

Input: Colorimetric Television Luminous System TLS00a

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

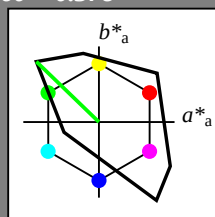
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 115 136

ol $v^*$ Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

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

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

TLS00a; adapted (a) CIELAB data

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

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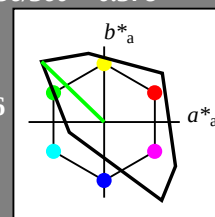
$lab^*tch$  and  $lab^*nch$

D65: hue L

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triangle lightness  $t^*$



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$u^*_{rel} = 158$

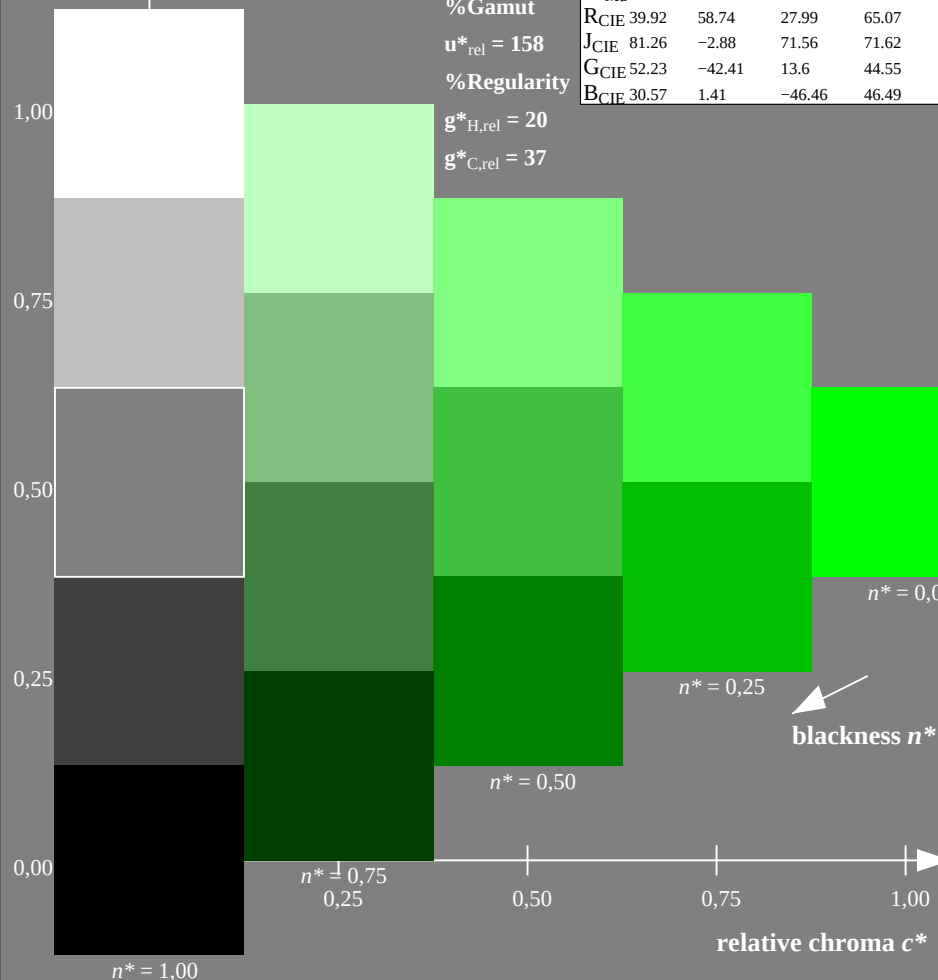
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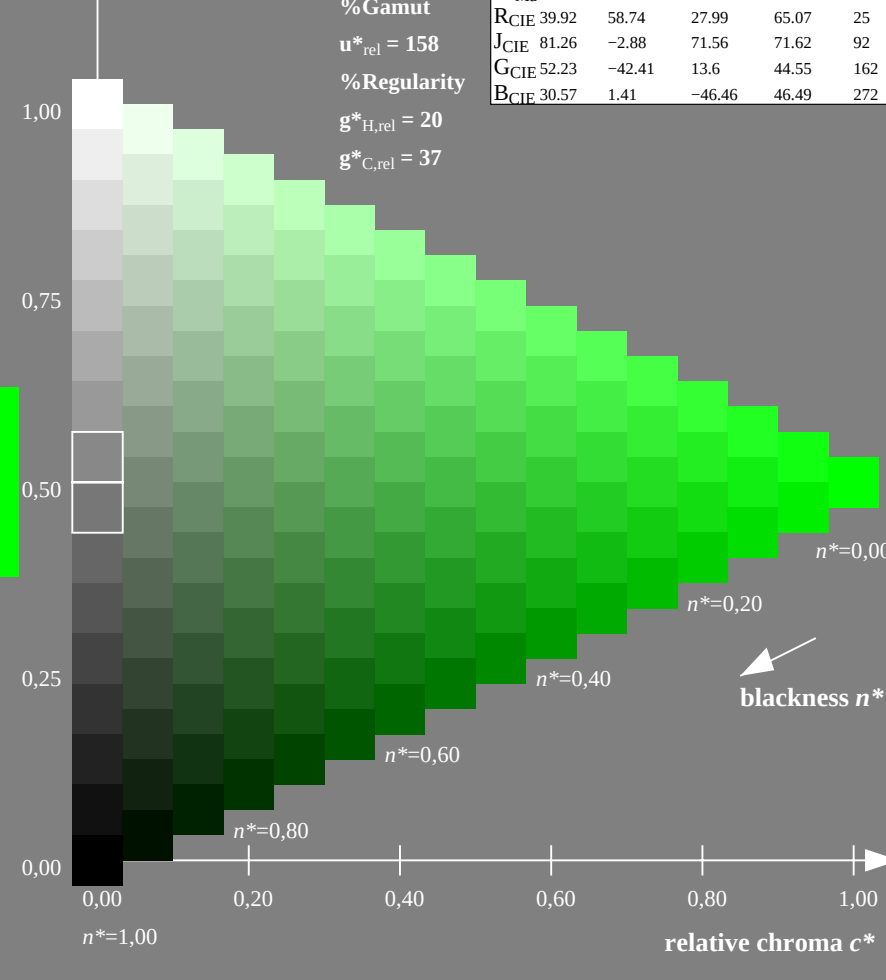
$g^*_{C,rel} = 37$

TLS00a; adapted (a) CIELAB data

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OE730-7N-130-2: 5 step scales for constant CIELAB hue 136/360 = 0.378 (left)



16 step scales for constant CIELAB hue 136/360 = 0.378 (right)

OE73: Test chart 2 according to DIN 33872-2, Hue L; 1MR, DH  
Discrimination of 5 and 16 step colour scales

input:  $cmy0$  ( $\rightarrow cmy0^*_d$ )  $setcmyk$   
output 130-2:  $g_P=1.0$ ;  $g_N=1.0$

See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>  
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1, CIELAB

TUB registration: 20110801-OE73/OE73L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rha4ta

Input: Colorimetric Television Luminous System TLS00a

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

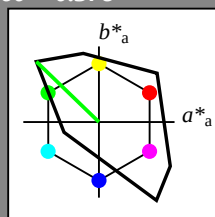
$lab^*tch$  and  $lab^*nch$

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ol $v^*$ Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



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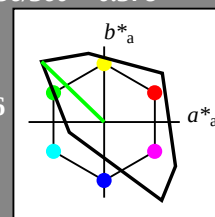
$lab^*tch$  and  $lab^*nch$

D65: hue L

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triangle lightness  $t^*$



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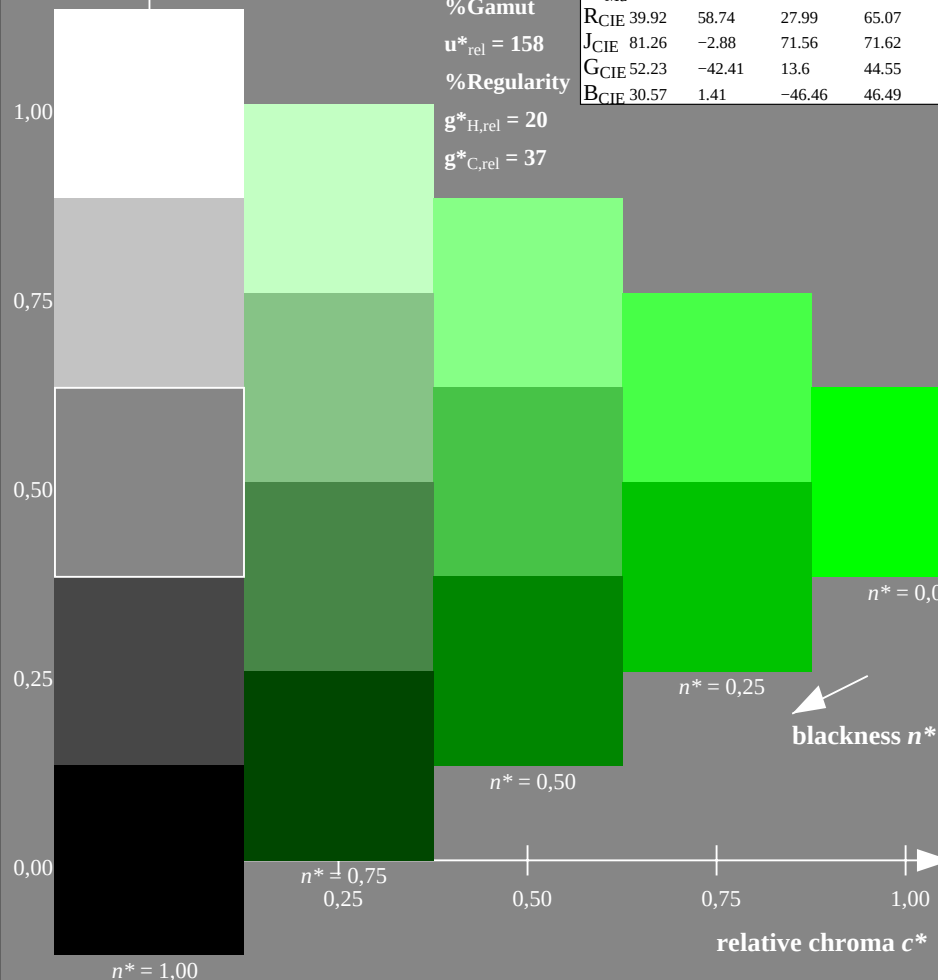
%Regularity

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

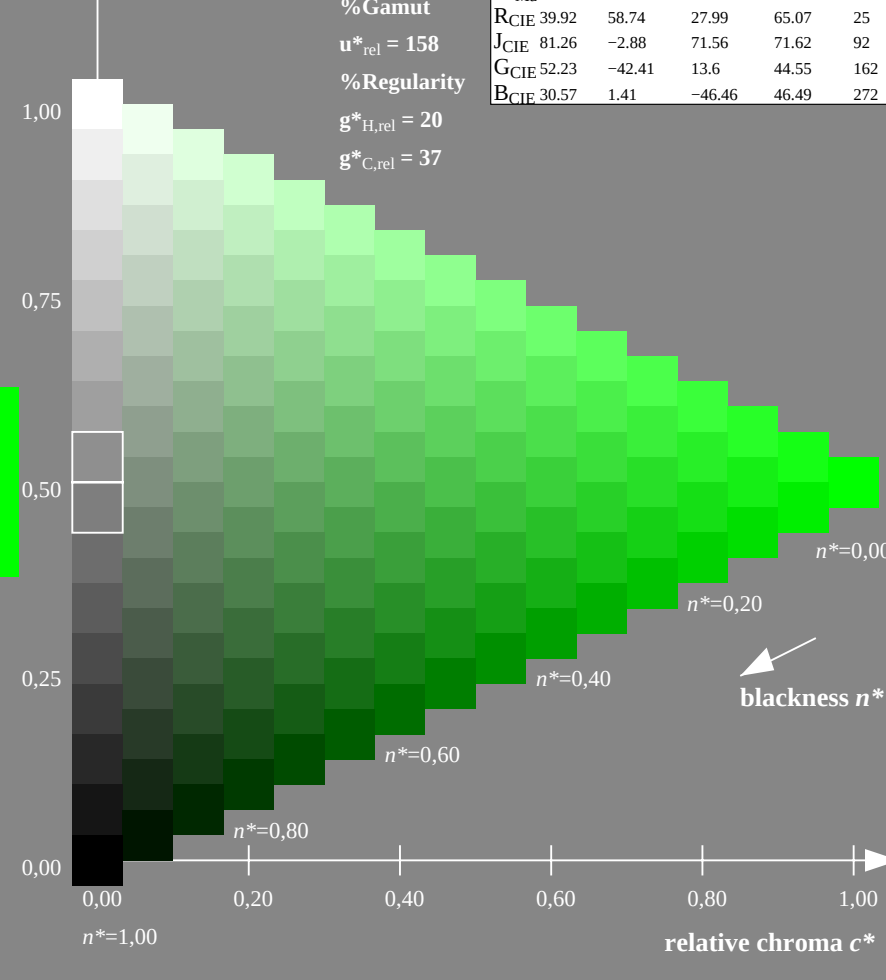
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TLS00a; adapted (a) CIELAB data

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OE730-7N-130-2: 5 step scales for constant CIELAB hue 136/360 = 0.378 (left)



16 step scales for constant CIELAB hue 136/360 = 0.378 (right)

OE73: Test chart 2 according to DIN 33872-2, Hue L; 1MR, DH  
Discrimination of 5 and 16 step colour scales

input:  $cmy0$  ( $\rightarrow cmy0^*_{d}$ )  $setcmyk$   
output 131-2:  $g_P=0.92$ ;  $g_N=1.0$

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

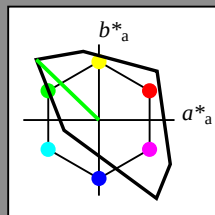
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 115 136

ol $v^*$ Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



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

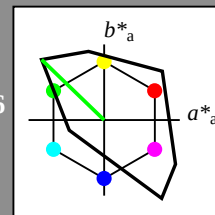
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 115 136

ol $v^*$ Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

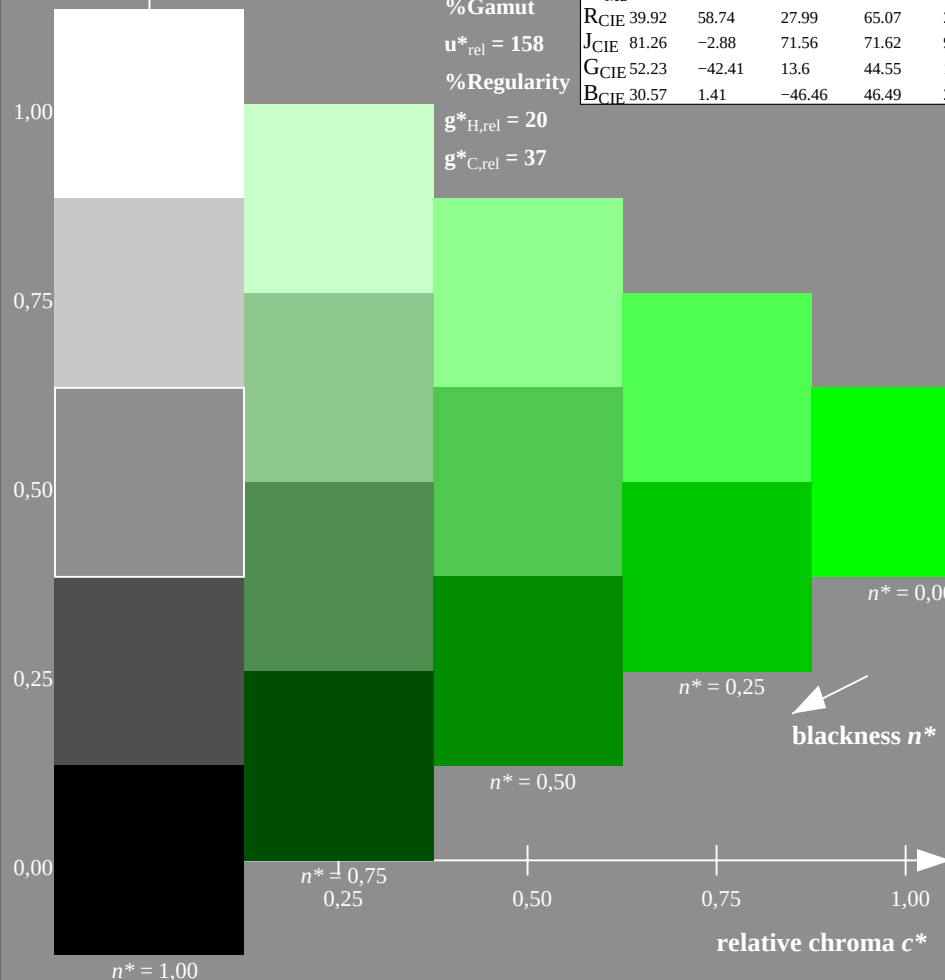
%Regularity

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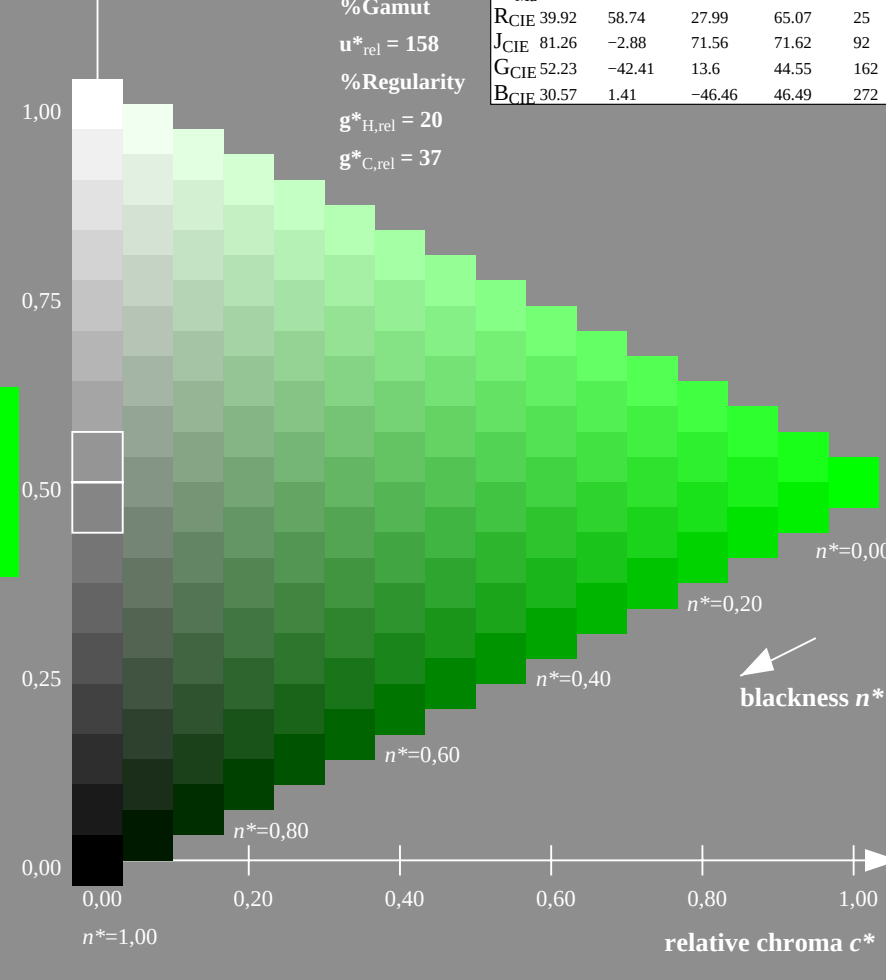
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16 step scales for constant CIELAB hue 136/360 = 0.378 (right)

OE73: Test chart 2 according to DIN 33872-2, Hue L; 1MR, DH  
Discrimination of 5 and 16 step colour scales

input:  $cmy0$  ( $\rightarrow cmy0^*_{d}$ )  $setcmyk$   
output 132-2:  $g_P=0.85$ ;  $g_N=1.0$

TUB registration: 20110801-OE73/OE73L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems

TUB material: code=rha4ta

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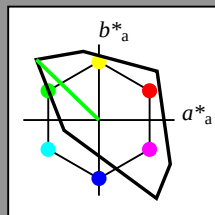
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LCH\*Ma: 84 115 136

ol $v^*$ Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



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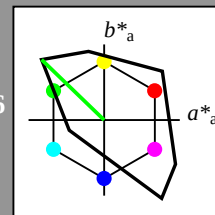
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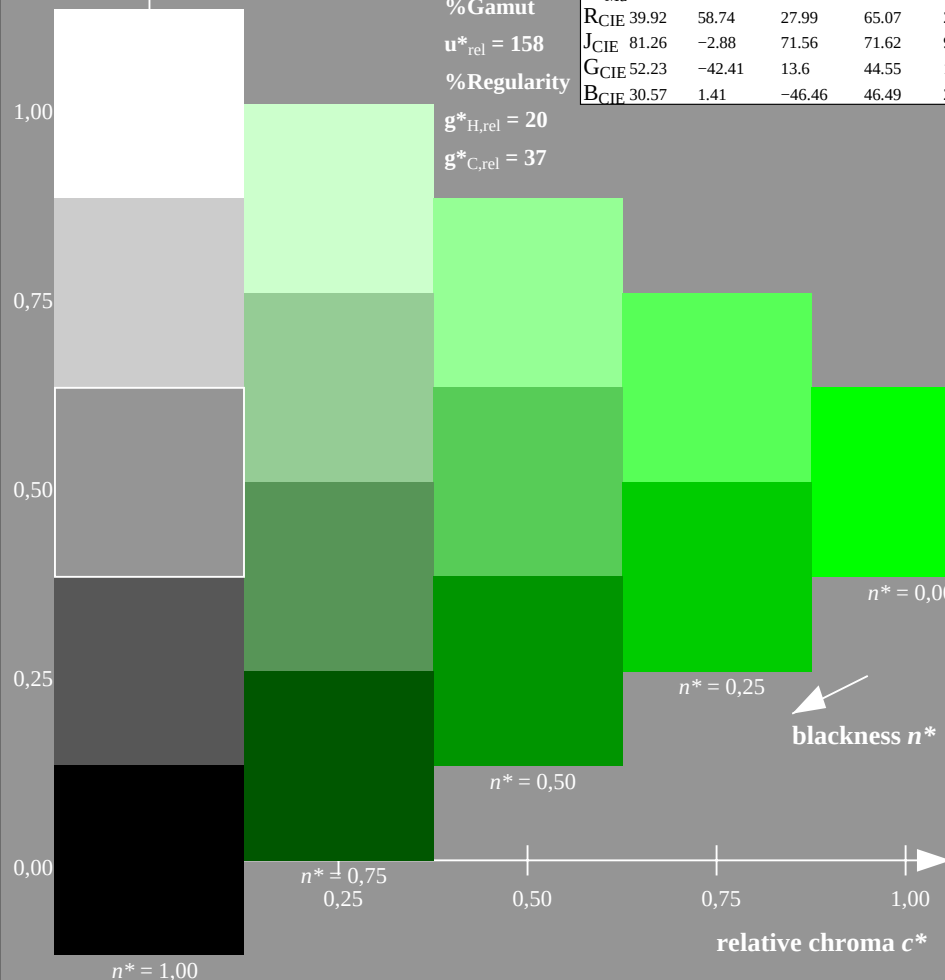
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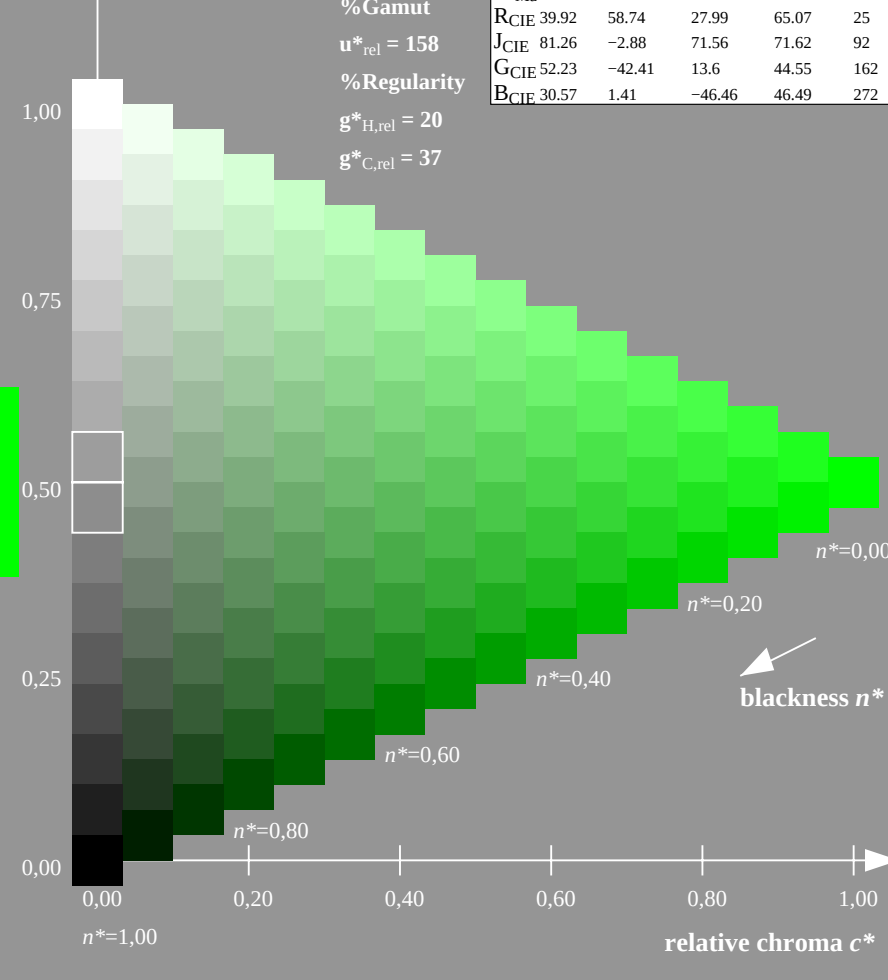
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16 step scales for constant CIELAB hue 136/360 = 0.378 (right)

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Discrimination of 5 and 16 step colour scales

input:  $cmy0$  ( $\rightarrow cmy0^*_{d}$ )  $setcmyk$   
output 133-2:  $g_P=0.77$ ;  $g_N=1.0$

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TUB material: code=rha4ta

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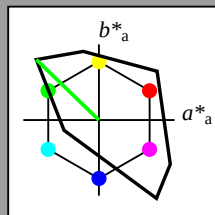
$lab^*tch$  and  $lab^*nch$

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LCH\*Ma: 84 115 136

ol $v^*$ Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



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Output: Colorimetric Television Luminous System TLS00a

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

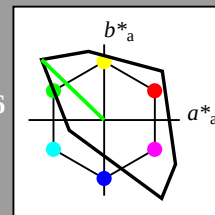
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 115 136

ol $v^*$ Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

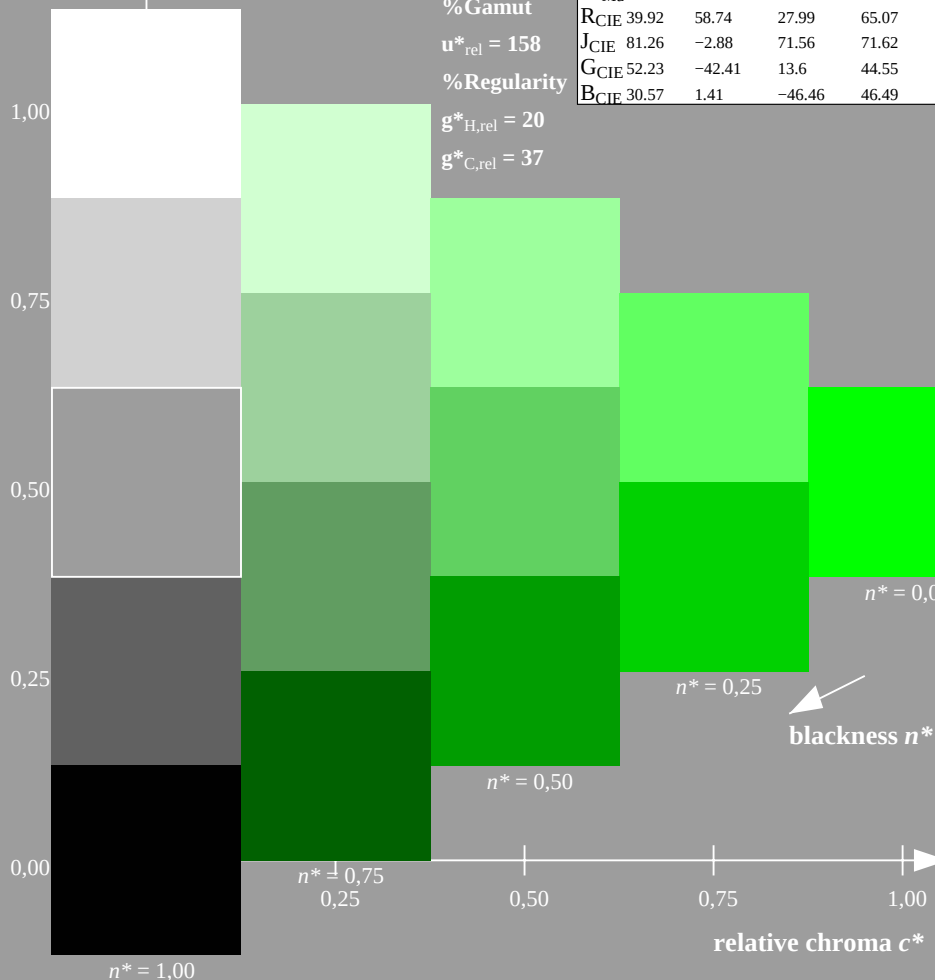
%Regularity

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

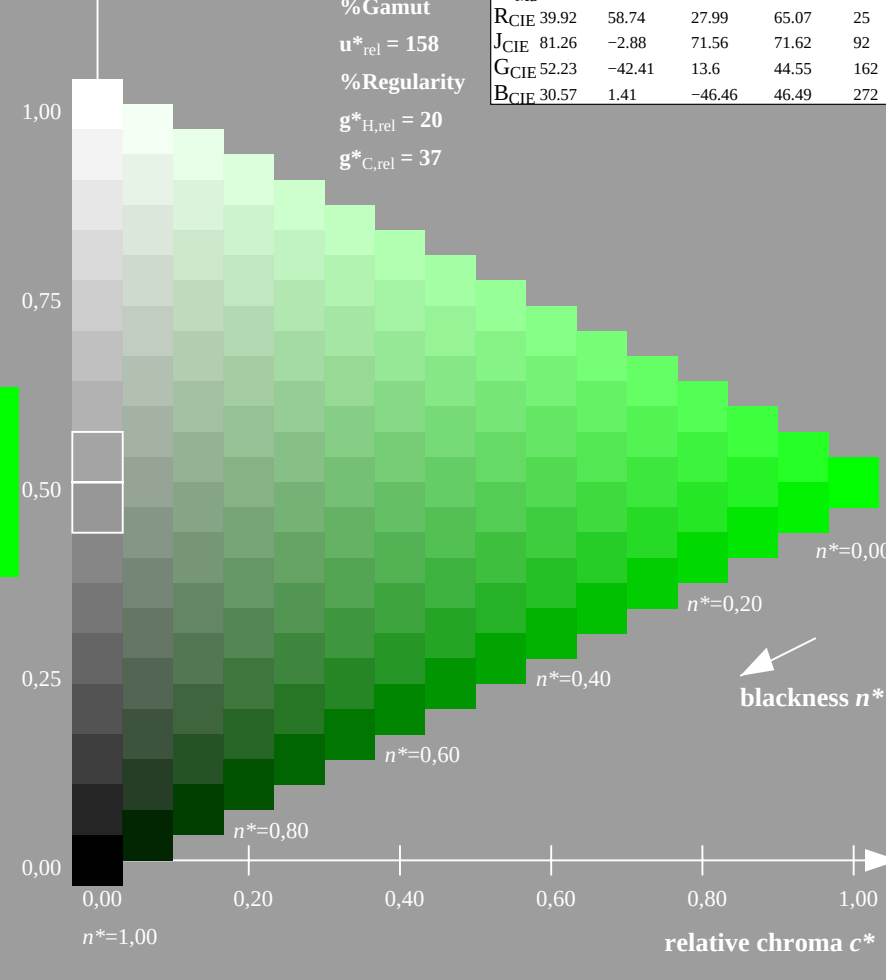
$g^*_{C,rel} = 37$

TLS00a; adapted (a) CIELAB data

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



OE730-7N-130-2: 5 step scales for constant CIELAB hue 136/360 = 0.378 (left)



16 step scales for constant CIELAB hue 136/360 = 0.378 (right)

OE73: Test chart 2 according to DIN 33872-2, Hue L; 1MR, DH  
Discrimination of 5 and 16 step colour scales

input:  $cmy0$  ( $\rightarrow cmy0^*_{\Delta}$ )  $setcmyk$   
output 134-2:  $g_P=0.7$ ;  $g_N=1.0$

See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>  
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1, CIELAB

TUB registration: 20110801-OE73/OE73L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rha4ta

Input: Colorimetric Television Luminous System TLS00a

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

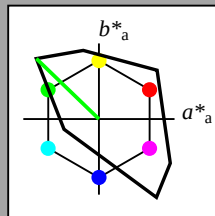
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 115 136

ol $v^*$ Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

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

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

| TLS00a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
|                                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| O <sub>Ma</sub>                 | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>                 | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>                 | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>                 | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>                 | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>                 | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| N <sub>Ma</sub>                 | 0.01        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                 | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub>                | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub>                | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub>                | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub>                | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

Output: Colorimetric Television Luminous System TLS00a

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

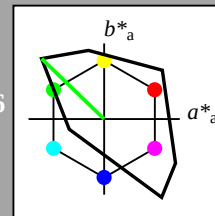
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 115 136

ol $v^*$ Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

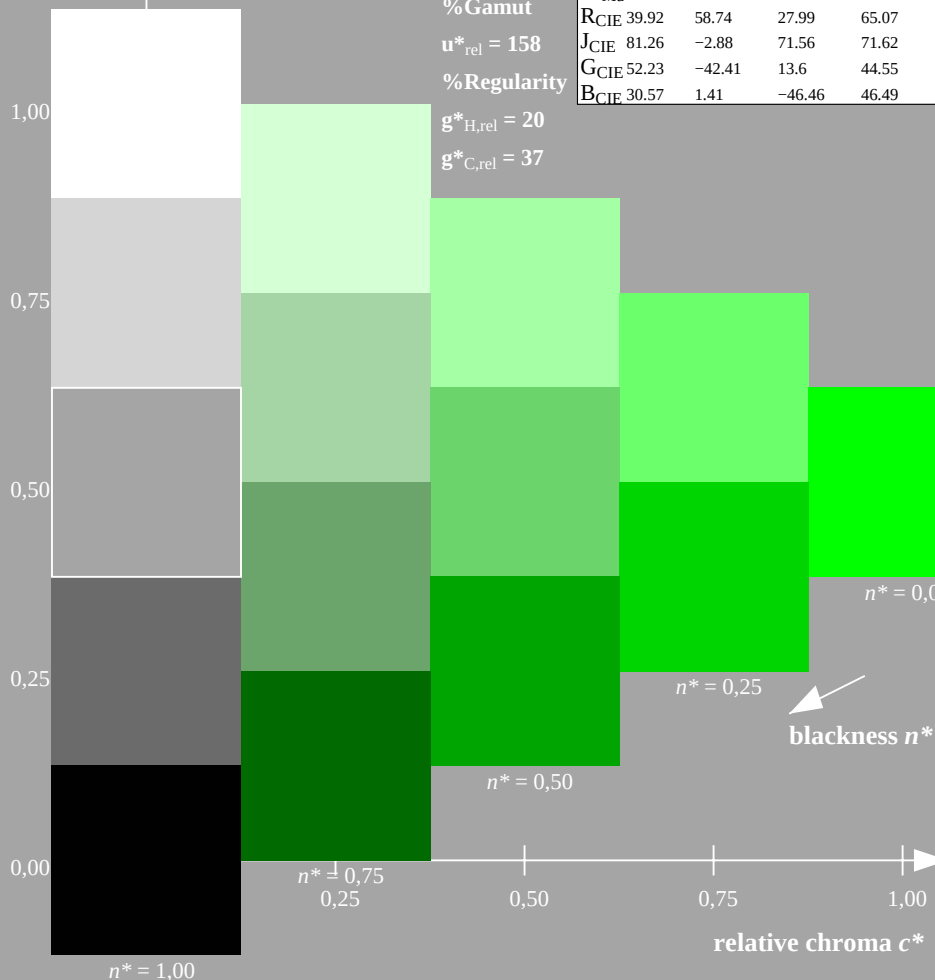
$u^*_{rel} = 158$

%Regularity

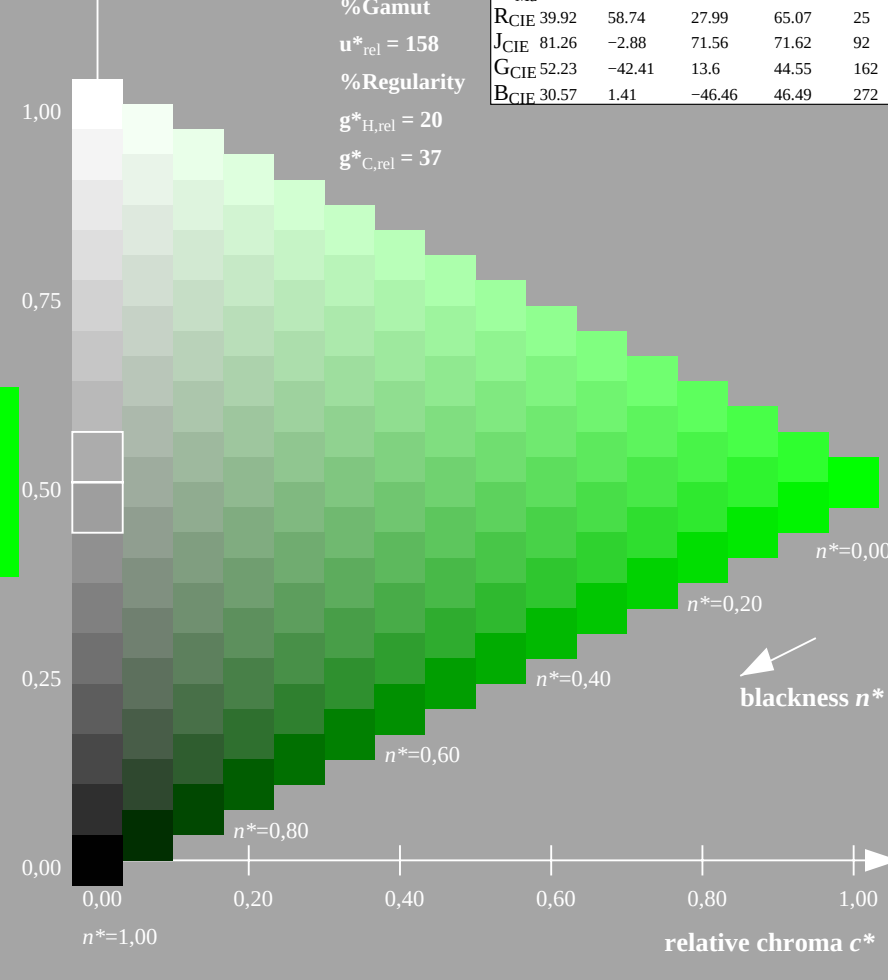
$g^*_{H,rel} = 20$

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

| TLS00a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
|                                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| O <sub>Ma</sub>                 | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>                 | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>                 | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>                 | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>                 | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>                 | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| N <sub>Ma</sub>                 | 0.01        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                 | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub>                | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub>                | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub>                | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub>                | 30.57       | 1.41    | -46.46  | 46.49        | 272          |



OE730-7N-130-2: 5 step scales for constant CIELAB hue 136/360 = 0.378 (left)



16 step scales for constant CIELAB hue 136/360 = 0.378 (right)

OE73: Test chart 2 according to DIN 33872-2, Hue L; 1MR, DH  
Discrimination of 5 and 16 step colour scales

input:  $cmy0$  ( $\rightarrow cmy0^*_{d}$ )  $setcmyk$   
output 135-2:  $g_P=0.62$ ;  $g_N=1.0$

See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>  
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1, CIELAB

TUB registration: 20110801-OE73/OE73L0NA.TXT /.PS  
TUB material: code=rha4ta  
application for output of displays: monitor systems or data projector systems

Input: Colorimetric Television Luminous System TLS00a

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

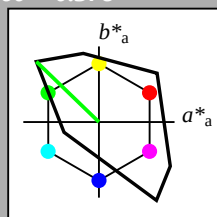
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 115 136

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

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

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

TLS00a; adapted (a) CIELAB data

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

Output: Colorimetric Television Luminous System TLS00a

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

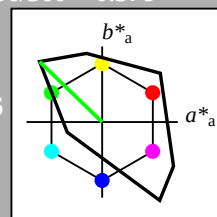
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 115 136

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

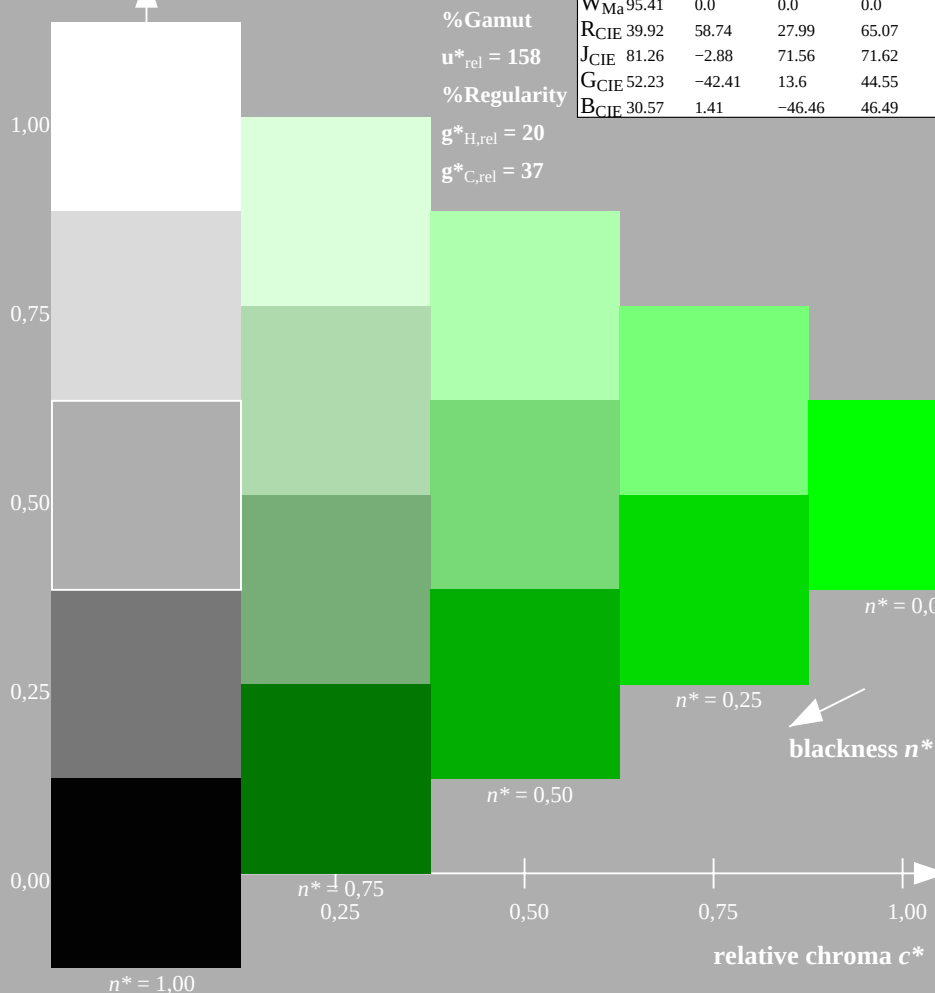
%Regularity

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

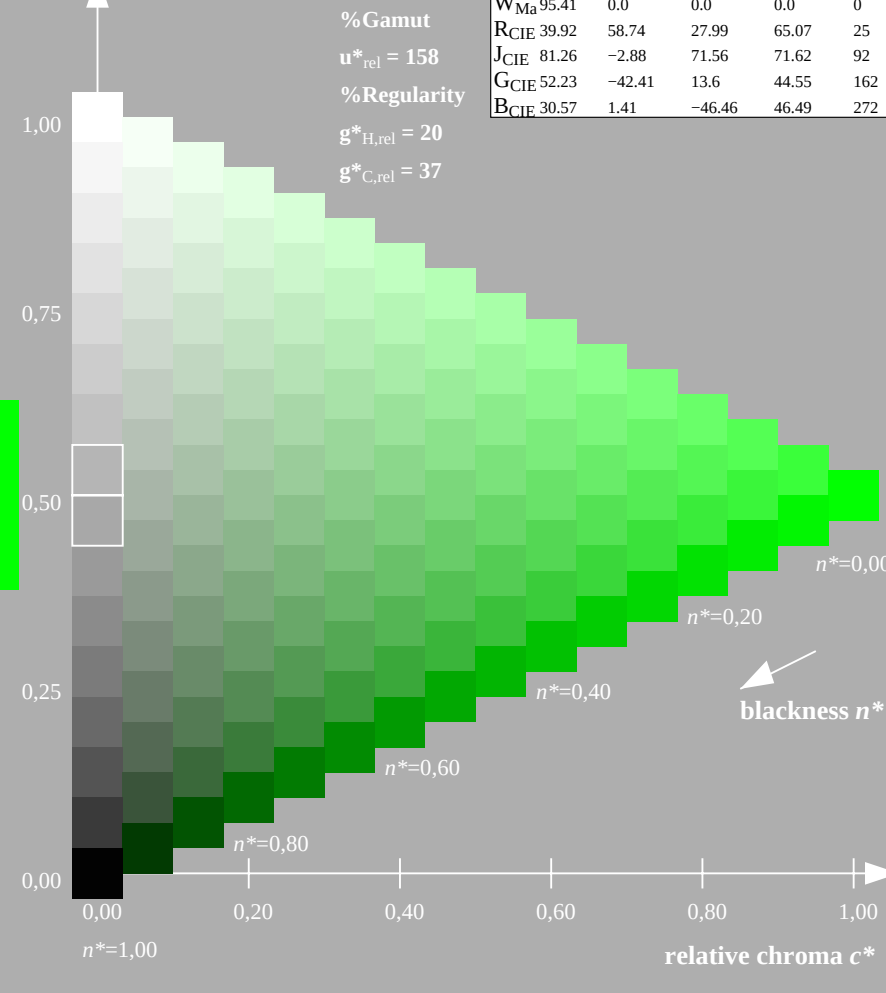
$g^*_{C,rel} = 37$

TLS00a; adapted (a) CIELAB data

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



OE730-7N-130-2: 5 step scales for constant CIELAB hue 136/360 = 0.378 (left)



16 step scales for constant CIELAB hue 136/360 = 0.378 (right)

OE73: Test chart 2 according to DIN 33872-2, Hue L; 1MR, DH  
Discrimination of 5 and 16 step colour scales

input:  $cmy0$  ( $\rightarrow cmy0^*_{d}$ )  $setcmyk$   
output 136-2:  $g_P=0.55$ ;  $g_N=1.0$

See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>  
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1, CIELAB

TUB registration: 20110801-OE73/OE73L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems

TUB material: code=rha4ta



Input: Colorimetric Television Luminous System TLS00a

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

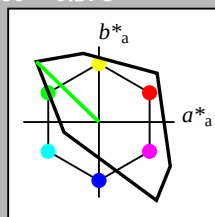
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 115 136

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

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

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

TLS00a; adapted (a) CIELAB data

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

Output: Colorimetric Television Luminous System TLS00a

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

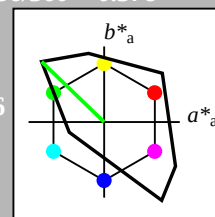
$lab^*tch$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 84 115 136

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

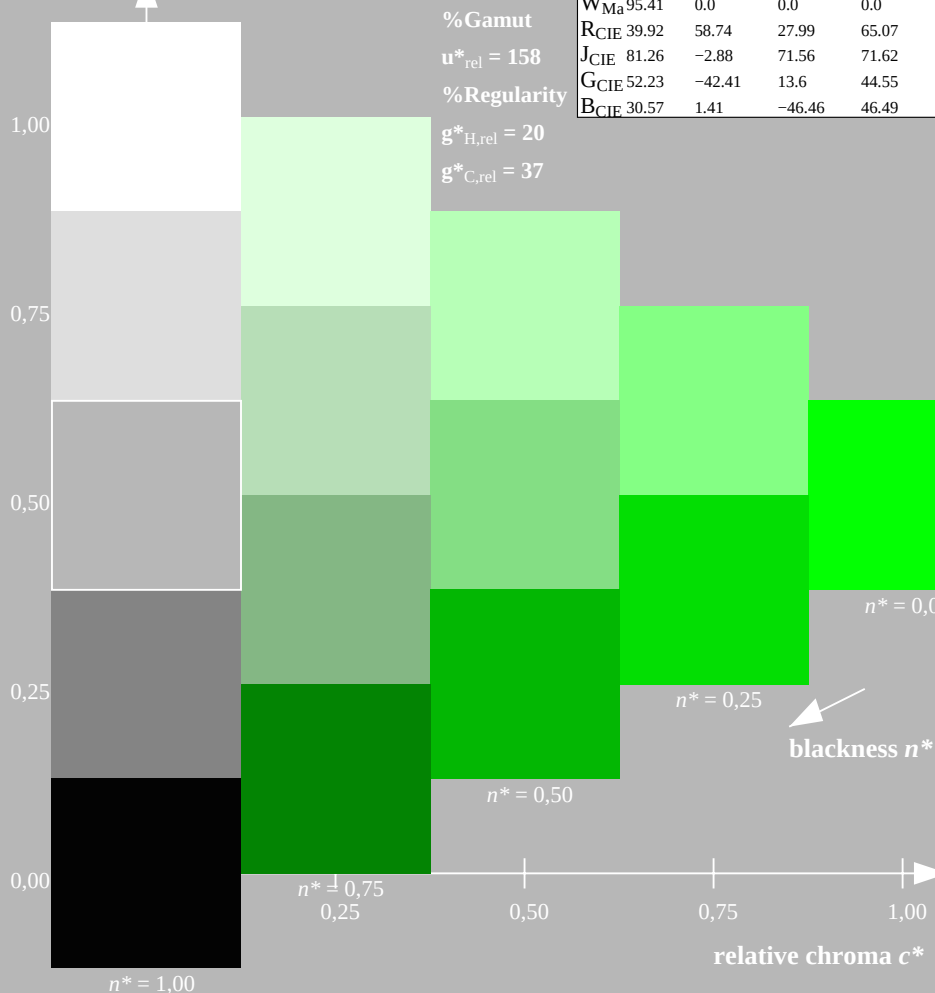
%Regularity

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

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

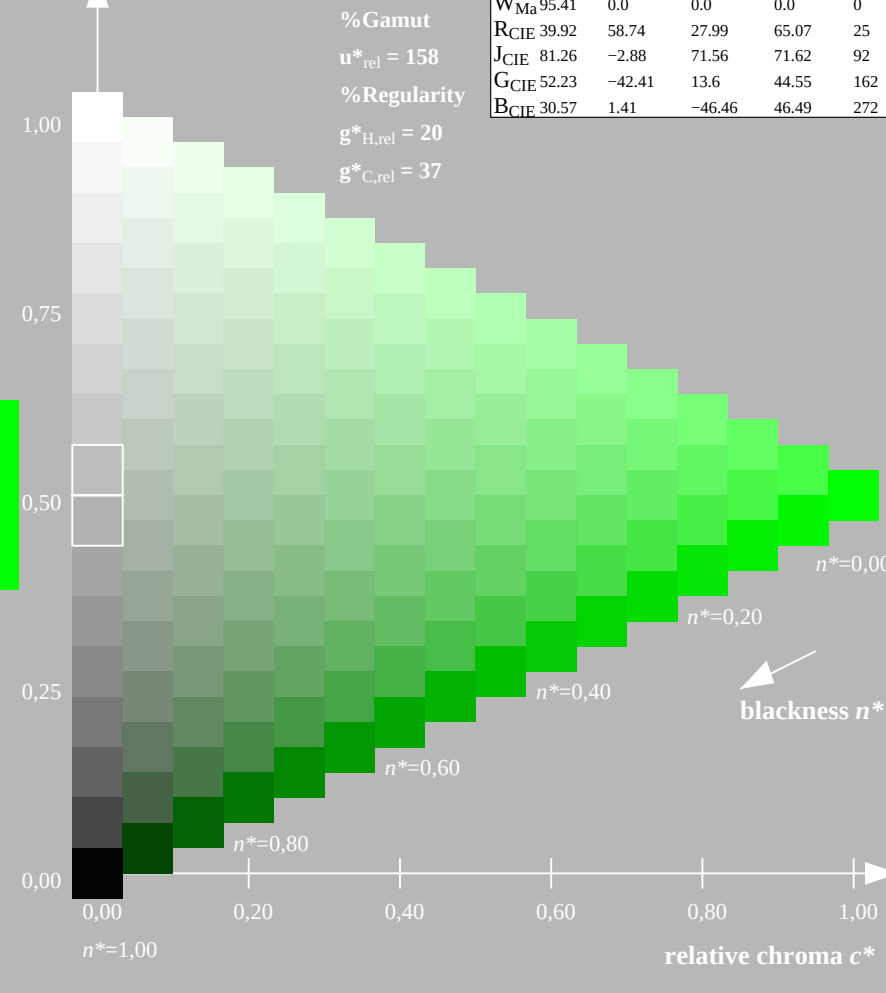
TLS00a; adapted (a) CIELAB data

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



OE730-7N-130-2: 5 step scales for constant CIELAB hue 136/360 = 0.378 (left)

OE73: Test chart 2 according to DIN 33872-2, Hue L; 1MR, DH  
Discrimination of 5 and 16 step colour scales



16 step scales for constant CIELAB hue 136/360 = 0.378 (right)

input:  $cmy0$  ( $\rightarrow cmy0^*_{d}$ )  $setcmyk$   
output 137-2:  $g_P=0.47$ ;  $g_N=1.0$

See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>  
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1, CIELAB

TUB registration: 20110801-OE73/OE73L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems

TUB material: code=rha4ta