

<http://farbe.li.tu-berlin.de/eep5/eep510na.txt> /.ps; only vector graphic VG; start output
 see similar files: <http://farbe.li.tu-berlin.de/eep5/eep5.htm>

Equal 9 step grey scaling between $L^*_{0aN}=8.1$ and $L^*_{0aW}=95.9$, $Y_{0ref}=3.6$, normalisation grey U

$L^*_{0aN}=8.1, L^*_{0aU}=52.1, L^*_{0aW}=96.0, Y_{0aN}=0.9, Y_{0aU}=20.2, Y_{0aW}=90.0, C_{0aY}=Y_{0aW}:Y_{0aN}=99.9$
 $L^*_{taN}=23.1, L^*_{taU}=52.1, L^*_{taW}=91.4, Y_{taN}=3.8, Y_{taU}=20.2, Y_{taW}=79.4, C_{taY}=Y_{taW}:Y_{taN}=20.8$

Regularity index according to ISO/IEC 15775:2022, annex G for 5 and 9 steps

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}], L^*_{CIELAB} = 116 [Y/Y_n]^{1/3} - 16$ with $Y \geq 0.882, Y_n=100$

| L^*_{CIELAB} | n0.i | intended output | | | | real output | | | | linearized output | | | |
|----------------|------|-----------------|------------|----------|----------|-------------|-------------------|------------|----------|-----------------------|------------|-------------------|--|
| | | L^*_{0a} | L^*_{0r} | Y_{0a} | Y_{0r} | L^*_{ta} | ΔL^*_{ta} | L^*_{tr} | Y_{ta} | $(L^*_{tr})^{1/1.25}$ | L^*_{la} | ΔL^*_{la} | |
| 100 | 9 | 96.0 | 1.0 | 90.0 | 1.0 | 91.4 | 10.1 | 1.0 | 79.4 | 1.0 | 91.4 | 8.2 | |
| | 8 | 85.0 | 0.875 | 66.0 | 0.731 | 81.3 | 10.0 | 0.852 | 59.1 | 0.88 | 83.2 | 8.4 | |
| 75 | 7 | 74.0 | 0.75 | 46.7 | 0.515 | 71.4 | 9.8 | 0.707 | 42.7 | 0.757 | 74.8 | 8.6 | |
| | 6 | 63.0 | 0.625 | 31.6 | 0.345 | 61.6 | 9.5 | 0.563 | 29.9 | 0.631 | 66.2 | 8.8 | |
| 50 | 5 | 52.1 | 0.5 | 20.2 | 0.217 | 52.1 | 9.0 | 0.424 | 20.2 | 0.502 | 57.4 | 8.9 | |
| | 4 | 41.1 | 0.375 | 11.9 | 0.124 | 43.0 | 8.2 | 0.292 | 13.2 | 0.372 | 48.5 | 8.9 | |
| 25 | 3 | 30.1 | 0.25 | 6.3 | 0.06 | 34.8 | 6.9 | 0.171 | 8.4 | 0.243 | 39.6 | 8.5 | |
| | 2 | 19.1 | 0.125 | 2.8 | 0.021 | 27.9 | 4.8 | 0.07 | 5.4 | 0.119 | 31.2 | 8.1 | |
| 0 | 1 | 8.1 | 0.0 | 0.9 | 0.0 | 23.1 | | 0.0 | 3.8 | 0.0 | 23.1 | | |

$\Delta L^*_{0a}=11.0$ (i=1,2,...,8) normalisation: $Y_{taiU}=Y_{0aU} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aU}+Y_{0ref}}$

eep50-3n

Equal 9 step grey scaling between $L^*_{0aN}=8.1$ and $L^*_{0aW}=95.9$, $Y_{0ref}=0.4$, normalisation grey U

$L^*_{0aN}=8.1, L^*_{0aU}=52.1, L^*_{0aW}=96.0, Y_{0aN}=0.9, Y_{0aU}=20.2, Y_{0aW}=90.0, C_{0aY}=Y_{0aW}:Y_{0aN}=99.9$
 $L^*_{taN}=11.1, L^*_{taU}=52.1, L^*_{taW}=95.4, Y_{taN}=1.3, Y_{taU}=20.2, Y_{taW}=88.6, C_{taY}=Y_{taW}:Y_{taN}=69.5$

Regularity index according to ISO/IEC 15775:2022, annex G for 5 and 9 steps

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}], L^*_{CIELAB} = 116 [Y/Y_n]^{1/3} - 16$ with $Y \geq 0.882, Y_n=100$

| L^*_{CIELAB} | n0.i | intended output | | | | real output | | | | linearized output | | | |
|----------------|------|-----------------|------------|----------|----------|-------------|-------------------|------------|----------|-----------------------|------------|-------------------|--|
| | | L^*_{0a} | L^*_{0r} | Y_{0a} | Y_{0r} | L^*_{ta} | ΔL^*_{ta} | L^*_{tr} | Y_{ta} | $(L^*_{tr})^{1/1.04}$ | L^*_{la} | ΔL^*_{la} | |
| 100 | 9 | 96.0 | 1.0 | 90.0 | 1.0 | 95.4 | 10.9 | 1.0 | 88.6 | 1.0 | 95.4 | 10.4 | |
| | 8 | 85.0 | 0.875 | 66.0 | 0.731 | 84.5 | 10.8 | 0.871 | 65.1 | 0.876 | 85.0 | 10.5 | |
| 75 | 7 | 74.0 | 0.75 | 46.7 | 0.515 | 73.7 | 10.8 | 0.742 | 46.2 | 0.752 | 74.5 | 10.5 | |
| | 6 | 63.0 | 0.625 | 31.6 | 0.345 | 62.9 | 10.8 | 0.614 | 31.4 | 0.627 | 63.9 | 10.5 | |
| 50 | 5 | 52.1 | 0.5 | 20.2 | 0.217 | 52.1 | 10.7 | 0.486 | 20.2 | 0.501 | 53.3 | 10.6 | |
| | 4 | 41.1 | 0.375 | 11.9 | 0.124 | 41.3 | 10.6 | 0.358 | 12.1 | 0.374 | 42.7 | 10.6 | |
| 25 | 3 | 30.1 | 0.25 | 6.3 | 0.06 | 30.7 | 10.6 | 0.233 | 6.5 | 0.248 | 32.0 | 10.7 | |
| | 2 | 19.1 | 0.125 | 2.8 | 0.021 | 20.5 | 10.3 | 0.111 | 3.1 | 0.122 | 21.4 | 10.6 | |
| 0 | 1 | 8.1 | 0.0 | 0.9 | 0.0 | 11.1 | 9.4 | 0.0 | 1.3 | 0.0 | 11.1 | 10.3 | |

$\Delta L^*_{0a}=11.0$ (i=1,2,...,8) normalisation: $Y_{taiU}=Y_{0aU} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aU}+Y_{0ref}}$

eep50-7n

Equal 9 step grey scaling between $L^*_{0aN}=8.1$ and $L^*_{0aW}=95.9$, $Y_{0ref}=0.9$, normalisation grey U

$L^*_{0aN}=8.1, L^*_{0aU}=52.1, L^*_{0aW}=96.0, Y_{0aN}=0.9, Y_{0aU}=20.2, Y_{0aW}=90.0, C_{0aY}=Y_{0aW}:Y_{0aN}=99.9$
 $L^*_{taN}=14.0, L^*_{taU}=52.1, L^*_{taW}=94.7, Y_{taN}=1.7, Y_{taU}=20.2, Y_{taW}=87.0, C_{taY}=Y_{taW}:Y_{taN}=50.5$

Regularity index according to ISO/IEC 15775:2022, annex G for 5 and 9 steps

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}], L^*_{CIELAB} = 116 [Y/Y_n]^{1/3} - 16$ with $Y \geq 0.882, Y_n=100$

| L^*_{CIELAB} | n0.i | intended output | | | | real output | | | | linearized output | | | |
|----------------|------|-----------------|------------|----------|----------|-------------|-------------------|------------|----------|-----------------------|------------|-------------------|--|
| | | L^*_{0a} | L^*_{0r} | Y_{0a} | Y_{0r} | L^*_{ta} | ΔL^*_{ta} | L^*_{tr} | Y_{ta} | $(L^*_{tr})^{1/1.09}$ | L^*_{la} | ΔL^*_{la} | |
| 100 | 9 | 96.0 | 1.0 | 90.0 | 1.0 | 94.7 | 10.7 | 1.0 | 87.0 | 1.0 | 94.7 | 9.9 | |
| | 8 | 85.0 | 0.875 | 66.0 | 0.731 | 84.0 | 10.7 | 0.867 | 64.1 | 0.877 | 84.8 | 10.0 | |
| 75 | 7 | 74.0 | 0.75 | 46.7 | 0.515 | 73.3 | 10.6 | 0.734 | 45.6 | 0.753 | 74.8 | 10.1 | |
| | 6 | 63.0 | 0.625 | 31.6 | 0.345 | 62.6 | 10.6 | 0.602 | 31.1 | 0.628 | 64.7 | 10.2 | |
| 50 | 5 | 52.1 | 0.5 | 20.2 | 0.217 | 52.1 | 10.4 | 0.472 | 20.2 | 0.502 | 54.5 | 10.3 | |
| | 4 | 41.1 | 0.375 | 11.9 | 0.124 | 41.6 | 10.1 | 0.343 | 12.3 | 0.374 | 44.2 | 10.3 | |
| 25 | 3 | 30.1 | 0.25 | 6.3 | 0.06 | 31.5 | 9.5 | 0.217 | 6.9 | 0.246 | 33.8 | 10.2 | |
| | 2 | 19.1 | 0.125 | 2.8 | 0.021 | 22.0 | 8.0 | 0.099 | 3.5 | 0.12 | 23.7 | 9.7 | |
| 0 | 1 | 8.1 | 0.0 | 0.9 | 0.0 | 14.0 | | 0.0 | 1.7 | 0.0 | 14.0 | | |

$\Delta L^*_{0a}=11.0$ (i=1,2,...,8) normalisation: $Y_{taiU}=Y_{0aU} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aU}+Y_{0ref}}$

eep51-3n

Equal 9 step grey scaling between $L^*_{0aN}=8.1$ and $L^*_{0aW}=95.9$, $Y_{0ref}=1.8$, normalisation grey U

$L^*_{0aN}=8.1, L^*_{0aU}=52.1, L^*_{0aW}=96.0, Y_{0aN}=0.9, Y_{0aU}=20.2, Y_{0aW}=90.0, C_{0aY}=Y_{0aW}:Y_{0aN}=99.9$
 $L^*_{taN}=17.8, L^*_{taU}=52.1, L^*_{taW}=93.6, Y_{taN}=2.5, Y_{taU}=20.2, Y_{taW}=84.3, C_{taY}=Y_{taW}:Y_{taN}=34.0$

Regularity index according to ISO/IEC 15775:2022, annex G for 5 and 9 steps

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}], L^*_{CIELAB} = 116 [Y/Y_n]^{1/3} - 16$ with $Y \geq 0.882, Y_n=100$

| L^*_{CIELAB} | n0.i | intended output | | | | real output | | | | linearized output | | | |
|----------------|------|-----------------|------------|----------|----------|-------------|-------------------|------------|----------|-----------------------|------------|-------------------|--|
| | | L^*_{0a} | L^*_{0r} | Y_{0a} | Y_{0r} | L^*_{ta} | ΔL^*_{ta} | L^*_{tr} | Y_{ta} | $(L^*_{tr})^{1/1.15}$ | L^*_{la} | ΔL^*_{la} | |
| 100 | 9 | 96.0 | 1.0 | 90.0 | 1.0 | 93.6 | 10.5 | 1.0 | 84.3 | 1.0 | 93.6 | 9.2 | |
| | 8 | 85.0 | 0.875 | 66.0 | 0.731 | 83.1 | 10.4 | 0.861 | 62.3 | 0.878 | 84.4 | 9.3 | |
| 75 | 7 | 74.0 | 0.75 | 46.7 | 0.515 | 72.6 | 10.3 | 0.723 | 44.6 | 0.755 | 75.0 | 9.5 | |
| | 6 | 63.0 | 0.625 | 31.6 | 0.345 | 62.3 | 10.2 | 0.587 | 30.7 | 0.629 | 65.5 | 9.6 | |
| 50 | 5 | 52.1 | 0.5 | 20.2 | 0.217 | 52.1 | 9.9 | 0.452 | 20.2 | 0.502 | 55.9 | 9.8 | |
| | 4 | 41.1 | 0.375 | 11.9 | 0.124 | 42.1 | 9.4 | 0.321 | 12.6 | 0.373 | 46.1 | 9.8 | |
| 25 | 3 | 30.1 | 0.25 | 6.3 | 0.06 | 32.7 | 8.4 | 0.197 | 7.4 | 0.244 | 36.3 | 9.5 | |
| | 2 | 19.1 | 0.125 | 2.8 | 0.021 | 24.3 | 6.5 | 0.086 | 4.2 | 0.119 | 26.8 | 9.0 | |
| 0 | 1 | 8.1 | 0.0 | 0.9 | 0.0 | 17.8 | | 0.0 | 2.5 | 0.0 | 17.8 | | |

$\Delta L^*_{0a}=11.0$ (i=1,2,...,8) normalisation: $Y_{taiU}=Y_{0aU} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aU}+Y_{0ref}}$

eep51-7n

Test chart eep5; Equal 9 step grey scaling for four display reflections $Y_{ref}=3.6, 0.4, 0.9, 1.8$, and black $L^*_{N,CIELAB}=8.13, Y_N=0.9$ and white $L^*_{W,CIELAB}=95.99, Y_W=90$, normalisation: grey U

see similar files of the whole serie: <http://farbe.li.tu-berlin.de/eeps.htm>
 technical information: <http://farbe.li.tu-berlin.de> or <http://color.li.tu-berlin.de>

TUB registration: 20230701-eep5/eep510na.txt /.ps
 application for evaluation and measurement of display or print output
 TUB material: code=rha4ta