

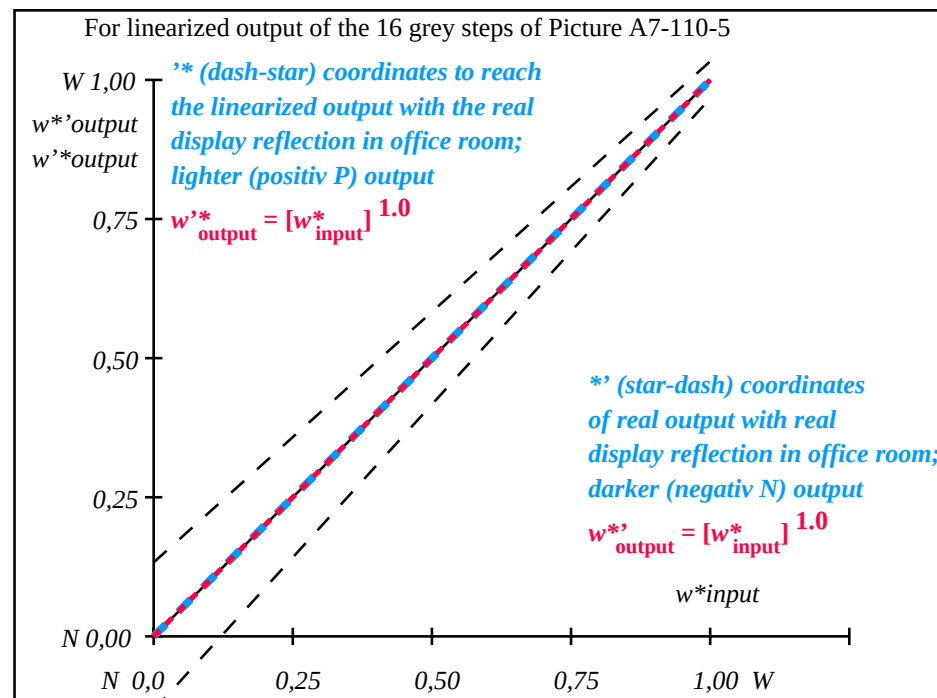
See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>  
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1, CIELAB

TUB registration: 20110801-OE64/OE64L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rh4ta

| i  | LAB*ref | L*out | LAB*out | LAB*out/c-ref | ΔE* | Start output S1 |
|----|---------|-------|---------|---------------|-----|-----------------|
| 1  | 0.0     | 0.0   | 0.0     | 0.0           | 0.0 | 0.01            |
| 2  | 6.36    | 0.0   | 0.07    | 6.36          | 0.0 | 0.01            |
| 3  | 12.72   | 0.0   | 0.13    | 12.72         | 0.0 | 0.01            |
| 4  | 19.08   | 0.0   | 0.2     | 19.08         | 0.0 | 0.01            |
| 5  | 25.44   | 0.0   | 0.27    | 25.44         | 0.0 | 0.01            |
| 6  | 31.8    | 0.0   | 0.33    | 31.8          | 0.0 | 0.01            |
| 7  | 38.16   | 0.0   | 0.4     | 38.16         | 0.0 | 0.01            |
| 8  | 44.52   | 0.0   | 0.47    | 44.52         | 0.0 | 0.01            |
| 9  | 50.89   | 0.0   | 0.53    | 50.89         | 0.0 | 0.01            |
| 10 | 57.25   | 0.0   | 0.6     | 57.25         | 0.0 | 0.01            |
| 11 | 63.61   | 0.0   | 0.67    | 63.61         | 0.0 | 0.01            |
| 12 | 69.97   | 0.0   | 0.73    | 69.97         | 0.0 | 0.01            |
| 13 | 76.33   | 0.0   | 0.8     | 76.33         | 0.0 | 0.01            |
| 14 | 82.69   | 0.0   | 0.87    | 82.69         | 0.0 | 0.01            |
| 15 | 89.05   | 0.0   | 0.93    | 89.05         | 0.0 | 0.01            |
| 16 | 95.41   | 0.0   | 1.0     | 95.41         | 0.0 | 0.01            |
| 17 | 0.0     | 0.0   | 0.0     | 0.0           | 0.0 | 0.01            |
| 18 | 23.85   | 0.0   | 0.25    | 23.85         | 0.0 | 0.01            |
| 19 | 47.71   | 0.0   | 0.5     | 47.71         | 0.0 | 0.01            |
| 20 | 71.56   | 0.0   | 0.75    | 71.56         | 0.0 | 0.01            |
| 21 | 95.41   | 0.0   | 1.0     | 95.41         | 0.0 | 0.01            |

Mean lightness difference (16 steps)  $\Delta E^*_{\text{CIELAB}} = 0.0$   
Mean lightness difference (5 steps)  $\Delta L^*_{\text{CIELAB}} = 0.0$   
Mean colour reproduction index:  $R^*_{\text{ab,m}} = 100$

OE640-3N-110-5: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-110-5: File: Measure unknown; Device: Device unknown; Date: Date unknown

| $L^*/Y^*_{\text{intended}}$<br>(absolute)         | 0.0/0.0 | 6.4/0.7 | 12.7/1.5 | 19.1/2.8 | 25.4/4.6 | 31.8/7.0 | 38.2/10.2 | 44.5/14.2 | 50.9/19.2 | 57.2/25.2 | 63.6/32.3 | 70.0/40.7 | 76.3/50.4 | 82.7/61.6 | 89.0/74.3 | 95.4/88.6 |
|---------------------------------------------------|---------|---------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| $w^*_{\text{setgray}}$<br>$g_p=1.0$               |         |         |          |          |          |          |           |           |           |           |           |           |           |           |           |           |
| No. and<br>Hex code                               | 00;F    | 01;E    | 02;D     | 03;C     | 04;B     | 05;A     | 06;9      | 07;8      | 08;7      | 09;6      | 10;5      | 11;4      | 12;3      | 13;2      | 14;1      | 15;0      |
| $w^* = [L^*_{\text{CIELAB}}]^{1/r}$<br>(relative) |         |         |          |          |          |          |           |           |           |           |           |           |           |           |           |           |
| $w^*_{\text{intended}}$                           | 0.000   | 0.067   | 0.133    | 0.200    | 0.267    | 0.333    | 0.400     | 0.467     | 0.533     | 0.600     | 0.667     | 0.733     | 0.800     | 0.867     | 0.933     | 1.000     |
| $w^*_{\text{out}}$                                | 0.0     | 0.067   | 0.133    | 0.2      | 0.267    | 0.333    | 0.4       | 0.467     | 0.533     | 0.6       | 0.667     | 0.733     | 0.8       | 0.867     | 0.933     | 1.0       |

OE640-7N, Picture A7-110-5: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^*_{\text{setgray}}$

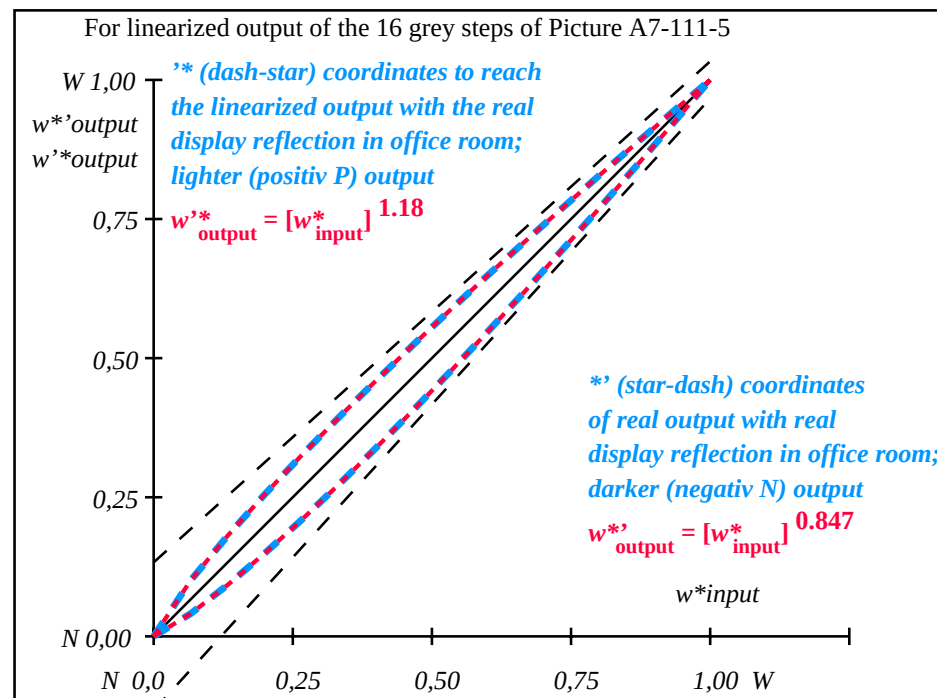
OE64: In-output relation according to ISO 9241-306; 1MR, DEH  
Viewing Y contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

input: all ( $\rightarrow \text{rgb}^*_{\text{de}}$ ) setrgbcolor  
output 130-5:  $g_p=1.0$ ;  $g_N=1.0$

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

| i                                    | LAB*ref | L*out | LAB*out | LAB*out/c-ref | ΔE*                         | Start output S1 |
|--------------------------------------|---------|-------|---------|---------------|-----------------------------|-----------------|
| 1                                    | 5.69    | 0.0   | 0.0     | 0.0           | 0.0                         | 0.01            |
| 2                                    | 11.67   | 0.0   | 0.04    | 9.36          | 0.0                         | 2.31            |
| 3                                    | 17.65   | 0.0   | 0.09    | 14.01         | 0.0                         | 3.64            |
| 4                                    | 23.63   | 0.0   | 0.15    | 19.12         | 0.0                         | 4.51            |
| 5                                    | 29.62   | 0.0   | 0.21    | 24.55         | 0.0                         | 5.07            |
| 6                                    | 35.6    | 0.0   | 0.27    | 30.23         | 0.0                         | 5.37            |
| 7                                    | 41.58   | 0.0   | 0.34    | 36.12         | 0.0                         | 5.46            |
| 8                                    | 47.56   | 0.0   | 0.41    | 42.19         | 0.0                         | 5.37            |
| 9                                    | 53.54   | 0.0   | 0.48    | 48.42         | 0.0                         | 5.12            |
| 10                                   | 59.52   | 0.0   | 0.55    | 54.79         | 0.0                         | 4.73            |
| 11                                   | 65.5    | 0.0   | 0.62    | 61.29         | 0.0                         | 4.21            |
| 12                                   | 71.48   | 0.0   | 0.69    | 67.91         | 0.0                         | 3.57            |
| 13                                   | 77.47   | 0.0   | 0.77    | 74.64         | 0.0                         | 2.83            |
| 14                                   | 83.45   | 0.0   | 0.84    | 81.47         | 0.0                         | 1.98            |
| 15                                   | 89.43   | 0.0   | 0.92    | 88.4          | 0.0                         | 1.03            |
| 16                                   | 95.41   | 0.0   | 1.0     | 95.41         | 0.0                         | 0.01            |
| 17                                   | 5.69    | 0.0   | 0.0     | 5.69          | 0.0                         | 0.01            |
| 18                                   | 28.12   | 0.0   | 0.19    | 23.17         | 0.0                         | 4.95            |
| 19                                   | 50.55   | 0.0   | 0.44    | 45.29         | 0.0                         | 5.26            |
| 20                                   | 72.98   | 0.0   | 0.71    | 69.58         | 0.0                         | 3.4             |
| 21                                   | 95.41   | 0.0   | 1.0     | 95.41         | 0.0                         | 0.01            |
| Mean lightness difference (16 steps) |         |       |         |               | ΔE* <sub>CIELAB</sub> = 3.4 |                 |
| Mean lightness difference (5 steps)  |         |       |         |               | ΔE* <sub>CIELAB</sub> = 2.7 |                 |
| Mean colour reproduction index:      |         |       |         |               | R* <sub>ab,m</sub> = 85     |                 |

OE640-3N-111-5: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-111-5: File: Measure unknown; Device: Device unknown; Date: Date unknown

| $L^*/Y_{\text{intended}}$<br>(absolute) | 5.7/0.6 | 11.7/1.4 | 17.7/2.4 | 23.6/4.0 | 29.6/6.1 | 35.6/8.8 | 41.6/12.2 | 47.6/16.5 | 53.5/21.5 | 59.5/27.6 | 65.5/34.7 | 71.5/42.9 | 77.5/52.3 | 83.4/63.0 | 89.4/75.1 | 95.4/88.6 |
|-----------------------------------------|---------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| $w^*$<br>setgray                        |         |          |          |          |          |          |           |           |           |           |           |           |           |           |           |           |
| $g_N=1.18$<br>No. and<br>Hex code       | 00;F    | 01;E     | 02;D     | 03;C     | 04;B     | 05;A     | 06;9      | 07;8      | 08;7      | 09;6      | 10;5      | 11;4      | 12;3      | 13;2      | 14;1      | 15;0      |
| $w^*=L^*$<br>CIELAB, r<br>(relative)    |         |          |          |          |          |          |           |           |           |           |           |           |           |           |           |           |
| $w^*_{\text{intended}}$                 | 0.000   | 0.067    | 0.133    | 0.200    | 0.267    | 0.333    | 0.400     | 0.467     | 0.533     | 0.600     | 0.667     | 0.733     | 0.800     | 0.867     | 0.933     | 1.000     |
| $w^*_{\text{out}}$                      | 0.0     | 0.041    | 0.093    | 0.15     | 0.211    | 0.273    | 0.339     | 0.407     | 0.476     | 0.547     | 0.62      | 0.693     | 0.769     | 0.845     | 0.921     | 1.0       |

OE640-7N, Picture A7-111-5: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^*$  setgray

OE64: In-output relation according to ISO 9241-306; 1MR, DEH  
Viewing Y contrast  $Y_W:Y_N=88,9:0,62$ ;  $Y_N$  range 0,46 to <0,93

input: all ( $\rightarrow rgb^*_{de}$ ) setrgbcolor  
output 130-5:  $g_P=1.0$ ;  $g_N=1.08$

TUB registration: 20110801-OE64/OE64L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rh4ta

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

| i  | LAB*ref | L*out | LAB*out | LAB*out/c-ref | ΔE* | Start output S1 |
|----|---------|-------|---------|---------------|-----|-----------------|
| 1  | 10.99   | 0.0   | 0.0     | 10.99         | 0.0 | 0.0             |
| 2  | 16.62   | 0.0   | 0.03    | 13.12         | 0.0 | -3.49           |
| 3  | 22.25   | 0.0   | 0.06    | 16.44         | 0.0 | -5.8            |
| 4  | 27.88   | 0.0   | 0.11    | 20.45         | 0.0 | -7.41           |
| 5  | 33.5    | 0.0   | 0.17    | 24.98         | 0.0 | -8.51           |
| 6  | 39.13   | 0.0   | 0.22    | 29.94         | 0.0 | -9.18           |
| 7  | 44.76   | 0.0   | 0.29    | 35.27         | 0.0 | -9.48           |
| 8  | 50.39   | 0.0   | 0.35    | 40.93         | 0.0 | -9.44           |
| 9  | 56.02   | 0.0   | 0.43    | 46.9          | 0.0 | -9.11           |
| 10 | 61.64   | 0.0   | 0.5     | 53.13         | 0.0 | -8.5            |
| 11 | 67.27   | 0.0   | 0.58    | 59.63         | 0.0 | -7.63           |
| 12 | 72.9    | 0.0   | 0.66    | 66.36         | 0.0 | -6.53           |
| 13 | 78.53   | 0.0   | 0.74    | 73.31         | 0.0 | -5.2            |
| 14 | 84.15   | 0.0   | 0.82    | 80.48         | 0.0 | -3.66           |
| 15 | 89.78   | 0.0   | 0.91    | 87.85         | 0.0 | -1.92           |
| 16 | 95.41   | 0.0   | 1.0     | 95.41         | 0.0 | 0.0             |
| 17 | 10.99   | 0.0   | 0.0     | 10.99         | 0.0 | 0.0             |
| 18 | 32.1    | 0.0   | 0.15    | 23.81         | 0.0 | -8.28           |
| 19 | 53.2    | 0.0   | 0.39    | 43.88         | 0.0 | -9.31           |
| 20 | 74.31   | 0.0   | 0.68    | 68.08         | 0.0 | -6.22           |
| 21 | 95.41   | 0.0   | 1.0     | 95.41         | 0.0 | 0.0             |

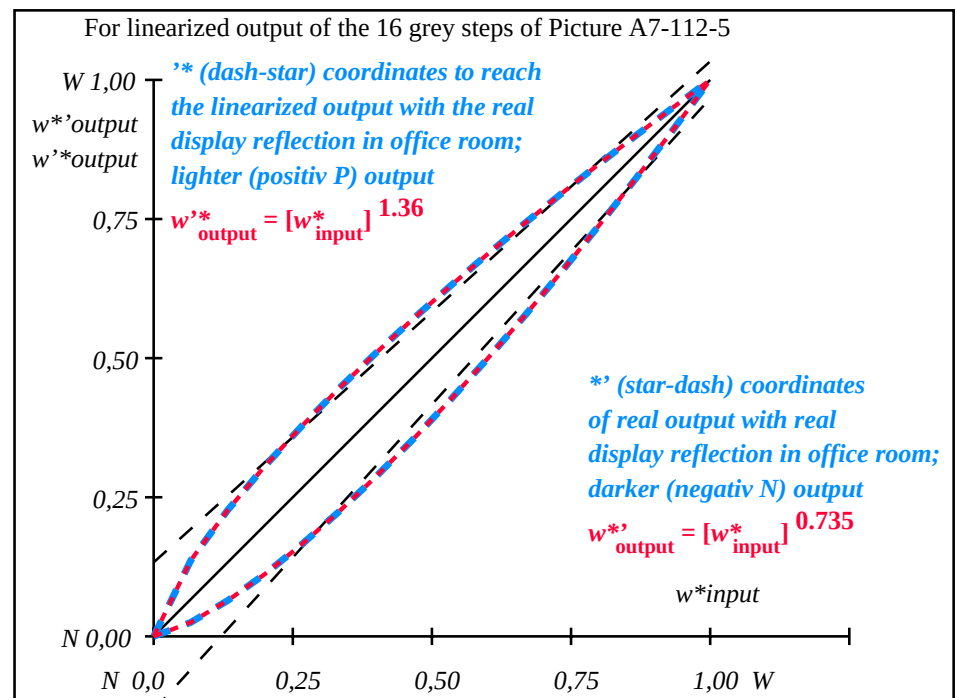
Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G

Mean lightness difference (16 steps)  $\Delta E^*_{\text{CIELAB}} = 6.0$

Mean lightness difference (5 steps)  $\Delta E^*_{\text{CIELAB}} = 4.8$

Mean colour reproduction index:  $R^*_{\text{ab,m}} = 74$

OE640-3N-112-5: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-112-5: File: Measure unknown; Device: Device unknown; Date: Date unknown

| $L^*/Y^*_{\text{intended}}$<br>(absolute)                | 11.0/1.3 | 16.6/2.2 | 22.2/3.6 | 27.9/5.4 | 33.5/7.8 | 39.1/10.7 | 44.8/14.4 | 50.4/18.7 | 56.0/23.9 | 61.6/30.0 | 67.3/37.0 | 72.9/45.0 | 78.5/54.1 | 84.2/64.4 | 89.8/75.8 | 95.4/88.6 |
|----------------------------------------------------------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| $w^*_{\text{setgray}}$<br>$g_N=1.36$<br>No. and Hex code | 00;F     | 01;E     | 02;D     | 03;C     | 04;B     | 05;A      | 06;9      | 07;8      | 08;7      | 09;6      | 10;5      | 11;4      | 12;3      | 13;2      | 14;1      | 15;0      |
| $w^* = [L^*_{\text{CIELAB}, r}]$<br>(relative)           | 0.000    | 0.067    | 0.133    | 0.200    | 0.267    | 0.333     | 0.400     | 0.467     | 0.533     | 0.600     | 0.667     | 0.733     | 0.800     | 0.867     | 0.933     | 1.000     |
| $w^*_{\text{intended}}$                                  | 0.000    | 0.067    | 0.133    | 0.200    | 0.267    | 0.333     | 0.400     | 0.467     | 0.533     | 0.600     | 0.667     | 0.733     | 0.800     | 0.867     | 0.933     | 1.000     |
| $w^*_{\text{out}}$                                       | 0.0      | 0.025    | 0.064    | 0.112    | 0.166    | 0.224     | 0.288     | 0.355     | 0.425     | 0.499     | 0.577     | 0.655     | 0.738     | 0.824     | 0.91      | 1.0       |

OE640-7N, Picture A7-112-5: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^*_{\text{setgray}}$

OE64: In-output relation according to ISO 9241-306; 1MR, DEH  
Viewing Y contrast  $Y_W:Y_N=88,9:1,25$ ;  $Y_N$  range 0,93 to <1,87

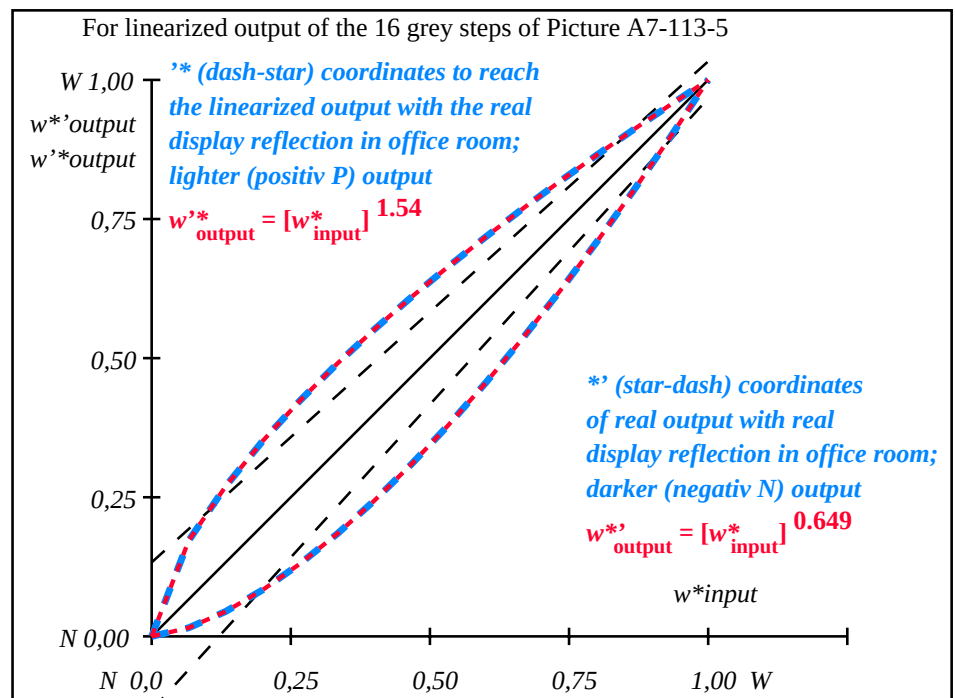
input: all ( $\rightarrow rgb^*_{\text{de}}$ ) setrgbcolor  
output 130-5:  $g_P=1.0$ ;  $g_N=1.17$

TUB registration: 20110801-OE64/OE64L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rh4ta

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

| i                                    | LAB*ref | L*out | LAB*out | LAB*out/c-ref | ΔE*                         | Start output S1 |
|--------------------------------------|---------|-------|---------|---------------|-----------------------------|-----------------|
| 1                                    | 18.01   | 0.0   | 0.0     | 18.01         | 0.0                         | 0.0             |
| 2                                    | 23.17   | 0.0   | 0.02    | 19.2          | 0.0                         | -3.95           |
| 3                                    | 28.33   | 0.0   | 0.04    | 21.49         | 0.0                         | -6.83           |
| 4                                    | 33.49   | 0.0   | 0.08    | 24.5          | 0.0                         | -8.98           |
| 5                                    | 38.65   | 0.0   | 0.13    | 28.12         | 0.0                         | -10.52          |
| 6                                    | 43.81   | 0.0   | 0.18    | 32.26         | 0.0                         | -11.53          |
| 7                                    | 48.97   | 0.0   | 0.24    | 36.89         | 0.0                         | -12.07          |
| 8                                    | 54.13   | 0.0   | 0.31    | 41.94         | 0.0                         | -12.18          |
| 9                                    | 59.29   | 0.0   | 0.38    | 47.41         | 0.0                         | -11.87          |
| 10                                   | 64.45   | 0.0   | 0.46    | 53.25         | 0.0                         | -11.19          |
| 11                                   | 69.61   | 0.0   | 0.54    | 59.46         | 0.0                         | -10.14          |
| 12                                   | 74.77   | 0.0   | 0.62    | 66.02         | 0.0                         | -8.74           |
| 13                                   | 79.93   | 0.0   | 0.71    | 72.9          | 0.0                         | -7.02           |
| 14                                   | 85.09   | 0.0   | 0.8     | 80.1          | 0.0                         | -4.98           |
| 15                                   | 90.25   | 0.0   | 0.9     | 87.61         | 0.0                         | -2.63           |
| 16                                   | 95.41   | 0.0   | 1.0     | 95.41         | 0.0                         | 0.0             |
| 17                                   | 18.01   | 0.0   | 0.0     | 18.01         | 0.0                         | 0.0             |
| 18                                   | 37.36   | 0.0   | 0.12    | 27.16         | 0.0                         | -10.19          |
| 19                                   | 56.71   | 0.0   | 0.34    | 44.63         | 0.0                         | -12.07          |
| 20                                   | 76.06   | 0.0   | 0.64    | 67.71         | 0.0                         | -8.34           |
| 21                                   | 95.41   | 0.0   | 1.0     | 95.41         | 0.0                         | 0.0             |
| Mean lightness difference (16 steps) |         |       |         |               | ΔE* <sub>CIELAB</sub> = 7.7 |                 |
| Mean lightness difference (5 steps)  |         |       |         |               | ΔE* <sub>CIELAB</sub> = 6.1 |                 |
| Mean colour reproduction index:      |         |       |         |               | R* <sub>ab,m</sub> = 66     |                 |

OE640-3N-113-5: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-113-5: File: Measure unknown; Device: Device unknown; Date: Date unknown

| $L^*/Y_{\text{intended}}$<br>(absolute)   | 18.0/2.5 | 23.2/3.8 | 28.3/5.6 | 33.5/7.8 | 38.6/10.5 | 43.8/13.7 | 49.0/17.6 | 54.1/22.1 | 59.3/27.3 | 64.4/33.4 | 69.6/40.2 | 74.8/47.9 | 79.9/56.6 | 85.1/66.2 | 90.2/76.8 | 95.4/88.6 |
|-------------------------------------------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| $w^*$<br>setgray                          |          |          |          |          |           |           |           |           |           |           |           |           |           |           |           |           |
| $g_N=1.54$<br>No. and<br>Hex code         | 00;F     | 01;E     | 02;D     | 03;C     | 04;B      | 05;A      | 06;9      | 07;8      | 08;7      | 09;6      | 10;5      | 11;4      | 12;3      | 13;2      | 14;1      | 15;0      |
| $w^*=L^*_{\text{CIELAB},r}$<br>(relative) |          |          |          |          |           |           |           |           |           |           |           |           |           |           |           |           |
| $w^*_{\text{intended}}$                   | 0.000    | 0.067    | 0.133    | 0.200    | 0.267     | 0.333     | 0.400     | 0.467     | 0.533     | 0.600     | 0.667     | 0.733     | 0.800     | 0.867     | 0.933     | 1.000     |
| $w^*_{\text{out}}$                        | 0.0      | 0.016    | 0.045    | 0.084    | 0.131     | 0.184     | 0.244     | 0.31      | 0.379     | 0.455     | 0.536     | 0.62      | 0.709     | 0.803     | 0.899     | 1.0       |

OE640-7N, Picture A7-113-5: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^*$  setgray

OE64: In-output relation according to ISO 9241-306; 1MR, DEH  
Viewing Y contrast  $Y_W:Y_N=88,9:2,5$ ;  $Y_N$  range 1,87 to <3,75

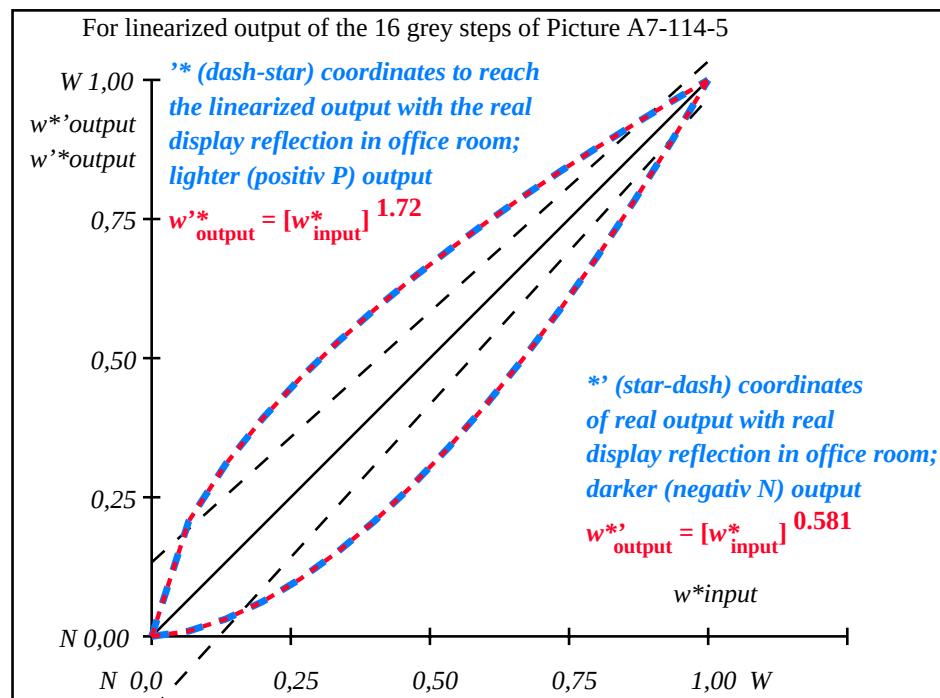
input: all ( $\rightarrow rgb^*_{de}$ ) setrgbcolor  
output 130-5:  $g_P=1.0$ ;  $g_N=1.29$

TUB registration: 20110801-OE64/OE64L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rh4ta

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

| i                               | LAB*ref       | L*out              | LAB*out        | LAB*out/c-ref | ΔE*                                  | Start output S1                                                          |
|---------------------------------|---------------|--------------------|----------------|---------------|--------------------------------------|--------------------------------------------------------------------------|
| 1                               | 26.85 0.0 0.0 | 0.0 0.0 0.0        | 26.85 0.0 0.0  | 0.0 0.0 0.0   | 0.01                                 | Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G |
| 2                               | 31.42 0.0 0.0 | 0.01 27.5 0.0 0.0  | -3.91 0.0 0.0  | 3.92          |                                      |                                                                          |
| 3                               | 35.99 0.0 0.0 | 0.03 28.99 0.0 0.0 | -6.99 0.0 0.0  | 7.0           |                                      |                                                                          |
| 4                               | 40.56 0.0 0.0 | 0.06 31.15 0.0 0.0 | -9.4 0.0 0.0   | 9.41          |                                      |                                                                          |
| 5                               | 45.13 0.0 0.0 | 0.1 33.91 0.0 0.0  | -11.21 0.0 0.0 | 11.22         |                                      |                                                                          |
| 6                               | 49.7 0.0 0.0  | 0.15 37.21 0.0 0.0 | -12.48 0.0 0.0 | 12.49         |                                      |                                                                          |
| 7                               | 54.27 0.0 0.0 | 0.21 41.03 0.0 0.0 | -13.24 0.0 0.0 | 13.25         |                                      |                                                                          |
| 8                               | 58.84 0.0 0.0 | 0.27 45.33 0.0 0.0 | -13.5 0.0 0.0  | 13.51         |                                      |                                                                          |
| 9                               | 63.41 0.0 0.0 | 0.34 50.1 0.0 0.0  | -13.3 0.0 0.0  | 13.31         |                                      |                                                                          |
| 10                              | 67.99 0.0 0.0 | 0.42 55.33 0.0 0.0 | -12.65 0.0 0.0 | 12.66         |                                      |                                                                          |
| 11                              | 72.56 0.0 0.0 | 0.5 60.98 0.0 0.0  | -11.56 0.0 0.0 | 11.57         |                                      |                                                                          |
| 12                              | 77.13 0.0 0.0 | 0.59 67.06 0.0 0.0 | -10.05 0.0 0.0 | 10.06         |                                      |                                                                          |
| 13                              | 81.7 0.0 0.0  | 0.68 73.56 0.0 0.0 | -8.13 0.0 0.0  | 8.14          |                                      |                                                                          |
| 14                              | 86.27 0.0 0.0 | 0.78 80.45 0.0 0.0 | -5.81 0.0 0.0  | 5.82          |                                      |                                                                          |
| 15                              | 90.84 0.0 0.0 | 0.89 87.74 0.0 0.0 | -3.09 0.0 0.0  | 3.1           | Mean lightness difference (16 steps) |                                                                          |
| 16                              | 95.41 0.0 0.0 | 1.0 95.41 0.0 0.0  | 0.0 0.0 0.0    | 0.01          | ΔE*CIELAB = 8.5                      |                                                                          |
| 17                              | 26.85 0.0 0.0 | 0.0 26.85 0.0 0.0  | 0.0 0.0 0.0    | 0.01          |                                      |                                                                          |
| 18                              | 43.99 0.0 0.0 | 0.09 33.17 0.0 0.0 | -10.81 0.0 0.0 | 10.82         |                                      |                                                                          |
| 19                              | 61.13 0.0 0.0 | 0.3 47.66 0.0 0.0  | -13.46 0.0 0.0 | 13.47         |                                      |                                                                          |
| 20                              | 78.27 0.0 0.0 | 0.61 68.65 0.0 0.0 | -9.61 0.0 0.0  | 9.62          | Mean lightness difference (5 steps)  |                                                                          |
| 21                              | 95.41 0.0 0.0 | 1.0 95.41 0.0 0.0  | 0.0 0.0 0.0    | 0.01          | ΔL*CIELAB = 6.8                      |                                                                          |
| Mean colour reproduction index: |               |                    |                |               | R* <sub>ab,m</sub> = 63              |                                                                          |

OE640-3N-114-5: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-114-5: File: Measure unknown; Device: Device unknown; Date: Date unknown

| $L^*/Y^*_{intended}$<br>(absolute)                | 26.8/5.0 | 31.4/6.8 | 36.0/9.0 | 40.6/11.6 | 45.1/14.6 | 49.7/18.2 | 54.3/22.2 | 58.8/26.9 | 63.4/32.1 | 68.0/38.0 | 72.6/44.5 | 77.1/51.7 | 81.7/59.7 | 86.3/68.5 | 90.8/78.1 | 95.4/88.6 |
|---------------------------------------------------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| $w^*_{setgray}$<br>$g_N=1.72$<br>No. and Hex code | 00;F     | 01;E     | 02;D     | 03;C      | 04;B      | 05;A      | 06;9      | 07;8      | 08;7      | 09;6      | 10;5      | 11;4      | 12;3      | 13;2      | 14;1      | 15;0      |
| $w^* = [L^*_{CIELAB, r}]$<br>(relative)           |          |          |          |           |           |           |           |           |           |           |           |           |           |           |           |           |
| $w^*_{intended}$                                  | 0.000    | 0.067    | 0.133    | 0.200     | 0.267     | 0.333     | 0.400     | 0.467     | 0.533     | 0.600     | 0.667     | 0.733     | 0.800     | 0.867     | 0.933     | 1.000     |
| $w^*_{out}$                                       | 0.0      | 0.01     | 0.031    | 0.063     | 0.103     | 0.151     | 0.207     | 0.27      | 0.339     | 0.415     | 0.498     | 0.586     | 0.681     | 0.782     | 0.888     | 1.0       |

OE640-7N, Picture A7-114-5: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^*_{setgray}$

OE64: In-output relation according to ISO 9241-306; 1MR, DEH  
Viewing Y contrast  $Y_W:Y_N=88,9:5$ ;  $Y_N$  range 3,75 to <7,5

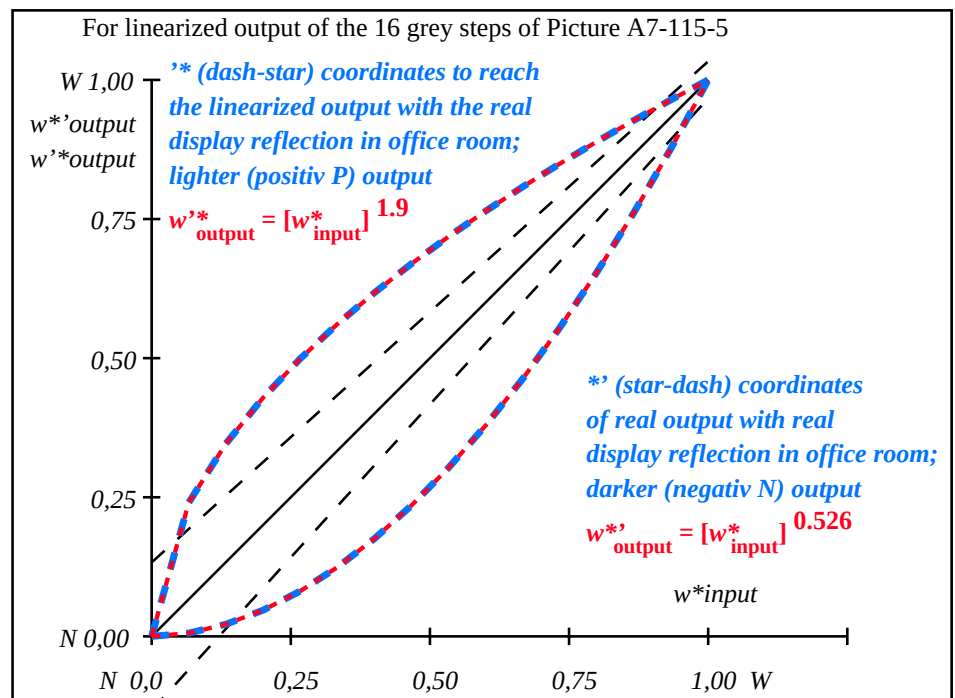
input: all ( $\rightarrow rgb^*_{de}$ ) setrgbcolor  
output 130-5:  $g_P=1.0$ ;  $g_N=1.42$

TUB registration: 20110801-OE64/OE64L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rh4ta

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

| i                                    | LAB*ref | L*out | LAB*out | LAB*out/c-ref | ΔE*                         | Start output S1 |
|--------------------------------------|---------|-------|---------|---------------|-----------------------------|-----------------|
| 1                                    | 37.99   | 0.0   | 0.0     | 37.99         | 0.0                         | 0.0             |
| 2                                    | 41.81   | 0.0   | 0.01    | 38.32         | 0.0                         | -3.48           |
| 3                                    | 45.64   | 0.0   | 0.02    | 39.23         | 0.0                         | -6.4            |
| 4                                    | 49.47   | 0.0   | 0.05    | 40.68         | 0.0                         | -8.78           |
| 5                                    | 53.3    | 0.0   | 0.08    | 42.65         | 0.0                         | -10.64          |
| 6                                    | 57.13   | 0.0   | 0.12    | 45.11         | 0.0                         | -12.01          |
| 7                                    | 60.96   | 0.0   | 0.18    | 48.06         | 0.0                         | -12.89          |
| 8                                    | 64.78   | 0.0   | 0.24    | 51.48         | 0.0                         | -13.29          |
| 9                                    | 68.61   | 0.0   | 0.3     | 55.38         | 0.0                         | -13.22          |
| 10                                   | 72.44   | 0.0   | 0.38    | 59.74         | 0.0                         | -12.69          |
| 11                                   | 76.27   | 0.0   | 0.46    | 64.56         | 0.0                         | -11.69          |
| 12                                   | 80.1    | 0.0   | 0.55    | 69.84         | 0.0                         | -10.25          |
| 13                                   | 83.93   | 0.0   | 0.65    | 75.57         | 0.0                         | -8.35           |
| 14                                   | 87.75   | 0.0   | 0.76    | 81.74         | 0.0                         | -6.0            |
| 15                                   | 91.58   | 0.0   | 0.88    | 88.35         | 0.0                         | -3.22           |
| 16                                   | 95.41   | 0.0   | 1.0     | 95.41         | 0.0                         | 0.0             |
| 17                                   | 37.99   | 0.0   | 0.0     | 37.99         | 0.0                         | 0.0             |
| 18                                   | 52.34   | 0.0   | 0.07    | 42.11         | 0.0                         | -10.22          |
| 19                                   | 66.7    | 0.0   | 0.27    | 53.37         | 0.0                         | -13.32          |
| 20                                   | 81.05   | 0.0   | 0.58    | 71.23         | 0.0                         | -9.81           |
| 21                                   | 95.41   | 0.0   | 1.0     | 95.41         | 0.0                         | 0.0             |
| Mean lightness difference (16 steps) |         |       |         |               | ΔE* <sub>CIELAB</sub> = 8.3 |                 |
| Mean lightness difference (5 steps)  |         |       |         |               | ΔE* <sub>CIELAB</sub> = 6.7 |                 |
| Mean colour reproduction index:      |         |       |         |               | R* <sub>ab,m</sub> = 64     |                 |

OE640-3N-115-5: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-115-5: File: Measure unknown; Device: Device unknown; Date: Date unknown

| $L^*/Y^*_{\text{intended}}$<br>(absolute)                   | 38.0/10.1 | 41.8/12.4 | 45.6/15.0 | 49.5/18.0 | 53.3/21.3 | 57.1/25.1 | 61.0/29.2 | 64.8/33.8 | 68.6/38.8 | 72.4/44.3 | 76.3/50.3 | 80.1/56.9 | 83.9/63.9 | 87.8/71.6 | 91.6/79.8 | 95.4/88.6 |
|-------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| w*<br>setgray<br>g <sub>N</sub> =1.9<br>No. and<br>Hex code | 00;F      | 01;E      | 02;D      | 03;C      | 04;B      | 05;A      | 06;9      | 07;8      | 08;7      | 09;6      | 10;5      | 11;4      | 12;3      | 13;2      | 14;1      | 15;0      |
| w*= $l^*_{\text{CIELAB},r}$<br>(relative)                   |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| w* <sub>intended</sub>                                      | 0,000     | 0,067     | 0,133     | 0,200     | 0,267     | 0,333     | 0,400     | 0,467     | 0,533     | 0,600     | 0,667     | 0,733     | 0,800     | 0,867     | 0,933     | 1,000     |
| w* <sub>out</sub>                                           | 0,0       | 0,006     | 0,022     | 0,047     | 0,081     | 0,124     | 0,175     | 0,235     | 0,303     | 0,379     | 0,463     | 0,554     | 0,654     | 0,762     | 0,877     | 1,0       |

OE640-7N, Picture A7-115-5: 16 visual equidistant L\*-grey steps; PS operator: w\* setgray

OE64: In-output relation according to ISO 9241-306; 1MR, DEH  
Viewing Y contrast  $Y_W:Y_N=88,9:10$ ;  $Y_N$  range 7,5 to <15

input: all (->rgb\*<sub>de</sub>) setrgbcolor  
output 130-5: g<sub>P</sub>=1.0; g<sub>N</sub>=1.6

TUB registration: 20110801-OE64/OE64L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rh4ta

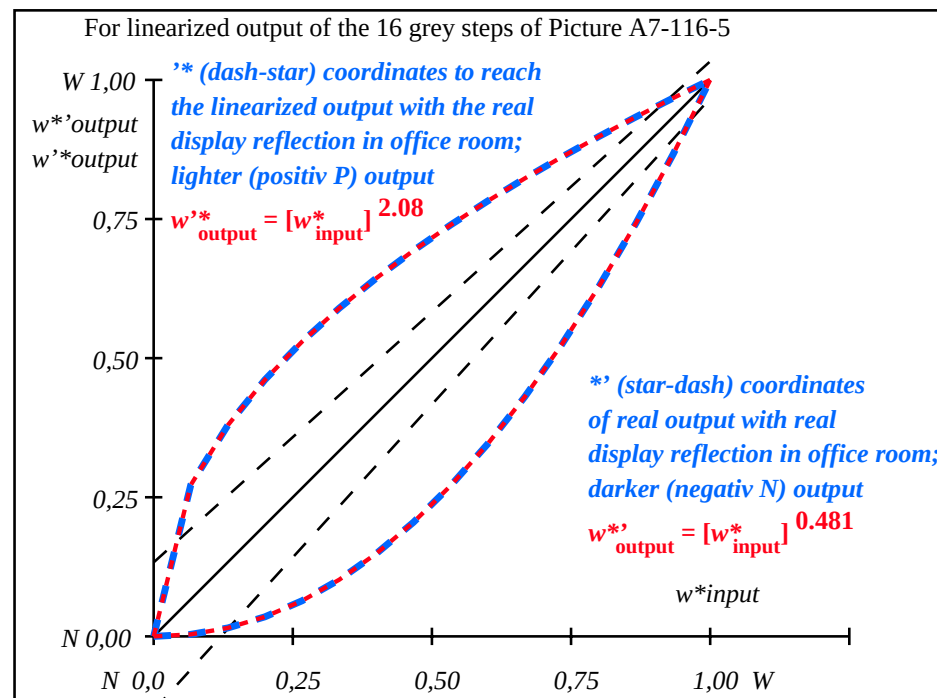


See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>  
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1, CIELAB

TUB registration: 20110801-OE64/OE64L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rh4ta

| i                               | LAB*ref       | L*out    | LAB*out       | LAB*out/c-ref  | ΔE*                     | Start output S1                      |
|---------------------------------|---------------|----------|---------------|----------------|-------------------------|--------------------------------------|
| 1                               | 52.02 0.0 0.0 | 0.0 0.0  | 52.02 0.0 0.0 | 0.0 0.0 0.0    | 0.01                    | Specification according to           |
| 2                               | 54.91 0.0 0.0 | 0.0 0.0  | 52.17 0.0 0.0 | -2.73 0.0 0.0  | 2.74                    | ISO/IEC 15775 Annex G                |
| 3                               | 57.8 0.0 0.0  | 0.0 0.02 | 52.67 0.0 0.0 | -5.12 0.0 0.0  | 5.13                    | and DIN 33866-1 Annex G              |
| 4                               | 60.7 0.0 0.0  | 0.0 0.04 | 53.54 0.0 0.0 | -7.14 0.0 0.0  | 7.15                    |                                      |
| 5                               | 63.59 0.0 0.0 | 0.0 0.06 | 54.79 0.0 0.0 | -8.79 0.0 0.0  | 8.8                     |                                      |
| 6                               | 66.48 0.0 0.0 | 0.0 0.1  | 56.43 0.0 0.0 | -10.04 0.0 0.0 | 10.05                   |                                      |
| 7                               | 69.37 0.0 0.0 | 0.0 0.15 | 58.47 0.0 0.0 | -10.89 0.0 0.0 | 10.9                    |                                      |
| 8                               | 72.27 0.0 0.0 | 0.0 0.2  | 60.91 0.0 0.0 | -11.35 0.0 0.0 | 11.36                   |                                      |
| 9                               | 75.16 0.0 0.0 | 0.0 0.27 | 63.75 0.0 0.0 | -11.4 0.0 0.0  | 11.41                   |                                      |
| 10                              | 78.05 0.0 0.0 | 0.0 0.35 | 67.01 0.0 0.0 | -11.03 0.0 0.0 | 11.04                   |                                      |
| 11                              | 80.95 0.0 0.0 | 0.0 0.43 | 70.69 0.0 0.0 | -10.25 0.0 0.0 | 10.26                   |                                      |
| 12                              | 83.84 0.0 0.0 | 0.0 0.52 | 74.78 0.0 0.0 | -9.05 0.0 0.0  | 9.06                    |                                      |
| 13                              | 86.73 0.0 0.0 | 0.0 0.63 | 79.3 0.0 0.0  | -7.42 0.0 0.0  | 7.43                    |                                      |
| 14                              | 89.62 0.0 0.0 | 0.0 0.74 | 84.24 0.0 0.0 | -5.38 0.0 0.0  | 5.39                    |                                      |
| 15                              | 92.52 0.0 0.0 | 0.0 0.87 | 89.61 0.0 0.0 | -2.9 0.0 0.0   | 2.91                    | Mean lightness difference (16 steps) |
| 16                              | 95.41 0.0 0.0 | 0.0 1.0  | 95.41 0.0 0.0 | 0.0 0.0 0.0    | 0.01                    | ΔE*CIELAB = 7.1                      |
| 17                              | 52.02 0.0 0.0 | 0.0 0.0  | 52.02 0.0 0.0 | 0.0 0.0 0.0    | 0.01                    |                                      |
| 18                              | 62.87 0.0 0.0 | 0.0 0.06 | 54.44 0.0 0.0 | -8.41 0.0 0.0  | 8.42                    |                                      |
| 19                              | 73.71 0.0 0.0 | 0.0 0.24 | 62.28 0.0 0.0 | -11.42 0.0 0.0 | 11.43                   |                                      |
| 20                              | 84.56 0.0 0.0 | 0.0 0.55 | 75.87 0.0 0.0 | -8.68 0.0 0.0  | 8.69                    | Mean lightness difference (5 steps)  |
| 21                              | 95.41 0.0 0.0 | 0.0 1.0  | 95.41 0.0 0.0 | 0.0 0.0 0.0    | 0.01                    | ΔL*CIELAB = 5.7                      |
| Mean colour reproduction index: |               |          |               |                | R* <sub>ab,m</sub> = 69 |                                      |

OE640-3N-116-5: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-116-5: File: Measure unknown; Device: Device unknown; Date: Date unknown

| L*/Y <sub>intended</sub><br>(absolute) | 52.0/20.2 | 54.9/22.8 | 57.8/25.8 | 60.7/28.9 | 63.6/32.3 | 66.5/36.0 | 69.4/39.9 | 72.3/44.1 | 75.2/48.5 | 78.1/53.3 | 80.9/58.4 | 83.8/63.8 | 86.7/69.5 | 89.6/75.5 | 92.5/81.9 | 95.4/88.6 |
|----------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| w*<br>setgray                          |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| g <sub>N</sub> =2.08                   |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| No. and Hex code                       | 00;F      | 01;E      | 02;D      | 03;C      | 04;B      | 05;A      | 06;9      | 07;8      | 08;7      | 09;6      | 10;5      | 11;4      | 12;3      | 13;2      | 14;1      | 15;0      |
| w*=L*<br>CIELAB, r<br>(relative)       |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| w* <sub>intended</sub>                 | 0,000     | 0,067     | 0,133     | 0,200     | 0,267     | 0,333     | 0,400     | 0,467     | 0,533     | 0,600     | 0,667     | 0,733     | 0,800     | 0,867     | 0,933     | 1,000     |
| w* <sub>out</sub>                      | 0.0       | 0.004     | 0.015     | 0.035     | 0.064     | 0.102     | 0.149     | 0.205     | 0.27      | 0.346     | 0.431     | 0.524     | 0.629     | 0.743     | 0.866     | 1.0       |

OE640-7N, Picture A7-116-5: 16 visual equidistant L\*-grey steps; PS operator: w\* setgray

OE64: In-output relation according to ISO 9241-306; 1MR, DEH  
Viewing Y contrast  $Y_W:Y_N=88,9:20$ ;  $Y_N$  range 15 to <30

input: all (->rgb\*<sub>de</sub>) setrgbcolor  
output 130-5:  $g_P=1.0$ ;  $g_N=1.81$

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

| i  | LAB*ref | L*out | LAB*out | LAB*out/c-ref | ΔE* | Start output S1 |
|----|---------|-------|---------|---------------|-----|-----------------|
| 1  | 69.7    | 0.0   | 0.0     | 0.0           | 0.0 | 0.01            |
| 2  | 71.41   | 0.0   | 0.0     | 0.0           | 0.0 | 1.66            |
| 3  | 73.13   | 0.0   | 0.01    | 0.0           | 0.0 | 3.16            |
| 4  | 74.84   | 0.0   | 0.03    | 0.0           | 0.0 | 4.47            |
| 5  | 76.55   | 0.0   | 0.05    | 0.0           | 0.0 | 5.56            |
| 6  | 78.27   | 0.0   | 0.08    | 0.0           | 0.0 | 6.42            |
| 7  | 79.98   | 0.0   | 0.13    | 0.0           | 0.0 | 7.04            |
| 8  | 81.7    | 0.0   | 0.18    | 0.0           | 0.0 | 7.41            |
| 9  | 83.41   | 0.0   | 0.24    | 0.0           | 0.0 | 7.5             |
| 10 | 85.12   | 0.0   | 0.32    | 0.0           | 0.0 | 7.32            |
| 11 | 86.84   | 0.0   | 0.4     | 0.0           | 0.0 | 6.86            |
| 12 | 88.55   | 0.0   | 0.5     | 0.0           | 0.0 | 6.1             |
| 13 | 90.27   | 0.0   | 0.6     | 0.0           | 0.0 | 5.04            |
| 14 | 91.98   | 0.0   | 0.72    | 0.0           | 0.0 | 3.68            |
| 15 | 93.7    | 0.0   | 0.86    | 0.0           | 0.0 | 2.0             |
| 16 | 95.41   | 0.0   | 1.0     | 0.0           | 0.0 | 0.01            |
| 17 | 69.7    | 0.0   | 0.0     | 0.0           | 0.0 | 0.01            |
| 18 | 76.13   | 0.0   | 0.04    | 0.0           | 0.0 | 5.31            |
| 19 | 82.55   | 0.0   | 0.21    | 0.0           | 0.0 | 7.49            |
| 20 | 88.98   | 0.0   | 0.52    | 0.0           | 0.0 | 5.86            |
| 21 | 95.41   | 0.0   | 1.0     | 0.0           | 0.0 | 0.01            |

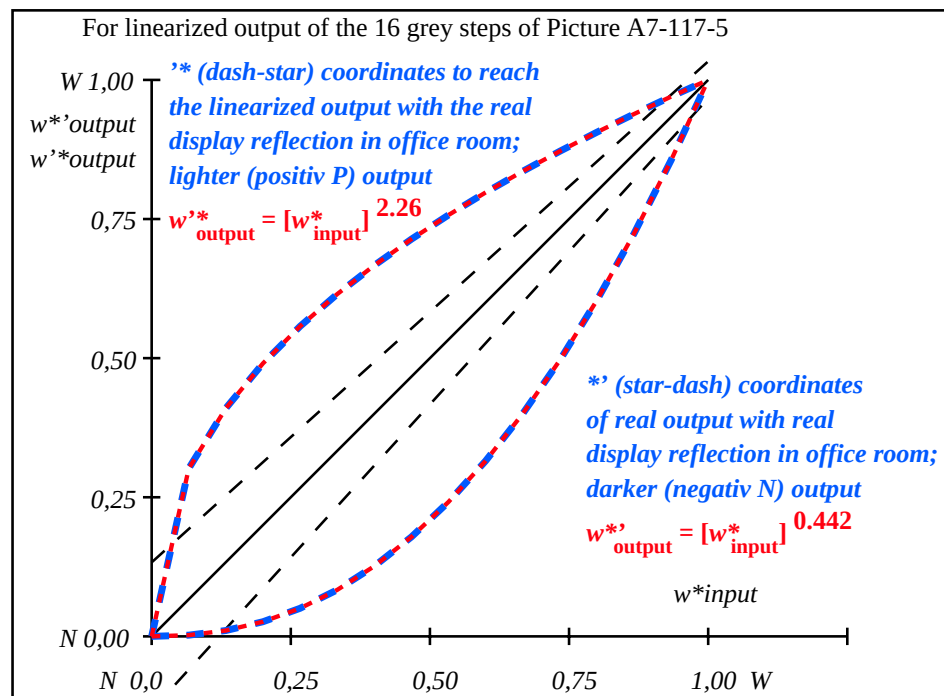
Specification according to  
ISO/IEC 15775 Annex G  
and DIN 33866-1 Annex G

Mean lightness difference (16 steps)  
 $\Delta E^*_{\text{CIELAB}} = 4.6$

Mean lightness difference (5 steps)  
 $\Delta L^*_{\text{CIELAB}} = 3.7$

Mean colour reproduction index:  
 $R^*_{\text{ab,m}} = 80$

OE640-3N-117-5: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-117-5: File: Measure unknown; Device: Device unknown; Date: Date unknown

| $L^*/Y^*_{\text{intended}}$<br>(absolute)                   | 69.7/40.3 | 71.4/42.8 | 73.1/45.4 | 74.8/48.0 | 76.6/50.8 | 78.3/53.7 | 80.0/56.6 | 81.7/59.7 | 83.4/62.9 | 85.1/66.3 | 86.8/69.7 | 88.6/73.2 | 90.3/76.9 | 92.0/80.7 | 93.7/84.6 | 95.4/88.6 |
|-------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| $w^*_{\text{setgray}}$<br>$g_N=2.26$<br>No. and<br>Hex code | 00;F      | 01;E      | 02;D      | 03;C      | 04;B      | 05;A      | 06;9      | 07;8      | 08;7      | 09;6      | 10;5      | 11;4      | 12;3      | 13;2      | 14;1      | 15;0      |
| $w^* = [L^*_{\text{CIELAB}}]^r$<br>(relative)               | 0.000     | 0.067     | 0.133     | 0.200     | 0.267     | 0.333     | 0.400     | 0.467     | 0.533     | 0.600     | 0.667     | 0.733     | 0.800     | 0.867     | 0.933     | 1.000     |
| $w^*_{\text{intended}}$                                     | 0.000     | 0.067     | 0.133     | 0.200     | 0.267     | 0.333     | 0.400     | 0.467     | 0.533     | 0.600     | 0.667     | 0.733     | 0.800     | 0.867     | 0.933     | 1.000     |
| $w^*_{\text{out}}$                                          | 0.0       | 0.002     | 0.01      | 0.026     | 0.051     | 0.083     | 0.126     | 0.179     | 0.241     | 0.315     | 0.4       | 0.496     | 0.604     | 0.724     | 0.855     | 1.0       |

OE640-7N, Picture A7-117-5: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^*_{\text{setgray}}$

OE64: In-output relation according to ISO 9241-306; 1MR, DEH  
Viewing Y contrast  $Y_W:Y_N=88,9:40$ ;  $Y_N$  range 30 to <60

input: all ( $\rightarrow \text{rgb}^*_{\text{de}}$ ) setrgbcolor  
output 130-5:  $g_P=1.0$ ;  $g_N=2.1$

TUB registration: 20110801-OE64/OE64L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rh4ta