

# Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 38/360 = 0.105$

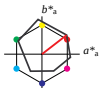
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 48 83 38

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 93$

% Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

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 -0.98 4.75  
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 - (0.0)  
lab\*nch 0.0 0.0 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0 (1.0)  
lab\*nce 1.0 0.0 0.0 (1.0)  
lab\*nceE 0.0 0.0 - (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
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 56.71 -0.24 2.14  
LAB\*LABo 56.71 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 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0 (1.0)  
lab\*nce 0.5 0.0 0.0 (1.0)  
lab\*nceE 0.5 0.0 - (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (1.0)  
olvi4\* 1.0 1.0 1.0 (1.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.5 -0.47  
LAB\*LABo 18.02 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 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0 (1.0)  
lab\*nce 0.0 0.0 0.0 (1.0)  
lab\*nceE 0.0 0.0 - (0.0)

$n^* = 1.0$

relative Inform. Technology (IT)  
olvi3\* 1.0 0.5 0.5 (1.0)  
cmyn3\* 0.0 0.5 0.5 (0.0)  
olvi4\* 1.0 0.5 0.5 (1.0)  
cmyn4\* 0.0 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 71.67 32.15 28.41  
LAB\*LABo 71.67 32.69 25.25  
LAB\*TCHo 75.0 41.31 37.69

relative CIELAB lab\*  
lab\*lab 0.693 0.396 0.306  
lab\*tch 0.75 0.5 0.105  
lab\*nch 0.0 0.5 0.105  
relative Natural Colour (NC)  
lab\*lrj 0.693 0.477 0.15  
lab\*nce 0.75 0.5 0.048  
lab\*nceE 0.0 0.5 0.15

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.0 (1.0)  
cmyn3\* 0.5 1.0 0.0 (0.0)  
olvi4\* 1.0 0.5 0.5 (1.0)  
cmyn4\* 0.0 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 32.98 32.9 25.8  
LAB\*LABo 32.98 32.69 25.25  
LAB\*TCHo 25.01 41.31 37.69

relative CIELAB lab\*  
lab\*lab 0.193 0.396 0.306  
lab\*tch 0.25 0.5 0.105  
lab\*nch 0.0 0.5 0.105  
relative Natural Colour (NC)  
lab\*lrj 0.193 0.477 0.15  
lab\*nce 0.25 0.5 0.048  
lab\*nceE 0.0 0.5 0.15

$n^* = 0.00$   
blackness  $n^*$

chromaticness  $c^*$

| ORS18; adapted (a) CIELAB data |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| $L^* \cdot L^*_{ab}$           | $a^*_{ab}$ | $b^*_{ab}$ | $C^*_{ab}$ | $h^*_{ab}$ |
| QMa 47.94                      | 65.39      | 50.52      | 82.63      | 38         |
| YMa 90.37                      | -10.26     | 91.75      | 92.32      | 96         |
| LMa 50.39                      | -62.83     | 34.96      | 71.91      | 151        |
| CMa 58.62                      | -30.34     | -45.01     | 54.3       | 236        |
| VMa 25.72                      | 31.1       | -44.4      | 54.22      | 305        |
| MMa 48.13                      | 75.28      | -8.36      | 75.74      | 354        |
| NMa 18.01                      | 0.0        | 0.0        | 0.0        | 0          |
| WMa 95.41                      | 0.0        | 0.0        | 0.0        | 0          |
| RCIE 39.92                     | 58.66      | 26.98      | 64.57      | 25         |
| JCIE 81.26                     | -2.16      | 67.76      | 67.79      | 92         |
| GCIE 82.23                     | -42.25     | 11.76      | 43.87      | 164        |
| BCIE 30.57                     | 1.15       | -46.84     | 46.86      | 271        |

# Output: 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

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

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 0.0 0.0 (1.0)  
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 (1.0)  
lab\*nce 1.0 0.0 0.0 (1.0)  
lab\*nceE 0.0 0.0 - (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 1.0 1.0 1.0 (1.0)  
cmyn4\* 0.0 0.5 0.5 (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 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0 (1.0)  
lab\*nce 0.5 0.0 0.0 (1.0)  
lab\*nceE 0.5 0.0 - (0.0)

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (1.0)  
olvi4\* 1.0 1.0 1.0 (1.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 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 - (0.0)  
relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0 (1.0)  
lab\*nce 0.0 0.0 0.0 (1.0)  
lab\*nceE 0.0 0.0 - (0.0)

$n^* = 1.0$

relative Inform. Technology (IT)  
olvi3\* 1.0 0.5 0.5 (1.0)  
cmyn3\* 0.0 0.5 0.5 (0.0)  
olvi4\* 1.0 0.5 0.5 (1.0)  
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\*nce 0.75 0.5 0.054  
lab\*nceE 0.0 0.5 0.121

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.0 (1.0)  
cmyn3\* 0.5 1.0 0.0 (0.0)  
olvi4\* 1.0 0.5 0.5 (1.0)  
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 40.2 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\*nce 0.25 0.5 0.054  
lab\*nceE 0.0 0.5 0.121

$n^* = 0.50$

relative Inform. Technology (IT)  
olvi3\* 1.0 0.0 0.0 (1.0)  
cmyn3\* 0.0 1.0 1.0 (0.0)  
olvi4\* 1.0 0.0 0.0 (1.0)  
cmyn4\* 0.0 1.0 1.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 50.5 76.9 64.54  
LAB\*LABo 50.5 76.9 64.54  
LAB\*TCHo 50.0 100.4 40.0

relative CIELAB lab\*  
lab\*lab 0.529 0.766 0.643  
lab\*tch 0.5 1.0 0.111  
lab\*nch 0.0 1.0 0.111  
relative Natural Colour (NC)  
lab\*lrj 0.529 0.942 0.325  
lab\*nce 0.5 1.0 0.054  
lab\*nceE 0.0 1.0 0.121

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.0 (1.0)  
cmyn3\* 0.5 1.0 0.0 (0.0)  
olvi4\* 1.0 0.5 0.5 (1.0)  
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 40.2 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\*nce 0.25 0.5 0.054  
lab\*nceE 0.0 0.5 0.121

$n^* = 0.50$

chromaticness  $c^*$

| TLS00; adapted (a) CIELAB data |            |            |            |            |
|--------------------------------|------------|------------|------------|------------|
| $L^* \cdot L^*_{ab}$           | $a^*_{ab}$ | $b^*_{ab}$ | $C^*_{ab}$ | $h^*_{ab}$ |
| QMa 50.5                       | 76.92      | 64.55      | 100.42     | 40         |
| YMa 92.66                      | -20.69     | 90.75      | 93.08      | 103        |
| LMa 83.63                      | -82.75     | 79.9       | 115.04     | 136        |
| CMa 86.88                      | -46.16     | -13.55     | 48.12      | 196        |
| VMa 30.39                      | 76.06      | -103.59    | 128.52     | 306        |
| MMa 57.3                       | 94.35      | -58.41     | 110.97     | 328        |
| NMa 0.01                       | 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         |
| GCIE 82.23                     | -42.41     | 13.6       | 44.55      | 162        |
| BCIE 30.57                     | 1.41       | -46.46     | 46.49      | 272        |

3 step scales for constant CIELAB hue 40/360 = 0.111 (right)

BAM-test chart OE10; Colorimetric systems ORS18 & TLS00

D65: 2 coordinate data of 3 step colour scales for 10 hues

input: cmy0\* setcmycolor

output: no change compared to input