

Equal 9 step grey scaling between $L^*_{0aN}=22.3$ and $L^*_{0aW}=95.9$, $Y_{0ref}=0.4$, normalisation grey U

$L^*_{0aN}=22.3$, $L^*_{0aU}=59.1$, $L^*_{0aW}=96.0$, $Y_{0aN}=3.6$, $Y_{0aU}=27.2$, $Y_{0aW}=90.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=25.0$

$L^*_{taN}=23.5$, $L^*_{taU}=59.1$, $L^*_{taW}=95.6$, $Y_{taN}=3.9$, $Y_{taU}=27.2$, $Y_{taW}=89.1$, $C_{taY}=Y_{taW}:Y_{taN}=22.6$

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 $Y \geq 0.882$, $Y_n=100$

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

$g^*_5=96$, $g^*_9=95$

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

$L^*_{CIE LAB}$	n0. i	intended output				real output					linearized output	
		L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.01}$	L^*_{la}	ΔL^*_{la}
100	○ 9	96.0	1.0	90.0	1.0	95.6		1.0	89.1	1.0	95.6	
	● 8	86.8	0.875	69.6	0.763	86.5	9.1	0.873	68.9	0.875	86.6	9.0
	● 7	77.6	0.75	52.5	0.566	77.3	9.1	0.747	52.1	0.75	77.6	9.0
75	● 6	68.4	0.625	38.5	0.403	68.2	9.1	0.62	38.3	0.625	68.6	9.0
	● 5	59.1	0.5	27.2	0.273	59.1	9.1	0.494	27.2	0.5	59.5	9.0
50	● 4	49.9	0.375	18.4	0.171	50.1	9.0	0.369	18.5	0.375	50.5	9.0
	● 3	40.7	0.25	11.7	0.094	41.1	9.0	0.244	11.9	0.249	41.5	9.0
	● 2	31.5	0.125	6.9	0.038	32.2	8.9	0.121	7.2	0.125	32.5	9.0
25	● 1	22.3	0.0	3.6	0.0	23.5	8.7	0.0	3.9	0.0	23.5	9.0

$\Delta L^*_{0a}=9.2$

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

normalisation: $Y_{taiU}=Y_{0aU} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aU}+Y_{0ref}}$