

# Input: Colorimetric Offset Reflective System ORS18

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

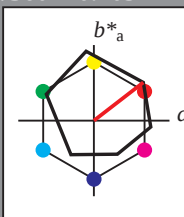
$lab^*tch$  and  $lab^*nch$

A: hue 0

LCH\*Ma: 48 83 38

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 93$

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 1.0 | 1.0 | 1.0 | (1.0) |
| olv3* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 1.0 | 1.0 | 1.0 | (1.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |

standard and adapted CIELAB

|         |       |       |      |
|---------|-------|-------|------|
| LAB*Lab | 95.41 | -0.98 | 47.5 |
| LAB*Lab | 95.41 | 0.00  | 0.0  |
| LAB*Lab | 95.41 | 0.00  | 0.0  |
| LAB*Lab | 95.41 | 0.00  | 0.0  |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.75 | 0.75 | 0.75 | (1.0) |
| olv3* | 0.25 | 0.25 | 0.25 | (0.0) |
| olv4* | 1.0  | 1.0  | 1.0  | (1.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |

standard and adapted CIELAB

|         |       |       |      |
|---------|-------|-------|------|
| LAB*Lab | 76.06 | -0.61 | 3.44 |
| LAB*Lab | 76.06 | 0.00  | 0.0  |
| LAB*Lab | 76.06 | 0.00  | 0.0  |
| LAB*Lab | 76.06 | 0.00  | 0.0  |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.75 | 0.75 | 0.75 | (1.0) |
| olv3* | 0.25 | 0.25 | 0.25 | (0.0) |
| olv4* | 1.0  | 1.0  | 1.0  | (1.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |

standard and adapted CIELAB

|         |       |       |      |
|---------|-------|-------|------|
| LAB*Lab | 56.71 | -0.24 | 2.14 |
| LAB*Lab | 56.71 | 0.00  | 0.0  |
| LAB*Lab | 56.71 | 0.00  | 0.0  |
| LAB*Lab | 56.71 | 0.00  | 0.0  |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.25 | 0.25 | 0.25 | (1.0) |
| olv3* | 0.75 | 0.75 | 0.75 | (0.0) |
| olv4* | 1.0  | 1.0  | 1.0  | (1.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |

standard and adapted CIELAB

|         |       |      |      |
|---------|-------|------|------|
| LAB*Lab | 37.26 | 0.00 | 0.00 |
| LAB*Lab | 37.26 | 0.00 | 0.00 |
| LAB*Lab | 37.26 | 0.00 | 0.00 |
| LAB*Lab | 37.26 | 0.00 | 0.00 |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 0.0 | 0.0 | 0.0 | (1.0) |
| olv3* | 1.0 | 1.0 | 1.0 | (0.0) |
| olv4* | 1.0 | 1.0 | 1.0 | (1.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |

standard and adapted CIELAB

|         |       |      |      |
|---------|-------|------|------|
| LAB*Lab | 18.02 | 0.03 | 0.47 |
| LAB*Lab | 18.02 | 0.00 | 0.0  |
| LAB*Lab | 18.02 | 0.00 | 0.0  |
| LAB*Lab | 18.02 | 0.00 | 0.0  |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 0.0 | 0.0 | 0.0 | (1.0) |
| olv3* | 1.0 | 1.0 | 1.0 | (0.0) |
| olv4* | 1.0 | 1.0 | 1.0 | (1.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |

standard and adapted CIELAB

|         |      |      |      |
|---------|------|------|------|
| LAB*Lab | 0.01 | 0.01 | 0.01 |
| LAB*Lab | 0.01 | 0.00 | 0.0  |
| LAB*Lab | 0.01 | 0.00 | 0.0  |
| LAB*Lab | 0.01 | 0.00 | 0.0  |

## ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

% Regularity

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

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

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 1.0 | 0.5 | 0.5 | (1.0) |
| olv3* | 0.0 | 0.5 | 0.5 | (0.0) |
| olv4* | 1.0 | 0.5 | 0.5 | (1.0) |
| olv4* | 0.0 | 0.5 | 0.5 | (0.0) |
| olv4* | 0.0 | 0.5 | 0.5 | (0.0) |
| olv4* | 0.0 | 0.5 | 0.5 | (0.0) |

standard and adapted CIELAB

|         |       |       |       |
|---------|-------|-------|-------|
| LAB*Lab | 71.67 | 32.15 | 28.41 |
| LAB*Lab | 71.67 | 32.69 | 25.25 |
| LAB*Lab | 71.67 | 32.69 | 25.25 |
| LAB*Lab | 71.67 | 32.69 | 25.25 |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.75 | 0.25 | 0.25 | (1.0) |
| olv3* | 0.25 | 0.75 | 0.25 | (0.0) |
| olv4* | 1.0  | 0.5  | 0.5  | (1.0) |
| olv4* | 0.0  | 0.5  | 0.5  | (0.0) |
| olv4* | 0.0  | 0.5  | 0.5  | (0.0) |
| olv4* | 0.0  | 0.5  | 0.5  | (0.0) |

standard and adapted CIELAB

|         |      |       |       |
|---------|------|-------|-------|
| LAB*Lab | 59.8 | 48.73 | 40.24 |
| LAB*Lab | 59.8 | 49.03 | 37.88 |
| LAB*Lab | 59.8 | 49.03 | 37.88 |
| LAB*Lab | 59.8 | 49.03 | 37.88 |

relative Inform. Technology (IT)

|       |      |     |     |       |
|-------|------|-----|-----|-------|
| olv3* | 0.5  | 0.0 | 0.0 | (1.0) |
| olv3* | 0.25 | 0.0 | 0.0 | (0.0) |
| olv4* | 1.0  | 0.5 | 0.5 | (1.0) |
| olv4* | 0.0  | 0.5 | 0.5 | (0.0) |
| olv4* | 0.0  | 0.5 | 0.5 | (0.0) |
| olv4* | 0.0  | 0.5 | 0.5 | (0.0) |

standard and adapted CIELAB

|         |       |       |       |
|---------|-------|-------|-------|
| LAB*Lab | 40.46 | 49.1  | 38.93 |
| LAB*Lab | 40.46 | 49.03 | 37.88 |
| LAB*Lab | 40.46 | 49.03 | 37.88 |
| LAB*Lab | 40.46 | 49.03 | 37.88 |

relative Inform. Technology (IT)

|       |      |      |     |       |
|-------|------|------|-----|-------|
| olv3* | 0.25 | 0.0  | 0.0 | (1.0) |
| olv3* | 0.0  | 0.25 | 0.0 | (0.0) |
| olv4* | 1.0  | 0.5  | 0.5 | (1.0) |
| olv4* | 0.0  | 0.5  | 0.5 | (0.0) |
| olv4* | 0.0  | 0.5  | 0.5 | (0.0) |
| olv4* | 0.0  | 0.5  | 0.5 | (0.0) |

standard and adapted CIELAB

|         |       |       |       |
|---------|-------|-------|-------|
| LAB*Lab | 22.98 | 32.9  | 27.11 |
| LAB*Lab | 22.98 | 32.69 | 25.26 |
| LAB*Lab | 22.98 | 32.69 | 25.26 |
| LAB*Lab | 22.98 | 32.69 | 25.26 |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 0.0 | 0.0 | 0.0 | (1.0) |
| olv3* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 1.0 | 0.5 | 0.5 | (1.0) |
| olv4* | 0.0 | 0.5 | 0.5 | (0.0) |
| olv4* | 0.0 | 0.5 | 0.5 | (0.0) |
| olv4* | 0.0 | 0.5 | 0.5 | (0.0) |

standard and adapted CIELAB

|         |     |     |     |
|---------|-----|-----|-----|
| LAB*Lab | 0.0 | 0.0 | 0.0 |
| LAB*Lab | 0.0 | 0.0 | 0.0 |
| LAB*Lab | 0.0 | 0.0 | 0.0 |
| LAB*Lab | 0.0 | 0.0 | 0.0 |

# Output: Colorimetric Television Luminous System TLS00

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

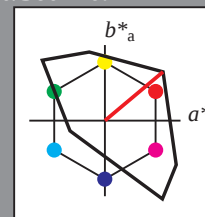
$lab^*tch$  and  $lab^*nch$

A: hue 0

LCH\*Ma: 51 100 40

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 158$

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 1.0 | 1.0 | 1.0 | (1.0) |
| olv3* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 1.0 | 1.0 | 1.0 | (1.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |

standard and adapted CIELAB

|         |       |      |     |
|---------|-------|------|-----|
| LAB*Lab | 95.41 | 0.00 | 0.0 |
| LAB*Lab | 95.41 | 0.00 | 0.0 |
| LAB*Lab | 95.41 | 0.00 | 0.0 |
| LAB*Lab | 95.41 | 0.00 | 0.0 |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.75 | 0.75 | 0.75 | (1.0) |
| olv3* | 0.25 | 0.25 | 0.25 | (0.0) |
| olv4* | 1.0  | 1.0  | 1.0  | (1.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |

standard and adapted CIELAB

|         |       |      |     |
|---------|-------|------|-----|
| LAB*Lab | 71.57 | 0.00 | 0.0 |
| LAB*Lab | 71.57 | 0.00 | 0.0 |
| LAB*Lab | 71.57 | 0.00 | 0.0 |
| LAB*Lab | 71.57 | 0.00 | 0.0 |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.75 | 0.25 | 0.25 | (1.0) |
| olv3* | 0.25 | 0.75 | 0.25 | (0.0) |
| olv4* | 1.0  | 0.5  | 0.5  | (1.0) |
| olv4* | 0.0  | 0.5  | 0.5  | (0.0) |
| olv4* | 0.0  | 0.5  | 0.5  | (0.0) |
| olv4* | 0.0  | 0.5  | 0.5  | (0.0) |

standard and adapted CIELAB

|         |       |      |     |
|---------|-------|------|-----|
| LAB*Lab | 59.81 | 0.00 | 0.0 |
| LAB*Lab | 59.81 | 0.00 | 0.0 |
| LAB*Lab | 59.81 | 0.00 | 0.0 |
| LAB*Lab | 59.81 | 0.00 | 0.0 |

relative Inform. Technology (IT)

|       |      |     |     |       |
|-------|------|-----|-----|-------|
| olv3* | 0.5  | 0.0 | 0.0 | (1.0) |
| olv3* | 0.25 | 0.0 | 0.0 | (0.0) |
| olv4* | 1.0  | 0.5 | 0.5 | (1.0) |
| olv4* | 0.0  | 0.5 | 0.5 | (0.0) |
| olv4* | 0.0  | 0.5 | 0.5 | (0.0) |
| olv4* | 0.0  | 0.5 | 0.5 | (0.0) |

standard and adapted CIELAB

|         |       |       |       |
|---------|-------|-------|-------|
| LAB*Lab | 47.94 | 65.37 | 50.51 |
| LAB*Lab | 47.94 | 65.37 | 50.51 |
| LAB*Lab | 47.94 | 65.37 | 50.51 |
| LAB*Lab | 47.94 | 65.37 | 50.51 |

relative Inform. Technology (IT)

|       |      |      |     |       |
|-------|------|------|-----|-------|
| olv3* | 0.25 | 0.0  | 0.0 | (1.0) |
| olv3* | 0.0  | 0.25 | 0.0 | (0.0) |
| olv4* | 1.0  | 0.5  | 0.5 | (1.0) |
| olv4* | 0.0  | 0.5  | 0.5 | (0.0) |
| olv4* | 0.0  | 0.5  | 0.5 | (0.0) |
| olv4* | 0.0  | 0.5  | 0.5 | (0.0) |

standard and adapted CIELAB

|         |       |      |     |
|---------|-------|------|-----|
| LAB*Lab | 23.87 | 0.00 | 0.0 |
| LAB*Lab | 23.87 | 0.00 | 0.0 |
| LAB*Lab | 23.87 | 0.00 | 0.0 |
| LAB*Lab | 23.87 | 0.00 | 0.0 |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 0.0 | 0.0 | 0.0 | (1.0) |
| olv3* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 1.0 | 0.5 | 0.5 | (1.0) |
| olv4* | 0.0 | 0.5 | 0.5 | (0.0) |
| olv4* | 0.0 | 0.5 | 0.5 | (0.0) |
| olv4* | 0.0 | 0.5 | 0.5 | (0.0) |

standard and adapted CIELAB

|         |     |     |     |
|---------|-----|-----|-----|
| LAB*Lab | 0.0 | 0.0 | 0.0 |
| LAB*Lab | 0.0 | 0.0 | 0.0 |
| LAB*Lab | 0.0 | 0.0 | 0.0 |
| LAB*Lab | 0.0 | 0.0 | 0.0 |

## TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| N <sub>Ma</sub>  | 0.01        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

% Regularity

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

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

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.75 | 0.25 | 0.25 | (1.0) |
| olv3* | 0.25 | 0.75 | 0.25 | (0.0) |
| olv4* | 1.0  | 0.5  | 0.5  | (1.0) |
| olv4* | 0.0  | 0.5  | 0.5  | (0.0) |
| olv4* | 0.0  | 0.5  | 0.5  | (0.0) |
| olv4* | 0.0  | 0.5  | 0.5  | (0.0) |

standard and adapted CIELAB

|         |       |       |       |
|---------|-------|-------|-------|
| LAB*Lab | 72.95 | 38.45 | 32.27 |
| LAB*Lab | 72.95 | 38.45 | 32.27 |
| LAB*Lab | 72.95 | 38.45 | 32.27 |
| LAB*Lab | 72.95 | 38.45 | 32.27 |

## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 96/360 = 0.268$

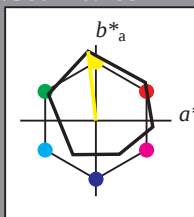
$lab^*tch$  and  $lab^*nch$

A: hue Y

LCH\*Ma: 90 92 96

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



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 -0.98 47.5  
LAB\*LABa 95.41 0.0 0.0  
LAB\*LABb 99.99 0.01 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)  
cmyn3\* 0.25 0.25 0.25 (0.0)  
olv4\* 1.0 1.0 1.0 0.75  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 76.06 -0.61 3.44  
LAB\*LABa 76.06 0.0 0.0  
LAB\*LABb 75.00 0.01 -

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\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (0.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 1.0 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 56.71 -0.24 2.14  
LAB\*LABa 56.71 0.0 0.0  
LAB\*LABb 50.00 0.01 -

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\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 1.0 1.0 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.75  
standard and adapted CIELAB  
LAB\*LAB 37.36 -0.03 0.63  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 25.00 0.01 -

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\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

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\*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 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

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\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

## ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

%Regularity

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

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

relative Inform. Technology (IT)  
olv3\* 1.0 1.0 0.5 (1.0)  
cmyn3\* 0.0 0.0 0.5 (0.0)  
olv4\* 1.0 1.0 0.5 1.0  
cmyn4\* 0.0 0.0 0.5 0.0  
standard and adapted CIELAB  
LAB\*LAB 92.88 -6.06 50.46  
LAB\*LABa 92.88 -3.12 45.87  
LAB\*LABb 94.14 -2.56 22.93  
LAB\*LABc 97.5 23.07 96.38

relative CIELAB lab\*  
lab\*lab 0.984 -0.027 0.248  
lab\*tch 0.875 0.25 2.68  
lab\*nch 0.0 0.25 0.268  
relative Natural Colour (NC)  
lab\*trj 0.984 -0.024 0.249  
lab\*tce 0.875 0.25 2.66  
lab\*nce 0.0 0.25 0.96

relative Inform. Technology (IT)  
olv3\* 0.75 0.75 0.25 (1.0)  
cmyn3\* 0.25 0.25 0.75 (0.0)  
olv4\* 1.0 1.0 0.75 0.75  
cmyn4\* 0.0 0.0 0.75 0.25  
standard and adapted CIELAB  
LAB\*LAB 74.8 -3.15 26.3  
LAB\*LABa 74.8 -2.56 22.94  
LAB\*LABb 62.5 23.08 96.38

relative CIELAB lab\*  
lab\*lab 0.734 -0.024 0.249  
lab\*tch 0.625 0.25 2.66  
lab\*nch 0.0 0.25 0.268  
relative Natural Colour (NC)  
lab\*trj 0.734 -0.024 0.249  
lab\*tce 0.625 0.25 2.66  
lab\*nce 0.0 0.25 0.96

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 0.5 0.5  
cmyn4\* 0.0 0.0 0.5 0.5  
standard and adapted CIELAB  
LAB\*LAB 56.71 -0.24 2.14  
LAB\*LABa 56.71 0.0 0.0  
LAB\*LABb 50.00 0.01 -

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\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 1.0 1.0 0.25 0.25  
cmyn4\* 0.0 0.0 0.25 0.75  
standard and adapted CIELAB  
LAB\*LAB 37.36 -0.03 0.63  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 25.00 0.01 -

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\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

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\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

## Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 103/360 = 0.286$

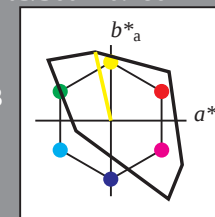
$lab^*tch$  and  $lab^*nch$

A: hue Y

LCH\*Ma: 93 93 103

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



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\*LABb 99.99 0.01 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)  
cmyn3\* 0.25 0.25 0.25 (0.0)  
olv4\* 1.0 1.0 1.0 0.75  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 71.57 0.0 0.0  
LAB\*LABa 71.57 0.0 0.0  
LAB\*LABb 75.00 0.01 -

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\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (0.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 1.0 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 56.71 -0.24 2.14  
LAB\*LABa 56.71 0.0 0.0  
LAB\*LABb 50.00 0.01 -

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\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 1.0 1.0 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.75  
standard and adapted CIELAB  
LAB\*LAB 37.36 -0.03 0.63  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 25.00 0.01 -

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\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

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\*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 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

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\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

## TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| N <sub>Ma</sub>  | 0.01        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

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

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

relative Inform. Technology (IT)  
olv3\* 1.0 1.0 0.5 (1.0)  
cmyn3\* 0.0 0.0 0.5 (0.0)  
olv4\* 1.0 1.0 0.5 1.0  
cmyn4\* 0.0 0.0 0.5 0.0  
standard and adapted CIELAB  
LAB\*LAB 94.71 -5.16 22.68  
LAB\*LABa 94.71 -3.16 22.68  
LAB\*LABb 94.71 -2.56 22.68  
LAB\*LABc 87.5 23.26 102.85

relative CIELAB lab\*  
lab\*lab 0.993 -0.055 0.244  
lab\*tch 0.875 0.25 2.86  
lab\*nch 0.0 0.25 0.286  
relative Natural Colour (NC)  
lab\*trj 0.993 -0.058 0.243  
lab\*tce 0.875 0.25 2.88  
lab\*nce 0.0 0.25 1.95

relative Inform. Technology (IT)  
olv3\* 0.75 0.75 0.25 (1.0)  
cmyn3\* 0.25 0.25 0.75 (0.0)  
olv4\* 1.0 1.0 0.75 0.75  
cmyn4\* 0.0 0.0 0.75 0.25  
standard and adapted CIELAB  
LAB\*LAB 70.87 -5.17 22.69  
LAB\*LABa 70.87 -3.17 22.69  
LAB\*LABb 70.87 -2.56 22.69  
LAB\*LABc 62.5 23.27 102.85

relative CIELAB lab\*  
lab\*lab 0.743 -0.058 0.244  
lab\*tch 0.625 0.25 2.86  
lab\*nch 0.0 0.25 0.286  
relative Natural Colour (NC)  
lab\*trj 0.743 -0.058 0.243  
lab\*tce 0.625 0.25 2.88  
lab\*nce 0.0 0.25 1.95

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 0.5 0.5  
cmyn4\* 0.0 0.0 0.5 0.5  
standard and adapted CIELAB  
LAB\*LAB 56.71 -0.24 2.14  
LAB\*LABa 56.71 0.0 0.0  
LAB\*LABb 50.00 0.01 -

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\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 1.0 1.0 0.25 0.25  
cmyn4\* 0.0 0.0 0.25 0.75  
standard and adapted CIELAB  
LAB\*LAB 37.36 -0.03 0.63  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 25.00 0.01 -

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\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

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\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.75 0.75 0.0 (1.0)  
cmyn3\* 0.25 0.25 0.75 (0.0)  
olv4\* 1.0 1.0 0.75 0.0  
cmyn4\* 0.0 0.0 0.75 0.0  
standard and adapted CIELAB  
LAB\*LAB 93.34 -15.51 68.05  
LAB\*LABa 93.34 -15.51 68.05  
LAB\*LABb 62.5 69.8 102.85

relative CIELAB lab\*  
lab\*lab 0.985 -0.11 0.487  
lab\*tch 0.75 0.0 0.286  
lab\*nch 0.0 0.286  
relative Natural Colour (NC)  
lab\*trj 0.985 -0.116 0.486  
lab\*tce 0.75 0.0 0.288  
lab\*nce 0.0 0.288

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.0 (1.0)  
cmyn3\* 0.5 0.5 0.75 (0.0)  
olv4\* 1.0 1.0 0.5 0.0  
cmyn4\* 0.0 0.0 0.75 0.0  
standard and adapted CIELAB  
LAB\*LAB 70.19 -10.34 45.38  
LAB\*LABa 70.19 -10.34 45.38  
LAB\*LABb 50.00 46.54 102.85

relative CIELAB lab\*  
lab\*lab 0.985 -0.11 0.487  
lab\*tch 0.5 0.0 0.286  
lab\*nch 0.0 0.286  
relative Natural Colour (NC)  
lab\*trj 0.985 -0.116 0.486  
lab\*tce 0.5 0.0 0.288  
lab\*nce 0.0 0.288

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.0 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 1.0 1.0 0.25 0.0  
cmyn4\* 0.0 0.0 0.75 0.0  
standard and adapted CIELAB  
LAB\*LAB 37.36 -0.03 0.63  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 25.00 0.01 -

relative CIELAB lab\*  
lab\*lab 0.728 -0.175 0.729  
lab\*tch 0.5 0.0 0.286  
lab\*nch 0.0 0.286  
relative Natural Colour (NC)  
lab\*trj 0.728 -0.175 0.729  
lab\*tce 0.5 0.0 0.288  
lab\*nce 0.0 0.288

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0

## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 151/360 = 0.419$

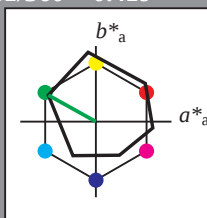
$lab^*tch$  and  $lab^*nch$

A: hue L

LCH\*Ma: 51 72 151

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



### ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

%Regularity

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

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

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 -0.98 47.5  
LAB\*LABa 95.41 0.0 0.0  
LAB\*TCHa 99.99 0.01 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  
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)  
cmyn3\* 0.25 0.25 0.25 (0.0)  
olv4\* 1.0 1.0 1.0 0.75  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 76.06 -0.61 3.44  
LAB\*LABa 76.06 0.0 0.0  
LAB\*TCHa 75.0 0.01 -

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  
lab\*trj 0.75 0.0 0.0  
lab\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (0.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 1.0 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 56.71 -0.24 2.14  
LAB\*LABa 56.71 0.0 0.0  
LAB\*TCHa 50.0 0.01 -

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  
lab\*trj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (0.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 1.0 1.0 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.75  
standard and adapted CIELAB  
LAB\*LAB 37.36 -0.03 0.83  
LAB\*LABa 37.36 0.0 0.0  
LAB\*TCHa 25.0 0.01 -

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  
lab\*trj 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 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

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  
lab\*trj 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 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.01 0.01 -

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  
lab\*trj 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\* 0.75 1.0 0.75 (1.0)  
cmyn3\* 0.25 0.0 0.75 (0.0)  
olv4\* 1.0 0.75 1.0 0.75  
cmyn4\* 0.25 0.0 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 84.28 -16.47 12.74  
LAB\*LABa 84.28 -15.69 8.74  
LAB\*TCHa 97.5 17.97 150.91

relative CIELAB lab\*  
lab\*lab 0.856 -0.217 0.121  
lab\*tch 0.875 0.25 0.419  
lab\*nch 0.0 0.25 0.419  
lab\*trj 0.856 -0.238 0.072  
lab\*tce 0.875 0.25 0.453  
lab\*nce 0.0 0.25 0.419

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 1.0 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 64.93 -16.1 11.44  
LAB\*LABa 64.93 -15.7 8.74  
LAB\*TCHa 62.5 17.98 150.91

relative CIELAB lab\*  
lab\*lab 0.616 -0.217 0.122  
lab\*tch 0.625 0.25 0.419  
lab\*nch 0.25 0.25 0.419  
lab\*trj 0.606 -0.238 0.072  
lab\*tce 0.625 0.25 0.453  
lab\*nce 0.25 0.25 0.419

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 1.0 1.0 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.75  
standard and adapted CIELAB  
LAB\*LAB 45.58 -15.73 10.13  
LAB\*LABa 45.58 -15.7 8.74  
LAB\*TCHa 37.5 17.98 150.91

relative CIELAB lab\*  
lab\*lab 0.356 -0.217 0.122  
lab\*tch 0.375 0.25 0.419  
lab\*nch 0.25 0.25 0.419  
lab\*trj 0.356 -0.238 0.072  
lab\*tce 0.375 0.25 0.453  
lab\*nce 0.25 0.25 0.419

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 0.5 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 34.46 -31.22 18.12  
LAB\*LABa 34.46 -31.4 17.48  
LAB\*TCHa 25.01 35.95 150.91

relative CIELAB lab\*  
lab\*lab 0.213 -0.436 0.243  
lab\*tch 0.25 0.5 0.419  
lab\*nch 0.0 0.5 0.419  
lab\*trj 0.213 -0.478 0.144  
lab\*tce 0.25 0.5 0.453  
lab\*nce 0.0 0.5 0.419

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 0.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

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  
lab\*trj 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 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.01 0.01 -

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  
lab\*trj 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\* 0.5 1.0 0.5 (1.0)  
cmyn3\* 0.5 0.0 0.5 (0.0)  
olv4\* 0.5 1.0 0.5 1.0  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 73.15 -31.96 20.73  
LAB\*LABa 73.15 -31.4 17.48  
LAB\*TCHa 75.0 35.95 150.91

relative CIELAB lab\*  
lab\*lab 0.712 -0.436 0.243  
lab\*tch 0.75 0.5 0.419  
lab\*nch 0.0 0.5 0.419  
lab\*trj 0.712 -0.478 0.144  
lab\*tce 0.75 0.5 0.453  
lab\*nce 0.0 0.5 0.419

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.25 0.75 (0.0)  
olv4\* 1.0 0.25 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 53.81 -31.6 19.43  
LAB\*LABa 53.81 -31.4 17.48  
LAB\*TCHa 50.0 35.95 150.91

relative CIELAB lab\*  
lab\*lab 0.569 -0.654 0.365  
lab\*tch 0.625 0.75 0.419  
lab\*nch 0.0 0.75 0.419  
lab\*trj 0.569 -0.717 0.217  
lab\*tce 0.625 0.75 0.453  
lab\*nce 0.0 0.75 0.419

relative Inform. Technology (IT)  
olv3\* 0.0 0.25 0.0 (1.0)  
cmyn3\* 1.0 0.25 1.0 (0.0)  
olv4\* 0.25 1.0 0.25 0.0  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 42.68 -47.09 27.41  
LAB\*LABa 42.68 -47.11 26.21  
LAB\*TCHa 37.51 53.92 150.91

relative CIELAB lab\*  
lab\*lab 0.319 -0.654 0.365  
lab\*tch 0.375 0.75 0.419  
lab\*nch 0.0 0.75 0.419  
lab\*trj 0.319 -0.717 0.217  
lab\*tce 0.375 0.75 0.453  
lab\*nce 0.0 0.75 0.419

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 0.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

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  
lab\*trj 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 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.01 0.01 -

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  
lab\*trj 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 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.01 0.01 -

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  
lab\*trj 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 1.0 0.25 (1.0)  
cmyn3\* 0.25 0.0 0.25 (0.0)  
olv4\* 0.25 1.0 0.25 1.0  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 62.02 -47.46 28.72  
LAB\*LABa 62.02 -47.11 26.21  
LAB\*TCHa 62.5 53.92 150.91

relative CIELAB lab\*  
lab\*lab 0.569 -0.654 0.365  
lab\*tch 0.625 0.75 0.419  
lab\*nch 0.0 0.75 0.419  
lab\*trj 0.569 -0.717 0.217  
lab\*tce 0.625 0.75 0.453  
lab\*nce 0.0 0.75 0.419

relative Inform. Technology (IT)  
olv3\* 0.0 0.75 0.0 (1.0)  
cmyn3\* 1.0 0.75 1.0 (0.0)  
olv4\* 0.0 1.0 0.0 0.75  
cmyn4\* 0.0 0.0 0.0 0.75  
standard and adapted CIELAB  
LAB\*LAB 50.9 -62.95 36.7  
LAB\*LABa 50.9 -62.81 34.95  
LAB\*TCHa 50.0 71.89 150.91

relative CIELAB lab\*  
lab\*lab 0.425 -0.873 0.486  
lab\*tch 0.5 1.0 0.419  
lab\*nch 0.0 1.0 0.419  
lab\*trj 0.425 -0.956 0.289  
lab\*tce 0.5 1.0 0.453  
lab\*nce 0.0 1.0 0.419

relative Inform. Technology (IT)  
olv3\* 0.0 0.25 0.0 (1.0)  
cmyn3\* 1.0 0.25 1.0 (0.0)  
olv4\* 0.25 1.0 0.25 0.0  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 42.68 -47.09 27.41  
LAB\*LABa 42.68 -47.11 26.21  
LAB\*TCHa 37.51 53.92 150.91

relative CIELAB lab\*  
lab\*lab 0.319 -0.654 0.365  
lab\*tch 0.375 0.75 0.419  
lab\*nch 0.0 0.75 0.419  
lab\*trj 0.319 -0.717 0.217  
lab\*tce 0.375 0.75 0.453  
lab\*nce 0.0 0.75 0.419

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 0.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

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  
lab\*trj 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 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.01 0.01 -

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  
lab\*trj 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 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.01 0.01 -

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  
lab\*trj 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\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 1.0 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 71.57 0.0 0.0  
LAB\*LABa 71.57 0.0 0.0  
LAB\*TCHa 75.0 0.01 -

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  
lab\*trj 0.75 0.0 0.0  
lab\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.25 0.75 (0.0)  
olv4\* 1.0 0.25 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 47.72 0.0 0.0  
LAB\*LABa 47.72 0.0 0.0  
LAB\*TCHa 50.0 0.01 -

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  
lab\*trj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.5 0.0 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 1.0 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 47.72 0.0 0.0  
LAB\*LABa 47.72 0.0 0.0  
LAB\*TCHa 50.0 0.01 -

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  
lab\*trj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.25 0.0 (1.0)  
cmyn3\* 0.75 0.25 0.75 (0.0)  
olv4\* 1.0 1.0 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 47.72 0.0 0.0  
LAB\*LABa 47.72 0.0 0.0  
LAB\*TCHa 50.0 0.01 -

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  
lab\*trj 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 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.01 0.01 -

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  
lab\*trj 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 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.01 0.01 -

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  
lab\*trj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

## Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 136/360 = 0.378$

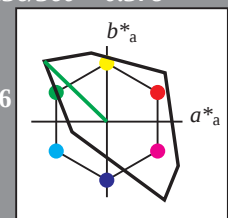
$lab^*tch$  and  $lab^*nch$

A: hue L

LCH\*Ma: 84 115 136

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



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## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 305/360 = 0.847$

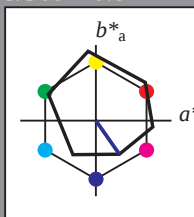
$lab^*tch$  and  $lab^*nch$

A: hue V

LCH\*Ma: 26 54 305

olv\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 93$

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 -0.98 47.5  
LAB\*LABa 95.41 0.0 0.0  
LAB\*LABb 99.99 0.01 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)  
cmyn3\* 0.25 0.25 0.25 (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 76.06 -0.61 3.44  
LAB\*LABa 76.06 0.0 0.0  
LAB\*LABb 75.00 0.01 -

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\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (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 56.71 -0.24 2.14  
LAB\*LABa 56.71 0.0 0.0  
LAB\*LABb 55.00 0.01 -

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\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 37.36 -0.03 0.63  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 35.00 0.01 -

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\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (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 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 18.00 0.01 -

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\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 1.0$

## ORS18; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37         | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9          | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62         | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72         | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13         | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92         | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26         | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23         | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57         | 1.15    | -46.84  | 46.86        | 271          |

% Regularity

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

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

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 60.56 15.23 -19.79  
LAB\*LABa 60.56 15.23 -19.79  
LAB\*LABb 58.64 7.77 -11.09  
LAB\*LABc 58.64 7.77 -11.09

relative CIELAB lab\*  
lab\*lab 0.5 0.287 -0.408  
lab\*tch 0.5 0.287 -0.408  
lab\*nch 0.0 0.5 0.847  
relative Natural Colour (NC)  
lab\*trj 0.5 0.287 -0.408  
lab\*tce 0.5 0.287 -0.408  
lab\*nce 0.0 0.5 0.847

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 41.22 15.55 -22.2  
LAB\*LABa 41.22 15.55 -22.2  
LAB\*LABb 39.92 7.77 -11.09  
LAB\*LABc 39.92 7.77 -11.09

relative CIELAB lab\*  
lab\*lab 0.25 0.287 -0.408  
lab\*tch 0.25 0.287 -0.408  
lab\*nch 0.0 0.5 0.847  
relative Natural Colour (NC)  
lab\*trj 0.25 0.287 -0.408  
lab\*tce 0.25 0.287 -0.408  
lab\*nce 0.0 0.5 0.847

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 21.87 15.57 -22.2  
LAB\*LABa 21.87 15.57 -22.2  
LAB\*LABb 20.01 7.77 -11.09  
LAB\*LABc 20.01 7.77 -11.09

relative CIELAB lab\*  
lab\*lab 0.0 0.287 -0.408  
lab\*tch 0.0 0.287 -0.408  
lab\*nch 0.0 0.5 0.847  
relative Natural Colour (NC)  
lab\*trj 0.0 0.287 -0.408  
lab\*tce 0.0 0.287 -0.408  
lab\*nce 0.0 0.5 0.847

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 19.94 7.77 -11.09  
LAB\*LABa 19.94 7.77 -11.09  
LAB\*LABb 18.02 0.0 0.47  
LAB\*LABc 18.02 0.0 0.47

relative CIELAB lab\*  
lab\*lab 0.0 0.287 -0.408  
lab\*tch 0.0 0.287 -0.408  
lab\*nch 0.0 0.5 0.847  
relative Natural Colour (NC)  
lab\*trj 0.0 0.287 -0.408  
lab\*tce 0.0 0.287 -0.408  
lab\*nce 0.0 0.5 0.847

$n^* = 0.50$

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 33.14 33.37 -33.37  
LAB\*LABa 33.14 33.37 -33.37  
LAB\*LABb 32.5 0.0 0.0  
LAB\*LABc 32.5 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.25 0.43 -0.613  
lab\*tch 0.25 0.43 -0.613  
lab\*nch 0.0 0.75 0.847  
relative Natural Colour (NC)  
lab\*trj 0.25 0.43 -0.613  
lab\*tce 0.25 0.43 -0.613  
lab\*nce 0.0 0.75 0.847

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 25.73 31.44 -44.34  
LAB\*LABa 25.73 31.44 -44.34  
LAB\*LABb 25.0 54.21 305.0  
LAB\*LABc 25.0 54.21 305.0

relative CIELAB lab\*  
lab\*lab 0.0 0.573 -0.818  
lab\*tch 0.0 0.573 -0.818  
lab\*nch 0.0 1.0 0.847  
relative Natural Colour (NC)  
lab\*trj 0.0 0.573 -0.818  
lab\*tce 0.0 0.573 -0.818  
lab\*nce 0.0 1.0 0.847

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 19.94 7.77 -11.09  
LAB\*LABa 19.94 7.77 -11.09  
LAB\*LABb 18.02 0.0 0.47  
LAB\*LABc 18.02 0.0 0.47

relative CIELAB lab\*  
lab\*lab 0.0 0.287 -0.408  
lab\*tch 0.0 0.287 -0.408  
lab\*nch 0.0 0.5 0.847  
relative Natural Colour (NC)  
lab\*trj 0.0 0.287 -0.408  
lab\*tce 0.0 0.287 -0.408  
lab\*nce 0.0 0.5 0.847

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 18.00 0.01 -

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\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 0.00$

## Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 306/360 = 0.851$

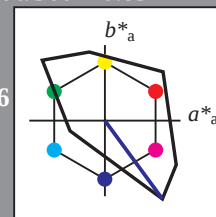
$lab^*tch$  and  $lab^*nch$

A: hue V

LCH\*Ma: 30 129 306

olv\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 158$

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\*LABb 99.99 0.01 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)  
cmyn3\* 0.25 0.25 0.25 (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 71.57 0.0 0.0  
LAB\*LABa 71.57 0.0 0.0  
LAB\*LABb 70.00 0.01 -

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\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (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 56.71 -0.24 2.14  
LAB\*LABa 56.71 0.0 0.0  
LAB\*LABb 55.00 0.01 -

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\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (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 37.36 -0.03 0.63  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 35.00 0.01 -

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\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 18.00 0.01 -

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\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 1.0$

## TLS00; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5          | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66         | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63         | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88         | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39         | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3          | 94.35   | -58.41  | 110.97       | 328          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92         | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26         | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23         | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57         | 1.41    | -46.46  | 46.49        | 272          |

% Regularity

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

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

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 62.9 38.02 -51.78  
LAB\*LABa 62.9 38.02 -51.78  
LAB\*LABb 62.9 38.02 -51.78

relative CIELAB lab\*  
lab\*lab 0.659 0.296 -0.402  
lab\*tch 0.659 0.296 -0.402  
lab\*nch 0.0 0.5 0.851  
relative Natural Colour (NC)  
lab\*trj 0.659 0.296 -0.402  
lab\*tce 0.659 0.296 -0.402  
lab\*nce 0.0 0.5 0.851

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (1.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 39.05 38.03 -51.79  
LAB\*LABa 39.05 38.03 -51.79  
LAB\*LABb 39.05 38.03 -51.79

relative CIELAB lab\*  
lab\*lab 0.239 0.444 -0.603  
lab\*tch 0.239 0.444 -0.603  
lab\*nch 0.0 0.5 0.851  
relative Natural Colour (NC)  
lab\*trj 0.239 0.444 -0.603  
lab\*tce 0.239 0.444 -0.603  
lab\*nce 0.0 0.5 0.851

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 22.8 57.04 -77.68  
LAB\*LABa 22.8 57.04 -77.68  
LAB\*LABb 22.8 57.04 -77.68

relative CIELAB lab\*  
lab\*lab 0.0 0.318 0.592 -0.805  
lab\*tch 0.0 0.318 0.592 -0.805  
lab\*nch 0.0 1.0 0.851  
relative Natural Colour (NC)  
lab\*trj 0.0 0.318 0.592 -0.805  
lab\*tce 0.0 0.318 0.592 -0.805  
lab\*nce 0.0 1.0 0.851

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 0.5 0.5 0.5 (1.0)  
cmyn4\* 0.5 0.5 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 15.21 38.02 -51.78  
LAB\*LABa 15.21 38.02 -51.78  
LAB\*LABb 15.21 38.02 -51.78

relative CIELAB lab\*  
lab\*lab 0.0 0.239 0.444 -0.603  
lab\*tch 0.0 0.239 0.444 -0.603  
lab\*nch 0.0 0.5 0.851  
relative Natural Colour (NC)  
lab\*trj 0.0 0.239 0.444 -0.603  
lab\*tce 0.0 0.239 0.444 -0.603  
lab\*nce 0.0 0.5 0.851

$n^* = 0.00$

SE500-7, 5 step scales for constant CIELAB hue 305/360 = 0.847 (left)

5 step scales for constant CIELAB hue 306/360 = 0.851 (right)

BAM-test chart SE50; Colorimetric systems ORS18 & TLS00

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

input: `cmv0* setcmvcolor`

output: `cmv0* / 000n* setcmvcolor`

## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 354/360 = 0.982$

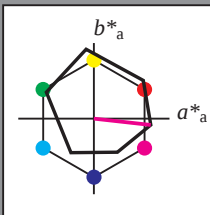
$lab^*tch$  and  $lab^*nch$

A: hue M

LCH\*Ma: 48 76 354

olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



## ORS18; adapted (a) CIELAB data

|                  | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

%Regularity

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

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

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 1.0 | 1.0 | 1.0 | (1.0) |
| olv3* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 1.0 | 1.0 | 1.0 | (1.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |

standard and adapted CIELAB

|         |       |       |      |
|---------|-------|-------|------|
| LAB*LAB | 95.41 | -0.98 | 47.5 |
| 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*lab | 0.0 | 1.0 | 0.0 |
| lab*lab | 0.0 | 0.0 | 1.0 |
| lab*lab | 0.0 | 0.0 | 0.0 |
| lab*lab | 0.0 | 0.0 | 0.0 |

relative Natural Colour (NC)

|         |     |     |     |
|---------|-----|-----|-----|
| lab*lab | 1.0 | 0.0 | 0.0 |
| lab*lab | 0.0 | 1.0 | 0.0 |
| lab*lab | 0.0 | 0.0 | 1.0 |
| lab*lab | 0.0 | 0.0 | 0.0 |
| lab*lab | 0.0 | 0.0 | 0.0 |

relative Inform. Technology (IT)

|       |     |      |     |       |
|-------|-----|------|-----|-------|
| olv3* | 1.0 | 0.75 | 1.0 | (1.0) |
| olv3* | 0.0 | 0.25 | 0.0 | (0.0) |
| olv4* | 1.0 | 0.75 | 1.0 | (1.0) |
| olv4* | 0.0 | 0.25 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.25 | 0.0 | (0.0) |

standard and adapted CIELAB

|         |       |       |      |
|---------|-------|-------|------|
| LAB*LAB | 83.59 | 18.05 | 1.87 |
| LAB*LAB | 83.59 | 18.05 | 1.87 |
| LAB*LAB | 83.59 | 18.05 | 1.87 |

relative CIELAB lab\*

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.847 | 0.248 | -0.027 |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |

relative Natural Colour (NC)

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.847 | 0.248 | -0.027 |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 1.0 | 0.5 | 1.0 | (1.0) |
| olv3* | 0.0 | 0.5 | 0.0 | (0.0) |
| olv4* | 1.0 | 0.5 | 1.0 | (1.0) |
| olv4* | 0.0 | 0.5 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.5 | 0.0 | (0.0) |

standard and adapted CIELAB

|         |       |       |       |
|---------|-------|-------|-------|
| LAB*LAB | 71.77 | 37.63 | -1.01 |
| LAB*LAB | 71.77 | 37.63 | -1.01 |
| LAB*LAB | 71.77 | 37.63 | -1.01 |

relative CIELAB lab\*

|         |     |     |     |
|---------|-----|-----|-----|
| lab*lab | 1.0 | 0.0 | 0.0 |
| lab*lab | 0.0 | 1.0 | 0.0 |
| lab*lab | 0.0 | 0.0 | 1.0 |
| lab*lab | 0.0 | 0.0 | 0.0 |
| lab*lab | 0.0 | 0.0 | 0.0 |

relative Natural Colour (NC)

|         |     |     |     |
|---------|-----|-----|-----|
| lab*lab | 1.0 | 0.0 | 0.0 |
| lab*lab | 0.0 | 1.0 | 0.0 |
| lab*lab | 0.0 | 0.0 | 1.0 |
| lab*lab | 0.0 | 0.0 | 0.0 |
| lab*lab | 0.0 | 0.0 | 0.0 |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.75 | 0.75 | 0.75 | (1.0) |
| olv3* | 0.25 | 0.25 | 0.25 | (0.0) |
| olv4* | 1.0  | 1.0  | 1.0  | (1.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |

standard and adapted CIELAB

|         |       |       |      |
|---------|-------|-------|------|
| LAB*LAB | 76.06 | -0.61 | 3.44 |
| LAB*LAB | 76.06 | -0.61 | 3.44 |
| LAB*LAB | 76.06 | -0.61 | 3.44 |

relative CIELAB lab\*

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.847 | 0.248 | -0.027 |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |

relative Natural Colour (NC)

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.847 | 0.248 | -0.027 |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |
| lab*lab | 0.875 | 0.25  | 0.982  |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.75 | 0.5  | 0.75 | (1.0) |
| olv3* | 0.25 | 0.5  | 0.25 | (0.0) |
| olv4* | 1.0  | 0.75 | 1.0  | (1.0) |
| olv4* | 0.0  | 0.25 | 0.0  | (0.0) |
| olv4* | 0.0  | 0.25 | 0.0  | (0.0) |

standard and adapted CIELAB

|         |       |       |      |
|---------|-------|-------|------|
| LAB*LAB | 64.24 | 18.43 | 0.56 |
| LAB*LAB | 64.24 | 18.43 | 0.56 |
| LAB*LAB | 64.24 | 18.43 | 0.56 |

relative CIELAB lab\*

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.695 | 0.497 | -0.054 |
| lab*lab | 0.75  | 0.5   | 0.982  |
| lab*lab | 0.75  | 0.5   | 0.982  |
| lab*lab | 0.75  | 0.5   | 0.982  |
| lab*lab | 0.75  | 0.5   | 0.982  |

relative Natural Colour (NC)

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.695 | 0.497 | -0.054 |
| lab*lab | 0.75  | 0.5   | 0.982  |
| lab*lab | 0.75  | 0.5   | 0.982  |
| lab*lab | 0.75  | 0.5   | 0.982  |
| lab*lab | 0.75  | 0.5   | 0.982  |

relative Inform. Technology (IT)

|       |     |      |     |       |
|-------|-----|------|-----|-------|
| olv3* | 1.0 | 0.25 | 1.0 | (1.0) |
| olv3* | 0.0 | 0.25 | 0.0 | (0.0) |
| olv4* | 1.0 | 0.25 | 1.0 | (1.0) |
| olv4* | 0.0 | 0.25 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.25 | 0.0 | (0.0) |

standard and adapted CIELAB

|         |       |       |      |
|---------|-------|-------|------|
| LAB*LAB | 59.95 | 56.15 | -3.9 |
| LAB*LAB | 59.95 | 56.15 | -3.9 |
| LAB*LAB | 59.95 | 56.15 | -3.9 |

relative CIELAB lab\*

|         |      |     |     |
|---------|------|-----|-----|
| lab*lab | 0.5  | 0.5 | 0.0 |
| lab*lab | 0.75 | 0.5 | 0.0 |
| lab*lab | 0.75 | 0.5 | 0.0 |
| lab*lab | 0.75 | 0.5 | 0.0 |
| lab*lab | 0.75 | 0.5 | 0.0 |

relative Natural Colour (NC)

|         |      |     |     |
|---------|------|-----|-----|
| lab*lab | 0.5  | 0.5 | 0.0 |
| lab*lab | 0.75 | 0.5 | 0.0 |
| lab*lab | 0.75 | 0.5 | 0.0 |
| lab*lab | 0.75 | 0.5 | 0.0 |
| lab*lab | 0.75 | 0.5 | 0.0 |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 0.5 | 0.5 | 0.5 | (1.0) |
| olv3* | 0.0 | 0.5 | 0.0 | (0.0) |
| olv4* | 1.0 | 1.0 | 1.0 | (1.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |

standard and adapted CIELAB

|         |       |       |      |
|---------|-------|-------|------|
| LAB*LAB | 56.71 | -0.24 | 2.14 |
| LAB*LAB | 56.71 | -0.24 | 2.14 |
| LAB*LAB | 56.71 | -0.24 | 2.14 |

relative CIELAB lab\*

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.597 | 0.227 | -0.103 |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |

relative Natural Colour (NC)

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.597 | 0.227 | -0.103 |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.75 | 0.25 | 0.75 | (1.0) |
| olv3* | 0.25 | 0.25 | 0.25 | (0.0) |
| olv4* | 1.0  | 0.5  | 1.0  | (1.0) |
| olv4* | 0.0  | 0.5  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.5  | 0.0  | (0.0) |

standard and adapted CIELAB

|         |       |       |       |
|---------|-------|-------|-------|
| LAB*LAB | 52.42 | 37.64 | -1.17 |
| LAB*LAB | 52.42 | 37.64 | -1.17 |
| LAB*LAB | 52.42 | 37.64 | -1.17 |

relative CIELAB lab\*

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.542 | 0.454 | -0.208 |
| lab*lab | 0.625 | 0.75  | 0.982  |
| lab*lab | 0.625 | 0.75  | 0.982  |
| lab*lab | 0.625 | 0.75  | 0.982  |
| lab*lab | 0.625 | 0.75  | 0.982  |

relative Natural Colour (NC)

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.542 | 0.454 | -0.208 |
| lab*lab | 0.625 | 0.75  | 0.982  |
| lab*lab | 0.625 | 0.75  | 0.982  |
| lab*lab | 0.625 | 0.75  | 0.982  |
| lab*lab | 0.625 | 0.75  | 0.982  |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 1.0 | 0.0 | 1.0 | (1.0) |
| olv3* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 1.0 | 0.0 | 1.0 | (1.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.0 | 0.0 | (0.0) |

standard and adapted CIELAB

|         |       |       |       |
|---------|-------|-------|-------|
| LAB*LAB | 48.13 | 75.18 | -6.79 |
| LAB*LAB | 48.13 | 75.18 | -6.79 |
| LAB*LAB | 48.13 | 75.18 | -6.79 |

relative CIELAB lab\*

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.389 | 0.994 | -0.109 |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |

relative Natural Colour (NC)

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.389 | 0.994 | -0.109 |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.25 | 0.25 | 0.25 | (1.0) |
| olv3* | 0.0  | 0.25 | 0.0  | (0.0) |
| olv4* | 1.0  | 1.0  | 1.0  | (1.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |

standard and adapted CIELAB

|         |       |       |      |
|---------|-------|-------|------|
| LAB*LAB | 56.71 | -0.24 | 2.14 |
| LAB*LAB | 56.71 | -0.24 | 2.14 |
| LAB*LAB | 56.71 | -0.24 | 2.14 |

relative CIELAB lab\*

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.597 | 0.227 | -0.103 |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |

relative Natural Colour (NC)

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.597 | 0.227 | -0.103 |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| olv3* | 0.5 | 0.0 | 0.5 | (1.0) |
| olv3* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv4* | 1.0 | 0.5 | 1.0 | (1.0) |
| olv4* | 0.0 | 0.5 | 0.0 | (0.0) |
| olv4* | 0.0 | 0.5 | 0.0 | (0.0) |

standard and adapted CIELAB

|         |       |      |       |
|---------|-------|------|-------|
| LAB*LAB | 44.89 | 18.8 | -0.74 |
| LAB*LAB | 44.89 | 18.8 | -0.74 |
| LAB*LAB | 44.89 | 18.8 | -0.74 |

relative CIELAB lab\*

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.445 | 0.454 | -0.208 |
| lab*lab | 0.5   | 0.5   | 0.982  |
| lab*lab | 0.5   | 0.5   | 0.982  |
| lab*lab | 0.5   | 0.5   | 0.982  |
| lab*lab | 0.5   | 0.5   | 0.982  |

relative Natural Colour (NC)

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.445 | 0.454 | -0.208 |
| lab*lab | 0.5   | 0.5   | 0.982  |
| lab*lab | 0.5   | 0.5   | 0.982  |
| lab*lab | 0.5   | 0.5   | 0.982  |
| lab*lab | 0.5   | 0.5   | 0.982  |

relative Inform. Technology (IT)

|       |      |     |      |       |
|-------|------|-----|------|-------|
| olv3* | 0.75 | 0.0 | 0.75 | (1.0) |
| olv3* | 0.25 | 0.0 | 0.25 | (0.0) |
| olv4* | 1.0  | 0.0 | 1.0  | (1.0) |
| olv4* | 0.0  | 0.0 | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0 | 0.0  | (0.0) |

standard and adapted CIELAB

|         |      |       |       |
|---------|------|-------|-------|
| LAB*LAB | 40.6 | 56.52 | -5.21 |
| LAB*LAB | 40.6 | 56.52 | -5.21 |
| LAB*LAB | 40.6 | 56.52 | -5.21 |

relative CIELAB lab\*

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.389 | 0.994 | -0.109 |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |

relative Natural Colour (NC)

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.389 | 0.994 | -0.109 |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |
| lab*lab | 0.5   | 1.0   | 0.982  |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| olv3* | 0.25 | 0.25 | 0.25 | (1.0) |
| olv3* | 0.0  | 0.25 | 0.0  | (0.0) |
| olv4* | 1.0  | 1.0  | 1.0  | (1.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |
| olv4* | 0.0  | 0.0  | 0.0  | (0.0) |

standard and adapted CIELAB

|         |       |       |      |
|---------|-------|-------|------|
| LAB*LAB | 56.71 | -0.24 | 2.14 |
| LAB*LAB | 56.71 | -0.24 | 2.14 |
| LAB*LAB | 56.71 | -0.24 | 2.14 |

relative CIELAB lab\*

|         |       |       |        |
|---------|-------|-------|--------|
| lab*lab | 0.597 | 0.227 | -0.103 |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  | 0.982  |
| lab*lab | 0.625 | 0.25  |        |



## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 92/360 = 0.255$

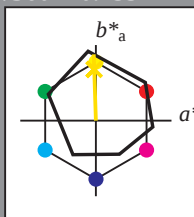
$lab^*tch$  and  $lab^*nch$

A: hue J

LCH\*Ma: 86 88 92

olv\*Ma: 1.0 0.9 0.0

triangle lightness  $t^*$



### ORS18; adapted (a) CIELAB data

|                  | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

%Regularity

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

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

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 -0.98 47.5  
LAB\*LABa 95.41 0.0 0.0  
LAB\*LABb 99.99 0.01 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)  
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 76.06 -0.61 3.44  
LAB\*LABa 76.06 0.0 0.0  
LAB\*LABb 75.00 0.01 -

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\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (0.0)  
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 56.71 -0.24 2.14  
LAB\*LABa 56.71 0.0 0.0  
LAB\*LABb 55.00 0.01 -

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\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (0.0)  
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 37.36 -0.03 0.83  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 35.00 0.01 -

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\*tce 0.25 0.0 0.0  
lab\*nce 0.0 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\* 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 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

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\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 1.0$

relative Inform. Technology (IT)  
olv3\* 1.0 0.975 0.75 (1.0)  
cmyn3\* 0.0 0.025 0.25 (0.0)  
olv4\* 1.0 0.975 0.75 (1.0)  
cmyn4\* 0.0 0.025 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 93.11 -1.64 26.52  
LAB\*LABa 93.11 -0.7 21.92  
LAB\*LABb 87.5 21.93 91.85

relative CIELAB lab\*  
lab\*lab 0.97 -0.007 0.25  
lab\*tch 0.875 0.25 0.25  
lab\*nch 0.0 0.25 0.25  
relative Natural Colour (NC)  
lab\*trj 0.97 0.0 0.25  
lab\*tce 0.875 0.25 0.25  
lab\*nce 0.0 0.25 0.25

relative Inform. Technology (IT)  
olv3\* 0.75 0.725 0.5 (1.0)  
cmyn3\* 0.0 0.075 0.5 (0.0)  
olv4\* 1.0 0.975 0.75 (1.0)  
cmyn4\* 0.0 0.025 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 73.75 -1.27 25.22  
LAB\*LABa 73.75 -0.69 21.92  
LAB\*LABb 62.5 21.93 91.84

relative CIELAB lab\*  
lab\*lab 0.75 -0.007 0.25  
lab\*tch 0.625 0.25 0.25  
lab\*nch 0.0 0.25 0.25  
relative Natural Colour (NC)  
lab\*trj 0.75 0.0 0.25  
lab\*tce 0.625 0.25 0.25  
lab\*nce 0.0 0.25 0.25

relative Inform. Technology (IT)  
olv3\* 0.5 0.475 0.25 (1.0)  
cmyn3\* 0.0 0.025 0.25 (0.0)  
olv4\* 1.0 0.975 0.75 (1.0)  
cmyn4\* 0.0 0.025 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 54.4 -0.89 23.91  
LAB\*LABa 54.4 -0.69 21.92  
LAB\*LABb 43.75 21.93 91.84

relative CIELAB lab\*  
lab\*lab 0.5 -0.007 0.25  
lab\*tch 0.375 0.25 0.25  
lab\*nch 0.0 0.25 0.25  
relative Natural Colour (NC)  
lab\*trj 0.5 0.0 0.25  
lab\*tce 0.375 0.25 0.25  
lab\*nce 0.0 0.25 0.25

relative Inform. Technology (IT)  
olv3\* 0.25 0.475 0.25 (1.0)  
cmyn3\* 0.0 0.025 0.25 (0.0)  
olv4\* 1.0 0.975 0.75 (1.0)  
cmyn4\* 0.0 0.025 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 37.36 -0.03 0.83  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 35.00 0.01 -

relative CIELAB lab\*  
lab\*lab 0.25 -0.007 0.25  
lab\*tch 0.125 0.25 0.25  
lab\*nch 0.0 0.25 0.25  
relative Natural Colour (NC)  
lab\*trj 0.25 0.0 0.25  
lab\*tce 0.125 0.25 0.25  
lab\*nce 0.0 0.25 0.25

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (0.0)  
cmyn3\* 1.0 1.0 1.0 (1.0)  
olv4\* 1.0 1.0 1.0 (1.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

$n^* = 0.50$

relative Inform. Technology (IT)  
olv3\* 1.0 0.951 0.5 (1.0)  
cmyn3\* 0.0 0.049 0.5 (0.0)  
olv4\* 1.0 0.951 0.5 (1.0)  
cmyn4\* 0.0 0.049 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 90.8 -2.3 48.29  
LAB\*LABa 90.8 -1.4 43.84  
LAB\*LABb 75.0 43.86 91.85

relative CIELAB lab\*  
lab\*lab 0.94 -0.015 0.5  
lab\*tch 0.75 0.5 0.25  
lab\*nch 0.0 0.5 0.25  
relative Natural Colour (NC)  
lab\*trj 0.94 0.0 0.5  
lab\*tce 0.75 0.5 0.25  
lab\*nce 0.0 0.5 0.25

relative Inform. Technology (IT)  
olv3\* 0.75 0.675 0.0 (1.0)  
cmyn3\* 0.25 0.299 0.75 (0.0)  
olv4\* 1.0 0.951 0.5 (1.0)  
cmyn4\* 0.0 0.049 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 71.45 -1.92 46.98  
LAB\*LABa 71.45 -1.4 43.84  
LAB\*LABb 50.0 43.87 91.84

relative CIELAB lab\*  
lab\*lab 0.75 0.675 0.0 (1.0)  
lab\*tch 0.625 0.75 0.25  
lab\*nch 0.0 0.75 0.25  
relative Natural Colour (NC)  
lab\*trj 0.75 0.0 0.75  
lab\*tce 0.625 0.75 0.25  
lab\*nce 0.0 0.75 0.25

relative Inform. Technology (IT)  
olv3\* 0.5 0.675 0.0 (1.0)  
cmyn3\* 0.25 0.324 1.0 (0.0)  
olv4\* 1.0 0.926 0.25 (1.0)  
cmyn4\* 0.0 0.074 0.75 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 69.14 -2.58 68.74  
LAB\*LABa 69.14 -2.1 65.76  
LAB\*LABb 37.51 65.79 91.84

relative CIELAB lab\*  
lab\*lab 0.5 0.675 0.0 (1.0)  
lab\*tch 0.375 0.75 0.25  
lab\*nch 0.0 0.75 0.25  
relative Natural Colour (NC)  
lab\*trj 0.5 0.0 0.75  
lab\*tce 0.375 0.75 0.25  
lab\*nce 0.0 0.75 0.25

relative Inform. Technology (IT)  
olv3\* 0.25 0.675 0.0 (1.0)  
cmyn3\* 0.0 0.549 1.0 (0.0)  
olv4\* 1.0 0.951 0.5 (1.0)  
cmyn4\* 0.0 0.049 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 52.1 -1.39 43.84  
LAB\*LABa 52.1 -1.39 43.84  
LAB\*LABb 25.01 43.86 91.84

relative CIELAB lab\*  
lab\*lab 0.44 -0.015 0.5  
lab\*tch 0.25 0.5 0.25  
lab\*nch 0.0 0.5 0.25  
relative Natural Colour (NC)  
lab\*trj 0.44 0.0 0.5  
lab\*tce 0.25 0.5 0.25  
lab\*nce 0.0 0.5 0.25

$n^* = 0.25$

relative Inform. Technology (IT)  
olv3\* 1.0 0.926 0.25 (1.0)  
cmyn3\* 0.0 0.074 0.75 (0.0)  
olv4\* 1.0 0.926 0.25 (1.0)  
cmyn4\* 0.0 0.074 0.75 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 88.49 -2.96 70.05  
LAB\*LABa 88.49 -2.1 65.76  
LAB\*LABb 62.5 65.79 91.84

relative CIELAB lab\*  
lab\*lab 0.911 -0.023 0.75  
lab\*tch 0.625 0.75 0.25  
lab\*nch 0.0 0.75 0.25  
relative Natural Colour (NC)  
lab\*trj 0.911 0.0 0.75  
lab\*tce 0.625 0.75 0.25  
lab\*nce 0.0 0.75 0.25

relative Inform. Technology (IT)  
olv3\* 0.75 0.675 0.0 (1.0)  
cmyn3\* 0.0 0.099 1.0 (0.0)  
olv4\* 1.0 0.902 0.0 (1.0)  
cmyn4\* 0.0 0.099 1.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 86.15 -3.62 91.81  
LAB\*LABa 86.15 -2.81 87.87  
LAB\*LABb 50.0 87.72 91.84

relative CIELAB lab\*  
lab\*lab 0.881 -0.031 0.999  
lab\*tch 0.5 1.0 0.25  
lab\*nch 0.0 1.0 0.25  
relative Natural Colour (NC)  
lab\*trj 0.881 0.0 1.0  
lab\*tce 0.5 1.0 0.25  
lab\*nce 0.0 1.0 0.25

relative Inform. Technology (IT)  
olv3\* 0.5 0.675 0.0 (1.0)  
cmyn3\* 0.25 0.324 1.0 (0.0)  
olv4\* 1.0 0.926 0.25 (1.0)  
cmyn4\* 0.0 0.074 0.75 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 69.14 -2.58 68.74  
LAB\*LABa 69.14 -2.1 65.76  
LAB\*LABb 37.51 65.79 91.84

relative CIELAB lab\*  
lab\*lab 0.661 -0.023 0.75  
lab\*tch 0.375 0.75 0.25  
lab\*nch 0.0 0.75 0.25  
relative Natural Colour (NC)  
lab\*trj 0.661 0.0 0.75  
lab\*tce 0.375 0.75 0.25  
lab\*nce 0.0 0.75 0.25

relative Inform. Technology (IT)  
olv3\* 0.25 0.675 0.0 (1.0)  
cmyn3\* 0.0 0.549 1.0 (0.0)  
olv4\* 1.0 0.951 0.5 (1.0)  
cmyn4\* 0.0 0.049 0.5 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 52.1 -1.39 43.84  
LAB\*LABa 52.1 -1.39 43.84  
LAB\*LABb 25.01 43.86 91.84

$n^* = 0.00$

blackness  $n^*$

chromaticness  $c^*$

## Output: Colorimetric Television Luminous System TLS00

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

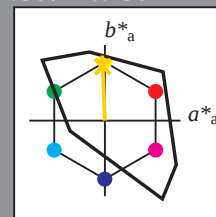
$lab^*tch$  and  $lab^*nch$

A: hue J

LCH\*Ma: 85 86 92

olv\*Ma: 1.0 0.82 0.0

triangle lightness  $t^*$



### TLS00; adapted (a) CIELAB data

|                  | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| N <sub>Ma</sub>  | 0.01        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

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

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

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\*LABb 99.99 0.01 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)  
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 71.57 0.0 0.0  
LAB\*LABa 71.57 0.0 0.0  
LAB\*LABb 75.00 0.01 -

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\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (0.0)  
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 47.72 0.0 0.0  
LAB\*LABa 47.72 0.0 0.0  
LAB\*LABb 50.0 0.01 -

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\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (0.0)  
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 23.87 0.0 0.0  
LAB\*LABa 23.87 0.0 0.0  
LAB\*LABb 25.01 0.01 -

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\*tce 0.25 0.0 0.0  
lab\*nce 0.0 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\* 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 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

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\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 1.0$

relative Inform. Technology (IT)  
olv3\* 1.0 0.956 0.75 (1.0)  
cmyn3\* 0.0 0.044 0.25 (0.0)  
olv4\* 1.0 0.956 0.75 (1.0)  
cmyn4\* 0.0 0.044 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 92.86 -0.87 21.53  
LAB\*LABa 92.86 -0.87 21.53  
LAB\*LABb 87.5 21.54 92.33

relative CIELAB lab\*  
lab\*lab 0.973 -0.009 0.25  
lab\*tch 0.875 0.25 0.25  
lab\*nch 0.0 0.25 0.25  
relative Natural Colour (NC)  
lab\*trj 0.973 0.0 0.25  
lab\*tce 0.875 0.25 0.25  
lab\*nce 0.0 0.25 0.25

relative Inform. Technology (IT)  
olv3\* 0.75 0.786 0.5 (1.0)  
cmyn3\* 0.25 0.294 0.75 (0.0)  
olv4\* 1.0 0.956 0.75 (1.0)  
cmyn4\* 0.0 0.044 0.25 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 69.01 -0.86 21.53  
LAB\*LABa 69.01 -0.86 21.53  
LAB\*LABb 62.5 21.55 92.31

relative CIELAB lab\*  
lab\*lab 0.947 -0.019 0.5  
lab\*tch 0.75 0.75 0.25  
lab\*nch 0.0 0.75 0.25  
relative Natural Colour (NC)  
lab\*trj 0.947 0.0 0.5  
lab\*tce 0.75 0.75 0.25  
lab\*nce 0.0 0.7

## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 164/360 = 0.457$

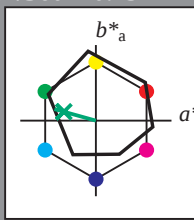
$lab^*tch$  and  $lab^*nch$

A: hue G

LCH\*Ma: 53 57 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



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 -0.98 47.5  
LAB\*LABa 95.41 0.0 0.0  
LAB\*LABb 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*ch 1.0 0.0 0.0  
lab\*nh 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 1.0 0.0 0.0  
lab\*tc 1.0 0.0 0.0  
lab\*nc 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (0.0)  
olv4\* 1.0 1.0 1.0 0.75  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 76.06 -0.61 3.44  
LAB\*LABa 76.06 0.0 0.0  
LAB\*LABb 75.00 0.01 -

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.0  
lab\*ch 0.75 0.0 0.0  
lab\*nh 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.75 0.0 0.0  
lab\*tc 0.75 0.0 0.0  
lab\*nc 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (0.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 1.0 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 56.71 -0.24 2.14  
LAB\*LABa 56.71 0.0 0.0  
LAB\*LABb 55.00 0.01 -

relative CIELAB lab\*  
lab\*lab 0.5 0.0 0.0  
lab\*ch 0.5 0.0 0.0  
lab\*nh 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.5 0.0 0.0  
lab\*tc 0.5 0.0 0.0  
lab\*nc 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (0.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 1.0 1.0 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.75  
standard and adapted CIELAB  
LAB\*LAB 37.36 -0.03 0.63  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 25.00 0.01 -

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0  
lab\*ch 0.25 0.0 0.0  
lab\*nh 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.25 0.0 0.0  
lab\*tc 0.25 0.0 0.0  
lab\*nc 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nh 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*nc 1.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nh 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*nc 1.0 0.0 0.0

## ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

%Regularity

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

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

relative Inform. Technology (IT)  
olv3\* 0.5 1.0 0.5 (1.0)  
cmyn3\* 0.5 0.0 0.5 (0.0)  
olv4\* 0.5 1.0 0.5 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 74.1 -27.98 10.94  
LAB\*LABa 74.1 -27.4 7.62  
LAB\*LABb 75.0 28.45 164.46

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.5  
lab\*ch 0.75 0.0 0.5  
lab\*nh 0.0 0.0 0.5  
relative Natural Colour (NC)  
lab\*tr 0.75 0.0 0.5  
lab\*tc 0.75 0.0 0.5  
lab\*nc 0.0 0.0 0.5

relative Inform. Technology (IT)  
olv3\* 0.25 0.5 0.75 (1.0)  
cmyn3\* 0.75 0.25 0.625 (0.0)  
olv4\* 0.5 1.0 0.625 0.5  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 54.76 -27.61 9.64  
LAB\*LABa 54.76 -27.41 7.63  
LAB\*LABb 50.0 28.46 164.45

relative CIELAB lab\*  
lab\*lab 0.475 -0.481 0.134  
lab\*ch 0.475 0.0 0.5  
lab\*nh 0.0 0.0 0.5  
relative Natural Colour (NC)  
lab\*tr 0.475 -0.481 0.134  
lab\*tc 0.475 0.0 0.5  
lab\*nc 0.0 0.0 0.5

relative Inform. Technology (IT)  
olv3\* 0.0 0.5 0.75 (1.0)  
cmyn3\* 1.0 0.0 0.75 (0.0)  
olv4\* 0.5 1.0 0.75 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 35.41 -27.24 3.81  
LAB\*LABa 35.41 -27.4 7.63  
LAB\*LABb 37.5 14.23 164.45

relative CIELAB lab\*  
lab\*lab 0.362 -0.249 0.01  
lab\*ch 0.362 0.0 0.5  
lab\*nh 0.0 0.0 0.5  
relative Natural Colour (NC)  
lab\*tr 0.362 -0.249 0.01  
lab\*tc 0.362 0.0 0.5  
lab\*nc 0.0 0.0 0.5

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 0.0 0.0 (0.0)  
olv4\* 1.0 1.0 0.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nh 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*nc 1.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nh 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*nc 1.0 0.0 0.0

## Output: Colorimetric Television Luminous System TLS00

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

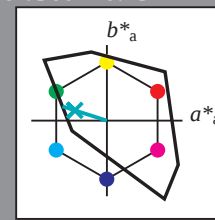
$lab^*tch$  and  $lab^*nch$

A: hue G

LCH\*Ma: 86 62 162

olv\*Ma: 0.0 1.0 0.65

triangle lightness  $t^*$



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\*LABb 99.99 0.01 0.0

relative CIELAB lab\*  
lab\*lab 1.0 0.0 0.0  
lab\*ch 1.0 0.0 0.0  
lab\*nh 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 1.0 0.0 0.0  
lab\*tc 1.0 0.0 0.0  
lab\*nc 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.75 0.75 0.75 (1.0)  
cmyn3\* 0.25 0.25 0.25 (0.0)  
olv4\* 1.0 1.0 1.0 0.75  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 71.57 0.0 0.0  
LAB\*LABa 71.57 0.0 0.0  
LAB\*LABb 75.00 0.01 -

relative CIELAB lab\*  
lab\*lab 0.75 0.0 0.0  
lab\*ch 0.75 0.0 0.0  
lab\*nh 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.75 0.0 0.0  
lab\*tc 0.75 0.0 0.0  
lab\*nc 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (0.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 1.0 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 52.8 -54.81 15.26  
LAB\*LABa 52.8 -54.81 15.26  
LAB\*LABb 50.0 56.91 164.45

relative CIELAB lab\*  
lab\*lab 0.45 -0.962 0.268  
lab\*ch 0.45 0.0 0.5  
lab\*nh 0.0 0.0 0.5  
relative Natural Colour (NC)  
lab\*tr 0.45 -0.962 0.268  
lab\*tc 0.45 0.0 0.5  
lab\*nc 0.0 0.0 0.5

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (0.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 1.0 1.0 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.75  
standard and adapted CIELAB  
LAB\*LAB 37.36 -0.03 0.63  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 25.00 0.01 -

relative CIELAB lab\*  
lab\*lab 0.25 0.0 0.0  
lab\*ch 0.25 0.0 0.0  
lab\*nh 0.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.25 0.0 0.0  
lab\*tc 0.25 0.0 0.0  
lab\*nc 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.0 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nh 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*nc 1.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nh 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*nc 1.0 0.0 0.0

## TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| N <sub>Ma</sub>  | 0.01        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

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

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

relative Inform. Technology (IT)  
olv3\* 0.5 1.0 0.5 (1.0)  
cmyn3\* 0.5 0.0 0.5 (0.0)  
olv4\* 0.5 1.0 0.5 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 90.57 -29.42 9.43  
LAB\*LABa 90.57 -29.42 9.43  
LAB\*LABb 90.57 30.9 162.23

relative CIELAB lab\*  
lab\*lab 0.949 -0.475 0.153  
lab\*ch 0.949 0.0 0.5  
lab\*nh 0.0 0.0 0.5  
relative Natural Colour (NC)  
lab\*tr 0.949 -0.475 0.153  
lab\*tc 0.949 0.0 0.5  
lab\*nc 0.0 0.0 0.5

relative Inform. Technology (IT)  
olv3\* 0.25 0.5 0.75 (1.0)  
cmyn3\* 0.75 0.25 0.625 (0.0)  
olv4\* 0.5 1.0 0.75 0.5  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 66.73 -29.42 9.44  
LAB\*LABa 66.73 -29.42 9.44  
LAB\*LABb 50.0 30.91 162.22

relative CIELAB lab\*  
lab\*lab 0.674 -0.713 0.229  
lab\*ch 0.674 0.0 0.5  
lab\*nh 0.0 0.0 0.5  
relative Natural Colour (NC)  
lab\*tr 0.674 -0.713 0.229  
lab\*tc 0.674 0.0 0.5  
lab\*nc 0.0 0.0 0.5

relative Inform. Technology (IT)  
olv3\* 0.0 0.5 0.75 (1.0)  
cmyn3\* 0.75 0.0 0.75 (0.0)  
olv4\* 0.5 1.0 0.75 0.5  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 45.3 -14.71 4.72  
LAB\*LABa 45.3 -14.71 4.72  
LAB\*LABb 37.5 15.45 162.22

relative CIELAB lab\*  
lab\*lab 0.475 -0.237 0.076  
lab\*ch 0.475 0.0 0.5  
lab\*nh 0.0 0.0 0.5  
relative Natural Colour (NC)  
lab\*tr 0.475 -0.237 0.076  
lab\*tc 0.475 0.0 0.5  
lab\*nc 0.0 0.0 0.5

relative Inform. Technology (IT)  
olv3\* 0.0 0.5 0.75 (1.0)  
cmyn3\* 0.75 0.0 0.75 (0.0)  
olv4\* 0.5 1.0 0.75 0.5  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 42.88 -14.71 4.72  
LAB\*LABa 42.88 -14.71 4.72  
LAB\*LABb 37.5 15.45 162.22

relative CIELAB lab\*  
lab\*lab 0.449 -0.237 0.076  
lab\*ch 0.449 0.0 0.5  
lab\*nh 0.0 0.0 0.5  
relative Natural Colour (NC)  
lab\*tr 0.449 -0.237 0.076  
lab\*tc 0.449 0.0 0.5  
lab\*nc 0.0 0.0 0.5

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0  
LAB\*LABb 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*ch 0.0 0.0 0.0  
lab\*nh 1.0 0.0 0.0  
relative Natural Colour (NC)  
lab\*tr 0.0 0.0 0.0  
lab\*tc 0.0 0.0 0.0  
lab\*nc 1.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (0.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 1.0 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 56.73 -29.42 9.44  
LAB\*LABa 56.73 -29.42 9.44  
LAB\*LABb 50.0 30.91 162.22

relative CIELAB lab\*  
lab\*lab 0.674 -0.713 0.229  
lab\*ch 0.674 0.0 0.5  
lab\*nh 0.0 0.0 0.5  
relative Natural Colour (NC)  
lab\*tr 0.674 -0.713 0.229  
lab\*tc 0.674 0.0 0.5  
lab\*nc 0.0 0.0 0.5

relative Inform. Technology (IT)  
olv3\* 0.25 0.5 0.75 (1.0)  
cmyn3\* 0.75 0.25 0.625 (0.0)  
olv4\* 0.5 1.0 0.75 0.5  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 66.73 -29.42 9.44  
LAB\*LABa 66.73 -29.42 9.44  
LAB\*LABb 50.0 30.91 162.22

relative CIELAB lab\*  
lab\*lab 0.674 -0.713 0.229  
lab\*ch 0.674 0.0 0.5  
lab\*nh 0.0 0.0 0.5  
relative Natural Colour (NC)  
lab\*tr 0.674 -0.713 0.229  
lab\*tc 0.674 0.0 0.5  
lab\*nc 0.0 0.0 0.5

relative Inform. Technology (IT)  
olv3\* 0.0 0.5 0.75 (1.0)  
cmyn3\* 0.75 0.0 0.75 (0.0)  
olv4\* 0.5 1.0 0.75 0.5  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 42.88 -14.71 4.72  
LAB\*LABa 42.88 -14.71 4.72  
LAB\*LABb 37.5 15.45 162.22

relative CIELAB lab\*  
lab\*lab 0.449 -0.237 0.076  
lab\*ch 0.449 0.0 0.5  
lab\*nh 0.0 0.0 0.5  
relative Natural Colour (NC)  
lab\*tr 0.449 -0.237 0.076  
lab\*tc 0.449 0.0 0.5  
lab\*nc 0.0 0.0 0.5

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0

## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 271/360 = 0.754$

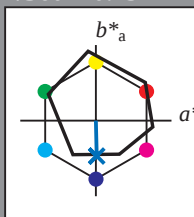
$lab^*tch$  and  $lab^*nch$

A: hue B

LCH\*Ma: 42 45 271

olv\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 93$

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 -0.98 4.75  
LAB\*LABa 95.41 0.0 0.0  
LAB\*LABb 99.99 0.01 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)  
cmyn3\* 0.25 0.25 0.25 (0.0)  
olv4\* 1.0 1.0 1.0 0.75  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 76.06 -0.61 3.44  
LAB\*LABa 76.06 0.0 0.0  
LAB\*LABb 75.00 0.01 -

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\*tce 0.75 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (0.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 1.0 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 56.71 -0.24 2.14  
LAB\*LABa 56.71 0.0 0.0  
LAB\*LABb 55.00 0.01 -

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\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.25 0.25 (0.0)  
cmyn3\* 0.75 0.75 0.75 (0.0)  
olv4\* 1.0 1.0 1.0 0.25  
cmyn4\* 0.0 0.0 0.0 0.75  
standard and adapted CIELAB  
LAB\*LAB 37.36 -0.03 0.83  
LAB\*LABa 37.36 0.0 0.0  
LAB\*LABb 35.00 0.01 -

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\*tce 0.25 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olv4\* 1.0 1.0 1.0 (0.0)  
cmyn4\* 0.0 0.0 0.0 (0.0)  
standard and adapted CIELAB  
LAB\*LAB 18.02 0.03 0.47  
LAB\*LABa 18.02 0.0 0.0  
LAB\*LABb 18.00 0.01 -

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\*tce 0.0 0.0 0.0  
lab\*nce 1.0 0.0 0.0

$n^* = 1.0$

## ORS18; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37         | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9          | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62         | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72         | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13         | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92         | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26         | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23         | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57         | 1.15    | -46.84  | 46.86        | 271          |

% Regularity

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

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

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 0.5 0.5 0.5 0.5  
cmyn4\* 0.5 0.5 0.5 0.5  
standard and adapted CIELAB  
LAB\*LAB 68.6 0.07 -19.39  
LAB\*LABa 68.6 0.5 -22.34  
LAB\*LABb 75.0 22.36 27.14

relative CIELAB lab\*  
lab\*lab 0.654 0.012 -0.499  
lab\*tch 0.75 0.5 0.754  
lab\*nch 0.0 0.5 0.754  
relative Natural Colour (NC)  
lab\*trj 0.654 0.0 -0.499  
lab\*tce 0.75 0.5 0.75  
lab\*nce 0.0 0.5 0.996

relative Inform. Technology (IT)  
olv3\* 0.25 0.494 0.75 (1.0)  
cmyn3\* 0.75 0.506 0.25 (0.0)  
olv4\* 0.5 0.616 1.0 0.75  
cmyn4\* 0.5 0.384 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 49.25 0.45 -20.7  
LAB\*LABa 49.25 0.5 -22.35  
LAB\*LABb 50.0 22.36 27.14

relative CIELAB lab\*  
lab\*lab 0.48 0.018 -0.749  
lab\*tch 0.625 0.75 0.754  
lab\*nch 0.0 0.75 0.754  
relative Natural Colour (NC)  
lab\*trj 0.48 0.0 -0.749  
lab\*tce 0.625 0.75 0.75  
lab\*nce 0.0 0.75 0.996

relative Inform. Technology (IT)  
olv3\* 0.0 0.368 0.75 (1.0)  
cmyn3\* 1.0 0.512 0.0 (0.0)  
olv4\* 0.0 0.488 1.0 1.0  
cmyn4\* 0.0 0.512 0.0 0.0  
standard and adapted CIELAB  
LAB\*LAB 41.79 1.1 -44.68  
LAB\*LABa 41.79 1.1 -44.68  
LAB\*LABb 50.0 44.71 27.14

relative CIELAB lab\*  
lab\*lab 0.307 0.025 -0.998  
lab\*tch 0.5 1.0 0.754  
lab\*nch 0.0 1.0 0.754  
relative Natural Colour (NC)  
lab\*trj 0.307 0.0 -0.999  
lab\*tce 0.5 1.0 0.75  
lab\*nce 0.0 1.0 0.000

relative Inform. Technology (IT)  
olv3\* 0.0 0.244 0.5 (1.0)  
cmyn3\* 0.5 0.256 0.5 (0.0)  
olv4\* 0.5 0.44 1.0 0.75  
cmyn4\* 0.5 0.256 0.5 0.25  
standard and adapted CIELAB  
LAB\*LAB 29.9 0.55 -22.34  
LAB\*LABa 29.9 0.55 -22.34  
LAB\*LABb 25.01 22.36 27.14

relative CIELAB lab\*  
lab\*lab 0.154 0.012 -0.499  
lab\*tch 0.25 0.5 0.754  
lab\*nch 0.0 0.5 0.754  
relative Natural Colour (NC)  
lab\*trj 0.154 0.0 -0.499  
lab\*tce 0.25 0.5 0.75  
lab\*nce 0.0 0.5 0.000

$n^* = 0.50$

relative Inform. Technology (IT)  
olv3\* 0.25 0.616 1.0 (1.0)  
cmyn3\* 0.75 0.384 0.0 (0.0)  
olv4\* 0.25 0.616 1.0 1.0  
cmyn4\* 0.75 0.384 0.0 0.0  
standard and adapted CIELAB  
LAB\*LAB 55.19 0.61 -31.48  
LAB\*LABa 55.19 0.61 -31.48  
LAB\*LABb 62.5 33.54 27.14

relative CIELAB lab\*  
lab\*lab 0.48 0.018 -0.749  
lab\*tch 0.625 0.75 0.754  
lab\*nch 0.0 0.75 0.754  
relative Natural Colour (NC)  
lab\*trj 0.48 0.0 -0.749  
lab\*tce 0.625 0.75 0.75  
lab\*nce 0.0 0.75 0.996

relative Inform. Technology (IT)  
olv3\* 0.0 0.368 0.75 (1.0)  
cmyn3\* 1.0 0.512 0.0 (0.0)  
olv4\* 0.0 0.488 1.0 1.0  
cmyn4\* 0.0 0.512 0.0 0.0  
standard and adapted CIELAB  
LAB\*LAB 41.79 1.1 -44.68  
LAB\*LABa 41.79 1.1 -44.68  
LAB\*LABb 50.0 44.71 27.14

relative CIELAB lab\*  
lab\*lab 0.307 0.025 -0.998  
lab\*tch 0.5 1.0 0.754  
lab\*nch 0.0 1.0 0.754  
relative Natural Colour (NC)  
lab\*trj 0.307 0.0 -0.999  
lab\*tce 0.5 1.0 0.75  
lab\*nce 0.0 1.0 0.000

relative Inform. Technology (IT)  
olv3\* 0.0 0.244 0.5 (1.0)  
cmyn3\* 0.5 0.256 0.5 (0.0)  
olv4\* 0.5 0.44 1.0 0.75  
cmyn4\* 0.5 0.256 0.5 0.25  
standard and adapted CIELAB  
LAB\*LAB 29.9 0.55 -22.34  
LAB\*LABa 29.9 0.55 -22.34  
LAB\*LABb 25.01 22.36 27.14

relative CIELAB lab\*  
lab\*lab 0.154 0.012 -0.499  
lab\*tch 0.25 0.5 0.754  
lab\*nch 0.0 0.5 0.754  
relative Natural Colour (NC)  
lab\*trj 0.154 0.0 -0.499  
lab\*tce 0.25 0.5 0.75  
lab\*nce 0.0 0.5 0.000

$n^* = 0.25$

$n^* = 0.00$

chromaticness  $c^*$

## Output: Colorimetric Television Luminous System TLS00

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

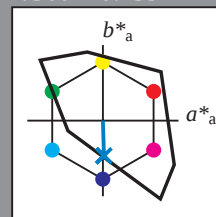
$lab^*tch$  and  $lab^*nch$

A: hue B

LCH\*Ma: 65 49 272

olv\*Ma: 0.0 0.61 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 158$

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\*LABb 99.99 0.01 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)  
cmyn3\* 0.25 0.25 0.25 (0.0)  
olv4\* 1.0 1.0 1.0 0.75  
cmyn4\* 0.0 0.0 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 80.13 0.73 -24.31  
LAB\*LABa 80.13 0.73 -24.31  
LAB\*LABb 87.7 0.36 -12.14

relative CIELAB lab\*  
lab\*lab 0.92 0.0 -0.249  
lab\*tch 0.875 0.25 0.755  
lab\*nch 0.0 0.25 0.755  
relative Natural Colour (NC)  
lab\*trj 0.92 0.0 -0.249  
lab\*tce 0.875 0.25 0.75  
lab\*nce 0.0 0.25 0.996

relative Inform. Technology (IT)  
olv3\* 0.5 0.5 0.5 (0.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olv4\* 1.0 1.0 1.0 0.5  
cmyn4\* 0.0 0.0 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 56.71 0.0 0.0  
LAB\*LABa 56.71 0.0 0.0  
LAB\*LABb 55.00 0.01 -

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\*tce 0.5 0.0 0.0  
lab\*nce 0.0 0.0 0.0

relative Inform. Technology (IT)  
olv3\* 0.25 0.403 0.5 (1.0)  
cmyn3\* 0.75 0.597 0.5 (0.0)  
olv4\* 0.5 0.903 1.0 0.5  
cmyn4\* 0.25 0.097 0.0 0.5  
standard and adapted CIELAB  
LAB\*LAB 40.07 3.7 -12.15  
LAB\*LABa 40.07 3.7 -12.15  
LAB\*LABb 47.2 0.0 0.0

relative CIELAB lab\*  
lab\*lab 0.67 0.008 -0.249  
lab\*tch 0.625 0.25 0.755  
lab\*nch 0.0 0.25 0.755  
relative Natural Colour (NC)  
lab\*trj 0.67 0.0 -0.249  
lab\*tce 0.625 0.25 0.75  
lab\*nce 0.0 0.25 0.000

relative Inform. Technology (IT)  
olv3\* 0.0 0.368 0.75 (1.0)  
cmyn3\* 1.0 0.512 0.0 (0.0)  
olv4\* 0.0 0.488 1.0 1.0  
cmyn4\* 0.0 0.512 0.0 0.0  
standard and adapted CIELAB  
LAB\*LAB 41.79 1.1 -44.68  
LAB\*LABa 41.79 1.1 -44.68  
LAB\*LABb 50.0 44.71 27.14

relative CIELAB lab\*  
lab\*lab 0.307 0.025 -0.998  
lab\*tch 0.5 1.0 0.754  
lab\*nch 0.0 1.0 0.754  
relative Natural Colour (NC)  
lab\*trj 0.307 0.0 -0.999  
lab\*tce 0.5 1.0 0.75  
lab\*nce 0.0 1.0 0.000

$n^* = 0.25$

$n^* = 0.00$

chromaticness  $c^*$

## TLS00; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5          | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66         | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63         | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88         | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39         | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3          | 94.35   | -58.41  | 110.97       | 328          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92         | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26         | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23         | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57         | 1.41    | -46.46  | 46.49        | 272          |

% Regularity

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

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

relative Inform. Technology (IT)  
olv3\* 0.5 0.805 1.0 (1.0)  
cmyn3\* 0.5 0.195 0.0 (0.0)  
olv4\* 0.5 0.805 1.0 1.0  
cmyn4\* 0.5 0.195 0.0 0.0  
standard and adapted CIELAB  
LAB\*LAB 80.13 0.73 -24.31  
LAB\*LABa 80.13 0.73 -24.31  
LAB\*LABb 87.7 0.36 -12.14

relative CIELAB lab\*  
lab\*lab 0.84 0.015 -0.499  
lab\*tch 0.75 0.5 0.755  
lab\*nch 0.0 0.5 0.755  
relative Natural Colour (NC)  
lab\*trj 0.84 0.0 -0.499  
lab\*tce 0.75 0.5 0.75  
lab\*nce 0.0 0.5 0.996

relative Inform. Technology (IT)  
olv3\* 0.25 0.555 0.75 (1.0)  
cmyn3\* 0.75 0.445 0.25 (0.0)  
olv4\* 0.5 0.805 1.0 0.75  
cmyn4\* 0.5 0.195 0.0 0.25  
standard and adapted CIELAB  
LAB\*LAB 56.28 0.74 -24.32  
LAB\*LABa 56.28 0.74 -24.32  
LAB\*LABb 62.5 0.36 -12.15

relative CIELAB lab\*  
lab\*lab 0.79 0.023 -0.749  
lab\*tch 0.75 0.5 0.755  
lab\*nch 0.0 0.5 0.755  
relative Natural Colour (NC)  
lab\*trj 0.79 0.0 -0.749  
lab\*tce 0.75 0.5 0.75  
lab\*nce 0.0 0.5 0.996

relative Inform. Technology (IT)  
olv3\* 0.0 0.368 0.75 (1.0)  
cmyn3\* 1.0 0.512 0.0 (0.0)  
olv4\* 0.0 0.488 1.0 1.0  
cmyn4\* 0.0 0.512 0.0 0.0  
standard and adapted CIELAB  
LAB\*LAB 41.79 1.1 -44.68  
LAB\*LABa 41.79 1.1 -44.68  
LAB\*LABb 50.0 44.71 27.14

relative CIELAB lab\*  
lab\*lab 0.307 0.025 -0.998  
lab\*tch 0.5 1.0 0.754  
lab\*nch 0.0 1.0 0.754  
relative Natural Colour (NC)  
lab\*trj 0.307 0.0 -0.999  
lab\*tce 0.5 1.0 0.75  
lab\*nce 0.0 1.0 0.000

relative Inform. Technology (IT)  
olv3\* 0.0 0.244 0.5 (1.0)  
cmyn3\* 0.5 0.256 0.5 (0.0)  
olv4\* 0.5 0.44 1.0 0.75  
cmyn4\* 0.5 0.256 0.5 0.25  
standard and adapted CIELAB  
LAB\*LAB 29.9 0.55 -22.34  
LAB\*LABa 29.9 0.55 -22.34  
LAB\*LABb 25.01 22.36 27.14

relative CIELAB lab\*  
lab\*lab 0.154 0.012 -0.499  
lab\*tch 0.25 0.5 0.754  
lab\*nch 0.0 0.5 0.754  
relative Natural Colour (NC)  
lab\*trj 0.154 0.0 -0.499  
lab\*tce 0.25 0.5 0.75  
lab\*nce 0.0 0.5 0.000

$n^* = 0.50$

$n^* = 0.00$

chromaticness  $c^*$

SE500-7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

BAM-test chart SE50; Colorimetric systems ORS18 & TLS00

input:  $cm y 0^* \text{ set } c m y k c o l o r$

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

output:  $cm y 0^* / 000 n^* \text{ set } c m y k c o l o r$