

Input: Colorimetric Offset Reflective System ORS18

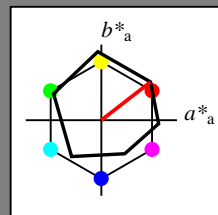
for hue  $h^* = lab^*h = 38/360 = 0.105$

$lab^*tch$  and  $lab^*nch$

D50: hue O

LCH\*Ma: 48 82 38

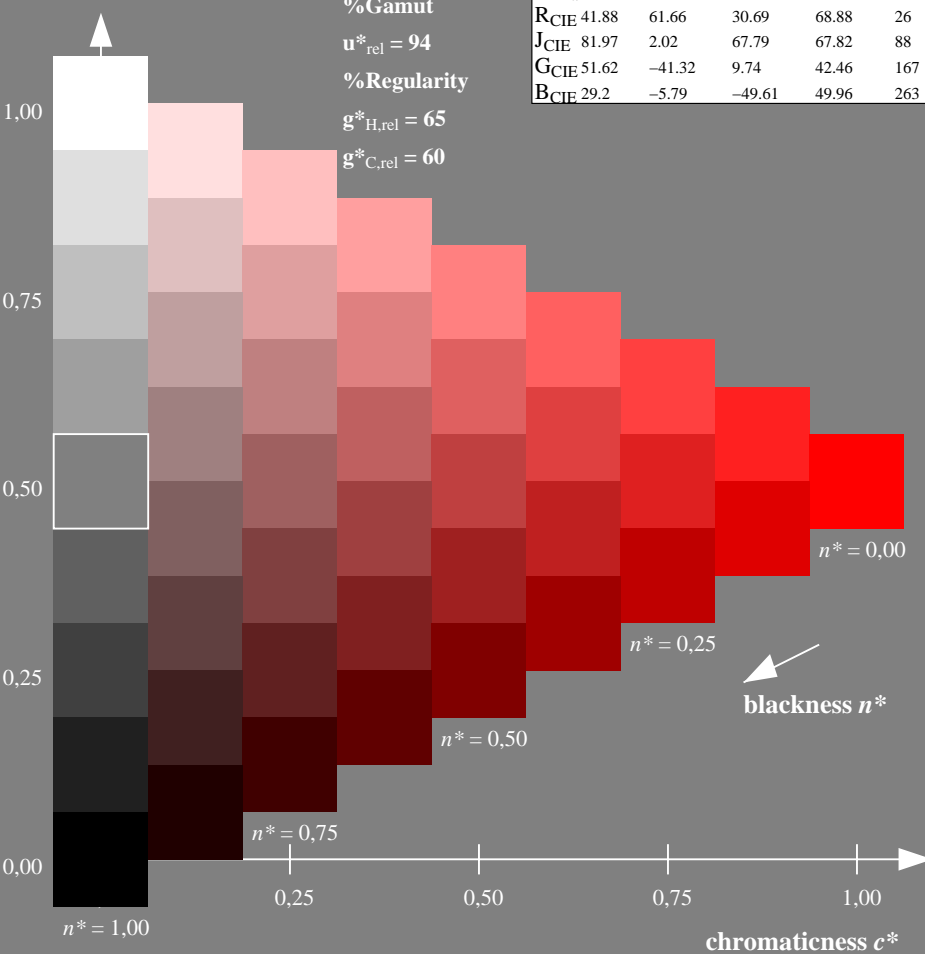
olv\*Ma: 1.0 0.0 0.0



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	65.05	50.54	82.38	38
Y <sub>Ma</sub>	91.0	-4.72	90.58	90.7	93
L <sub>Ma</sub>	50.9	-63.18	34.98	72.22	151
C <sub>Ma</sub>	56.99	-39.34	-48.1	62.16	231
V <sub>Ma</sub>	25.72	30.89	-44.4	54.09	305
M <sub>Ma</sub>	49.99	75.76	-4.64	75.9	356
N <sub>Ma</sub>	18.09	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.46	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	61.66	30.69	68.88	26
J <sub>CIE</sub>	81.97	2.02	67.79	67.82	88
G <sub>CIE</sub>	51.62	-41.32	9.74	42.46	167
B <sub>CIE</sub>	29.2	-5.79	-49.61	49.96	263

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 94$

%Regularity

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

$g^*_{C,rel} = 60$

Output: Colorimetric Television Luminous System TLS00

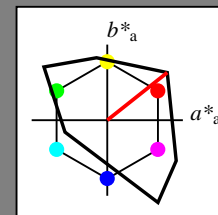
for hue  $h^* = lab^*h = 38/360 = 0.107$

$lab^*tch$  and  $lab^*nch$

D50: hue O

LCH\*Ma: 54 101 38

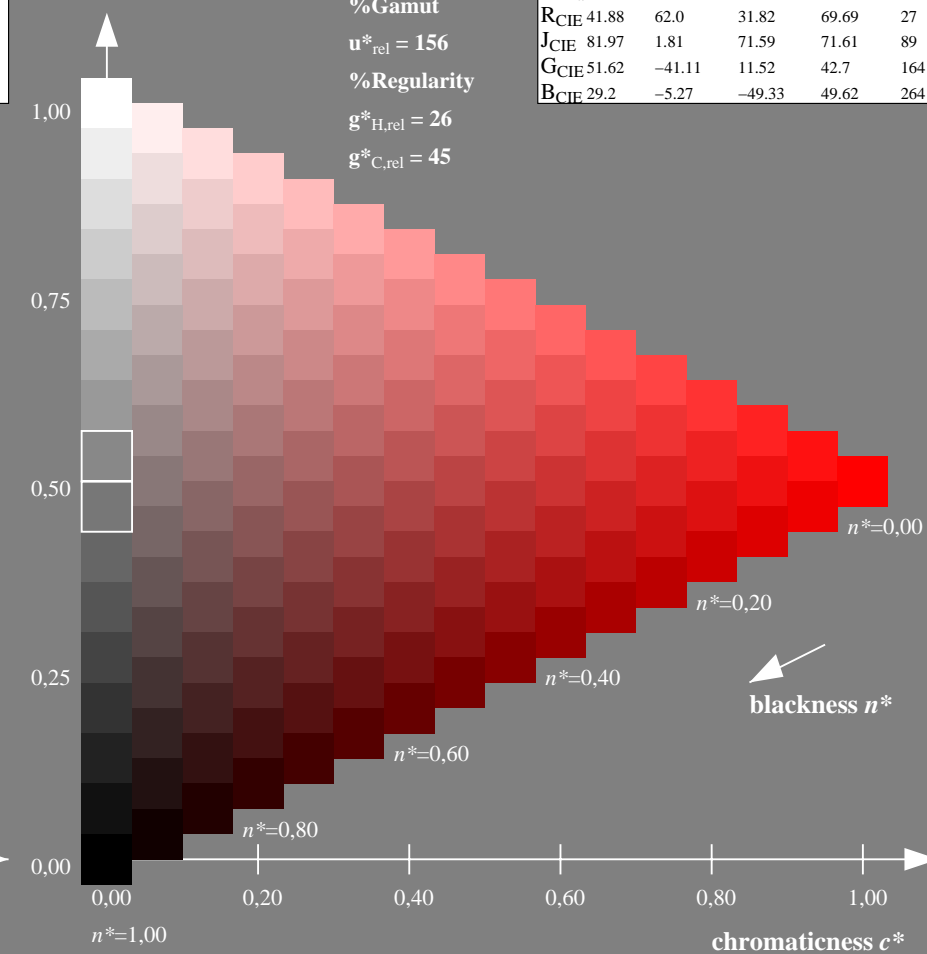
olv\*Ma: 1.0 0.0 0.0



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	54.19	79.36	63.0	101.33	38
Y <sub>Ma</sub>	93.44	-14.18	82.59	83.8	100
L <sub>Ma</sub>	82.82	-83.73	70.41	109.41	140
C <sub>Ma</sub>	85.22	-55.9	-15.78	58.1	196
V <sub>Ma</sub>	25.61	67.05	-108.87	127.87	302
M <sub>Ma</sub>	58.76	91.18	-53.69	105.82	330
N <sub>Ma</sub>	0.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	62.0	31.82	69.69	27
J <sub>CIE</sub>	81.97	1.81	71.59	71.61	89
G <sub>CIE</sub>	51.62	-41.11	11.52	42.7	164
B <sub>CIE</sub>	29.2	-5.27	-49.33	49.62	264

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

PE900-7, 9 step scales for constant CIELAB hue 38/360 = 0.105 (left)

16 step scales for constant CIELAB hue 38/360 = 0.107 (right)

BAM-test chart PE90; Colorimetric systems ORS18 & TLS00  
 D50: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor  
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/PE90/>  
 Technical information: <http://www.ps.bam.de>  
 Version 2.1, io=1,1

BAM registration: 20060101-PE90/10L/L90E00NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems  
 /PE90 Form: 1/10, Serie: 1/1, Page: 1 Page count: 1

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 93/360 = 0.258$

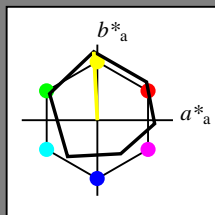
$lab^*tch$  and  $lab^*nch$

D50: hue Y

LCH\*Ma: 91 91 93

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 94$

%Regularity

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

$g^*_{C,rel} = 60$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	65.05	50.54	82.38	38
Y <sub>Ma</sub>	91.0	-4.72	90.58	90.7	93
L <sub>Ma</sub>	50.9	-63.18	34.98	72.22	151
C <sub>Ma</sub>	56.99	-39.34	-48.1	62.16	231
V <sub>Ma</sub>	25.72	30.89	-44.4	54.09	305
M <sub>Ma</sub>	49.99	75.76	-4.64	75.9	356
N <sub>Ma</sub>	18.09	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.46	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	61.66	30.69	68.88	26
J <sub>CIE</sub>	81.97	2.02	67.79	67.82	88
G <sub>CIE</sub>	51.62	-41.32	9.74	42.46	167
B <sub>CIE</sub>	29.2	-5.79	-49.61	49.96	263

Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 100/360 = 0.277$

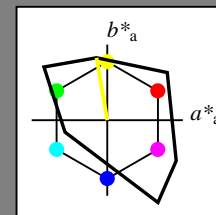
$lab^*tch$  and  $lab^*nch$

D50: hue Y

LCH\*Ma: 93 84 100

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 156$

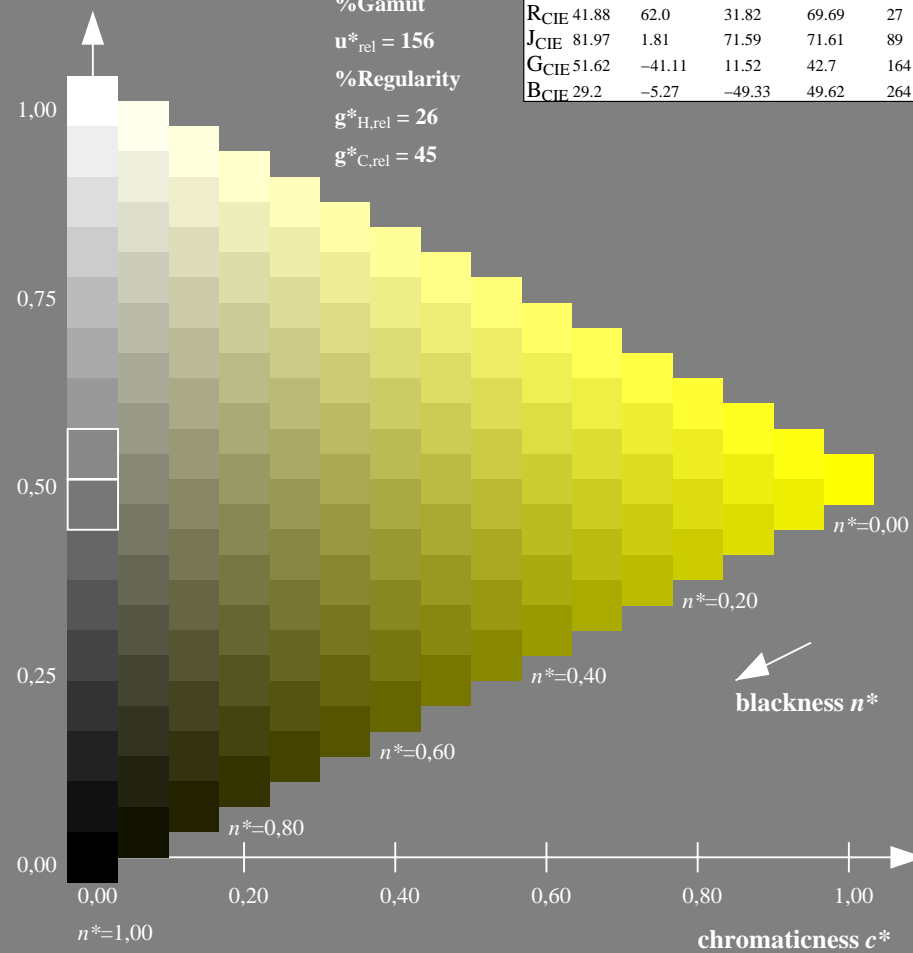
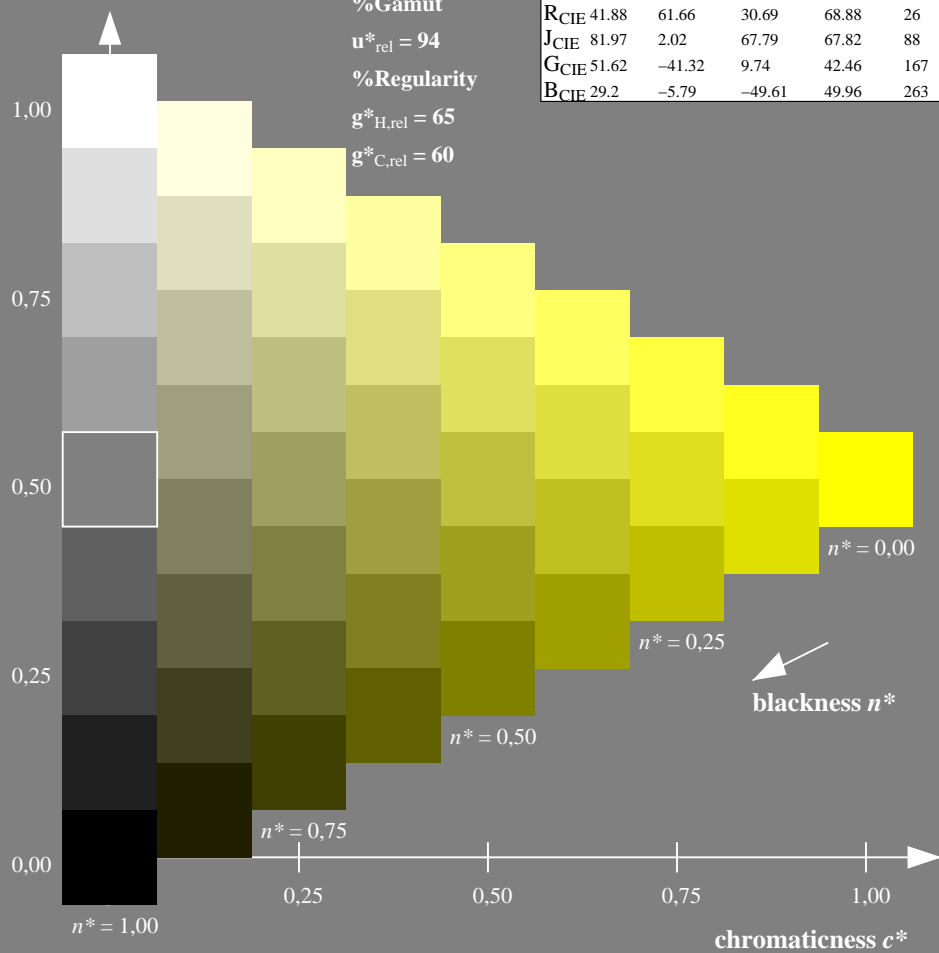
%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	54.19	79.36	63.0	101.33	38
Y <sub>Ma</sub>	93.44	-14.18	82.59	83.8	100
L <sub>Ma</sub>	82.82	-83.73	70.41	109.41	140
C <sub>Ma</sub>	85.22	-55.9	-15.78	58.1	196
V <sub>Ma</sub>	25.61	67.05	-108.87	127.87	302
M <sub>Ma</sub>	58.76	91.18	-53.69	105.82	330
N <sub>Ma</sub>	0.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	62.0	31.82	69.69	27
J <sub>CIE</sub>	81.97	1.81	71.59	71.61	89
G <sub>CIE</sub>	51.62	-41.11	11.52	42.7	164
B <sub>CIE</sub>	29.2	-5.27	-49.33	49.62	264



PE900-7, 9 step scales for constant CIELAB hue 93/360 = 0.258 (left)

16 step scales for constant CIELAB hue 100/360 = 0.277 (right)

BAM-test chart PE90; Colorimetric systems ORS18 & TLS00

D50: 9 and 16 step colour scales for 10 hues

input: *olv\* setrgbcolor*

output: *no change compared to input*

See for similar files: <http://www.ps.bam.de/PE90/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1

BAM registration: 20060101-PE90/10L/L90E01NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems  
 /PE90 Form: 2/10, Serie: 1/1, Page: 2 Page count: 2

Input: Colorimetric Offset Reflective System ORS18

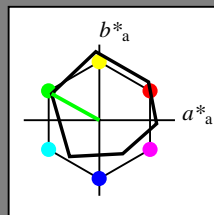
for hue  $h^* = lab^*h = 151/360 = 0.42$

$lab^*tch$  and  $lab^*nch$

D50: hue L

LCH\*Ma: 51 72 151

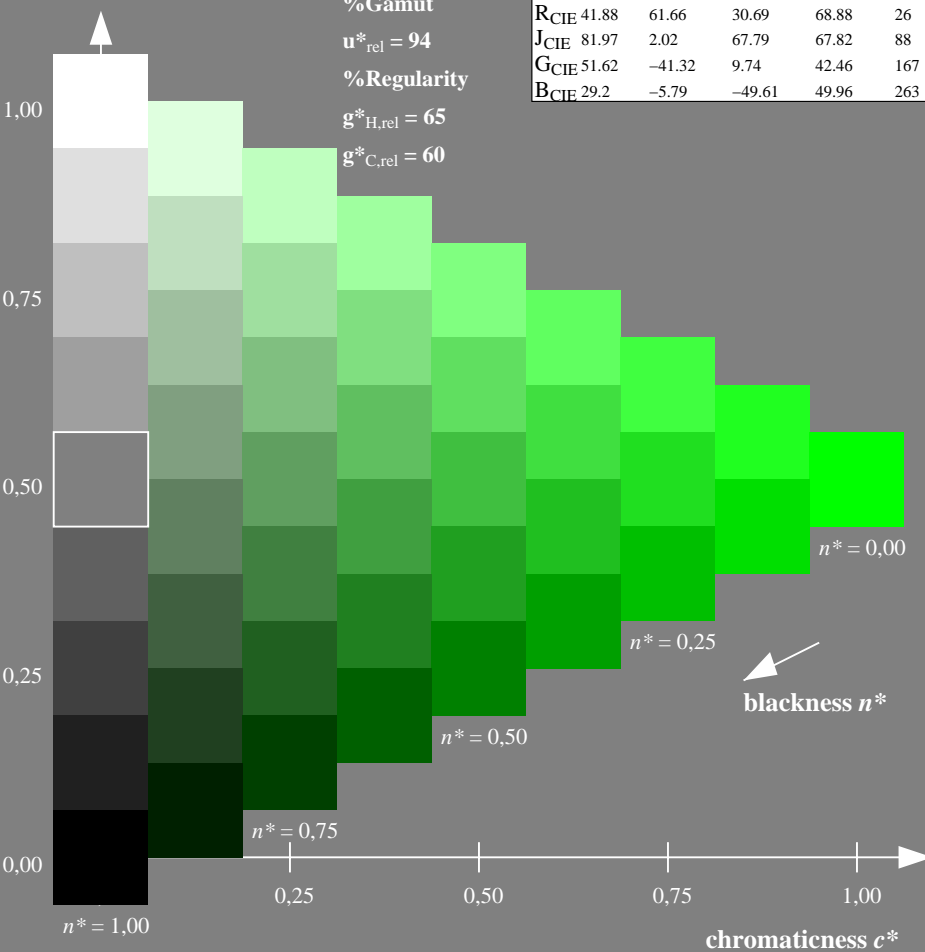
olv\*Ma: 0.0 1.0 0.0



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	65.05	50.54	82.38	38
Y <sub>Ma</sub>	91.0	-4.72	90.58	90.7	93
L <sub>Ma</sub>	50.9	-63.18	34.98	72.22	151
C <sub>Ma</sub>	56.99	-39.34	-48.1	62.16	231
V <sub>Ma</sub>	25.72	30.89	-44.4	54.09	305
M <sub>Ma</sub>	49.99	75.76	-4.64	75.9	356
N <sub>Ma</sub>	18.09	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.46	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	61.66	30.69	68.88	26
J <sub>CIE</sub>	81.97	2.02	67.79	67.82	88
G <sub>CIE</sub>	51.62	-41.32	9.74	42.46	167
B <sub>CIE</sub>	29.2	-5.79	-49.61	49.96	263

triangle lightness  $t^*$



Output: Colorimetric Television Luminous System TLS00

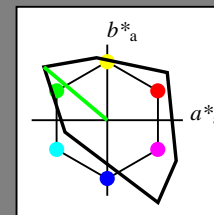
for hue  $h^* = lab^*h = 140/360 = 0.389$

$lab^*tch$  and  $lab^*nch$

D50: hue L

LCH\*Ma: 83 109 140

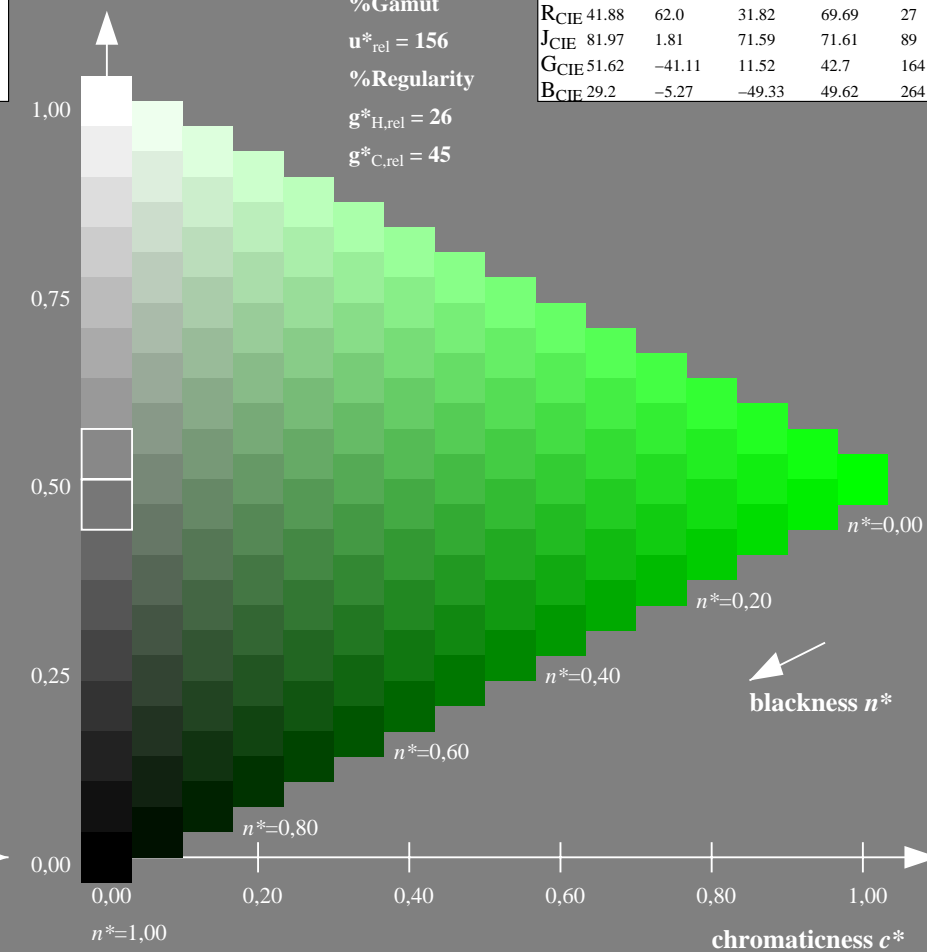
olv\*Ma: 0.0 1.0 0.0



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	54.19	79.36	63.0	101.33	38
Y <sub>Ma</sub>	93.44	-14.18	82.59	83.8	100
L <sub>Ma</sub>	82.82	-83.73	70.41	109.41	140
C <sub>Ma</sub>	85.22	-55.9	-15.78	58.1	196
V <sub>Ma</sub>	25.61	67.05	-108.87	127.87	302
M <sub>Ma</sub>	58.76	91.18	-53.69	105.82	330
N <sub>Ma</sub>	0.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	62.0	31.82	69.69	27
J <sub>CIE</sub>	81.97	1.81	71.59	71.61	89
G <sub>CIE</sub>	51.62	-41.11	11.52	42.7	164
B <sub>CIE</sub>	29.2	-5.27	-49.33	49.62	264

triangle lightness  $t^*$



PE900-7, 9 step scales for constant CIELAB hue 151/360 = 0.42 (left)

16 step scales for constant CIELAB hue 140/360 = 0.389 (right)

BAM-test chart PE90; Colorimetric systems ORS18 & TLS00  
 D50: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor  
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/PE90/>  
 Technical information: <http://www.ps.bam.de>  
 Version 2.1, io=1,1

BAM registration: 20060101-PE90/10L/L90E02NP.PS/.PDF BAM material: code=rh4ta  
 application for evaluation and measurement of printer or monitor systems  
 /PE90 Form: 3/10, Serie: 1/1, Page: 3 Page count: 3

Input: Colorimetric Offset Reflective System ORS18

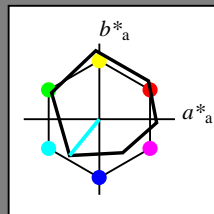
for hue  $h^* = lab^*h = 231/360 = 0.641$

$lab^*tch$  and  $lab^*nch$

D50: hue C

LCH\*Ma: 57 62 231

olv\*Ma: 0.0 1.0 1.0



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	65.05	50.54	82.38	38
Y <sub>Ma</sub>	91.0	-4.72	90.58	90.7	93
L <sub>Ma</sub>	50.9	-63.18	34.98	72.22	151
C <sub>Ma</sub>	56.99	-39.34	-48.1	62.16	231
V <sub>Ma</sub>	25.72	30.89	-44.4	54.09	305
M <sub>Ma</sub>	49.99	75.76	-4.64	75.9	356
N <sub>Ma</sub>	18.09	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.46	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	61.66	30.69	68.88	26
J <sub>CIE</sub>	81.97	2.02	67.79	67.82	88
G <sub>CIE</sub>	51.62	-41.32	9.74	42.46	167
B <sub>CIE</sub>	29.2	-5.79	-49.61	49.96	263

%Gamut

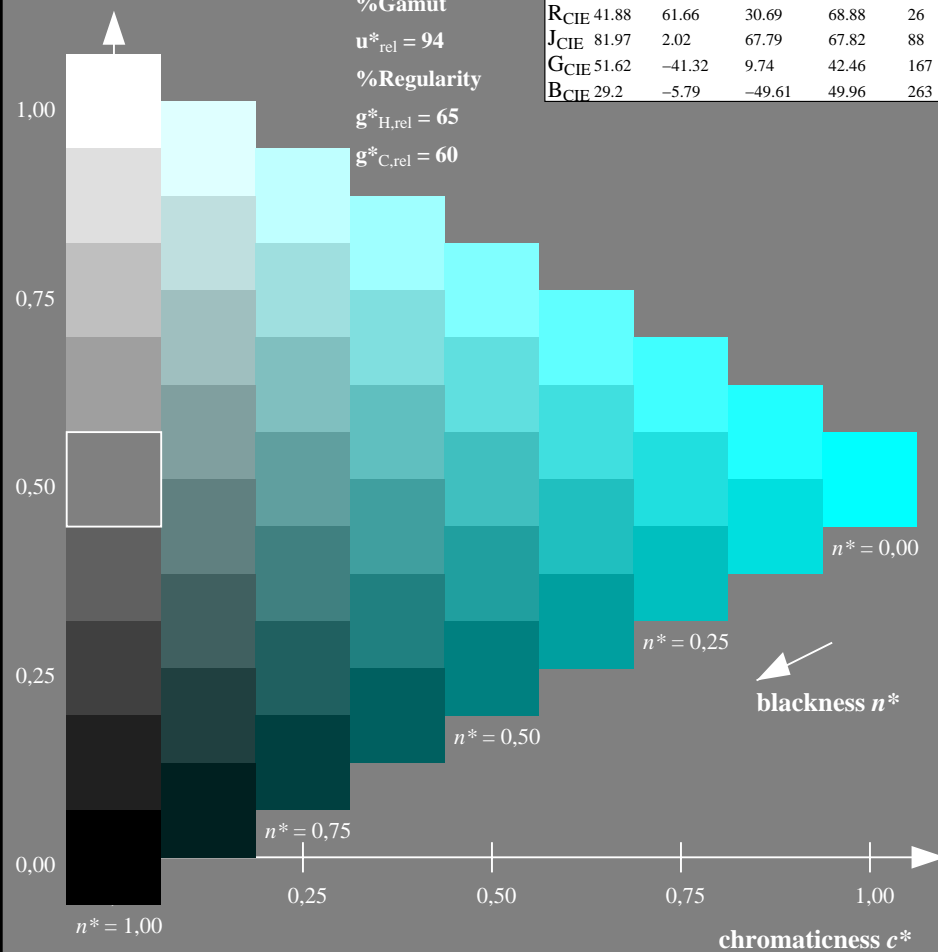
$u^*_{rel} = 94$

%Regularity

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

$g^*_{C,rel} = 60$

triangle lightness  $t^*$



Output: Colorimetric Television Luminous System TLS00

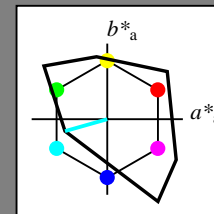
for hue  $h^* = lab^*h = 196/360 = 0.544$

$lab^*tch$  and  $lab^*nch$

D50: hue C

LCH\*Ma: 85 58 196

olv\*Ma: 0.0 1.0 1.0



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	54.19	79.36	63.0	101.33	38
Y <sub>Ma</sub>	93.44	-14.18	82.59	83.8	100
L <sub>Ma</sub>	82.82	-83.73	70.41	109.41	140
C <sub>Ma</sub>	85.22	-55.9	-15.78	58.1	196
V <sub>Ma</sub>	25.61	67.05	-108.87	127.87	302
M <sub>Ma</sub>	58.76	91.18	-53.69	105.82	330
N <sub>Ma</sub>	0.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	62.0	31.82	69.69	27
J <sub>CIE</sub>	81.97	1.81	71.59	71.61	89
G <sub>CIE</sub>	51.62	-41.11	11.52	42.7	164
B <sub>CIE</sub>	29.2	-5.27	-49.33	49.62	264

%Gamut

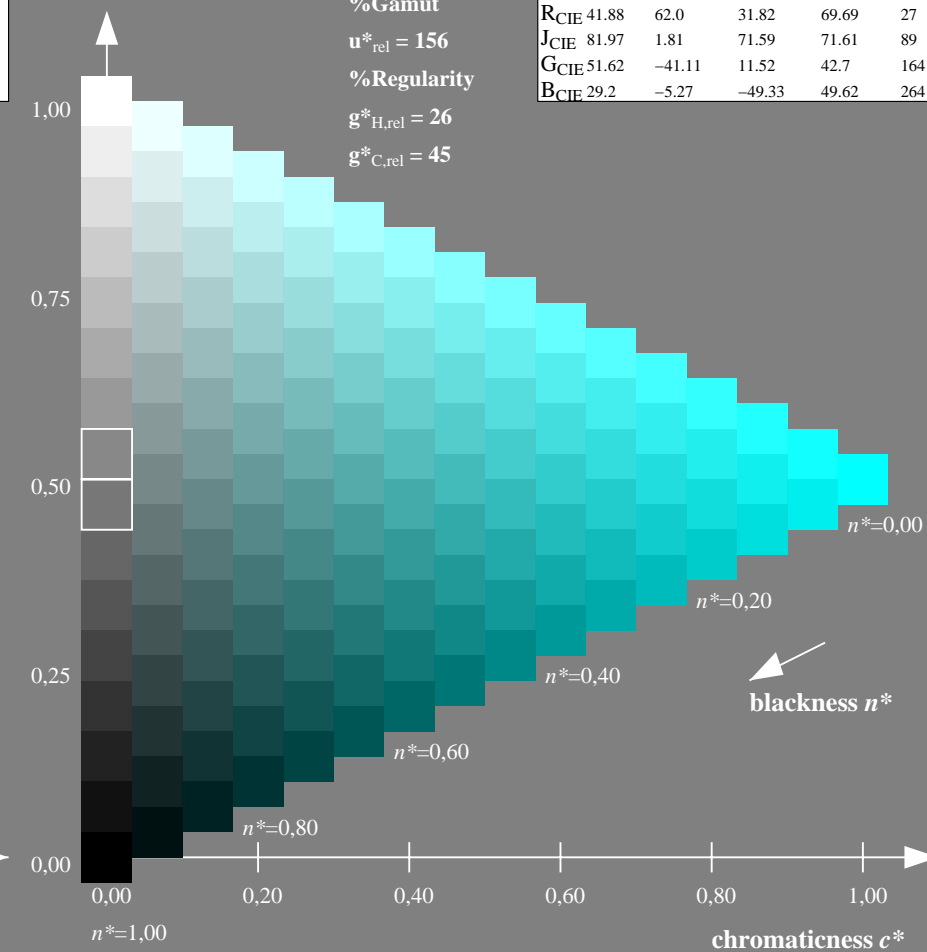
$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

triangle lightness  $t^*$



PE900-7, 9 step scales for constant CIELAB hue 231/360 = 0.641 (left)

16 step scales for constant CIELAB hue 196/360 = 0.544 (right)

BAM-test chart PE90; Colorimetric systems ORS18 & TLS00

D50: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

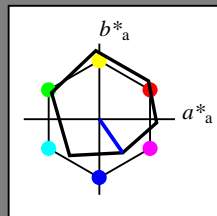
for hue  $h^* = lab^*h = 305/360 = 0.847$

$lab^*tch$  and  $lab^*nch$

D50: hue V

LCH\*Ma: 26 54 305

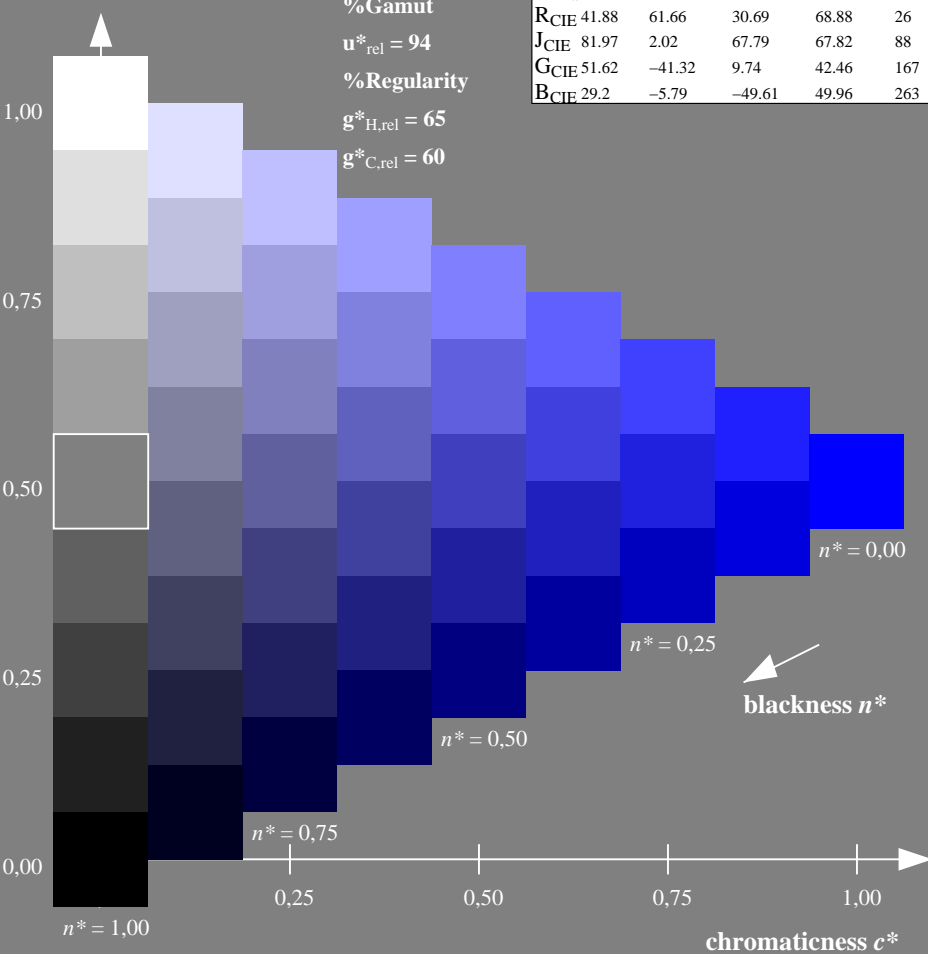
olv\*Ma: 0.0 0.0 1.0



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	65.05	50.54	82.38	38
Y <sub>Ma</sub>	91.0	-4.72	90.58	90.7	93
L <sub>Ma</sub>	50.9	-63.18	34.98	72.22	151
C <sub>Ma</sub>	56.99	-39.34	-48.1	62.16	231
V <sub>Ma</sub>	25.72	30.89	-44.4	54.09	305
M <sub>Ma</sub>	49.99	75.76	-4.64	75.9	356
N <sub>Ma</sub>	18.09	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.46	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	61.66	30.69	68.88	26
J <sub>CIE</sub>	81.97	2.02	67.79	67.82	88
G <sub>CIE</sub>	51.62	-41.32	9.74	42.46	167
B <sub>CIE</sub>	29.2	-5.79	-49.61	49.96	263

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 94$

%Regularity

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

$g^*_{C,rel} = 60$

blackness  $n^*$

Output: Colorimetric Television Luminous System TLS00

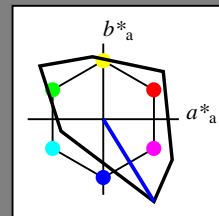
for hue  $h^* = lab^*h = 302/360 = 0.838$

$lab^*tch$  and  $lab^*nch$

D50: hue V

LCH\*Ma: 26 128 302

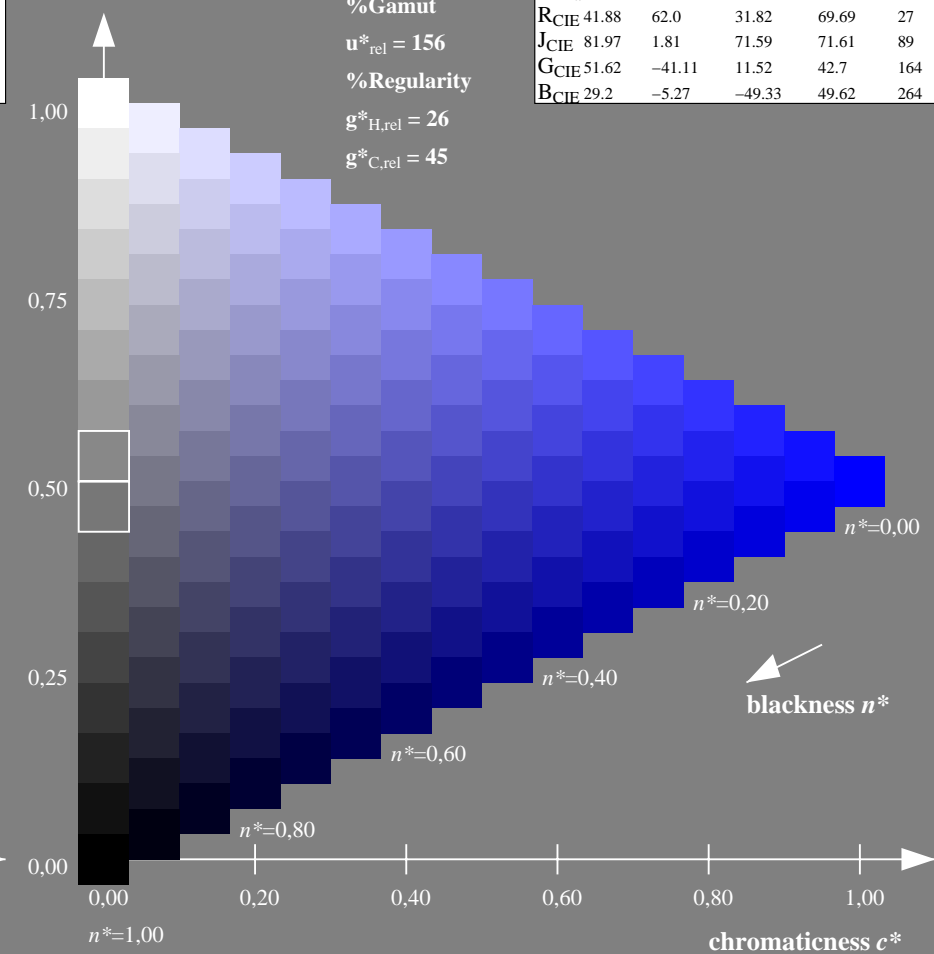
olv\*Ma: 0.0 0.0 1.0



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	54.19	79.36	63.0	101.33	38
Y <sub>Ma</sub>	93.44	-14.18	82.59	83.8	100
L <sub>Ma</sub>	82.82	-83.73	70.41	109.41	140
C <sub>Ma</sub>	85.22	-55.9	-15.78	58.1	196
V <sub>Ma</sub>	25.61	67.05	-108.87	127.87	302
M <sub>Ma</sub>	58.76	91.18	-53.69	105.82	330
N <sub>Ma</sub>	0.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	62.0	31.82	69.69	27
J <sub>CIE</sub>	81.97	1.81	71.59	71.61	89
G <sub>CIE</sub>	51.62	-41.11	11.52	42.7	164
B <sub>CIE</sub>	29.2	-5.27	-49.33	49.62	264

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

blackness  $n^*$

PE900-7, 9 step scales for constant CIELAB hue 305/360 = 0.847 (left)

16 step scales for constant CIELAB hue 302/360 = 0.838 (right)

BAM-test chart PE90; Colorimetric systems ORS18 & TLS00

D50: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: no change compared to input

See for similar files: <http://www.ps.bam.de/PE90/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1

BAM registration: 20060101-PE90/10L/L90E04NP.PS/.PDF BAM material: code=rh4ta  
 application for evaluation and measurement of printer or monitor systems  
 /PE90 Form: 5/10, Serie: 1/1, Page: 5 Page count: 5

Input: Colorimetric Offset Reflective System ORS18

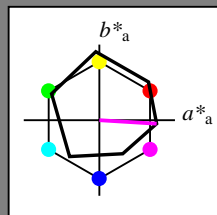
for hue  $h^* = lab^*h = 356/360 = 0.99$

$lab^*tch$  and  $lab^*nch$

D50: hue M

LCH\*Ma: 50 76 356

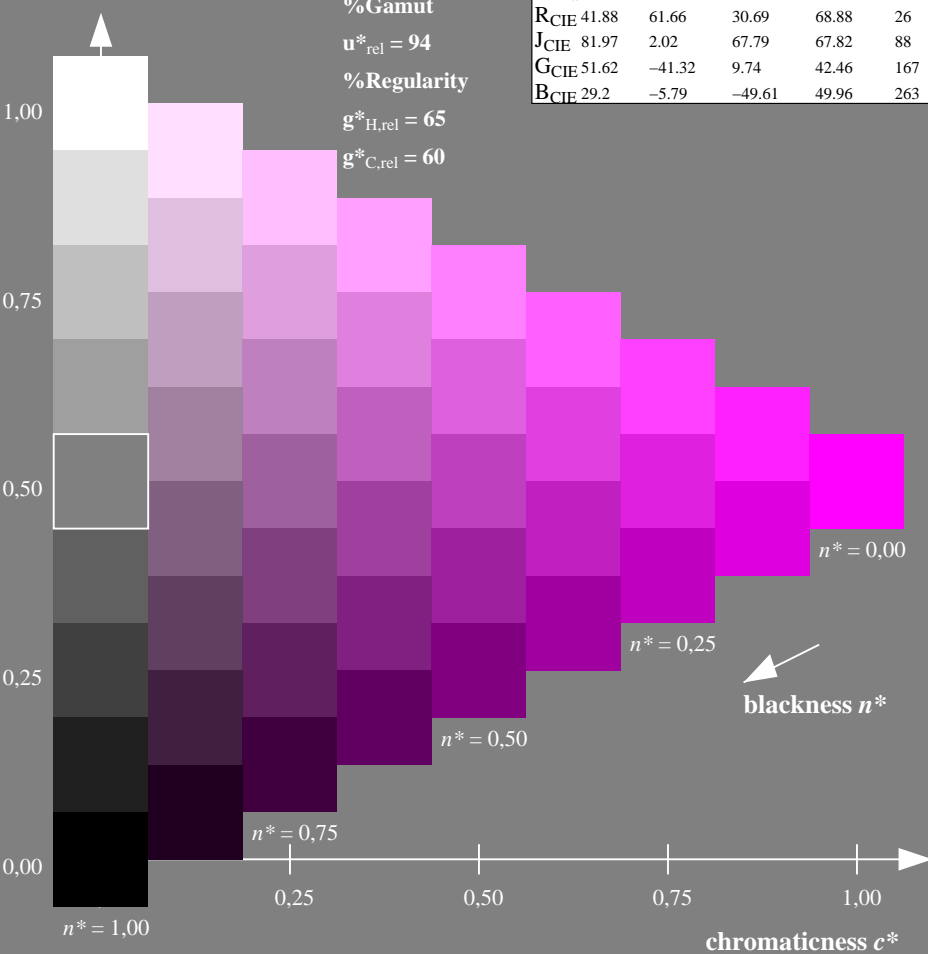
olv\*Ma: 1.0 0.0 1.0



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	65.05	50.54	82.38	38
Y <sub>Ma</sub>	91.0	-4.72	90.58	90.7	93
L <sub>Ma</sub>	50.9	-63.18	34.98	72.22	151
C <sub>Ma</sub>	56.99	-39.34	-48.1	62.16	231
V <sub>Ma</sub>	25.72	30.89	-44.4	54.09	305
M <sub>Ma</sub>	49.99	75.76	-4.64	75.9	356
N <sub>Ma</sub>	18.09	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.46	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	61.66	30.69	68.88	26
J <sub>CIE</sub>	81.97	2.02	67.79	67.82	88
G <sub>CIE</sub>	51.62	-41.32	9.74	42.46	167
B <sub>CIE</sub>	29.2	-5.79	-49.61	49.96	263

triangle lightness  $t^*$



Output: Colorimetric Television Luminous System TLS00

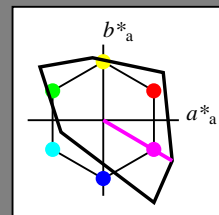
for hue  $h^* = lab^*h = 330/360 = 0.915$

$lab^*tch$  and  $lab^*nch$

D50: hue M

LCH\*Ma: 59 106 330

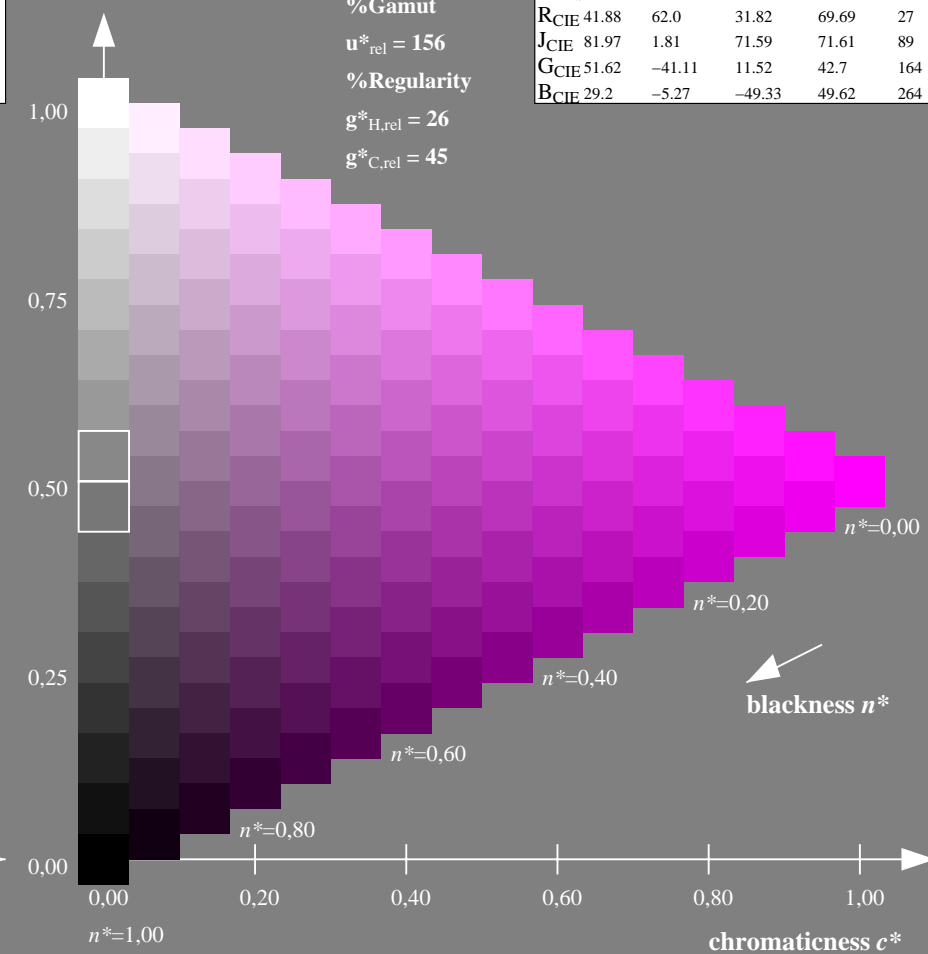
olv\*Ma: 1.0 0.0 1.0



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	54.19	79.36	63.0	101.33	38
Y <sub>Ma</sub>	93.44	-14.18	82.59	83.8	100
L <sub>Ma</sub>	82.82	-83.73	70.41	109.41	140
C <sub>Ma</sub>	85.22	-55.9	-15.78	58.1	196
V <sub>Ma</sub>	25.61	67.05	-108.87	127.87	302
M <sub>Ma</sub>	58.76	91.18	-53.69	105.82	330
N <sub>Ma</sub>	0.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	62.0	31.82	69.69	27
J <sub>CIE</sub>	81.97	1.81	71.59	71.61	89
G <sub>CIE</sub>	51.62	-41.11	11.52	42.7	164
B <sub>CIE</sub>	29.2	-5.27	-49.33	49.62	264

triangle lightness  $t^*$



PE900-7, 9 step scales for constant CIELAB hue 356/360 = 0.99 (left)

16 step scales for constant CIELAB hue 330/360 = 0.915 (right)

BAM-test chart PE90; Colorimetric systems ORS18 & TLS00  
 D50: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor  
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/PE90/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1

BAM registration: 20060101-PE90/10L/L90E05NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems  
 /PE90 Form: 6/10, Serie: 1/1, Page: 6 Page count: 6

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 26/360 = 0.074$

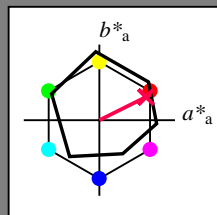
$lab^*tch$  and  $lab^*nch$

D50: hue R

LCH\*Ma: 49 76 26

olv\*Ma: 1.0 0.0 0.3

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 94$

%Regularity

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

$g^*_{C,rel} = 60$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	65.05	50.54	82.38	38
Y <sub>Ma</sub>	91.0	-4.72	90.58	90.7	93
L <sub>Ma</sub>	50.9	-63.18	34.98	72.22	151
C <sub>Ma</sub>	56.99	-39.34	-48.1	62.16	231
V <sub>Ma</sub>	25.72	30.89	-44.4	54.09	305
M <sub>Ma</sub>	49.99	75.76	-4.64	75.9	356
N <sub>Ma</sub>	18.09	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.46	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	61.66	30.69	68.88	26
J <sub>CIE</sub>	81.97	2.02	67.79	67.82	88
G <sub>CIE</sub>	51.62	-41.32	9.74	42.46	167
B <sub>CIE</sub>	29.2	-5.79	-49.61	49.96	263

Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 27/360 = 0.075$

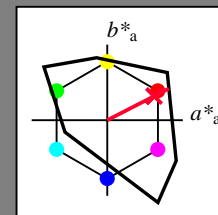
$lab^*tch$  and  $lab^*nch$

D50: hue R

LCH\*Ma: 55 92 27

olv\*Ma: 1.0 0.0 0.18

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 156$

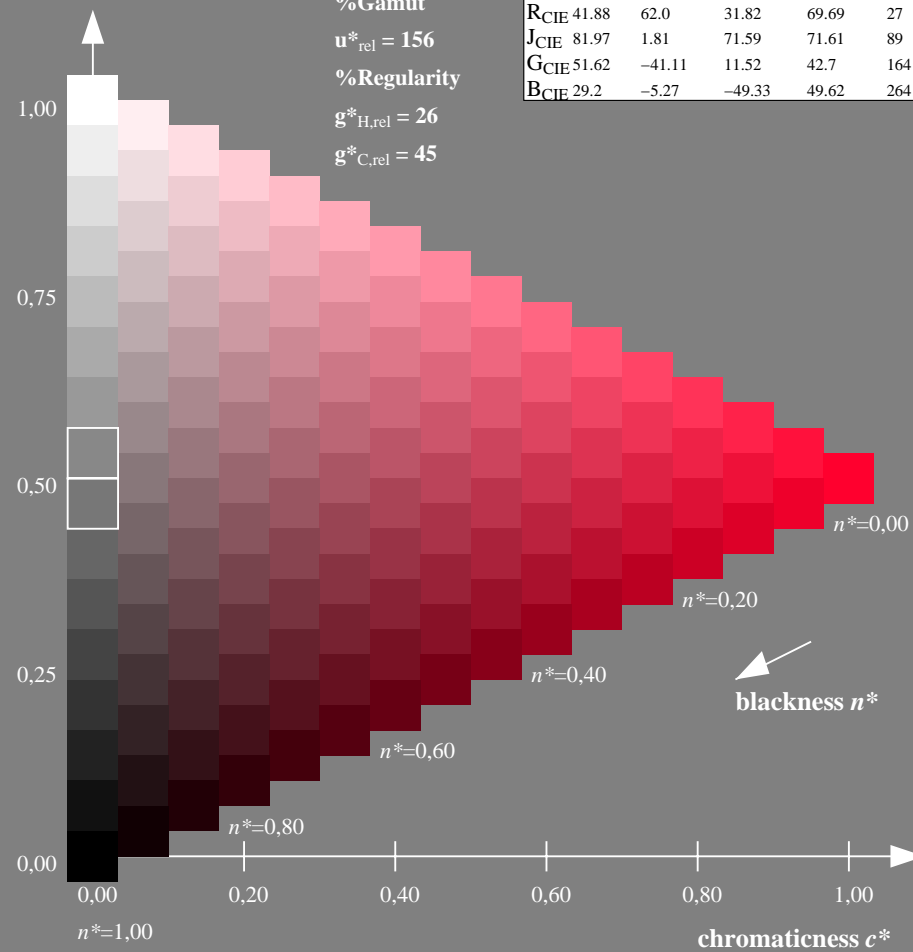
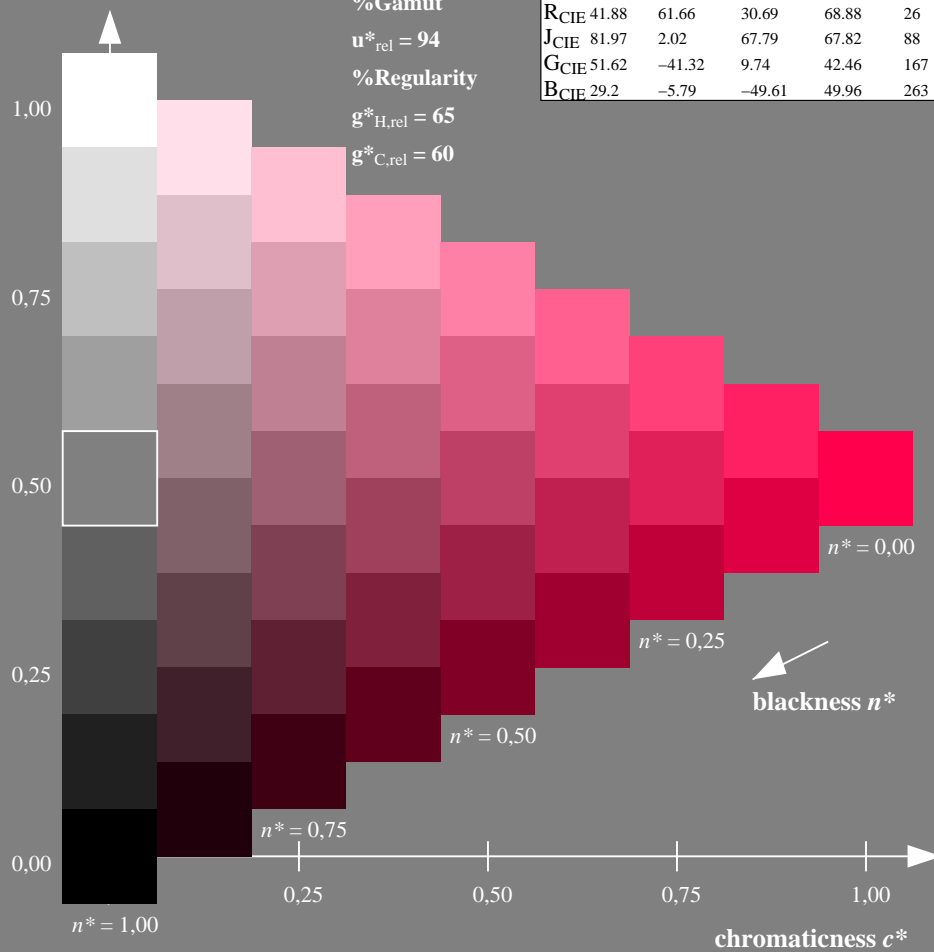
%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	54.19	79.36	63.0	101.33	38
Y <sub>Ma</sub>	93.44	-14.18	82.59	83.8	100
L <sub>Ma</sub>	82.82	-83.73	70.41	109.41	140
C <sub>Ma</sub>	85.22	-55.9	-15.78	58.1	196
V <sub>Ma</sub>	25.61	67.05	-108.87	127.87	302
M <sub>Ma</sub>	58.76	91.18	-53.69	105.82	330
N <sub>Ma</sub>	0.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	62.0	31.82	69.69	27
J <sub>CIE</sub>	81.97	1.81	71.59	71.61	89
G <sub>CIE</sub>	51.62	-41.11	11.52	42.7	164
B <sub>CIE</sub>	29.2	-5.27	-49.33	49.62	264



PE900-7, 9 step scales for constant CIELAB hue 26/360 = 0.074 (left)

16 step scales for constant CIELAB hue 27/360 = 0.075 (right)

BAM-test chart PE90; Colorimetric systems ORS18 & TLS00

input: *olv\* setrgbcolor*

D50: 9 and 16 step colour scales for 10 hues

output: *no change compared to input*

See for similar files: <http://www.ps.bam.de/PE90/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1

BAM registration: 20060101-PE90/10L/L90E06NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems  
 /PE90 Form: 7/10, Serie: 1/1, Page: 7 Page count: 7

Input: Colorimetric Offset Reflective System ORS18

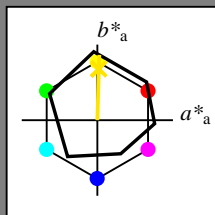
for hue  $h^* = lab^*h = 88/360 = 0.245$

$lab^*tch$  and  $lab^*nch$

D50: hue J

LCH\*Ma: 86 86 88

olv\*Ma: 1.0 0.9 0.0



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	65.05	50.54	82.38	38
Y <sub>Ma</sub>	91.0	-4.72	90.58	90.7	93
L <sub>Ma</sub>	50.9	-63.18	34.98	72.22	151
C <sub>Ma</sub>	56.99	-39.34	-48.1	62.16	231
V <sub>Ma</sub>	25.72	30.89	-44.4	54.09	305
M <sub>Ma</sub>	49.99	75.76	-4.64	75.9	356
N <sub>Ma</sub>	18.09	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.46	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	61.66	30.69	68.88	26
J <sub>CIE</sub>	81.97	2.02	67.79	67.82	88
G <sub>CIE</sub>	51.62	-41.32	9.74	42.46	167
B <sub>CIE</sub>	29.2	-5.79	-49.61	49.96	263

%Gamut

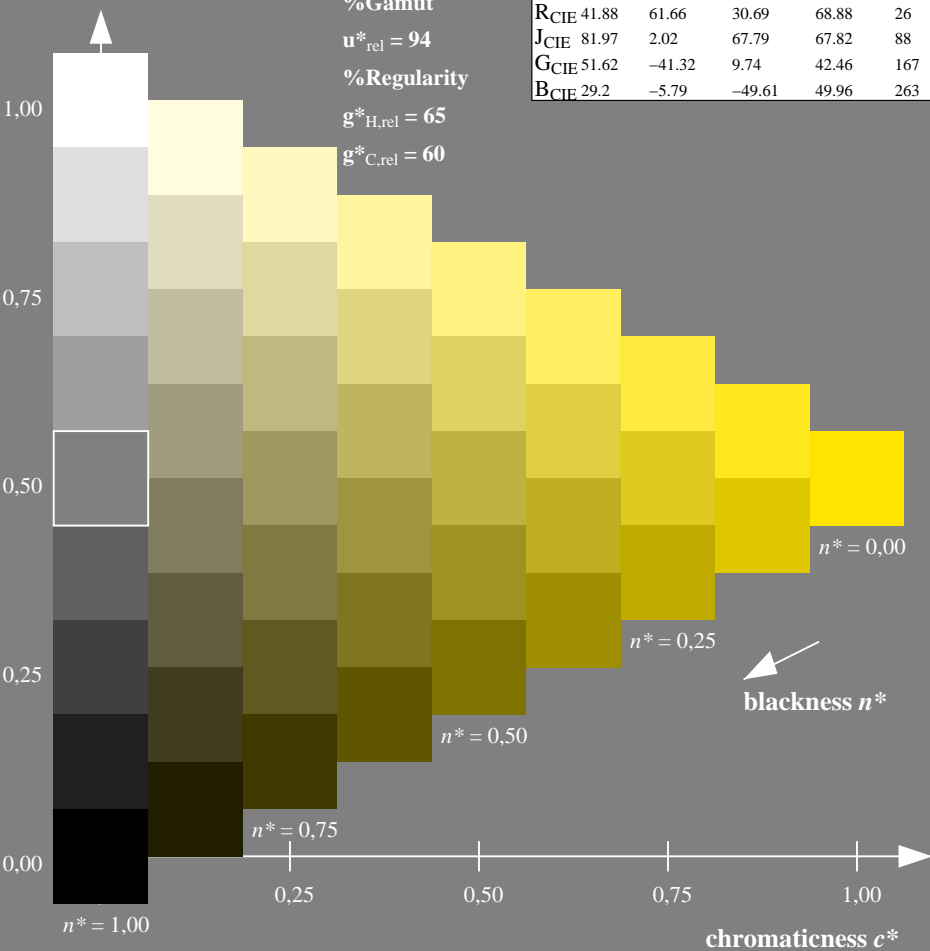
$u^*_{rel} = 94$

%Regularity

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

$g^*_{C,rel} = 60$

triangle lightness  $t^*$



Output: Colorimetric Television Luminous System TLS00

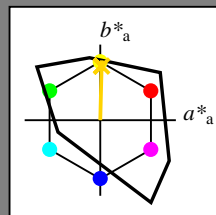
for hue  $h^* = lab^*h = 89/360 = 0.246$

$lab^*tch$  and  $lab^*nch$

D50: hue J

LCH\*Ma: 87 79 89

olv\*Ma: 1.0 0.83 0.0



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	54.19	79.36	63.0	101.33	38
Y <sub>Ma</sub>	93.44	-14.18	82.59	83.8	100
L <sub>Ma</sub>	82.82	-83.73	70.41	109.41	140
C <sub>Ma</sub>	85.22	-55.9	-15.78	58.1	196
V <sub>Ma</sub>	25.61	67.05	-108.87	127.87	302
M <sub>Ma</sub>	58.76	91.18	-53.69	105.82	330
N <sub>Ma</sub>	0.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	62.0	31.82	69.69	27
J <sub>CIE</sub>	81.97	1.81	71.59	71.61	89
G <sub>CIE</sub>	51.62	-41.11	11.52	42.7	164
B <sub>CIE</sub>	29.2	-5.27	-49.33	49.62	264

%Gamut

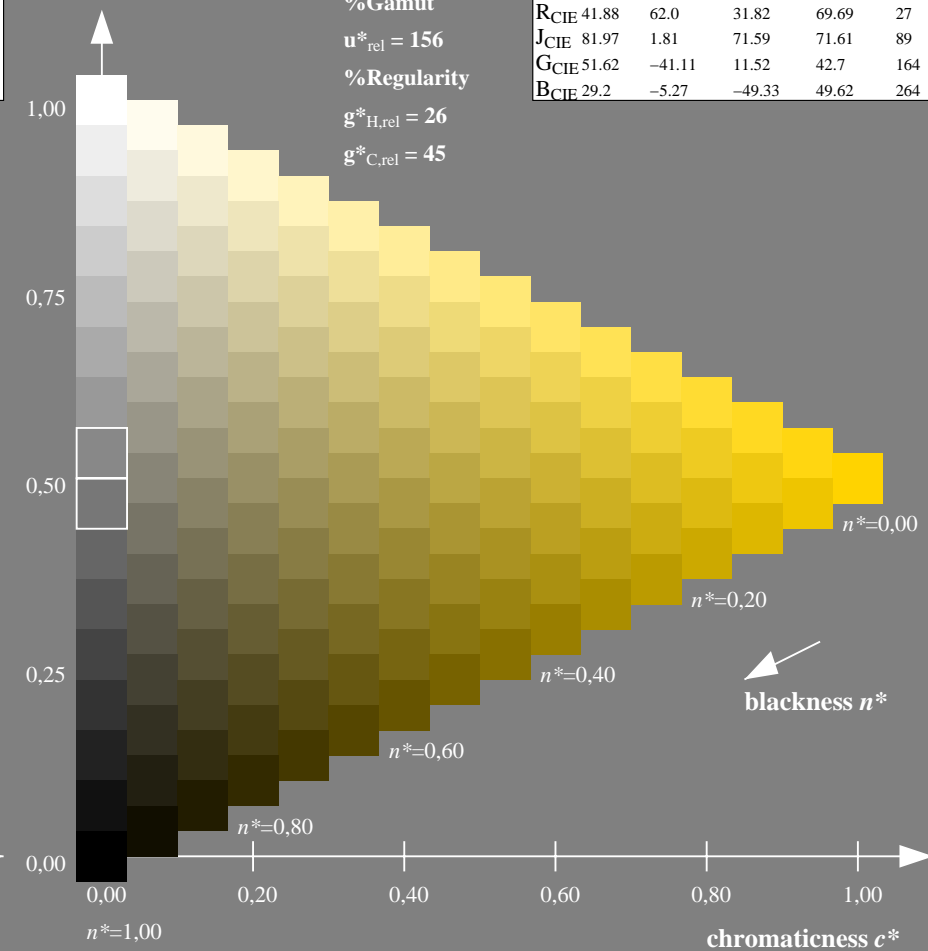
$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

triangle lightness  $t^*$



PE900-7, 9 step scales for constant CIELAB hue 88/360 = 0.245 (left)

16 step scales for constant CIELAB hue 89/360 = 0.246 (right)

BAM-test chart PE90; Colorimetric systems ORS18 & TLS00

D50: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: no change compared to input

See for similar files: <http://www.ps.bam.de/PE90/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1

BAM registration: 20060101-PE90/10L/L90E07NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems  
 /PE90 Form: 8/10, Serie: 1/1, Page: 8 Page count: 8



Input: Colorimetric Offset Reflective System ORS18

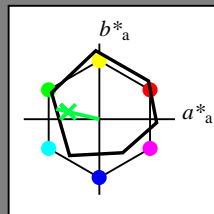
for hue  $h^* = lab^*h = 167/360 = 0.463$

$lab^*tch$  and  $lab^*nch$

D50: hue G

LCH\*Ma: 52 59 167

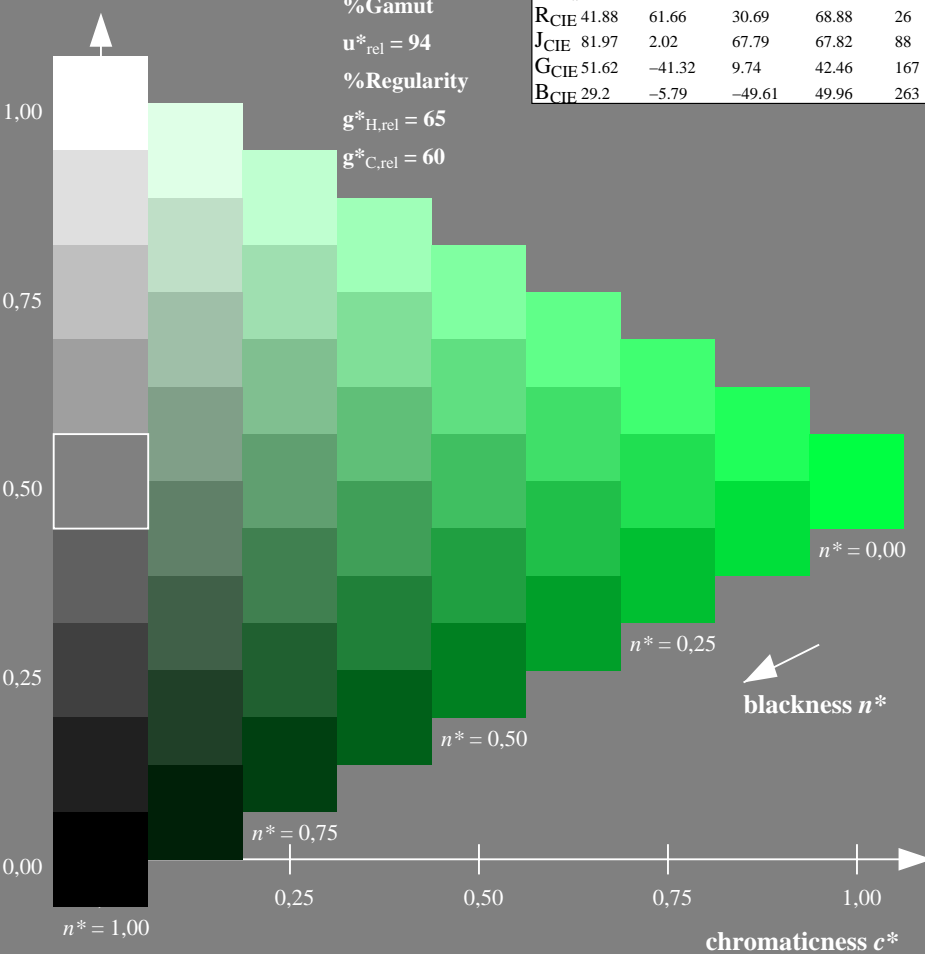
olv\*Ma: 0.0 1.0 0.26



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	65.05	50.54	82.38	38
Y <sub>Ma</sub>	91.0	-4.72	90.58	90.7	93
L <sub>Ma</sub>	50.9	-63.18	34.98	72.22	151
C <sub>Ma</sub>	56.99	-39.34	-48.1	62.16	231
V <sub>Ma</sub>	25.72	30.89	-44.4	54.09	305
M <sub>Ma</sub>	49.99	75.76	-4.64	75.9	356
N <sub>Ma</sub>	18.09	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.46	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	61.66	30.69	68.88	26
J <sub>CIE</sub>	81.97	2.02	67.79	67.82	88
G <sub>CIE</sub>	51.62	-41.32	9.74	42.46	167
B <sub>CIE</sub>	29.2	-5.79	-49.61	49.96	263

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 94$

%Regularity

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

$g^*_{C,rel} = 60$

Output: Colorimetric Television Luminous System TLS00

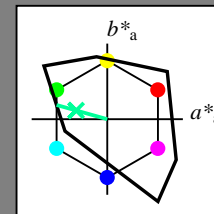
for hue  $h^* = lab^*h = 164/360 = 0.457$

$lab^*tch$  and  $lab^*nch$

D50: hue G

LCH\*Ma: 84 70 164

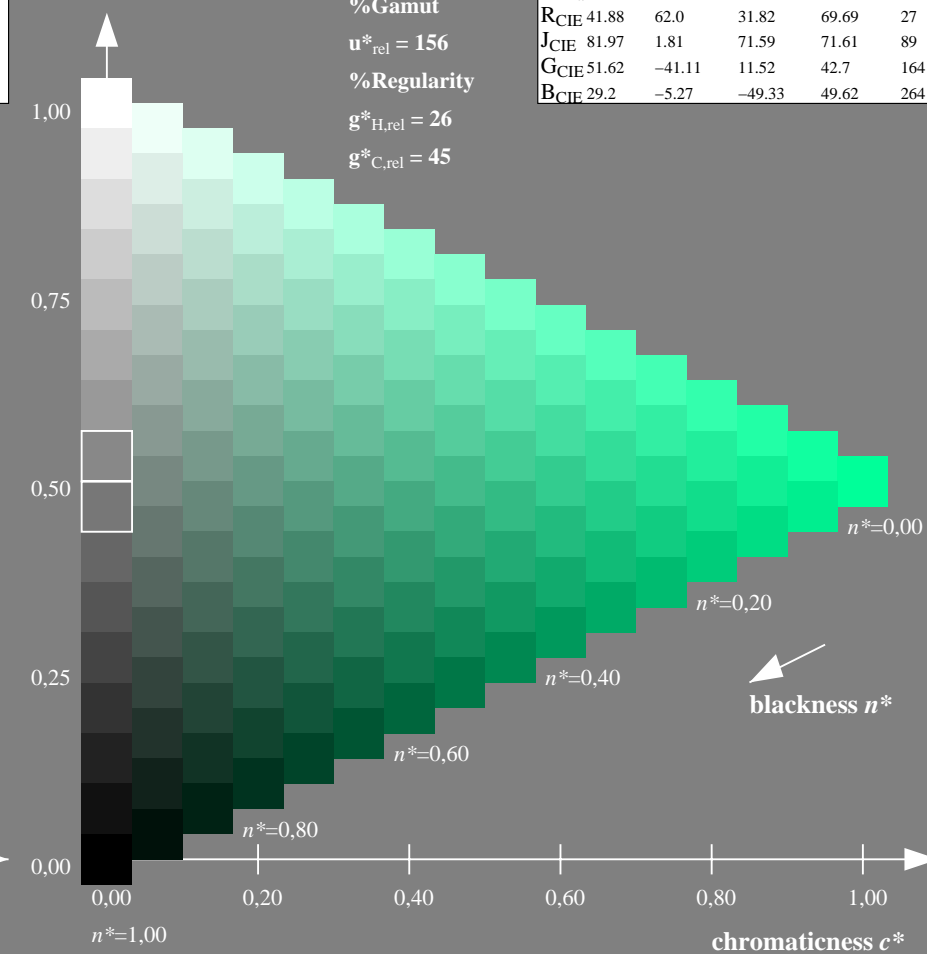
olv\*Ma: 0.0 1.0 0.6



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	54.19	79.36	63.0	101.33	38
Y <sub>Ma</sub>	93.44	-14.18	82.59	83.8	100
L <sub>Ma</sub>	82.82	-83.73	70.41	109.41	140
C <sub>Ma</sub>	85.22	-55.9	-15.78	58.1	196
V <sub>Ma</sub>	25.61	67.05	-108.87	127.87	302
M <sub>Ma</sub>	58.76	91.18	-53.69	105.82	330
N <sub>Ma</sub>	0.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	62.0	31.82	69.69	27
J <sub>CIE</sub>	81.97	1.81	71.59	71.61	89
G <sub>CIE</sub>	51.62	-41.11	11.52	42.7	164
B <sub>CIE</sub>	29.2	-5.27	-49.33	49.62	264

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

PE900-7, 9 step scales for constant CIELAB hue 167/360 = 0.463 (left)

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

BAM-test chart PE90; Colorimetric systems ORS18 & TLS00  
 D50: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor  
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/PE90/>  
 Technical information: <http://www.ps.bam.de>  
 Version 2.1, io=1,1

BAM registration: 20060101-PE90/10L/L90E08NP.PS/.PDF BAM material: code=rh4ta  
 application for evaluation and measurement of printer or monitor systems  
 /PE90 Form: 9/10, Serie: 1/1, Page: 9 Page count: 9

Input: Colorimetric Offset Reflective System ORS18

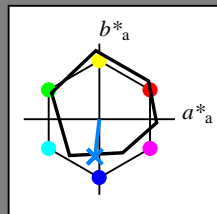
for hue  $h^* = lab^*h = 263/360 = 0.731$

$lab^*tch$  and  $lab^*nch$

D50: hue B

LCH\*Ma: 42 47 263

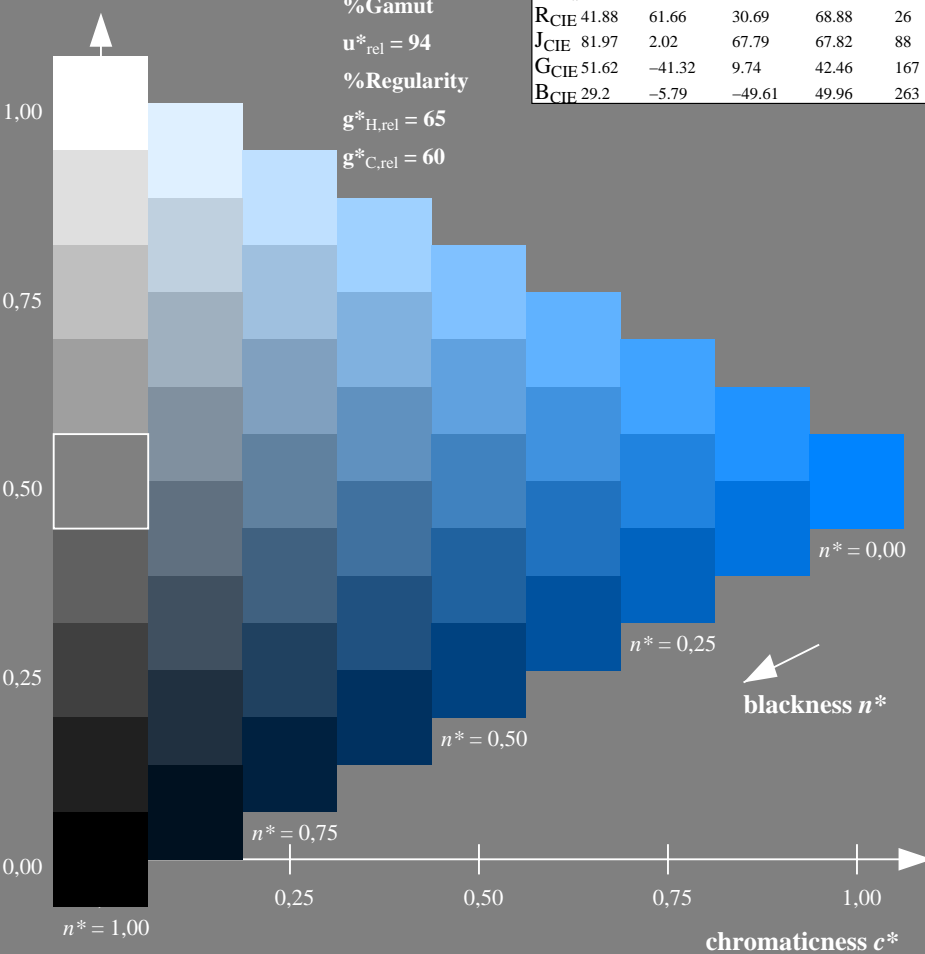
olv\*Ma: 0.0 0.52 1.0



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	65.05	50.54	82.38	38
Y <sub>Ma</sub>	91.0	-4.72	90.58	90.7	93
L <sub>Ma</sub>	50.9	-63.18	34.98	72.22	151
C <sub>Ma</sub>	56.99	-39.34	-48.1	62.16	231
V <sub>Ma</sub>	25.72	30.89	-44.4	54.09	305
M <sub>Ma</sub>	49.99	75.76	-4.64	75.9	356
N <sub>Ma</sub>	18.09	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.46	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	61.66	30.69	68.88	26
J <sub>CIE</sub>	81.97	2.02	67.79	67.82	88
G <sub>CIE</sub>	51.62	-41.32	9.74	42.46	167
B <sub>CIE</sub>	29.2	-5.79	-49.61	49.96	263

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 94$

%Regularity

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

$g^*_{C,rel} = 60$

blackness  $n^*$

Output: Colorimetric Television Luminous System TLS00

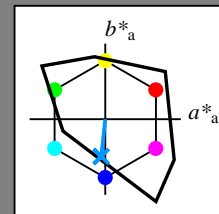
for hue  $h^* = lab^*h = 264/360 = 0.733$

$lab^*tch$  and  $lab^*nch$

D50: hue B

LCH\*Ma: 61 54 264

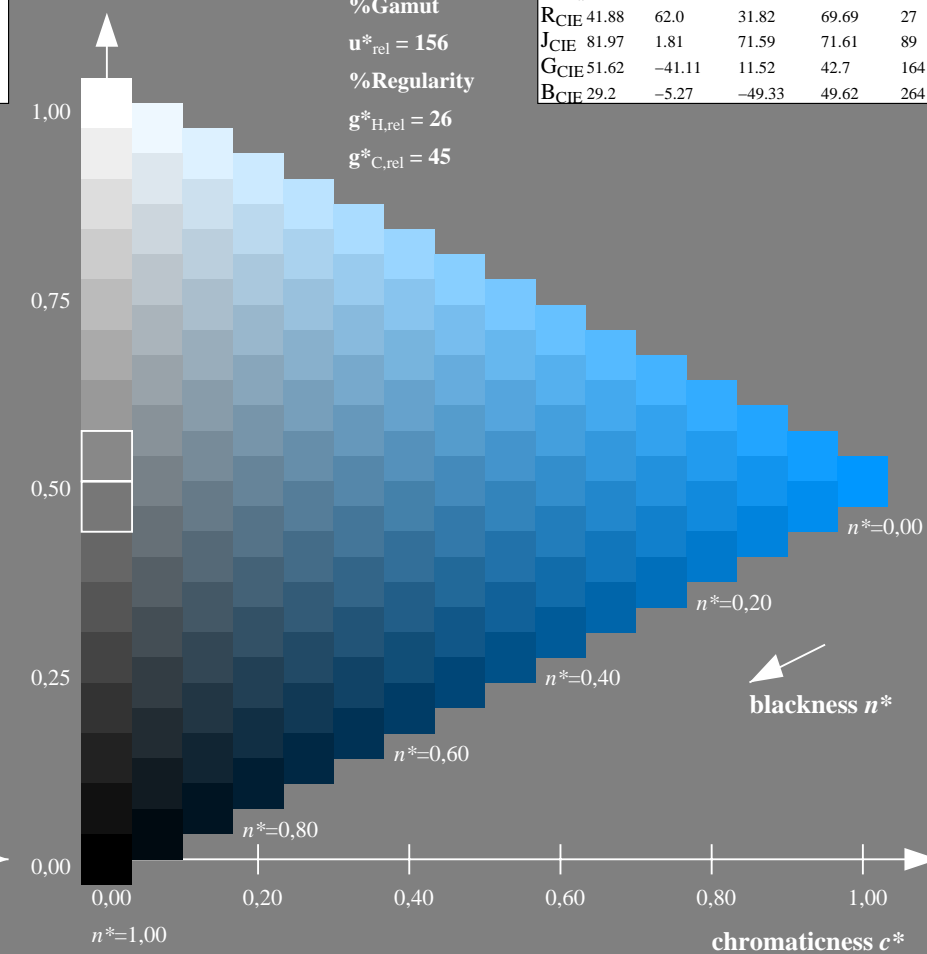
olv\*Ma: 0.0 0.59 1.0



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	54.19	79.36	63.0	101.33	38
Y <sub>Ma</sub>	93.44	-14.18	82.59	83.8	100
L <sub>Ma</sub>	82.82	-83.73	70.41	109.41	140
C <sub>Ma</sub>	85.22	-55.9	-15.78	58.1	196
V <sub>Ma</sub>	25.61	67.05	-108.87	127.87	302
M <sub>Ma</sub>	58.76	91.18	-53.69	105.82	330
N <sub>Ma</sub>	0.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	41.88	62.0	31.82	69.69	27
J <sub>CIE</sub>	81.97	1.81	71.59	71.61	89
G <sub>CIE</sub>	51.62	-41.11	11.52	42.7	164
B <sub>CIE</sub>	29.2	-5.27	-49.33	49.62	264

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 156$

%Regularity

$g^*_{H,rel} = 26$

$g^*_{C,rel} = 45$

blackness  $n^*$

PE900-7, 9 step scales for constant CIELAB hue 263/360 = 0.731 (left)

16 step scales for constant CIELAB hue 264/360 = 0.733 (right)

BAM-test chart PE90; Colorimetric systems ORS18 & TLS00

input:  $olv^*$  setrgbcolor

D50: 9 and 16 step colour scales for 10 hues

output: no change compared to input

See for similar files: <http://www.ps.bam.de/PE90/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1

BAM registration: 20060101-PE90/10L/L90E09NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems  
 /PE90 Form: 10/10, Serie: 1/1, Page: 10 Page count: 10