

Equal 9 step grey scaling between $L^*_{0aN}=8.1$ and $L^*_{0aW}=95.9$, $Y_{0ref}=2.5$, normalisation grey U

$L^*_{0aN}=8.1$, $L^*_{0aU}=52.1$, $L^*_{0aW}=96.0$, $Y_{0aN}=0.9$, $Y_{0aU}=20.2$, $Y_{0aW}=90.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=99.9$

$L^*_{taN}=20.1$, $L^*_{taU}=52.1$, $L^*_{taW}=92.7$, $Y_{taN}=3.0$, $Y_{taU}=20.2$, $Y_{taW}=82.3$, $C_{taY}=Y_{taW}:Y_{taN}=27.2$

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

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

$g^*_5=65$, $g^*_9=55$

$g^*_5=93$, $g^*_9=91$

$L^*_{CIE LAB}$	n0. i	intended output				real output					linearized output	
		L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.19}$	L^*_{la}	ΔL^*_{la}
100	○ 9	96.0	1.0	90.0	1.0	92.7		1.0	82.3	1.0	92.7	
	● 8	85.0	0.875	66.0	0.731	82.4	10.3	0.857	61.0	0.879	83.9	8.8
75	● 7	74.0	0.75	46.7	0.515	72.1	10.2	0.716	43.8	0.756	75.0	8.9
	● 6	63.0	0.625	31.6	0.345	62.0	10.1	0.576	30.4	0.63	65.9	9.1
50	● 5	52.1	0.5	20.2	0.217	52.1	9.9	0.44	20.2	0.503	56.6	9.3
	● 4	41.1	0.375	11.9	0.124	42.5	9.6	0.308	12.8	0.373	47.2	9.4
25	● 3	30.1	0.25	6.3	0.06	33.6	8.9	0.185	7.8	0.243	37.8	9.4
	● 2	19.1	0.125	2.8	0.021	25.8	7.7	0.078	4.7	0.119	28.8	9.0
0	● 1	8.1	0.0	0.9	0.0	20.1	5.7	0.0	3.0	0.0	20.1	8.6

$\Delta L^*_{0a}=11.0$ (i=1,2,...,8)

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