

Equal 9 step grey scaling between $L^*_{0aN}=8.1$ and $L^*_{0aW}=95.9$, $Y_{0ref}=20.0$, normalisation grey U

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

$L^*_{taN}=38.7$, $L^*_{taU}=52.1$, $L^*_{taW}=79.2$, $Y_{taN}=10.5$, $Y_{taU}=20.2$, $Y_{taW}=55.3$, $C_{taY}=Y_{taW}:Y_{taN}=5.3$

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

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

$g^*_5=29$, $g^*_9=21$

$g^*_5=95$, $g^*_9=88$

$L^*_{CIE LAB}$	n0. i	intended output				real output					linearized output	
		L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.59}$	L^*_{la}	ΔL^*_{la}
100	○ 9	96.0	1.0	90.0	1.0	79.2		1.0	55.3	1.0	79.2	
	● 8	85.0	0.875	66.0	0.731	71.7	7.5	0.815	43.2	0.879	74.3	4.9
75	● 7	74.0	0.75	46.7	0.515	64.6	7.1	0.639	33.5	0.755	69.3	5.0
	● 6	63.0	0.625	31.6	0.345	58.0	6.6	0.476	25.9	0.627	64.1	5.2
50	● 5	52.1	0.5	20.2	0.217	52.1	5.9	0.329	20.2	0.498	58.9	5.2
	● 4	41.1	0.375	11.9	0.124	47.0	5.0	0.205	16.0	0.369	53.7	5.2
25	● 3	30.1	0.25	6.3	0.06	43.1	3.9	0.107	13.2	0.246	48.7	5.0
	● 2	19.1	0.125	2.8	0.021	40.3	2.7	0.039	11.4	0.131	44.0	4.6
0	● 1	8.1	0.0	0.9	0.0	38.7	1.6	0.0	10.5	0.0	38.7	5.3

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

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