

Input: Colorimetric Reflective System MRS18

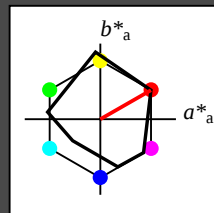
for hue  $h^* = lab \cdot h = 30/360 = 0.083$

LAB\*LCH, LAB\*NCH

D65: hue R

LCH\*Ma: 50 77 30

olv\*Ma: 1.0 0.0 0.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C_{ab,a}^*$ | $h_{ab,a}^*$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

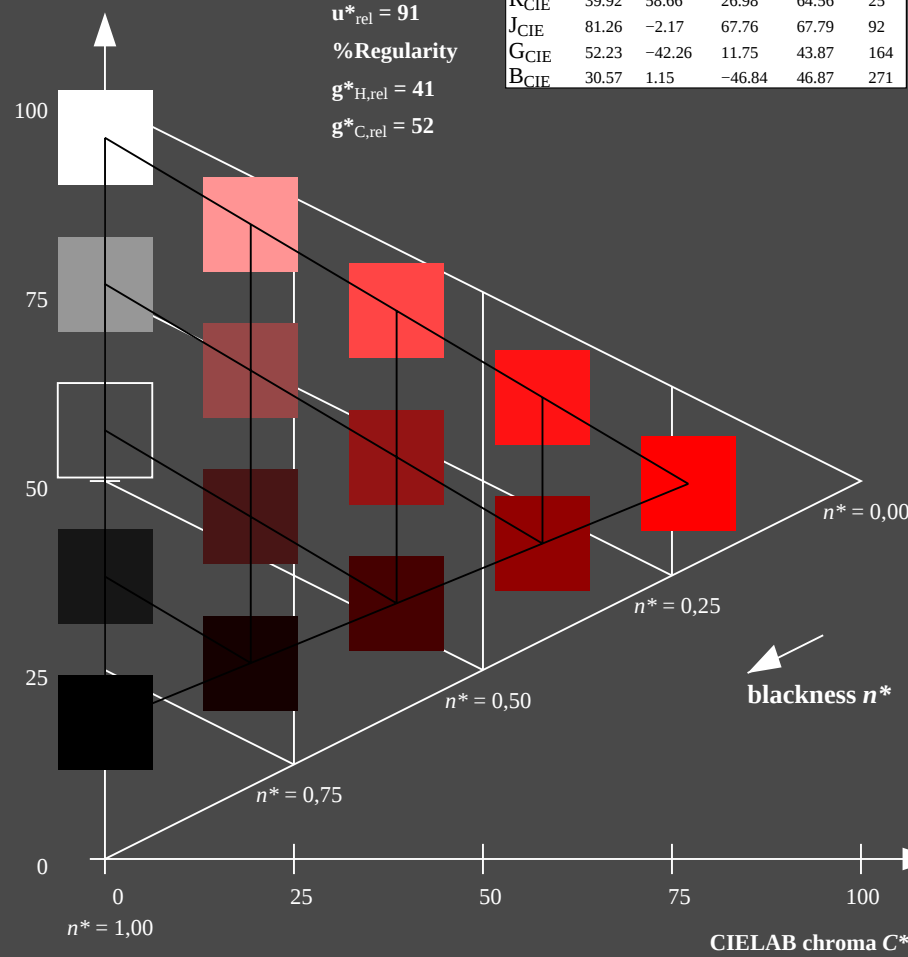
%Gamut

$u_{rel}^* = 91$

%Regularity

$g_{H,rel}^* = 41$

$g_{C,rel}^* = 52$



TE340-7, 5 step scales for constant CIELAB hue 30/360 = 0.083 (left)

Output: Colorimetric Reflective System MRS18

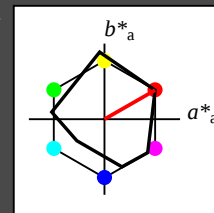
for hue  $h^* = lab \cdot h = 30/360 = 0.083$

LAB\*LCH, LAB\*NCH

D65: hue R

LCH\*Ma: 50 77 30

olv\*Ma: 1.0 0.0 0.0



MRS18; adapted (a) CIELAB data

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| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
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| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

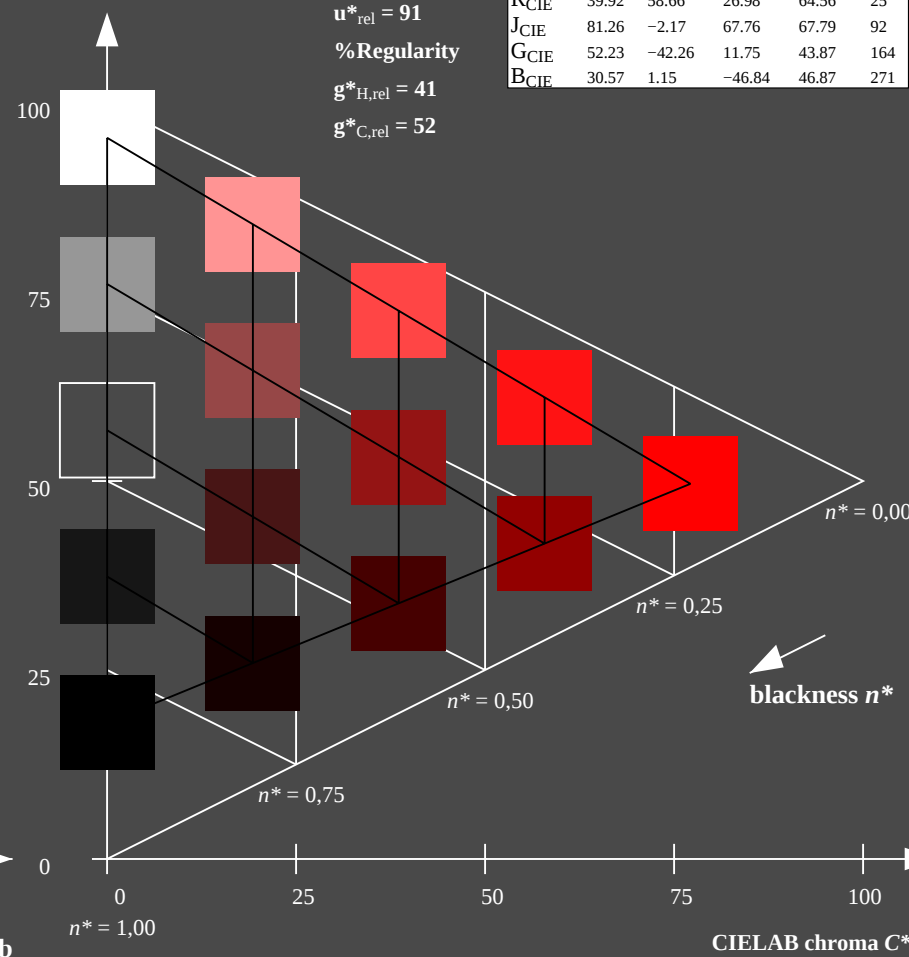
%Gamut

$u_{rel}^* = 91$

%Regularity

$g_{H,rel}^* = 41$

$g_{C,rel}^* = 52$



5 step scales for constant CIELAB hue 30/360 = 0.083 (right)

BAM-test chart TE34; Colorimetric systems MRS18 & MRS18  
D65: Coordinate systems of 5 step colour scales for 10 hues

input:  $olv^* \text{ setrgbcolor}$   
output:  $olv^* \text{ setrgbcolor} / w^* \text{ setgray}$



Input: Colorimetric Reflective System MRS18

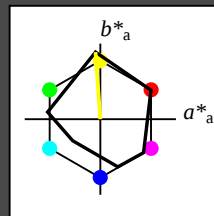
for hue  $h^* = lab^*h = 94/360 = 0.261$

LAB\*LCH, LAB\*NCH

D65: hue J

LCH\*Ma: 91 89 94

olv\*Ma: 1.0 1.0 0.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

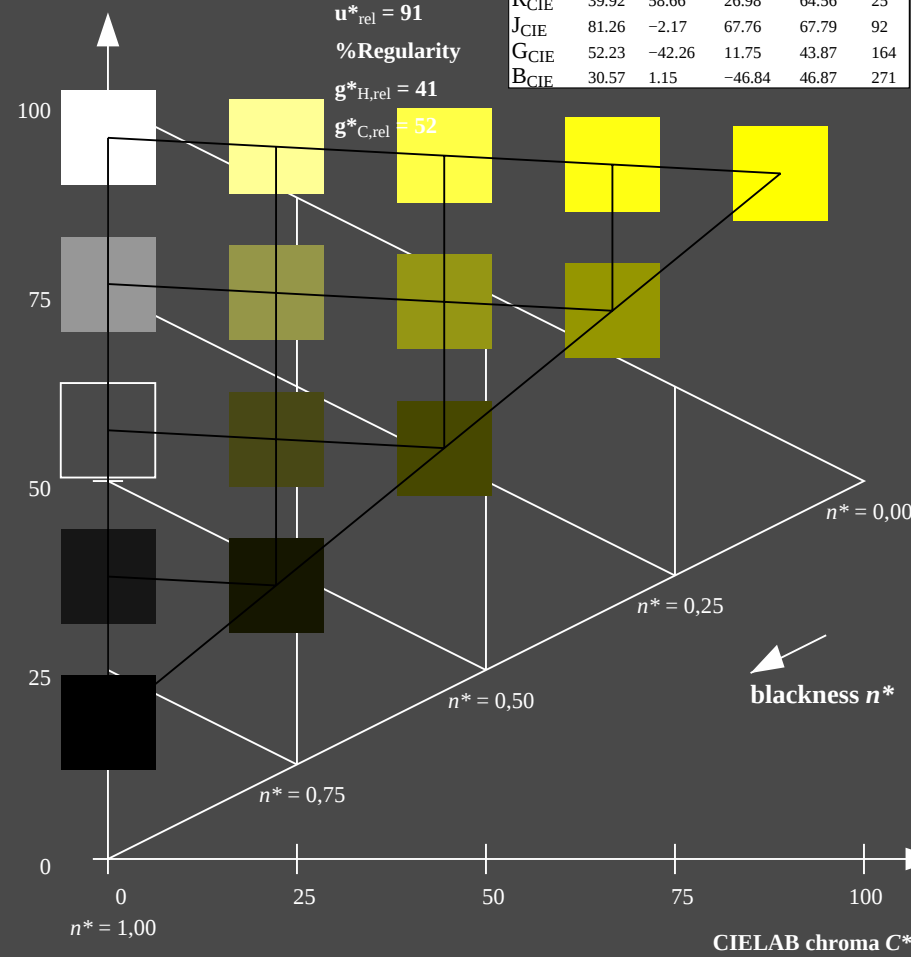
%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



TE340-7, 5 step scales for constant CIELAB hue 94/360 = 0.261 (left)



BAM-test chart TE34; Colorimetric systems MRS18 & MRS18  
 D65: Coordinate systems of 5 step colour scales for 10 hues

Output: Colorimetric Reflective System MRS18

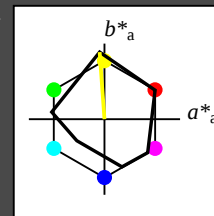
for hue  $h^* = lab^*h = 94/360 = 0.261$

LAB\*LCH, LAB\*NCH

D65: hue J

LCH\*Ma: 91 89 94

olv\*Ma: 1.0 1.0 0.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

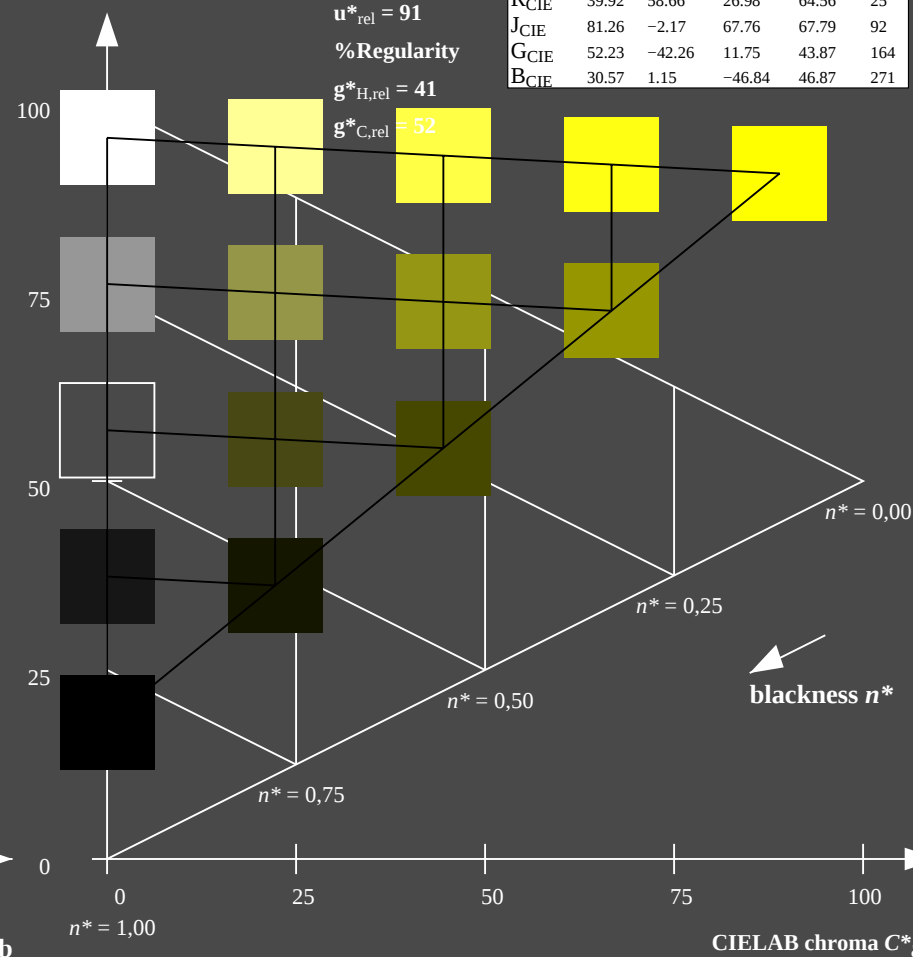
%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

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



Input: Colorimetric Reflective System MRS18

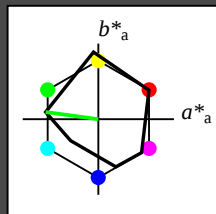
for hue  $h^* = lab \cdot h = 172/360 = 0.479$

LAB\*LCH, LAB\*NCH

D65: hue G

LCH\*Ma: 52 70 172

olv\*Ma: 0.0 1.0 0.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C_{ab,a}^*$ | $h_{ab,a}^*$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

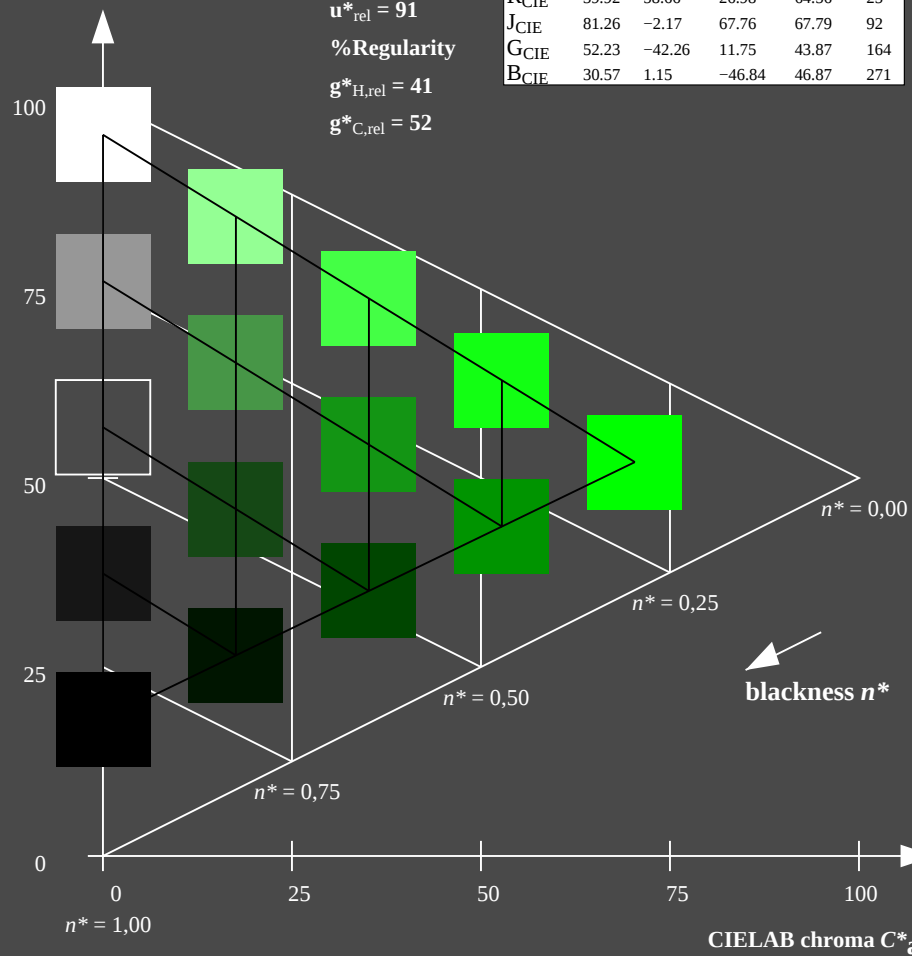
%Gamut

$u_{rel}^* = 91$

%Regularity

$g_{H,rel}^* = 41$

$g_{C,rel}^* = 52$



blackness  $n^*$

TE340-7, 5 step scales for constant CIELAB hue 172/360 = 0.479 (left)

Output: Colorimetric Reflective System MRS18

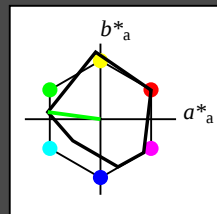
for hue  $h^* = lab \cdot h = 172/360 = 0.479$

LAB\*LCH, LAB\*NCH

D65: hue G

LCH\*Ma: 52 70 172

olv\*Ma: 0.0 1.0 0.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C_{ab,a}^*$ | $h_{ab,a}^*$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
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| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

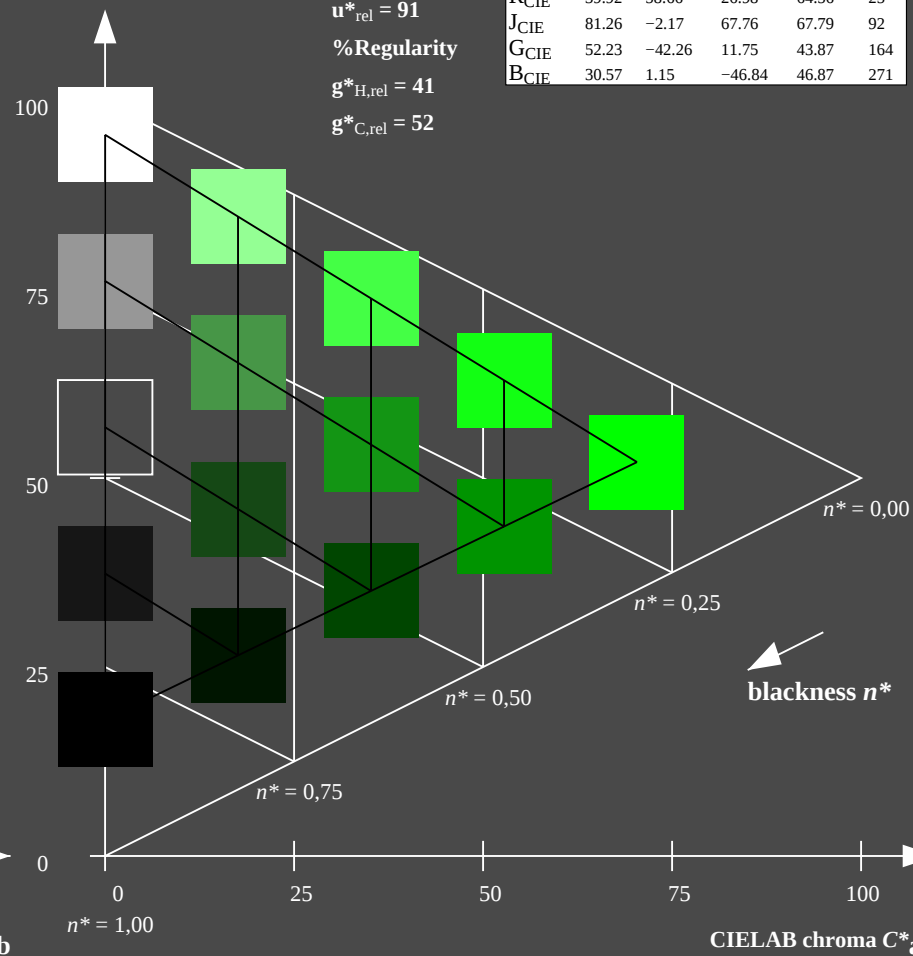
%Gamut

$u_{rel}^* = 91$

%Regularity

$g_{H,rel}^* = 41$

$g_{C,rel}^* = 52$



blackness  $n^*$

5 step scales for constant CIELAB hue 172/360 = 0.479 (right)

BAM-test chart TE34; Colorimetric systems MRS18 & MRS18

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv\* setrgbcolor

output: olv\* setrgbcolor / w\* setgray

Input: Colorimetric Reflective System MRS18

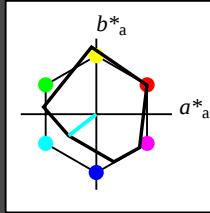
for hue  $h^* = lab \cdot h = 218/360 = 0.605$

LAB\*LCH, LAB\*NCH

D65: hue G50B

LCH\*Ma: 45 46 218

olv\*Ma: 0.0 1.0 1.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C_{ab,a}^*$ | $h_{ab,a}^*$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
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| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
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| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

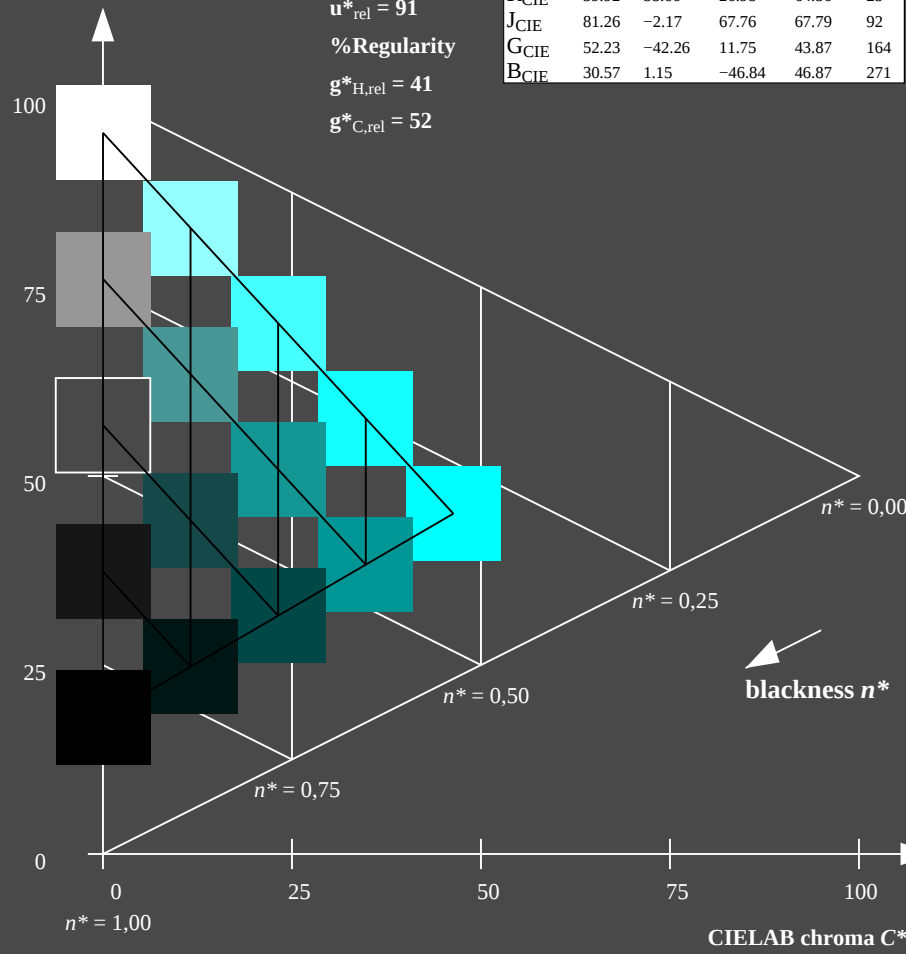
%Gamut

$u_{rel}^* = 91$

%Regularity

$g_{H,rel}^* = 41$

$g_{C,rel}^* = 52$



TE340-7, 5 step scales for constant CIELAB hue 218/360 = 0.605 (left)

Output: Colorimetric Reflective System MRS18

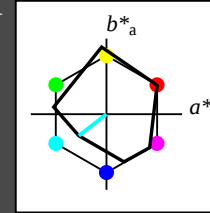
for hue  $h^* = lab \cdot h = 218/360 = 0.605$

LAB\*LCH, LAB\*NCH

D65: hue G50B

LCH\*Ma: 45 46 218

olv\*Ma: 0.0 1.0 1.0



MRS18; adapted (a) CIELAB data

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| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
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| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

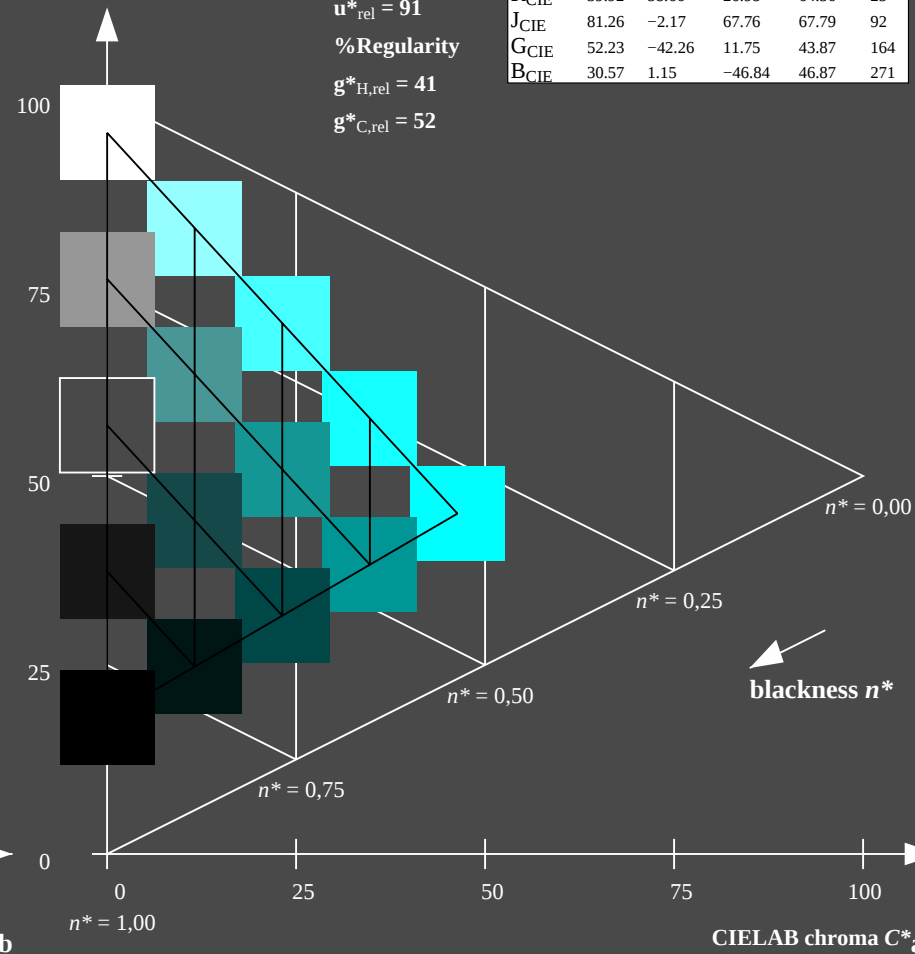
%Gamut

$u_{rel}^* = 91$

%Regularity

$g_{H,rel}^* = 41$

$g_{C,rel}^* = 52$



5 step scales for constant CIELAB hue 218/360 = 0.605 (right)

BAM-test chart TE34; Colorimetric systems MRS18 & MRS18

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv\* setrgbcolor

output: olv\* setrgbcolor / w\* setgray

Input: Colorimetric Reflective System MRS18

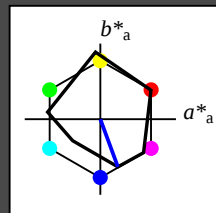
for hue  $h^* = lab \cdot h = 290/360 = 0.806$

LAB\*LCH, LAB\*NCH

D65: hue B

LCH\*Ma: 37 67 290

olv\*Ma: 0.0 0.0 1.0



| MRS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| R <sub>Ma</sub>                | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>                | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>                | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub>             | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>                | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub>             | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>               | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>               | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>               | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

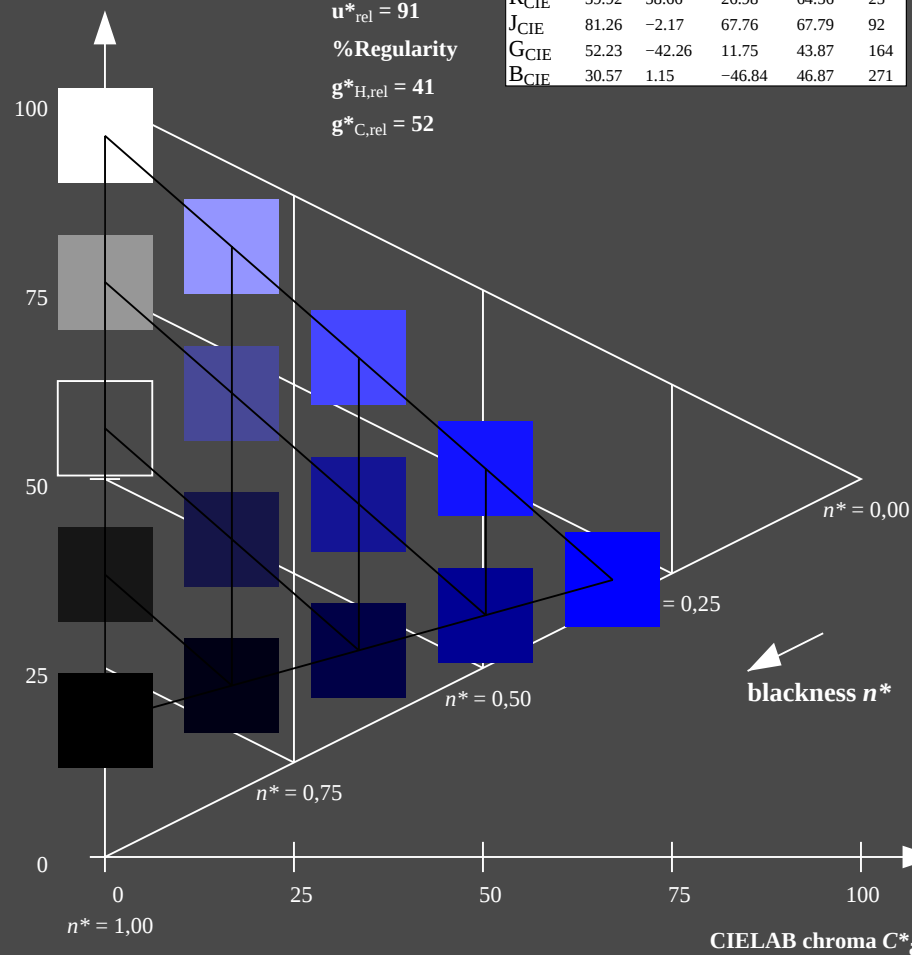
%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



TE340-7, 5 step scales for constant CIELAB hue 290/360 = 0.806 (left)

Output: Colorimetric Reflective System MRS18

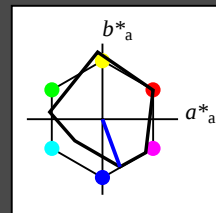
for hue  $h^* = lab \cdot h = 290/360 = 0.806$

LAB\*LCH, LAB\*NCH

D65: hue B

LCH\*Ma: 37 67 290

olv\*Ma: 0.0 0.0 1.0



| MRS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| R <sub>Ma</sub>                | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>                | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>                | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub>             | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>                | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub>             | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>               | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>               | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>               | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

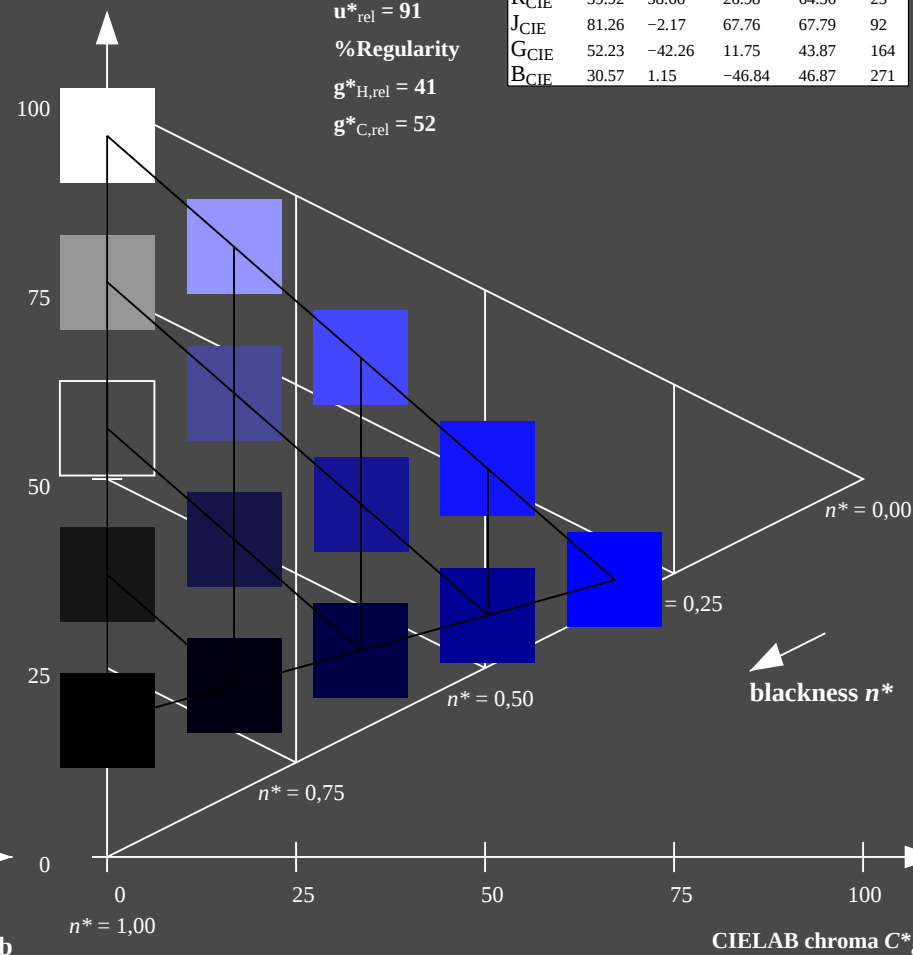
%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



5 step scales for constant CIELAB hue 290/360 = 0.806 (right)

BAM-test chart TE34; Colorimetric systems MRS18 & MRS18  
D65: Coordinate systems of 5 step colour scales for 10 hues

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

Input: Colorimetric Reflective System MRS18

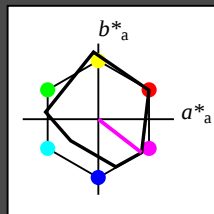
for hue  $h^* = lab \cdot h = 322/360 = 0.895$

LAB\*LCH, LAB\*NCH

D65: hue B50R

LCH\*Ma: 35 72 322

olv\*Ma: 1.0 0.0 1.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

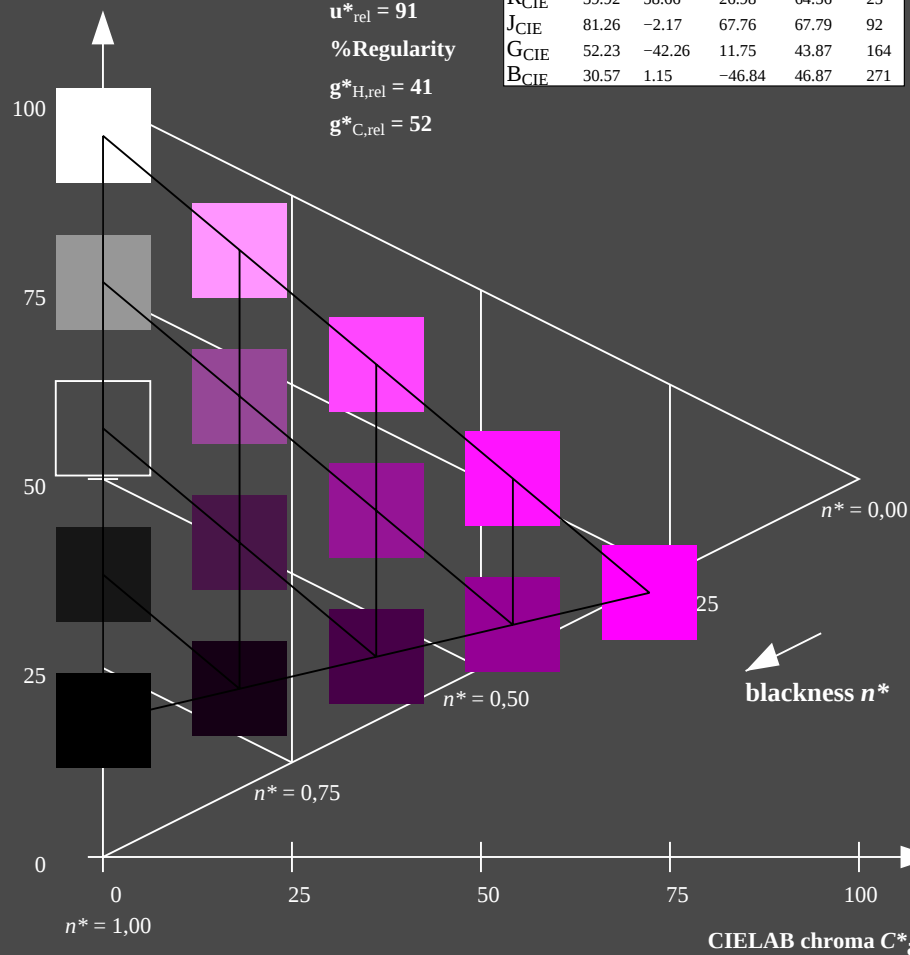
%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



TE340-7, 5 step scales for constant CIELAB hue 322/360 = 0.895 (left)

Output: Colorimetric Reflective System MRS18

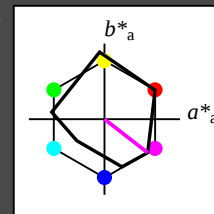
for hue  $h^* = lab \cdot h = 322/360 = 0.895$

LAB\*LCH, LAB\*NCH

D65: hue B50R

LCH\*Ma: 35 72 322

olv\*Ma: 1.0 0.0 1.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

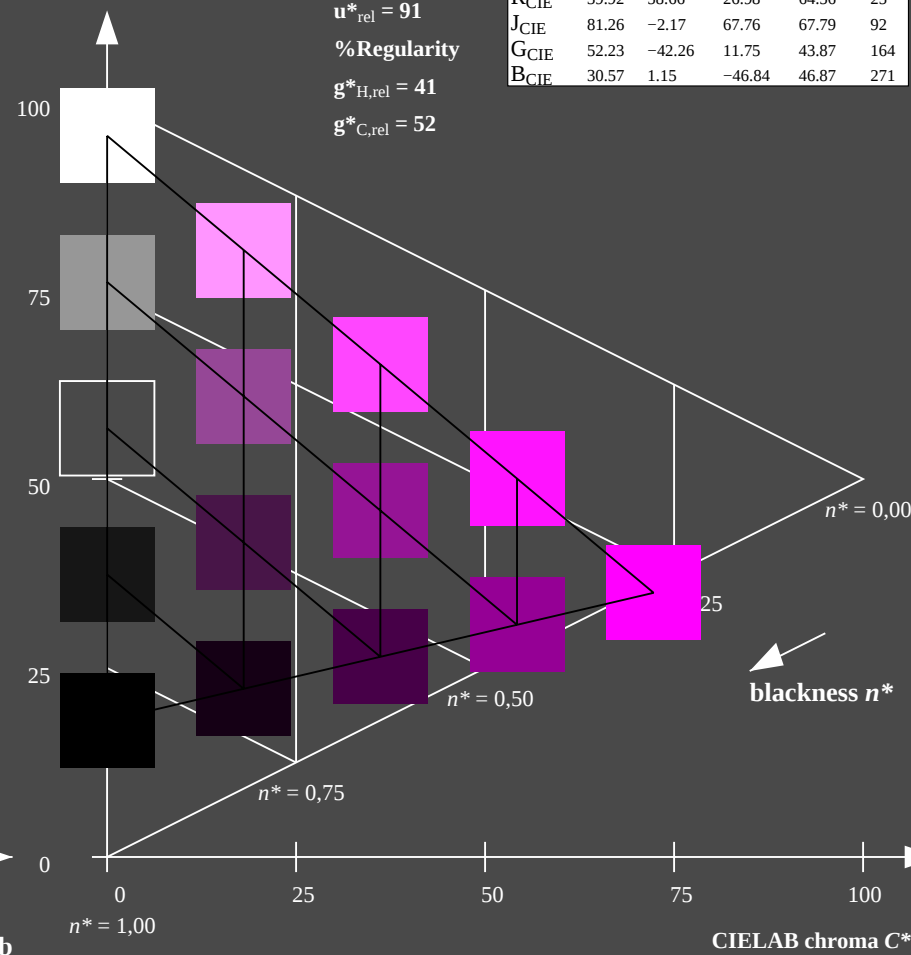
%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



5 step scales for constant CIELAB hue 322/360 = 0.895 (right)

BAM-test chart TE34; Colorimetric systems MRS18 & MRS18  
D65: Coordinate systems of 5 step colour scales for 10 hues

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

Input: Colorimetric Reflective System MRS18

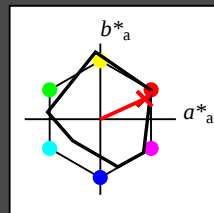
for hue  $h^* = lab \cdot h = 25/360 = 0.069$

LAB\*LCH, LAB\*NCH

D65: hue R

LCH\*Ma: 48 73 25

olv\*Ma: 1.0 0.0 0.1



MRS18; adapted (a) CIELAB data

|                    | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C_{ab,a}^*$ | $h_{ab,a}^*$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

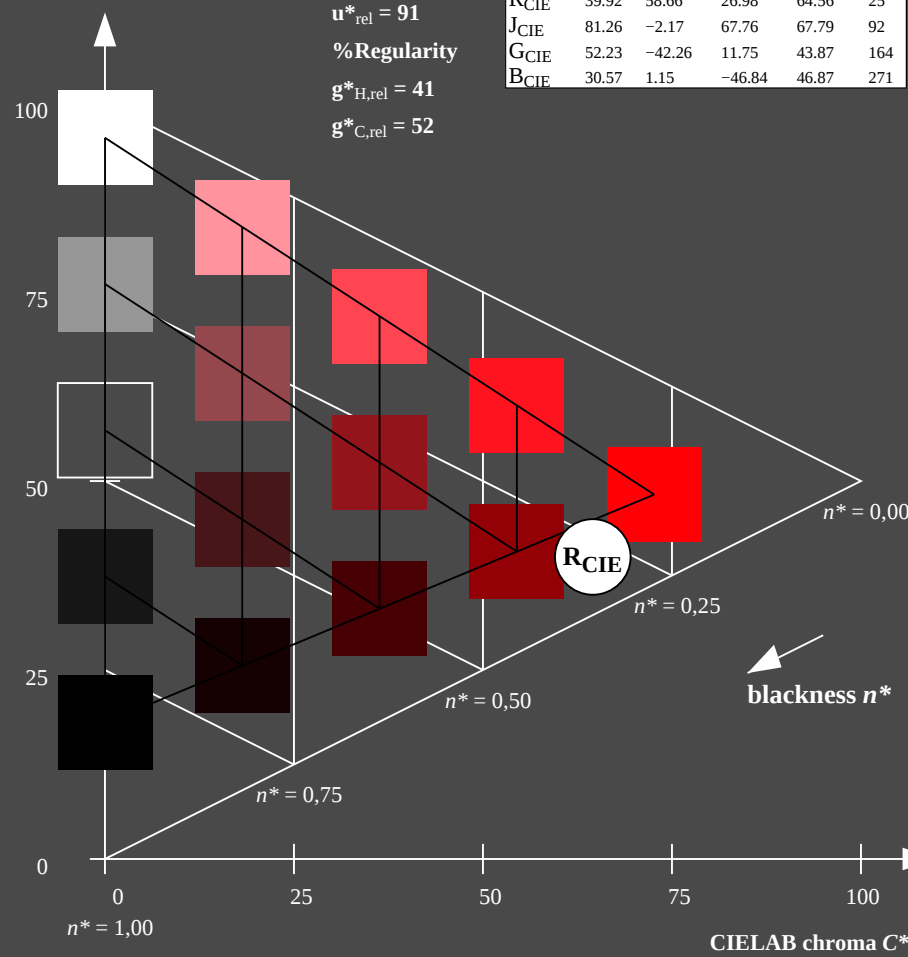
% Gamut

$u_{rel}^* = 91$

% Regularity

$g_{H,rel}^* = 41$

$g_{C,rel}^* = 52$



TE340-7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)

Output: Colorimetric Reflective System MRS18

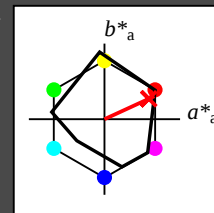
for hue  $h^* = lab \cdot h = 25/360 = 0.069$

LAB\*LCH, LAB\*NCH

D65: hue R

LCH\*Ma: 48 73 25

olv\*Ma: 1.0 0.0 0.1



MRS18; adapted (a) CIELAB data

|                    | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C_{ab,a}^*$ | $h_{ab,a}^*$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

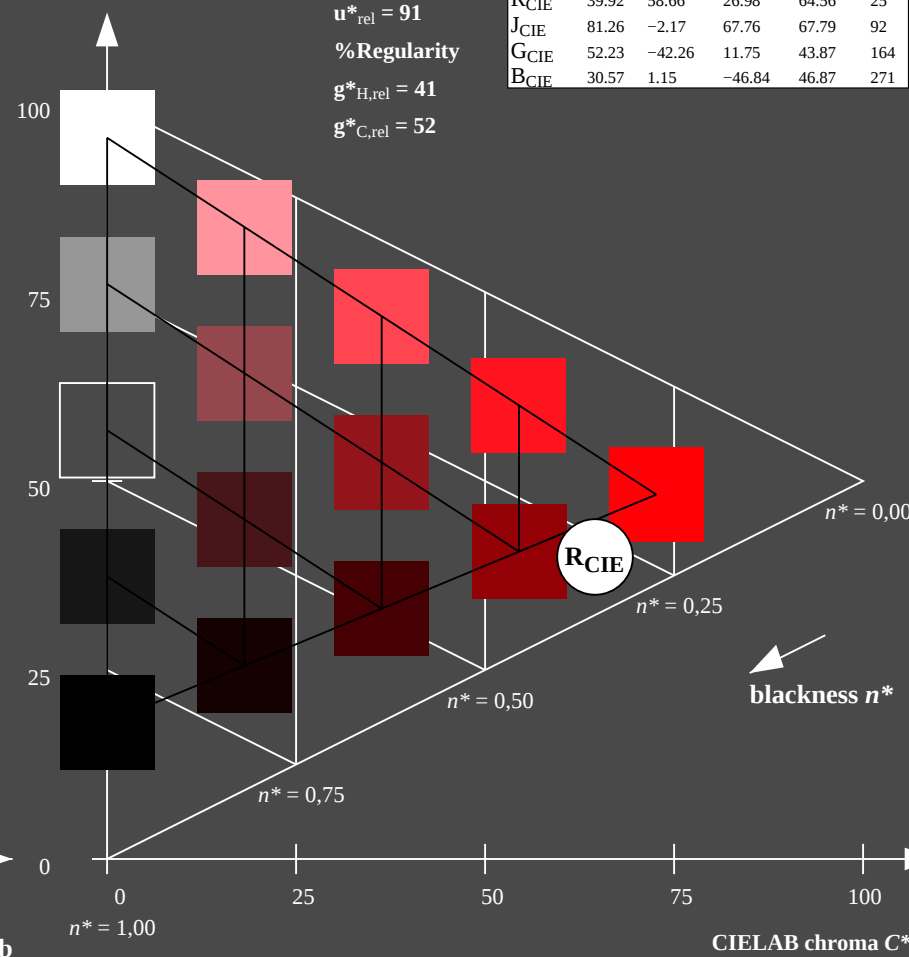
% Gamut

$u_{rel}^* = 91$

% Regularity

$g_{H,rel}^* = 41$

$g_{C,rel}^* = 52$



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

BAM-test chart TE34; Colorimetric systems MRS18 & MRS18

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv\* setrgbcolor

output: olv\* setrgbcolor / w\* setgray

Input: Colorimetric Reflective System MRS18

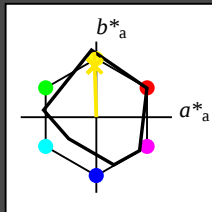
for hue  $h^* = lab^*h = 92/360 = 0.255$

LAB\*LCH, LAB\*NCH

D65: hue J

LCH\*Ma: 89 86 92

olv\*Ma: 1.0 0.95 0.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

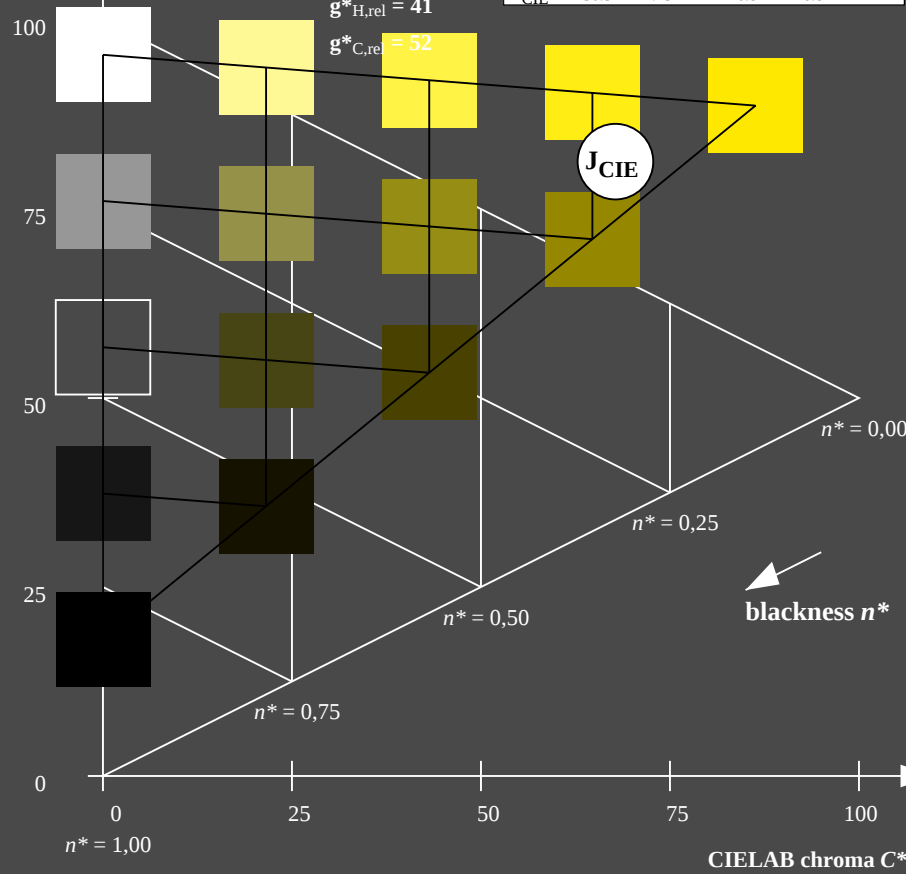
%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



TE340-7, 5 step scales for constant CIELAB hue 92/360 = 0.255 (left)

Output: Colorimetric Reflective System MRS18

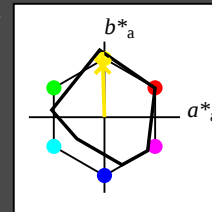
for hue  $h^* = lab^*h = 92/360 = 0.255$

LAB\*LCH, LAB\*NCH

D65: hue J

LCH\*Ma: 89 86 92

olv\*Ma: 1.0 0.95 0.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

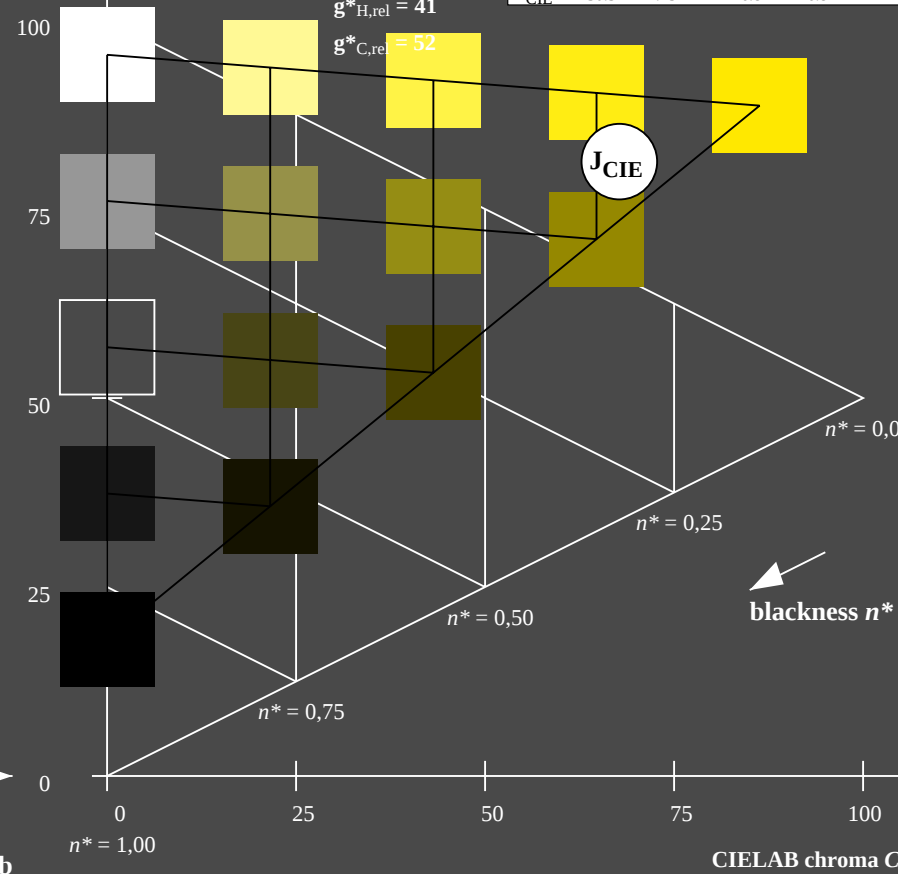
%Gamut

$u^*_{rel} = 91$

%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$



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

BAM-test chart TE34; Colorimetric systems MRS18 & MRS18

D65: Coordinate systems of 5 step colour scales for 10 hues

input:  $olv^* setrgbcolor$

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

Input: Colorimetric Reflective System MRS18

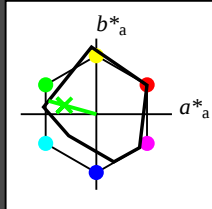
for hue  $h^* = lab \cdot h = 164/360 = 0.457$

LAB\*LCH, LAB\*NCH

D65: hue G

LCH\*Ma: 56 66 164

olv\*Ma: 0.1 1.0 0.0



CIELAB lightness  $L^*$

%Gamut

$u^*_{rel} = 91$

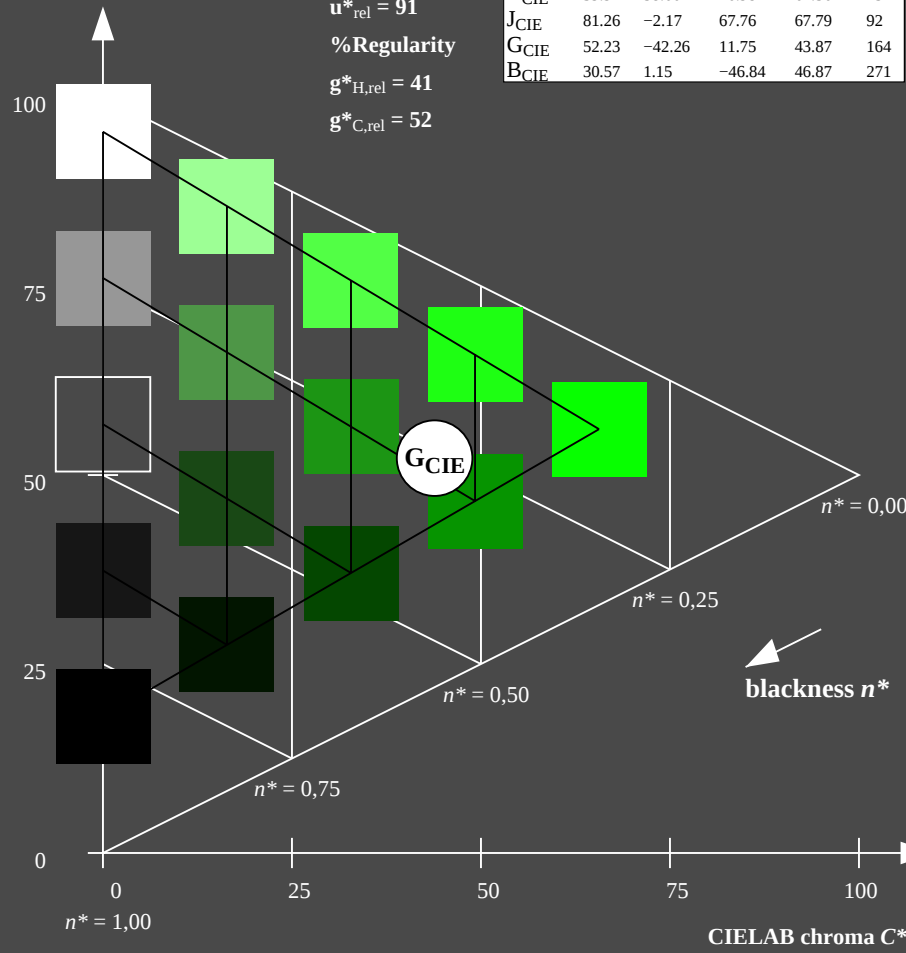
%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

MRS18; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



TE340-7, 5 step scales for constant CIELAB hue 164/360 = 0.457 (left)

Output: Colorimetric Reflective System MRS18

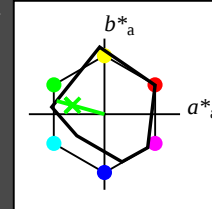
for hue  $h^* = lab \cdot h = 164/360 = 0.457$

LAB\*LCH, LAB\*NCH

D65: hue G

LCH\*Ma: 56 66 164

olv\*Ma: 0.1 1.0 0.0



CIELAB lightness  $L^*$

%Gamut

$u^*_{rel} = 91$

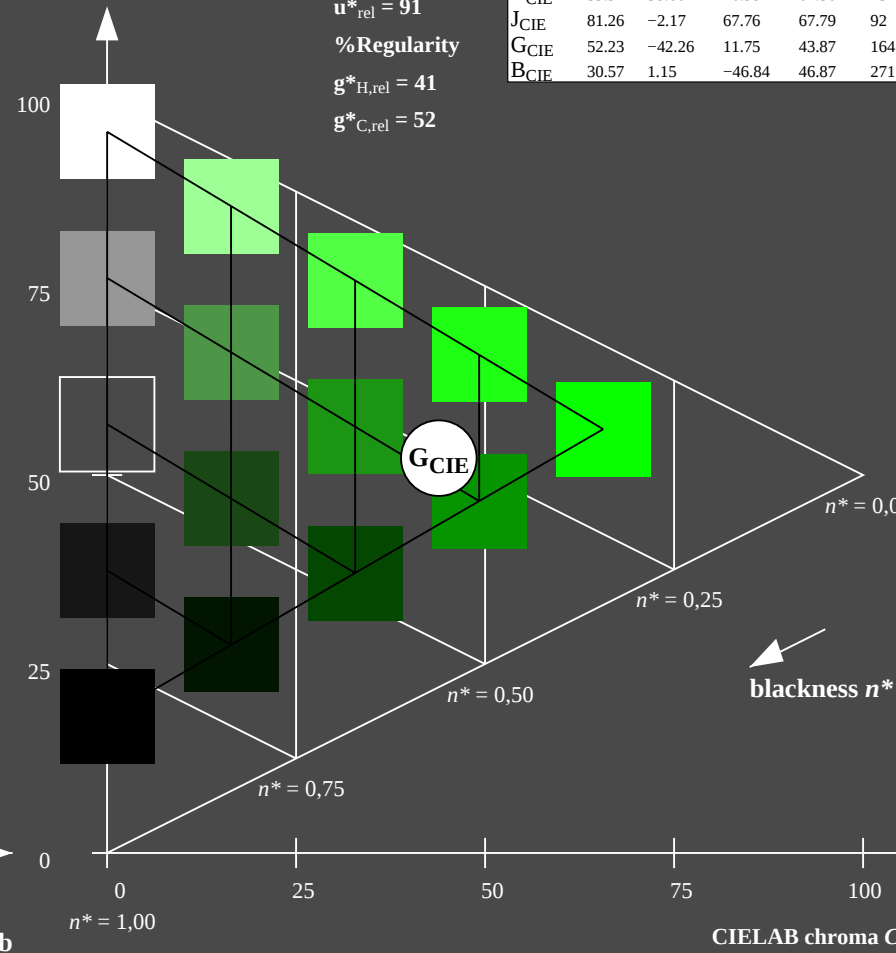
%Regularity

$g^*_{H,rel} = 41$

$g^*_{C,rel} = 52$

MRS18; adapted (a) CIELAB data

|                    | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |



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

BAM-test chart TE34; Colorimetric systems MRS18 & MRS18

D65: Coordinate systems of 5 step colour scales for 10 hues

input: olv\* setrgbcolor

output: olv\* setrgbcolor / w\* setgray

Input: Colorimetric Reflective System MRS18

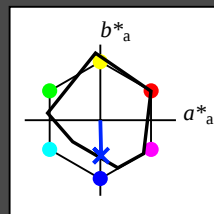
for hue  $h^* = lab \cdot h = 271/360 = 0.754$

LAB\*LCH, LAB\*NCH

D65: hue B

LCH\*Ma: 40 50 271

olv\*Ma: 0.0 0.37 1.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C_{ab,a}^*$ | $h_{ab,a}^*$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

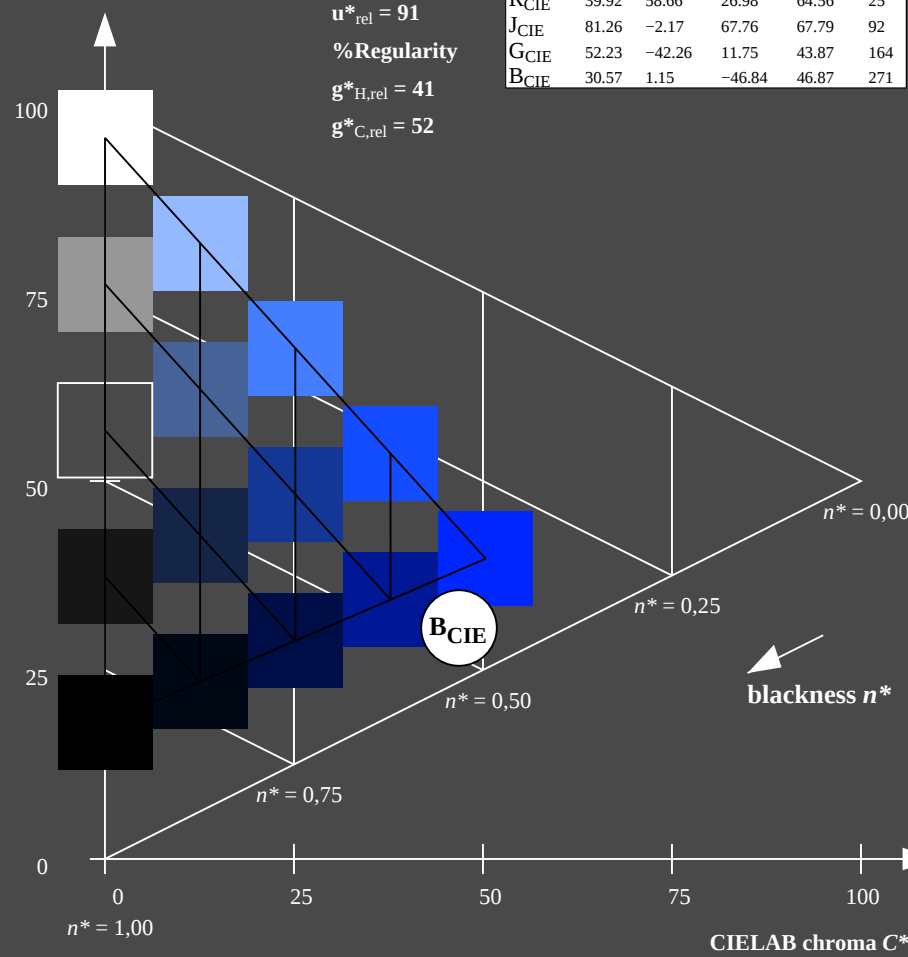
%Gamut

$u_{rel}^* = 91$

%Regularity

$g_{H,rel}^* = 41$

$g_{C,rel}^* = 52$



TE340-7, 5 step scales for constant CIELAB hue 271/360 = 0.754 (left)

Output: Colorimetric Reflective System MRS18

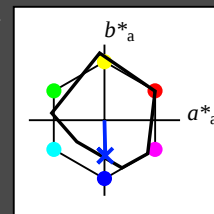
for hue  $h^* = lab \cdot h = 271/360 = 0.754$

LAB\*LCH, LAB\*NCH

D65: hue B

LCH\*Ma: 40 50 271

olv\*Ma: 0.0 0.37 1.0



MRS18; adapted (a) CIELAB data

|                    | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C_{ab,a}^*$ | $h_{ab,a}^*$ |
|--------------------|-------------|---------|---------|--------------|--------------|
| R <sub>Ma</sub>    | 49.63       | 66.96   | 38.37   | 77.18        | 30           |
| J <sub>Ma</sub>    | 90.7        | -6.36   | 88.75   | 88.98        | 94           |
| G <sub>Ma</sub>    | 52.11       | -69.73  | 9.44    | 70.37        | 172          |
| G50B <sub>Ma</sub> | 45.03       | -36.57  | -28.47  | 46.36        | 218          |
| B <sub>Ma</sub>    | 36.65       | 23.19   | -63.05  | 67.18        | 290          |
| B50R <sub>Ma</sub> | 34.94       | 57.17   | -44.26  | 72.31        | 322          |
| 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       | 58.66   | 26.98   | 64.56        | 25           |
| J <sub>CIE</sub>   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

CIELAB lightness  $L^*$

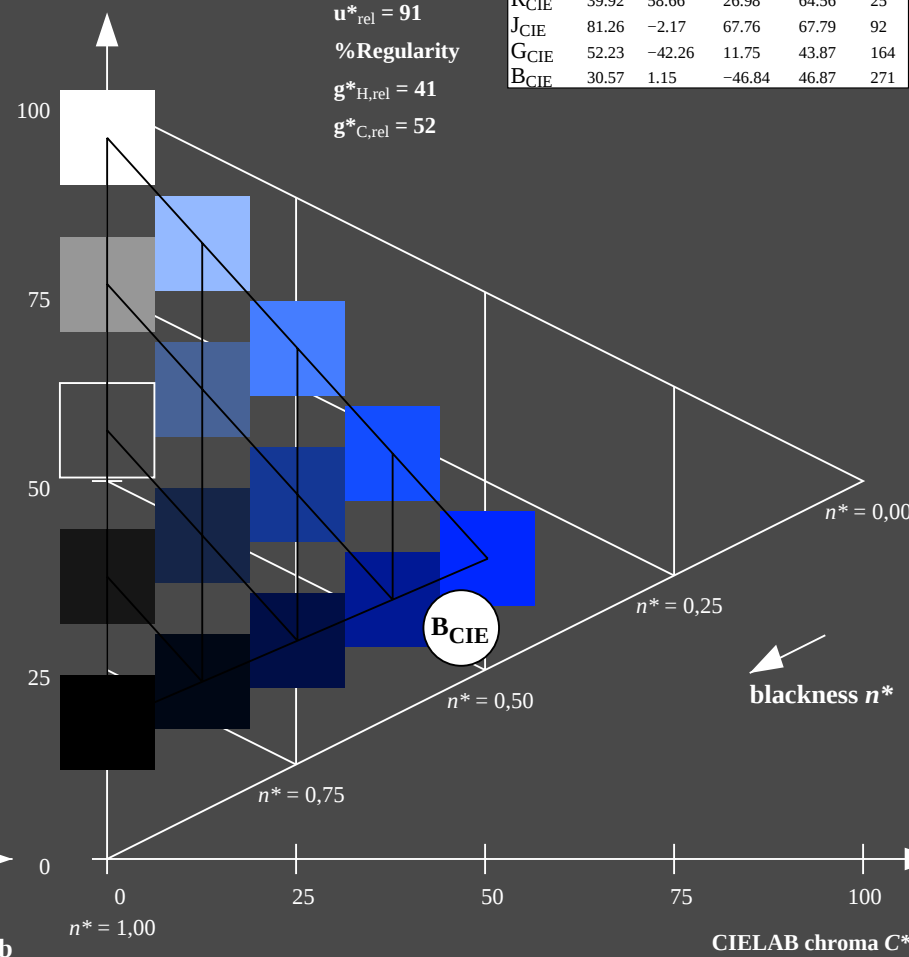
%Gamut

$u_{rel}^* = 91$

%Regularity

$g_{H,rel}^* = 41$

$g_{C,rel}^* = 52$



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

BAM-test chart TE34; Colorimetric systems MRS18 & MRS18  
D65: Coordinate systems of 5 step colour scales for 10 hues

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