

Input: Colorimetric Television Luminous System TLS70

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

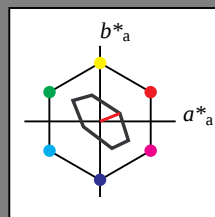
lab^*ich and lab^*nch

D65: hue O

LCH*Ma: 76 28 22

olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



%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 _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Television Luminous System TLS70

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

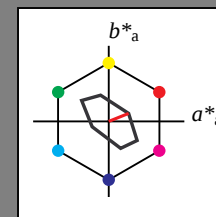
lab^*ich and lab^*nch

D65: hue O

LCH*Ma: 76 28 22

olv*Ma: 1.0 0.0 0.0

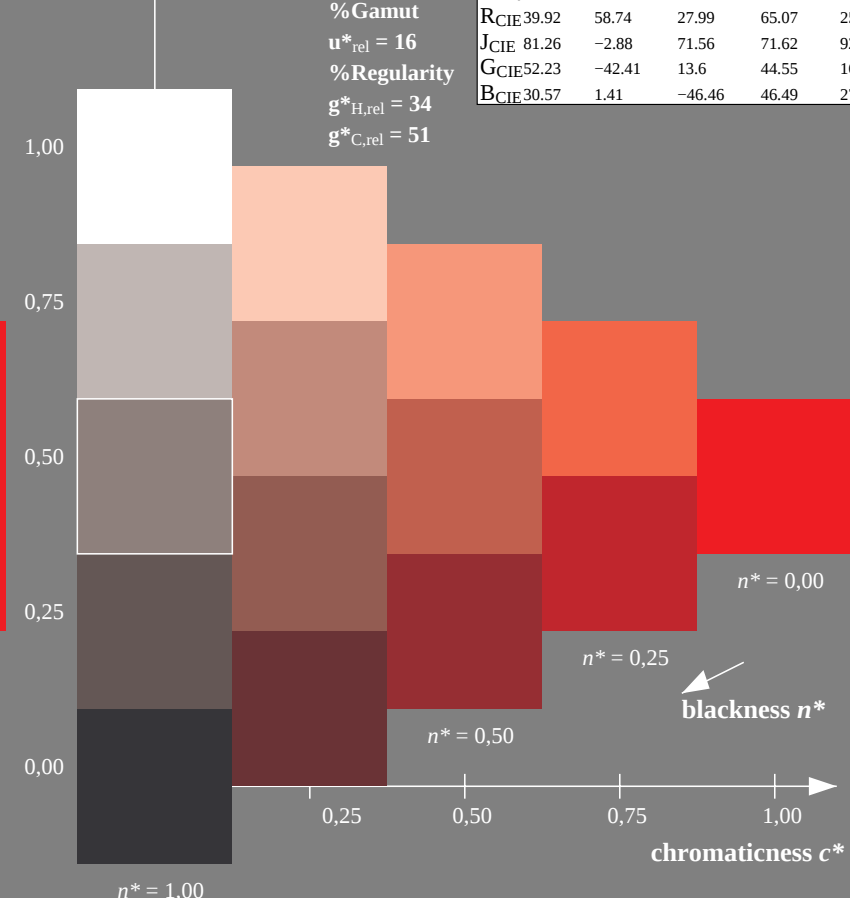
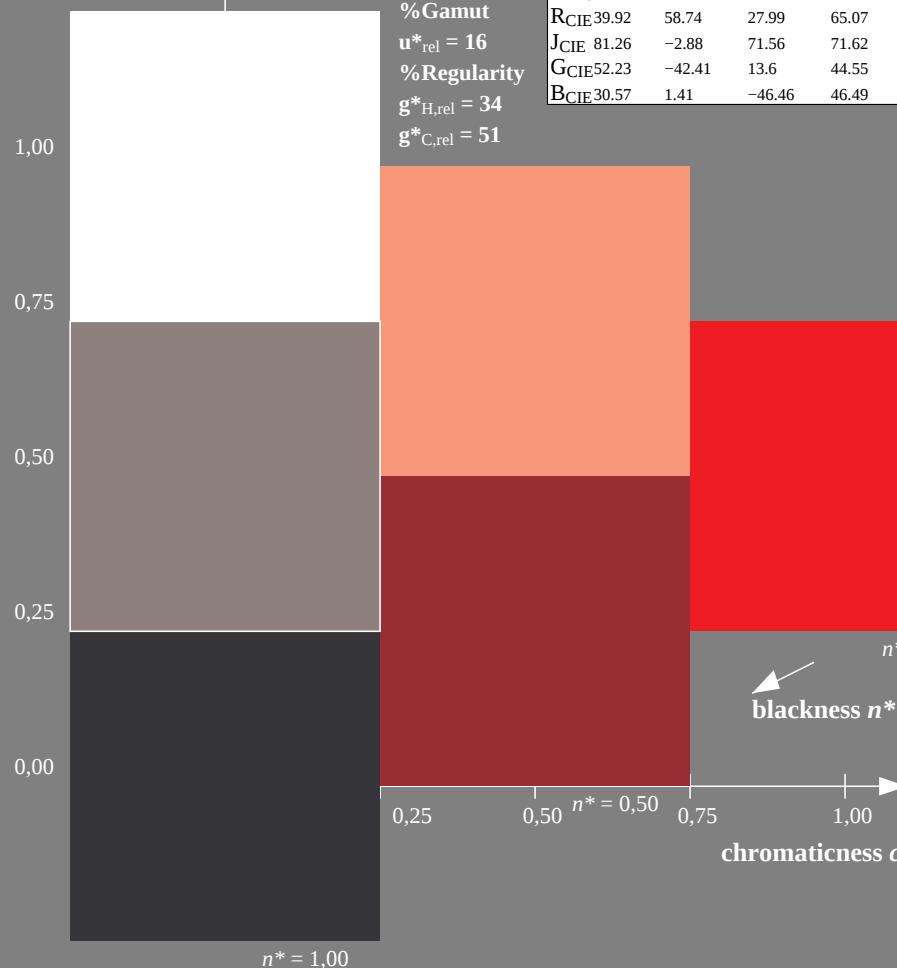
triangle lightness t^*



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

TLS70; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
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B _{CIE}	30.57	1.41	-46.46	46.49	272



OE890-7, 3 step scales for constant CIELAB hue 22/360 = 0.061 (left)

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

BAM-test chart OE89; Colorimetric systems TLS70 & TLS70
D65: 3 and 5 step colour scales for 10 hues

input: $cmY0^*$ setcmykcolor
output: no change compared to input

Input: Colorimetric Television Luminous System TLS70

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

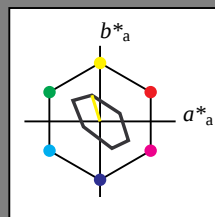
lab^*ich and lab^*nch

D65: hue Y

LCH*Ma: 94 36 107

olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



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

TLS70; adapted (a) CIELAB data

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Output: Colorimetric Television Luminous System TLS70

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

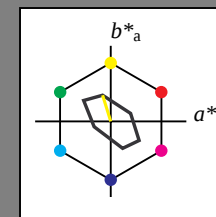
lab^*ich and lab^*nch

D65: hue Y

LCH*Ma: 94 36 107

olv*Ma: 1.0 1.0 0.0

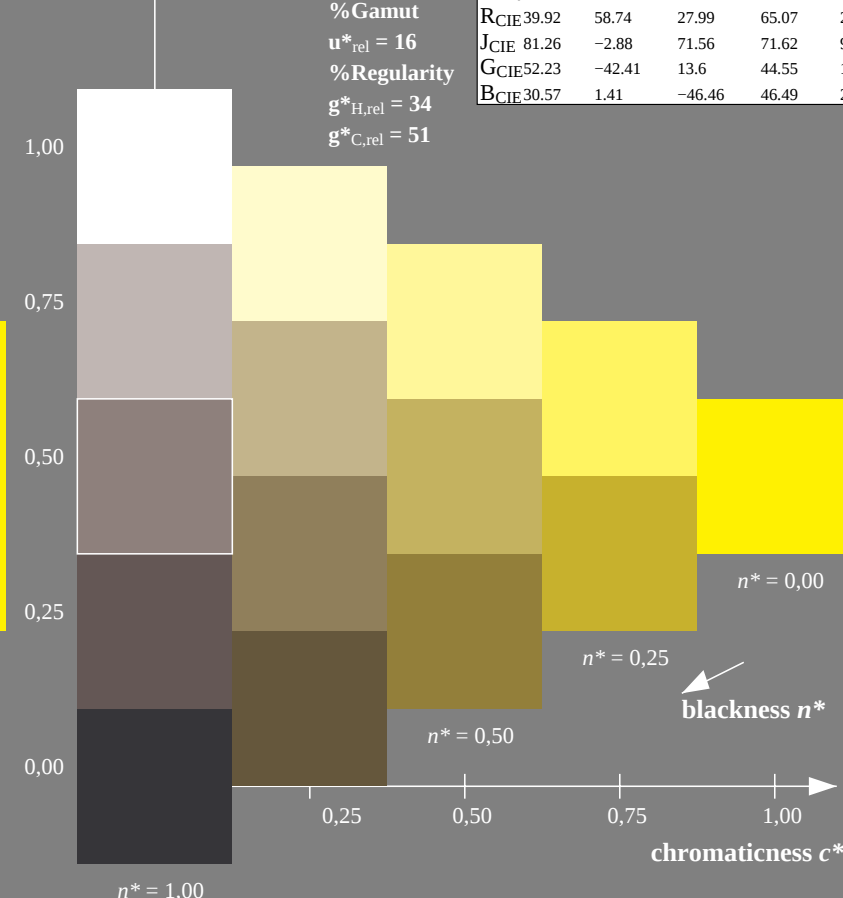
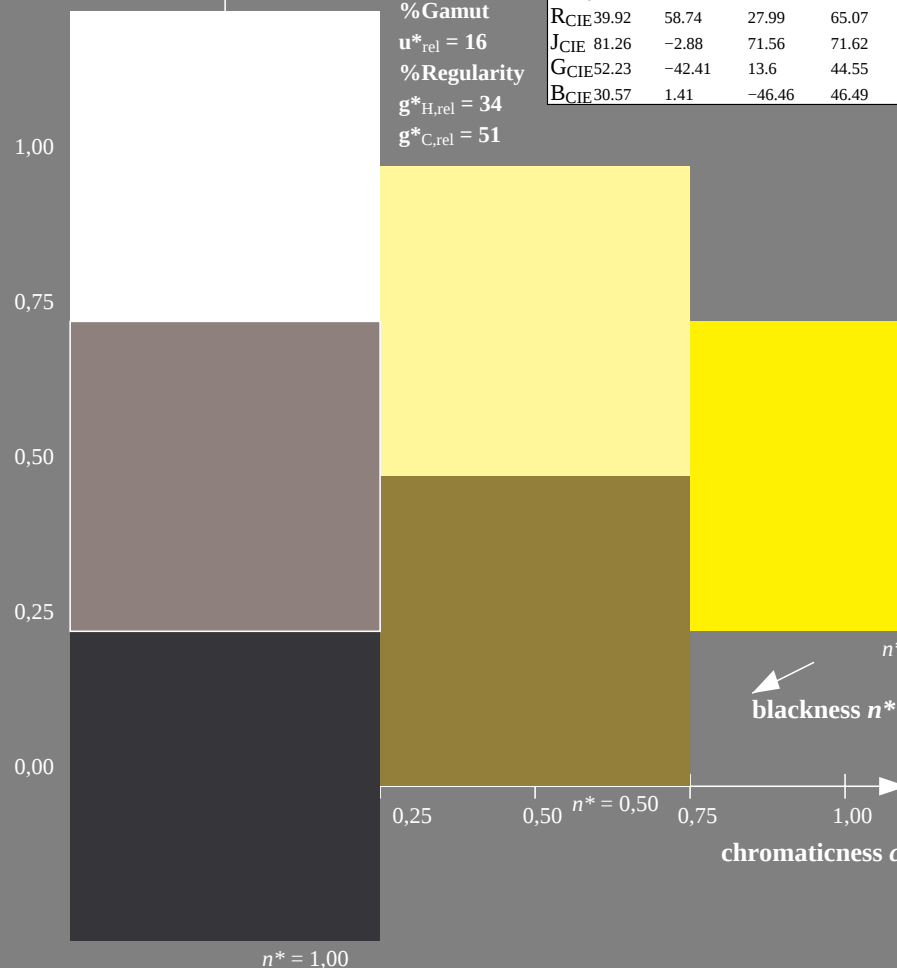
triangle lightness t^*



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TLS70; adapted (a) CIELAB data

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OE890-7, 3 step scales for constant CIELAB hue 107/360 = 0.298 (left)

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

BAM-test chart OE89; Colorimetric systems TLS70 & TLS70
D65: 3 and 5 step colour scales for 10 hues

input: $cmY0^*$ setcmykcolor
output: no change compared to input

Input: Colorimetric Television Luminous System TLS70

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

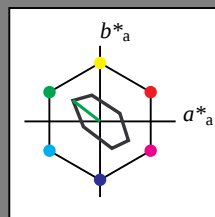
lab^*ich and lab^*nch

D65: hue L

LCH*Ma: 89 45 142

olv*Ma: 0.0 1.0 0.0

triangle lightness t^*



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

TLS70; adapted (a) CIELAB data

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N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
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B _{CIE}	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Television Luminous System TLS70

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

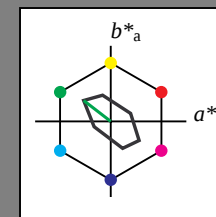
lab^*ich and lab^*nch

D65: hue L

LCH*Ma: 89 45 142

olv*Ma: 0.0 1.0 0.0

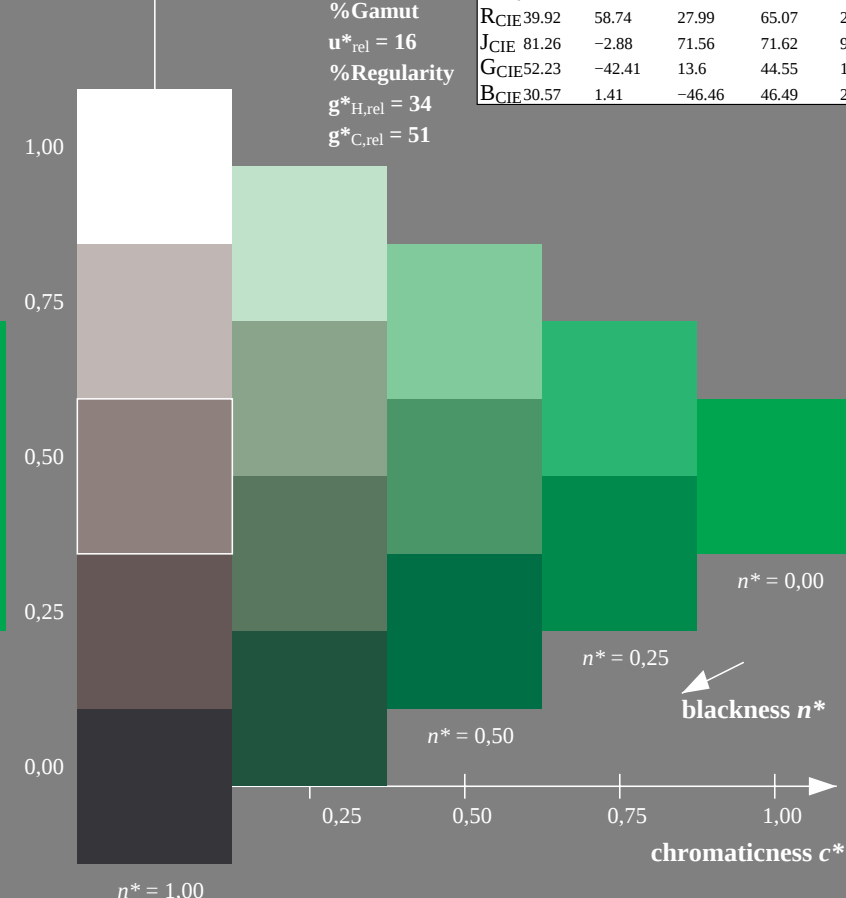
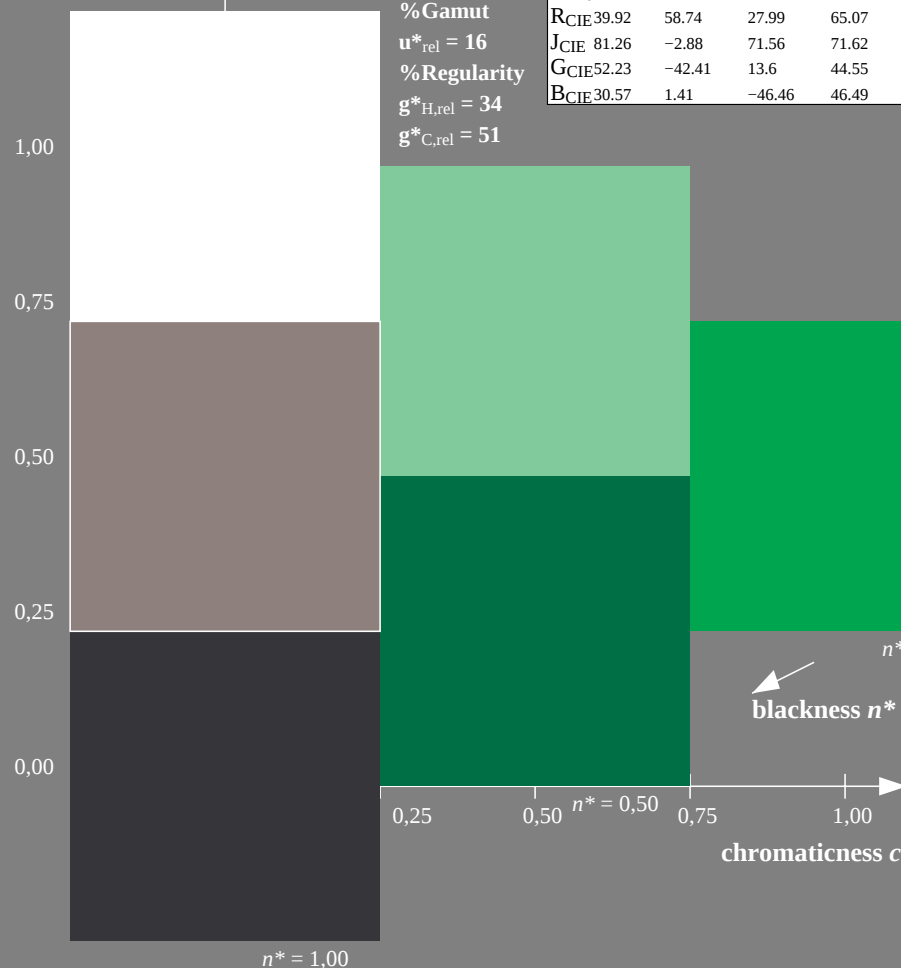
triangle lightness t^*



%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	$C^*_{ab,a}$	$h^*_{ab,a}$
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N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272



OE890-7, 3 step scales for constant CIELAB hue 142/360 = 0.395 (left)

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

BAM-test chart OE89; Colorimetric systems TLS70 & TLS70

D65: 3 and 5 step colour scales for 10 hues

input: $cmy0^*$ setcmykcolor

output: no change compared to input

Input: Colorimetric Television Luminous System TLS70

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

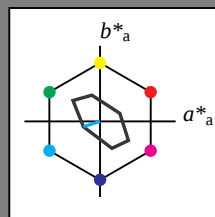
lab^*ich and lab^*nch

D65: hue C

LCH*Ma: 91 23 198

olv*Ma: 0.0 1.0 1.0

triangle lightness t^*



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

TLS70; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
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L _{Ma}	89.32	-35.8	27.64	45.24	142
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V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Television Luminous System TLS70

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

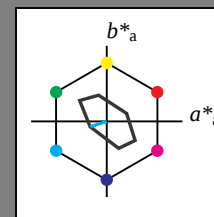
lab^*ich and lab^*nch

D65: hue C

LCH*Ma: 91 23 198

olv*Ma: 0.0 1.0 1.0

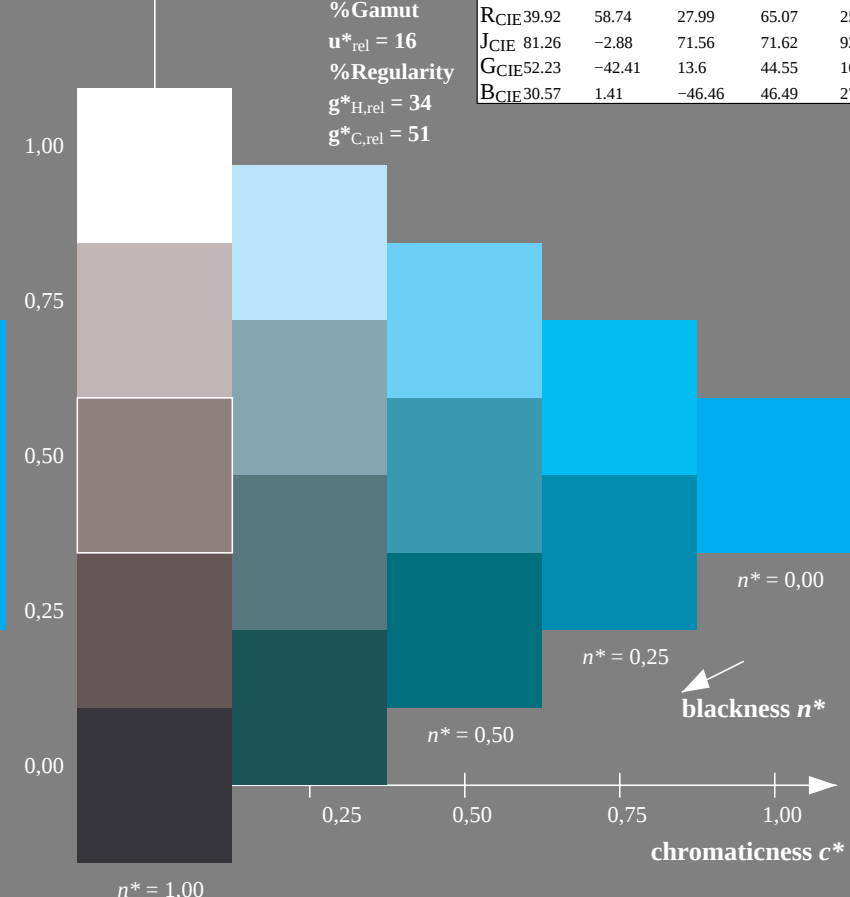
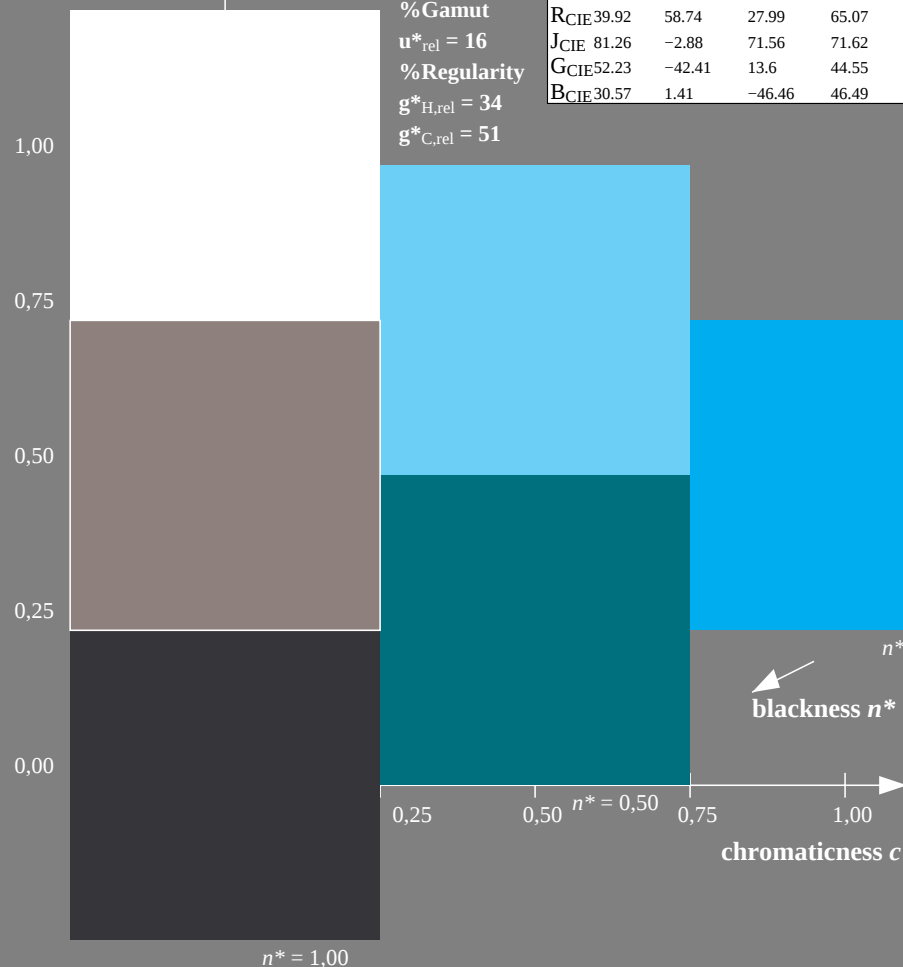
triangle lightness t^*



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

TLS70; adapted (a) CIELAB data

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OE890-7, 3 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 OE89; Colorimetric systems TLS70 & TLS70

D65: 3 and 5 step colour scales for 10 hues

input: $cmY0^*$ setcmykcolor

output: no change compared to input

Input: Colorimetric Television Luminous System TLS70

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

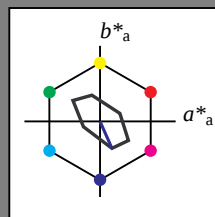
lab^*ich and lab^*nch

D65: hue V

LCH*Ma: 72 39 294

olv*Ma: 0.0 0.0 1.0

triangle lightness t^*



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

TLS70; adapted (a) CIELAB data

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R _{CIE}	39.92	58.74	27.99	65.07	25
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Output: Colorimetric Television Luminous System TLS70

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

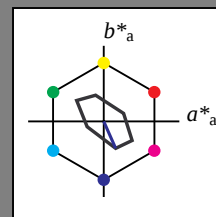
lab^*ich and lab^*nch

D65: hue V

LCH*Ma: 72 39 294

olv*Ma: 0.0 0.0 1.0

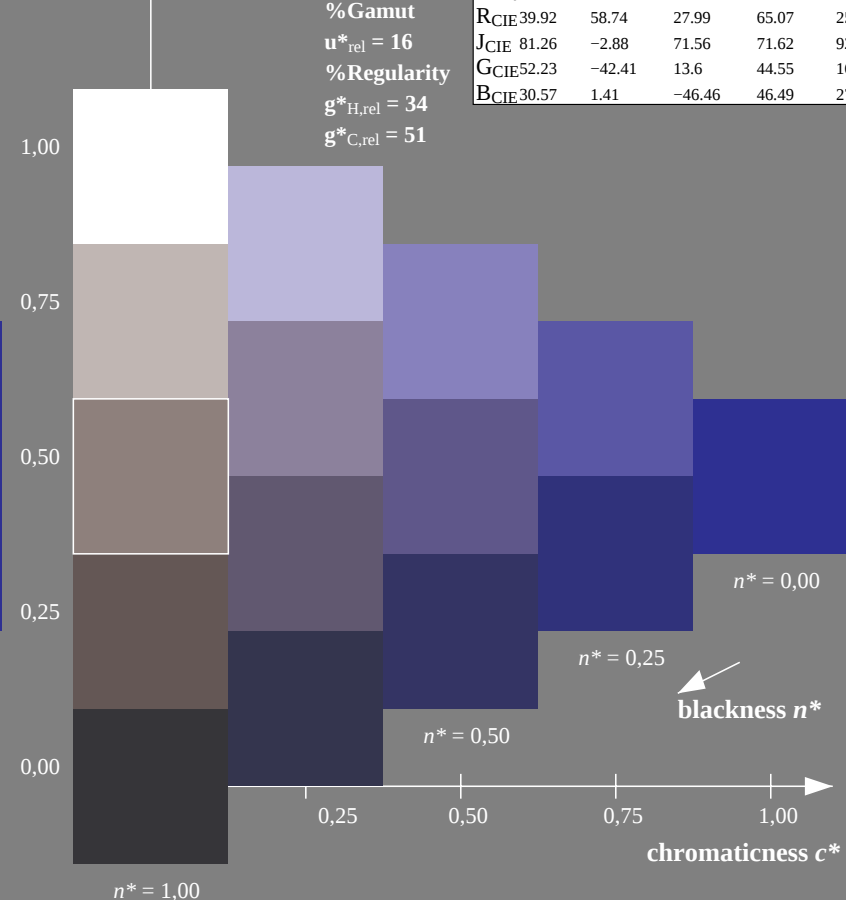
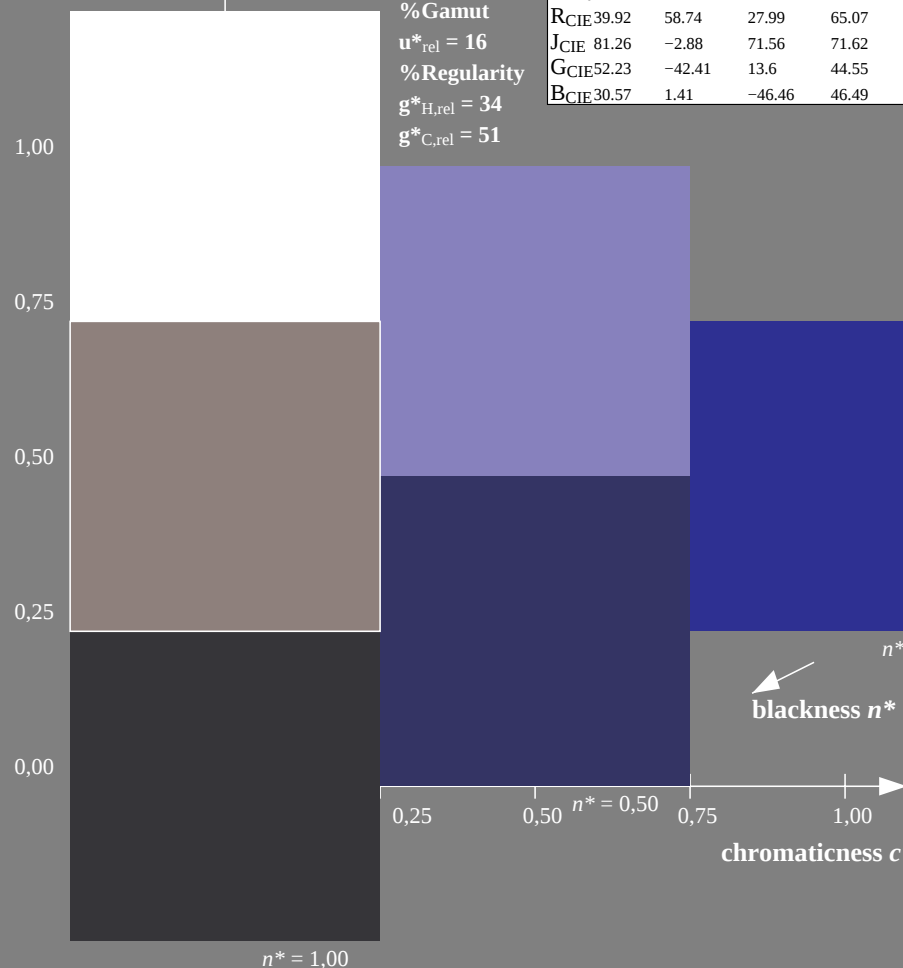
triangle lightness t^*



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OE890-7, 3 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 OE89; Colorimetric systems TLS70 & TLS70

D65: 3 and 5 step colour scales for 10 hues

input: $cmY0^*$ setcmykcolor

output: no change compared to input

Input: Colorimetric Television Luminous System TLS70

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

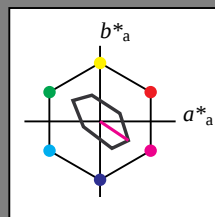
lab^*ich and lab^*nch

D65: hue M

LCH*Ma: 79 45 326

olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



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Output: Colorimetric Television Luminous System TLS70

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

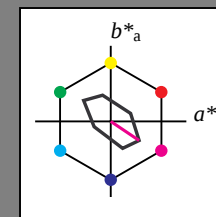
lab^*ich and lab^*nch

D65: hue M

LCH*Ma: 79 45 326

olv*Ma: 1.0 0.0 1.0

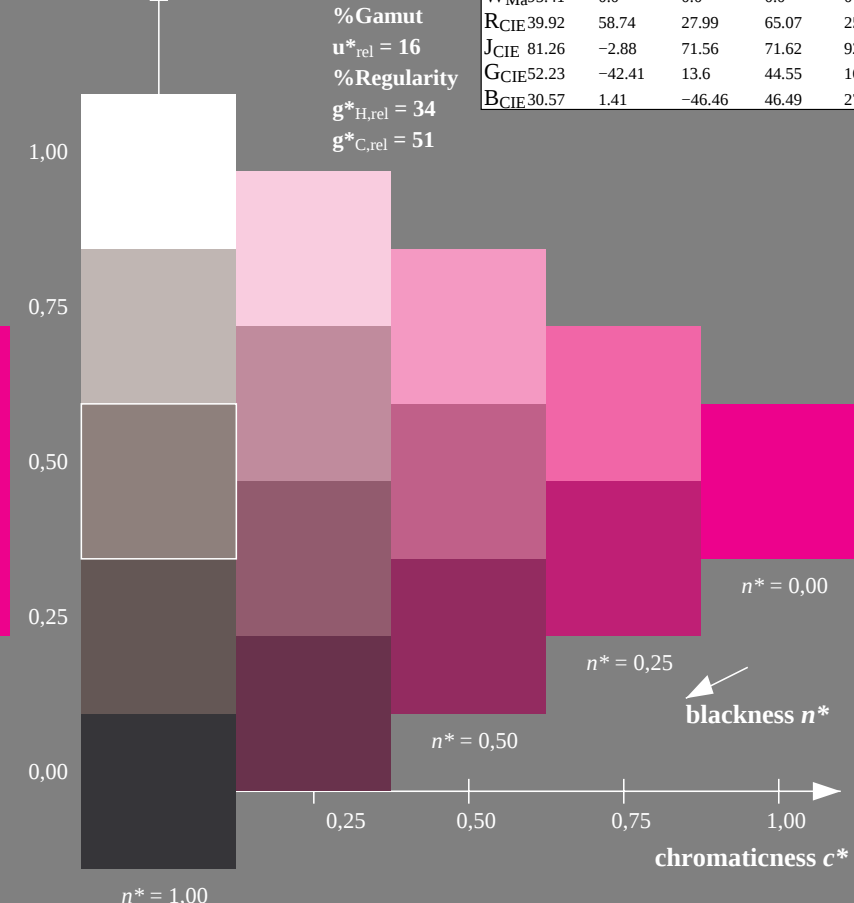
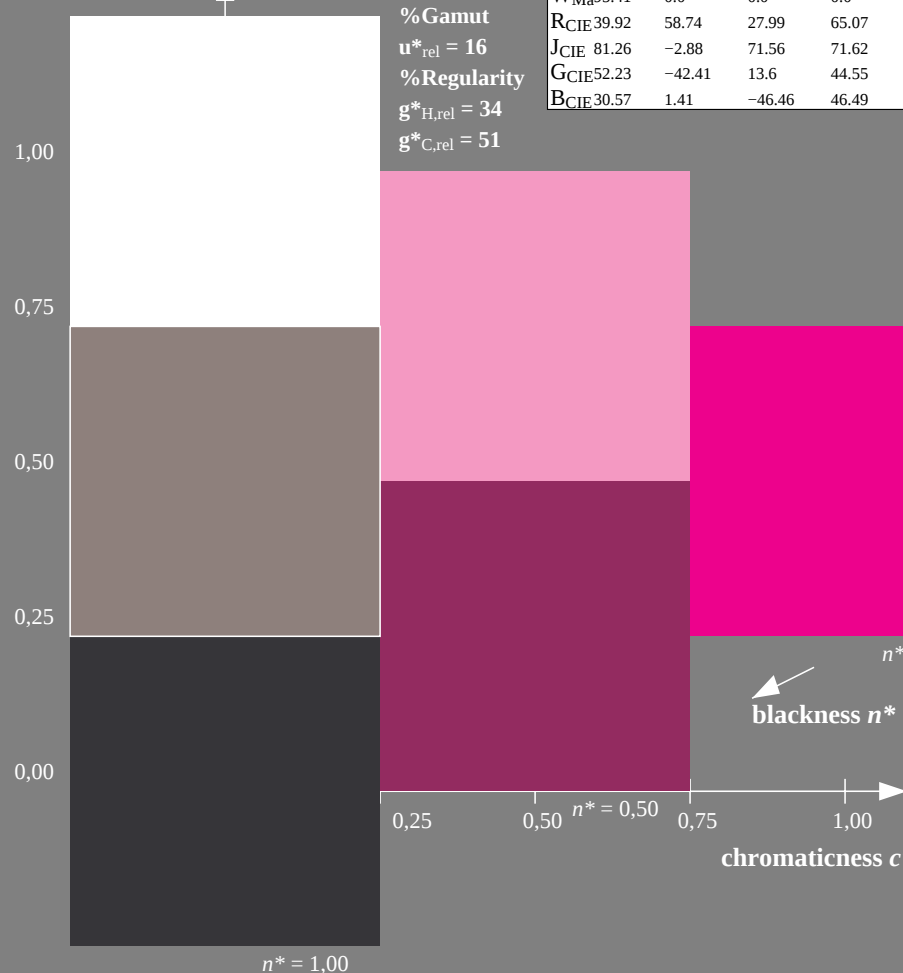
triangle lightness t^*



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V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272



OE890-7, 3 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 OE89; Colorimetric systems TLS70 & TLS70

D65: 3 and 5 step colour scales for 10 hues

input: $cmY0^*$ setcmykcolor

output: no change compared to input

Input: Colorimetric Television Luminous System TLS70

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

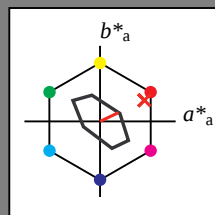
lab^*ich and lab^*nch

D65: hue R

LCH*Ma: 77 27 25

olv*Ma: 1.0 0.05 0.0

triangle lightness t^*



% 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 _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Television Luminous System TLS70

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

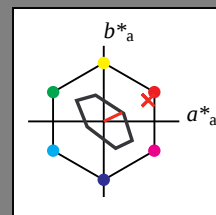
lab^*ich and lab^*nch

D65: hue R

LCH*Ma: 77 27 25

olv*Ma: 1.0 0.05 0.0

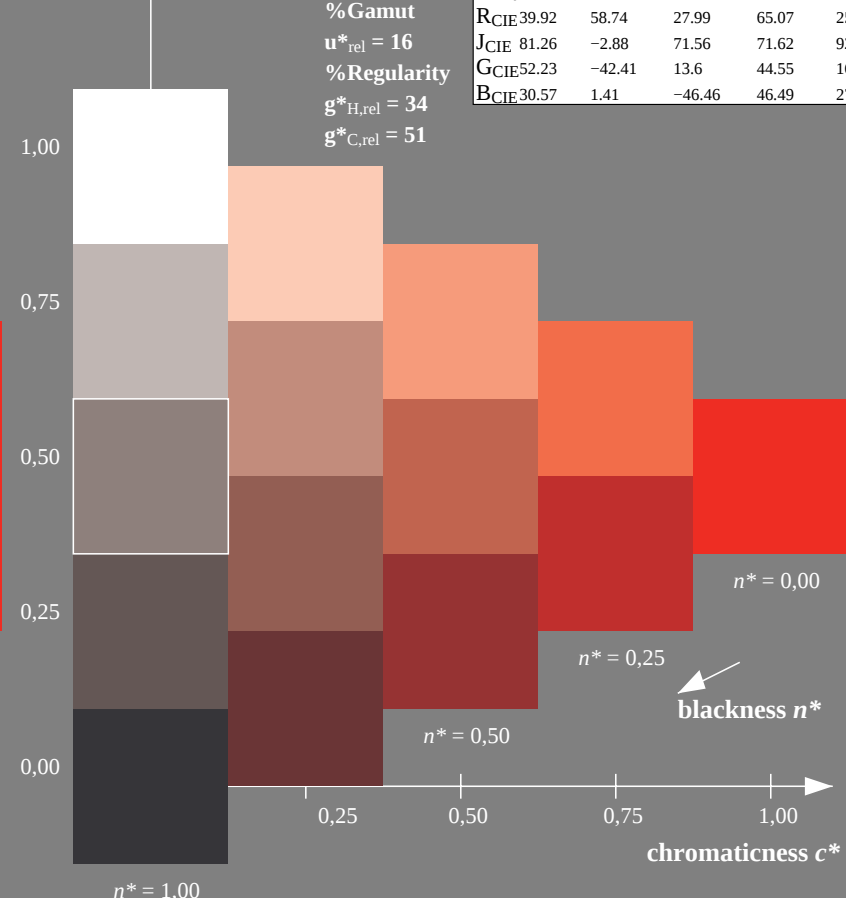
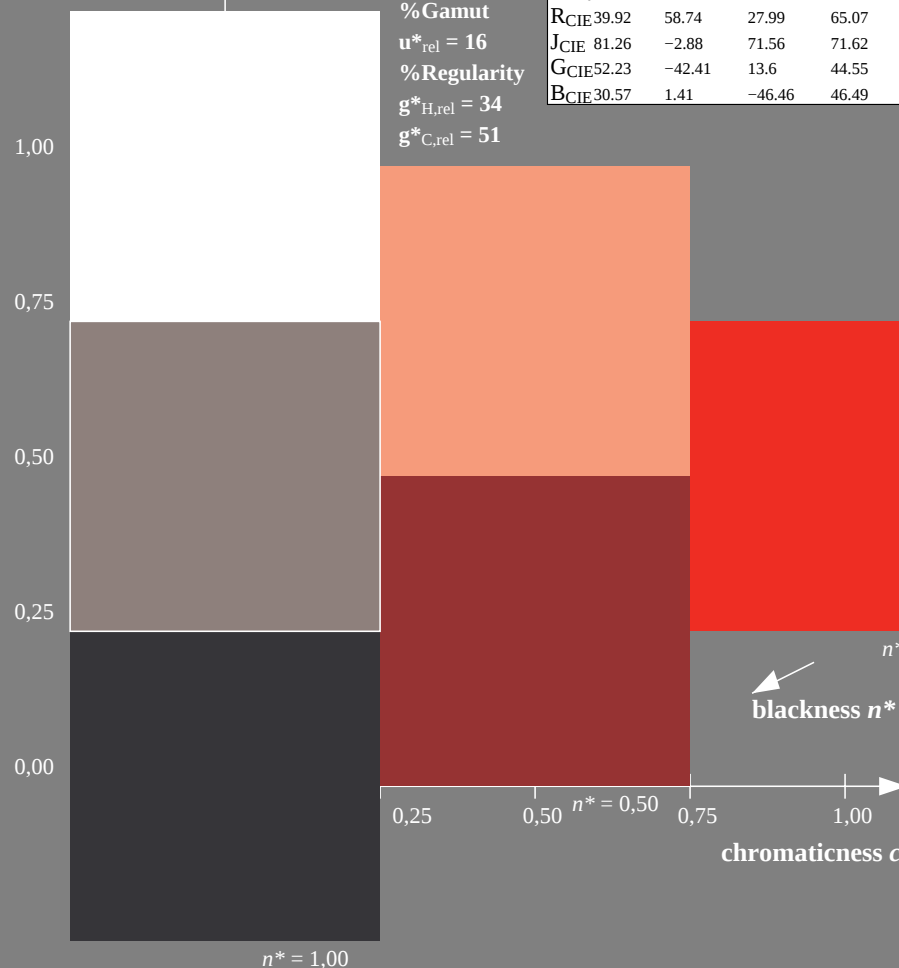
triangle lightness t^*



% 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 _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272



OE890-7, 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 OE89; Colorimetric systems TLS70 & TLS70

D65: 3 and 5 step colour scales for 10 hues

input: $cmY0^*$ setcmykcolor

output: no change compared to input

Input: Colorimetric Television Luminous System TLS70

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

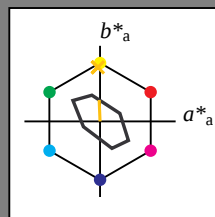
lab^*ich and lab^*nch

D65: hue J

LCH*Ma: 89 28 92

olv*Ma: 1.0 0.74 0.0

triangle lightness t^*



% 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 _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Television Luminous System TLS70

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

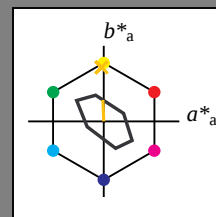
lab^*ich and lab^*nch

D65: hue J

LCH*Ma: 89 28 92

olv*Ma: 1.0 0.74 0.0

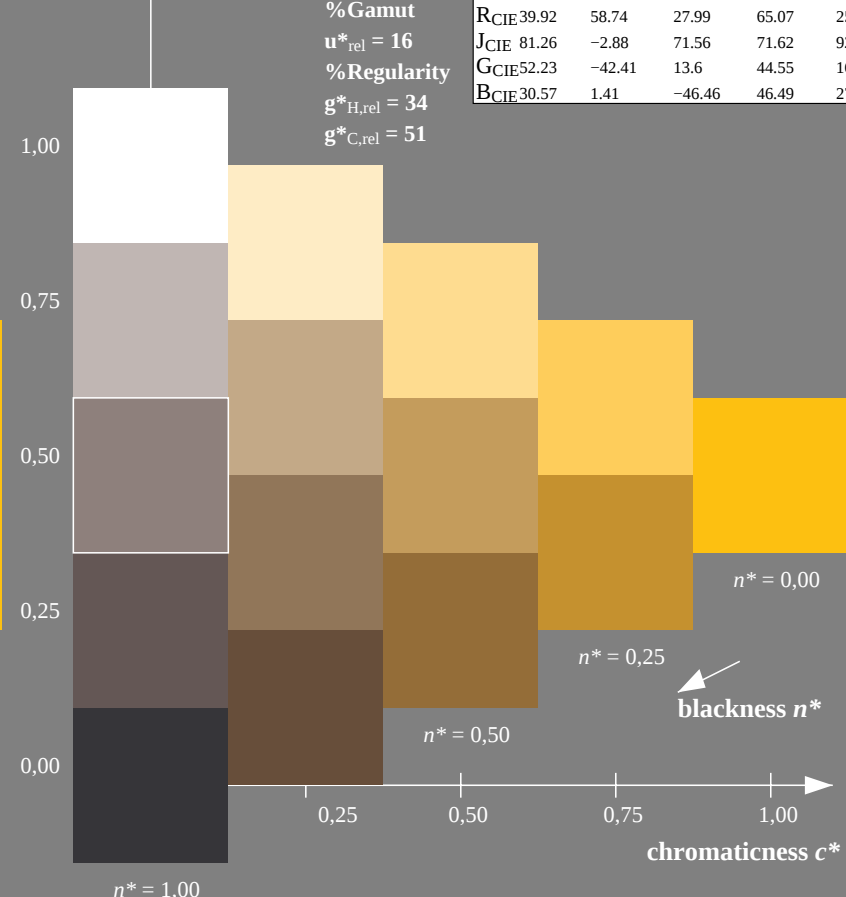
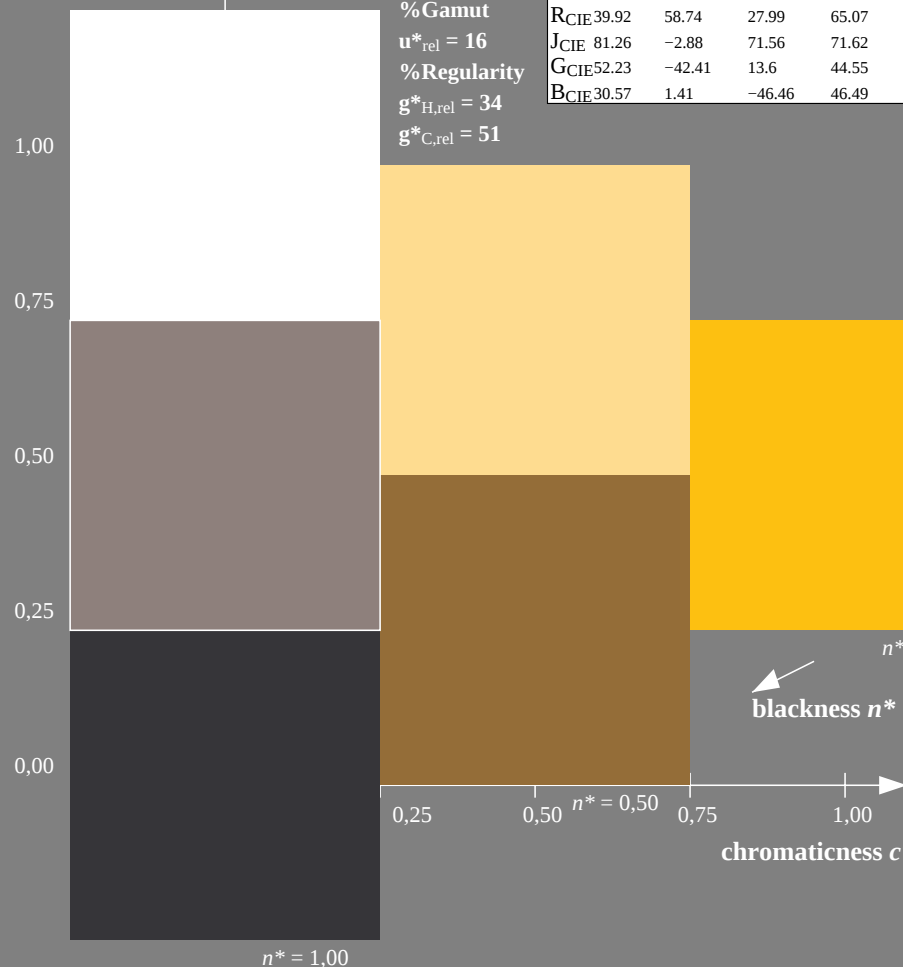
triangle lightness t^*



% 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 _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272



OE890-7, 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 OE89; Colorimetric systems TLS70 & TLS70

D65: 3 and 5 step colour scales for 10 hues

input: $cmY0^*$ set $cmYkcolor$

output: no change compared to input

Input: Colorimetric Television Luminous System TLS70

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

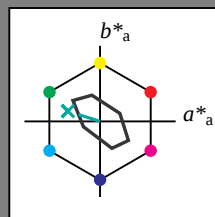
lab^*ich and lab^*nch

D65: hue G

LCH*Ma: 90 30 162

olv*Ma: 0.0 1.0 0.53

triangle lightness t^*



%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 _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272

Output: Colorimetric Television Luminous System TLS70

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

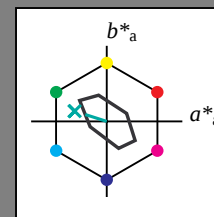
lab^*ich and lab^*nch

D65: hue G

LCH*Ma: 90 30 162

olv*Ma: 0.0 1.0 0.53

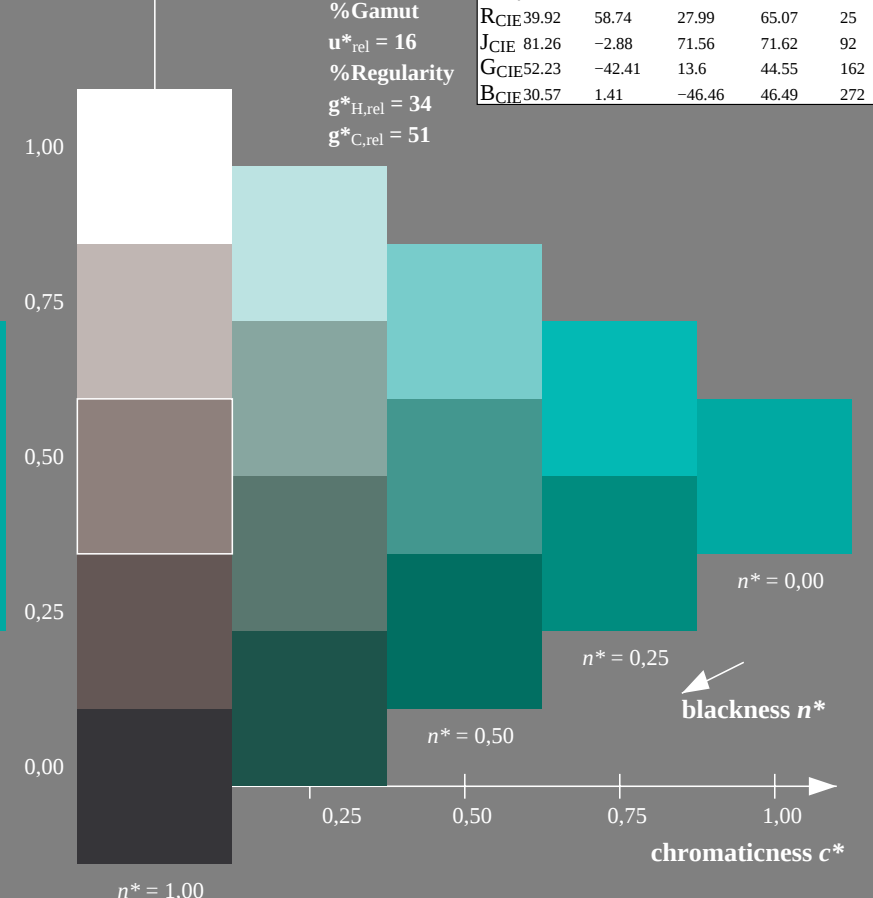
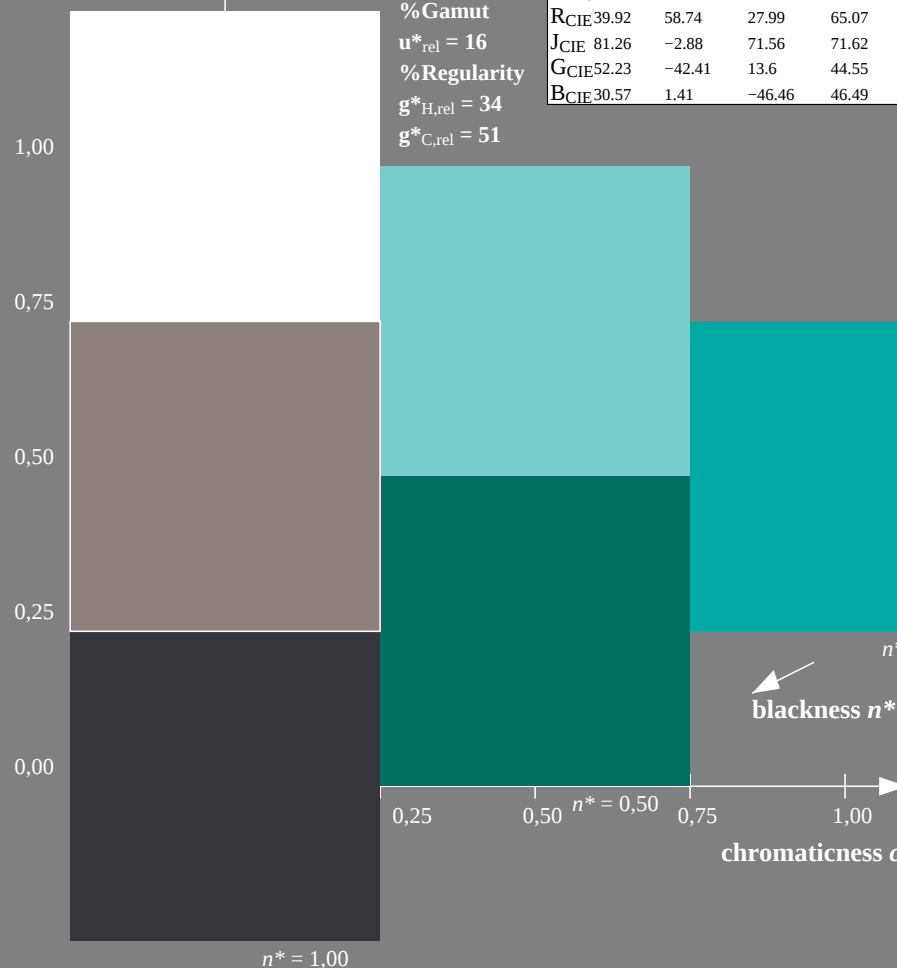
triangle lightness t^*



%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 _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272



OE890-7, 3 step scales for constant CIELAB hue 162/360 = 0.451 (left)

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

BAM-test chart OE89; Colorimetric systems TLS70 & TLS70

D65: 3 and 5 step colour scales for 10 hues

input: $cmY0^*$ setcmykcolor

output: no change compared to input

-See for similar files: <http://www.ps.bam.de/OE89/>
 Technical information: <http://www.ps.bam.de> Version 2.1, io=0,0

Input: Colorimetric Television Luminous System TLS70

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

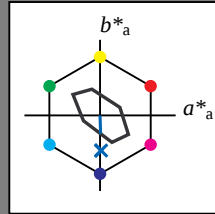
*lab*tch* and *lab*nch*

D65: hue B

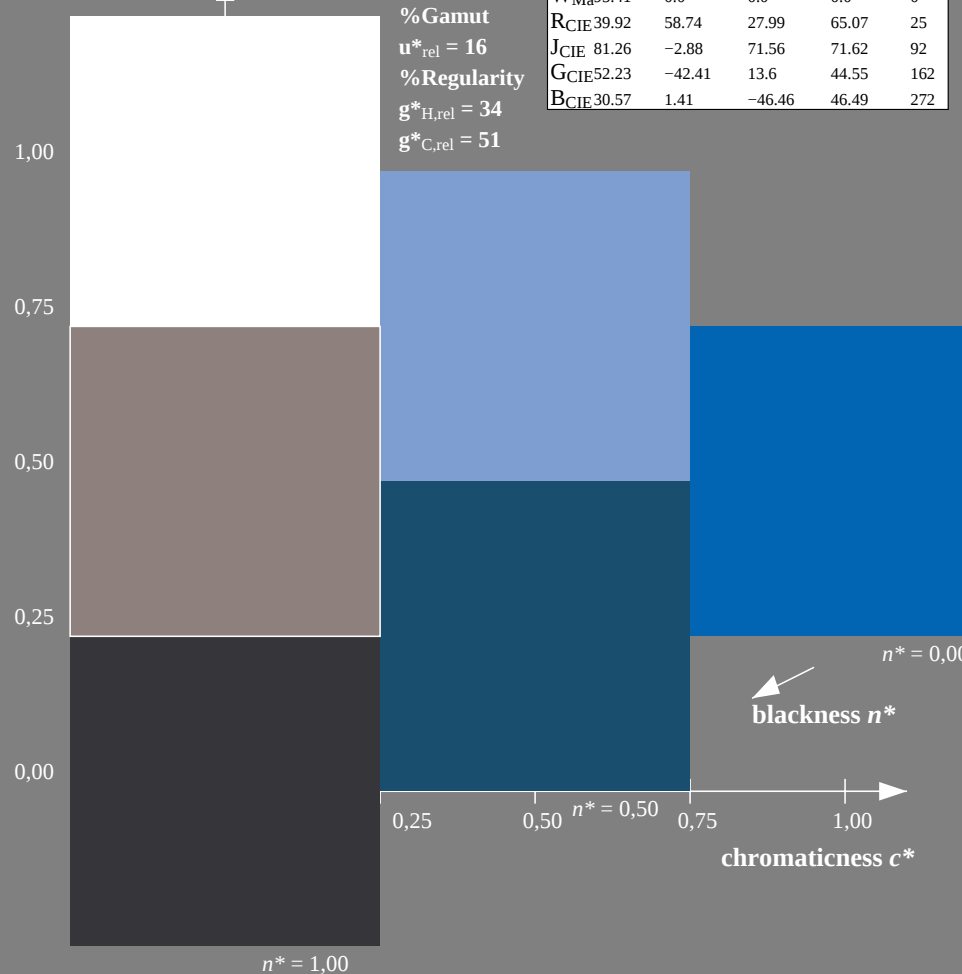
LCH*Ma: 80 24 272

olv*Ma: 0.0 0.4 1.0

triangle lightness t^*



TSL70; adapted (a)		CIELAB data		
$L^* = L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma} 76.43	26.27	10.57	28.32	22
Y _{Ma} 93.93	-10.76	34.63	36.27	107
L _{Ma} 89.32	-35.8	27.64	45.24	142
C _{Ma} 90.93	-21.95	-7.07	23.07	198
V _{Ma} 72.1	15.76	-35.63	38.97	294
M _{Ma} 78.5	37.52	-25.23	45.22	326
N _{Ma} 69.7	0.0	0.0	0.0	0
W _{Ma} 95.41	0.0	0.0	0.0	0
R _{CIE} 39.92	58.74	27.99	65.07	25
J _{CIE} 81.26	-2.88	71.56	71.62	92
G _{CIE} 52.23	-42.41	13.6	44.55	162
B _{CIE} 30.57	1.41	-46.46	46.49	272



OE890-7, 3 step scales for constant CIELAB hue $272/360 = 0.755$ (left)

BAM-test chart OE89; Colorimetric systems TLS70 & TLS70

D65: 3 and 5 step colour scales for 10 hues

Output: Colorimetric Television Luminous System TLS70

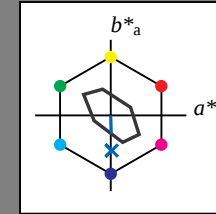
```
for hue  $h^* = lab^*h = 272/360 = 0.755$ 
```

lab*tch and lab*nch

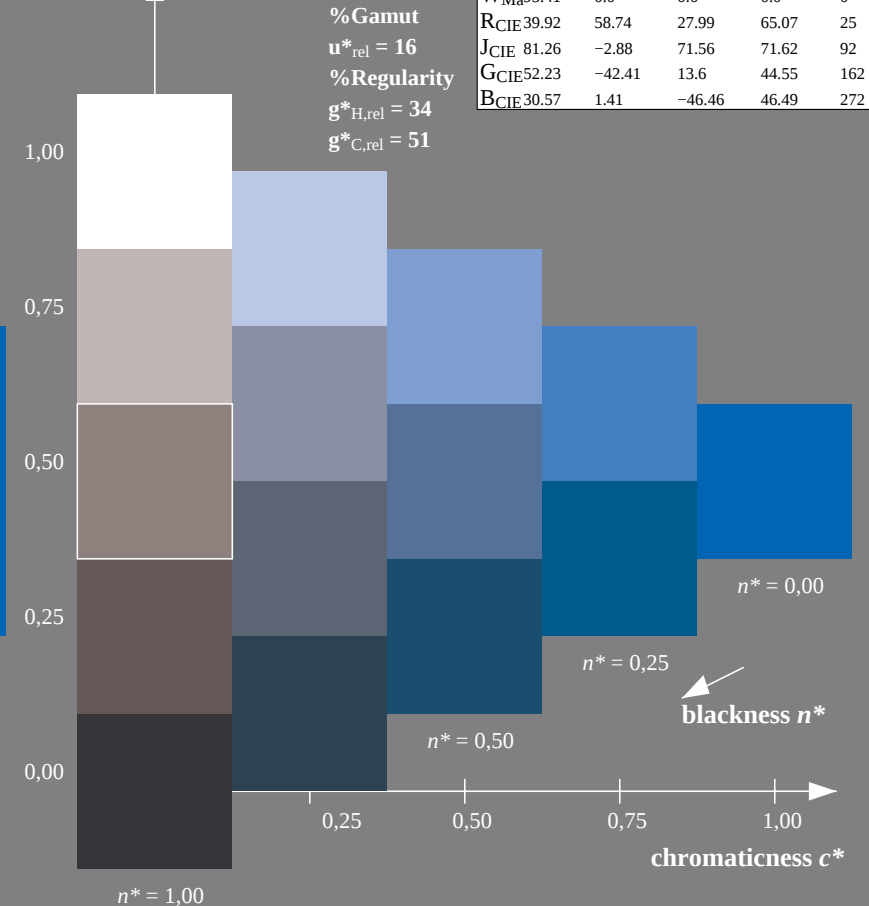
D65: hue B

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	$C^*_{ab,a}$	$h^*_{ab,a}$
O _{Ma}	76.43	26.27	10.57	28.32	22
Y _{Ma}	93.93	-10.76	34.63	36.27	107
L _{Ma}	89.32	-35.8	27.64	45.24	142
C _{Ma}	90.93	-21.95	-7.07	23.07	198
V _{Ma}	72.1	15.76	-35.63	38.97	294
M _{Ma}	78.5	37.52	-25.23	45.22	326
N _{Ma}	69.7	0.0	0.0	0.0	0
W _{Ma}	95.41	0.0	0.0	0.0	0
R _{CIE}	39.92	58.74	27.99	65.07	25
J _{CIE}	81.26	-2.88	71.56	71.62	92
G _{CIE}	52.23	-42.41	13.6	44.55	162
B _{CIE}	30.57	1.41	-46.46	46.49	272



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

input: *cmy0** *setcmykcolor*

output: *no change compared to input*