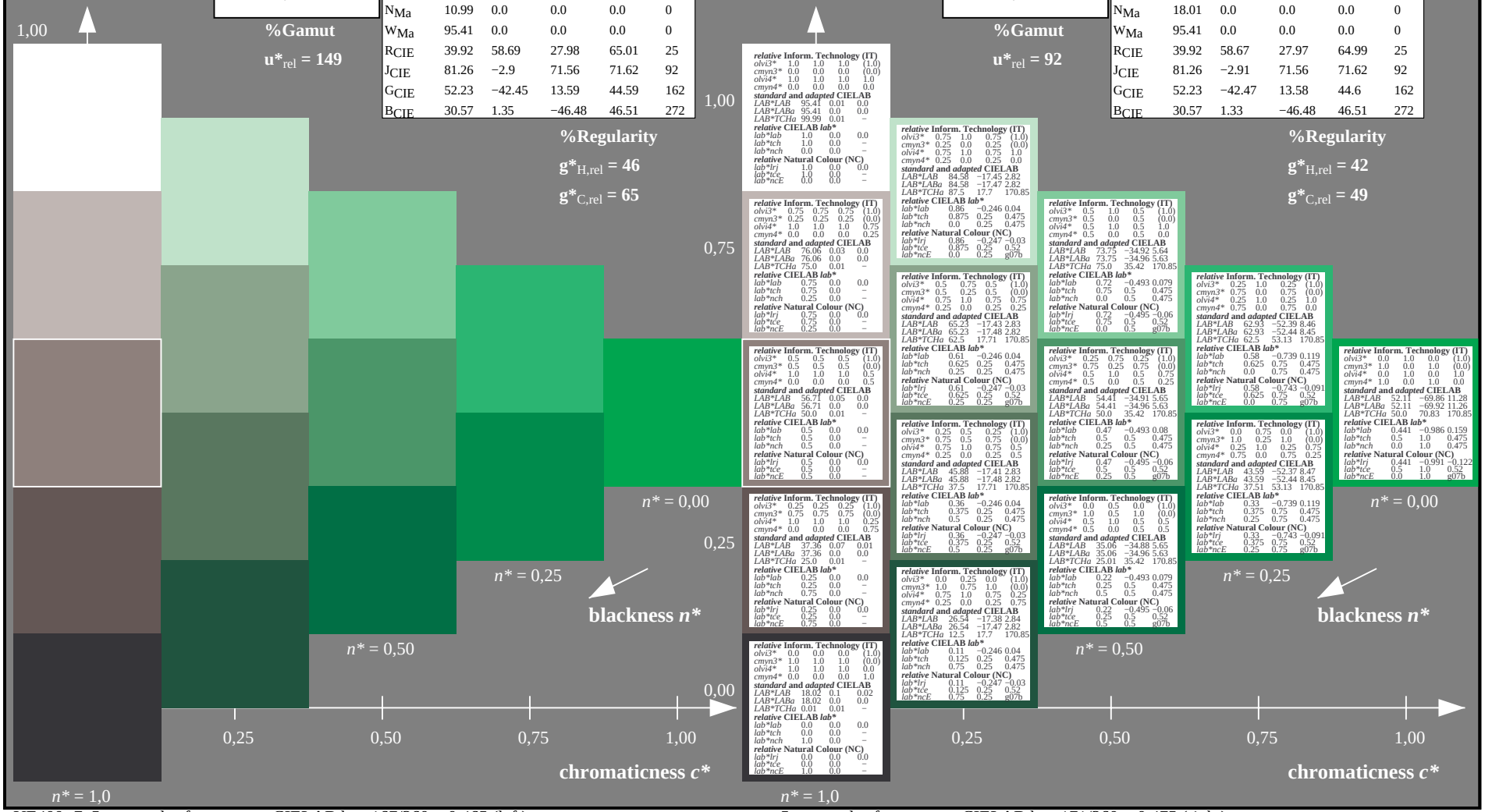
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

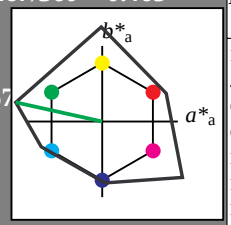


UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 171/360 = 0.475 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

triangle lightness

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

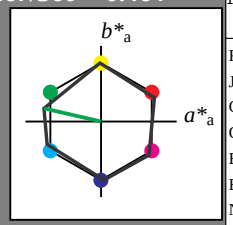
blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 77 167
rgb*Ma: 0.0 1.0 0.0



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

triangle lightness

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

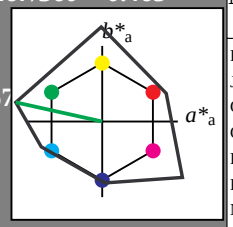
UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

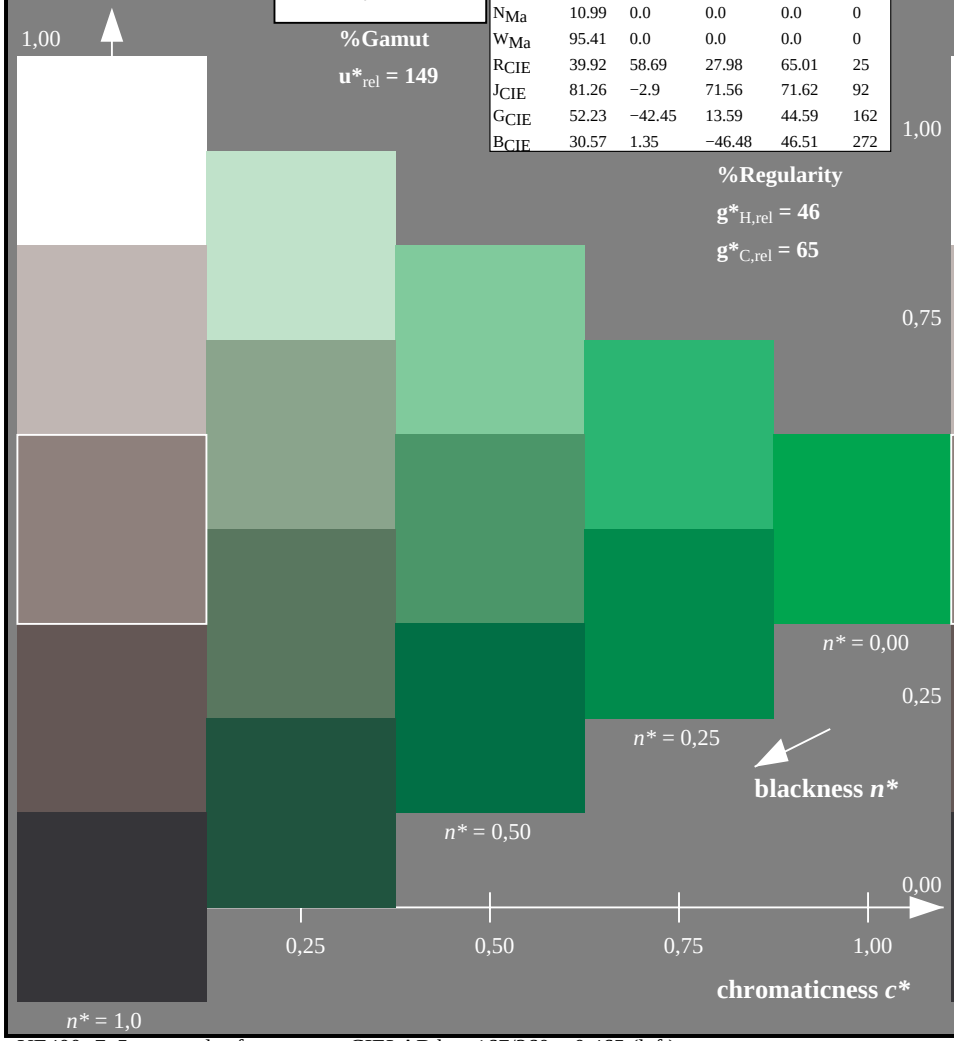
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

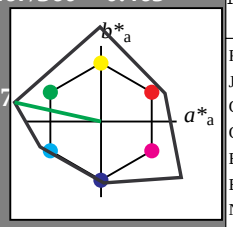
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

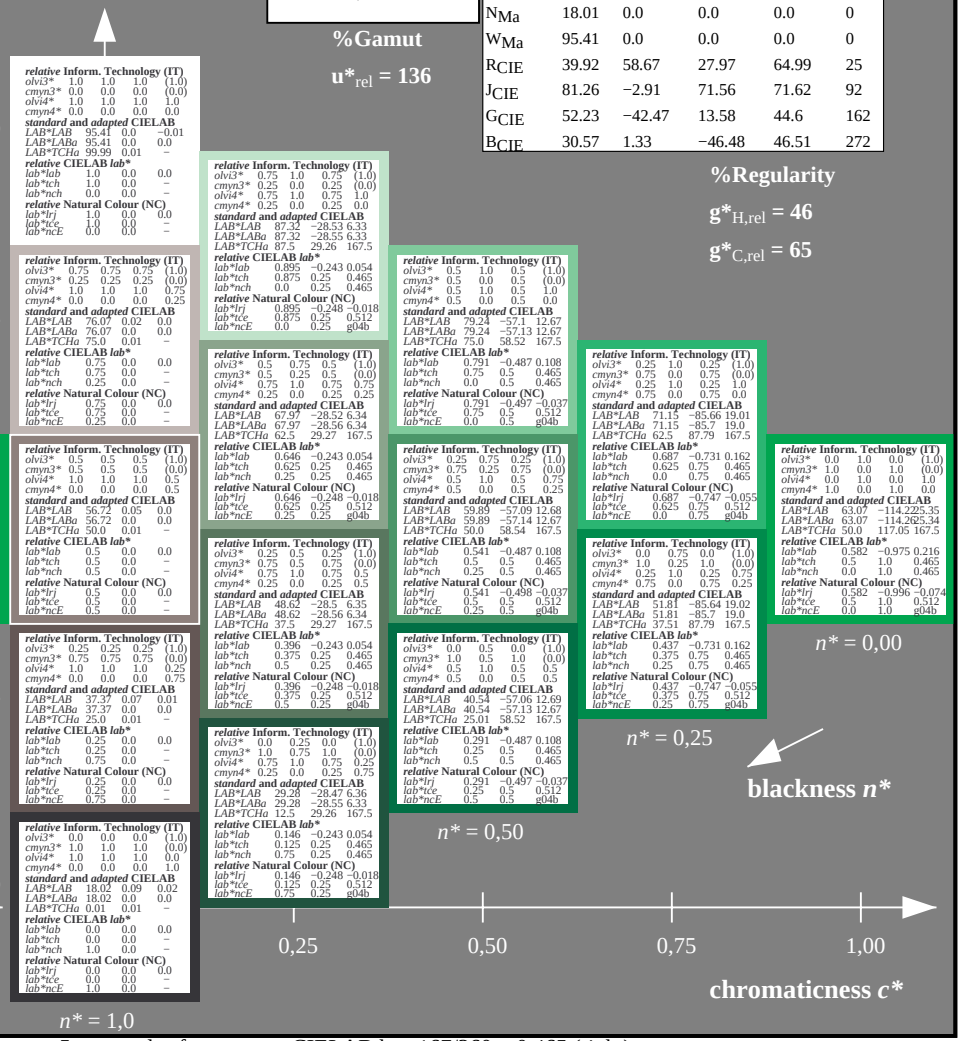
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

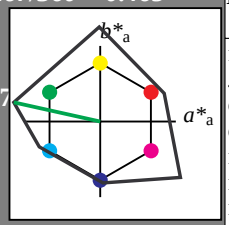


UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut
u^*_{rel} = 149

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

triangle lightness

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

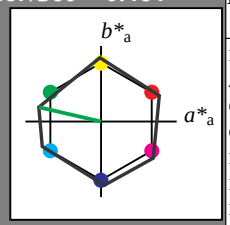
0,25 0,50 0,75 1,00

chromaticness c^*

UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 167/360 = 0.464$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 84 167
rgb*Ma: 0.0 1.0 0.0



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut
u^*_{rel} = 119

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

triangle lightness

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

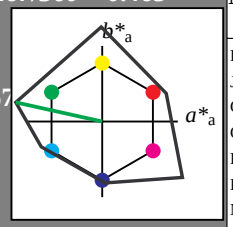
chromaticness c^*

5 step scales for constant CIELAB hue 167/360 = 0.464 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

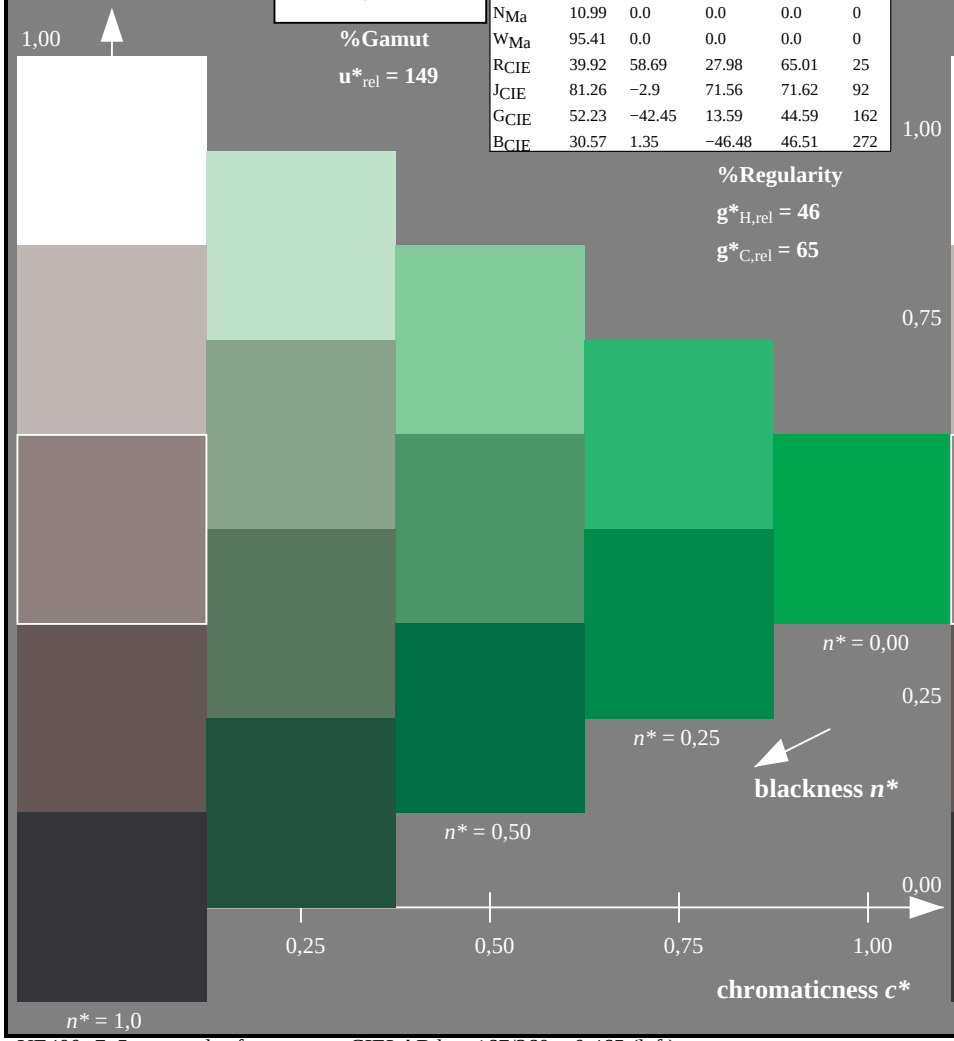
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

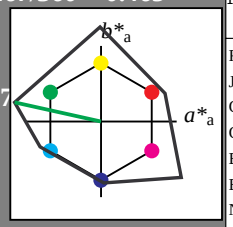


UE400−7, 5 step scales for constant CIELAB hue 167/360 = 0.465 (left)

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 167/360 = 0.465$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 63 117 167
rgb*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

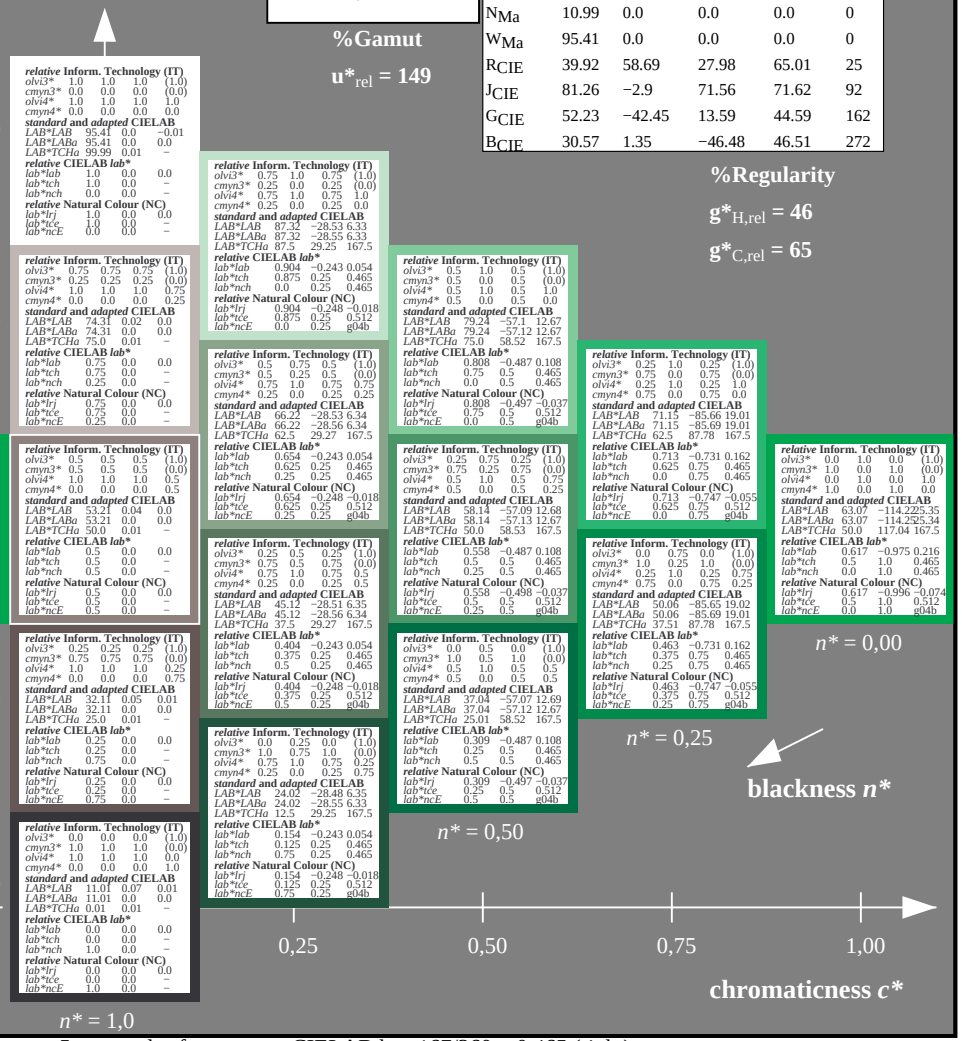
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

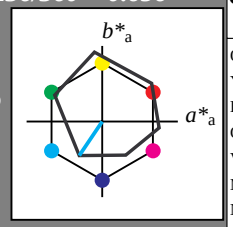


5 step scales for constant CIELAB hue 167/360 = 0.465 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

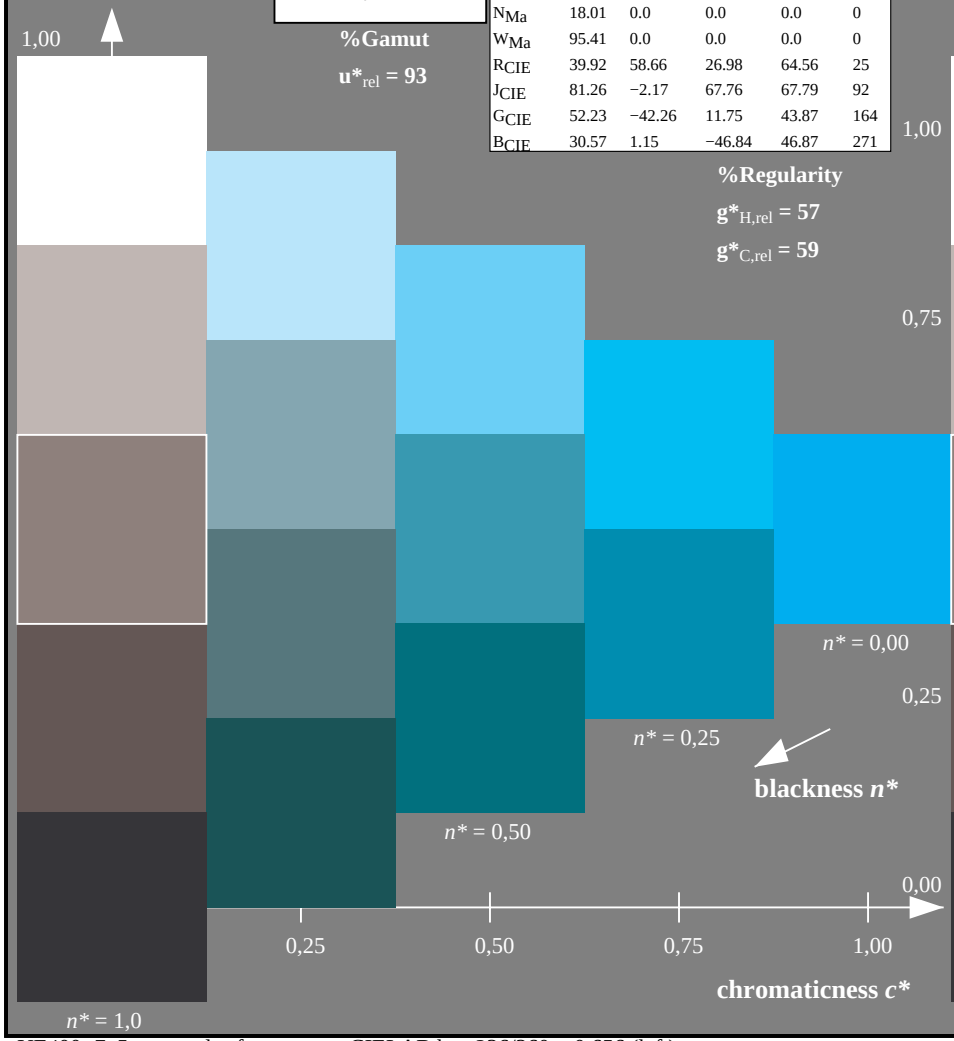
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

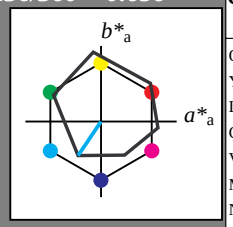
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

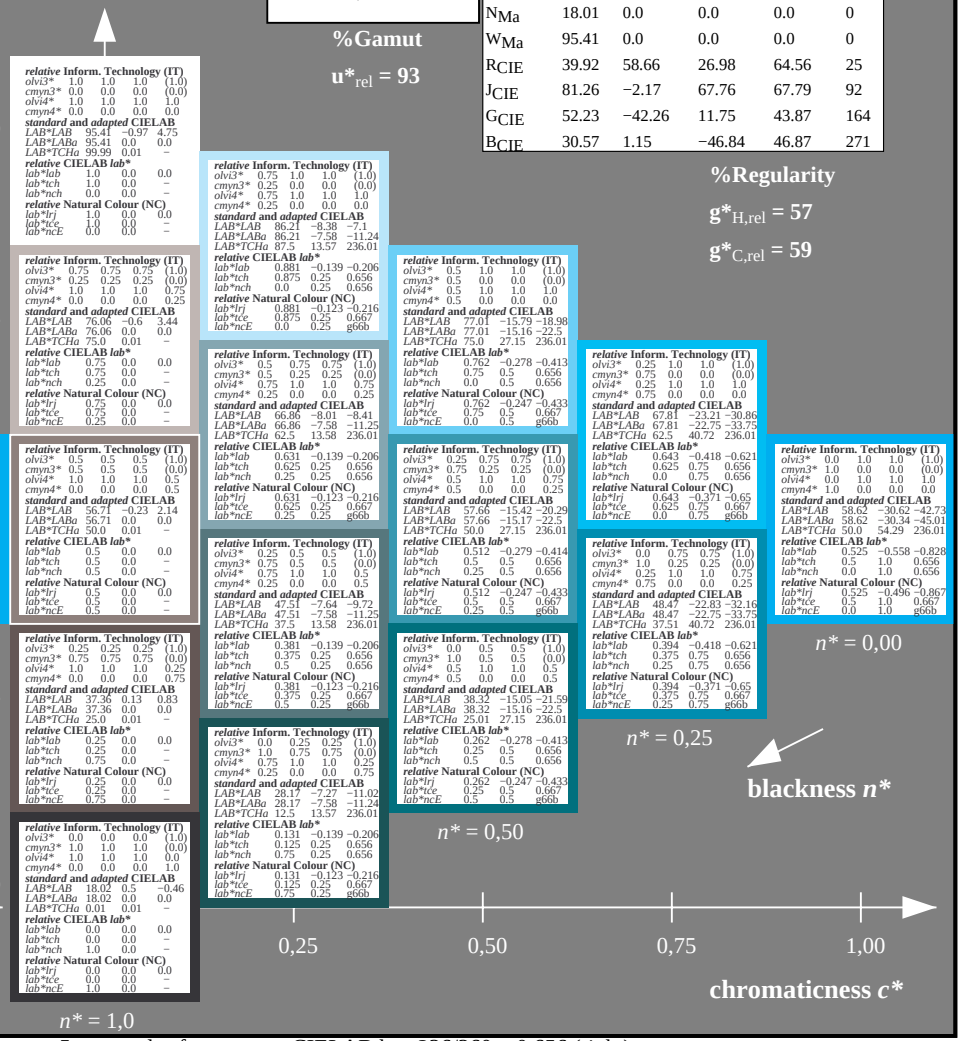
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



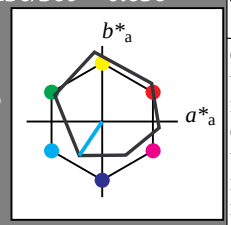
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

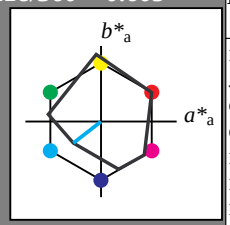
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

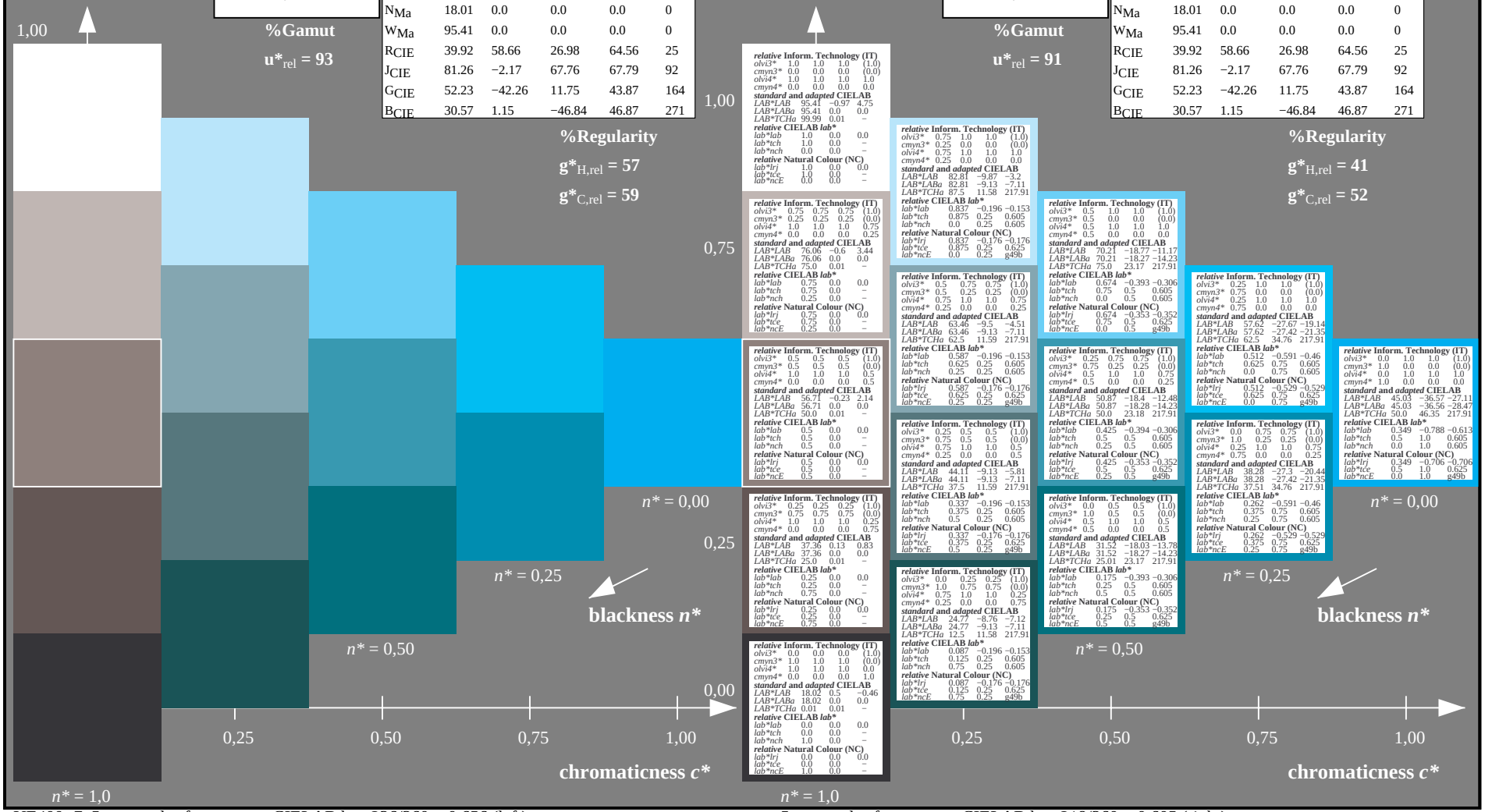
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



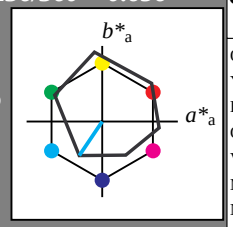
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

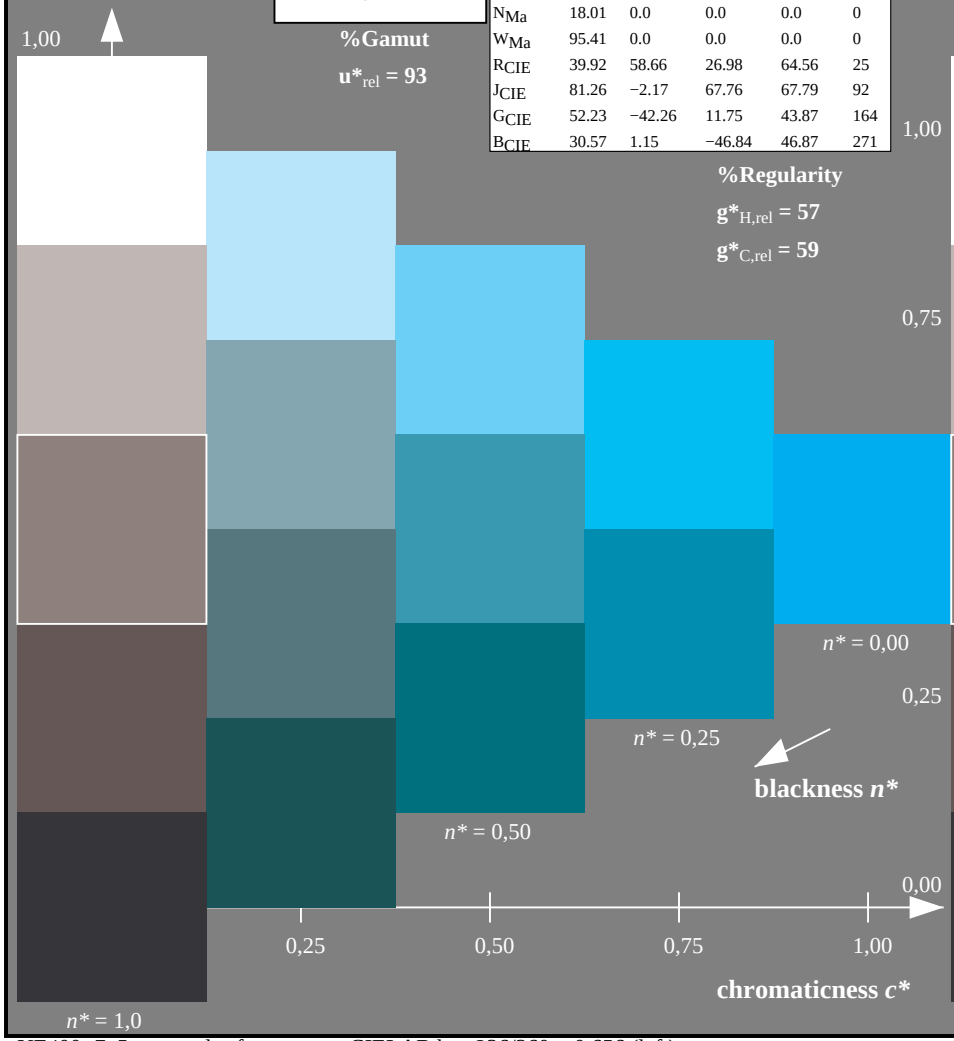
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

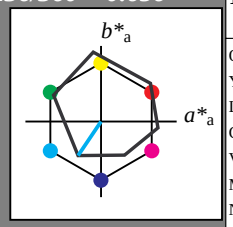


UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

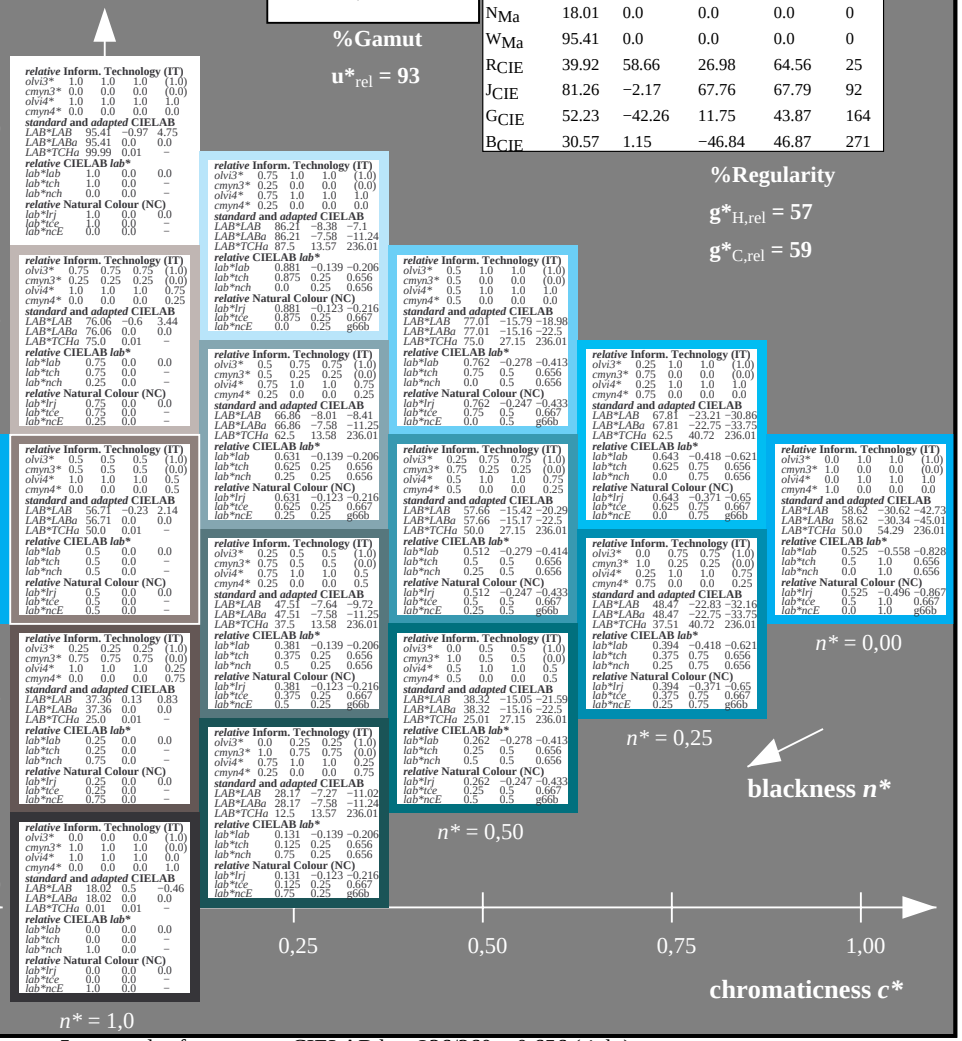
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

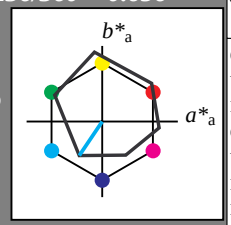


5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

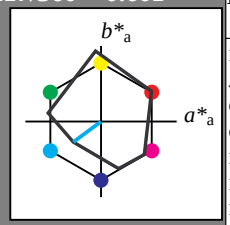
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

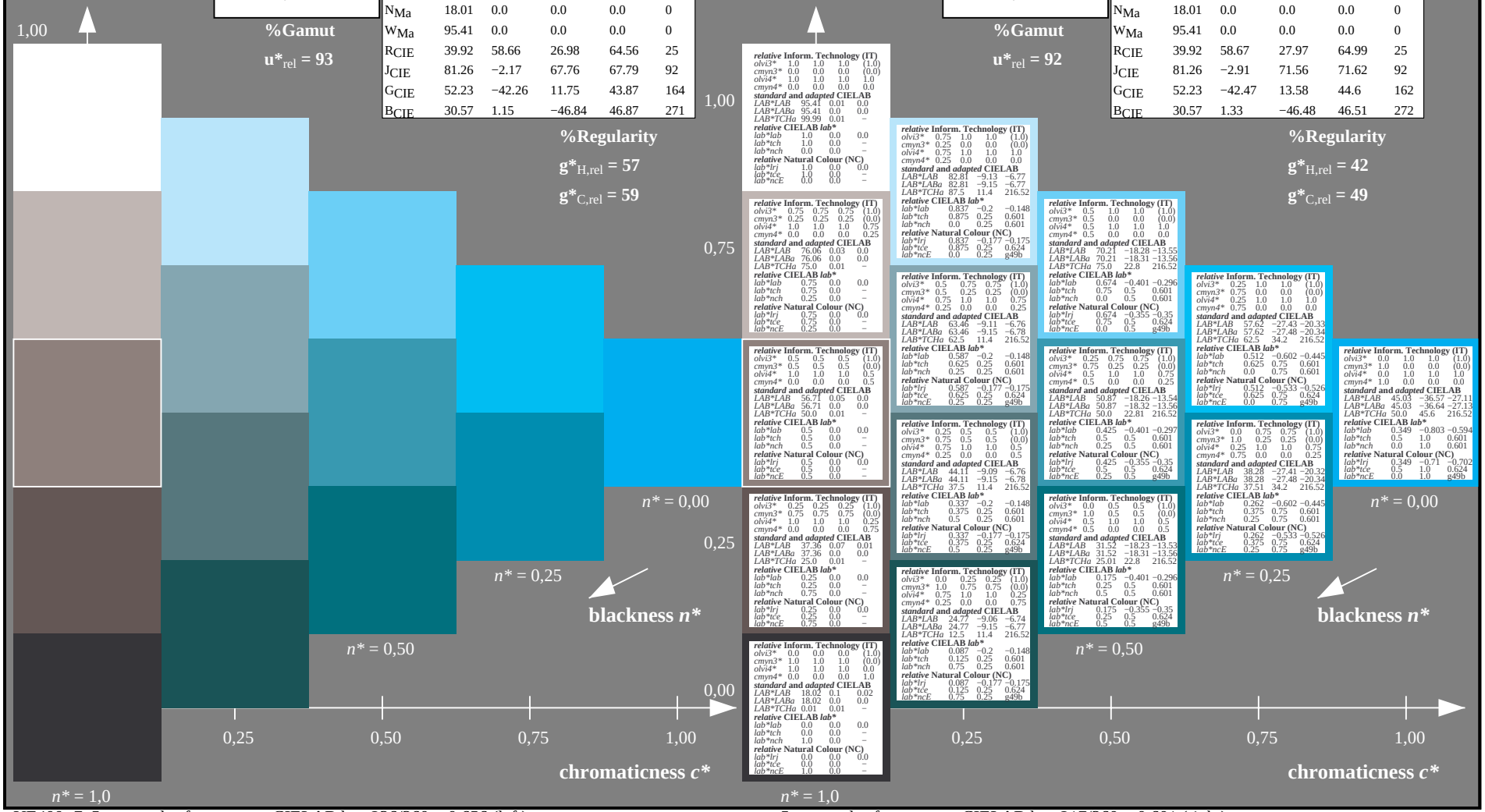
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



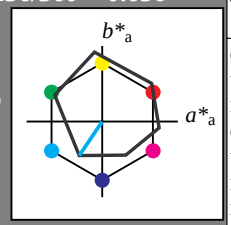
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 236/360 = 0.656*
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

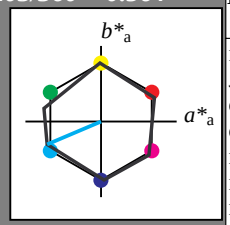
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

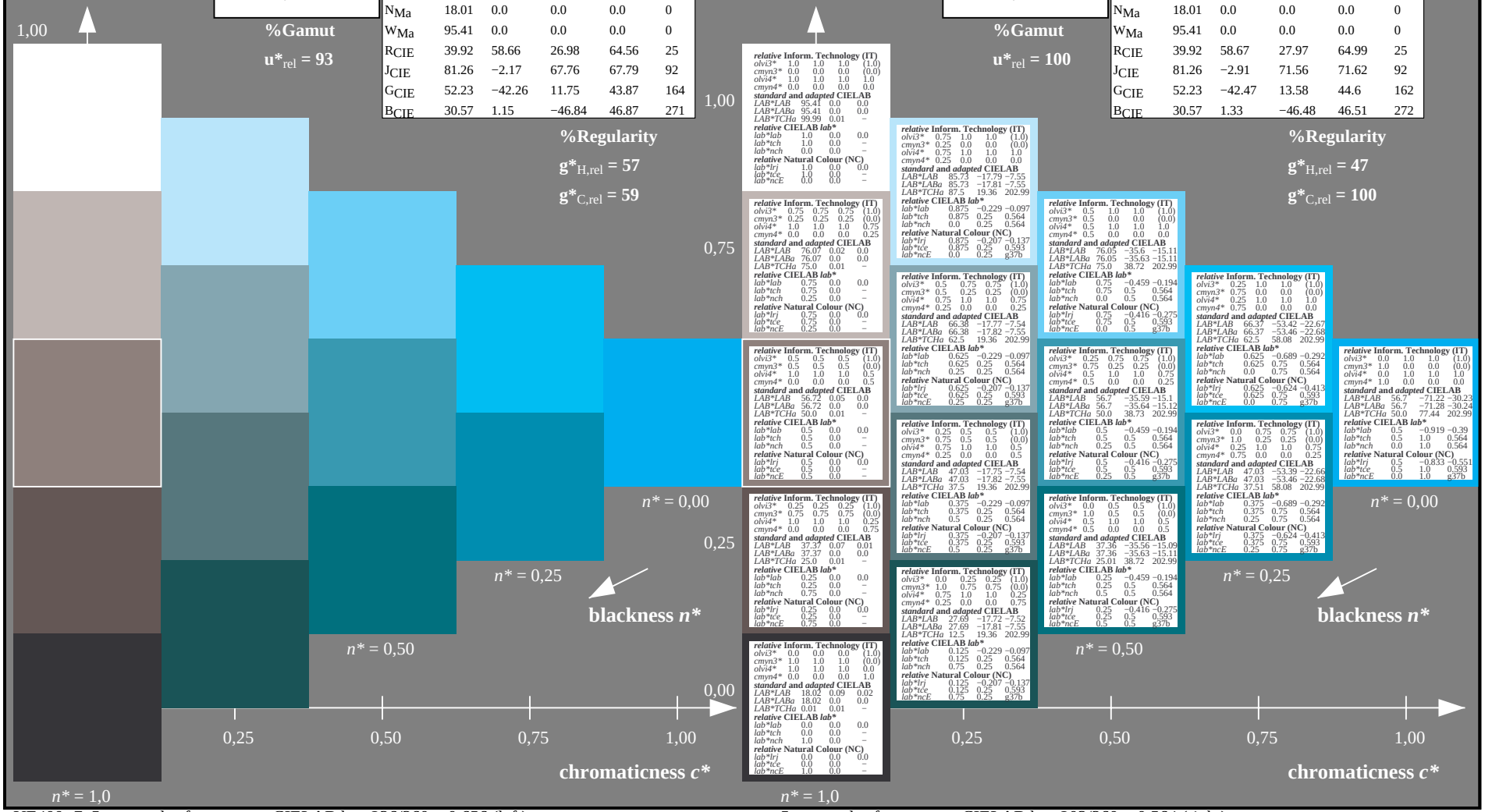
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



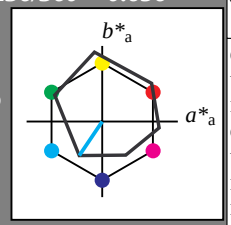
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

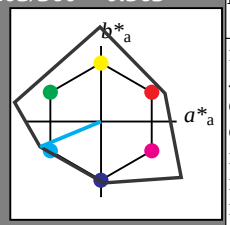
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

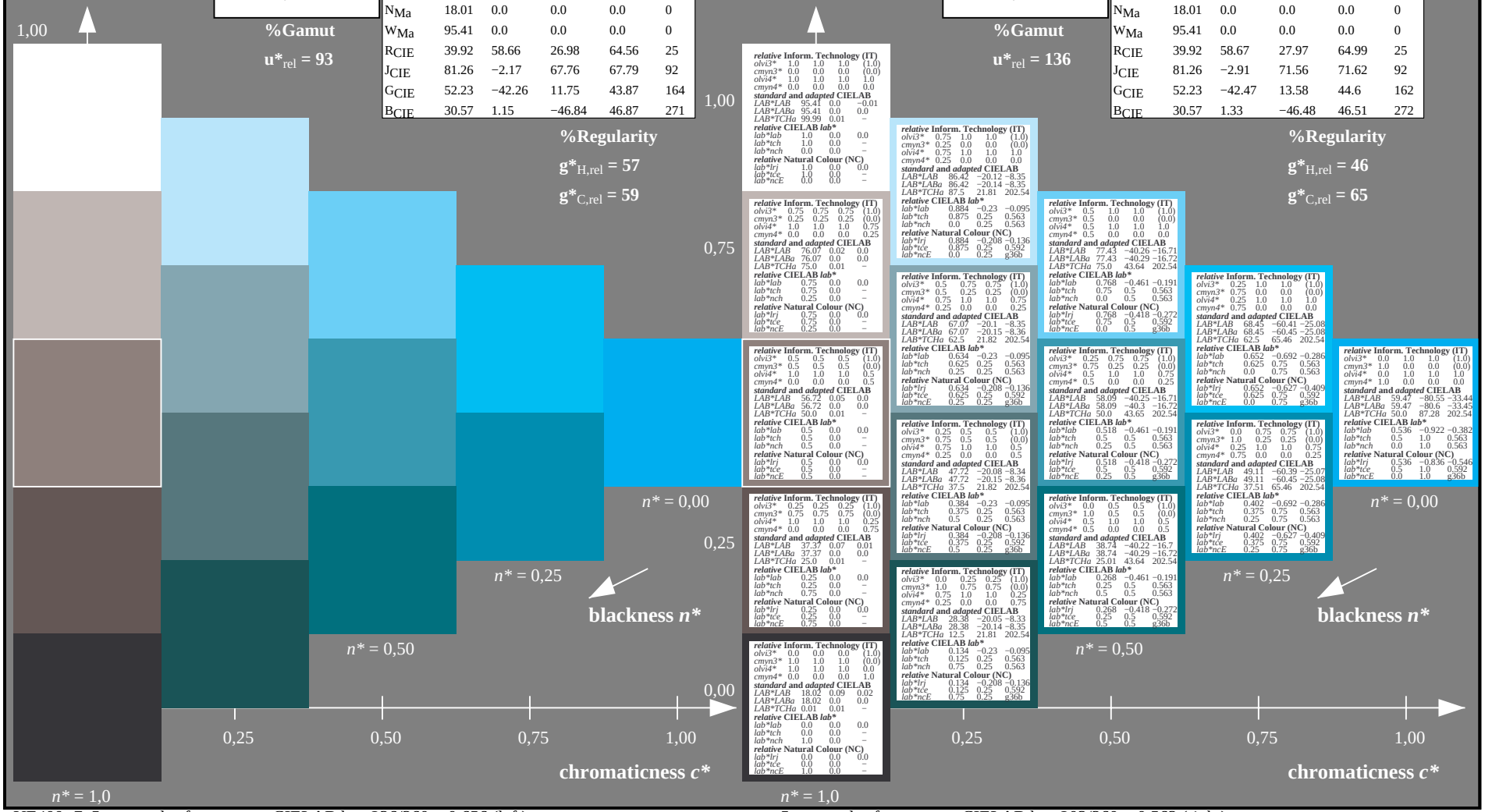
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



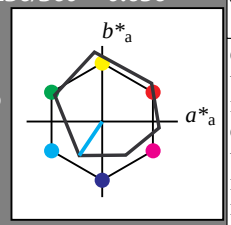
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

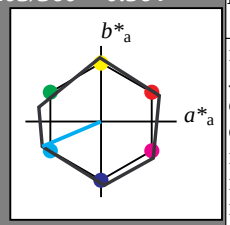
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

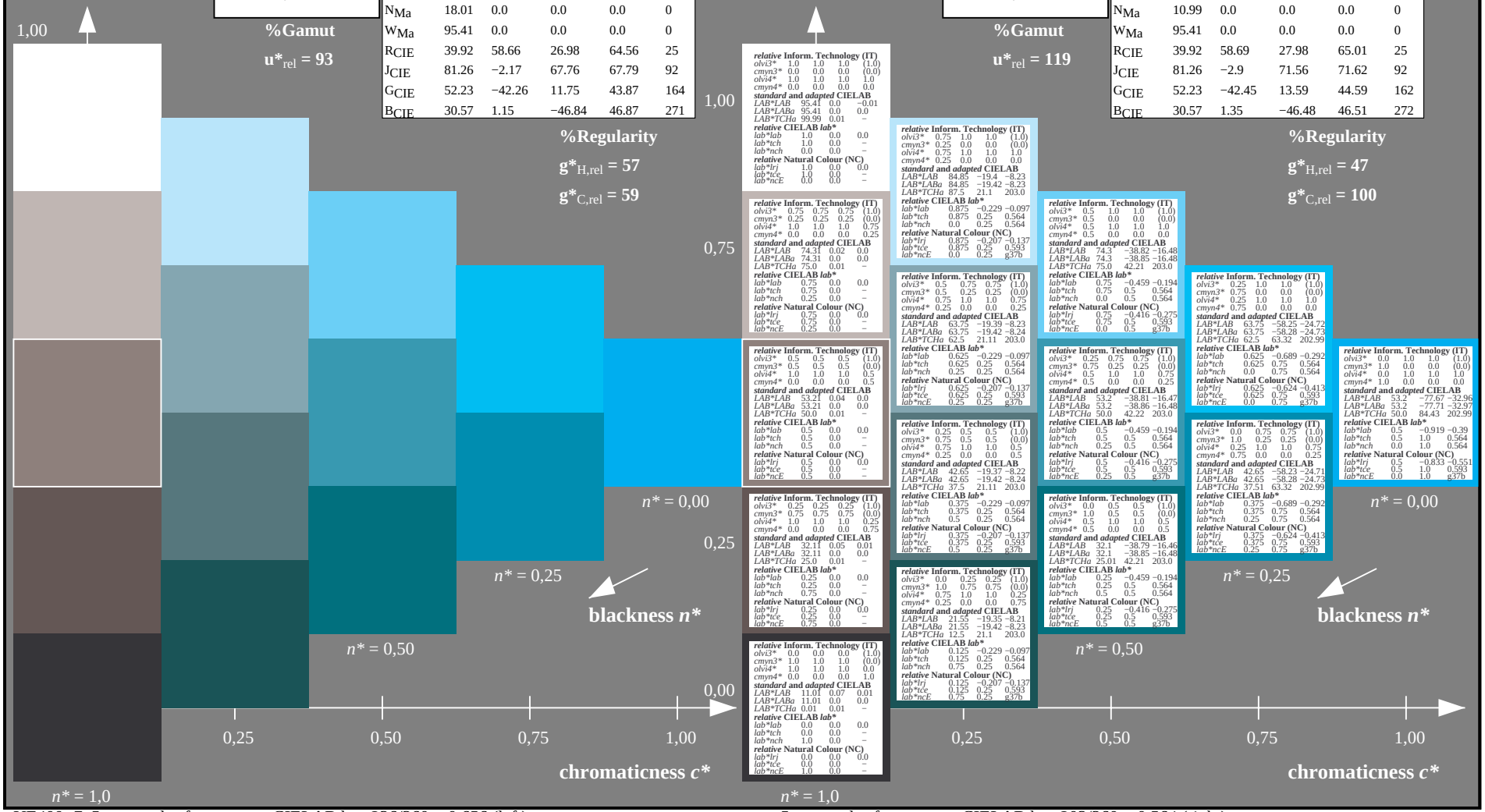
%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



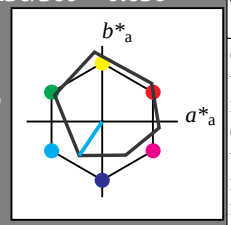
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

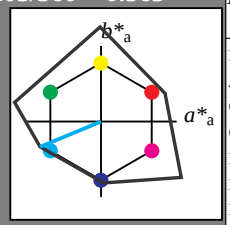
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

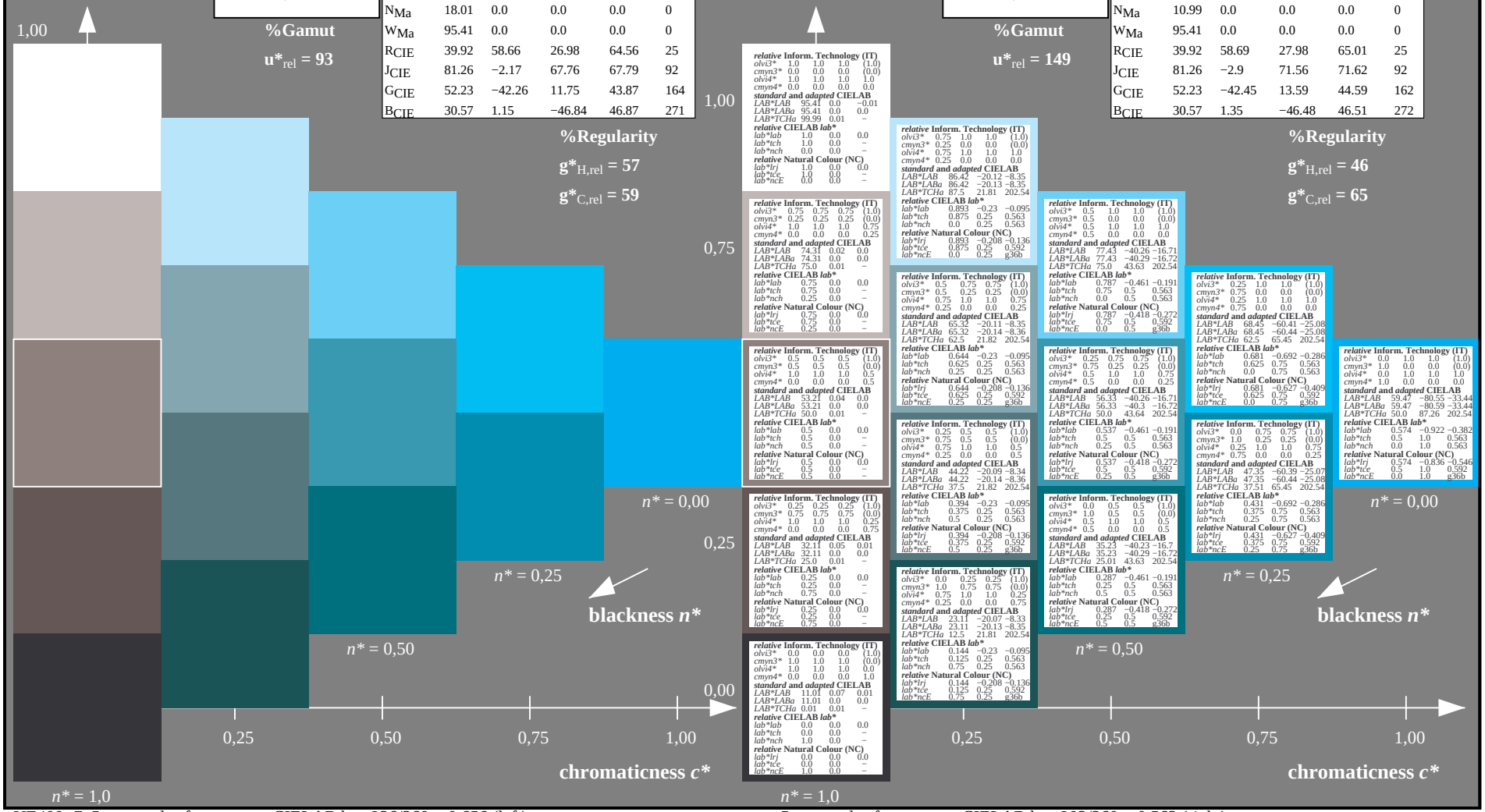
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



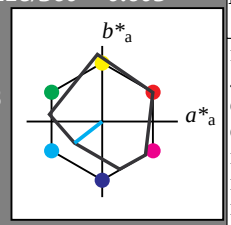
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

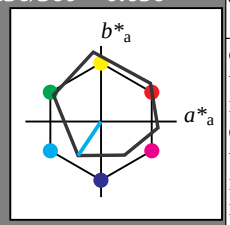
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

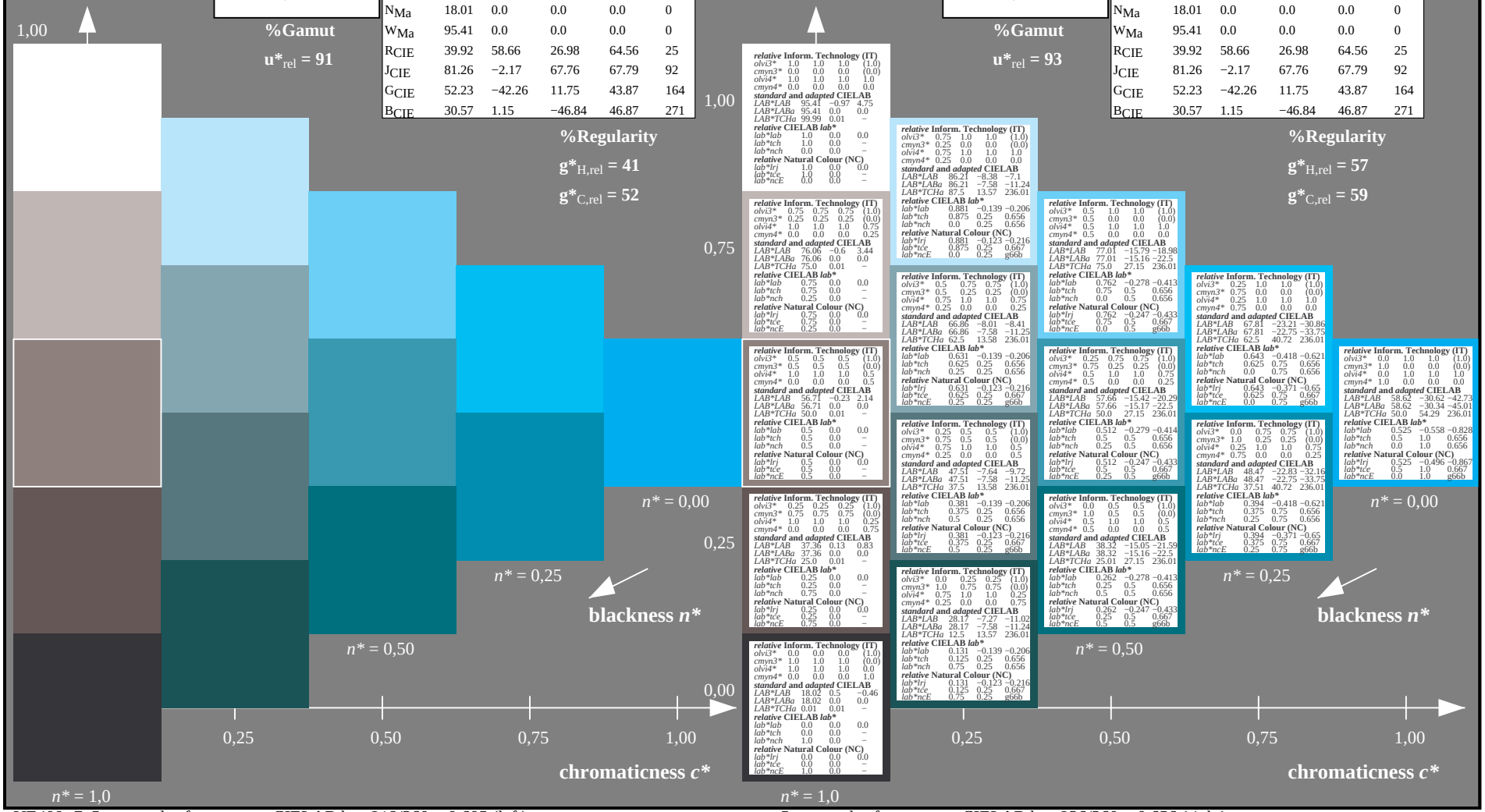
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



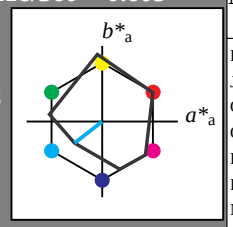
UE400−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

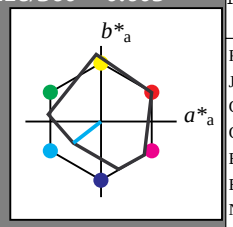
chromaticness c^*

UE400−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

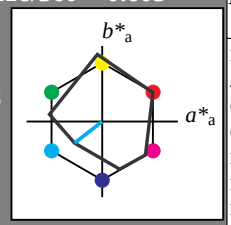
chromaticness c^*

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 218/360 = 0.605*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

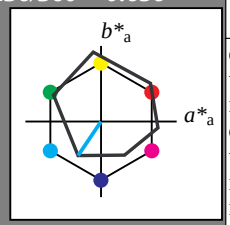
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 236/360 = 0.656*
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

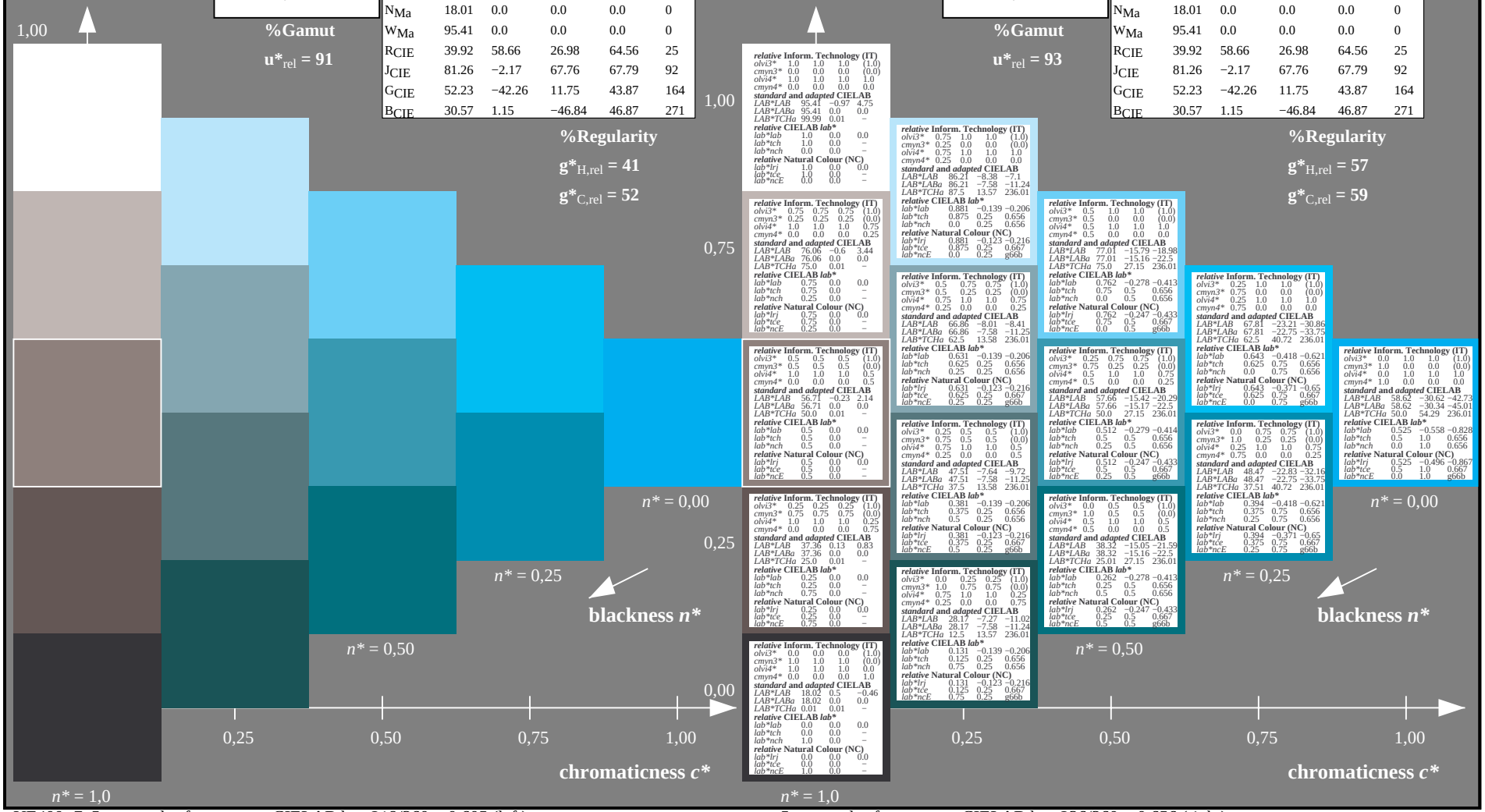
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



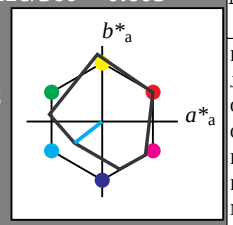
UE400−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 218/360 = 0.605*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

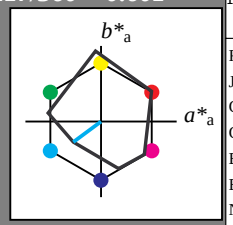
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 217/360 = 0.601*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

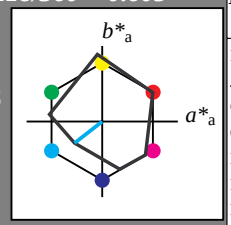
UE400−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 218/360 = 0.605*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

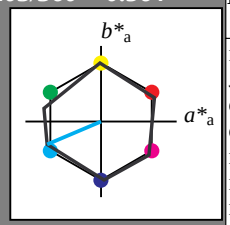
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

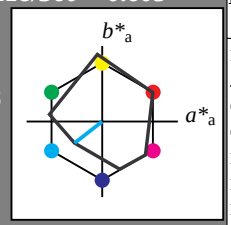
UE400−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

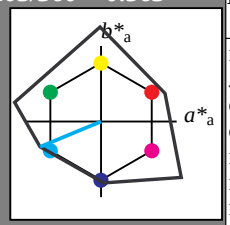
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

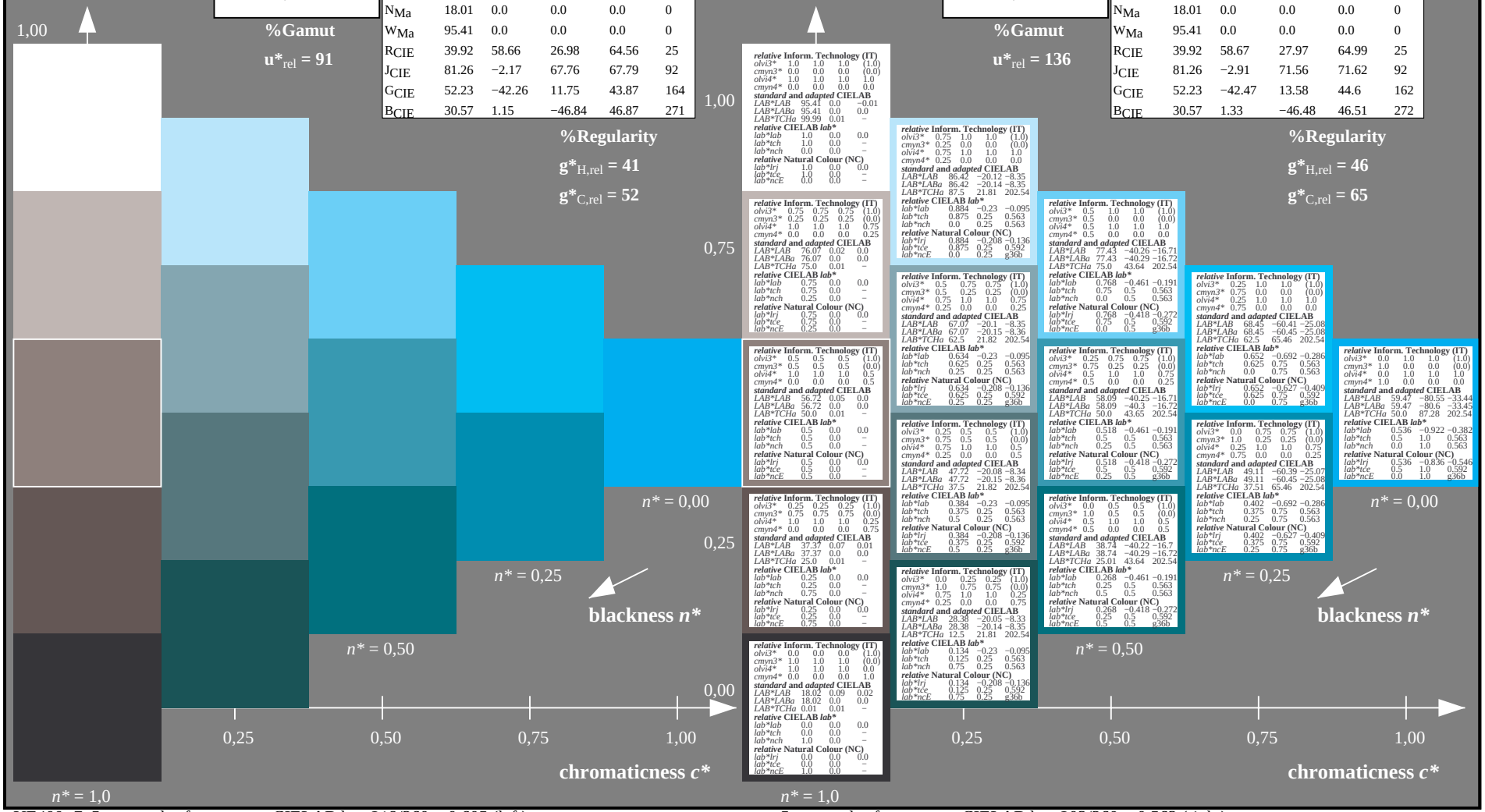
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



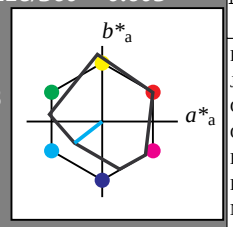
UE400−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 218/360 = 0.605*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

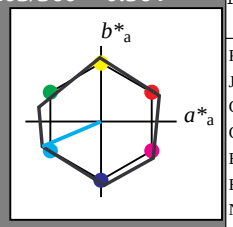
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

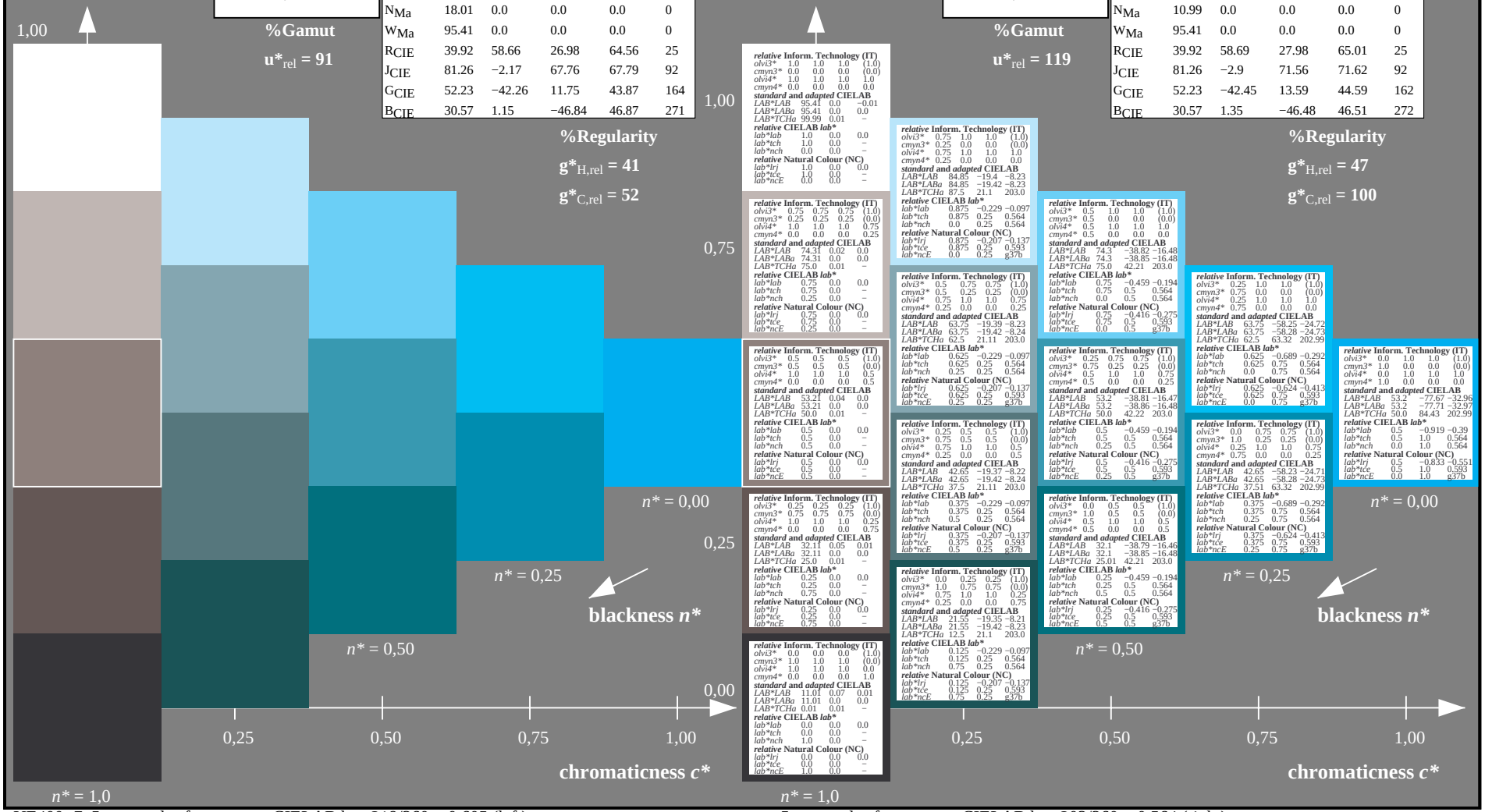
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



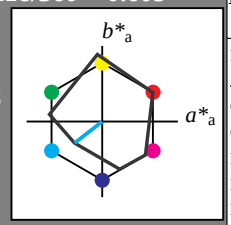
UE400−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 218/360 = 0.605**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

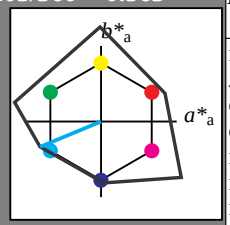
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 203/360 = 0.563**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

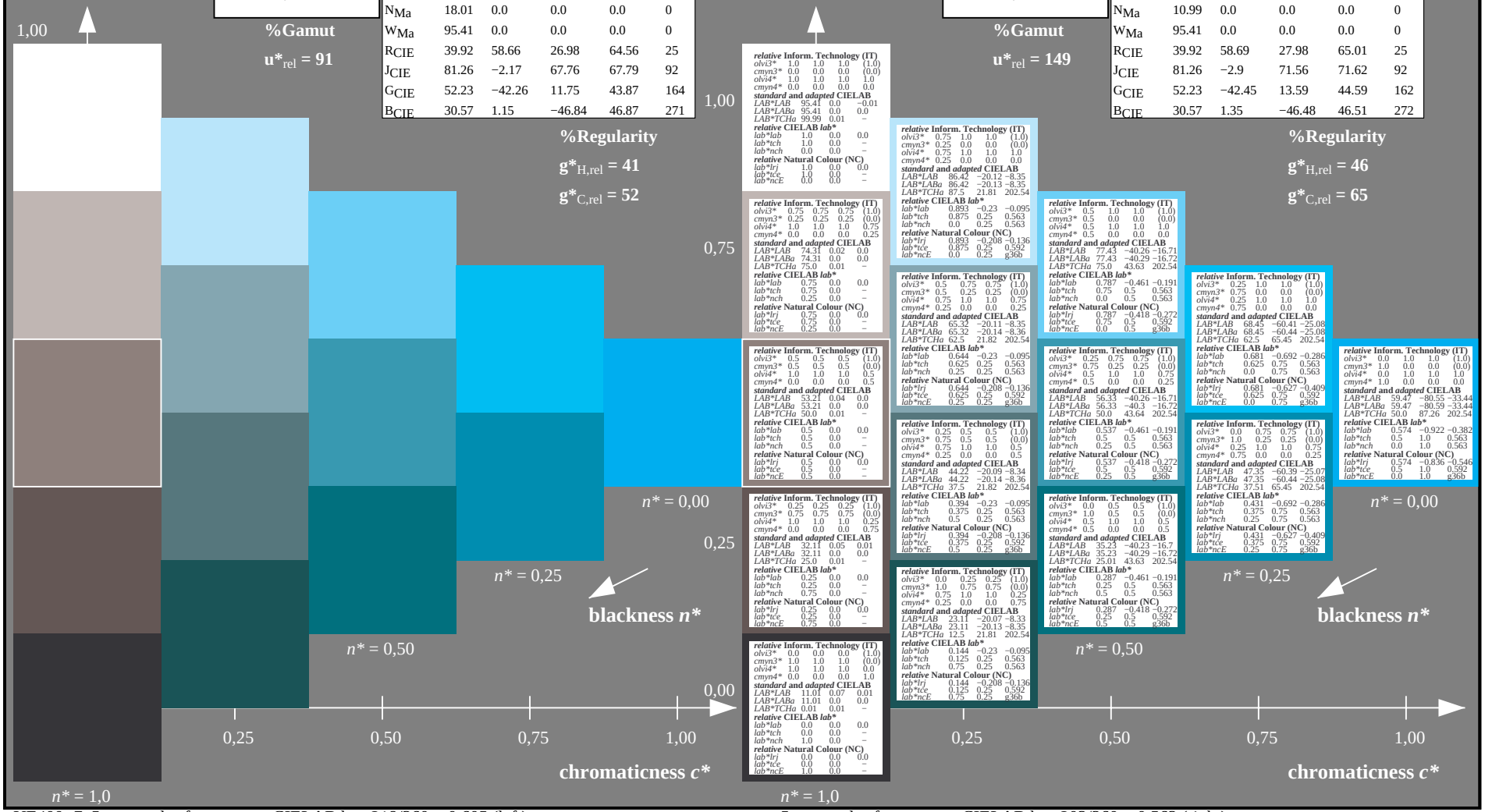
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



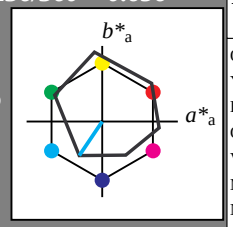
UE400−7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

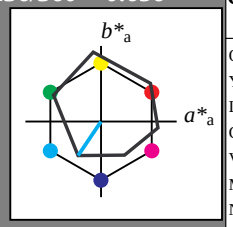
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

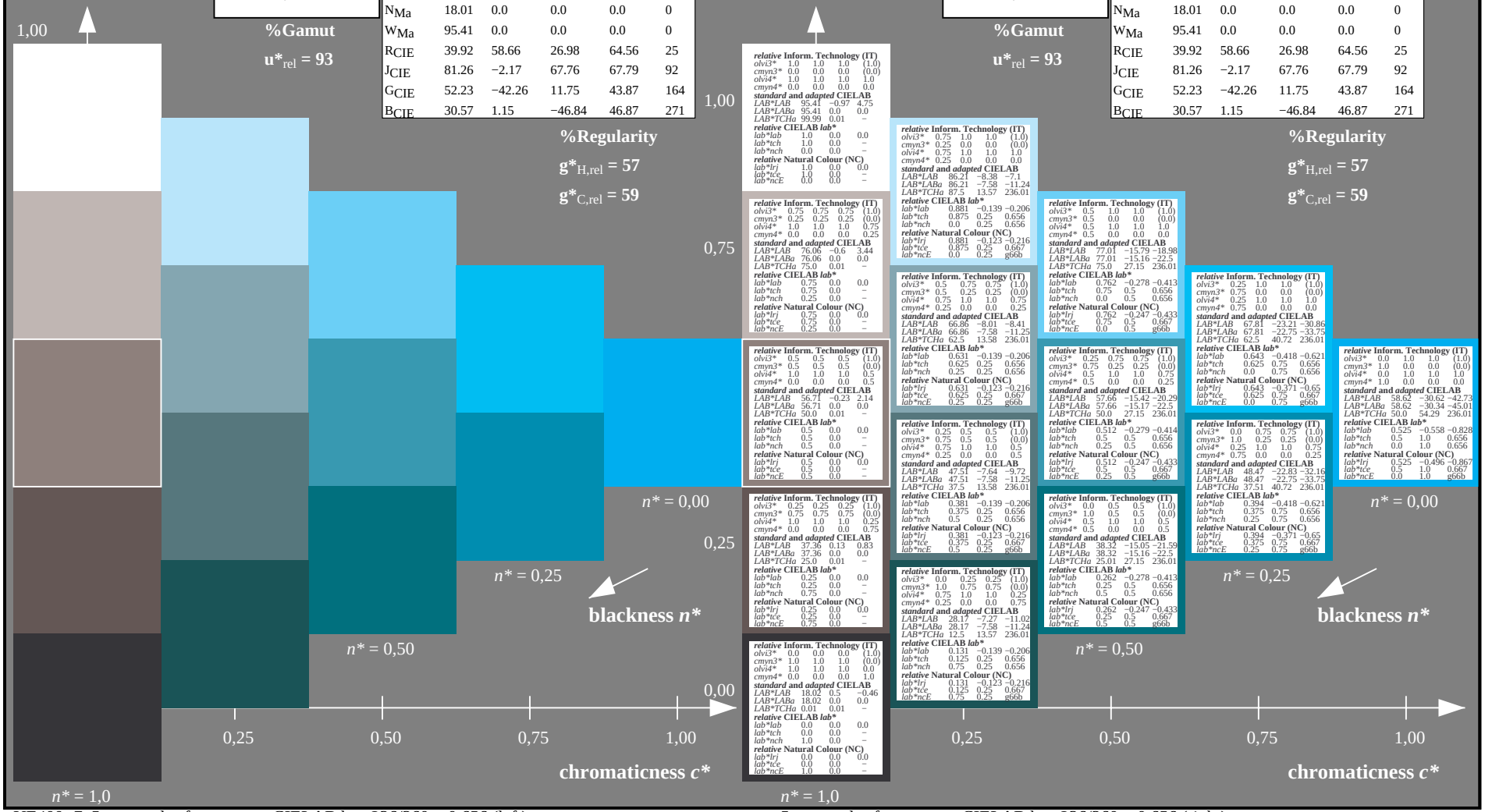
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



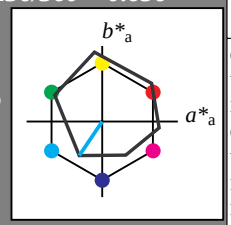
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 236/360 = 0.656**
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

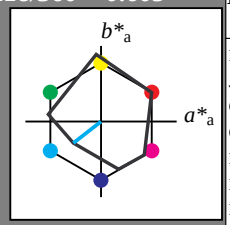
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 218/360 = 0.605**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

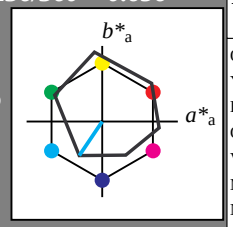
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 236/360 = 0.656*
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

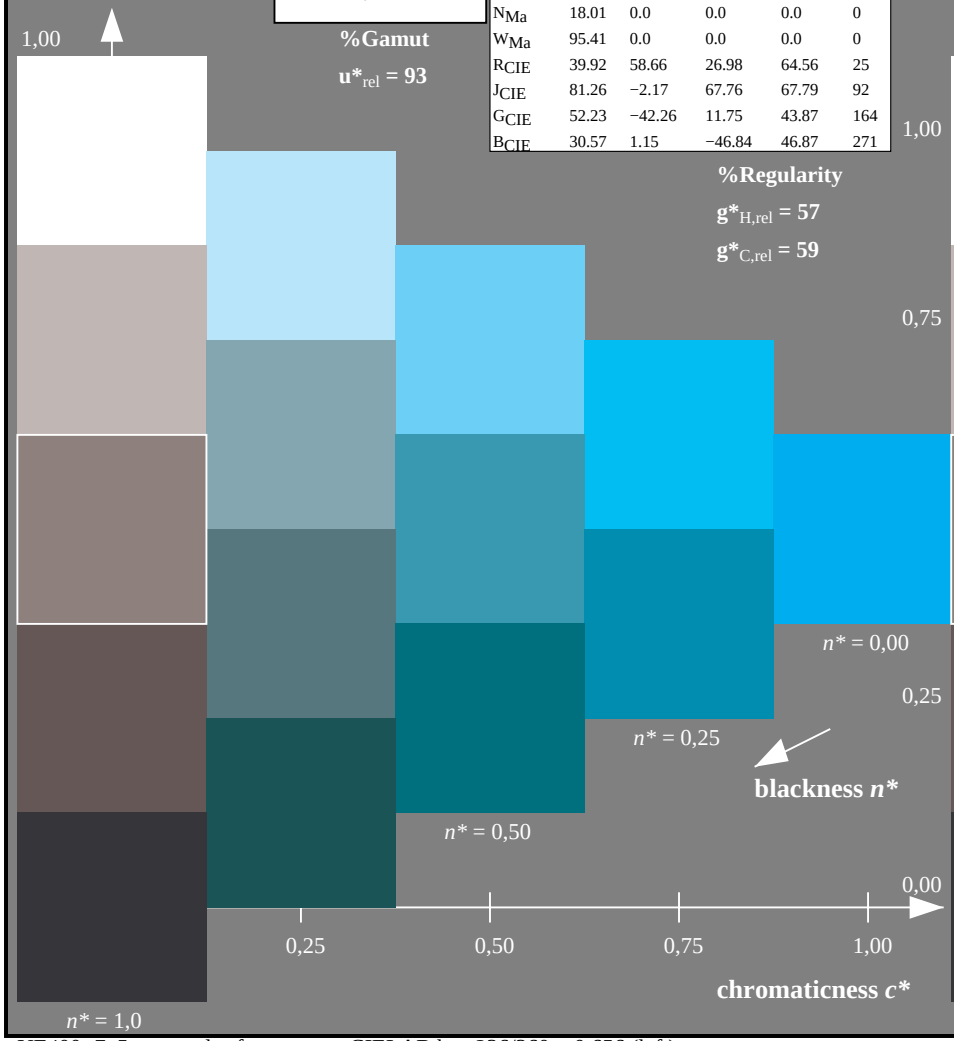
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

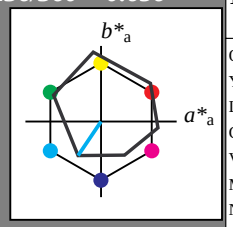


UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 236/360 = 0.656*
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

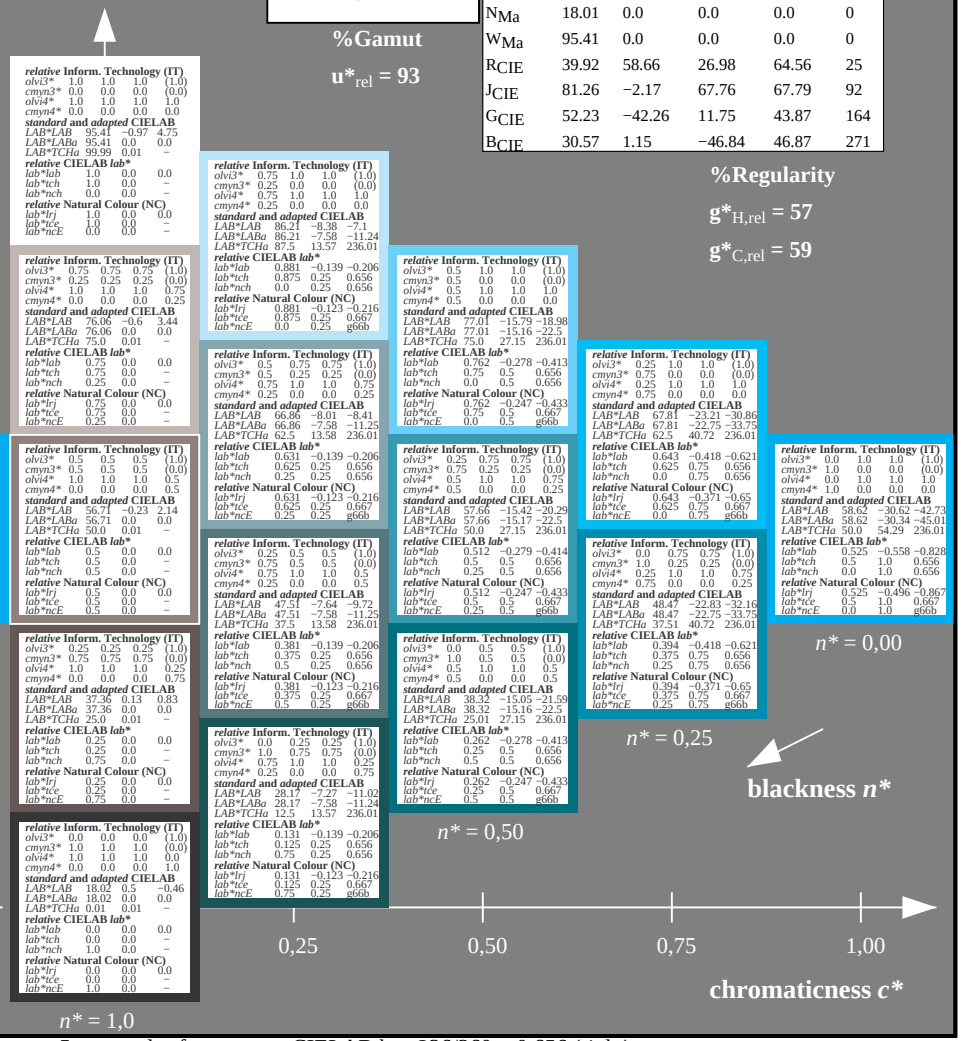
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

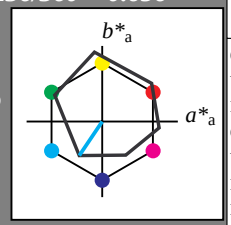


5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System TRS18
for hue *h = lab*h = 236/360 = 0.656**
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

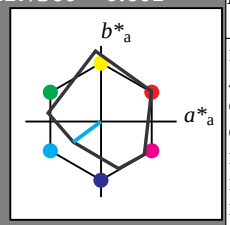
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System MRS18a
for hue *h = lab*h = 217/360 = 0.601**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

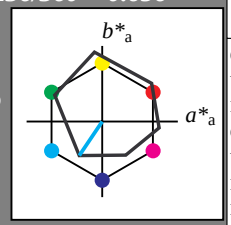
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 236/360 = 0.656*
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

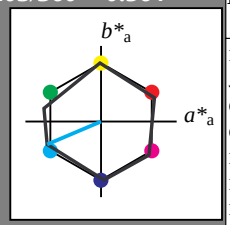
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

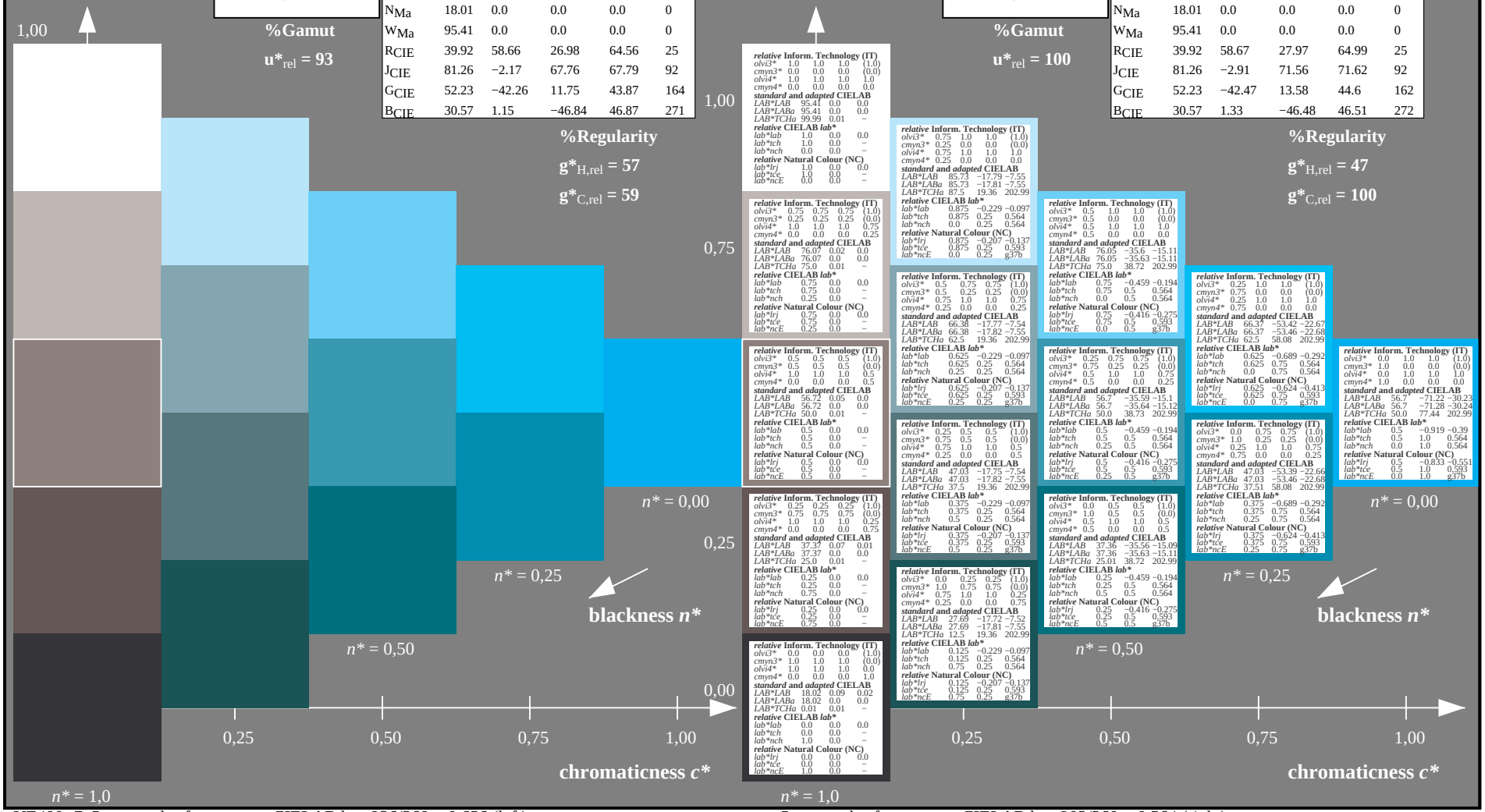
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



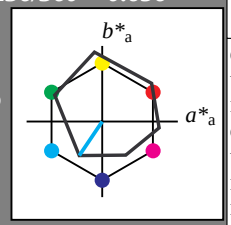
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

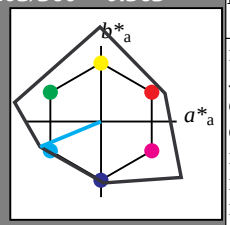
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

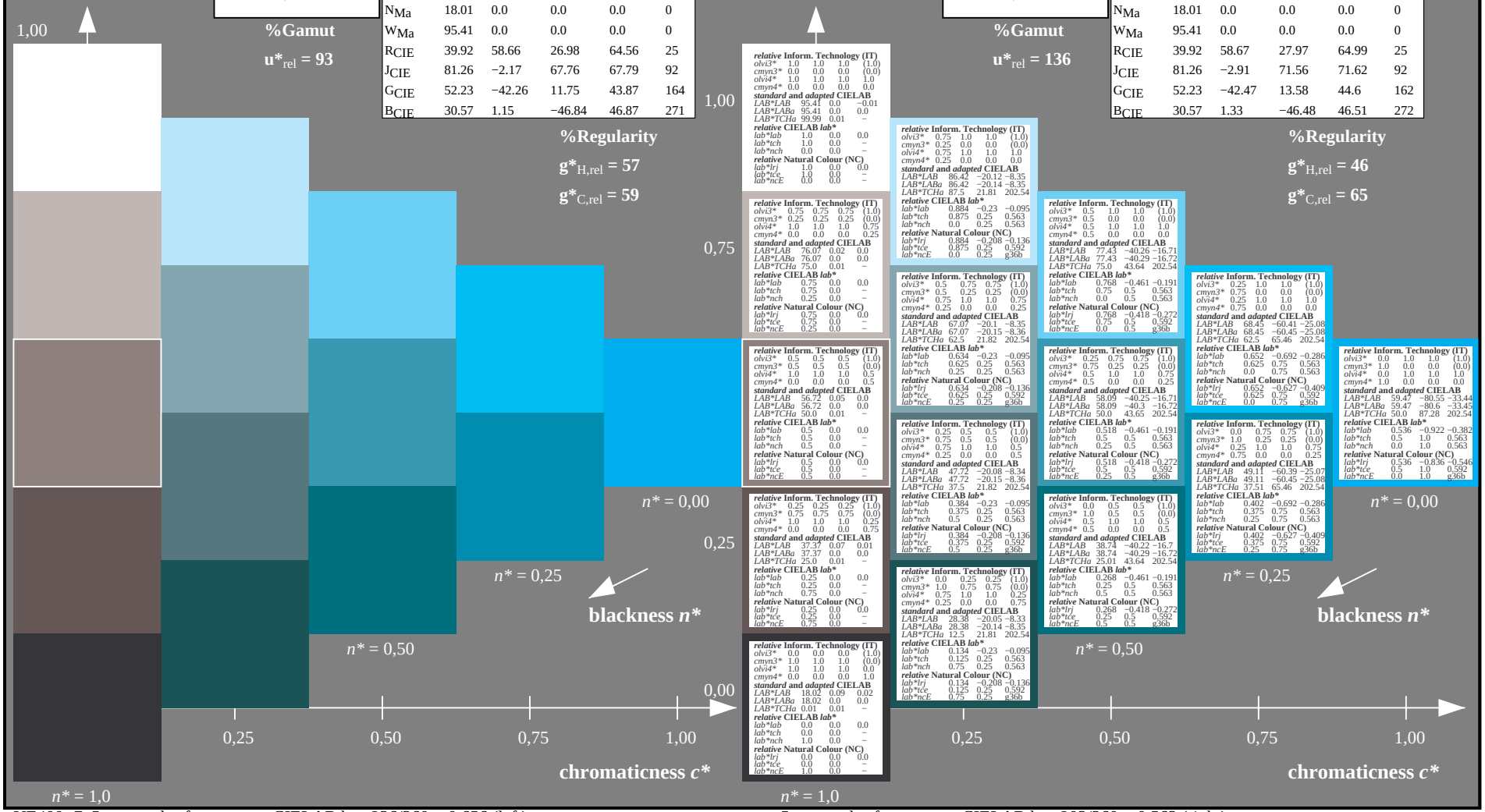
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



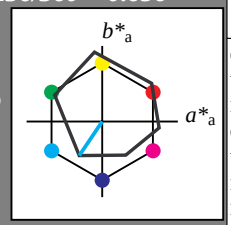
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 236/360 = 0.656*
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

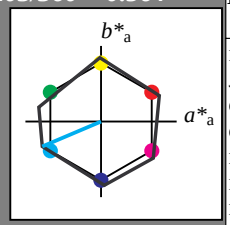
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

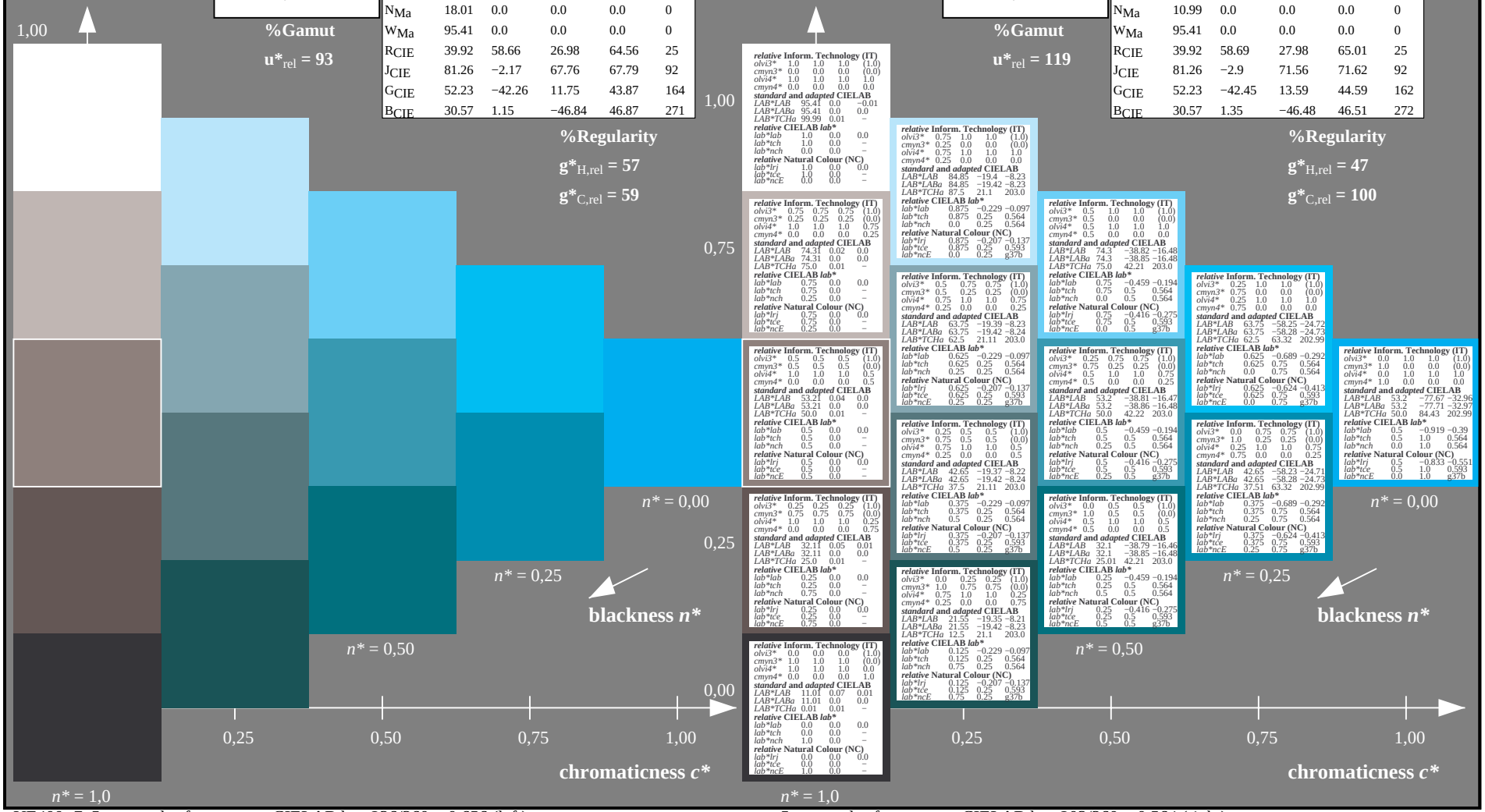
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



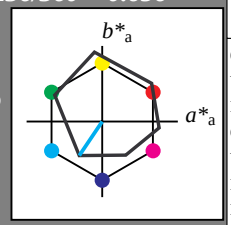
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

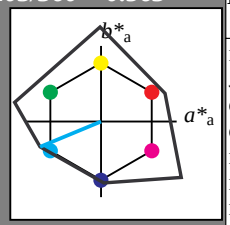
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

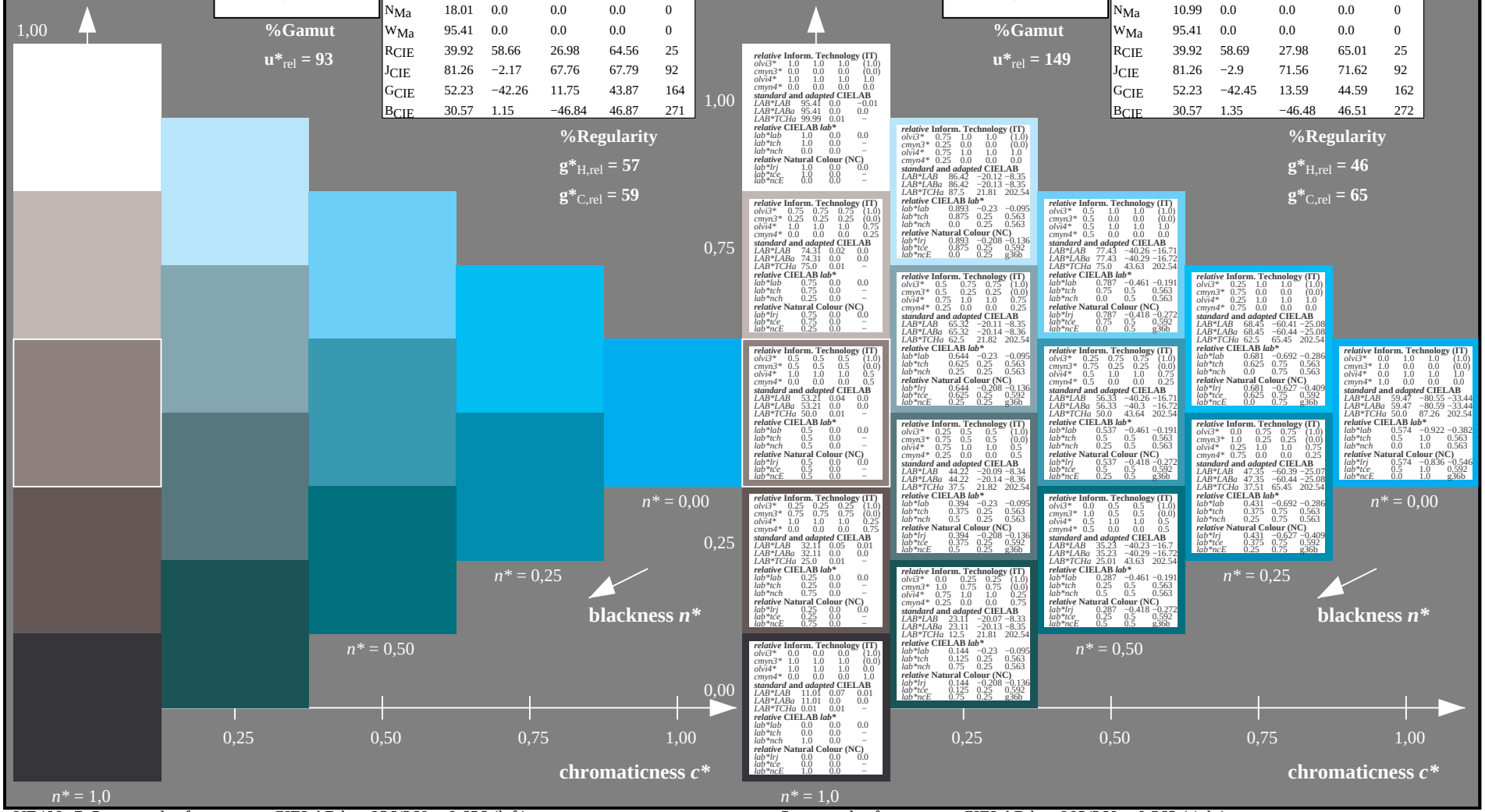
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



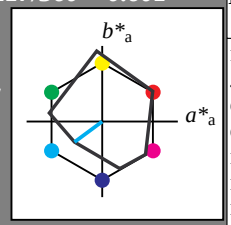
UE400−7, 5 step scales for constant CIELAB hue 236/360 = 0.656 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

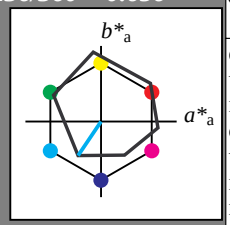
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

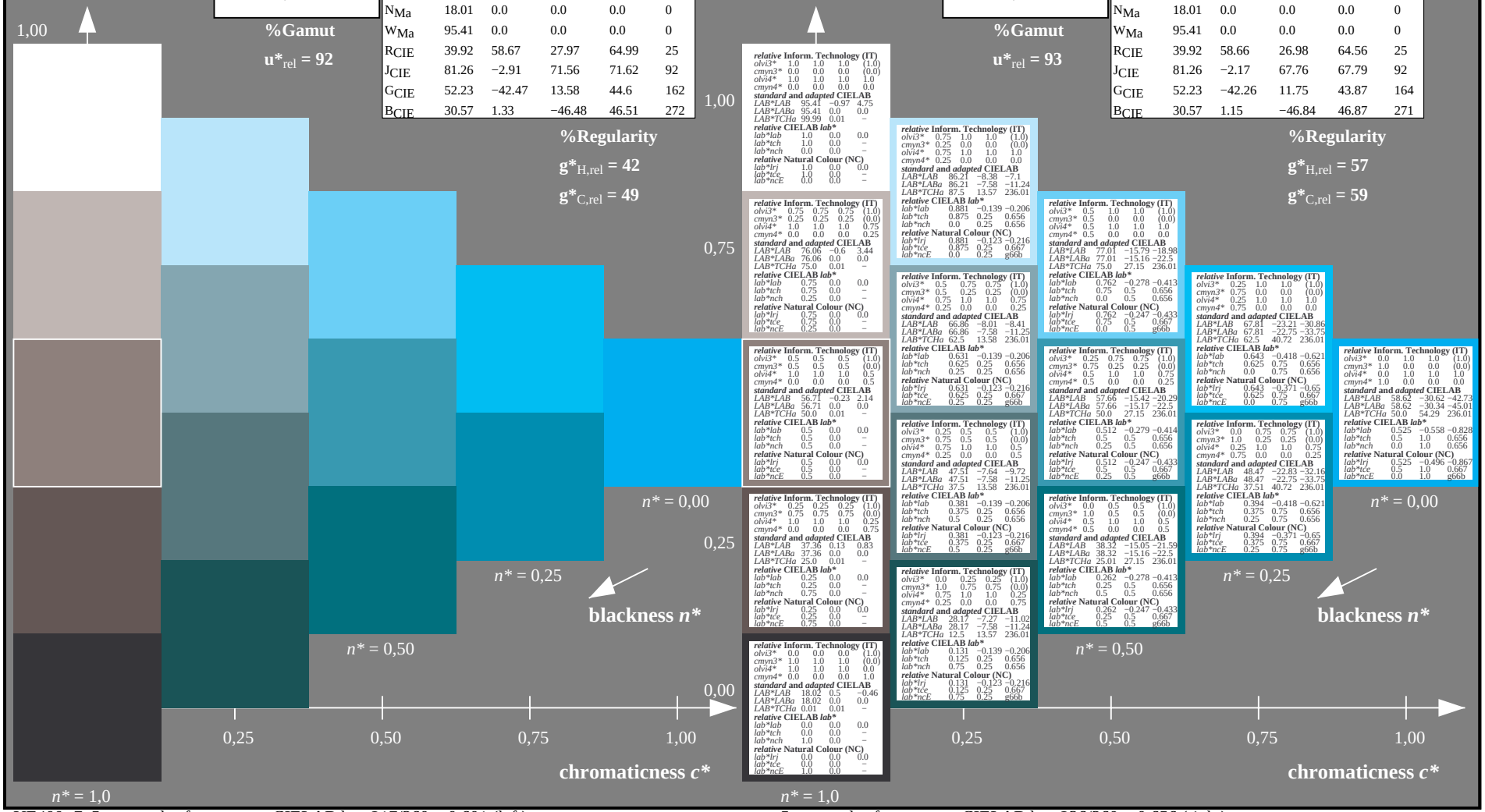
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



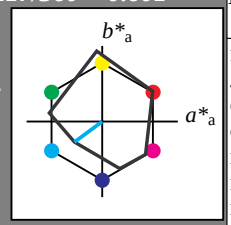
UE400−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h = lab*h = 217/360 = 0.601**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

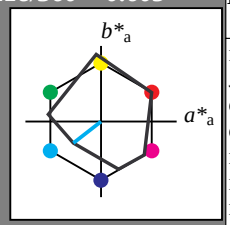
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System MRS18
for hue *h = lab*h = 218/360 = 0.605**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

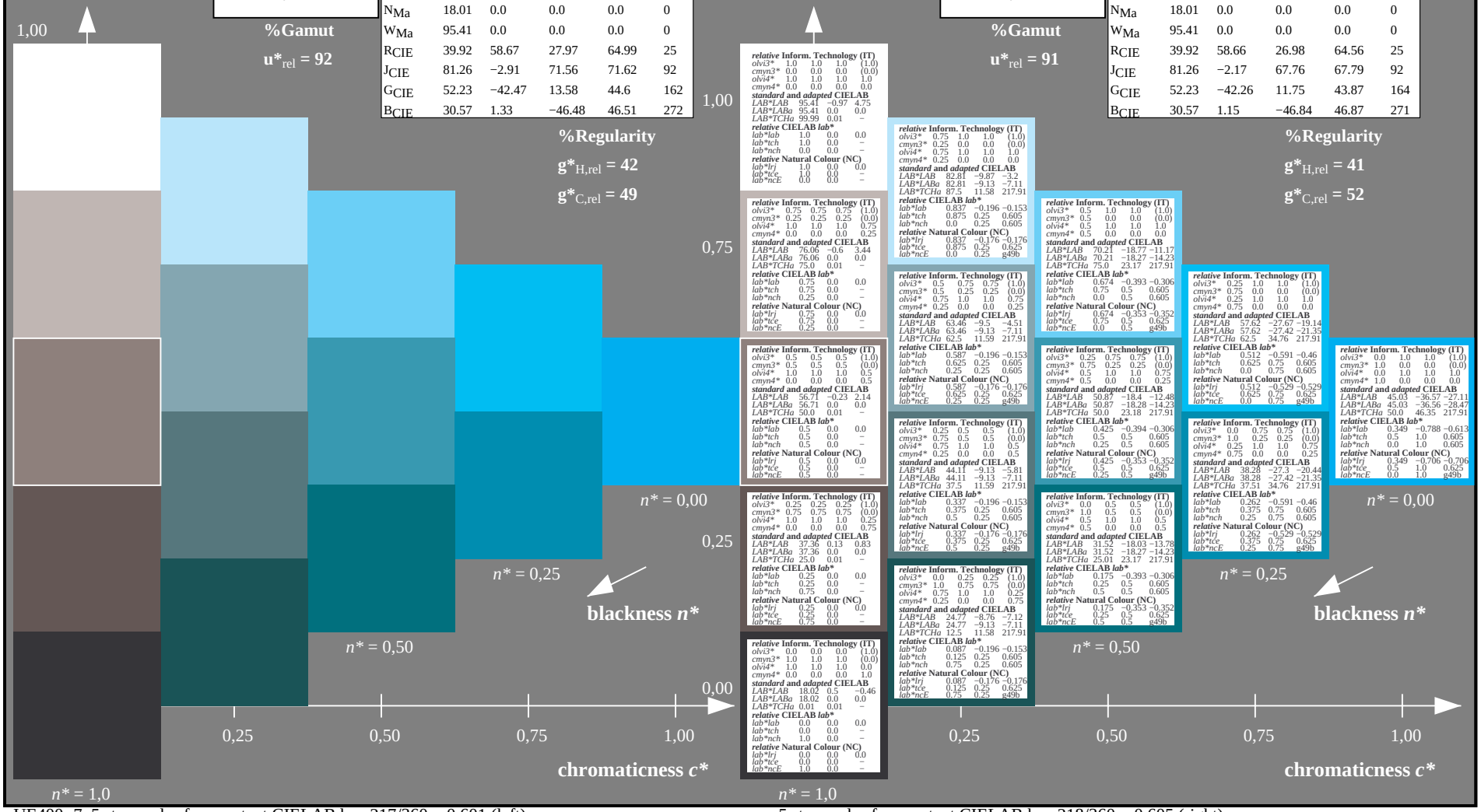
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



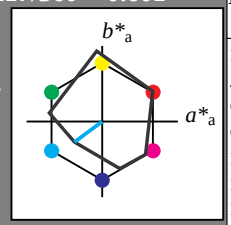
UE400−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

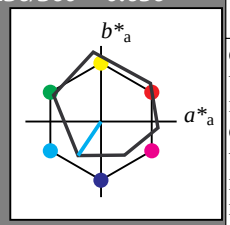
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

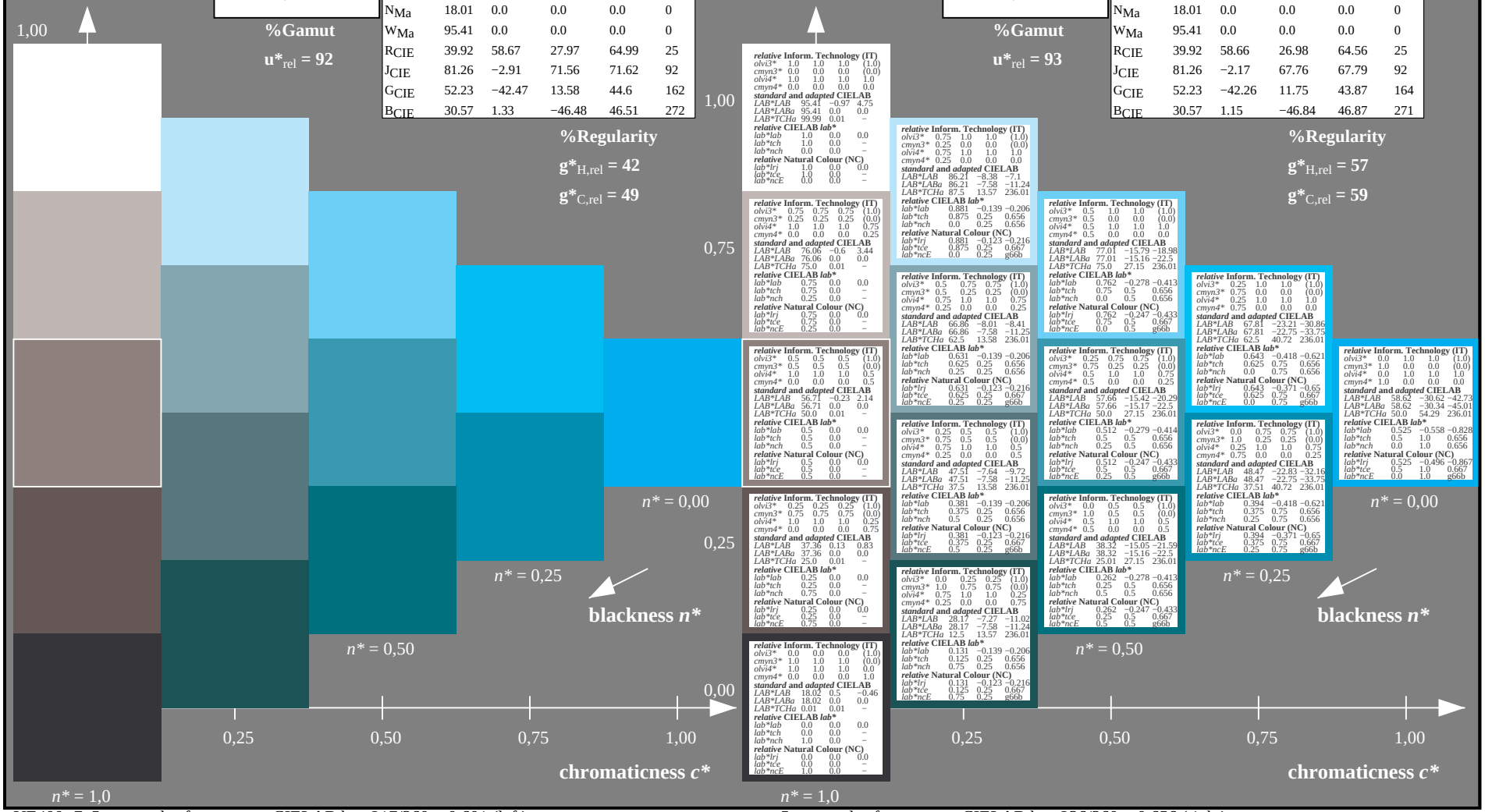
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



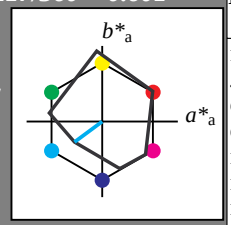
UE400−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

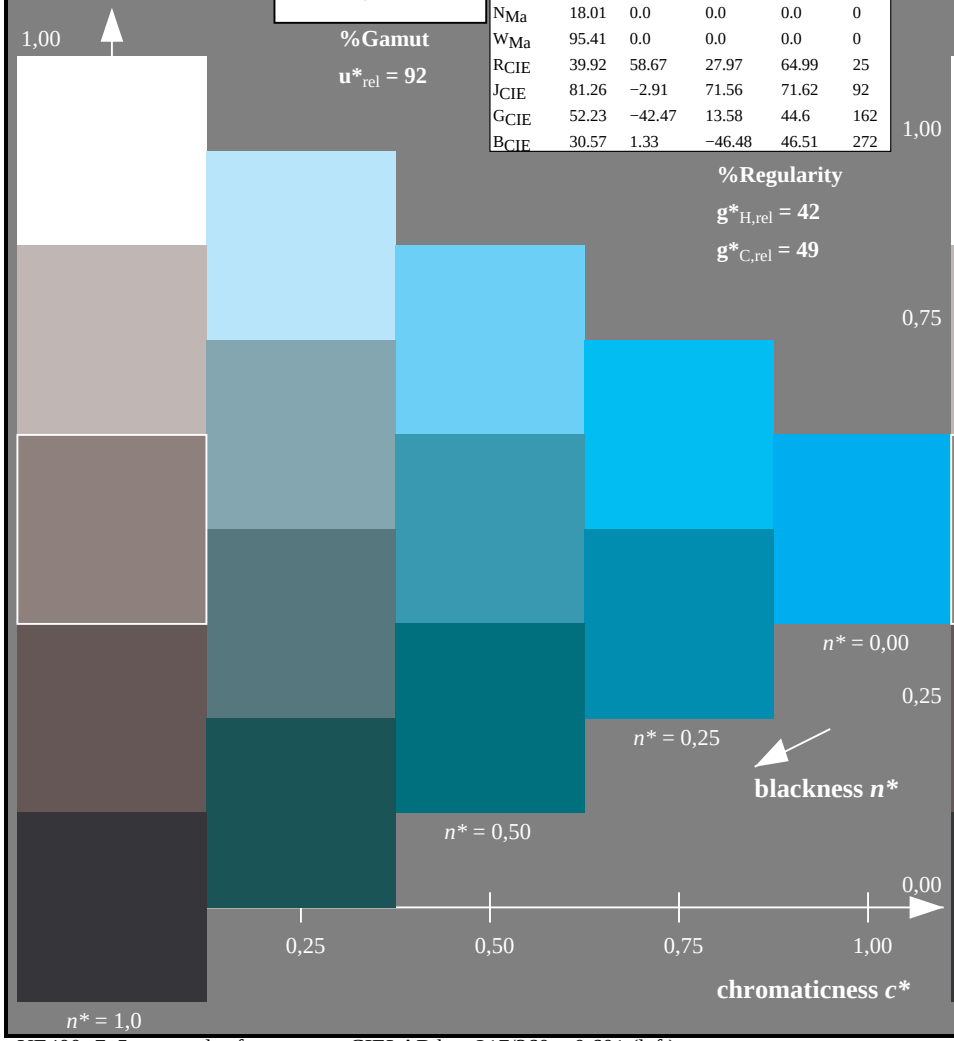
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

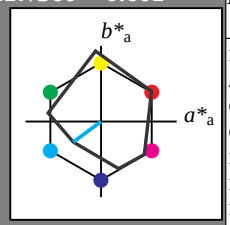
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

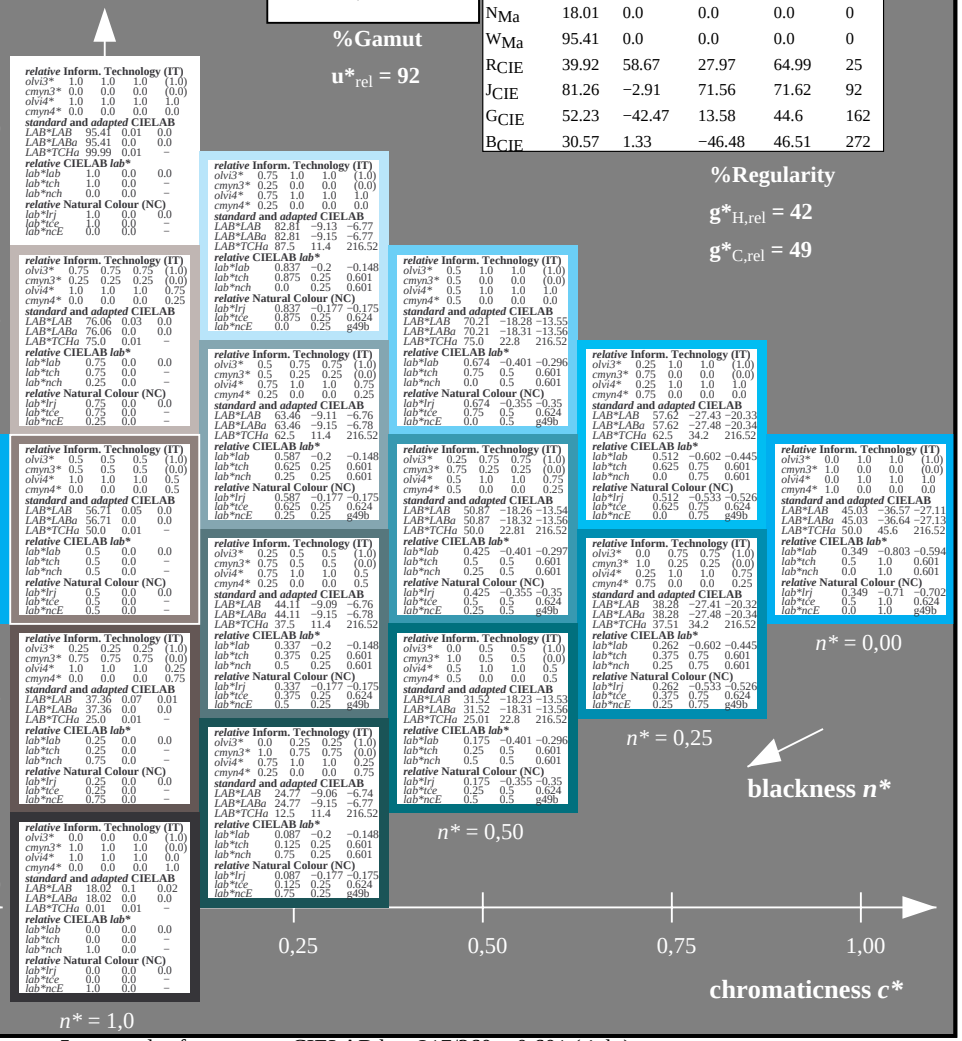
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



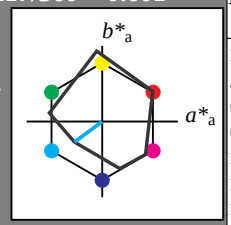
UE400−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h = lab*h = 217/360 = 0.601**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

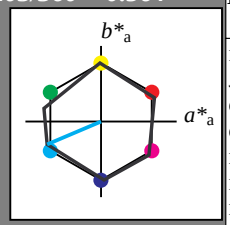
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS18
for hue *h = lab*h = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

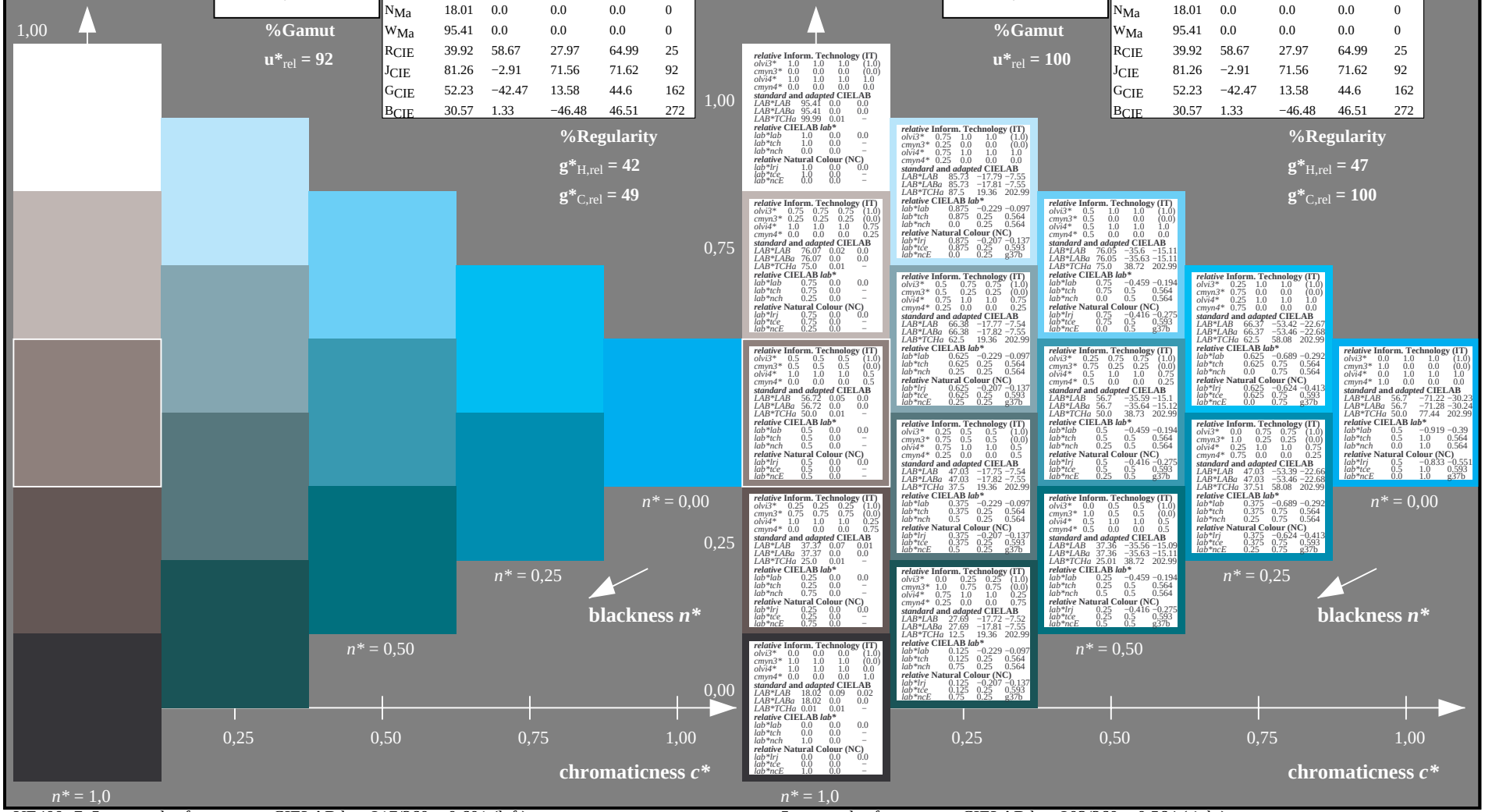
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



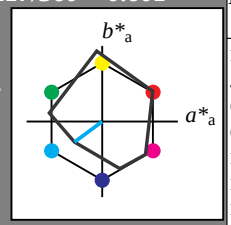
UE400−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h = lab*h = 217/360 = 0.601**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

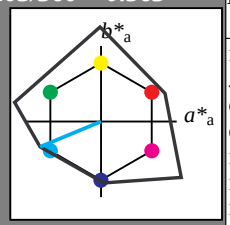
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS18
for hue *h = lab*h = 203/360 = 0.563**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

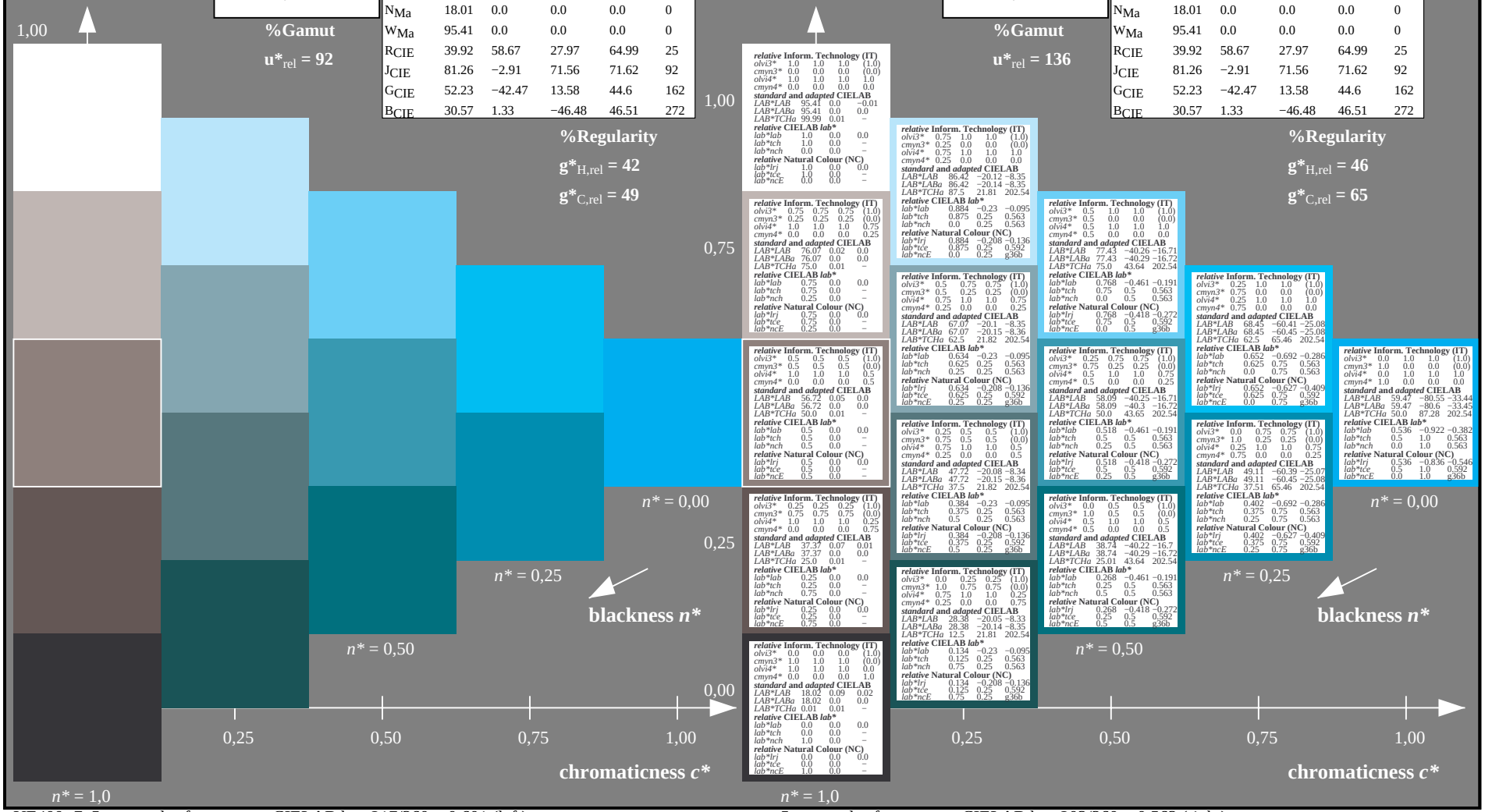
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



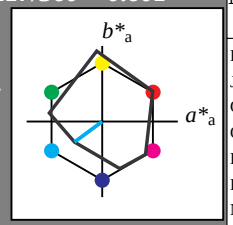
UE400−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

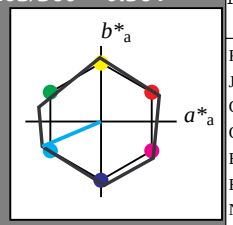
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

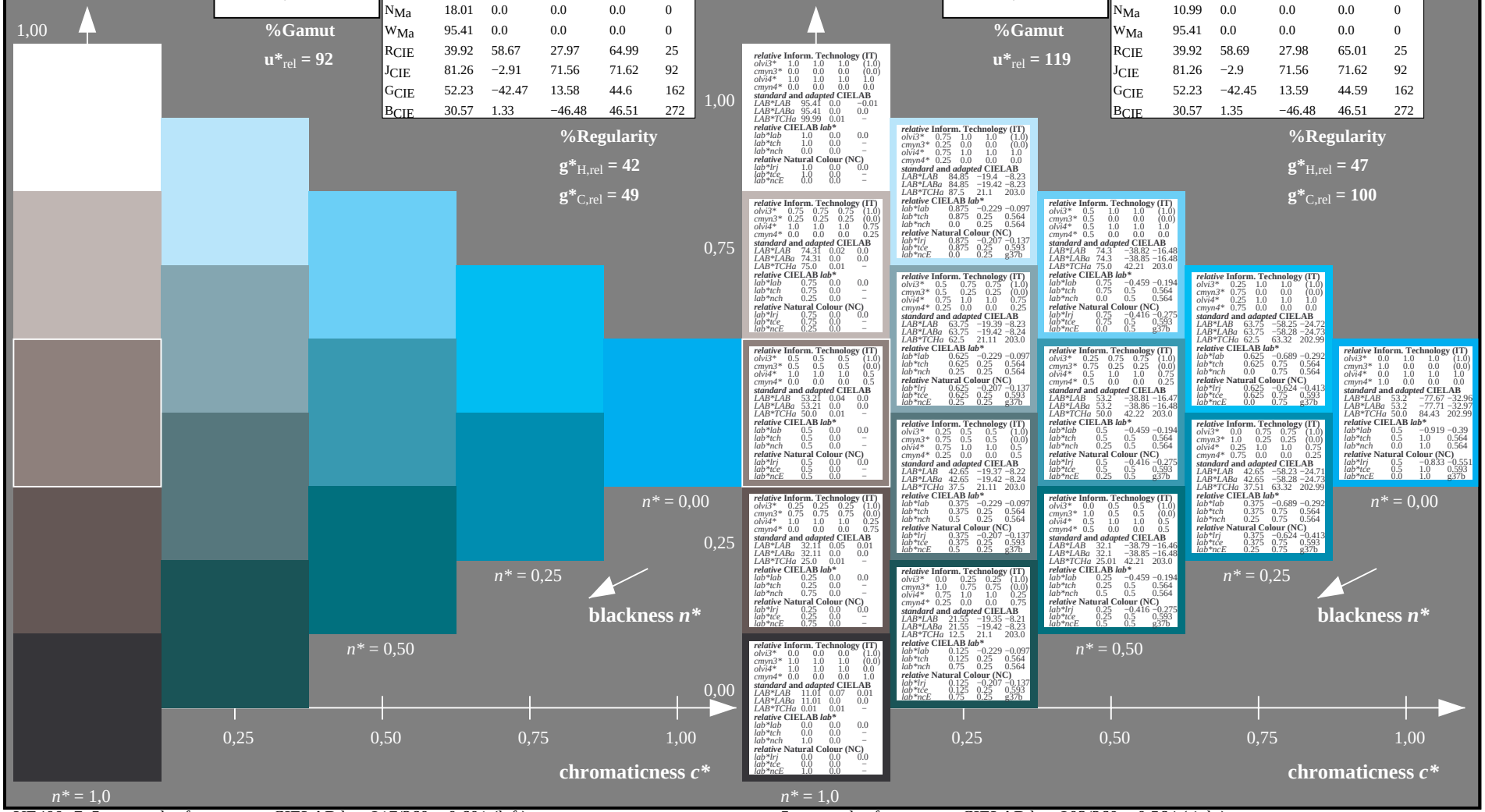
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



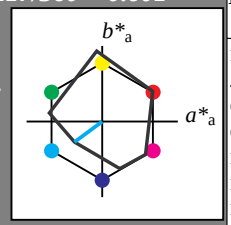
UE400−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h = *lab*h* = 217/360 = 0.601**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u*rel = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

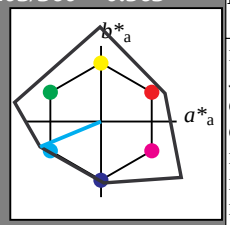
g*H,rel = 42

g*C,rel = 49

Output: Colorimetric Reflective System NCS11
for hue *h = *lab*h* = 203/360 = 0.563**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u*rel = 149

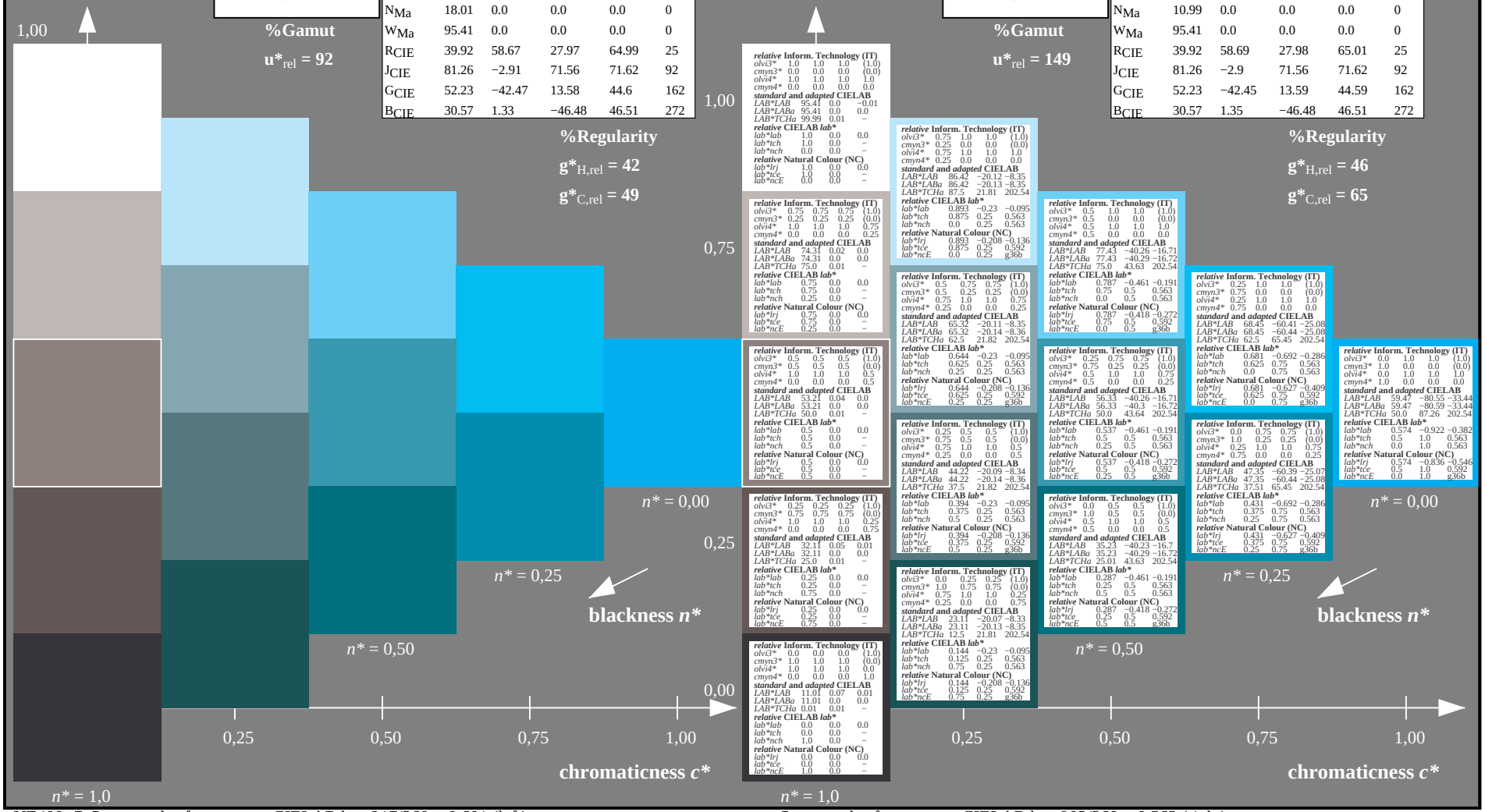
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

g*H,rel = 46

g*C,rel = 65



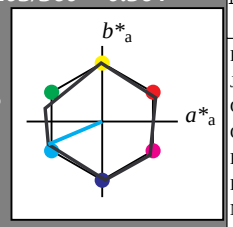
UE400−7, 5 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

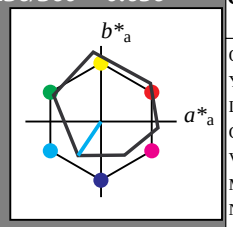
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 236/360 = 0.656*
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

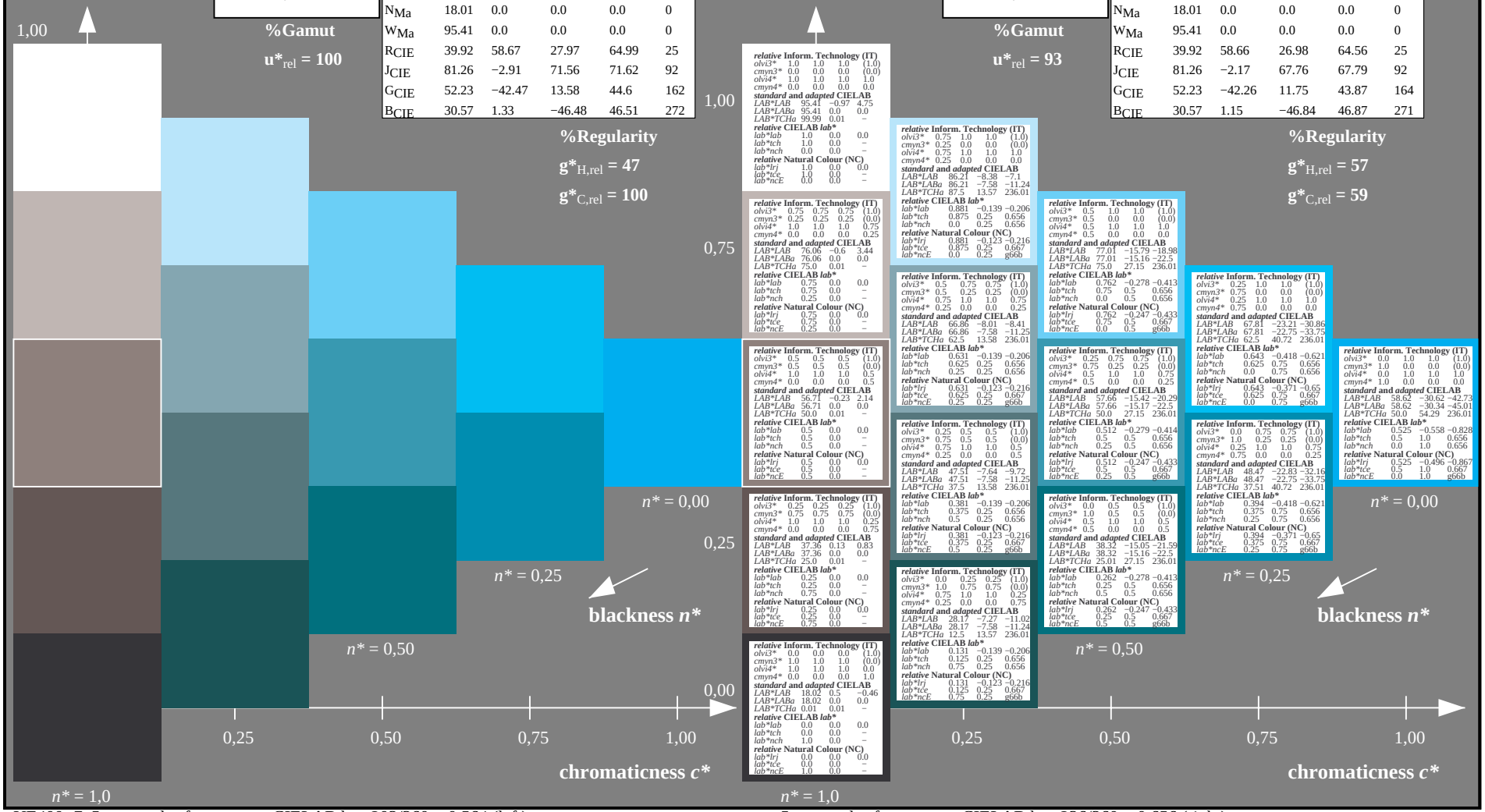
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



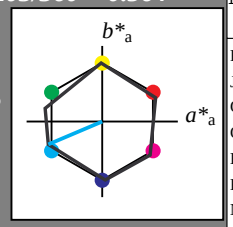
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

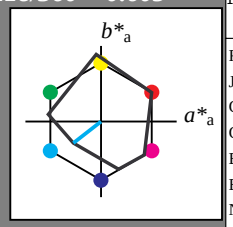
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 218/360 = 0.605*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

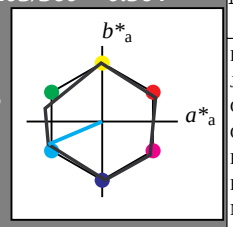
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

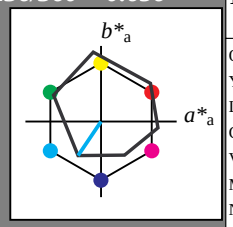
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 236/360 = 0.656*
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

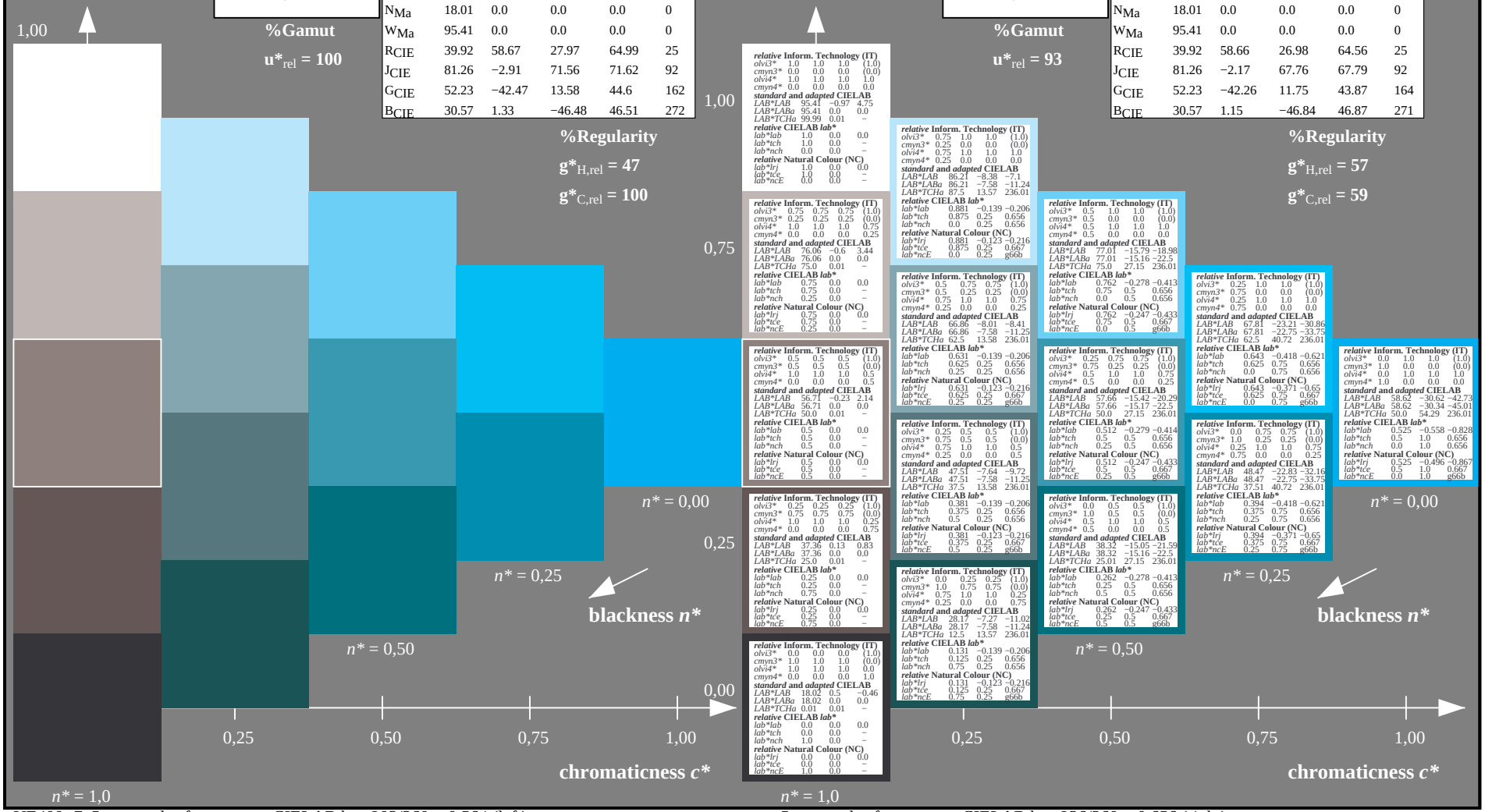
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



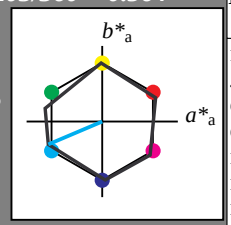
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

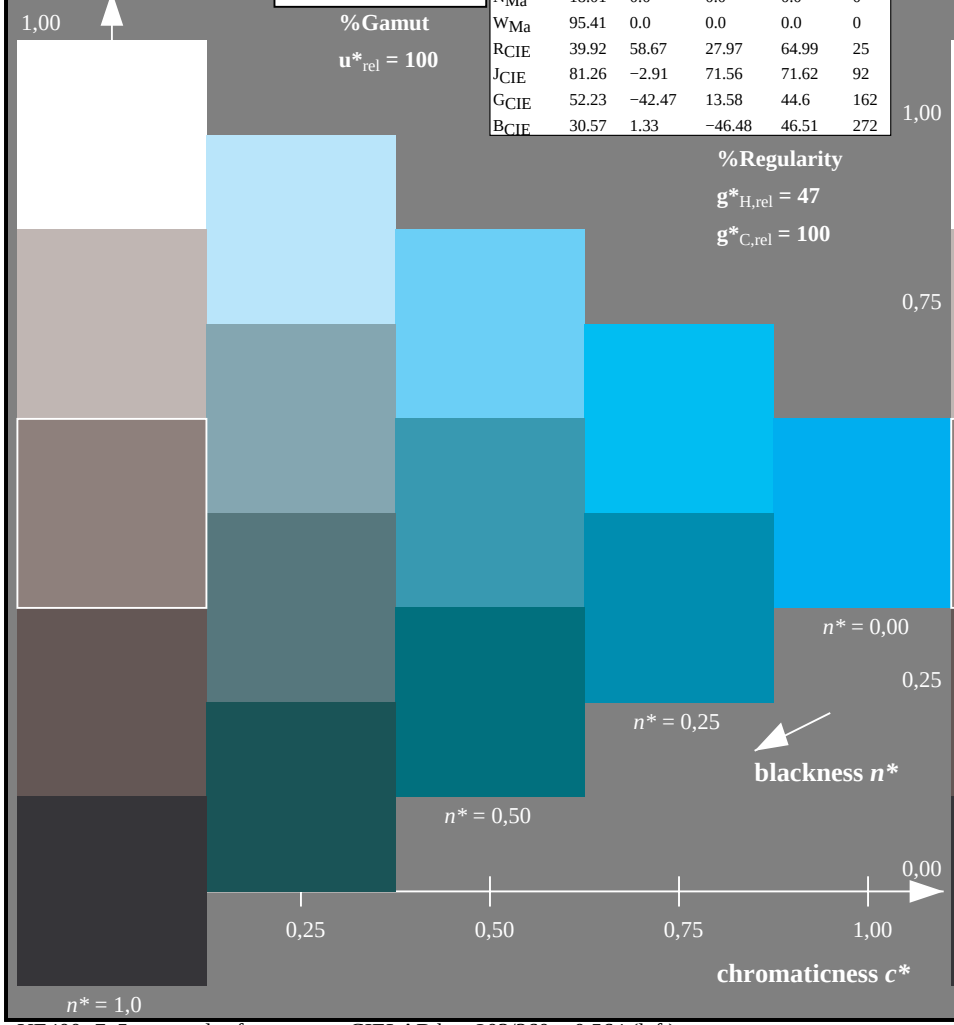
%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

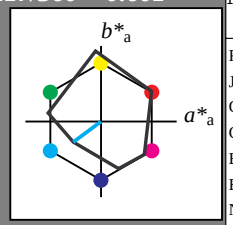
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

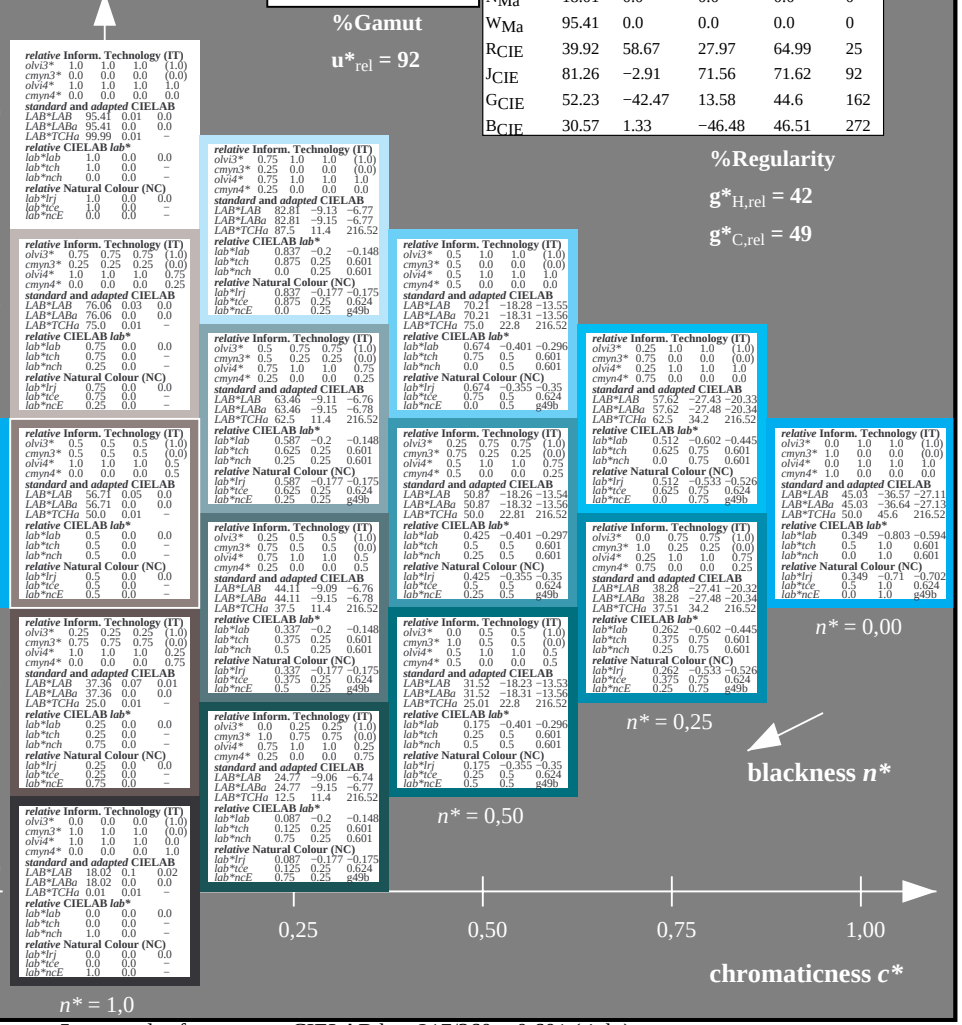
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



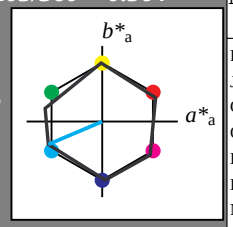
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

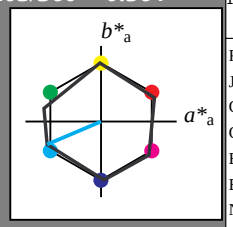
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

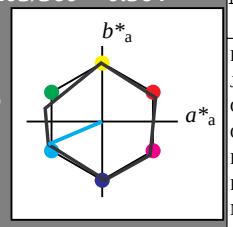
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

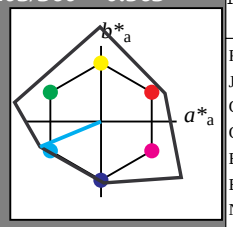
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

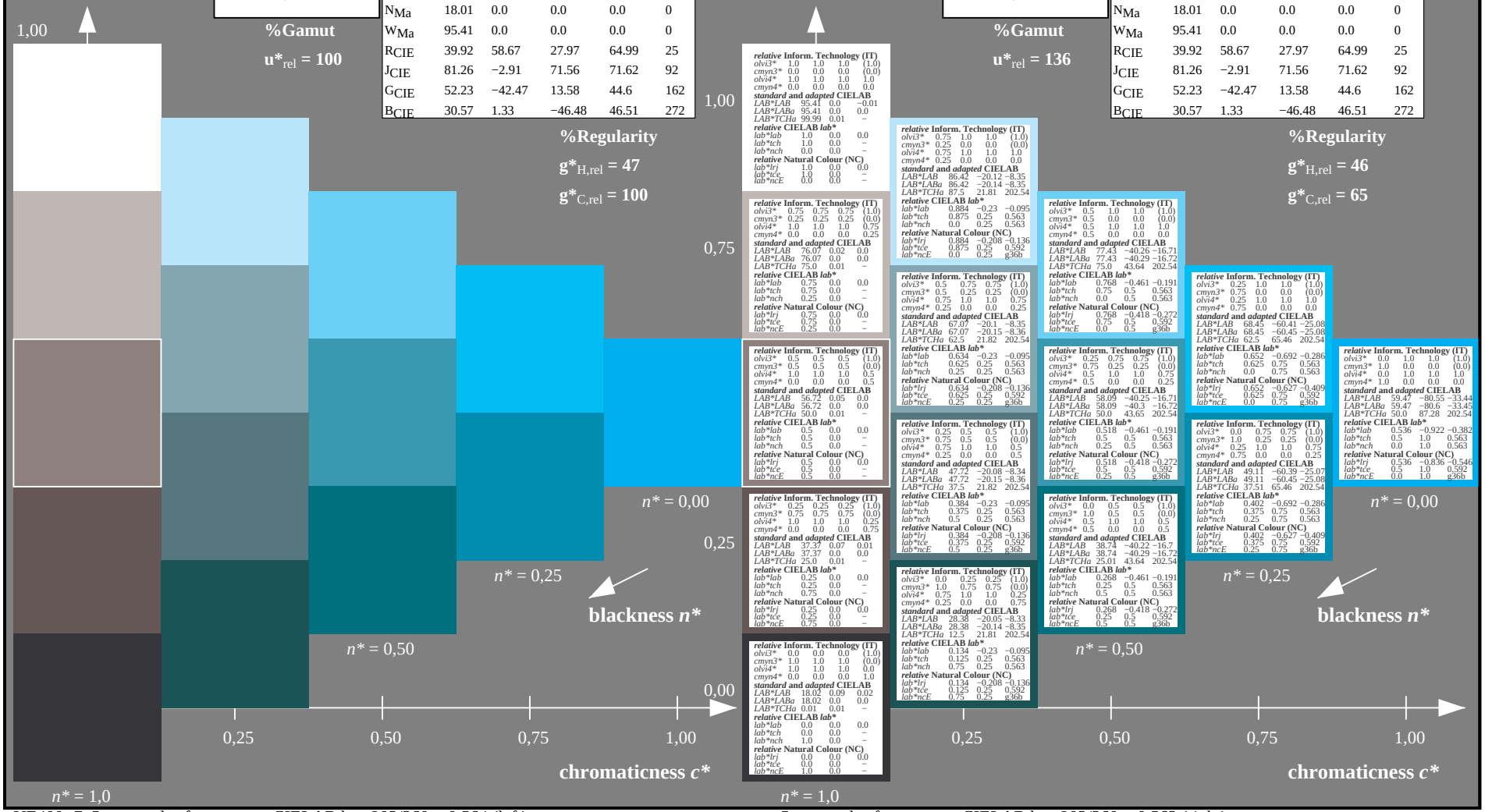
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



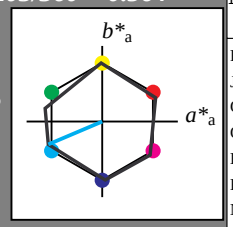
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

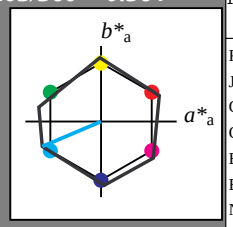
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

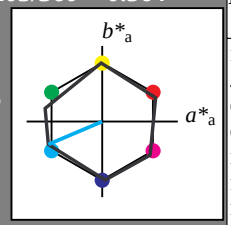
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

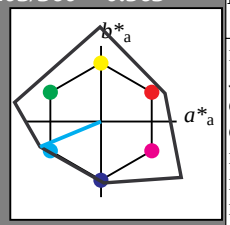
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

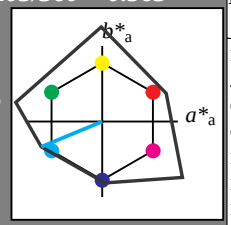
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

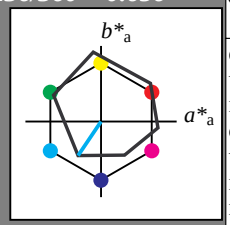
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

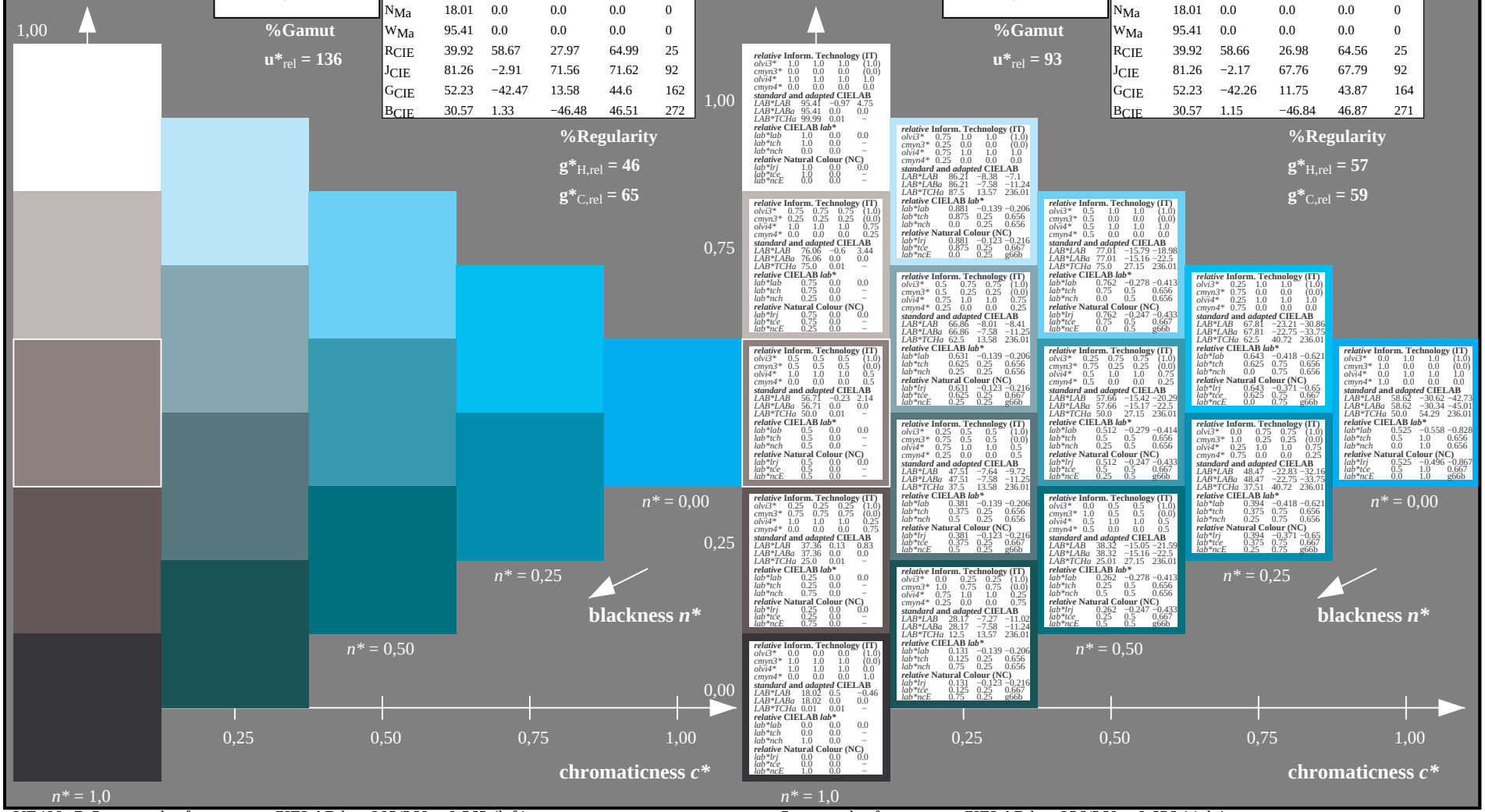
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



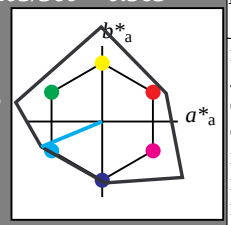
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

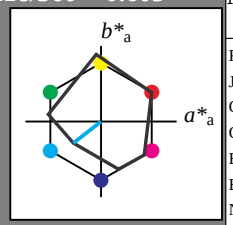
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

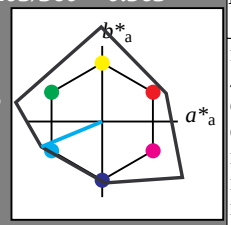
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

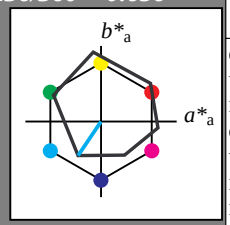
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

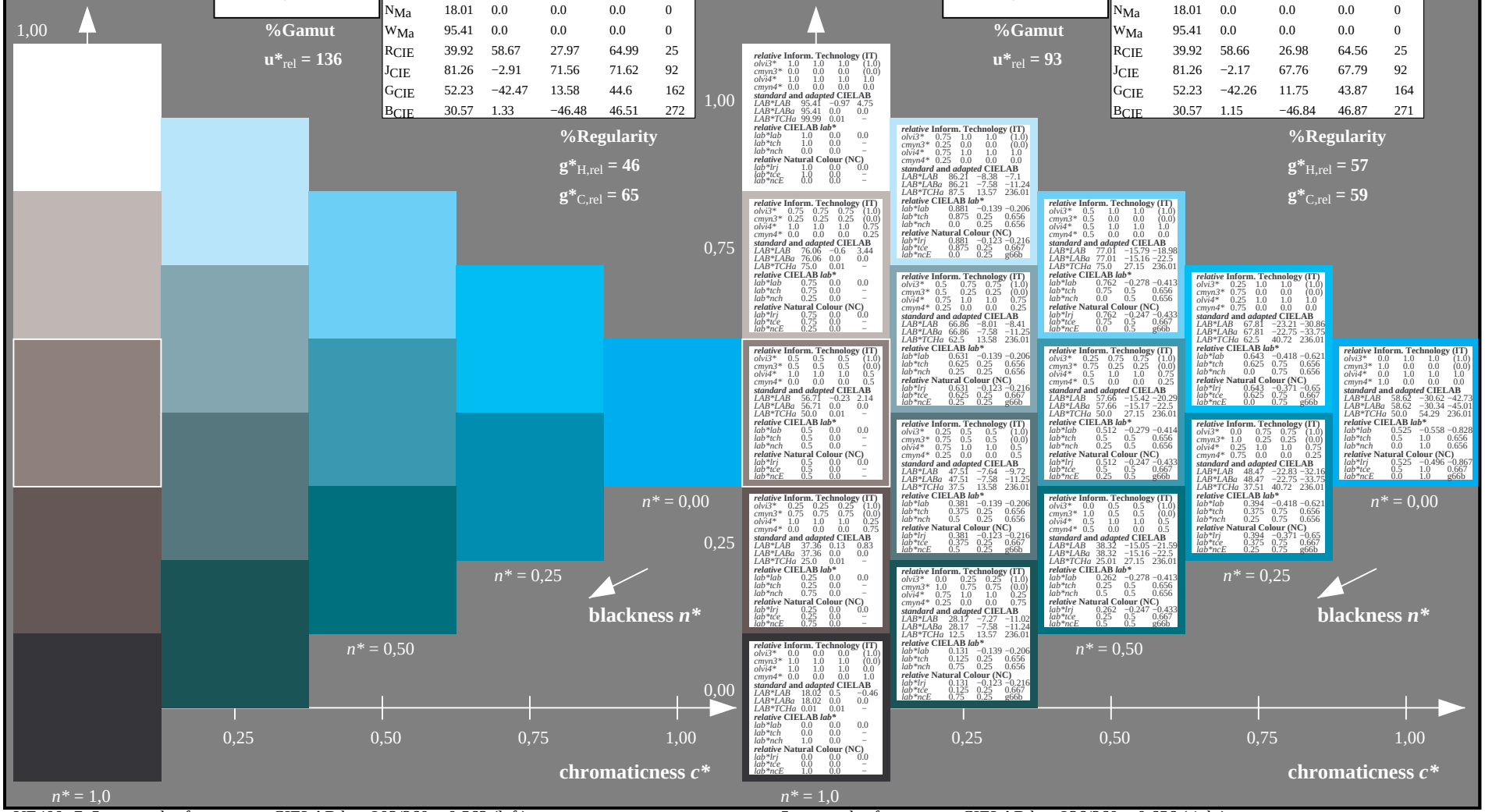
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



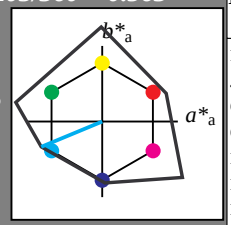
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

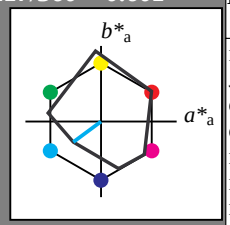
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

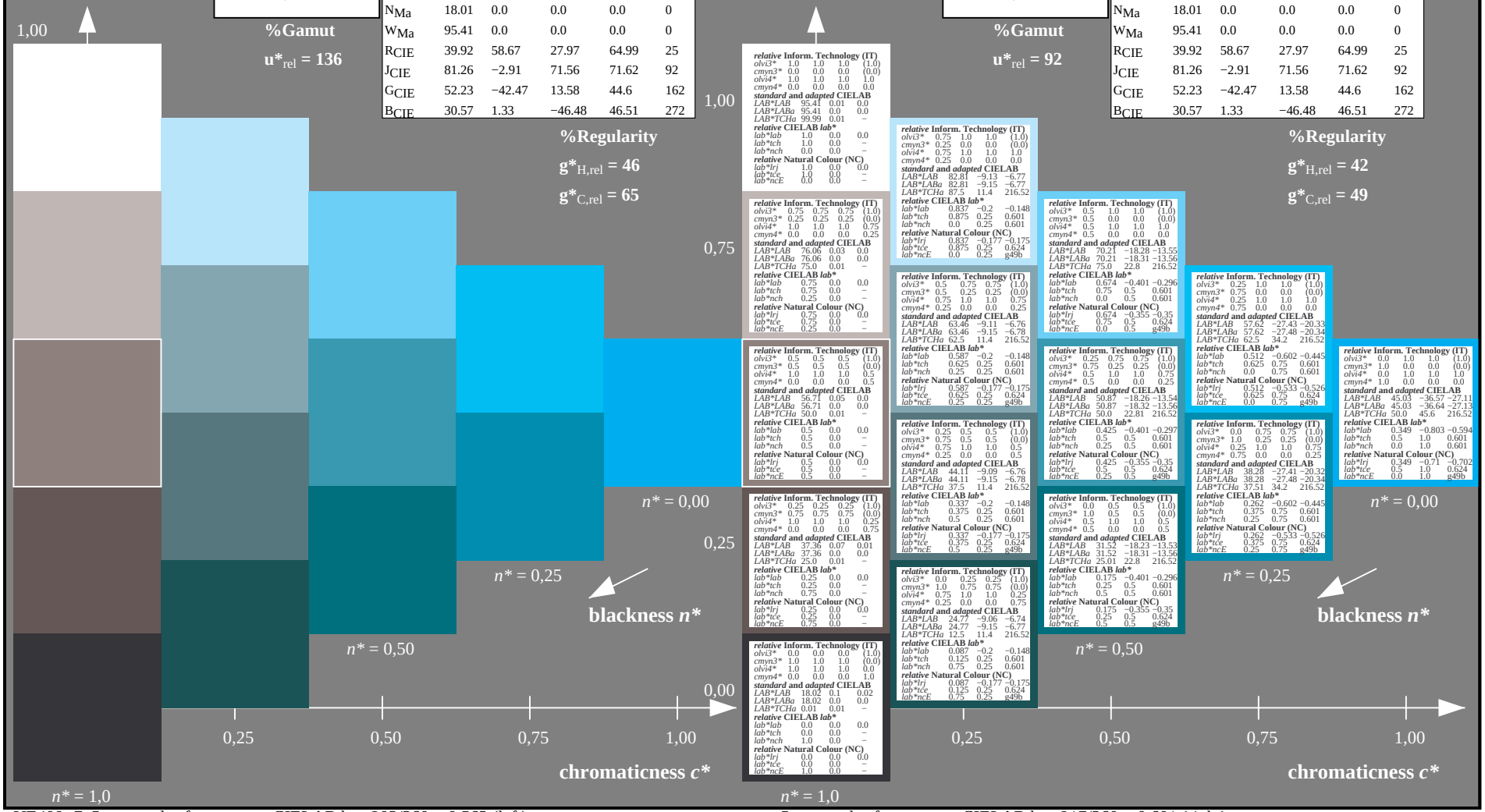
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



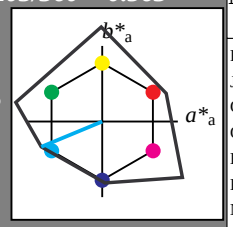
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

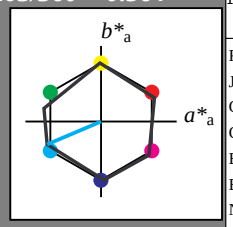
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

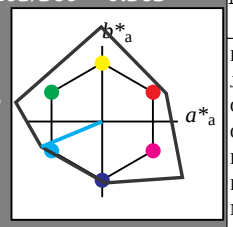
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

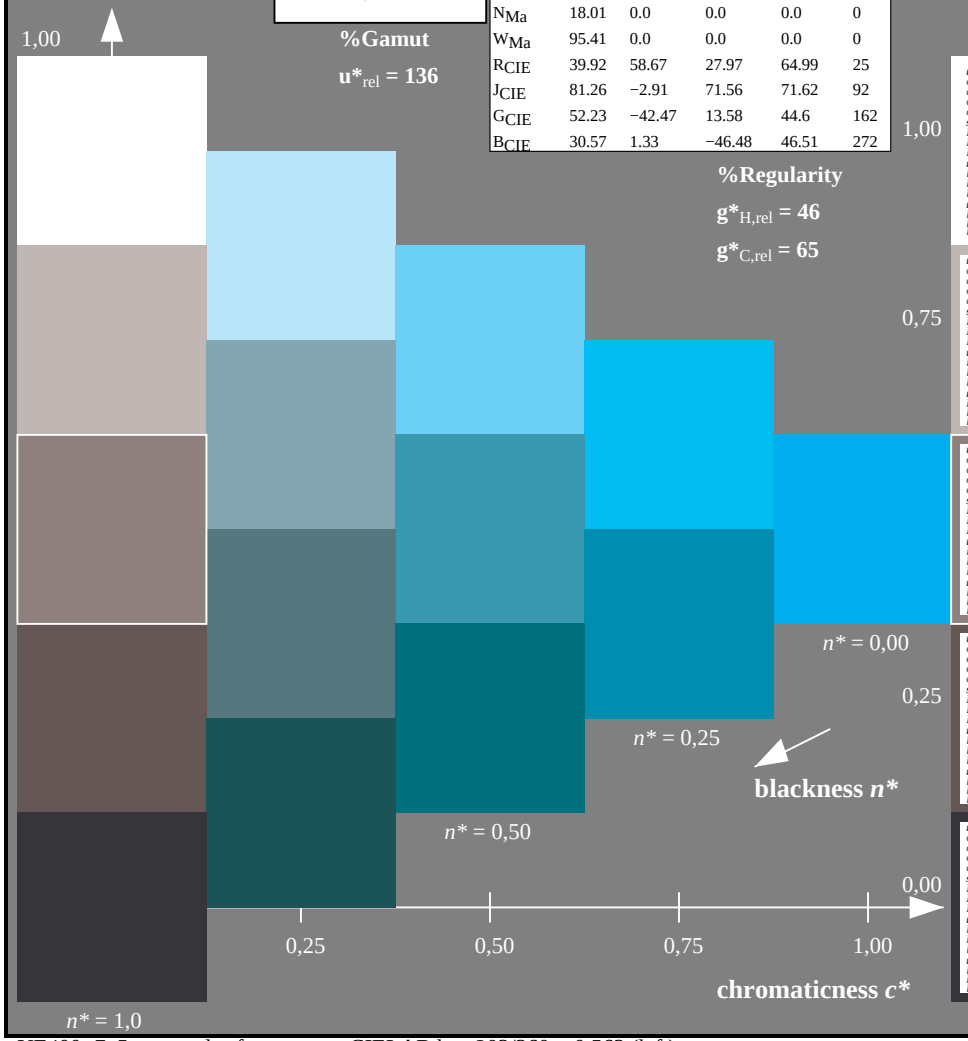
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

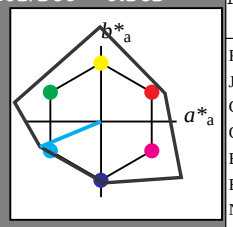


UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

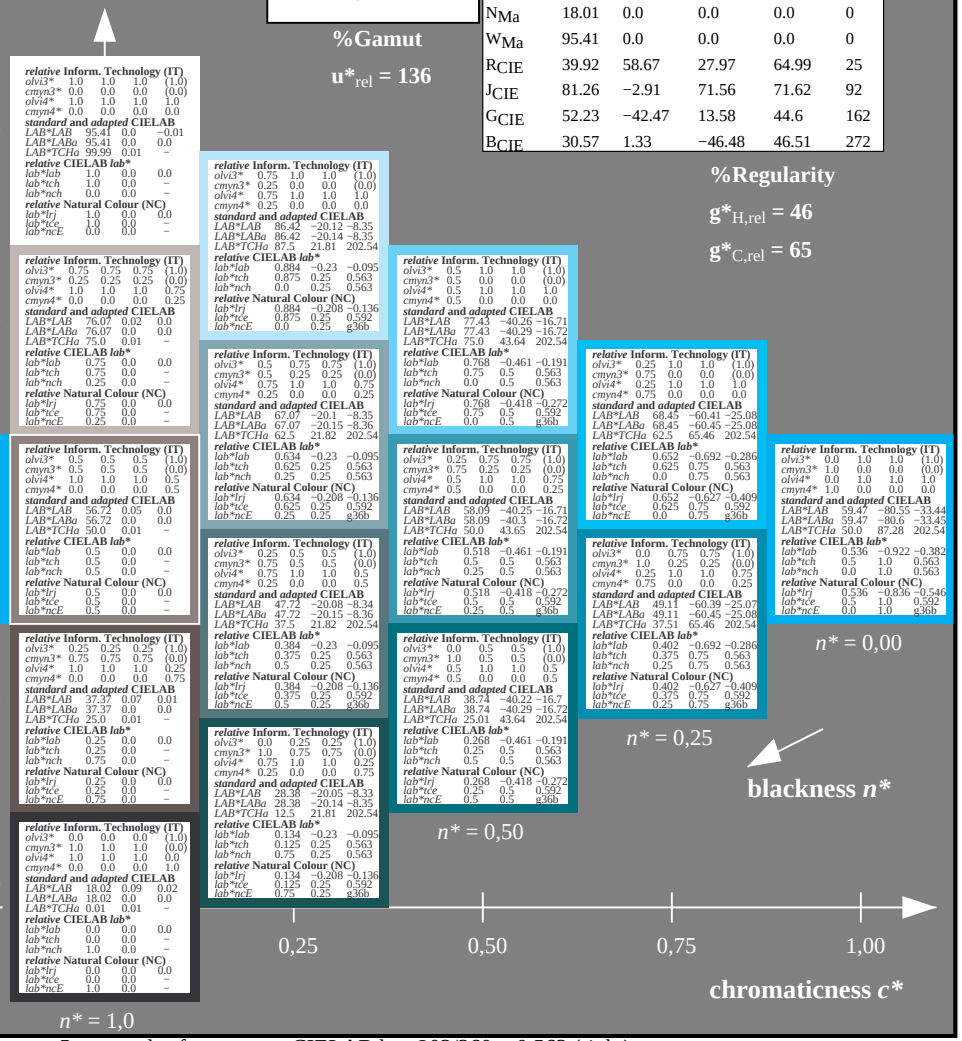
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

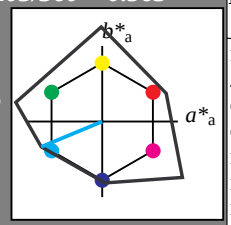


5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

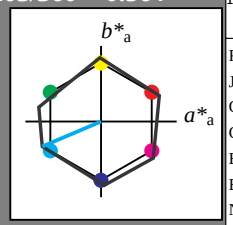
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

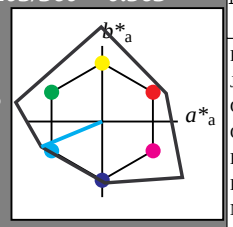
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

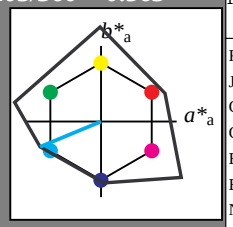
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

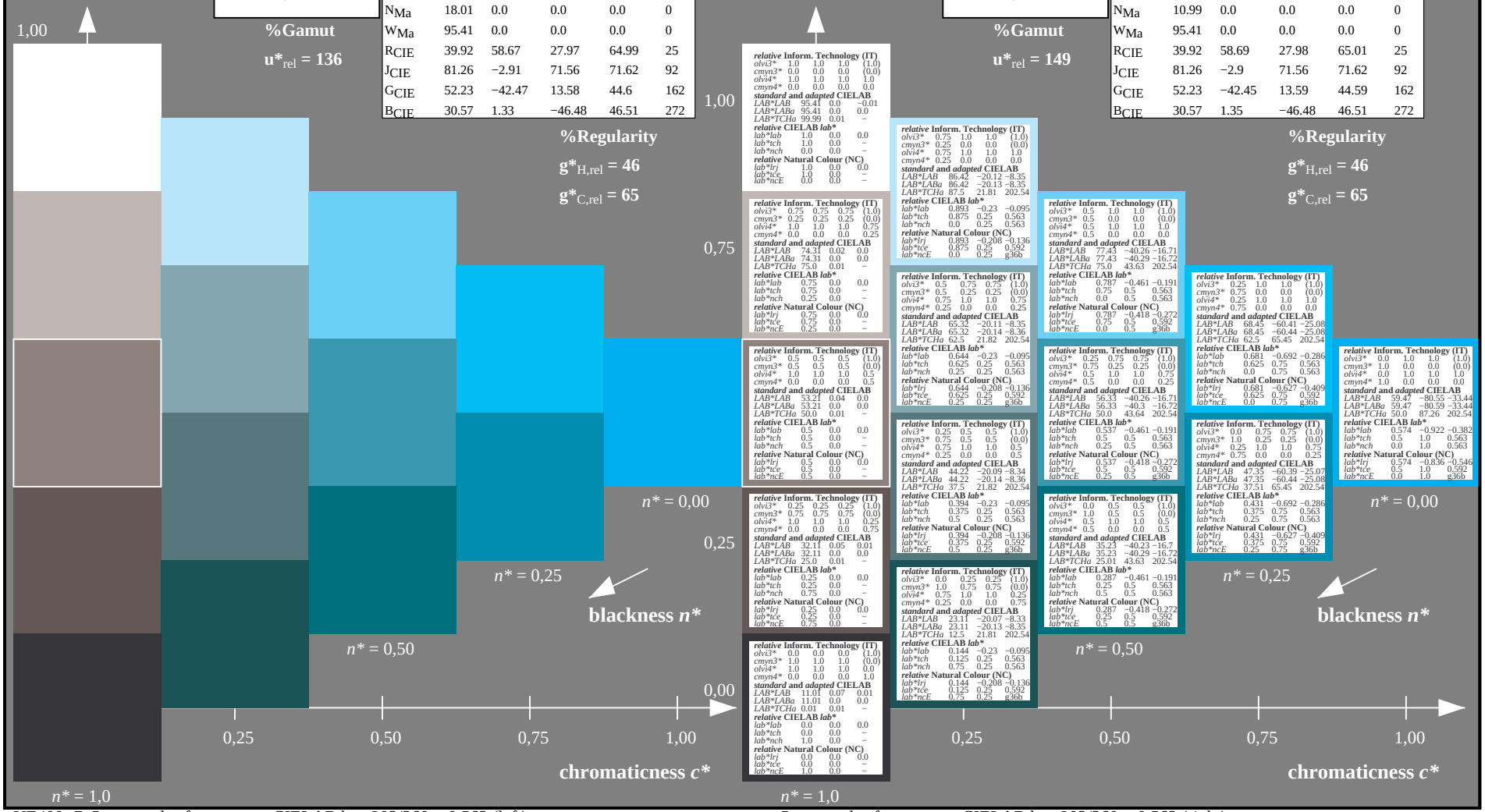
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



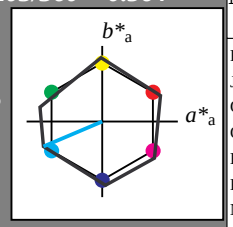
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

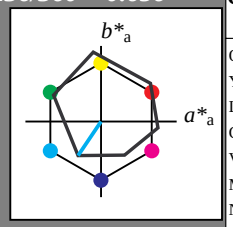
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

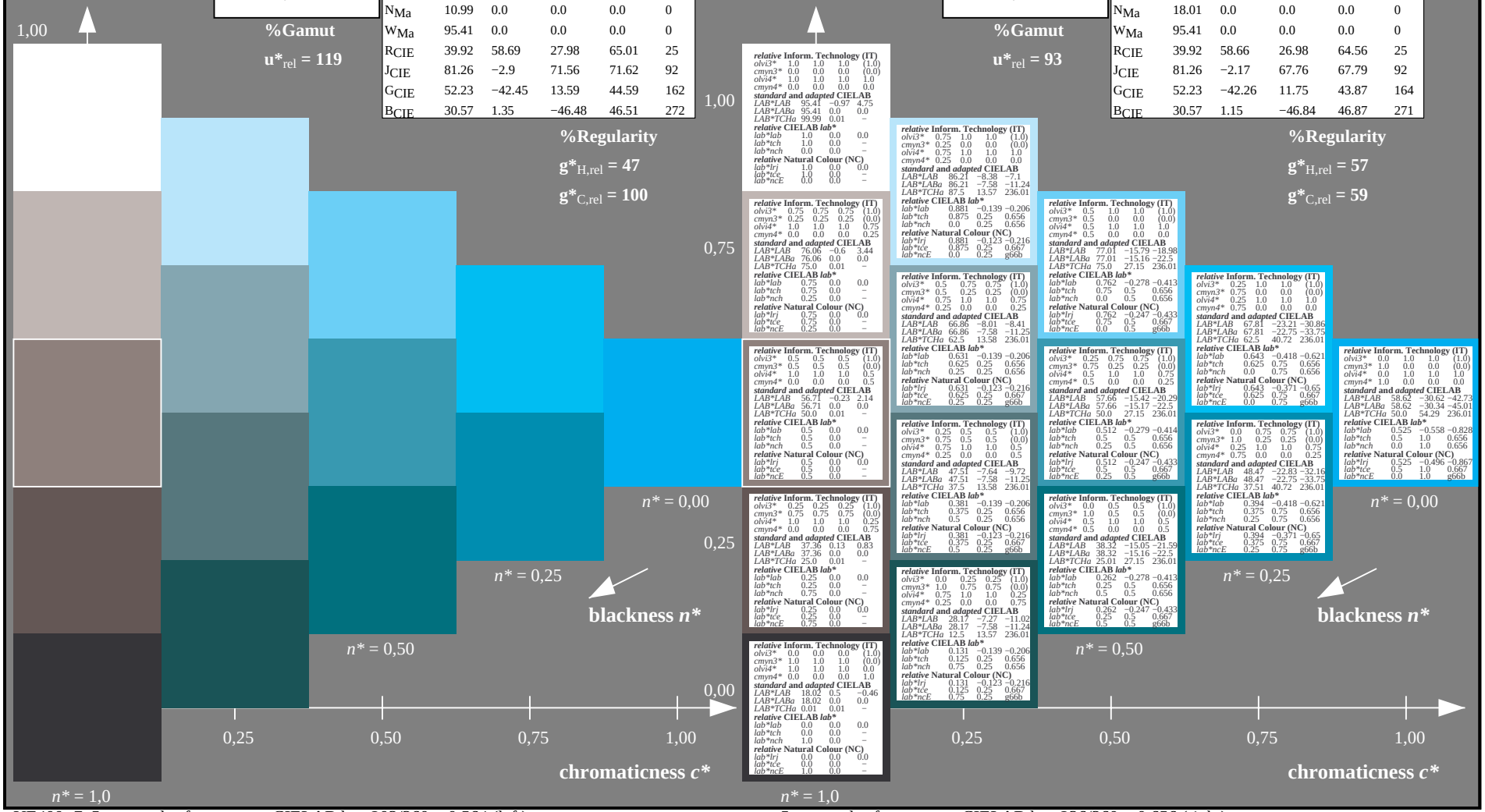
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



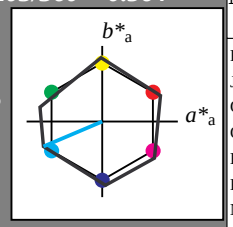
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

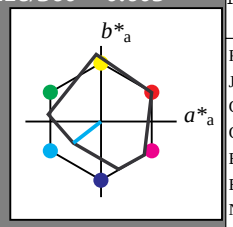
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue *h = *lab*h* = 218/360 = 0.605**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

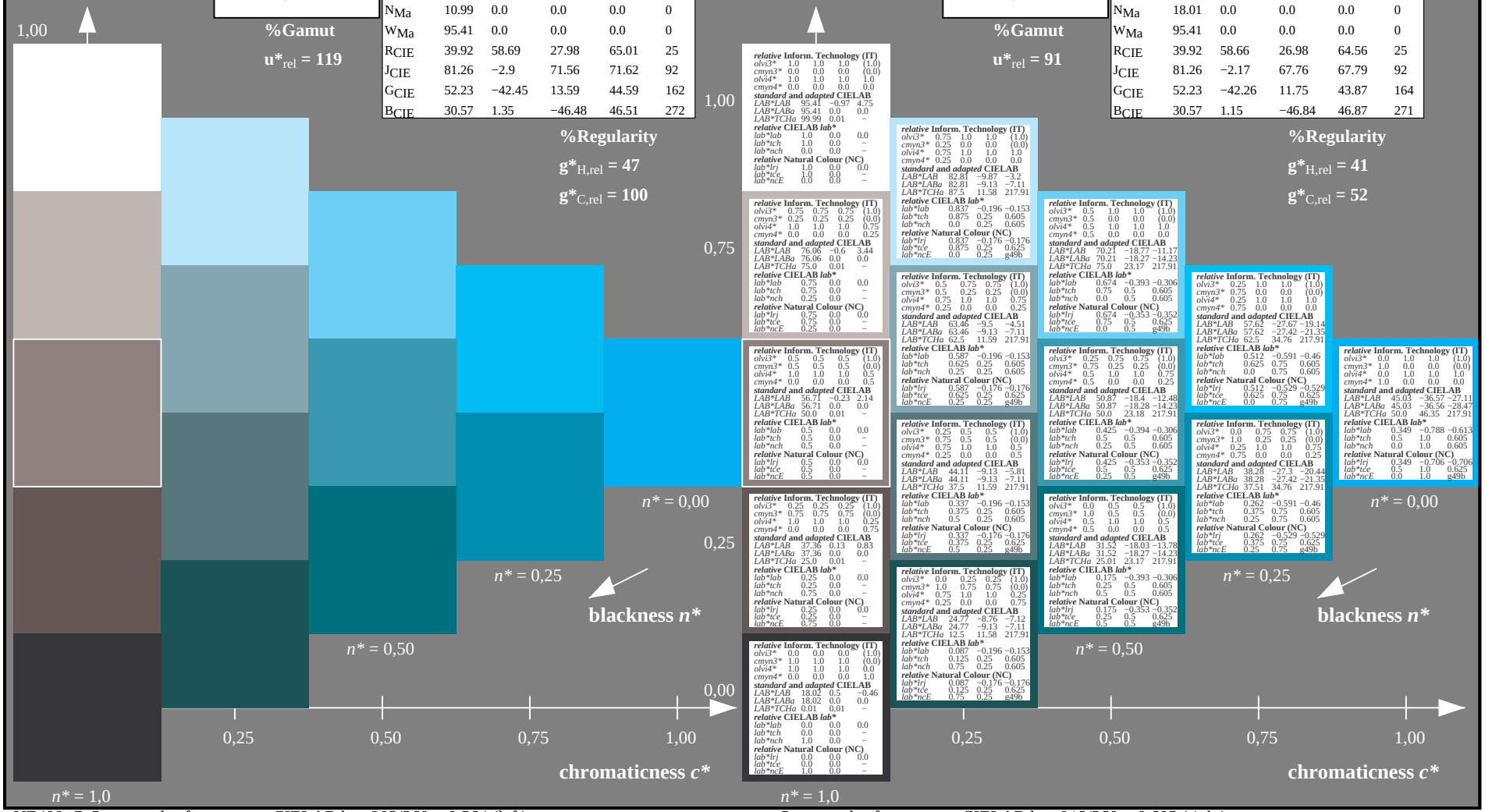
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



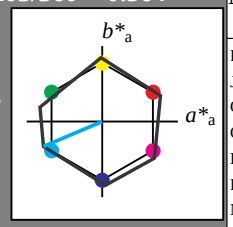
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

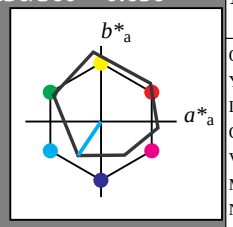
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

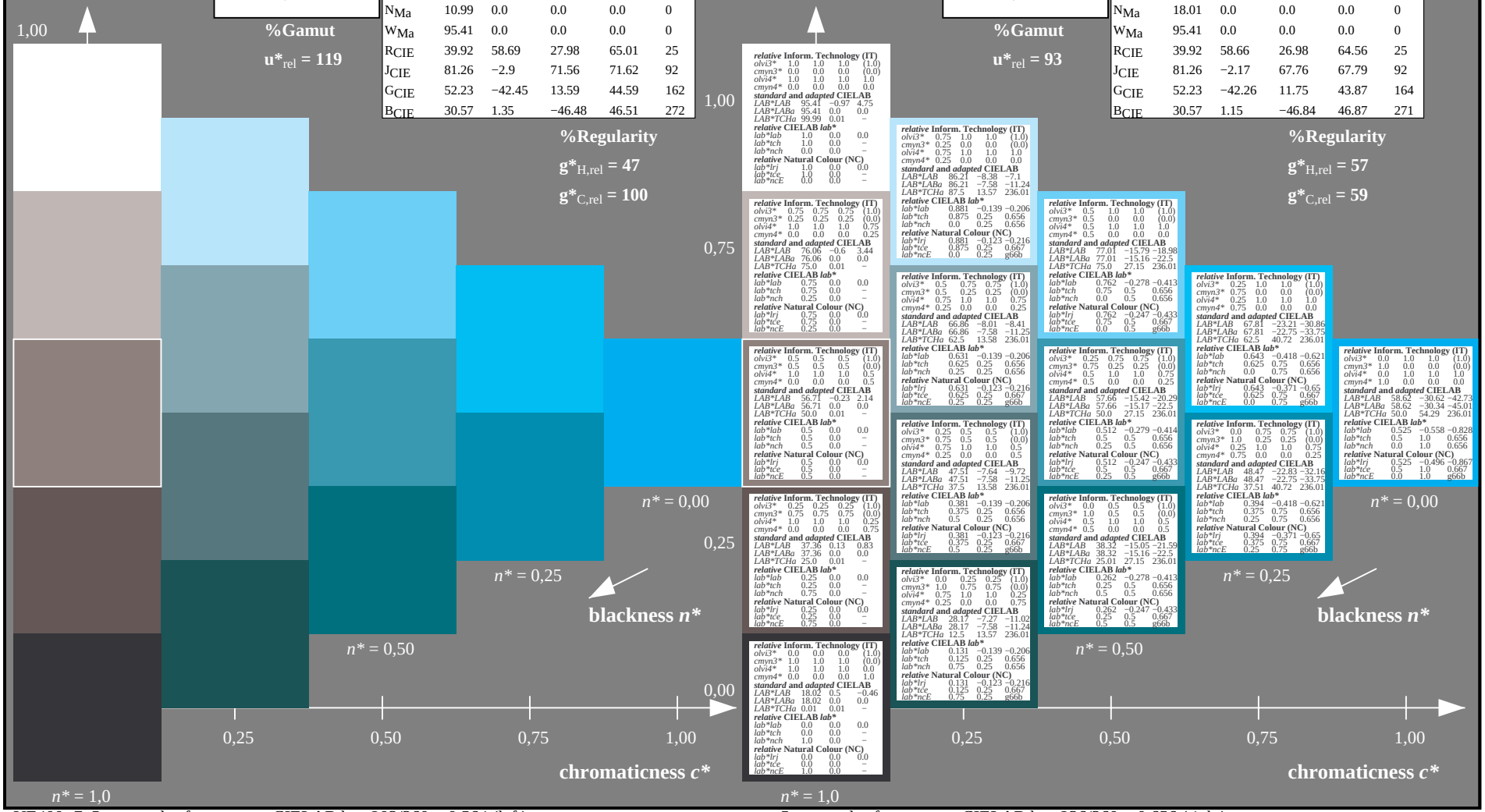
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



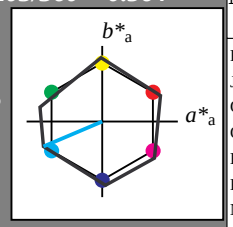
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 203/360 = 0.564*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

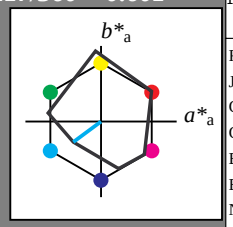
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 217/360 = 0.601*
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

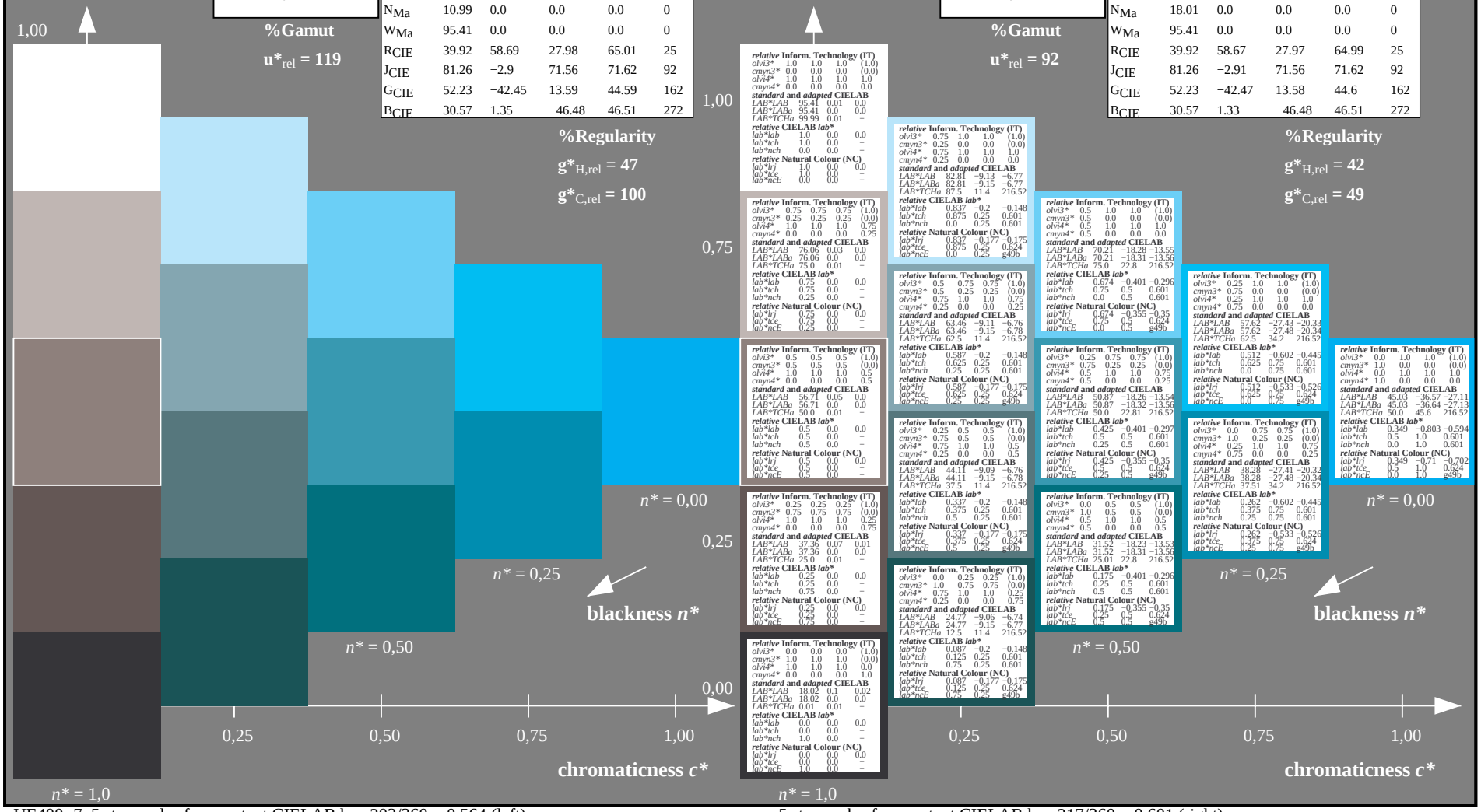
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



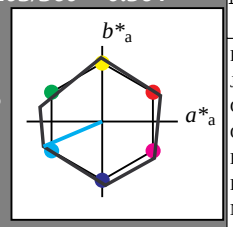
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

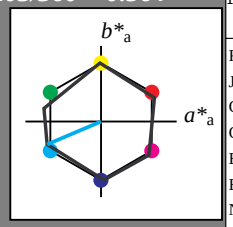
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS18
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

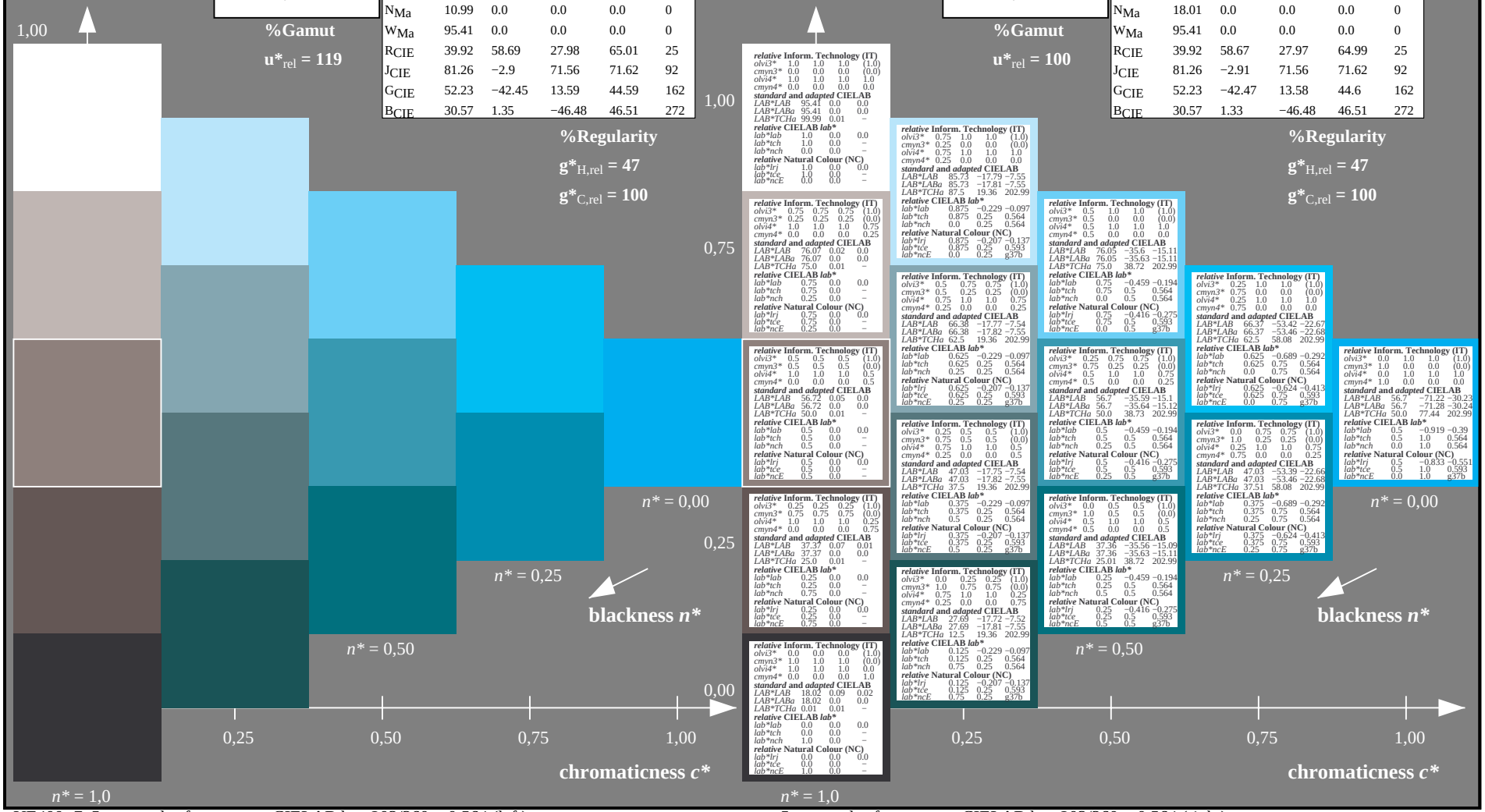
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



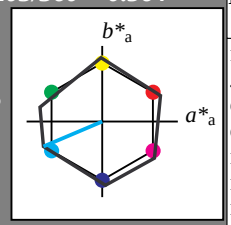
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

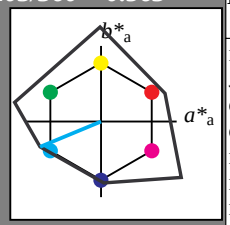
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue *h = *lab*h* = 203/360 = 0.563**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

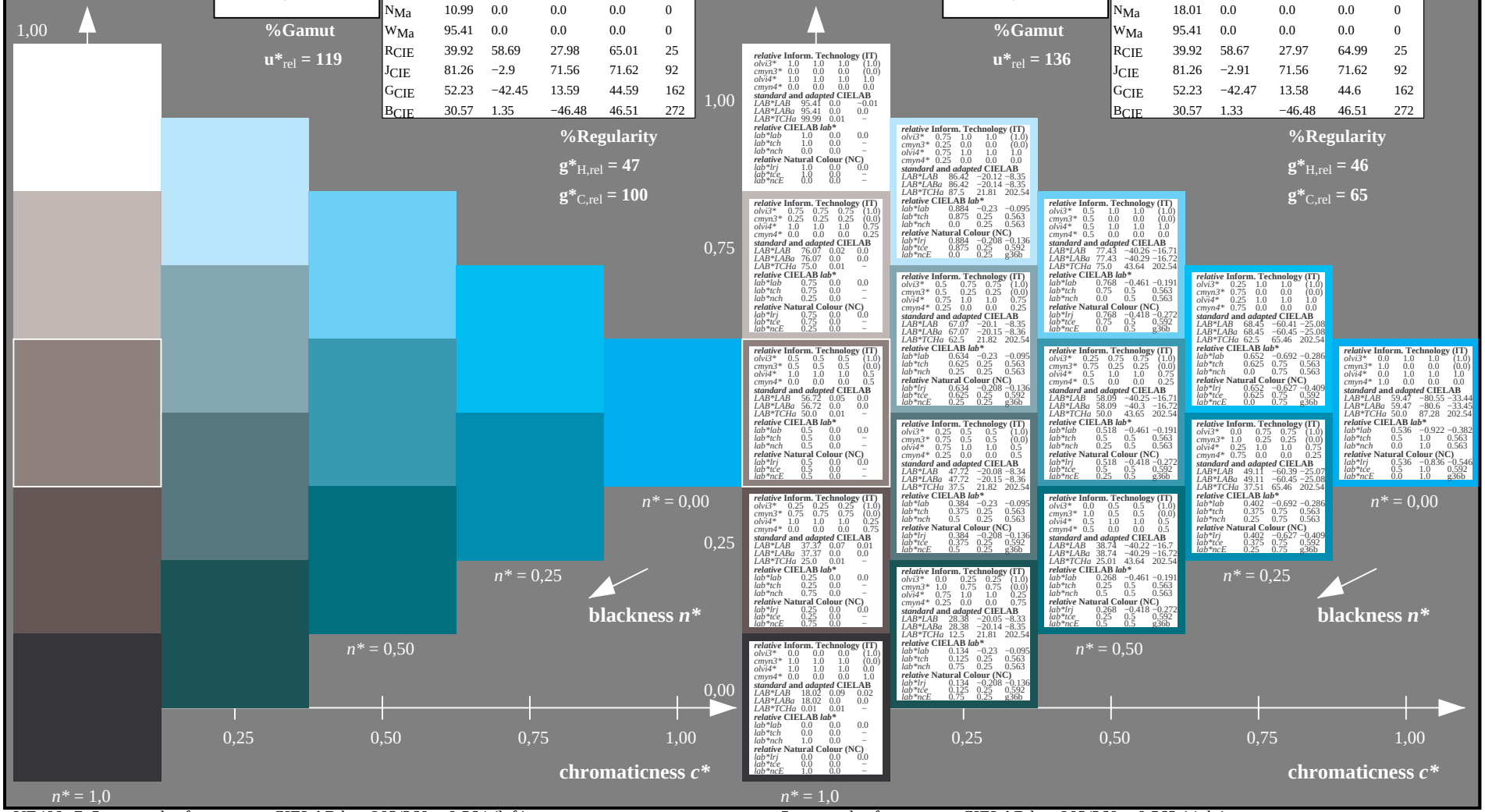
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



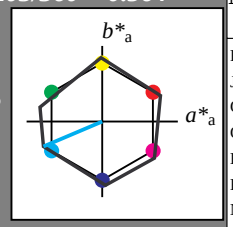
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

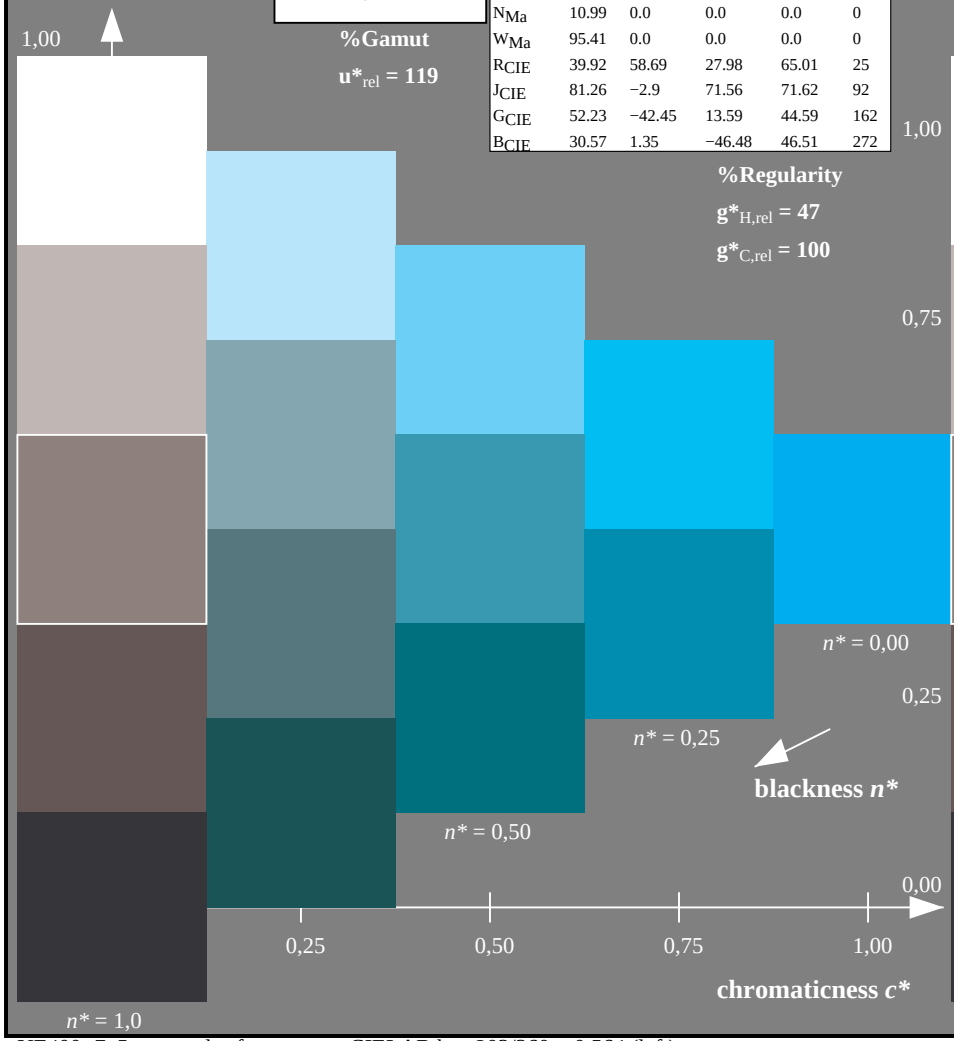
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

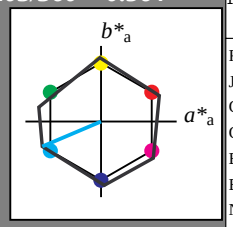
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue *h = *lab*h* = 203/360 = 0.564**
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

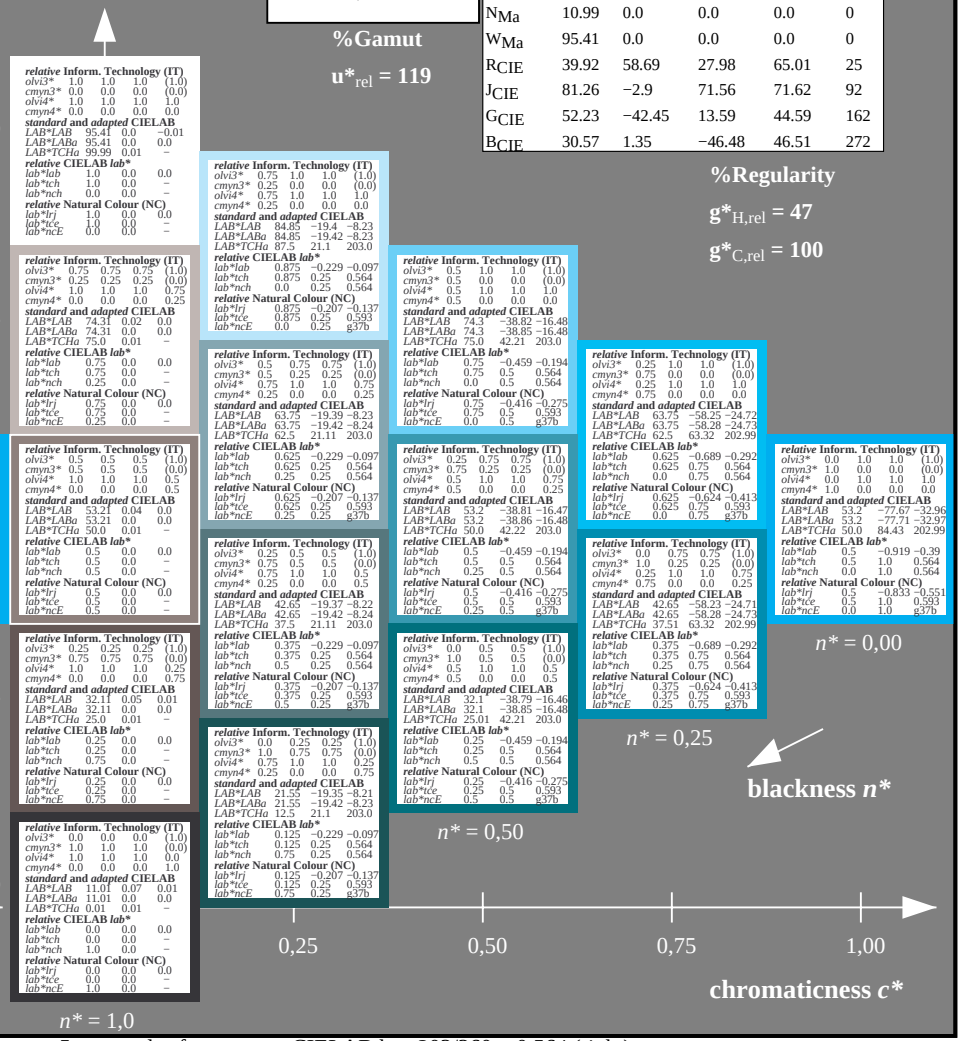
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



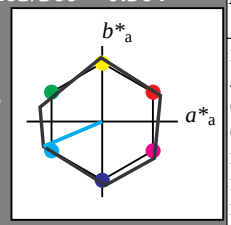
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

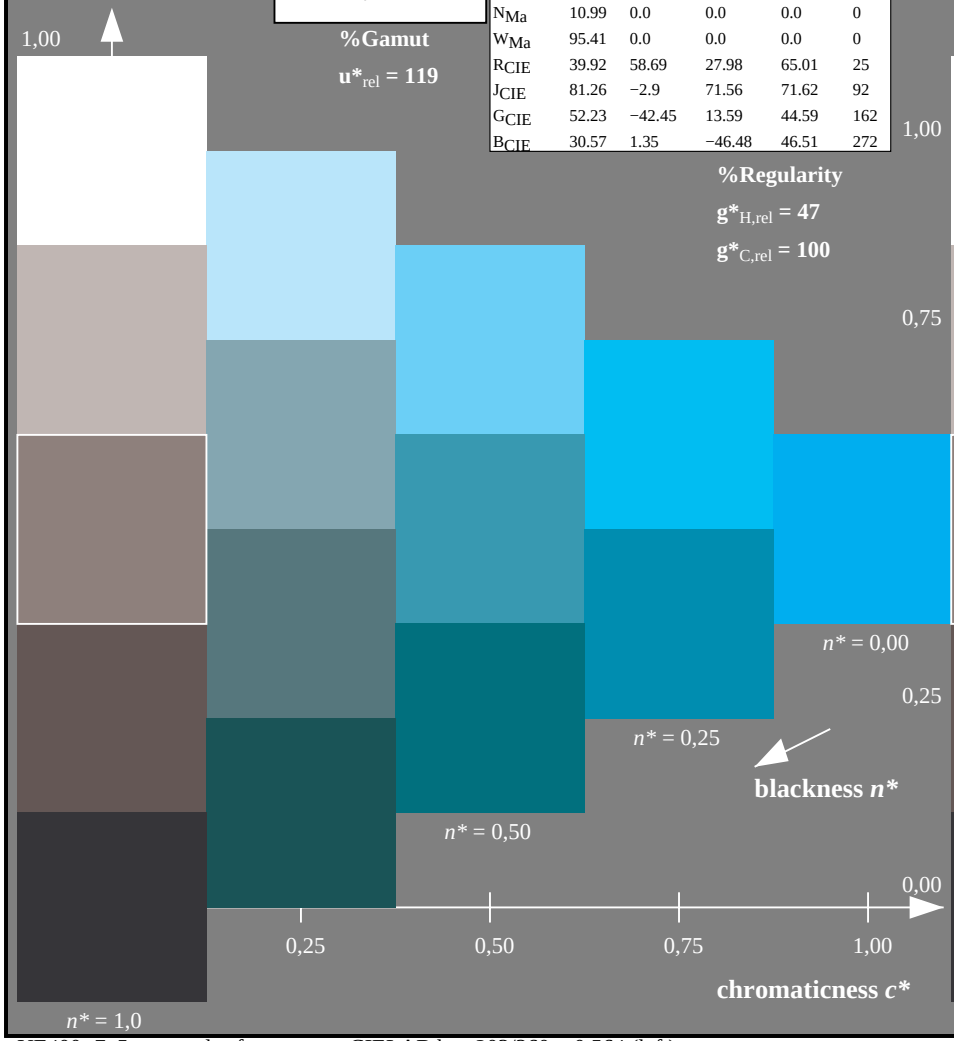
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

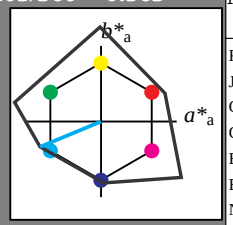
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

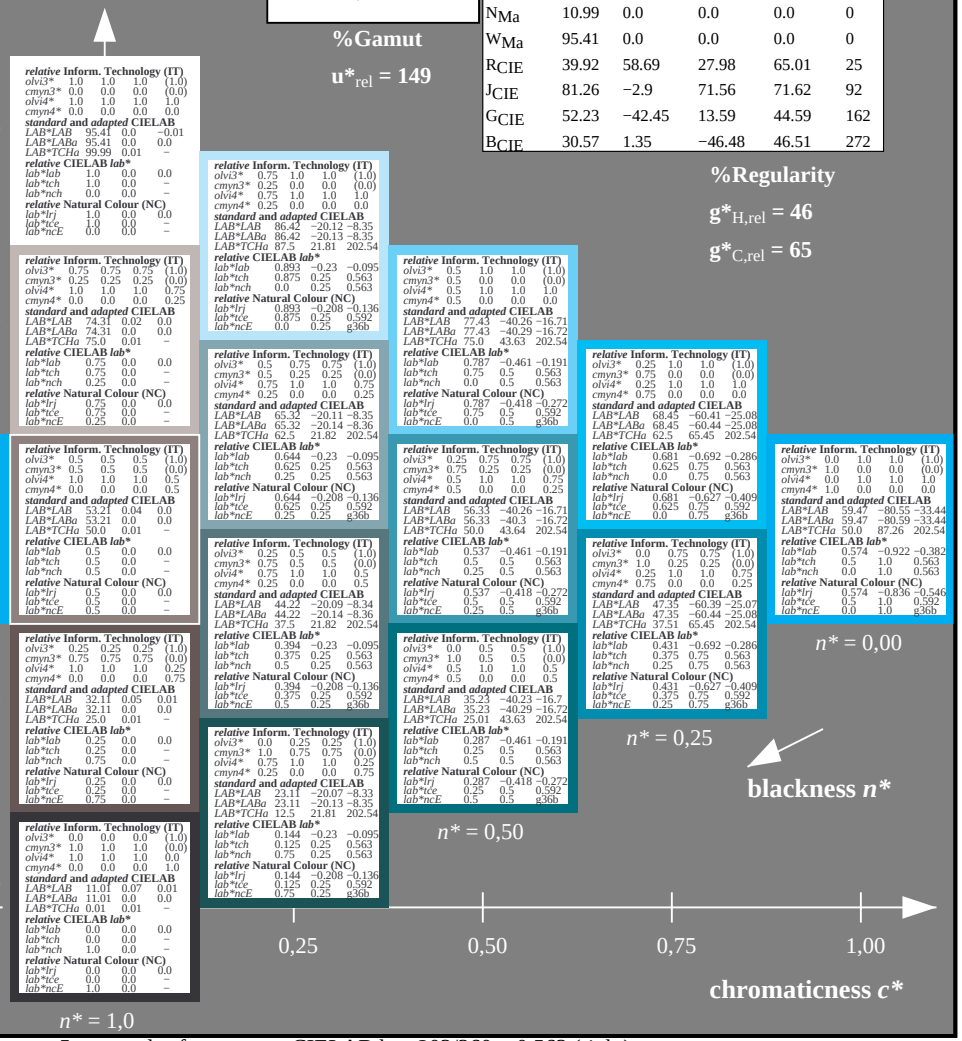
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



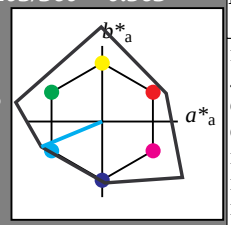
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

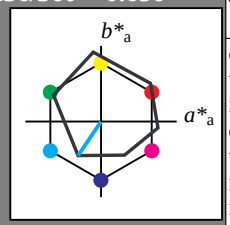
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

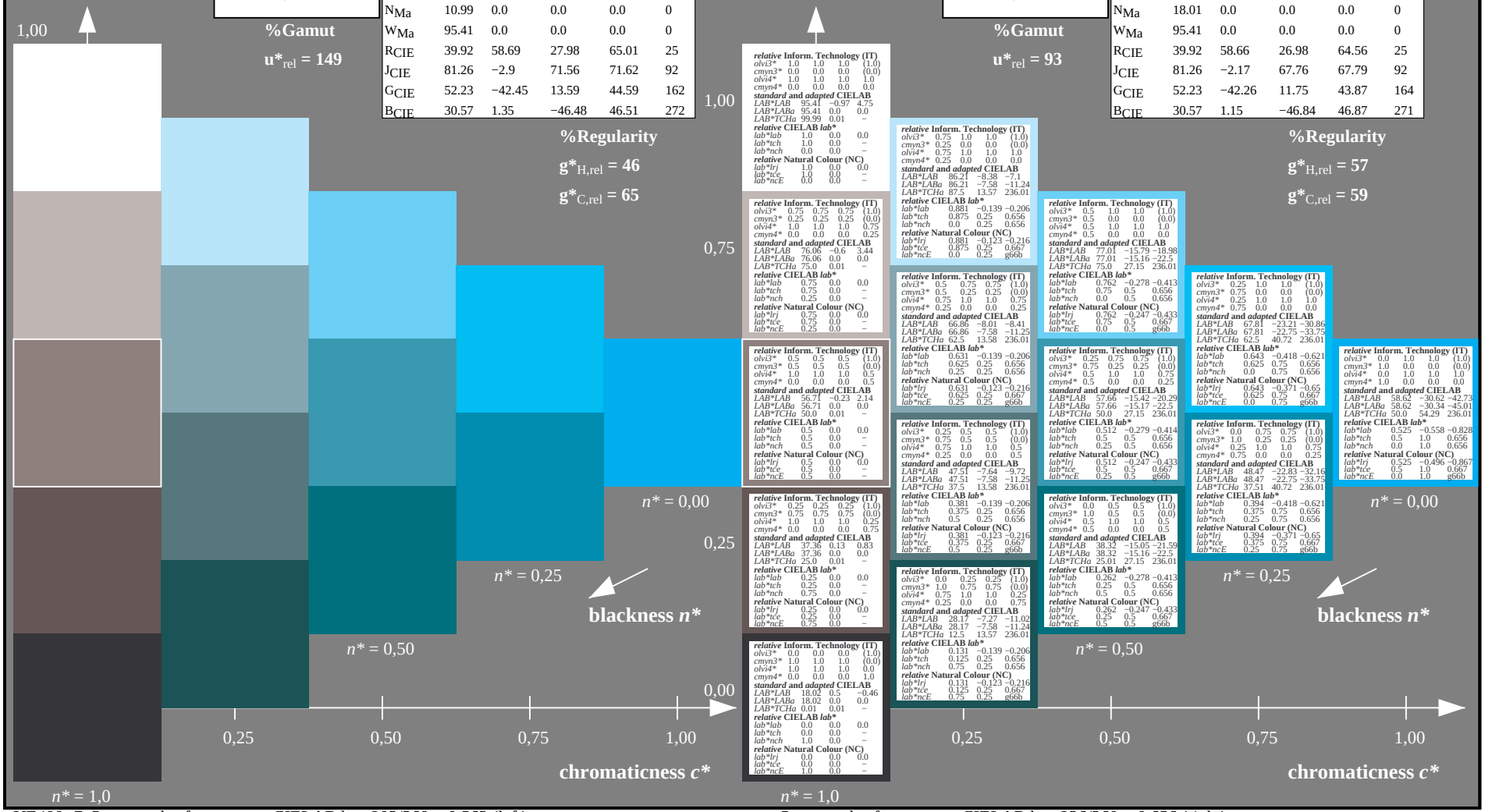
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



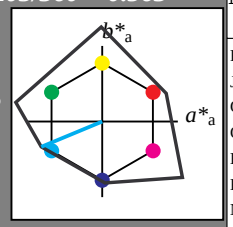
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

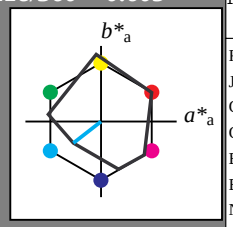
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 218/360 = 0.605$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 218
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

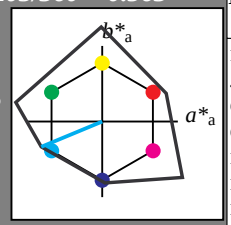
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

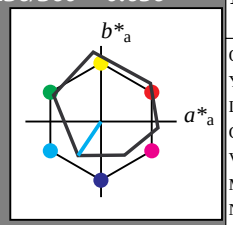
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 236/360 = 0.656$
lab*tch* and *lab*nch

D65: hue C
LCH*Ma: 59 54 236
rgb*Ma: 0.0 1.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

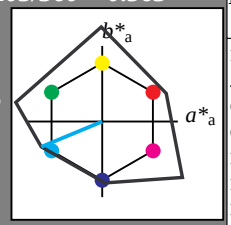
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

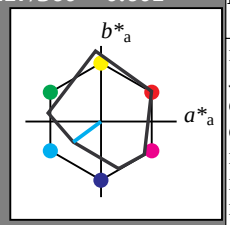
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 217/360 = 0.601$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 45 46 217
rgb*Ma: 0.0 1.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

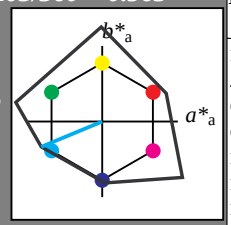
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 217/360 = 0.601 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

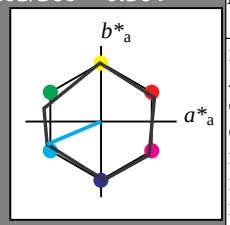
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 57 77 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

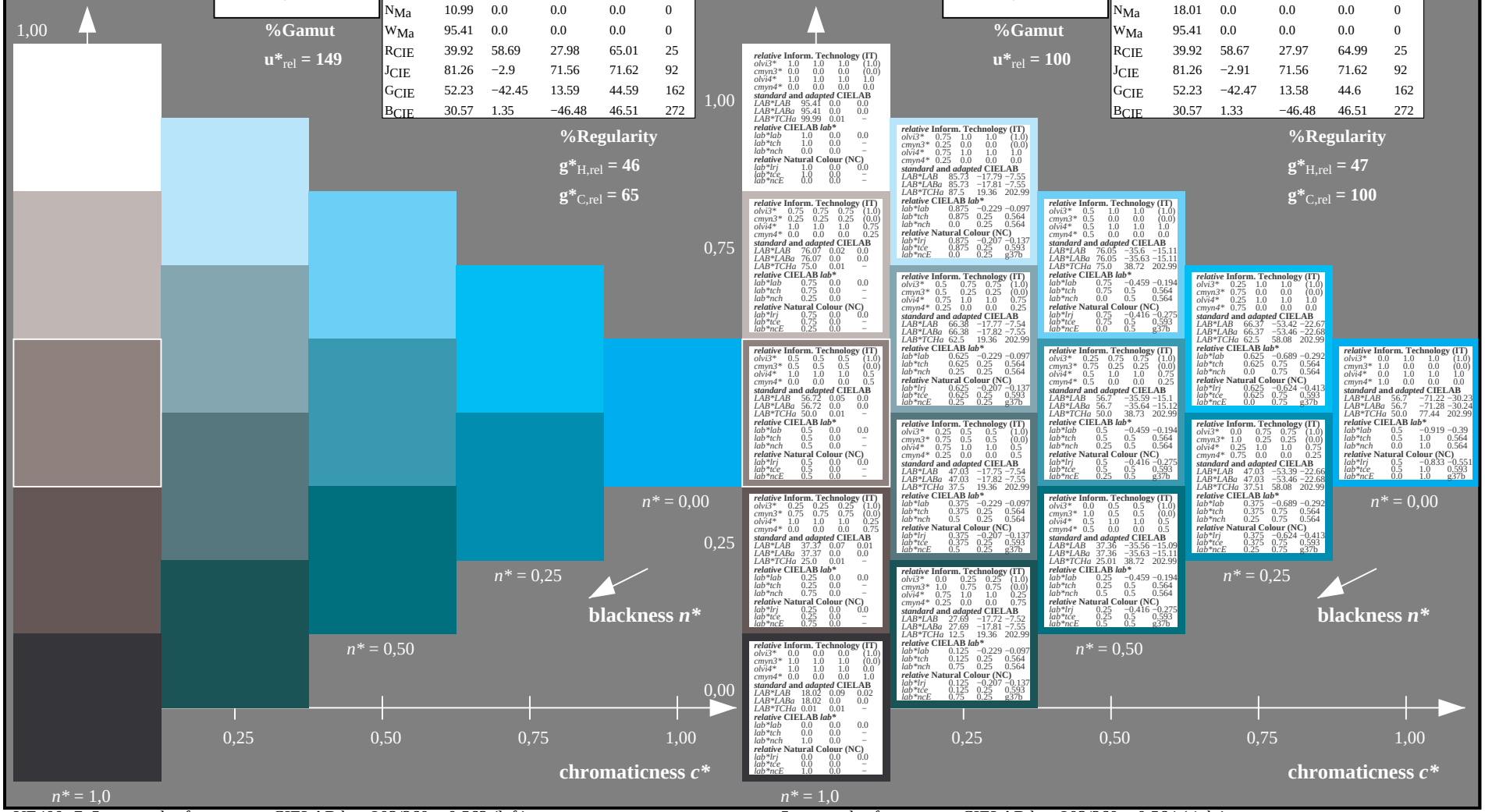
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



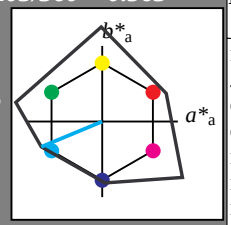
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

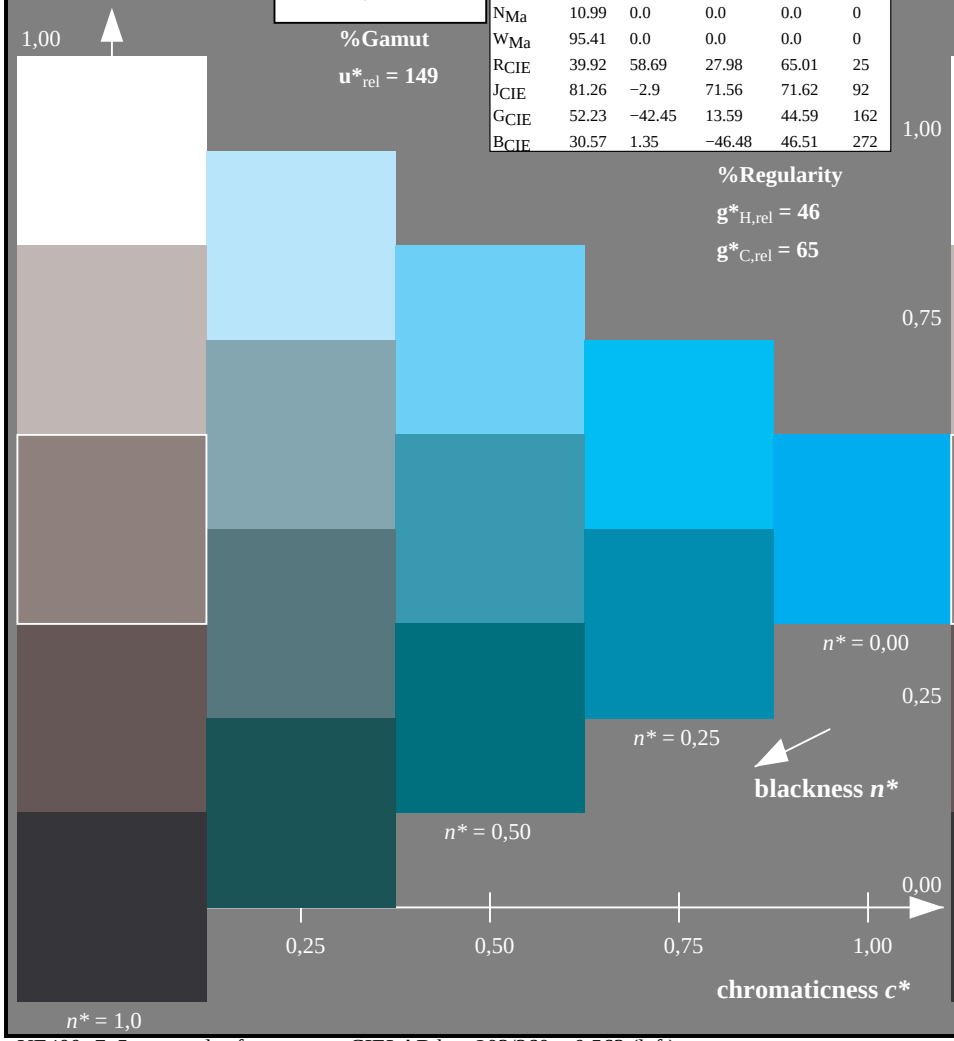
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

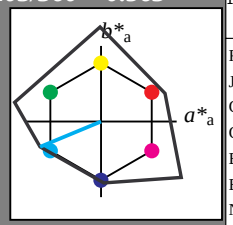
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

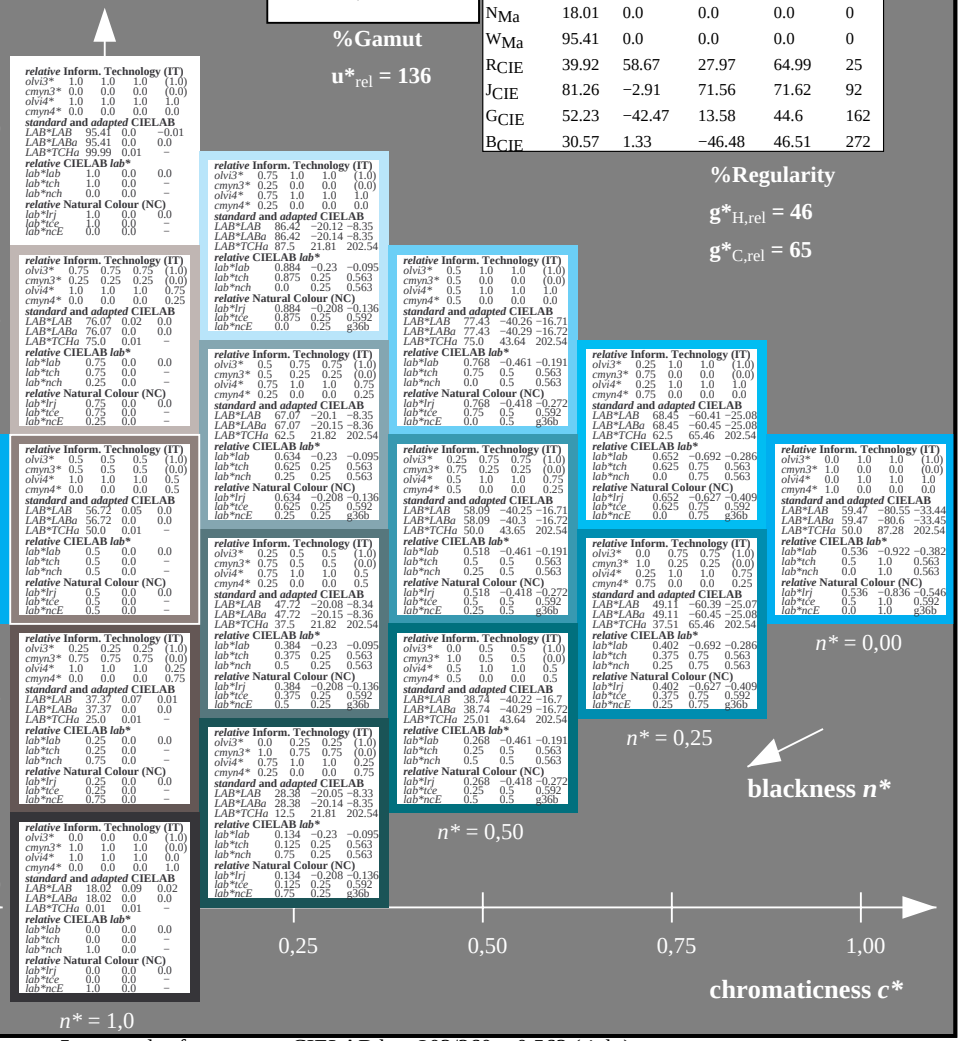
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



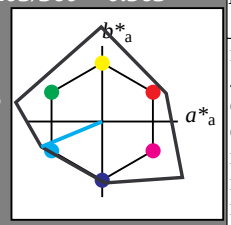
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

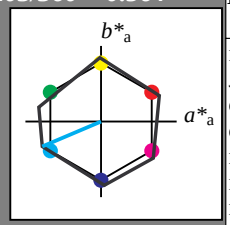
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 203/360 = 0.564$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 53 84 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

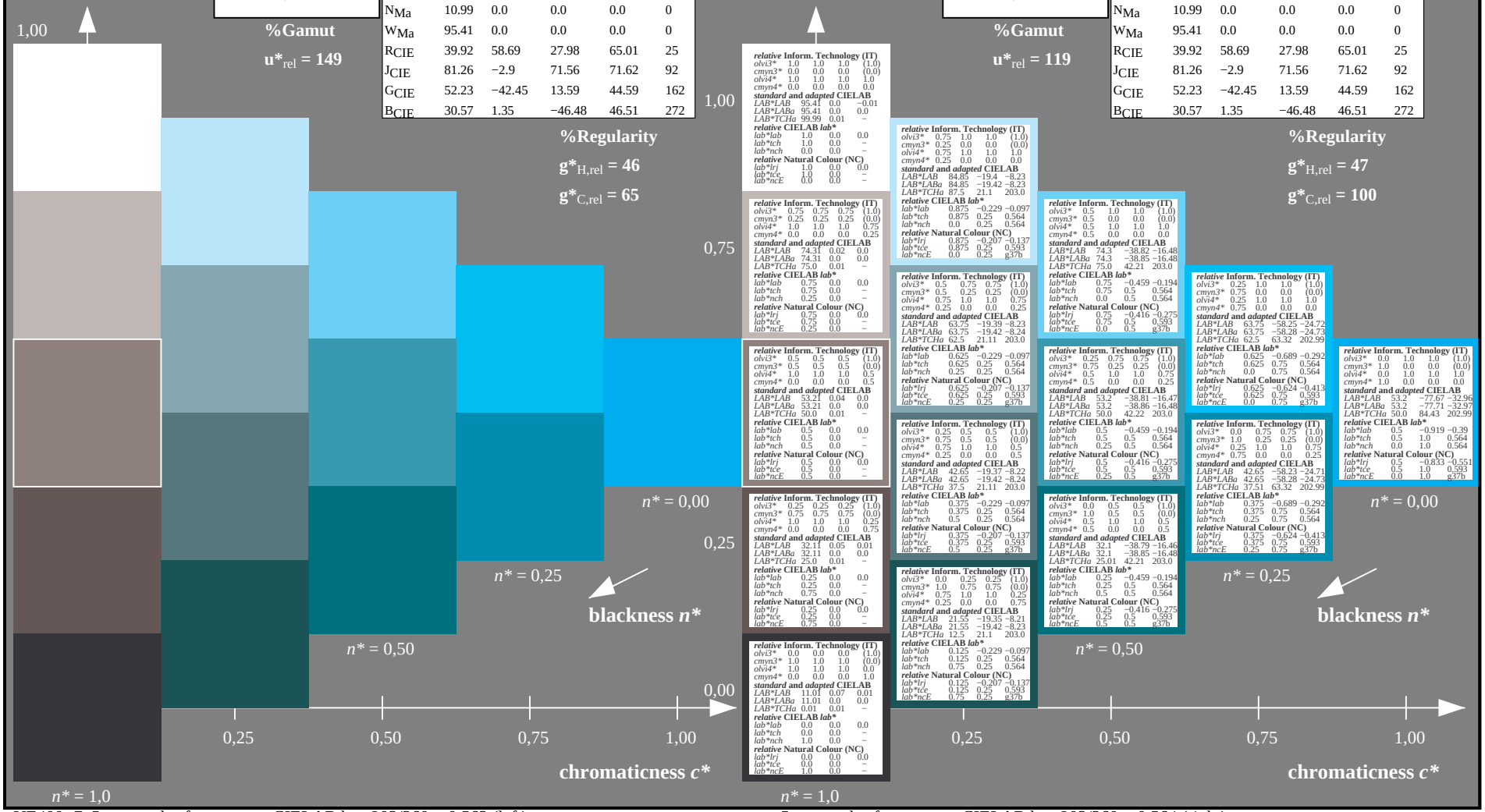
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



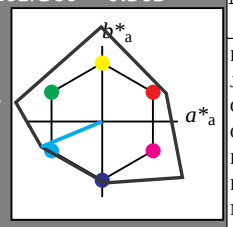
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

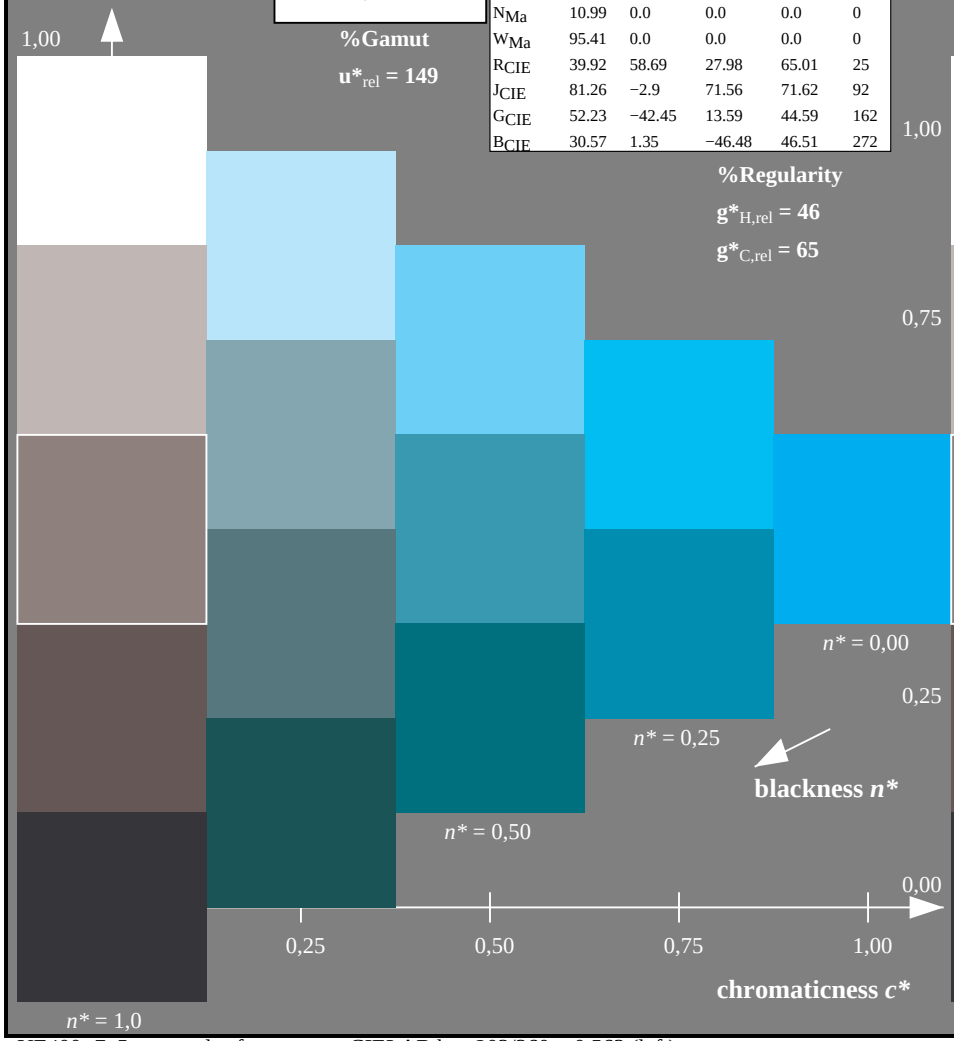
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

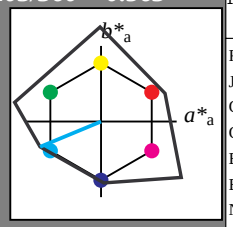
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 203/360 = 0.563$
lab*tch* and *lab*nch

D65: hue G50B
LCH*Ma: 59 87 203
rgb*Ma: 0.0 1.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

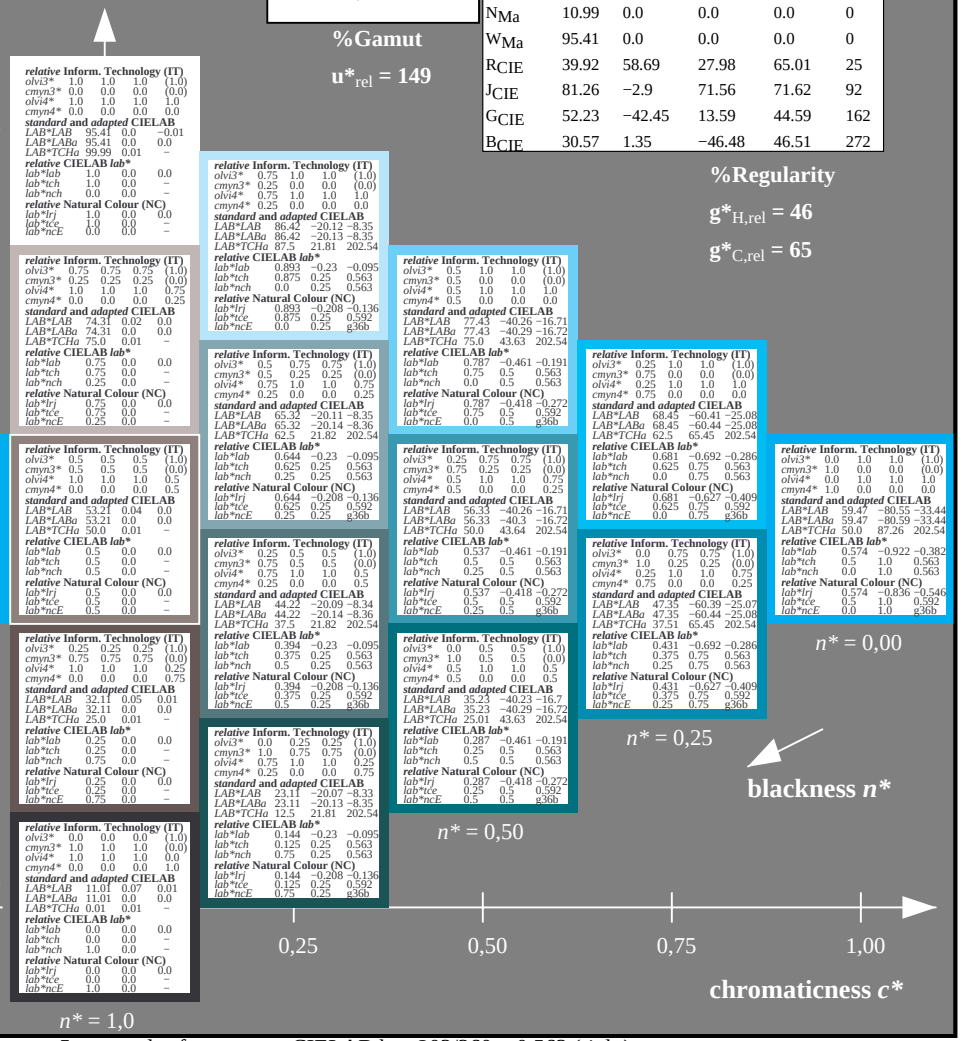
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



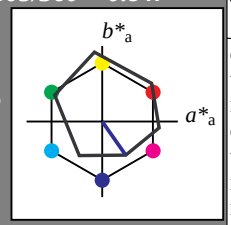
UE400−7, 5 step scales for constant CIELAB hue 203/360 = 0.563 (left)

5 step scales for constant CIELAB hue 203/360 = 0.563 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

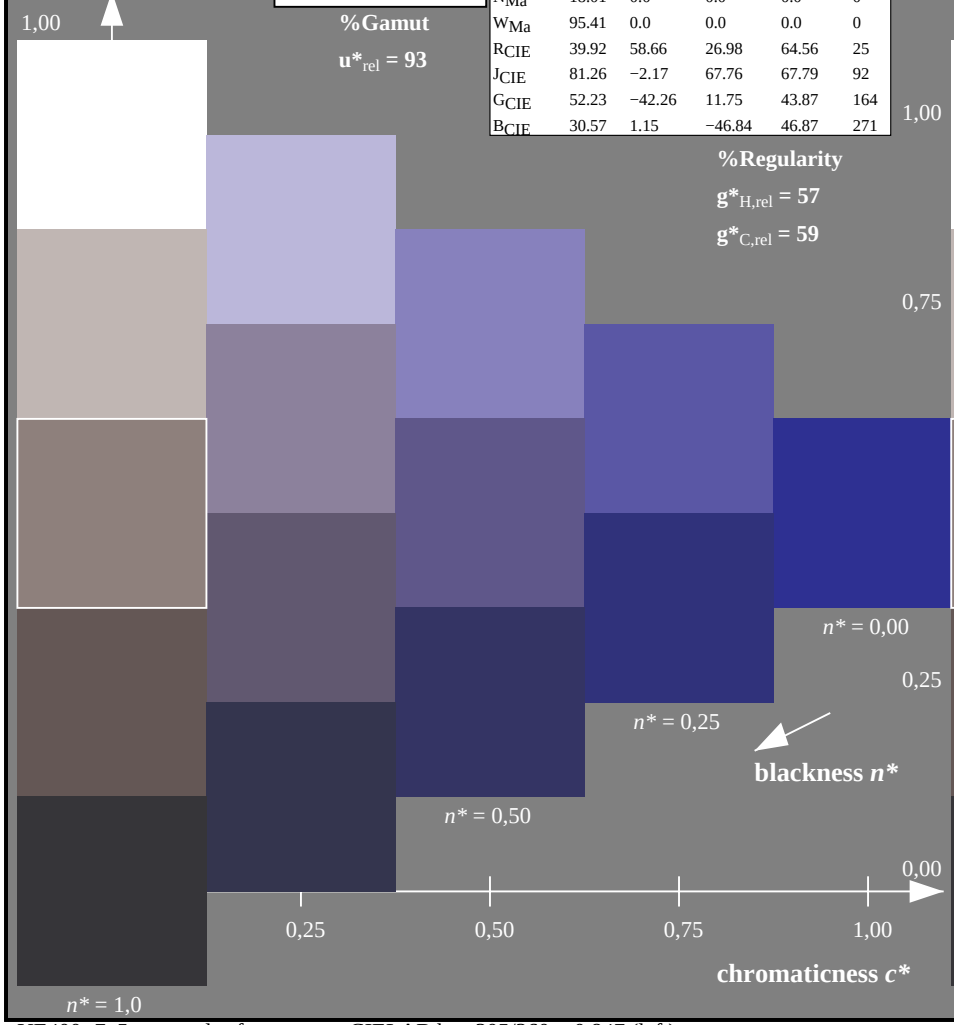
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

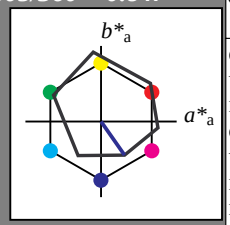
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

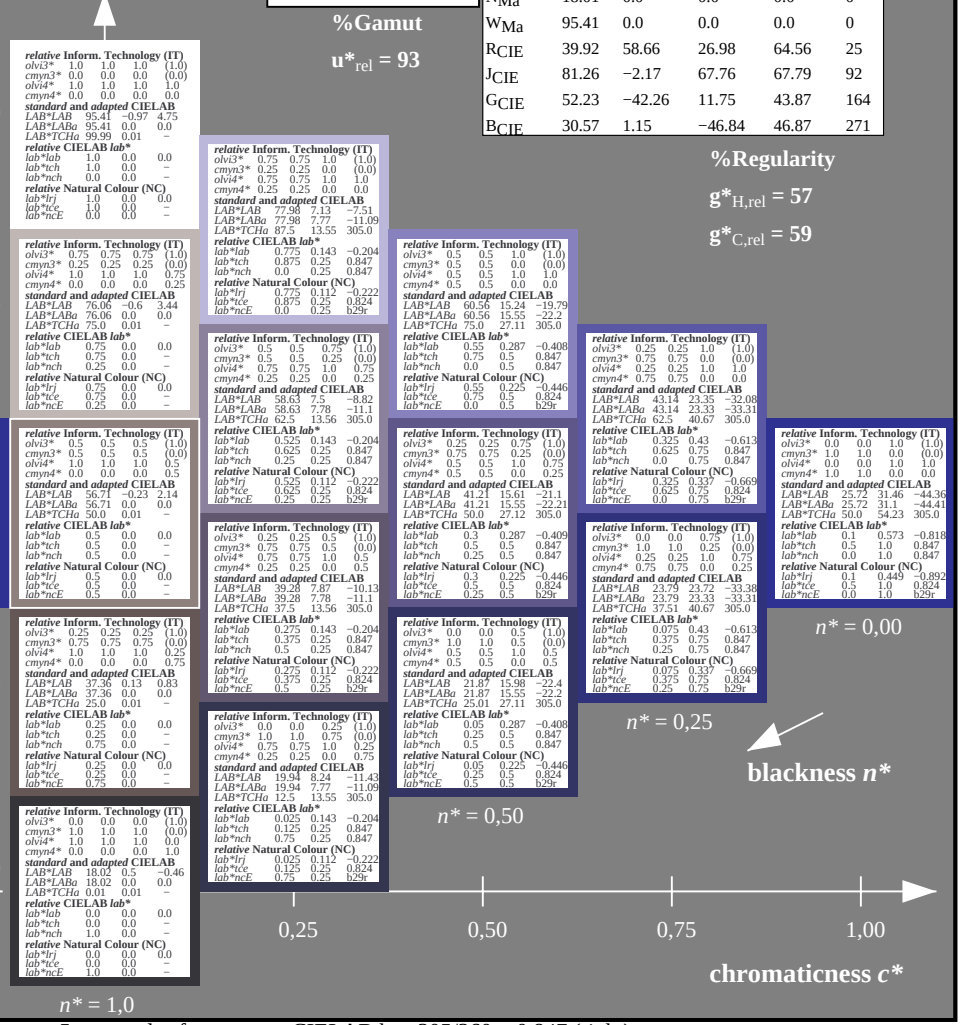
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



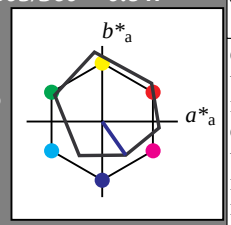
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 305/360 = 0.847*
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

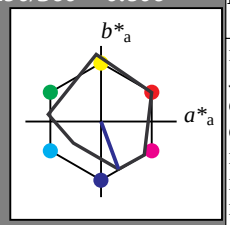
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 290/360 = 0.806*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

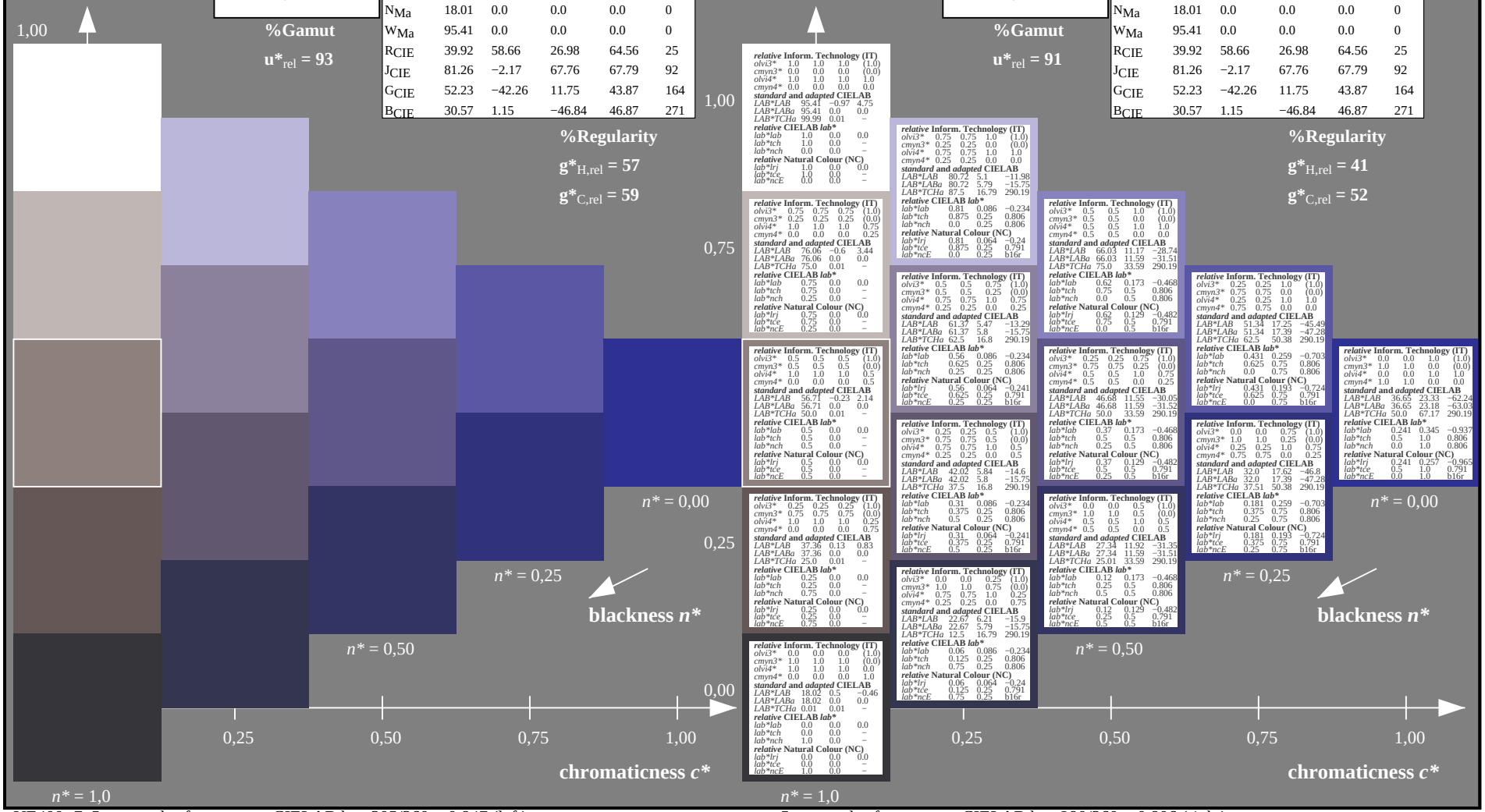
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



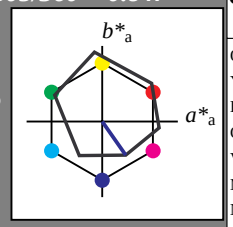
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 305/360 = 0.847*
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

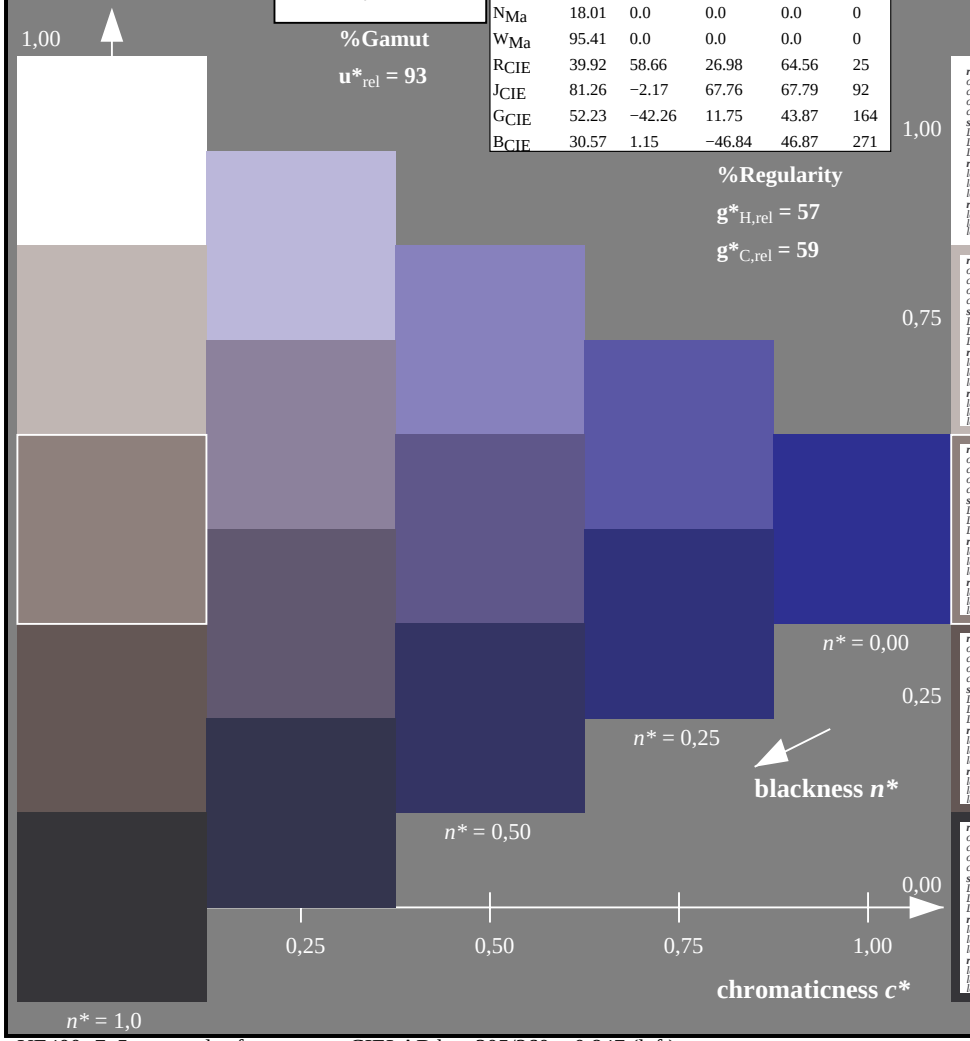
%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

ORS18; adapted (a) CIELAB data

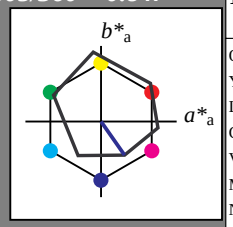
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 305/360 = 0.847*
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

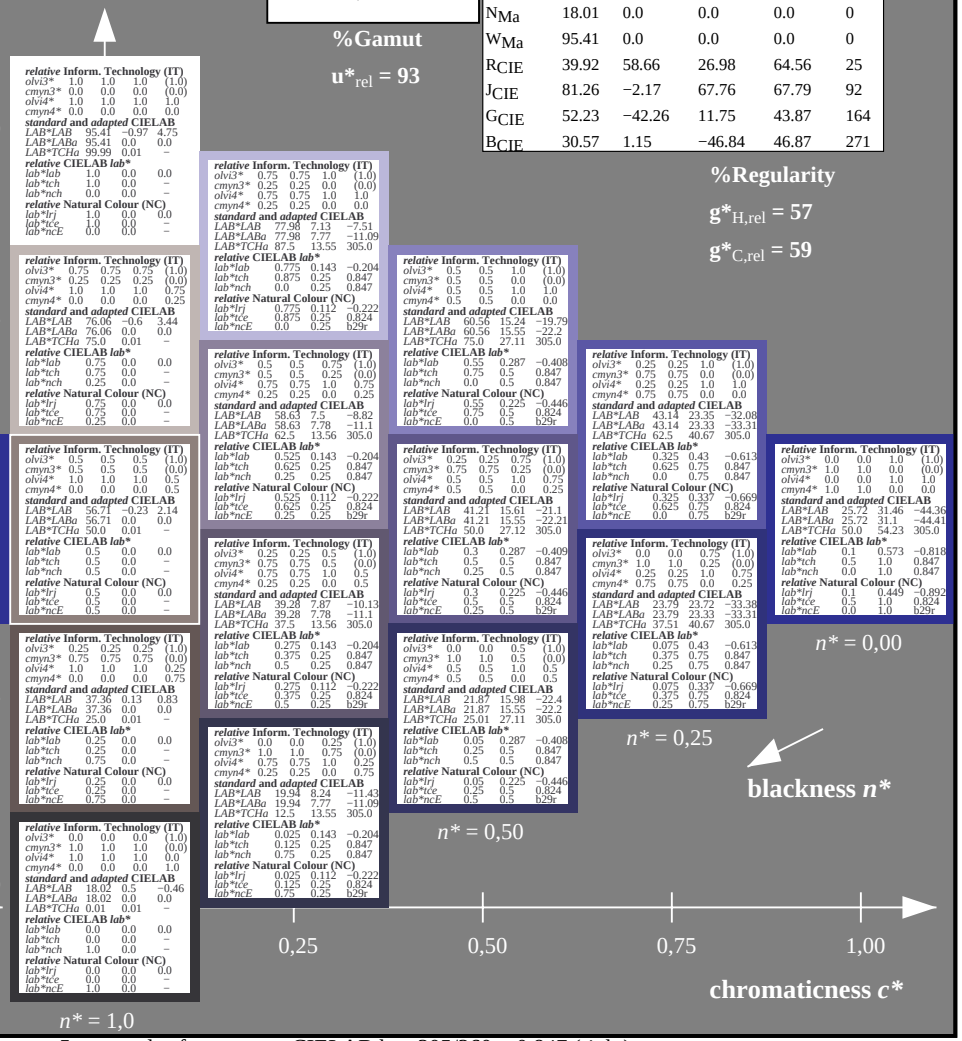
%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271



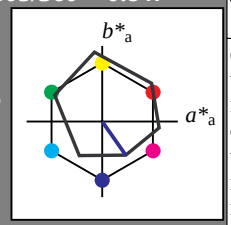
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

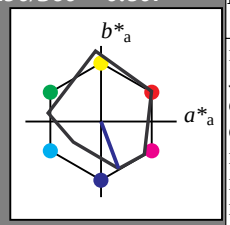
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

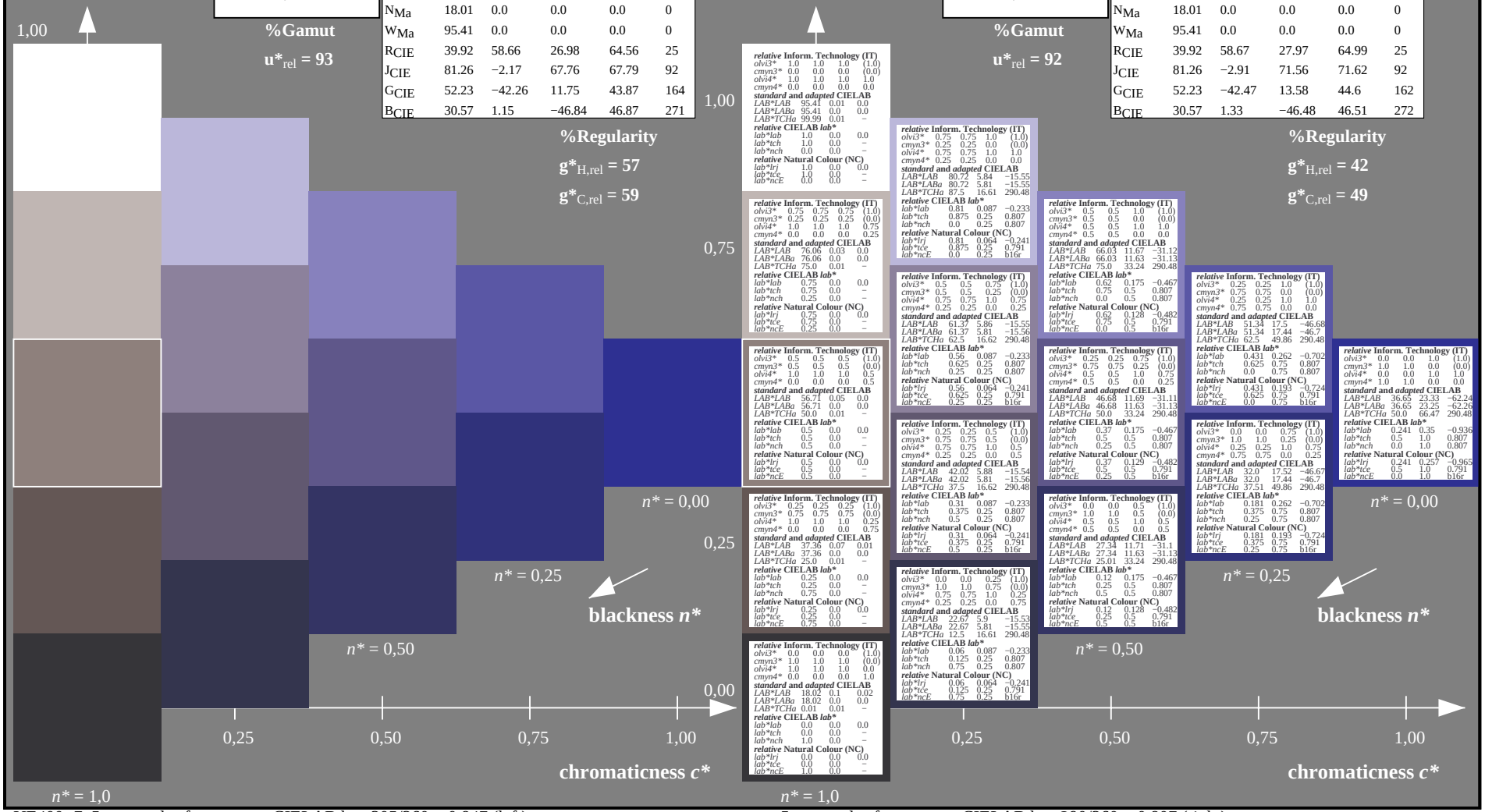
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



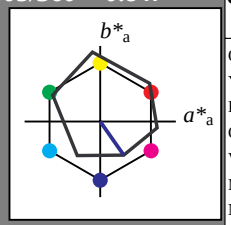
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 305/360 = 0.847*
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

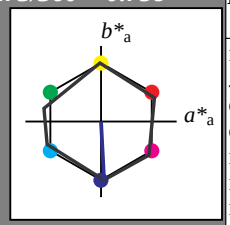
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 273/360 = 0.758*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

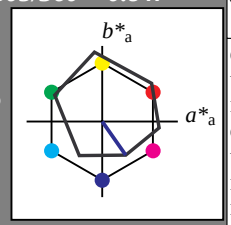
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

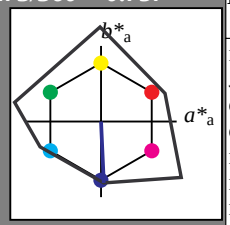
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

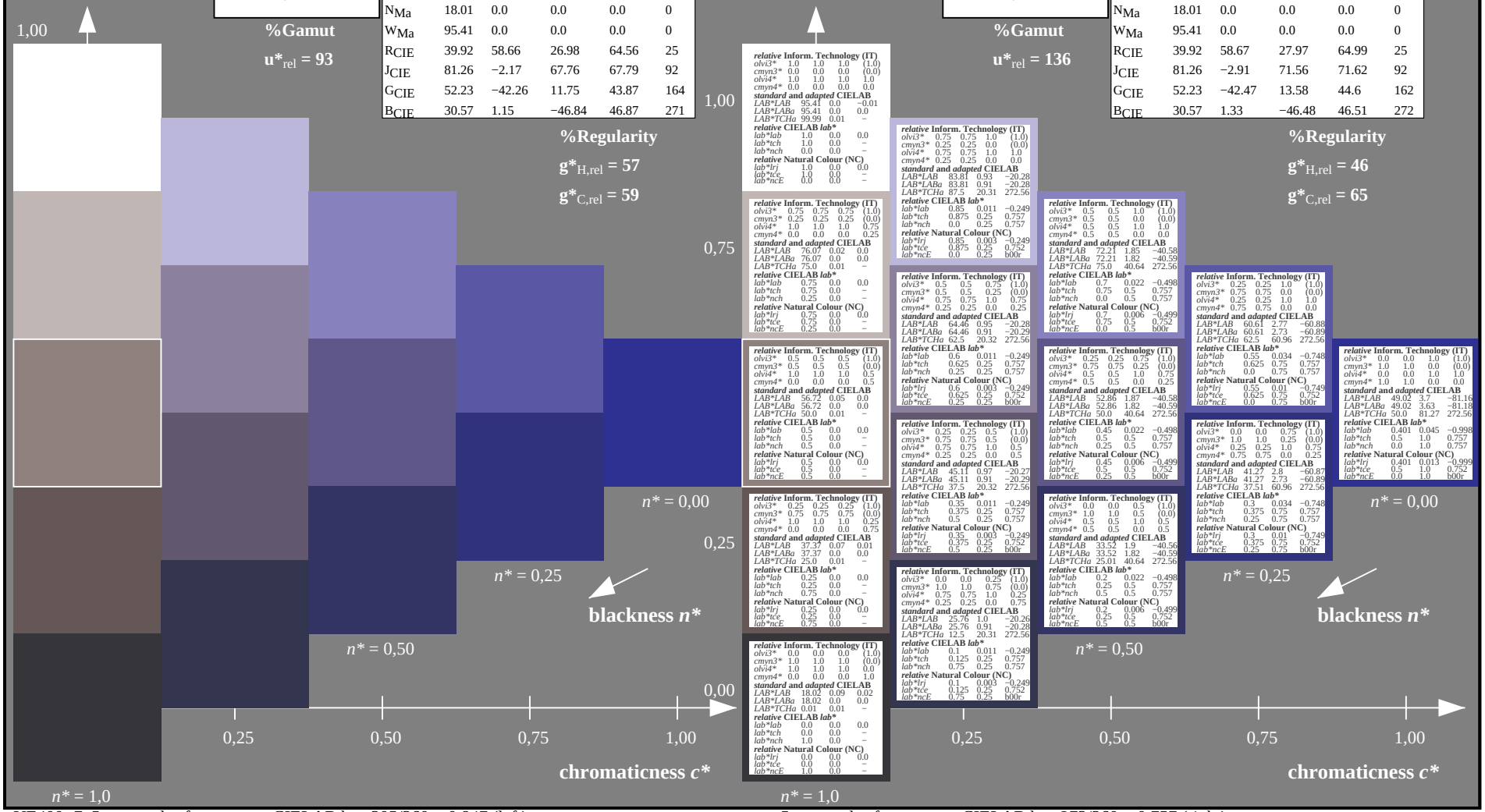
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



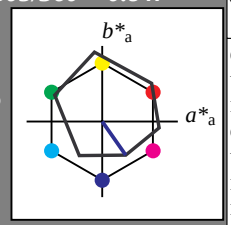
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

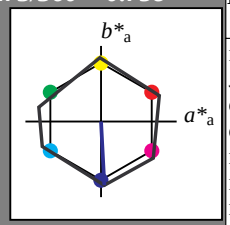
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

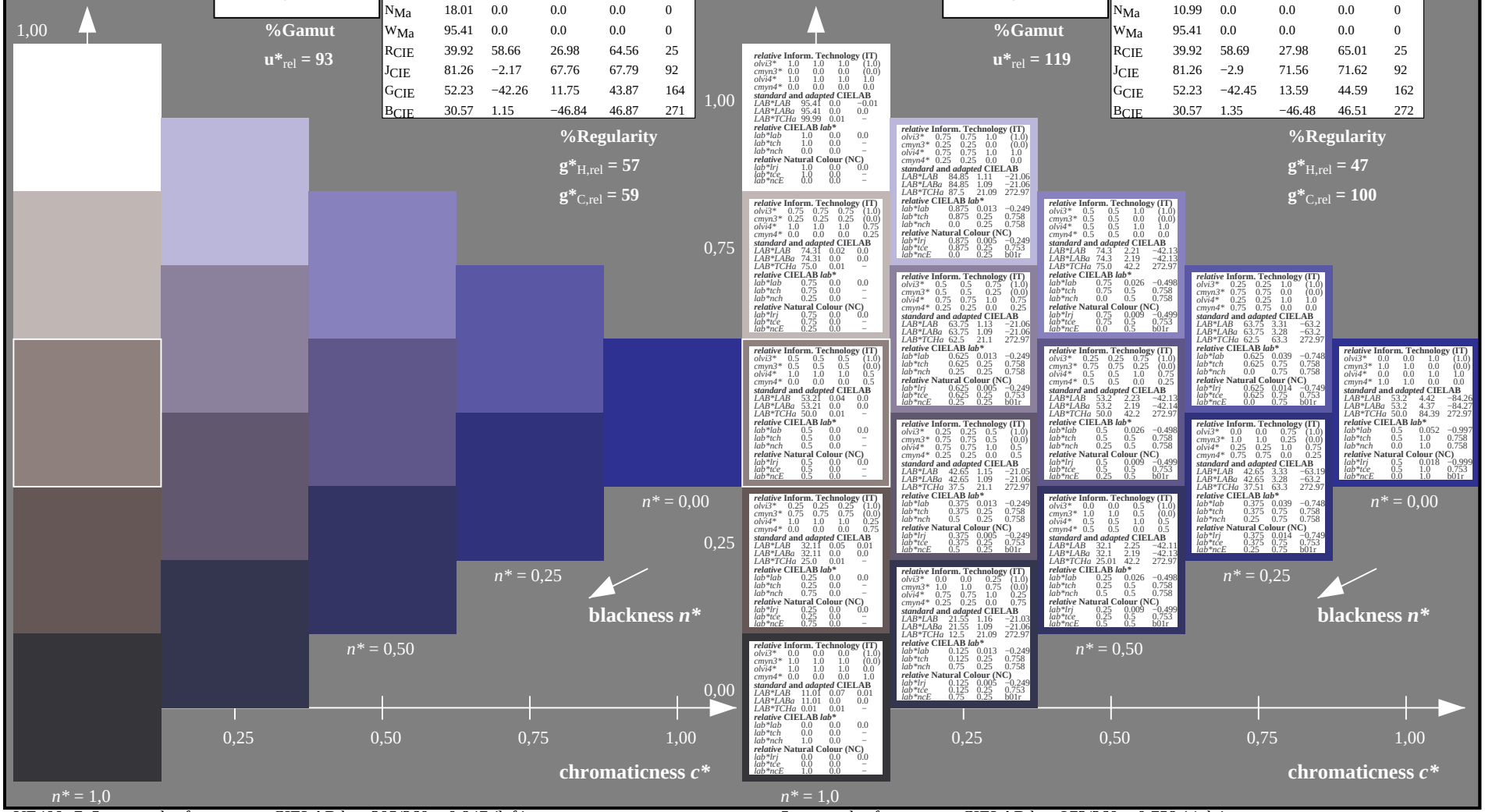
%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



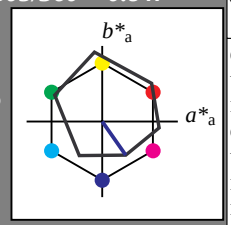
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

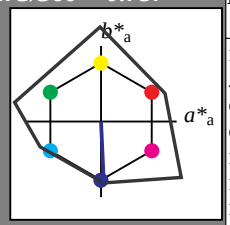
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

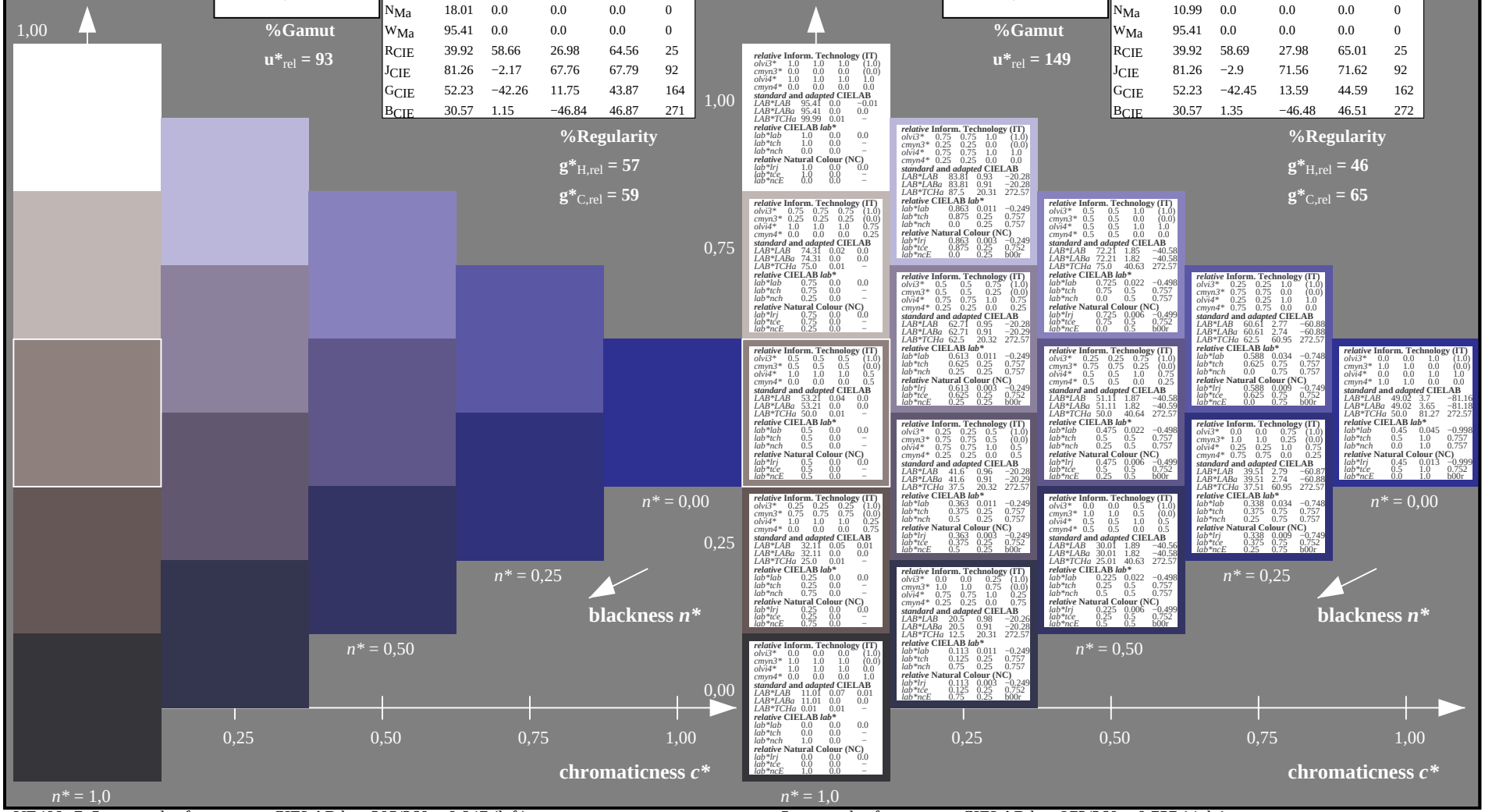
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



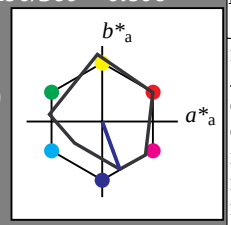
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

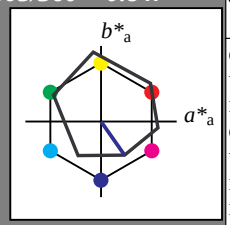
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

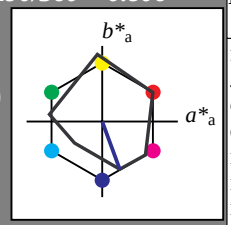
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

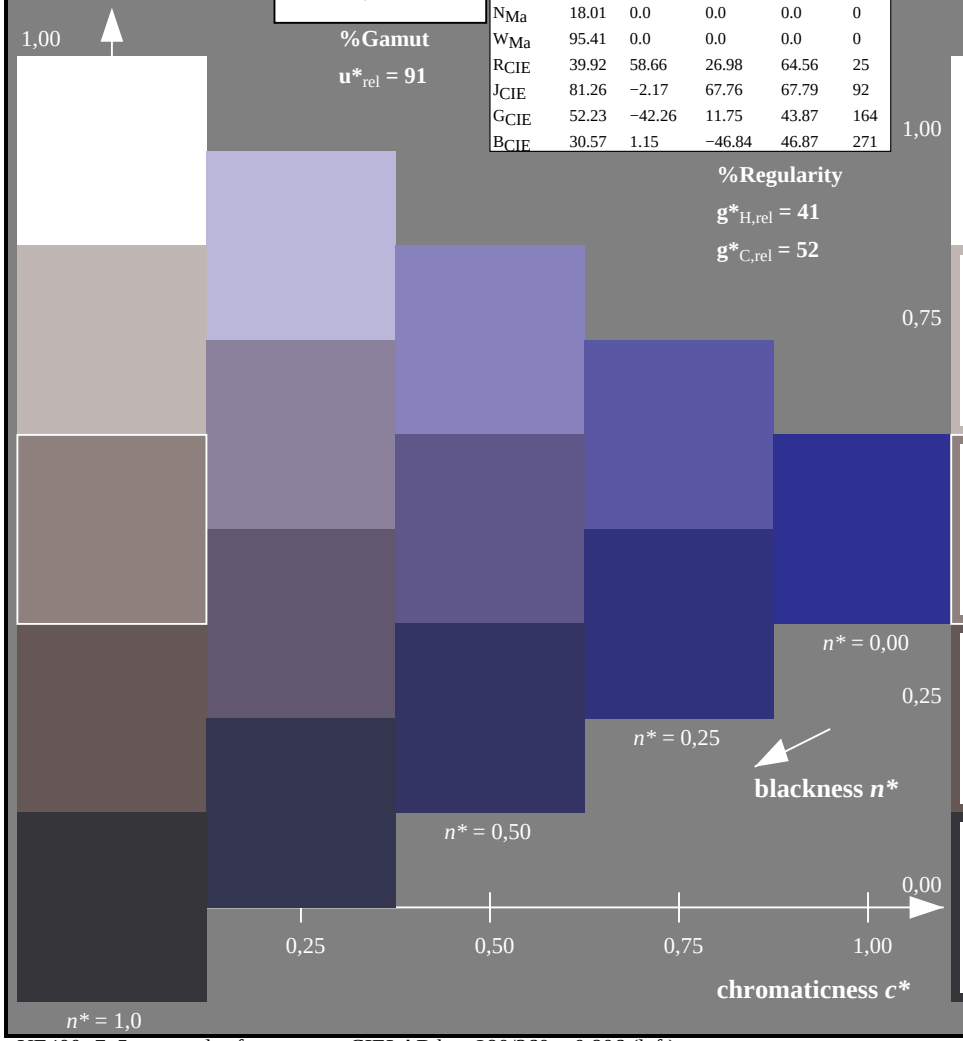
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

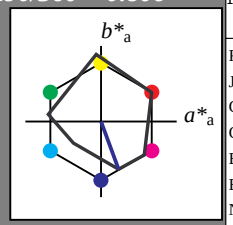


UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

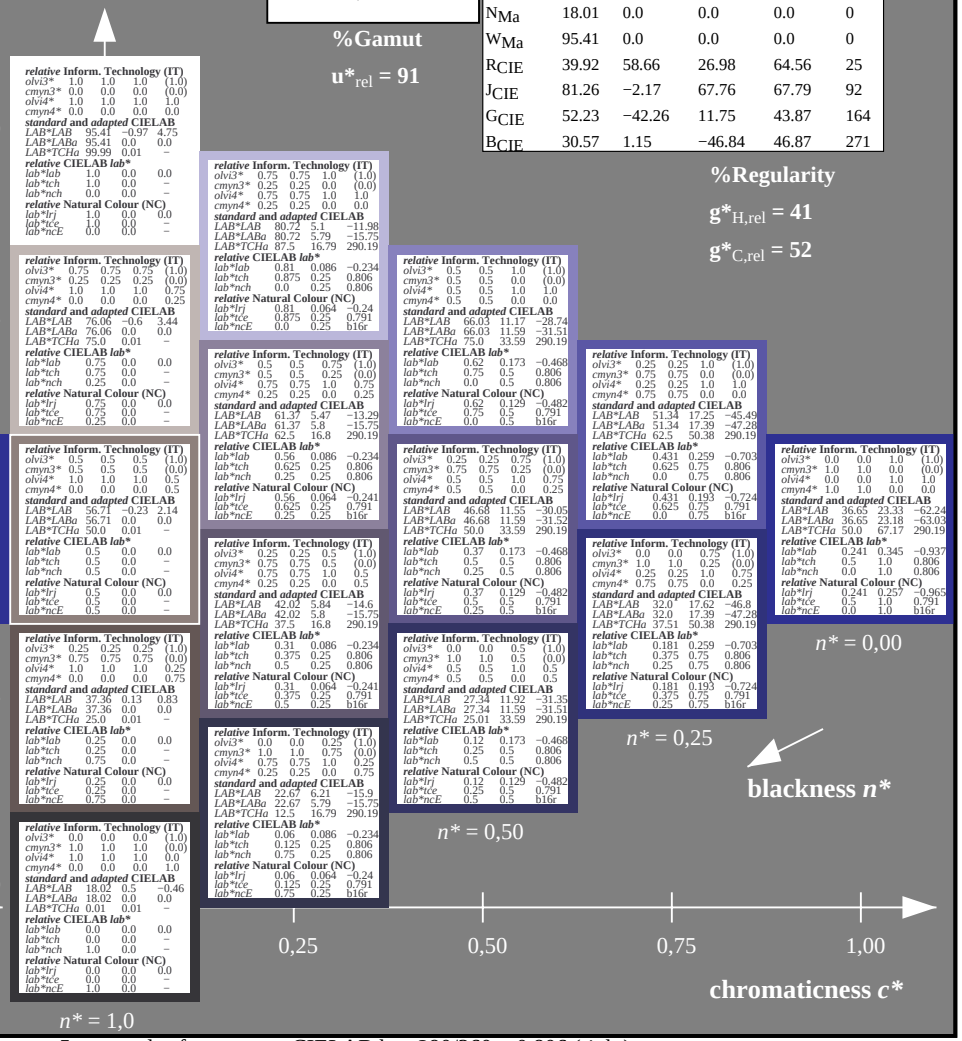
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

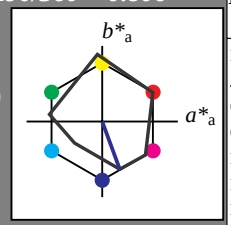


5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

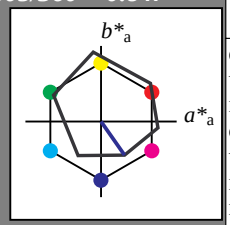
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

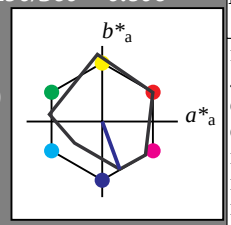
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

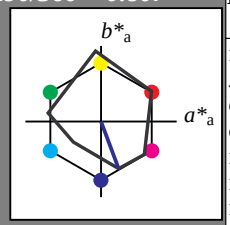
$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 92$

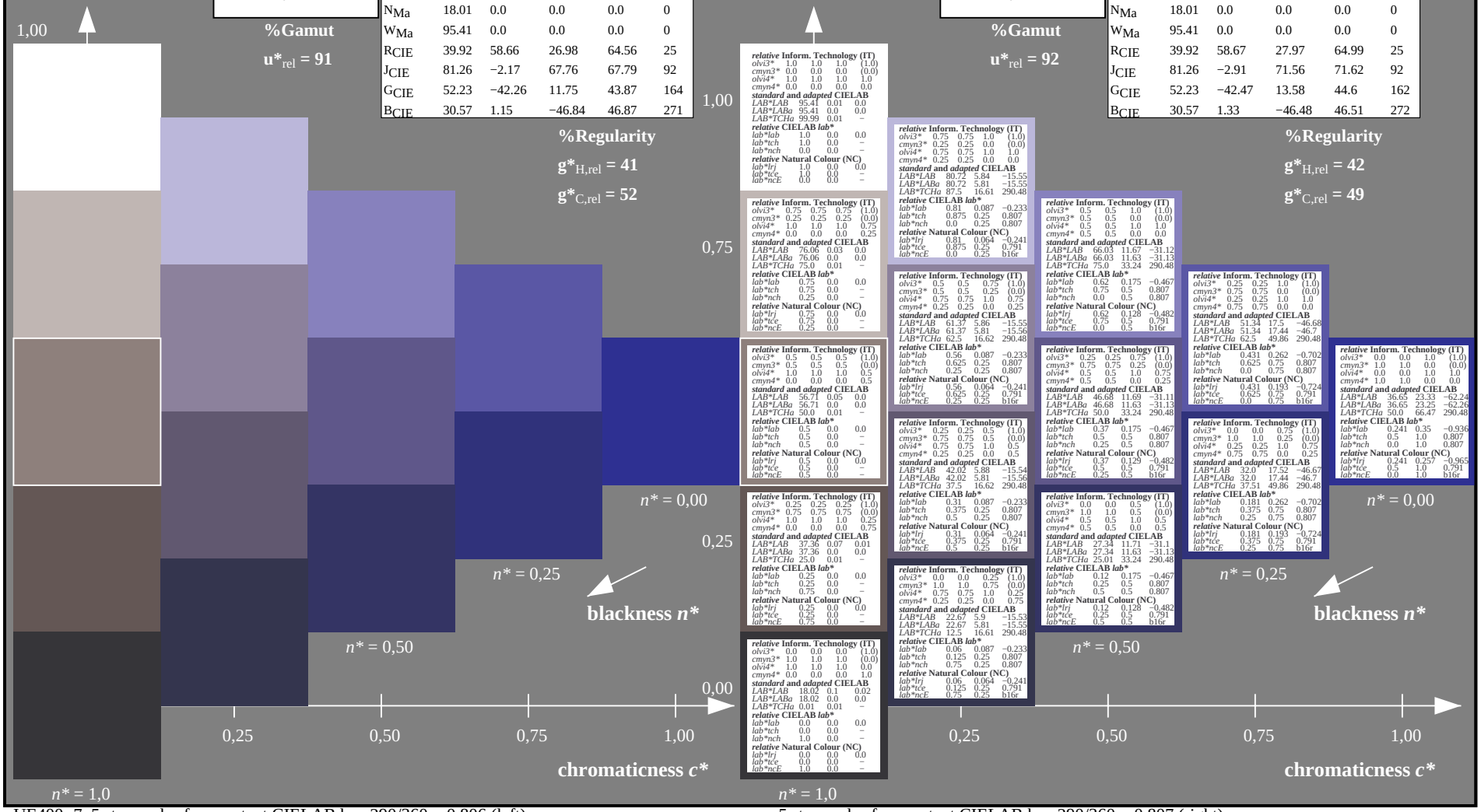
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



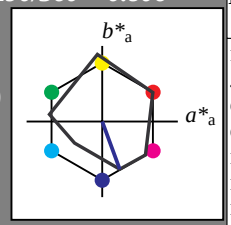
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

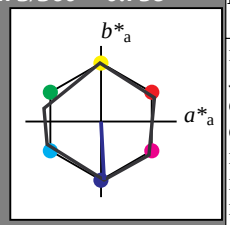
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

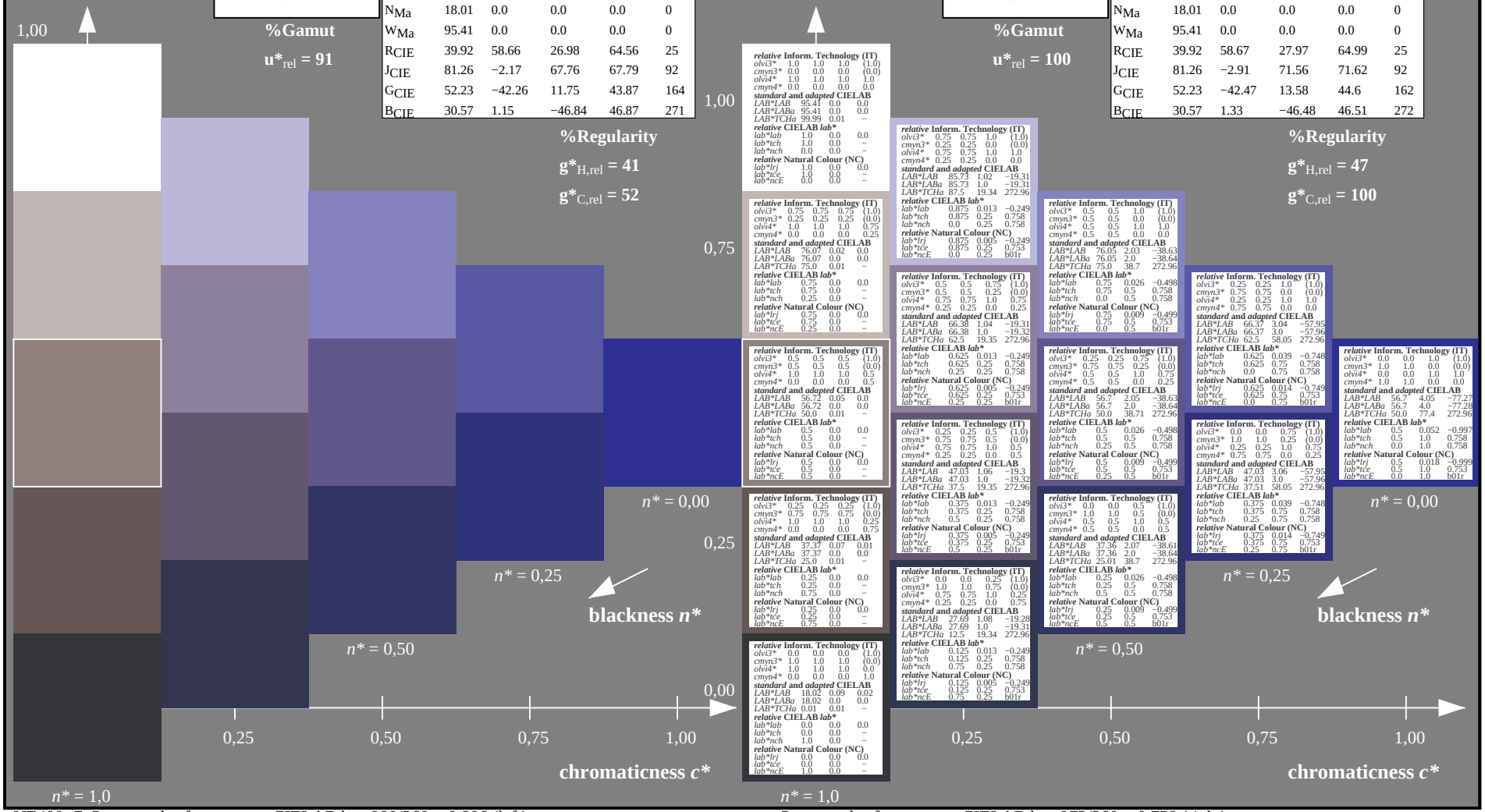
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



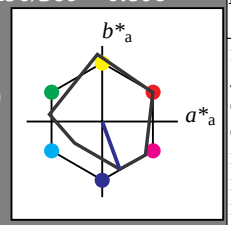
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

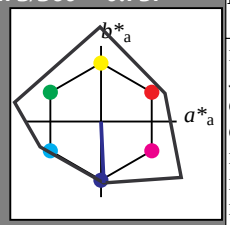
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

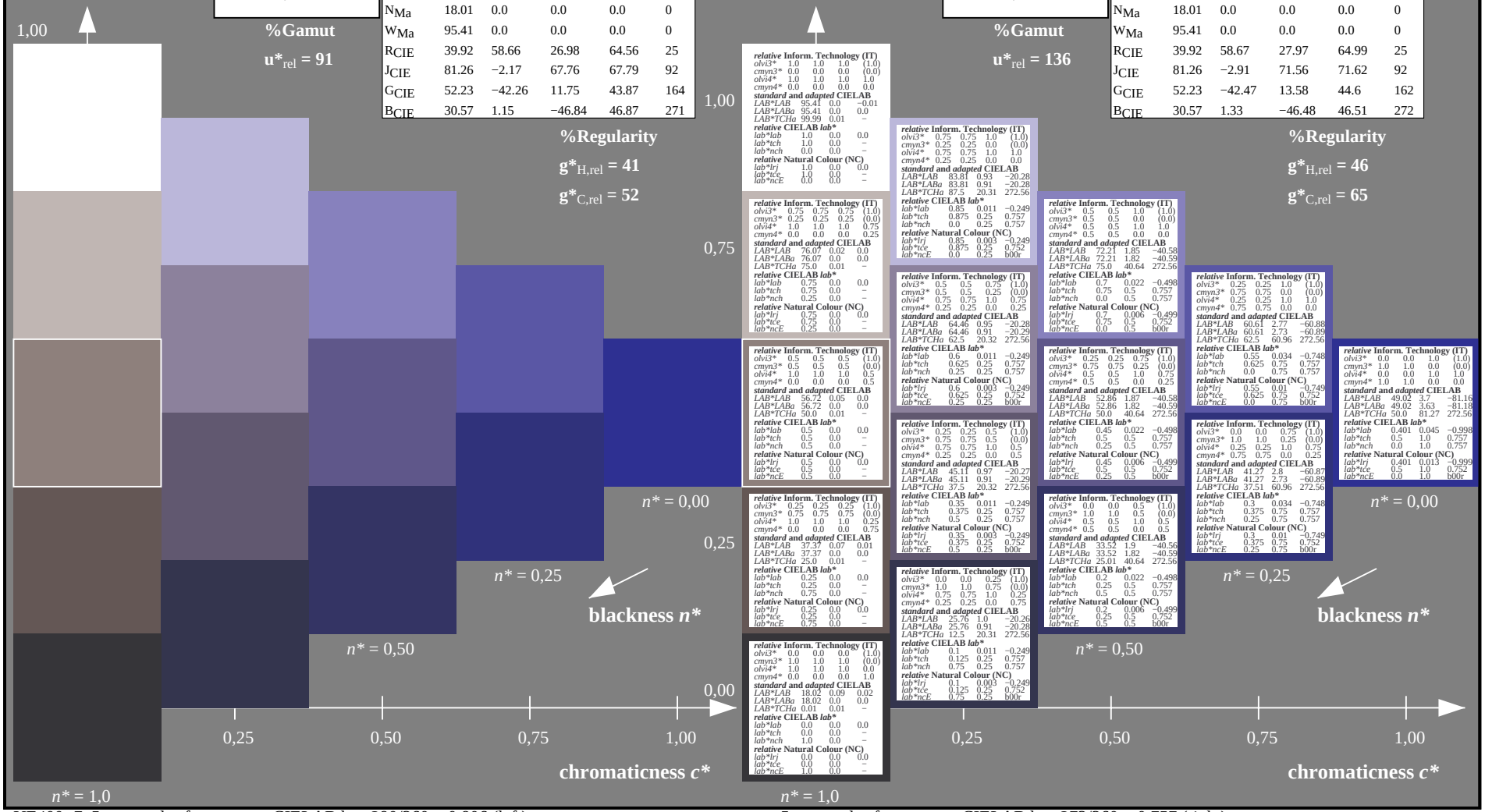
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



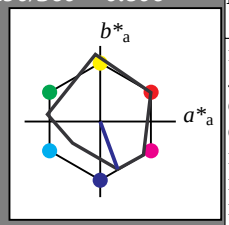
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 290/360 = 0.806*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

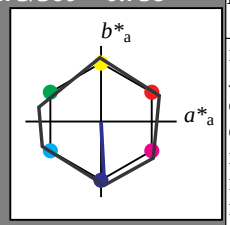
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 273/360 = 0.758*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

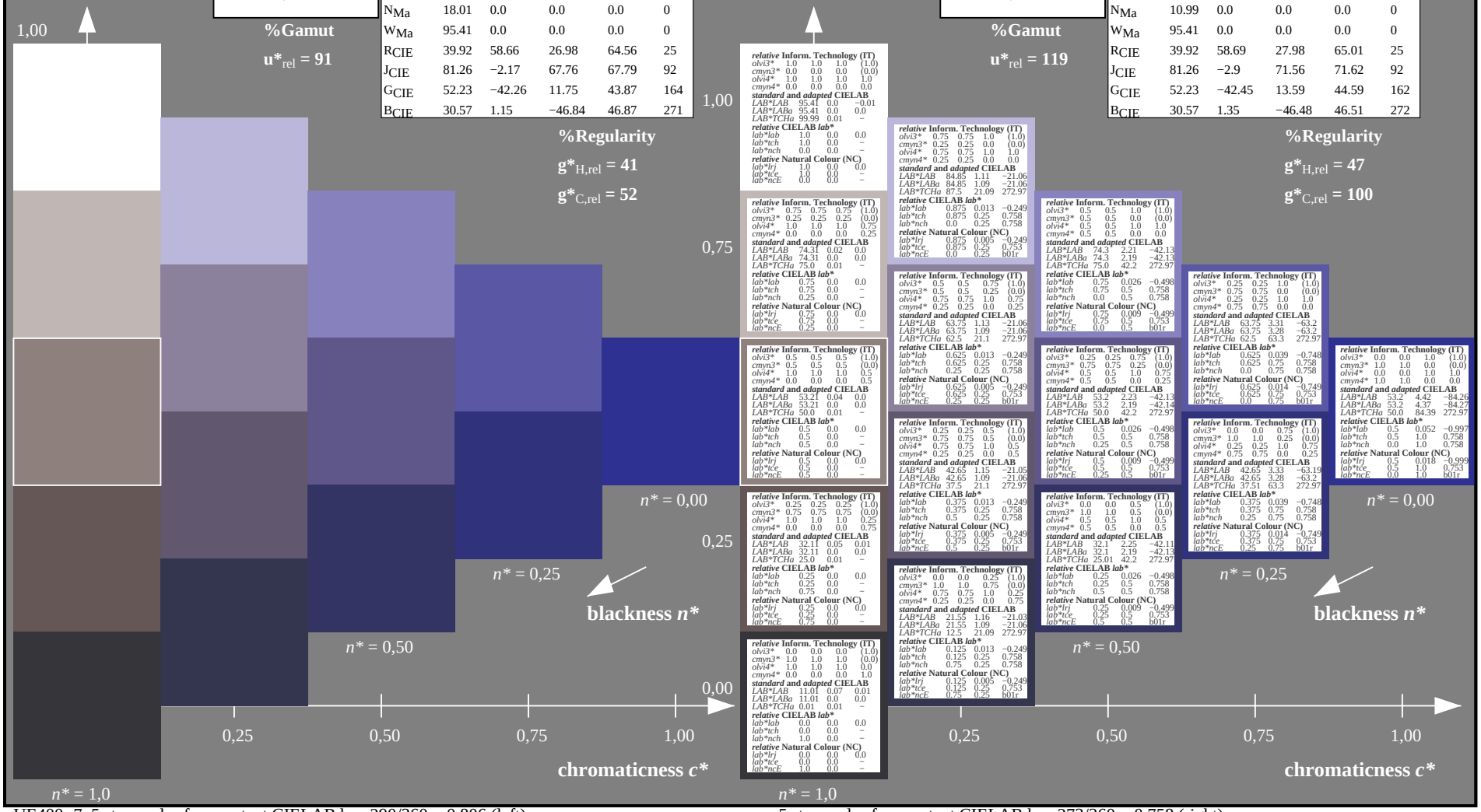
%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



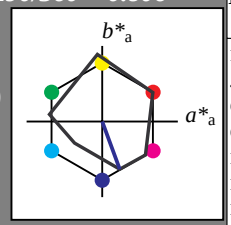
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

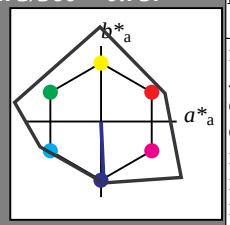
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

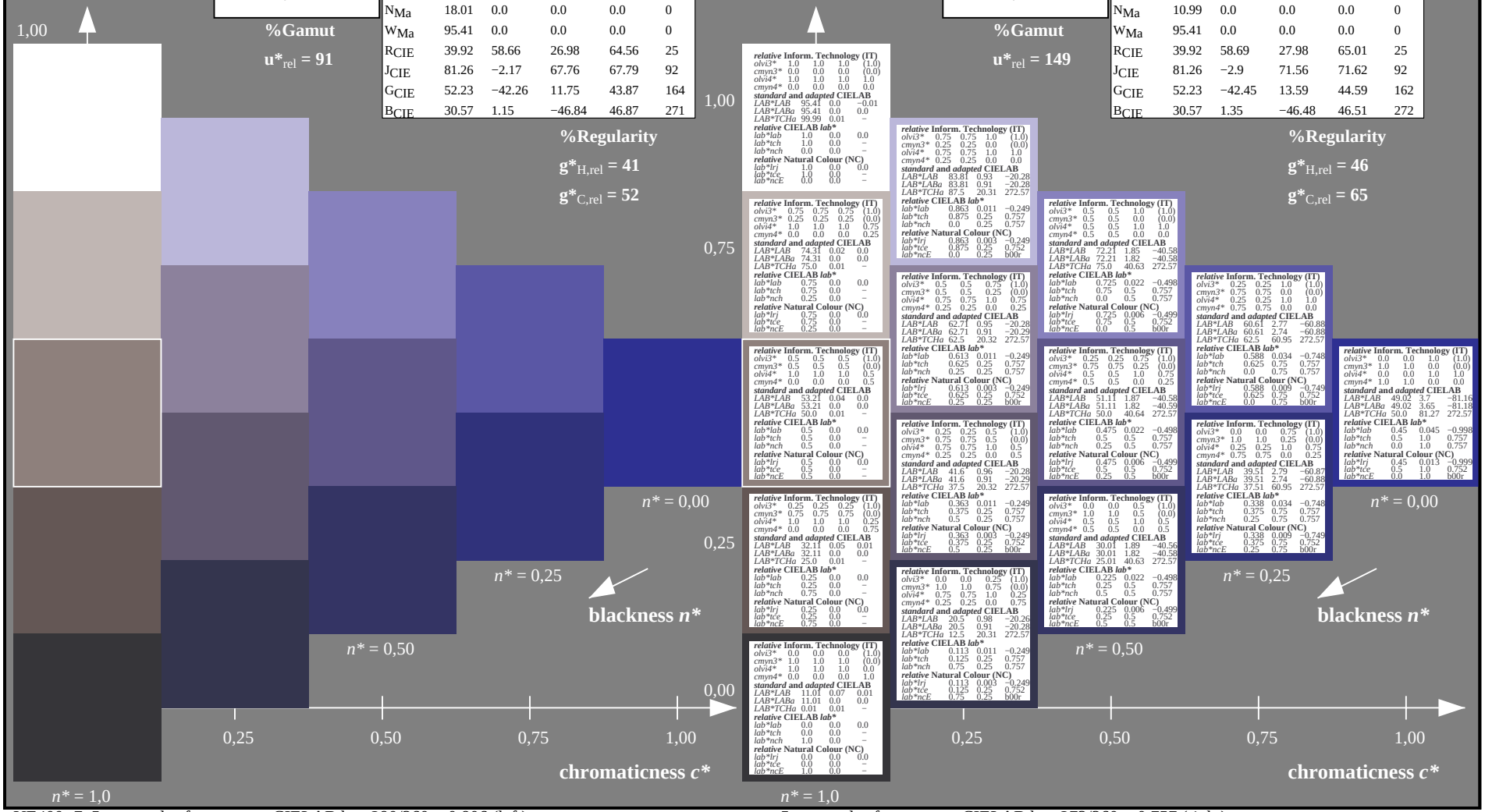
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



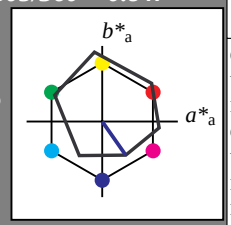
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

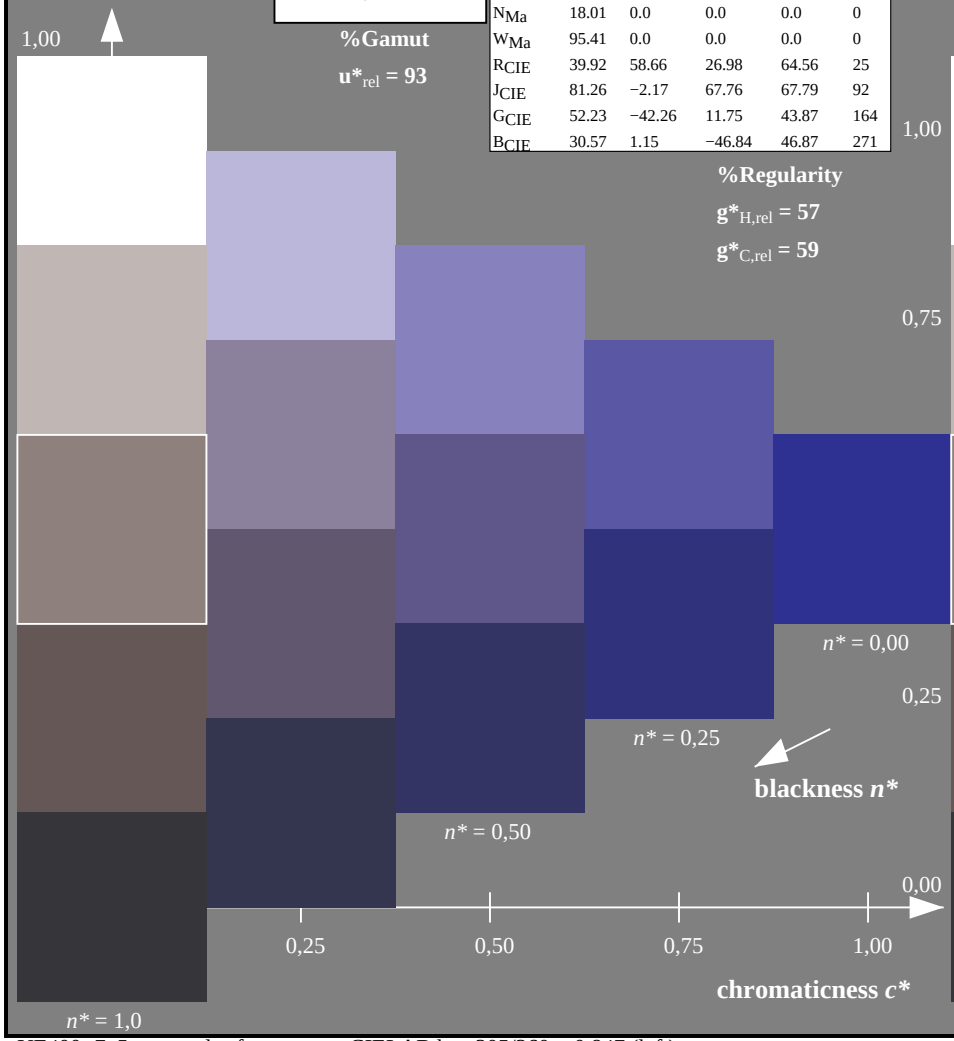
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

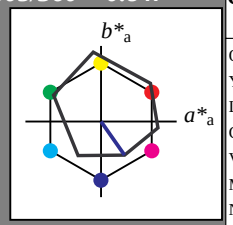
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

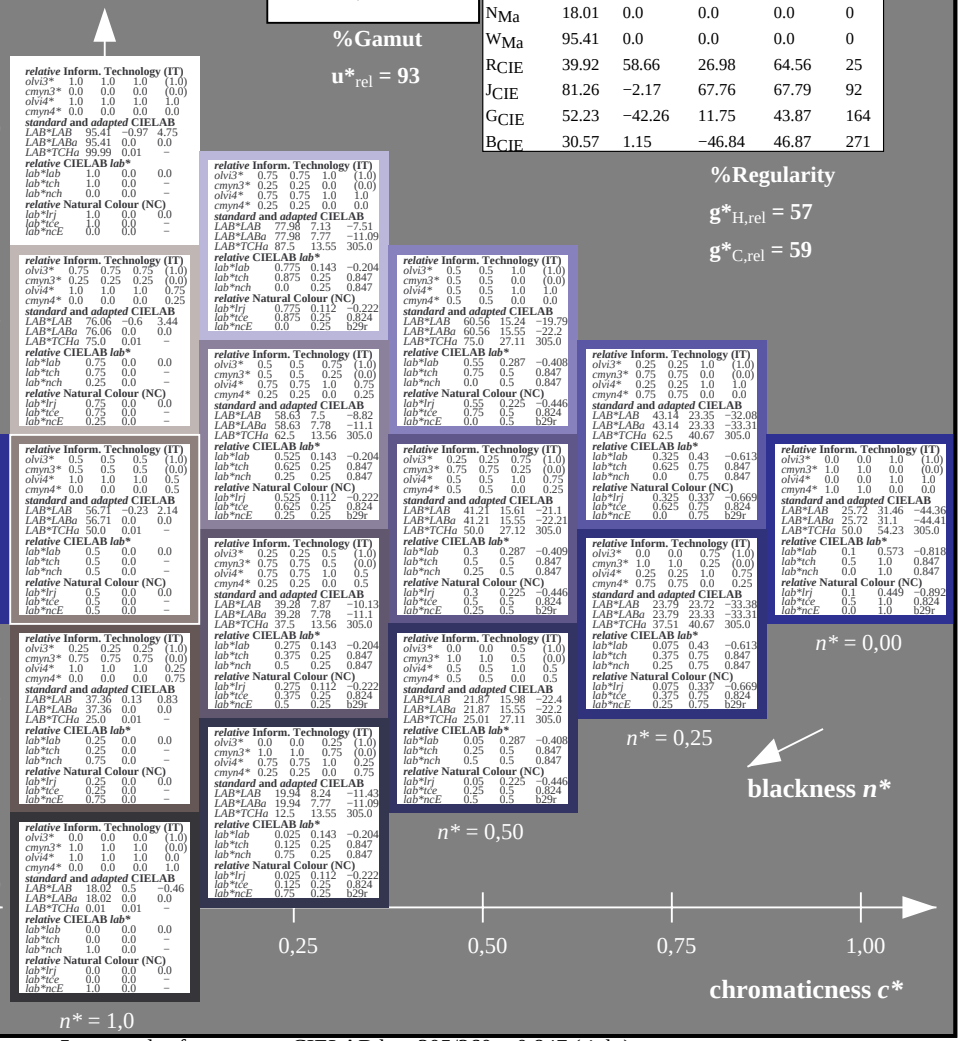
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



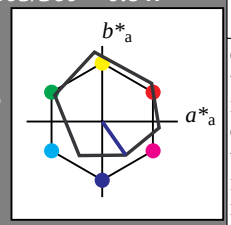
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

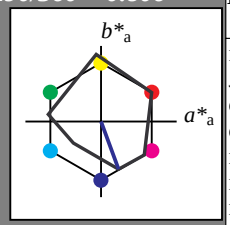
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

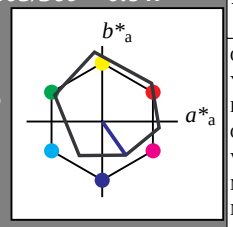
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

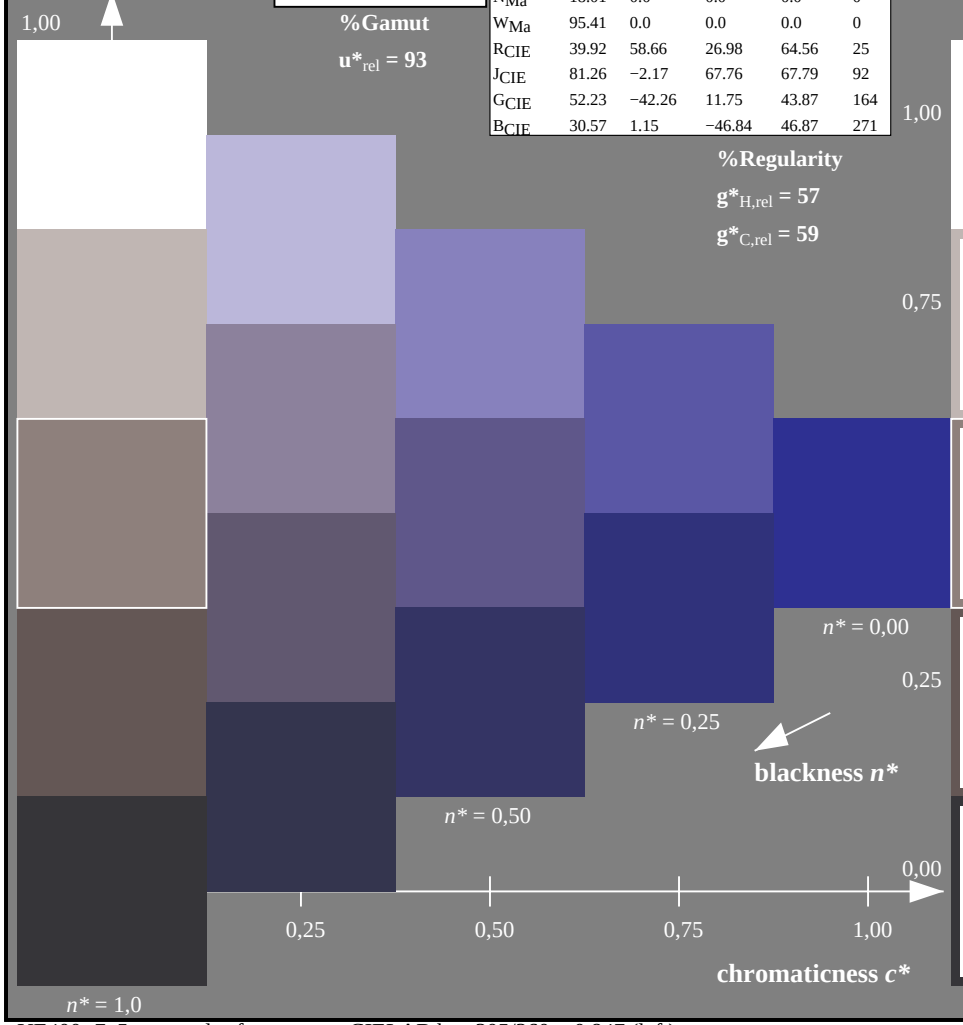
%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

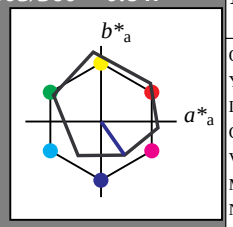
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

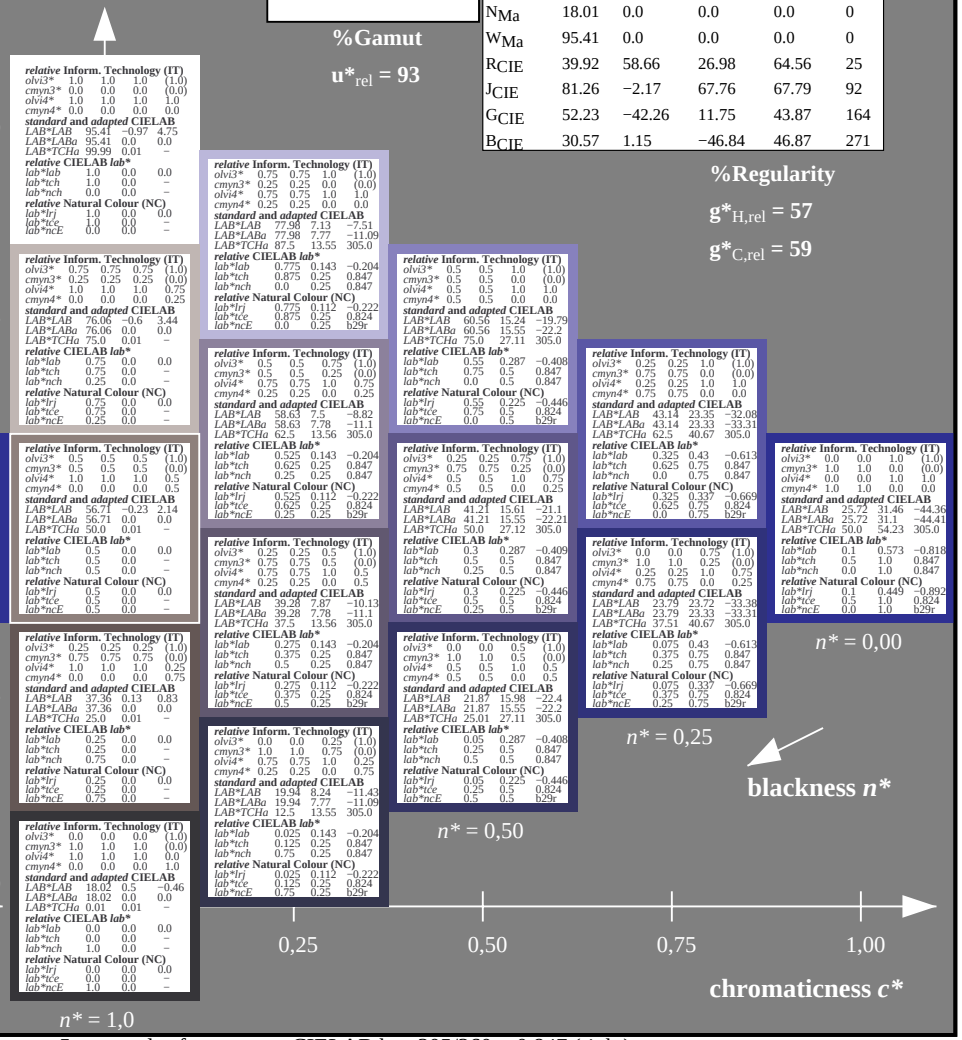
%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



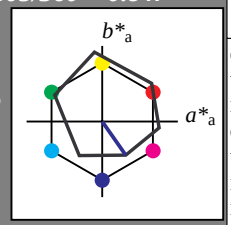
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 305/360 = 0.847*
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

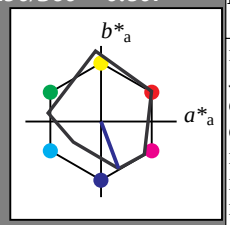
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 290/360 = 0.807*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

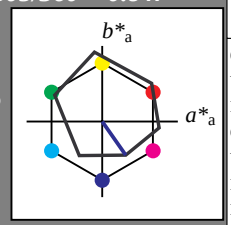
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 305/360 = 0.847*
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

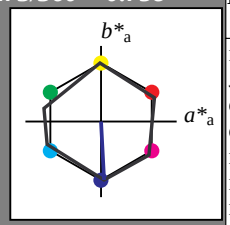
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 273/360 = 0.758*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

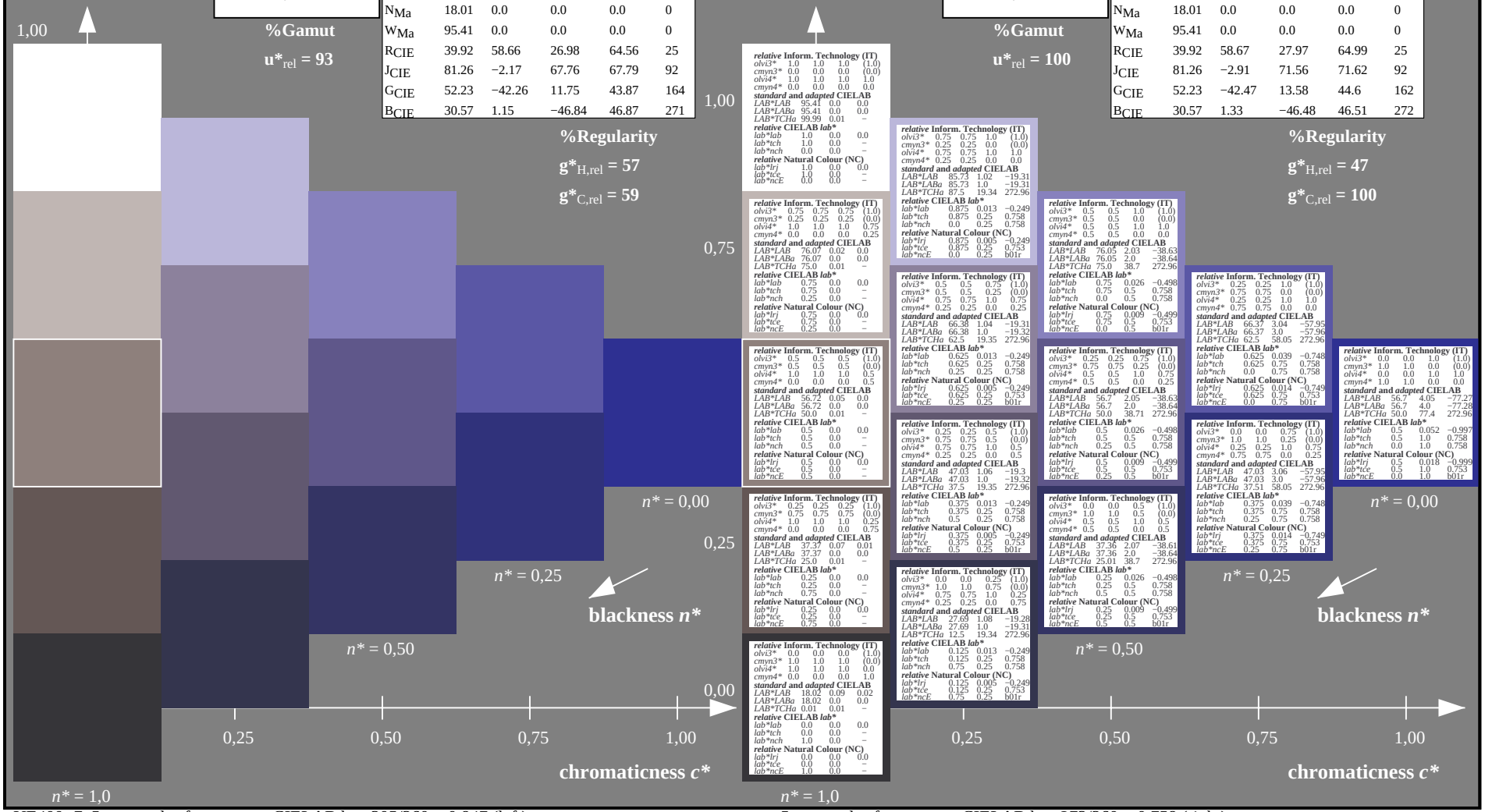
%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



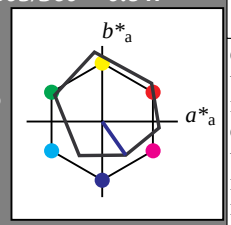
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System TRS18
for hue *h = lab*h = 305/360 = 0.847**
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

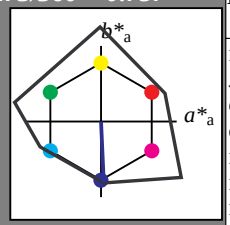
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue *h = lab*h = 273/360 = 0.757**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

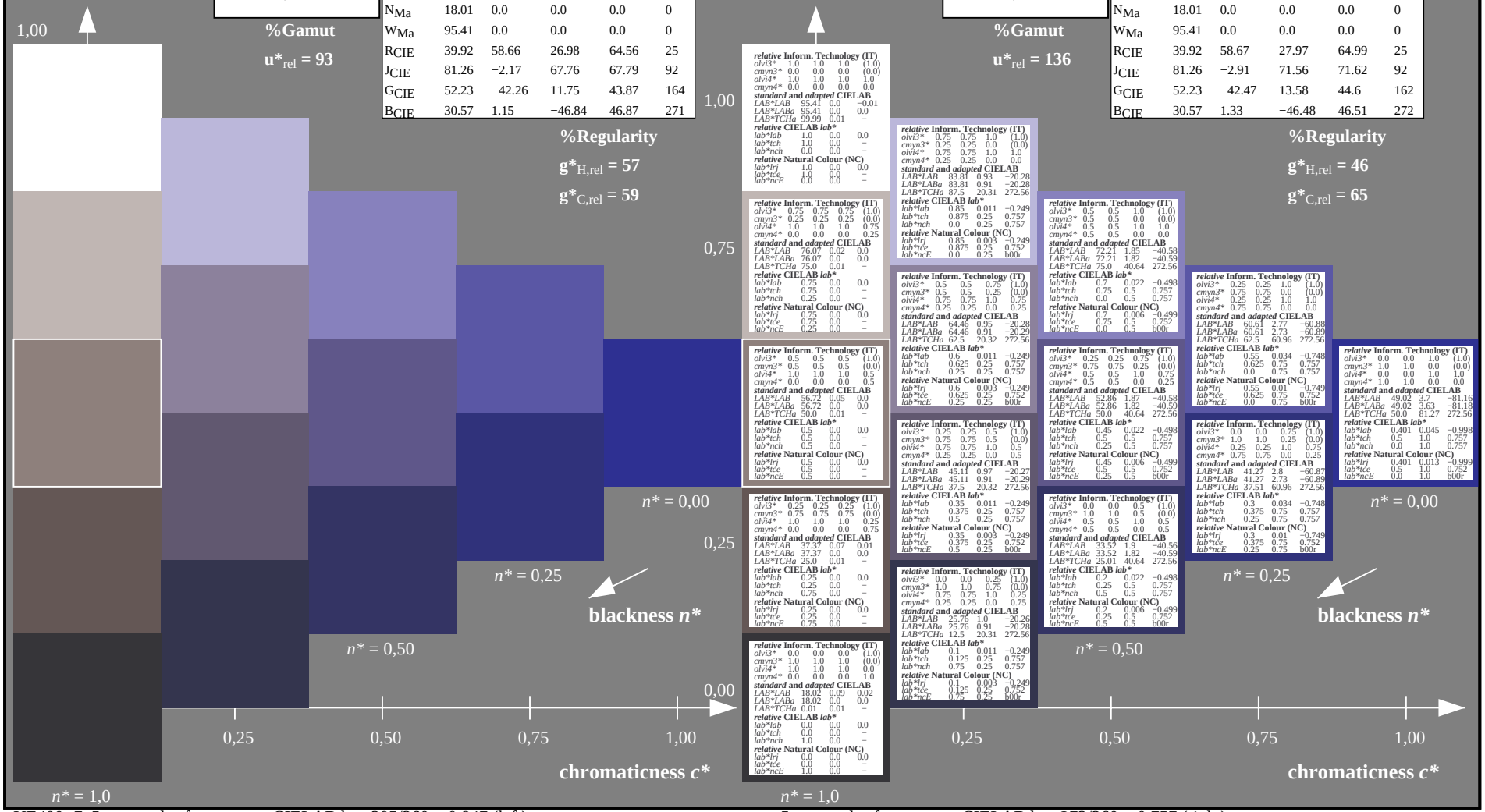
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



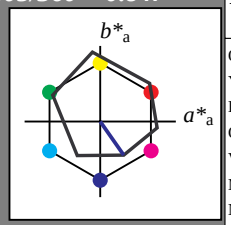
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

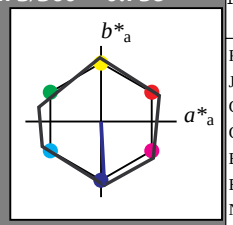
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

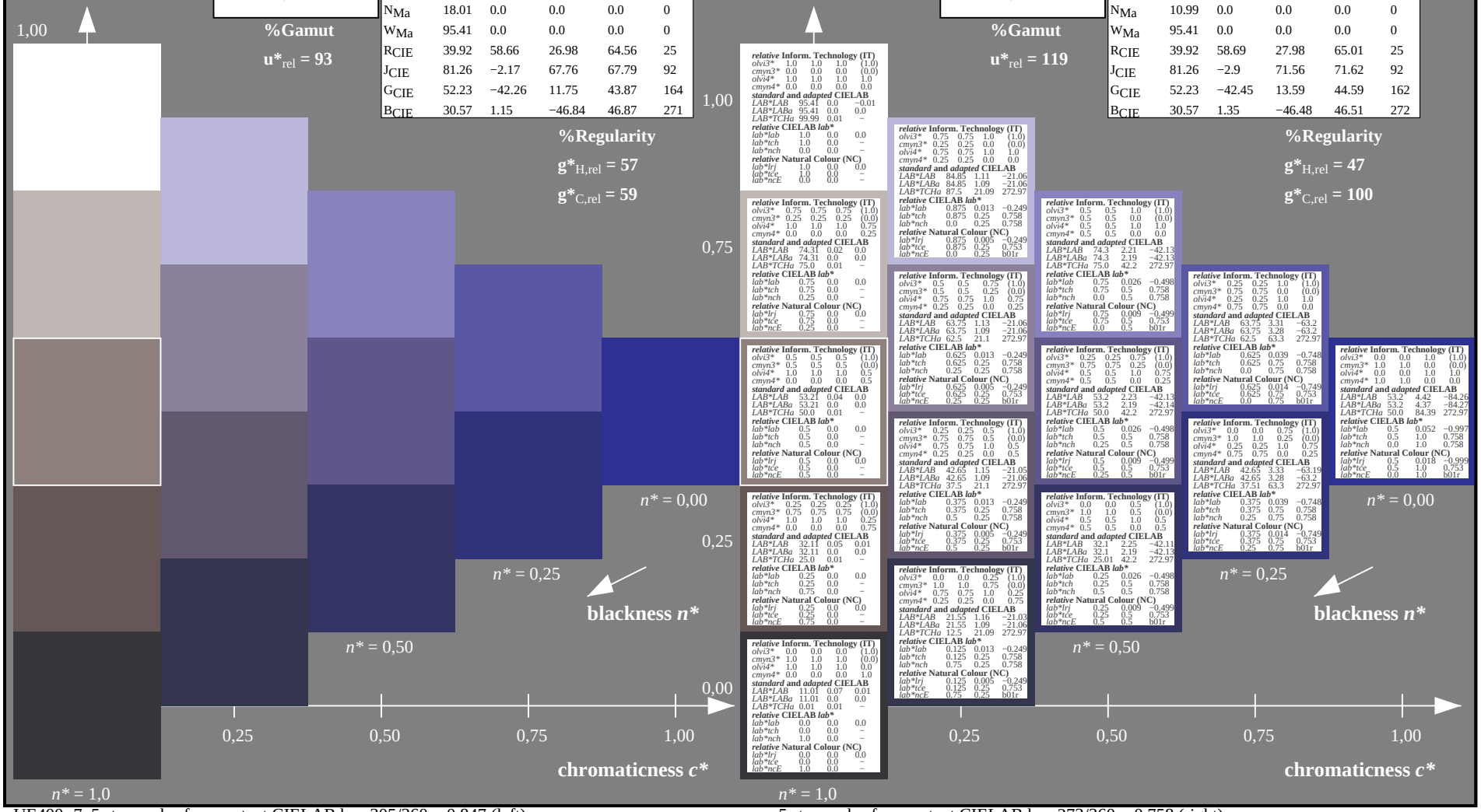
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



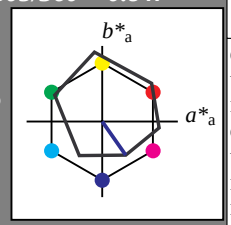
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

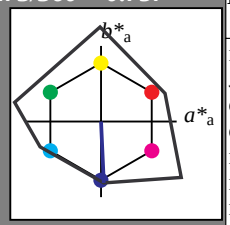
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

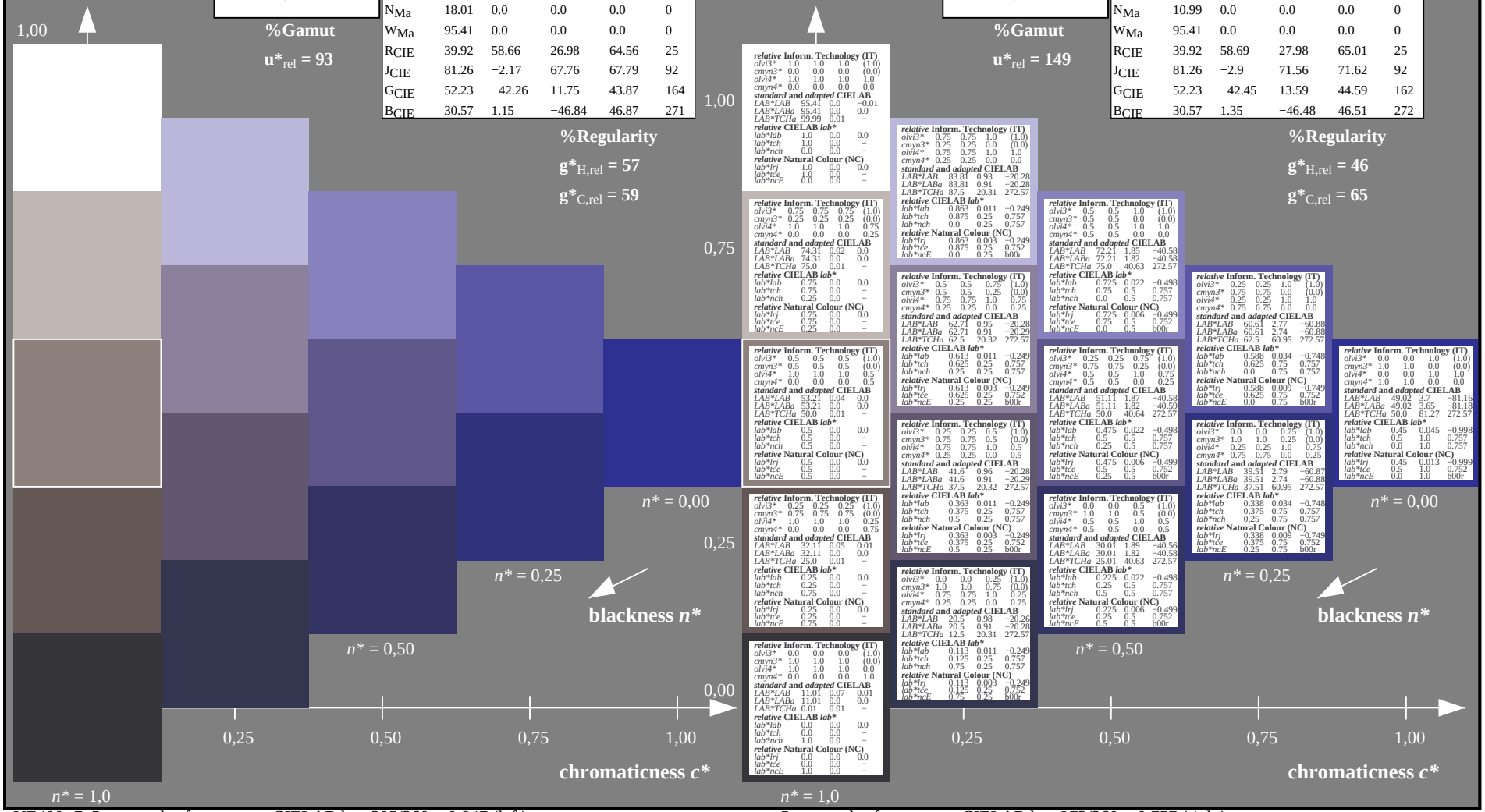
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



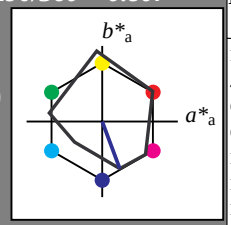
UE400−7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

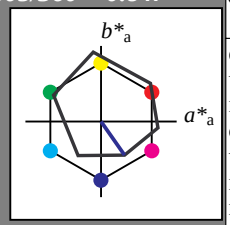
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

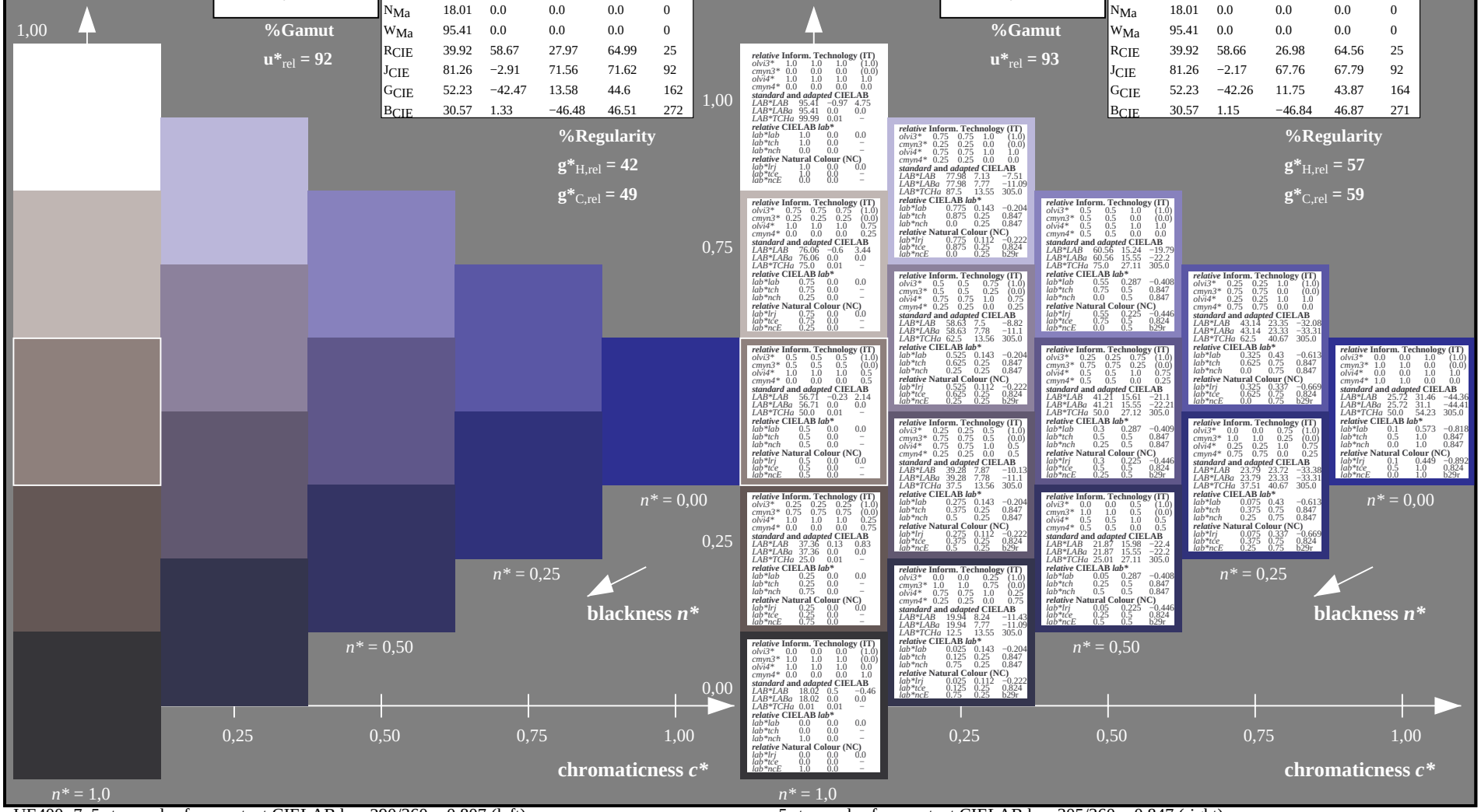
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



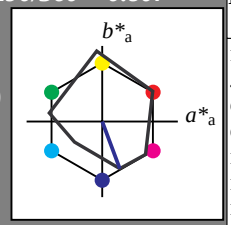
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

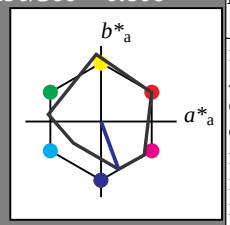
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

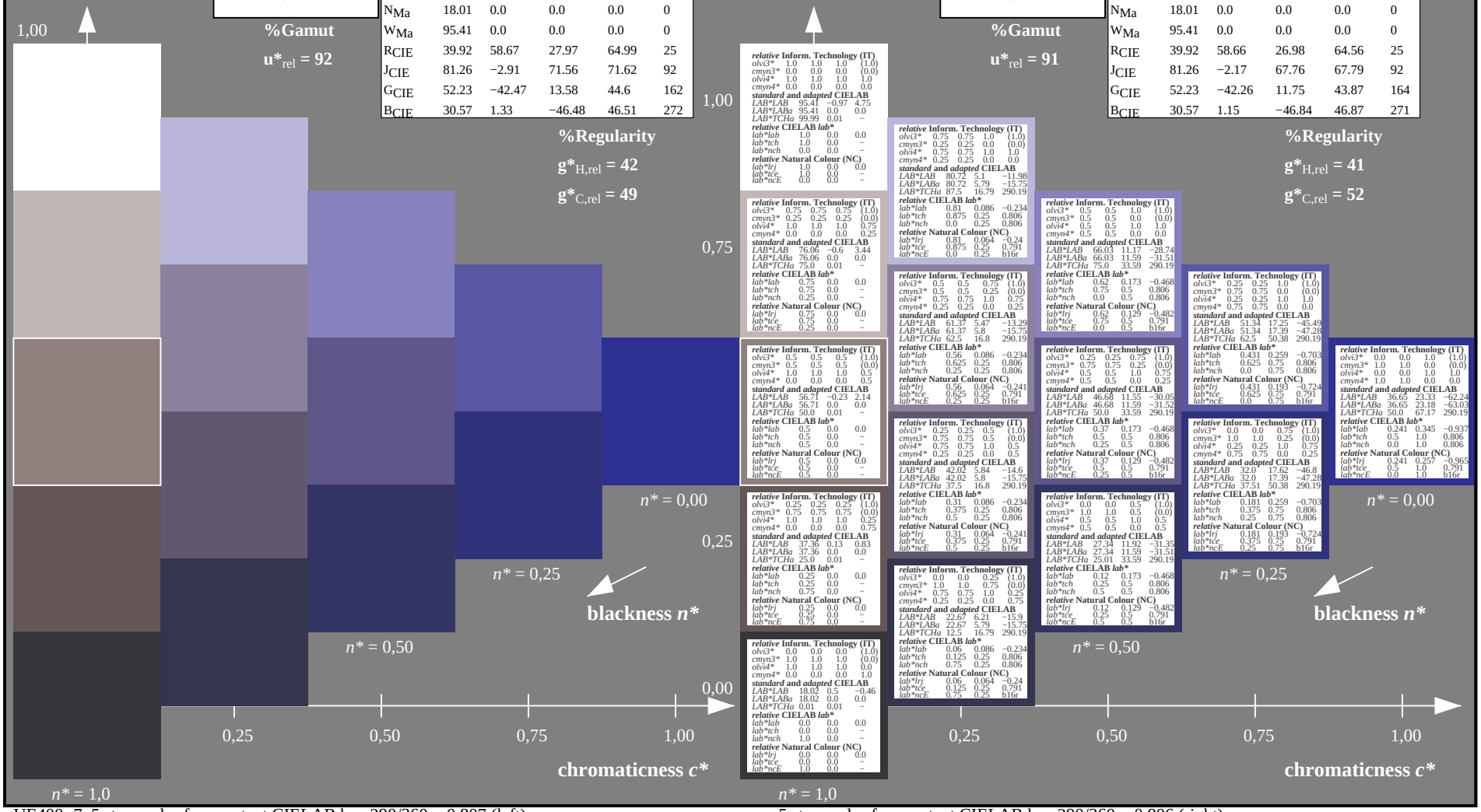
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



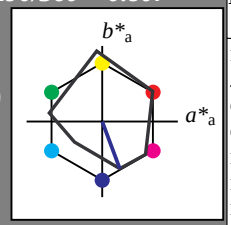
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

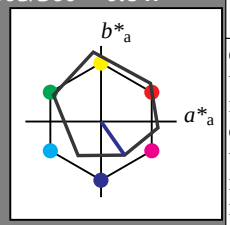
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

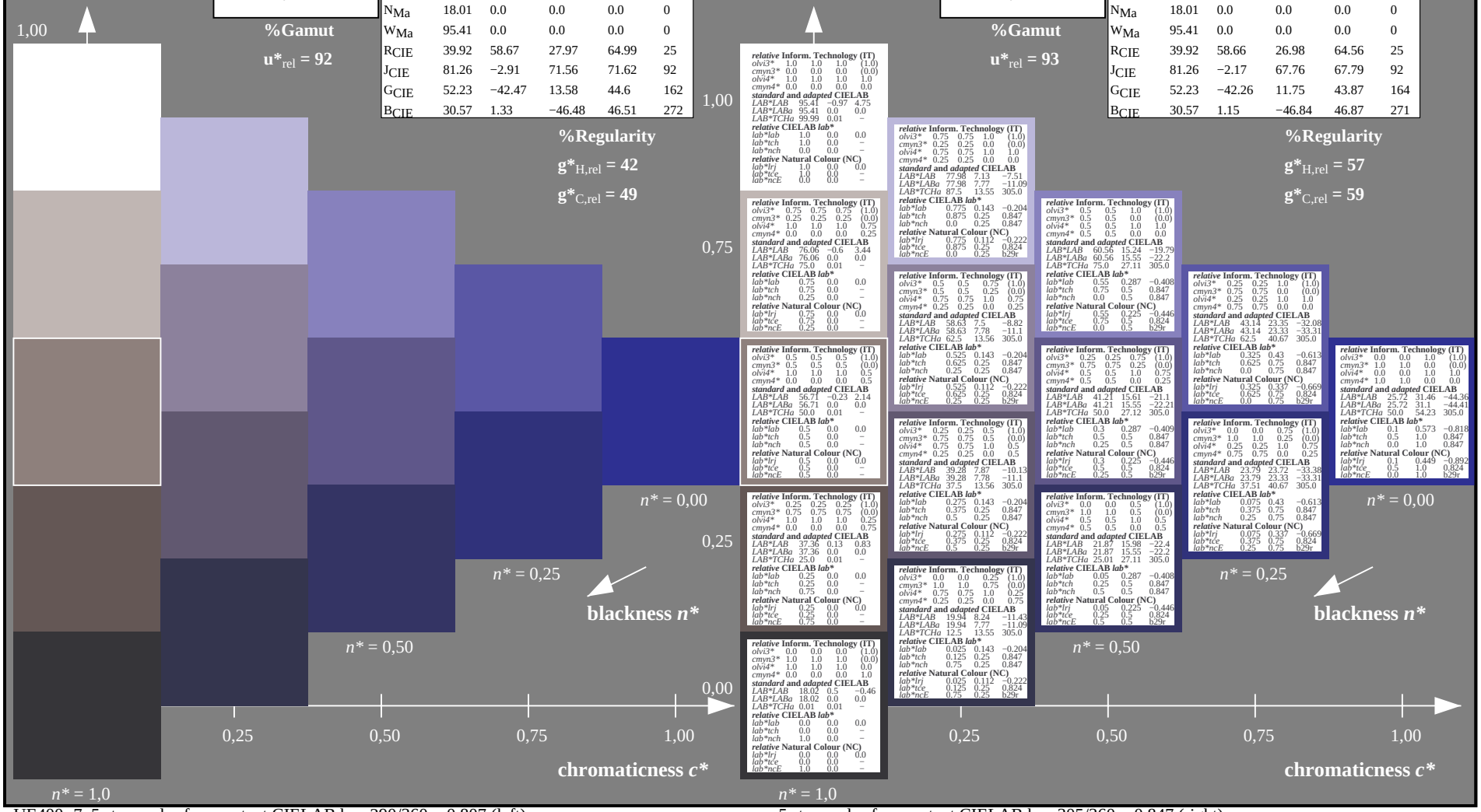
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



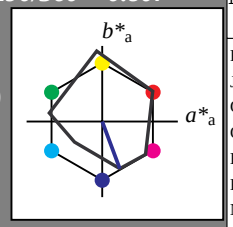
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 92$

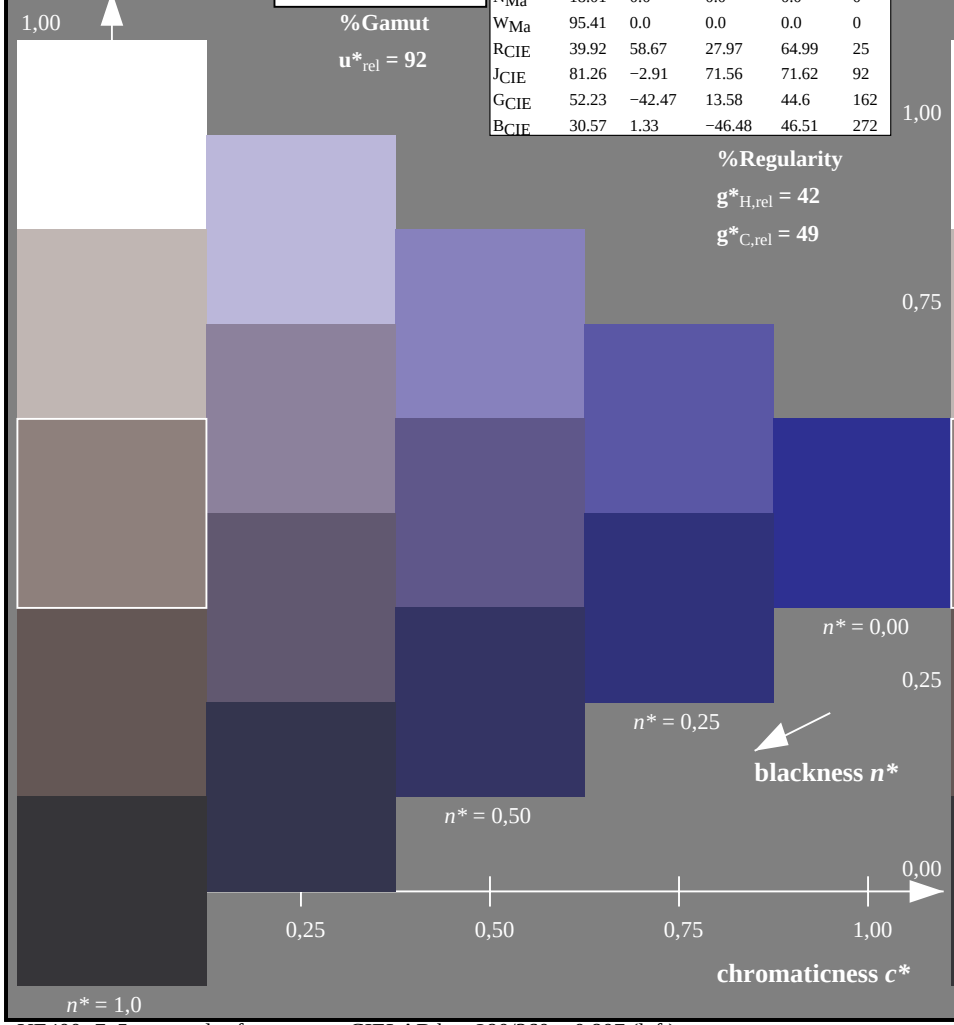
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

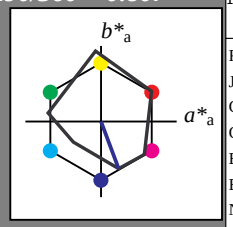
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 92$

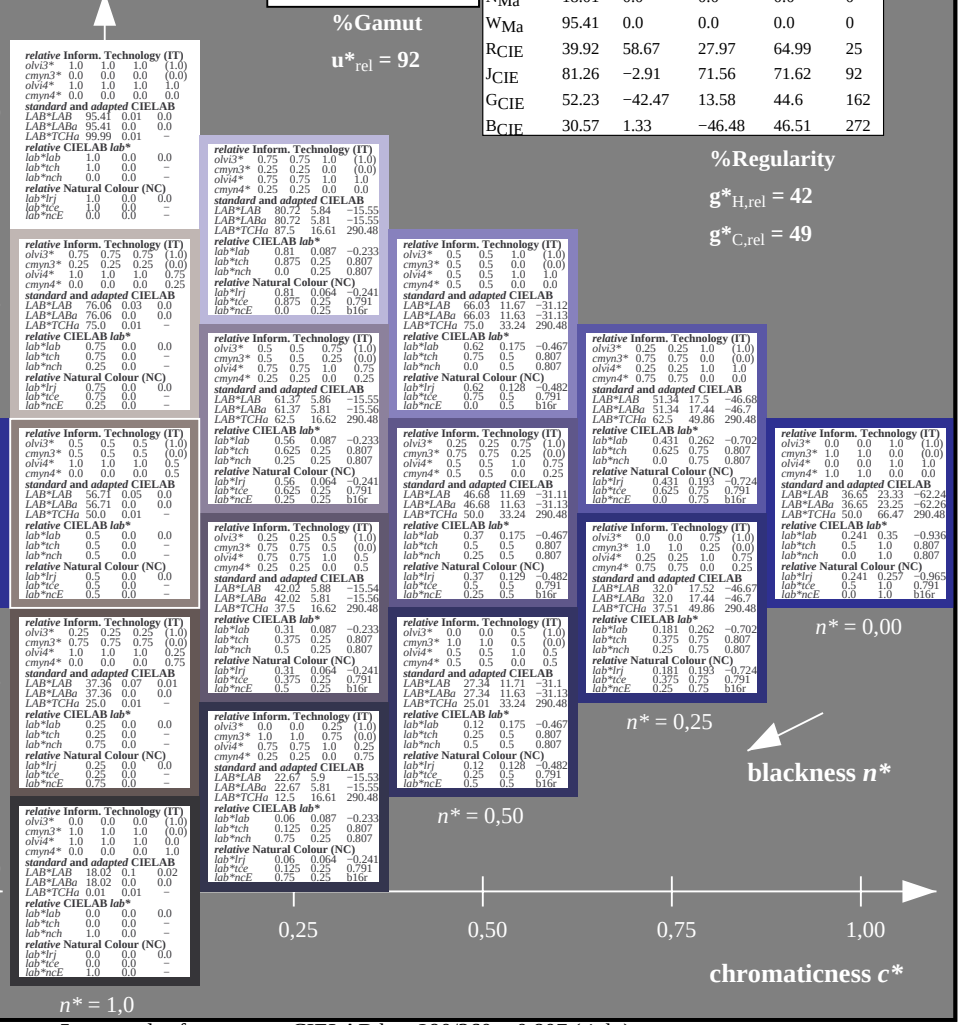
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



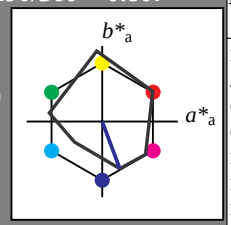
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

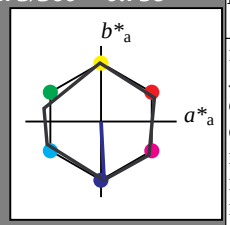
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

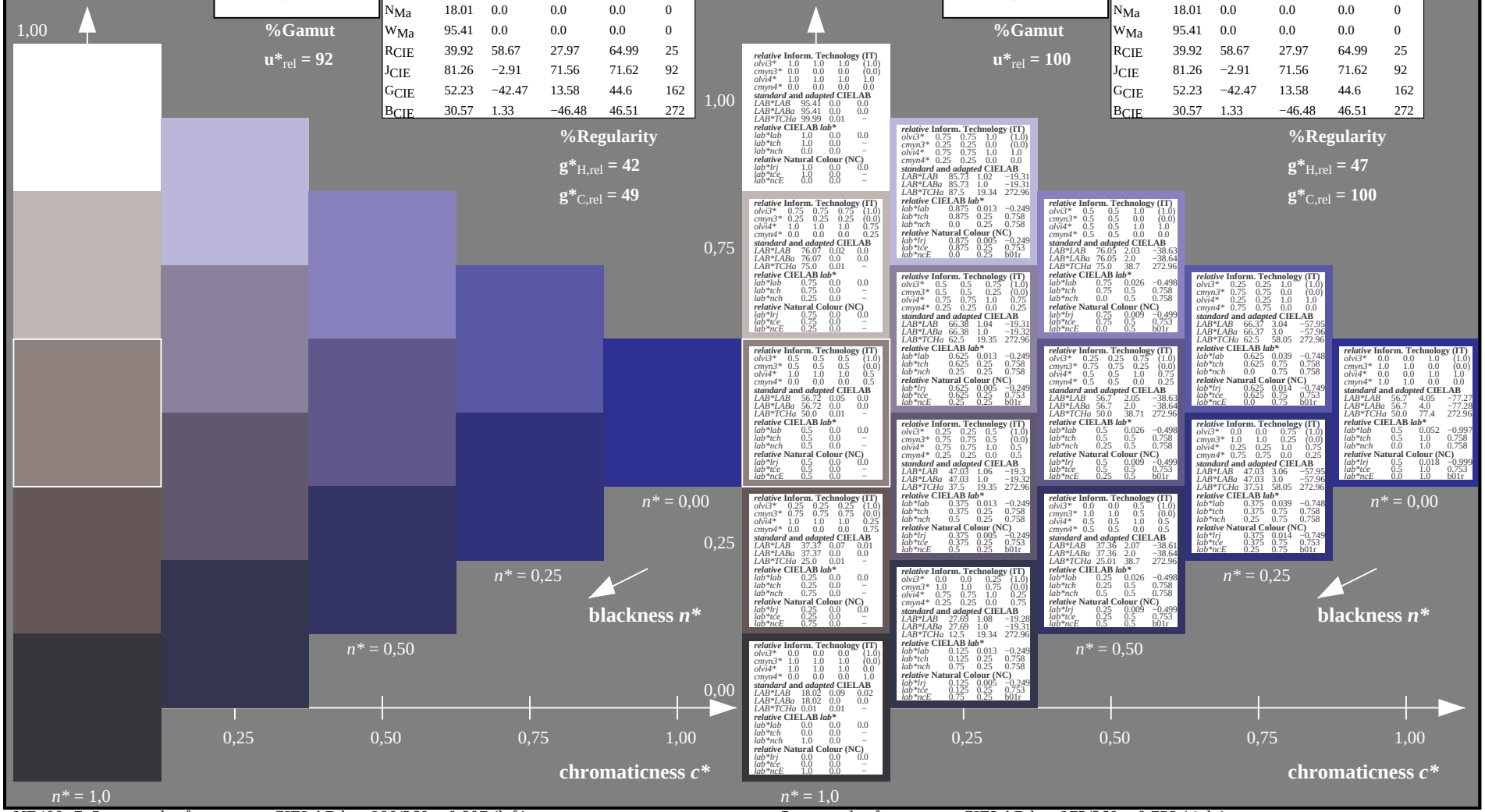
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



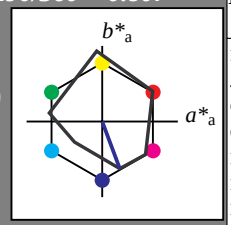
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

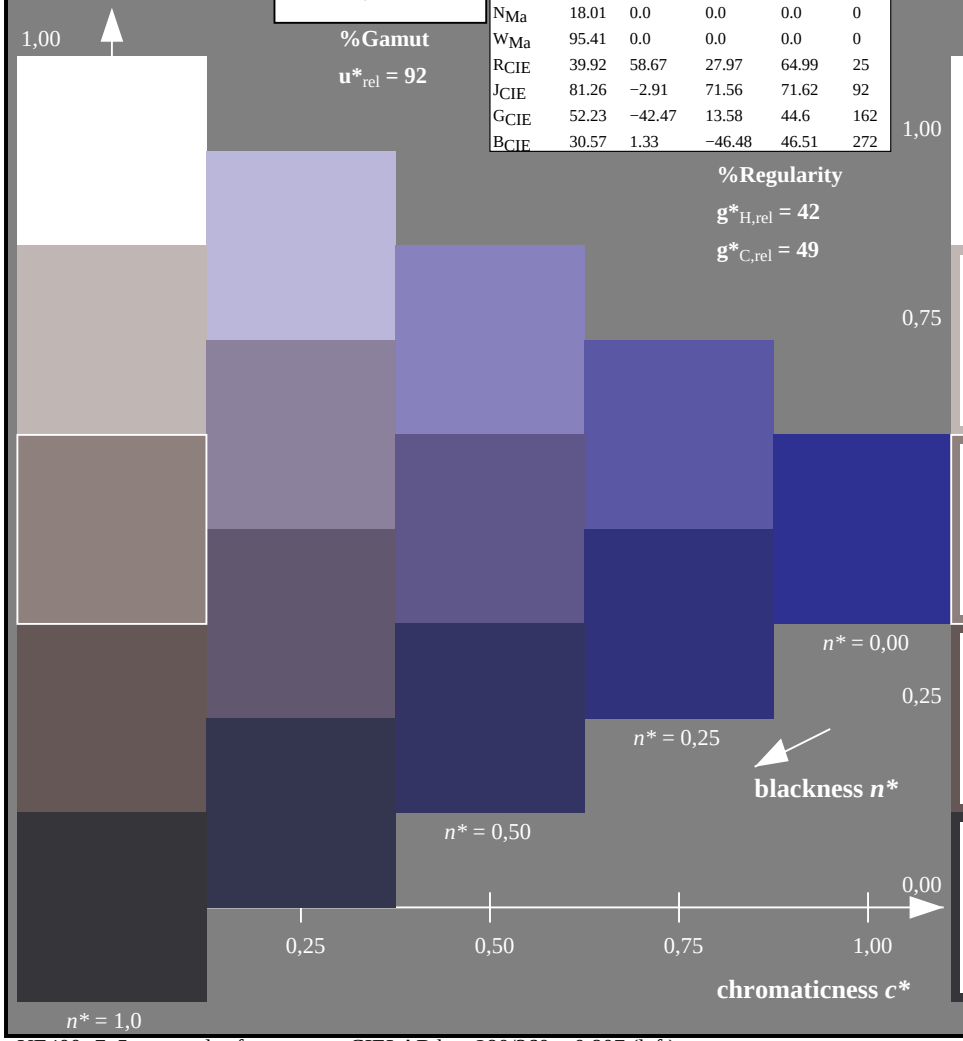
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

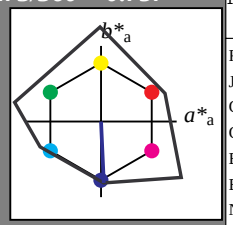
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

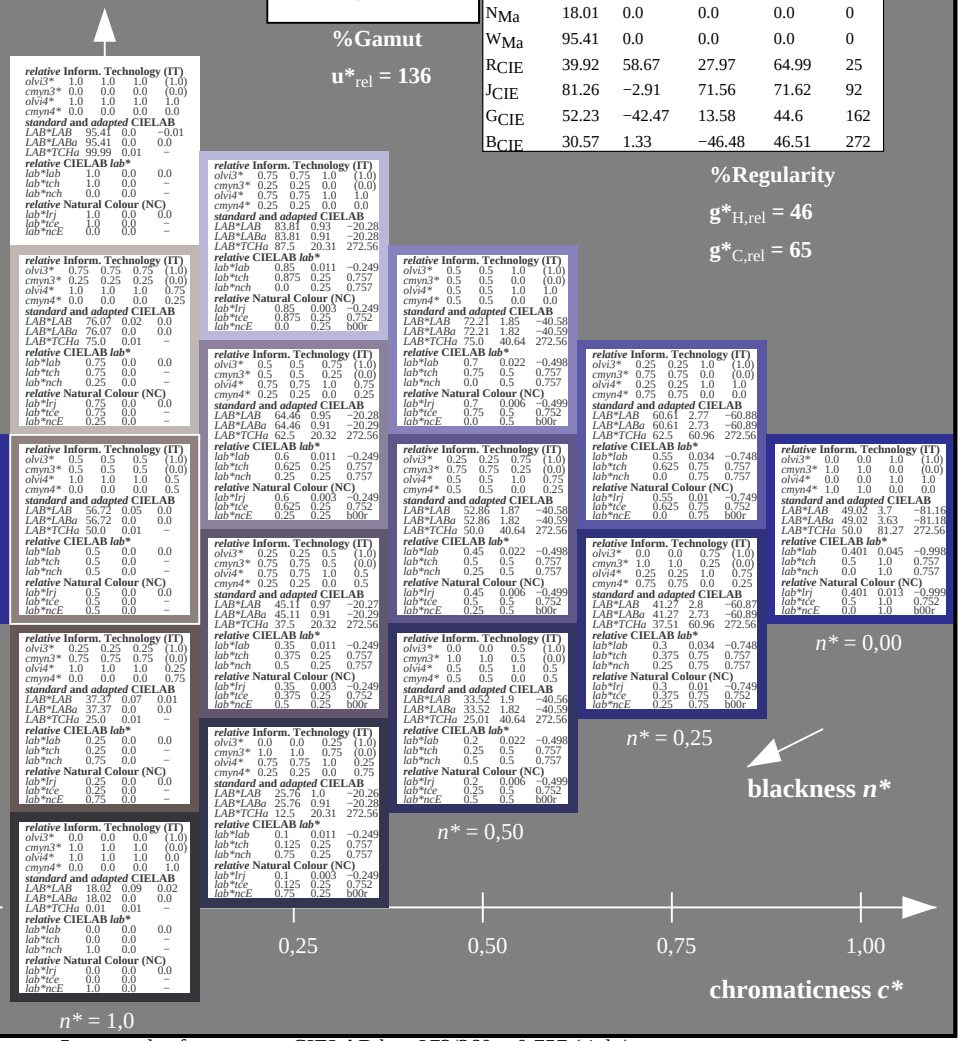
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



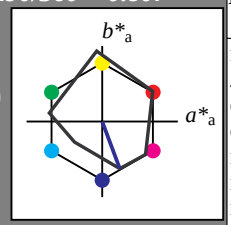
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

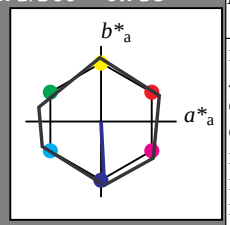
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness

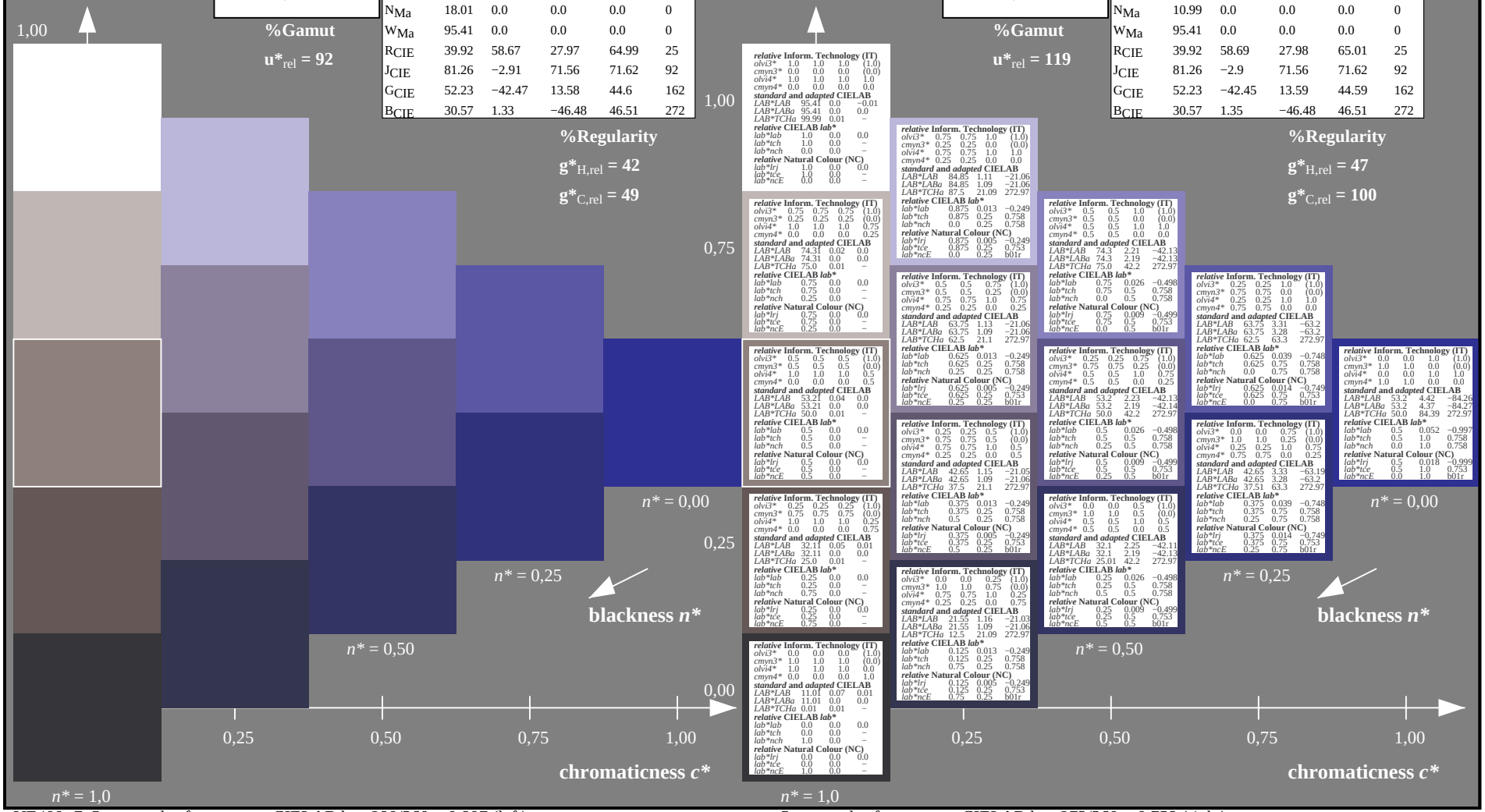


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



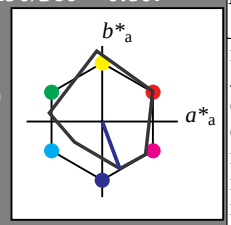
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut
u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

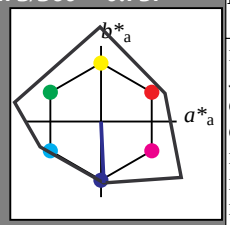
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness

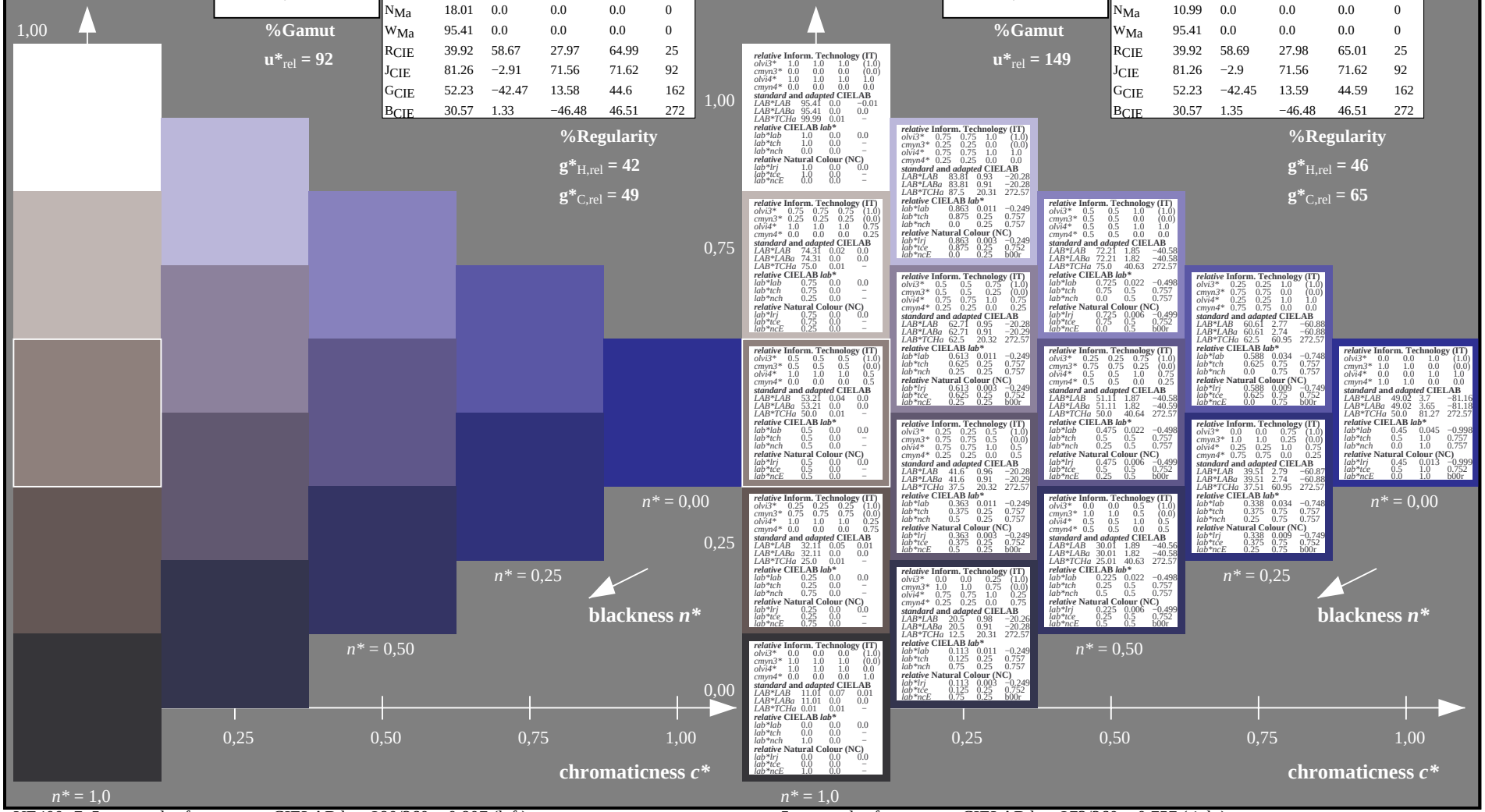


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



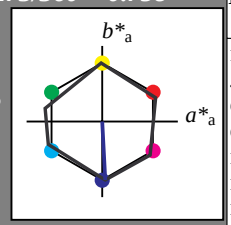
UE400−7, 5 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

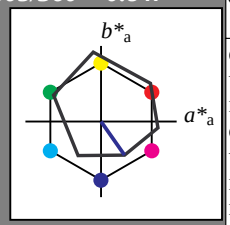
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

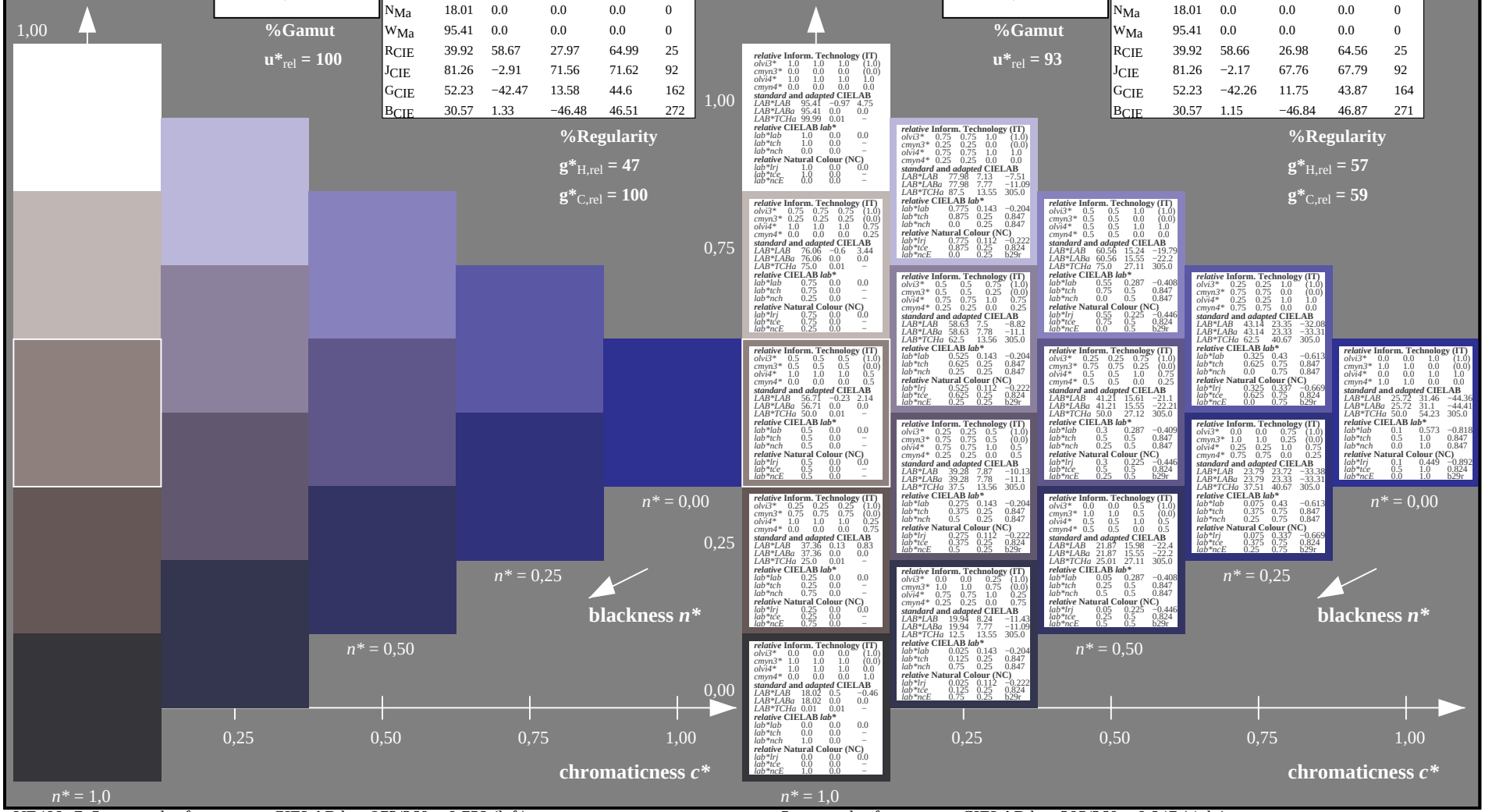
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



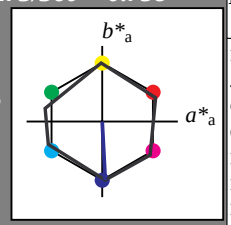
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 273/360 = 0.758*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

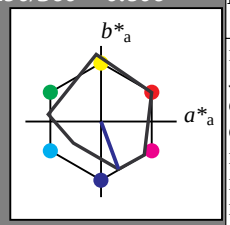
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 290/360 = 0.806*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

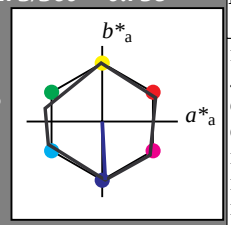
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

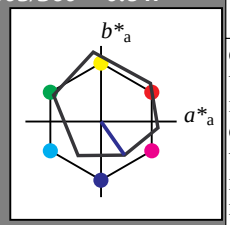
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

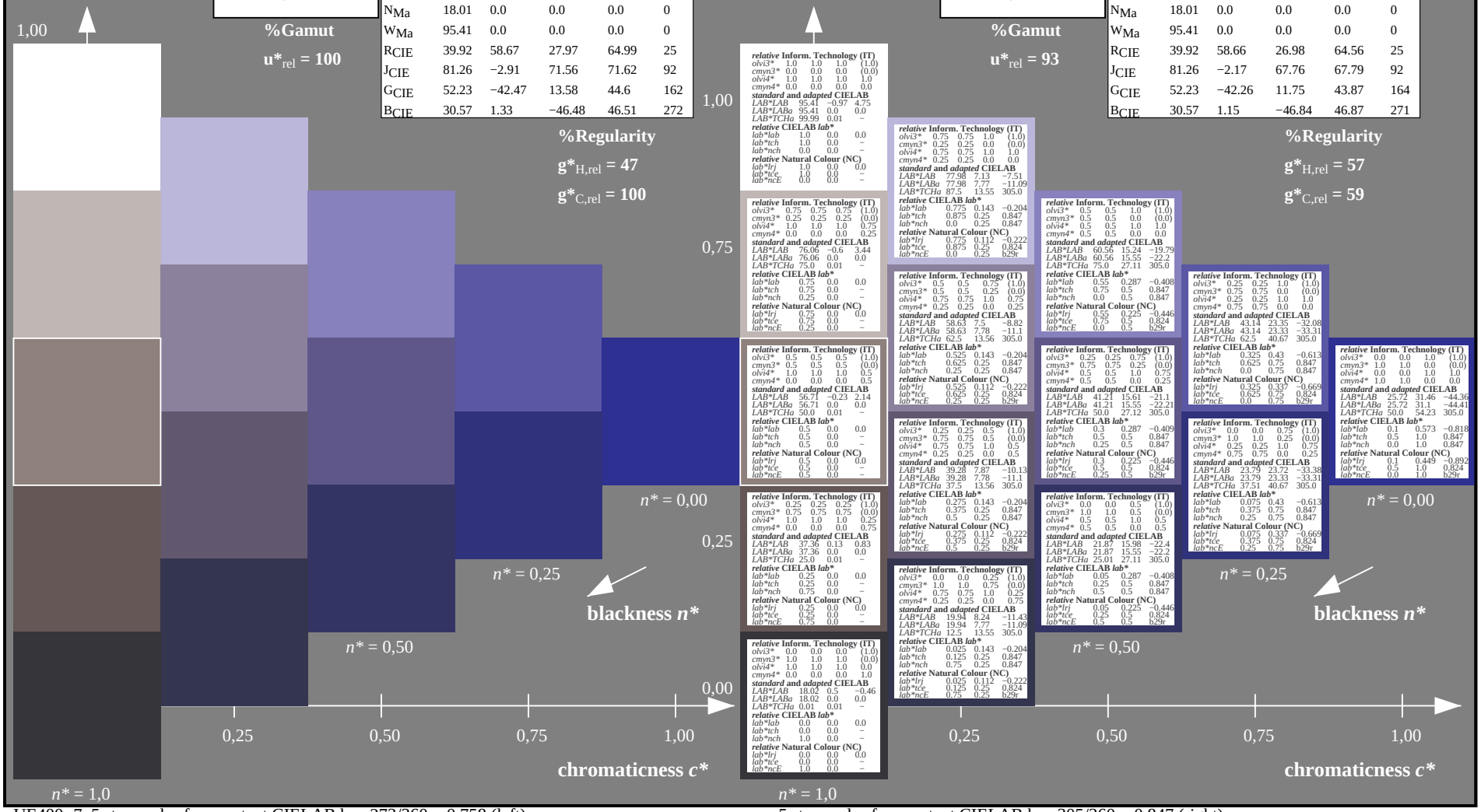
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



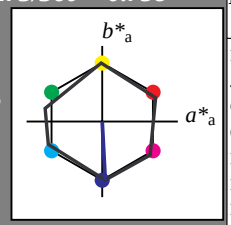
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

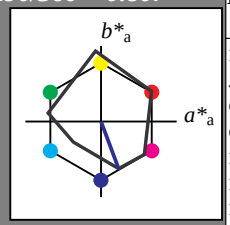
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

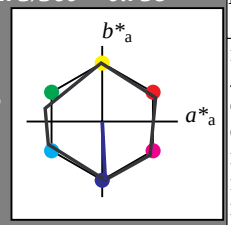
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

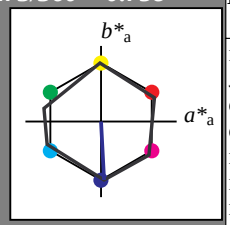
chromaticness c^*

UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

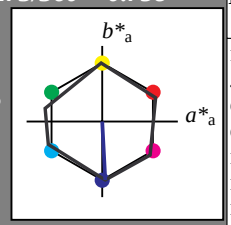
chromaticness c^*

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

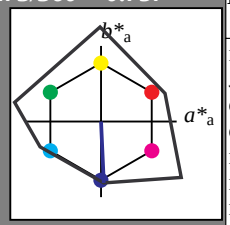
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

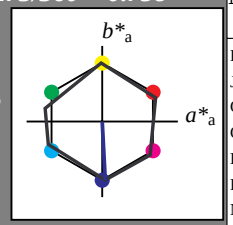
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

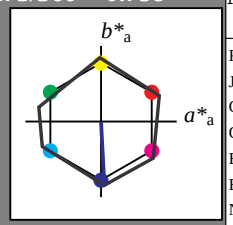
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

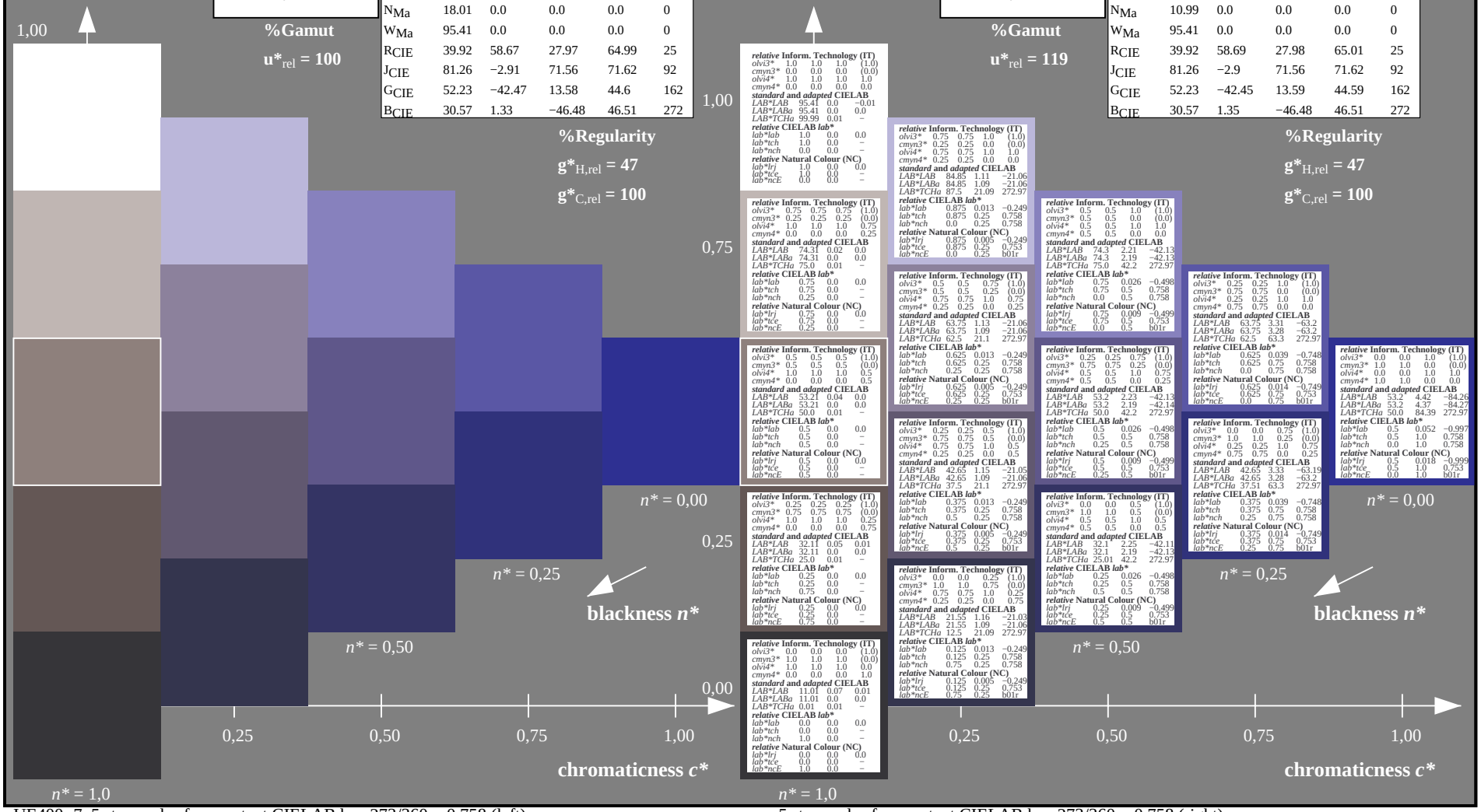
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



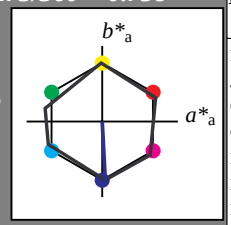
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

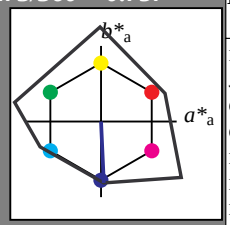
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

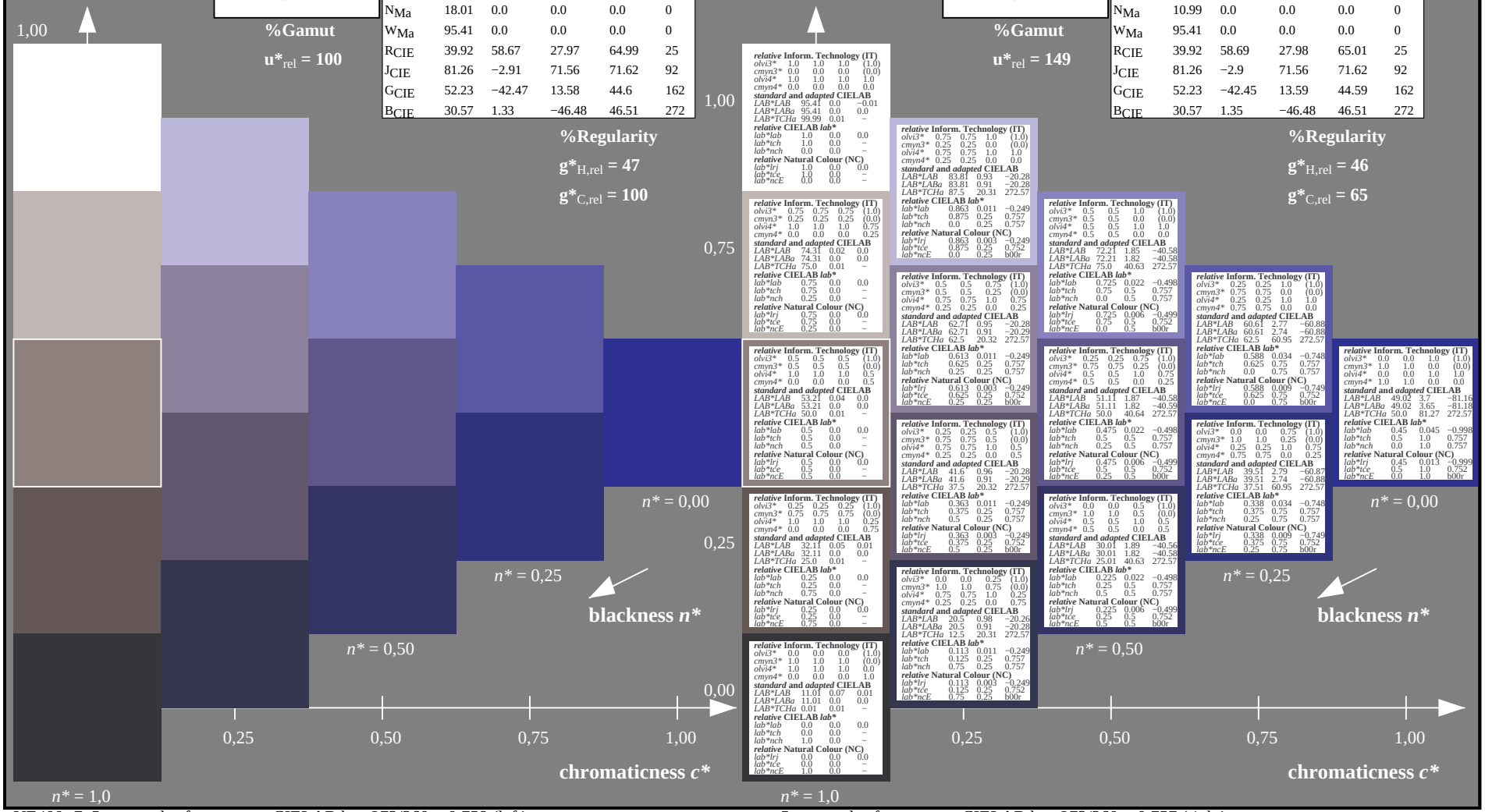
%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



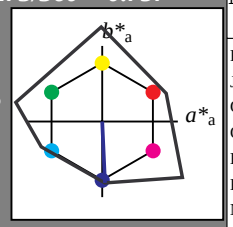
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

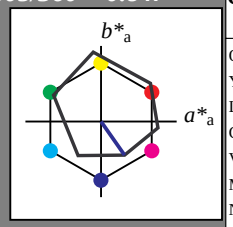
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

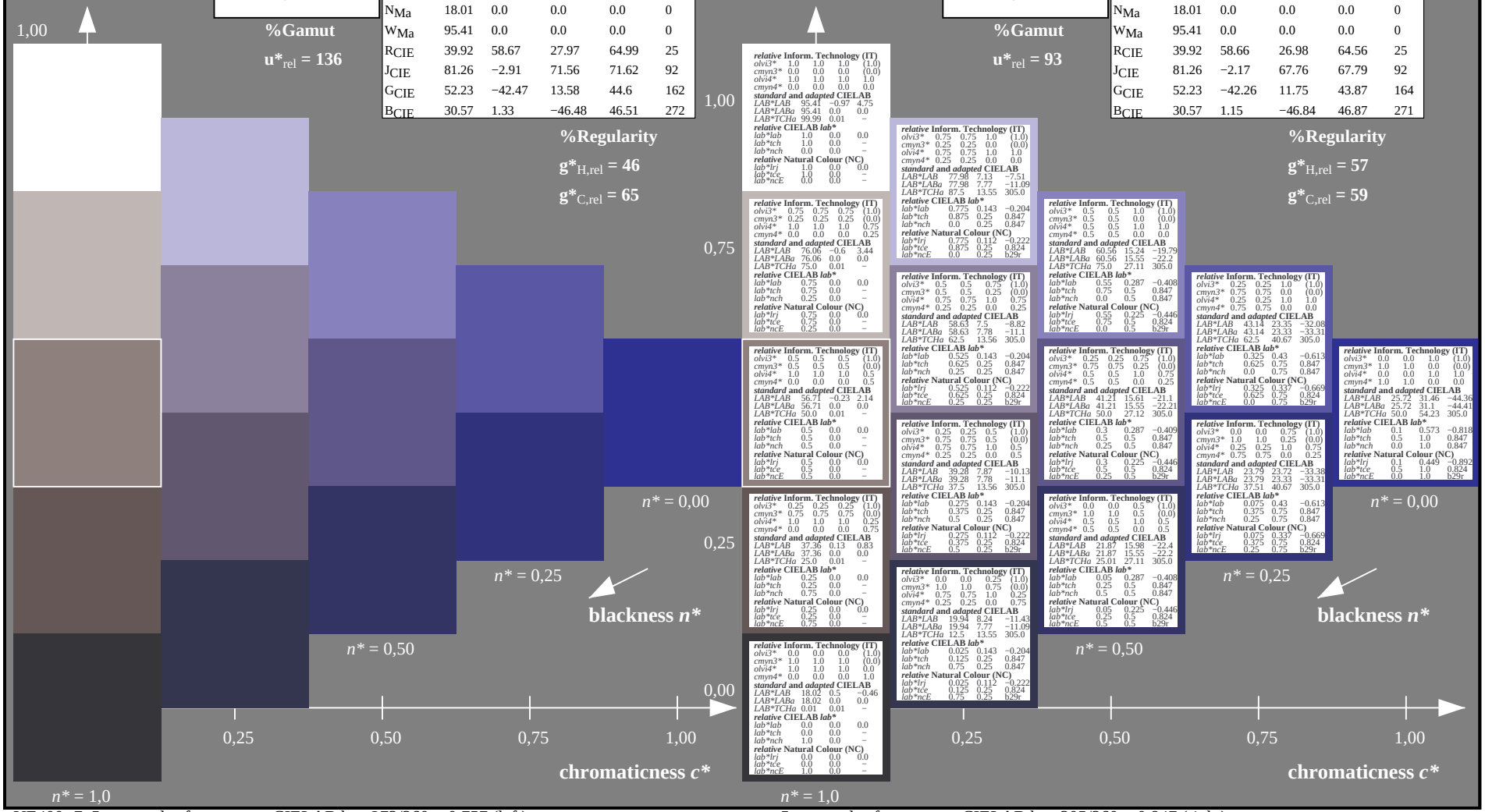
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



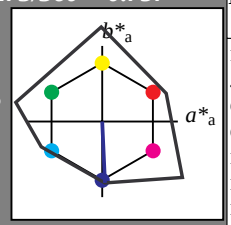
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

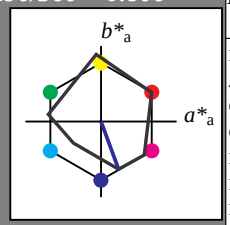
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

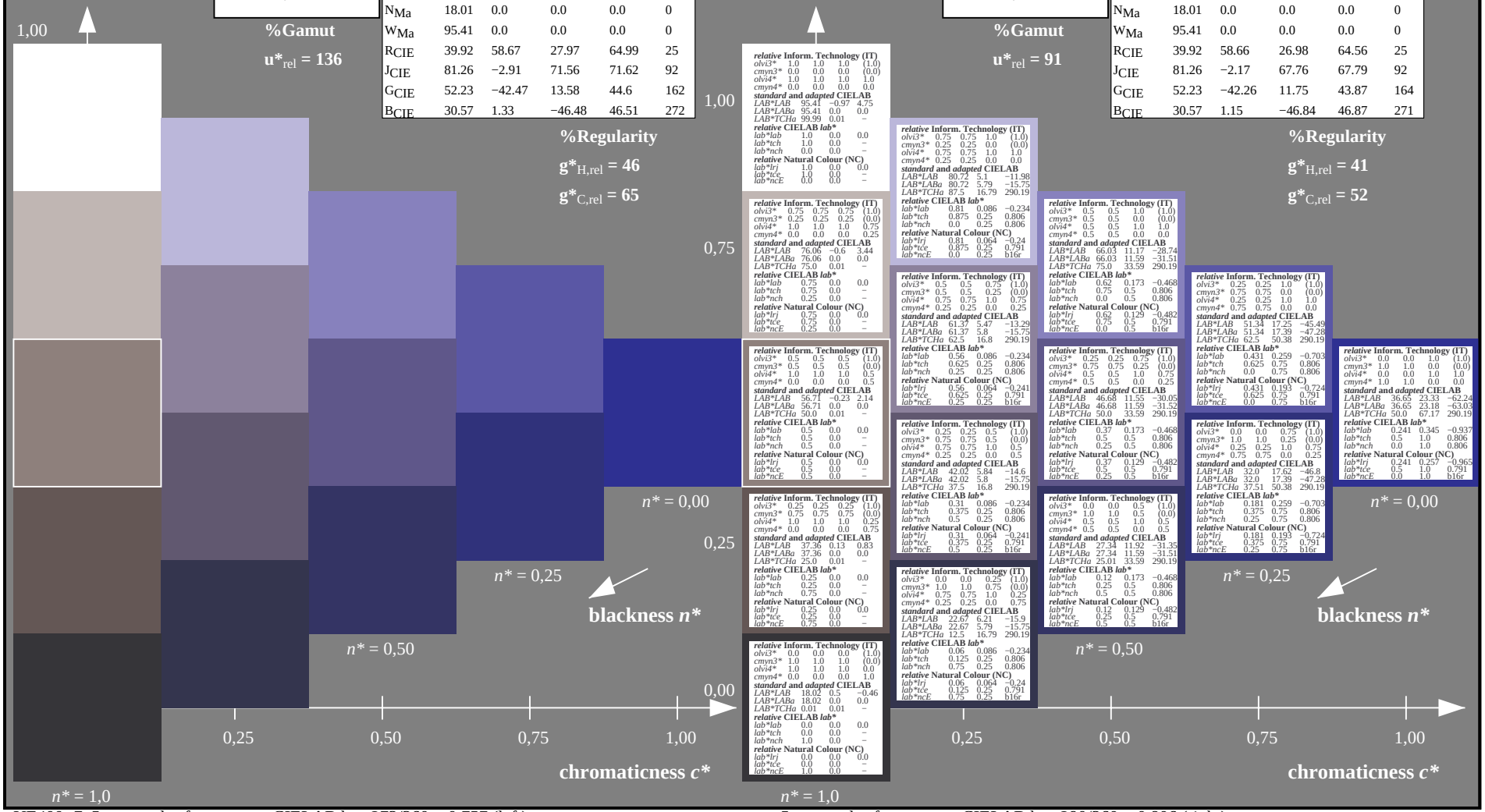
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



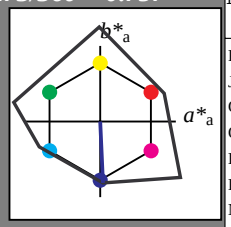
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

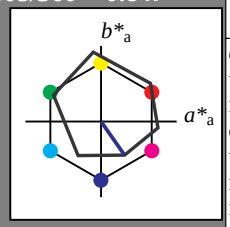
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

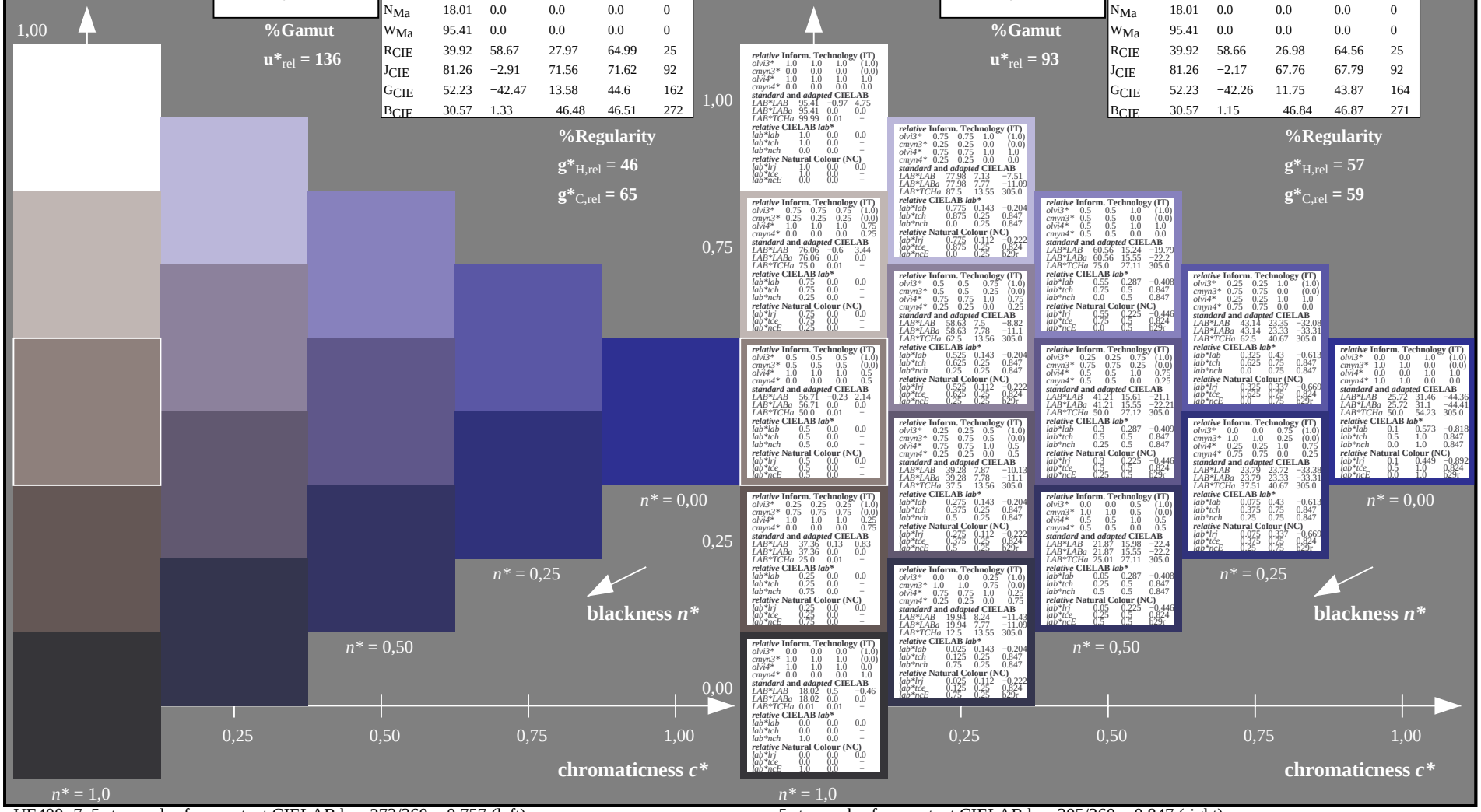
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



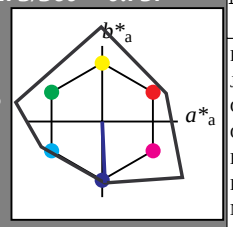
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

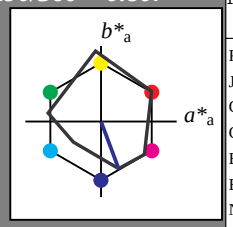
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

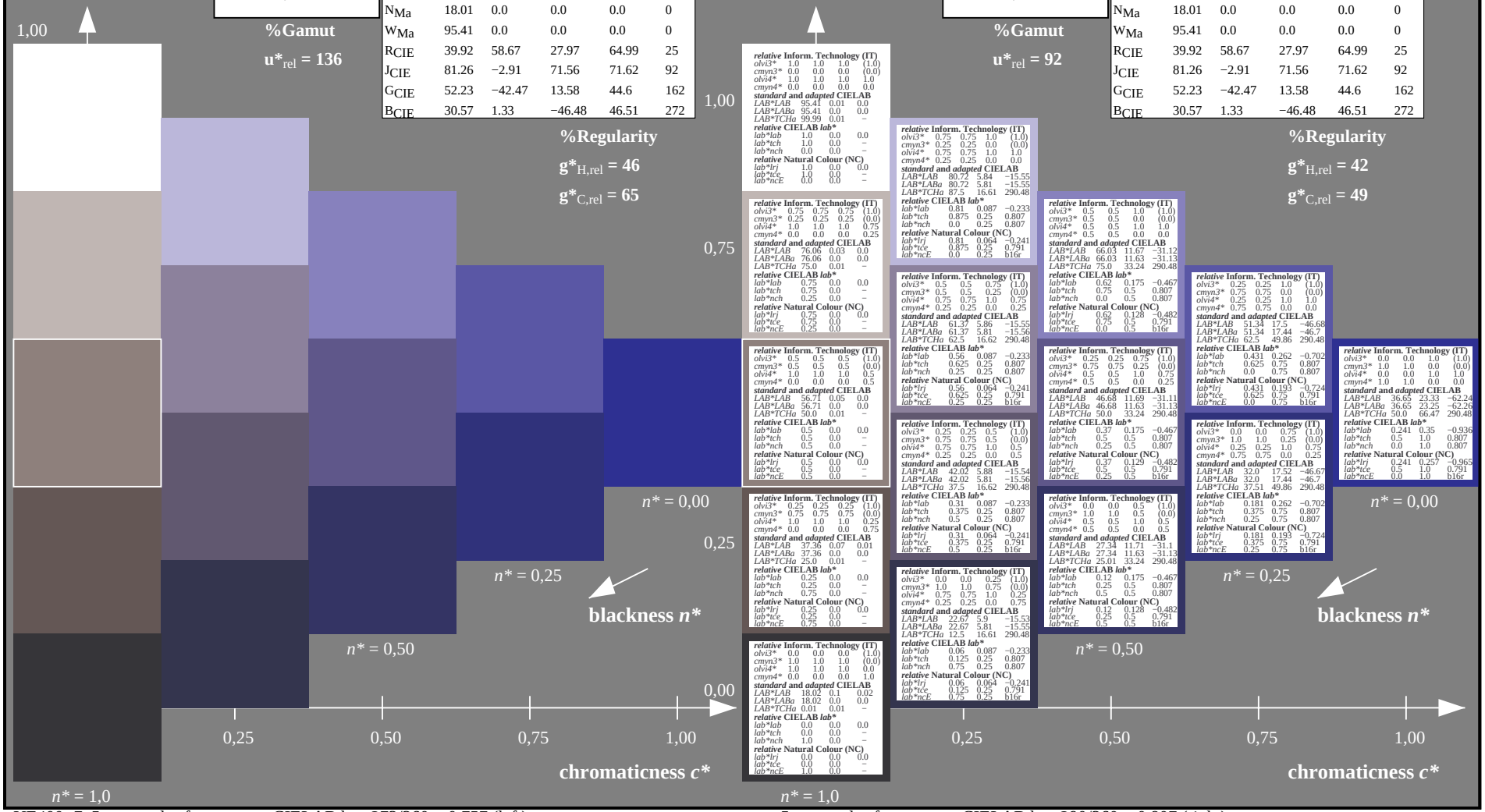
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



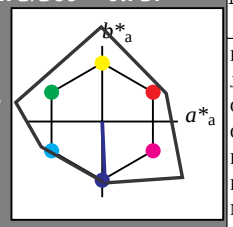
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

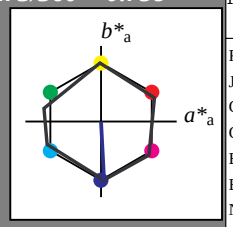
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

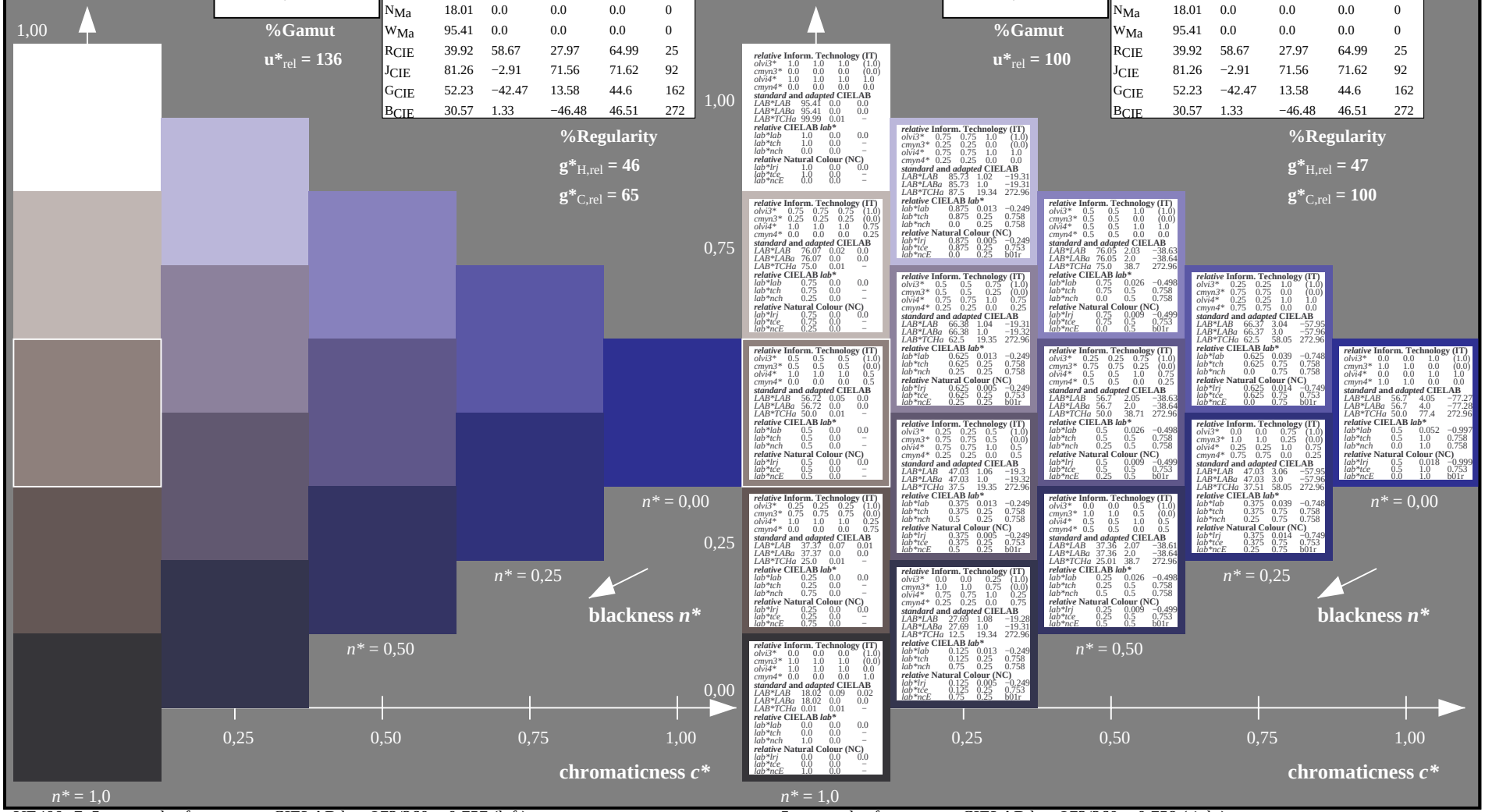
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



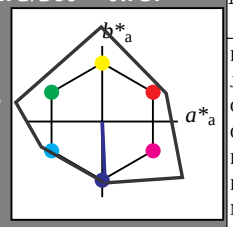
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

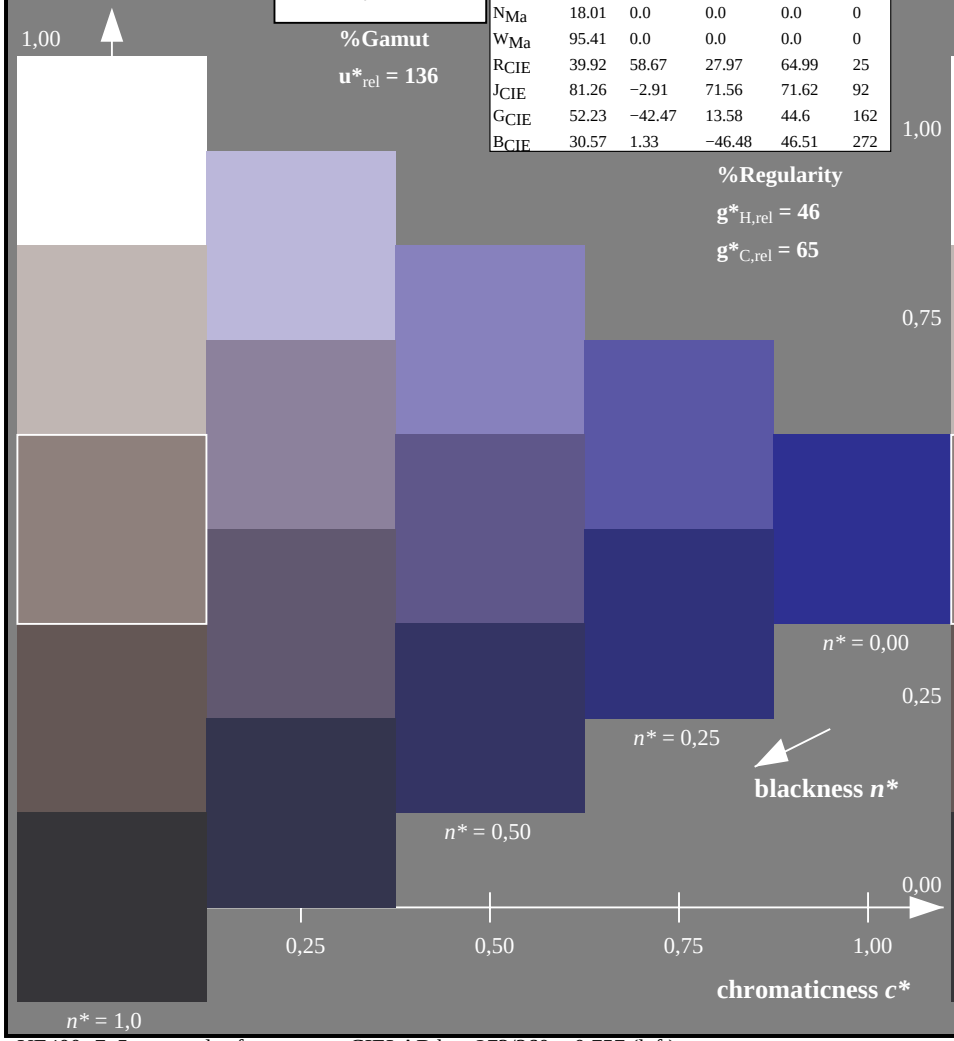
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

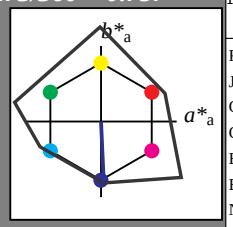
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

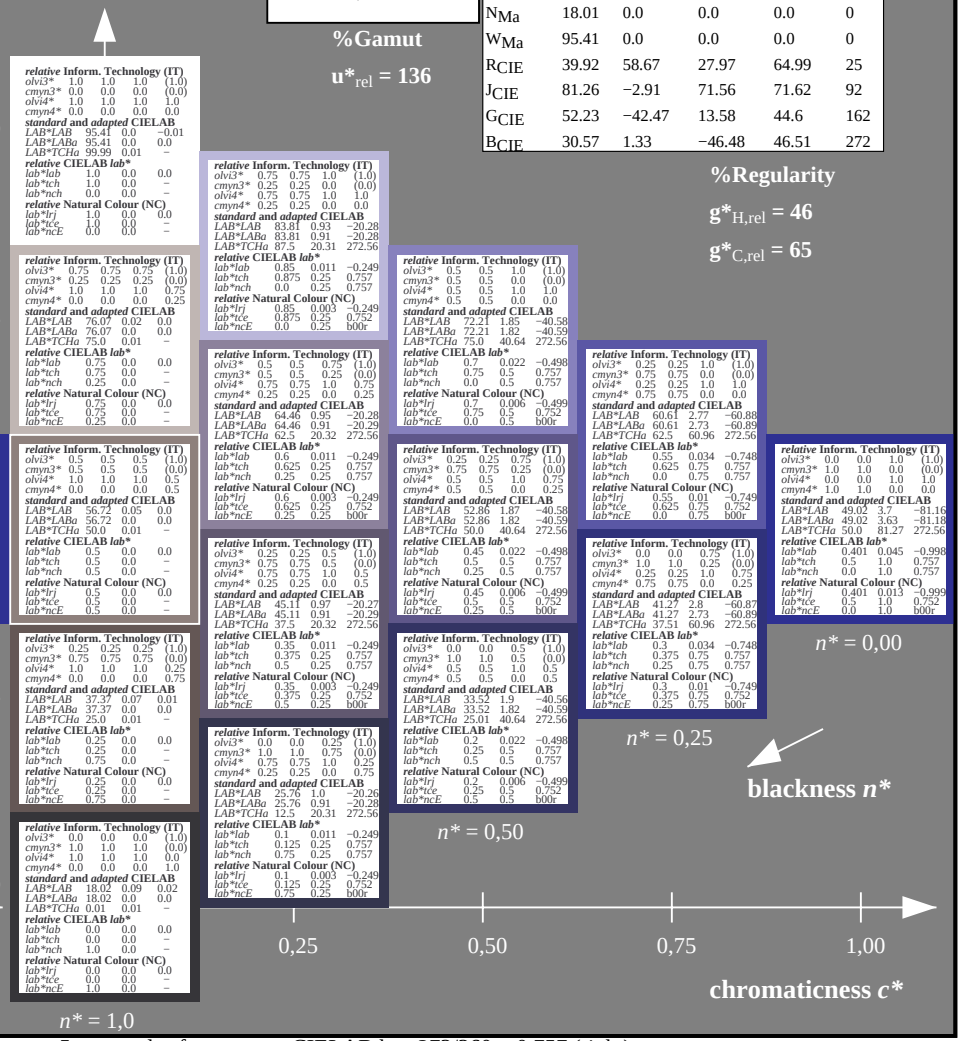
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



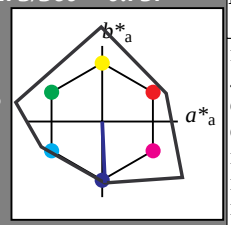
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

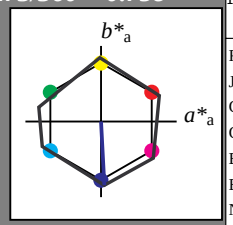
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

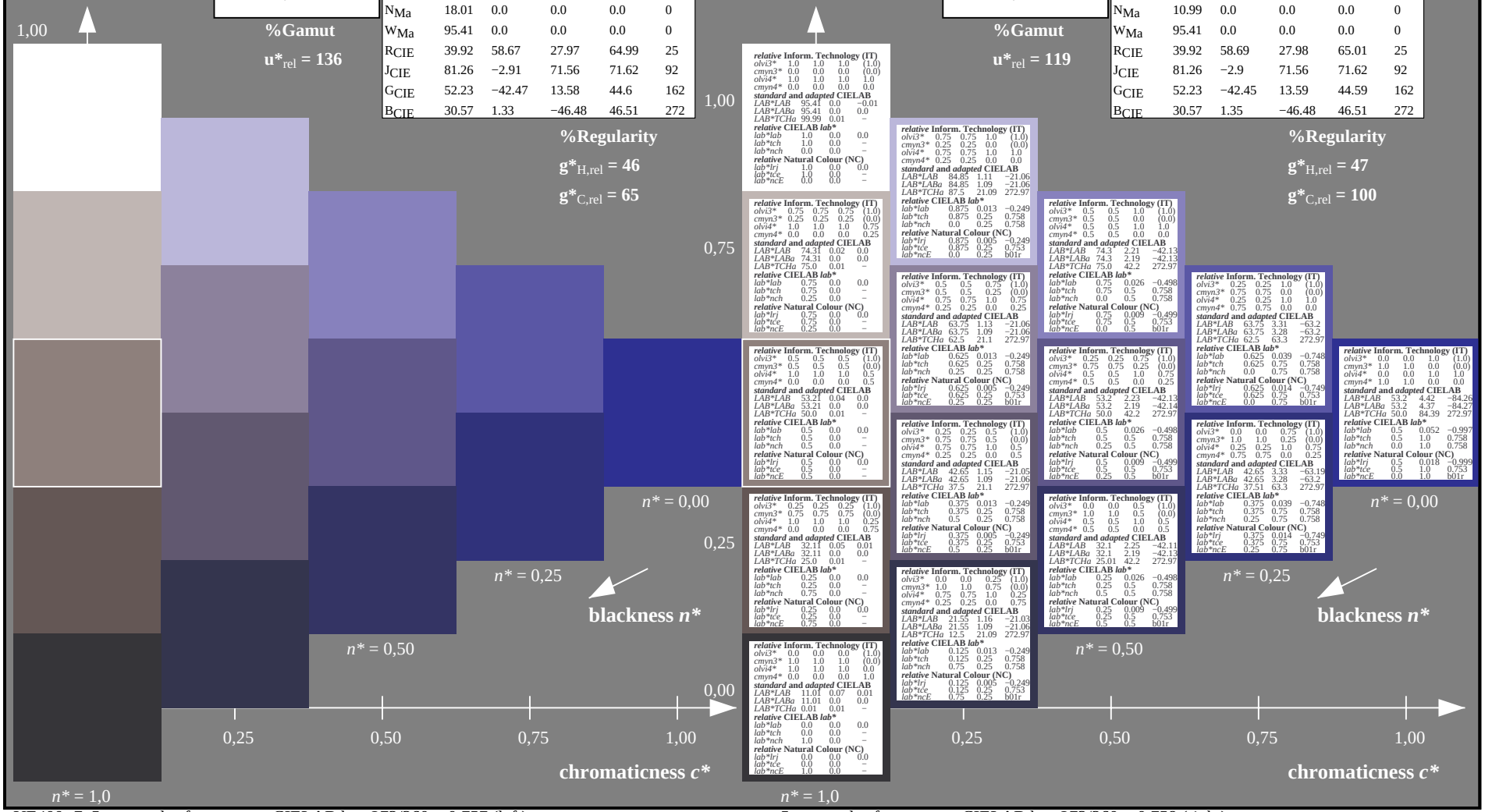
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



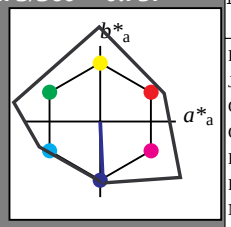
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

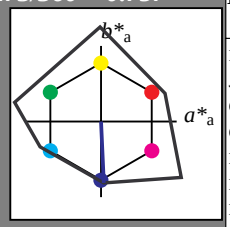
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

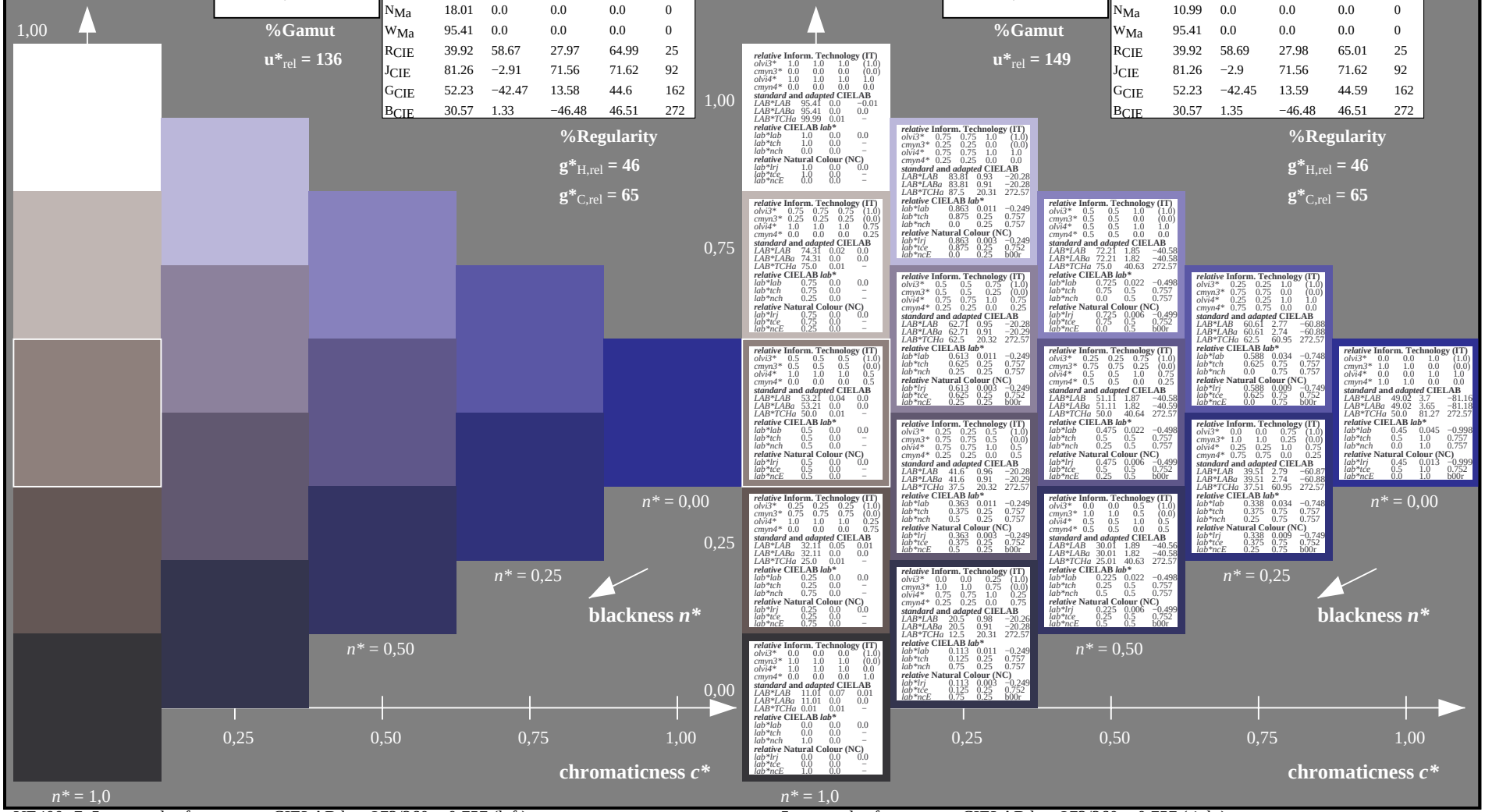
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



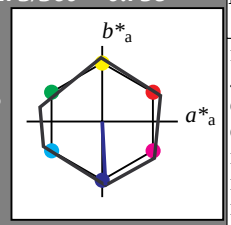
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

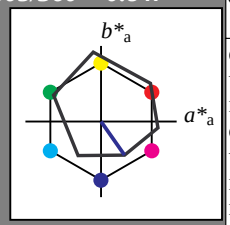
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

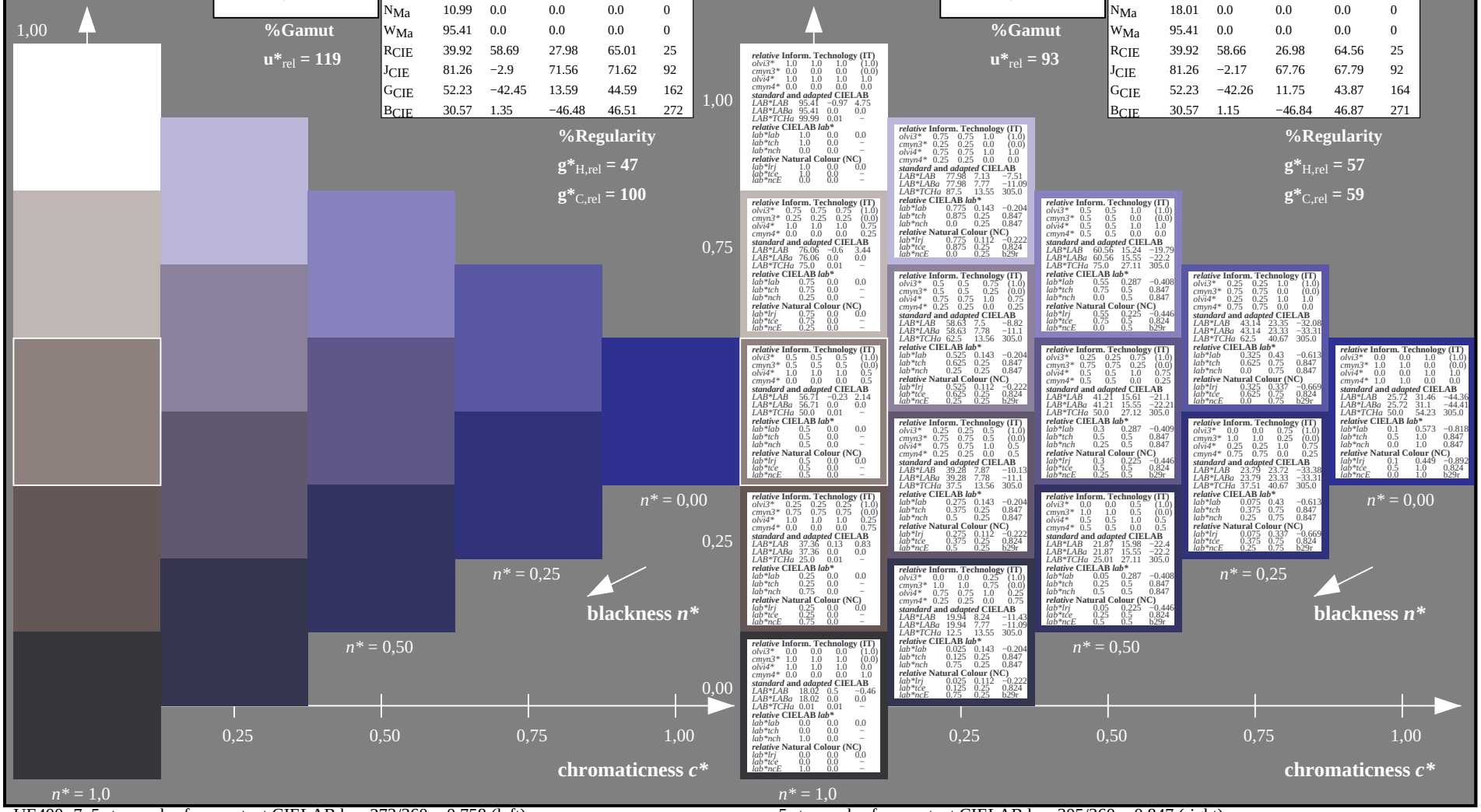
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



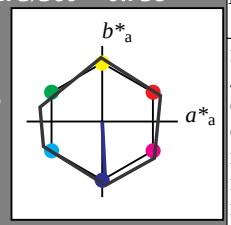
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

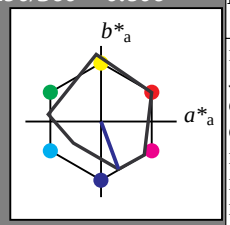
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

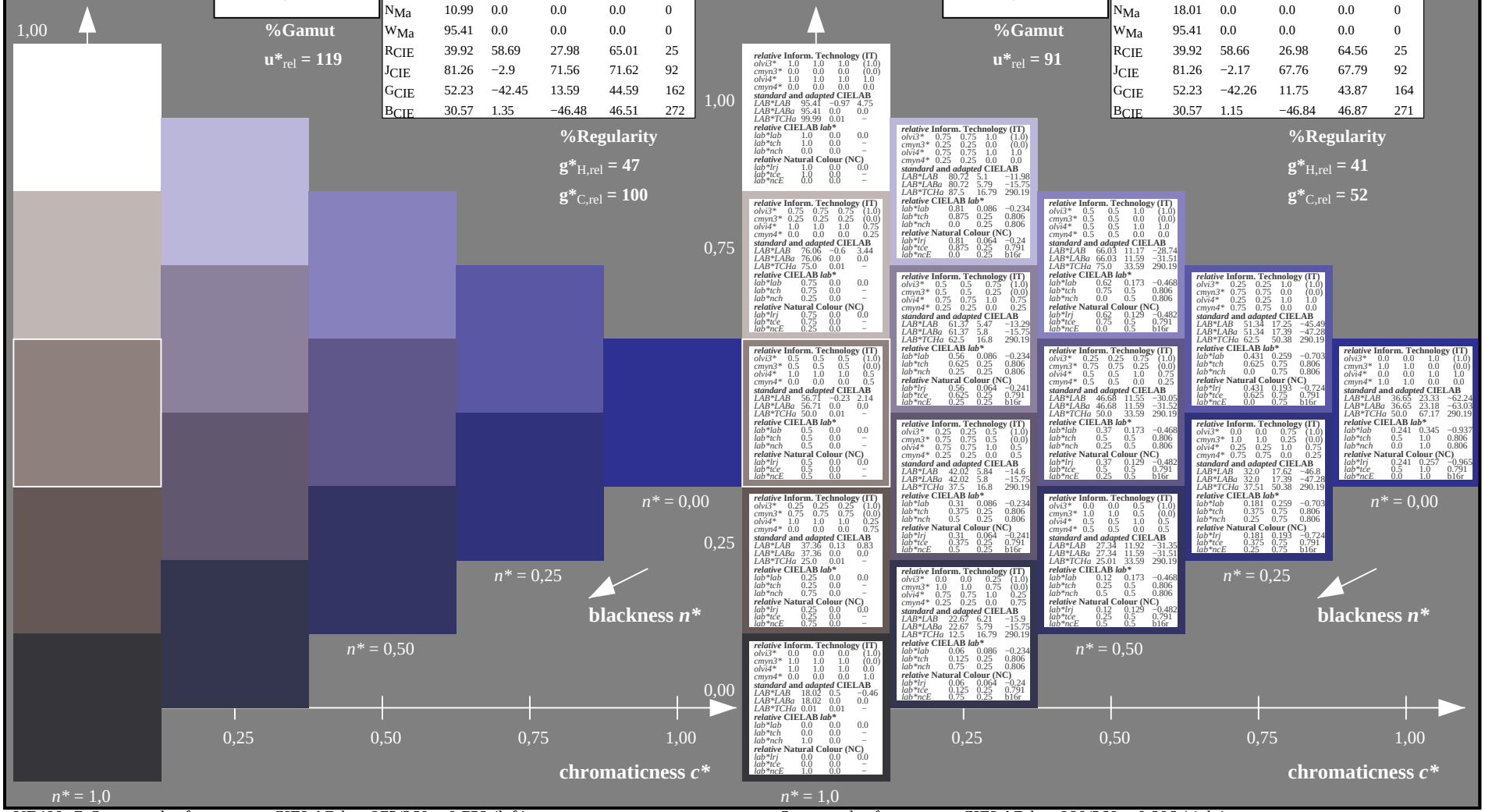
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



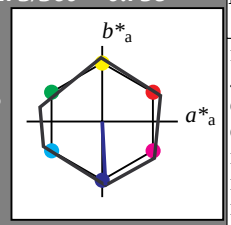
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

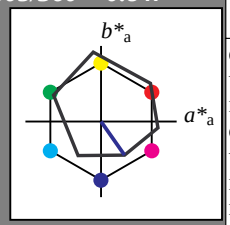
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

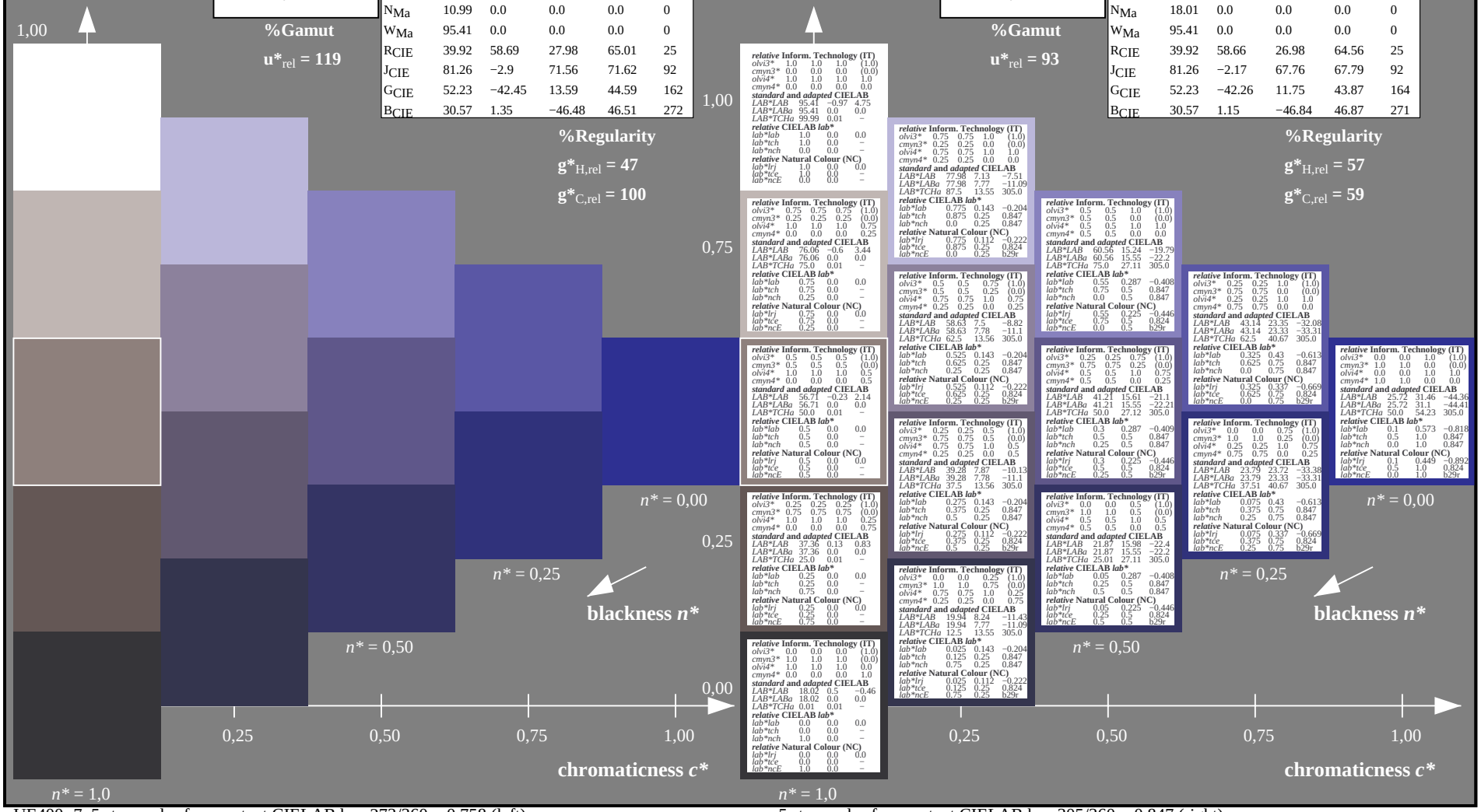
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



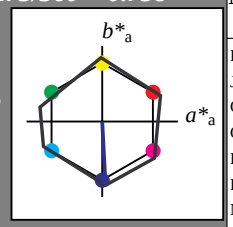
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 273/360 = 0.758*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

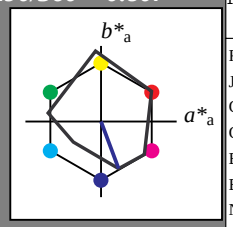
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 290/360 = 0.807*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

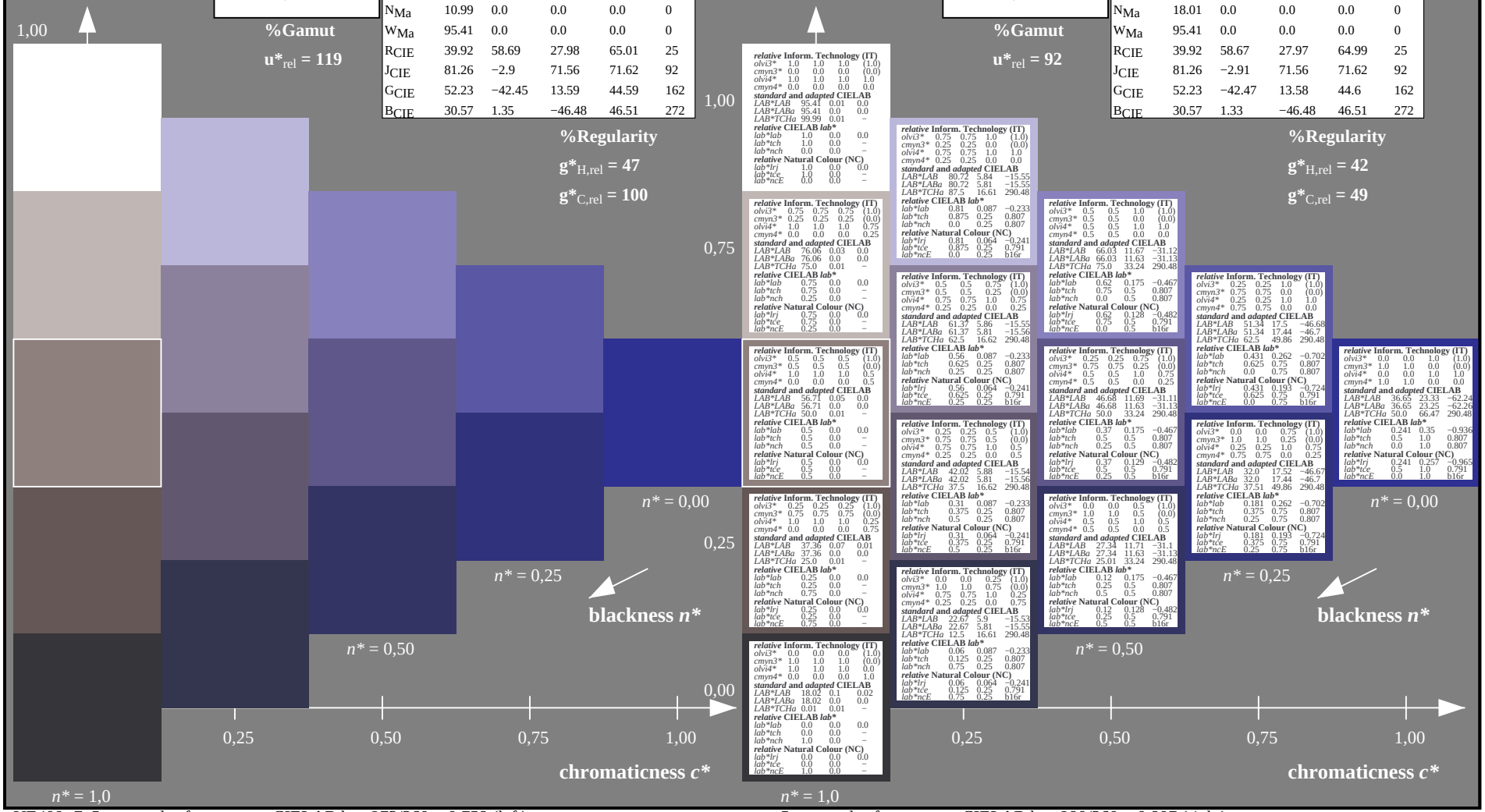
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



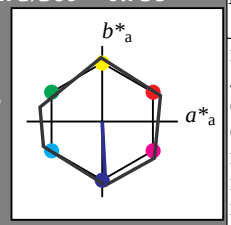
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

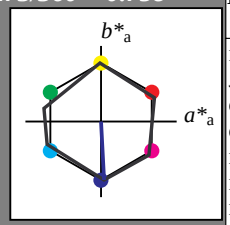
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

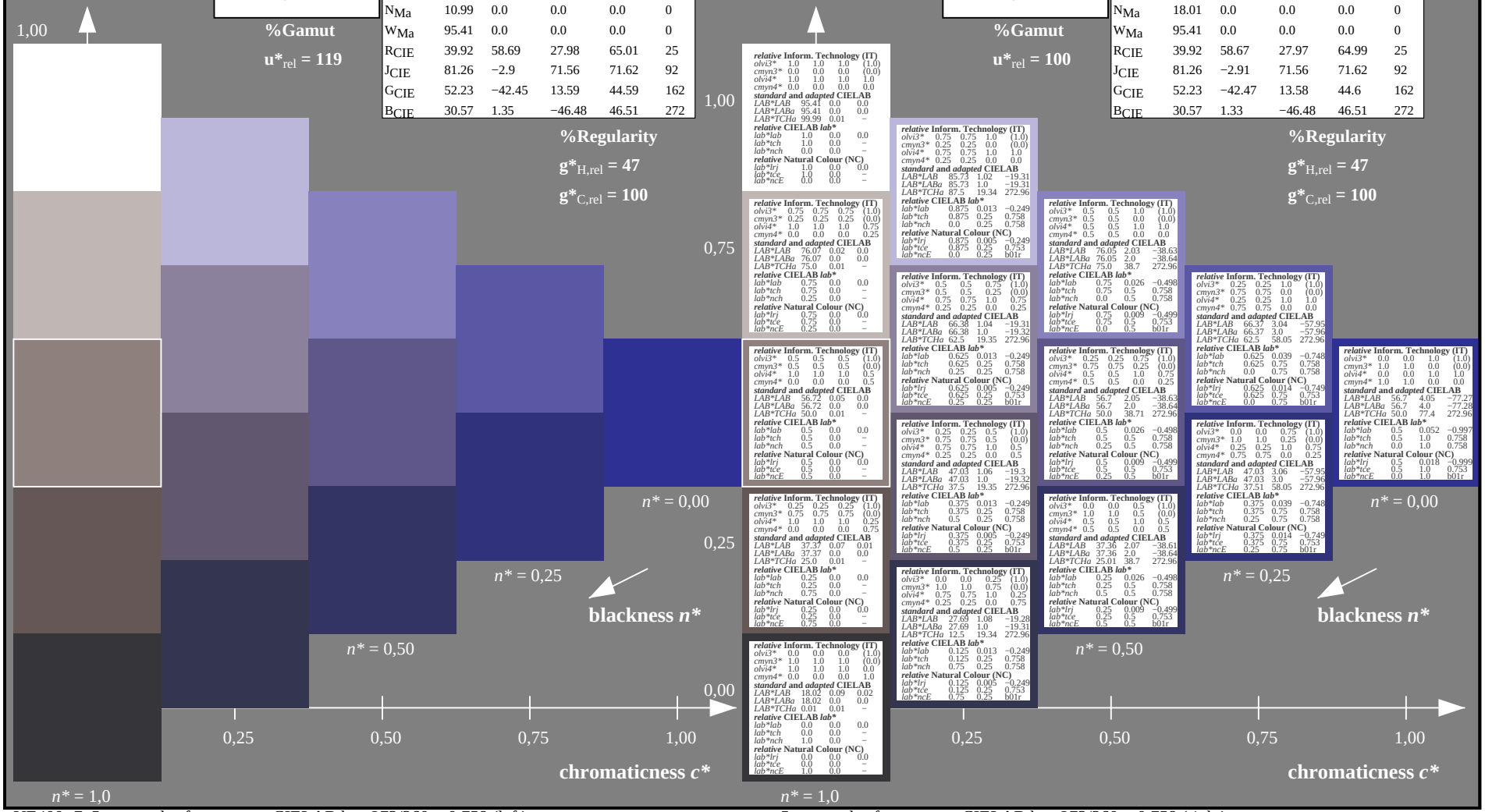
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



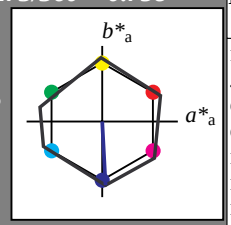
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

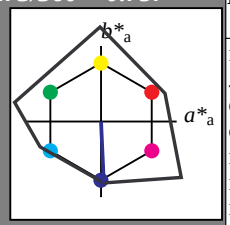
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

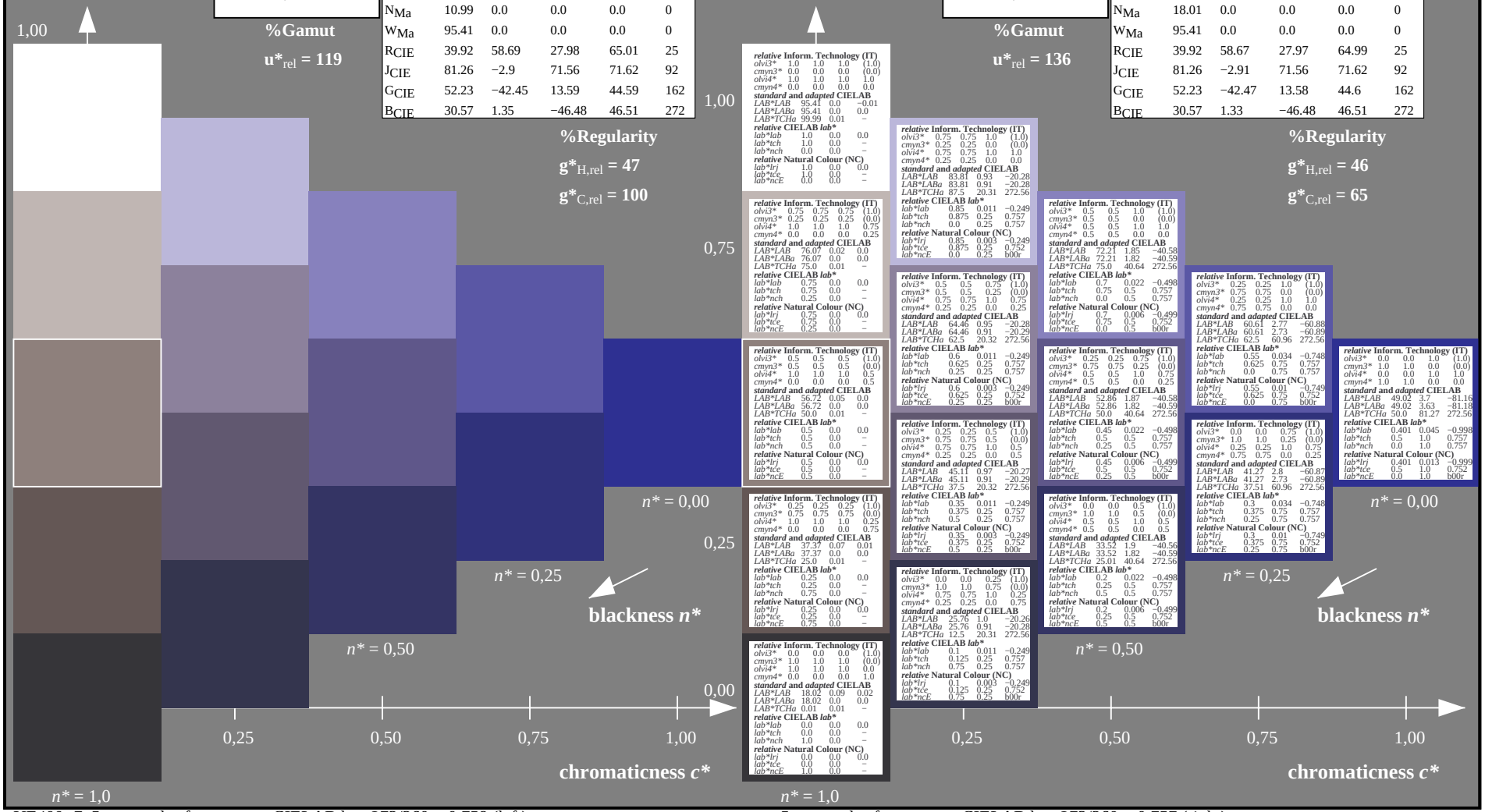
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



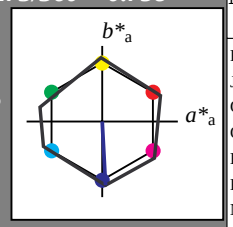
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

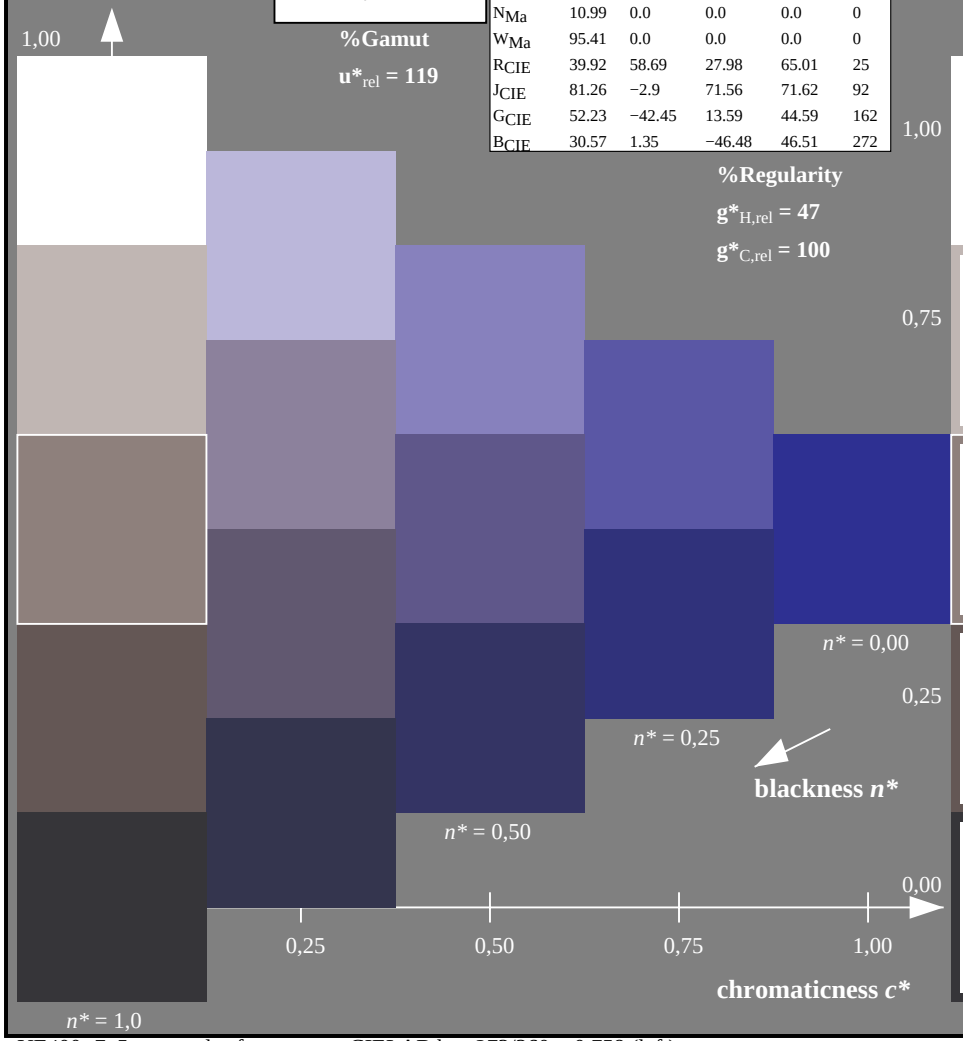
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

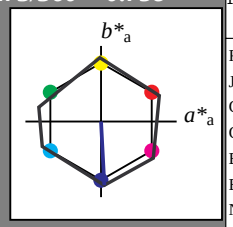
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

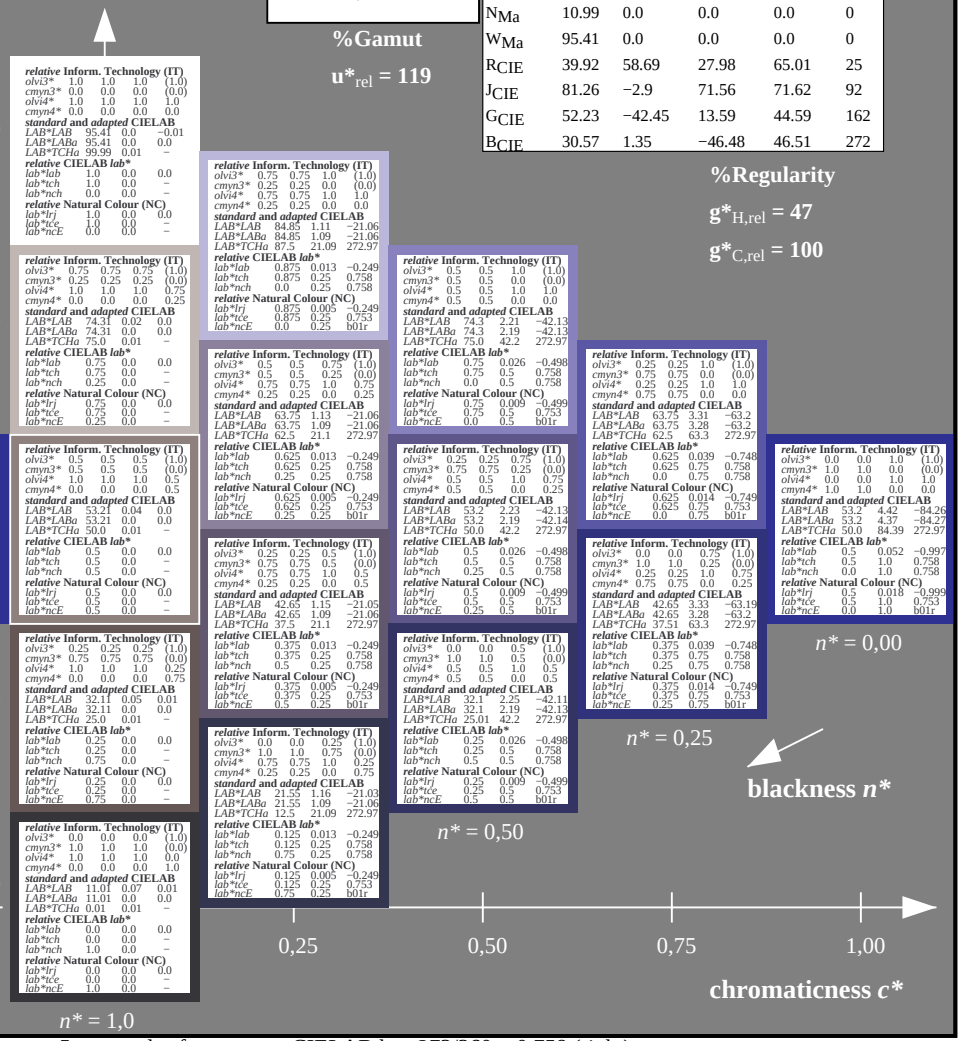
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



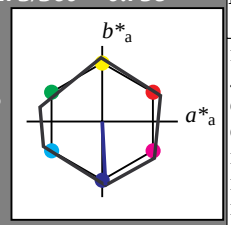
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

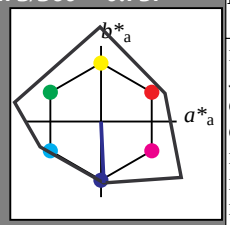
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

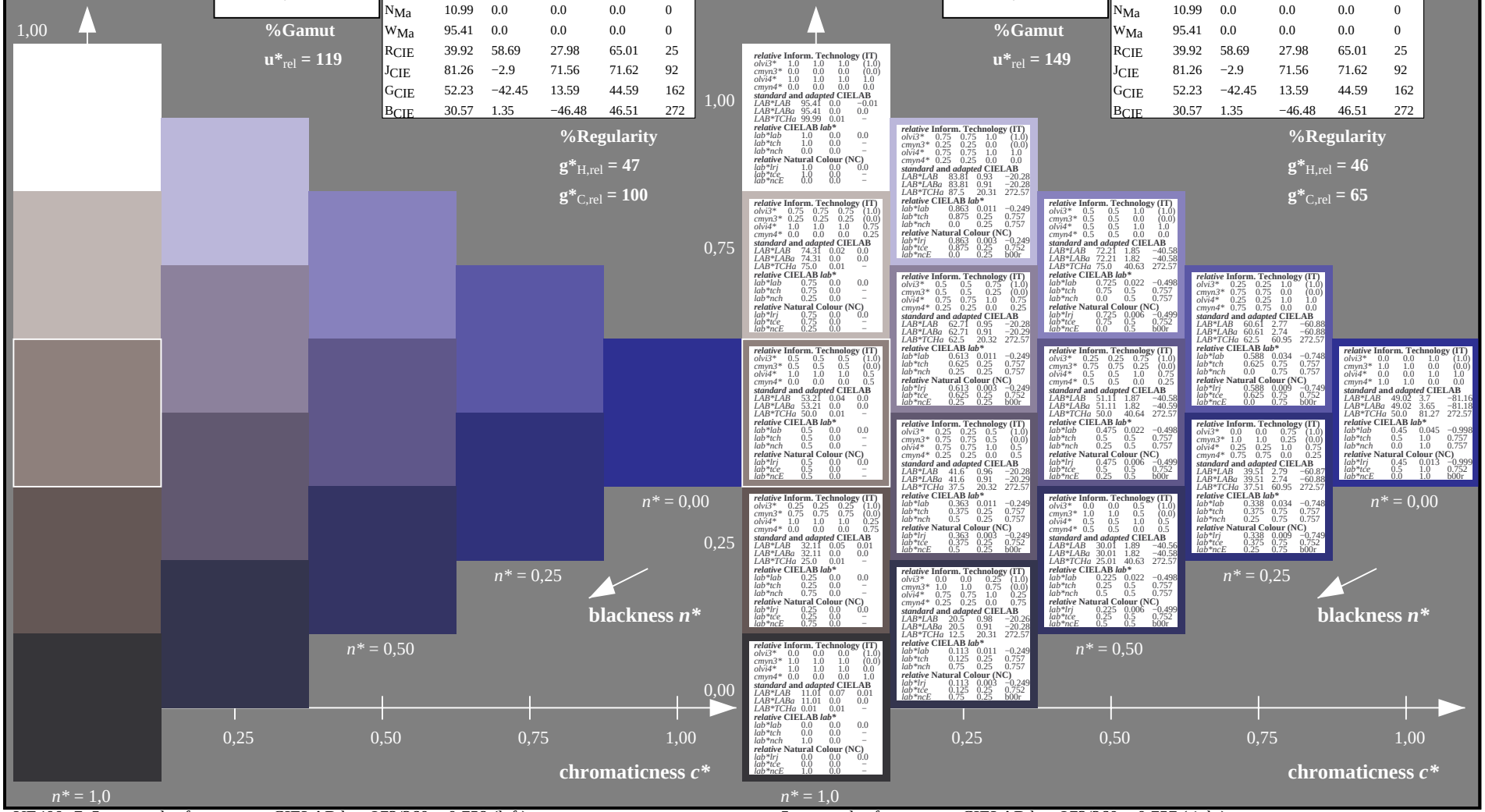
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



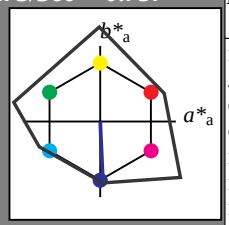
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.758 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

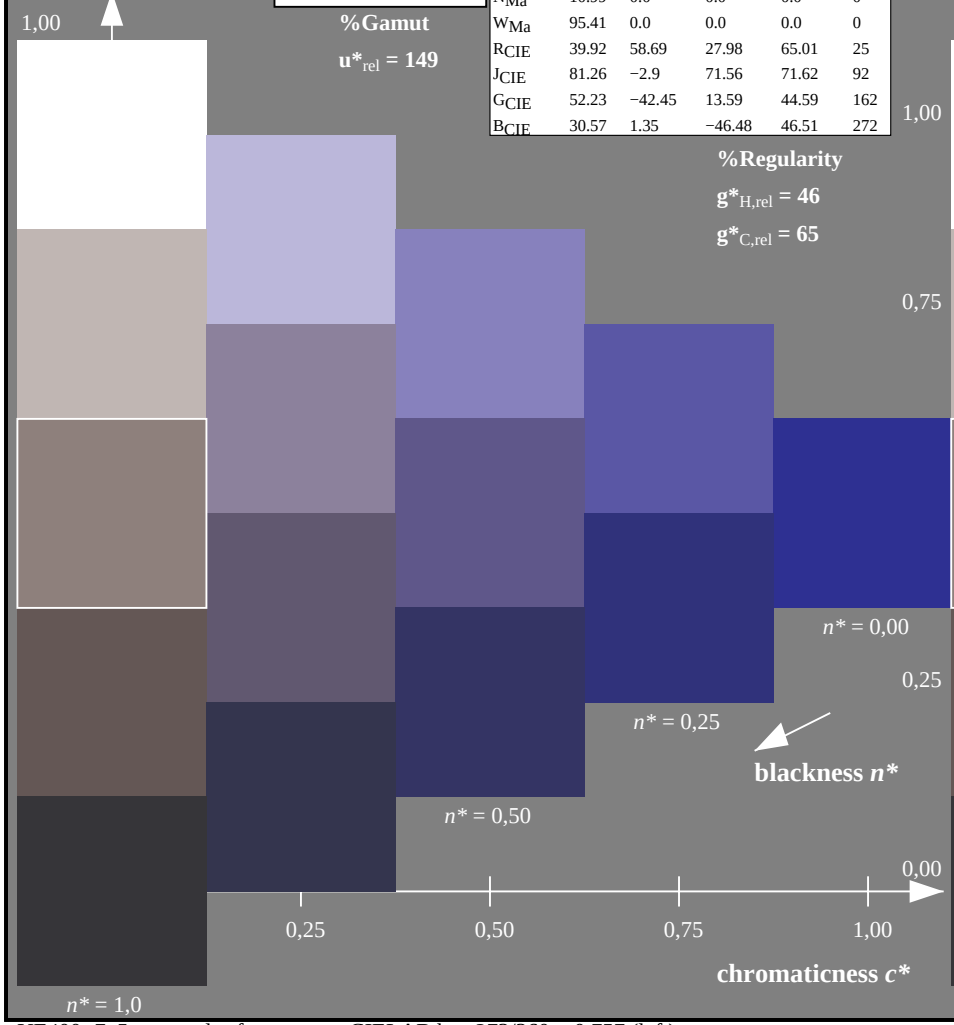
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

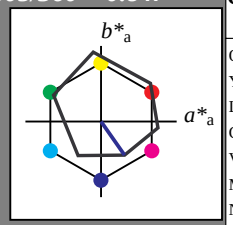
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

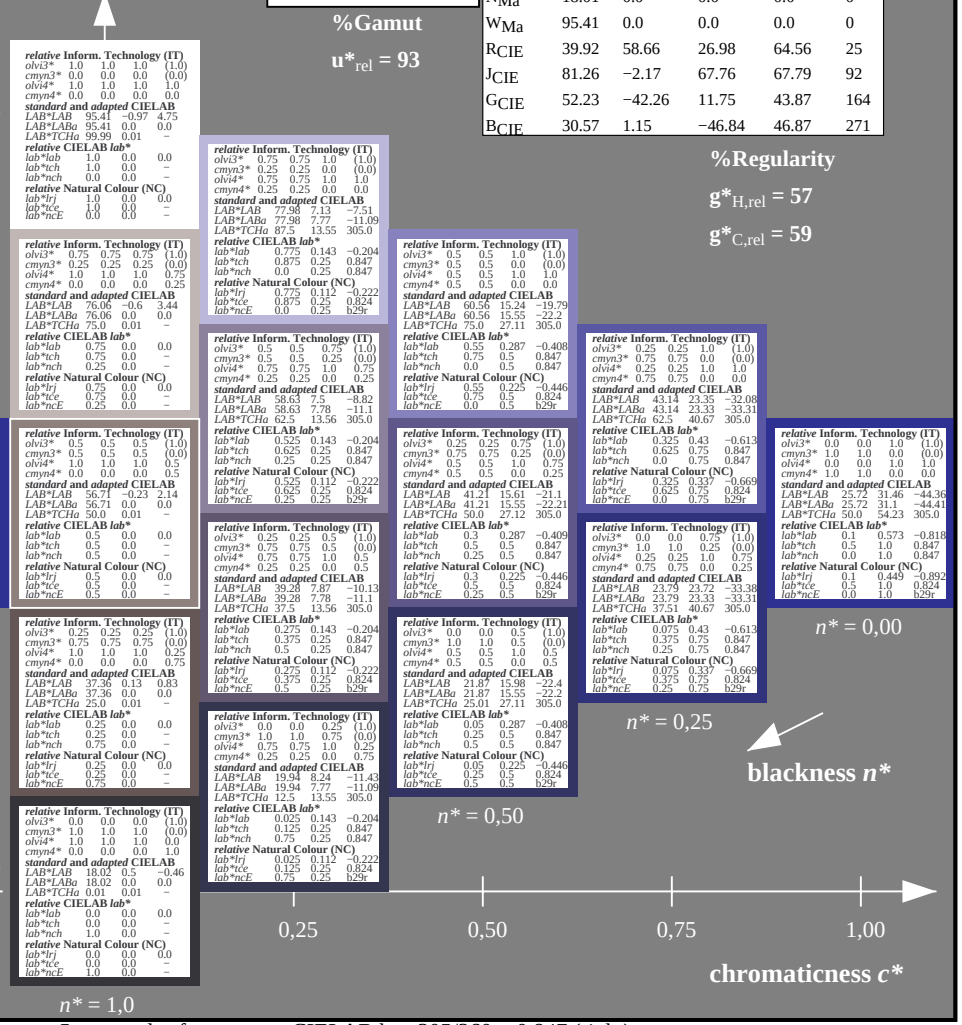
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



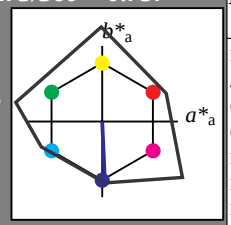
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

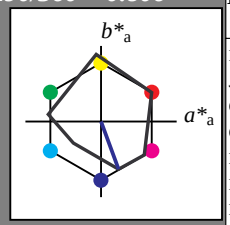
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 290/360 = 0.806$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 67 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

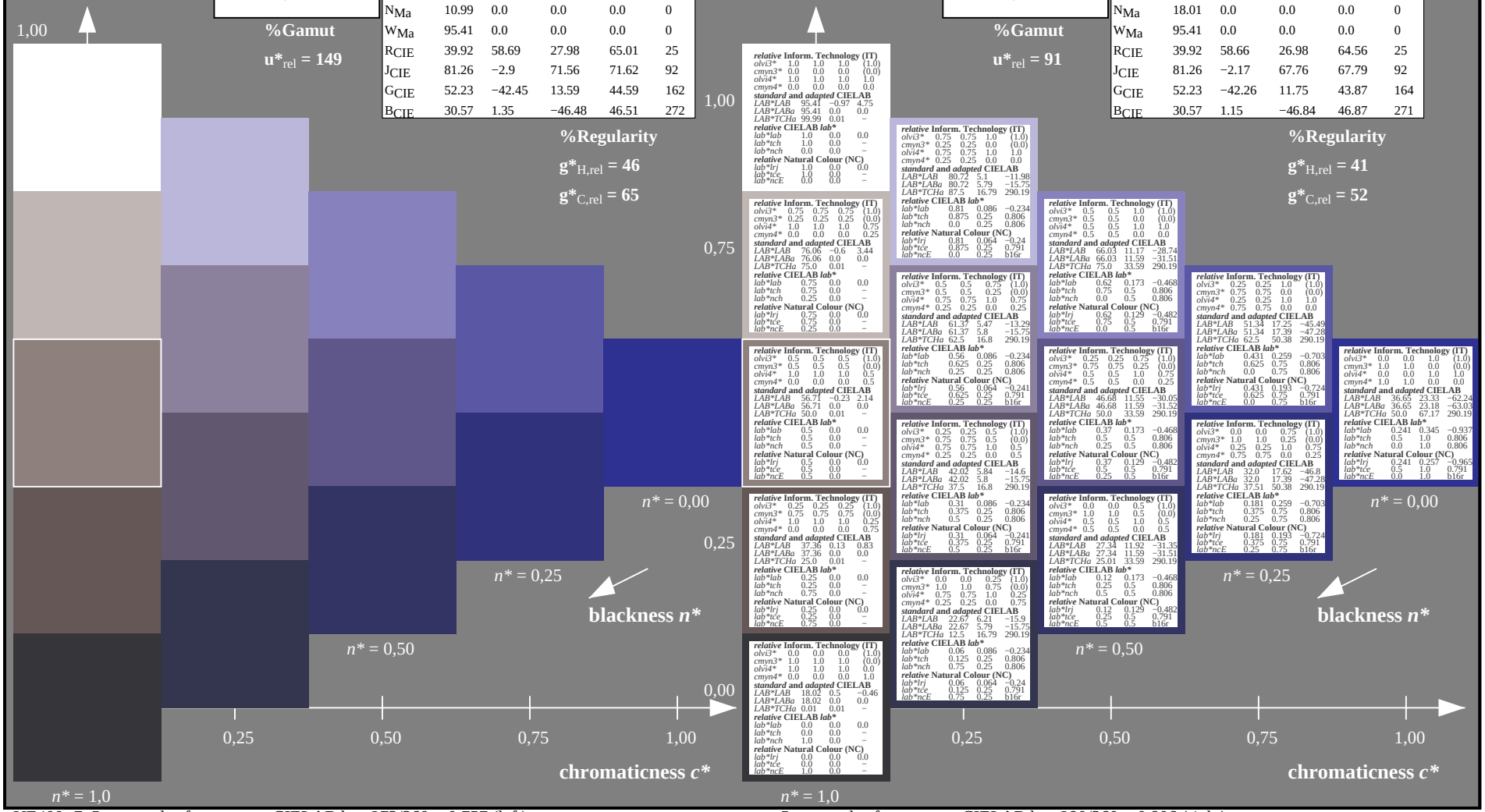
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



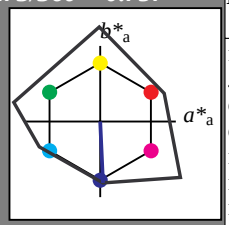
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

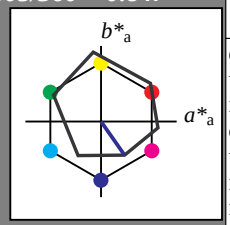
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 305/360 = 0.847$
lab*tch* and *lab*nch

D65: hue V
LCH*Ma: 26 54 305
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

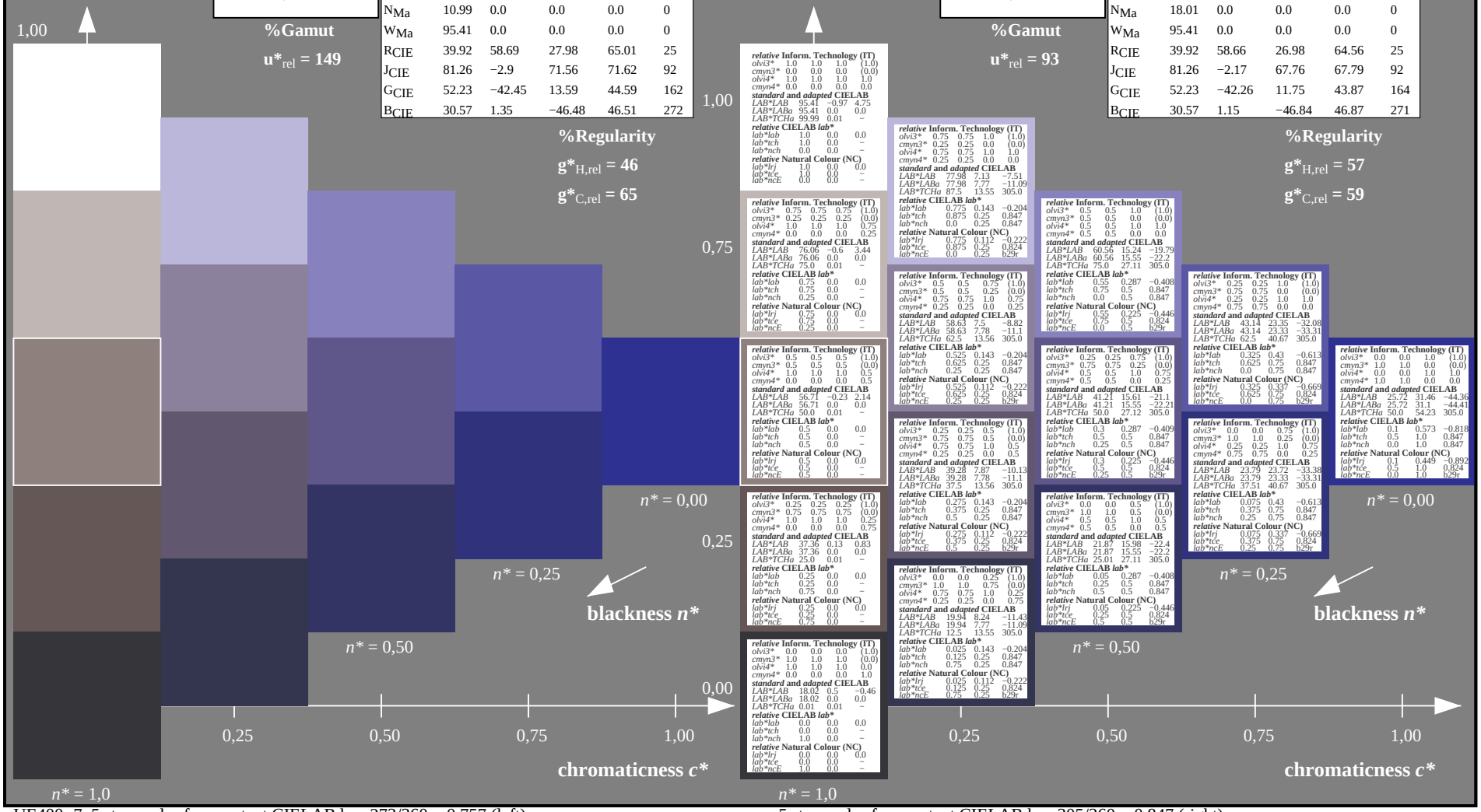
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



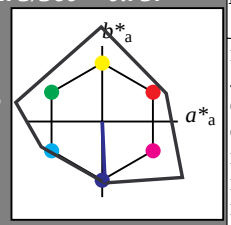
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

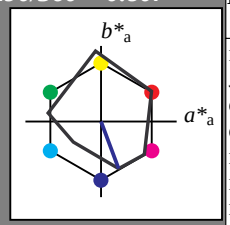
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 290/360 = 0.807$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 37 66 290
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

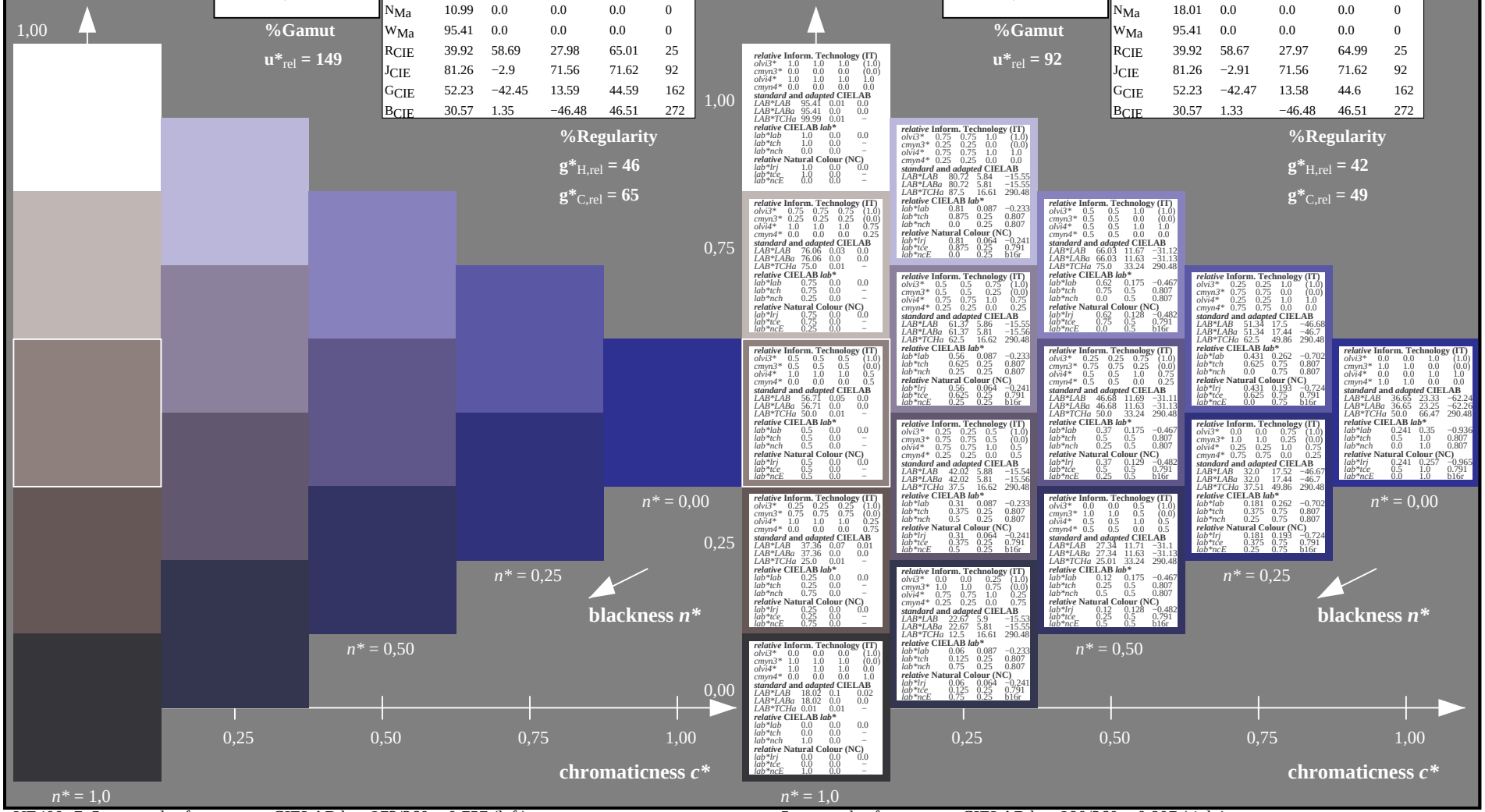
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



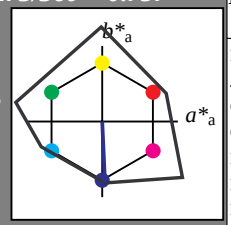
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 290/360 = 0.807 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

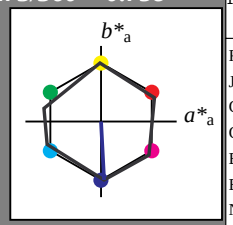
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 77 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

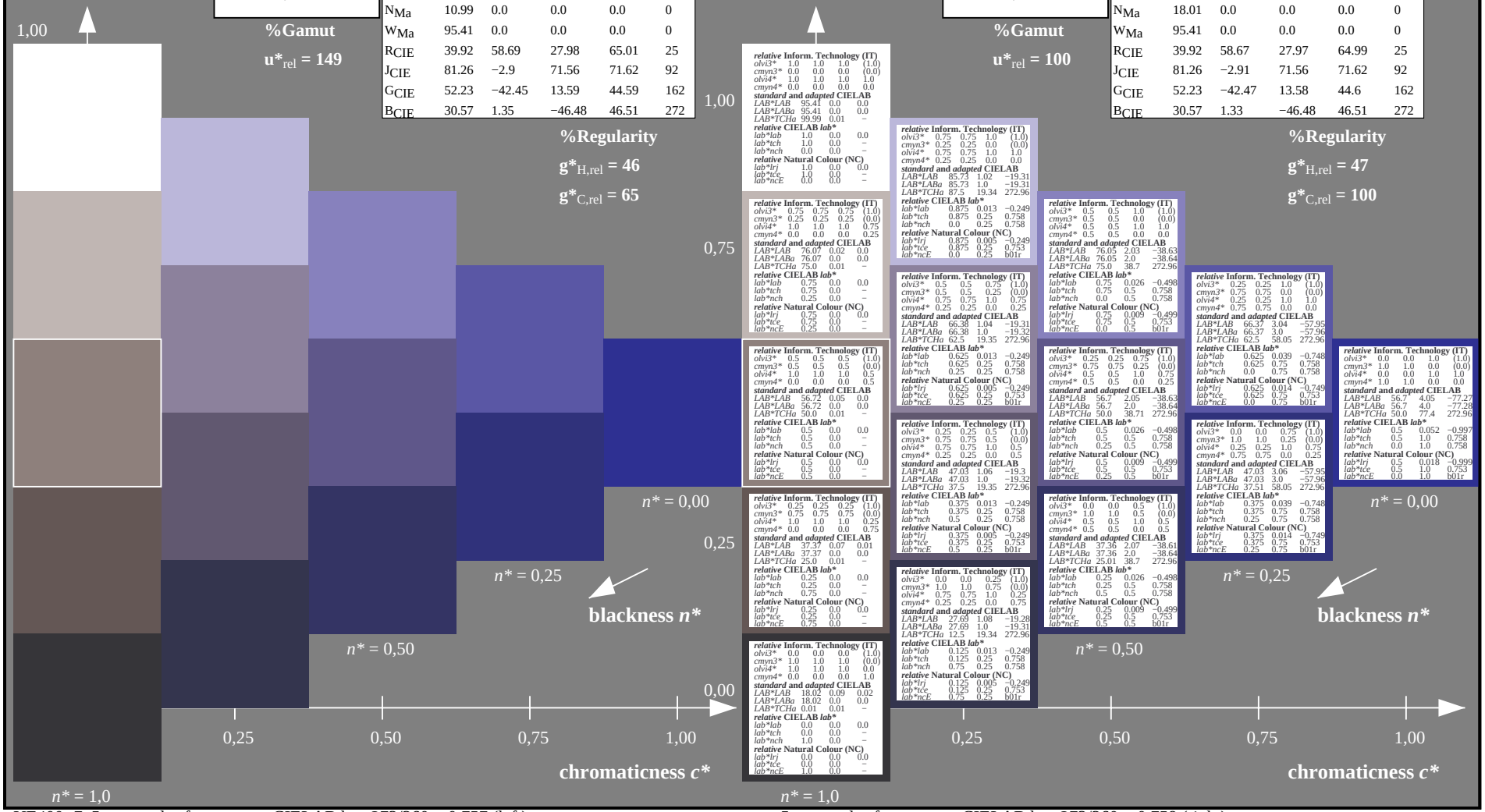
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



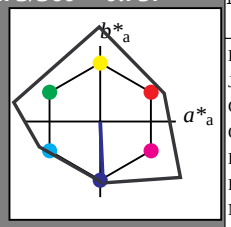
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

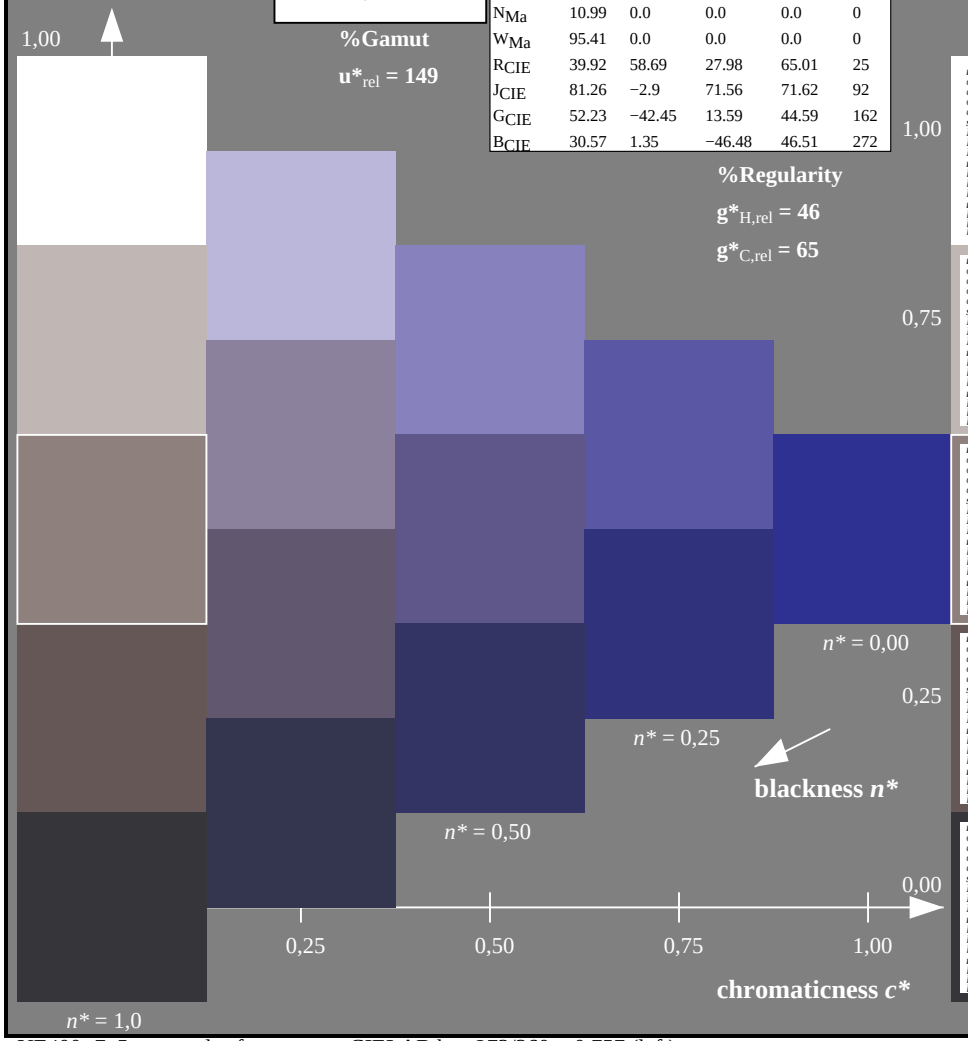
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

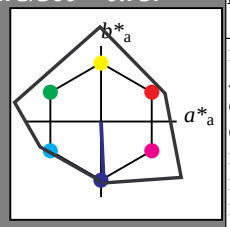
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

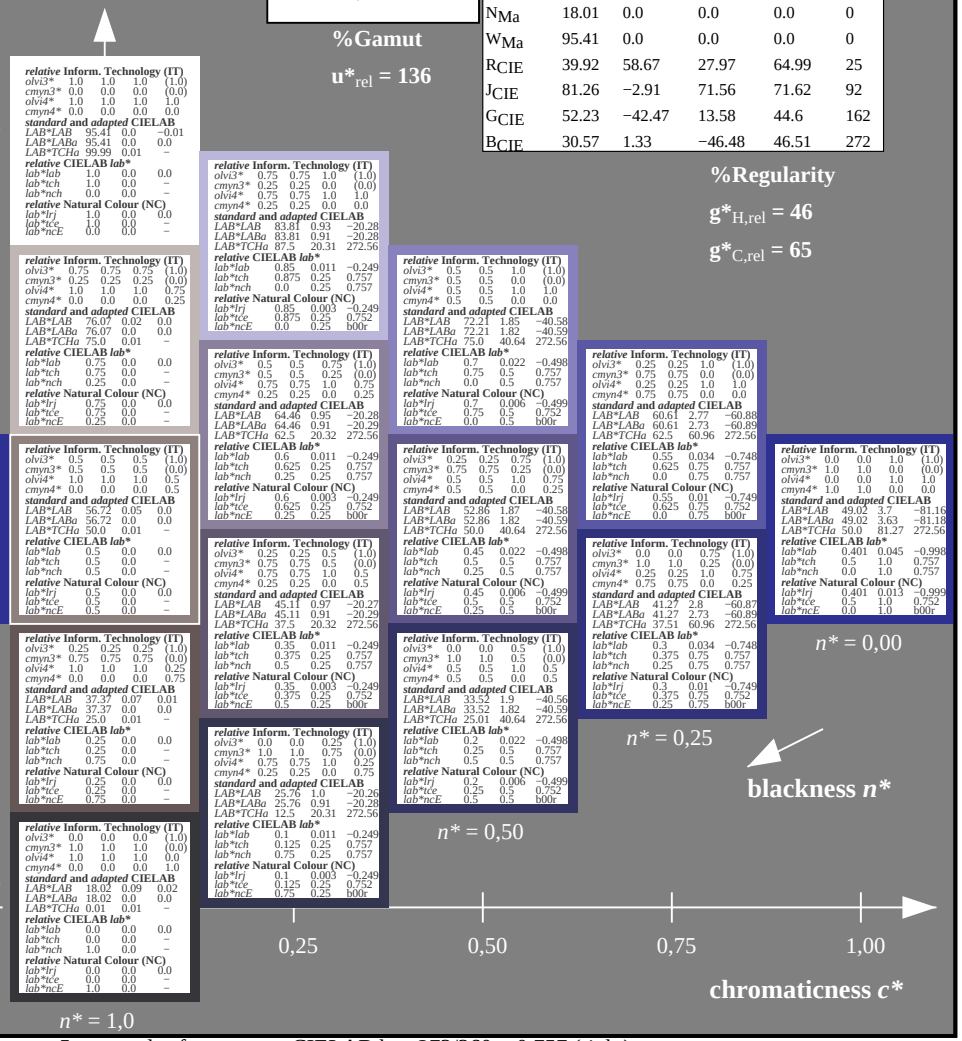
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



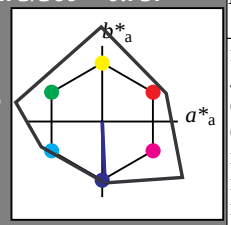
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

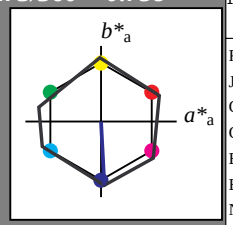
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 273/360 = 0.758$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 84 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness

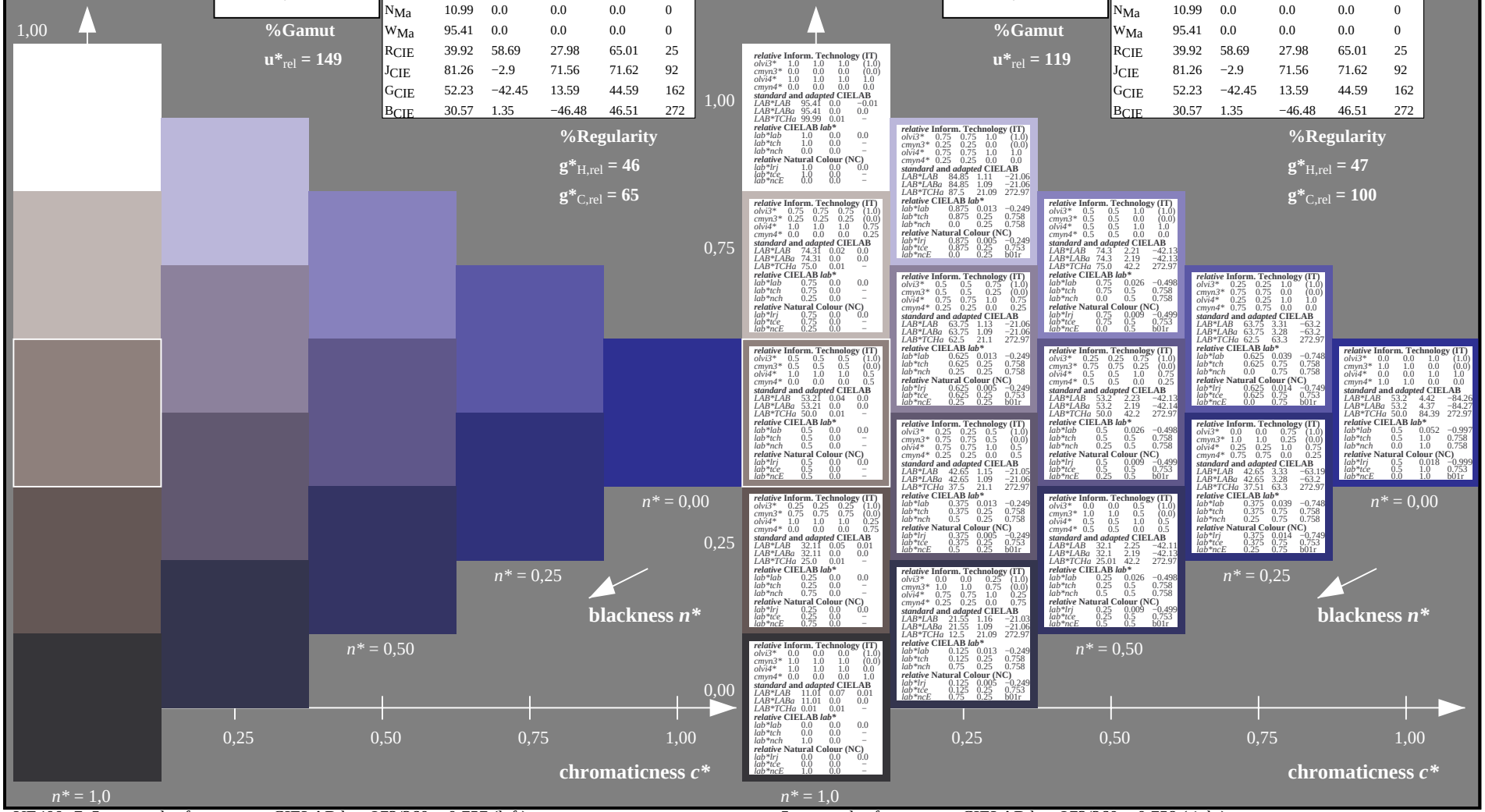


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



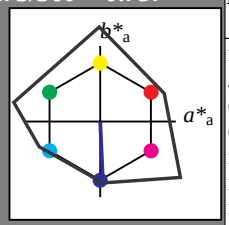
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.758 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

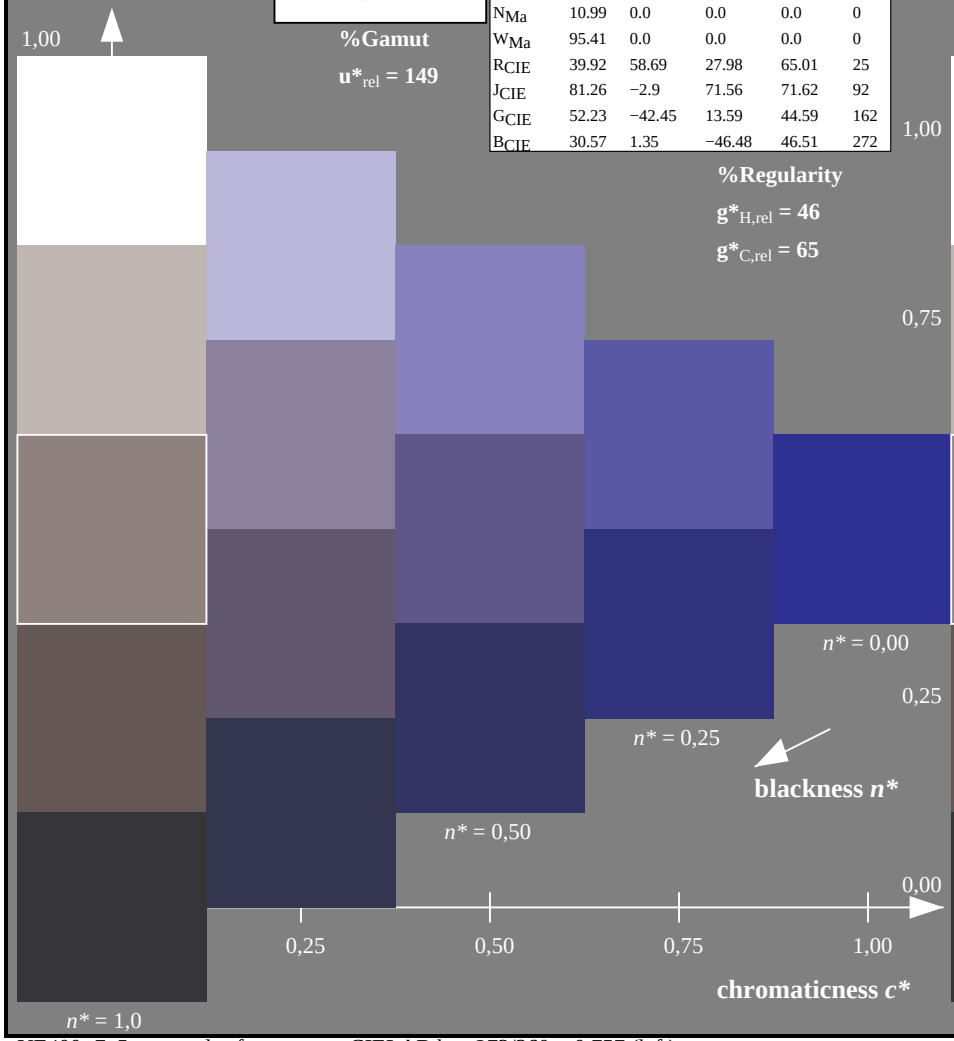
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

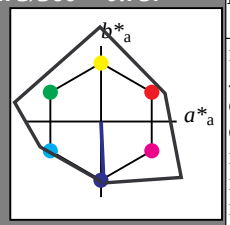
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 273/360 = 0.757$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 81 273
rgb*Ma: 0.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

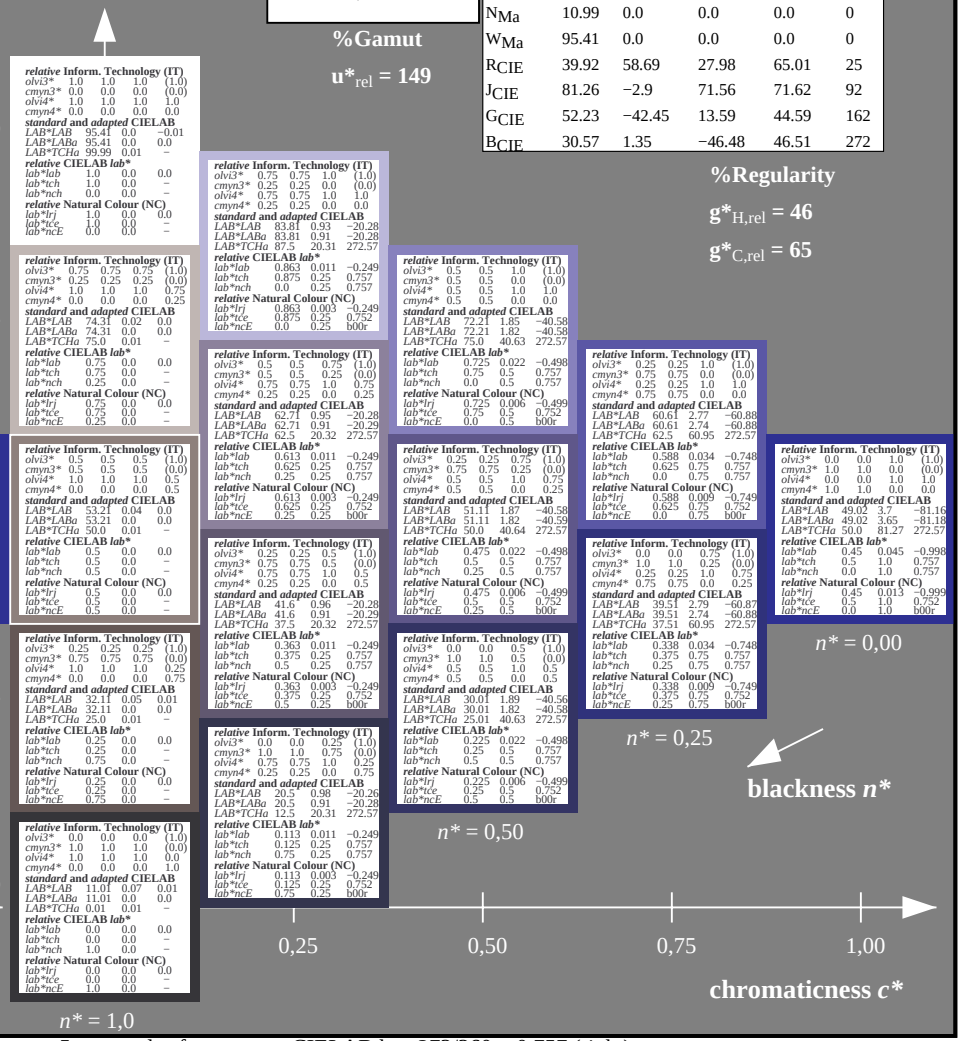
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



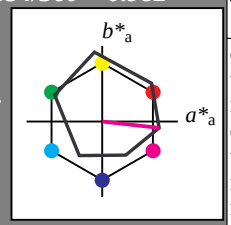
UE400−7, 5 step scales for constant CIELAB hue 273/360 = 0.757 (left)

5 step scales for constant CIELAB hue 273/360 = 0.757 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

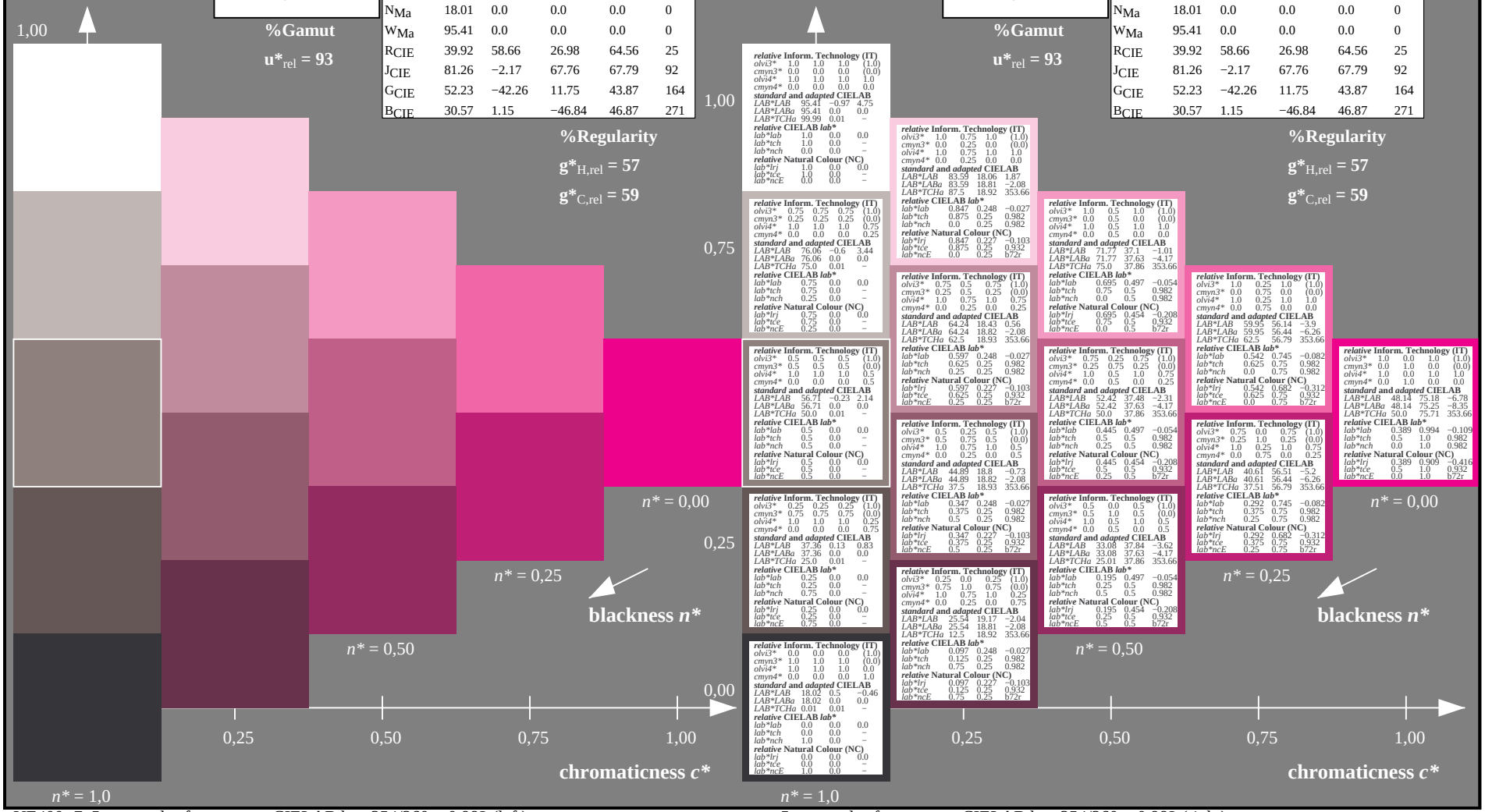
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

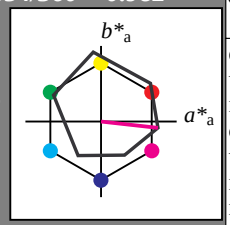
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

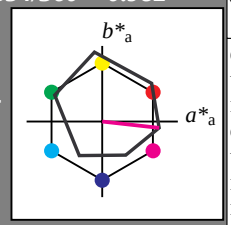
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

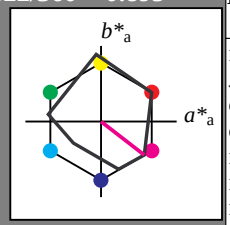
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

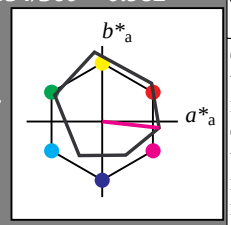
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 354/360 = 0.982*
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

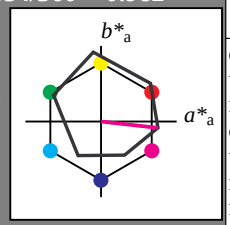
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 354/360 = 0.982*
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

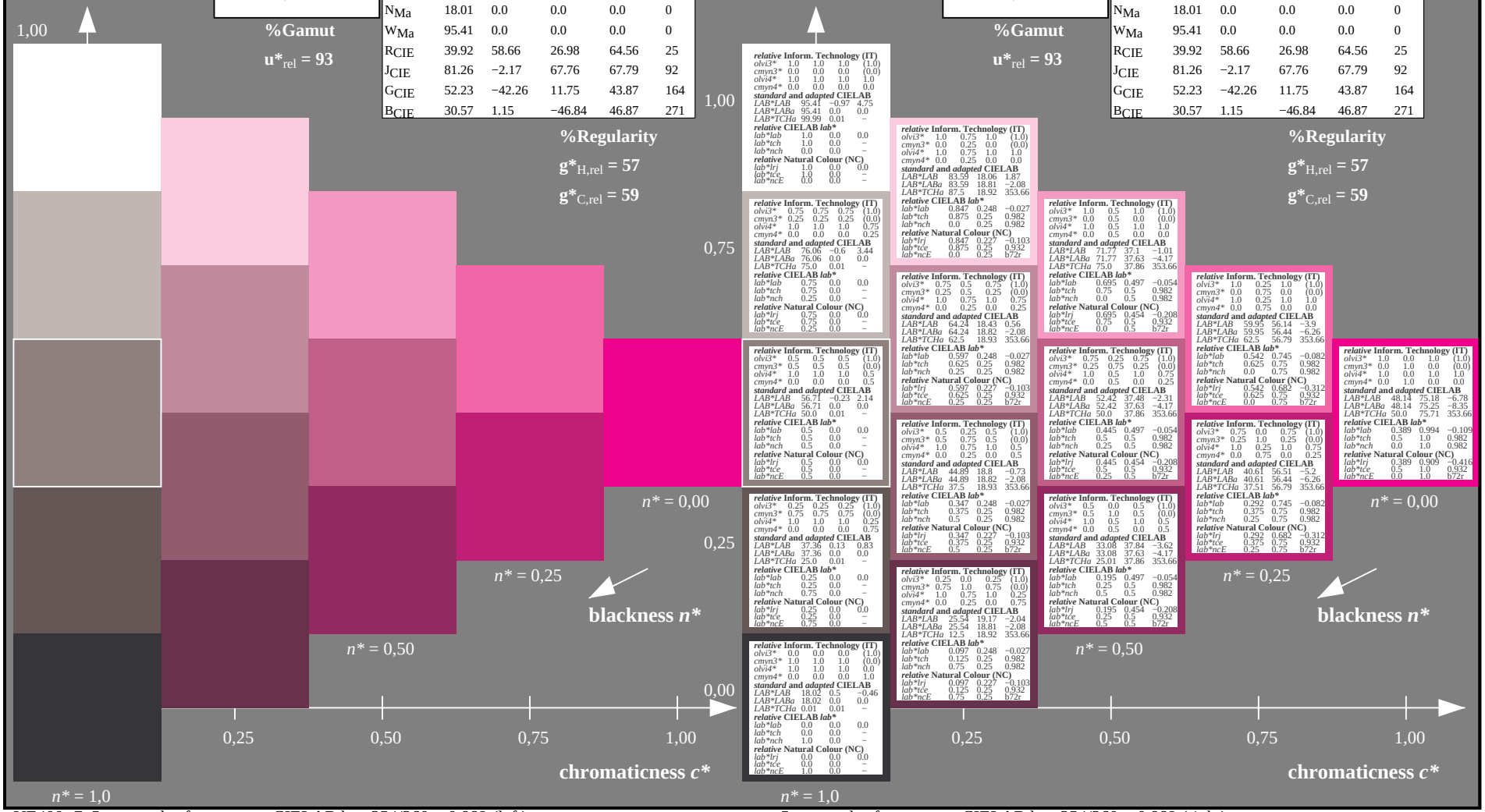
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



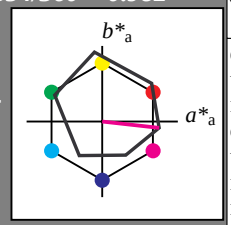
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

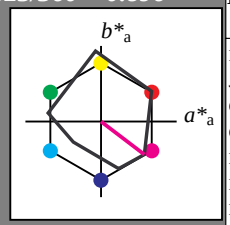
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

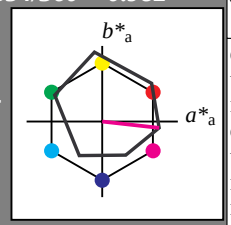
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

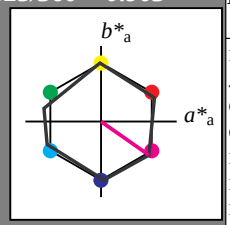
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

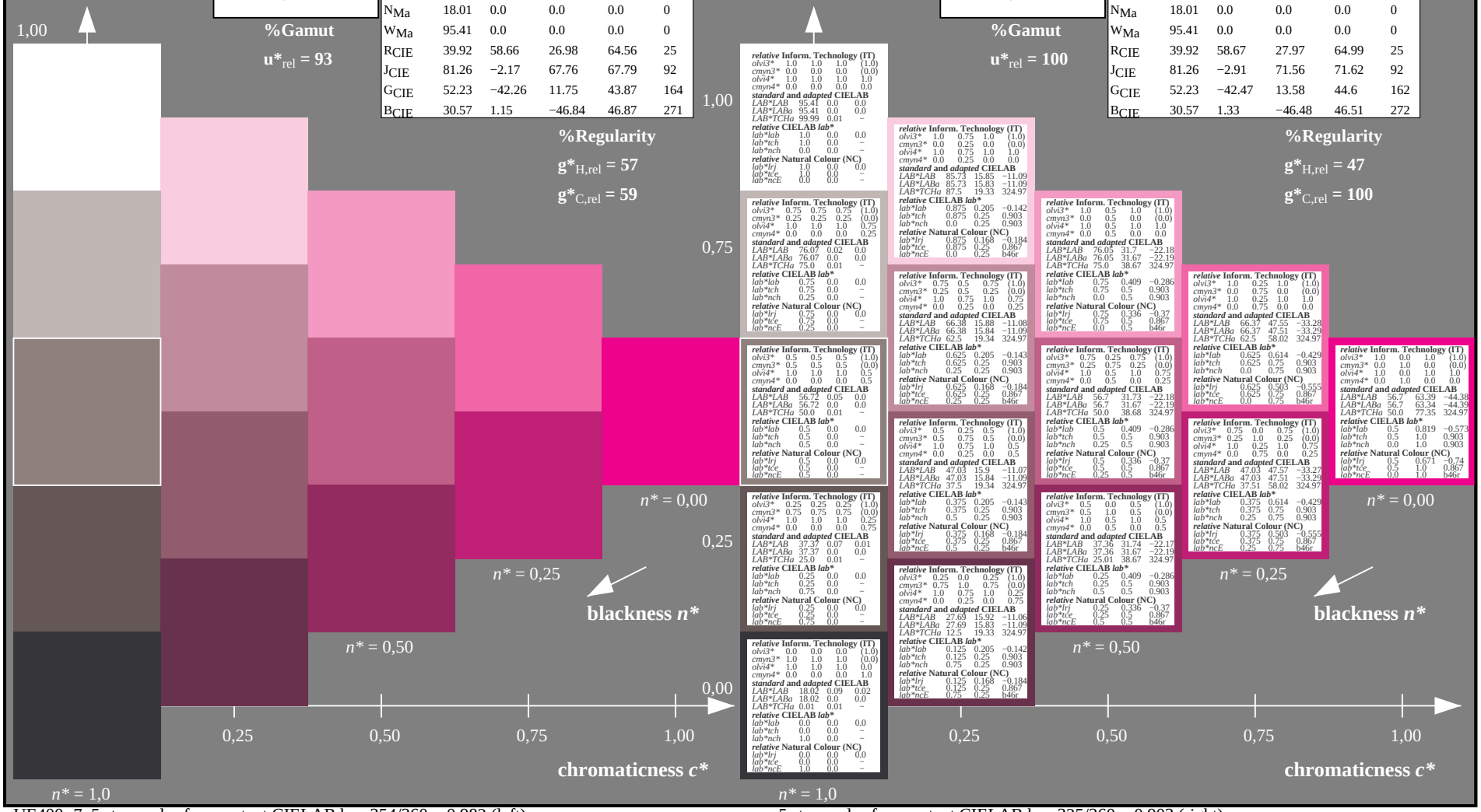
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



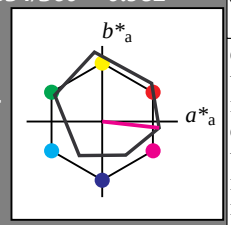
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

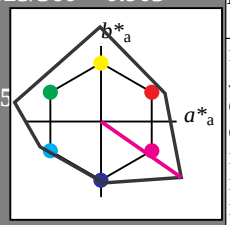
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

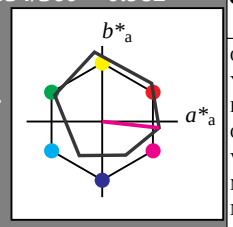
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

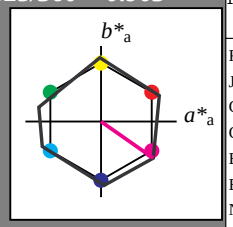
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

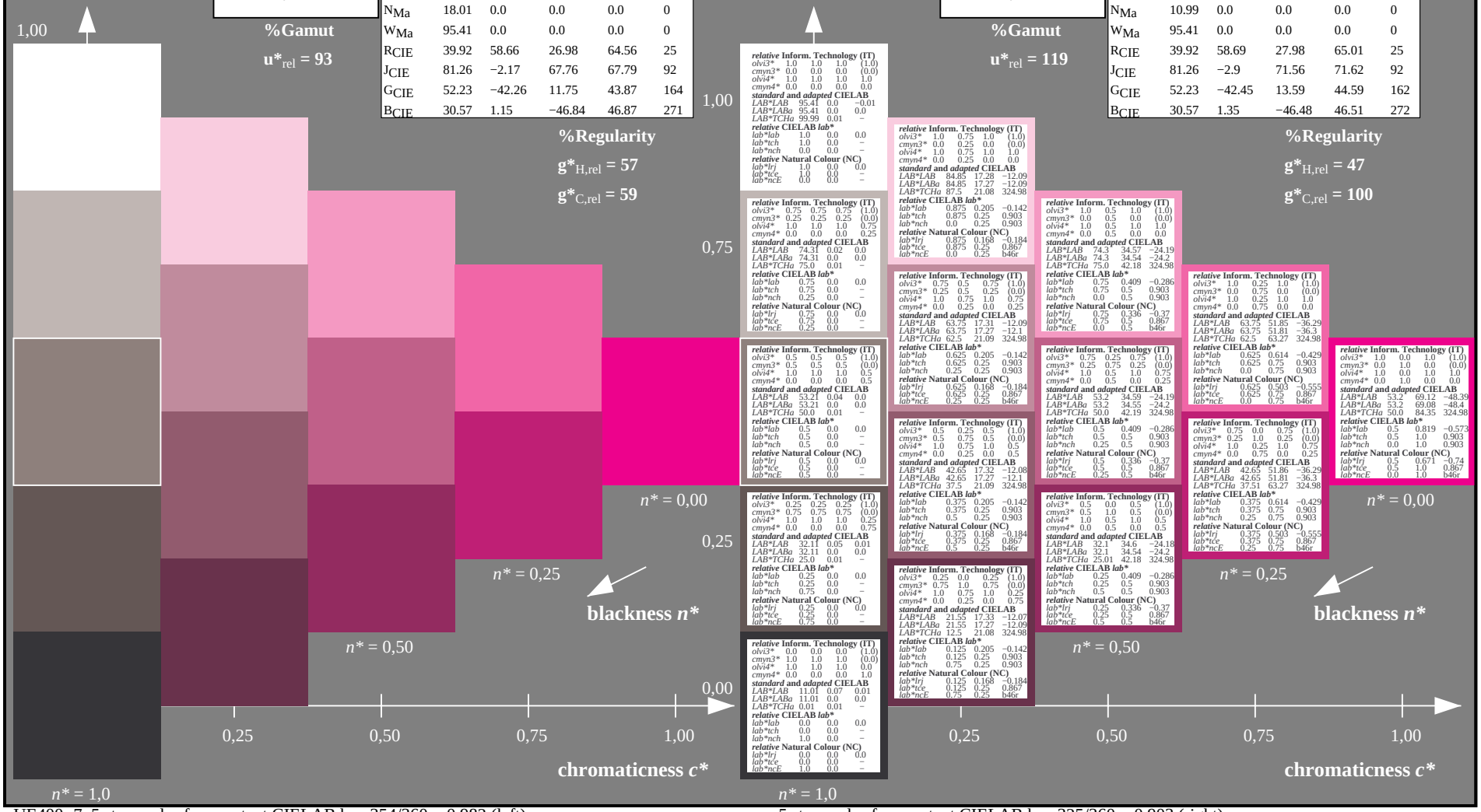
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



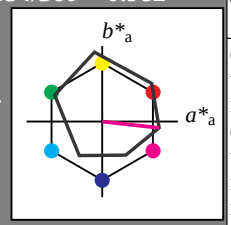
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

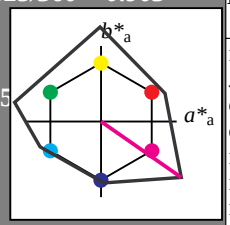
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

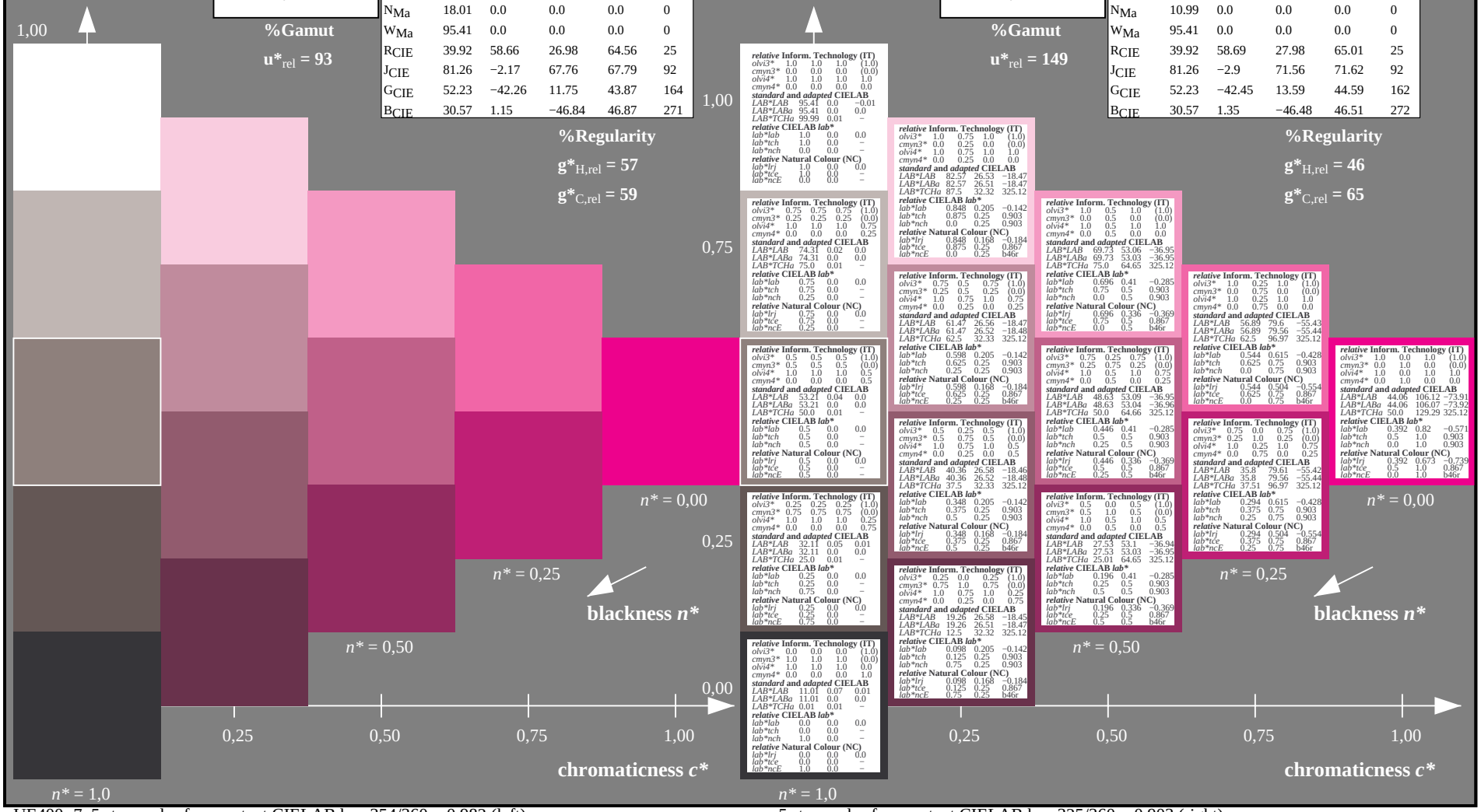
%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



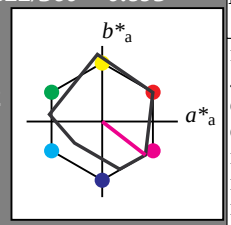
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 322/360 = 0.895*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

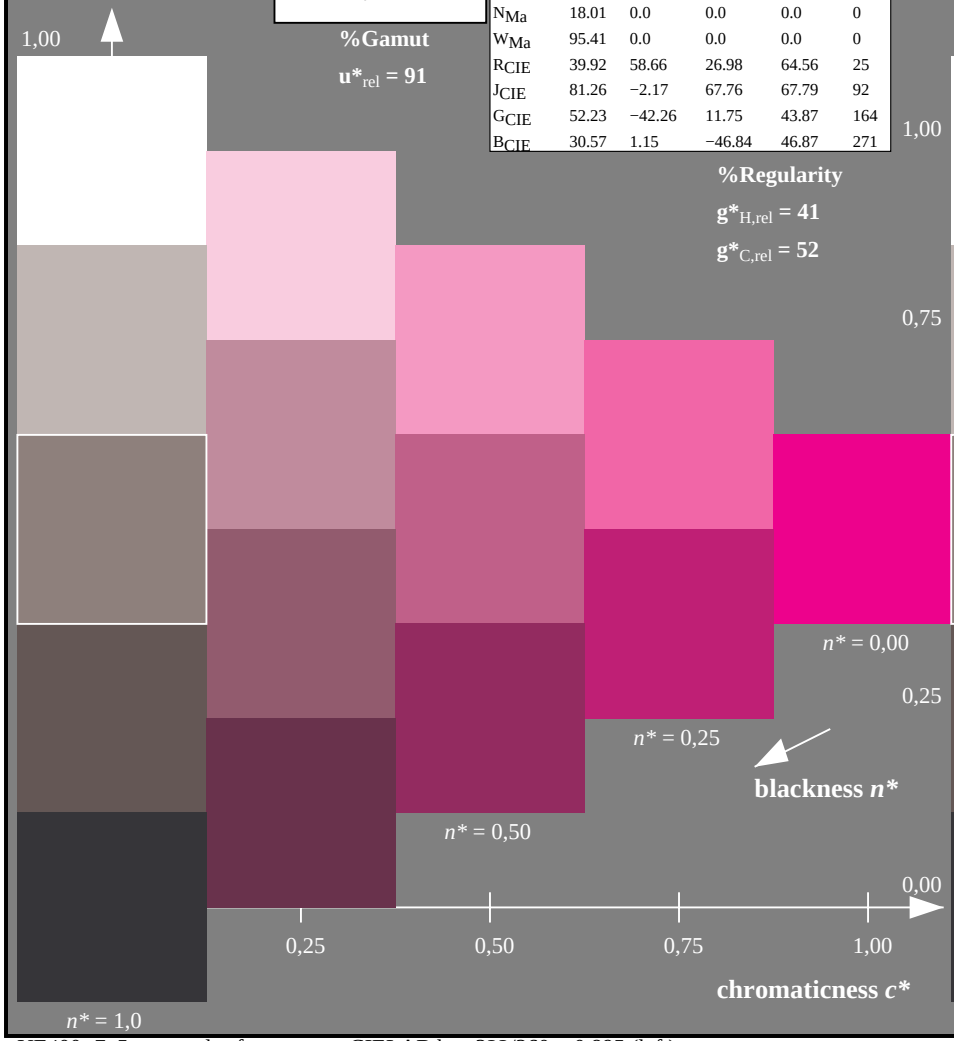
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

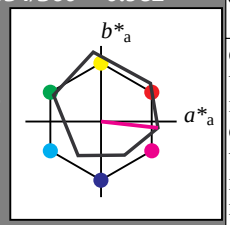
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 354/360 = 0.982*
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

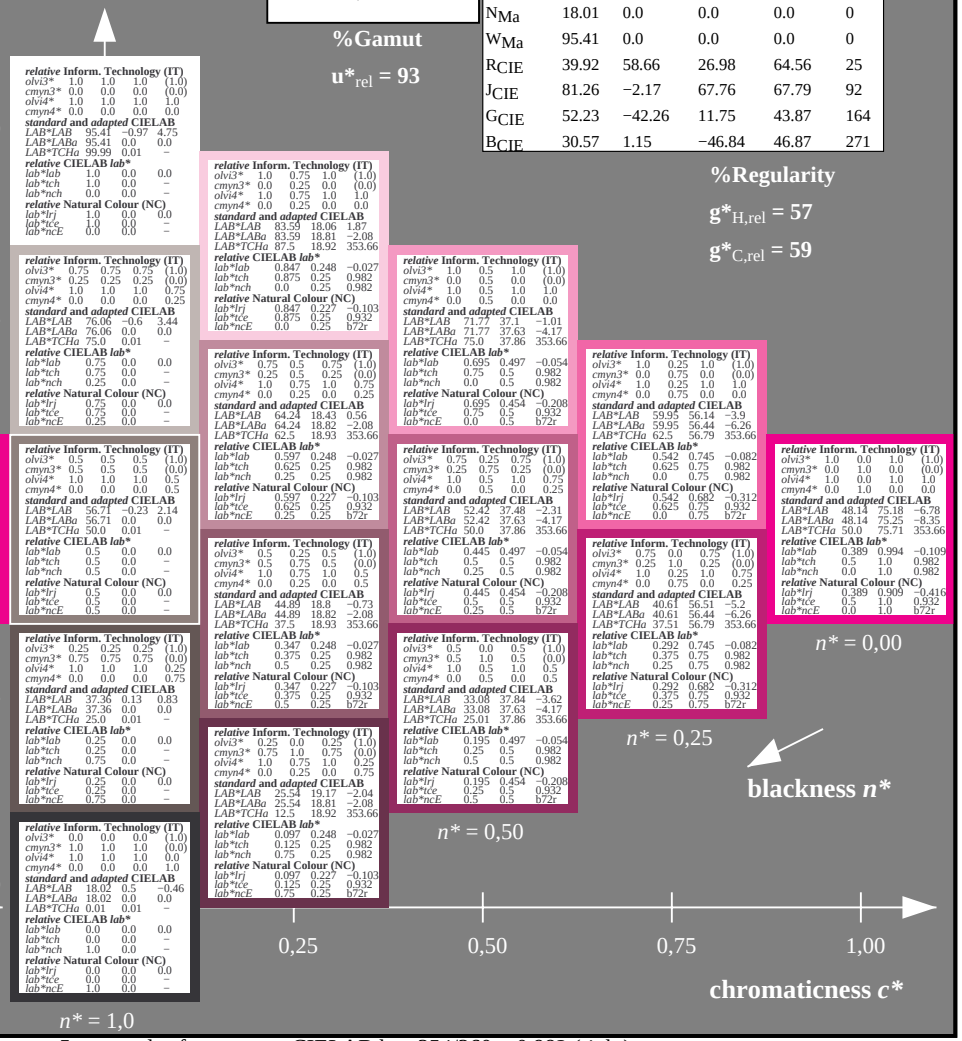
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



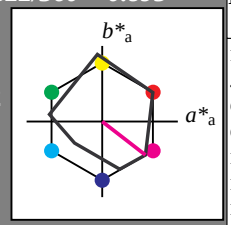
UE400−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 91$

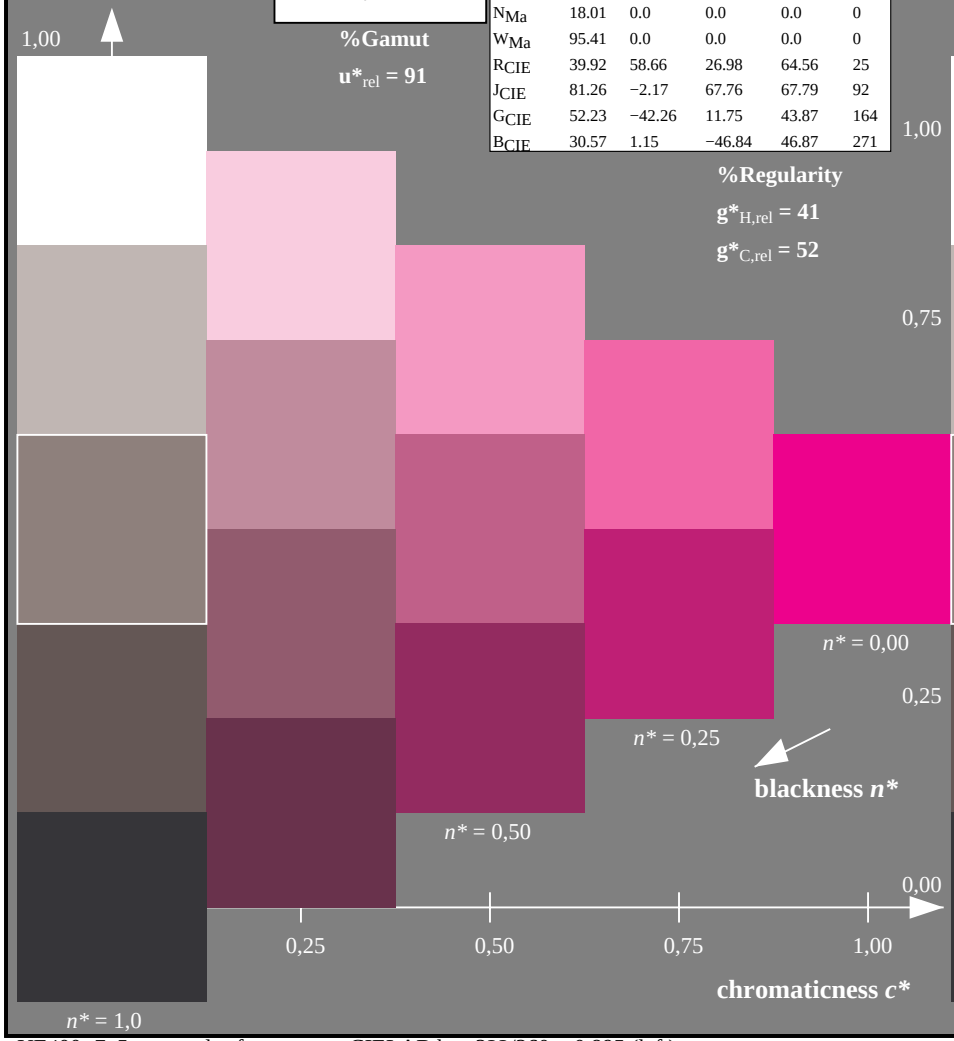
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 41$

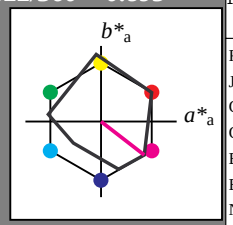


UE400−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 91$

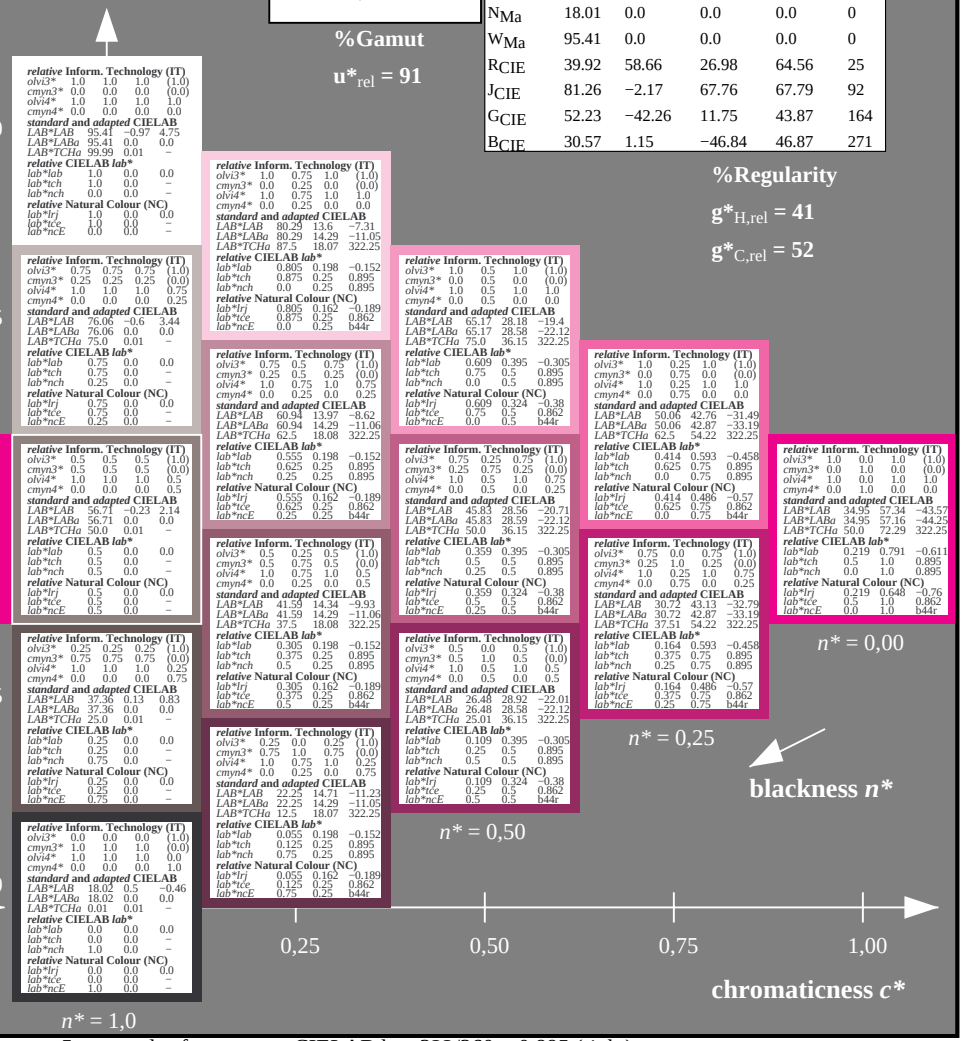
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

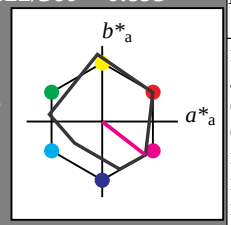


5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 322/360 = 0.895*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

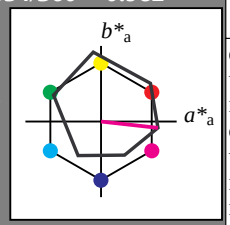
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 354/360 = 0.982*
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

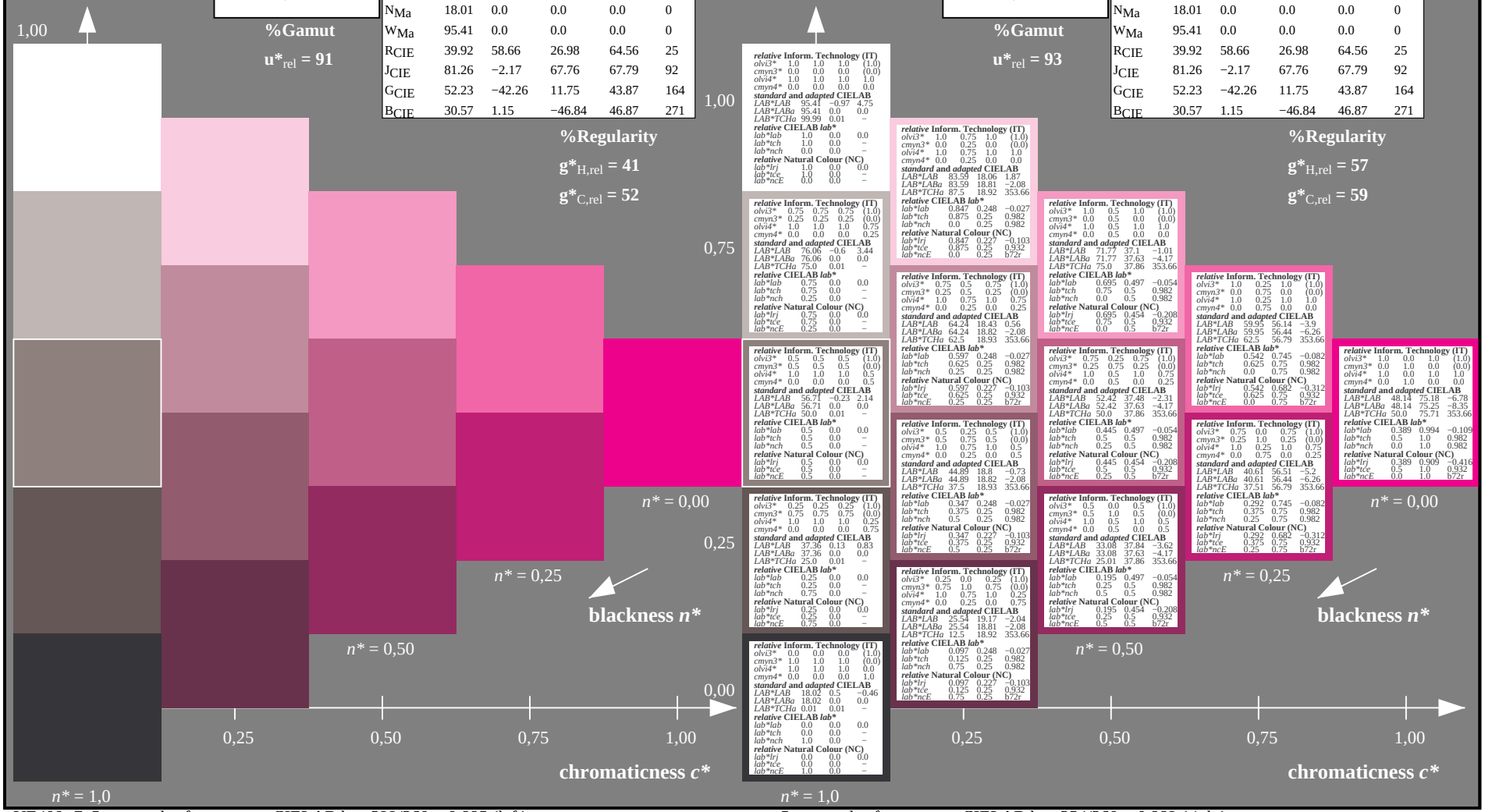
%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



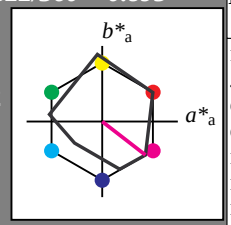
UE400−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System MRS18
for hue *h = lab*h = 322/360 = 0.895**
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

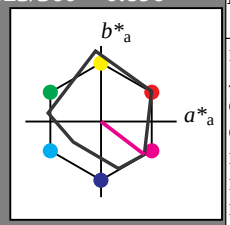
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System MRS18a
for hue *h = lab*h = 323/360 = 0.896**
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

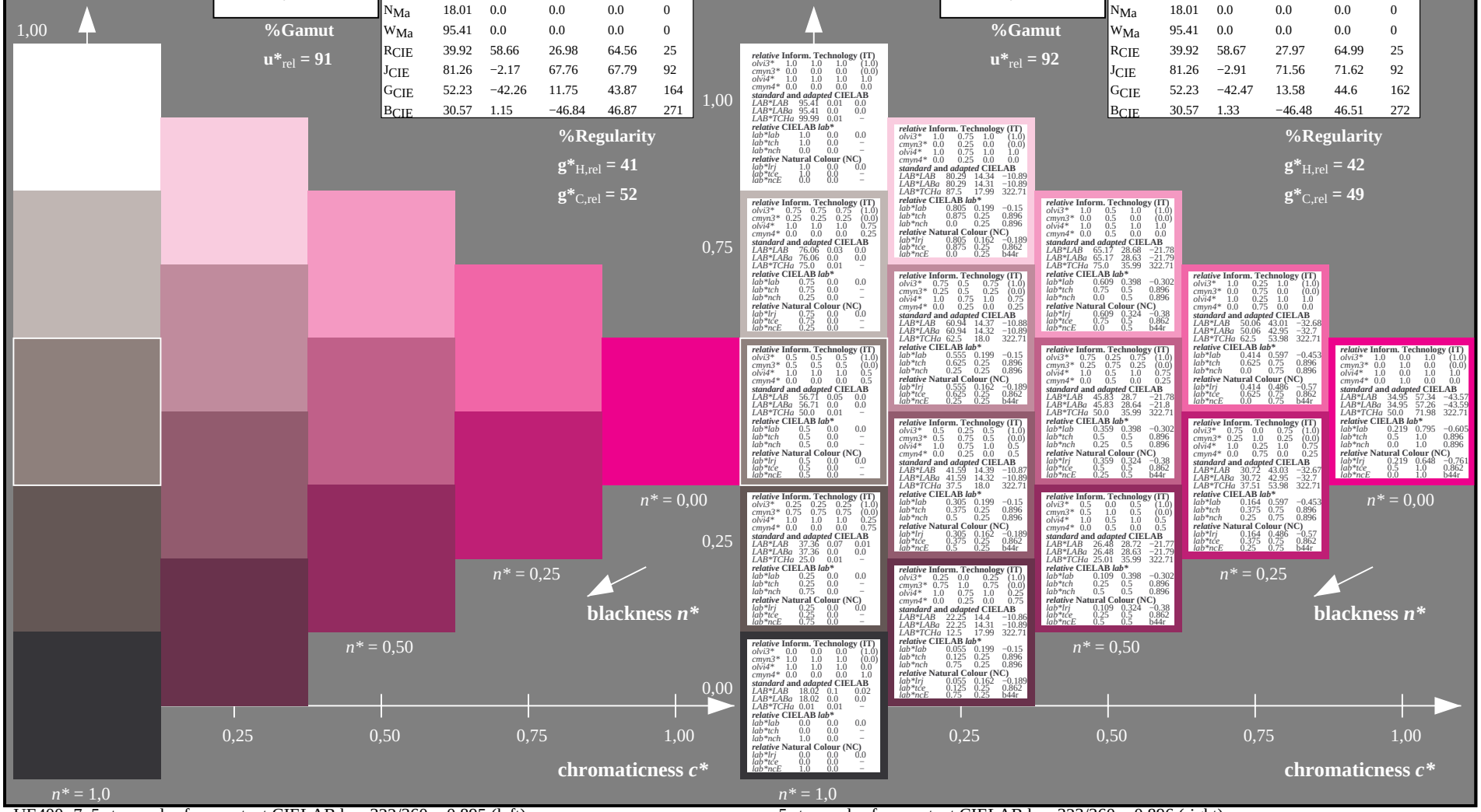
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



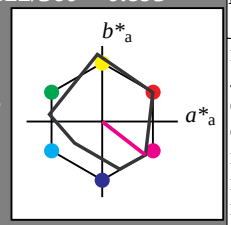
UE400−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

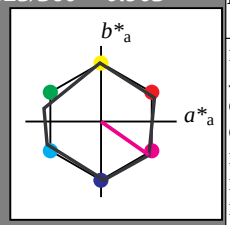
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

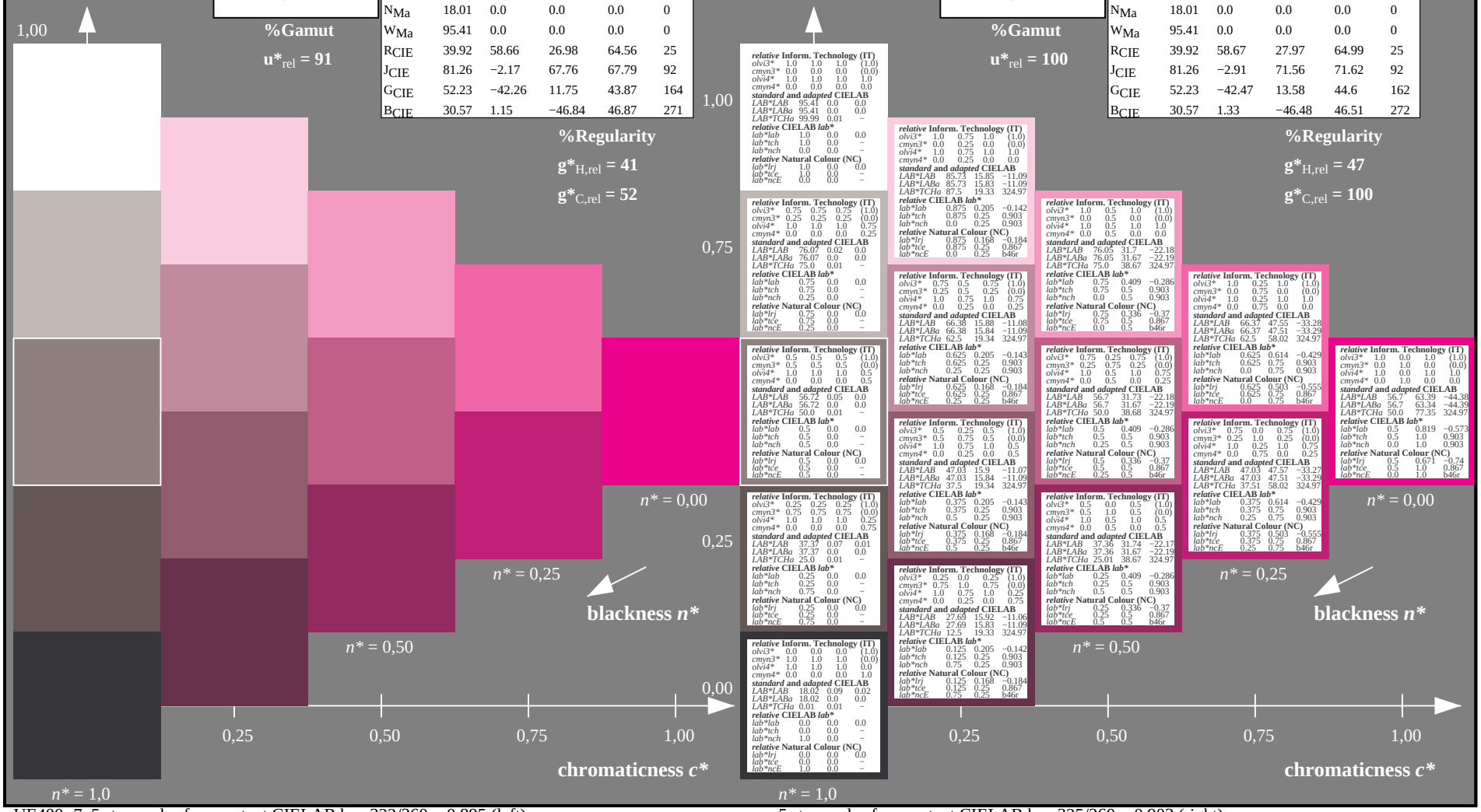
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



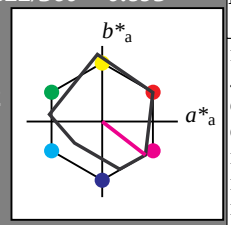
UE400−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

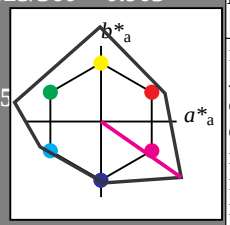
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

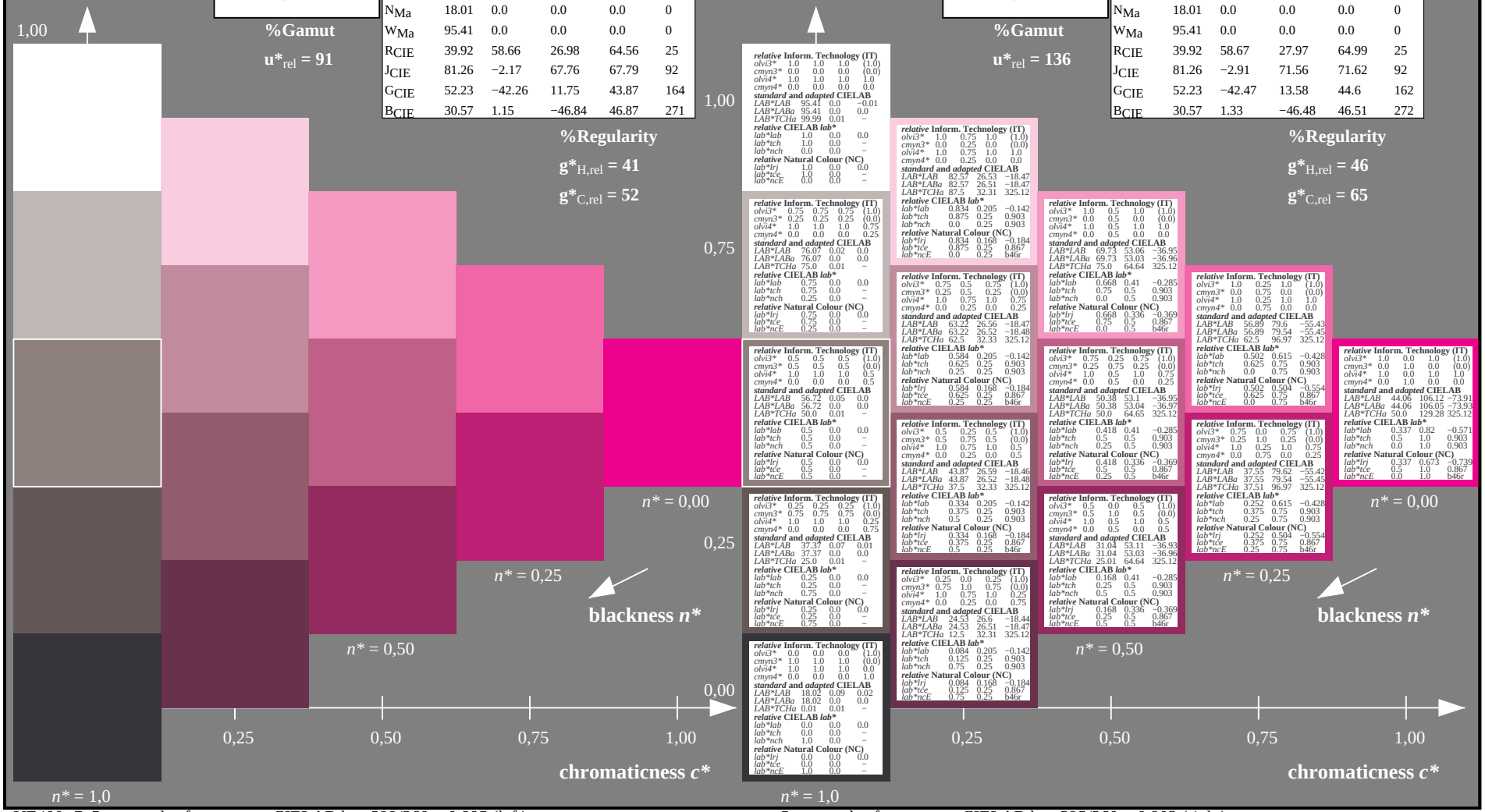
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



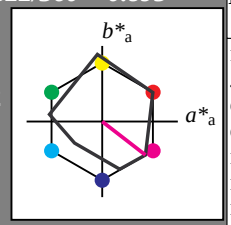
UE400−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 322/360 = 0.895*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

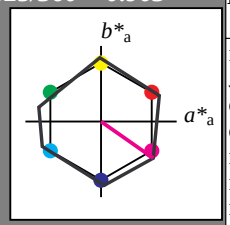
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

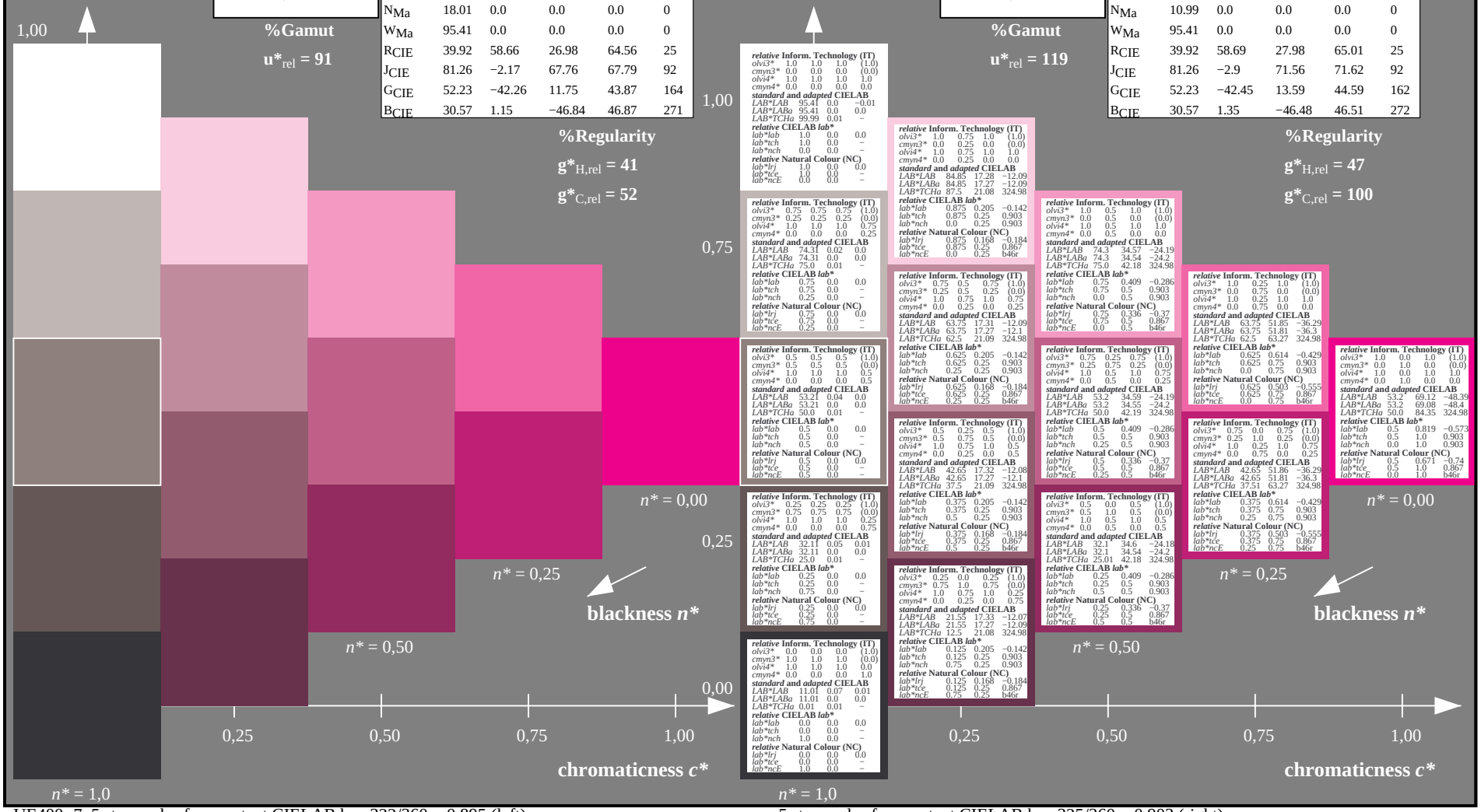
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



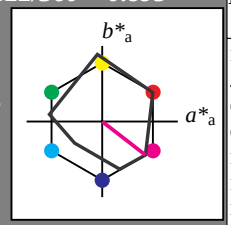
UE400−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 322/360 = 0.895*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

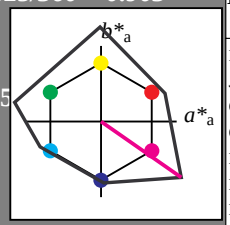
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

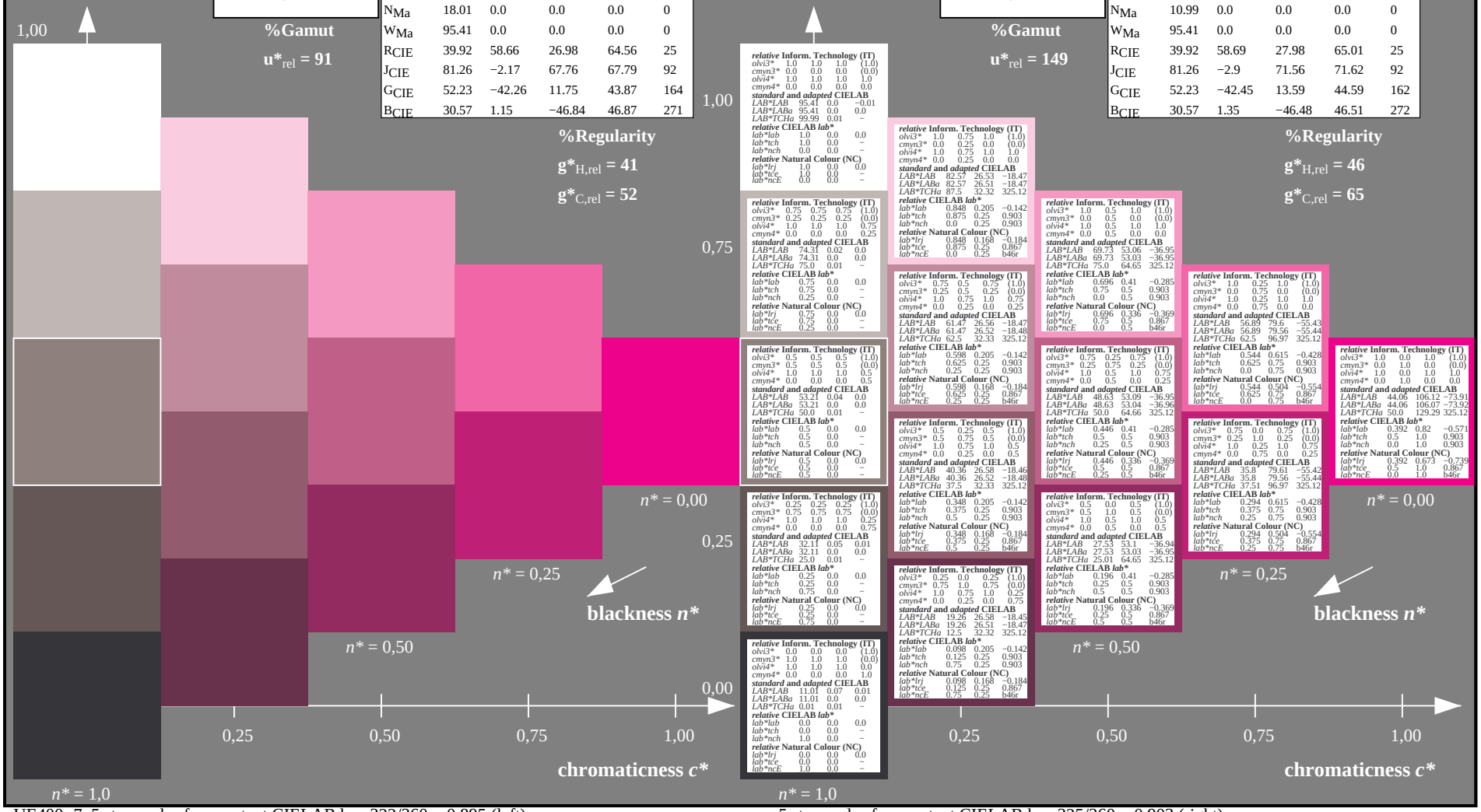
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



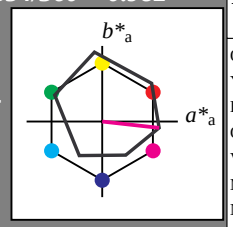
UE400−7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

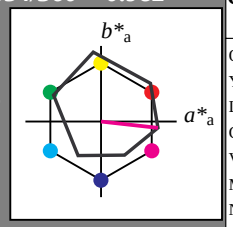
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

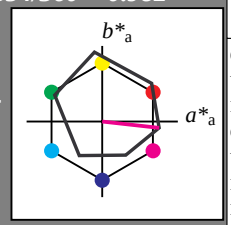
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 354/360 = 0.982*
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

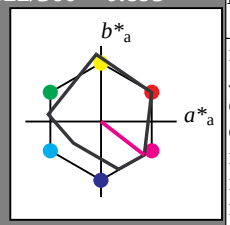
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 322/360 = 0.895*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

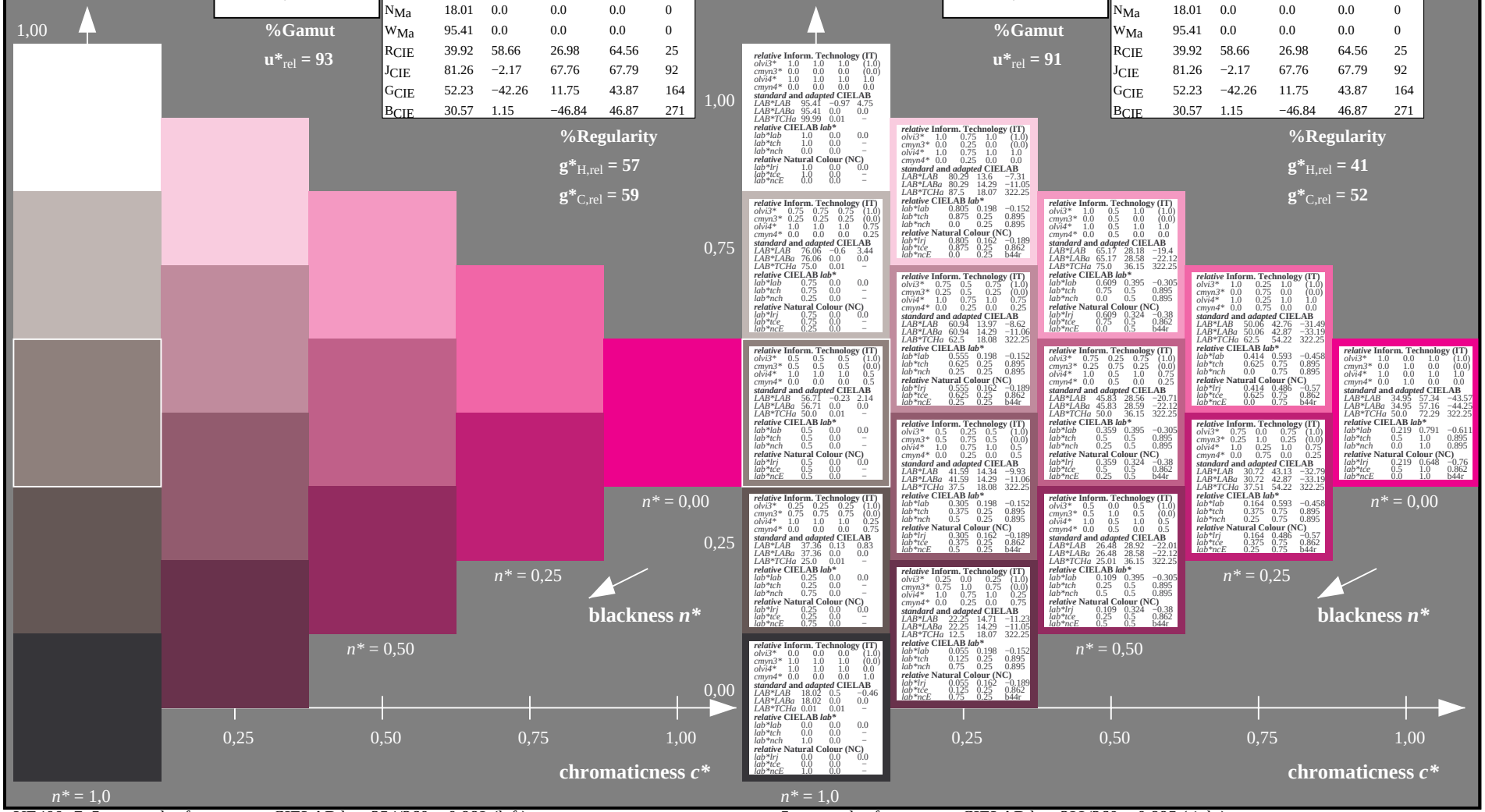
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



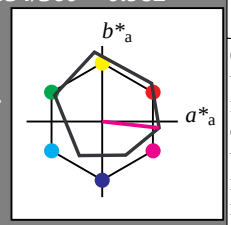
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 354/360 = 0.982**
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

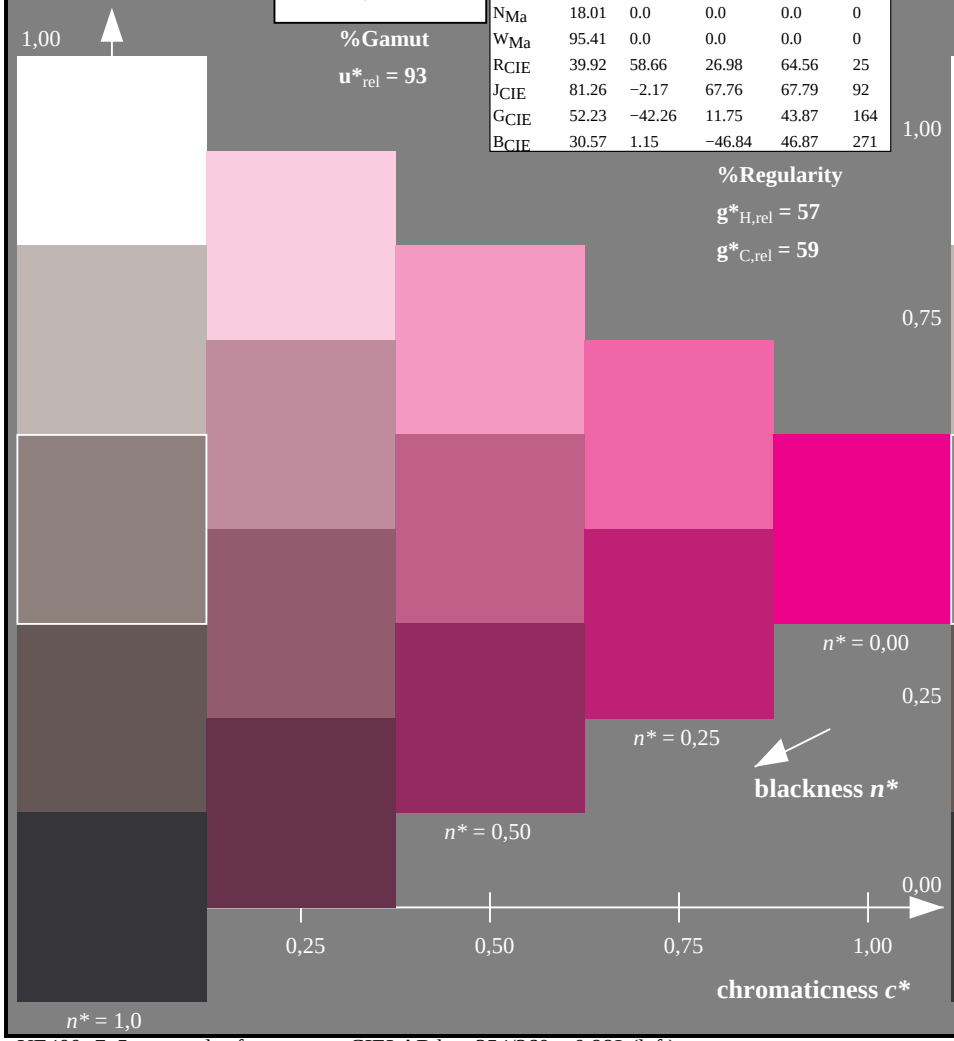
%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

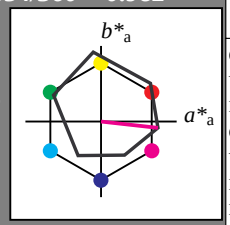
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System TRS18
for hue *h = *lab*h* = 354/360 = 0.982**
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

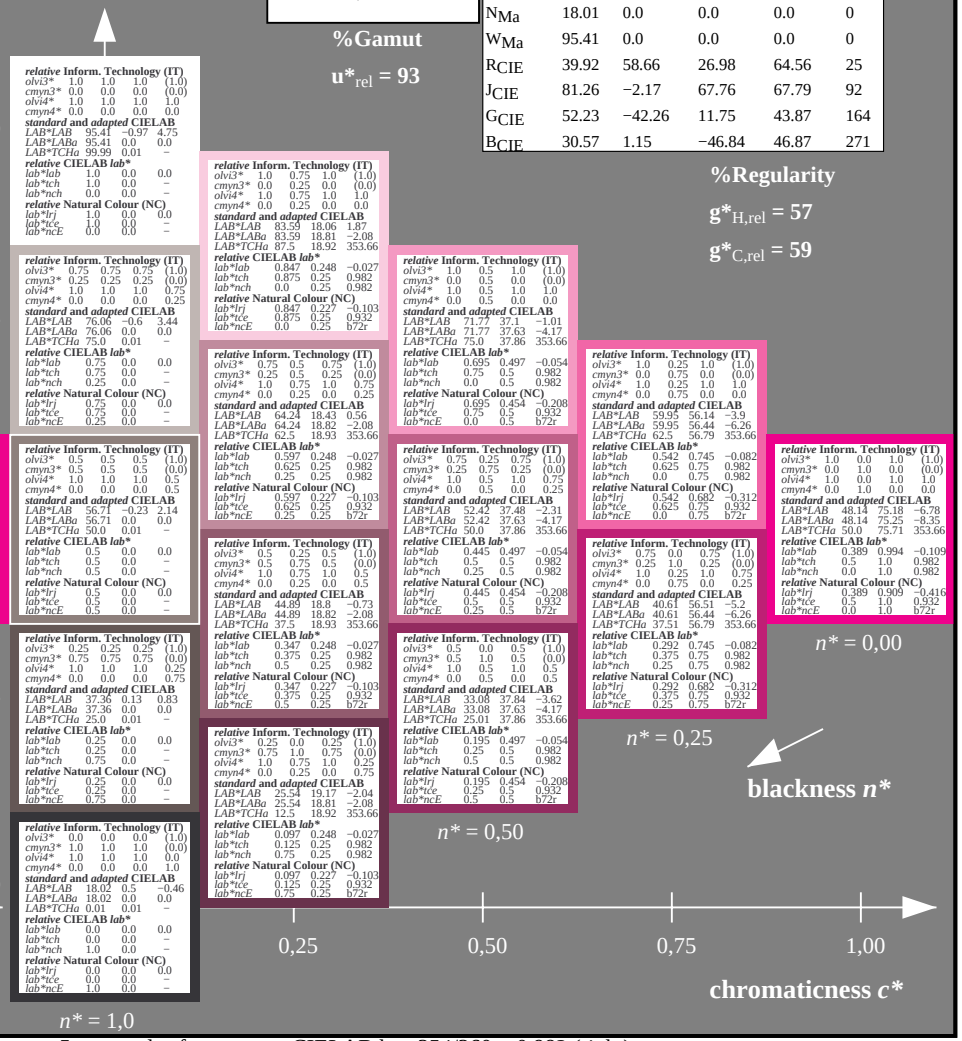
%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



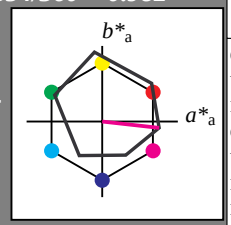
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

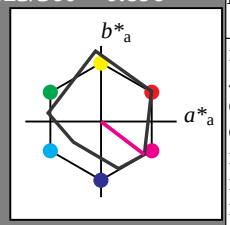
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

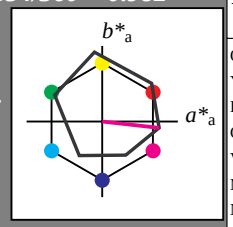
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

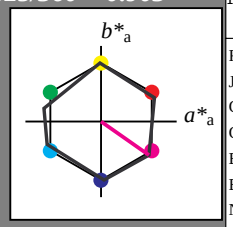
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

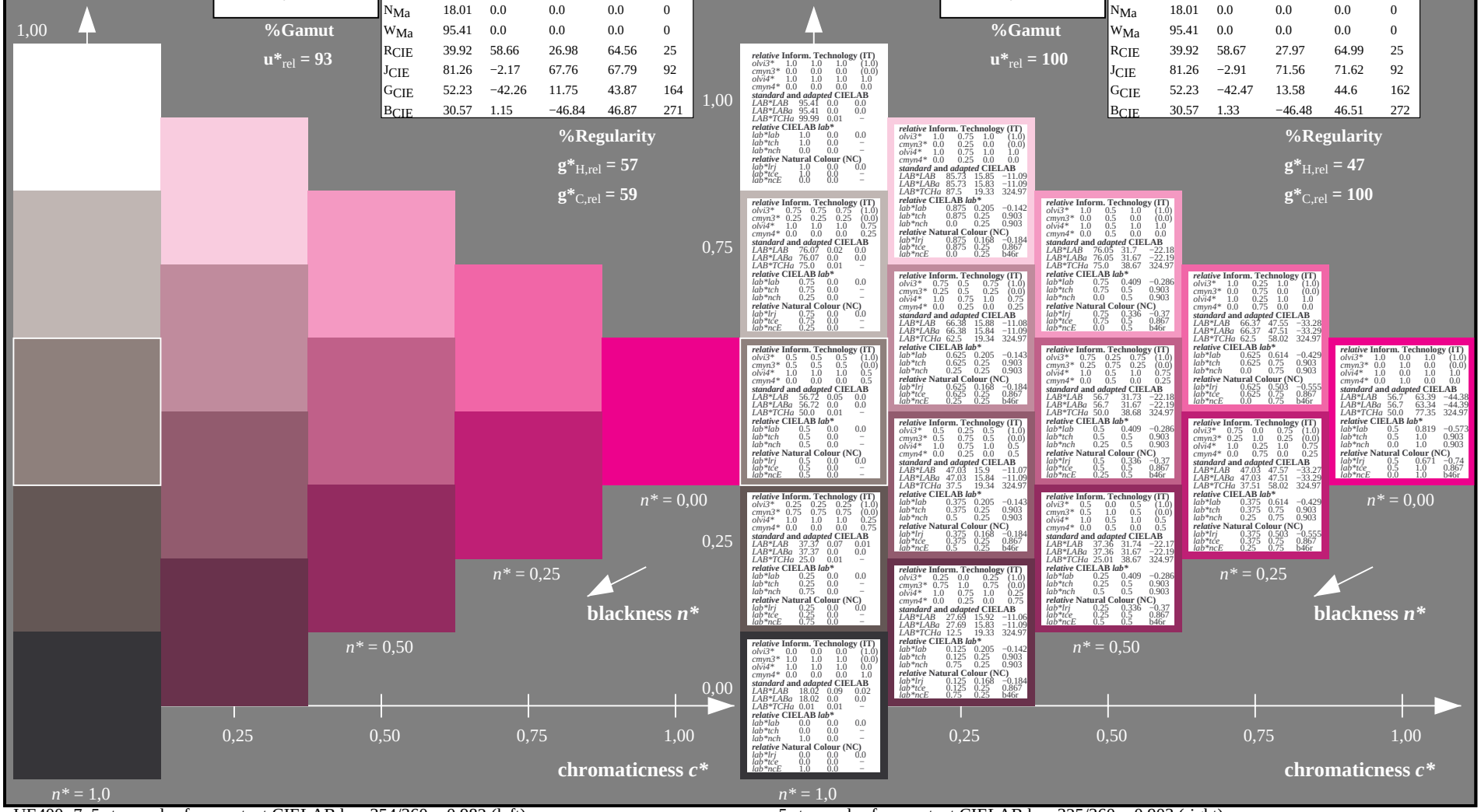
%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



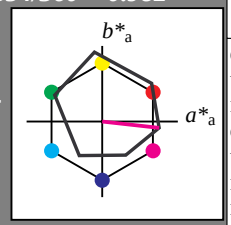
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

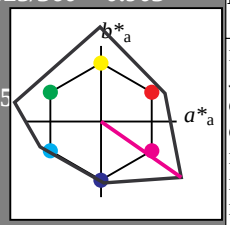
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 136$

%Regularity

$g^*_{H,rel} = 46$

$g^*_{C,rel} = 65$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

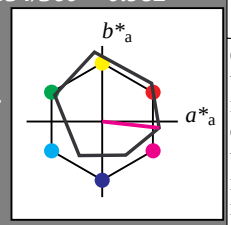
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 354/360 = 0.982*
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

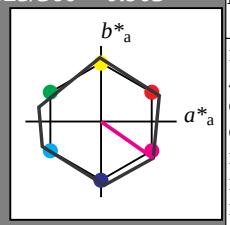
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

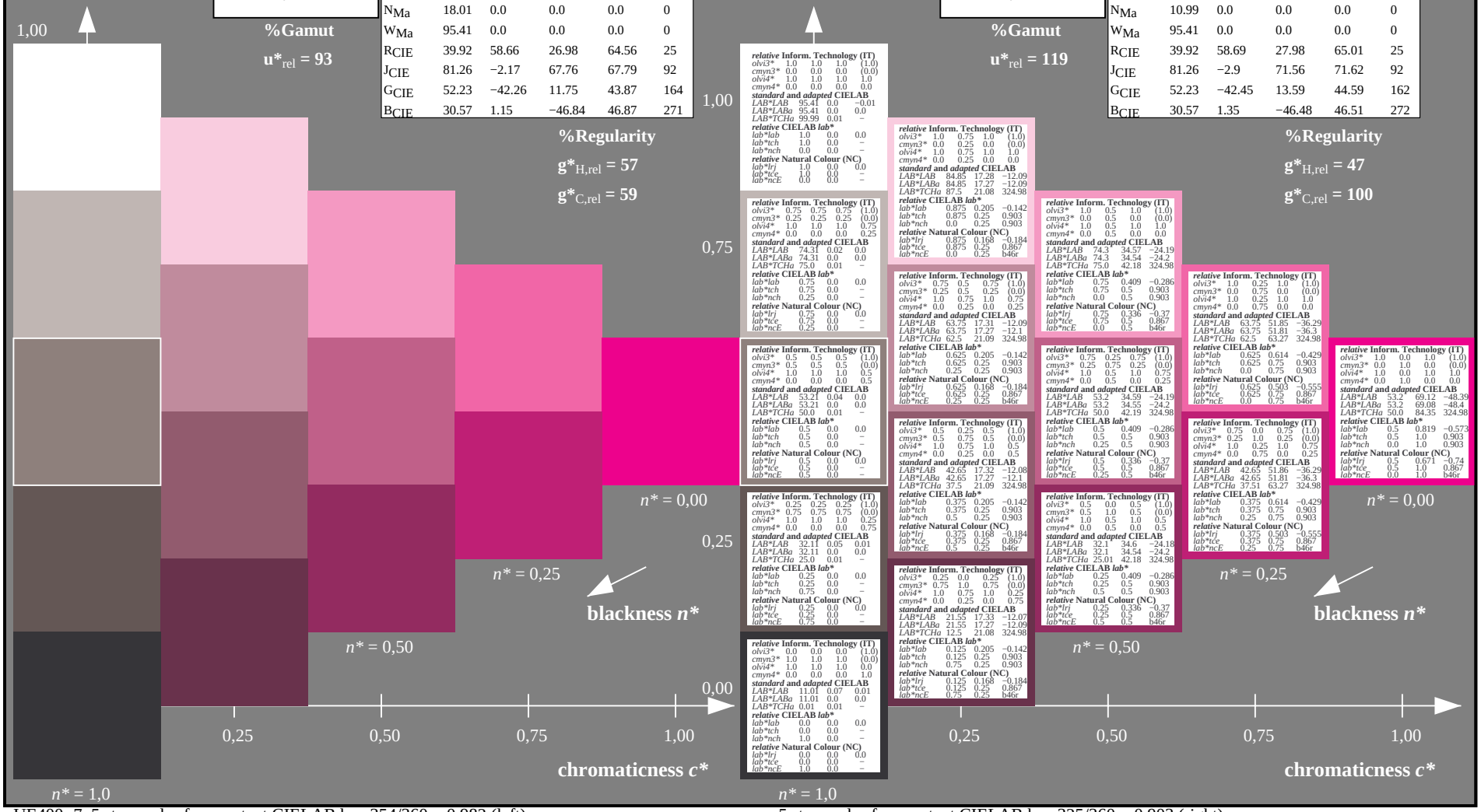
%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



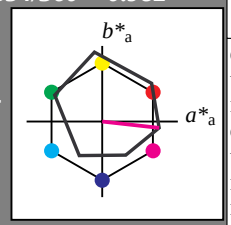
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

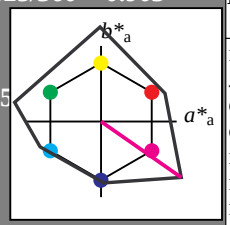
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

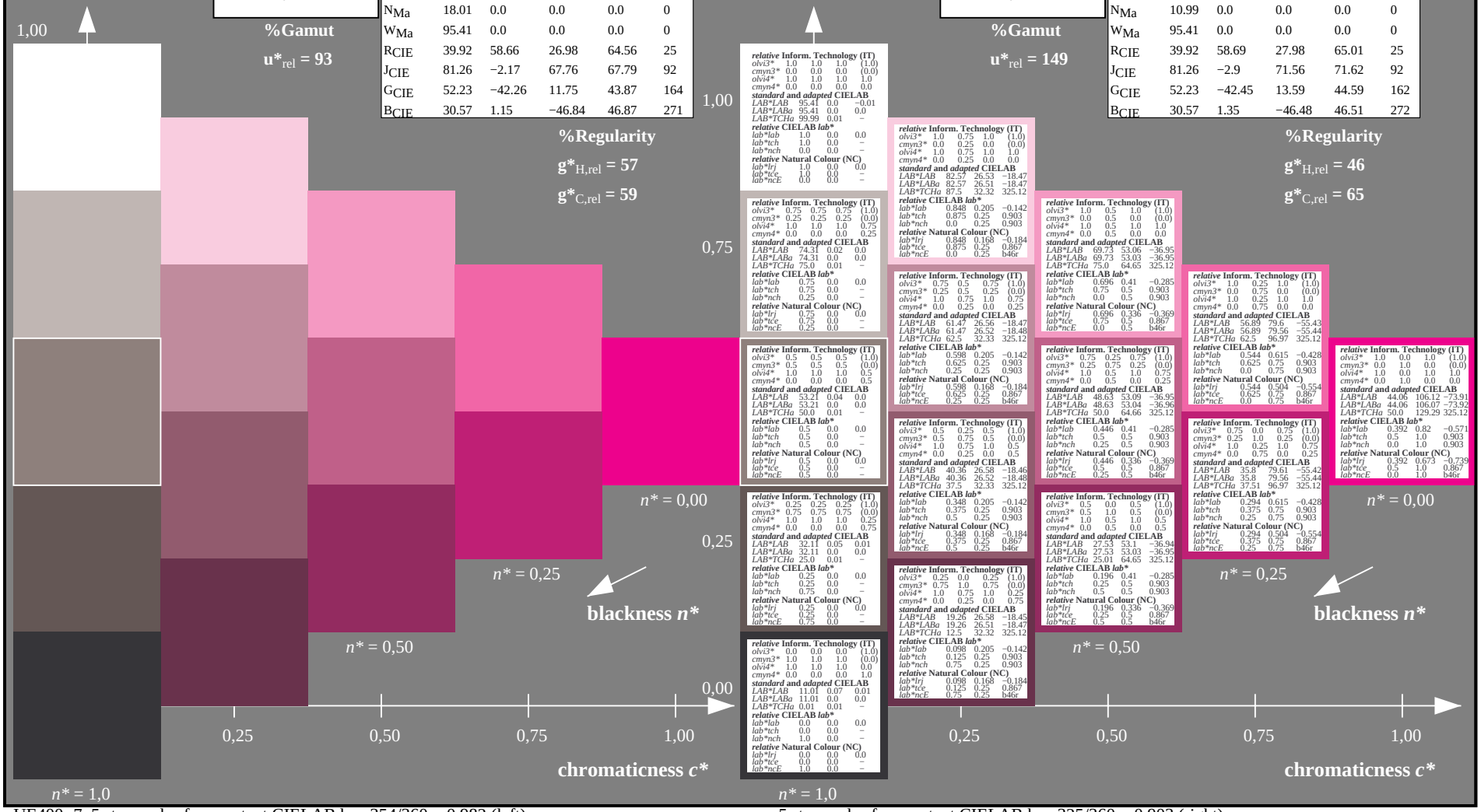
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



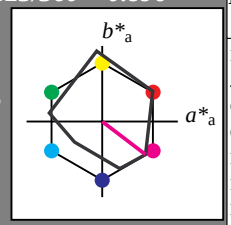
UE400−7, 5 step scales for constant CIELAB hue 354/360 = 0.982 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 323/360 = 0.896*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

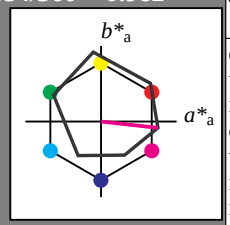
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 354/360 = 0.982*
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

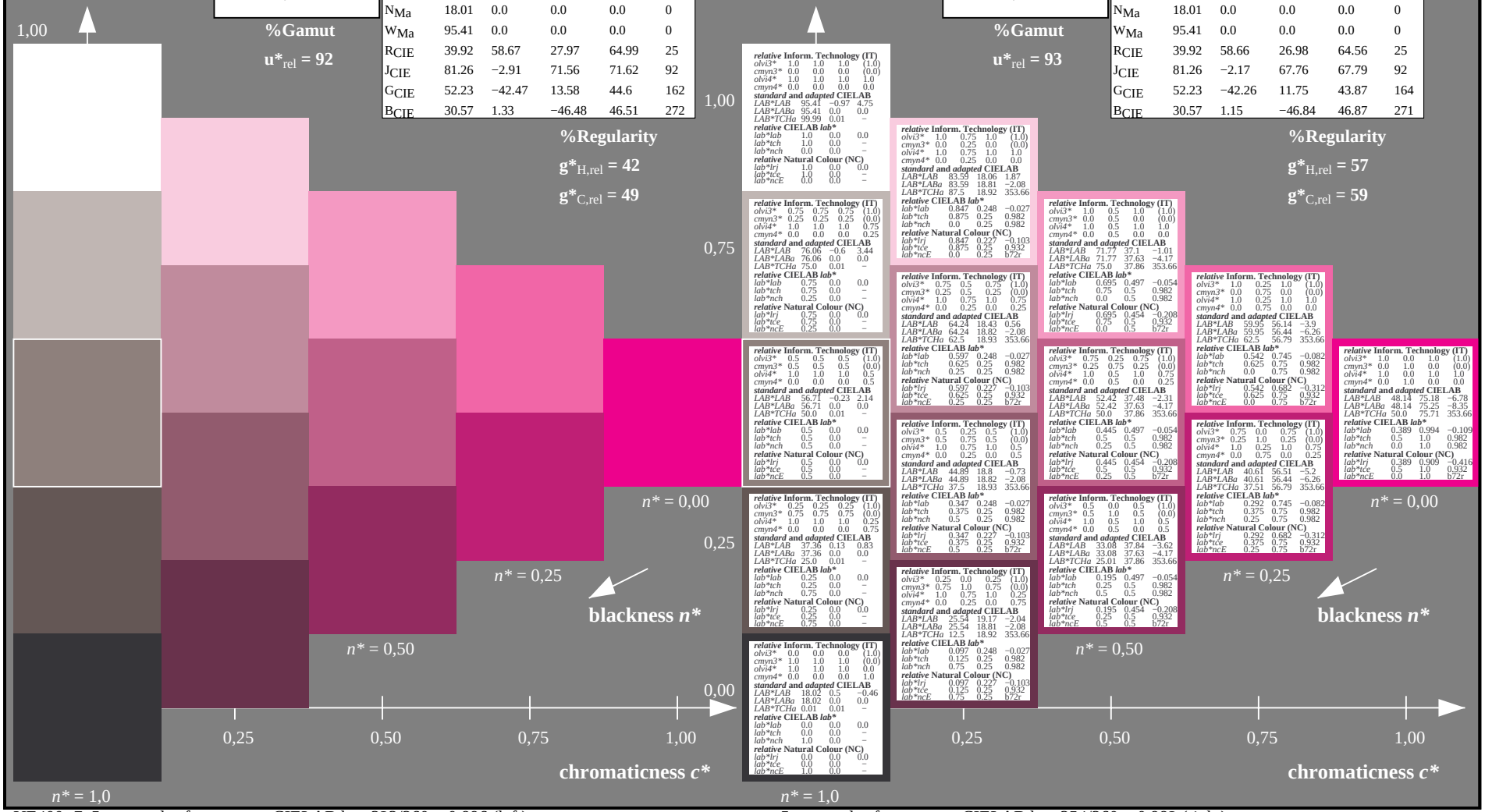
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



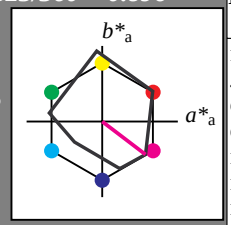
UE400−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h = lab*h = 323/360 = 0.896**
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

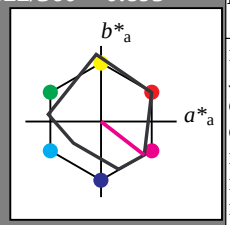
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue *h = lab*h = 322/360 = 0.895**
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

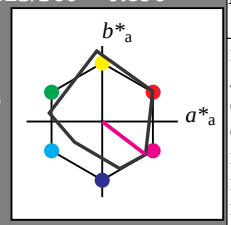
UE400−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 323/360 = 0.896*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

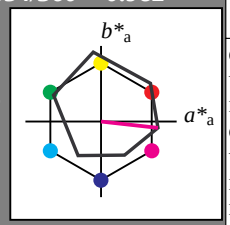
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 354/360 = 0.982*
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

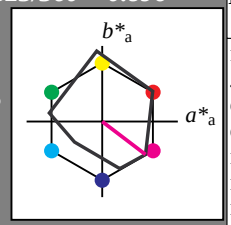
UE400−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

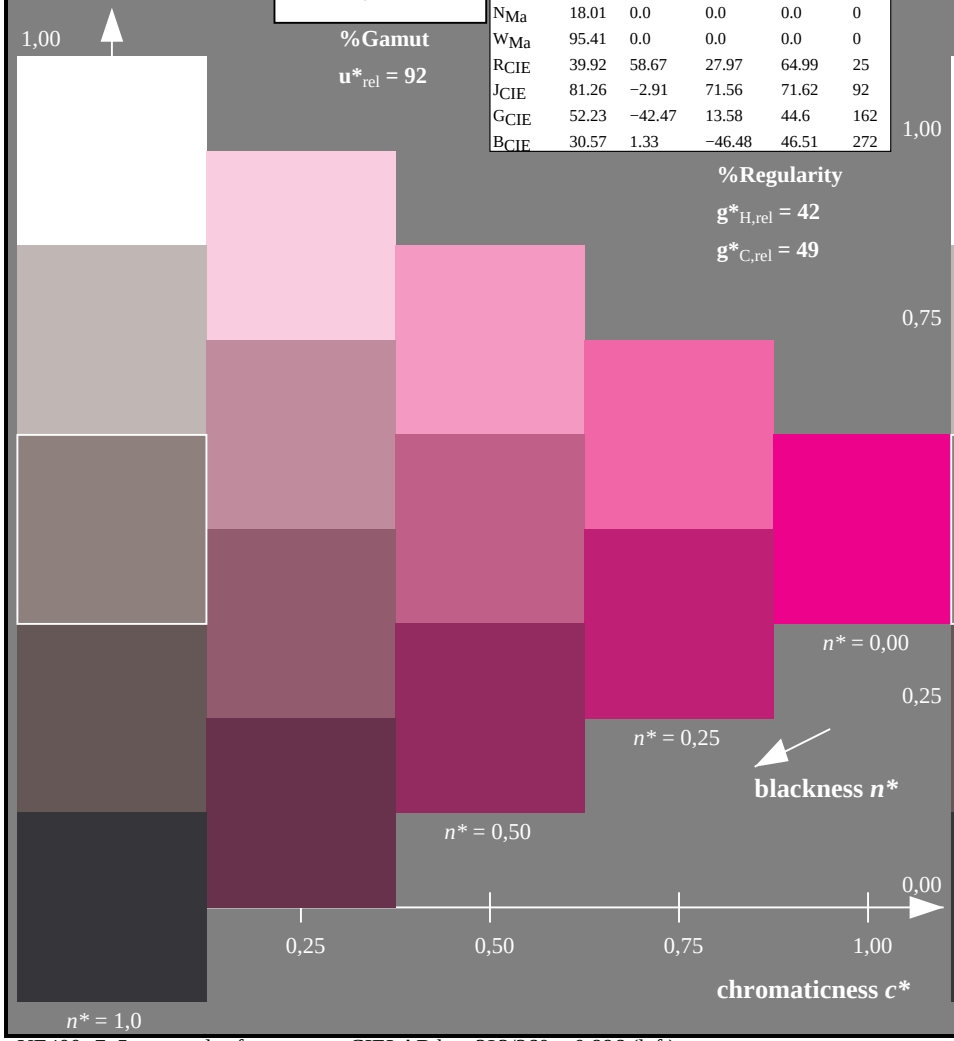
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

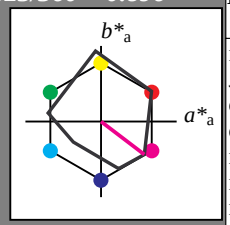
$g^*_{C,rel}$ = 49



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

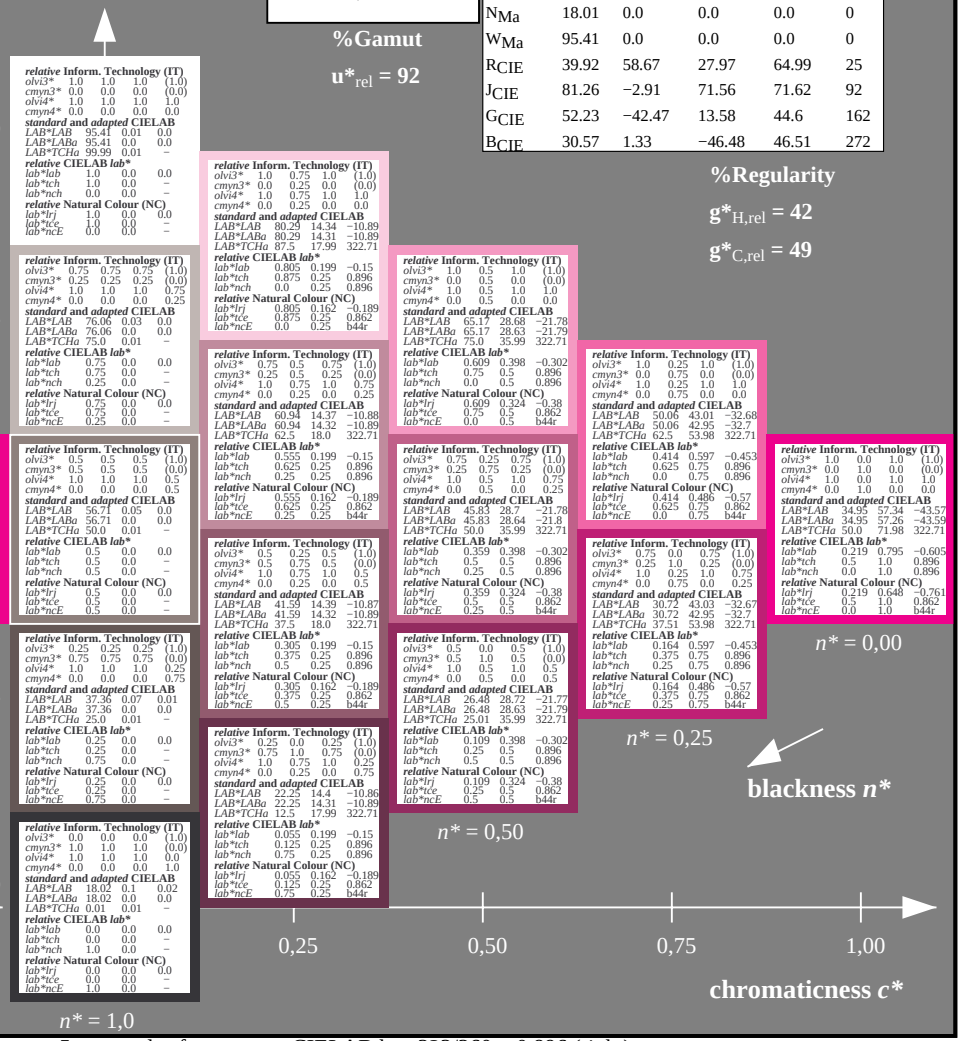
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



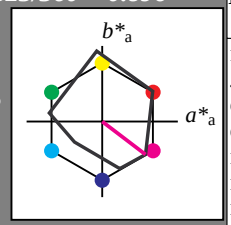
UE400−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 323/360 = 0.896*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

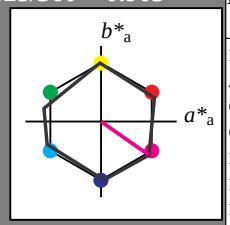
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

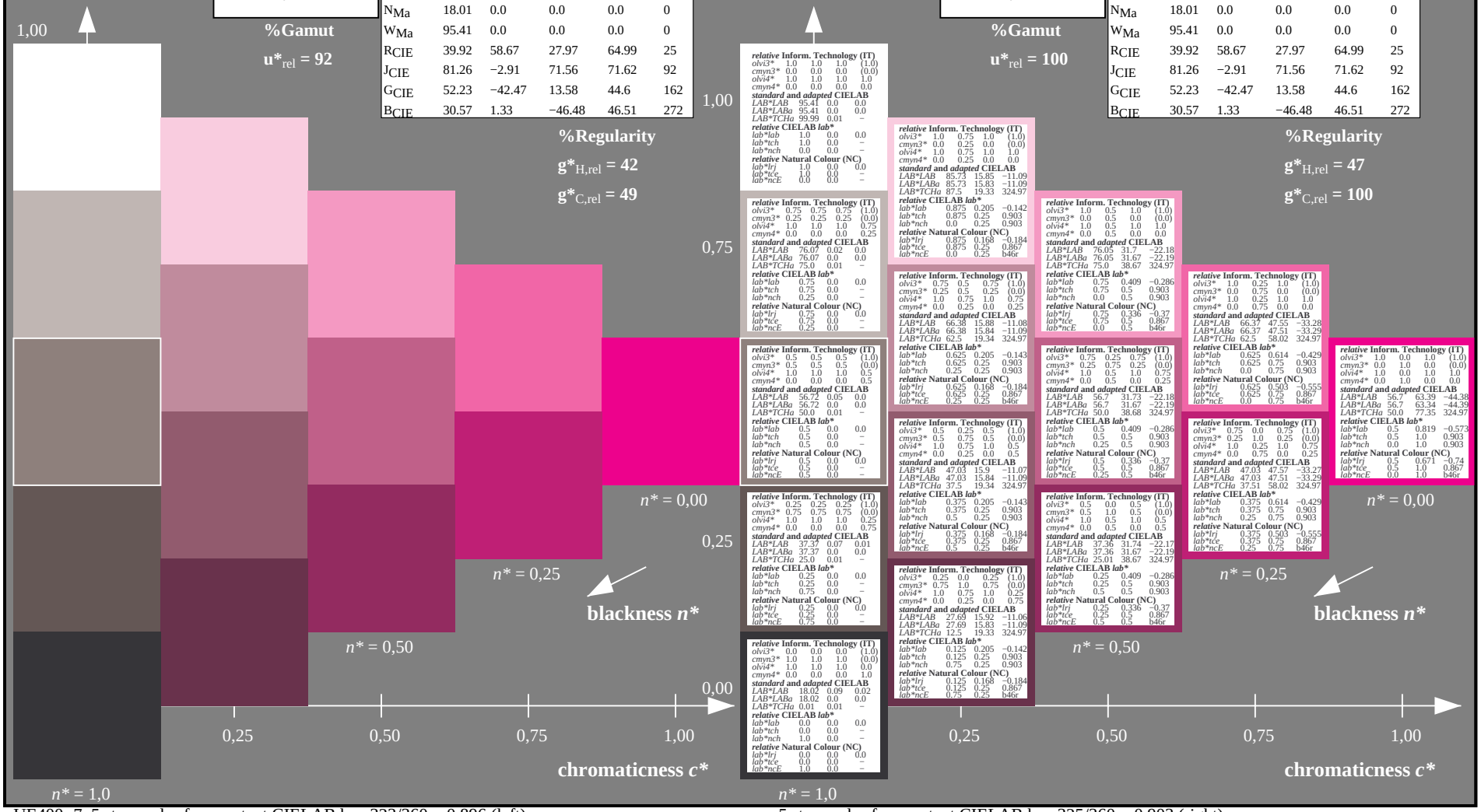
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



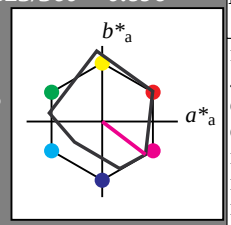
UE400−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 323/360 = 0.896*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

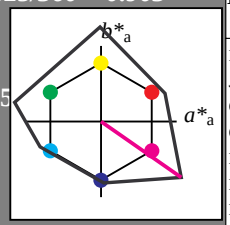
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System NCS18
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

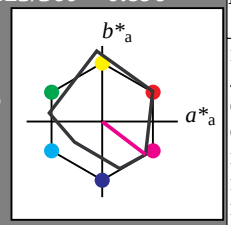
UE400−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 323/360 = 0.896*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

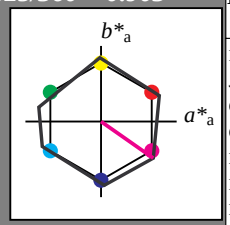
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

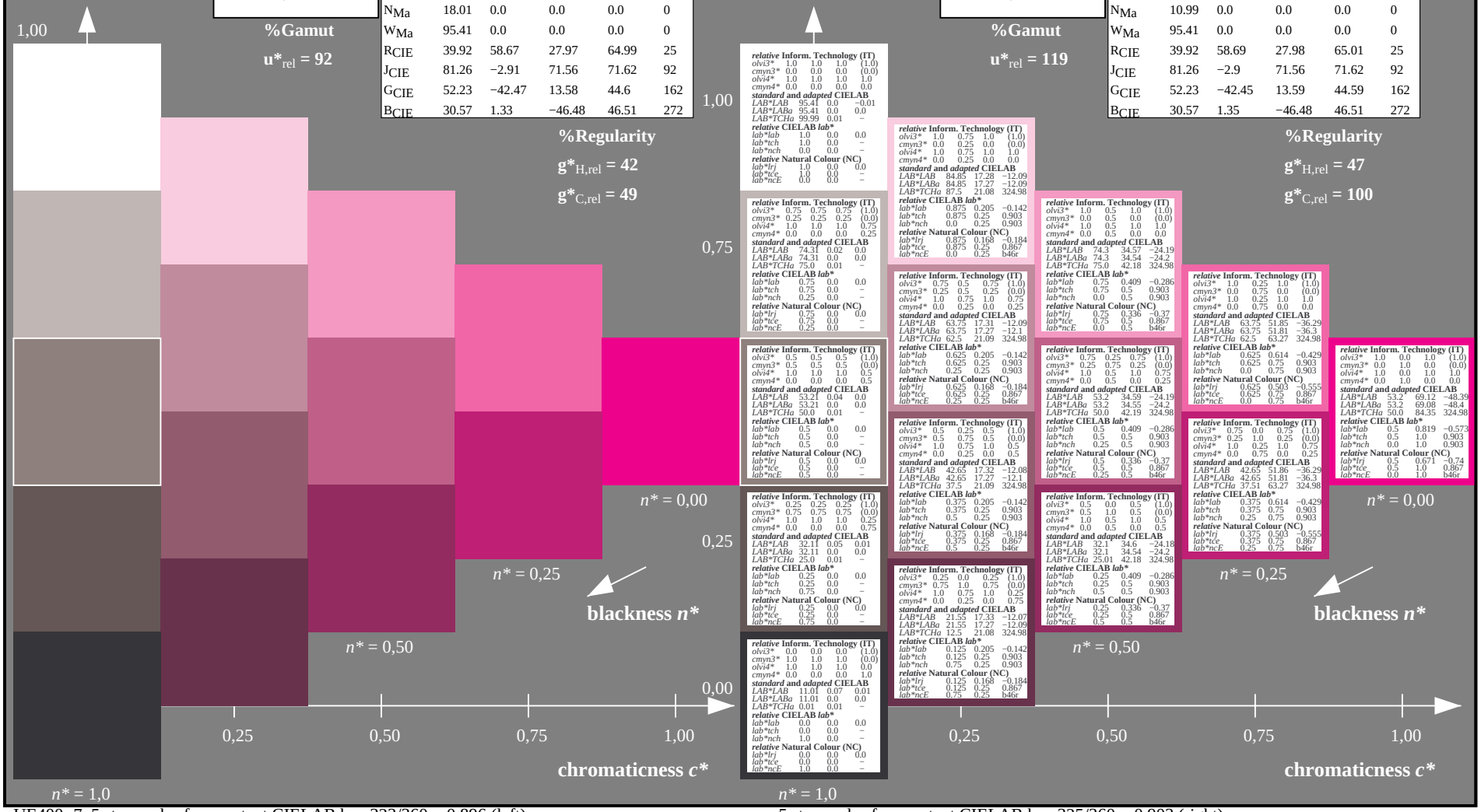
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



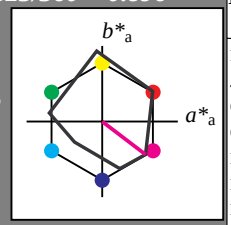
UE400−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 323/360 = 0.896*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

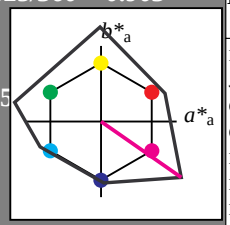
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

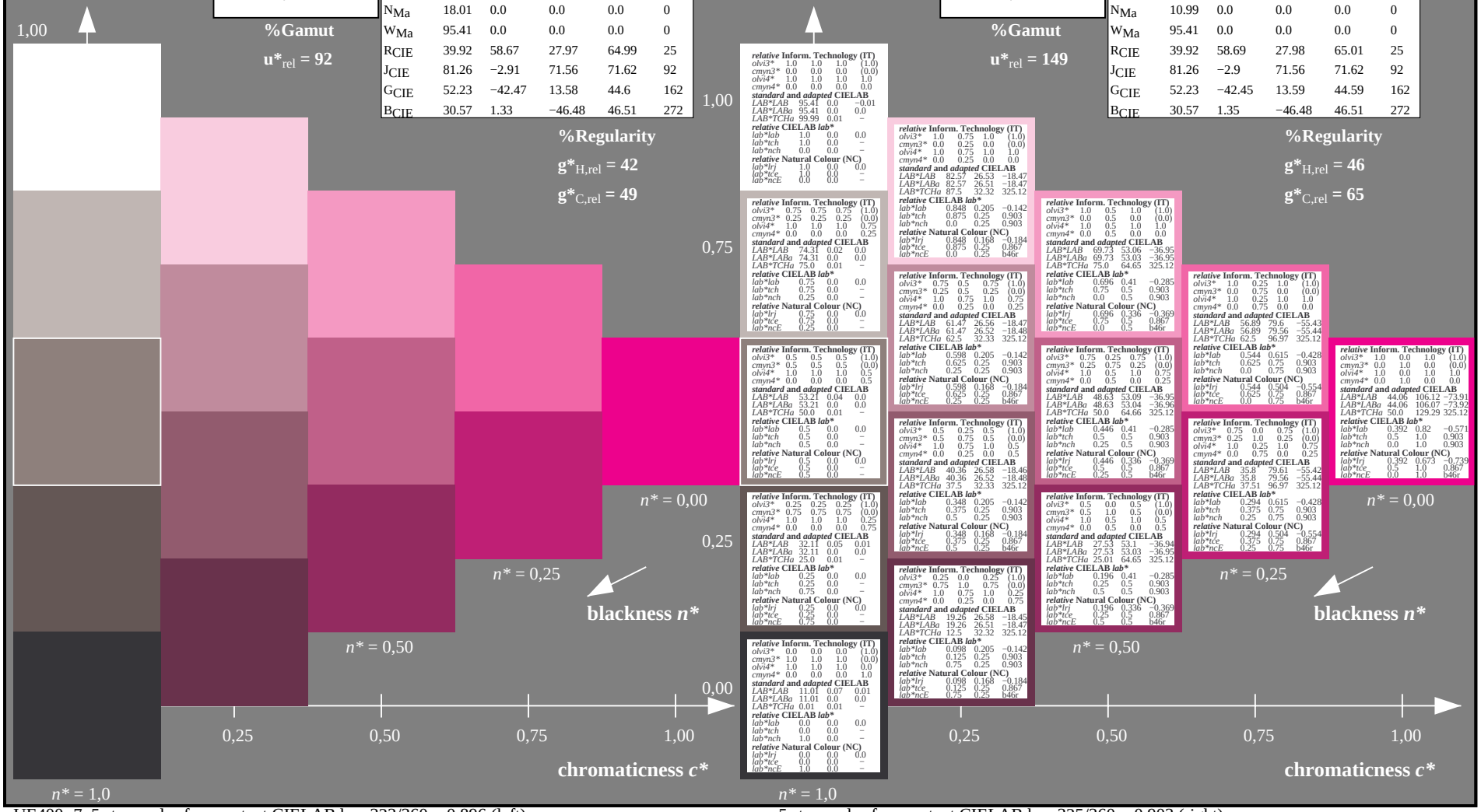
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



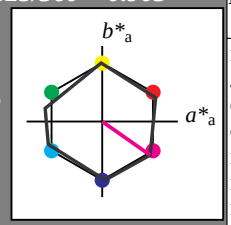
UE400−7, 5 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

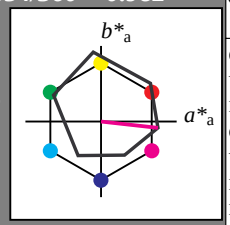
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

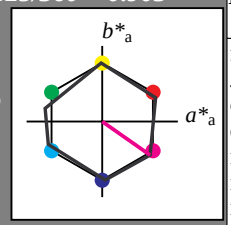
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

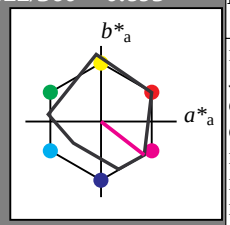
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 322/360 = 0.895*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

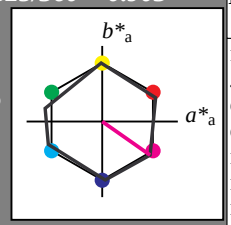
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

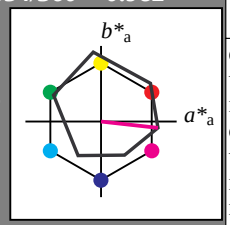
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 354/360 = 0.982*
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

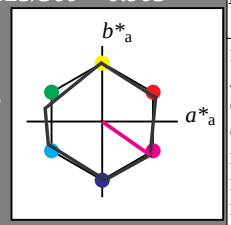
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

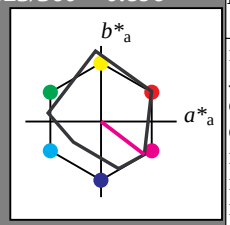
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 323/360 = 0.896*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

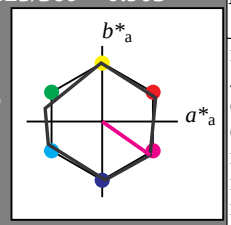
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

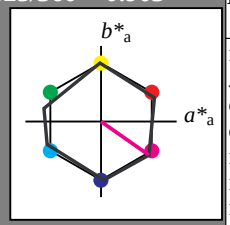
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

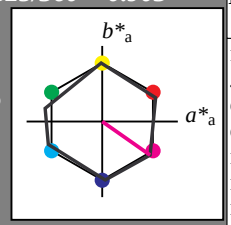
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

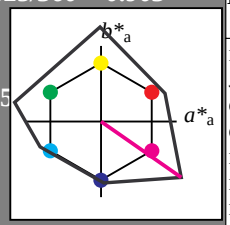
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

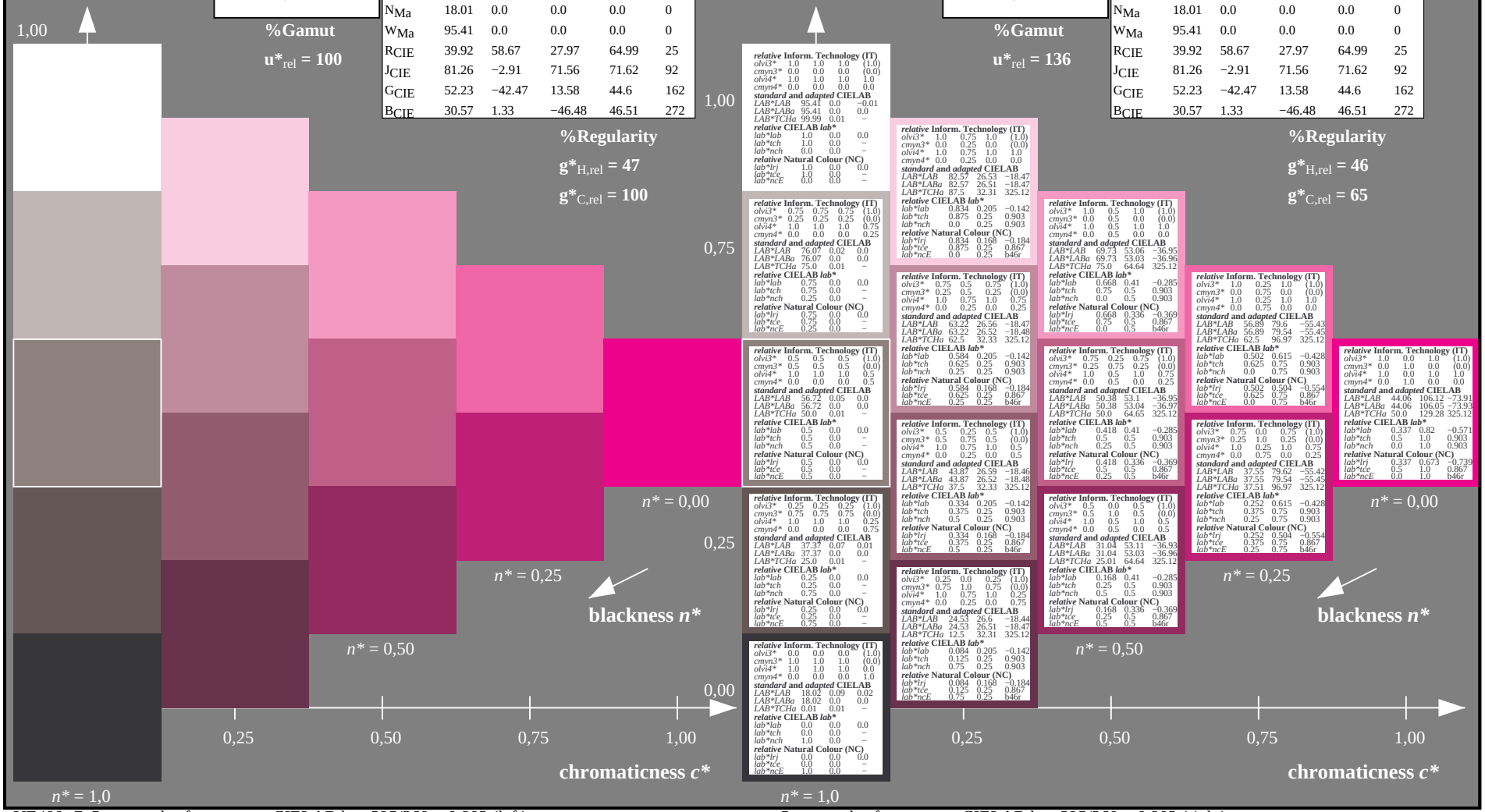
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



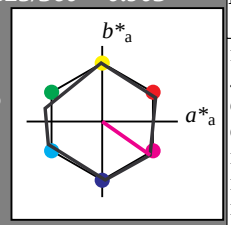
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

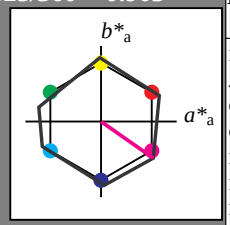
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

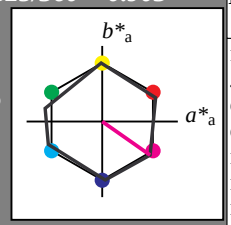
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

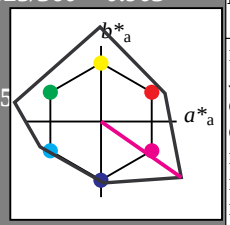
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System NCS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

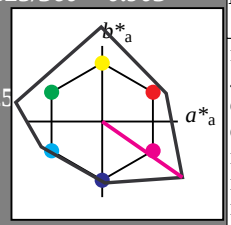
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS18
for hue *h = lab*h = 325/360 = 0.903**
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

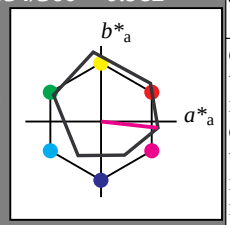
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System ORS18
for hue *h = lab*h = 354/360 = 0.982**
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

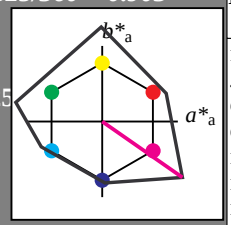
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

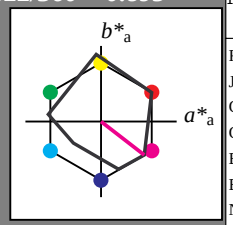
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

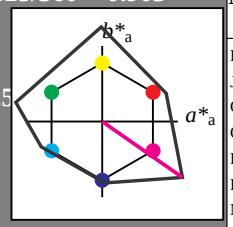
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

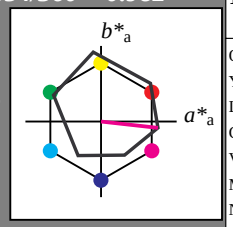
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

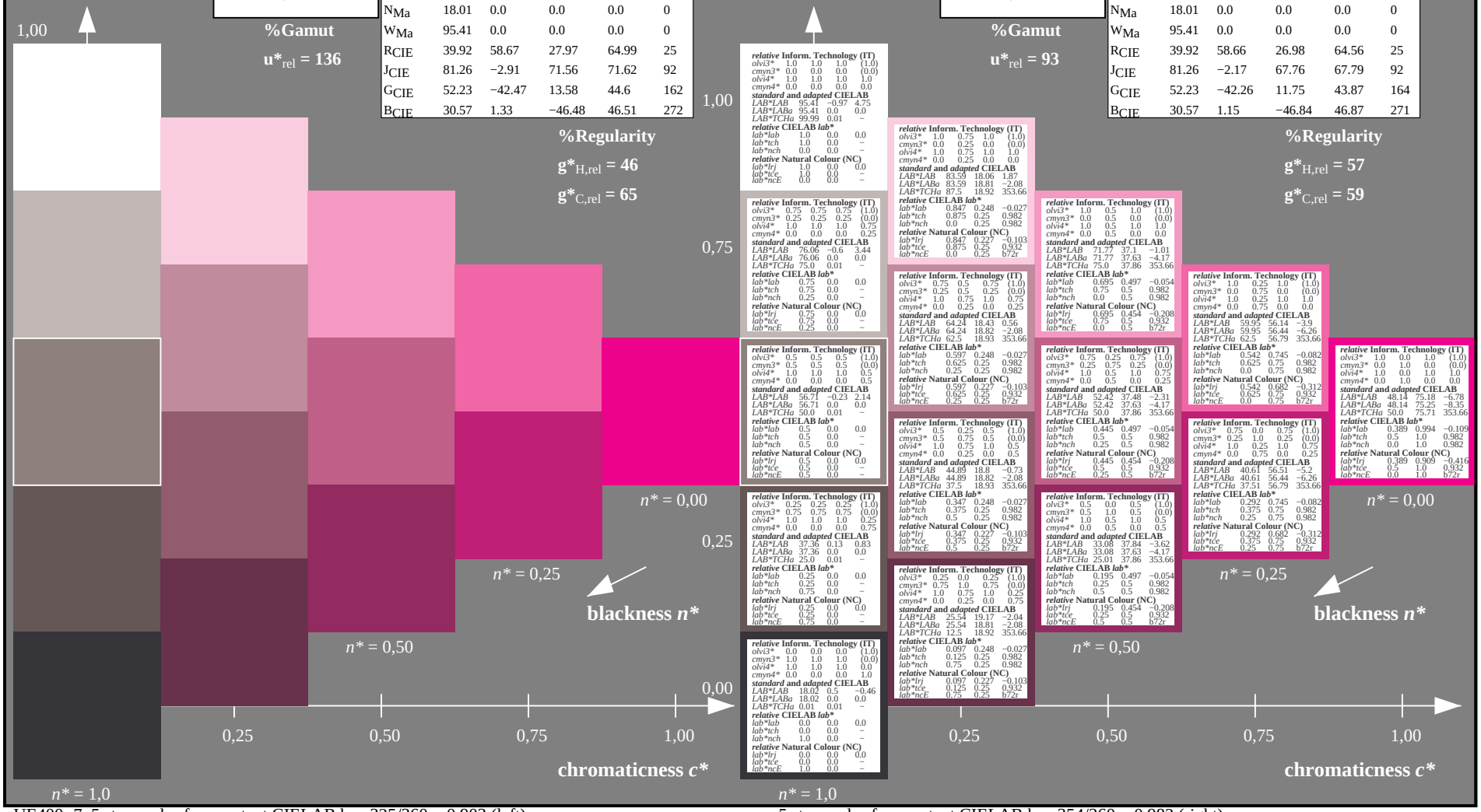
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



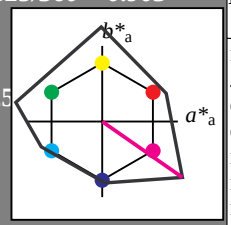
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

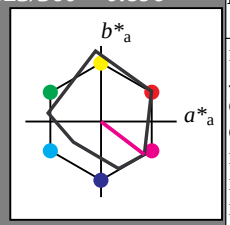
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

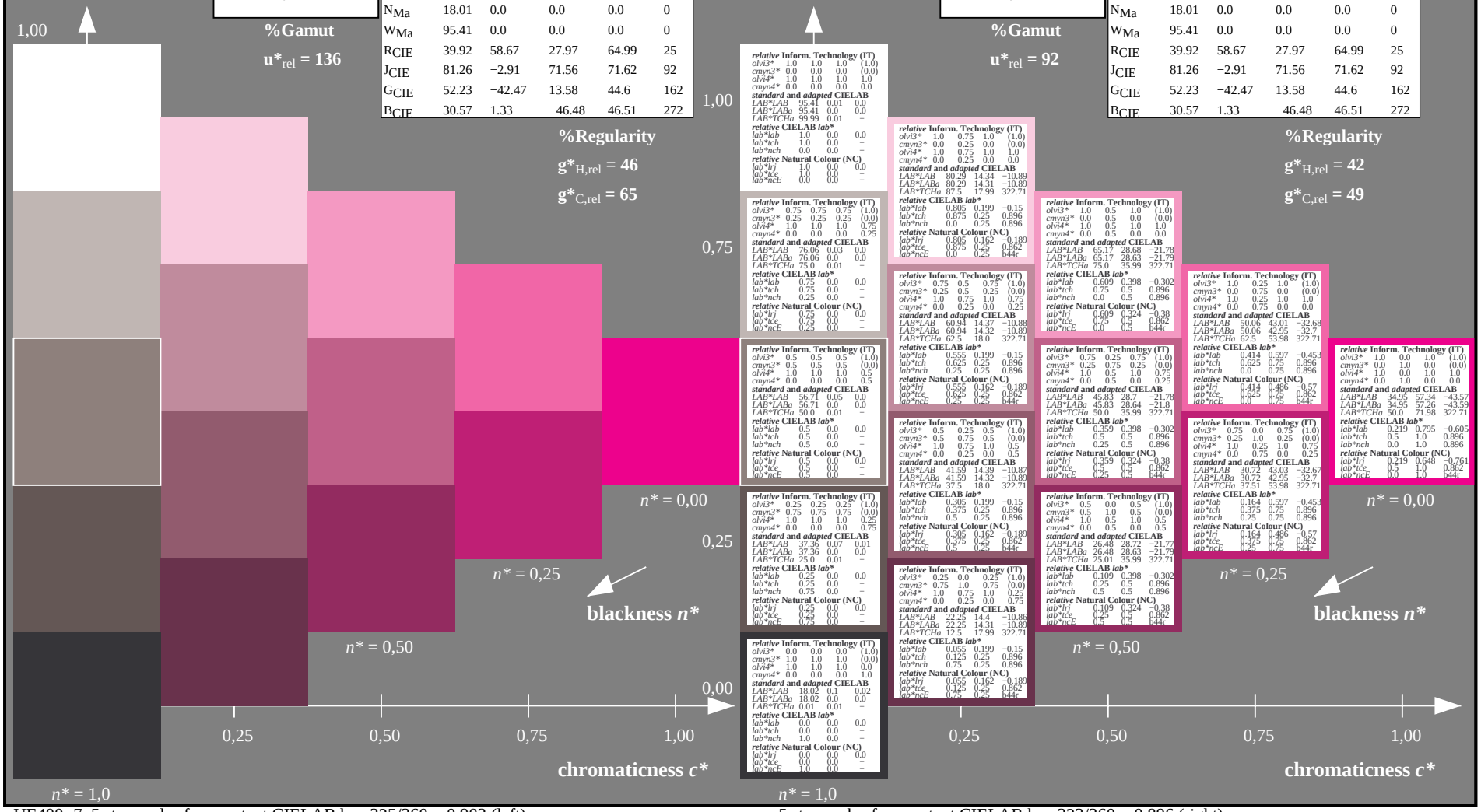
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



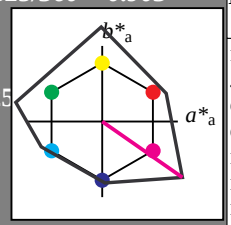
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

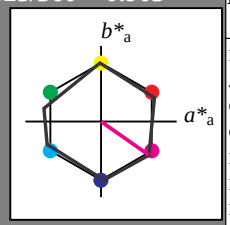
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

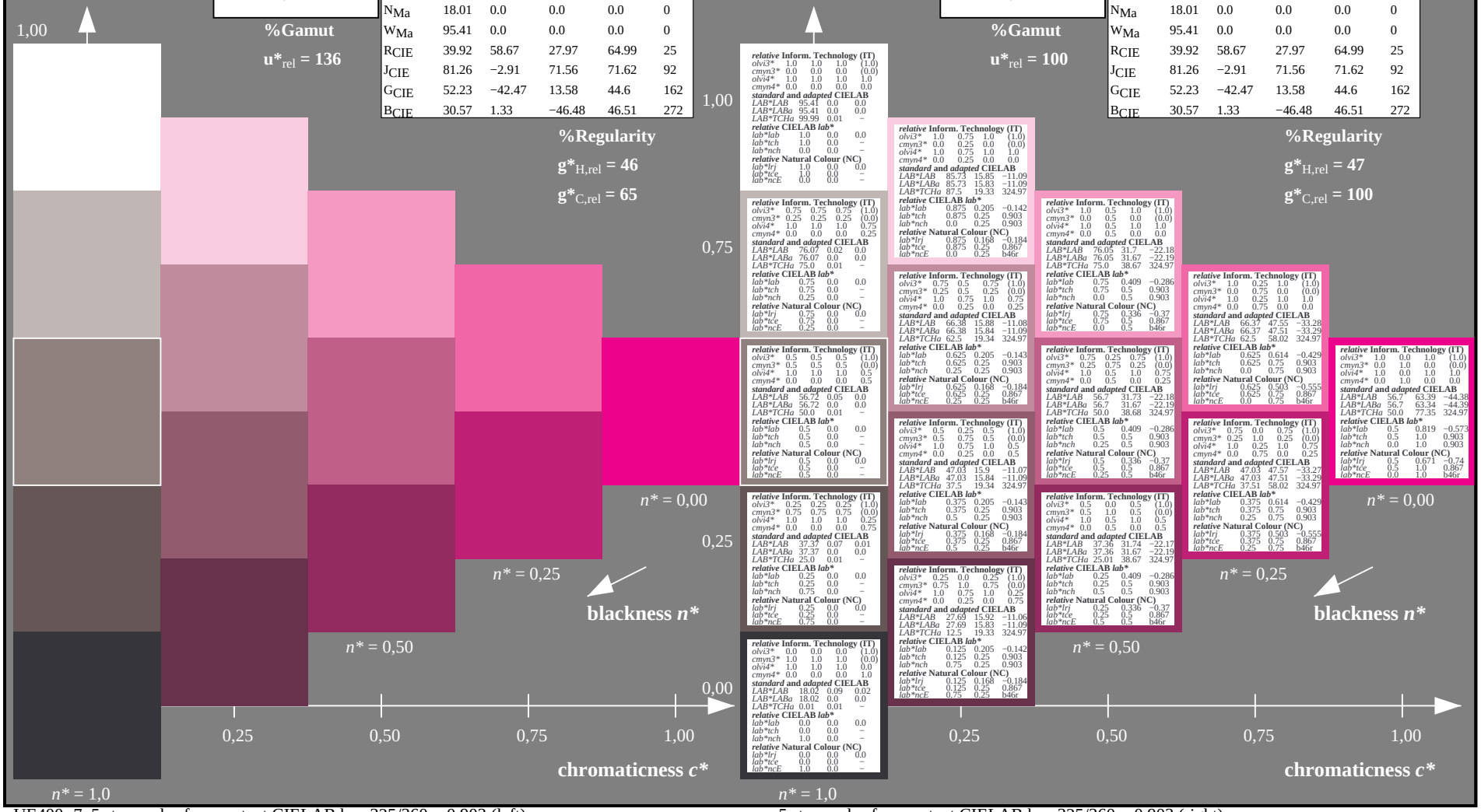
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



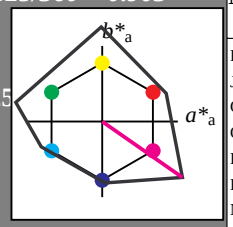
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

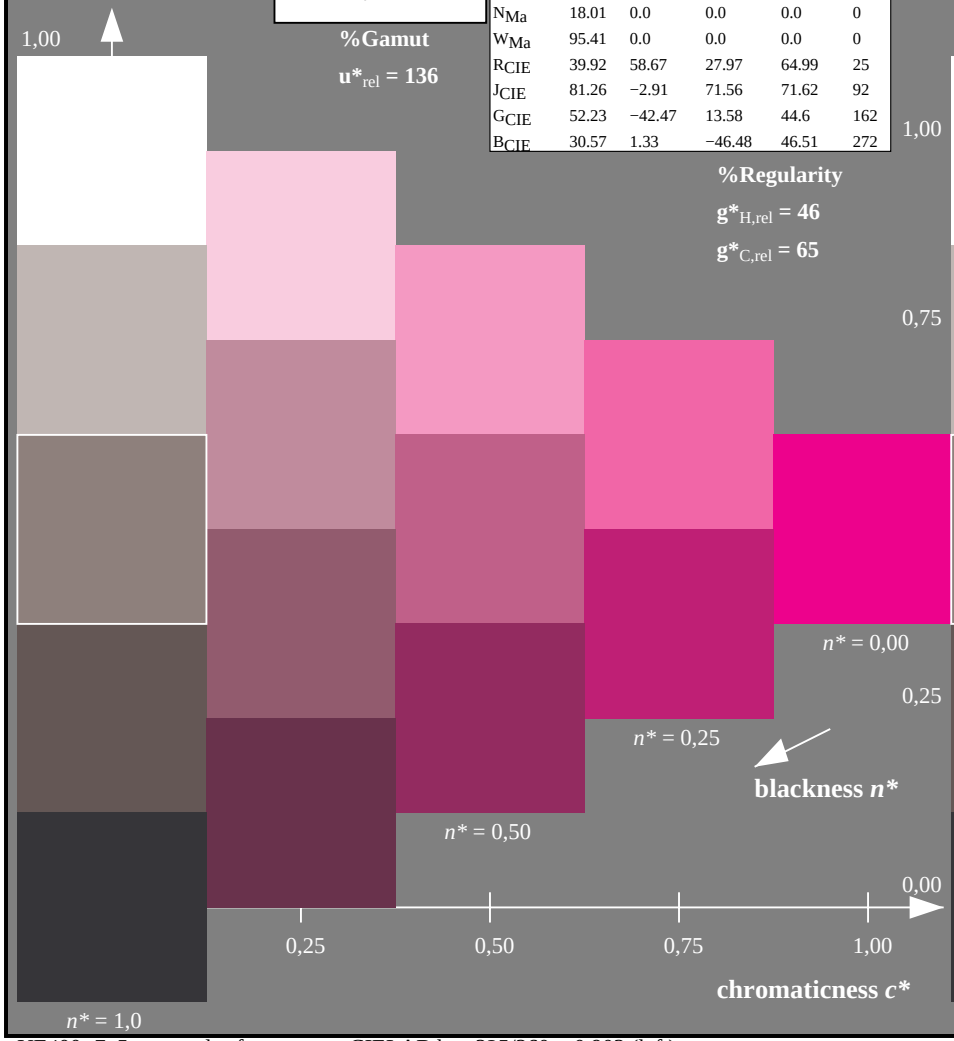
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

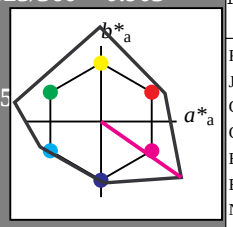
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

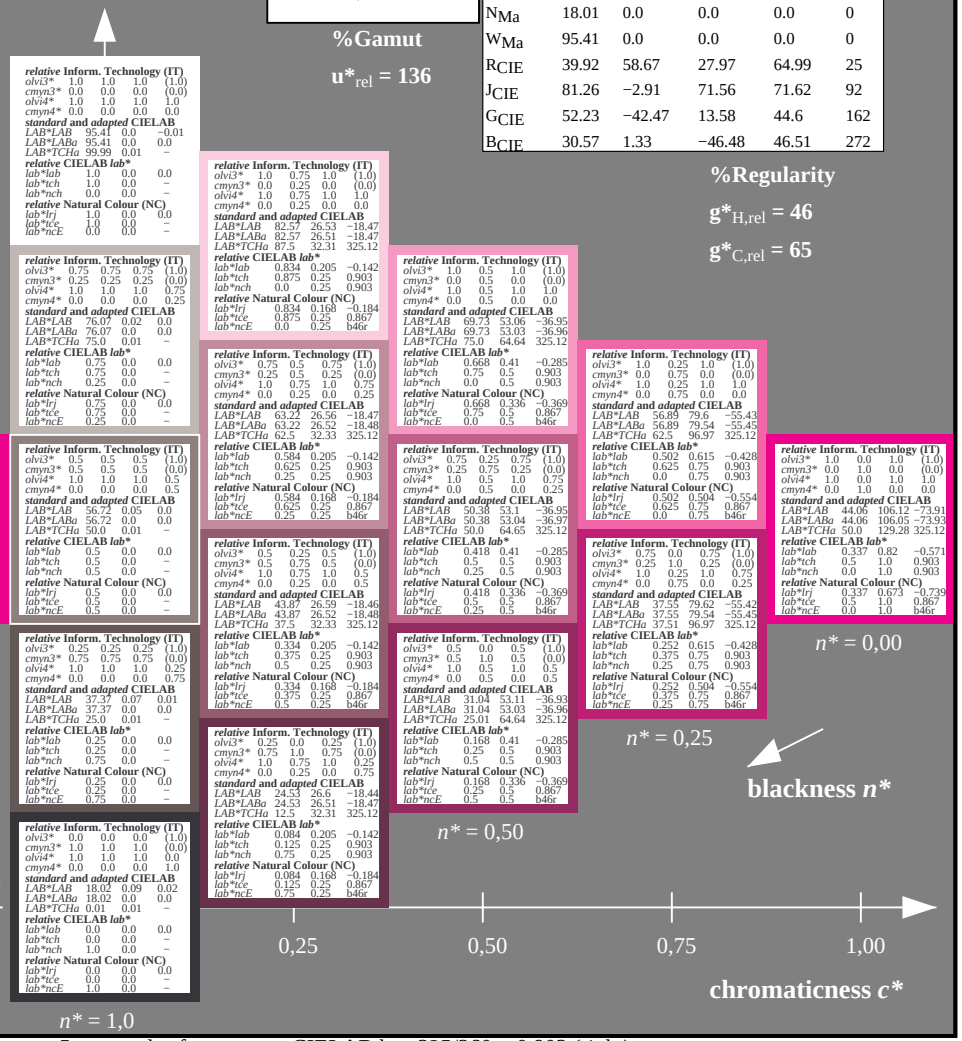
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



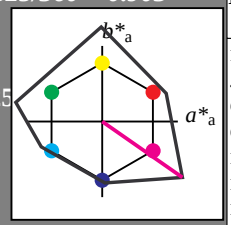
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

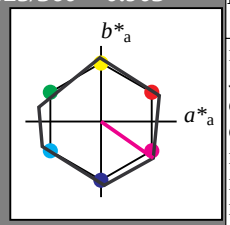
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

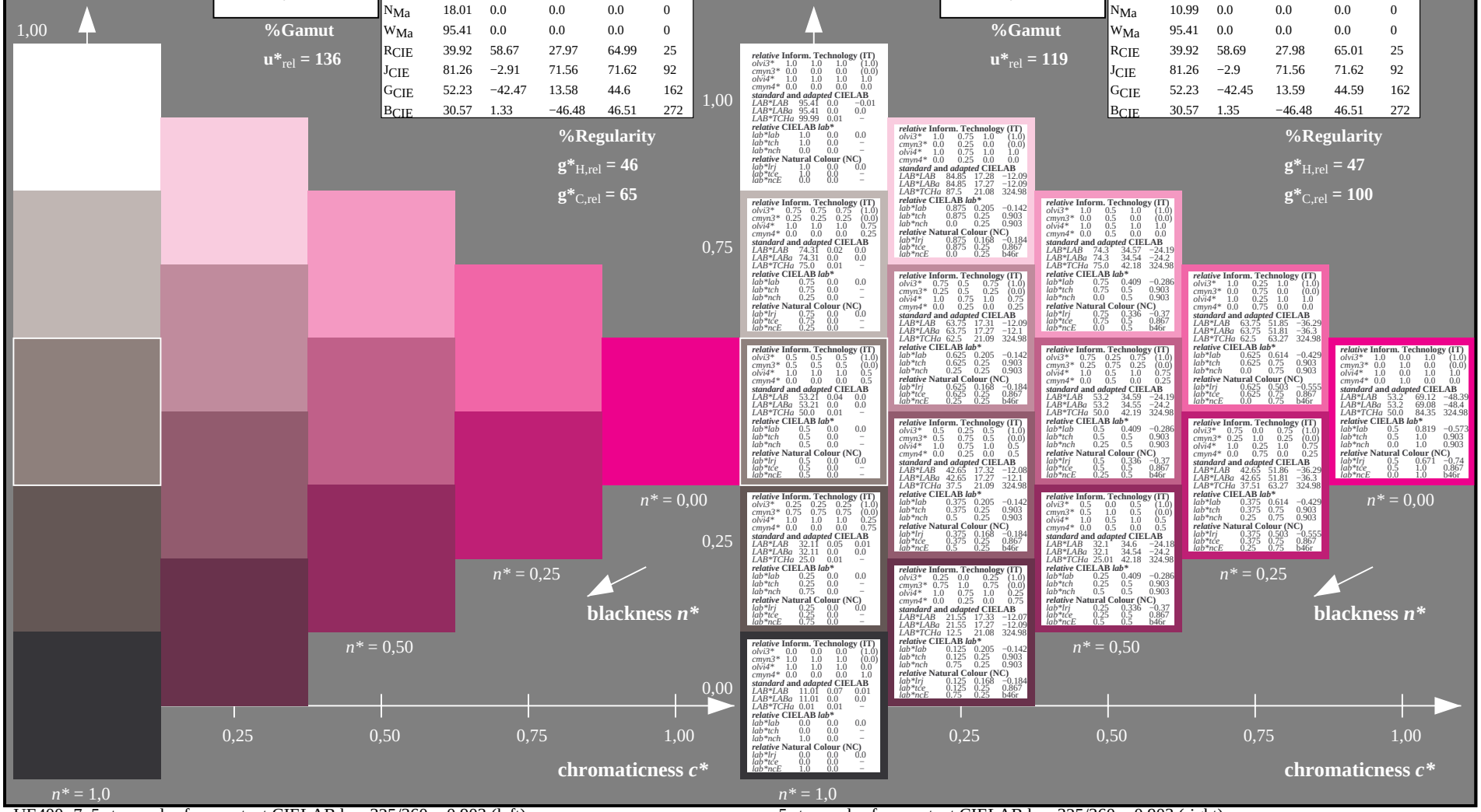
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



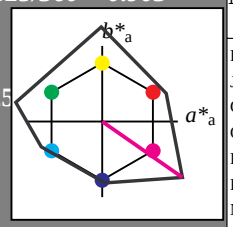
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

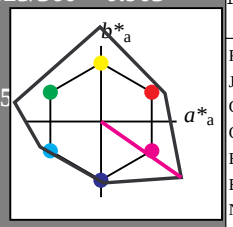
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

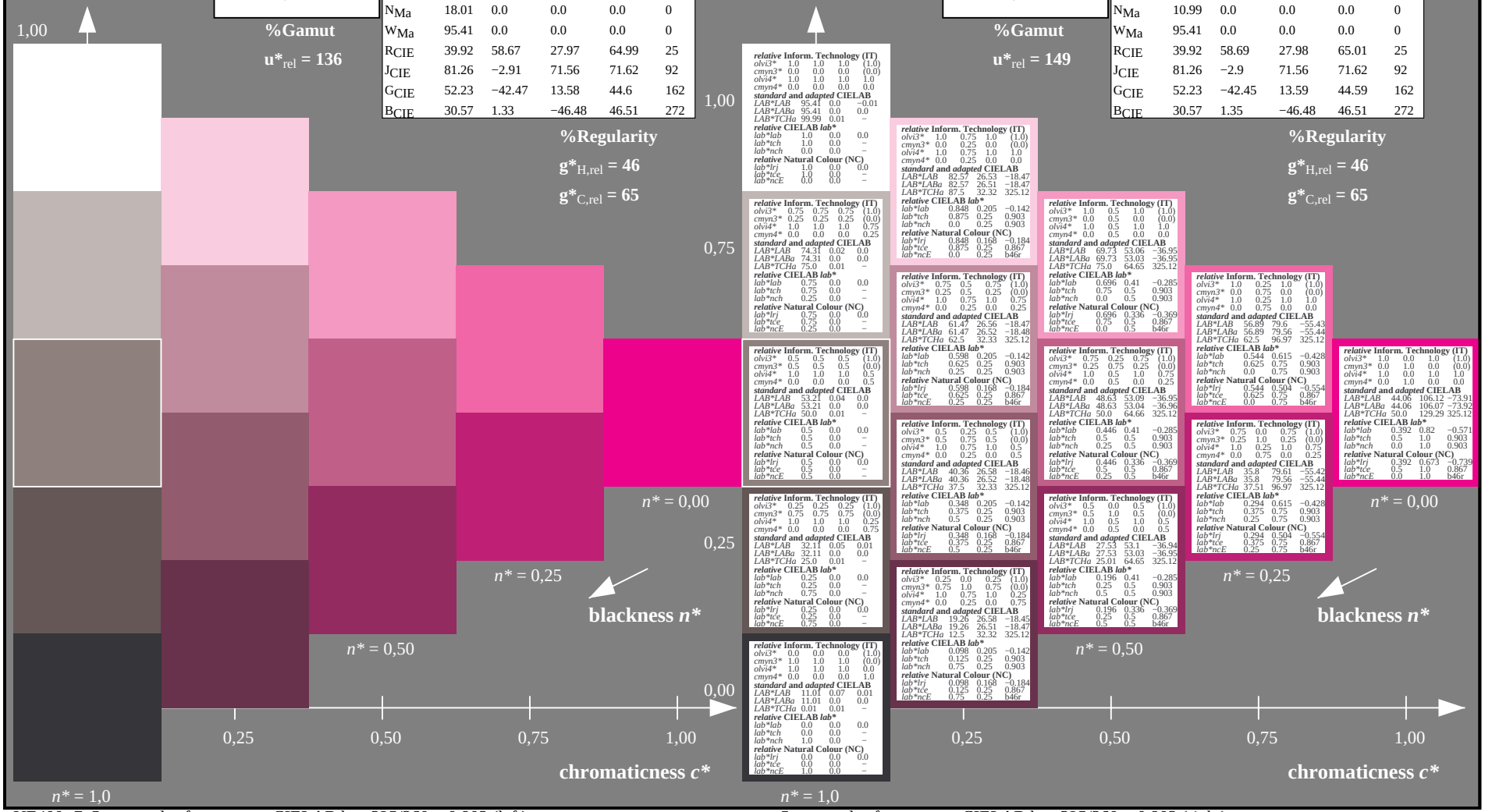
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



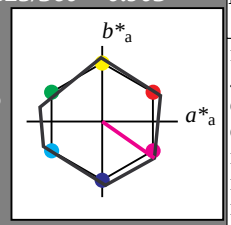
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

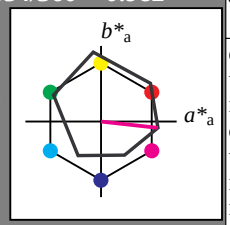
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 354/360 = 0.982*
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

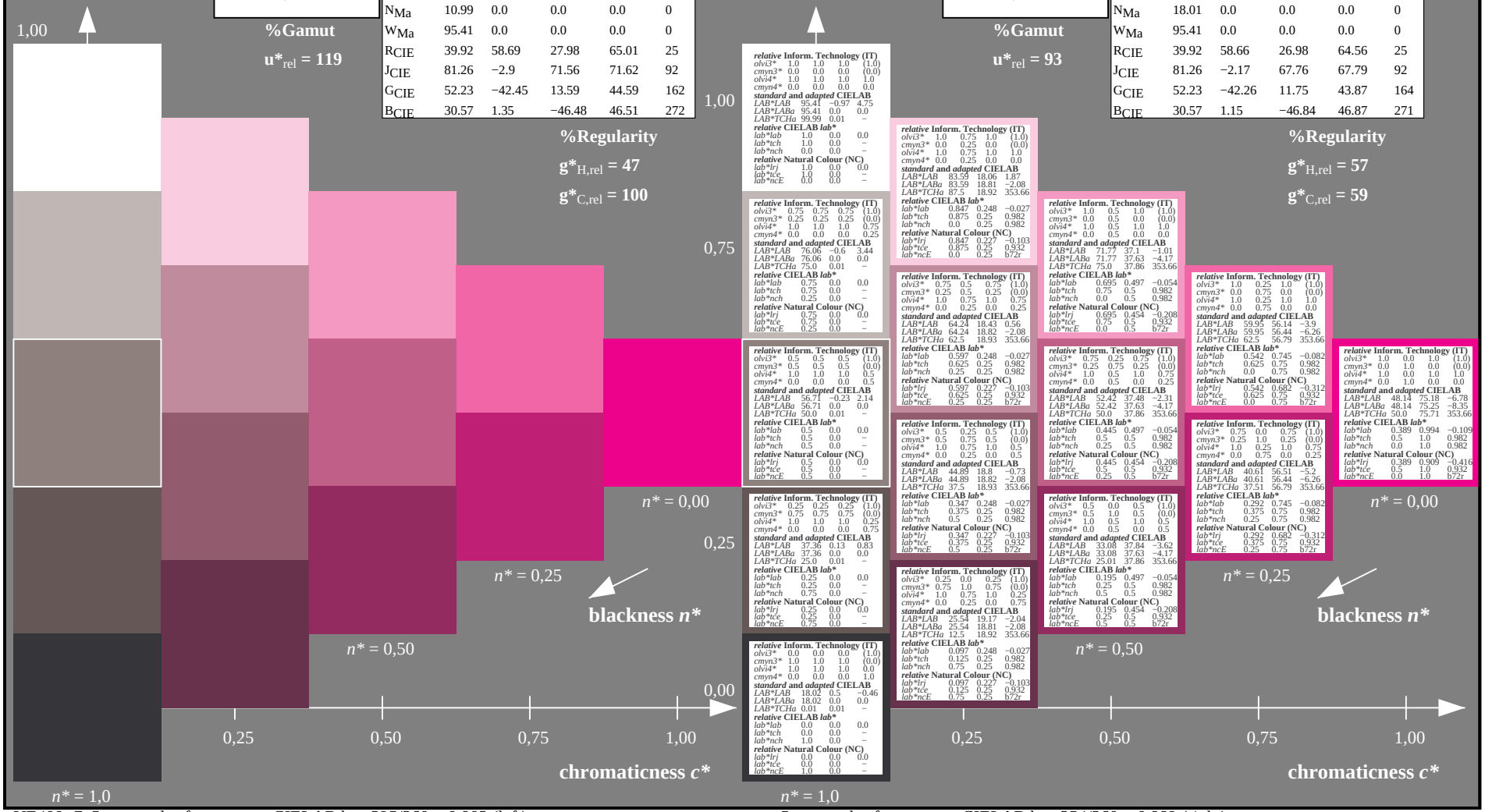
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



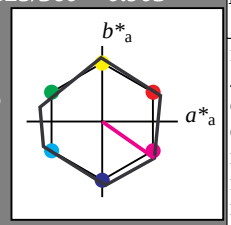
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

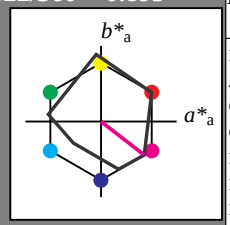
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 322/360 = 0.895*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

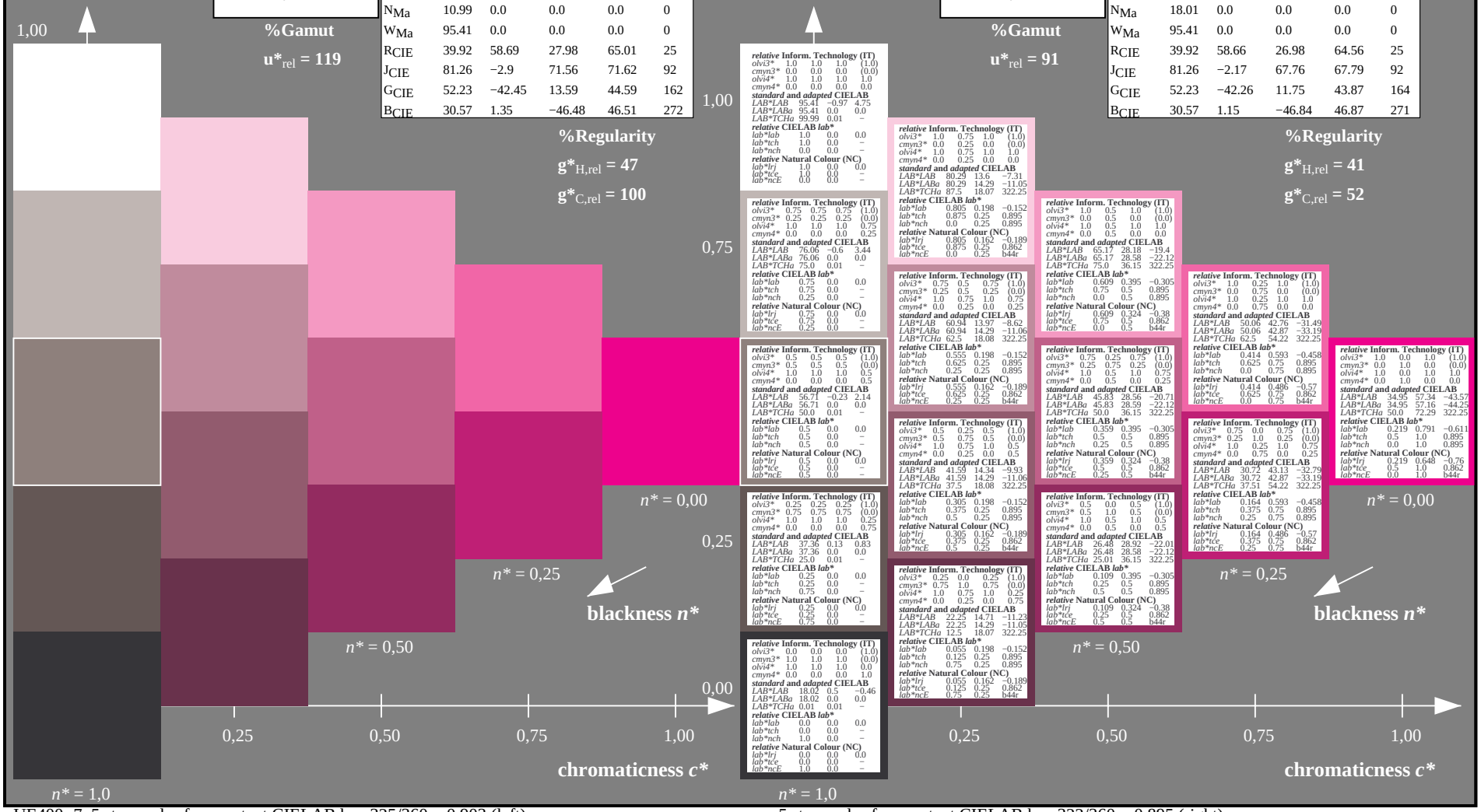
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



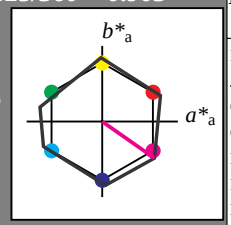
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

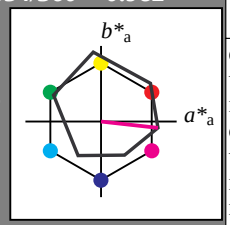
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 354/360 = 0.982*
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

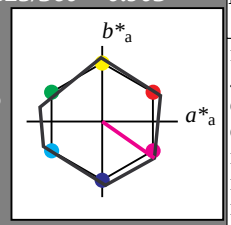
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

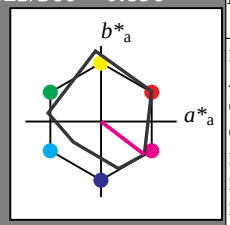
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 323/360 = 0.896*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

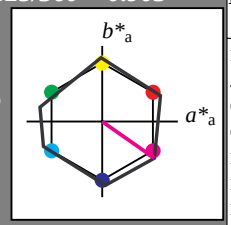
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

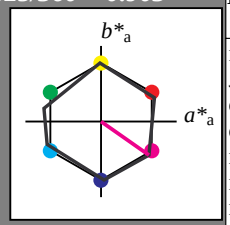
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

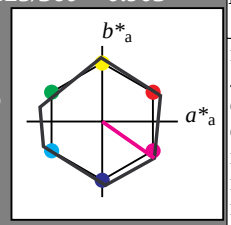
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

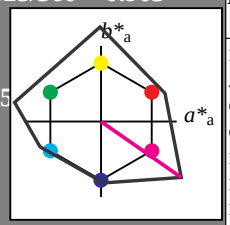
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

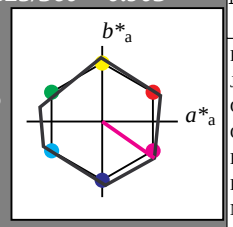
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

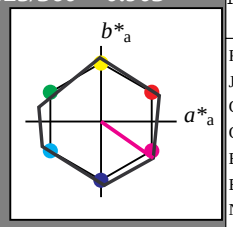
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 325/360 = 0.903*
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

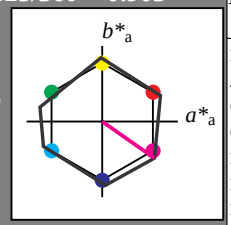
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

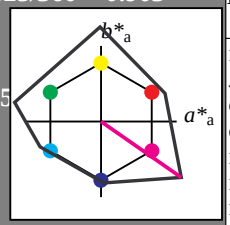
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

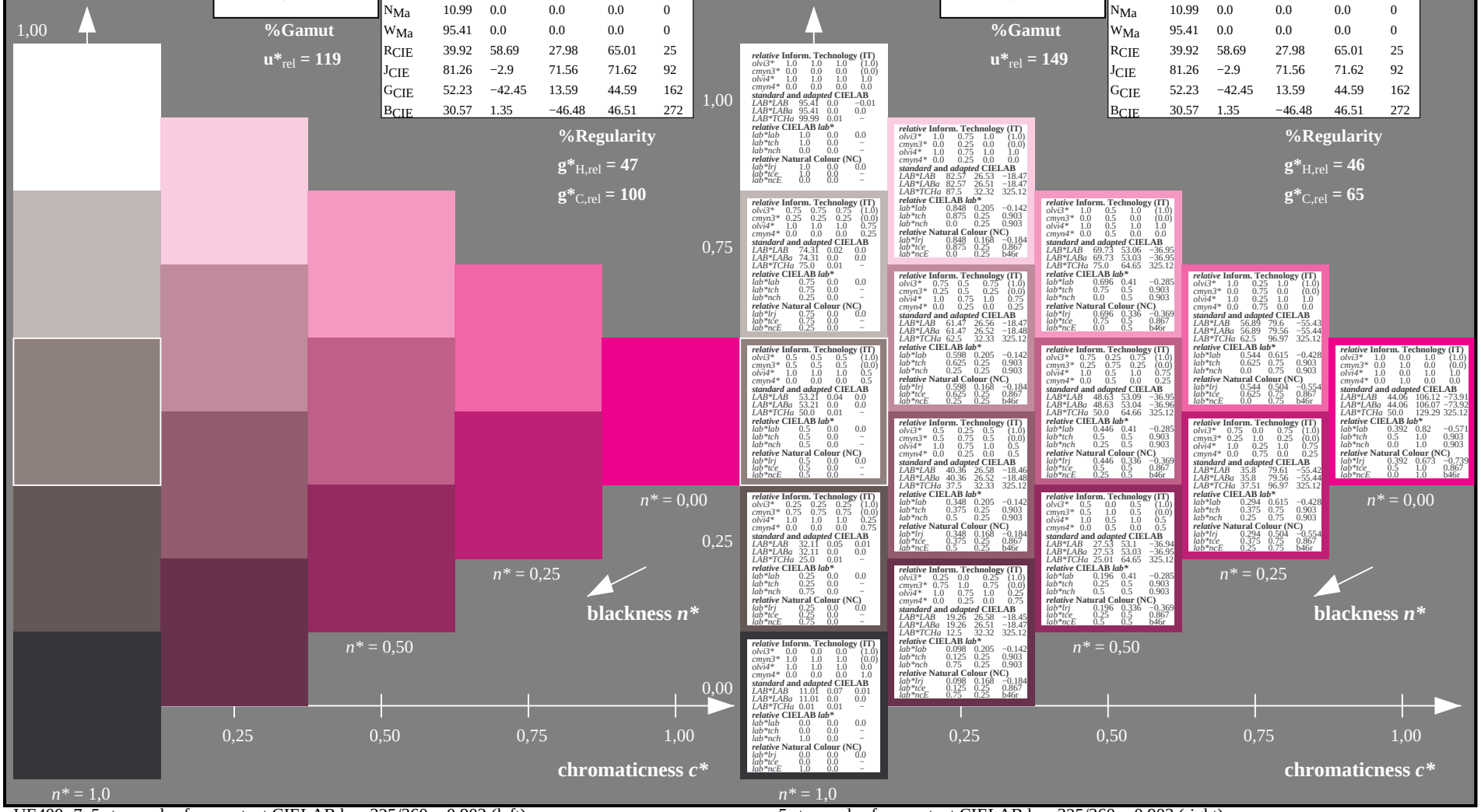
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



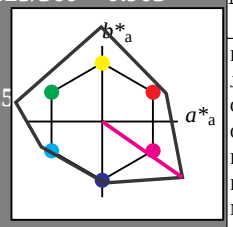
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

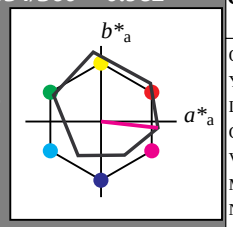
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

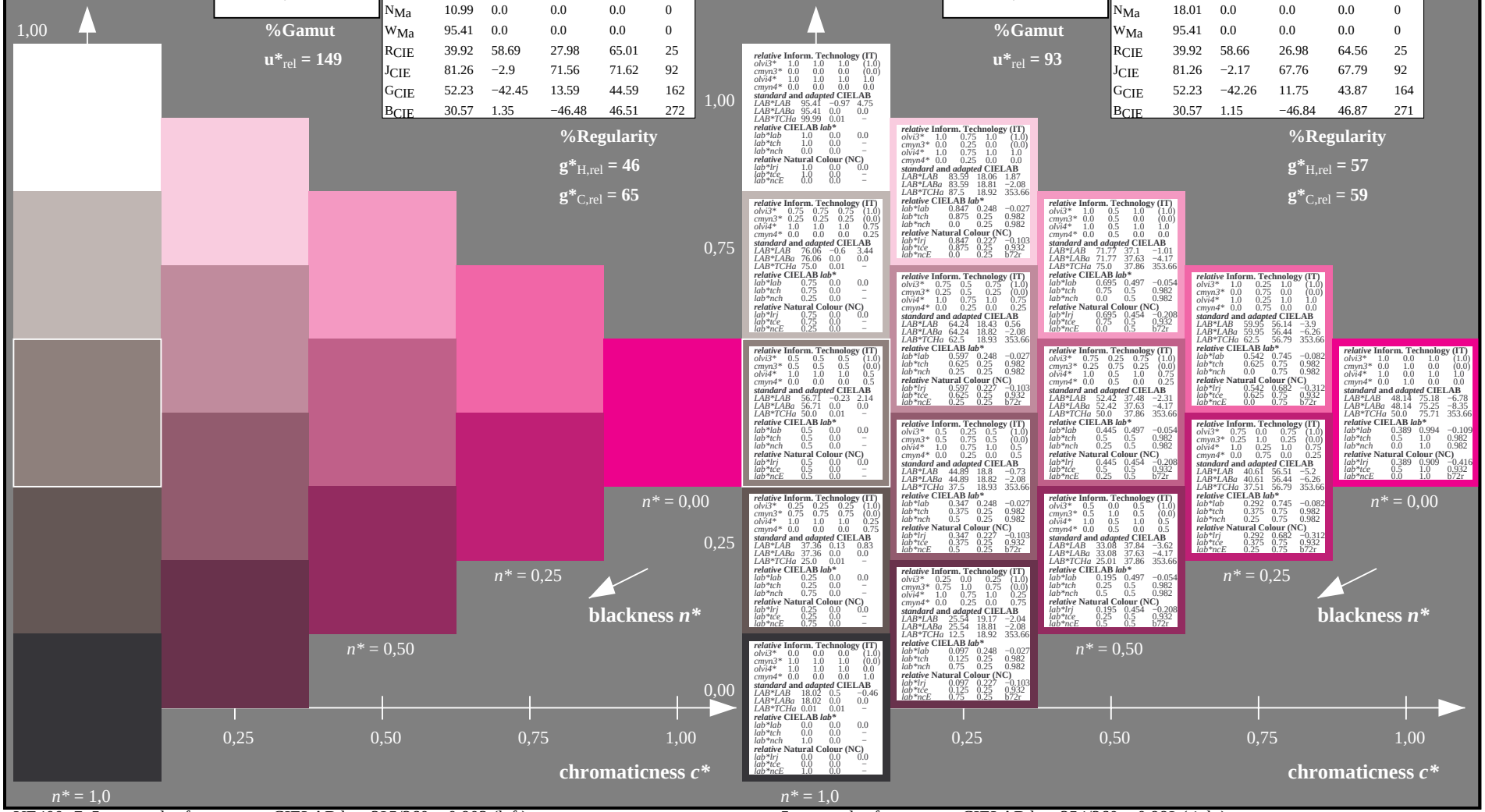
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



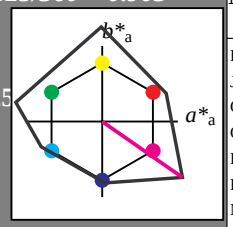
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

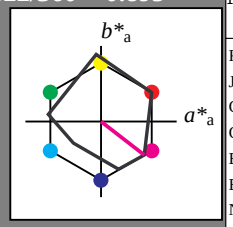
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 322/360 = 0.895$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 322
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

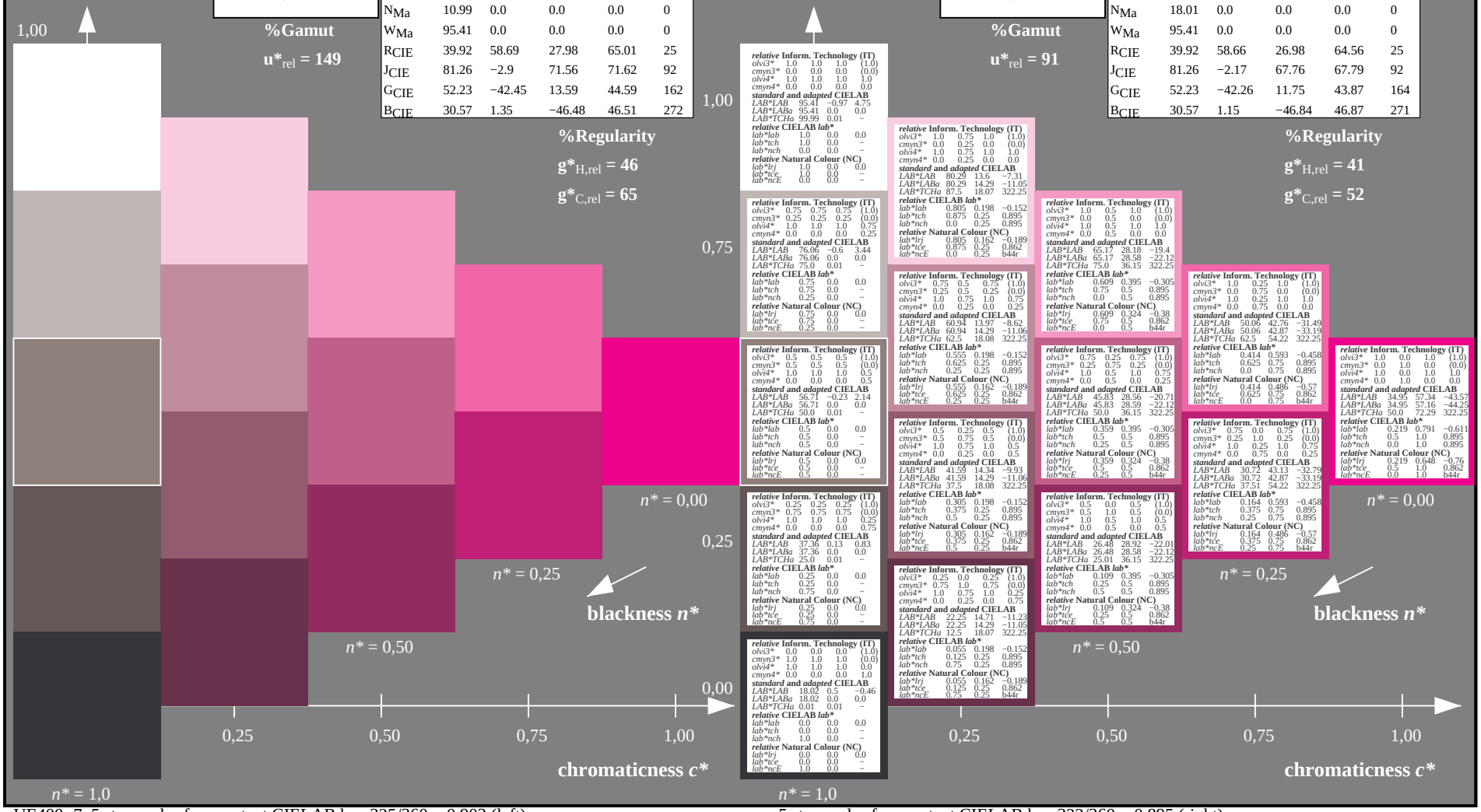
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



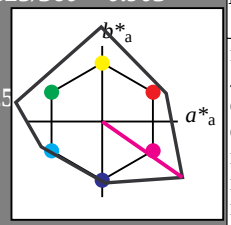
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

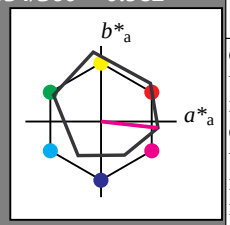
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 354/360 = 0.982$
lab*tch* and *lab*nch

D65: hue M
LCH*Ma: 48 76 354
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

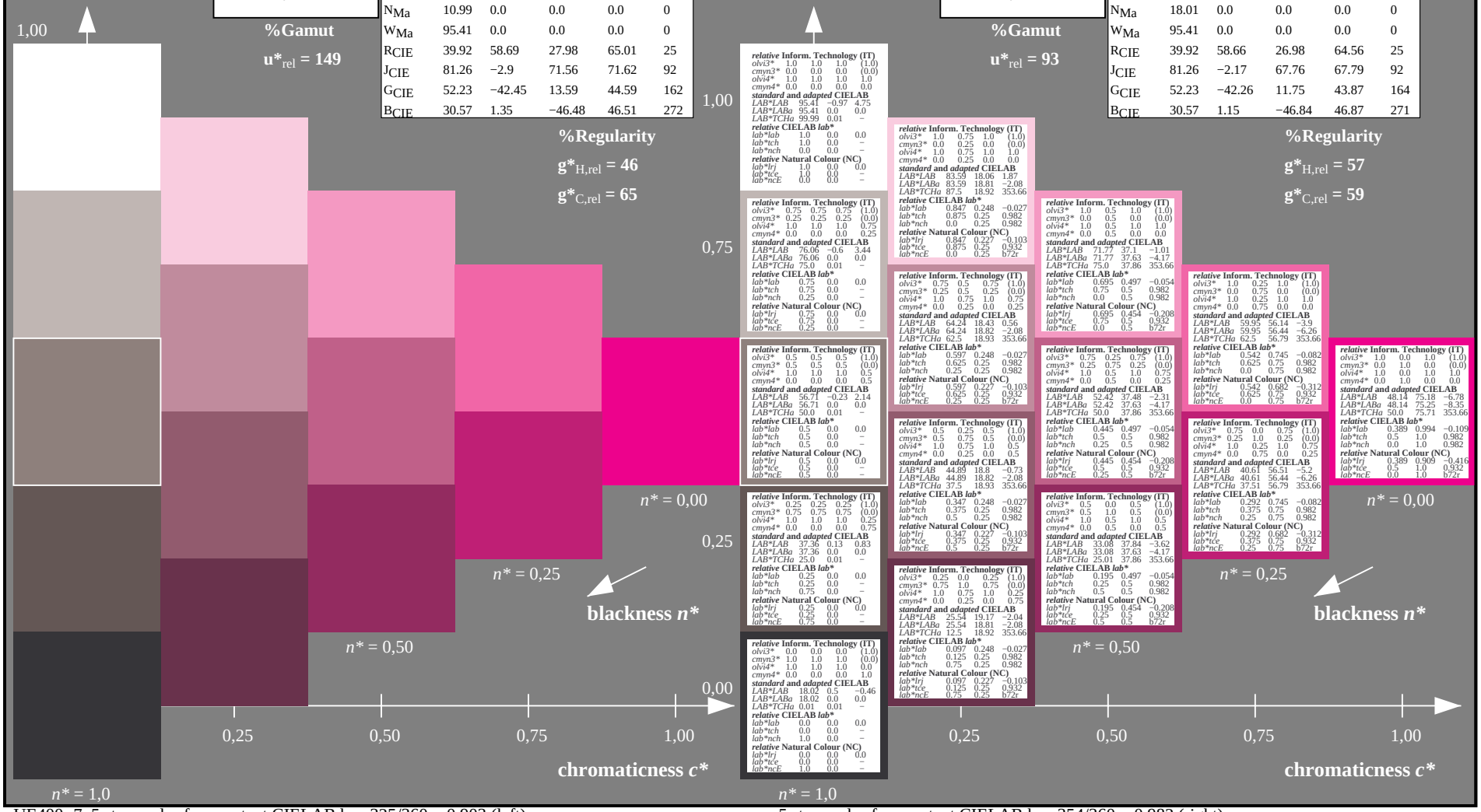
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



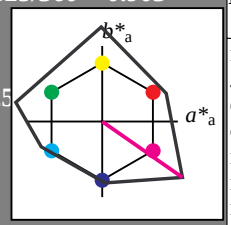
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

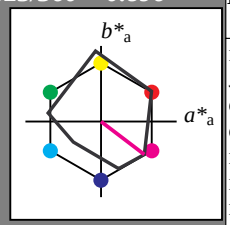
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 323/360 = 0.896$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 35 72 323
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

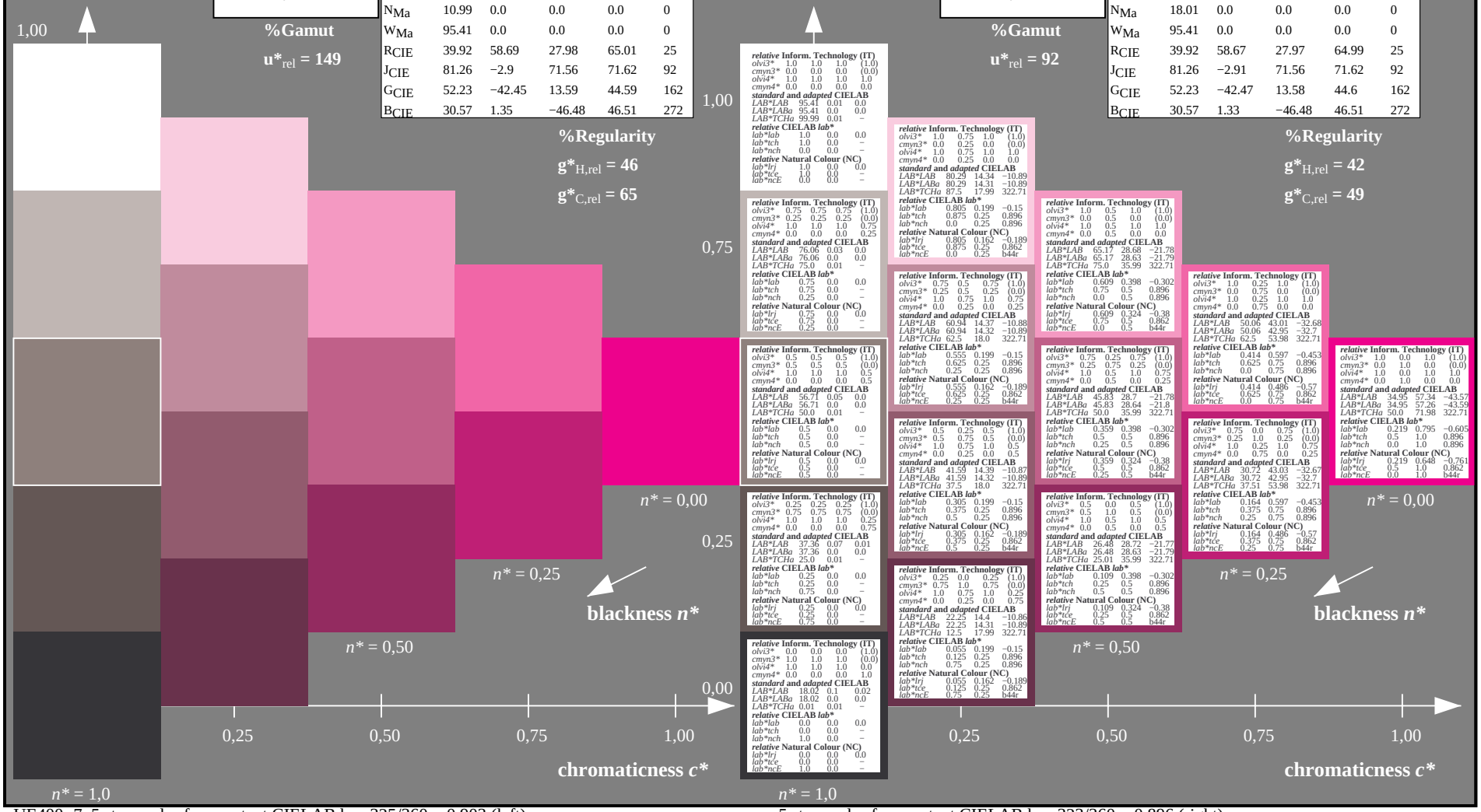
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



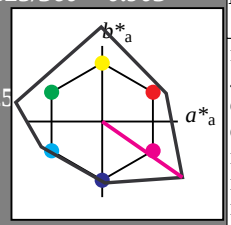
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 323/360 = 0.896 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

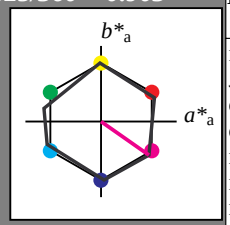
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 57 77 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

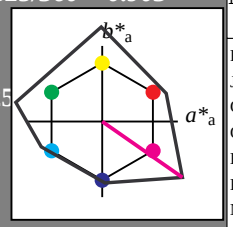
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

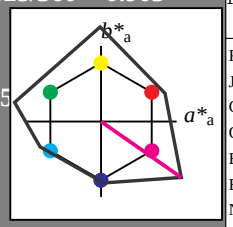
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

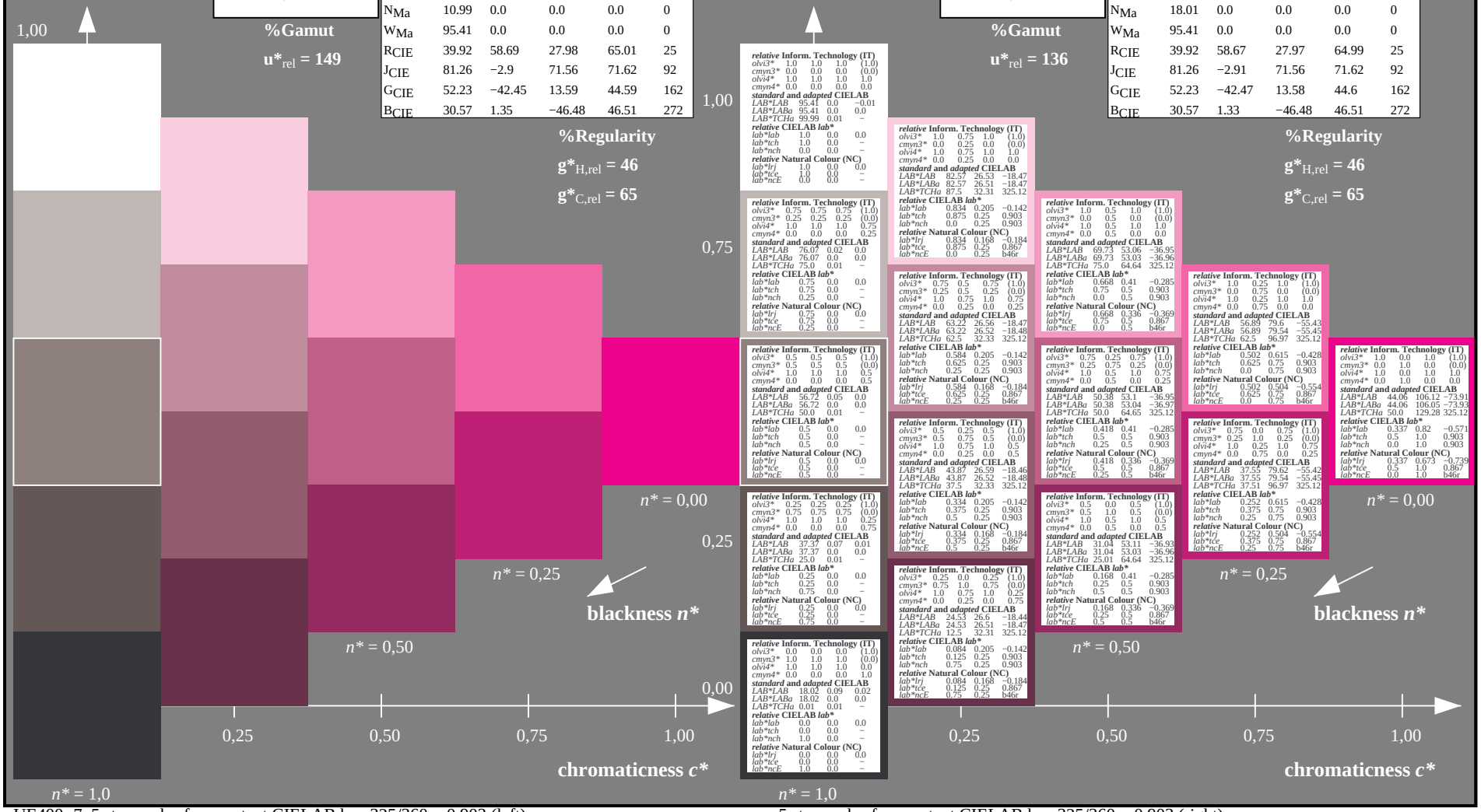
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



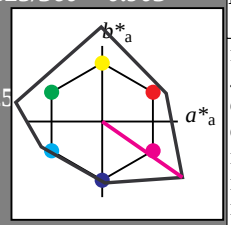
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

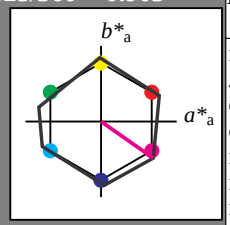
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 53 84 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

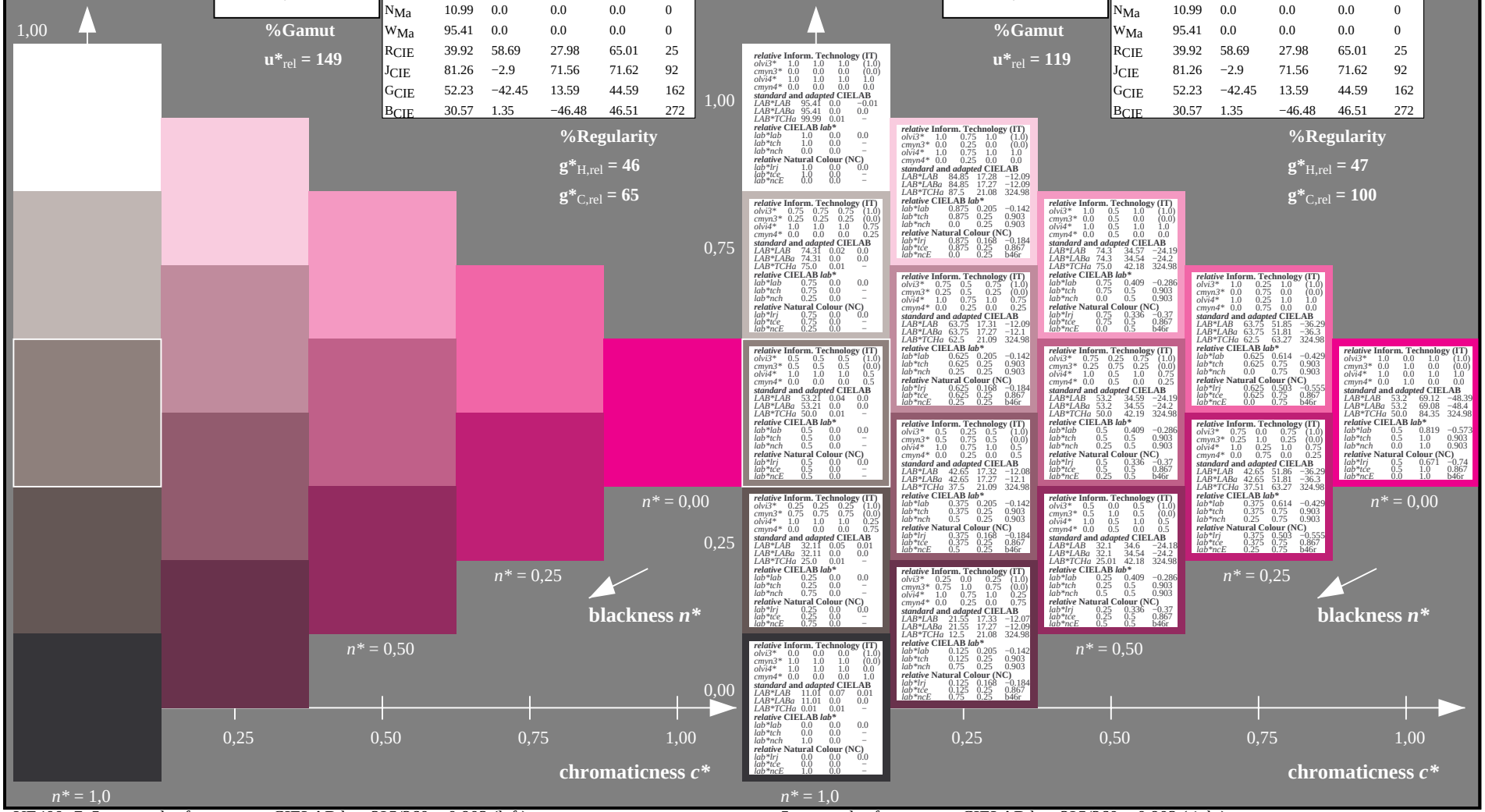
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



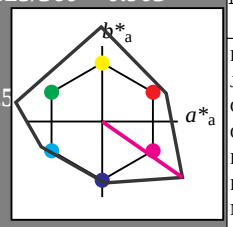
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

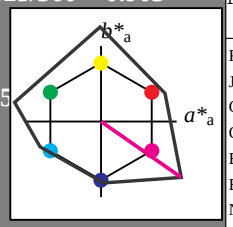
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 325/360 = 0.903$
lab*tch* and *lab*nch

D65: hue B50R
LCH*Ma: 44 129 325
rgb*Ma: 1.0 0.0 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

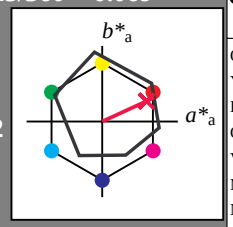
UE400−7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)

5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

$u^*_{rel} = 93$

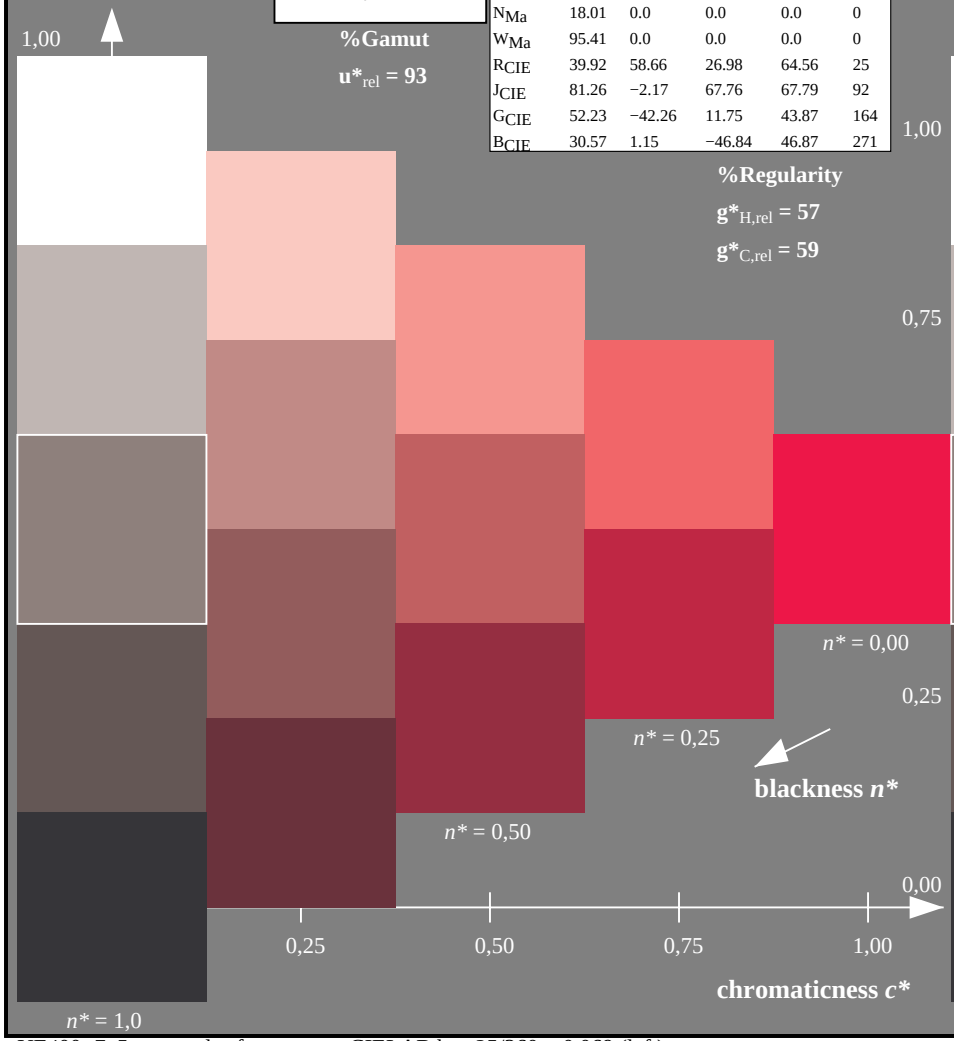
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

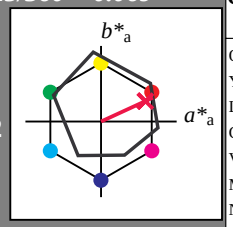
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

$u^*_{rel} = 93$

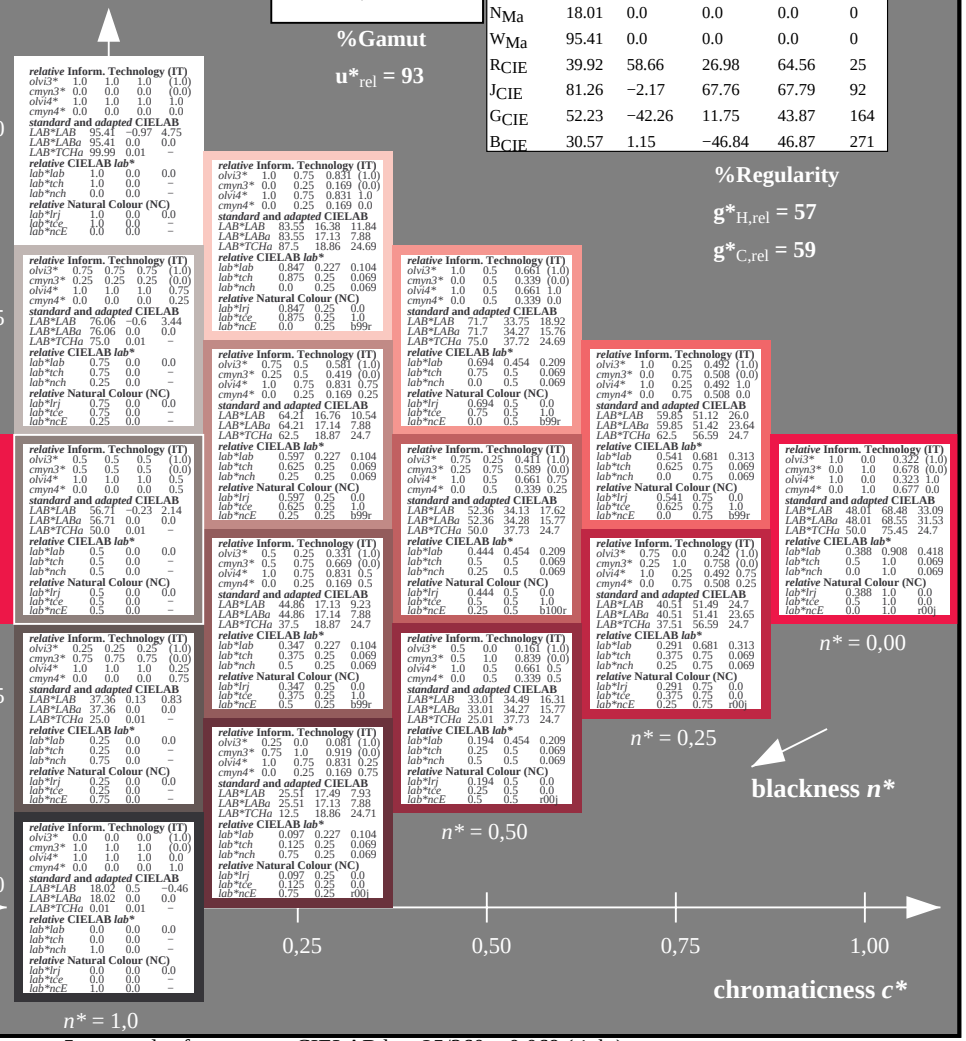
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



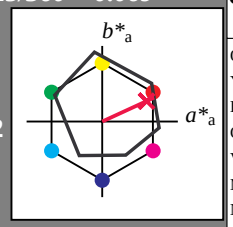
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

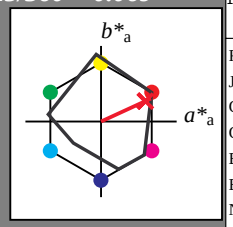
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

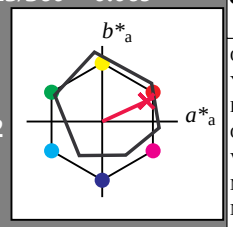
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

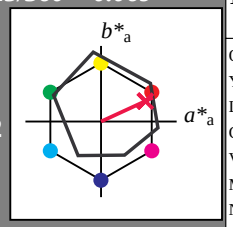
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

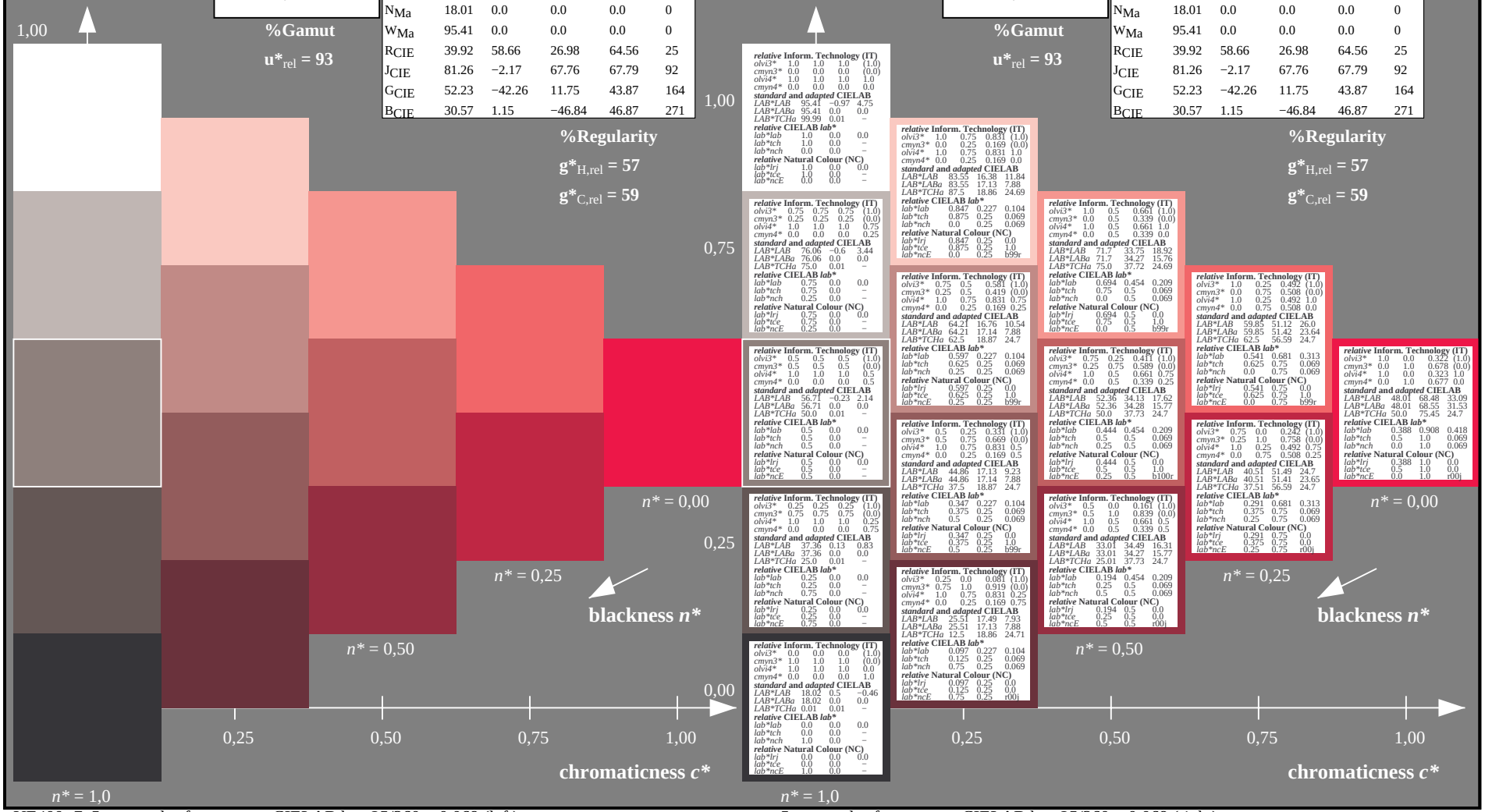
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



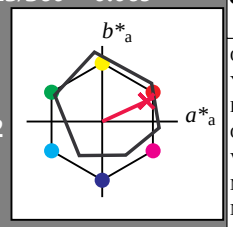
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

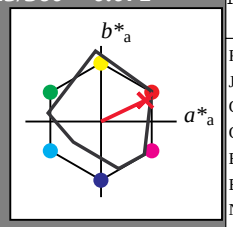
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 92

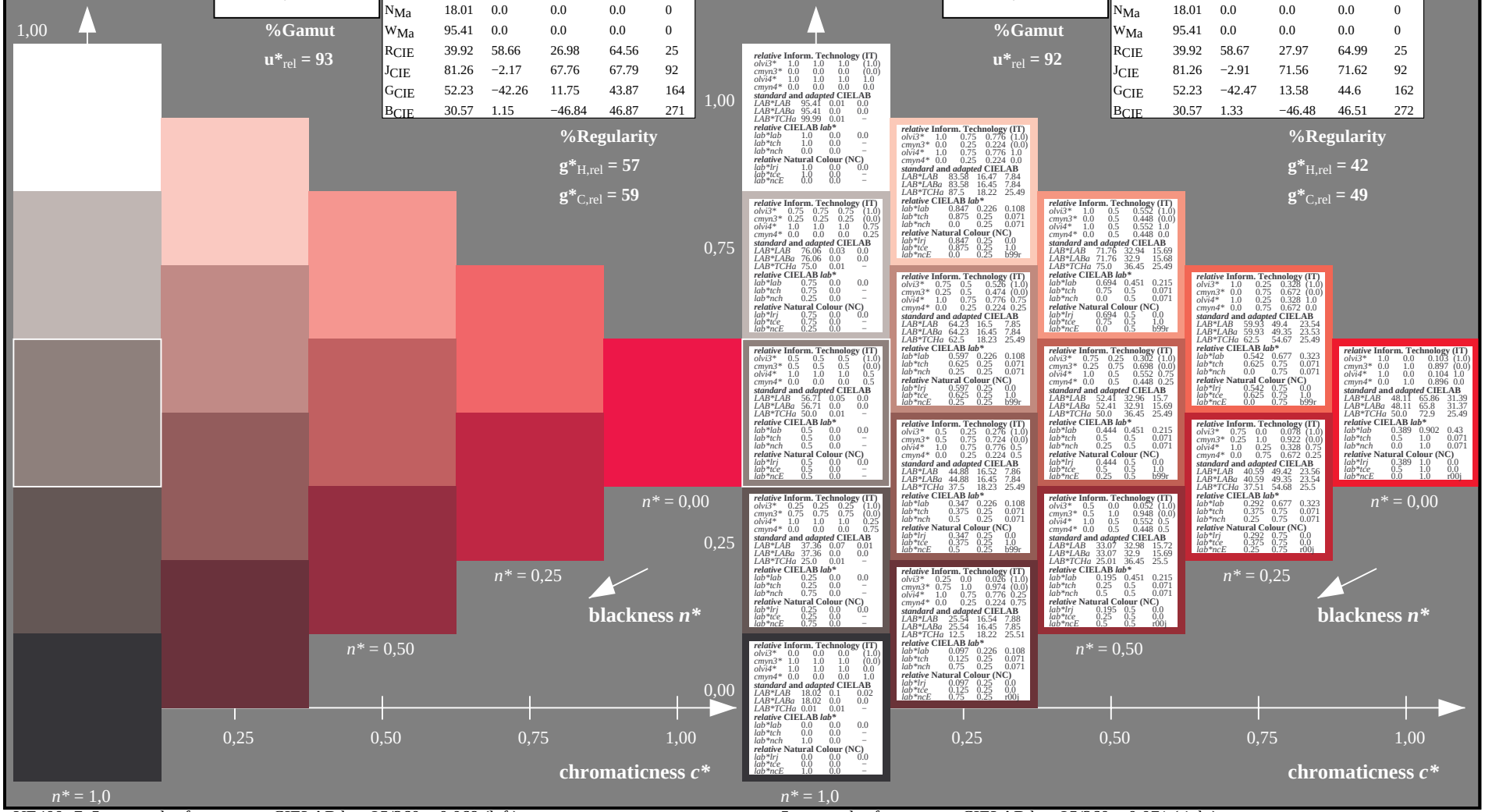
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



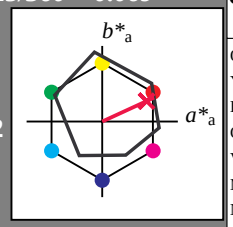
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 25/360 = 0.069*
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

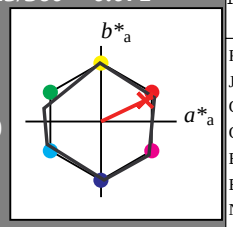
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue *h* = lab*h = 25/360 = 0.071*
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

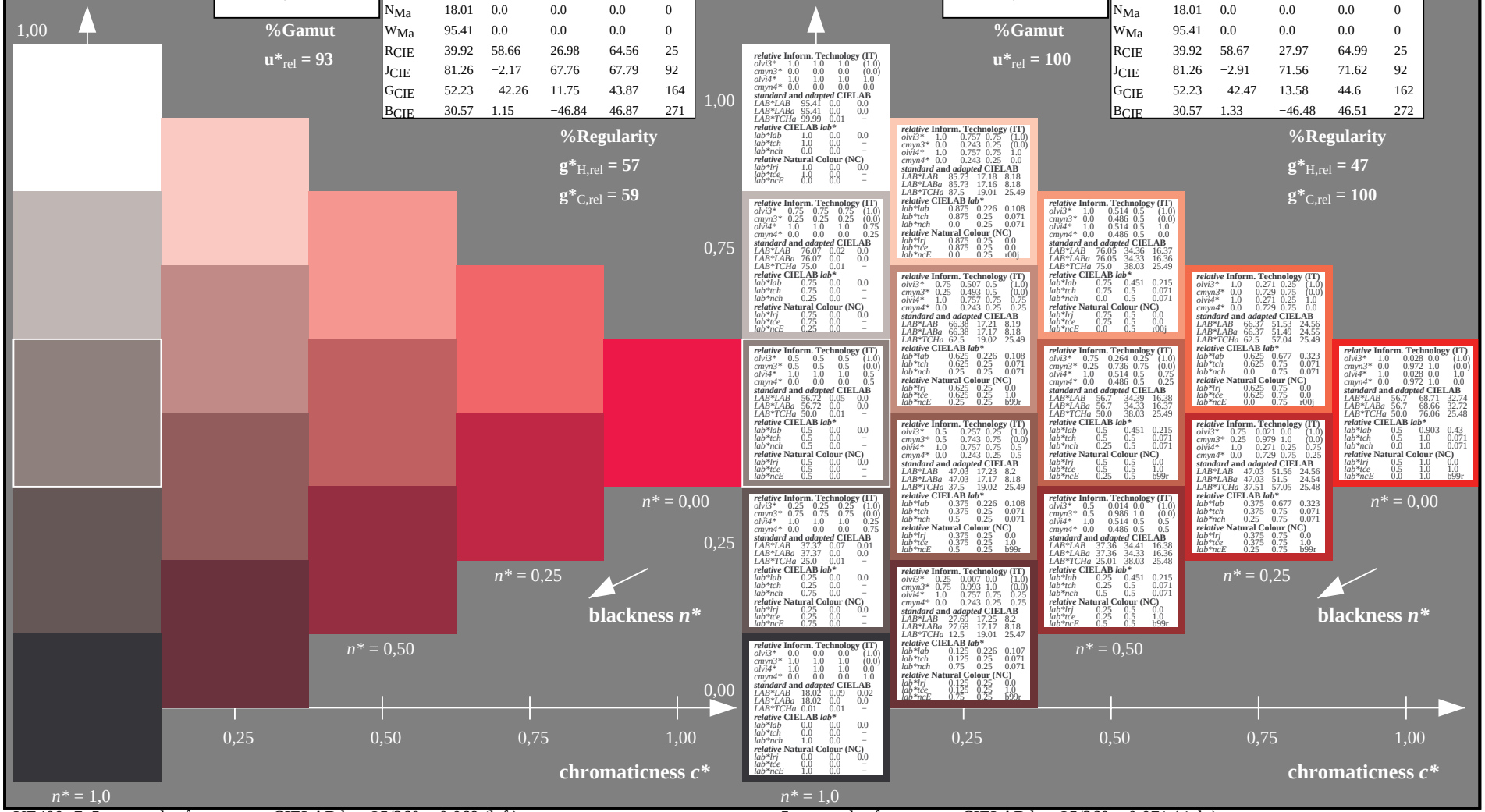
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



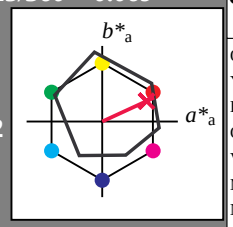
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

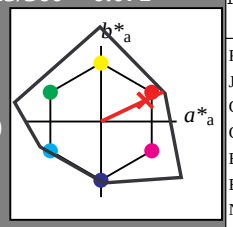
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

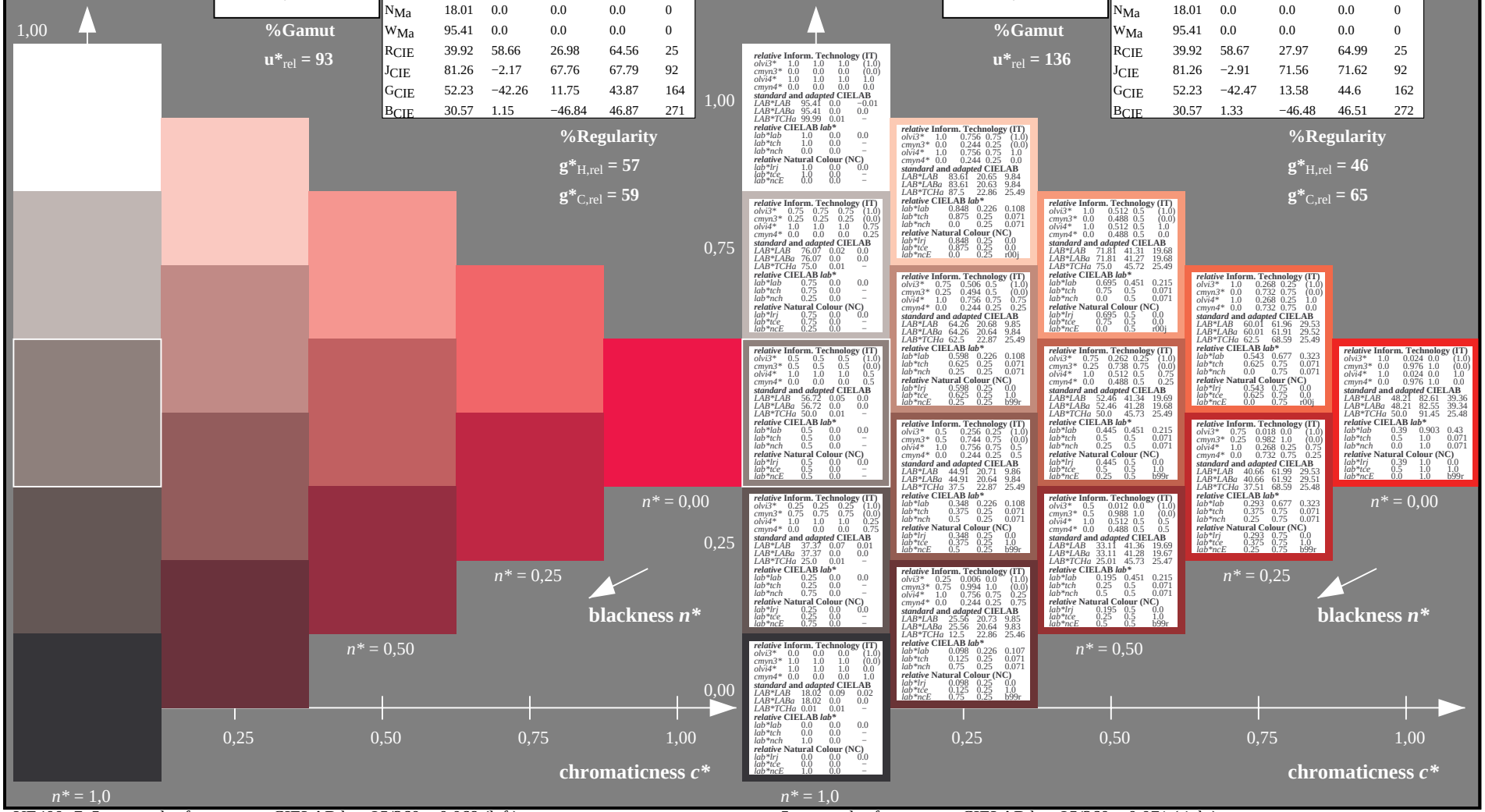
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



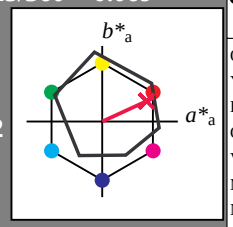
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

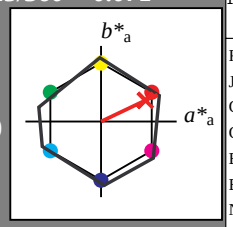
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

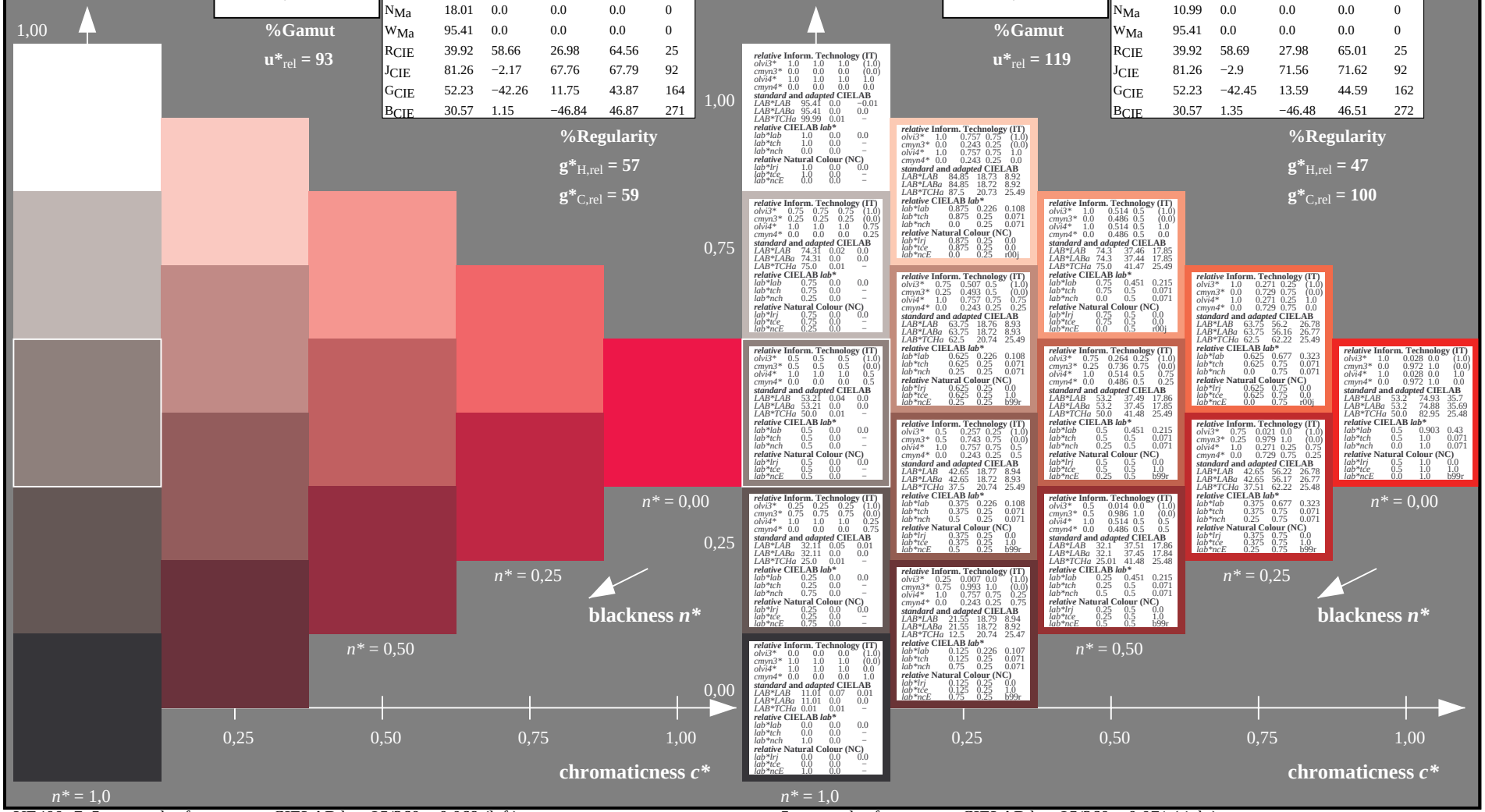
%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272



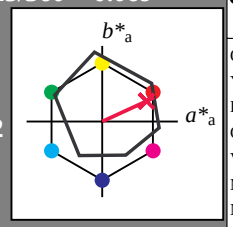
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

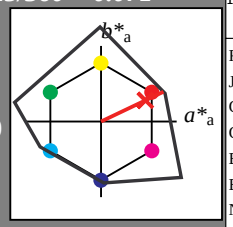
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

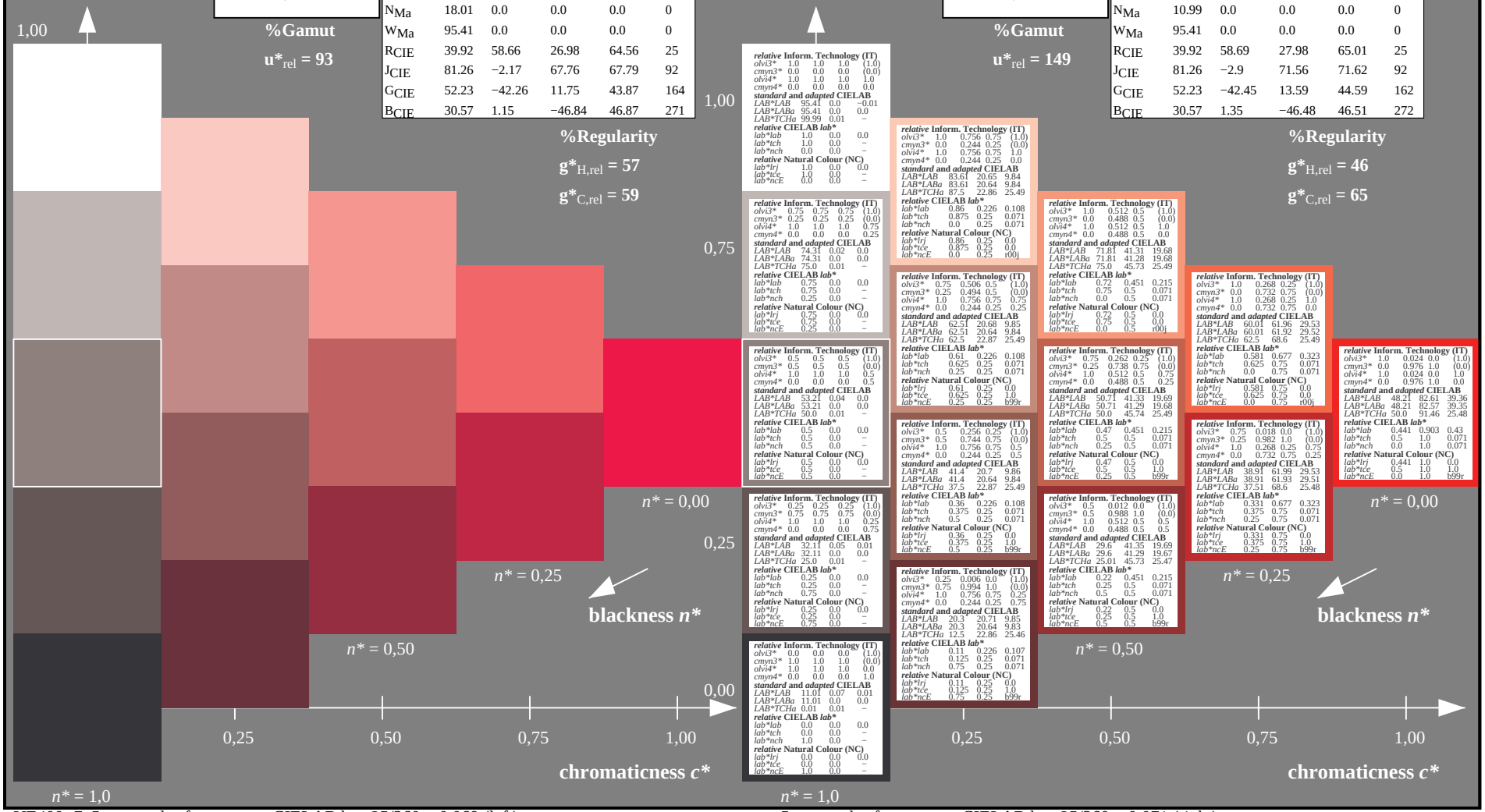
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



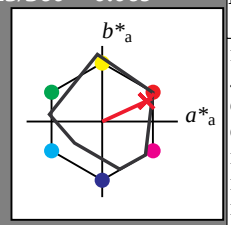
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

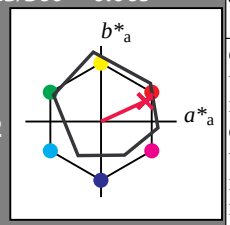
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

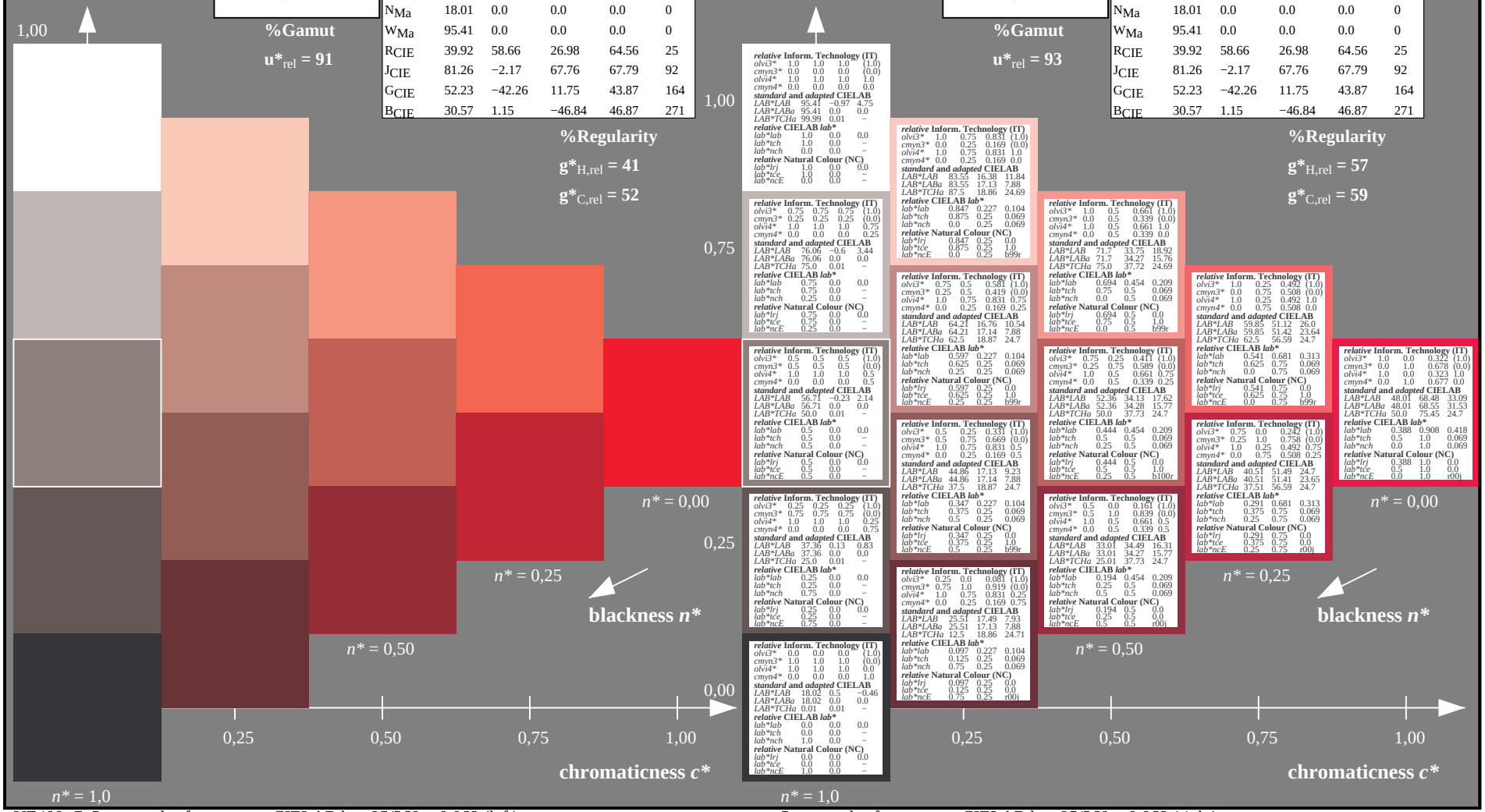
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



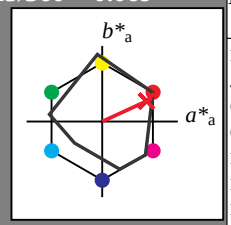
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

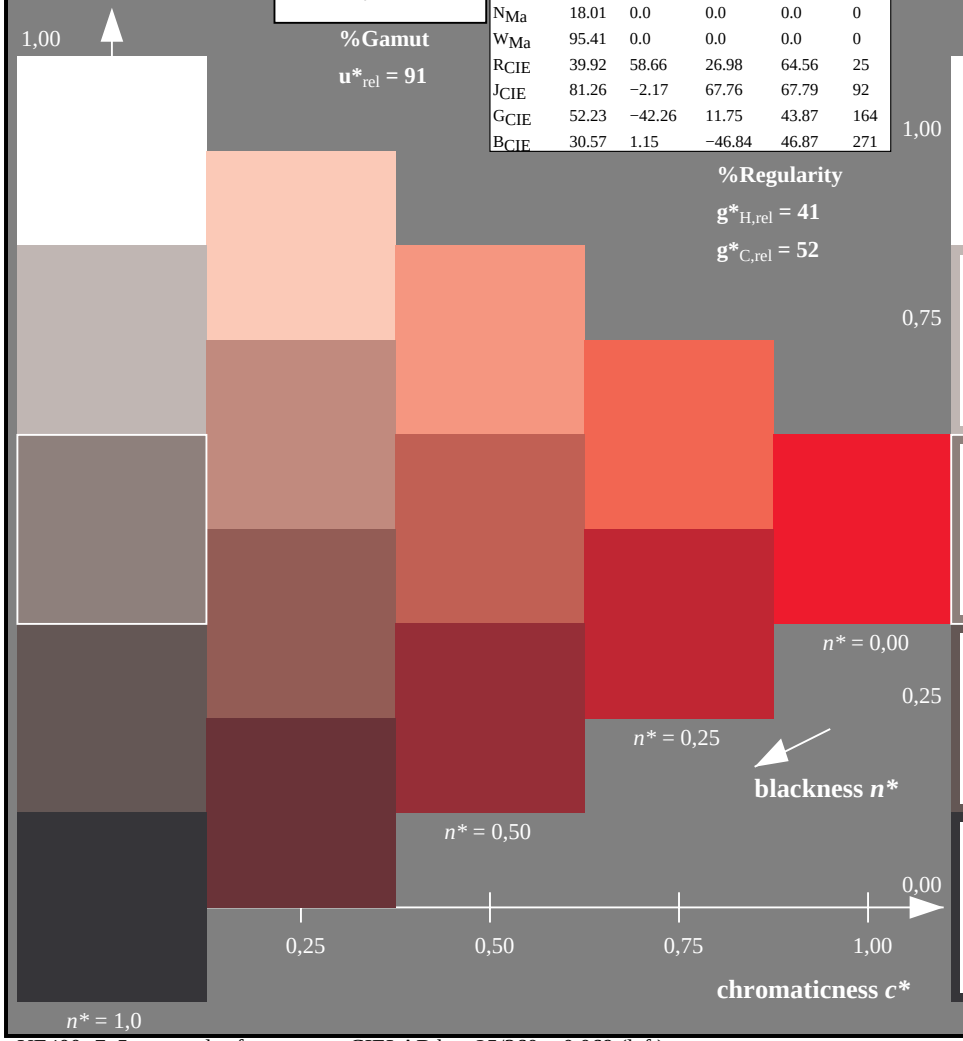
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

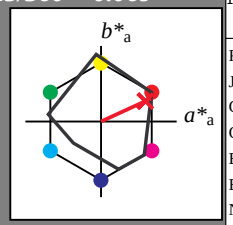
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

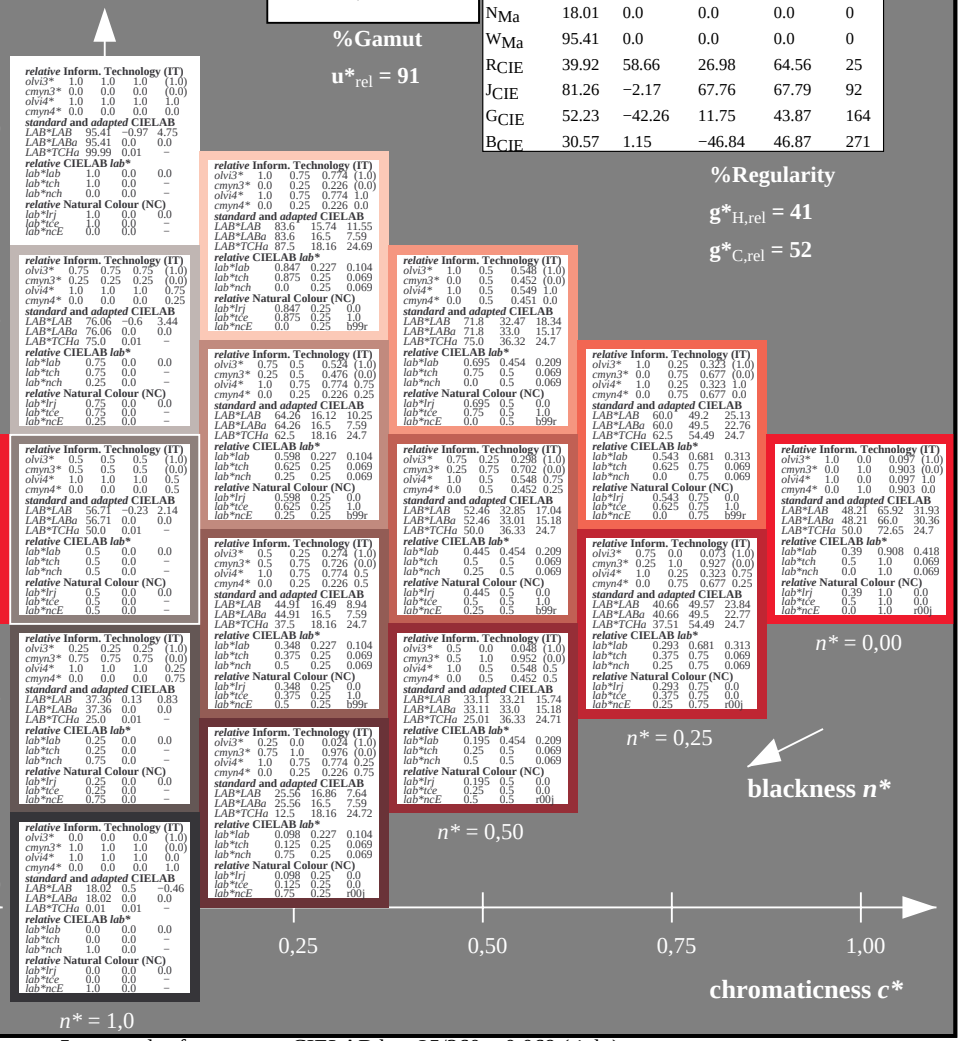
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



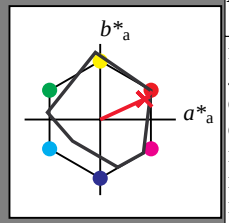
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

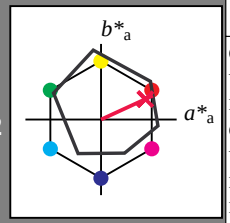
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

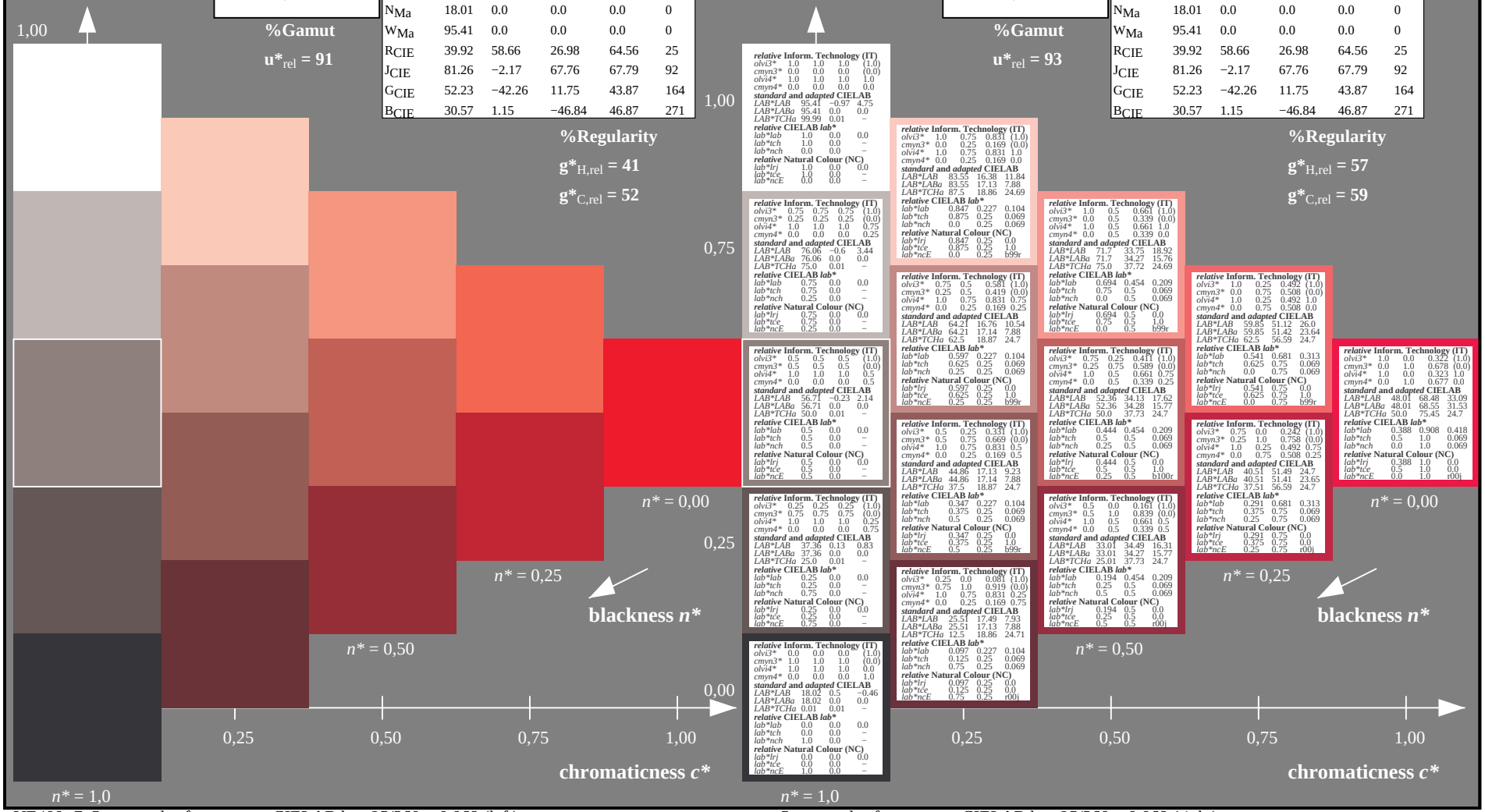
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



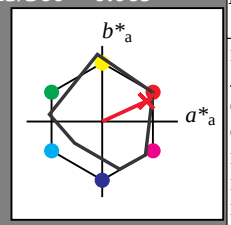
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

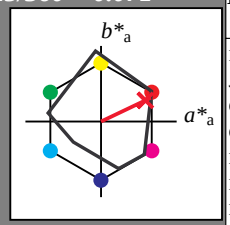
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

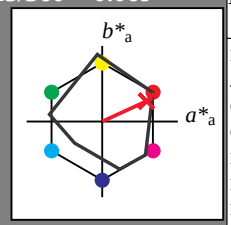
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

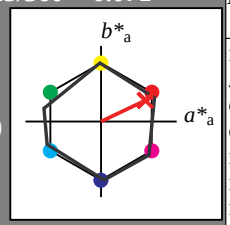
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

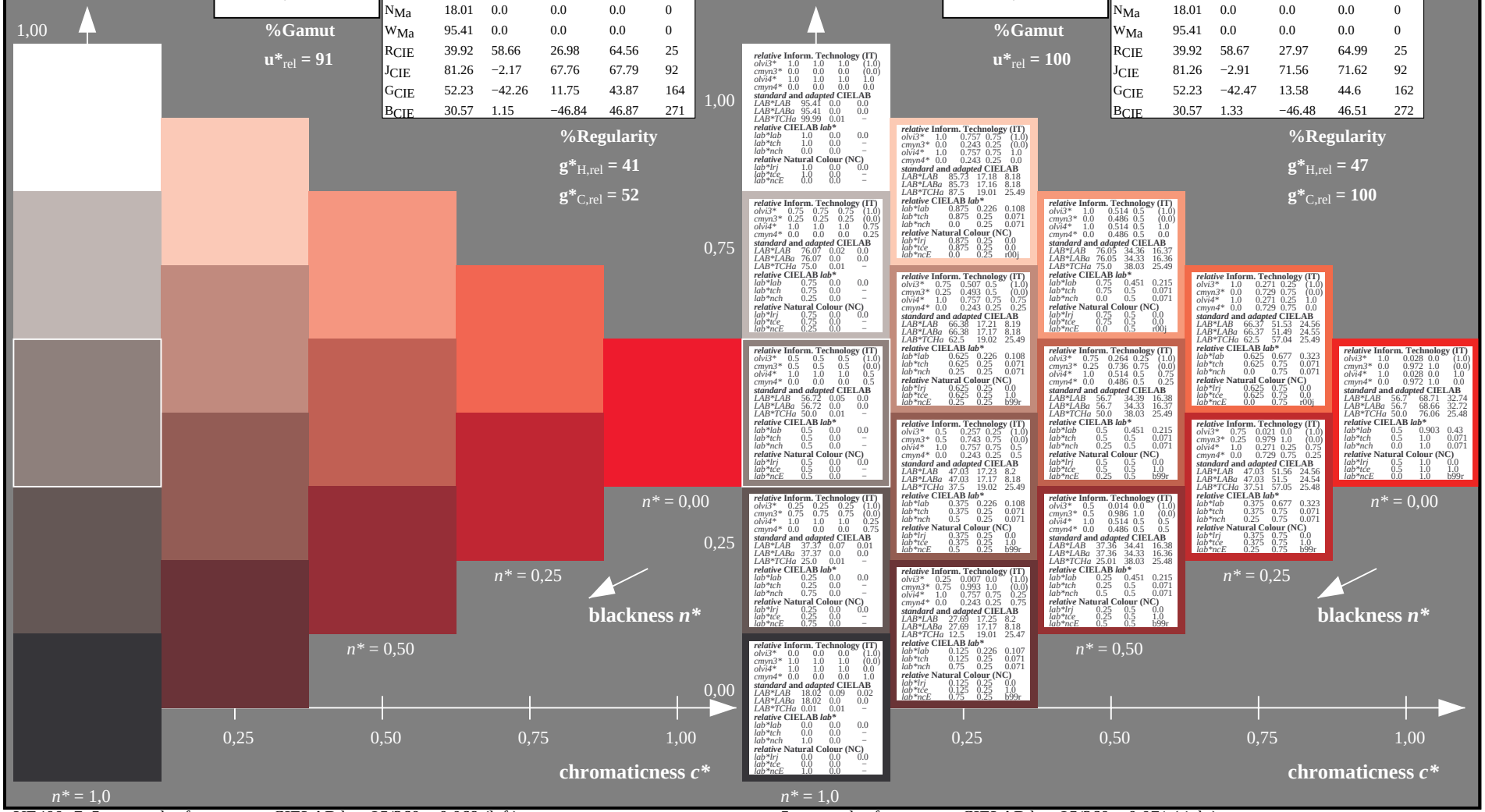
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



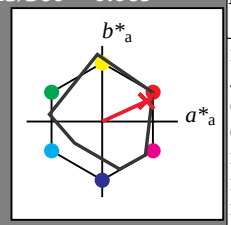
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

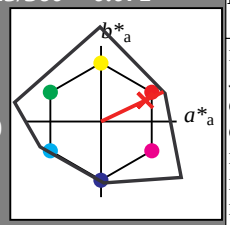
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

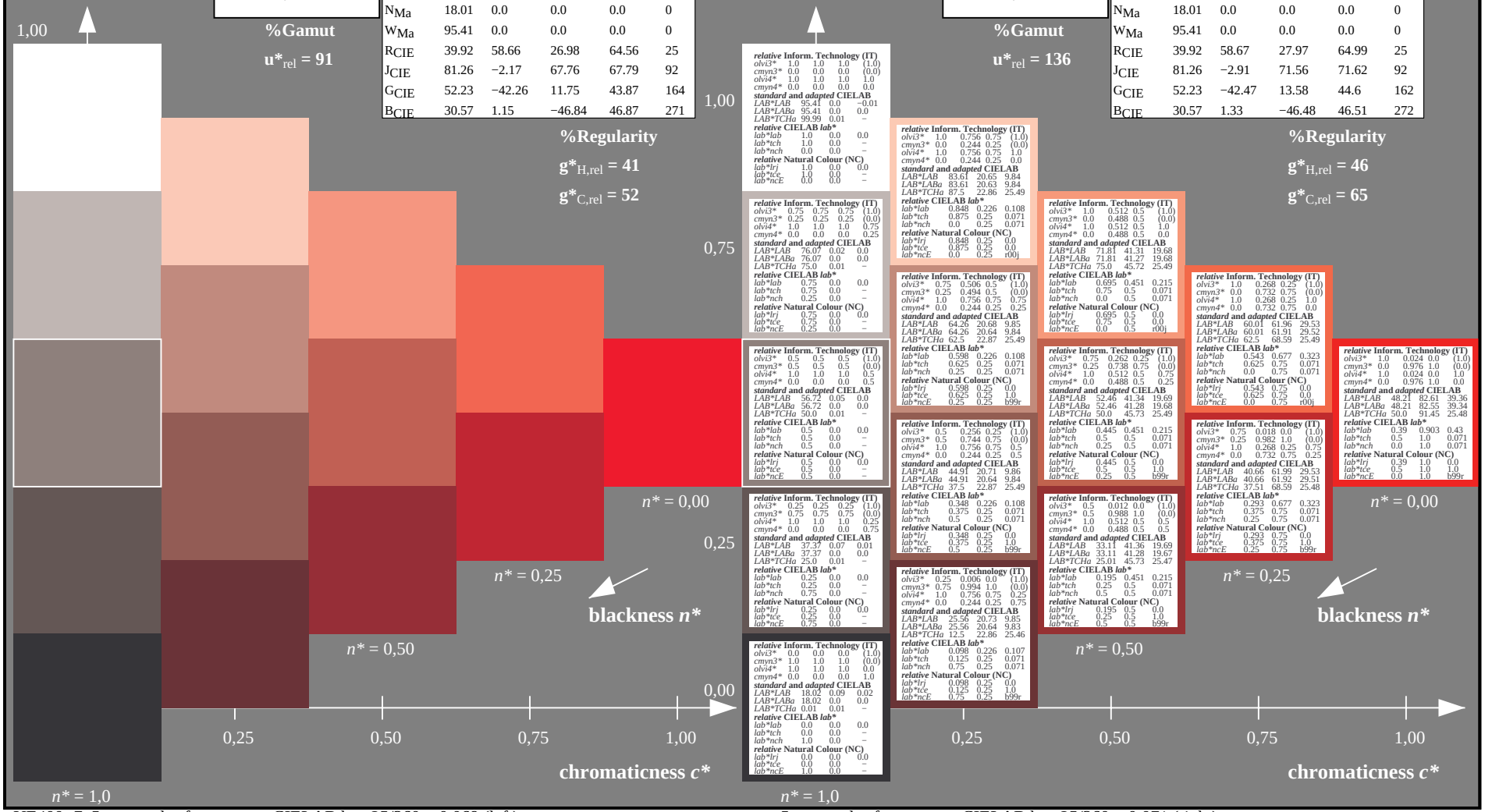
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



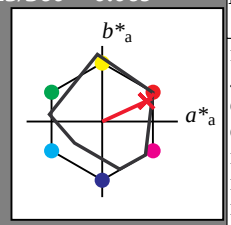
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

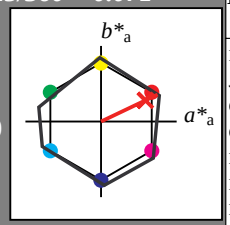
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

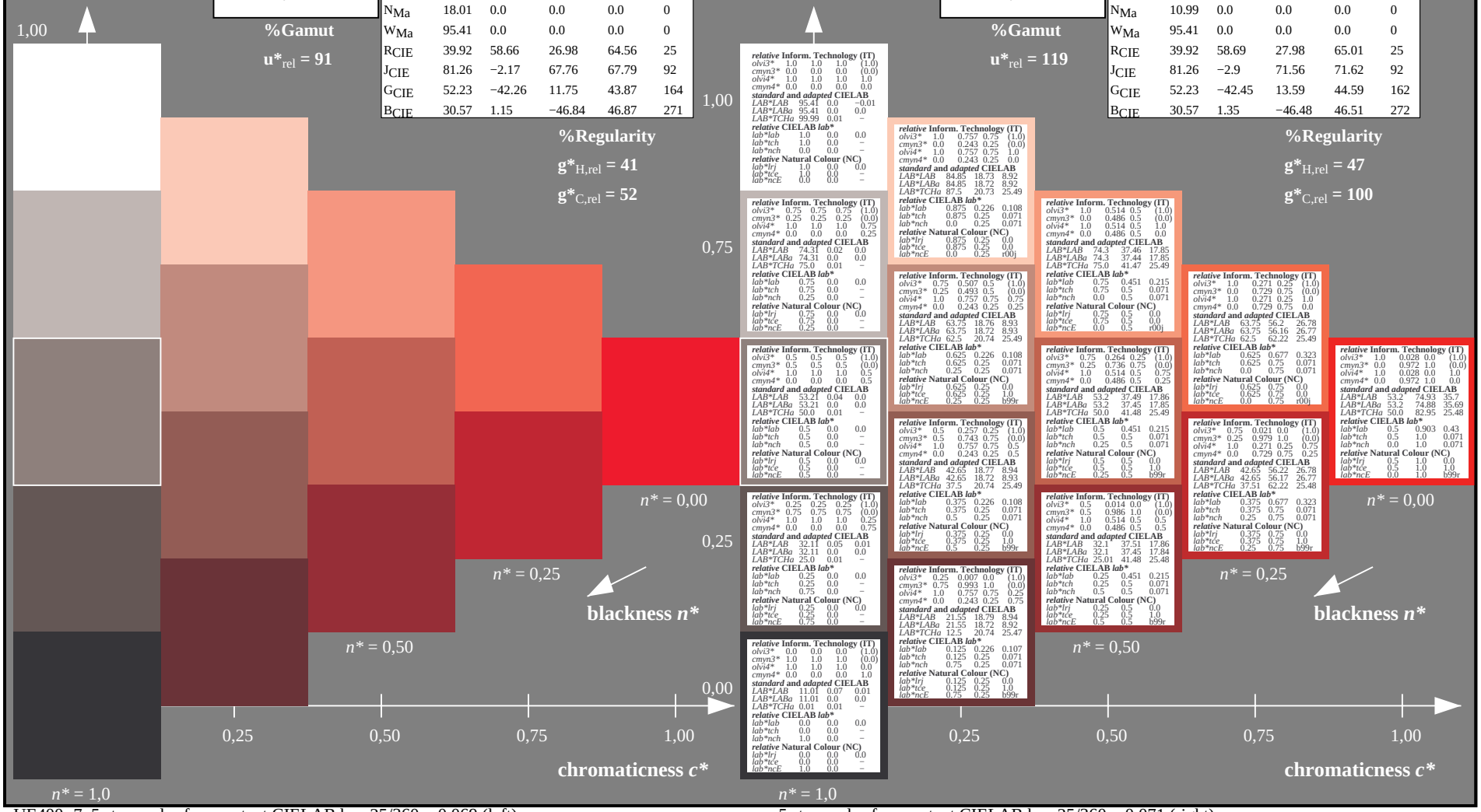
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



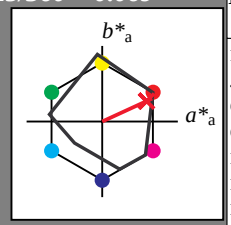
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

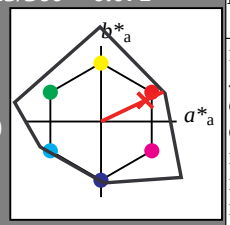
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

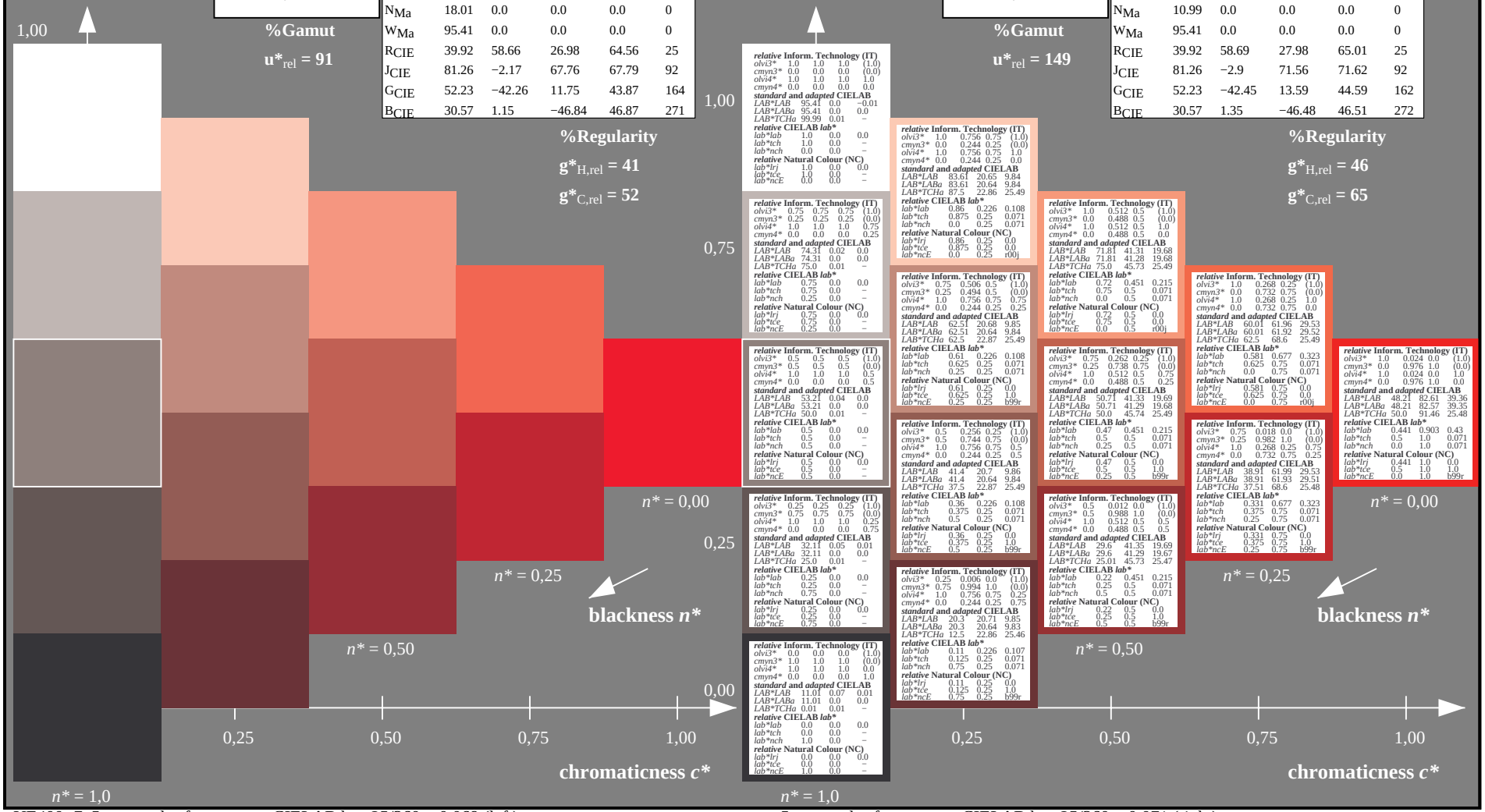
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



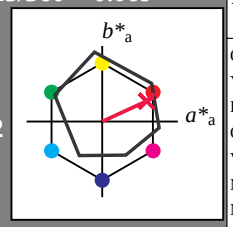
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

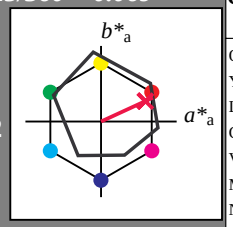
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

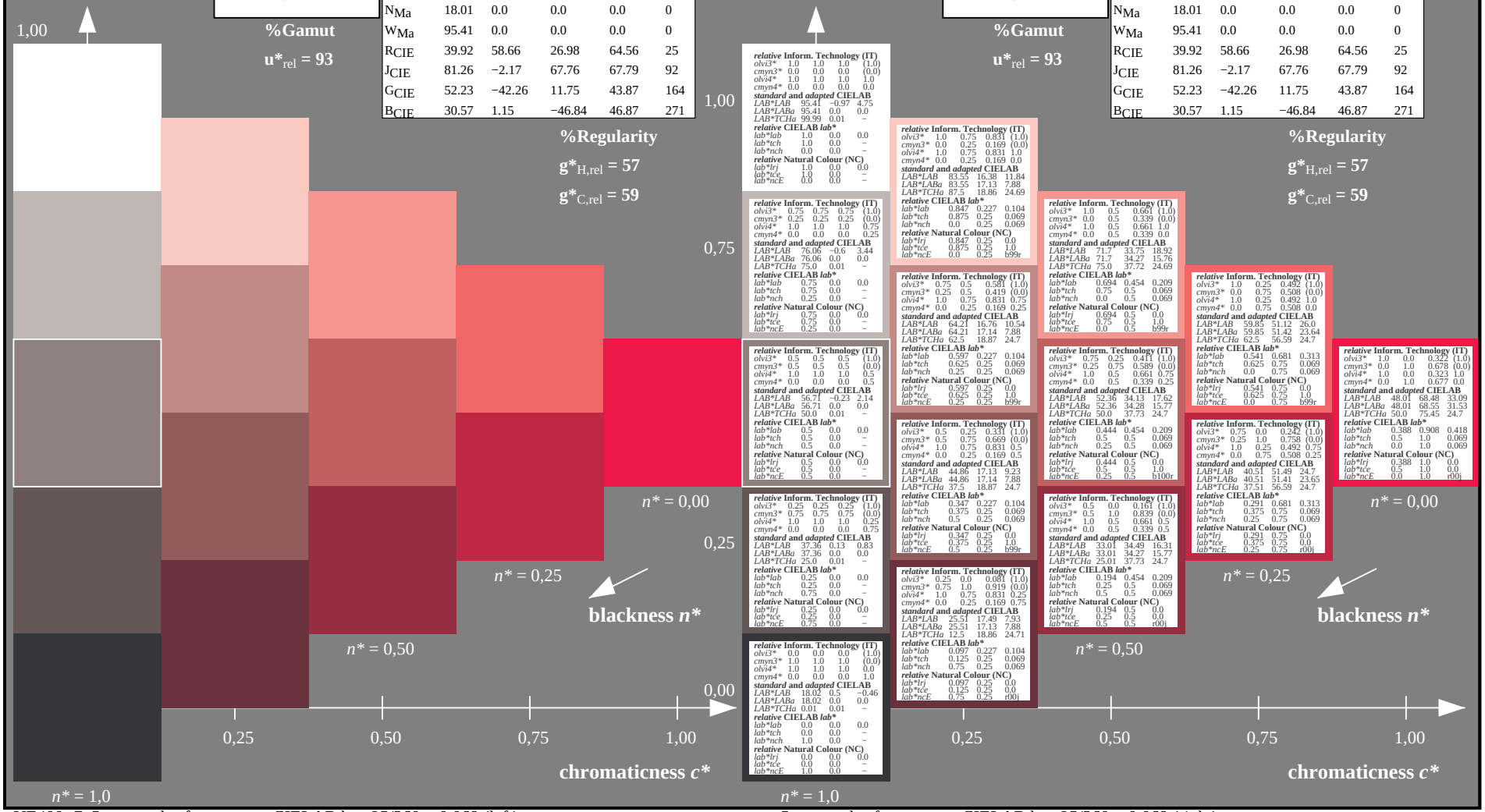
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



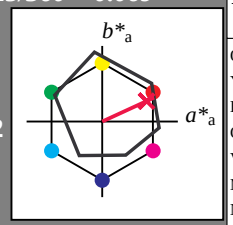
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

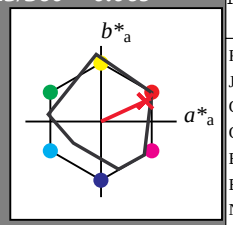
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

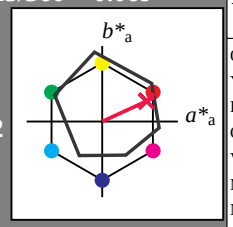
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

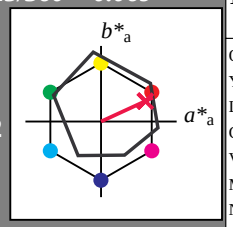
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

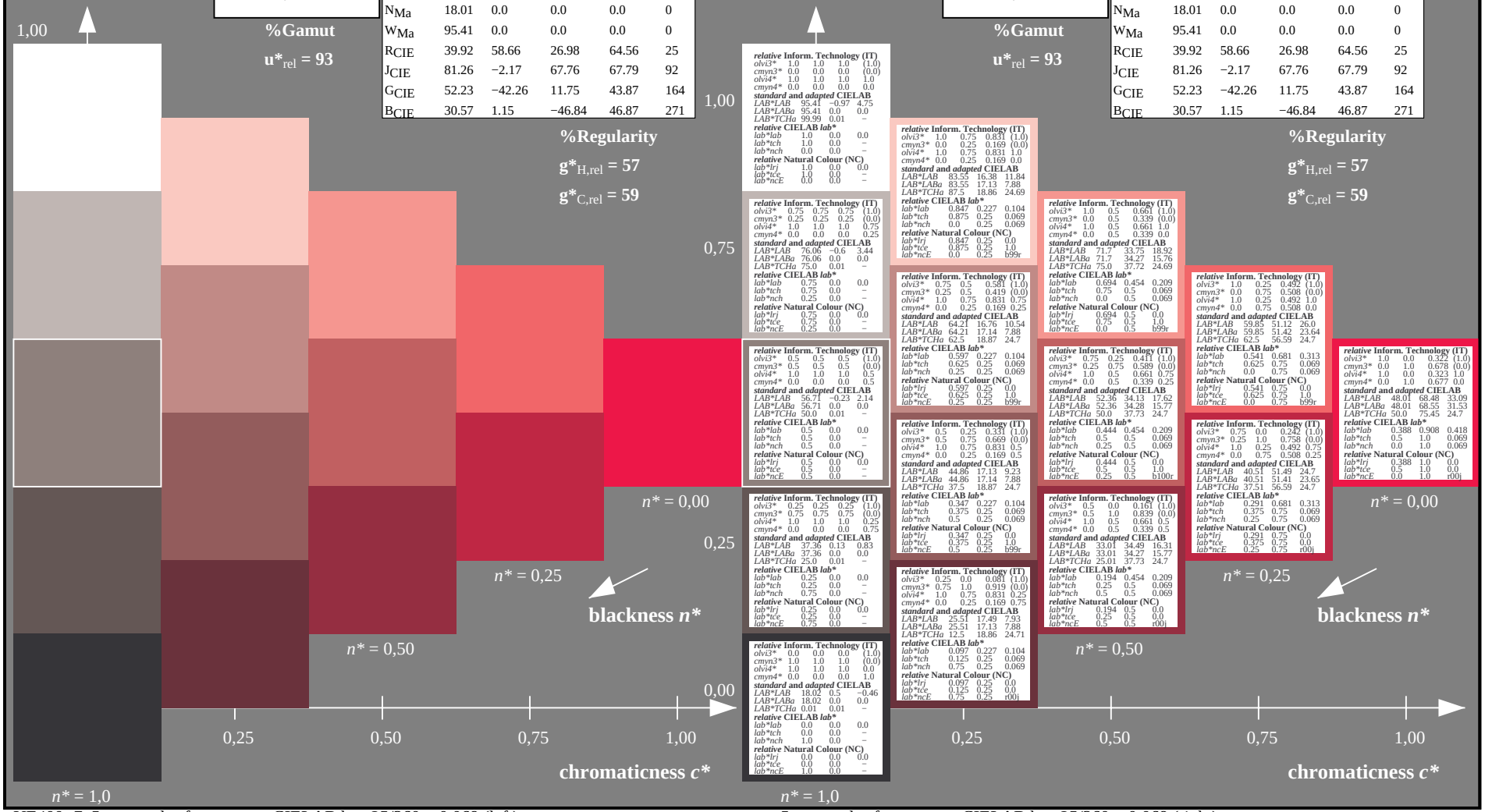
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



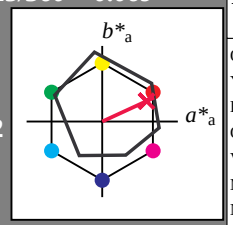
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

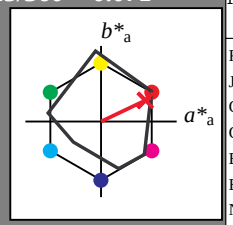
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

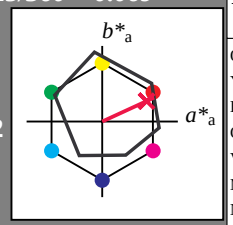
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

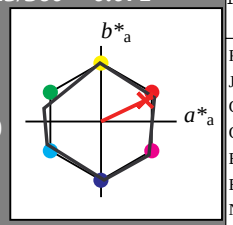
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

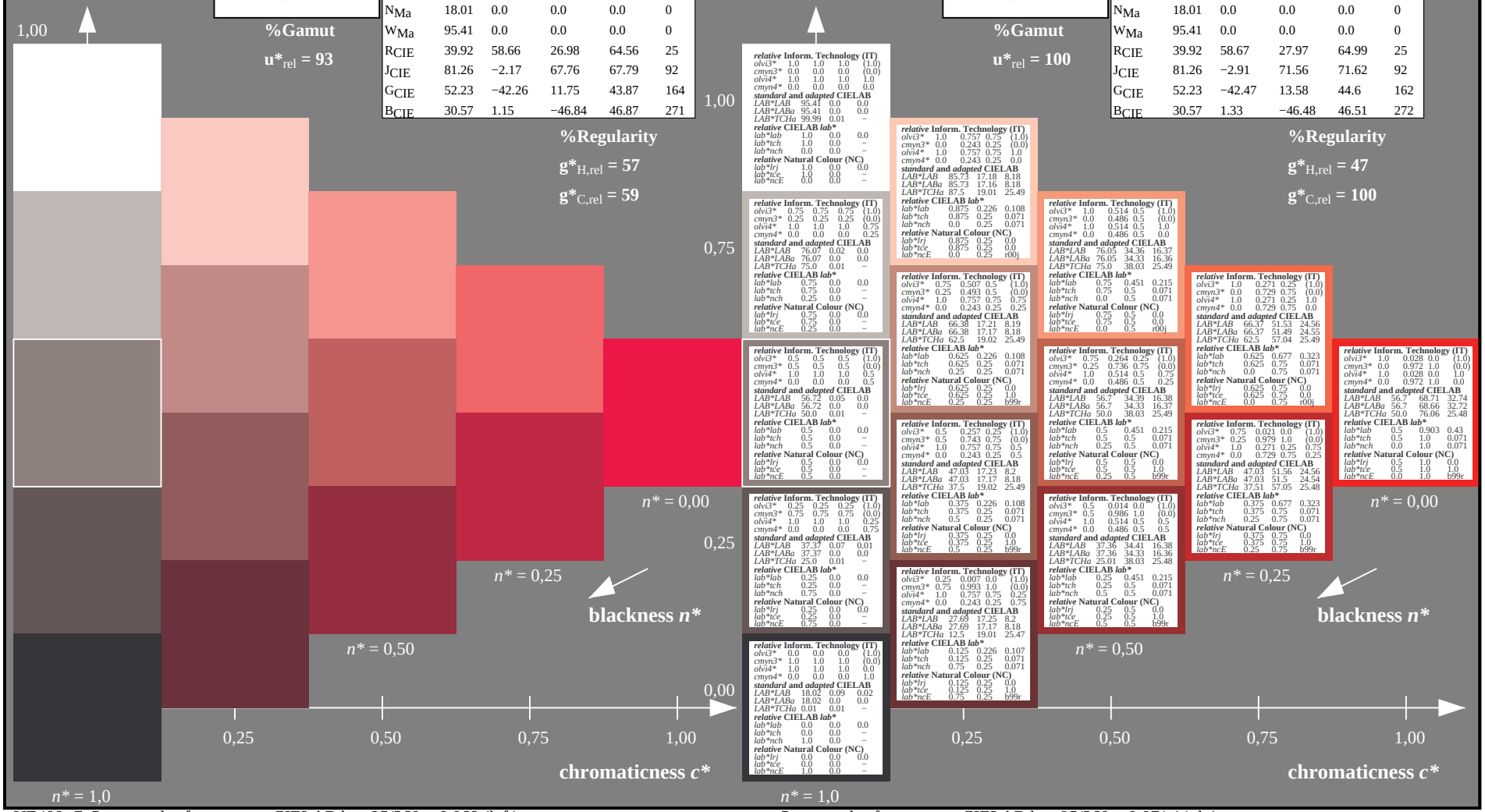
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



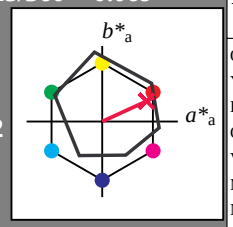
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System TRS18
for hue *h = lab*h = 25/360 = 0.069**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

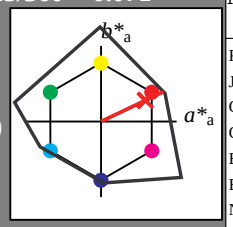
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue *h = lab*h = 25/360 = 0.071**
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

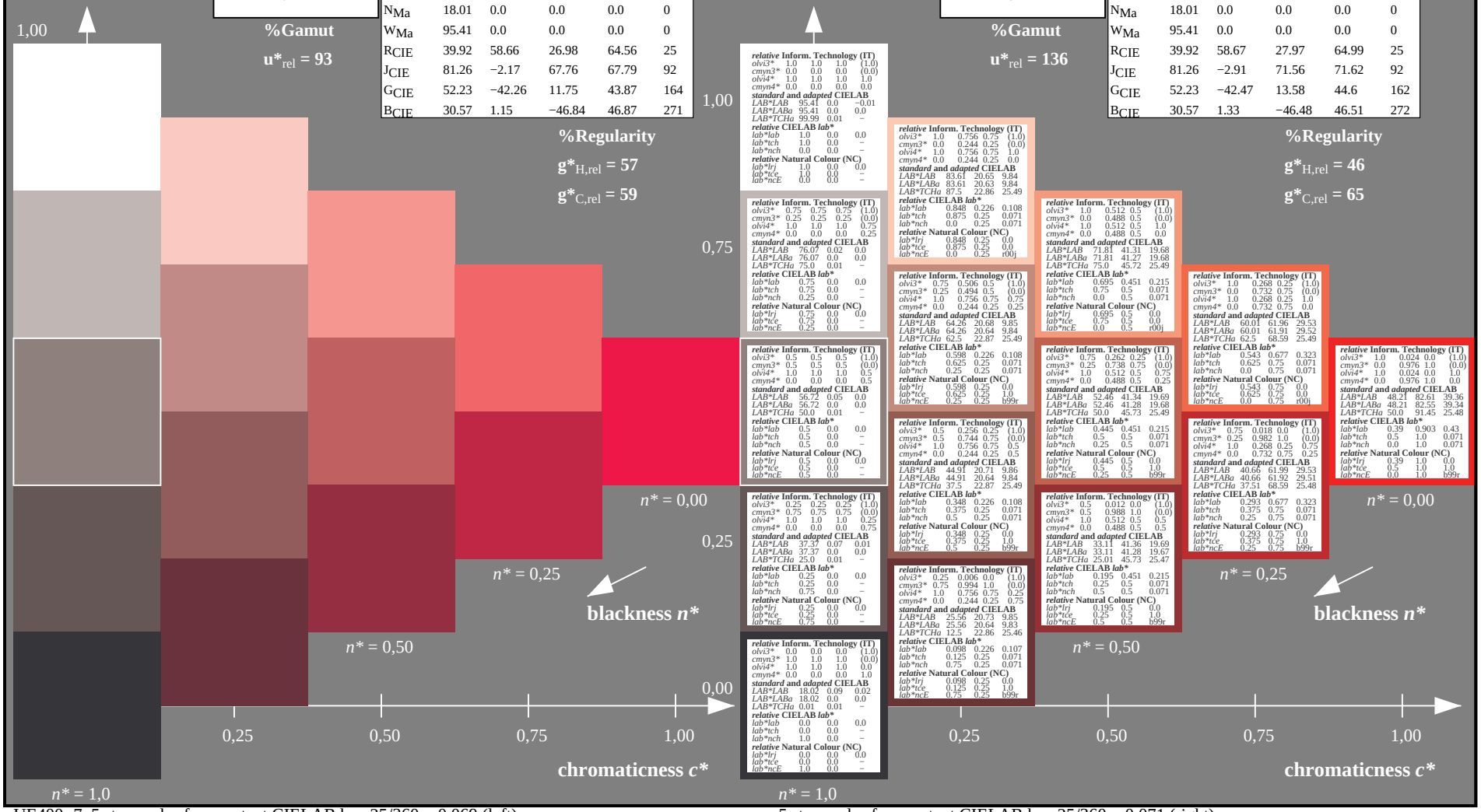
%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



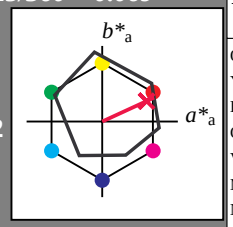
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

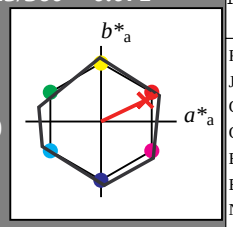
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

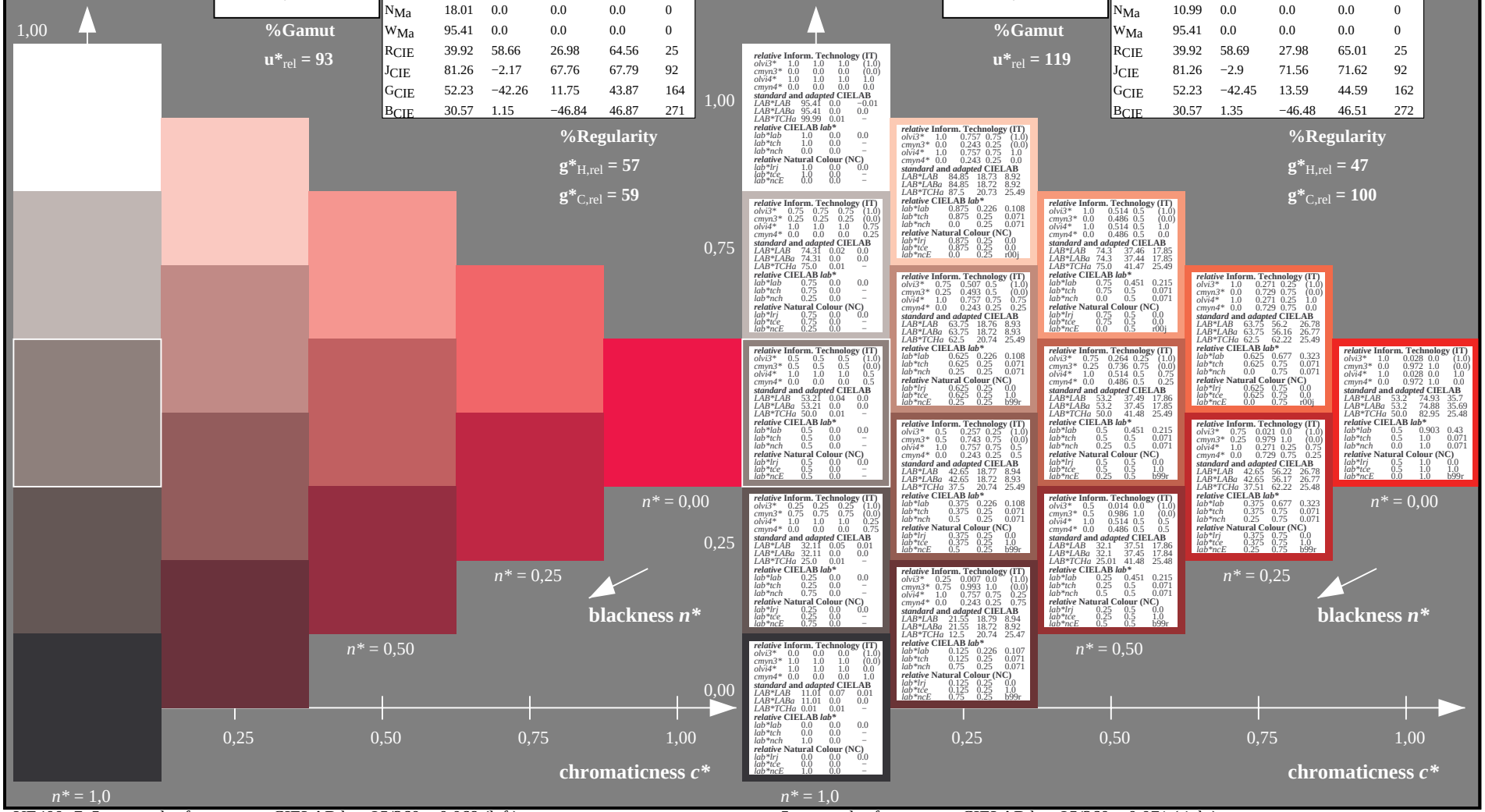
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



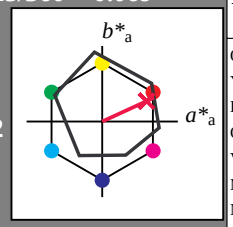
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

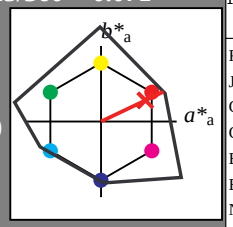
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

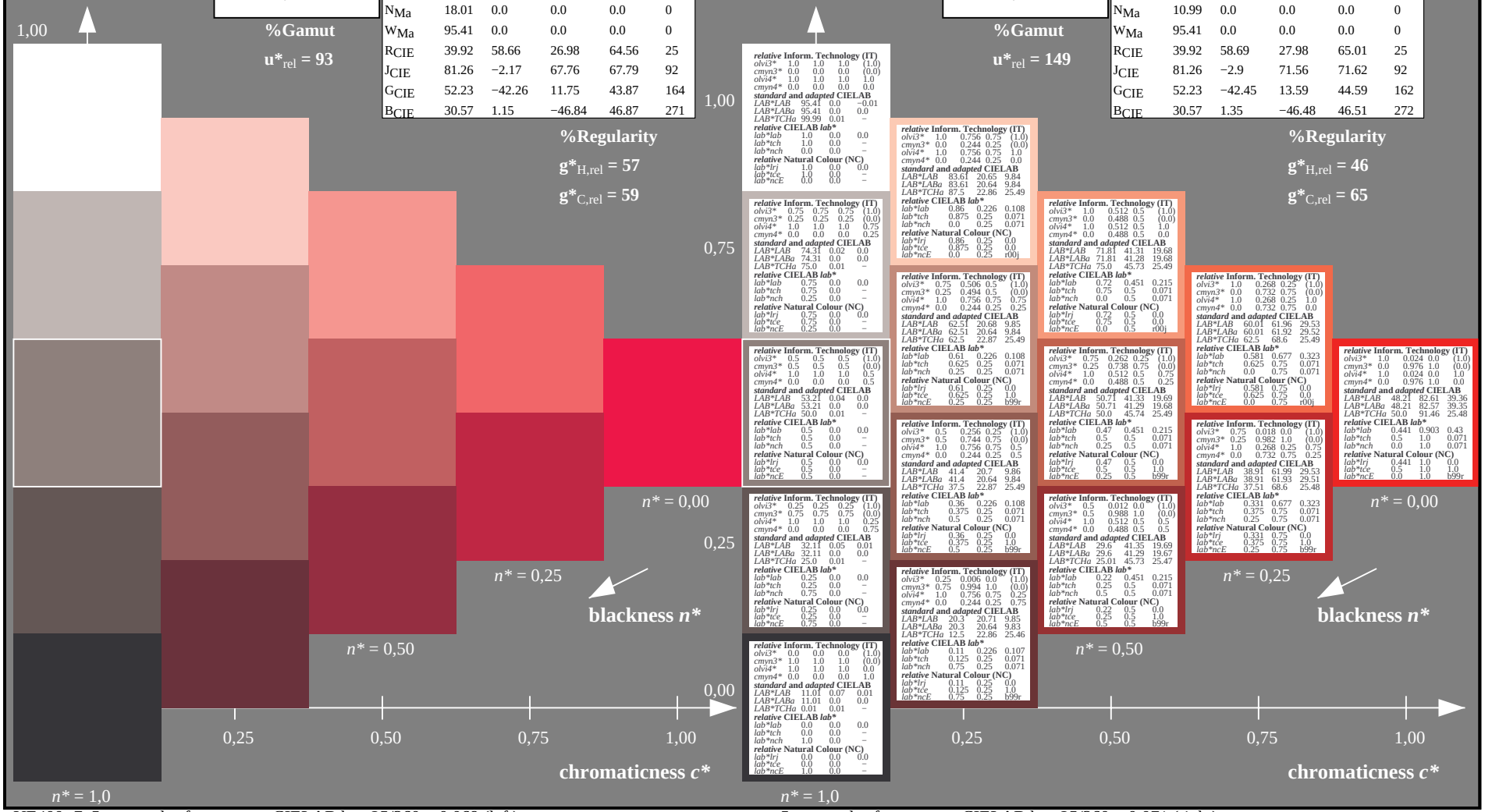
%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



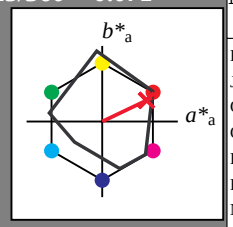
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

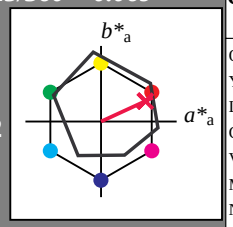
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

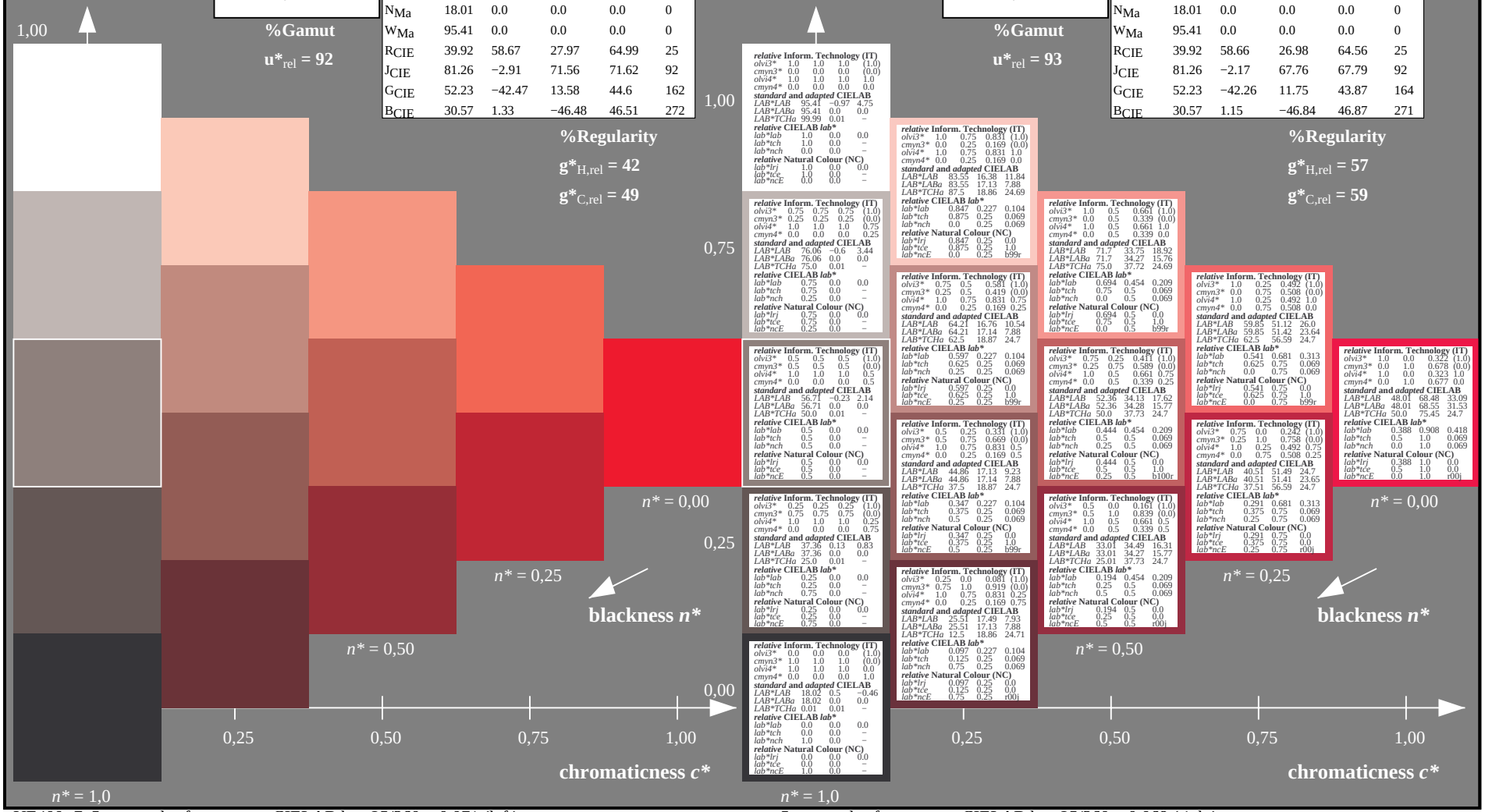
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



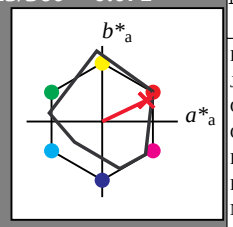
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

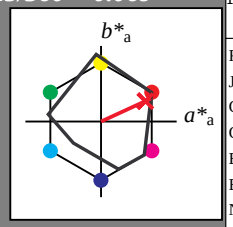
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

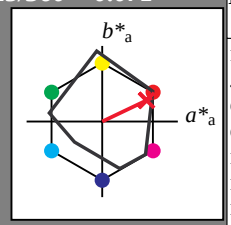
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

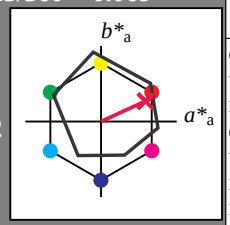
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

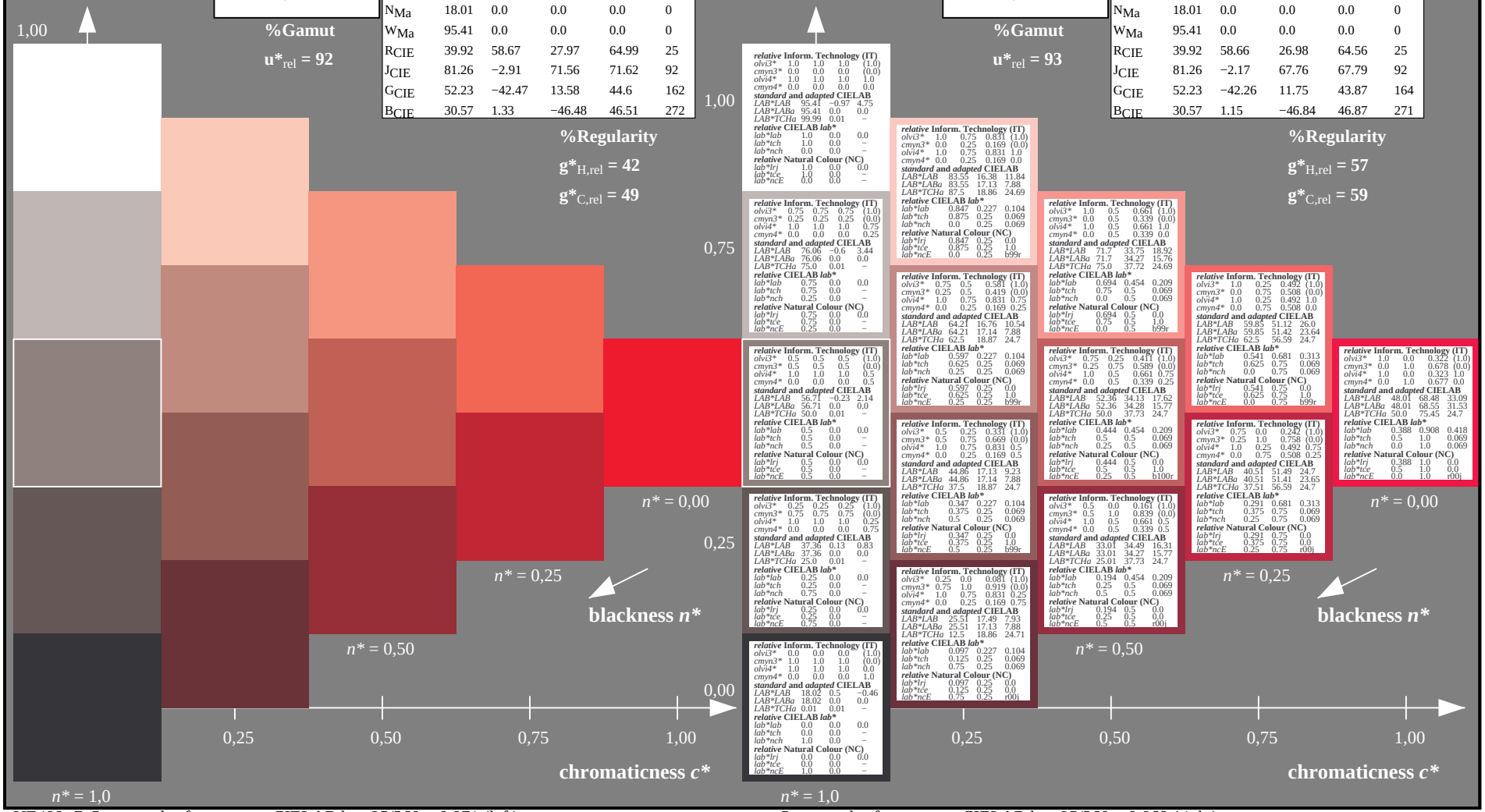
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



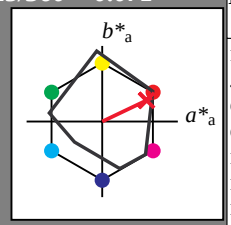
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 25/360 = 0.071*
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

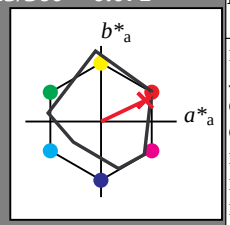
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 25/360 = 0.071*
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

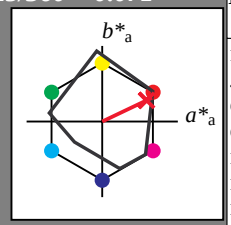
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

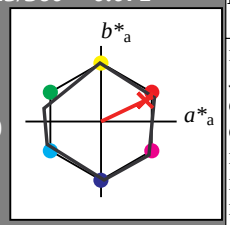
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

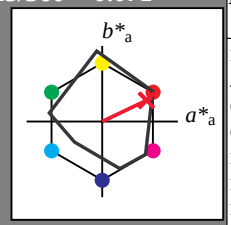
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

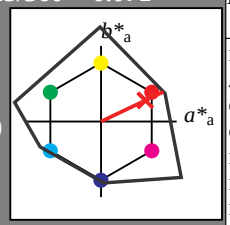
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

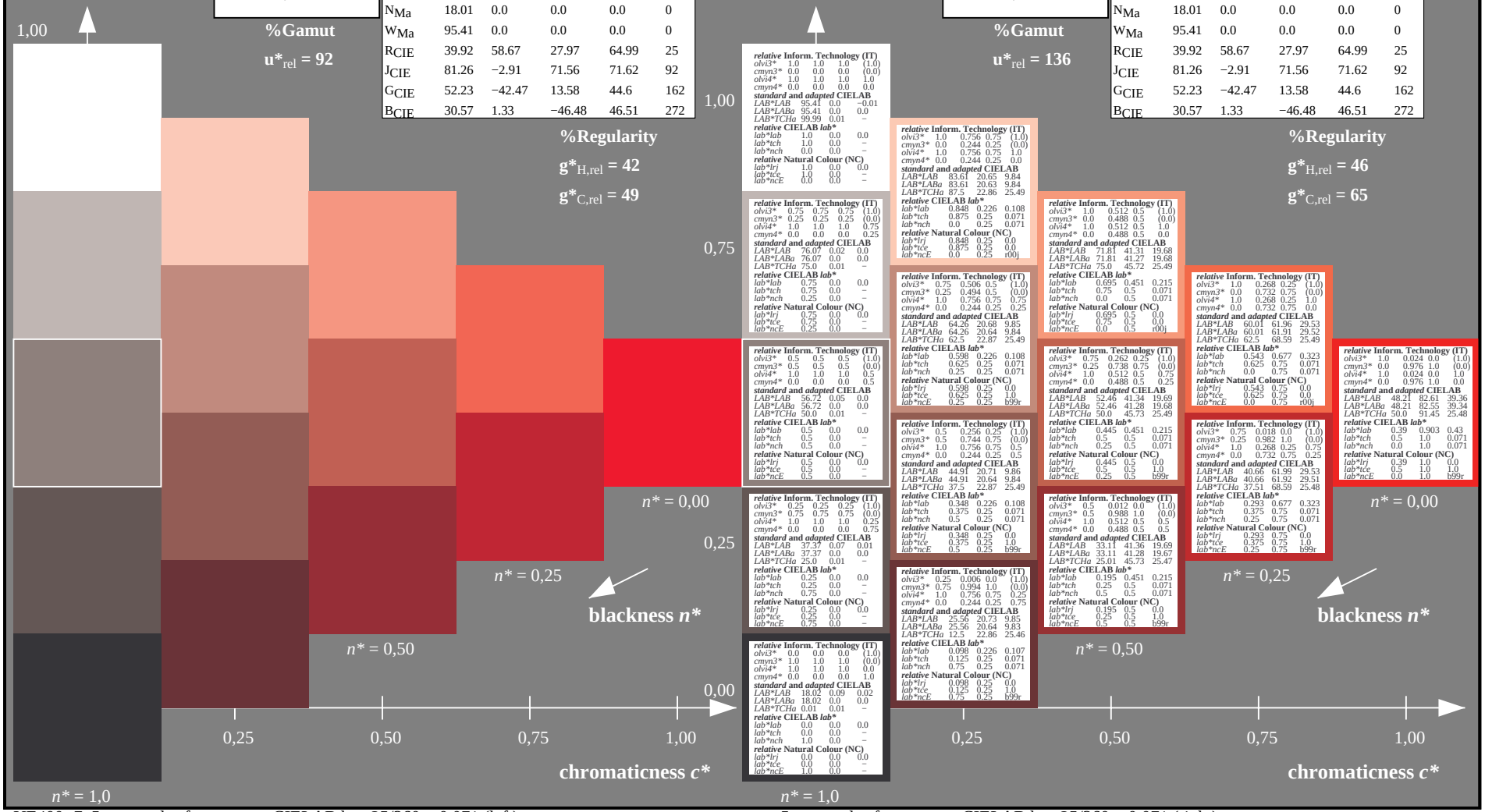
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



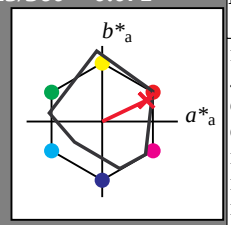
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

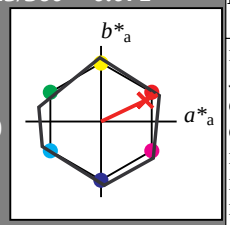
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

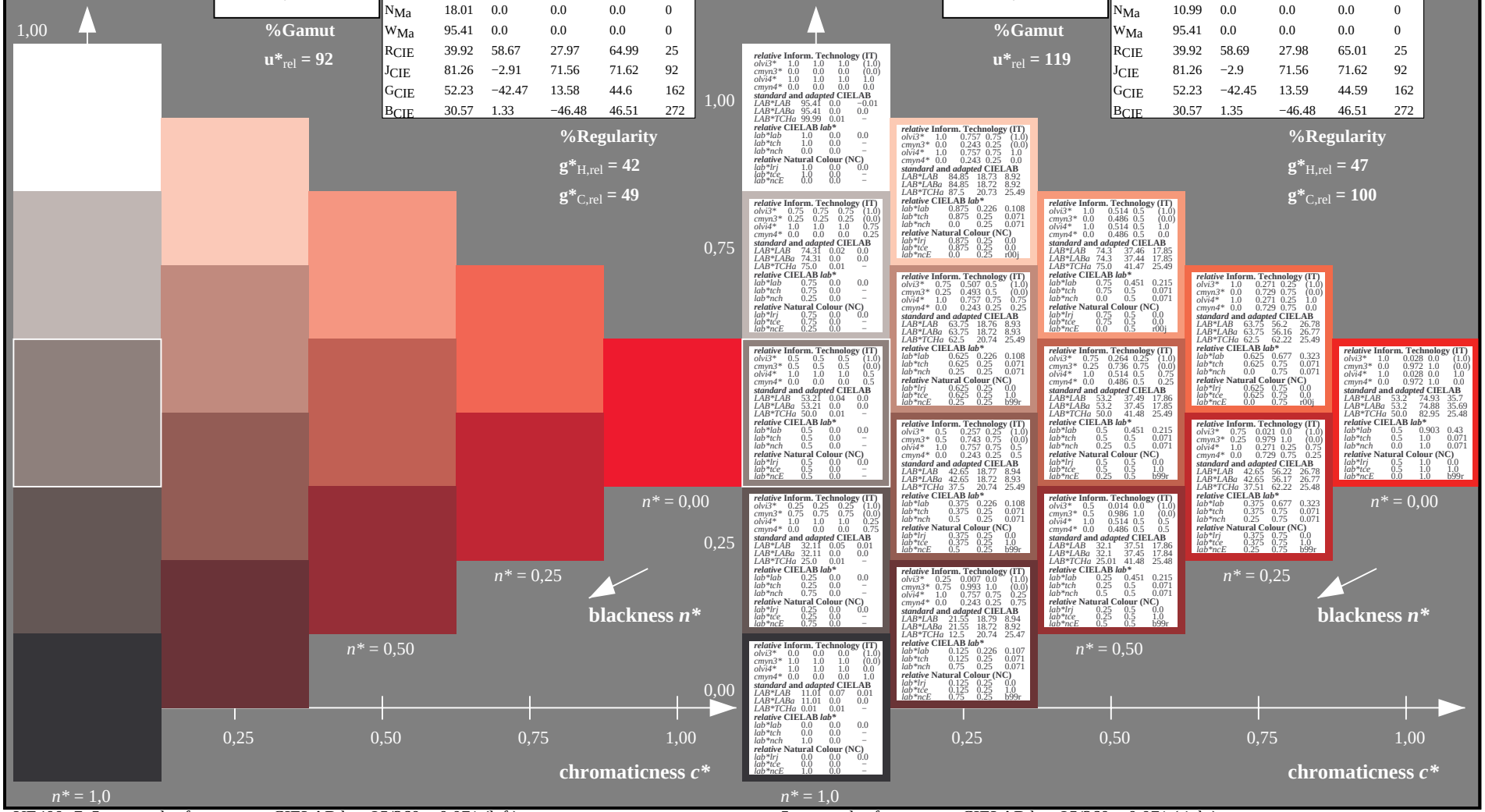
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



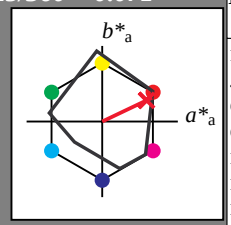
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

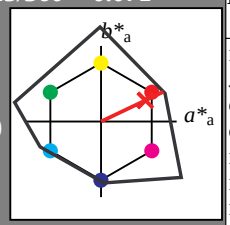
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

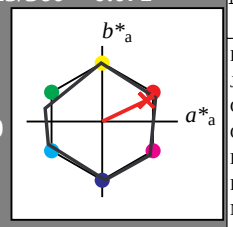
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

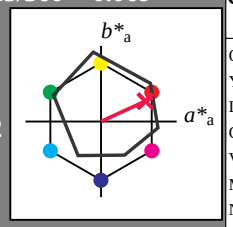
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

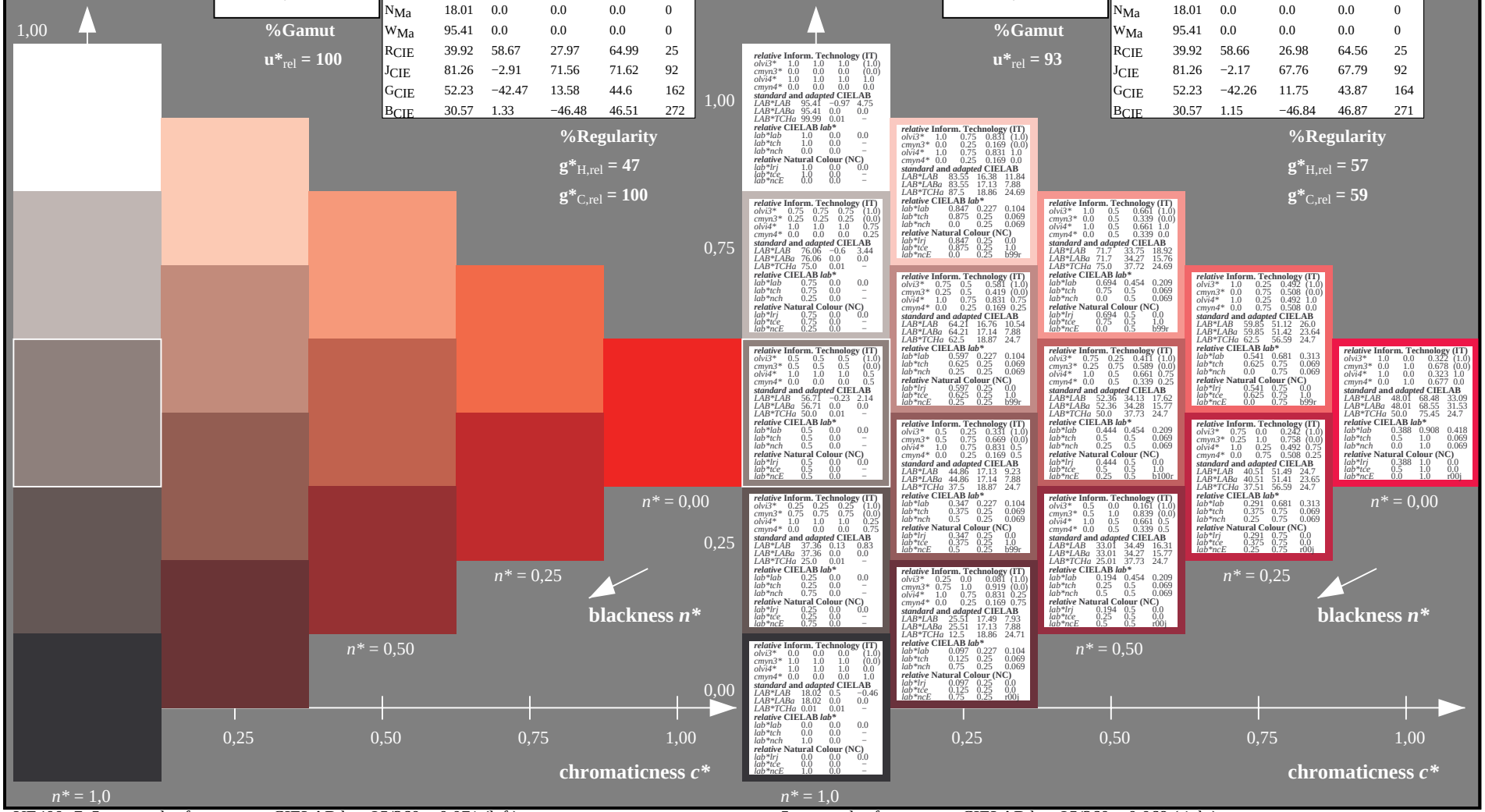
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



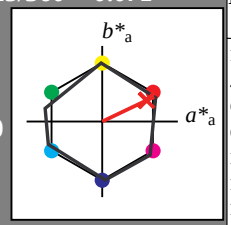
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

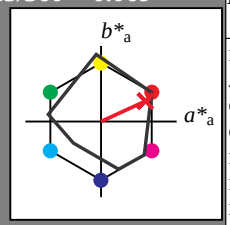
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

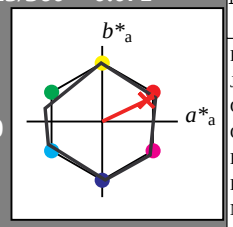
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

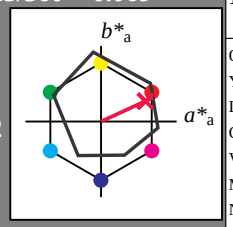
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

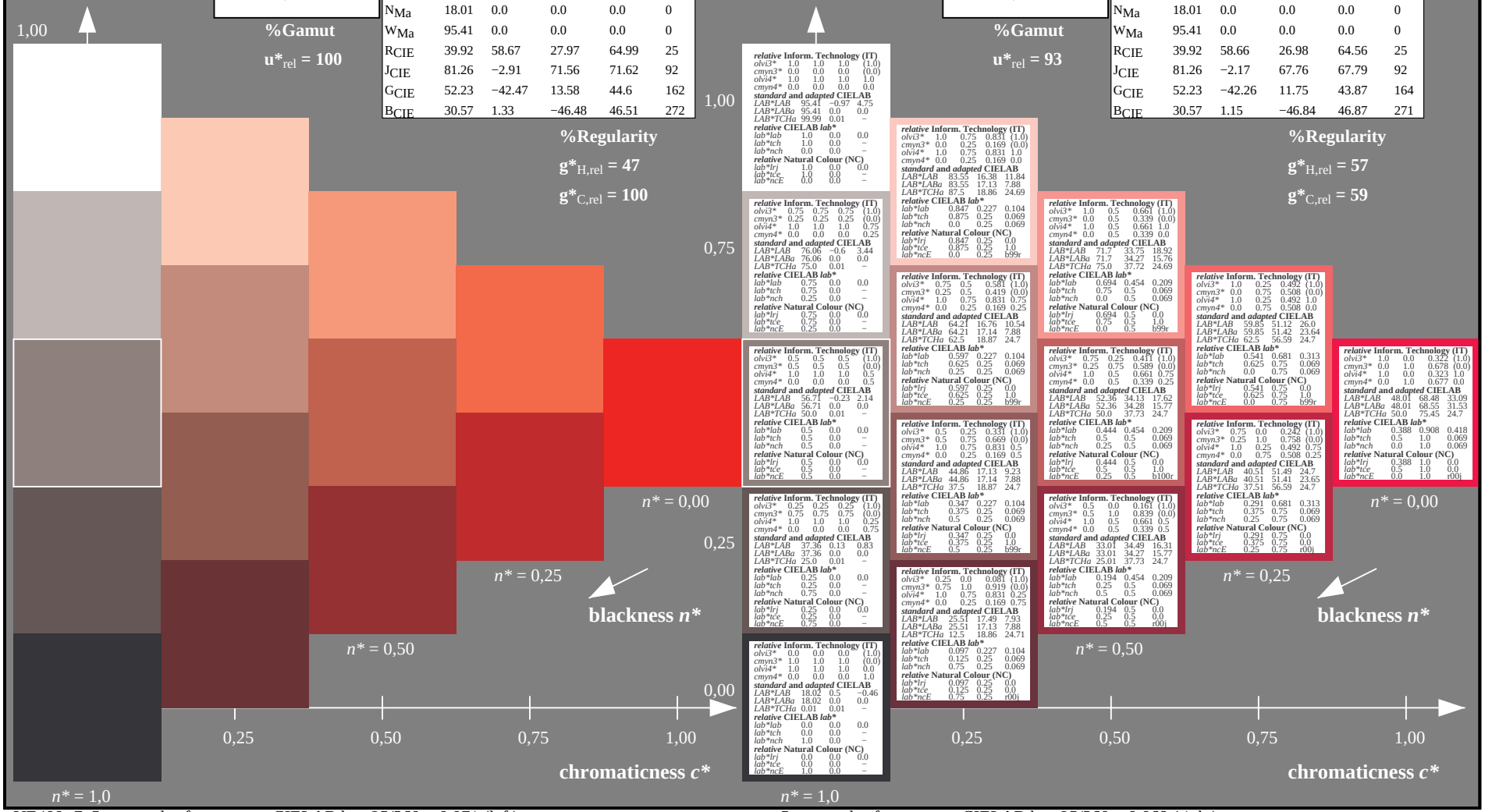
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



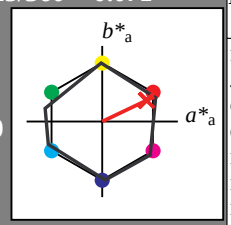
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

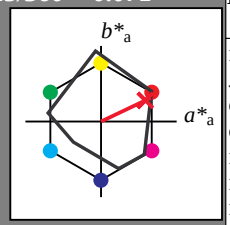
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 92

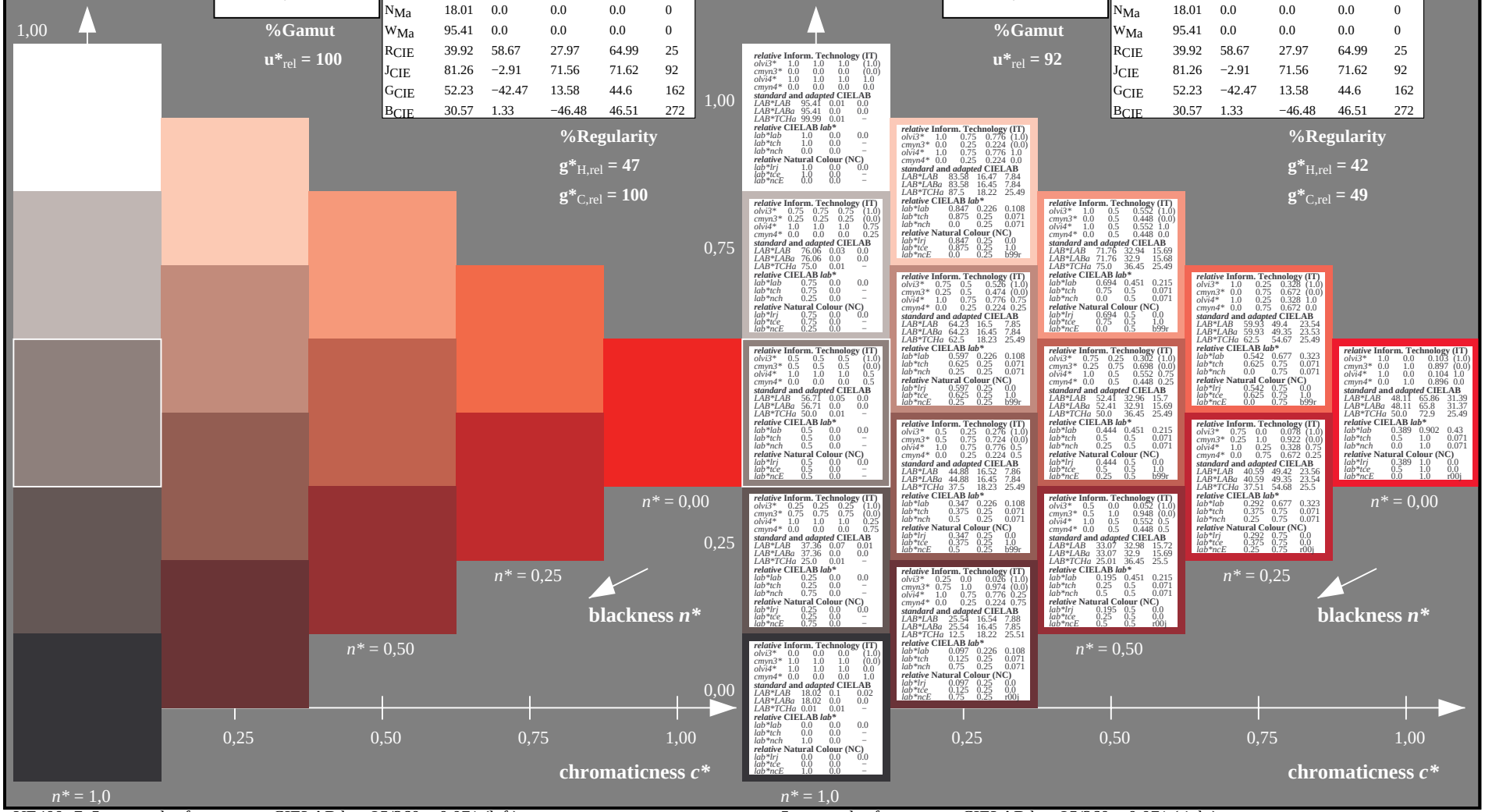
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



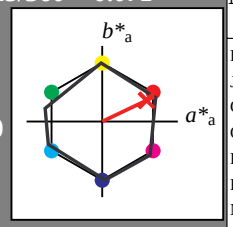
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

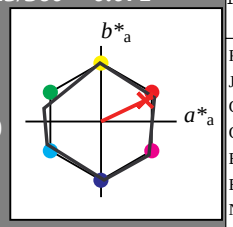
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

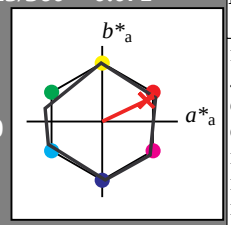
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

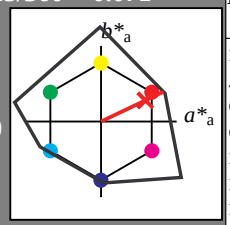
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

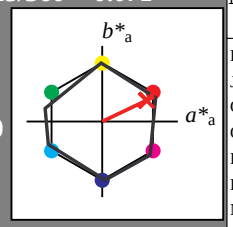
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

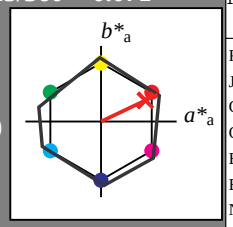
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

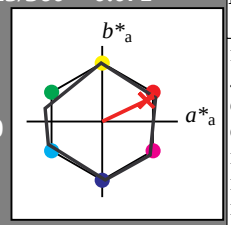
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

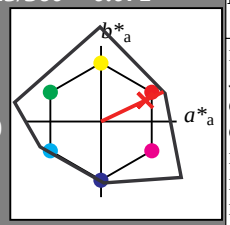
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

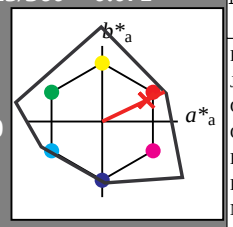
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

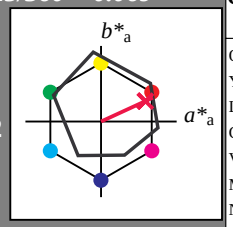
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

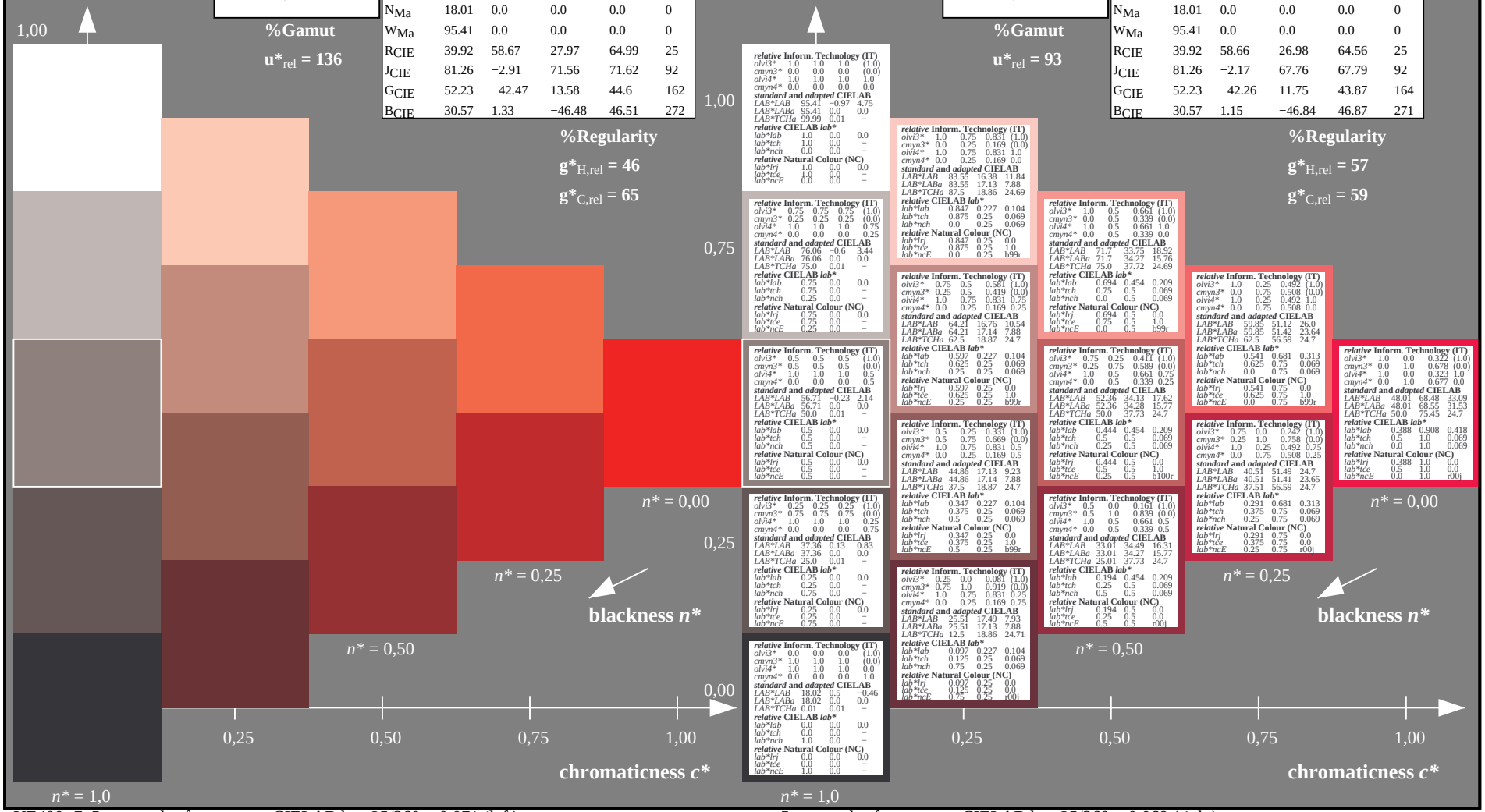
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



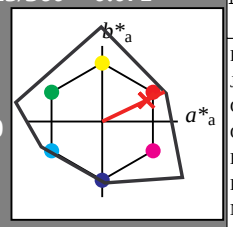
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

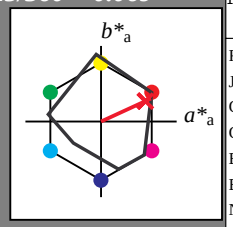
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

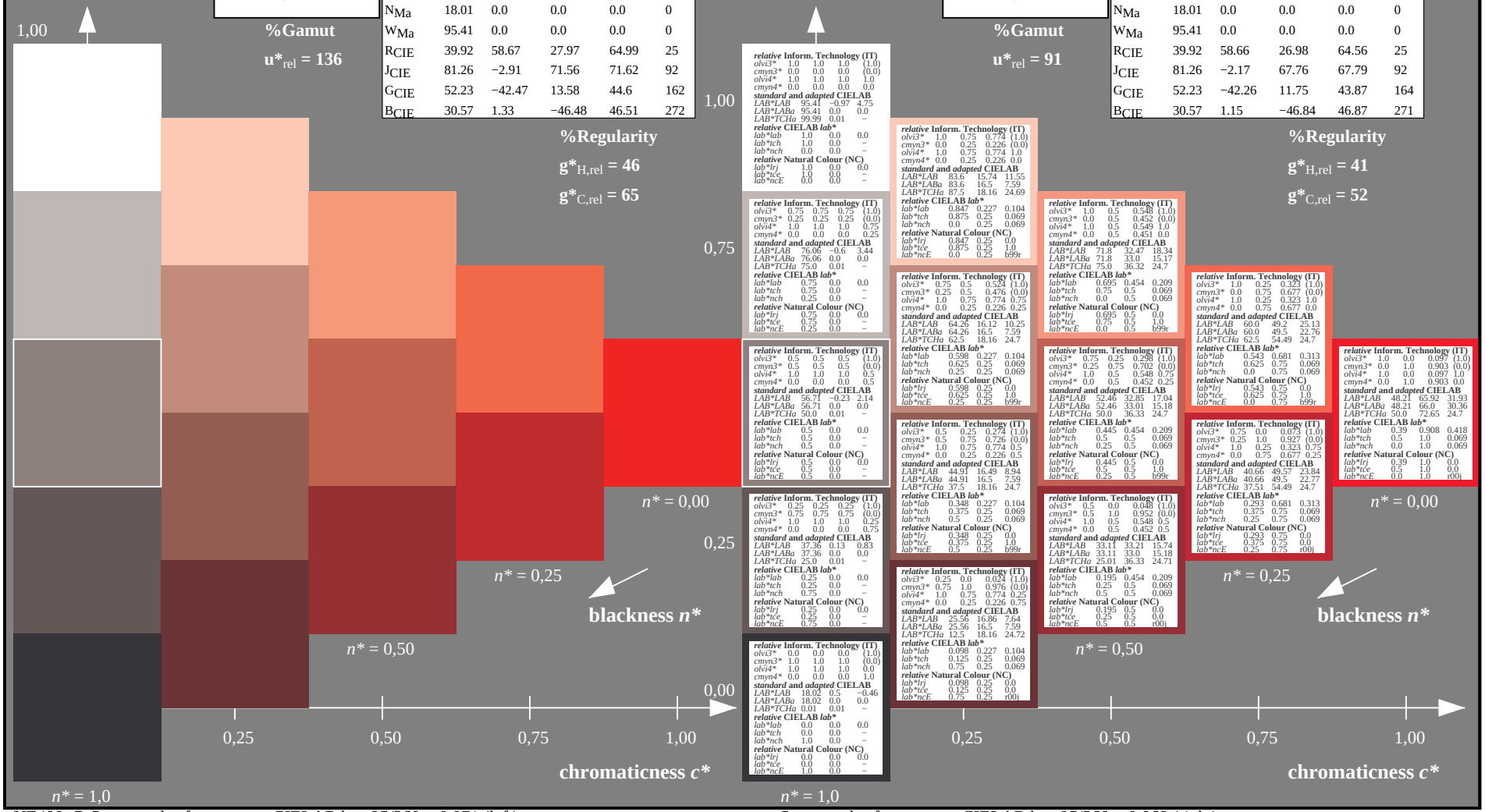
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



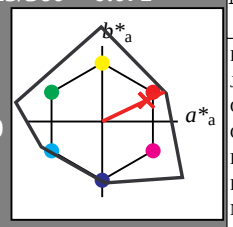
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

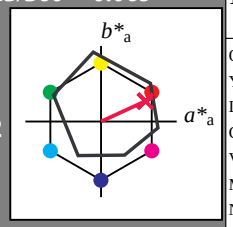
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

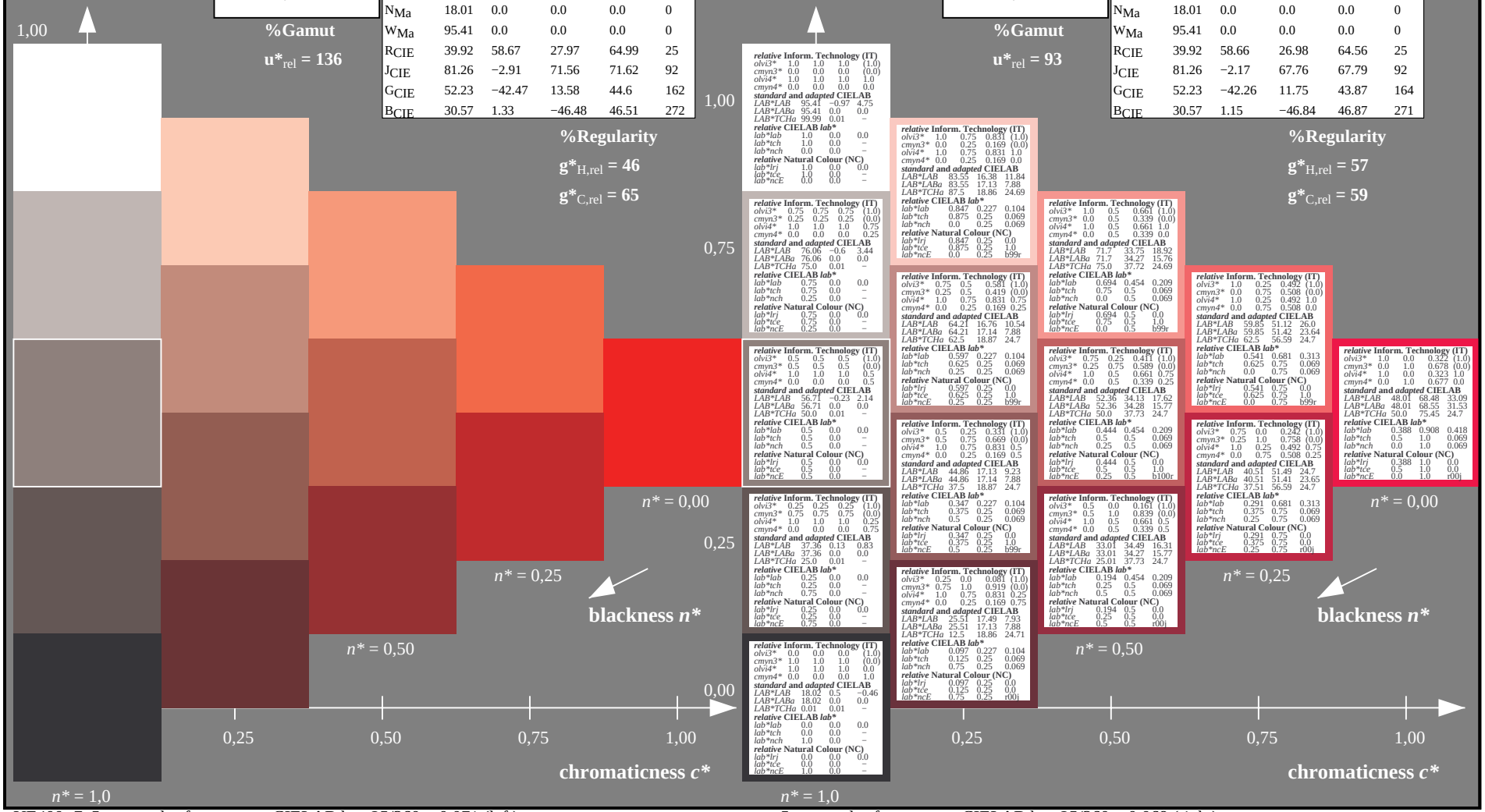
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



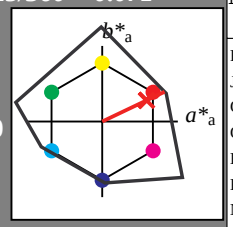
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

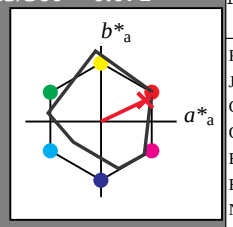
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 92

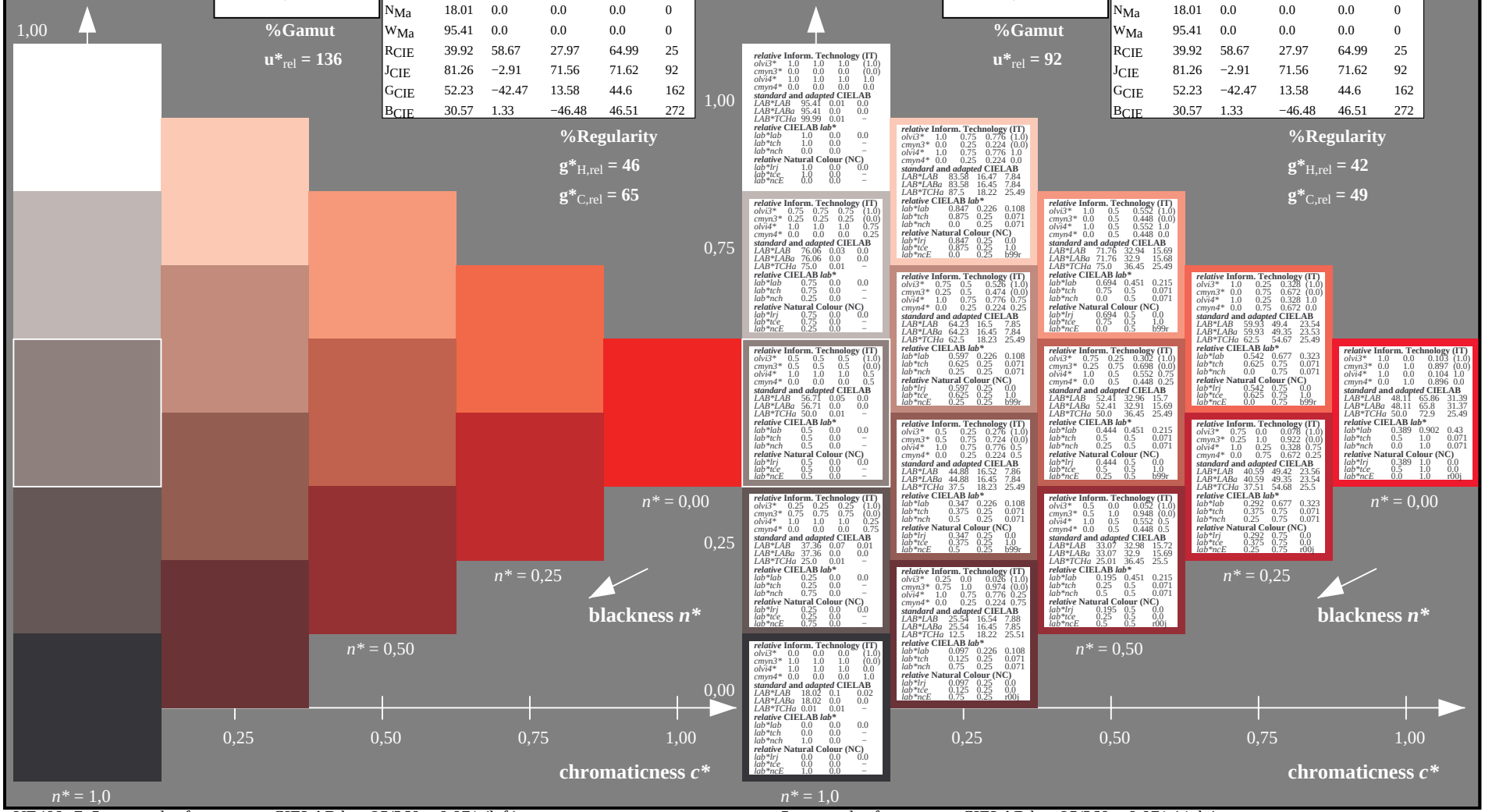
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



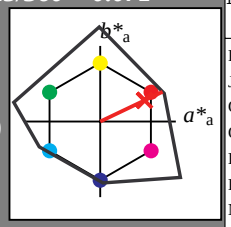
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

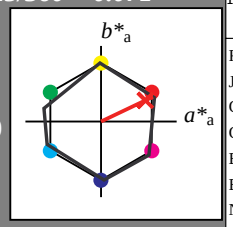
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

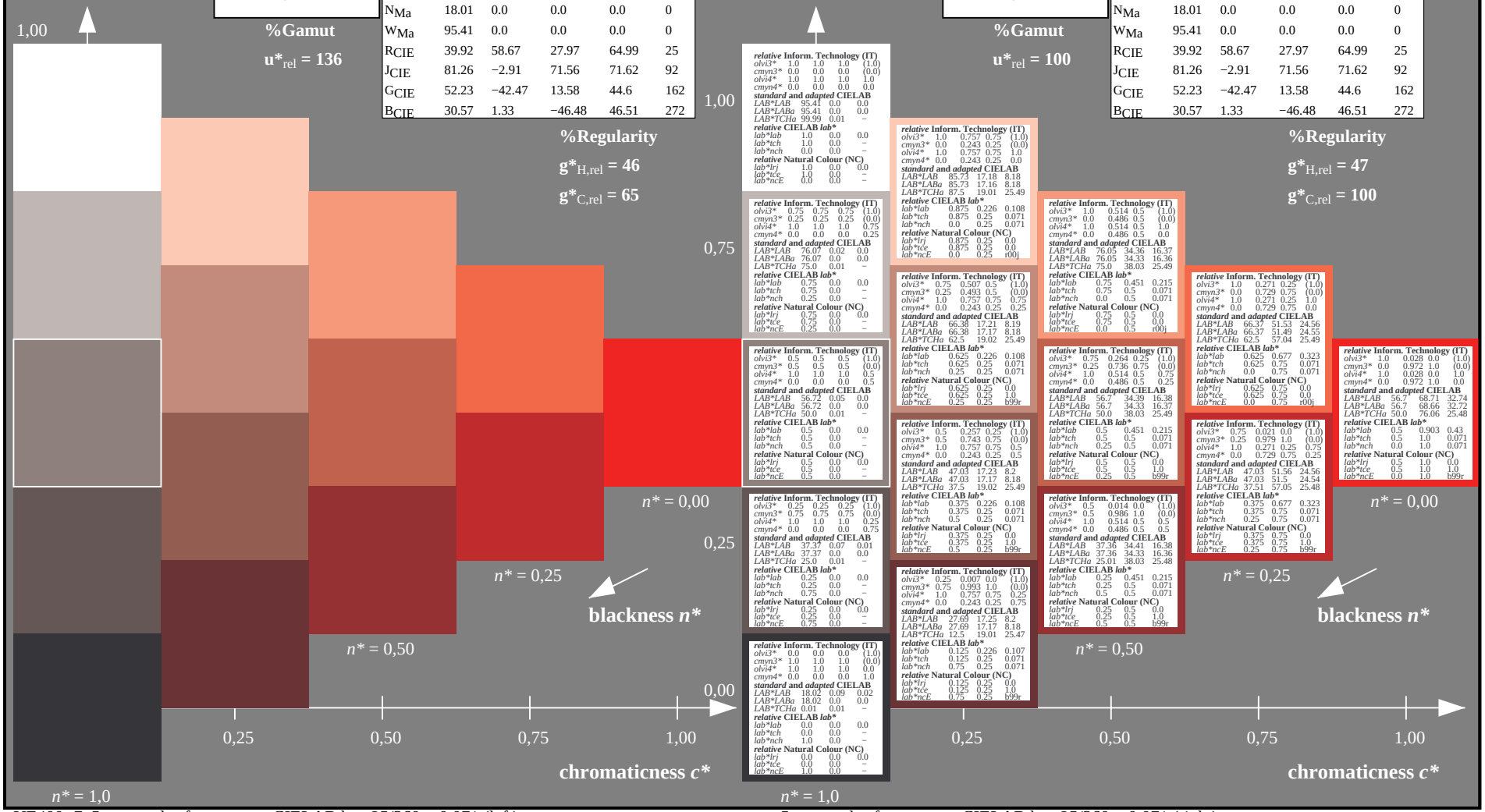
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



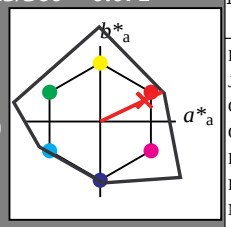
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

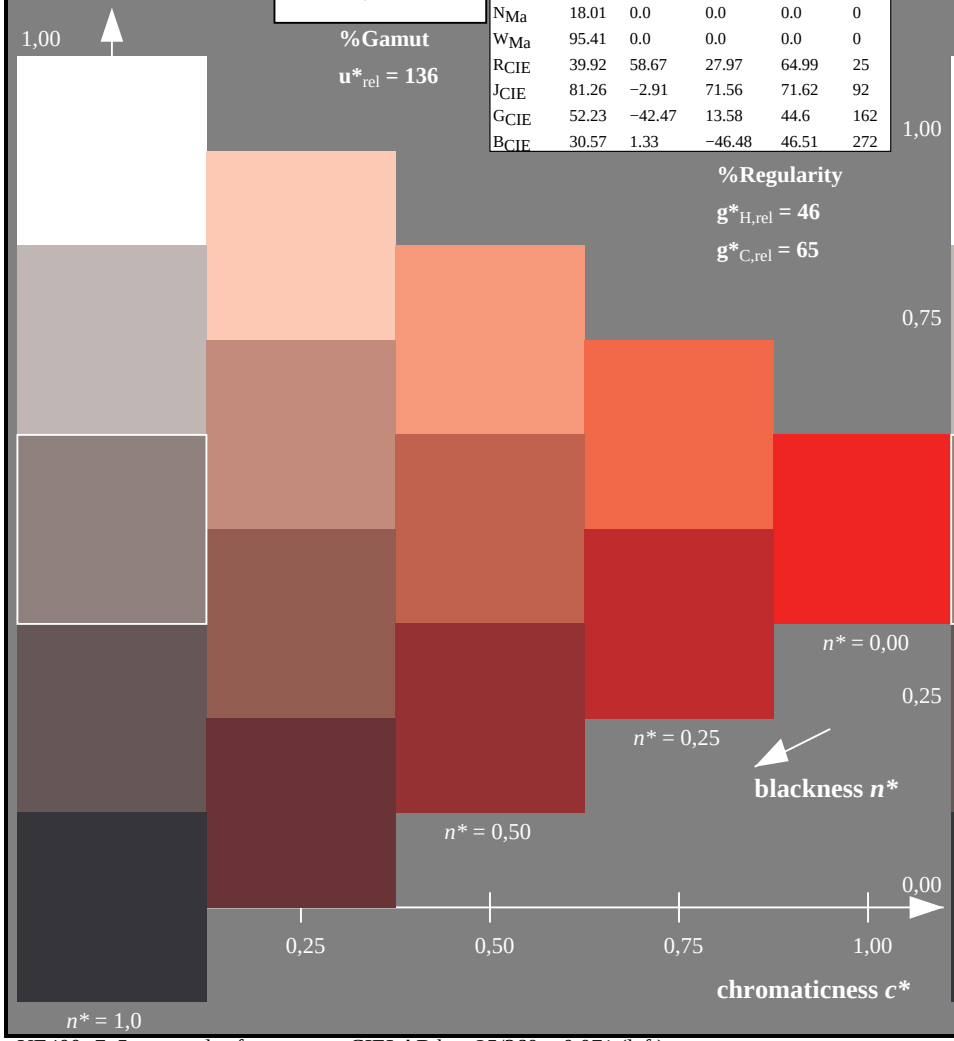
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

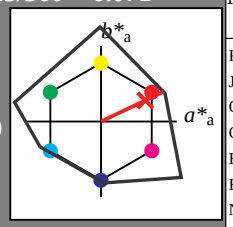
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

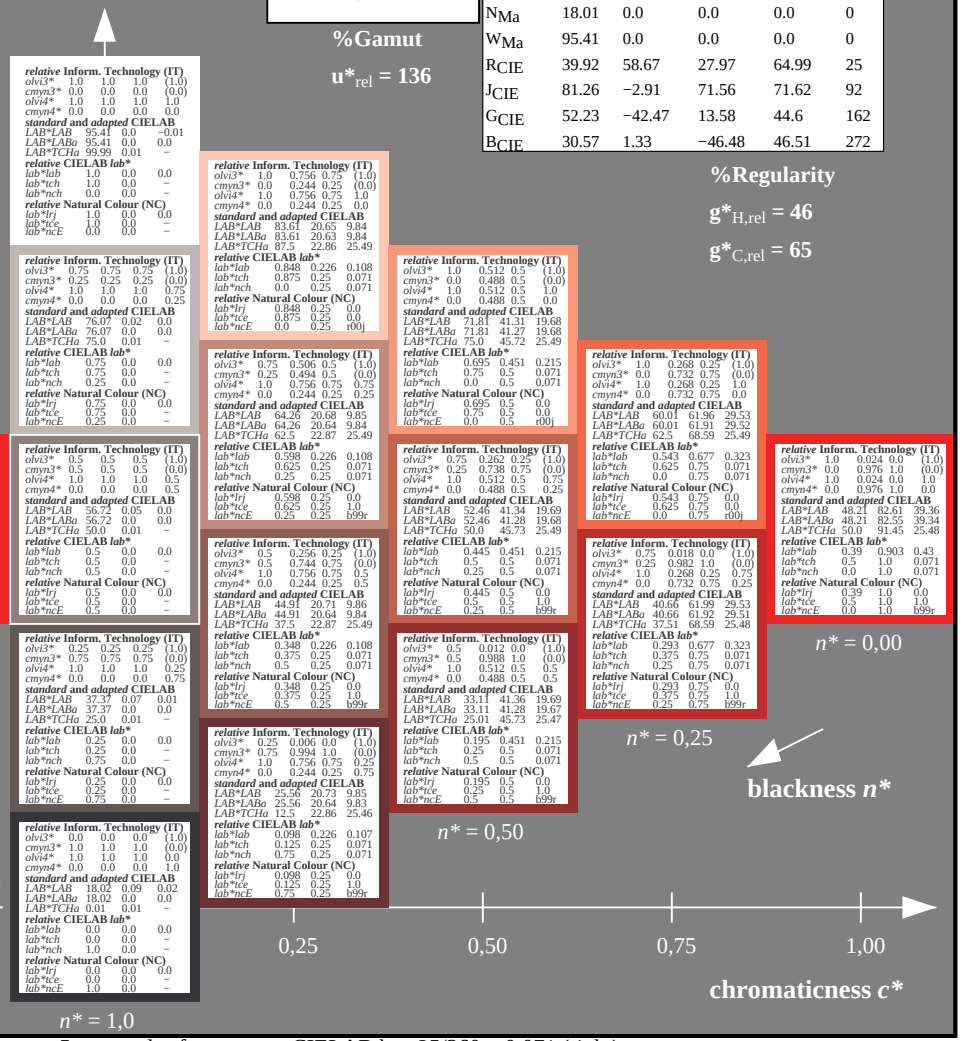
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



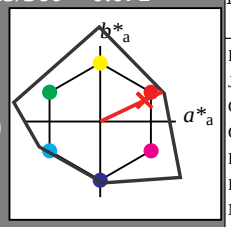
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

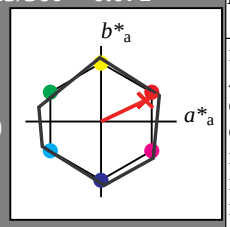
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

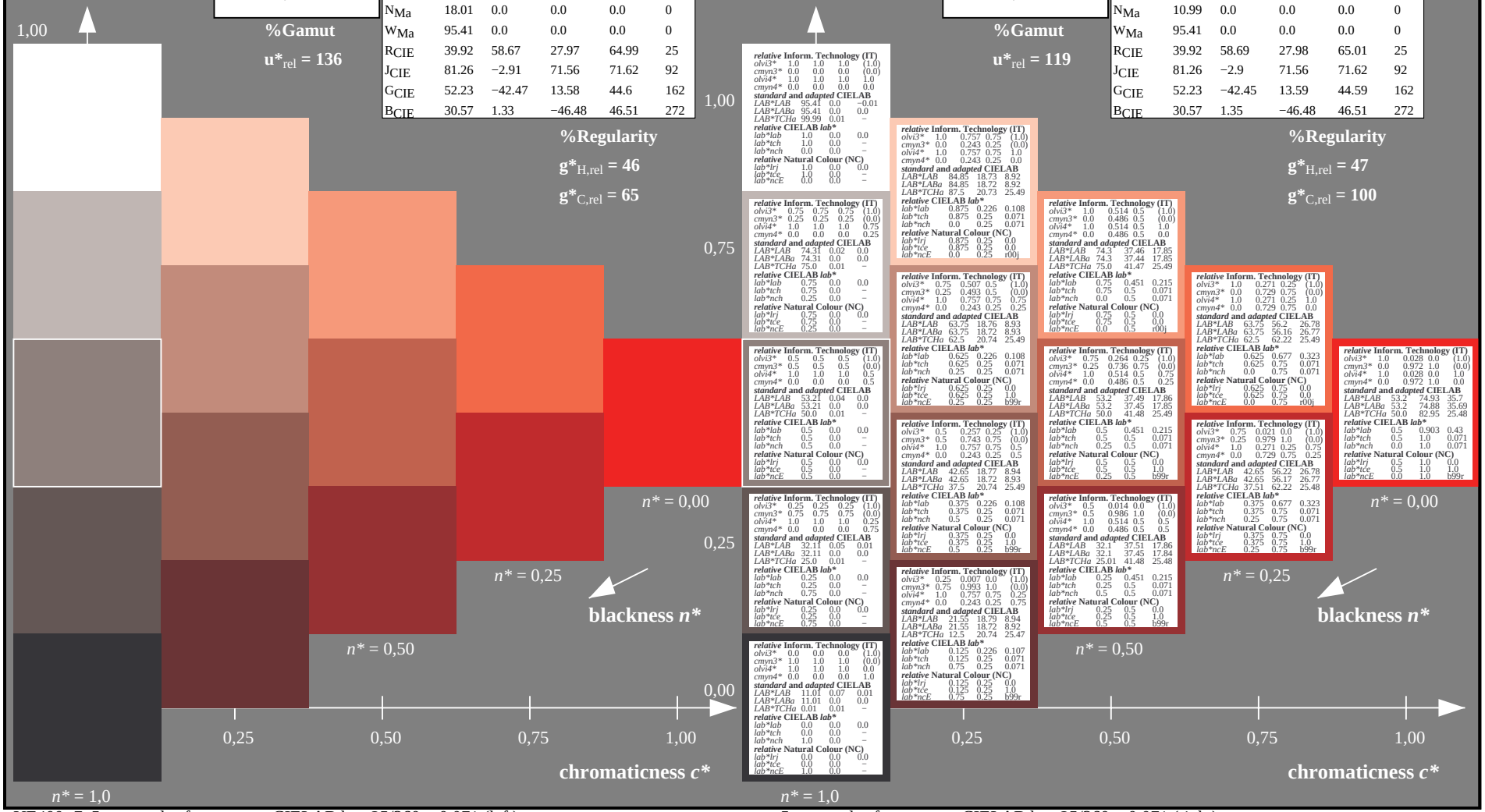
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



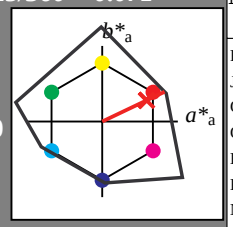
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

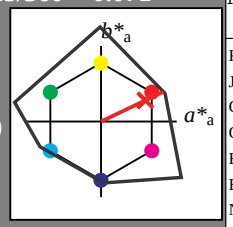
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

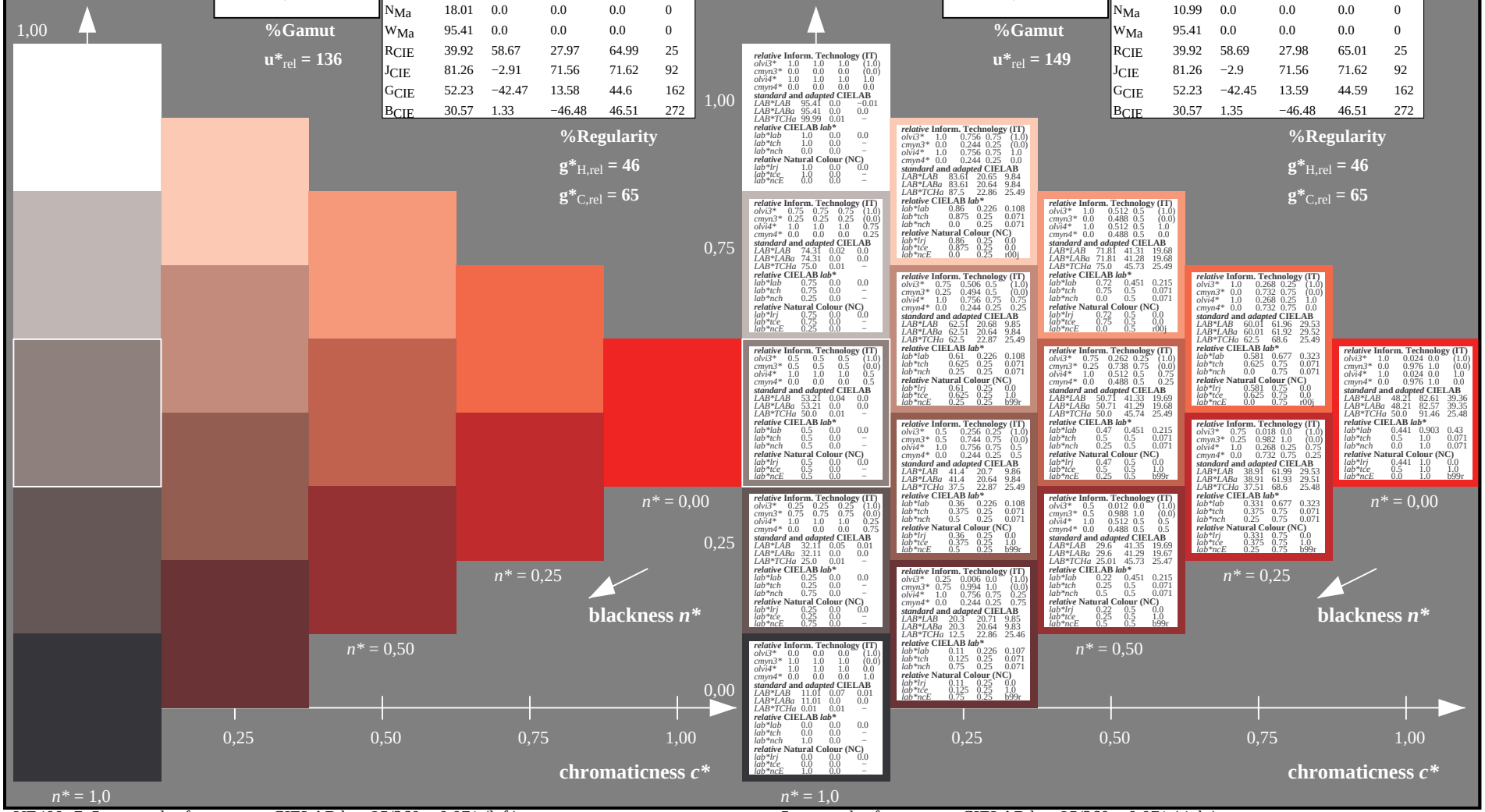
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



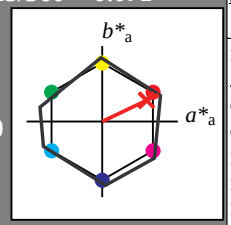
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

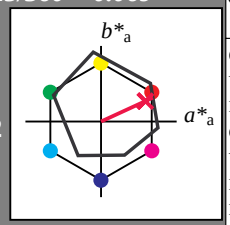
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

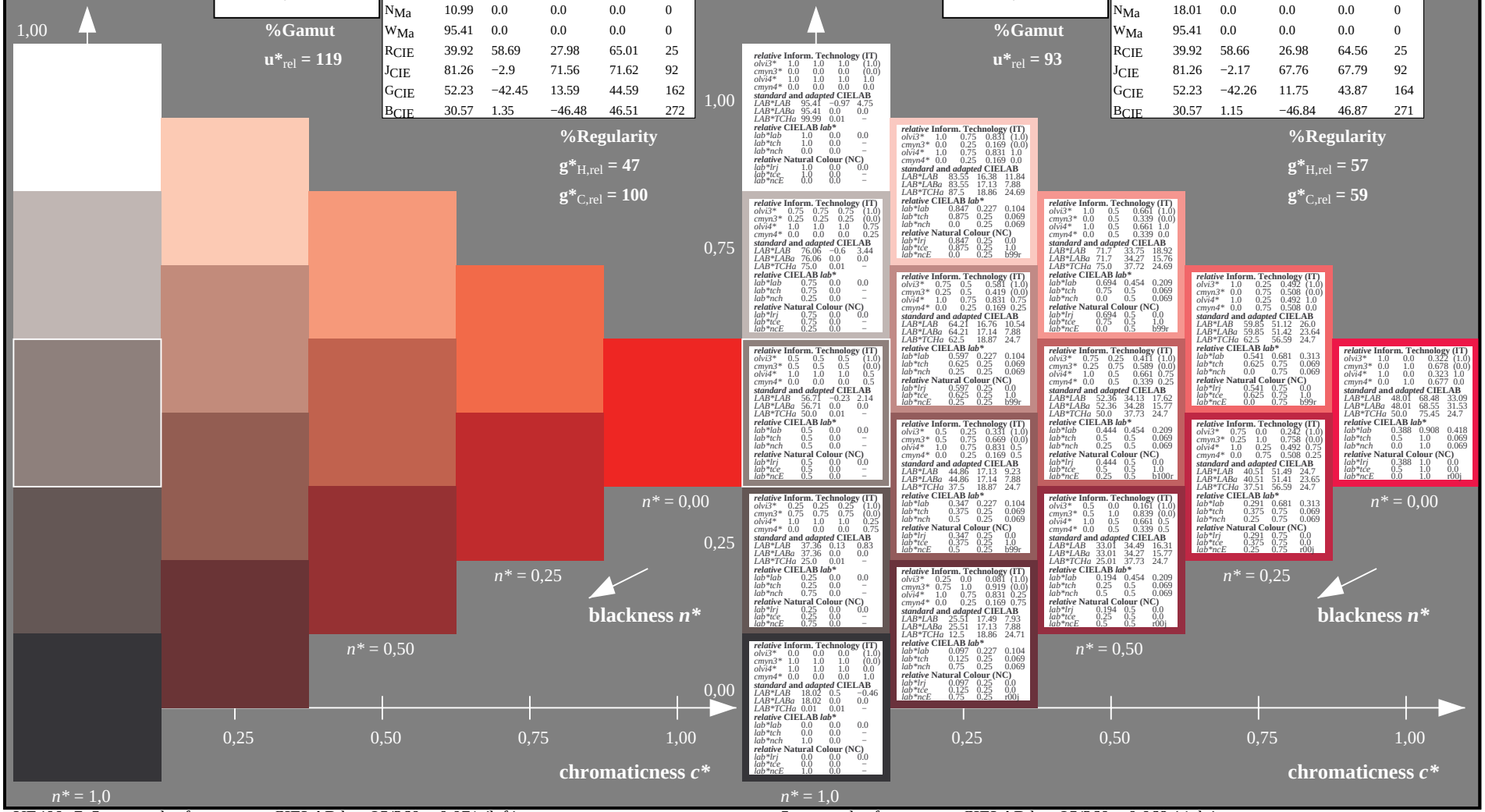
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



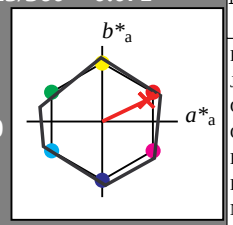
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

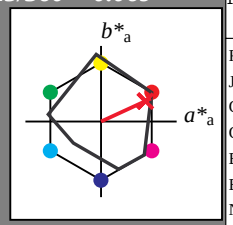
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

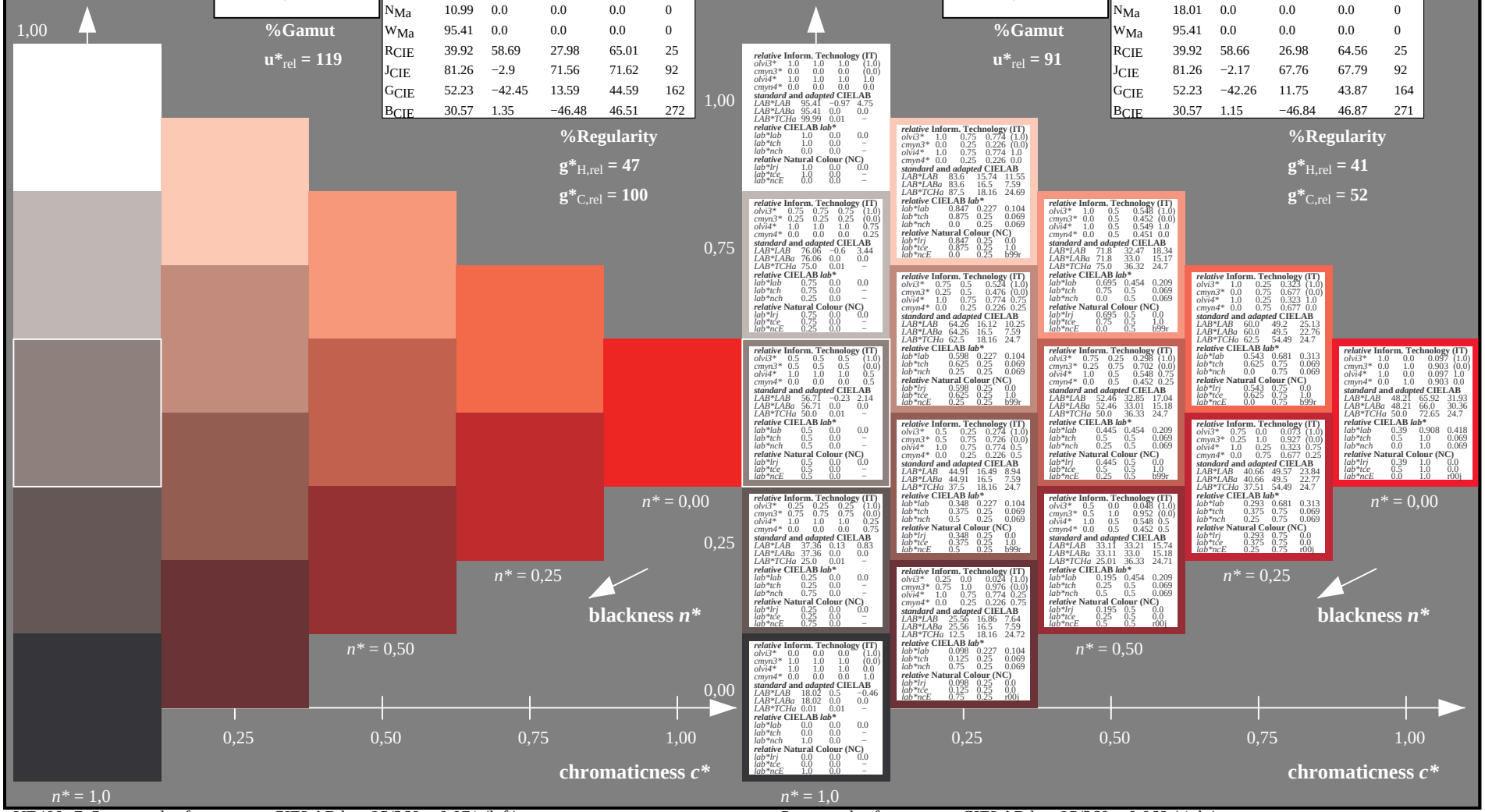
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



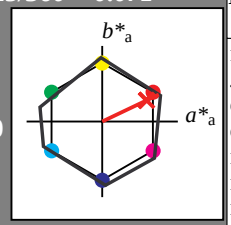
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

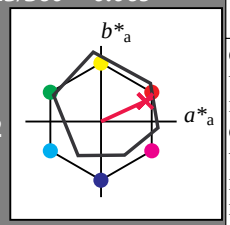
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

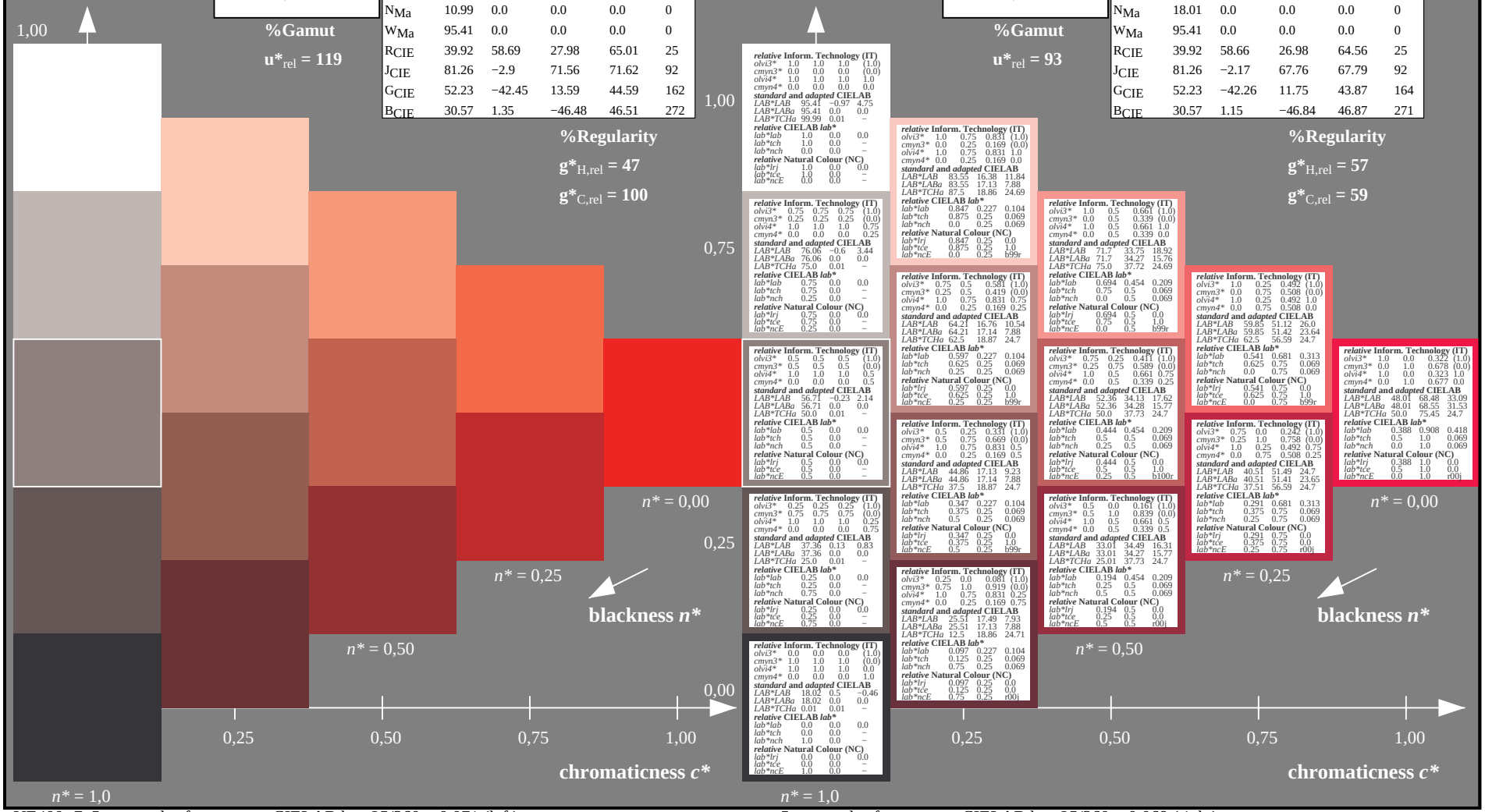
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



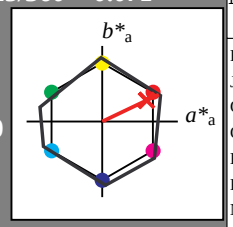
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

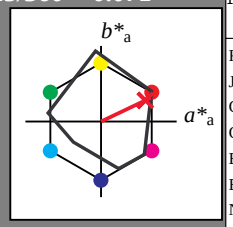
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

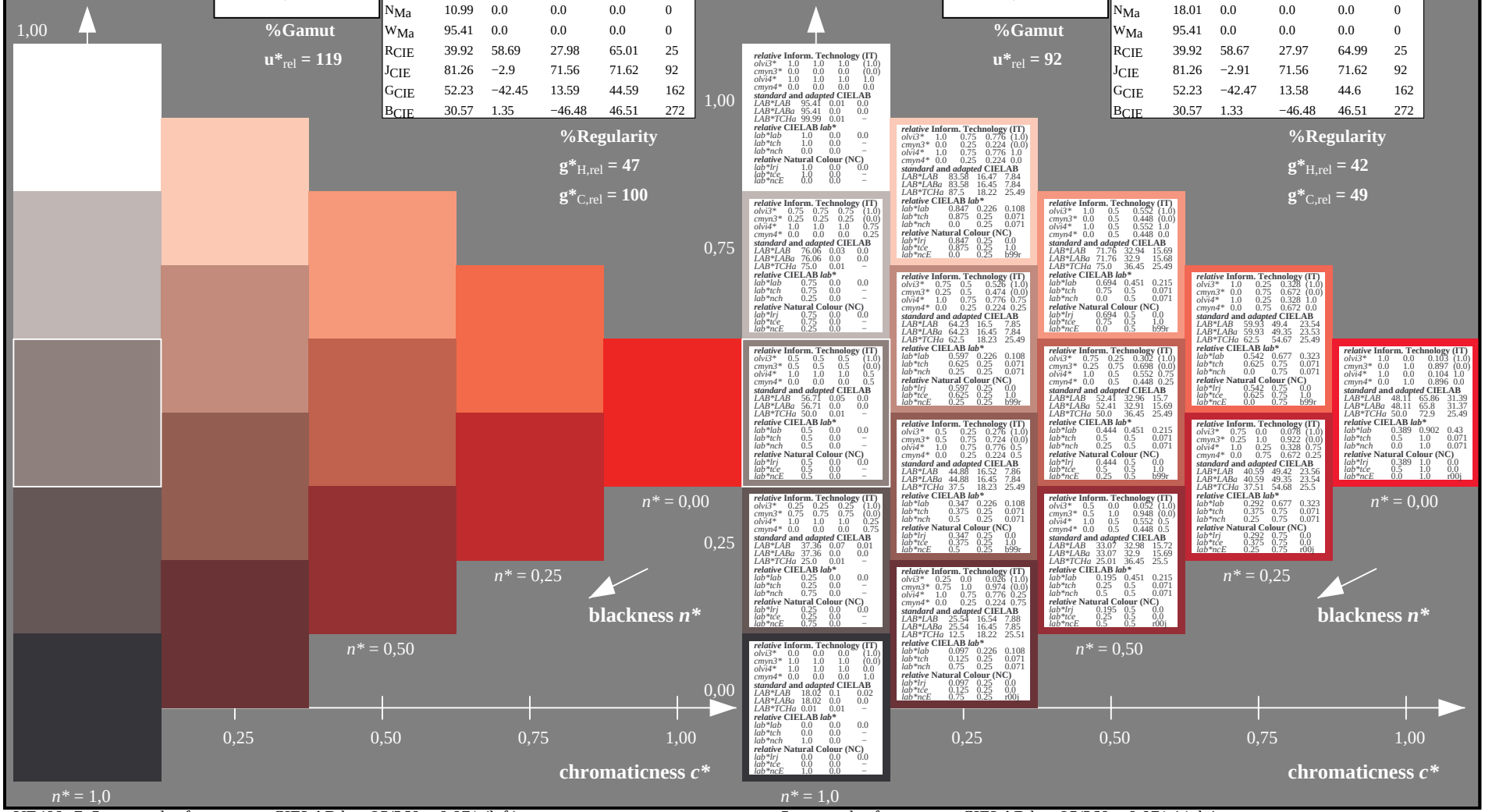
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



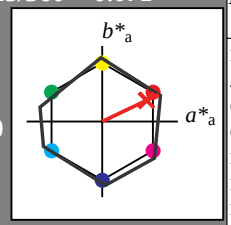
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

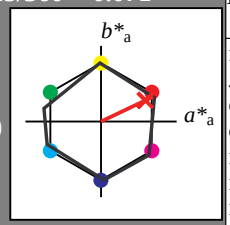
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

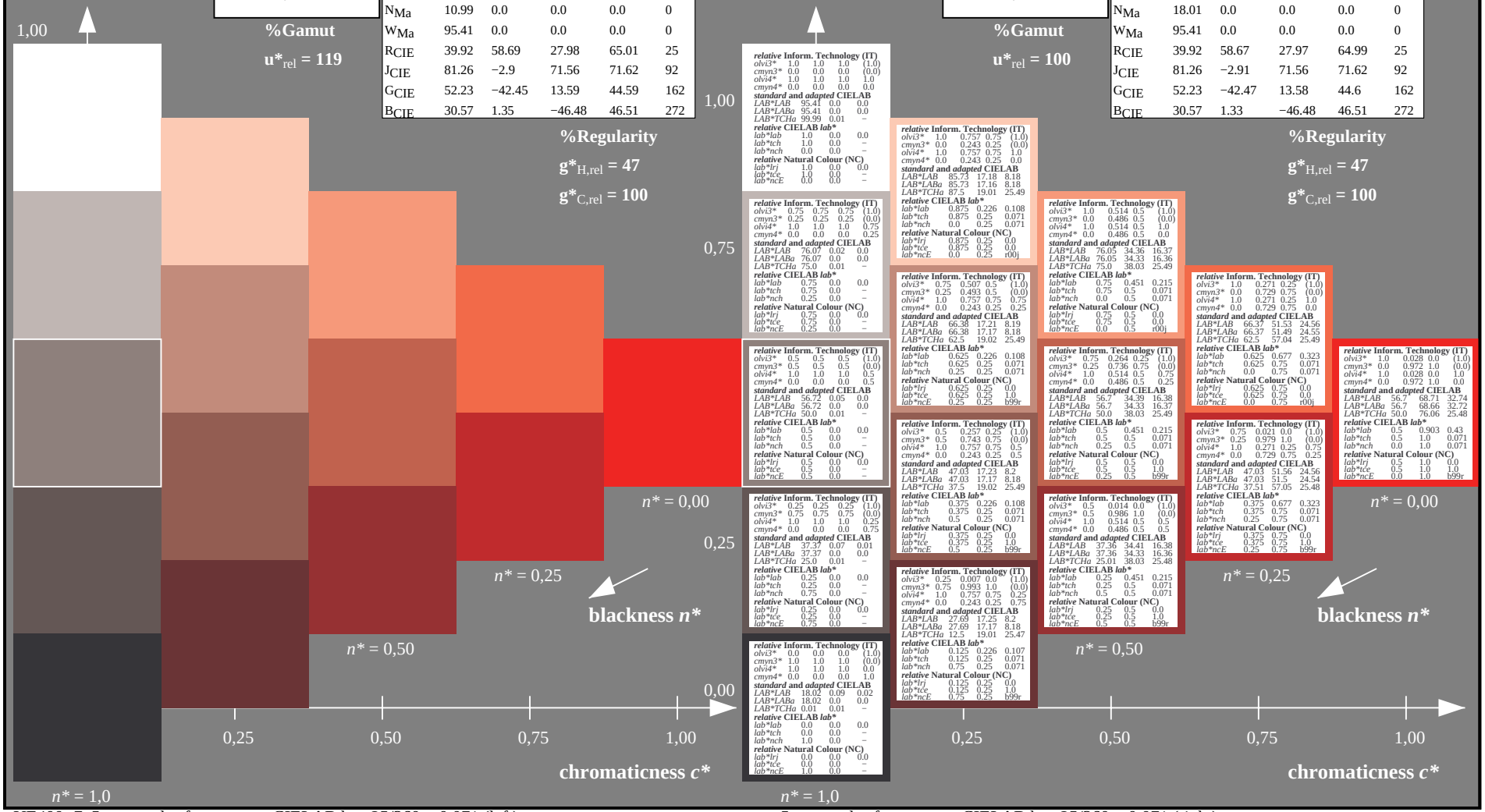
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



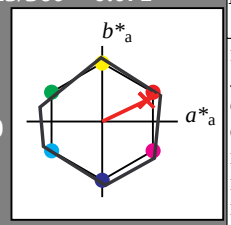
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NRS11
for hue *h* = lab*h = 25/360 = 0.071*
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

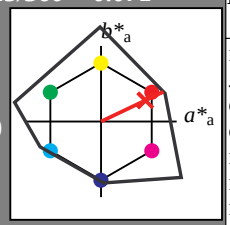
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System NCS18
for hue *h* = lab*h = 25/360 = 0.071*
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

*n** = 0,00

*n** = 0,25

*n** = 0,50

*n** = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

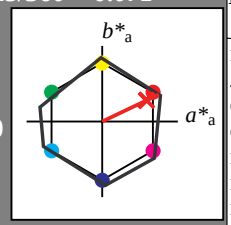
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

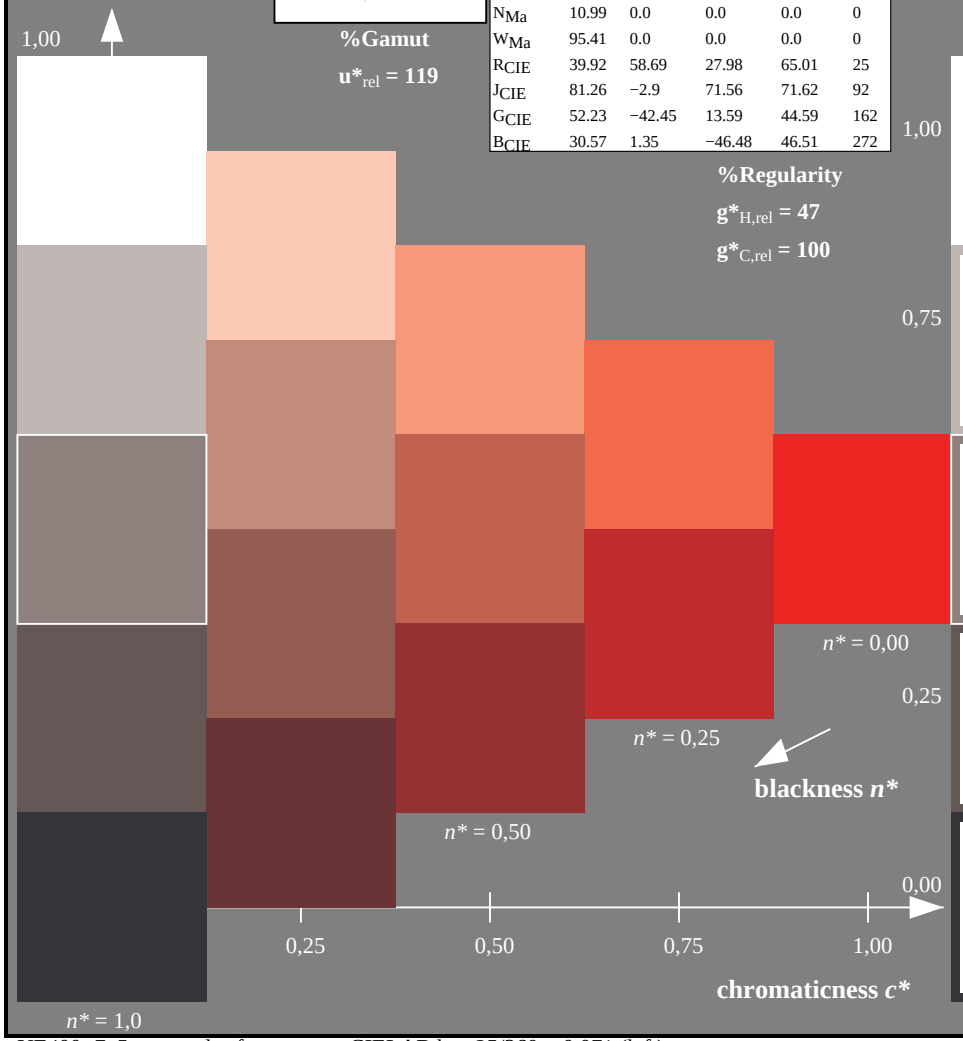
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

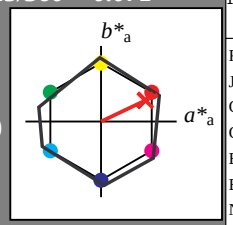
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

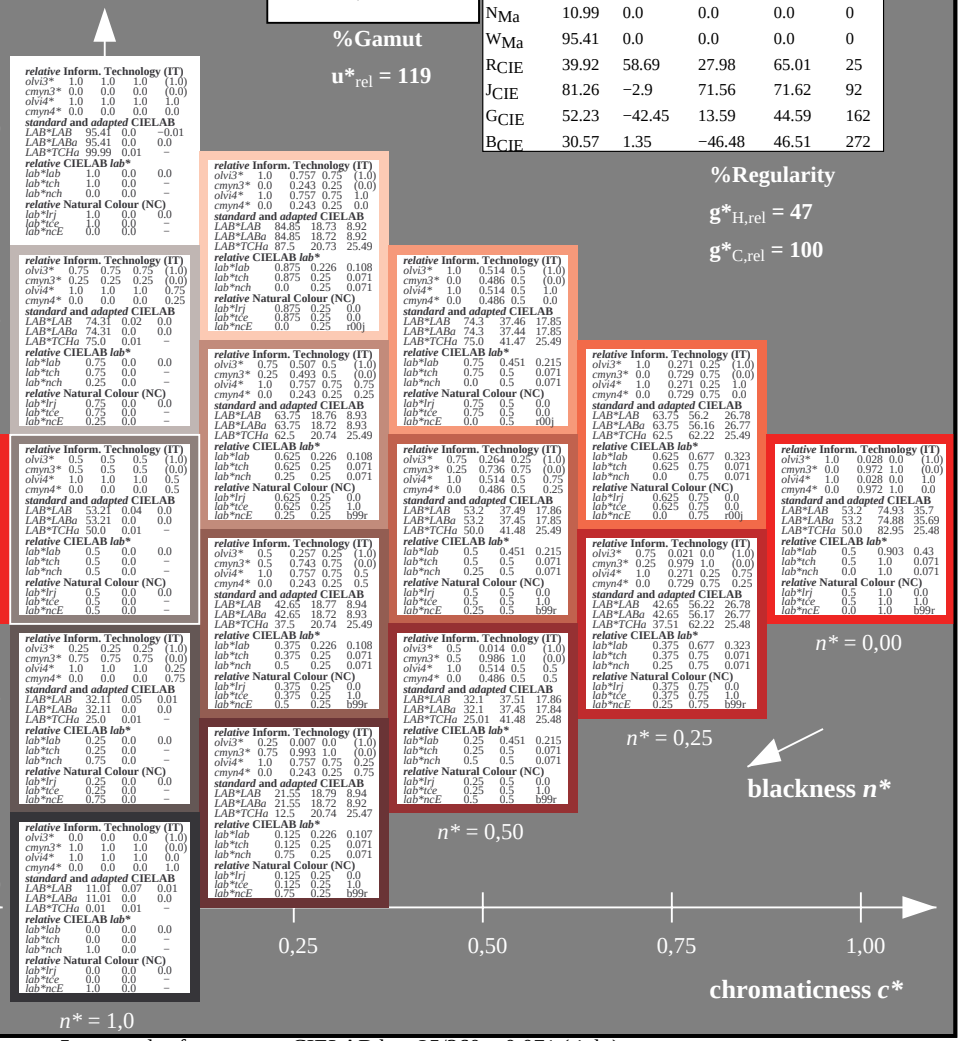
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



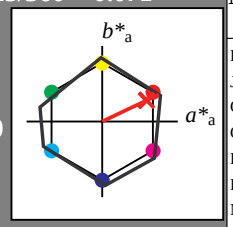
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

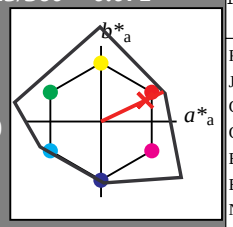
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

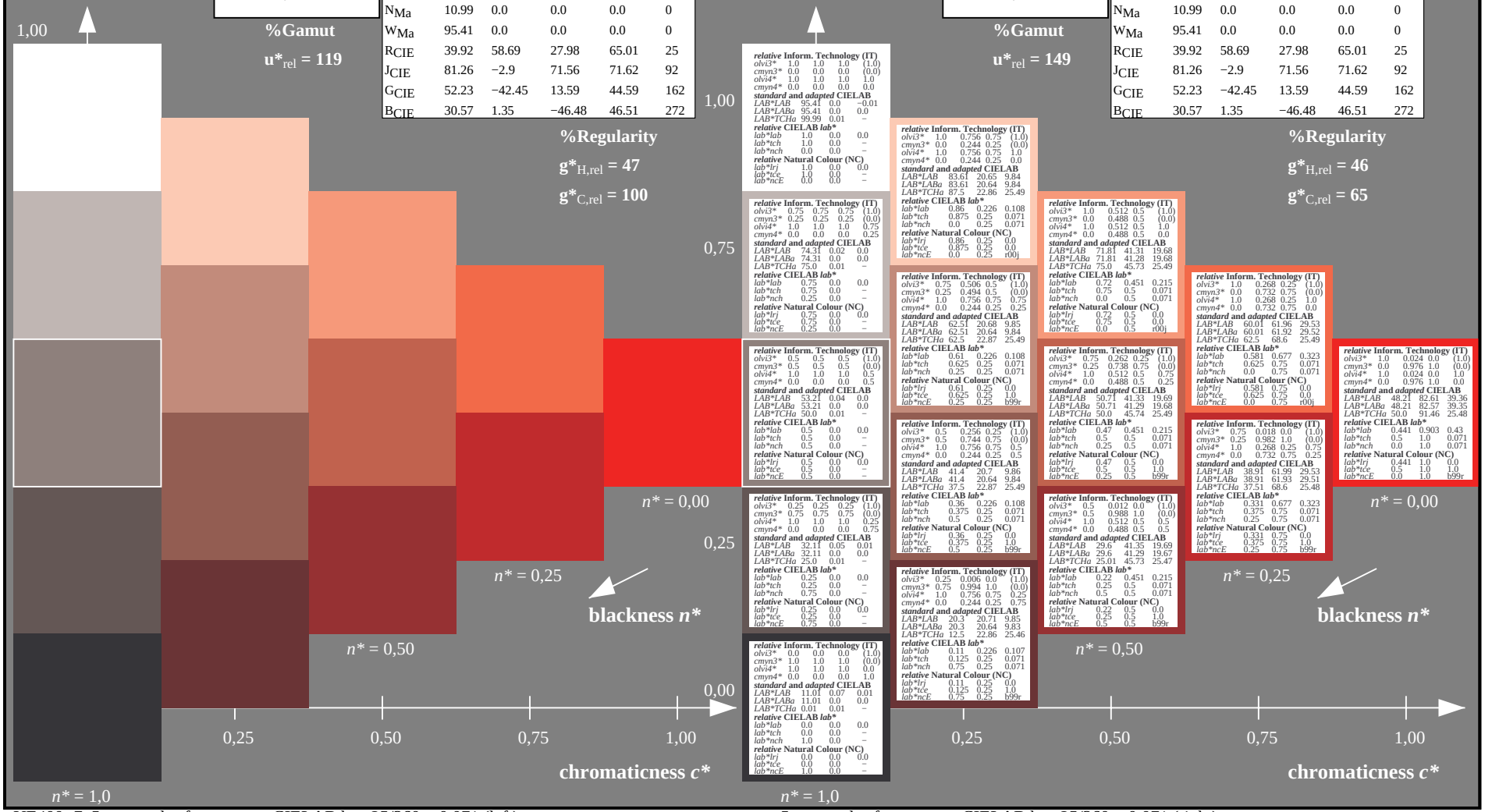
%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



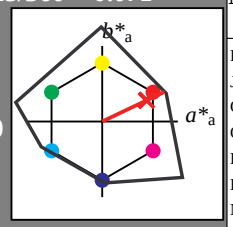
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

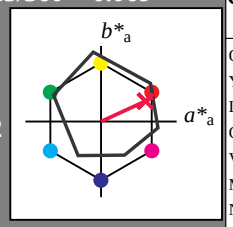
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

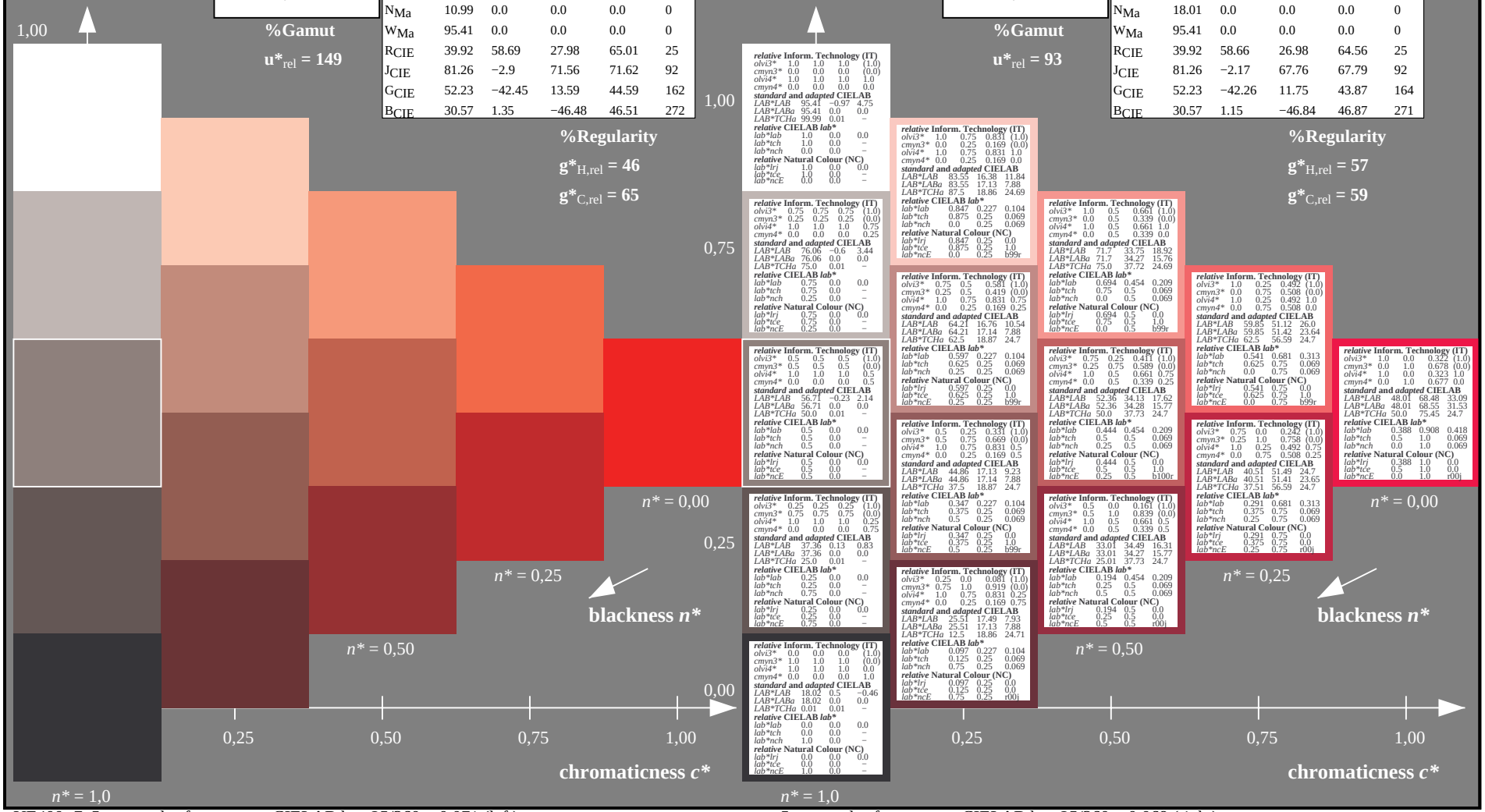
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



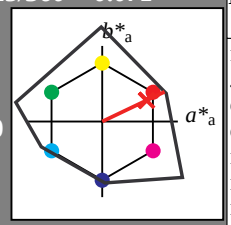
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

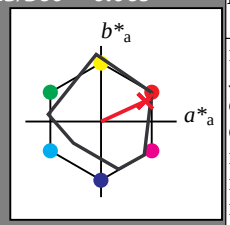
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



%Gamut

u^*_{rel} = 91

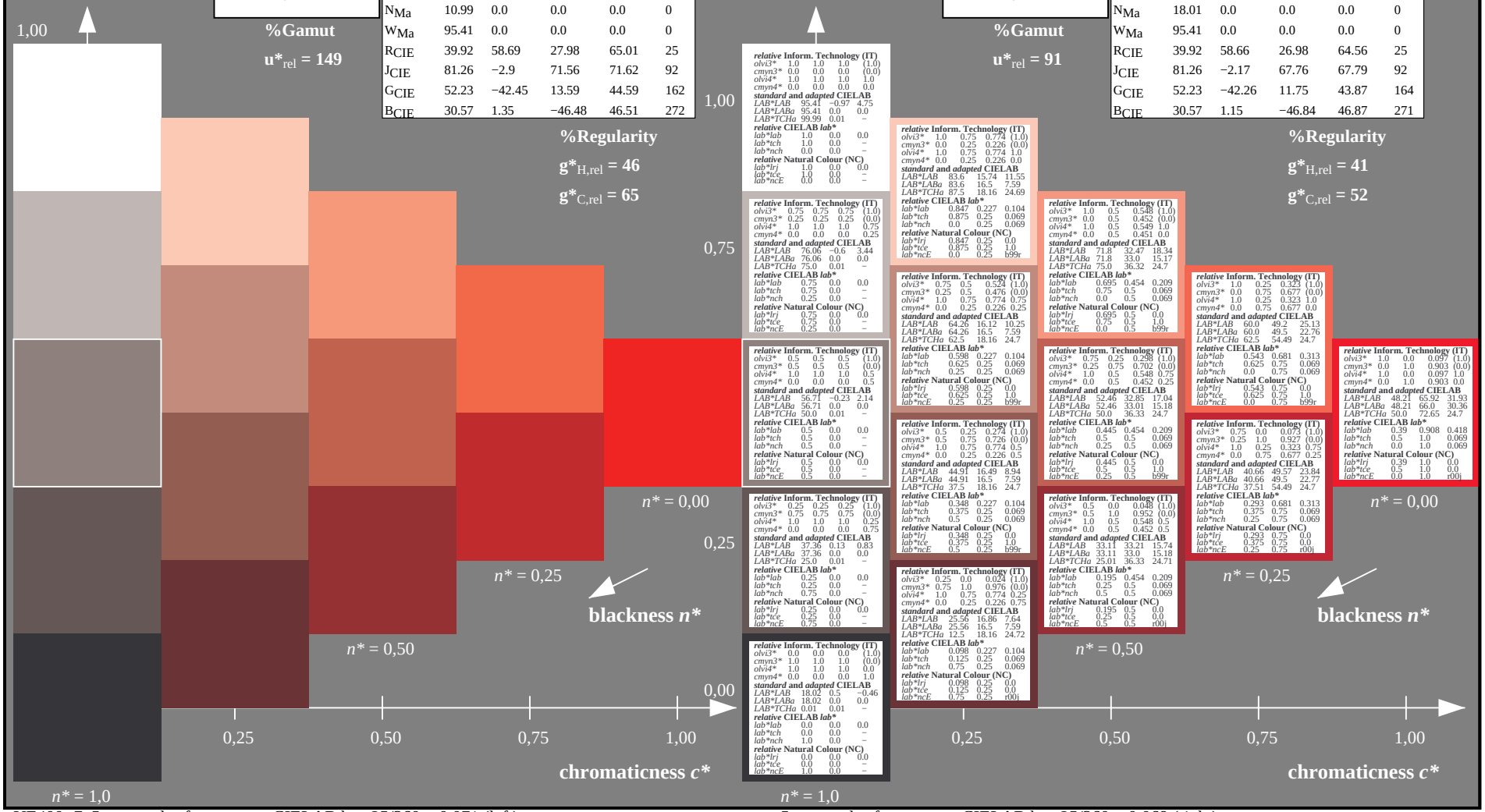
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



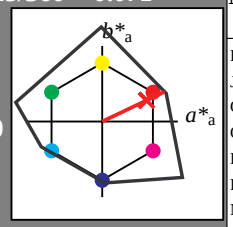
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

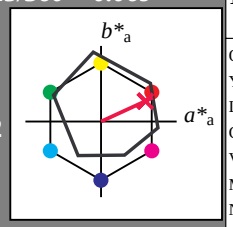
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 25/360 = 0.069$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 75 25
rgb*Ma: 1.0 0.0 0.32

triangle lightness



%Gamut

u^*_{rel} = 93

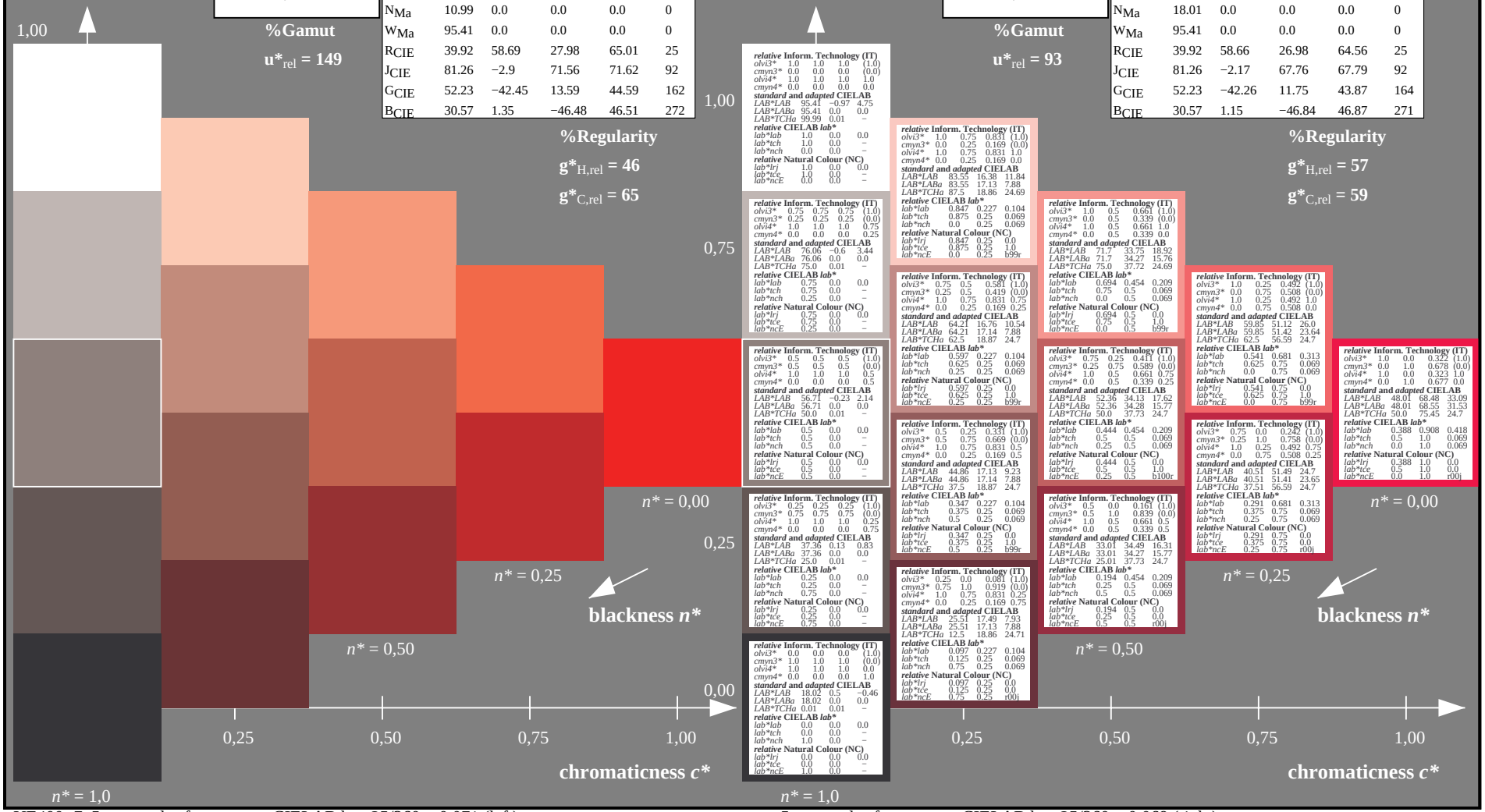
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



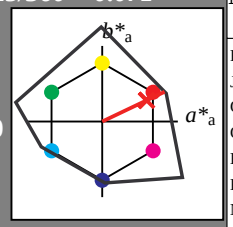
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

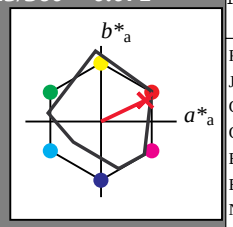
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 73 25
rgb*Ma: 1.0 0.0 0.1

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

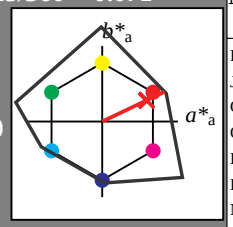
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

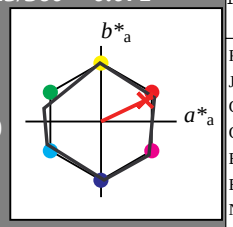
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 57 76 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

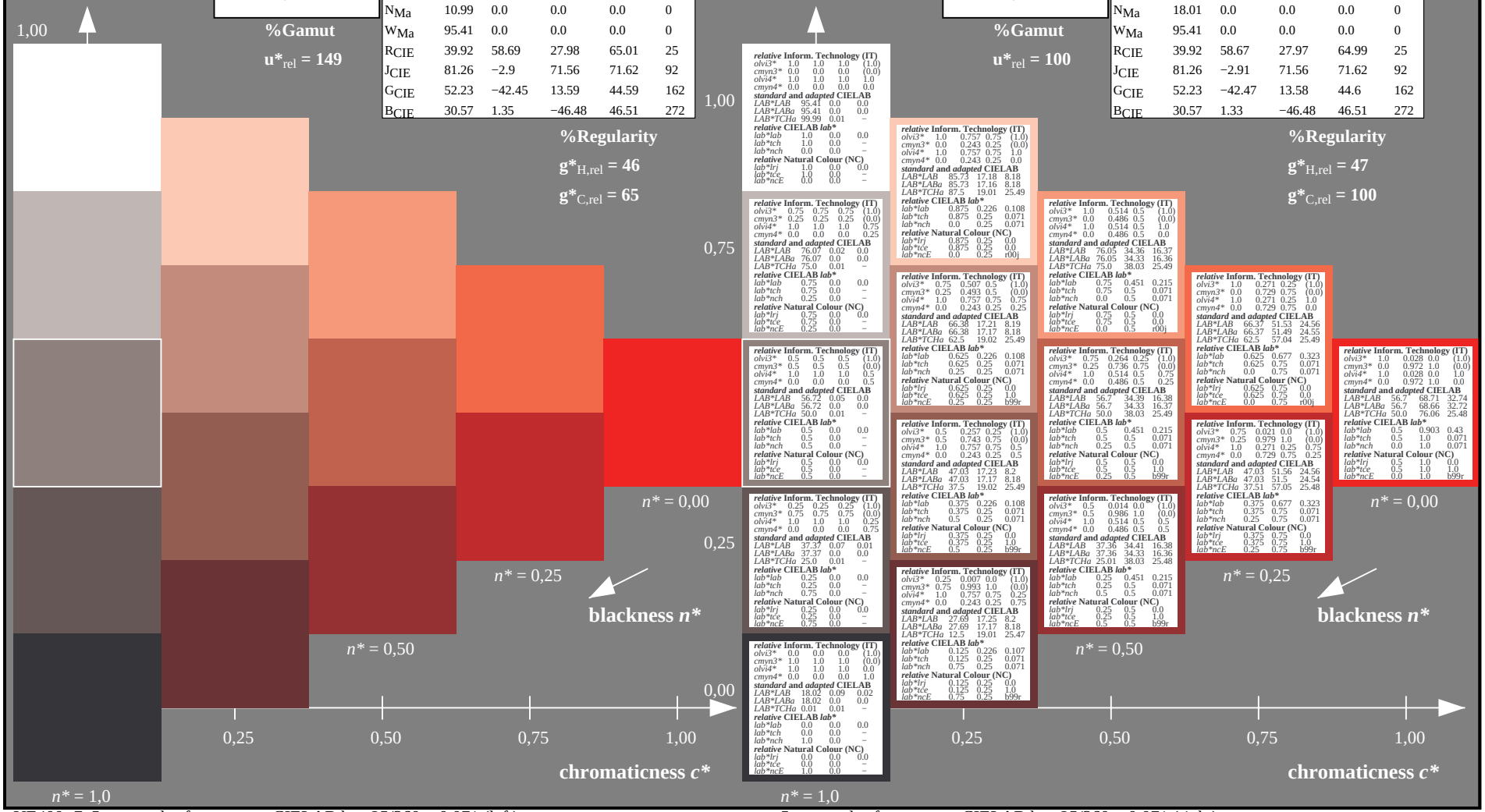
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



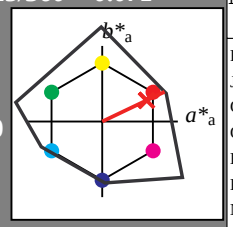
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

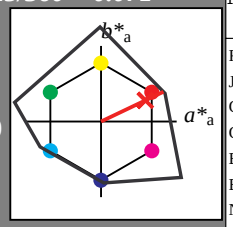
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

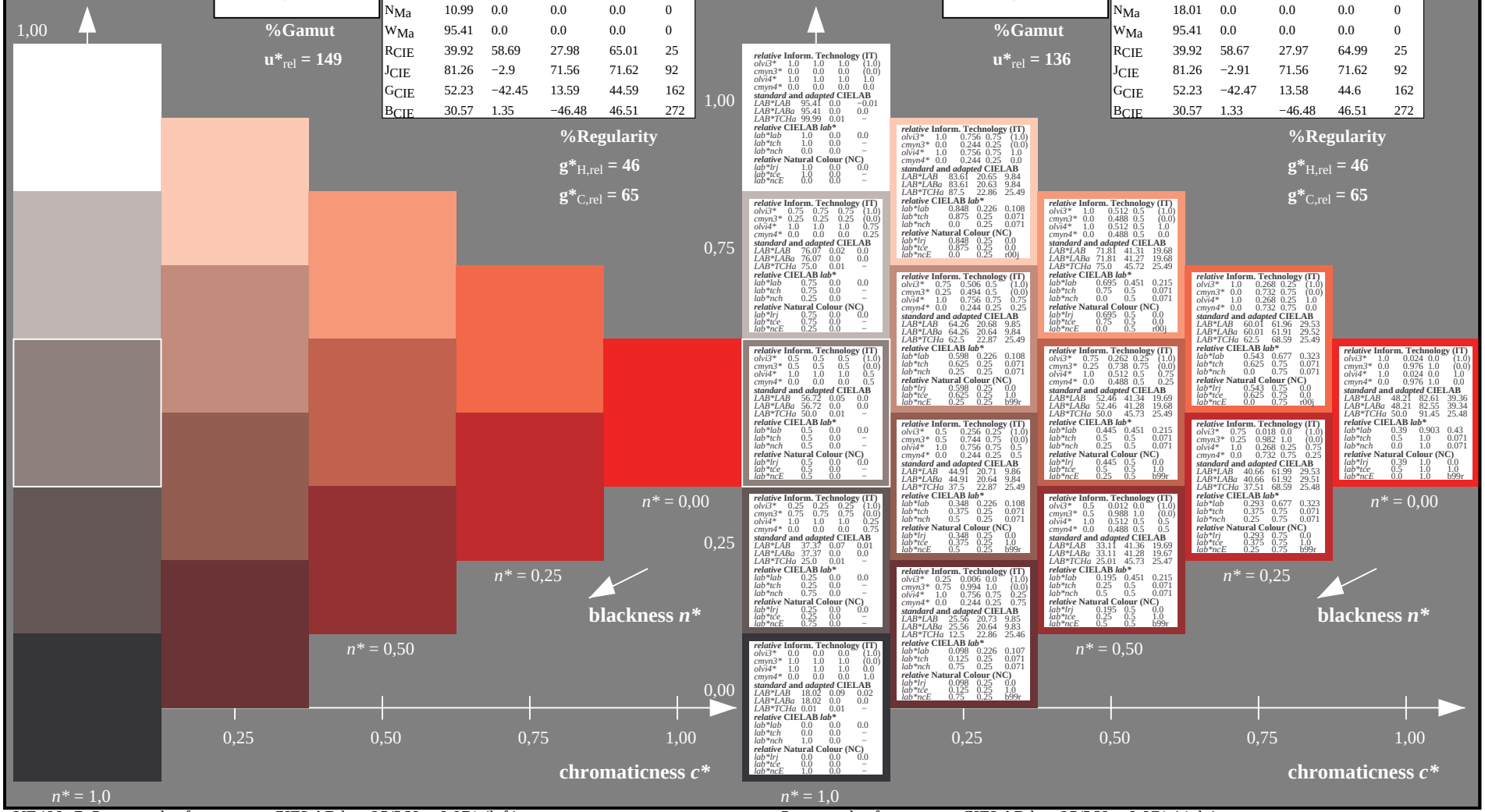
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



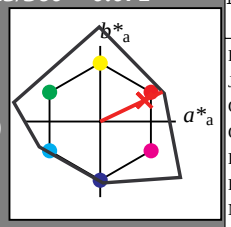
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

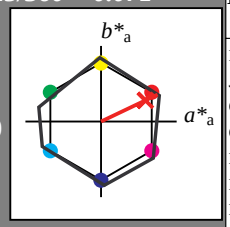
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 53 83 25
rgb*Ma: 1.0 0.03 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

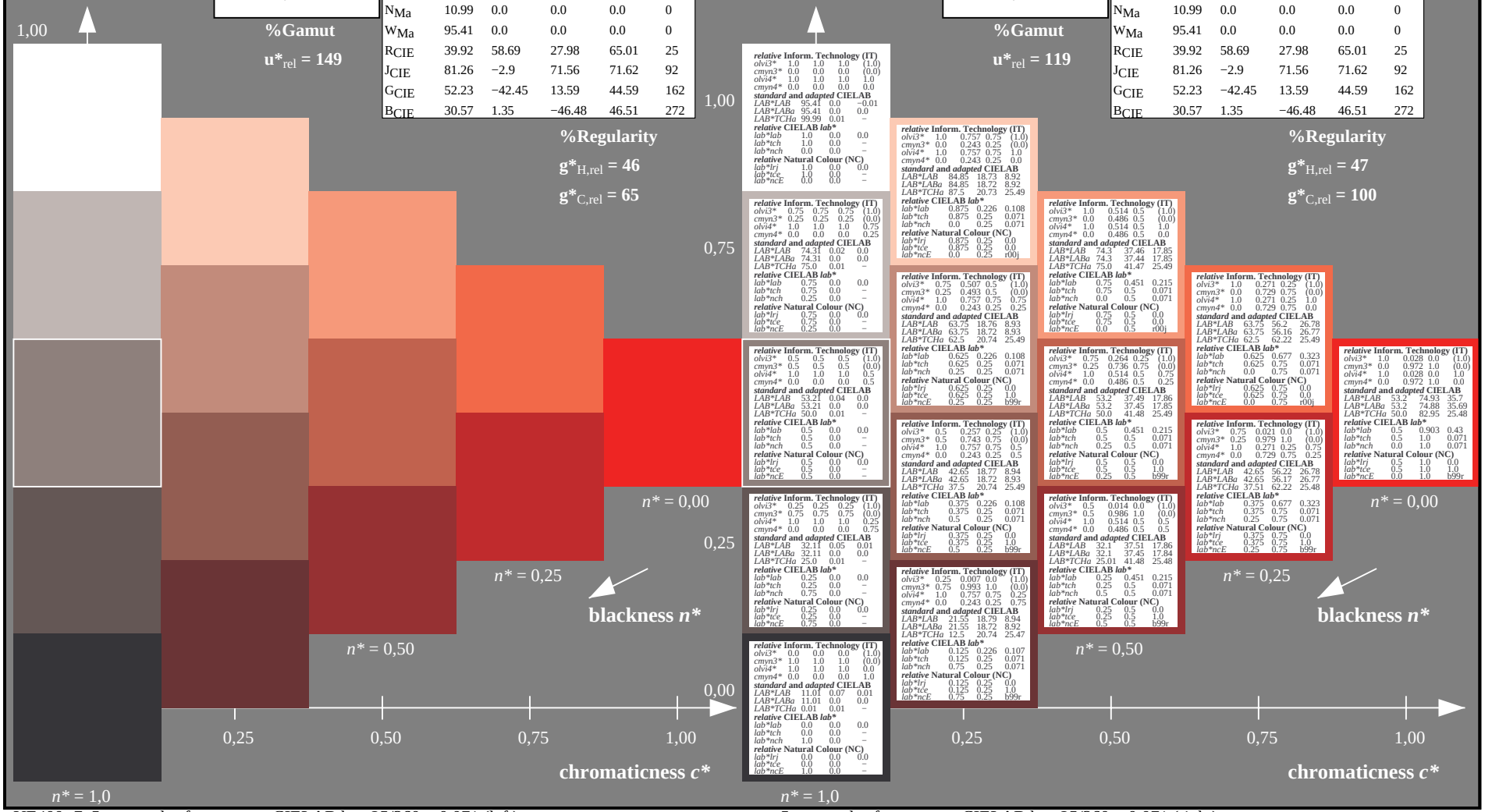
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



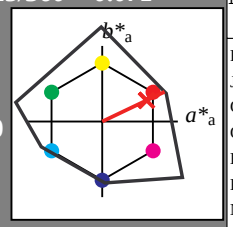
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

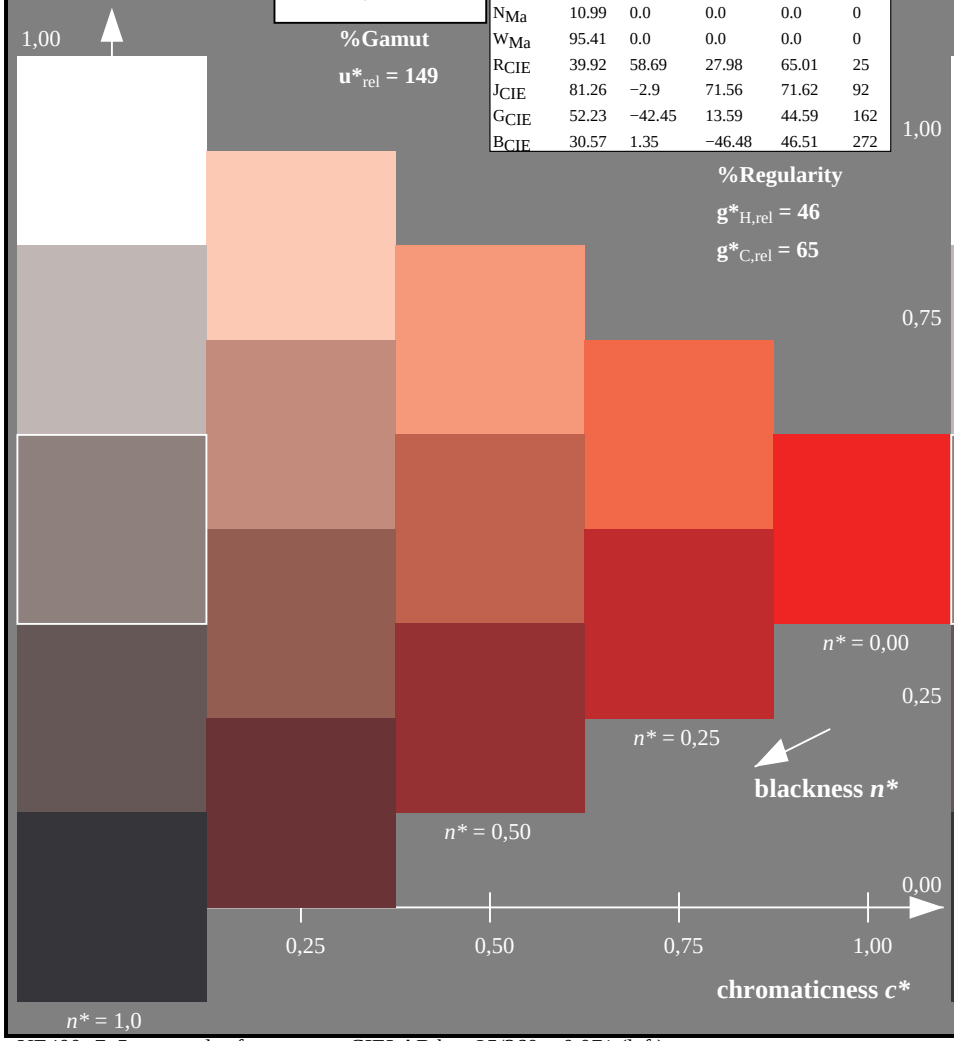
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

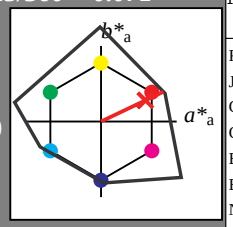
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 25/360 = 0.071$
lab*tch* and *lab*nch

D65: hue R
LCH*Ma: 48 91 25
rgb*Ma: 1.0 0.02 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

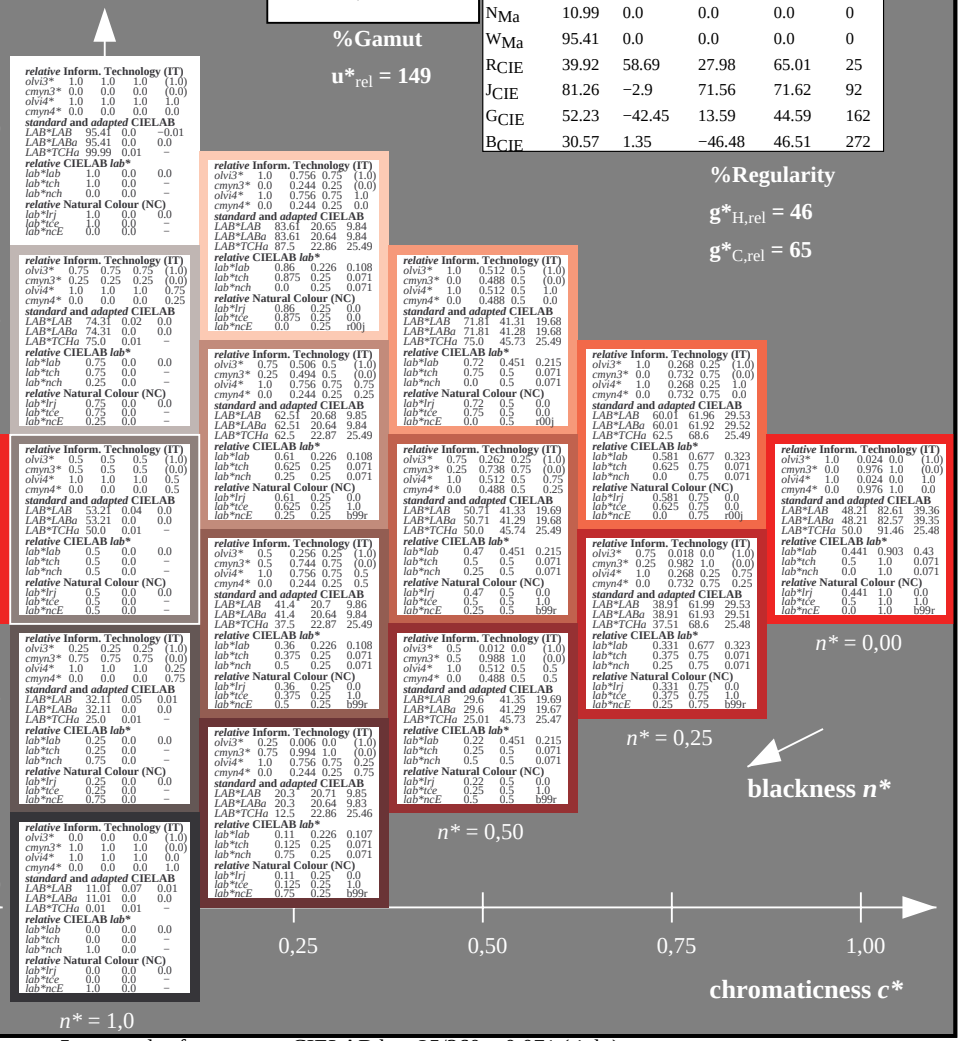
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



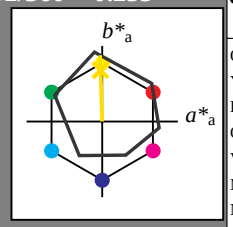
UE400−7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

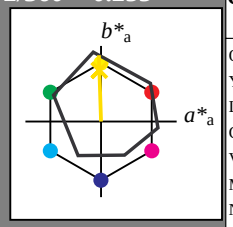
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

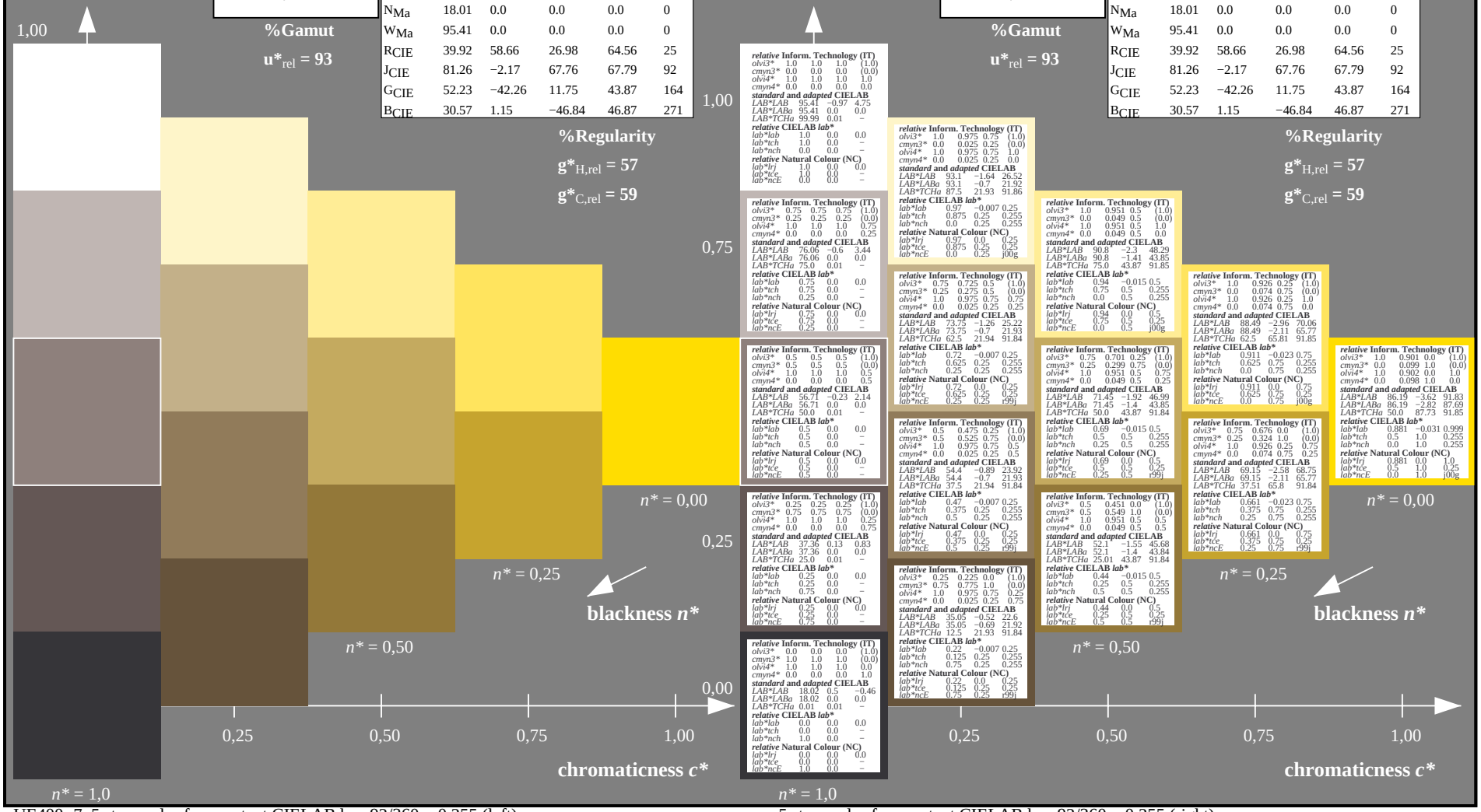
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



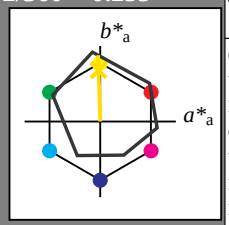
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

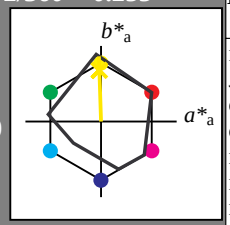
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

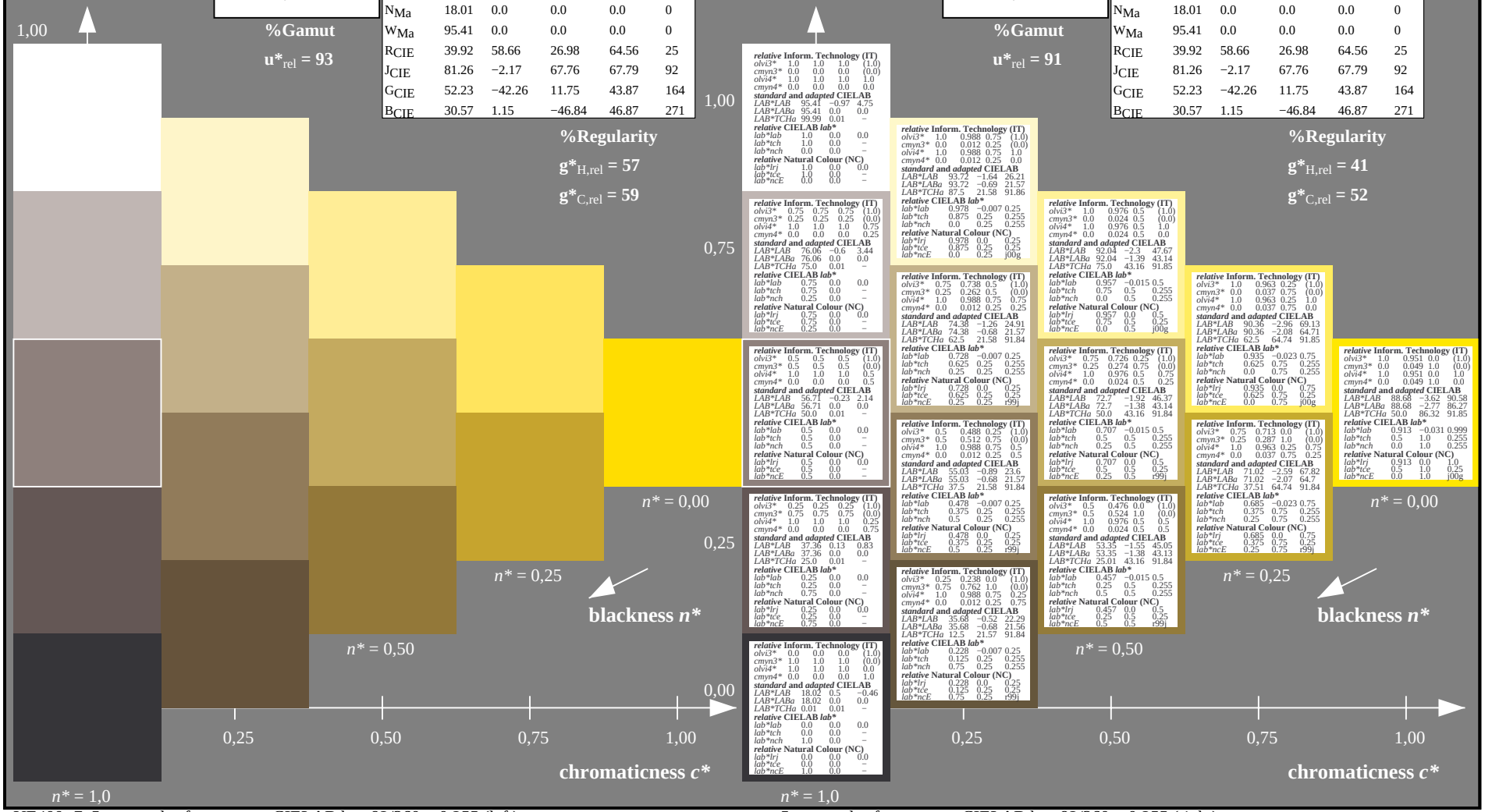
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



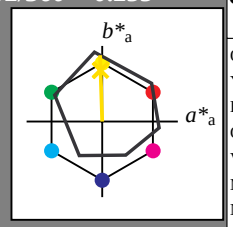
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

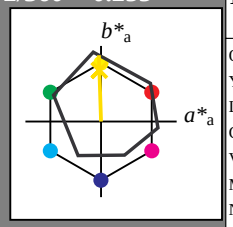
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

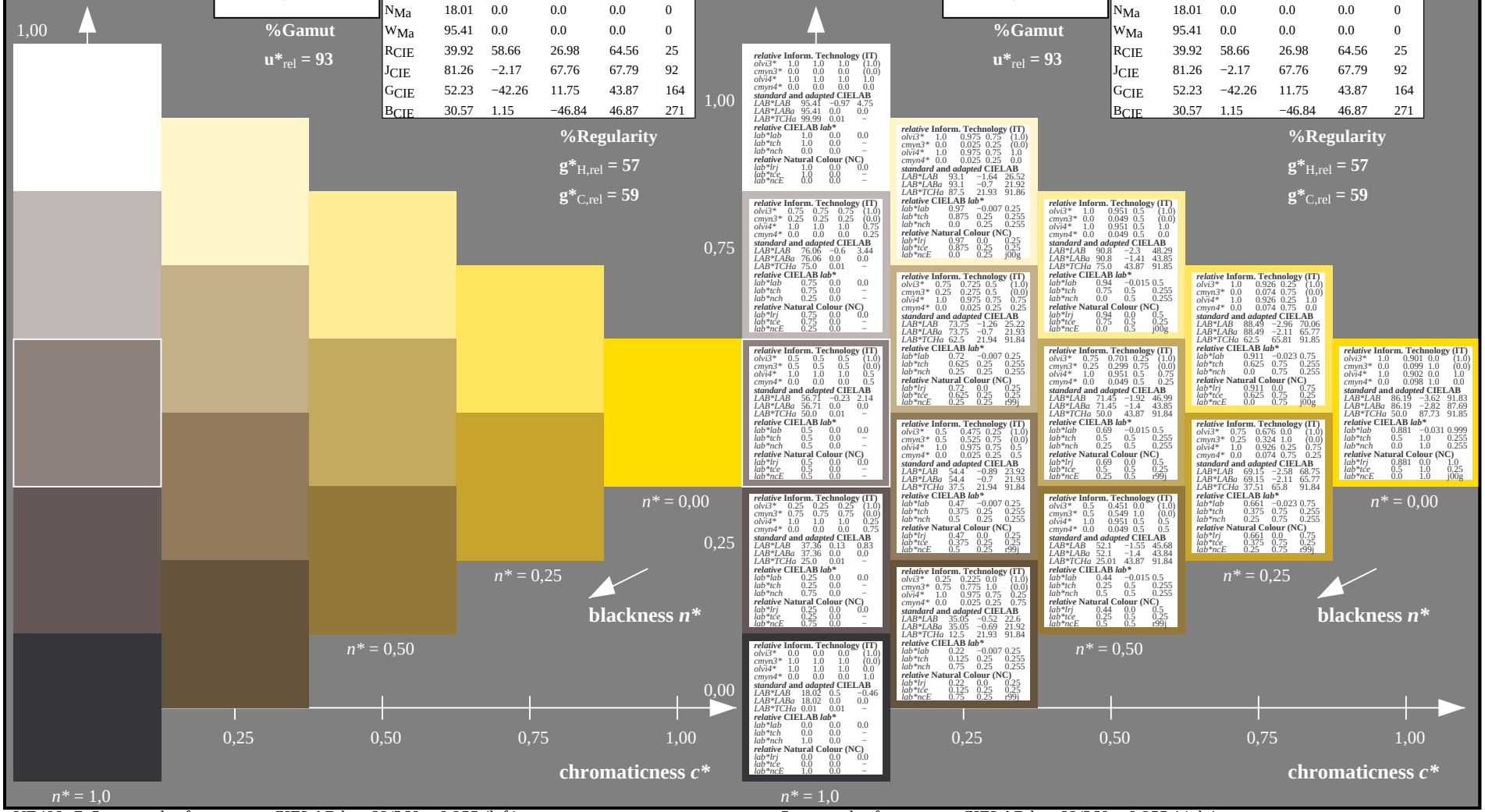
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



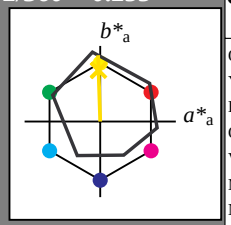
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

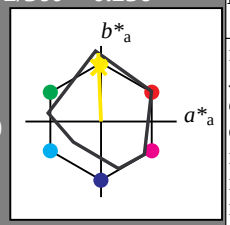
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

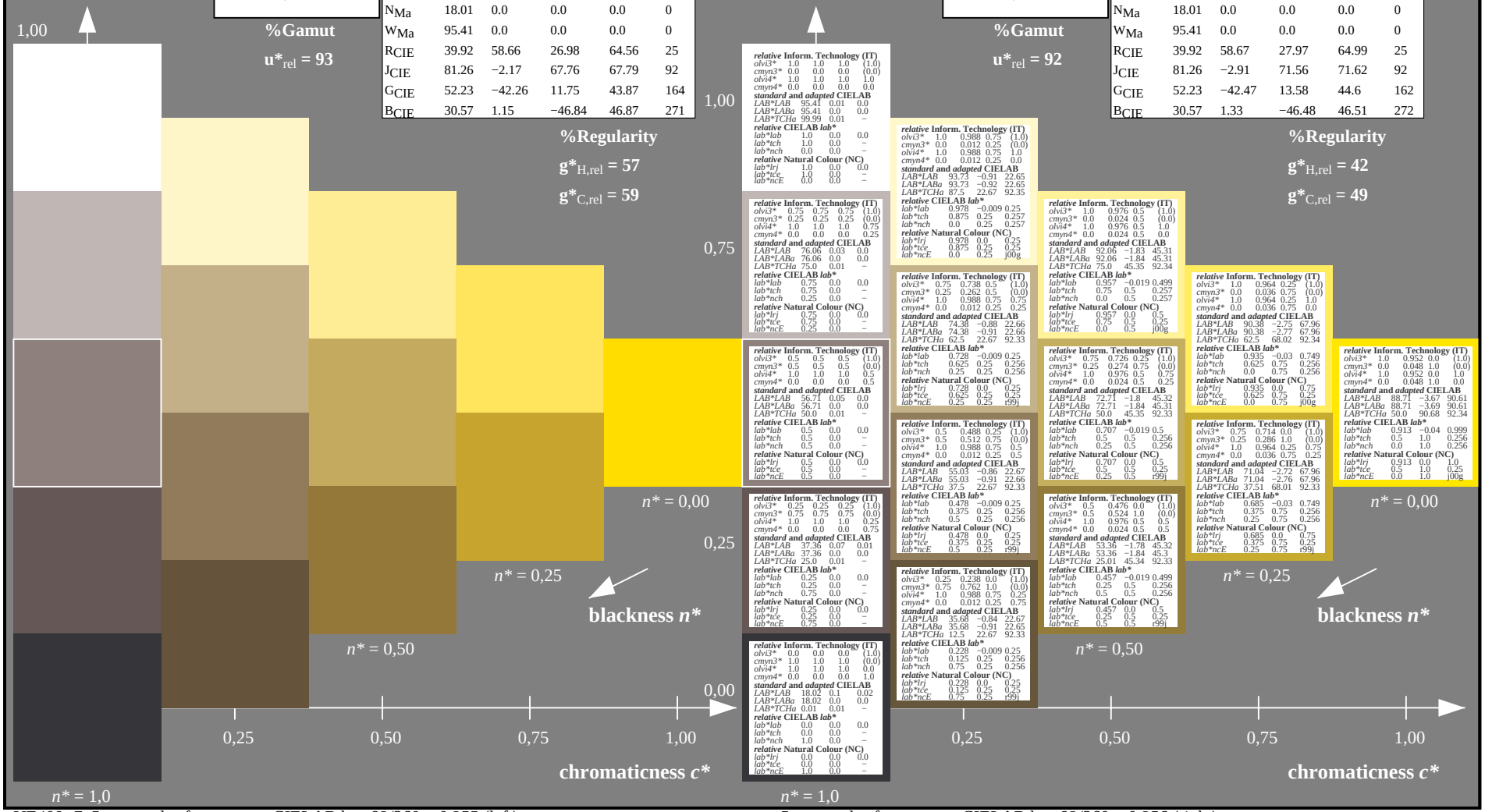
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



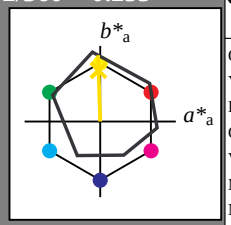
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

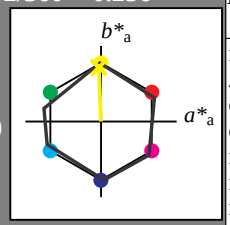
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

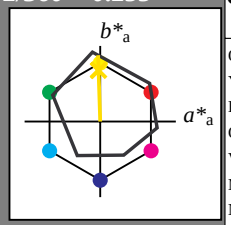
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut
u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

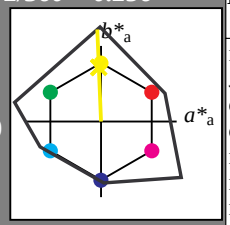
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness

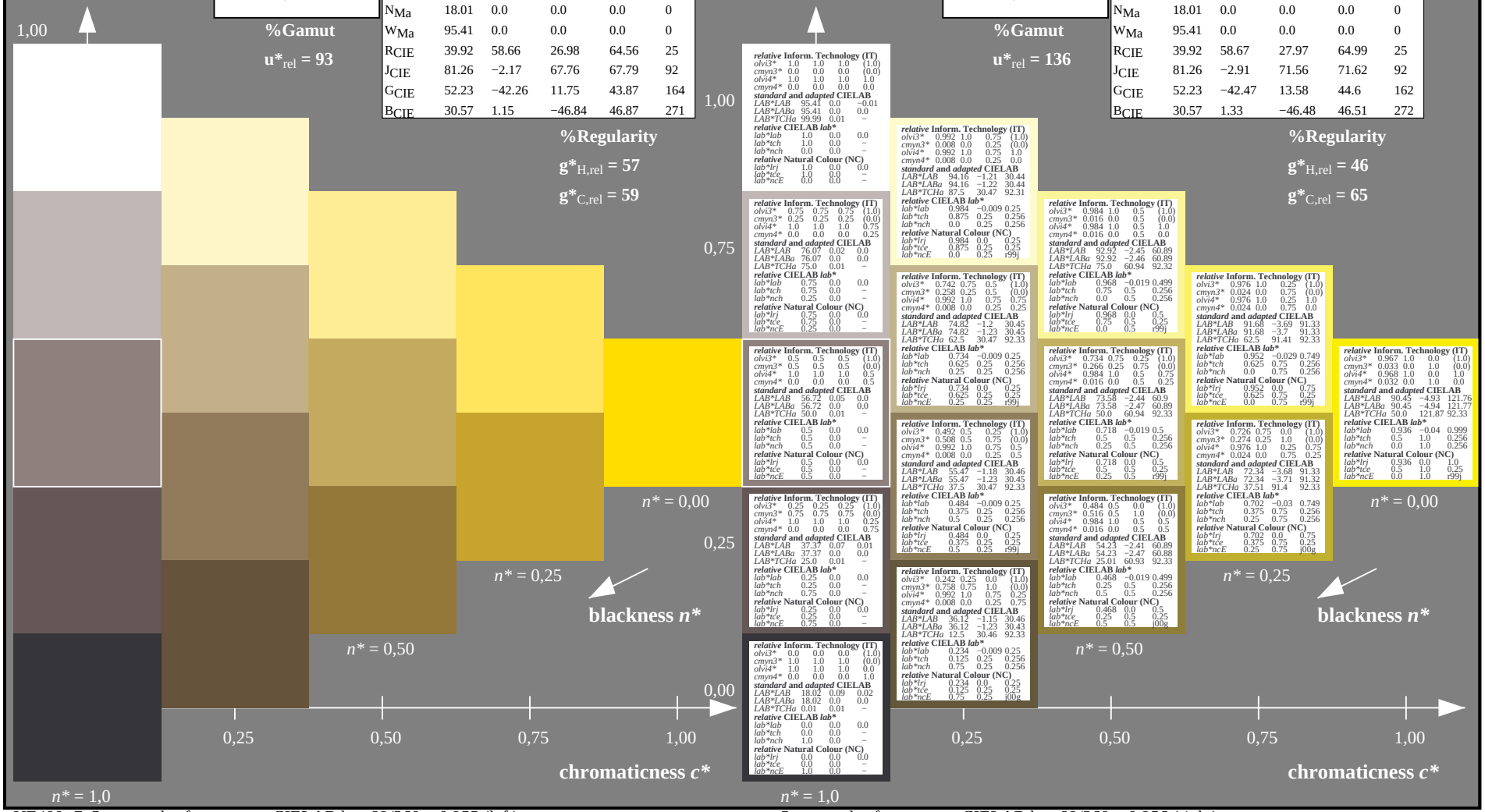


%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



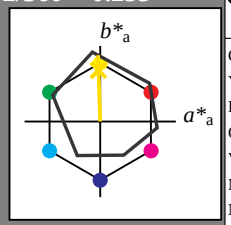
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

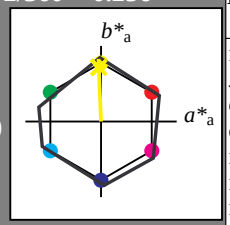
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

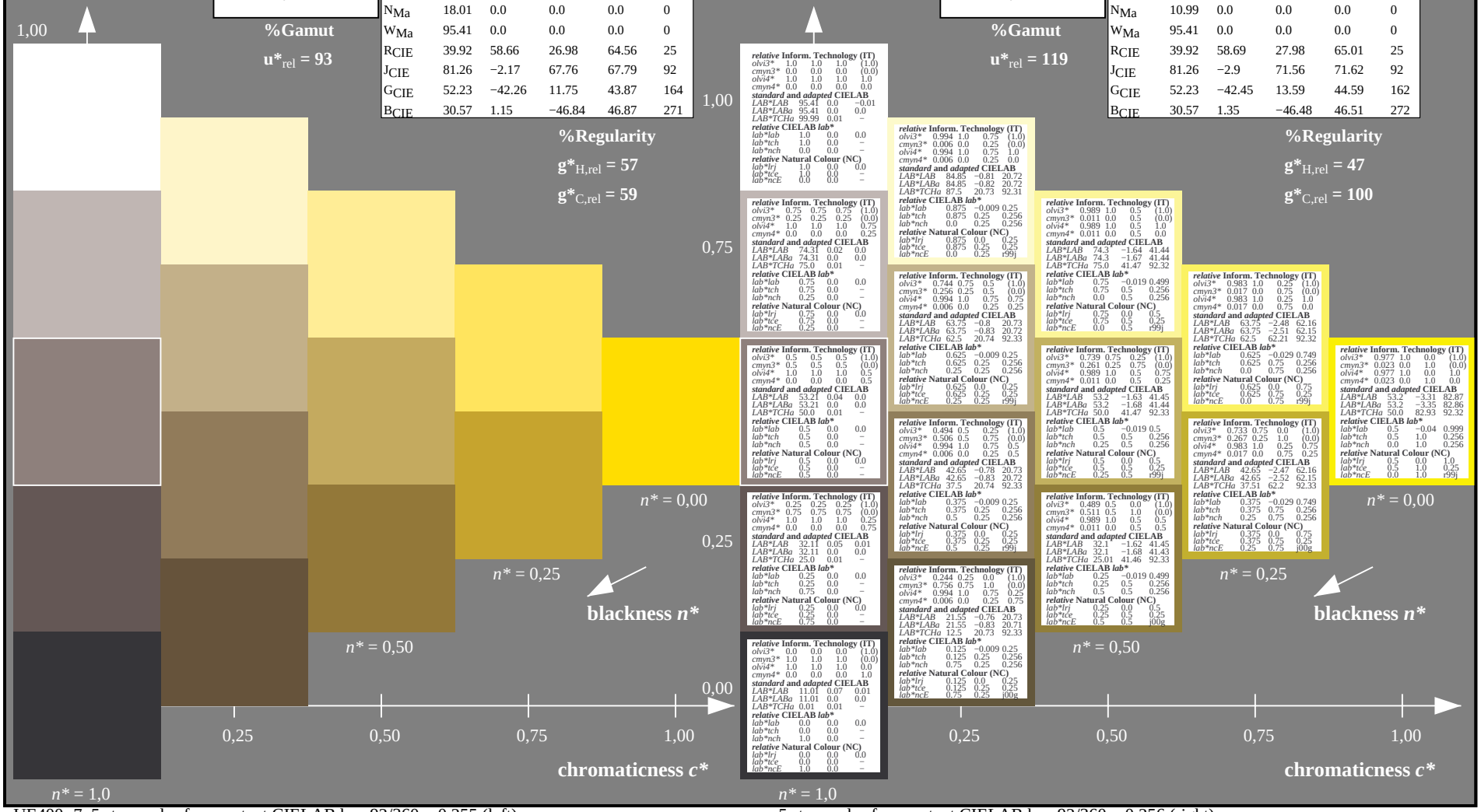
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



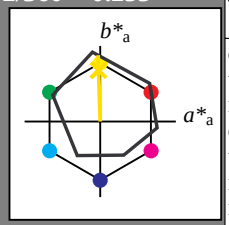
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

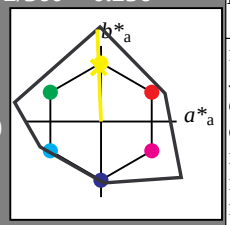
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

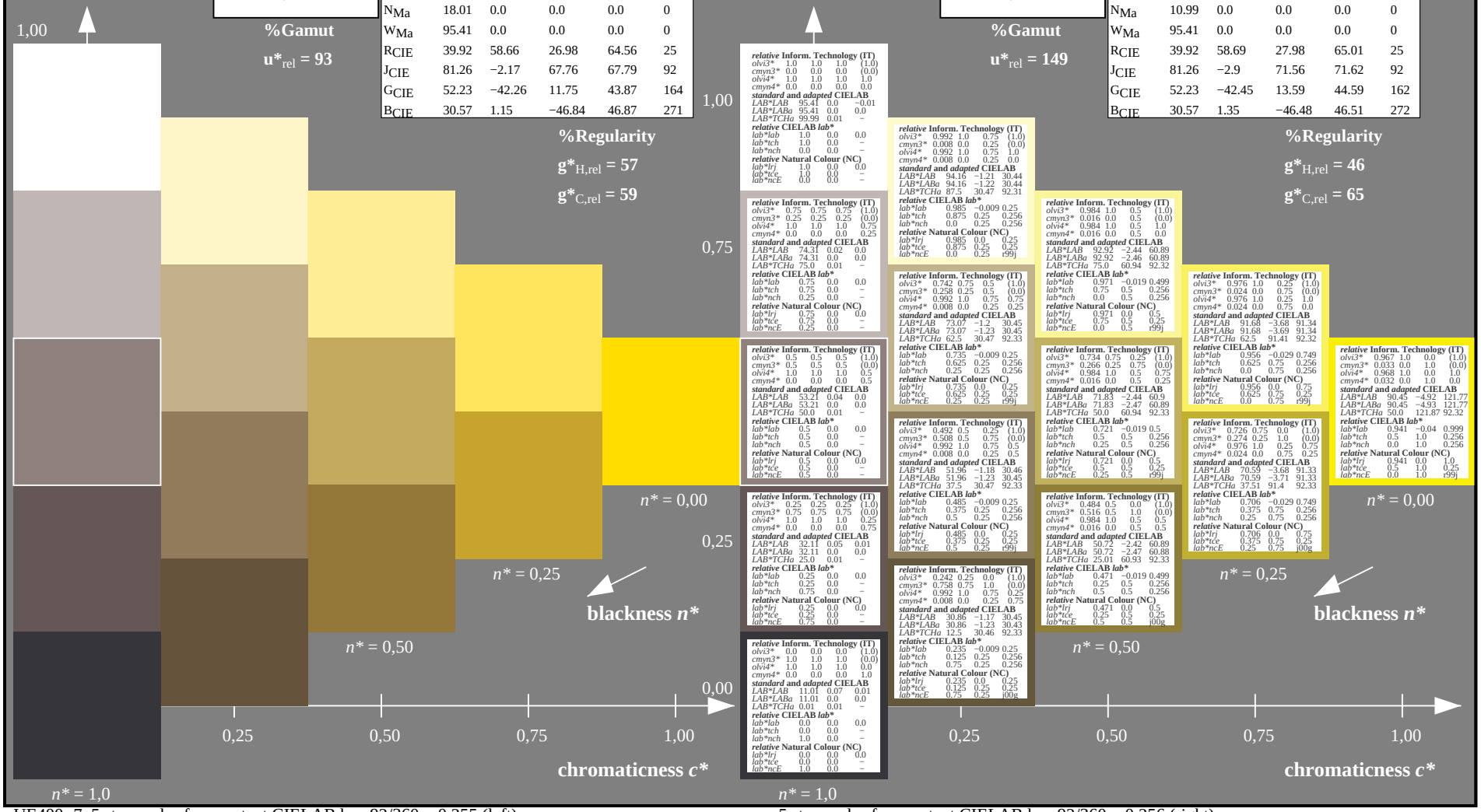
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



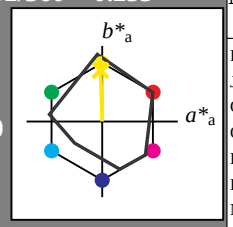
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

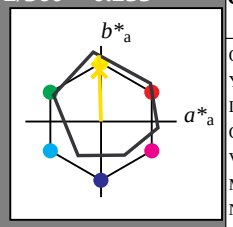
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

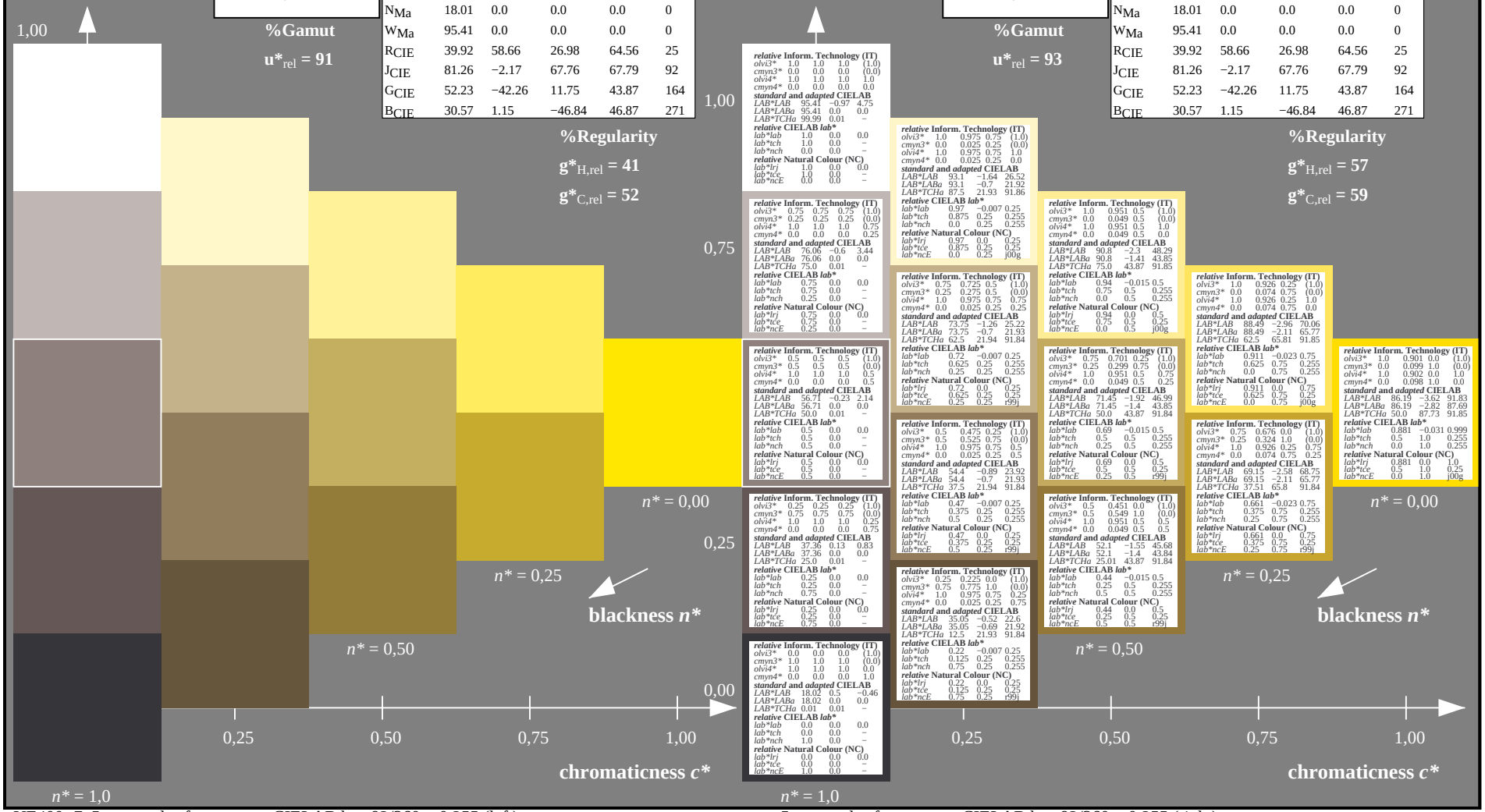
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



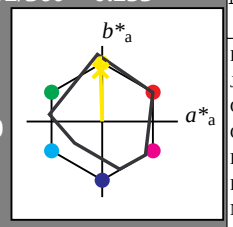
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

$u^*_{rel} = 91$

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

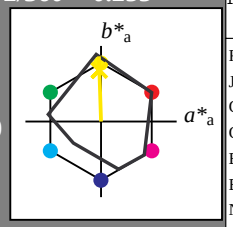
$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

$u^*_{rel} = 91$

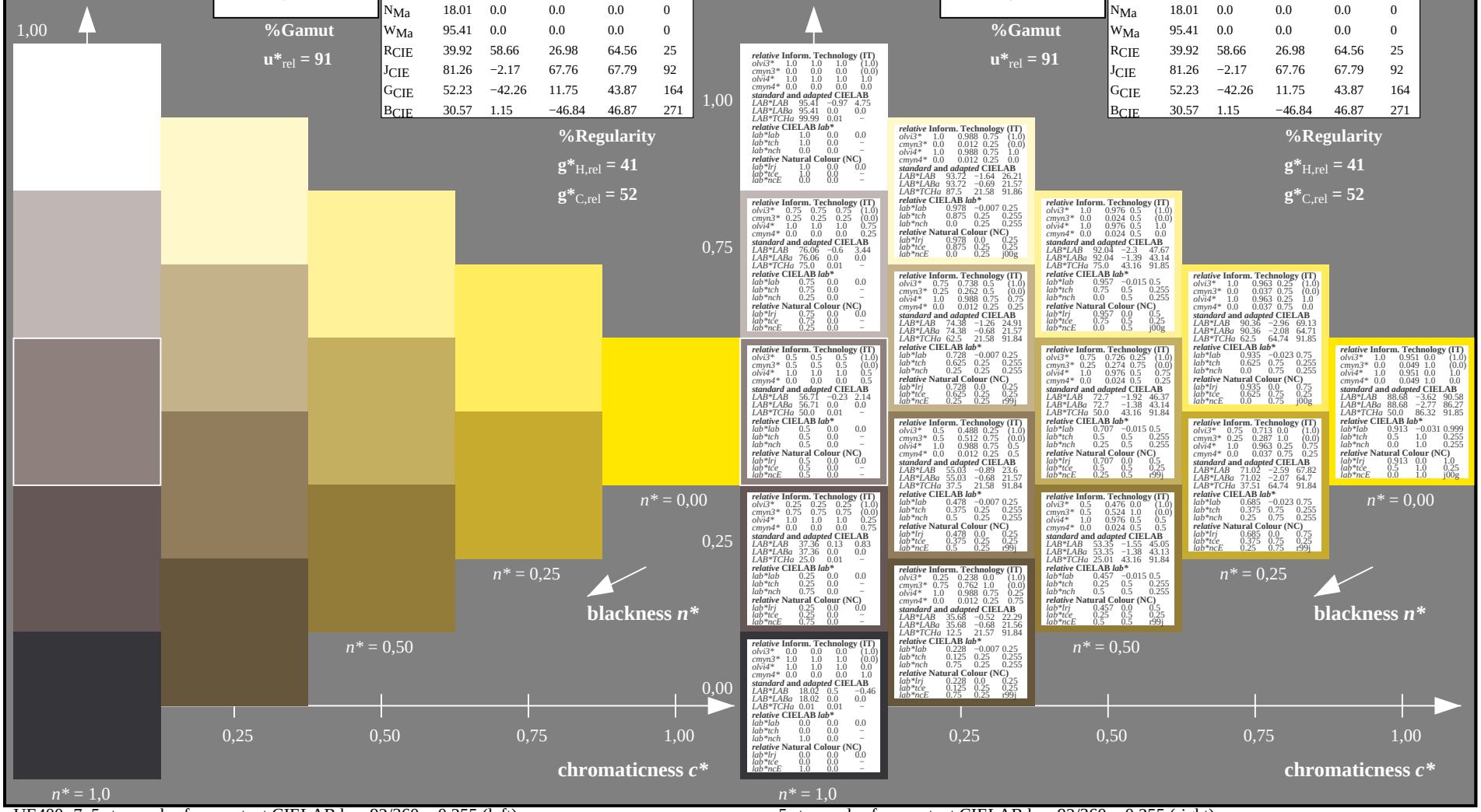
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



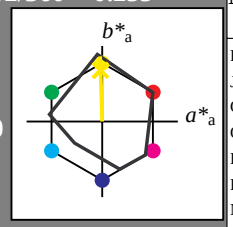
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

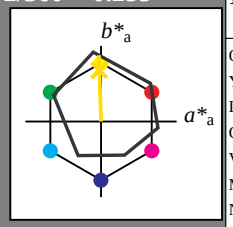
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

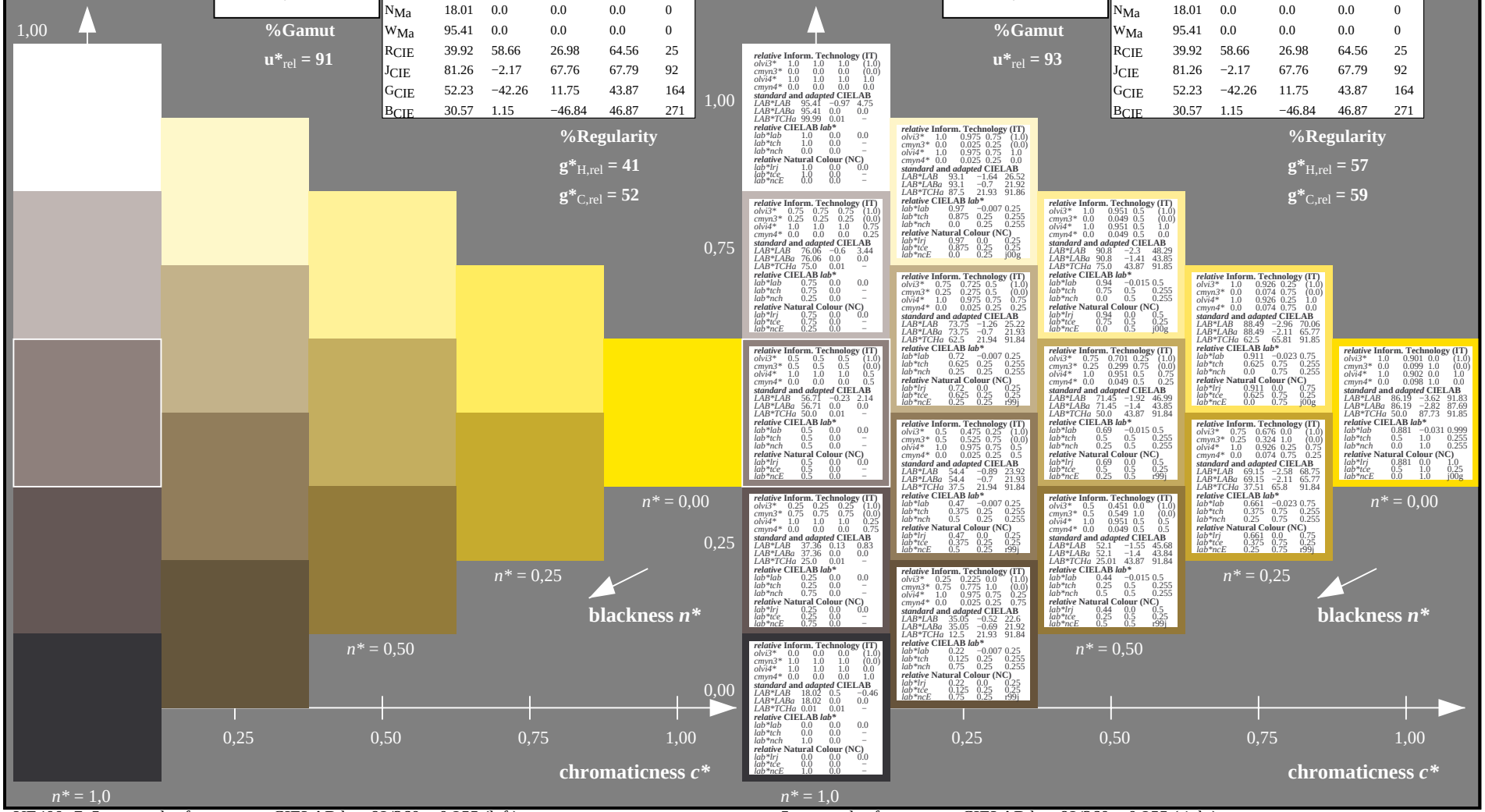
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



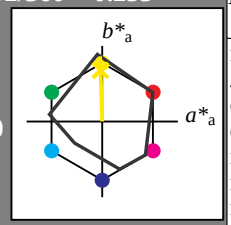
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

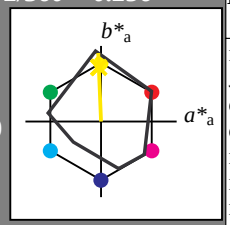
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

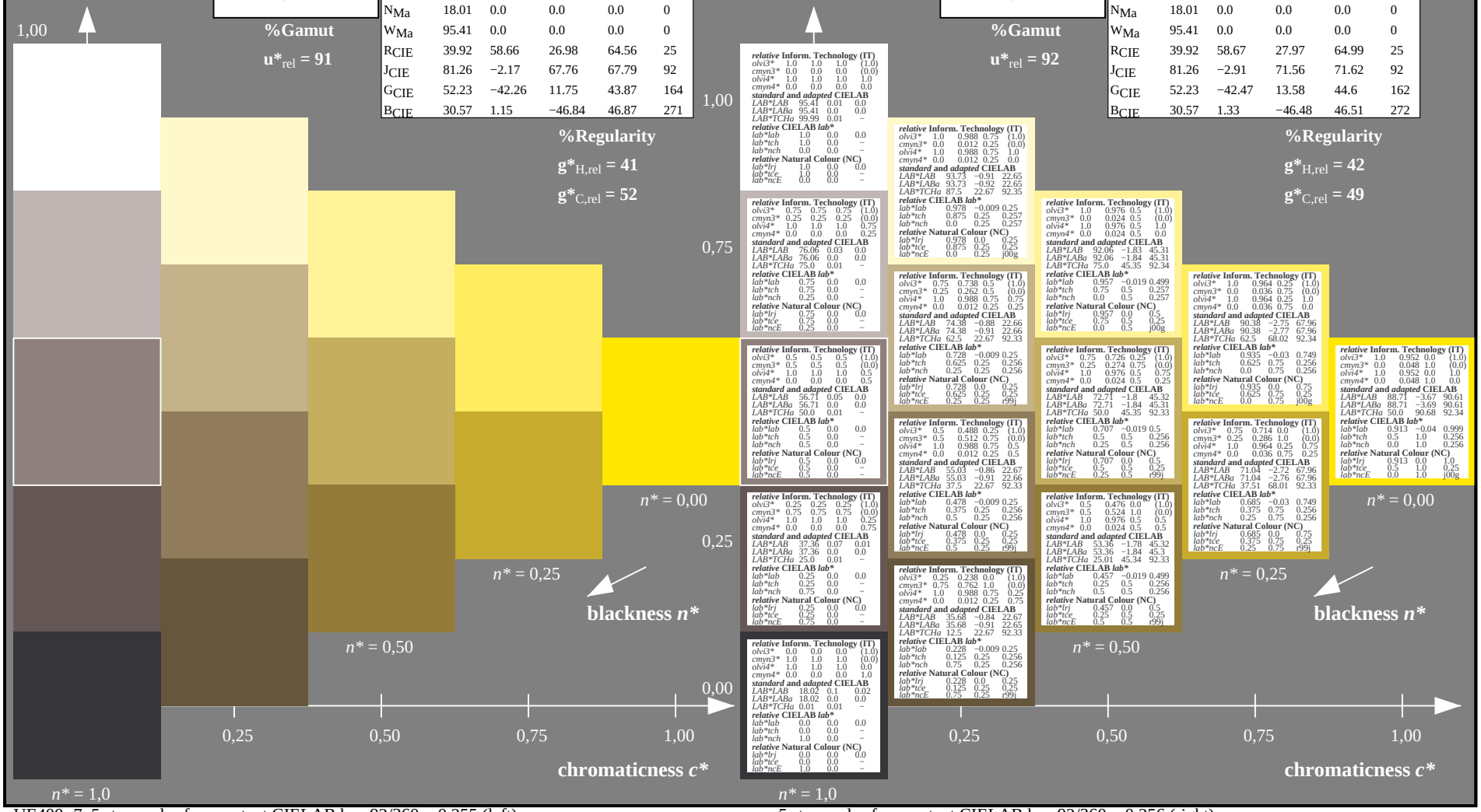
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



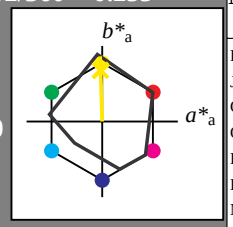
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

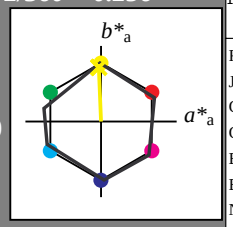
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

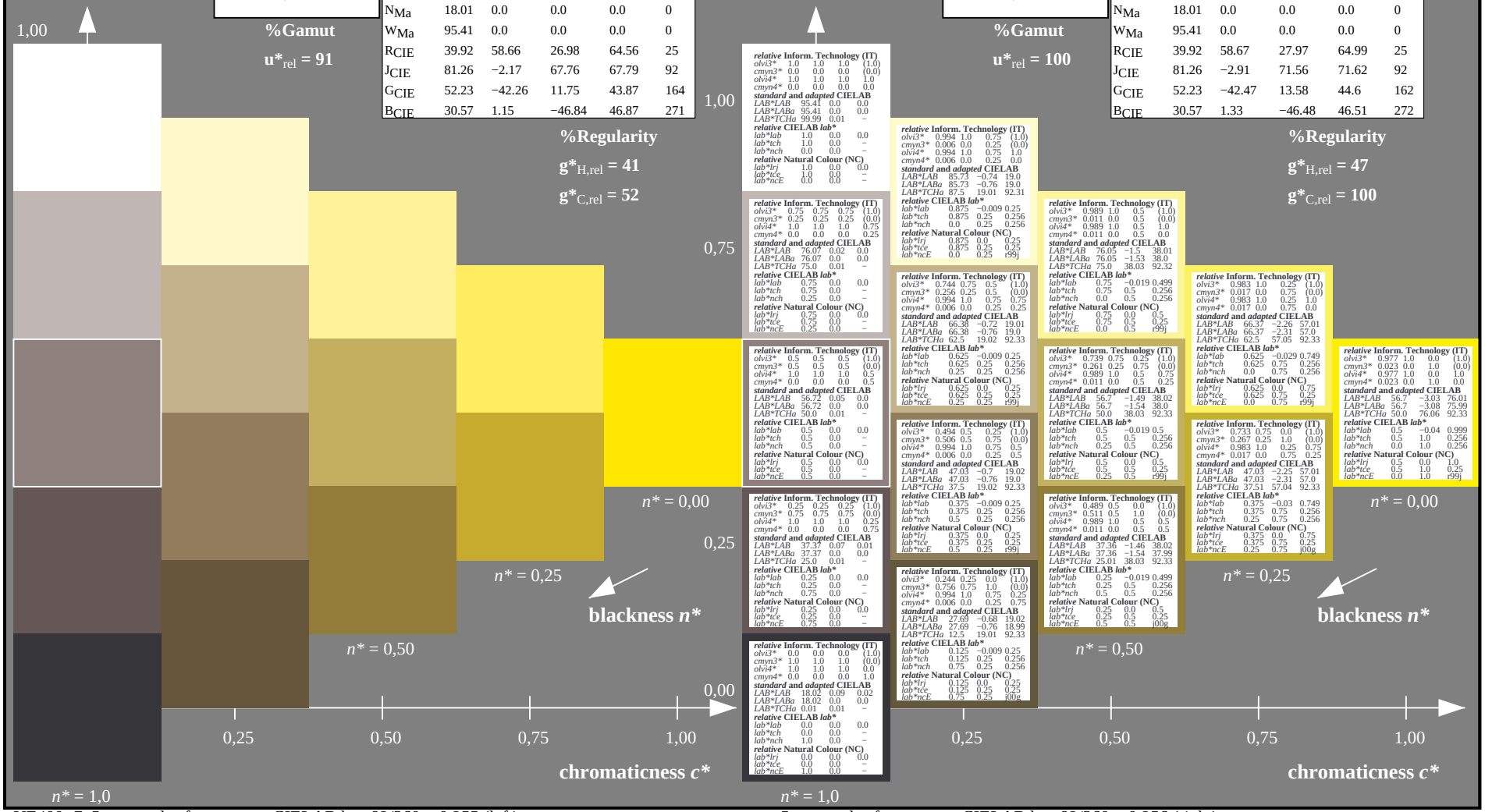
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



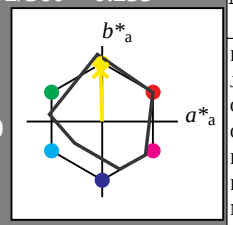
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

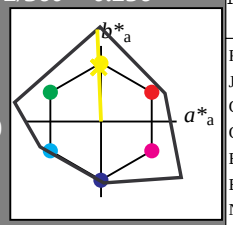
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

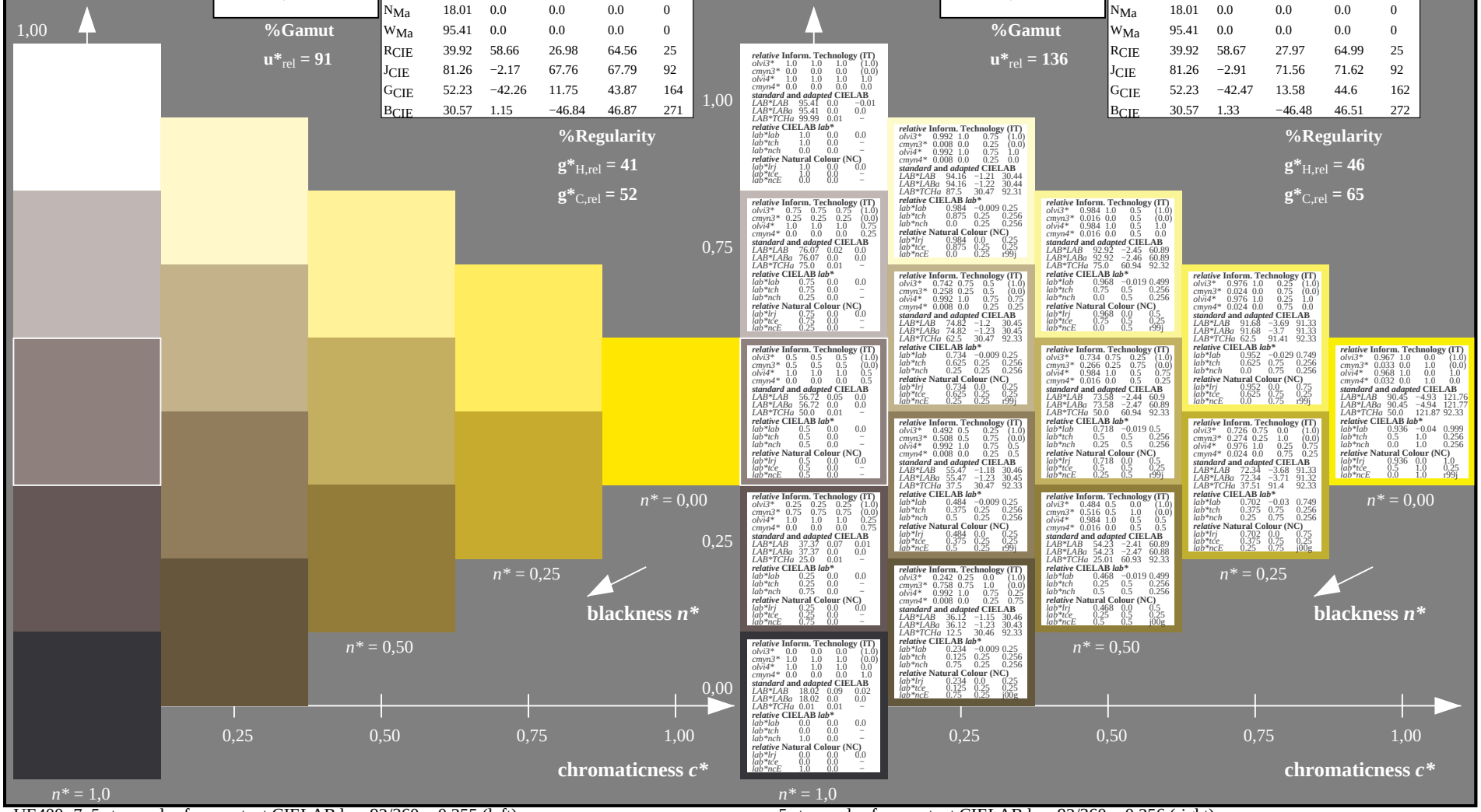
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



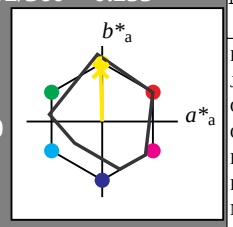
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

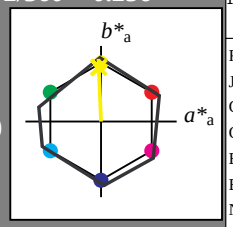
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

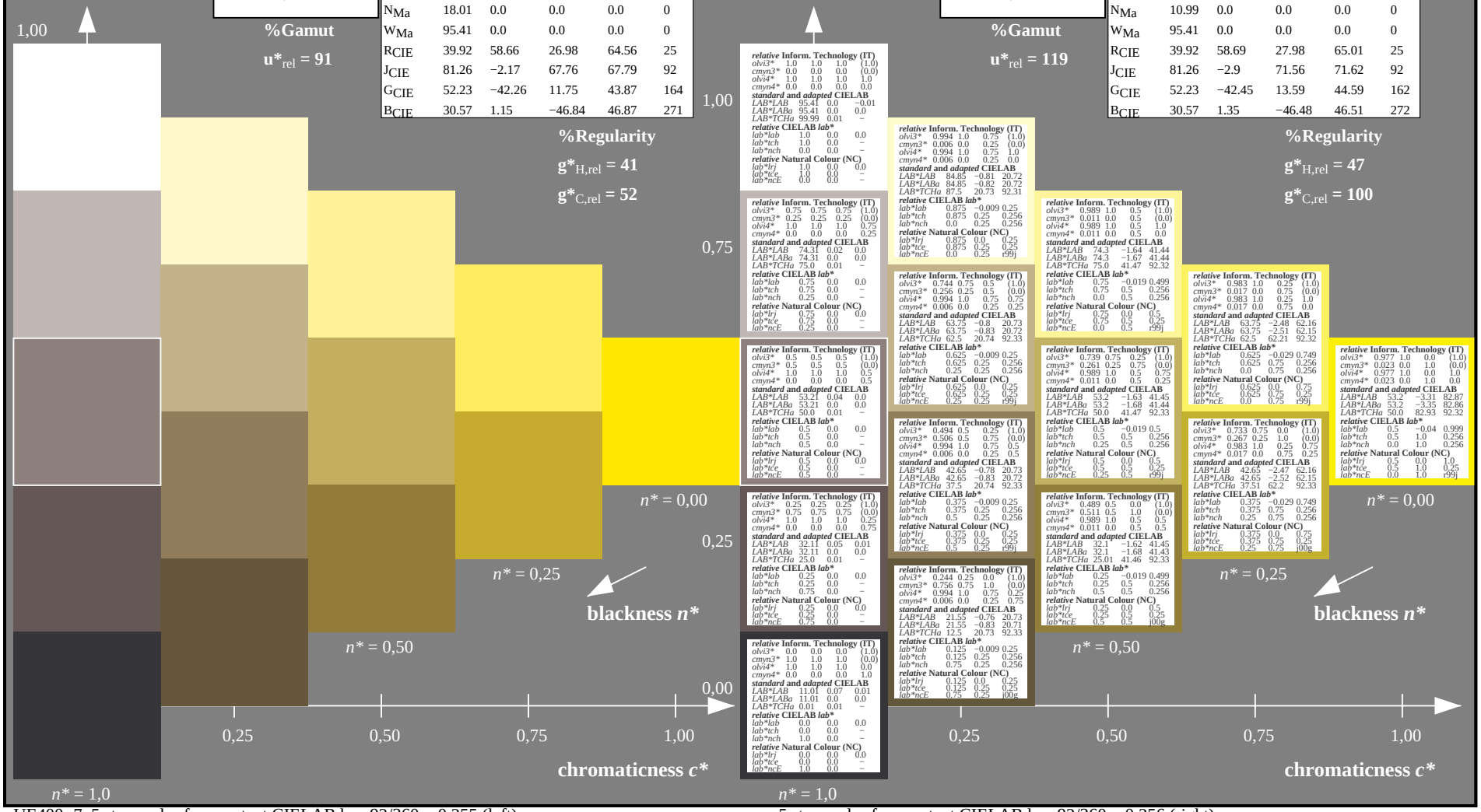
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



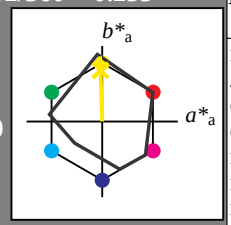
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

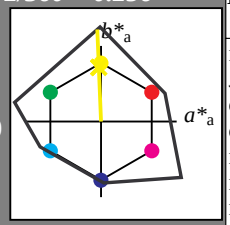
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

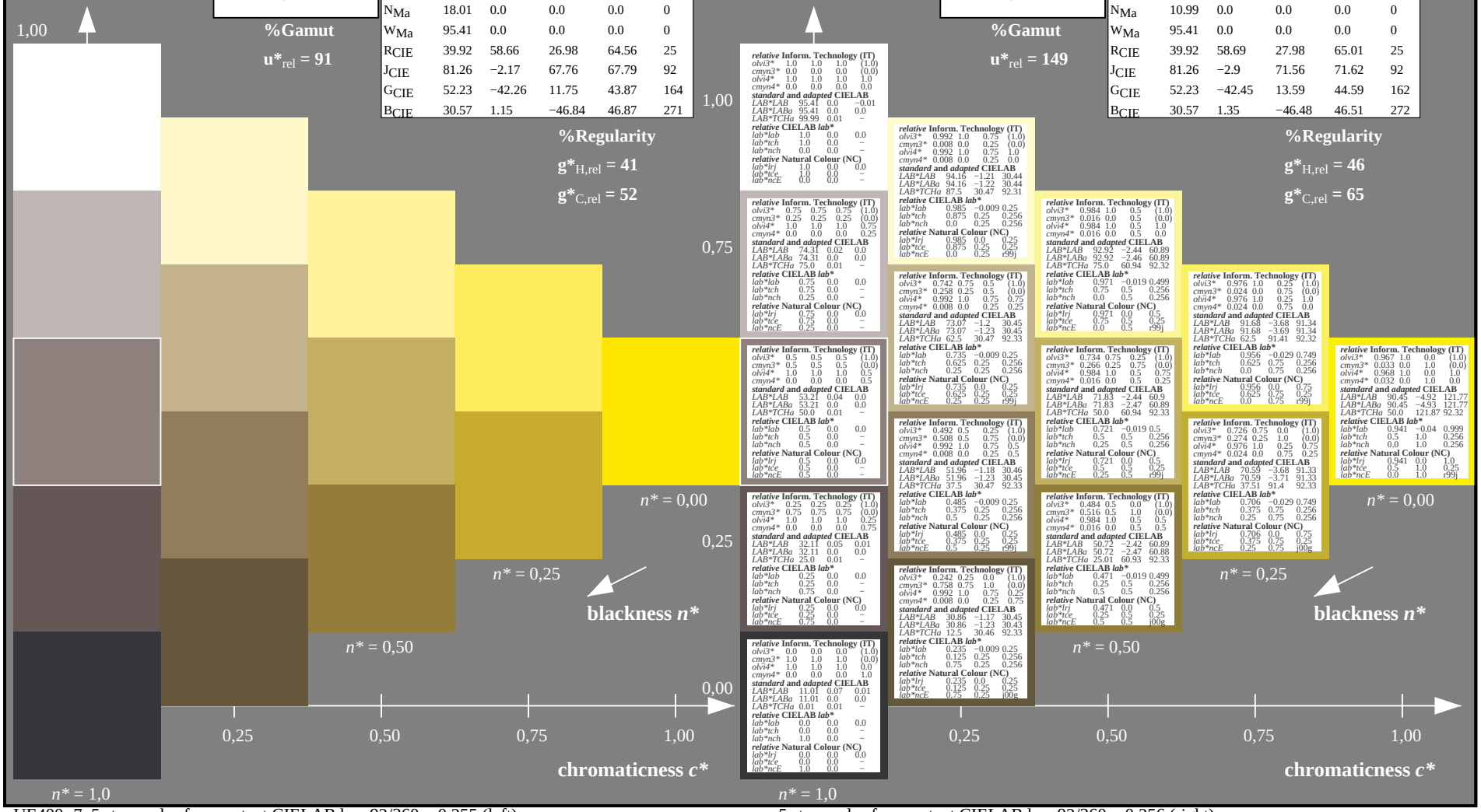
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



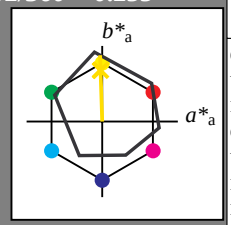
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

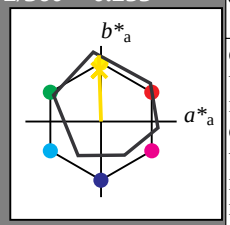
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

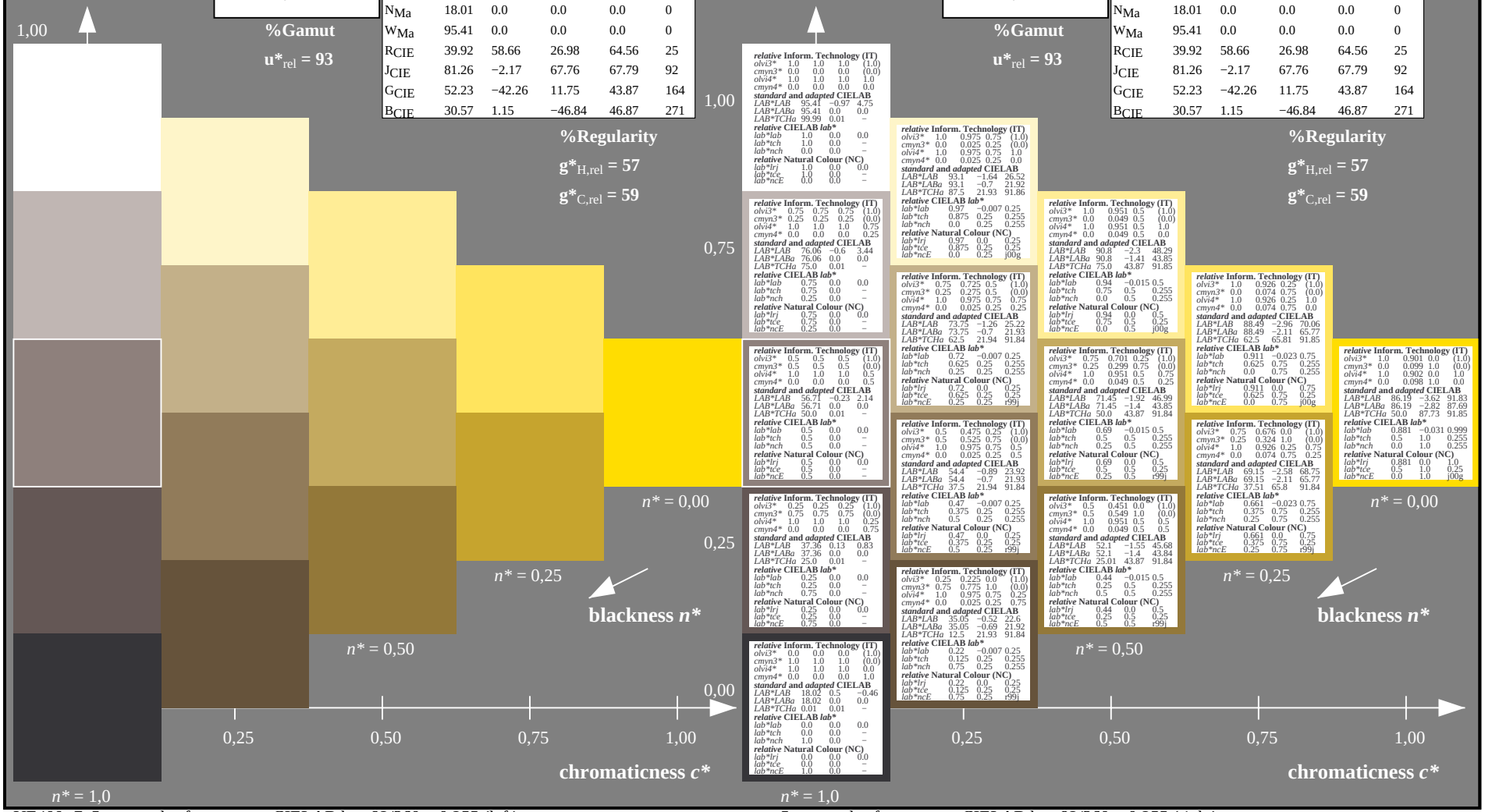
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



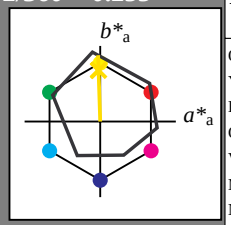
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

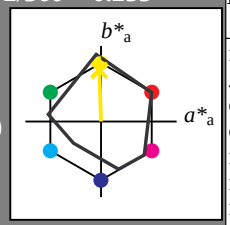
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

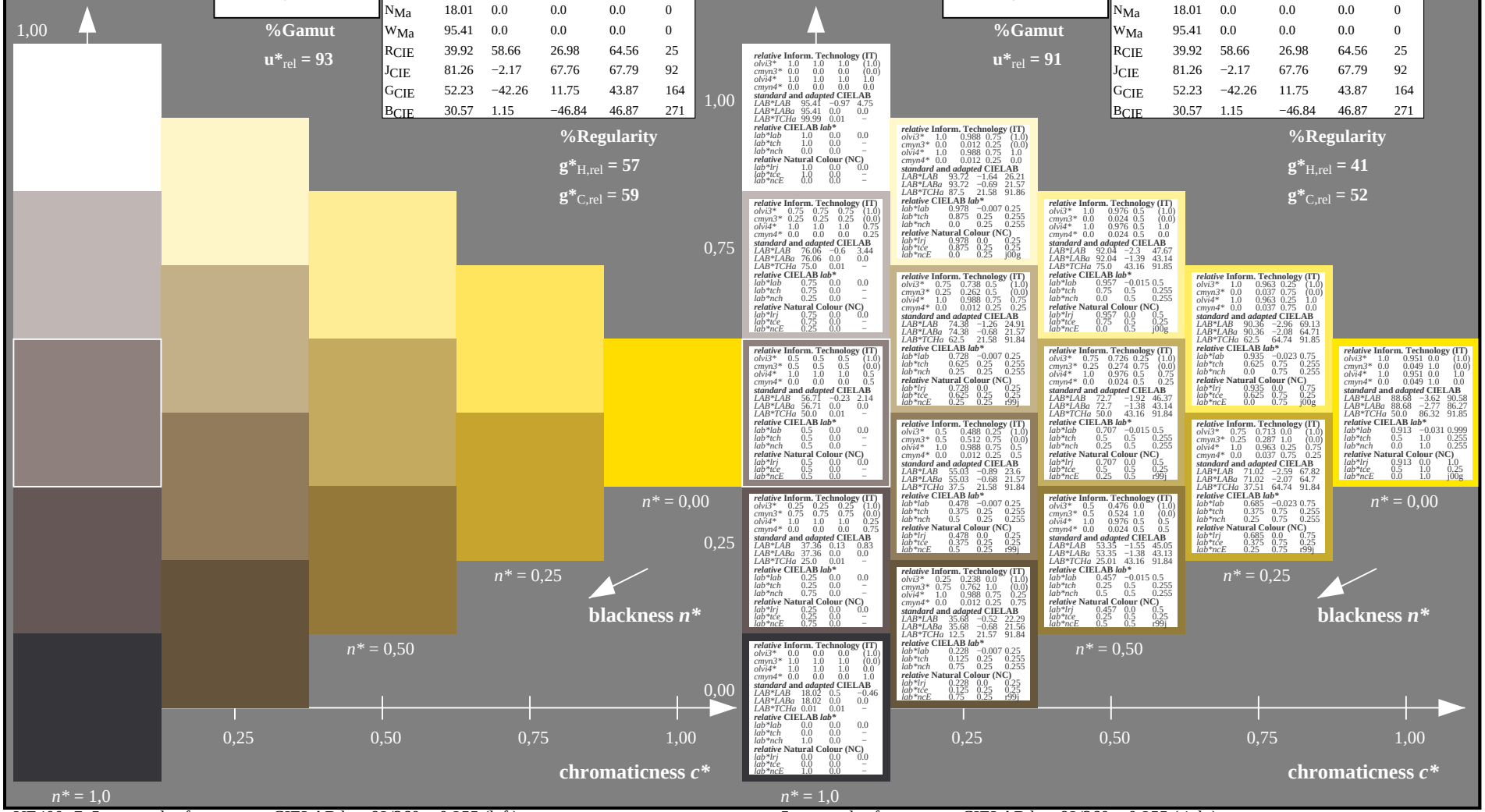
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



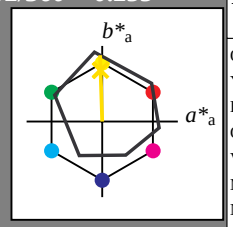
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

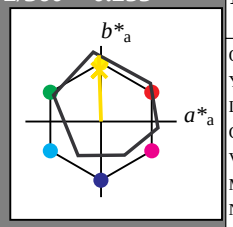
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

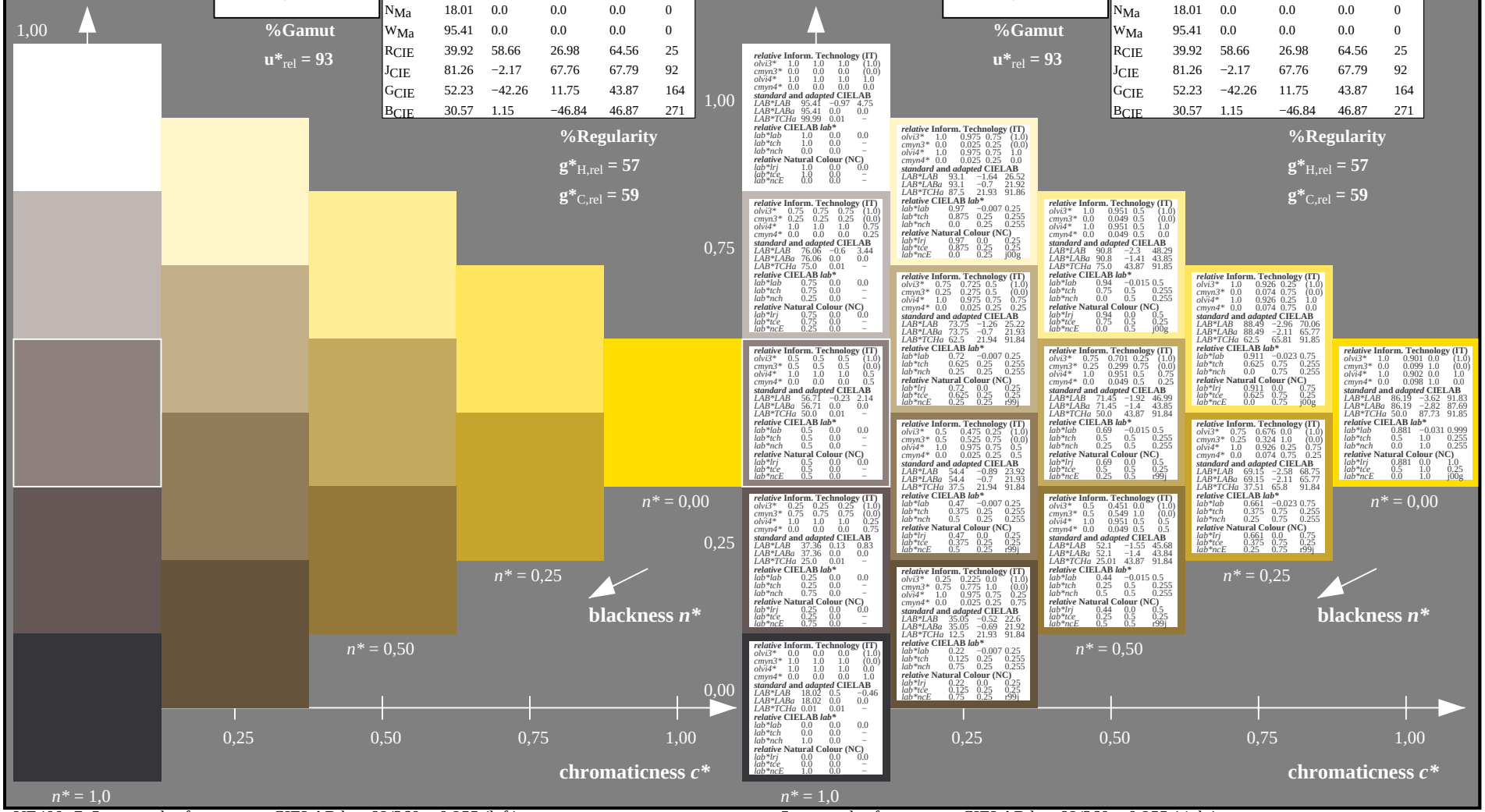
%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



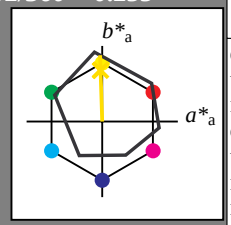
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

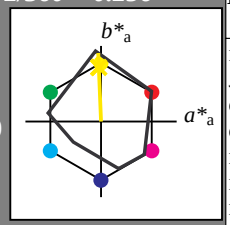
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

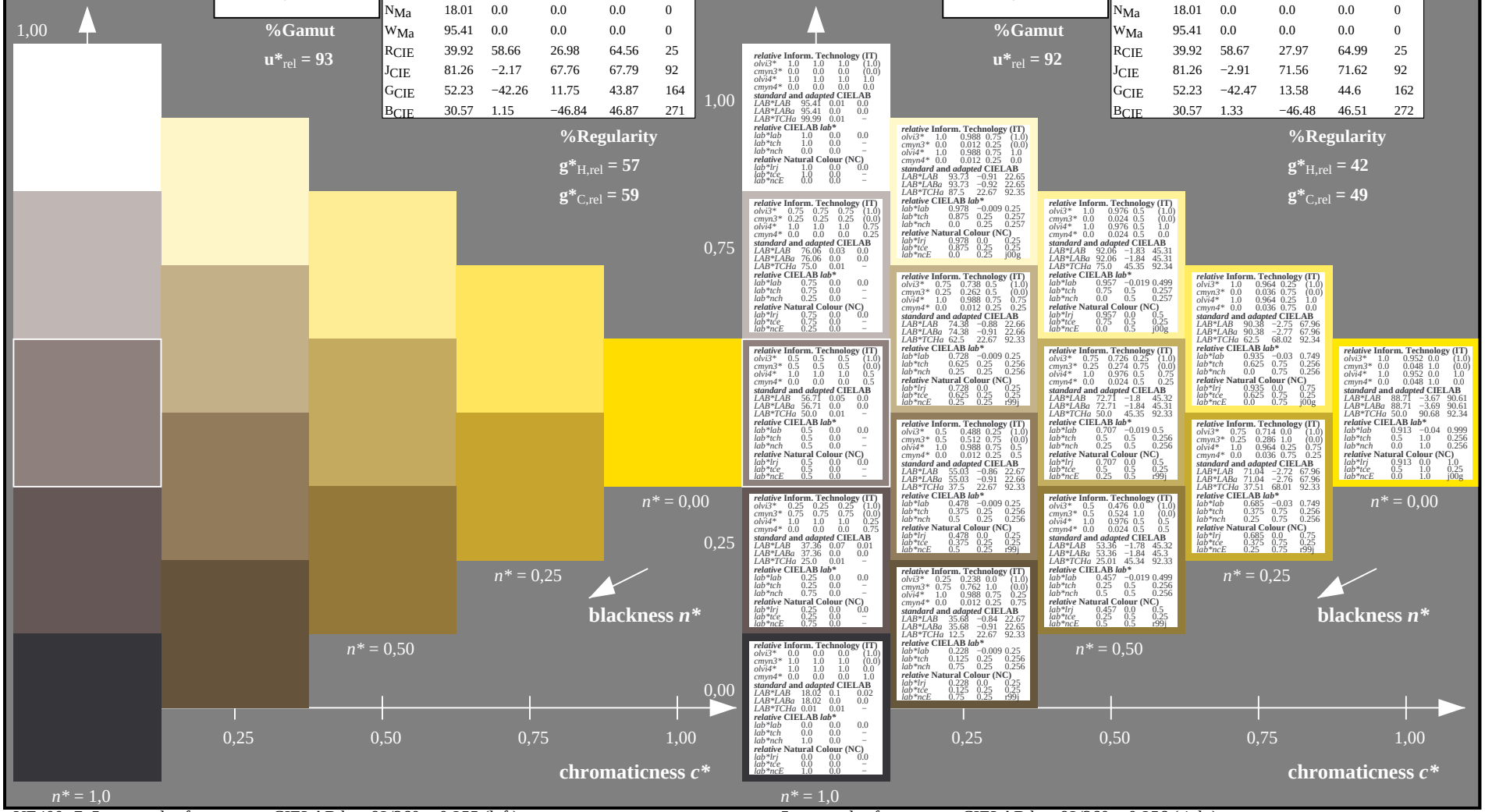
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



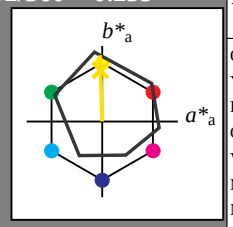
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

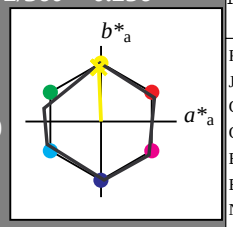
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

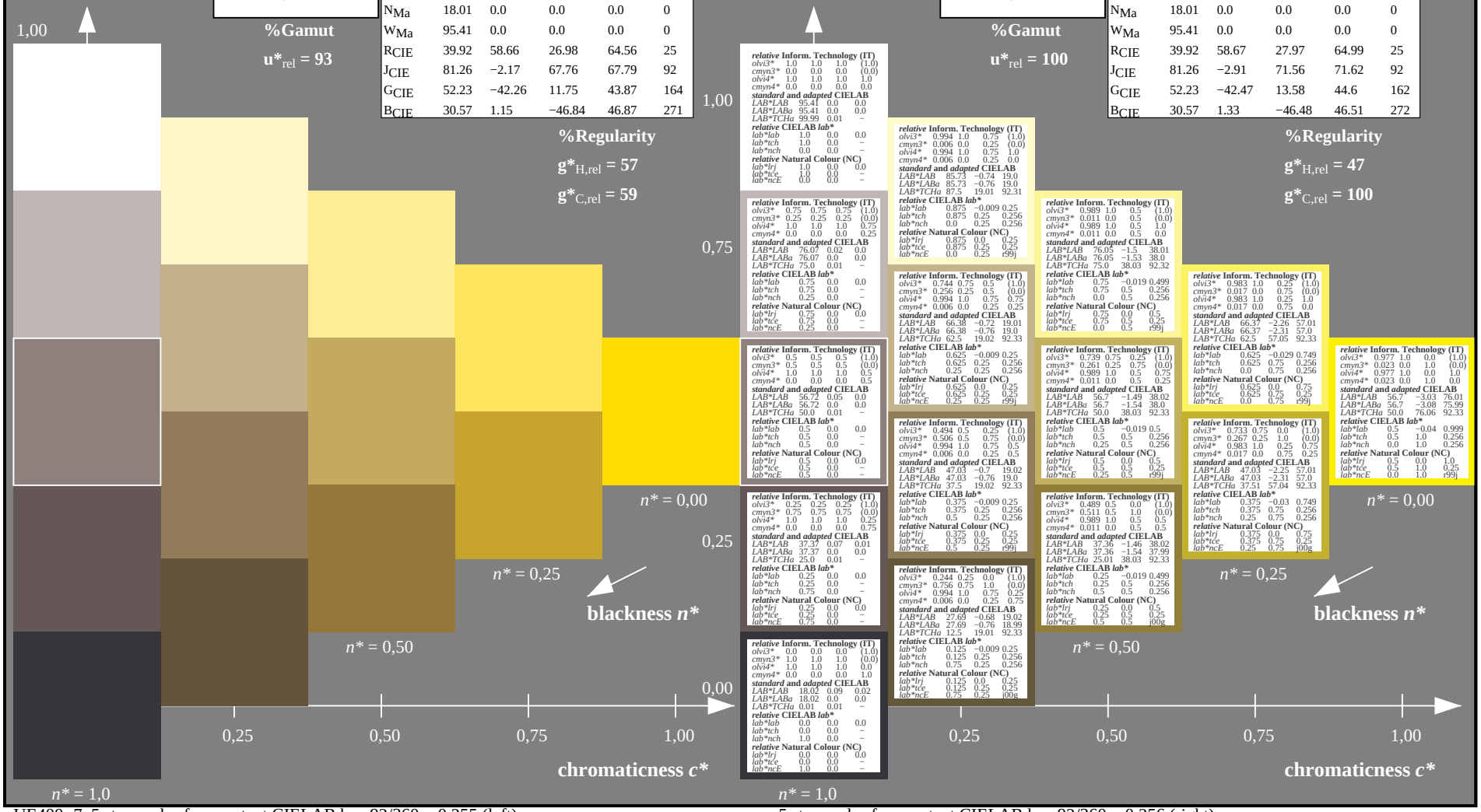
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



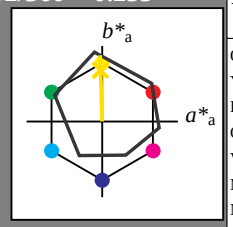
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

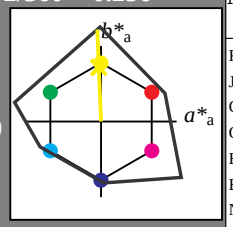
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

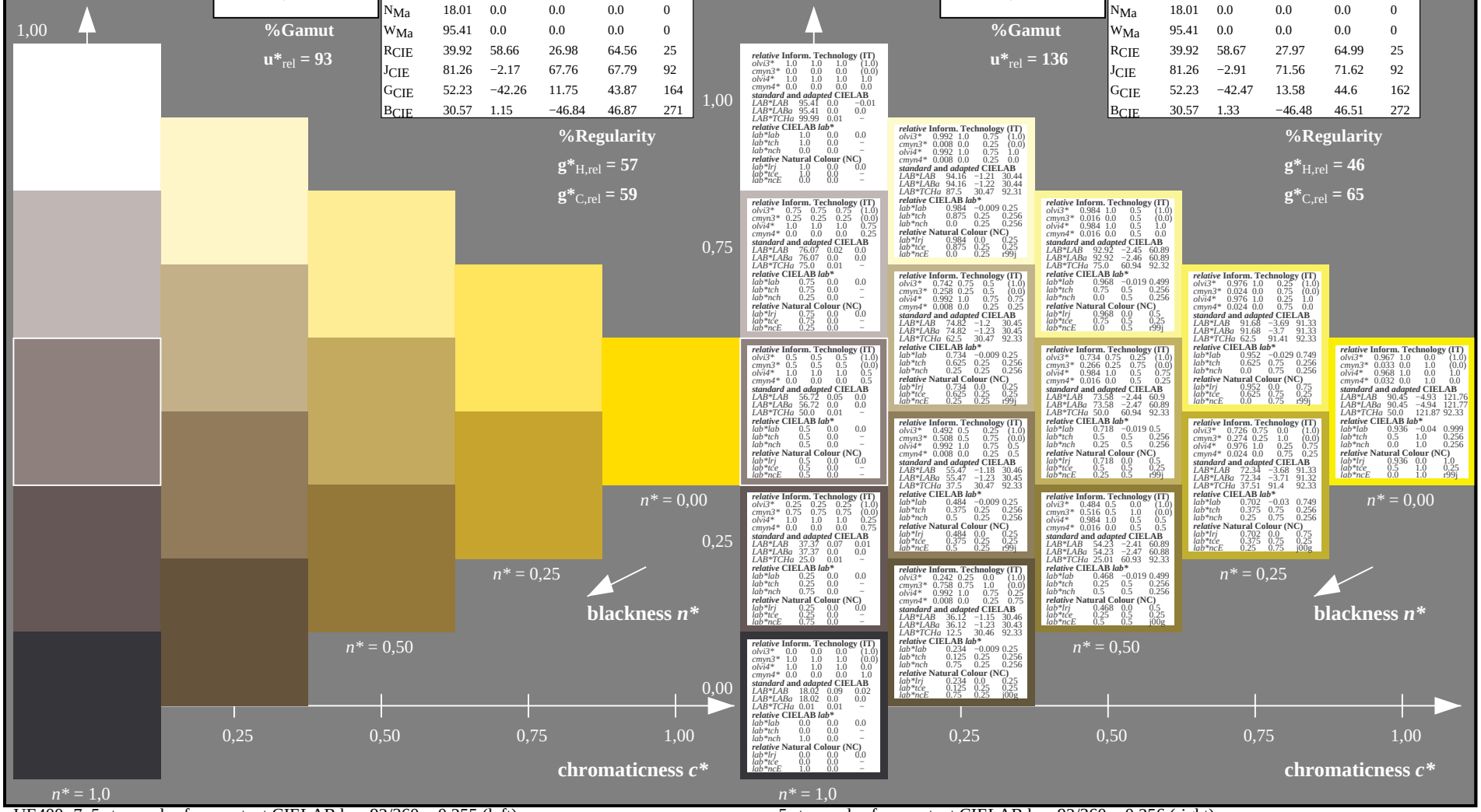
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



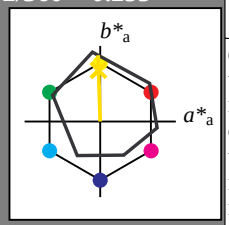
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

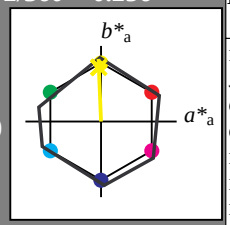
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

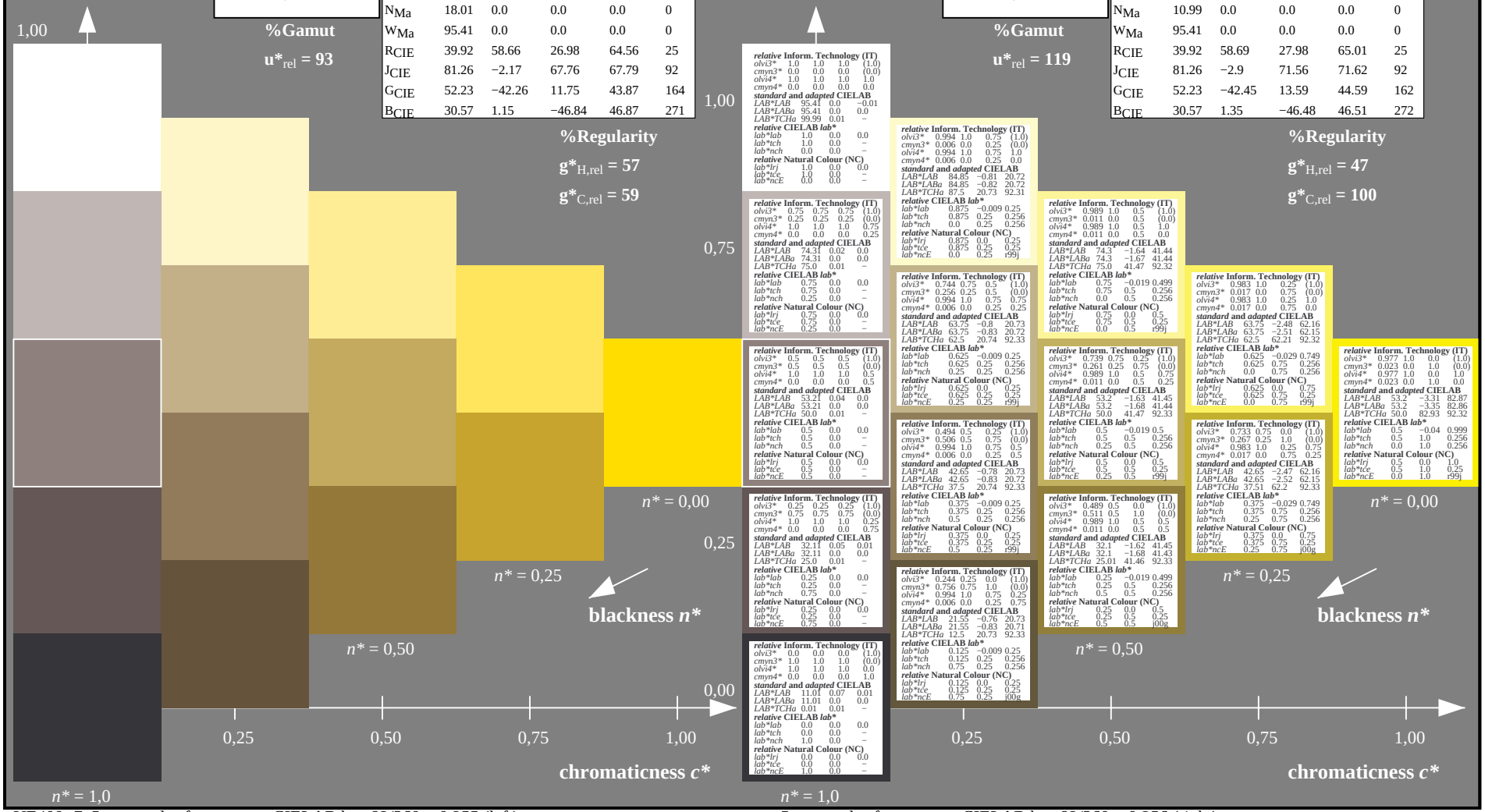
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



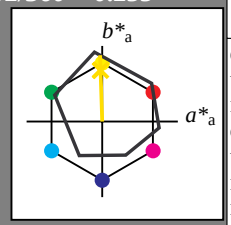
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

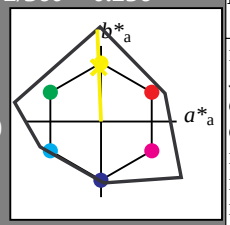
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

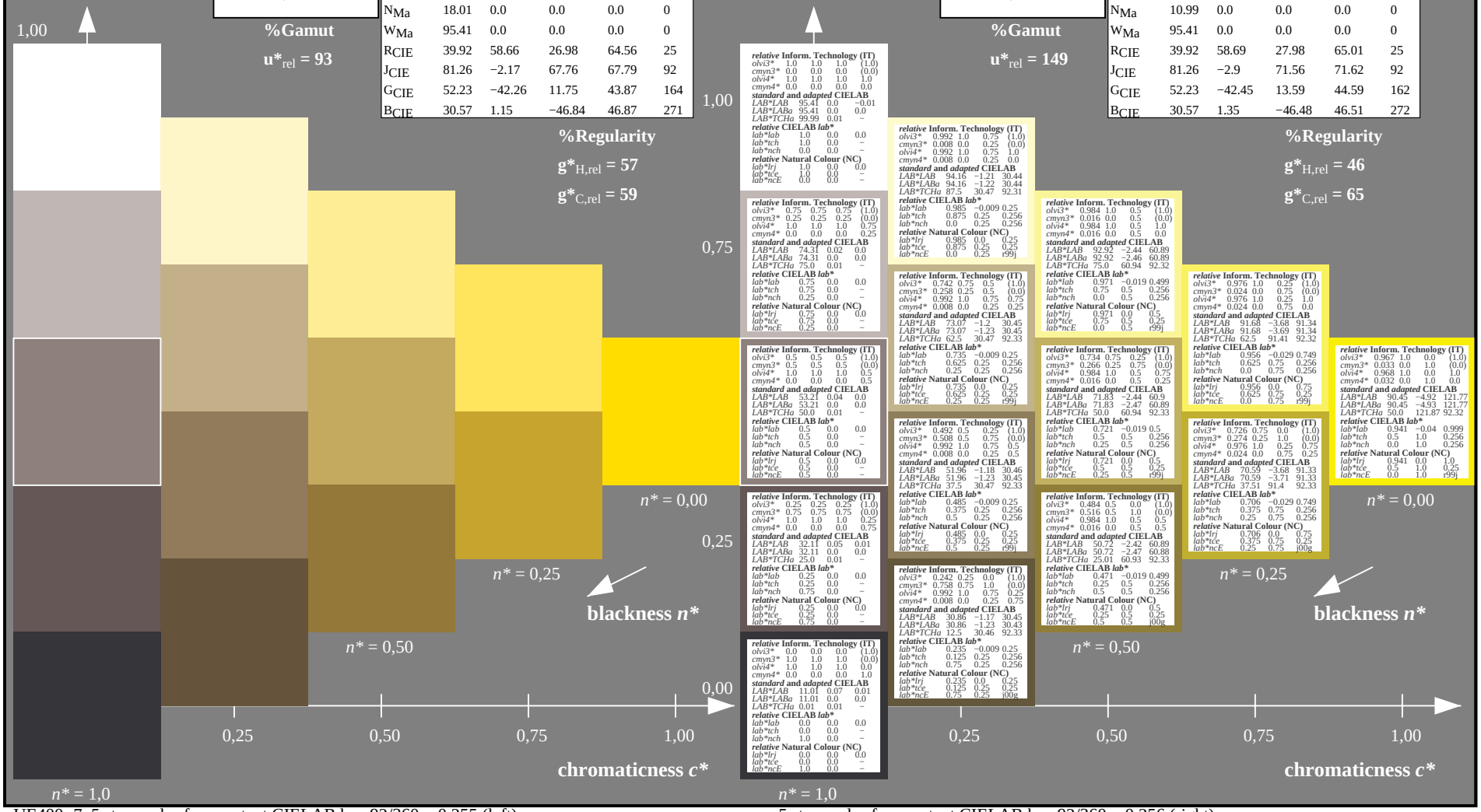
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



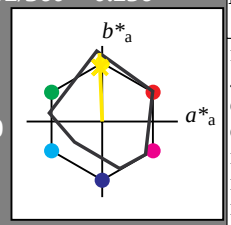
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

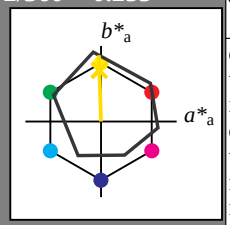
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

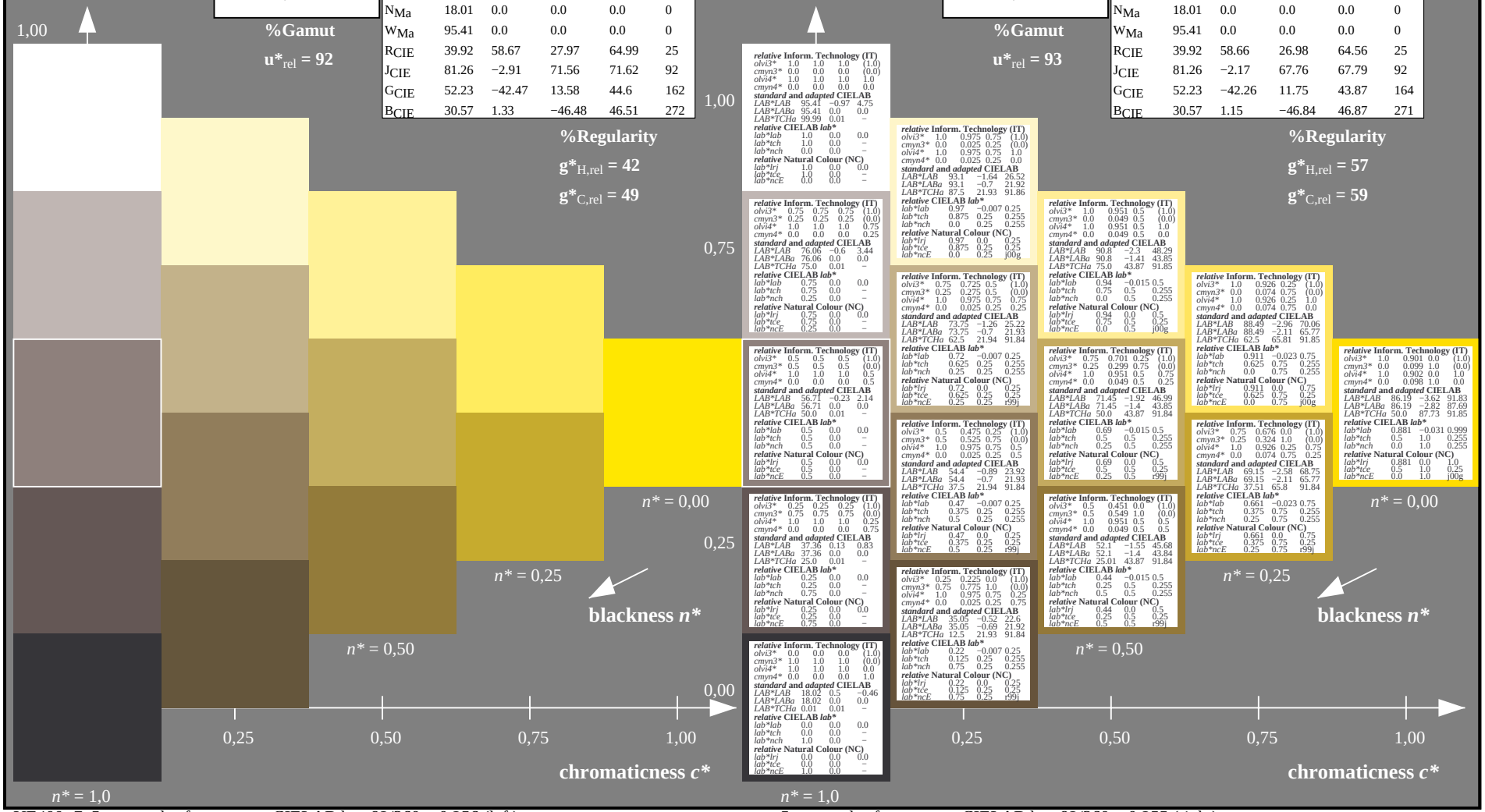
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



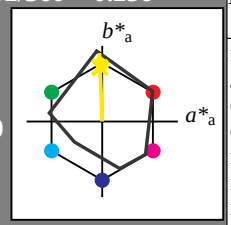
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

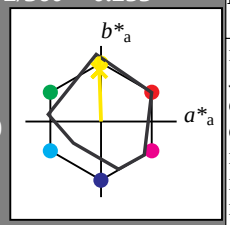
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

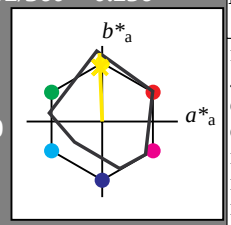
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

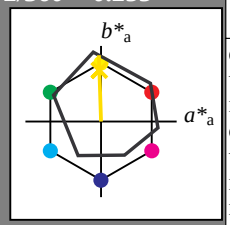
$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

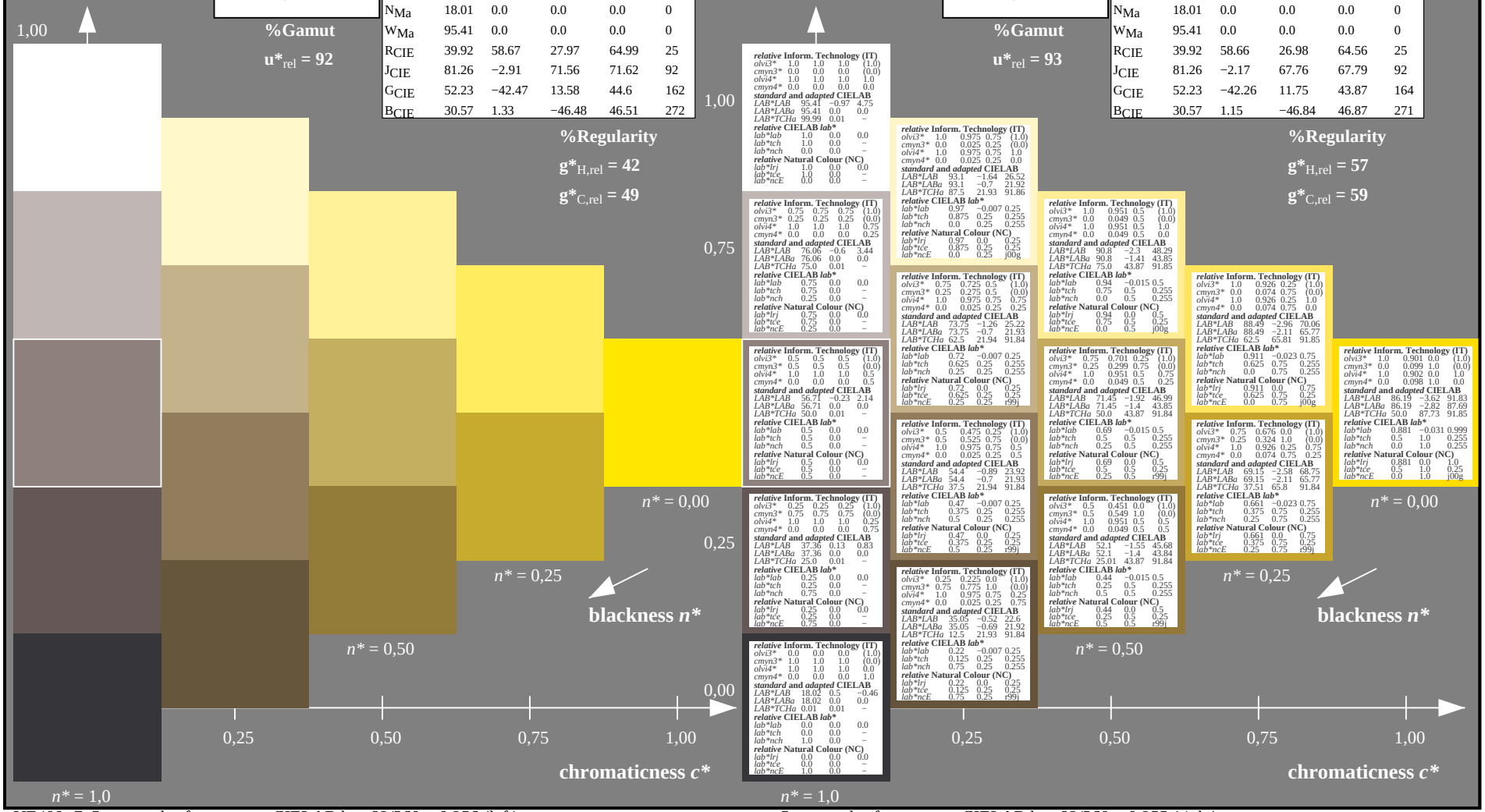
%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



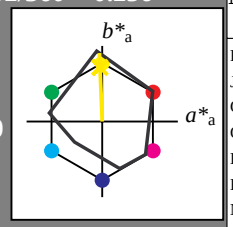
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

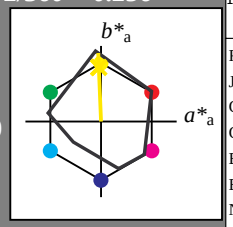
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

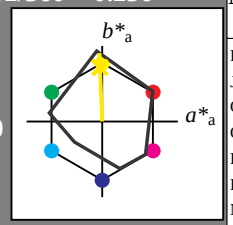
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

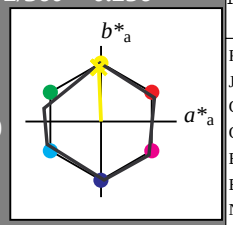
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

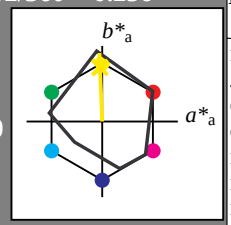
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

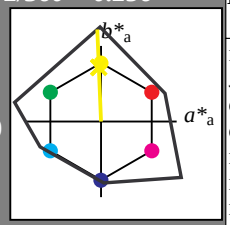
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

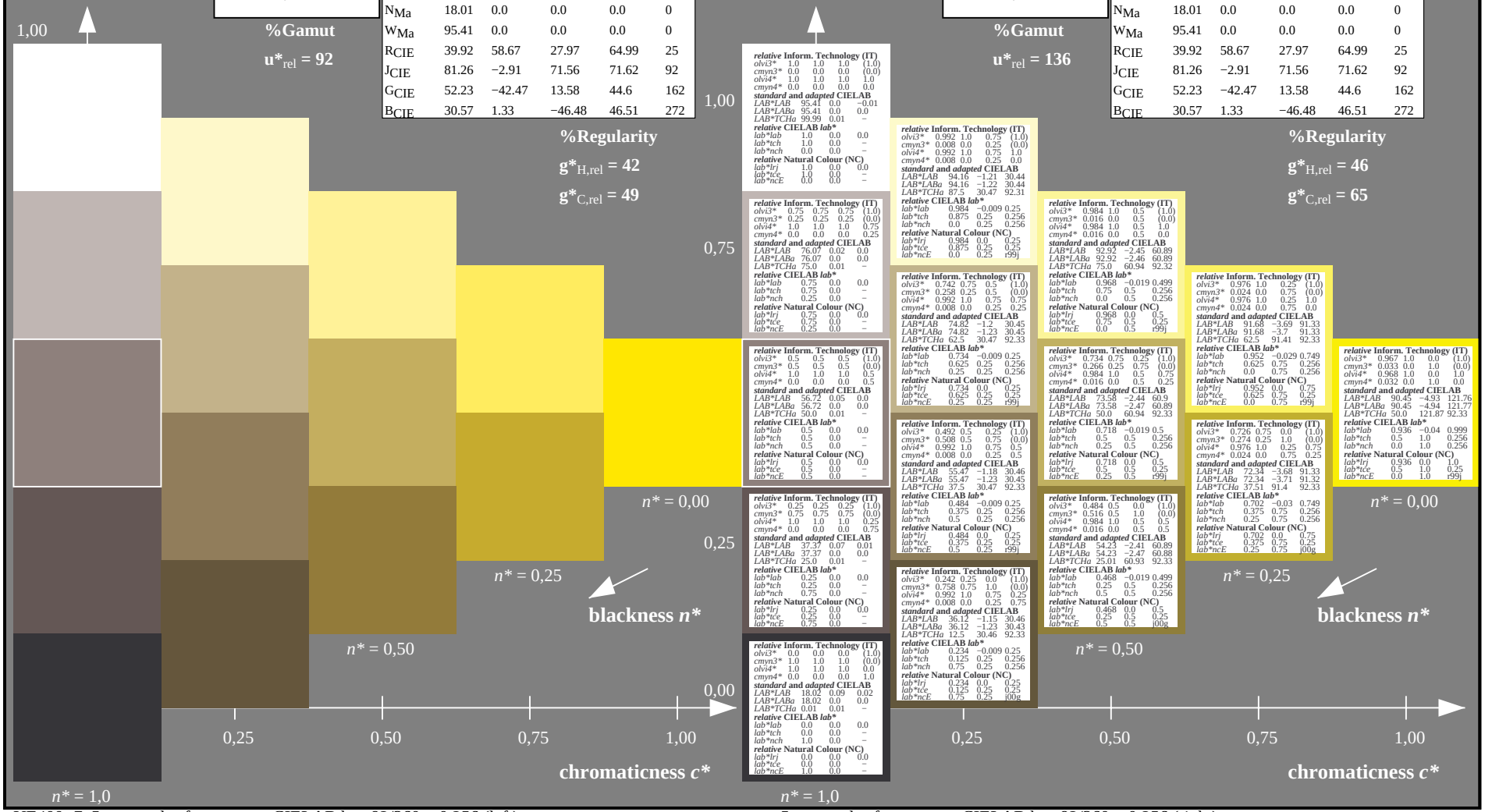
%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



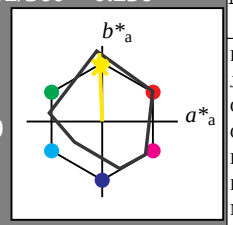
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

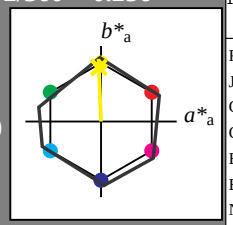
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

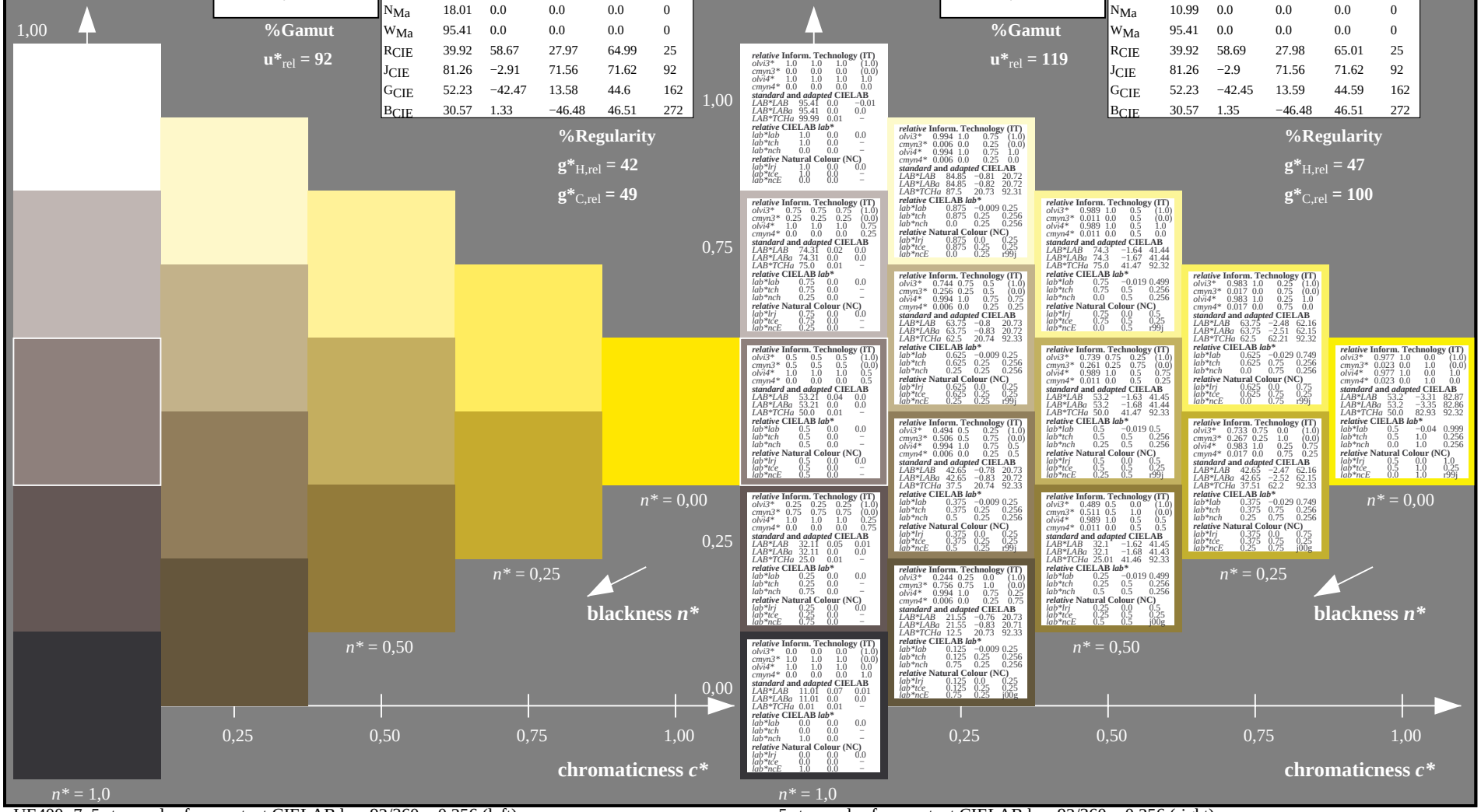
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



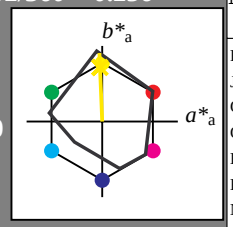
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

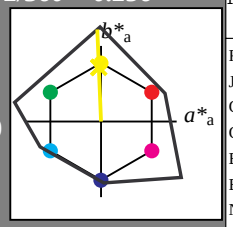
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

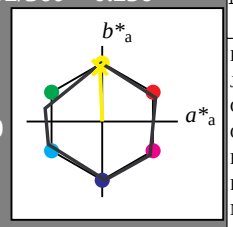
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

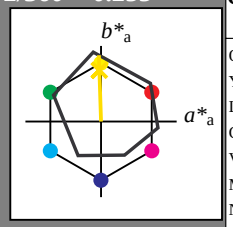
$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

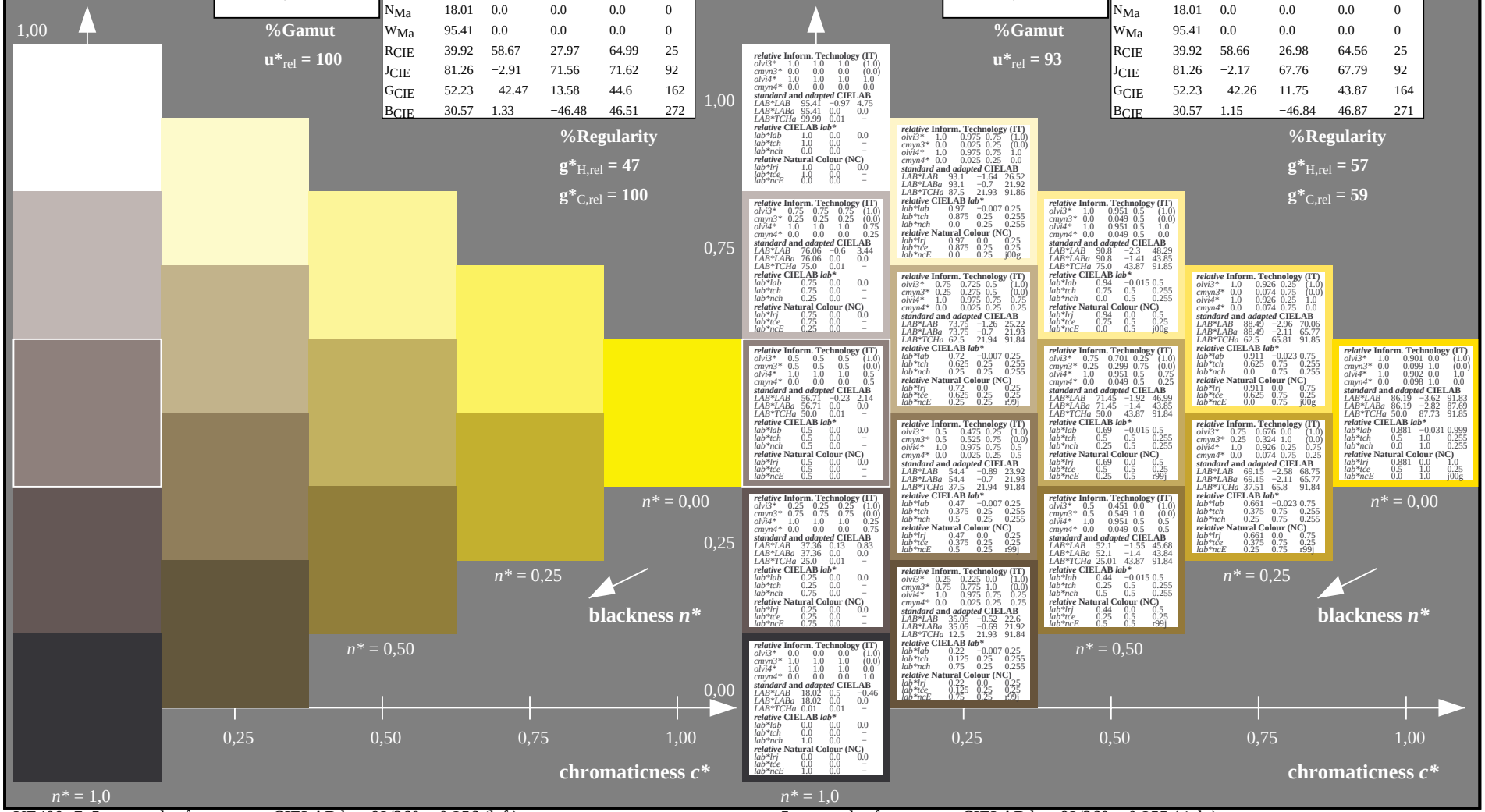
%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



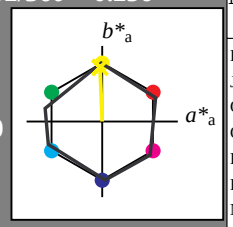
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

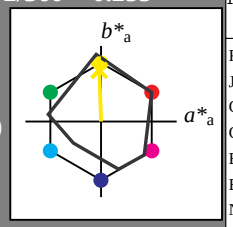
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

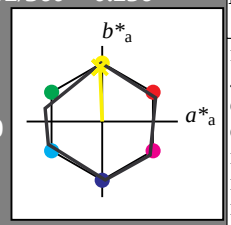
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

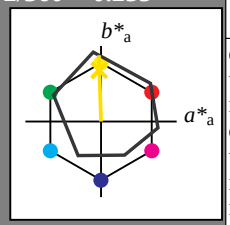
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

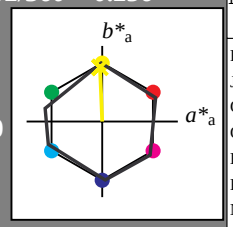
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

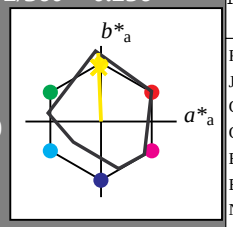
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

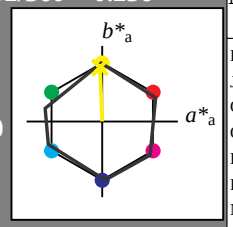
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

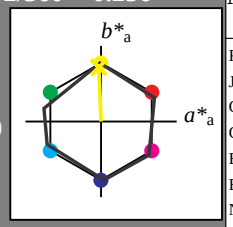
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

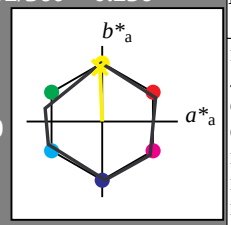
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

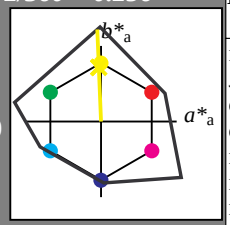
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

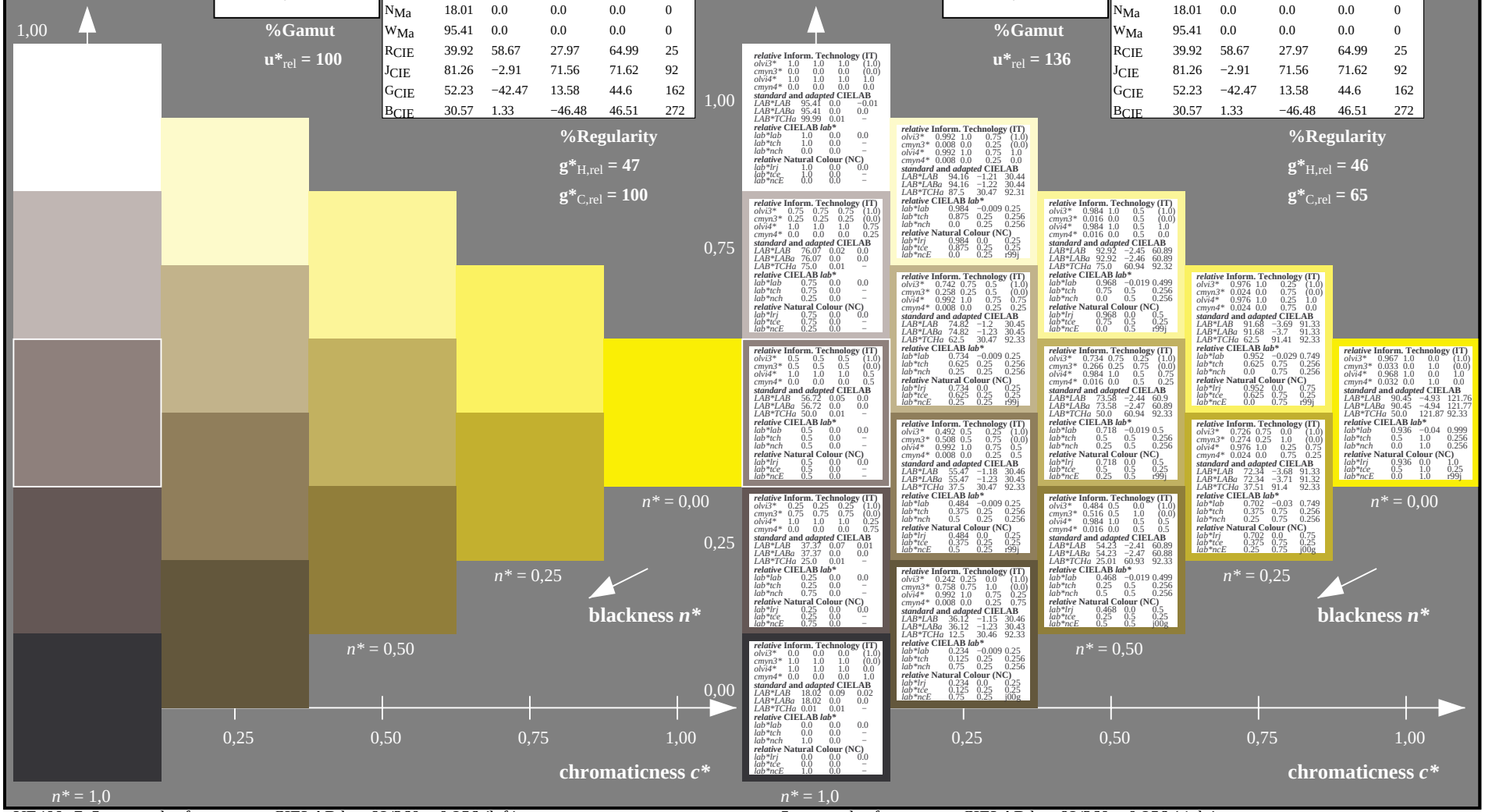
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



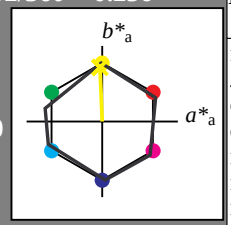
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

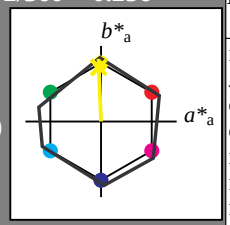
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness

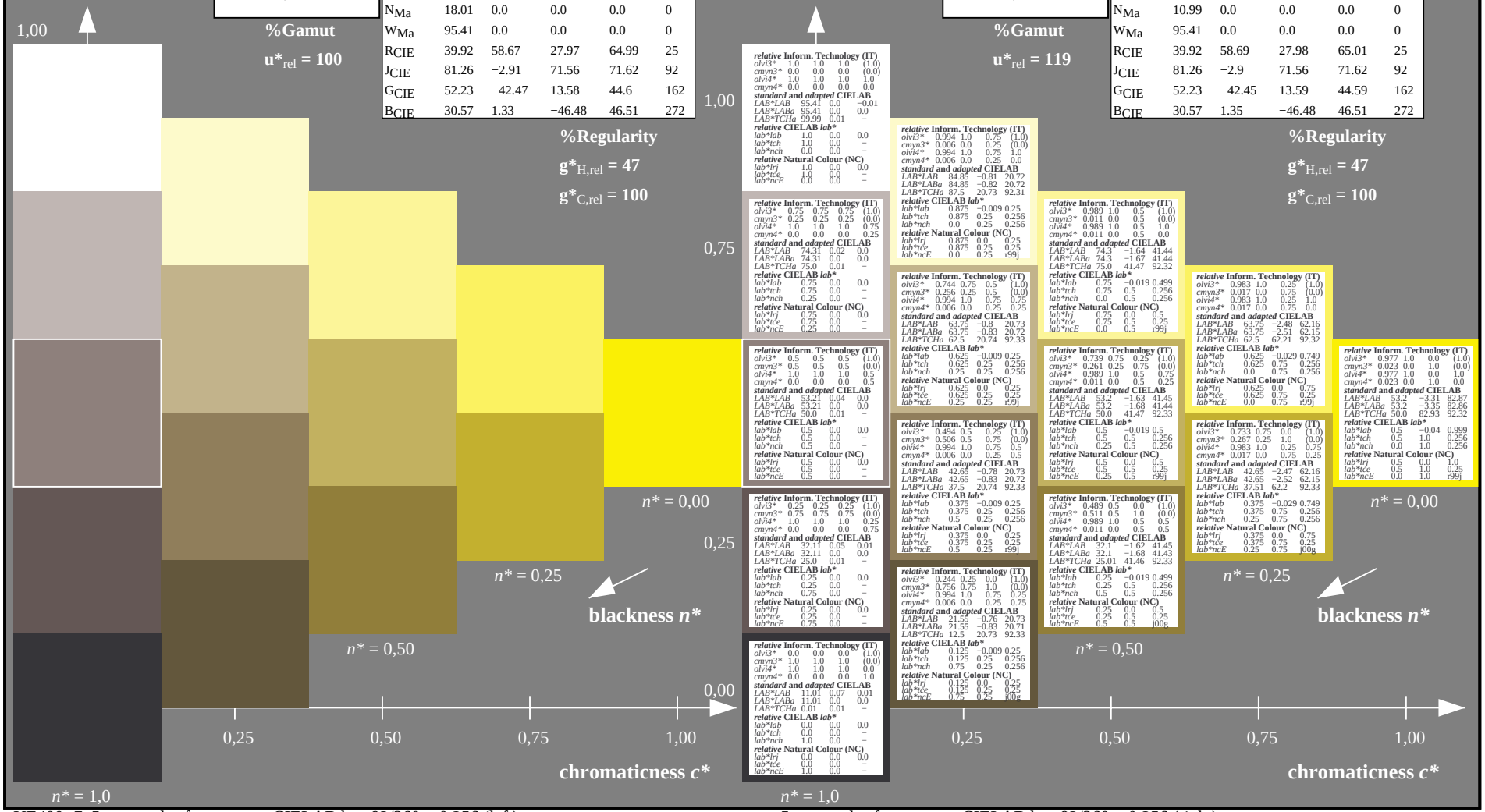


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



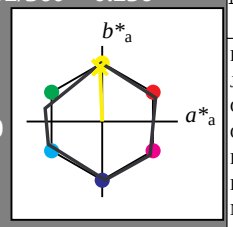
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

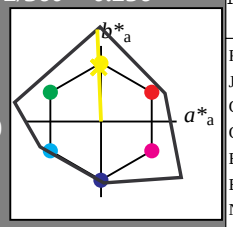
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

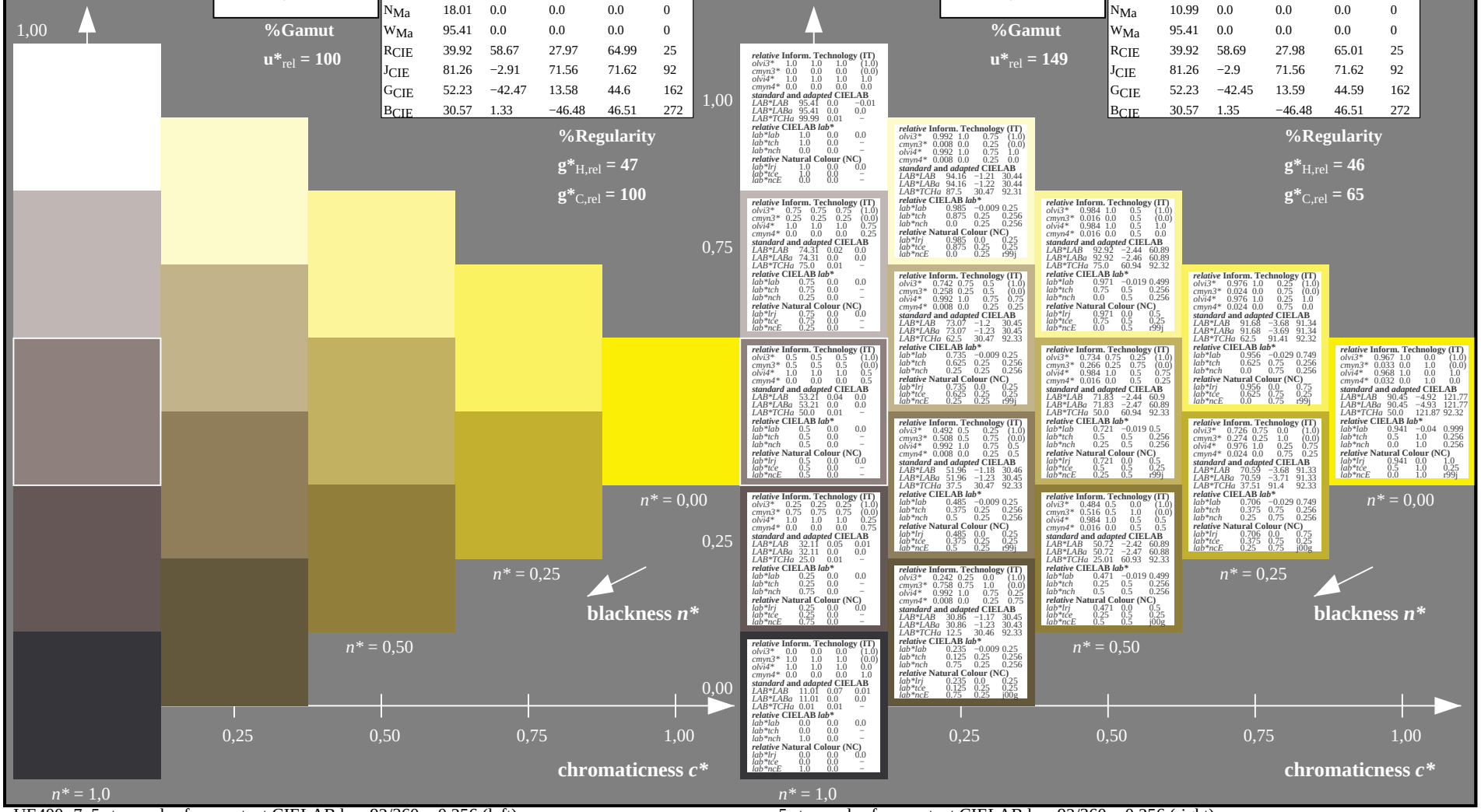
%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



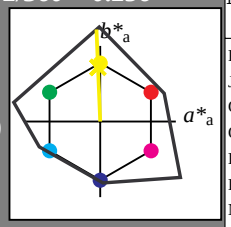
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

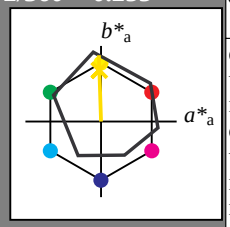
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

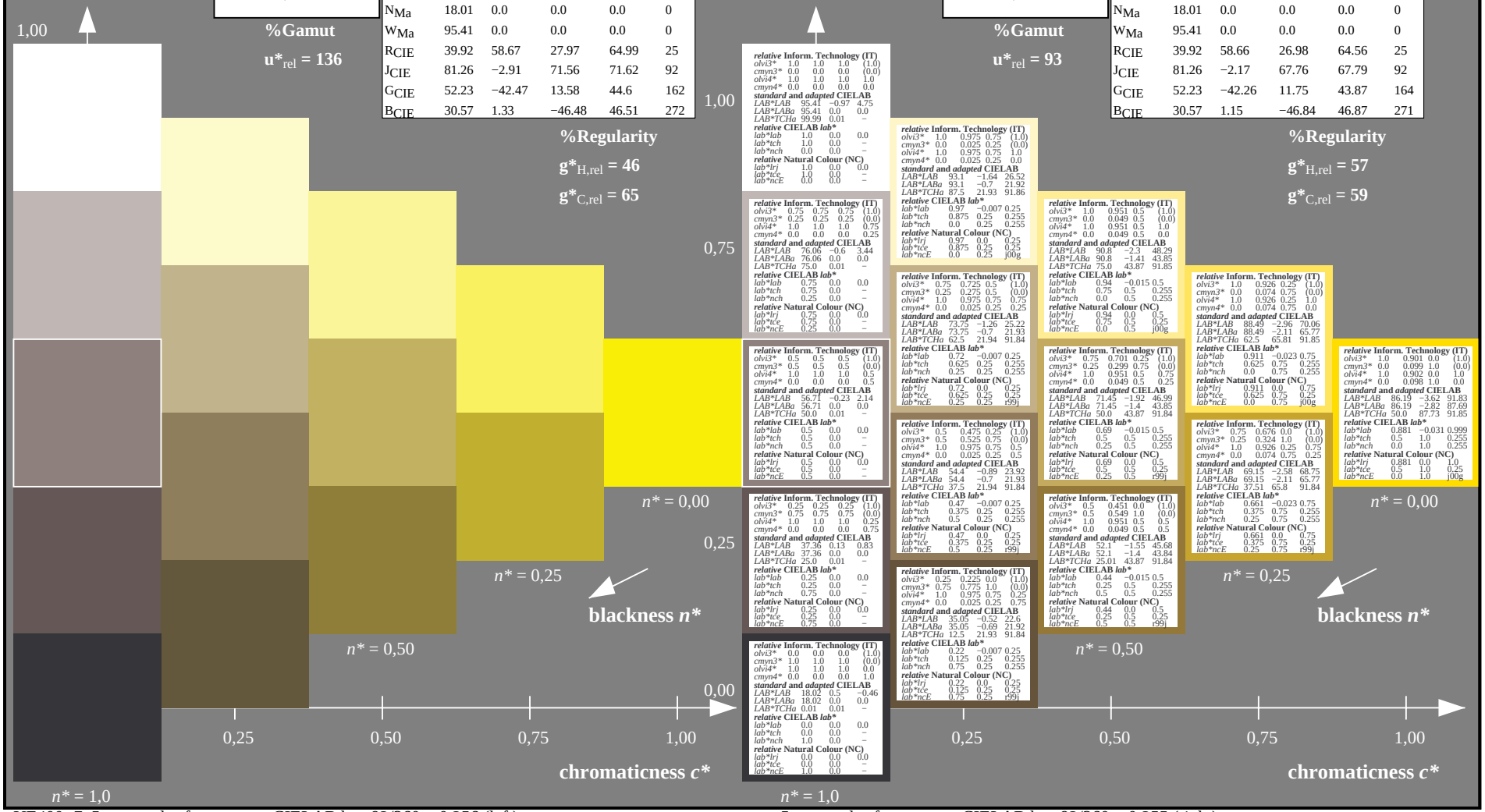
%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



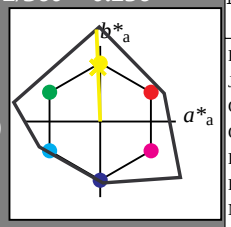
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

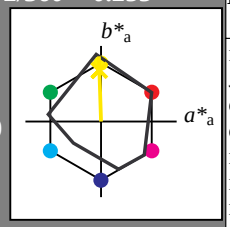
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

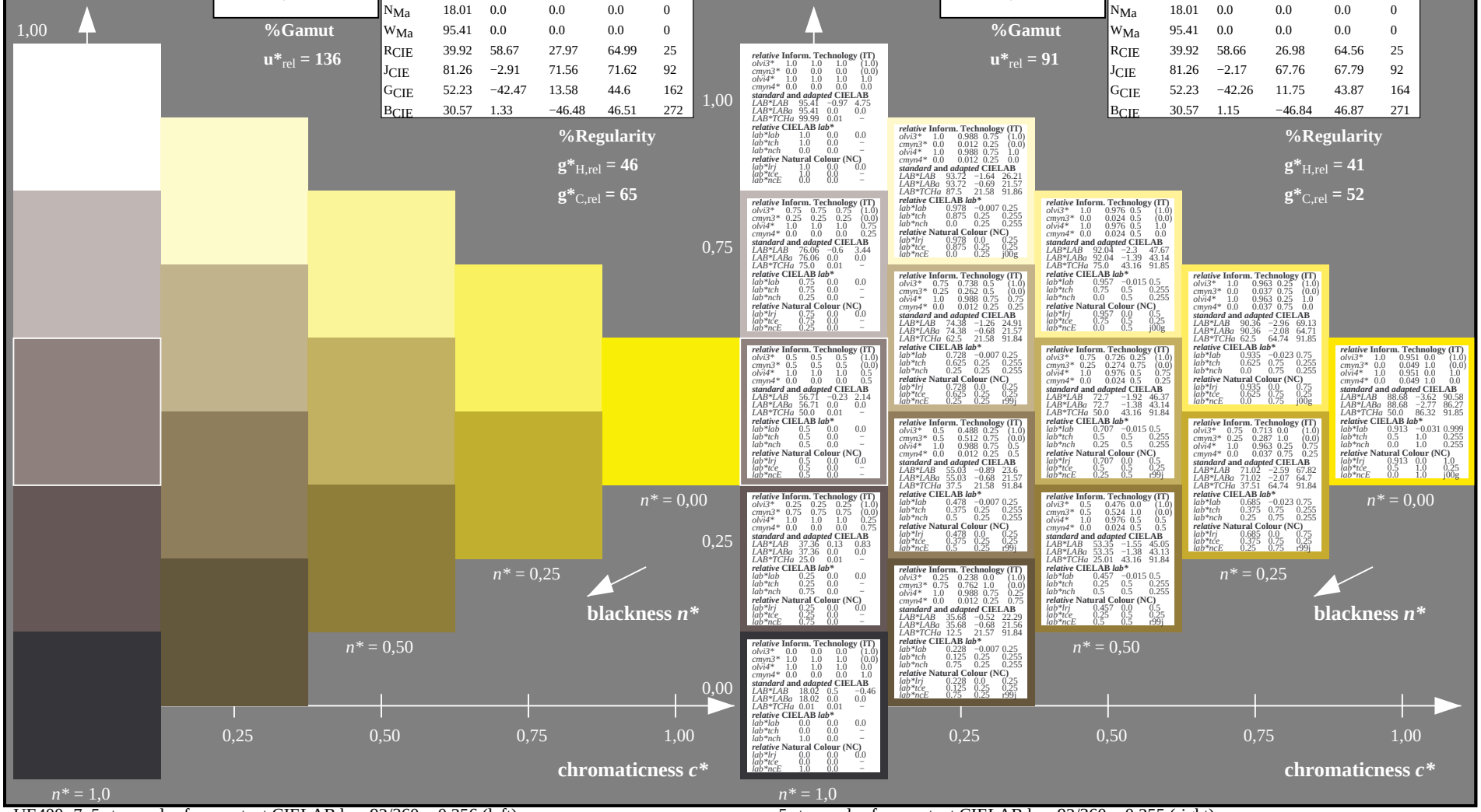
%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



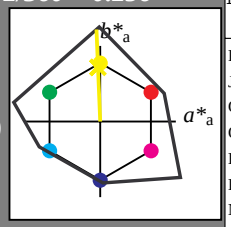
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

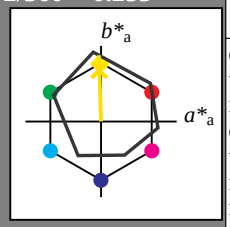
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

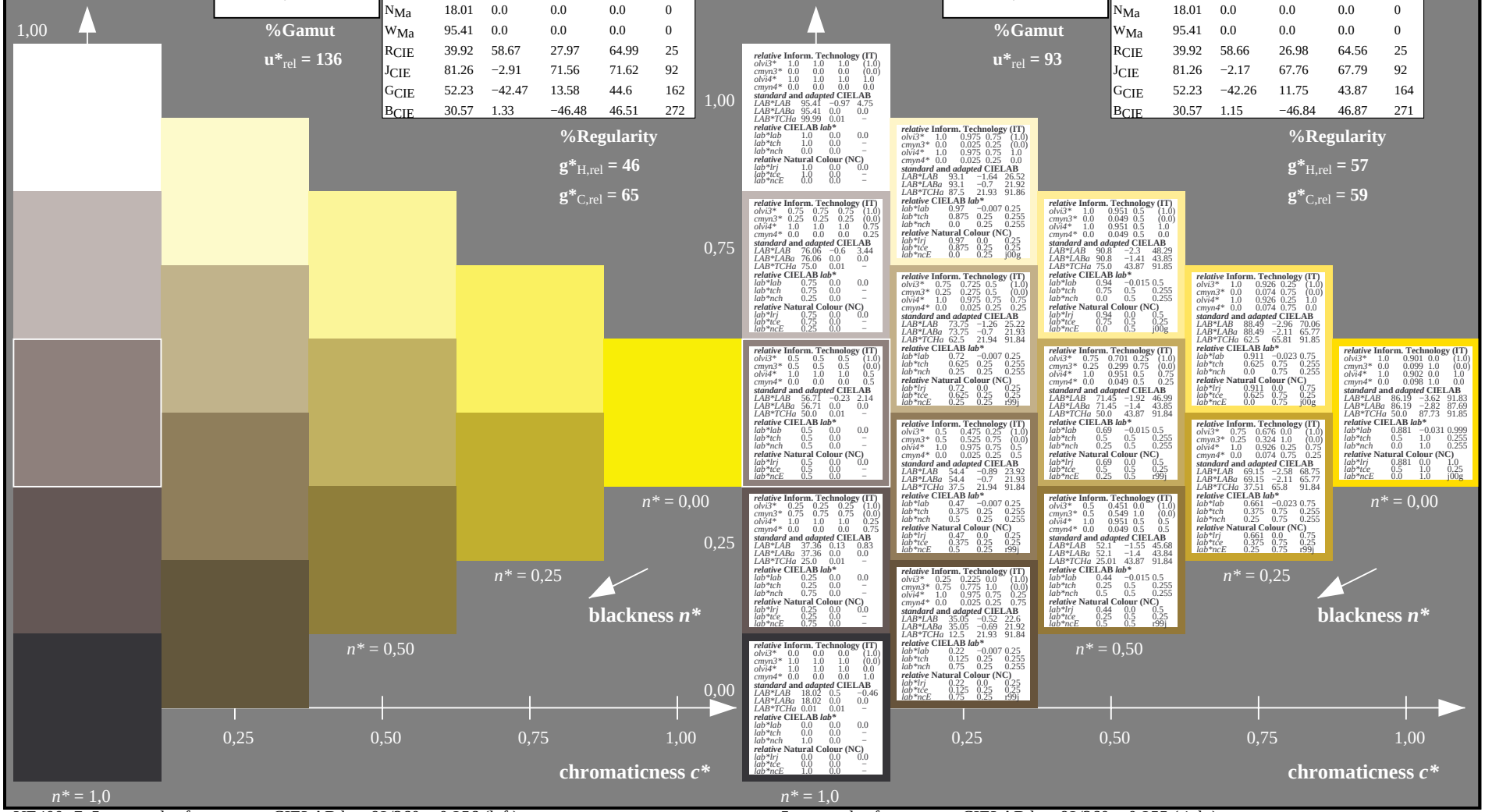
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



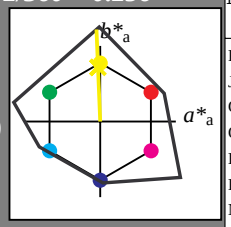
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

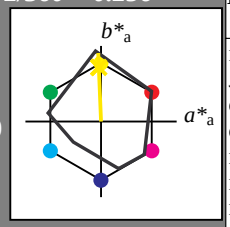
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

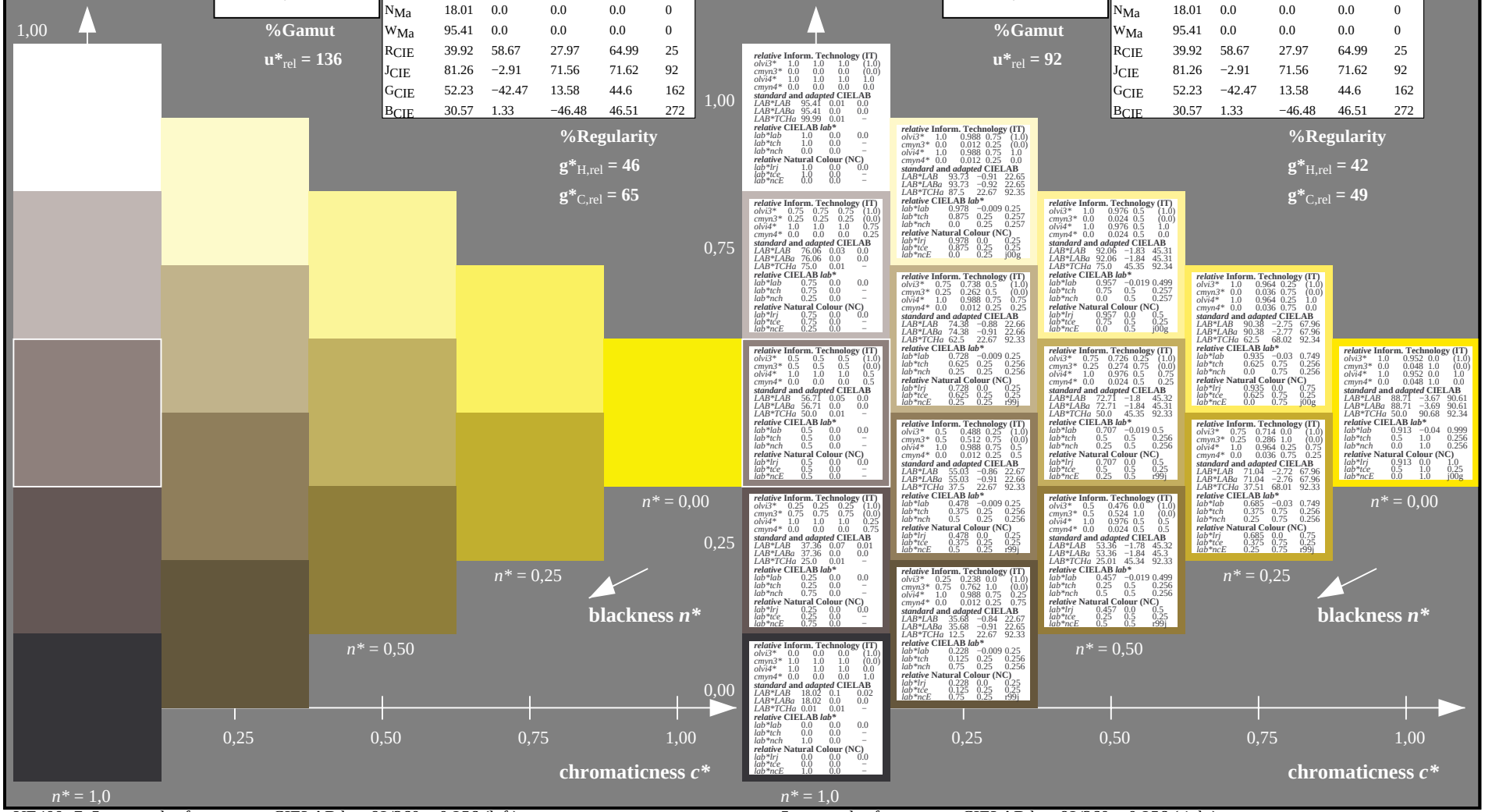
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



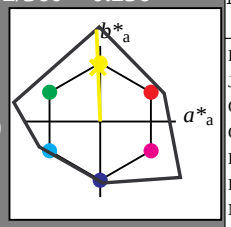
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

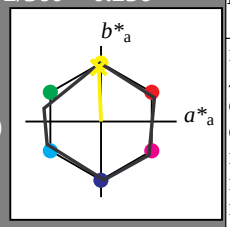
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

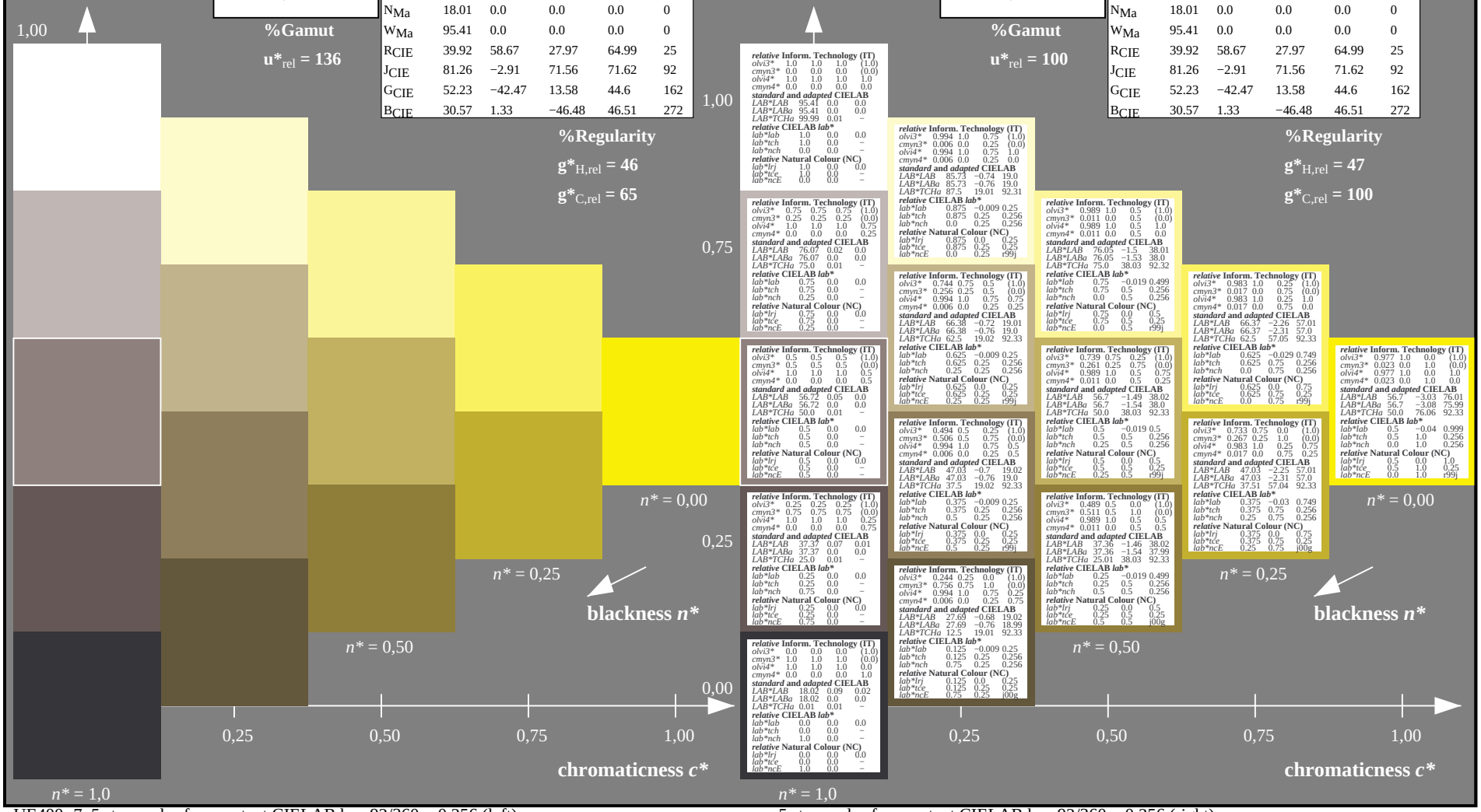
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



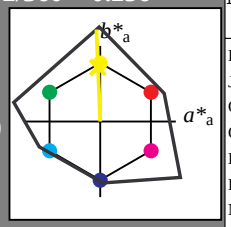
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

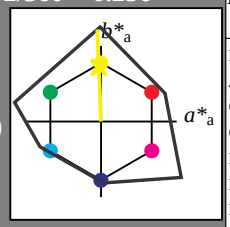
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

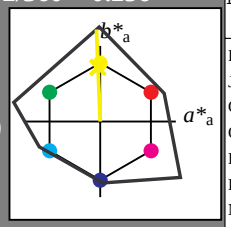
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

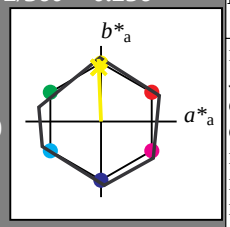
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

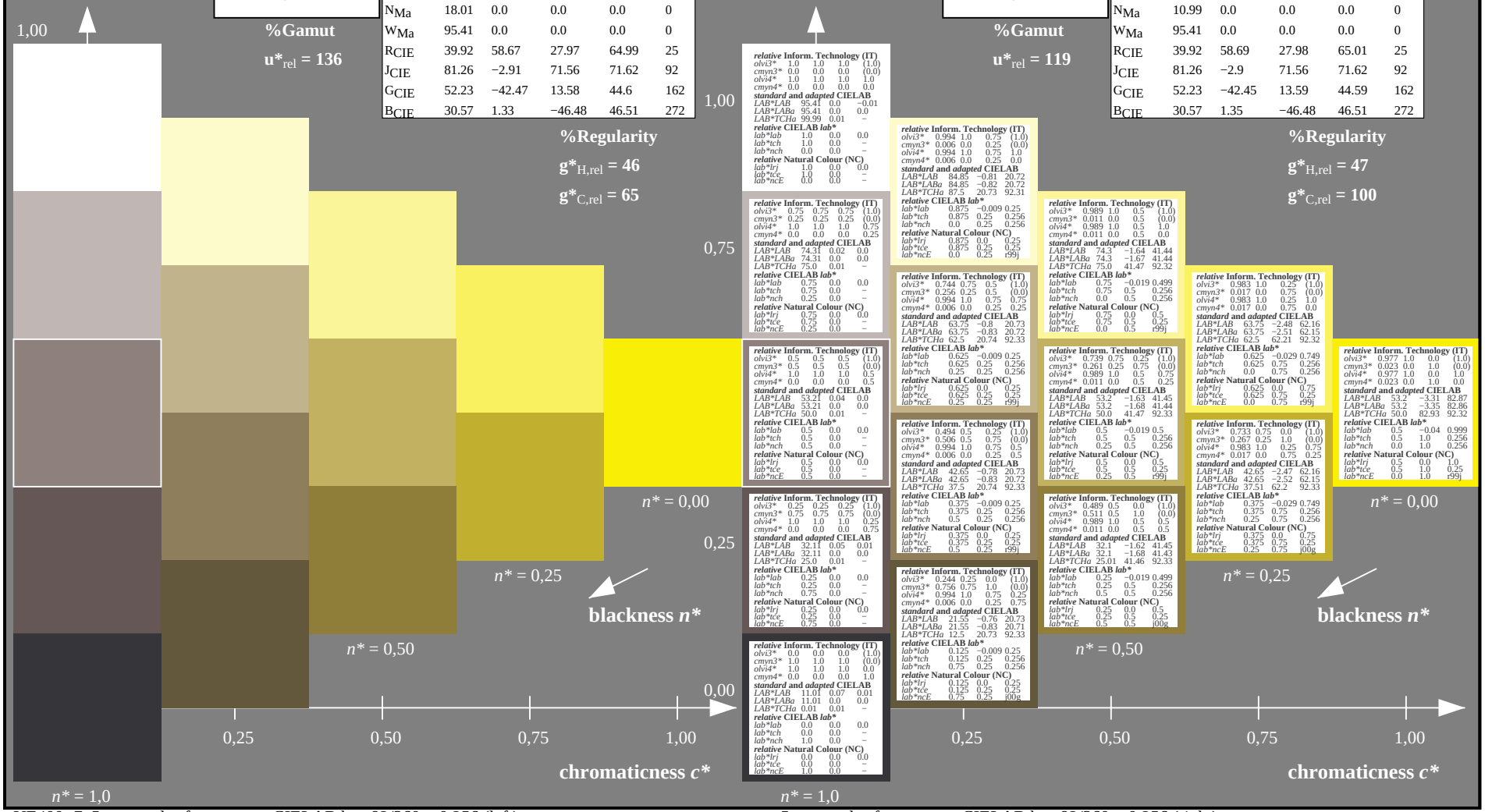
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



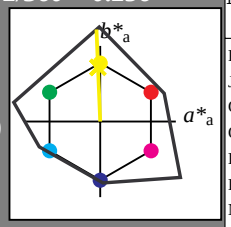
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

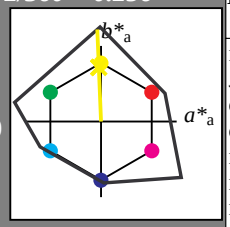
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness

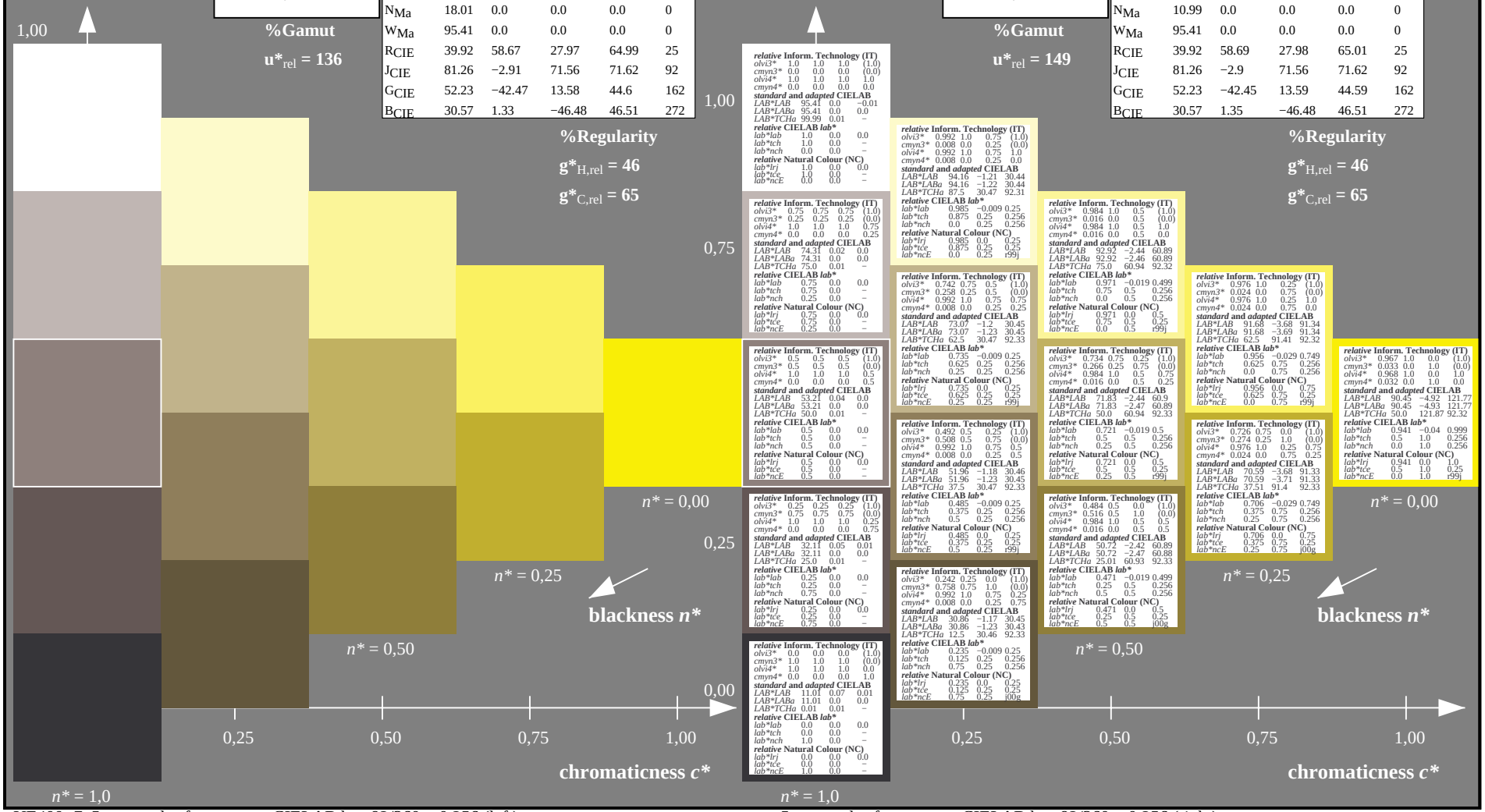


%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65



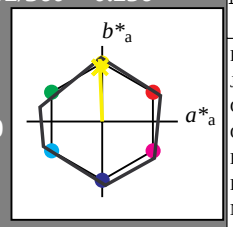
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

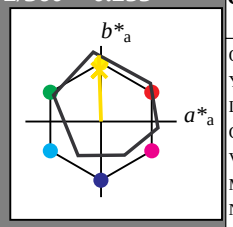
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

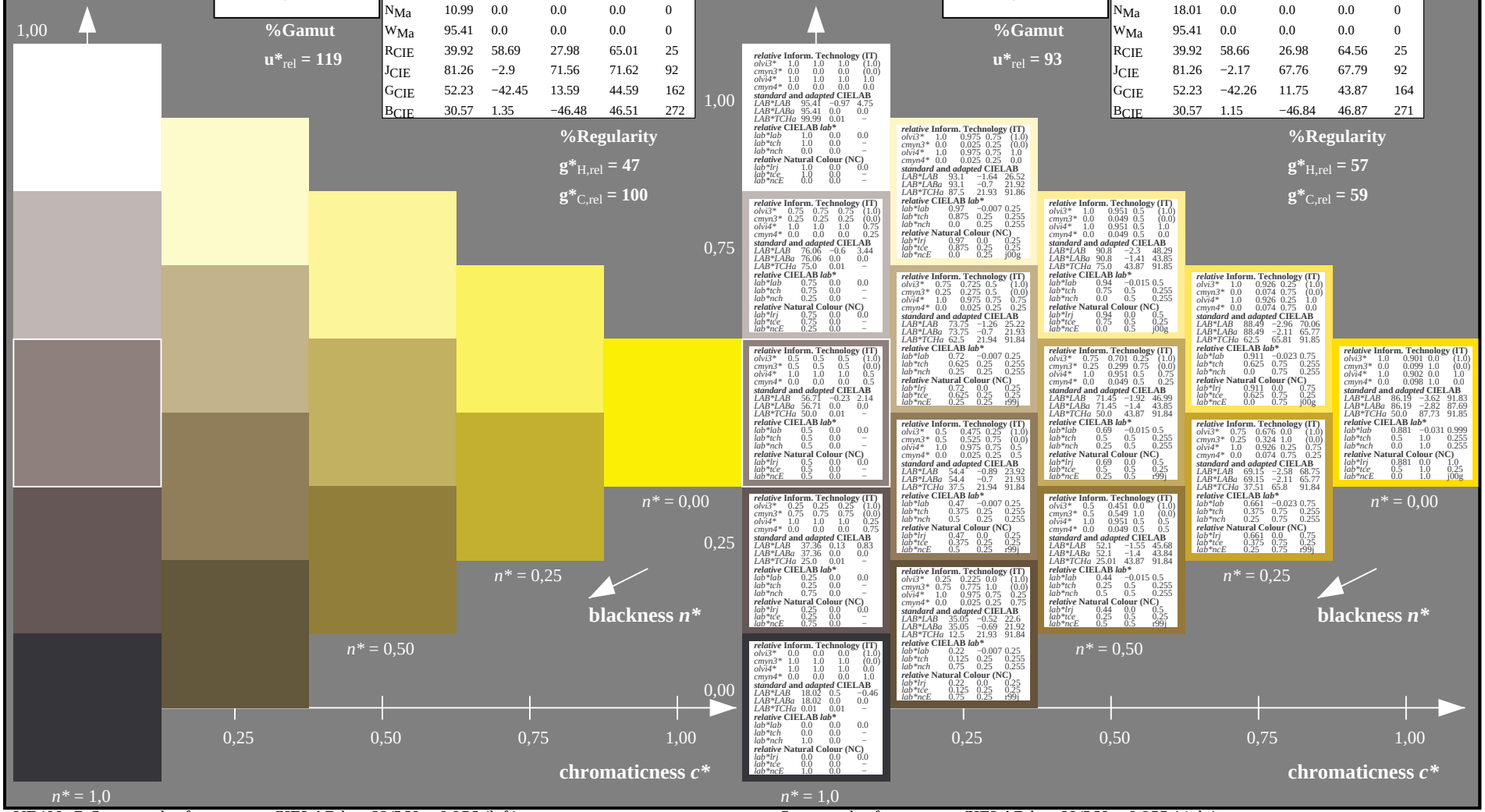
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



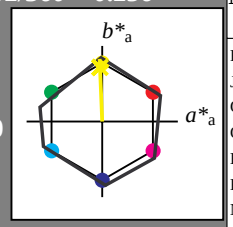
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

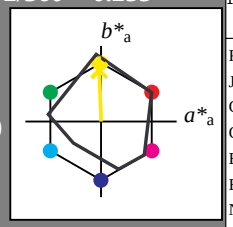
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

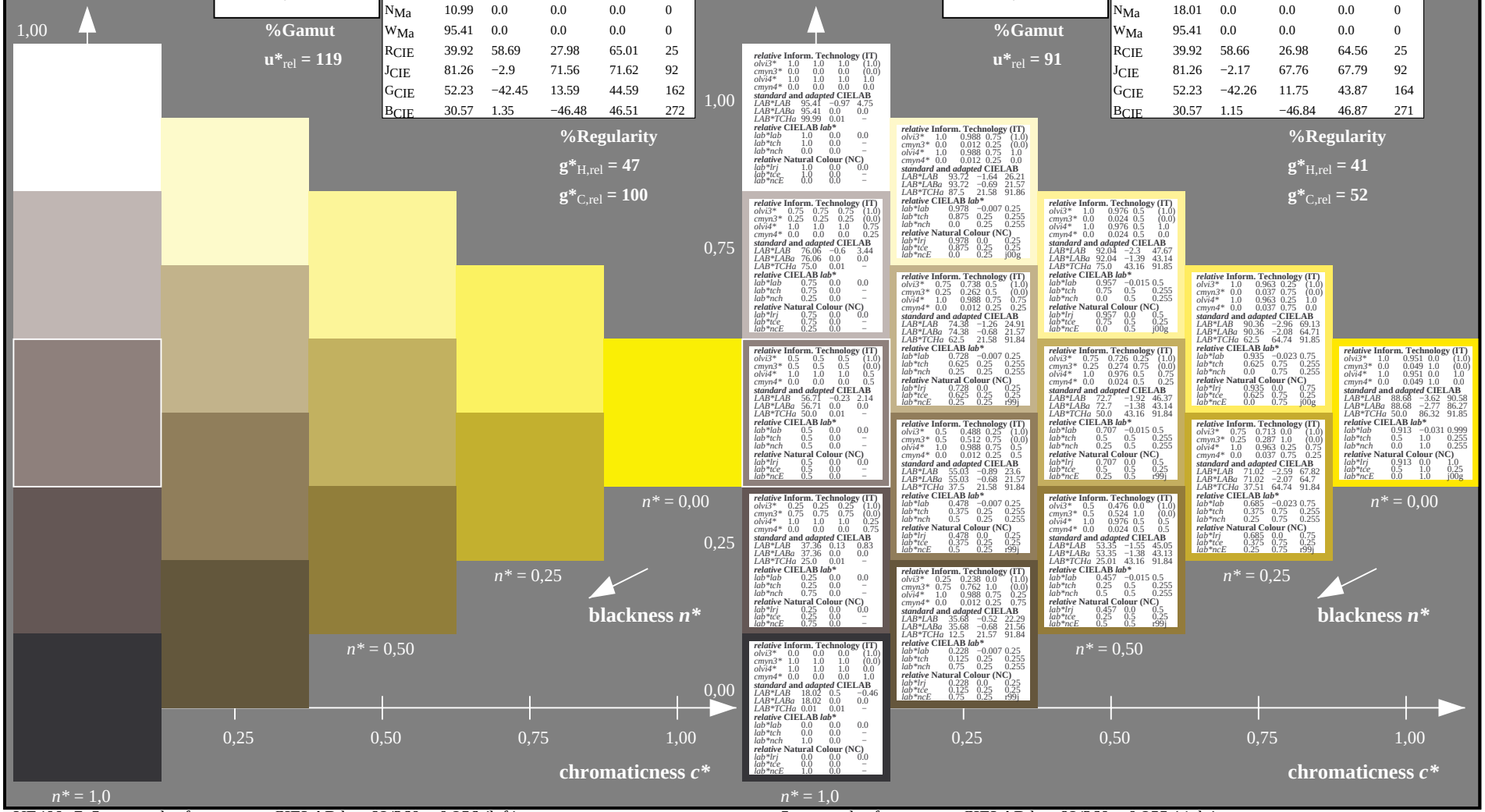
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



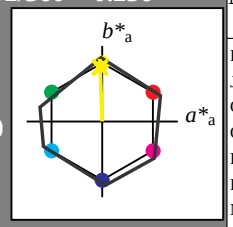
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

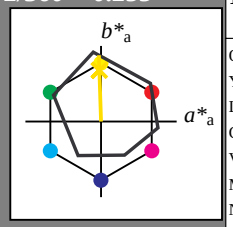
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

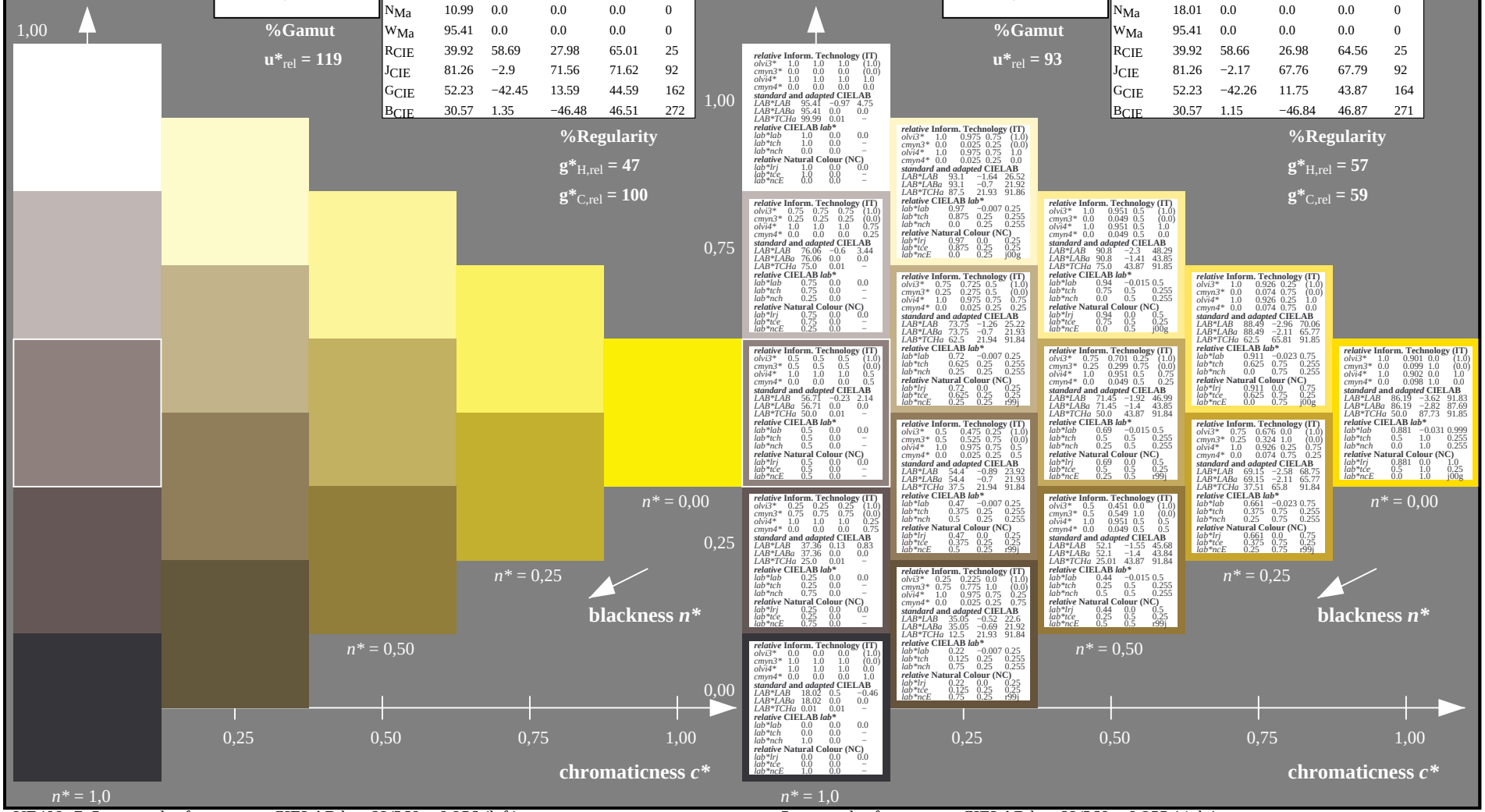
%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



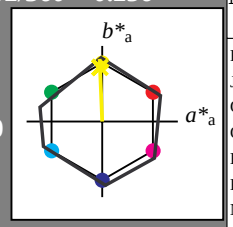
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

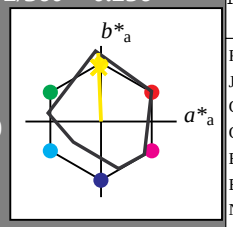
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

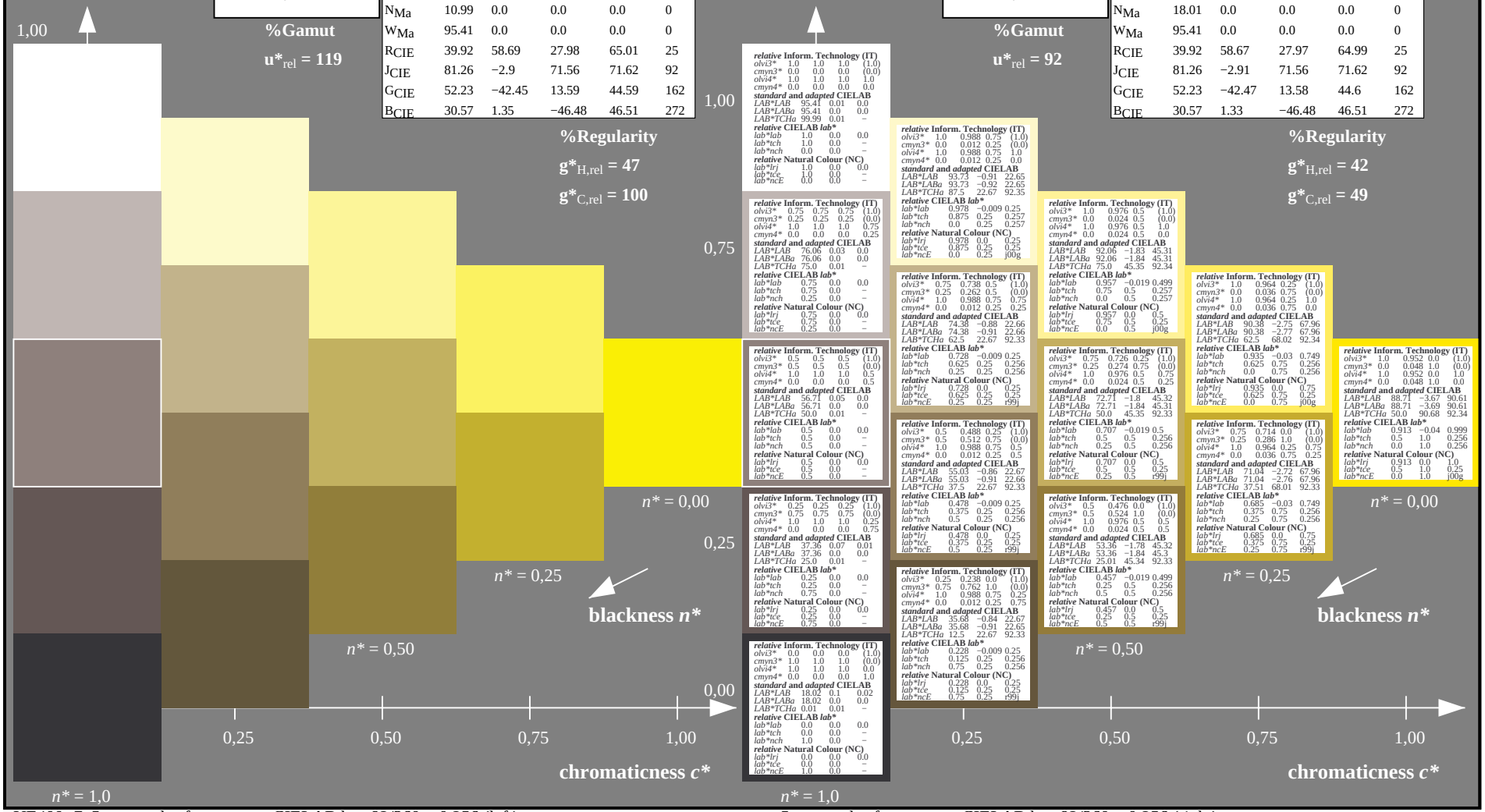
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



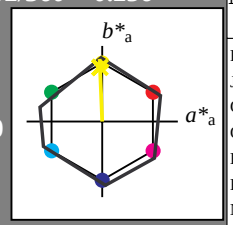
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

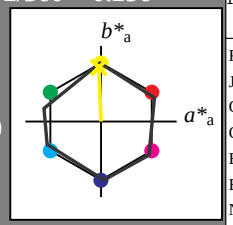
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

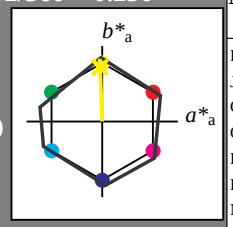
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

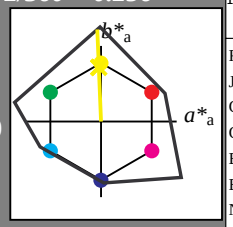
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

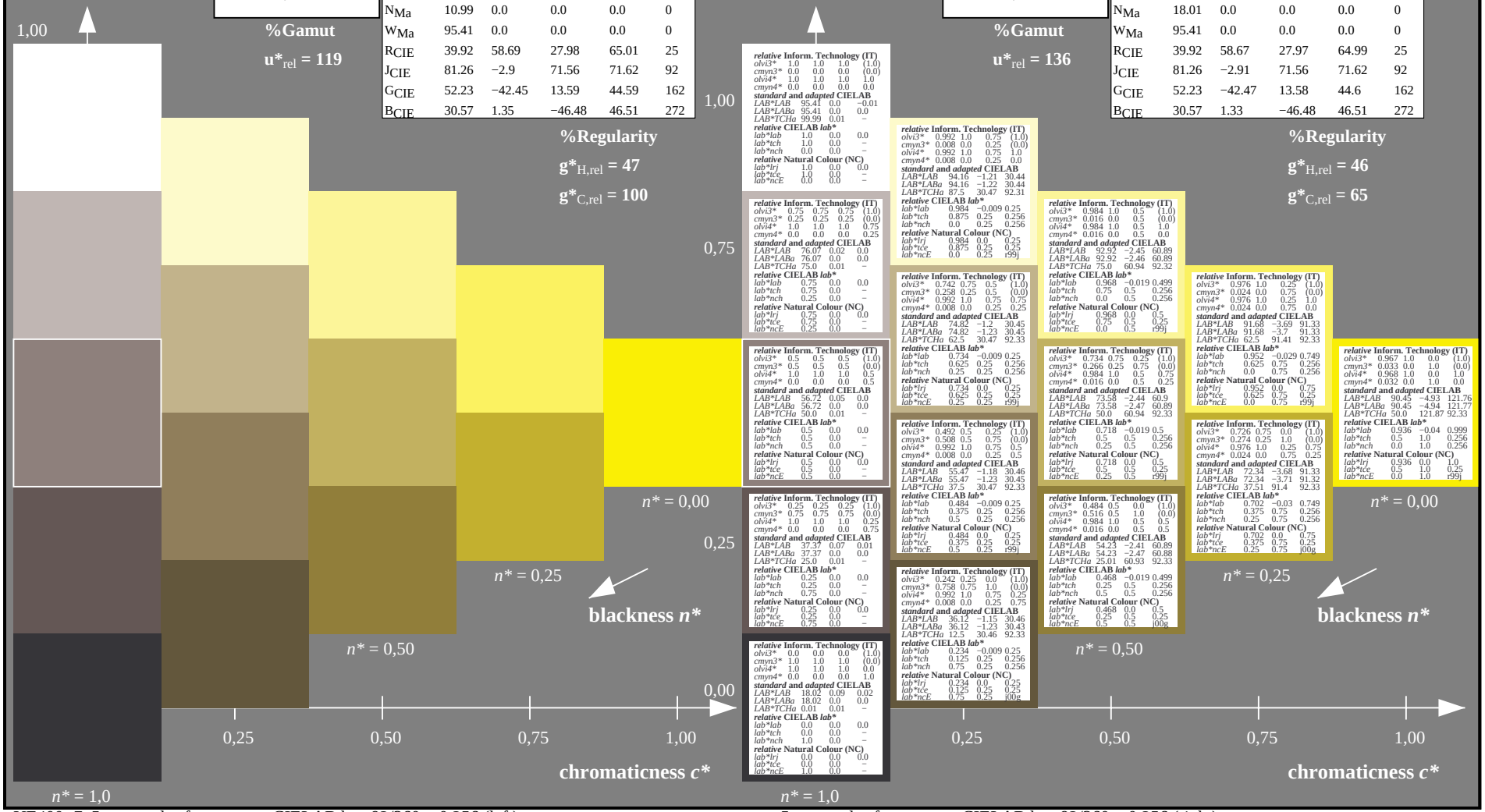
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



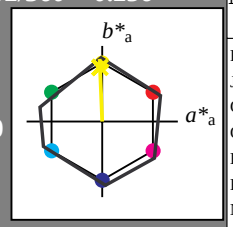
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

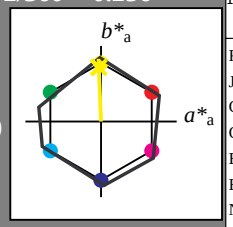
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

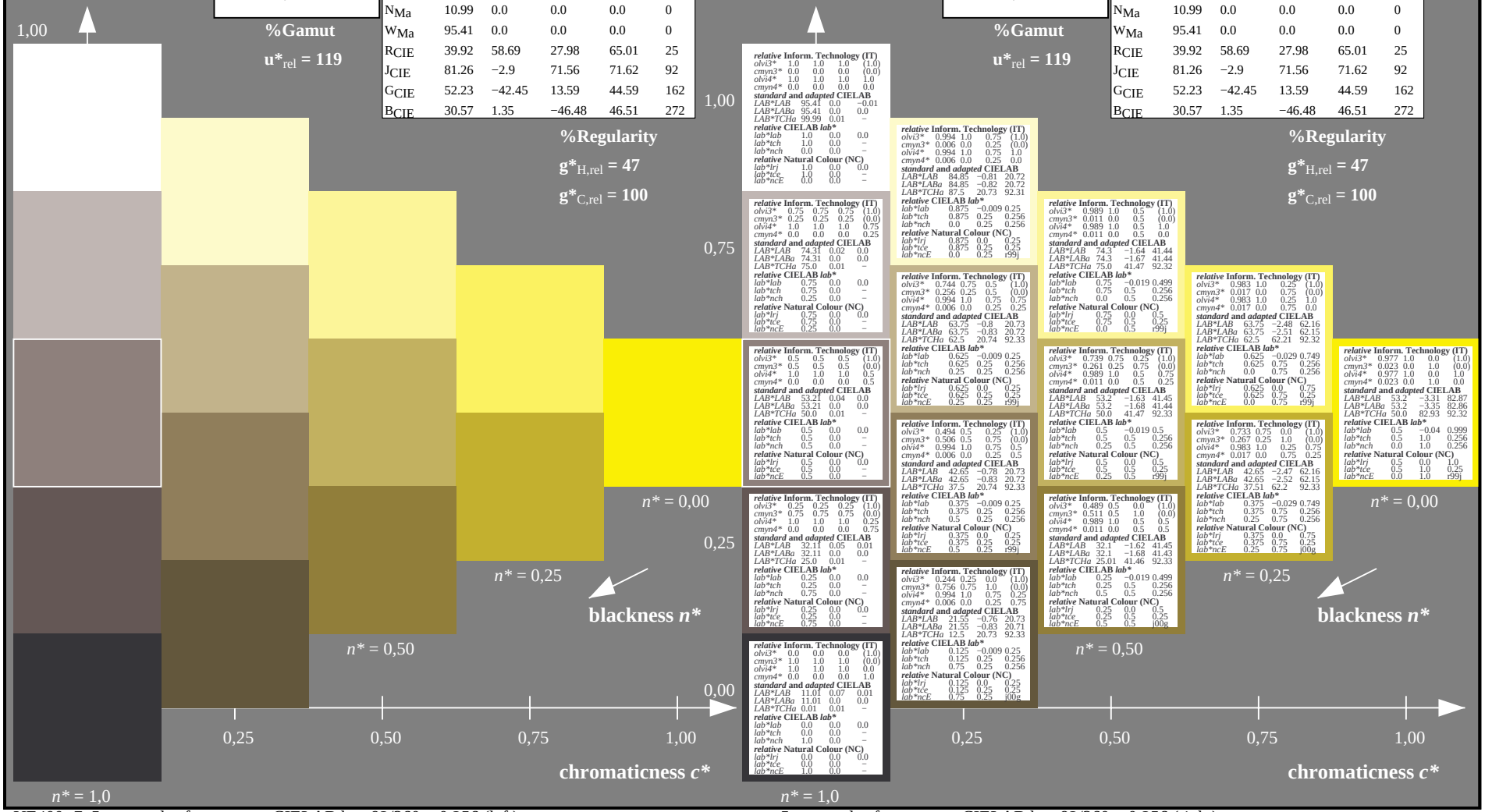
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



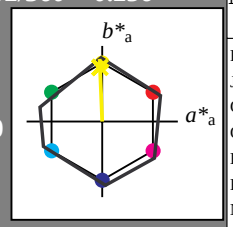
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

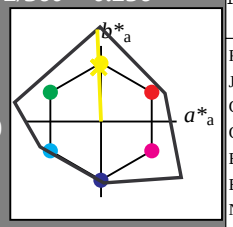
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

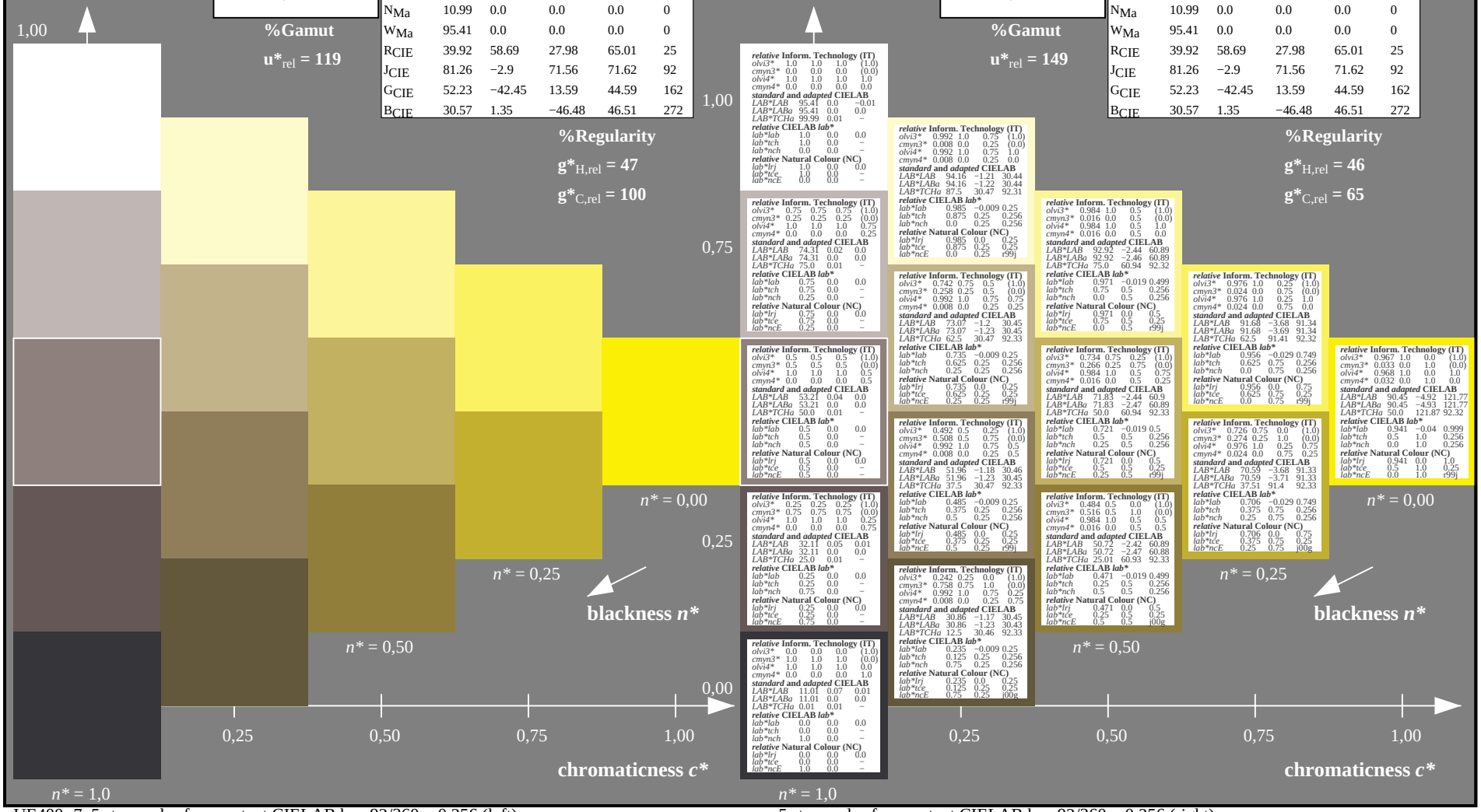
%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



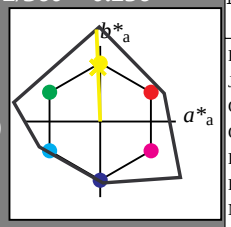
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

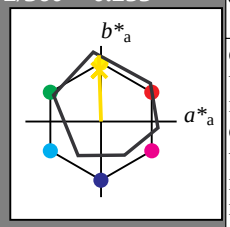
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

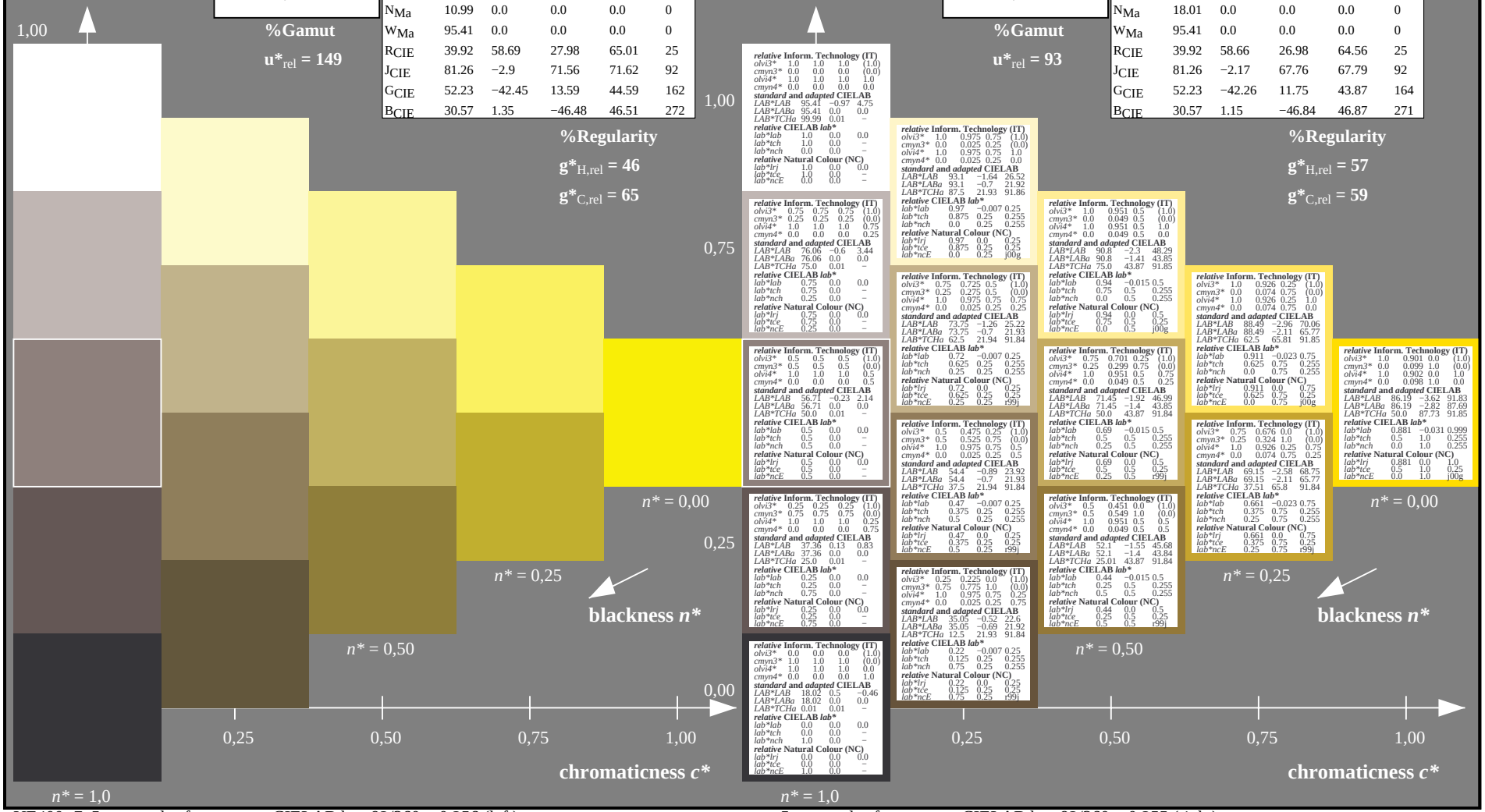
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



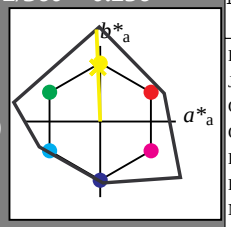
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

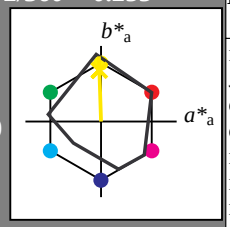
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 86 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

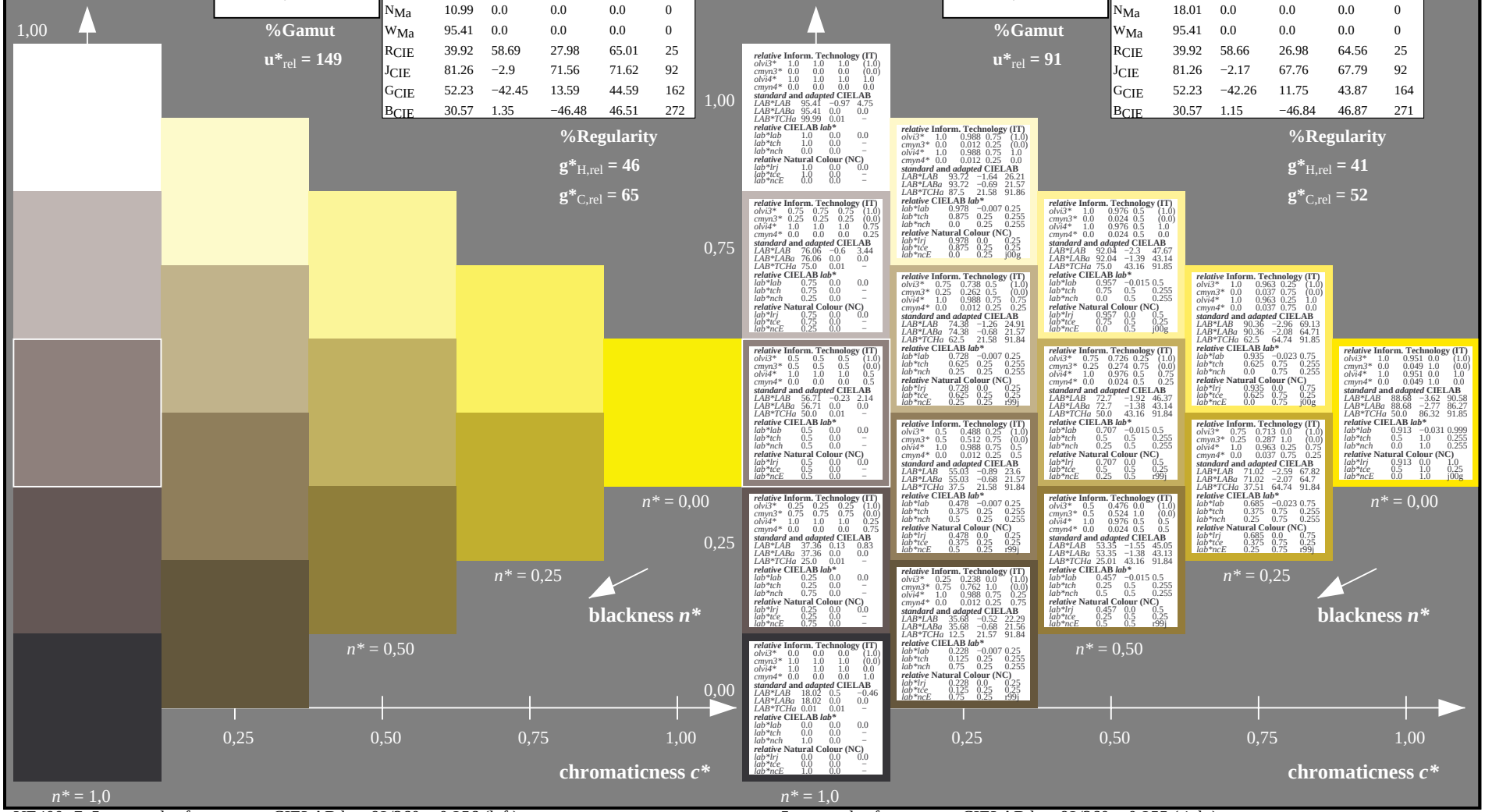
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



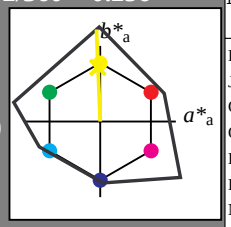
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

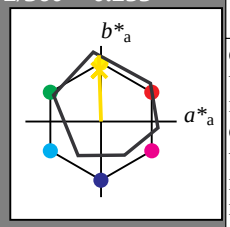
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 92/360 = 0.255$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 86 88 92
rgb*Ma: 1.0 0.9 0.0

triangle lightness



%Gamut

u^*_{rel} = 93

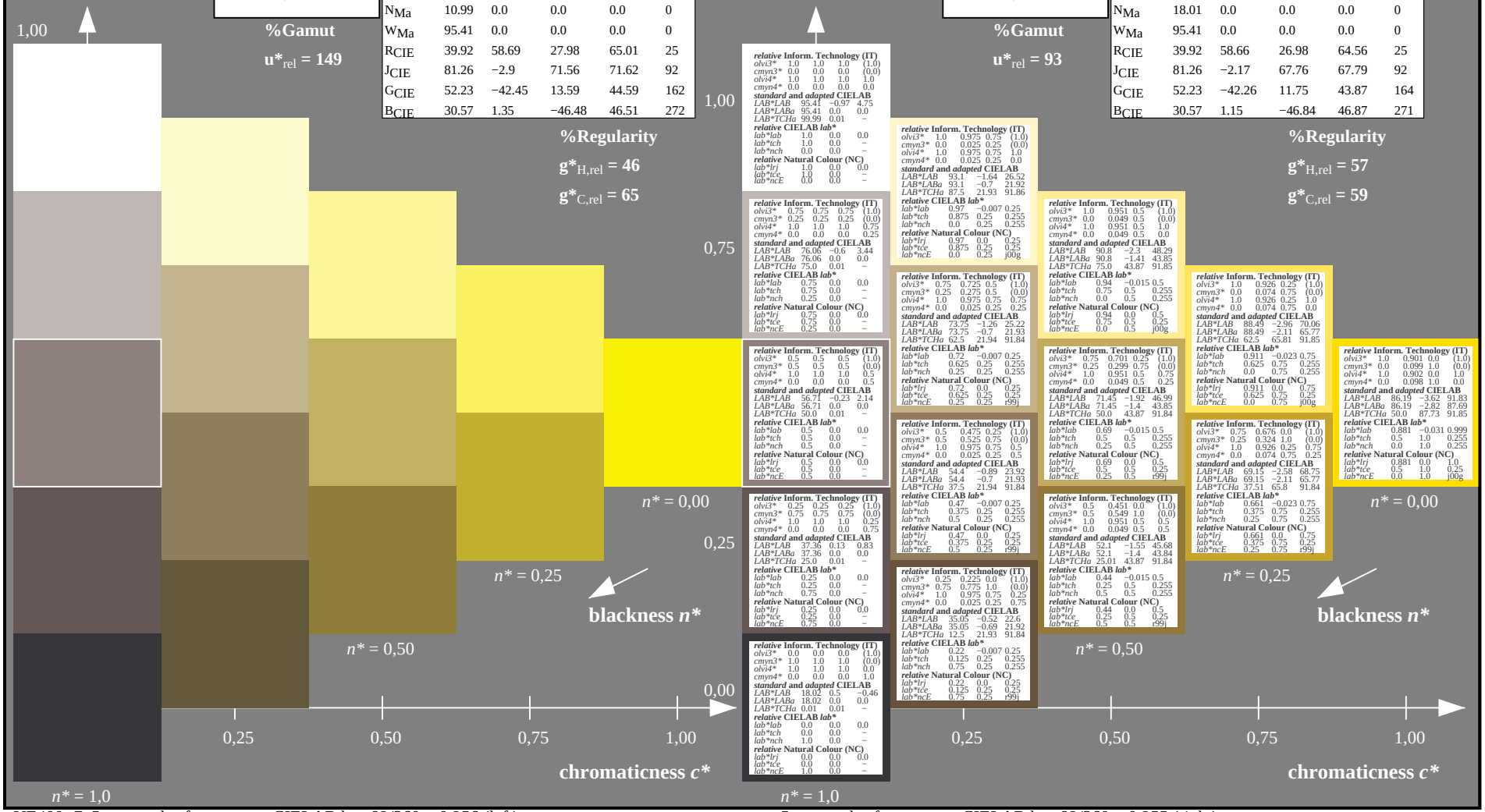
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



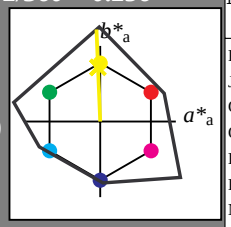
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

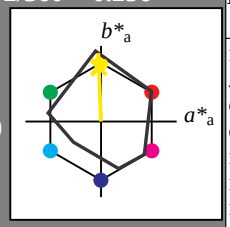
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 89 91 92
rgb*Ma: 1.0 0.95 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

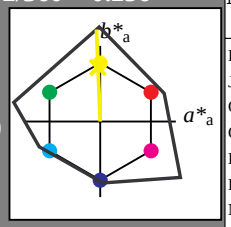
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

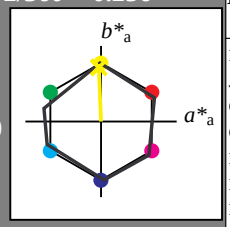
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 57 76 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

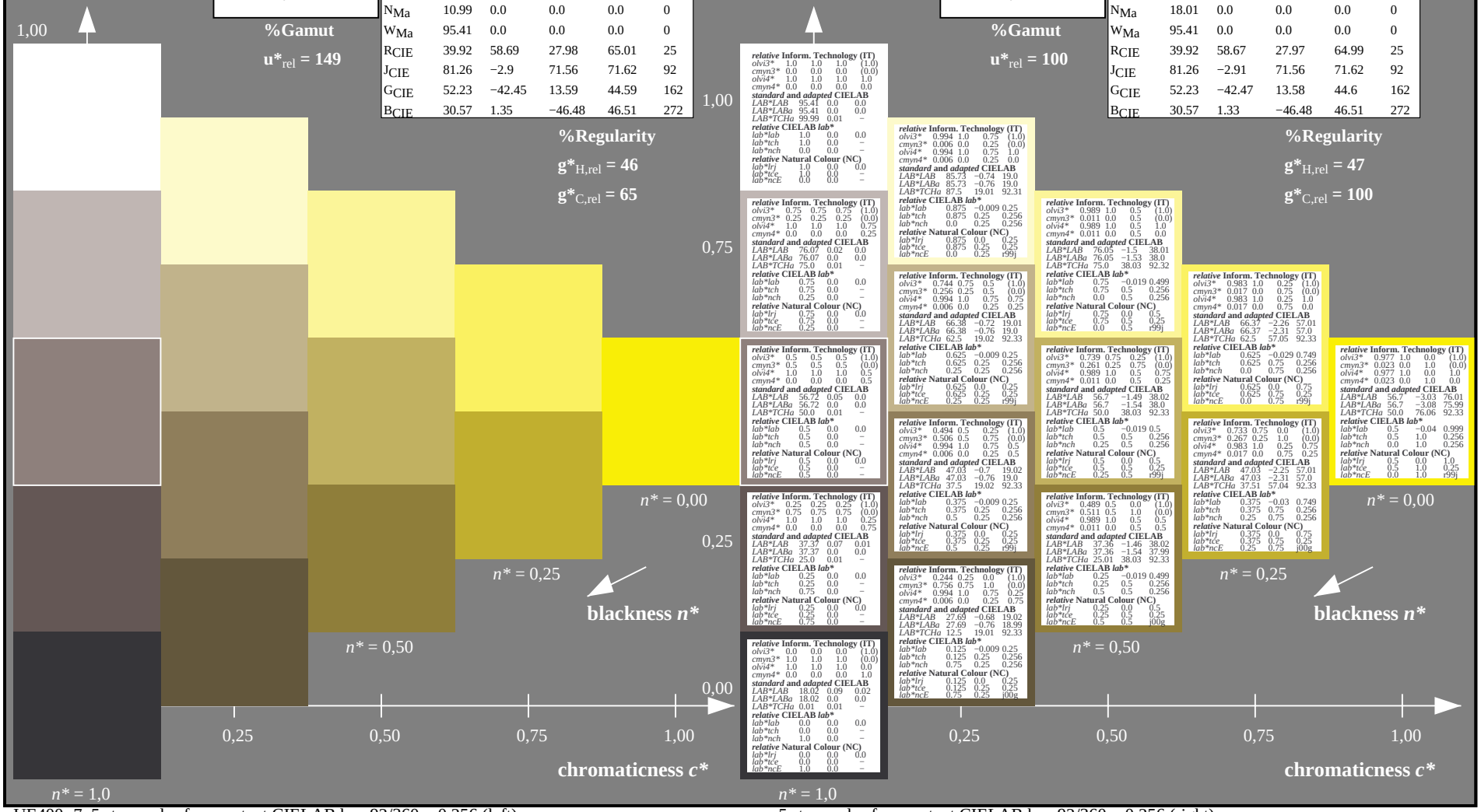
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



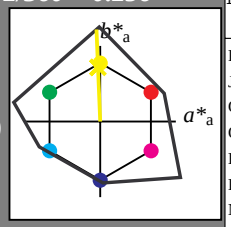
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

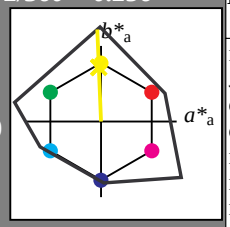
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

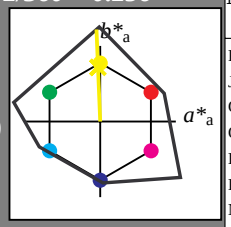
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut
u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

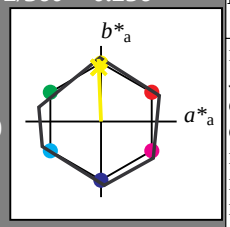
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 46
$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 53 83 92
rgb*Ma: 0.98 1.0 0.0

triangle lightness

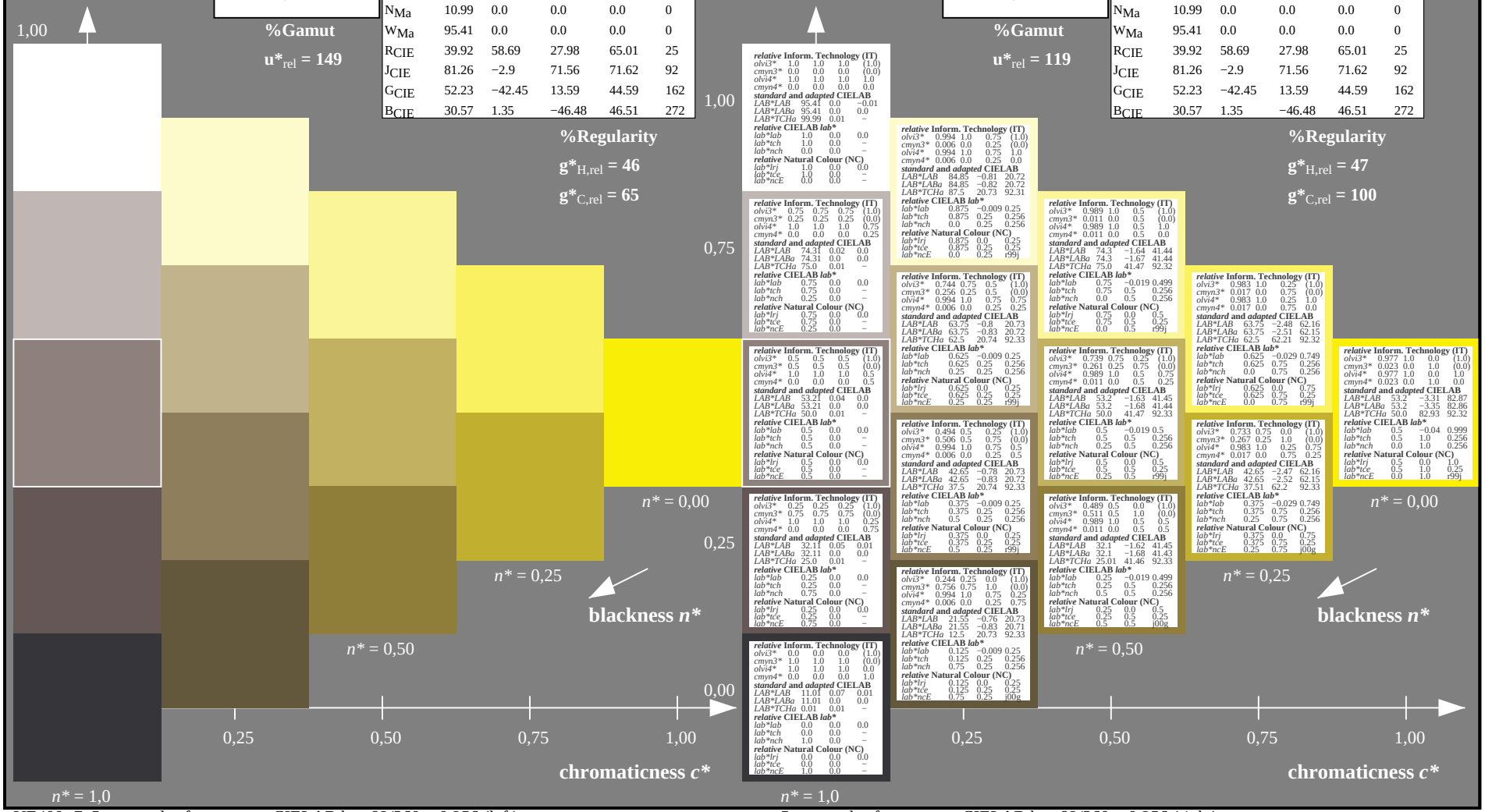


%Gamut
u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity
$g^*_{H,rel}$ = 47
$g^*_{C,rel}$ = 100



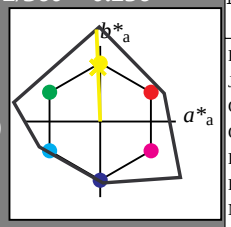
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

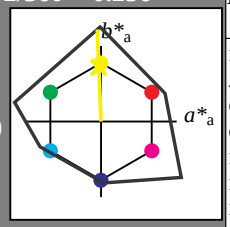
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 92/360 = 0.256$
lab*tch* and *lab*nch

D65: hue J
LCH*Ma: 90 122 92
rgb*Ma: 0.97 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

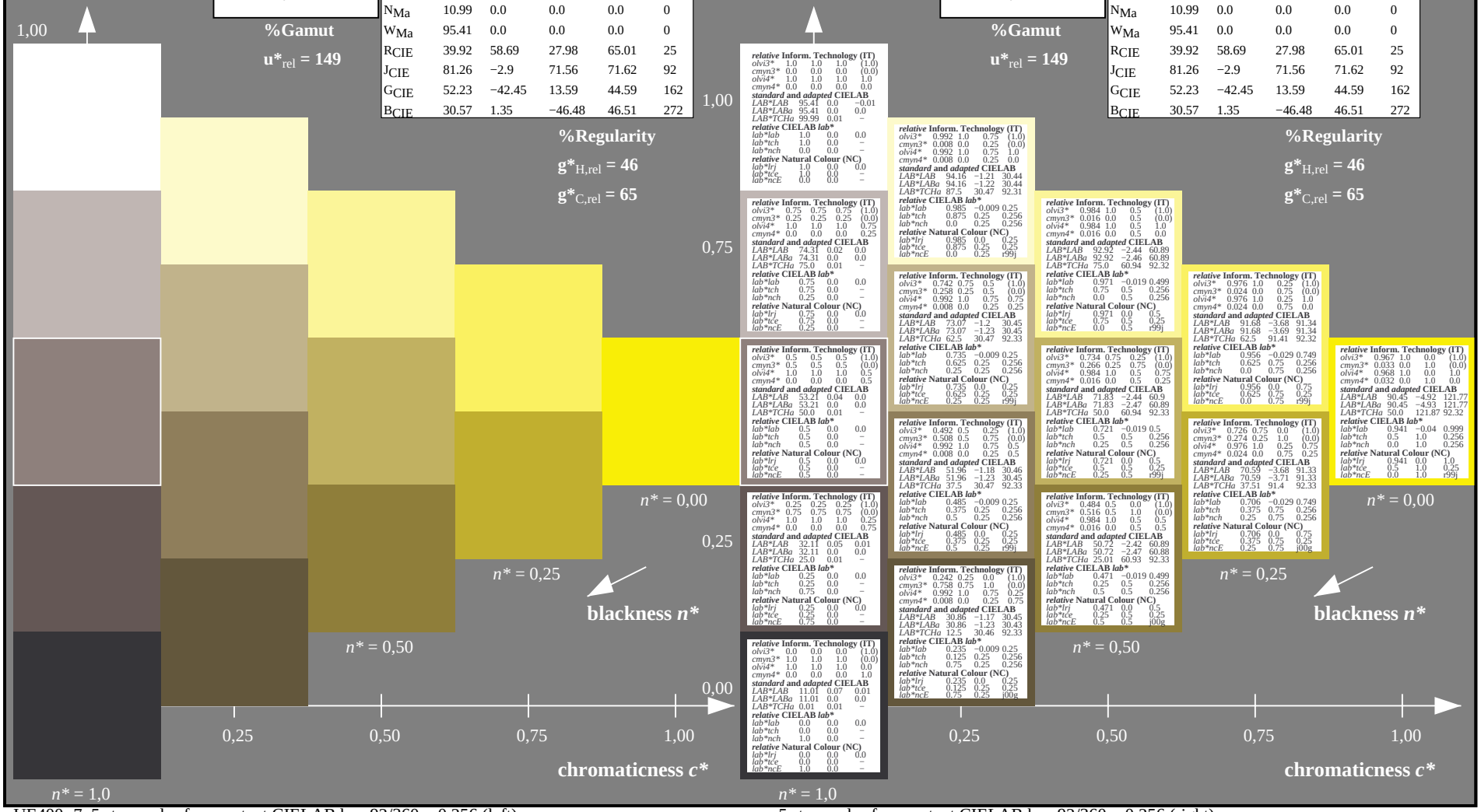
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



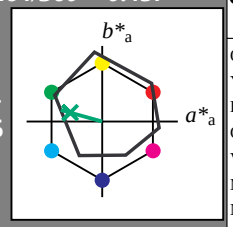
UE400−7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

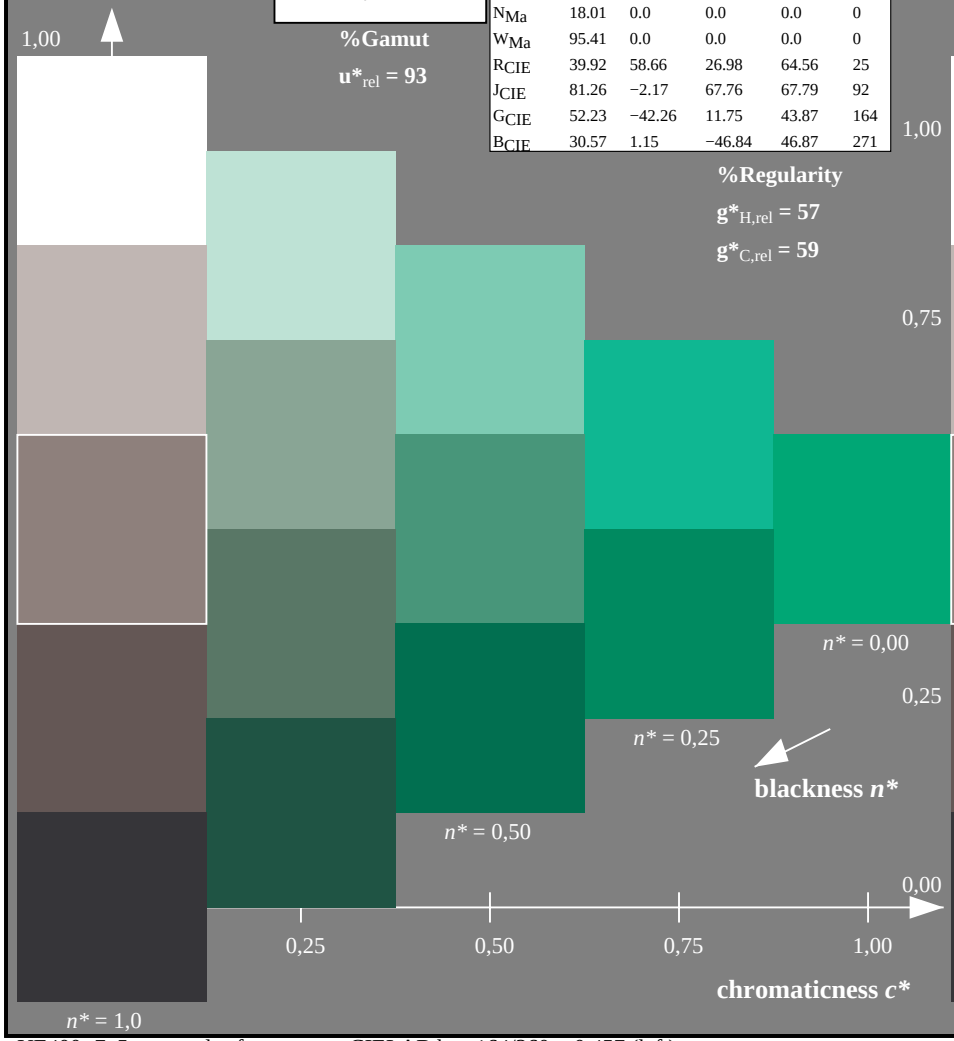
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

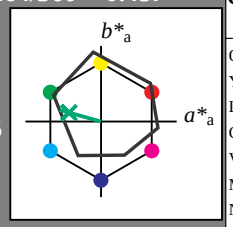
$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

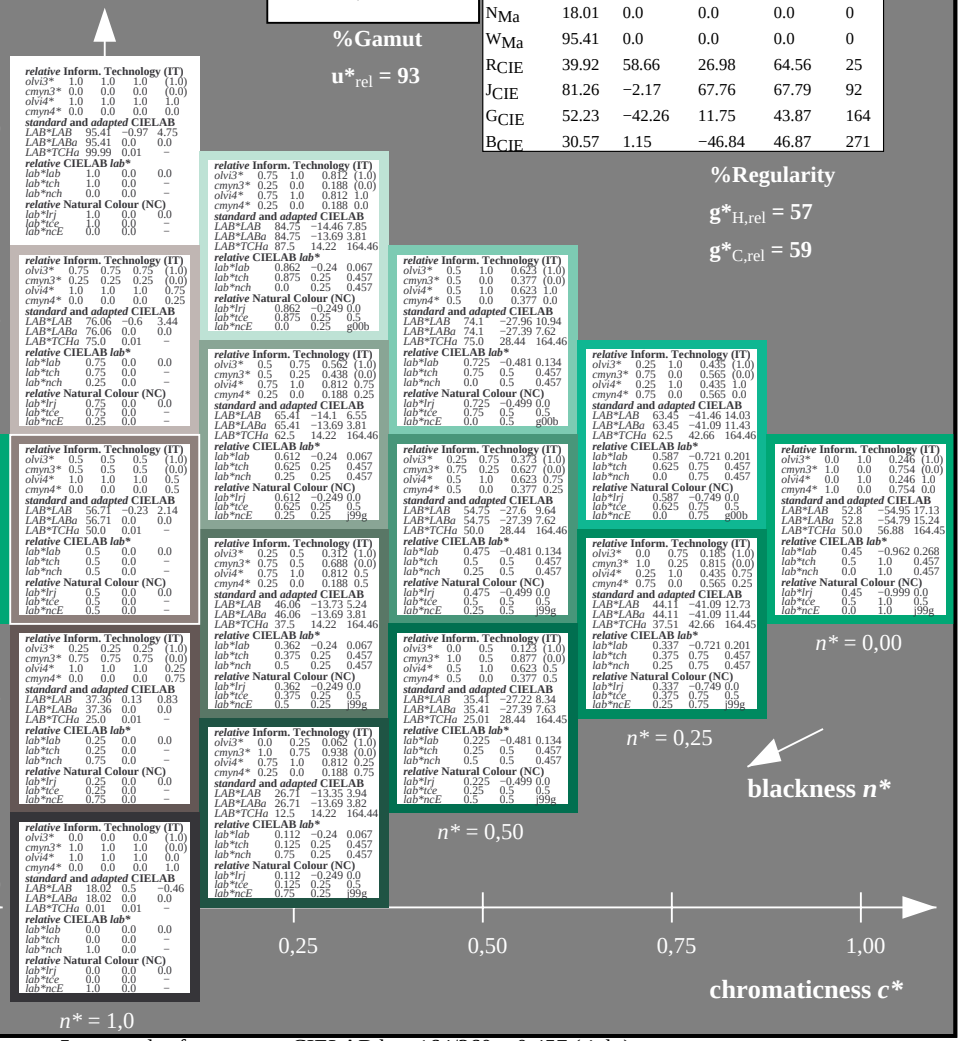
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



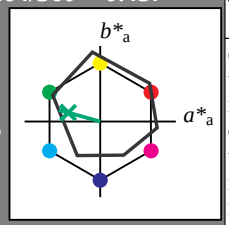
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System ORS18
for hue *h* = lab*h = 164/360 = 0.457*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

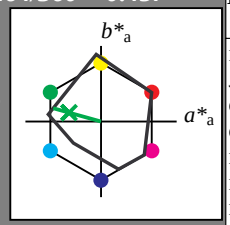
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 164/360 = 0.457*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

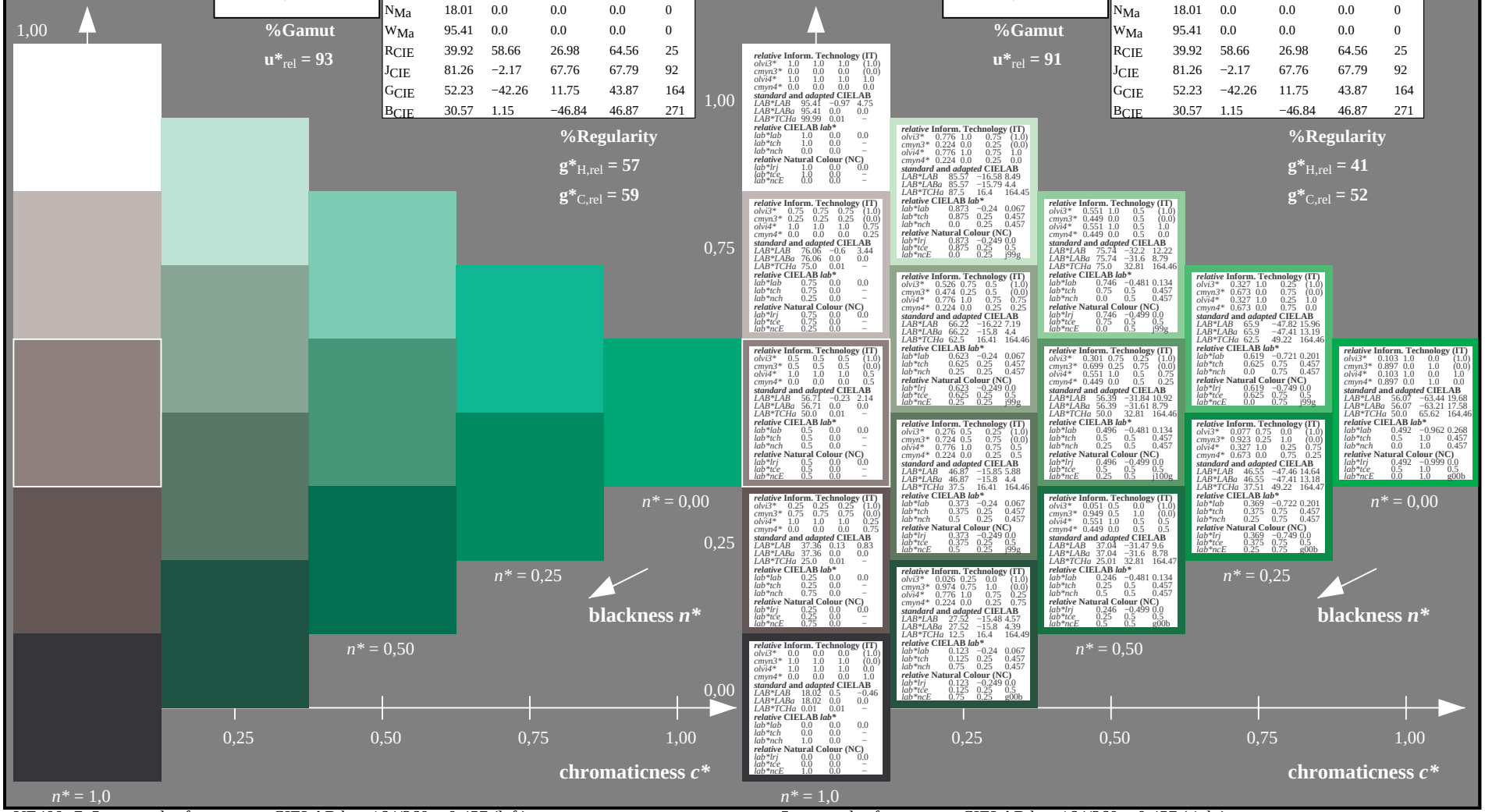
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



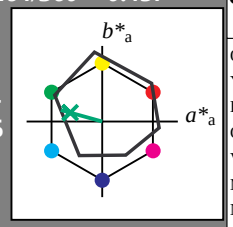
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

$u^*_{rel} = 93$

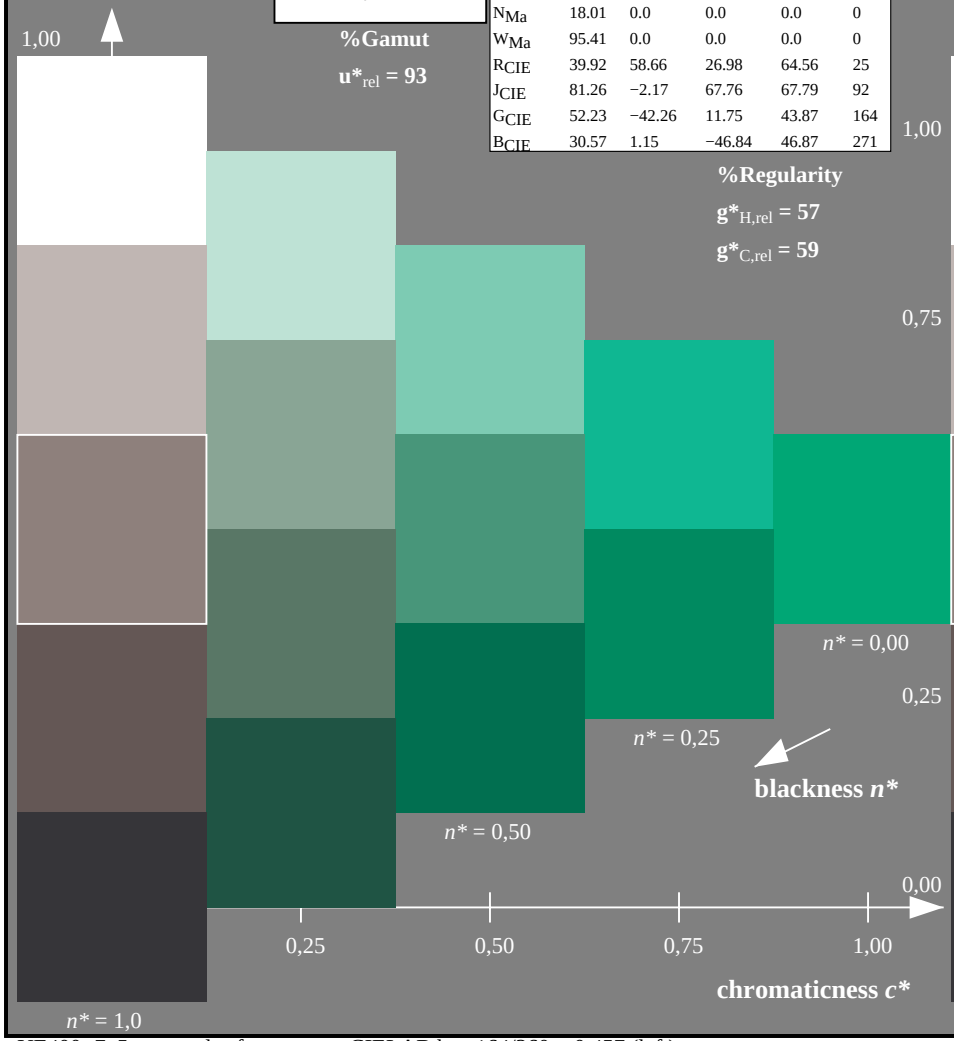
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

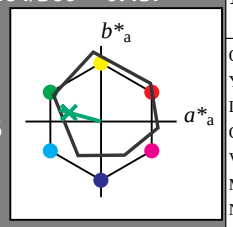
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

$u^*_{rel} = 93$

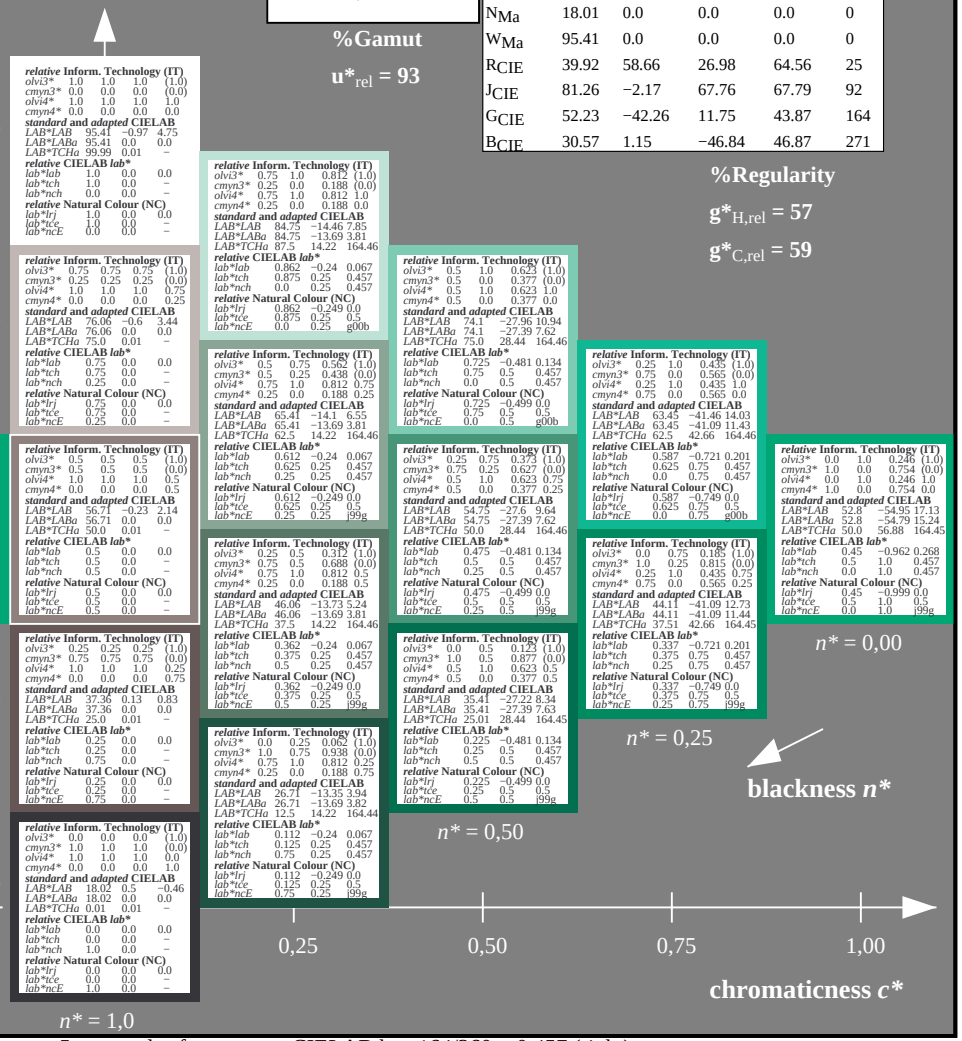
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



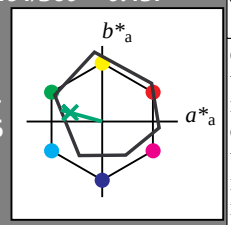
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

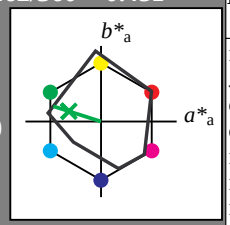
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

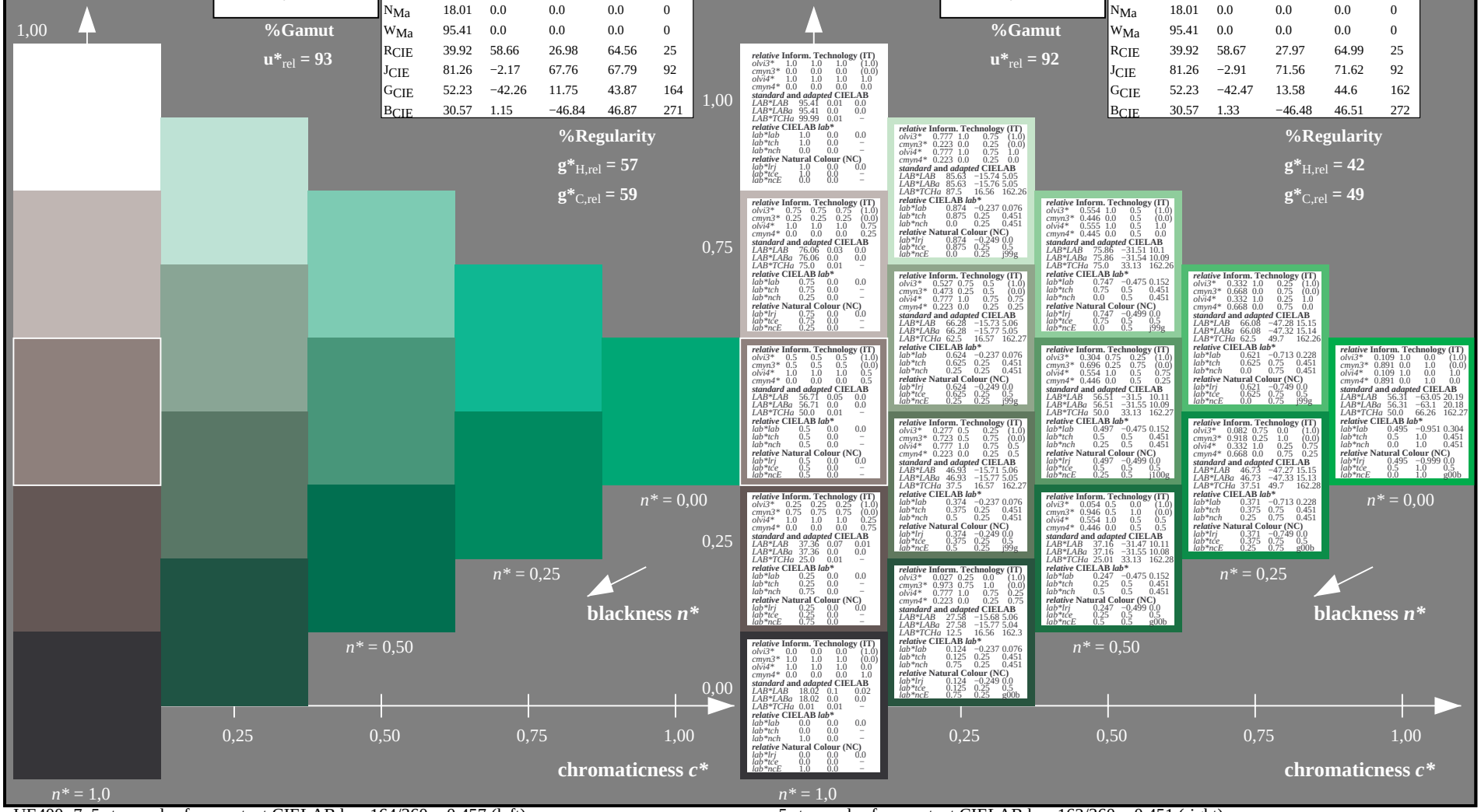
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



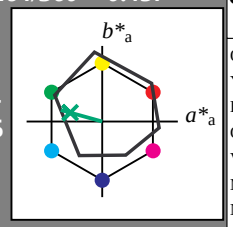
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

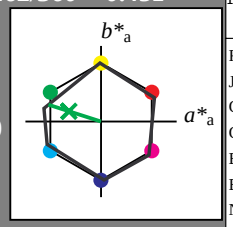
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

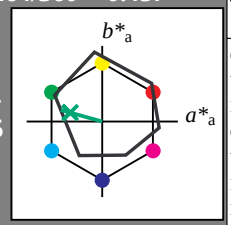
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

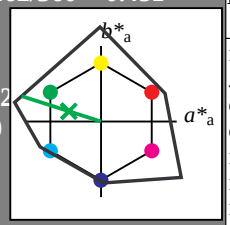
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

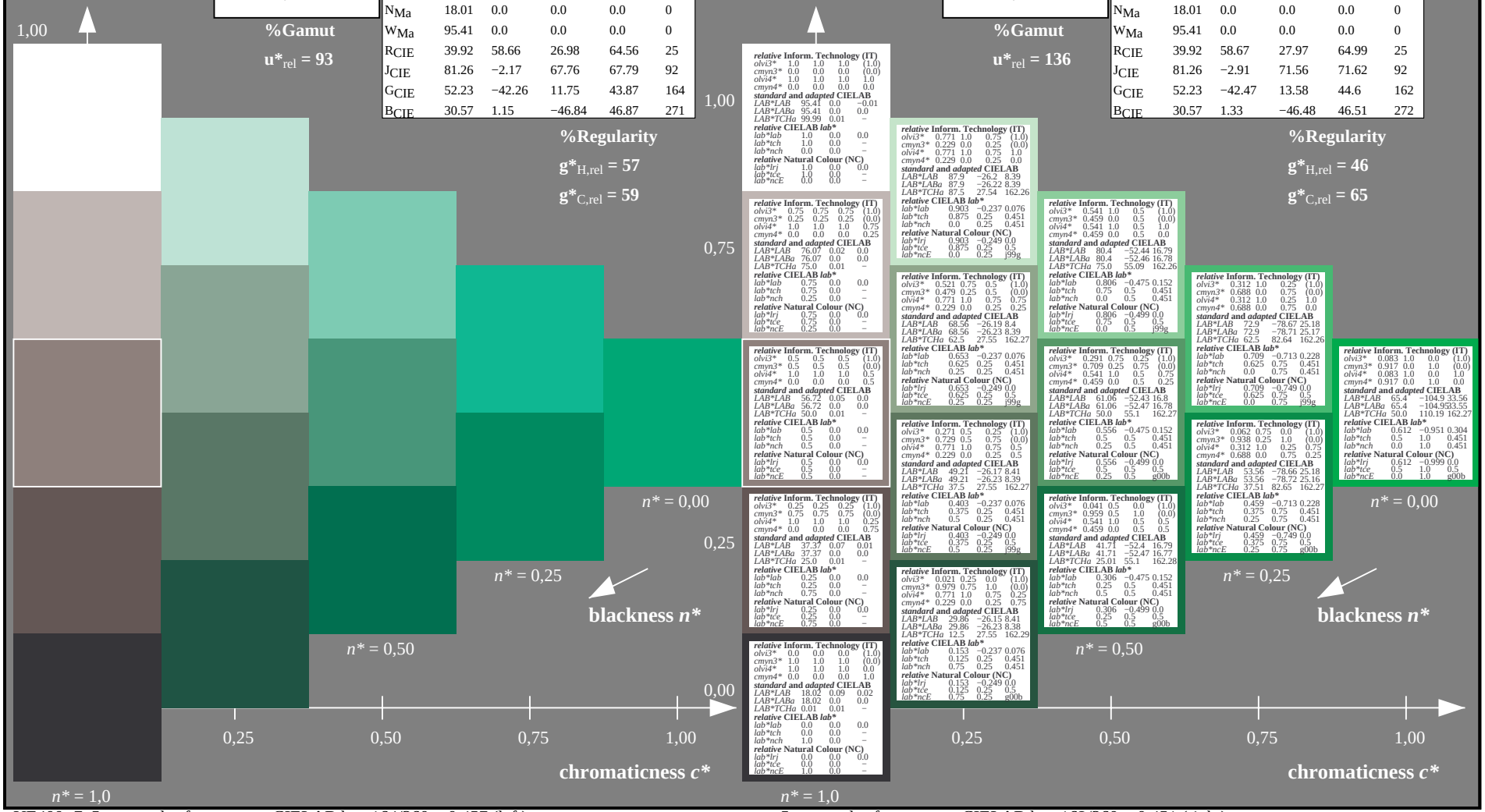
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



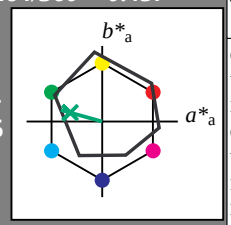
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

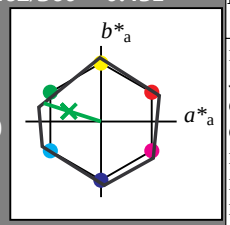
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

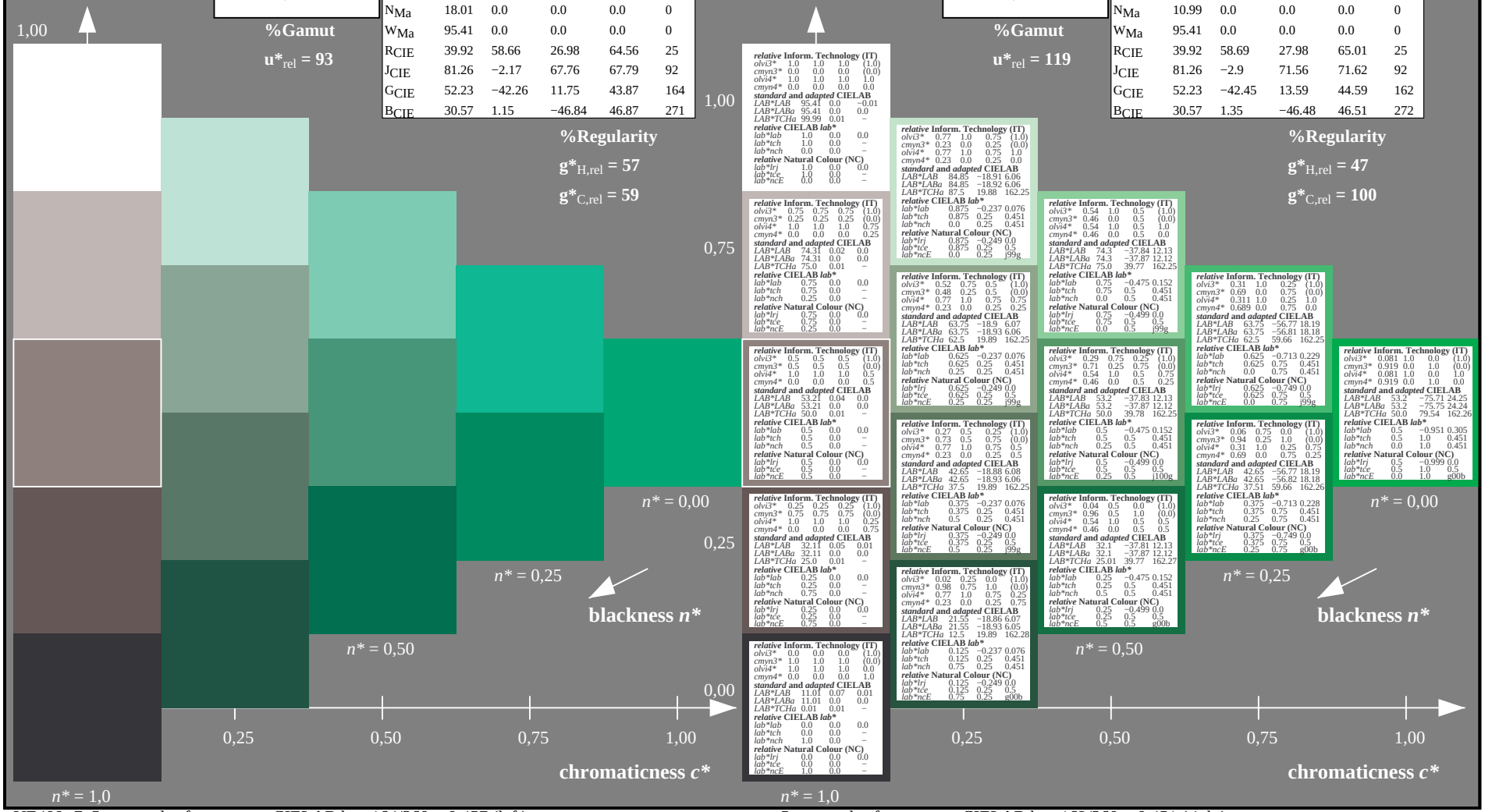
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

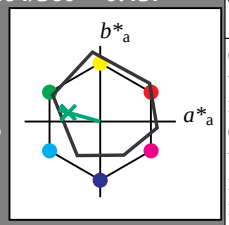


UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

triangle lightness

1,00

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

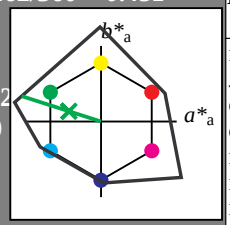
blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

triangle lightness

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

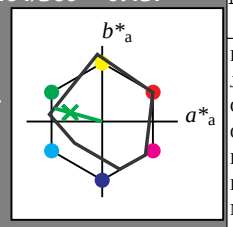
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

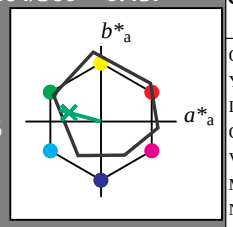
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

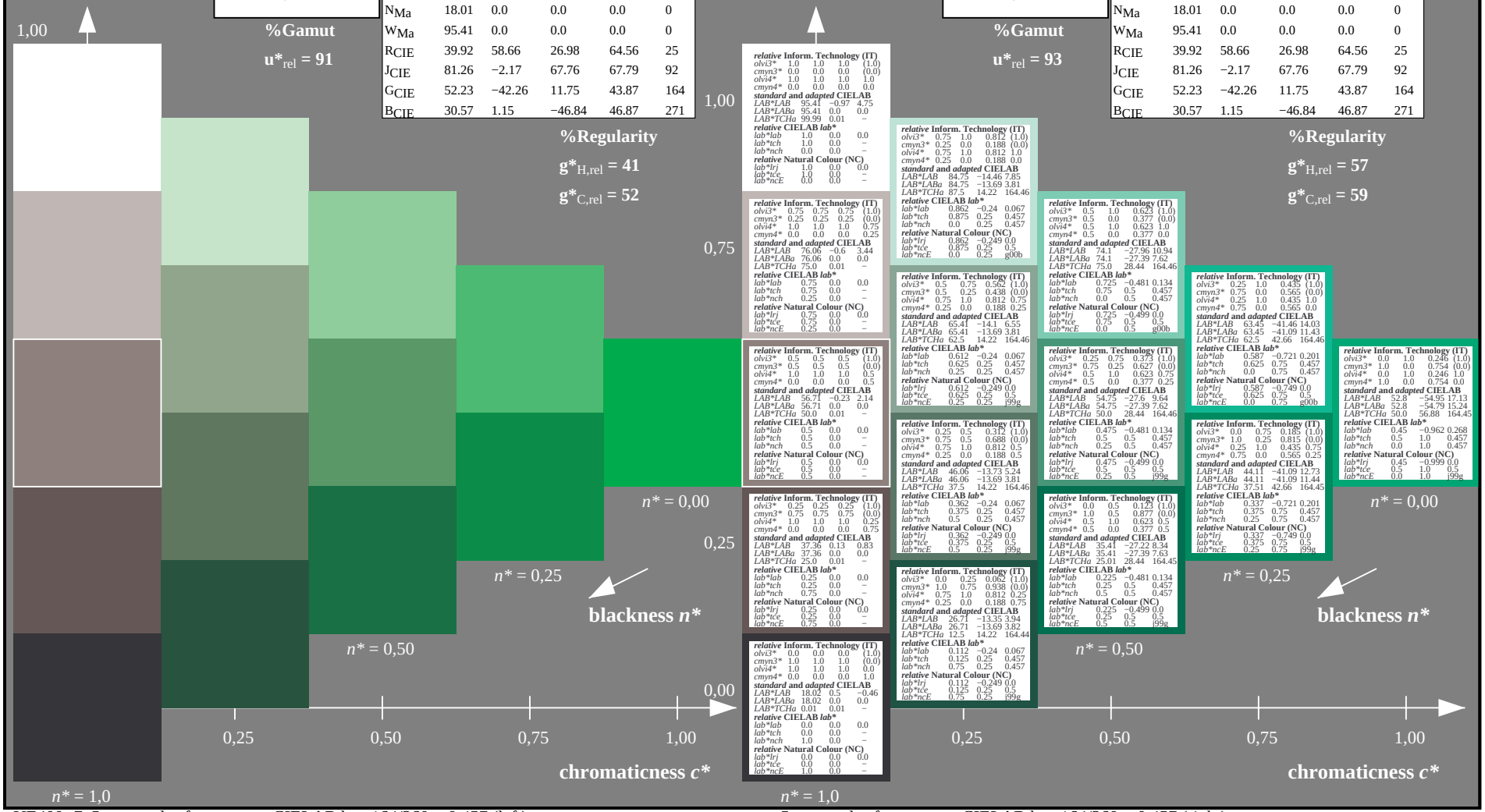
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



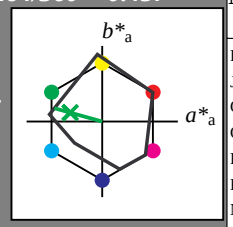
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

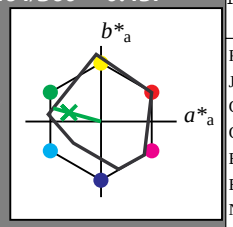
chromaticness c^*

UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

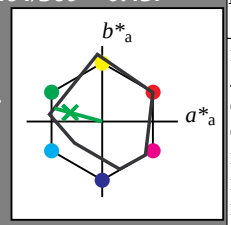
chromaticness c^*

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

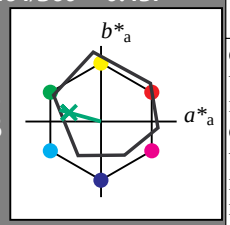
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

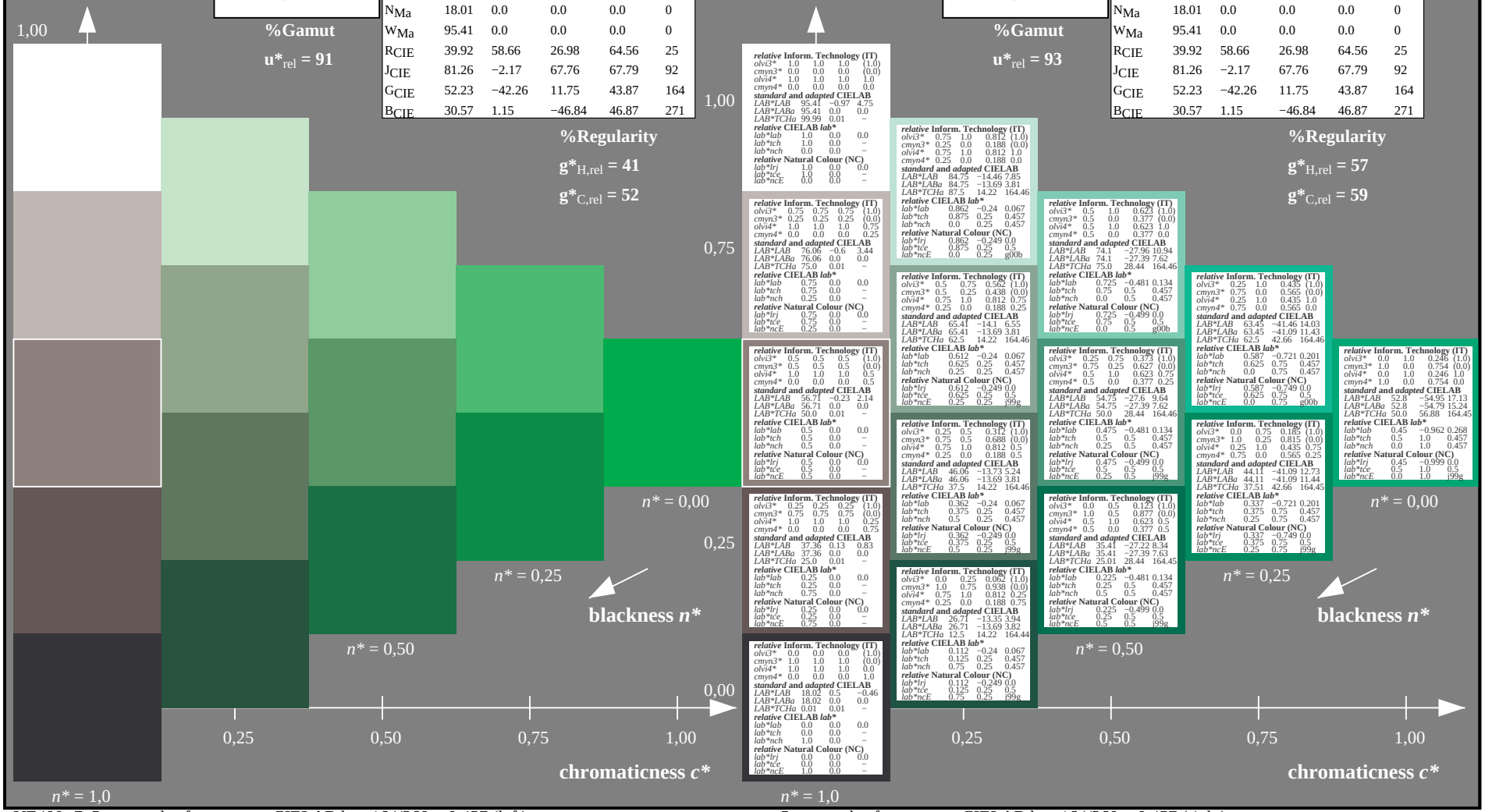
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

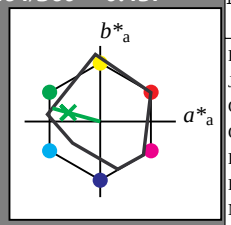


UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

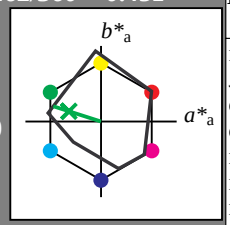


MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

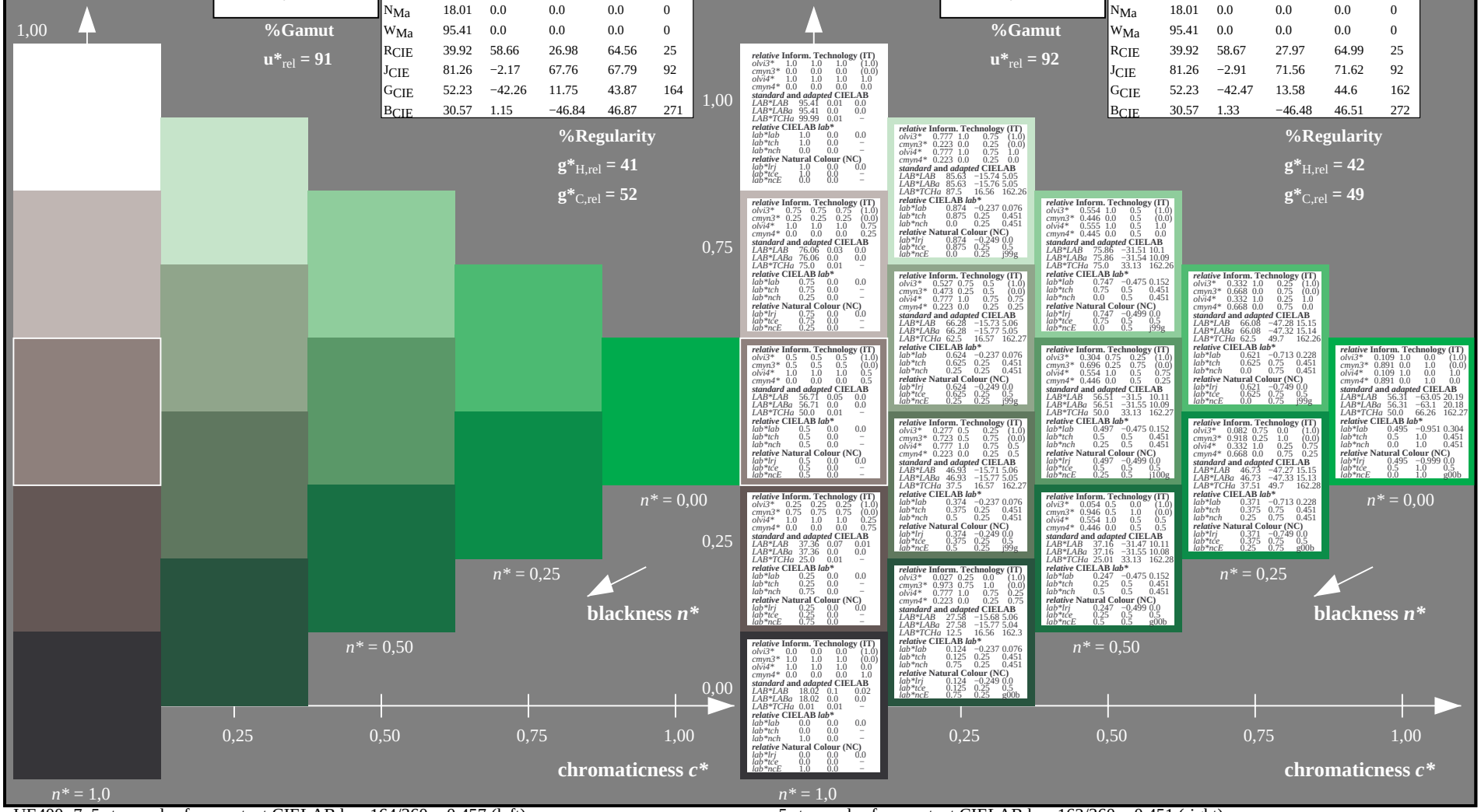
Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



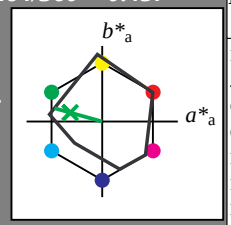
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

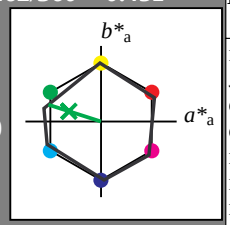
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

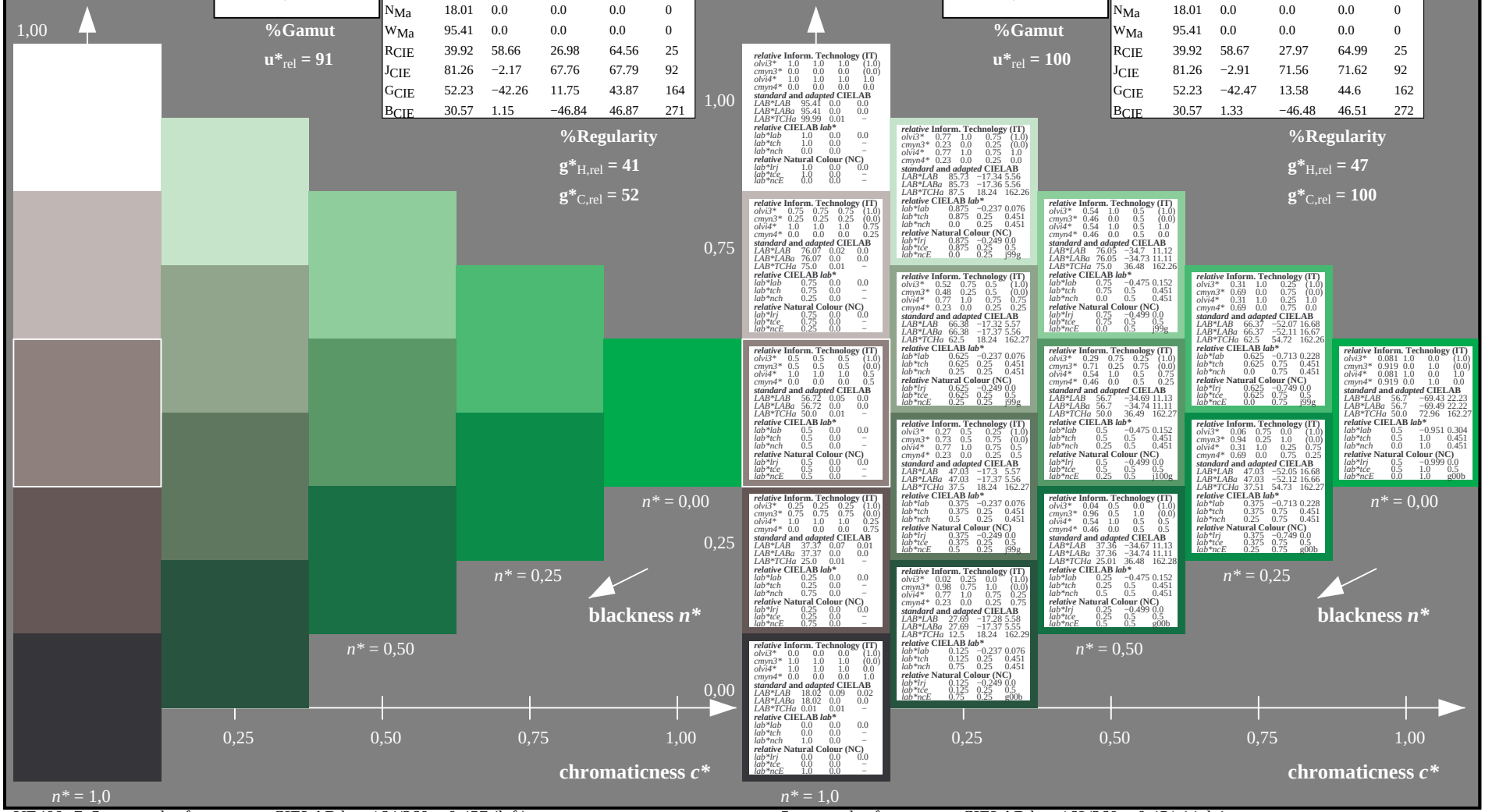
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

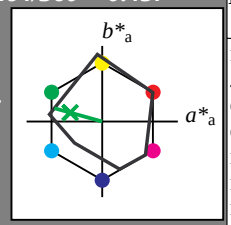


UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

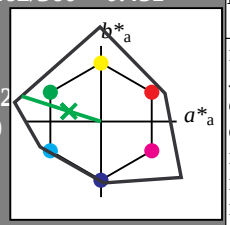


MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

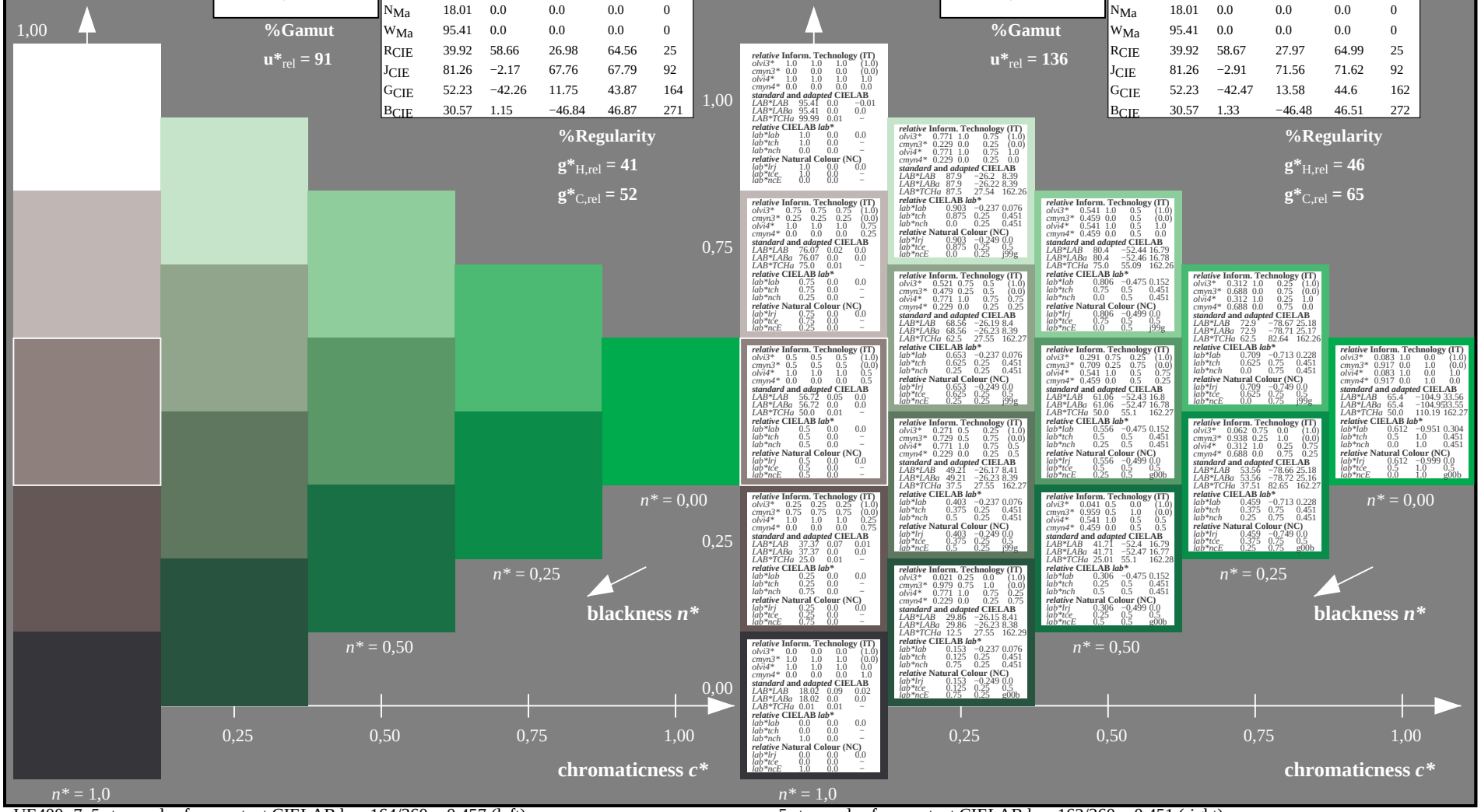
Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272



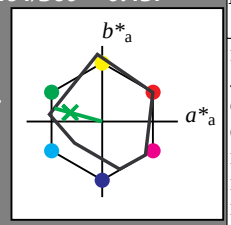
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

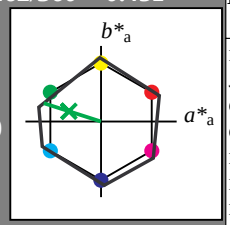
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

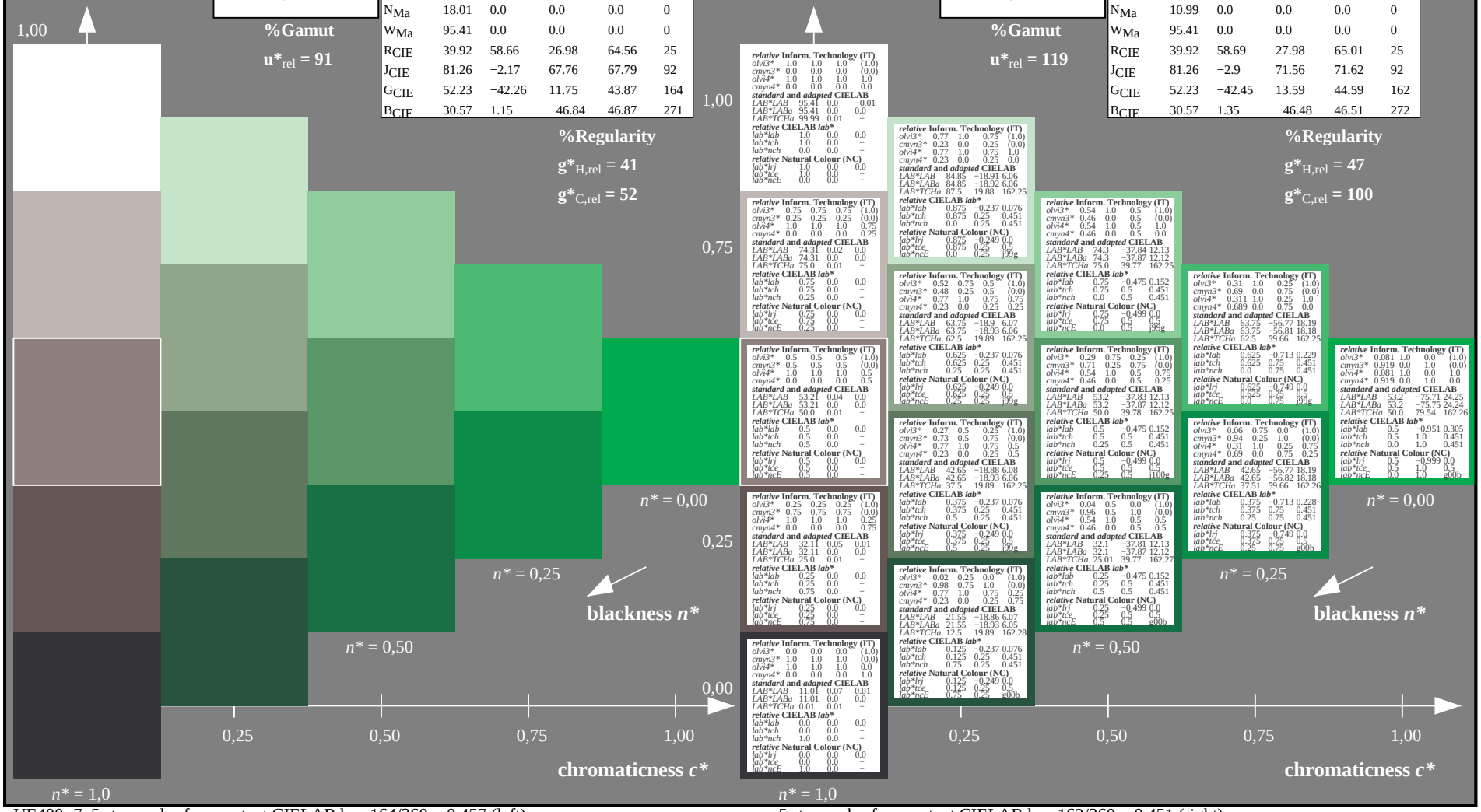
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

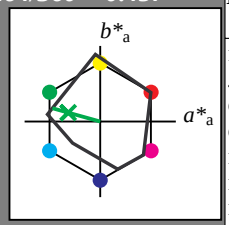


UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

triangle lightness

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

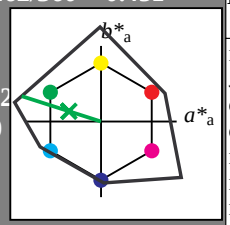
blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

triangle lightness

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

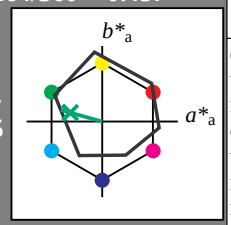
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

$u^*_{rel} = 93$

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

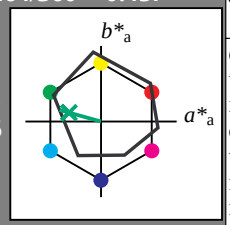
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

$u^*_{rel} = 93$

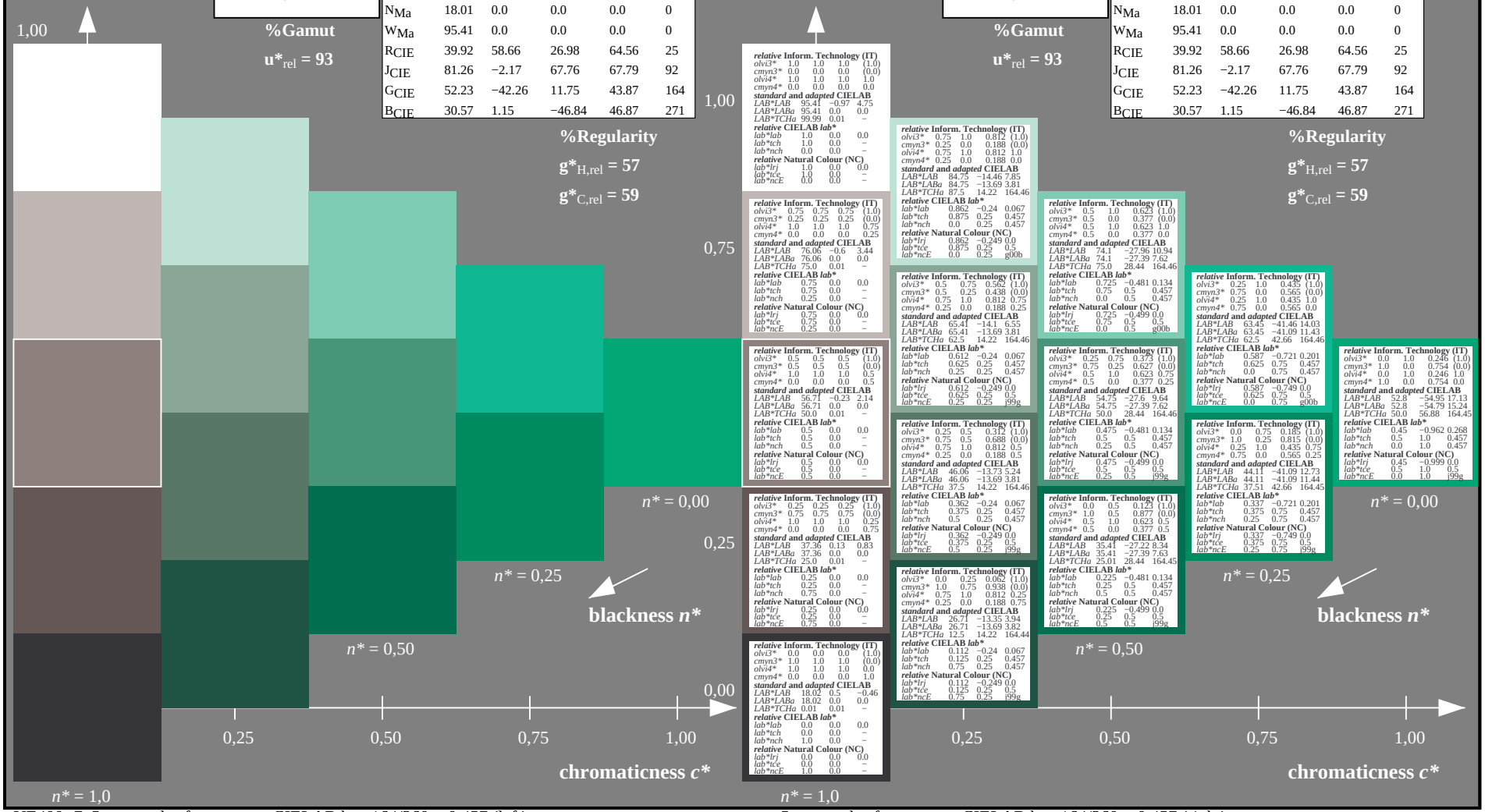
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

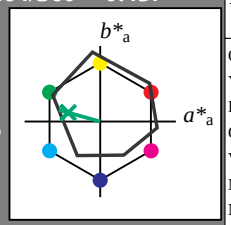


UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

triangle lightness

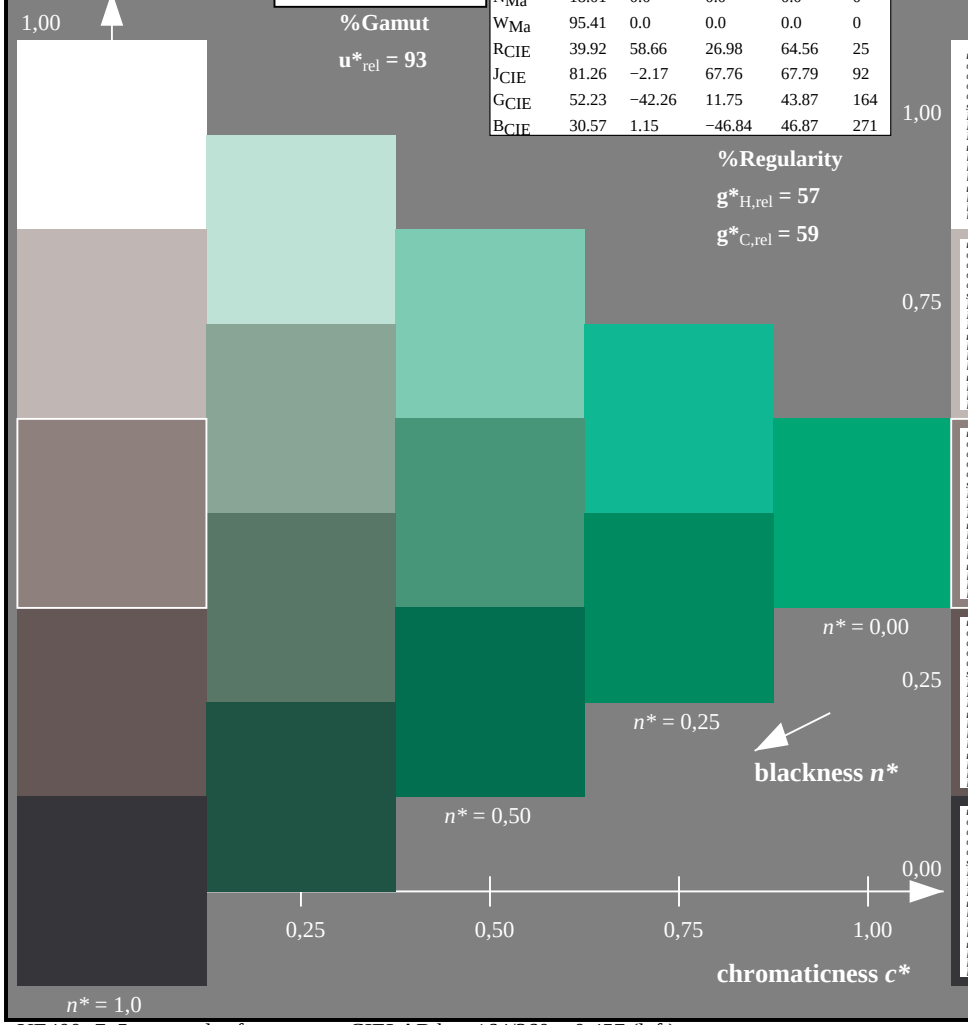
%Gamut

u^*_{rel} = 93

%Regularity

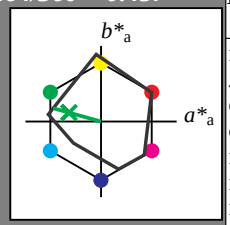
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

triangle lightness

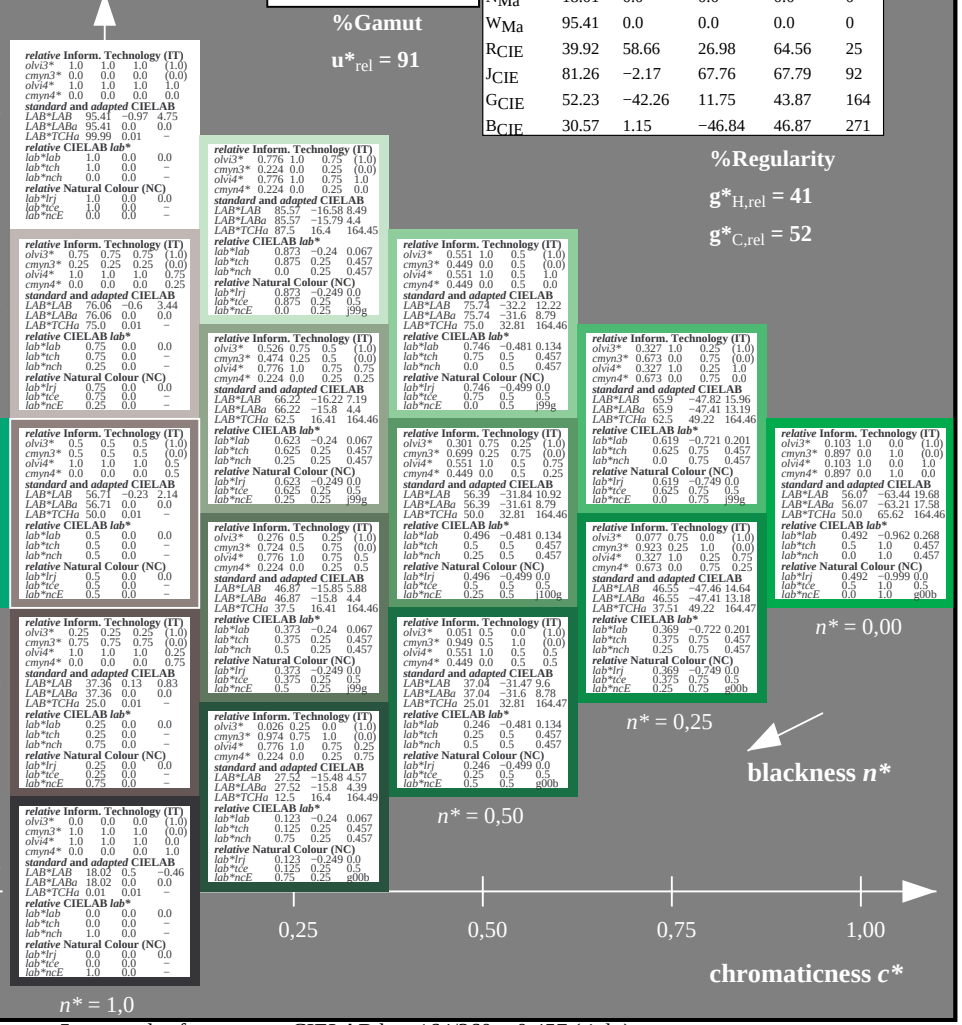
%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



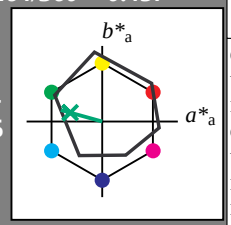
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

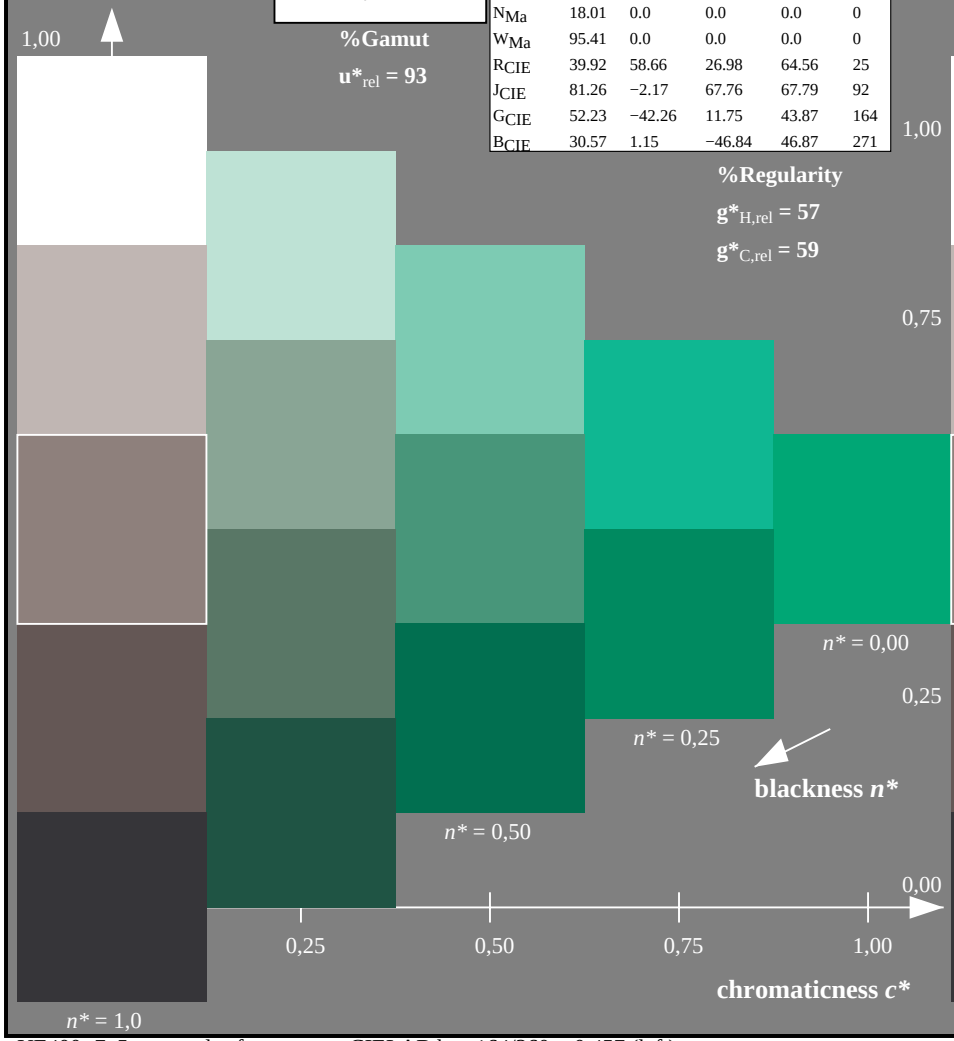
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

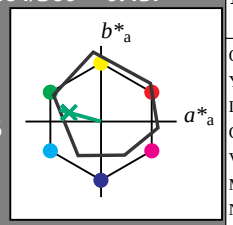


UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

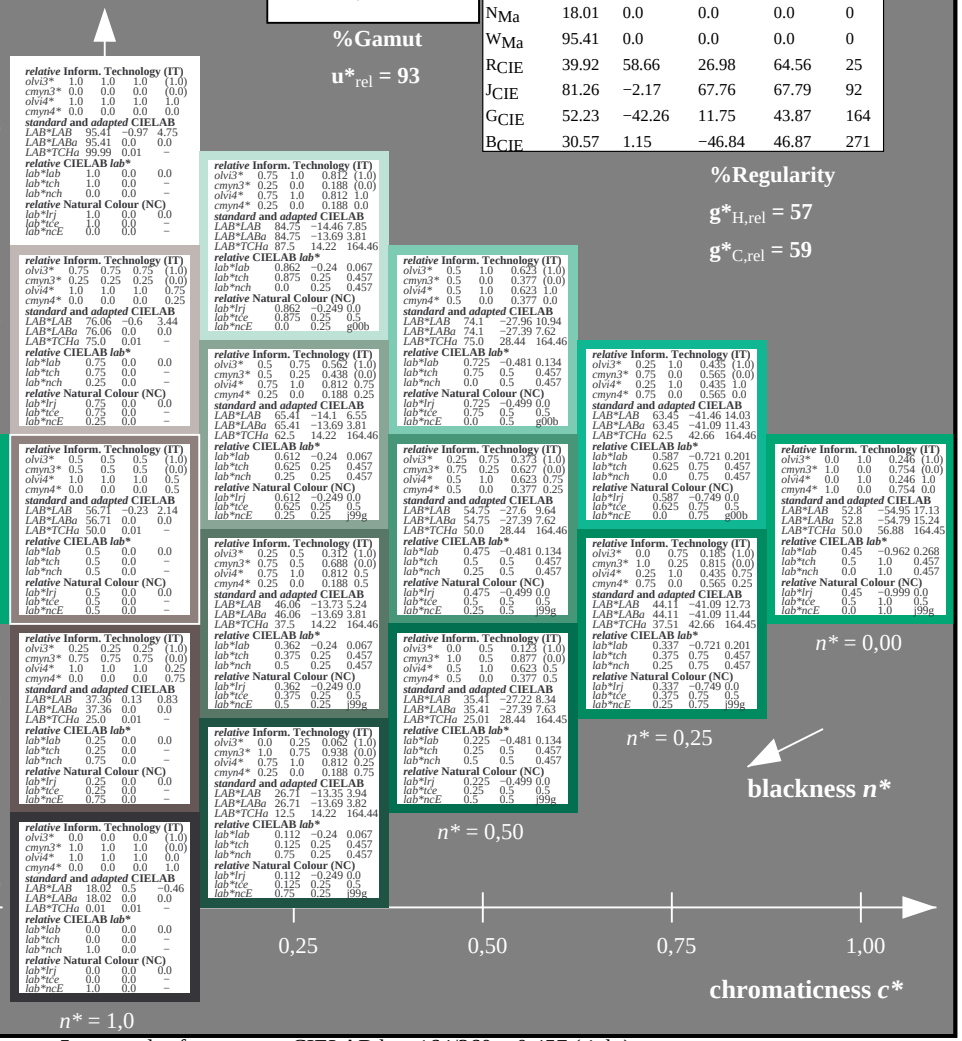
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

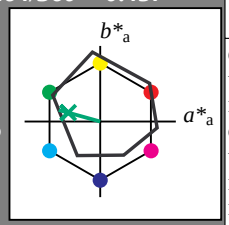


5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

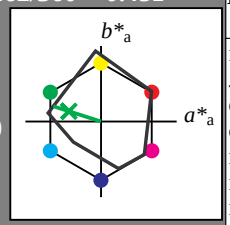
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

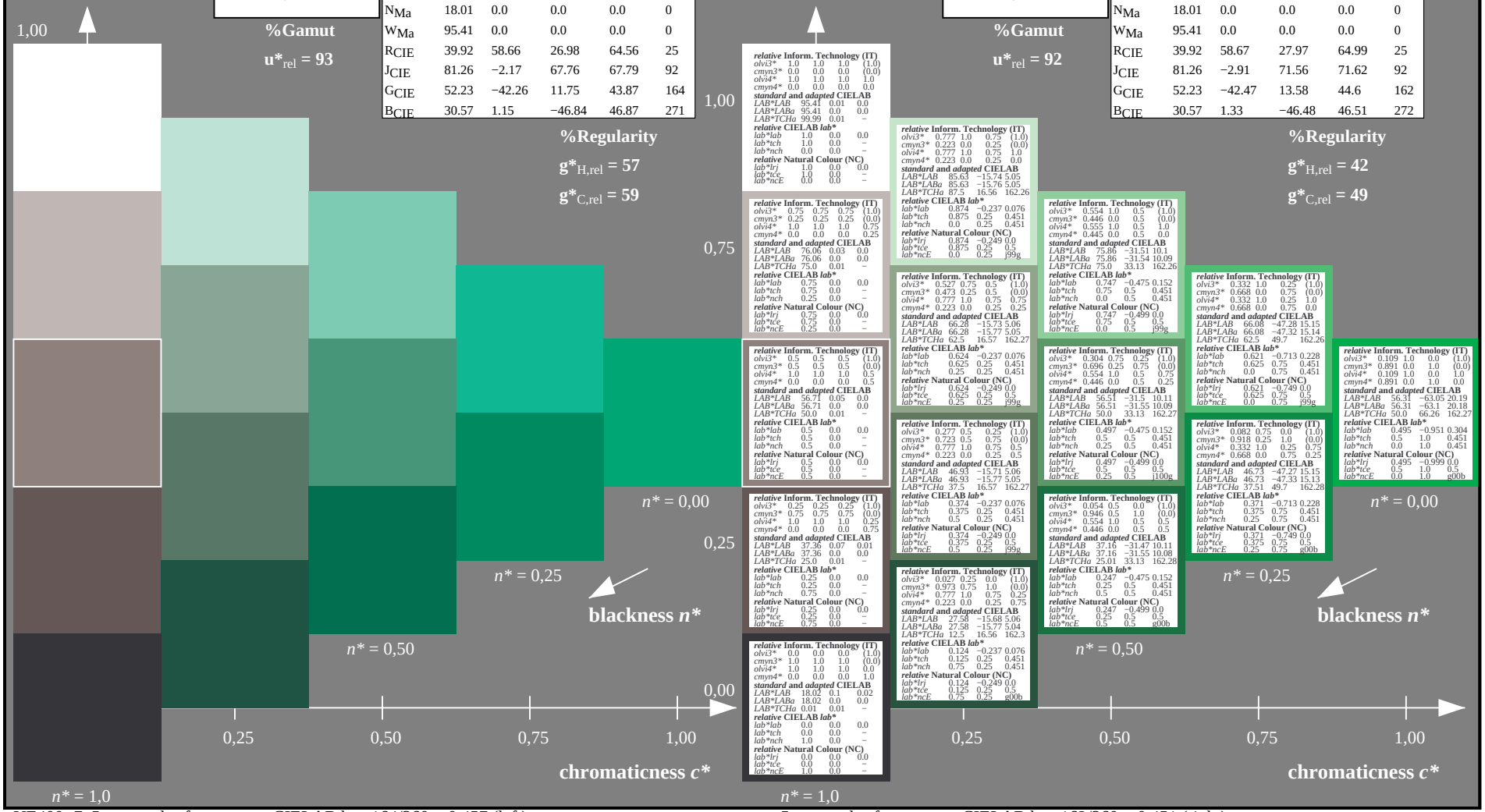
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



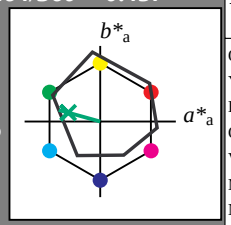
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

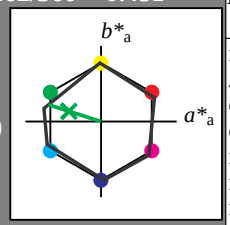
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

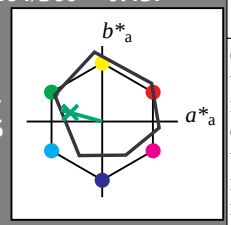
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

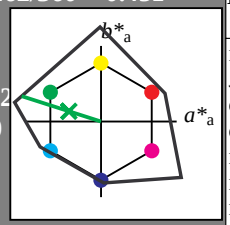
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

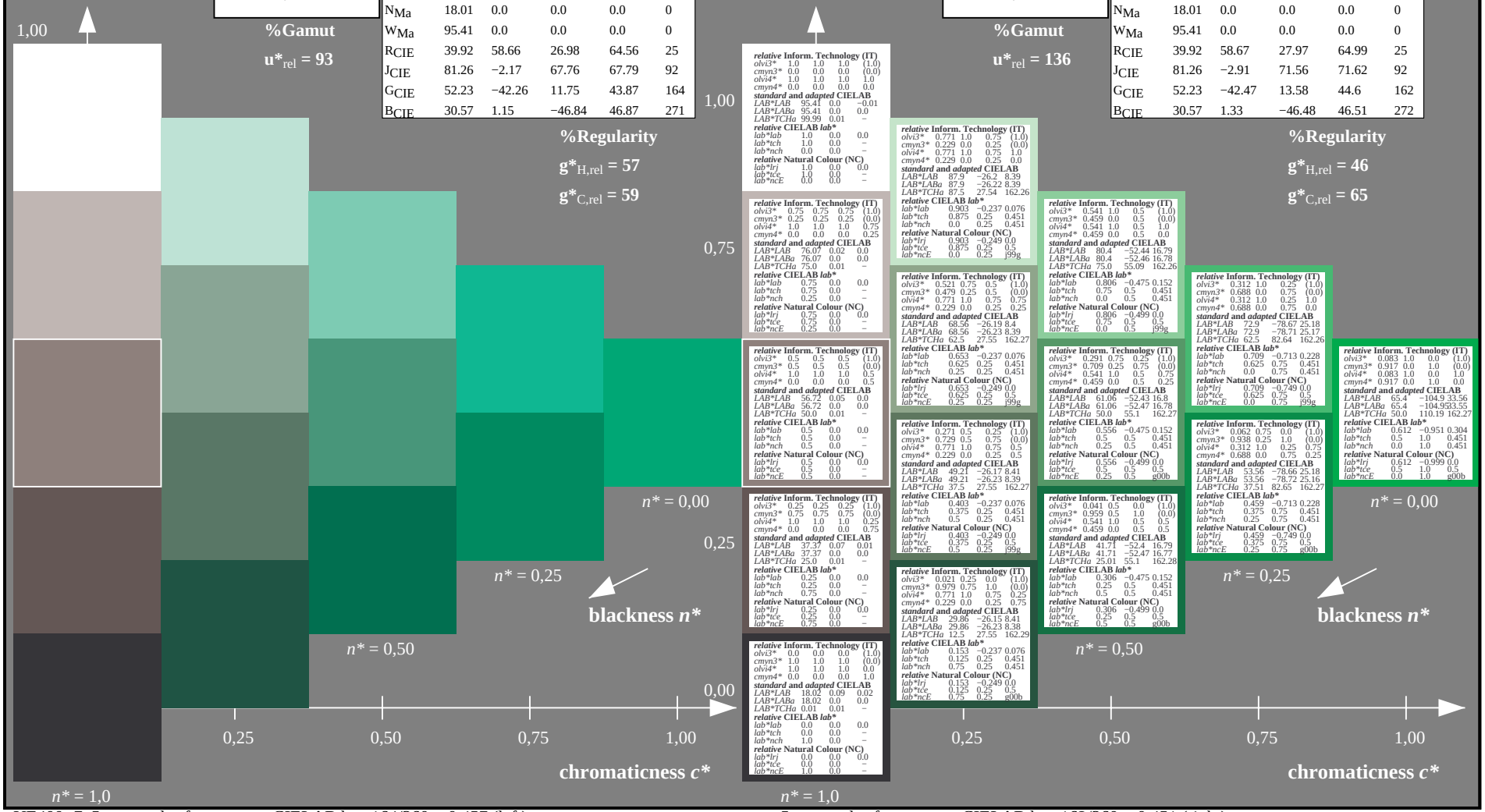
%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



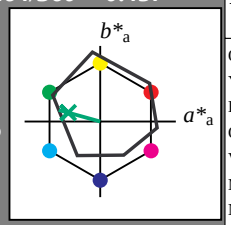
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

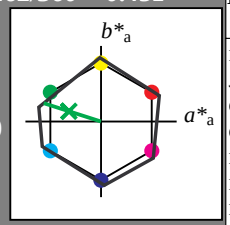
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

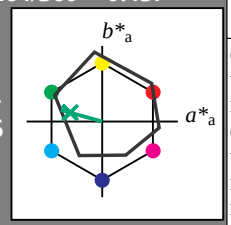
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

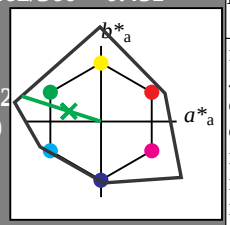
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

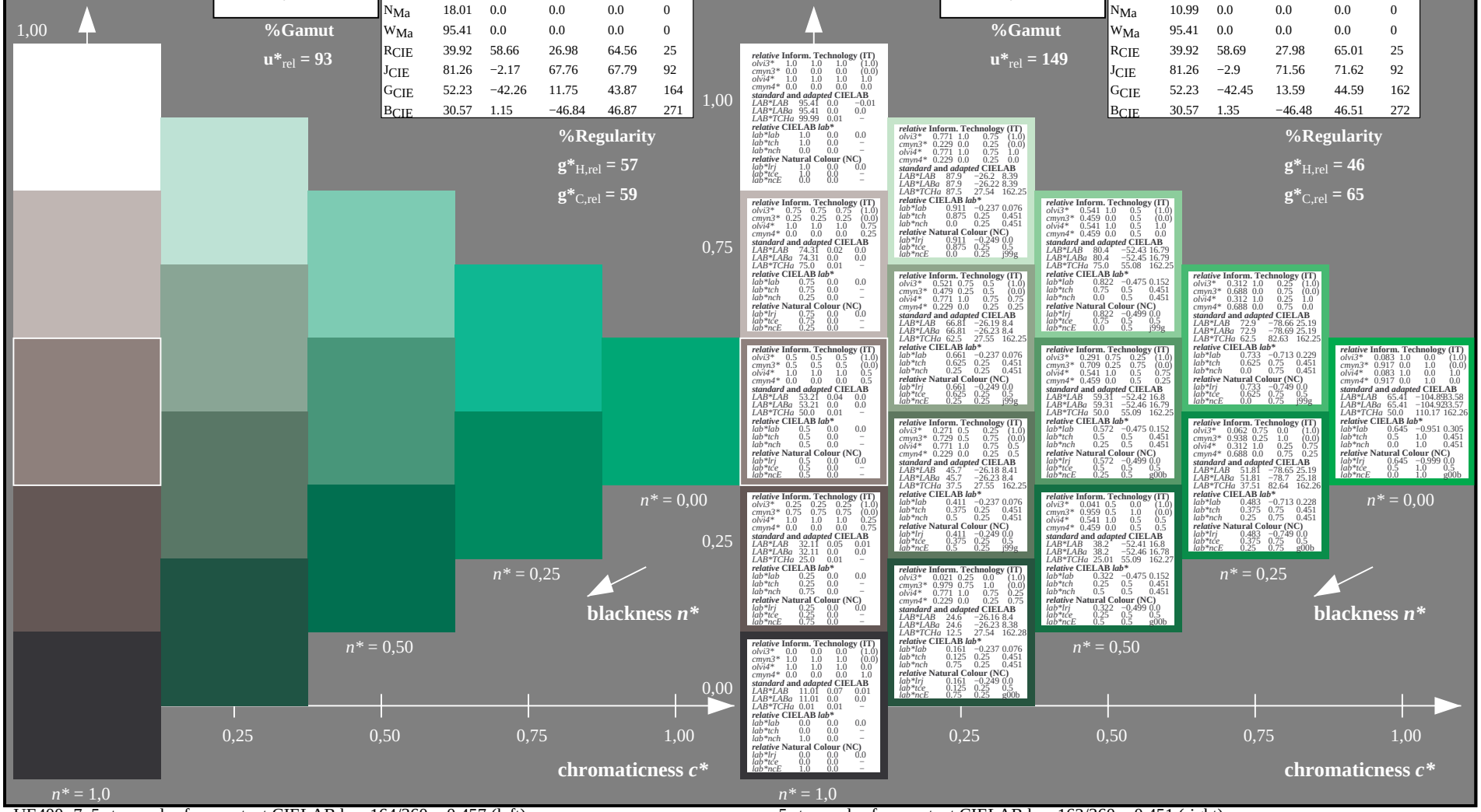
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



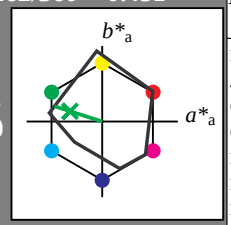
UE400−7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

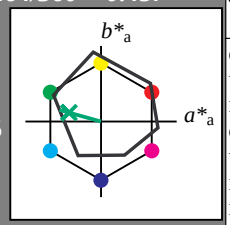
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

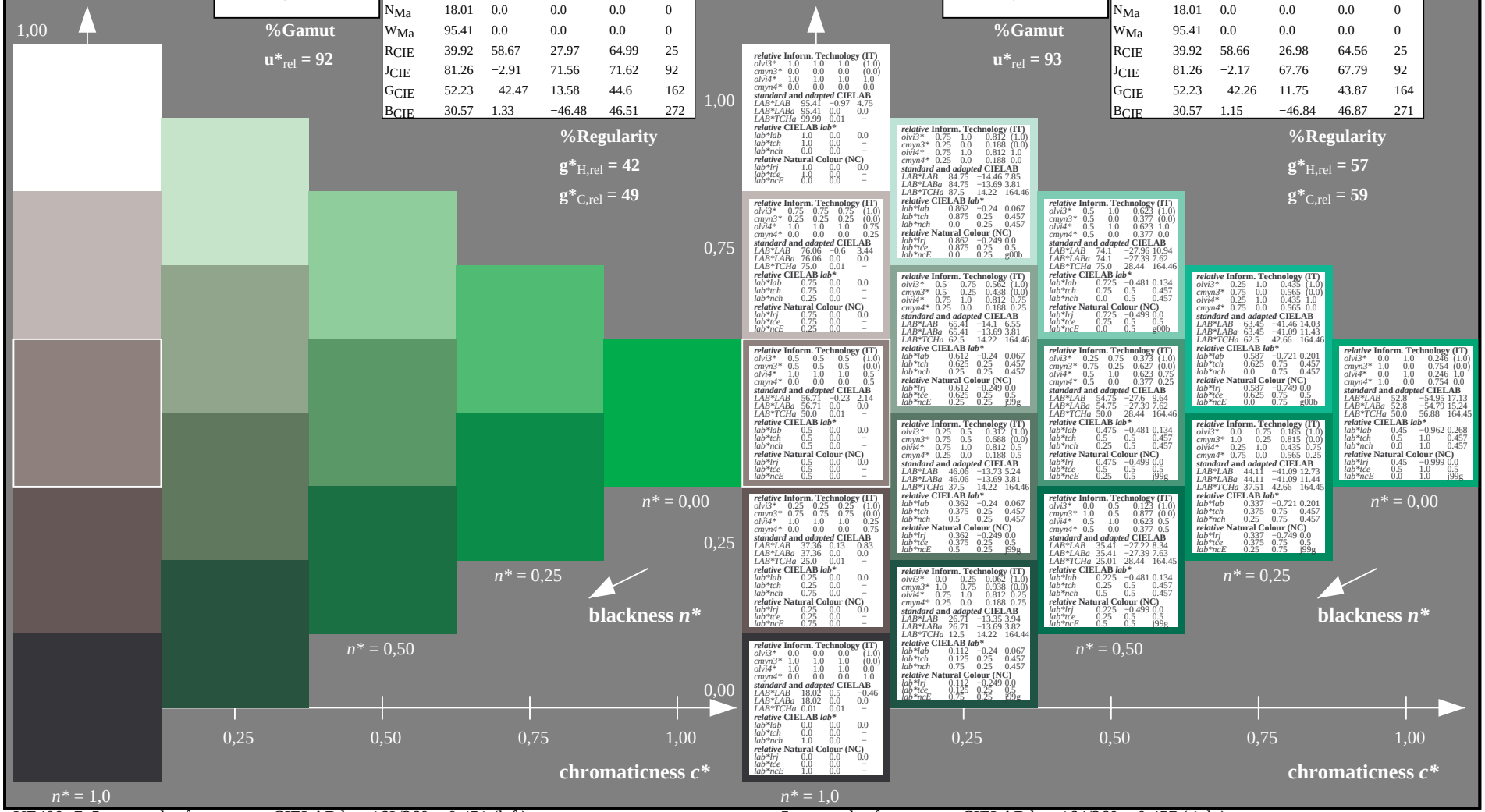
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



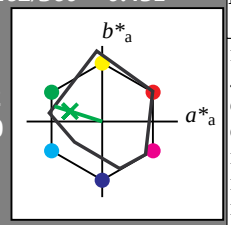
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System MRS18a
for hue *h* = lab*h = 162/360 = 0.451*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

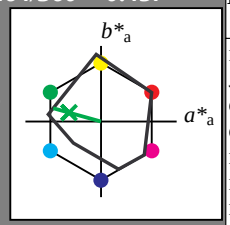
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System MRS18
for hue *h* = lab*h = 164/360 = 0.457*
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

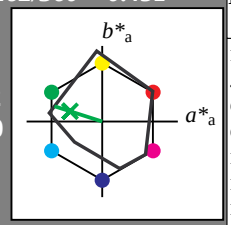
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

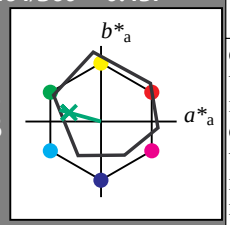
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

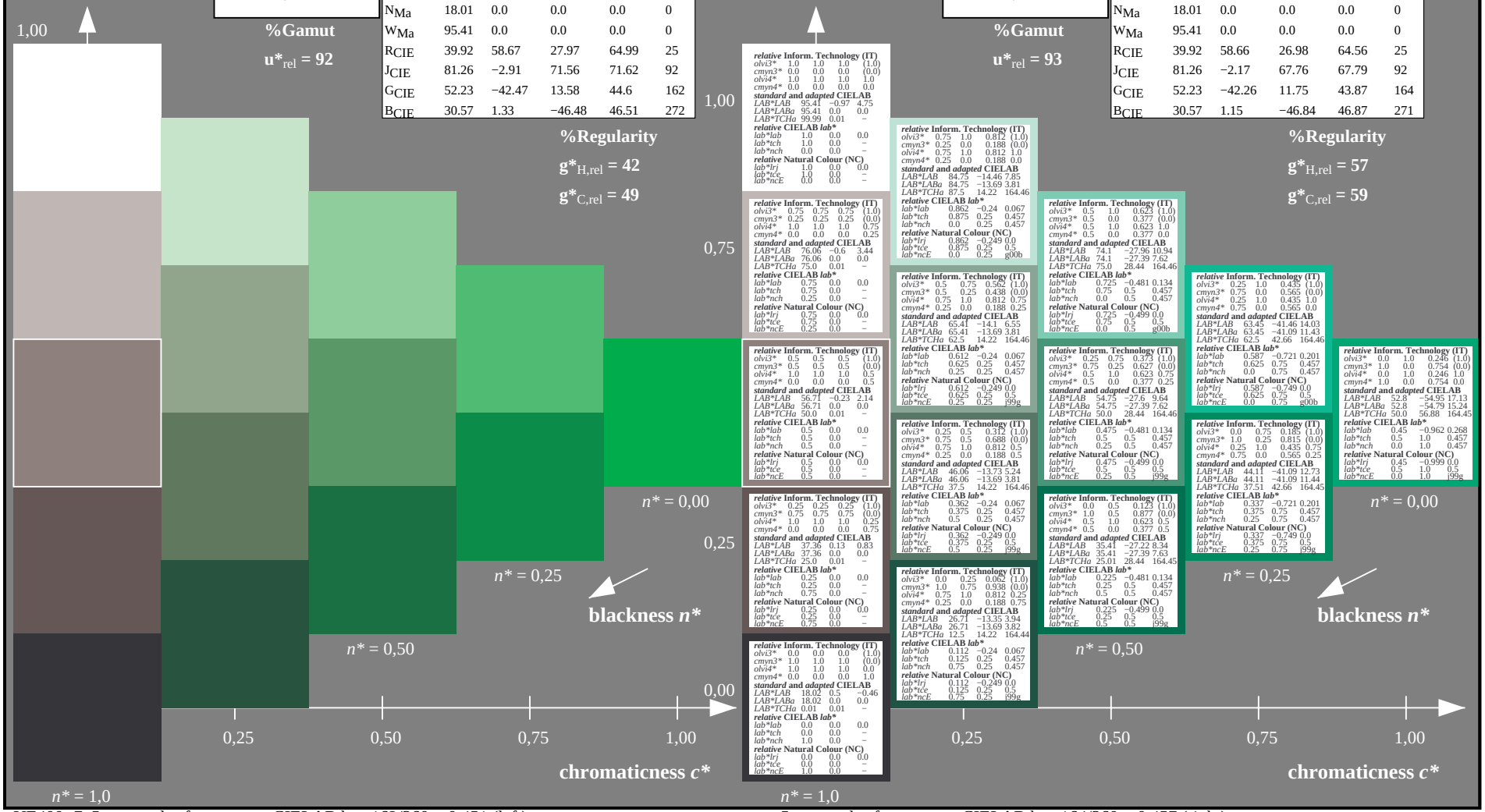
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



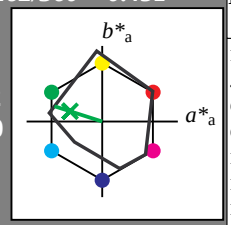
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

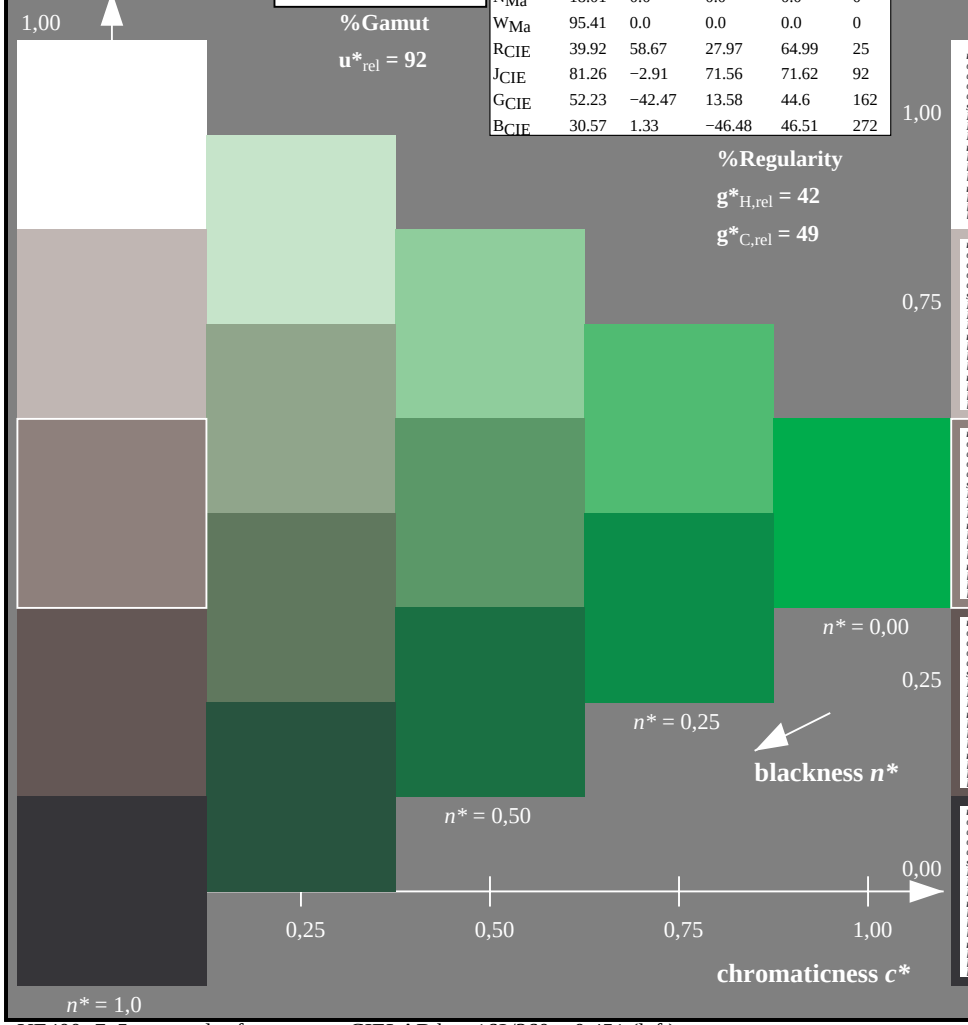
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

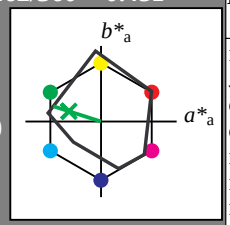
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

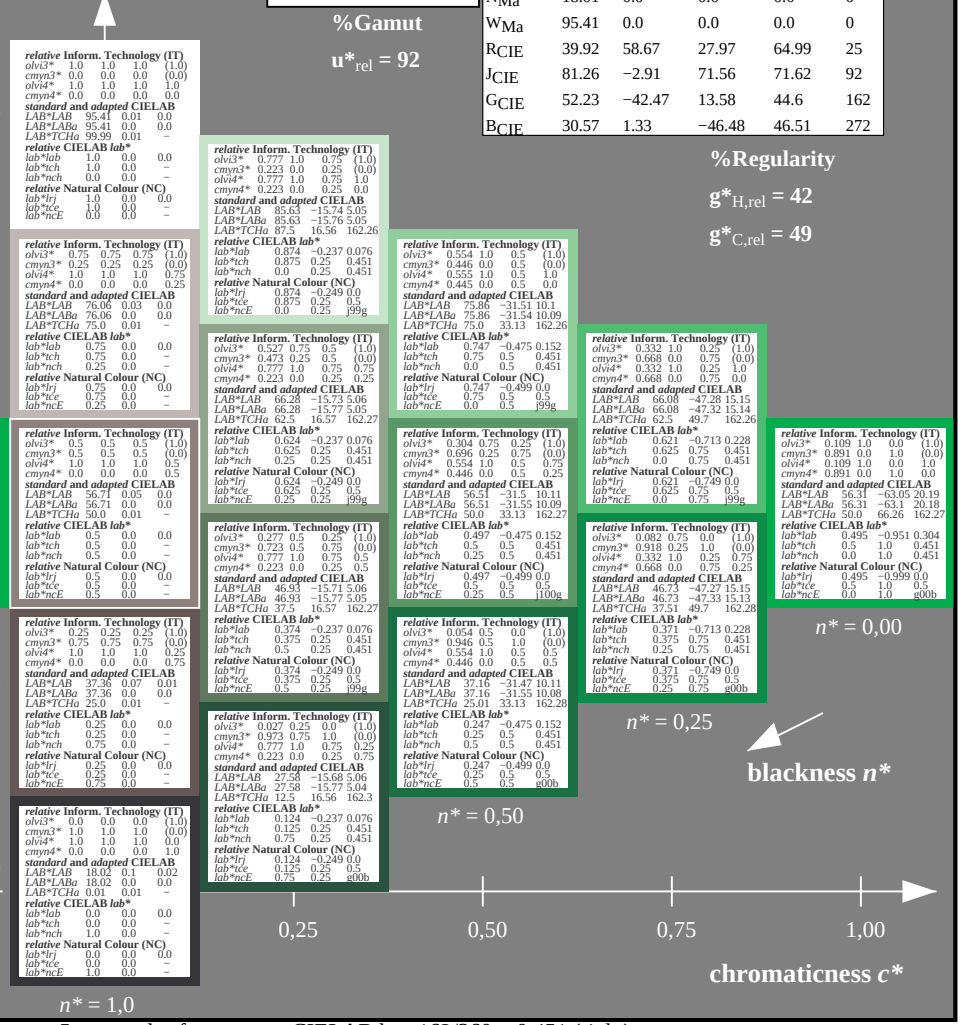
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



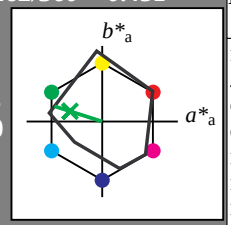
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

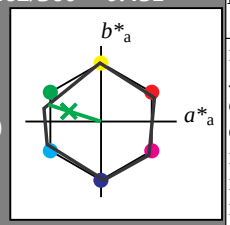
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

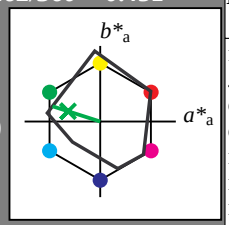
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

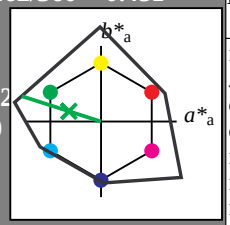
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

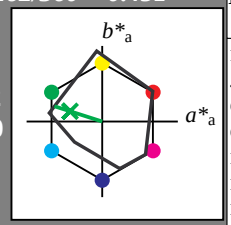
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

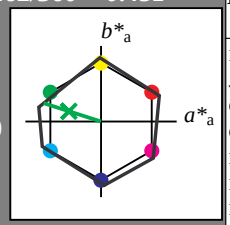
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

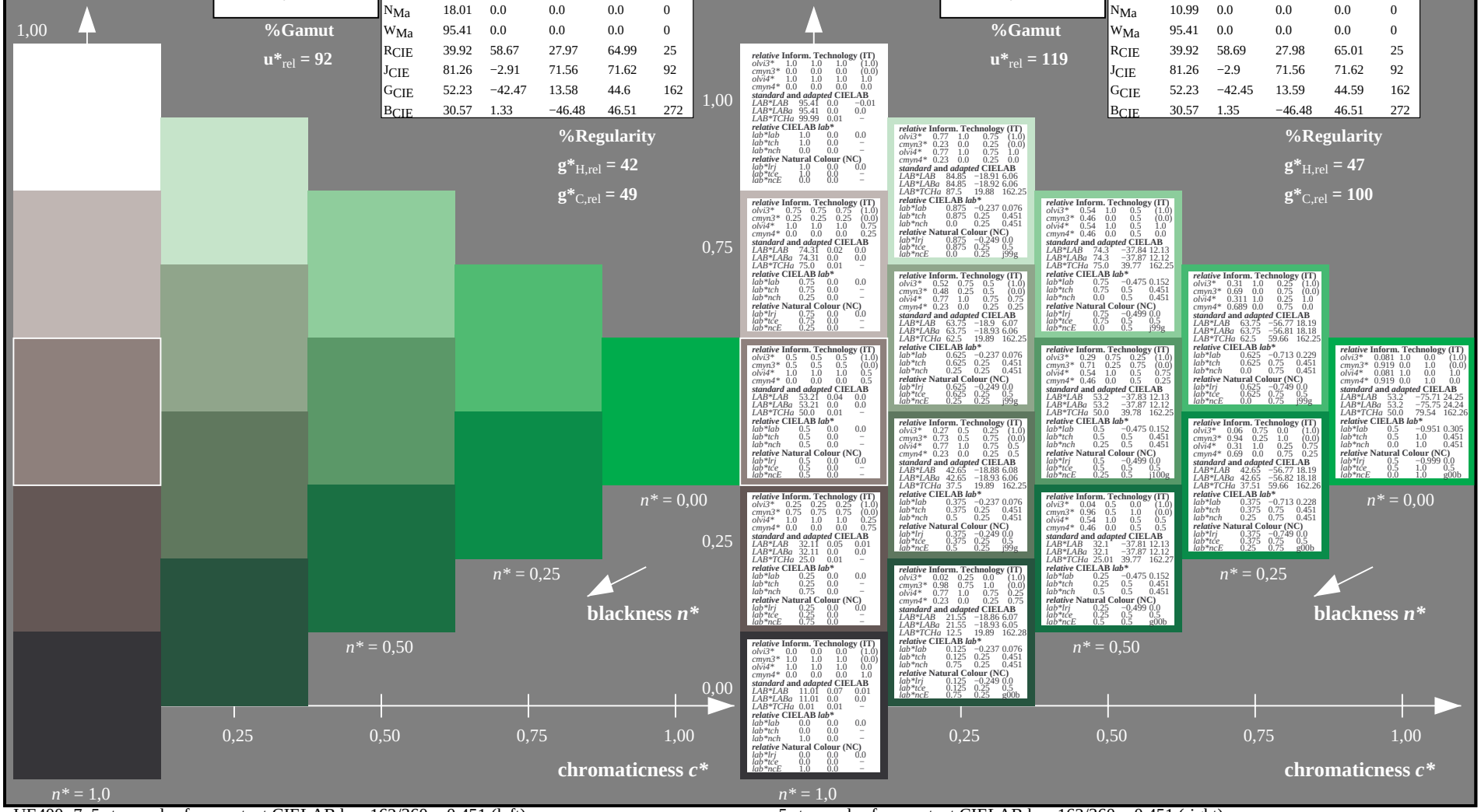
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



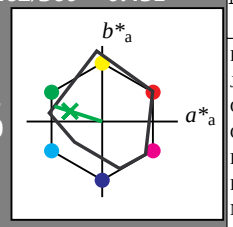
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

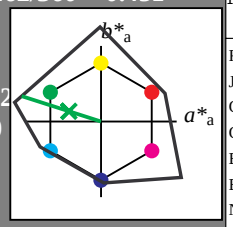
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

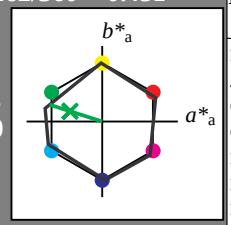
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

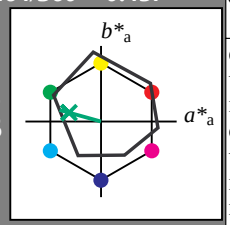
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

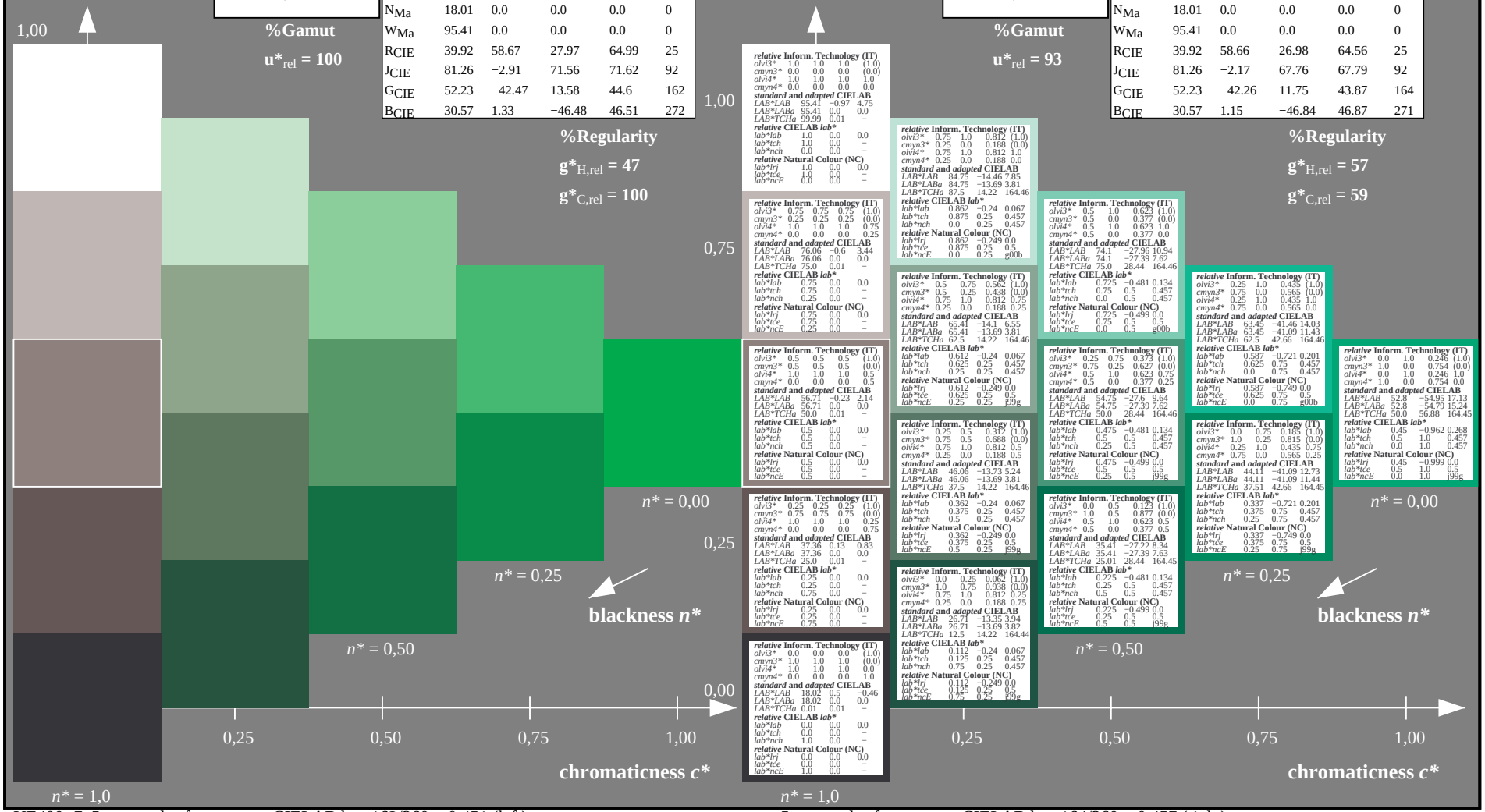
%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



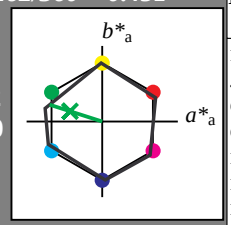
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

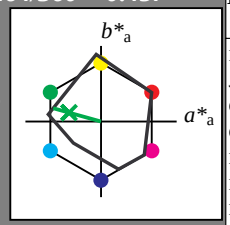
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

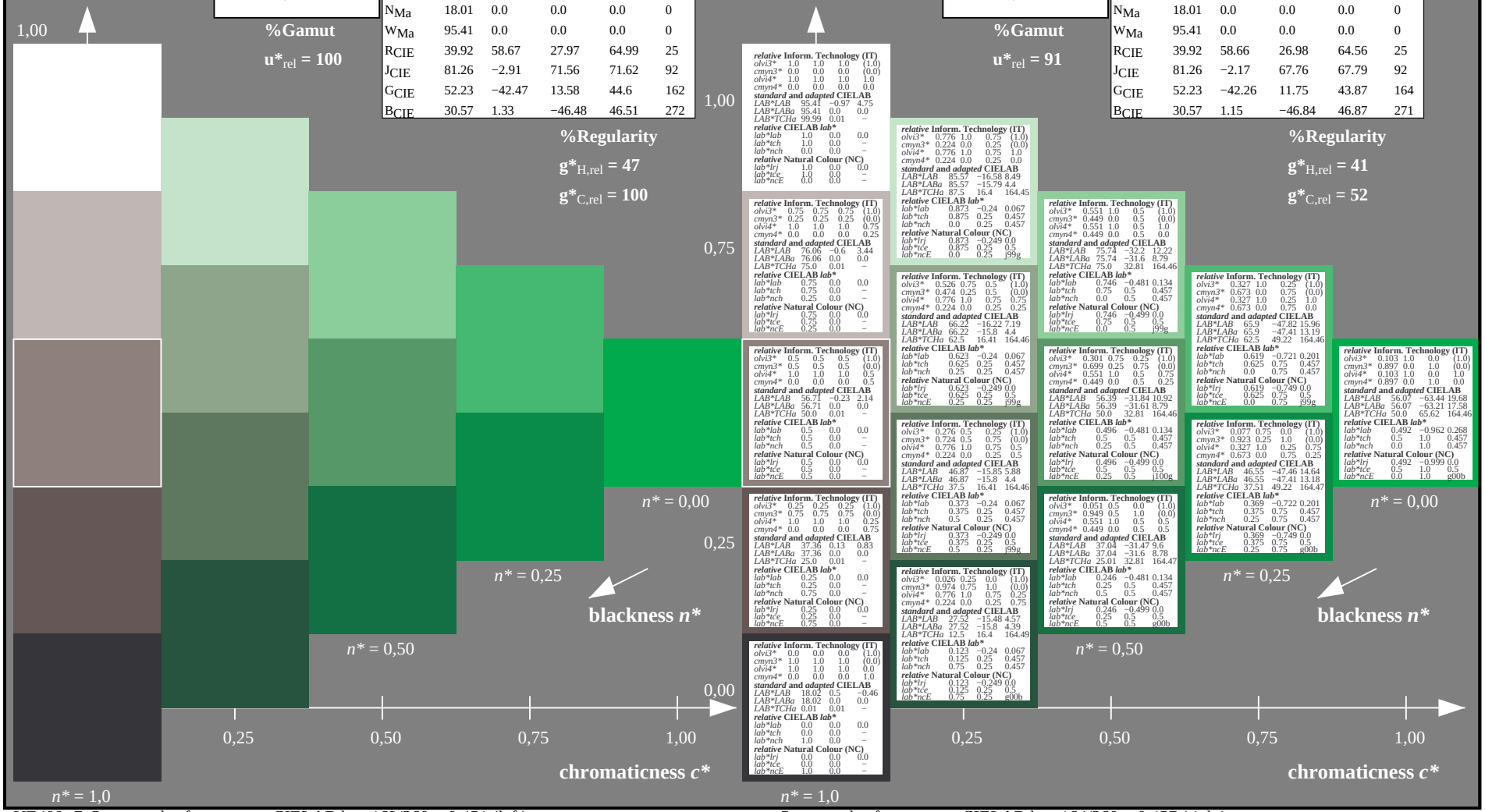
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



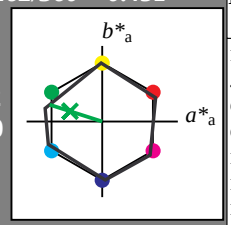
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

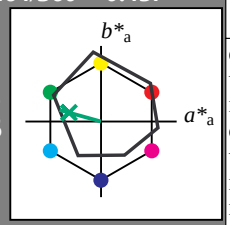
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

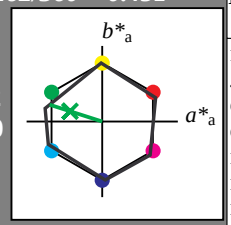
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

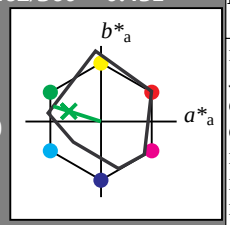
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

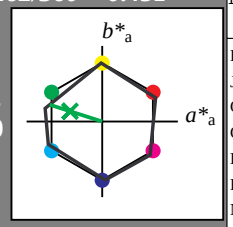
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

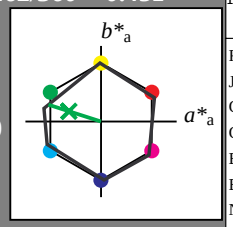
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

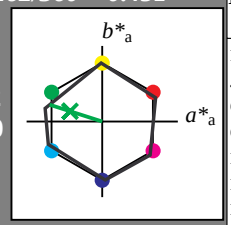
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

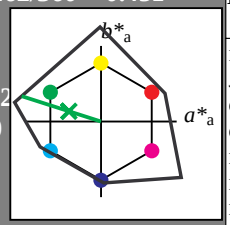
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

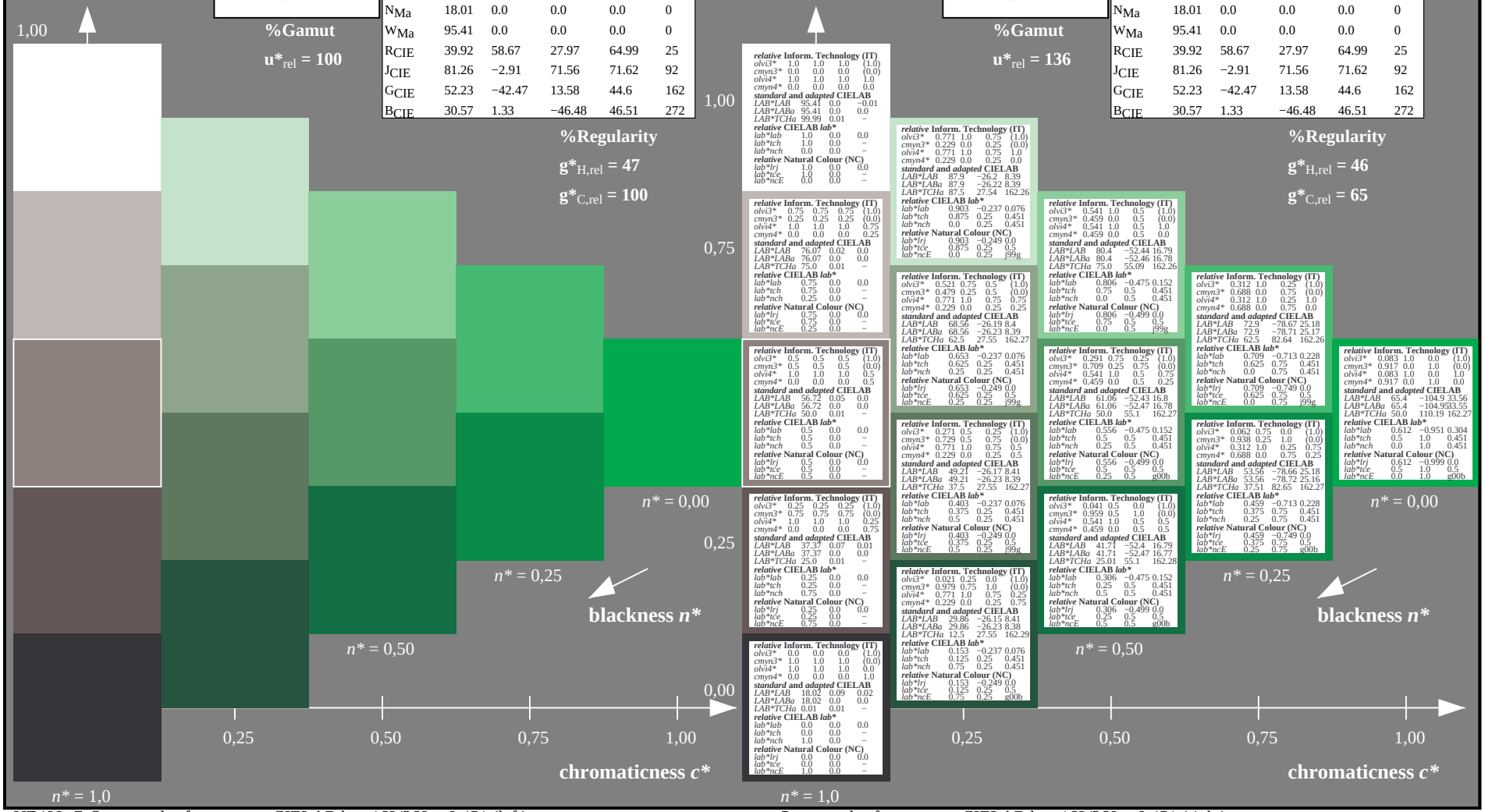
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



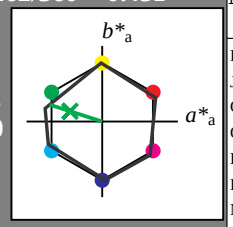
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

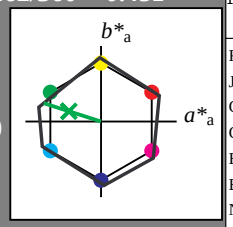
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

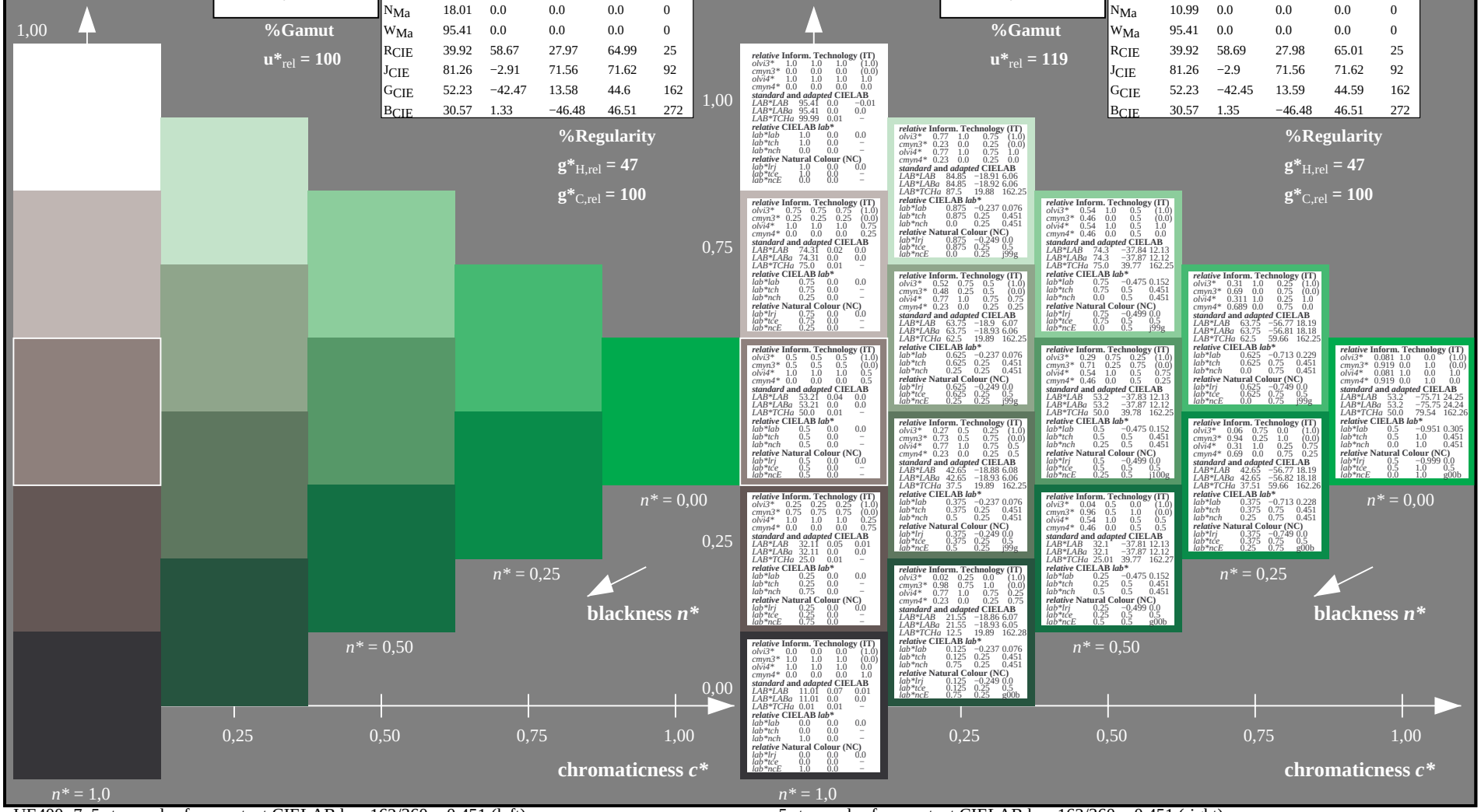
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



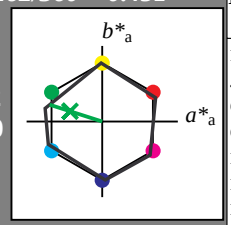
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

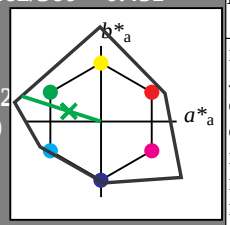
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

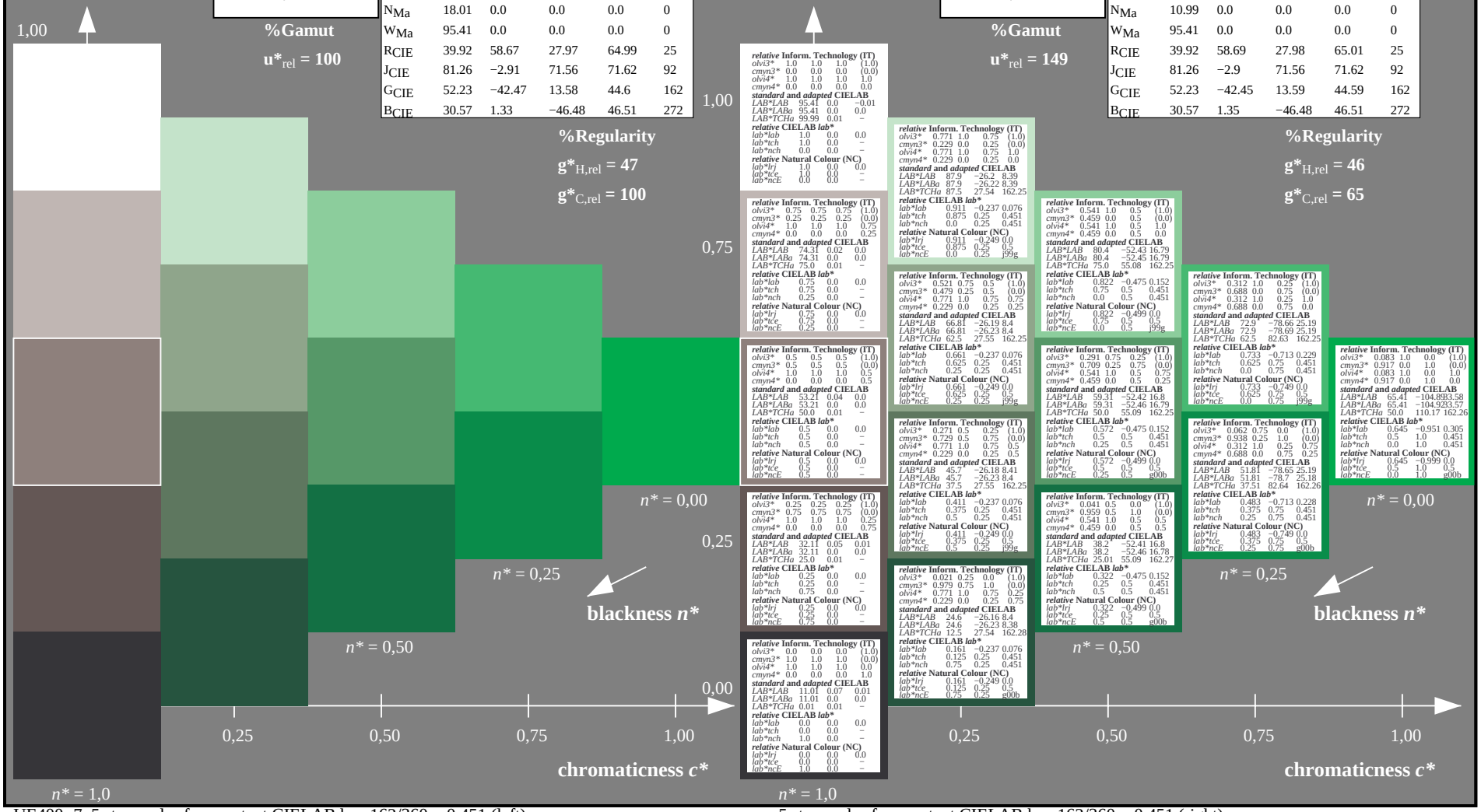
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



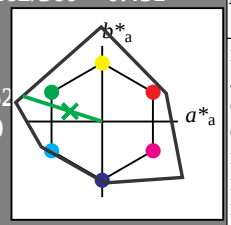
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

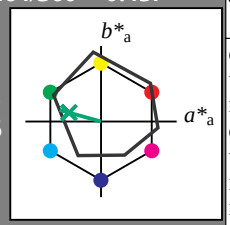
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

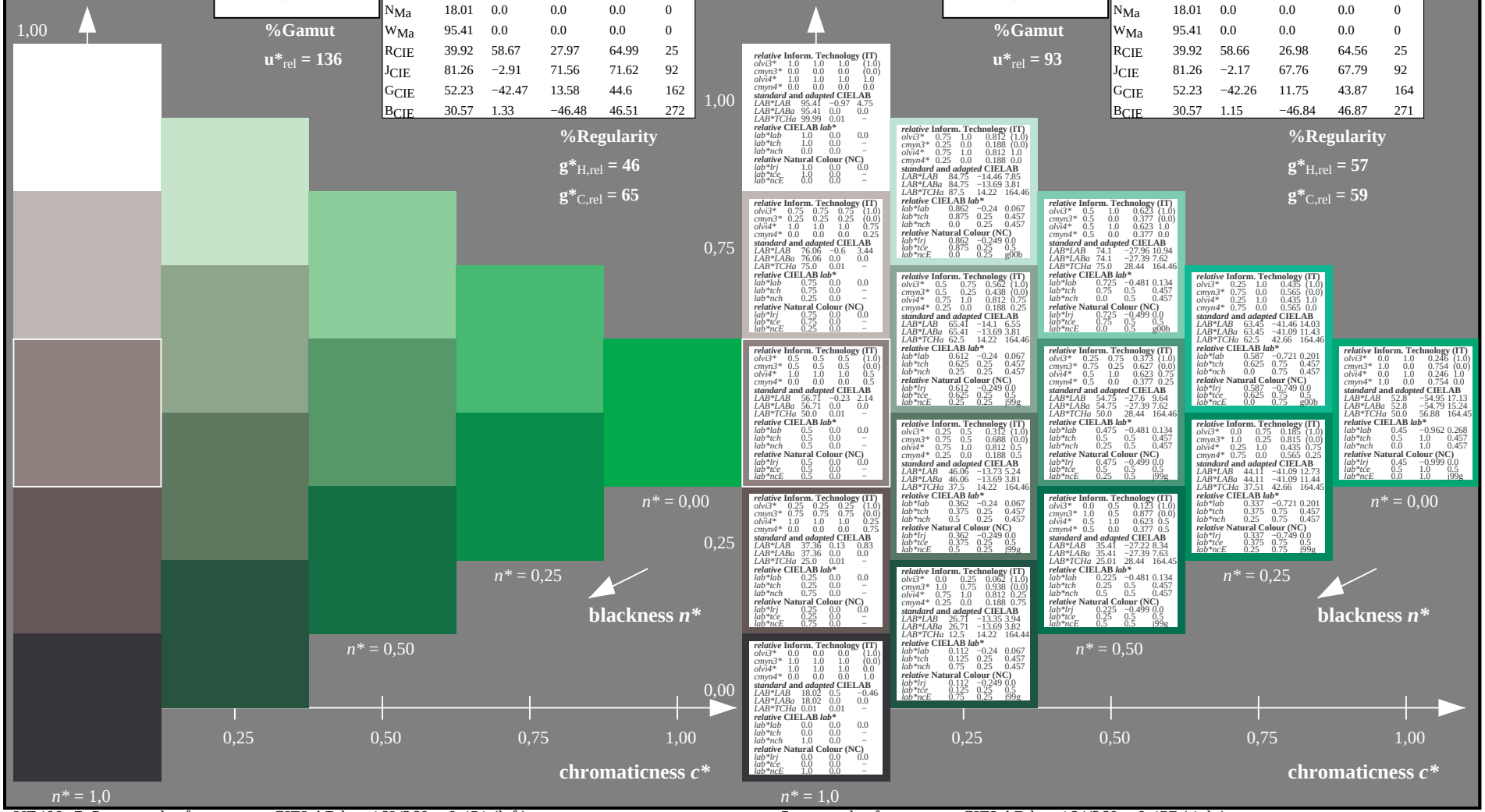
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



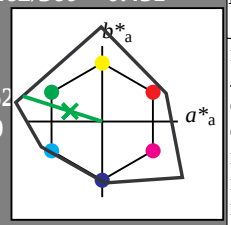
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

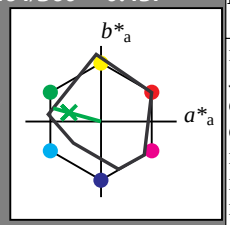
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

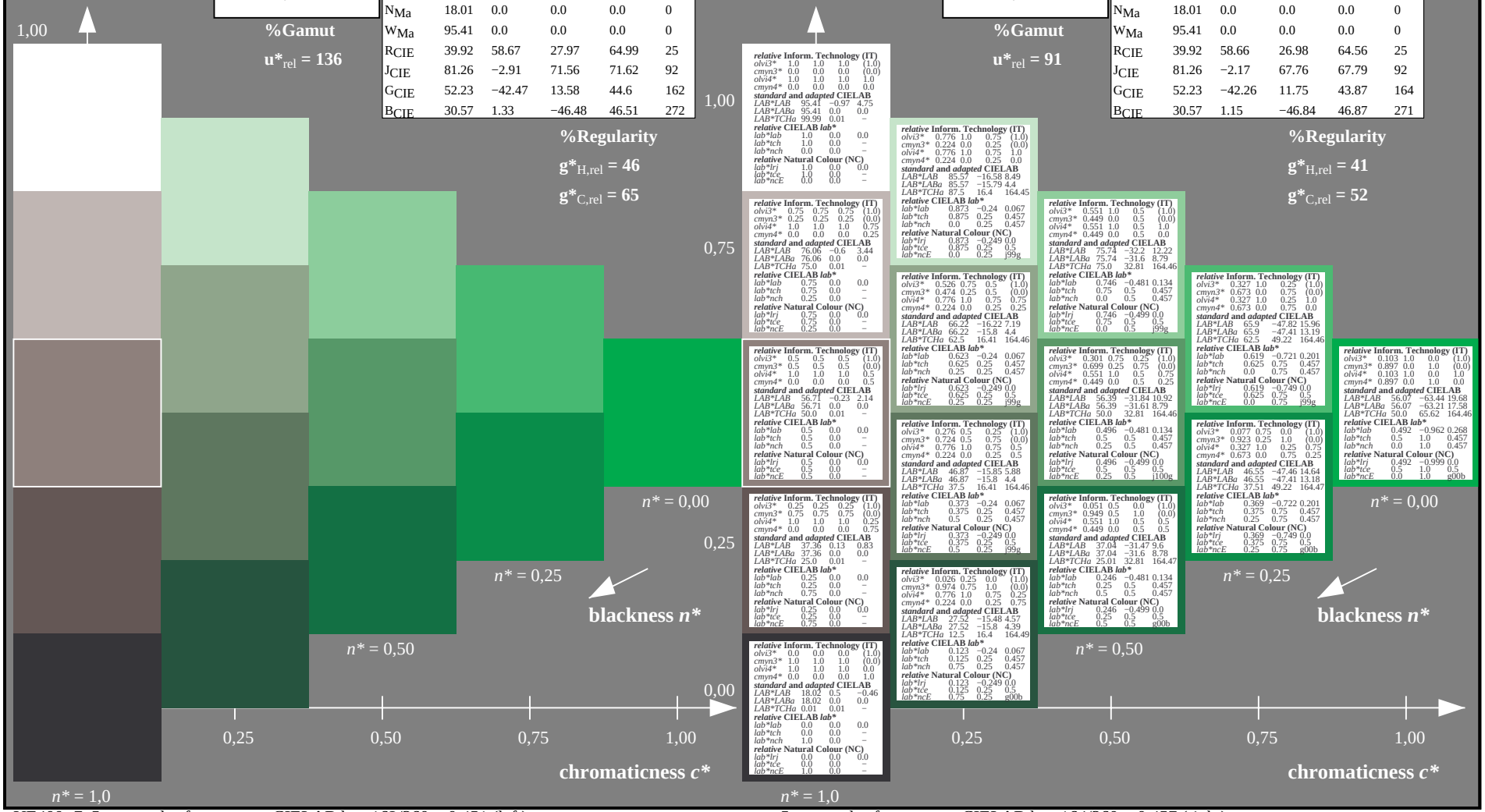
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



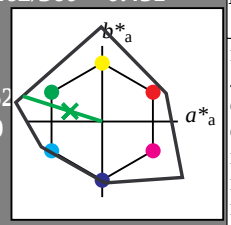
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

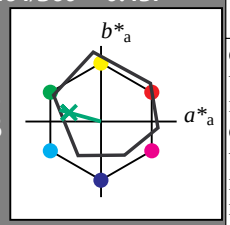
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

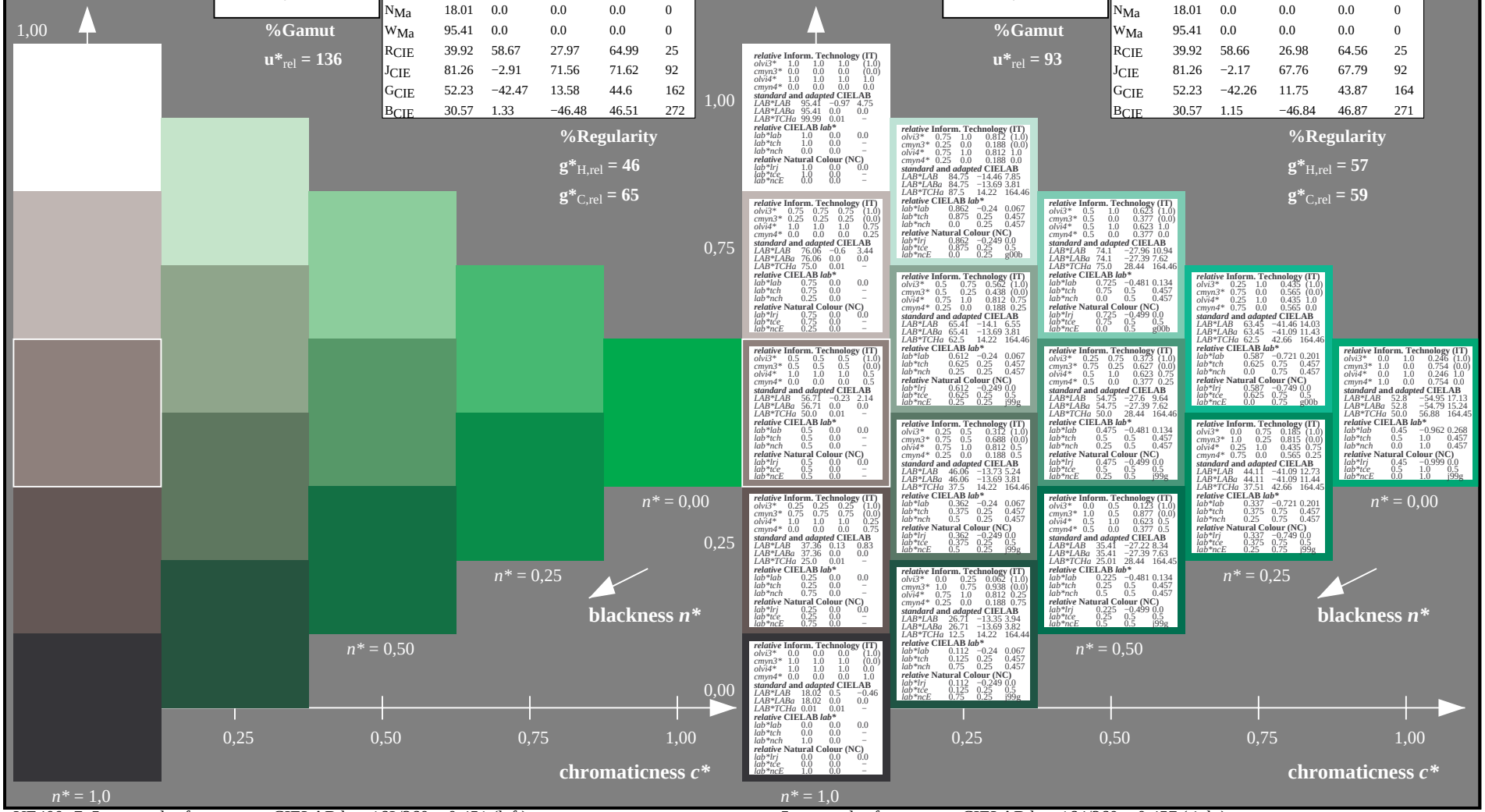
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



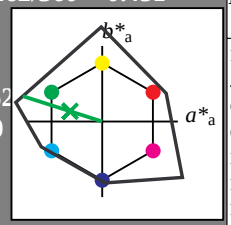
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

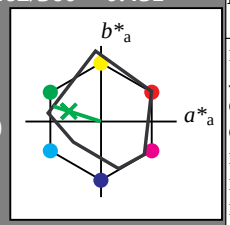
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

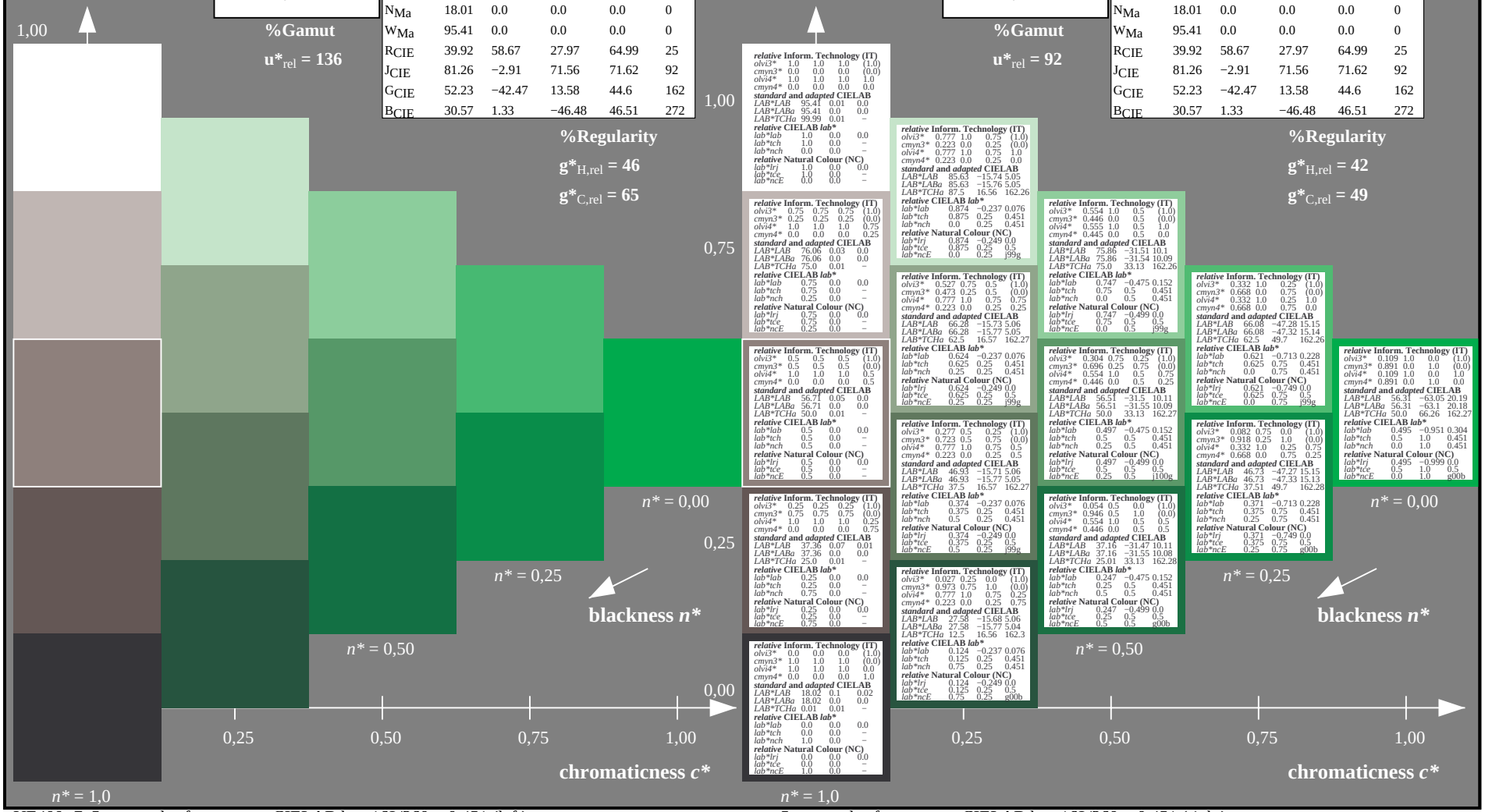
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



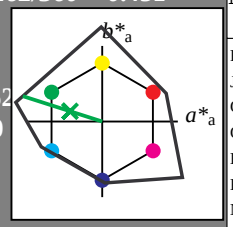
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

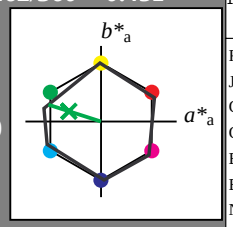
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

relative **Inform. Technology (IT)**
*olvi3** 1.0 1.0 1.0 (1.0)
*cmyn3** 0.0 0.0 0.0 (0.0)
*olvi4** 1.0 1.0 1.0 1.0
*cmyn4** 0.0 0.0 0.0 0.0
***standard* and *adapted* CIELAB**
*LAB*LAB* 95.41 0.0 0.0
*LAB*LABa* 95.41 0.0 0.0
*LAB*TCHa* 99.99 0.01 –
relative* CIELAB *lab*
*lab*lab* 1.0 0.0 0.0
*lab*tch* 1.0 0.0 –
*lab*nch* 0.0 0.0 –
***relative* Natural Colour (NC)**
*lab*lrj* 1.0 0.0 0.0
*lab*tce* 1.0 0.0 –
*lab*ncE* 0.0 0.0 –

relative **Inform. Technology (IT)**
*olvi3** 0.75 0.75 0.75 (1.0)
*cmyn3** 0.25 0.25 0.25 (0.0)
*olvi4** 1.0 1.0 1.0 0.75
*cmyn4** 0.0 0.0 0.0 0.25
***standard* and *adapted* CIELAB**
*LAB*LAB* 76.07 0.02 0.0
*LAB*LABa* 76.07 0.0 0.0
*LAB*TCHa* 75.0 0.01 –
relative* CIELAB *lab*
*lab*lab* 0.75 0.0 0.0
*lab*tch* 0.75 0.0 –
*lab*nch* 0.25 0.0 –
***relative* Natural Colour (NC)**
*lab*lrj* 0.75 0.0 0.0
*lab*tce* 0.75 0.0 –
*lab*ncE* 0.25 0.0 –

relative **Inform. Technology (IT)**
*olvi3** 0.5 0.5 0.5 (1.0)
*cmyn3** 0.5 0.5 0.5 (0.0)
*olvi4** 1.0 1.0 1.0 0.5
*cmyn4** 0.0 0.0 0.0 0.5
***standard* and *adapted* CIELAB**
*LAB*LAB* 56.72 0.05 0.0
*LAB*LABa* 56.72 0.0 0.0
*LAB*TCHa* 50.0 0.01 –
relative* CIELAB *lab*
*lab*lab* 0.5 0.0 0.0
*lab*tch* 0.5 0.0 –
*lab*nch* 0.5 0.0 –
***relative* Natural Colour (NC)**
*lab*lrj* 0.5 0.0 0.0
*lab*tce* 0.5 0.0 –
*lab*ncE* 0.5 0.0 –

relative **Inform. Technology (IT)**
*olvi3** 0.25 0.25 0.25 (1.0)
*cmyn3** 0.75 0.75 0.75 (0.0)
*olvi4** 1.0 1.0 1.0 0.25
*cmyn4** 0.0 0.0 0.0 0.75
***standard* and *adapted* CIELAB**
*LAB*LAB* 37.37 0.07 0.01
*LAB*LABa* 37.37 0.0 0.0
*LAB*TCHa* 25.0 0.01 –
relative* CIELAB *lab*
*lab*lab* 0.25 0.0 0.0
*lab*tch* 0.25 0.0 –
*lab*nch* 0.75 0.0 –
***relative* Natural Colour (NC)**
*lab*lrj* 0.25 0.0 0.0
*lab*tce* 0.25 0.0 –
*lab*ncE* 0.75 0.0 –

relative **Inform. Technology (IT)**
*olvi3** 0.0 0.0 0.0 (1.0)
*cmyn3** 1.0 1.0 1.0 (0.0)
*olvi4** 1.0 1.0 1.0 0.0
*cmyn4** 0.0 0.0 0.0 1.0
***standard* and *adapted* CIELAB**
*LAB*LAB* 18.02 0.09 0.02
*LAB*LABa* 18.02 0.0 0.0
*LAB*TCHa* 0.01 0.01 –
relative* CIELAB *lab*
*lab*lab* 0.0 0.0 0.0
*lab*tch* 0.0 0.0 –
*lab*nch* 1.0 0.0 –
***relative* Natural Colour (NC)**
*lab*lrj* 0.0 0.0 0.0
*lab*tce* 0.0 0.0 –
*lab*ncE* 1.0 0.0 –

relative **Inform. Technology (IT)**
*olvi3** 0.77 1.0 0.75 (1.0)
*cmyn3** 0.23 0.0 0.25 (0.0)
*olvi4** 0.77 1.0 0.75 1.0
*cmyn4** 0.23 0.0 0.25 0.0
***standard* and *adapted* CIELAB**
*LAB*LAB* 85.73 −17.34 5.56
*LAB*LABa* 85.73 −17.36 5.56
*LAB*TCHa* 87.5 18.24 162.26
relative* CIELAB *lab*
*lab*lab* 0.875 −0.237 0.076
*lab*tch* 0.875 0.25 0.451
*lab*nch* 0.0 0.25 0.451
***relative* Natural Colour (NC)**
*lab*lrj* 0.875 −0.249 0.0
*lab*tce* 0.875 0.25 0.5
*lab*ncE* 0.0 0.25 j99g

relative **Inform. Technology (IT)**
*olvi3** 0.52 0.75 0.5 (1.0)
*cmyn3** 0.48 0.25 0.5 (0.0)
*olvi4** 0.77 1.0 0.75 0.75
*cmyn4** 0.23 0.0 0.25 0.25
***standard* and *adapted* CIELAB**
*LAB*LAB* 66.38 −17.32 5.57
*LAB*LABa* 66.38 −17.37 5.56
*LAB*TCHa* 62.5 18.24 162.27
relative* CIELAB *lab*
*lab*lab* 0.625 −0.237 0.076
*lab*tch* 0.625 0.25 0.451
*lab*nch* 0.25 0.25 0.451
***relative* Natural Colour (NC)**
*lab*lrj* 0.625 −0.249 0.0
*lab*tce* 0.625 0.25 0.5
*lab*ncE* 0.25 0.25 j99g

relative **Inform. Technology (IT)**
*olvi3** 0.27 0.5 0.25 (1.0)
*cmyn3** 0.73 0.5 0.75 (0.0)
*olvi4** 0.77 1.0 0.75 0.5
*cmyn4** 0.23 0.0 0.25 0.5
***standard* and *adapted* CIELAB**
*LAB*LAB* 47.03 −17.3 5.57
*LAB*LABa* 47.03 −17.37 5.56
*LAB*TCHa* 37.5 18.24 162.27
relative* CIELAB *lab*
*lab*lab* 0.375 −0.237 0.076
*lab*tch* 0.375 0.25 0.451
*lab*nch* 0.5 0.25 0.451
***relative* Natural Colour (NC)**
*lab*lrj* 0.375 −0.249 0.0
*lab*tce* 0.375 0.25 0.5
*lab*ncE* 0.5 0.25 j99g

relative **Inform. Technology (IT)**
*olvi3** 0.02 0.25 0.0 (1.0)
*cmyn3** 0.98 0.75 1.0 (0.0)
*olvi4** 0.77 1.0 0.75 0.25
*cmyn4** 0.23 0.0 0.25 0.75
***standard* and *adapted* CIELAB**
*LAB*LAB* 27.69 −17.28 5.58
*LAB*LABa* 27.69 −17.37 5.55
*LAB*TCHa* 12.5 18.24 162.29
relative* CIELAB *lab*
*lab*lab* 0.125 −0.237 0.076
*lab*tch* 0.125 0.25 0.451
*lab*nch* 0.75 0.25 0.451
***relative* Natural Colour (NC)**
*lab*lrj* 0.125 −0.249 0.0
*lab*tce* 0.125 0.25 0.5
*lab*ncE* 0.75 0.25 g00b

relative **Inform. Technology (IT)**
*olvi3** 0.54 1.0 0.5 (1.0)
*cmyn3** 0.46 0.0 0.5 (0.0)
*olvi4** 0.54 1.0 0.5 1.0
*cmyn4** 0.46 0.0 0.5 0.0
***standard* and *adapted* CIELAB**
*LAB*LAB* 76.05 −34.7 11.12
*LAB*LABa* 76.05 −34.73 11.11
*LAB*TCHa* 75.0 36.48 162.26
relative* CIELAB *lab*
*lab*lab* 0.75 −0.475 0.152
*lab*tch* 0.75 0.5 0.451
*lab*nch* 0.0 0.5 0.451
***relative* Natural Colour (NC)**
*lab*lrj* 0.75 −0.499 0.0
*lab*tce* 0.75 0.5 0.5
*lab*ncE* 0.0 0.5 j99g

relative **Inform. Technology (IT)**
*olvi3** 0.29 0.75 0.25 (1.0)
*cmyn3** 0.71 0.25 0.75 (0.0)
*olvi4** 0.54 1.0 0.5 0.75
*cmyn4** 0.46 0.0 0.5 0.25
***standard* and *adapted* CIELAB**
*LAB*LAB* 56.7 −34.69 11.13
*LAB*LABa* 56.7 −34.74 11.11
*LAB*TCHa* 50.0 36.49 162.27
relative* CIELAB *lab*
*lab*lab* 0.5 −0.475 0.152
*lab*tch* 0.5 0.5 0.451
*lab*nch* 0.25 0.5 0.451
***relative* Natural Colour (NC)**
*lab*lrj* 0.5 −0.499 0.0
*lab*tce* 0.5 0.5 0.5
*lab*ncE* 0.25 0.5 j100g

relative **Inform. Technology (IT)**
*olvi3** 0.04 0.5 0.0 (1.0)
*cmyn3** 0.96 0.5 1.0 (0.0)
*olvi4** 0.54 1.0 0.5 0.5
*cmyn4** 0.46 0.0 0.5 0.5
***standard* and *adapted* CIELAB**
*LAB*LAB* 37.36 −34.67 11.13
*LAB*LABa* 37.36 −34.74 11.11
*LAB*TCHa* 25.01 36.48 162.28
relative* CIELAB *lab*
*lab*lab* 0.25 −0.475 0.152
*lab*tch* 0.25 0.5 0.451
*lab*nch* 0.5 0.5 0.451
***relative* Natural Colour (NC)**
*lab*lrj* 0.25 −0.499 0.0
*lab*tce* 0.25 0.5 0.5
*lab*ncE* 0.5 0.5 g00b

relative **Inform. Technology (IT)**
*olvi3** 0.31 1.0 0.25 (1.0)
*cmyn3** 0.69 0.0 0.75 (0.0)
*olvi4** 0.31 1.0 0.25 1.0
*cmyn4** 0.69 0.0 0.75 0.0
***standard* and *adapted* CIELAB**
*LAB*LAB* 66.37 −52.07 16.68
*LAB*LABa* 66.37 −52.11 16.67
*LAB*TCHa* 62.5 54.72 162.26
relative* CIELAB *lab*
*lab*lab* 0.625 −0.713 0.228
*lab*tch* 0.625 0.75 0.451
*lab*nch* 0.0 0.75 0.451
***relative* Natural Colour (NC)**
*lab*lrj* 0.625 −0.749 0.0
*lab*tce* 0.625 0.75 0.5
*lab*ncE* 0.0 0.75 j99g

relative **Inform. Technology (IT)**
*olvi3** 0.06 0.75 0.0 (1.0)
*cmyn3** 0.94 0.25 1.0 (0.0)
*olvi4** 0.31 1.0 0.25 0.75
*cmyn4** 0.69 0.0 0.75 0.25
***standard* and *adapted* CIELAB**
*LAB*LAB* 47.03 −52.05 16.68
*LAB*LABa* 47.03 −52.12 16.66
*LAB*TCHa* 37.51 54.73 162.27
relative* CIELAB *lab*
*lab*lab* 0.375 −0.713 0.228
*lab*tch* 0.375 0.75 0.451
*lab*nch* 0.25 0.75 0.451
***relative* Natural Colour (NC)**
*lab*lrj* 0.375 −0.749 0.0
*lab*tce* 0.375 0.75 0.5
*lab*ncE* 0.25 0.75 g00b

relative **Inform. Technology (IT)**
*olvi3** 0.081 1.0 0.0 (1.0)
*cmyn3** 0.919 0.0 1.0 (0.0)
*olvi4** 0.081 1.0 0.0 1.0
*cmyn4** 0.919 0.0 1.0 0.0
***standard* and *adapted* CIELAB**
*LAB*LAB* 56.7 −69.43 22.23
*LAB*LABa* 56.7 −69.49 22.22
*LAB*TCHa* 50.0 72.96 162.27
relative* CIELAB *lab*
*lab*lab* 0.5 −0.951 0.304
*lab*tch* 0.5 1.0 0.451
*lab*nch* 0.0 1.0 0.451
***relative* Natural Colour (NC)**
*lab*lrj* 0.5 −0.999 0.0
*lab*tce* 0.5 1.0 0.5
*lab*ncE* 0.0 1.0 g00b

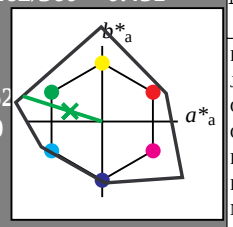
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

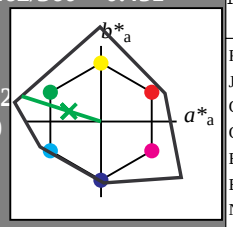
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

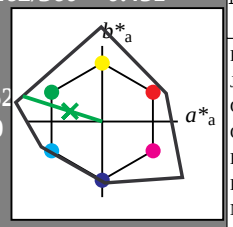
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

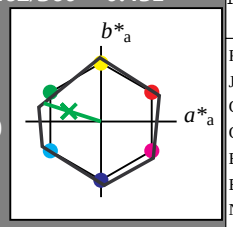
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

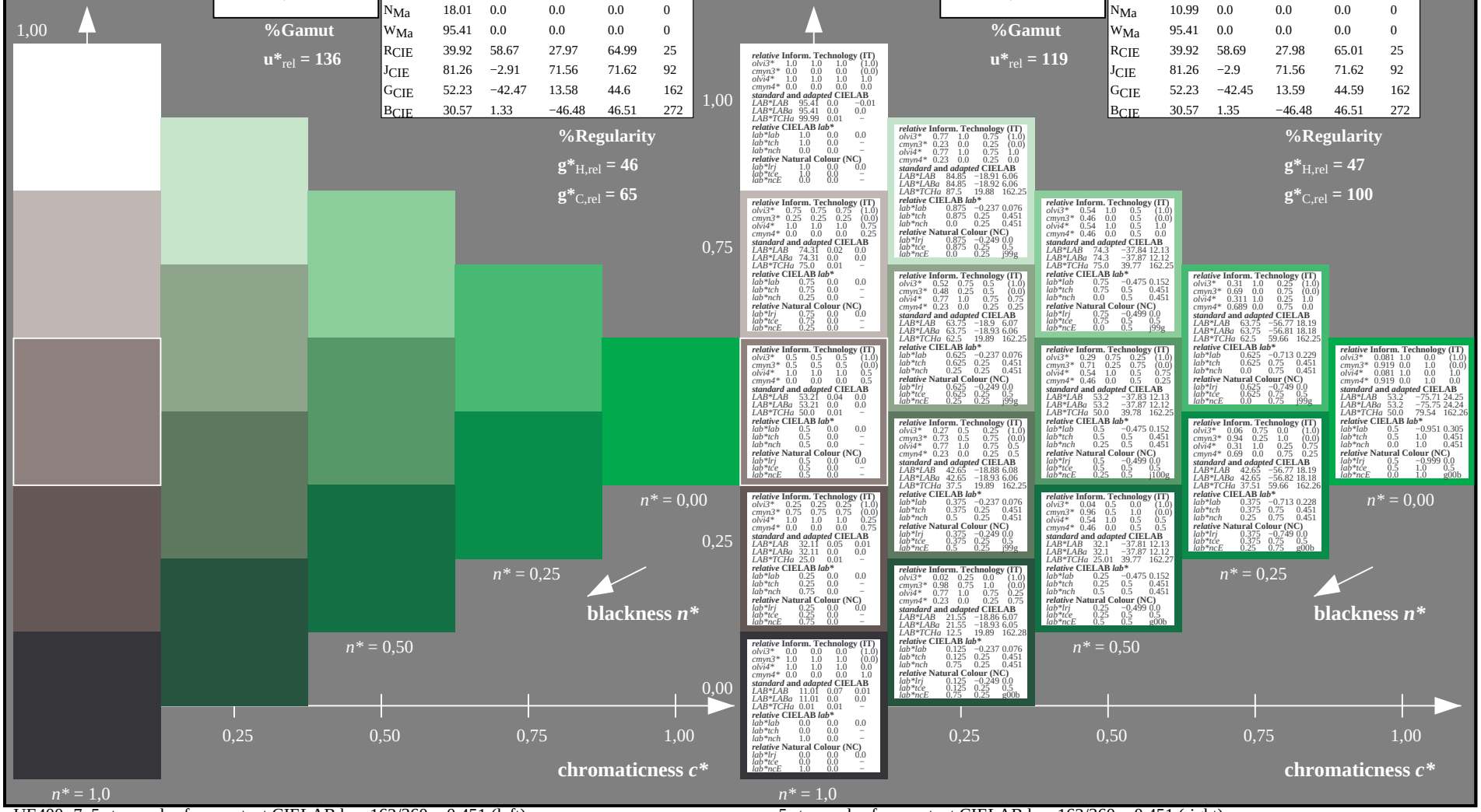
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



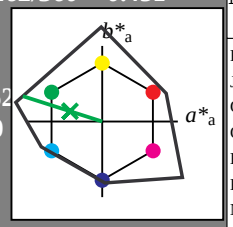
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

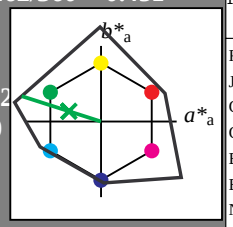
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

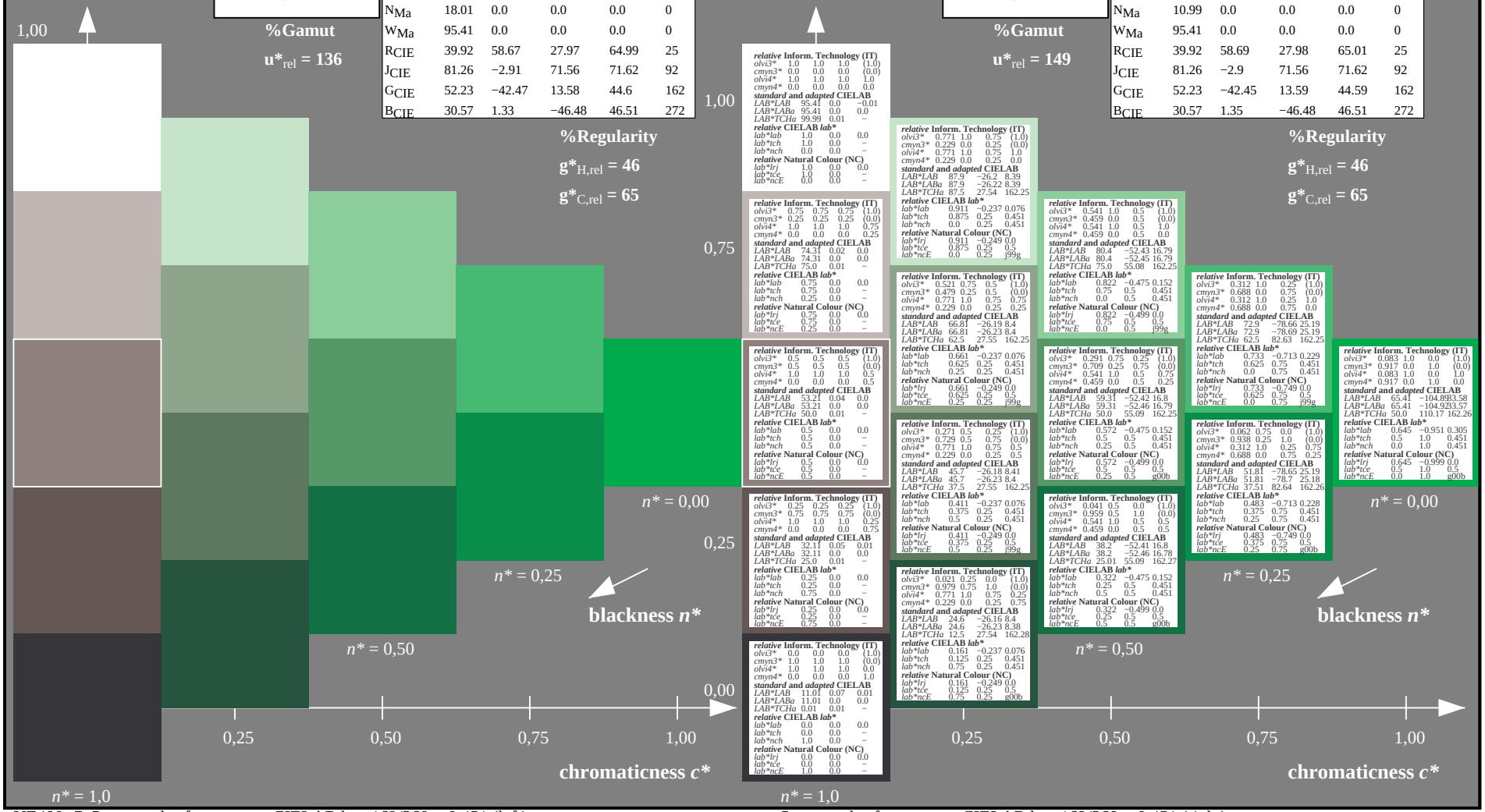
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



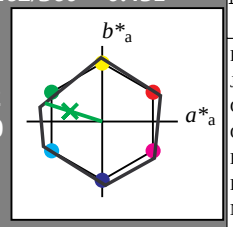
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

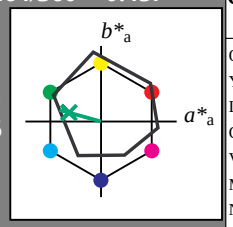
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

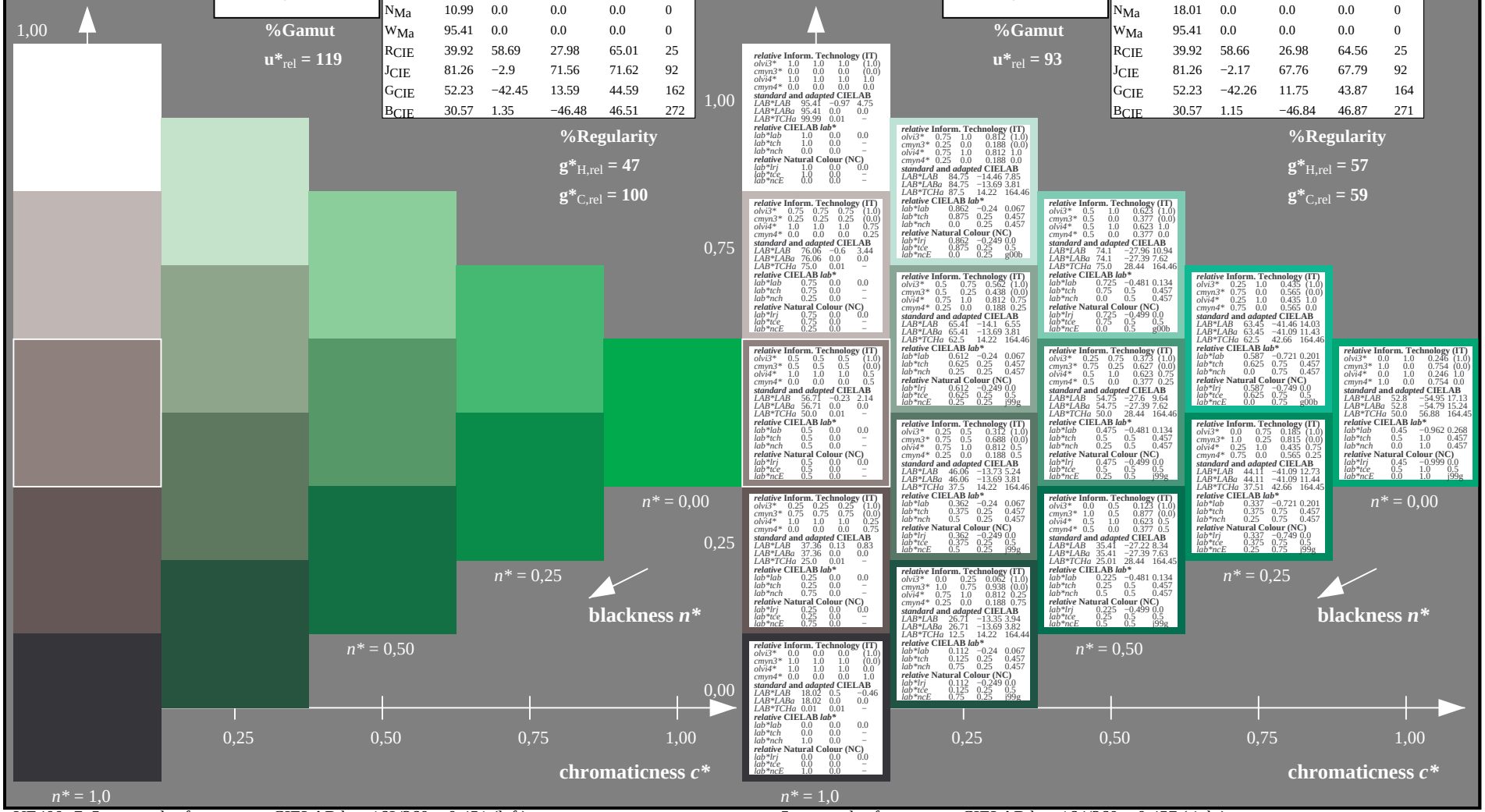
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



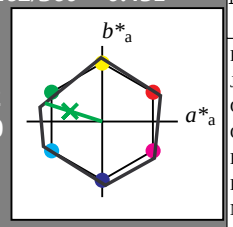
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

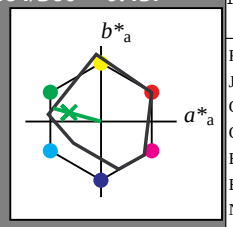
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 91

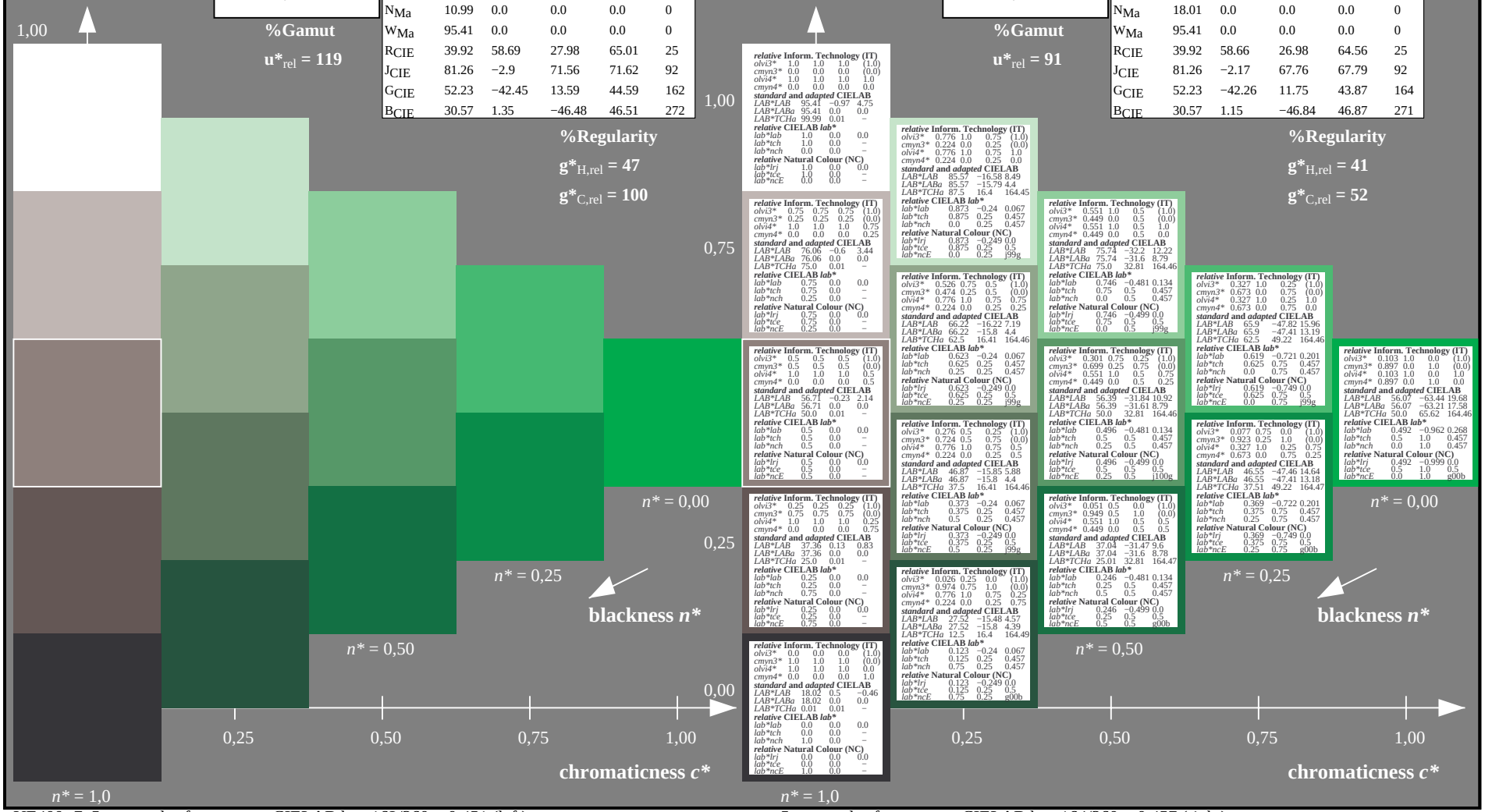
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



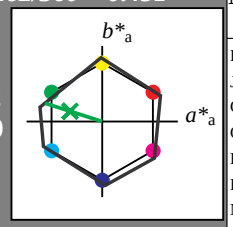
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

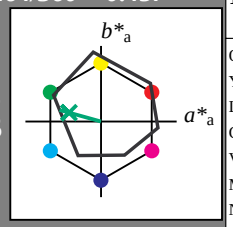
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

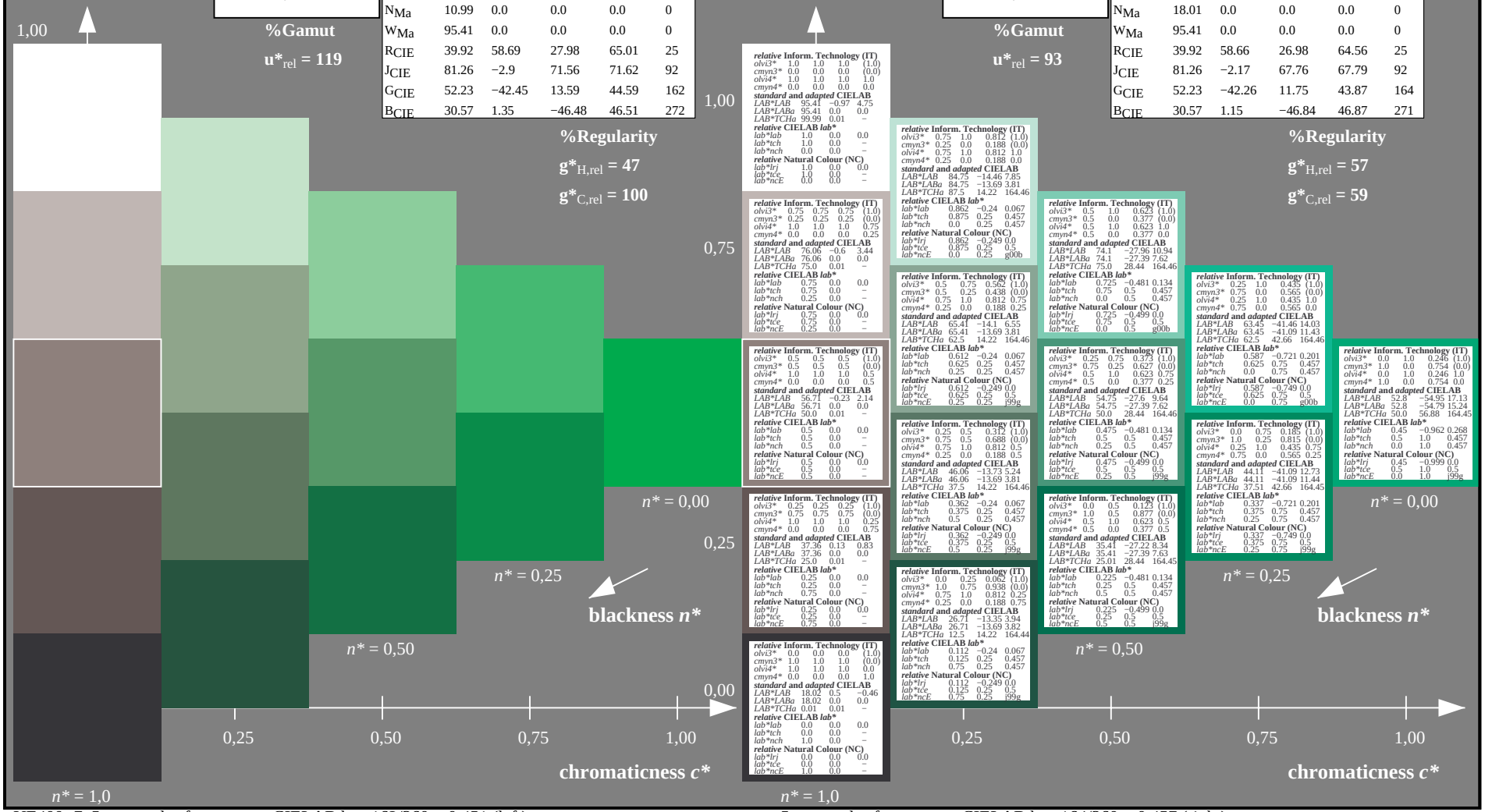
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



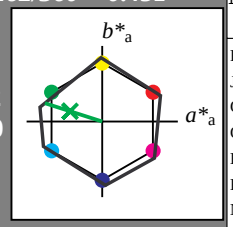
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Gamut

u^*_{rel} = 119

%Regularity

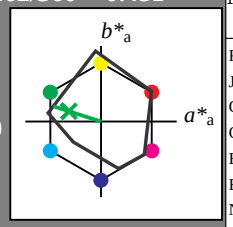
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

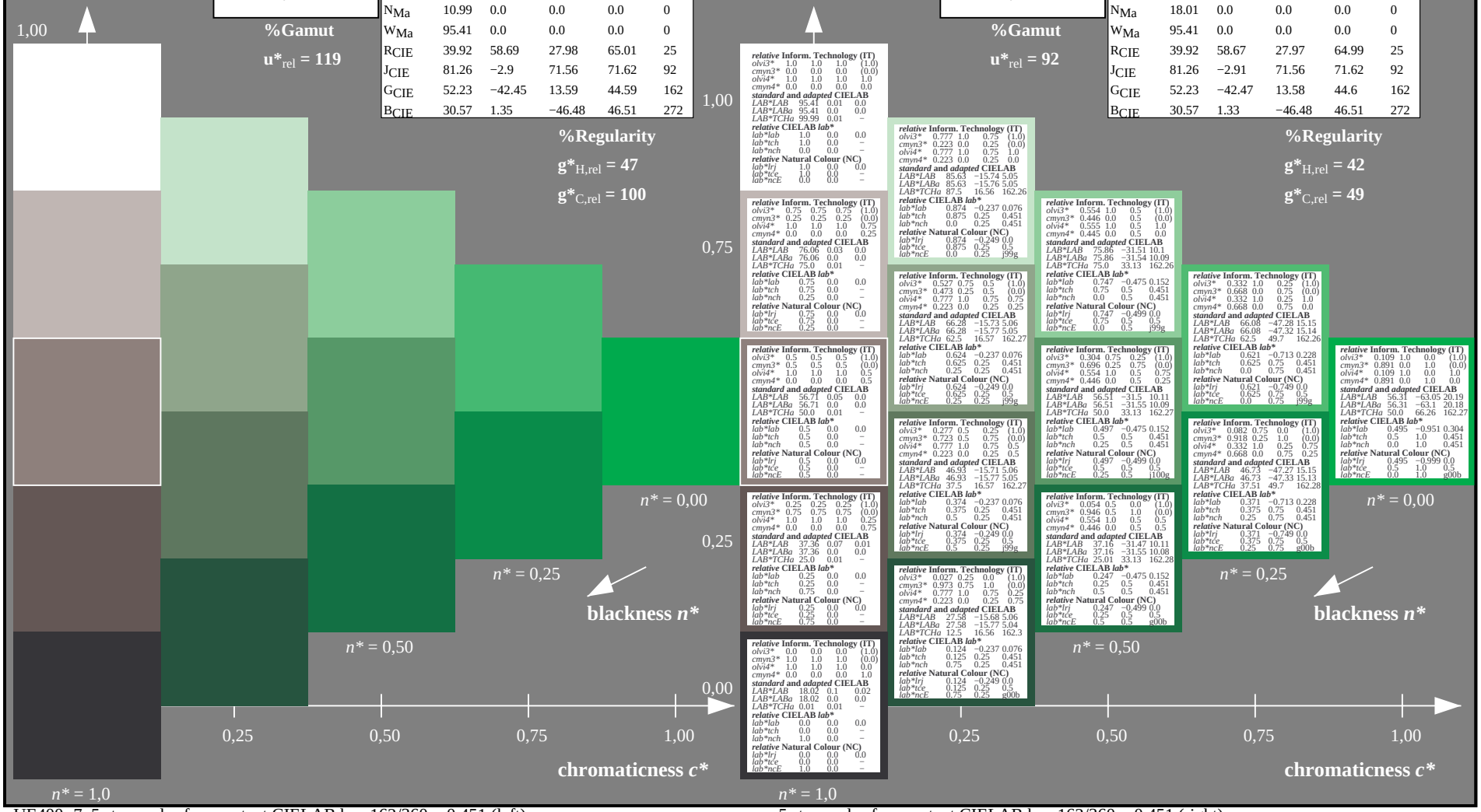
%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



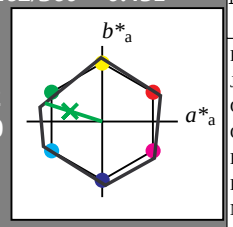
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

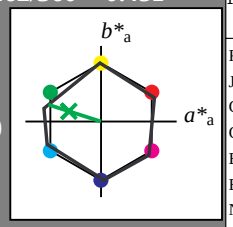
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

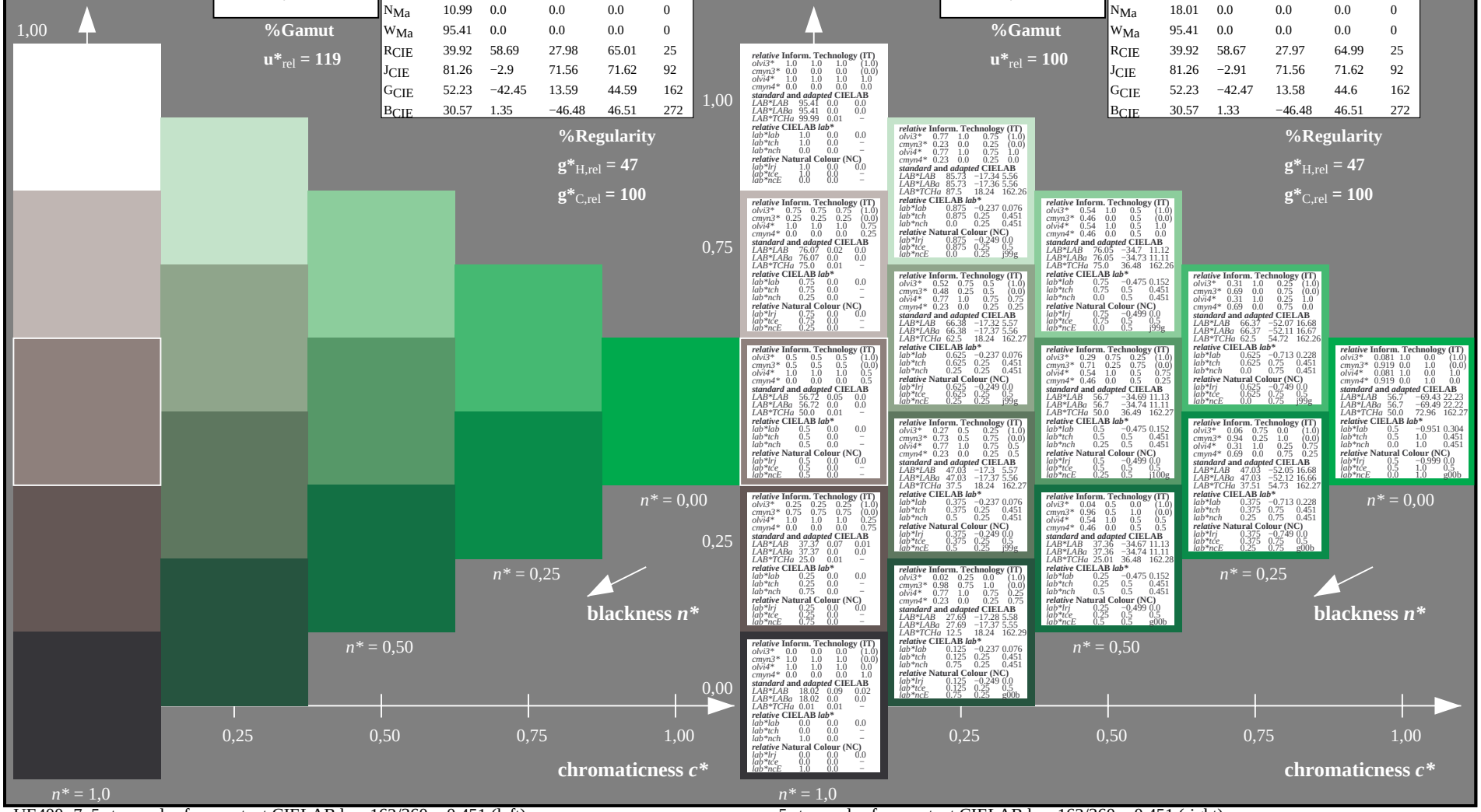
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



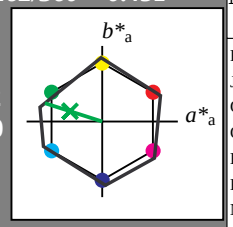
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

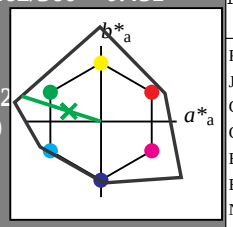
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

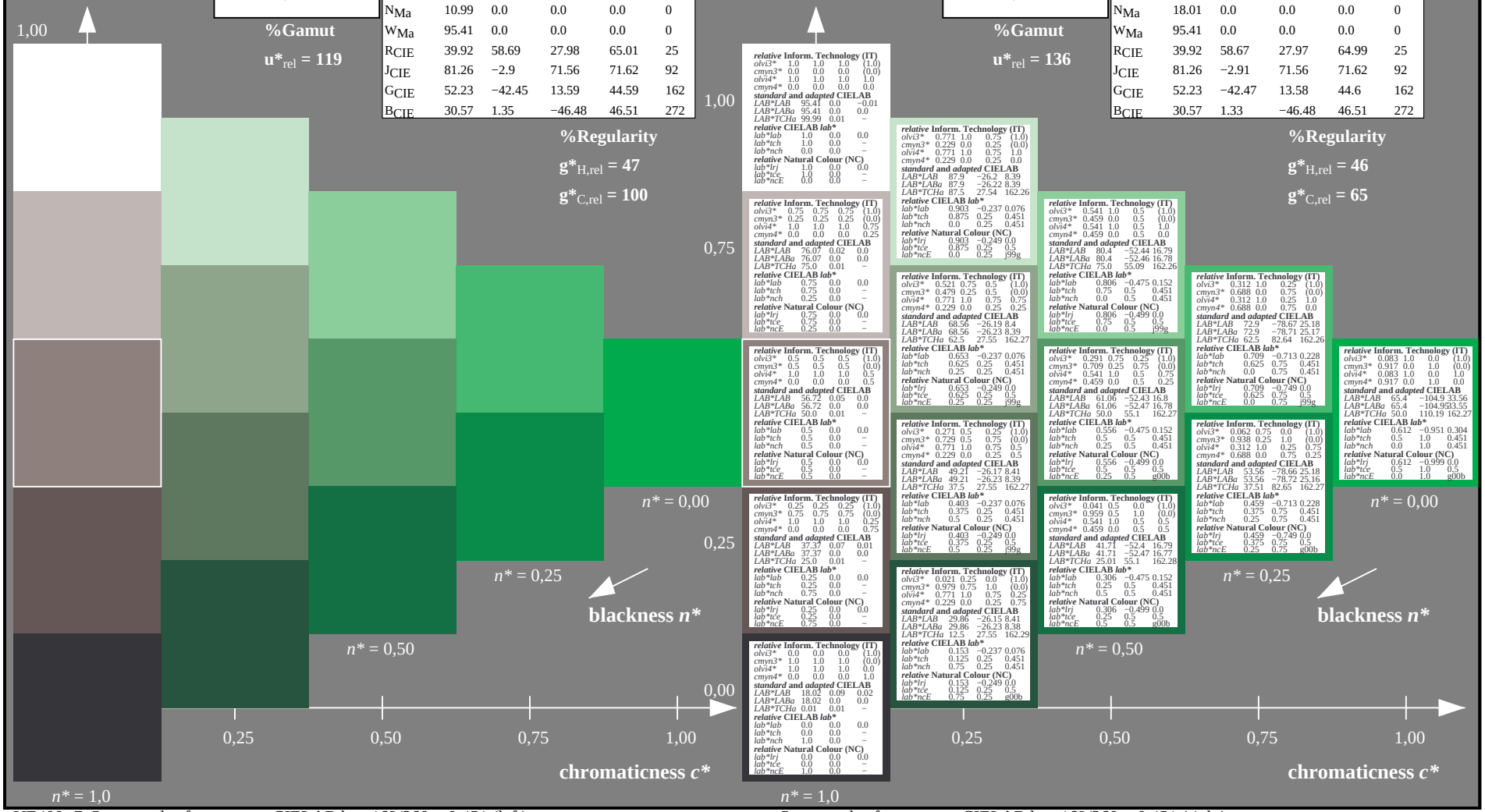
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



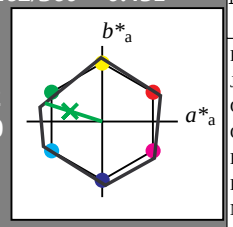
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NRS11
for hue *h = lab*h = 162/360 = 0.451**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

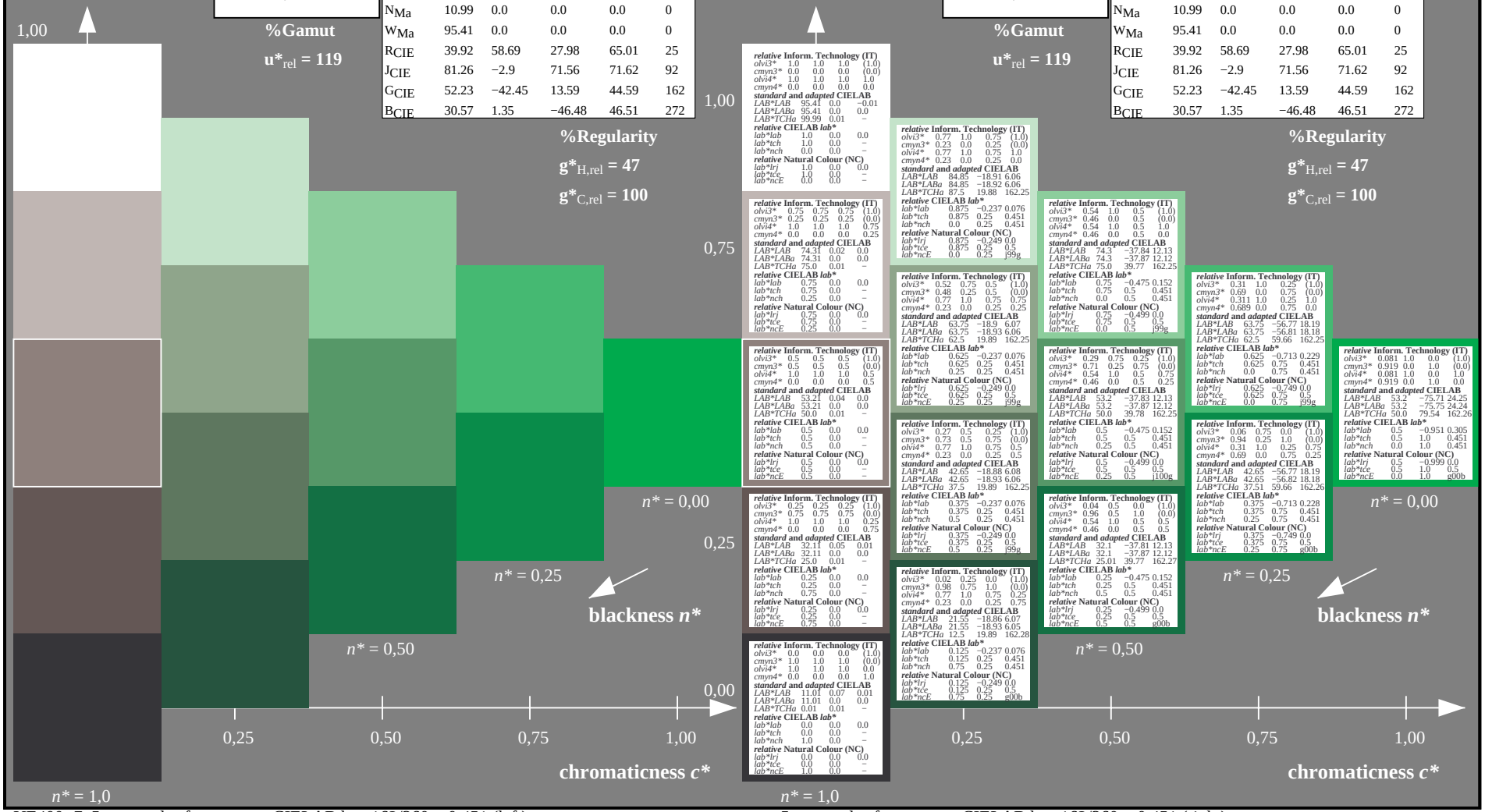
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

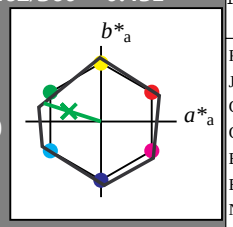
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue *h = lab*h = 162/360 = 0.451**
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

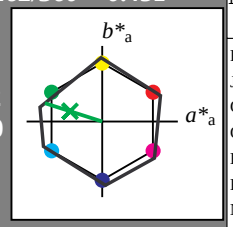
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

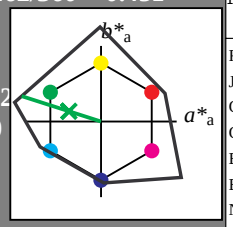
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

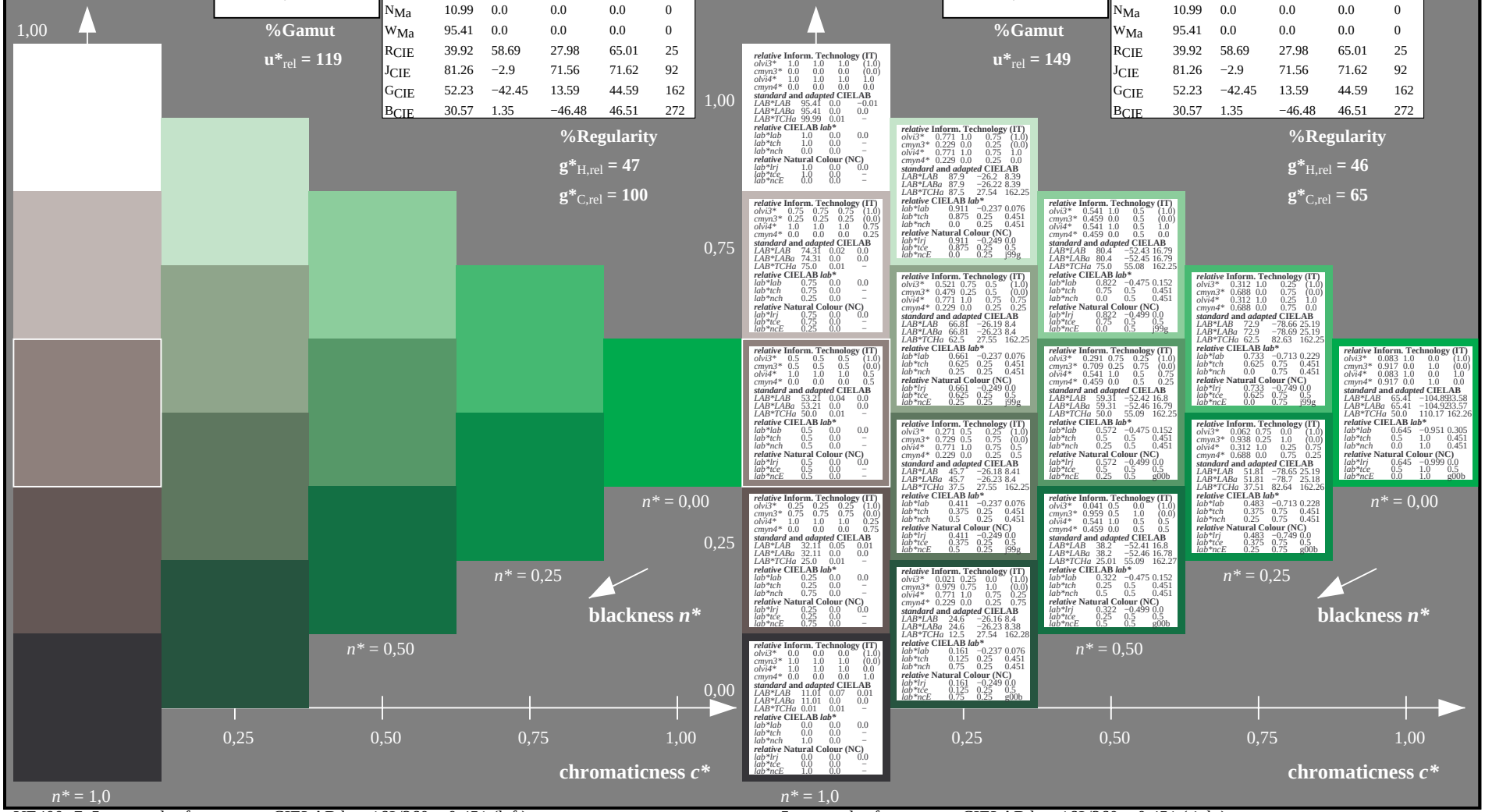
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



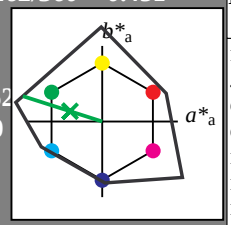
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

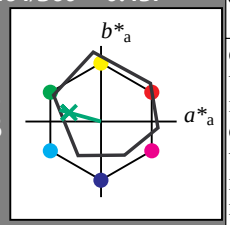
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

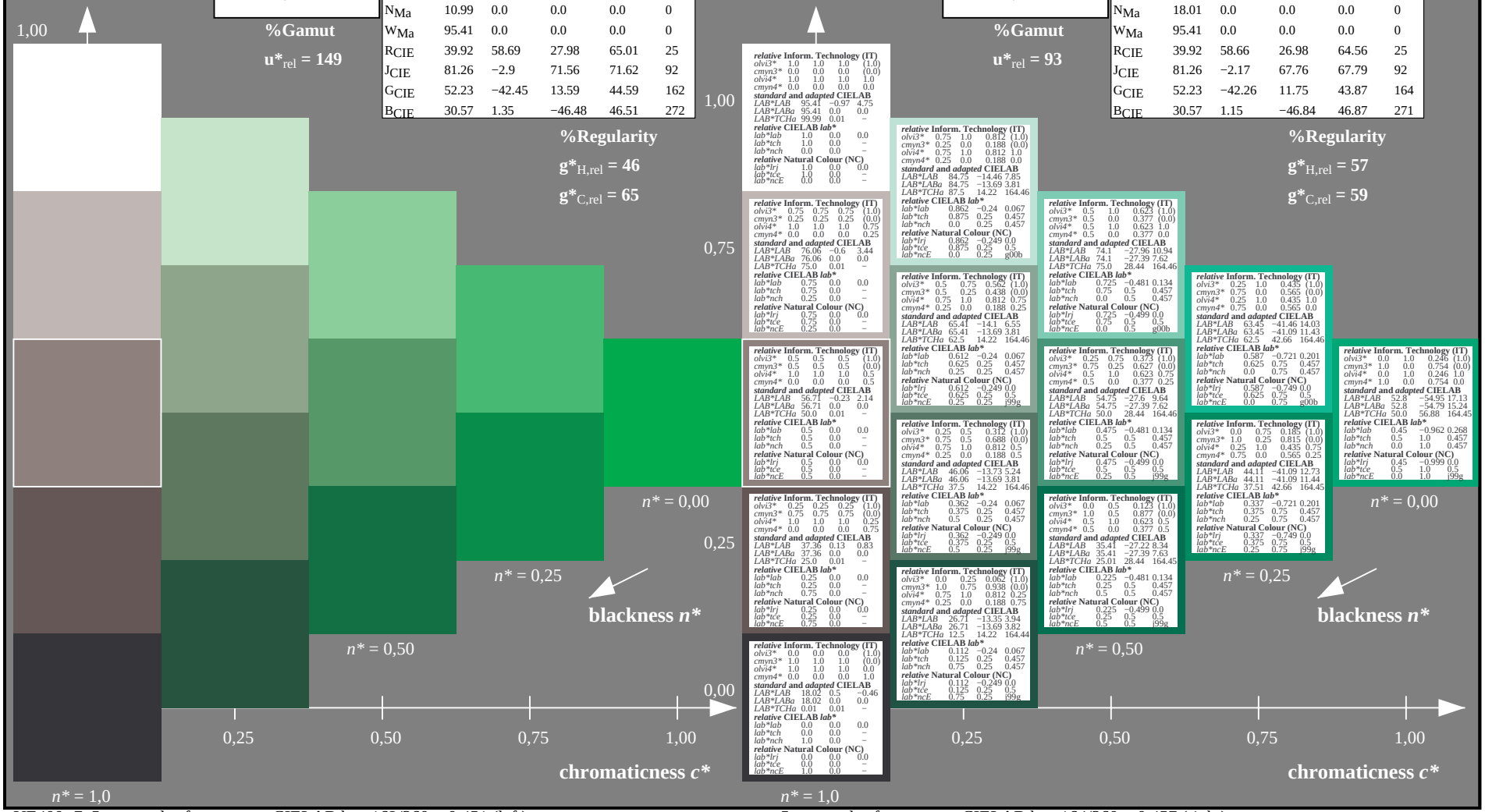
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

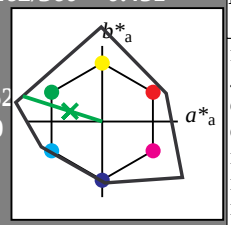


UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0



NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

triangle lightness

1,00

%Gamut

u^*_{rel} = 149

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

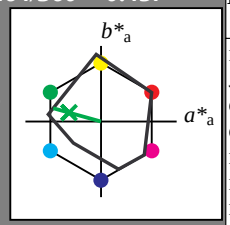
blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 164
rgb*Ma: 0.1 1.0 0.0



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

triangle lightness

%Gamut

u^*_{rel} = 91

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

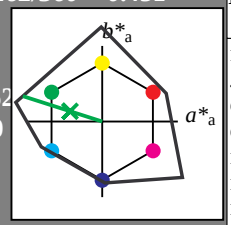
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

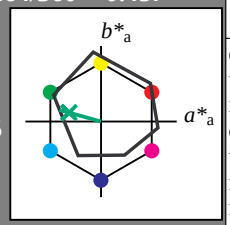
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 164/360 = 0.457$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 57 164
rgb*Ma: 0.0 1.0 0.25

triangle lightness



%Gamut

u^*_{rel} = 93

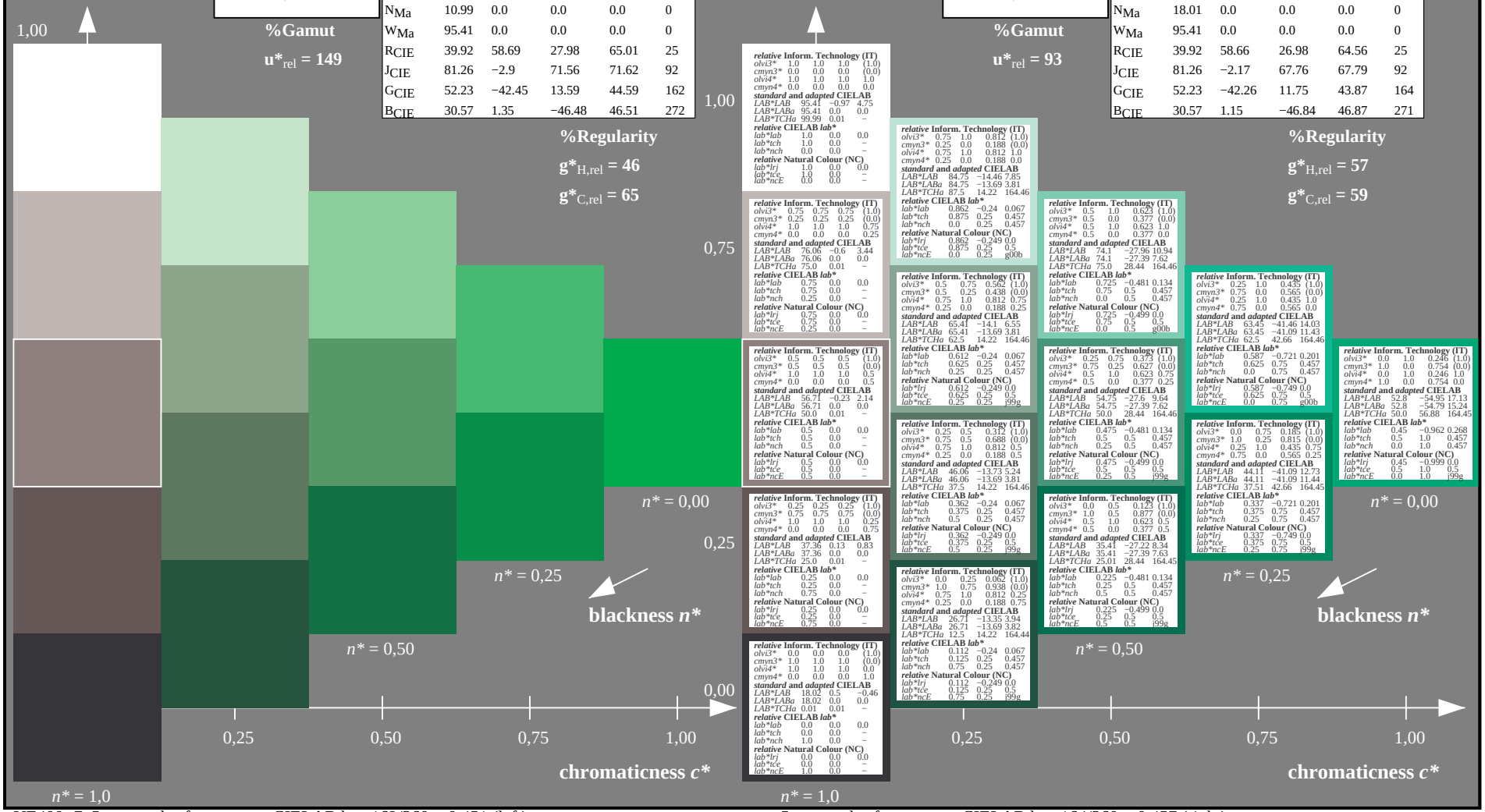
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



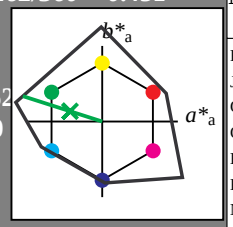
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

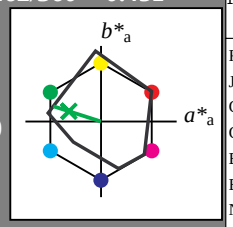
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 56 66 162
rgb*Ma: 0.11 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 92

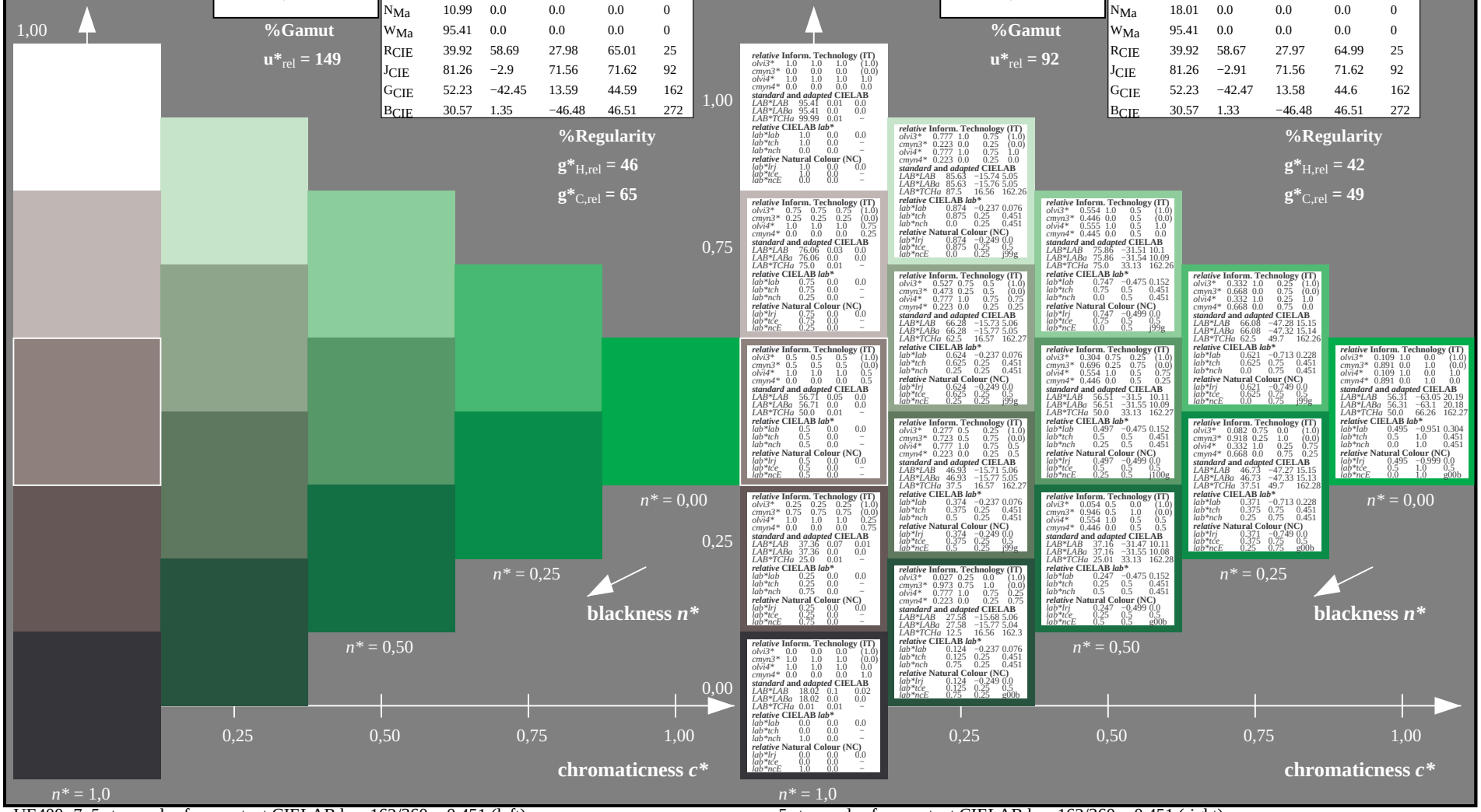
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



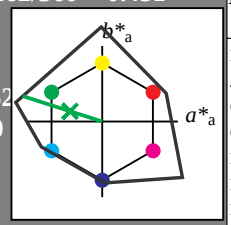
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

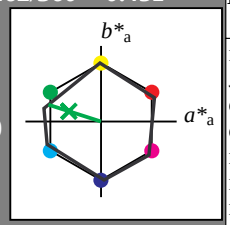
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 57 73 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 100

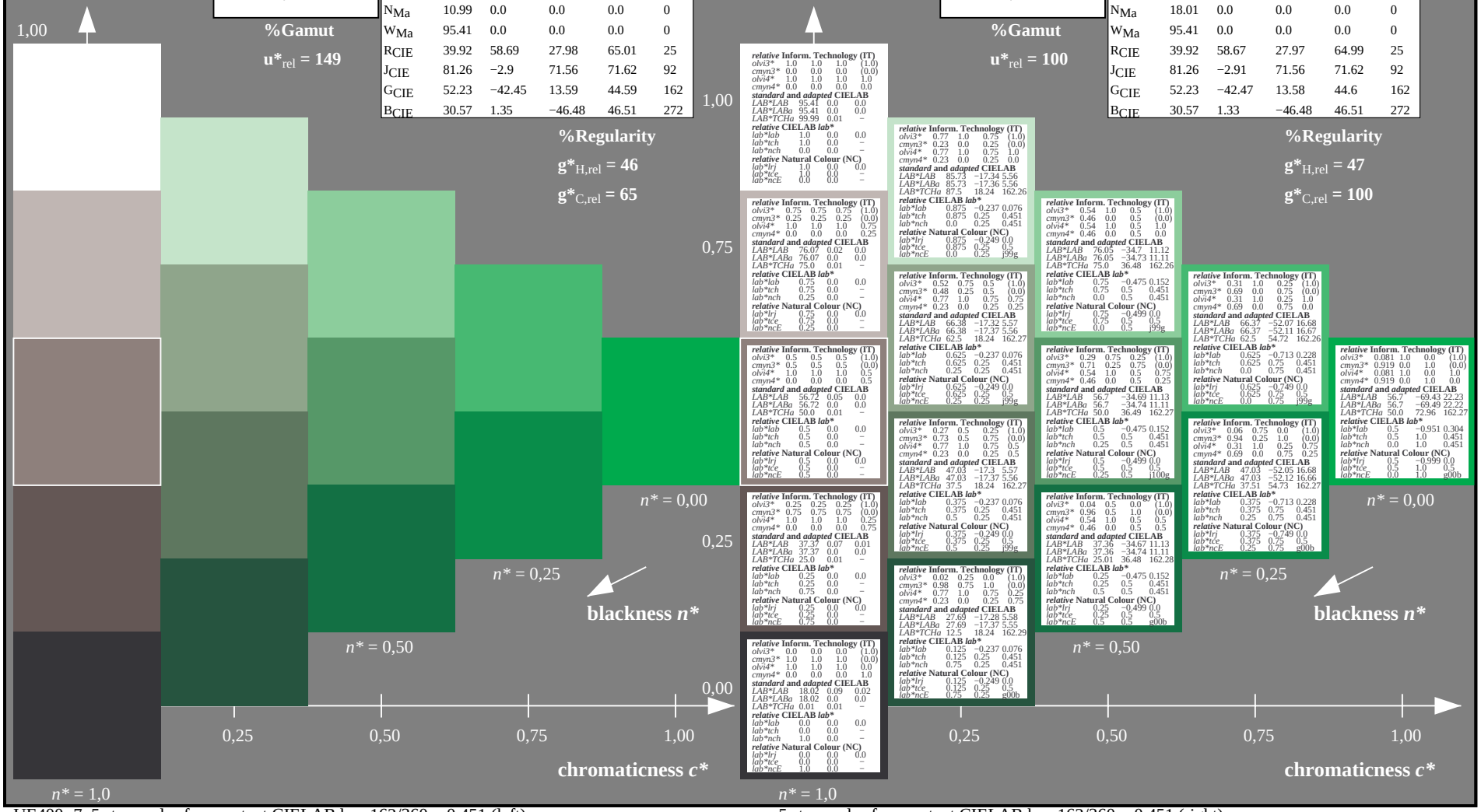
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



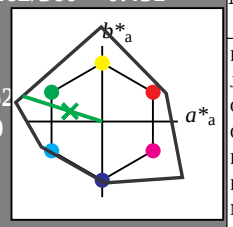
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

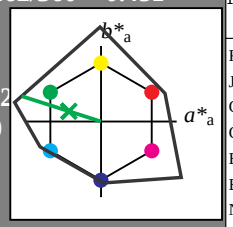
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

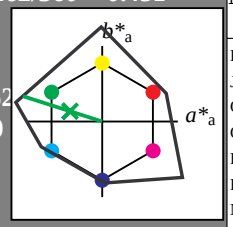
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

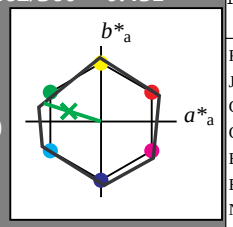
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 53 80 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 119

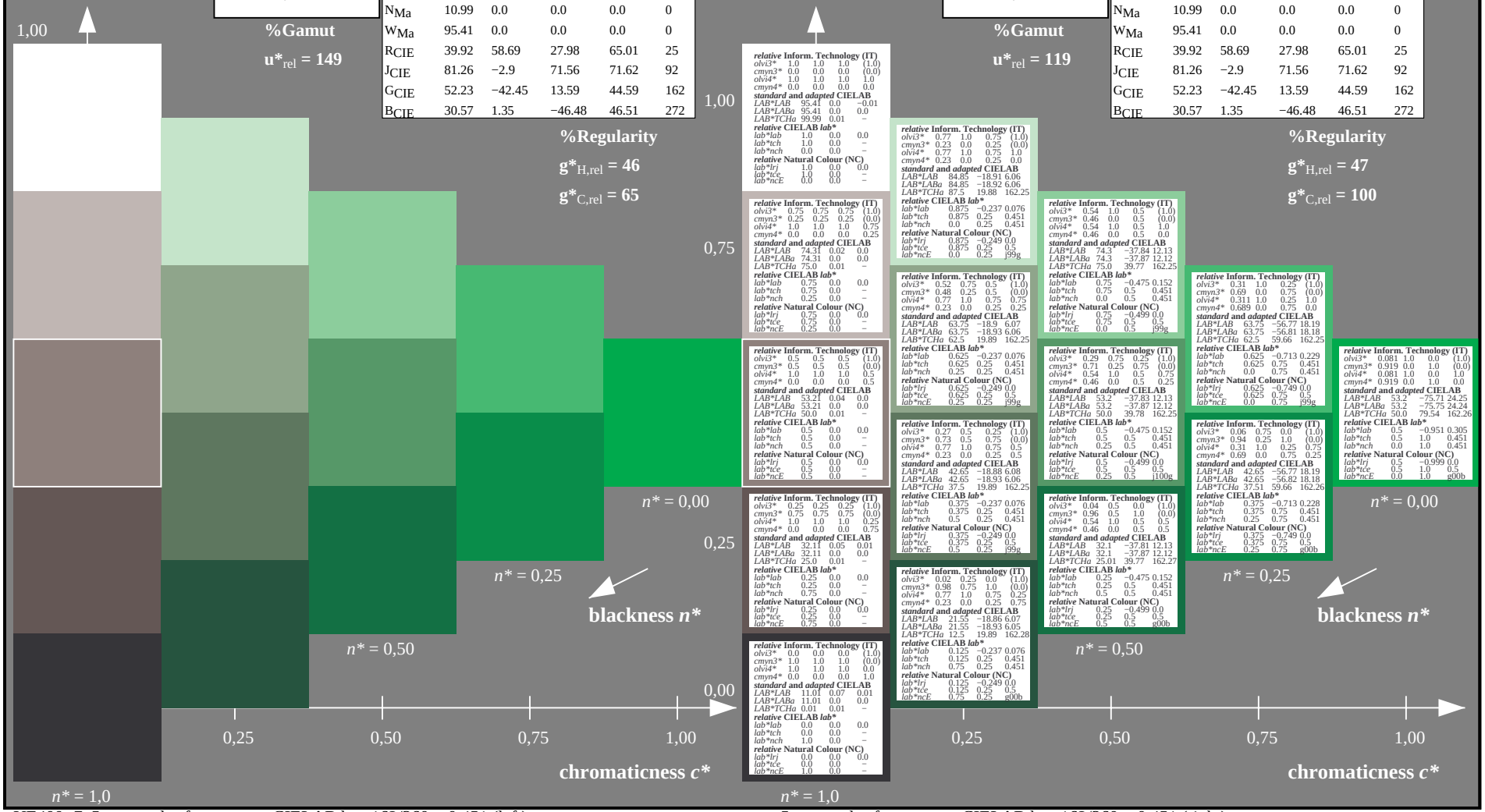
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



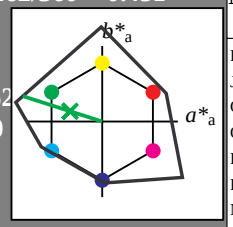
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

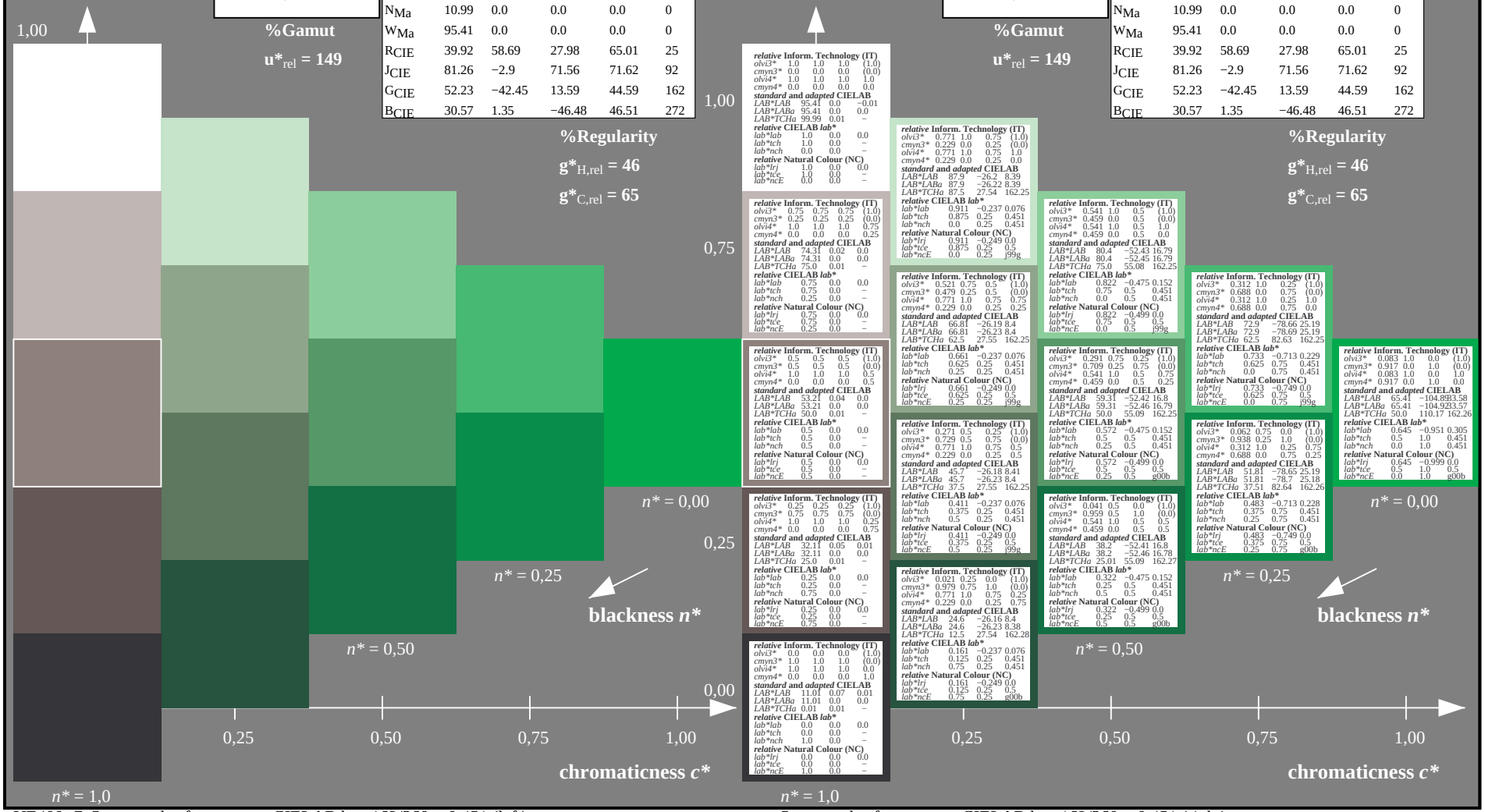
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

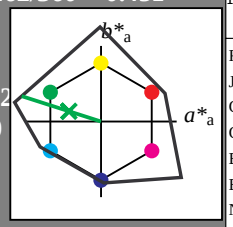
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 162/360 = 0.451$
lab*tch* and *lab*nch

D65: hue G
LCH*Ma: 65 110 162
rgb*Ma: 0.08 1.0 0.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

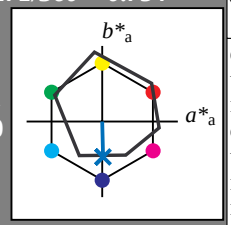
UE400−7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

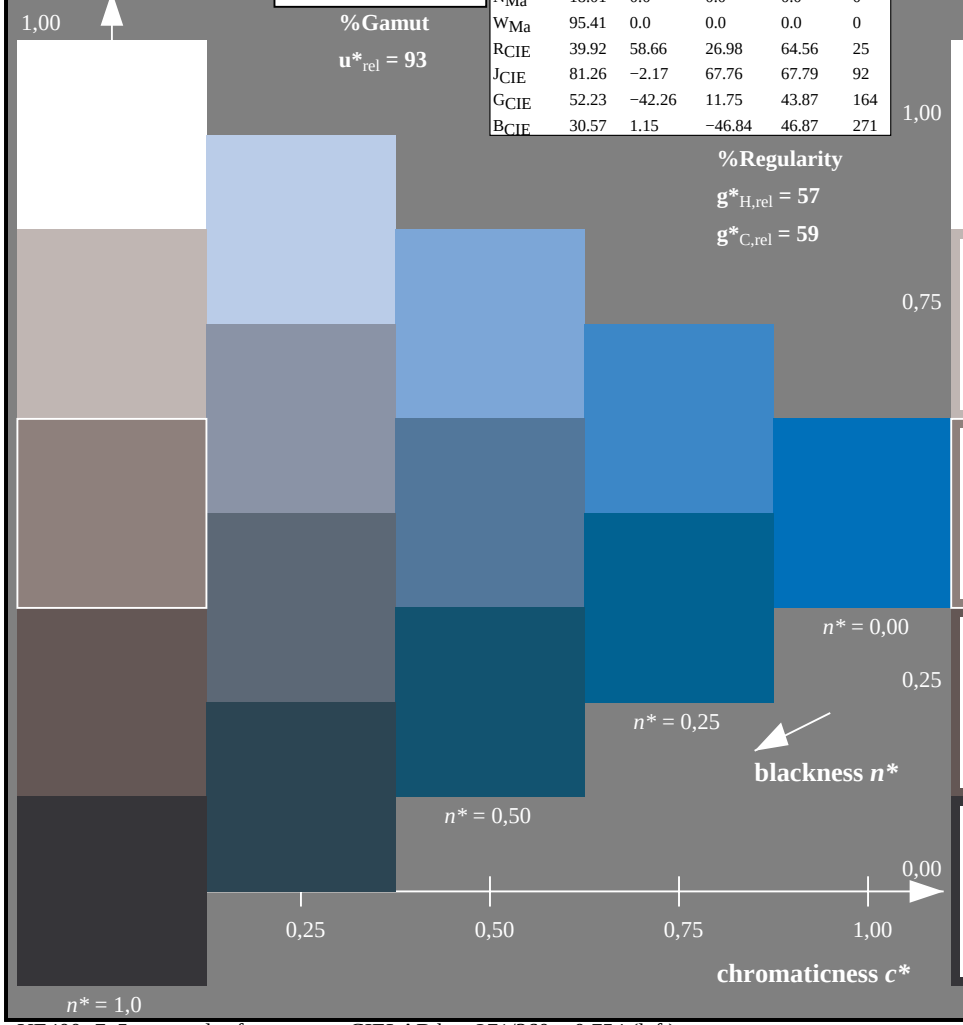
%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

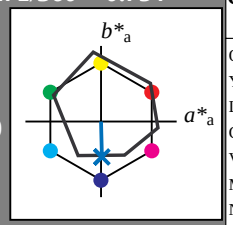
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

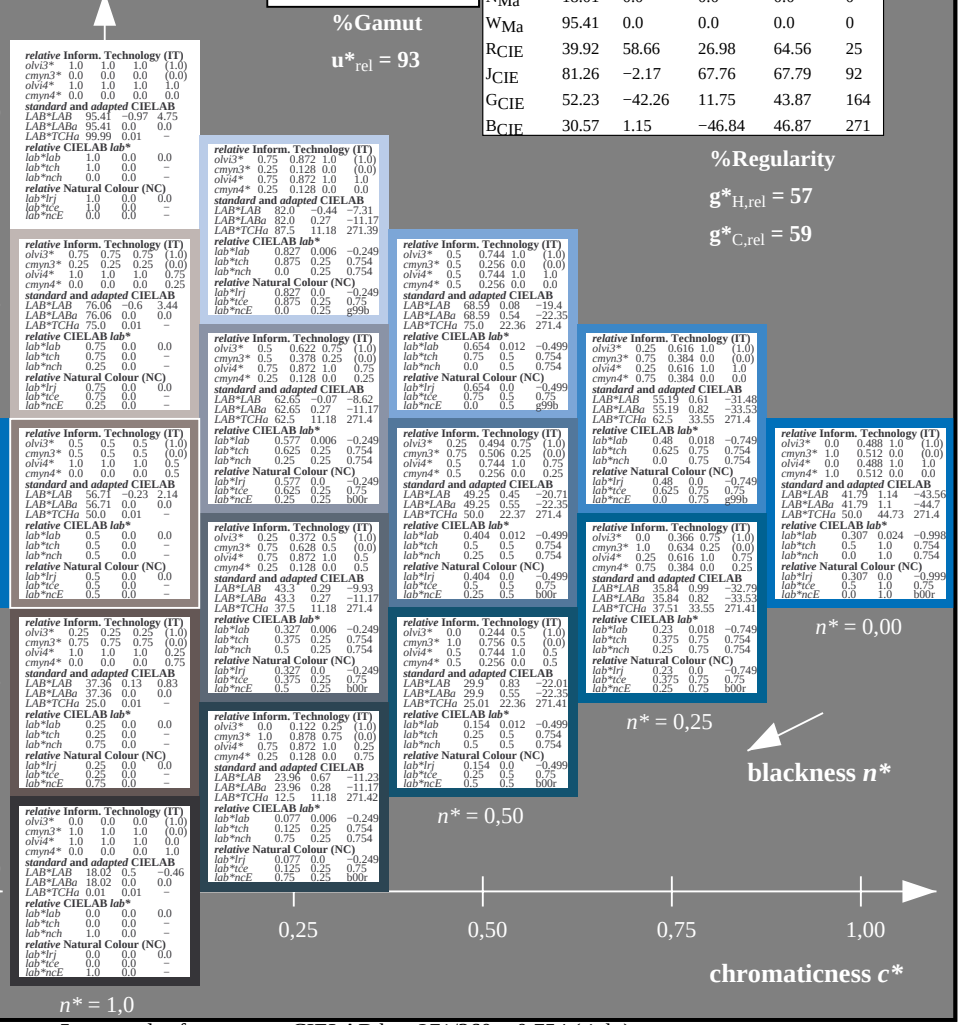
%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



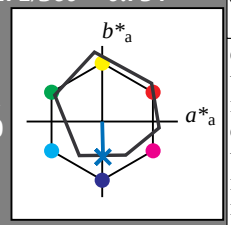
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

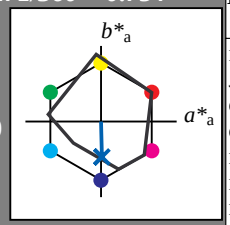
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

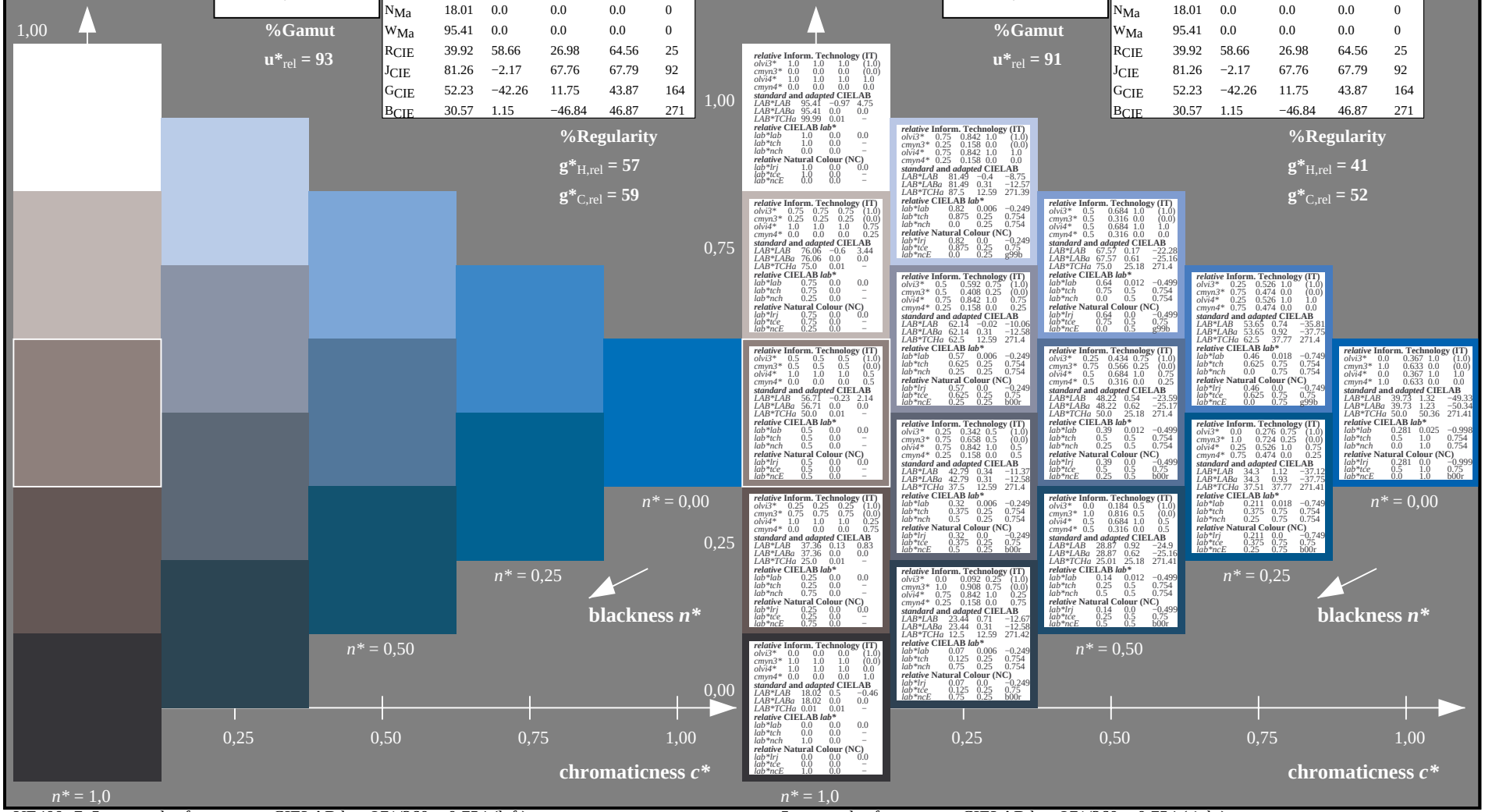
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



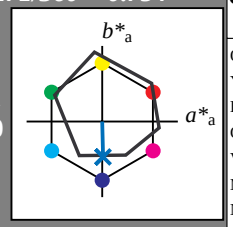
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

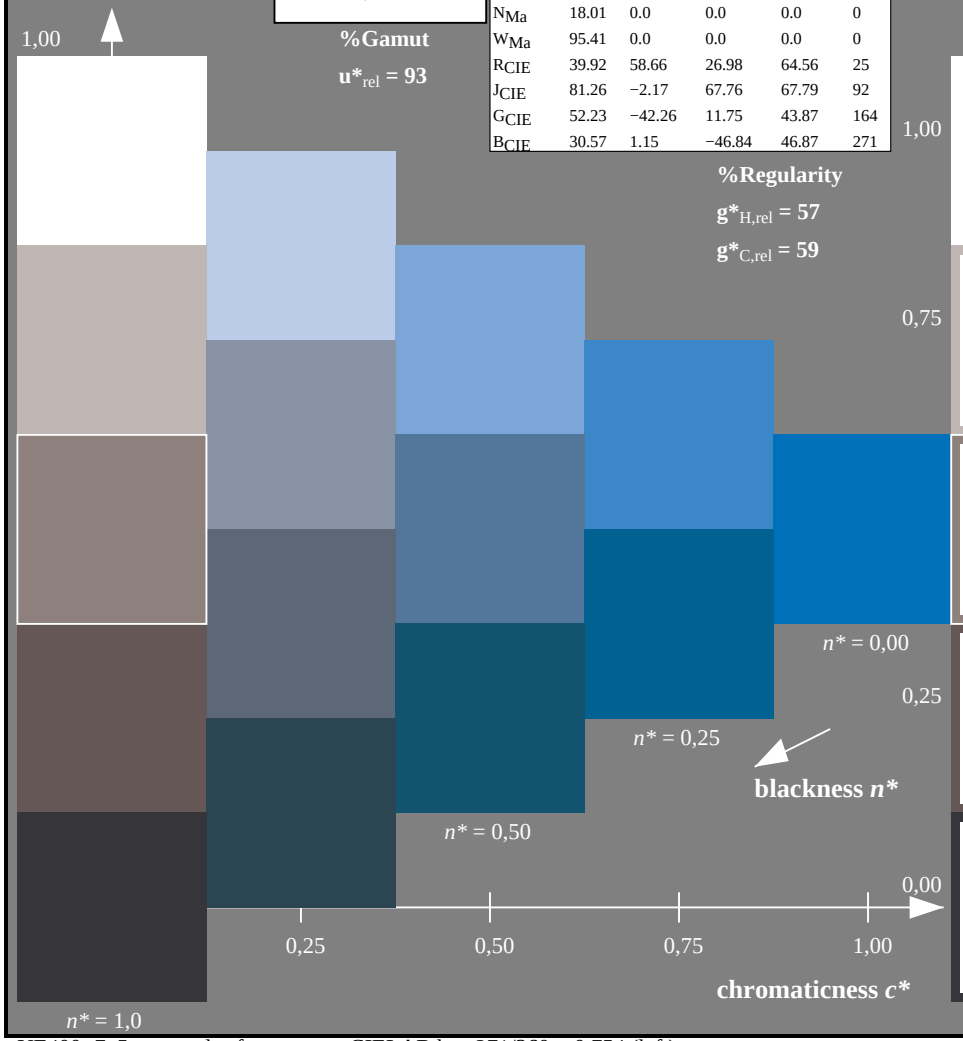
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

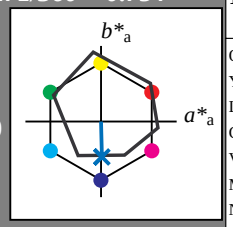
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

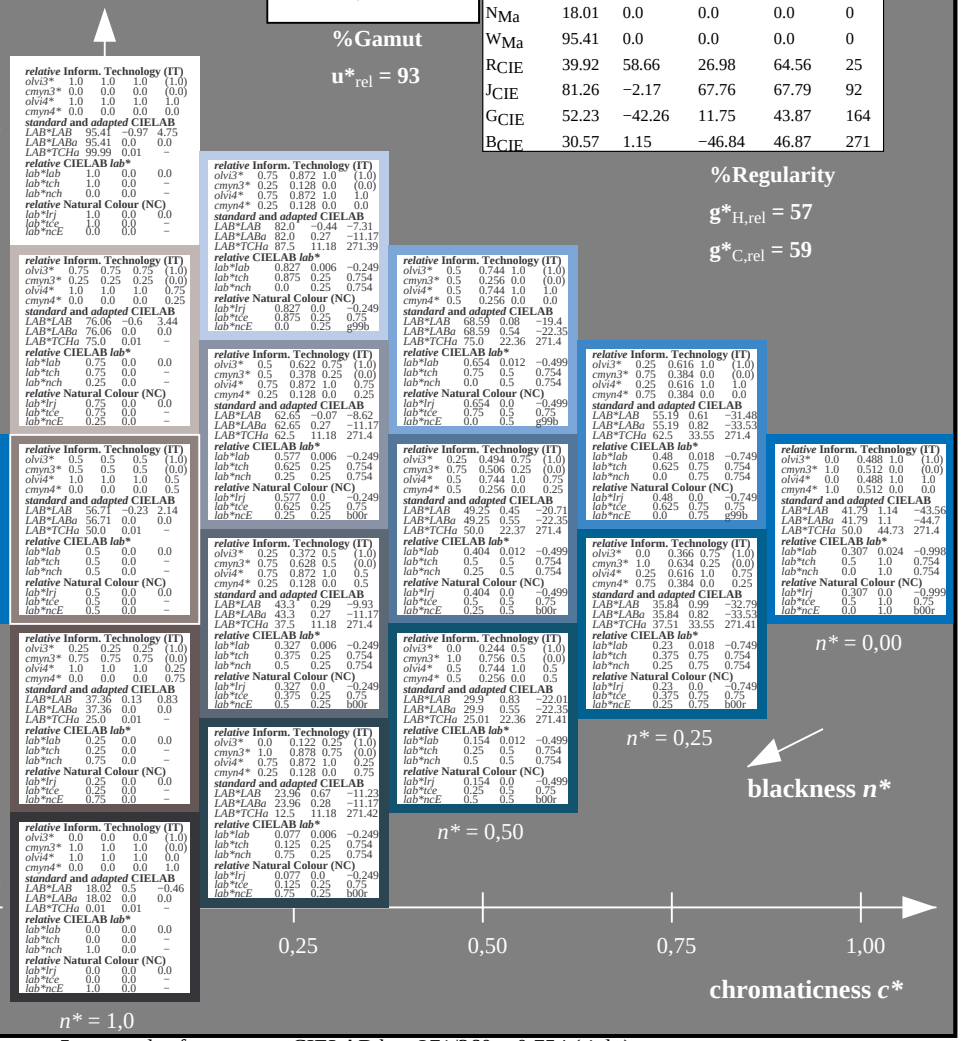
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



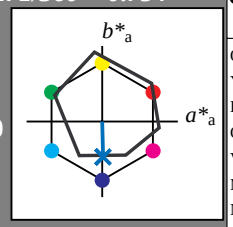
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

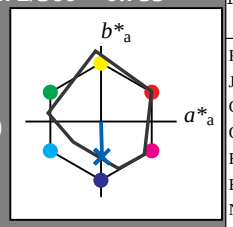
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

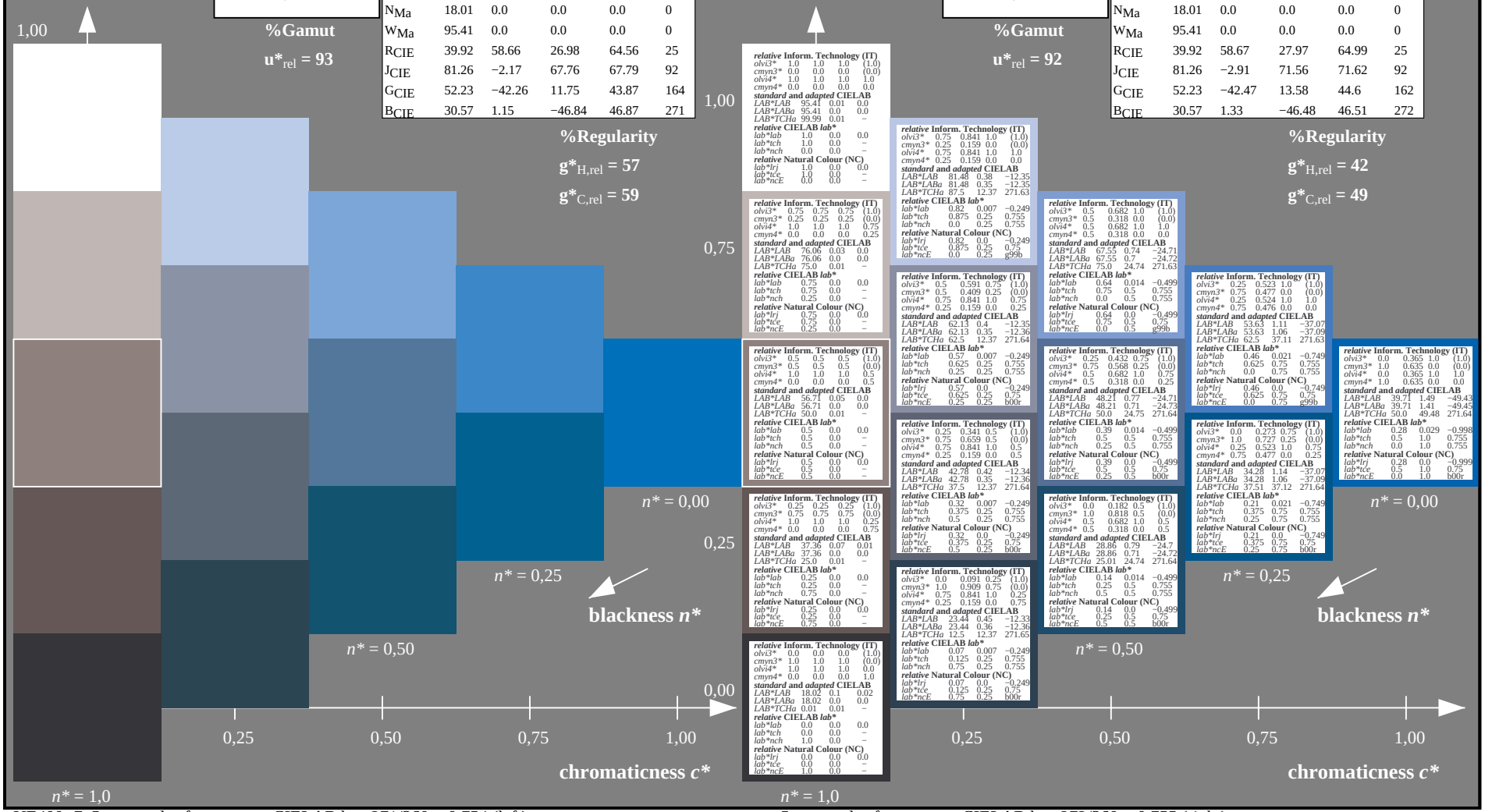
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



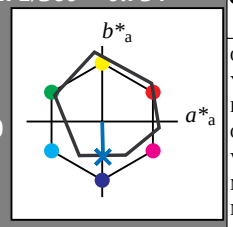
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

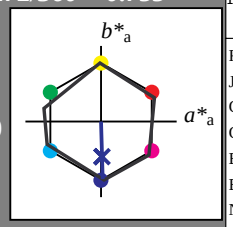
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00
0,75
0,25
0,00
n^* = 0,00
n^* = 0,25
n^* = 0,50
n^* = 1,0
blackness n^*
0,25 0,50 0,75 1,00
chromaticness c^*

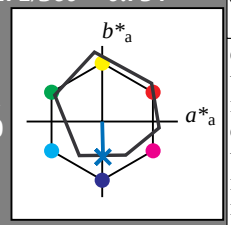
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

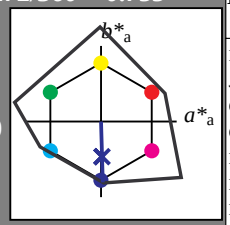
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

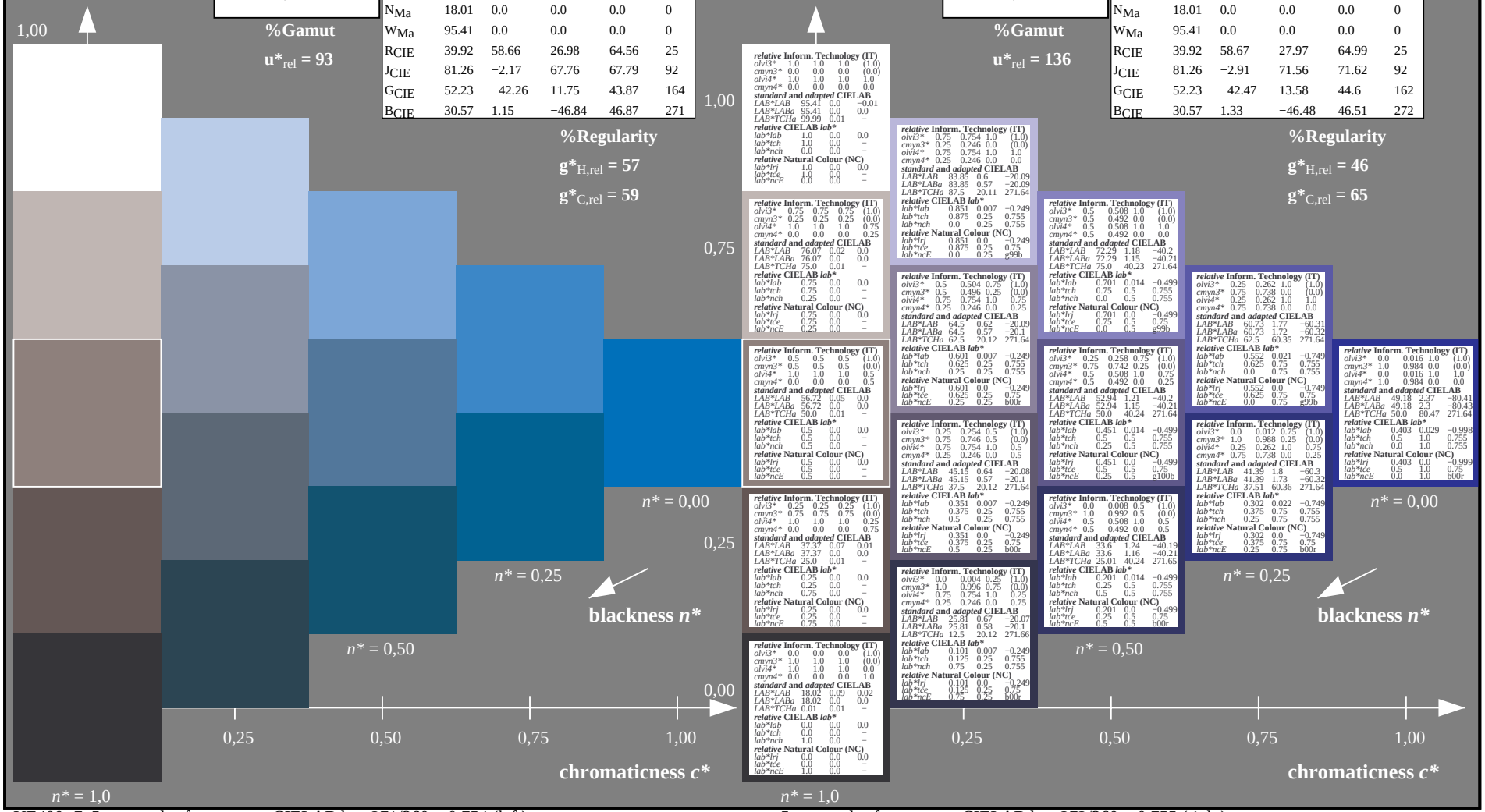
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



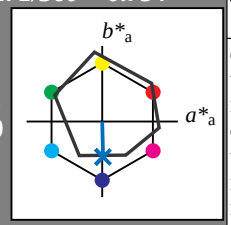
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

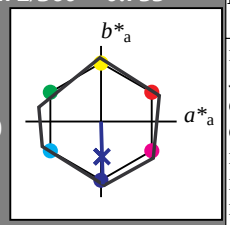
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

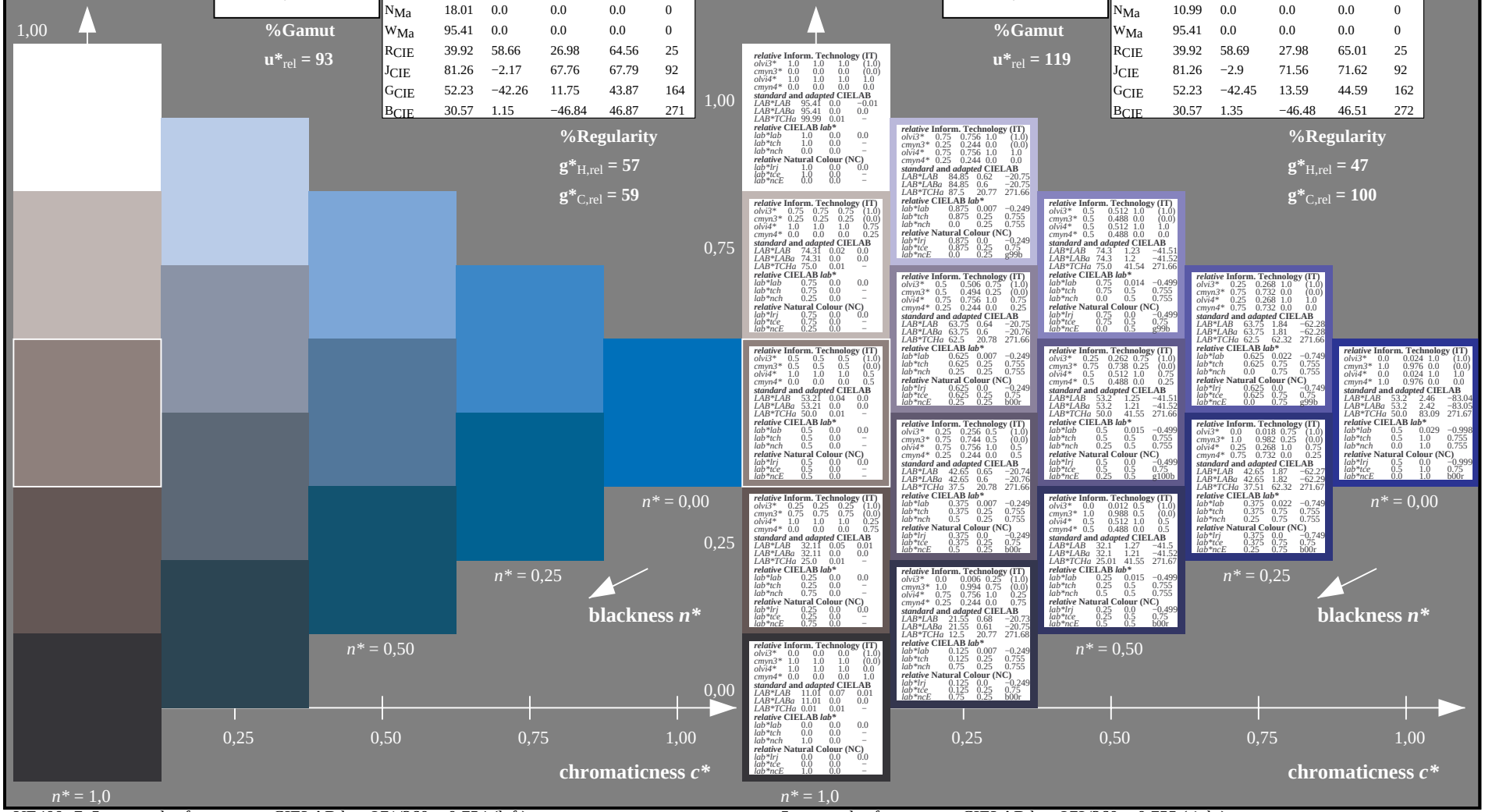
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



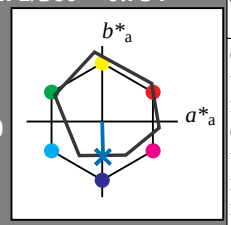
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

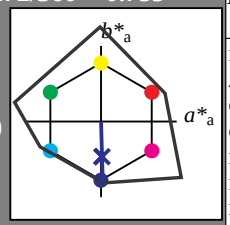
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

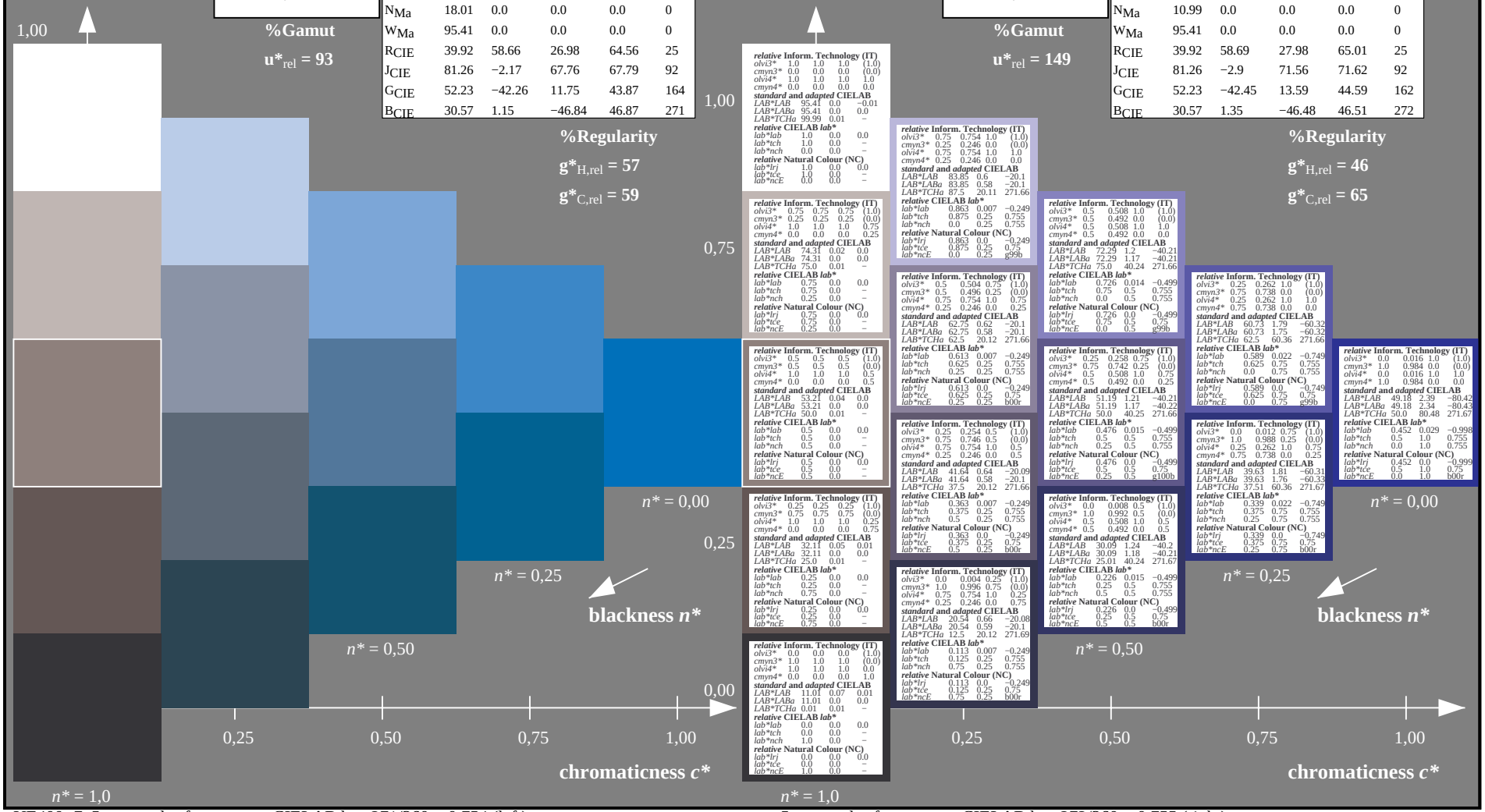
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



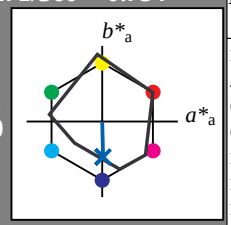
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

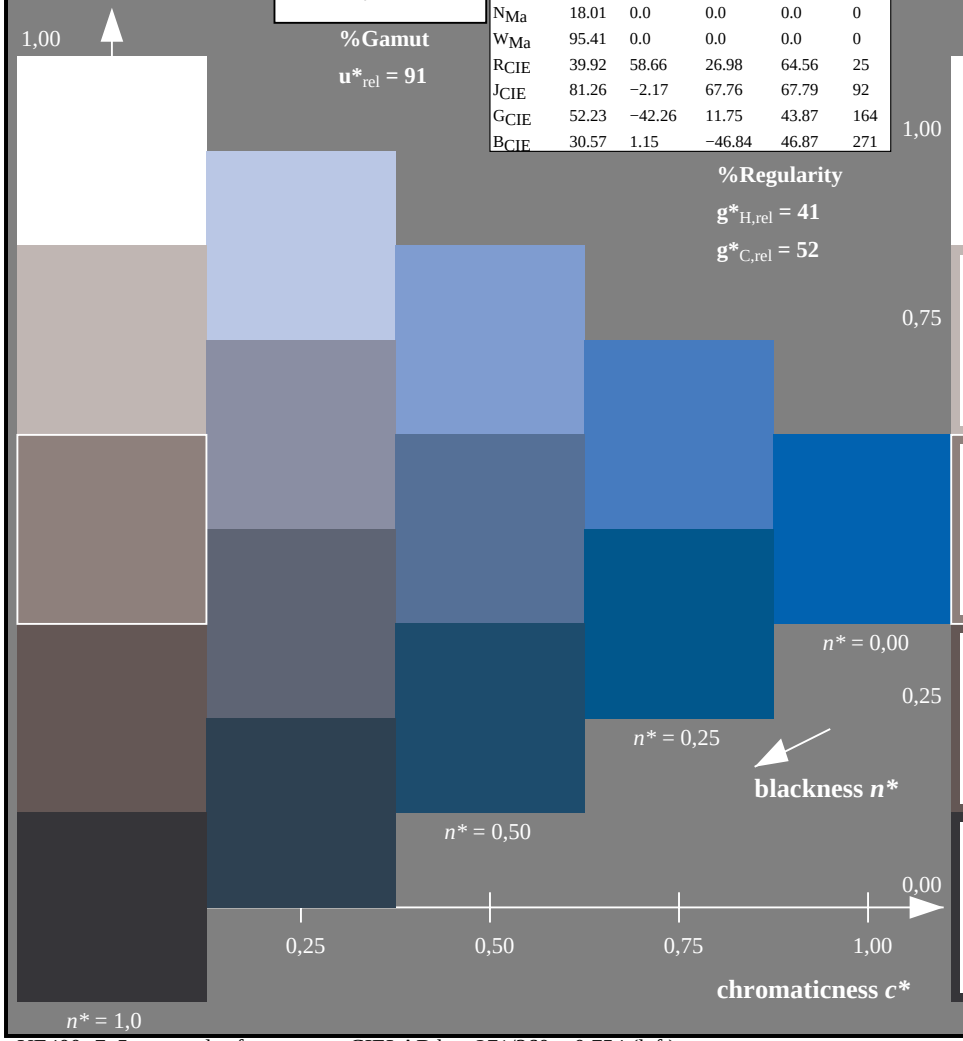
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

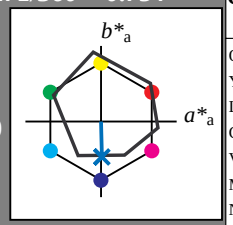
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

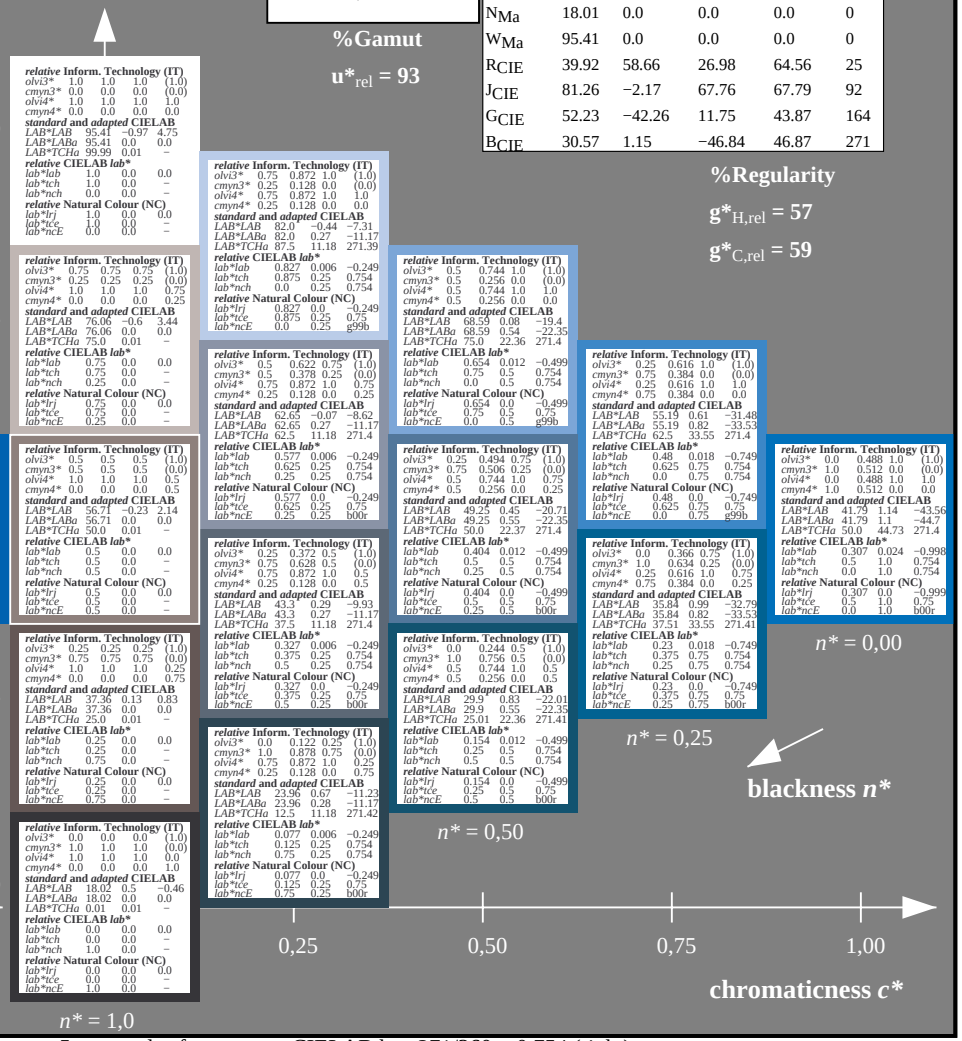
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



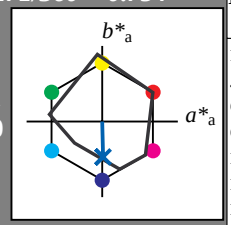
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

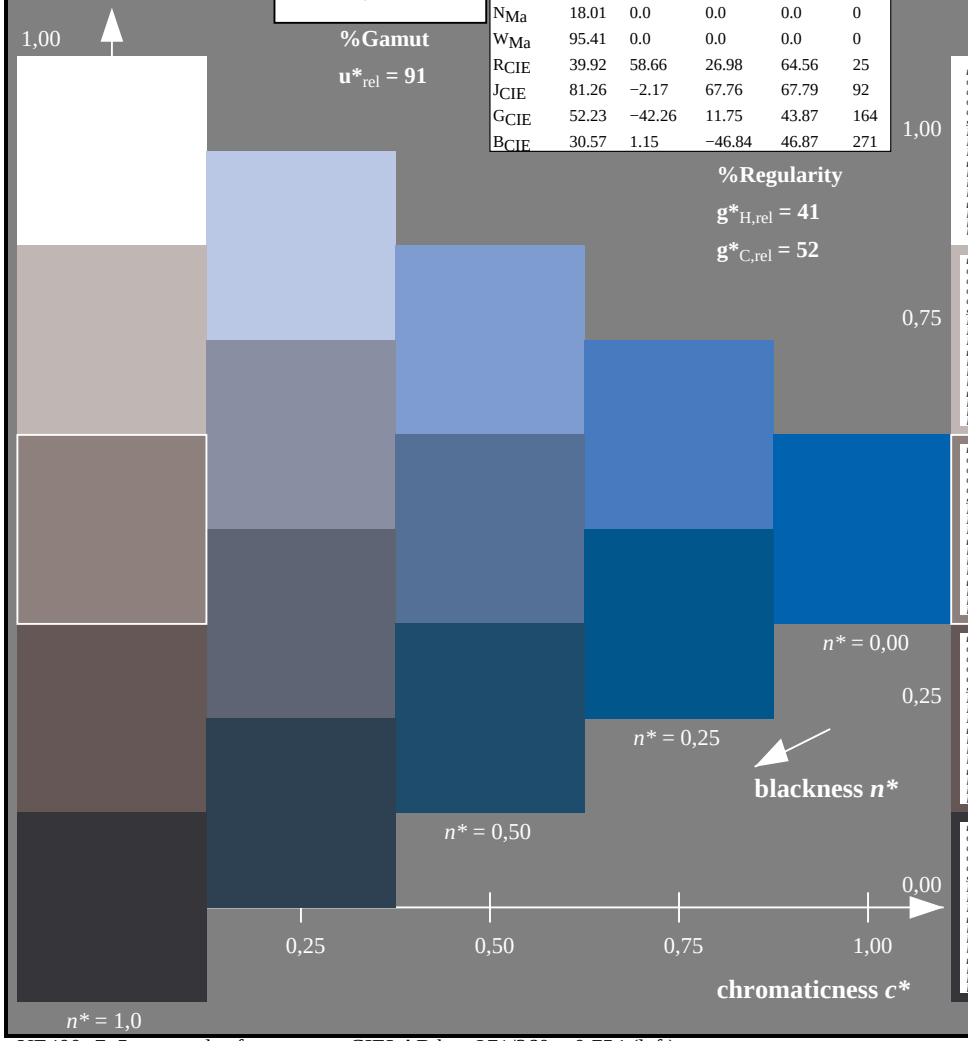
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

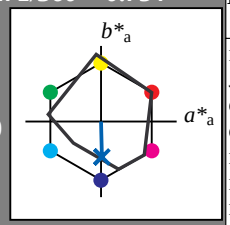
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

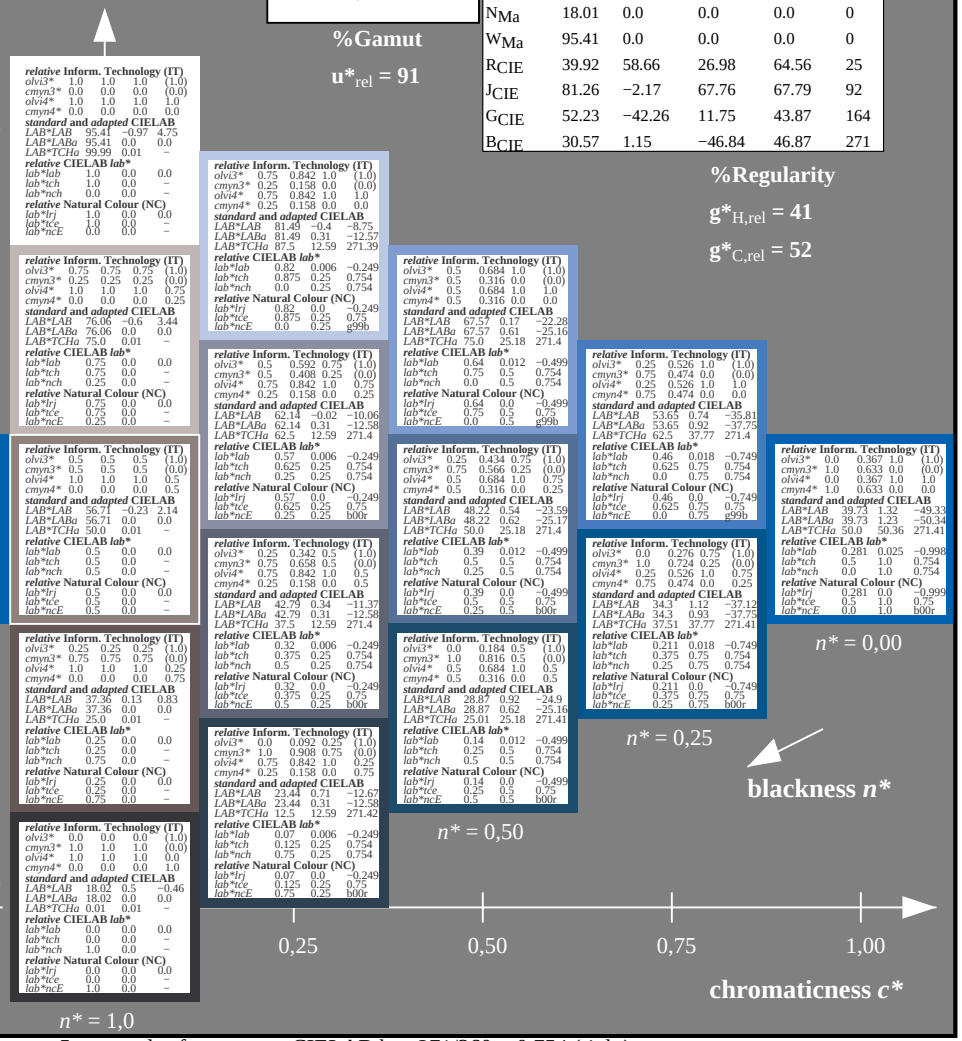
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



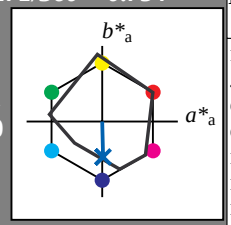
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

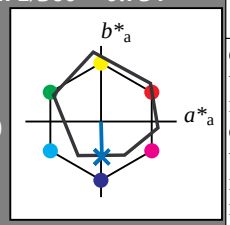
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

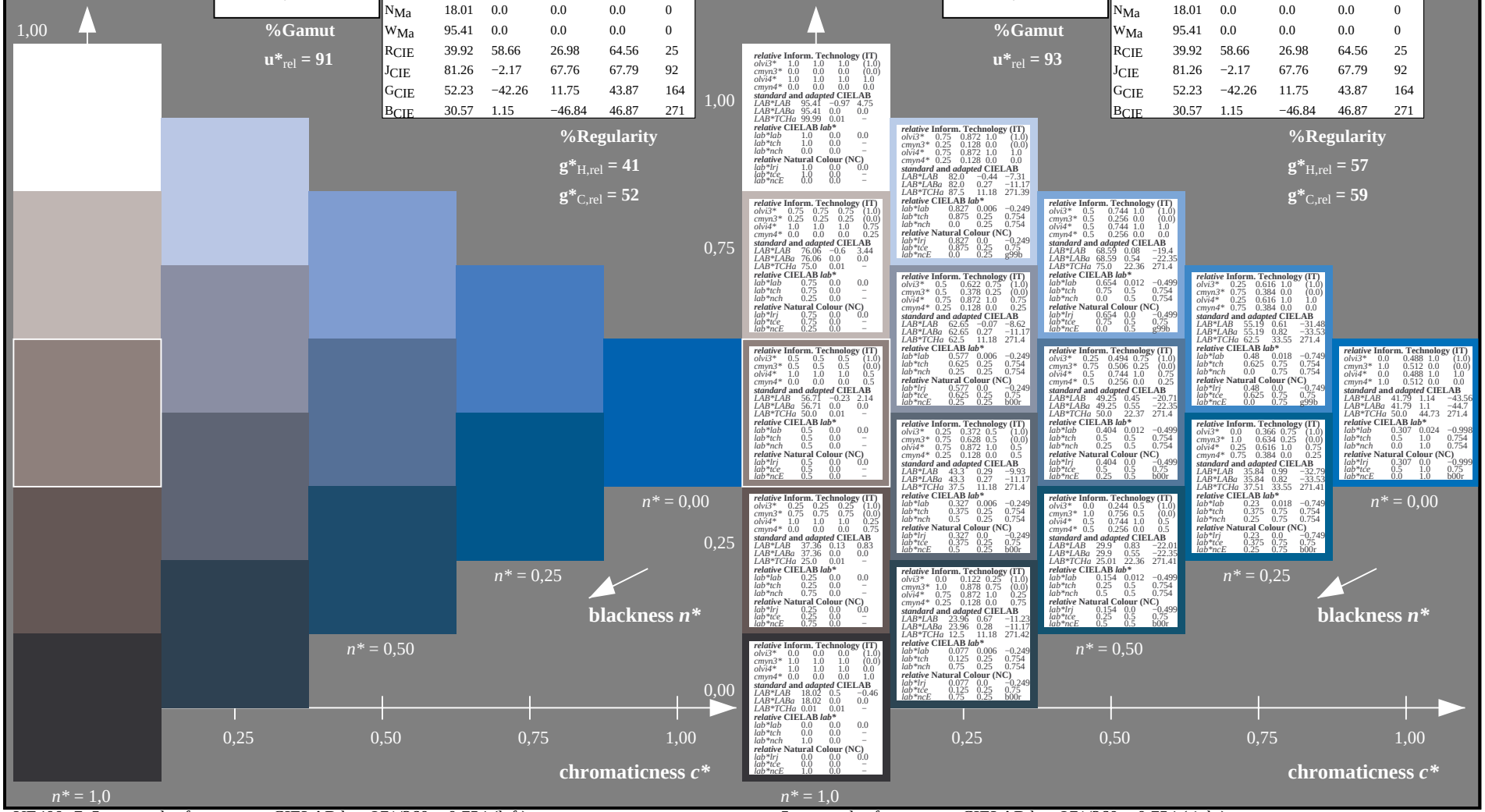
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



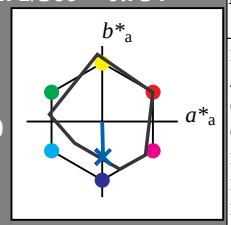
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

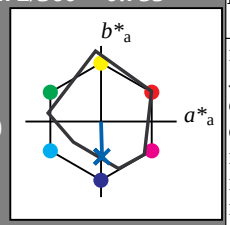
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

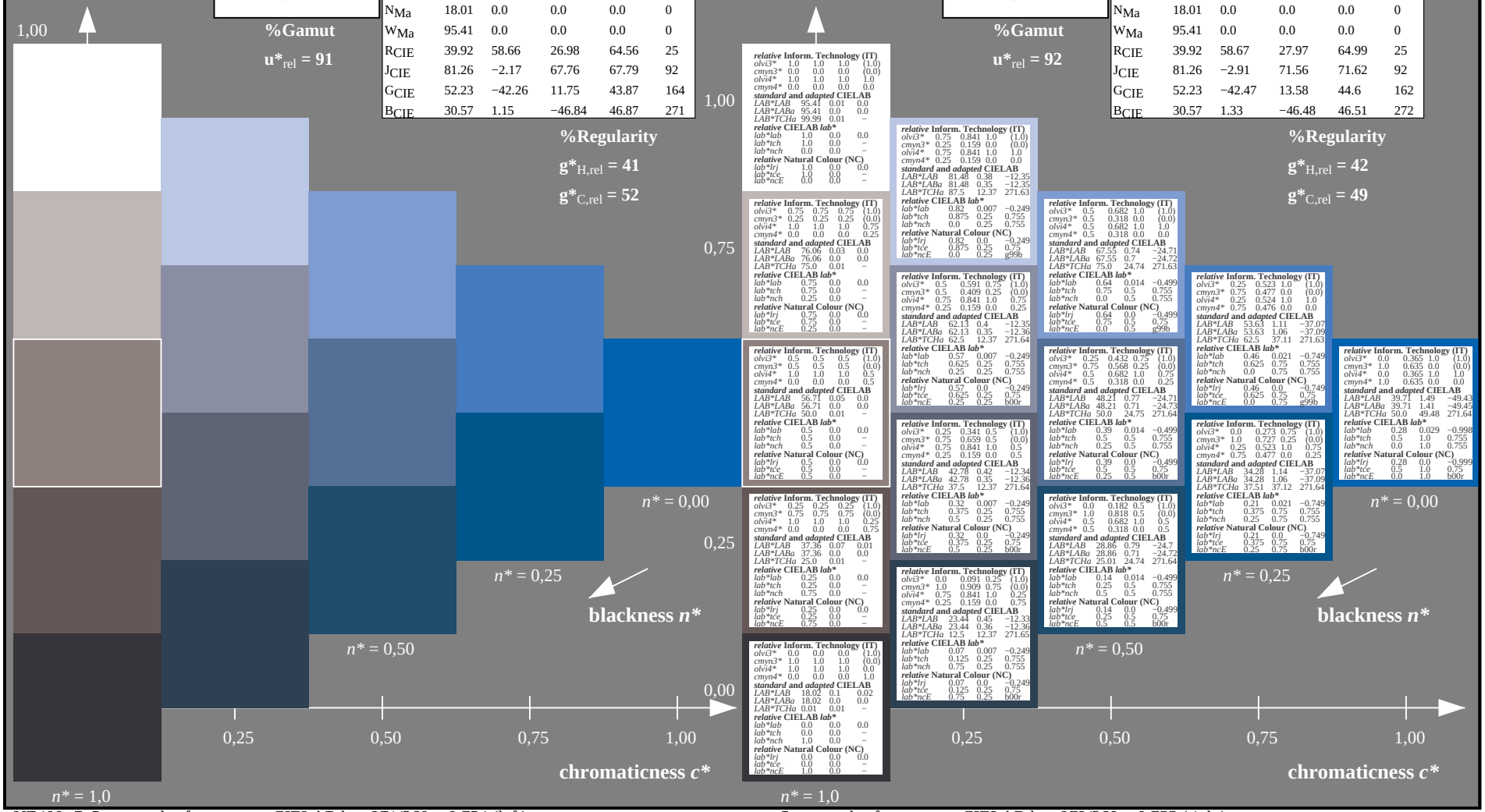
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



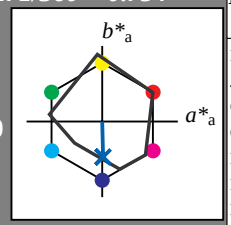
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

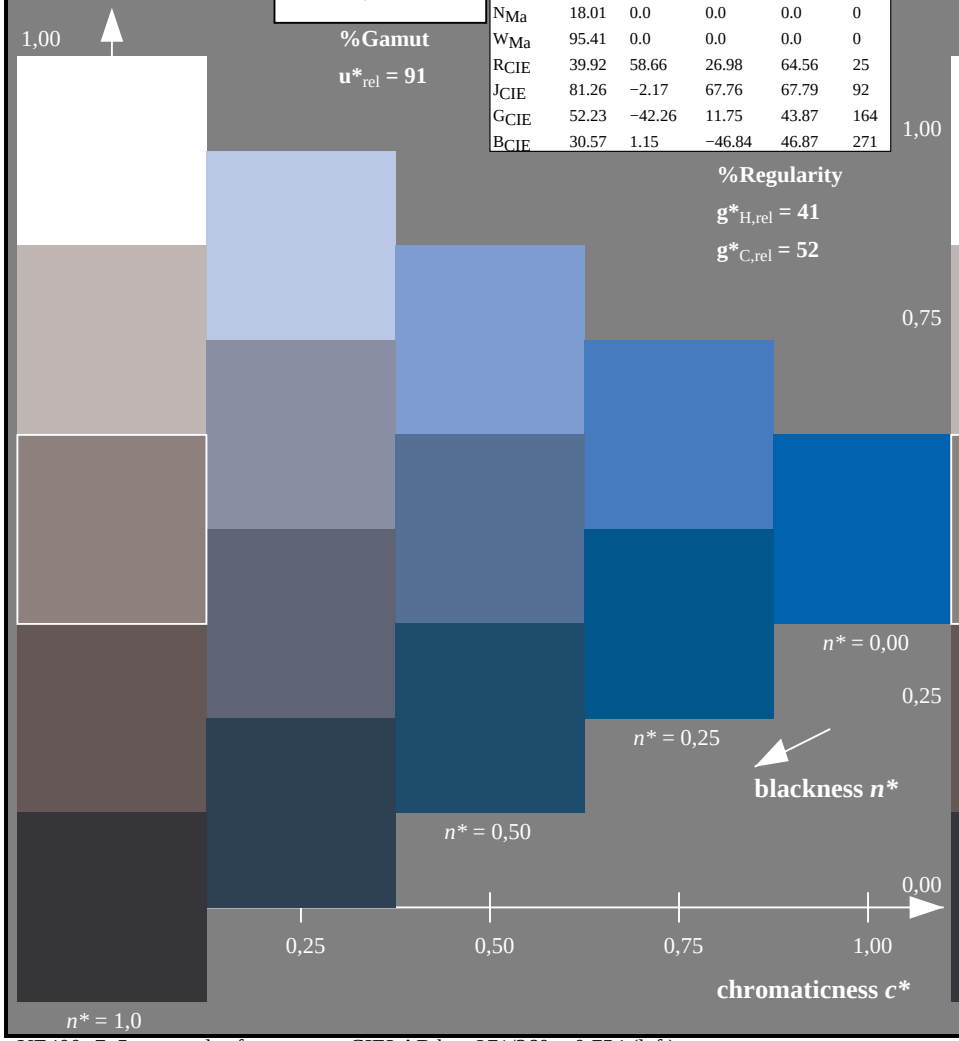
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

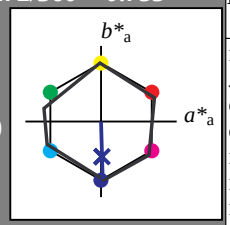
$g^*_{C,rel}$ = 52



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

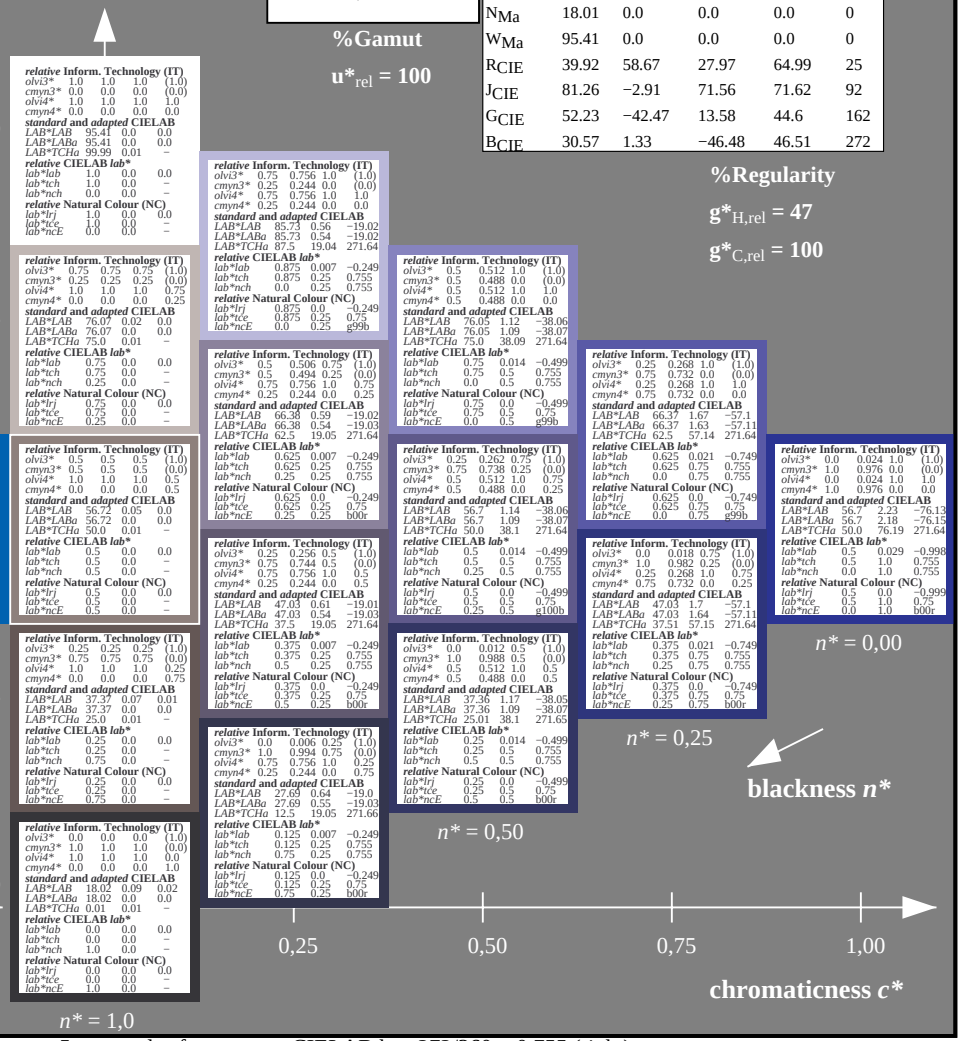
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



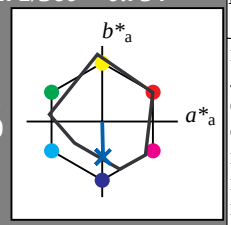
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

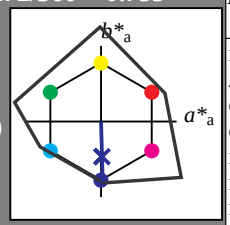
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

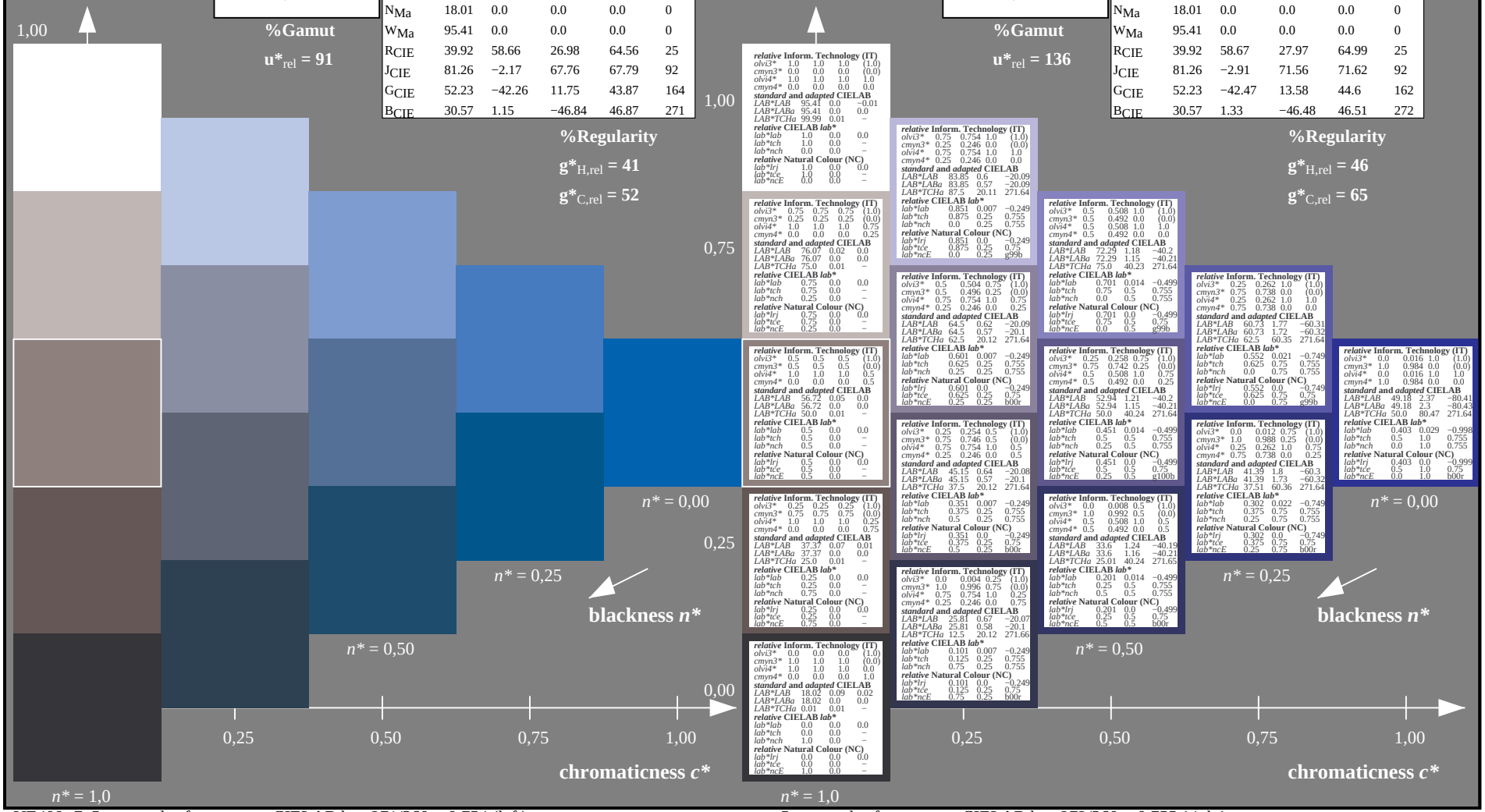
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



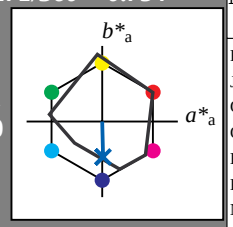
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

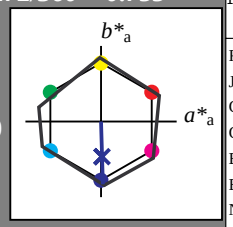
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

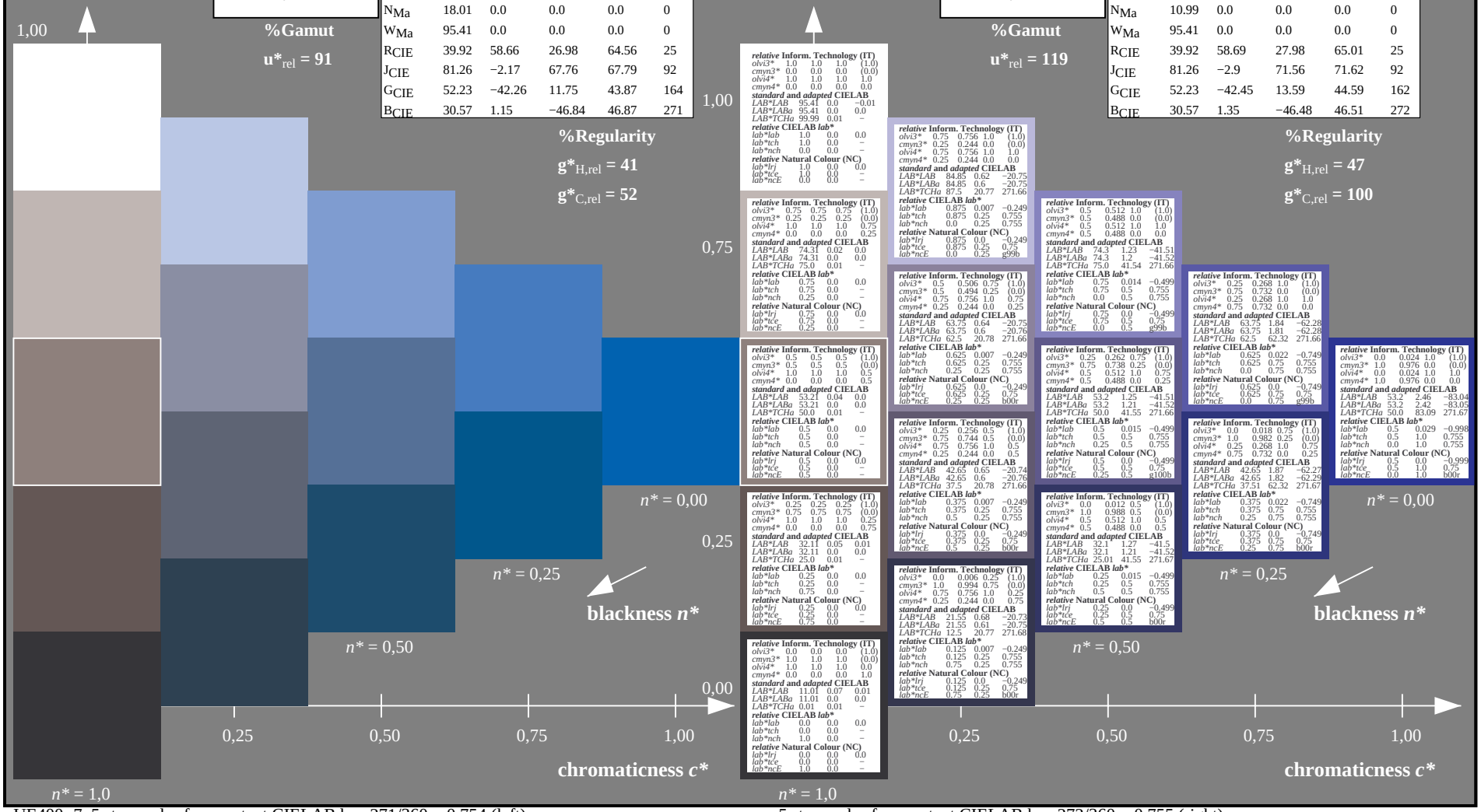
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



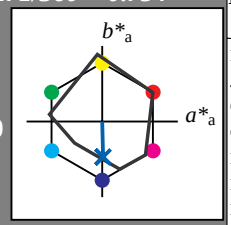
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

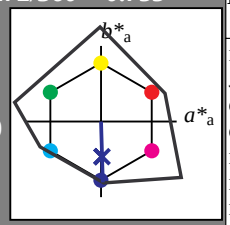
$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

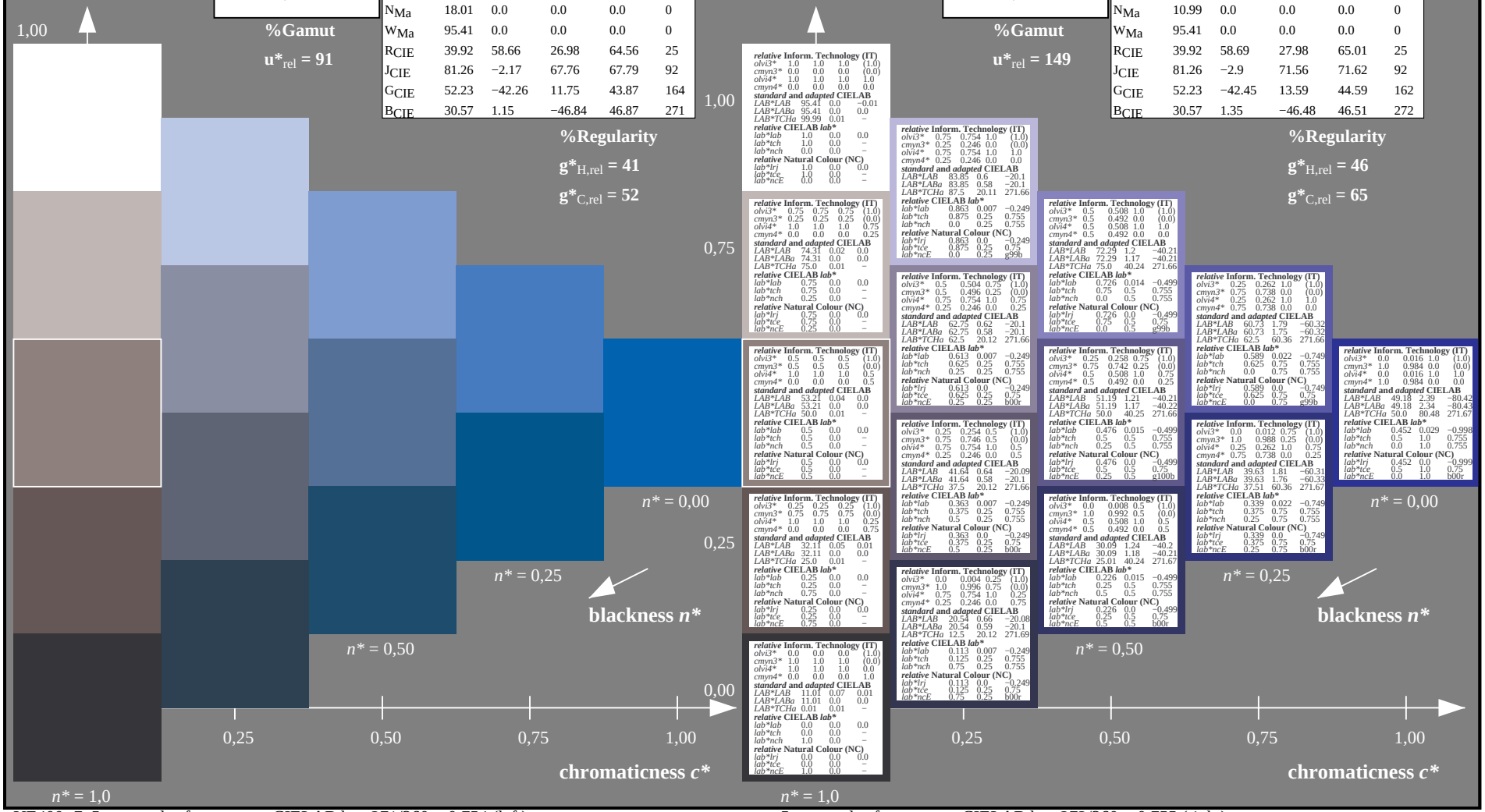
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



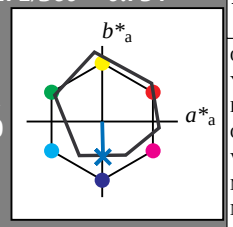
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

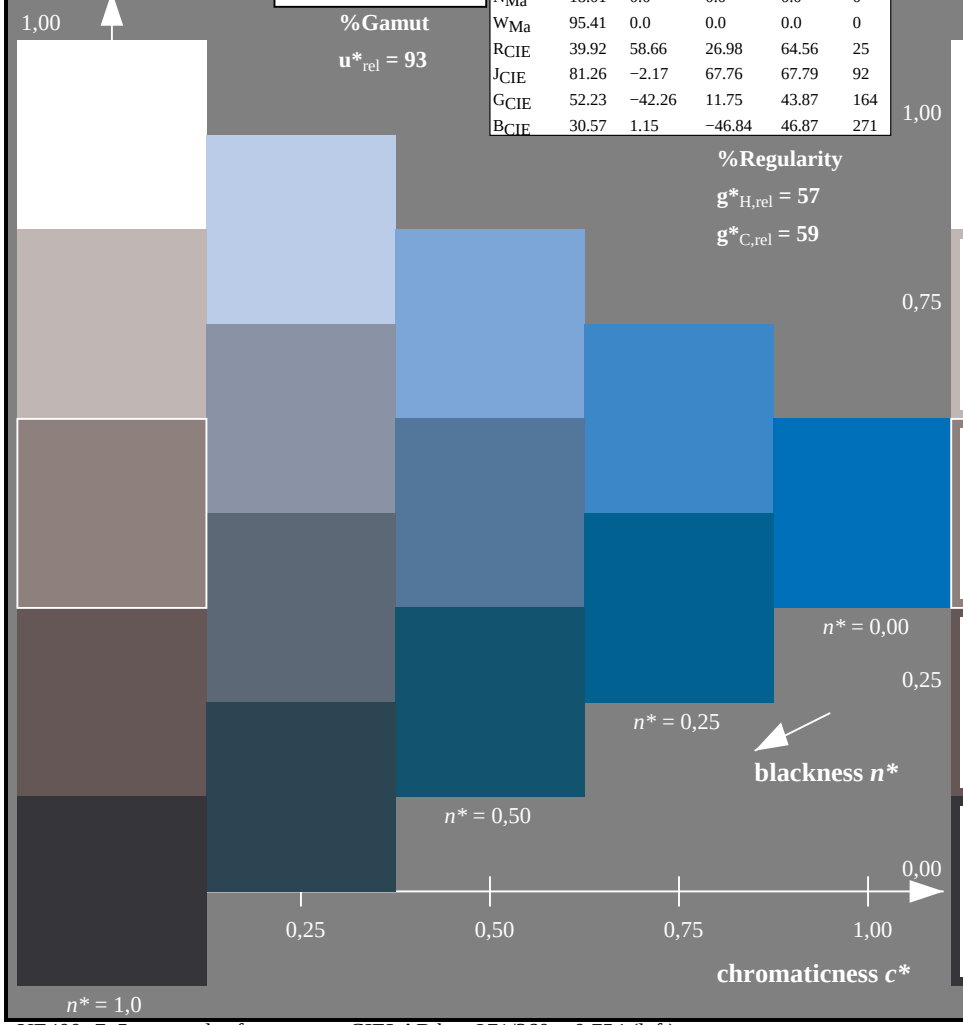
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

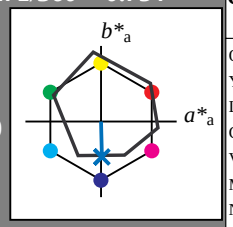


UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

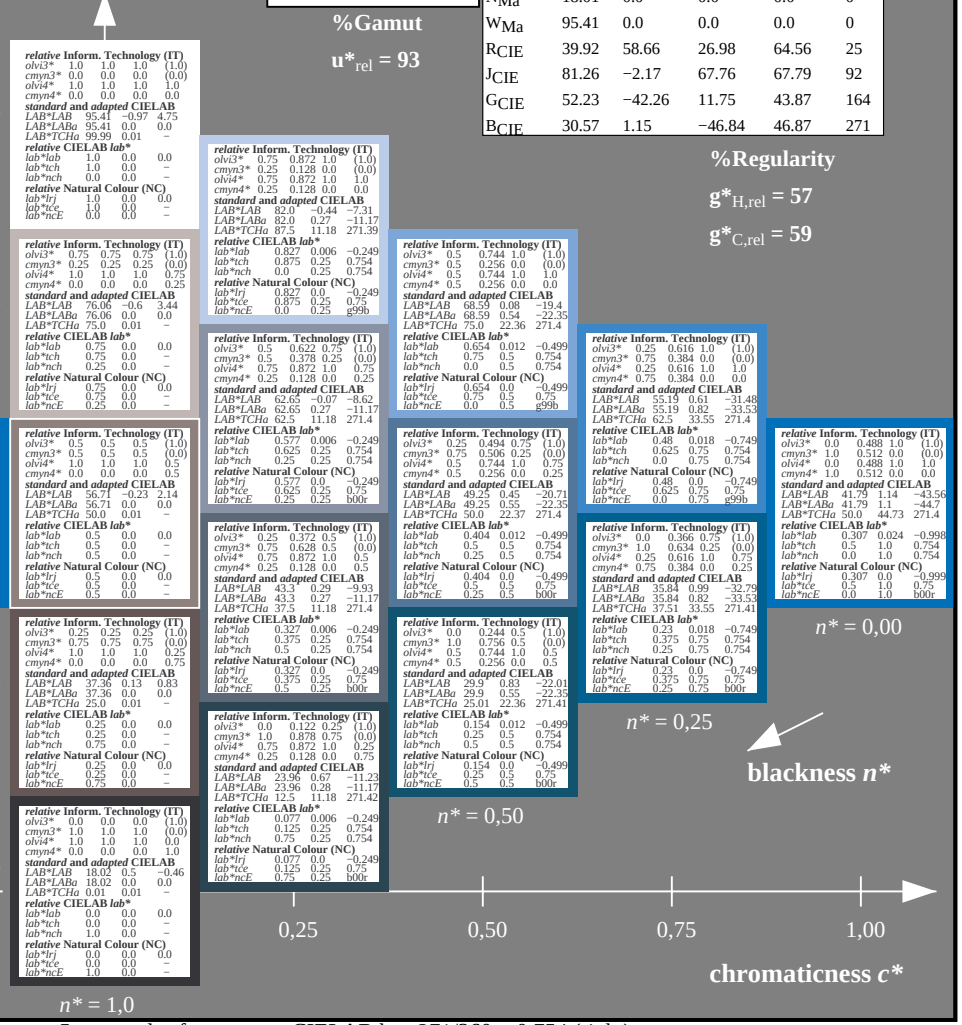
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

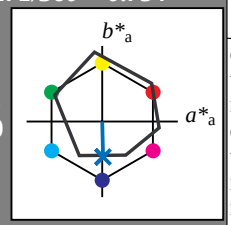


5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

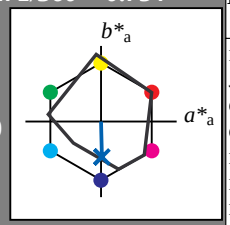
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

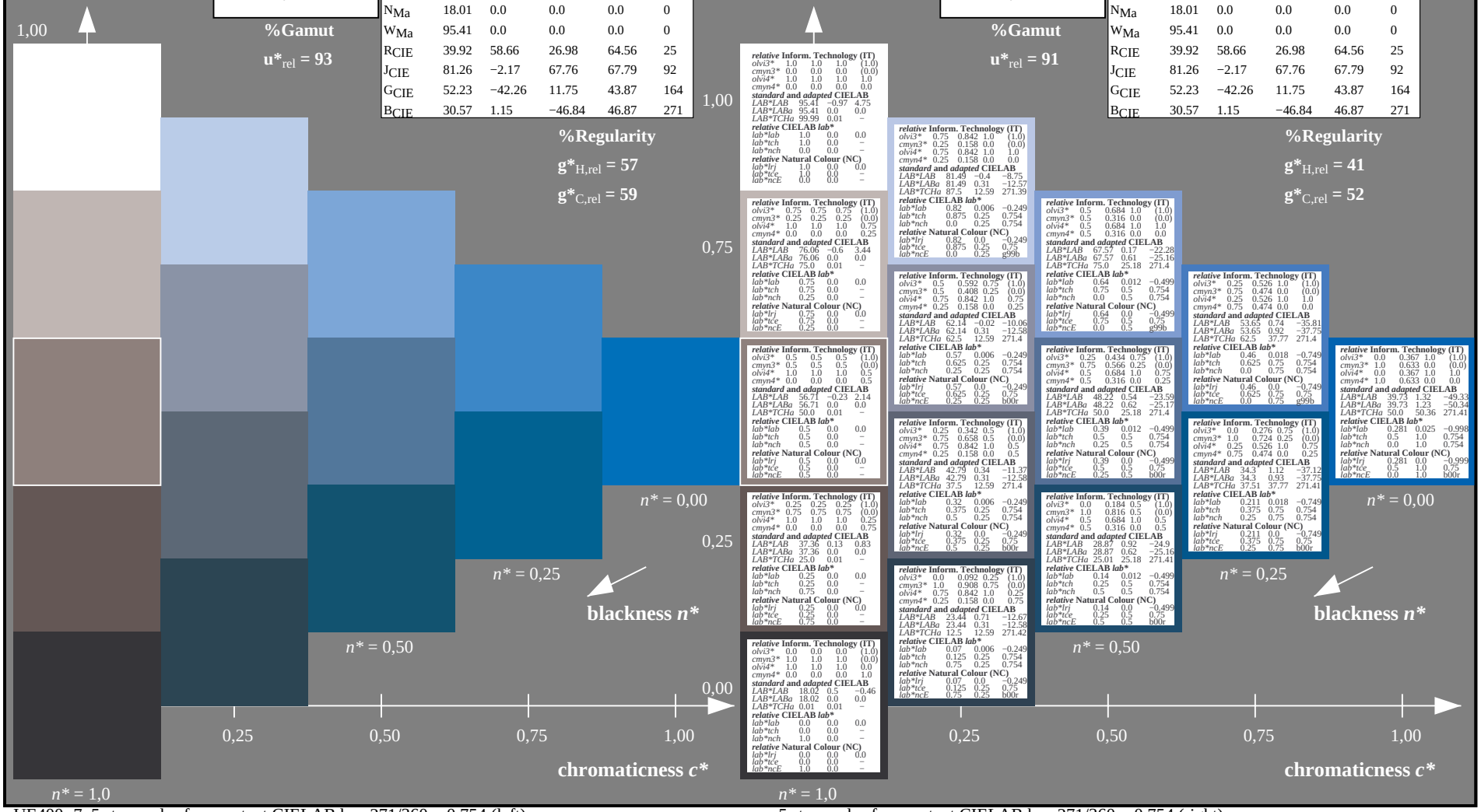
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



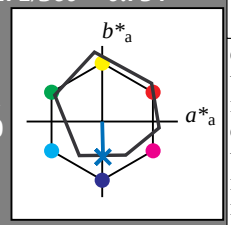
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

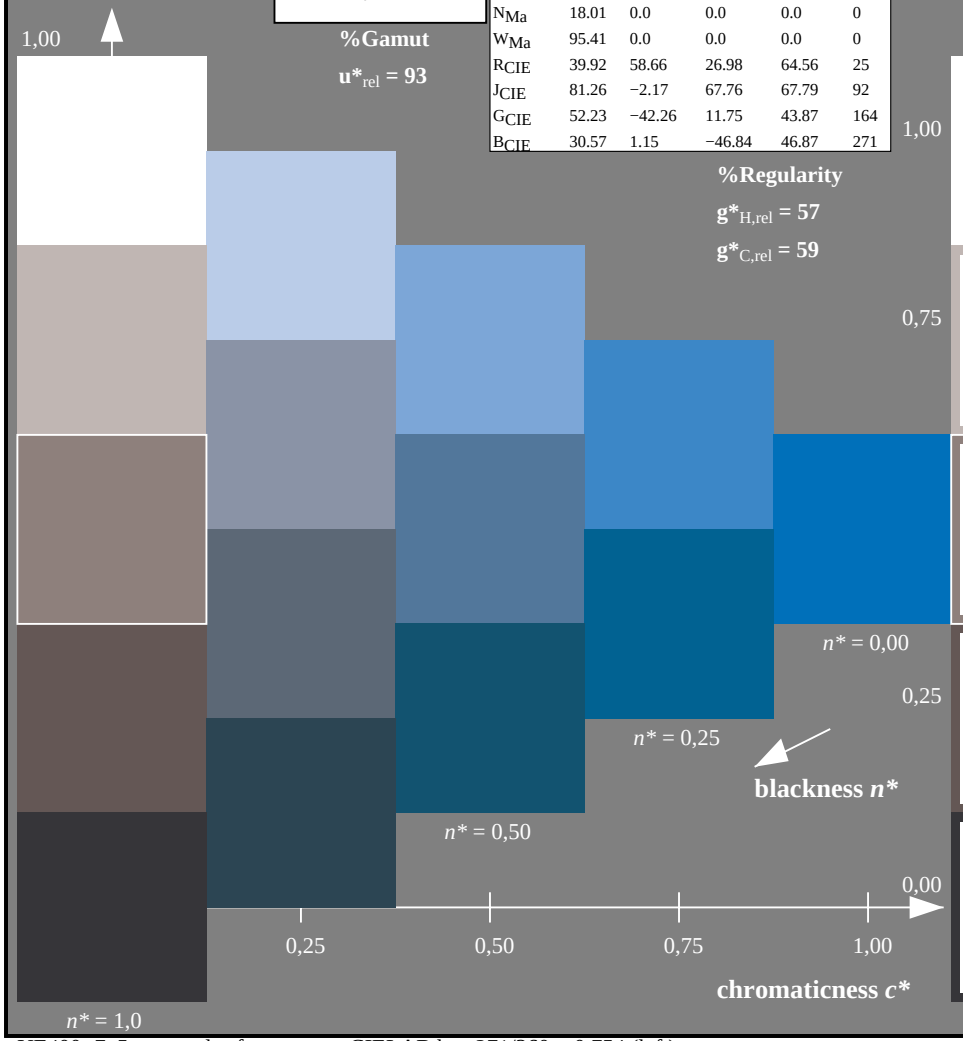
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

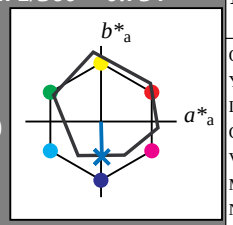
$g^*_{C,rel} = 59$



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

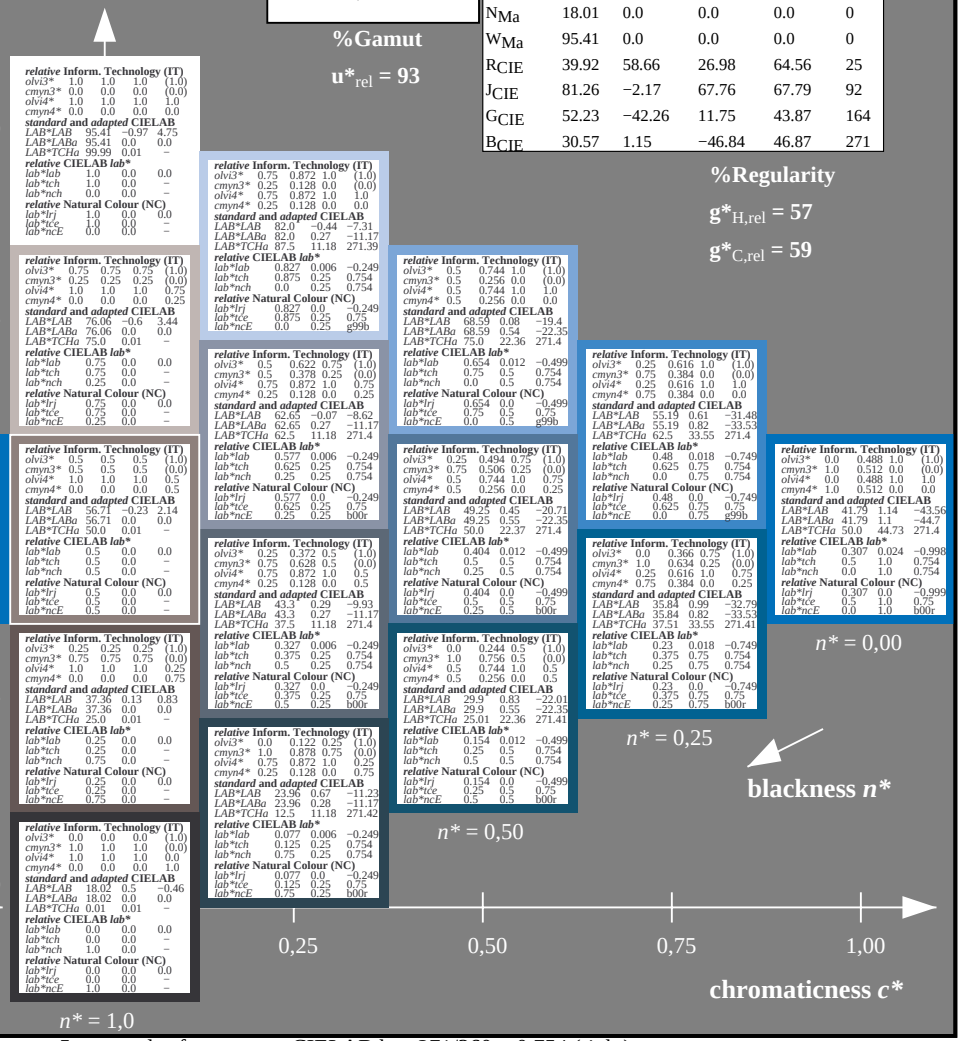
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$



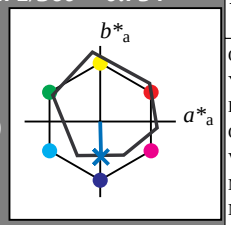
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System TRS18
for hue *h = lab*h = 271/360 = 0.754**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

u^*_{rel} = 93

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

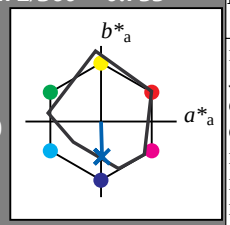
0,25 0,50 0,75 1,00

chromaticness *c**

Output: Colorimetric Reflective System MRS18a
for hue *h = lab*h = 272/360 = 0.755**
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness *n**

0,25 0,50 0,75 1,00

chromaticness *c**

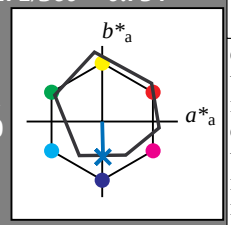
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Gamut

$u^*_{rel} = 93$

%Regularity

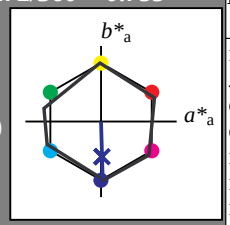
$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

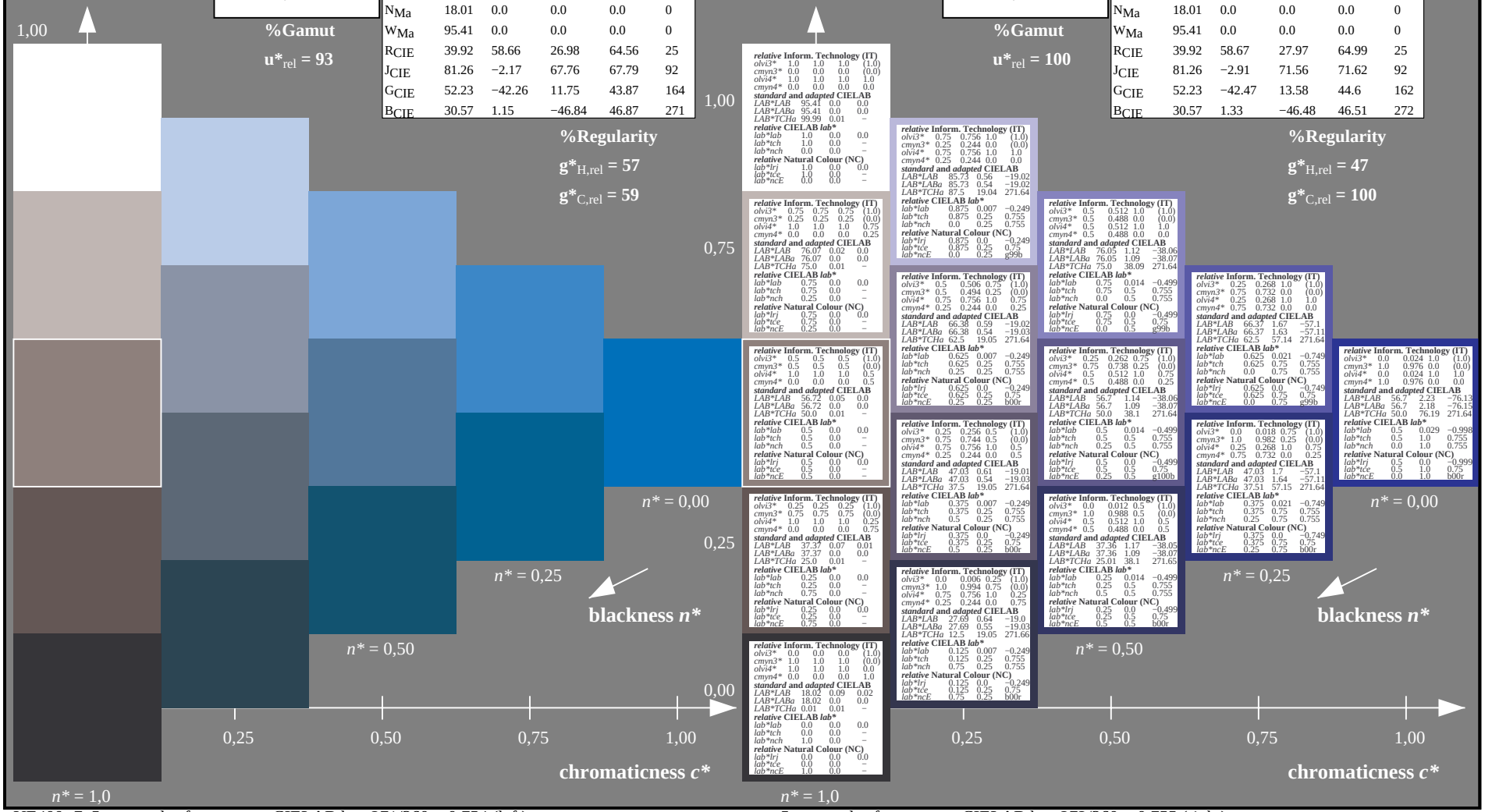
%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$



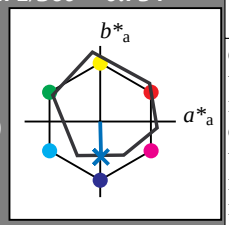
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System TRS18
for hue *h* = lab*h = 271/360 = 0.754*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

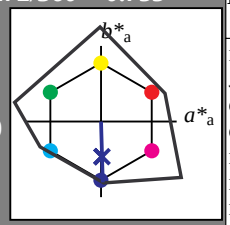
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS18
for hue *h* = lab*h = 272/360 = 0.755*
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

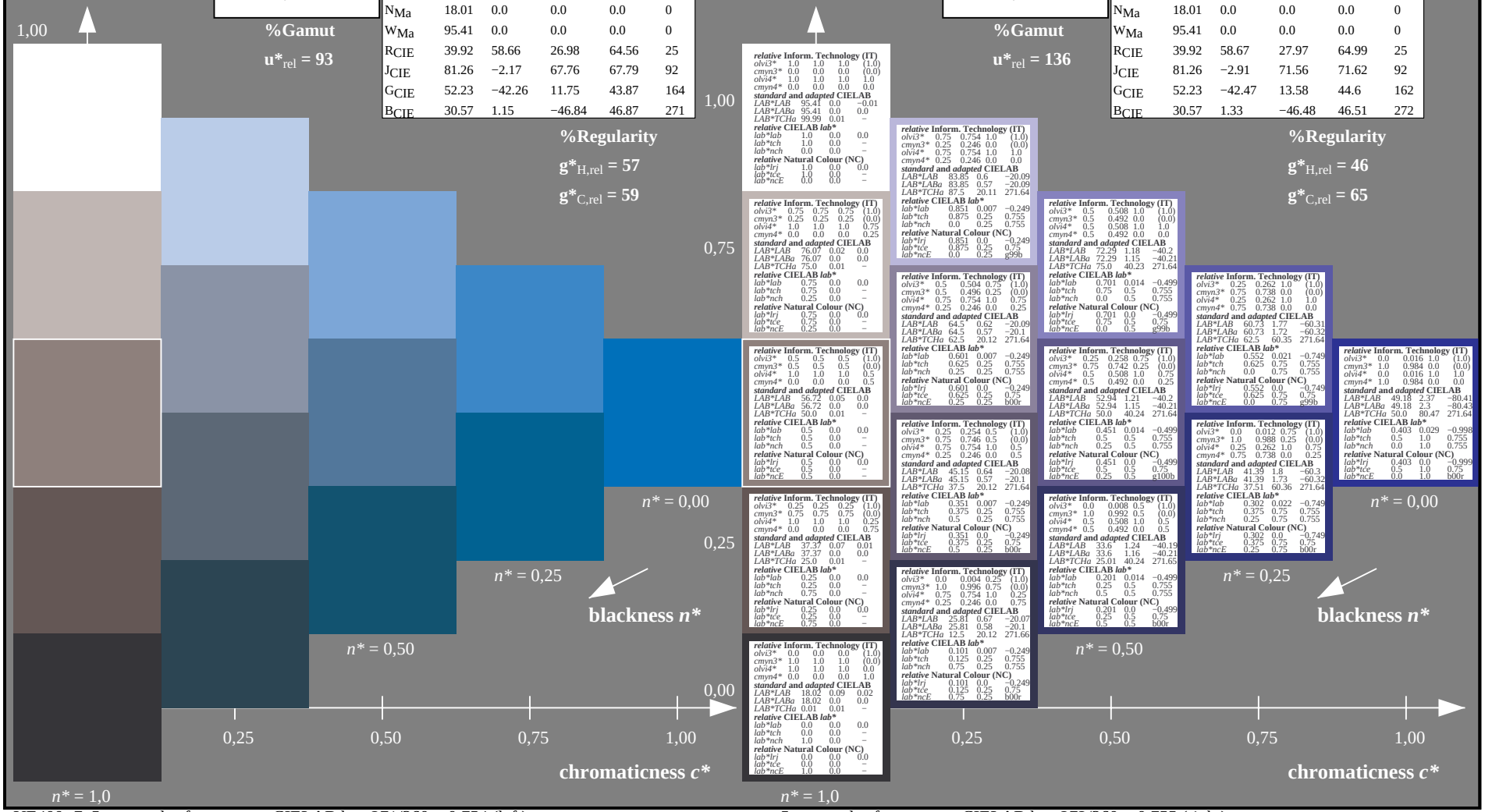
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



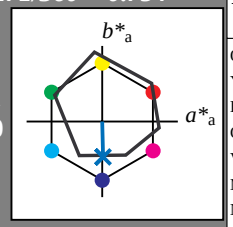
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

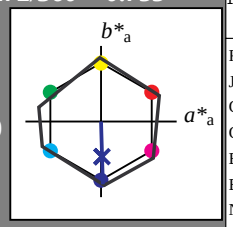
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

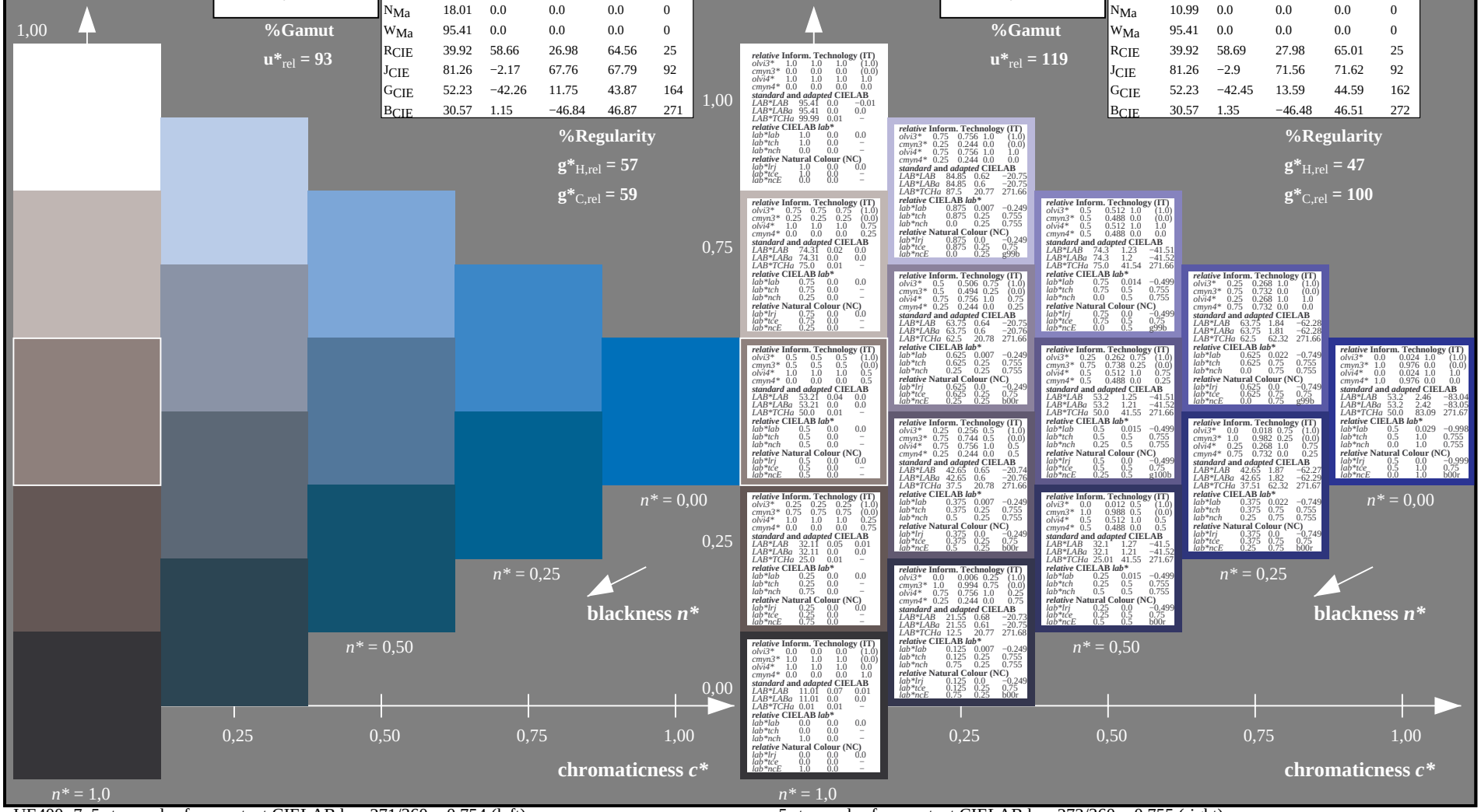
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



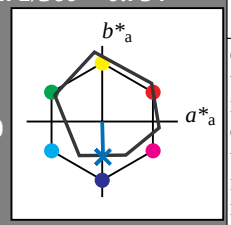
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

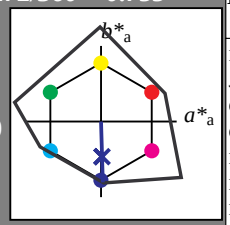
$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

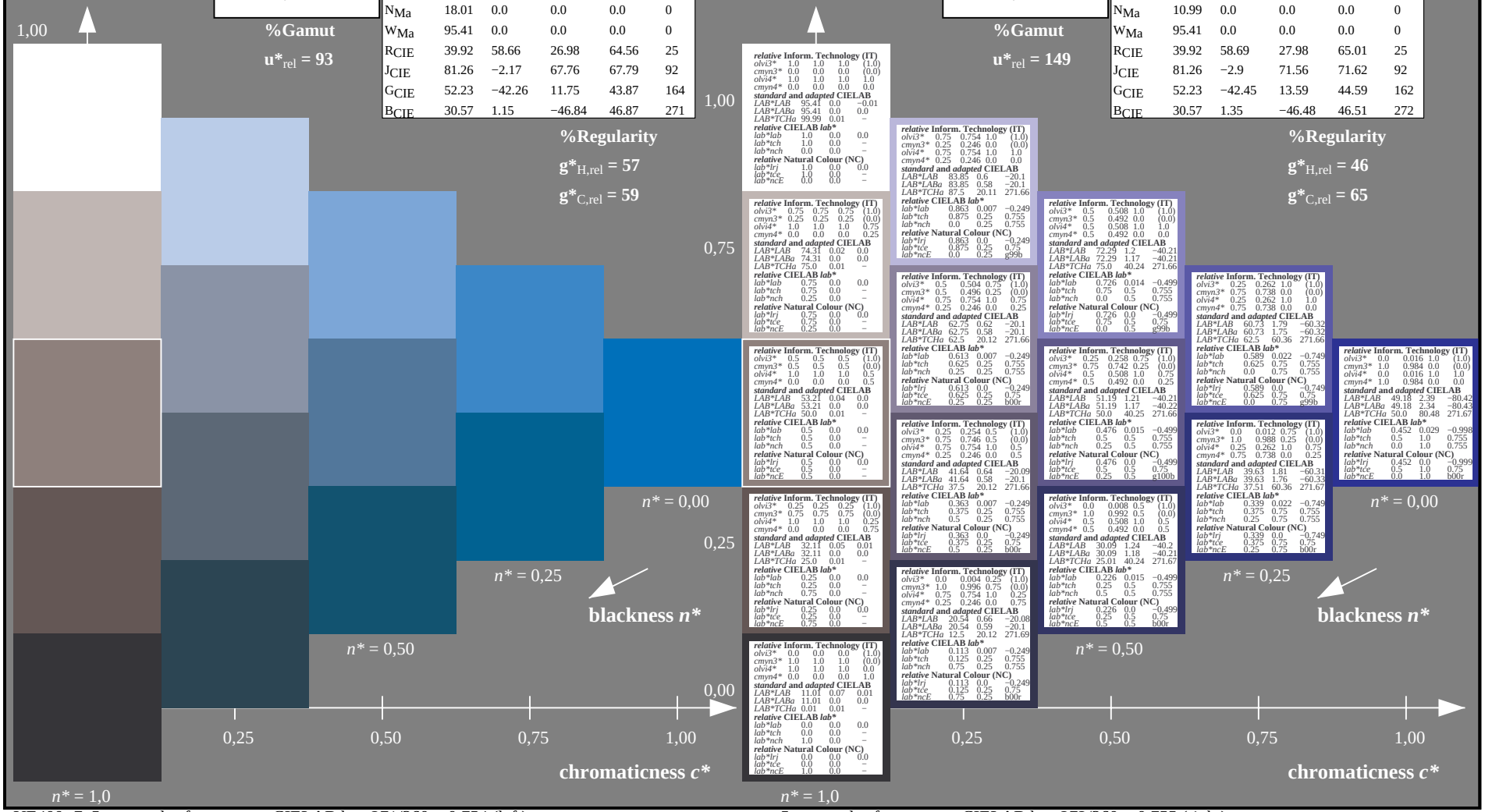
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



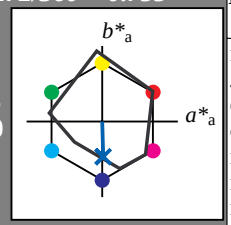
UE400−7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

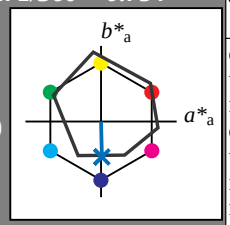
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

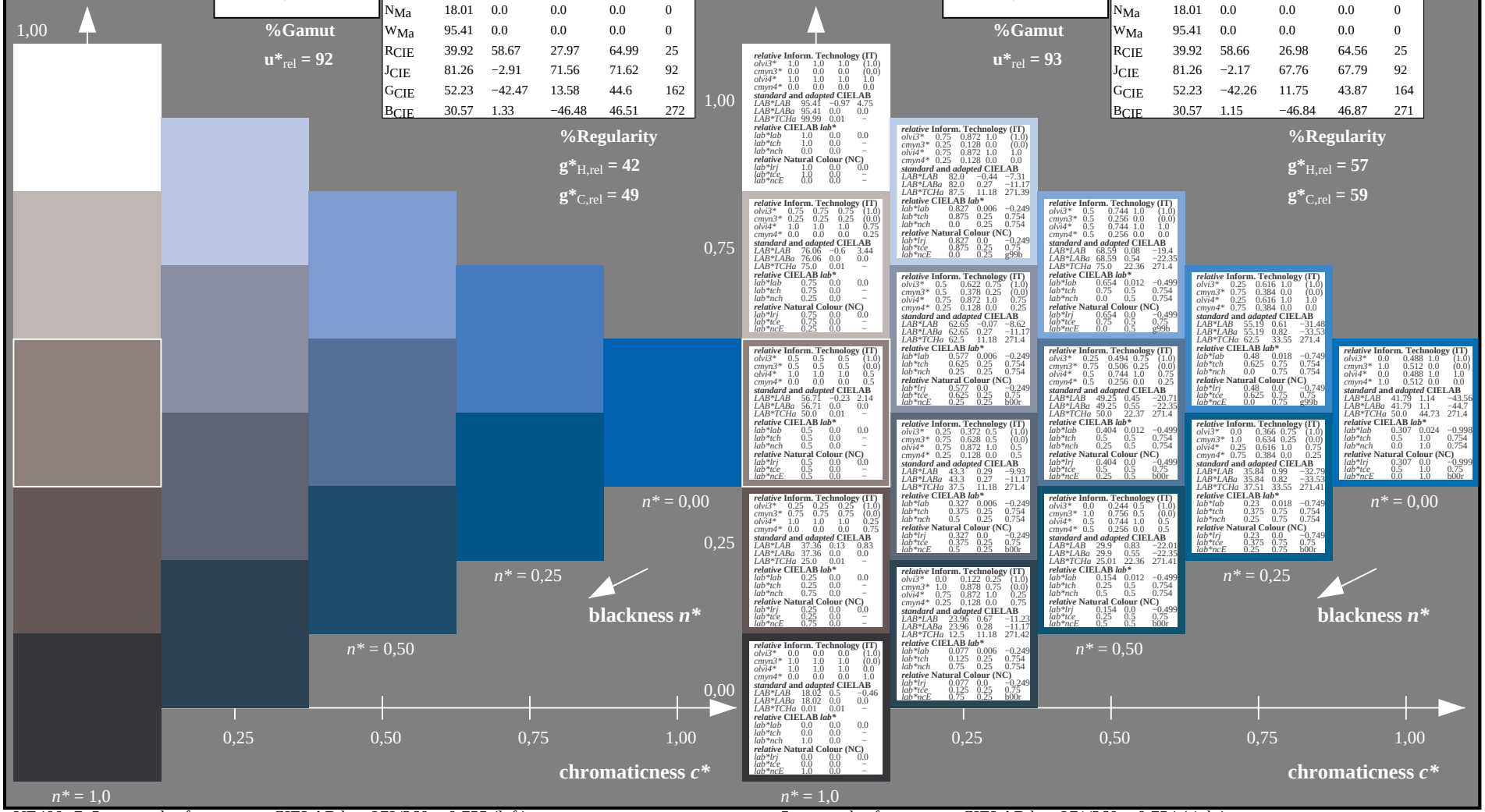
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



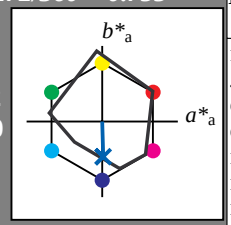
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 92$

%Regularity

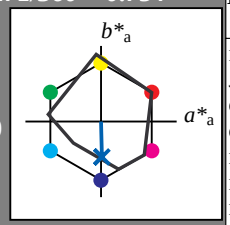
$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

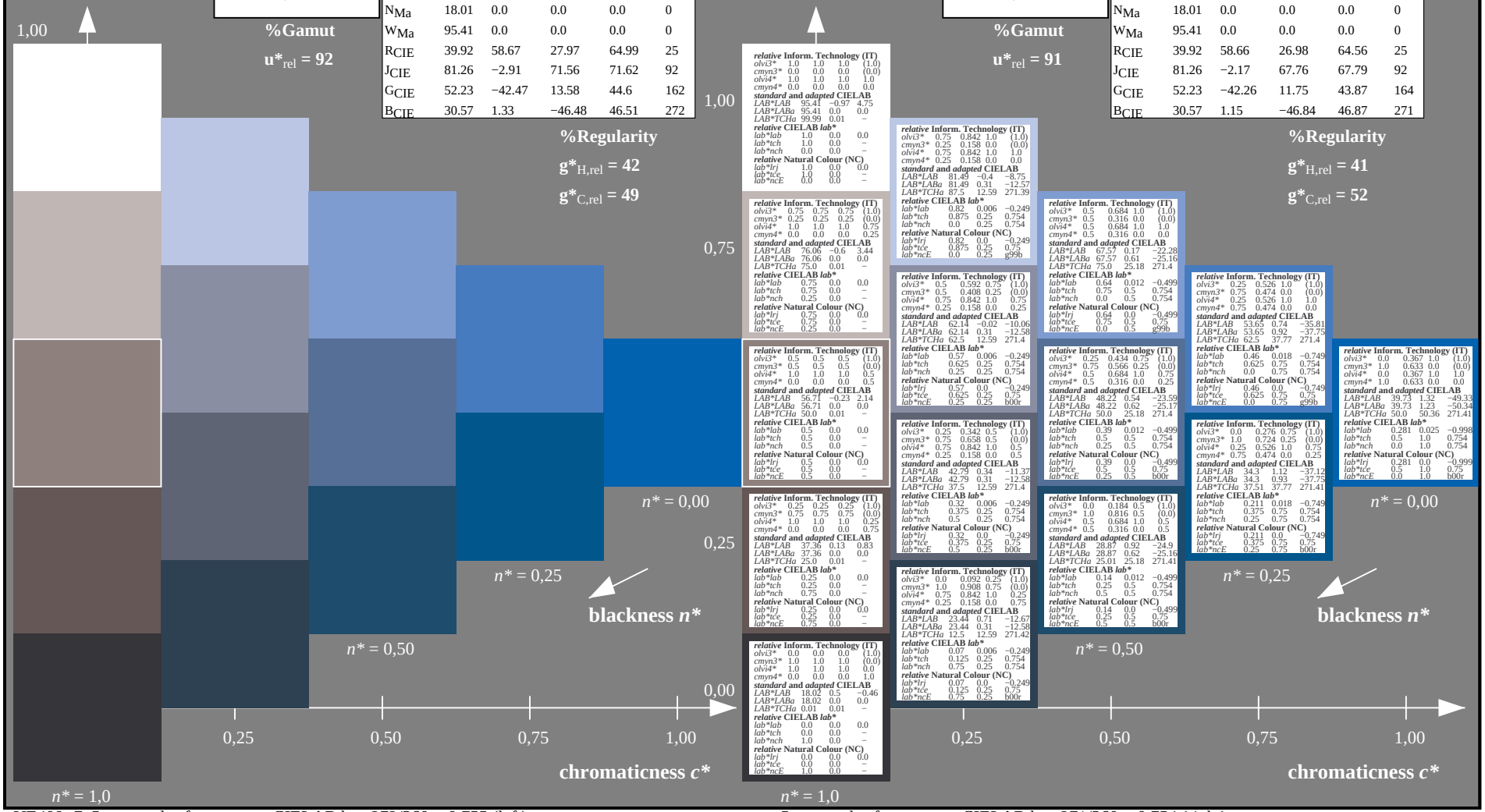
%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



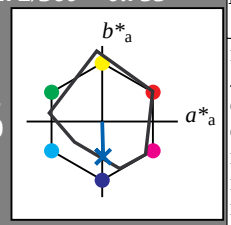
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

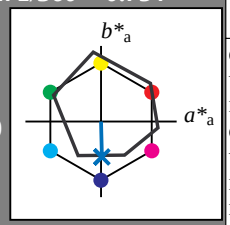
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

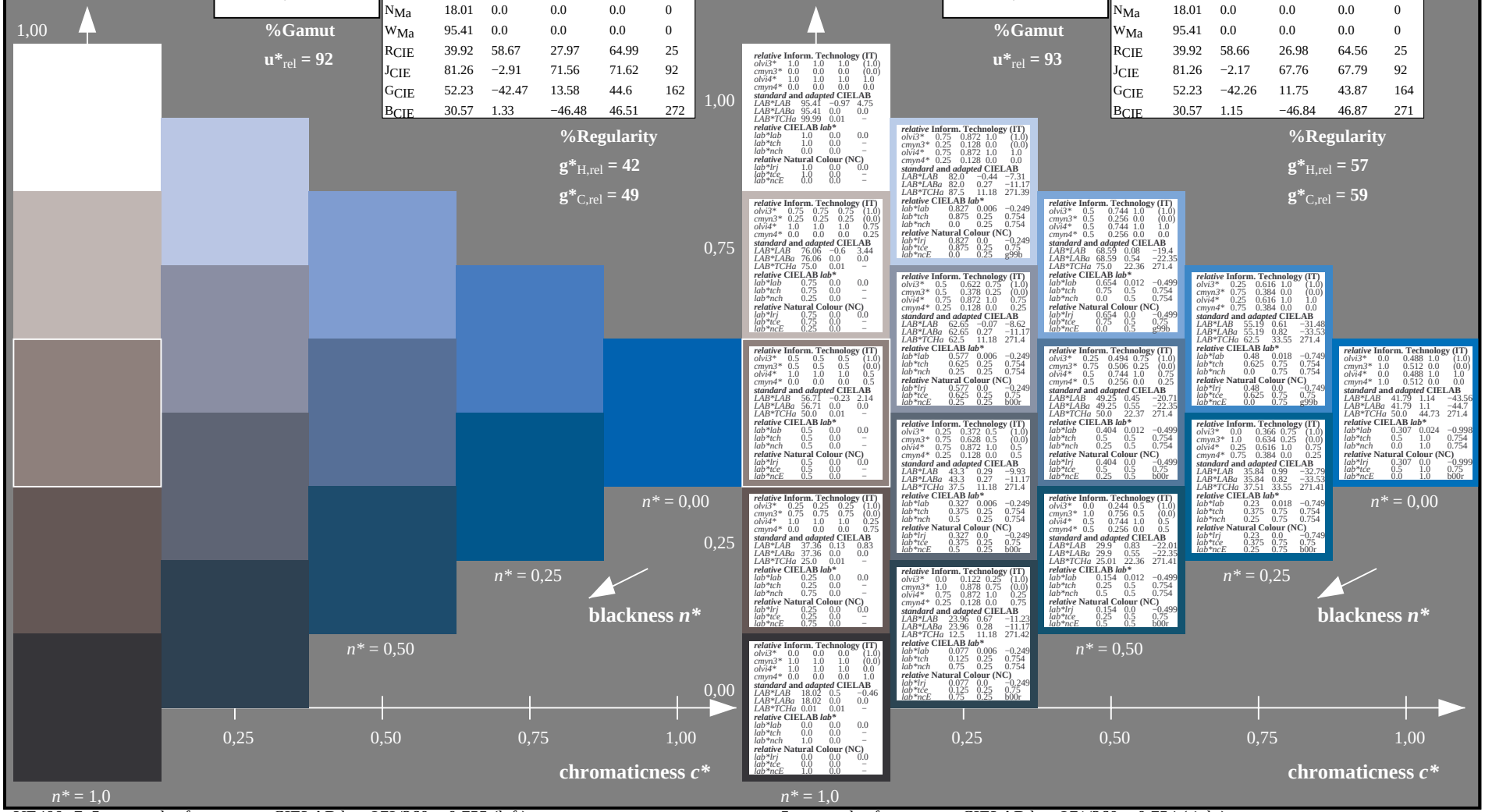
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



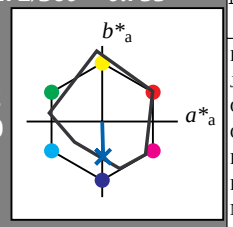
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

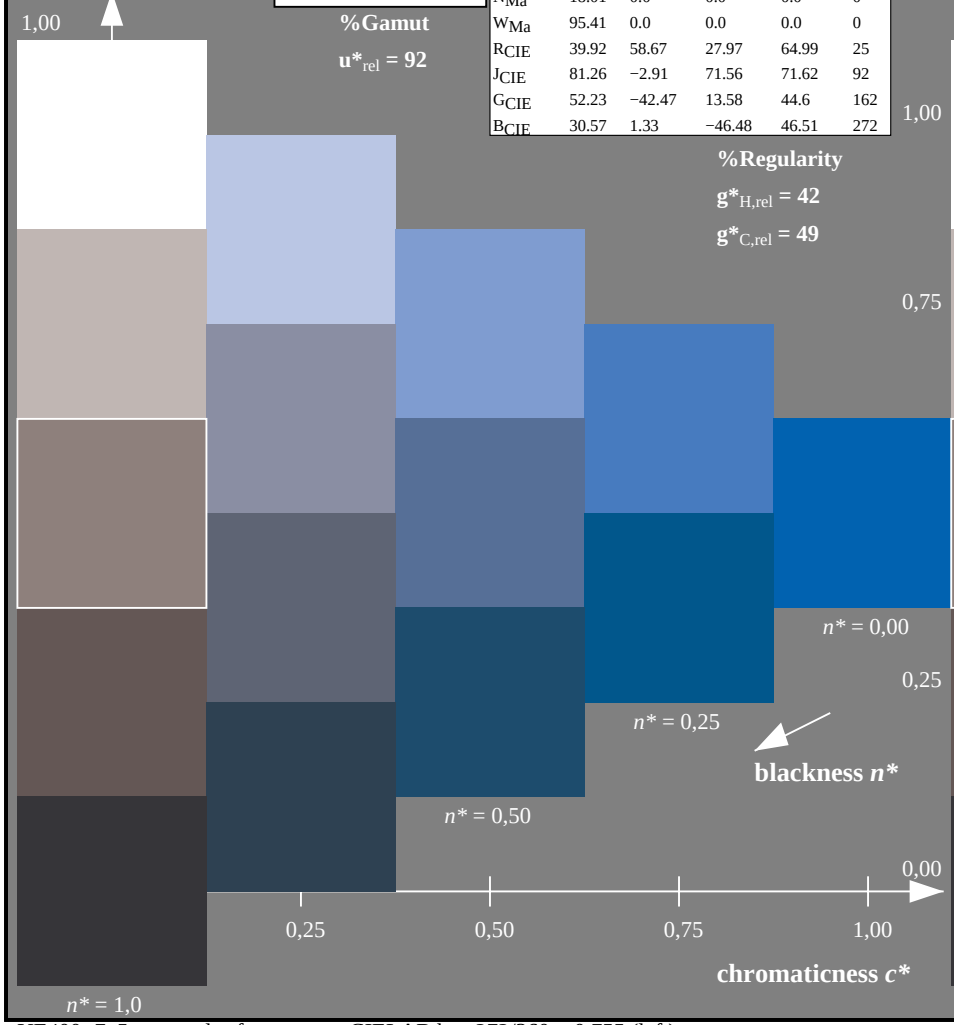
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

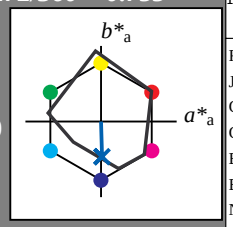
$g^*_{C,rel} = 49$



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

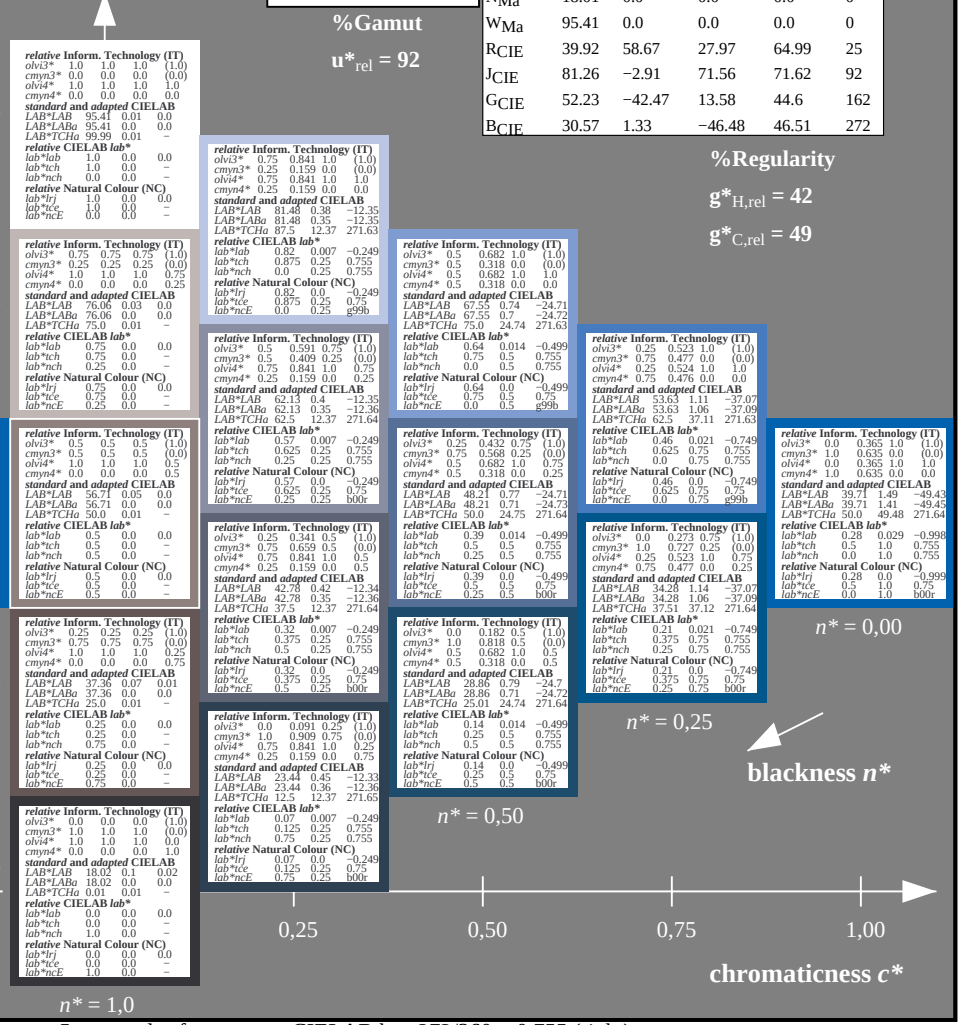
%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$



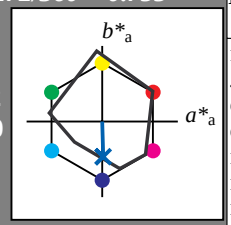
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 92

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

1,00

0,75

0,25

0,00

n^* = 1,0

n^* = 0,50

n^* = 0,25

n^* = 0,00

blackness n^*

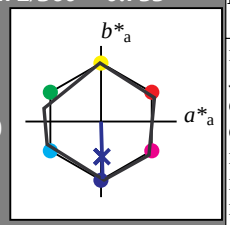
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 1,0

n^* = 0,50

n^* = 0,25

n^* = 0,00

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

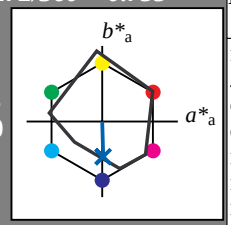
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

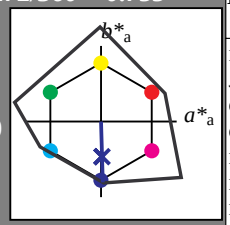
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

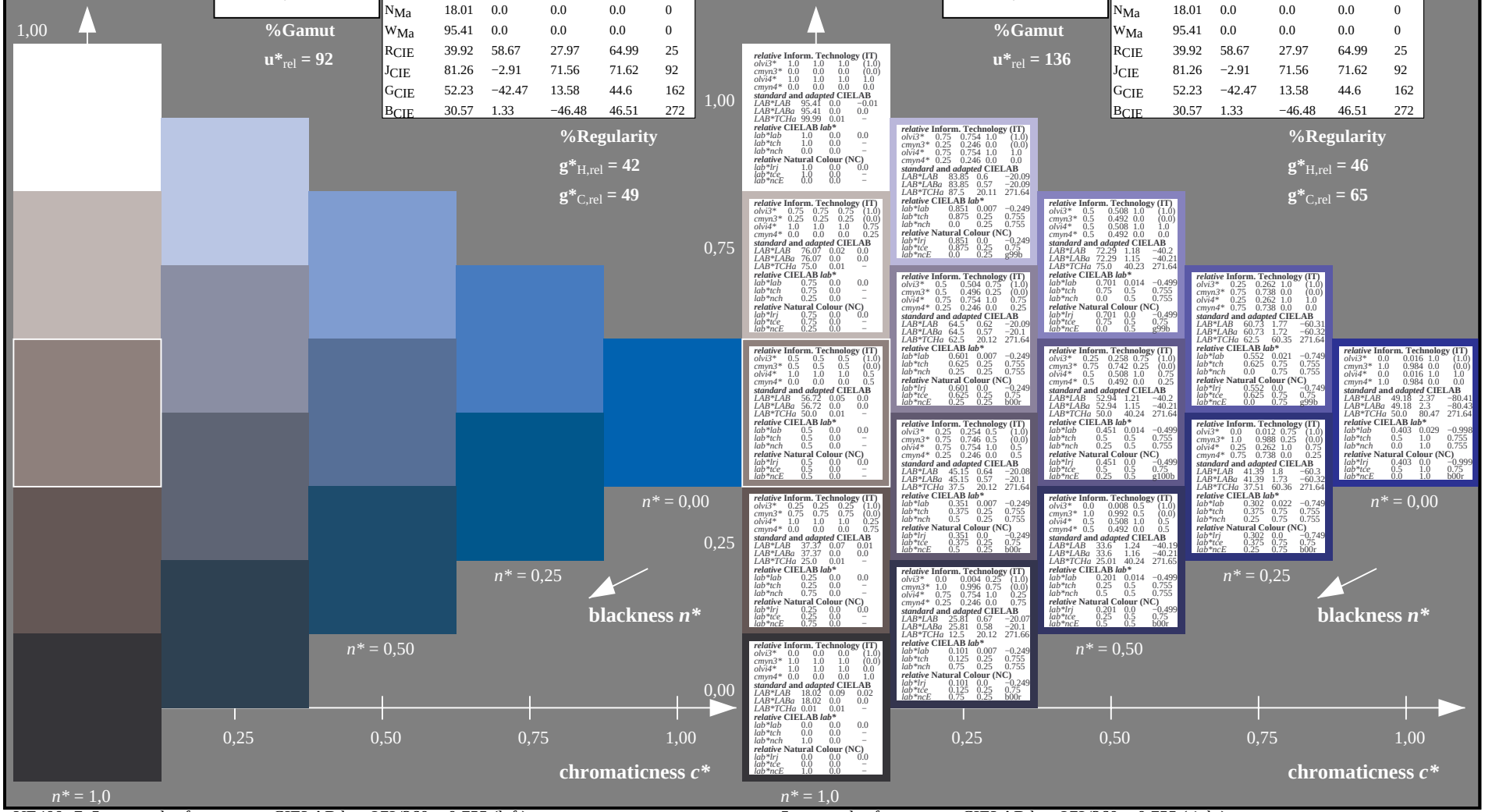
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



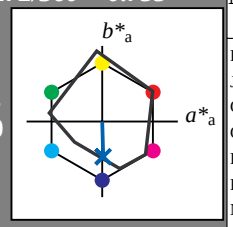
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

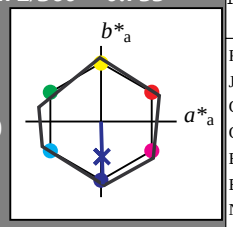
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

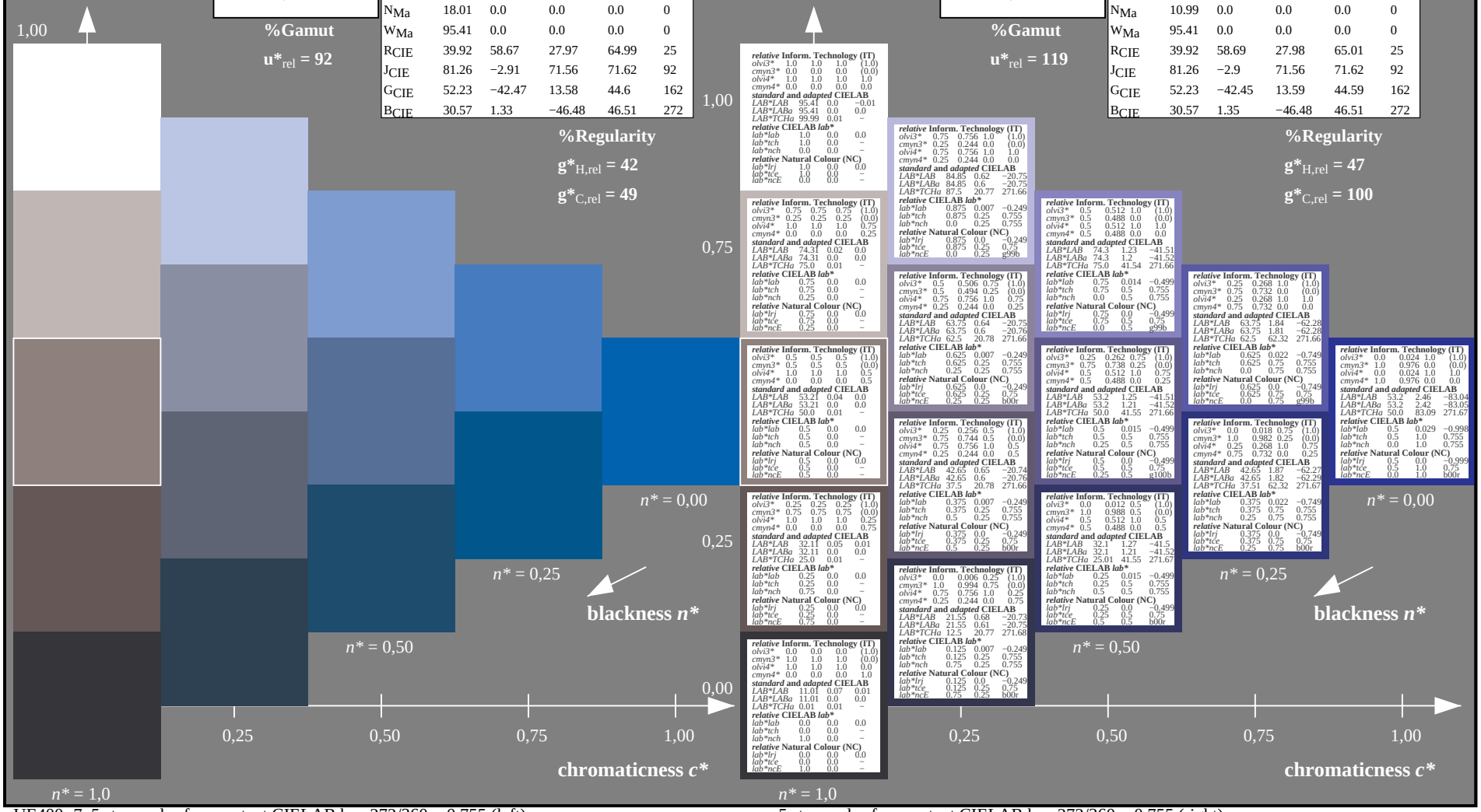
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



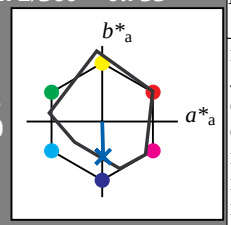
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

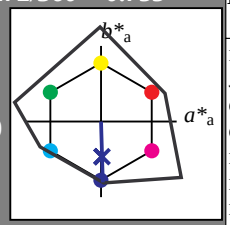
$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

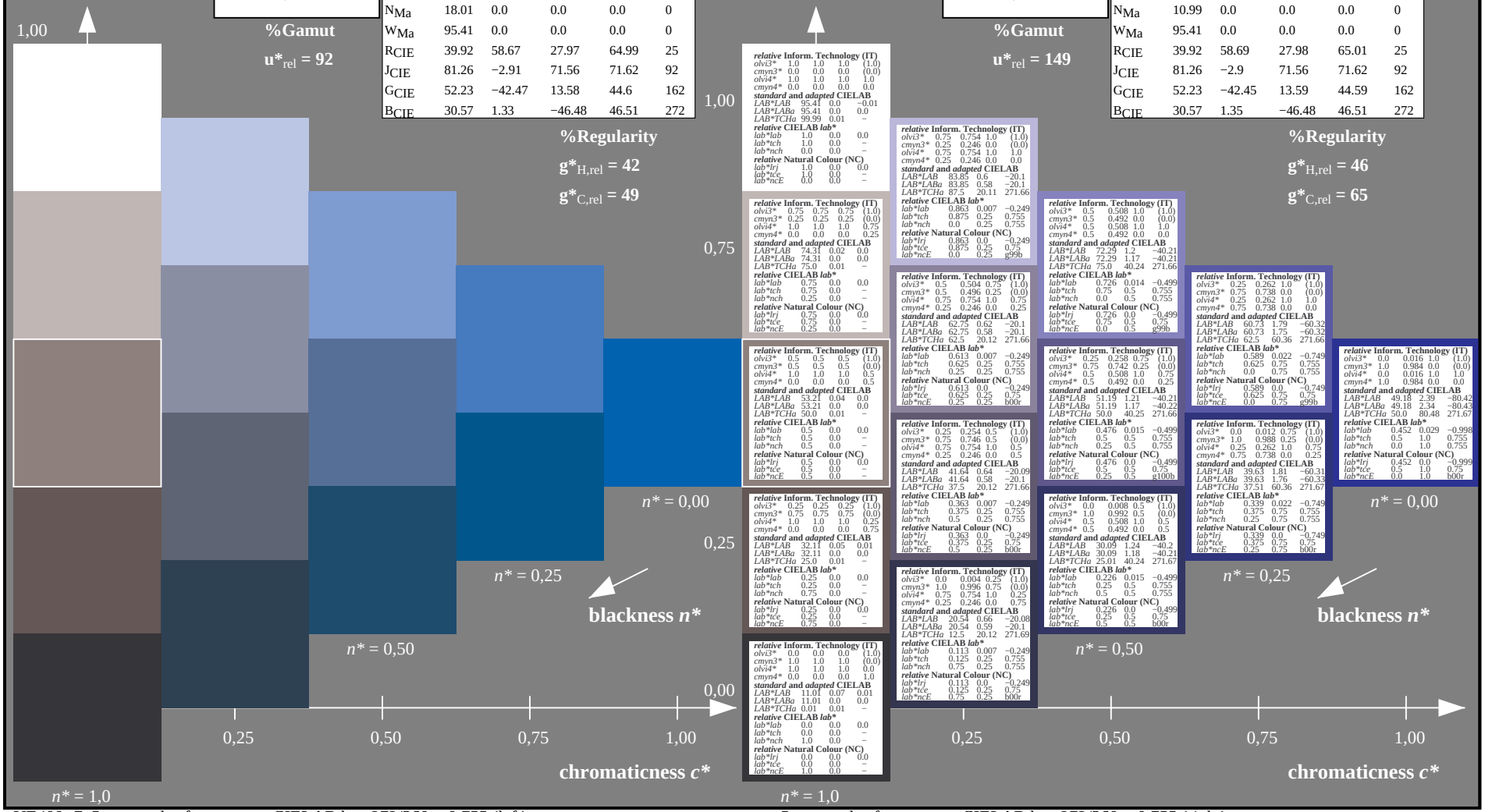
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



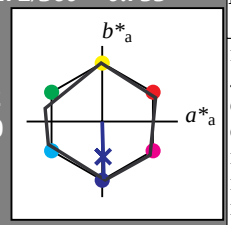
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

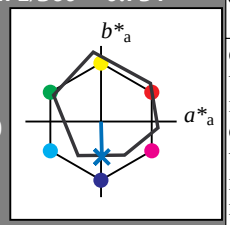
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

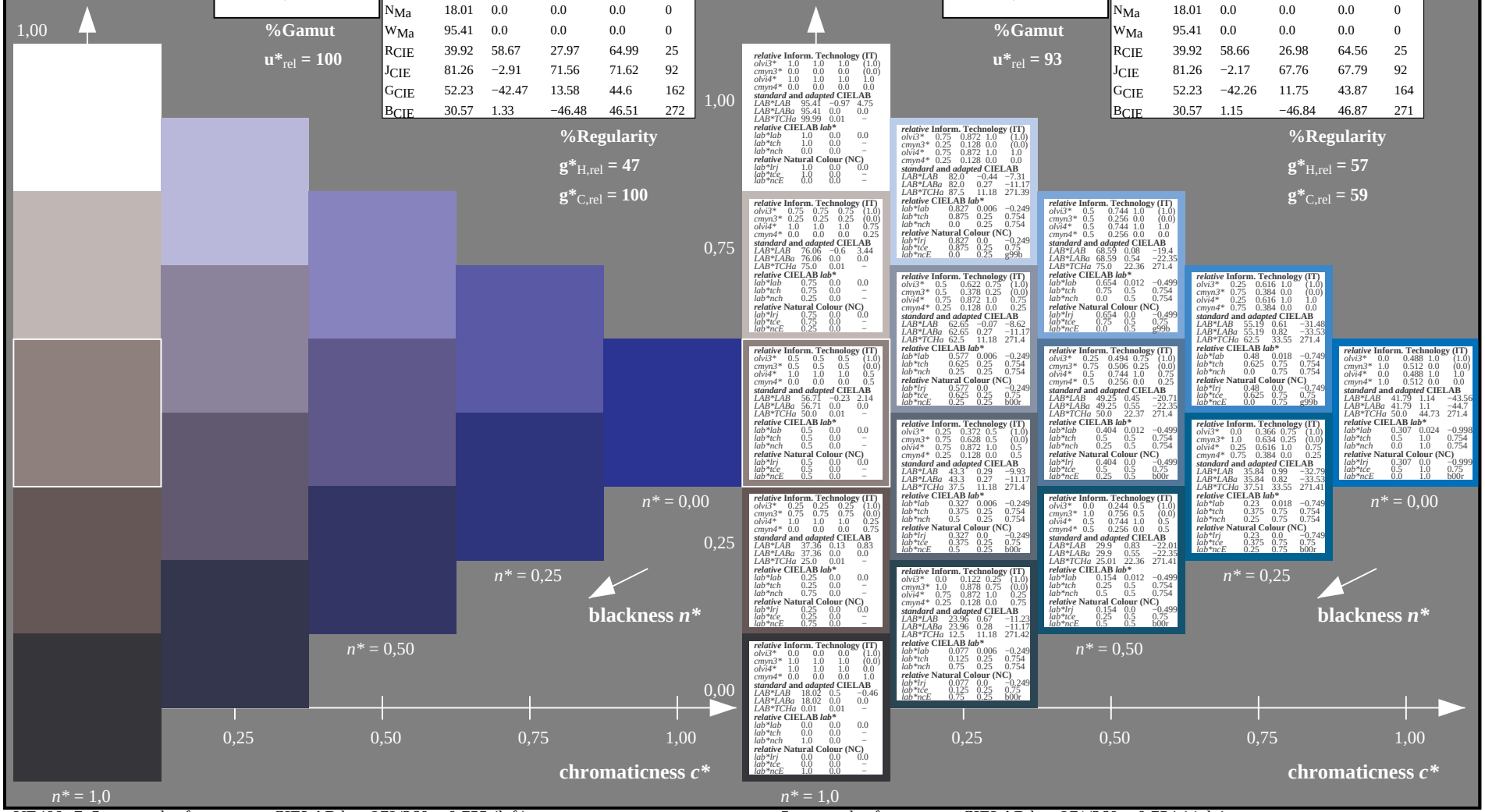
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



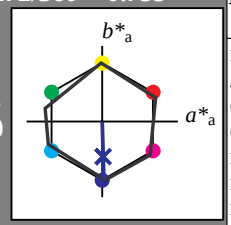
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

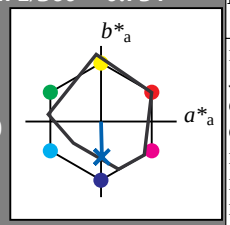
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

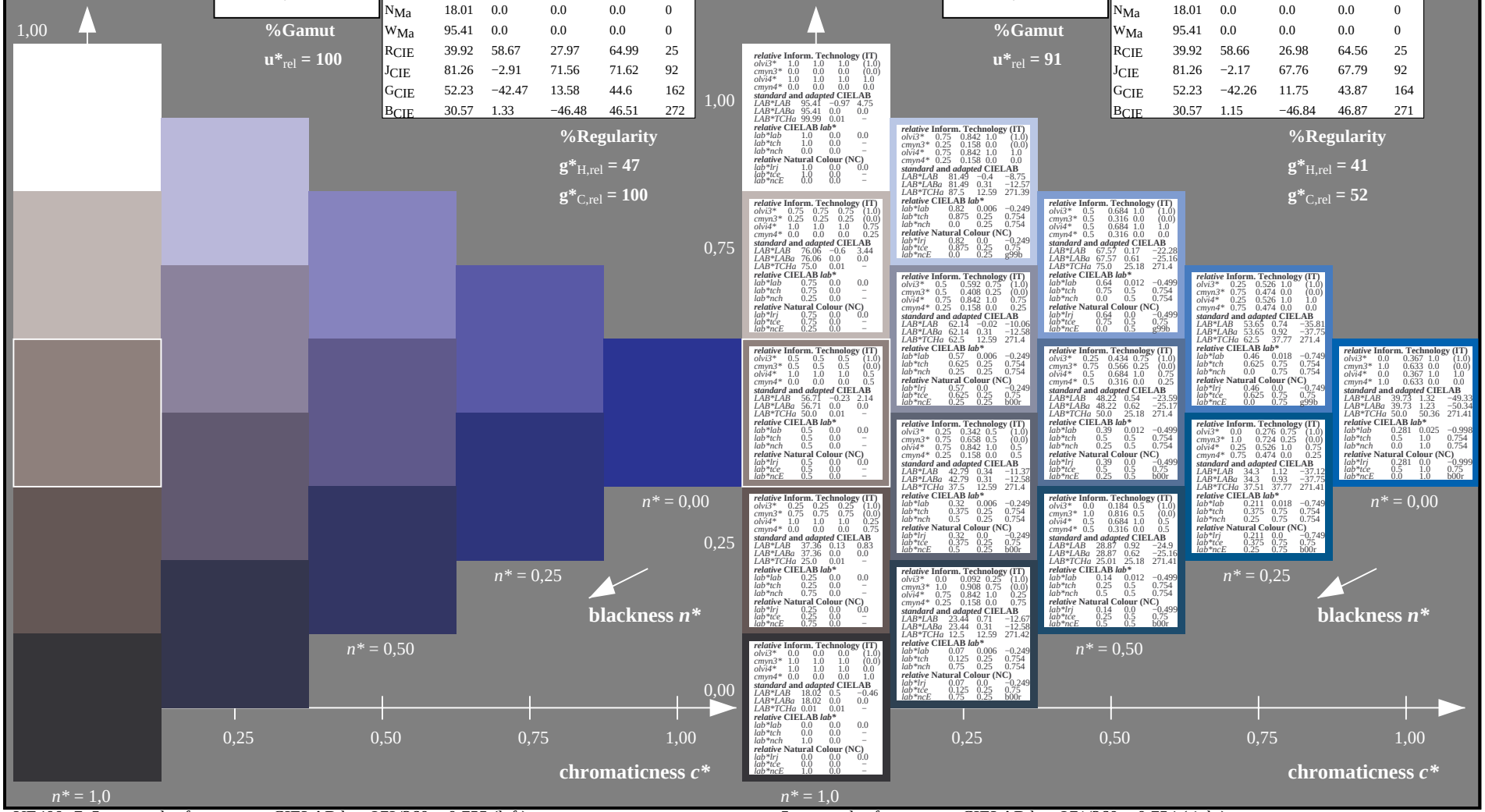
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



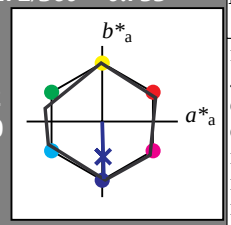
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

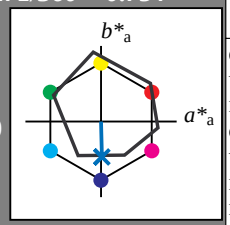
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

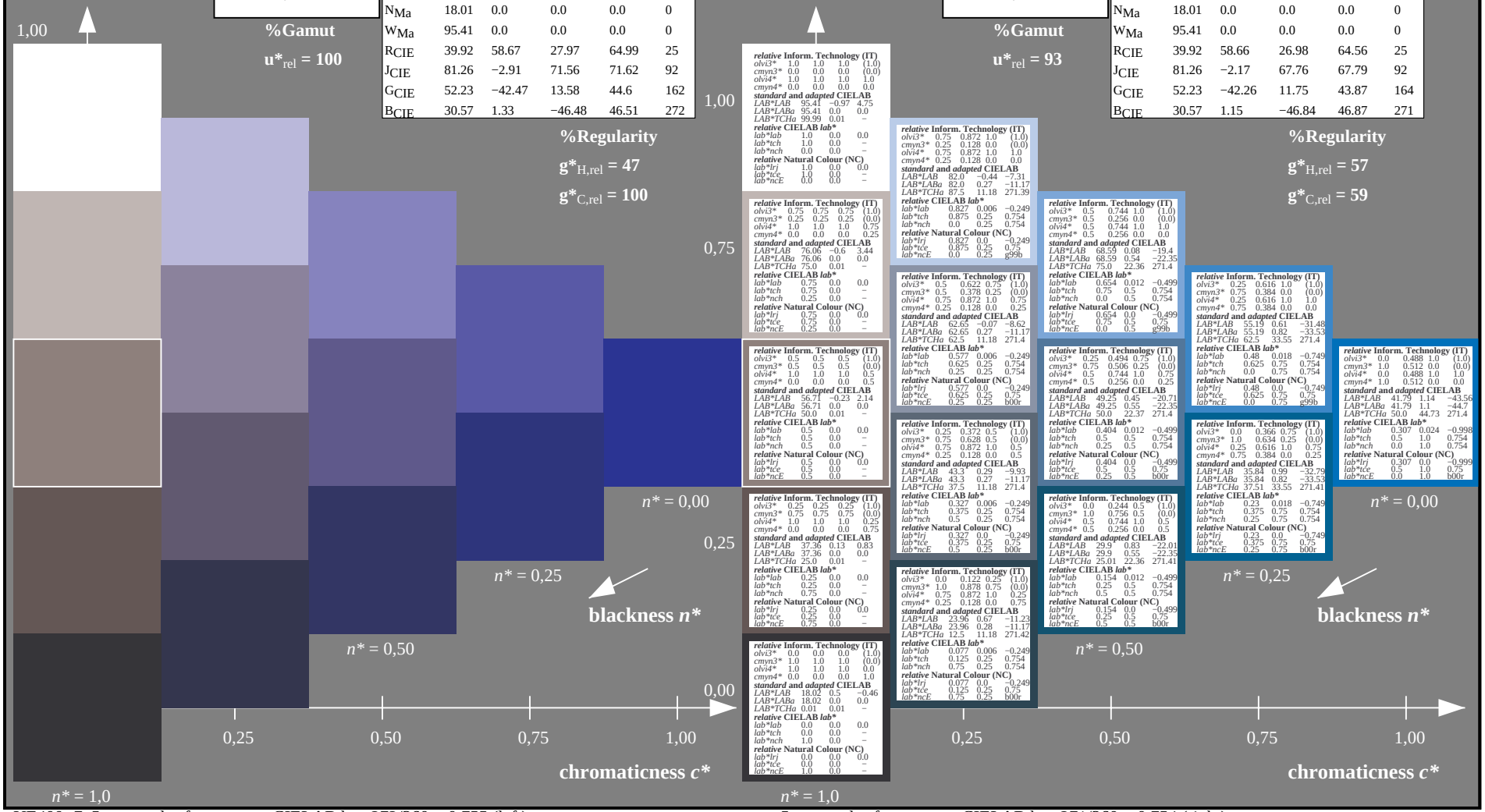
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



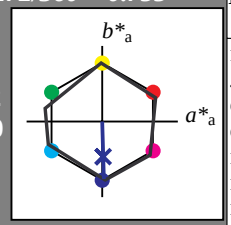
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

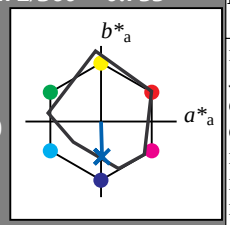
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

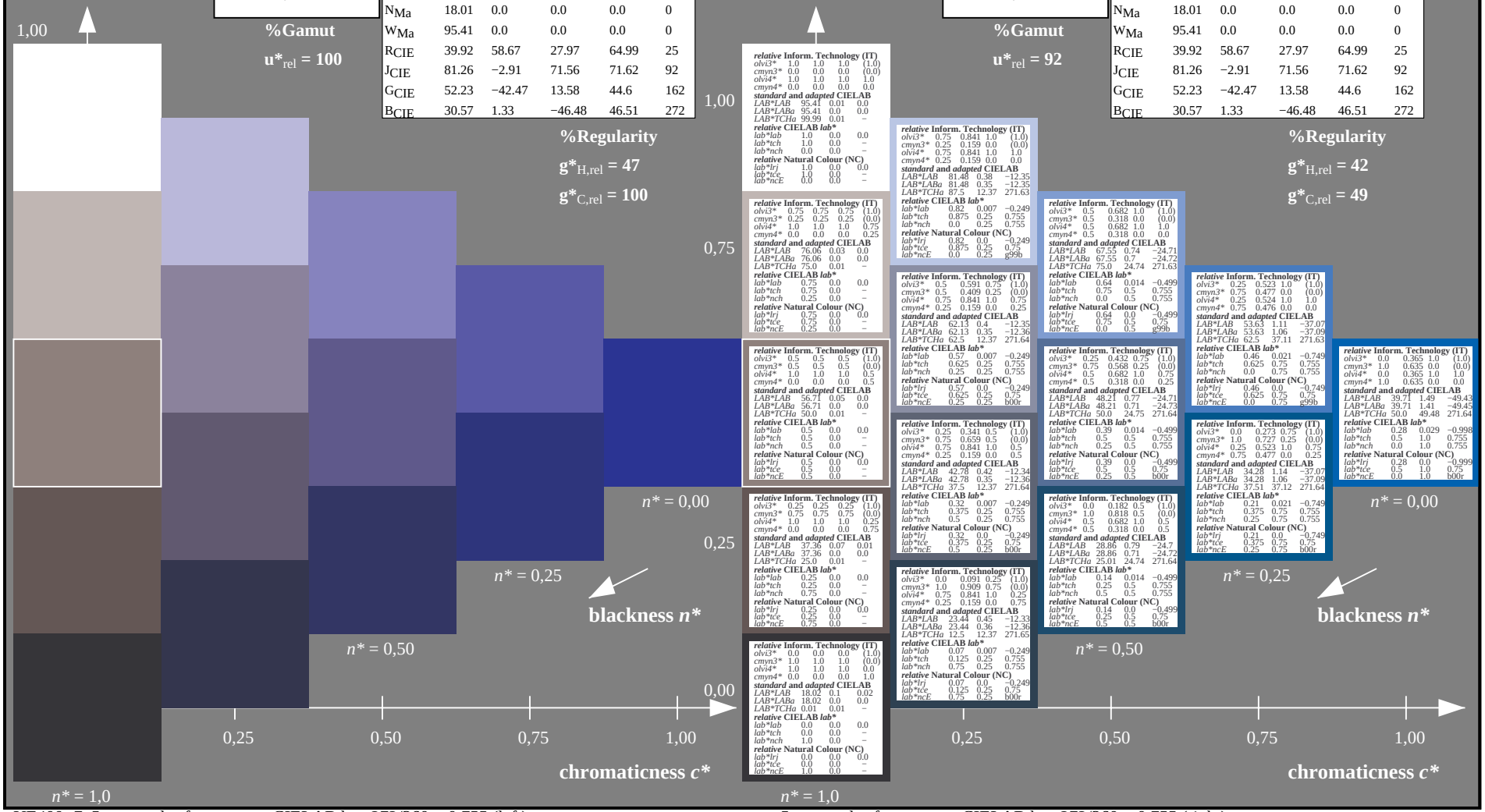
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



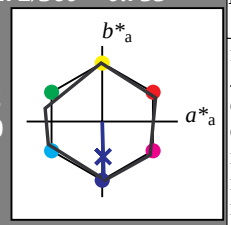
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

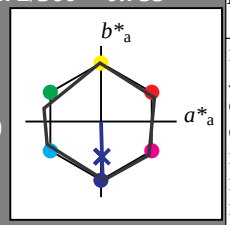
chromaticness c^*

UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

$u^*_{rel} = 100$

%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

1,00

0,75

0,25

0,00

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

blackness n^*

0,25 0,50 0,75 1,00

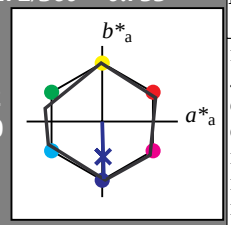
chromaticness c^*

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 100

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

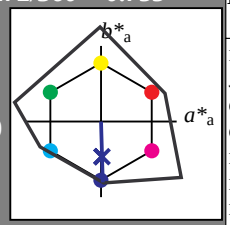
0,25 0,50 0,75 1,00

chromaticness c^*

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Gamut

u^*_{rel} = 136

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

1,00

0,75

0,25

0,00

n^* = 0,00

n^* = 0,25

n^* = 0,50

n^* = 1,0

blackness n^*

0,25 0,50 0,75 1,00

chromaticness c^*

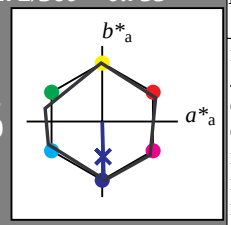
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

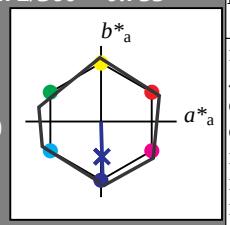
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

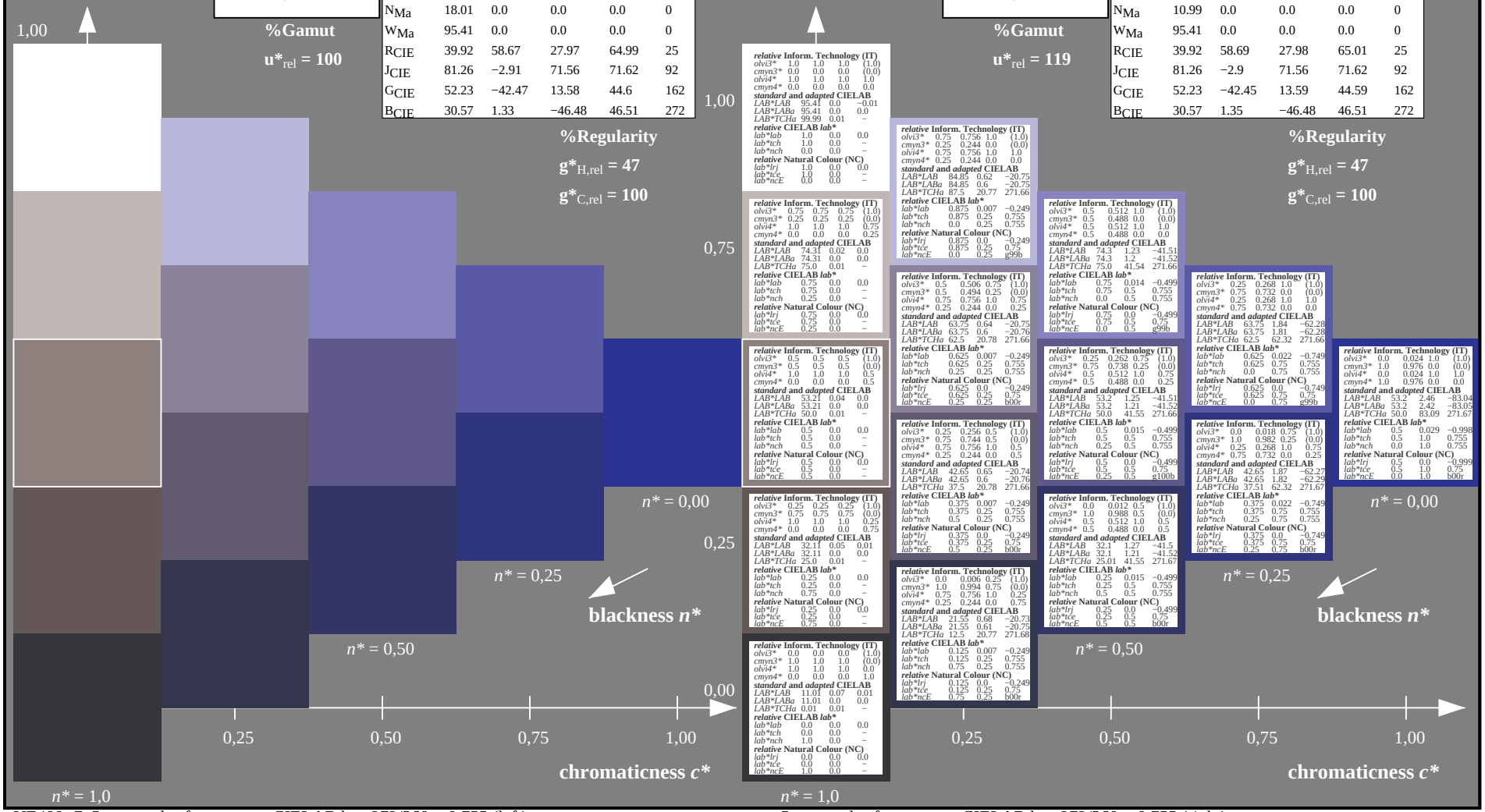
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



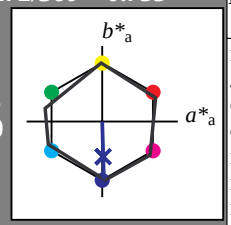
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

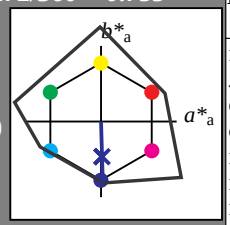
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

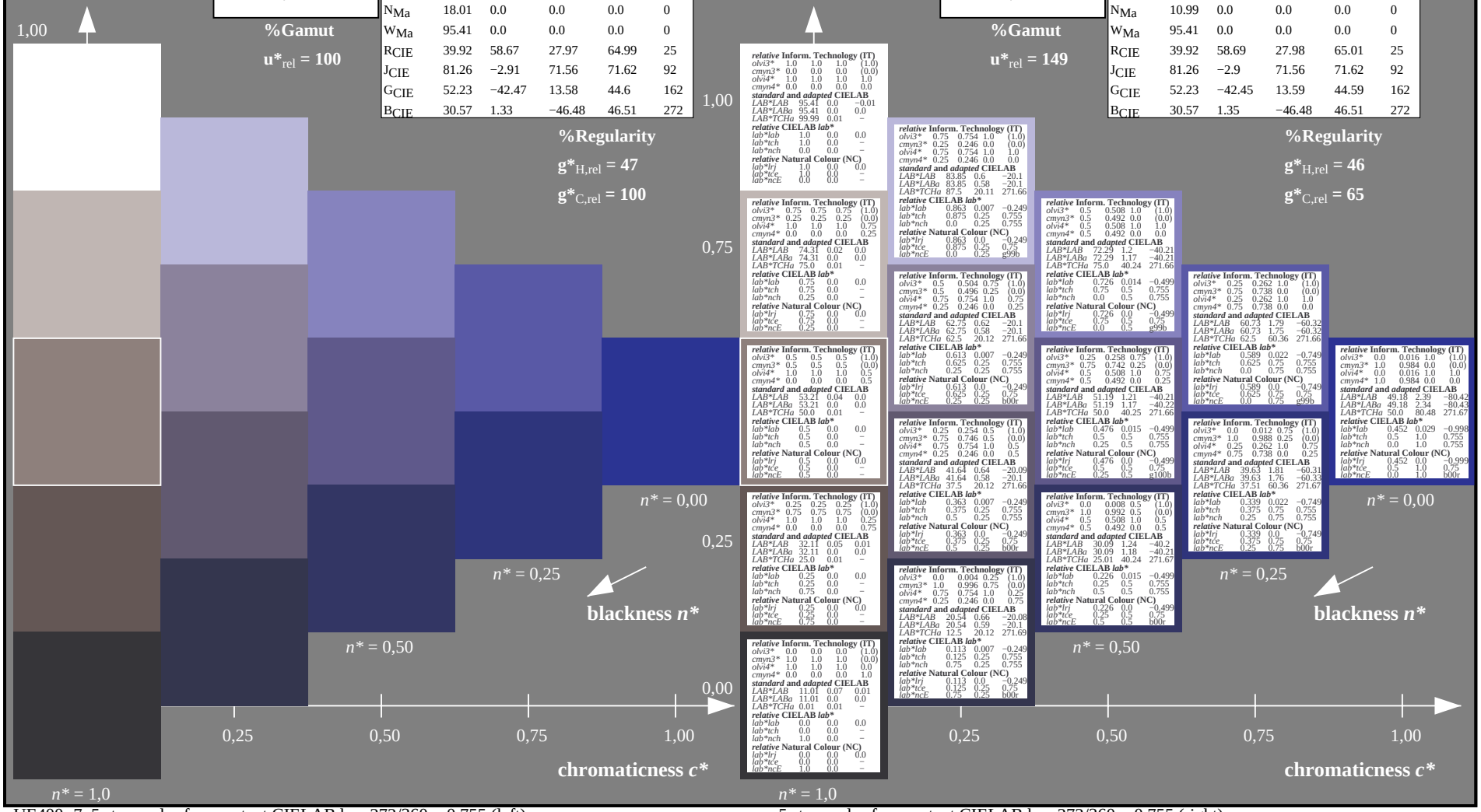
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



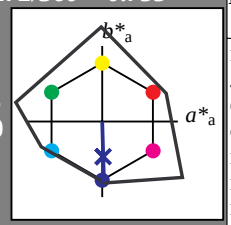
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

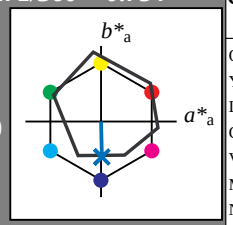
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

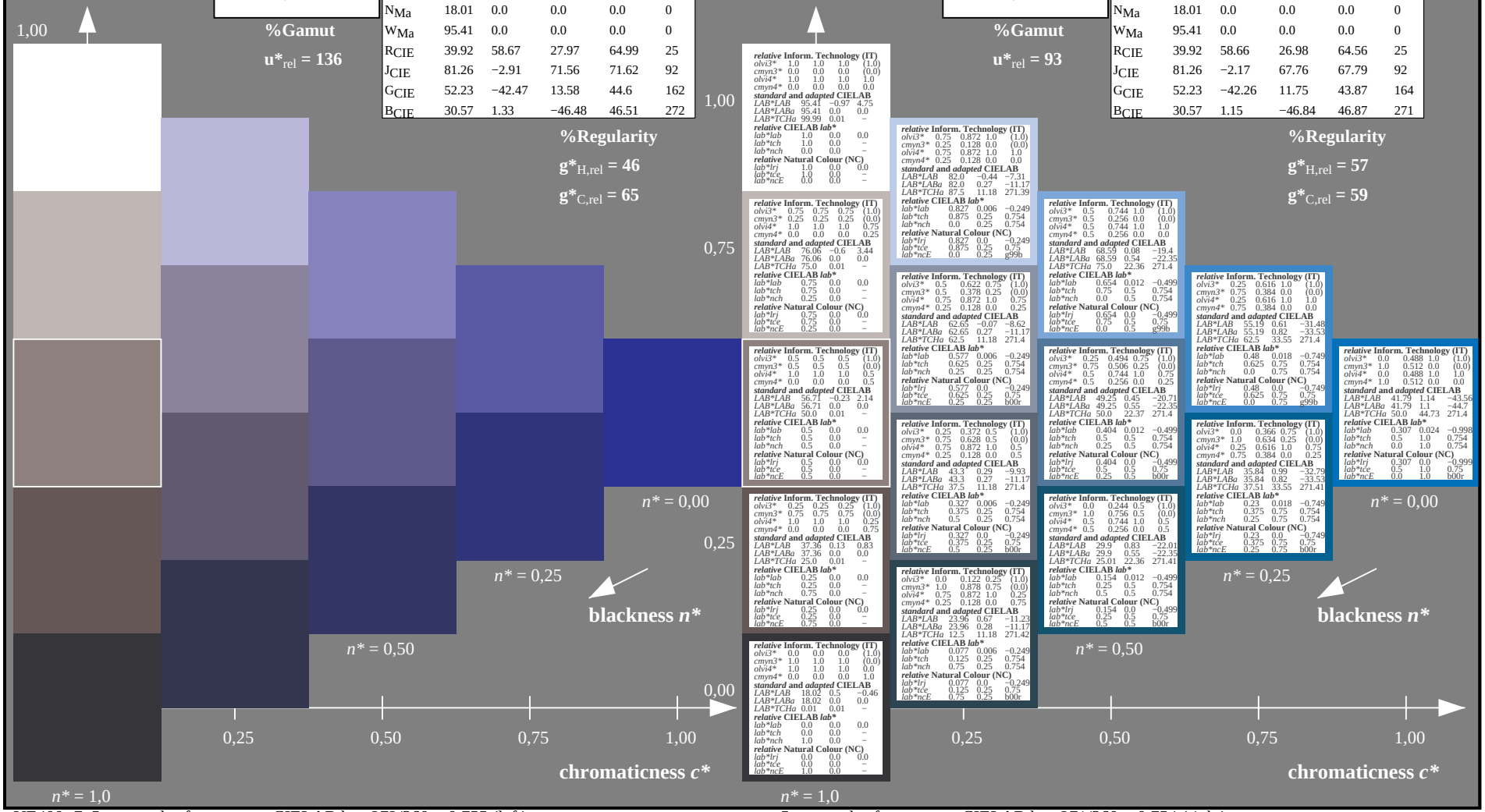
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



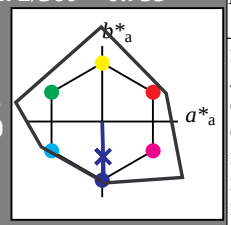
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

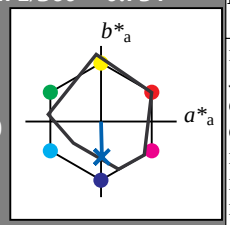
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

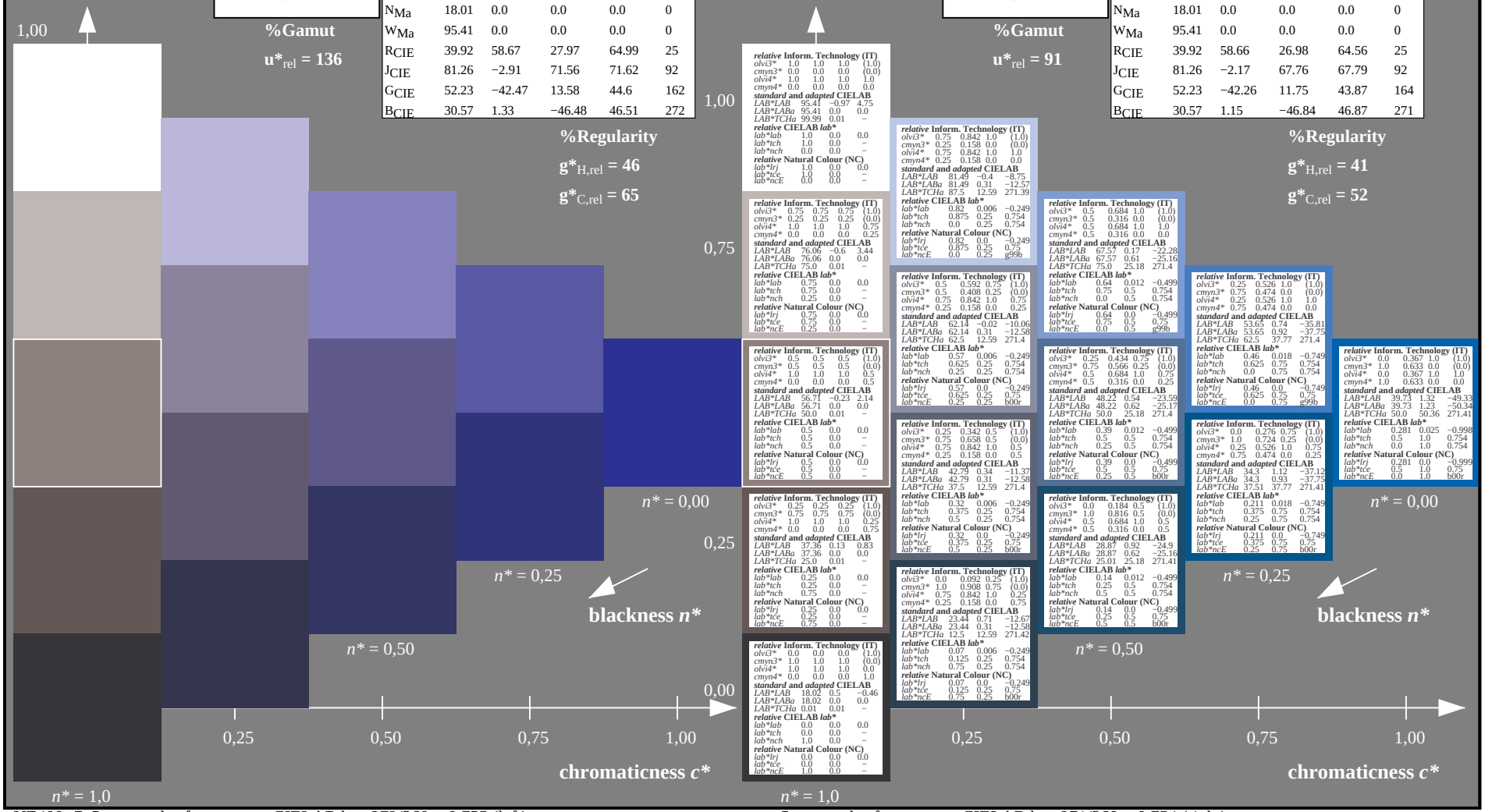
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



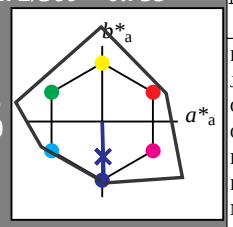
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

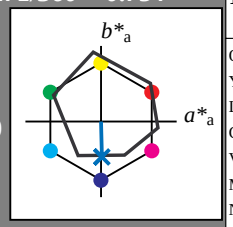
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

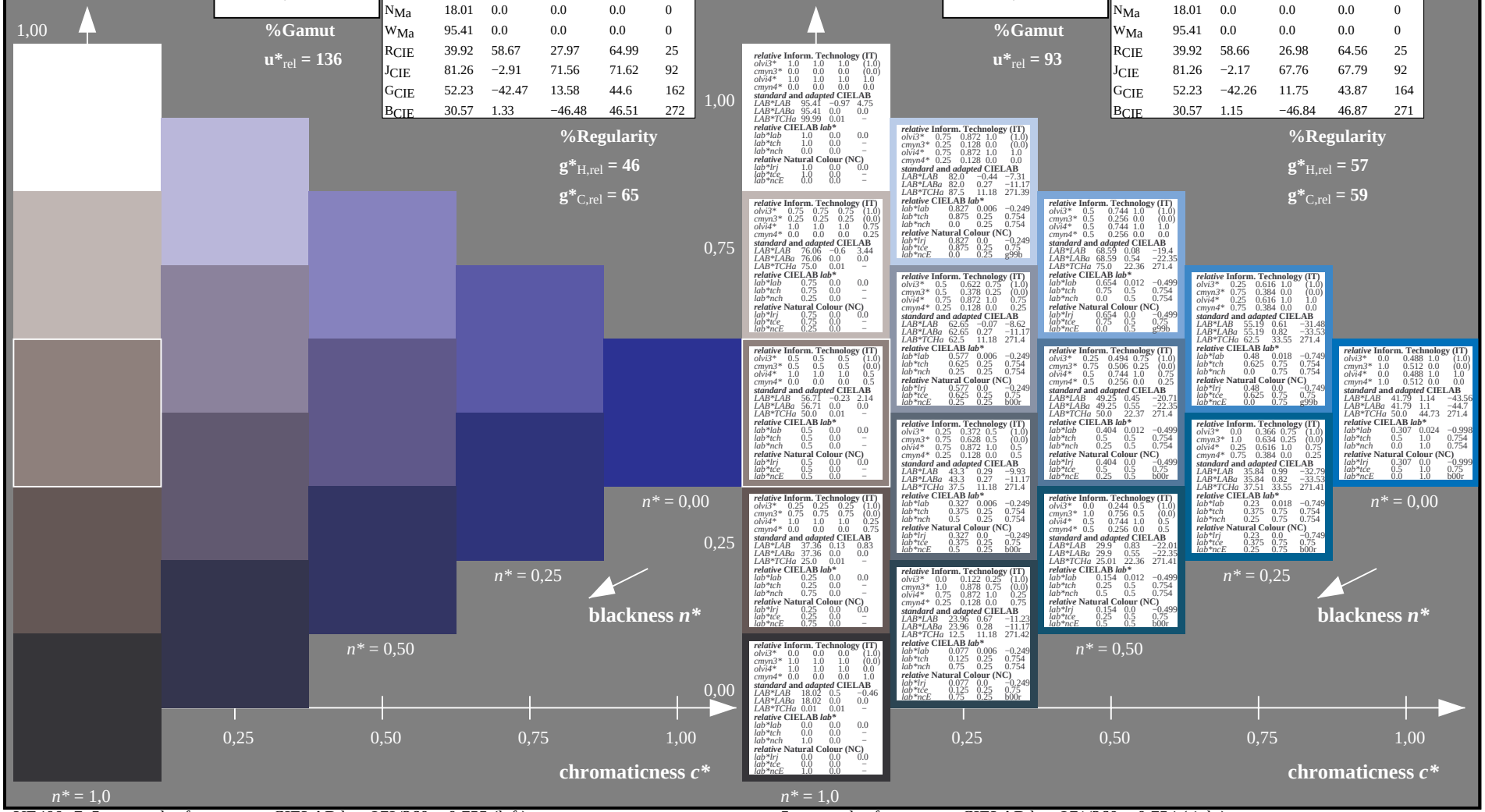
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



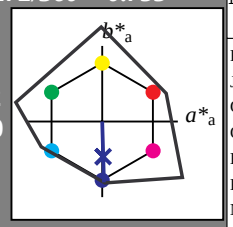
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

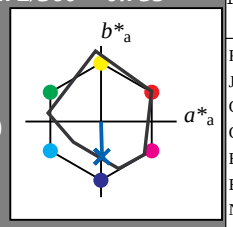
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

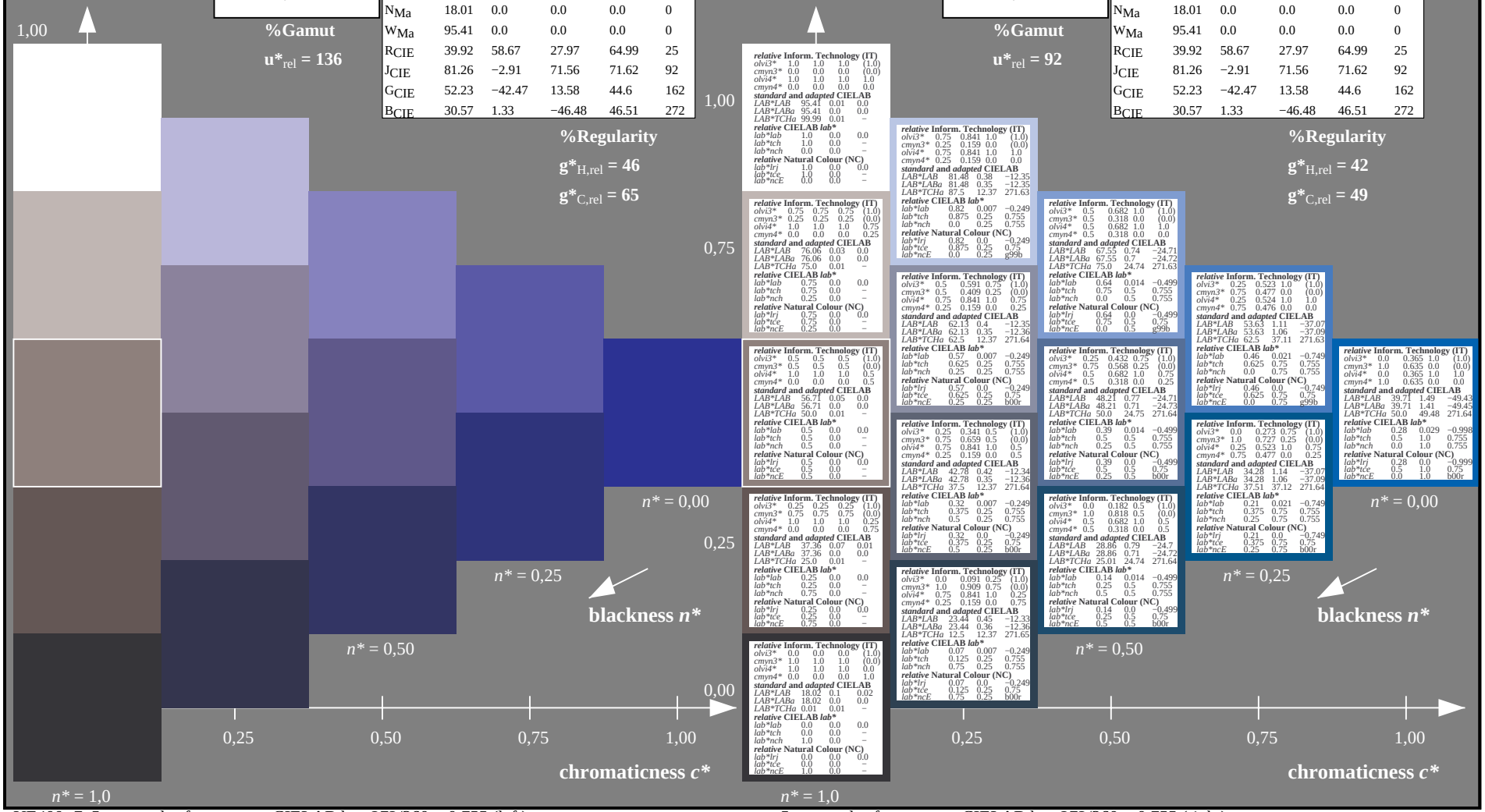
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



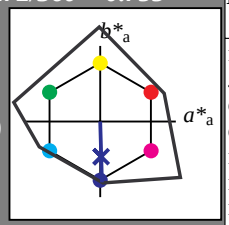
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

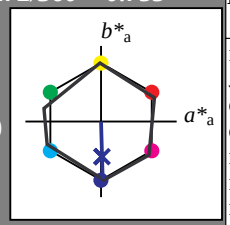
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

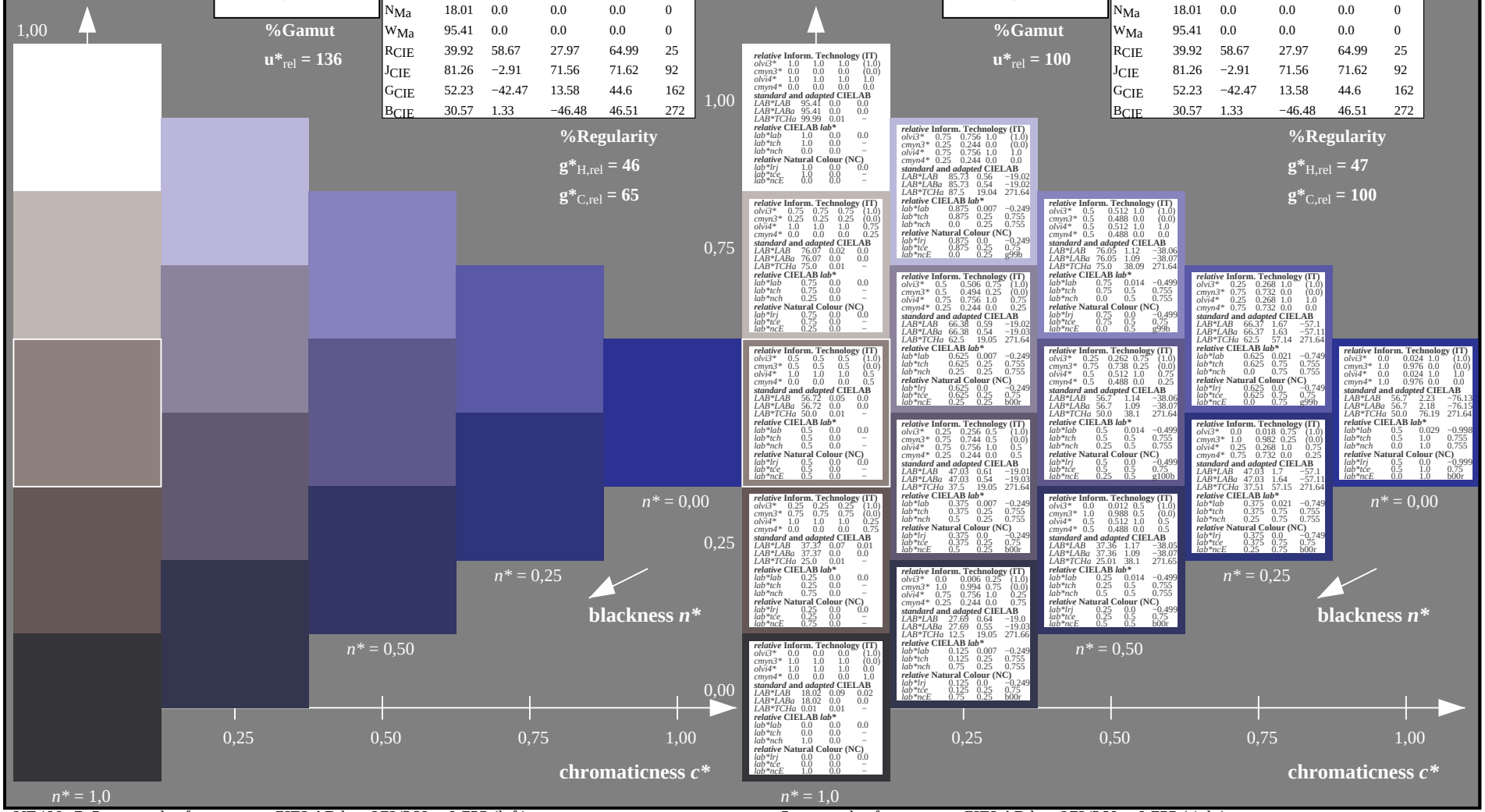
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



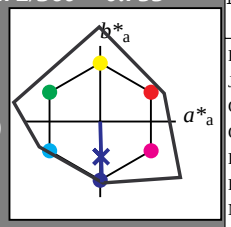
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

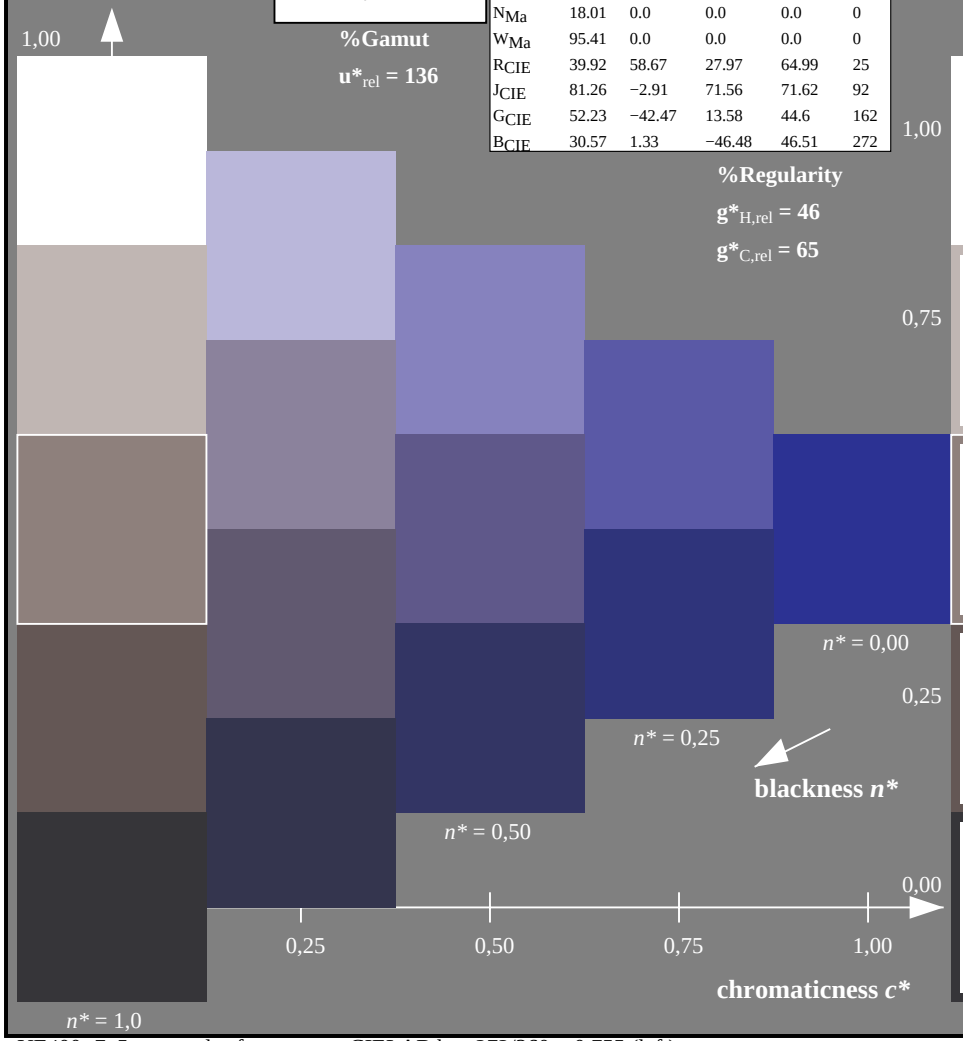
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

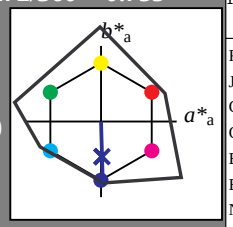
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

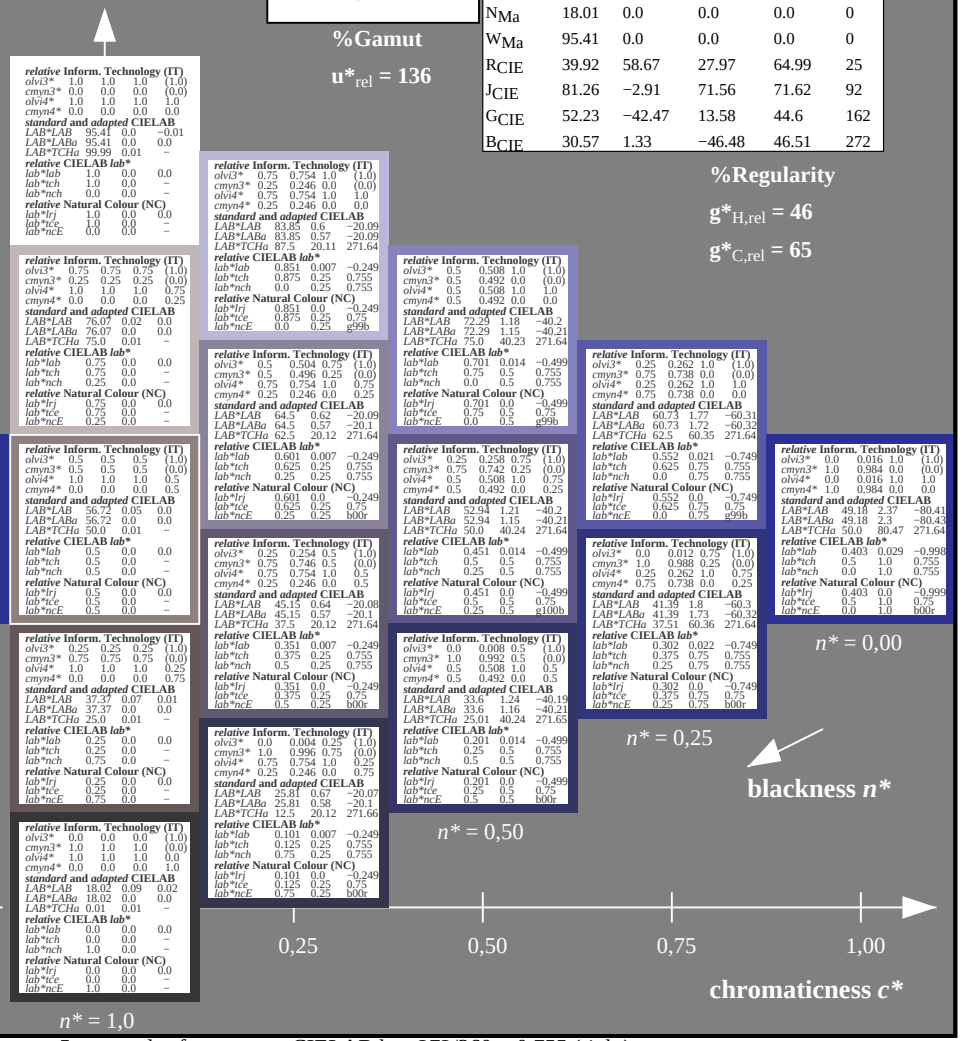
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



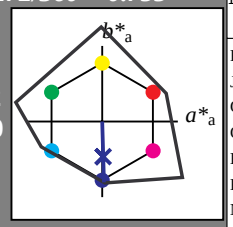
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

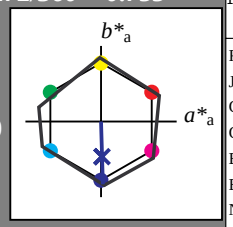
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

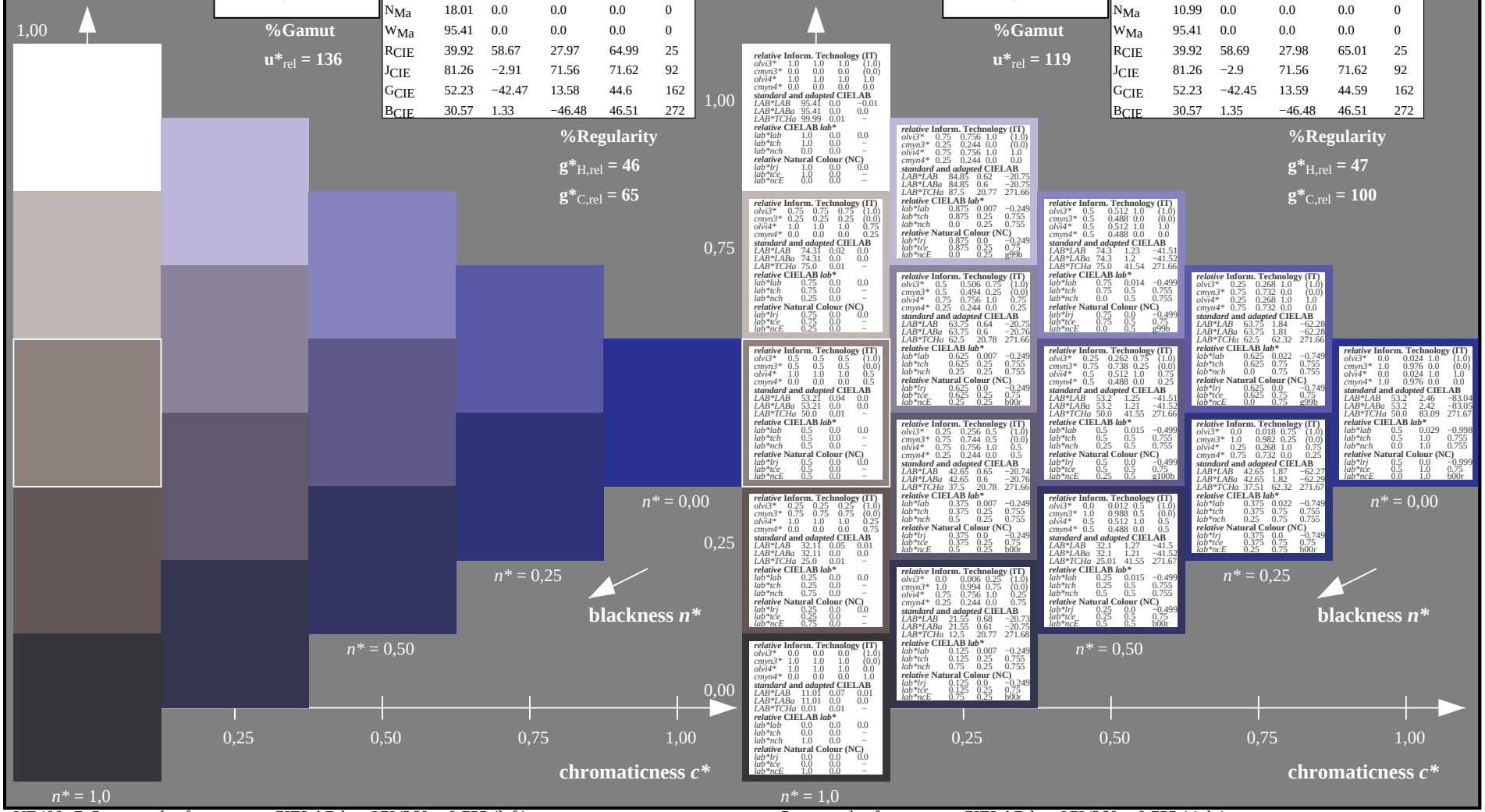
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



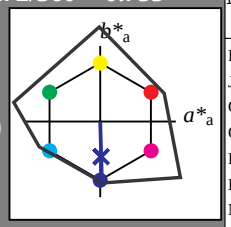
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

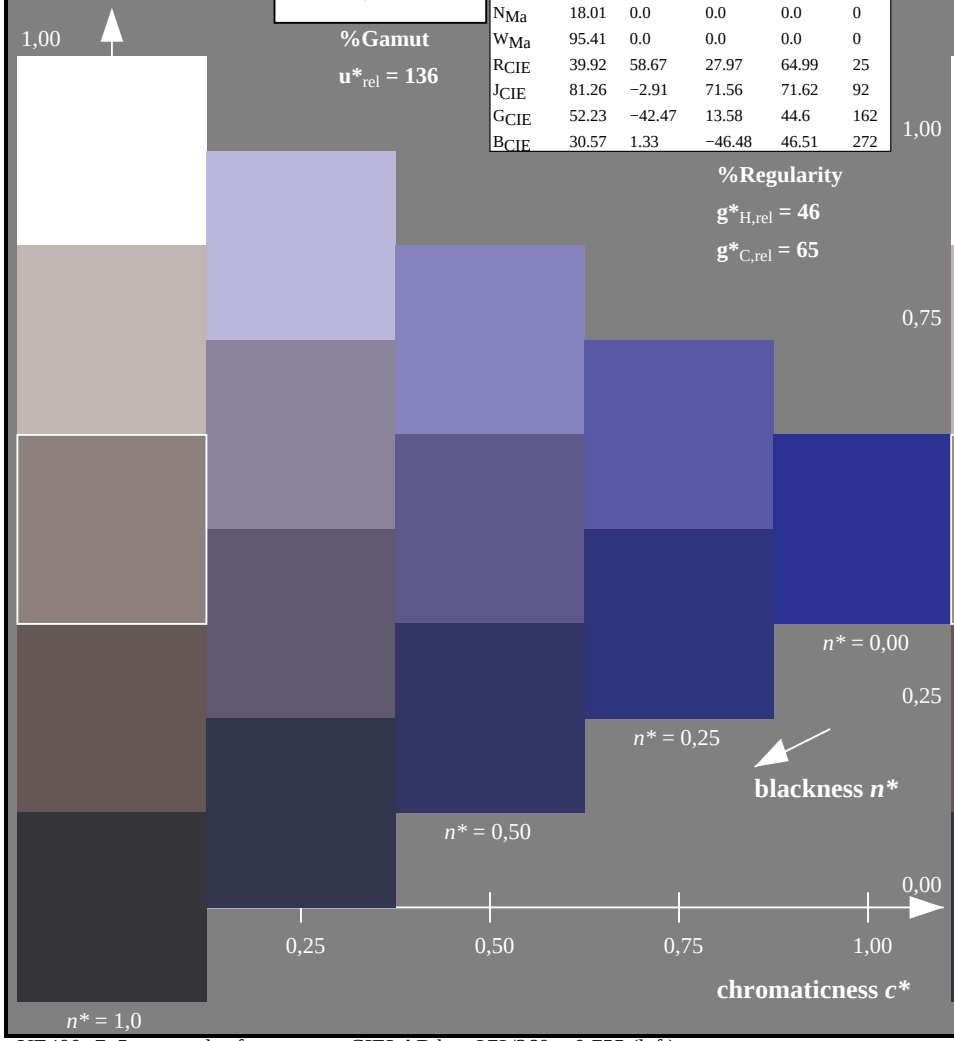
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

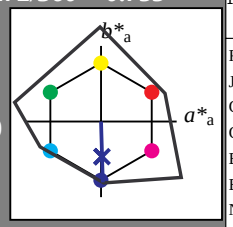
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

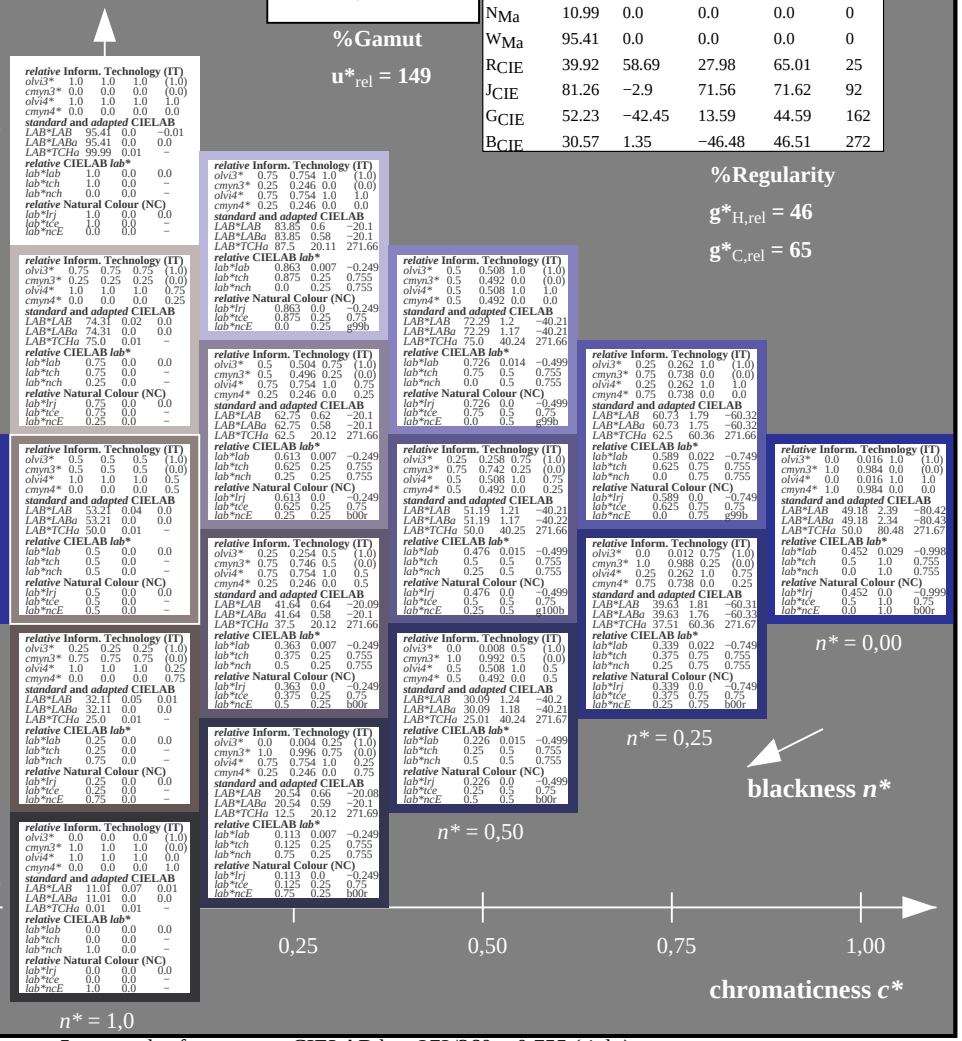
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



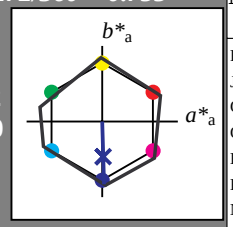
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

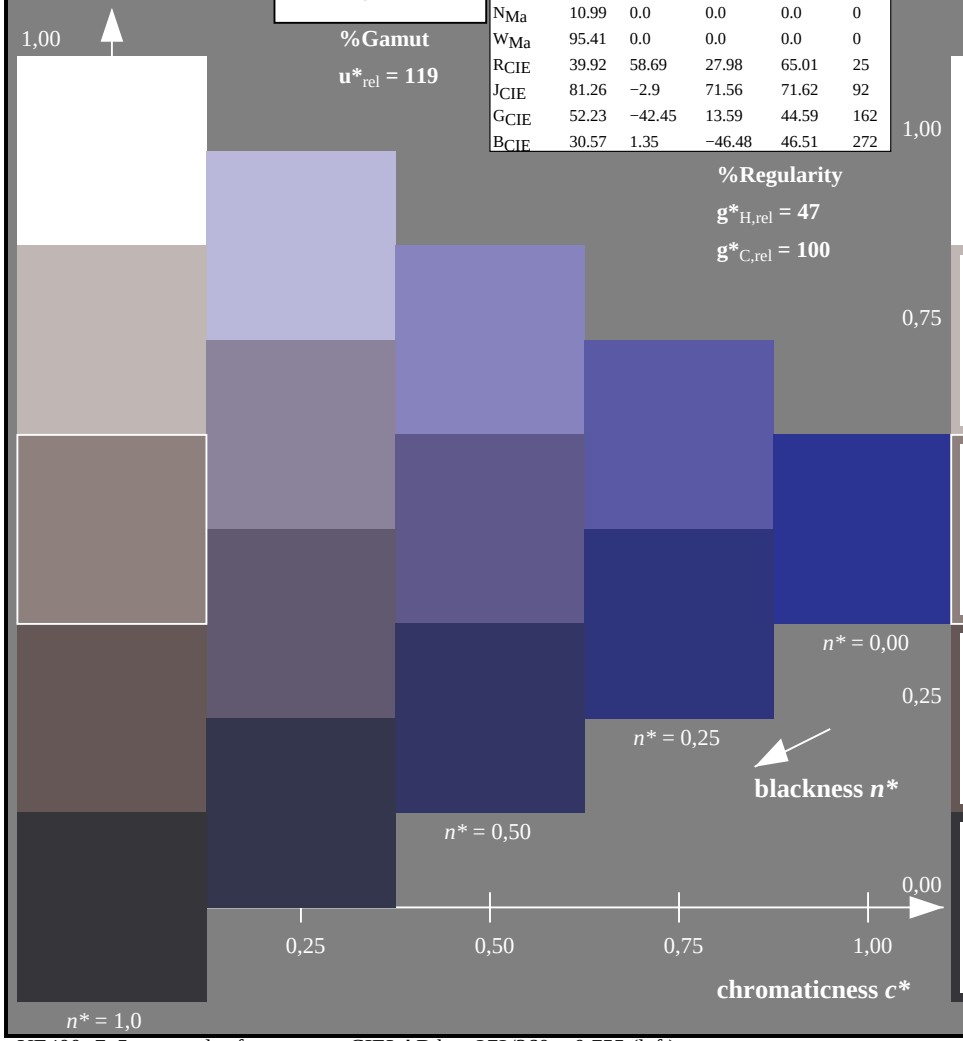
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

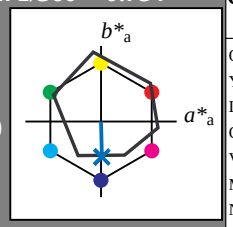
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

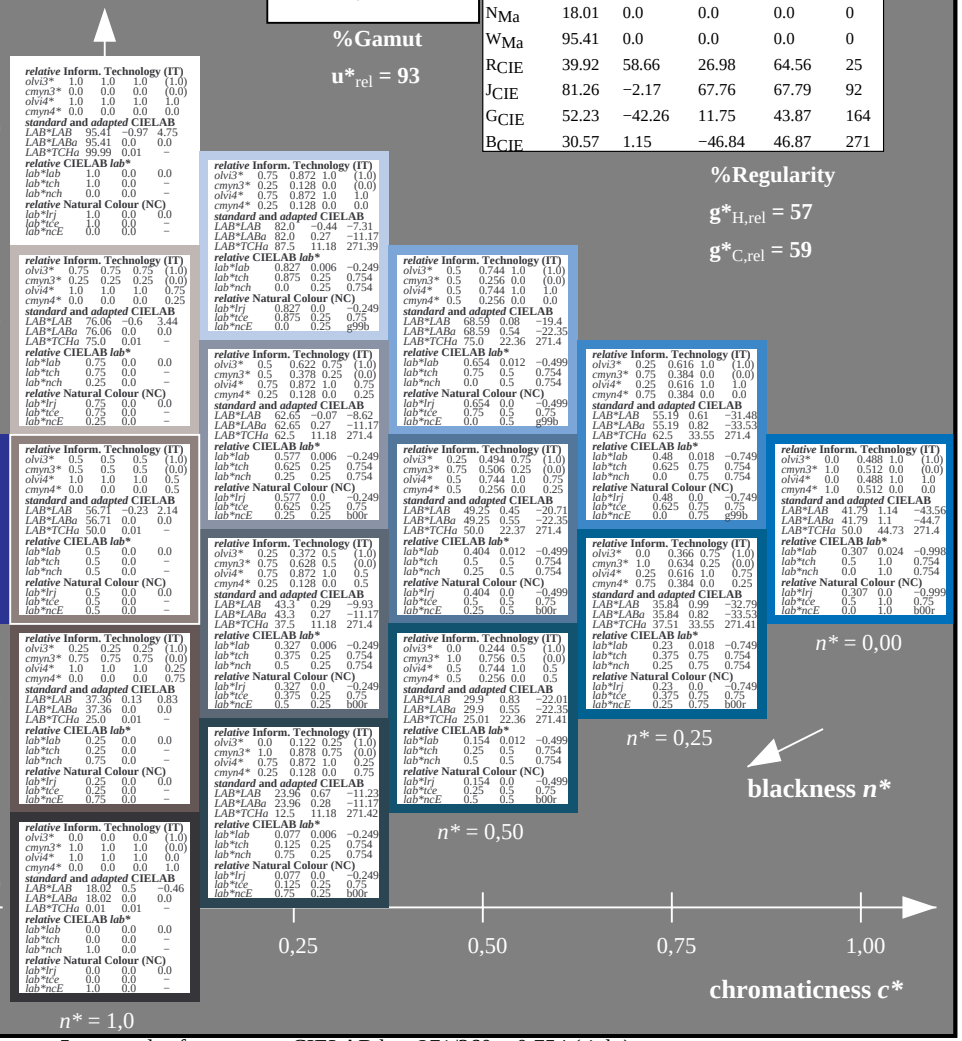
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



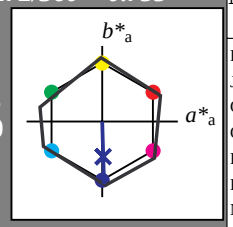
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

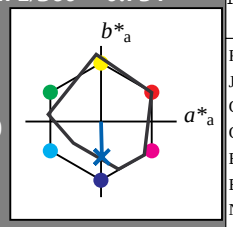
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

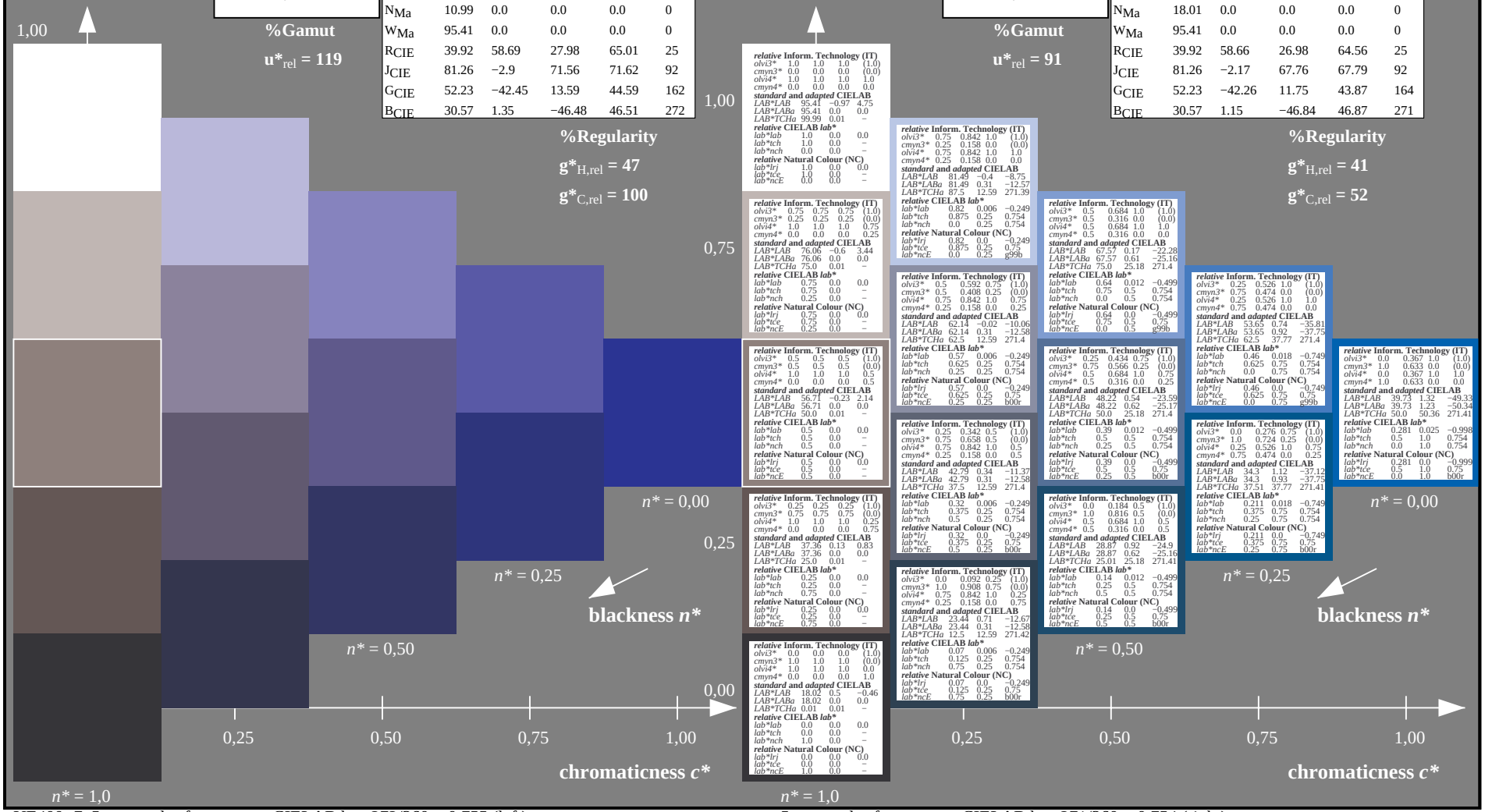
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



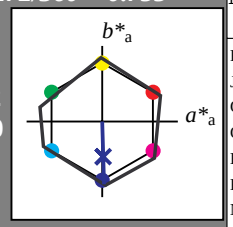
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

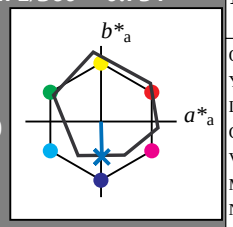
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

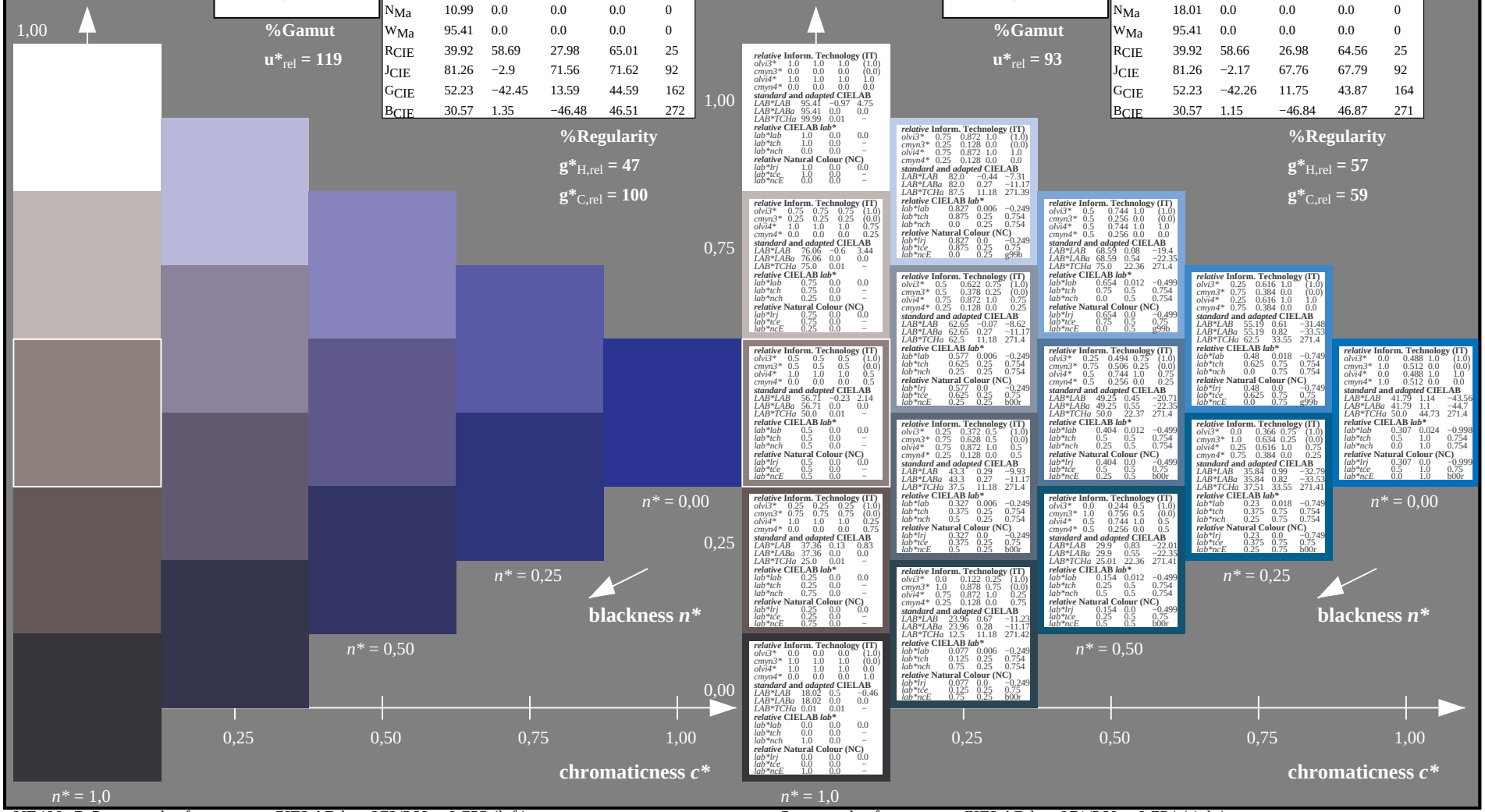
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



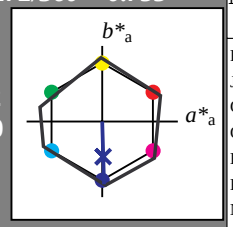
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

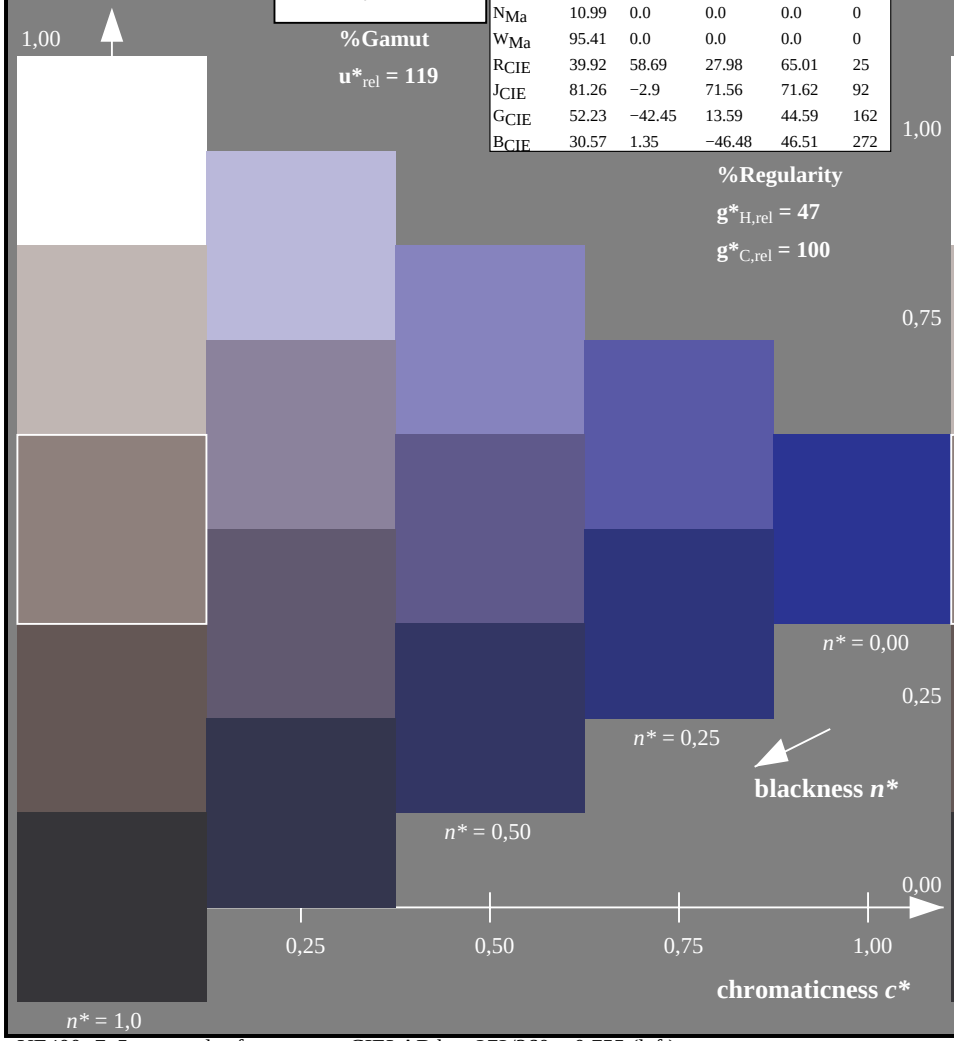
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

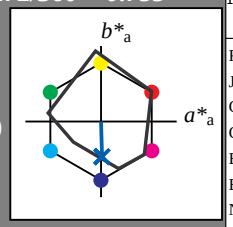
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

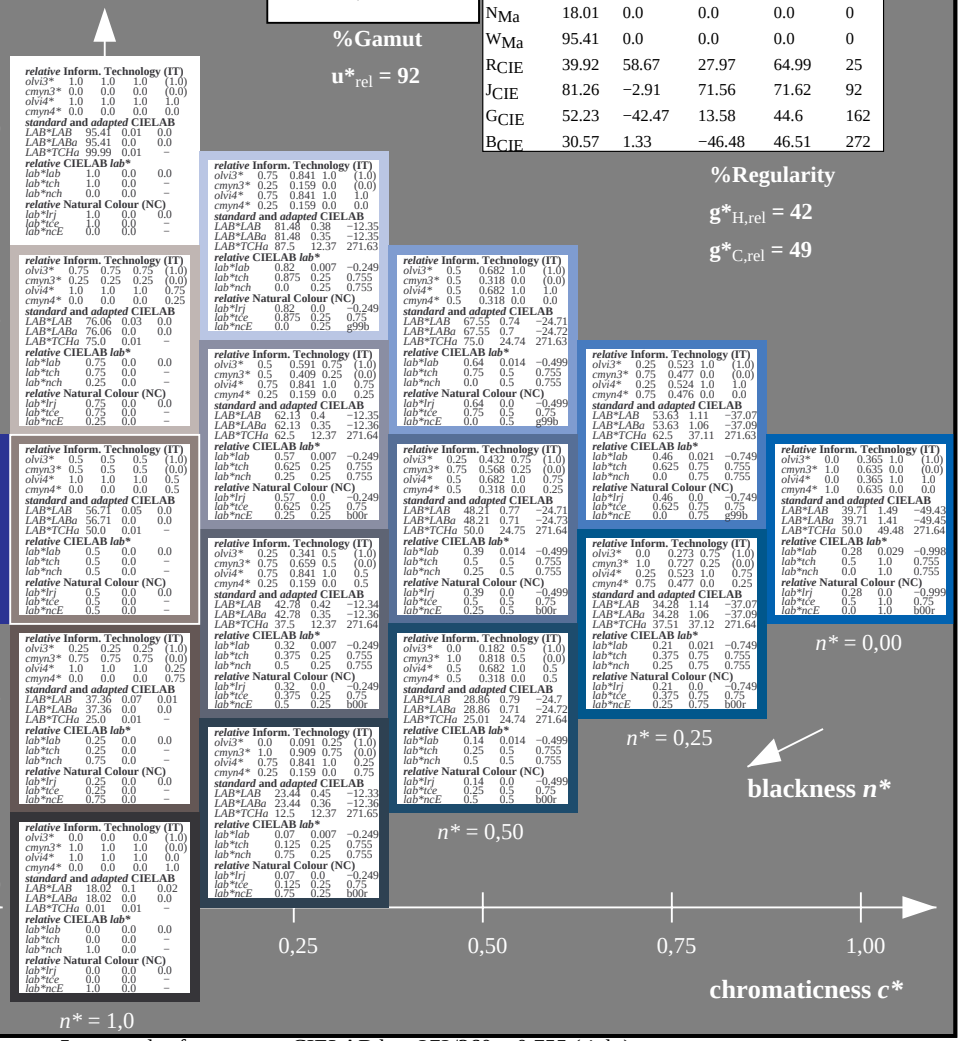
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



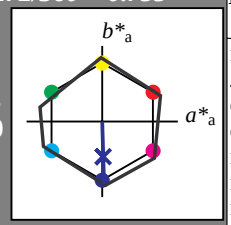
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

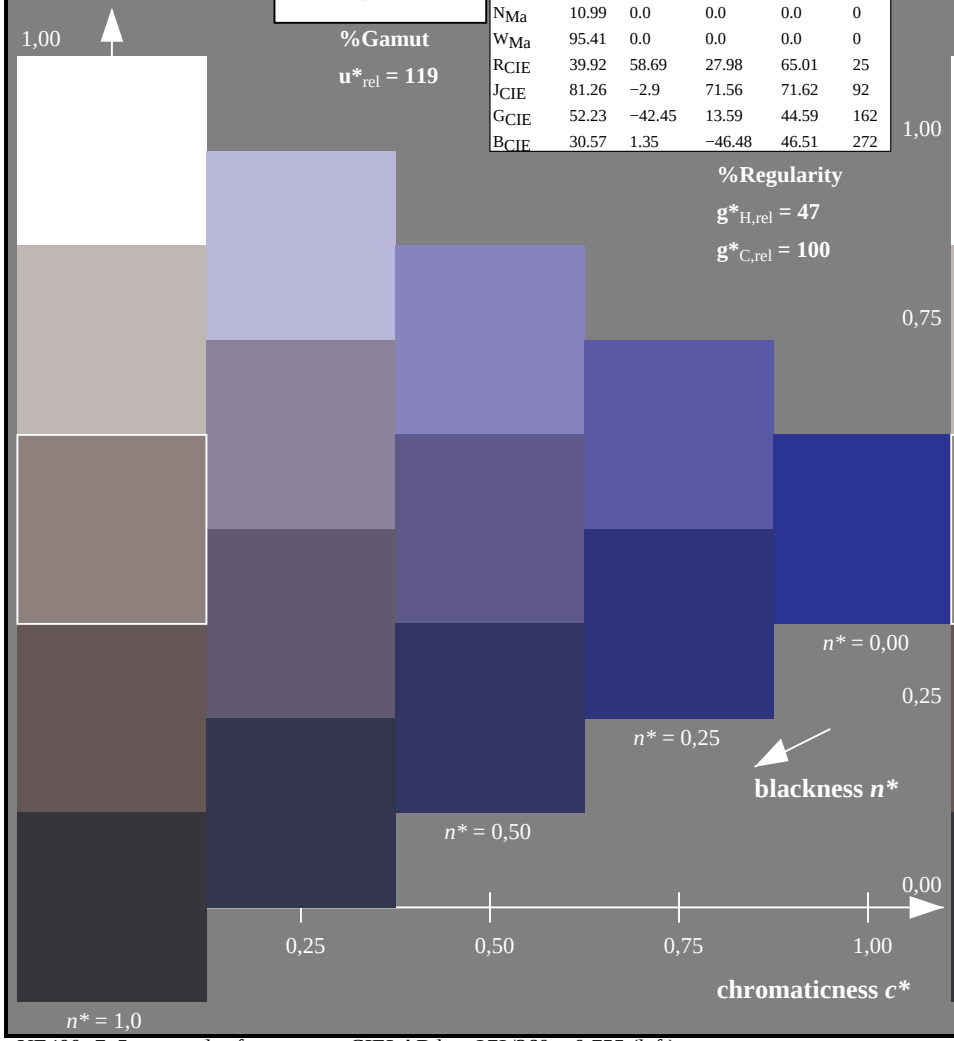
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

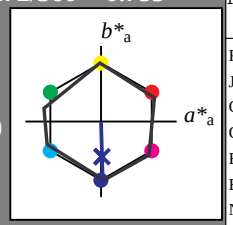
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

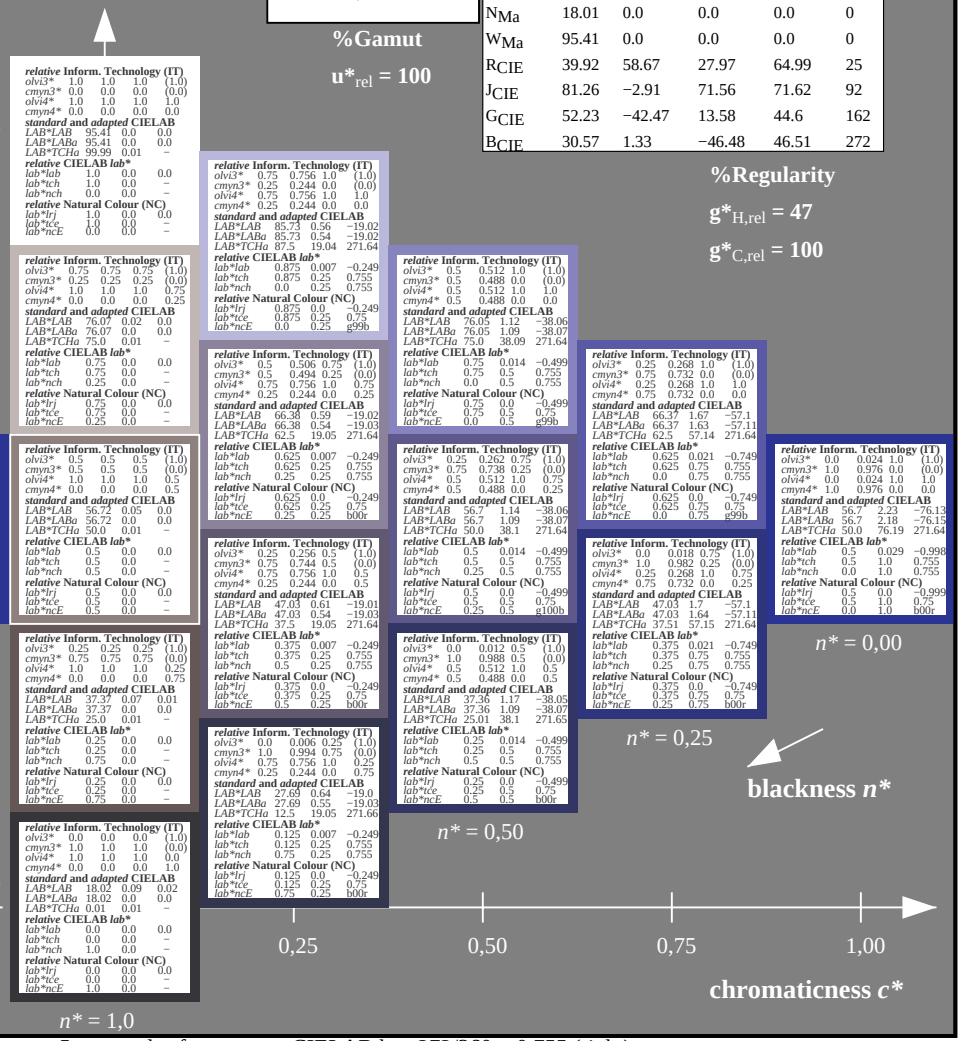
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



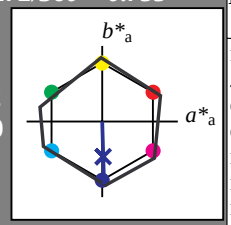
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

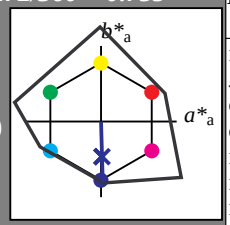
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

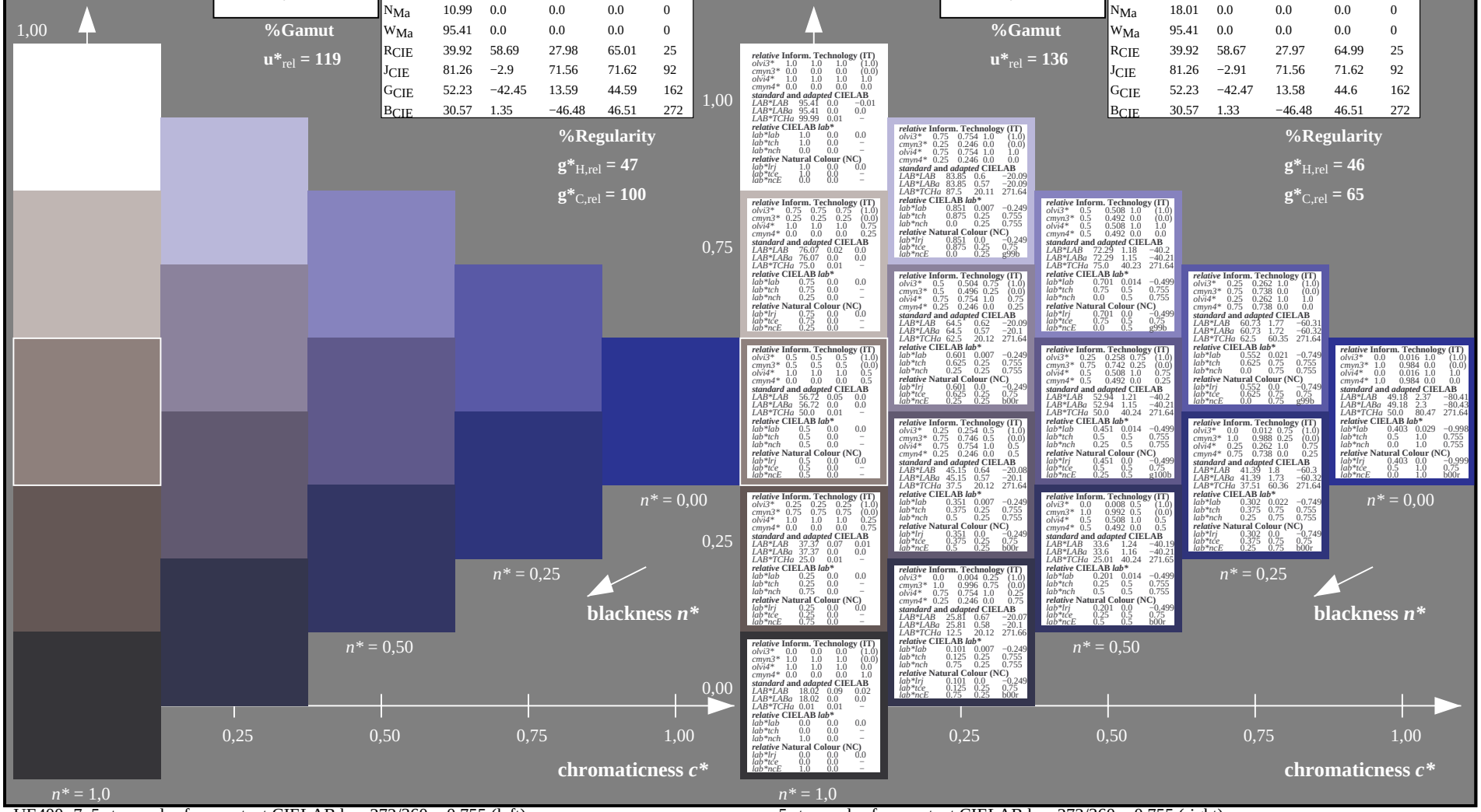
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



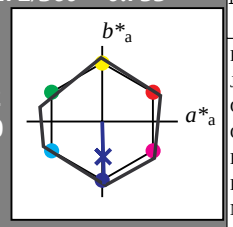
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

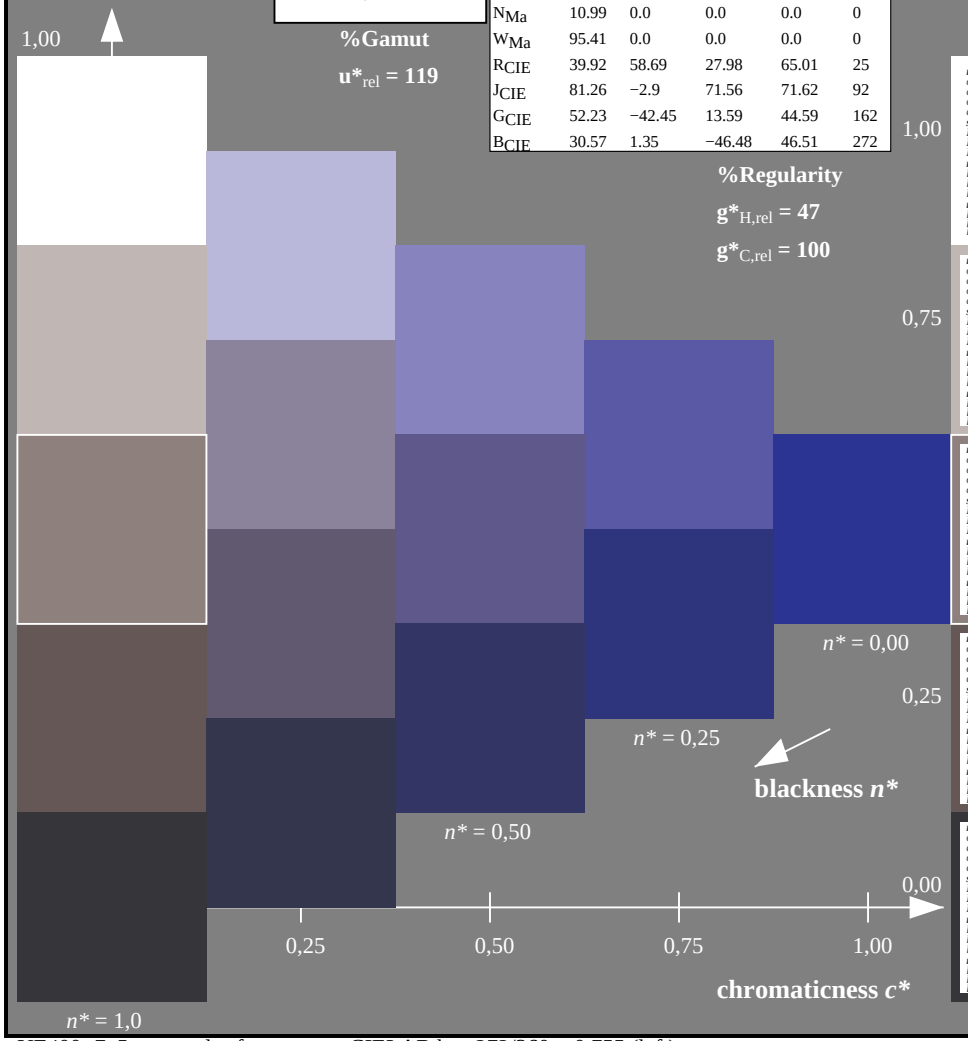
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

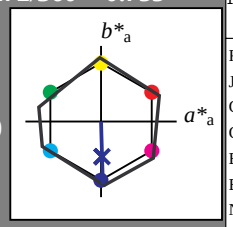
$g^*_{C,rel}$ = 100



Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

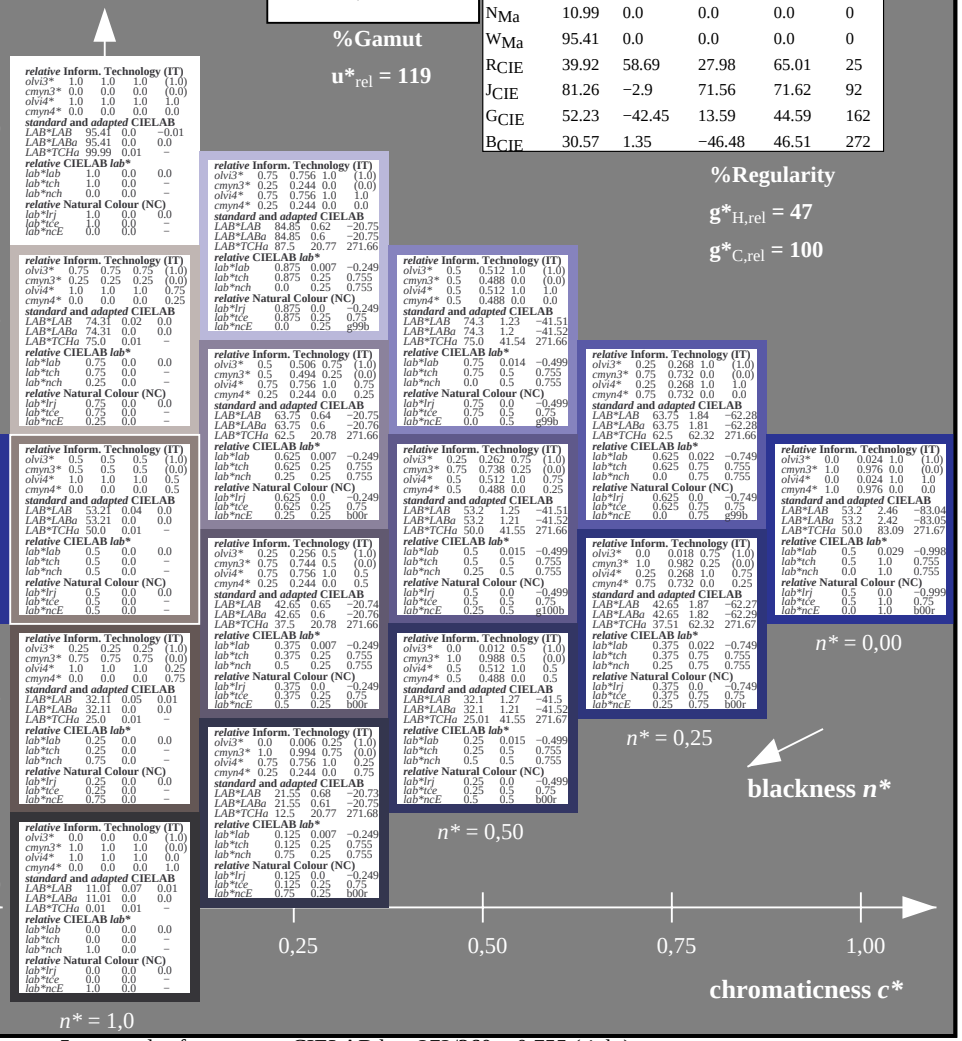
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



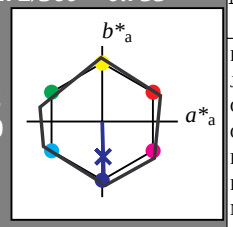
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

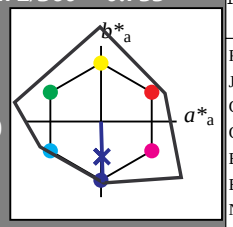
$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100

Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

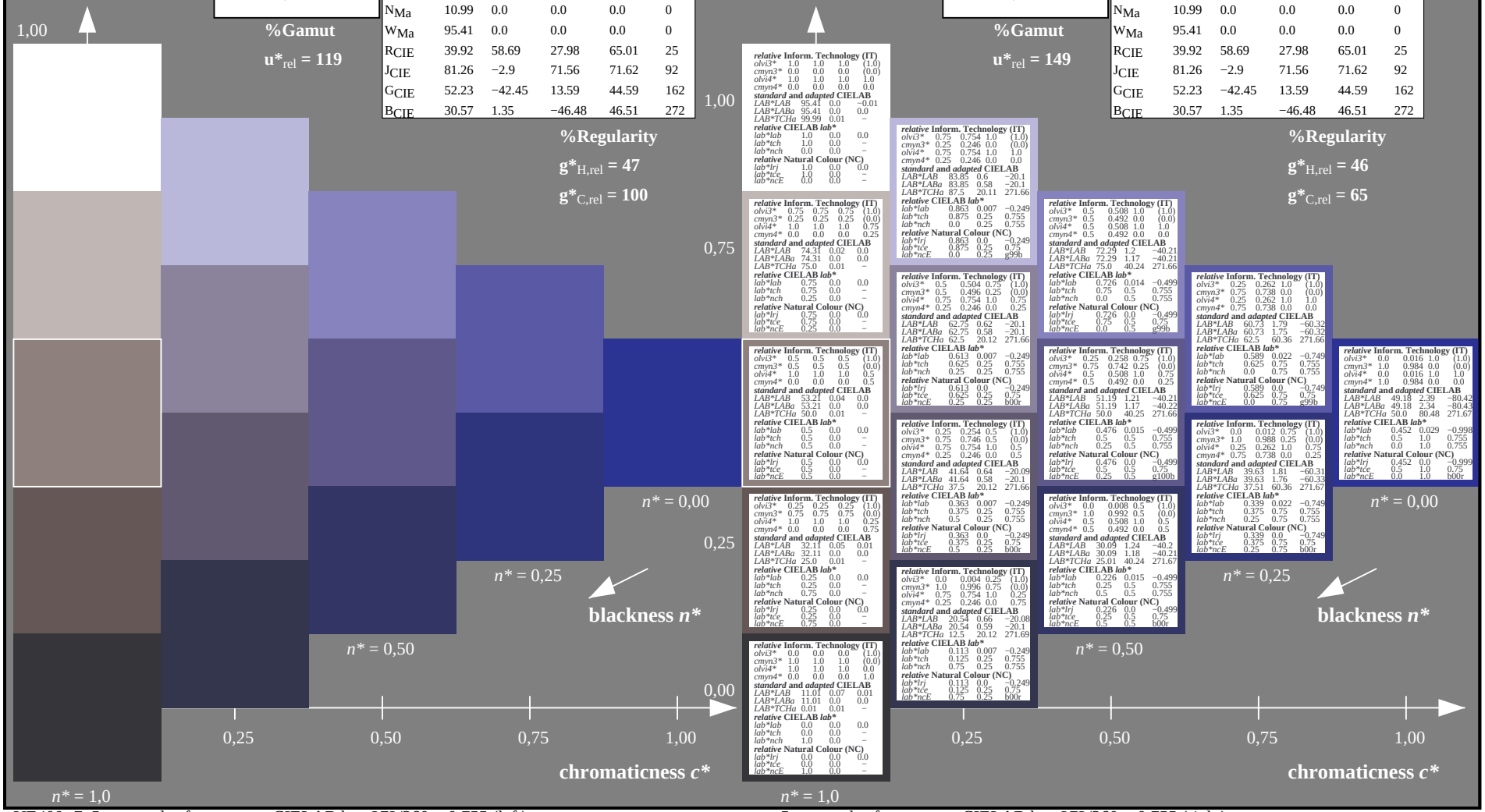
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



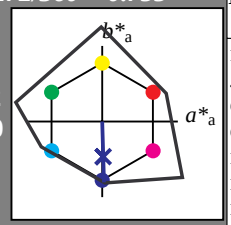
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

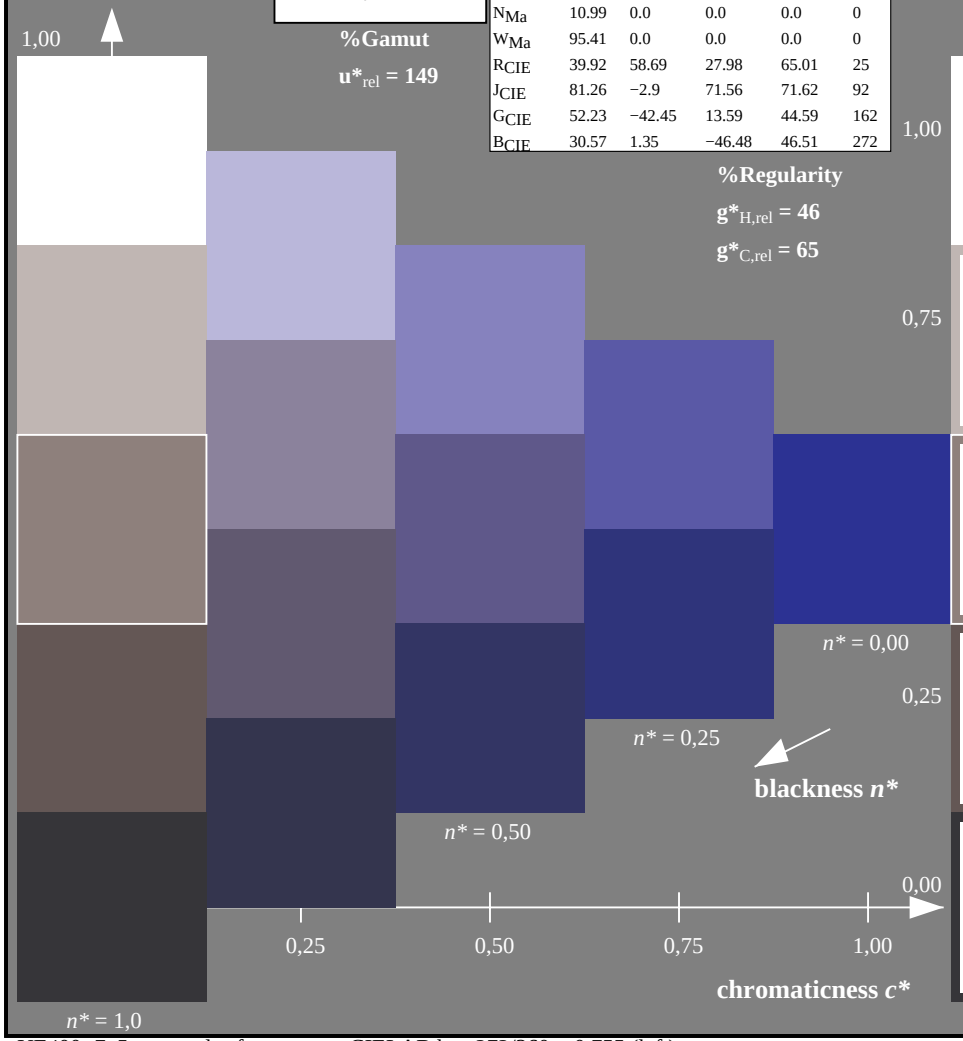
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

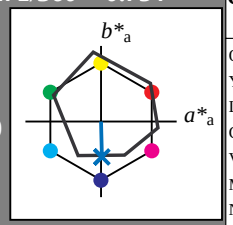
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System ORS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

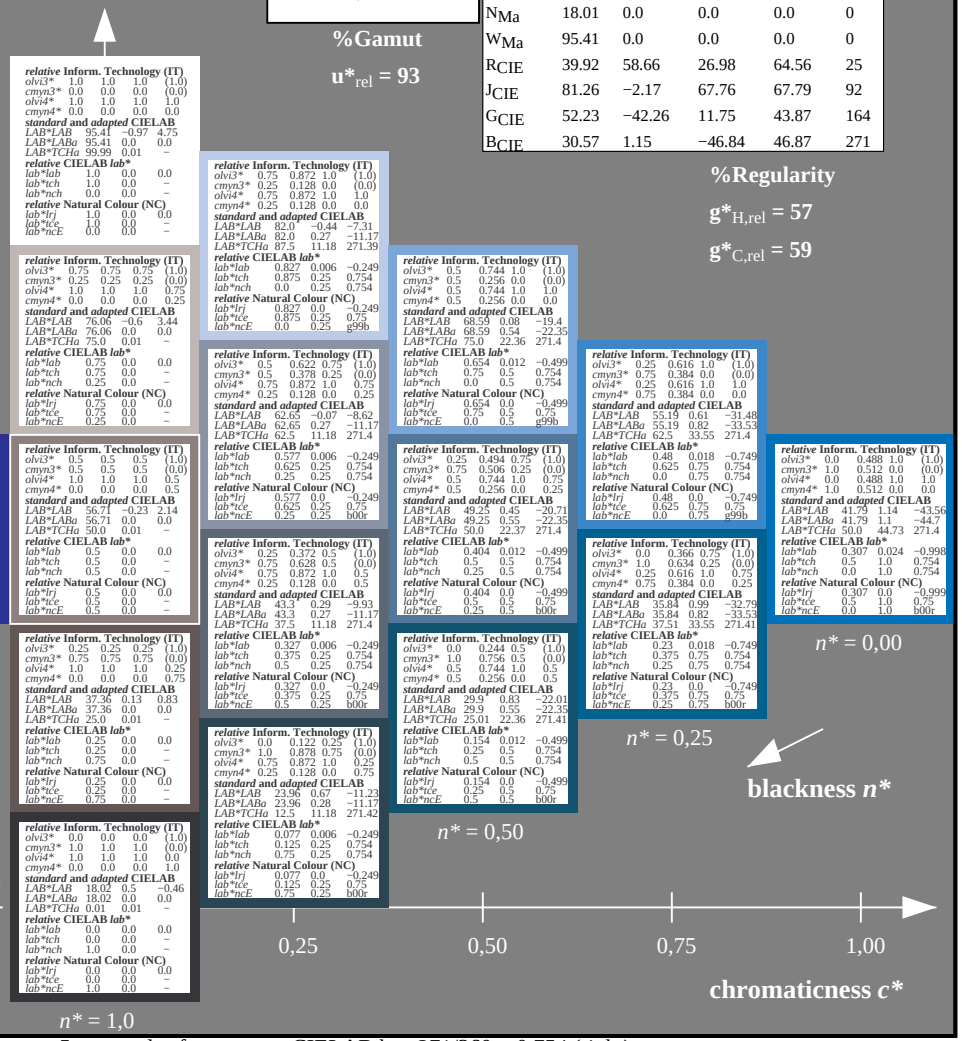
ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



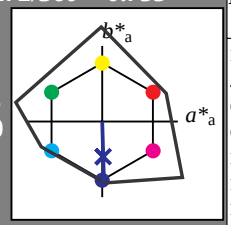
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

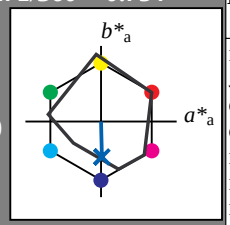
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System MRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 50 271
rgb*Ma: 0.0 0.37 1.0

triangle lightness



%Gamut

u^*_{rel} = 91

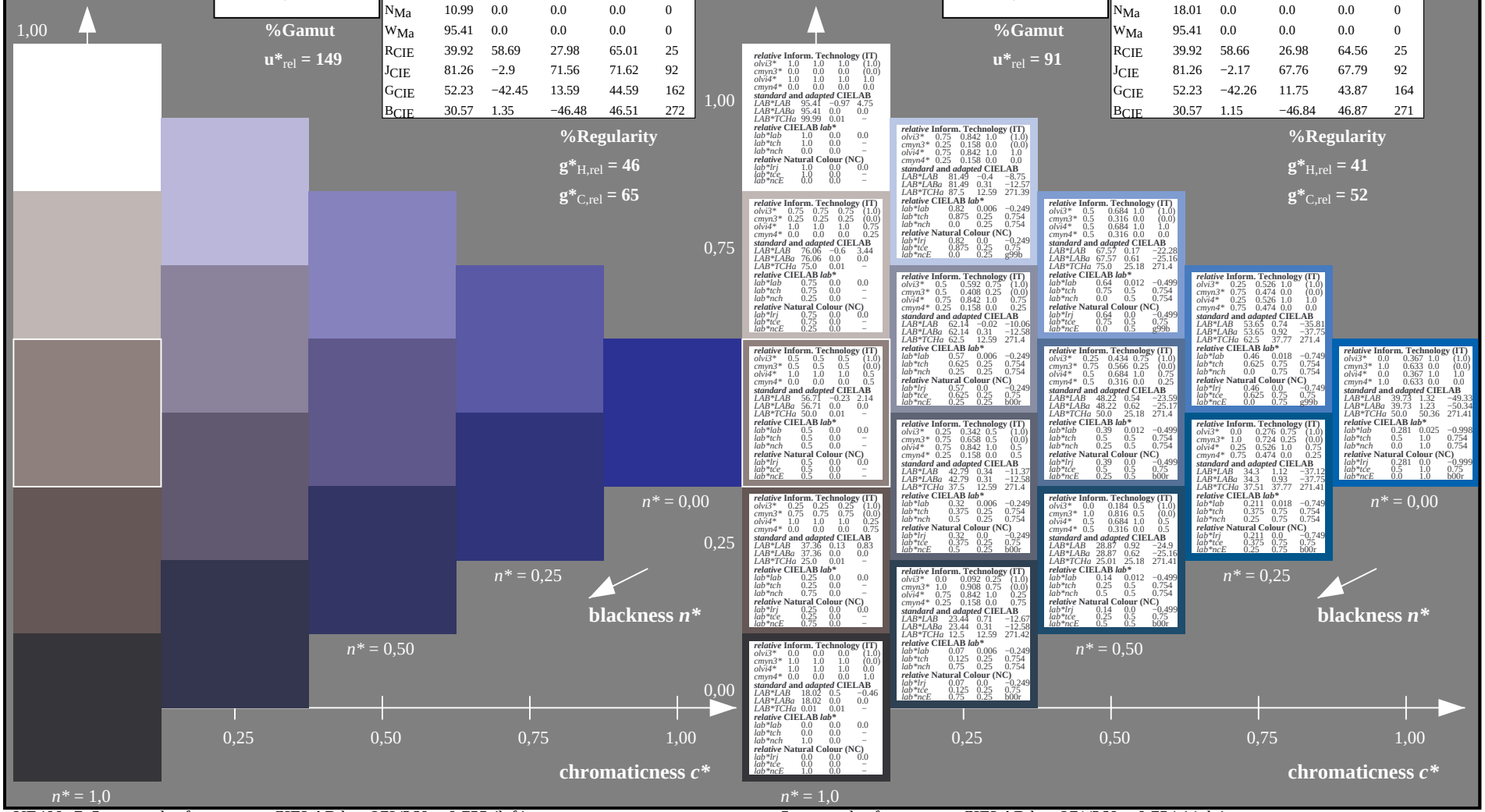
MRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.96	38.37	77.18	30
J_{Ma}	90.7	−6.36	88.75	88.98	94
G_{Ma}	52.11	−69.73	9.44	70.37	172
$G50B_{Ma}$	45.03	−36.57	−28.47	46.36	218
B_{Ma}	36.65	23.19	−63.05	67.18	290
$B50R_{Ma}$	34.94	57.17	−44.26	72.31	322
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 41

$g^*_{C,rel}$ = 52



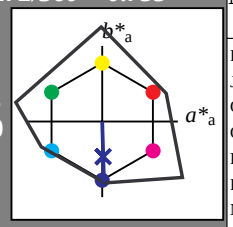
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

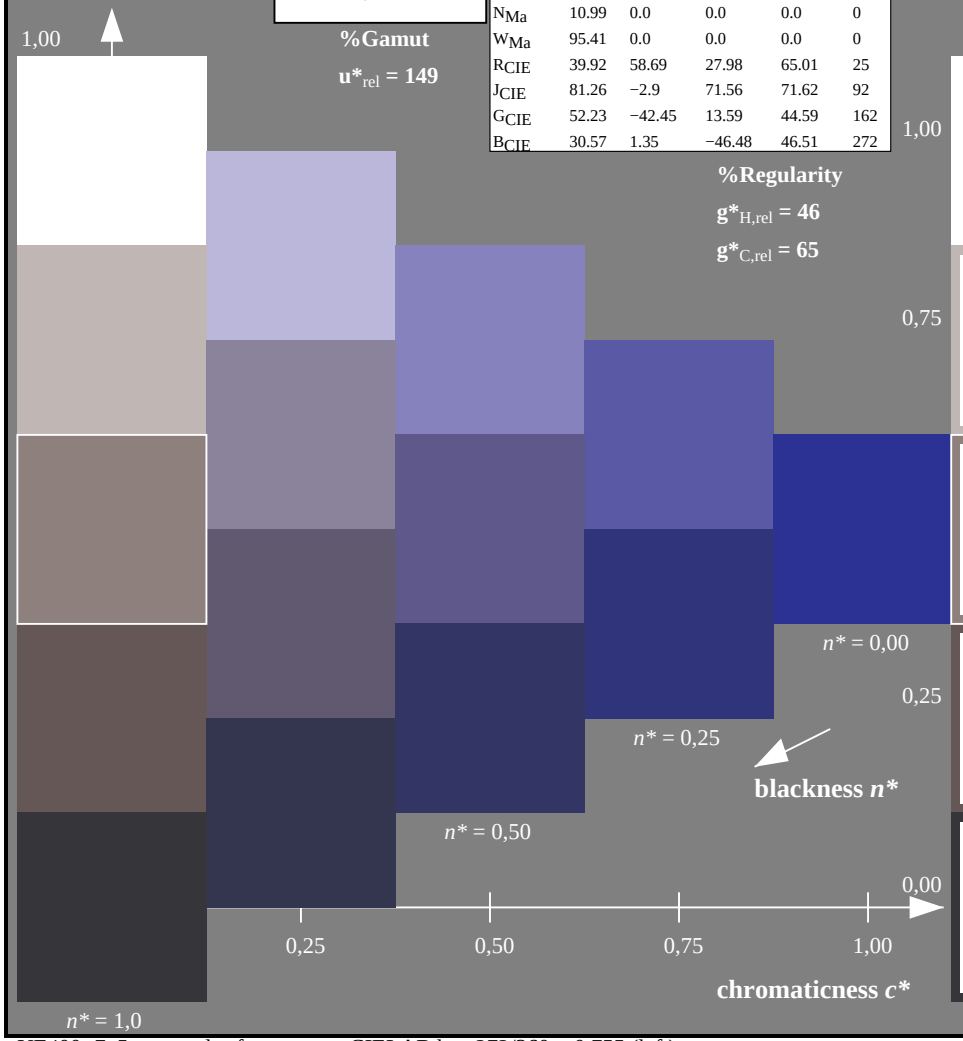
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

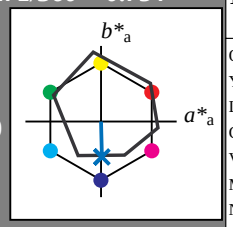
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System TRS18
for hue $h^* = lab^*h = 271/360 = 0.754$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 42 45 271
rgb*Ma: 0.0 0.49 1.0

triangle lightness



%Gamut

u^*_{rel} = 93

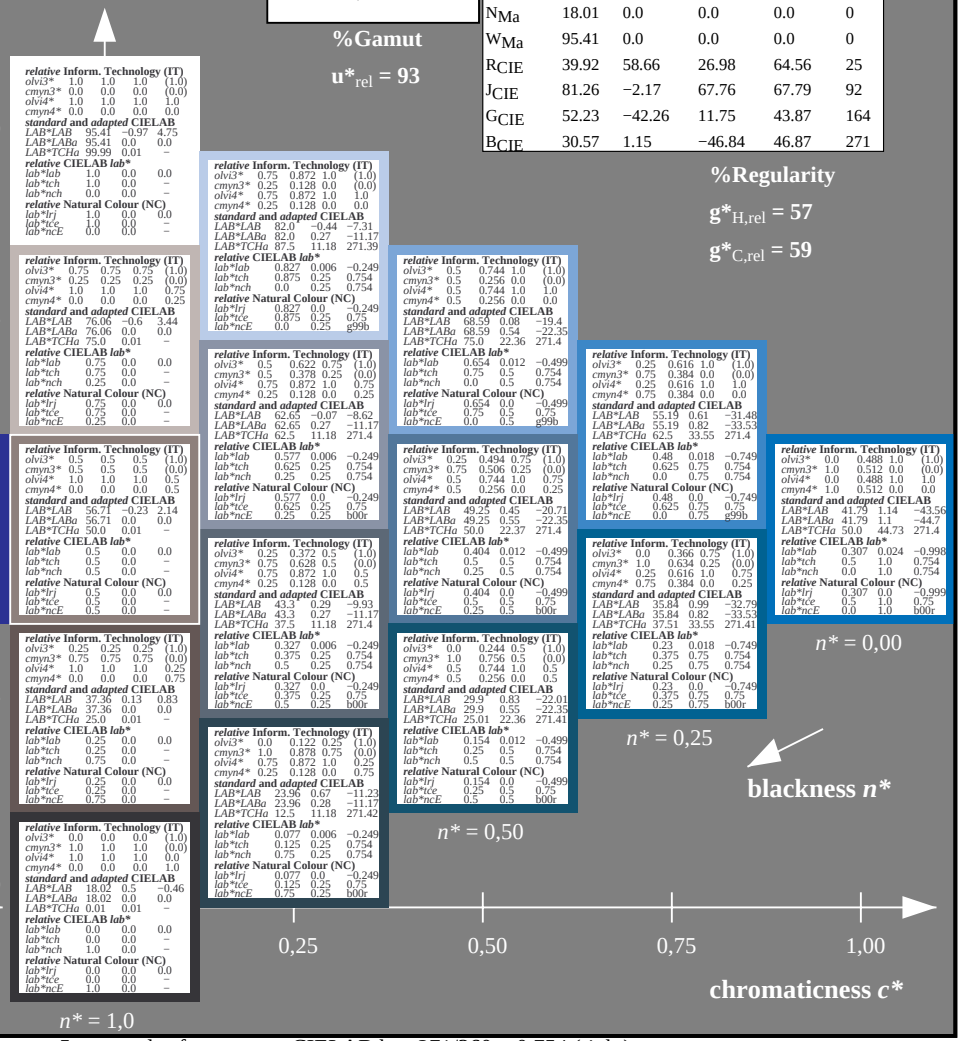
TRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.37	50.52	82.62	38
Y_{Ma}	90.37	−10.27	91.77	92.34	96
L_{Ma}	50.9	−62.79	34.95	71.87	151
C_{Ma}	58.62	−30.35	−45.01	54.3	236
V_{Ma}	25.71	31.11	−44.42	54.24	305
M_{Ma}	48.13	75.27	−8.35	75.73	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.56	25
J_{CIE}	81.26	−2.17	67.76	67.79	92
G_{CIE}	52.23	−42.26	11.75	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.87	271

%Regularity

$g^*_{H,rel}$ = 57

$g^*_{C,rel}$ = 59



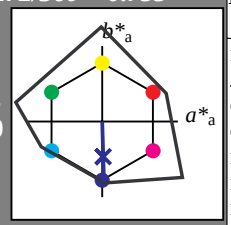
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

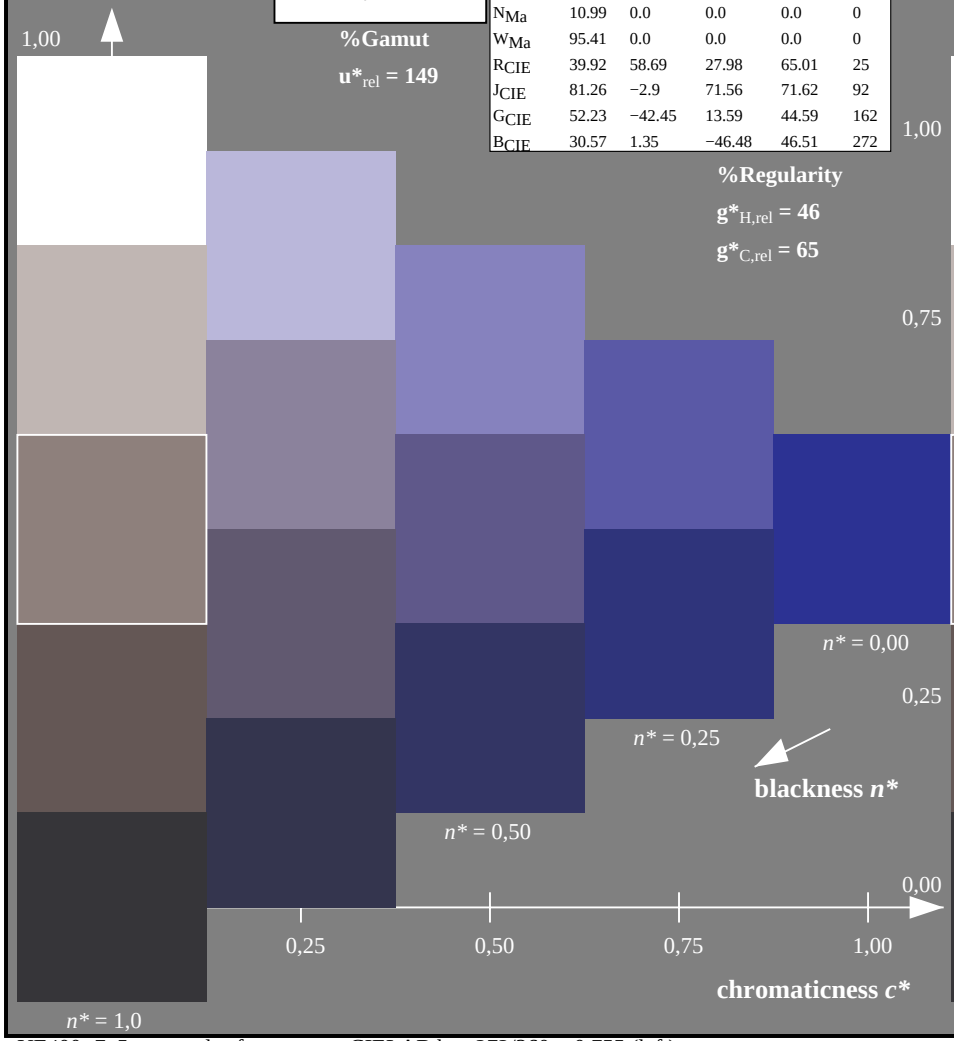
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

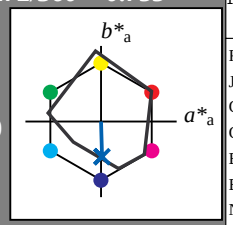
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System MRS18a
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 40 49 272
rgb*Ma: 0.0 0.36 1.0

triangle lightness



%Gamut

u^*_{rel} = 92

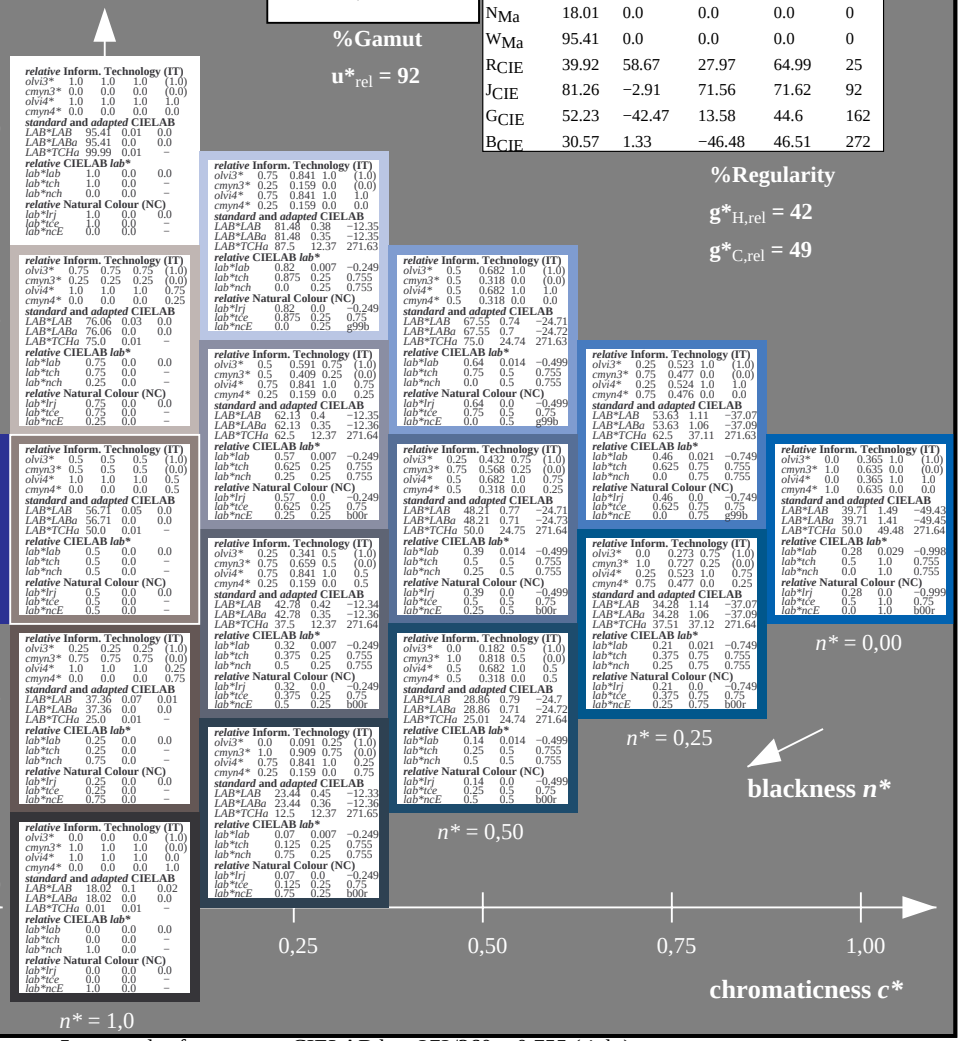
MRS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	49.63	66.8	40.02	77.87	31
J_{Ma}	90.7	−7.27	93.19	93.48	94
G_{Ma}	52.11	−69.93	11.26	70.85	171
$G50B_{Ma}$	45.03	−36.65	−27.13	45.61	217
B_{Ma}	36.65	23.26	−62.27	66.49	290
$B50R_{Ma}$	34.94	57.27	−43.6	71.99	323
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 42

$g^*_{C,rel}$ = 49



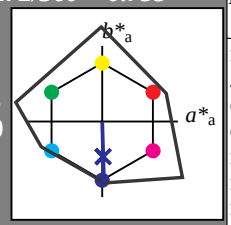
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

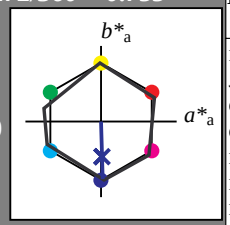
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 57 76 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 100

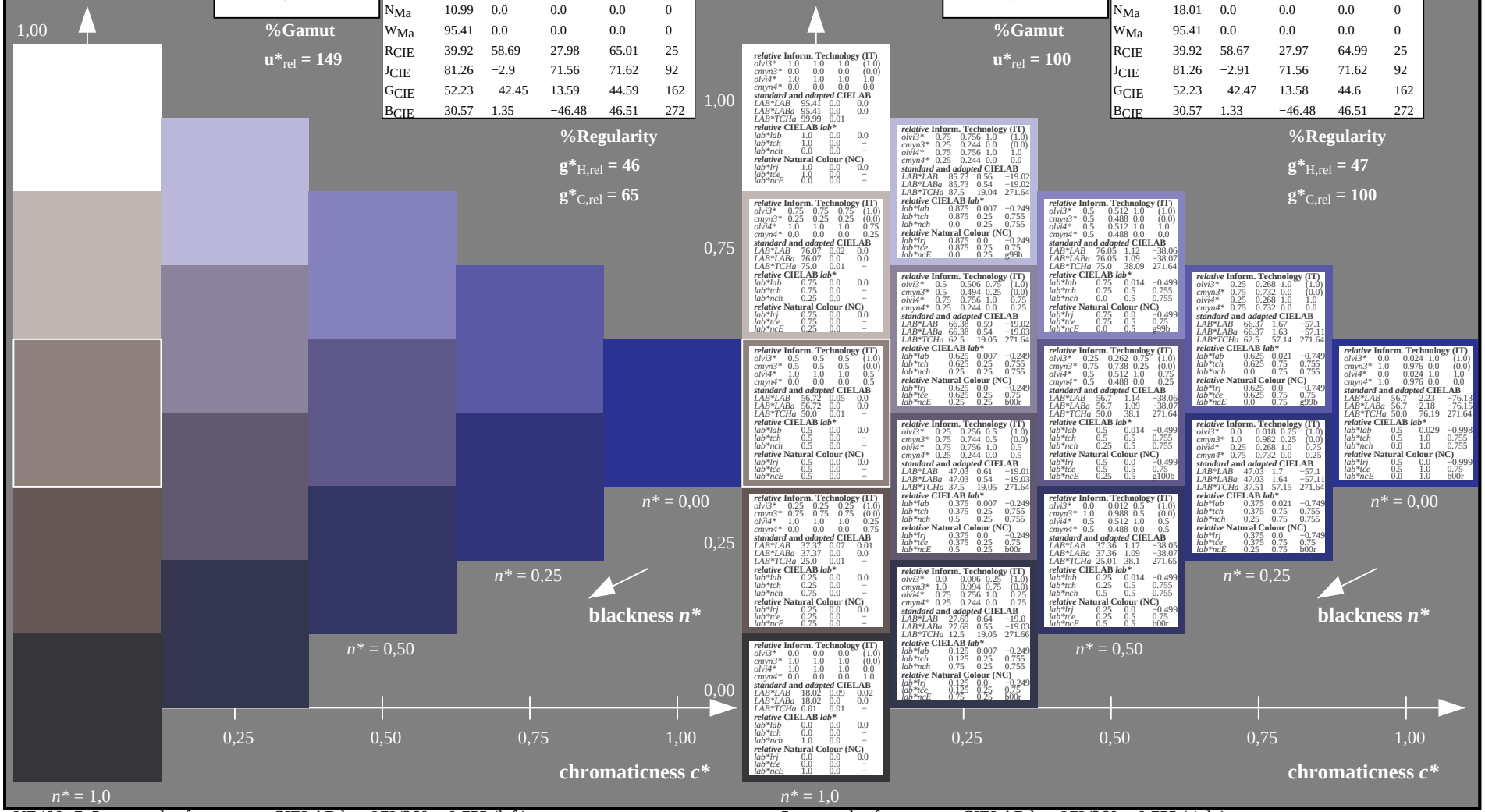
NRS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	56.7	70.66	31.47	77.35	24
J_{Ma}	56.7	−1.39	77.37	77.39	91
G_{Ma}	56.7	−75.46	17.4	77.45	167
$G50B_{Ma}$	56.7	−71.29	−30.25	77.45	203
B_{Ma}	56.7	4.0	−77.3	77.41	273
$B50R_{Ma}$	56.7	63.35	−44.4	77.36	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



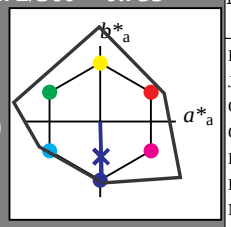
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

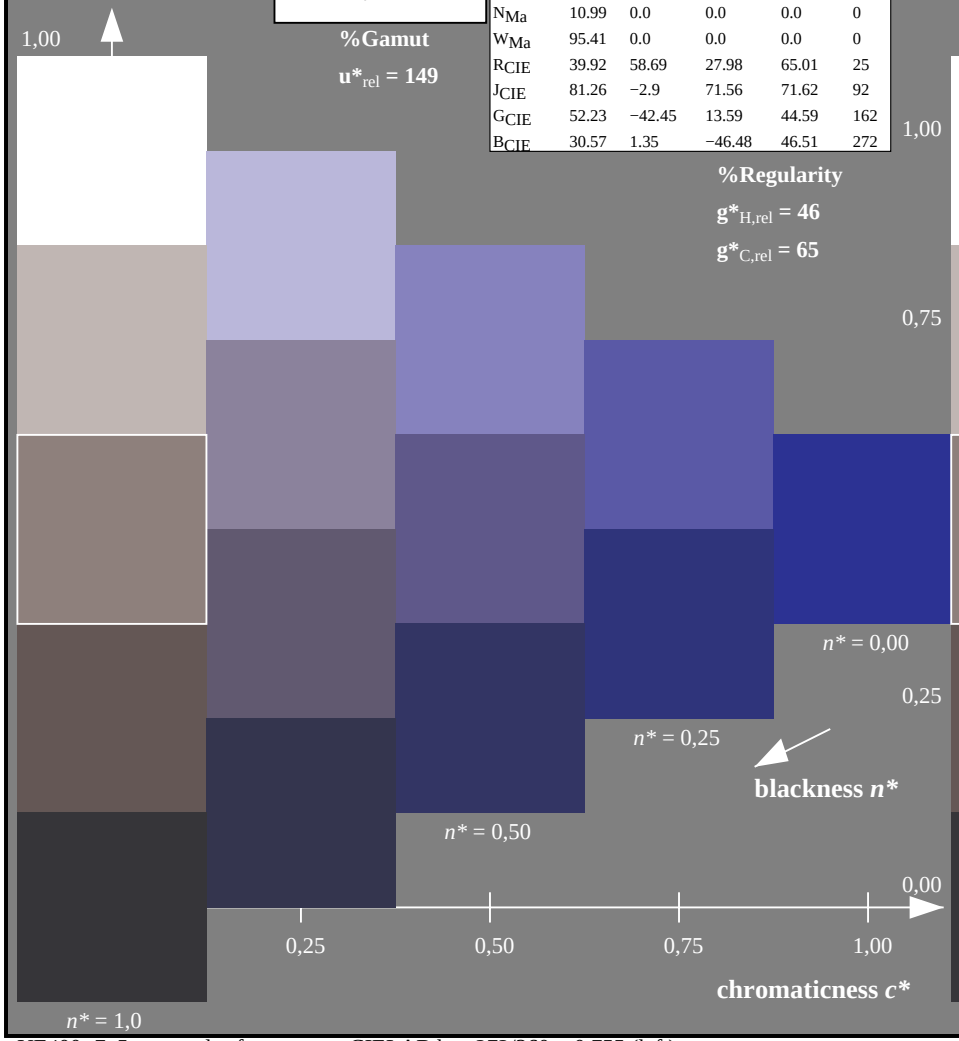
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

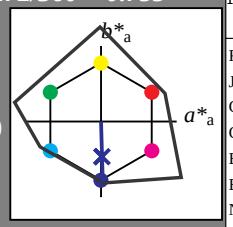
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS18
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 136

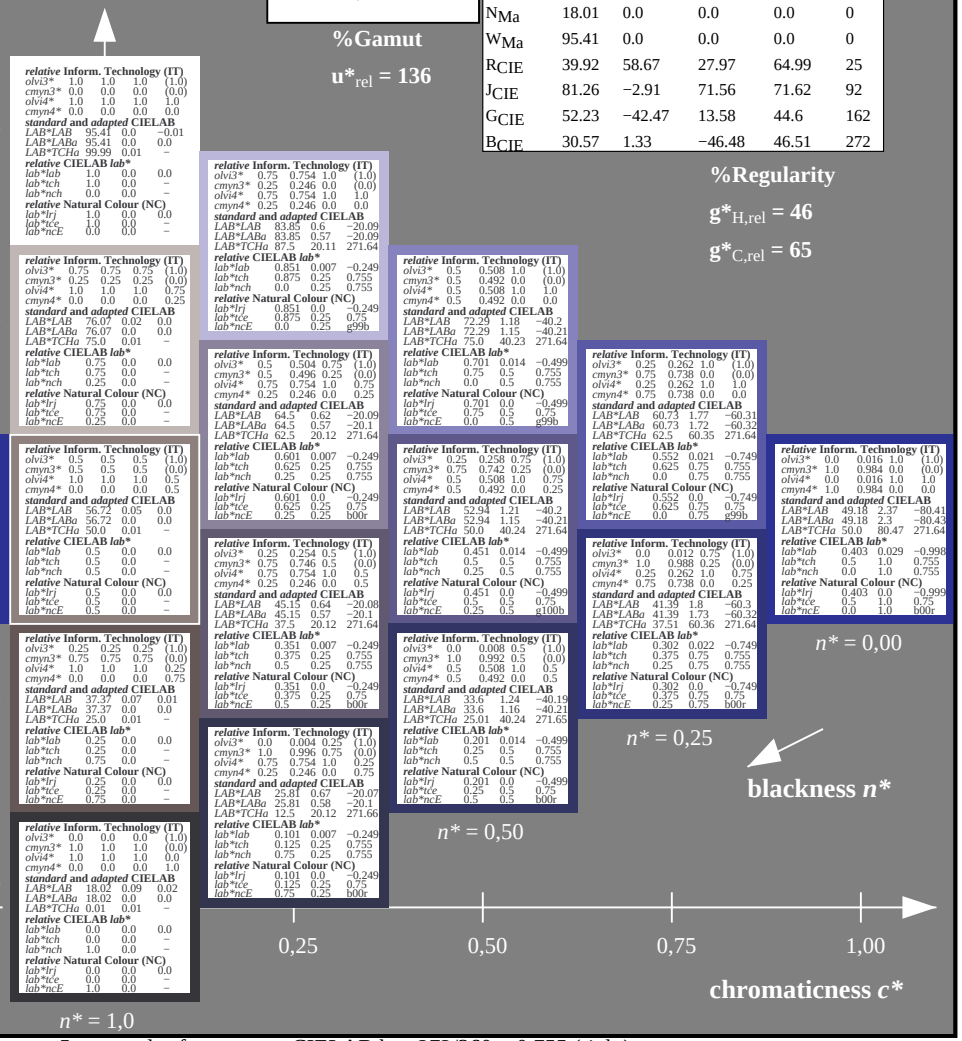
NCS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.63	37.24	92.46	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.29	25.34	117.07	167
$G50B_{Ma}$	59.47	−80.61	−33.45	87.29	203
B_{Ma}	49.01	3.63	−81.2	81.29	273
$B50R_{Ma}$	44.06	106.07	−73.94	129.31	325
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.67	27.97	64.99	25
J_{CIE}	81.26	−2.91	71.56	71.62	92
G_{CIE}	52.23	−42.47	13.58	44.6	162
B_{CIE}	30.57	1.33	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



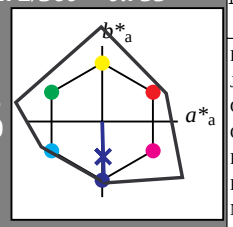
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

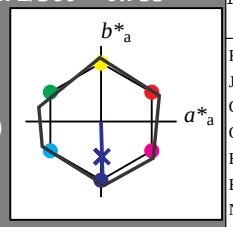
$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65

Output: Colorimetric Reflective System NRS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 53 83 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 119

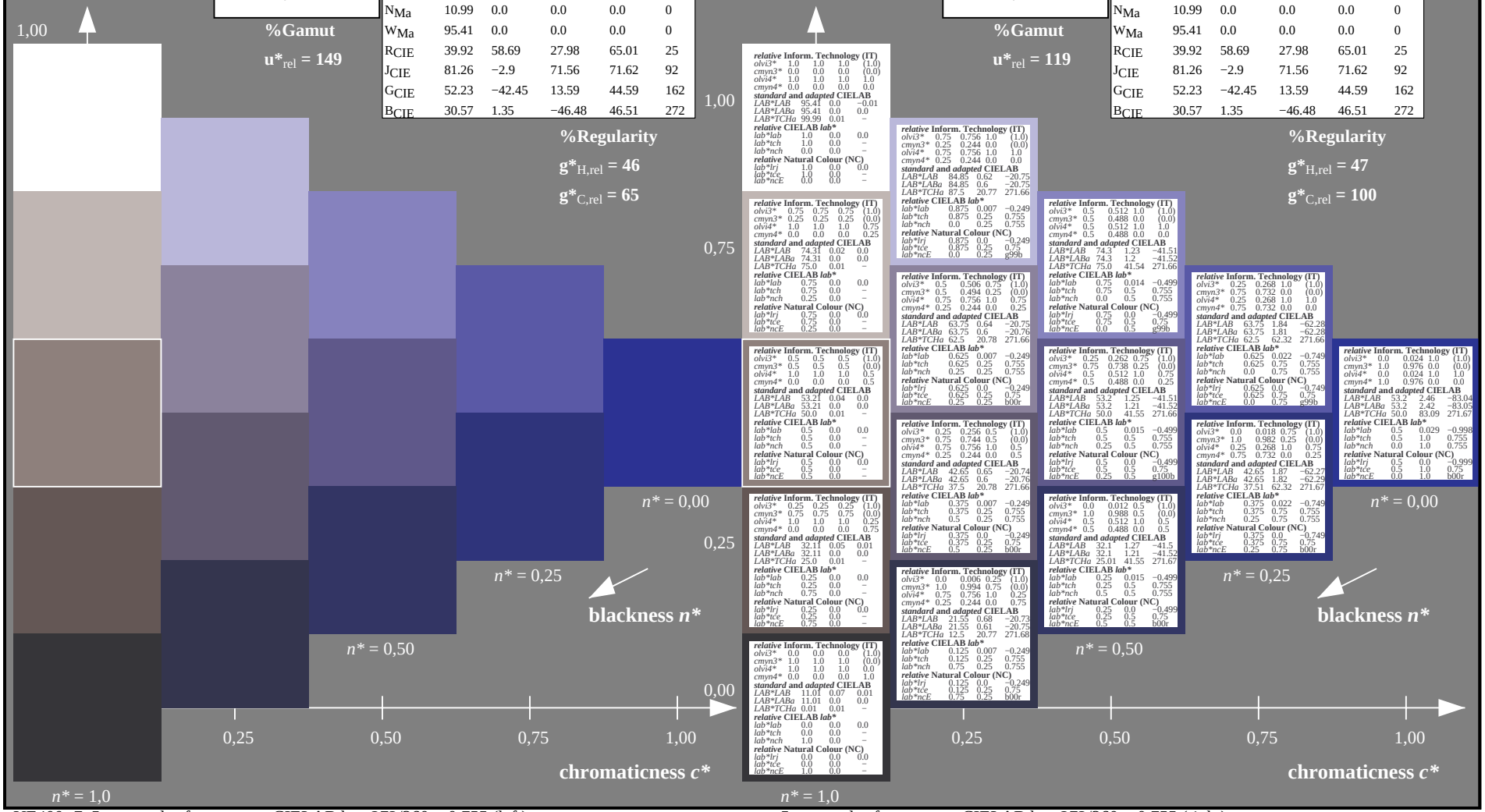
NRS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	53.2	77.06	34.32	84.36	24
J_{Ma}	53.2	−1.51	84.38	84.39	91
G_{Ma}	53.2	−82.27	18.98	84.44	167
$G50B_{Ma}$	53.2	−77.72	−32.98	84.44	203
B_{Ma}	53.2	4.37	−84.28	84.41	273
$B50R_{Ma}$	53.2	69.09	−48.41	84.37	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 47

$g^*_{C,rel}$ = 100



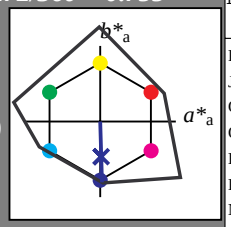
UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

Input: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

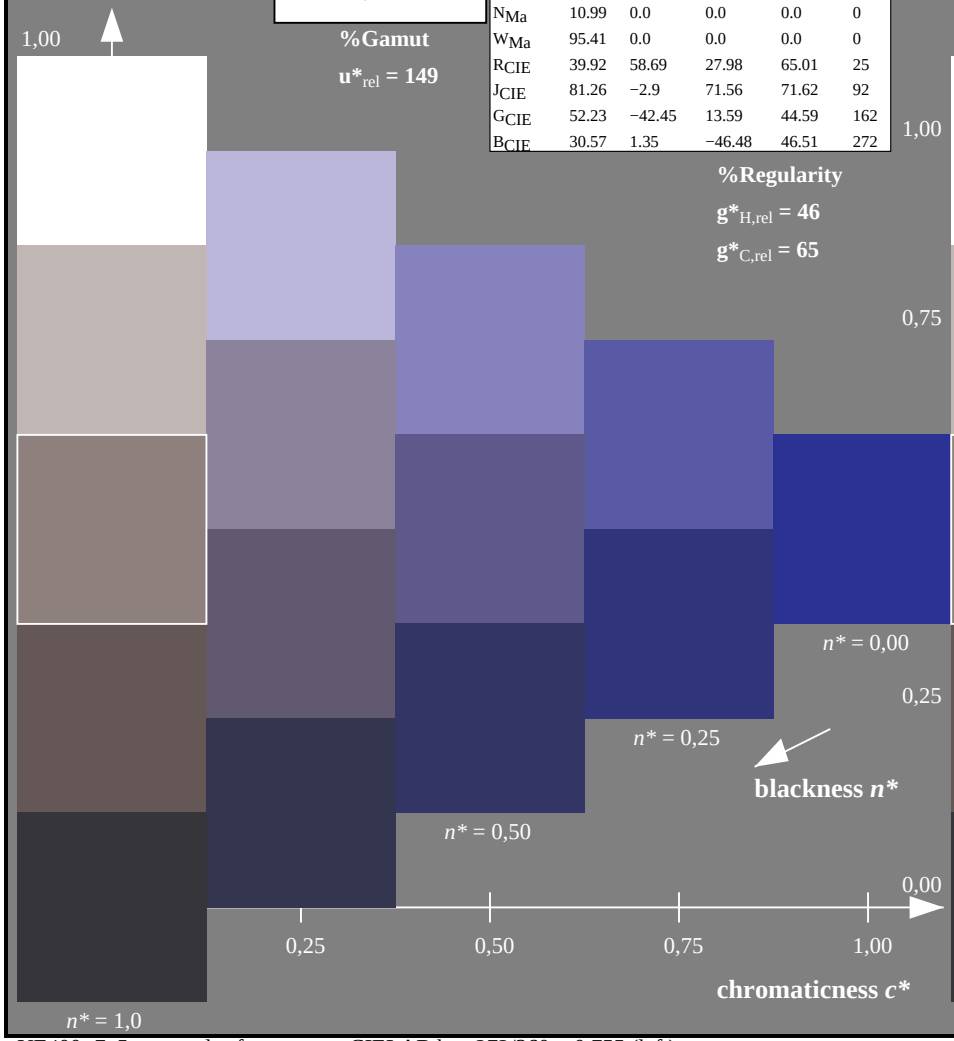
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

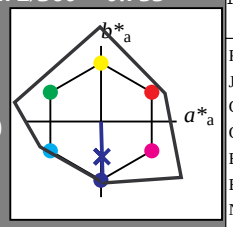
$g^*_{C,rel}$ = 65



Output: Colorimetric Reflective System NCS11
for hue $h^* = lab^*h = 272/360 = 0.755$
lab*tch* and *lab*nch

D65: hue B
LCH*Ma: 49 80 272
rgb*Ma: 0.0 0.02 1.0

triangle lightness



%Gamut

u^*_{rel} = 149

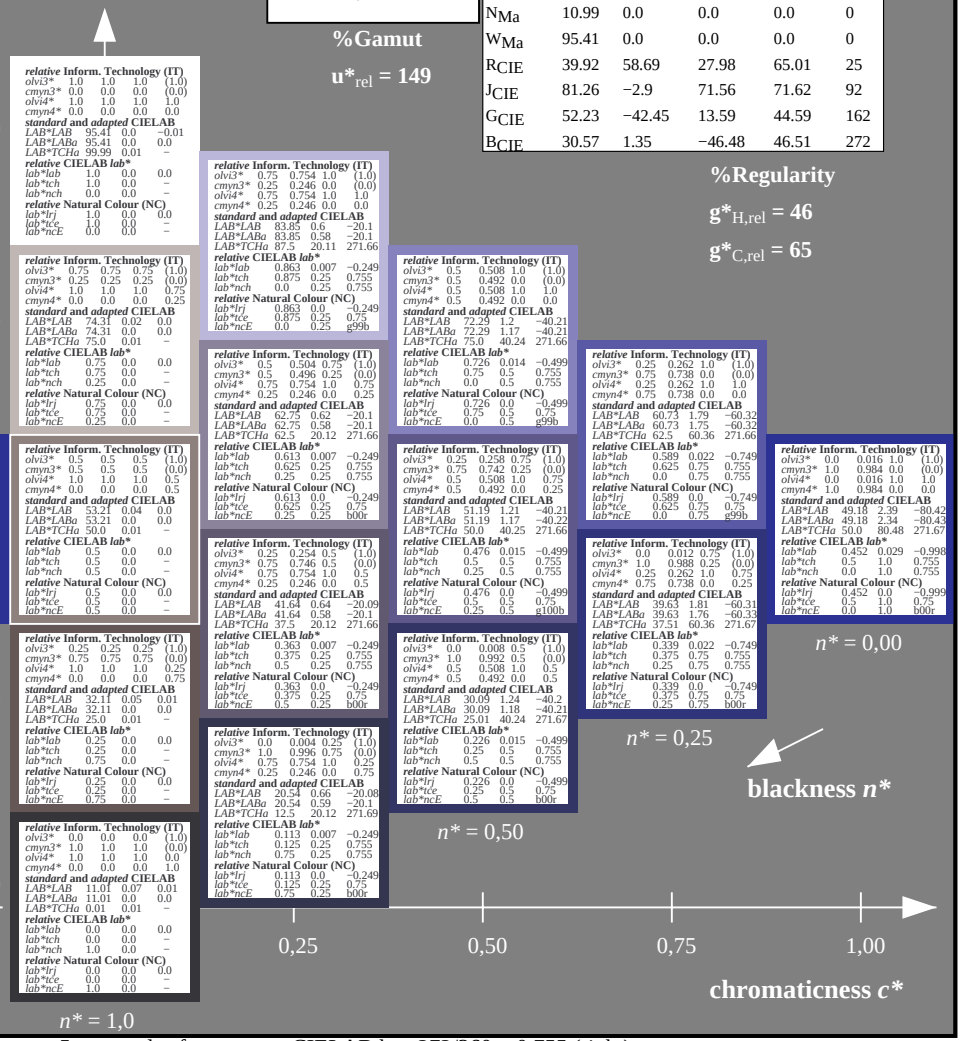
NCS11; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
R_{Ma}	47.15	84.64	37.25	92.48	24
J_{Ma}	91.37	−1.27	125.03	125.03	91
G_{Ma}	63.07	−114.28	25.35	117.06	167
$G50B_{Ma}$	59.47	−80.6	−33.45	87.28	203
B_{Ma}	49.01	3.65	−81.19	81.28	273
$B50R_{Ma}$	44.06	106.09	−73.93	129.32	325
N_{Ma}	10.99	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.69	27.98	65.01	25
J_{CIE}	81.26	−2.9	71.56	71.62	92
G_{CIE}	52.23	−42.45	13.59	44.59	162
B_{CIE}	30.57	1.35	−46.48	46.51	272

%Regularity

$g^*_{H,rel}$ = 46

$g^*_{C,rel}$ = 65



UE400−7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 272/360 = 0.755 (right)