

**Input: Colorimetric Offset Reflective System ORS18**

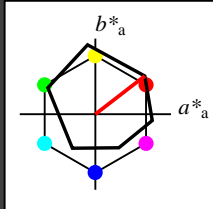
for hue  $h^* = lab^*h = 38/360 = 0.105$

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

A: hue O

LCH\*Ma: 48 83 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	65.39	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

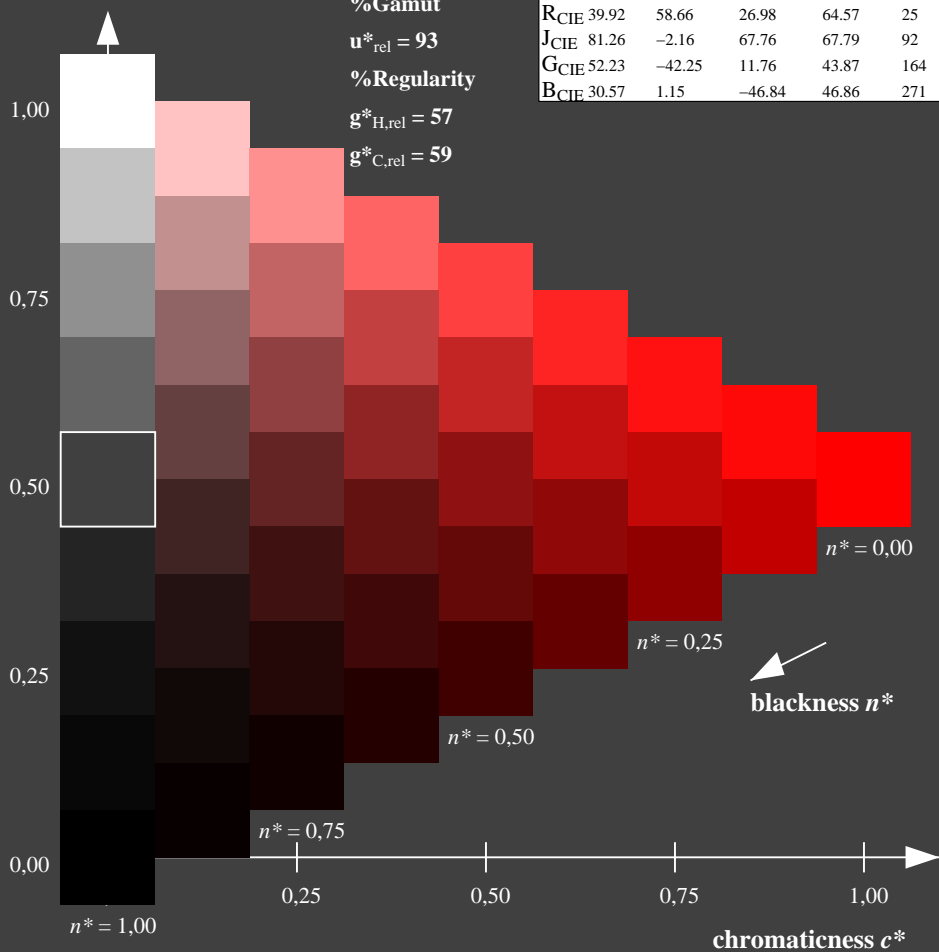
$u^*_{rel} = 93$

%Regularity

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

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

triangle lightness  $t^*$



**Output: Colorimetric Television Luminous System TLS00**

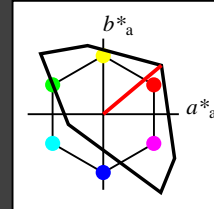
for hue  $h^* = lab^*h = 40/360 = 0.111$

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

A: hue O

LCH\*Ma: 51 100 40

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>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3	94.35	-58.41	110.97	328
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>	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

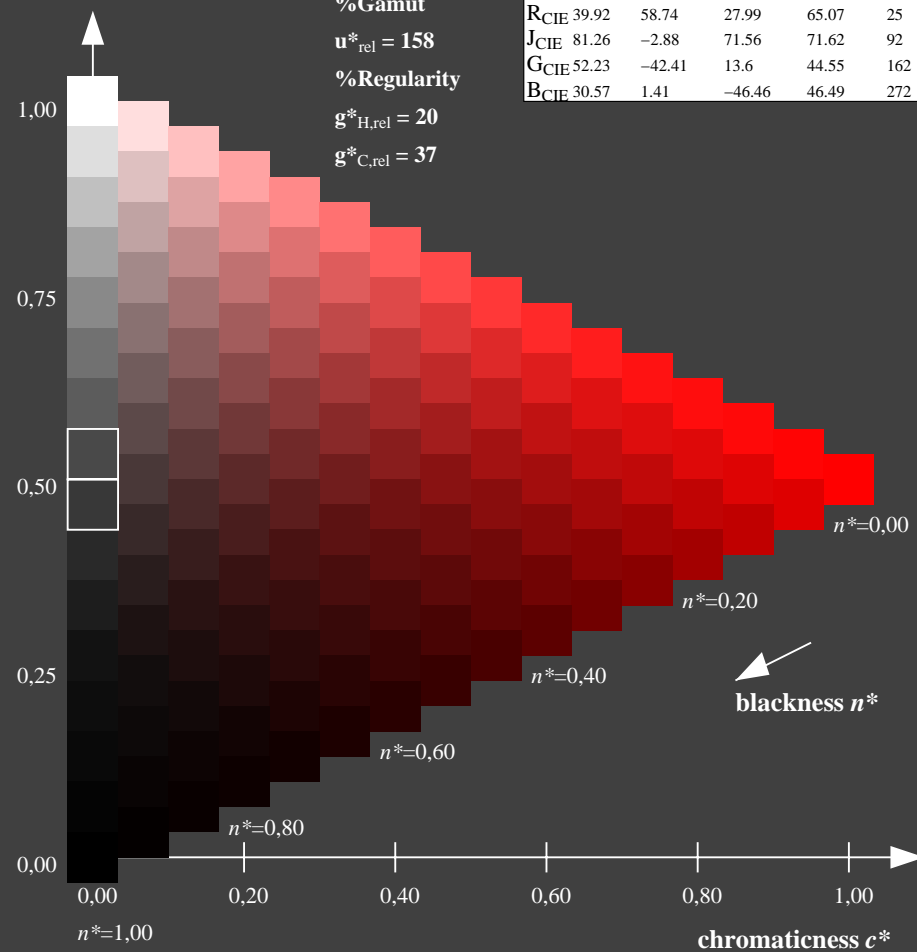
$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

triangle lightness  $t^*$



RE900-7, 9 step scales for constant CIELAB hue 38/360 = 0.105 (left)

16 step scales for constant CIELAB hue 40/360 = 0.111 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input: `olv* setrgbcolor`

output: `olv* setrgbcolor / w* setgray`

**Input: Colorimetric Offset Reflective System ORS18**

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

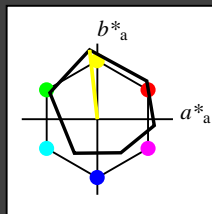
$lab^*tch$  and  $lab^*nch$

A: hue Y

LCH\*Ma: 90 92 96

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

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

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <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

**Output: Colorimetric Television Luminous System TLS00**

for hue  $h^* = lab^*h = 103/360 = 0.286$

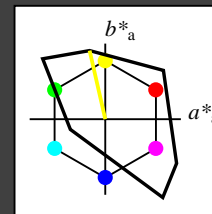
$lab^*tch$  and  $lab^*nch$

A: hue Y

LCH\*Ma: 93 93 103

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

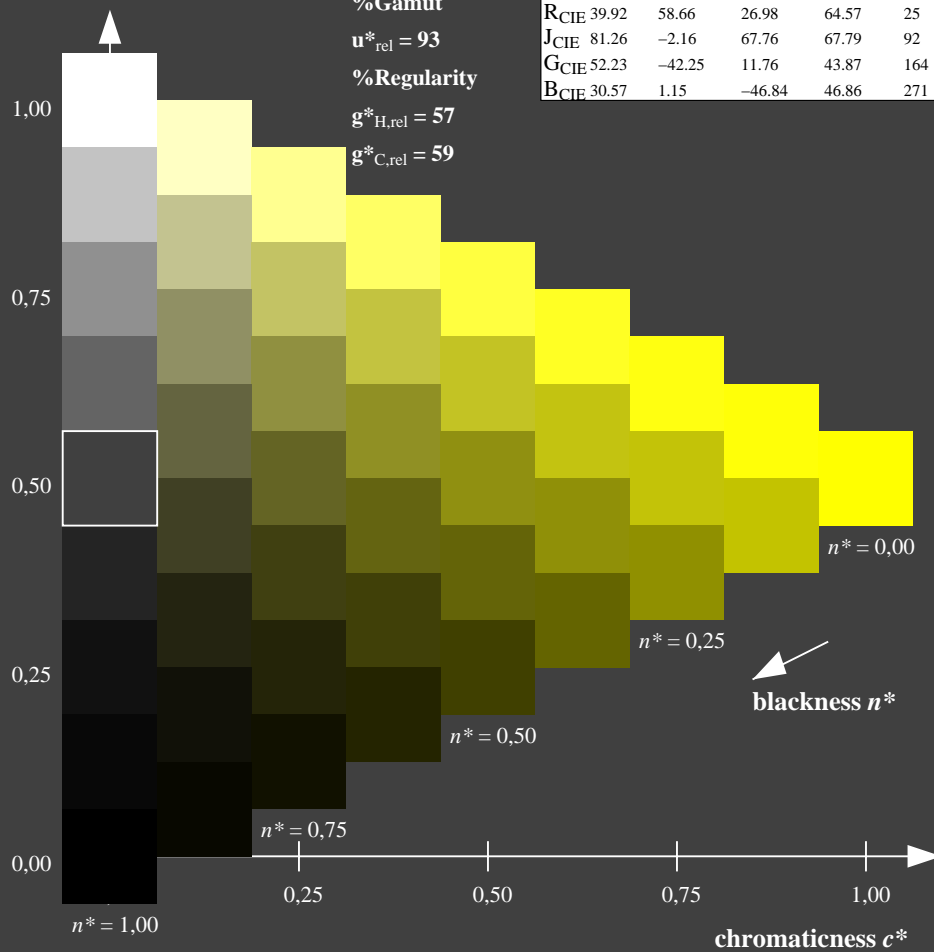
%Regularity

$g^*_{H,rel} = 20$

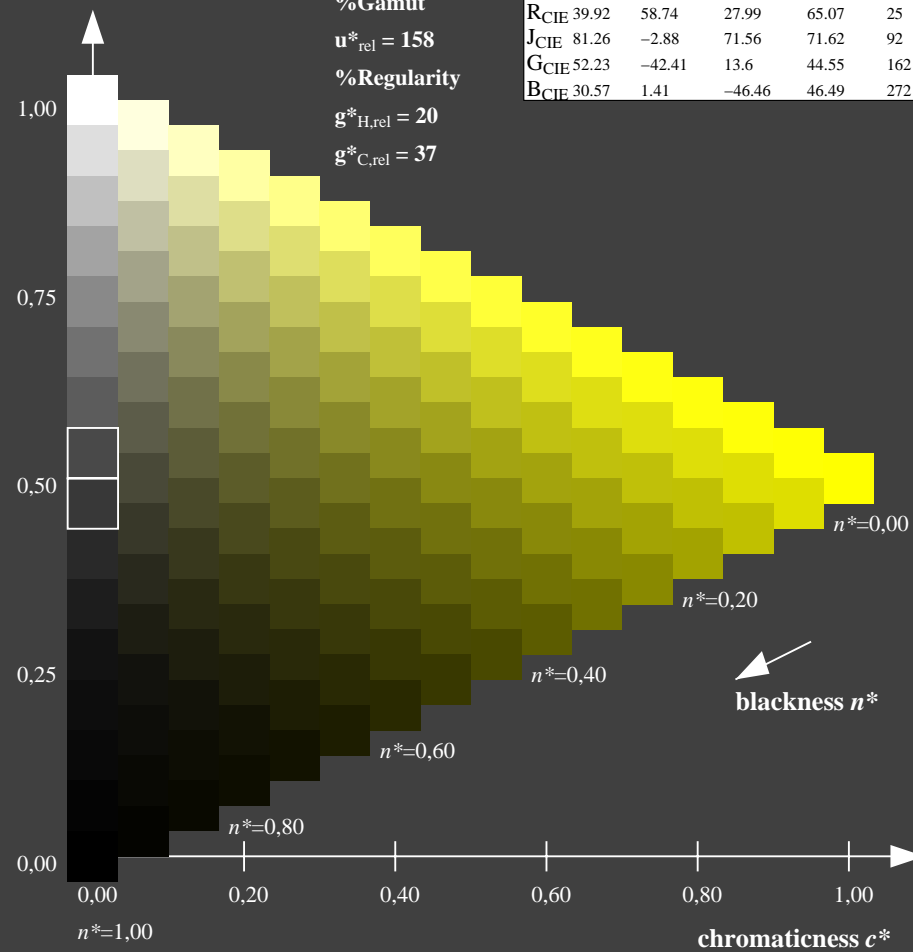
$g^*_{C,rel} = 37$

**TLS00; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3	94.35	-58.41	110.97	328
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>	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



RE900-7, 9 step scales for constant CIELAB hue 96/360 = 0.268 (left)



16 step scales for constant CIELAB hue 103/360 = 0.286 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input:  $olv^* setrgbcolor$

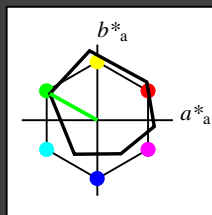
output:  $olv^* setrgbcolor / w^* setgray$

**Input: Colorimetric Offset Reflective System ORS18**

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

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

A: 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	65.39	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

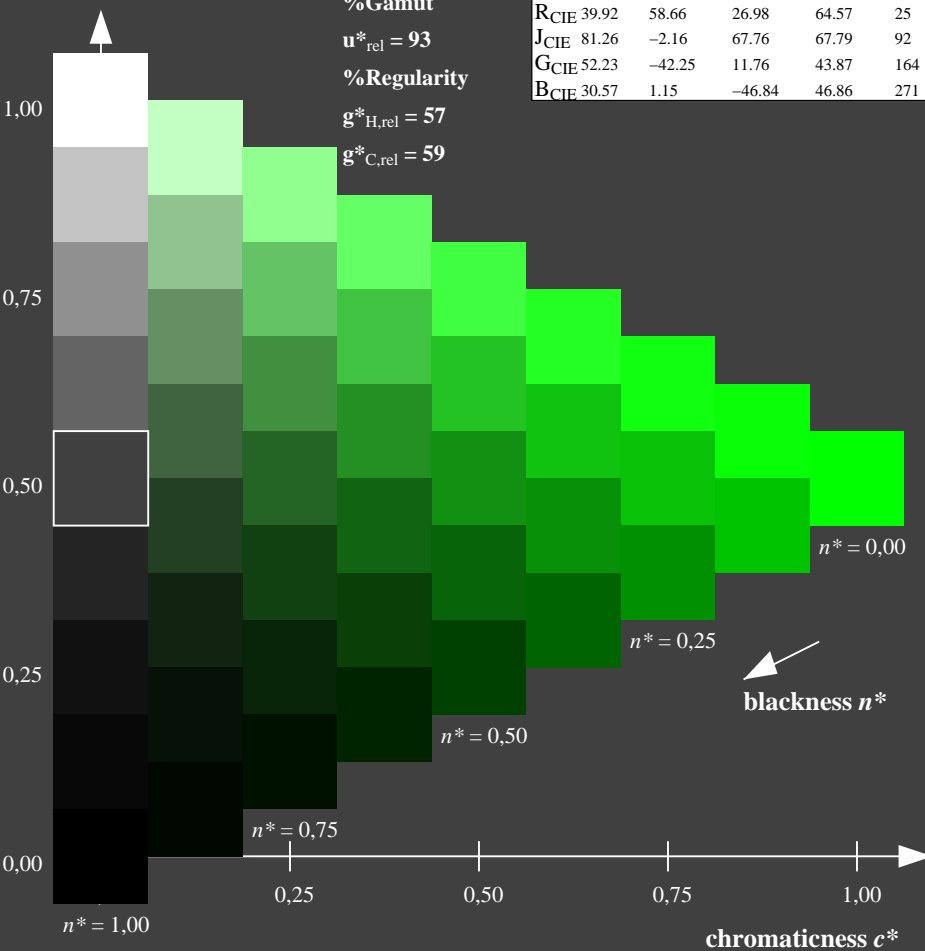
$u^*_{rel} = 93$

%Regularity

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

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

triangle lightness  $t^*$



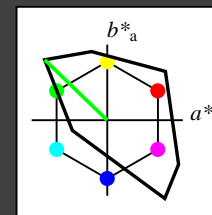
RE900-7, 9 step scales for constant CIELAB hue 151/360 = 0.419 (left)

**Output: Colorimetric Television Luminous System TLS00**

for hue  $h^* = lab^*h = 136/360 = 0.378$

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

A: hue L  
 LCH\*Ma: 84 115 136  
 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>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3	94.35	-58.41	110.97	328
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>	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

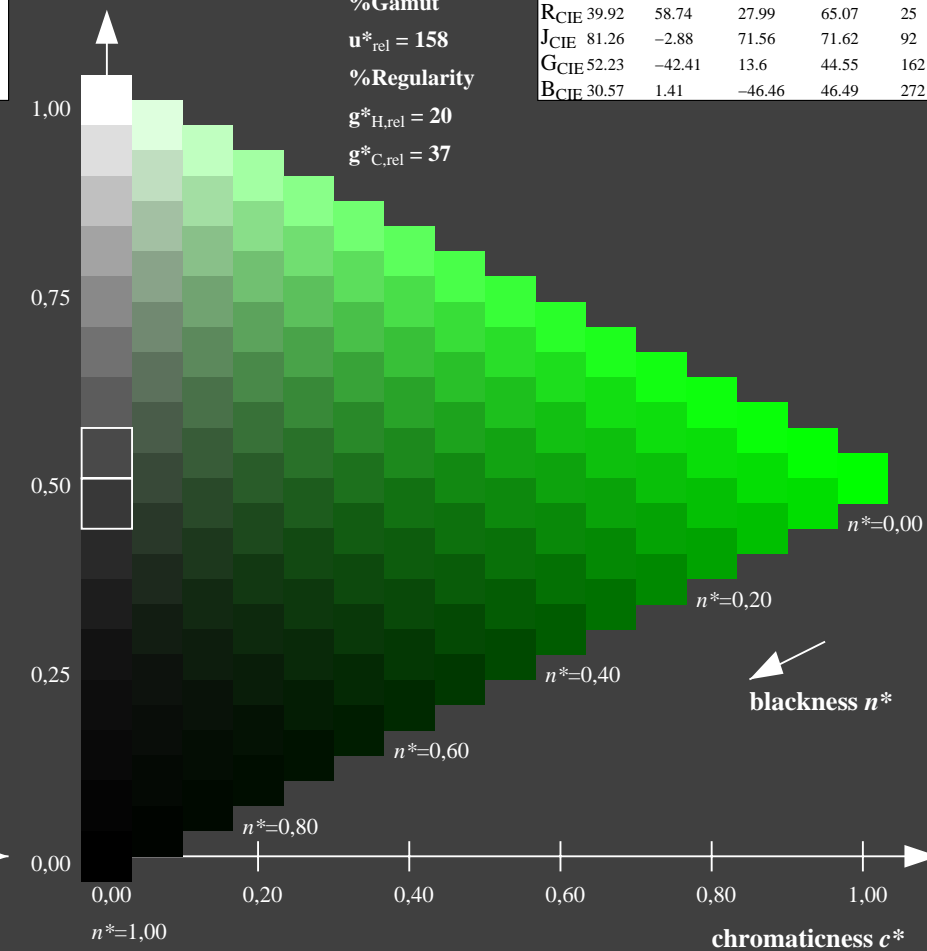
$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

triangle lightness  $t^*$



16 step scales for constant CIELAB hue 136/360 = 0.378 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$

**Input: Colorimetric Offset Reflective System ORS18**

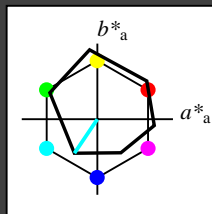
for hue  $h^* = lab^*h = 236/360 = 0.656$

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

A: hue C

LCH\*Ma: 59 54 236

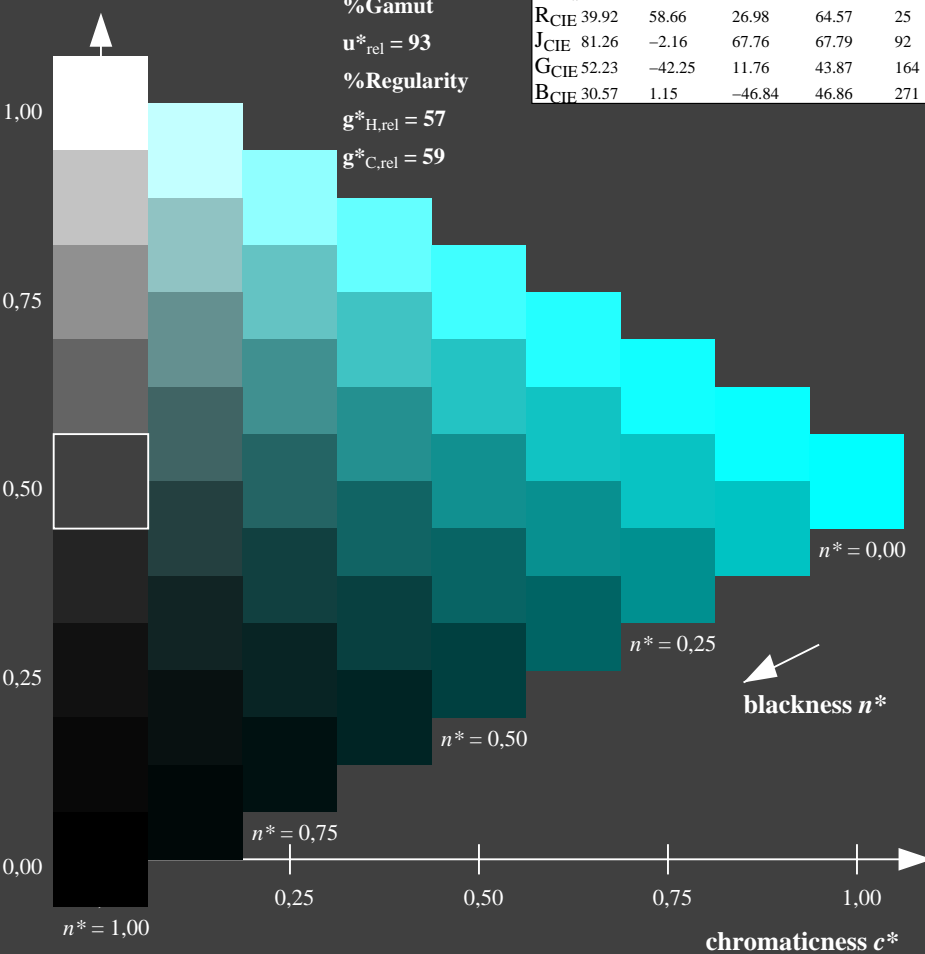
olv\*Ma: 0.0 1.0 1.0



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

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
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  $t^*$



**Output: Colorimetric Television Luminous System TLS00**

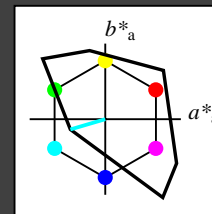
for hue  $h^* = lab^*h = 196/360 = 0.545$

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

A: hue C

LCH\*Ma: 87 48 196

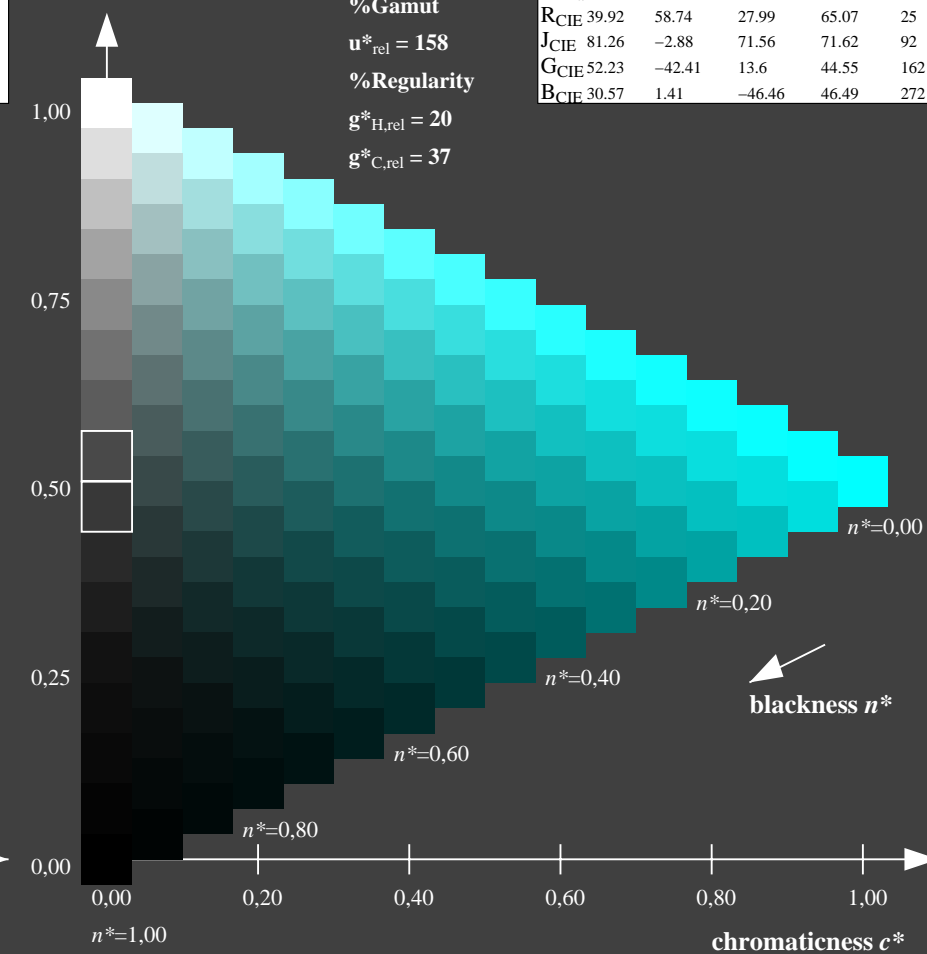
olv\*Ma: 0.0 1.0 1.0



**TLS00; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3	94.35	-58.41	110.97	328
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>	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  $t^*$



RE900-7, 9 step scales for constant CIELAB hue 236/360 = 0.656 (left)

16 step scales for constant CIELAB hue 196/360 = 0.545 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$

**Input: Colorimetric Offset Reflective System ORS18**

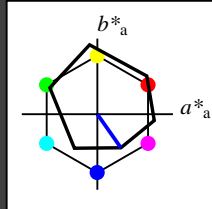
for hue  $h^* = lab^*h = 305/360 = 0.847$

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

A: 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	65.39	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

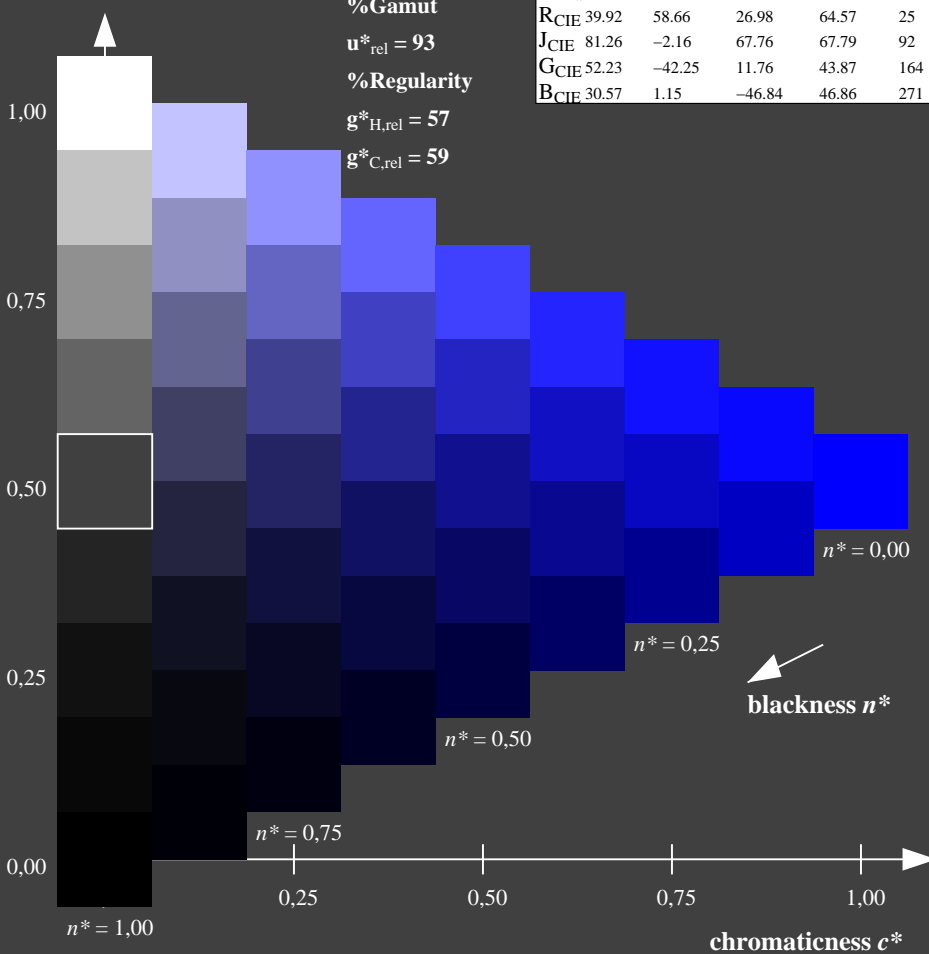
$u^*_{rel} = 93$

%Regularity

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

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

triangle lightness  $t^*$



**Output: Colorimetric Television Luminous System TLS00**

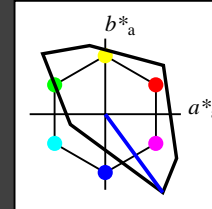
for hue  $h^* = lab^*h = 306/360 = 0.851$

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

A: hue V

LCH\*Ma: 30 129 306

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>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3	94.35	-58.41	110.97	328
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>	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

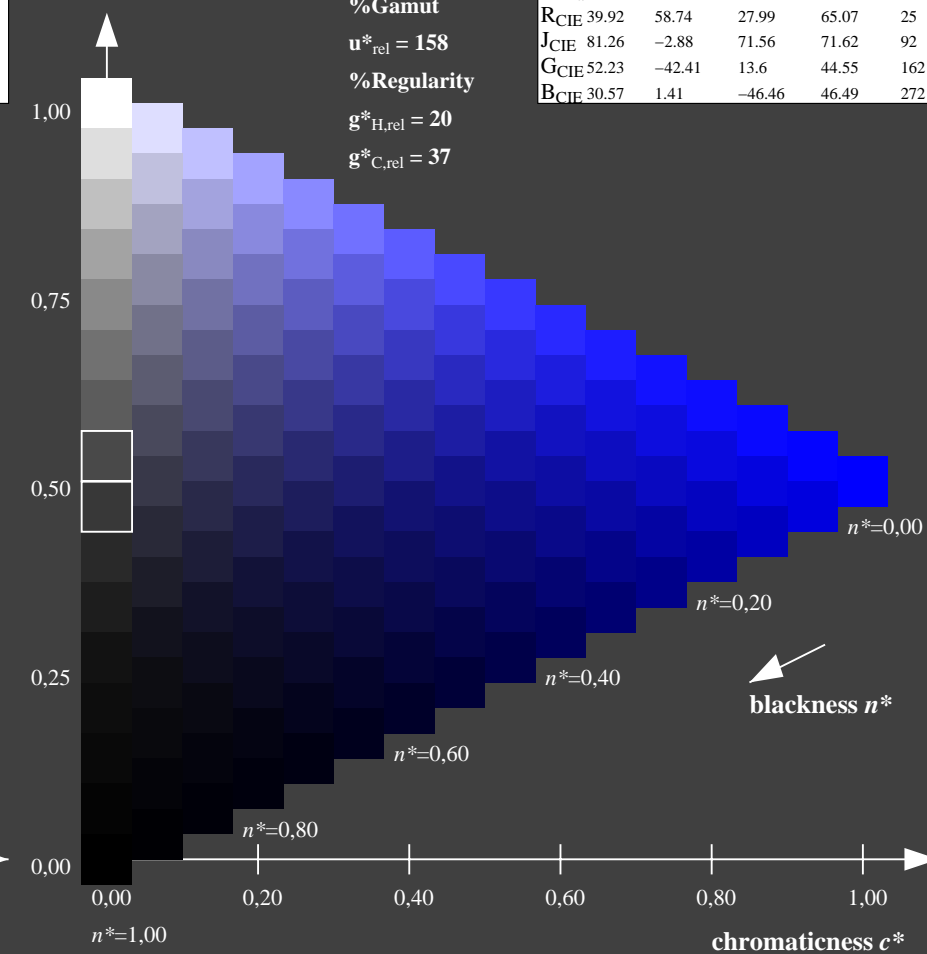
$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

triangle lightness  $t^*$



RE900-7, 9 step scales for constant CIELAB hue 305/360 = 0.847 (left)

16 step scales for constant CIELAB hue 306/360 = 0.851 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$

**Input: Colorimetric Offset Reflective System ORS18**

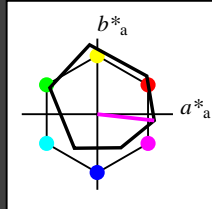
for hue  $h^* = lab^*h = 354/360 = 0.982$

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

A: hue M

LCH\*Ma: 48 76 354

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	65.39	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

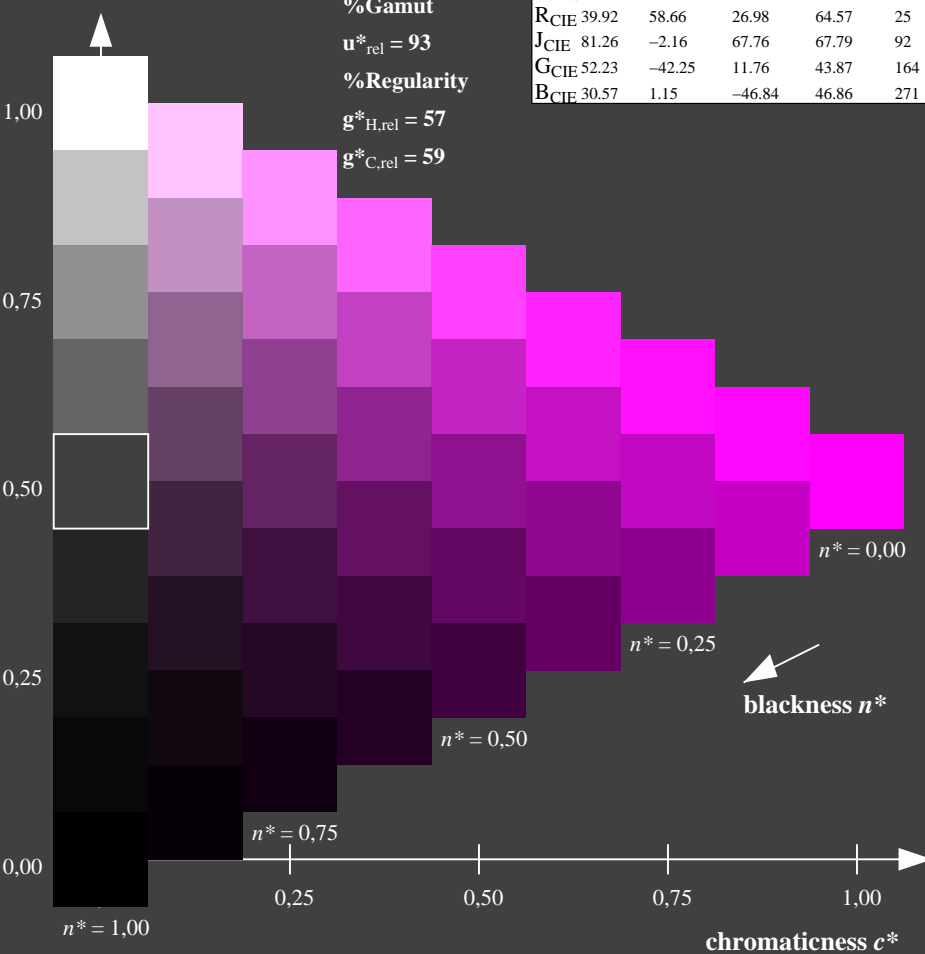
$u^*_{rel} = 93$

%Regularity

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

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

triangle lightness  $t^*$



**Output: Colorimetric Television Luminous System TLS00**

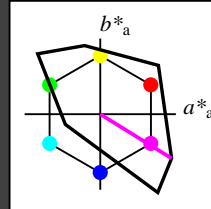
for hue  $h^* = lab^*h = 328/360 = 0.912$

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

A: hue M

LCH\*Ma: 57 111 328

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>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3	94.35	-58.41	110.97	328
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>	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

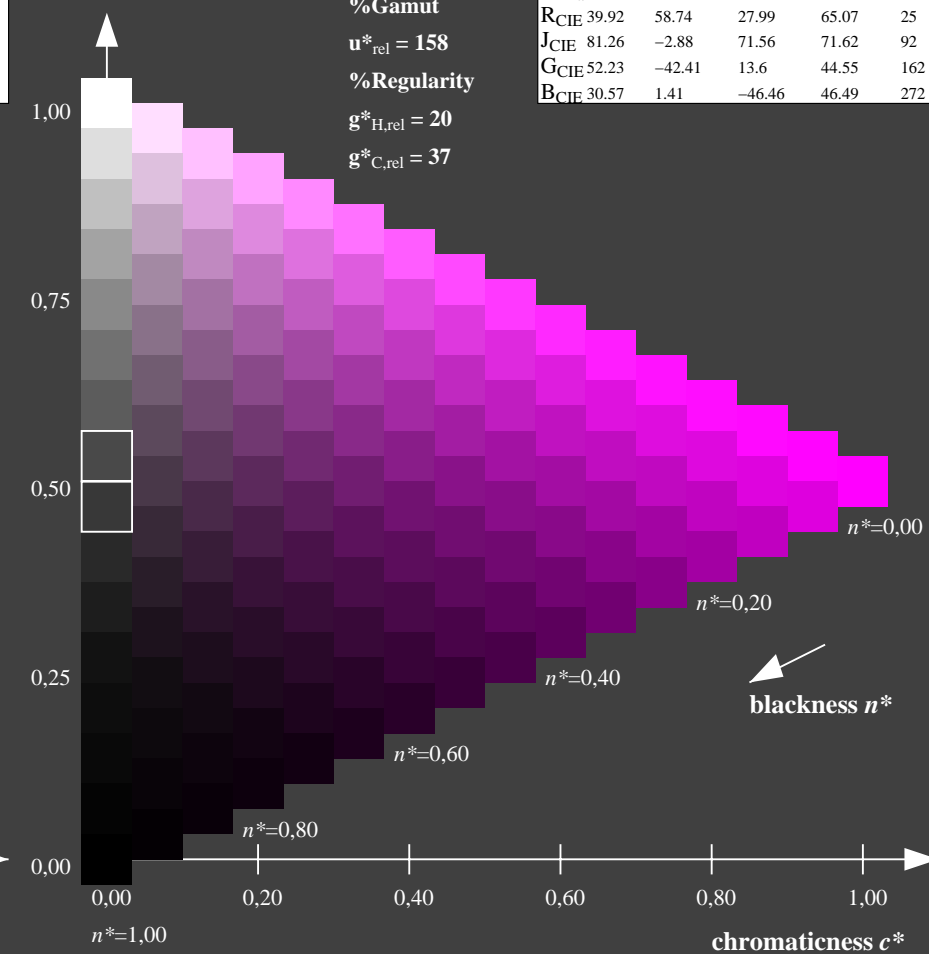
$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

triangle lightness  $t^*$



RE900-7, 9 step scales for constant CIELAB hue 354/360 = 0.982 (left)

16 step scales for constant CIELAB hue 328/360 = 0.912 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$

**Input: Colorimetric Offset Reflective System ORS18**

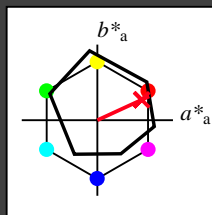
for hue  $h^* = lab^*h = 25/360 = 0.069$

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

A: 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

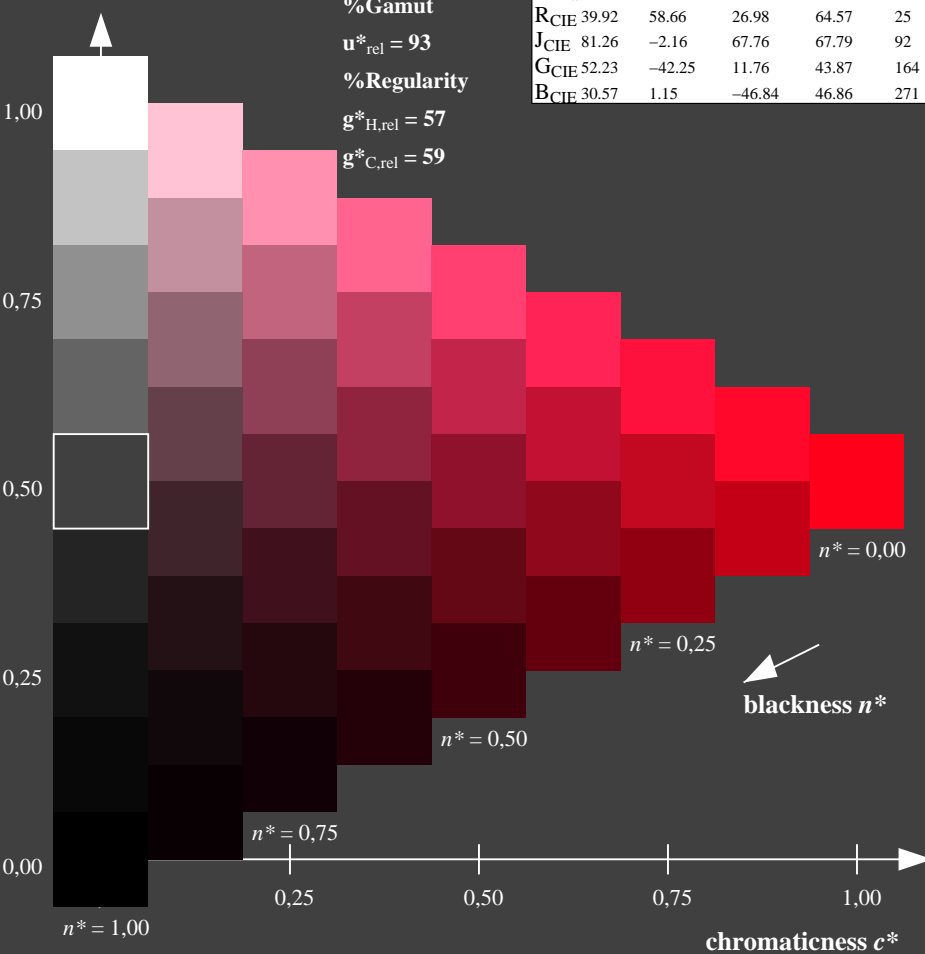
$u^*_{rel} = 93$

%Regularity

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

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

triangle lightness  $t^*$



RE900-7, 9 step scales for constant CIELAB hue 25/360 = 0.069 (left)

**Output: Colorimetric Television Luminous System TLS00**

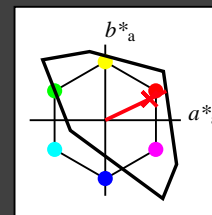
for hue  $h^* = lab^*h = 25/360 = 0.071$

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

A: hue R

LCH\*Ma: 52 89 25

olv\*Ma: 1.0 0.0 0.21



**TLS00; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3	94.35	-58.41	110.97	328
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>	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

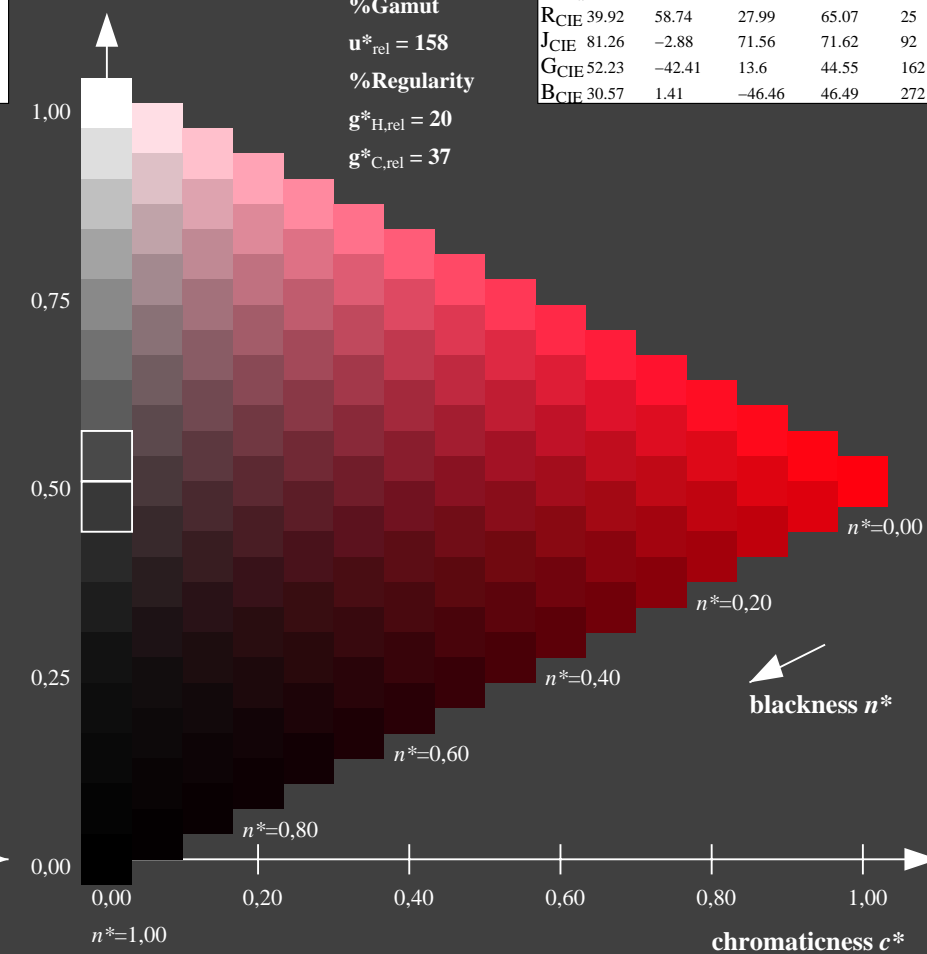
$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

triangle lightness  $t^*$



16 step scales for constant CIELAB hue 25/360 = 0.071 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$

**Input: Colorimetric Offset Reflective System ORS18**

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

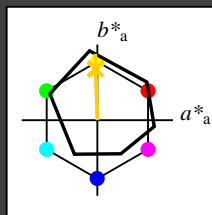
$lab^*tch$  and  $lab^*nch$

A: hue J

LCH\*Ma: 86 88 92

olv\*Ma: 1.0 0.9 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

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

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <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

**Output: Colorimetric Television Luminous System TLS00**

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

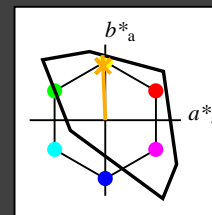
$lab^*tch$  and  $lab^*nch$

A: hue J

LCH\*Ma: 85 86 92

olv\*Ma: 1.0 0.82 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

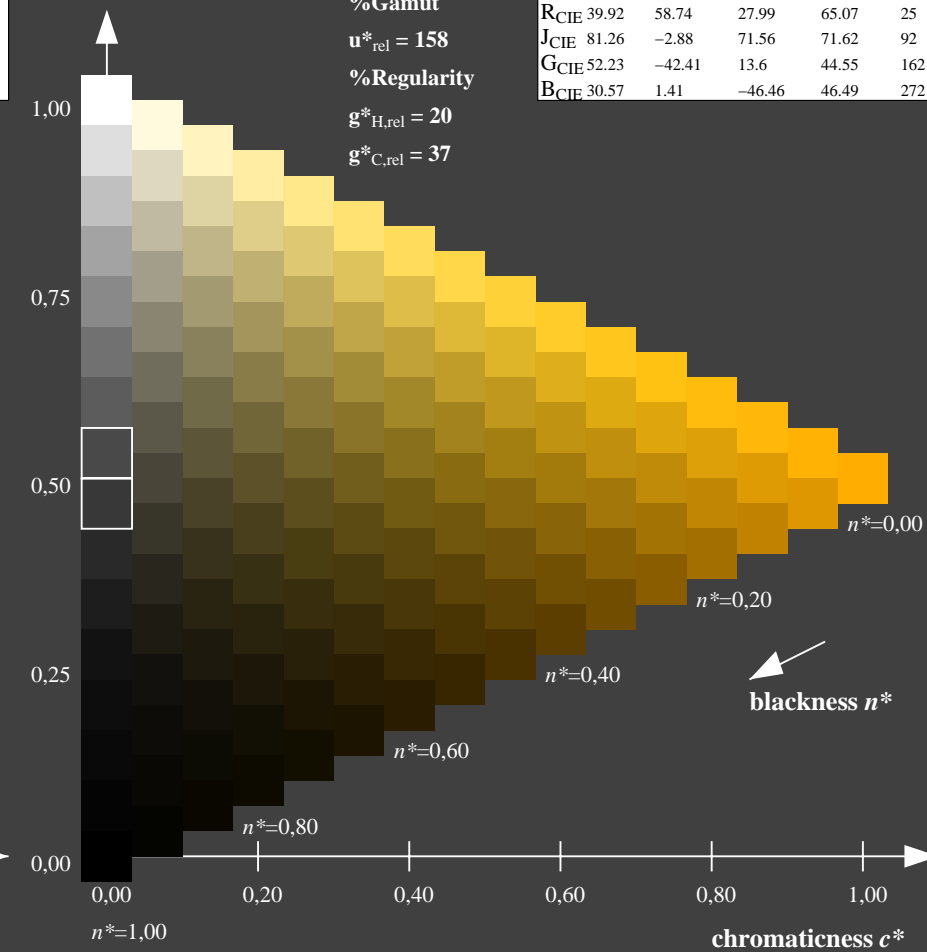
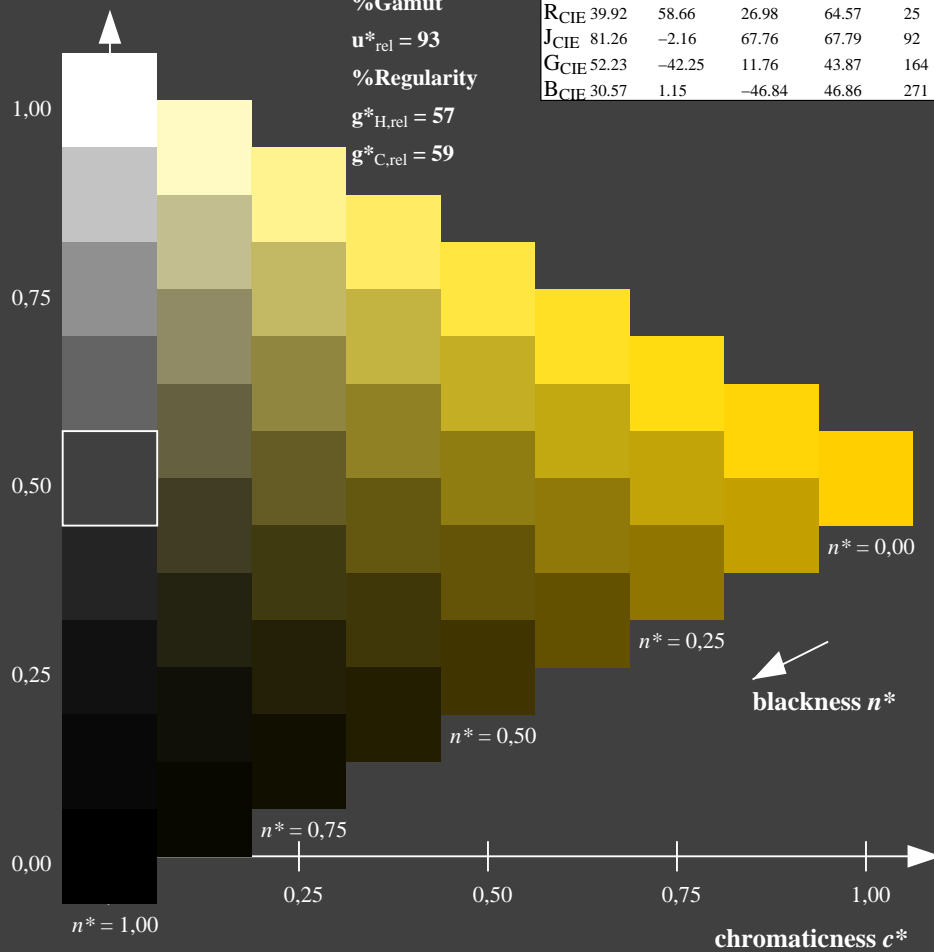
%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

**TLS00; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3	94.35	-58.41	110.97	328
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>	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



RE900-7, 9 step scales for constant CIELAB hue 92/360 = 0.255 (left)

16 step scales for constant CIELAB hue 92/360 = 0.256 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$



**Input: Colorimetric Offset Reflective System ORS18**

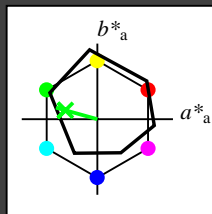
for hue  $h^* = lab^*h = 164/360 = 0.457$

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

A: hue G

LCH\*Ma: 53 57 164

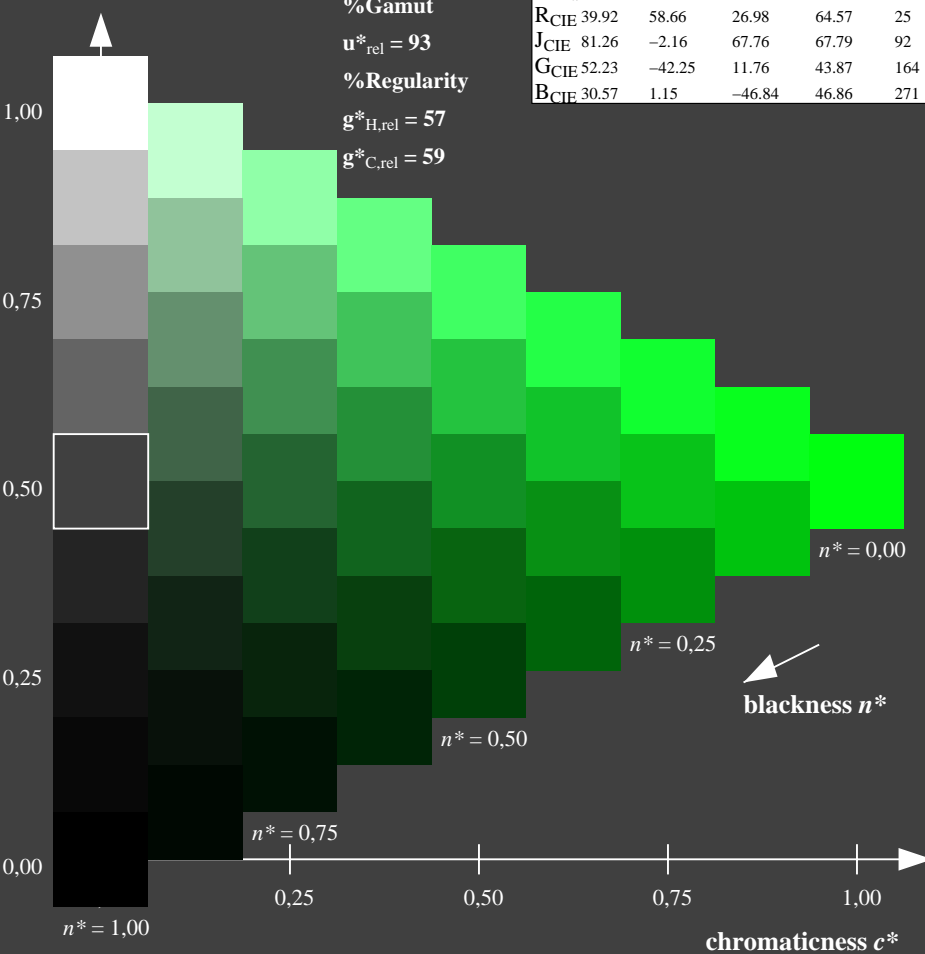
olv\*Ma: 0.0 1.0 0.25



**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

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

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

blackness  $n^*$

**Output: Colorimetric Television Luminous System TLS00**

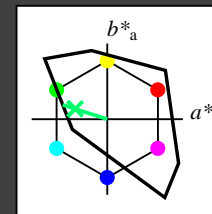
for hue  $h^* = lab^*h = 162/360 = 0.451$

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

A: hue G

LCH\*Ma: 86 62 162

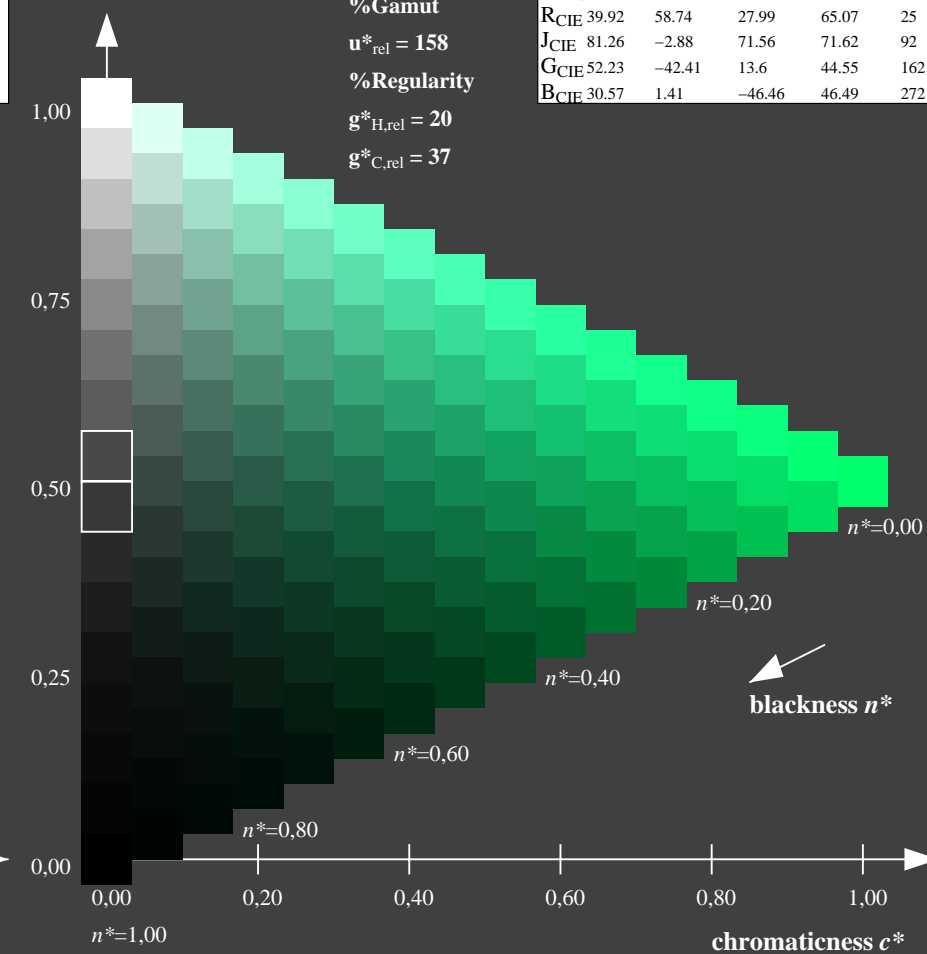
olv\*Ma: 0.0 1.0 0.65



**TLS00; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3	94.35	-58.41	110.97	328
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>	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

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

blackness  $n^*$

RE900-7, 9 step scales for constant CIELAB hue 164/360 = 0.457 (left)

16 step scales for constant CIELAB hue 162/360 = 0.451 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input:  $olv^* setrgbcolor$

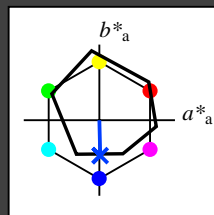
output:  $olv^* setrgbcolor / w^* setgray$

**Input: Colorimetric Offset Reflective System ORS18**

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

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

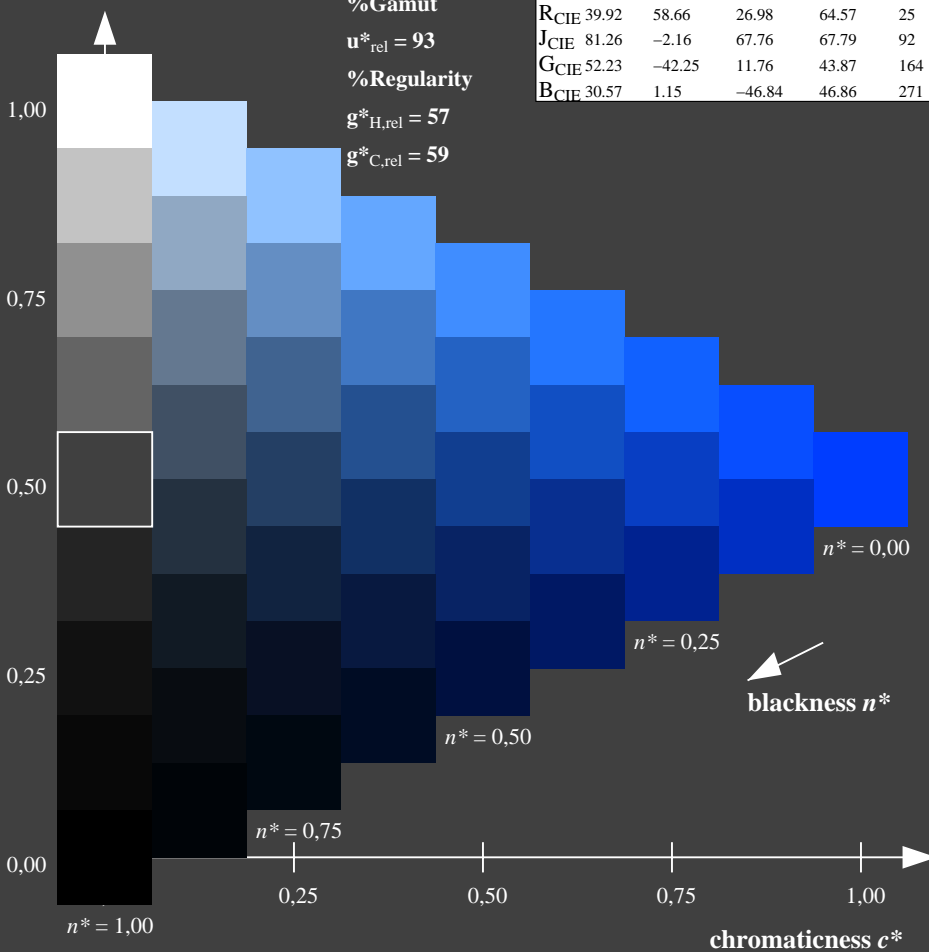
A: hue B  
 LCH\*Ma: 42 45 271  
 olv\*Ma: 0.0 0.49 1.0



**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  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

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

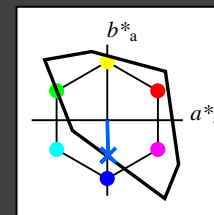
$g^*_{C,rel} = 59$

**Output: Colorimetric Television Luminous System TLS00**

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

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

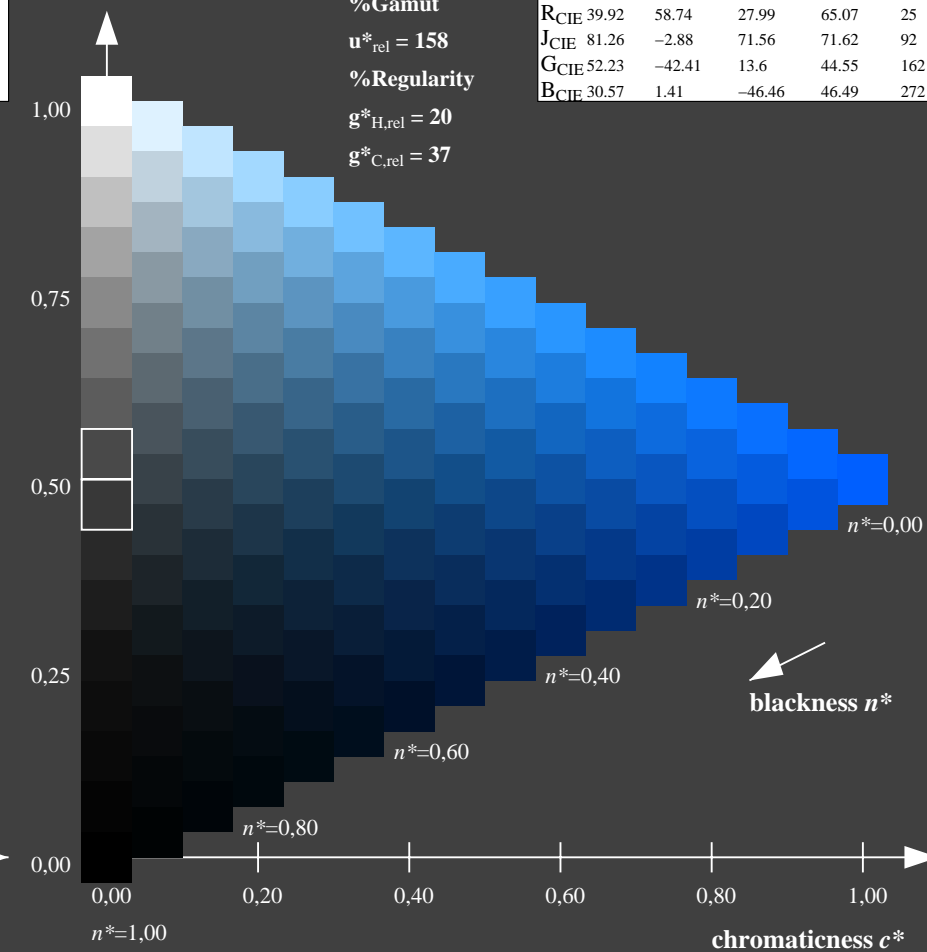
A: hue B  
 LCH\*Ma: 65 49 272  
 olv\*Ma: 0.0 0.61 1.0



**TLS00; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3	94.35	-58.41	110.97	328
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>	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

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

RE900-7, 9 step scales for constant CIELAB hue 271/360 = 0.754 (left)

16 step scales for constant CIELAB hue 272/360 = 0.755 (right)

BAM-test chart RE90; Colorimetric systems ORS18 & TLS00

A: 9 and 16 step colour scales for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$