

Input: Colorimetric Reflective System NRS11

for hue  $h^* = lab^*h = 24/360 = 0.067$

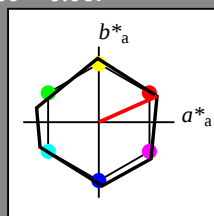
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 53 84 24

rgb\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 119$

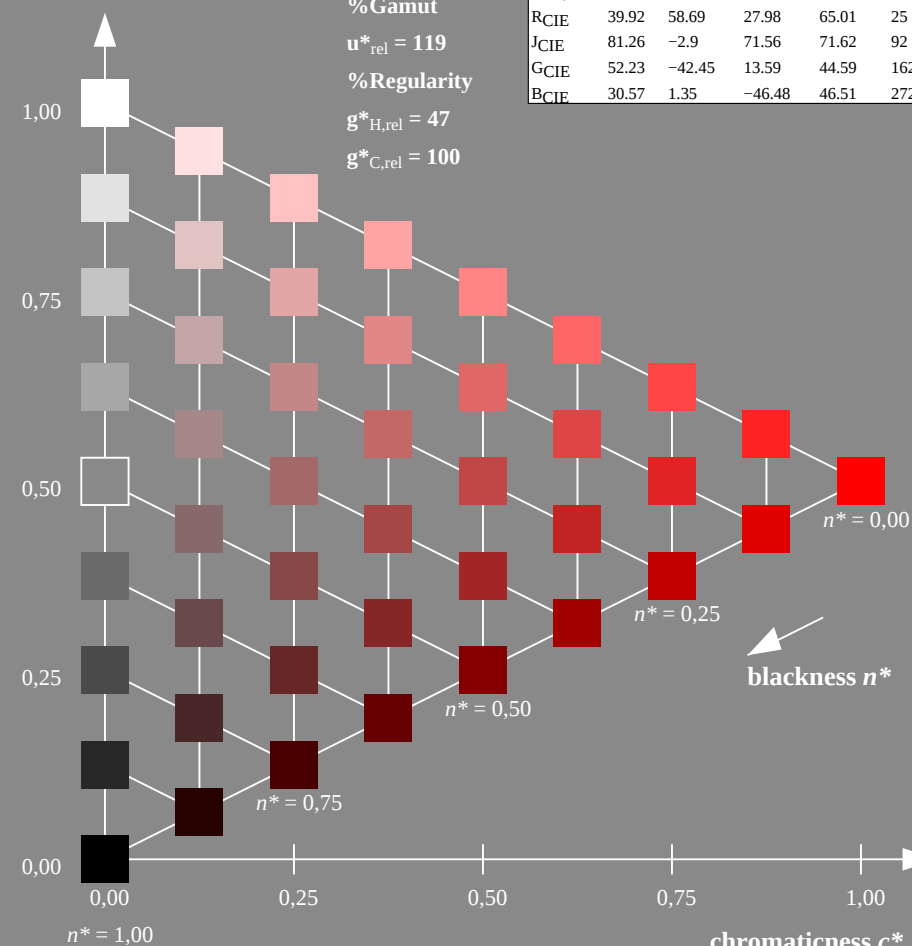
%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

NRS11; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa                | 53.2        | 77.06   | 34.32   | 84.36        | 24           |
| JMa                | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa                | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50B <sub>Ma</sub> | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| B <sub>Ma</sub>    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50R <sub>Ma</sub> | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| N <sub>Ma</sub>    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE               | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE               | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE               | 30.57       | 1.35    | -46.48  | 46.51        | 272          |



UE770-7, 9 step scales for constant CIELAB hue 24/360 = 0.067 (left)



BAM-test chart UE77; Colorimetric systems NRS11 & ORS18

D65: 9 and 16 step colour scales for 10 hues

Output: Colorimetric Reflective System ORS18

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

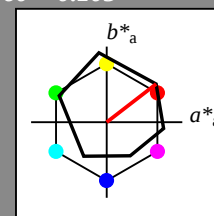
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 48 83 38

rgb\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

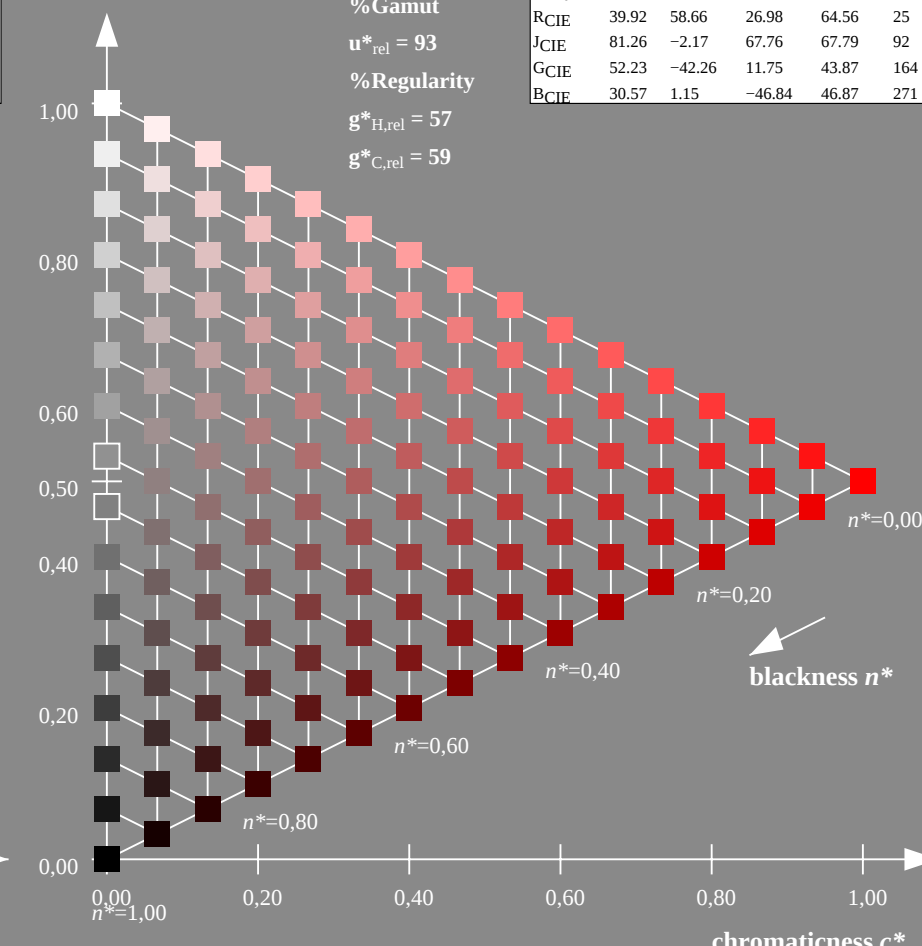
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-----------------|-------------|---------|---------|--------------|--------------|
| OMa             | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| YMa             | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa             | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa             | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| VMa             | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| MMa             | 48.13       | 75.27   | -8.35   | 75.73        | 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            |
| RCIE            | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE            | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE            | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE            | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



16 step scales for constant CIELAB hue 38/360 = 0.105 (right)

input: *cmv0\* setcmykcolor*

output: *olv\* setrgbcolor / w\* setgray*



Input: Colorimetric Reflective System NRS11

for hue  $h^* = lab^*h = 91/360 = 0.253$

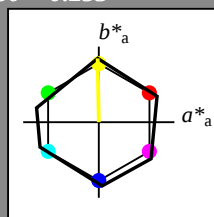
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 53 84 91

rgb\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 119$

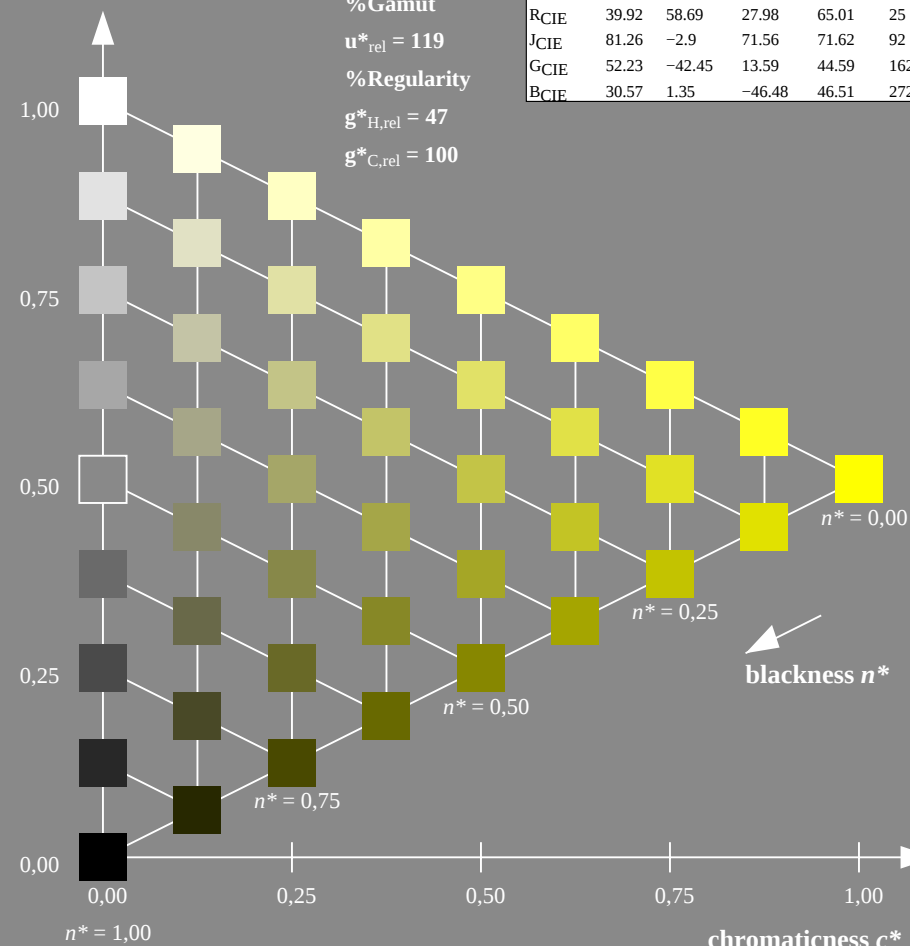
%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

NRS11; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa                | 53.2        | 77.06   | 34.32   | 84.36        | 24           |
| JMa                | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa                | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50B <sub>Ma</sub> | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| B <sub>Ma</sub>    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50R <sub>Ma</sub> | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| N <sub>Ma</sub>    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE               | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE               | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE               | 30.57       | 1.35    | -46.48  | 46.51        | 272          |



UE770-7, 9 step scales for constant CIELAB hue 91/360 = 0.253 (left)



BAM-test chart UE77; Colorimetric systems NRS11 & ORS18

D65: 9 and 16 step colour scales for 10 hues

Output: Colorimetric Reflective System ORS18

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

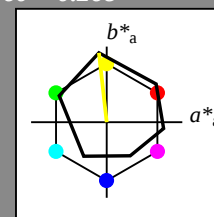
$lab^*tch$  and  $lab^*nch$

D65: hue Y

LCH\*Ma: 90 92 96

rgb\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

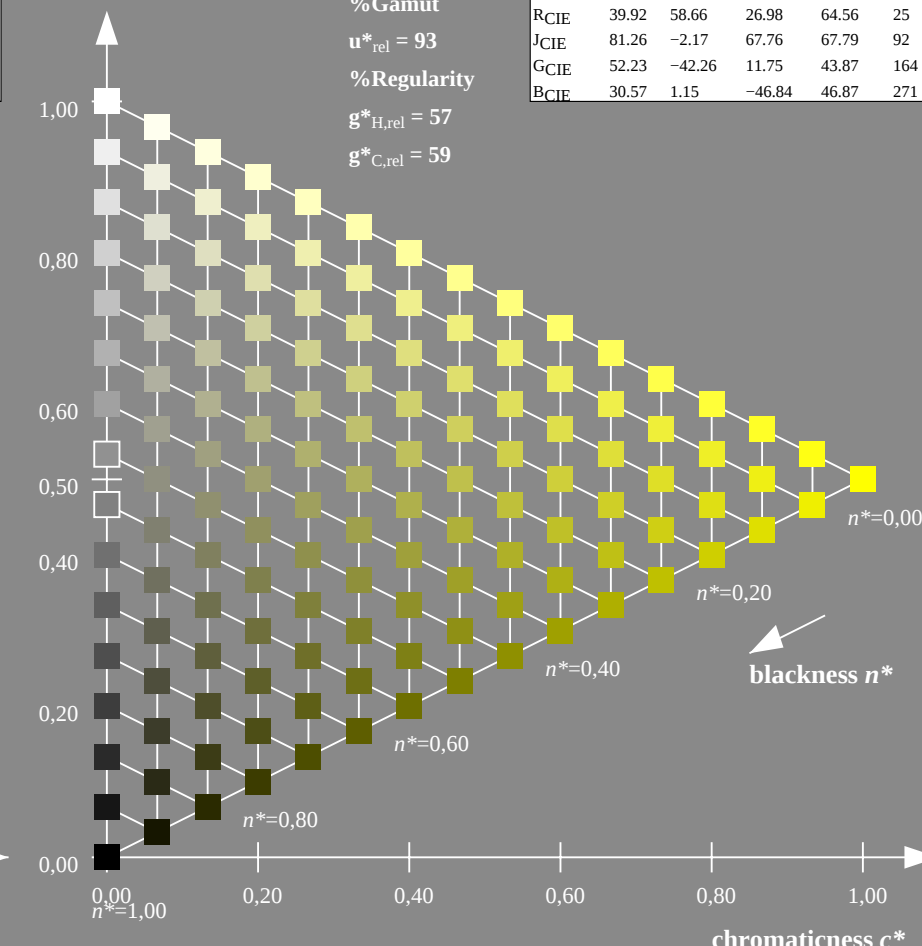
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-----------------|-------------|---------|---------|--------------|--------------|
| OMa             | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| YMa             | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa             | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa             | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| VMa             | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| MMa             | 48.13       | 75.27   | -8.35   | 75.73        | 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            |
| RCIE            | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE            | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE            | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE            | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



16 step scales for constant CIELAB hue 96/360 = 0.268 (right)

input: *cmY0\* setcmykcolor*

output: *olv\* setrgbcolor / w\* setgray*



Input: Colorimetric Reflective System NRS11

for hue  $h^* = lab^*h = 167/360 = 0.464$

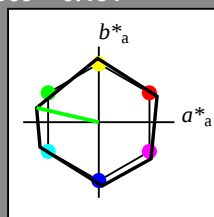
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 53 84 167

rgb\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 119$

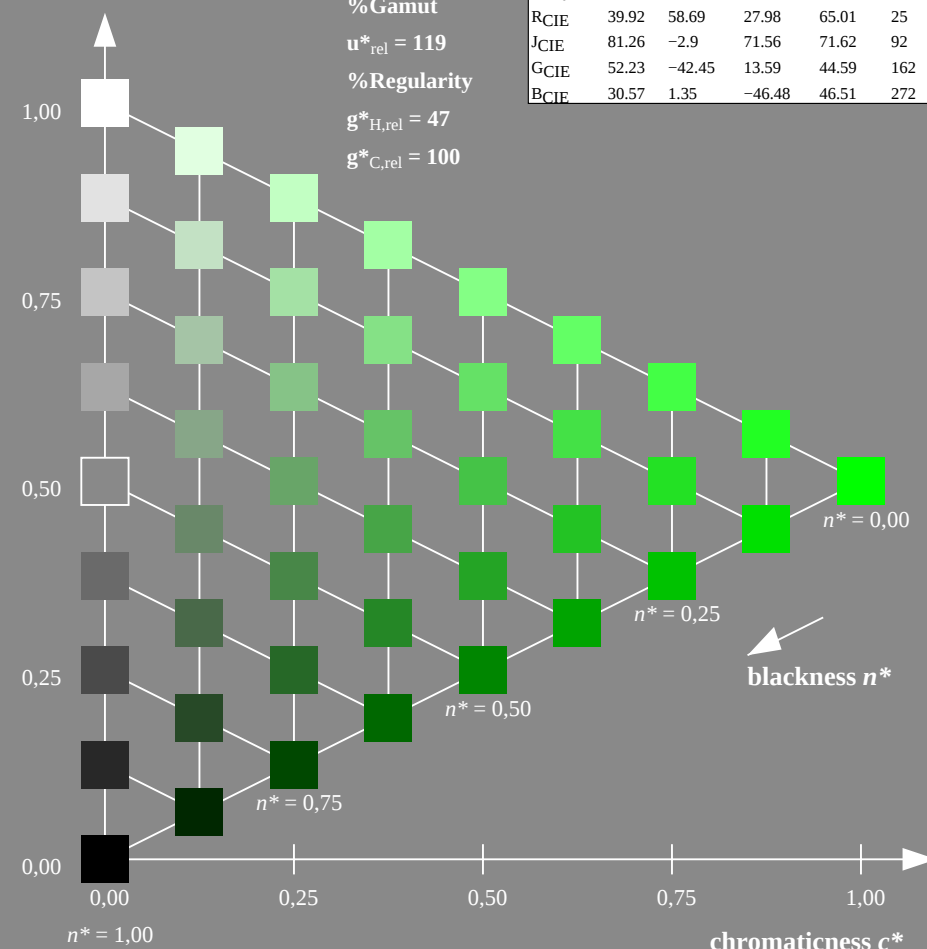
%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

NRS11; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa                | 53.2        | 77.06   | 34.32   | 84.36        | 24           |
| JMa                | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa                | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50B <sub>Ma</sub> | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| B <sub>Ma</sub>    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50R <sub>Ma</sub> | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| N <sub>Ma</sub>    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE               | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE               | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE               | 30.57       | 1.35    | -46.48  | 46.51        | 272          |



UE770-7, 9 step scales for constant CIELAB hue 167/360 = 0.464 (left)



BAM-test chart UE77; Colorimetric systems NRS11 & ORS18

D65: 9 and 16 step colour scales for 10 hues

Output: Colorimetric Reflective System ORS18

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

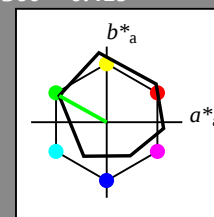
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 51 72 151

rgb\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

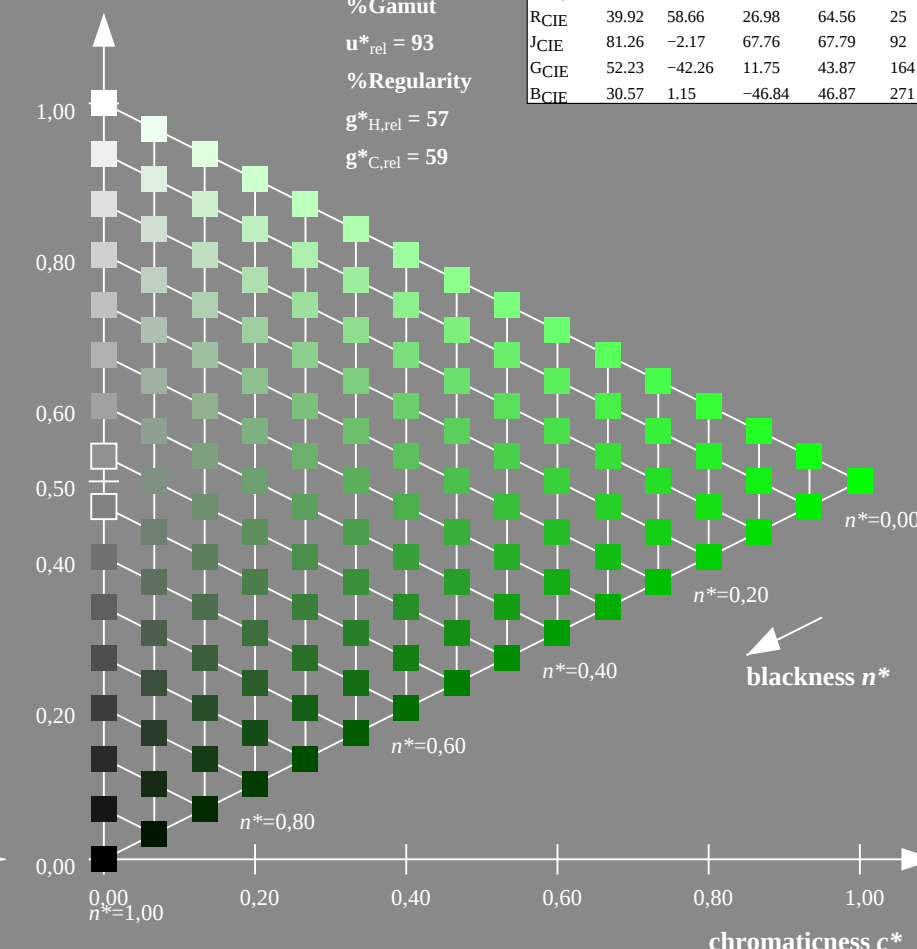
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-----------------|-------------|---------|---------|--------------|--------------|
| OMa             | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| YMa             | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa             | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa             | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| VMa             | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| MMa             | 48.13       | 75.27   | -8.35   | 75.73        | 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            |
| RCIE            | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE            | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE            | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE            | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



16 step scales for constant CIELAB hue 151/360 = 0.419 (right)

input: *cmv0\* setcmykcolor*

output: *olv\* setrgbcolor / w\* setgray*



Input: Colorimetric Reflective System NRS11

for hue  $h^* = lab^*h = 203/360 = 0.564$

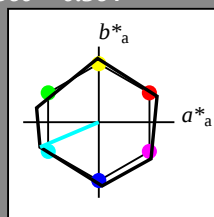
$lab^*tch$  and  $lab^*nch$

D65: hue G50B

LCH\*Ma: 53 84 203

rgb\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 119$

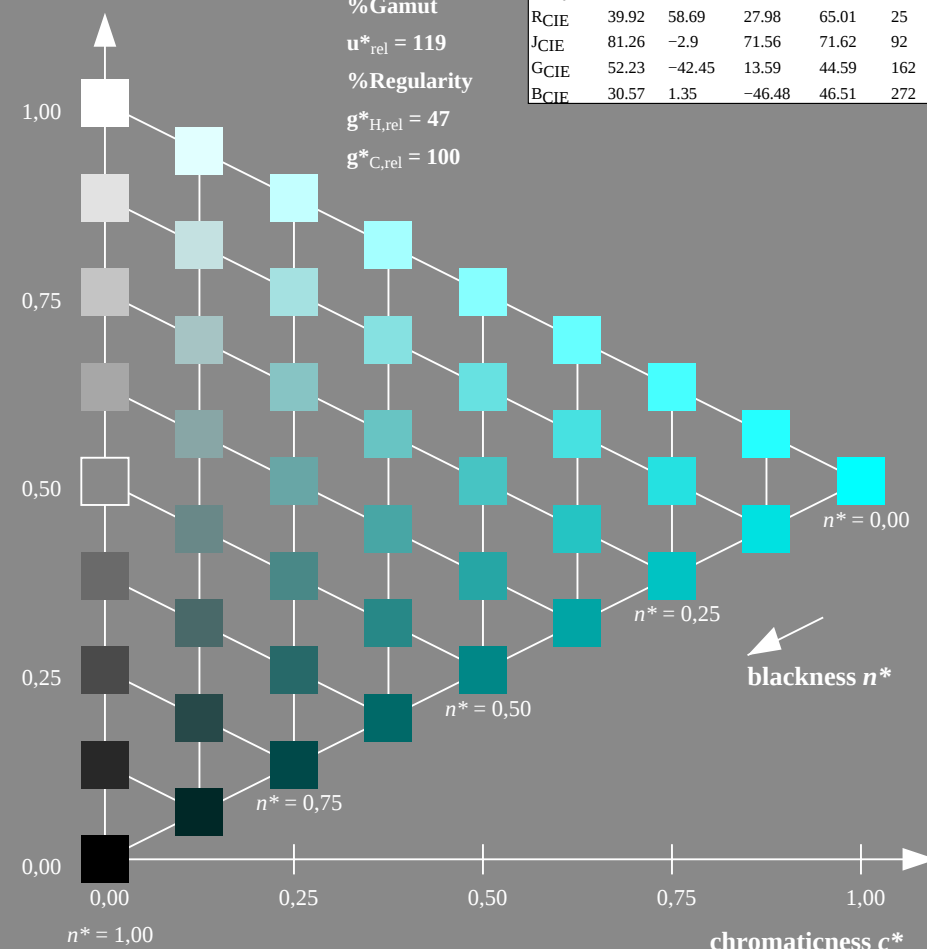
%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

NRS11; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa                | 53.2        | 77.06   | 34.32   | 84.36        | 24           |
| JMa                | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa                | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50B <sub>Ma</sub> | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| B <sub>Ma</sub>    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50R <sub>Ma</sub> | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| N <sub>Ma</sub>    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE               | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE               | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE               | 30.57       | 1.35    | -46.48  | 46.51        | 272          |



UE770-7, 9 step scales for constant CIELAB hue 203/360 = 0.564 (left)



BAM-test chart UE77; Colorimetric systems NRS11 & ORS18

D65: 9 and 16 step colour scales for 10 hues

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 236/360 = 0.656$

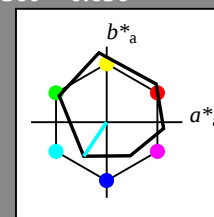
$lab^*tch$  and  $lab^*nch$

D65: hue C

LCH\*Ma: 59 54 236

rgb\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

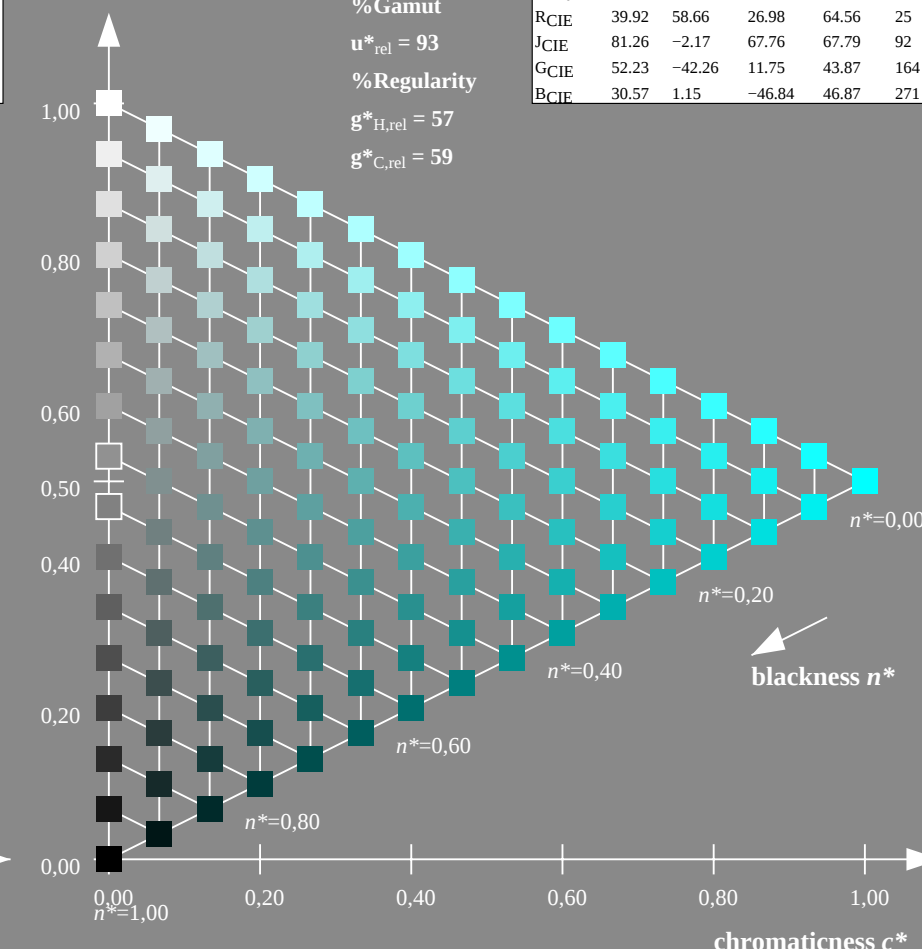
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-----------------|-------------|---------|---------|--------------|--------------|
| OMa             | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| YMa             | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa             | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa             | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| VMa             | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| MMa             | 48.13       | 75.27   | -8.35   | 75.73        | 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            |
| RCIE            | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE            | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE            | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE            | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



16 step scales for constant CIELAB hue 236/360 = 0.656 (right)

input:  $cmY0^* setcmykcolor$

output:  $olv^* setrgbcolor / w^* setgray$



Input: Colorimetric Reflective System NRS11

for hue  $h^* = lab^*h = 273/360 = 0.758$

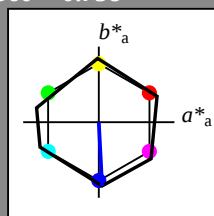
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 53 84 273

rgb\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 119$

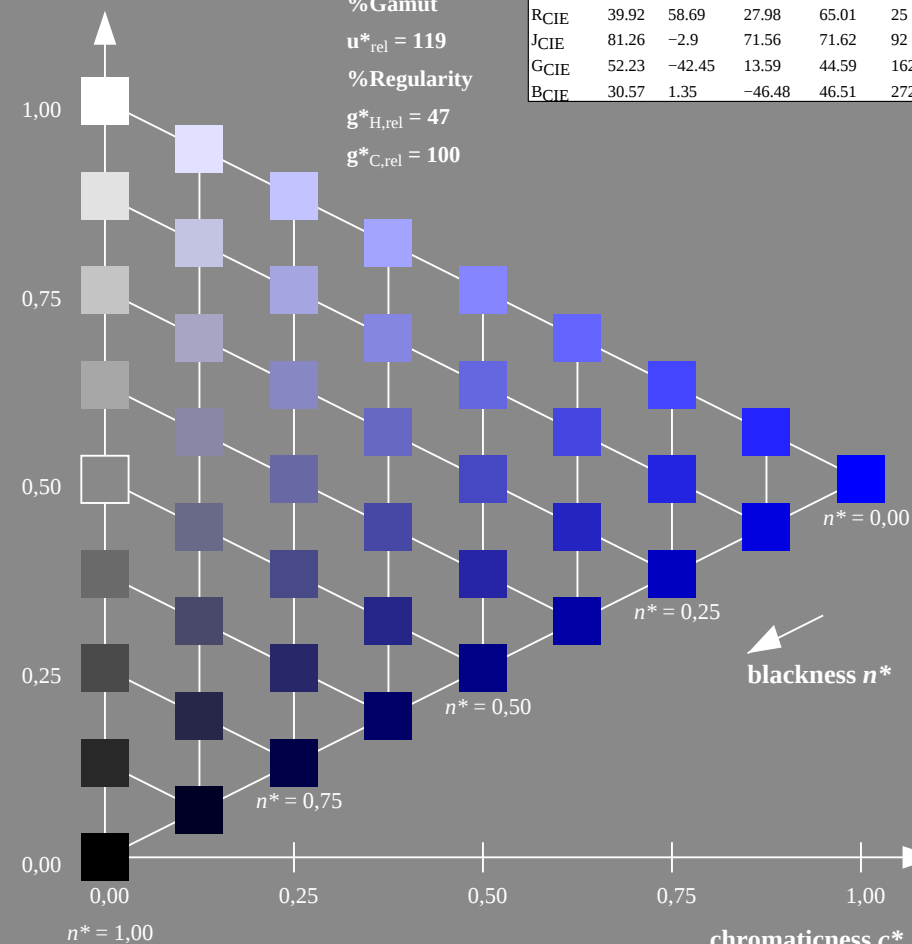
%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

NRS11; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa                | 53.2        | 77.06   | 34.32   | 84.36        | 24           |
| JMa                | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa                | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50B <sub>Ma</sub> | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| B <sub>Ma</sub>    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50R <sub>Ma</sub> | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| N <sub>Ma</sub>    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE               | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE               | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE               | 30.57       | 1.35    | -46.48  | 46.51        | 272          |



UE770-7, 9 step scales for constant CIELAB hue 273/360 = 0.758 (left)



BAM-test chart UE77; Colorimetric systems NRS11 & ORS18

D65: 9 and 16 step colour scales for 10 hues

Output: Colorimetric Reflective System ORS18

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

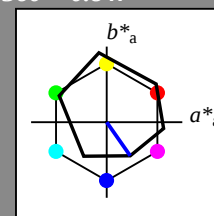
$lab^*tch$  and  $lab^*nch$

D65: hue V

LCH\*Ma: 26 54 305

rgb\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

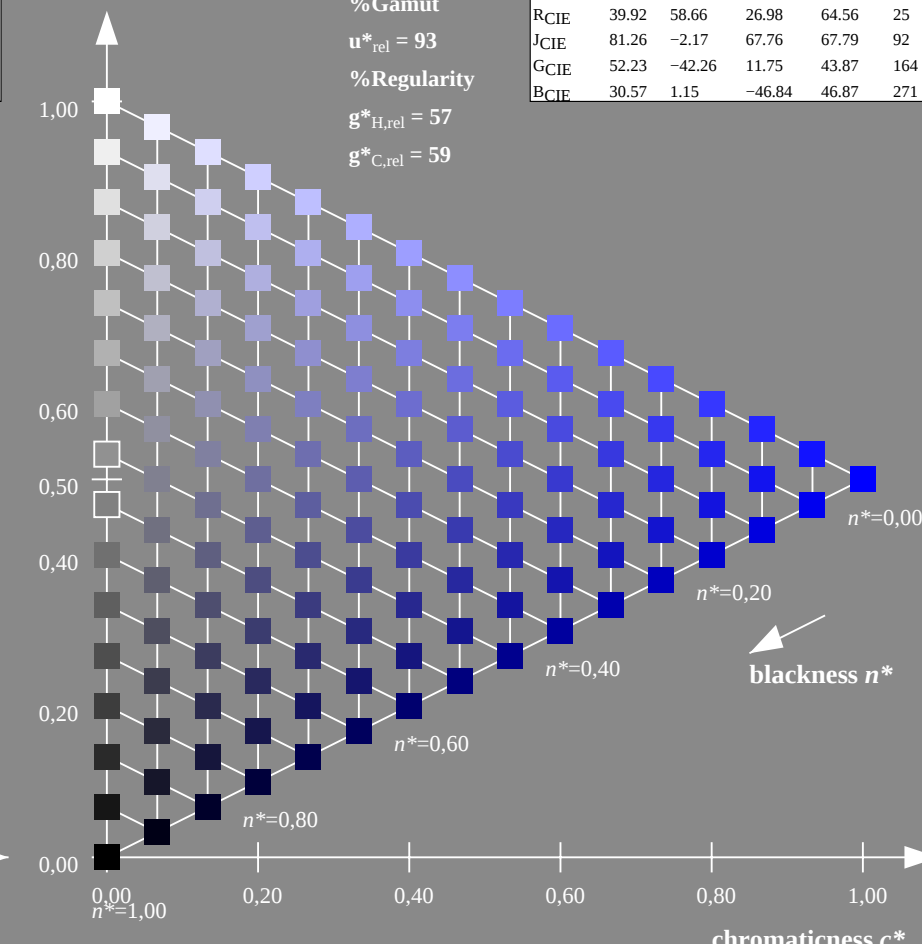
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-----------------|-------------|---------|---------|--------------|--------------|
| OMa             | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| YMa             | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa             | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa             | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub> | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| M <sub>Ma</sub> | 48.13       | 75.27   | -8.35   | 75.73        | 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            |
| RCIE            | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE            | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE            | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE            | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



16 step scales for constant CIELAB hue 305/360 = 0.847 (right)

input: *cmv0\* setcmykcolor*

output: *olv\* setrgbcolor / w\* setgray*



Input: Colorimetric Reflective System NRS11

for hue  $h^* = lab^*h = 325/360 = 0.903$

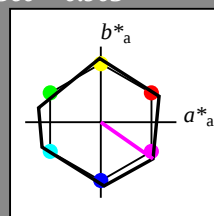
$lab^*tch$  and  $lab^*nch$

D65: hue B50R

LCH\*Ma: 53 84 325

rgb\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 119$

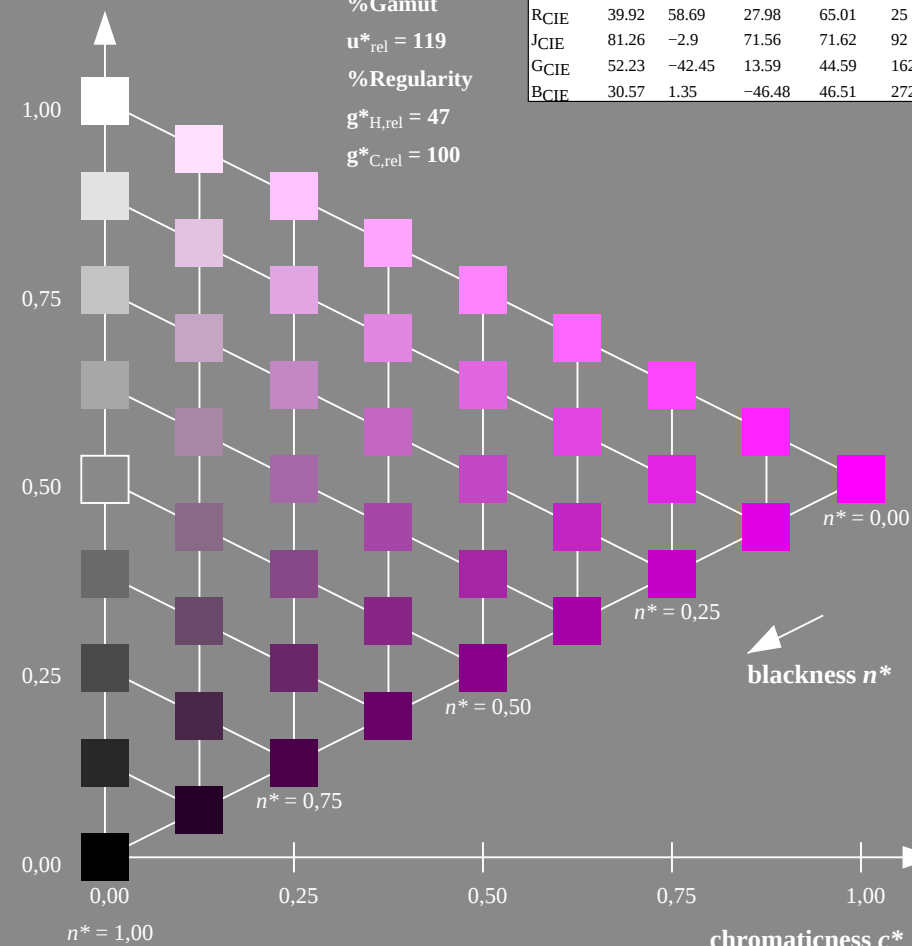
%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

NRS11; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa                | 53.2        | 77.06   | 34.32   | 84.36        | 24           |
| JMa                | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa                | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50B <sub>Ma</sub> | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| B <sub>Ma</sub>    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50R <sub>Ma</sub> | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| N <sub>Ma</sub>    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE               | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE               | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE               | 30.57       | 1.35    | -46.48  | 46.51        | 272          |



UE770-7, 9 step scales for constant CIELAB hue 325/360 = 0.903 (left)



BAM-test chart UE77; Colorimetric systems NRS11 & ORS18

D65: 9 and 16 step colour scales for 10 hues

Output: Colorimetric Reflective System ORS18

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

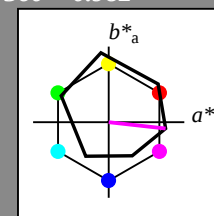
$lab^*tch$  and  $lab^*nch$

D65: hue M

LCH\*Ma: 48 76 354

rgb\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

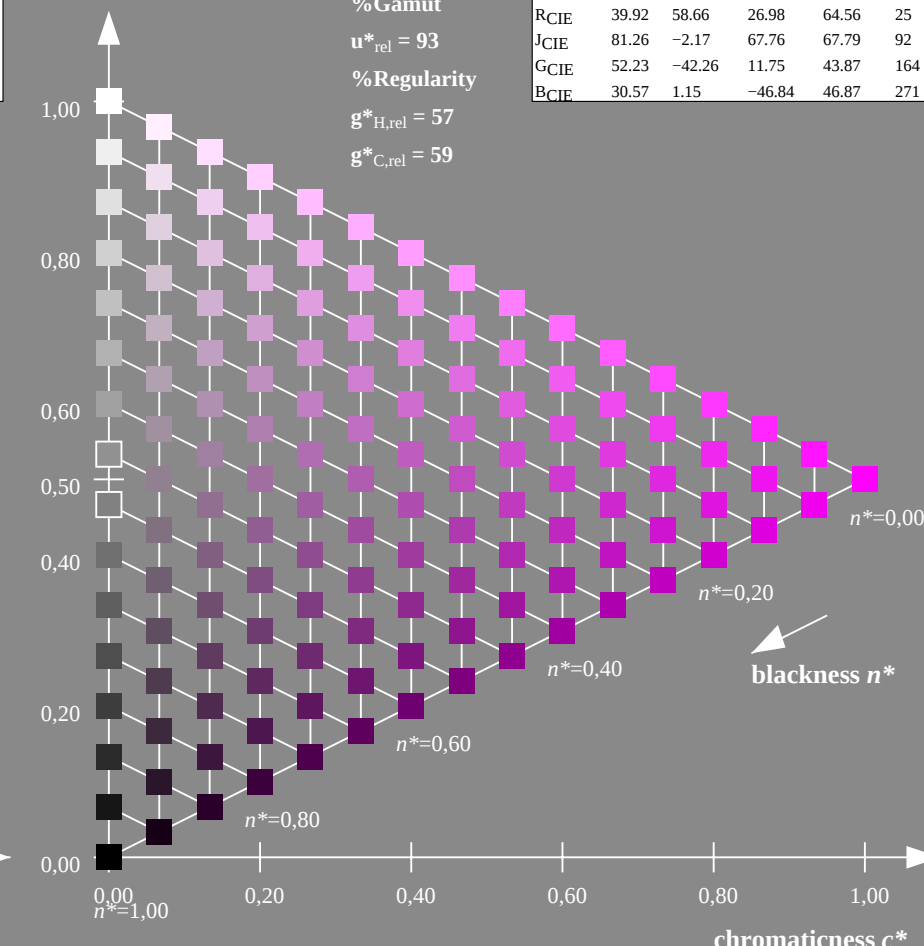
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-----------------|-------------|---------|---------|--------------|--------------|
| OMa             | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| YMa             | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa             | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa             | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| VMa             | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| MMa             | 48.13       | 75.27   | -8.35   | 75.73        | 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            |
| RCIE            | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE            | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE            | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE            | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



16 step scales for constant CIELAB hue 354/360 = 0.982 (right)

input:  $cmY0^* setcmykcolor$

output:  $olv^* setrgbcolor / w^* setgray$



Input: Colorimetric Reflective System NRS11

for hue  $h^* = lab^*h = 25/360 = 0.071$

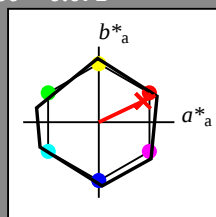
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 53 83 25

rgb\*Ma: 1.0 0.03 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 119$

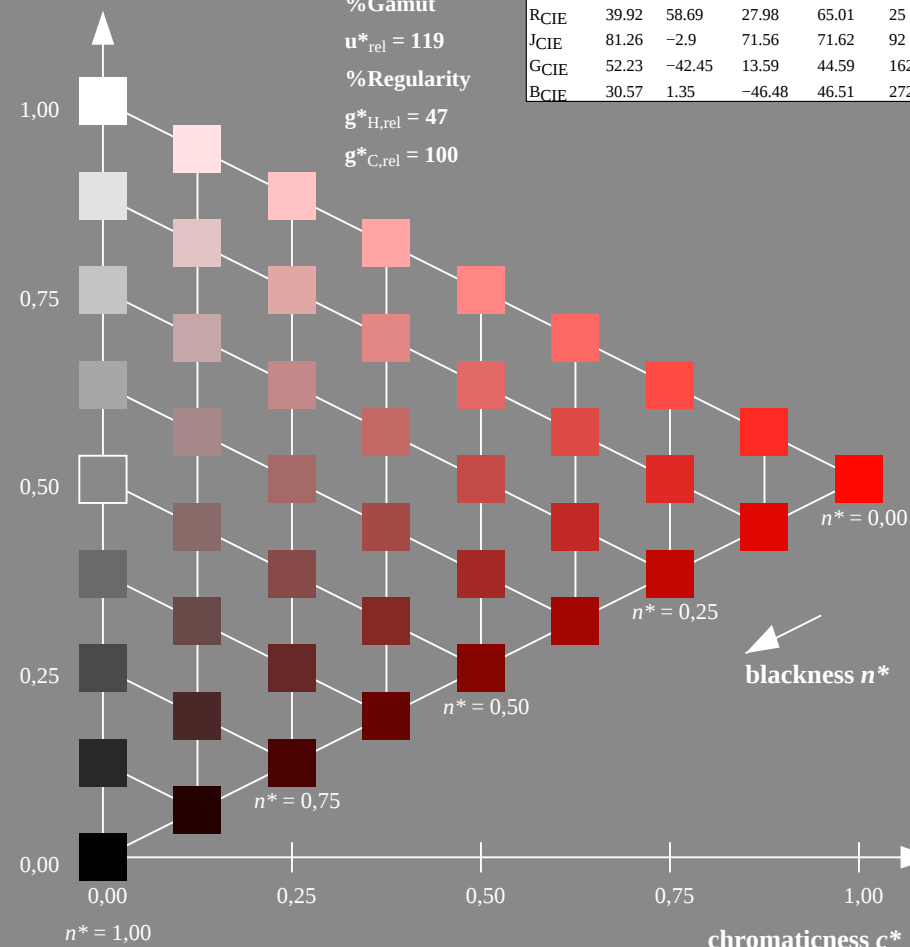
%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

NRS11; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa                | 53.2        | 77.06   | 34.32   | 84.36        | 24           |
| JMa                | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa                | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50B <sub>Ma</sub> | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| B <sub>Ma</sub>    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50R <sub>Ma</sub> | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| N <sub>Ma</sub>    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE               | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE               | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE               | 30.57       | 1.35    | -46.48  | 46.51        | 272          |



UE770-7, 9 step scales for constant CIELAB hue 25/360 = 0.071 (left)



BAM-test chart UE77; Colorimetric systems NRS11 & ORS18

D65: 9 and 16 step colour scales for 10 hues

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 25/360 = 0.069$

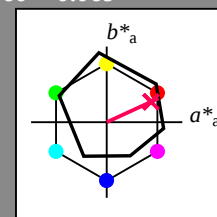
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 48 75 25

rgb\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

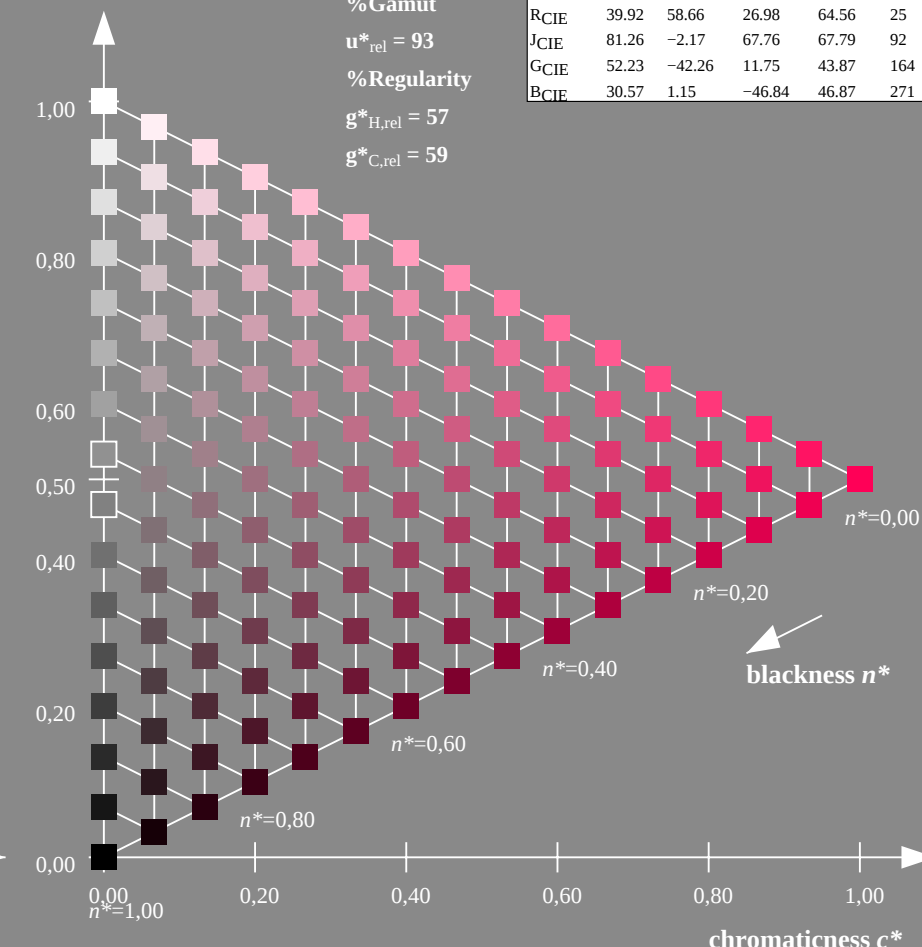
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-----------------|-------------|---------|---------|--------------|--------------|
| OMa             | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| YMa             | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa             | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa             | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| VMa             | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| MMa             | 48.13       | 75.27   | -8.35   | 75.73        | 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            |
| RCIE            | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE            | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE            | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE            | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



16 step scales for constant CIELAB hue 25/360 = 0.069 (right)

input: *cmY0\* setcmykcolor*

output: *olv\* setrgbcolor / w\* setgray*



Input: Colorimetric Reflective System NRS11

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

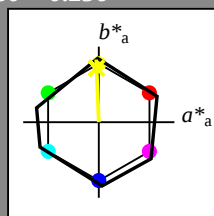
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 53 83 92

rgb\*Ma: 0.98 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 119$

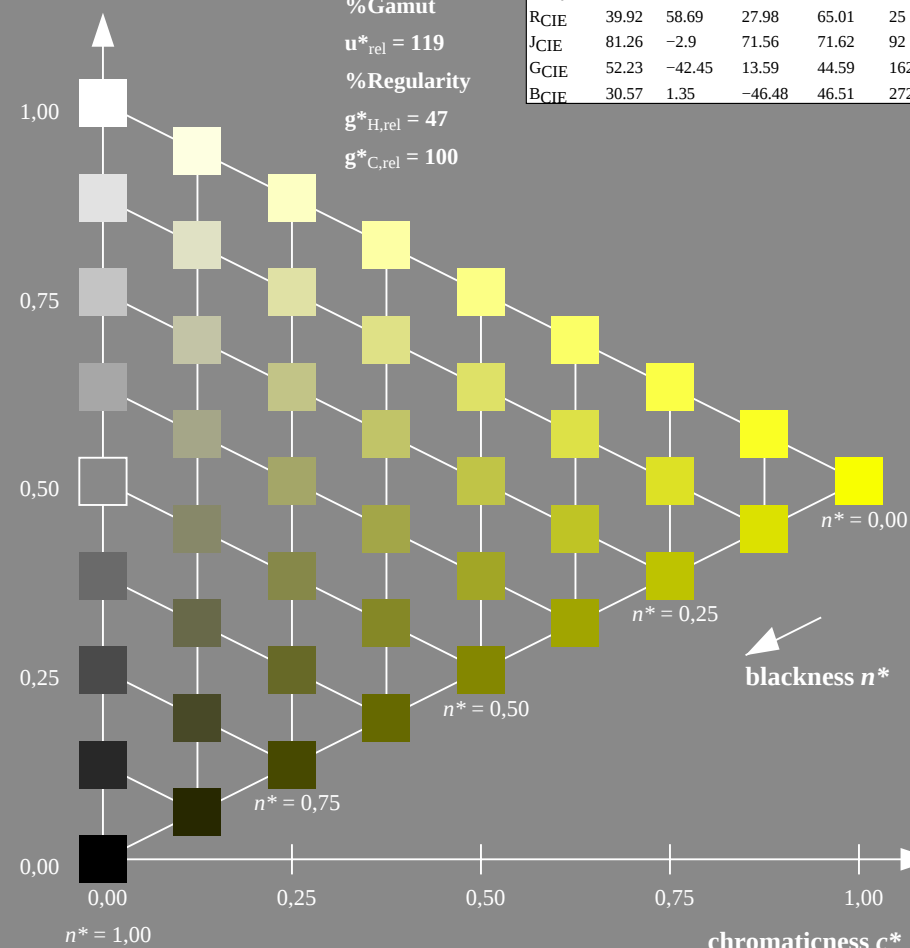
%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

NRS11; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa                | 53.2        | 77.06   | 34.32   | 84.36        | 24           |
| JMa                | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa                | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50B <sub>Ma</sub> | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| B <sub>Ma</sub>    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50R <sub>Ma</sub> | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| N <sub>Ma</sub>    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE               | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE               | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE               | 30.57       | 1.35    | -46.48  | 46.51        | 272          |



UE770-7, 9 step scales for constant CIELAB hue 92/360 = 0.256 (left)



BAM-test chart UE77; Colorimetric systems NRS11 & ORS18

D65: 9 and 16 step colour scales for 10 hues

Output: Colorimetric Reflective System ORS18

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

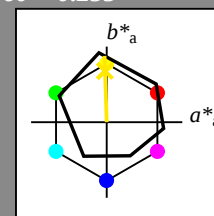
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 86 88 92

rgb\*Ma: 1.0 0.9 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

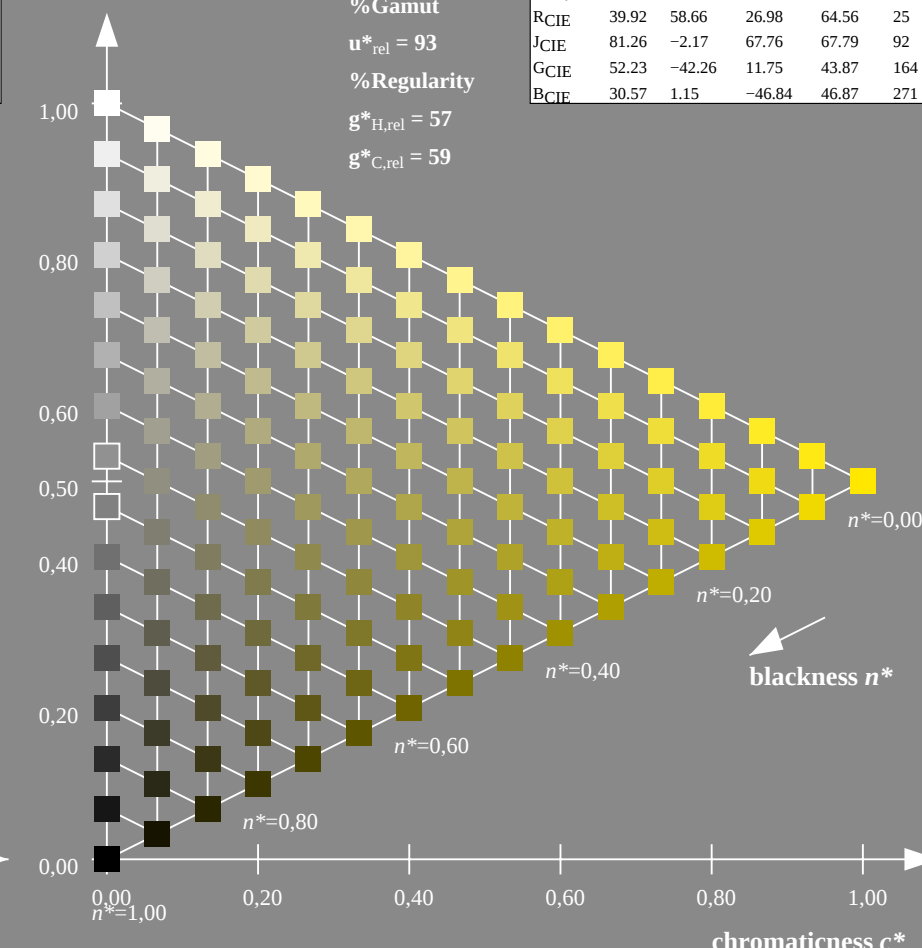
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-----------------|-------------|---------|---------|--------------|--------------|
| OMa             | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| YMa             | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa             | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa             | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| VMa             | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| MMa             | 48.13       | 75.27   | -8.35   | 75.73        | 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            |
| RCIE            | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE            | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE            | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE            | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



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

input: *cmY0\* setcmykcolor*

output: *olv\* setrgbcolor / w\* setgray*



Input: Colorimetric Reflective System NRS11

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

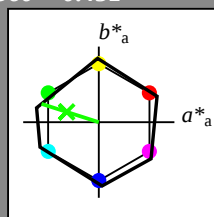
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 53 80 162

rgb\*Ma: 0.08 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 119$

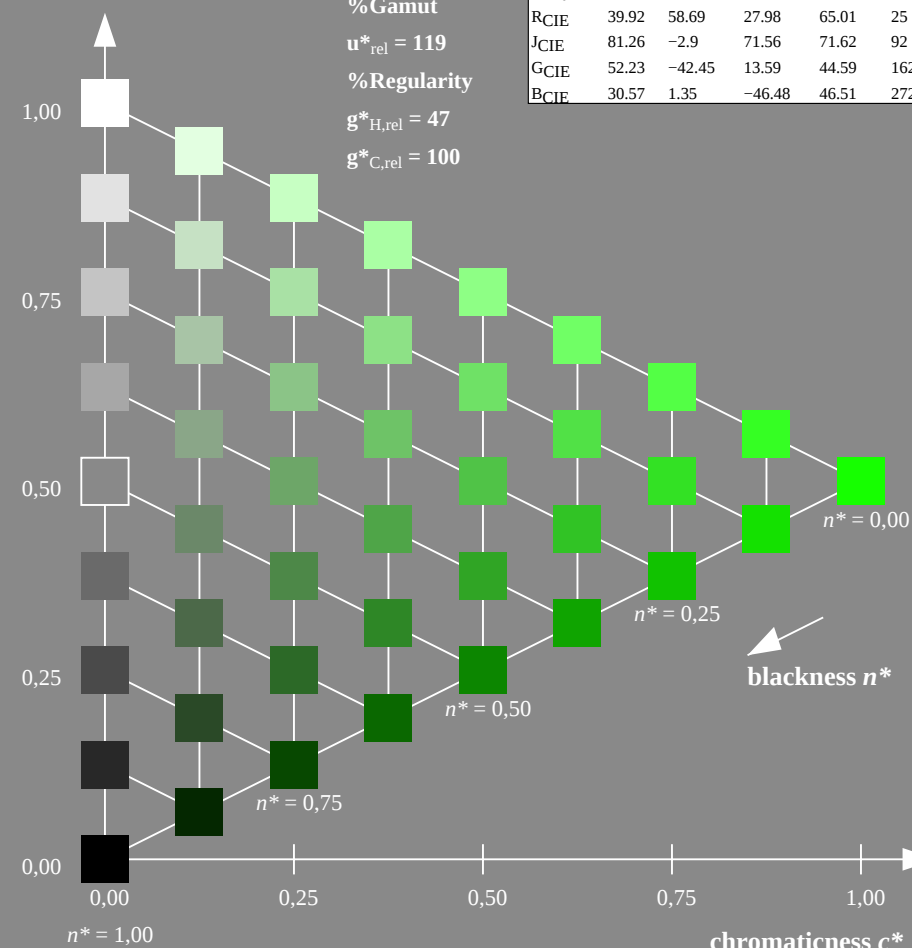
%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

NRS11; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa                | 53.2        | 77.06   | 34.32   | 84.36        | 24           |
| JMa                | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa                | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50B <sub>Ma</sub> | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| B <sub>Ma</sub>    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50R <sub>Ma</sub> | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| N <sub>Ma</sub>    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE               | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE               | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE               | 30.57       | 1.35    | -46.48  | 46.51        | 272          |



UE770-7, 9 step scales for constant CIELAB hue 162/360 = 0.451 (left)



BAM-test chart UE77; Colorimetric systems NRS11 & ORS18

D65: 9 and 16 step colour scales for 10 hues

Output: Colorimetric Reflective System ORS18

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

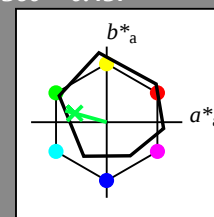
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 53 57 164

rgb\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

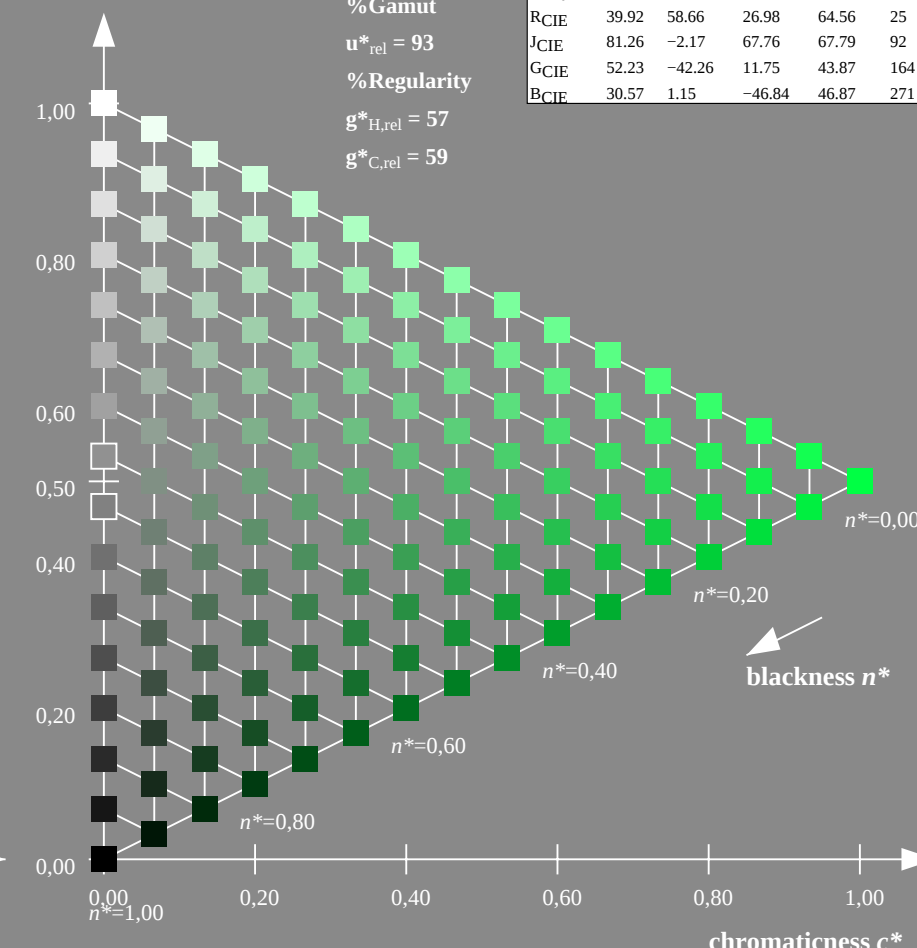
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-----------------|-------------|---------|---------|--------------|--------------|
| OMa             | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| YMa             | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa             | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa             | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub> | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| M <sub>Ma</sub> | 48.13       | 75.27   | -8.35   | 75.73        | 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            |
| RCIE            | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE            | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE            | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE            | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



16 step scales for constant CIELAB hue 164/360 = 0.457 (right)

input: *cmv0\* setcmykcolor*

output: *olv\* setrgbcolor / w\* setgray*



Input: Colorimetric Reflective System NRS11

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

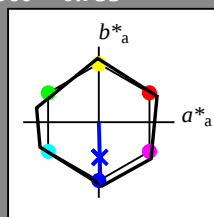
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 53 83 272

rgb\*Ma: 0.0 0.02 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 119$

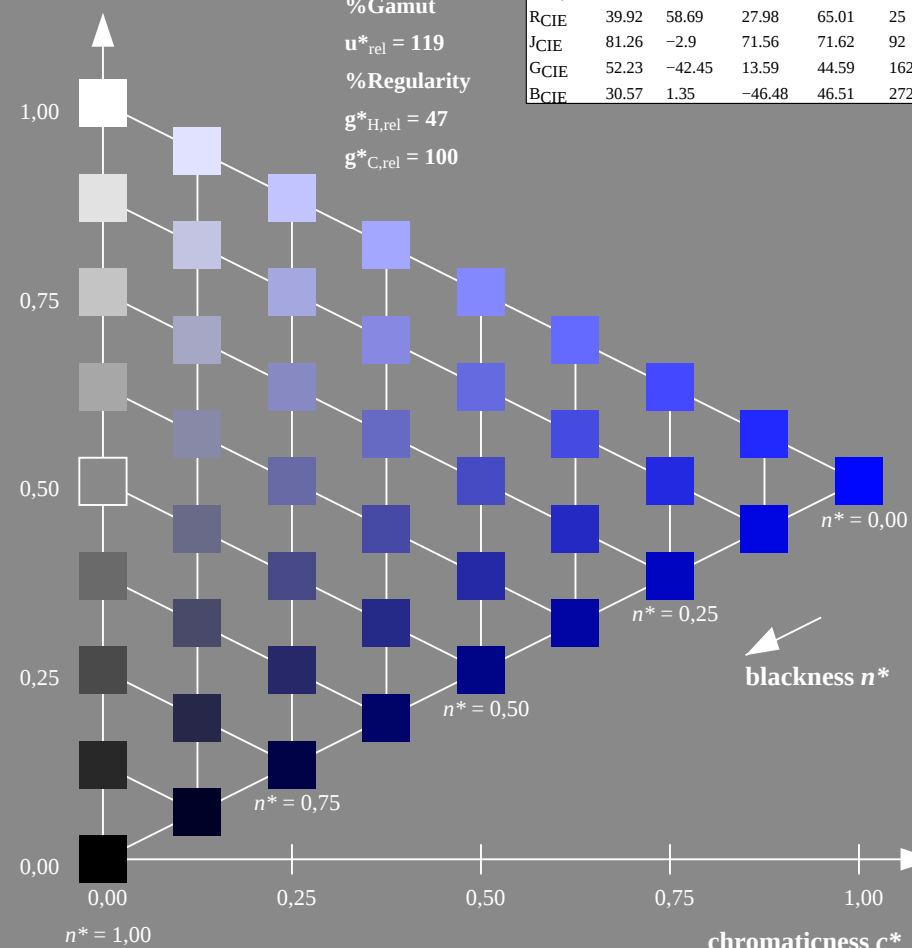
%Regularity

$g^*_{H,rel} = 47$

$g^*_{C,rel} = 100$

NRS11; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| RMa                | 53.2        | 77.06   | 34.32   | 84.36        | 24           |
| JMa                | 53.2        | -1.51   | 84.38   | 84.39        | 91           |
| GMa                | 53.2        | -82.27  | 18.98   | 84.44        | 167          |
| G50B <sub>Ma</sub> | 53.2        | -77.72  | -32.98  | 84.44        | 203          |
| B <sub>Ma</sub>    | 53.2        | 4.37    | -84.28  | 84.41        | 273          |
| B50R <sub>Ma</sub> | 53.2        | 69.09   | -48.41  | 84.37        | 325          |
| N <sub>Ma</sub>    | 10.99       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE               | 39.92       | 58.69   | 27.98   | 65.01        | 25           |
| JCIE               | 81.26       | -2.9    | 71.56   | 71.62        | 92           |
| GCIE               | 52.23       | -42.45  | 13.59   | 44.59        | 162          |
| BCIE               | 30.57       | 1.35    | -46.48  | 46.51        | 272          |



UE770-7, 9 step scales for constant CIELAB hue 272/360 = 0.755 (left)



BAM-test chart UE77; Colorimetric systems NRS11 & ORS18

D65: 9 and 16 step colour scales for 10 hues

Output: Colorimetric Reflective System ORS18

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

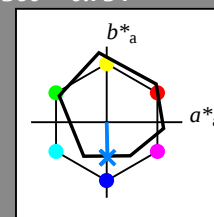
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 42 45 271

rgb\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

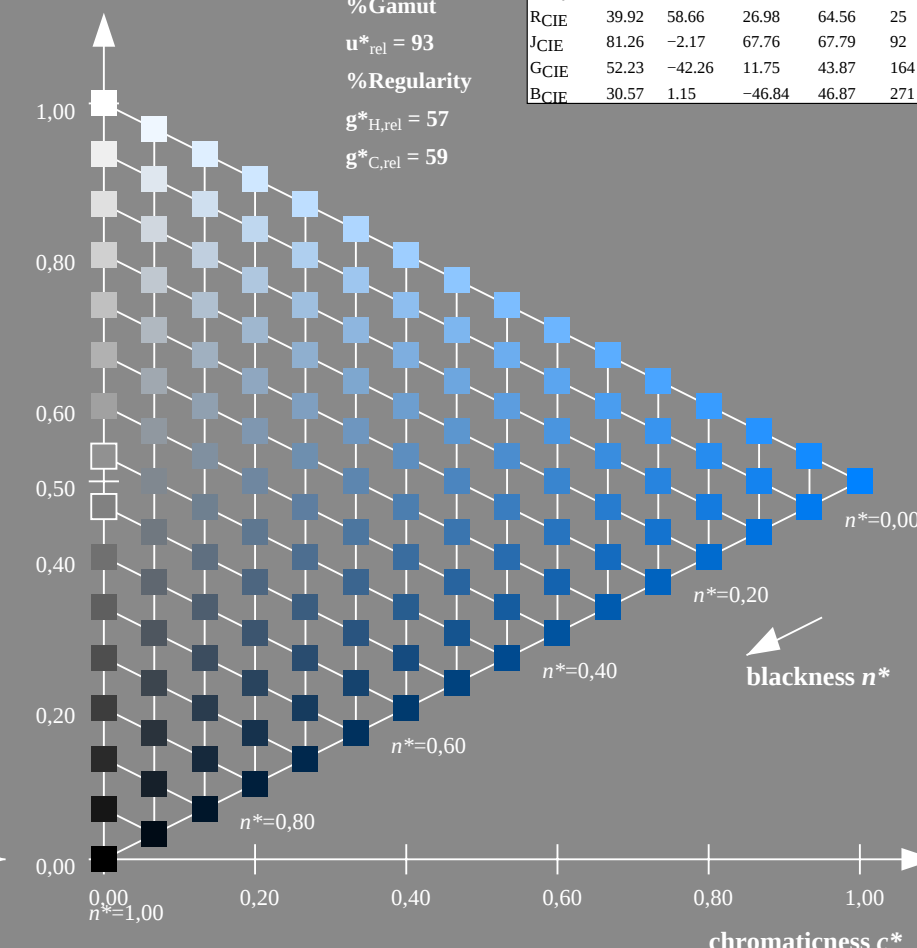
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-----------------|-------------|---------|---------|--------------|--------------|
| OMa             | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| YMa             | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| LMa             | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| CMa             | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| VMa             | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| MMa             | 48.13       | 75.27   | -8.35   | 75.73        | 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            |
| RCIE            | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE            | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE            | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE            | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



16 step scales for constant CIELAB hue 271/360 = 0.754 (right)

input:  $cmY0^* setcmykcolor$

output:  $olv^* setrgbcolor / w^* setgray$

