

Input: Colorimetric Television Luminous System TLS18

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

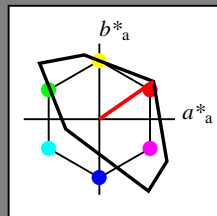
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 53 87 35

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



TLS18; adapted (a) CIELAB data

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

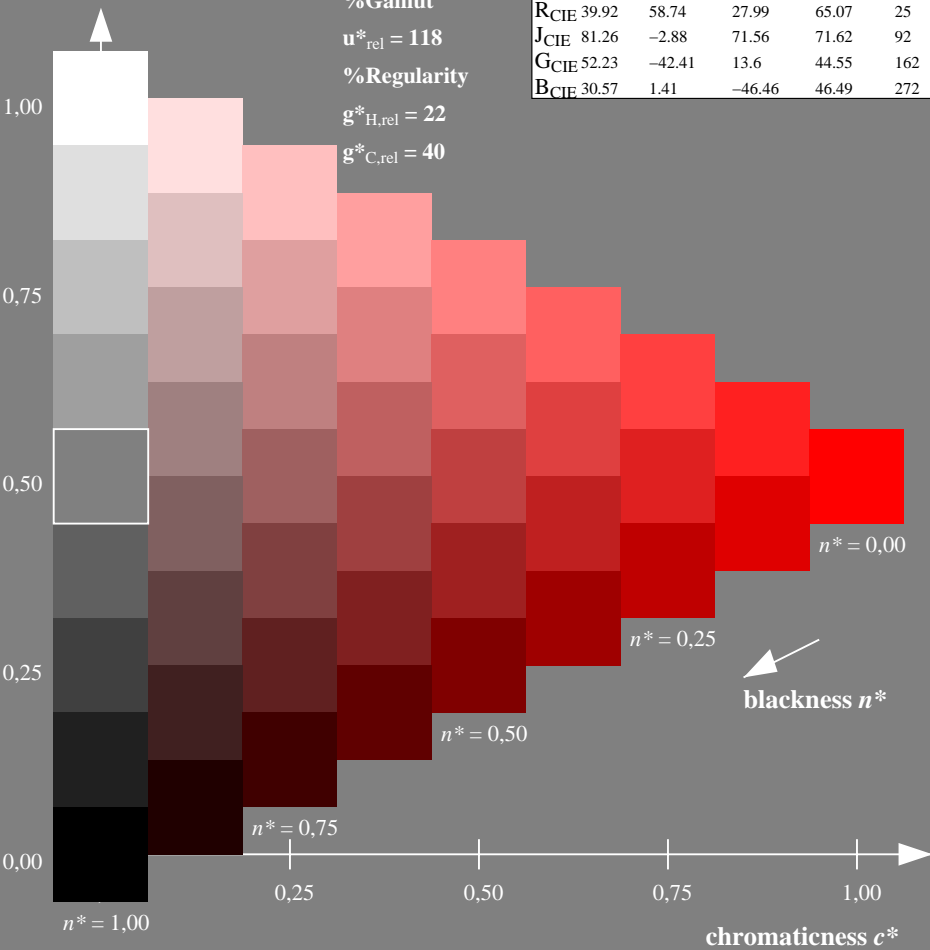
%Gamut

$u^*_{rel} = 118$

%Regularity

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

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



Output: Colorimetric Offset Reflective System ORS18

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

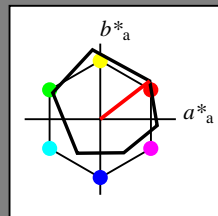
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 48 83 38

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

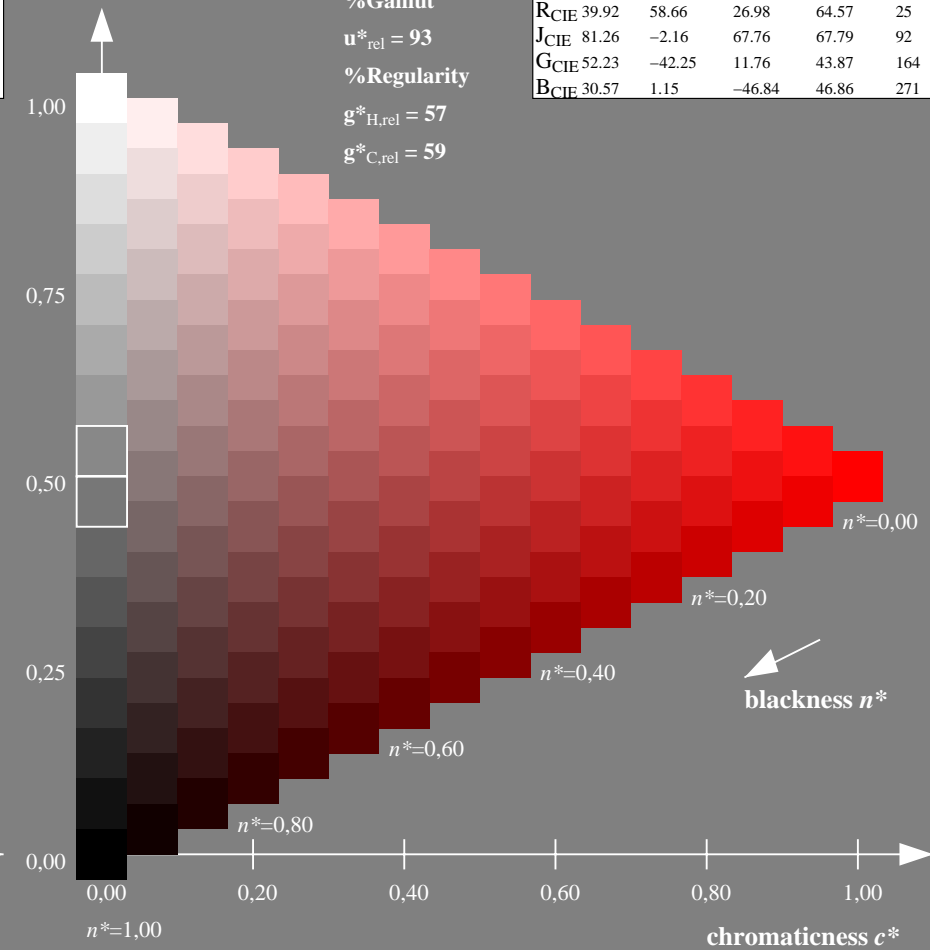
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



NE960-7, 9 step scales for constant CIELAB hue 35/360 = 0.097 (left)

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

BAM-test chart NE96; Colorimetric systems ORS18 & ORS18

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^* setrgbcolor$

output: Startup (S) data depend

Input: Colorimetric Television Luminous System TLS18

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

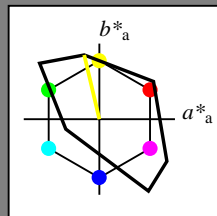
$lab^*tch$  and  $lab^*nch$

D65: hue Y

LCH\*Ma: 93 87 103

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



TLS18; adapted (a) CIELAB data

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

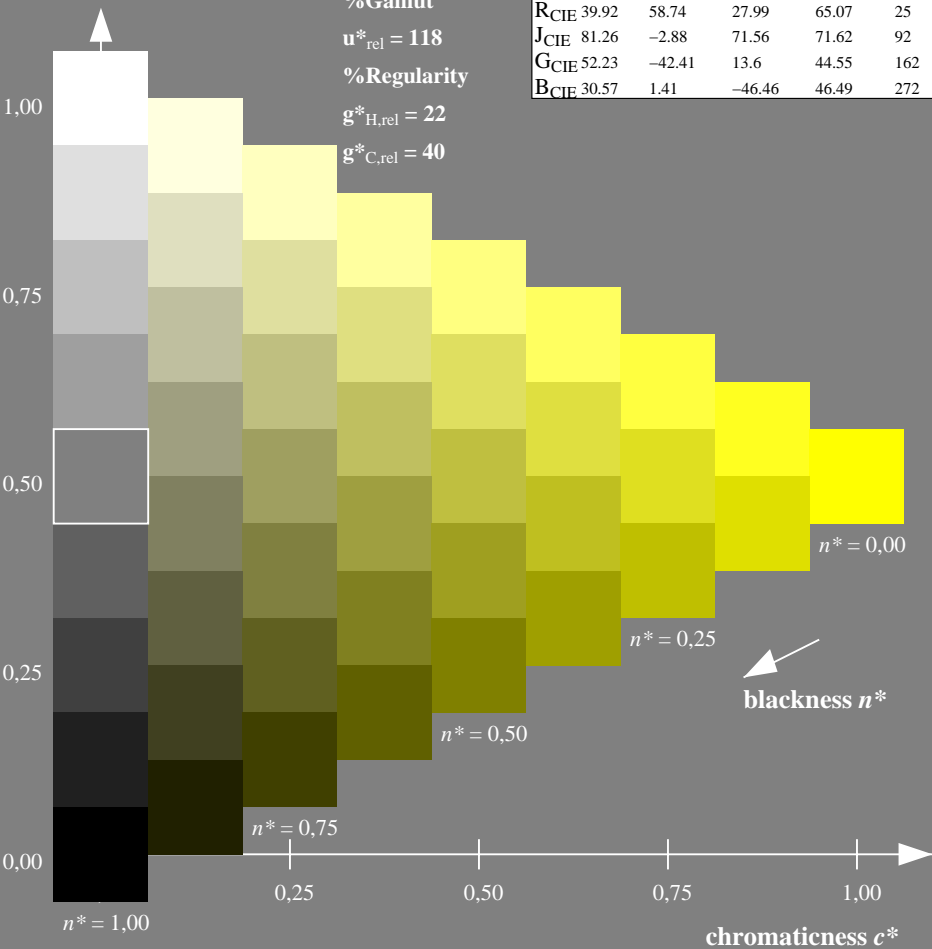
%Gamut

$u^*_{rel} = 118$

%Regularity

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

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



Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 96/360 = 0.268$

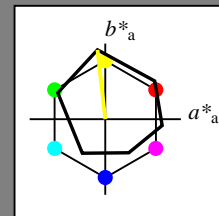
$lab^*tch$  and  $lab^*nch$

D65: hue Y

LCH\*Ma: 90 92 96

olv\*Ma: 1.0 1.0 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	65.39	50.52	82.63	38
Y <sub>Ma</sub>	90.37	-10.26	91.75	92.32	96
L <sub>Ma</sub>	50.9	-62.83	34.96	71.91	151
C <sub>Ma</sub>	58.62	-30.34	-45.01	54.3	236
V <sub>Ma</sub>	25.72	31.1	-44.4	54.22	305
M <sub>Ma</sub>	48.13	75.28	-8.36	75.74	354
N <sub>Ma</sub>	18.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	39.92	58.66	26.98	64.57	25
J <sub>CIE</sub>	81.26	-2.16	67.76	67.79	92
G <sub>CIE</sub>	52.23	-42.25	11.76	43.87	164
B <sub>CIE</sub>	30.57	1.15	-46.84	46.86	271

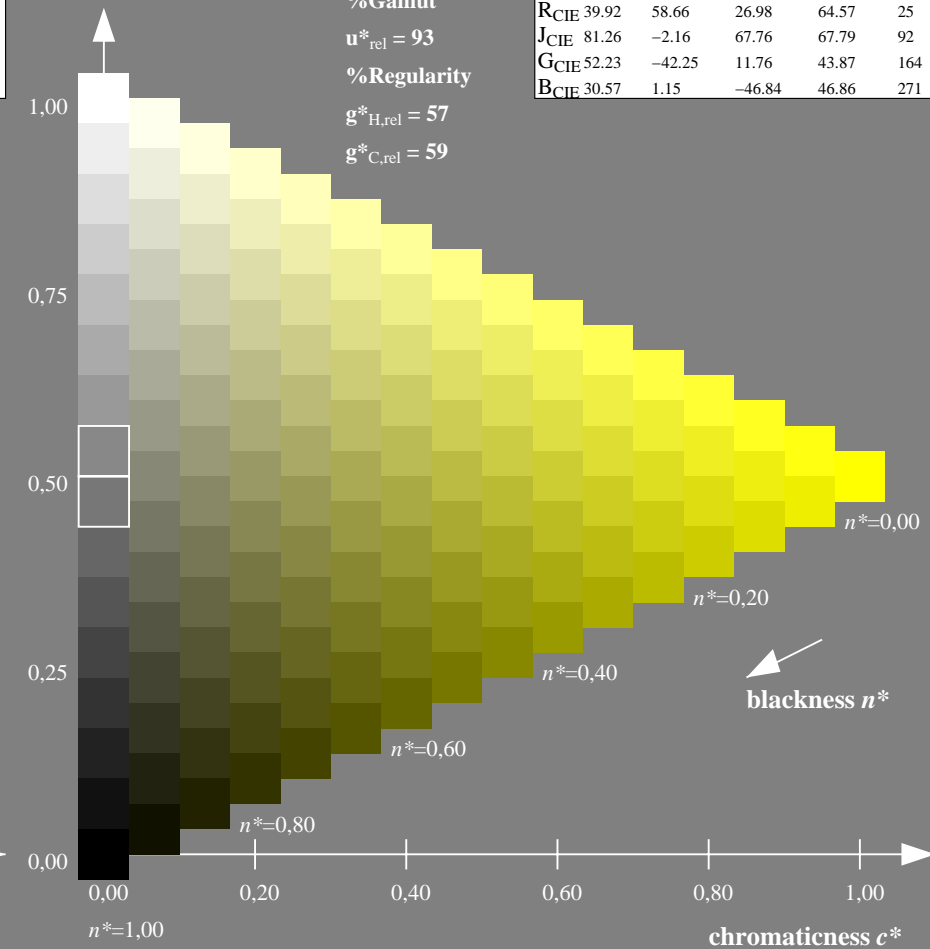
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



NE960-7, 9 step scales for constant CIELAB hue 103/360 = 0.287 (left)

16 step scales for constant CIELAB hue 96/360 = 0.268 (right)

BAM-test chart NE96; Colorimetric systems ORS18 & ORS18

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: Startup (S) data depend

Input: Colorimetric Television Luminous System TLS18

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

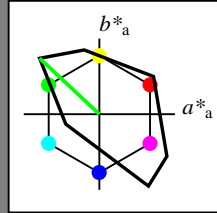
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 108 137

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



TLS18; adapted (a) CIELAB data

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

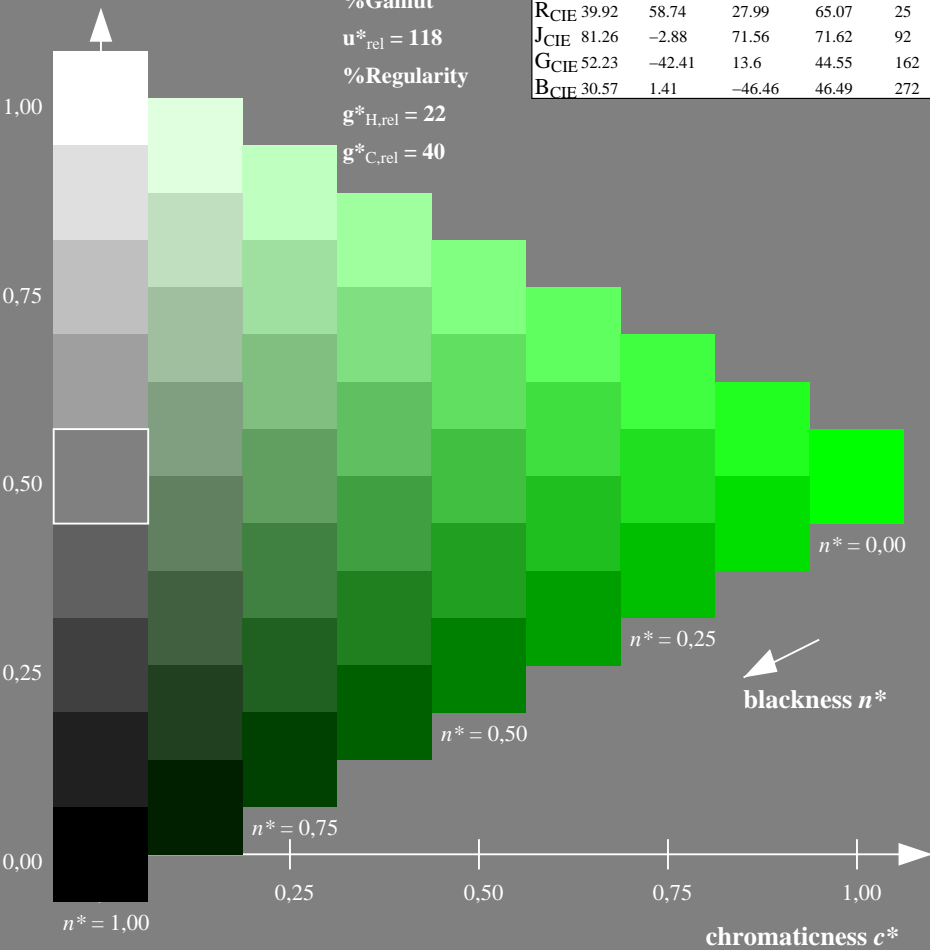
%Gamut

$u^*_{rel} = 118$

%Regularity

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

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



NE960-7, 9 step scales for constant CIELAB hue 137/360 = 0.38 (left)

Output: Colorimetric Offset Reflective System ORS18

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

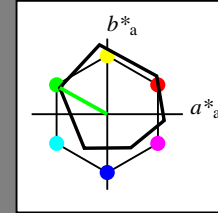
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 51 72 151

olv\*Ma: 0.0 1.0 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	65.39	50.52	82.63	38
Y <sub>Ma</sub>	90.37	-10.26	91.75	92.32	96
L <sub>Ma</sub>	50.9	-62.83	34.96	71.91	151
C <sub>Ma</sub>	58.62	-30.34	-45.01	54.3	236
V <sub>Ma</sub>	25.72	31.1	-44.4	54.22	305
M <sub>Ma</sub>	48.13	75.28	-8.36	75.74	354
N <sub>Ma</sub>	18.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	39.92	58.66	26.98	64.57	25
J <sub>CIE</sub>	81.26	-2.16	67.76	67.79	92
G <sub>CIE</sub>	52.23	-42.25	11.76	43.87	164
B <sub>CIE</sub>	30.57	1.15	-46.84	46.86	271

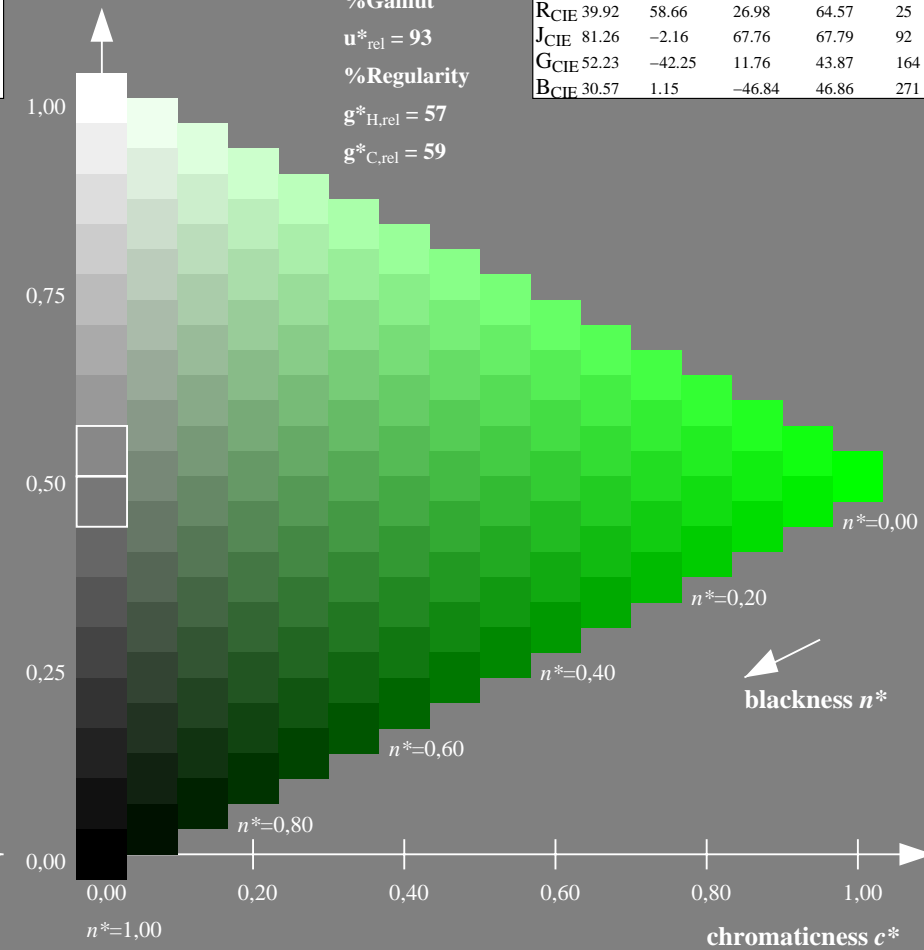
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



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

BAM-test chart NE96; Colorimetric systems ORS18 & ORS18

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: Startup (S) data dependend

Input: Colorimetric Television Luminous System TLS18

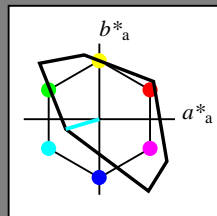
for hue  $h^* = lab^*h = 196/360 = 0.546$

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

D65: hue C

LCH\*Ma: 87 46 196

olv\*Ma: 0.0 1.0 1.0



TLS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	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

%Gamut

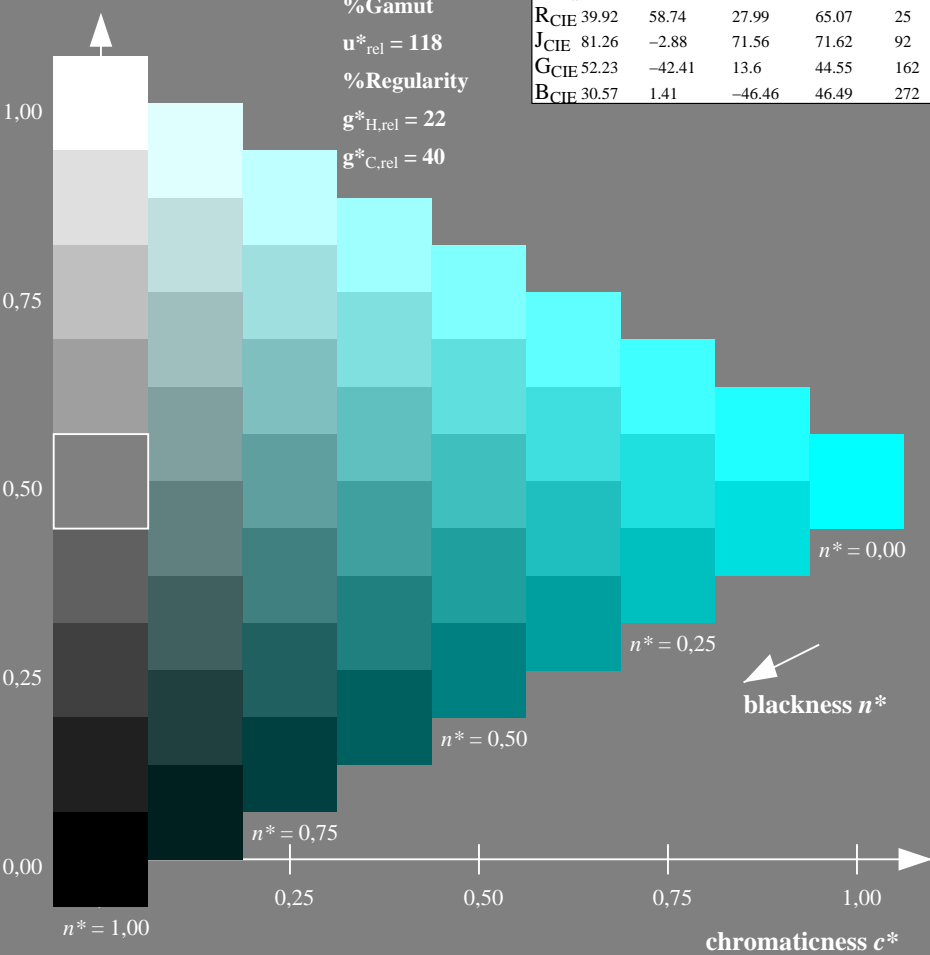
$u^*_{rel} = 118$

%Regularity

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

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

triangle lightness  $t^*$



Output: Colorimetric Offset Reflective System ORS18

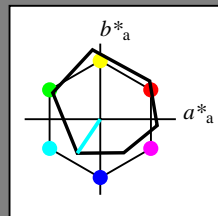
for hue  $h^* = lab^*h = 236/360 = 0.656$

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

D65: hue C

LCH\*Ma: 59 54 236

olv\*Ma: 0.0 1.0 1.0



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	354
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

%Gamut

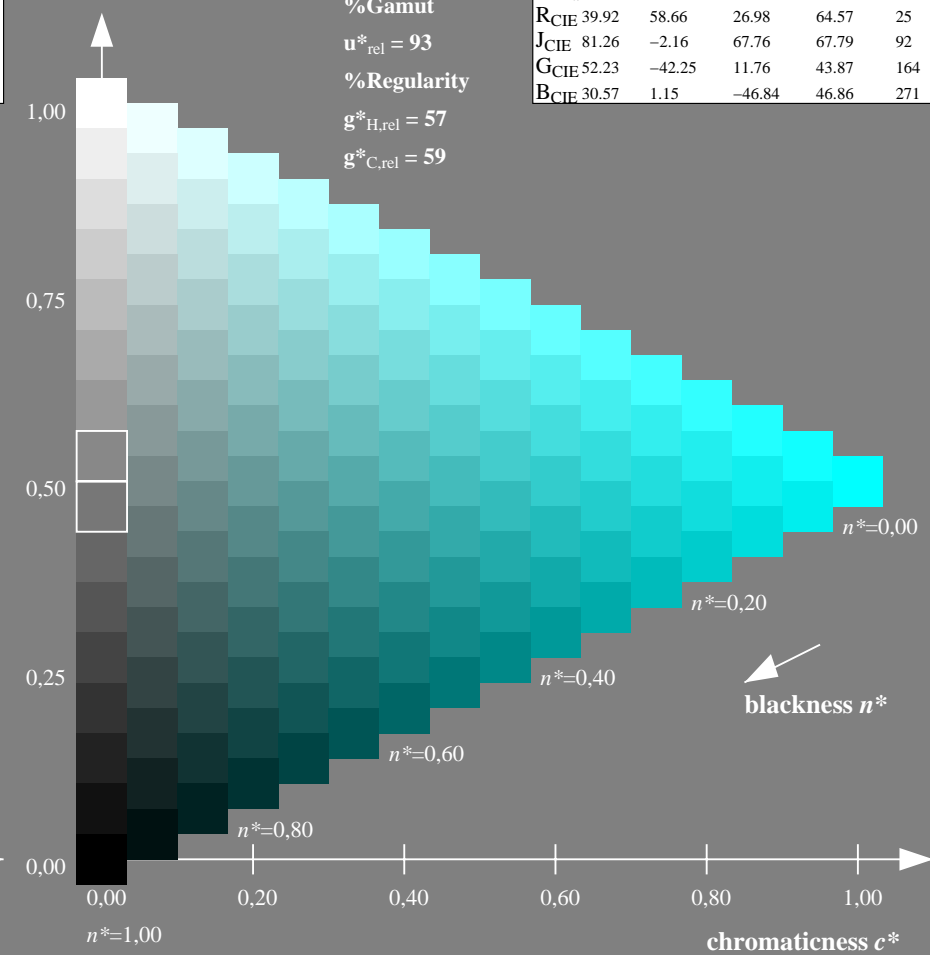
$u^*_{rel} = 93$

%Regularity

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

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

triangle lightness  $t^*$



NE960-7, 9 step scales for constant CIELAB hue 196/360 = 0.546 (left)

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

BAM-test chart NE96; Colorimetric systems ORS18 & ORS18

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: Startup (S) data dependend

Input: Colorimetric Television Luminous System TLS18

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

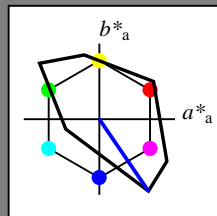
$lab^*tch$  and  $lab^*nch$

D65: hue V

LCH\*Ma: 35 115 304

olv\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



TLS18; adapted (a) CIELAB data

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

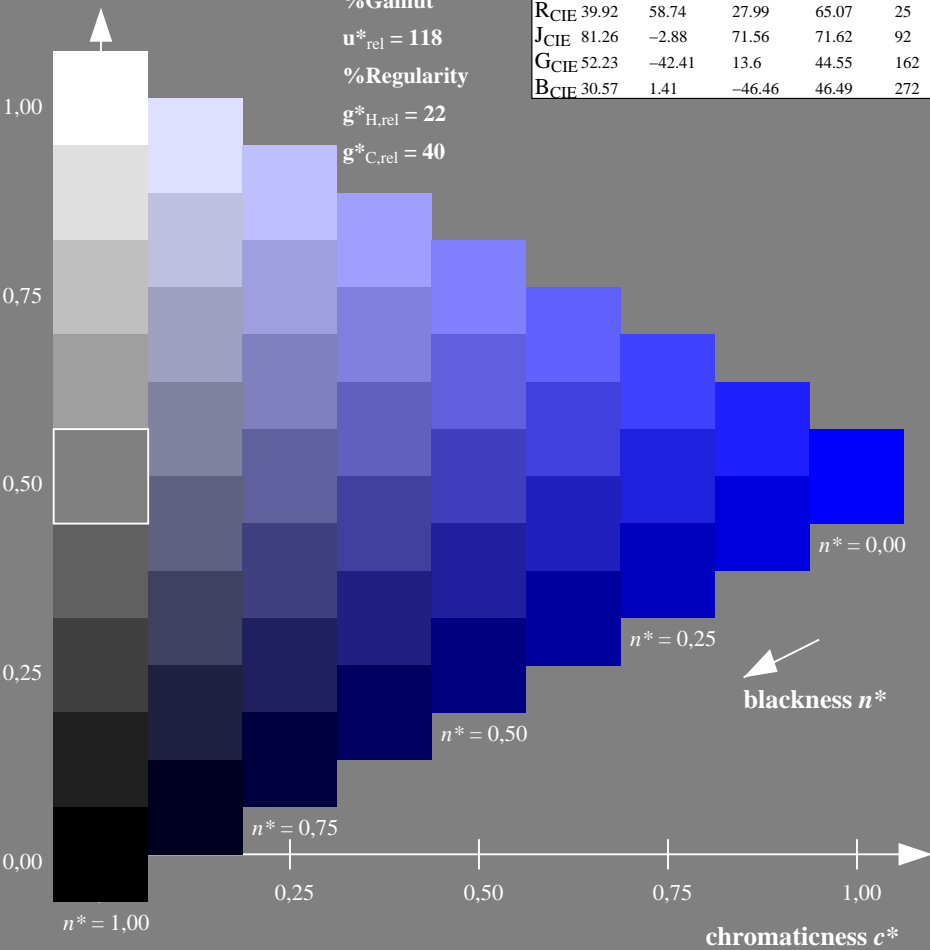
%Gamut

$u^*_{rel} = 118$

%Regularity

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

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



NE960-7, 9 step scales for constant CIELAB hue 304/360 = 0.845 (left)

Output: Colorimetric Offset Reflective System ORS18

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

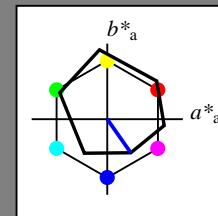
$lab^*tch$  and  $lab^*nch$

D65: hue V

LCH\*Ma: 26 54 305

olv\*Ma: 0.0 0.0 1.0

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

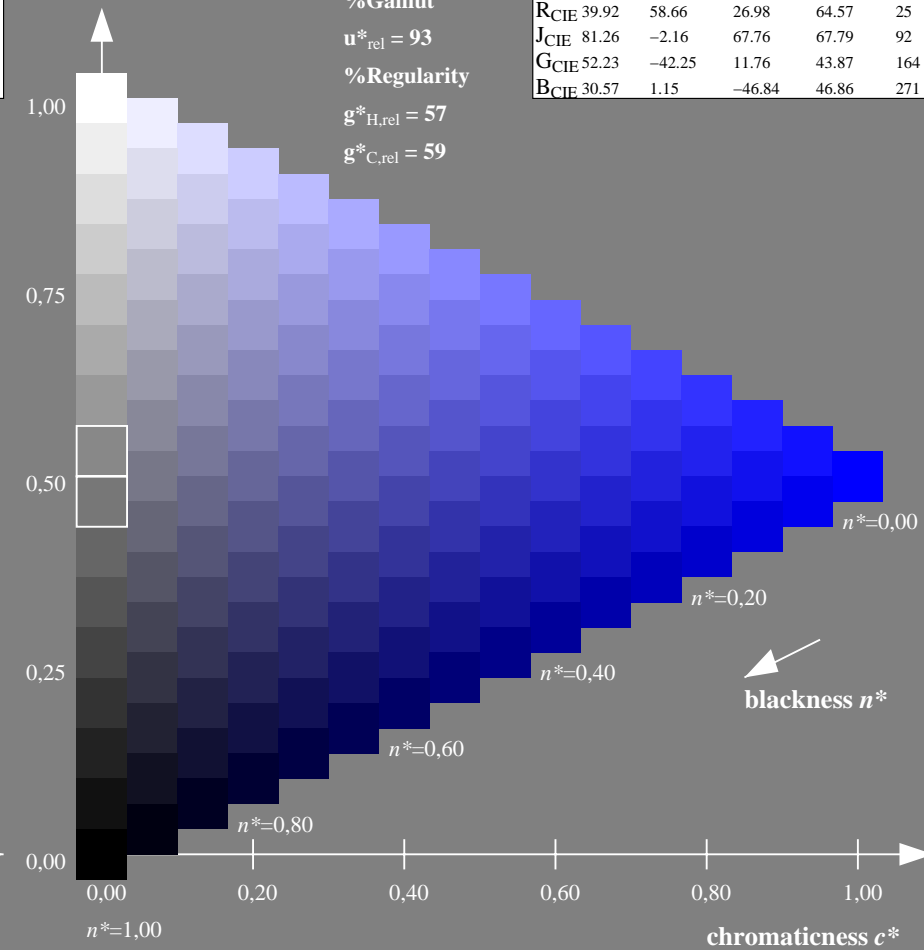
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



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

BAM-test chart NE96; Colorimetric systems ORS18 & ORS18

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: Startup (S) data dependend

**Input: Colorimetric Television Luminous System TLS18**

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

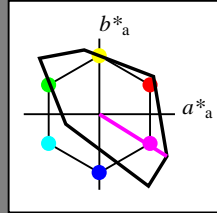
$lab^*tch$  and  $lab^*nch$

D65: hue M

LCH\*Ma: 59 105 328

olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



**TLS18; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	52.76	71.63	49.88	87.29	35
YMa	92.74	-20.02	84.97	87.3	103
LMa	84.0	-78.98	73.94	108.2	137
CMa	87.14	-44.41	-13.11	46.32	196
VMa	35.47	64.92	-95.06	115.12	304
MMa	59.01	89.33	-55.67	105.26	328
NMa	18.01	0.0	0.0	0.0	0
WMa	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

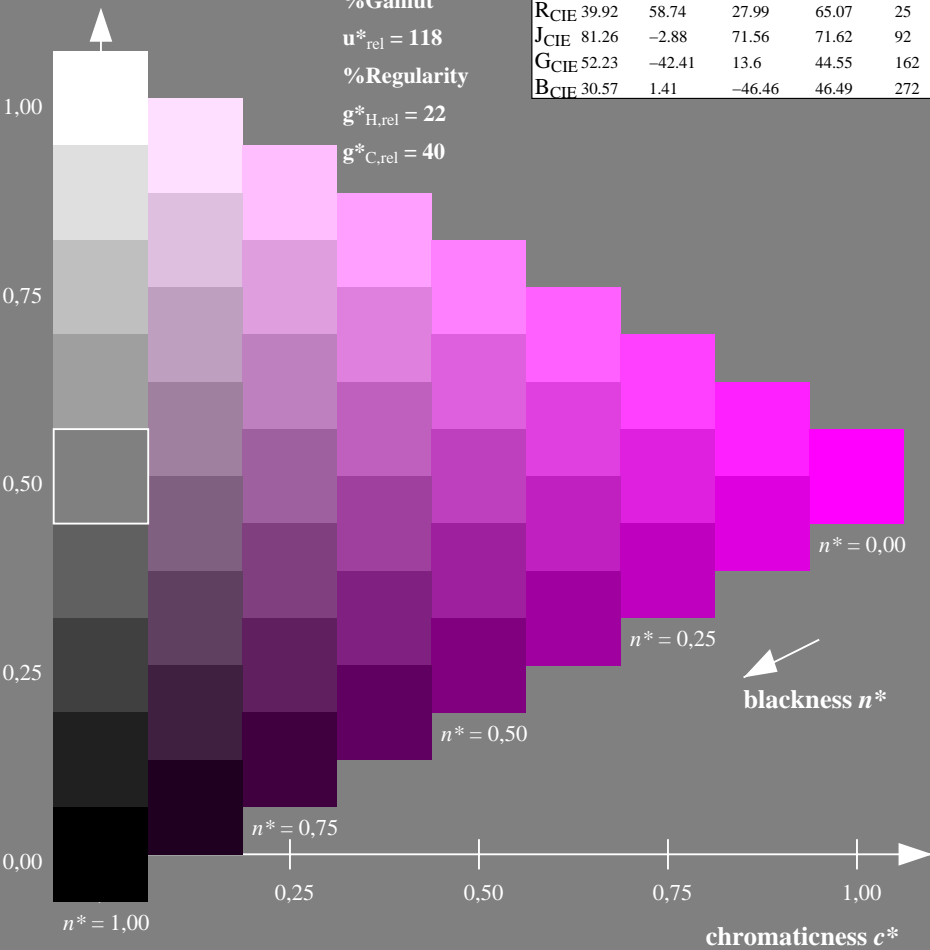
%Gamut

$u^*_{rel} = 118$

%Regularity

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

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



NE960-7, 9 step scales for constant CIELAB hue 328/360 = 0.911 (left)

**Output: Colorimetric Offset Reflective System ORS18**

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

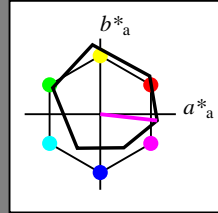
$lab^*tch$  and  $lab^*nch$

D65: hue M

LCH\*Ma: 48 76 354

olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



**ORS18; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	354
NMa	18.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.66	26.98	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

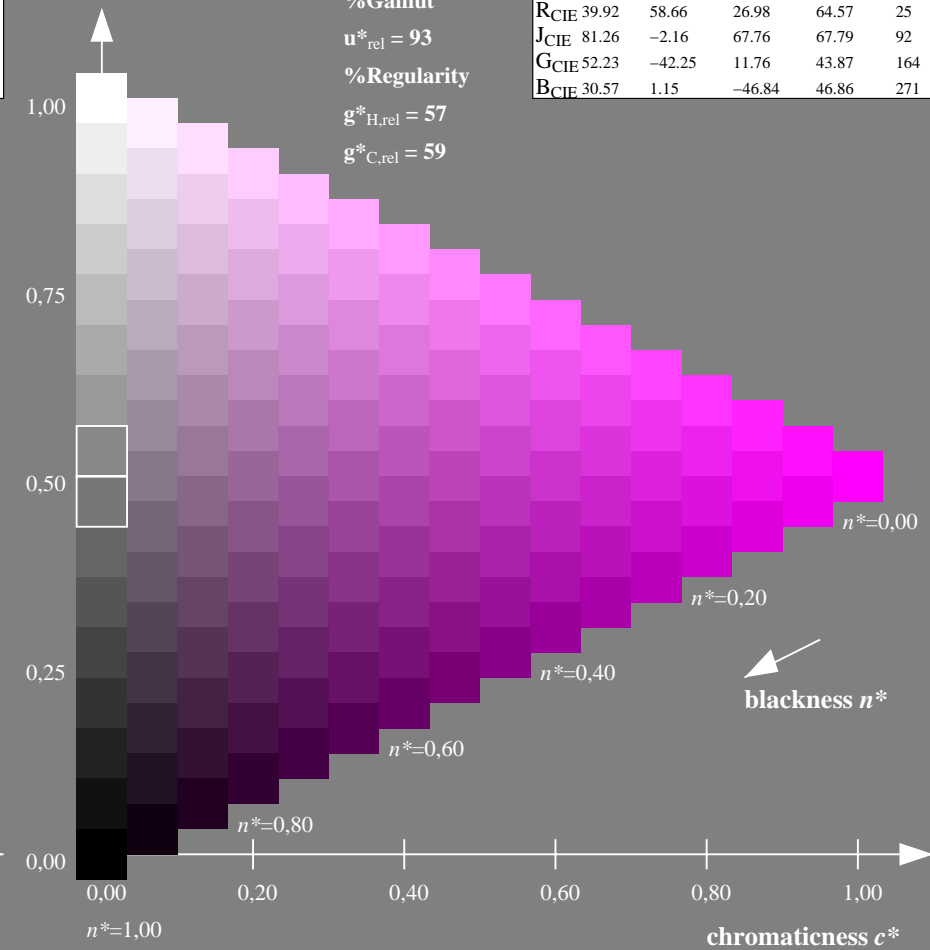
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



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

Input: Colorimetric Television Luminous System TLS18

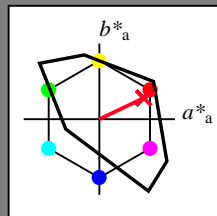
for hue  $h^* = lab^*h = 25/360 = 0.071$

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

D65: hue R

LCH\*Ma: 54 82 25

olv\*Ma: 1.0 0.0 0.14



TLS18; adapted (a) CIELAB data

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

%Gamut

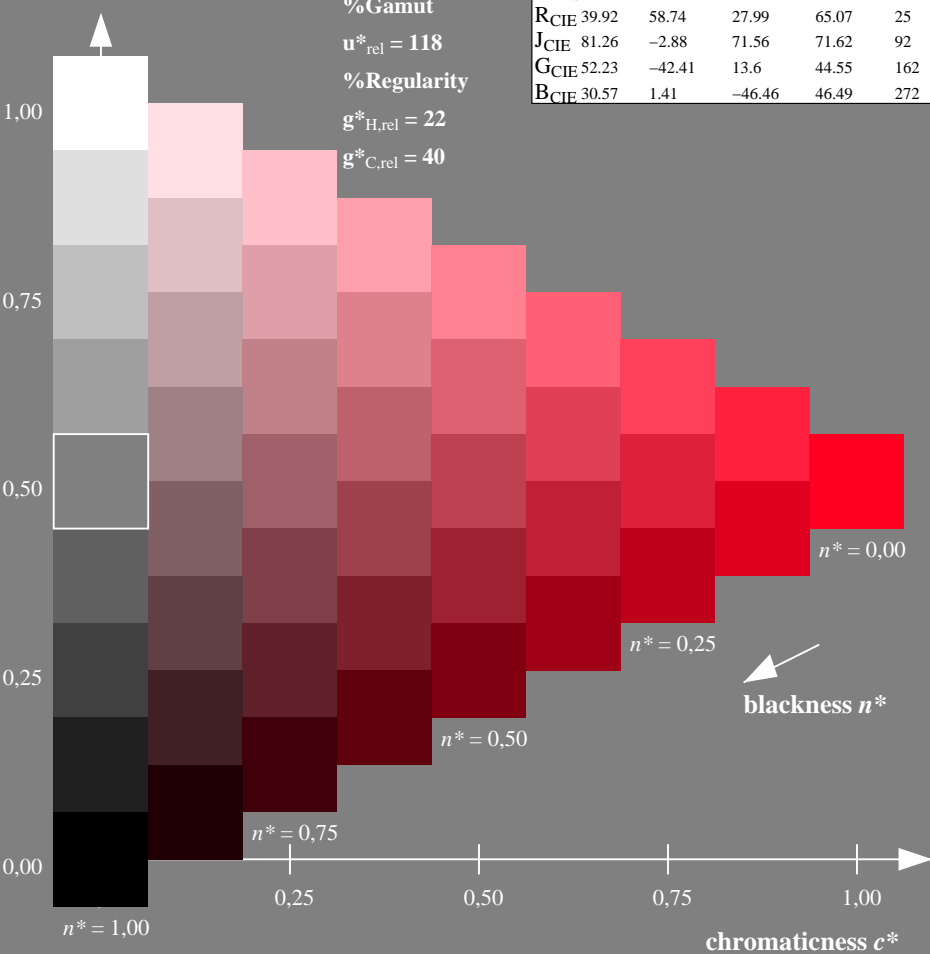
$u^*_{rel} = 118$

%Regularity

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

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

triangle lightness  $t^*$



Output: Colorimetric Offset Reflective System ORS18

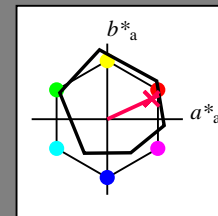
for hue  $h^* = lab^*h = 25/360 = 0.069$

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

D65: hue R

LCH\*Ma: 48 75 25

olv\*Ma: 1.0 0.0 0.32



ORS18; adapted (a) CIELAB data

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

%Gamut

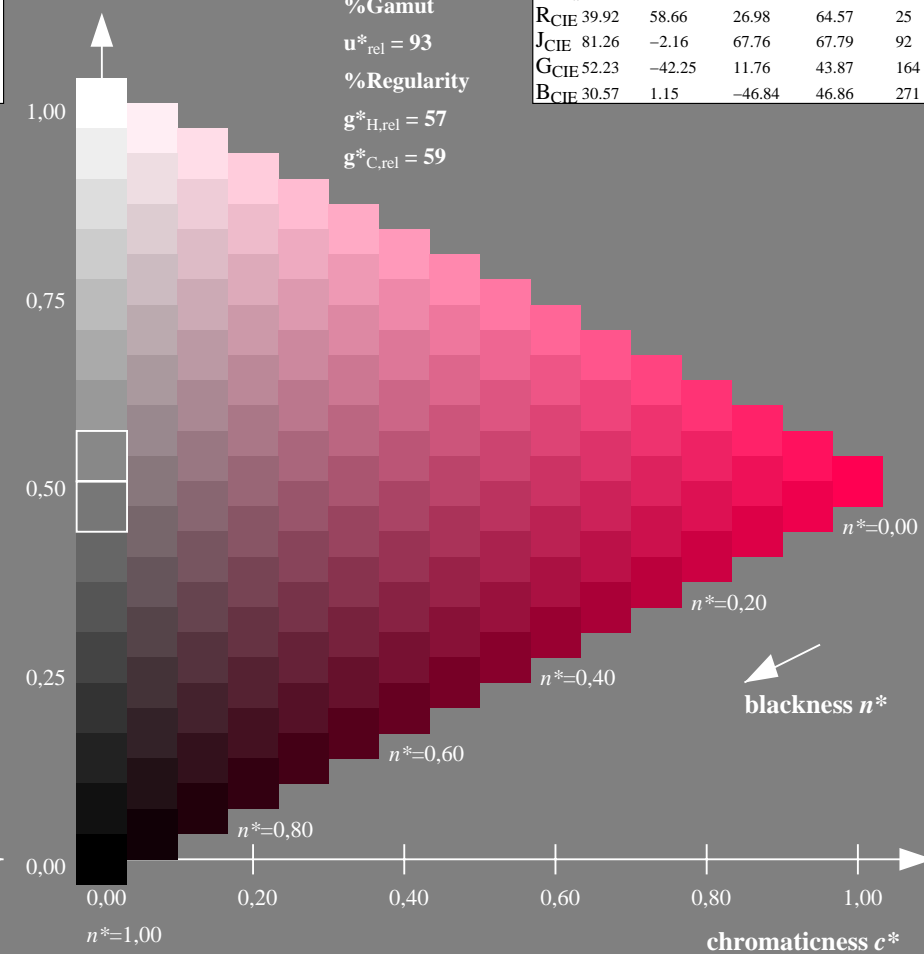
$u^*_{rel} = 93$

%Regularity

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

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

triangle lightness  $t^*$



NE960-7, 9 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

BAM-test chart NE96; Colorimetric systems ORS18 & ORS18 input:  $olv^* setrgbcolor$

D65: 9 and 16 step colour scales for 10 hues

output: Startup (S) data depend

**Input: Colorimetric Television Luminous System TLS18**

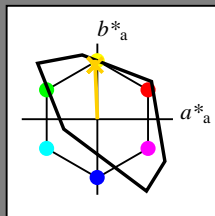
for hue  $h^* = lab^*h = 92/360 = 0.256$

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

D65: hue J

LCH\*Ma: 85 79 92

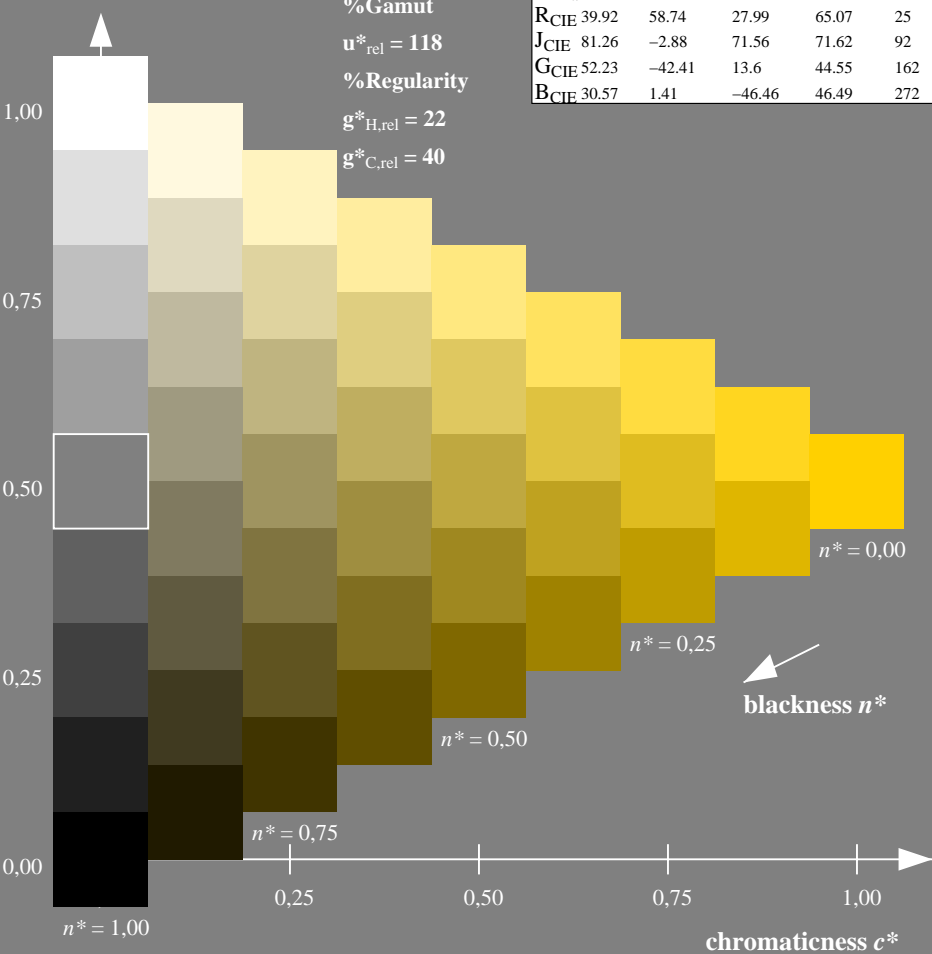
olv\*Ma: 1.0 0.82 0.0



**TLS18; adapted (a) CIELAB data**

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

triangle lightness  $t^*$



**Output: Colorimetric Offset Reflective System ORS18**

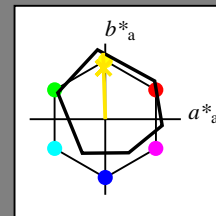
for hue  $h^* = lab^*h = 92/360 = 0.255$

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

D65: hue J

LCH\*Ma: 86 88 92

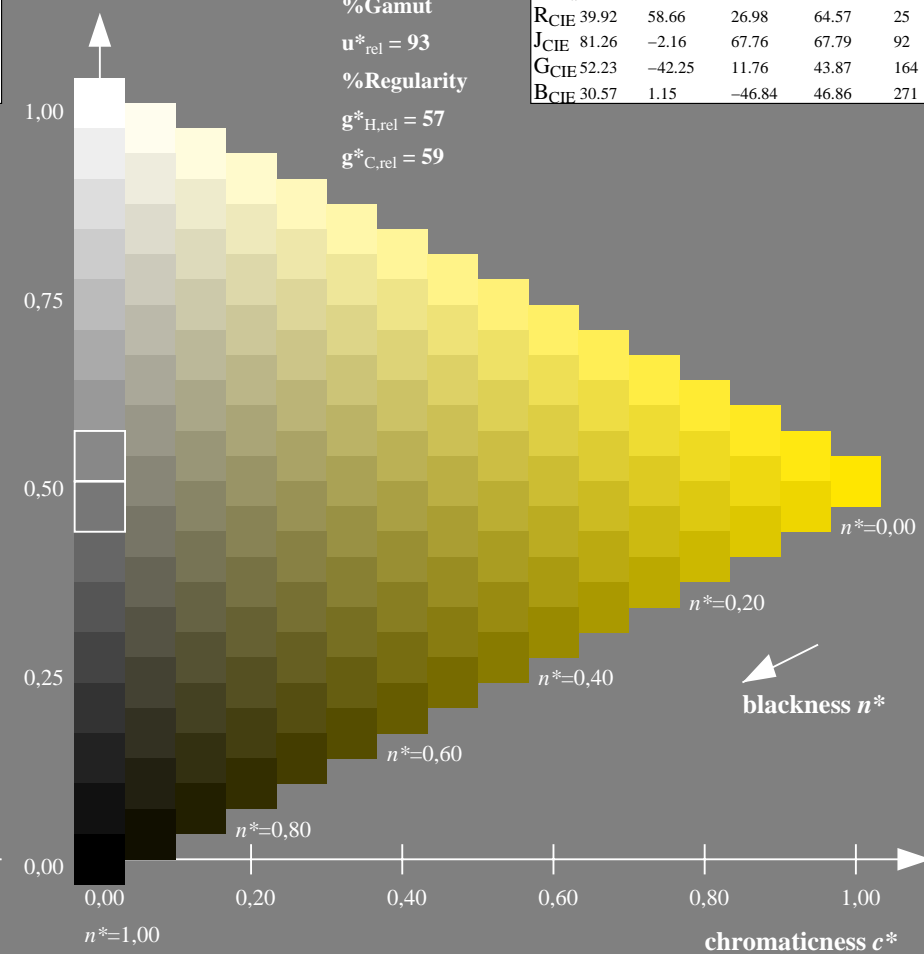
olv\*Ma: 1.0 0.9 0.0



**ORS18; adapted (a) CIELAB data**

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

triangle lightness  $t^*$



NE960-7, 9 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

BAM-test chart NE96; Colorimetric systems ORS18 & ORS18

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: Startup (S) data dependend



Input: Colorimetric Television Luminous System TLS18

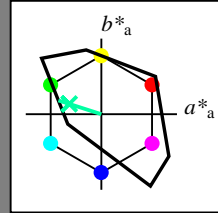
for hue  $h^* = lab^*h = 162/360 = 0.451$

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

D65: hue G

LCH\*Ma: 86 60 162

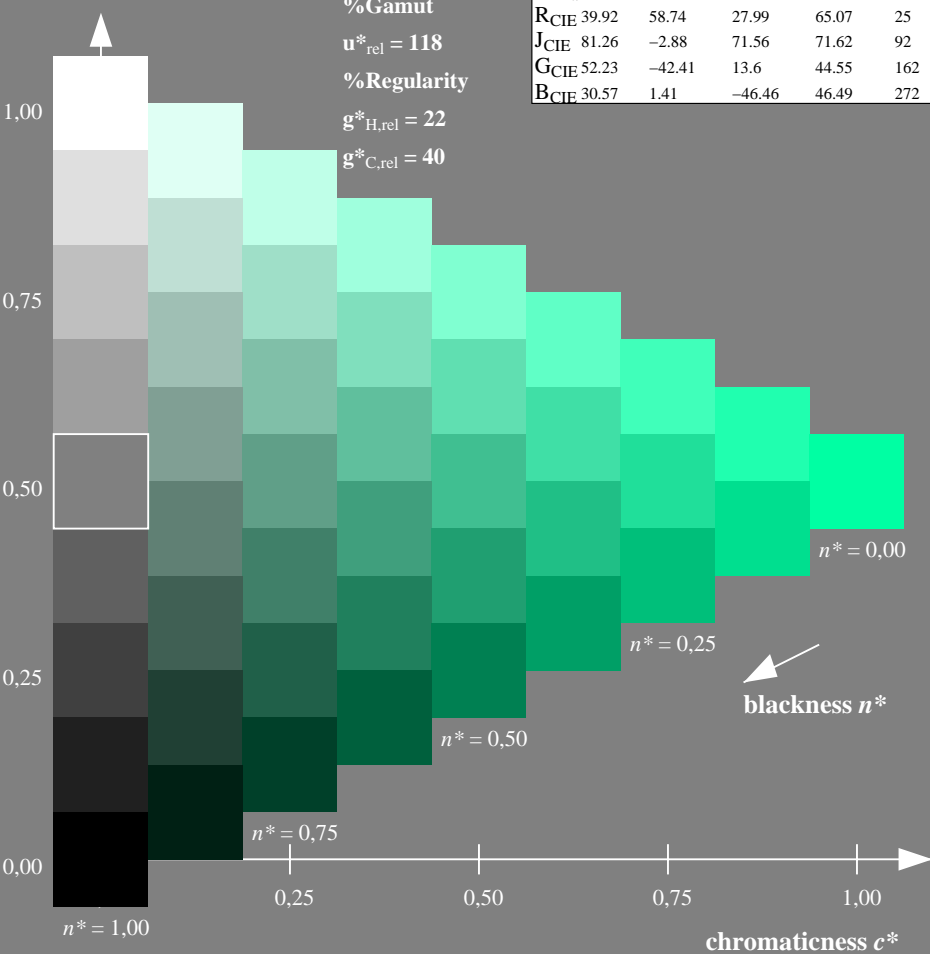
olv\*Ma: 0.0 1.0 0.64



TLS18; adapted (a) CIELAB data

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

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 118$

%Regularity

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

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

Output: Colorimetric Offset Reflective System ORS18

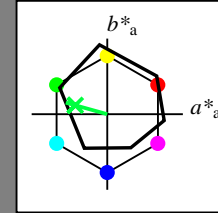
for hue  $h^* = lab^*h = 164/360 = 0.457$

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

D65: hue G

LCH\*Ma: 53 57 164

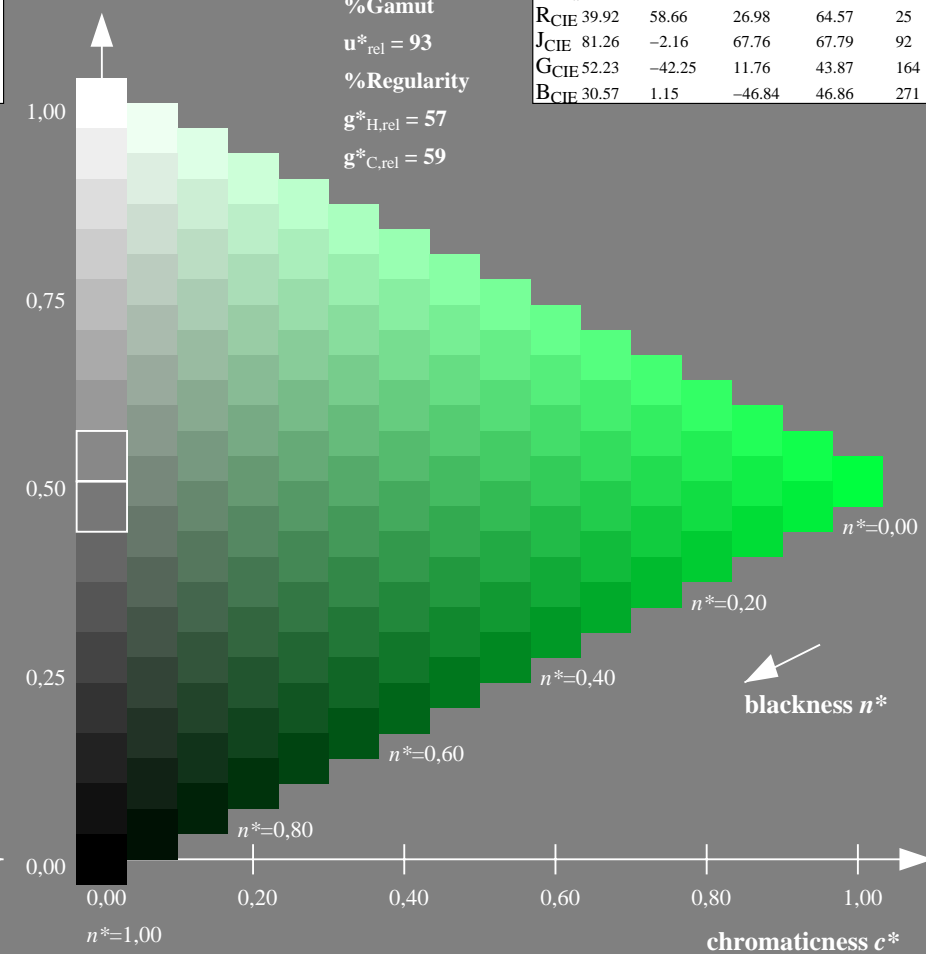
olv\*Ma: 0.0 1.0 0.25



ORS18; adapted (a) CIELAB data

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

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

NE960-7, 9 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

BAM-test chart NE96; Colorimetric systems ORS18 & ORS18

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: Startup (S) data dependend

Input: Colorimetric Television Luminous System TLS18

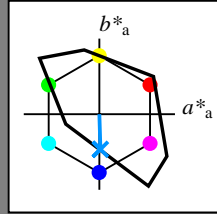
for hue  $h^* = lab^*h = 272/360 = 0.755$

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

D65: hue B

LCH\*Ma: 65 48 272

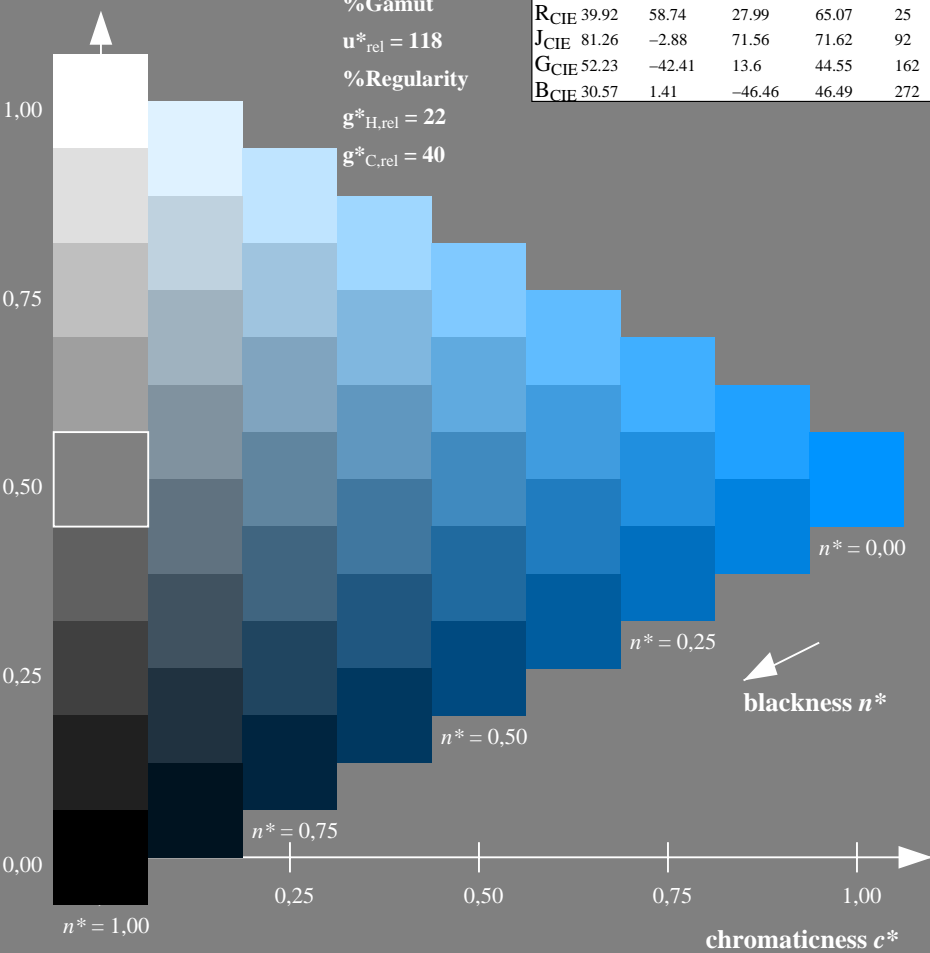
olv\*Ma: 0.0 0.58 1.0



TLS18; adapted (a) CIELAB data

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

triangle lightness  $t^*$



Output: Colorimetric Offset Reflective System ORS18

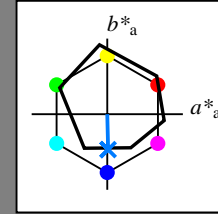
for hue  $h^* = lab^*h = 271/360 = 0.754$

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

D65: hue B

LCH\*Ma: 42 45 271

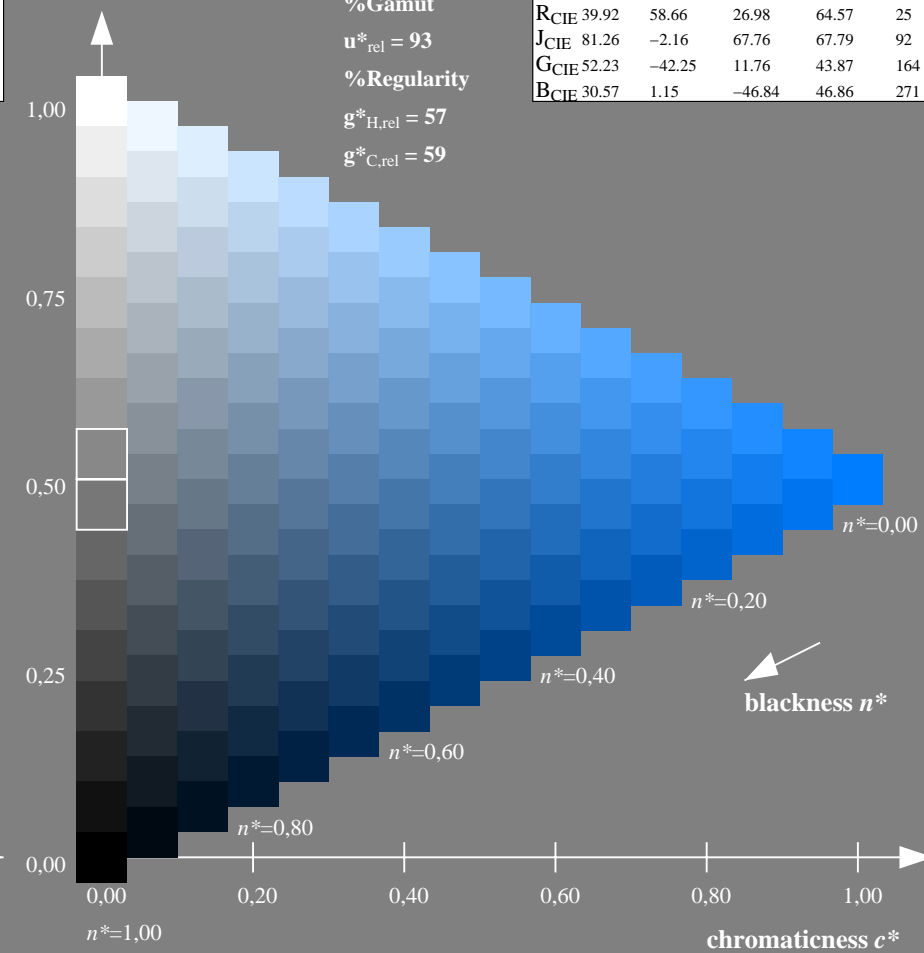
olv\*Ma: 0.0 0.49 1.0



ORS18; adapted (a) CIELAB data

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

triangle lightness  $t^*$



NE960-7, 9 step scales for constant CIELAB hue 272/360 = 0.755 (left)

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

BAM-test chart NE96; Colorimetric systems ORS18 & ORS18

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^*$  setrgbcolor

output: Startup (S) data depend