

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 38/360 = 0.106$

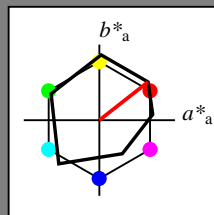
$lab^*tch$  and  $lab^*nch$

A: hue O

LCH\*Ma: 48 82 38

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	64.42	50.58	81.9	38
Y <sub>Ma</sub>	92.62	2.41	86.36	86.39	88
L <sub>Ma</sub>	50.9	-63.82	35.02	72.81	151
C <sub>Ma</sub>	51.25	-53.68	-57.69	78.82	227
V <sub>Ma</sub>	25.72	30.34	-44.37	53.76	304
M <sub>Ma</sub>	56.25	70.59	7.57	70.99	6
N <sub>Ma</sub>	18.11	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.6	0.0	0.0	0.0	0
R <sub>CIE</sub>	47.79	60.85	41.08	73.41	34
J <sub>CIE</sub>	83.82	6.52	66.9	67.22	84
G <sub>CIE</sub>	49.0	-36.83	2.78	36.95	176
B <sub>CIE</sub>	25.14	-18.35	-56.22	59.15	252

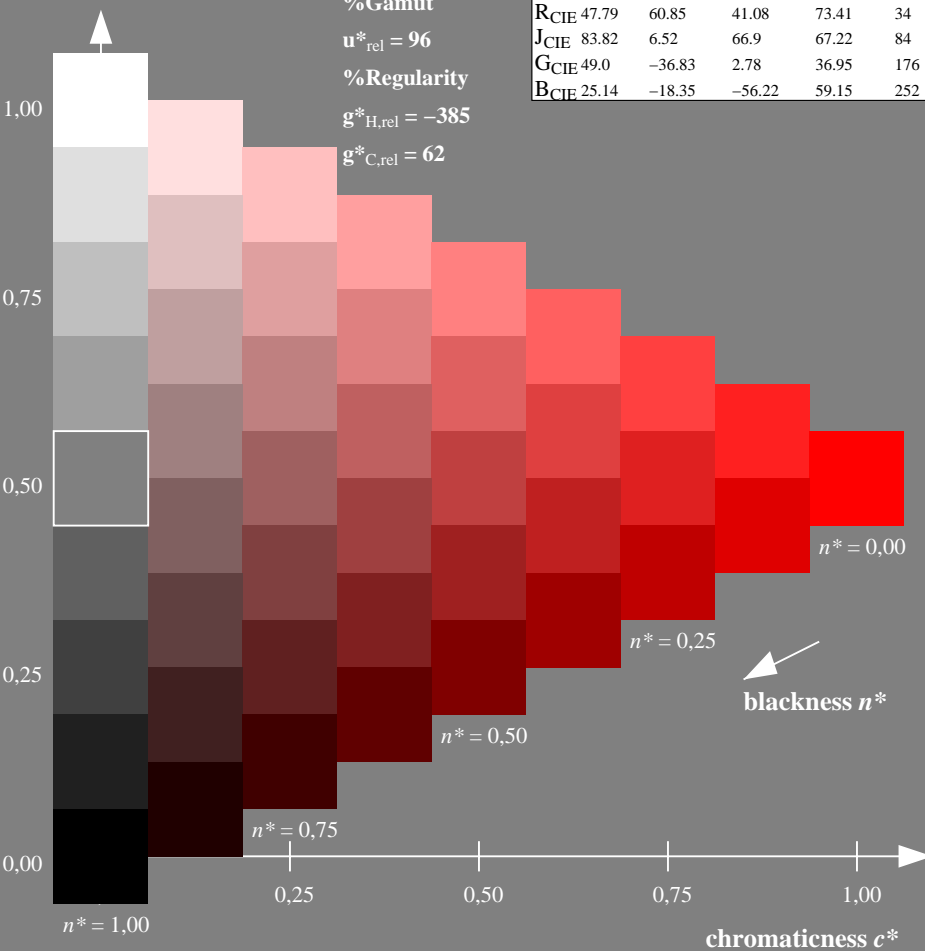
%Gamut

$u^*_{rel} = 96$

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$



Output: Colorimetric Television Luminous System TLS00

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

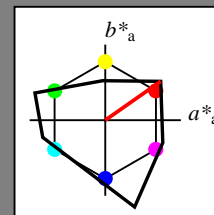
$lab^*tch$  and  $lab^*nch$

A: hue O

LCH\*Ma: 66 90 35

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	65.56	73.34	51.39	89.55	35
Y <sub>Ma</sub>	94.78	-3.49	52.24	52.36	94
L <sub>Ma</sub>	77.48	-92.97	36.0	99.71	159
C <sub>Ma</sub>	78.36	-82.69	-22.74	85.77	195
V <sub>Ma</sub>	12.55	38.81	-114.81	121.2	289
M <sub>Ma</sub>	66.71	76.08	-29.8	81.71	339
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>	47.79	61.74	42.56	74.99	35
J <sub>CIE</sub>	83.82	7.06	70.78	71.13	84
G <sub>CIE</sub>	49.0	-35.95	4.34	36.22	173
B <sub>CIE</sub>	25.14	-17.24	-56.24	58.84	253

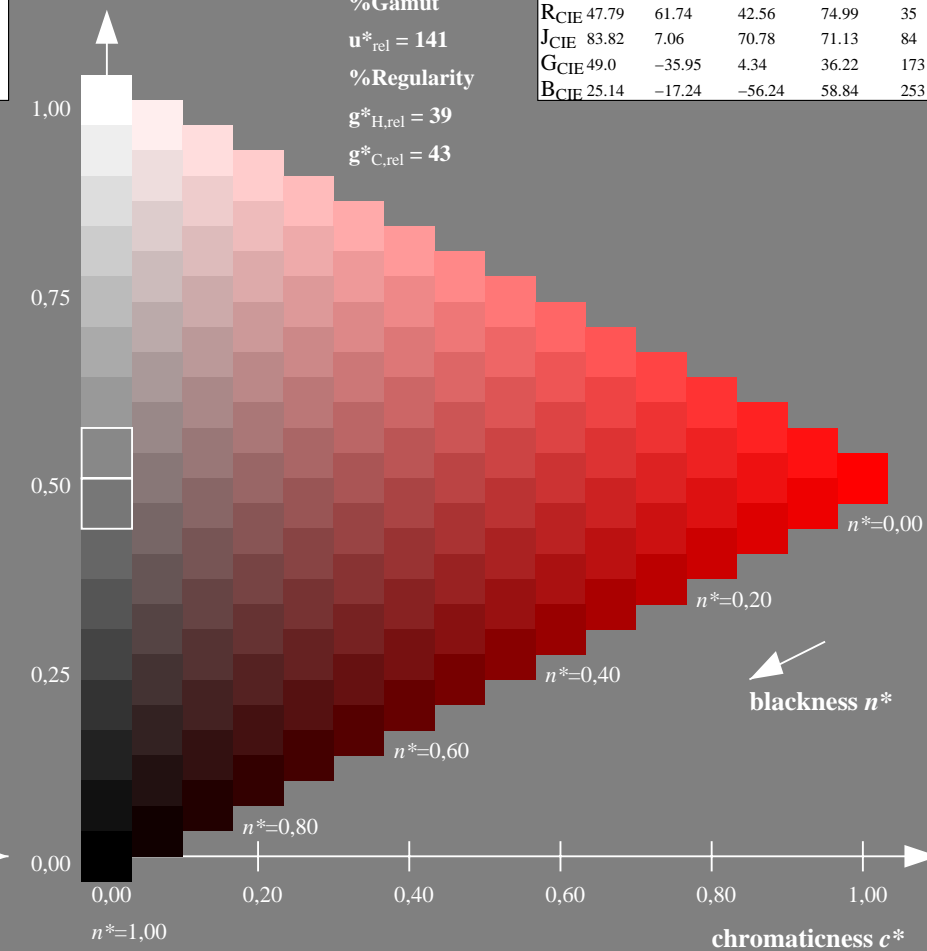
%Gamut

$u^*_{rel} = 141$

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$



RE900-7, 9 step scales for constant CIELAB hue 38/360 = 0.106 (left)

16 step scales for constant CIELAB hue 35/360 = 0.097 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 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  $h^* = lab^*h = 88/360 = 0.246$

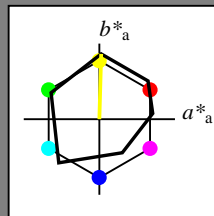
$lab^*tch$  and  $lab^*nch$

A: hue Y

LCH\*Ma: 93 86 88

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 96$

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	64.42	50.58	81.9	38
Y <sub>Ma</sub>	92.62	2.41	86.36	86.39	88
L <sub>Ma</sub>	50.9	-63.82	35.02	72.81	151
C <sub>Ma</sub>	51.25	-53.68	-57.69	78.82	227
V <sub>Ma</sub>	25.72	30.34	-44.37	53.76	304
M <sub>Ma</sub>	56.25	70.59	7.57	70.99	6
N <sub>Ma</sub>	18.11	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.6	0.0	0.0	0.0	0
R <sub>CIE</sub>	47.79	60.85	41.08	73.41	34
J <sub>CIE</sub>	83.82	6.52	66.9	67.22	84
G <sub>CIE</sub>	49.0	-36.83	2.78	36.95	176
B <sub>CIE</sub>	25.14	-18.35	-56.22	59.15	252

Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 94/360 = 0.261$

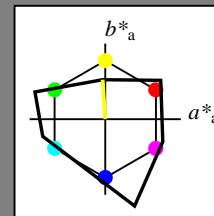
$lab^*tch$  and  $lab^*nch$

A: hue Y

LCH\*Ma: 95 52 94

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 141$

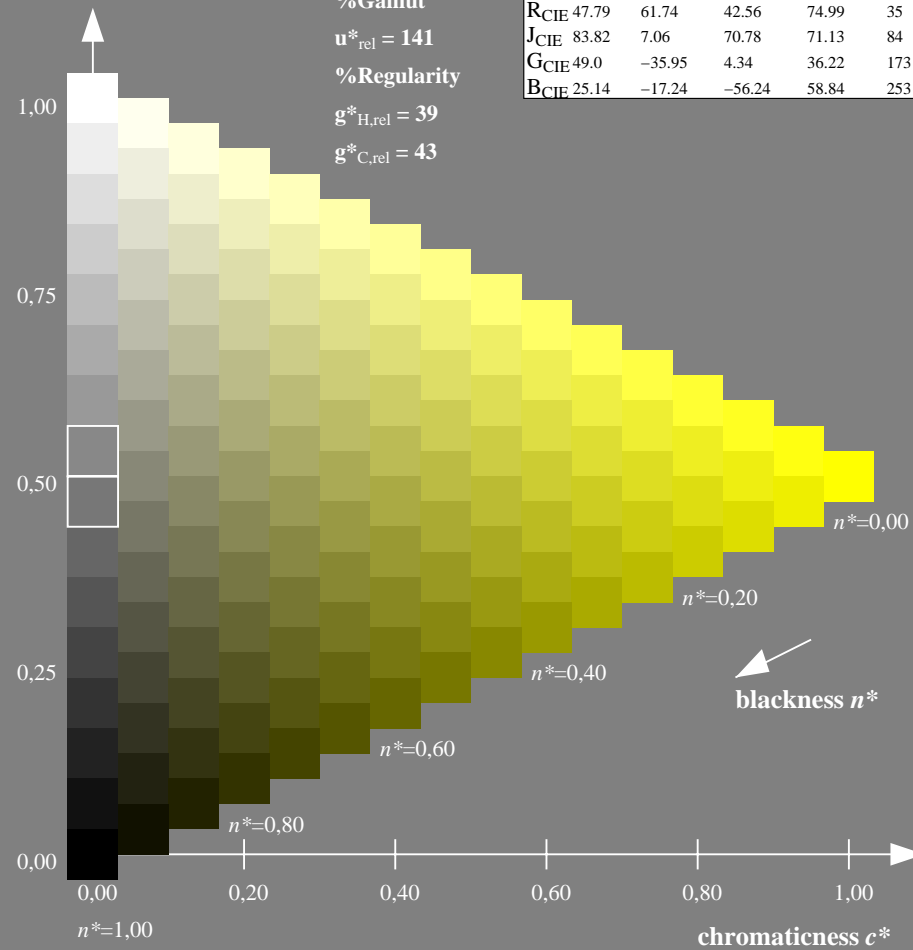
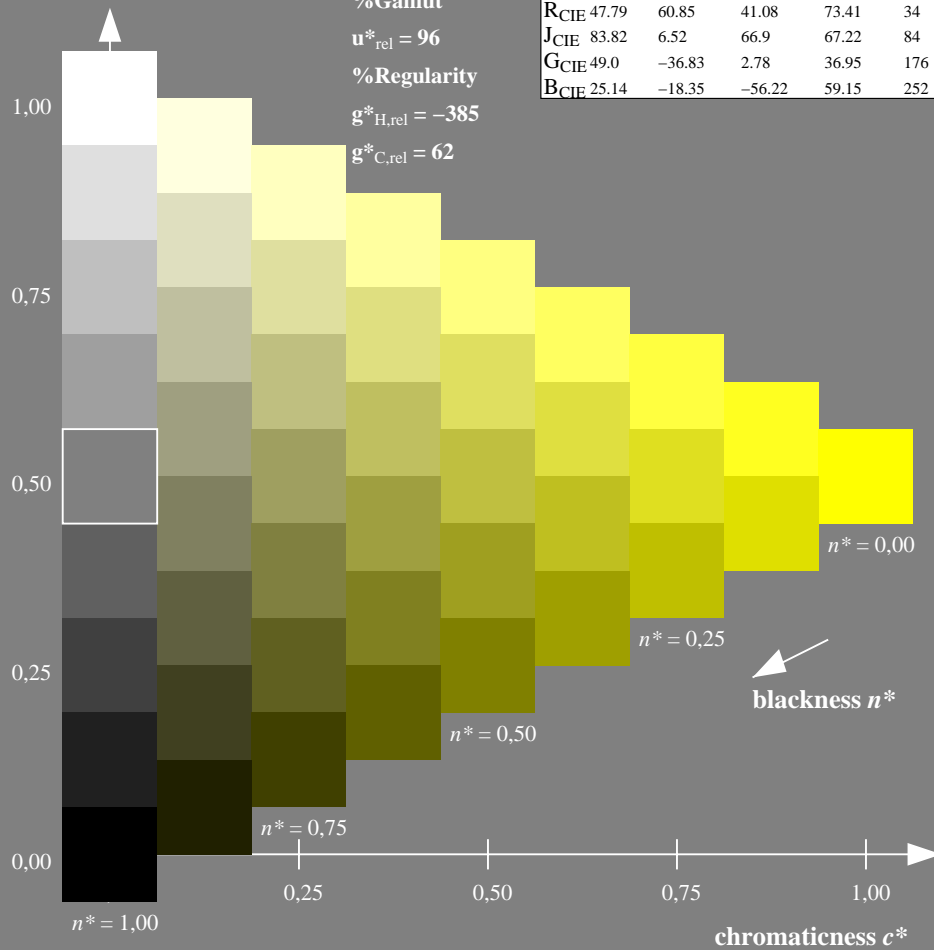
%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	65.56	73.34	51.39	89.55	35
Y <sub>Ma</sub>	94.78	-3.49	52.24	52.36	94
L <sub>Ma</sub>	77.48	-92.97	36.0	99.71	159
C <sub>Ma</sub>	78.36	-82.69	-22.74	85.77	195
V <sub>Ma</sub>	12.55	38.81	-114.81	121.2	289
M <sub>Ma</sub>	66.71	76.08	-29.8	81.71	339
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>	47.79	61.74	42.56	74.99	35
J <sub>CIE</sub>	83.82	7.06	70.78	71.13	84
G <sub>CIE</sub>	49.0	-35.95	4.34	36.22	173
B <sub>CIE</sub>	25.14	-17.24	-56.24	58.84	253



RE900-7, 9 step scales for constant CIELAB hue 88/360 = 0.246 (left)

16 step scales for constant CIELAB hue 94/360 = 0.261 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 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/RE90/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1

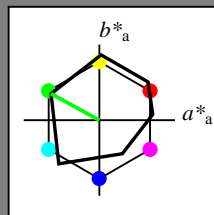
BAM registration: 20060101-RE90/10S/S90E01NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems  
 /RE90 Form: 2/10, Serie: 1/1, Page: 2 Page count: 2

Input: Colorimetric Offset Reflective System ORS18

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

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

A: hue L  
 LCH\*Ma: 51 73 151  
 olv\*Ma: 0.0 1.0 0.0

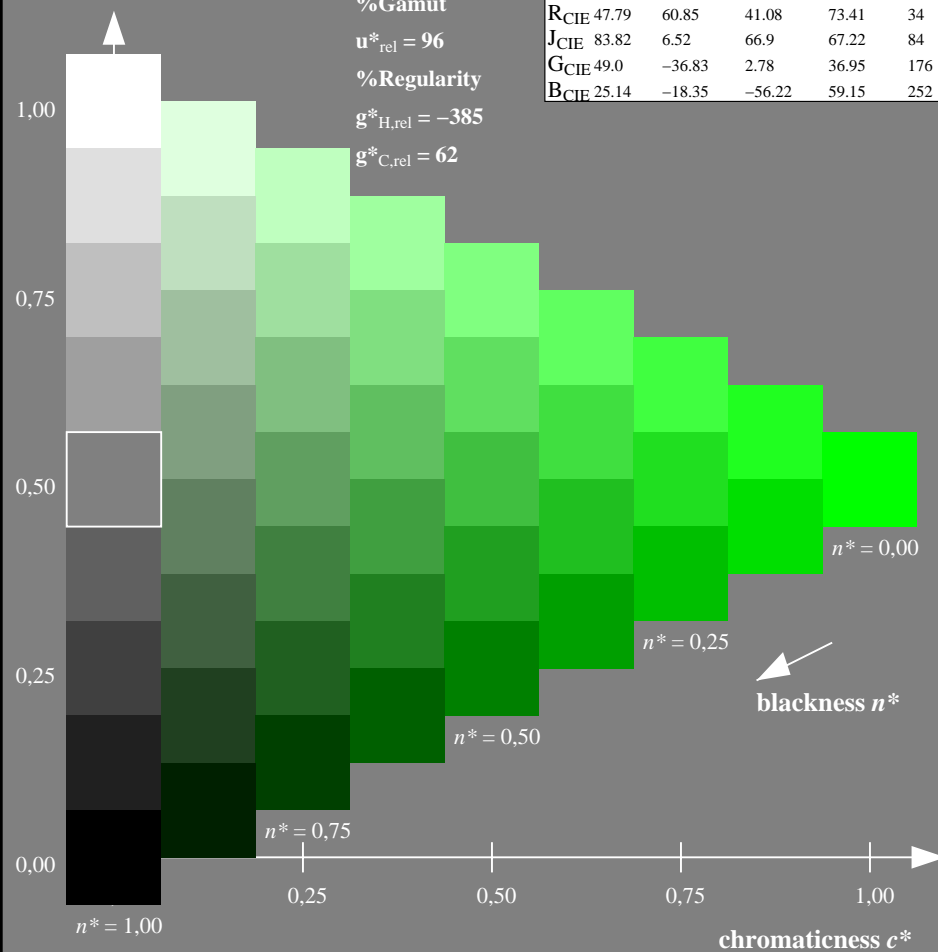


ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	64.42	50.58	81.9	38
Y <sub>Ma</sub>	92.62	2.41	86.36	86.39	88
L <sub>Ma</sub>	50.9	-63.82	35.02	72.81	151
C <sub>Ma</sub>	51.25	-53.68	-57.69	78.82	227
V <sub>Ma</sub>	25.72	30.34	-44.37	53.76	304
M <sub>Ma</sub>	56.25	70.59	7.57	70.99	6
N <sub>Ma</sub>	18.11	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.6	0.0	0.0	0.0	0
R <sub>CIE</sub>	47.79	60.85	41.08	73.41	34
J <sub>CIE</sub>	83.82	6.52	66.9	67.22	84
G <sub>CIE</sub>	49.0	-36.83	2.78	36.95	176
B <sub>CIE</sub>	25.14	-18.35	-56.22	59.15	252

%Gamut  
 $u^*_{rel} = 96$   
 %Regularity  
 $g^*_{H,rel} = -385$   
 $g^*_{C,rel} = 62$

triangle lightness  $t^*$



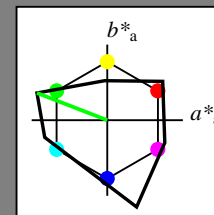
RE900-7, 9 step scales for constant CIE LAB hue 151/360 = 0.42 (left)

Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 159/360 = 0.441$

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

A: hue L  
 LCH\*Ma: 77 100 159  
 olv\*Ma: 0.0 1.0 0.0

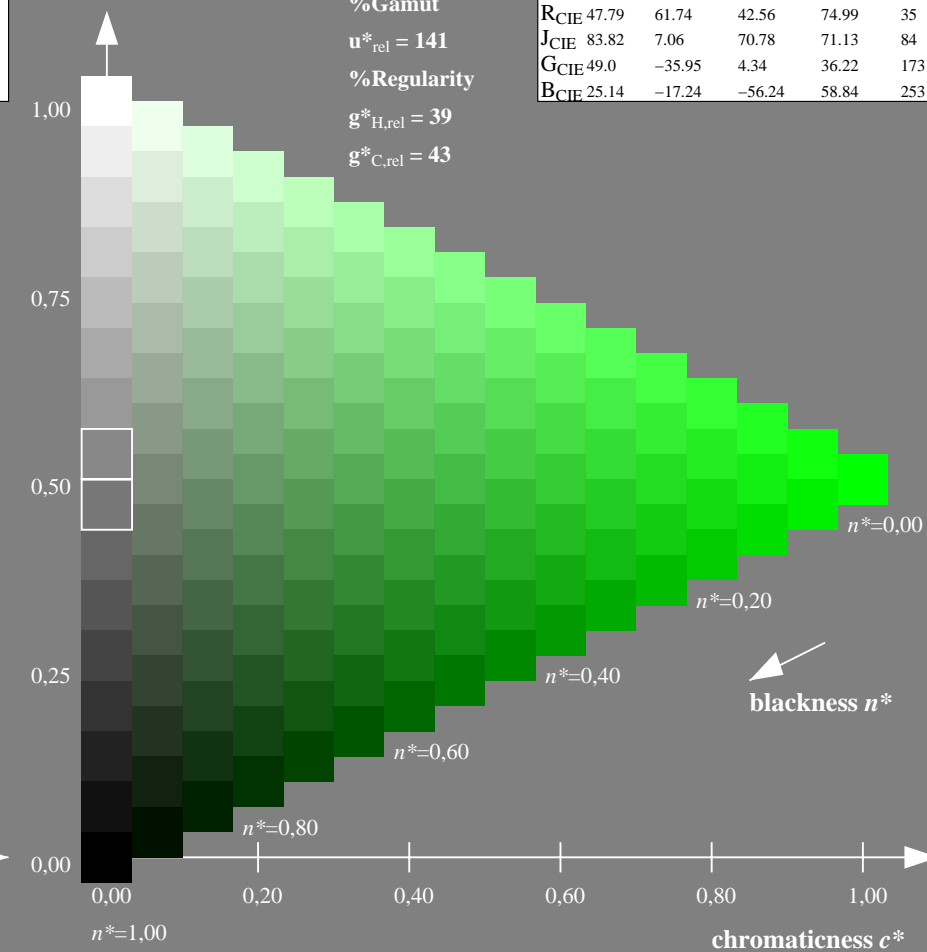


TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	65.56	73.34	51.39	89.55	35
Y <sub>Ma</sub>	94.78	-3.49	52.24	52.36	94
L <sub>Ma</sub>	77.48	-92.97	36.0	99.71	159
C <sub>Ma</sub>	78.36	-82.69	-22.74	85.77	195
V <sub>Ma</sub>	12.55	38.81	-114.81	121.2	289
M <sub>Ma</sub>	66.71	76.08	-29.8	81.71	339
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>	47.79	61.74	42.56	74.99	35
J <sub>CIE</sub>	83.82	7.06	70.78	71.13	84
G <sub>CIE</sub>	49.0	-35.95	4.34	36.22	173
B <sub>CIE</sub>	25.14	-17.24	-56.24	58.84	253

%Gamut  
 $u^*_{rel} = 141$   
 %Regularity  
 $g^*_{H,rel} = 39$   
 $g^*_{C,rel} = 43$

triangle lightness  $t^*$



16 step scales for constant CIE LAB hue 159/360 = 0.441 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00  
 A: 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/RE90/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1

BAM registration: 20060101-RE90/10S/S90E02NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems  
 /RE90 Form: 3/10, Serie: 1/1, Page: 3 Page count: 3

Input: Colorimetric Offset Reflective System ORS18

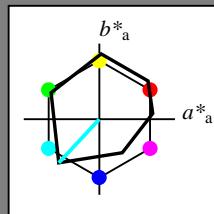
for hue  $h^* = lab^*h = 227/360 = 0.631$

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

A: hue C

LCH\*Ma: 51 79 227

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	64.42	50.58	81.9	38
Y <sub>Ma</sub>	92.62	2.41	86.36	86.39	88
L <sub>Ma</sub>	50.9	-63.82	35.02	72.81	151
C <sub>Ma</sub>	51.25	-53.68	-57.69	78.82	227
V <sub>Ma</sub>	25.72	30.34	-44.37	53.76	304
M <sub>Ma</sub>	56.25	70.59	7.57	70.99	6
N <sub>Ma</sub>	18.11	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.6	0.0	0.0	0.0	0
R <sub>CIE</sub>	47.79	60.85	41.08	73.41	34
J <sub>CIE</sub>	83.82	6.52	66.9	67.22	84
G <sub>CIE</sub>	49.0	-36.83	2.78	36.95	176
B <sub>CIE</sub>	25.14	-18.35	-56.22	59.15	252

%Gamut

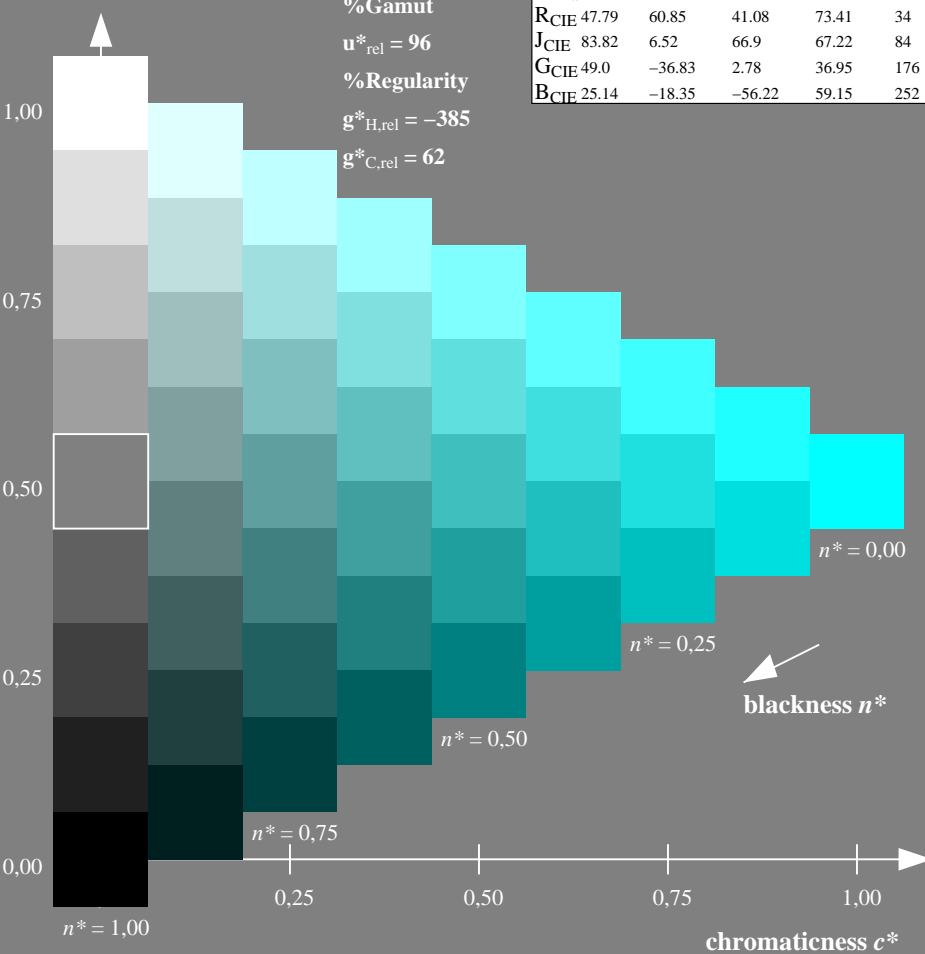
$u^*_{rel} = 96$

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

triangle lightness  $t^*$



Output: Colorimetric Television Luminous System TLS00

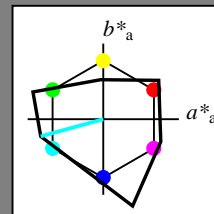
for hue  $h^* = lab^*h = 195/360 = 0.543$

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

A: hue C

LCH\*Ma: 78 86 195

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>	65.56	73.34	51.39	89.55	35
Y <sub>Ma</sub>	94.78	-3.49	52.24	52.36	94
L <sub>Ma</sub>	77.48	-92.97	36.0	99.71	159
C <sub>Ma</sub>	78.36	-82.69	-22.74	85.77	195
V <sub>Ma</sub>	12.55	38.81	-114.81	121.2	289
M <sub>Ma</sub>	66.71	76.08	-29.8	81.71	339
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>	47.79	61.74	42.56	74.99	35
J <sub>CIE</sub>	83.82	7.06	70.78	71.13	84
G <sub>CIE</sub>	49.0	-35.95	4.34	36.22	173
B <sub>CIE</sub>	25.14	-17.24	-56.24	58.84	253

%Gamut

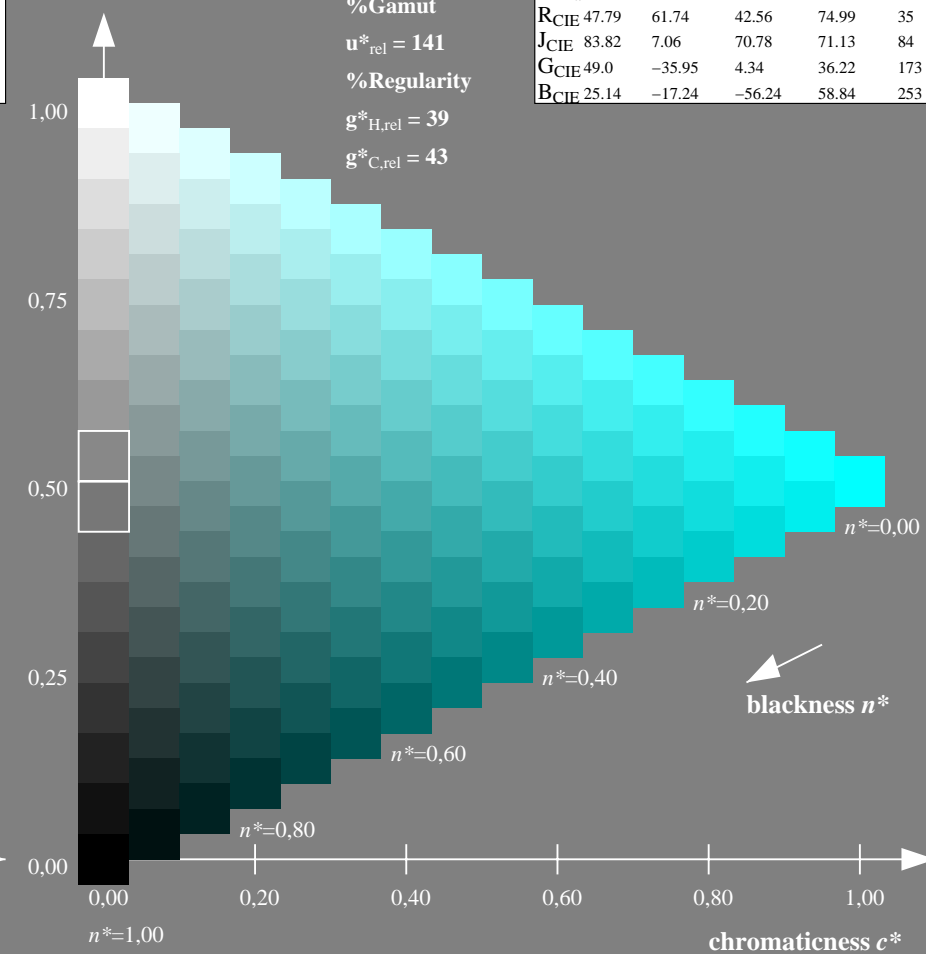
$u^*_{rel} = 141$

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$

triangle lightness  $t^*$



RE900-7, 9 step scales for constant CIELAB hue 227/360 = 0.631 (left)

16 step scales for constant CIELAB hue 195/360 = 0.543 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

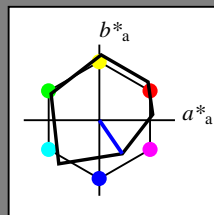
for hue  $h^* = lab^*h = 304/360 = 0.845$

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

A: hue V

LCH\*Ma: 26 54 304

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	64.42	50.58	81.9	38
Y <sub>Ma</sub>	92.62	2.41	86.36	86.39	88
L <sub>Ma</sub>	50.9	-63.82	35.02	72.81	151
C <sub>Ma</sub>	51.25	-53.68	-57.69	78.82	227
V <sub>Ma</sub>	25.72	30.34	-44.37	53.76	304
M <sub>Ma</sub>	56.25	70.59	7.57	70.99	6
N <sub>Ma</sub>	18.11	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.6	0.0	0.0	0.0	0
R <sub>CIE</sub>	47.79	60.85	41.08	73.41	34
J <sub>CIE</sub>	83.82	6.52	66.9	67.22	84
G <sub>CIE</sub>	49.0	-36.83	2.78	36.95	176
B <sub>CIE</sub>	25.14	-18.35	-56.22	59.15	252

%Gamut

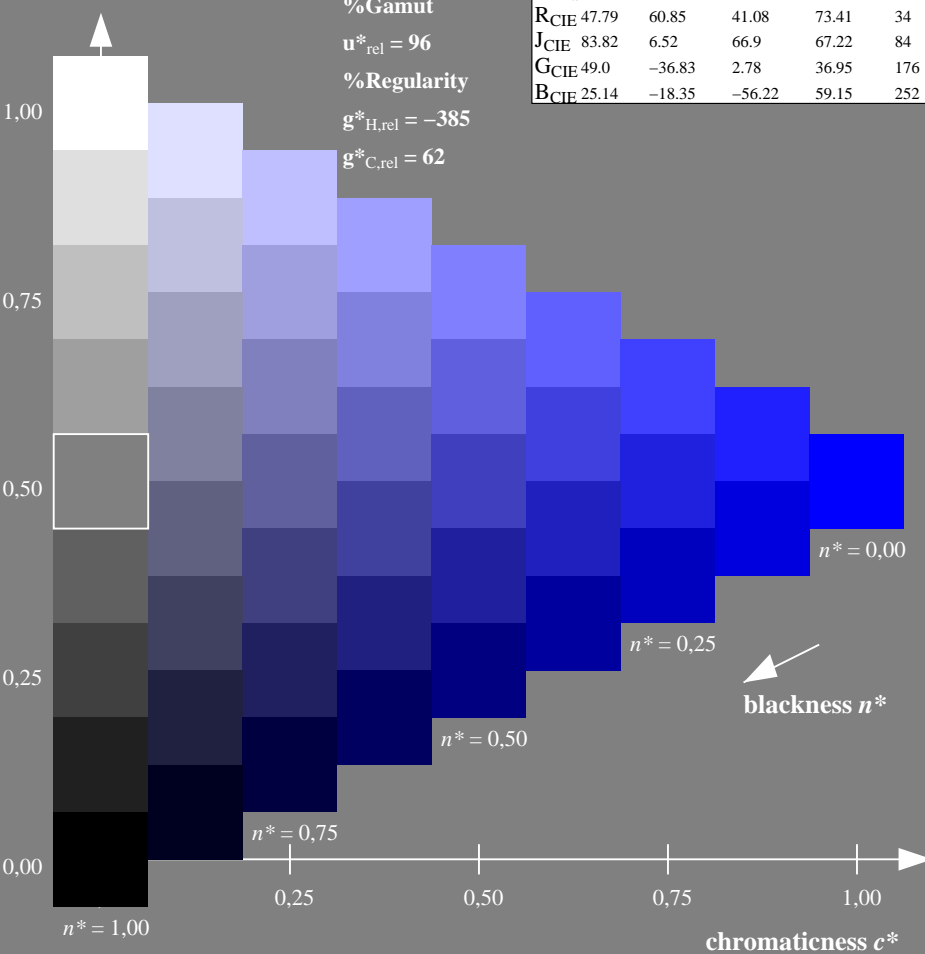
$u^*_{rel} = 96$

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

triangle lightness  $t^*$



Output: Colorimetric Television Luminous System TLS00

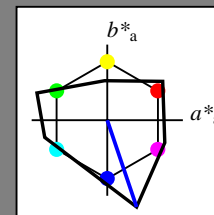
for hue  $h^* = lab^*h = 289/360 = 0.802$

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

A: hue V

LCH\*Ma: 13 121 289

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>	65.56	73.34	51.39	89.55	35
Y <sub>Ma</sub>	94.78	-3.49	52.24	52.36	94
L <sub>Ma</sub>	77.48	-92.97	36.0	99.71	159
C <sub>Ma</sub>	78.36	-82.69	-22.74	85.77	195
V <sub>Ma</sub>	12.55	38.81	-114.81	121.2	289
M <sub>Ma</sub>	66.71	76.08	-29.8	81.71	339
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>	47.79	61.74	42.56	74.99	35
J <sub>CIE</sub>	83.82	7.06	70.78	71.13	84
G <sub>CIE</sub>	49.0	-35.95	4.34	36.22	173
B <sub>CIE</sub>	25.14	-17.24	-56.24	58.84	253

%Gamut

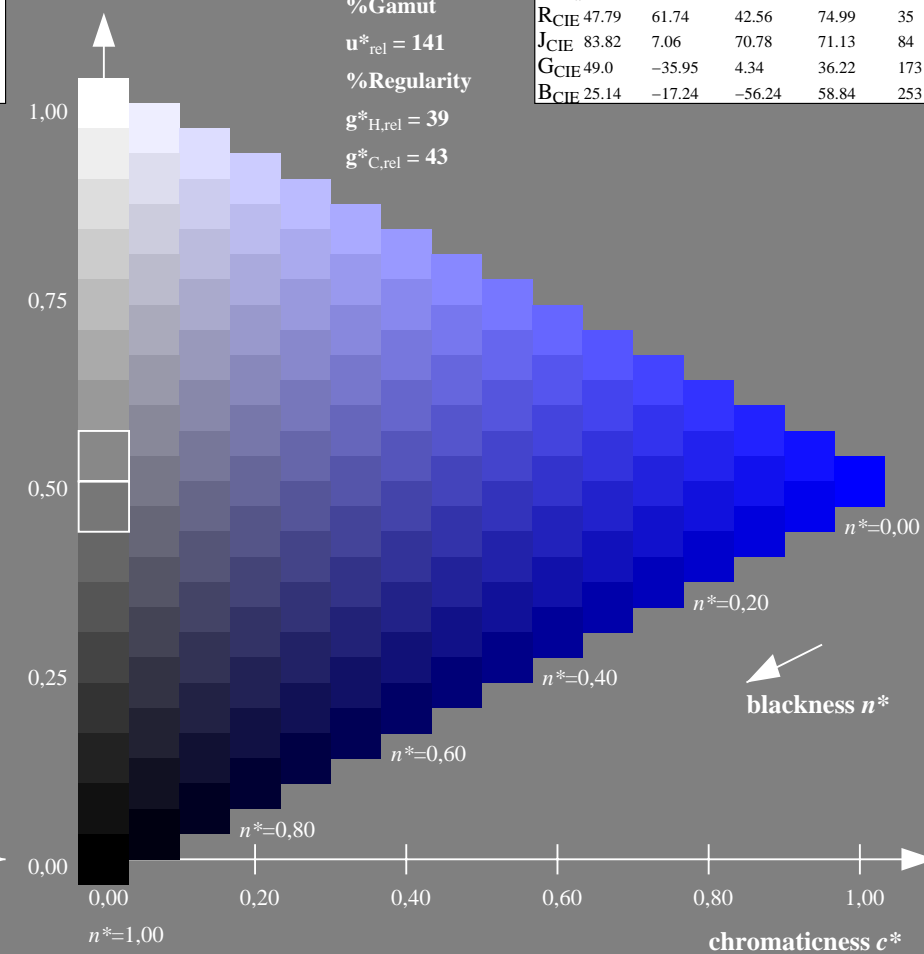
$u^*_{rel} = 141$

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$

triangle lightness  $t^*$



RE900-7, 9 step scales for constant CIELAB hue 304/360 = 0.845 (left)

16 step scales for constant CIELAB hue 289/360 = 0.802 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 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/RE90/>  
 Technical information: <http://www.ps.bam.de>  
 Version 2.1, io=1,1

BAM registration: 20060101-RE90/10S/S90E04NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems  
 /RE90/ Form: 5/10, Serie: 1/1, Page: 5 Page count: 5

Input: Colorimetric Offset Reflective System ORS18

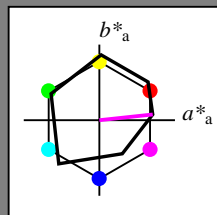
for hue  $h^* = lab^*h = 6/360 = 0.017$

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

A: hue M

LCH\*Ma: 56 71 6

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	64.42	50.58	81.9	38
Y <sub>Ma</sub>	92.62	2.41	86.36	86.39	88
L <sub>Ma</sub>	50.9	-63.82	35.02	72.81	151
C <sub>Ma</sub>	51.25	-53.68	-57.69	78.82	227
V <sub>Ma</sub>	25.72	30.34	-44.37	53.76	304
M <sub>Ma</sub>	56.25	70.59	7.57	70.99	6
N <sub>Ma</sub>	18.11	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.6	0.0	0.0	0.0	0
R <sub>CIE</sub>	47.79	60.85	41.08	73.41	34
J <sub>CIE</sub>	83.82	6.52	66.9	67.22	84
G <sub>CIE</sub>	49.0	-36.83	2.78	36.95	176
B <sub>CIE</sub>	25.14	-18.35	-56.22	59.15	252

%Gamut

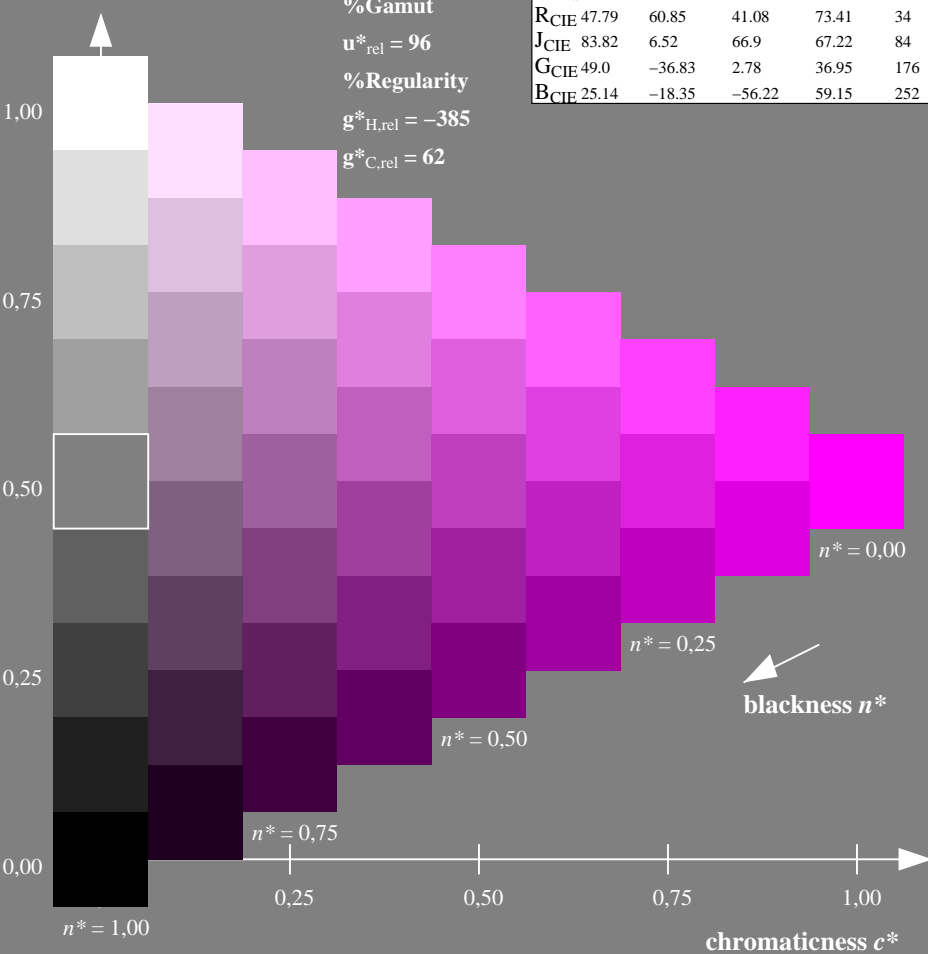
$u^*_{rel} = 96$

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

triangle lightness  $t^*$



Output: Colorimetric Television Luminous System TLS00

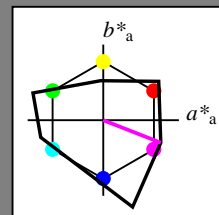
for hue  $h^* = lab^*h = 339/360 = 0.941$

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

A: hue M

LCH\*Ma: 67 82 339

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>	65.56	73.34	51.39	89.55	35
Y <sub>Ma</sub>	94.78	-3.49	52.24	52.36	94
L <sub>Ma</sub>	77.48	-92.97	36.0	99.71	159
C <sub>Ma</sub>	78.36	-82.69	-22.74	85.77	195
V <sub>Ma</sub>	12.55	38.81	-114.81	121.2	289
M <sub>Ma</sub>	66.71	76.08	-29.8	81.71	339
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>	47.79	61.74	42.56	74.99	35
J <sub>CIE</sub>	83.82	7.06	70.78	71.13	84
G <sub>CIE</sub>	49.0	-35.95	4.34	36.22	173
B <sub>CIE</sub>	25.14	-17.24	-56.24	58.84	253

%Gamut

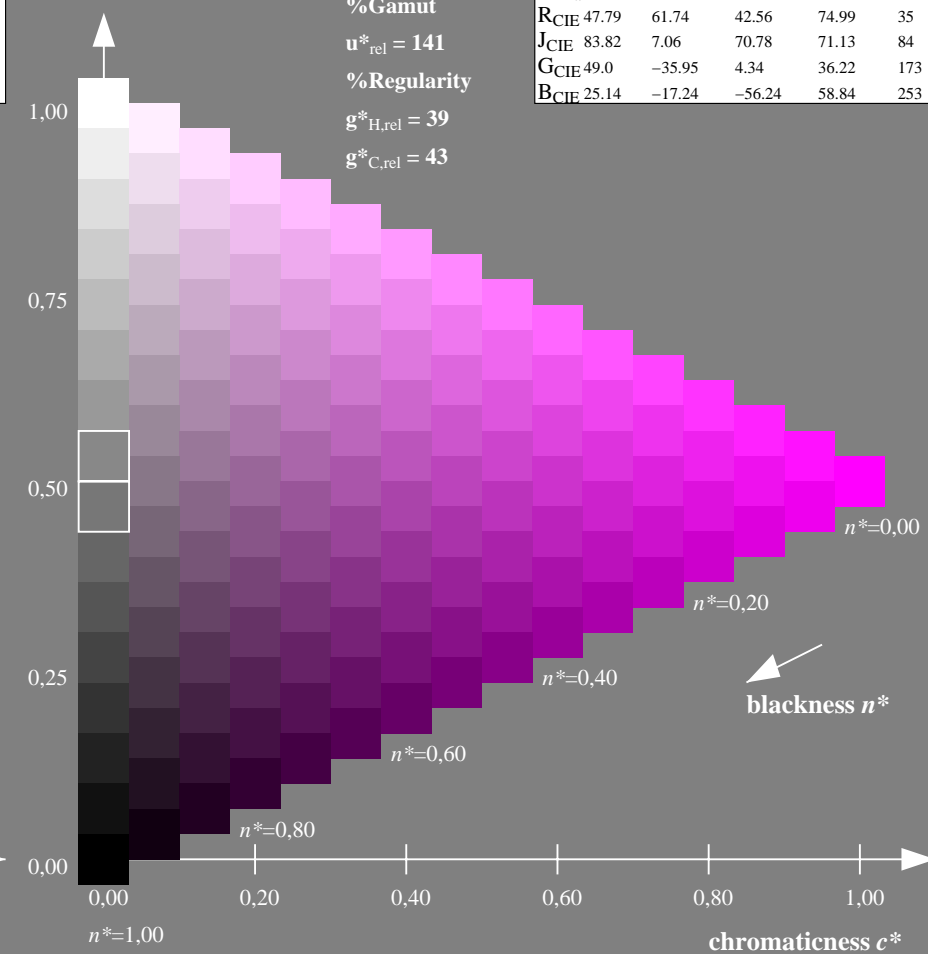
$u^*_{rel} = 141$

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$

triangle lightness  $t^*$



RE900-7, 9 step scales for constant CIELAB hue 6/360 = 0.017 (left)

16 step scales for constant CIELAB hue 339/360 = 0.941 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 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/RE90/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1

BAM registration: 20060101-RE90/10S/S90E05NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems

Input: Colorimetric Offset Reflective System ORS18

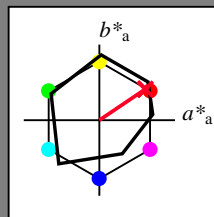
for hue  $h^* = lab^*h = 34/360 = 0.095$

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

A: hue R

LCH\*Ma: 49 79 34

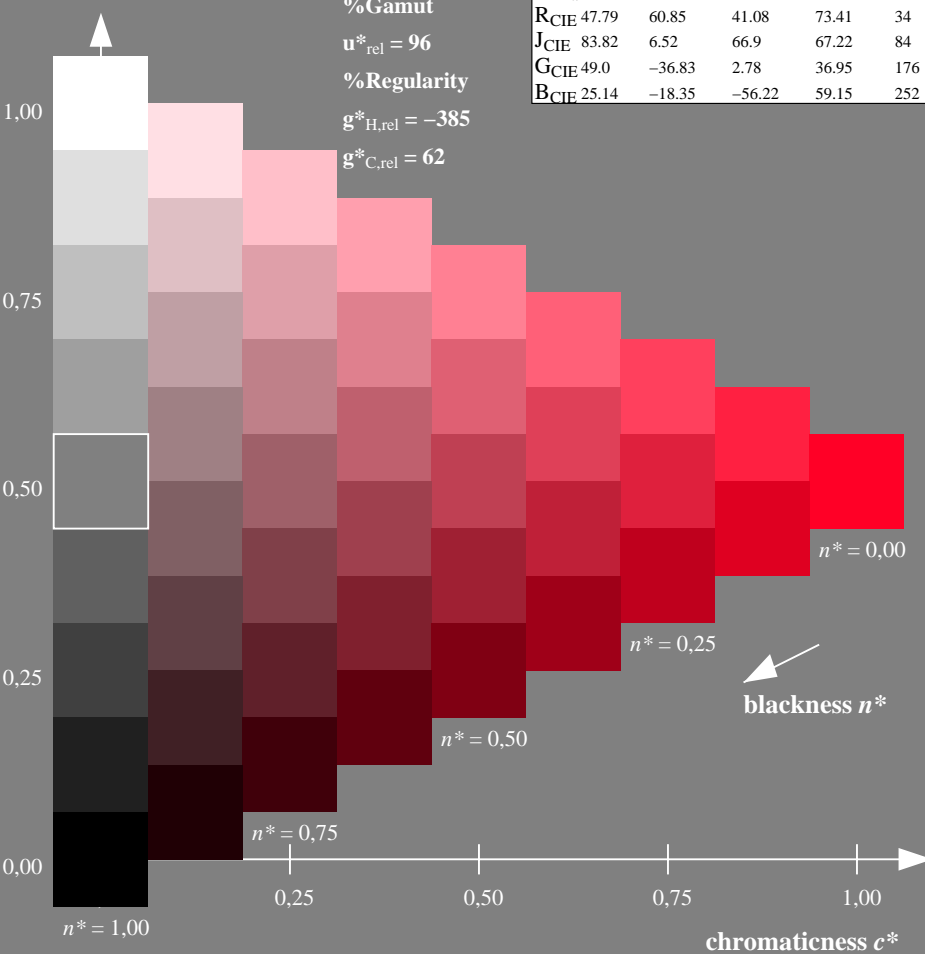
olv\*Ma: 1.0 0.0 0.15



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	64.42	50.58	81.9	38
Y <sub>Ma</sub>	92.62	2.41	86.36	86.39	88
L <sub>Ma</sub>	50.9	-63.82	35.02	72.81	151
C <sub>Ma</sub>	51.25	-53.68	-57.69	78.82	227
V <sub>Ma</sub>	25.72	30.34	-44.37	53.76	304
M <sub>Ma</sub>	56.25	70.59	7.57	70.99	6
N <sub>Ma</sub>	18.11	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.6	0.0	0.0	0.0	0
R <sub>CIE</sub>	47.79	60.85	41.08	73.41	34
J <sub>CIE</sub>	83.82	6.52	66.9	67.22	84
G <sub>CIE</sub>	49.0	-36.83	2.78	36.95	176
B <sub>CIE</sub>	25.14	-18.35	-56.22	59.15	252

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 96$

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

Output: Colorimetric Television Luminous System TLS00

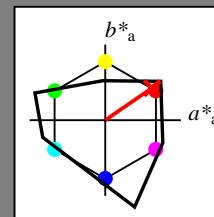
for hue  $h^* = lab^*h = 35/360 = 0.096$

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

A: hue R

LCH\*Ma: 66 89 35

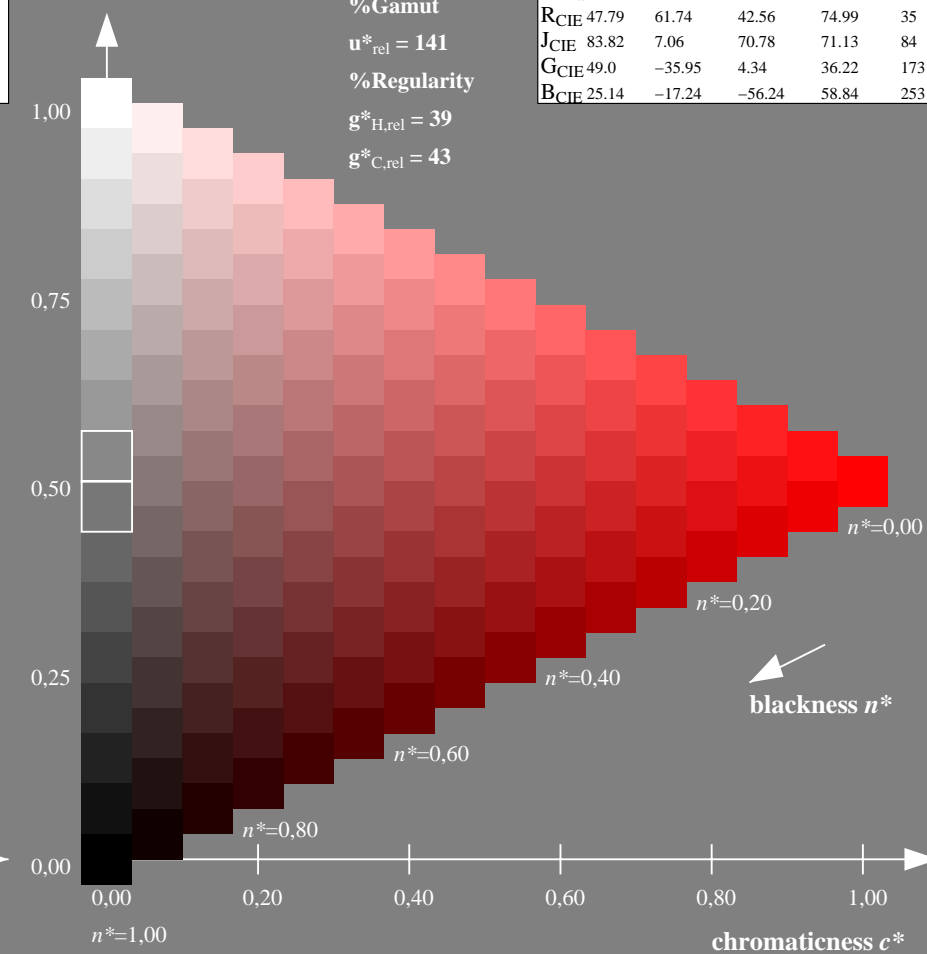
olv\*Ma: 1.0 0.0 0.01



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	65.56	73.34	51.39	89.55	35
Y <sub>Ma</sub>	94.78	-3.49	52.24	52.36	94
L <sub>Ma</sub>	77.48	-92.97	36.0	99.71	159
C <sub>Ma</sub>	78.36	-82.69	-22.74	85.77	195
V <sub>Ma</sub>	12.55	38.81	-114.81	121.2	289
M <sub>Ma</sub>	66.71	76.08	-29.8	81.71	339
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>	47.79	61.74	42.56	74.99	35
J <sub>CIE</sub>	83.82	7.06	70.78	71.13	84
G <sub>CIE</sub>	49.0	-35.95	4.34	36.22	173
B <sub>CIE</sub>	25.14	-17.24	-56.24	58.84	253

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 141$

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$

RE900-7, 9 step scales for constant CIELAB hue 34/360 = 0.095 (left)

16 step scales for constant CIELAB hue 35/360 = 0.096 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 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/RE90/>  
 Technical information: <http://www.ps.bam.de/>  
 Version 2.1, io=1,1

BAM registration: 20060101-RE90/10S/S90E06NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems  
 /RE90 Form: 7/10, Serie: 1/1, Page: 7 Page count: 7



Input: Colorimetric Offset Reflective System ORS18

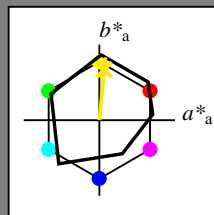
for hue  $h^* = lab^*h = 84/360 = 0.235$

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

A: hue J

LCH\*Ma: 89 83 84

olv\*Ma: 1.0 0.91 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	64.42	50.58	81.9	38
Y <sub>Ma</sub>	92.62	2.41	86.36	86.39	88
L <sub>Ma</sub>	50.9	-63.82	35.02	72.81	151
C <sub>Ma</sub>	51.25	-53.68	-57.69	78.82	227
V <sub>Ma</sub>	25.72	30.34	-44.37	53.76	304
M <sub>Ma</sub>	56.25	70.59	7.57	70.99	6
N <sub>Ma</sub>	18.11	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.6	0.0	0.0	0.0	0
R <sub>CIE</sub>	47.79	60.85	41.08	73.41	34
J <sub>CIE</sub>	83.82	6.52	66.9	67.22	84
G <sub>CIE</sub>	49.0	-36.83	2.78	36.95	176
B <sub>CIE</sub>	25.14	-18.35	-56.22	59.15	252

%Gamut

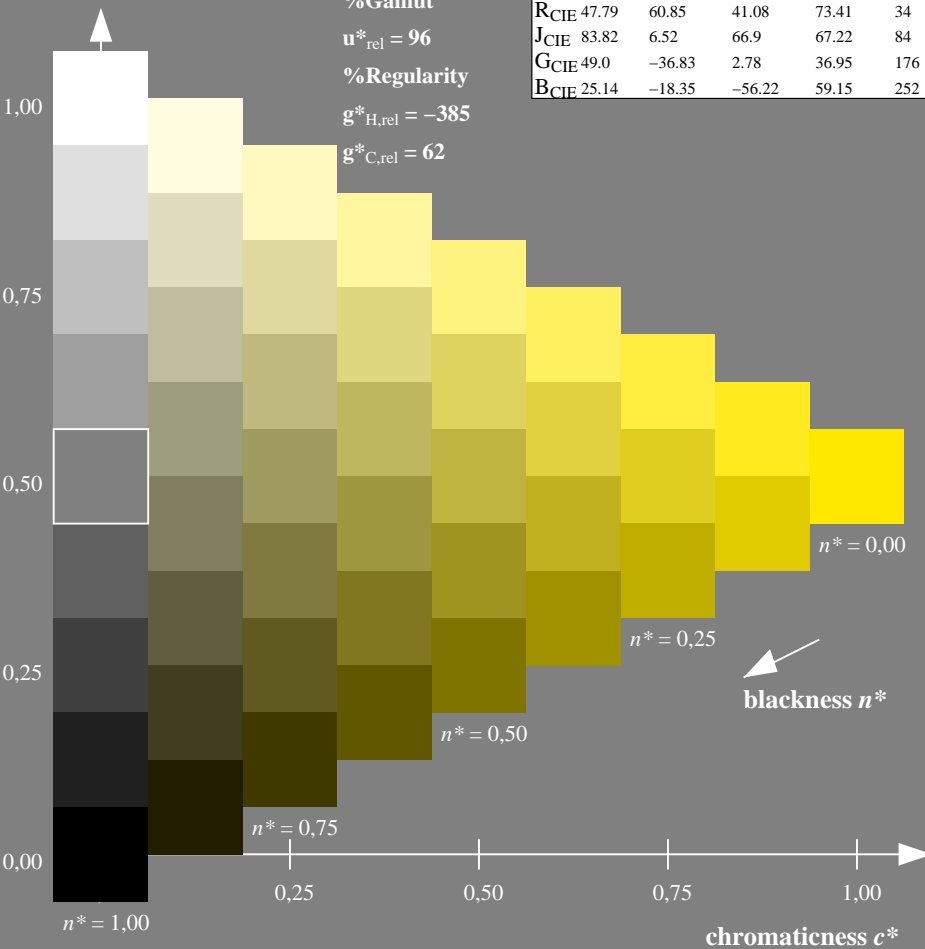
$u^*_{rel} = 96$

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

triangle lightness  $t^*$



Output: Colorimetric Television Luminous System TLS00

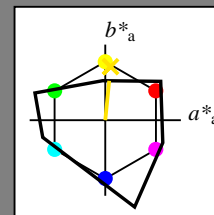
for hue  $h^* = lab^*h = 84/360 = 0.234$

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

A: hue J

LCH\*Ma: 91 52 84

olv\*Ma: 1.0 0.89 0.0



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	65.56	73.34	51.39	89.55	35
Y <sub>Ma</sub>	94.78	-3.49	52.24	52.36	94
L <sub>Ma</sub>	77.48	-92.97	36.0	99.71	159
C <sub>Ma</sub>	78.36	-82.69	-22.74	85.77	195
V <sub>Ma</sub>	12.55	38.81	-114.81	121.2	289
M <sub>Ma</sub>	66.71	76.08	-29.8	81.71	339
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>	47.79	61.74	42.56	74.99	35
J <sub>CIE</sub>	83.82	7.06	70.78	71.13	84
G <sub>CIE</sub>	49.0	-35.95	4.34	36.22	173
B <sub>CIE</sub>	25.14	-17.24	-56.24	58.84	253

%Gamut

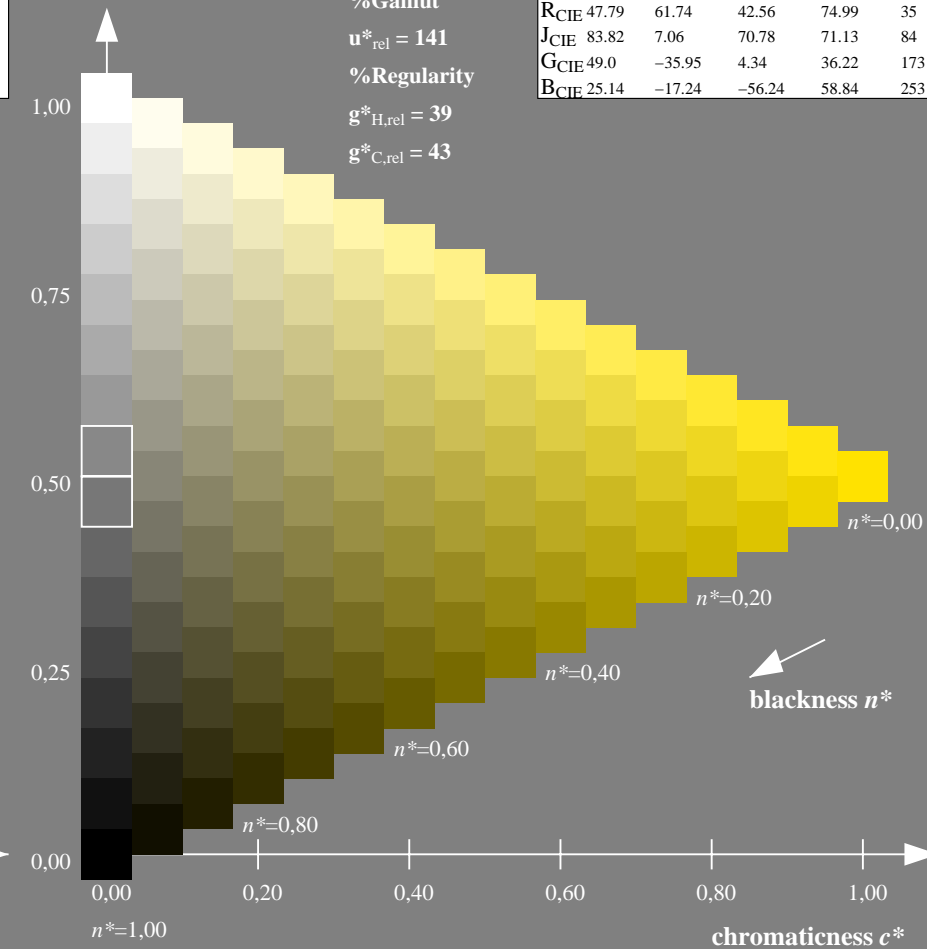
$u^*_{rel} = 141$

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$

triangle lightness  $t^*$



RE900-7, 9 step scales for constant CIELAB hue 84/360 = 0.235 (left)

16 step scales for constant CIELAB hue 84/360 = 0.234 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: no change compared to input



Input: Colorimetric Offset Reflective System ORS18

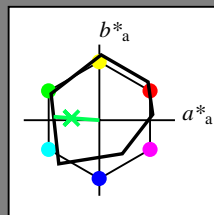
for hue  $h^* = lab^*h = 176/360 = 0.488$

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

A: hue G

LCH\*Ma: 51 61 176

olv\*Ma: 0.0 1.0 0.33



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	64.42	50.58	81.9	38
Y <sub>Ma</sub>	92.62	2.41	86.36	86.39	88
L <sub>Ma</sub>	50.9	-63.82	35.02	72.81	151
C <sub>Ma</sub>	51.25	-53.68	-57.69	78.82	227
V <sub>Ma</sub>	25.72	30.34	-44.37	53.76	304
M <sub>Ma</sub>	56.25	70.59	7.57	70.99	6
N <sub>Ma</sub>	18.11	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.6	0.0	0.0	0.0	0
R <sub>CIE</sub>	47.79	60.85	41.08	73.41	34
J <sub>CIE</sub>	83.82	6.52	66.9	67.22	84
G <sub>CIE</sub>	49.0	-36.83	2.78	36.95	176
B <sub>CIE</sub>	25.14	-18.35	-56.22	59.15	252

%Gamut

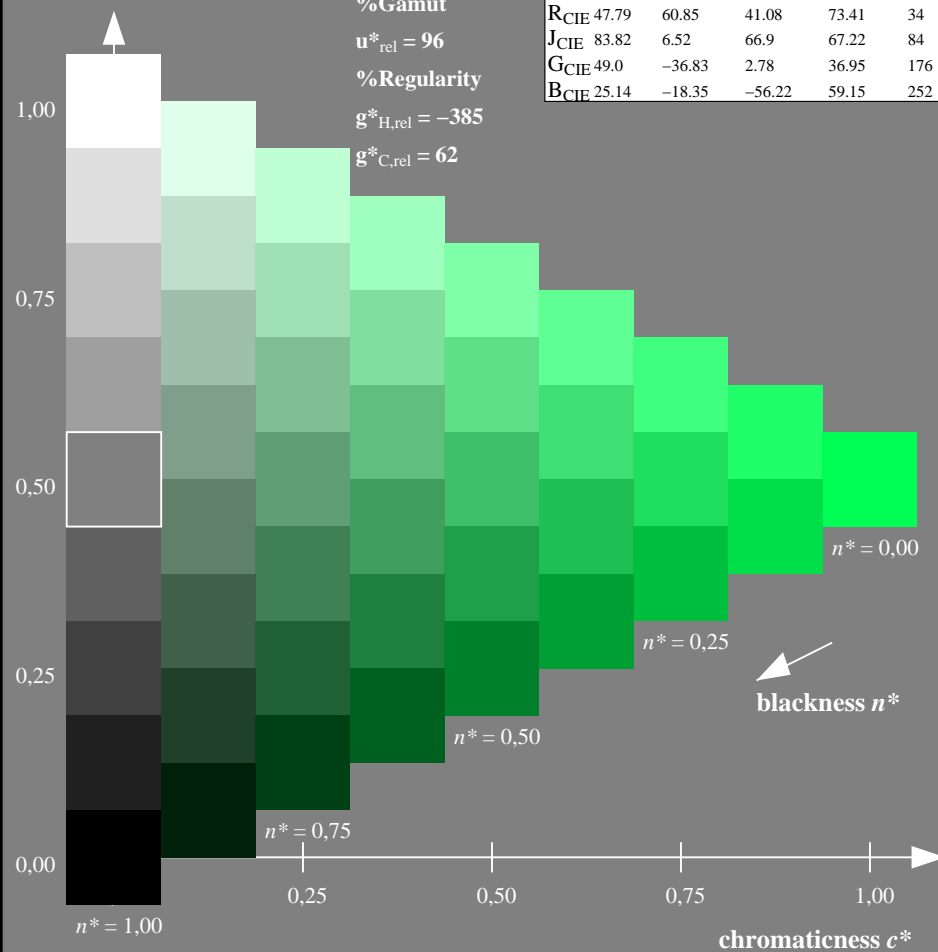
$u^*_{rel} = 96$

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

triangle lightness  $t^*$



Output: Colorimetric Television Luminous System TLS00

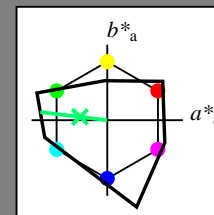
for hue  $h^* = lab^*h = 173/360 = 0.481$

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

A: hue G

LCH\*Ma: 78 89 173

olv\*Ma: 0.0 1.0 0.43



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	65.56	73.34	51.39	89.55	35
Y <sub>Ma</sub>	94.78	-3.49	52.24	52.36	94
L <sub>Ma</sub>	77.48	-92.97	36.0	99.71	159
C <sub>Ma</sub>	78.36	-82.69	-22.74	85.77	195
V <sub>Ma</sub>	12.55	38.81	-114.81	121.2	289
M <sub>Ma</sub>	66.71	76.08	-29.8	81.71	339
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>	47.79	61.74	42.56	74.99	35
J <sub>CIE</sub>	83.82	7.06	70.78	71.13	84
G <sub>CIE</sub>	49.0	-35.95	4.34	36.22	173
B <sub>CIE</sub>	25.14	-17.24	-56.24	58.84	253

%Gamut

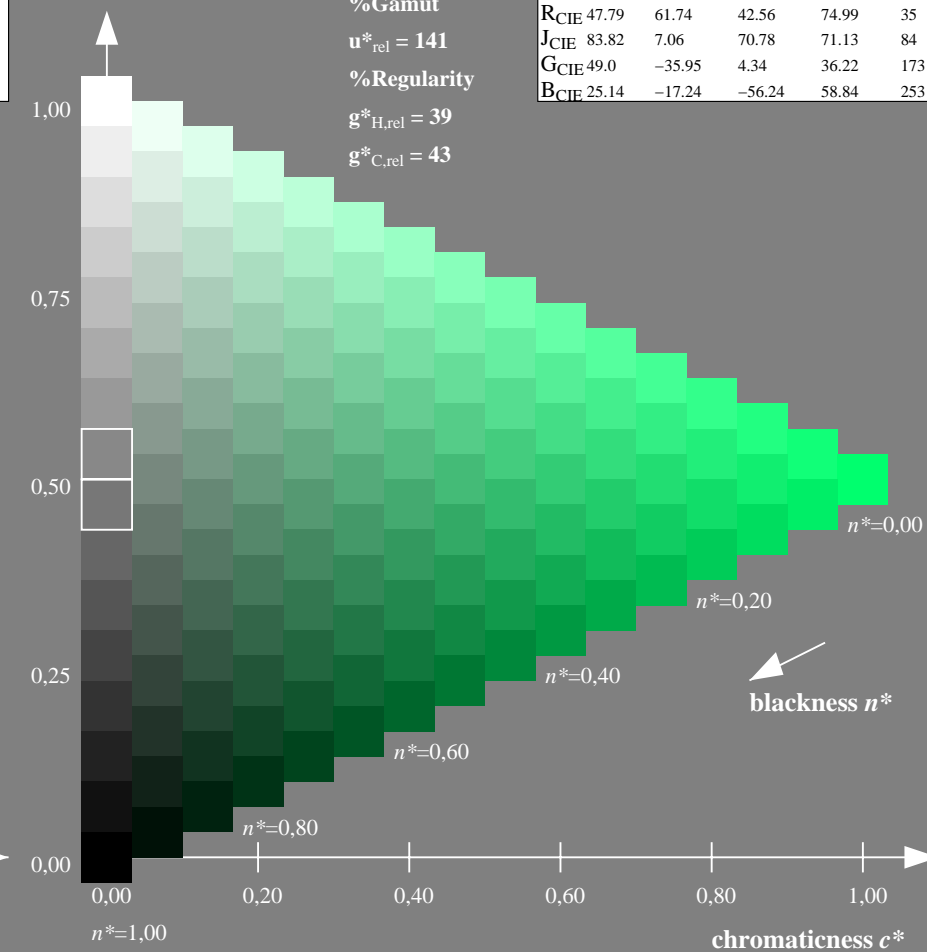
$u^*_{rel} = 141$

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$

triangle lightness  $t^*$



RE900-7, 9 step scales for constant CIELAB hue 176/360 = 0.488 (left)

16 step scales for constant CIELAB hue 173/360 = 0.481 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

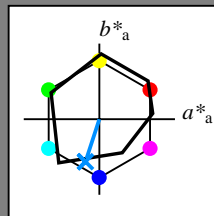
input: *olv\* setrgbcolor*

output: *no change compared to input*

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 252/360 = 0.7$   
 $lab^*tch$  and  $lab^*nch$

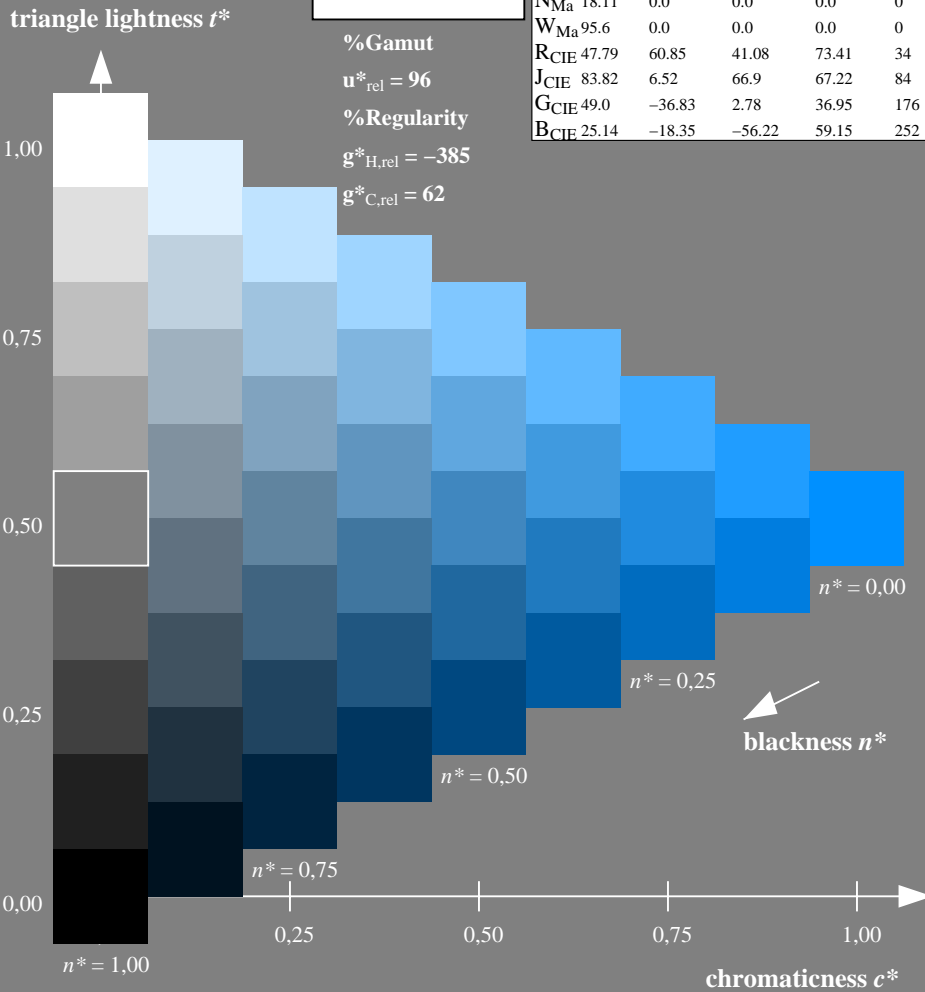
A: hue B  
 LCH\*Ma: 40 55 252  
 olv\*Ma: 0.0 0.56 1.0



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	47.94	64.42	50.58	81.9	38
Y <sub>Ma</sub>	92.62	2.41	86.36	86.39	88
L <sub>Ma</sub>	50.9	-63.82	35.02	72.81	151
C <sub>Ma</sub>	51.25	-53.68	-57.69	78.82	227
V <sub>Ma</sub>	25.72	30.34	-44.37	53.76	304
M <sub>Ma</sub>	56.25	70.59	7.57	70.99	6
N <sub>Ma</sub>	18.11	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.6	0.0	0.0	0.0	0
R <sub>CIE</sub>	47.79	60.85	41.08	73.41	34
J <sub>CIE</sub>	83.82	6.52	66.9	67.22	84
G <sub>CIE</sub>	49.0	-36.83	2.78	36.95	176
B <sub>CIE</sub>	25.14	-18.35	-56.22	59.15	252

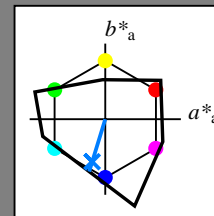
%Gamut  
 $u^*_{rel} = 96$   
 %Regularity  
 $g^*_{H,rel} = -385$   
 $g^*_{C,rel} = 62$



Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 253/360 = 0.703$   
 $lab^*tch$  and  $lab^*nch$

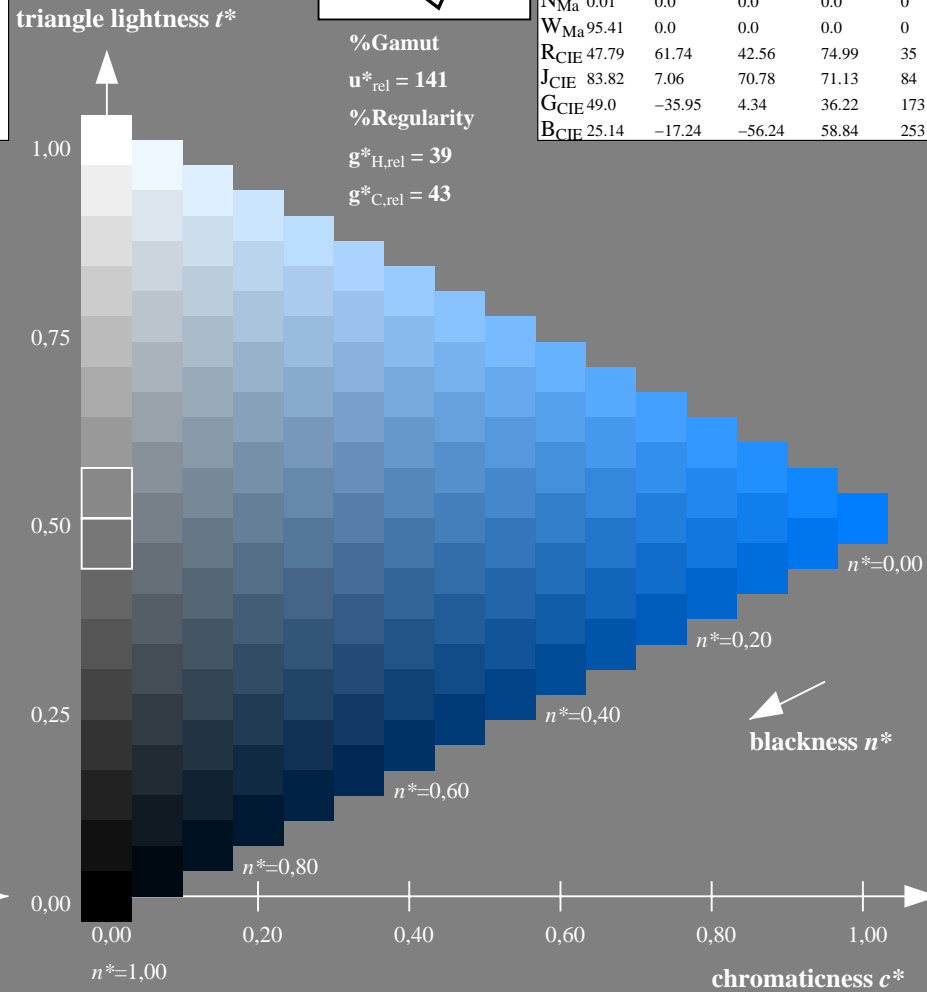
A: hue B  
 LCH\*Ma: 45 72 253  
 olv\*Ma: 0.0 0.49 1.0



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	65.56	73.34	51.39	89.55	35
Y <sub>Ma</sub>	94.78	-3.49	52.24	52.36	94
L <sub>Ma</sub>	77.48	-92.97	36.0	99.71	159
C <sub>Ma</sub>	78.36	-82.69	-22.74	85.77	195
V <sub>Ma</sub>	12.55	38.81	-114.81	121.2	289
M <sub>Ma</sub>	66.71	76.08	-29.8	81.71	339
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>	47.79	61.74	42.56	74.99	35
J <sub>CIE</sub>	83.82	7.06	70.78	71.13	84
G <sub>CIE</sub>	49.0	-35.95	4.34	36.22	173
B <sub>CIE</sub>	25.14	-17.24	-56.24	58.84	253

%Gamut  
 $u^*_{rel} = 141$   
 %Regularity  
 $g^*_{H,rel} = 39$   
 $g^*_{C,rel} = 43$



RE900-7, 9 step scales for constant CIELAB hue 252/360 = 0.7 (left)

16 step scales for constant CIELAB hue 253/360 = 0.703 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00  
 A: 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/RE90/>  
 Technical information: <http://www.ps.bam.de/RE90/>  
 Version 2.1, io=1,1

BAM registration: 20060101-RE90/10S/S90E09NP.PS/.PDF BAM material: code=rhadata  
 application for evaluation and measurement of printer or monitor systems  
 /RE90 Form: 10/10Scene: 1/1 Page: 10 Page count: 10