

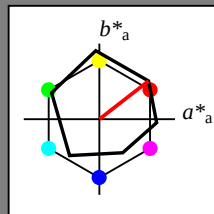
## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab \cdot h = 38/360 = 0.105$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue O

LCH\*Ma: 48 82 38

olv\*Ma: 1.0 0.0 0.0



%Gamut

 $u^*_{rel} = 94$ 

%Regularity

 $g^*_{H,rel} = 65$  $g^*_{C,rel} = 60$ 

## ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.05   | 50.54   | 82.38        | 38           |
| Y <sub>Ma</sub>  | 91.0        | -4.72   | 90.58   | 90.7         | 93           |
| L <sub>Ma</sub>  | 50.9        | -63.18  | 34.98   | 72.22        | 151          |
| C <sub>Ma</sub>  | 56.99       | -39.34  | -48.1   | 62.16        | 231          |
| V <sub>Ma</sub>  | 25.72       | 30.89   | -44.4   | 54.09        | 305          |
| M <sub>Ma</sub>  | 49.99       | 75.76   | -4.64   | 75.9         | 356          |
| N <sub>Ma</sub>  | 18.09       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.46       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 41.88       | 61.66   | 30.69   | 68.88        | 26           |
| J <sub>CIE</sub> | 81.97       | 2.02    | 67.79   | 67.82        | 88           |
| G <sub>CIE</sub> | 51.62       | -41.32  | 9.74    | 42.46        | 167          |
| B <sub>CIE</sub> | 29.2        | -5.79   | -49.61  | 49.96        | 263          |

triangle lightness  $t^*$ 

1,00

0,75

0,50

0,25

0,00

 $n^* = 1,00$  $n^* = 0,75$  $n^* = 0,50$  $n^* = 0,25$  $n^* = 0,00$ blackness  $n^*$ chromaticness  $c^*$ 

PE900-7, 9 step scales for constant CIELAB hue 38/360 = 0.105 (left)

BAM-test chart PE90; Colorimetric systems ORS18 &amp; ORS18

D50: 9 and 16 step colour scales for 10 hues

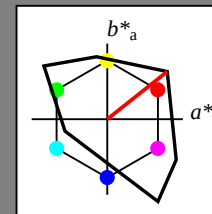
## Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab \cdot h = 38/360 = 0.107$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue O

LCH\*Ma: 54 101 38

olv\*Ma: 1.0 0.0 0.0



%Gamut

 $u^*_{rel} = 156$ 

%Regularity

 $g^*_{H,rel} = 26$  $g^*_{C,rel} = 45$ 

## TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 54.19       | 79.36   | 63.0    | 101.33       | 38           |
| Y <sub>Ma</sub>  | 93.44       | -14.18  | 82.59   | 83.8         | 100          |
| L <sub>Ma</sub>  | 82.82       | -83.73  | 70.41   | 109.41       | 140          |
| C <sub>Ma</sub>  | 85.22       | -55.9   | -15.78  | 58.1         | 196          |
| V <sub>Ma</sub>  | 25.61       | 67.05   | -108.87 | 127.87       | 302          |
| M <sub>Ma</sub>  | 58.76       | 91.18   | -53.69  | 105.82       | 330          |
| 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> | 41.88       | 62.0    | 31.82   | 69.69        | 27           |
| J <sub>CIE</sub> | 81.97       | 1.81    | 71.59   | 71.61        | 89           |
| G <sub>CIE</sub> | 51.62       | -41.11  | 11.52   | 42.7         | 164          |
| B <sub>CIE</sub> | 29.2        | -5.27   | -49.33  | 49.62        | 264          |

triangle lightness  $t^*$ 

1,00

0,75

0,50

0,25

0,00

 $n^* = 1,00$  $n^* = 0,80$  $n^* = 0,60$  $n^* = 0,40$  $n^* = 0,20$  $n^* = 0,00$ blackness  $n^*$ chromaticness  $c^*$ 

16 step scales for constant CIELAB hue 38/360 = 0.107 (right)

input: olv\* setrgbcolor

output: Startup (S) data dependend

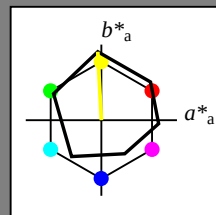
## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab \cdot h = 93/360 = 0.258$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue Y

LCH\*Ma: 91 91 93

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$ 

%Gamut

 $u^*_{rel} = 94$ 

%Regularity

 $g^*_{H,rel} = 65$  $g^*_{C,rel} = 60$ 

## ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.05   | 50.54   | 82.38        | 38           |
| Y <sub>Ma</sub>  | 91.0        | -4.72   | 90.58   | 90.7         | 93           |
| L <sub>Ma</sub>  | 50.9        | -63.18  | 34.98   | 72.22        | 151          |
| C <sub>Ma</sub>  | 56.99       | -39.34  | -48.1   | 62.16        | 231          |
| V <sub>Ma</sub>  | 25.72       | 30.89   | -44.4   | 54.09        | 305          |
| M <sub>Ma</sub>  | 49.99       | 75.76   | -4.64   | 75.9         | 356          |
| N <sub>Ma</sub>  | 18.09       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.46       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 41.88       | 61.66   | 30.69   | 68.88        | 26           |
| J <sub>CIE</sub> | 81.97       | 2.02    | 67.79   | 67.82        | 88           |
| G <sub>CIE</sub> | 51.62       | -41.32  | 9.74    | 42.46        | 167          |
| B <sub>CIE</sub> | 29.2        | -5.79   | -49.61  | 49.96        | 263          |

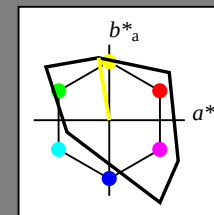
## Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab \cdot h = 100/360 = 0.277$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue Y

LCH\*Ma: 93 84 100

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$ 

%Gamut

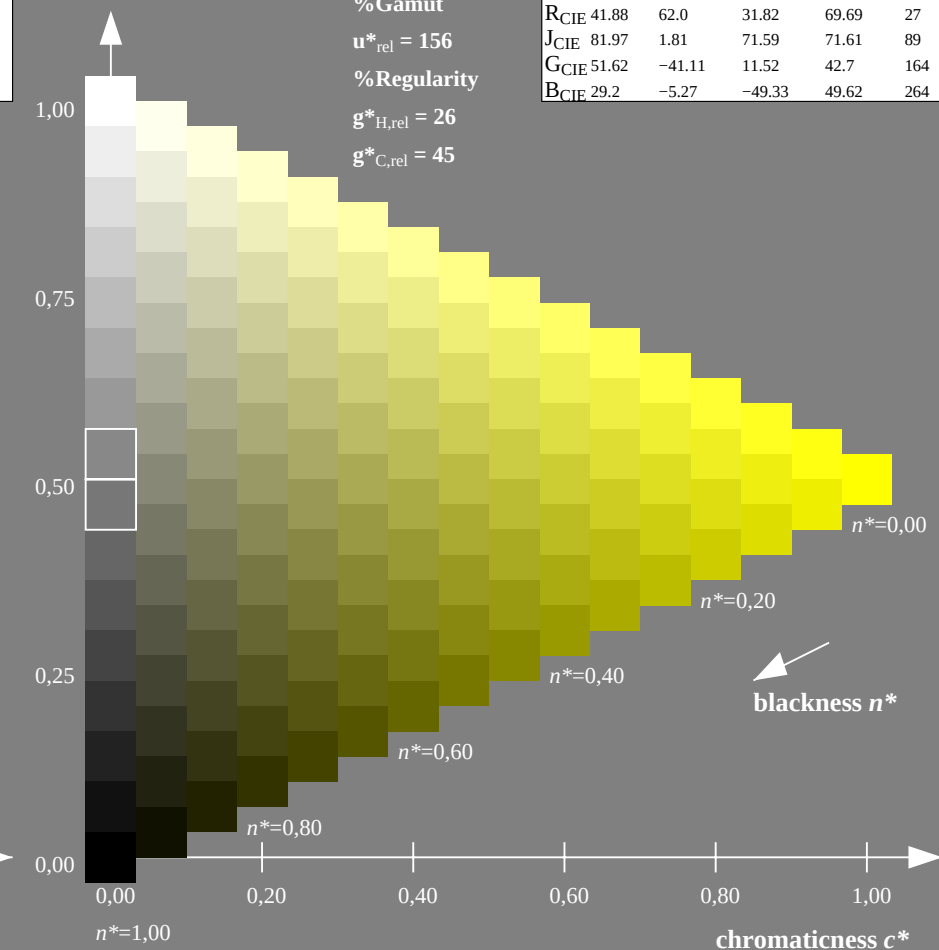
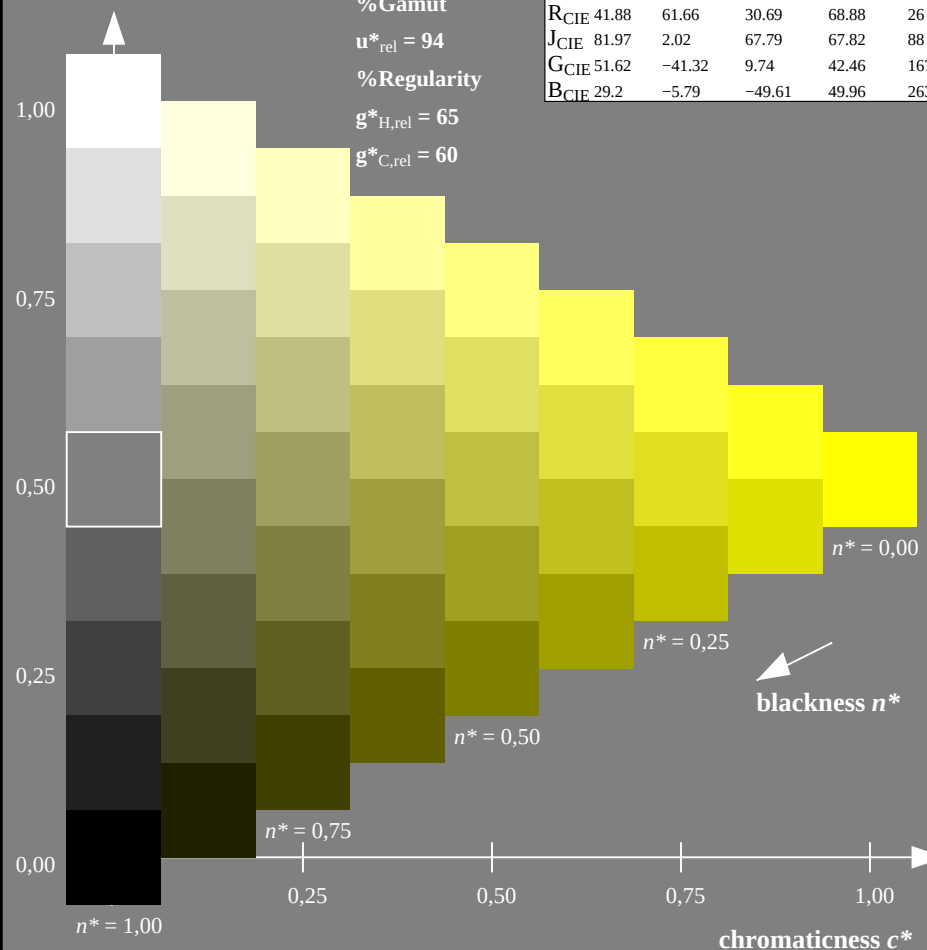
 $u^*_{rel} = 156$ 

%Regularity

 $g^*_{H,rel} = 26$  $g^*_{C,rel} = 45$ 

## TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 54.19       | 79.36   | 63.0    | 101.33       | 38           |
| Y <sub>Ma</sub>  | 93.44       | -14.18  | 82.59   | 83.8         | 100          |
| L <sub>Ma</sub>  | 82.82       | -83.73  | 70.41   | 109.41       | 140          |
| C <sub>Ma</sub>  | 85.22       | -55.9   | -15.78  | 58.1         | 196          |
| V <sub>Ma</sub>  | 25.61       | 67.05   | -108.87 | 127.87       | 302          |
| M <sub>Ma</sub>  | 58.76       | 91.18   | -53.69  | 105.82       | 330          |
| 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> | 41.88       | 62.0    | 31.82   | 69.69        | 27           |
| J <sub>CIE</sub> | 81.97       | 1.81    | 71.59   | 71.61        | 89           |
| G <sub>CIE</sub> | 51.62       | -41.11  | 11.52   | 42.7         | 164          |
| B <sub>CIE</sub> | 29.2        | -5.27   | -49.33  | 49.62        | 264          |



PE900-7, 9 step scales for constant CIELAB hue 93/360 = 0.258 (left)

16 step scales for constant CIELAB hue 100/360 = 0.277 (right)

BAM-test chart PE90; Colorimetric systems ORS18 &amp; ORS18

D50: 9 and 16 step colour scales for 10 hues

input: olv\* setrgbcolor

output: Startup (S) data dependend

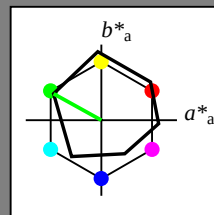
Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab \cdot h = 151/360 = 0.42$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue L

LCH\*Ma: 51 72 151

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$ 

%Gamut

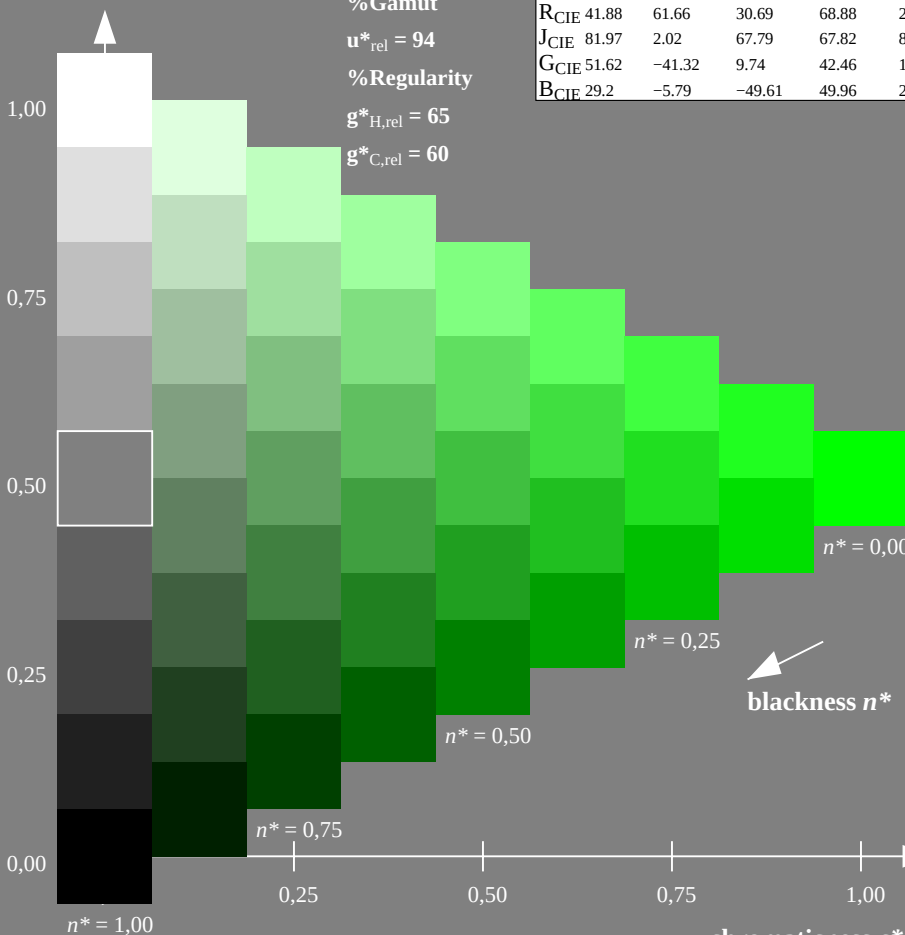
 $u^*_{rel} = 94$ 

%Regularity

 $g^*_{H,rel} = 65$  $g^*_{C,rel} = 60$ 

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.05   | 50.54   | 82.38        | 38           |
| Y <sub>Ma</sub>  | 91.0        | -4.72   | 90.58   | 90.7         | 93           |
| L <sub>Ma</sub>  | 50.9        | -63.18  | 34.98   | 72.22        | 151          |
| C <sub>Ma</sub>  | 56.99       | -39.34  | -48.1   | 62.16        | 231          |
| V <sub>Ma</sub>  | 25.72       | 30.89   | -44.4   | 54.09        | 305          |
| M <sub>Ma</sub>  | 49.99       | 75.76   | -4.64   | 75.9         | 356          |
| N <sub>Ma</sub>  | 18.09       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.46       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 41.88       | 61.66   | 30.69   | 68.88        | 26           |
| J <sub>CIE</sub> | 81.97       | 2.02    | 67.79   | 67.82        | 88           |
| G <sub>CIE</sub> | 51.62       | -41.32  | 9.74    | 42.46        | 167          |
| B <sub>CIE</sub> | 29.2        | -5.79   | -49.61  | 49.96        | 263          |



PE900-7, 9 step scales for constant CIELAB hue 151/360 = 0.42 (left)

BAM-test chart PE90; Colorimetric systems ORS18 &amp; ORS18

D50: 9 and 16 step colour scales for 10 hues

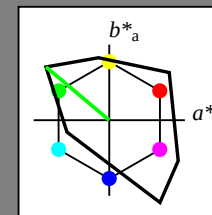
Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab \cdot h = 140/360 = 0.389$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue L

LCH\*Ma: 83 109 140

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$ 

%Gamut

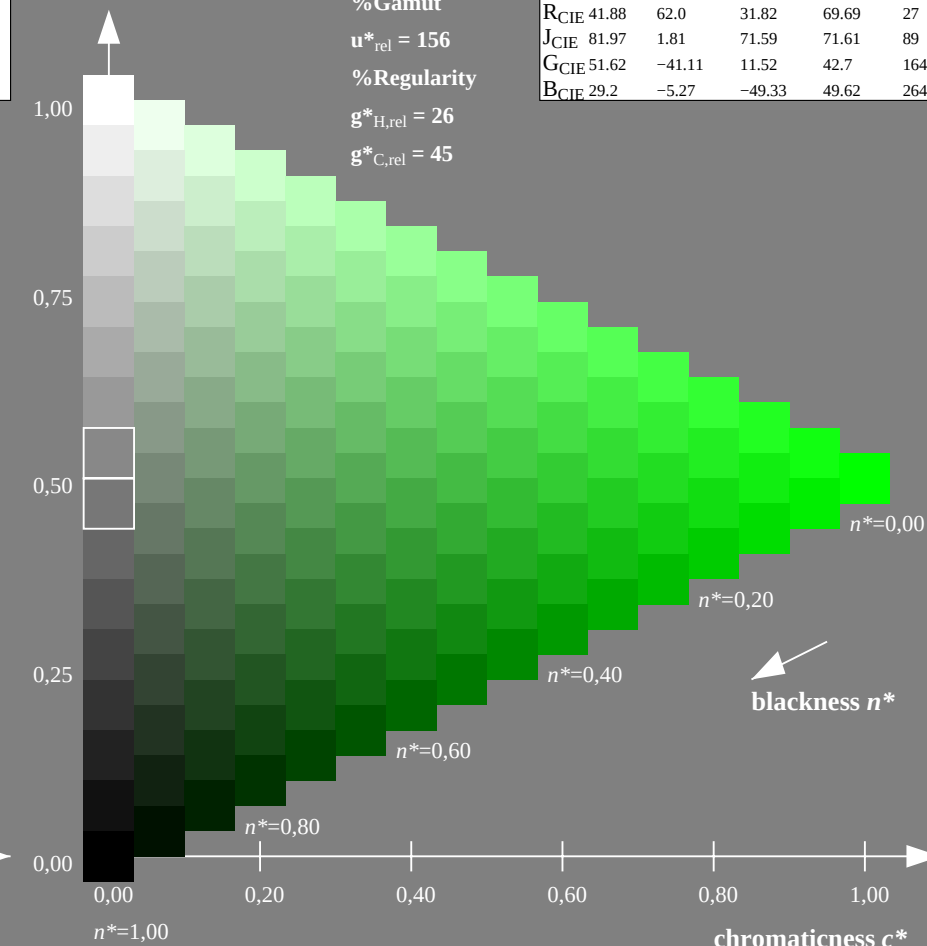
 $u^*_{rel} = 156$ 

%Regularity

 $g^*_{H,rel} = 26$  $g^*_{C,rel} = 45$ 

TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 54.19       | 79.36   | 63.0    | 101.33       | 38           |
| Y <sub>Ma</sub>  | 93.44       | -14.18  | 82.59   | 83.8         | 100          |
| L <sub>Ma</sub>  | 82.82       | -83.73  | 70.41   | 109.41       | 140          |
| C <sub>Ma</sub>  | 85.22       | -55.9   | -15.78  | 58.1         | 196          |
| V <sub>Ma</sub>  | 25.61       | 67.05   | -108.87 | 127.87       | 302          |
| M <sub>Ma</sub>  | 58.76       | 91.18   | -53.69  | 105.82       | 330          |
| 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> | 41.88       | 62.0    | 31.82   | 69.69        | 27           |
| J <sub>CIE</sub> | 81.97       | 1.81    | 71.59   | 71.61        | 89           |
| G <sub>CIE</sub> | 51.62       | -41.11  | 11.52   | 42.7         | 164          |
| B <sub>CIE</sub> | 29.2        | -5.27   | -49.33  | 49.62        | 264          |



16 step scales for constant CIELAB hue 140/360 = 0.389 (right)

input: olv\* setrgbcolor

output: Startup (S) data dependend

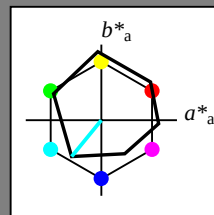
## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab \cdot h = 231/360 = 0.641$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue C

LCH\*Ma: 57 62 231

olv\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$ 

%Gamut

 $u^*_{rel} = 94$ 

%Regularity

 $g^*_{H,rel} = 65$  $g^*_{C,rel} = 60$ 

## ORS18; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 65.05   | 50.54   | 82.38        | 38           |
| Y <sub>Ma</sub>  | 91.0          | -4.72   | 90.58   | 90.7         | 93           |
| L <sub>Ma</sub>  | 50.9          | -63.18  | 34.98   | 72.22        | 151          |
| C <sub>Ma</sub>  | 56.99         | -39.34  | -48.1   | 62.16        | 231          |
| V <sub>Ma</sub>  | 25.72         | 30.89   | -44.4   | 54.09        | 305          |
| M <sub>Ma</sub>  | 49.99         | 75.76   | -4.64   | 75.9         | 356          |
| N <sub>Ma</sub>  | 18.09         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.46         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 41.88         | 61.66   | 30.69   | 68.88        | 26           |
| J <sub>CIE</sub> | 81.97         | 2.02    | 67.79   | 67.82        | 88           |
| G <sub>CIE</sub> | 51.62         | -41.32  | 9.74    | 42.46        | 167          |
| B <sub>CIE</sub> | 29.2          | -5.79   | -49.61  | 49.96        | 263          |

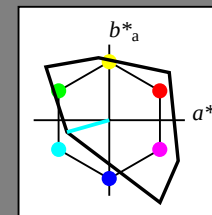
## Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab \cdot h = 196/360 = 0.544$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue C

LCH\*Ma: 85 58 196

olv\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$ 

%Gamut

 $u^*_{rel} = 156$ 

%Regularity

 $g^*_{H,rel} = 26$  $g^*_{C,rel} = 45$ 

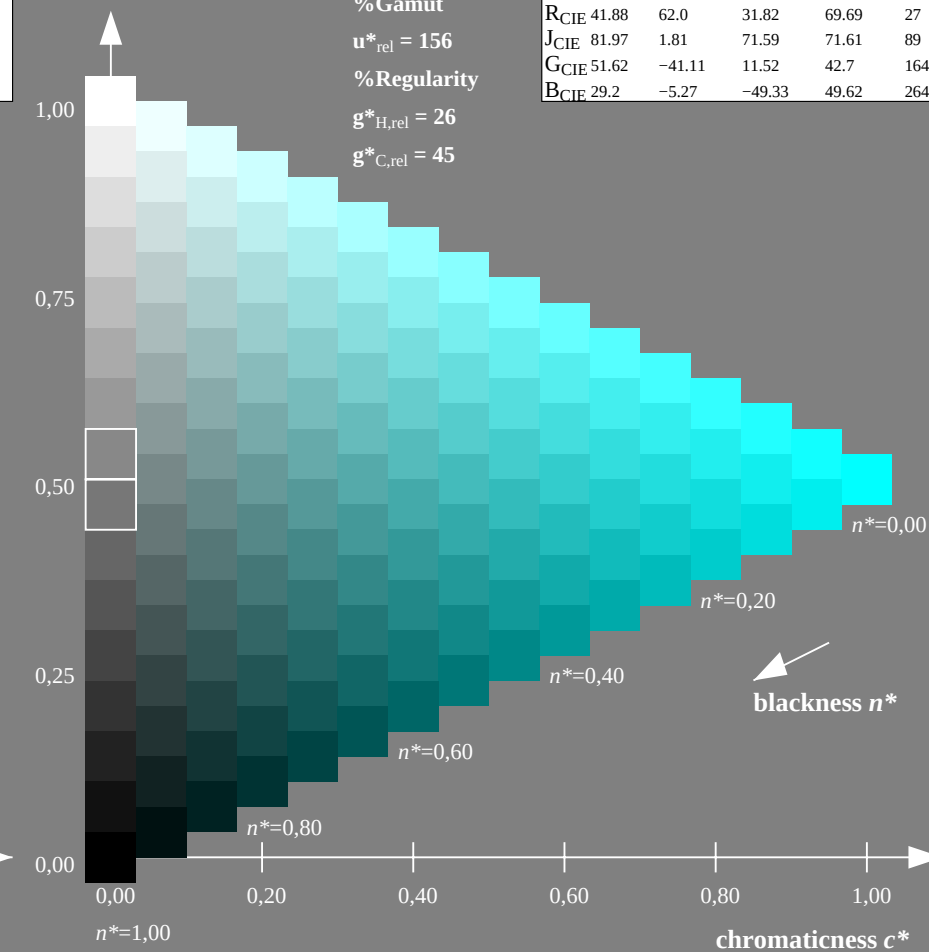
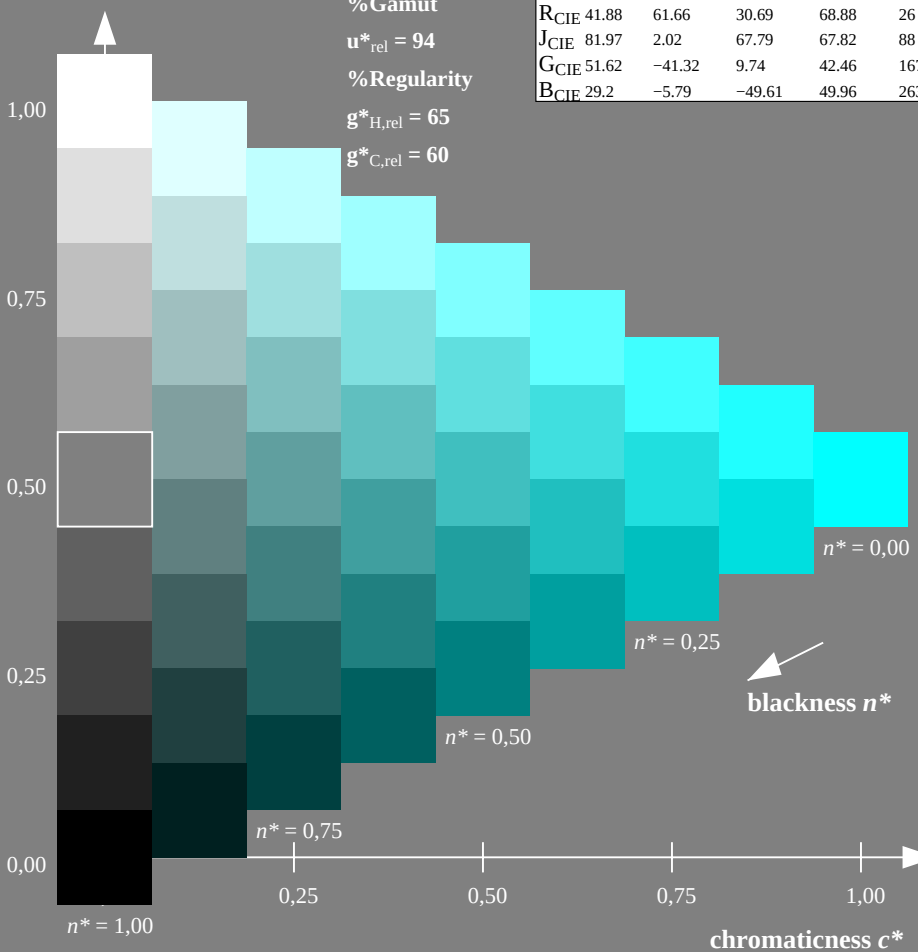
## TLS00; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 54.19         | 79.36   | 63.0    | 101.33       | 38           |
| Y <sub>Ma</sub>  | 93.44         | -14.18  | 82.59   | 83.8         | 100          |
| L <sub>Ma</sub>  | 82.82         | -83.73  | 70.41   | 109.41       | 140          |
| C <sub>Ma</sub>  | 85.22         | -55.9   | -15.78  | 58.1         | 196          |
| V <sub>Ma</sub>  | 25.61         | 67.05   | -108.87 | 127.87       | 302          |
| M <sub>Ma</sub>  | 58.76         | 91.18   | -53.69  | 105.82       | 330          |
| 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> | 41.88         | 62.0    | 31.82   | 69.69        | 27           |
| J <sub>CIE</sub> | 81.97         | 1.81    | 71.59   | 71.61        | 89           |
| G <sub>CIE</sub> | 51.62         | -41.11  | 11.52   | 42.7         | 164          |
| B <sub>CIE</sub> | 29.2          | -5.27   | -49.33  | 49.62        | 264          |

%Gamut

 $u^*_{rel} = 156$ 

%Regularity

 $g^*_{H,rel} = 26$  $g^*_{C,rel} = 45$ 

PE900-7, 9 step scales for constant CIELAB hue 231/360 = 0.641 (left)

16 step scales for constant CIELAB hue 196/360 = 0.544 (right)

BAM-test chart PE90; Colorimetric systems ORS18 &amp; ORS18

D50: 9 and 16 step colour scales for 10 hues

input: olv\* setrgbcolor

output: Startup (S) data dependend

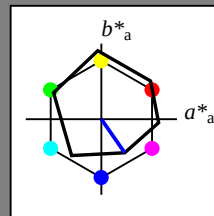
## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab \cdot h = 305/360 = 0.847$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue V

LCH\*Ma: 26 54 305

olv\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$ 

%Gamut

 $u^*_{rel} = 94$ 

%Regularity

 $g^*_{H,rel} = 65$  $g^*_{C,rel} = 60$ 

## ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.05   | 50.54   | 82.38        | 38           |
| Y <sub>Ma</sub>  | 91.0        | -4.72   | 90.58   | 90.7         | 93           |
| L <sub>Ma</sub>  | 50.9        | -63.18  | 34.98   | 72.22        | 151          |
| C <sub>Ma</sub>  | 56.99       | -39.34  | -48.1   | 62.16        | 231          |
| V <sub>Ma</sub>  | 25.72       | 30.89   | -44.4   | 54.09        | 305          |
| M <sub>Ma</sub>  | 49.99       | 75.76   | -4.64   | 75.9         | 356          |
| N <sub>Ma</sub>  | 18.09       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.46       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 41.88       | 61.66   | 30.69   | 68.88        | 26           |
| J <sub>CIE</sub> | 81.97       | 2.02    | 67.79   | 67.82        | 88           |
| G <sub>CIE</sub> | 51.62       | -41.32  | 9.74    | 42.46        | 167          |
| B <sub>CIE</sub> | 29.2        | -5.79   | -49.61  | 49.96        | 263          |

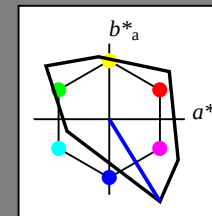
## Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab \cdot h = 302/360 = 0.838$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue V

LCH\*Ma: 26 128 302

olv\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$ 

%Gamut

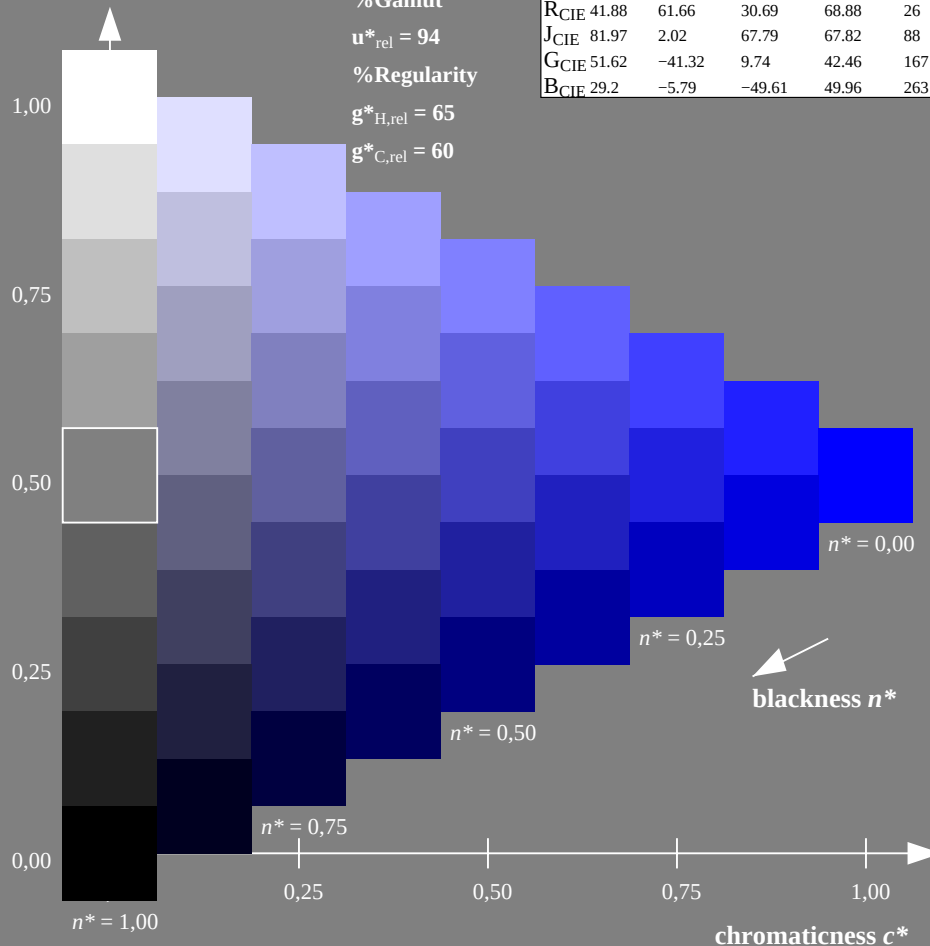
 $u^*_{rel} = 156$ 

%Regularity

 $g^*_{H,rel} = 26$  $g^*_{C,rel} = 45$ 

## TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 54.19       | 79.36   | 63.0    | 101.33       | 38           |
| Y <sub>Ma</sub>  | 93.44       | -14.18  | 82.59   | 83.8         | 100          |
| L <sub>Ma</sub>  | 82.82       | -83.73  | 70.41   | 109.41       | 140          |
| C <sub>Ma</sub>  | 85.22       | -55.9   | -15.78  | 58.1         | 196          |
| V <sub>Ma</sub>  | 25.61       | 67.05   | -108.87 | 127.87       | 302          |
| M <sub>Ma</sub>  | 58.76       | 91.18   | -53.69  | 105.82       | 330          |
| 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> | 41.88       | 62.0    | 31.82   | 69.69        | 27           |
| J <sub>CIE</sub> | 81.97       | 1.81    | 71.59   | 71.61        | 89           |
| G <sub>CIE</sub> | 51.62       | -41.11  | 11.52   | 42.7         | 164          |
| B <sub>CIE</sub> | 29.2        | -5.27   | -49.33  | 49.62        | 264          |

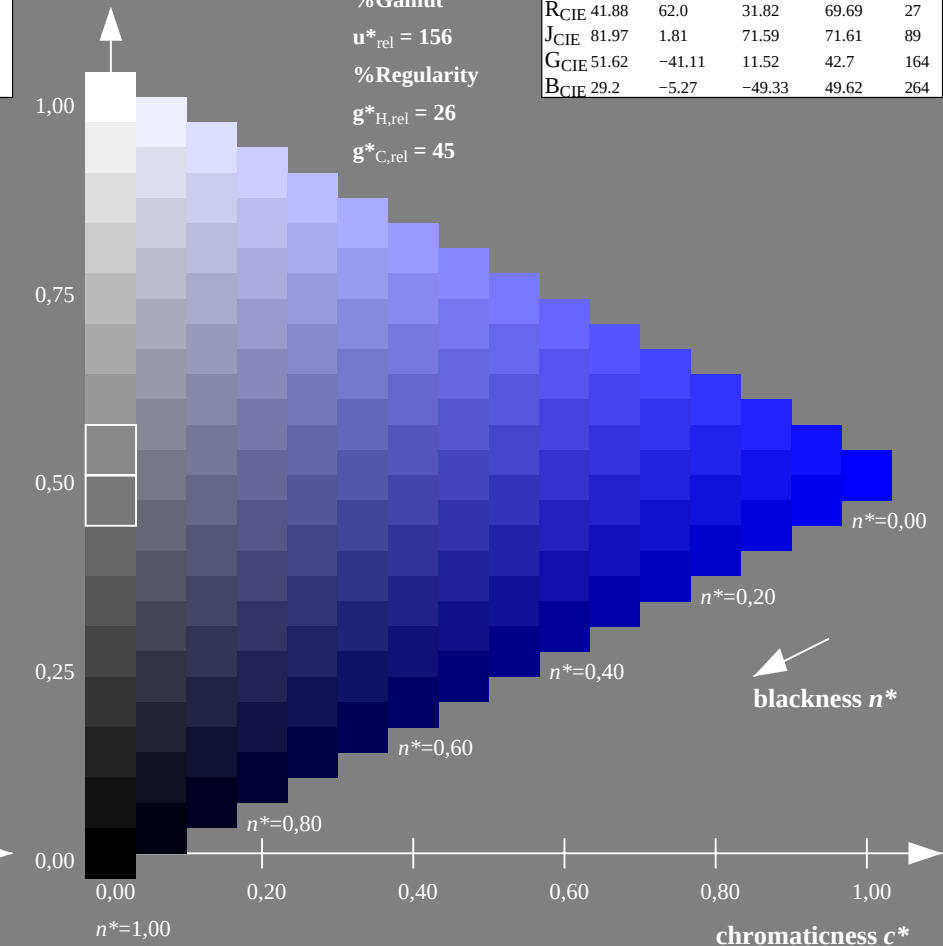


PE900-7, 9 step scales for constant CIELAB hue 305/360 = 0.847 (left)



BAM-test chart PE90; Colorimetric systems ORS18 &amp; ORS18

D50: 9 and 16 step colour scales for 10 hues



16 step scales for constant CIELAB hue 302/360 = 0.838 (right)

input: olv\* setrgbcolor

output: Startup (S) data dependend



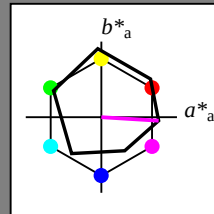
## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab \cdot h = 356/360 = 0.99$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue M

LCH\*Ma: 50 76 356

olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$ 

%Gamut

 $u^*_{rel} = 94$ 

%Regularity

 $g^*_{H,rel} = 65$  $g^*_{C,rel} = 60$ 

## ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.05   | 50.54   | 82.38        | 38           |
| Y <sub>Ma</sub>  | 91.0        | -4.72   | 90.58   | 90.7         | 93           |
| L <sub>Ma</sub>  | 50.9        | -63.18  | 34.98   | 72.22        | 151          |
| C <sub>Ma</sub>  | 56.99       | -39.34  | -48.1   | 62.16        | 231          |
| V <sub>Ma</sub>  | 25.72       | 30.89   | -44.4   | 54.09        | 305          |
| M <sub>Ma</sub>  | 49.99       | 75.76   | -4.64   | 75.9         | 356          |
| N <sub>Ma</sub>  | 18.09       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.46       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 41.88       | 61.66   | 30.69   | 68.88        | 26           |
| J <sub>CIE</sub> | 81.97       | 2.02    | 67.79   | 67.82        | 88           |
| G <sub>CIE</sub> | 51.62       | -41.32  | 9.74    | 42.46        | 167          |
| B <sub>CIE</sub> | 29.2        | -5.79   | -49.61  | 49.96        | 263          |

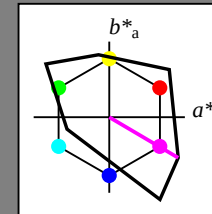
## Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab \cdot h = 330/360 = 0.915$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue M

LCH\*Ma: 59 106 330

olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$ 

%Gamut

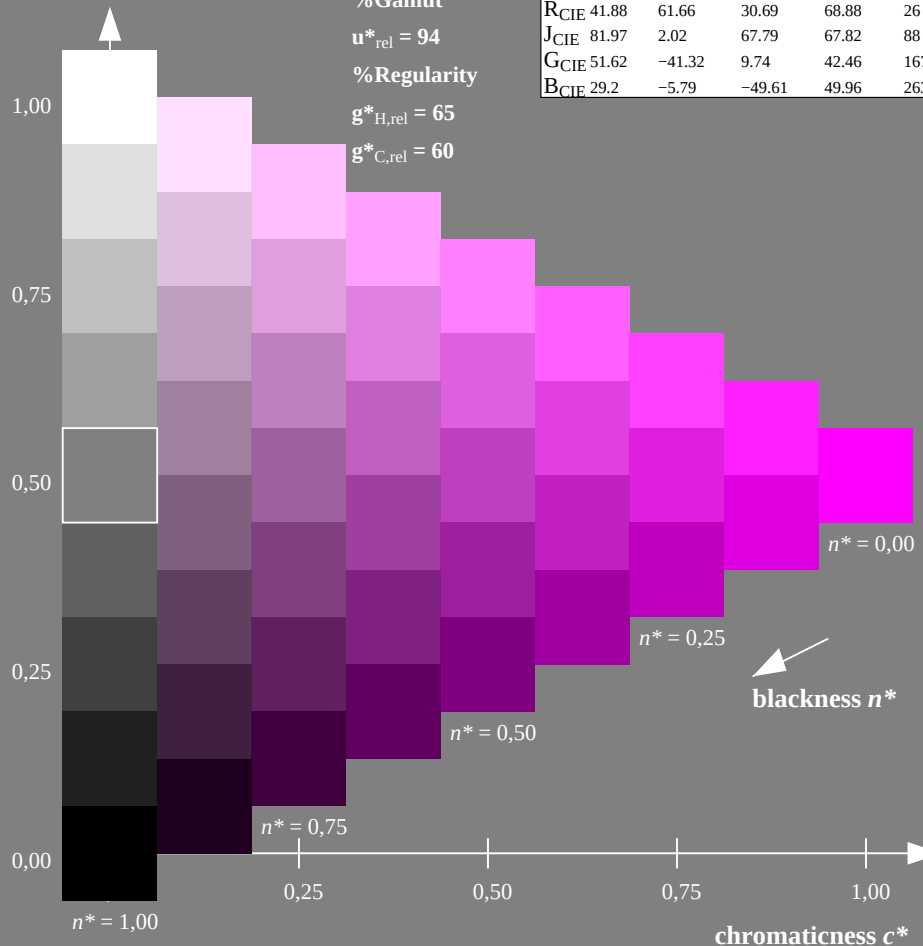
 $u^*_{rel} = 156$ 

%Regularity

 $g^*_{H,rel} = 26$  $g^*_{C,rel} = 45$ 

## TLS00; adapted (a) CIELAB data

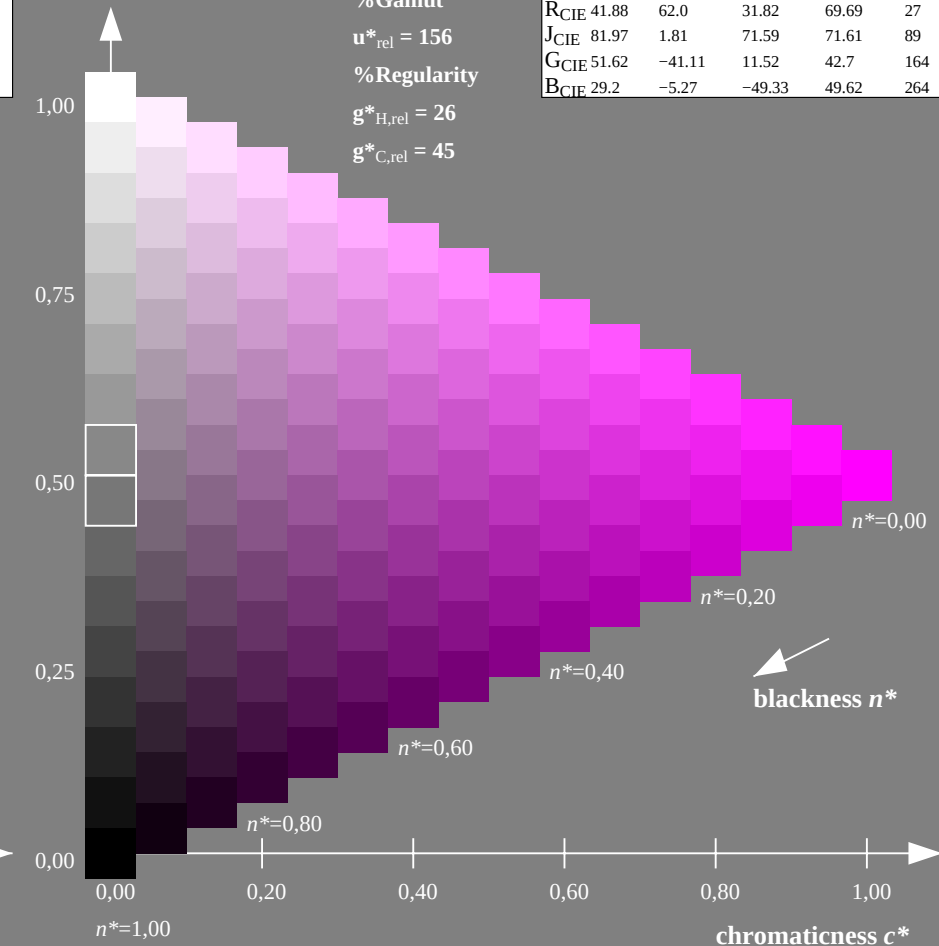
|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 54.19       | 79.36   | 63.0    | 101.33       | 38           |
| Y <sub>Ma</sub>  | 93.44       | -14.18  | 82.59   | 83.8         | 100          |
| L <sub>Ma</sub>  | 82.82       | -83.73  | 70.41   | 109.41       | 140          |
| C <sub>Ma</sub>  | 85.22       | -55.9   | -15.78  | 58.1         | 196          |
| V <sub>Ma</sub>  | 25.61       | 67.05   | -108.87 | 127.87       | 302          |
| M <sub>Ma</sub>  | 58.76       | 91.18   | -53.69  | 105.82       | 330          |
| 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> | 41.88       | 62.0    | 31.82   | 69.69        | 27           |
| J <sub>CIE</sub> | 81.97       | 1.81    | 71.59   | 71.61        | 89           |
| G <sub>CIE</sub> | 51.62       | -41.11  | 11.52   | 42.7         | 164          |
| B <sub>CIE</sub> | 29.2        | -5.27   | -49.33  | 49.62        | 264          |



PE900-7, 9 step scales for constant CIELAB hue 356/360 = 0.99 (left)

BAM-test chart PE90; Colorimetric systems ORS18 &amp; ORS18

D50: 9 and 16 step colour scales for 10 hues



16 step scales for constant CIELAB hue 330/360 = 0.915 (right)

input: olv\* setrgbcolor

output: Startup (S) data dependend

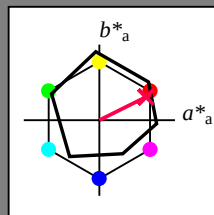
## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab \cdot h = 26/360 = 0.074$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue R

LCH\*Ma: 49 76 26

olv\*Ma: 1.0 0.0 0.3

triangle lightness  $t^*$ 

%Gamut

 $u^*_{rel} = 94$ 

%Regularity

 $g^*_{H,rel} = 65$  $g^*_{C,rel} = 60$ 

## ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.05   | 50.54   | 82.38        | 38           |
| Y <sub>Ma</sub>  | 91.0        | -4.72   | 90.58   | 90.7         | 93           |
| L <sub>Ma</sub>  | 50.9        | -63.18  | 34.98   | 72.22        | 151          |
| C <sub>Ma</sub>  | 56.99       | -39.34  | -48.1   | 62.16        | 231          |
| V <sub>Ma</sub>  | 25.72       | 30.89   | -44.4   | 54.09        | 305          |
| M <sub>Ma</sub>  | 49.99       | 75.76   | -4.64   | 75.9         | 356          |
| N <sub>Ma</sub>  | 18.09       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.46       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 41.88       | 61.66   | 30.69   | 68.88        | 26           |
| J <sub>CIE</sub> | 81.97       | 2.02    | 67.79   | 67.82        | 88           |
| G <sub>CIE</sub> | 51.62       | -41.32  | 9.74    | 42.46        | 167          |
| B <sub>CIE</sub> | 29.2        | -5.79   | -49.61  | 49.96        | 263          |

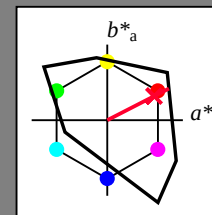
## Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab \cdot h = 27/360 = 0.075$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue R

LCH\*Ma: 55 92 27

olv\*Ma: 1.0 0.0 0.18

triangle lightness  $t^*$ 

%Gamut

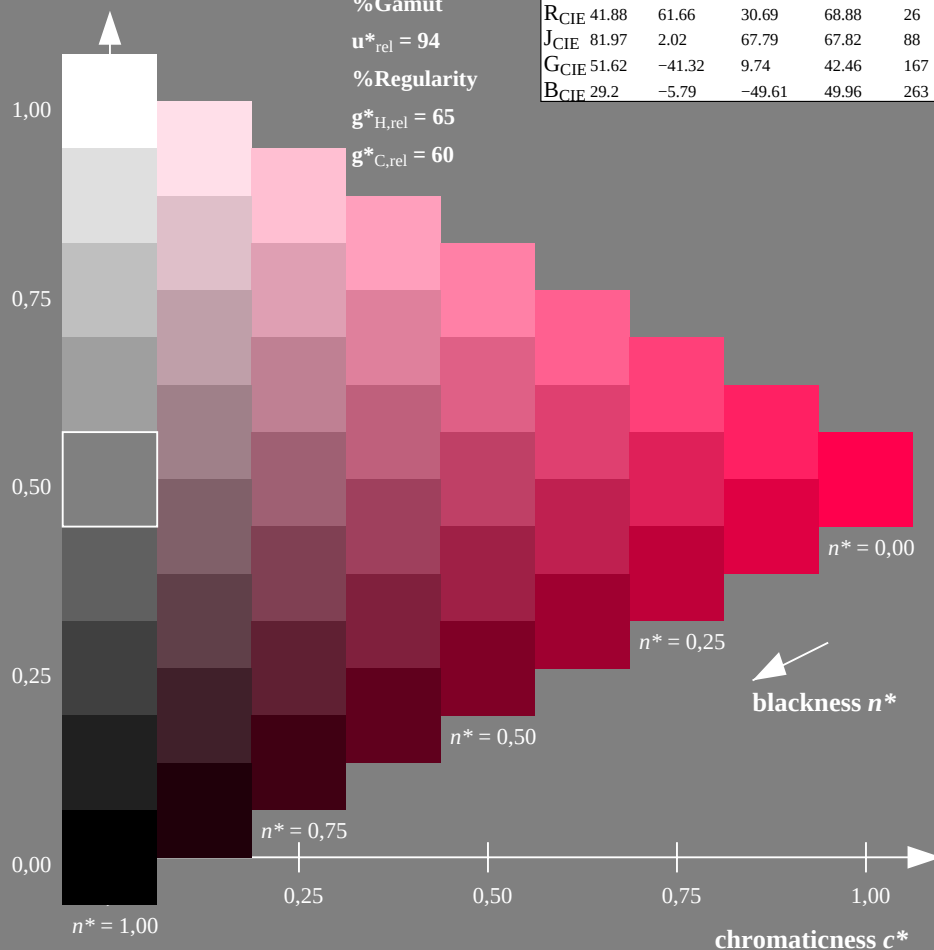
 $u^*_{rel} = 156$ 

%Regularity

 $g^*_{H,rel} = 26$  $g^*_{C,rel} = 45$ 

## TLS00; adapted (a) CIELAB data

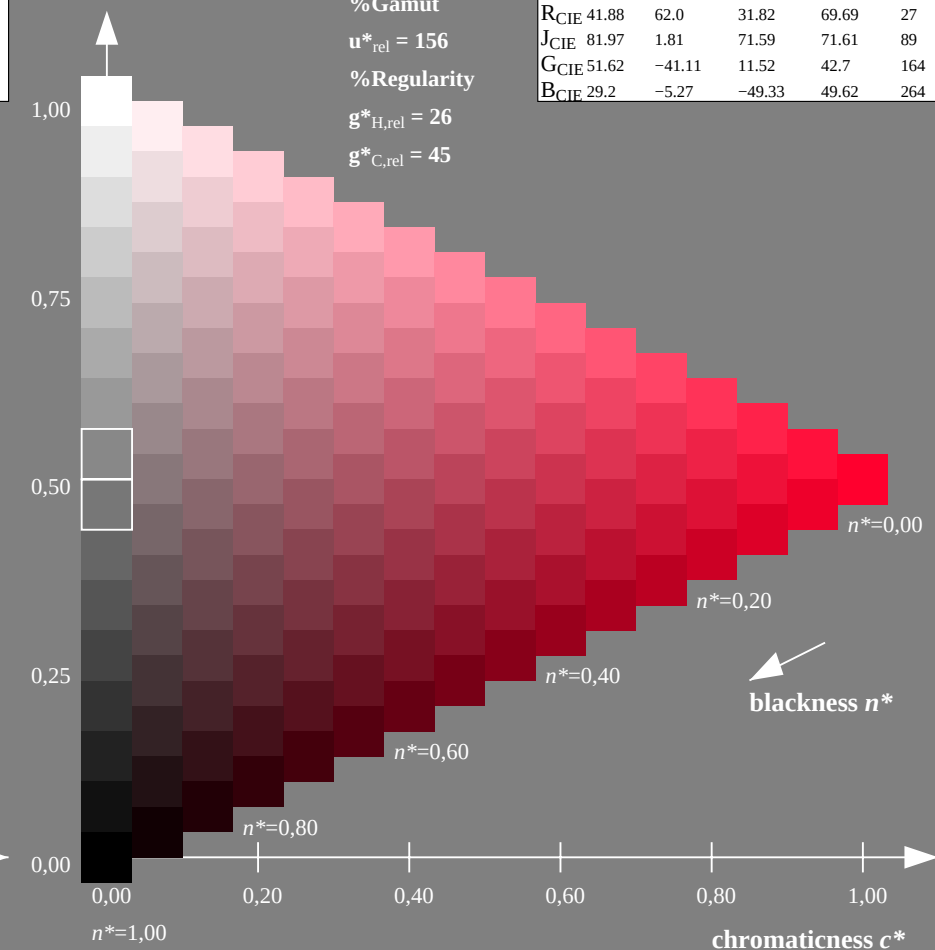
|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 54.19       | 79.36   | 63.0    | 101.33       | 38           |
| Y <sub>Ma</sub>  | 93.44       | -14.18  | 82.59   | 83.8         | 100          |
| L <sub>Ma</sub>  | 82.82       | -83.73  | 70.41   | 109.41       | 140          |
| C <sub>Ma</sub>  | 85.22       | -55.9   | -15.78  | 58.1         | 196          |
| V <sub>Ma</sub>  | 25.61       | 67.05   | -108.87 | 127.87       | 302          |
| M <sub>Ma</sub>  | 58.76       | 91.18   | -53.69  | 105.82       | 330          |
| 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> | 41.88       | 62.0    | 31.82   | 69.69        | 27           |
| J <sub>CIE</sub> | 81.97       | 1.81    | 71.59   | 71.61        | 89           |
| G <sub>CIE</sub> | 51.62       | -41.11  | 11.52   | 42.7         | 164          |
| B <sub>CIE</sub> | 29.2        | -5.27   | -49.33  | 49.62        | 264          |



PE900-7, 9 step scales for constant CIELAB hue 26/360 = 0.074 (left)

BAM-test chart PE90; Colorimetric systems ORS18 &amp; ORS18

D50: 9 and 16 step colour scales for 10 hues



16 step scales for constant CIELAB hue 27/360 = 0.075 (right)

input: olv\* setrgbcolor

output: Startup (S) data dependend

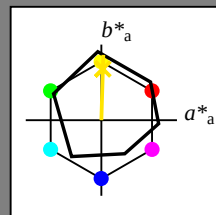
## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab \cdot h = 88/360 = 0.245$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue J

LCH\*Ma: 86 86 88

olv\*Ma: 1.0 0.9 0.0



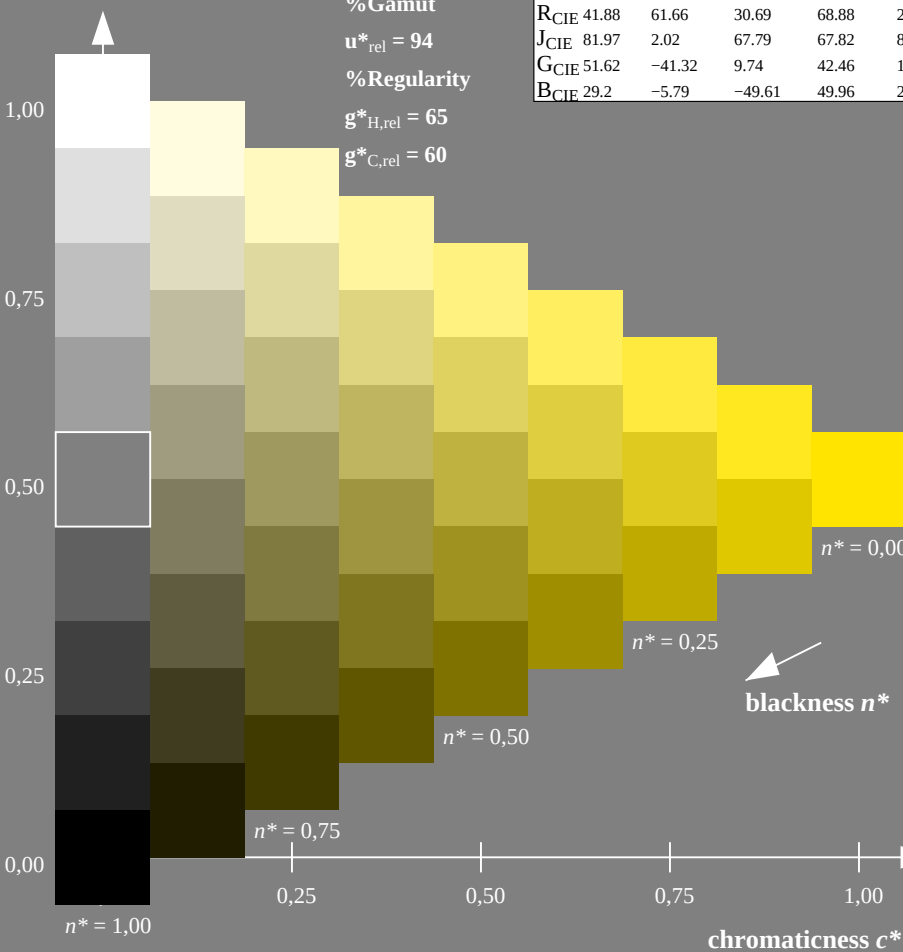
## ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.05   | 50.54   | 82.38        | 38           |
| Y <sub>Ma</sub>  | 91.0        | -4.72   | 90.58   | 90.7         | 93           |
| L <sub>Ma</sub>  | 50.9        | -63.18  | 34.98   | 72.22        | 151          |
| C <sub>Ma</sub>  | 56.99       | -39.34  | -48.1   | 62.16        | 231          |
| V <sub>Ma</sub>  | 25.72       | 30.89   | -44.4   | 54.09        | 305          |
| M <sub>Ma</sub>  | 49.99       | 75.76   | -4.64   | 75.9         | 356          |
| N <sub>Ma</sub>  | 18.09       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.46       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 41.88       | 61.66   | 30.69   | 68.88        | 26           |
| J <sub>CIE</sub> | 81.97       | 2.02    | 67.79   | 67.82        | 88           |
| G <sub>CIE</sub> | 51.62       | -41.32  | 9.74    | 42.46        | 167          |
| B <sub>CIE</sub> | 29.2        | -5.79   | -49.61  | 49.96        | 263          |

%Gamut

 $u^*_{rel} = 94$ 

%Regularity

 $g^*_{H,rel} = 65$  $g^*_{C,rel} = 60$ triangle lightness  $t^*$ 

PE900-7, 9 step scales for constant CIELAB hue 88/360 = 0.245 (left)

BAM-test chart PE90; Colorimetric systems ORS18 &amp; ORS18

D50: 9 and 16 step colour scales for 10 hues

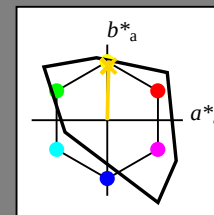
## Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab \cdot h = 89/360 = 0.246$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue J

LCH\*Ma: 87 79 89

olv\*Ma: 1.0 0.83 0.0



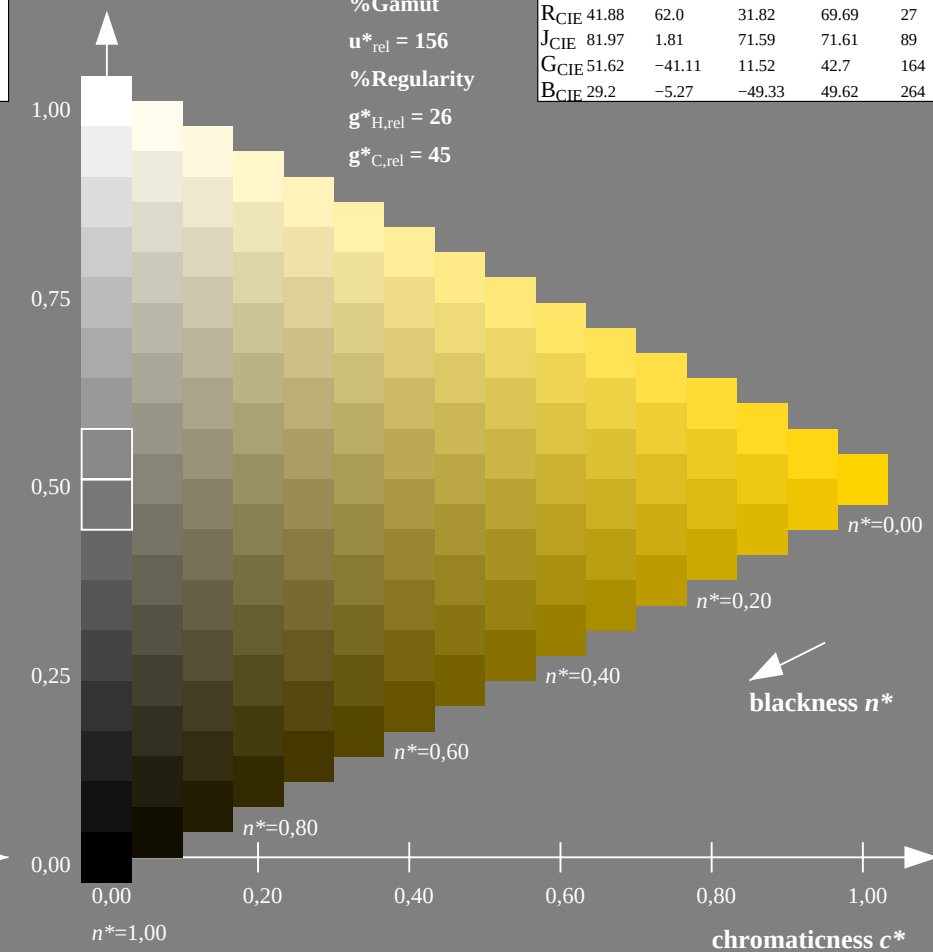
## TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 54.19       | 79.36   | 63.0    | 101.33       | 38           |
| Y <sub>Ma</sub>  | 93.44       | -14.18  | 82.59   | 83.8         | 100          |
| L <sub>Ma</sub>  | 82.82       | -83.73  | 70.41   | 109.41       | 140          |
| C <sub>Ma</sub>  | 85.22       | -55.9   | -15.78  | 58.1         | 196          |
| V <sub>Ma</sub>  | 25.61       | 67.05   | -108.87 | 127.87       | 302          |
| M <sub>Ma</sub>  | 58.76       | 91.18   | -53.69  | 105.82       | 330          |
| 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> | 41.88       | 62.0    | 31.82   | 69.69        | 27           |
| J <sub>CIE</sub> | 81.97       | 1.81    | 71.59   | 71.61        | 89           |
| G <sub>CIE</sub> | 51.62       | -41.11  | 11.52   | 42.7         | 164          |
| B <sub>CIE</sub> | 29.2        | -5.27   | -49.33  | 49.62        | 264          |

%Gamut

 $u^*_{rel} = 156$ 

%Regularity

 $g^*_{H,rel} = 26$  $g^*_{C,rel} = 45$ triangle lightness  $t^*$ 

16 step scales for constant CIELAB hue 89/360 = 0.246 (right)

input: olv\* setrgbcolor

output: Startup (S) data dependend





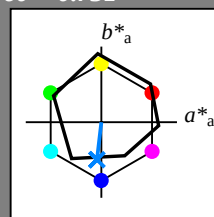
## Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab \cdot h = 263/360 = 0.731$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue B

LCH\*Ma: 42 47 263

olv\*Ma: 0.0 0.52 1.0

triangle lightness  $t^*$ 

%Gamut

 $u^*_{rel} = 94$ 

%Regularity

 $g^*_{H,rel} = 65$  $g^*_{C,rel} = 60$ 

## ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.05   | 50.54   | 82.38        | 38           |
| Y <sub>Ma</sub>  | 91.0        | -4.72   | 90.58   | 90.7         | 93           |
| L <sub>Ma</sub>  | 50.9        | -63.18  | 34.98   | 72.22        | 151          |
| C <sub>Ma</sub>  | 56.99       | -39.34  | -48.1   | 62.16        | 231          |
| V <sub>Ma</sub>  | 25.72       | 30.89   | -44.4   | 54.09        | 305          |
| M <sub>Ma</sub>  | 49.99       | 75.76   | -4.64   | 75.9         | 356          |
| N <sub>Ma</sub>  | 18.09       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.46       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 41.88       | 61.66   | 30.69   | 68.88        | 26           |
| J <sub>CIE</sub> | 81.97       | 2.02    | 67.79   | 67.82        | 88           |
| G <sub>CIE</sub> | 51.62       | -41.32  | 9.74    | 42.46        | 167          |
| B <sub>CIE</sub> | 29.2        | -5.79   | -49.61  | 49.96        | 263          |

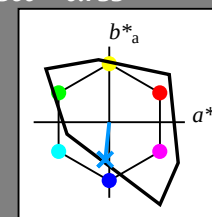
## Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab \cdot h = 264/360 = 0.733$  $lab \cdot tch$  and  $lab \cdot nch$ 

D50: hue B

LCH\*Ma: 61 54 264

olv\*Ma: 0.0 0.59 1.0

triangle lightness  $t^*$ 

%Gamut

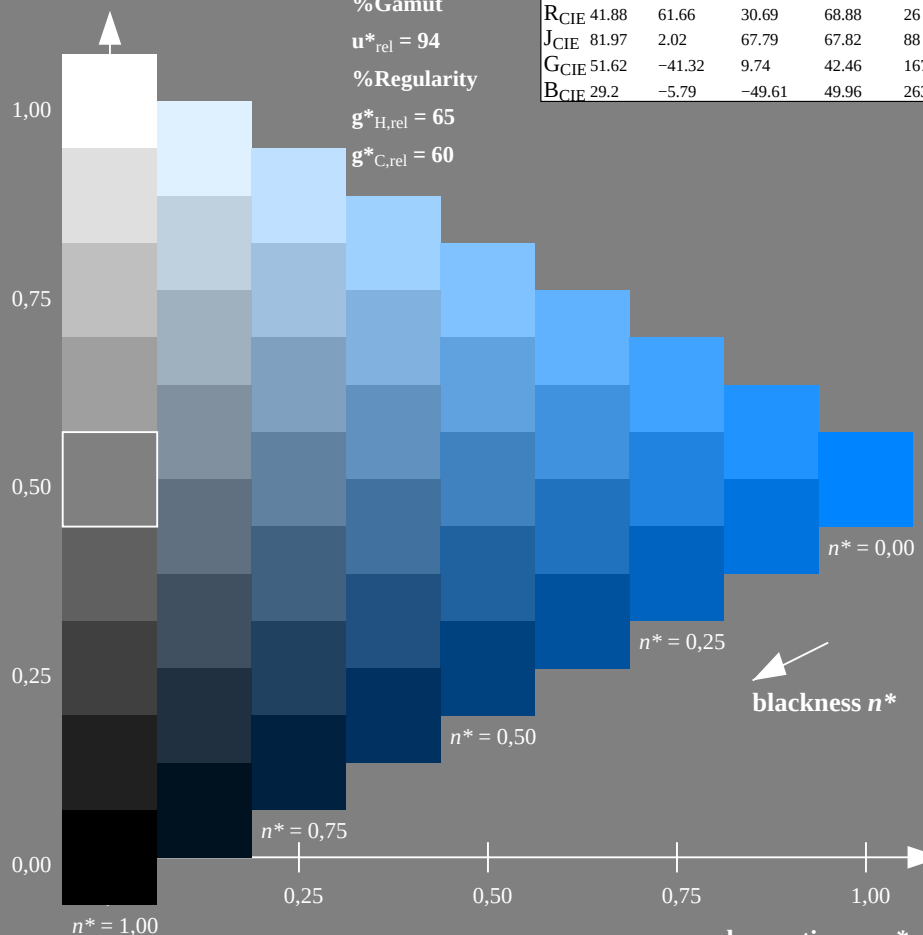
 $u^*_{rel} = 156$ 

%Regularity

 $g^*_{H,rel} = 26$  $g^*_{C,rel} = 45$ 

## TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 54.19       | 79.36   | 63.0    | 101.33       | 38           |
| Y <sub>Ma</sub>  | 93.44       | -14.18  | 82.59   | 83.8         | 100          |
| L <sub>Ma</sub>  | 82.82       | -83.73  | 70.41   | 109.41       | 140          |
| C <sub>Ma</sub>  | 85.22       | -55.9   | -15.78  | 58.1         | 196          |
| V <sub>Ma</sub>  | 25.61       | 67.05   | -108.87 | 127.87       | 302          |
| M <sub>Ma</sub>  | 58.76       | 91.18   | -53.69  | 105.82       | 330          |
| 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> | 41.88       | 62.0    | 31.82   | 69.69        | 27           |
| J <sub>CIE</sub> | 81.97       | 1.81    | 71.59   | 71.61        | 89           |
| G <sub>CIE</sub> | 51.62       | -41.11  | 11.52   | 42.7         | 164          |
| B <sub>CIE</sub> | 29.2        | -5.27   | -49.33  | 49.62        | 264          |

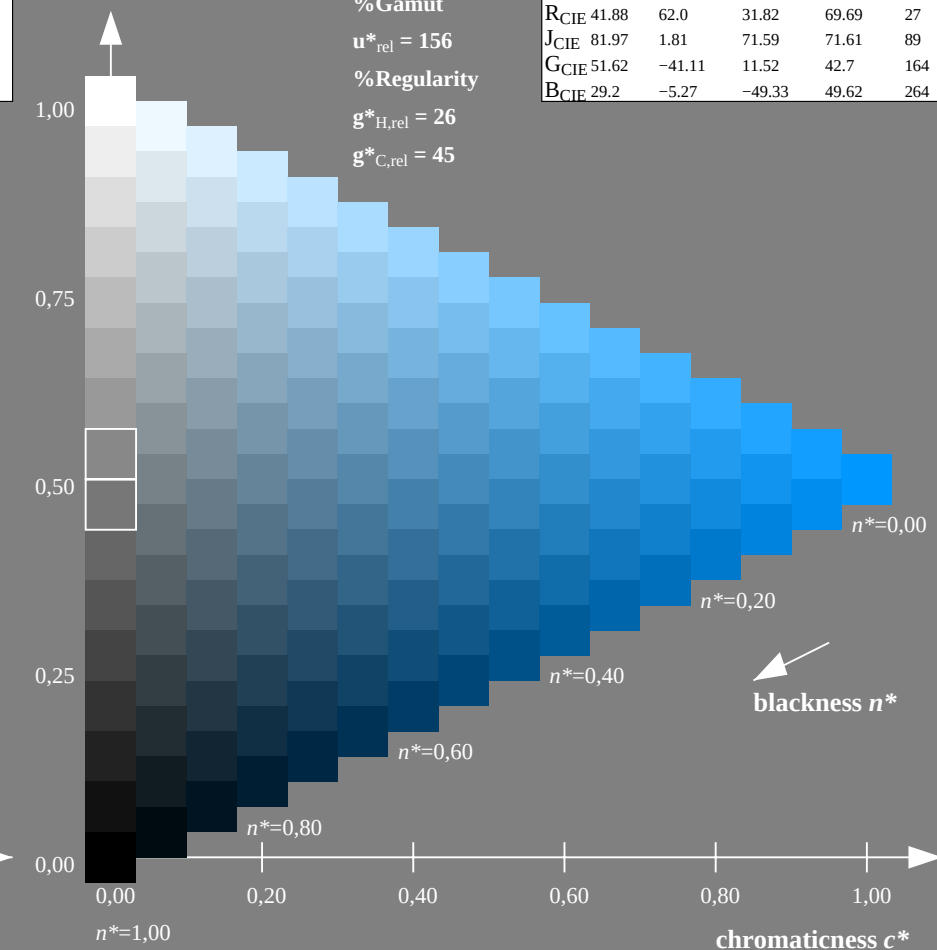


PE900-7, 9 step scales for constant CIE LAB hue 263/360 = 0.731 (left)



BAM-test chart PE90; Colorimetric systems ORS18 &amp; ORS18

D50: 9 and 16 step colour scales for 10 hues



16 step scales for constant CIE LAB hue 264/360 = 0.733 (right)

input: olv\* setrgbcolor

output: Startup (S) data dependend

