

Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.071$

data for any colour:

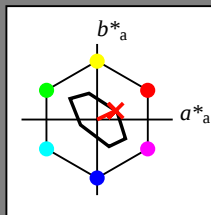
lab^*tch^* and lab^*ncu^*

elementary and device

hue text:

$u^* = r00j$ $d^* = o04y$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
Name	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 77 25 12

$LAB^*LCH^*_{Ma}$: 77 27 25

$lab^*rgb^*_{Ma}$: 1.0 0.0 0.0

$lab^*olv^*_{Ma}$: 1.0 0.04 0.0

triangle lightness t^*

% Gamut

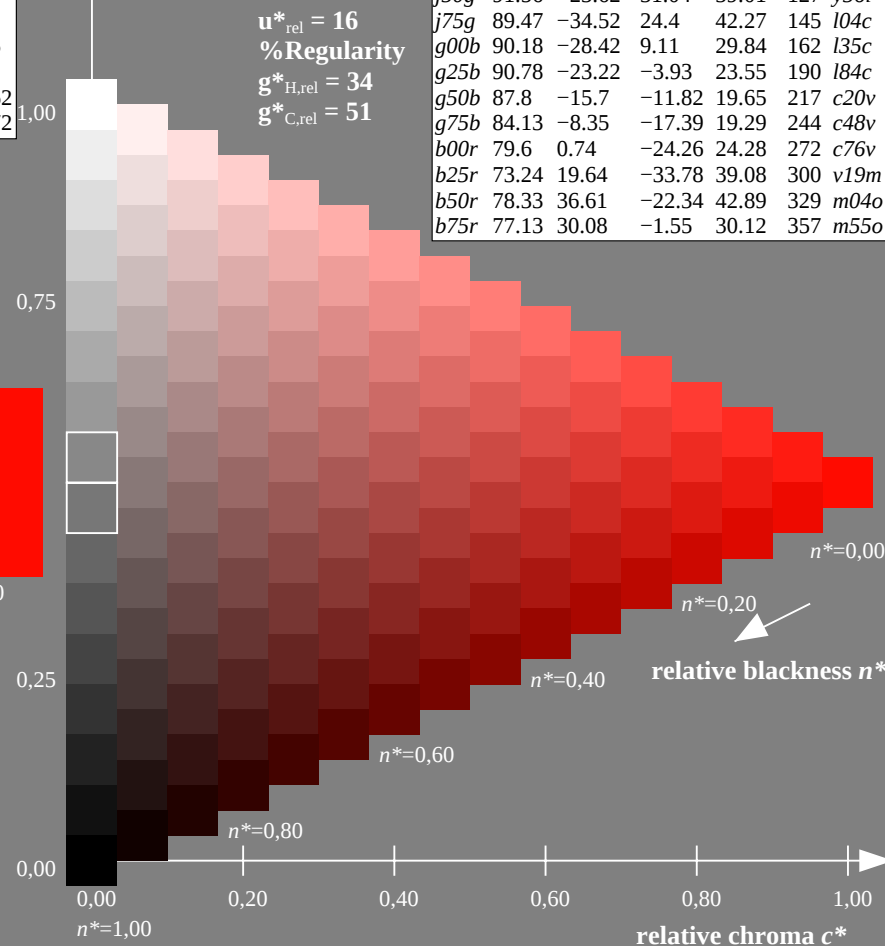
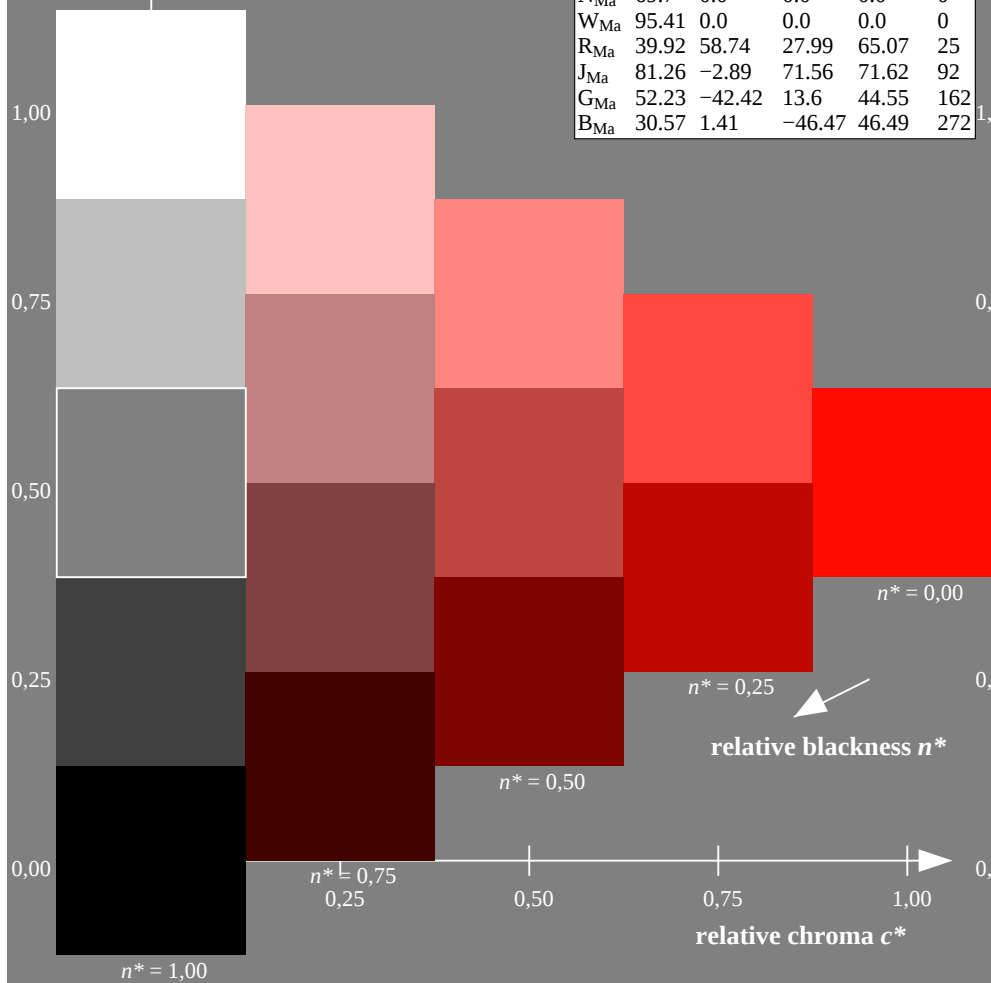
$u^*_{rel} = 16$

% Regularity

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

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

TLS70a; adapted (a) CIELAB data					
u^*	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	77.25	24.54	11.69	27.18	25
r25j	80.45	17.76	16.1	23.97	42
r50j	83.18	11.98	19.85	23.19	59
r75j	85.97	6.08	23.69	24.45	76
j00g	89.38	-1.15	28.38	28.4	92
j25g	93.65	-12.31	34.2	36.35	110
j50g	91.56	-23.62	31.04	39.01	127
j75g	89.47	-34.52	24.4	42.27	145
g00b	90.18	-28.42	9.11	29.84	162
g25b	90.78	-23.22	-3.93	23.55	190
g50b	87.8	-15.7	-11.82	19.65	217
g75b	84.13	-8.35	-17.39	19.29	244
b00r	79.6	0.74	-24.26	24.28	272
b25r	73.24	19.64	-33.78	39.08	300
b50r	78.33	36.61	-22.34	42.89	329
b75r	77.13	30.08	-1.55	30.12	357



IE590-7N

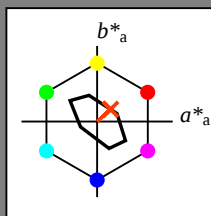
Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab \cdot h^* = h_{ab}/360 = 0.117$ data for any colour: Data for maximum colour (Ma):

lab*tch* and lab*ncu*
elementary and device

hue text:

$$u^* = r25j \quad d^* = o23y$$

triangle lightness t^*



<i>Name</i>	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

LAB*LAB*_{Ma}: 80 18 16

LAB*LCH*_{Ma}: 80 24 42

lab*rgb*_Ma: 1.0 0.25 0.0

lab*olv*_Ma: 1.0 0.24 0.0

triangle lightness t^*

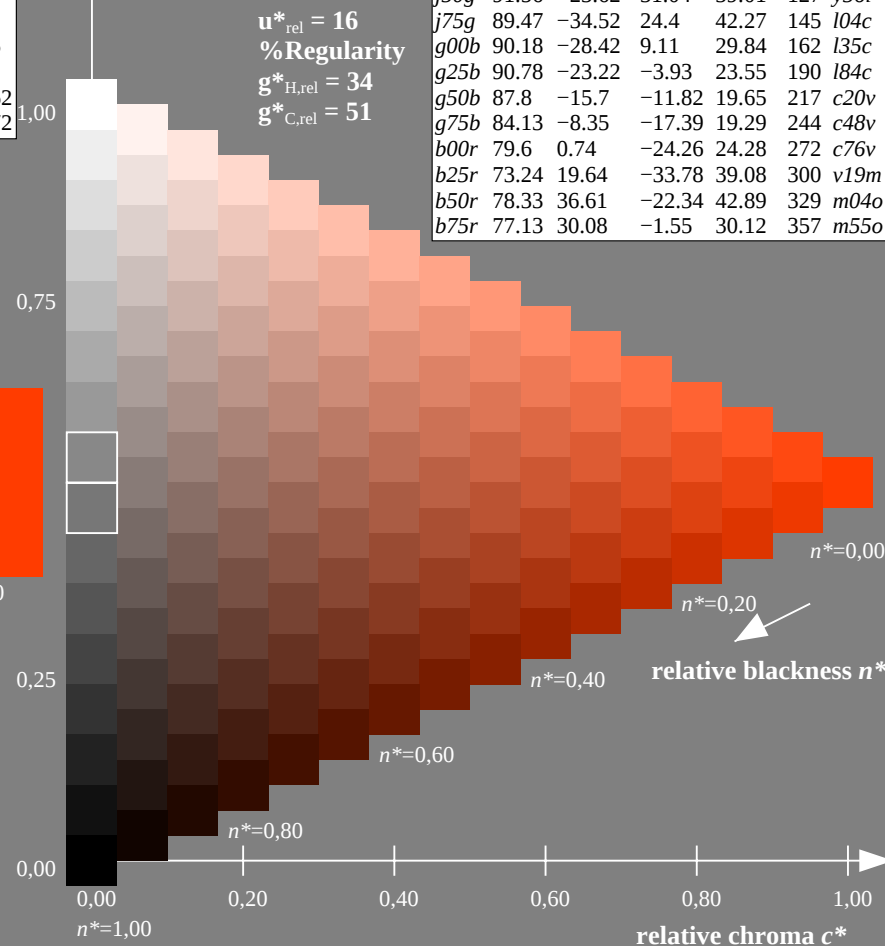
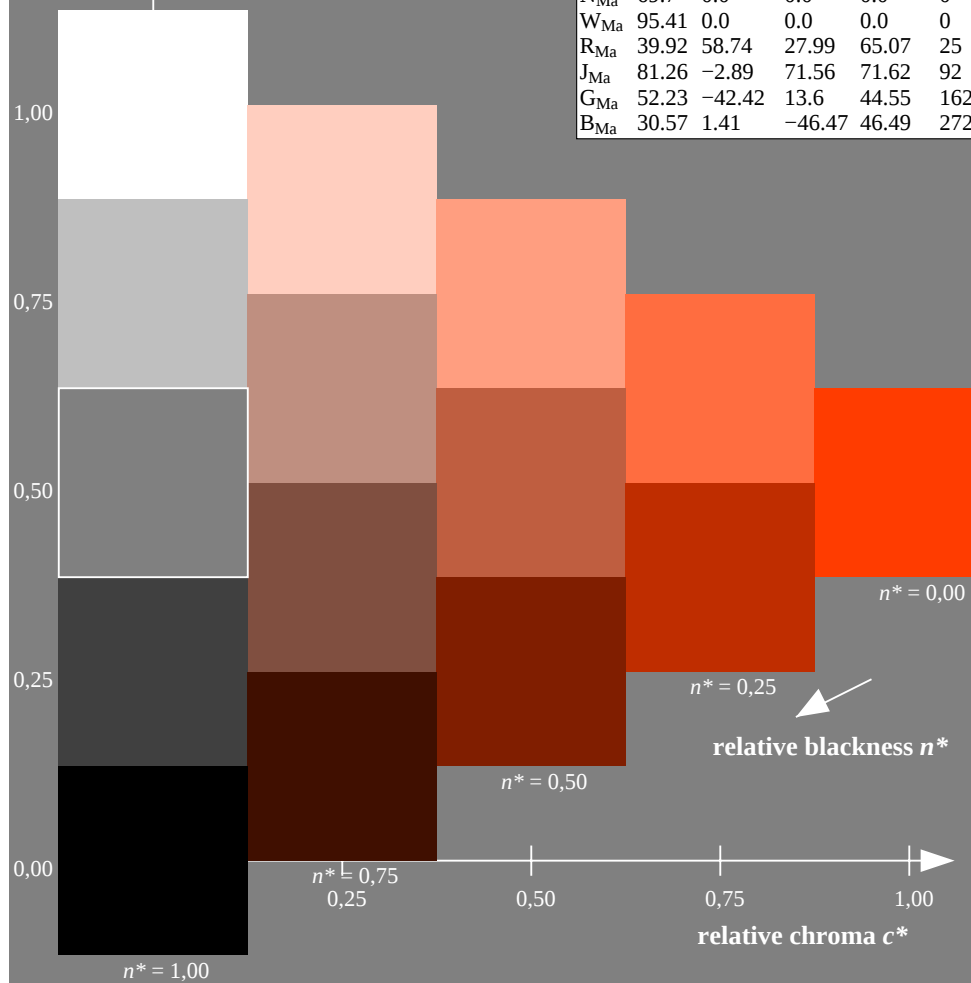
%Gamut

$$\mathbf{u}_{rel}^* = 16$$

%Regularity

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

TLS70a; adapted (a) CIELAB data						
u^*	$L^*=L_a^*$	a_a^*	b_a^*	$C^*_{ab,a}$	$h^*_{ab,a}$	d^*
<i>r00j</i>	77.25	24.54	11.69	27.18	25	<i>o04y</i>
<i>r25j</i>	80.45	17.76	16.1	23.97	42	<i>o23y</i>
<i>r50j</i>	83.18	11.98	19.85	23.19	59	<i>o43y</i>
<i>r75j</i>	85.97	6.08	23.69	24.45	76	<i>o62y</i>
<i>j00g</i>	89.38	-1.15	28.38	28.4	92	<i>o82y</i>
<i>j25g</i>	93.65	-12.31	34.2	36.35	110	<i>y07l</i>
<i>j50g</i>	91.56	-23.62	31.04	39.01	127	<i>y56l</i>
<i>j75g</i>	89.47	-34.52	24.4	42.27	145	<i>l04c</i>
<i>g00b</i>	90.18	-28.42	9.11	29.84	162	<i>l35c</i>
<i>g25b</i>	90.78	-23.22	-3.93	23.55	190	<i>l84c</i>
<i>g50b</i>	87.8	-15.7	-11.82	19.65	217	<i>c20v</i>
<i>g75b</i>	84.13	-8.35	-17.39	19.29	244	<i>c48v</i>
<i>b00r</i>	79.6	0.74	-24.26	24.28	272	<i>c76v</i>
<i>b25r</i>	73.24	19.64	-33.78	39.08	300	<i>v19m</i>
<i>b50r</i>	78.33	36.61	-22.34	42.89	329	<i>m04o</i>
<i>b75r</i>	77.13	30.08	-1.55	30.12	357	<i>m55o</i>



TUB-test chart IE59; Colorimetric systems, Page 2/16
Hue plane and data table for 16 hues $r00j$ to $b75r$

input: *rgb* ($\rightarrow$ *rgb**) *setrgbcolor*
output: no change compared to input

TUB registration: 20090901-IE59/IE59L0NA.PS/.TXT
 application for output of visual display systems

TUB material: code=rha4ta

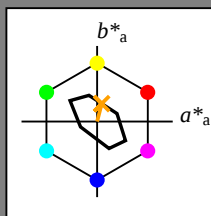
Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.21$ data for any colour:

lab*tch* and lab*ncu*
elementary and device

hue text:

$$u^* = r75j \quad d^* = o62y$$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
<i>Name</i>	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

LAB*LAB*_{Ma}: 86 6 24

LAB*LCH*Ma: 86 24 75

*lab*rgb*_Ma: 1.0 0.75 0.0*

lab*olv*Ma: 1.0 0.63 0.0

triangle lightness t^*

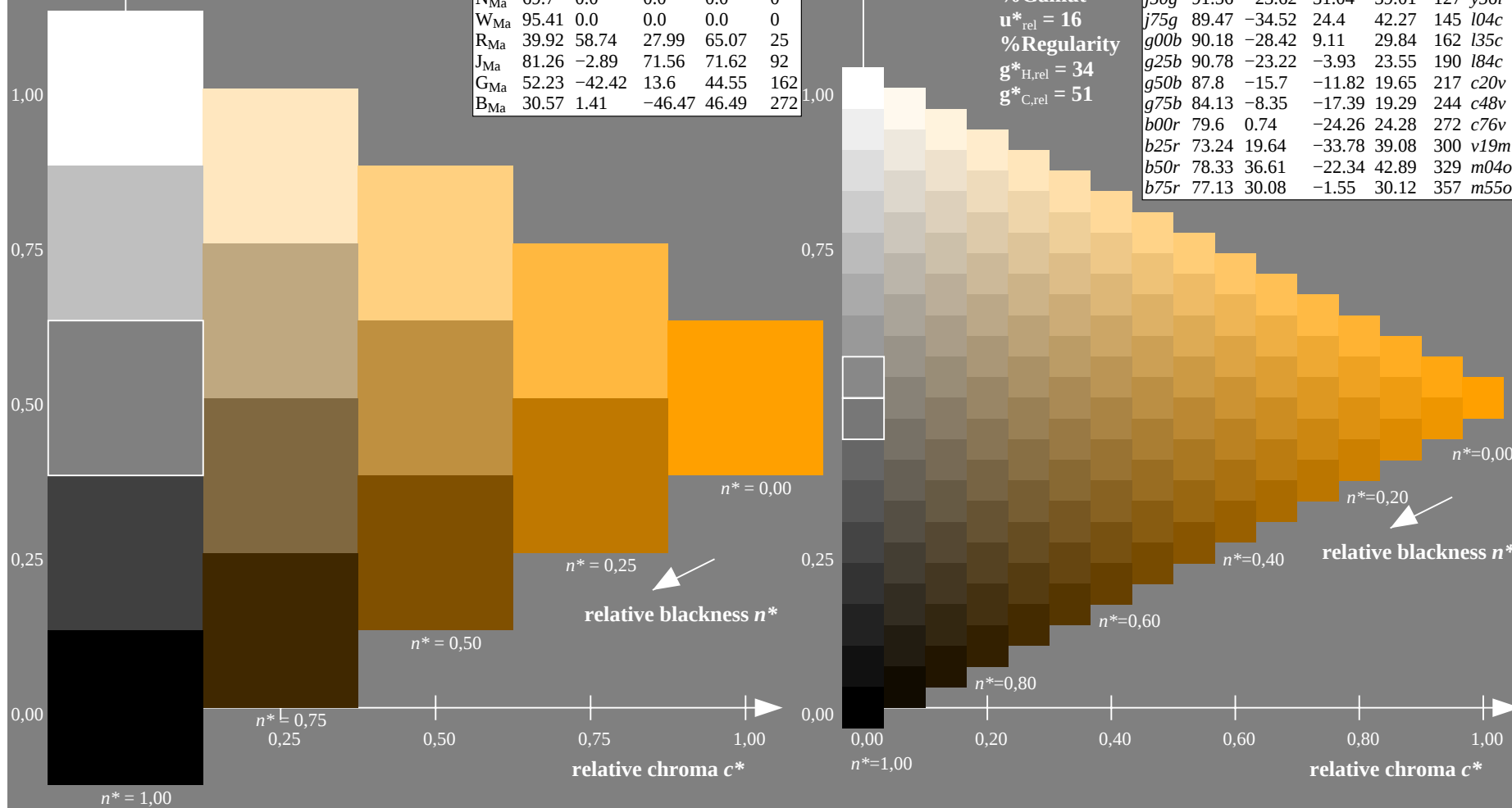
% Gamut

$$\mathbf{u}_{\text{rel}}^* = 16$$

%Regularity

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

TLS70a; adapted (a) CIELAB data							
u^*	$L^*=L_a^*$	a_a^*	b_a^*	$C_{ab,a}^*$	$h_{ab,a}^*$	d^*	
<i>r00j</i>	77.25	24.54	11.69	27.18	25	<i>o04y</i>	
<i>r25j</i>	80.45	17.76	16.1	23.97	42	<i>o23y</i>	
<i>r50j</i>	83.18	11.98	19.85	23.19	59	<i>o43y</i>	
<i>r75j</i>	85.97	6.08	23.69	24.45	76	<i>o62y</i>	
<i>j00g</i>	89.38	-1.15	28.38	28.4	92	<i>o82y</i>	
<i>j25g</i>	93.65	-12.31	34.2	36.35	110	<i>y07l</i>	
<i>j50g</i>	91.56	-23.62	31.04	39.01	127	<i>y56l</i>	
<i>j75g</i>	89.47	-34.52	24.4	42.27	145	<i>l04c</i>	
<i>g00b</i>	90.18	-28.42	9.11	29.84	162	<i>l35c</i>	
<i>g25b</i>	90.78	-23.22	-3.93	23.55	190	<i>l84c</i>	
<i>g50b</i>	87.8	-15.7	-11.82	19.65	217	<i>c20v</i>	
<i>g75b</i>	84.13	-8.35	-17.39	19.29	244	<i>c48v</i>	
<i>b00r</i>	79.6	0.74	-24.26	24.28	272	<i>c76v</i>	
<i>b25r</i>	73.24	19.64	-33.78	39.08	300	<i>v19m</i>	
<i>b50r</i>	78.33	36.61	-22.34	42.89	329	<i>m04o</i>	
<i>b75r</i>	77.13	30.08	-1.55	30.12	357	<i>m55o</i>	



TUB-test chart IE59; Colorimetric systems, Page 4/16
Hue plane and data table for 16 hues $r00j$ to $b75r$

input: *rgb (->rgb*) setrgbcolor*
output: no change compared to input

TUB registration: 20090901-IE59/IE59L0NA.PS/.TXT
+ application for output of visual display systems

TUB material: code=rh4ta

Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.256$

data for any colour:

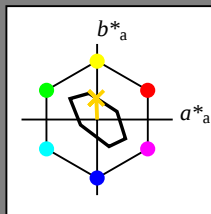
lab^*tch^* and lab^*ncu^*

elementary and device

hue text:

$u^* = j00g$ $d^* = o82y$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
Name	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 89 -1 28

$LAB^*LCH^*_{Ma}$: 89 28 92

$lab^*rgb^*_{Ma}$: 1.0 1.0 0.0

$lab^*olv^*_{Ma}$: 1.0 0.82 0.0

triangle lightness t^*

% Gamut

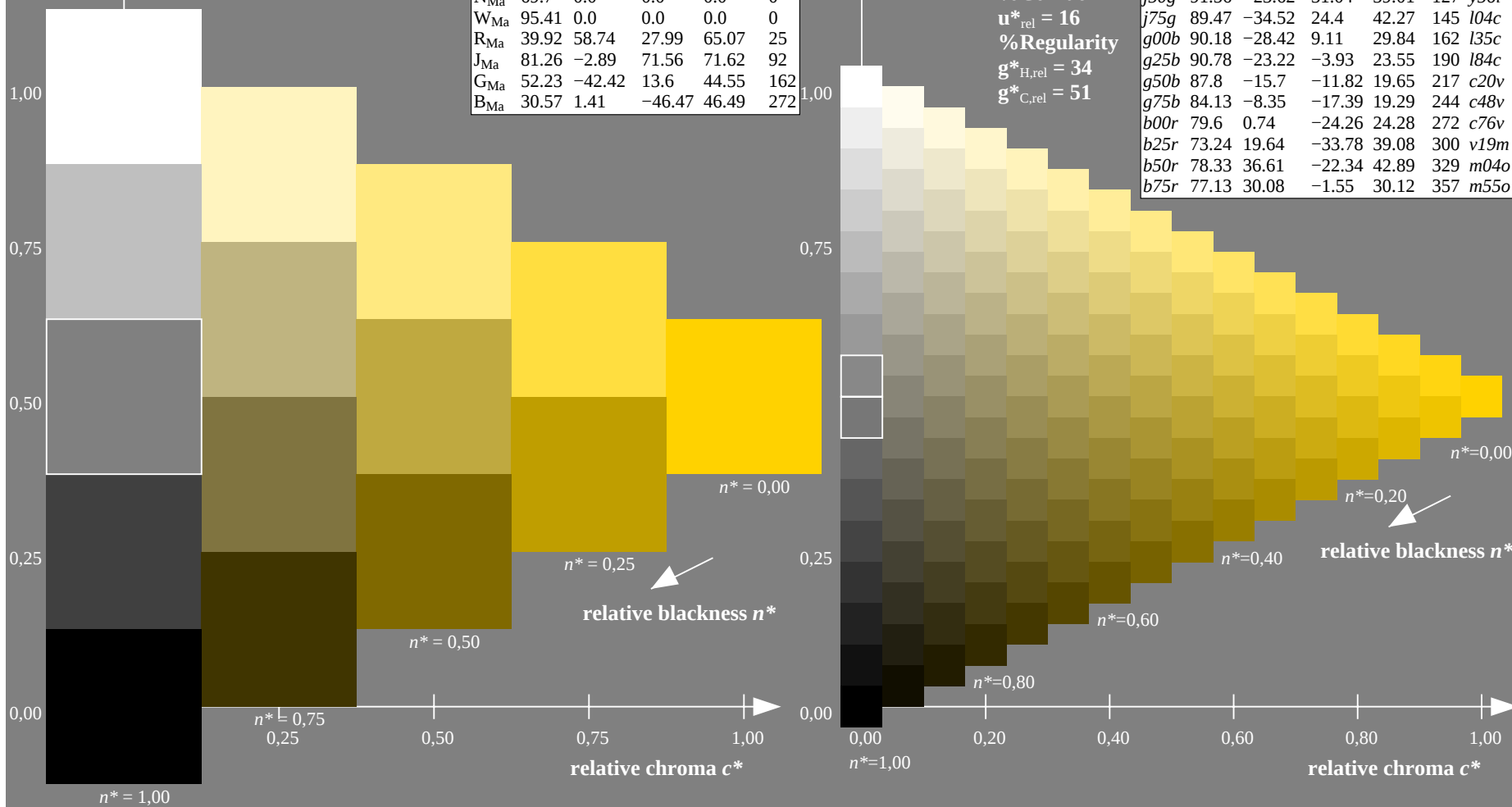
$u^*_{rel} = 16$

% Regularity

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

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

TLS70a; adapted (a) CIELAB data					
u^*	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	77.25	24.54	11.69	27.18	25
r25j	80.45	17.76	16.1	23.97	42
r50j	83.18	11.98	19.85	23.19	59
r75j	85.97	6.08	23.69	24.45	76
j00g	89.38	-1.15	28.38	28.4	92
j25g	93.65	-12.31	34.2	36.35	110
j50g	91.56	-23.62	31.04	39.01	127
j75g	89.47	-34.52	24.4	42.27	145
g00b	90.18	-28.42	9.11	29.84	162
g25b	90.78	-23.22	-3.93	23.55	190
g50b	87.8	-15.7	-11.82	19.65	217
g75b	84.13	-8.35	-17.39	19.29	244
b00r	79.6	0.74	-24.26	24.28	272
b25r	73.24	19.64	-33.78	39.08	300
b50r	78.33	36.61	-22.34	42.89	329
b75r	77.13	30.08	-1.55	30.12	357



Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.305$

data for any colour:

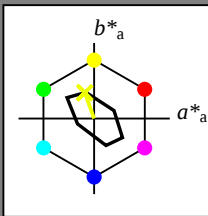
lab^*tch^* and lab^*ncu^*

elementary and device

hue text:

$u^* = j25g$ $d^* = y07l$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
Name	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 94 -12 34

$LAB^*LCH^*_{Ma}$: 94 36 109

$lab^*rgb^*_{Ma}$: 0.75 1.0 0.0

$lab^*olv^*_{Ma}$: 0.93 1.0 0.0

triangle lightness t^*

% Gamut

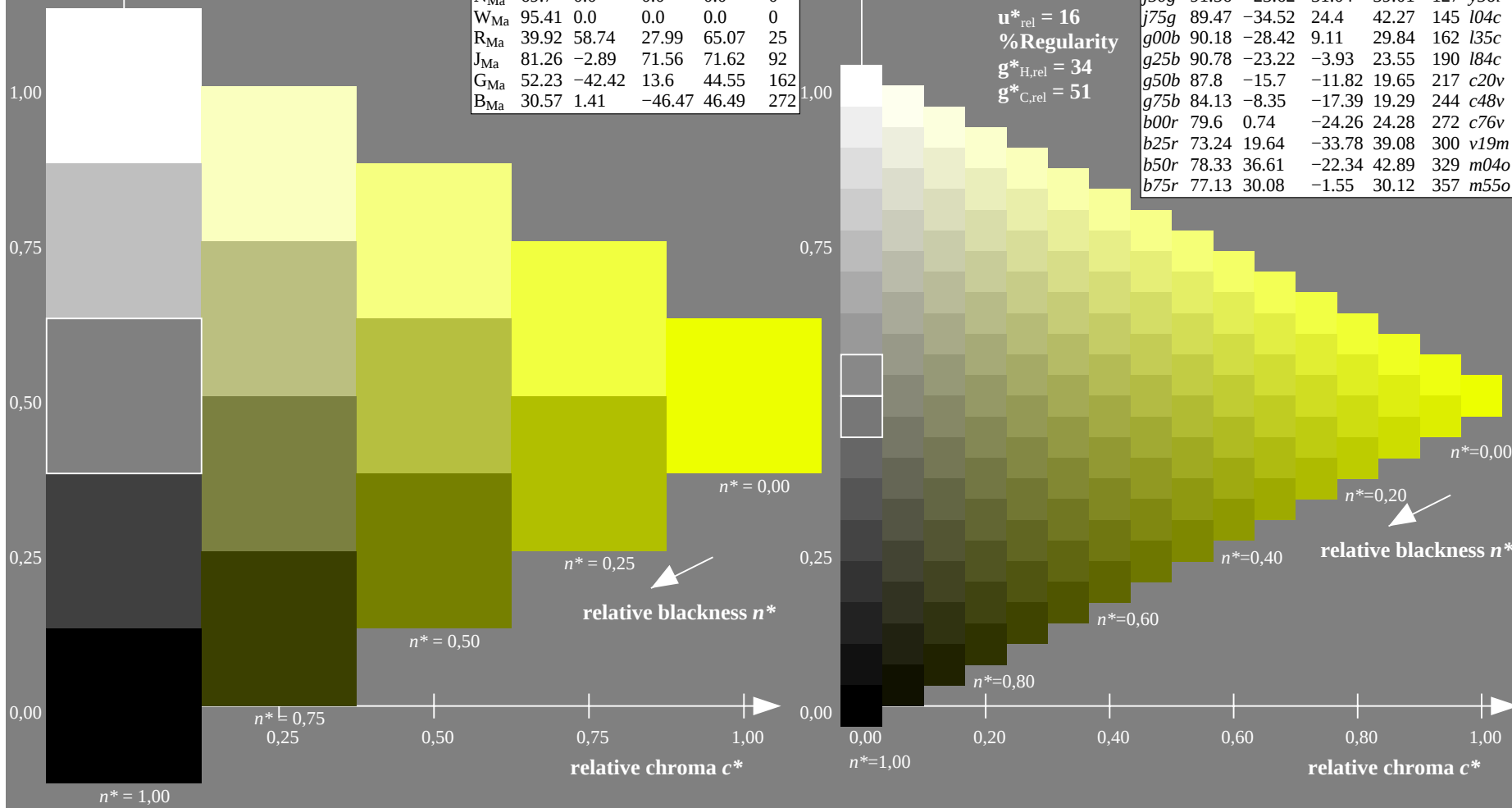
$u^*_{rel} = 16$

% Regularity

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

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

TLS70a; adapted (a) CIELAB data					
u^*	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	77.25	24.54	11.69	27.18	25
r25j	80.45	17.76	16.1	23.97	42
r50j	83.18	11.98	19.85	23.19	59
r75j	85.97	6.08	23.69	24.45	76
j00g	89.38	-1.15	28.38	28.4	92
j25g	93.65	-12.31	34.2	36.35	110
j50g	91.56	-23.62	31.04	39.01	127
j75g	89.47	-34.52	24.4	42.27	145
g00b	90.18	-28.42	9.11	29.84	162
g25b	90.78	-23.22	-3.93	23.55	190
g50b	87.8	-15.7	-11.82	19.65	217
g75b	84.13	-8.35	-17.39	19.29	244
b00r	79.6	0.74	-24.26	24.28	272
b25r	73.24	19.64	-33.78	39.08	300
b50r	78.33	36.61	-22.34	42.89	329
b75r	77.13	30.08	-1.55	30.12	357



Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.354$

data for any colour:

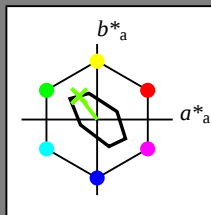
lab^*tch^* and lab^*ncu^*

elementary and device

hue text:

$u^* = j50g$ $d^* = y56l$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
Name	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 92 -24 31

$LAB^*LCH^*_{Ma}$: 92 39 127

$lab^*rgb^*_{Ma}$: 0.5 1.0 0.0

$lab^*olv^*_{Ma}$: 0.43 1.0 0.0

triangle lightness t^*

% Gamut

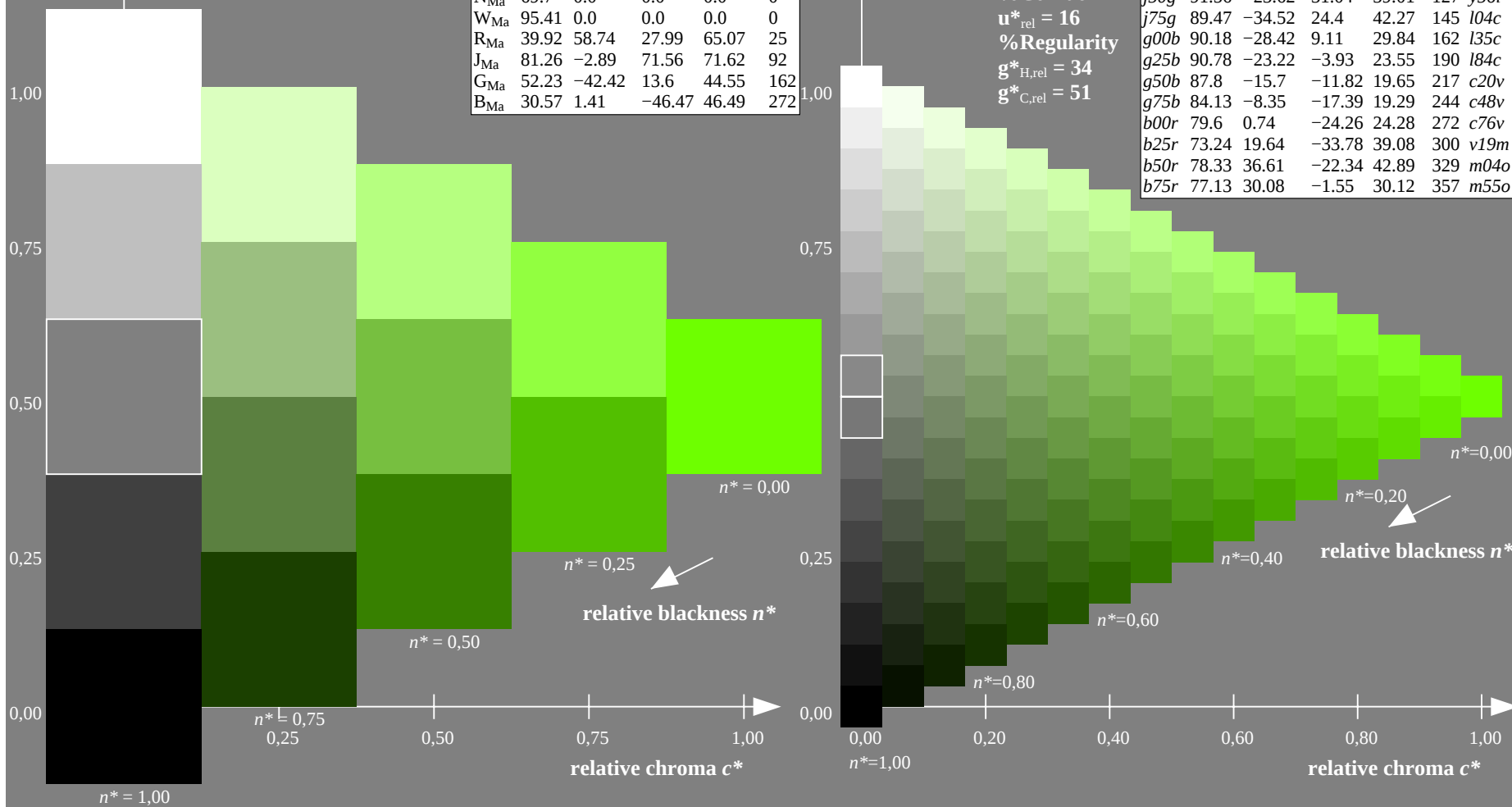
$u^*_{rel} = 16$

% Regularity

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

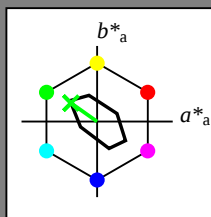
$g^*_{C,rel} = 51$

TLS70a; adapted (a) CIELAB data					
u^*	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	77.25	24.54	11.69	27.18	25
r25j	80.45	17.76	16.1	23.97	42
r50j	83.18	11.98	19.85	23.19	59
r75j	85.97	6.08	23.69	24.45	76
j00g	89.38	-1.15	28.38	28.4	92
j25g	93.65	-12.31	34.2	36.35	110
j50g	91.56	-23.62	31.04	39.01	127
j75g	89.47	-34.52	24.4	42.27	145
g00b	90.18	-28.42	9.11	29.84	162
g25b	90.78	-23.22	-3.93	23.55	190
g50b	87.8	-15.7	-11.82	19.65	217
g75b	84.13	-8.35	-17.39	19.29	244
b00r	79.6	0.74	-24.26	24.28	272
b25r	73.24	19.64	-33.78	39.08	300
b50r	78.33	36.61	-22.34	42.89	329
b75r	77.13	30.08	-1.55	30.12	357



Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.402$ data for any colour: Data for maximum colour (Ma):

lab*tch* and lab*ncu*
elementary and device
hue text:

$$u^* = j75g \quad d^* = 104c$$
triangle lightness t^* 

TLS70a; adapted (a) CIELAB data					
<i>Name</i>	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

LAB*LAB*Ma: 89 -35 24

LAB*LCH*Ma: 89 42 144

*lab*rgb*_Ma: 0.25 1.0 0.0*

 $lab*oly*M_3: 0.0 \quad 1.0 \quad 0.04$

triangle lightness t^*

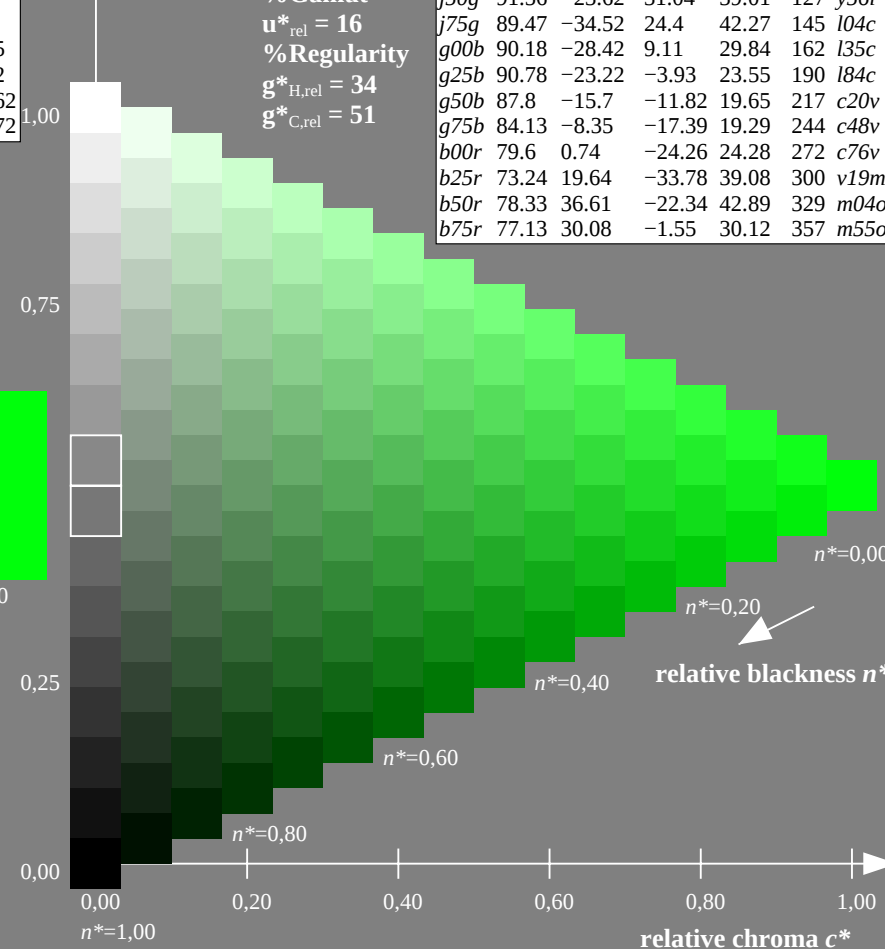
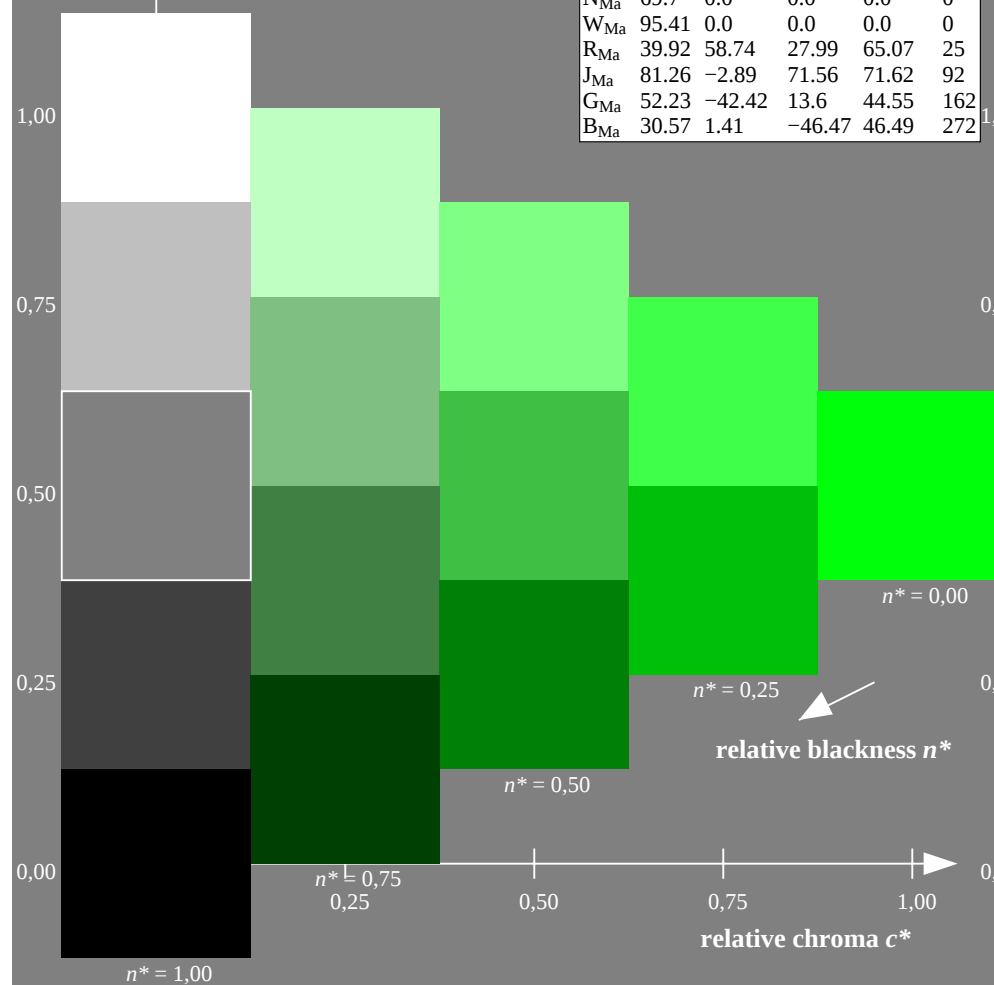
% Gamut

$$\mathbf{u}_{\text{rel}}^* = 16$$

%Regularity

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

TLS70a; adapted (a) CIELAB data							
u^*	$L^*=L_a^*$	a_a^*	b_a^*	$C_{ab,a}^*$	$h_{ab,a}^*$	d^*	
<i>r00j</i>	77.25	24.54	11.69	27.18	25	<i>o04y</i>	
<i>r25j</i>	80.45	17.76	16.1	23.97	42	<i>o23y</i>	
<i>r50j</i>	83.18	11.98	19.85	23.19	59	<i>o43y</i>	
<i>r75j</i>	85.97	6.08	23.69	24.45	76	<i>o62y</i>	
<i>j00g</i>	89.38	-1.15	28.38	28.4	92	<i>o82y</i>	
<i>j25g</i>	93.65	-12.31	34.2	36.35	110	<i>y07l</i>	
<i>j50g</i>	91.56	-23.62	31.04	39.01	127	<i>y56l</i>	
<i>j75g</i>	89.47	-34.52	24.4	42.27	145	<i>l04c</i>	
<i>g00b</i>	90.18	-28.42	9.11	29.84	162	<i>l35c</i>	
<i>g25b</i>	90.78	-23.22	-3.93	23.55	190	<i>l84c</i>	
<i>g50b</i>	87.8	-15.7	-11.82	19.65	217	<i>c20v</i>	
<i>g75b</i>	84.13	-8.35	-17.39	19.29	244	<i>c48v</i>	
<i>b00r</i>	79.6	0.74	-24.26	24.28	272	<i>c76v</i>	
<i>b25r</i>	73.24	19.64	-33.78	39.08	300	<i>v19m</i>	
<i>b50r</i>	78.33	36.61	-22.34	42.89	329	<i>m04c</i>	
<i>b75r</i>	77.13	30.08	-1.55	30.12	357	<i>m55c</i>	



TUB registration: 20090901-IE59/IE59L0NA.PS/.TXT
application for output of visual display systems

TUB material: code=rha4ta

TUB-test chart IE59; Colorimetric systems, Page 8/16
Hue plane and data table for 16 hues *r00j* to *b75r*

input: *rgb* ($\rightarrow$ *rgb**) *setrgbcolor*
output: no change compared to input

Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.451$

data for any colour:

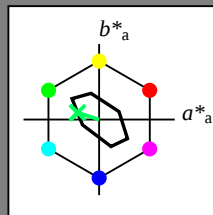
lab^*tch^* and lab^*ncu^*

elementary and device

hue text:

$u^* = g00b$ $d^* = l35c$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
Name	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 90 -28 9

$LAB^*LCH^*_{Ma}$: 90 30 162

$lab^*rgb^*_{Ma}$: 0.0 1.0 0.0

$lab^*olv^*_{Ma}$: 0.0 1.0 0.36

triangle lightness t^*

% Gamut

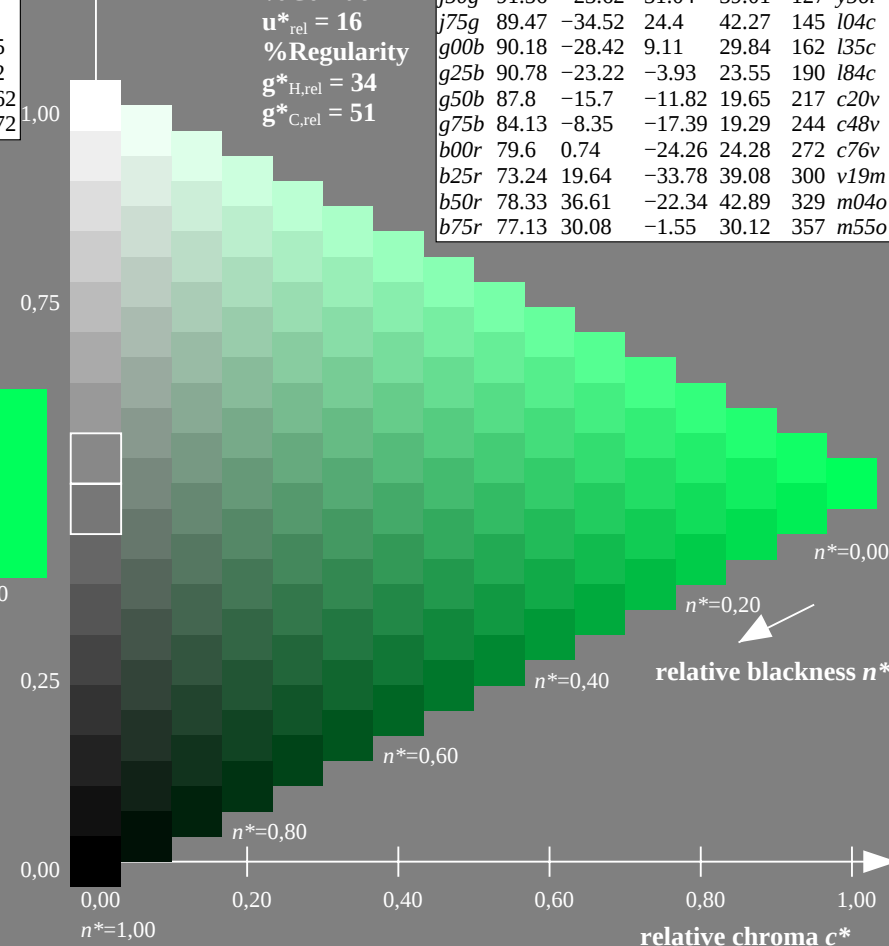
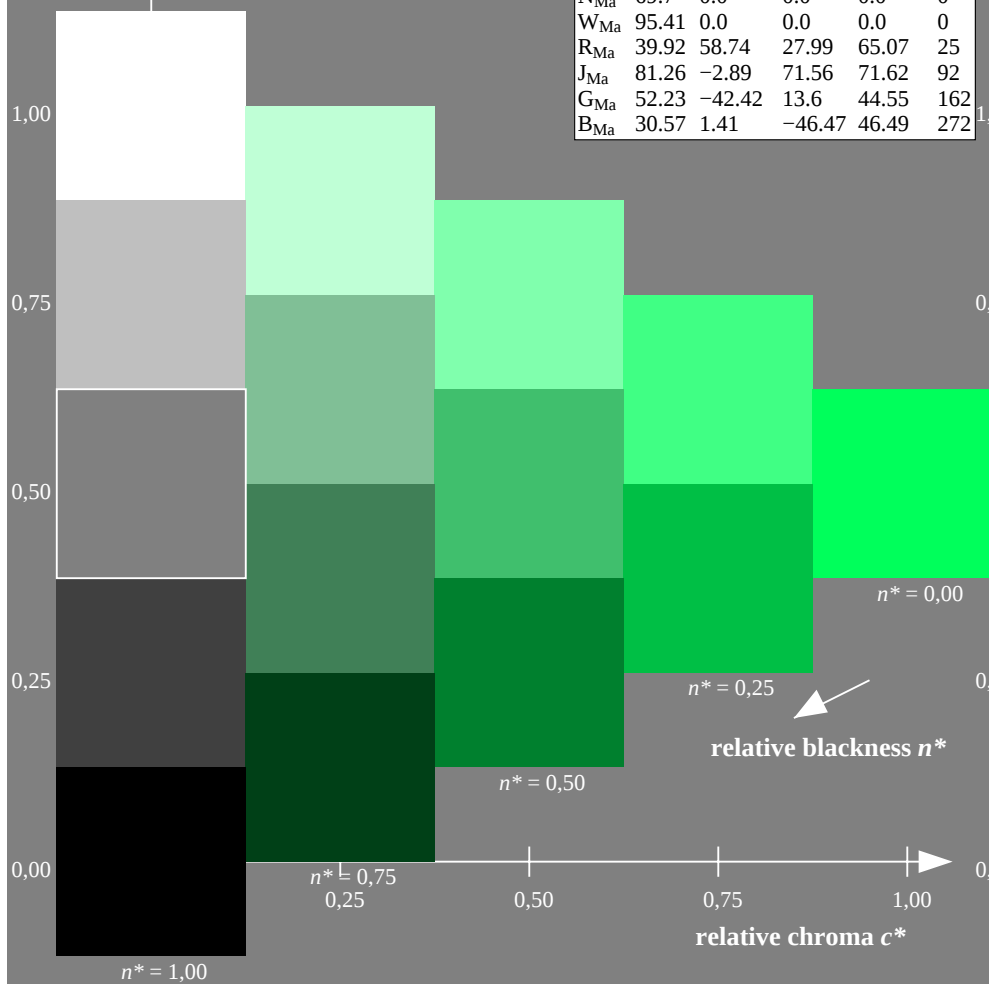
$u^*_{rel} = 16$

% Regularity

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

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

TLS70a; adapted (a) CIELAB data					
u^*	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	77.25	24.54	11.69	27.18	25
r25j	80.45	17.76	16.1	23.97	42
r50j	83.18	11.98	19.85	23.19	59
r75j	85.97	6.08	23.69	24.45	76
j00g	89.38	-1.15	28.38	28.4	92
j25g	93.65	-12.31	34.2	36.35	110
j50g	91.56	-23.62	31.04	39.01	127
j75g	89.47	-34.52	24.4	42.27	145
g00b	90.18	-28.42	9.11	29.84	162
g25b	90.78	-23.22	-3.93	23.55	190
g50b	87.8	-15.7	-11.82	19.65	217
g75b	84.13	-8.35	-17.39	19.29	244
b00r	79.6	0.74	-24.26	24.28	272
b25r	73.24	19.64	-33.78	39.08	300
b50r	78.33	36.61	-22.34	42.89	329
b75r	77.13	30.08	-1.55	30.12	357



Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.527$

data for any colour:

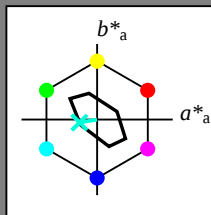
lab^*tch^* and lab^*ncu^*

elementary and device

hue text:

$u^* = g25b$ $d^* = l84c$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
Name	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 91 -23 -4

$LAB^*LCH^*_{Ma}$: 91 24 189

$lab^*rgb^*_{Ma}$: 0.0 1.0 0.5

$lab^*olv^*_{Ma}$: 0.0 1.0 0.85

triangle lightness t^*

% Gamut

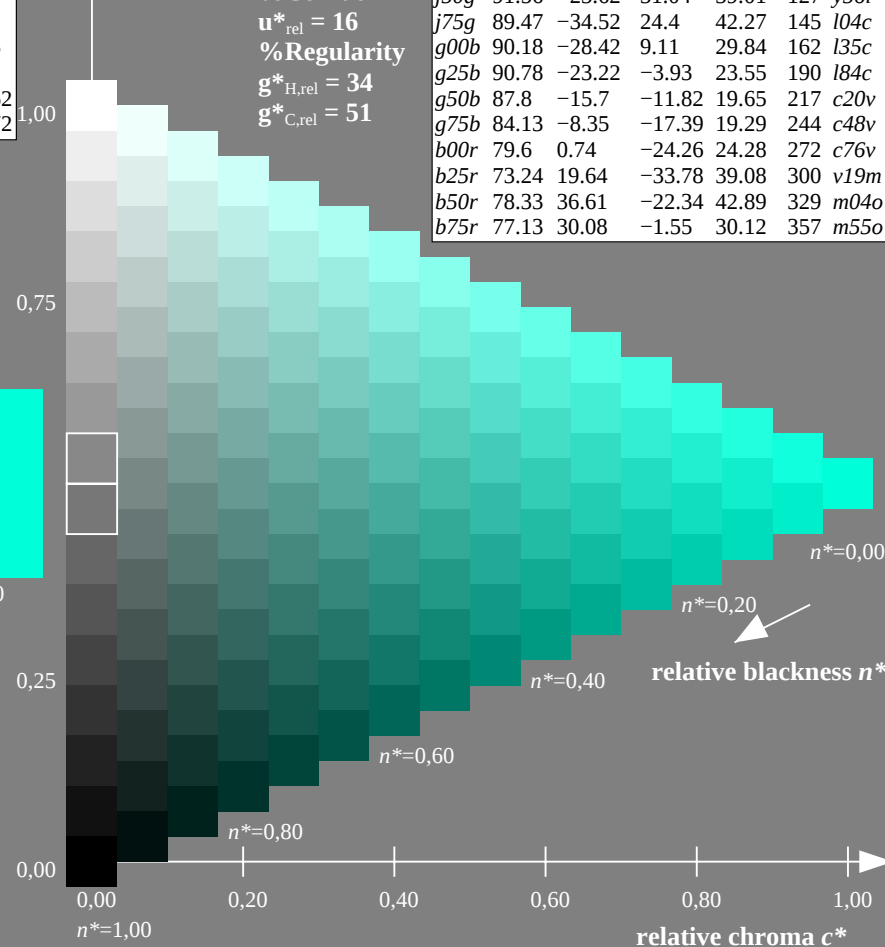
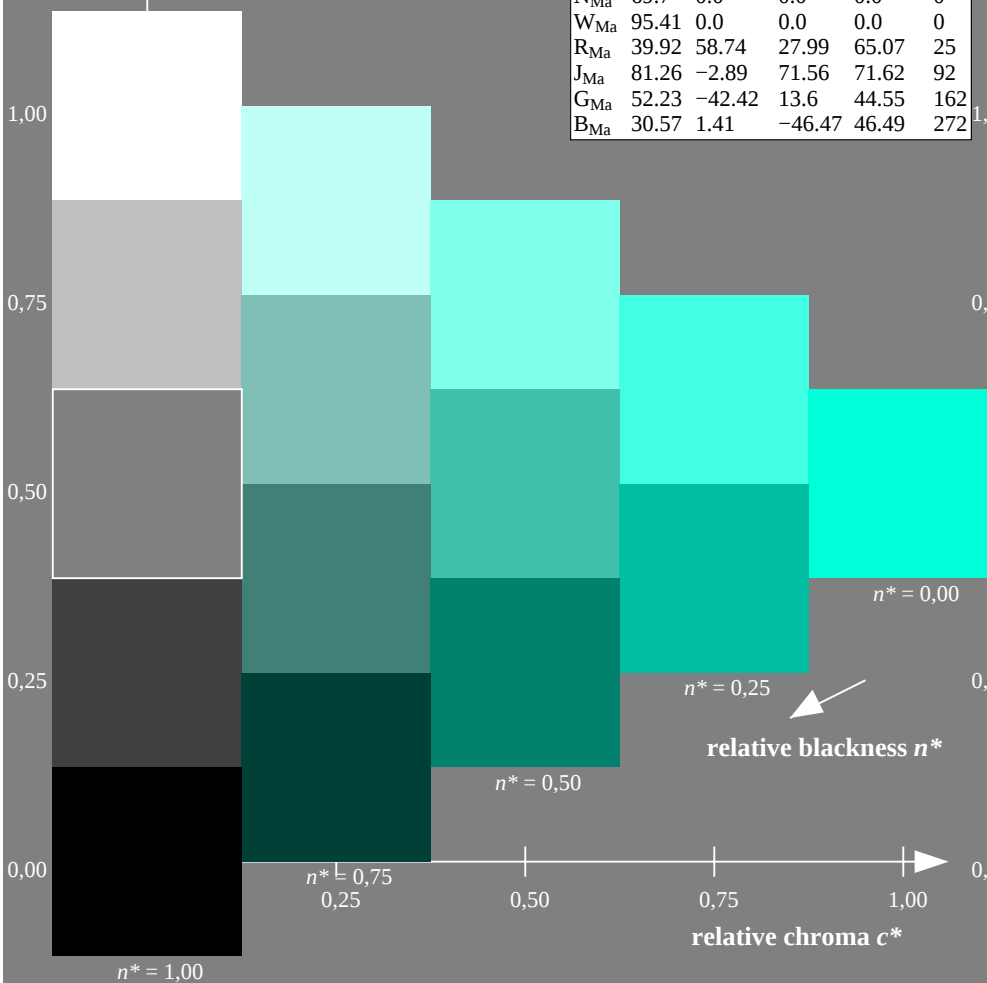
$u^*_{rel} = 16$

% Regularity

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

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

TLS70a; adapted (a) CIELAB data					
u^*	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	77.25	24.54	11.69	27.18	25
r25j	80.45	17.76	16.1	23.97	42
r50j	83.18	11.98	19.85	23.19	59
r75j	85.97	6.08	23.69	24.45	76
j00g	89.38	-1.15	28.38	28.4	92
j25g	93.65	-12.31	34.2	36.35	110
j50g	91.56	-23.62	31.04	39.01	127
j75g	89.47	-34.52	24.4	42.27	145
g00b	90.18	-28.42	9.11	29.84	162
g25b	90.78	-23.22	-3.93	23.55	190
g50b	87.8	-15.7	-11.82	19.65	217
g75b	84.13	-8.35	-17.39	19.29	244
b00r	79.6	0.74	-24.26	24.28	272
b25r	73.24	19.64	-33.78	39.08	300
b50r	78.33	36.61	-22.34	42.89	329
b75r	77.13	30.08	-1.55	30.12	357



IE590-7N

Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.603$

data for any colour:

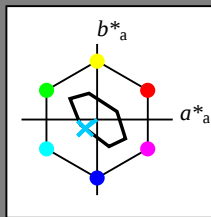
lab^*tch^* and lab^*ncu^*

elementary and device

hue text:

$u^* = g50b$ $d^* = c20v$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
Name	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 88 -16 -12

$LAB^*LCH^*_{Ma}$: 88 20 216

$lab^*rgb^*_{Ma}$: 0.0 1.0 1.0

$lab^*olv^*_{Ma}$: 0.0 0.8 1.0

triangle lightness t^*

% Gamut

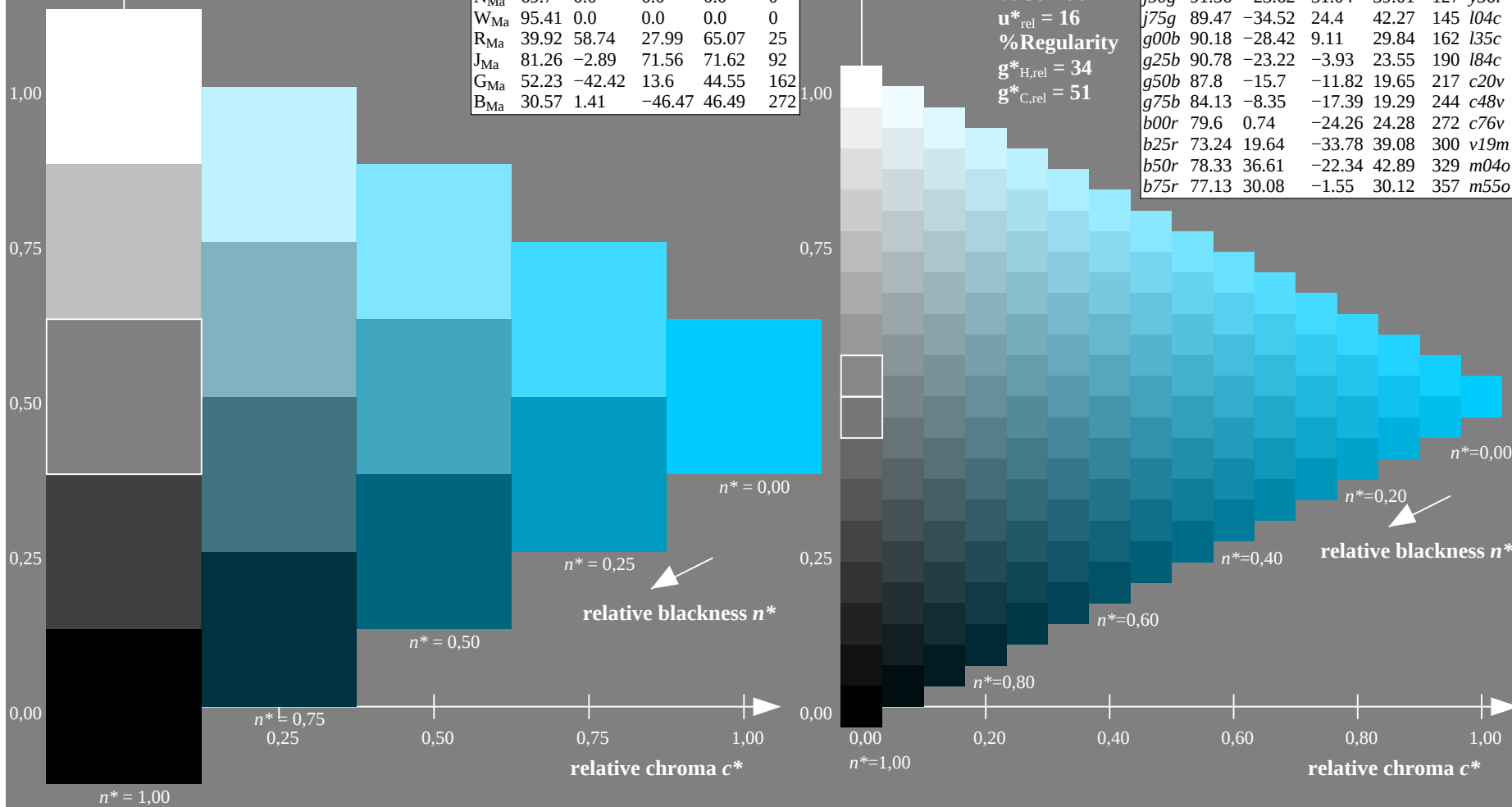
$u^*_{rel} = 16$

% Regularity

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

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

TLS70a; adapted (a) CIELAB data					
u^*	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	77.25	24.54	11.69	27.18	25
r25j	80.45	17.76	16.1	23.97	42
r50j	83.18	11.98	19.85	23.19	59
r75j	85.97	6.08	23.69	24.45	76
j00g	89.38	-1.15	28.38	28.4	92
j25g	93.65	-12.31	34.2	36.35	110
j50g	91.56	-23.62	31.04	39.01	127
j75g	89.47	-34.52	24.4	42.27	145
g00b	90.18	-28.42	9.11	29.84	162
g25b	90.78	-23.22	-3.93	23.55	190
g50b	87.8	-15.7	-11.82	19.65	217
g75b	84.13	-8.35	-17.39	19.29	244
b00r	79.6	0.74	-24.26	24.28	272
b25r	73.24	19.64	-33.78	39.08	300
b50r	78.33	36.61	-22.34	42.89	329
b75r	77.13	30.08	-1.55	30.12	357



Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.679$

data for any colour:

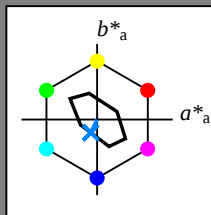
lab^*tch^* and lab^*ncu^*

elementary and device

hue text:

$u^* = g75b$ $d^* = c48v$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
Name	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 84 -8 -17

$LAB^*LCH^*_{Ma}$: 84 19 244

$lab^*rgb^*_{Ma}$: 0.0 0.5 1.0

$lab^*olv^*_{Ma}$: 0.0 0.52 1.0

triangle lightness t^*

% Gamut

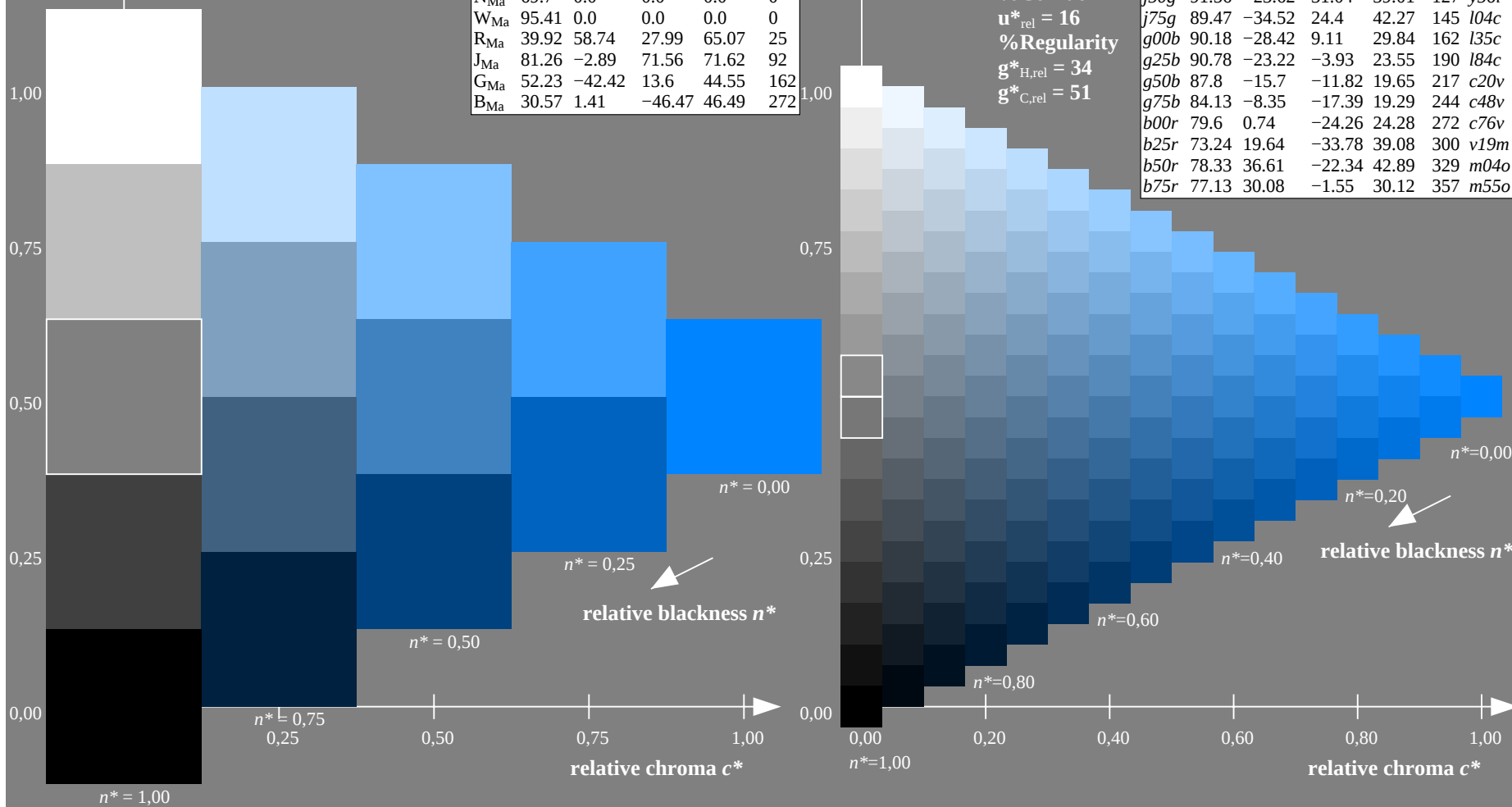
$u^*_{rel} = 16$

% Regularity

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

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

TLS70a; adapted (a) CIELAB data					
u^*	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	77.25	24.54	11.69	27.18	25
r25j	80.45	17.76	16.1	23.97	42
r50j	83.18	11.98	19.85	23.19	59
r75j	85.97	6.08	23.69	24.45	76
j00g	89.38	-1.15	28.38	28.4	92
j25g	93.65	-12.31	34.2	36.35	110
j50g	91.56	-23.62	31.04	39.01	127
j75g	89.47	-34.52	24.4	42.27	145
g00b	90.18	-28.42	9.11	29.84	162
g25b	90.78	-23.22	-3.93	23.55	190
g50b	87.8	-15.7	-11.82	19.65	217
g75b	84.13	-8.35	-17.39	19.29	244
b00r	79.6	0.74	-24.26	24.28	272
b25r	73.24	19.64	-33.78	39.08	300
b50r	78.33	36.61	-22.34	42.89	329
b75r	77.13	30.08	-1.55	30.12	357



Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.755$

data for any colour:

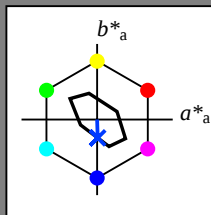
lab^*tch^* and lab^*ncu^*

elementary and device

hue text:

$u^* = b00r$ $d^* = c76v$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
Name	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 80 1 -24

$LAB^*LCH^*_{Ma}$: 80 24 271

$lab^*rgb^*_{Ma}$: 0.0 0.0 1.0

$lab^*olv^*_{Ma}$: 0.0 0.23 1.0

triangle lightness t^*

% Gamut

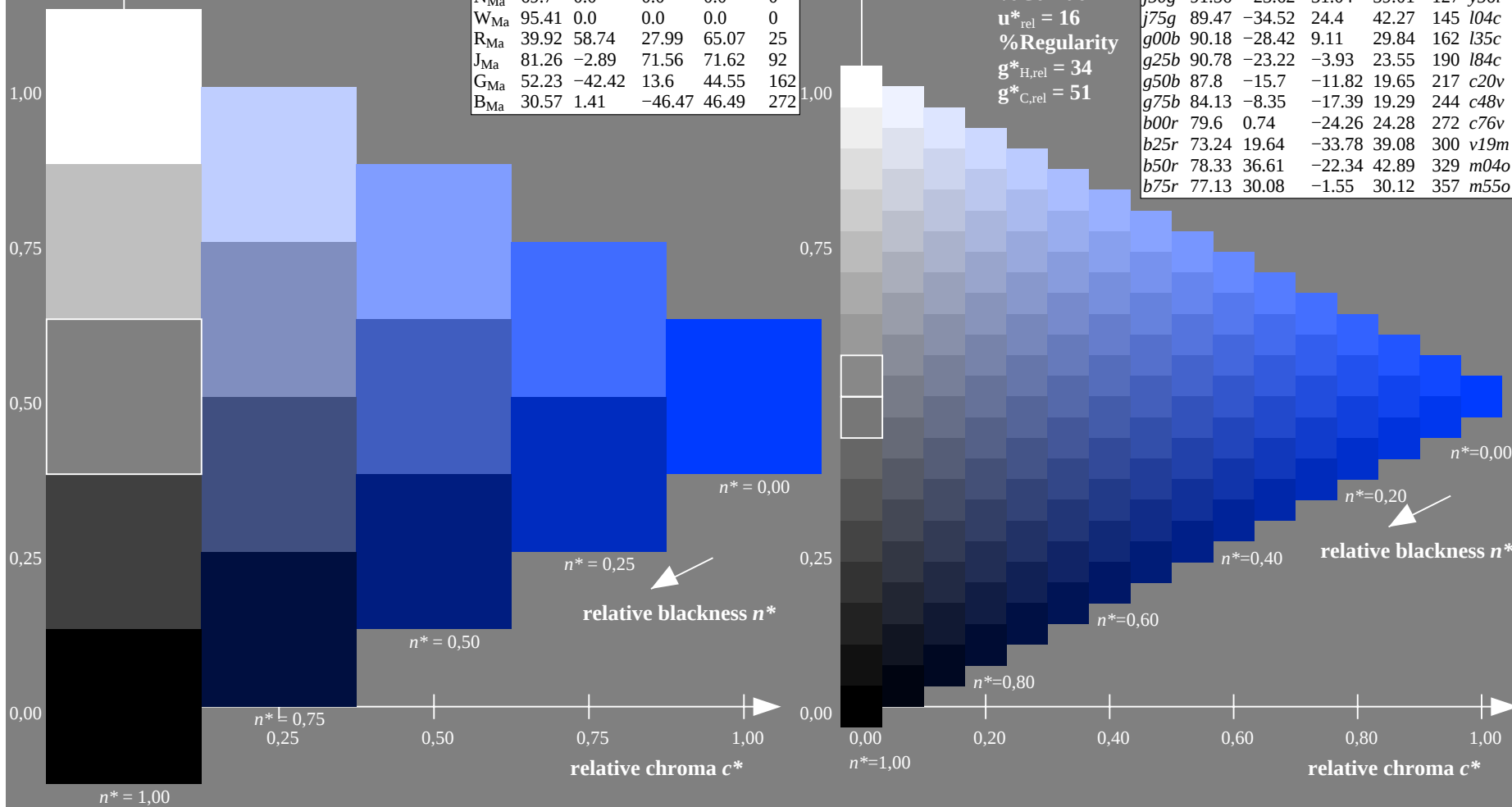
$u^*_{rel} = 16$

% Regularity

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

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

TLS70a; adapted (a) CIELAB data							
u^*	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$	d^*	
r00j	77.25	24.54	11.69	27.18	25	o04y	
r25j	80.45	17.76	16.1	23.97	42	o23y	
r50j	83.18	11.98	19.85	23.19	59	o43y	
r75j	85.97	6.08	23.69	24.45	76	o62y	
j00g	89.38	-1.15	28.38	28.4	92	o82y	
j25g	93.65	-12.31	34.2	36.35	110	y07l	
j50g	91.56	-23.62	31.04	39.01	127	y56l	
j75g	89.47	-34.52	24.4	42.27	145	i04c	
g00b	90.18	-28.42	9.11	29.84	162	i35c	
g25b	90.78	-23.22	-3.93	23.55	190	i84c	
g50b	87.8	-15.7	-11.82	19.65	217	c20v	
g75b	84.13	-8.35	-17.39	19.29	244	c48v	
b00r	79.6	0.74	-24.26	24.28	272	c76v	
b25r	73.24	19.64	-33.78	39.08	300	v19m	
b50r	78.33	36.61	-22.34	42.89	329	m04o	
b75r	77.13	30.08	-1.55	30.12	357	m55o	



Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.834$

data for any colour:

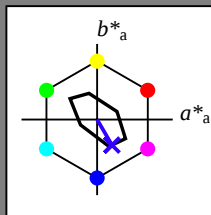
lab^*tch^* and lab^*ncu^*

elementary and device

hue text:

$u^* = b25r$ $d^* = v19m$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
Name	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 73 20 -34

$LAB^*LCH^*_{Ma}$: 73 39 300

$lab^*rgb^*_{Ma}$: 0.5 0.0 1.0

$lab^*olv^*_{Ma}$: 0.2 0.0 1.0

triangle lightness t^*

% Gamut

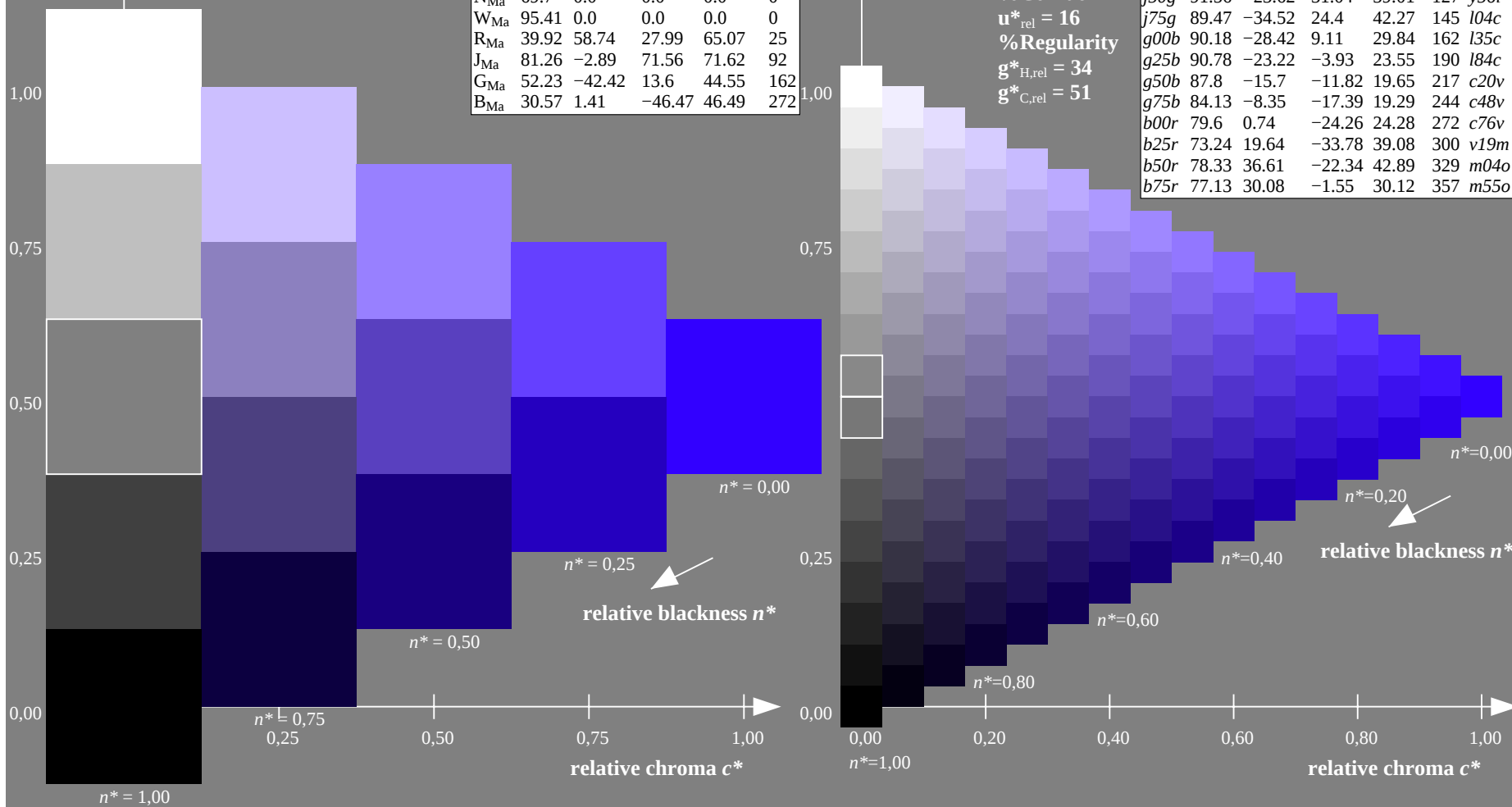
$u^*_{rel} = 16$

% Regularity

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

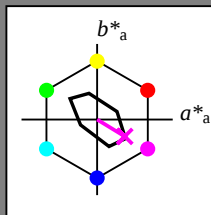
$g^*_{C,rel} = 51$

TLS70a; adapted (a) CIELAB data					
u^*	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	77.25	24.54	11.69	27.18	25
r25j	80.45	17.76	16.1	23.97	42
r50j	83.18	11.98	19.85	23.19	59
r75j	85.97	6.08	23.69	24.45	76
j00g	89.38	-1.15	28.38	28.4	92
j25g	93.65	-12.31	34.2	36.35	110
j50g	91.56	-23.62	31.04	39.01	127
j75g	89.47	-34.52	24.4	42.27	145
g00b	90.18	-28.42	9.11	29.84	162
g25b	90.78	-23.22	-3.93	23.55	190
g50b	87.8	-15.7	-11.82	19.65	217
g75b	84.13	-8.35	-17.39	19.29	244
b00r	79.6	0.74	-24.26	24.28	272
b25r	73.24	19.64	-33.78	39.08	300
b50r	78.33	36.61	-22.34	42.89	329
b75r	77.13	30.08	-1.55	30.12	357



Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab \cdot h^* = h_{ab}/360 = 0.913$ data for any colour: Data for maximum colour (Ma):

*lab*tch** and *lab*ncu**
elementary and device
hue text:
 $u^* = b50r$ $d^* = m04o$

$$u^* = b50r$$


<i>Name</i>	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
C _{Ma}	90.93	-21.96	-7.08	23.07	198
V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

LAB*LAB*_{Ma}: 78 37 -22

LAB*LCH*Ma: 78 43 328

lab*rgb*Ma: 1.0 0.0 1.0

*lab*olv**_{Ma}: 1.0 0.0 0.95

triangle lightness t^*

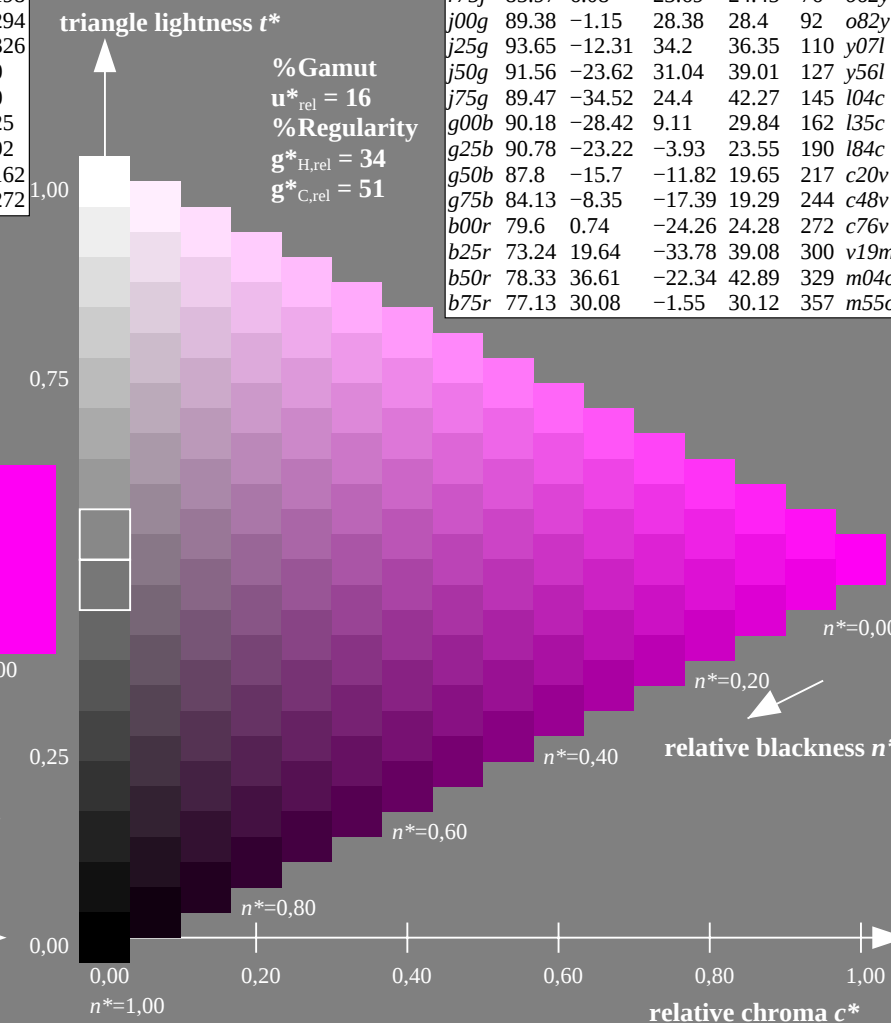
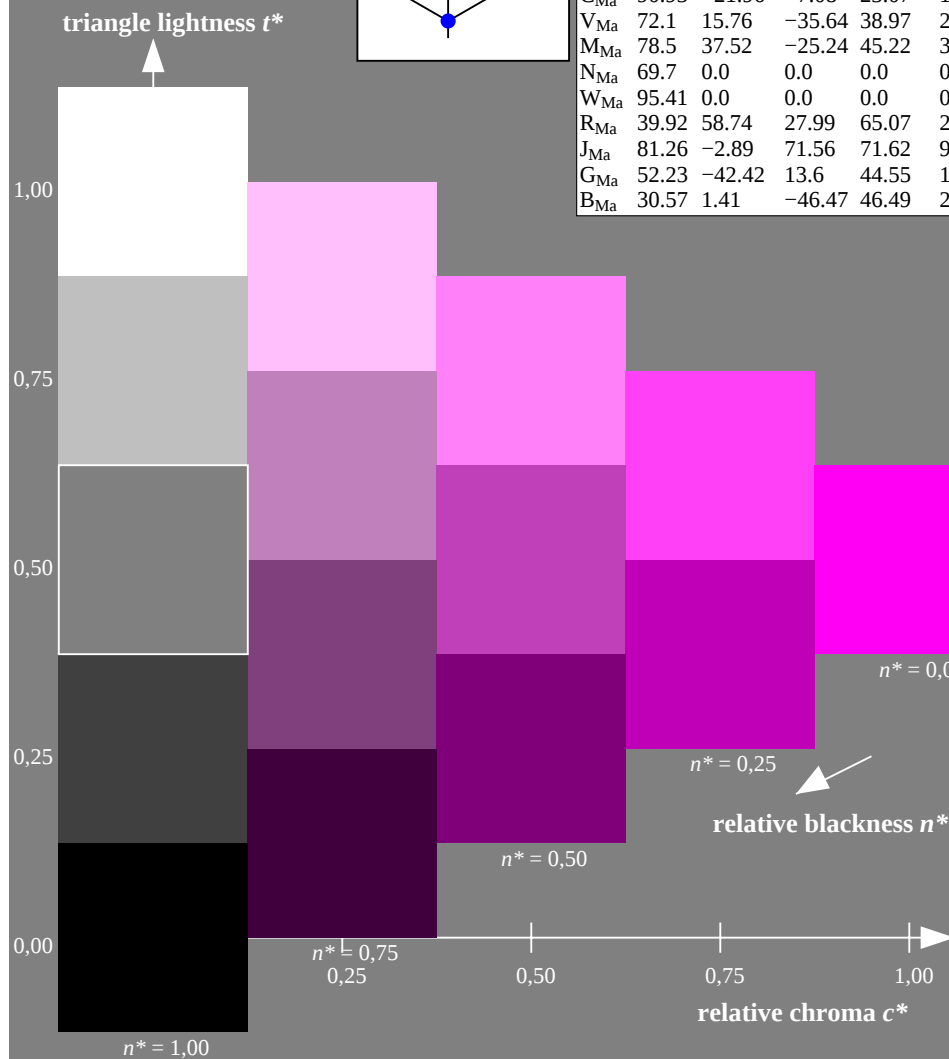
%Gamut

$$\mathbf{u}_{\text{rel}}^* = 16$$

%Regularity

$$g^*_{H,rel} = 34$$
 $\mathbf{g} = \mathbf{C}_{\text{rel}} = \mathbf{J}$

TLS70a; adapted (a) CIELAB data						
u^*	$L^*=L_a^*$	a_a^*	b_a^*	$C_{ab,a}^*$	$h_{ab,a}^*$	d^*
<i>r00j</i>	77.25	24.54	11.69	27.18	25	<i>o04v</i>
<i>r25j</i>	80.45	17.76	16.1	23.97	42	<i>o23y</i>
<i>r50j</i>	83.18	11.98	19.85	23.19	59	<i>o43y</i>
<i>r75j</i>	85.97	6.08	23.69	24.45	76	<i>o62y</i>
<i>j00g</i>	89.38	-1.15	28.38	28.4	92	<i>o82y</i>
<i>j25g</i>	93.65	-12.31	34.2	36.35	110	<i>y07l</i>
<i>j50g</i>	91.56	-23.62	31.04	39.01	127	<i>y56l</i>
<i>j75g</i>	89.47	-34.52	24.4	42.27	145	<i>l04c</i>
<i>g00b</i>	90.18	-28.42	9.11	29.84	162	<i>l35c</i>
<i>g25b</i>	90.78	-23.22	-3.93	23.55	190	<i>l84c</i>
<i>g50b</i>	87.8	-15.7	-11.82	19.65	217	<i>c20v</i>
<i>g75b</i>	84.13	-8.35	-17.39	19.29	244	<i>c48v</i>
<i>b00r</i>	79.6	0.74	-24.26	24.28	272	<i>c76v</i>
<i>b25r</i>	73.24	19.64	-33.78	39.08	300	<i>v19m</i>
<i>b50r</i>	78.33	36.61	-22.34	42.89	329	<i>m04c</i>
<i>b75r</i>	77.13	30.08	-1.55	30.12	357	<i>m55c</i>

TUB registration: 20090901-IE59/IE59L0NA.PS/.TXT
application for output of visual display systems

TUB material: code=rha4ta

TUB-test chart IE59; Colorimetric systems, Page 15/16
Hue plane and data table for 16 hues $r00j$ to $b75r$

input: *rgb (->rgb*) setrgbcolor*
output: no change compared to input

Input and output: Colorimetric Television Luminous System TLS70a for relative CIELAB hue $h^* = lab^*h^* = h_{ab}/360 = 0.992$

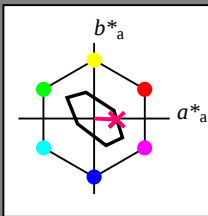
data for any colour:

lab^*tch^* and lab^*ncu^*
elementary and device

hue text:

$u^* = b75r$ $d^* = m55o$

triangle lightness t^*



TLS70a; adapted (a) CIELAB data					
Name	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	-10.77	34.63	36.27	107
L _{Ma}	89.32	-35.81	27.64	45.24	142
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V _{Ma}	72.1	15.76	-35.64	38.97	294
M _{Ma}	78.5	37.52	-25.24	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 _{Ma}	39.92	58.74	27.99	65.07	25
J _{Ma}	81.26	-2.89	71.56	71.62	92
G _{Ma}	52.23	-42.42	13.6	44.55	162
B _{Ma}	30.57	1.41	-46.47	46.49	272

Data for maximum colour (Ma):

$LAB^*LAB^*_{Ma}$: 77 30 -2

$LAB^*LCH^*_{Ma}$: 77 30 357

$lab^*rgb^*_{Ma}$: 1.0 0.0 0.5

$lab^*olv^*_{Ma}$: 1.0 0.0 0.45

triangle lightness t^*

% Gamut

$u^*_{rel} = 16$

% Regularity

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

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

TLS70a; adapted (a) CIELAB data					
u^*	L^*_a	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
r00j	77.25	24.54	11.69	27.18	25
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j50g	91.56	-23.62	31.04	39.01	127
j75g	89.47	-34.52	24.4	42.27	145
g00b	90.18	-28.42	9.11	29.84	162
g25b	90.78	-23.22	-3.93	23.55	190
g50b	87.8	-15.7	-11.82	19.65	217
g75b	84.13	-8.35	-17.39	19.29	244
b00r	79.6	0.74	-24.26	24.28	272
b25r	73.24	19.64	-33.78	39.08	300
b50r	78.33	36.61	-22.34	42.89	329
b75r	77.13	30.08	-1.55	30.12	357

