

Input: Colorimetric Television Luminous System TLS00

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

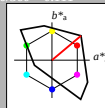
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 51 100 40

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 158$

% Regularity

$g^*_{rel} = 20$

$g^*_{rel} = 37$

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\*LABo 95.41 0.0 0.0  
LAB\*TCHo 99.99 0.01 -

relative CIELAB lab\*  
lab\*lab 1.0 0.5 0.0 (1.0)  
lab\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*ncc 1.0 0.0 0.0  
lab\*nccE 0.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
olvi4\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 47.72 0.0 0.0  
LAB\*LABo 47.72 0.0 0.0  
LAB\*TCHo 50.0 0.01 -

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0 (1.0)  
lab\*tch 0.5 0.0 0.0  
lab\*nch 0.5 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*ncc 0.5 0.0 0.0  
lab\*nccE 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
olvi4\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABo 0.03 0.0 0.0  
LAB\*TCHo 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0 (1.0)  
lab\*tch 0.0 0.0 0.0  
lab\*nch 0.0 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*ncc 0.0 0.0 0.0  
lab\*nccE 1.0 0.0 -

$n^* = 1.0$

relative Inform. Technology (IT)  
olvi3\* 1.0 0.5 0.5 (1.0)  
olvi4\* 0.0 0.5 0.5 (0.0)  
cmyn3\* 0.0 0.5 0.5 (0.0)  
cmyn4\* 0.0 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 72.95 38.45 32.27  
LAB\*LABo 72.95 38.45 32.27  
LAB\*TCHo 75.0 50.2 40.0

relative CIELAB lab\*  
lab\*lab 0.765 0.383 0.321  
lab\*tch 0.75 0.5 0.111  
lab\*nch 0.0 0.5 0.111  
relative Natural Colour (NC)  
lab\*lrj 0.765 0.471 0.167  
lab\*ncc 0.75 0.5 0.054  
lab\*nccE 0.0 0.5 0.231

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.0 (1.0)  
olvi4\* 0.5 0.0 0.0 (0.0)  
cmyn3\* 0.5 1.0 1.0 (0.0)  
cmyn4\* 0.0 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 25.26 38.45 32.27  
LAB\*LABo 25.26 38.45 32.27  
LAB\*TCHo 25.01 50.2 40.0

relative CIELAB lab\*  
lab\*lab 0.265 0.383 0.321  
lab\*tch 0.25 0.5 0.111  
lab\*nch 0.0 0.5 0.111  
relative Natural Colour (NC)  
lab\*lrj 0.265 0.471 0.167  
lab\*ncc 0.25 0.5 0.054  
lab\*nccE 0.5 0.5 0.231

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

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0 (1.0)  
lab\*tch 0.0 0.0 0.0  
lab\*nch 0.0 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*ncc 0.0 0.0 0.0  
lab\*nccE 1.0 0.0 -

blackness  $n^*$

chromaticness  $c^*$

$n^* = 0.00$

Output: Colorimetric Television Luminous System TLS70

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

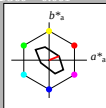
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 76 28 22

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 16$

% Regularity

$g^*_{rel} = 34$

$g^*_{rel} = 51$

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\*LABo 95.41 0.0 0.0  
LAB\*TCHo 99.99 0.01 -

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0 (1.0)  
lab\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*ncc 1.0 0.0 0.0  
lab\*nccE 0.0 0.0 -

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

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0 (1.0)  
lab\*tch 0.5 0.0 0.0  
lab\*nch 0.5 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*ncc 0.5 0.0 0.0  
lab\*nccE 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
olvi4\* 0.0 0.0 0.0 (0.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 69.7 0.0 0.0  
LAB\*LABo 69.7 0.0 0.0  
LAB\*TCHo 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0 (1.0)  
lab\*tch 0.0 0.0 0.0  
lab\*nch 0.0 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*ncc 0.0 0.0 0.0  
lab\*nccE 1.0 0.0 -

$n^* = 1.0$

TLS70; adapted (a) CIELAB data

|       | $L^*=L_a$ | $a^*$  | $b^*$  | $C^*_{ab}$ | $h^*_{ab}$ |
|-------|-----------|--------|--------|------------|------------|
| OMa   | 76.43     | 26.27  | 10.57  | 28.32      | 22         |
| YMa   | 93.93     | -10.76 | 34.63  | 36.27      | 107        |
| LMa   | 89.32     | -35.8  | 27.64  | 45.24      | 142        |
| CMa   | 90.93     | -21.95 | -7.07  | 23.07      | 198        |
| VMa   | 72.1      | 15.76  | -35.63 | 38.97      | 294        |
| MMa   | 78.5      | 37.52  | -25.23 | 45.22      | 326        |
| NMa   | 69.7      | 0.0    | 0.0    | 0.0        | 0          |
| WMa   | 95.41     | 0.0    | 0.0    | 0.0        | 0          |
| RCIE  | 39.92     | 58.74  | 27.99  | 65.07      | 25         |
| JCIE  | 81.26     | -2.88  | 71.56  | 71.62      | 92         |
| GCIIE | 82.23     | -42.41 | 13.6   | 44.55      | 162        |
| BCIE  | 30.57     | 1.41   | -46.46 | 46.49      | 272        |

relative Inform. Technology (IT)  
olvi3\* 1.0 0.5 0.5 (1.0)  
olvi4\* 0.0 0.5 0.5 (0.0)  
olvi4\* 1.0 0.5 0.5 (0.0)  
cmyn3\* 0.0 0.5 0.5 (0.0)  
cmyn4\* 0.0 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 85.92 13.13 5.28  
LAB\*LABo 85.92 13.13 5.28  
LAB\*TCHo 75.0 14.16 21.92

relative CIELAB lab\*  
lab\*lab 0.631 0.464 0.187  
lab\*tch 0.75 0.5 0.061  
lab\*nch 0.0 0.5 0.061  
relative Natural Colour (NC)  
lab\*lrj 0.631 0.499 -0.024  
lab\*ncc 0.75 0.5 0.992  
lab\*nccE 0.0 0.5 0.999

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.0 (1.0)  
olvi4\* 0.5 0.0 0.0 (0.0)  
olvi4\* 1.0 0.5 0.5 (0.0)  
cmyn3\* 0.0 0.5 0.5 (0.0)  
cmyn4\* 0.0 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 73.07 13.13 5.28  
LAB\*LABo 73.07 13.13 5.28  
LAB\*TCHo 25.01 14.16 21.92

relative CIELAB lab\*  
lab\*lab 0.131 0.464 0.187  
lab\*tch 0.25 0.5 0.061  
lab\*nch 0.0 0.5 0.061  
relative Natural Colour (NC)  
lab\*lrj 0.131 0.499 -0.024  
lab\*ncc 0.25 0.5 0.992  
lab\*nccE 0.0 0.5 0.999

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

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0 (1.0)  
lab\*tch 0.0 0.0 0.0  
lab\*nch 0.0 0.0 -  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*ncc 0.0 0.0 0.0  
lab\*nccE 1.0 0.0 -

blackness  $n^*$

chromaticness  $c^*$

$n^* = 0.00$