

Input: Colorimetric Television Luminous System TLS18

for hue $h^* = lab \cdot h = 35/360 = 0.097$

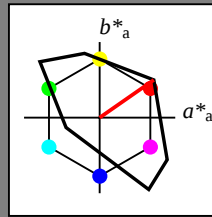
$lab \cdot tch$ and $lab \cdot nch$

D65: hue O

LCH*Ma: 53 87 35

olv*Ma: 1.0 0.0 0.0

triangle lightness



$u^*_{rel} = 118$

TLS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	52.76	71.63	49.88	87.29	35
Y _{Ma}	92.74	-20.02	84.97	87.3	103
L _{Ma}	84.0	-78.98	73.94	108.2	137
C _{Ma}	87.14	-44.41	-13.11	46.32	196
V _{Ma}	35.47	64.92	-95.06	115.12	304
M _{Ma}	59.01	89.33	-55.67	105.26	328
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 38/360 = 0.105$

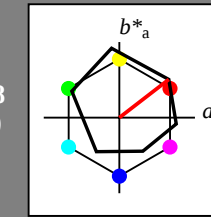
$lab \cdot tch$ and $lab \cdot nch$

D65: hue O

LCH*Ma: 48 83 38

olv*Ma: 1.0 0.0 0.0

triangle lightness



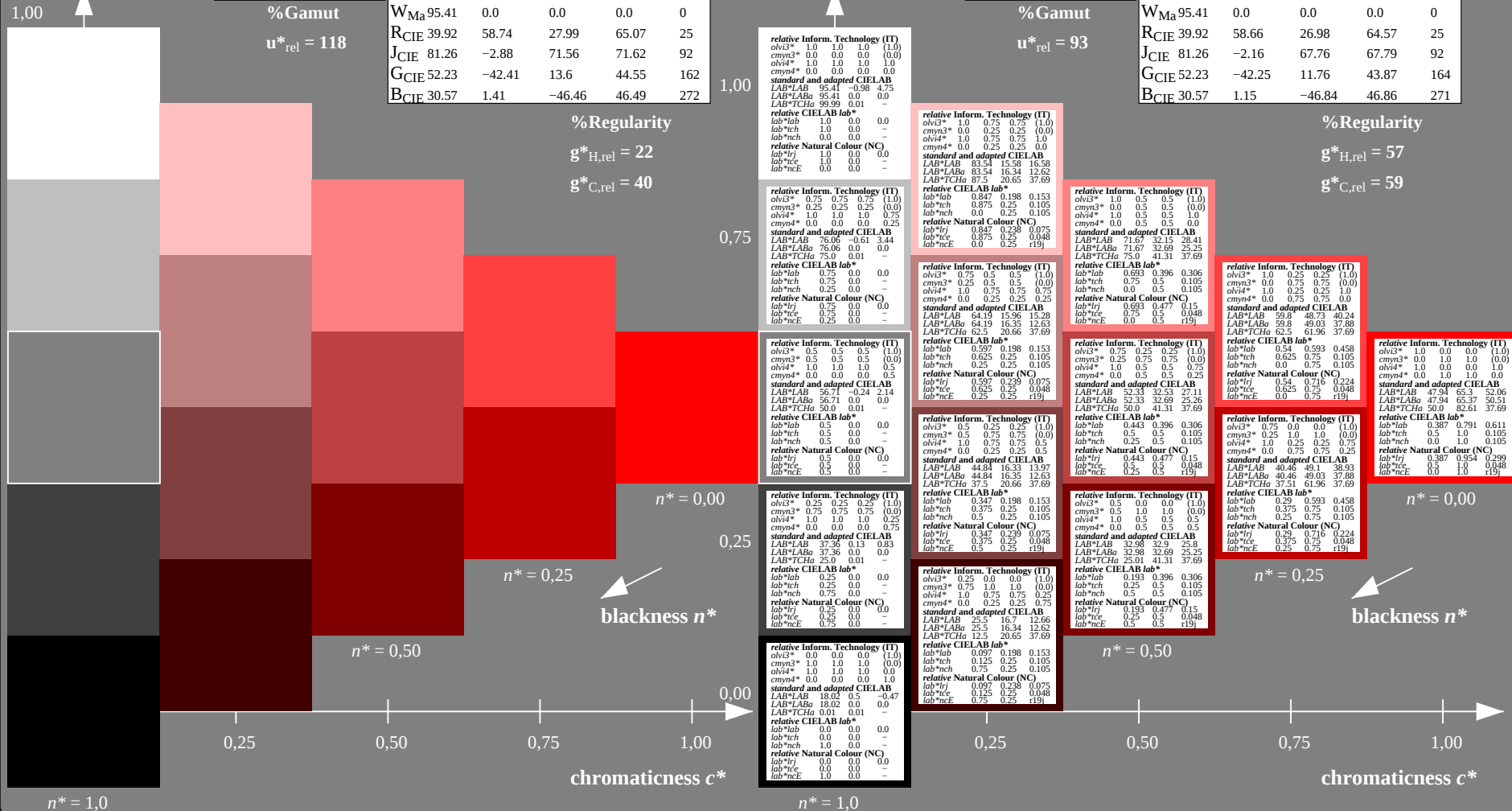
$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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



NE460-7, 5 step scales for constant CIELAB hue 35/360 = 0.097 (left)

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

BAM-test chart NE46; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

input: $olv \cdot setrgbcolor$

output: Startup (S) data dependant

Input: Colorimetric Television Luminous System TLS18

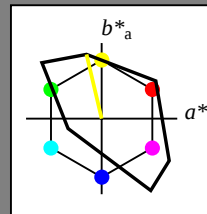
for hue $h^* = lab \cdot h = 103/360 = 0.287$

$lab \cdot tch$ and $lab \cdot nch$

D65: hue Y
LCH*Ma: 93 87 103
olv*Ma: 1.0 1.0 0.0

triangle lightness

1,00



% Gamut

$u^*_{rel} = 118$

TLS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	52.76	71.63	49.88	87.29	35
Y _{Ma}	92.74	-20.02	84.97	87.3	103
L _{Ma}	84.0	-78.98	73.94	108.2	137
C _{Ma}	87.14	-44.41	-13.11	46.32	196
V _{Ma}	35.47	64.92	-95.06	115.12	304
M _{Ma}	59.01	89.33	-55.67	105.26	328
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

1,00

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	-0.98	4.75		
LAB*LABa	95.41	0.0	0.0		
LAB*LABb	95.41	0.0	0.0		
LAB*LABc	95.41	0.0	0.0		
LAB*LABd	95.41	0.0	0.0		
LAB*LABe	95.41	0.0	0.0		
LAB*LABf	95.41	0.0	0.0		
LAB*LABg	95.41	0.0	0.0		
LAB*LABh	95.41	0.0	0.0		
LAB*LABi	95.41	0.0	0.0		
LAB*LABj	95.41	0.0	0.0		
LAB*LABk	95.41	0.0	0.0		
LAB*LABl	95.41	0.0	0.0		
LAB*LABm	95.41	0.0	0.0		
LAB*LABn	95.41	0.0	0.0		
LAB*LABo	95.41	0.0	0.0		
LAB*LABp	95.41	0.0	0.0		
LAB*LABq	95.41	0.0	0.0		
LAB*LABr	95.41	0.0	0.0		
LAB*LABs	95.41	0.0	0.0		
LAB*LABt	95.41	0.0	0.0		
LAB*LABu	95.41	0.0	0.0		
LAB*LABv	95.41	0.0	0.0		
LAB*LABw	95.41	0.0	0.0		
LAB*LABx	95.41	0.0	0.0		
LAB*LABy	95.41	0.0	0.0		
LAB*LABz	95.41	0.0	0.0		

relative CIELAB lab*					
lab*lab	1.0	0.0	0.0		
lab*tch	1.0	0.0	0.0		
lab*nch	1.0	0.0	0.0		
lab*trj	1.0	0.0	0.0		
lab*trk	1.0	0.0	0.0		
lab*trl	1.0	0.0	0.0		
lab*trm	1.0	0.0	0.0		
lab*trn	1.0	0.0	0.0		
lab*tro	1.0	0.0	0.0		
lab*trp	1.0	0.0	0.0		
lab*trq	1.0	0.0	0.0		
lab*trr	1.0	0.0	0.0		
lab*trs	1.0	0.0	0.0		
lab*trt	1.0	0.0	0.0		
lab*tru	1.0	0.0	0.0		
lab*trv	1.0	0.0	0.0		
lab*trw	1.0	0.0	0.0		
lab*trx	1.0	0.0	0.0		
lab*try	1.0	0.0	0.0		
lab*trz	1.0	0.0	0.0		

relative Natural Colour (NC)					
lab*trj	1.0	0.0	0.0		
lab*trk	1.0	0.0	0.0		
lab*trl	1.0	0.0	0.0		
lab*trm	1.0	0.0	0.0		
lab*trn	1.0	0.0	0.0		
lab*tro	1.0	0.0	0.0		
lab*trp	1.0	0.0	0.0		
lab*trq	1.0	0.0	0.0		
lab*trr	1.0	0.0	0.0		
lab*trs	1.0	0.0	0.0		
lab*trt	1.0	0.0	0.0		
lab*tru	1.0	0.0	0.0		
lab*trv	1.0	0.0	0.0		
lab*trw	1.0	0.0	0.0		
lab*trx	1.0	0.0	0.0		
lab*try	1.0	0.0	0.0		
lab*trz	1.0	0.0	0.0		

relative CIELAB lab*					
lab*lab	1.0	0.0	0.0		
lab*tch	1.0	0.0	0.0		
lab*nch	1.0	0.0	0.0		
lab*trj	1.0	0.0	0.0		
lab*trk	1.0	0.0	0.0		
lab*trl	1.0	0.0	0.0		
lab*trm	1.0	0.0	0.0		
lab*trn	1.0	0.0	0.0		
lab*tro	1.0	0.0	0.0		
lab*trp	1.0	0.0	0.0		
lab*trq	1.0	0.0	0.0		
lab*trr	1.0	0.0	0.0		
lab*trs	1.0	0.0	0.0		
lab*trt	1.0	0.0	0.0		
lab*tru	1.0	0.0	0.0		
lab*trv	1.0	0.0	0.0		
lab*trw	1.0	0.0	0.0		
lab*trx	1.0	0.0	0.0		
lab*try	1.0	0.0	0.0		
lab*trz	1.0	0.0	0.0		

relative Natural Colour (NC)					
lab*trj	1.0	0.0	0.0		
lab*trk	1.0	0.0	0.0		
lab*trl	1.0	0.0	0.0		
lab*trm	1.0	0.0	0.0		
lab*trn	1.0	0.0	0.0		
lab*tro	1.0	0.0	0.0		
lab*trp	1.0	0.0	0.0		
lab*trq	1.0	0.0	0.0		
lab*trr	1.0	0.0	0.0		
lab*trs	1.0	0.0	0.0		
lab*trt	1.0	0.0	0.0		
lab*tru	1.0	0.0	0.0		
lab*trv	1.0	0.0	0.0		
lab*trw	1.0	0.0	0.0		
lab*trx	1.0	0.0	0.0		
lab*try	1.0	0.0	0.0		
lab*trz	1.0	0.0	0.0		

relative CIELAB lab*					
lab*lab	1.0	0.0	0.0		
lab*tch	1.0	0.0	0.0		
lab*nch	1.0	0.0	0.0		
lab*trj	1.0	0.0	0.0		
lab*trk	1.0	0.0	0.0		
lab*trl	1.0	0.0	0.0		
lab*trm	1.0	0.0	0.0		
lab*trn	1.0	0.0	0.0		
lab*tro	1.0	0.0	0.0		
lab*trp	1.0	0.0	0.0		
lab*trq	1.0	0.0	0.0		
lab*trr	1.0	0.0	0.0		
lab*trs	1.0	0.0	0.0		
lab*trt	1.0	0.0	0.0		
lab*tru	1.0	0.0	0.0		
lab*trv	1.0	0.0	0.0		
lab*trw	1.0	0.0	0.0		
lab*trx	1.0	0.0	0.0		
lab*try	1.0	0.0	0.0		
lab*trz	1.0	0.0	0.0		

relative Natural Colour (NC)					
lab*trj	1.0	0.0	0.0		
lab*trk	1.0	0.0	0.0		
lab*trl	1.0	0.0	0.0		
lab*trm	1.0	0.0	0.0		
lab*trn	1.0	0.0	0.0		
lab*tro	1.0	0.0	0.0		
lab*trp	1.0	0.0	0.0		
lab*trq	1.0	0.0	0.0		
lab*trr	1.0	0.0	0.0		
lab*trs	1.0	0.0	0.0		
lab*trt	1.0	0.0	0.0		
lab*tru	1.0	0.0	0.0		
lab*trv	1.0	0.0	0.0		
lab*trw	1.0	0.0	0.0		
lab*trx	1.0	0.0	0.0		
lab*try	1.0	0.0	0.0		
lab*trz	1.0	0.0	0.0		

relative CIELAB lab*					
lab*lab	1.0	0.0	0.0		
lab*tch	1.0	0.0	0.0		
lab*nch	1.0	0.0	0.0		
lab*trj	1.0	0.0	0.0		
lab*trk	1.0	0.0	0.0		
lab*trl	1.0	0.0	0.0		
lab*trm	1.0	0.0	0.0		
lab*trn	1.0	0.0	0.0		
lab*tro	1.0	0.0	0.0		
lab*trp	1.0	0.0	0.0		
lab*trq	1.0	0.0	0.0		
lab*trr	1.0	0.0	0.0		
lab*trs	1.0	0.0	0.0		
lab*trt	1.0	0.0	0.0		
lab*tru	1.0	0.0	0.0		
lab*trv	1.0	0.0	0.0		
lab*trw	1.0	0.0	0.0		
lab*trx	1.0	0.0	0.0		
lab*try	1.0	0.0	0.0		
lab*trz	1.0	0.0	0.0		

relative Natural Colour (NC)					
lab*trj	1.0	0.0	0.0		
lab*trk	1.0	0.0	0.0		
lab*trl	1.0	0.0	0.0		
lab*trm	1.0	0.0	0.0		
lab*trn	1.0	0.0	0.0		
lab*tro	1.0	0.0	0.0		
lab*trp	1.0	0.0	0.0		
lab*trq	1.0	0.0	0.0		
lab*trr	1.0	0.0	0.0		
lab*trs	1.0	0.0	0.0		
lab*trt	1.0	0.0	0.0		
lab*tru	1.0	0.0	0.0		
lab*trv	1.0	0.0	0.0		
lab*trw	1.0	0.0	0.0		
lab*trx	1.0	0.0	0.0		
lab*try	1.0	0.0	0.0		
lab*trz	1.0	0.0	0.0		

relative CIELAB lab*					
lab*lab	1.0	0.0	0.0		
lab*tch	1.0	0.0	0.0		
lab*nch	1.0	0.0	0.0		
lab*trj	1.0	0.0	0.0		
lab*trk	1.0	0.0	0.0		
lab*trl	1.0	0.0	0.0		
lab*trm	1.0	0.0	0.0		
lab*trn	1.0	0.0	0.0		
lab*tro	1.0	0.0	0.0		
lab*trp	1.0	0.0	0.0		
lab*trq	1.0	0.0	0.0		
lab*trr	1.0	0.0	0.0		
lab*trs	1.0	0.0	0.0		
lab*trt	1.0	0.0	0.0		
lab*tru	1.0	0.0	0.0		
lab*trv	1.0	0.0	0.0		
lab*trw	1.0	0.0	0.0		
lab*trx	1.0	0.0	0.0		
lab*try	1.0	0.0	0.0		
lab*trz	1.0	0.0	0.0		

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	-

Input: Colorimetric Television Luminous System TLS18

for hue $h^* = lab \cdot h = 137/360 = 0.38$

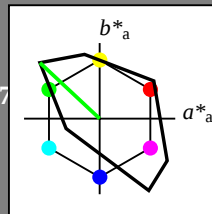
$lab \cdot tch$ and $lab \cdot nch$

D65: hue L

LCH*Ma: 84 108 137

olv*Ma: 0.0 1.0 0.0

triangle lightness



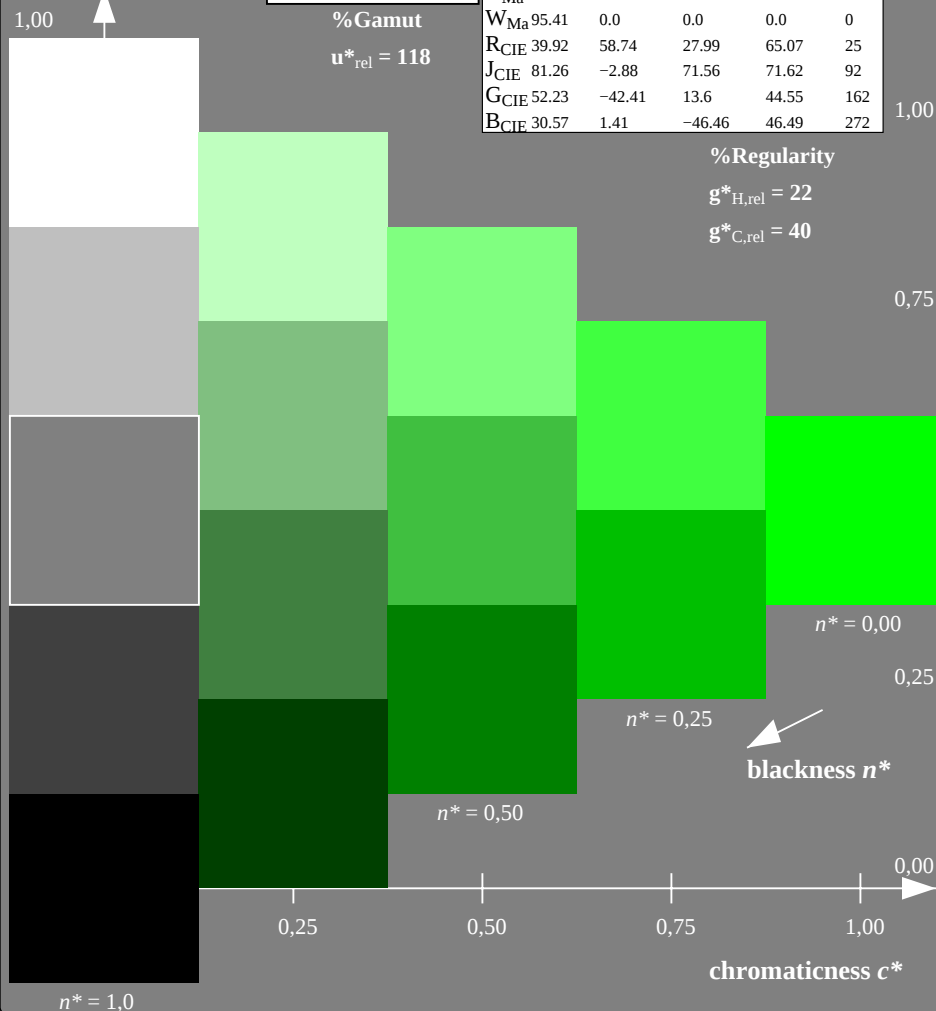
TLS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	52.76	71.63	49.88	87.29	35
Y _{Ma}	92.74	-20.02	84.97	87.3	103
L _{Ma}	84.0	-78.98	73.94	108.2	137
C _{Ma}	87.14	-44.41	-13.11	46.32	196
V _{Ma}	35.47	64.92	-95.06	115.12	304
M _{Ma}	59.01	89.33	-55.67	105.26	328
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$



NE460-7, 5 step scales for constant CIELAB hue 137/360 = 0.38 (left)

BAM-test chart NE46; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 151/360 = 0.419$

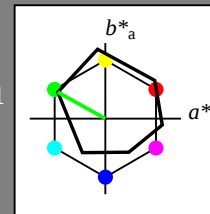
$lab \cdot tch$ and $lab \cdot nch$

D65: hue L

LCH*Ma: 51 72 151

olv*Ma: 0.0 1.0 0.0

triangle lightness



%Gamut

$u^*_{rel} = 93$

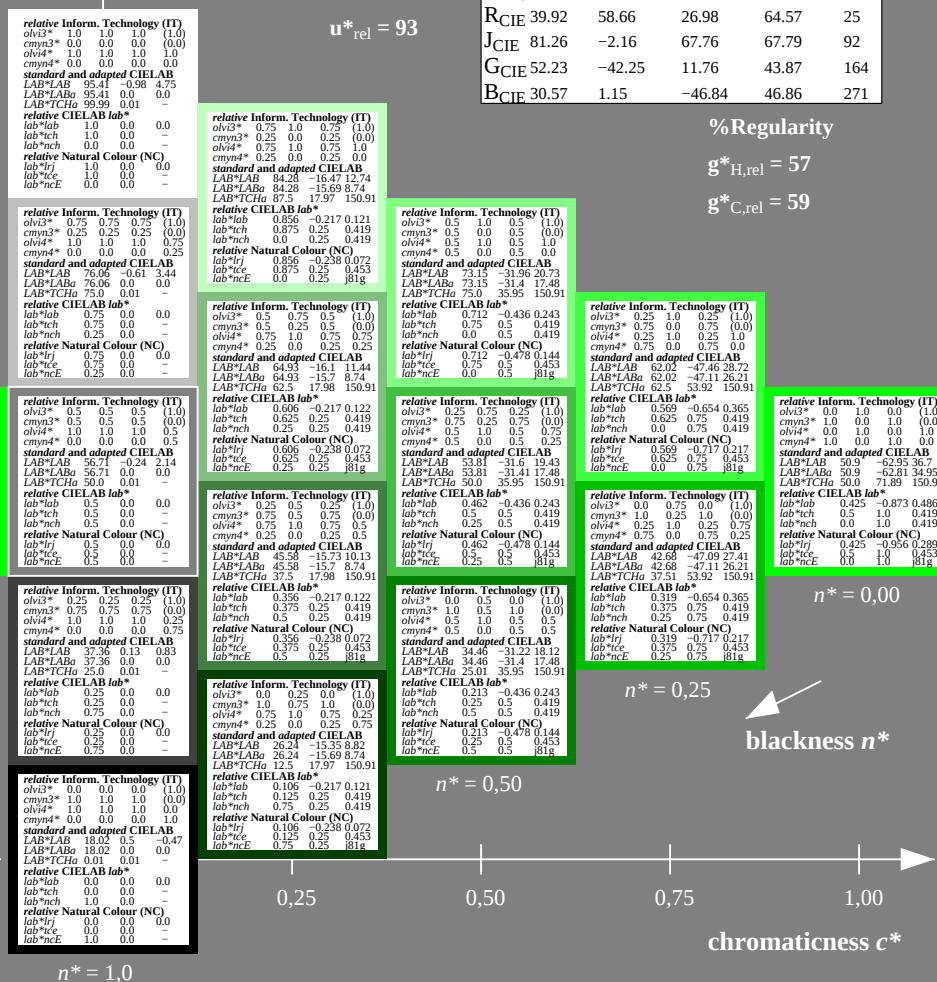
ORS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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



5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

input: $olv^* \cdot setrgbcolor$

output: Startup (S) data dependend

Input: Colorimetric Television Luminous System TLS18

for hue $h^* = lab \cdot h = 196/360 = 0.546$

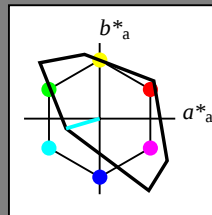
$lab \cdot tch$ and $lab \cdot nch$

D65: hue C

LCH*Ma: 87 46 196

olv*Ma: 0.0 1.0 1.0

triangle lightness



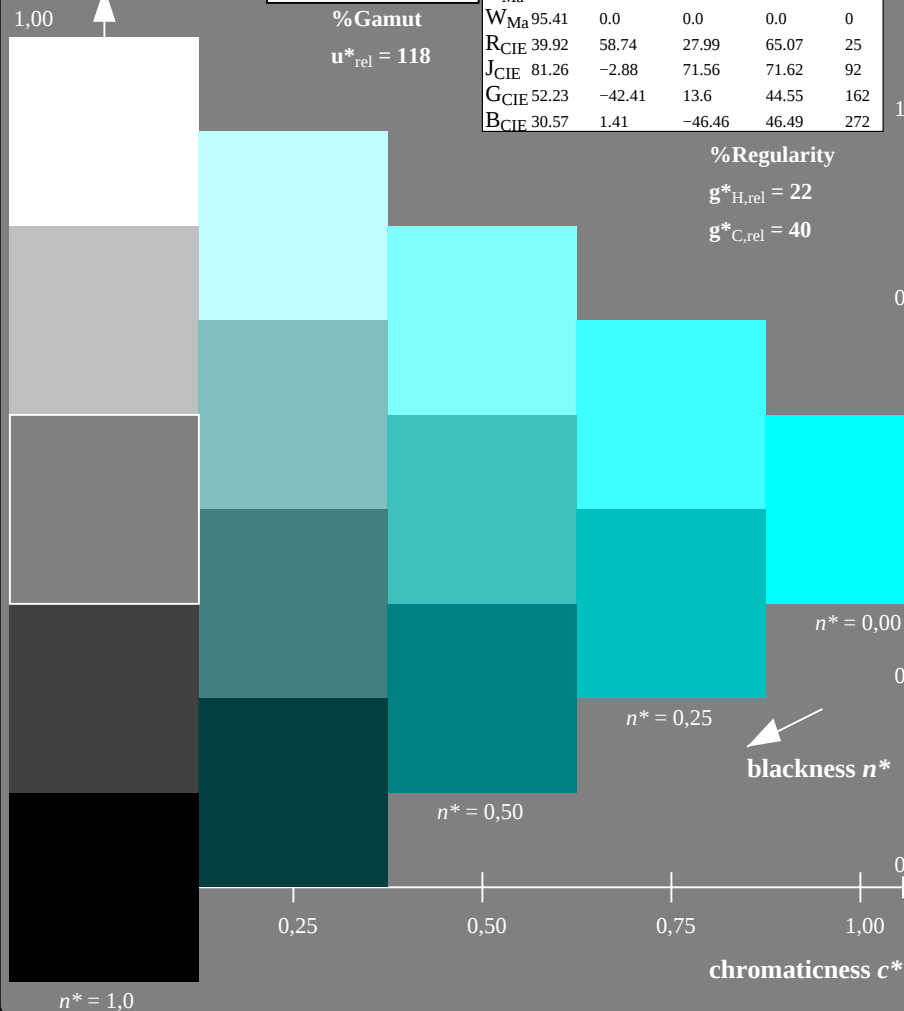
TLS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	52.76	71.63	49.88	87.29	35
Y _{Ma}	92.74	-20.02	84.97	87.3	103
L _{Ma}	84.0	-78.98	73.94	108.2	137
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M _{Ma}	59.01	89.33	-55.67	105.26	328
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$



NE460-7, 5 step scales for constant CIELAB hue 196/360 = 0.546 (left)

BAM-test chart NE46; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 236/360 = 0.656$

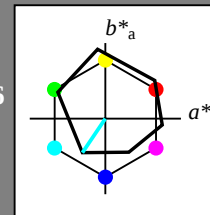
$lab \cdot tch$ and $lab \cdot nch$

D65: hue C

LCH*Ma: 59 54 236

olv*Ma: 0.0 1.0 1.0

triangle lightness



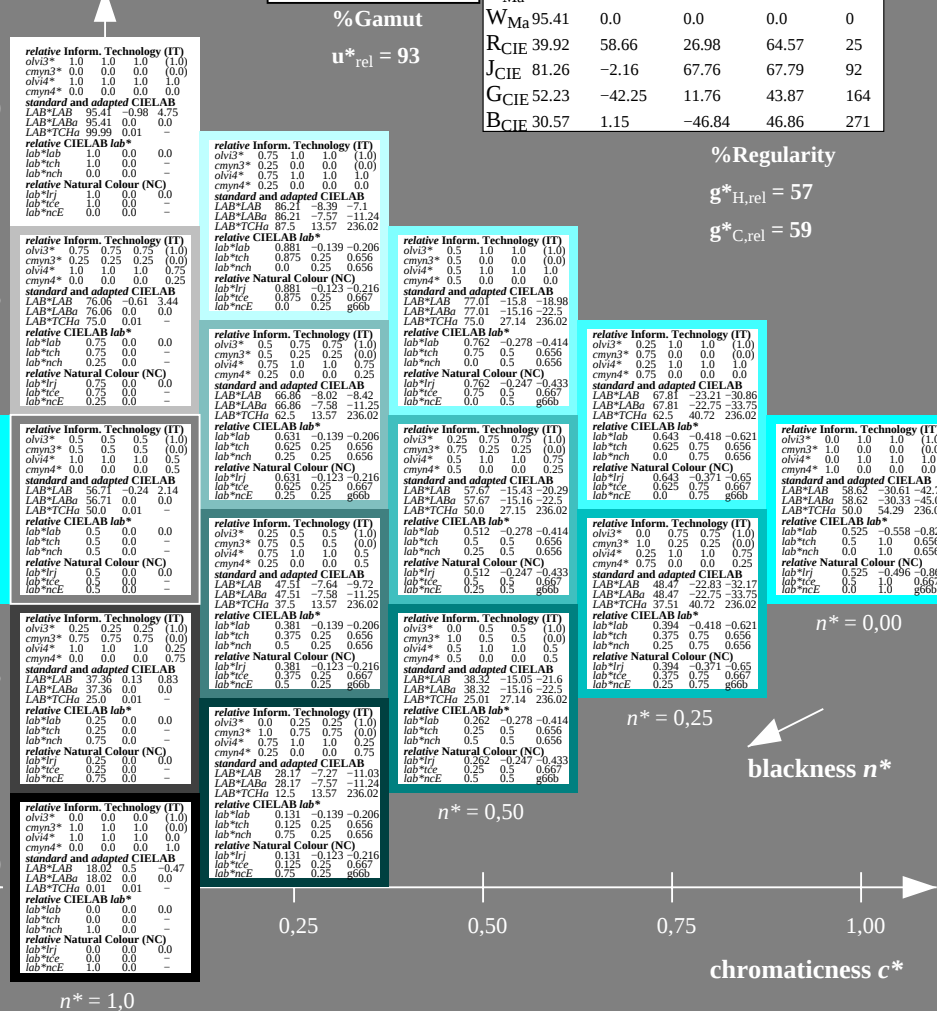
ORS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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



5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

input: $olv \cdot setrgbcolor$

output: Startup (S) data dependend

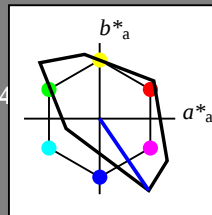
Input: Colorimetric Television Luminous System TLS18

for hue $h^* = lab \cdot h = 304/360 = 0.845$

$lab \cdot tch$ and $lab \cdot nch$

D65: hue V
LCH*Ma: 35 115 304
olv*Ma: 0.0 0.0 1.0

triangle lightness



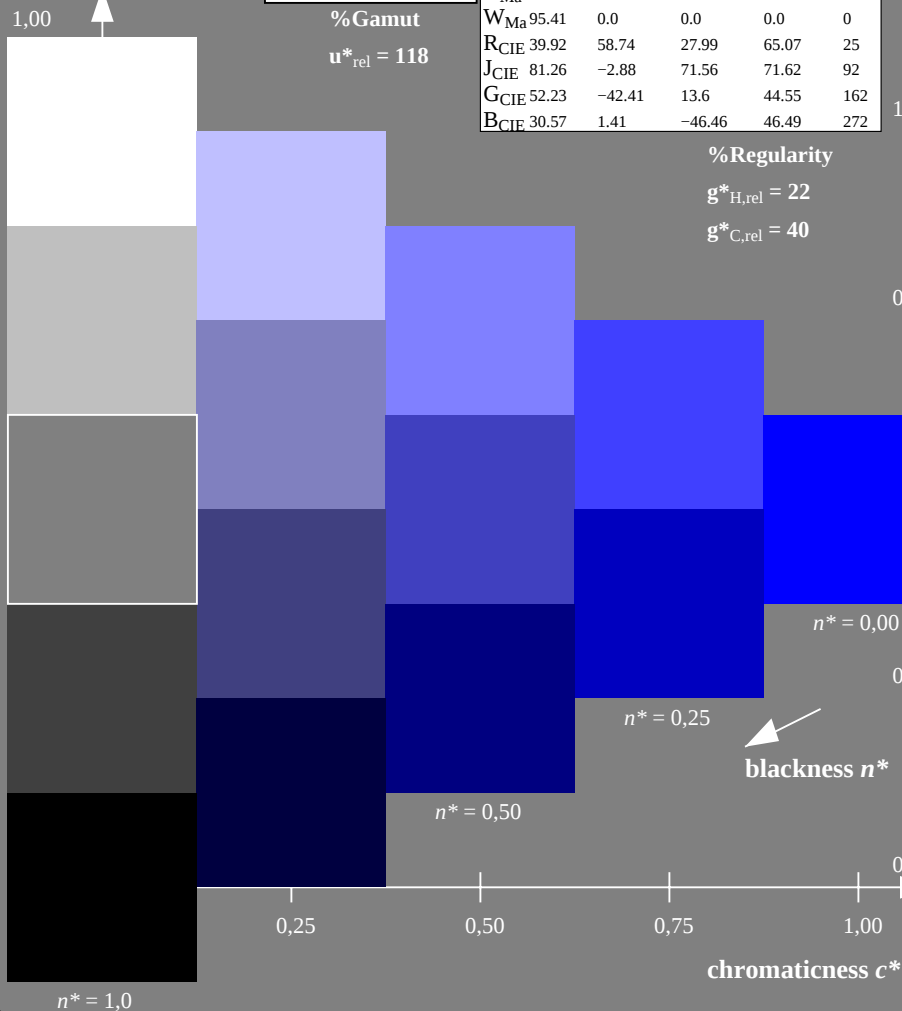
TLS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	52.76	71.63	49.88	87.29	35
Y _{Ma}	92.74	-20.02	84.97	87.3	103
L _{Ma}	84.0	-78.98	73.94	108.2	137
C _{Ma}	87.14	-44.41	-13.11	46.32	196
V _{Ma}	35.47	64.92	-95.06	115.12	304
M _{Ma}	59.01	89.33	-55.67	105.26	328
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$



NE460-7, 5 step scales for constant CIELAB hue 304/360 = 0.845 (left)

BAM-test chart NE46; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

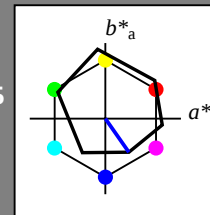
Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 305/360 = 0.847$

$lab \cdot tch$ and $lab \cdot nch$

D65: hue V
LCH*Ma: 26 54 305
olv*Ma: 0.0 0.0 1.0

triangle lightness



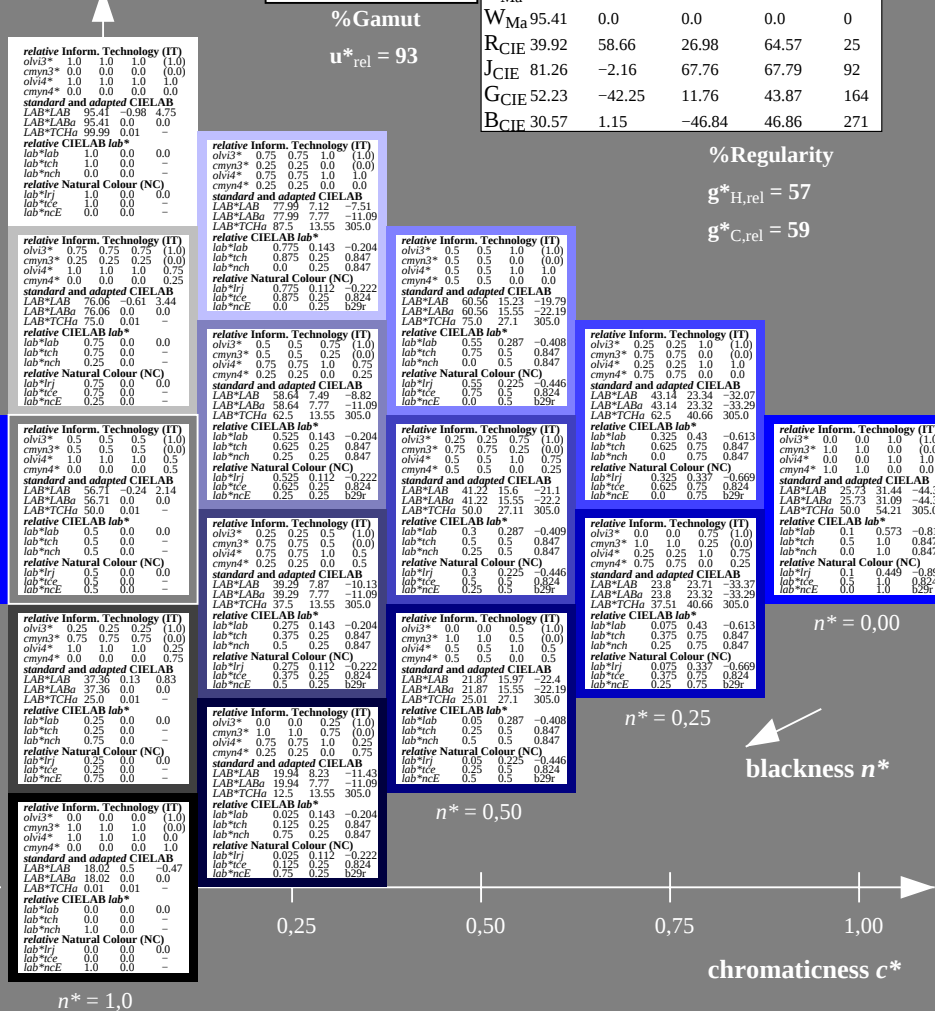
ORS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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



5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

input: $olv \cdot setrgbcolor$

output: Startup (S) data dependent

Input: Colorimetric Television Luminous System TLS18

```
for hue  $h^* = lab^*h = 328/360 = 0.911$ 
```

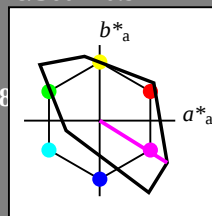
lab*tch and lab*nch

D65: hue M

LCH*Ma: 59 105 328

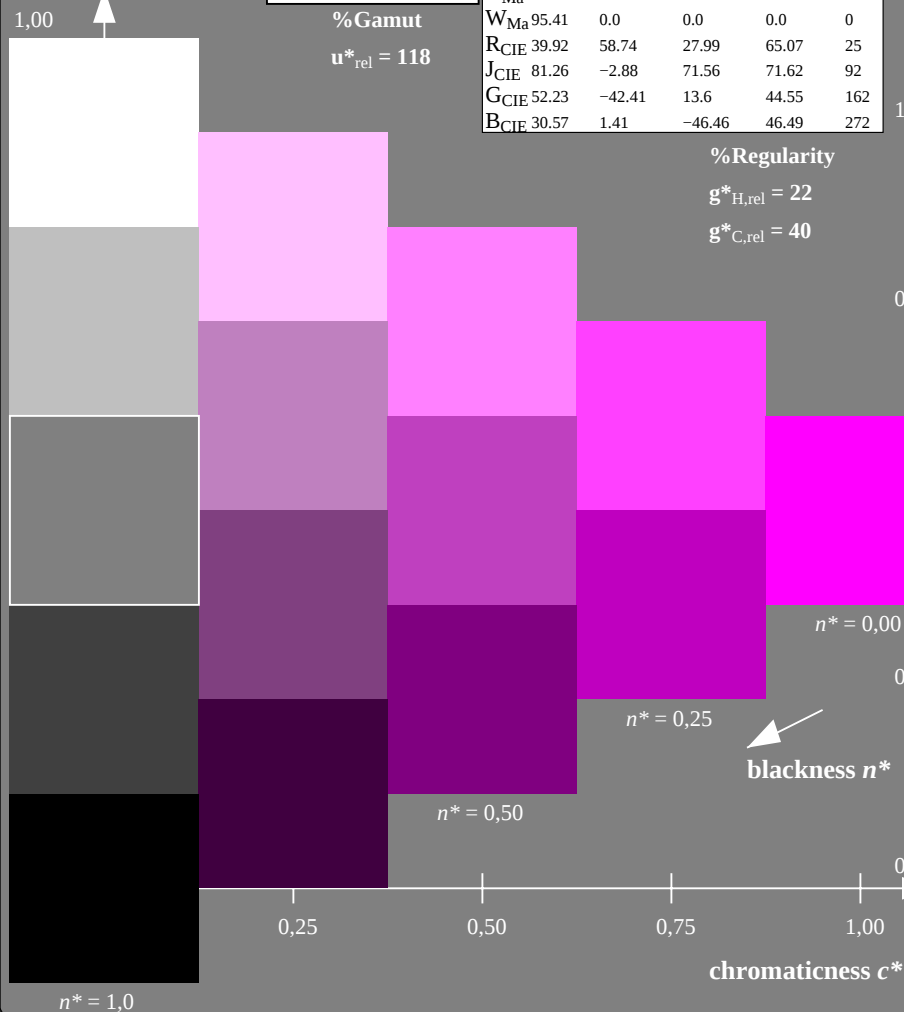
olv*Ma: 1.0 0.0 1.0

triangle lightness


$$\mathbf{u}_{\text{rel}}^* = 118$$
TLS18; adapted (a) CIELAB data

	$L^* = L_a^*$	a_a^*	b_a^*	$C_{ab,a}^*$	$h_{ab,a}^*$
O _{Ma}	52.76	71.63	49.88	87.29	35
Y _{Ma}	92.74	-20.02	84.97	87.3	103
L _{Ma}	84.0	-78.98	73.94	108.2	137
C _{Ma}	87.14	-44.41	-13.11	46.32	196
V _{Ma}	35.47	64.92	-95.06	115.12	304
M _{Ma}	59.01	89.33	-55.67	105.26	328
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Regularity

$$g^*_{H,rel} = 22$$
$$g^*_{C,rel} = 40$$


NE460-7, 5 step scales for constant CIELAB hue 328/360 = 0.911 (left)

BAM-test chart NE46: Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Offset Reflective System ORS18

```
for hue  $h^* = lab^*h = 354/360 = 0.982$ 
```

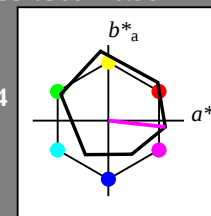
*lab*tch* and *lab*nch*

D65: hue M

LCH*Ma: 48 76 354

olv*Ma: 1.0 0.0 1.0

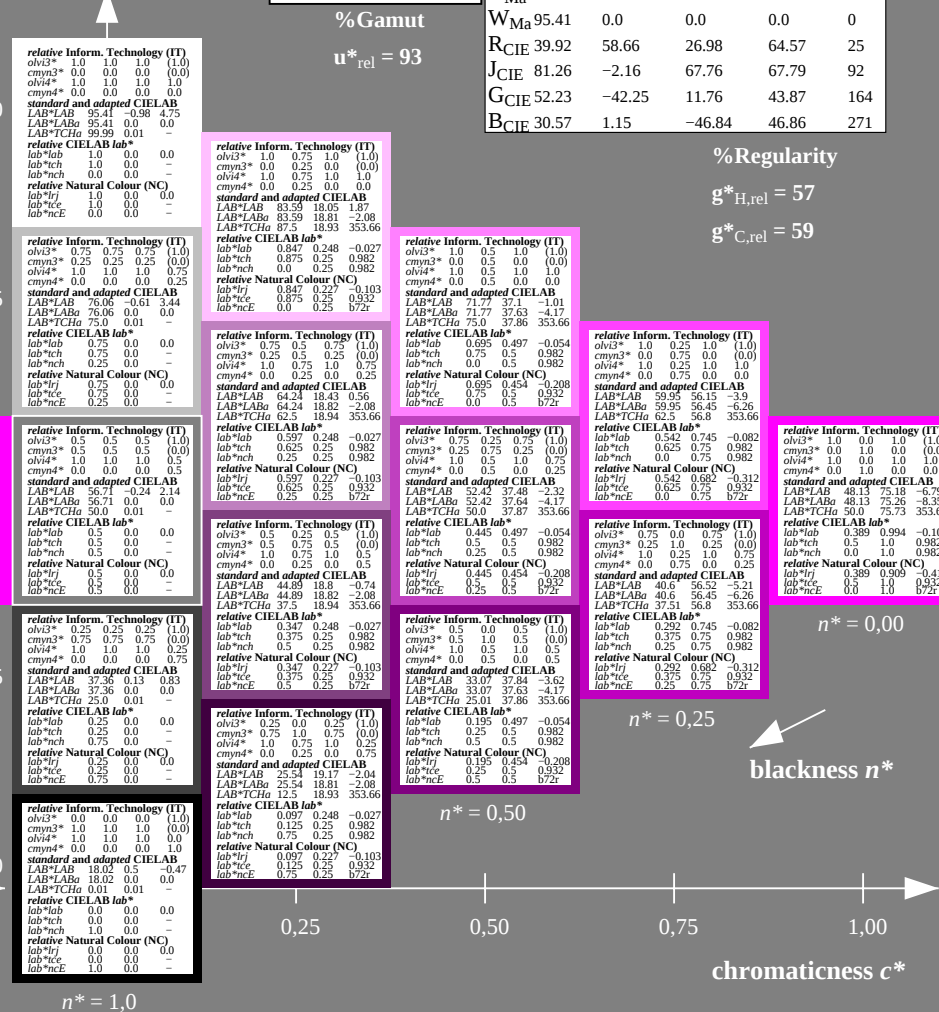
triangle lightness


$$\mathbf{u}_{rel}^* = 93$$

ORS18; adapted (a) CIELAB data

	$L^* = L_a^*$	a_a^*	b_a^*	$C_{ab,a}^*$	$h_{ab,a}^*$
O_{Ma}	47.94	65.39	50.52	82.63	38
Y_{Ma}	90.37	-10.26	91.75	92.32	96
L_{Ma}	50.9	-62.83	34.96	71.91	151
C_{Ma}	58.62	-30.34	-45.01	54.3	236
V_{Ma}	25.72	31.1	-44.4	54.22	305
M_{Ma}	48.13	75.28	-8.36	75.74	354
N_{Ma}	18.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.66	26.98	64.57	25
J_{CIE}	81.26	-2.16	67.76	67.79	92
G_{CIE}	52.23	-42.25	11.76	43.87	164
B_{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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


5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

```
input: olv* setrgbcolor
```

output: *Startup (S) data dependend*

Input: Colorimetric Television Luminous System TLS18

for hue $h^* = lab \cdot h = 25/360 = 0.071$

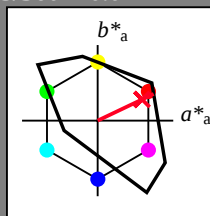
$lab \cdot tch$ and $lab \cdot nch$

D65: hue R

LCH*Ma: 54 82 25

olv*Ma: 1.0 0.0 0.14

triangle lightness



$u^*_{rel} = 118$

TLS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	52.76	71.63	49.88	87.29	35
Y _{Ma}	92.74	-20.02	84.97	87.3	103
L _{Ma}	84.0	-78.98	73.94	108.2	137
C _{Ma}	87.14	-44.41	-13.11	46.32	196
V _{Ma}	35.47	64.92	-95.06	115.12	304
M _{Ma}	59.01	89.33	-55.67	105.26	328
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 25/360 = 0.069$

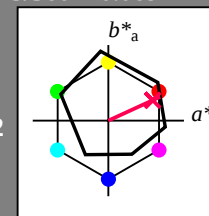
$lab \cdot tch$ and $lab \cdot nch$

D65: hue R

LCH*Ma: 48 75 25

olv*Ma: 1.0 0.0 0.32

triangle lightness



$u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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

NE460-7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)



BAM-test chart NE46; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

input: $olv^* \cdot setrgbcolor$

output: Startup (S) data dependend

Input: Colorimetric Television Luminous System TLS18

for hue $h^* = lab \cdot h = 92/360 = 0.256$

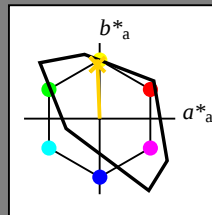
$lab \cdot tch$ and $lab \cdot nch$

D65: hue J

LCH*Ma: 85 79 92

olv*Ma: 1.0 0.82 0.0

triangle lightness



$u^*_{rel} = 118$

TLS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	52.76	71.63	49.88	87.29	35
Y _{Ma}	92.74	-20.02	84.97	87.3	103
L _{Ma}	84.0	-78.98	73.94	108.2	137
C _{Ma}	87.14	-44.41	-13.11	46.32	196
V _{Ma}	35.47	64.92	-95.06	115.12	304
M _{Ma}	59.01	89.33	-55.67	105.26	328
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 92/360 = 0.255$

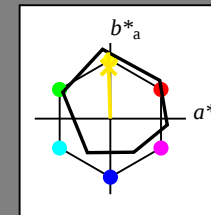
$lab \cdot tch$ and $lab \cdot nch$

D65: hue J

LCH*Ma: 86 88 92

olv*Ma: 1.0 0.9 0.0

triangle lightness



$u^*_{rel} = 93$

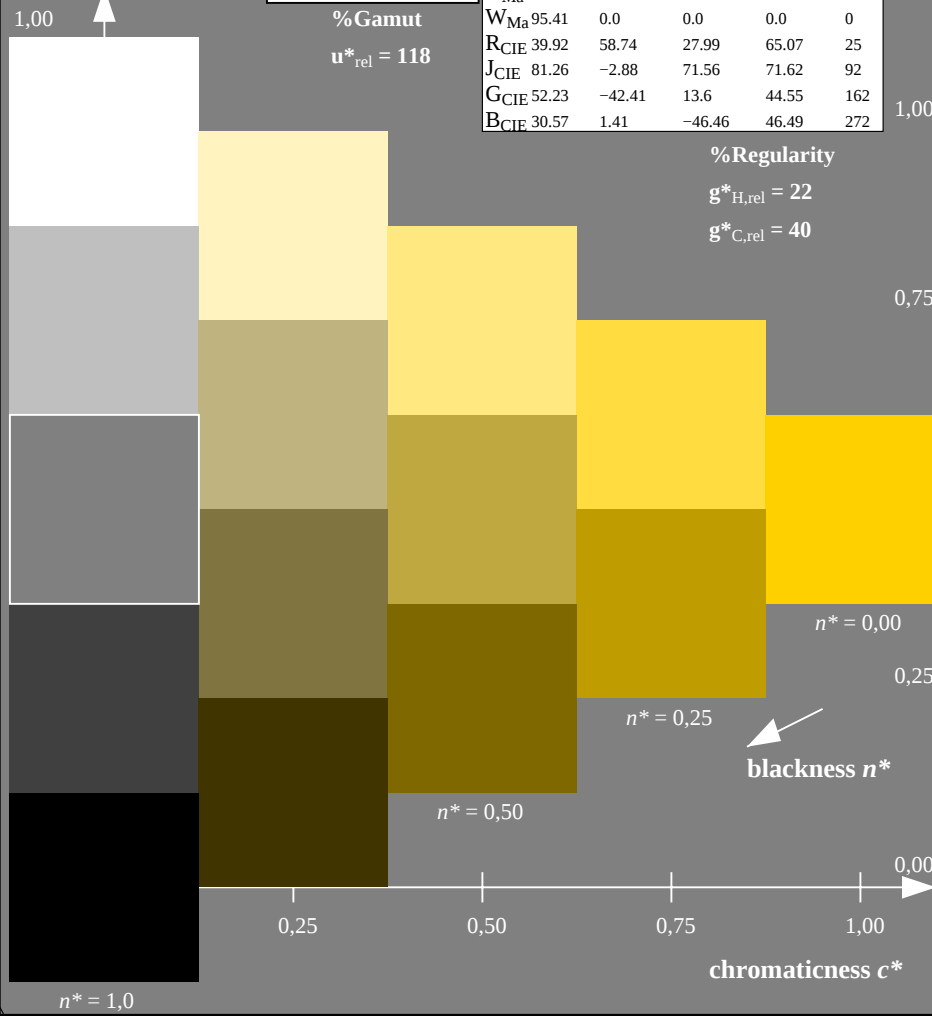
ORS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

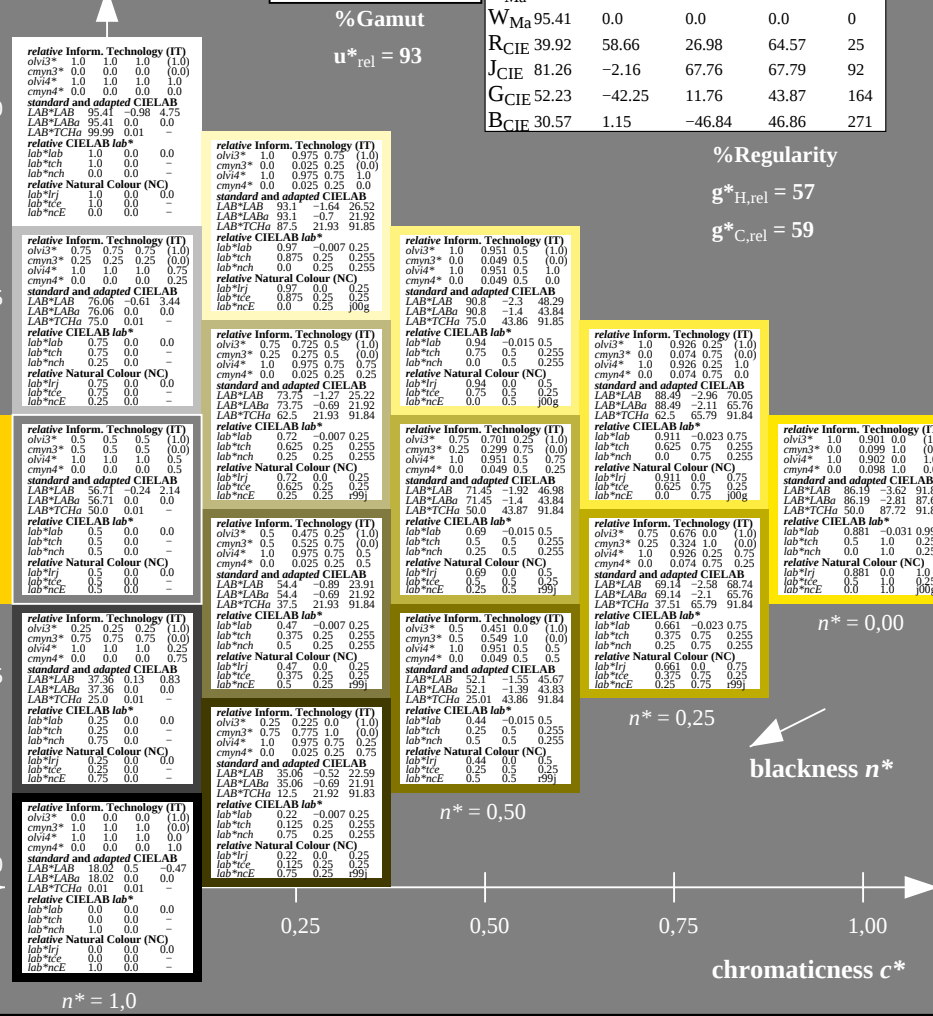
$g^*_{C,rel} = 59$



NE460-7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)



BAM-test chart NE46; Colorimetric systems ORS18 & ORS18
D65: 5 step colour scales and coordinate data for 10 hues



5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

input: $olv^* \cdot setrgbcolor$
output: *Startup (S) data dependend*

Input: Colorimetric Television Luminous System TLS18

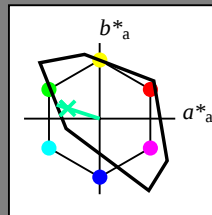
for hue $h^* = lab \cdot h = 162/360 = 0.451$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue G

LCH*Ma: 86 60 162

olv*Ma: 0.0 1.0 0.64

triangle lightness

 $u^*_{rel} = 118$

TLS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	52.76	71.63	49.88	87.29	35
Y _{Ma}	92.74	-20.02	84.97	87.3	103
L _{Ma}	84.0	-78.98	73.94	108.2	137
C _{Ma}	87.14	-44.41	-13.11	46.32	196
V _{Ma}	35.47	64.92	-95.06	115.12	304
M _{Ma}	59.01	89.33	-55.67	105.26	328
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

 $g^*_{H,rel} = 22$ $g^*_{C,rel} = 40$

1,00

0,75

0,50

0,25

0,00

0,00

0,00

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

NE460-7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)



BAM-test chart NE46; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Offset Reflective System ORS18

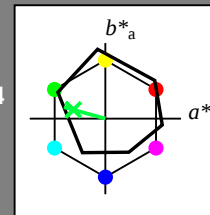
for hue $h^* = lab \cdot h = 164/360 = 0.457$ $lab \cdot tch$ and $lab \cdot nch$

D65: hue G

LCH*Ma: 53 57 164

olv*Ma: 0.0 1.0 0.25

triangle lightness

 $u^*_{rel} = 93$

ORS18; adapted (a) CIELAB data

	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	47.94	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

1,00

0,75

0,50

0,25

0,00

0,00

0,00

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

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

input: $olv^* \cdot setrgbcolor$

output: Startup (S) data dependend

Input: Colorimetric Television Luminous System TLS18

for hue $h^* = lab \cdot h = 272/360 = 0.755$

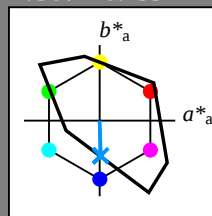
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 65 48 272

olv*Ma: 0.0 0.58 1.0

triangle lightness



TLS18; adapted (a) CIELAB data					
	$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	52.76	71.63	49.88	87.29	35
Y _{Ma}	92.74	-20.02	84.97	87.3	103
L _{Ma}	84.0	-78.98	73.94	108.2	137
C _{Ma}	87.14	-44.41	-13.11	46.32	196
V _{Ma}	35.47	64.92	-95.06	115.12	304
M _{Ma}	59.01	89.33	-55.67	105.26	328
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

%Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness c^*

NE460-7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)



BAM-test chart NE46; Colorimetric systems ORS18 & ORS18

D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab \cdot h = 271/360 = 0.754$

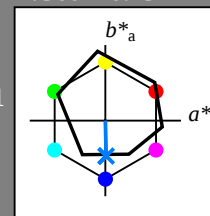
$lab \cdot tch$ and $lab \cdot nch$

D65: hue B

LCH*Ma: 42 45 271

olv*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	65.39	50.52	82.63	38
Y _{Ma}	90.37	-10.26	91.75	92.32	96
L _{Ma}	50.9	-62.83	34.96	71.91	151
C _{Ma}	58.62	-30.34	-45.01	54.3	236
V _{Ma}	25.72	31.1	-44.4	54.22	305
M _{Ma}	48.13	75.28	-8.36	75.74	354
N _{Ma}	18.01	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.66	26.98	64.57	25
J _{CIE}	81.26	-2.16	67.76	67.79	92
G _{CIE}	52.23	-42.25	11.76	43.87	164
B _{CIE}	30.57	1.15	-46.84	46.86	271

%Regularity

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

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

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness c^*

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

input: $olv^* \cdot setrgbcolor$

output: Startup (S) data dependend