

See for similar files: <http://www.ps.bam.de/ZE63/>; [www.ps.bam.de/ZE63/](http://www.ps.bam.de/ZE63/)  
Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1, CIELAB

BAM registration: 20071001-ZE63/10L/L63E00FA.PS/.TXT BAM material: code=rh4ta  
application for evaluation and measurement of printer or monitor systems

Input: Colorimetric Offset Reflective System ORS18

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

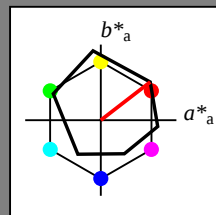
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 48 83 38

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

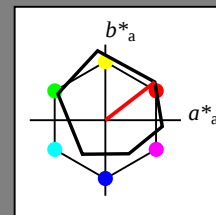
$lab^*tch$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 48 83 38

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

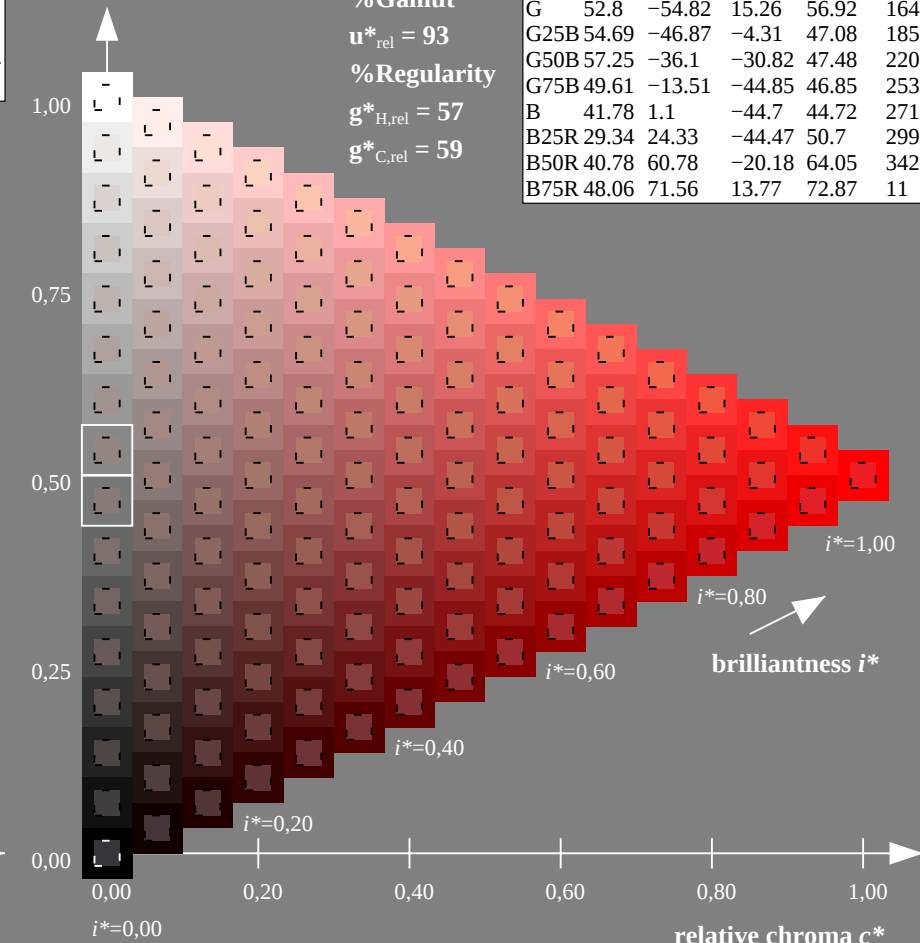
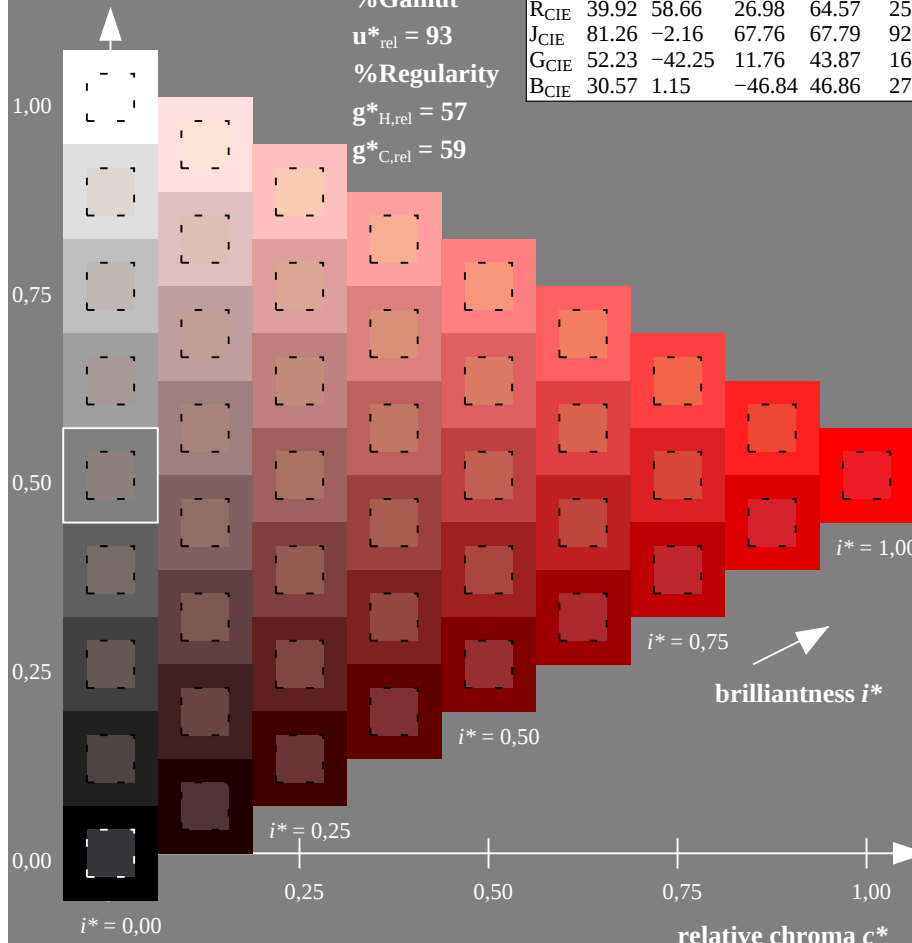
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 48.0        | 68.58   | 31.54   | 75.48        | 25           |
| R25J | 50.11       | 61.52   | 52.63   | 80.96        | 41           |
| R50J | 62.87       | 38.77   | 65.02   | 75.71        | 59           |
| R75J | 74.87       | 17.37   | 76.69   | 78.63        | 77           |
| J    | 86.19       | -2.8    | 87.69   | 87.73        | 92           |
| J25G | 84.01       | -18.73  | 82.6    | 84.7         | 103          |
| J50G | 71.17       | -35.83  | 64.13   | 73.46        | 119          |
| J75G | 56.99       | -54.71  | 43.72   | 70.05        | 141          |
| G    | 52.8        | -54.82  | 15.26   | 56.92        | 164          |
| G25B | 54.69       | -46.87  | -4.31   | 47.08        | 185          |
| G50B | 57.25       | -36.1   | -30.82  | 47.48        | 220          |
| G75B | 49.61       | -13.51  | -44.85  | 46.85        | 253          |
| B    | 41.78       | 1.1     | -44.7   | 44.72        | 271          |
| B25R | 29.34       | 24.33   | -44.47  | 50.7         | 299          |
| B50R | 40.78       | 60.78   | -20.18  | 64.05        | 342          |
| B75R | 48.06       | 71.56   | 13.77   | 72.87        | 11           |



ZE630-7F, 9 step scales for constant CIELAB hue 38/360 = 0.105 (left)

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ZE630-7F, 16 step scales for constant CIELAB hue 38/360 = 0.105 (right)

BAM-test chart ZE63; Colorimetric systems, Page 1/10

D65: 9 and 16 step colour scales for 10 hues

input:  $rgb / cmY0 set(rgb/cmyk)color$

output: no change compared to input

See for similar files: <http://www.ps.bam.de/ZE63/>; [www.ps.bam.de/ZE63/](http://www.ps.bam.de/ZE63/)  
Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1, CIELAB

BAM registration: 20071001-ZE63/10L/L63E00FA.PS/.TXT BAM material: code=rh4ta  
application for evaluation and measurement of printer or monitor systems

Input: Colorimetric Offset Reflective System ORS18

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

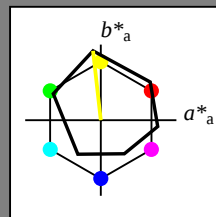
$lab^*tch$  and  $lab^*nch$

D65: hue Y

LCH\*Ma: 90 92 96

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

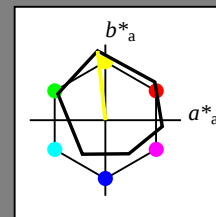
$lab^*tch$  and  $lab^*nch$

D65: hue Y

LCH\*Ma: 90 92 96

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

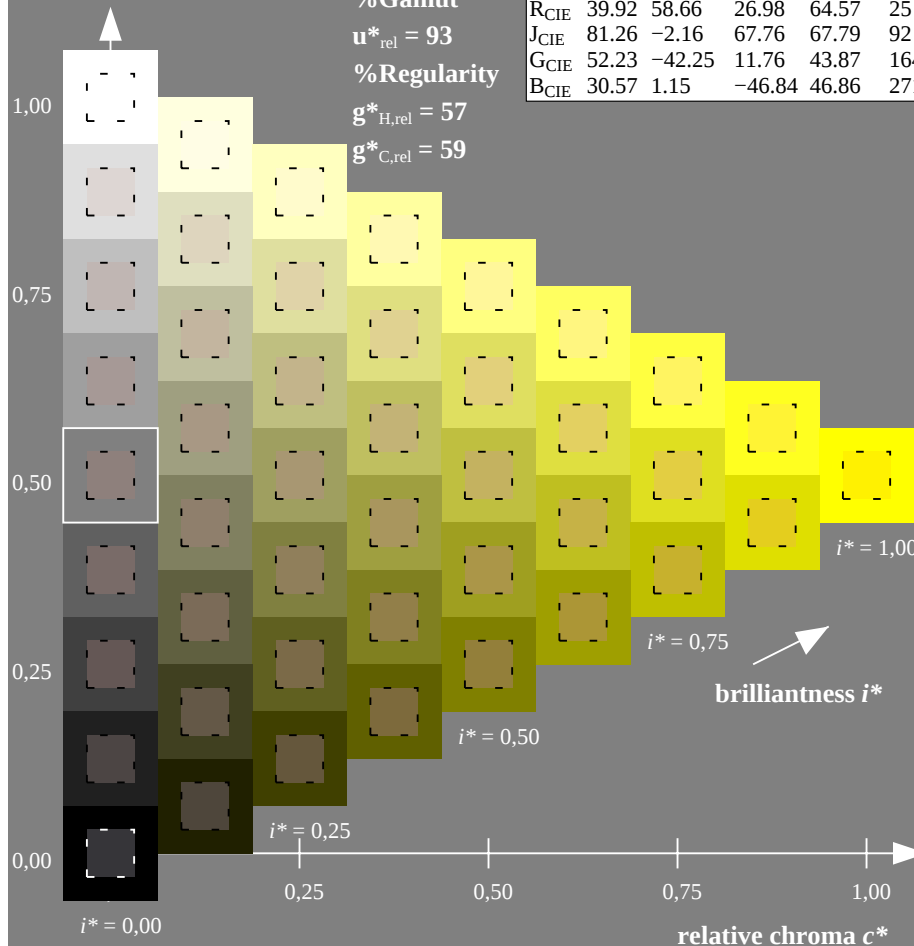
%Regularity

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

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

ORS18; adapted (a) CIELAB data

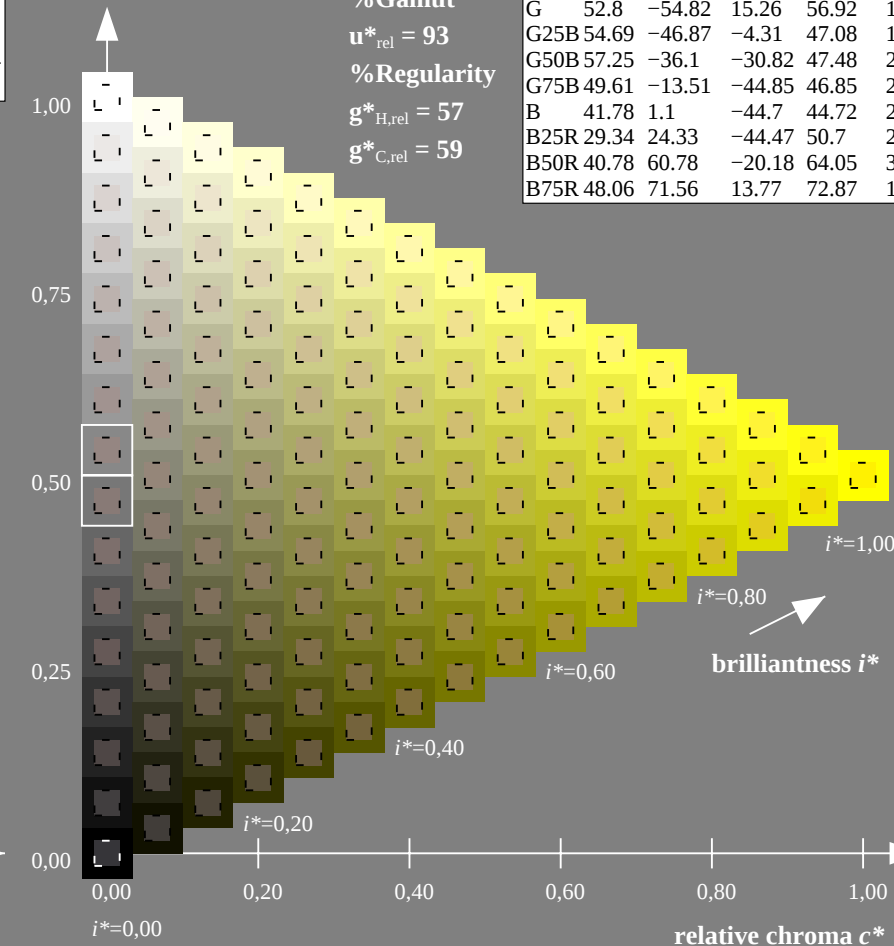
|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 48.0        | 68.58   | 31.54   | 75.48        | 25           |
| R25J | 50.11       | 61.52   | 52.63   | 80.96        | 41           |
| R50J | 62.87       | 38.77   | 65.02   | 75.71        | 59           |
| R75J | 74.87       | 17.37   | 76.69   | 78.63        | 77           |
| J    | 86.19       | -2.8    | 87.69   | 87.73        | 92           |
| J25G | 84.01       | -18.73  | 82.6    | 84.7         | 103          |
| J50G | 71.17       | -35.83  | 64.13   | 73.46        | 119          |
| J75G | 56.99       | -54.71  | 43.72   | 70.05        | 141          |
| G    | 52.8        | -54.82  | 15.26   | 56.92        | 164          |
| G25B | 54.69       | -46.87  | -4.31   | 47.08        | 185          |
| G50B | 57.25       | -36.1   | -30.82  | 47.48        | 220          |
| G75B | 49.61       | -13.51  | -44.85  | 46.85        | 253          |
| B    | 41.78       | 1.1     | -44.7   | 44.72        | 271          |
| B25R | 29.34       | 24.33   | -44.47  | 50.7         | 299          |
| B50R | 40.78       | 60.78   | -20.18  | 64.05        | 342          |
| B75R | 48.06       | 71.56   | 13.77   | 72.87        | 11           |



ZE630-7F, 9 step scales for constant CIELAB hue 96/360 = 0.268 (left)

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BAM-test chart ZE63; Colorimetric systems, Page 2/10  
D65: 9 and 16 step colour scales for 10 hues



ZE630-7F, 16 step scales for constant CIELAB hue 96/360 = 0.268 (right)

input:  $rgb / cmY0 set(rgb/cmyk)color$   
output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

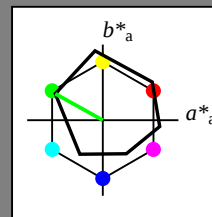
for hue  $h^* = lab^*h = 151/360 = 0.419$

**lab\*tch and lab\*nch**

D65: hue L

**LCH\*Ma: 51 72 151**

**olv\*Ma: 0.0 1.0 0.0**



## %Gamut

$$\mathbf{u}_{\text{rel}}^* = 93$$

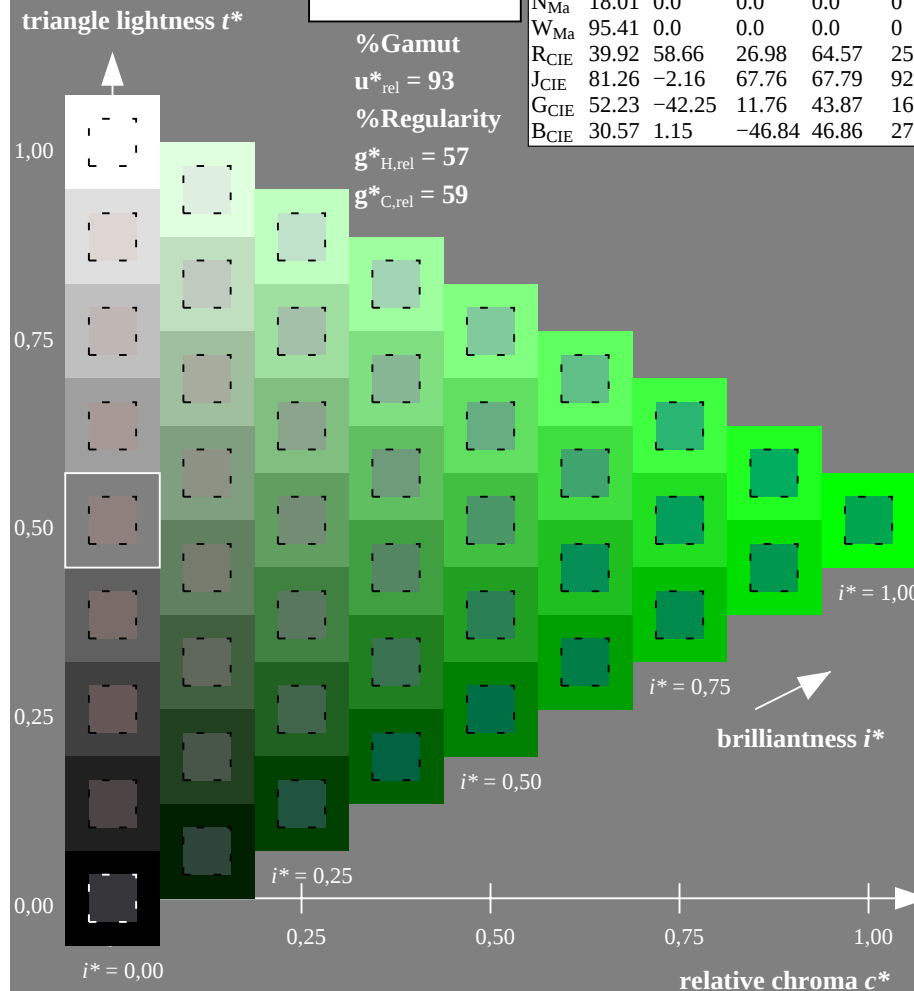
### %Regularity

$$g^*_{H_{rel}} = 57$$

■  $g^*_{C_{rel}} = 59$

**ORS18; adapted (a) CIELAB data**

|                  | $L^a - L^a_a$ | $d^a - d^a_a$ | $b^a - b^a_a$ | $C^a_{ab,a}$ | $n^a_{ab,a}$ |
|------------------|---------------|---------------|---------------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 65.39         | 50.52         | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37         | -10.26        | 91.75         | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9          | -62.83        | 34.96         | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62         | -30.34        | -45.01        | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72         | 31.1          | -44.4         | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13         | 75.28         | -8.36         | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01         | 0.0           | 0.0           | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0           | 0.0           | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92         | 58.66         | 26.98         | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26         | -2.16         | 67.76         | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23         | -42.25        | 11.76         | 43.87        | 164          |
| B <sub>CIF</sub> | 30.57         | 1.15          | -46.84        | 46.86        | 271          |



ZE630-7F, 9 step scales for constant CIELAB hue 151/360 = 0.419 (left)

BAM-test chart ZE63; Colorimetric systems, Page 3/10  
D65: 9 and 16 step colour scales for 10 hues

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### Output: Colorimetric Offset Reflective System ORS18

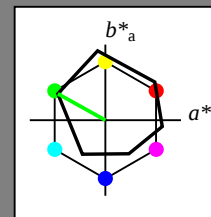
for hue  $h^* = lab^*h = 151/360 = 0.419$

**lab\*tch and lab\*nch**

D65: hue L

LCH\*Ma: 51 72 151

olv\*Ma: 0.0 1.0 0.0



## % Gamut

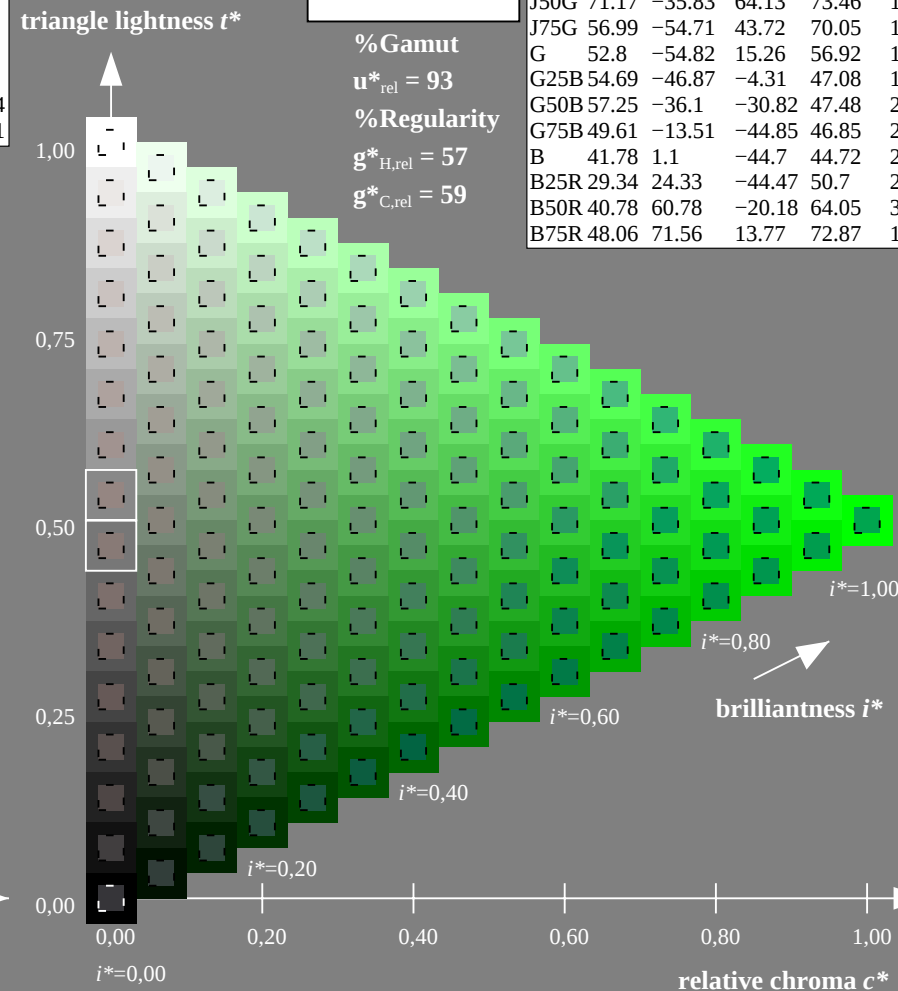
$$\mathbf{u}_{\text{rel}}^* = 93$$

## %Regularity

$$g^*_{H_{rel}} = 57$$
$$\mathbf{g}_{\text{rel}}^* = 59$$

ORS18; adapted (a) CIELAB data

|      | $L^a = L^a_a$ | $d^a = d^a_a$ | $b^a = b^a_a$ | $C^a_{ab,a}$ | $n^a_{ab,a}$ |
|------|---------------|---------------|---------------|--------------|--------------|
| R    | 48.0          | 68.58         | 31.54         | 75.48        | 25           |
| R25J | 50.11         | 61.52         | 52.63         | 80.96        | 41           |
| R50J | 62.87         | 38.77         | 65.02         | 75.71        | 59           |
| R75J | 74.87         | 17.37         | 76.69         | 78.63        | 77           |
| J    | 86.19         | -2.8          | 87.69         | 87.73        | 92           |
| J25G | 84.01         | -18.73        | 82.6          | 84.7         | 103          |
| J50G | 71.17         | -35.83        | 64.13         | 73.46        | 119          |
| J75G | 56.99         | -54.71        | 43.72         | 70.05        | 141          |
| G    | 52.8          | -54.82        | 15.26         | 56.92        | 164          |
| G25B | 54.69         | -46.87        | -4.31         | 47.08        | 185          |
| G50B | 57.25         | -36.1         | -30.82        | 47.48        | 220          |
| G75B | 49.61         | -13.51        | -44.85        | 46.85        | 253          |
| B    | 41.78         | 1.1           | -44.7         | 44.72        | 271          |
| B25R | 29.34         | 24.33         | -44.47        | 50.7         | 299          |
| B50R | 40.78         | 60.78         | -20.18        | 64.05        | 342          |
| B75R | 48.06         | 71.56         | 13.77         | 72.87        | 411          |



ZE630-7F, 16 step scales for constant CIELAB hue 151/360 = 0.419 (right)

input: *rgb / cmy0* set(*rgb/cmyk*)color  
output: no change compared to input

BAM registration: 20071001-ZE6310/L63E00FA.PS/.TXT    BAM material: code=rha4ta  
application for evaluation and measurement of printer or monitor systems



Input: Colorimetric Offset Reflective System ORS18

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

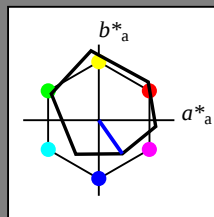
$lab^*tch$  and  $lab^*nch$

D65: hue V

LCH\*Ma: 26 54 305

olv\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

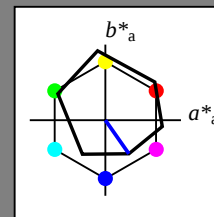
$lab^*tch$  and  $lab^*nch$

D65: hue V

LCH\*Ma: 26 54 305

olv\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 48.0        | 68.58   | 31.54   | 75.48        | 25           |
| R25J | 50.11       | 61.52   | 52.63   | 80.96        | 41           |
| R50J | 62.87       | 38.77   | 65.02   | 75.71        | 59           |
| R75J | 74.87       | 17.37   | 76.69   | 78.63        | 77           |
| J    | 86.19       | -2.8    | 87.69   | 87.73        | 92           |
| J25G | 84.01       | -18.73  | 82.6    | 84.7         | 103          |
| J50G | 71.17       | -35.83  | 64.13   | 73.46        | 119          |
| J75G | 56.99       | -54.71  | 43.72   | 70.05        | 141          |
| G    | 52.8        | -54.82  | 15.26   | 56.92        | 164          |
| G25B | 54.69       | -46.87  | -4.31   | 47.08        | 185          |
| G50B | 57.25       | -36.1   | -30.82  | 47.48        | 220          |
| G75B | 49.61       | -13.51  | -44.85  | 46.85        | 253          |
| B    | 41.78       | 1.1     | -44.7   | 44.72        | 271          |
| B25R | 29.34       | 24.33   | -44.47  | 50.7         | 299          |
| B50R | 40.78       | 60.78   | -20.18  | 64.05        | 342          |
| B75R | 48.06       | 71.56   | 13.77   | 72.87        | 11           |

triangle lightness  $t^*$

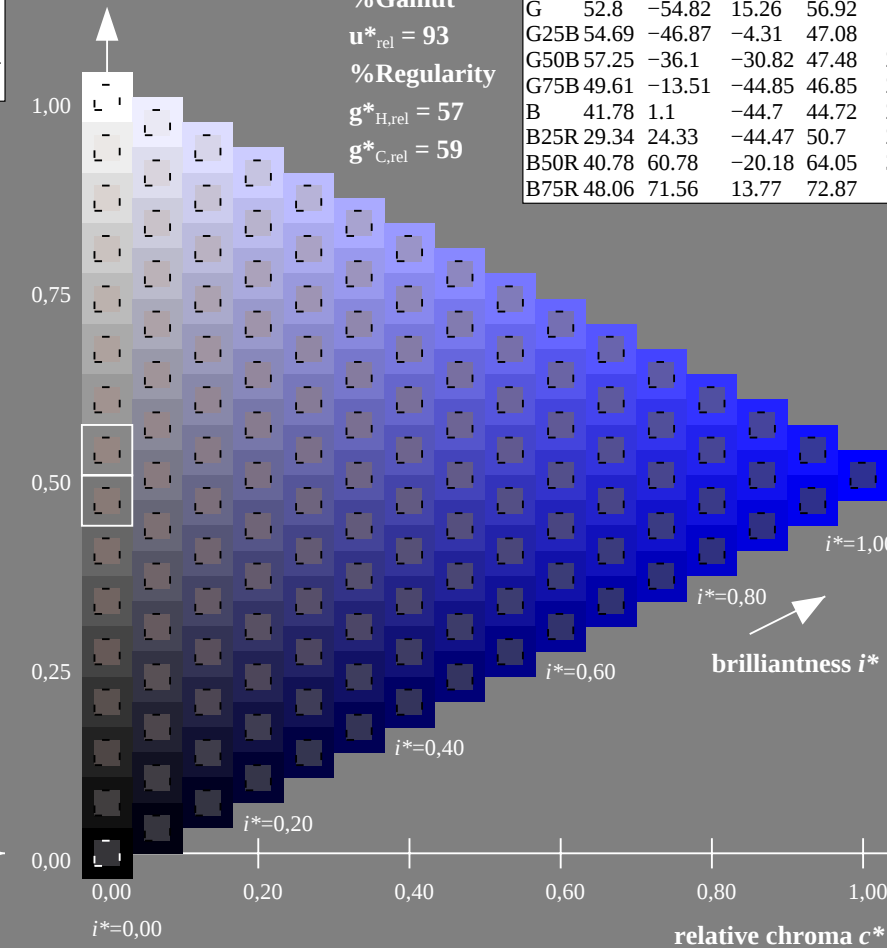
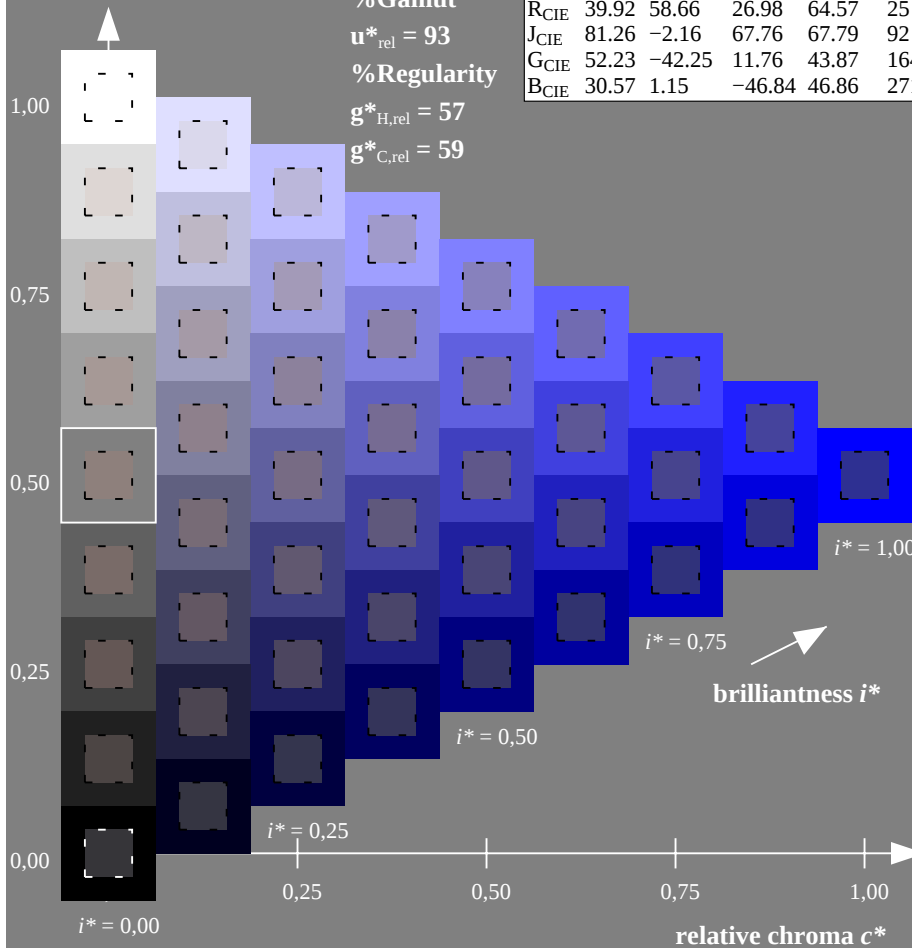
%Gamut

$u^*_{rel} = 93$

%Regularity

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

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



ZE630-7F, 9 step scales for constant CIELAB hue 305/360 = 0.847 (left)

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ZE630-7F, 16 step scales for constant CIELAB hue 305/360 = 0.847 (right)

BAM-test chart ZE63; Colorimetric systems, Page 5/10

D65: 9 and 16 step colour scales for 10 hues

input:  $rgb / cmY0 set(rgb/cmyk)color$

output: no change compared to input

See for similar files: <http://www.ps.bam.de/ZE63/>; [www.ps.bam.de/ZE.HTM](http://www.ps.bam.de/ZE.HTM)  
Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1, CIELAB

BAM registration: 20071001-ZE63/10L/L63E00FA.PS/.TXT BAM material: code=rhdata  
application for evaluation and measurement of printer or monitor systems

Input: Colorimetric Offset Reflective System ORS18

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

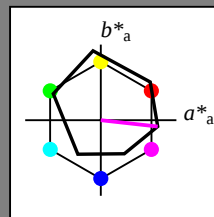
$lab^*tch$  and  $lab^*nch$

D65: hue M

LCH\*Ma: 48 76 354

olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

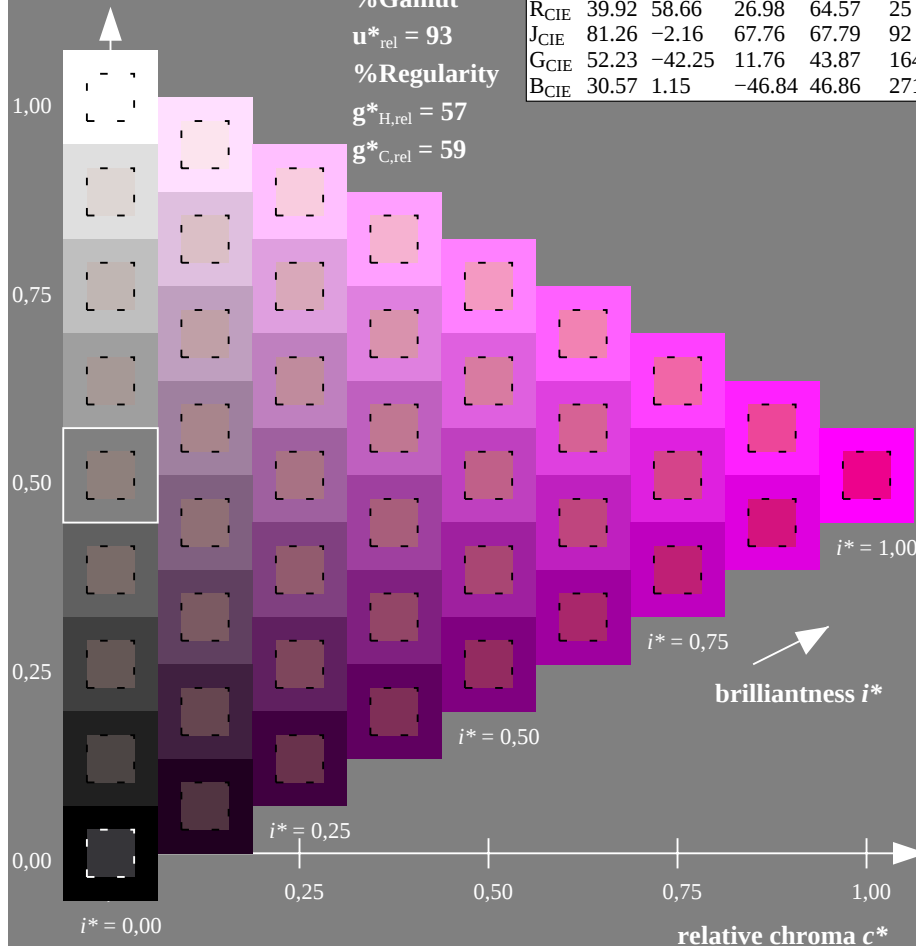
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |



Output: Colorimetric Offset Reflective System ORS18

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

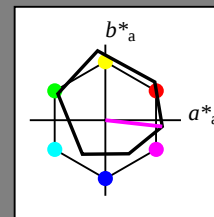
$lab^*tch$  and  $lab^*nch$

D65: hue M

LCH\*Ma: 48 76 354

olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

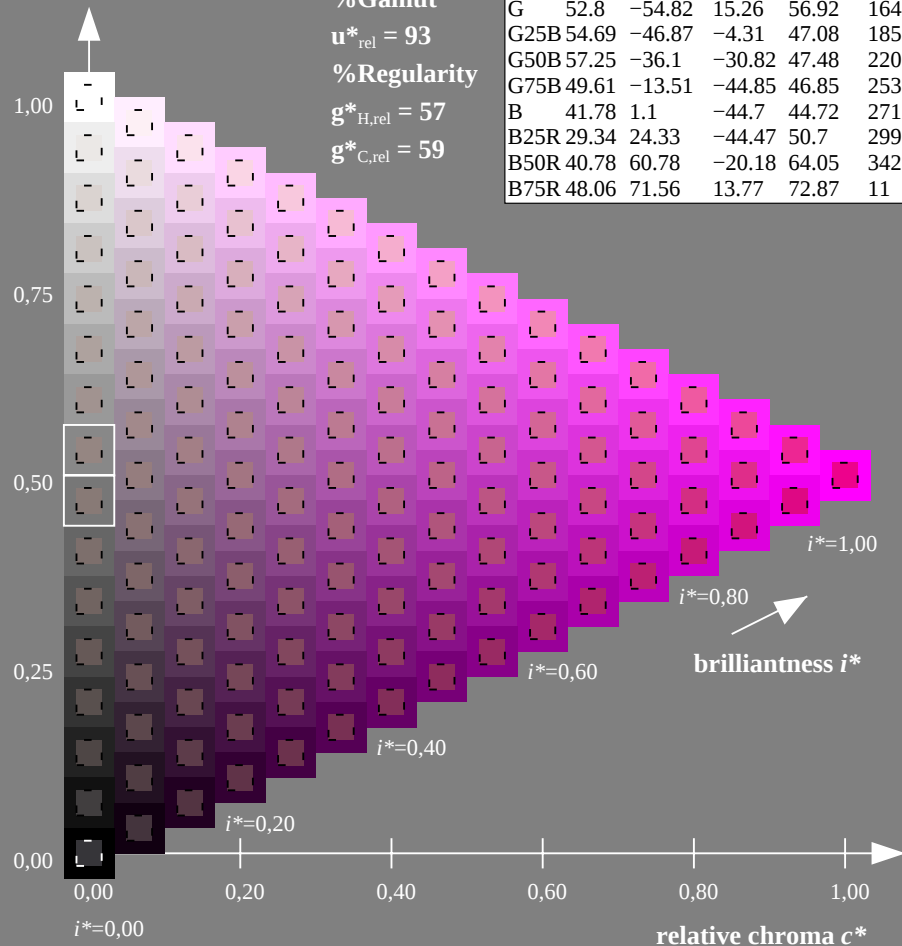
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 48.0        | 68.58   | 31.54   | 75.48        | 25           |
| R25J | 50.11       | 61.52   | 52.63   | 80.96        | 41           |
| R50J | 62.87       | 38.77   | 65.02   | 75.71        | 59           |
| R75J | 74.87       | 17.37   | 76.69   | 78.63        | 77           |
| J    | 86.19       | -2.8    | 87.69   | 87.73        | 92           |
| J25G | 84.01       | -18.73  | 82.6    | 84.7         | 103          |
| J50G | 71.17       | -35.83  | 64.13   | 73.46        | 119          |
| J75G | 56.99       | -54.71  | 43.72   | 70.05        | 141          |
| G    | 52.8        | -54.82  | 15.26   | 56.92        | 164          |
| G25B | 54.69       | -46.87  | -4.31   | 47.08        | 185          |
| G50B | 57.25       | -36.1   | -30.82  | 47.48        | 220          |
| G75B | 49.61       | -13.51  | -44.85  | 46.85        | 253          |
| B    | 41.78       | 1.1     | -44.7   | 44.72        | 271          |
| B25R | 29.34       | 24.33   | -44.47  | 50.7         | 299          |
| B50R | 40.78       | 60.78   | -20.18  | 64.05        | 342          |
| B75R | 48.06       | 71.56   | 13.77   | 72.87        | 11           |



ZE630-7F, 9 step scales for constant CIELAB hue 354/360 = 0.982 (left)

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ZE630-7F, 16 step scales for constant CIELAB hue 354/360 = 0.982 (right)

BAM-test chart ZE63; Colorimetric systems, Page 6/10

D65: 9 and 16 step colour scales for 10 hues

input:  $rgb / cmY0 set(rgb/cmyk)color$

output: no change compared to input

See for similar files: <http://www.ps.bam.de/ZE63/>; [www.ps.bam.de/ZE63/](http://www.ps.bam.de/ZE63/)  
Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1, CIELAB

BAM registration: 20071001-ZE63/10L/L63E00FA.PS/.TXT BAM material: code=rh4ta  
application for evaluation and measurement of printer or monitor systems

Input: Colorimetric Offset Reflective System ORS18

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

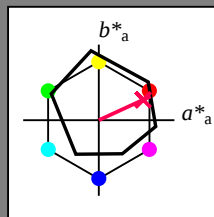
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 48 75 25

olv\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

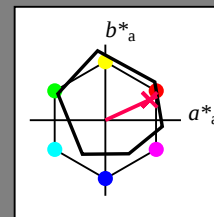
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 48 75 25

olv\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

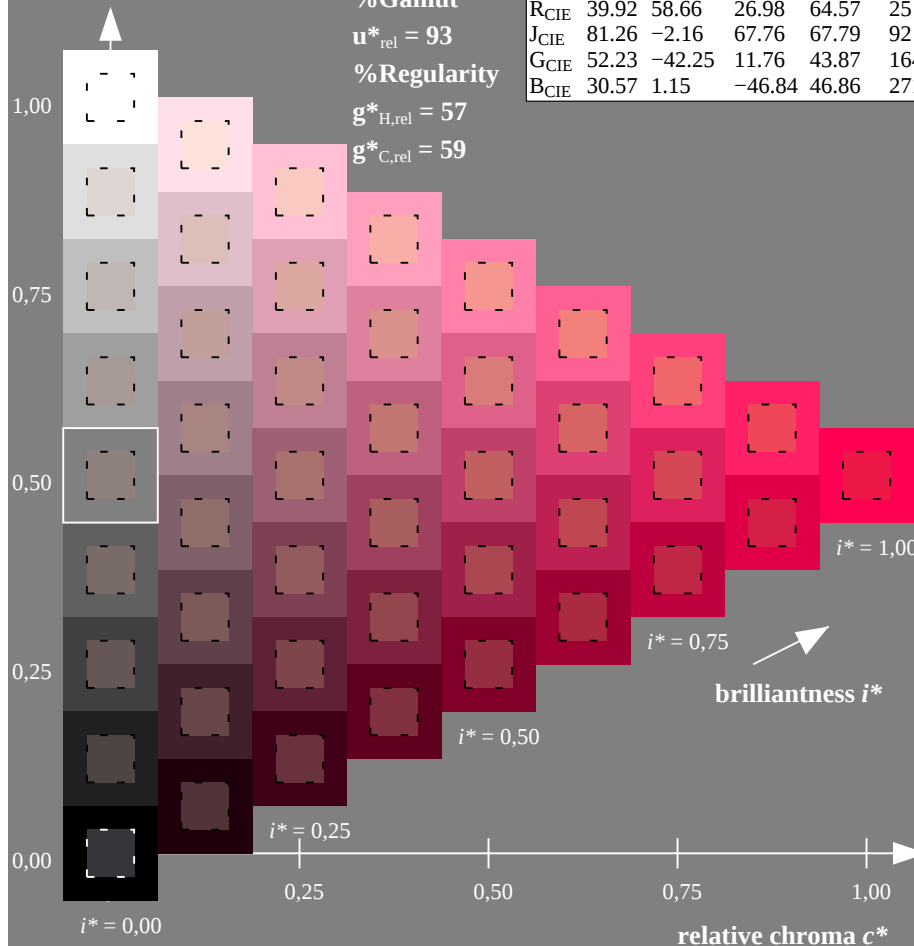
%Regularity

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

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

ORS18; adapted (a) CIELAB data

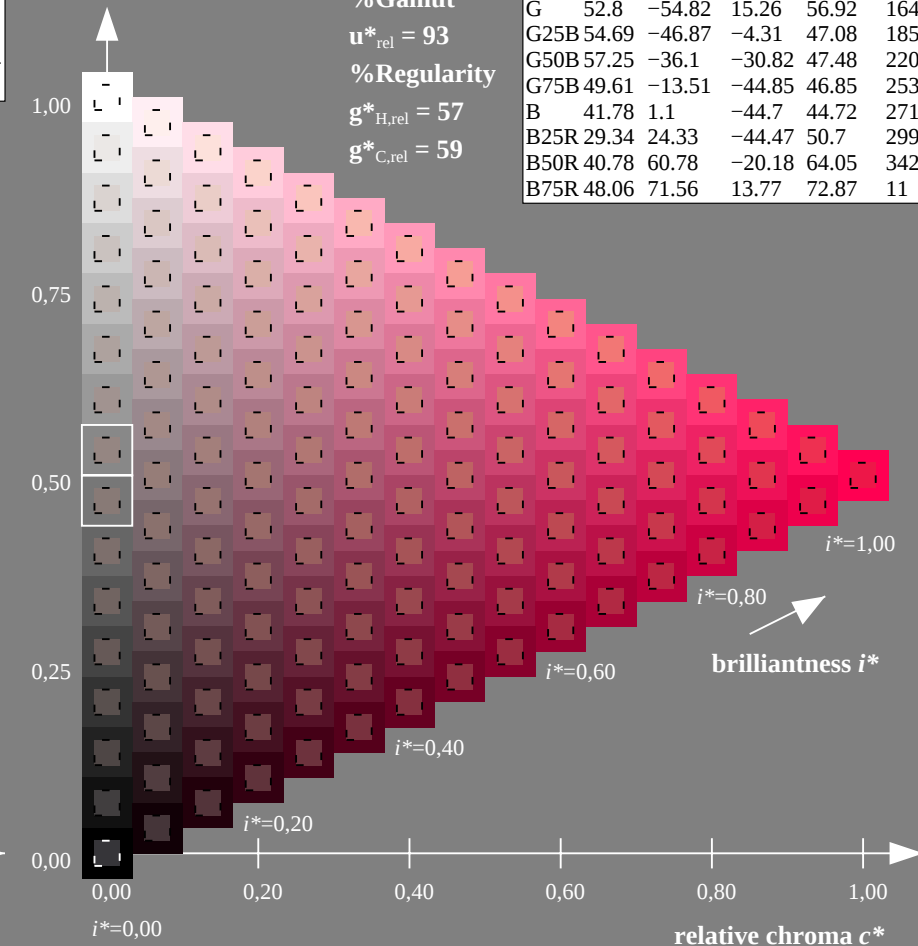
|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 48.0        | 68.58   | 31.54   | 75.48        | 25           |
| R25J | 50.11       | 61.52   | 52.63   | 80.96        | 41           |
| R50J | 62.87       | 38.77   | 65.02   | 75.71        | 59           |
| R75J | 74.87       | 17.37   | 76.69   | 78.63        | 77           |
| J    | 86.19       | -2.8    | 87.69   | 87.73        | 92           |
| J25G | 84.01       | -18.73  | 82.6    | 84.7         | 103          |
| J50G | 71.17       | -35.83  | 64.13   | 73.46        | 119          |
| J75G | 56.99       | -54.71  | 43.72   | 70.05        | 141          |
| G    | 52.8        | -54.82  | 15.26   | 56.92        | 164          |
| G25B | 54.69       | -46.87  | -4.31   | 47.08        | 185          |
| G50B | 57.25       | -36.1   | -30.82  | 47.48        | 220          |
| G75B | 49.61       | -13.51  | -44.85  | 46.85        | 253          |
| B    | 41.78       | 1.1     | -44.7   | 44.72        | 271          |
| B25R | 29.34       | 24.33   | -44.47  | 50.7         | 299          |
| B50R | 40.78       | 60.78   | -20.18  | 64.05        | 342          |
| B75R | 48.06       | 71.56   | 13.77   | 72.87        | 11           |



ZE630-7F, 9 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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BAM-test chart ZE63; Colorimetric systems, Page 7/10  
D65: 9 and 16 step colour scales for 10 hues



ZE630-7F, 16 step scales for constant CIELAB hue 25/360 = 0.069 (right)

input:  $rgb / cmY0 set(rgb/cmyk)color$   
output: no change compared to input

output: no change compared to input

BAM registration: 20071001-ZE6310I/L63E00FA.PS/.TXT    BAM material: code=rha4ta  
application for evaluation and measurement of printer or monitor systems

BAM material: code=rh4ta

See for similar files: <http://www.ps.bam.de/ZE63/>; [www.ps.bam.de/ZE.HTM](http://www.ps.bam.de/ZE.HTM)  
Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1, CIELAB

BAM registration: 20071001-ZE63/10L/L63E00FA.PS/.TXT BAM material: code=rh4ta  
application for evaluation and measurement of printer or monitor systems

Input: Colorimetric Offset Reflective System ORS18

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

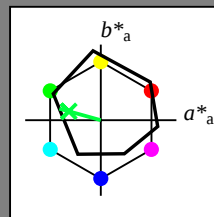
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 53 57 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

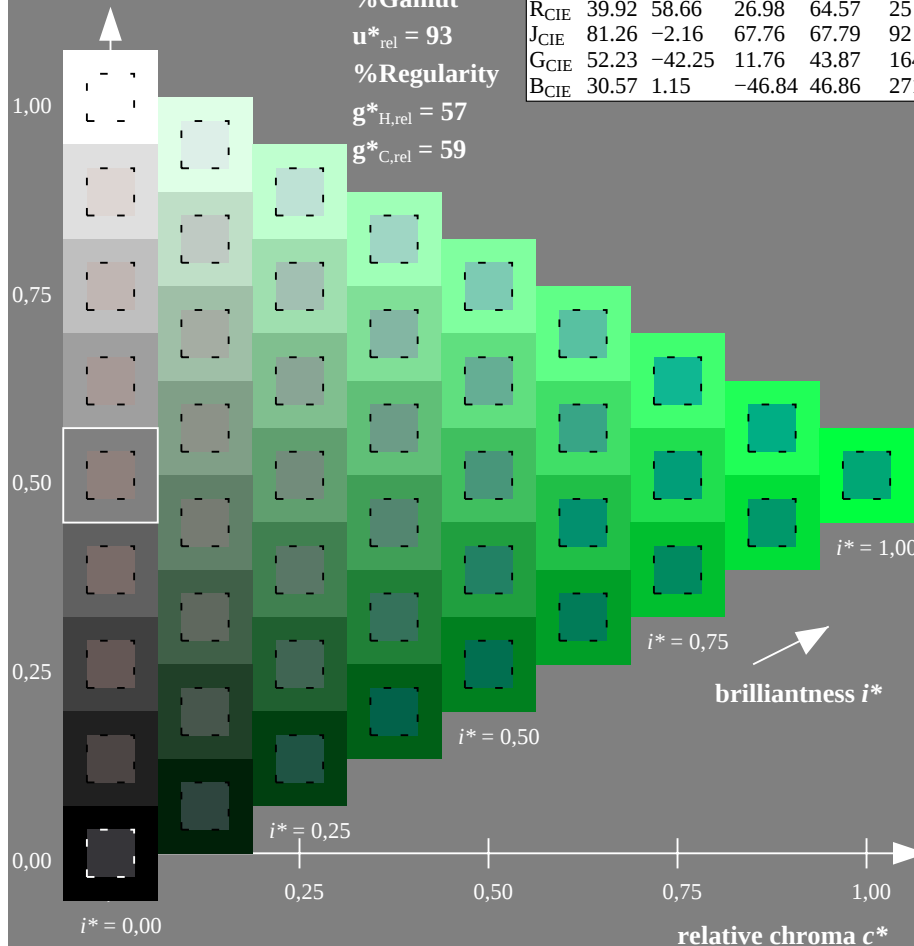
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>  | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |



ZE630-7F, 9 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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BAM-test chart ZE63; Colorimetric systems, Page 9/10  
D65: 9 and 16 step colour scales for 10 hues

Output: Colorimetric Offset Reflective System ORS18

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

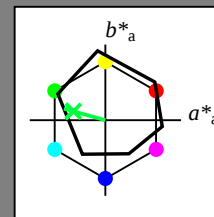
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 53 57 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

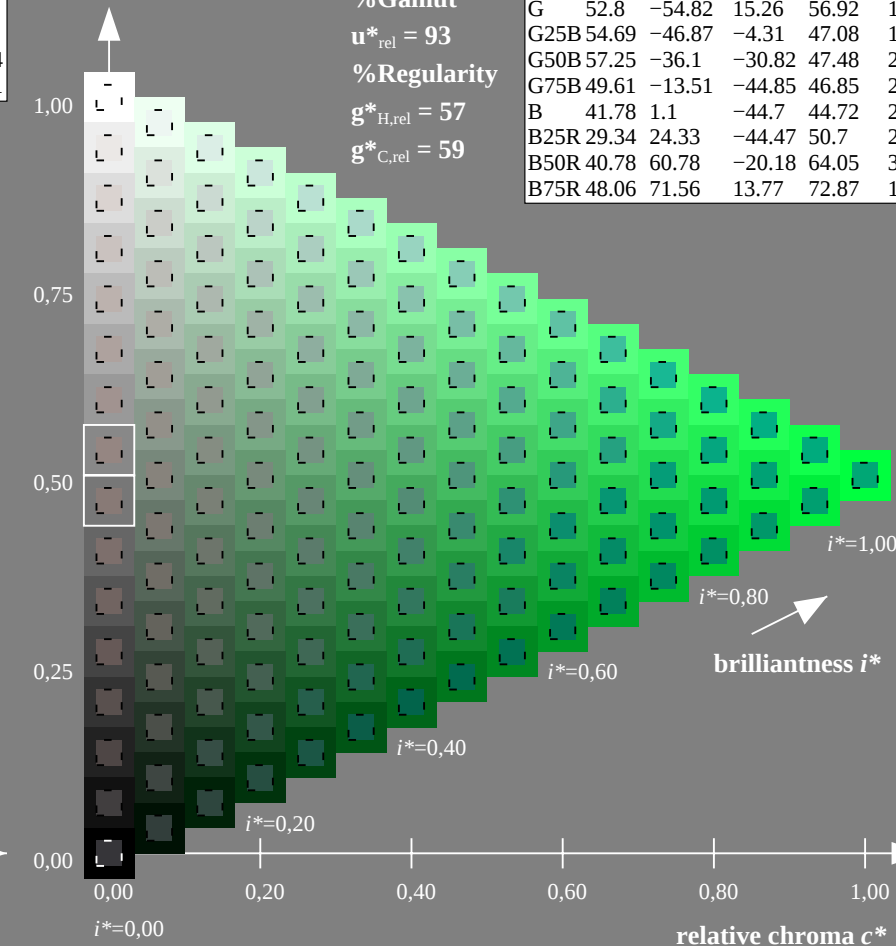
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 48.0        | 68.58   | 31.54   | 75.48        | 25           |
| R25J | 50.11       | 61.52   | 52.63   | 80.96        | 41           |
| R50J | 62.87       | 38.77   | 65.02   | 75.71        | 59           |
| R75J | 74.87       | 17.37   | 76.69   | 78.63        | 77           |
| J    | 86.19       | -2.8    | 87.69   | 87.73        | 92           |
| J25G | 84.01       | -18.73  | 82.6    | 84.7         | 103          |
| J50G | 71.17       | -35.83  | 64.13   | 73.46        | 119          |
| J75G | 56.99       | -54.71  | 43.72   | 70.05        | 141          |
| G    | 52.8        | -54.82  | 15.26   | 56.92        | 164          |
| G25B | 54.69       | -46.87  | -4.31   | 47.08        | 185          |
| G50B | 57.25       | -36.1   | -30.82  | 47.48        | 220          |
| G75B | 49.61       | -13.51  | -44.85  | 46.85        | 253          |
| B    | 41.78       | 1.1     | -44.7   | 44.72        | 271          |
| B25R | 29.34       | 24.33   | -44.47  | 50.7         | 299          |
| B50R | 40.78       | 60.78   | -20.18  | 64.05        | 342          |
| B75R | 48.06       | 71.56   | 13.77   | 72.87        | 11           |



ZE630-7F, 16 step scales for constant CIELAB hue 164/360 = 0.457 (right)

input:  $rgb / cmY0 set(rgb/cmyk)color$   
output: no change compared to input

See for similar files: <http://www.ps.bam.de/ZE63>; [www.ps.bam.de/ZE.HTM](http://www.ps.bam.de/ZE.HTM)  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=1, CIELAB

BAM registration: 20071001-ZE6310/L63E00FA.PS/.TXT    BAM material: code=rh4ta  
application for evaluation and measurement of printer or monitor systems

**Input: Colorimetric Offset Reflective System ORS18**

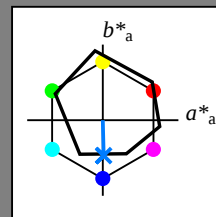
for hue  $h^* = lab^*h = 271/360 = 0.754$

**lab\*tch and lab\*nch**

**D65: hue B**

LCH\*Ma: 42 45 271

olv\*Ma: 0.0 0.49 1.0



## %Gamut

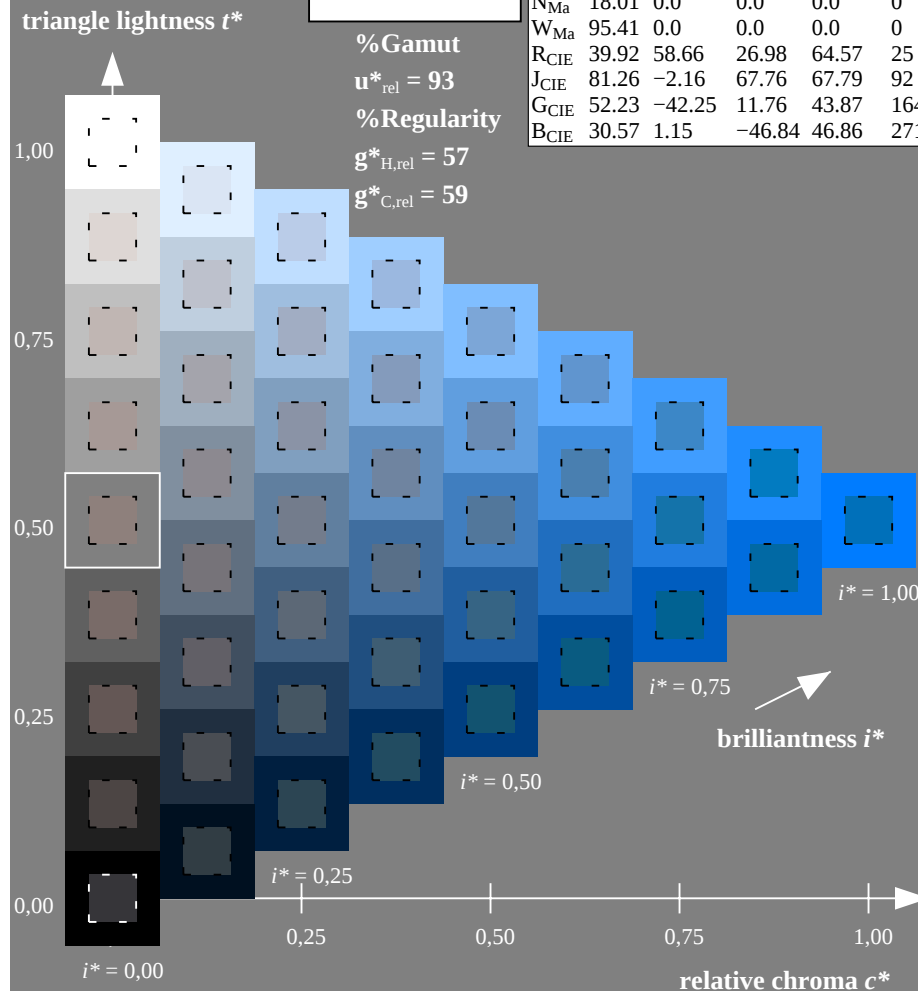
$$u_{rel}^* = 93$$

### %Regularity

$$g^*_{H_{rel}} = 57$$

■  $g^*_{C_{rel}} = 59$

| ORS18; adapted (a) |               | CIELAB data |         |              |              |
|--------------------|---------------|-------------|---------|--------------|--------------|
|                    | $L^* = L_a^*$ | $a^*_a$     | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| O <sub>Ma</sub>    | 47.94         | 65.39       | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>    | 90.37         | -10.26      | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>    | 50.9          | -62.83      | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>    | 58.62         | -30.34      | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>    | 25.72         | 31.1        | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>    | 48.13         | 75.28       | -8.36   | 75.74        | 354          |
| N <sub>Ma</sub>    | 18.01         | 0.0         | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>    | 95.41         | 0.0         | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub>   | 39.92         | 58.66       | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub>   | 81.26         | -2.16       | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub>   | 52.23         | -42.25      | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub>   | 30.57         | 1.15        | -46.84  | 46.86        | 271          |



ZE630-7F, 9 step scales for constant CIELAB hue 271/360 = 0.754 (left)

BAM-test chart ZE63: Colorimetric systems. Page 10/10

D65: 9 and 16 step colour scales for 10 hues

### Output: Colorimetric Offset Reflective System ORS18

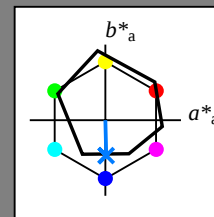
for hue  $h^* = lab^*h = 271/360 = 0.754$

**lab\*tch and lab\*nch**

D65: hue B

**LCH\*Ma: 42 45 271**

olv\*Ma: 0.0 0.49 1.0



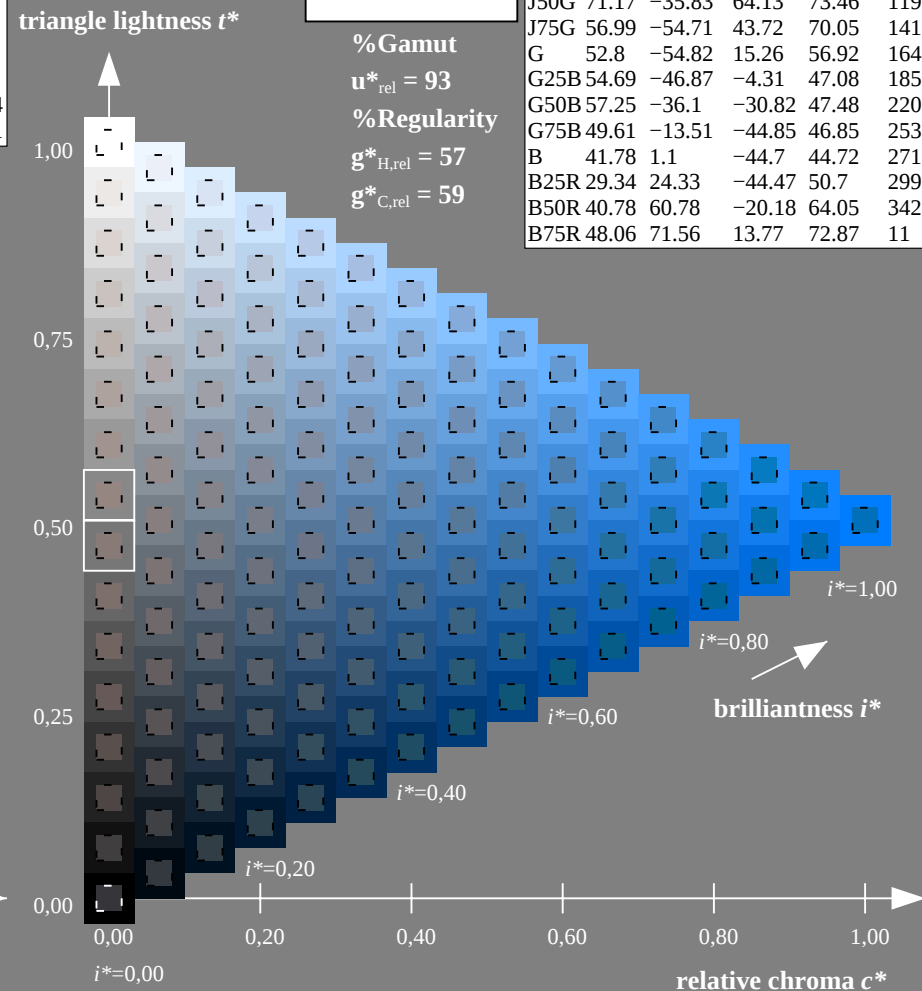
## % Gamut

$$\mathbf{u}_{\text{rel}}^* = 93$$

## %Regularity

$$\mathbf{g}_{\text{H rel}}^* = 5'$$
$$\mathbf{g}_{\text{rel}}^* = 59$$

| ORS18; adapted (a) |         | CIELAB data |         |              |              |
|--------------------|---------|-------------|---------|--------------|--------------|
|                    | $L^*_a$ | $a^*_a$     | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| R                  | 48.0    | 68.58       | 31.54   | 75.48        | 25           |
| R25J               | 50.11   | 61.52       | 52.63   | 80.96        | 41           |
| R50J               | 62.87   | 38.77       | 65.02   | 75.71        | 59           |
| R75J               | 74.87   | 17.37       | 76.69   | 78.63        | 77           |
| J                  | 86.19   | -2.8        | 87.69   | 87.73        | 92           |
| J25G               | 84.01   | -18.73      | 82.6    | 84.7         | 103          |
| J50G               | 71.17   | -35.83      | 64.13   | 73.46        | 119          |
| J75G               | 56.99   | -54.71      | 43.72   | 70.05        | 141          |
| G                  | 52.8    | -54.82      | 15.26   | 56.92        | 164          |
| G25B               | 54.69   | -46.87      | -4.31   | 47.08        | 185          |
| G50B               | 57.25   | -36.1       | -30.82  | 47.48        | 220          |
| G75B               | 49.61   | -13.51      | -44.85  | 46.85        | 253          |
| B                  | 41.78   | 1.1         | -44.7   | 44.72        | 271          |
| B25R               | 29.34   | 24.33       | -44.47  | 50.7         | 299          |
| B50R               | 40.78   | 60.78       | -20.18  | 64.05        | 342          |
| B75R               | 48.06   | 71.56       | 13.77   | 72.87        | 411          |



ZE630-7F, 16 step scales for constant CIELAB hue  $271/360 = 0.754$  (right)

```
input: rqb / cmv0 set(rqb/cmvk)color
```

output: no change compared to input