

Input: Colorimetric Television Luminous System TLS18a

for hue  $h^* = lab^*h = 35/360 = 0.097$

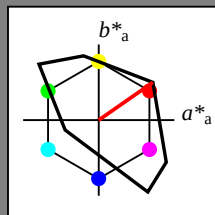
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 53 87 35

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

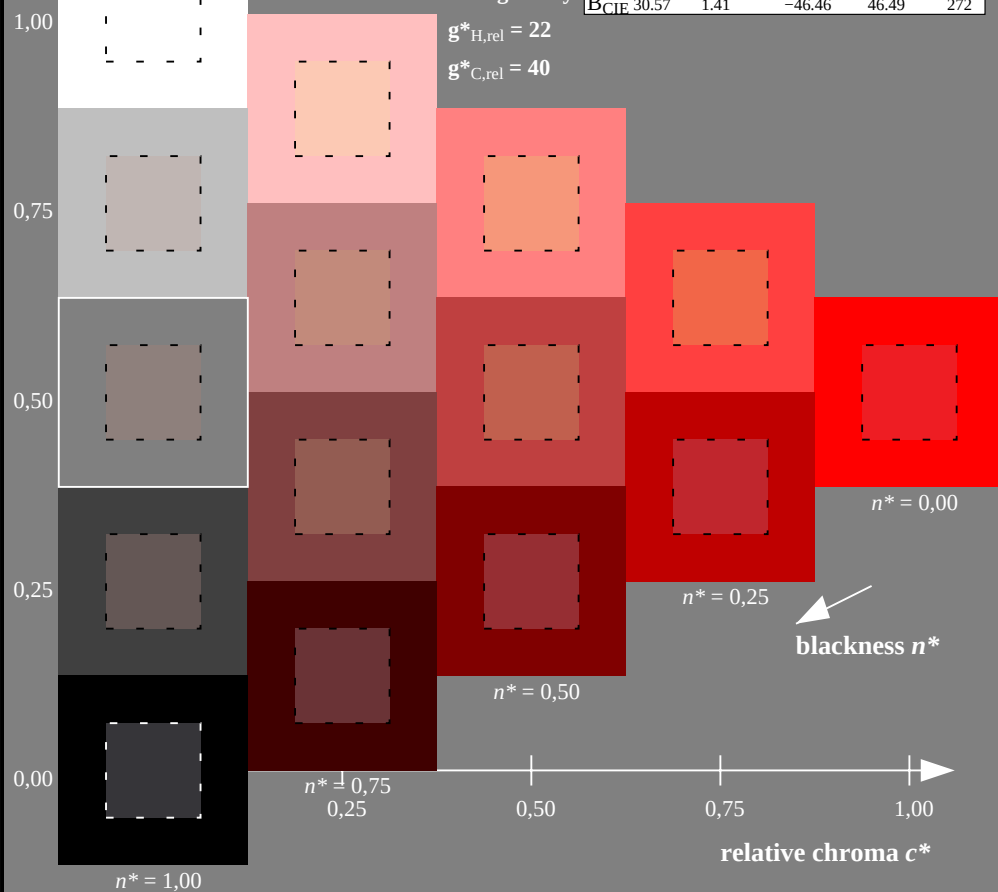
% Gamut

$u^*_{rel} = 118$

% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$



IE440-7N, 5 step scales for constant CIELAB hue 35/360 = 0.097 (left)

Output: Colorimetric Television Luminous System TLS18a

for hue  $h^* = lab^*h = 35/360 = 0.097$

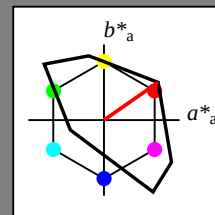
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 53 87 35

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

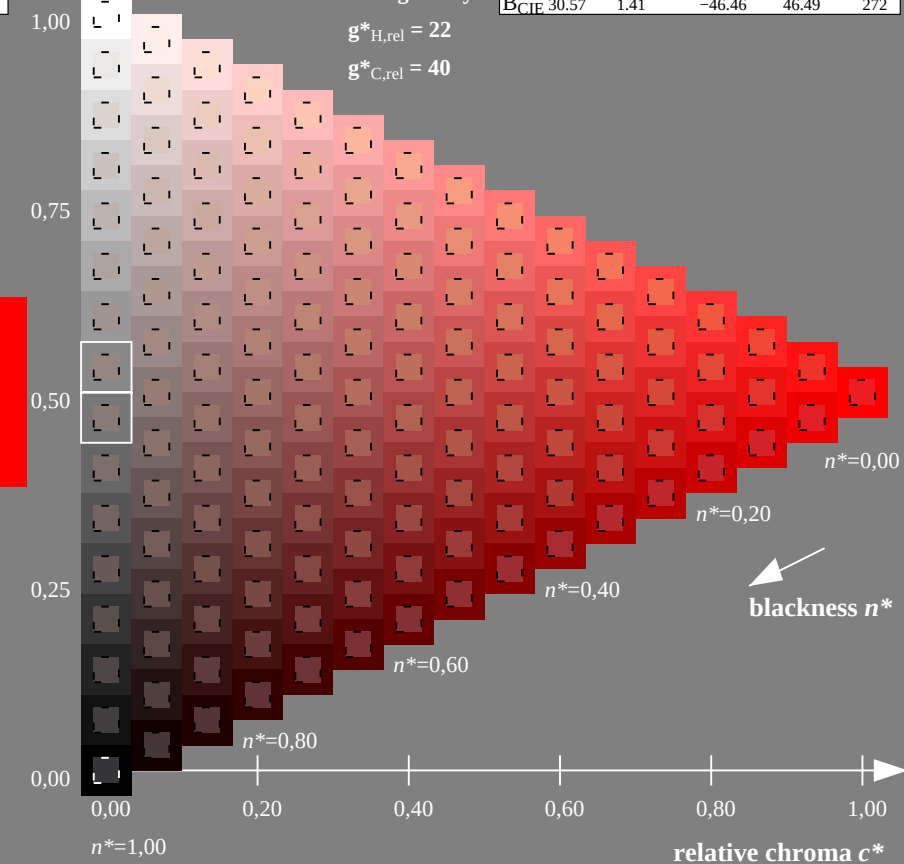
% Gamut

$u^*_{rel} = 118$

% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$



16 step scales for constant CIELAB hue 35/360 = 0.097 (right)

Input: Colorimetric Television Luminous System TLS18a

for hue  $h^* = lab^*h = 103/360 = 0.287$

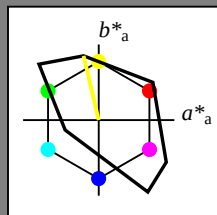
$lab^*tch$  and  $lab^*nch$

D65: hue Y

LCH\*Ma: 93 87 103

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

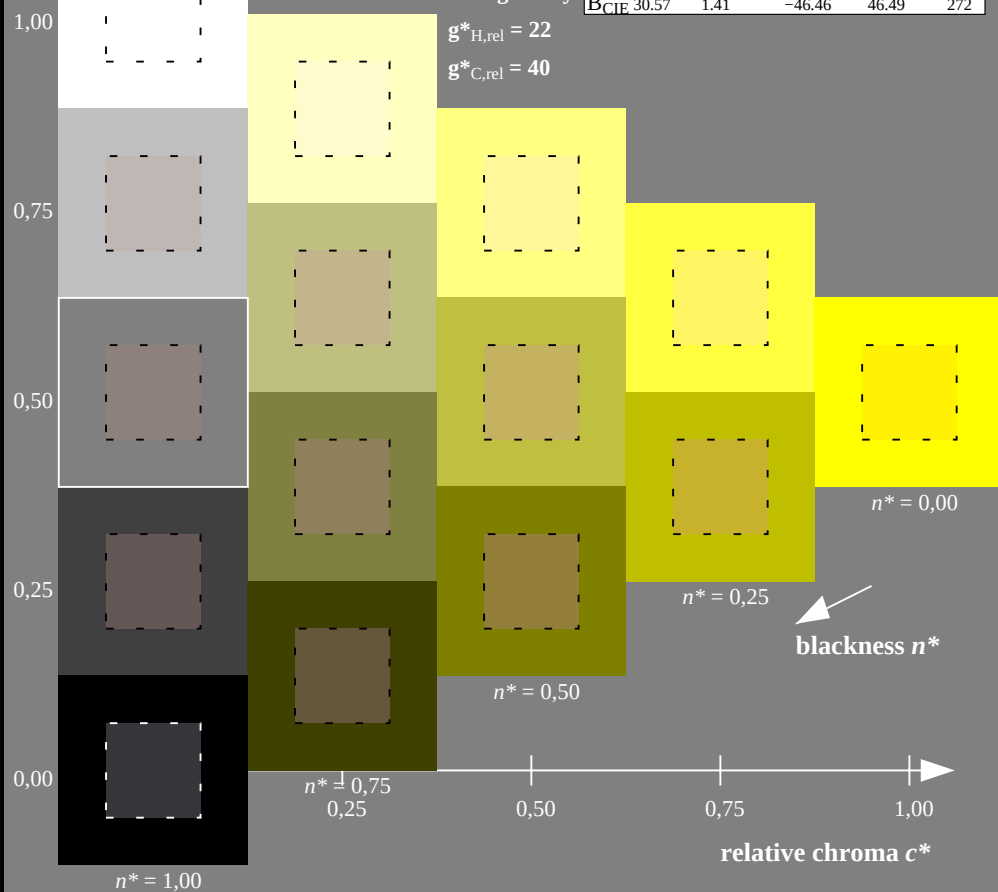
% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



IE440-7N, 5 step scales for constant CIELAB hue 103/360 = 0.287 (left)

Output: Colorimetric Television Luminous System TLS18a

for hue  $h^* = lab^*h = 103/360 = 0.287$

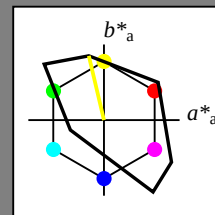
$lab^*tch$  and  $lab^*nch$

D65: hue Y

LCH\*Ma: 93 87 103

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

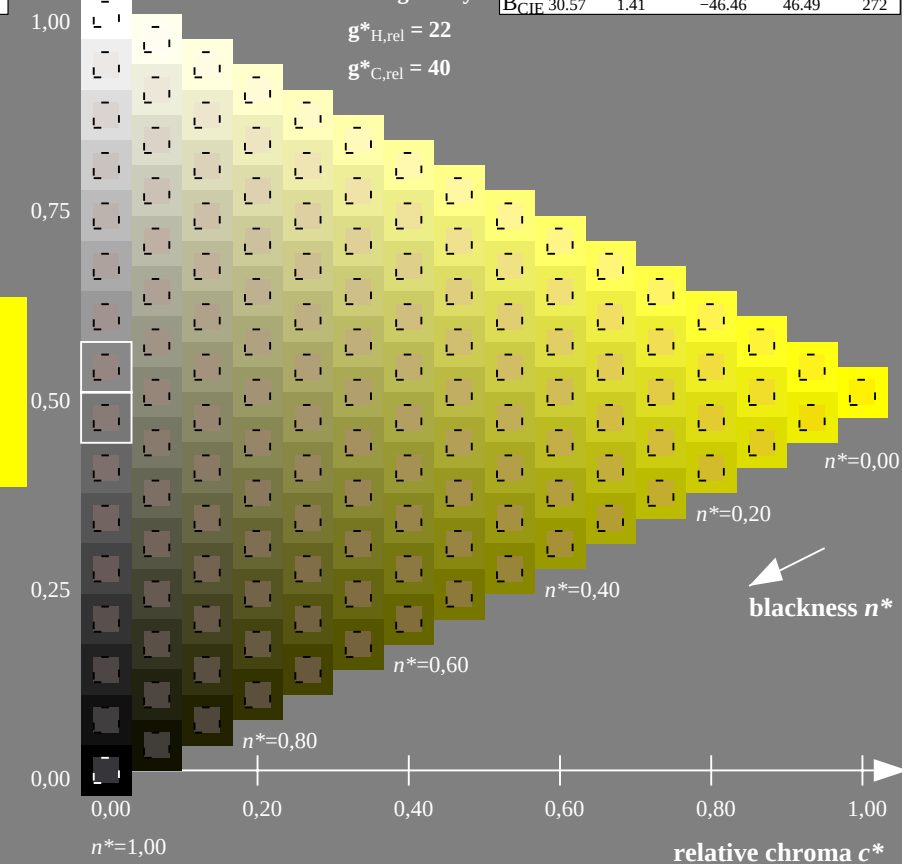
% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



16 step scales for constant CIELAB hue 103/360 = 0.287 (right)

Input: Colorimetric Television Luminous System TLS18a

for hue  $h^* = lab^*h = 137/360 = 0.38$

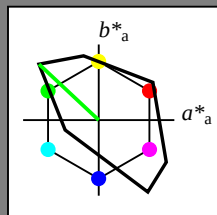
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 108 137

ol $v^*$ Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

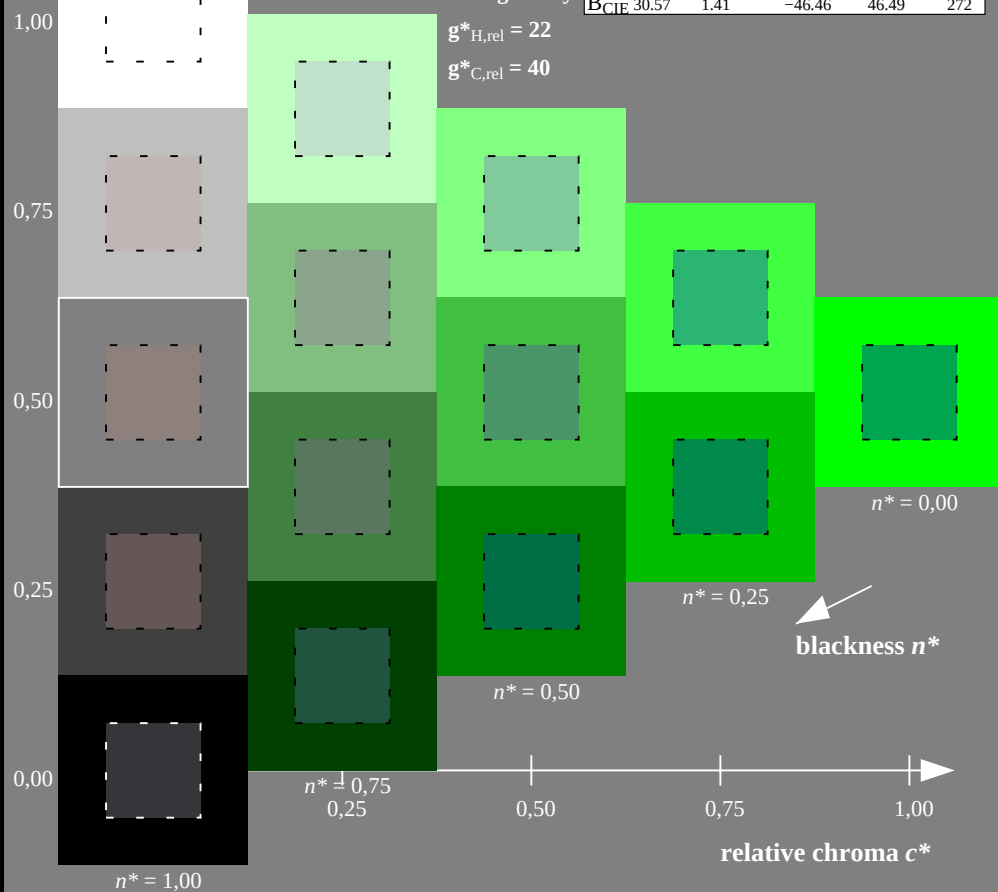
% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



IE440-7N, 5 step scales for constant CIELAB hue 137/360 = 0.38 (left)

Output: Colorimetric Television Luminous System TLS18a

for hue  $h^* = lab^*h = 137/360 = 0.38$

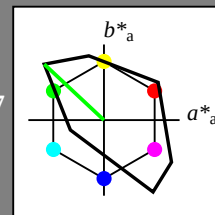
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 108 137

ol $v^*$ Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

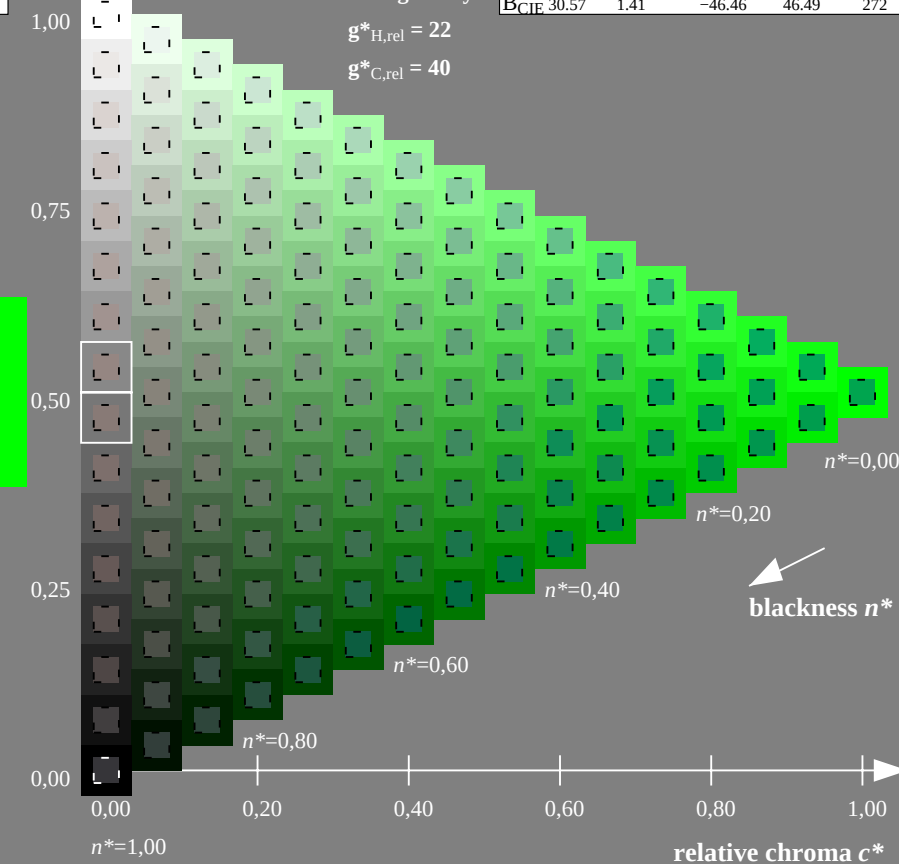
% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



16 step scales for constant CIELAB hue 137/360 = 0.38 (right)

Input: Colorimetric Television Luminous System TLS18a

for hue  $h^* = lab^*h = 196/360 = 0.546$

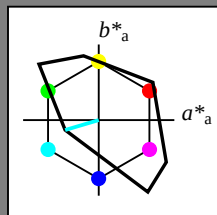
$lab^*tch$  and  $lab^*nch$

D65: hue C

LCH\*Ma: 87 46 196

olv\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

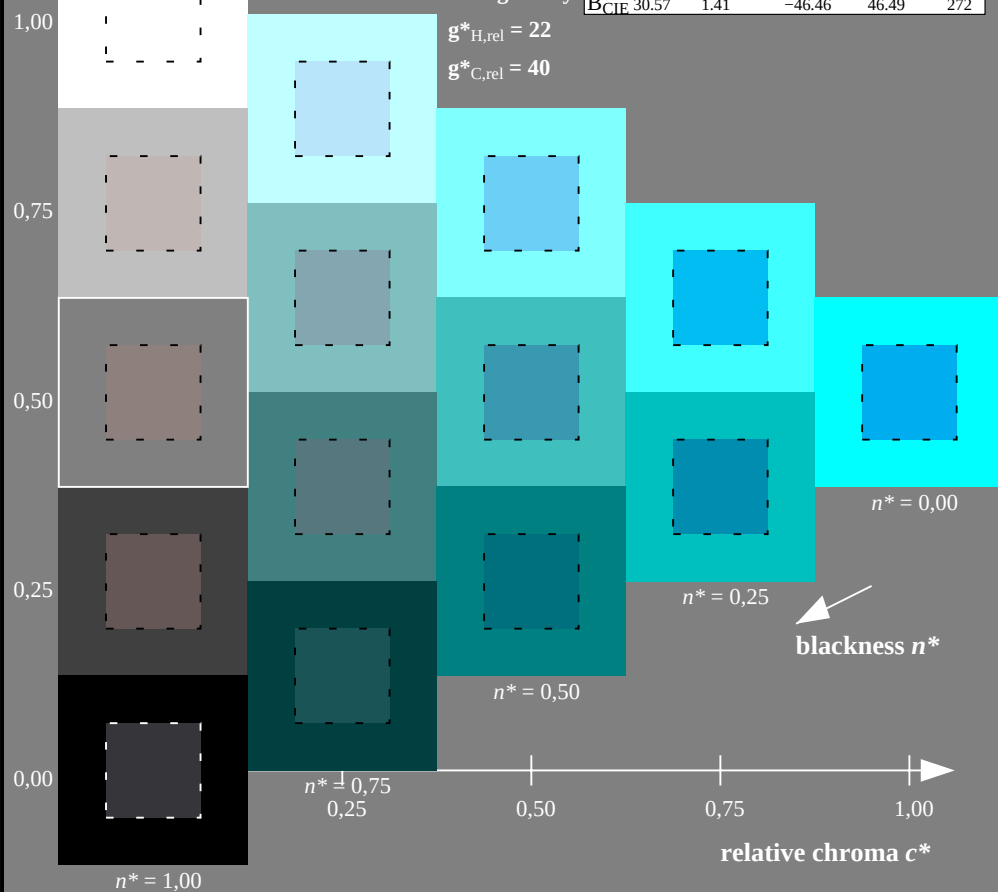
% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



IE440-7N, 5 step scales for constant CIELAB hue 196/360 = 0.546 (left)

Output: Colorimetric Television Luminous System TLS18a

for hue  $h^* = lab^*h = 196/360 = 0.546$

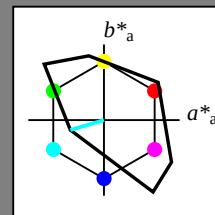
$lab^*tch$  and  $lab^*nch$

D65: hue C

LCH\*Ma: 87 46 196

olv\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

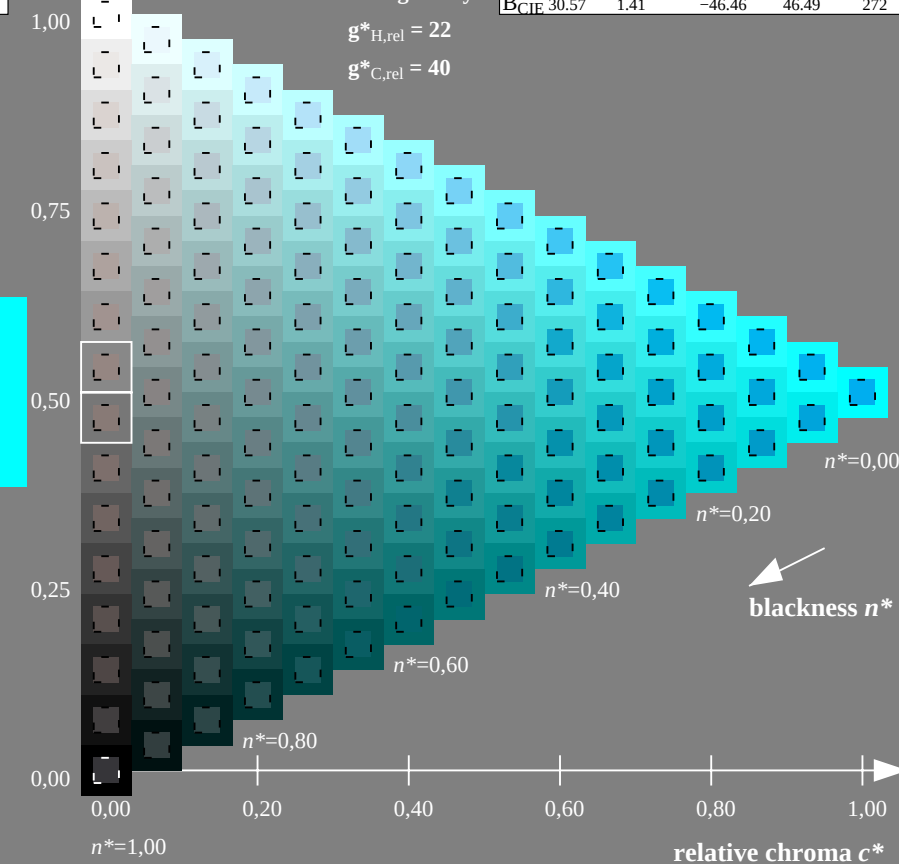
% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



16 step scales for constant CIELAB hue 196/360 = 0.546 (right)

Input: Colorimetric Television Luminous System TLS18a

for hue  $h^* = lab^*h = 304/360 = 0.845$

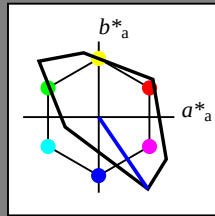
$lab^*tch$  and  $lab^*nch$

D65: hue V

LCH\*Ma: 35 115 304

ol $v^*$ Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

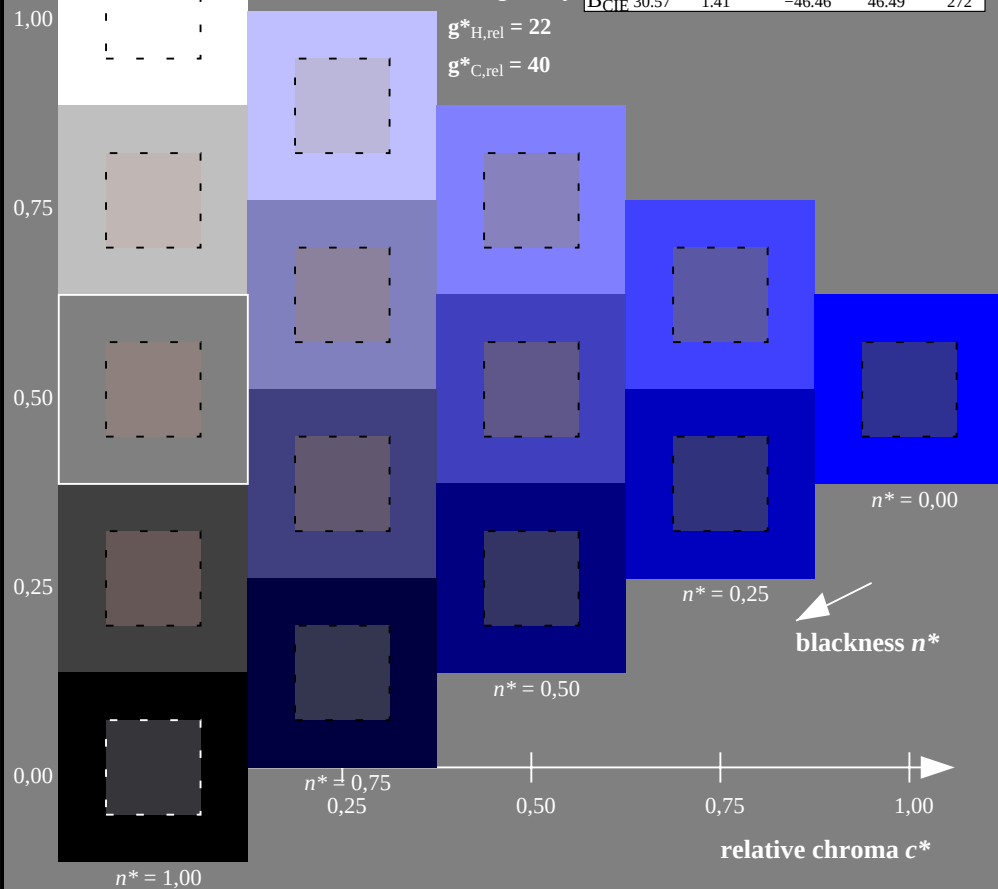
% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



IE440-7N, 5 step scales for constant CIELAB hue 304/360 = 0.845 (left)

Output: Colorimetric Television Luminous System TLS18a

for hue  $h^* = lab^*h = 304/360 = 0.845$

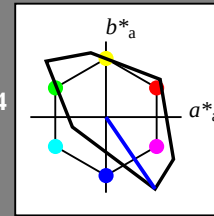
$lab^*tch$  and  $lab^*nch$

D65: hue V

LCH\*Ma: 35 115 304

ol $v^*$ Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

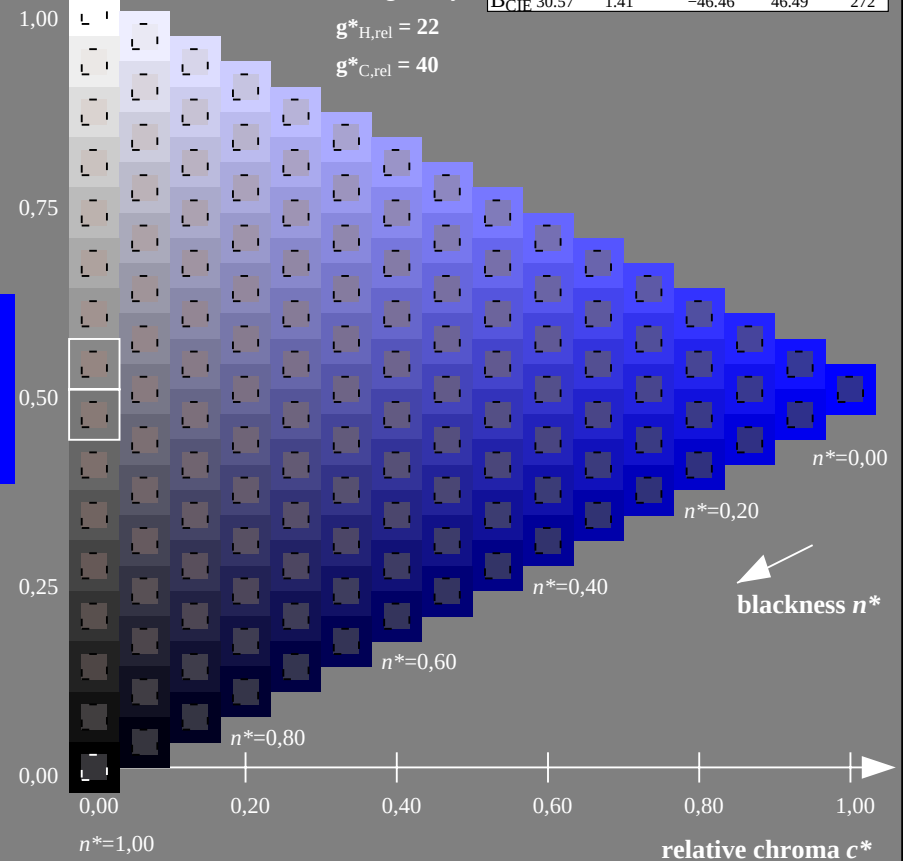
% Regularity

$g^*_{H,rel} = 22$

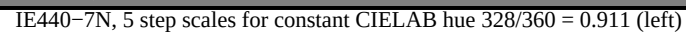
$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



16 step scales for constant CIELAB hue 304/360 = 0.845 (right)



10


$$n^* = 1,00$$
triangle lightness  $t^*$  $n^*=1,00$

Input: Colorimetric Television Luminous System TLS18a

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

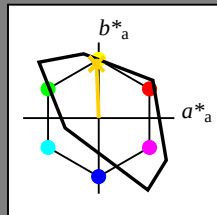
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 85 79 92

ol $v^*$ Ma: 1.0 0.82 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

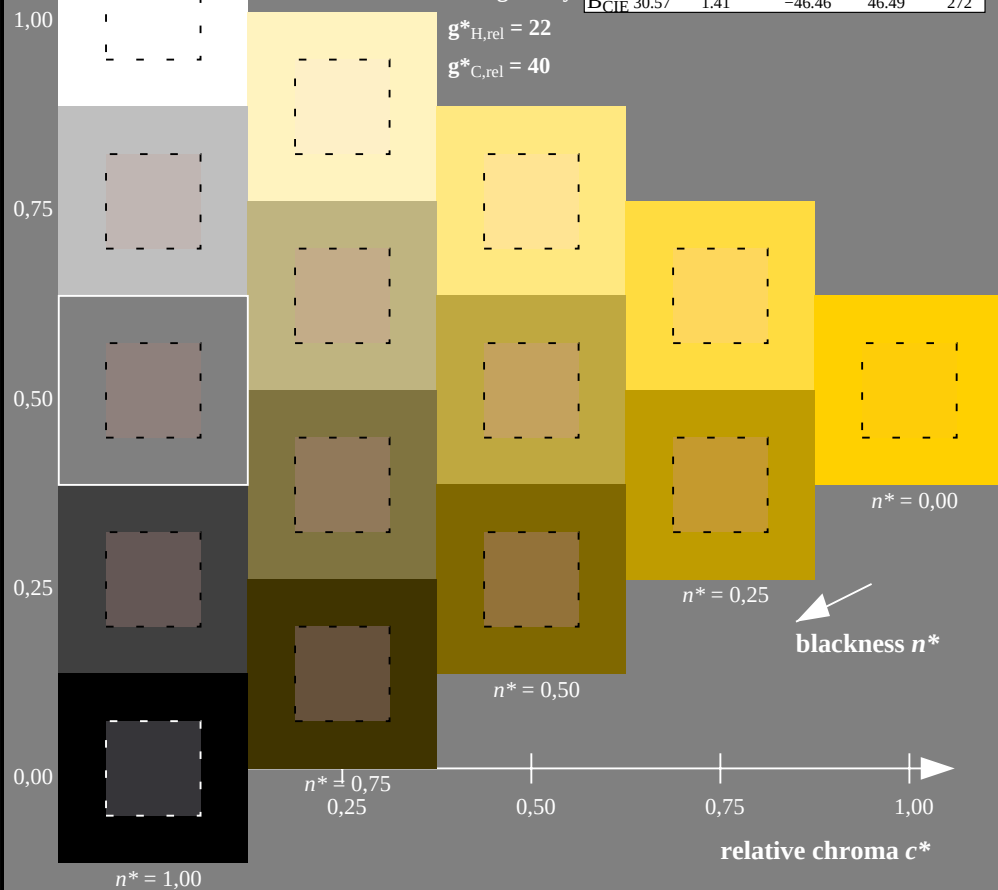
% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



IE440-7N, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)

Output: Colorimetric Television Luminous System TLS18a

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

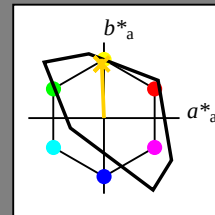
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 85 79 92

ol $v^*$ Ma: 1.0 0.82 0.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

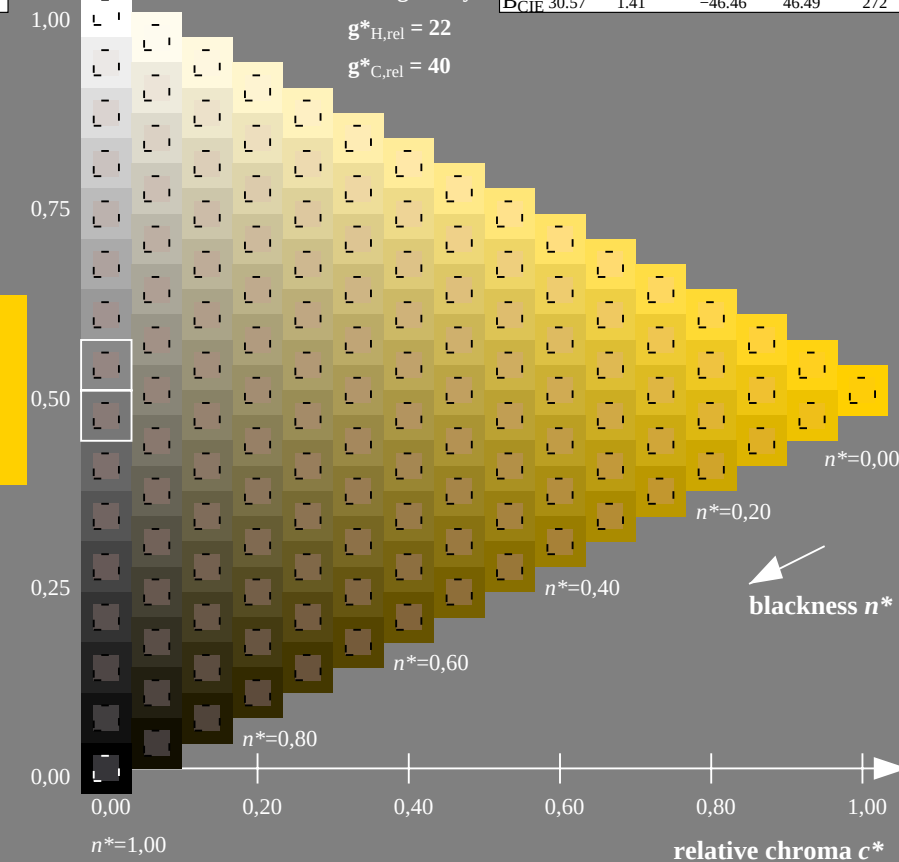
% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



16 step scales for constant CIELAB hue 92/360 = 0.256 (right)



Input: Colorimetric Television Luminous System TLS18a

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

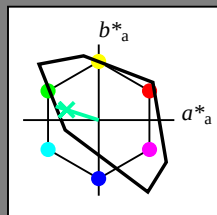
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 86 60 162

ol $v^*$ Ma: 0.0 1.0 0.64

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

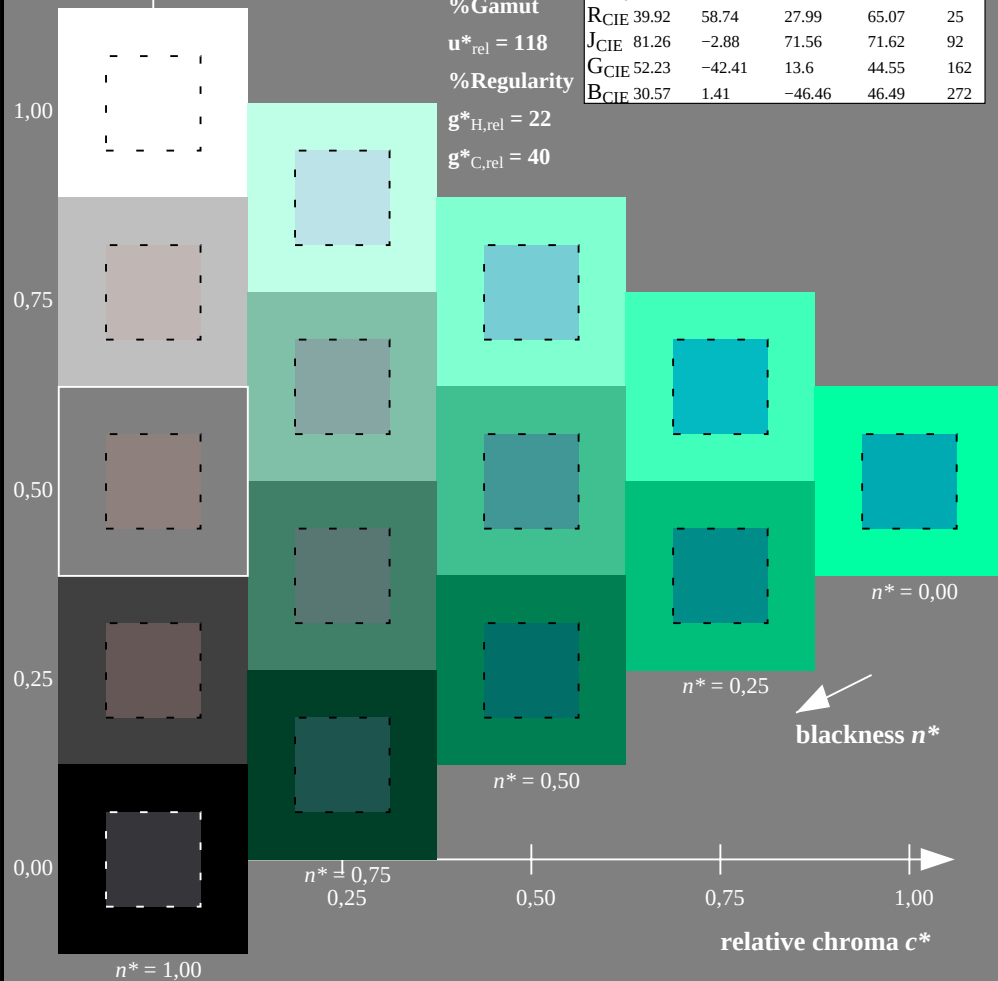
% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



IE440-7N, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

Output: Colorimetric Television Luminous System TLS18a

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

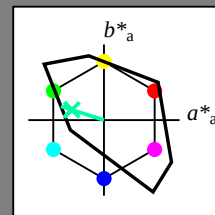
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 86 60 162

ol $v^*$ Ma: 0.0 1.0 0.64

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 118$

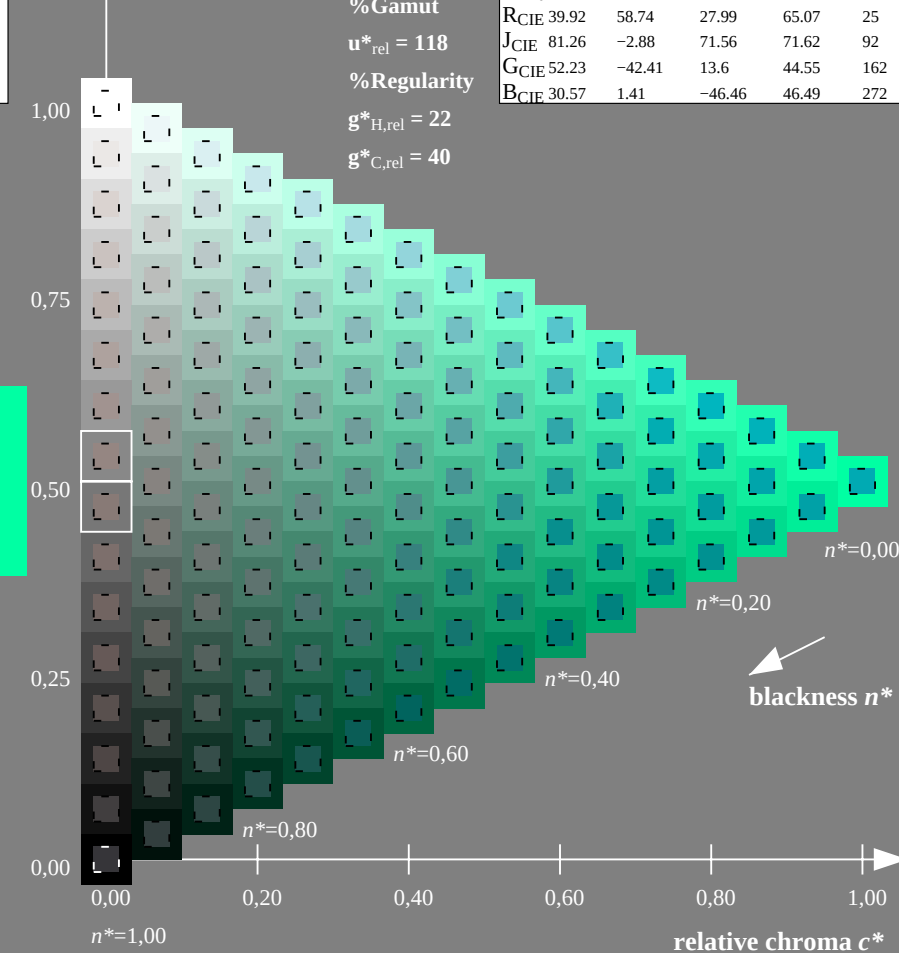
% Regularity

$g^*_{H,rel} = 22$

$g^*_{C,rel} = 40$

TLS18a; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 52.76       | 71.63   | 49.88   | 87.29        | 35           |
| Y <sub>Ma</sub>  | 92.74       | -20.02  | 84.97   | 87.3         | 103          |
| L <sub>Ma</sub>  | 84.0        | -78.98  | 73.94   | 108.2        | 137          |
| C <sub>Ma</sub>  | 87.14       | -44.41  | -13.11  | 46.32        | 196          |
| V <sub>Ma</sub>  | 35.47       | 64.92   | -95.06  | 115.12       | 304          |
| M <sub>Ma</sub>  | 59.01       | 89.33   | -55.67  | 105.26       | 328          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



16 step scales for constant CIELAB hue 162/360 = 0.451 (right)

