

Input: Colorimetric Television Luminous System TLS70

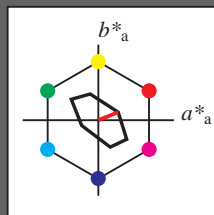
for hue  $h^* = lab^*h = 22/360 = 0.061$

LAB\*LCH, LAB\*NCH

D65: hue O

LCH\*Ma: 76 28 22

olv\*Ma: 1.0 0.0 0.0



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

CIELAB lightness  $L^*$

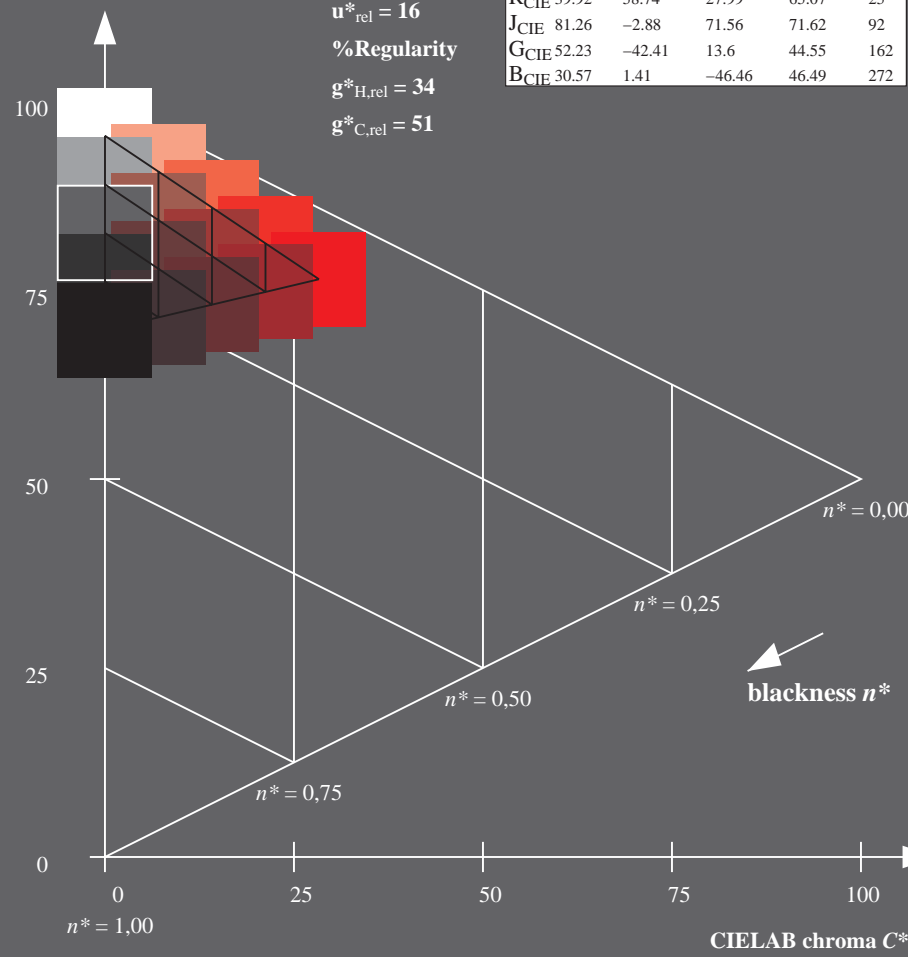
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



OE390-7, 5 step scales for constant CIELAB hue 22/360 = 0.061 (left)

Output: Colorimetric Television Luminous System TLS70

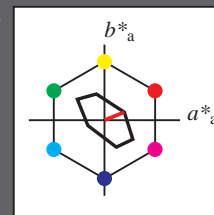
for hue  $h^* = lab^*h = 22/360 = 0.061$

LAB\*LCH, LAB\*NCH

D65: hue O

LCH\*Ma: 76 28 22

olv\*Ma: 1.0 0.0 0.0



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

CIELAB lightness  $L^*$

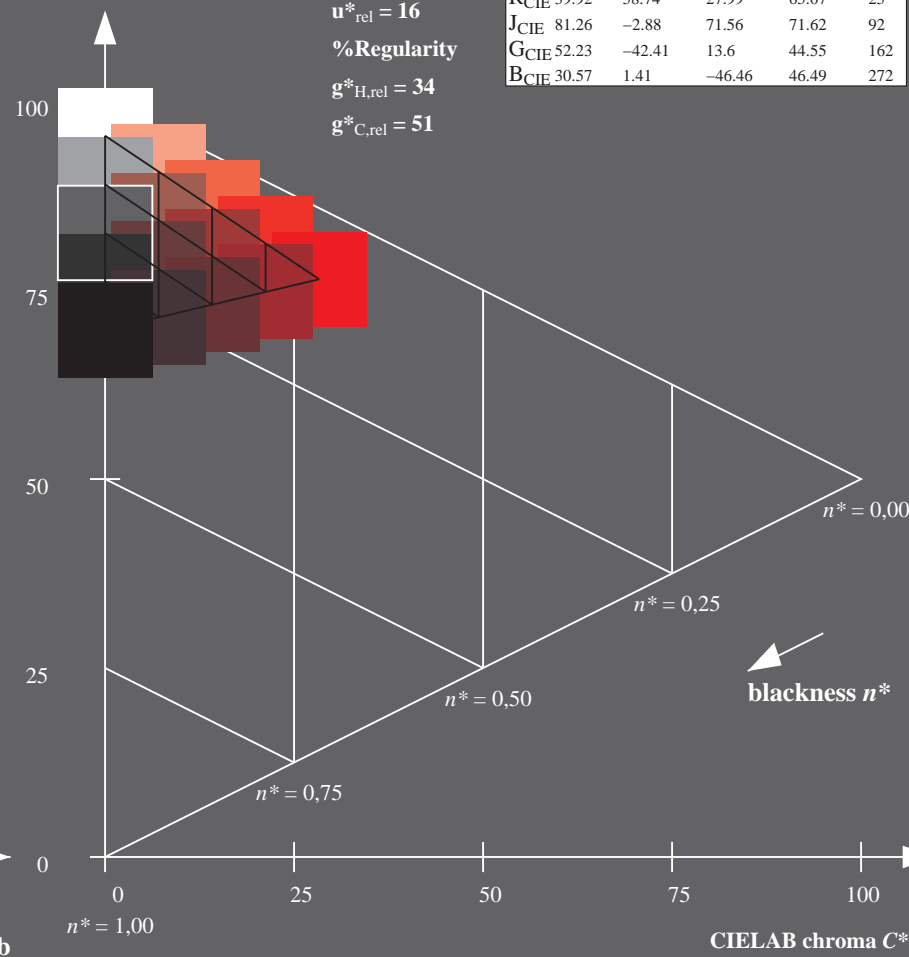
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



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

BAM-test chart OE39; Colorimetric systems TLS70 & TLS70  
 D65: Coordinate systems of 5 step colour scales for 10 hues

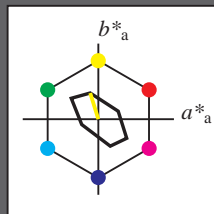
input:  $cmY0^*_{setcmykcolor}$   
 output:  $cmY0^*/000n^*_{setcmykcolor}$

Input: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

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



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

CIELAB lightness  $L^*$

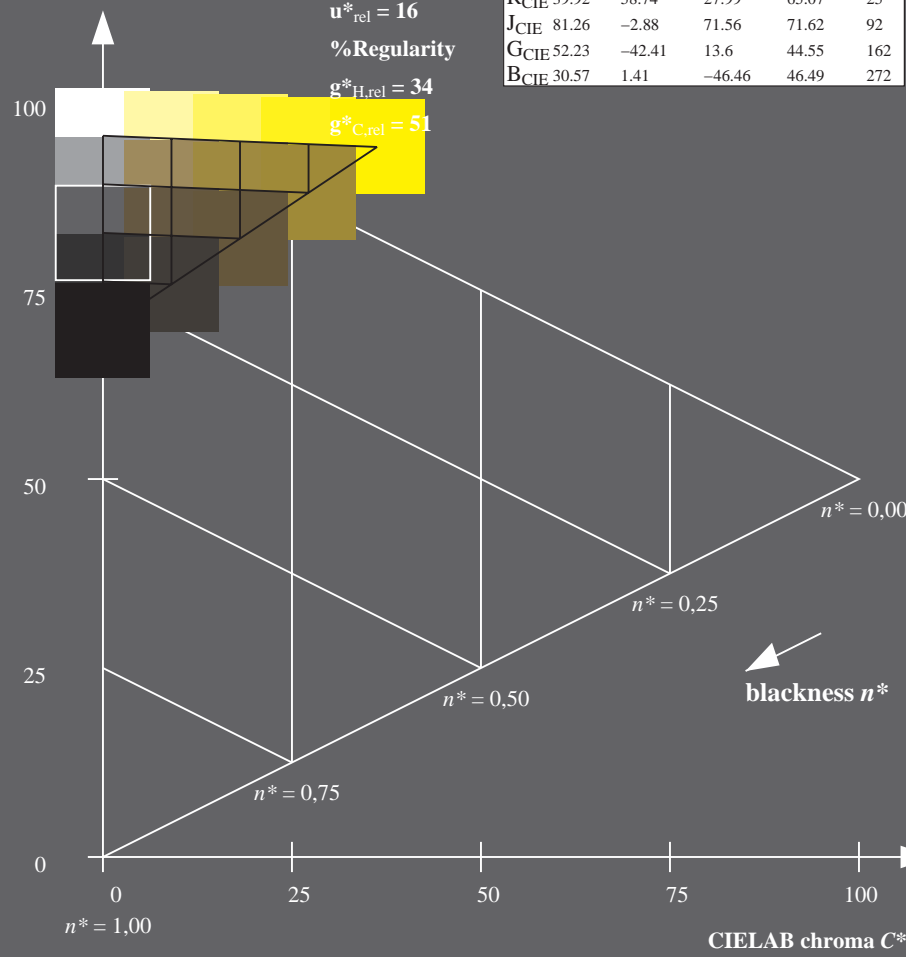
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



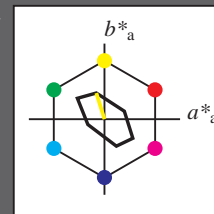
OE390-7, 5 step scales for constant CIELAB hue 107/360 = 0.298 (left)

Output: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

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



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
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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
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CIELAB lightness  $L^*$

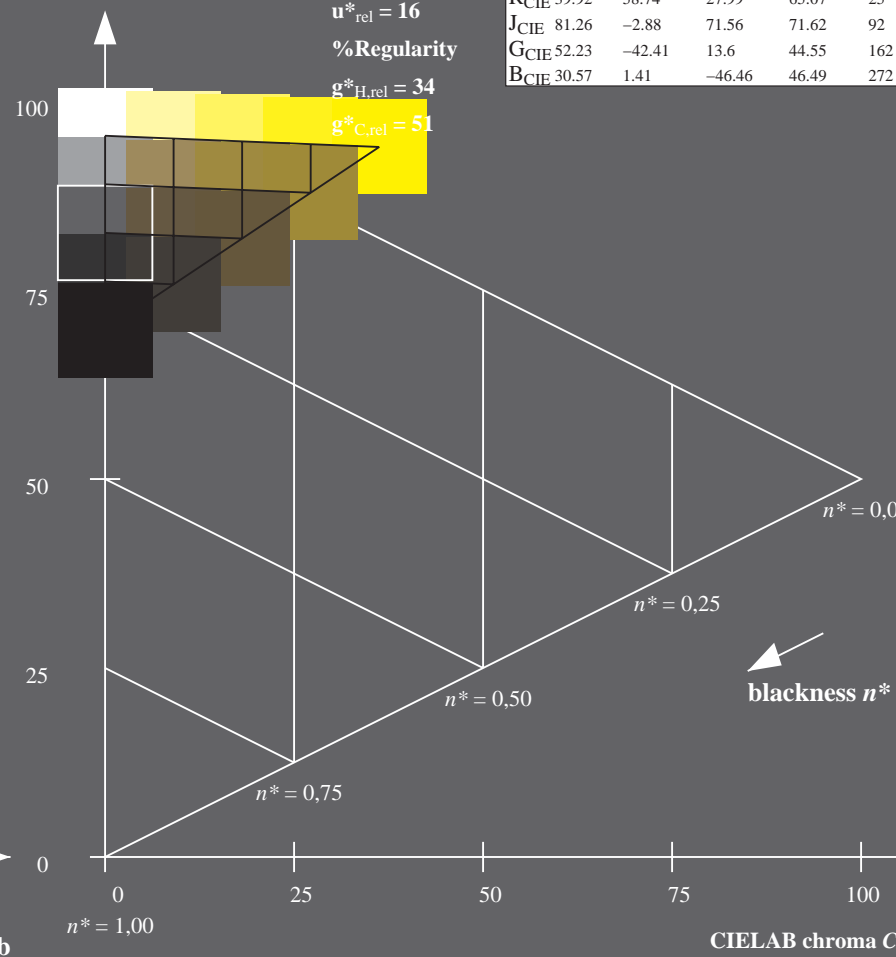
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



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

BAM-test chart OE39; Colorimetric systems TLS70 & TLS70  
 D65: Coordinate systems of 5 step colour scales for 10 hues

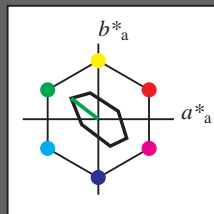
input:  $cmY0^*_{setcmykcolor}$   
 output:  $cmY0^*/000n^*_{setcmykcolor}$

Input: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

D65: hue L  
 LCH\*Ma: 89 45 142  
 olv\*Ma: 0.0 1.0 0.0



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

CIELAB lightness  $L^*$

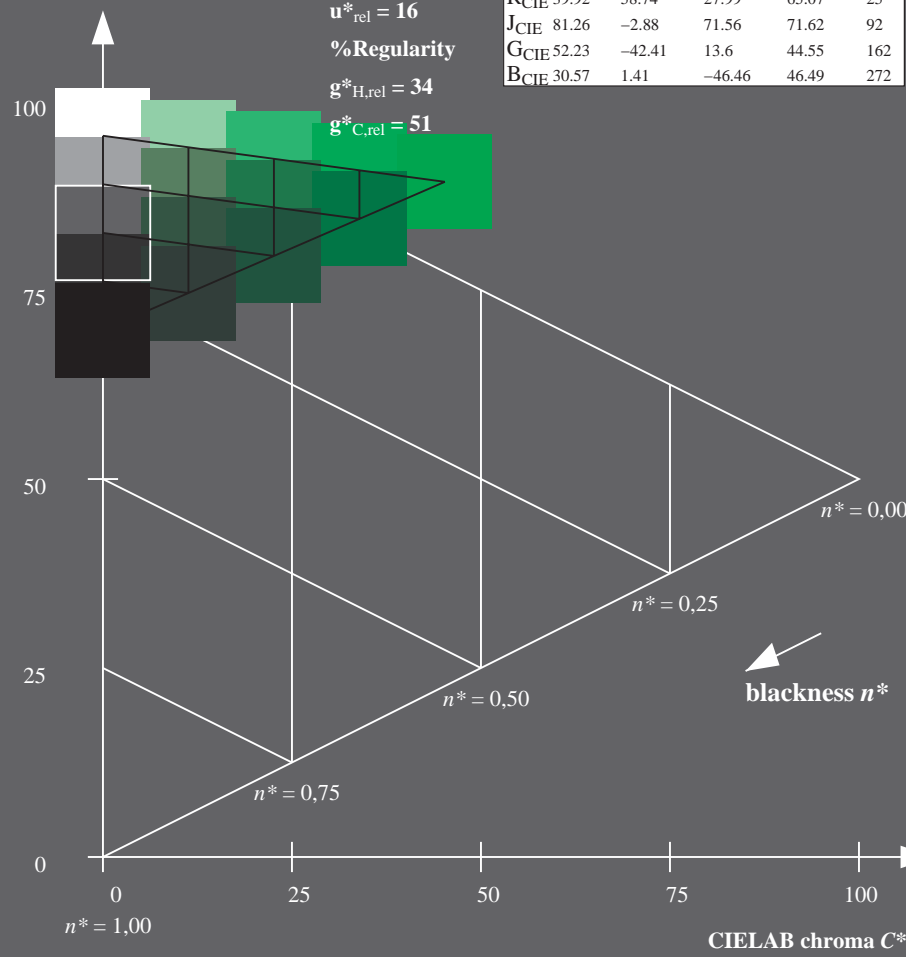
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



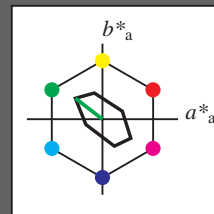
OE390-7, 5 step scales for constant CIELAB hue 142/360 = 0.395 (left)

Output: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

D65: hue L  
 LCH\*Ma: 89 45 142  
 olv\*Ma: 0.0 1.0 0.0



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

CIELAB lightness  $L^*$

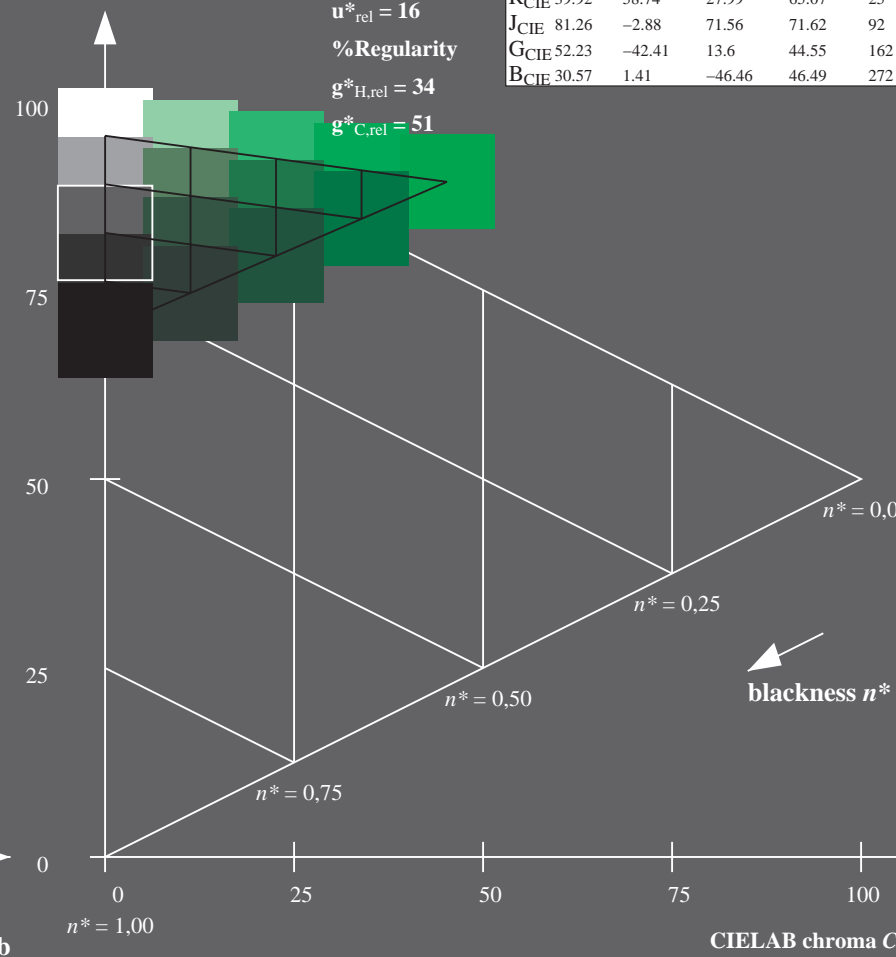
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



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

BAM-test chart OE39; Colorimetric systems TLS70 & TLS70  
 D65: Coordinate systems of 5 step colour scales for 10 hues

input:  $cmY0^*_{setcmykcolor}$   
 output:  $cmY0^*/000n^*_{setcmykcolor}$

**Input: Colorimetric Television Luminous System TLS70**

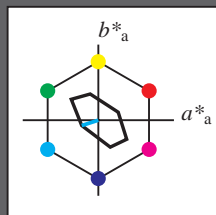
for hue  $h^* = lab^*h = 198/360 = 0.55$

LAB\*LCH, LAB\*NCH

D65: hue C

LCH\*Ma: 91 23 198

olv\*Ma: 0.0 1.0 1.0



**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

CIELAB lightness  $L^*$

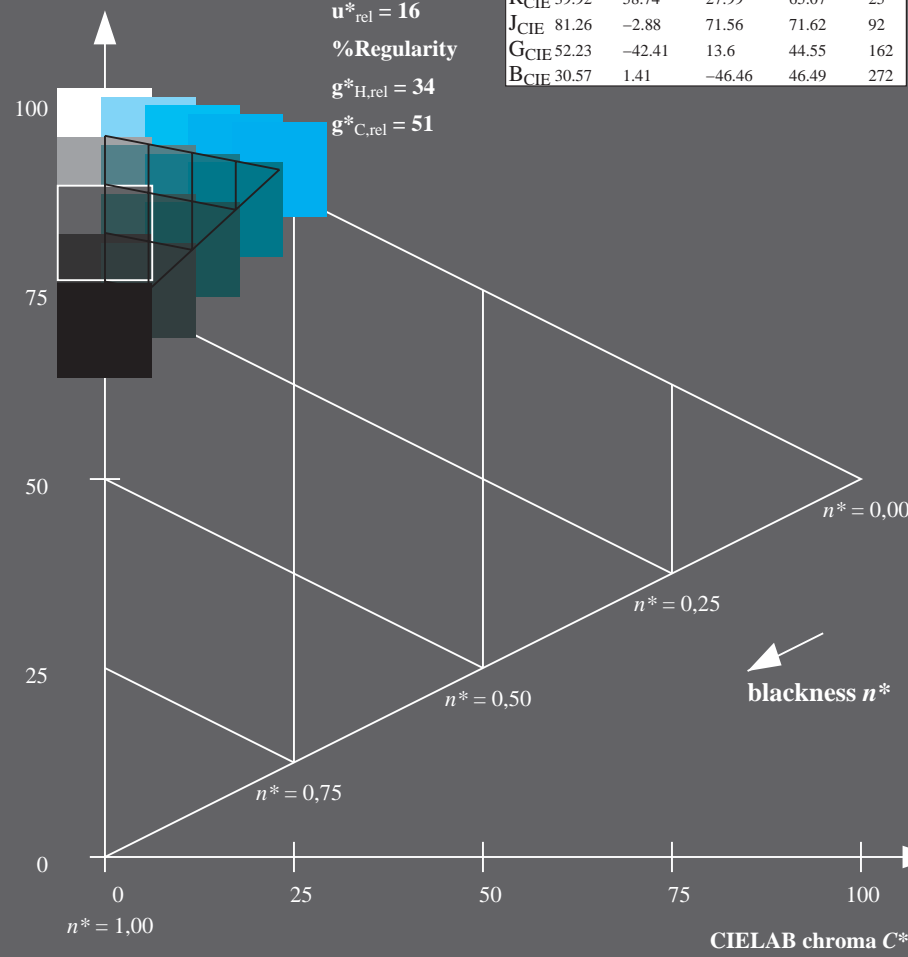
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



**Output: Colorimetric Television Luminous System TLS70**

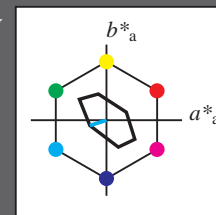
for hue  $h^* = lab^*h = 198/360 = 0.55$

LAB\*LCH, LAB\*NCH

D65: hue C

LCH\*Ma: 91 23 198

olv\*Ma: 0.0 1.0 1.0



**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
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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

CIELAB lightness  $L^*$

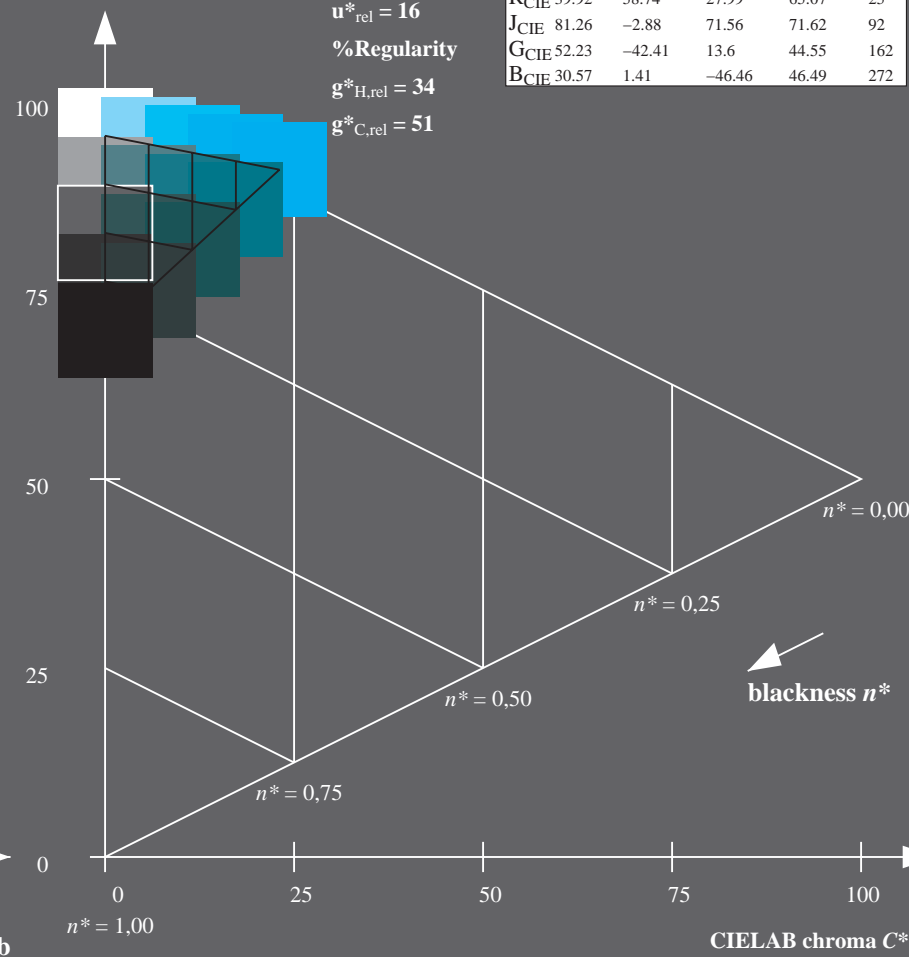
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



OE390-7, 5 step scales for constant CIELAB hue 198/360 = 0.55 (left)

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

BAM-test chart OE39; Colorimetric systems TLS70 & TLS70  
 D65: Coordinate systems of 5 step colour scales for 10 hues

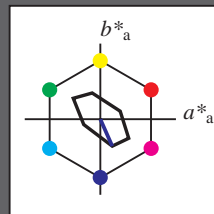
input:  $cmY0^* setcmykcolor$   
 output:  $cmY0^*/000n^* setcmykcolor$

Input: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

D65: hue V  
 LCH\*Ma: 72 39 294  
 olv\*Ma: 0.0 0.0 1.0



**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

CIELAB lightness  $L^*$

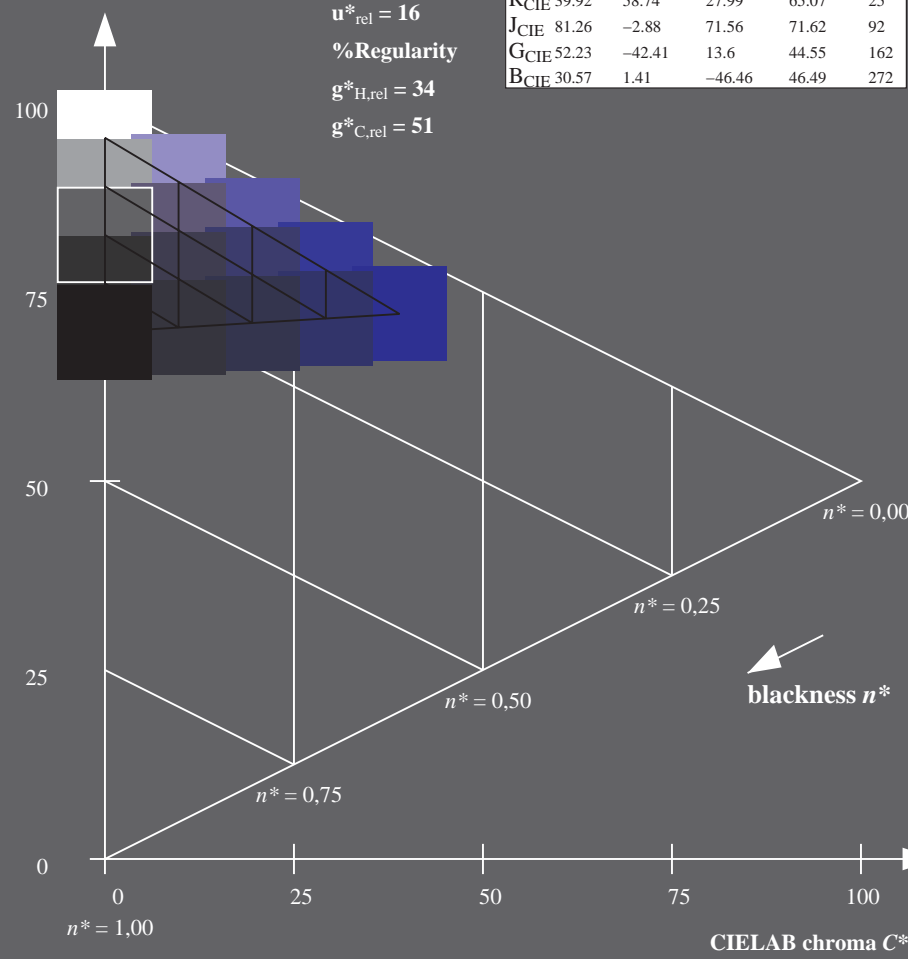
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

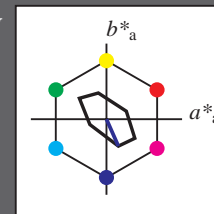


Output: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

D65: hue V  
 LCH\*Ma: 72 39 294  
 olv\*Ma: 0.0 0.0 1.0



**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

CIELAB lightness  $L^*$

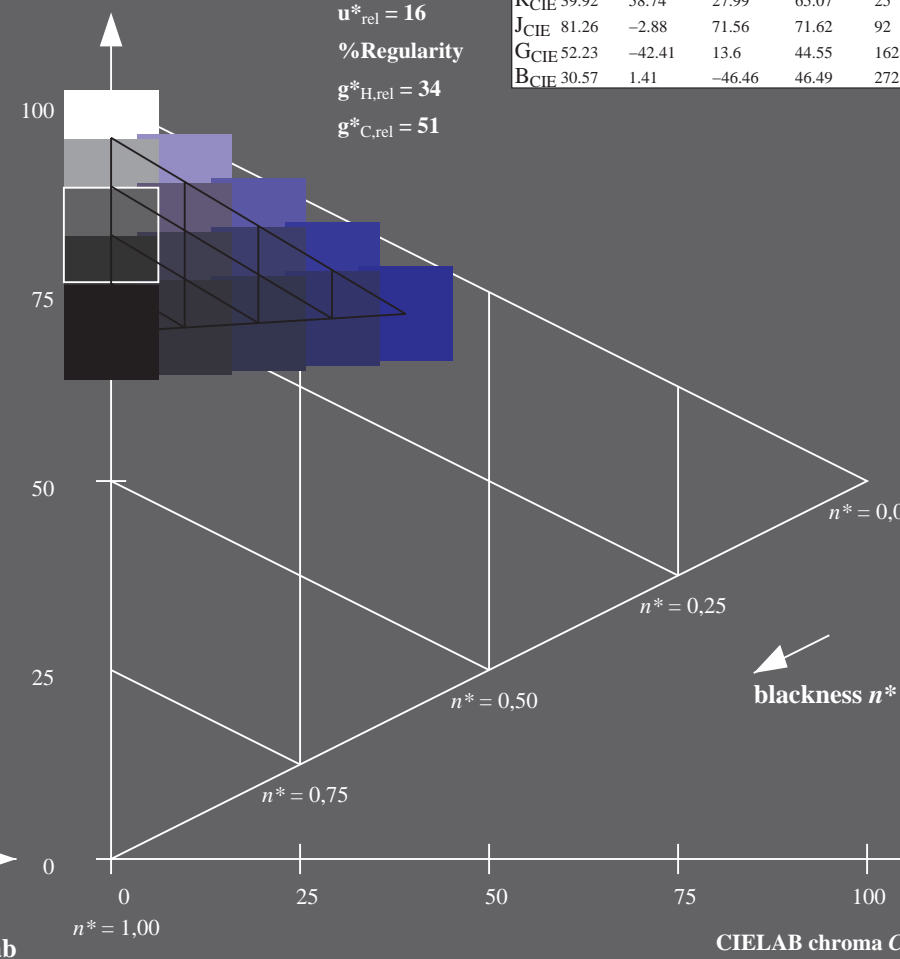
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



OE390-7, 5 step scales for constant CIELAB hue 294/360 = 0.816 (left)

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

BAM-test chart OE39; Colorimetric systems TLS70 & TLS70  
 D65: Coordinate systems of 5 step colour scales for 10 hues

input:  $cmY0^* setcmykcolor$   
 output:  $cmY0^*/000n^* setcmykcolor$

Input: Colorimetric Television Luminous System TLS70

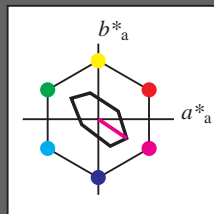
for hue  $h^* = lab^*h = 326/360 = 0.906$

LAB\*LCH, LAB\*NCH

D65: hue M

LCH\*Ma: 79 45 326

olv\*Ma: 1.0 0.0 1.0



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

CIELAB lightness  $L^*$

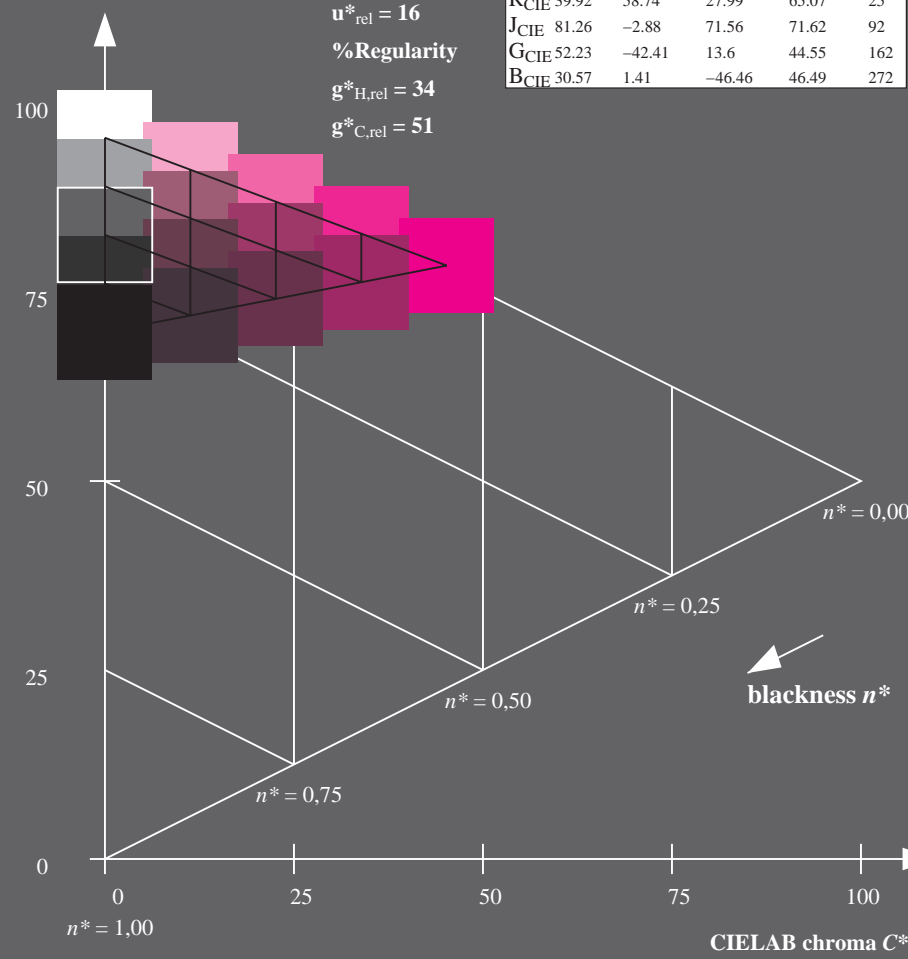
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



Output: Colorimetric Television Luminous System TLS70

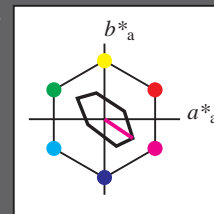
for hue  $h^* = lab^*h = 326/360 = 0.906$

LAB\*LCH, LAB\*NCH

D65: hue M

LCH\*Ma: 79 45 326

olv\*Ma: 1.0 0.0 1.0



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

CIELAB lightness  $L^*$

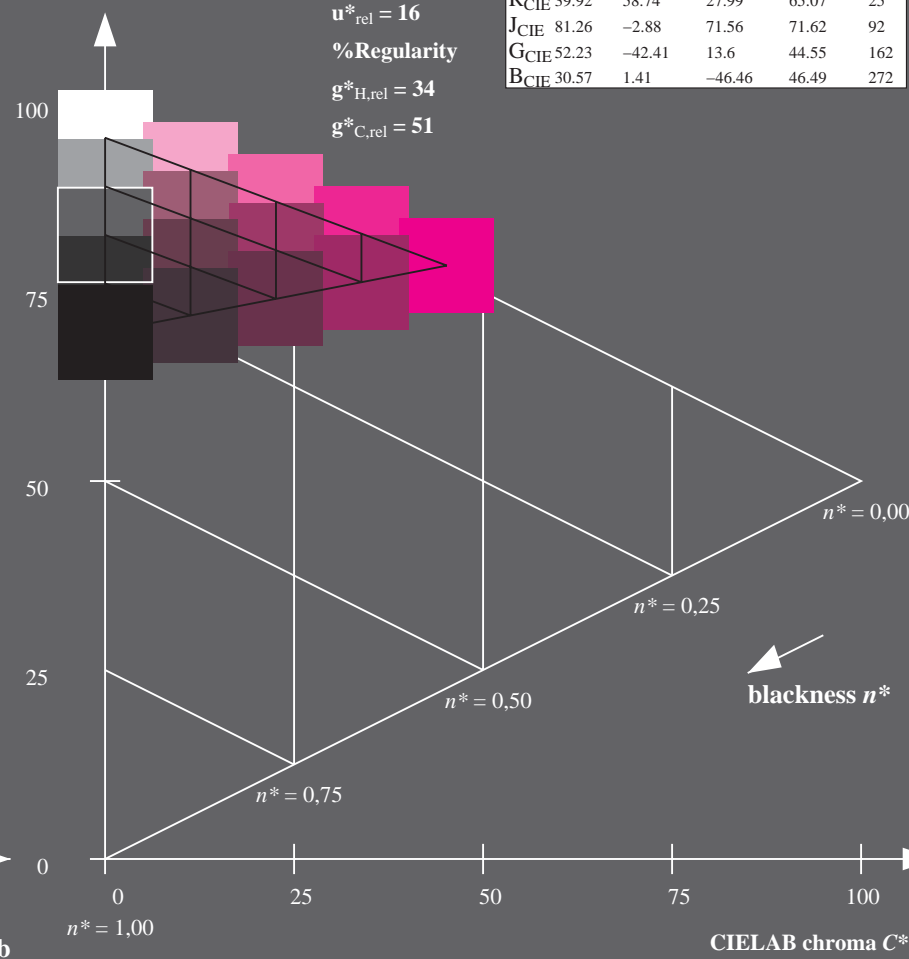
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



OE390-7, 5 step scales for constant CIELAB hue 326/360 = 0.906 (left)

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

BAM-test chart OE39; Colorimetric systems TLS70 & TLS70  
 D65: Coordinate systems of 5 step colour scales for 10 hues

input:  $cmY0^*_{setcmykcolor}$   
 output:  $cmY0^*/000n^*_{setcmykcolor}$

Input: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

D65: hue R

LCH\*Ma: 77 27 25

olv\*Ma: 1.0 0.05 0.0

CIELAB lightness  $L^*$

%Gamut

$u^*_{rel} = 16$

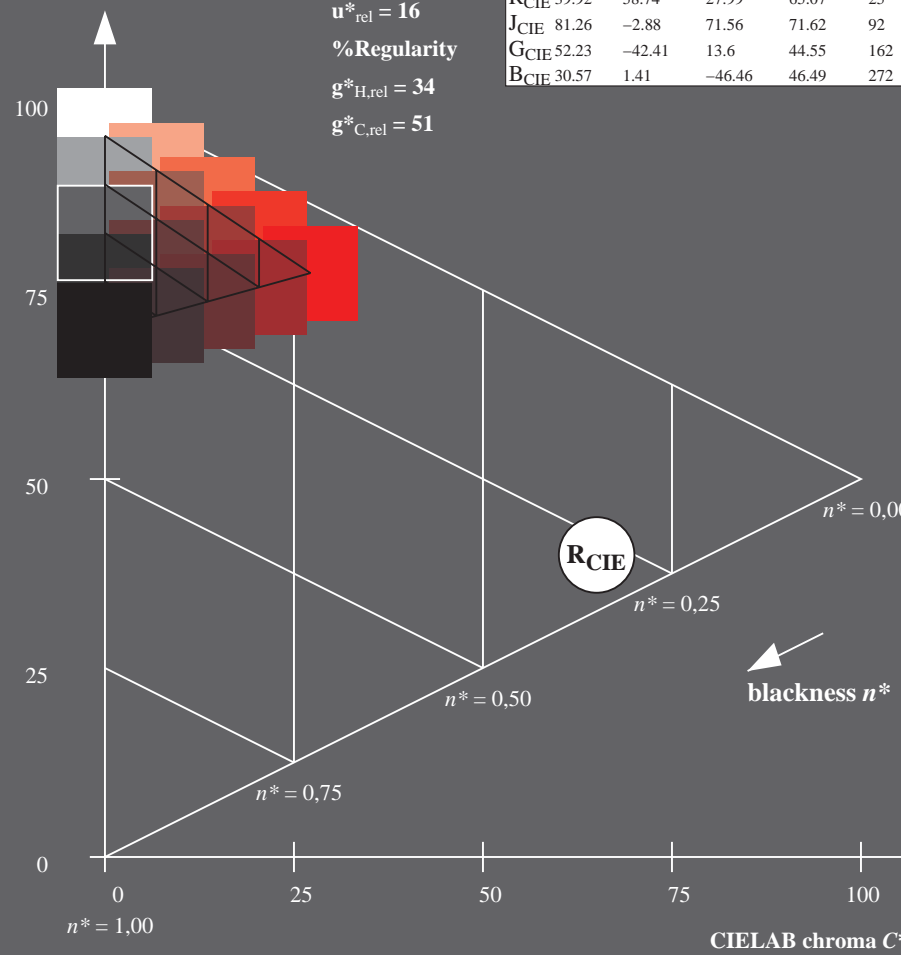
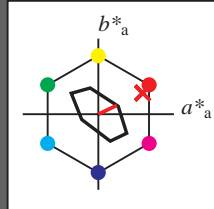
%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

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



OE390-7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

Output: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

D65: hue R

LCH\*Ma: 77 27 25

olv\*Ma: 1.0 0.05 0.0

CIELAB lightness  $L^*$

%Gamut

$u^*_{rel} = 16$

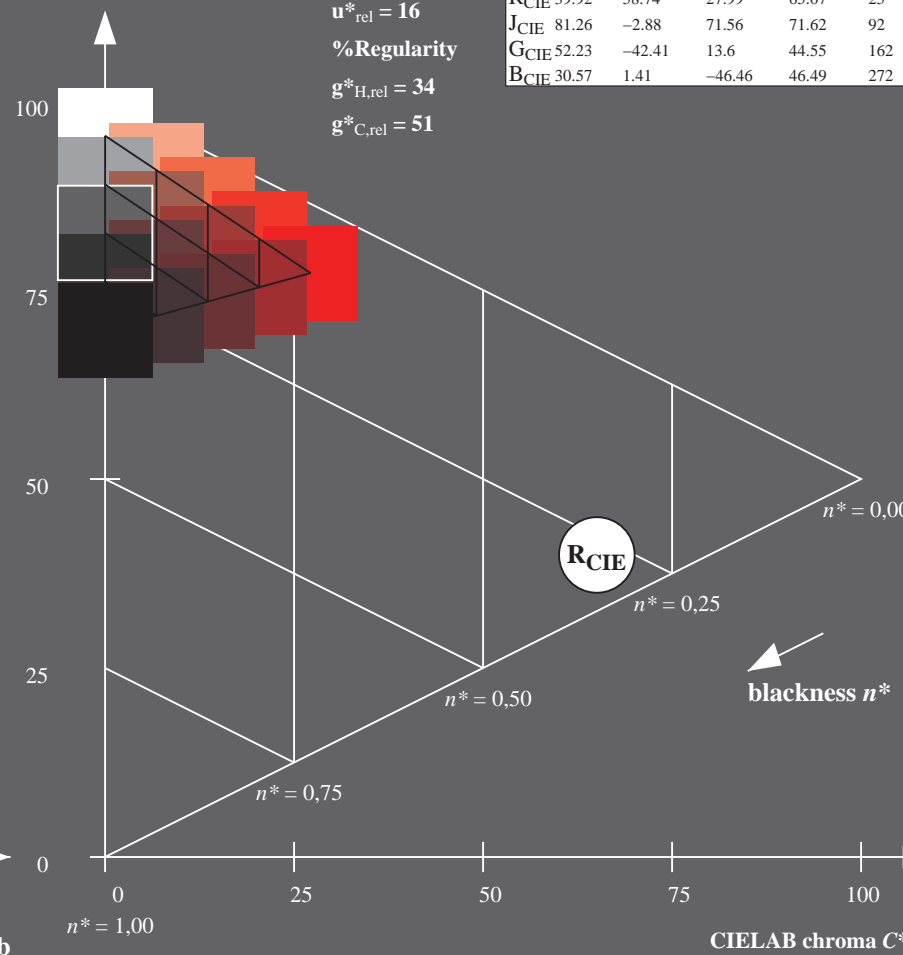
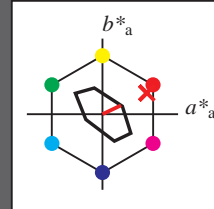
%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

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



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

BAM-test chart OE39; Colorimetric systems TLS70 & TLS70  
 D65: Coordinate systems of 5 step colour scales for 10 hues

input:  $cmY0^*_{setcmykcolor}$   
 output:  $cmY0^*/000n^*_{setcmykcolor}$

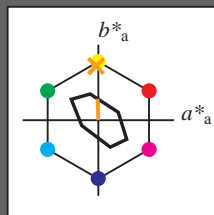


Input: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

D65: hue J  
 LCH\*Ma: 89 28 92  
 olv\*Ma: 1.0 0.74 0.0



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

CIELAB lightness  $L^*$

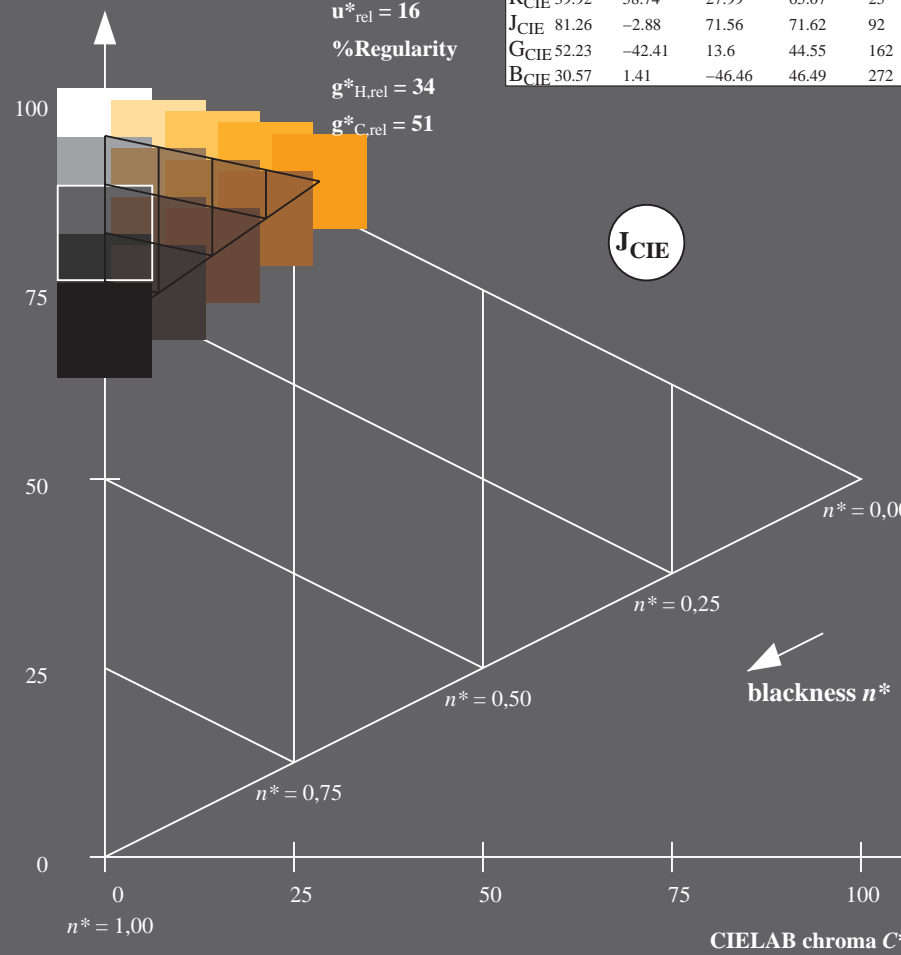
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



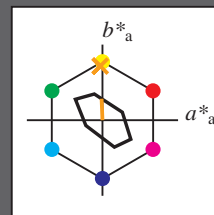
OE390-7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

Output: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

D65: hue J  
 LCH\*Ma: 89 28 92  
 olv\*Ma: 1.0 0.74 0.0



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

CIELAB lightness  $L^*$

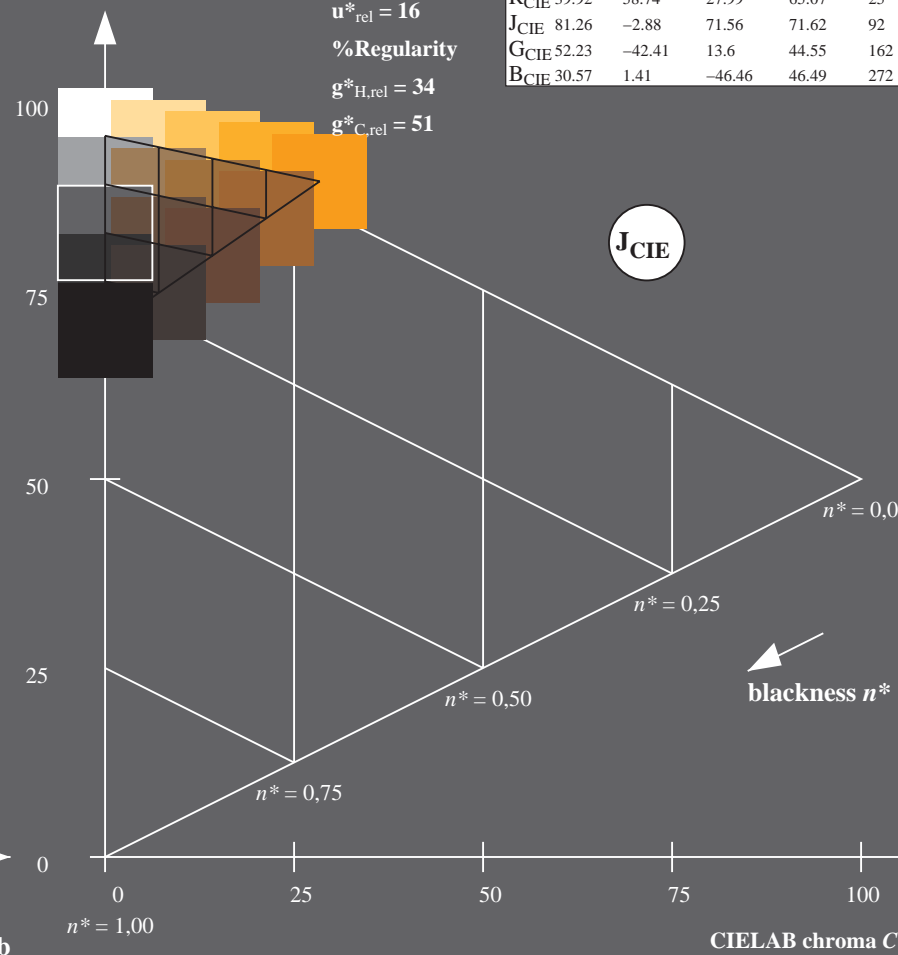
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



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

BAM-test chart OE39; Colorimetric systems TLS70 & TLS70  
 D65: Coordinate systems of 5 step colour scales for 10 hues

input:  $cmY0^*_{setcmykcolor}$   
 output:  $cmY0^*/000n^*_{setcmykcolor}$



Input: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

D65: hue G

LCH\*Ma: 90 30 162

olv\*Ma: 0.0 1.0 0.53

CIE LAB lightness  $L^*$

%Gamut

$u^*_{rel} = 16$

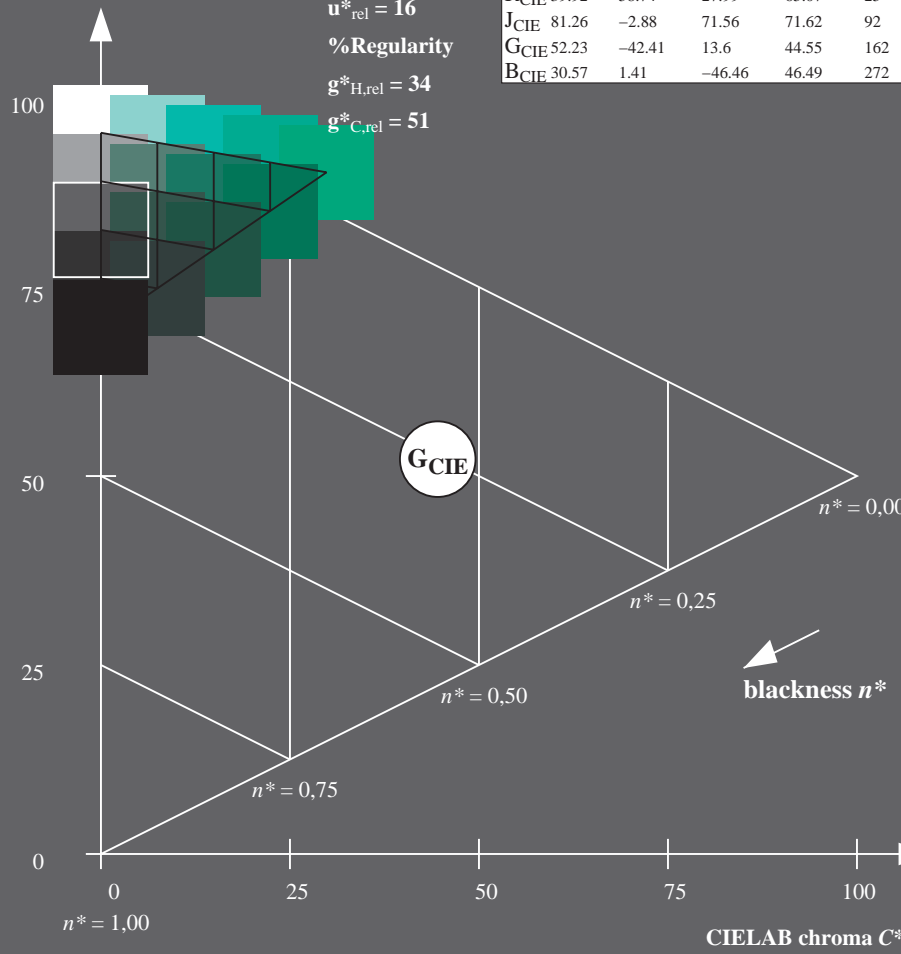
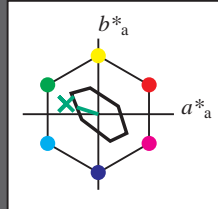
%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

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



OE390-7, 5 step scales for constant CIE LAB hue 162/360 = 0.451 (left)

Output: Colorimetric Television Luminous System TLS70

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

LAB\*LCH, LAB\*NCH

D65: hue G

LCH\*Ma: 90 30 162

olv\*Ma: 0.0 1.0 0.53

CIE LAB lightness  $L^*$

%Gamut

$u^*_{rel} = 16$

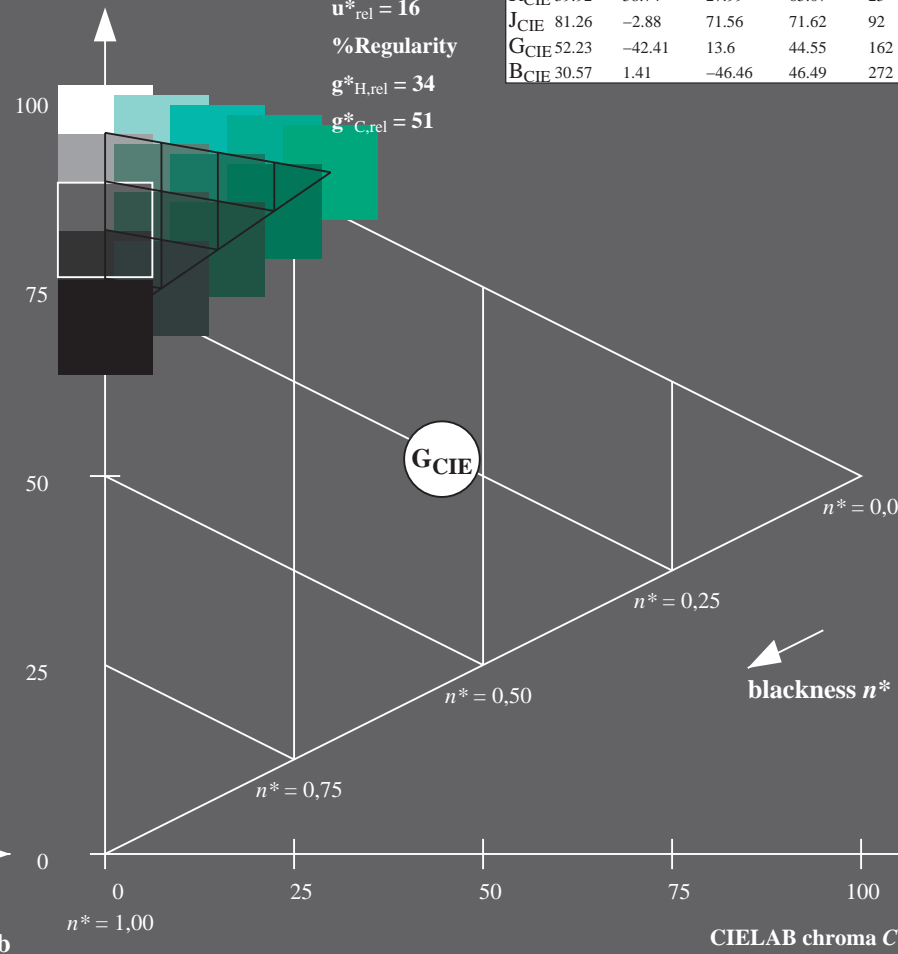
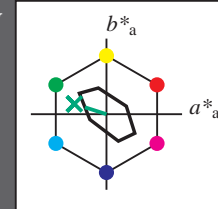
%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$

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



5 step scales for constant CIE LAB hue 162/360 = 0.451 (right)

BAM-test chart OE39; Colorimetric systems TLS70 & TLS70  
 D65: Coordinate systems of 5 step colour scales for 10 hues

input:  $cmy0^*_{setcmykcolor}$   
 output:  $cmy0^*/000n^*_{setcmykcolor}$

**Input: Colorimetric Television Luminous System TLS70**

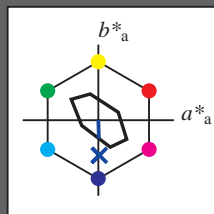
for hue  $h^* = lab^*h = 272/360 = 0.755$

LAB\*LCH, LAB\*NCH

D65: hue B

LCH\*Ma: 80 24 272

olv\*Ma: 0.0 0.4 1.0



**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

CIELAB lightness  $L^*$

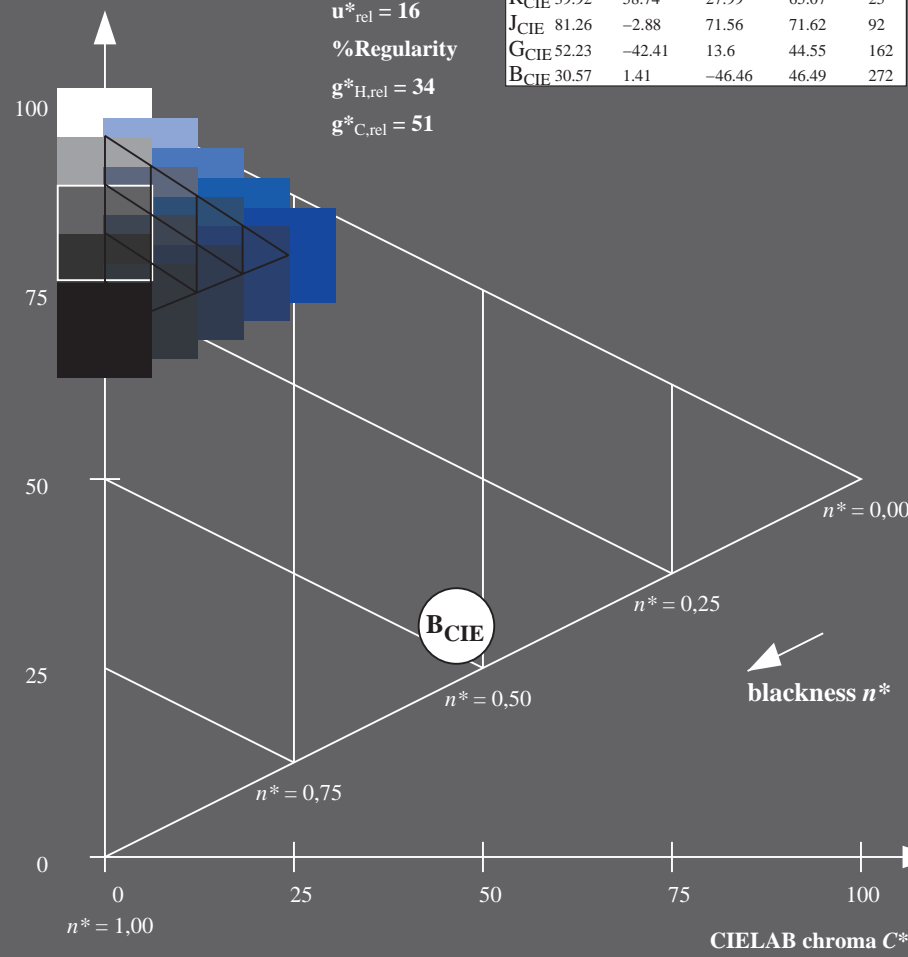
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



OE390-7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)

**Output: Colorimetric Television Luminous System TLS70**

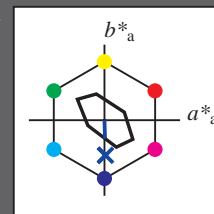
for hue  $h^* = lab^*h = 272/360 = 0.755$

LAB\*LCH, LAB\*NCH

D65: hue B

LCH\*Ma: 80 24 272

olv\*Ma: 0.0 0.4 1.0



**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

CIELAB lightness  $L^*$

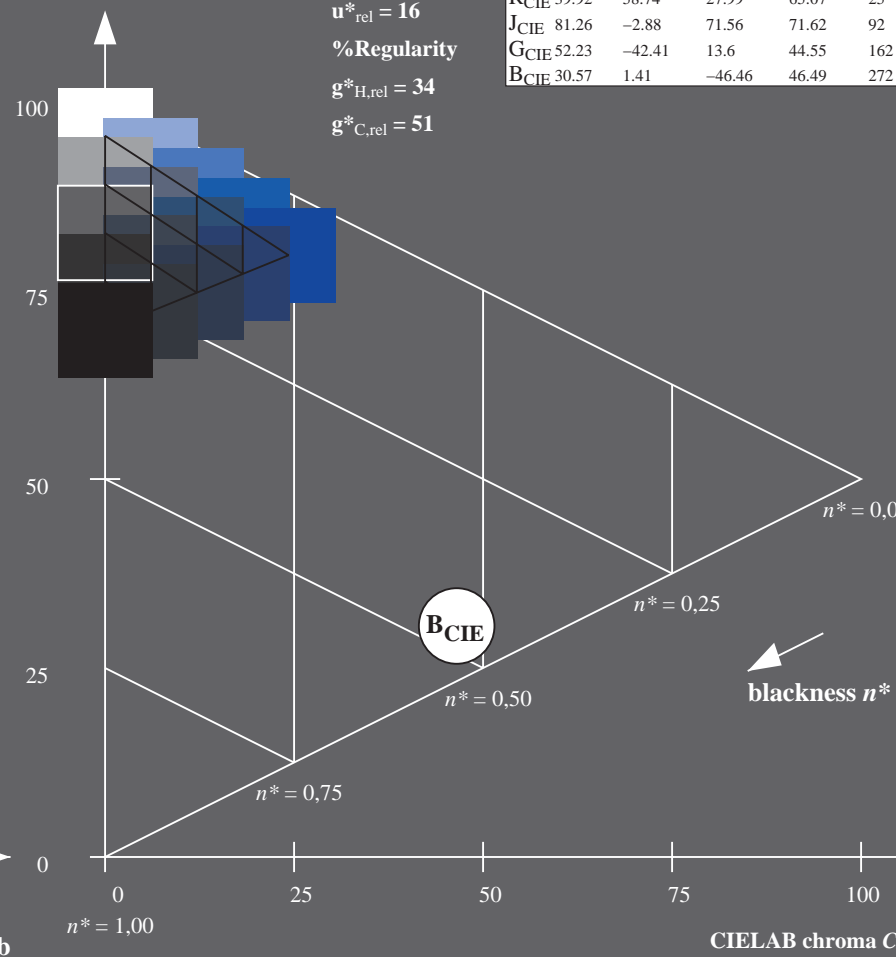
%Gamut

$u^*_{rel} = 16$

%Regularity

$g^*_{H,rel} = 34$

$g^*_{C,rel} = 51$



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

BAM-test chart OE39; Colorimetric systems TLS70 & TLS70  
 D65: Coordinate systems of 5 step colour scales for 10 hues

input:  $cmY0^*_{setcmykcolor}$   
 output:  $cmY0^*/000n^*_{setcmykcolor}$