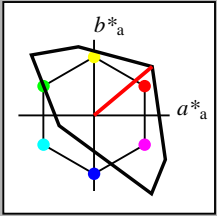


**Input: Colorimetric Television Luminous System TLS00**

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

D65: hue O  
 LCH\*Ma: 51 100 40  
 olv\*Ma: 1.0 0.0 0.0  
 triangle lightness  $t^*$



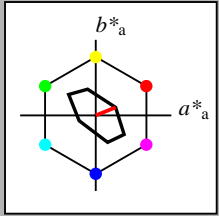
**TLS00; adapted (a) CIELAB data**

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

**Output: Colorimetric Television Luminous System TLS70**

for hue  $h^* = lab^*h = 22/360 = 0.061$   
 $lab^*tch$  and  $lab^*nch$

D65: hue O  
 LCH\*Ma: 76 28 22  
 olv\*Ma: 1.0 0.0 0.0  
 triangle lightness  $t^*$

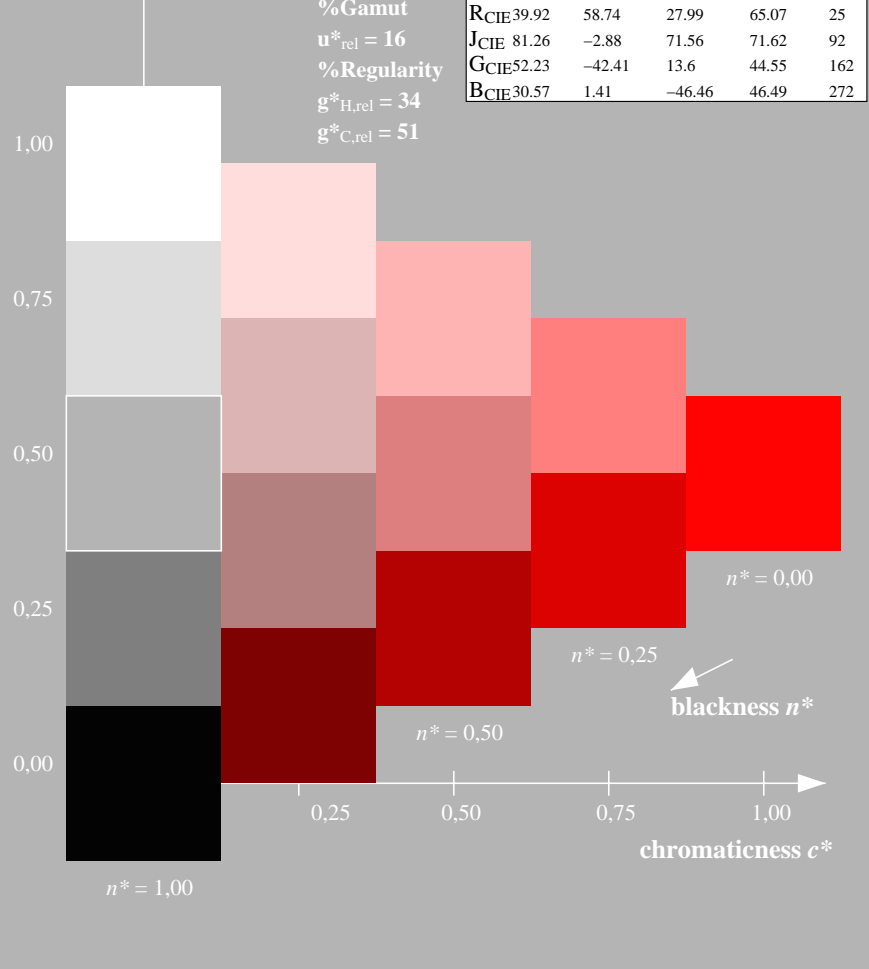
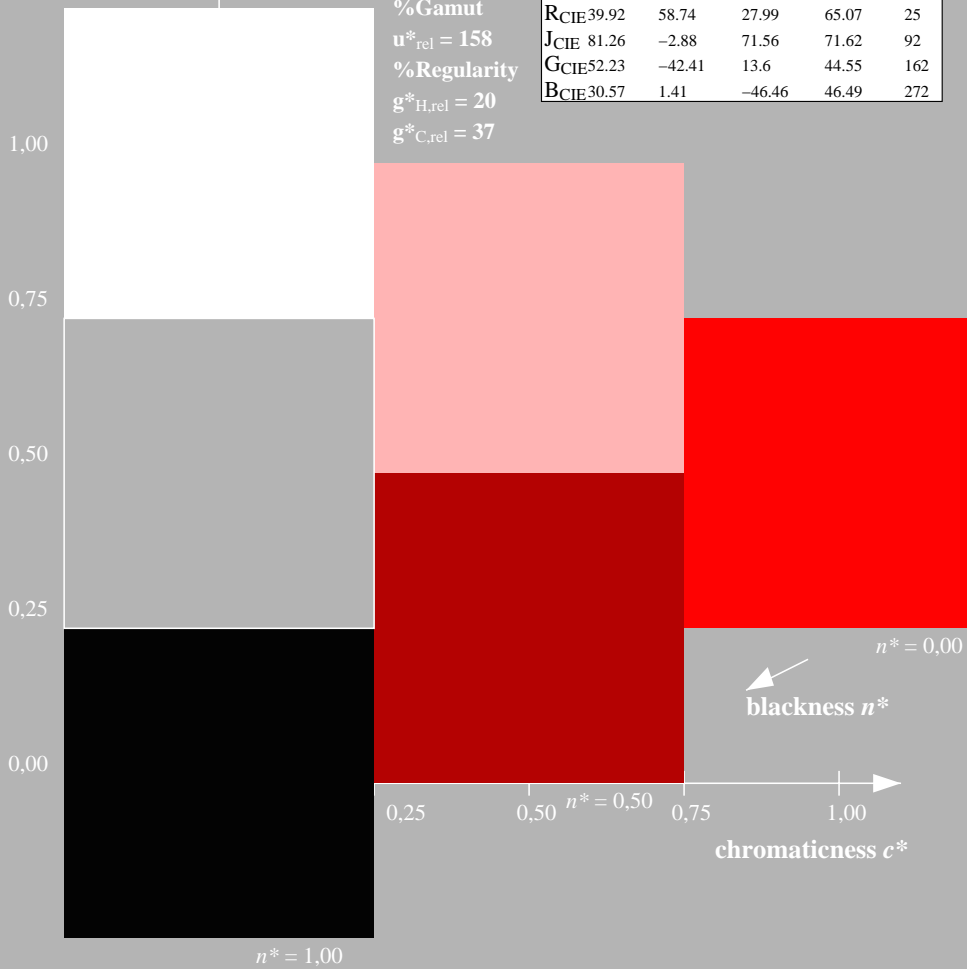


**TLS70; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	76.43	26.27	10.57	28.32	22
Y <sub>Ma</sub>	93.93	-10.76	34.63	36.27	107
L <sub>Ma</sub>	89.32	-35.8	27.64	45.24	142
C <sub>Ma</sub>	90.93	-21.95	-7.07	23.07	198
V <sub>Ma</sub>	72.1	15.76	-35.63	38.97	294
M <sub>Ma</sub>	78.5	37.52	-25.23	45.22	326
N <sub>Ma</sub>	69.7	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  
 $g^*_{H,rel} = 20$   
 $g^*_{C,rel} = 37$

%Gamut  
 $u^*_{rel} = 16$   
 %Regularity  
 $g^*_{H,rel} = 34$   
 $g^*_{C,rel} = 51$



NE830-7, 3 step scales for constant CIELAB hue 40/360 = 0.111 (left)

5 step scales for constant CIELAB hue 22/360 = 0.061 (right)

BAM-test chart NE83; Colorimetric systems TLS00 & TLS70  
 D65: 3 and 5 step colour scales for 10 hues

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

See for similar files: <http://www.ps.bam.de/NE83/>  
 Technical information: <http://www.ps.bam.de>  
 Version 2.1, io=1,1, CIELAB

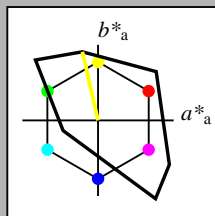
BAM registration: 20060101-NE83/10Q/Q83E00FP.PS/.PDF BAM material: code=rh4ta  
 application for evaluation and measurement of printer or monitor systems  
 /NE83/ Form: 1/10, Serie: 1/1, Page: 1 Page count: 1

**Input: Colorimetric Television Luminous System TLS00**

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

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

triangle lightness  $t^*$



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

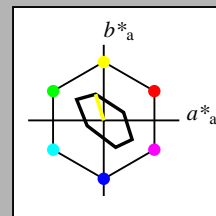
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3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

**Output: Colorimetric Television Luminous System TLS70**

for hue  $h^* = lab^*h = 107/360 = 0.298$   
 $lab^*tch$  and  $lab^*nch$

D65: hue Y  
 LCH\*Ma: 94 36 107  
 olv\*Ma: 1.0 1.0 0.0

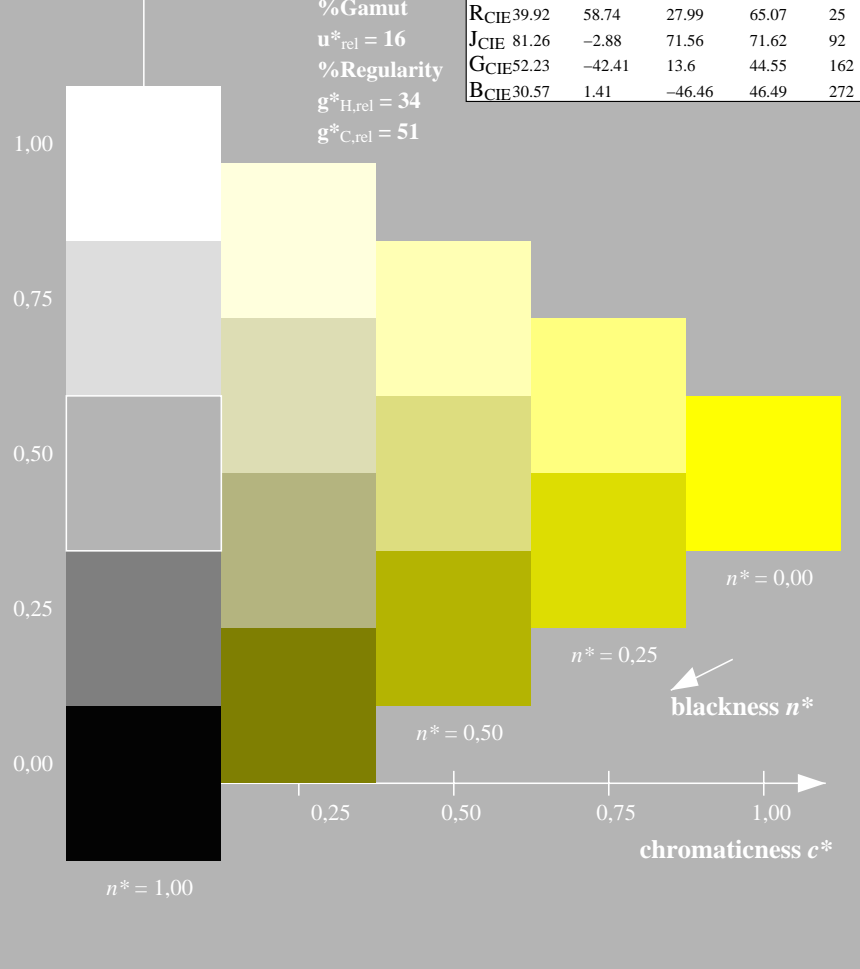
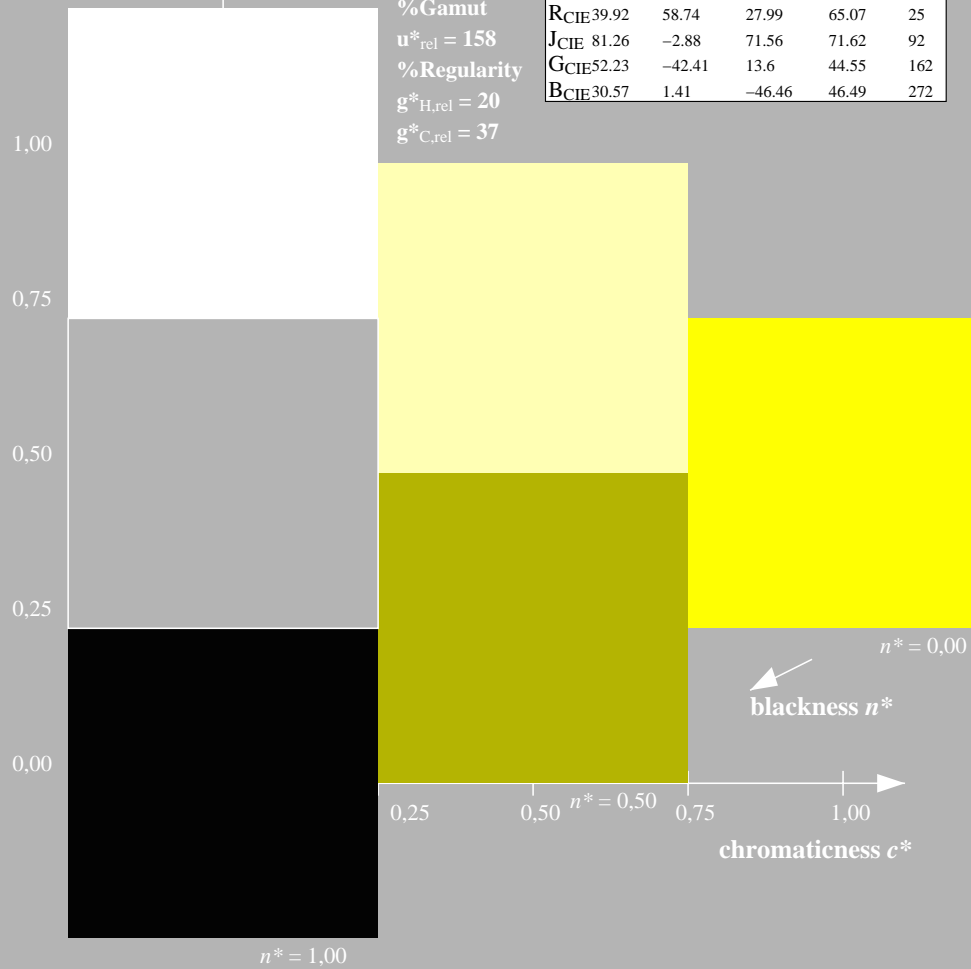
triangle lightness  $t^*$



**TLS70; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	76.43	26.27	10.57	28.32	22
Y <sub>Ma</sub>	93.93	-10.76	34.63	36.27	107
L <sub>Ma</sub>	89.32	-35.8	27.64	45.24	142
C <sub>Ma</sub>	90.93	-21.95	-7.07	23.07	198
V <sub>Ma</sub>	72.1	15.76	-35.63	38.97	294
M <sub>Ma</sub>	78.5	37.52	-25.23	45.22	326
N <sub>Ma</sub>	69.7	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  
 $u^*_{rel} = 16$   
 %Regularity  
 $g^*_{H,rel} = 34$   
 $g^*_{C,rel} = 51$



NE830-7, 3 step scales for constant CIELAB hue 103/360 = 0.286 (left)

5 step scales for constant CIELAB hue 107/360 = 0.298 (right)

BAM-test chart NE83; Colorimetric systems TLS00 & TLS70  
 D65: 3 and 5 step colour scales for 10 hues

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

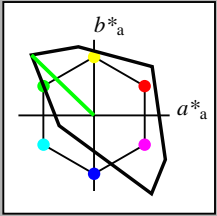
See for similar files: <http://www.ps.bam.de/NE83/>  
 Technical information: <http://www.ps.bam.de>  
 Version 2.1, io=1,1, CIELAB

BAM registration: 20060101-NE83/10Q/Q83E01FP.PS/.PDF BAM material: code=rh4ta  
 application for evaluation and measurement of printer or monitor systems  
 /NE83/ Form: 2/10, Serie: 1/1, Page: 2 Page count: 2

**Input: Colorimetric Television Luminous System TLS00**

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

D65: hue L  
 LCH\*Ma: 84 115 136  
 olv\*Ma: 0.0 1.0 0.0  
 triangle lightness  $t^*$



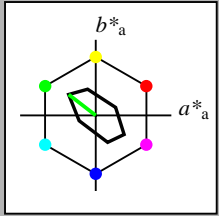
**TLS00; adapted (a) CIELAB data**

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

**Output: Colorimetric Television Luminous System TLS70**

for hue  $h^* = lab^*h = 142/360 = 0.395$   
 $lab^*tch$  and  $lab^*nch$

D65: hue L  
 LCH\*Ma: 89 45 142  
 olv\*Ma: 0.0 1.0 0.0  
 triangle lightness  $t^*$

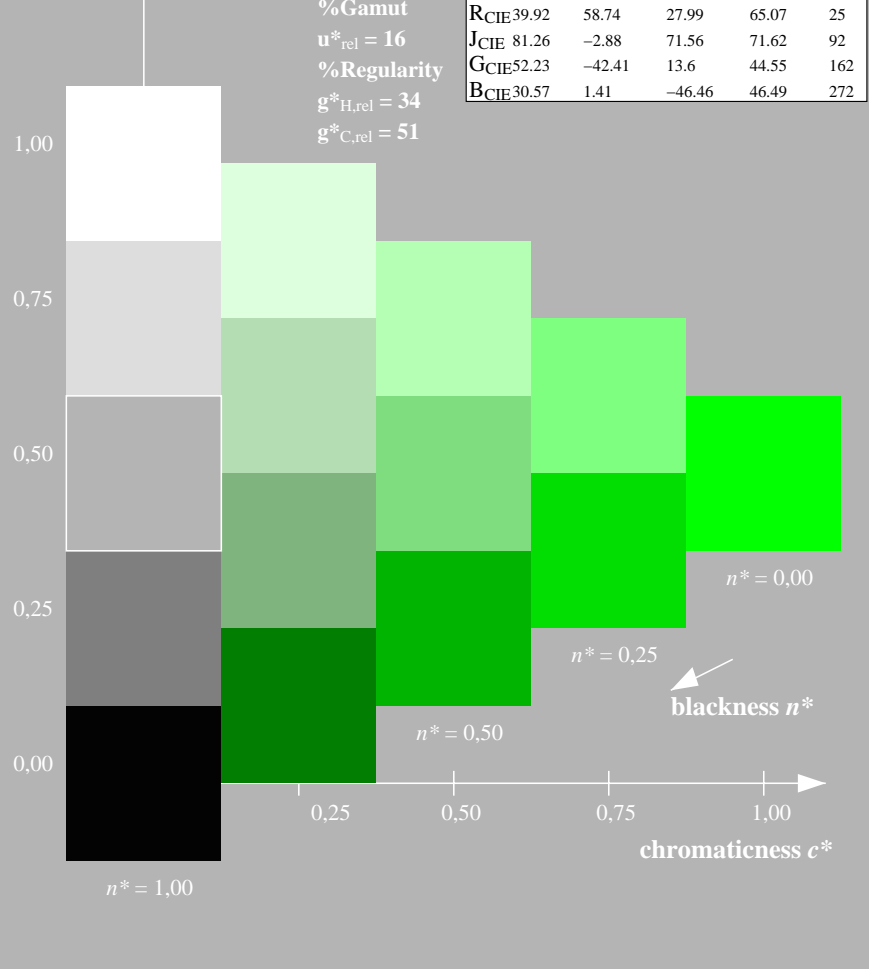
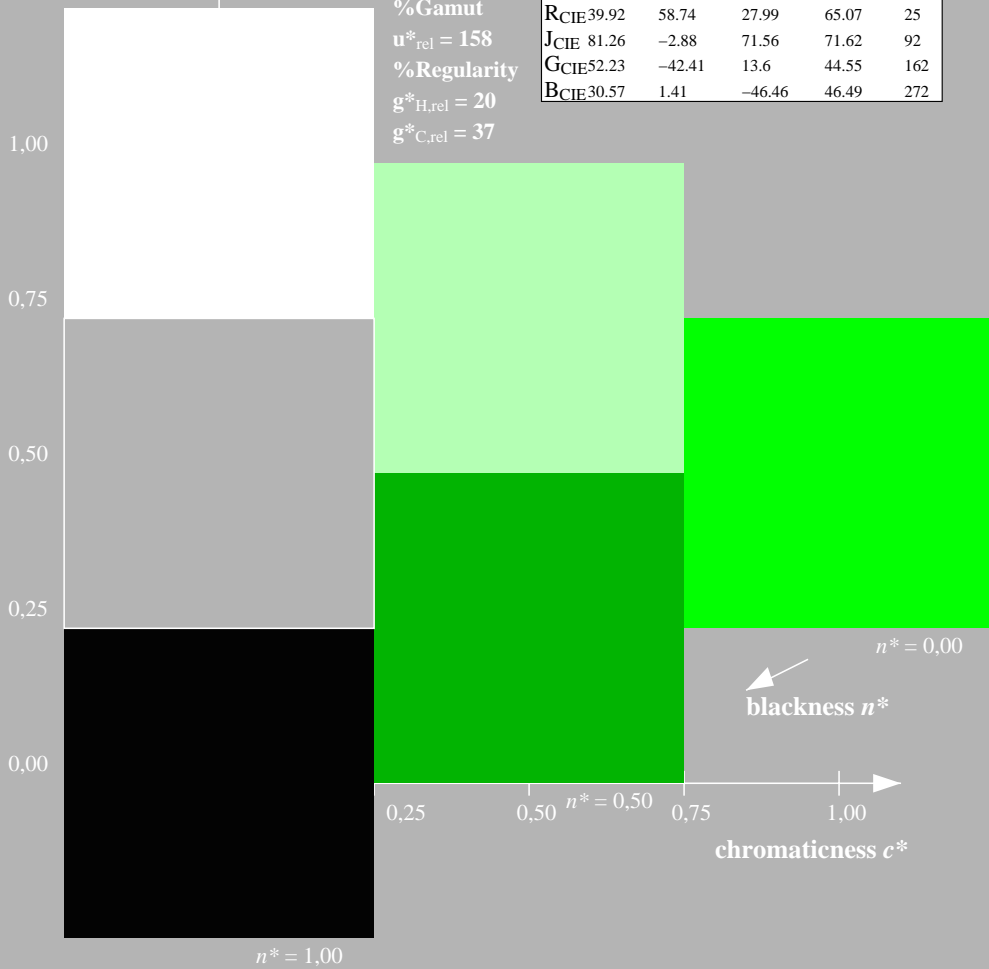


**TLS70; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	76.43	26.27	10.57	28.32	22
Y <sub>Ma</sub>	93.93	-10.76	34.63	36.27	107
L <sub>Ma</sub>	89.32	-35.8	27.64	45.24	142
C <sub>Ma</sub>	90.93	-21.95	-7.07	23.07	198
V <sub>Ma</sub>	72.1	15.76	-35.63	38.97	294
M <sub>Ma</sub>	78.5	37.52	-25.23	45.22	326
N <sub>Ma</sub>	69.7	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  
 $g^*_{H,rel} = 20$   
 $g^*_{C,rel} = 37$

%Gamut  
 $u^*_{rel} = 16$   
 %Regularity  
 $g^*_{H,rel} = 34$   
 $g^*_{C,rel} = 51$



NE830-7, 3 step scales for constant CIE LAB hue 136/360 = 0.378 (left)

5 step scales for constant CIE LAB hue 142/360 = 0.395 (right)

BAM-test chart NE83; Colorimetric systems TLS00 & TLS70  
 D65: 3 and 5 step colour scales for 10 hues

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

See for similar files: <http://www.ps.bam.de/NE83/>  
 Technical information: <http://www.ps.bam.de>  
 Version 2.1, io=1,1, CIELAB

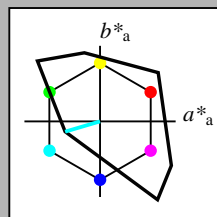
BAM registration: 20060101-NE83/10Q/Q83E02FP.PS/.PDF BAM material: code=rh4ta  
 application for evaluation and measurement of printer or monitor systems  
 /NE83/ Form: 3/10, Serie: 1/1, Page: 3 Page count: 3

Input: Colorimetric Television Luminous System TLS00

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

D65: hue C  
 LCH\*Ma: 87 48 196  
 olv\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



TLS00; adapted (a) CIELAB data

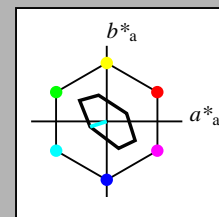
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3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

Output: Colorimetric Television Luminous System TLS70

for hue  $h^* = lab^*h = 198/360 = 0.55$   
 $lab^*tch$  and  $lab^*nch$

D65: hue C  
 LCH\*Ma: 91 23 198  
 olv\*Ma: 0.0 1.0 1.0

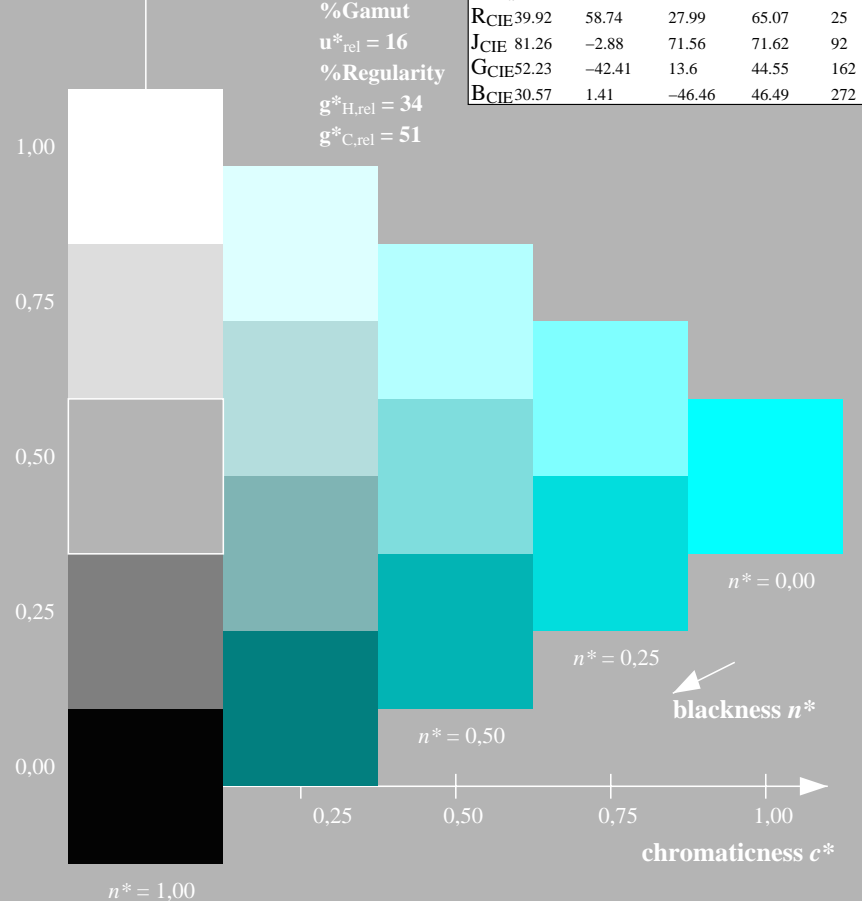
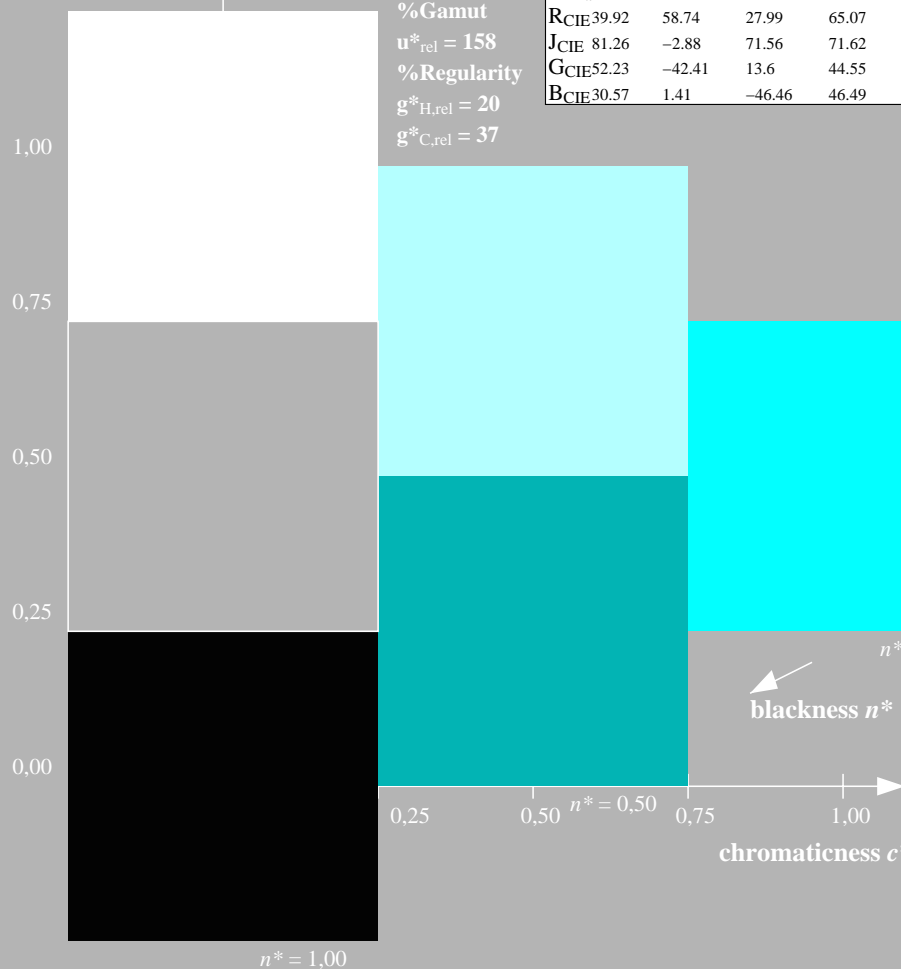
triangle lightness  $t^*$



TLS70; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	76.43	26.27	10.57	28.32	22
Y <sub>Ma</sub>	93.93	-10.76	34.63	36.27	107
L <sub>Ma</sub>	89.32	-35.8	27.64	45.24	142
C <sub>Ma</sub>	90.93	-21.95	-7.07	23.07	198
V <sub>Ma</sub>	72.1	15.76	-35.63	38.97	294
M <sub>Ma</sub>	78.5	37.52	-25.23	45.22	326
N <sub>Ma</sub>	69.7	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  
 $u^*_{rel} = 16$   
 %Regularity  
 $g^*_{H,rel} = 34$   
 $g^*_{C,rel} = 51$



NE830-7, 3 step scales for constant CIELAB hue 196/360 = 0.545 (left)

5 step scales for constant CIELAB hue 198/360 = 0.55 (right)

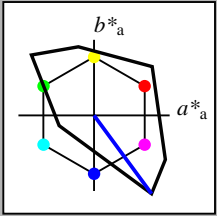
BAM-test chart NE83; Colorimetric systems TLS00 & TLS70  
 D65: 3 and 5 step colour scales for 10 hues

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

**Input: Colorimetric Television Luminous System TLS00**

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

D65: hue V  
 LCH\*Ma: 30 129 306  
 olv\*Ma: 0.0 0.0 1.0  
 triangle lightness  $l^*$



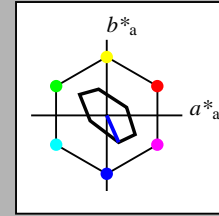
**TLS00; adapted (a) CIELAB data**

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

**Output: Colorimetric Television Luminous System TLS70**

for hue  $h^* = lab^*h = 294/360 = 0.816$   
 $lab^*ich$  and  $lab^*nch$

D65: hue V  
 LCH\*Ma: 72 39 294  
 olv\*Ma: 0.0 0.0 1.0  
 triangle lightness  $l^*$

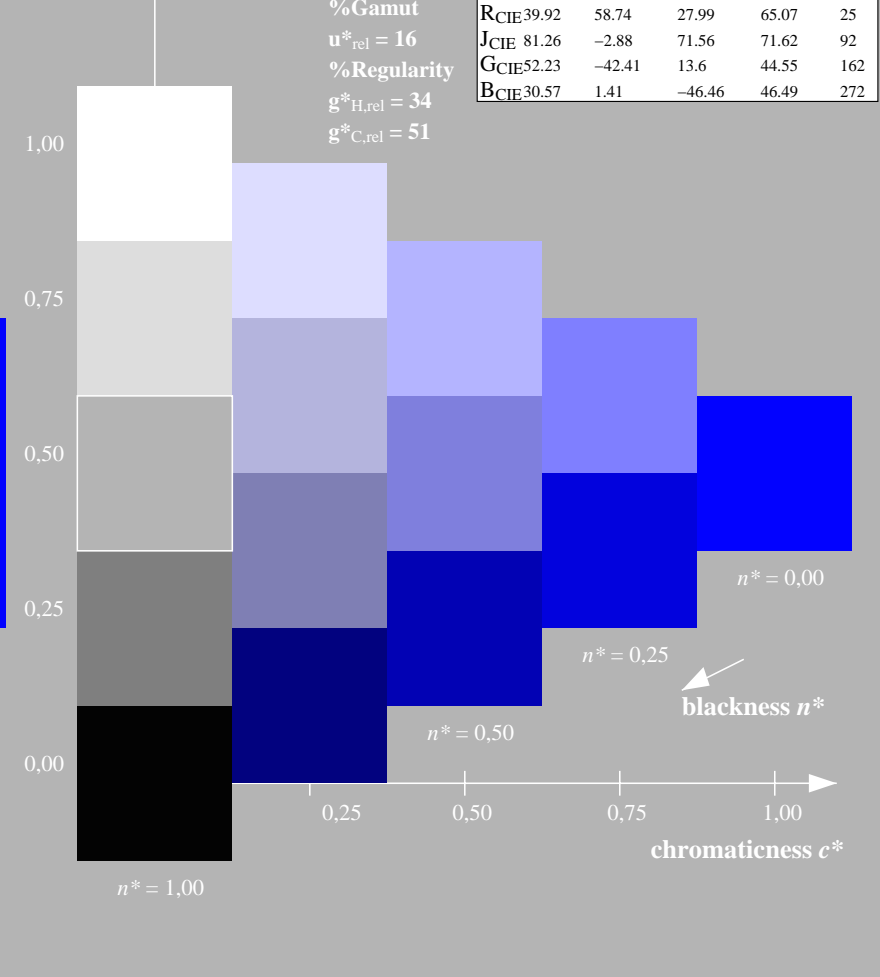
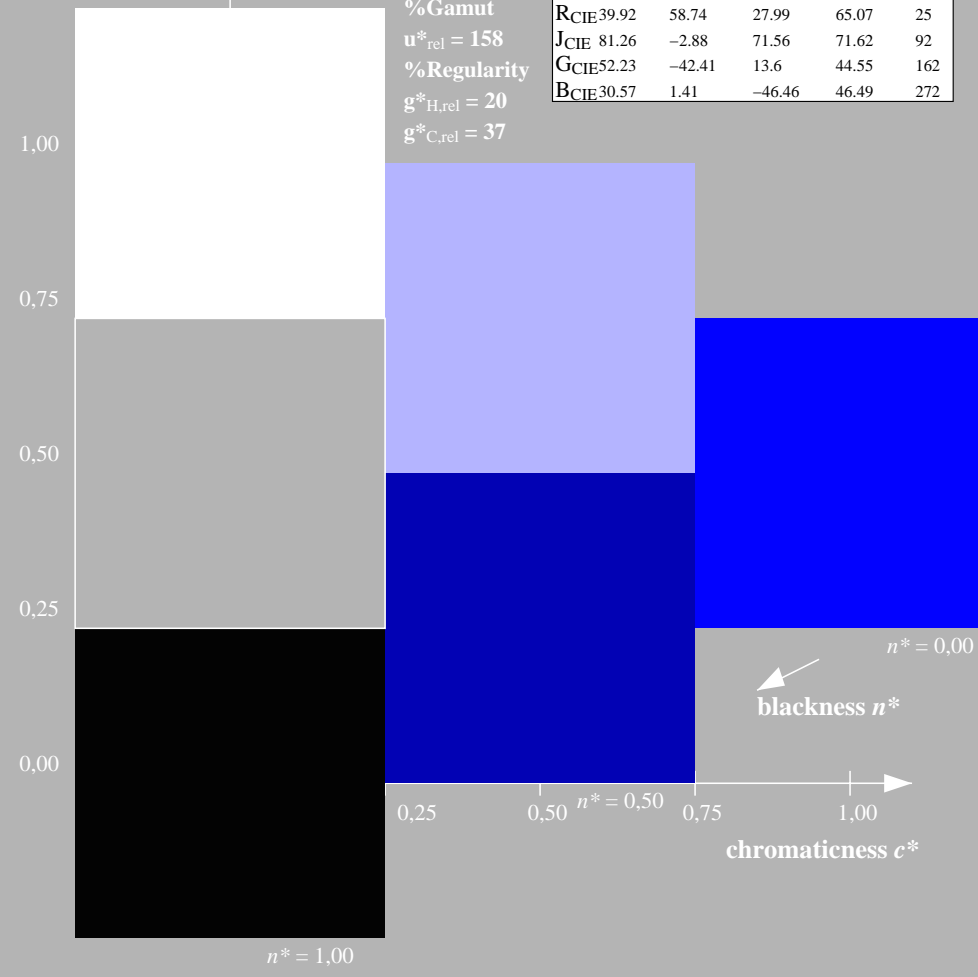


**TLS70; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	76.43	26.27	10.57	28.32	22
Y <sub>Ma</sub>	93.93	-10.76	34.63	36.27	107
L <sub>Ma</sub>	89.32	-35.8	27.64	45.24	142
C <sub>Ma</sub>	90.93	-21.95	-7.07	23.07	198
V <sub>Ma</sub>	72.1	15.76	-35.63	38.97	294
M <sub>Ma</sub>	78.5	37.52	-25.23	45.22	326
N <sub>Ma</sub>	69.7	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  
 $g^*_{H,rel} = 20$   
 $g^*_{C,rel} = 37$

% Gamut  
 $u^*_{rel} = 16$   
 % Regularity  
 $g^*_{H,rel} = 34$   
 $g^*_{C,rel} = 51$



NE830-7, 3 step scales for constant CIELAB hue 306/360 = 0.851 (left)

5 step scales for constant CIELAB hue 294/360 = 0.816 (right)

BAM-test chart NE83; Colorimetric systems TLS00 & TLS70  
 D65: 3 and 5 step colour scales for 10 hues

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

See for similar files: <http://www.ps.bam.de/NE83/>  
 Technical information: <http://www.ps.bam.de/>  
 Version 2.1, io=1,1, CIELAB

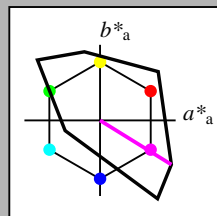
BAM registration: 20060101-NE83/10Q/Q83E04FP.PS/.PDF BAM material: code=rh4ta  
 application for evaluation and measurement of printer or monitor systems  
 /NE83/ Form: 5/10, Serie: 1/1, Page: 5 Page count: 5

Input: Colorimetric Television Luminous System TLS00

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

D65: hue M  
 LCH\*Ma: 57 111 328  
 olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



TLS00; adapted (a) CIELAB data

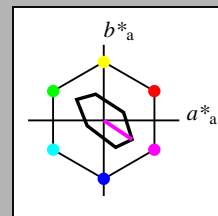
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	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

Output: Colorimetric Television Luminous System TLS70

for hue  $h^* = lab^*h = 326/360 = 0.906$   
 $lab^*tch$  and  $lab^*nch$

D65: hue M  
 LCH\*Ma: 79 45 326  
 olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$

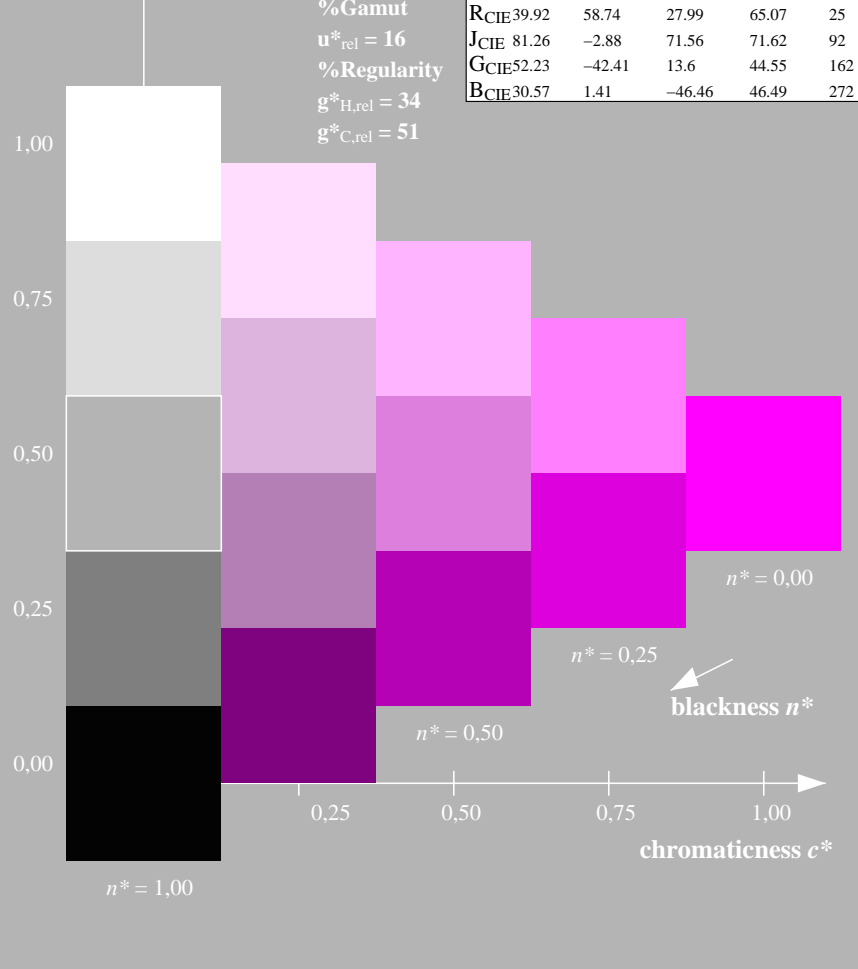
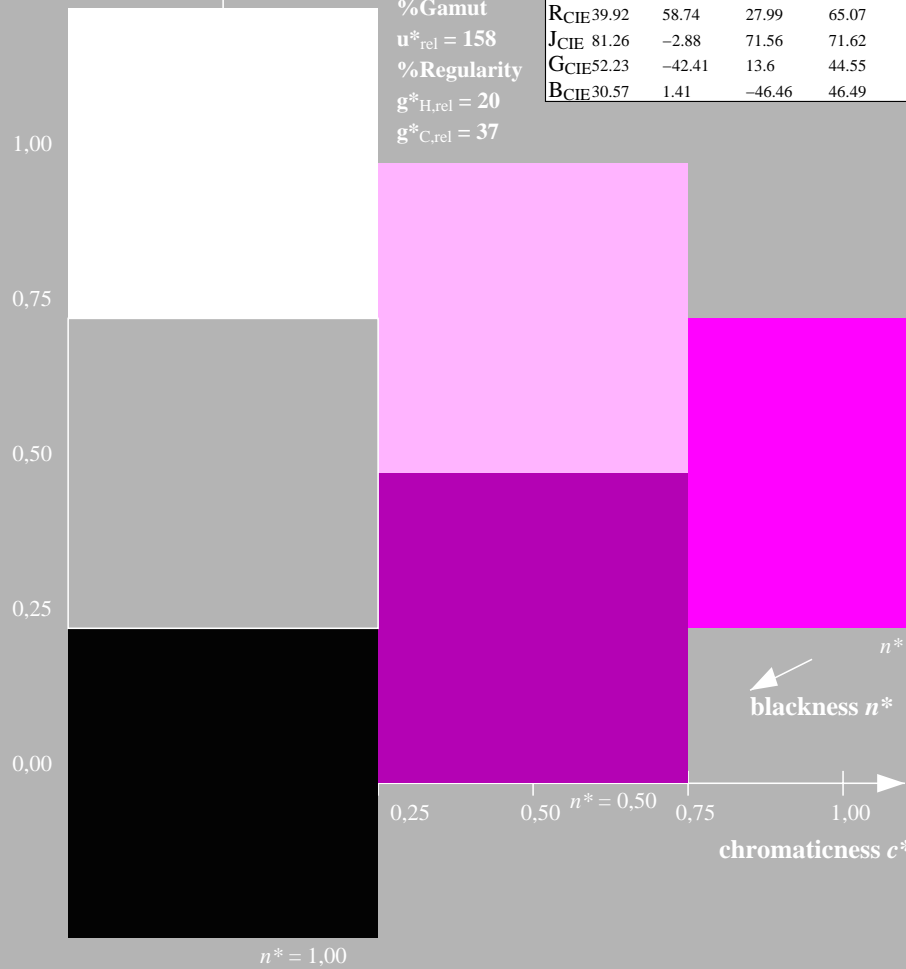


TLS70; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	76.43	26.27	10.57	28.32	22
YMa	93.93	-10.76	34.63	36.27	107
LMa	89.32	-35.8	27.64	45.24	142
CMa	90.93	-21.95	-7.07	23.07	198
VMa	72.1	15.76	-35.63	38.97	294
MMa	78.5	37.52	-25.23	45.22	326
NMa	69.7	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  
 $u^*_{rel} = 158$   
 %Regularity  
 $g^*_{H,rel} = 20$   
 $g^*_{C,rel} = 37$

%Gamut  
 $u^*_{rel} = 16$   
 %Regularity  
 $g^*_{H,rel} = 34$   
 $g^*_{C,rel} = 51$



NE830-7, 3 step scales for constant CIELAB hue 328/360 = 0.912 (left)

5 step scales for constant CIELAB hue 326/360 = 0.906 (right)

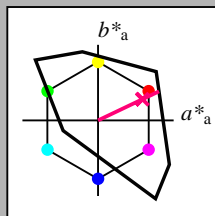
BAM-test chart NE83; Colorimetric systems TLS00 & TLS70  
 D65: 3 and 5 step colour scales for 10 hues

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

Input: Colorimetric Television Luminous System TLS00

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

D65: hue R  
 LCH\*Ma: 52 89 25  
 olv\*Ma: 1.0 0.0 0.21  
 triangle lightness  $t^*$



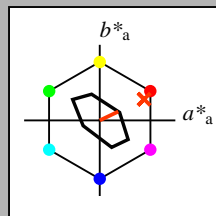
TLS00; adapted (a) CIELAB data

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

Output: Colorimetric Television Luminous System TLS70

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

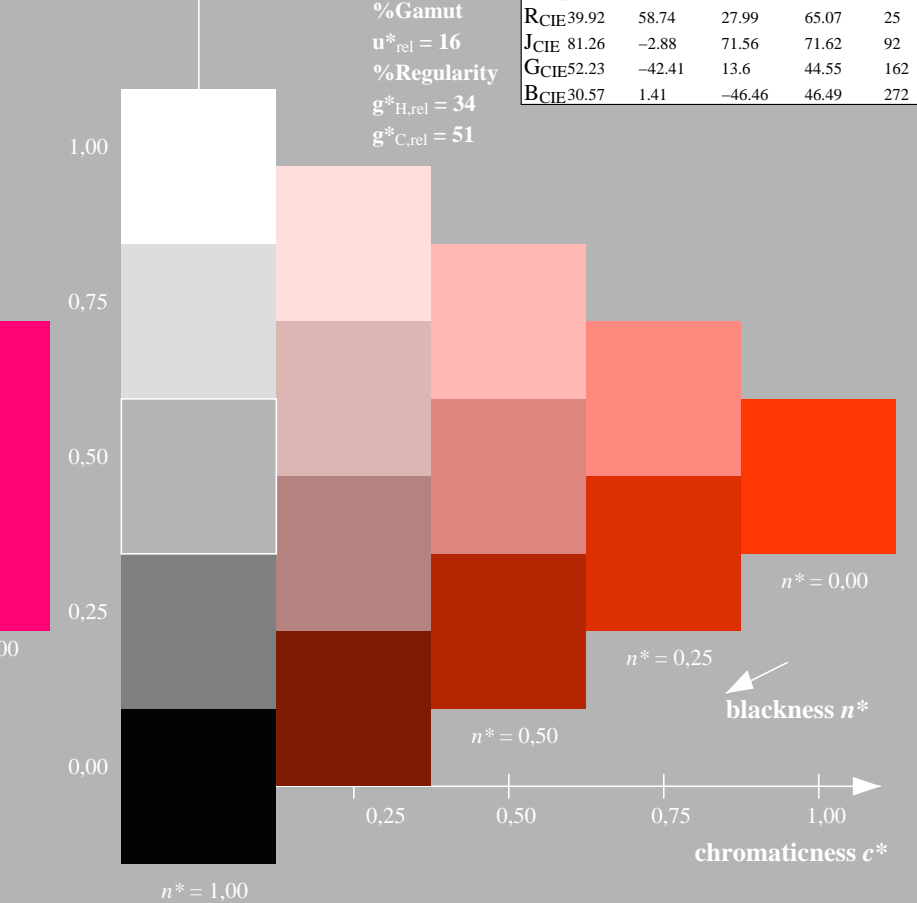
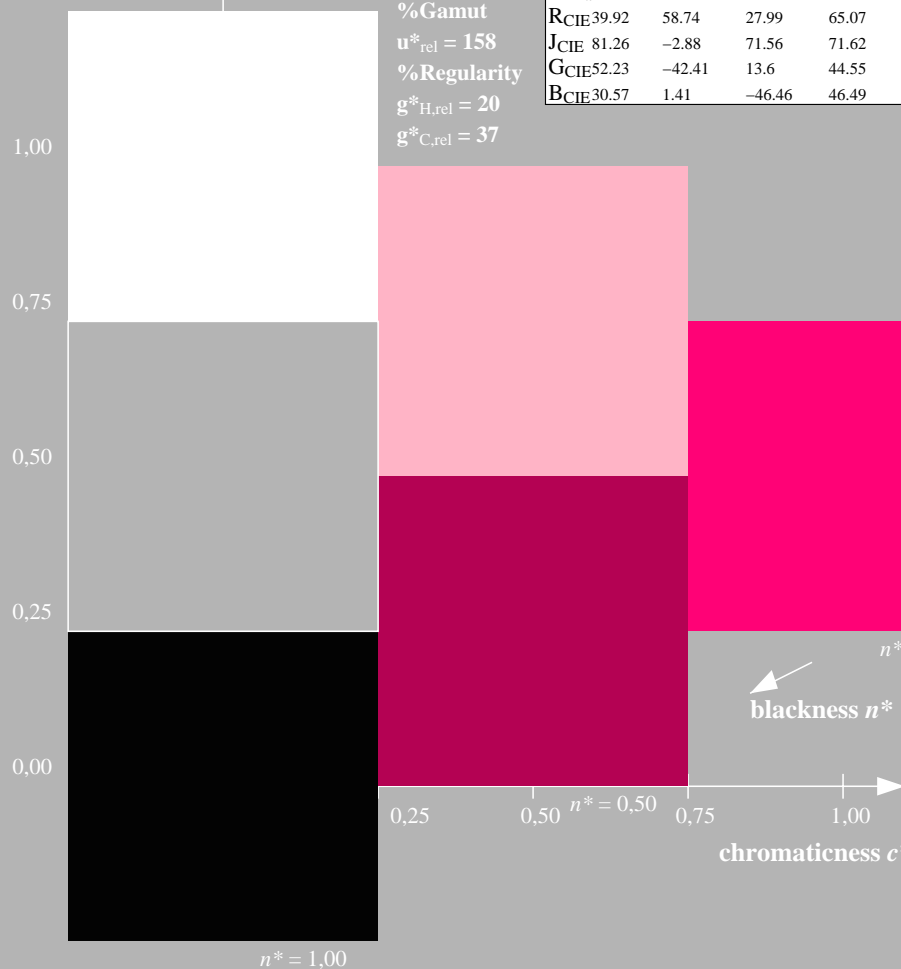
D65: hue R  
 LCH\*Ma: 77 27 25  
 olv\*Ma: 1.0 0.05 0.0  
 triangle lightness  $t^*$



TLS70; adapted (a) CIELAB data

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	76.43	26.27	10.57	28.32	22
Y <sub>Ma</sub>	93.93	-10.76	34.63	36.27	107
L <sub>Ma</sub>	89.32	-35.8	27.64	45.24	142
C <sub>Ma</sub>	90.93	-21.95	-7.07	23.07	198
V <sub>Ma</sub>	72.1	15.76	-35.63	38.97	294
M <sub>Ma</sub>	78.5	37.52	-25.23	45.22	326
N <sub>Ma</sub>	69.7	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  
 $u^*_{rel} = 16$   
 % Regularity  
 $g^*_{H,rel} = 34$   
 $g^*_{C,rel} = 51$



NE830-7, 3 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

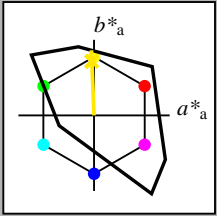
BAM-test chart NE83; Colorimetric systems TLS00 & TLS70  
 D65: 3 and 5 step colour scales for 10 hues

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

**Input: Colorimetric Television Luminous System TLS00**

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

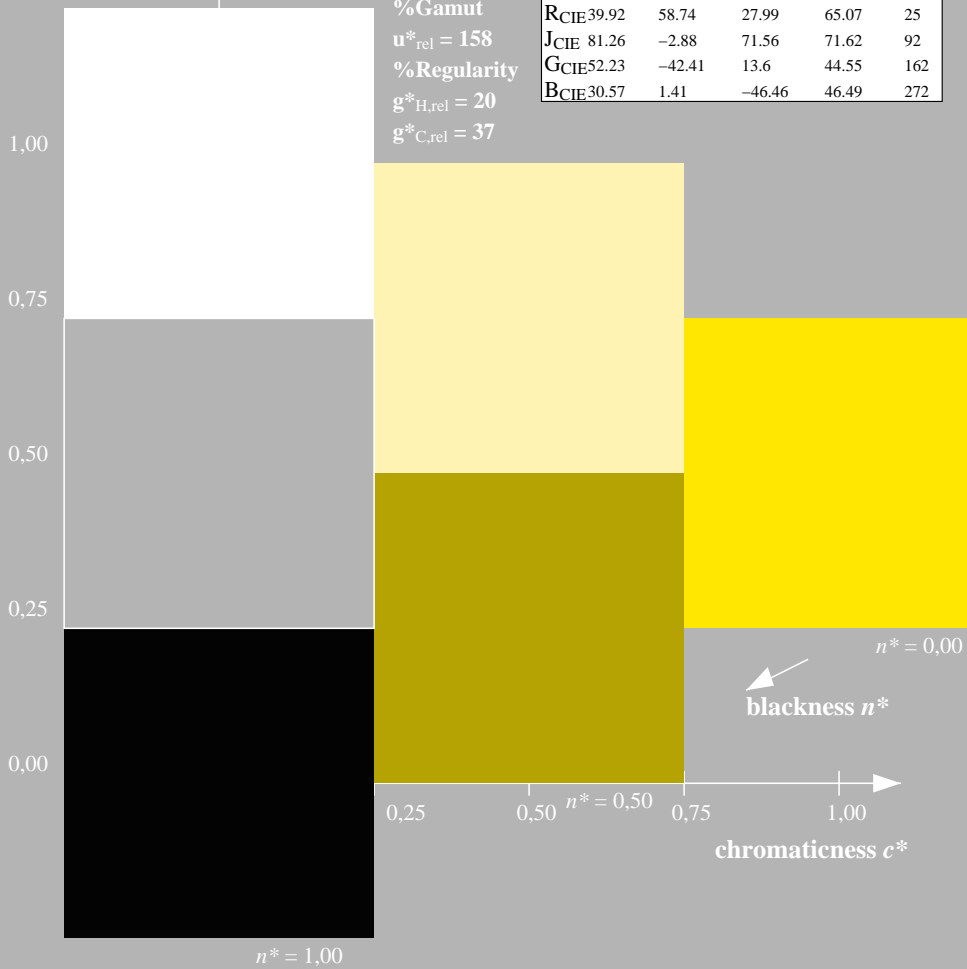
D65: hue J  
 LCH\*Ma: 85 86 92  
 olv\*Ma: 1.0 0.82 0.0  
 triangle lightness  $t^*$



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

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

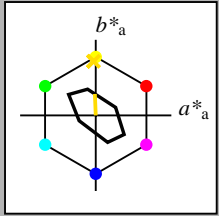
%Gamut  
 $u^*_{rel} = 158$   
 %Regularity  
 $g^*_{H,rel} = 20$   
 $g^*_{C,rel} = 37$



**Output: Colorimetric Television Luminous System TLS70**

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

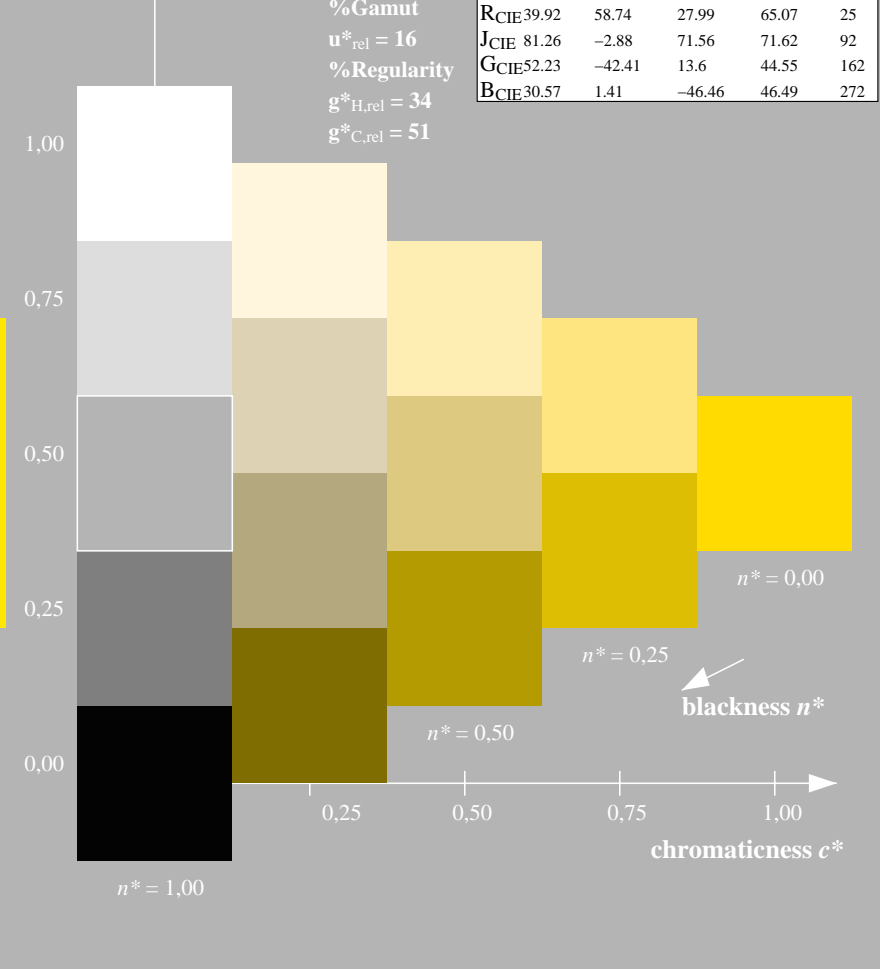
D65: hue J  
 LCH\*Ma: 89 28 92  
 olv\*Ma: 1.0 0.74 0.0  
 triangle lightness  $t^*$



**TLS70; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	76.43	26.27	10.57	28.32	22
Y <sub>Ma</sub>	93.93	-10.76	34.63	36.27	107
L <sub>Ma</sub>	89.32	-35.8	27.64	45.24	142
C <sub>Ma</sub>	90.93	-21.95	-7.07	23.07	198
V <sub>Ma</sub>	72.1	15.76	-35.63	38.97	294
M <sub>Ma</sub>	78.5	37.52	-25.23	45.22	326
N <sub>Ma</sub>	69.7	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  
 $u^*_{rel} = 16$   
 %Regularity  
 $g^*_{H,rel} = 34$   
 $g^*_{C,rel} = 51$



NE830-7, 3 step scales for constant CIELAB hue 92/360 = 0.256 (left)

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

BAM-test chart NE83; Colorimetric systems TLS00 & TLS70  
 D65: 3 and 5 step colour scales for 10 hues

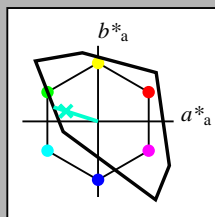
input:  $olv^* setrgbcolor$   
 output:  $olv^* setrgbcolor / w^* setgray$



**Input: Colorimetric Television Luminous System TLS00**

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

D65: hue G  
 LCH\*Ma: 86 62 162  
 olv\*Ma: 0.0 1.0 0.65  
 triangle lightness  $l^*$



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

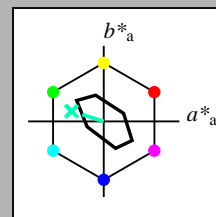
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	50.5	76.92	64.55	100.42	40
Y <sub>Ma</sub>	92.66	-20.69	90.75	93.08	103
L <sub>Ma</sub>	83.63	-82.75	79.9	115.04	136
C <sub>Ma</sub>	86.88	-46.16	-13.55	48.12	196
V <sub>Ma</sub>	30.39	76.06	-103.59	128.52	306
M <sub>Ma</sub>	57.3	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  
 $g^*_{H,rel} = 20$   
 $g^*_{C,rel} = 37$

**Output: Colorimetric Television Luminous System TLS70**

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

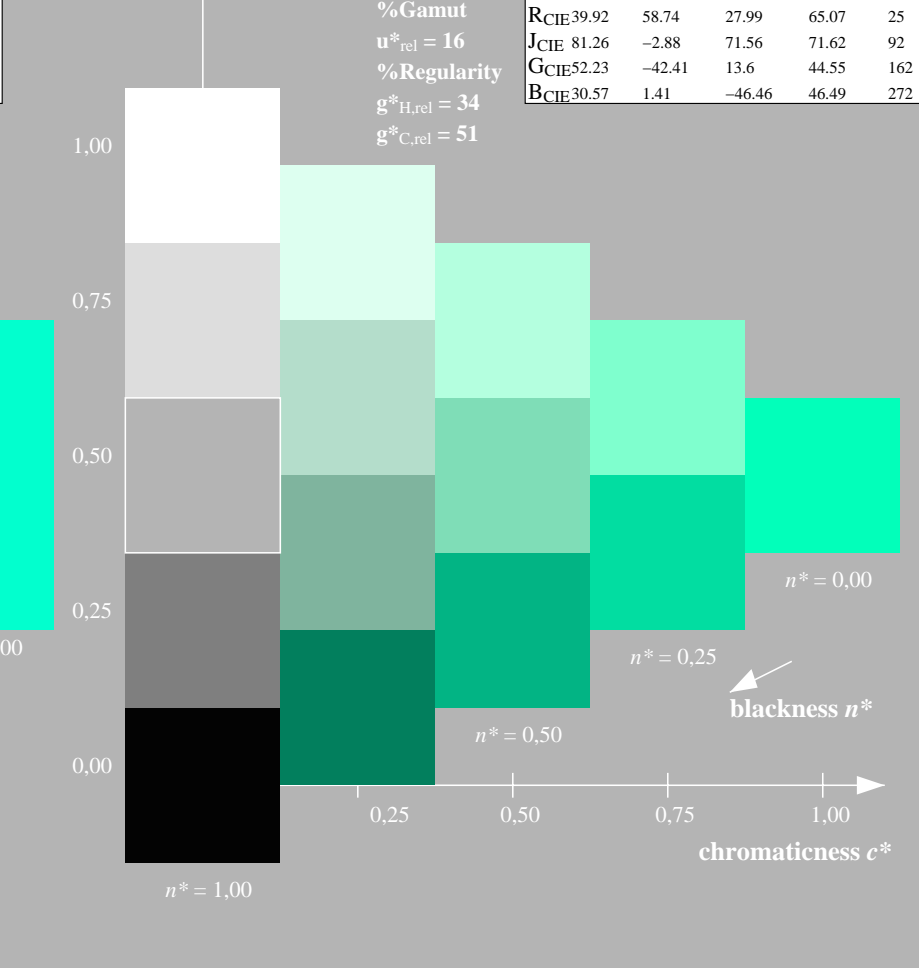
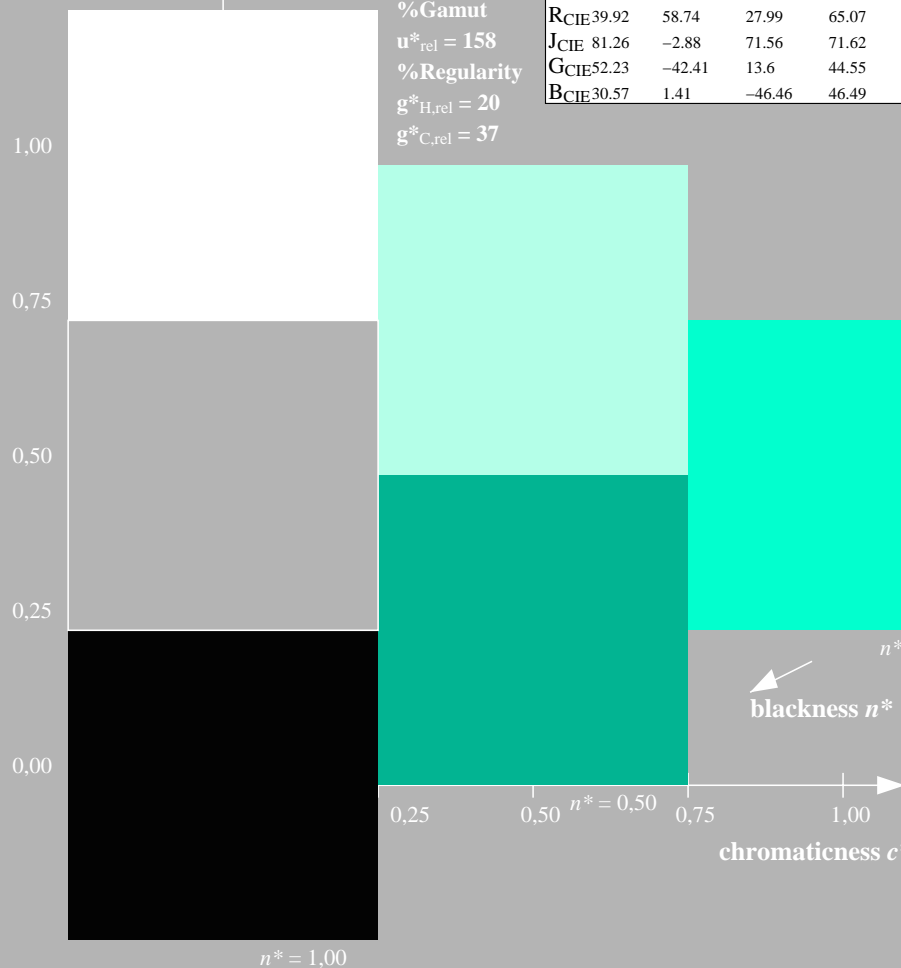
D65: hue G  
 LCH\*Ma: 90 30 162  
 olv\*Ma: 0.0 1.0 0.53  
 triangle lightness  $l^*$



**TLS70; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	76.43	26.27	10.57	28.32	22
Y <sub>Ma</sub>	93.93	-10.76	34.63	36.27	107
L <sub>Ma</sub>	89.32	-35.8	27.64	45.24	142
C <sub>Ma</sub>	90.93	-21.95	-7.07	23.07	198
V <sub>Ma</sub>	72.1	15.76	-35.63	38.97	294
M <sub>Ma</sub>	78.5	37.52	-25.23	45.22	326
N <sub>Ma</sub>	69.7	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

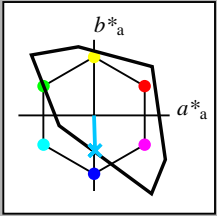
%Gamut  
 $u^*_{rel} = 16$   
 %Regularity  
 $g^*_{H,rel} = 34$   
 $g^*_{C,rel} = 51$



**Input: Colorimetric Television Luminous System TLS00**

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

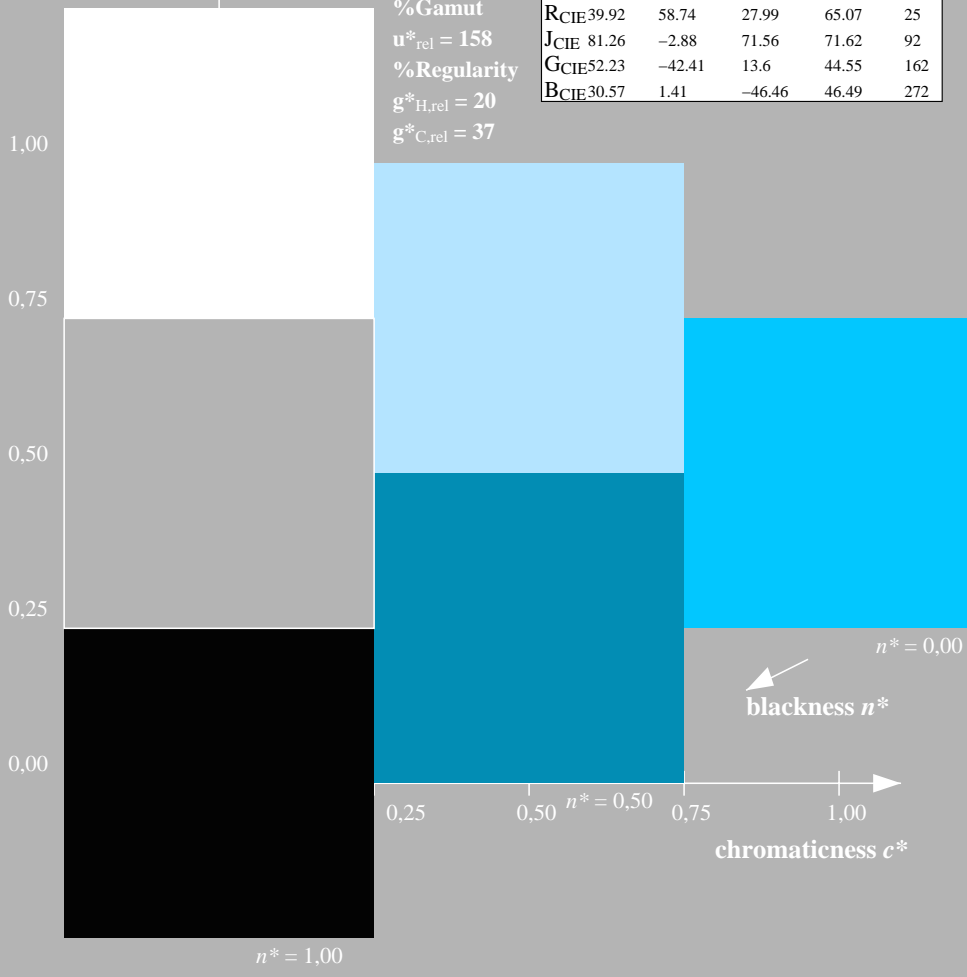
D65: hue B  
 LCH\*Ma: 65 49 272  
 olv\*Ma: 0.0 0.61 1.0  
 triangle lightness  $t^*$



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

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	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

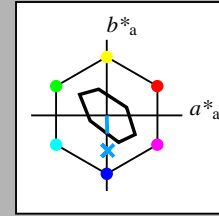
%Gamut  
 $u^*_{rel} = 158$   
 %Regularity  
 $g^*_{H,rel} = 20$   
 $g^*_{C,rel} = 37$



**Output: Colorimetric Television Luminous System TLS70**

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

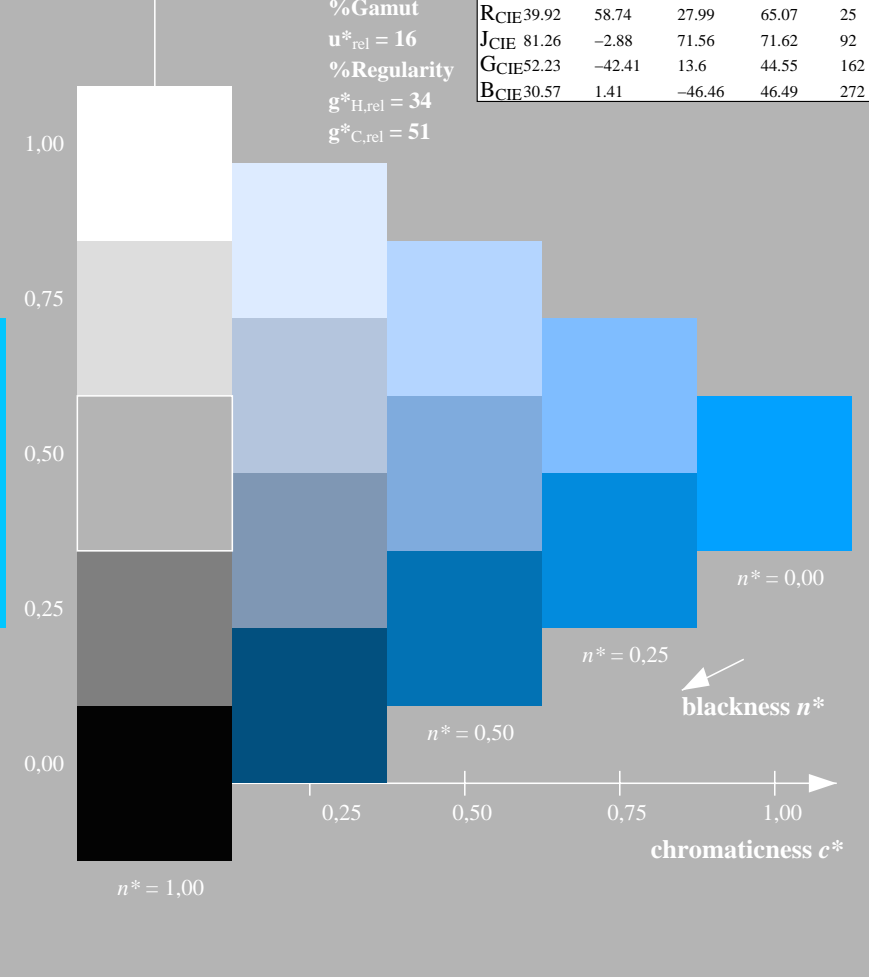
D65: hue B  
 LCH\*Ma: 80 24 272  
 olv\*Ma: 0.0 0.4 1.0  
 triangle lightness  $t^*$



**TLS70; adapted (a) CIELAB data**

	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	76.43	26.27	10.57	28.32	22
YMa	93.93	-10.76	34.63	36.27	107
LMa	89.32	-35.8	27.64	45.24	142
CMa	90.93	-21.95	-7.07	23.07	198
VMa	72.1	15.76	-35.63	38.97	294
MMa	78.5	37.52	-25.23	45.22	326
NMa	69.7	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  
 $u^*_{rel} = 16$   
 %Regularity  
 $g^*_{H,rel} = 34$   
 $g^*_{C,rel} = 51$



NE830-7, 3 step scales for constant CIELAB hue 272/360 = 0.755 (left)

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

BAM-test chart NE83; Colorimetric systems TLS00 & TLS70  
 D65: 3 and 5 step colour scales for 10 hues

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