

Equal 9 step grey scaling between $L^*_{0aN}=3.6$ and $L^*_{0aW}=95.9$, $Y_{0ref}=10.0$, normalisation grey U

$L^*_{0aN}=3.6$, $L^*_{0aU}=49.8$, $L^*_{0aW}=96.0$, $Y_{0aN}=0.4$, $Y_{0aU}=18.2$, $Y_{0aW}=90.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=225.0$
 $L^*_{taN}=31.2$, $L^*_{taU}=49.8$, $L^*_{taW}=84.3$, $Y_{taN}=6.7$, $Y_{taU}=18.2$, $Y_{taW}=64.6$, $C_{taY}=Y_{taW}:Y_{taN}=9.6$

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

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

$g^*_5 = 33$, $g^*_9 = 24$

$g^*_5 = 92$, $g^*_9 = 88$

$L^*_{CIE LAB}$	n0. i	intended output				real output					linearized output	
		L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.52}$	L^*_{la}	ΔL^*_{la}
100	○ 9	96.0	1.0	90.0	1.0	84.3		1.0	64.6	1.0	84.3	
	● 8	84.4	0.875	64.9	0.72	75.1	9.2	0.827	48.4	0.882	78.0	6.3
75	● 7	72.9	0.75	45.0	0.498	66.2	8.9	0.659	35.5	0.759	71.5	6.5
	● 6	61.3	0.625	29.6	0.326	57.7	8.5	0.499	25.6	0.632	64.7	6.7
50	● 5	49.8	0.5	18.2	0.199	49.8	7.9	0.351	18.2	0.501	57.8	7.0
	● 4	38.2	0.375	10.2	0.11	42.9	6.9	0.22	13.1	0.369	50.7	7.0
	● 3	26.7	0.25	5.0	0.051	37.3	5.6	0.115	9.7	0.24	43.9	6.8
25	● 2	15.2	0.125	1.9	0.017	33.4	3.9	0.042	7.7	0.123	37.7	6.2
	● 1	3.6	0.0	0.4	0.0	31.2	2.2	0.0	6.7	0.0	31.2	6.5

$\Delta L^*_{0a}=11.5$ (i=1,2,...,8)

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