

Equal 9 step grey scaling between $L^*_{0aN}=17.9$ and $L^*_{0aW}=95.9$, $Y_{0ref}=20.0$, normalisation white W

$L^*_{0aN}=17.9$, $L^*_{0aU}=56.9$, $L^*_{0aW}=96.0$, $Y_{0aN}=2.5$, $Y_{0aU}=24.9$, $Y_{0aW}=90.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=36.0$

$L^*_{taN}=50.0$, $L^*_{taU}=67.1$, $L^*_{taW}=96.0$, $Y_{taN}=18.4$, $Y_{taU}=36.7$, $Y_{taW}=90.0$, $C_{taY}=Y_{taW}:Y_{taN}=4.9$

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

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

$g^*_5=99$, $g^*_9=99$

$g^*_5=42$, $g^*_9=33$

$g^*_5=97$, $g^*_9=86$

| $L^*_{CIE LAB}$ | n0. i | intended output | | | | real output | | | | | linearized output | |
|-----------------|-------|-----------------|------------|----------|----------|-------------|-------------------|------------|----------|-----------------------|-------------------|-------------------|
| | | L^*_{0a} | L^*_{0r} | Y_{0a} | Y_{0r} | L^*_{ta} | ΔL^*_{ta} | L^*_{tr} | Y_{ta} | $(L^*_{tr})^{1/1.41}$ | L^*_{la} | ΔL^*_{la} |
| 100 | 9 | 96.0 | 1.0 | 90.0 | 1.0 | 96.0 | | 1.0 | 90.0 | 1.0 | 96.0 | |
| | 8 | 86.2 | 0.875 | 68.5 | 0.754 | 88.1 | 7.8 | 0.829 | 72.4 | 0.876 | 90.3 | 5.7 |
| | 7 | 76.5 | 0.75 | 50.7 | 0.55 | 80.6 | 7.5 | 0.666 | 57.8 | 0.75 | 84.5 | 5.8 |
| 75 | 6 | 66.7 | 0.625 | 36.3 | 0.386 | 73.6 | 7.1 | 0.512 | 46.0 | 0.623 | 78.7 | 5.8 |
| | 5 | 56.9 | 0.5 | 24.9 | 0.256 | 67.1 | 6.5 | 0.371 | 36.7 | 0.496 | 72.8 | 5.8 |
| 50 | 4 | 47.2 | 0.375 | 16.2 | 0.156 | 61.3 | 5.8 | 0.246 | 29.6 | 0.371 | 67.1 | 5.6 |
| | 3 | 37.4 | 0.25 | 9.8 | 0.083 | 56.4 | 4.8 | 0.14 | 24.4 | 0.25 | 61.5 | 5.3 |
| 25 | 2 | 27.7 | 0.125 | 5.3 | 0.032 | 52.6 | 3.8 | 0.058 | 20.7 | 0.134 | 56.1 | 5.3 |
| | 1 | 17.9 | 0.0 | 2.5 | 0.0 | 50.0 | 2.7 | 0.0 | 18.4 | 0.0 | 50.0 | 6.1 |

$\Delta L^*_{0a}=9.7$

(i=1,2,...,8)

normalisation: $Y_{taiW}=Y_{0aW} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aW}+Y_{0ref}}$