

Input: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 37/360 = 0.102$

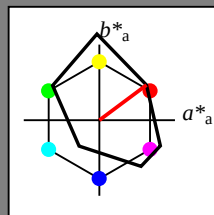
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue O

LCH\*Ma: 33 78 37

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 37/360 = 0.102$

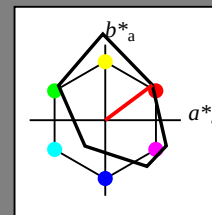
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue O

LCH\*Ma: 33 78 37

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

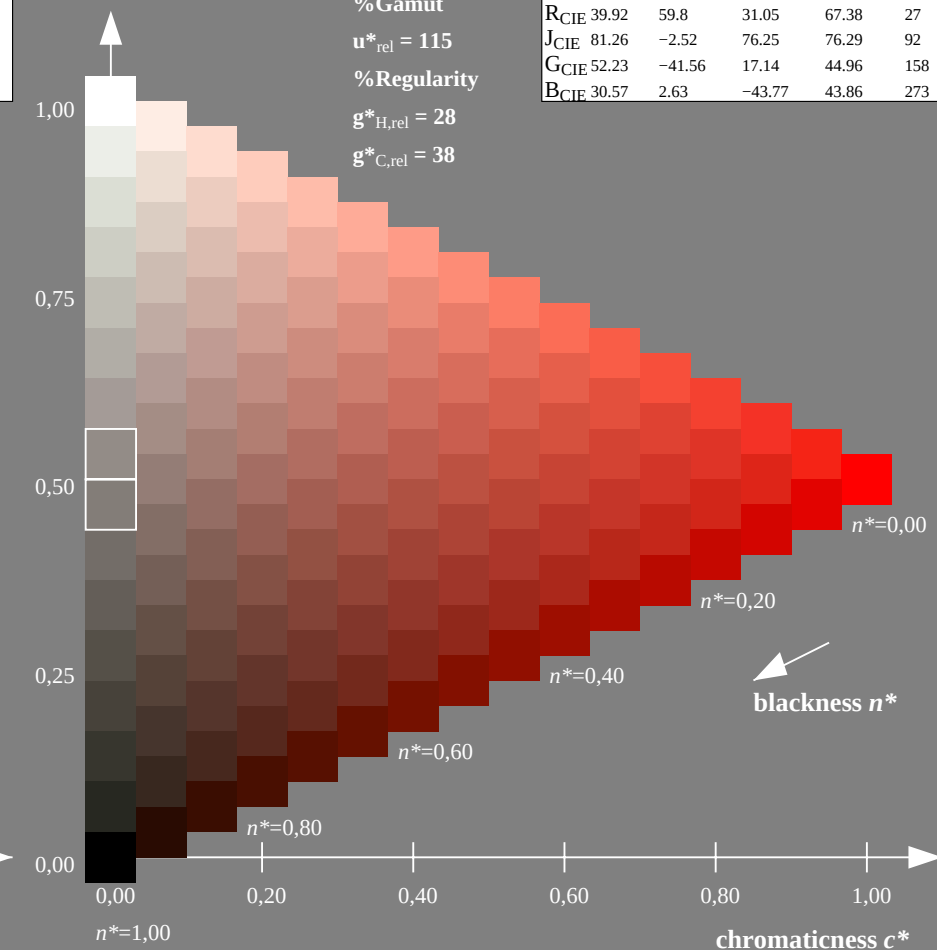
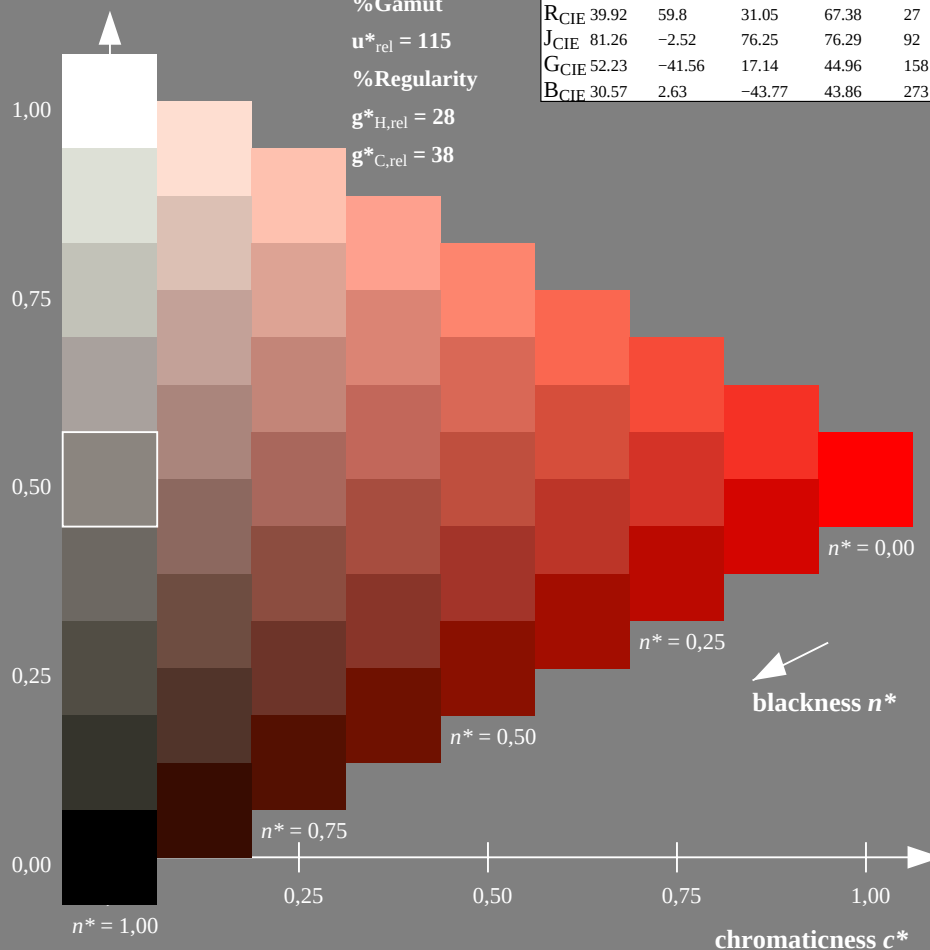
%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |



VE290-7, 9 step scales for constant CIELAB hue 37/360 = 0.102 (left)

16 step scales for constant CIELAB hue 37/360 = 0.102 (right)

BAM-test chart VE29; Colorimetric systems FRS06 & FRS06

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^* \cdot setrgbcolor$

output:  $olv^* \cdot (TRI9) \cdot setrgbcolor$

Input: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 92/360 = 0.254$

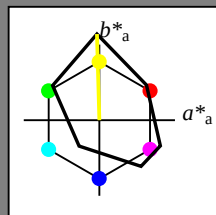
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue Y

LCH\*Ma: 83 114 92

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 92/360 = 0.254$

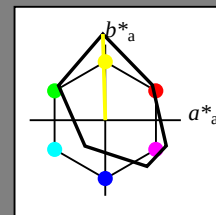
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue Y

LCH\*Ma: 83 114 92

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

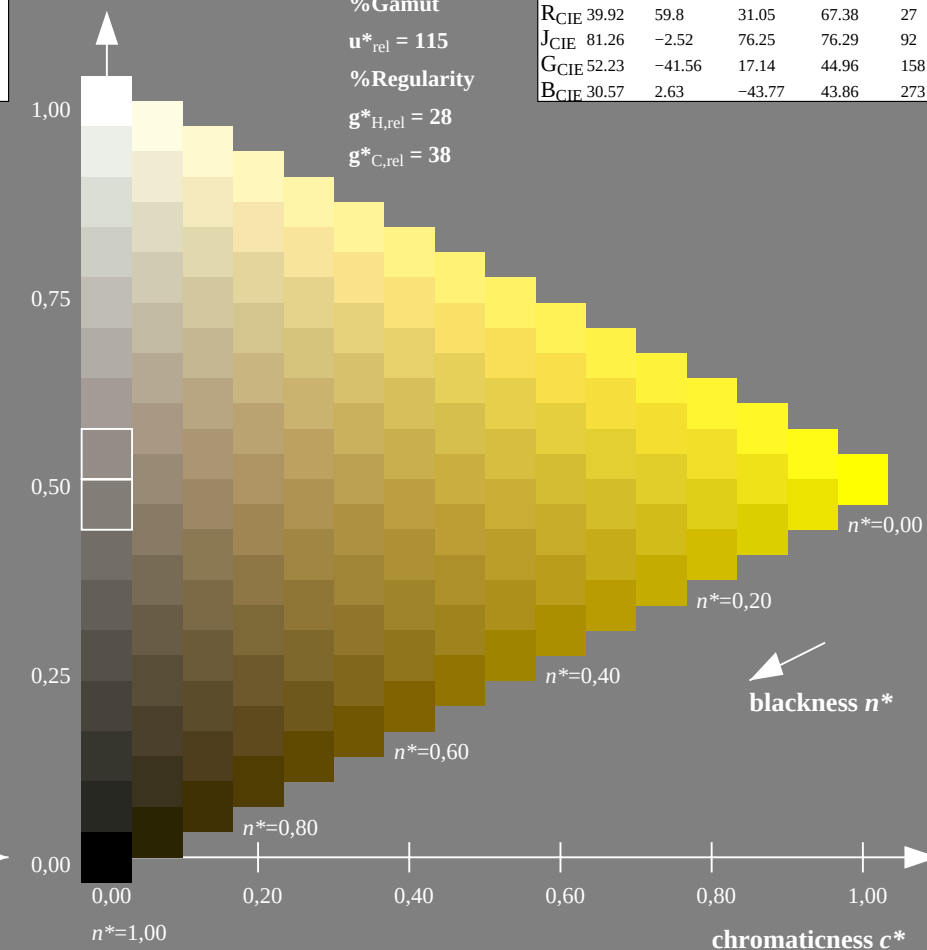
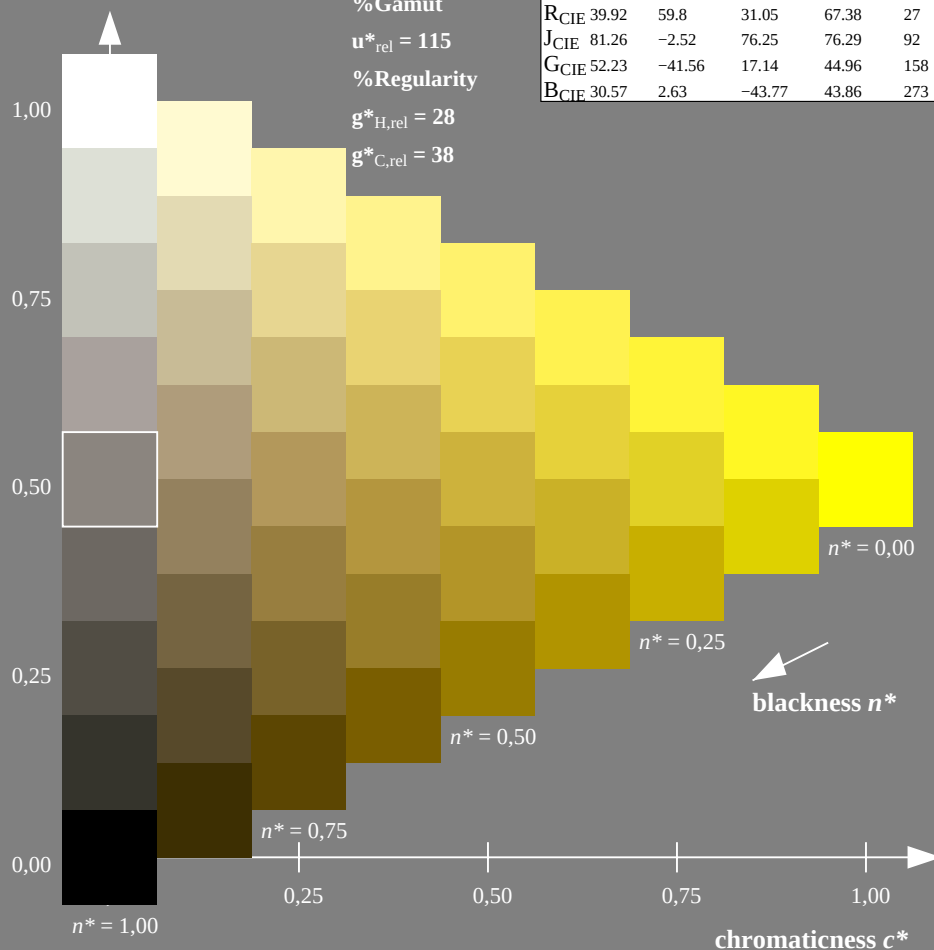
%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |



VE290-7, 9 step scales for constant CIELAB hue 92/360 = 0.254 (left)

16 step scales for constant CIELAB hue 92/360 = 0.254 (right)

BAM-test chart VE29; Colorimetric systems FRS06 & FRS06

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^* \cdot setrgbcolor$

output:  $olv^* \cdot (TRI9) \cdot setrgbcolor$

Input: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 143/360 = 0.398$

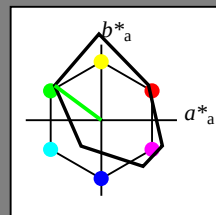
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue L

LCH\*Ma: 39 77 143

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 143/360 = 0.398$

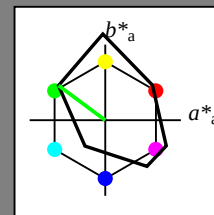
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue L

LCH\*Ma: 39 77 143

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

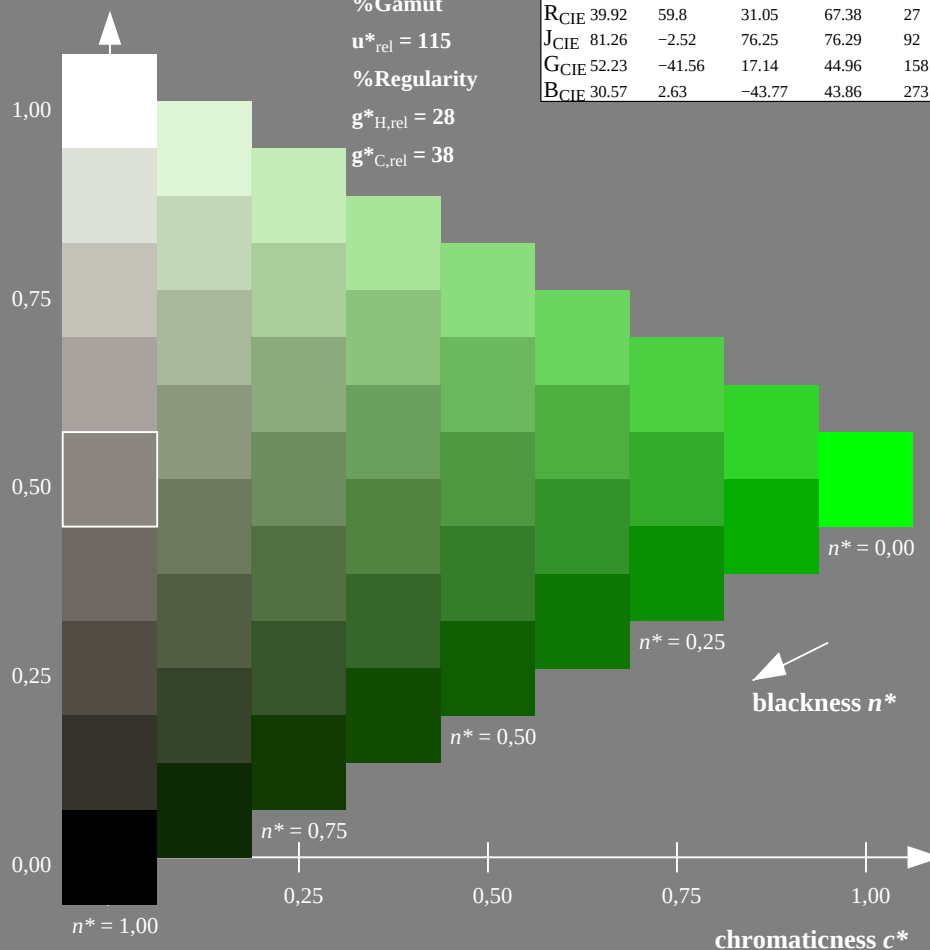
%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

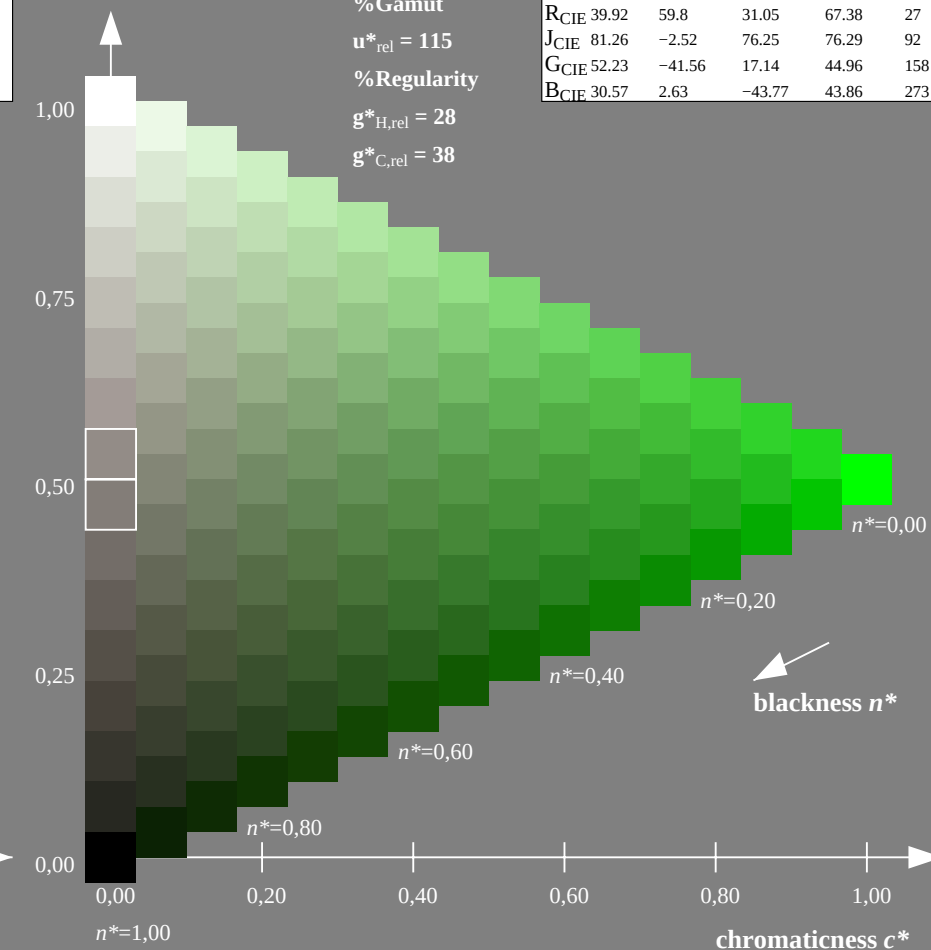
FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |



VE290-7, 9 step scales for constant CIELAB hue 143/360 = 0.398 (left)

BAM-test chart VE29; Colorimetric systems FRS06 & FRS06  
D65: 9 and 16 step colour scales for 10 hues



16 step scales for constant CIELAB hue 143/360 = 0.398 (right)

input:  $olv^* \cdot setrgbcolor$   
output:  $olv^* \cdot (TRI9) \cdot setrgbcolor$

Input: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 232/360 = 0.644$

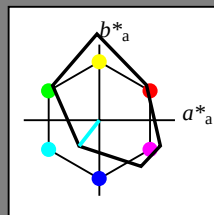
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue C

LCH\*Ma: 48 43 232

olv\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 232/360 = 0.644$

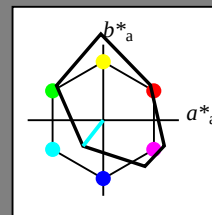
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue C

LCH\*Ma: 48 43 232

olv\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

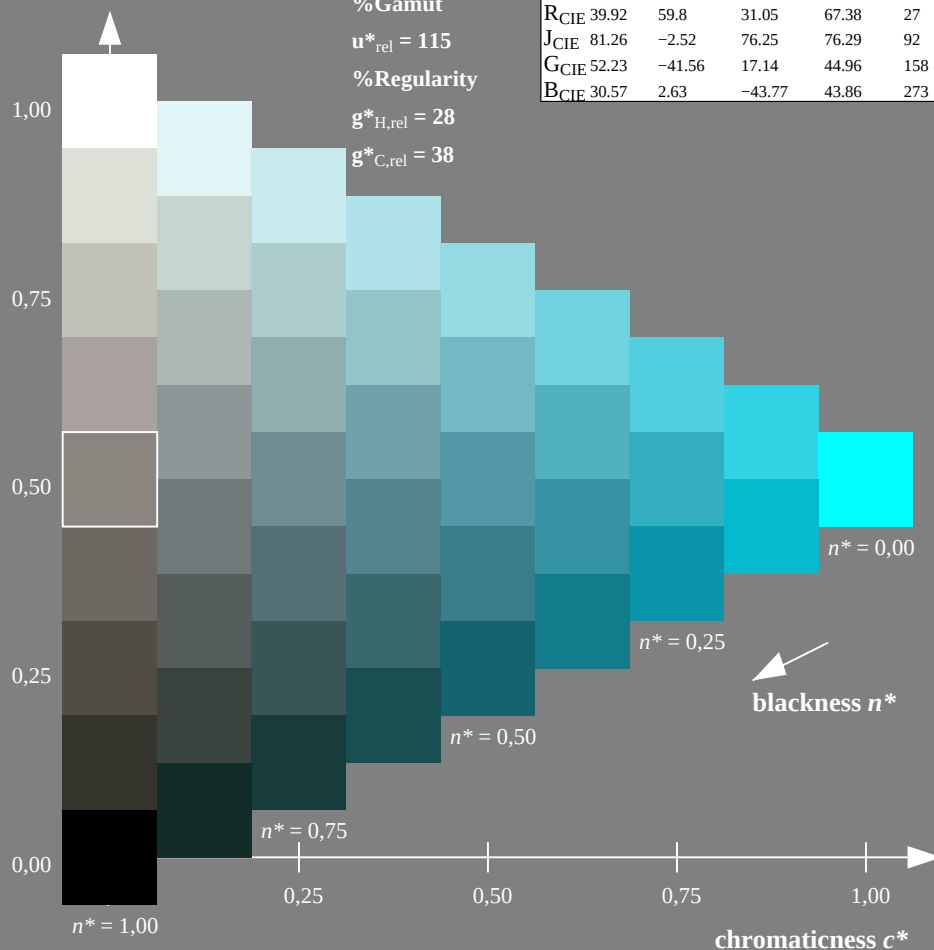
%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |



VE290-7, 9 step scales for constant CIELAB hue 232/360 = 0.644 (left)

16 step scales for constant CIELAB hue 232/360 = 0.644 (right)

BAM-test chart VE29; Colorimetric systems FRS06 & FRS06  
D65: 9 and 16 step colour scales for 10 hues

input:  $olv^* \cdot setrgbcolor$   
output:  $olv^* \cdot (TRI9) \cdot setrgbcolor$

Input: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 312/360 = 0.867$

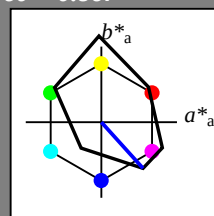
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue V

LCH\*Ma: 10 82 312

olv\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 312/360 = 0.867$

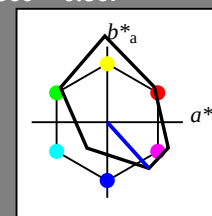
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue V

LCH\*Ma: 10 82 312

olv\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

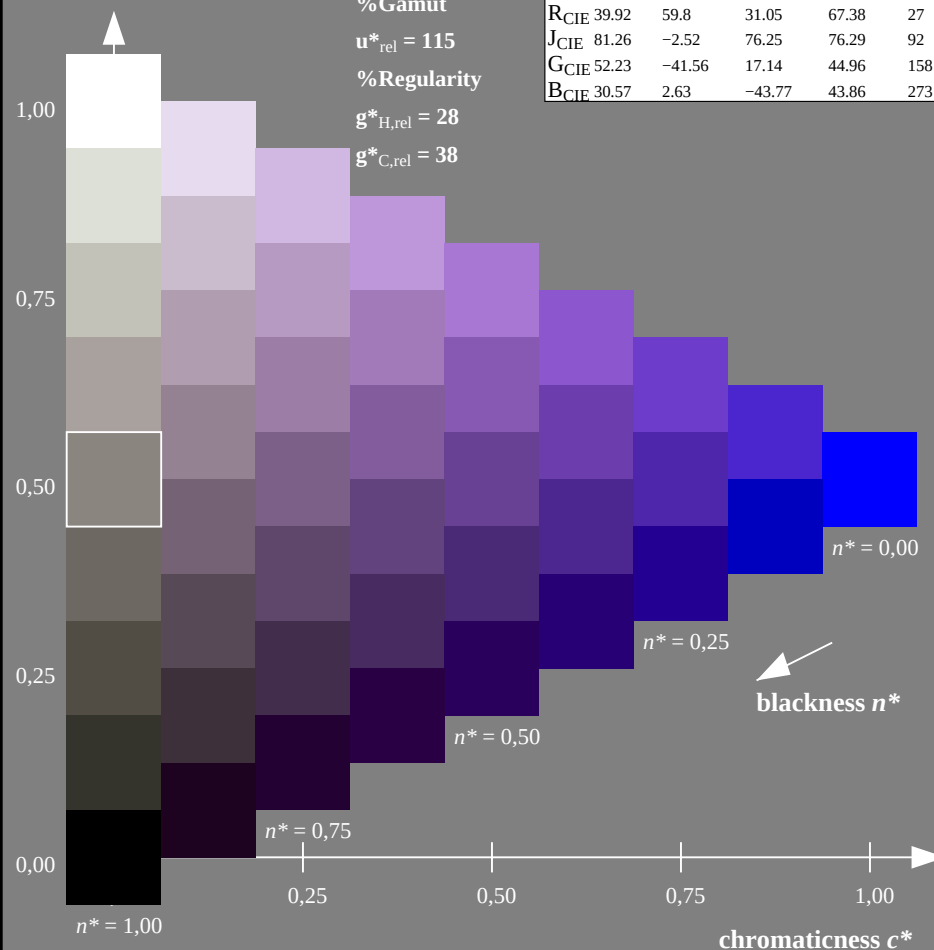
%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

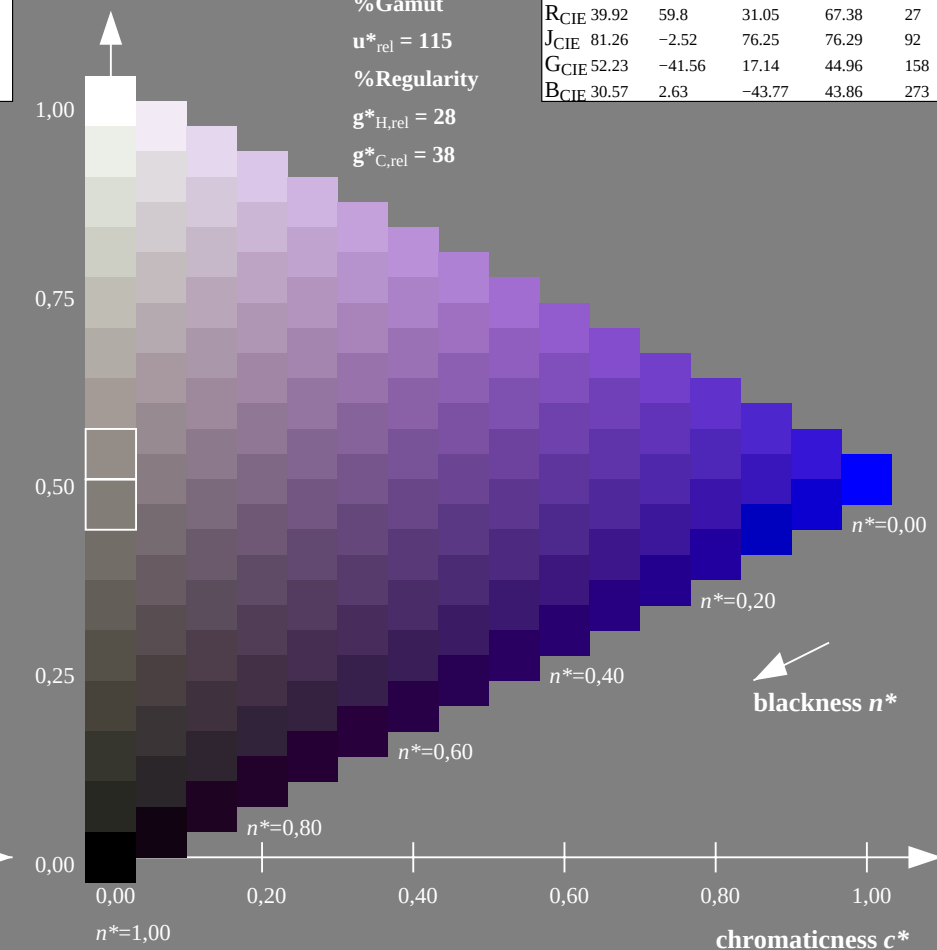
|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |



VE290-7, 9 step scales for constant CIELAB hue 312/360 = 0.867 (left)



BAM-test chart VE29; Colorimetric systems FRS06 & FRS06  
D65: 9 and 16 step colour scales for 10 hues



16 step scales for constant CIELAB hue 312/360 = 0.867 (right)

input:  $olv^* \cdot setrgbcolor$   
output:  $olv^* \cdot (TRI9) \cdot setrgbcolor$



Input: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 337/360 = 0.937$

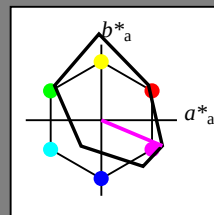
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue M

LCH\*Ma: 35 88 337

olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 337/360 = 0.937$

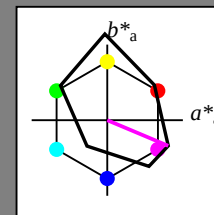
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue M

LCH\*Ma: 35 88 337

olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

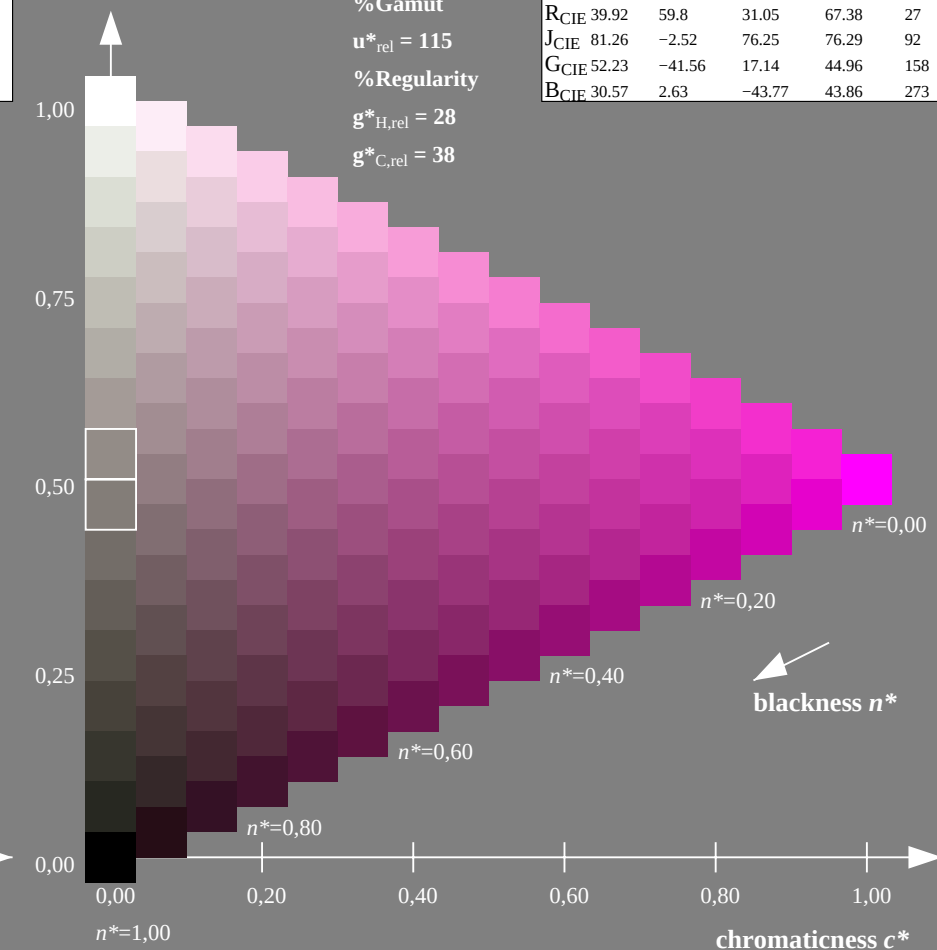
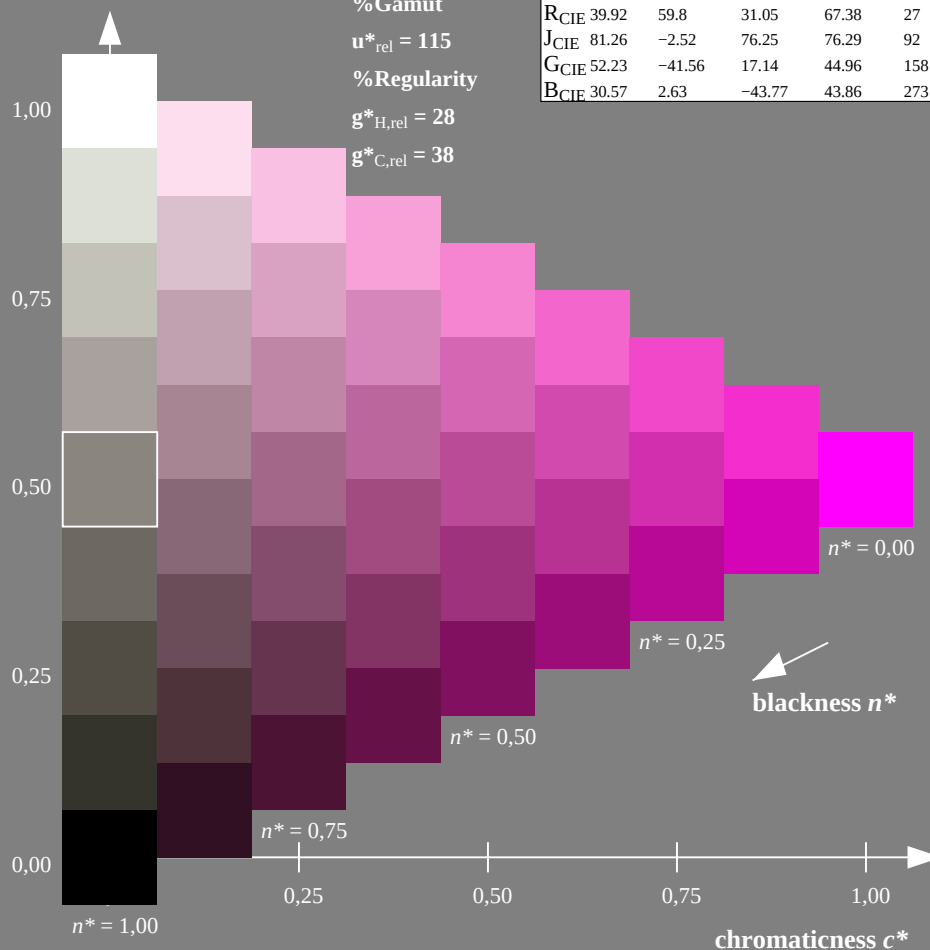
%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |



VE290-7, 9 step scales for constant CIELAB hue 337/360 = 0.937 (left)

16 step scales for constant CIELAB hue 337/360 = 0.937 (right)

BAM-test chart VE29; Colorimetric systems FRS06 & FRS06

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^* \cdot setrgbcolor$

output:  $olv^* \cdot (TRI9) \cdot setrgbcolor$

Input: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 27/360 = 0.076$

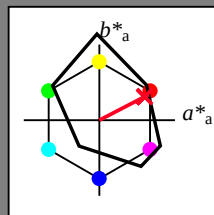
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue R

LCH\*Ma: 33 73 27

olv\*Ma: 1.0 0.0 0.16

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 27/360 = 0.076$

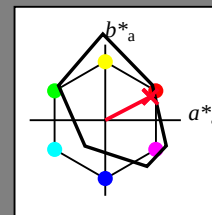
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue R

LCH\*Ma: 33 73 27

olv\*Ma: 1.0 0.0 0.16

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

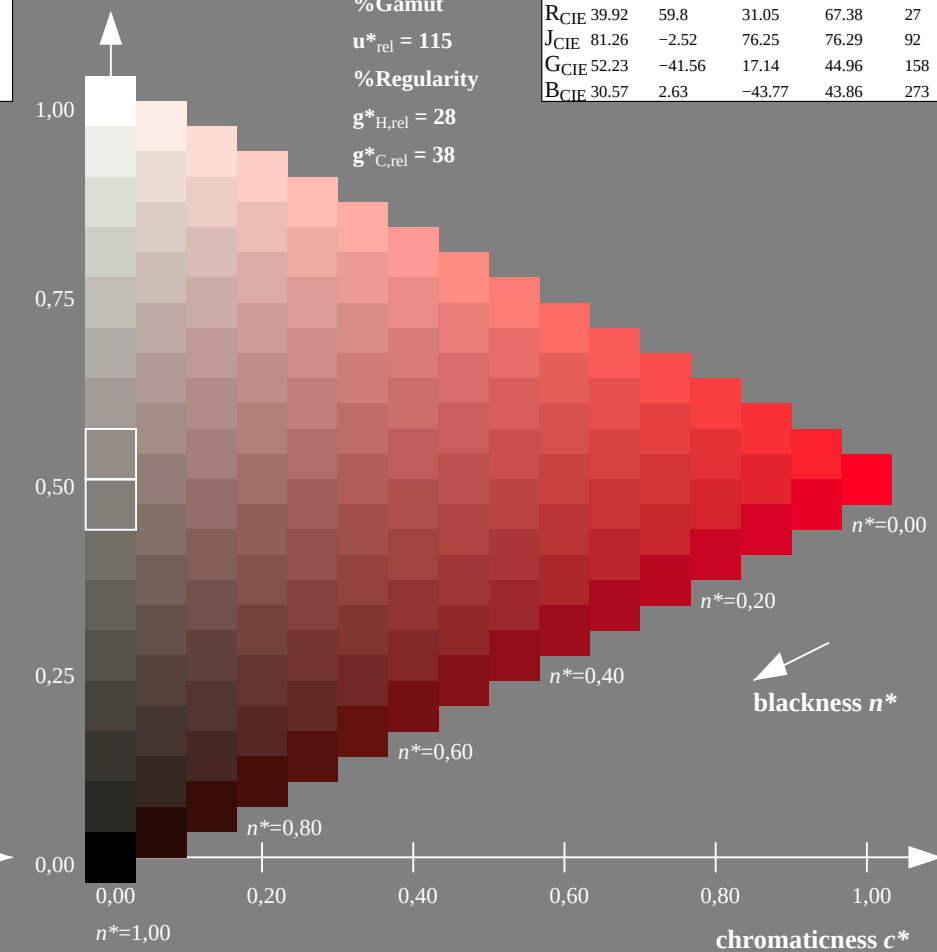
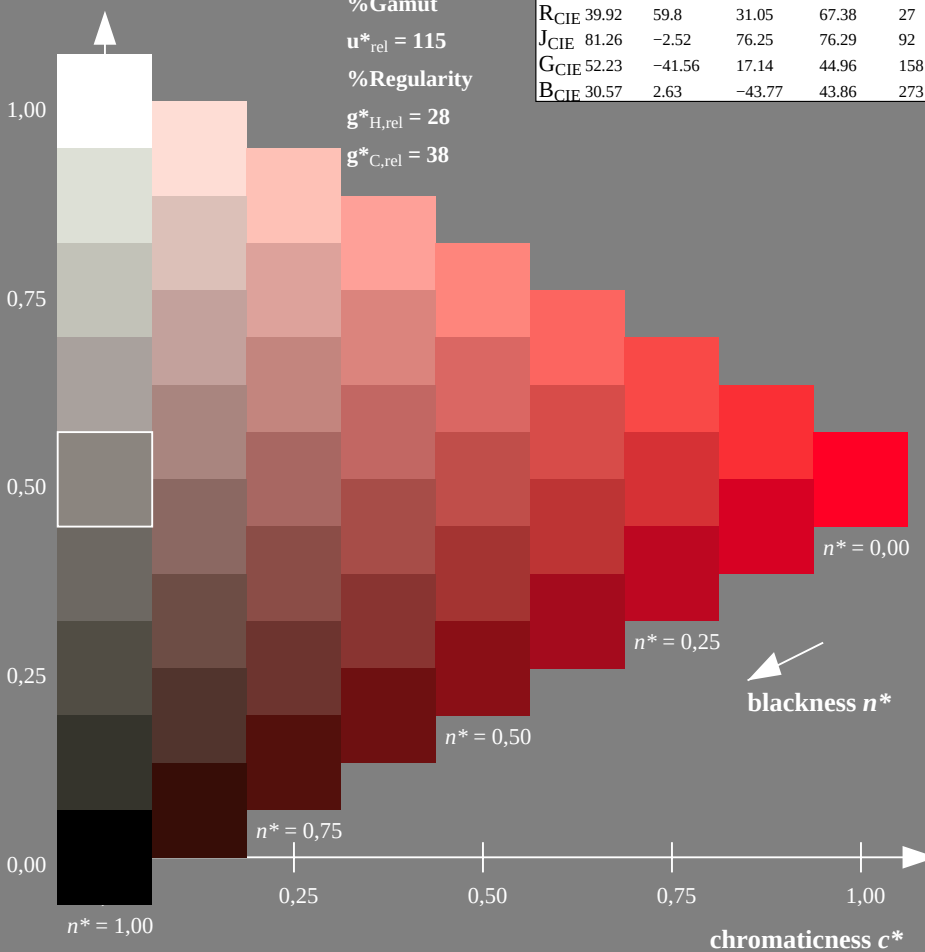
%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |



VE290-7, 9 step scales for constant CIELAB hue 27/360 = 0.076 (left)

16 step scales for constant CIELAB hue 27/360 = 0.076 (right)

BAM-test chart VE29; Colorimetric systems FRS06 & FRS06

D65: 9 and 16 step colour scales for 10 hues

input:  $olv^* \cdot setrgbcolor$

output:  $olv^* \cdot (TRI9) \cdot setrgbcolor$

Input: Colorimetric Printer Reflective System FRS06

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

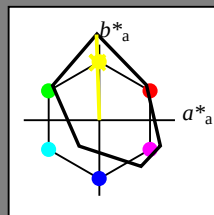
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue J

LCH\*Ma: 82 113 92

olv\*Ma: 0.99 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

Output: Colorimetric Printer Reflective System FRS06

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

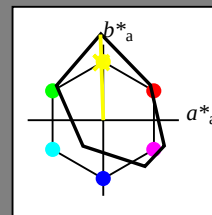
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue J

LCH\*Ma: 82 113 92

olv\*Ma: 0.99 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

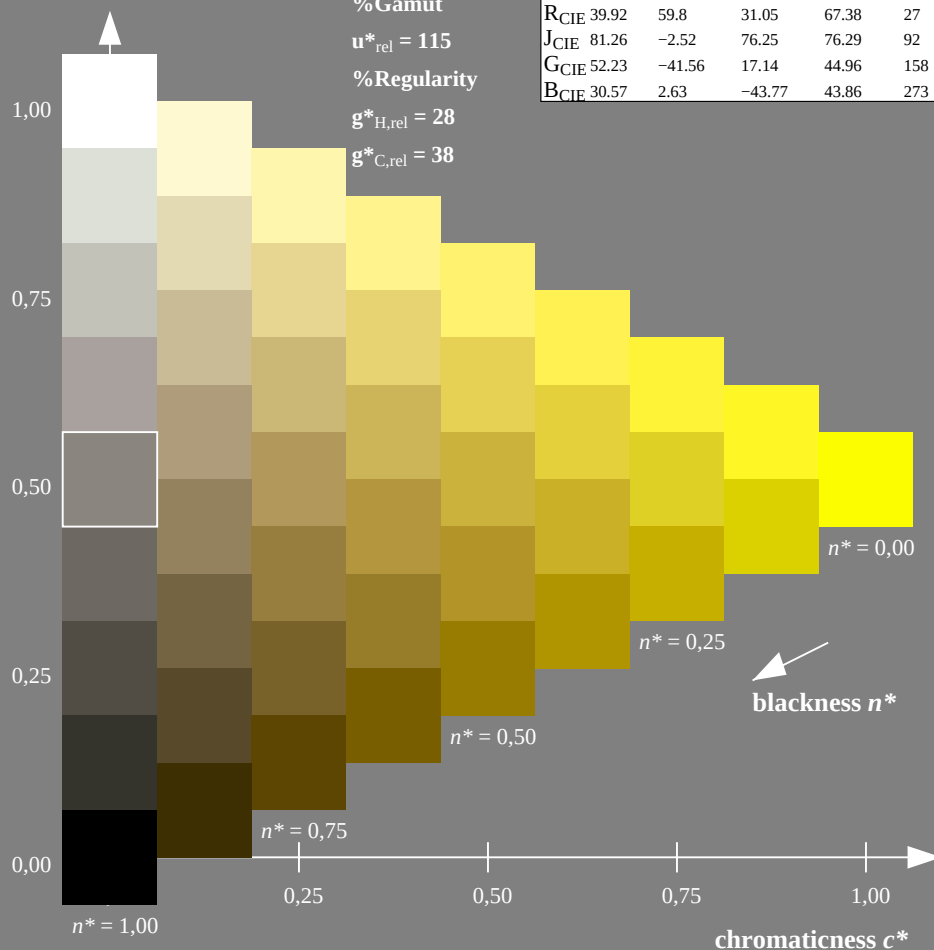
%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

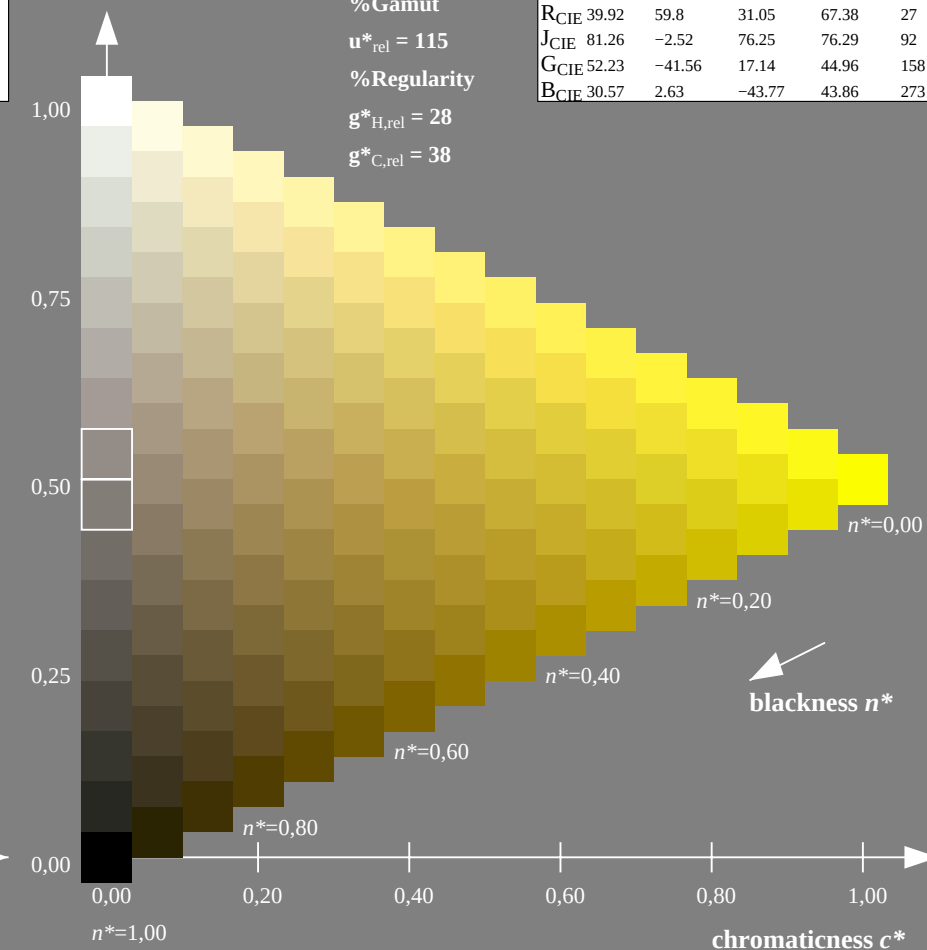
|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |



VE290-7, 9 step scales for constant CIELAB hue 92/360 = 0.255 (left)



BAM-test chart VE29; Colorimetric systems FRS06 & FRS06  
D65: 9 and 16 step colour scales for 10 hues



16 step scales for constant CIELAB hue 92/360 = 0.255 (right)

input:  $olv^* \cdot setrgbcolor$   
output:  $olv^* \cdot (TRI9) \cdot setrgbcolor$





Input: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab^*h = 158/360 = 0.438$

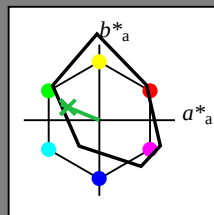
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 42 55 158

olv\*Ma: 0.0 1.0 0.31

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab^*h = 158/360 = 0.438$

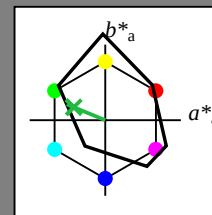
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 42 55 158

olv\*Ma: 0.0 1.0 0.31

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 115$

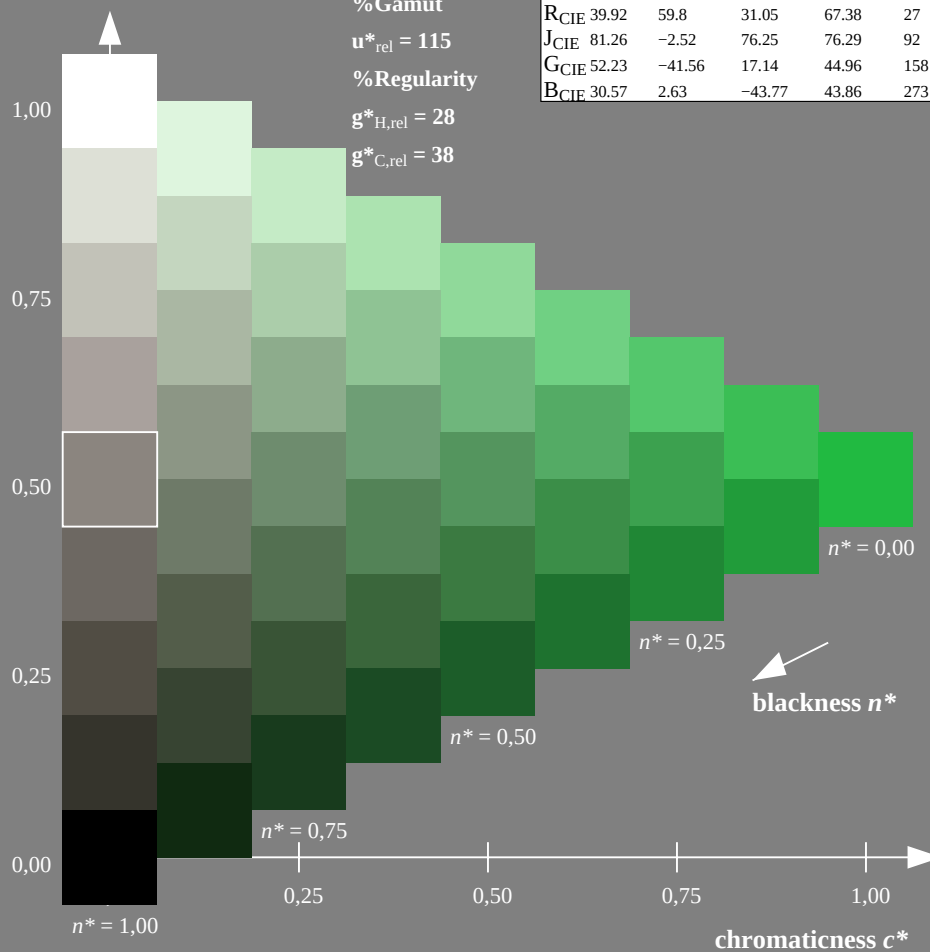
%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

FRS06; adapted (a) CIELAB data

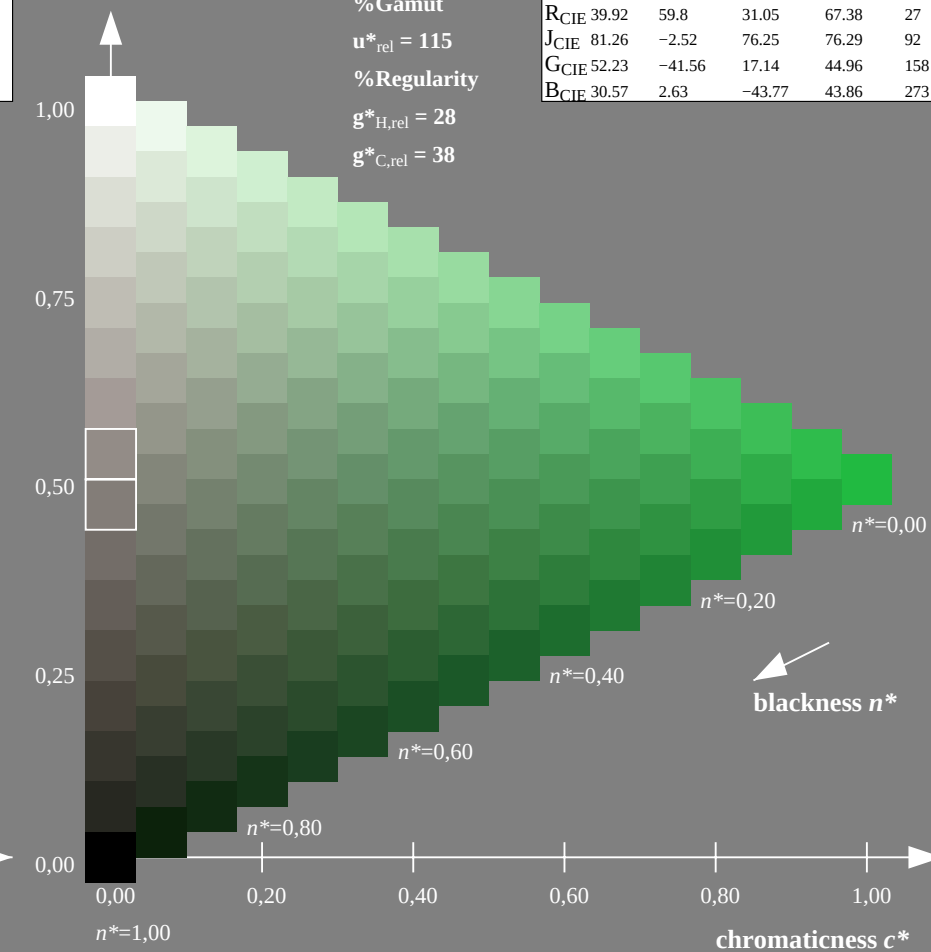
|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| Y <sub>Ma</sub>  | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| L <sub>Ma</sub>  | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| C <sub>Ma</sub>  | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| V <sub>Ma</sub>  | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| M <sub>Ma</sub>  | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>  | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| J <sub>CIE</sub> | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| G <sub>CIE</sub> | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| B <sub>CIE</sub> | 30.57       | 2.63    | -43.77  | 43.86        | 273          |



VE290-7, 9 step scales for constant CIELAB hue 158/360 = 0.438 (left)



BAM-test chart VE29; Colorimetric systems FRS06 & FRS06  
D65: 9 and 16 step colour scales for 10 hues



16 step scales for constant CIELAB hue 158/360 = 0.438 (right)

input:  $olv^*$  setrgbcolor  
output:  $olv^*$  (TRI9) setrgbcolor



output: *olv\** (*TRI9*) *setrgbcolor*