

Input: Colorimetric Offset Reflective System ORS18

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

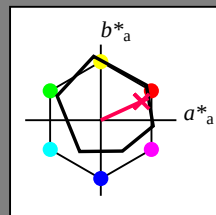
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 52 69 25

olv\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

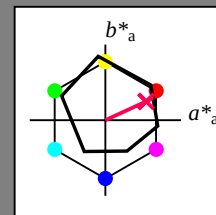
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 52 69 25

olv\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

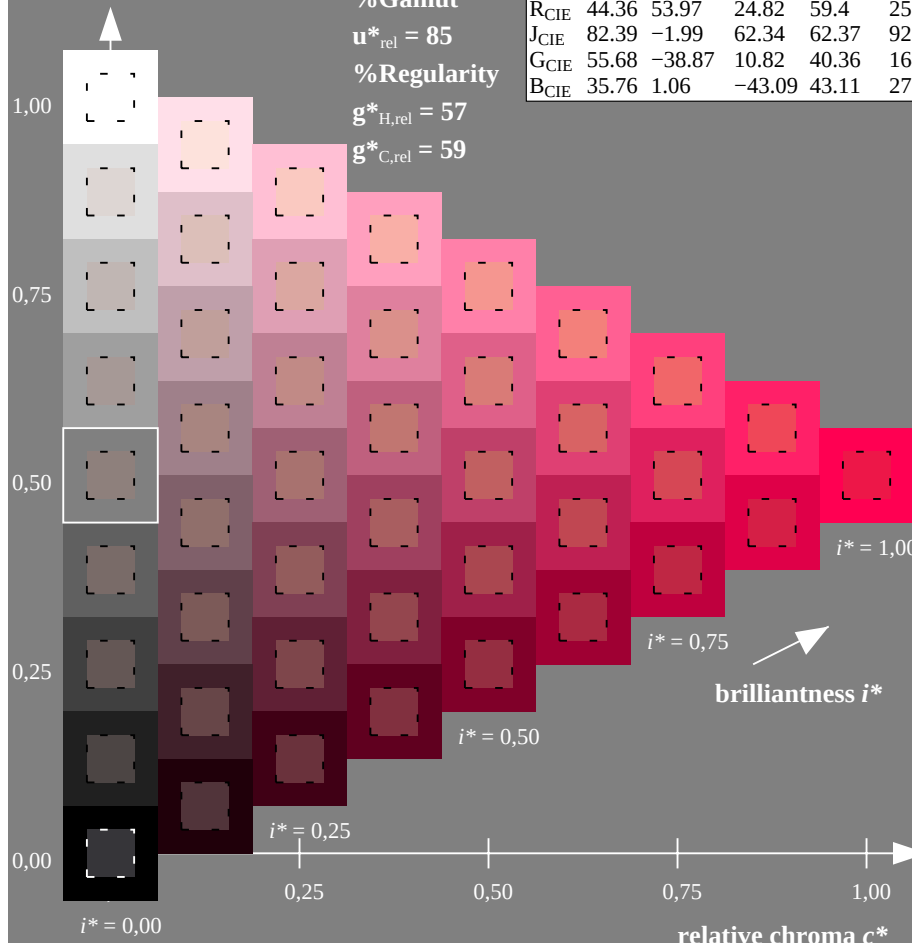
%Gamut

$u^*_{rel} = 85$

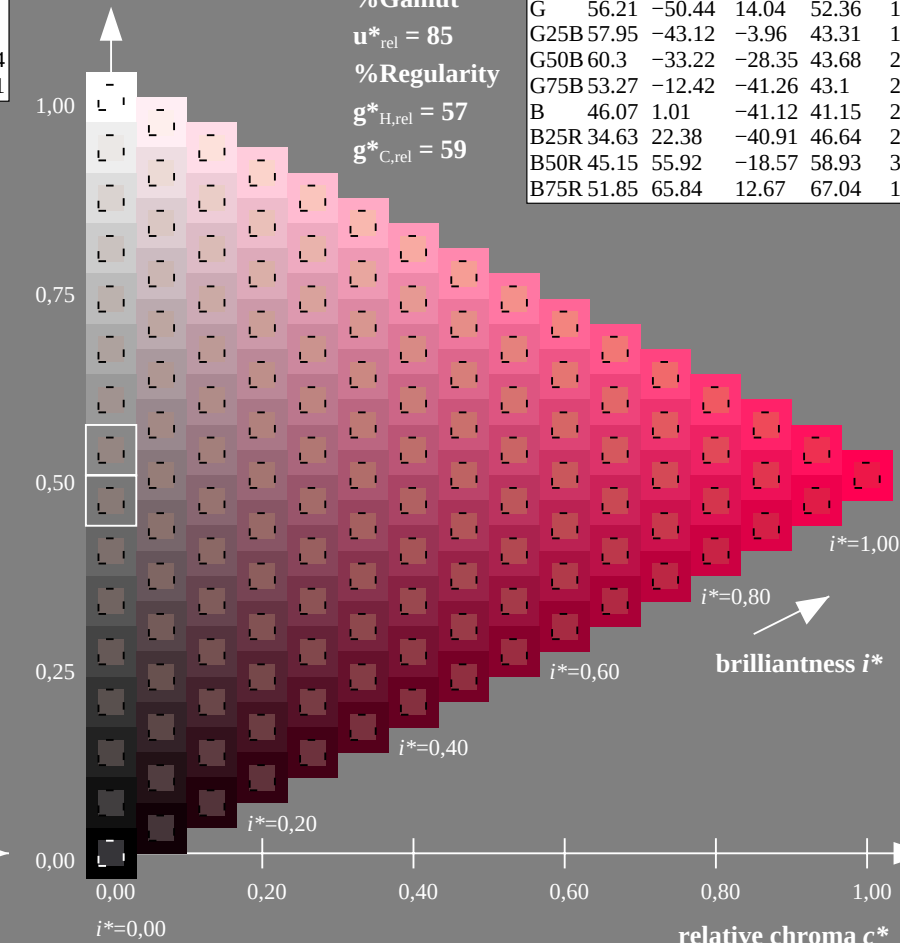
%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 25/360 = 0.069 (left)



ZE920-7F, 16 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 41/360 = 0.113$

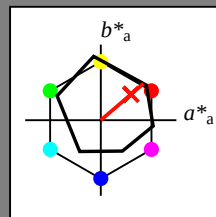
$lab^*tch$  and  $lab^*nch$

D65: hue R25J

LCH\*Ma: 54 74 41

olv\*Ma: 1.0 0.05 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 41/360 = 0.113$

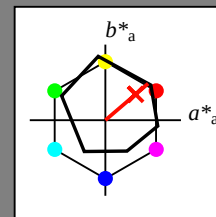
$lab^*tch$  and  $lab^*nch$

D65: hue R25J

LCH\*Ma: 54 74 41

olv\*Ma: 1.0 0.05 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

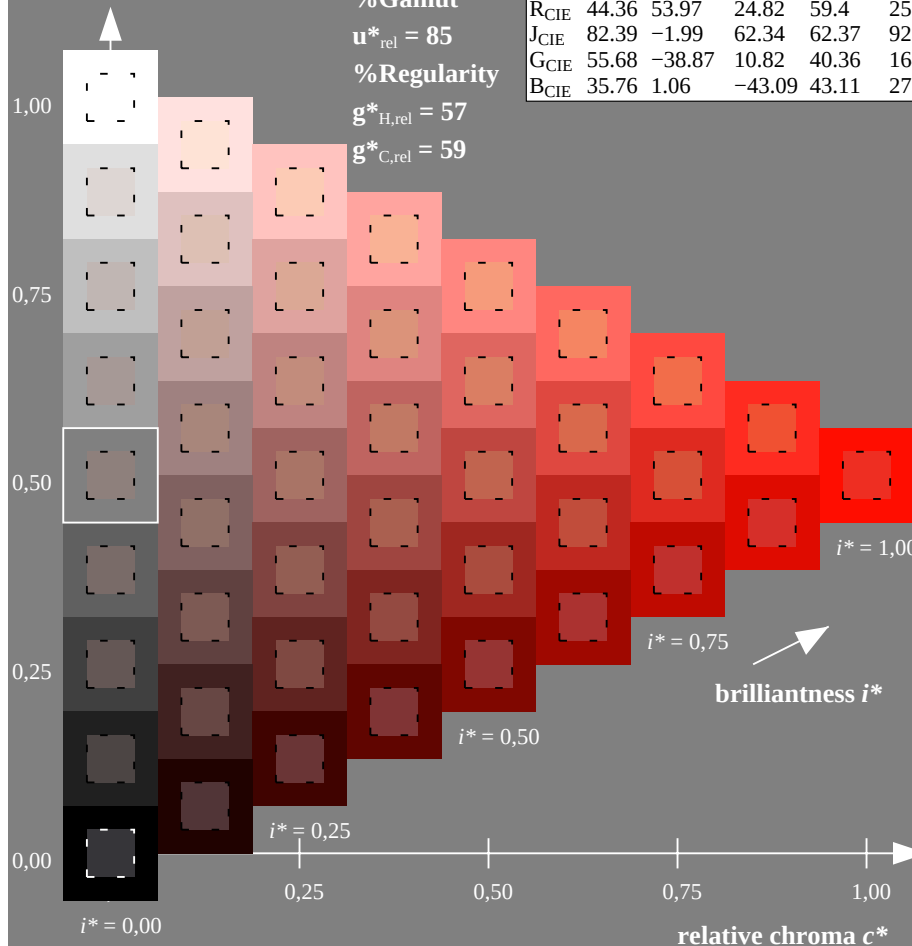
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 41/360 = 0.113 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 41/360 = 0.113 (right)

BAM-test chart ZE92; Colorimetric systems, Page 2/96

D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 59/360 = 0.164$

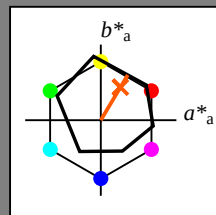
$lab^*tch$  and  $lab^*nch$

D65: hue R50J

LCH\*Ma: 65 70 59

olv\*Ma: 1.0 0.35 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 59/360 = 0.164$

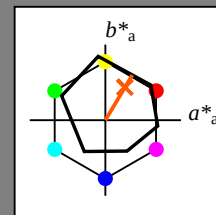
$lab^*tch$  and  $lab^*nch$

D65: hue R50J

LCH\*Ma: 65 70 59

olv\*Ma: 1.0 0.35 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

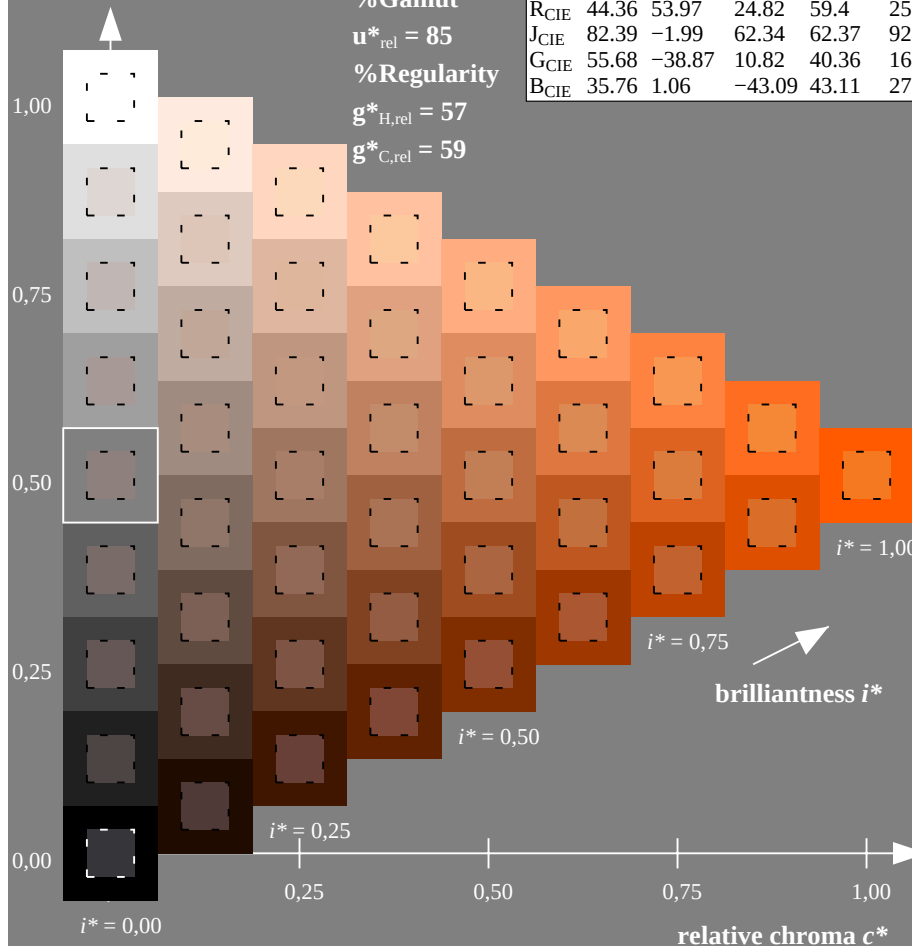
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 59/360 = 0.164 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 59/360 = 0.164 (right)

BAM-test chart ZE92; Colorimetric systems, Page 3/96

D65: 9 and 16 step colour scales for 16 elementary hues

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

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 77/360 = 0.215$

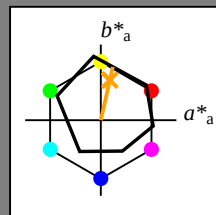
$lab^*tch$  and  $lab^*nch$

D65: hue R75J

LCH\*Ma: 77 72 77

olv\*Ma: 1.0 0.63 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 77/360 = 0.215$

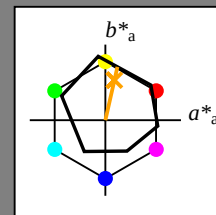
$lab^*tch$  and  $lab^*nch$

D65: hue R75J

LCH\*Ma: 77 72 77

olv\*Ma: 1.0 0.63 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

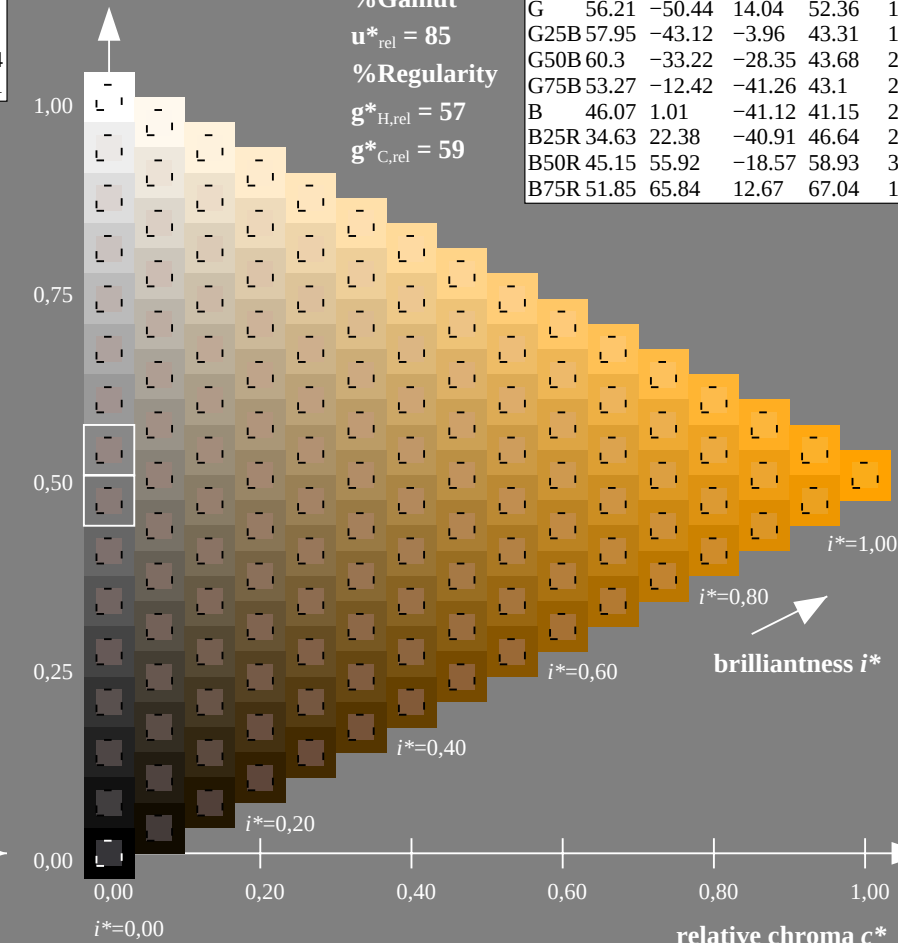
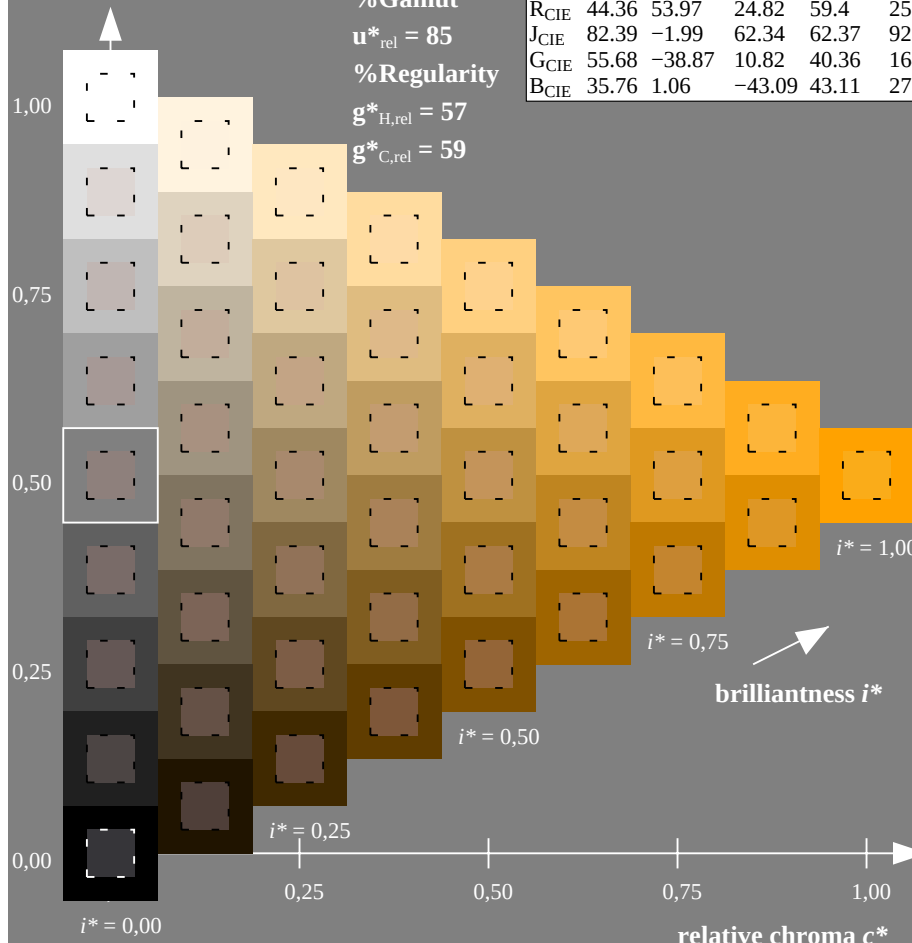
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 77/360 = 0.215 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 77/360 = 0.215 (right)

BAM-test chart ZE92; Colorimetric systems, Page 4/96

D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

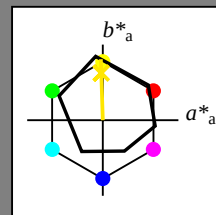
**for hue  $h^* = lab^*h = 92/360 = 0.255$**

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

**D65: hue J**

**LCH\*Ma: 87 81 92**

**olv\*Ma: 1.0 0.9 0.0**



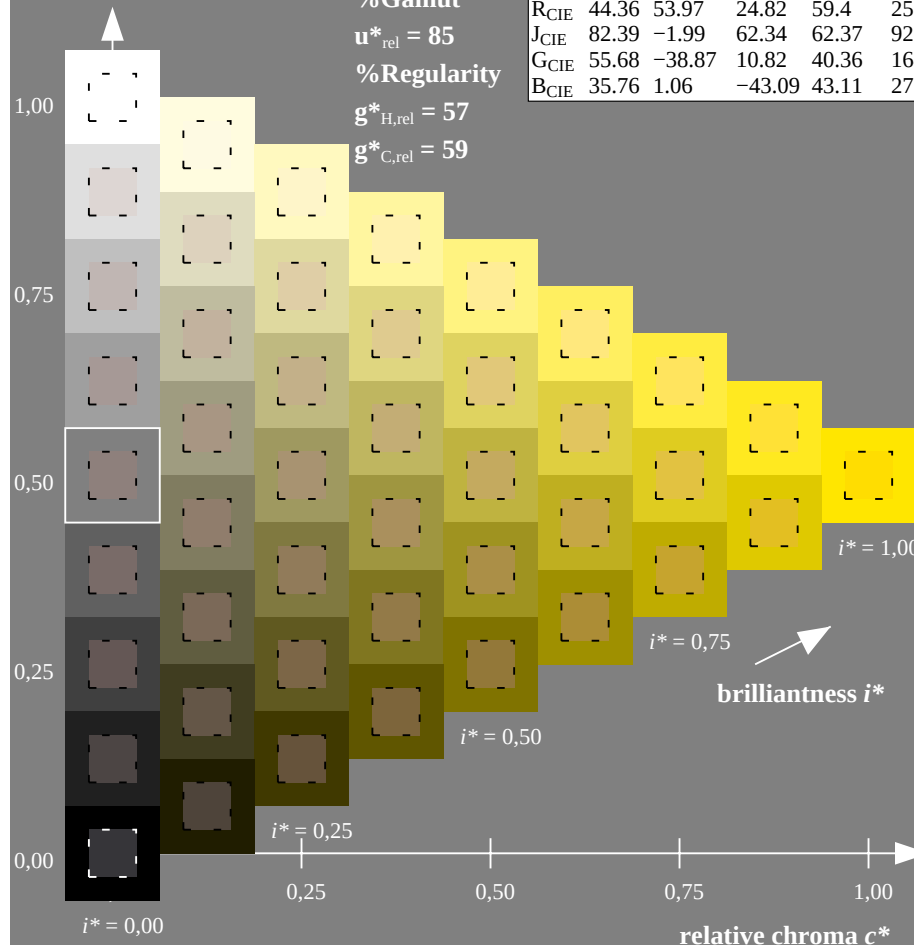
## %Gamut

$$\mathbf{u}_{rel}^* = 85$$

### %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>                | 51.74         | 60.16   | 46.48   | 76.02        | 38           |  |
| Y <sub>Ma</sub>                | 90.77         | -9.44   | 84.41   | 84.94        | 96           |  |
| L <sub>Ma</sub>                | 54.46         | -57.8   | 32.16   | 66.15        | 151          |  |
| C <sub>Ma</sub>                | 61.56         | -27.91  | -41.41  | 49.95        | 236          |  |
| V <sub>Ma</sub>                | 31.3          | 28.61   | -40.85  | 49.88        | 303          |  |
| M <sub>Ma</sub>                | 51.91         | 69.26   | -7.69   | 69.68        | 354          |  |
| N <sub>Ma</sub>                | 24.2          | 0.0     | 0.0     | 0.0          | 0            |  |
| W <sub>Ma</sub>                | 95.41         | 0.0     | 0.0     | 0.0          | 0            |  |
| R <sub>CIE</sub>               | 44.36         | 53.97   | 24.82   | 59.4         | 25           |  |
| J <sub>CIE</sub>               | 82.39         | -1.99   | 62.34   | 62.37        | 92           |  |
| G <sub>CIE</sub>               | 55.68         | -38.87  | 10.82   | 40.36        | 164          |  |
| B <sub>CIE</sub>               | 35.76         | 1.06    | -43.09  | 43.11        | 271          |  |



ZE920-7F, 9 step scales for constant CIELAB hue 92/360 = 0.255 (left)

BAM-test chart ZE92; Colorimetric systems, Page 5/96  
D65: 9 and 16 step colour scales for 16 elementary hues

### Output: Colorimetric Offset Reflective System ORS18

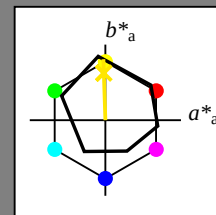
for hue  $h^* = lab^*h = 92/360 = 0.255$

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

D65: hue J

LCH\*Ma: 87 81 92

olv\*Ma: 1.0 0.9 0.0



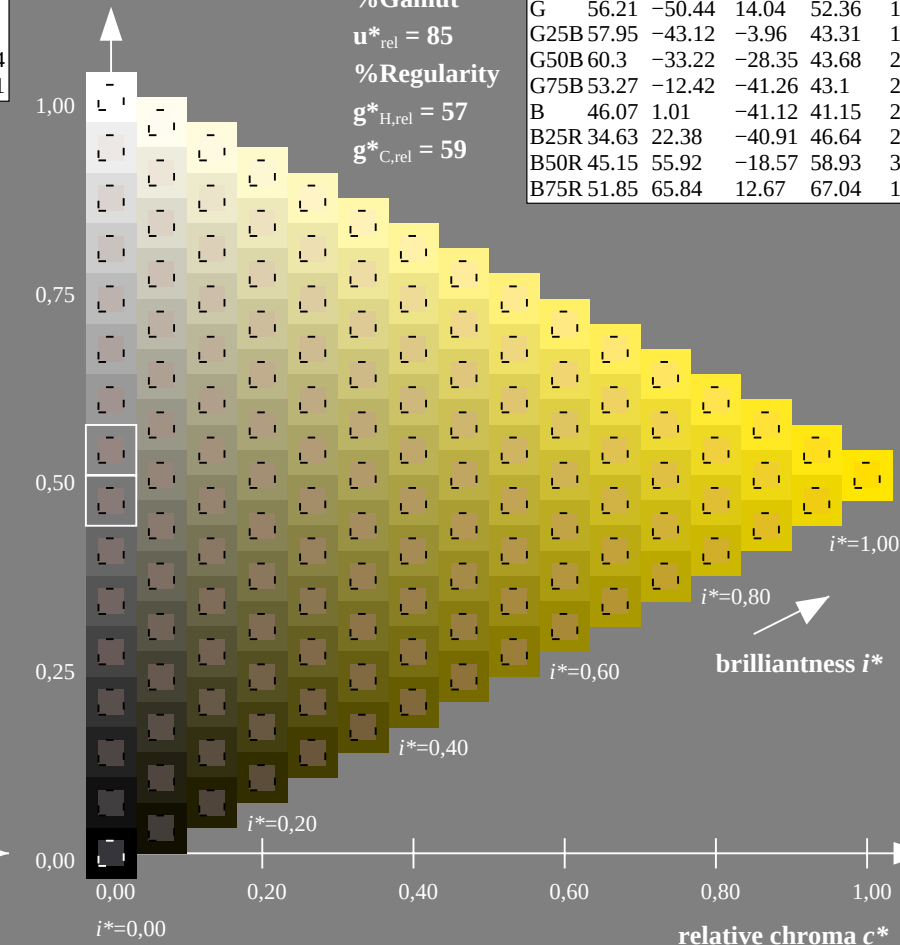
## % Gamut

$$\mathbf{u}_{rel}^* = 85$$

## %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                  | 51.79         | 63.09       | 29.02   | 69.44        | 25           |
| R25J               | 53.73         | 56.6        | 48.42   | 74.48        | 41           |
| R50J               | 65.47         | 35.67       | 59.82   | 69.65        | 59           |
| R75J               | 76.51         | 15.98       | 70.55   | 72.34        | 77           |
| J                  | 86.93         | -2.58       | 80.67   | 80.71        | 92           |
| J25G               | 84.92         | -17.23      | 75.99   | 77.92        | 103          |
| J50G               | 73.11         | -32.96      | 59.0    | 67.58        | 119          |
| J75G               | 60.06         | -50.34      | 40.22   | 64.44        | 141          |
| G                  | 56.21         | -50.44      | 14.04   | 52.36        | 164          |
| G25B               | 57.95         | -43.12      | -3.96   | 43.31        | 185          |
| G50B               | 60.3          | -33.22      | -28.35  | 43.68        | 220          |
| G75B               | 53.27         | -12.42      | -41.26  | 43.1         | 253          |
| B                  | 46.07         | 1.01        | -41.12  | 41.15        | 271          |
| B25R               | 34.63         | 22.38       | -40.91  | 46.64        | 299          |
| B50R               | 45.15         | 55.92       | -18.57  | 58.93        | 342          |
| B75R               | 51.85         | 65.84       | 12.67   | 67.04        | 11           |



ZE920-7F, 16 step scales for constant CIELAB hue 92/360 = 0.255 (right)

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

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 103/360 = 0.286$

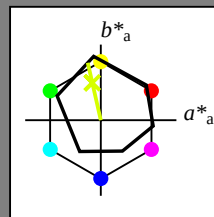
$lab^*tch$  and  $lab^*nch$

D65: hue J25G

LCH\*Ma: 85 78 103

olv\*Ma: 0.84 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

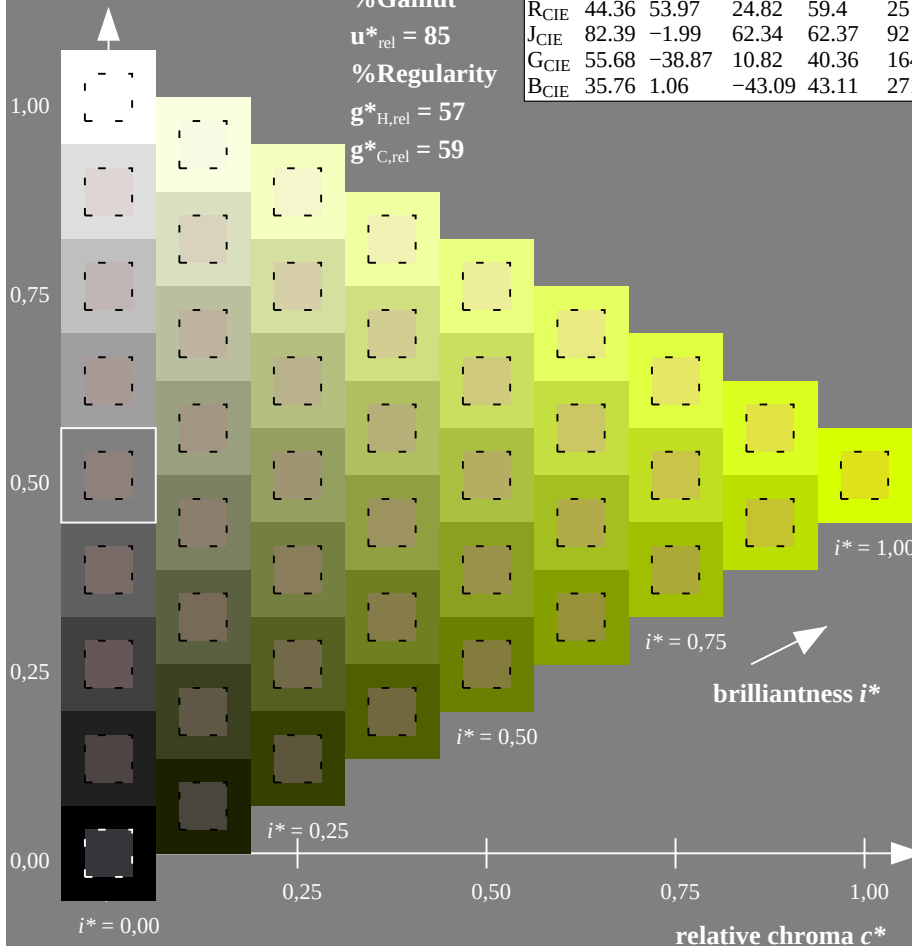
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 103/360 = 0.286$

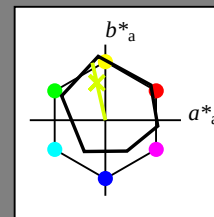
$lab^*tch$  and  $lab^*nch$

D65: hue J25G

LCH\*Ma: 85 78 103

olv\*Ma: 0.84 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

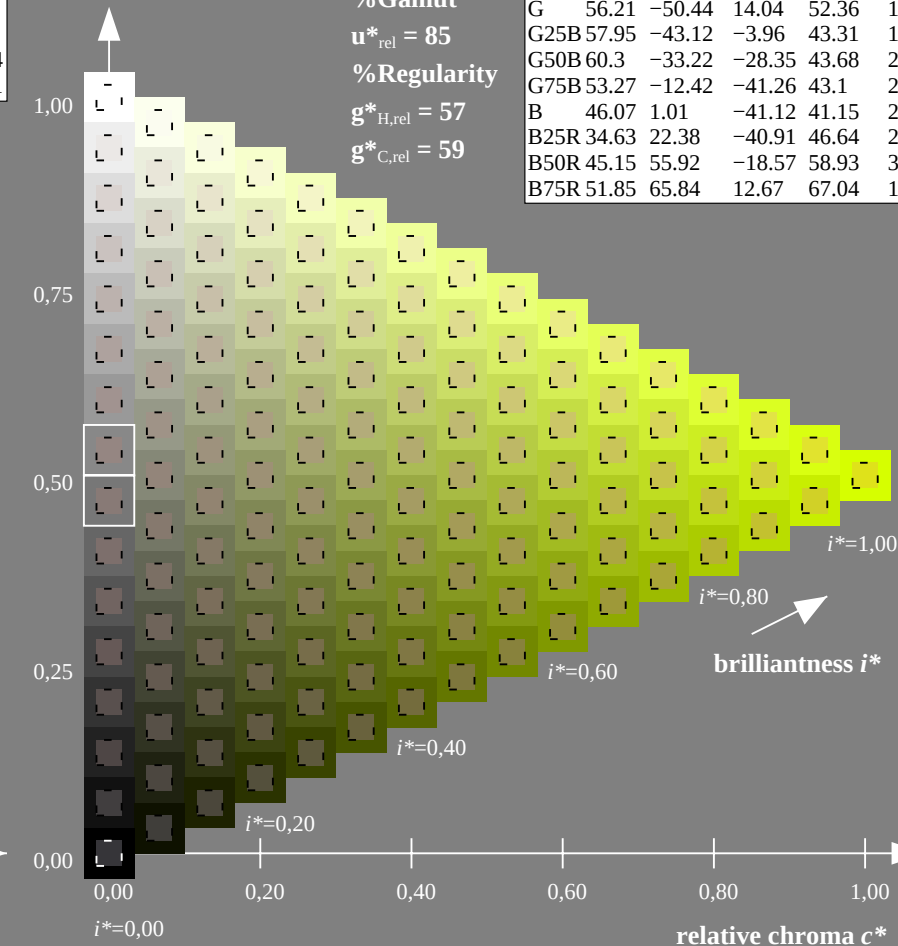
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 9 step scales for constant CIELAB hue 103/360 = 0.286 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 103/360 = 0.286 (right)

BAM-test chart ZE92; Colorimetric systems, Page 6/96

D65: 9 and 16 step colour scales for 16 elementary hues

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

output: no change compared to input



Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 119/360 = 0.331$

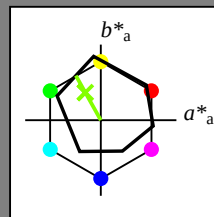
$lab^*tch$  and  $lab^*nch$

D65: hue J50G

LCH\*Ma: 73 68 119

olv\*Ma: 0.51 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 119/360 = 0.331$

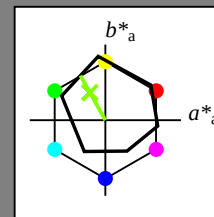
$lab^*tch$  and  $lab^*nch$

D65: hue J50G

LCH\*Ma: 73 68 119

olv\*Ma: 0.51 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

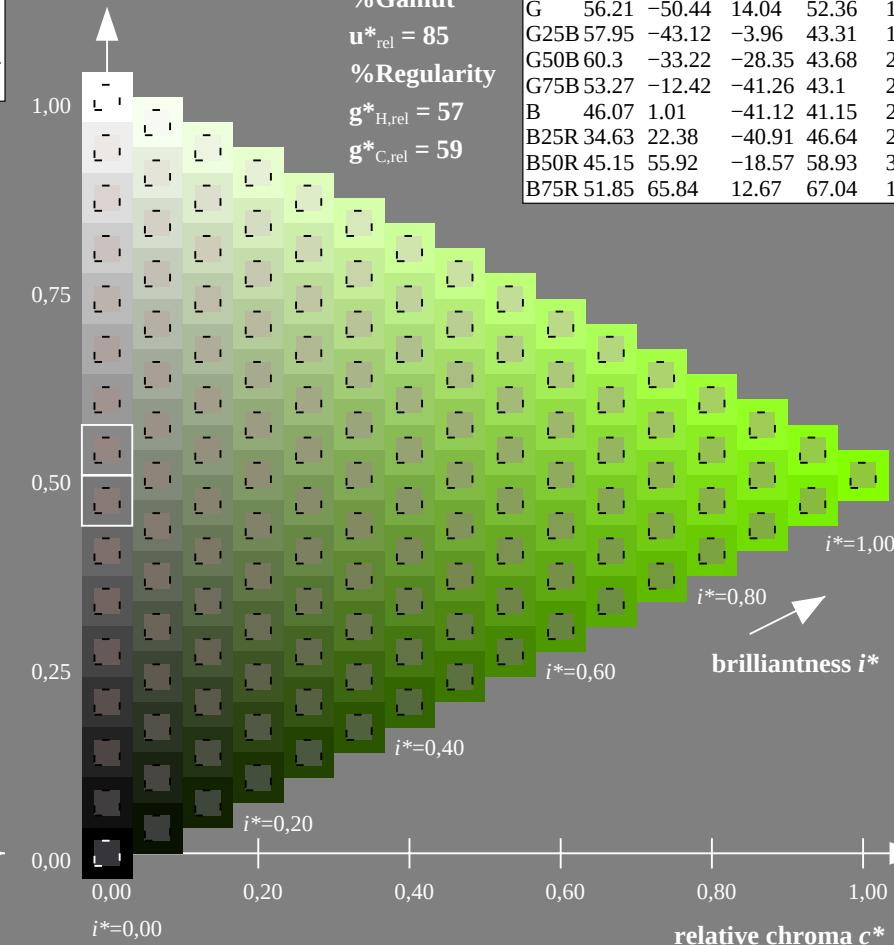
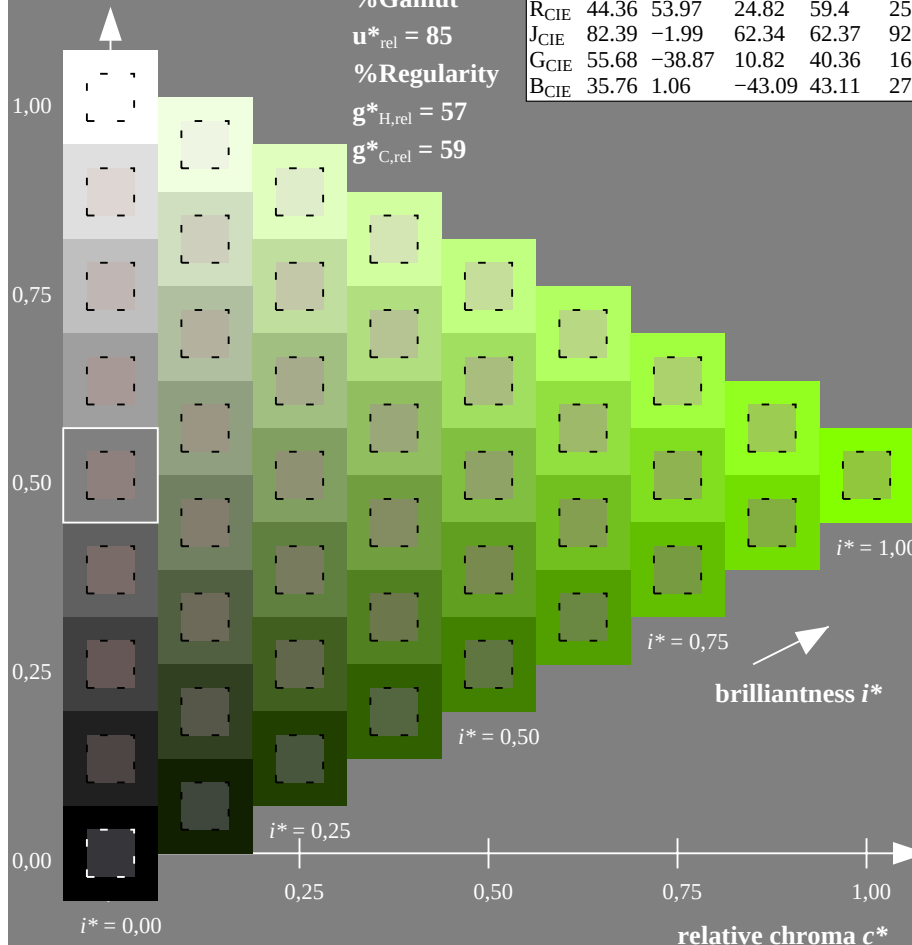
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 9 step scales for constant CIELAB hue 119/360 = 0.331 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 119/360 = 0.331 (right)

BAM-test chart ZE92; Colorimetric systems, Page 7/96  
D65: 9 and 16 step colour scales for 16 elementary hues

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

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 141/360 = 0.393$

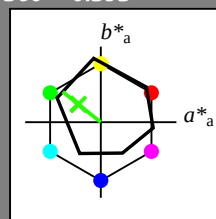
$lab^*tch$  and  $lab^*nch$

D65: hue J75G

LCH\*Ma: 60 64 141

olv\*Ma: 0.15 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 141/360 = 0.393$

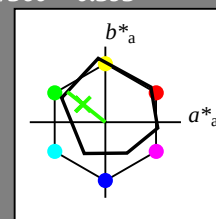
$lab^*tch$  and  $lab^*nch$

D65: hue J75G

LCH\*Ma: 60 64 141

olv\*Ma: 0.15 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

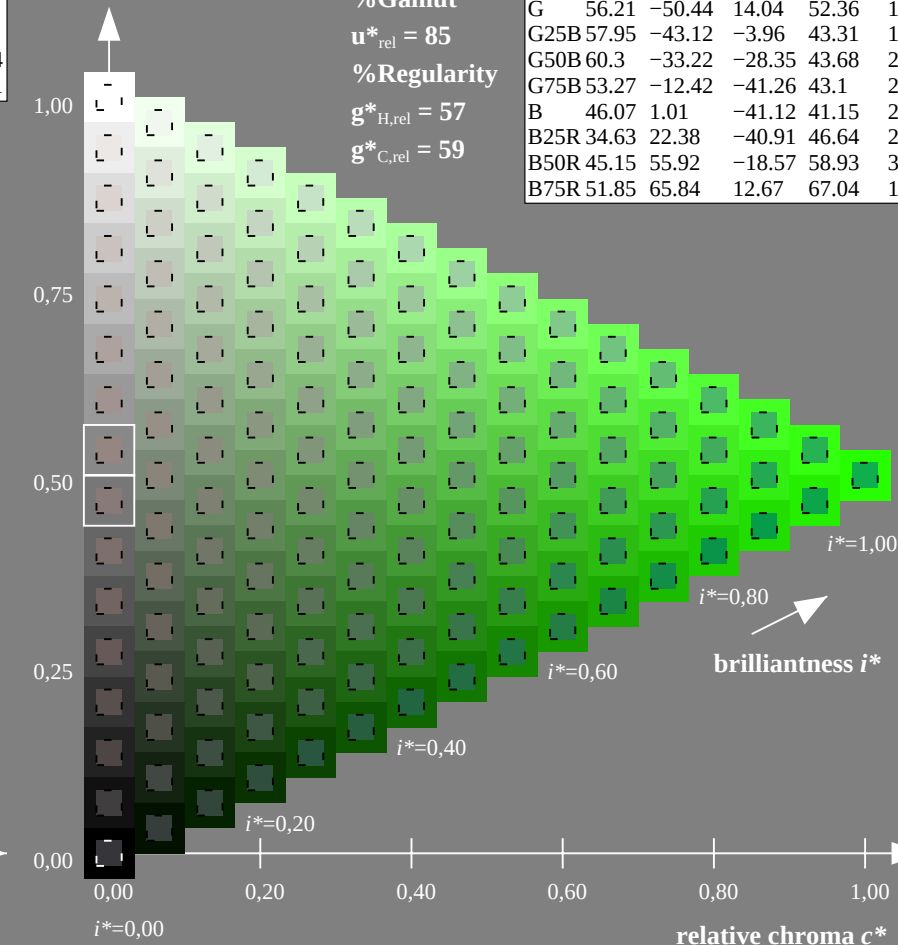
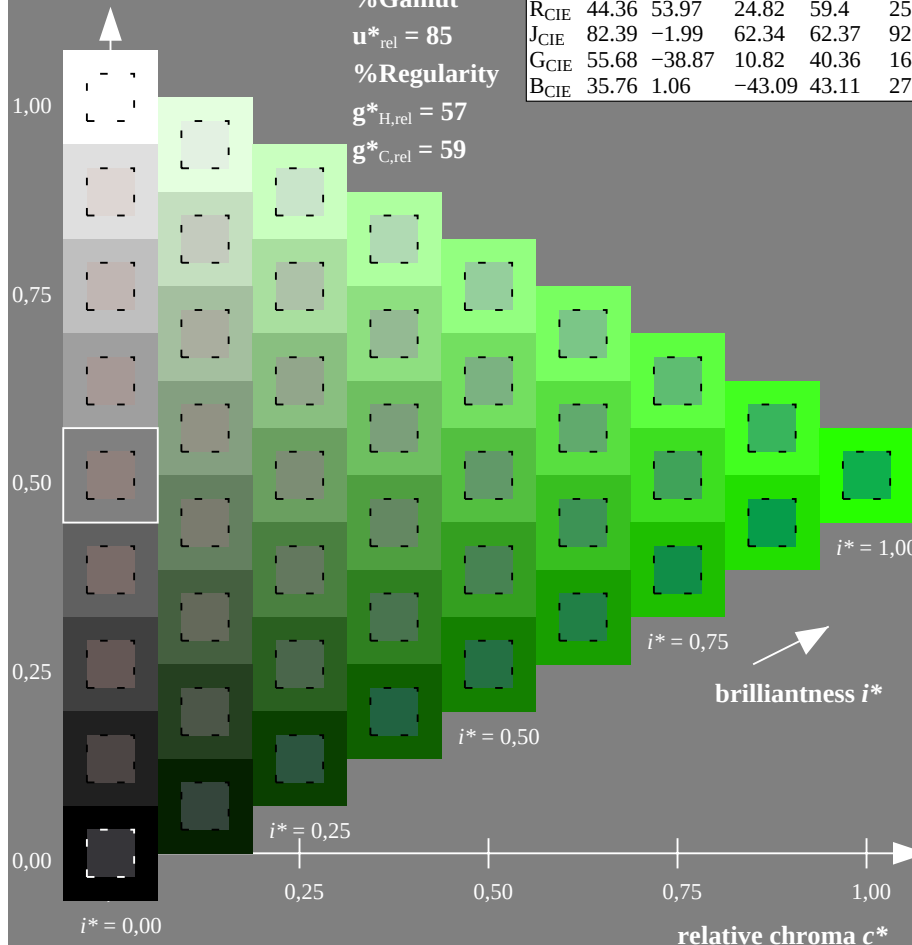
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 9 step scales for constant CIELAB hue 141/360 = 0.393 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 141/360 = 0.393 (right)

BAM-test chart ZE92; Colorimetric systems, Page 8/96

D65: 9 and 16 step colour scales for 16 elementary hues

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

output: no change compared to input



Input: Colorimetric Offset Reflective System ORS18

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

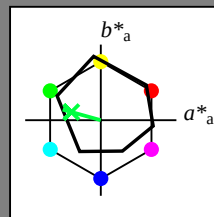
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 56 52 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

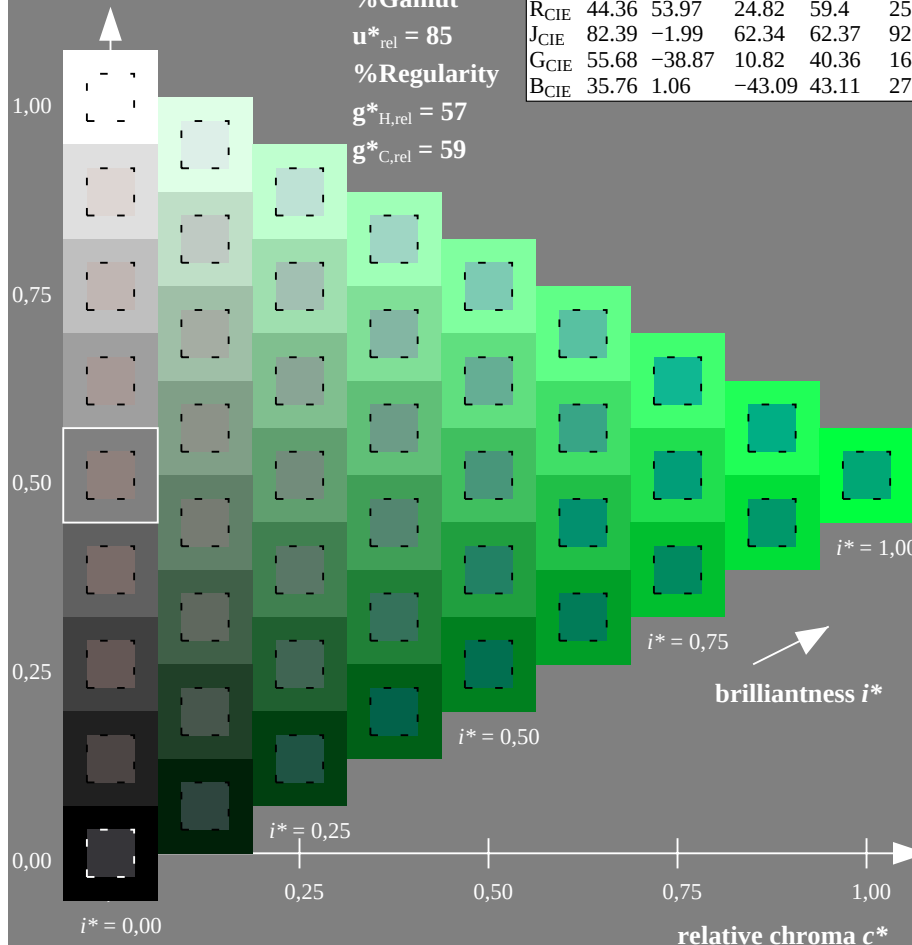
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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BAM-test chart ZE92; Colorimetric systems, Page 9/96

D65: 9 and 16 step colour scales for 16 elementary hues

Output: Colorimetric Offset Reflective System ORS18

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

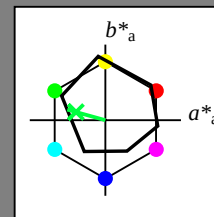
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 56 52 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

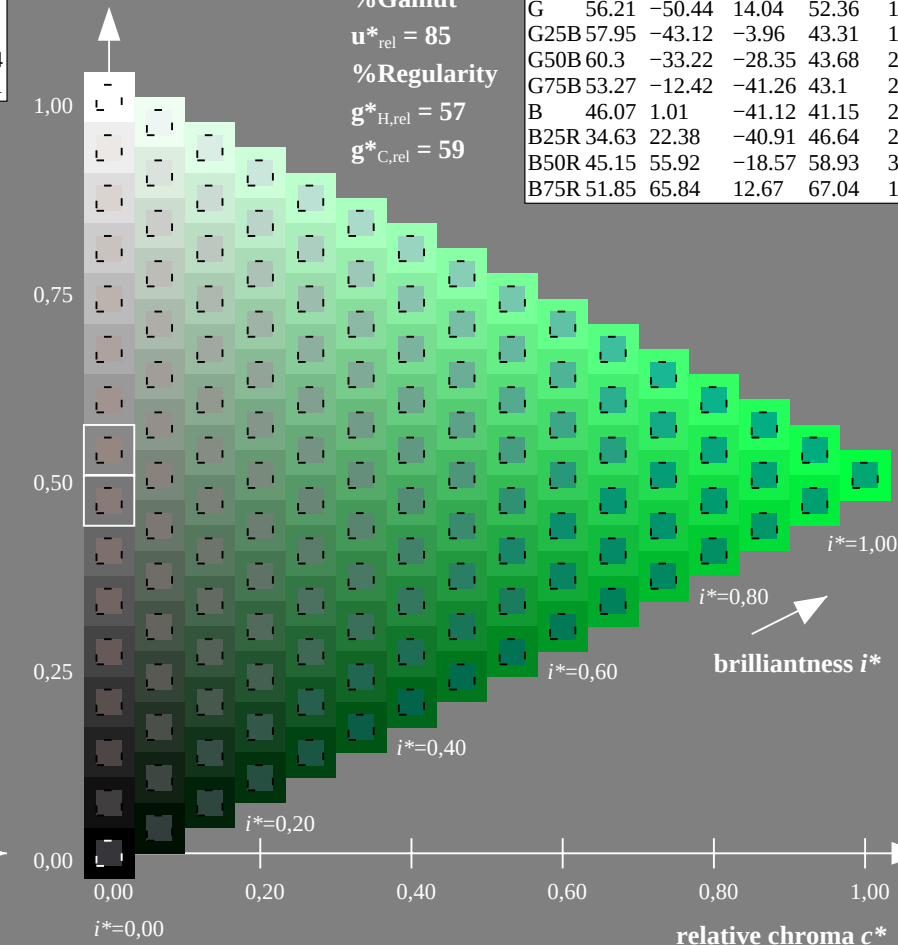
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 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

### Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 185/360 = 0.515$

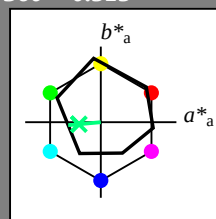
$lab^*tch$  and  $lab^*nch$

D65: hue G25B

LCH\*Ma: 58 43 185

olv\*Ma: 0.0 1.0 0.49

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

### Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 185/360 = 0.515$

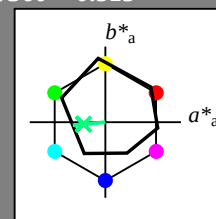
$lab^*tch$  and  $lab^*nch$

D65: hue G25B

LCH\*Ma: 58 43 185

olv\*Ma: 0.0 1.0 0.49

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

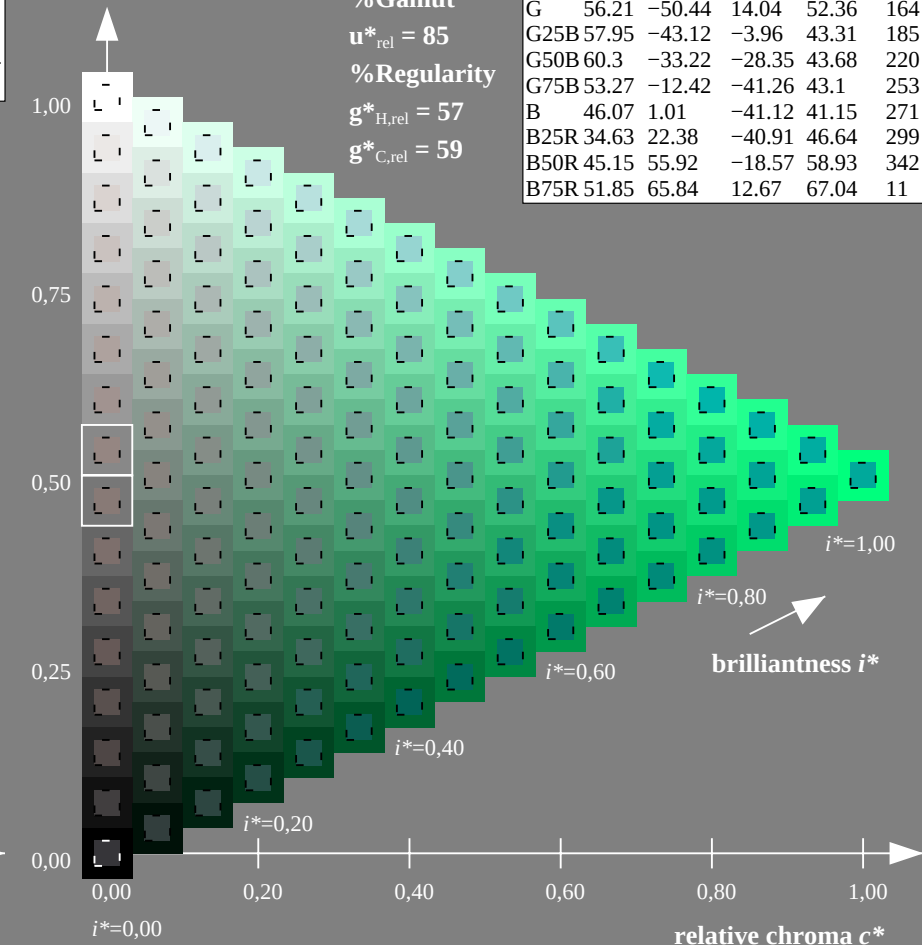
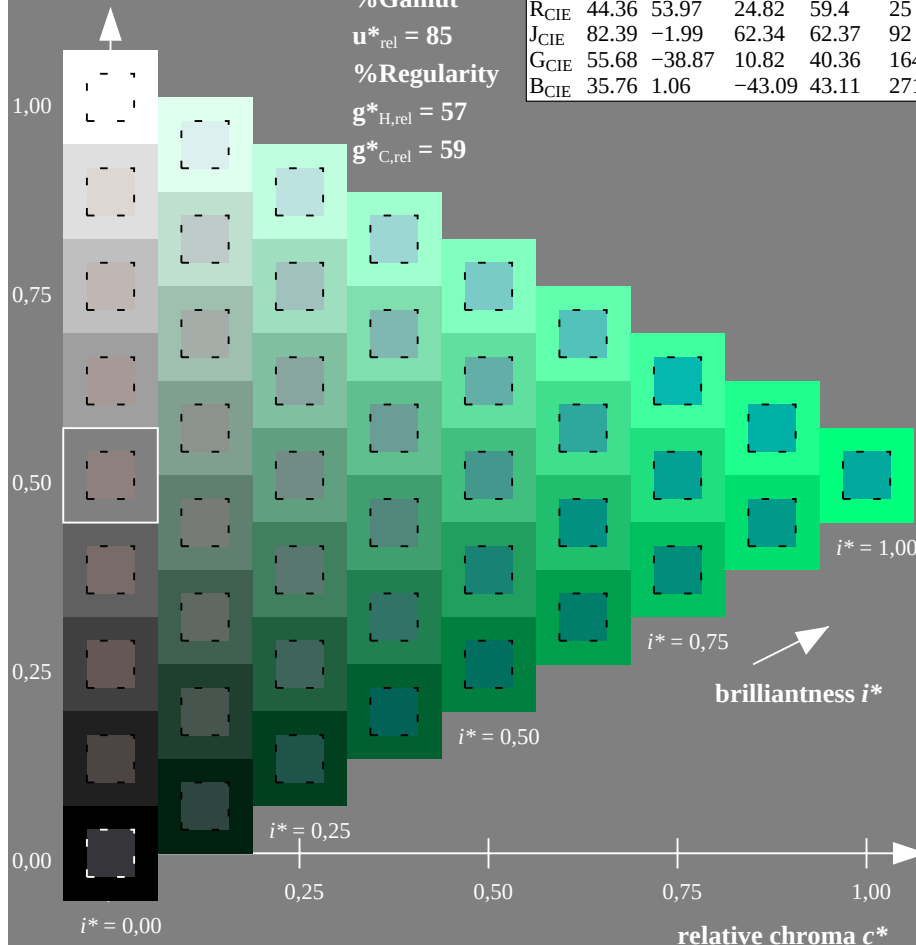
%Regularity

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

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

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

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 9 step scales for constant CIELAB hue 185/360 = 0.515 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 185/360 = 0.515 (right)

BAM-test chart ZE92; Colorimetric systems, Page 10/96

D65: 9 and 16 step colour scales for 16 elementary hues

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

output: no change compared to input

See for similar files: <http://www.ps.bam.de/ZE92/>; [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-ZEE9210I/L92E00FA.PS/TXT    BAM material: code=rha4ta  
application for evaluation and measurement of printer or monitor systems

Input: Colorimetric Offset Reflective System ORS18

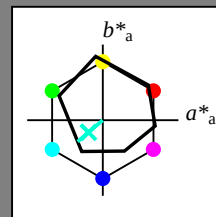
**for hue  $h^* = lab^*h = 220/360 = 0.612$**

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

D65: hue G50B

LCH\*Ma: 60 44 220

olv\*Ma: 0.0 1.0 0.82



triangle lightness  $t^*$

## %Gamut

$$\mathbf{u}_{rel}^* = 85$$

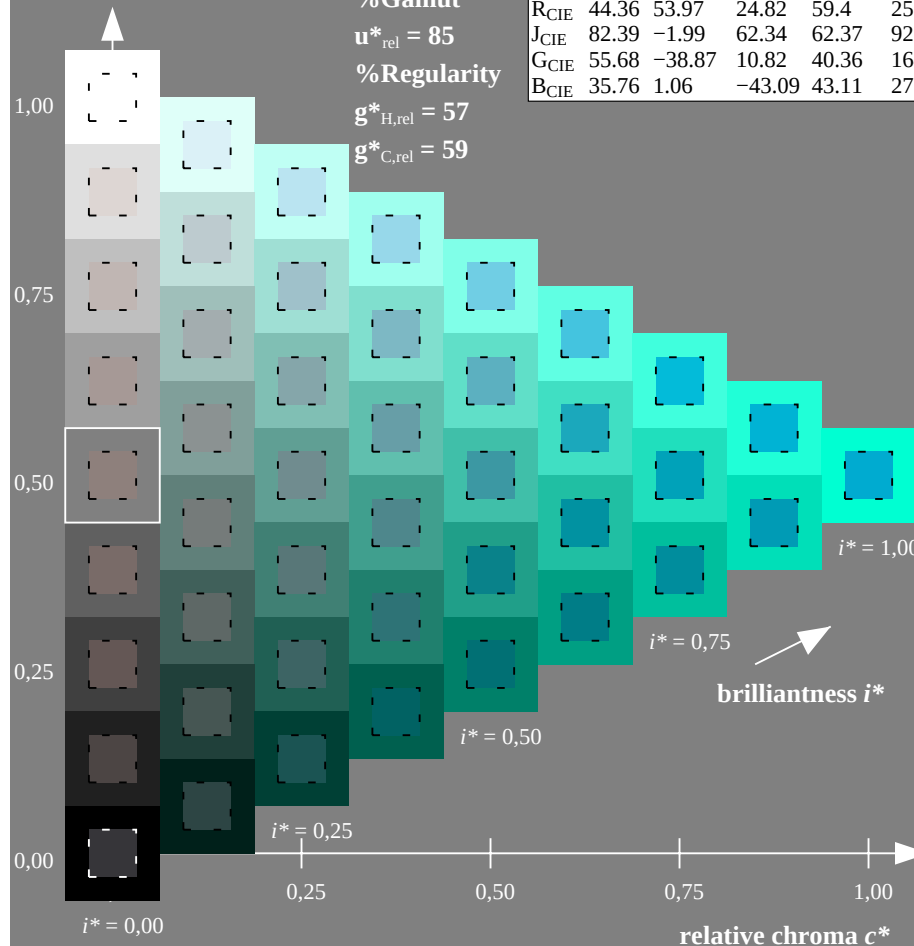
### %Regularity

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

**g\*<sub>C,rel</sub> = 59**

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

|                  | $L^*=L_a^*$ | $d_a^*$ | $b_a^*$ | $C_{ab,a}^*$ | $h_{ab,a}^*$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236.6        |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| R <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 220/360 = 0.612 (left)

BAM-test chart ZE92: Colorimetric systems. Page 11/96

## D65: 9 and 16 step colour scales for 16 elementary hues

### Output: Colorimetric Offset Reflective System ORS18

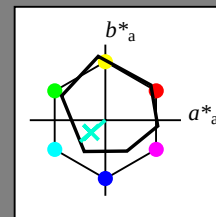
for hue  $h^* = lab^*h = 220/360 = 0.612$

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

D65: hue G50B

LCH\*Ma: 60 44 220

olv\*Ma: 0.0 1.0 0.82

triangle lightness  $t^*$ 

## % Gamut

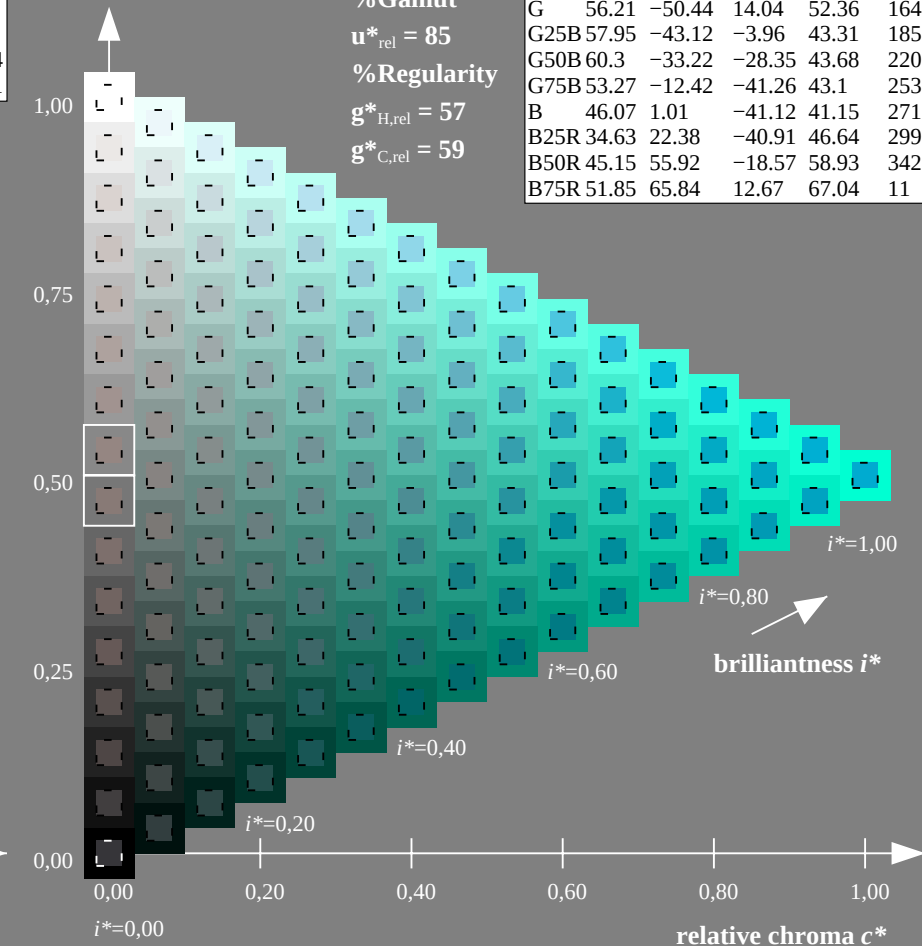
$$\mathbf{u}_{rel}^* = 85$$

## %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    | 51.79         | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73         | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47         | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51         | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93         | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92         | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11         | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06         | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21         | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95         | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3          | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27         | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07         | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63         | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15         | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85         | 65.84   | 12.67   | 67.04        | 411          |



ZE920-7F, 16 step scales for constant CIELAB hue 220/360 = 0.612 (right)

```
input: rrgb / cmv0 set(rrgb/cmyk)color
```

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 253/360 = 0.703$

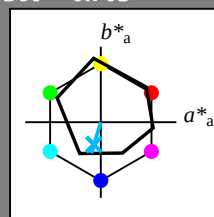
$lab^*tch$  and  $lab^*nch$

D65: hue G75B

LCH\*Ma: 53 43 253

olv\*Ma: 0.0 0.73 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 253/360 = 0.703$

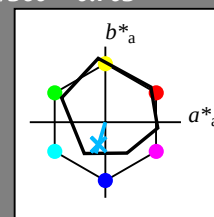
$lab^*tch$  and  $lab^*nch$

D65: hue G75B

LCH\*Ma: 53 43 253

olv\*Ma: 0.0 0.73 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

ZE920-7F, 9 step scales for constant CIELAB hue 253/360 = 0.703 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 253/360 = 0.703 (right)

BAM-test chart ZE92; Colorimetric systems, Page 12/96

D65: 9 and 16 step colour scales for 16 elementary hues

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

output: no change compared to input

See for similar files: <http://www.ps.bam.de/ZE92/>; [www.ps.bam.de/ZE92/](http://www.ps.bam.de/ZE92/)  
Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1, CIELAB

BAM registration: 20071001-ZE92/10L/L92E00FA.PS/.TXT BAM material: code=rh4ta  
application for evaluation and measurement of printer or monitor systems

### Input: Colorimetric Offset Reflective System ORS18

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

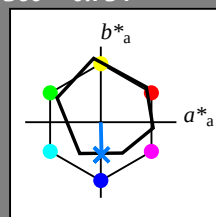
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 46 41 271

olv\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

### Output: Colorimetric Offset Reflective System ORS18

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

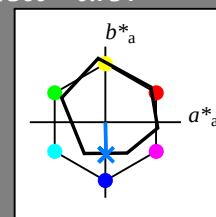
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 46 41 271

olv\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

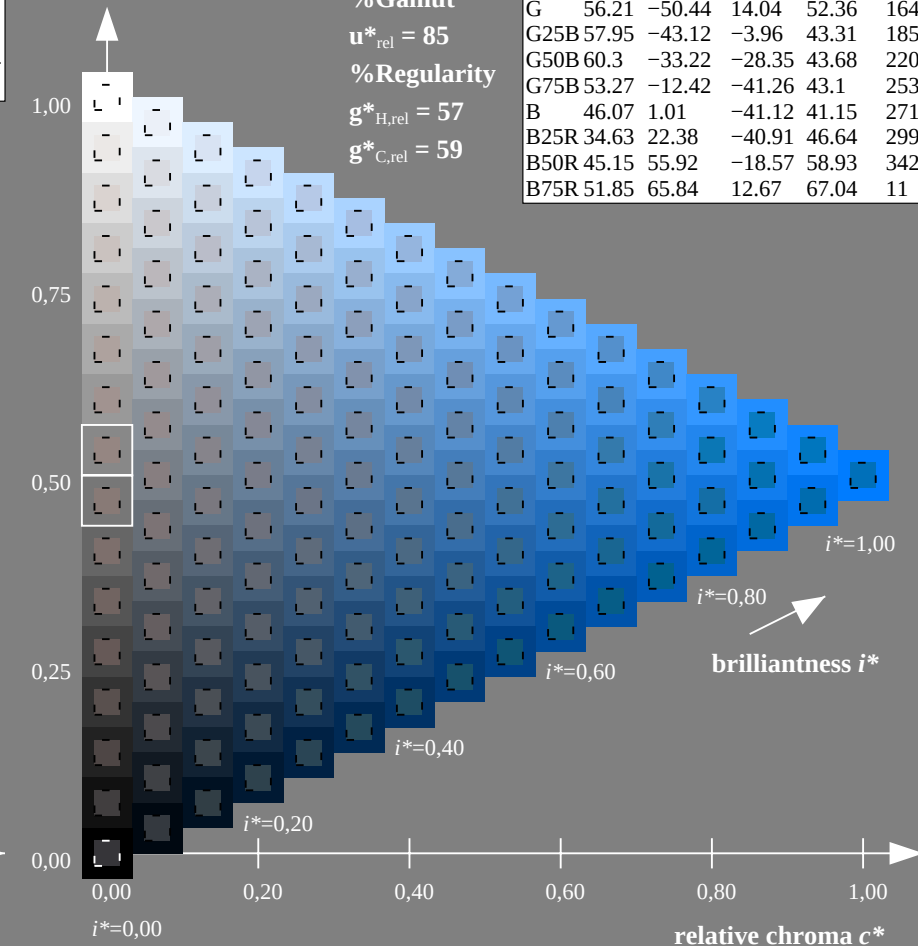
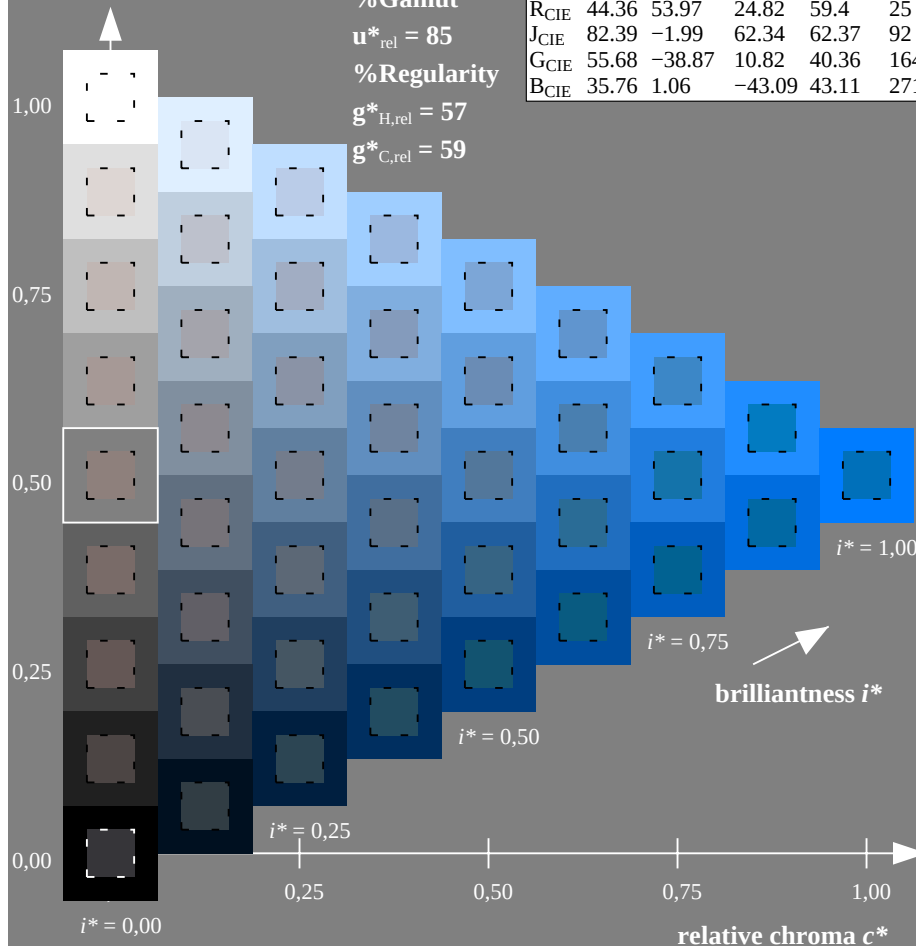
%Regularity

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

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

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

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 9 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 271/360 = 0.754 (right)

BAM-test chart ZE92; Colorimetric systems, Page 13/96

D65: 9 and 16 step colour scales for 16 elementary hues

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

output: no change compared to input

See for similar files: <http://www.ps.bam.de/ZE92/>; [www.ps.bam.de/ZE92/](http://www.ps.bam.de/ZE92/)  
Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1, CIELAB

BAM registration: 20071001-ZE92/10L/L92E00FA.PS/.TXT BAM material: code=rh4ta  
application for evaluation and measurement of printer or monitor systems

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 299/360 = 0.83$

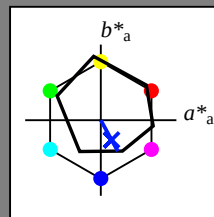
$lab^*tch$  and  $lab^*nch$

D65: hue B25R

LCH\*Ma: 35 47 299

olv\*Ma: 0.0 0.11 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 299/360 = 0.83$

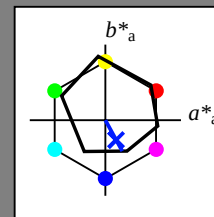
$lab^*tch$  and  $lab^*nch$

D65: hue B25R

LCH\*Ma: 35 47 299

olv\*Ma: 0.0 0.11 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

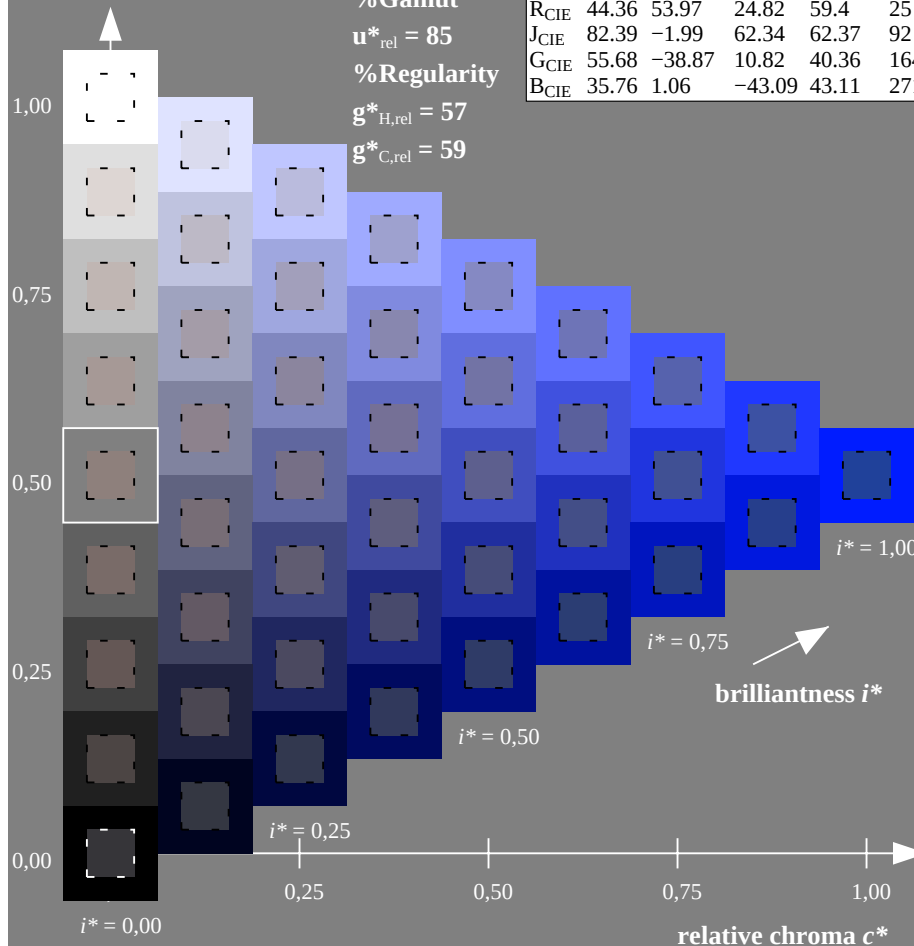
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 9 step scales for constant CIELAB hue 299/360 = 0.83 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 299/360 = 0.83 (right)

BAM-test chart ZE92; Colorimetric systems, Page 14/96

D65: 9 and 16 step colour scales for 16 elementary hues

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

output: no change compared to input



Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 342/360 = 0.949$

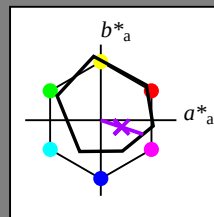
$lab^*tch$  and  $lab^*nch$

D65: hue B50R

LCH\*Ma: 45 59 342

olv\*Ma: 0.67 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 342/360 = 0.949$

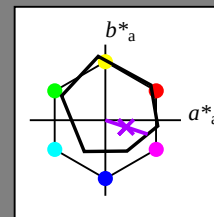
$lab^*tch$  and  $lab^*nch$

D65: hue B50R

LCH\*Ma: 45 59 342

olv\*Ma: 0.67 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

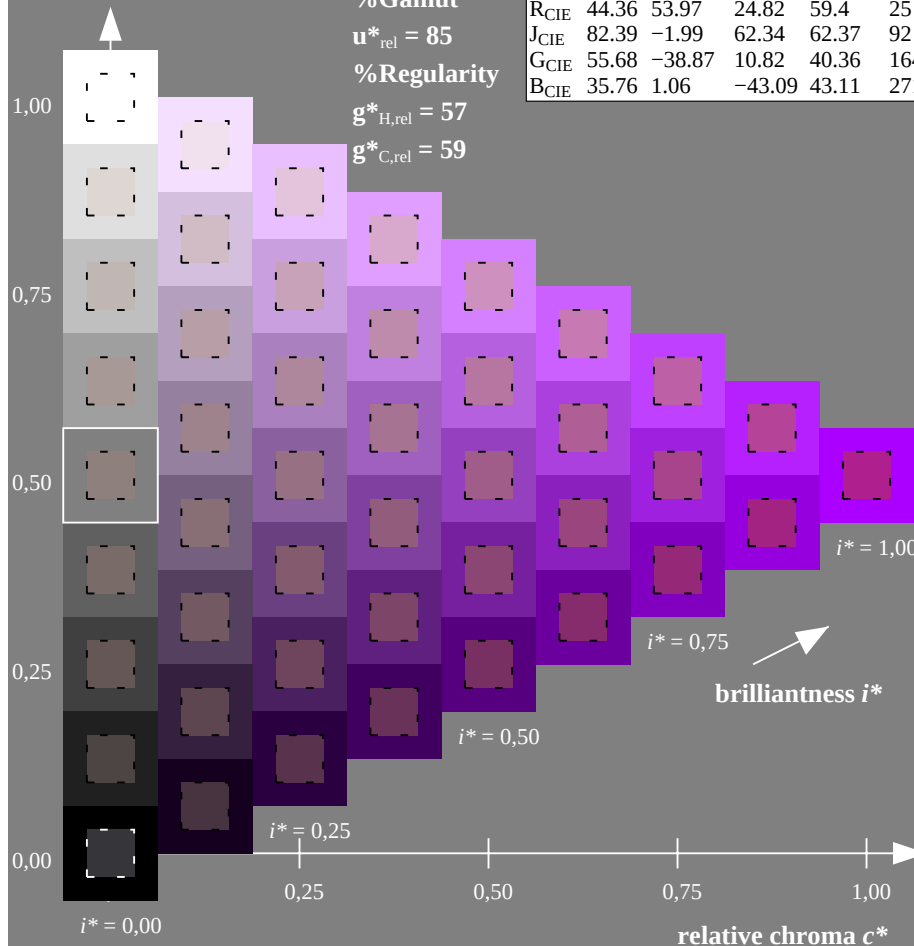
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 342/360 = 0.949 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 342/360 = 0.949 (right)

BAM-test chart ZE92; Colorimetric systems, Page 15/96

D65: 9 and 16 step colour scales for 16 elementary hues

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

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 11/360 = 0.03$

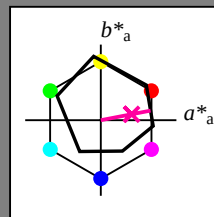
$lab^*tch$  and  $lab^*nch$

D65: hue B75R

LCH\*Ma: 52 67 11

olv\*Ma: 1.0 0.0 0.62

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 11/360 = 0.03$

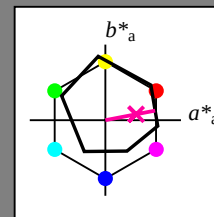
$lab^*tch$  and  $lab^*nch$

D65: hue B75R

LCH\*Ma: 52 67 11

olv\*Ma: 1.0 0.0 0.62

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

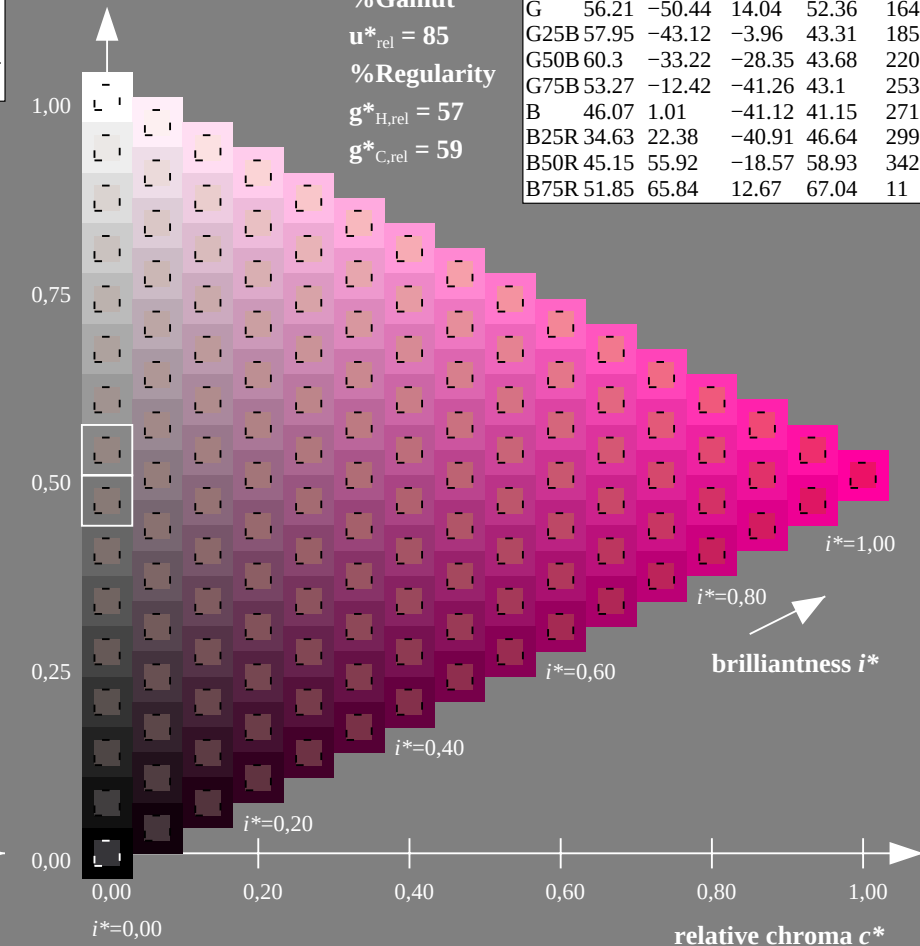
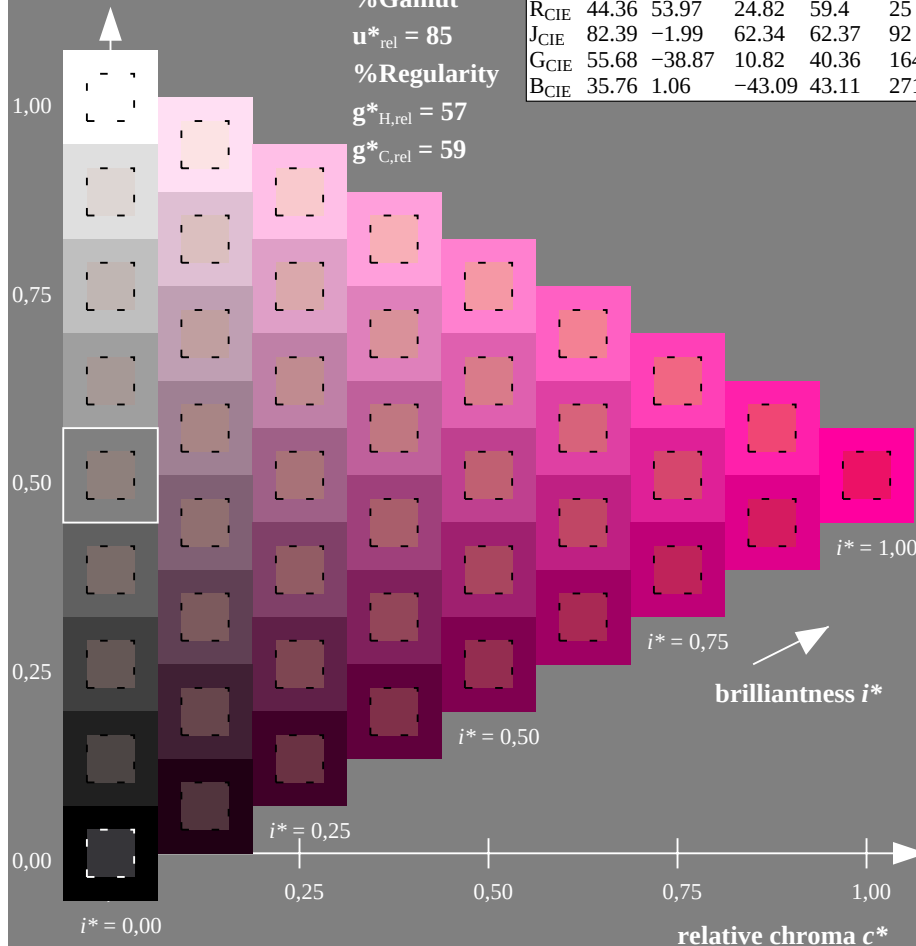
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 11/360 = 0.03 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 11/360 = 0.03 (right)

BAM-test chart ZE92; Colorimetric systems, Page 16/96

D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

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

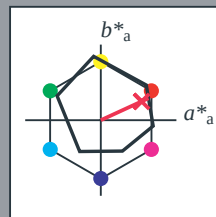
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 52 69 25

olv\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

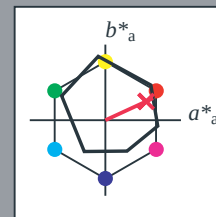
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 52 69 25

olv\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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$u^*_{rel} = 85$

%Regularity

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

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

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

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

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$u^*_{rel} = 85$

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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

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

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

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

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

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$u^*_{rel} = 85$

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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

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

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$u^*_{rel} = 85$

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 41/360 = 0.113$

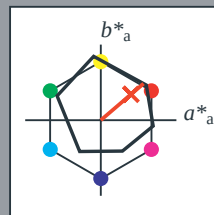
$lab^*tch$  and  $lab^*nch$

D65: hue R25J

LCH\*Ma: 54 74 41

olv\*Ma: 1.0 0.05 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 41/360 = 0.113$

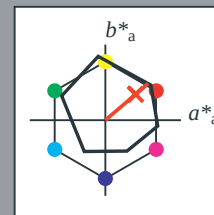
$lab^*tch$  and  $lab^*nch$

D65: hue R25J

LCH\*Ma: 54 74 41

olv\*Ma: 1.0 0.05 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

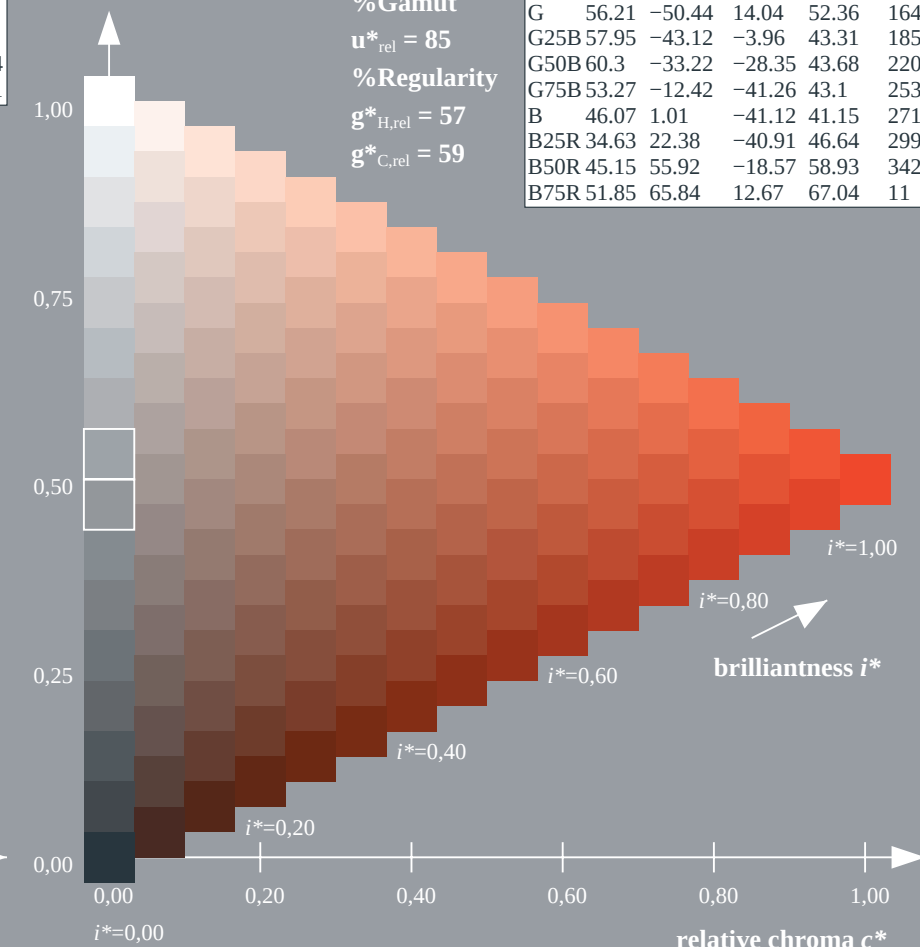
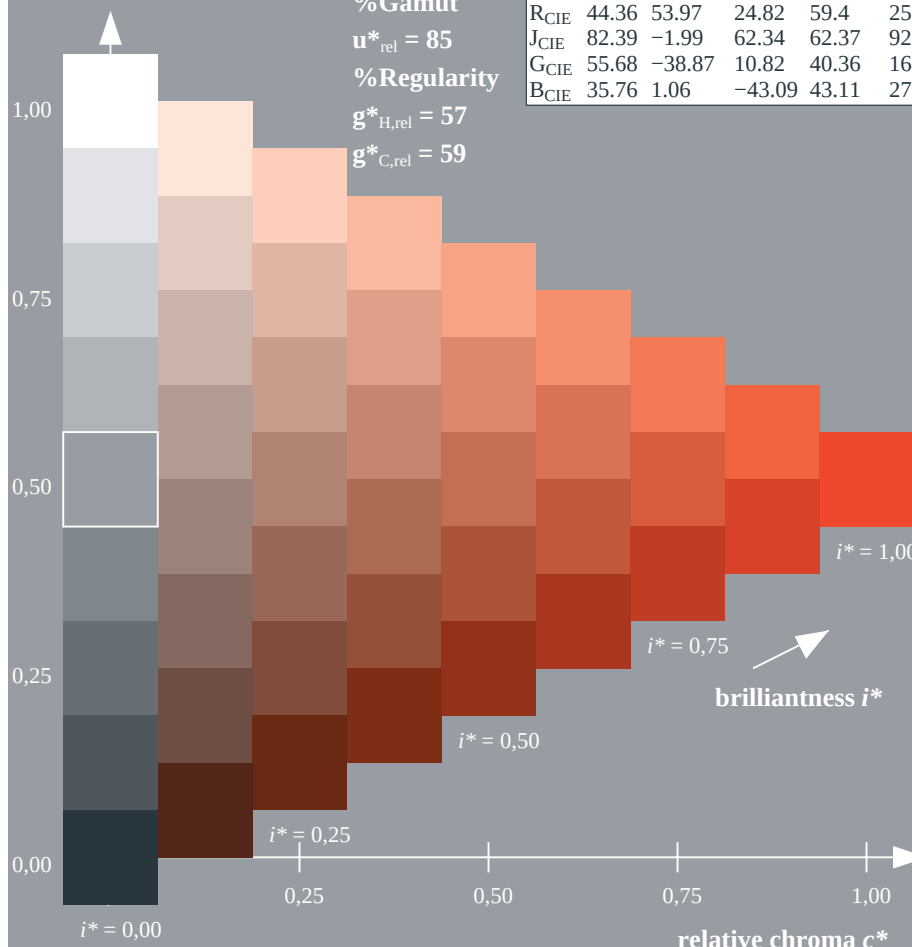
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 41/360 = 0.113 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 41/360 = 0.113 (right)

BAM-test chart ZE92; Colorimetric systems, Page 18/96

D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 59/360 = 0.164$

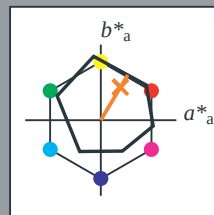
$lab^*tch$  and  $lab^*nch$

D65: hue R50J

LCH\*Ma: 65 70 59

olv\*Ma: 1.0 0.35 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 59/360 = 0.164$

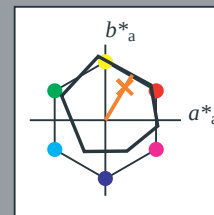
$lab^*tch$  and  $lab^*nch$

D65: hue R50J

LCH\*Ma: 65 70 59

olv\*Ma: 1.0 0.35 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

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

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

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$u^*_{rel} = 85$

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

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

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

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$u^*_{rel} = 85$

%Regularity

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

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

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$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

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

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

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$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gam

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 77/360 = 0.215$

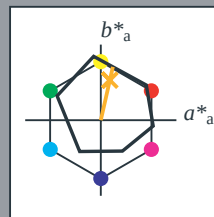
$lab^*tch$  and  $lab^*nch$

D65: hue R75J

LCH\*Ma: 77 72 77

olv\*Ma: 1.0 0.63 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 77/360 = 0.215$

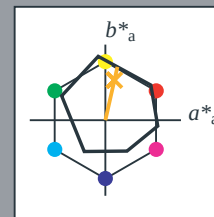
$lab^*tch$  and  $lab^*nch$

D65: hue R75J

LCH\*Ma: 77 72 77

olv\*Ma: 1.0 0.63 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

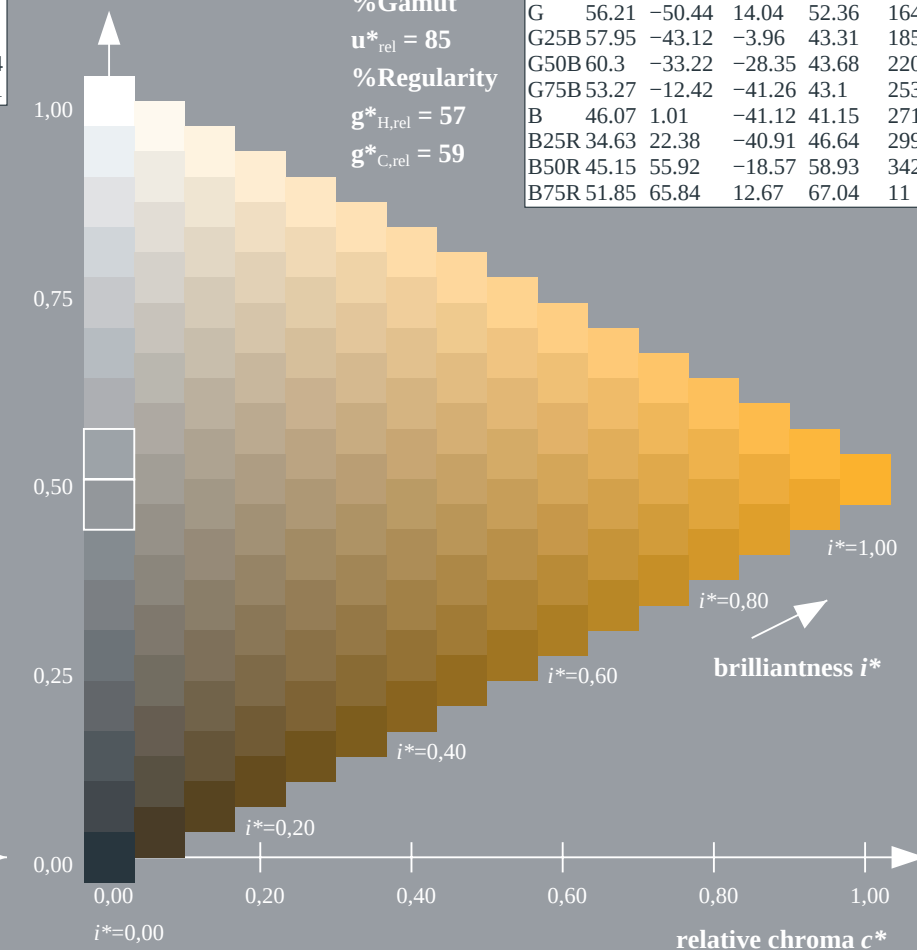
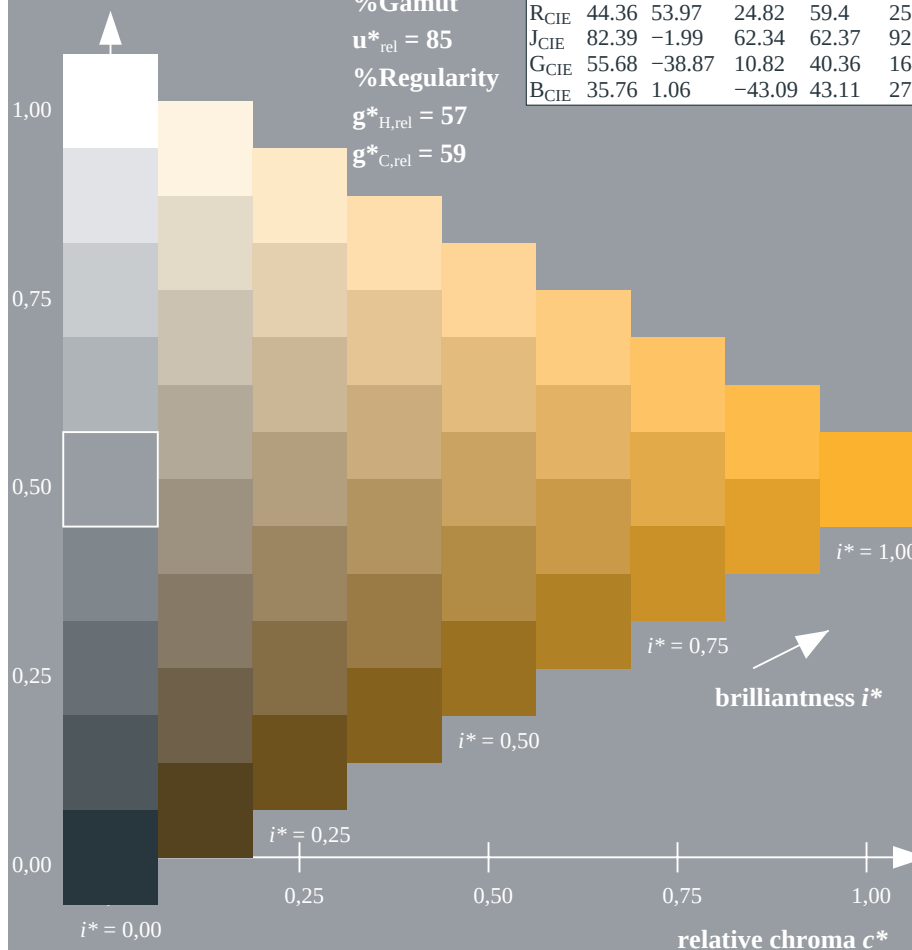
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 77/360 = 0.215 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 77/360 = 0.215 (right)

BAM-test chart ZE92; Colorimetric systems, Page 20/96

D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )



See for similar files: <http://www.ps.bam.de/ZE92/>; [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-ZE92/10L/L92E00FA.PS/TXT    BAM material: code=rh4ta  
- application for evaluation and measurement of printer or monitor systems

Input: Colorimetric Offset Reflective System ORS18

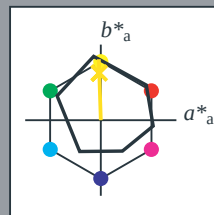
for hue  $h^* = lab^*h = 92/360 = 0.255$

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

D65: hue J

LCH\*Ma: 87 81 92

**olv\*Ma: 1.0 0.9 0.0**



## %Gamut

$$\mathbf{u}_{\text{rel}}^* = 85$$

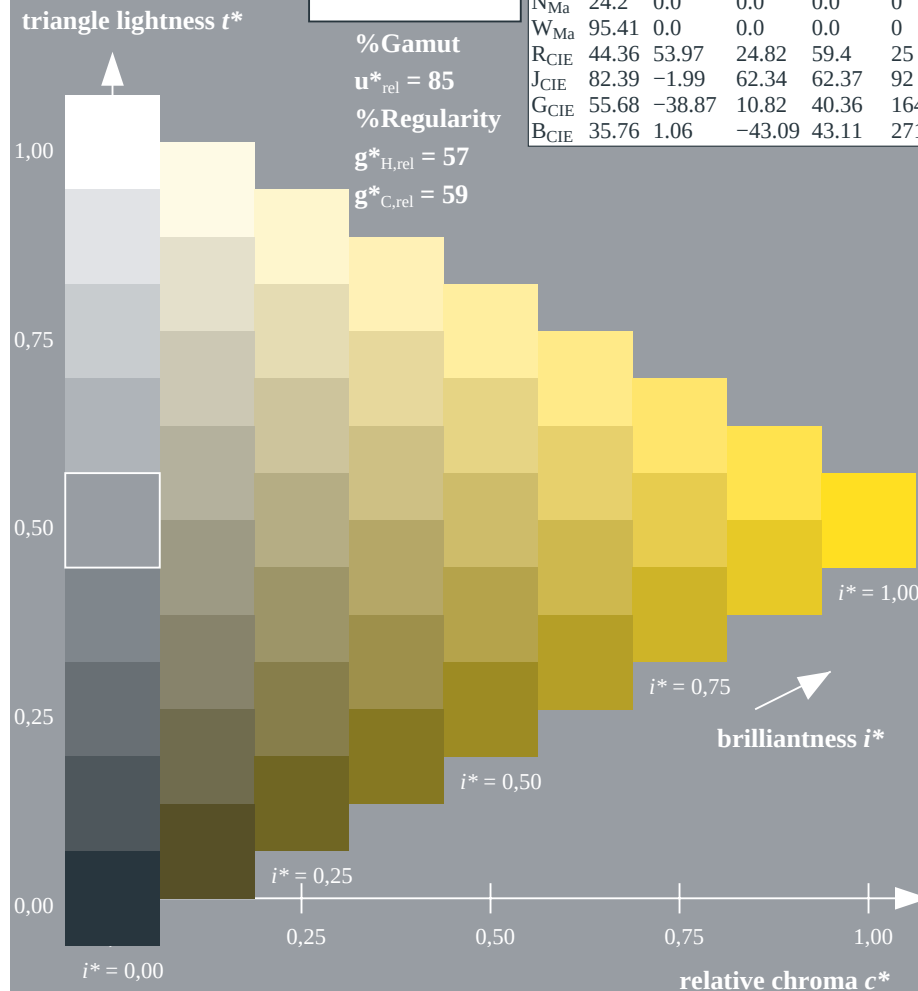
### %Regularity

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

**g\*<sub>C,rel</sub> = 59**

ORS18; adapted (a) CIELAB data

|                  | $L^*=L_a^*$ | $a_a^*$ | $b_a^*$ | $C_{ab,a}^*$ | $h_{ab,a}^*$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 92/360 = 0.255 (left)

BAM-test chart ZE92: Colorimetric systems, Page 21/96

## D65: 9 and 16 step colour scales for 16 elementary hues

**Output: Colorimetric Offset Reflective System ORS18**

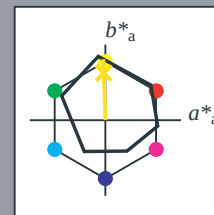
for hue  $h^* = lab^*h = 92/360 = 0.255$

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

D65: hue J

LCH\*Ma: 87 81 92

olv\*Ma: 1.0 0.9 0.0



%Gamut

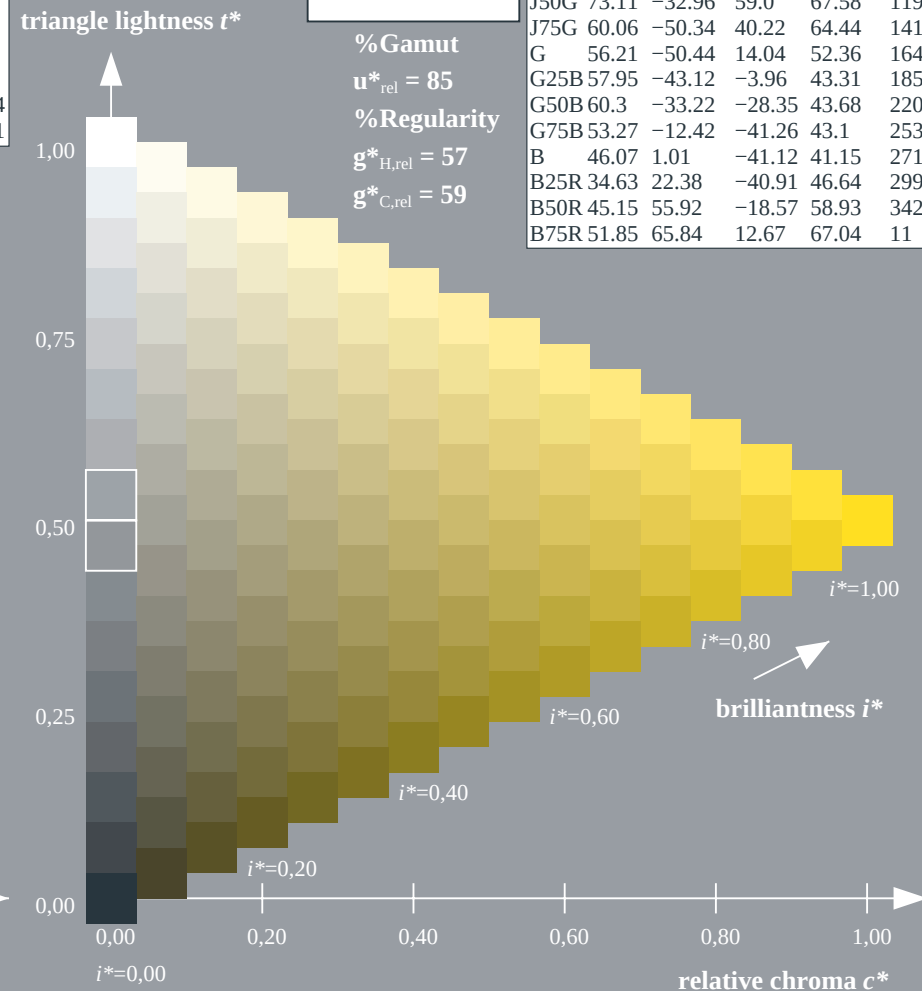
$$\mathbf{u}_{\text{rel}}^* = 85$$

### %Regularity

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

ORS18; adapted (a) CIELAB data

|      | $L^* = L^*_{\text{a}}$ | $a^*_{\text{a}}$ | $b^*_{\text{a}}$ | $C^*_{\text{ab,a}}$ | $h^*_{\text{ab,a}}$ |
|------|------------------------|------------------|------------------|---------------------|---------------------|
| R    | 51.79                  | 63.09            | 29.02            | 69.44               | 25                  |
| R25J | 53.73                  | 56.6             | 48.42            | 74.48               | 41                  |
| R50J | 65.47                  | 35.67            | 59.82            | 69.65               | 59                  |
| R75J | 76.51                  | 15.98            | 70.55            | 72.34               | 77                  |
| J    | 86.93                  | -2.58            | 80.67            | 80.71               | 92                  |
| J25G | 84.92                  | -17.23           | 75.99            | 77.92               | 103                 |
| J50G | 73.11                  | -32.96           | 59.0             | 67.58               | 119                 |
| J75G | 60.06                  | -50.34           | 40.22            | 64.44               | 141                 |
| G    | 56.21                  | -50.44           | 14.04            | 52.36               | 164                 |
| G25B | 57.95                  | -43.12           | -3.96            | 43.31               | 185                 |
| G50B | 60.3                   | -33.22           | -28.35           | 43.68               | 220                 |
| G75B | 53.27                  | -12.42           | -41.26           | 43.1                | 253                 |
| B    | 46.07                  | 1.01             | -41.12           | 41.15               | 271                 |
| B25R | 34.63                  | 22.38            | -40.91           | 46.64               | 299                 |
| B50R | 45.15                  | 55.92            | -18.57           | 58.93               | 342                 |
| B75R | 51.85                  | 65.84            | 12.67            | 67.04               | 411                 |



ZE920-7F, 16 step scales for constant CIELAB hue 92/360 = 0.255 (right)

```
input: rrgb / cmv0 set(rrgb/cmyk)color
```

output:  $->LAB^*->cmyn5^*setcmykcolo$

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 103/360 = 0.286$

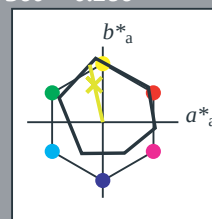
$lab^*tch$  and  $lab^*nch$

D65: hue J25G

LCH\*Ma: 85 78 103

olv\*Ma: 0.84 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 103/360 = 0.286$

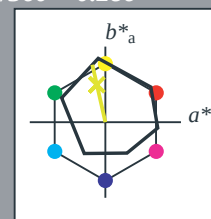
$lab^*tch$  and  $lab^*nch$

D65: hue J25G

LCH\*Ma: 85 78 103

olv\*Ma: 0.84 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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$u^*_{rel} = 85$

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%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

Input: Colorimetric Offset Reflective System ORS18

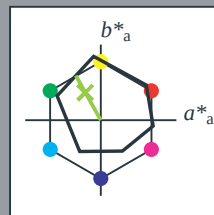
for hue  $h^* = lab^*h = 119/360 = 0.331$

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

D65: hue J50G

LCH\*Ma: 73 68 119

**olv\*Ma: 0.51 1.0 0.0**

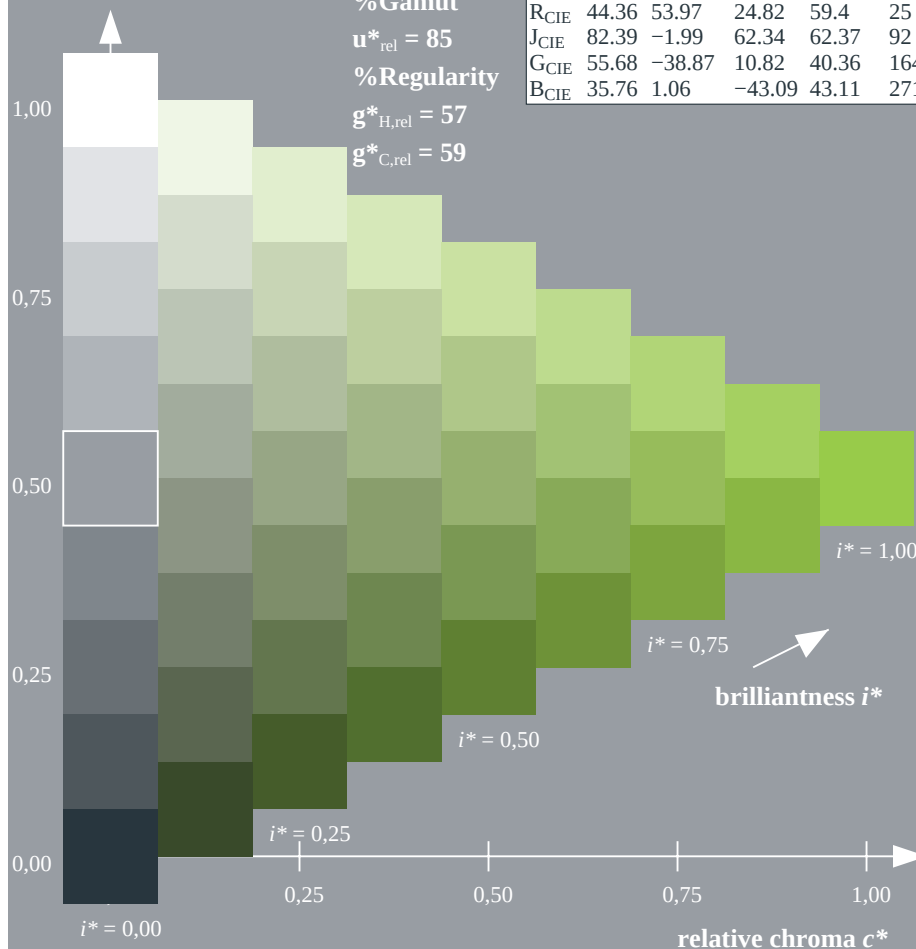


**triangle lightness  $t^*$**

## %Gamut

$$\mathbf{u}_{\text{rel}}^* = 85$$

### %Regularity

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

ZE920-7F, 9 step scales for constant CIELAB hue 119/360 = 0.331 (left)

BAM-test chart ZE92; Colorimetric systems, Page 23/96

## D65: 9 and 16 step colour scales for 16 elementary hues

### Output: Colorimetric Offset Reflective System ORS18

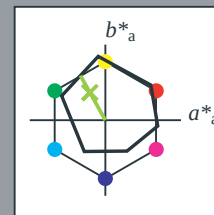
for hue  $h^* = lab^*h = 119/360 = 0.331$

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

D65: hue J50G

LCH\*Ma: 73 68 119

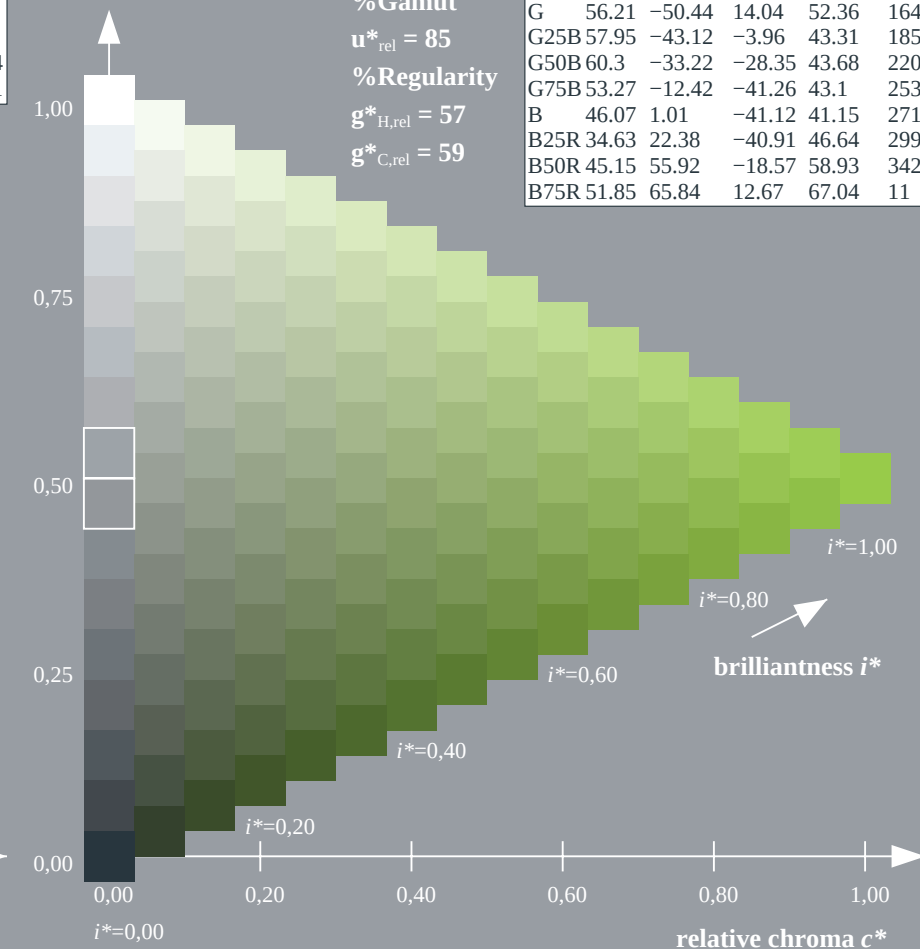
olv\*Ma: 0.51 1.0 0.0

triangle lightness  $t^*$ 

%Gamut

 $\mathbf{u}_{\text{rel}}^* = 85$ 

### %Regularity

$$g^*_{H_{rel}} = 57$$
$$g^*_{C_{rel}} = 59$$


ZE920-7F, 16 step scales for constant CIELAB hue 119/360 = 0.331 (right)

```
input: rgb / cmy0 set(rgb/cmyk)color
```

output:  $->LAB^*->cmyn5^*setcmykcolo$

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 141/360 = 0.393$

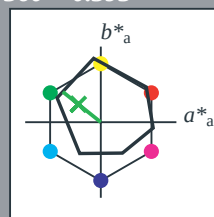
$lab^*tch$  and  $lab^*nch$

D65: hue J75G

LCH\*Ma: 60 64 141

olv\*Ma: 0.15 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 141/360 = 0.393$

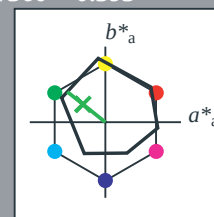
$lab^*tch$  and  $lab^*nch$

D65: hue J75G

LCH\*Ma: 60 64 141

olv\*Ma: 0.15 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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

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

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

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

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

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

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

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

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

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

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

ZE920-7F, 9 step scales for constant CIELAB hue 141/360 = 0.393 (left)

Page 24/96

ZE920-7F, 16 step scales for constant CIELAB hue 141/360 = 0.393 (right)

BAM-test chart ZE92; Colorimetric systems, Page 24/96

D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

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

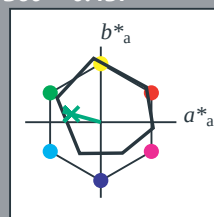
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 56 52 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

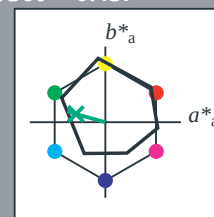
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 56 52 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Regularity

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

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

%Regularity

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

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

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

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

%Regularity

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

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

%Regularity

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

$g^*_{C,rel$

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 185/360 = 0.515$

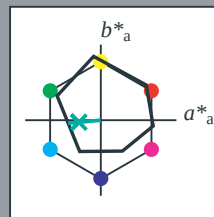
$lab^*tch$  and  $lab^*nch$

D65: hue G25B

LCH\*Ma: 58 43 185

olv\*Ma: 0.0 1.0 0.49

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

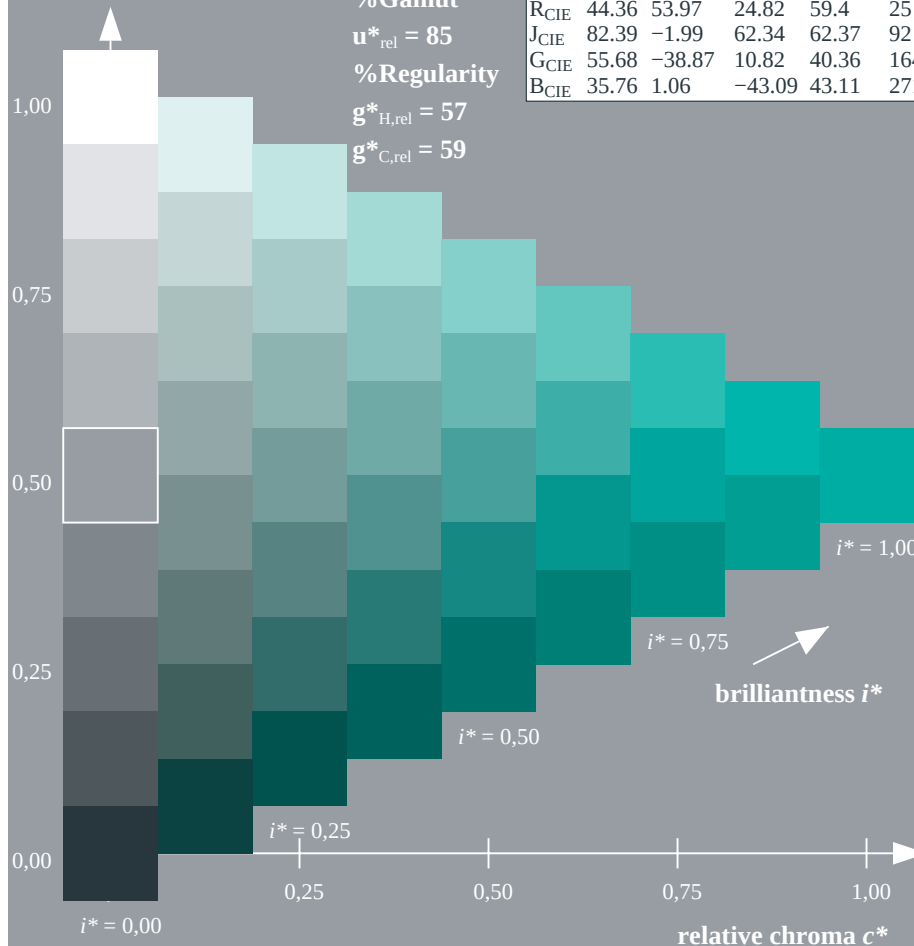
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 185/360 = 0.515$

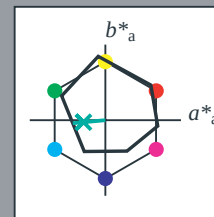
$lab^*tch$  and  $lab^*nch$

D65: hue G25B

LCH\*Ma: 58 43 185

olv\*Ma: 0.0 1.0 0.49

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

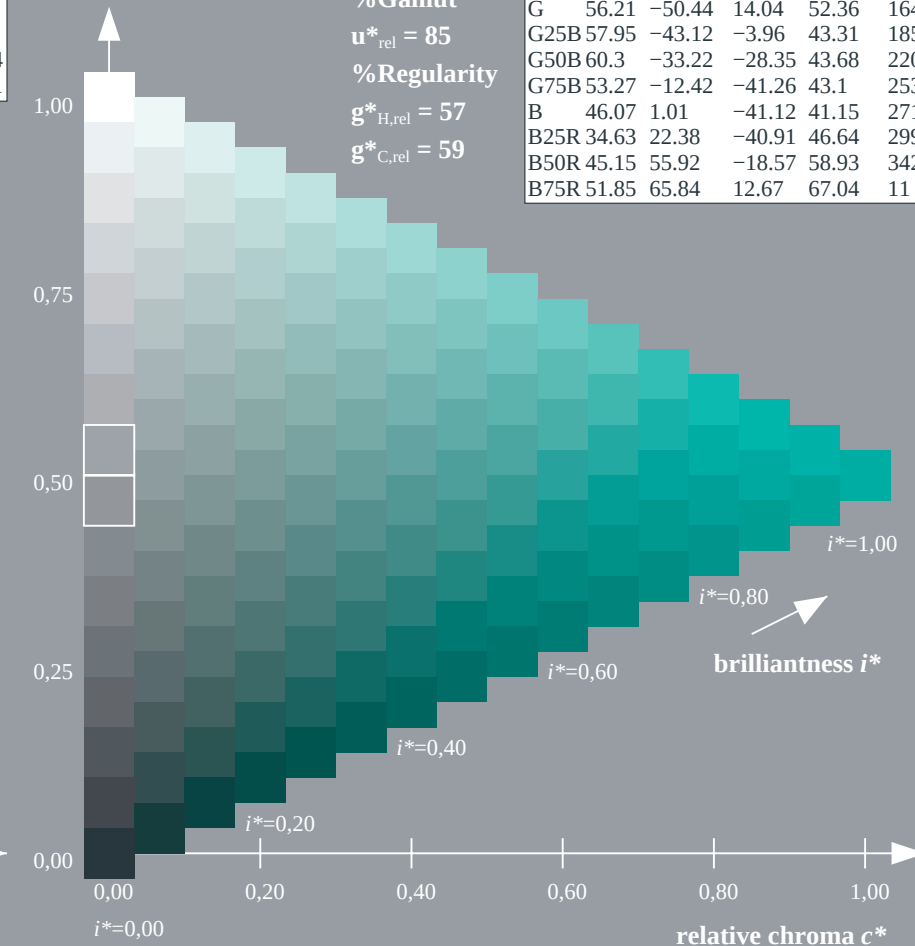
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 9 step scales for constant CIELAB hue 185/360 = 0.515 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 185/360 = 0.515 (right)

BAM-test chart ZE92; Colorimetric systems, Page 26/96

D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )



Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 220/360 = 0.612$

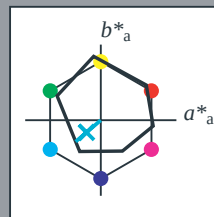
$lab^*tch$  and  $lab^*nch$

D65: hue G50B

LCH\*Ma: 60 44 220

olv\*Ma: 0.0 1.0 0.82

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 220/360 = 0.612$

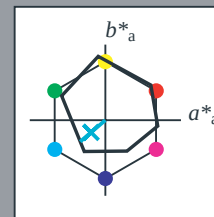
$lab^*tch$  and  $lab^*nch$

D65: hue G50B

LCH\*Ma: 60 44 220

olv\*Ma: 0.0 1.0 0.82

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

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

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$u^*_{rel} = 85$

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

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

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

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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$u^*_{rel} = 85$

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

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

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 253/360 = 0.703$

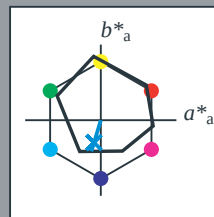
$lab^*tch$  and  $lab^*nch$

D65: hue G75B

LCH\*Ma: 53 43 253

olv\*Ma: 0.0 0.73 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 253/360 = 0.703$

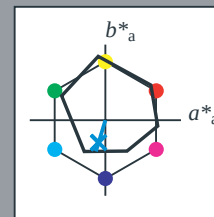
$lab^*tch$  and  $lab^*nch$

D65: hue G75B

LCH\*Ma: 53 43 253

olv\*Ma: 0.0 0.73 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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$u^*_{rel} = 85$

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

Input: Colorimetric Offset Reflective System ORS18

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

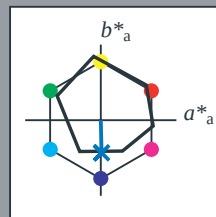
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 46 41 271

olv\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

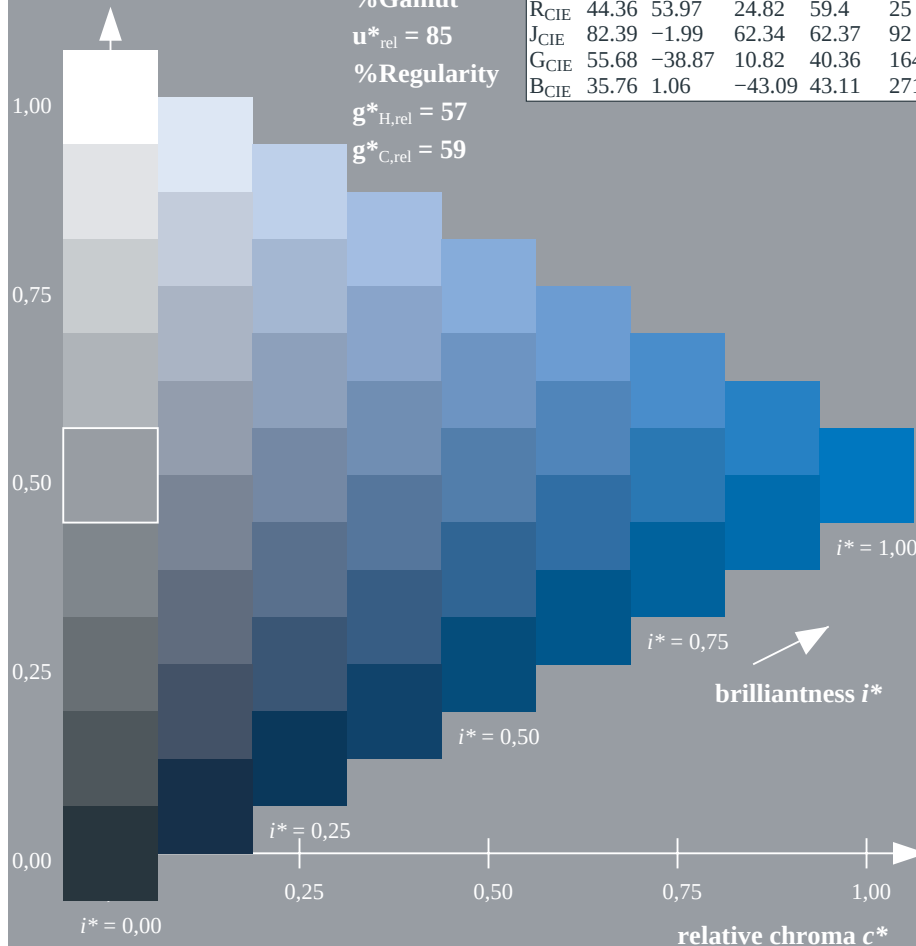
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



Output: Colorimetric Offset Reflective System ORS18

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

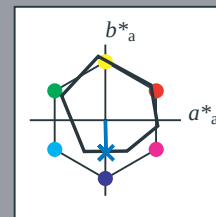
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 46 41 271

olv\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

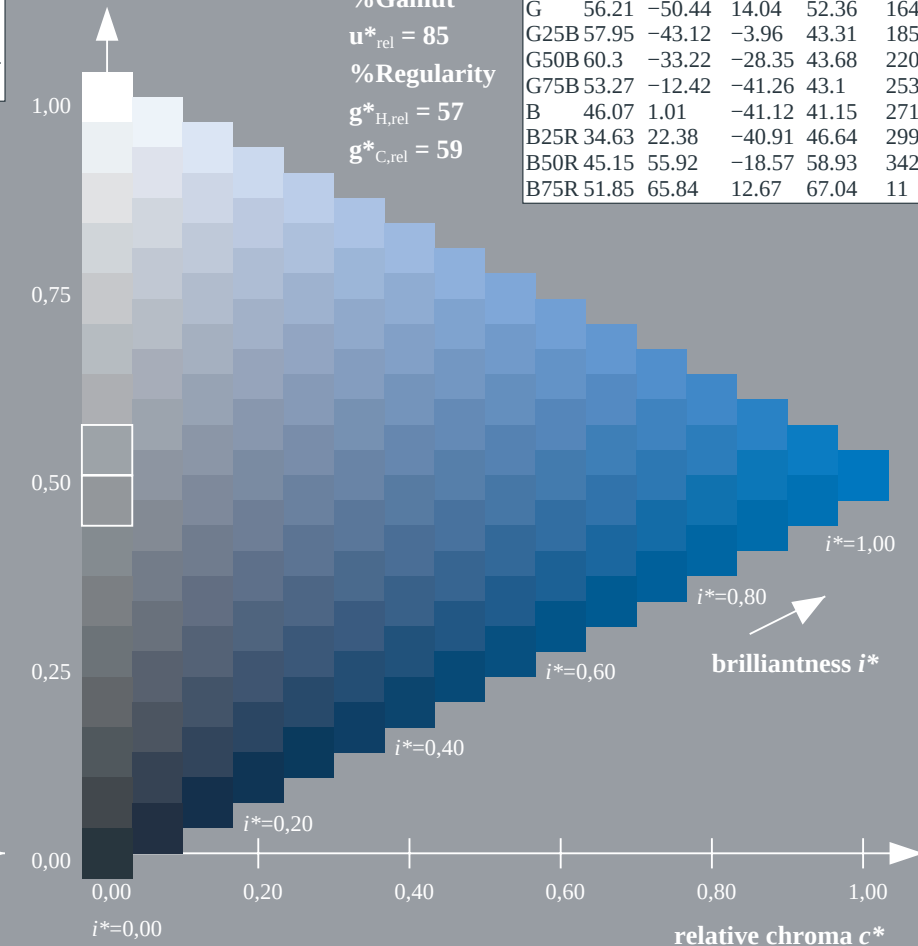
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 9 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 271/360 = 0.754 (right)

BAM-test chart ZE92; Colorimetric systems, Page 29/96

D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 299/360 = 0.83$

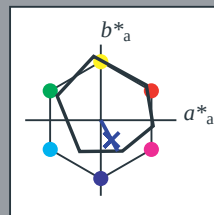
$lab^*tch$  and  $lab^*nch$

D65: hue B25R

LCH\*Ma: 35 47 299

olv\*Ma: 0.0 0.11 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

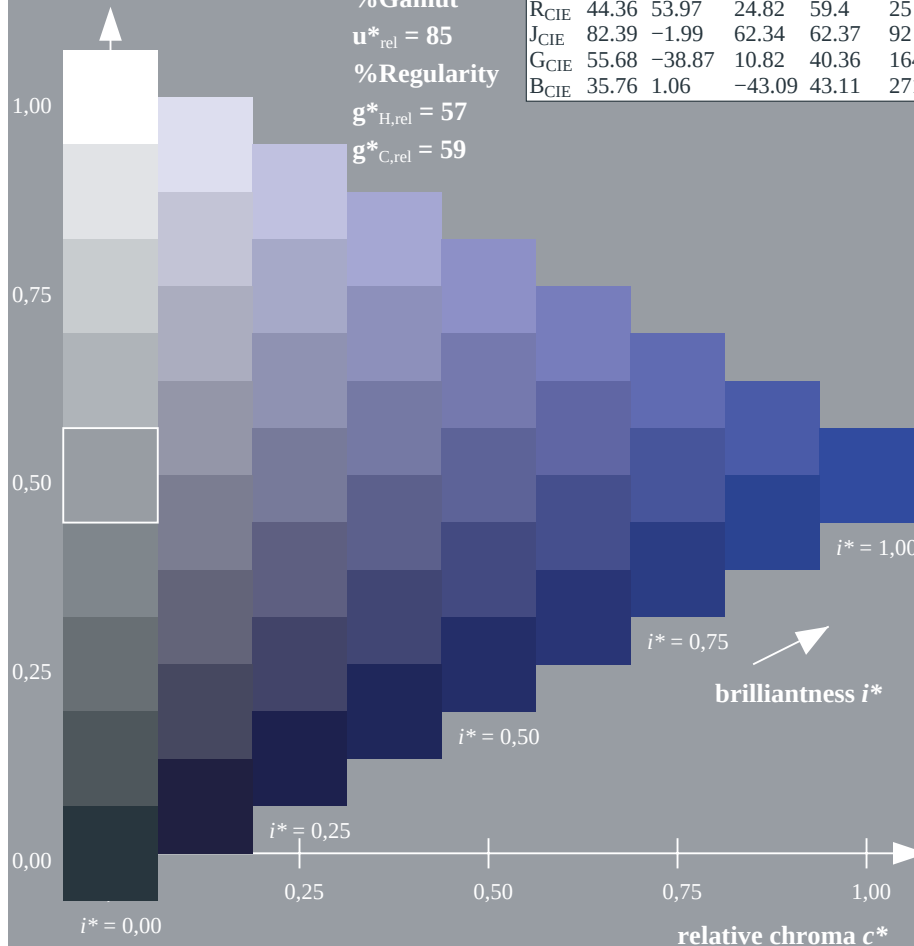
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 299/360 = 0.83 (left)

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Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 299/360 = 0.83$

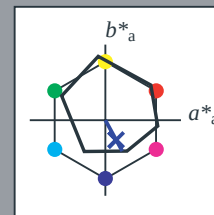
$lab^*tch$  and  $lab^*nch$

D65: hue B25R

LCH\*Ma: 35 47 299

olv\*Ma: 0.0 0.11 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

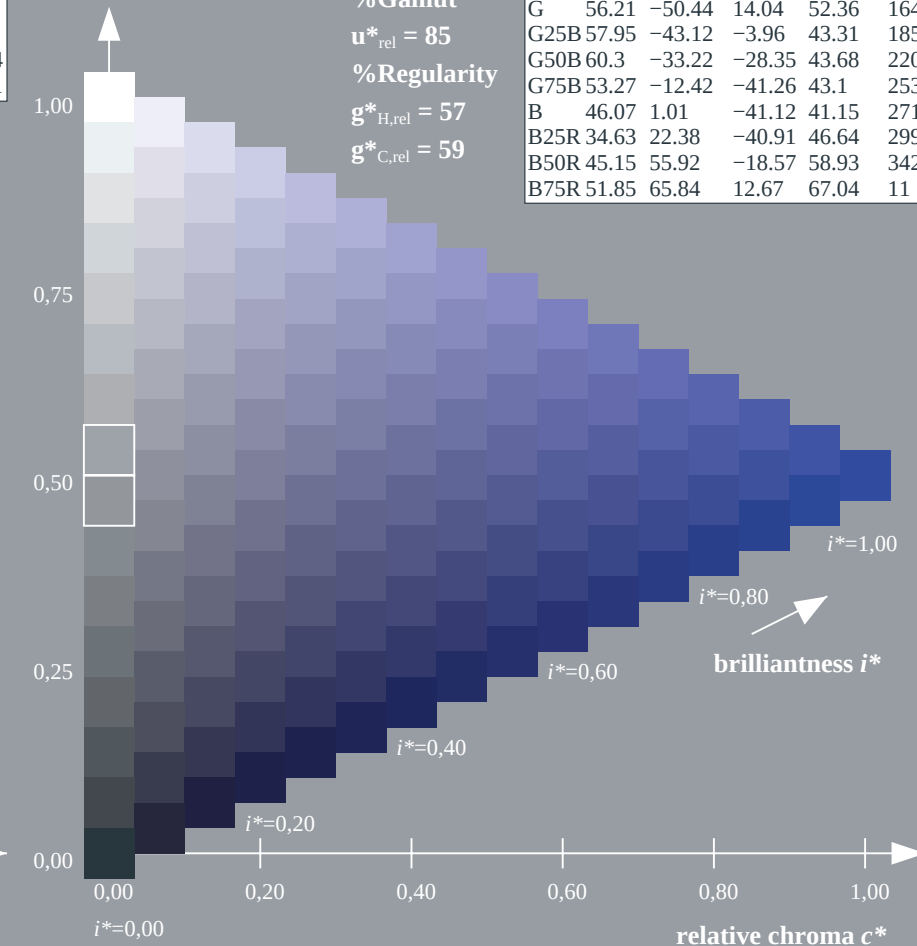
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 16 step scales for constant CIELAB hue 299/360 = 0.83 (right)

BAM-test chart ZE92; Colorimetric systems, Page 30/96  
D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 342/360 = 0.949$

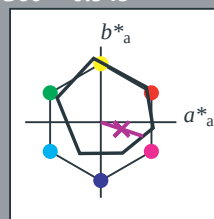
$lab^*tch$  and  $lab^*nch$

D65: hue B50R

LCH\*Ma: 45 59 342

olv\*Ma: 0.67 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 342/360 = 0.949$

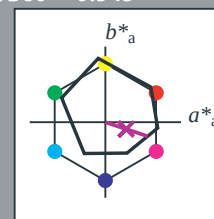
$lab^*tch$  and  $lab^*nch$

D65: hue B50R

LCH\*Ma: 45 59 342

olv\*Ma: 0.67 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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$u^*_{rel} = 85$

%Regularity

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

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

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$u^*_{rel} = 85$

%Regularity

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

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

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$u^*_{rel} = 85$

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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$u^*_{rel} = 85$

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

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

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

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$u^*_{rel} = 85$

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

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

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$u^*_{rel} = 85$

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

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

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

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$u^*_{rel} = 85$

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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$u^*_{rel} = 85$

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

**Input: Colorimetric Offset Reflective System ORS18**

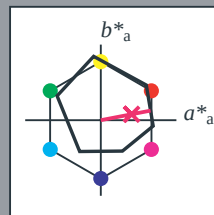
for hue  $h^* = lab^*h = 11/360 = 0.03$

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

D65: hue B75R

**LCH\*Ma: 52 67 11**

**olv\*Ma: 1.0 0.0 0.62**



triangle lightness  $t^*$

## %Gamut

$$\mathbf{u}_{\text{rel}}^* = 85$$

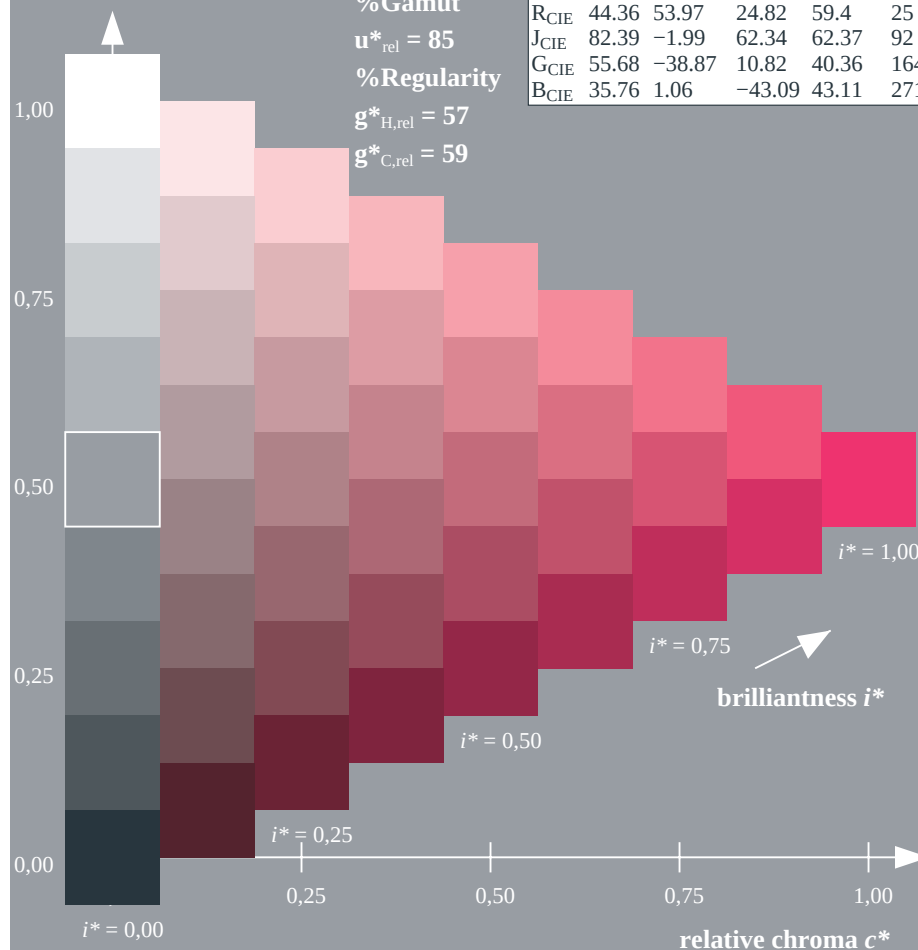
### %Regularity

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

**$g^*_{C_{rel}} = 59$**

ORS18; adapted (a) CIELAB data

|                  | $L^*=L_a^*$ | $\alpha_a^*$ | $b_a^*$ | $C_{ab,a}^*$ | $h_{ab,a}^*$ |
|------------------|-------------|--------------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16        | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44        | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8        | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91       | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61        | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26        | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0          | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0          | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97        | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99        | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87       | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06         | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 11/360 = 0.03 (left)

BAM-test chart ZE92; Colorimetric systems, Page 32/96

## D65: 9 and 16 step colour scales for 16 elementary hues

### Output: Colorimetric Offset Reflective System ORS18

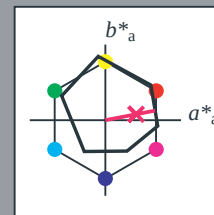
for hue  $h^* = lab^*h = 11/360 = 0.03$

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

D65: hue B75R

**LCH\*Ma: 52 67 11**

olv\*Ma: 1.0 0.0 0.62

triangle lightness  $t^*$ 

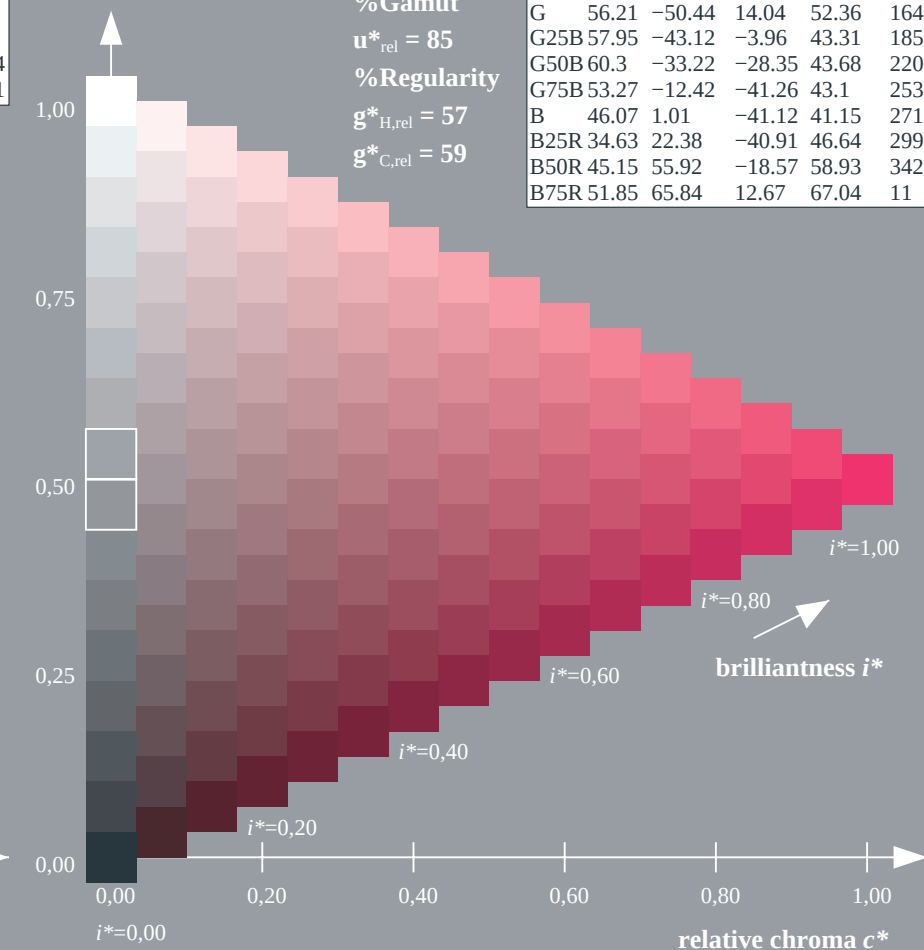
### %Gamut

$$\mathbf{u}_{\text{rel}}^* = 85$$

### %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    | 51.79         | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73         | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47         | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51         | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93         | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92         | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11         | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06         | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21         | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95         | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3          | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27         | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07         | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63         | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15         | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85         | 65.84   | 12.67   | 67.04        | 411          |



ZE920-7F, 16 step scales for constant CIELAB hue 11/360 = 0.03 (right)

input: *rgb* / *cmv0* *set(rgb/cmyk)color*

```
output: ->LAB*->cmyn5* setcmykcolo
```



Input: Colorimetric Offset Reflective System ORS18

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

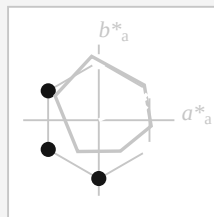
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 52 69 25

olv\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

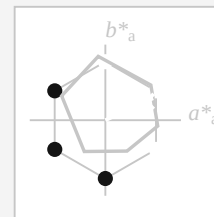
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 52 69 25

olv\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

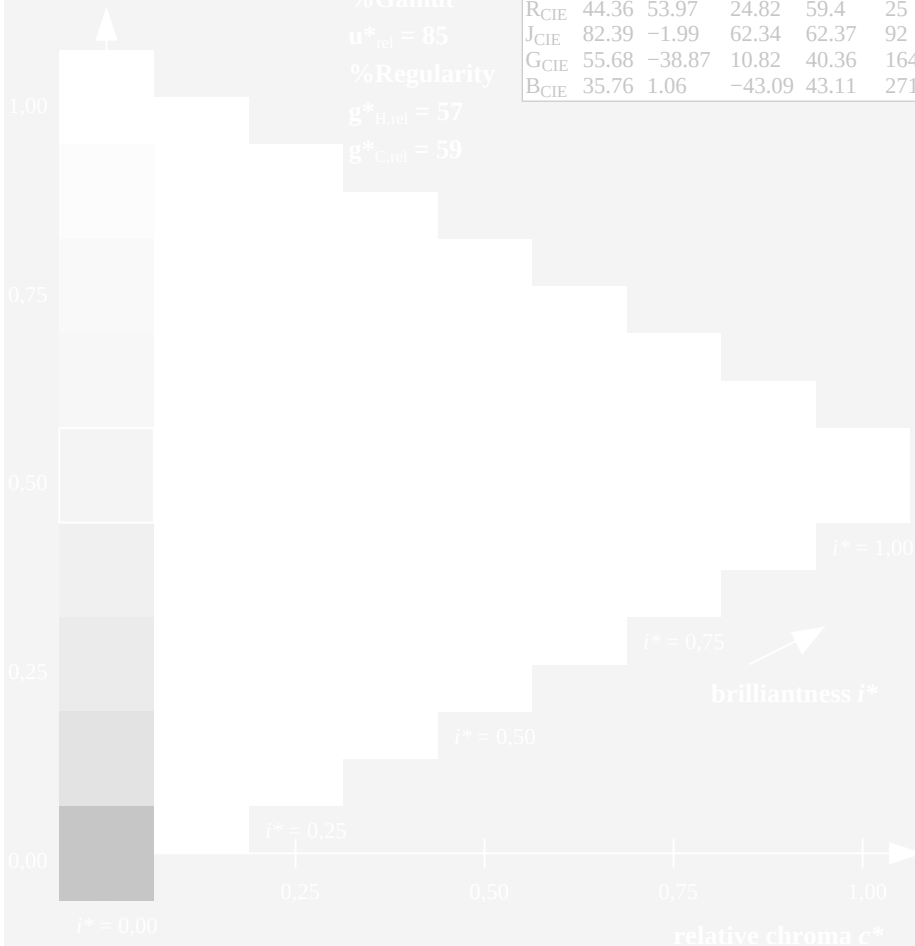
%Gamut

$u^*_{rel} = 85$

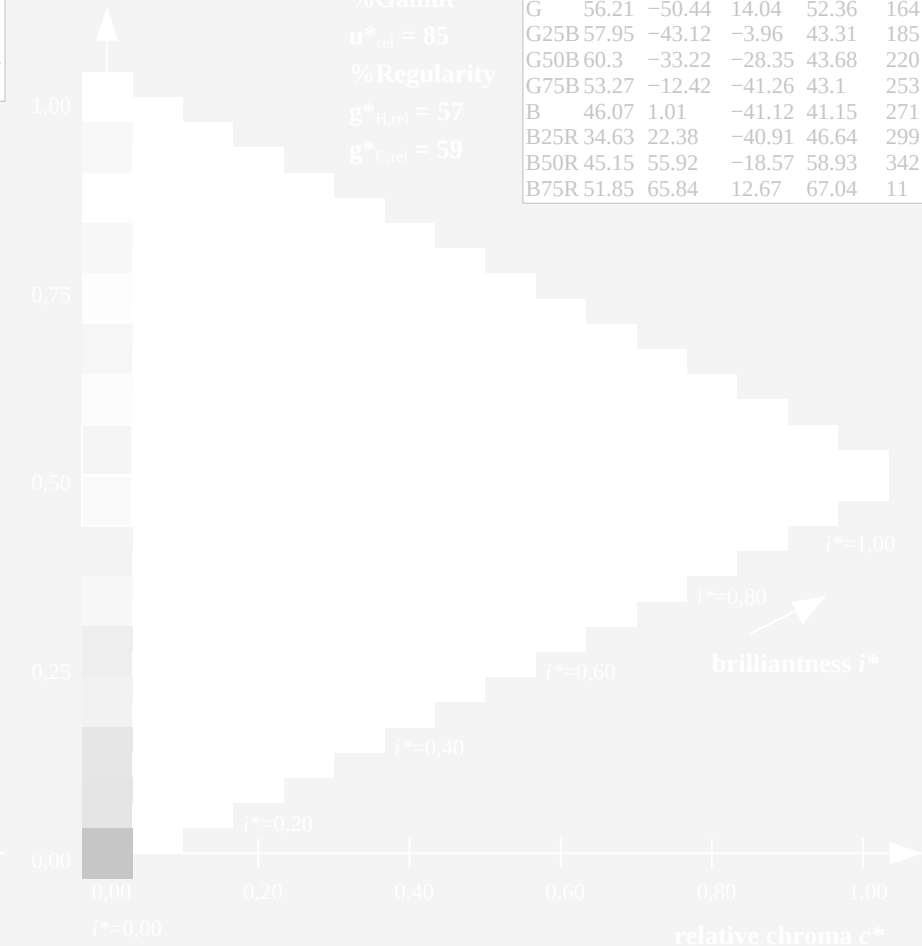
%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 25/360 = 0.069 (left)



ZE920-7F, 16 step scales for constant CIELAB hue 25/360 = 0.069 (right)

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 41/360 = 0.113$

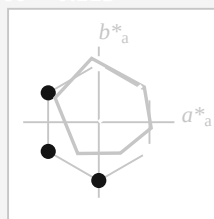
$lab^*tch$  and  $lab^*nch$

D65: hue R25J

LCH\*Ma: 54 74 41

olv\*Ma: 1.0 0.05 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 41/360 = 0.113$

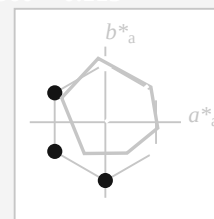
$lab^*tch$  and  $lab^*nch$

D65: hue R25J

LCH\*Ma: 54 74 41

olv\*Ma: 1.0 0.05 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

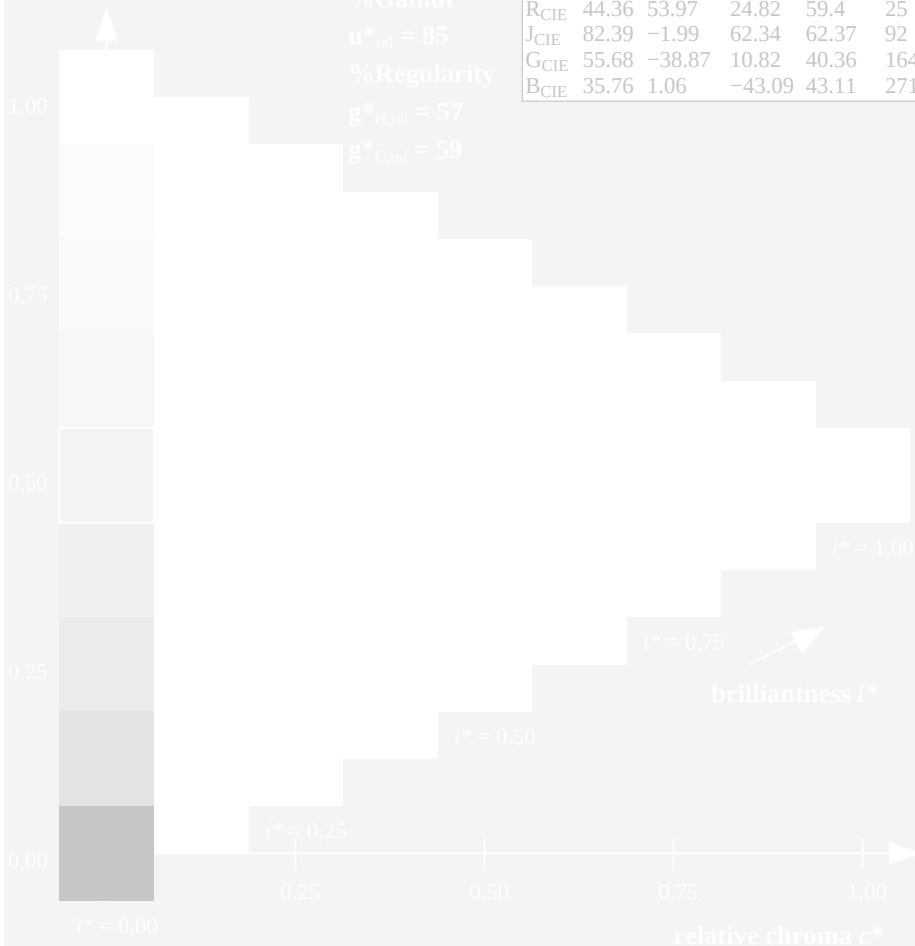
%Gamut

$u^*_{rel} = 85$

%Regularity

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

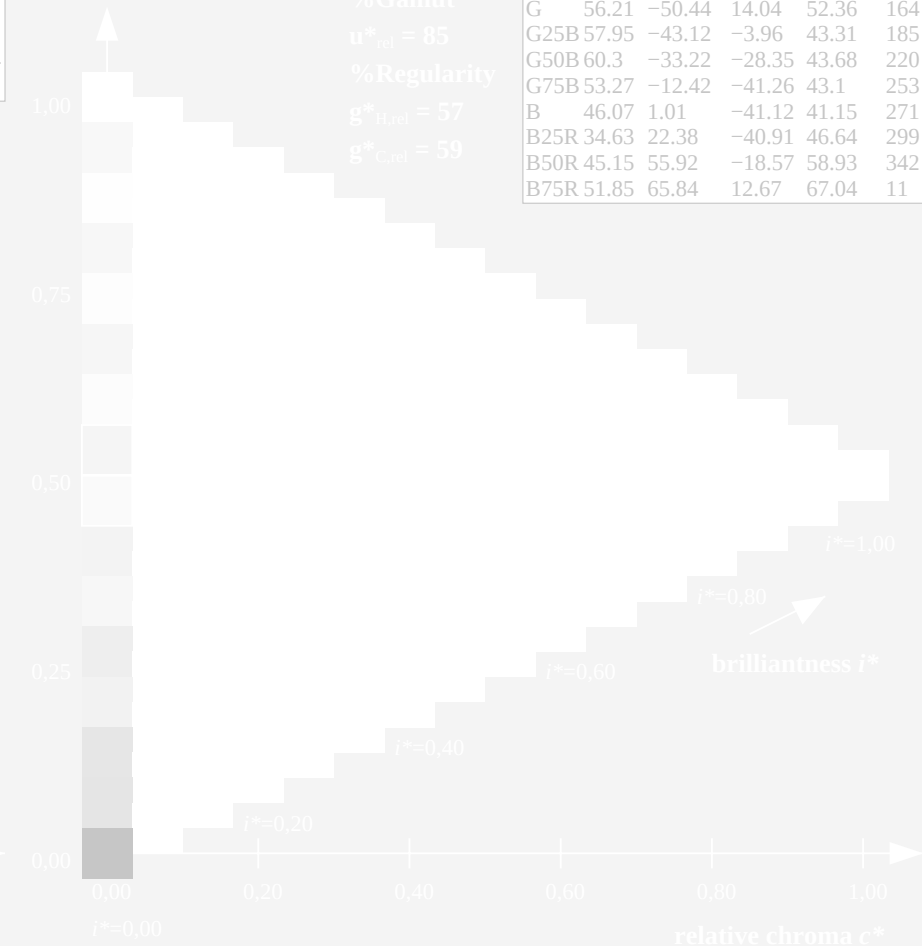
$g^*_{C,rel} = 59$



ZE920-7F, 9 step scales for constant CIELAB hue 41/360 = 0.113 (left)

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BAM-test chart ZE92; Colorimetric systems, Page 34/96  
D65: 9 and 16 step colour scales for 16 elementary hues



ZE920-7F, 16 step scales for constant CIELAB hue 41/360 = 0.113 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

c n\*

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 59/360 = 0.164$

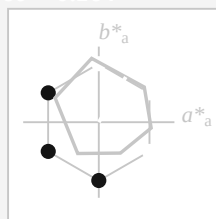
$lab^*tch$  and  $lab^*nch$

D65: hue R50J

LCH\*Ma: 65 70 59

olv\*Ma: 1.0 0.35 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 59/360 = 0.164$

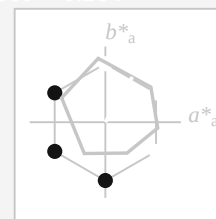
$lab^*tch$  and  $lab^*nch$

D65: hue R50J

LCH\*Ma: 65 70 59

olv\*Ma: 1.0 0.35 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

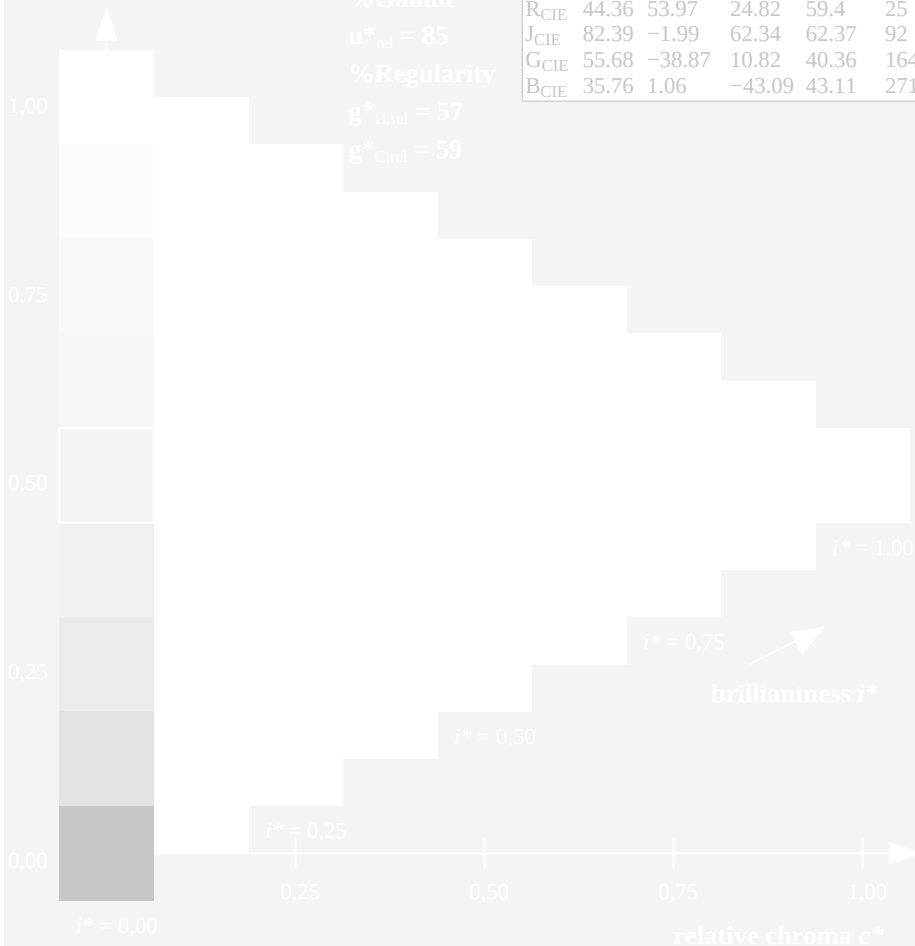
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 59/360 = 0.164 (left)

BAM-test chart ZE92; Colorimetric systems, Page 35/96  
D65: 9 and 16 step colour scales for 16 elementary hues

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ZE920-7F, 16 step scales for constant CIELAB hue 59/360 = 0.164 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

c n\*

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 77/360 = 0.215$

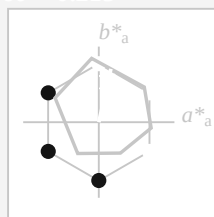
$lab^*tch$  and  $lab^*nch$

D65: hue R75J

LCH\*Ma: 77 72 77

olv\*Ma: 1.0 0.63 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 77/360 = 0.215$

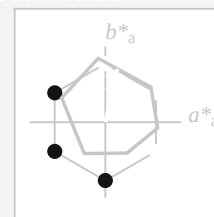
$lab^*tch$  and  $lab^*nch$

D65: hue R75J

LCH\*Ma: 77 72 77

olv\*Ma: 1.0 0.63 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

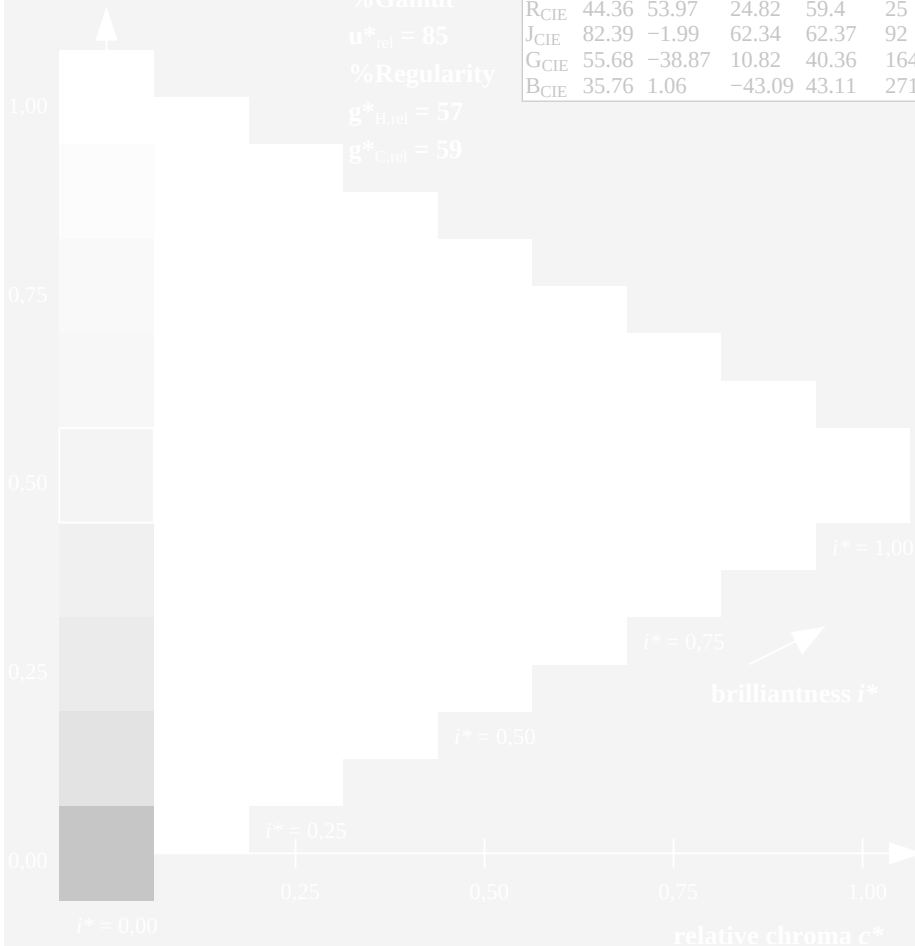
%Gamut

$u^*_{rel} = 85$

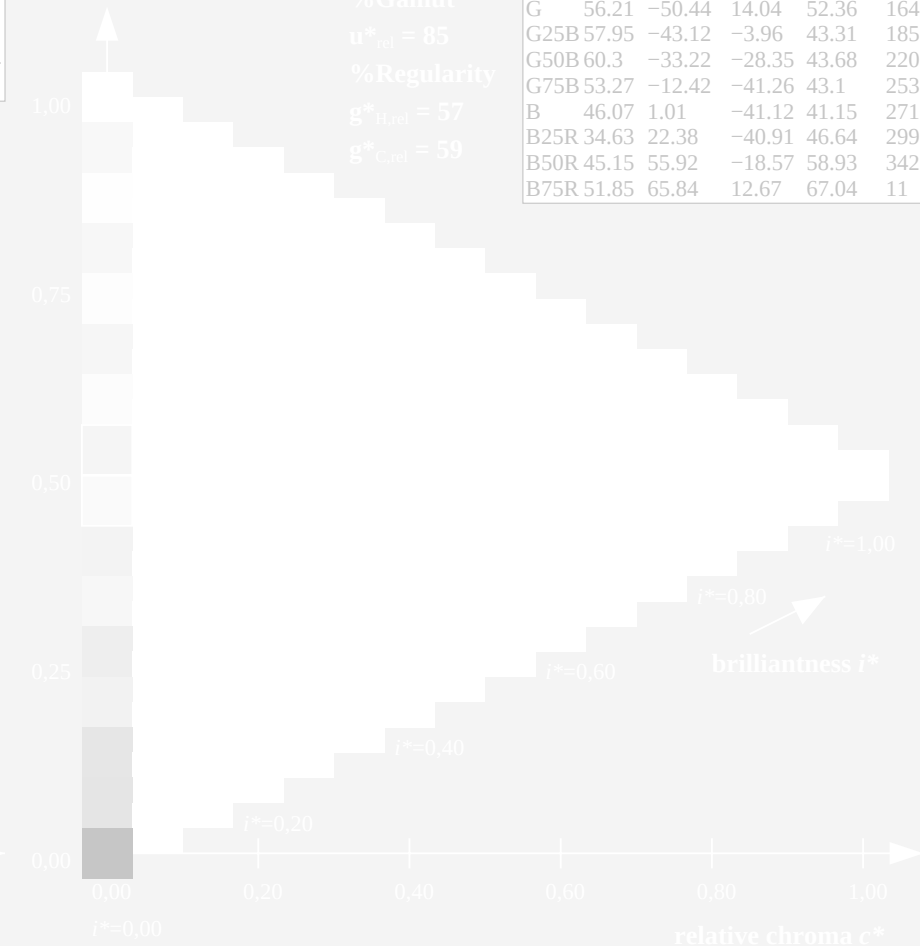
%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 77/360 = 0.215 (left)



ZE920-7F, 16 step scales for constant CIELAB hue 77/360 = 0.215 (right)

Input: Colorimetric Offset Reflective System ORS18

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

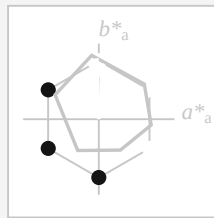
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 87 81 92

olv\*Ma: 1.0 0.9 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

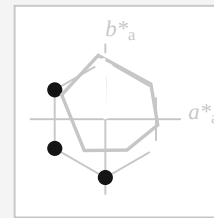
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 87 81 92

olv\*Ma: 1.0 0.9 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

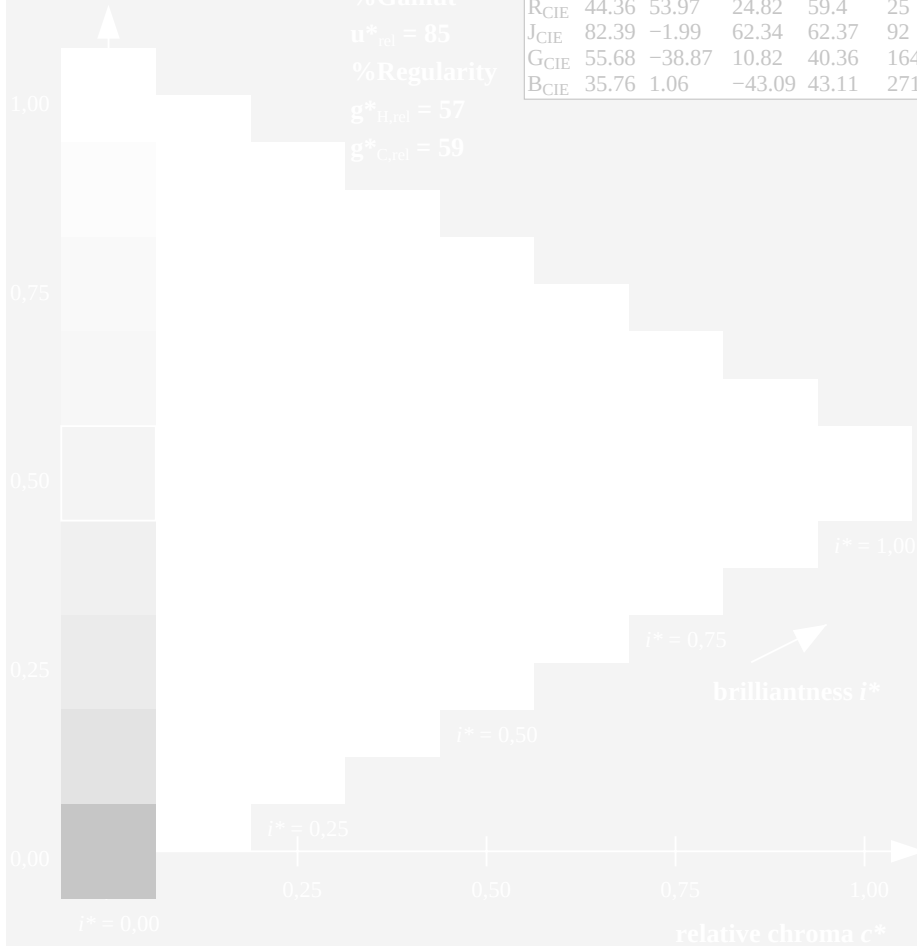
%Regularity

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

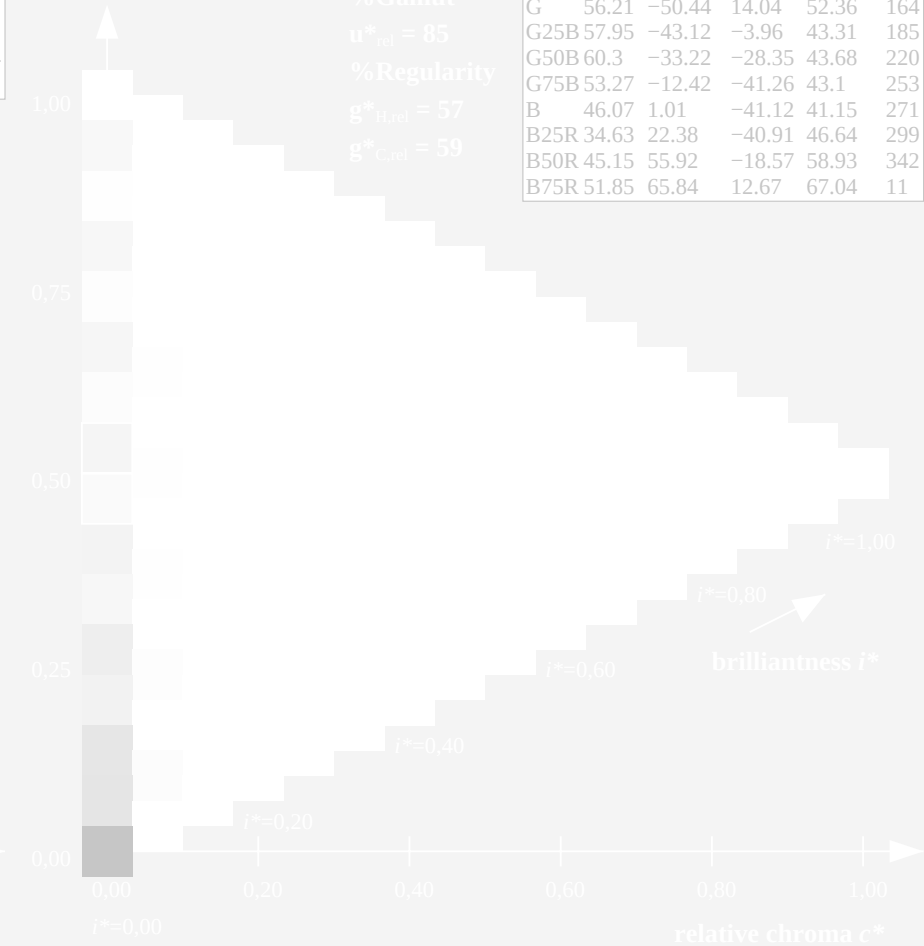
$g^*_{C,rel} = 59$

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 9 step scales for constant CIELAB hue 92/360 = 0.255 (left)



ZE920-7F, 16 step scales for constant CIELAB hue 92/360 = 0.255 (right)

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 103/360 = 0.286$

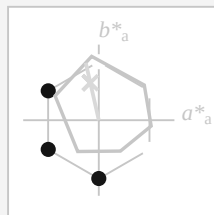
$lab^*tch$  and  $lab^*nch$

D65: hue J25G

LCH\*Ma: 85 78 103

olv\*Ma: 0.84 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

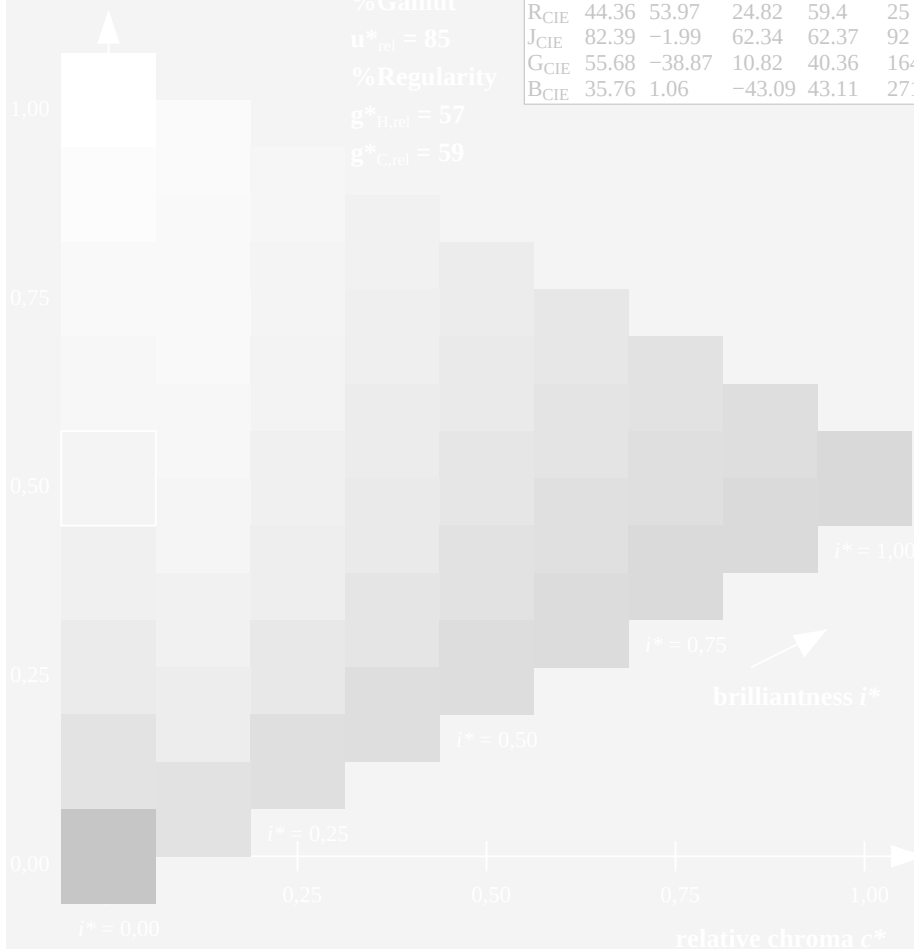
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 103/360 = 0.286 (left)

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BAM-test chart ZE92; Colorimetric systems, Page 38/96  
D65: 9 and 16 step colour scales for 16 elementary hues

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 103/360 = 0.286$

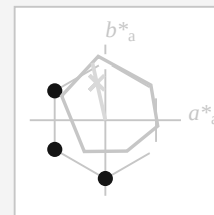
$lab^*tch$  and  $lab^*nch$

D65: hue J25G

LCH\*Ma: 85 78 103

olv\*Ma: 0.84 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

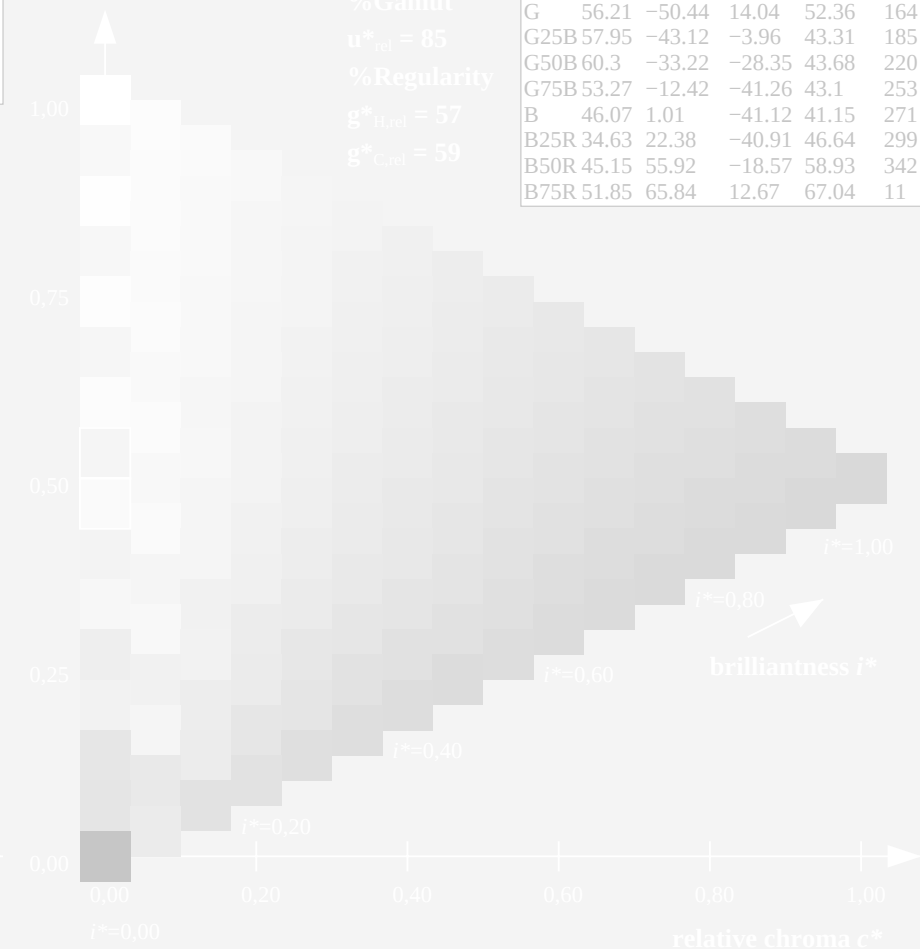
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 16 step scales for constant CIELAB hue 103/360 = 0.286 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

c n\*



Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 119/360 = 0.331$

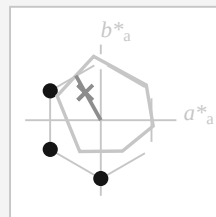
$lab^*tch$  and  $lab^*nch$

D65: hue J50G

LCH\*Ma: 73 68 119

olv\*Ma: 0.51 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 119/360 = 0.331$

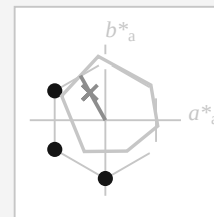
$lab^*tch$  and  $lab^*nch$

D65: hue J50G

LCH\*Ma: 73 68 119

olv\*Ma: 0.51 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

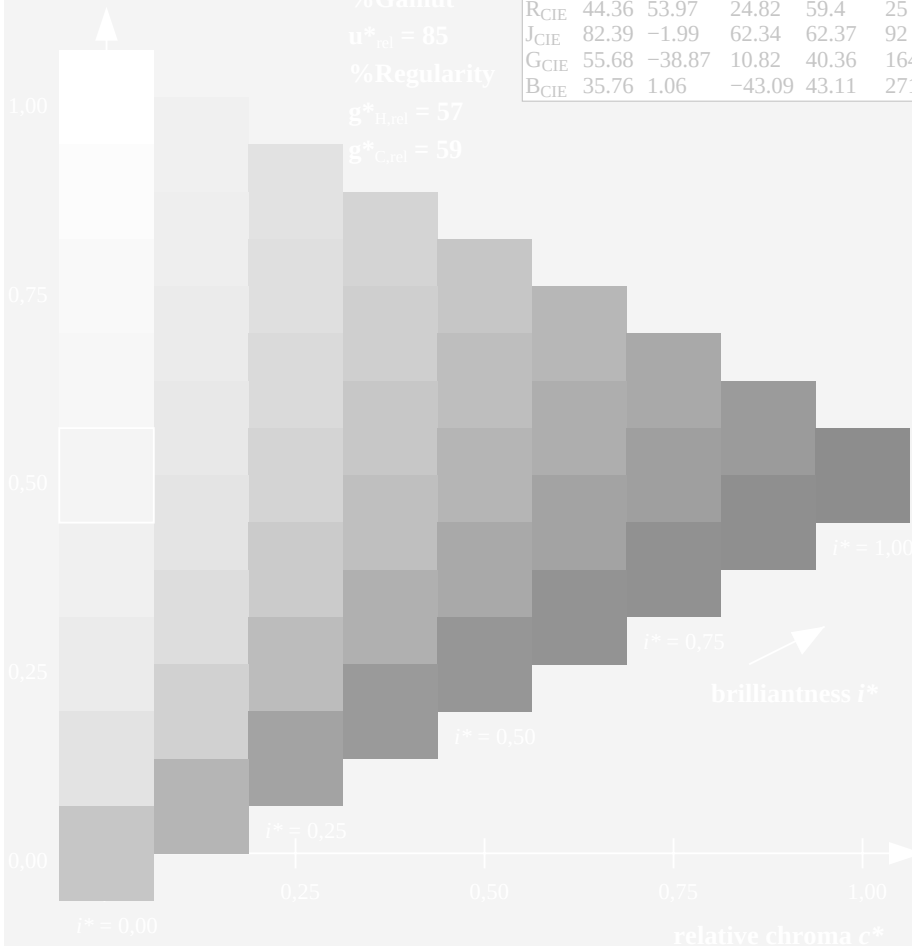
%Gamut

$u^*_{rel} = 85$

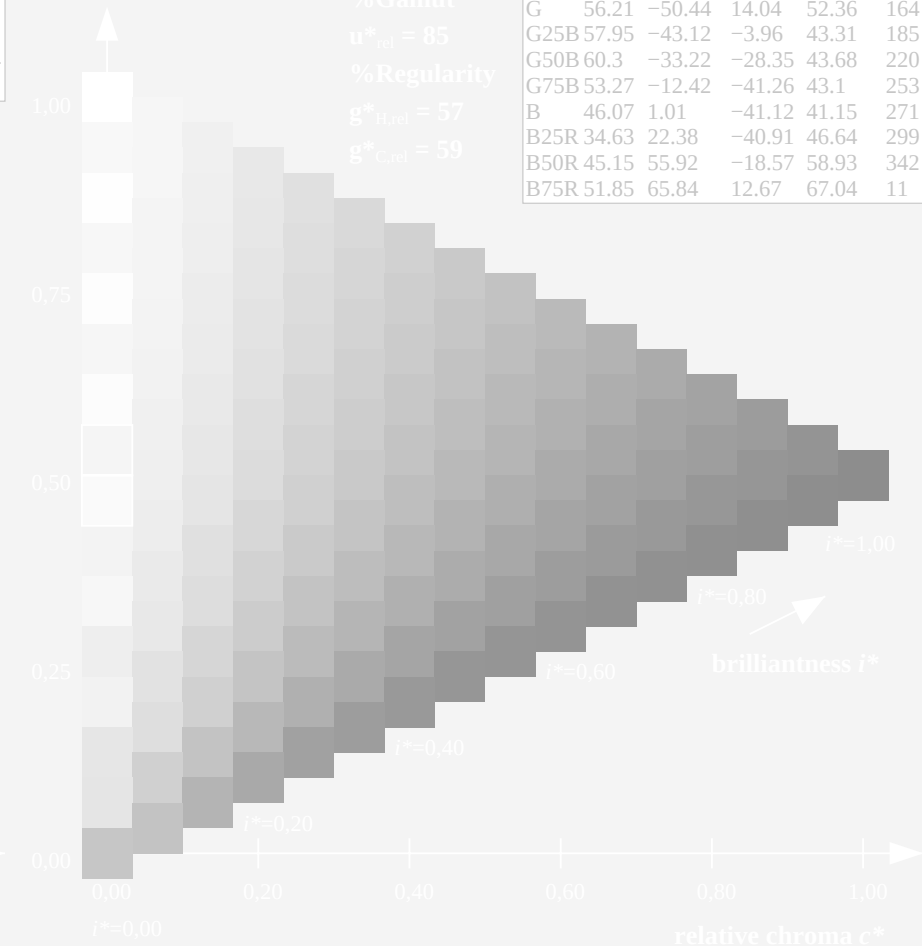
%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 119/360 = 0.331 (left)



ZE920-7F, 16 step scales for constant CIELAB hue 119/360 = 0.331 (right)

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 141/360 = 0.393$

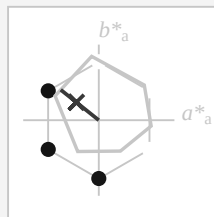
$lab^*tch$  and  $lab^*nch$

D65: hue J75G

LCH\*Ma: 60 64 141

olv\*Ma: 0.15 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 141/360 = 0.393$

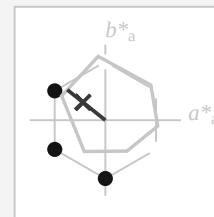
$lab^*tch$  and  $lab^*nch$

D65: hue J75G

LCH\*Ma: 60 64 141

olv\*Ma: 0.15 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

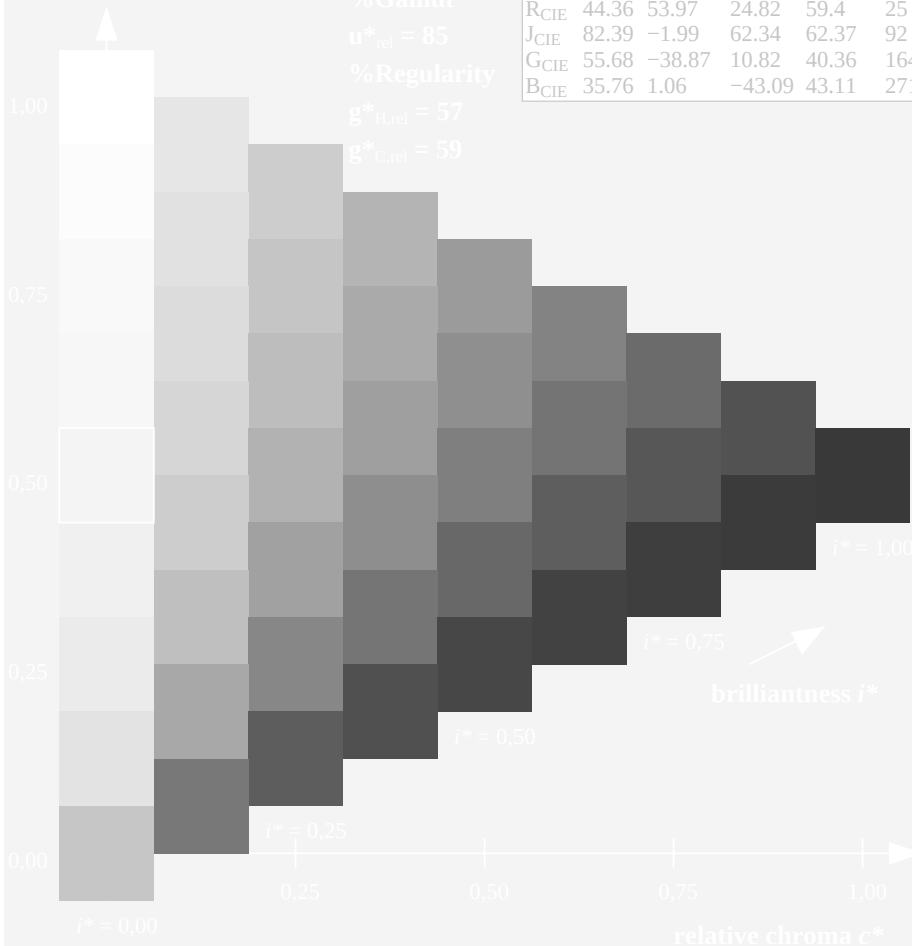
%Gamut

$u^*_{rel} = 85$

%Regularity

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

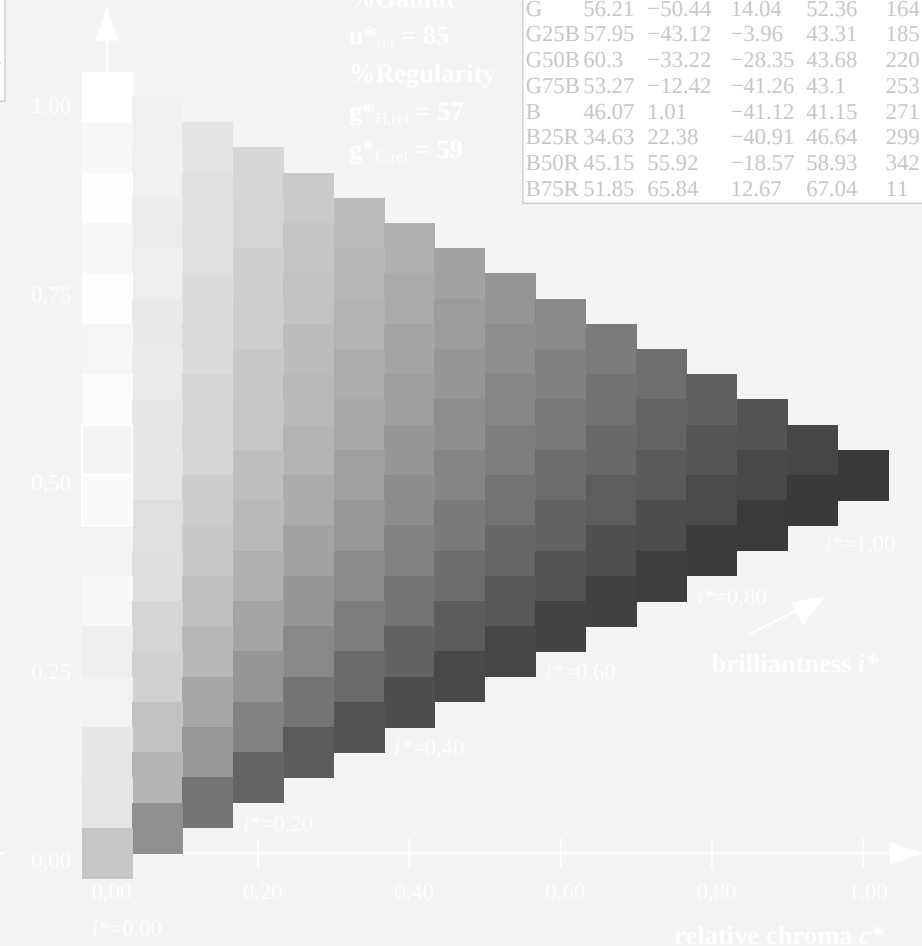
$g^*_{C,rel} = 59$



ZE920-7F, 9 step scales for constant CIELAB hue 141/360 = 0.393 (left)

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BAM-test chart ZE92; Colorimetric systems, Page 40/96  
D65: 9 and 16 step colour scales for 16 elementary hues



ZE920-7F, 16 step scales for constant CIELAB hue 141/360 = 0.393 (right)

input:  $rgb / cmY0 set(rgb/cmyk)color$   
output:  $->LAB^*->cmYn5^* setcmykcolo$

c n\*

Input: Colorimetric Offset Reflective System ORS18

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

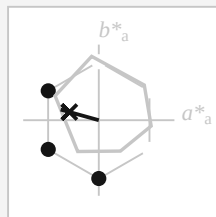
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 56 52 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

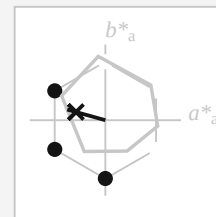
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 56 52 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

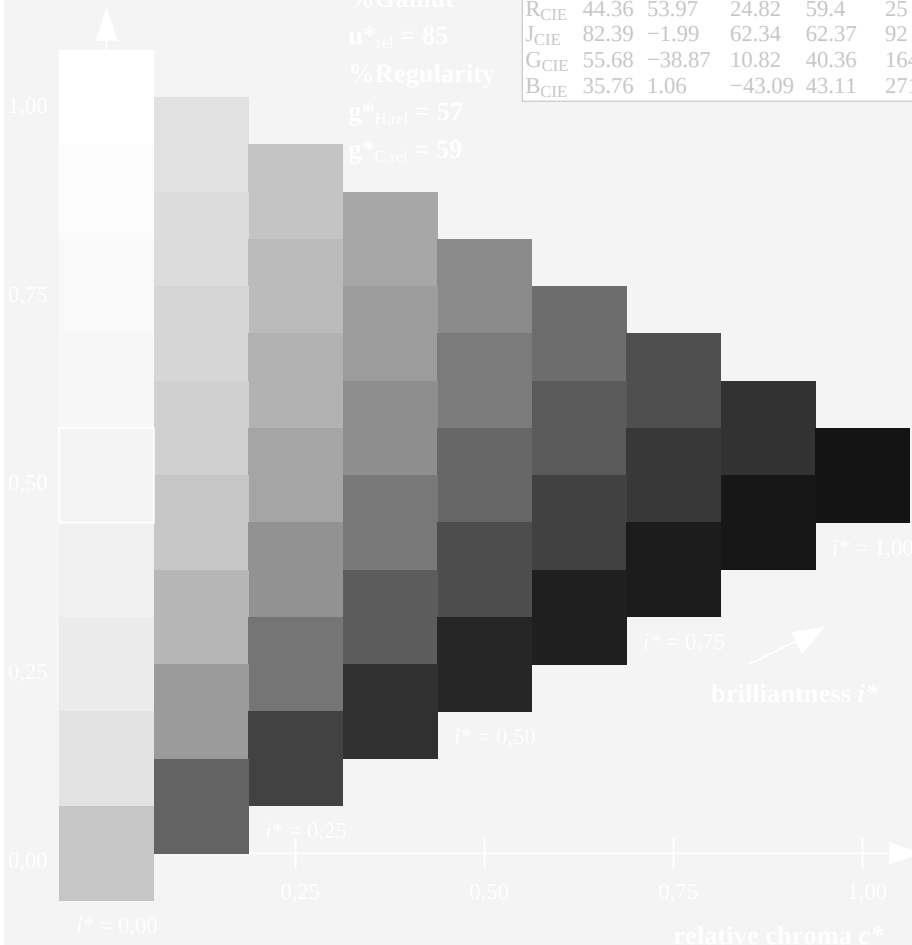
%Gamut

$u^*_{rel} = 85$

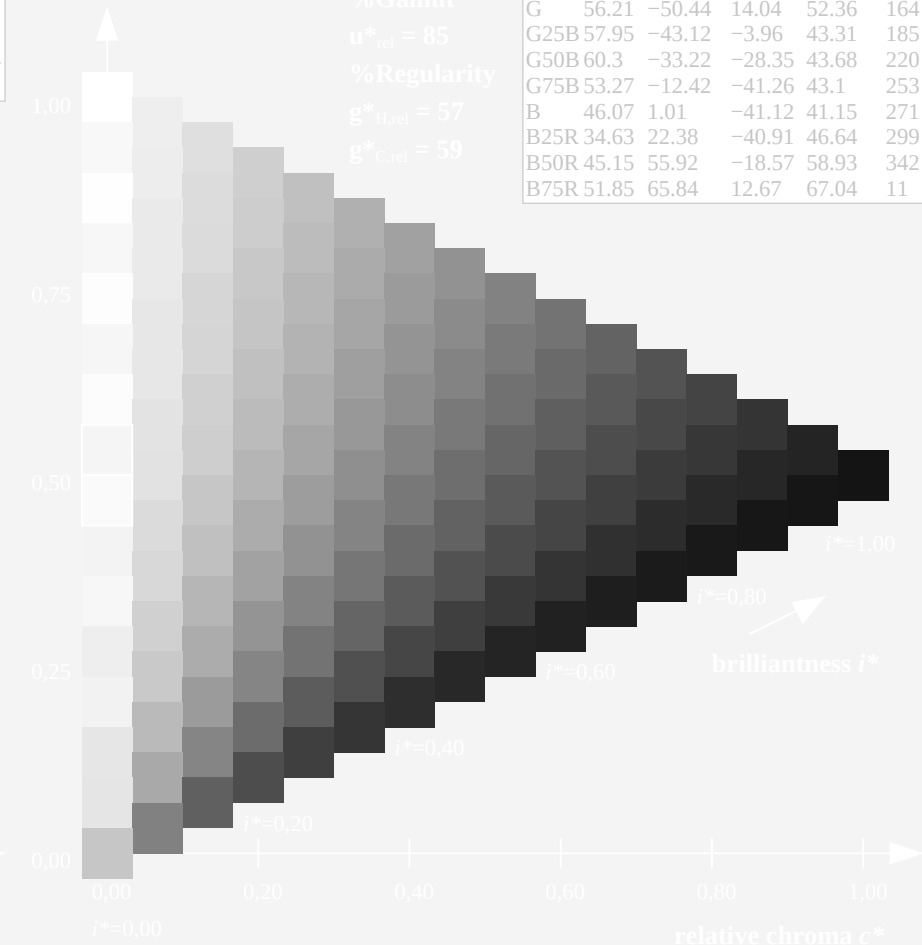
%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 164/360 = 0.457 (left)



ZE920-7F, 16 step scales for constant CIELAB hue 164/360 = 0.457 (right)

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 185/360 = 0.515$

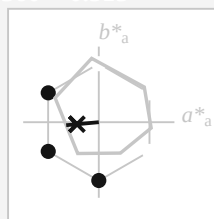
$lab^*tch$  and  $lab^*nch$

D65: hue G25B

LCH\*Ma: 58 43 185

olv\*Ma: 0.0 1.0 0.49

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 185/360 = 0.515$

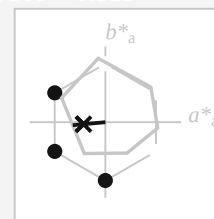
$lab^*tch$  and  $lab^*nch$

D65: hue G25B

LCH\*Ma: 58 43 185

olv\*Ma: 0.0 1.0 0.49

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

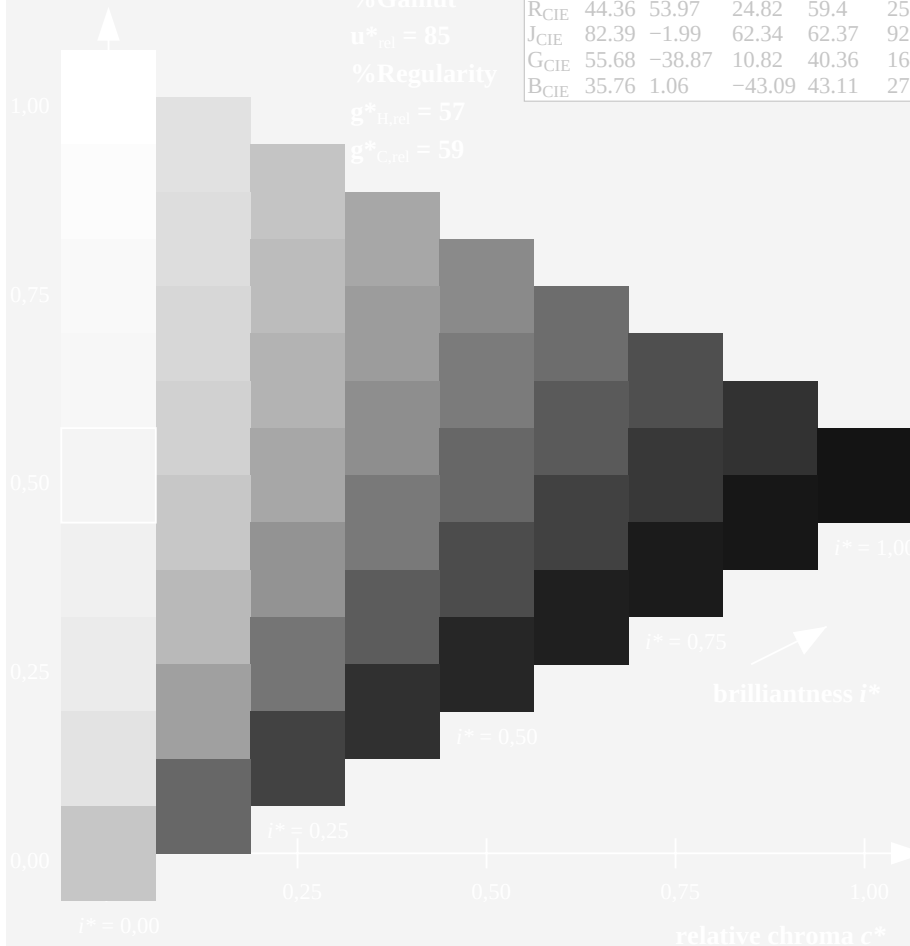
%Regularity

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

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

ORS18; adapted (a) CIELAB data

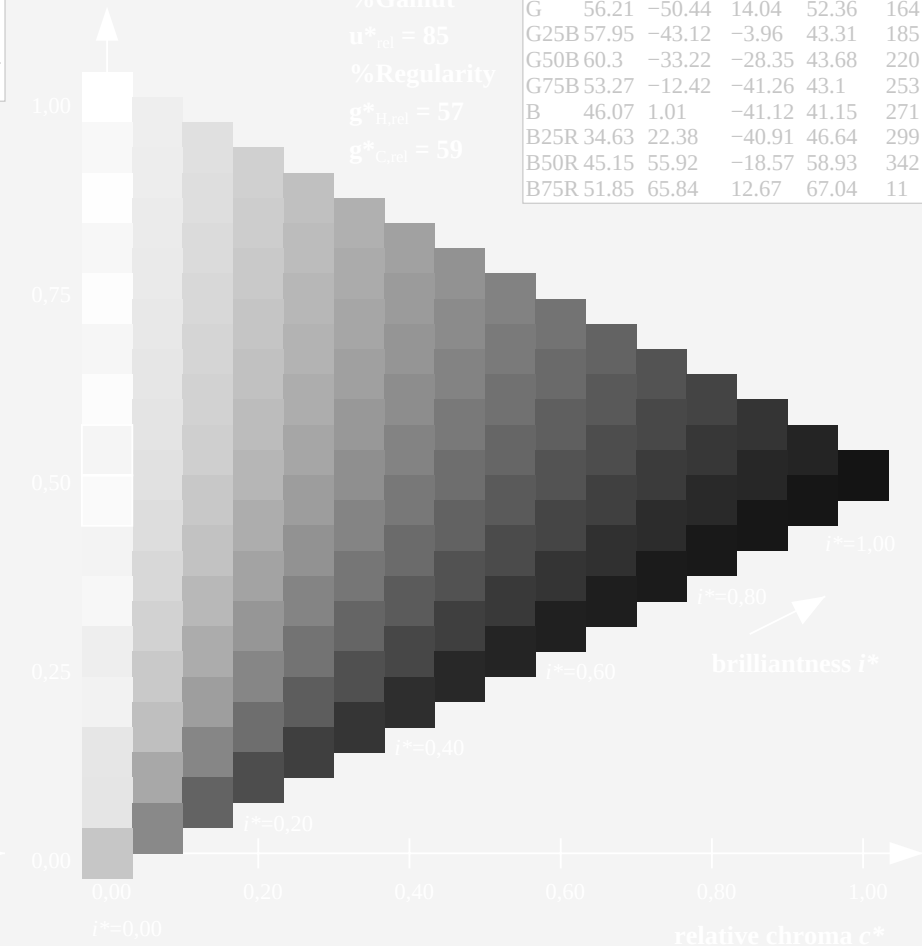
|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 9 step scales for constant CIELAB hue 185/360 = 0.515 (left)

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BAM-test chart ZE92; Colorimetric systems, Page 42/96  
D65: 9 and 16 step colour scales for 16 elementary hues



ZE920-7F, 16 step scales for constant CIELAB hue 185/360 = 0.515 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 220/360 = 0.612$

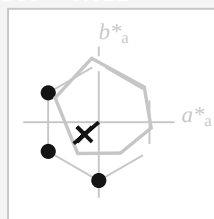
$lab^*tch$  and  $lab^*nch$

D65: hue G50B

LCH\*Ma: 60 44 220

olv\*Ma: 0.0 1.0 0.82

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 220/360 = 0.612$

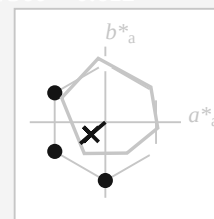
$lab^*tch$  and  $lab^*nch$

D65: hue G50B

LCH\*Ma: 60 44 220

olv\*Ma: 0.0 1.0 0.82

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

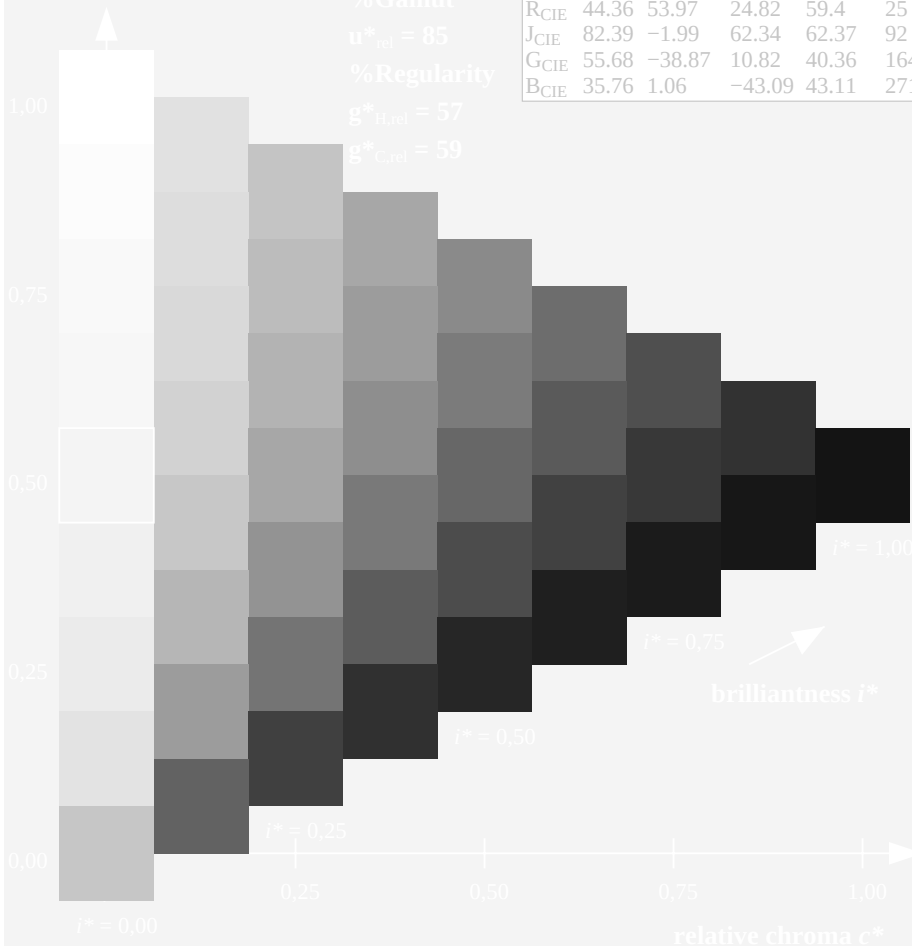
%Gamut

$u^*_{rel} = 85$

%Regularity

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

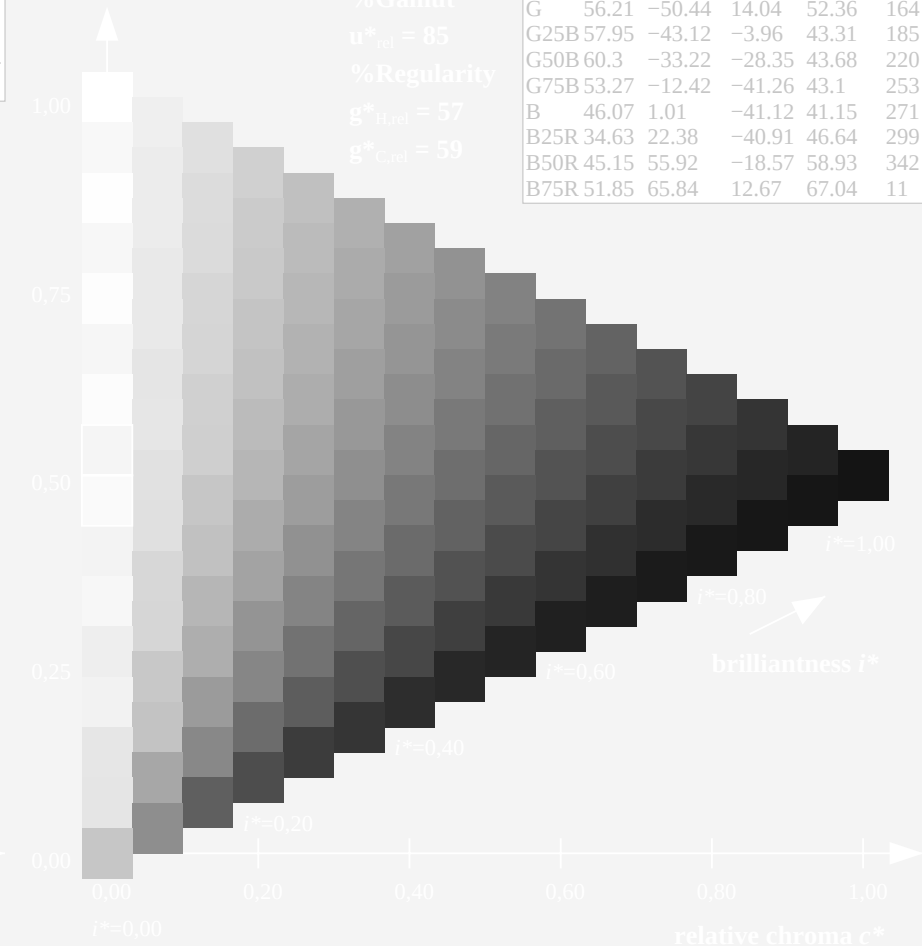
$g^*_{C,rel} = 59$



ZE920-7F, 9 step scales for constant CIELAB hue 220/360 = 0.612 (left)

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BAM-test chart ZE92; Colorimetric systems, Page 43/96  
D65: 9 and 16 step colour scales for 16 elementary hues



ZE920-7F, 16 step scales for constant CIELAB hue 220/360 = 0.612 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^* setcmykcolo$

c n\*

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 253/360 = 0.703$

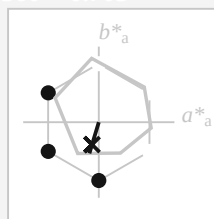
$lab^*tch$  and  $lab^*nch$

D65: hue G75B

LCH\*Ma: 53 43 253

olv\*Ma: 0.0 0.73 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

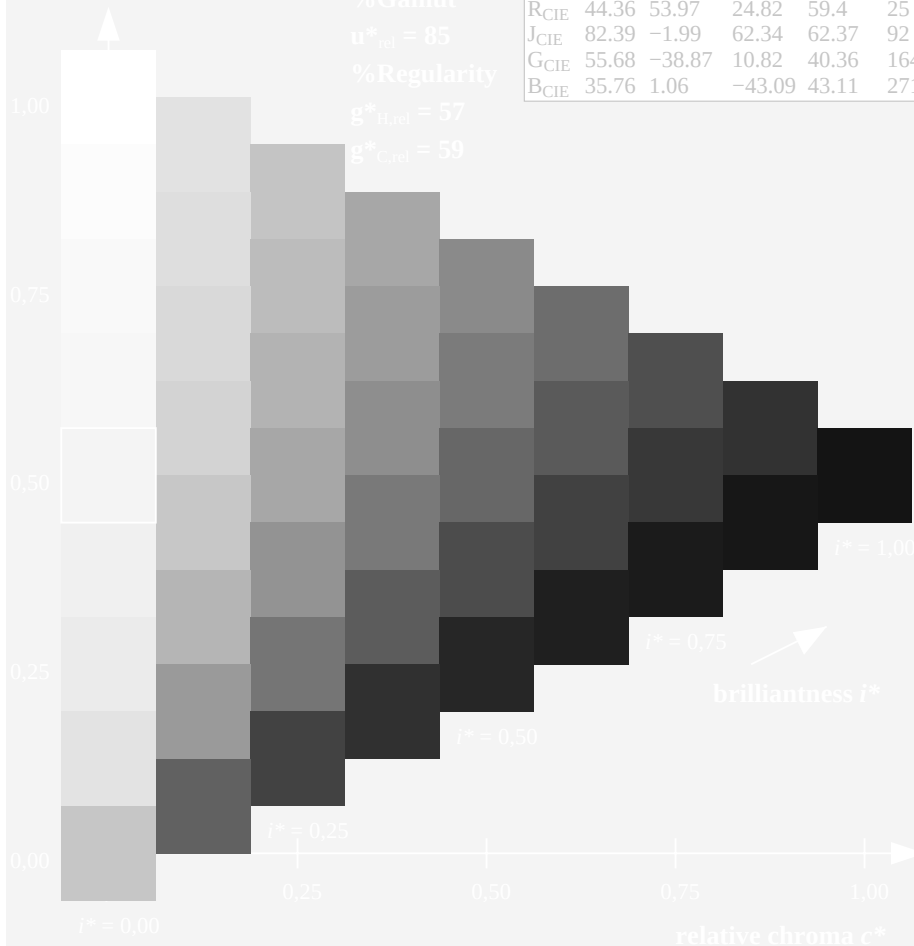
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 253/360 = 0.703 (left)

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BAM-test chart ZE92; Colorimetric systems, Page 44/96  
D65: 9 and 16 step colour scales for 16 elementary hues

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 253/360 = 0.703$

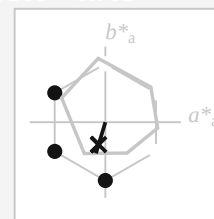
$lab^*tch$  and  $lab^*nch$

D65: hue G75B

LCH\*Ma: 53 43 253

olv\*Ma: 0.0 0.73 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

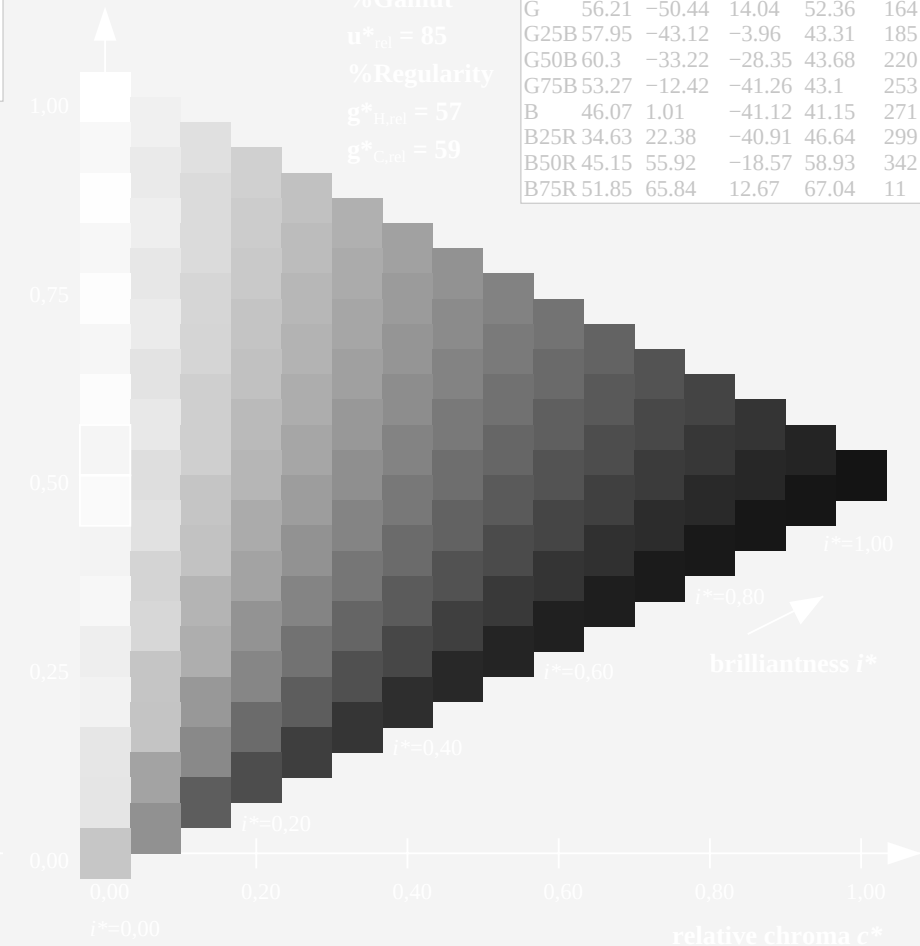
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 16 step scales for constant CIELAB hue 253/360 = 0.703 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

c n\*

Input: Colorimetric Offset Reflective System ORS18

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

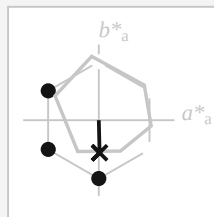
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 46 41 271

olv\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

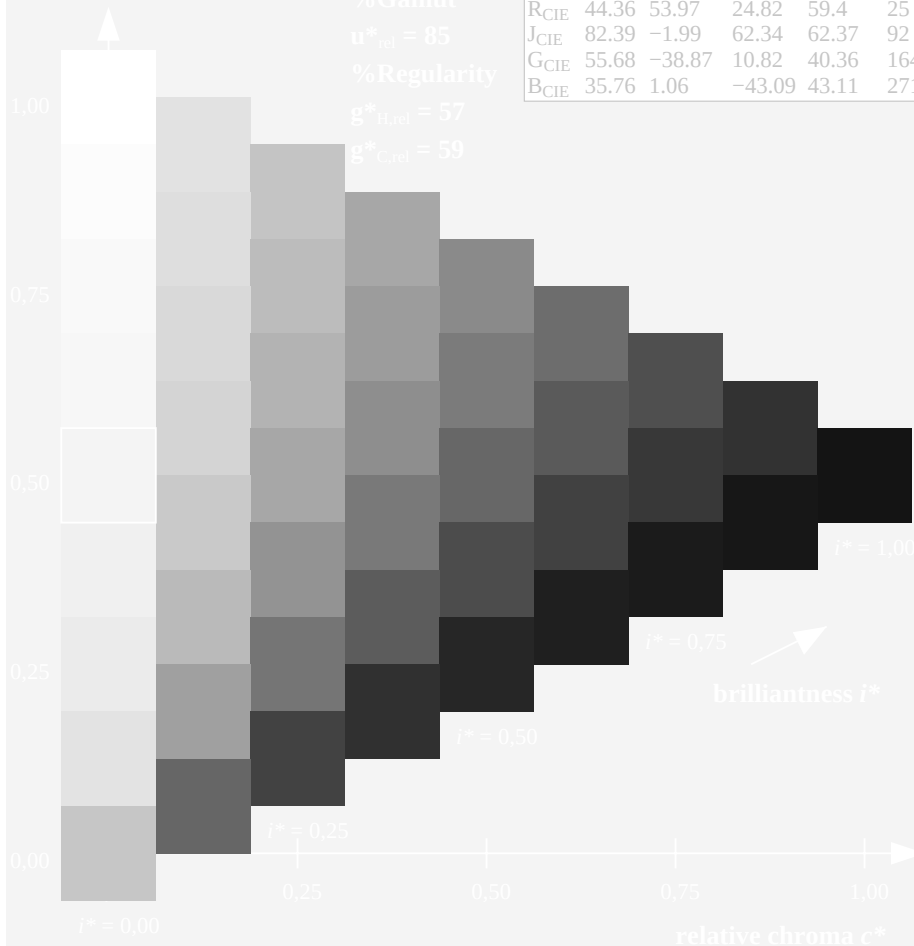
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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BAM-test chart ZE92; Colorimetric systems, Page 45/96  
D65: 9 and 16 step colour scales for 16 elementary hues

Output: Colorimetric Offset Reflective System ORS18

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

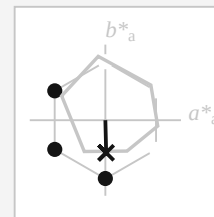
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 46 41 271

olv\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

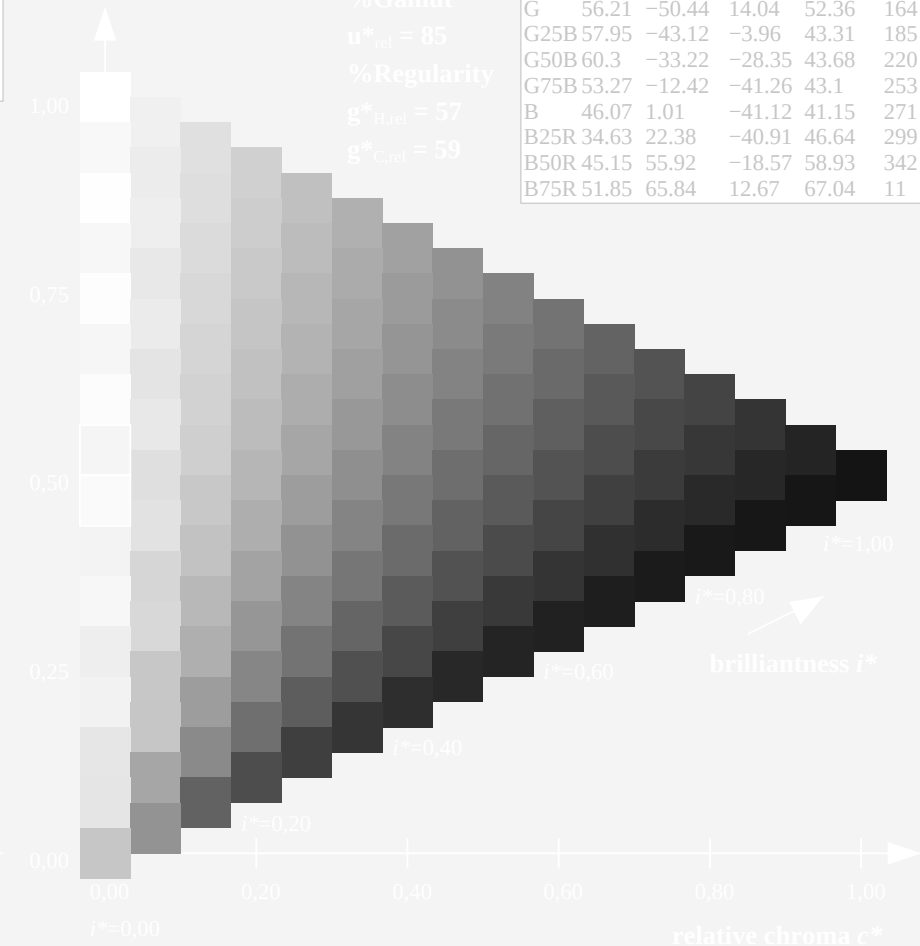
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 16 step scales for constant CIELAB hue 271/360 = 0.754 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^* setcmykcolo$

c n\*



Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 299/360 = 0.83$

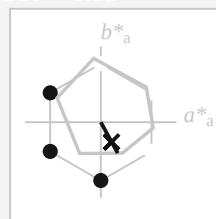
$lab^*tch$  and  $lab^*nch$

D65: hue B25R

LCH\*Ma: 35 47 299

olv\*Ma: 0.0 0.11 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 299/360 = 0.83$

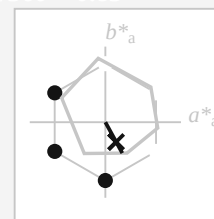
$lab^*tch$  and  $lab^*nch$

D65: hue B25R

LCH\*Ma: 35 47 299

olv\*Ma: 0.0 0.11 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

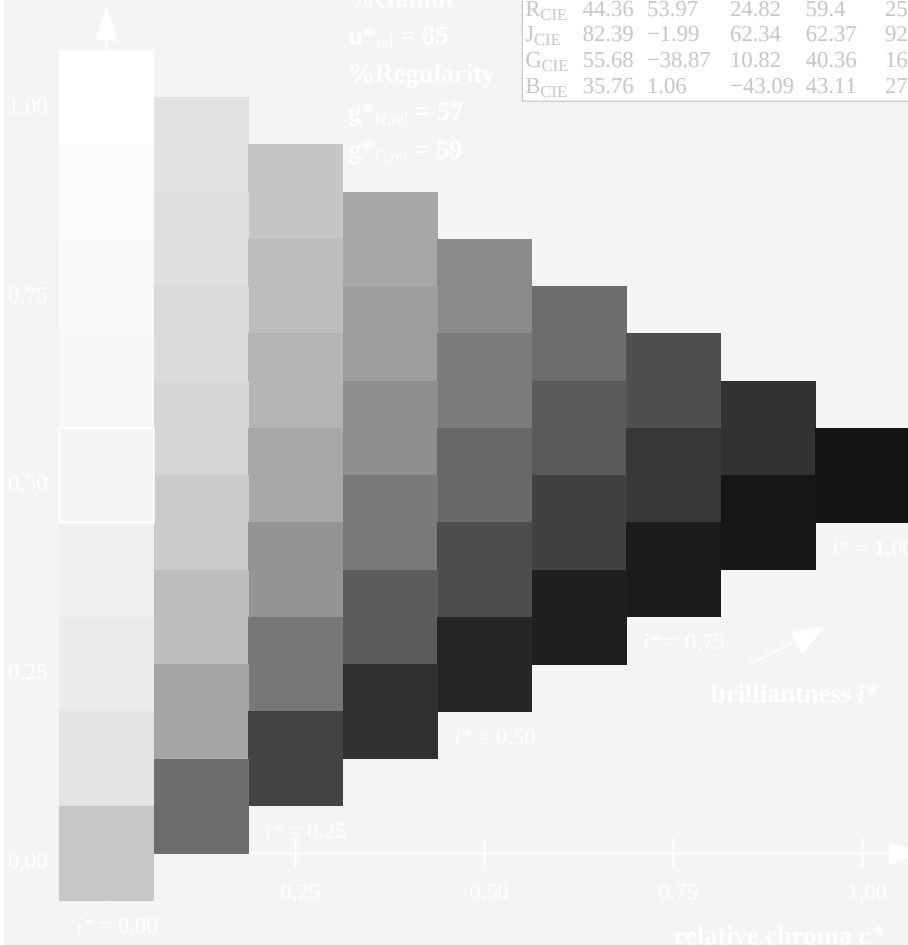
%Regularity

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

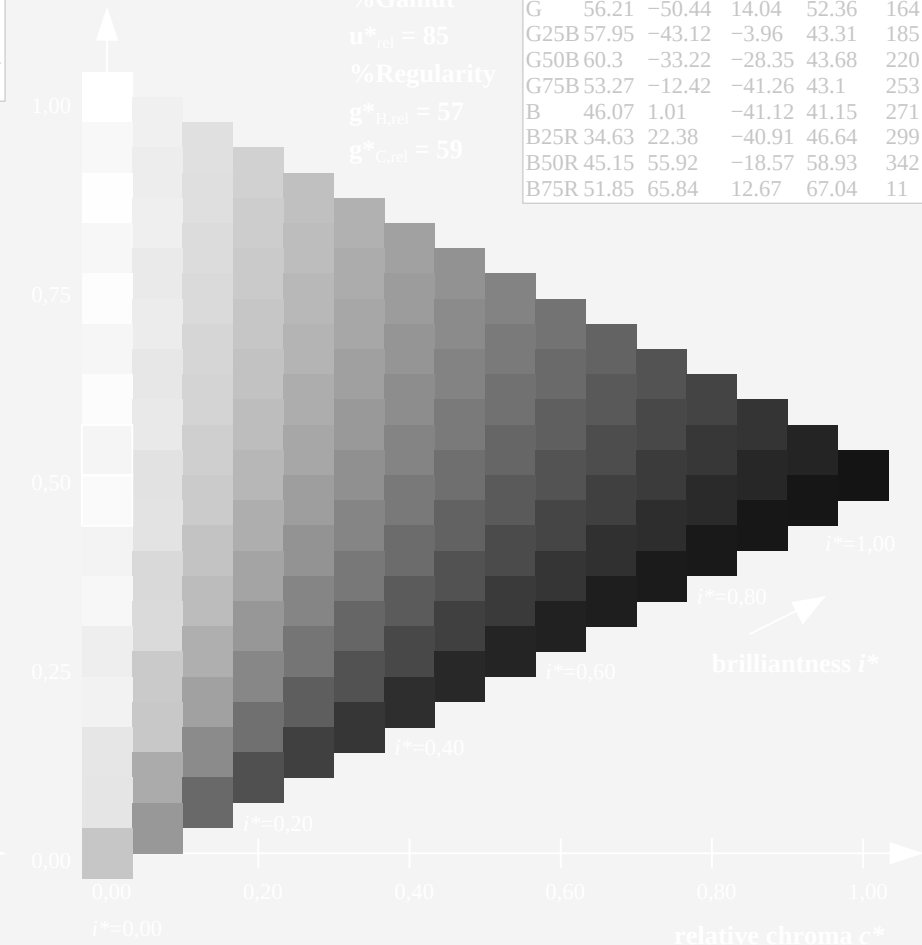
$g^*_{C,rel} = 59$

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 9 step scales for constant CIELAB hue 299/360 = 0.83 (left)



ZE920-7F, 16 step scales for constant CIELAB hue 299/360 = 0.83 (right)

See for similar files: <http://www.ps.bam.de/ZE92/>; [www.ps.bam.de/ZE92/](http://www.ps.bam.de/ZE92/); [www.ps.bam.de/ZE92/](http://www.ps.bam.de/ZE92/).  
Technical information: <http://www.ps.bam.de> Version 2.1, io=1,1, CIELAB



BAM registration: 20071001-ZE92/10L/L92E00FA.PS/.TXT BAM material: code=rh4ta  
application for evaluation and measurement of printer or monitor systems



Input: Colorimetric Offset Reflective System ORS18

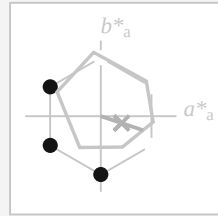
for hue  $h^* = lab^*h = 342/360 = 0.949$

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

D65: hue B50R

LCH\*Ma: 45 59 342

olv\*Ma: 0.67 0.0 1.0



| ORS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| O <sub>Ma</sub>                | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>                | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>                | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>                | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>                | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>                | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>                | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub>               | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub>               | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub>               | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub>               | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

triangle lightness  $t^*$

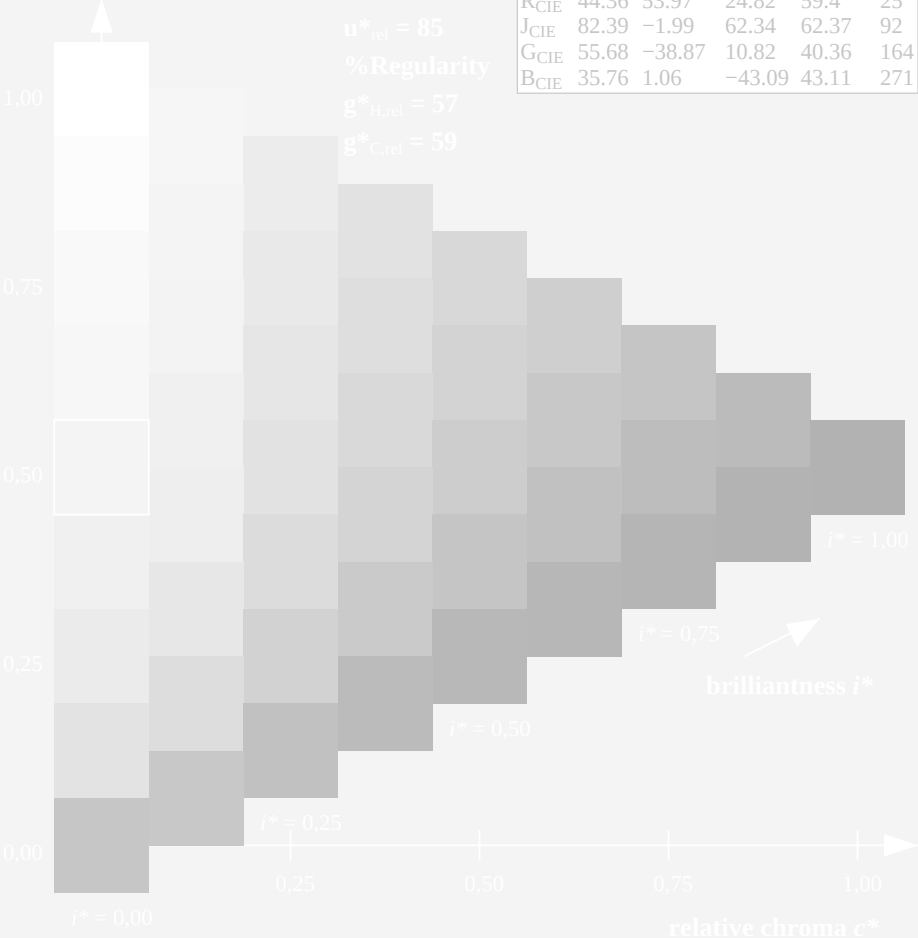
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 342/360 = 0.949 (left)

Output: Colorimetric Offset Reflective System ORS18

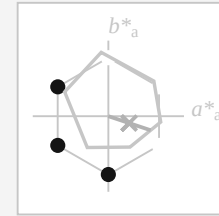
for hue  $h^* = lab^*h = 342/360 = 0.949$

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

D65: hue B50R

LCH\*Ma: 45 59 342

olv\*Ma: 0.67 0.0 1.0



triangle lightness  $t^*$

%Gamut

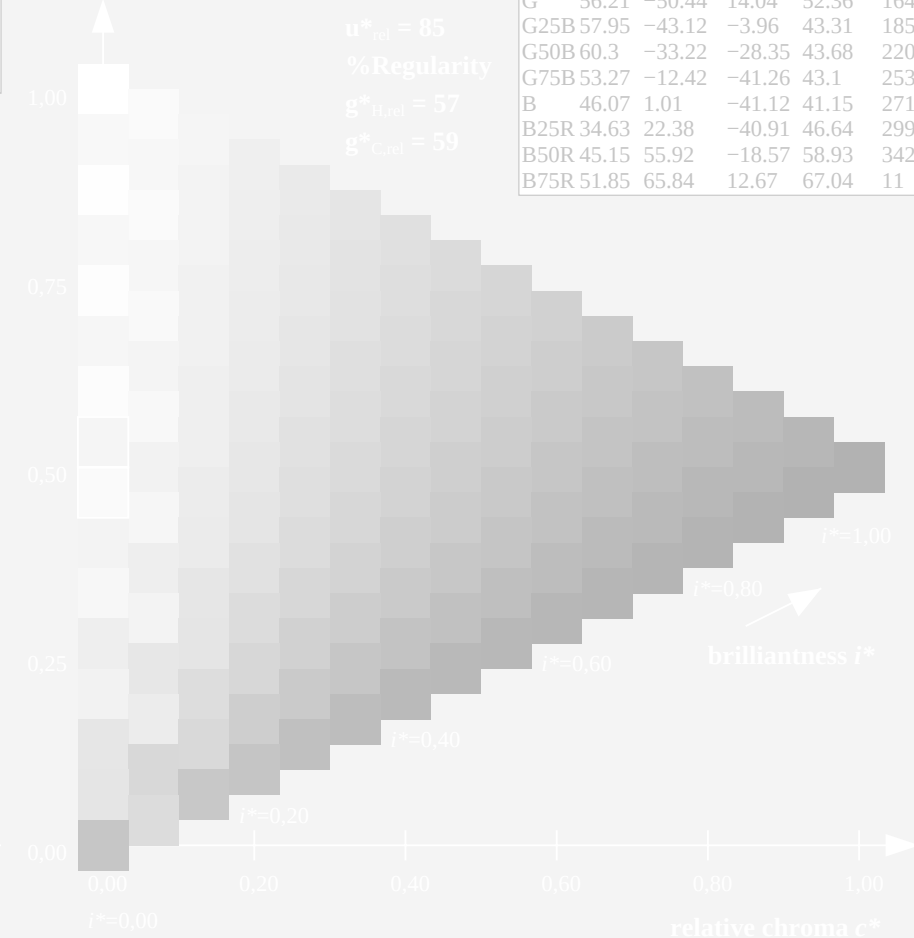
$u^*_{rel} = 85$

%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                              | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J                           | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J                           | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J                           | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J                              | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G                           | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G                           | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G                           | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G                              | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B                           | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B                           | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B                           | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B                              | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R                           | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R                           | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R                           | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 16 step scales for constant CIELAB hue 342/360 = 0.949 (right)

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 11/360 = 0.03$

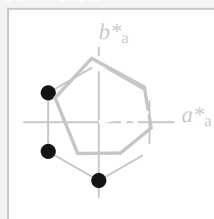
$lab^*tch$  and  $lab^*nch$

D65: hue B75R

LCH\*Ma: 52 67 11

olv\*Ma: 1.0 0.0 0.62

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 11/360 = 0.03$

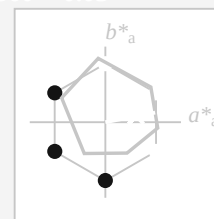
$lab^*tch$  and  $lab^*nch$

D65: hue B75R

LCH\*Ma: 52 67 11

olv\*Ma: 1.0 0.0 0.62

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

ZE920-7F, 9 step scales for constant CIELAB hue 11/360 = 0.03 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 11/360 = 0.03 (right)

c n\*

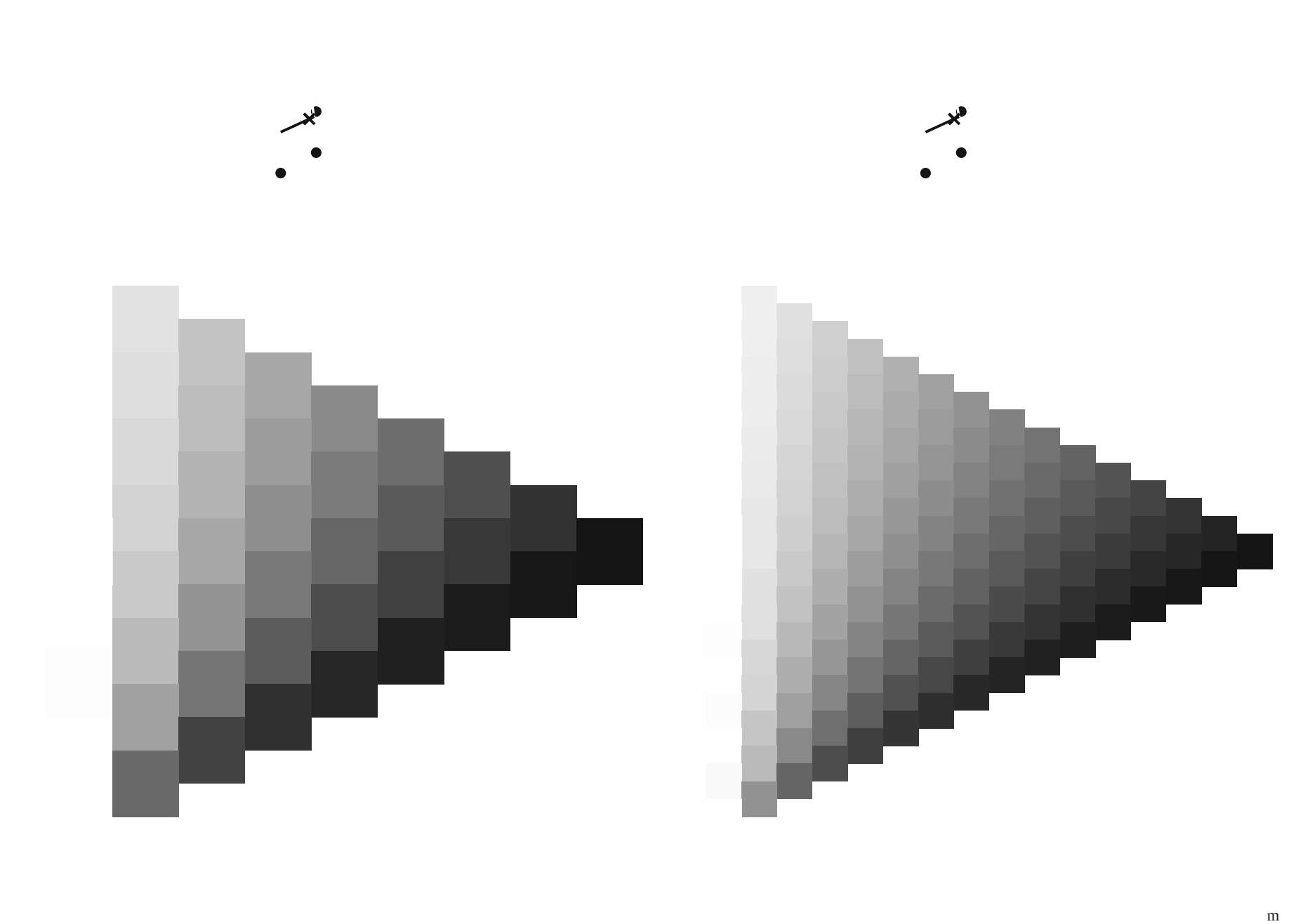
BAM-test chart ZE92; Colorimetric systems, Page 48/96

D65: 9 and 16 step colour scales for 16 elementary hues

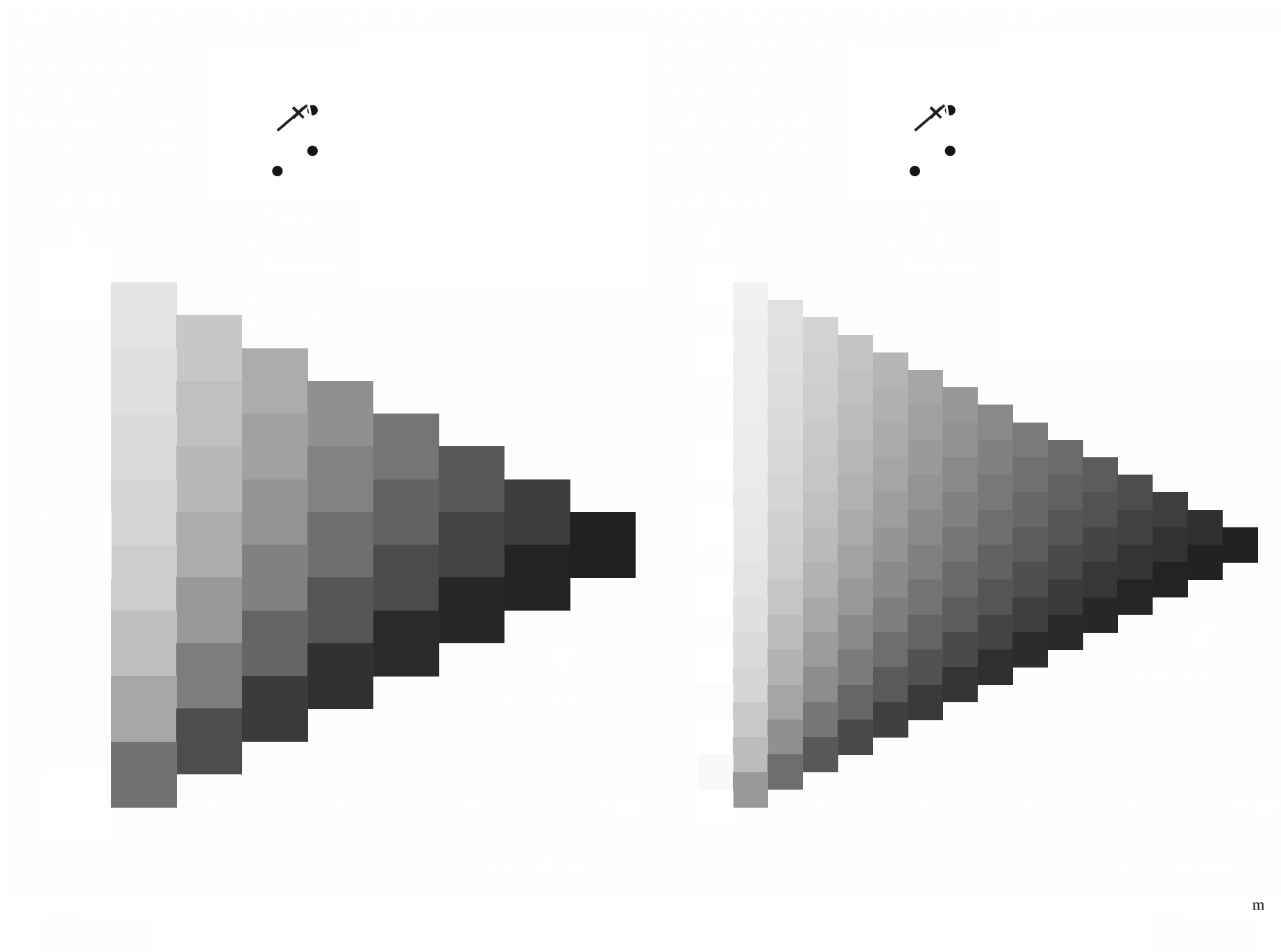
input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

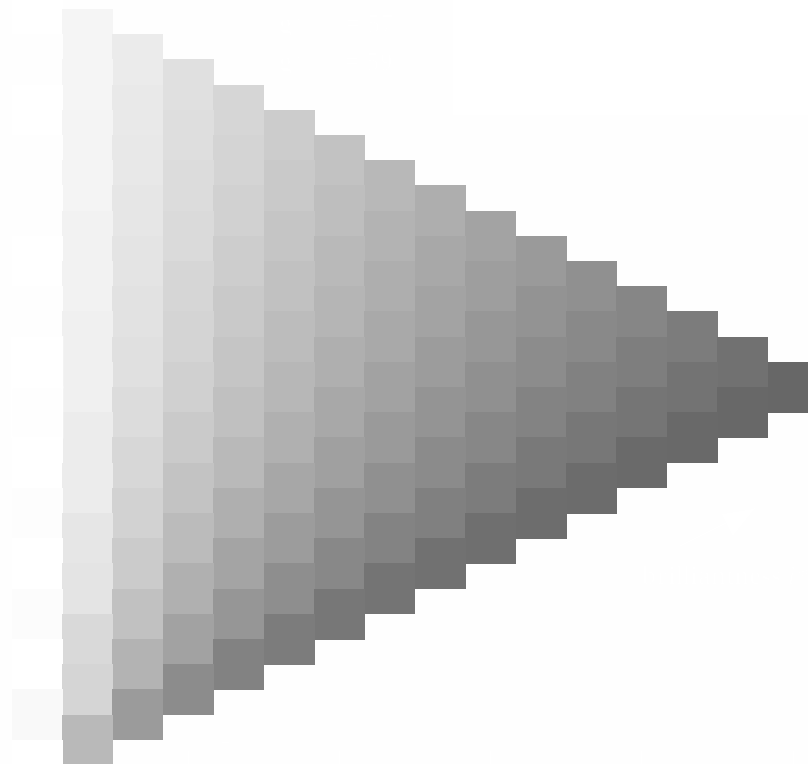
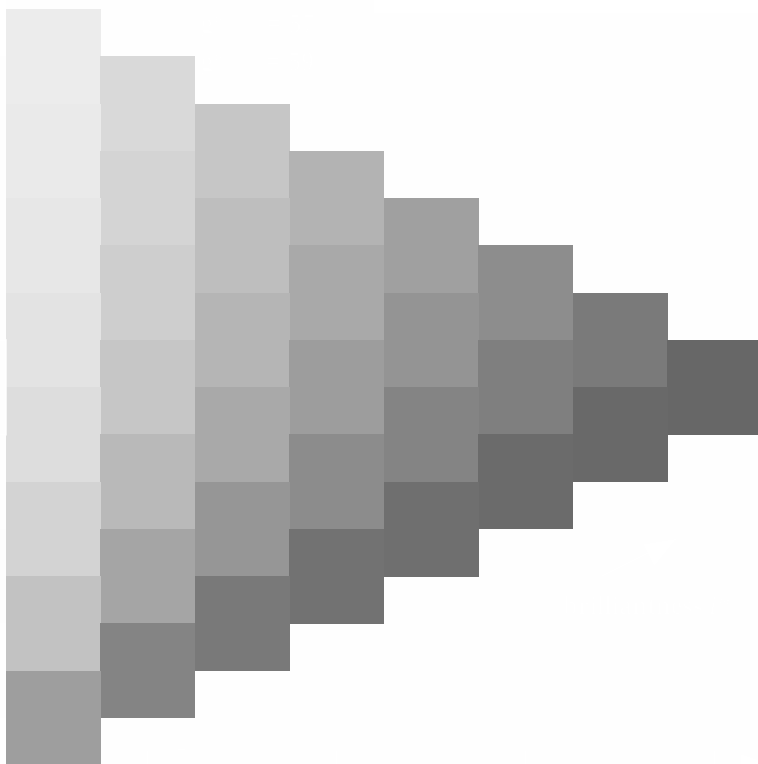
m



m



m

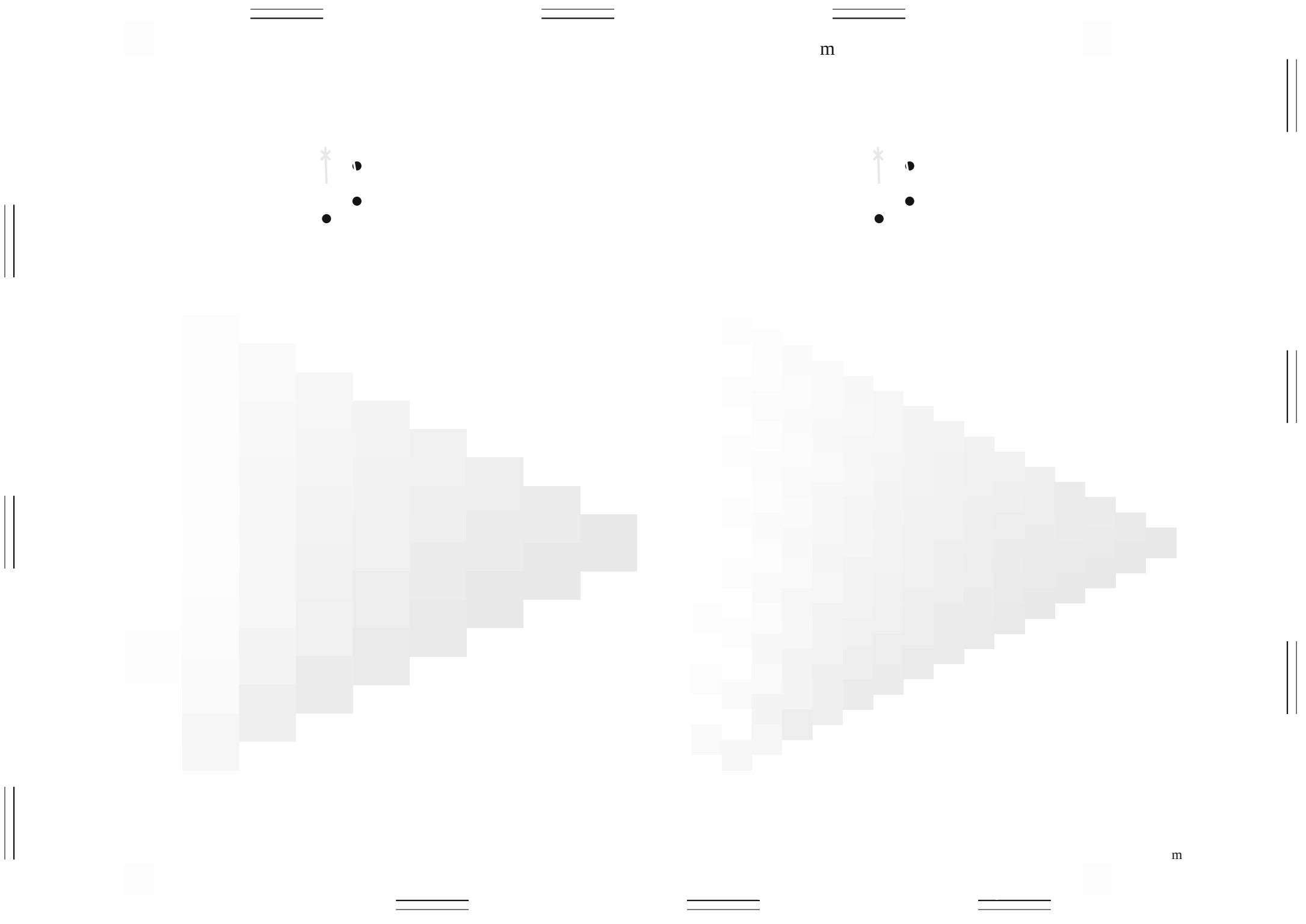


m

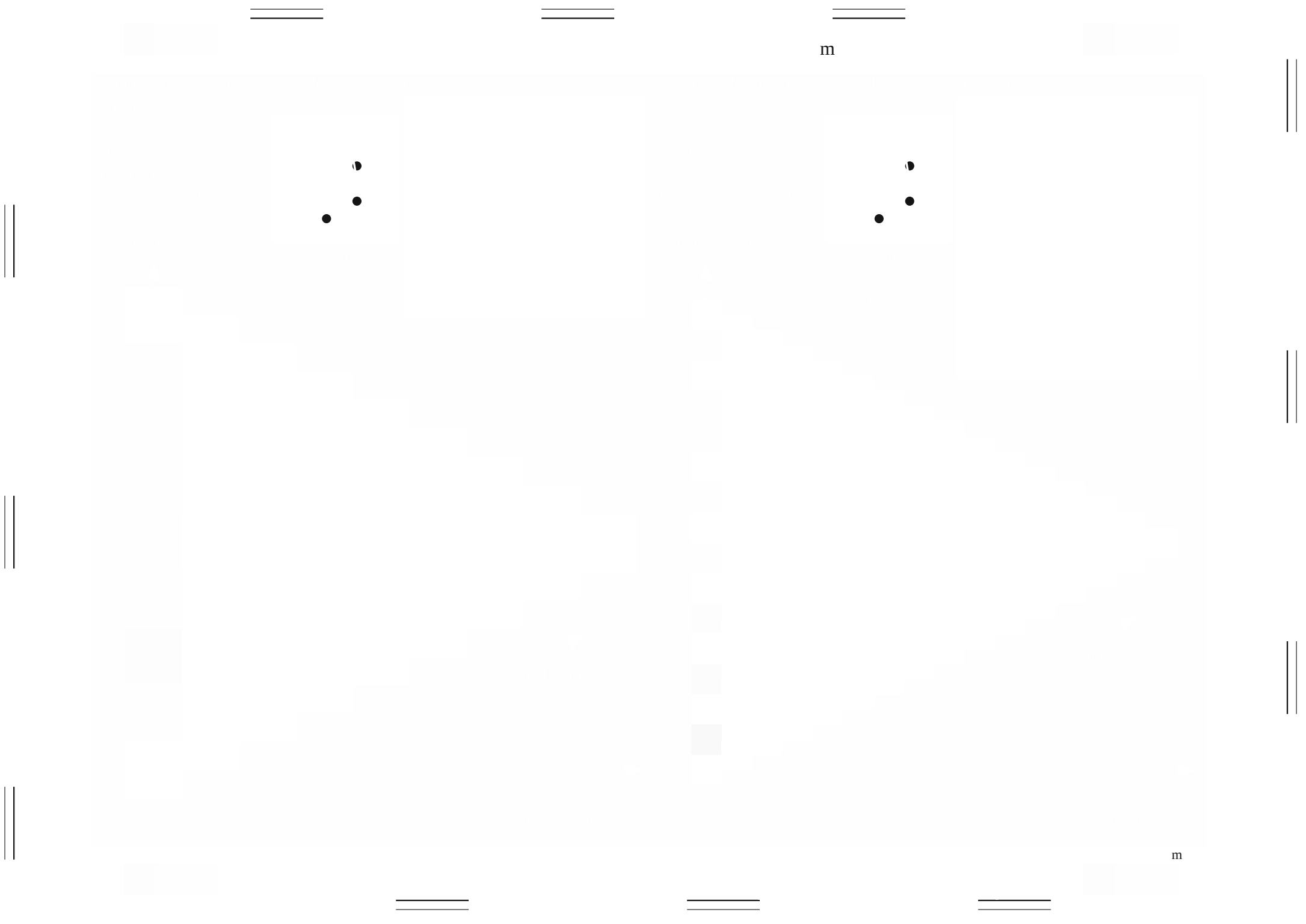
m

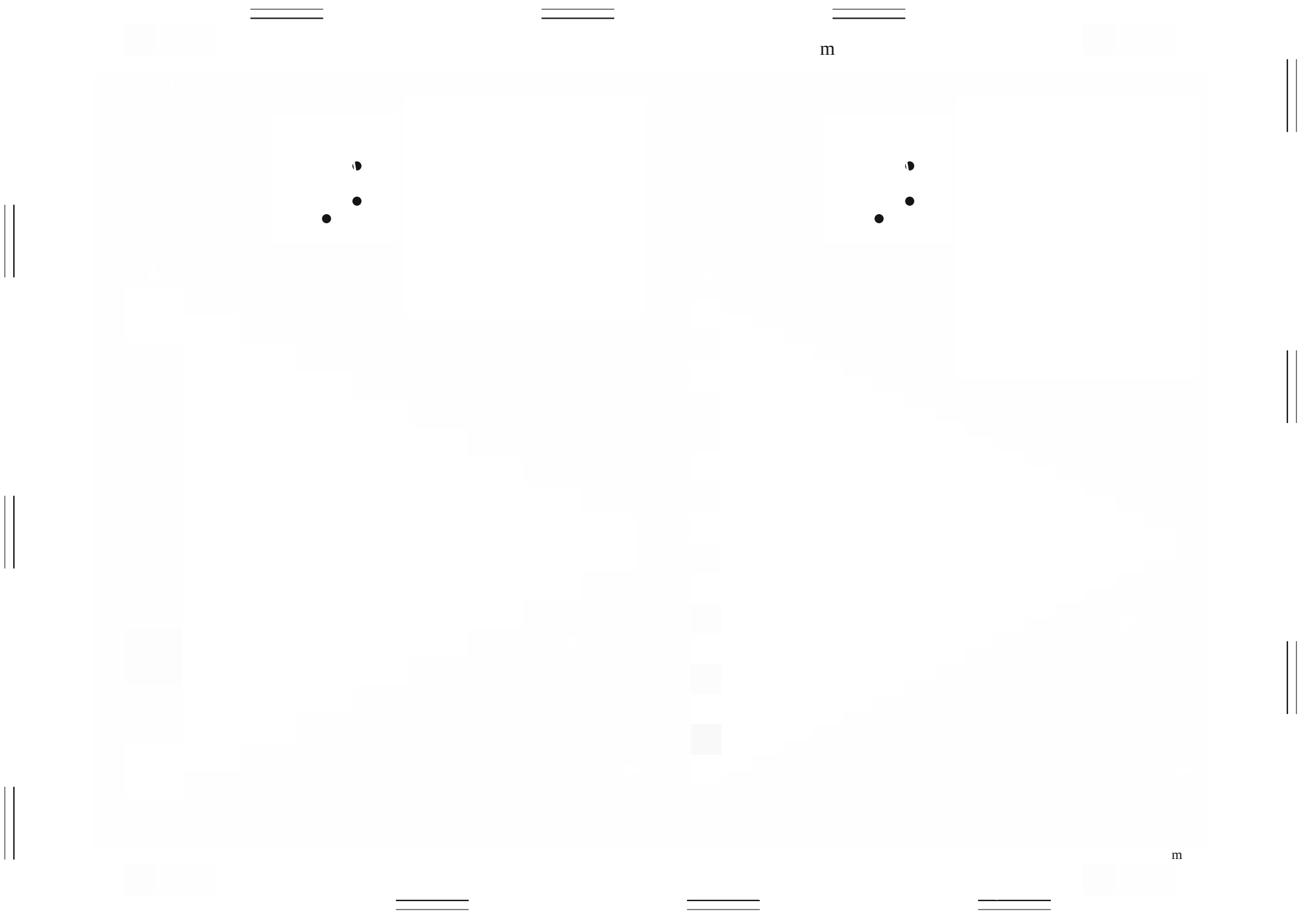


m



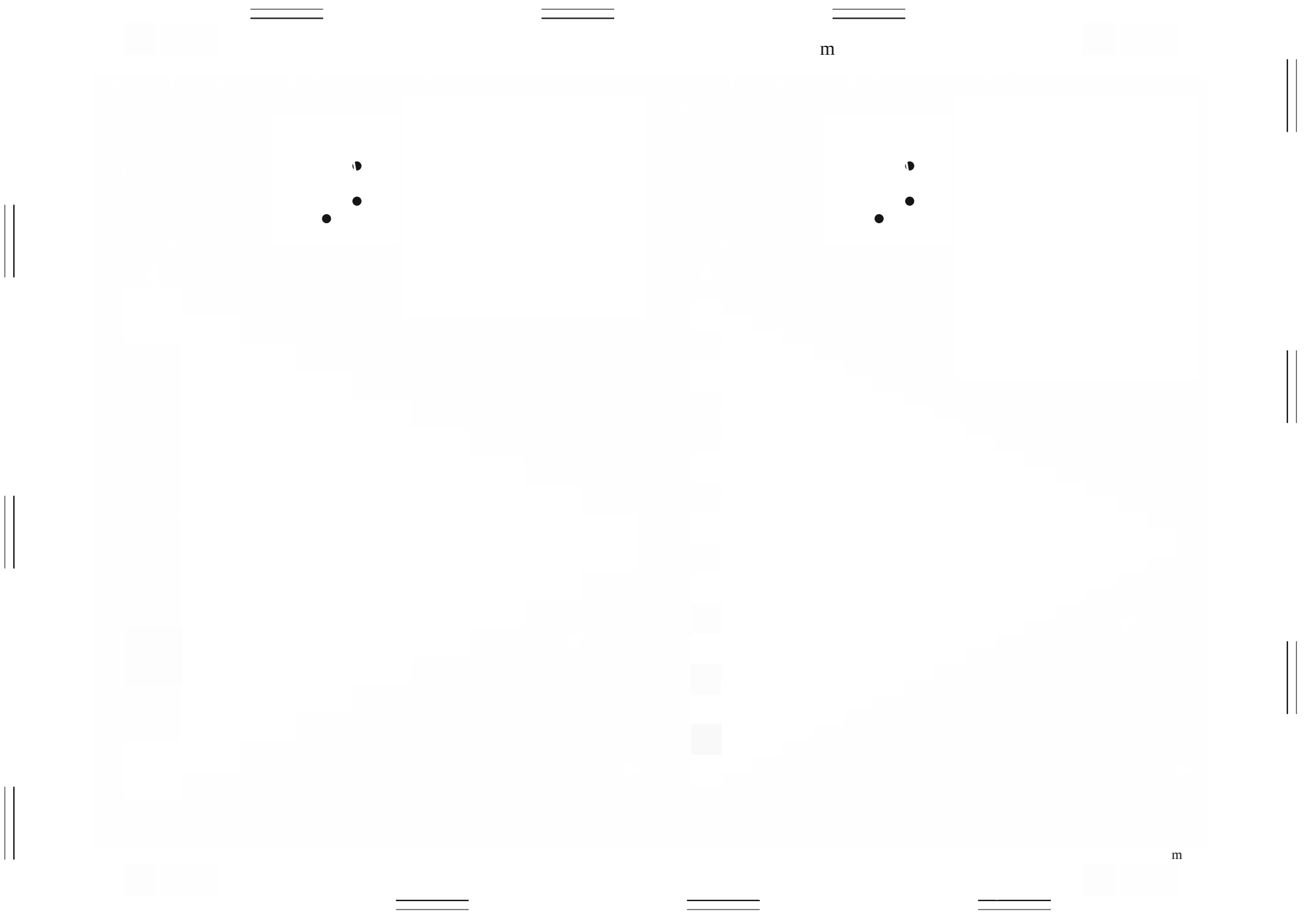


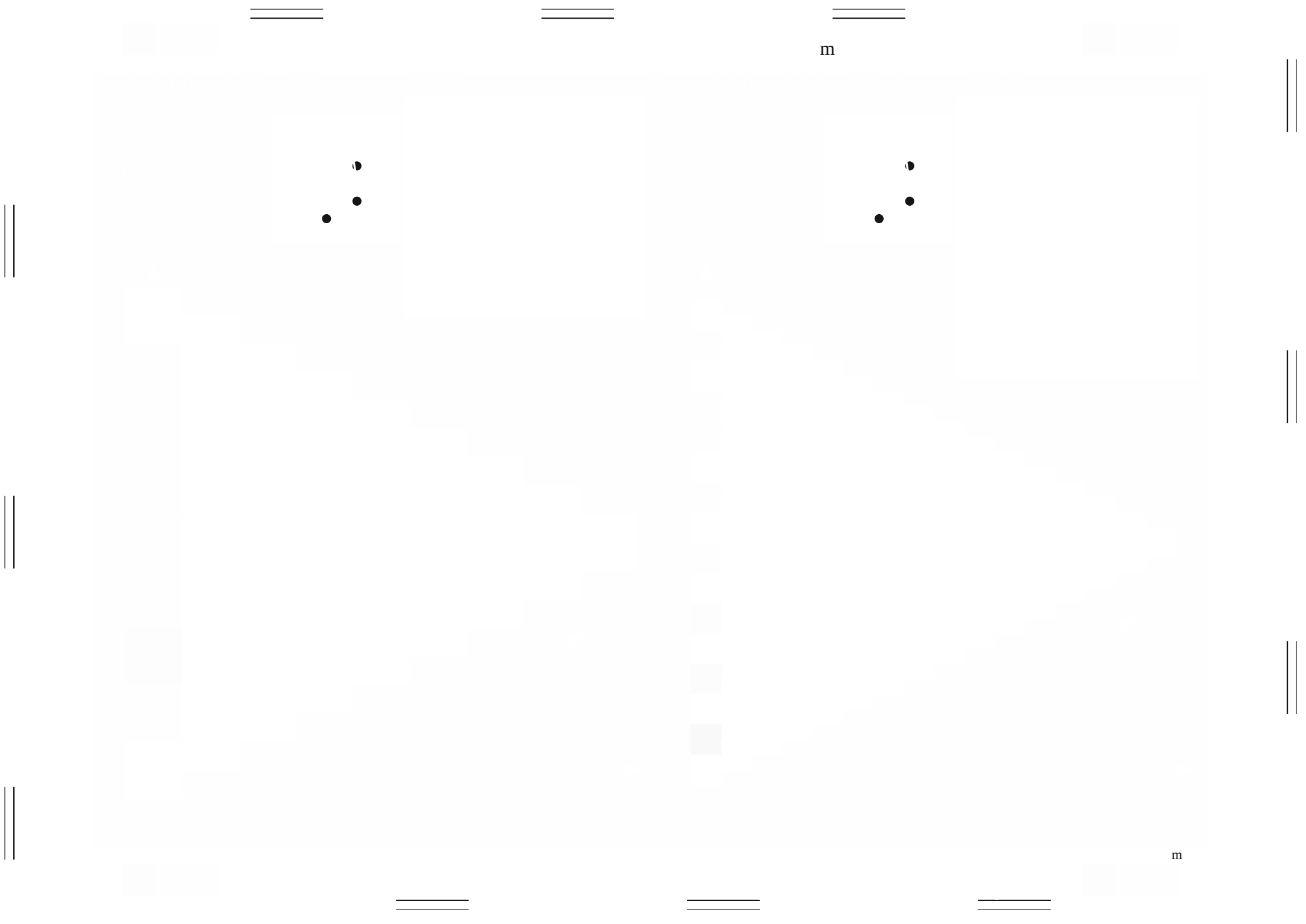


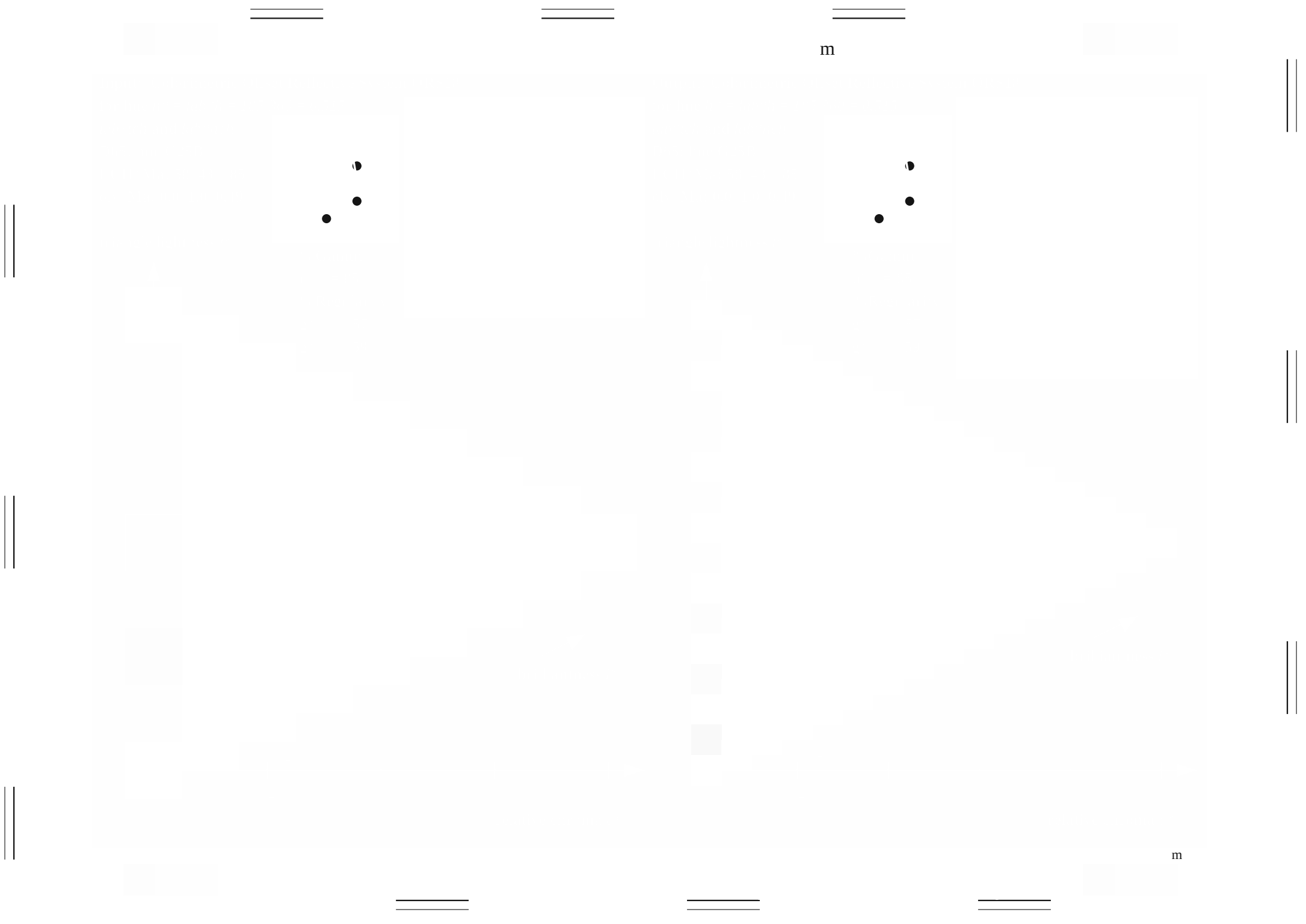


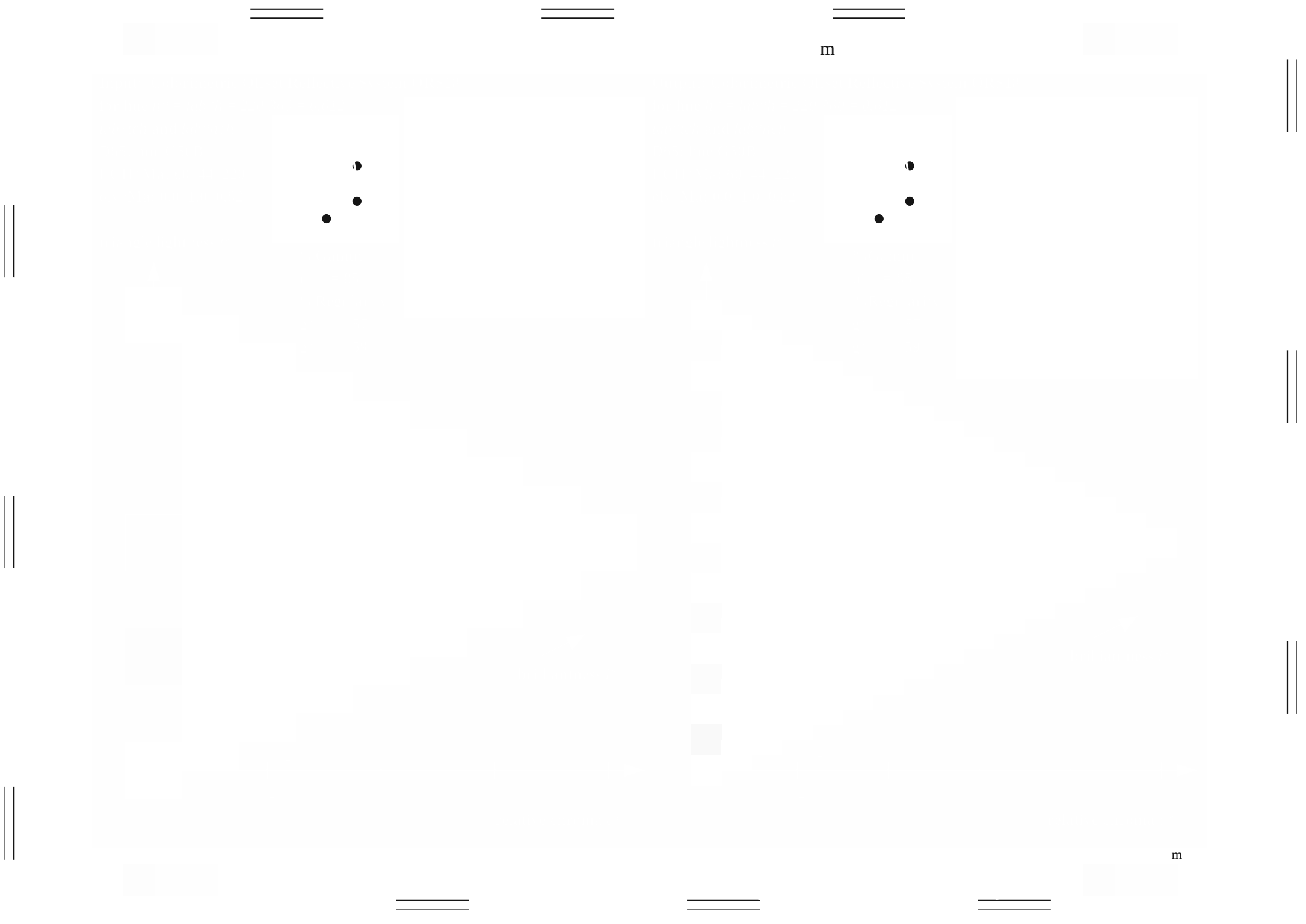
m

m



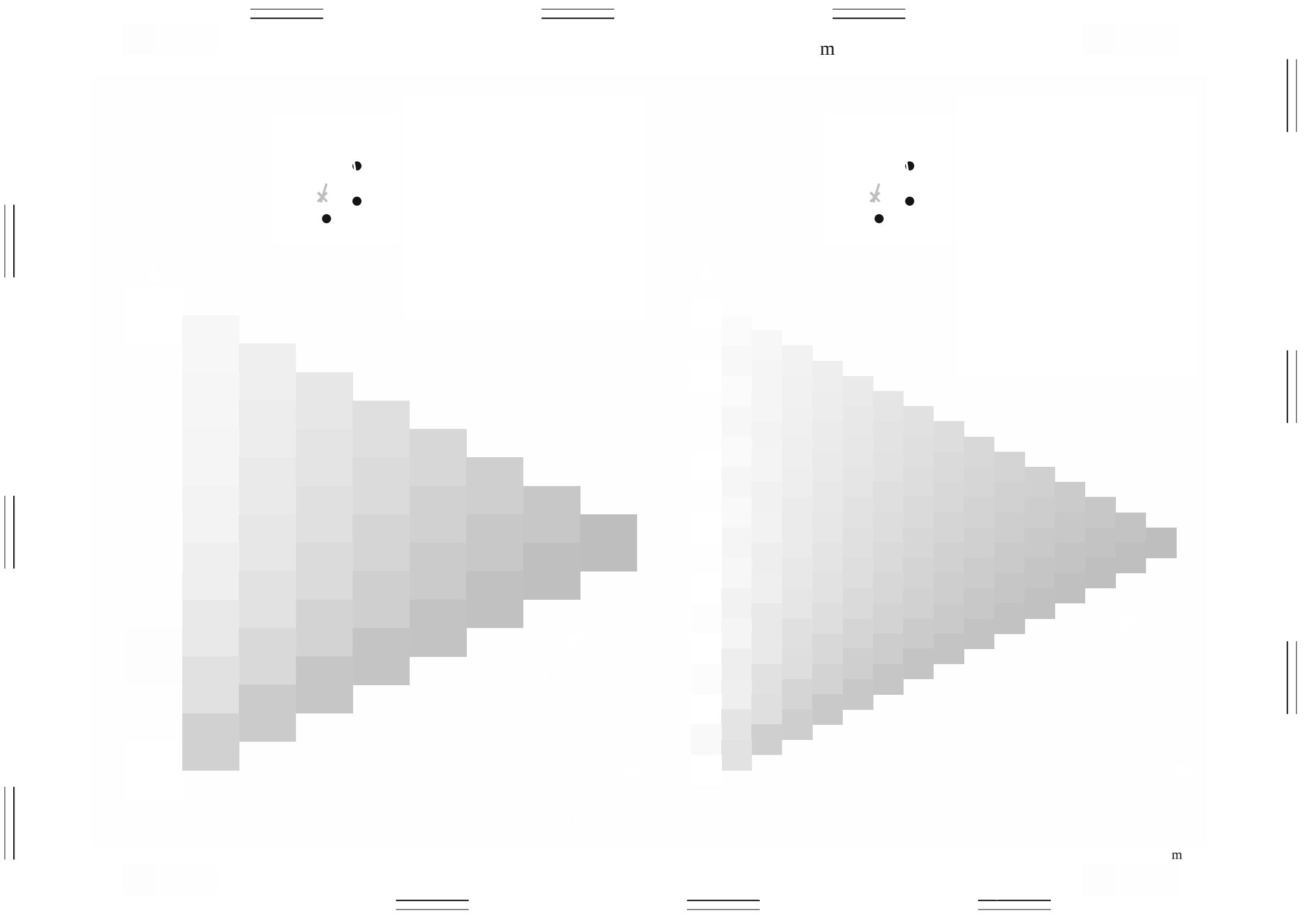




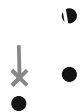


m

m



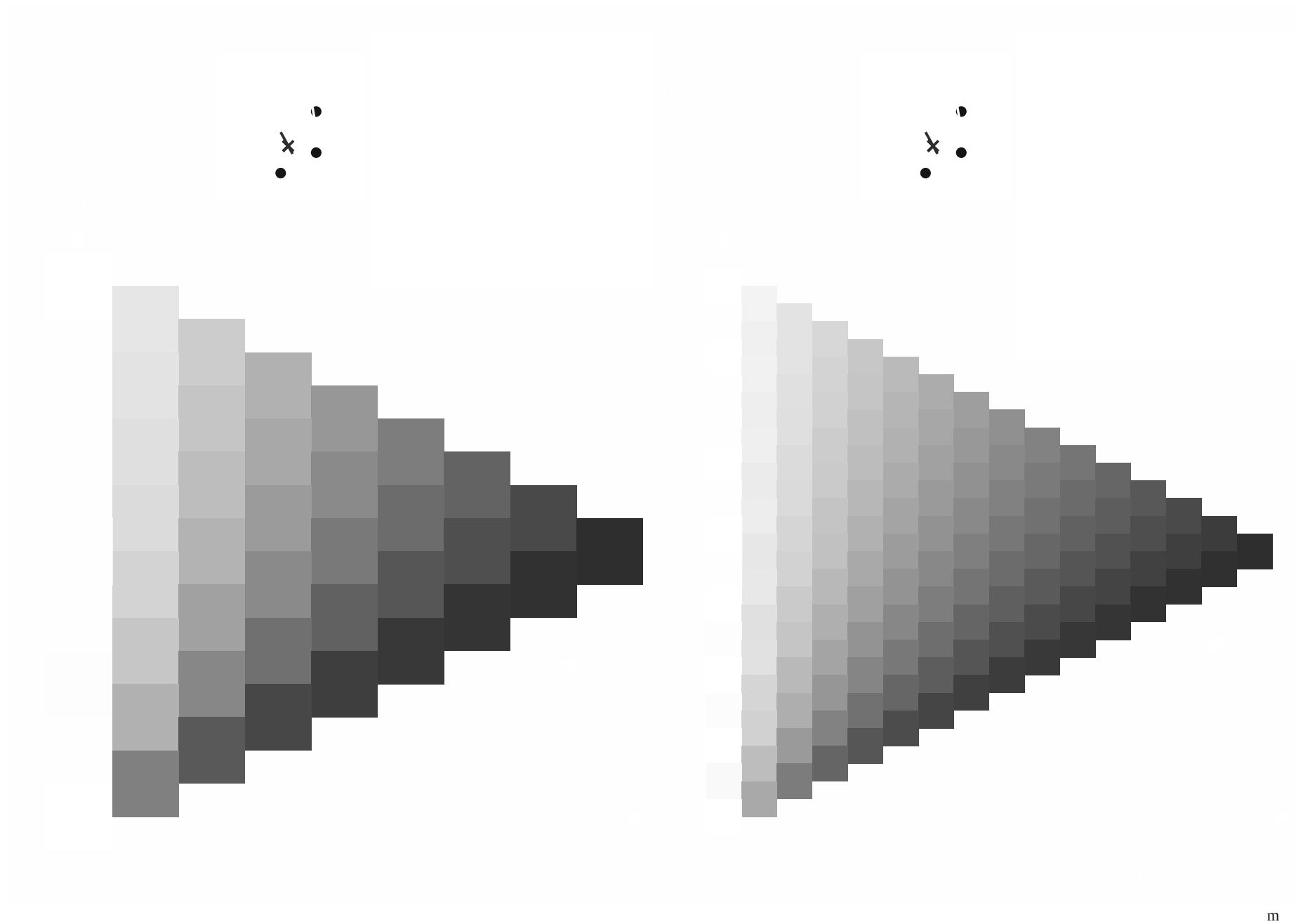
m



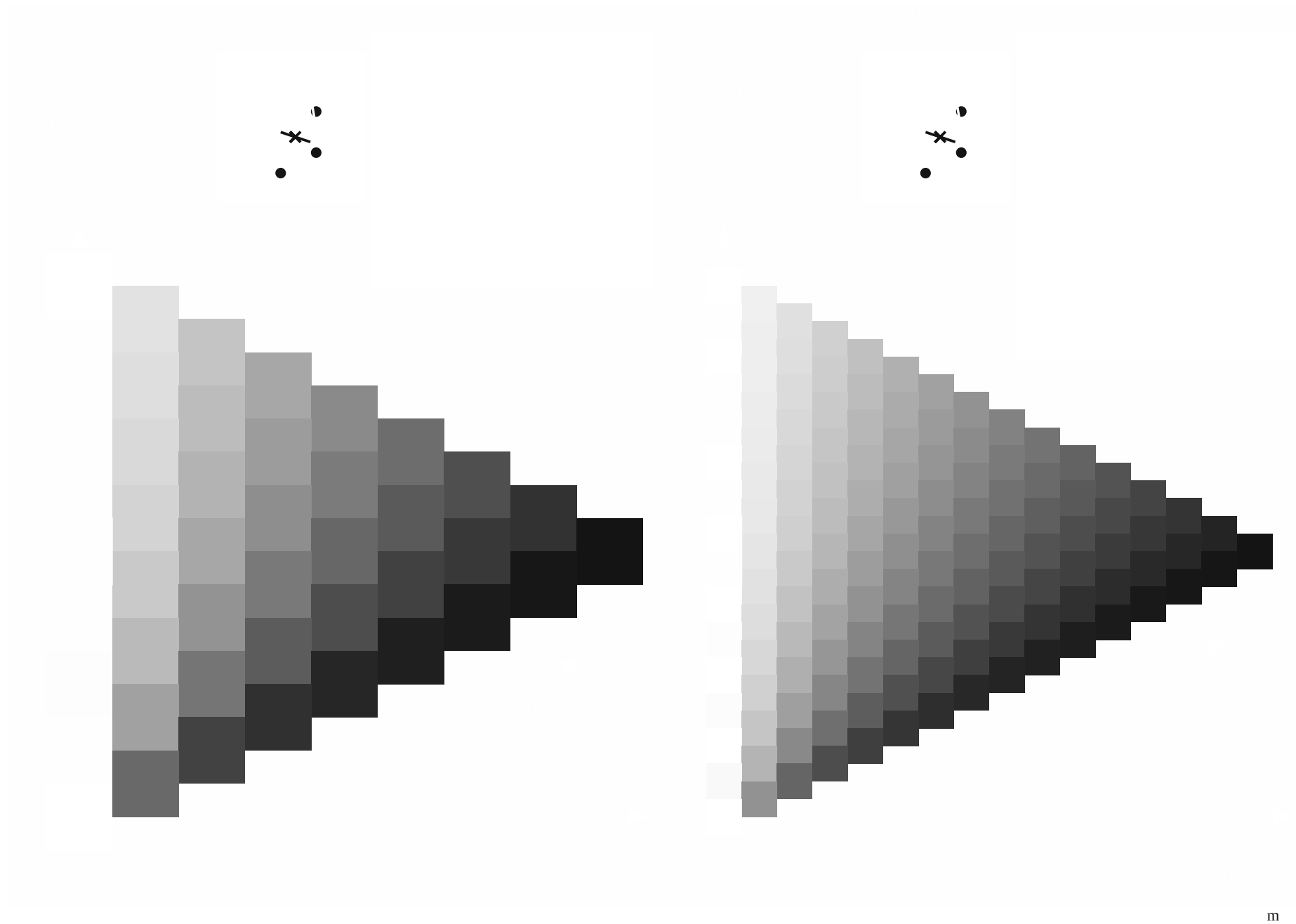
m



m



m

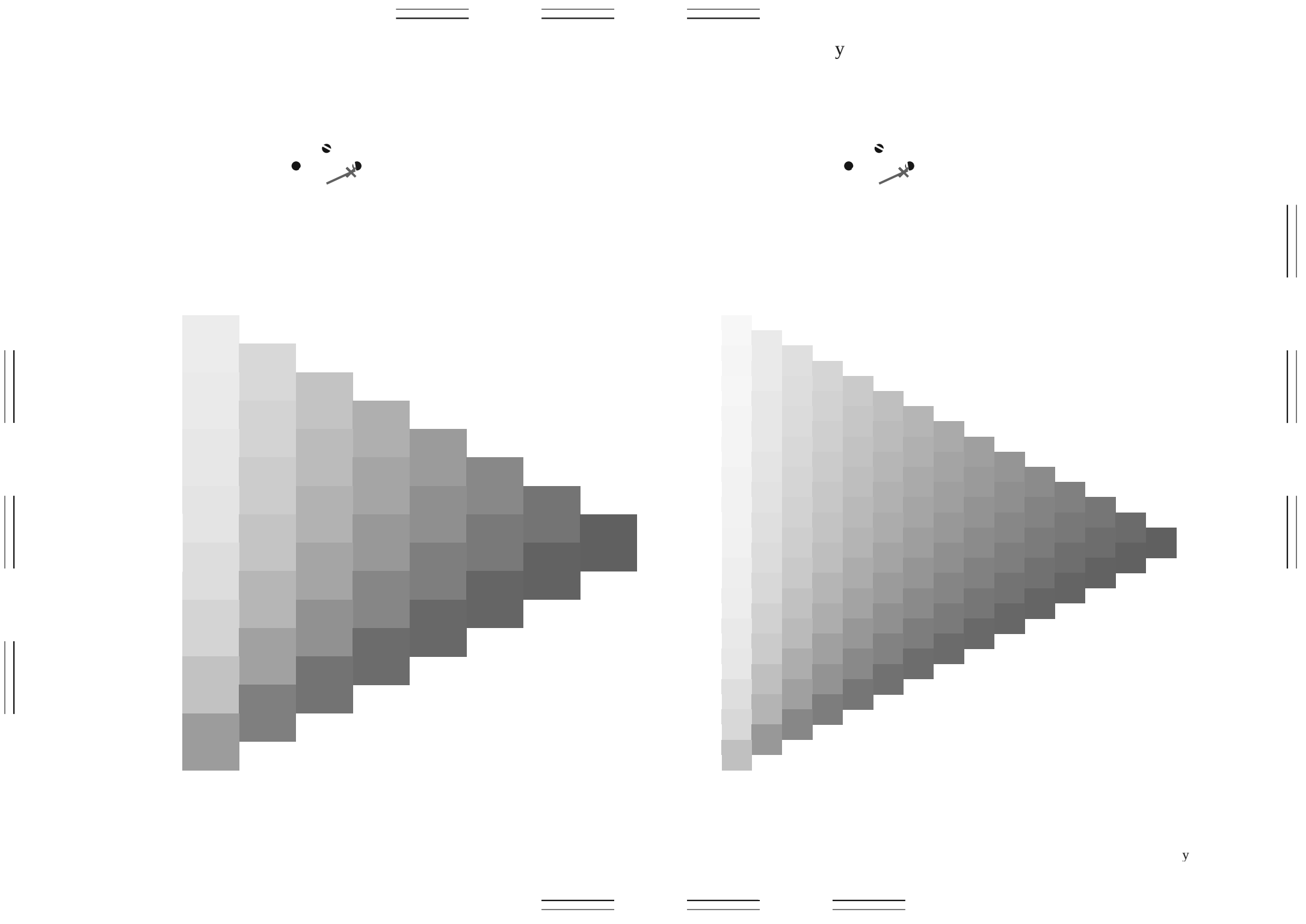


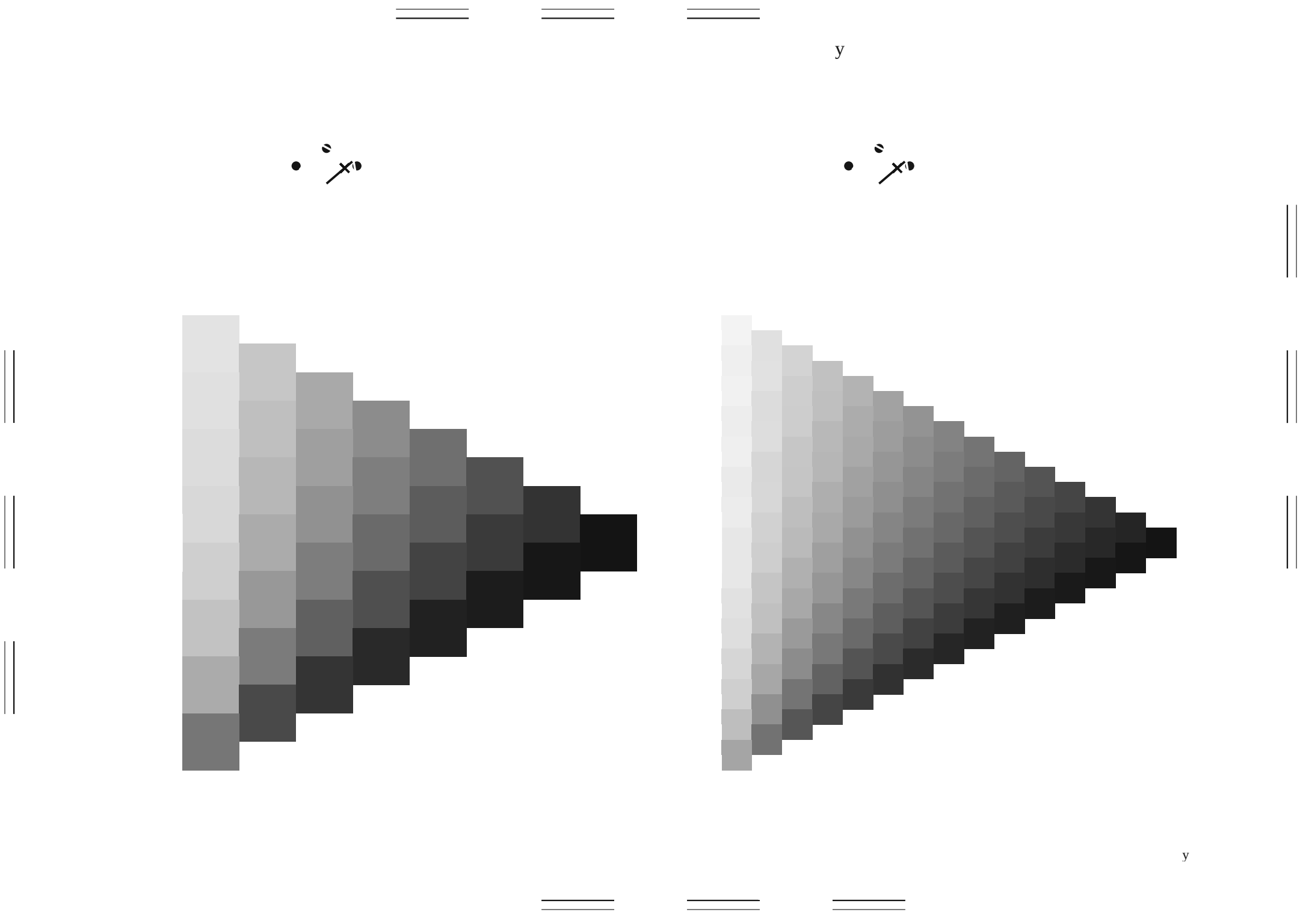
m

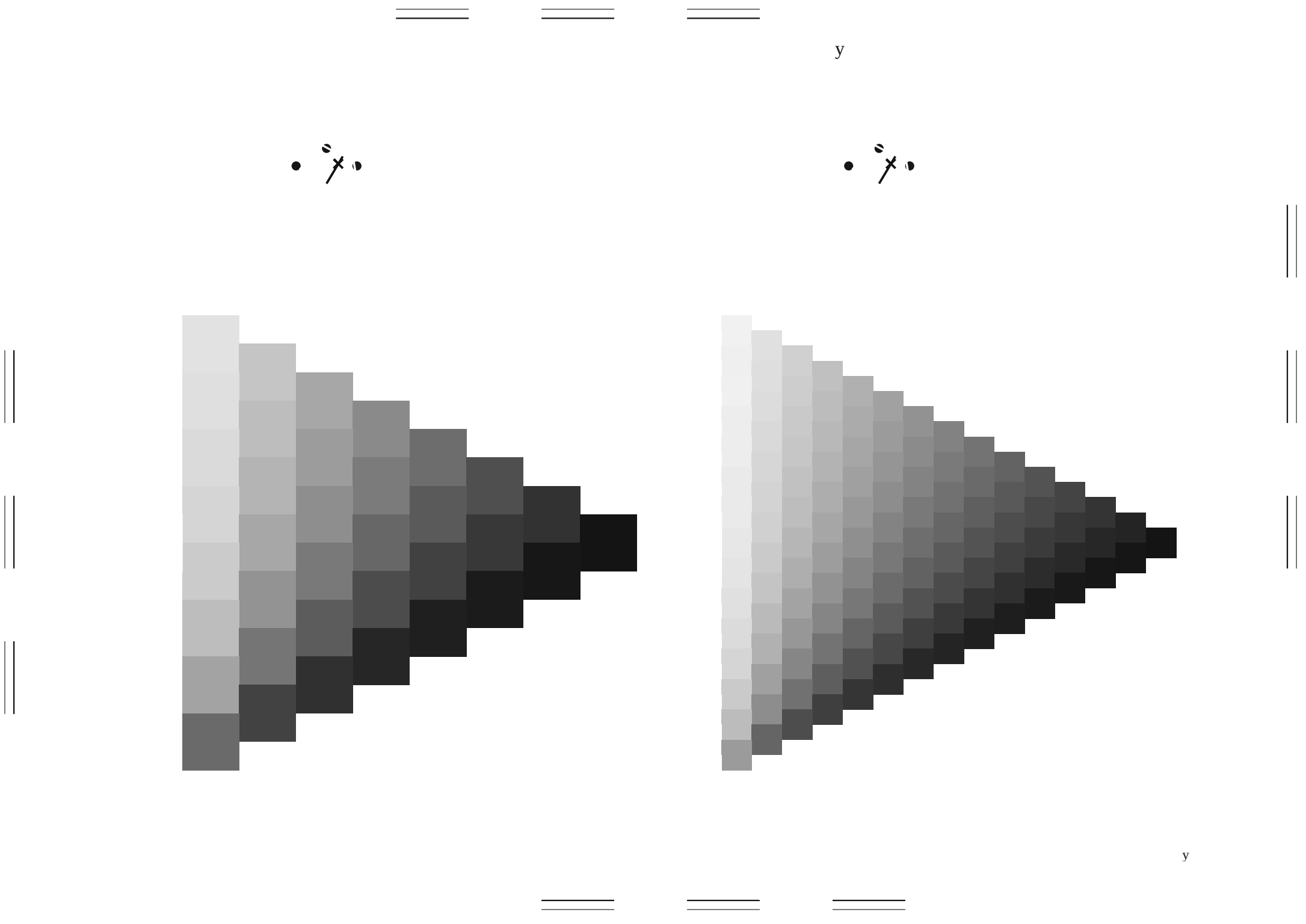
m

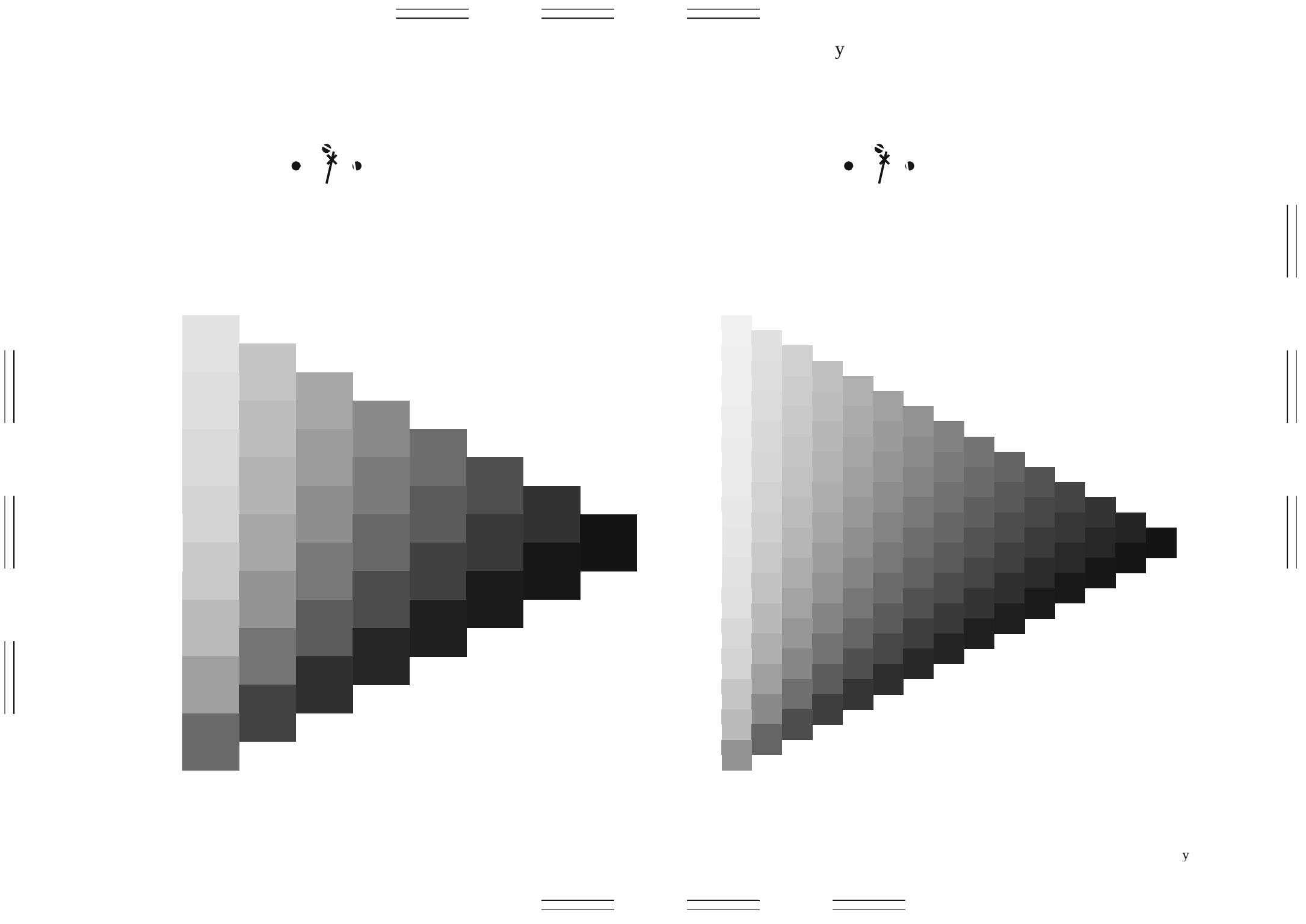


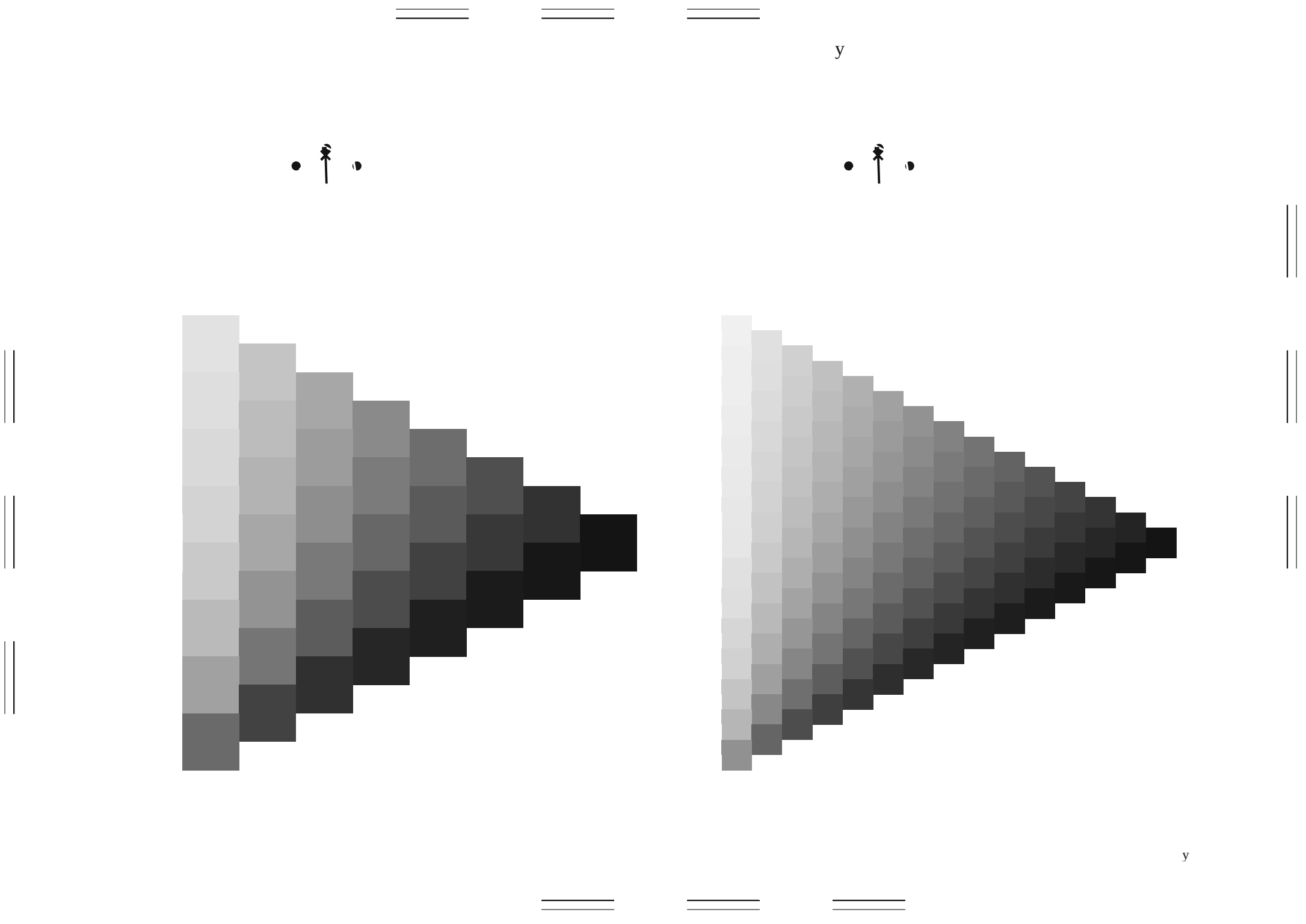
m



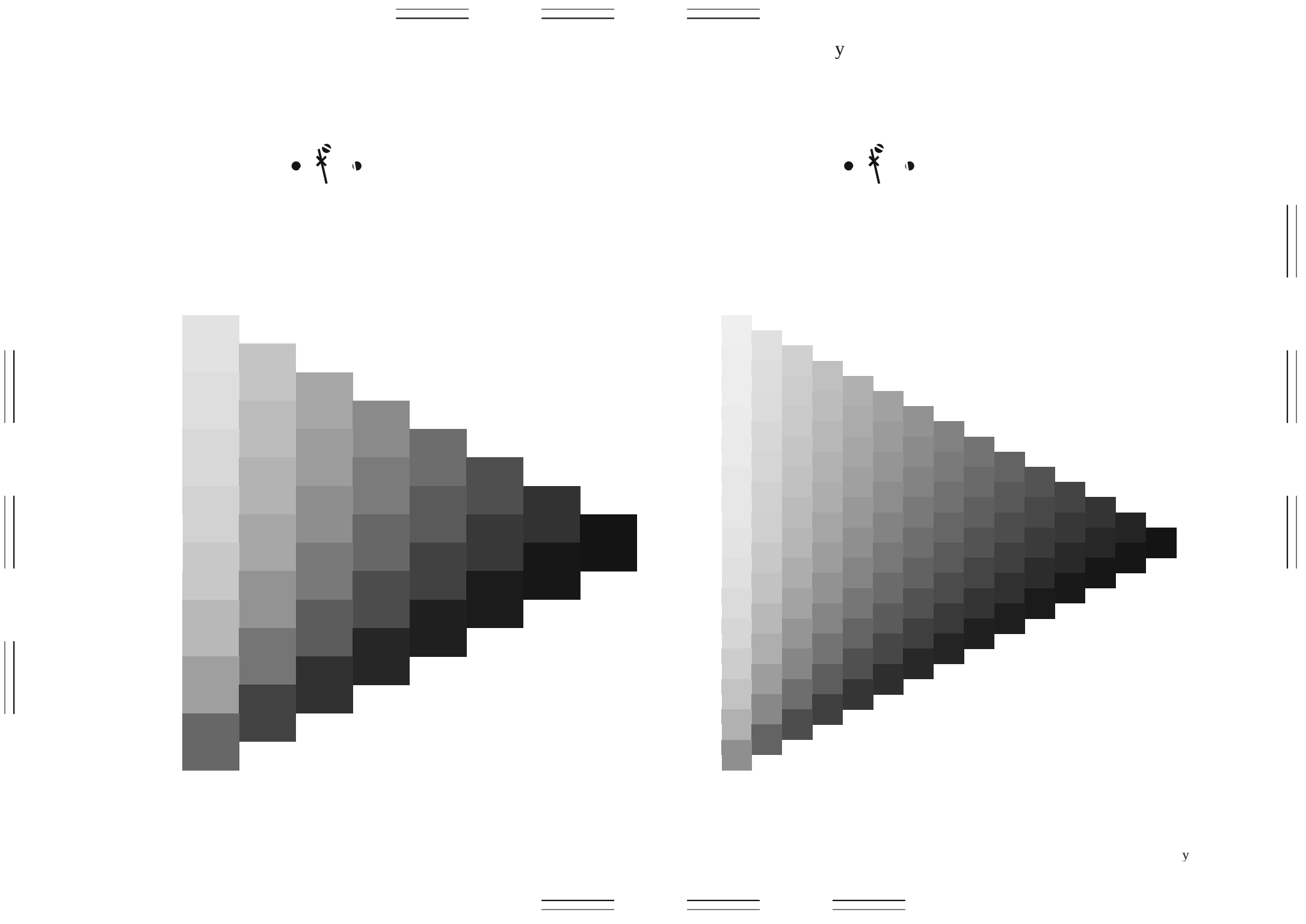


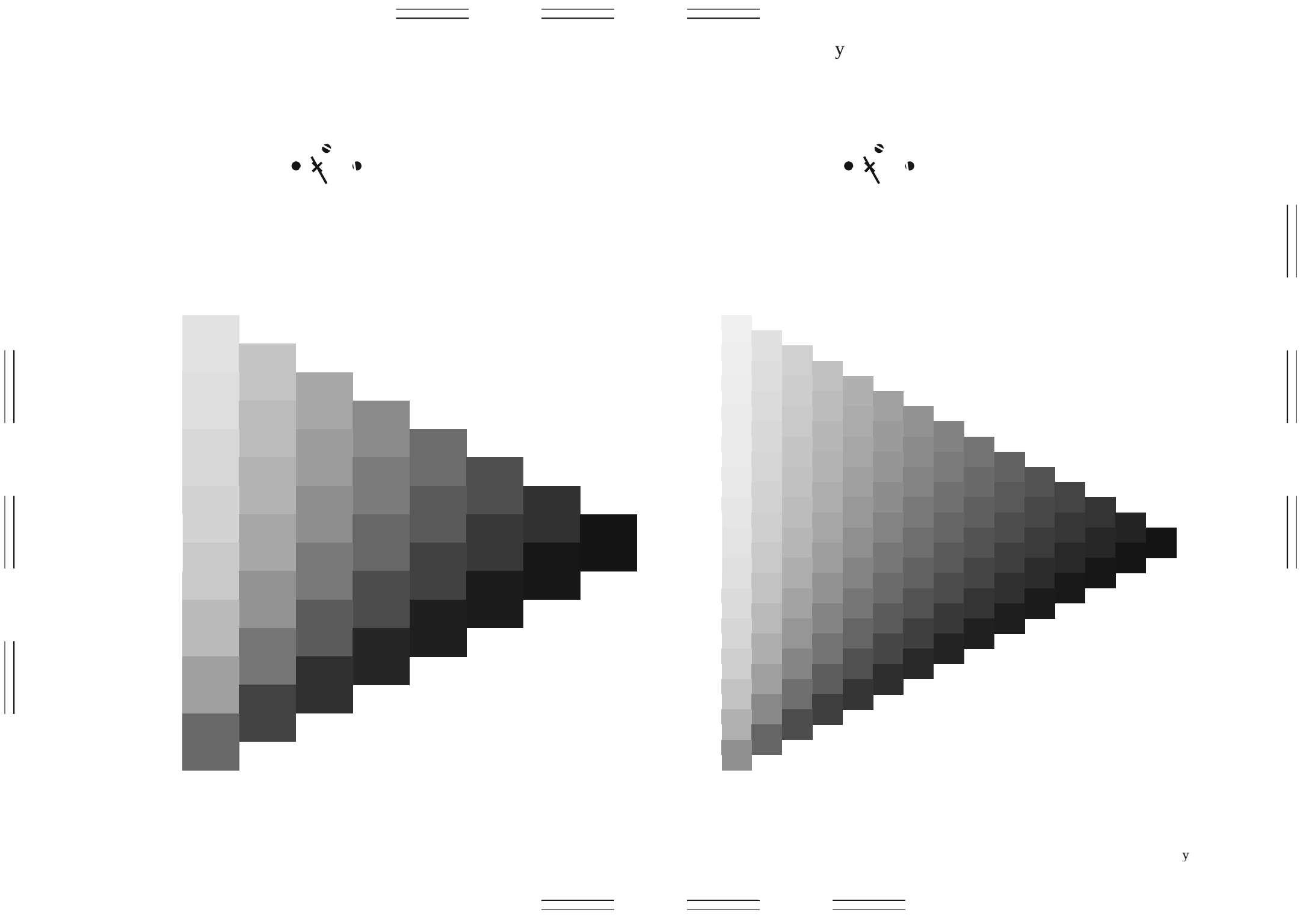


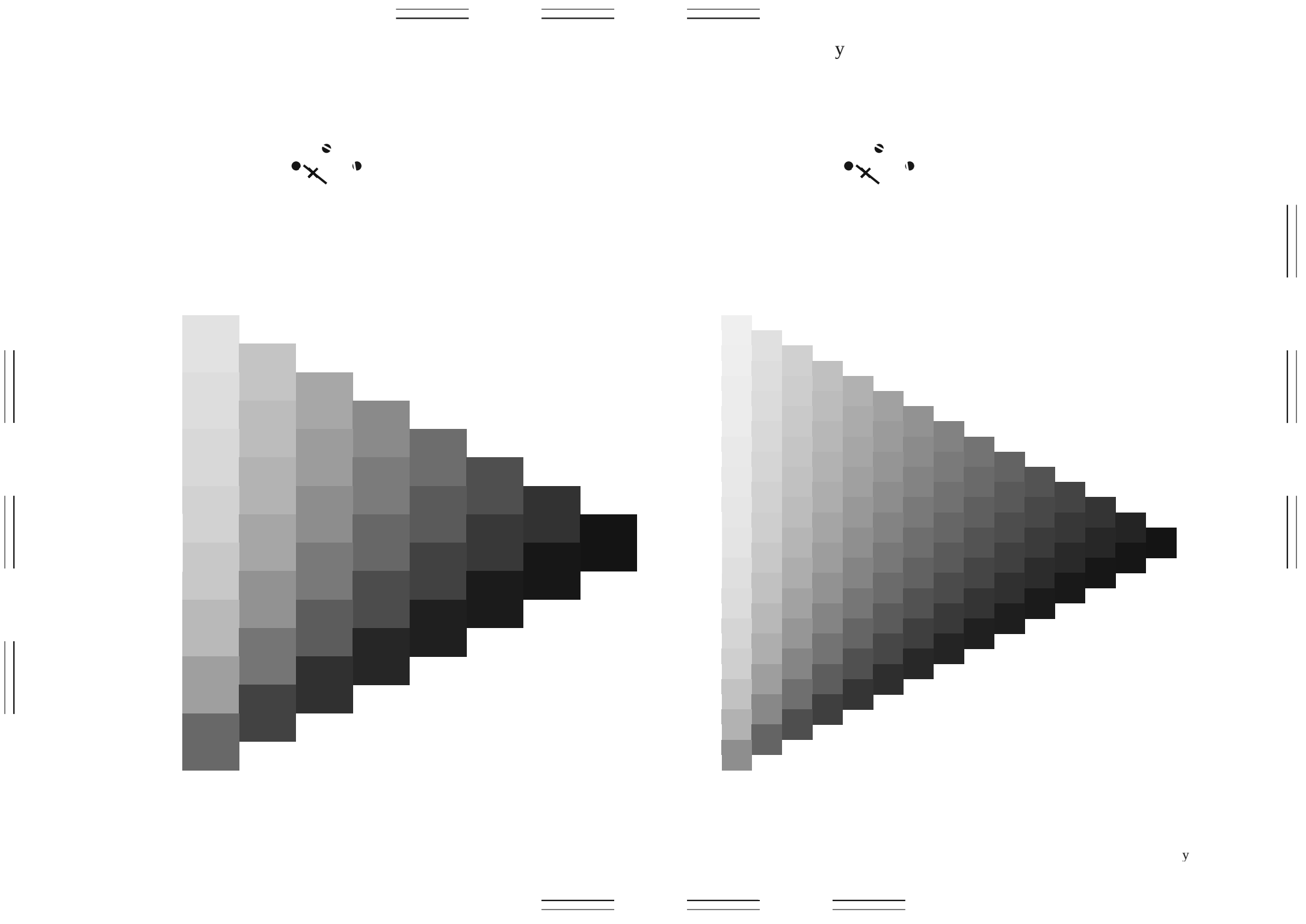


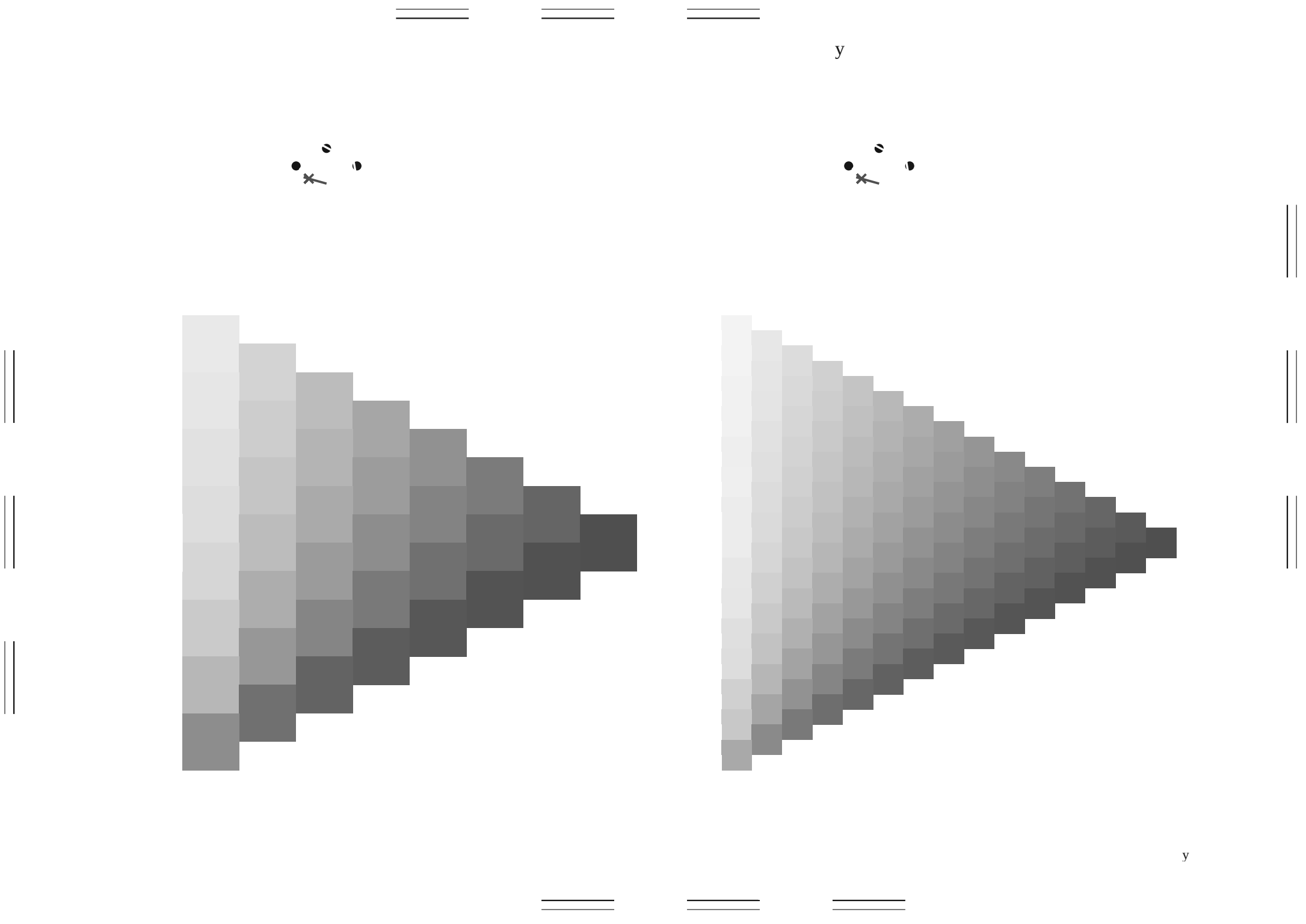


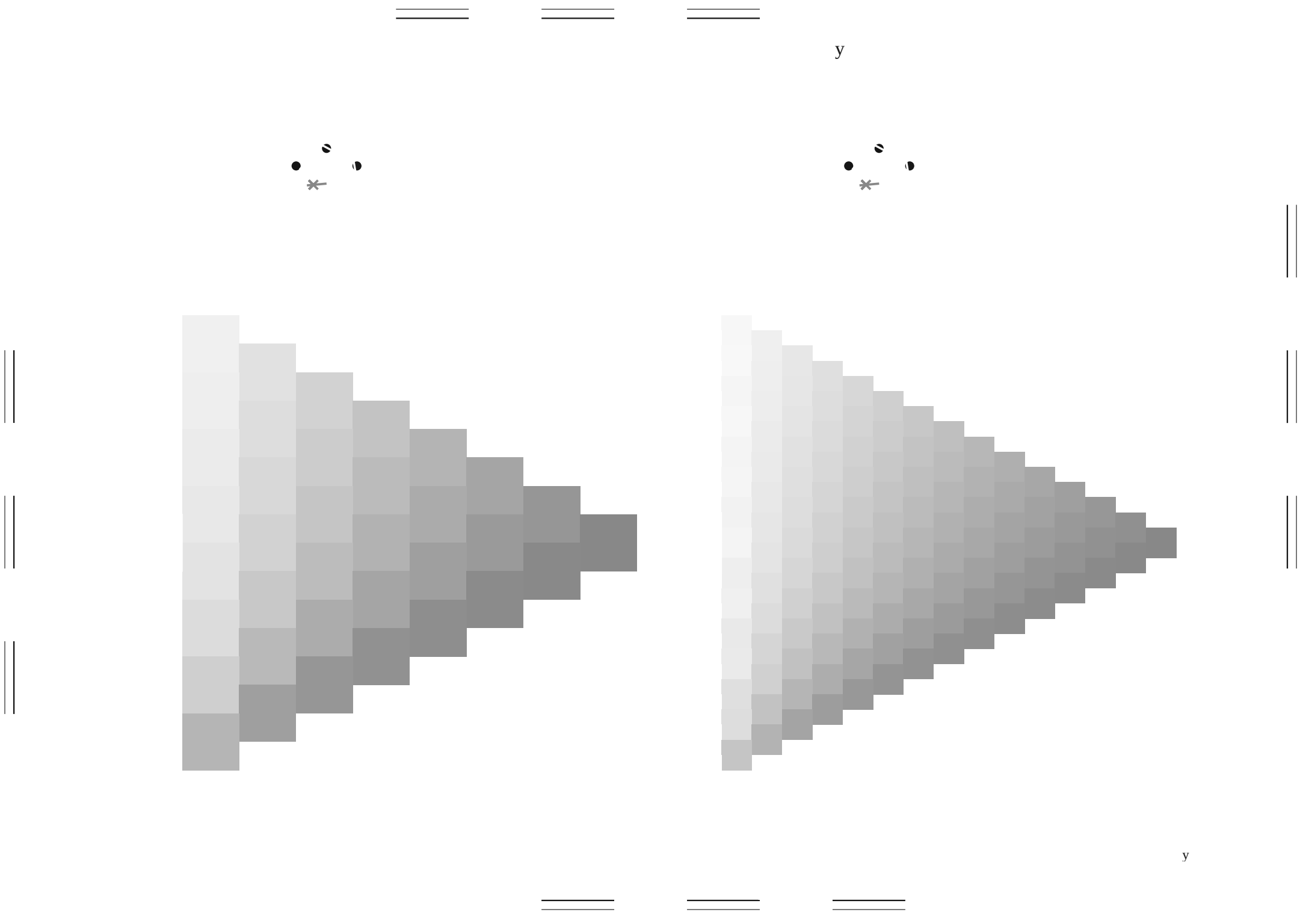


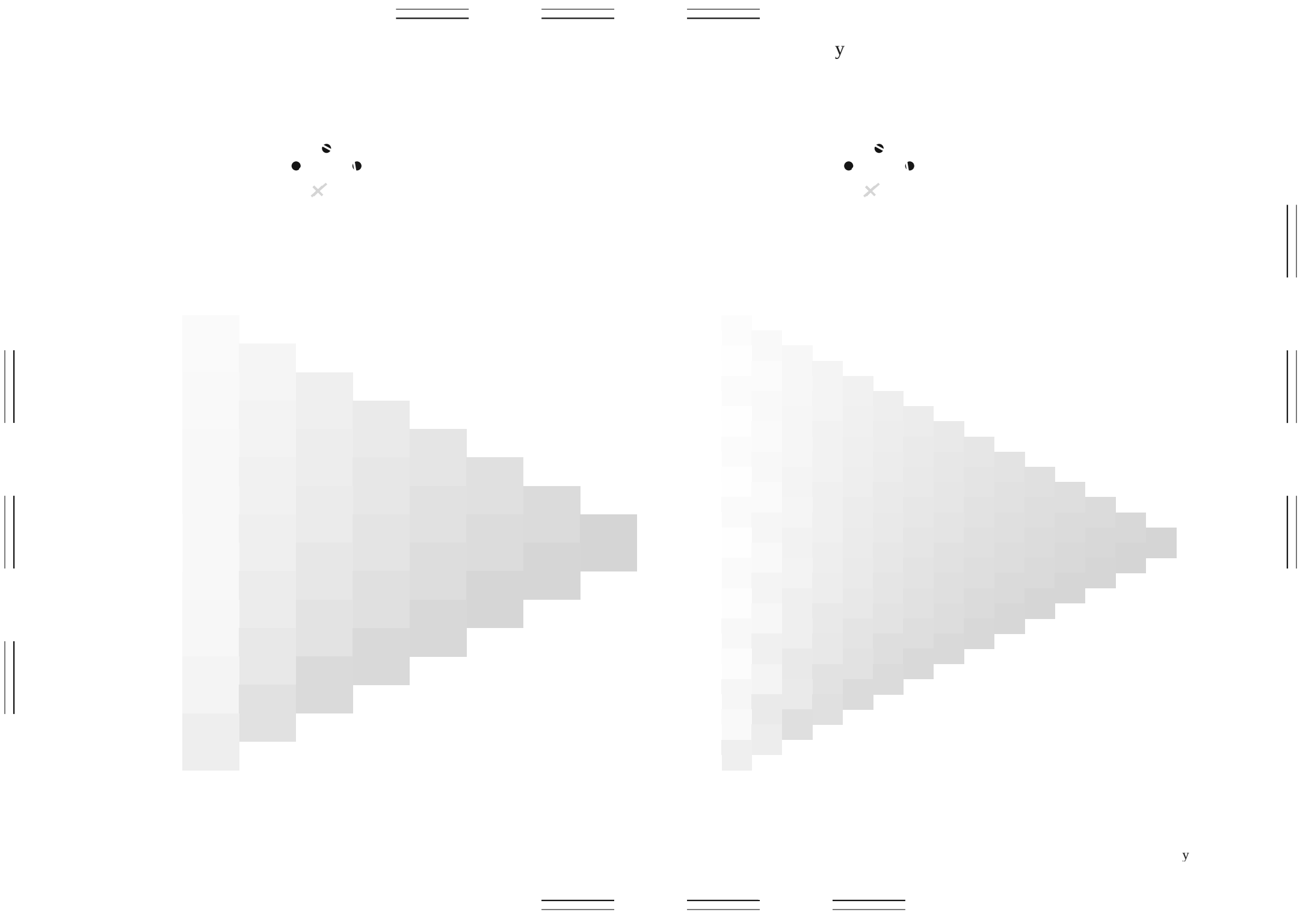


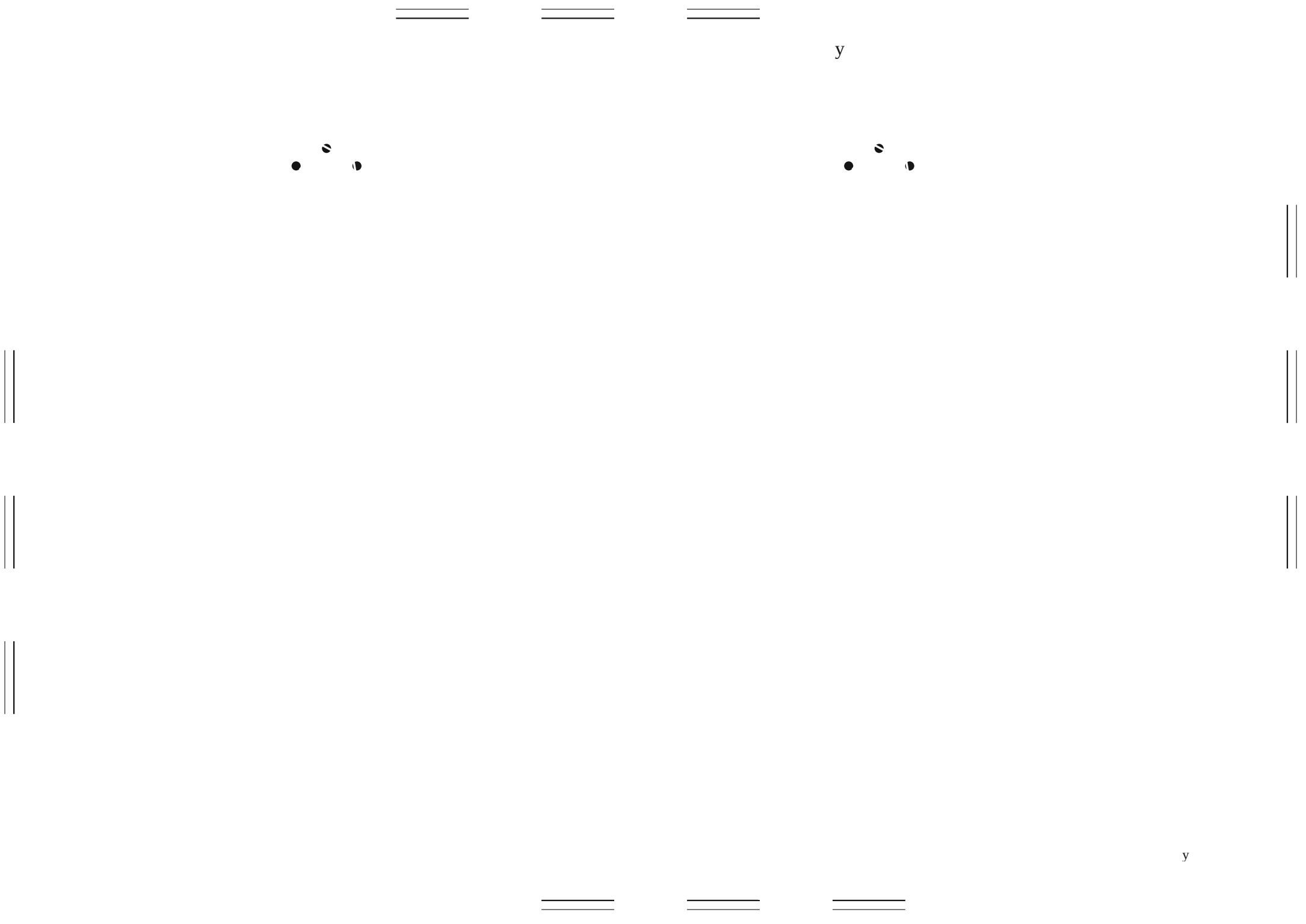


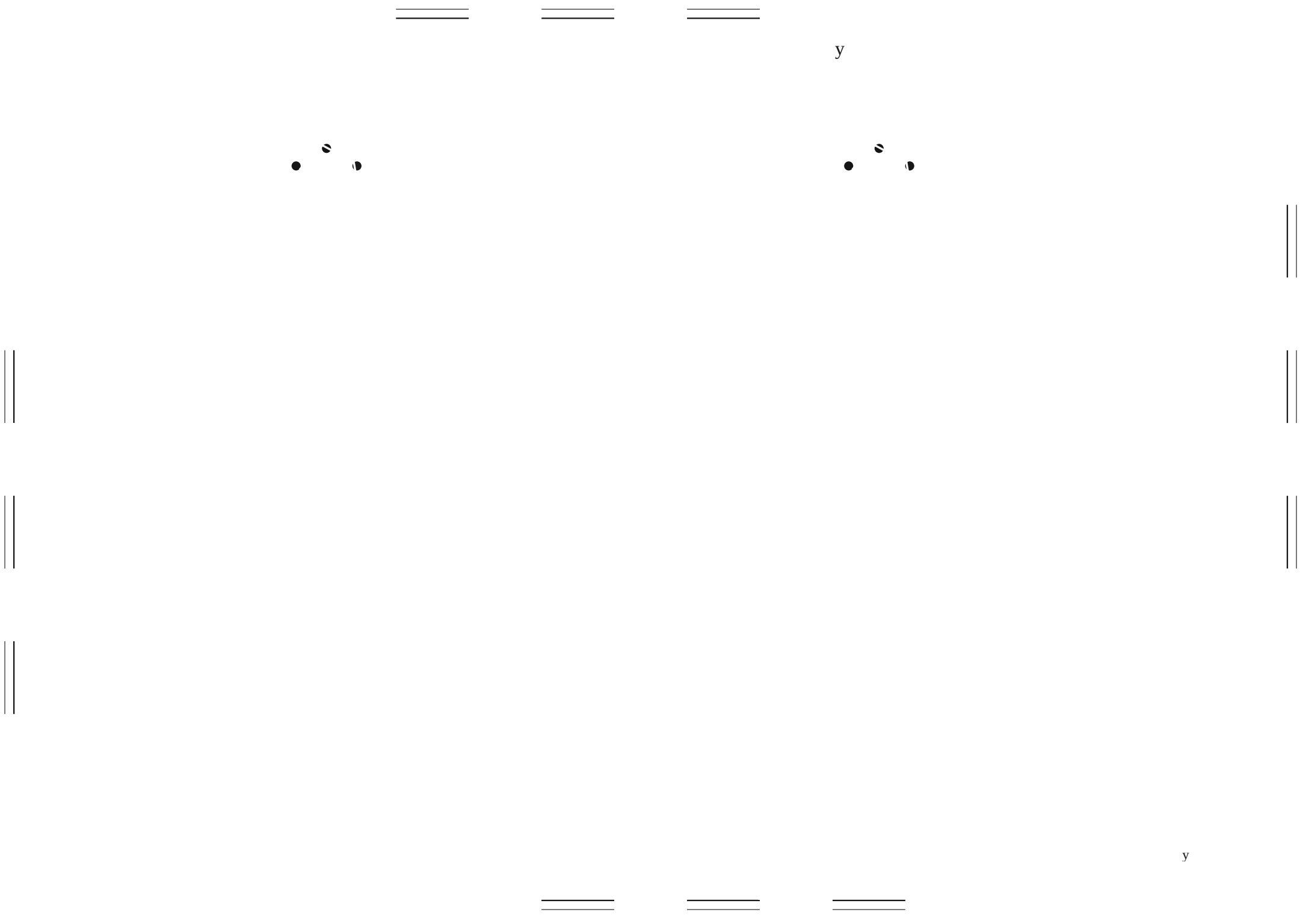




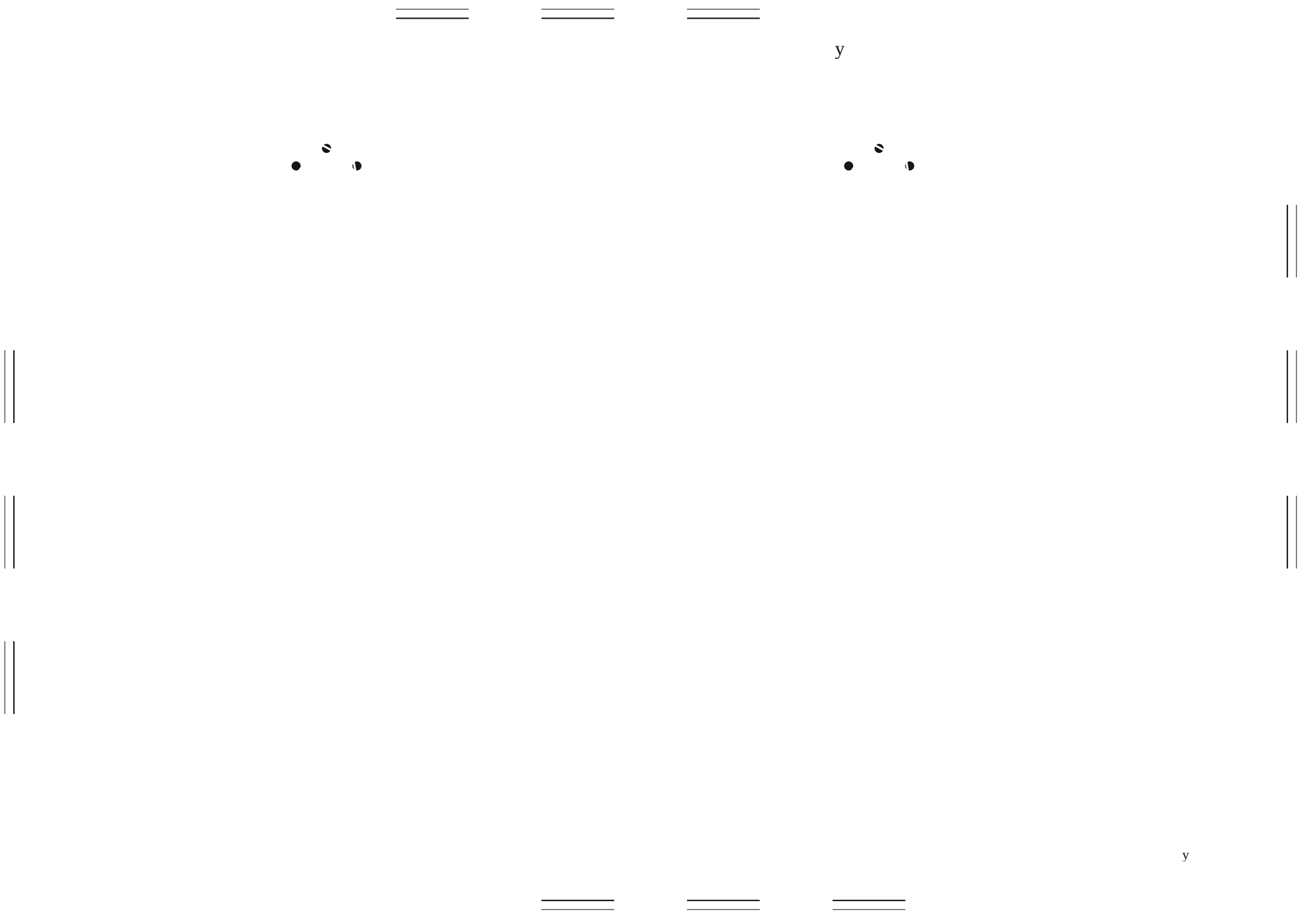


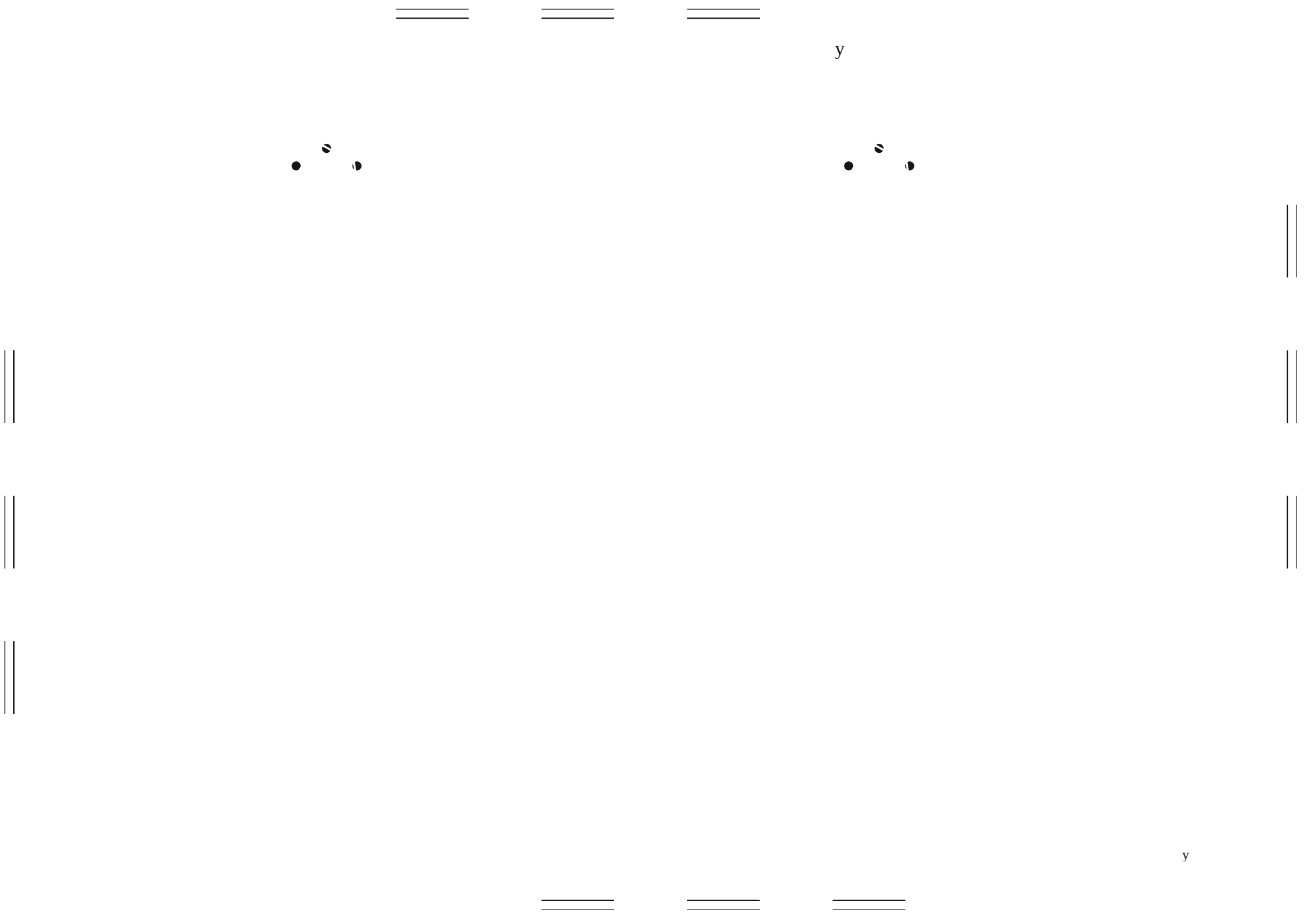


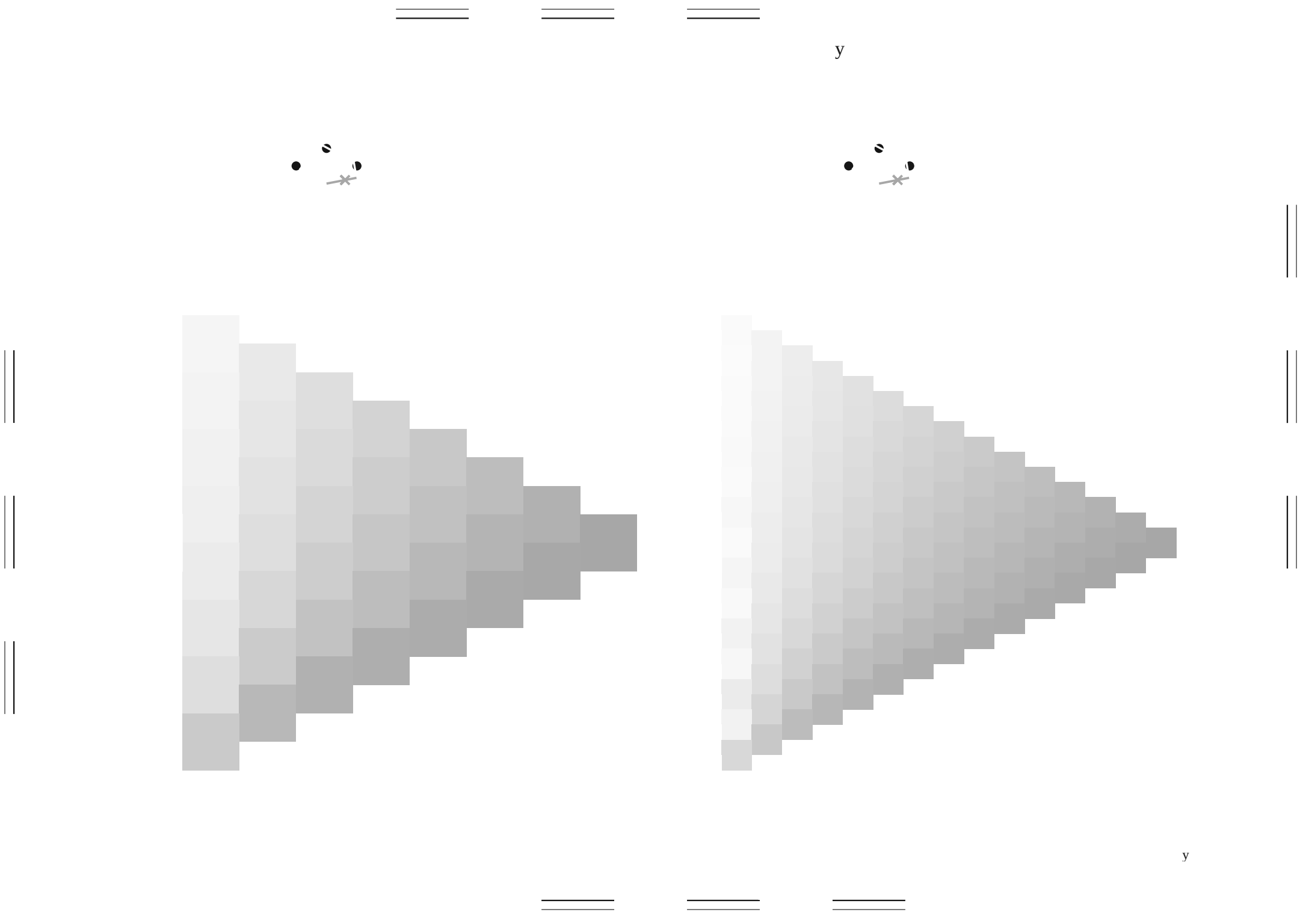














Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 41/360 = 0.113$

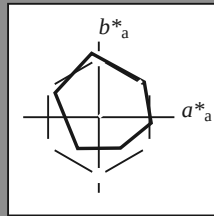
$lab^*tch$  and  $lab^*nch$

D65: hue R25J

LCH\*Ma: 54 74 41

olv\*Ma: 1.0 0.05 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 41/360 = 0.113$

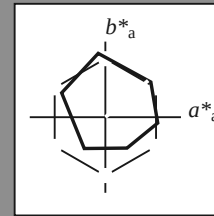
$lab^*tch$  and  $lab^*nch$

D65: hue R25J

LCH\*Ma: 54 74 41

olv\*Ma: 1.0 0.05 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

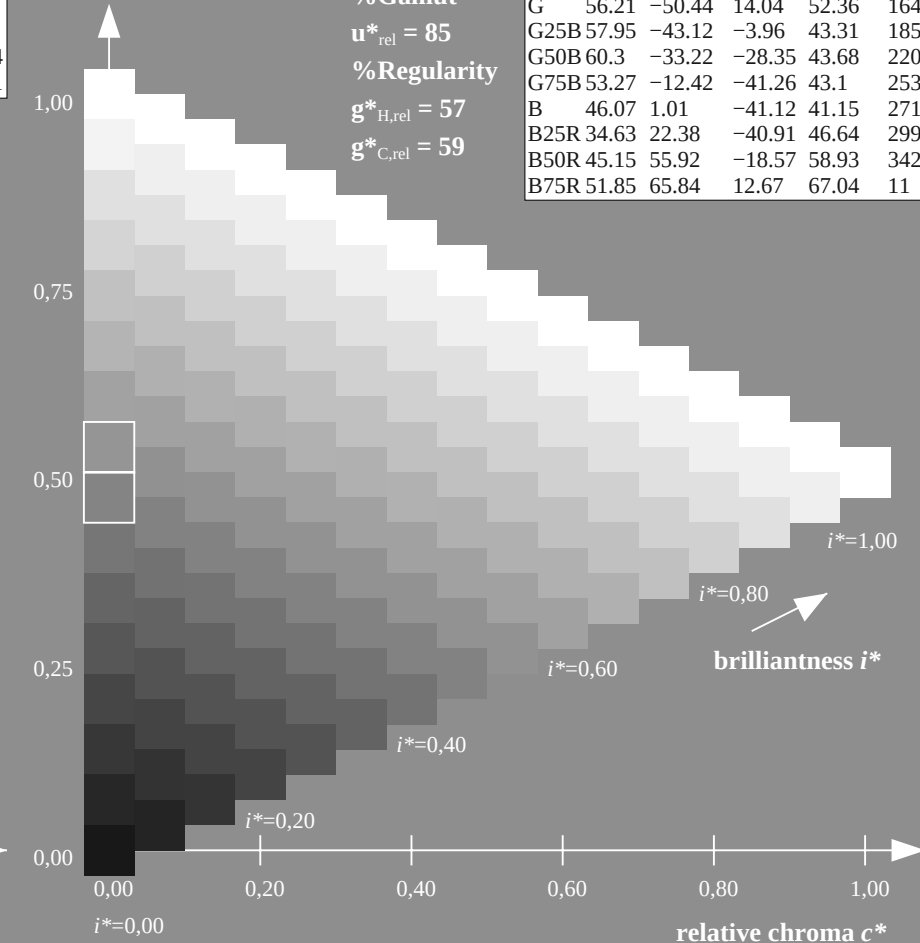
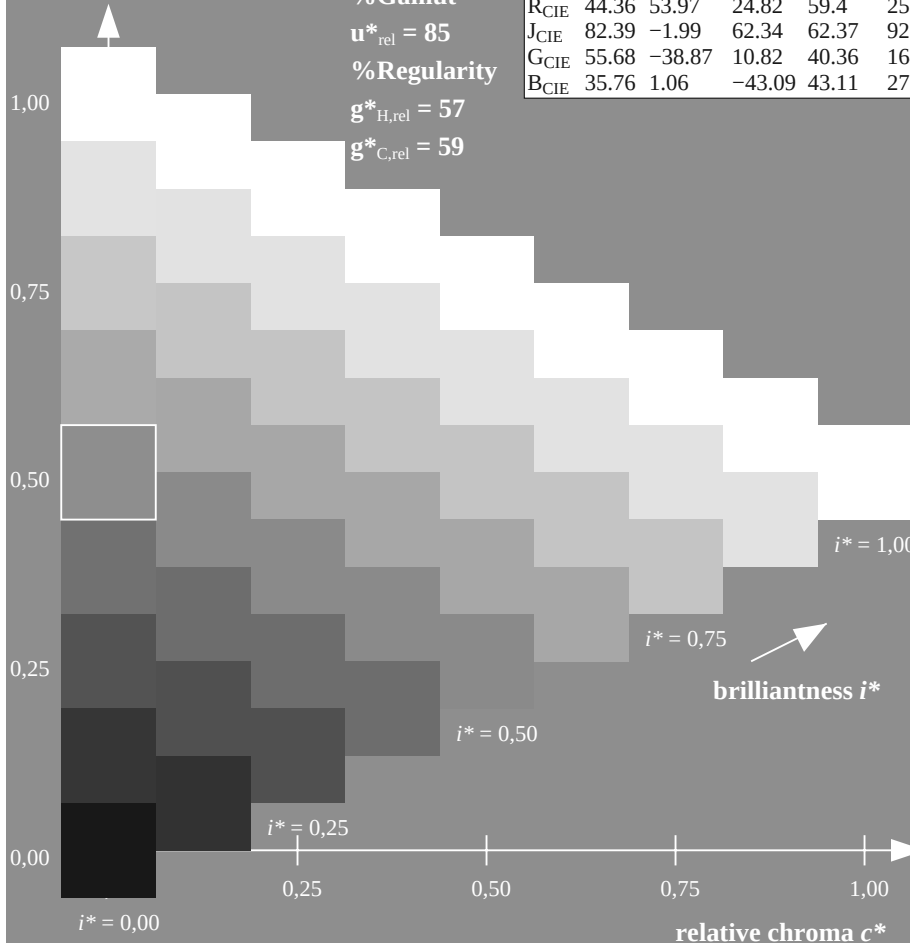
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 41/360 = 0.113 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 41/360 = 0.113 (right)

BAM-test chart ZE92; Colorimetric systems, Page 82/96

D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 59/360 = 0.164$

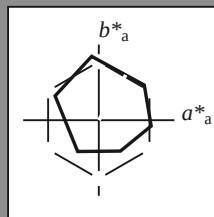
$lab^*tch$  and  $lab^*nch$

D65: hue R50J

LCH\*Ma: 65 70 59

olv\*Ma: 1.0 0.35 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 59/360 = 0.164$

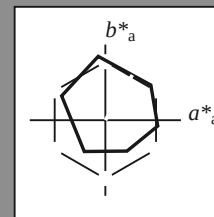
$lab^*tch$  and  $lab^*nch$

D65: hue R50J

LCH\*Ma: 65 70 59

olv\*Ma: 1.0 0.35 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

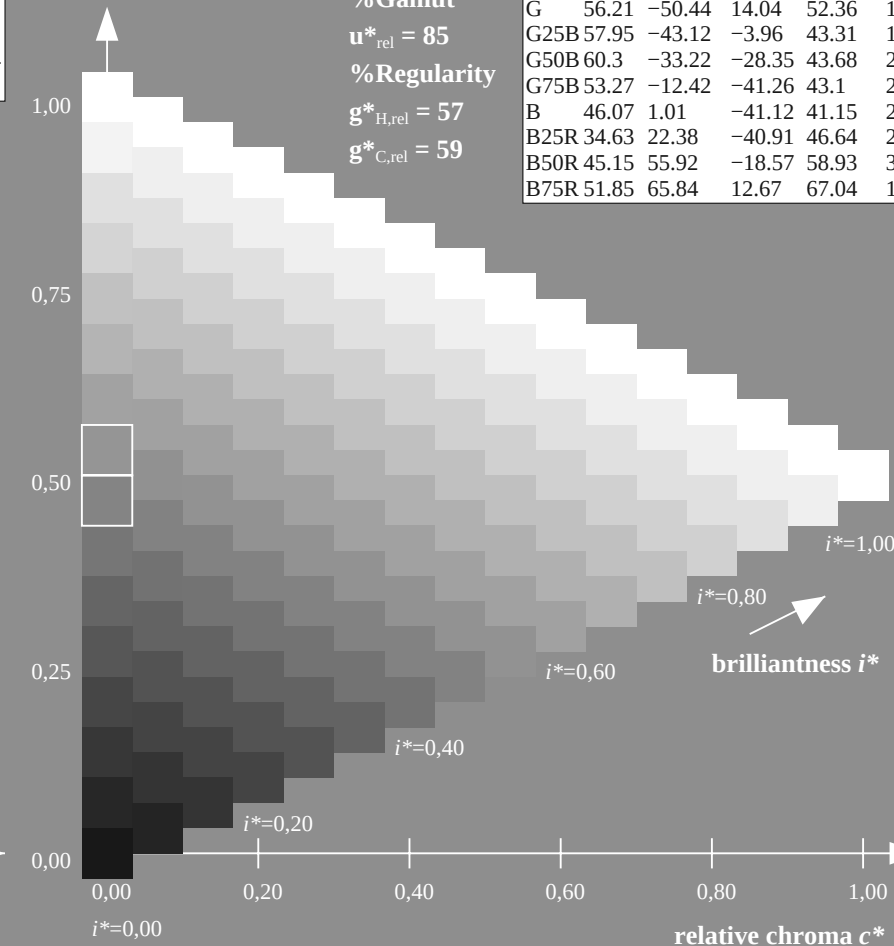
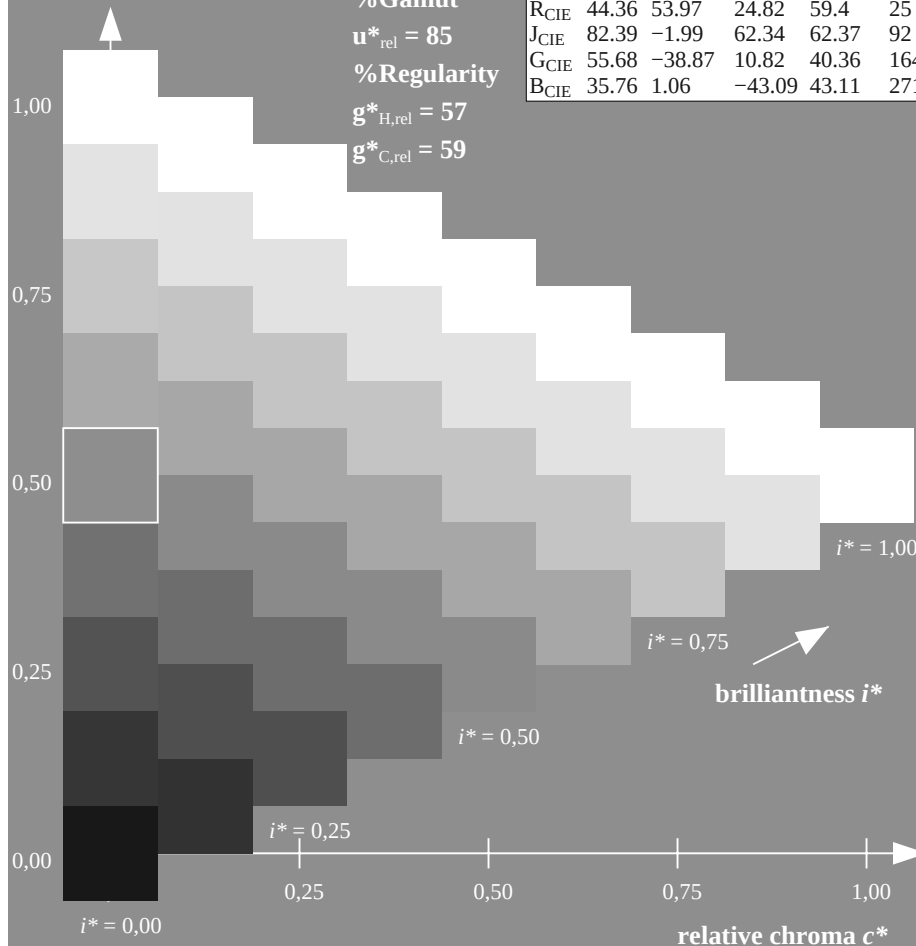
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 59/360 = 0.164 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 59/360 = 0.164 (right)

BAM-test chart ZE92; Colorimetric systems, Page 83/96

D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 77/360 = 0.215$

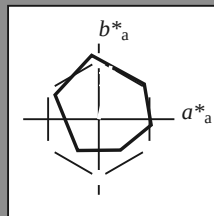
$lab^*tch$  and  $lab^*nch$

D65: hue R75J

LCH\*Ma: 77 72 77

olv\*Ma: 1.0 0.63 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 77/360 = 0.215$

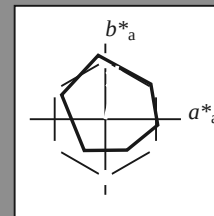
$lab^*tch$  and  $lab^*nch$

D65: hue R75J

LCH\*Ma: 77 72 77

olv\*Ma: 1.0 0.63 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

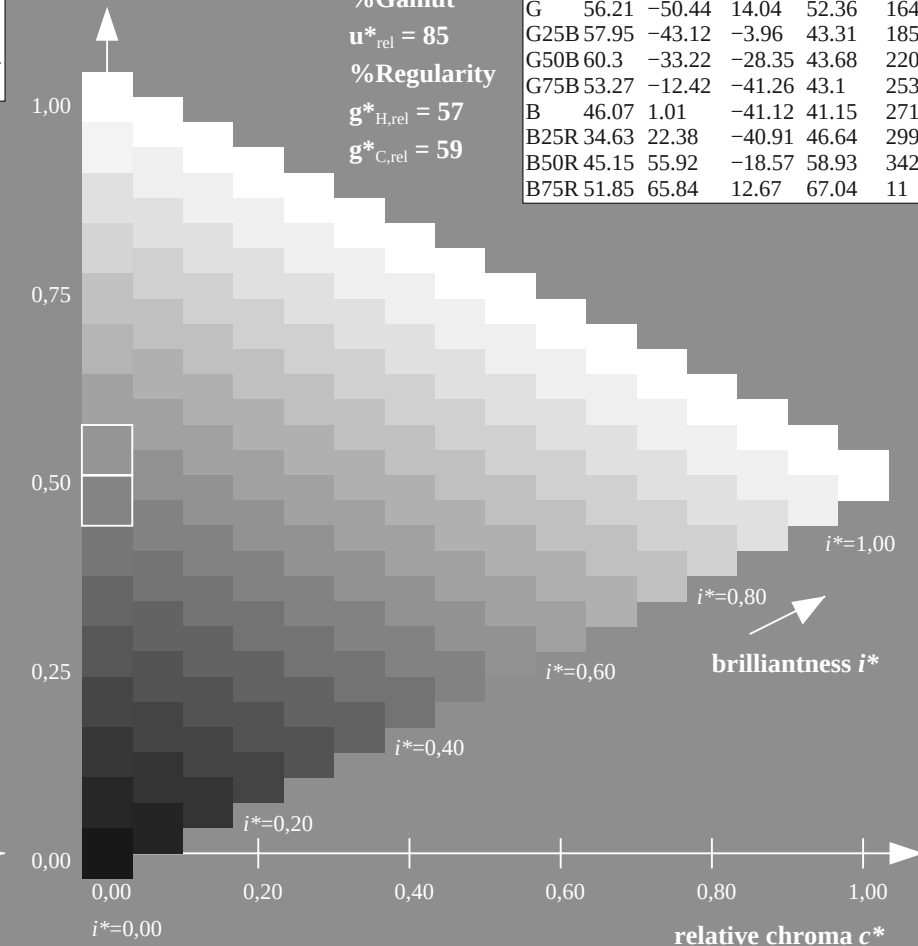
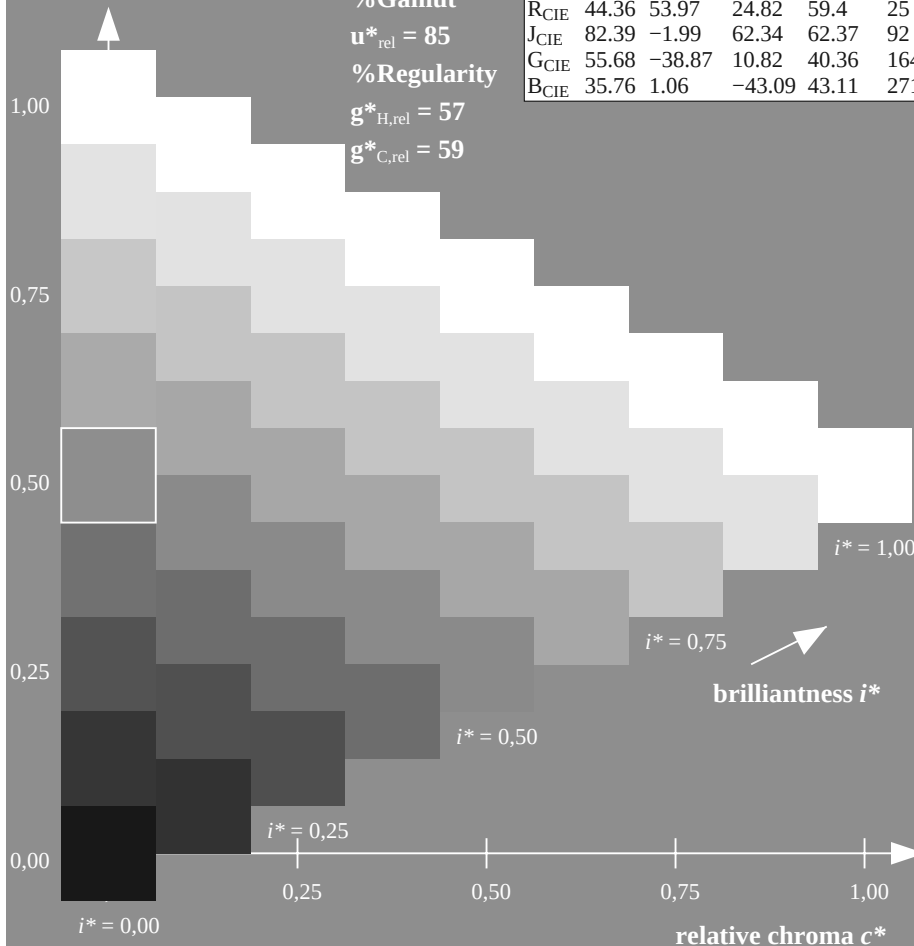
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 77/360 = 0.215 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 77/360 = 0.215 (right)

BAM-test chart ZE92; Colorimetric systems, Page 84/96  
D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

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

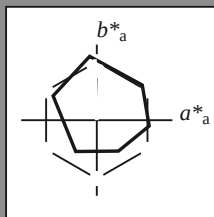
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 87 81 92

olv\*Ma: 1.0 0.9 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

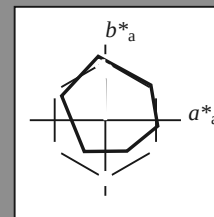
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 87 81 92

olv\*Ma: 1.0 0.9 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

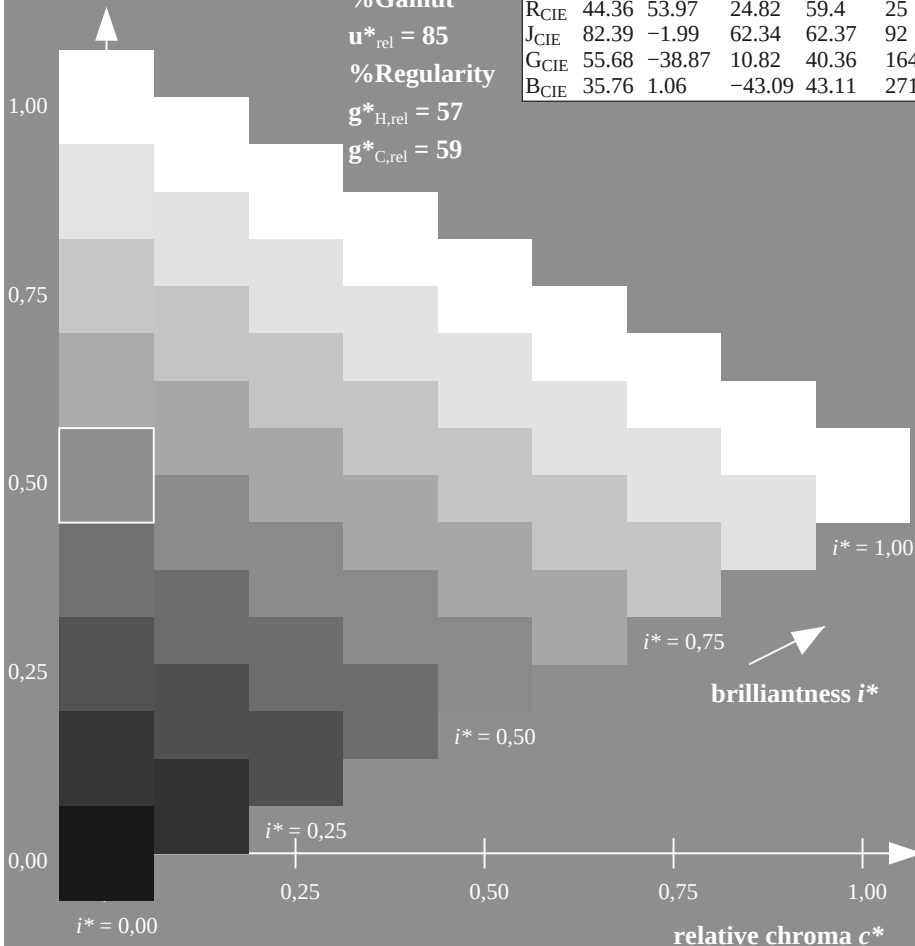
%Gamut

$u^*_{rel} = 85$

%Regularity

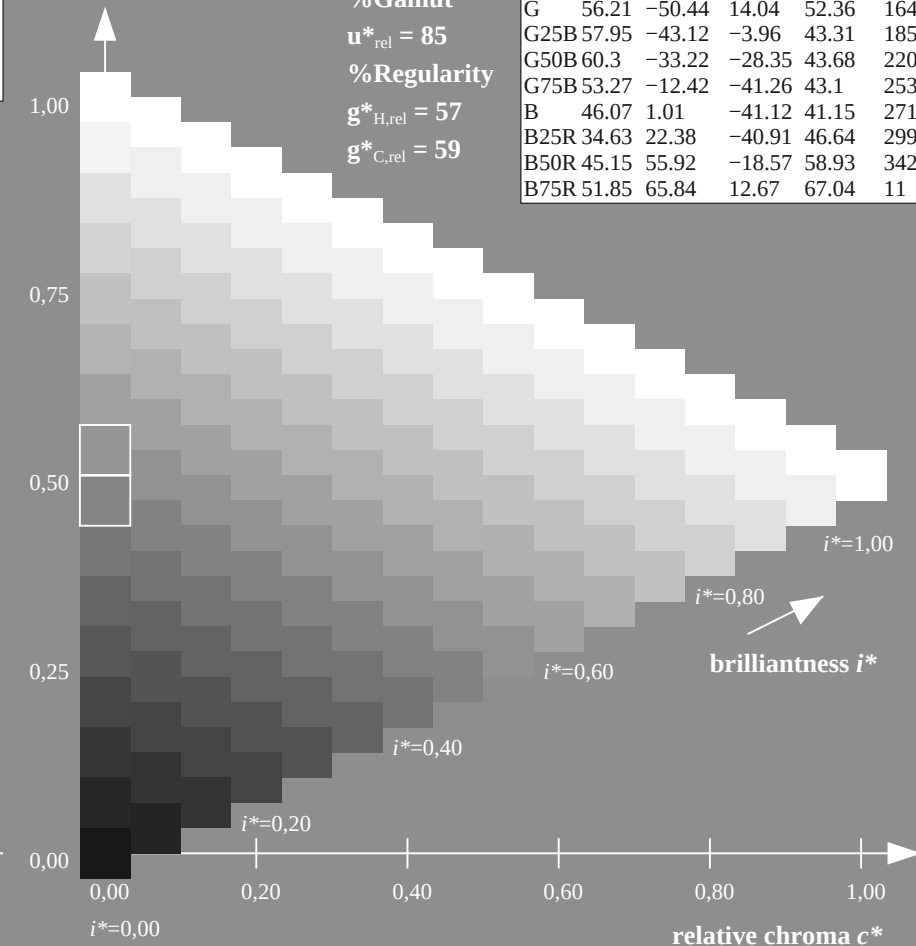
$g^*_{H,rel} = 57$

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



ZE920-7F, 9 step scales for constant CIELAB hue 92/360 = 0.255 (left)

BAM-test chart ZE92; Colorimetric systems, Page 85/96  
D65: 9 and 16 step colour scales for 16 elementary hues



ZE920-7F, 16 step scales for constant CIELAB hue 92/360 = 0.255 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )



Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 103/360 = 0.286$

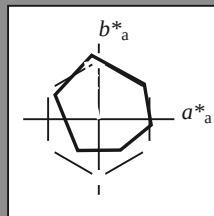
$lab^*tch$  and  $lab^*nch$

D65: hue J25G

LCH\*Ma: 85 78 103

olv\*Ma: 0.84 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 103/360 = 0.286$

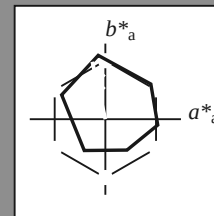
$lab^*tch$  and  $lab^*nch$

D65: hue J25G

LCH\*Ma: 85 78 103

olv\*Ma: 0.84 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

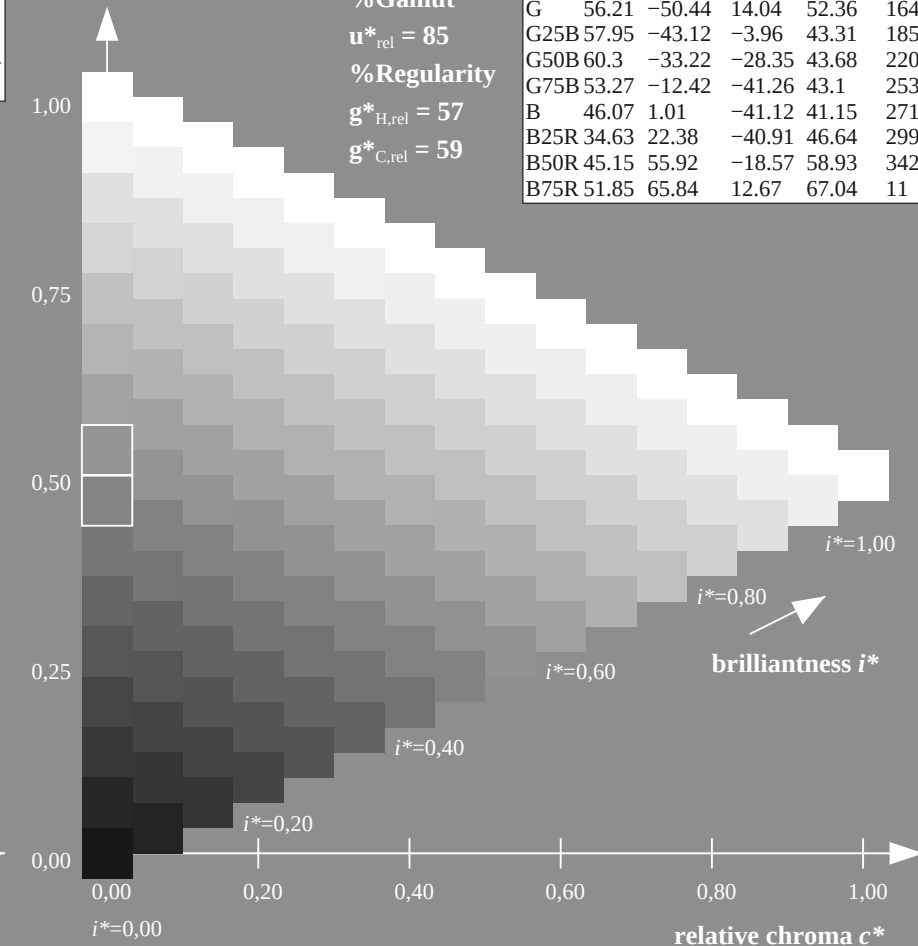
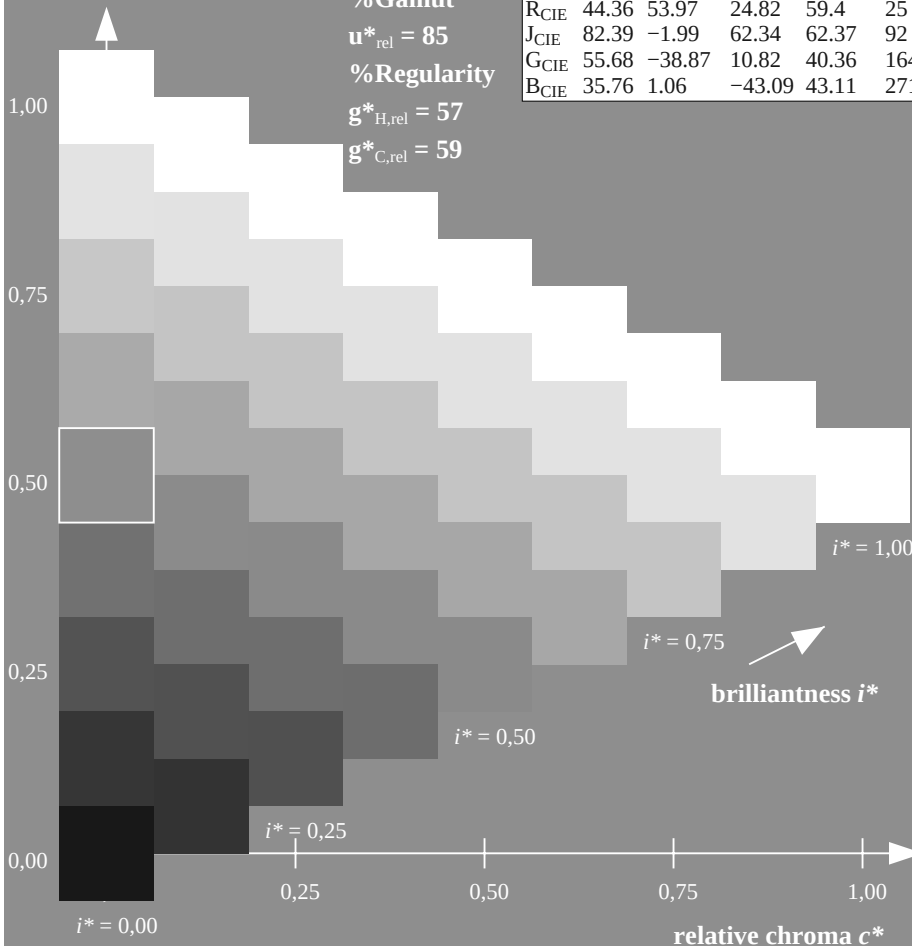
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 103/360 = 0.286 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 103/360 = 0.286 (right)

BAM-test chart ZE92; Colorimetric systems, Page 86/96  
D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

BAM registration: 20071001-ZE92/10L/L92E00FA.PS/.TXT  
application for evaluation and measurement of printer or monitor systems  
BAM material: code=rh4ta

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 119/360 = 0.331$

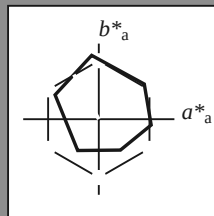
$lab^*tch$  and  $lab^*nch$

D65: hue J50G

LCH\*Ma: 73 68 119

olv\*Ma: 0.51 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

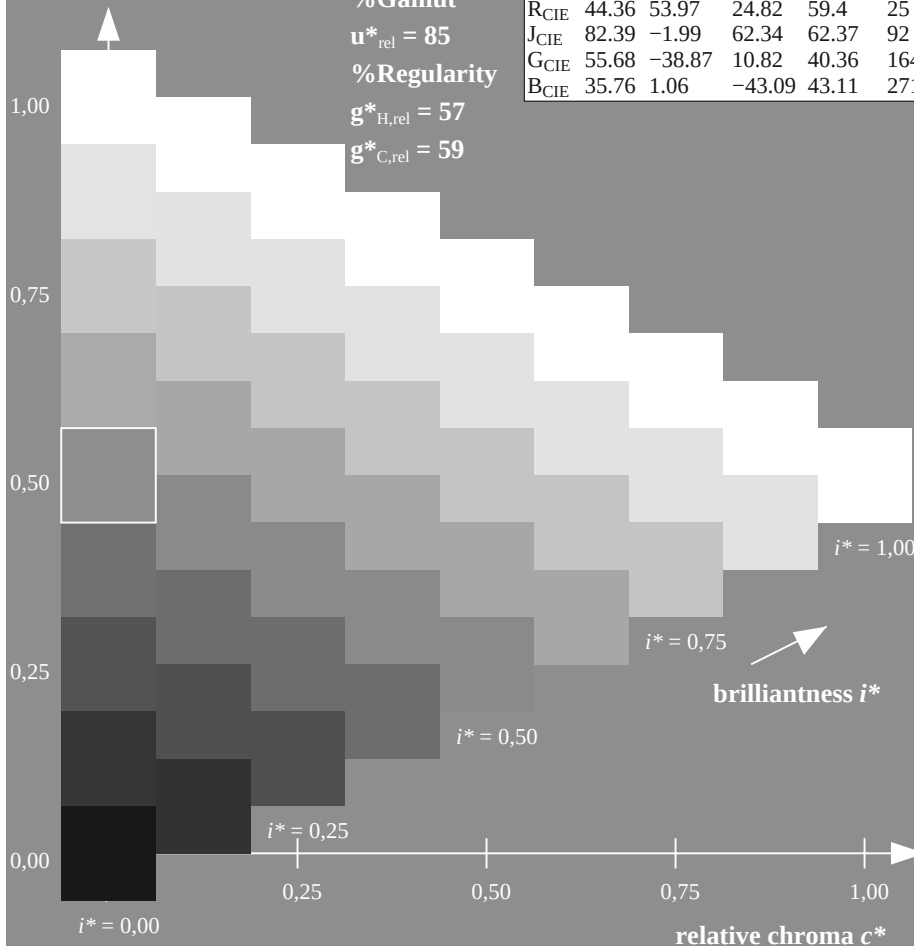
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 119/360 = 0.331 (left)

BAM-test chart ZE92; Colorimetric systems, Page 87/96  
D65: 9 and 16 step colour scales for 16 elementary hues

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 119/360 = 0.331$

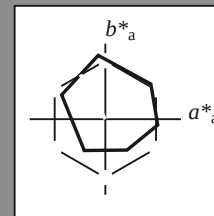
$lab^*tch$  and  $lab^*nch$

D65: hue J50G

LCH\*Ma: 73 68 119

olv\*Ma: 0.51 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

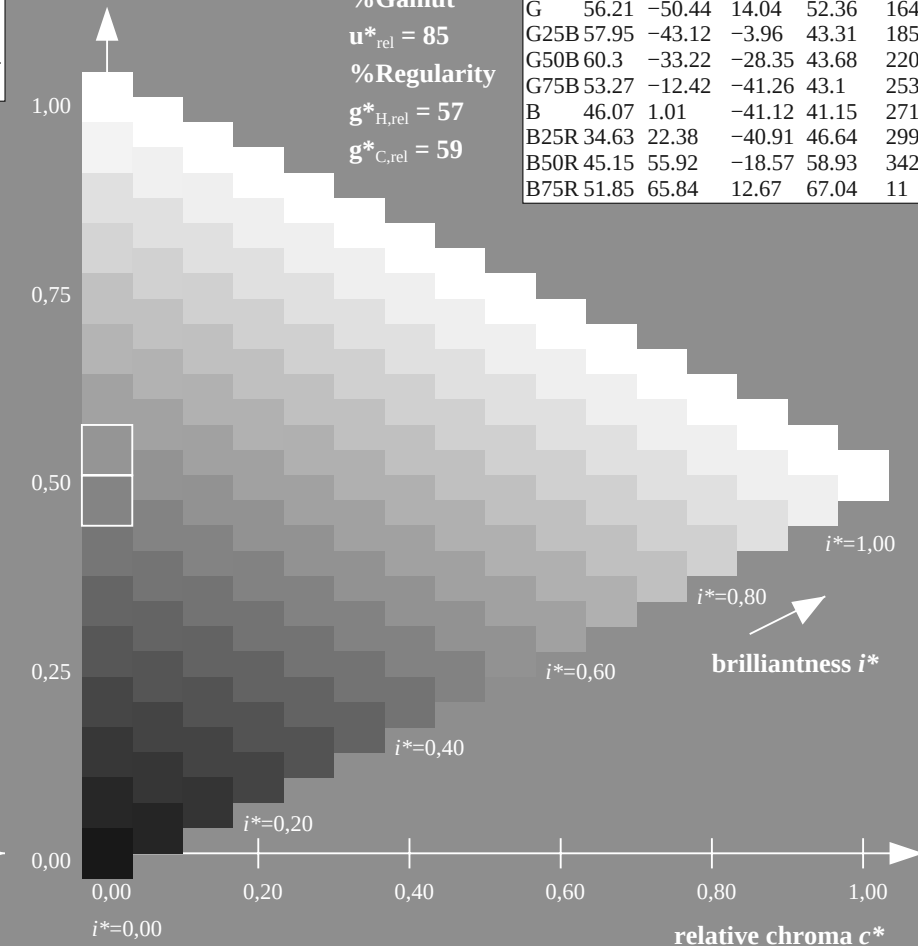
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 16 step scales for constant CIELAB hue 119/360 = 0.331 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 141/360 = 0.393$

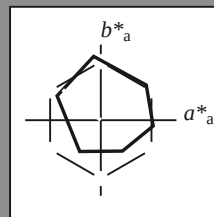
$lab^*tch$  and  $lab^*nch$

D65: hue J75G

LCH\*Ma: 60 64 141

olv\*Ma: 0.15 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

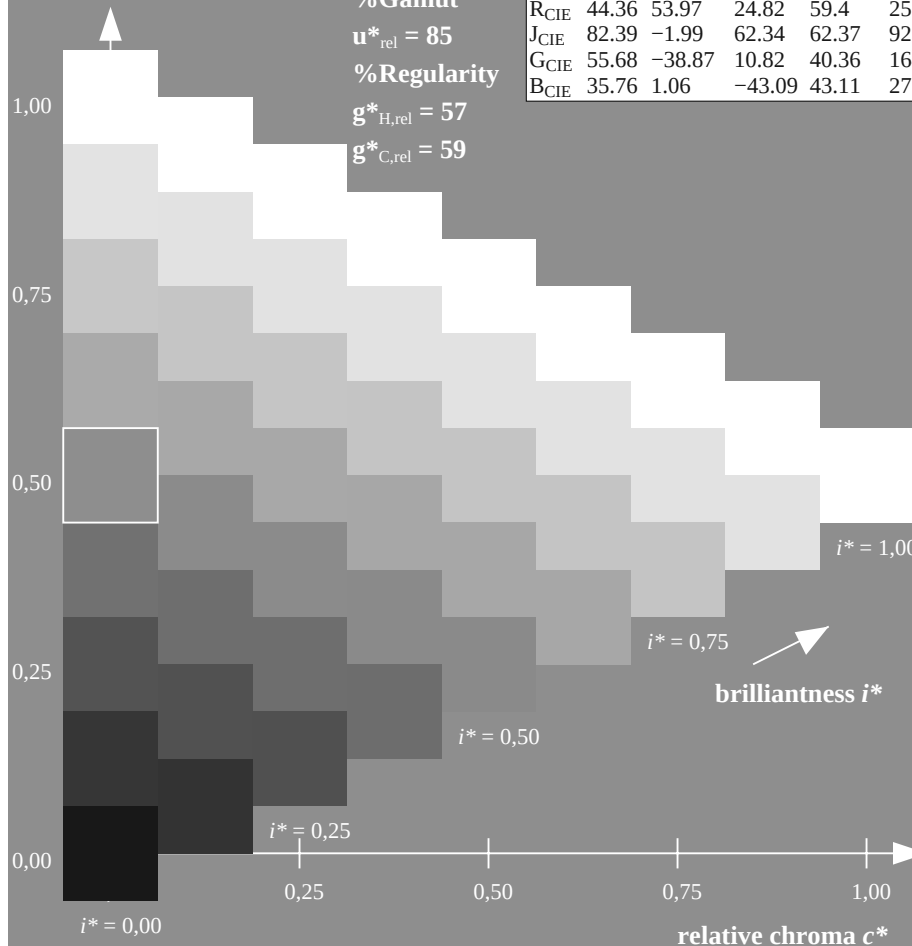
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 141/360 = 0.393 (left)

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BAM-test chart ZE92; Colorimetric systems, Page 88/96  
D65: 9 and 16 step colour scales for 16 elementary hues

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 141/360 = 0.393$

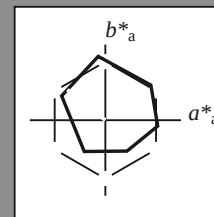
$lab^*tch$  and  $lab^*nch$

D65: hue J75G

LCH\*Ma: 60 64 141

olv\*Ma: 0.15 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

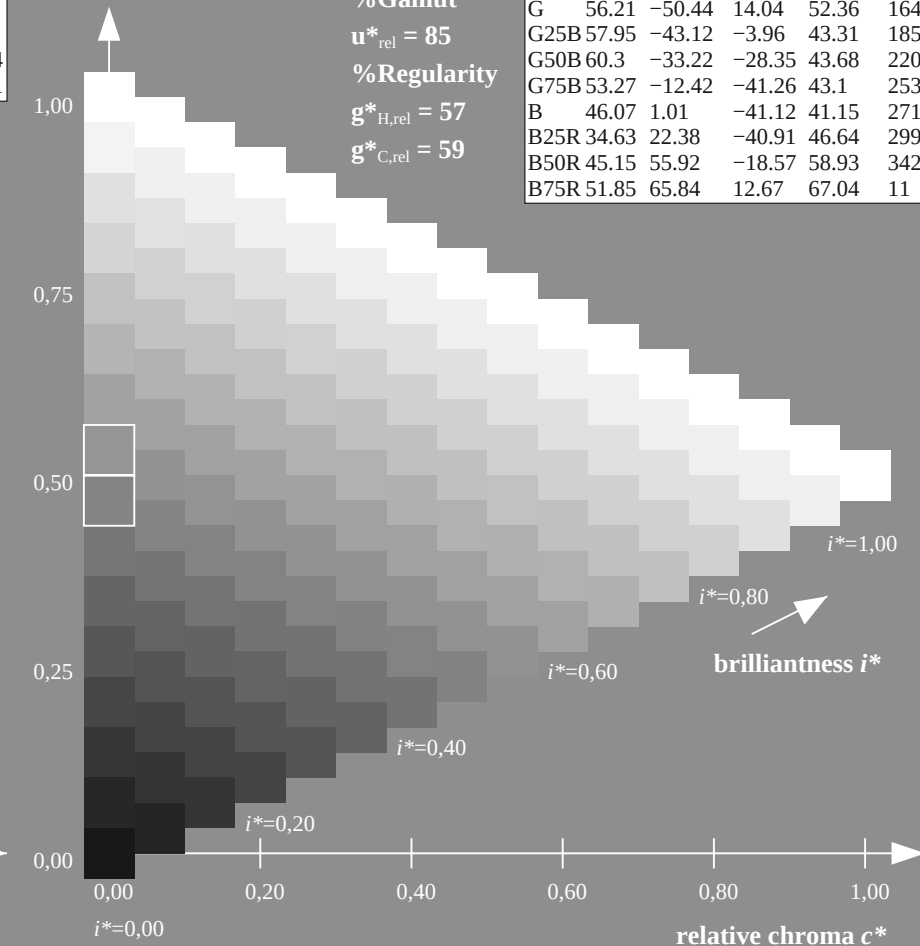
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 16 step scales for constant CIELAB hue 141/360 = 0.393 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

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

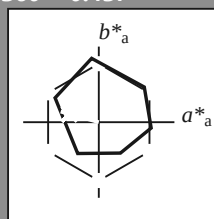
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 56 52 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

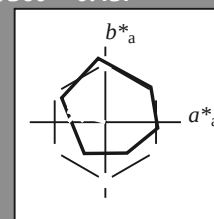
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 56 52 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

%Gamut

$u^*_{rel} = 85$

%Regularity

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

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

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

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Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 185/360 = 0.515$

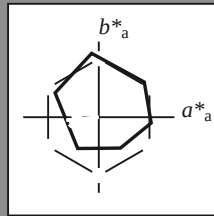
$lab^*tch$  and  $lab^*nch$

D65: hue G25B

LCH\*Ma: 58 43 185

olv\*Ma: 0.0 1.0 0.49

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 185/360 = 0.515$

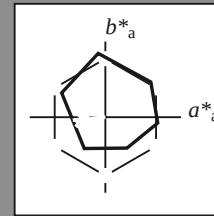
$lab^*tch$  and  $lab^*nch$

D65: hue G25B

LCH\*Ma: 58 43 185

olv\*Ma: 0.0 1.0 0.49

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

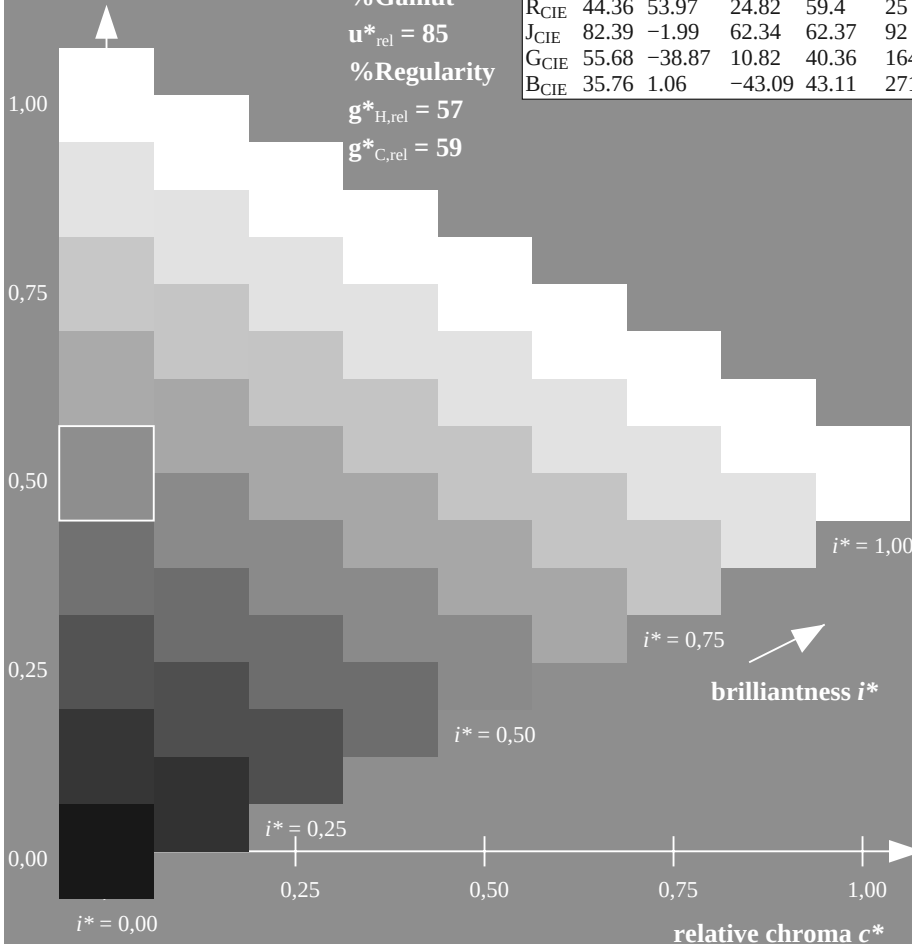
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 185/360 = 0.515 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 185/360 = 0.515 (right)

BAM-test chart ZE92; Colorimetric systems, Page 90/96  
D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

BAM registration: 20071001-ZE92/10L/L92E00FA.PS/.TXT  
application for evaluation and measurement of printer or monitor systems  
BAM material: code=rh4ta

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 220/360 = 0.612$

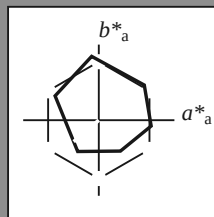
$lab^*tch$  and  $lab^*nch$

D65: hue G50B

LCH\*Ma: 60 44 220

olv\*Ma: 0.0 1.0 0.82

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

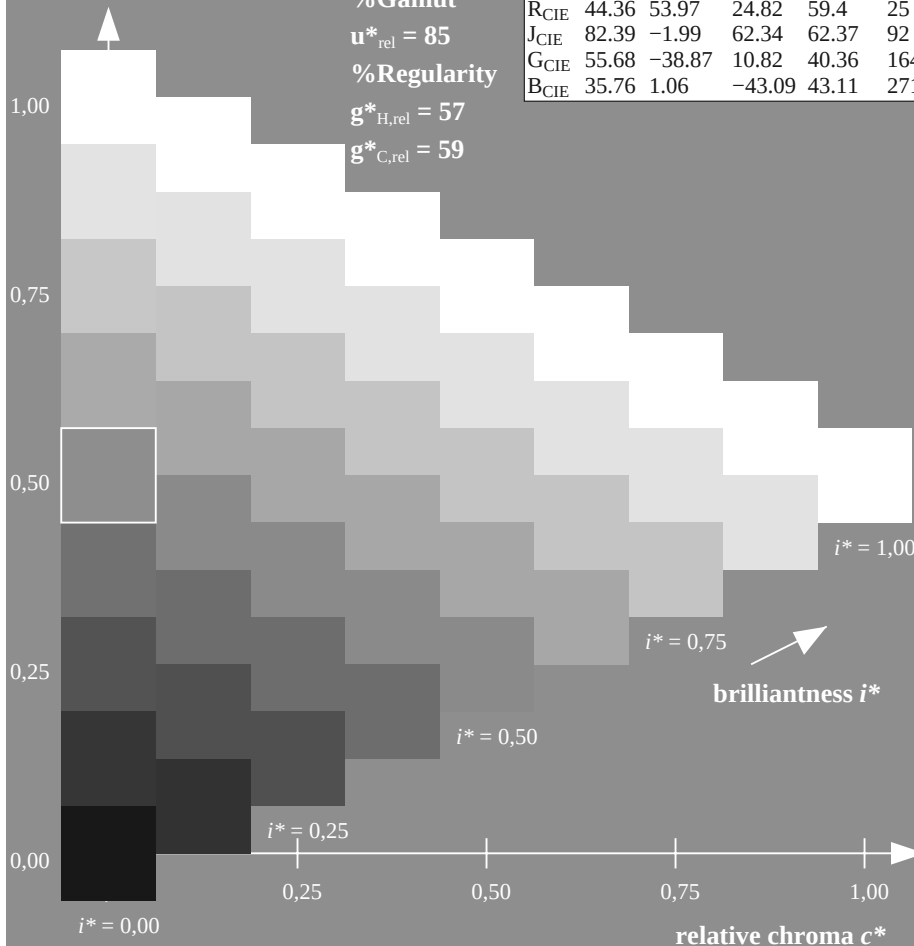
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 220/360 = 0.612 (left)

BAM-test chart ZE92; Colorimetric systems, Page 91/96  
D65: 9 and 16 step colour scales for 16 elementary hues

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 220/360 = 0.612$

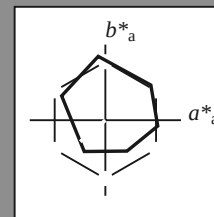
$lab^*tch$  and  $lab^*nch$

D65: hue G50B

LCH\*Ma: 60 44 220

olv\*Ma: 0.0 1.0 0.82

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

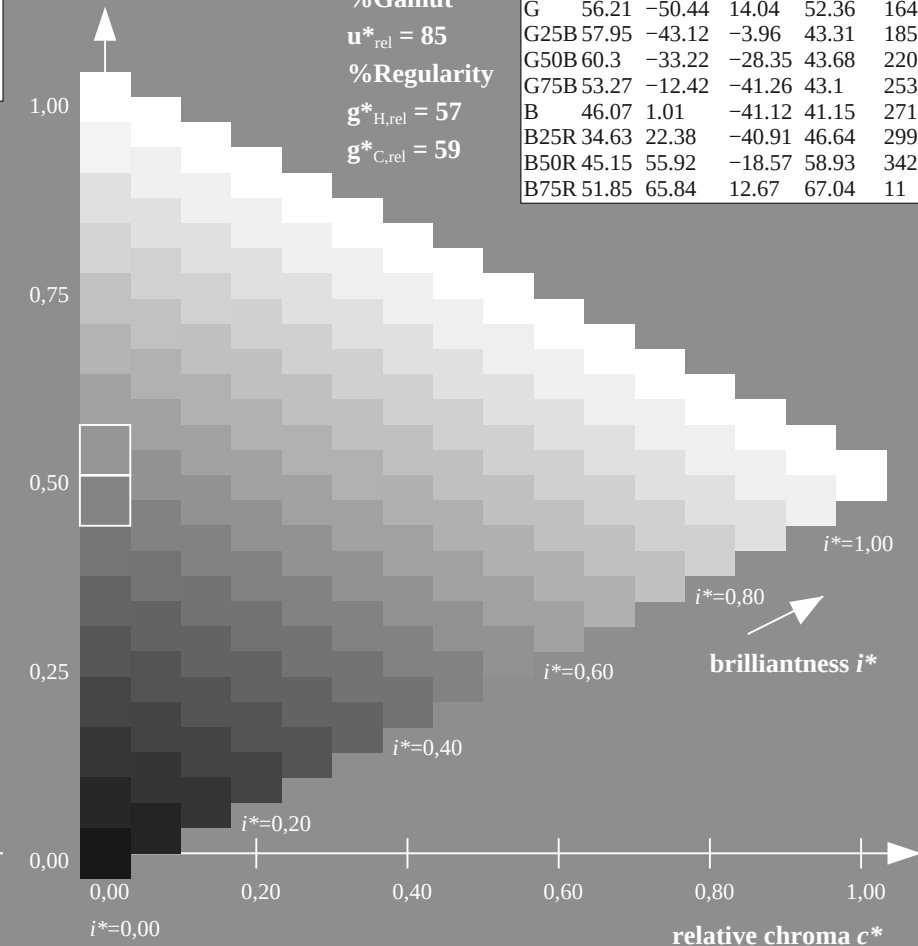
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 16 step scales for constant CIELAB hue 220/360 = 0.612 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 253/360 = 0.703$

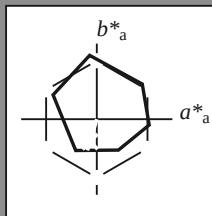
$lab^*tch$  and  $lab^*nch$

D65: hue G75B

LCH\*Ma: 53 43 253

olv\*Ma: 0.0 0.73 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 253/360 = 0.703$

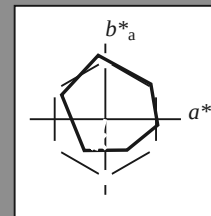
$lab^*tch$  and  $lab^*nch$

D65: hue G75B

LCH\*Ma: 53 43 253

olv\*Ma: 0.0 0.73 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

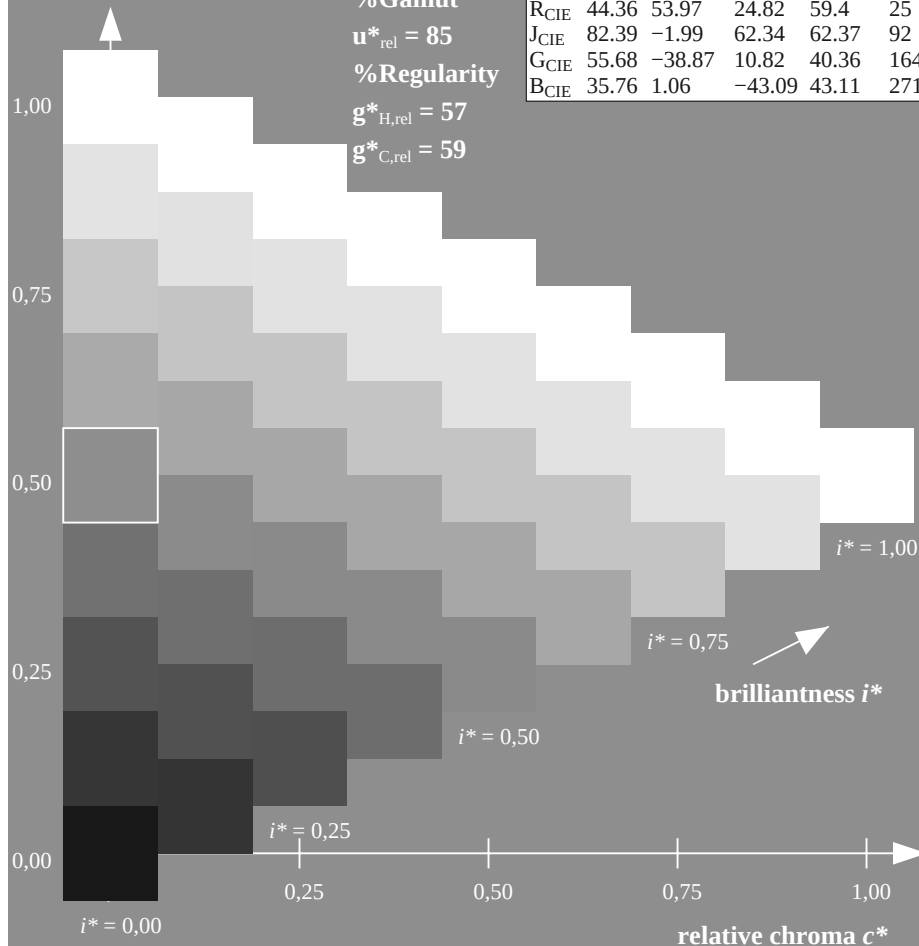
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 253/360 = 0.703 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 253/360 = 0.703 (right)

BAM-test chart ZE92; Colorimetric systems, Page 92/96  
D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

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

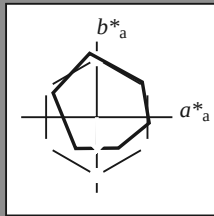
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 46 41 271

olv\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

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

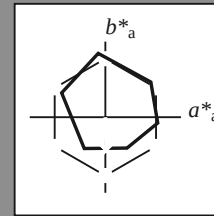
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 46 41 271

olv\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

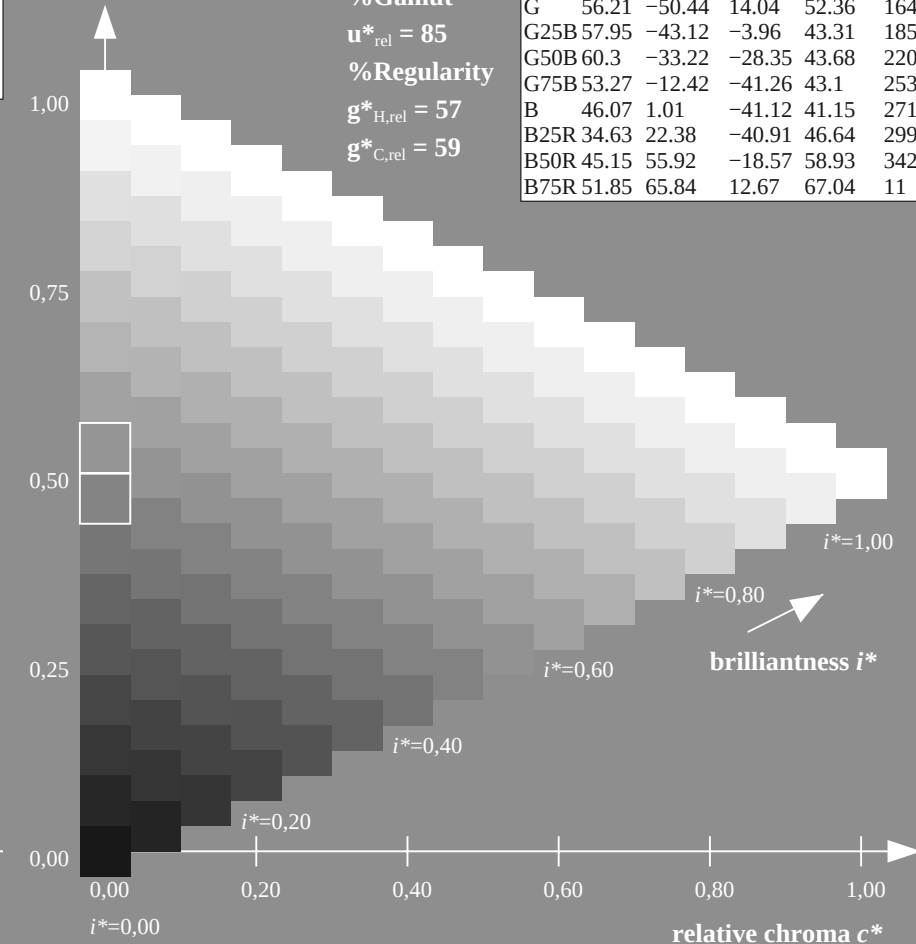
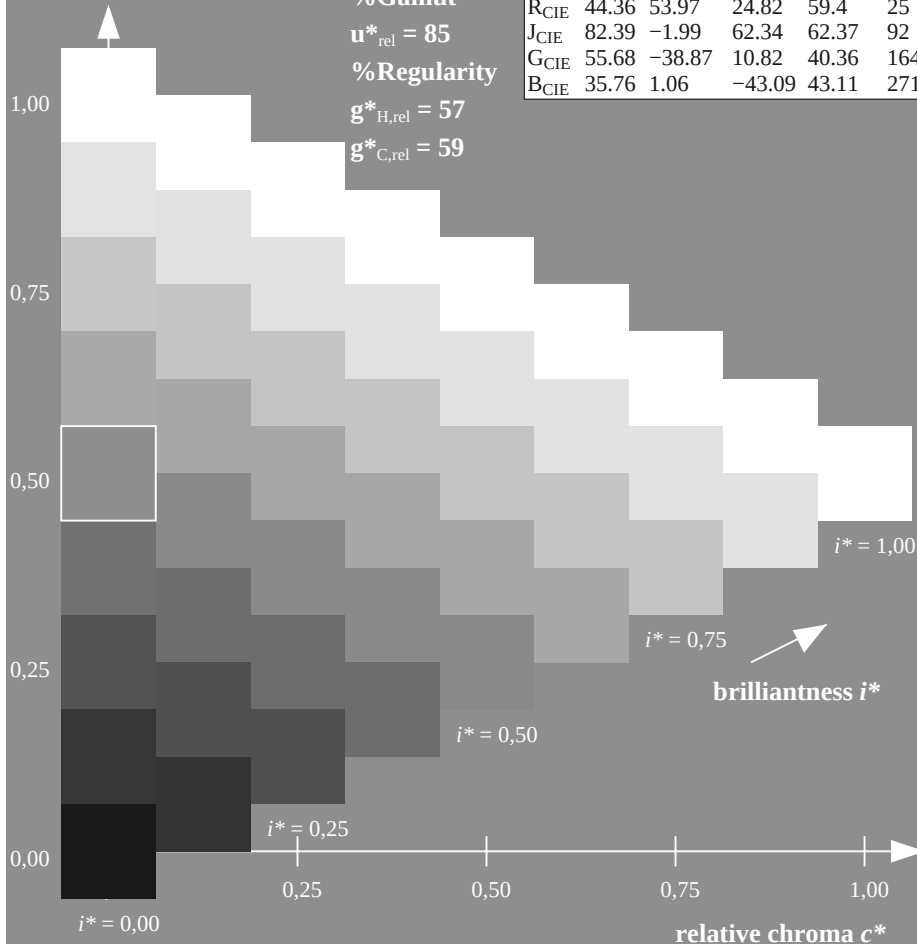
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 271/360 = 0.754 (right)

BAM-test chart ZE92; Colorimetric systems, Page 93/96

D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color

output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )



Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 299/360 = 0.83$

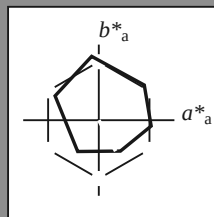
$lab^*tch$  and  $lab^*nch$

D65: hue B25R

LCH\*Ma: 35 47 299

olv\*Ma: 0.0 0.11 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

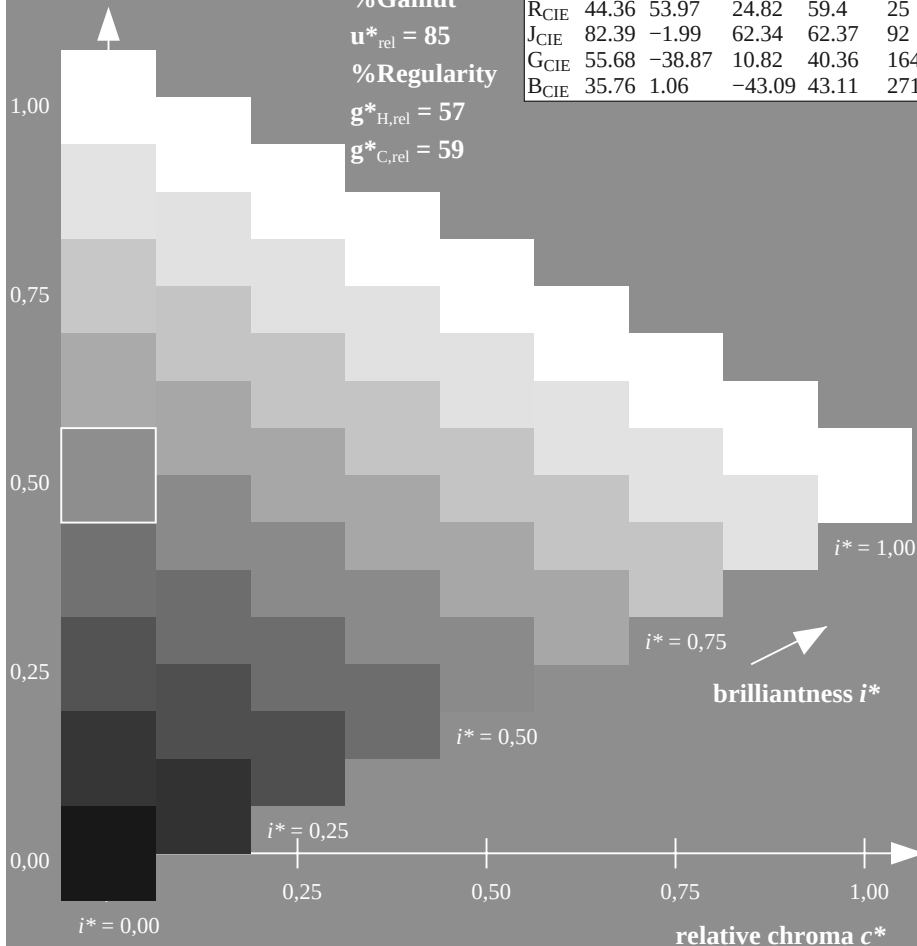
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 299/360 = 0.83 (left)

BAM-test chart ZE92; Colorimetric systems, Page 94/96  
D65: 9 and 16 step colour scales for 16 elementary hues

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 299/360 = 0.83$

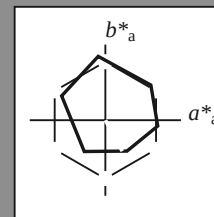
$lab^*tch$  and  $lab^*nch$

D65: hue B25R

LCH\*Ma: 35 47 299

olv\*Ma: 0.0 0.11 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

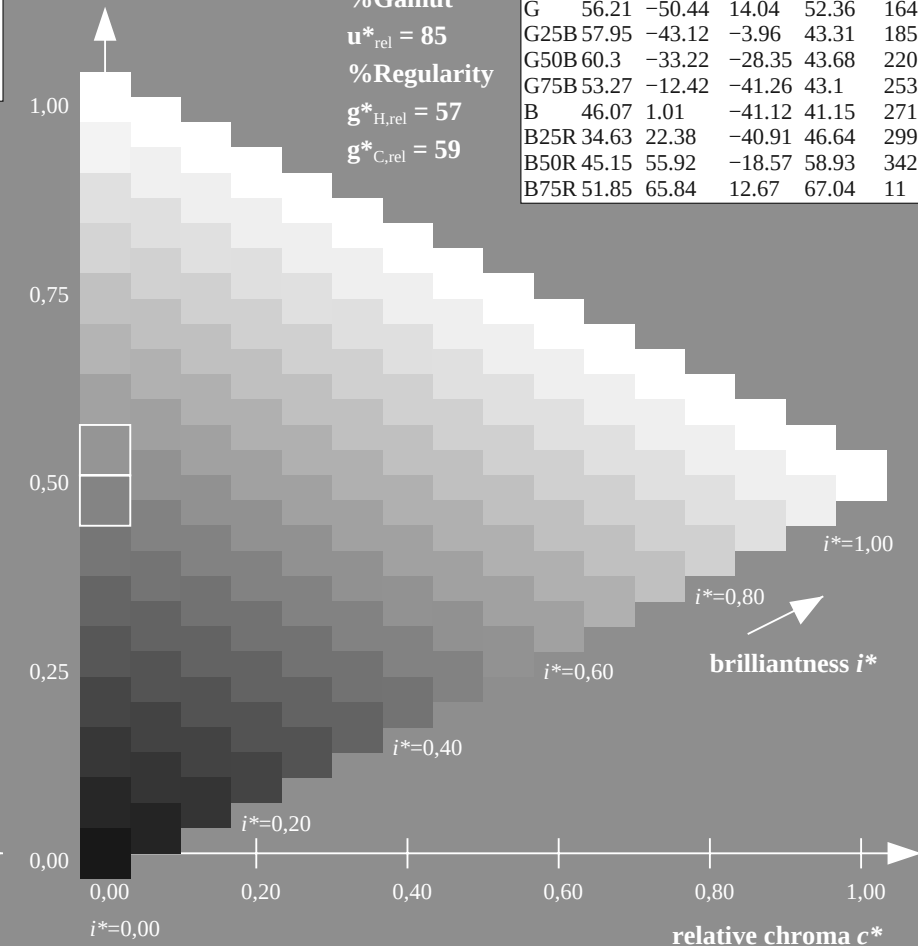
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 16 step scales for constant CIELAB hue 299/360 = 0.83 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 342/360 = 0.949$

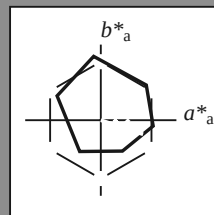
$lab^*tch$  and  $lab^*nch$

D65: hue B50R

LCH\*Ma: 45 59 342

olv\*Ma: 0.67 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

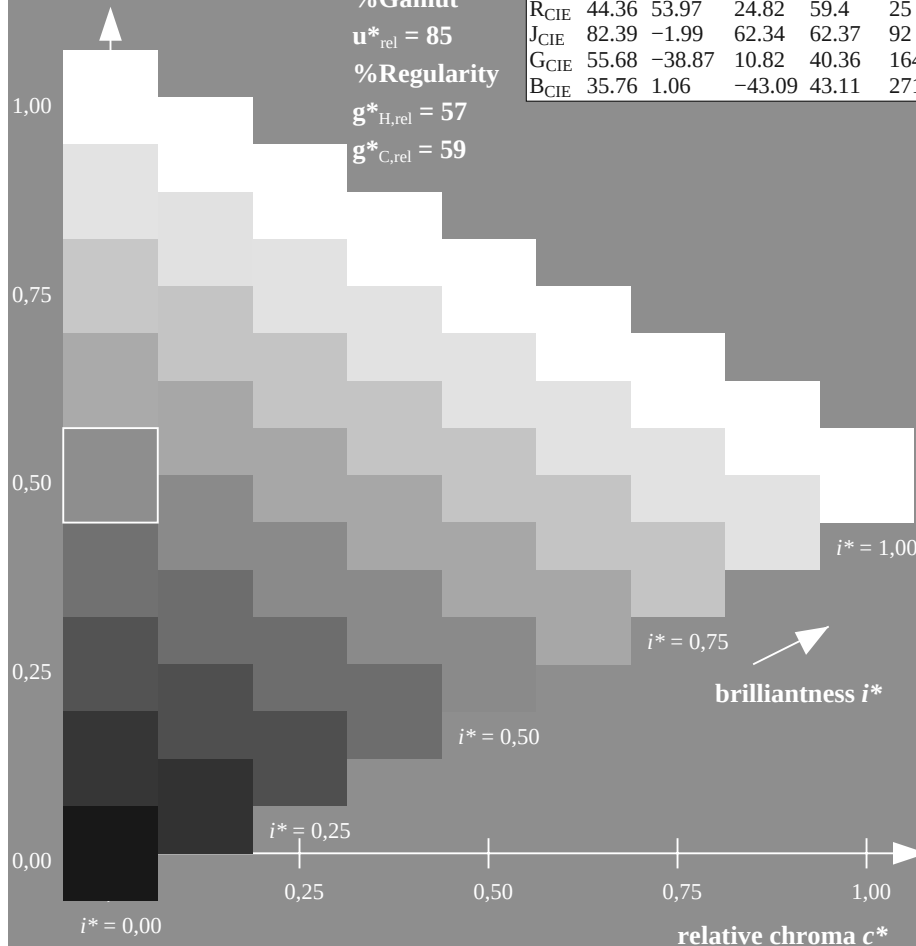
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |



ZE920-7F, 9 step scales for constant CIELAB hue 342/360 = 0.949 (left)

BAM-test chart ZE92; Colorimetric systems, Page 95/96  
D65: 9 and 16 step colour scales for 16 elementary hues

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 342/360 = 0.949$

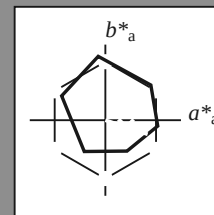
$lab^*tch$  and  $lab^*nch$

D65: hue B50R

LCH\*Ma: 45 59 342

olv\*Ma: 0.67 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

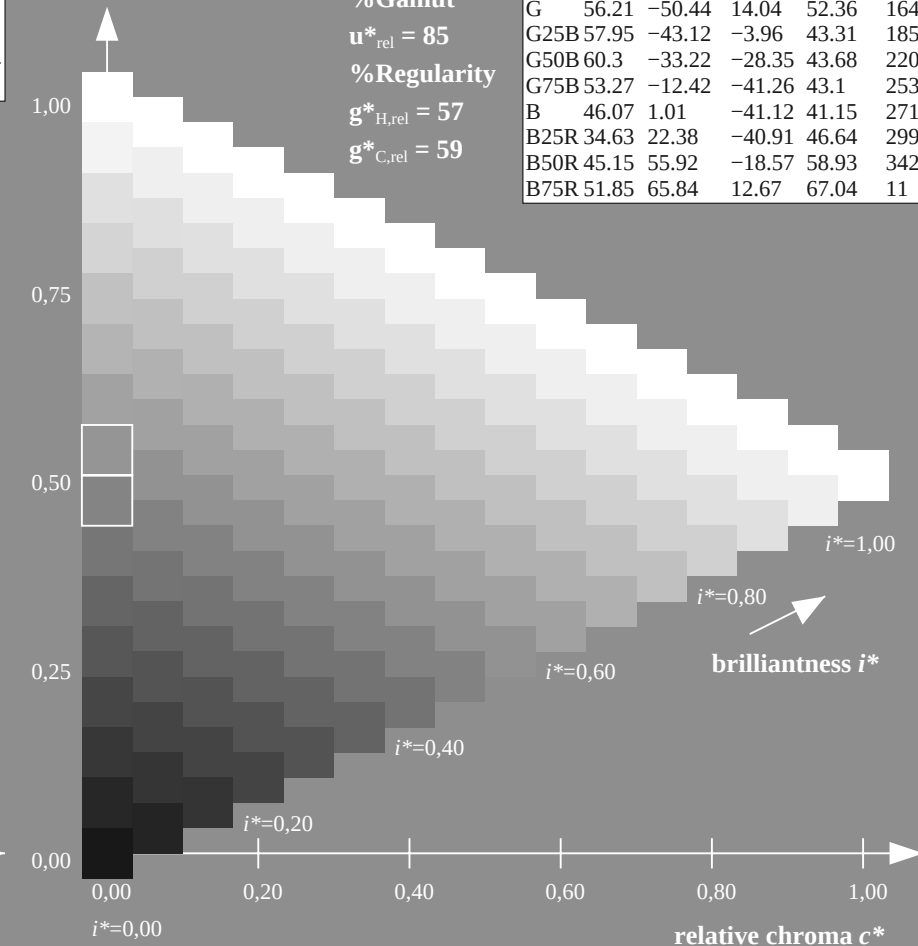
%Regularity

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

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

ORS18; adapted (a) CIELAB data

|      | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| R    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |



ZE920-7F, 16 step scales for constant CIELAB hue 342/360 = 0.949 (right)

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 11/360 = 0.03$

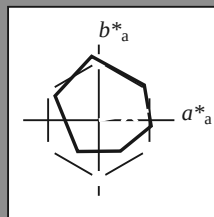
$lab^*tch$  and  $lab^*nch$

D65: hue B75R

LCH\*Ma: 52 67 11

olv\*Ma: 1.0 0.0 0.62

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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>  | 51.74       | 60.16   | 46.48   | 76.02        | 38           |
| Y <sub>Ma</sub>  | 90.77       | -9.44   | 84.41   | 84.94        | 96           |
| L <sub>Ma</sub>  | 54.46       | -57.8   | 32.16   | 66.15        | 151          |
| C <sub>Ma</sub>  | 61.56       | -27.91  | -41.41  | 49.95        | 236          |
| V <sub>Ma</sub>  | 31.3        | 28.61   | -40.85  | 49.88        | 305          |
| M <sub>Ma</sub>  | 51.91       | 69.26   | -7.69   | 69.68        | 354          |
| N <sub>Ma</sub>  | 24.2        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 44.36       | 53.97   | 24.82   | 59.4         | 25           |
| J <sub>CIE</sub> | 82.39       | -1.99   | 62.34   | 62.37        | 92           |
| G <sub>CIE</sub> | 55.68       | -38.87  | 10.82   | 40.36        | 164          |
| B <sub>CIE</sub> | 35.76       | 1.06    | -43.09  | 43.11        | 271          |

Output: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 11/360 = 0.03$

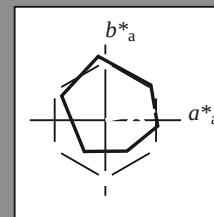
$lab^*tch$  and  $lab^*nch$

D65: hue B75R

LCH\*Ma: 52 67 11

olv\*Ma: 1.0 0.0 0.62

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 85$

%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    | 51.79       | 63.09   | 29.02   | 69.44        | 25           |
| R25J | 53.73       | 56.6    | 48.42   | 74.48        | 41           |
| R50J | 65.47       | 35.67   | 59.82   | 69.65        | 59           |
| R75J | 76.51       | 15.98   | 70.55   | 72.34        | 77           |
| J    | 86.93       | -2.58   | 80.67   | 80.71        | 92           |
| J25G | 84.92       | -17.23  | 75.99   | 77.92        | 103          |
| J50G | 73.11       | -32.96  | 59.0    | 67.58        | 119          |
| J75G | 60.06       | -50.34  | 40.22   | 64.44        | 141          |
| G    | 56.21       | -50.44  | 14.04   | 52.36        | 164          |
| G25B | 57.95       | -43.12  | -3.96   | 43.31        | 185          |
| G50B | 60.3        | -33.22  | -28.35  | 43.68        | 220          |
| G75B | 53.27       | -12.42  | -41.26  | 43.1         | 253          |
| B    | 46.07       | 1.01    | -41.12  | 41.15        | 271          |
| B25R | 34.63       | 22.38   | -40.91  | 46.64        | 299          |
| B50R | 45.15       | 55.92   | -18.57  | 58.93        | 342          |
| B75R | 51.85       | 65.84   | 12.67   | 67.04        | 11           |

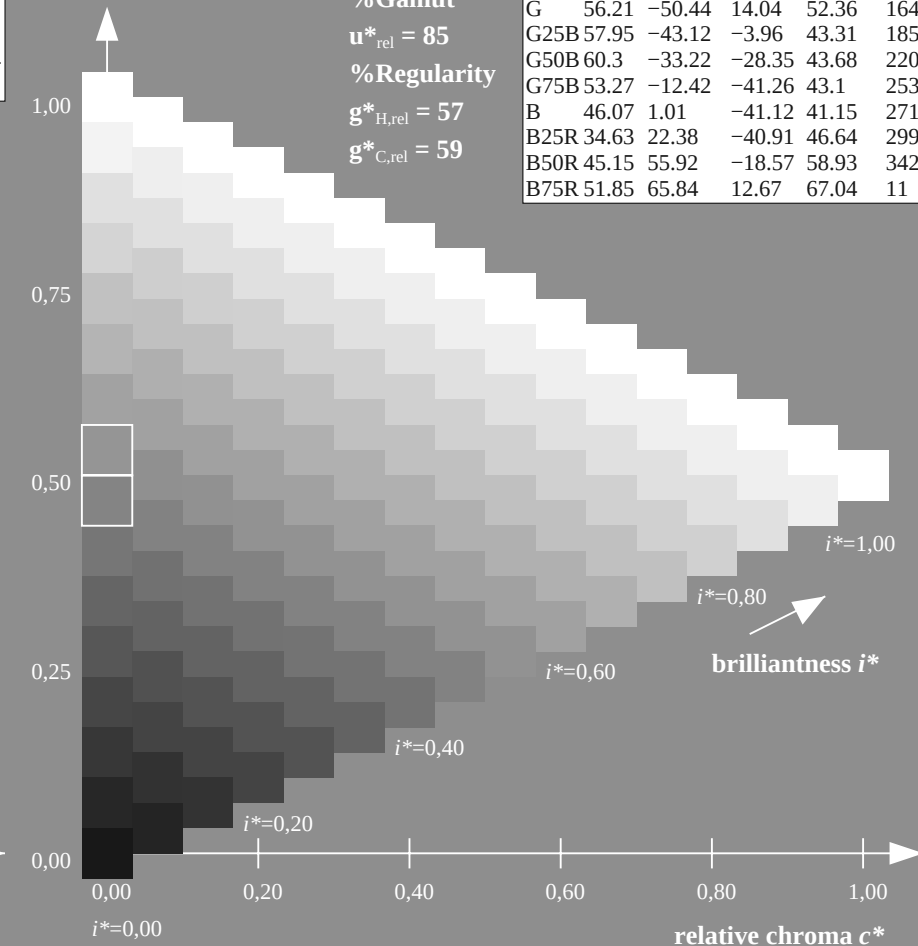
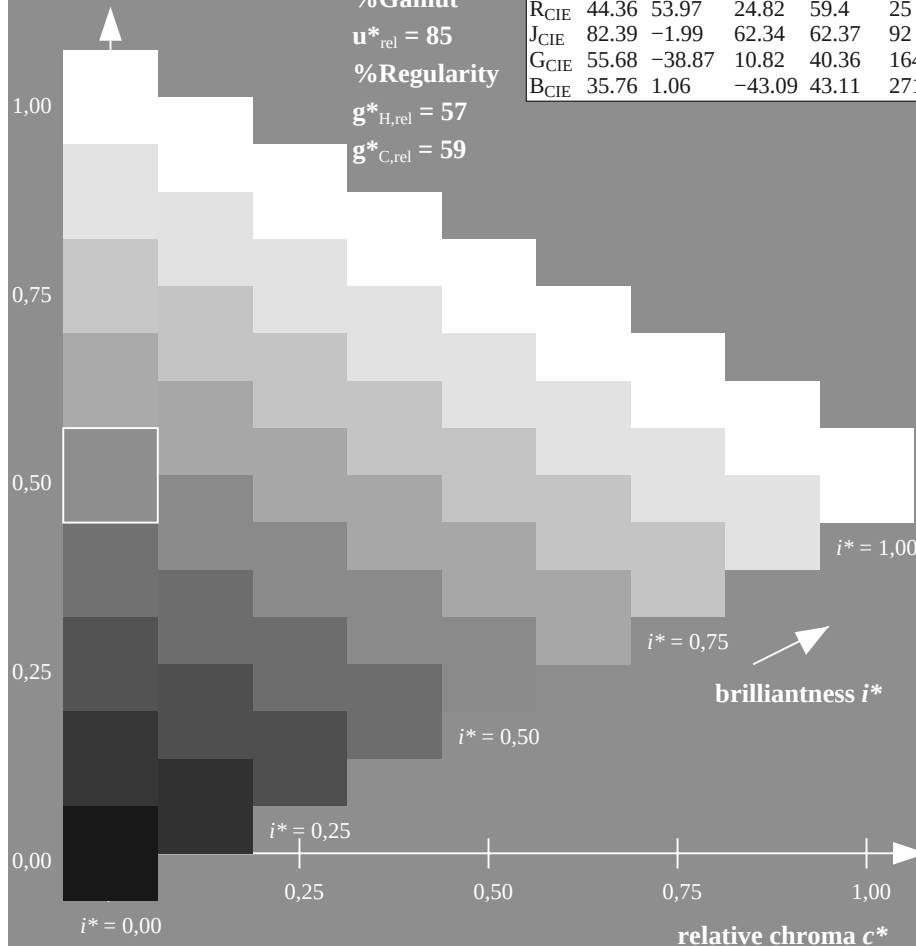
%Gamut

$u^*_{rel} = 85$

%Regularity

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

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



ZE920-7F, 9 step scales for constant CIELAB hue 11/360 = 0.03 (left)

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ZE920-7F, 16 step scales for constant CIELAB hue 11/360 = 0.03 (right)

BAM-test chart ZE92; Colorimetric systems, Page 96/96  
D65: 9 and 16 step colour scales for 16 elementary hues

input:  $rgb / cmy0$  set( $rgb/cmyk$ )color  
output:  $\rightarrow LAB^* \rightarrow cmy5^*$  set( $cmykcolo$ )