

Input: Colorimetric Television Luminous System TLS70

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

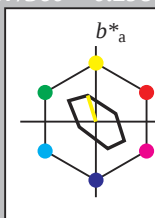
lab^*tch and lab^*nch

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 _{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

%Regularity

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

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

relative Inform. Technology (IT)
olv3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olv4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 0.0 0.0
LAB*LABa 95.41 0.0 0.0
LAB*TCHa 99.99 0.0 0.0

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*tce 1.0 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olv3* 0.75 0.75 0.75 (1.0)
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OE590-7, 5 step scales for constant CIELAB hue 107/360 = 0.298 (left)

BAM-test chart OE59; Colorimetric systems TLS70 & TLS70

D65: 2 coordinate data of 5 step colour scales for 10 hues

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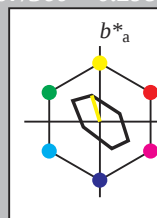
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triangle lightness t^*



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

input: $cm y 0^* set c m y k color$

output: $cm y 0^* / 000 n^* set c m y k color$

(

Input: Colorimetric Television Luminous System TLS70

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

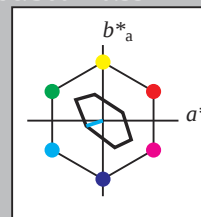
lab^*tch and lab^*nch

D65: hue C

LCH*Ma: 91 23 198

olv*Ma: 0.0 1.0 1.0

triangle lightness t^*



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relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*lrj 1.0 0.0 0.0
lab*tce 1.0 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olv3* 0.75 1.0 1.0 (1.0)
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standard and adapted CIELAB
LAB*LAB 94.29 -5.48 -1.76
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relative CIELAB lab*
lab*lab 0.956 -0.237 -0.076
lab*tch 0.875 0.25 0.55
lab*nch 0.0 0.25 0.55
relative Natural Colour (NC)
lab*lrj 0.956 -0.217 -0.121
lab*tce 0.875 0.25 0.581
lab*nce 0.0 0.25 0.581

relative Inform. Technology (IT)
olv3* 0.5 1.0 1.0 (1.0)
cmyn3* 0.5 0.0 0.0 (0.0)
olv4* 0.5 1.0 1.0 (1.0)
cmyn4* 0.5 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 93.17 -10.97 -3.53
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relative CIELAB lab*
lab*lab 0.913 -0.475 -0.152
lab*tch 0.75 0.5 0.55
lab*nch 0.0 0.5 0.55
relative Natural Colour (NC)
lab*lrj 0.913 -0.435 -0.244
lab*tce 0.75 0.5 0.581
lab*nce 0.0 0.5 0.581

relative Inform. Technology (IT)
olv3* 0.25 1.0 1.0 (1.0)
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olv4* 0.25 1.0 1.0 (1.0)
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standard and adapted CIELAB
LAB*LAB 92.05 -16.46 -5.3
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relative CIELAB lab*
lab*lab 0.869 -0.713 -0.229
lab*tch 0.625 0.75 0.55
lab*nch 0.0 0.75 0.55
relative Natural Colour (NC)
lab*lrj 0.869 -0.653 -0.366
lab*tce 0.625 0.75 0.581
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relative CIELAB lab*
lab*lab 0.826 -0.871 -0.488
lab*tch 0.5 1.0 0.55
lab*nch 0.0 1.0 0.55
relative Natural Colour (NC)
lab*lrj 0.826 -0.871 -0.488
lab*tce 0.5 1.0 0.581
lab*nce 0.0 1.0 0.581

relative Inform. Technology (IT)
olv3* 0.5 0.5 0.5 (0.5)
cmyn3* 0.5 0.5 0.5 (0.5)
olv4* 0.5 0.5 0.5 (0.5)
cmyn4* 0.5 0.5 0.5 (0.5)
standard and adapted CIELAB
LAB*LAB 82.56 0.0 0.0
LAB*LAB 82.56 0.0 0.0
LAB*LAB 82.56 0.0 0.0
LAB*LAB 82.56 0.0 0.0
relative CIELAB lab*
lab*lab 0.619 -0.713 -0.229
lab*tch 0.375 0.75 0.55
lab*nch 0.0 0.75 0.55
relative Natural Colour (NC)
lab*lrj 0.619 -0.653 -0.366
lab*tce 0.375 0.75 0.581
lab*nce 0.0 0.75 0.581

relative Inform. Technology (IT)
olv3* 0.25 0.5 0.5 (0.5)
cmyn3* 0.25 0.5 0.5 (0.5)
olv4* 0.25 0.5 0.5 (0.5)
cmyn4* 0.25 0.5 0.5 (0.5)
standard and adapted CIELAB
LAB*LAB 80.32 -10.97 -3.53
LAB*LAB 80.32 -10.97 -3.53
LAB*LAB 80.32 -10.97 -3.53
LAB*LAB 80.32 -10.97 -3.53
relative CIELAB lab*
lab*lab 0.456 -0.237 -0.076
lab*tch 0.375 0.25 0.55
lab*nch 0.0 0.25 0.55
relative Natural Colour (NC)
lab*lrj 0.456 -0.217 -0.121
lab*tce 0.375 0.25 0.581
lab*nce 0.0 0.25 0.581

relative Inform. Technology (IT)
olv3* 0.0 0.5 0.5 (0.5)
cmyn3* 0.0 0.5 0.5 (0.5)
olv4* 0.0 0.5 0.5 (0.5)
cmyn4* 0.0 0.5 0.5 (0.5)
standard and adapted CIELAB
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olv3* 0.5 0.5 0.5 (0.5)
cmyn3* 0.5 0.5 0.5 (0.5)
olv4* 0.5 0.5 0.5 (0.5)
cmyn4* 0.5 0.5 0.5 (0.5)
standard and adapted CIELAB
LAB*LAB 70.13 0.0 0.0
LAB*LAB 70.13 0.0 0.0
LAB*LAB 70.13 0.0 0.0
LAB*LAB 70.13 0.0 0.0
relative CIELAB lab*
lab*lab 0.119 -0.475 -0.152
lab*tch 0.119 0.25 0.55
lab*nch 0.0 0.25 0.55
relative Natural Colour (NC)
lab*lrj 0.119 -0.435 -0.244
lab*tce 0.119 0.25 0.581
lab*nce 0.0 0.25 0.581

relative Inform. Technology (IT)
olv3* 0.0 0.25 0.25 (0.25)
cmyn3* 0.0 0.25 0.25 (0.25)
olv4* 0.0 0.25 0.25 (0.25)
cmyn4* 0.0 0.25 0.25 (0.25)
standard and adapted CIELAB
LAB*LAB 65.01 0.0 0.0
LAB*LAB 65.01 0.0 0.0
LAB*LAB 65.01 0.0 0.0
LAB*LAB 65.01 0.0 0.0
relative CIELAB lab*
lab*lab 0.063 -0.435 -0.244
lab*tch 0.063 0.125 0.581
lab*nch 0.0 0.125 0.581
relative Natural Colour (NC)
lab*lrj 0.063 -0.435 -0.244
lab*tce 0.063 0.125 0.581
lab*nce 0.0 0.125 0.581

relative Inform. Technology (IT)
olv3* 0.25 0.25 0.25 (0.25)
cmyn3* 0.75 0.75 0.75 (0.75)
olv4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olv3* 0.0 0.5 0.5 (0.5)
cmyn3* 0.0 0.5 0.5 (0.5)
olv4* 0.0 0.5 0.5 (0.5)
cmyn4* 0.0 0.5 0.5 (0.5)
standard and adapted CIELAB
LAB*LAB 70.13 -10.97 -3.53
LAB*LAB 70.13 -10.97 -3.53
LAB*LAB 70.13 -10.97 -3.53
LAB*LAB 70.13 -10.97 -3.53
relative CIELAB lab*
lab*lab 0.413 -0.475 -0.152
lab*tch 0.25 0.5 0.55
lab*nch 0.0 0.5 0.55
relative Natural Colour (NC)
lab*lrj 0.413 -0.435 -0.244
lab*tce 0.25 0.5 0.581
lab*nce 0.0 0.5 0.581

relative Inform. Technology (IT)
olv3* 0.0 0.25 0.25 (0.25)
cmyn3* 0.0 0.25 0.25 (0.25)
olv4* 0.0 0.25 0.25 (0.25)
cmyn4* 0.0 0.25 0.25 (0.25)
standard and adapted CIELAB
LAB*LAB 65.01 -10.97 -3.53
LAB*LAB 65.01 -10.97 -3.53
LAB*LAB 65.01 -10.97 -3.53
LAB*LAB 65.01 -10.97 -3.53
relative CIELAB lab*
lab*lab 0.119 -0.475 -0.152
lab*tch 0.119 0.125 0.581
lab*nch 0.0 0.125 0.581
relative Natural Colour (NC)
lab*lrj 0.119 -0.435 -0.244
lab*tce 0.119 0.125 0.581
lab*nce 0.0 0.125 0.581

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (0.0)
cmyn3* 1.0 1.0 1.0 (1.0)
olv4* 0.0 0.0 0.0 (0.0)
cmyn4* 1.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (0.0)
cmyn3* 1.0 1.0 1.0 (1.0)
olv4* 0.0 0.0 0.0 (0.0)
cmyn4* 1.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olv3* 0.25 0.25 0.25 (0.25)
cmyn3* 0.75 0.75 0.75 (0.75)
olv4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 70.13 0.0 0.0
LAB*LAB 70.13 0.0 0.0
LAB*LAB 70.13 0.0 0.0
LAB*LAB 70.13 0.0 0.0
relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*lrj 0.25 0.0 0.0
lab*tce 0.25 0.0 0.0
lab*nce 0.0 0.0 0.0

relative Inform. Technology (IT)
olv3* 0.0 0.25 0.25 (0.25)
cmyn3* 0.0 0.25 0.25 (0.25)
olv4* 0.0 0.25 0.25 (0.25)
cmyn4* 0.0 0.25 0.25 (0.25)
standard and adapted CIELAB
LAB*LAB 65.01 0.0 0.0
LAB*LAB 65.01 0.0 0.0
LAB*LAB 65.01 0.0 0.0
LAB*LAB 65.01 0.0 0.0
relative CIELAB lab*
lab*lab 0.063 -0.435 -0.244
lab*tch 0.063 0.125 0.581
lab*nch 0.0 0.125 0.581
relative Natural Colour (NC)
lab*lrj 0.063 -0.435 -0.244
lab*tce 0.063 0.125 0.581
lab*nce 0.0 0.125 0.581

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (0.0)
cmyn3* 1.0 1.0 1.0 (1.0)
olv4* 0.0 0.0 0.0 (0.0)
cmyn4* 1.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (0.0)
cmyn3* 1.0 1.0 1.0 (1.0)
olv4* 0.0 0.0 0.0 (0.0)
cmyn4* 1.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

relative Inform. Technology (IT)
olv3* 0.0 0.0 0.0 (0.0)
cmyn3* 1.0 1.0 1.0 (1.0)
olv4* 0.0 0.0 0.0 (0.0)
cmyn4* 1.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
LAB*LAB 69.7 0.0 0.0
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 0.0
lab*nce 1.0 0.0 0.0

OE59-7, 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 OE59; Colorimetric systems TLS70 & TLS70

D65: 2 coordinate data of 5 step colour scales for 10 hues

input: `cmY0* setcmYcolor`

output: `cmY0* / 000n* setcmYcolor`

```
output: cmv0* / 000n* setcmvcolor
```

Input: Colorimetric Television Luminous System TLS70

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

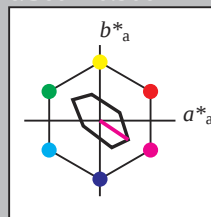
lab^*tch and lab^*nch

D65: hue M

LCH*Ma: 79 45 326

olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



$u^*_{rel} = 16$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 0.0 0.0
LAB*LAB 95.41 0.0 0.0
LAB*LAB 95.41 0.0 0.0
LAB*LAB 95.41 0.0 0.0

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*trc 1.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 88.98 0.0 0.0
LAB*LAB 88.98 0.0 0.0
LAB*LAB 88.98 0.0 0.0
LAB*LAB 88.98 0.0 0.0

relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.75 0.0 0.0
lab*trc 0.75 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (0.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 82.56 0.0 0.0
LAB*LAB 82.56 0.0 0.0
LAB*LAB 82.56 0.0 0.0
LAB*LAB 82.56 0.0 0.0

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0
lab*trc 0.5 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0

relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.25 0.0 0.0
lab*trc 0.25 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 69.17 0.0 0.0
LAB*LAB 69.17 0.0 0.0
LAB*LAB 69.17 0.0 0.0
LAB*LAB 69.17 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 69.17 0.0 0.0
LAB*LAB 69.17 0.0 0.0
LAB*LAB 69.17 0.0 0.0
LAB*LAB 69.17 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 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 _{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

%Regularity

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

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

relative Inform. Technology (IT)
olvi3* 1.0 0.5 1.0 (1.0)
cmyn3* 0.0 0.5 0.0 (0.0)
olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 86.95 18.76 -12.61
LAB*LAB 86.95 18.76 -12.61
LAB*LAB 86.95 18.76 -12.61
LAB*LAB 86.95 18.76 -12.61

relative CIELAB lab*
lab*lab 0.671 0.415 -0.278
lab*tch 0.75 0.5 0.906
lab*nch 0.0 0.5 0.906
relative Natural Colour (NC)
lab*trj 0.671 0.415 -0.278
lab*trc 0.75 0.5 0.906
lab*ncc 0.0 0.5 0.906

relative Inform. Technology (IT)
olvi3* 0.75 0.25 0.75 (1.0)
cmyn3* 0.25 0.75 0.25 (0.0)
olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 80.53 18.76 -12.61
LAB*LAB 80.53 18.76 -12.61
LAB*LAB 80.53 18.76 -12.61
LAB*LAB 80.53 18.76 -12.61

relative CIELAB lab*
lab*lab 0.507 0.622 -0.418
lab*tch 0.625 0.75 0.906
lab*nch 0.0 0.75 0.906
relative Natural Colour (NC)
lab*trj 0.507 0.622 -0.418
lab*trc 0.625 0.75 0.906
lab*ncc 0.0 0.75 0.906

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.5 (1.0)
cmyn3* 0.5 0.0 0.5 (0.0)
olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 76.13 18.76 -12.61
LAB*LAB 76.13 18.76 -12.61
LAB*LAB 76.13 18.76 -12.61
LAB*LAB 76.13 18.76 -12.61

relative CIELAB lab*
lab*lab 0.257 0.622 -0.418
lab*tch 0.375 0.75 0.906
lab*nch 0.0 0.75 0.906
relative Natural Colour (NC)
lab*trj 0.257 0.622 -0.418
lab*trc 0.375 0.75 0.906
lab*ncc 0.0 0.75 0.906

relative Inform. Technology (IT)
olvi3* 0.25 0.0 0.25 (1.0)
cmyn3* 0.75 0.0 0.25 (0.0)
olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 71.9 18.76 -12.61
LAB*LAB 71.9 18.76 -12.61
LAB*LAB 71.9 18.76 -12.61
LAB*LAB 71.9 18.76 -12.61

relative CIELAB lab*
lab*lab 0.171 0.415 -0.278
lab*tch 0.25 0.5 0.906
lab*nch 0.0 0.5 0.906
relative Natural Colour (NC)
lab*trj 0.171 0.415 -0.278
lab*trc 0.25 0.5 0.906
lab*ncc 0.0 0.5 0.906

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 1.0 0.0 0.0

Output: Colorimetric Television Luminous System TLS70

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

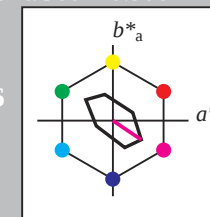
lab^*tch and lab^*nch

D65: hue M

LCH*Ma: 79 45 326

olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



$u^*_{rel} = 16$

relative Inform. Technology (IT)
olvi3* 1.0 1.0 1.0 (1.0)
cmyn3* 0.0 0.0 0.0 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 95.41 0.0 0.0
LAB*LAB 95.41 0.0 0.0
LAB*LAB 95.41 0.0 0.0
LAB*LAB 95.41 0.0 0.0

relative CIELAB lab*
lab*lab 1.0 0.0 0.0
lab*tch 1.0 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 1.0 0.0 0.0
lab*trc 1.0 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.75 0.75 0.75 (1.0)
cmyn3* 0.25 0.25 0.25 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 88.98 0.0 0.0
LAB*LAB 88.98 0.0 0.0
LAB*LAB 88.98 0.0 0.0
LAB*LAB 88.98 0.0 0.0

relative CIELAB lab*
lab*lab 0.75 0.0 0.0
lab*tch 0.75 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.75 0.0 0.0
lab*trc 0.75 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.5 0.5 0.5 (0.0)
cmyn3* 0.5 0.5 0.5 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 82.56 0.0 0.0
LAB*LAB 82.56 0.0 0.0
LAB*LAB 82.56 0.0 0.0
LAB*LAB 82.56 0.0 0.0

relative CIELAB lab*
lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.5 0.0 0.0
lab*trc 0.5 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.25 0.25 0.25 (1.0)
cmyn3* 0.75 0.75 0.75 (0.0)
olvi4* 1.0 1.0 1.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0
LAB*LAB 76.13 0.0 0.0

relative CIELAB lab*
lab*lab 0.25 0.0 0.0
lab*tch 0.25 0.0 0.0
lab*nch 0.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.25 0.0 0.0
lab*trc 0.25 0.0 0.0
lab*ncc 0.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 1.0 0.0 0.0

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 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 _{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

%Regularity

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

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

relative Inform. Technology (IT)
olvi3* 1.0 0.5 1.0 (1.0)
cmyn3* 0.0 0.5 0.0 (0.0)
olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 86.95 18.76 -12.61
LAB*LAB 86.95 18.76 -12.61
LAB*LAB 86.95 18.76 -12.61
LAB*LAB 86.95 18.76 -12.61

relative CIELAB lab*
lab*lab 0.671 0.415 -0.278
lab*tch 0.75 0.5 0.906
lab*nch 0.0 0.5 0.906
relative Natural Colour (NC)
lab*trj 0.671 0.415 -0.278
lab*trc 0.75 0.5 0.906
lab*ncc 0.0 0.5 0.906

relative Inform. Technology (IT)
olvi3* 0.75 0.25 0.75 (1.0)
cmyn3* 0.25 0.75 0.25 (0.0)
olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 80.53 18.76 -12.61
LAB*LAB 80.53 18.76 -12.61
LAB*LAB 80.53 18.76 -12.61
LAB*LAB 80.53 18.76 -12.61

relative CIELAB lab*
lab*lab 0.507 0.622 -0.418
lab*tch 0.625 0.75 0.906
lab*nch 0.0 0.75 0.906
relative Natural Colour (NC)
lab*trj 0.507 0.622 -0.418
lab*trc 0.625 0.75 0.906
lab*ncc 0.0 0.75 0.906

relative Inform. Technology (IT)
olvi3* 0.5 0.0 0.5 (1.0)
cmyn3* 0.5 0.0 0.5 (0.0)
olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 76.13 18.76 -12.61
LAB*LAB 76.13 18.76 -12.61
LAB*LAB 76.13 18.76 -12.61
LAB*LAB 76.13 18.76 -12.61

relative CIELAB lab*
lab*lab 0.257 0.622 -0.418
lab*tch 0.375 0.75 0.906
lab*nch 0.0 0.75 0.906
relative Natural Colour (NC)
lab*trj 0.257 0.622 -0.418
lab*trc 0.375 0.75 0.906
lab*ncc 0.0 0.75 0.906

relative Inform. Technology (IT)
olvi3* 0.25 0.0 0.25 (1.0)
cmyn3* 0.75 0.0 0.25 (0.0)
olvi4* 1.0 0.5 1.0 (1.0)
cmyn4* 0.0 0.5 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 71.9 18.76 -12.61
LAB*LAB 71.9 18.76 -12.61
LAB*LAB 71.9 18.76 -12.61
LAB*LAB 71.9 18.76 -12.61

relative CIELAB lab*
lab*lab 0.171 0.415 -0.278
lab*tch 0.25 0.5 0.906
lab*nch 0.0 0.5 0.906
relative Natural Colour (NC)
lab*trj 0.171 0.415 -0.278
lab*trc 0.25 0.5 0.906
lab*ncc 0.0 0.5 0.906

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 0.0 0.0 (0.0)
olvi4* 1.0 0.0 0.0 (1.0)
cmyn4* 0.0 0.0 0.0 (0.0)
standard and adapted CIELAB
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0
LAB*LAB 69.0 0.0 0.0

relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 0.0
lab*nch 1.0 0.0 0.0
relative Natural Colour (NC)
lab*trj 0.0 0.0 0.0
lab*trc 0.0 0.0 0.0
lab*ncc 1.0 0.0 0.0

OE590-7, 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 OE59; Colorimetric systems TLS70 & TLS70

input: $cmy0^* \text{ setcmykcolor}$

D65: 2 coordinate data of 5 step colour scales for 10 hues

output: $cmy0^* / 000n^* \text{ setcmykcolor}$

```
output: cmv0* / 000n* setcmvcolor
```




DZALVI MATHCLIM