

Equal 9 step grey scaling between $L^*_{0aN}=17.9$ and $L^*_{0aW}=95.9$, $Y_{0ref}=0.9$, normalisation grey U

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

$L^*_{taN}=21.1$, $L^*_{taU}=57.0$, $L^*_{taW}=95.0$, $Y_{taN}=3.3$, $Y_{taU}=24.9$, $Y_{taW}=87.7$, $C_{taY}=Y_{taW}:Y_{taN}=26.7$

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

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

$g^*_5=90$, $g^*_9=87$

$g^*_5=98$, $g^*_9=98$

$L^*_{CIE LAB}$	n0. i	intended output				real output					linearized output	
		L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.05}$	L^*_{la}	ΔL^*_{la}
100	○ 9	96.0	1.0	90.0	1.0	95.0		1.0	87.7	1.0	95.0	
	● 8	86.2	0.875	68.5	0.754	85.5	9.6	0.87	66.9	0.876	85.9	9.2
75	● 7	76.5	0.75	50.7	0.55	75.9	9.5	0.741	49.8	0.751	76.7	9.2
	● 6	66.7	0.625	36.3	0.386	66.4	9.5	0.613	35.9	0.626	67.4	9.2
	● 5	56.9	0.5	24.9	0.256	57.0	9.4	0.485	24.9	0.5	58.1	9.3
50	● 4	47.2	0.375	16.2	0.156	47.6	9.4	0.358	16.5	0.375	48.8	9.3
	● 3	37.4	0.25	9.8	0.083	38.4	9.2	0.233	10.3	0.249	39.5	9.3
25	● 2	27.7	0.125	5.3	0.032	29.5	8.9	0.113	6.0	0.124	30.3	9.2
	● 1	17.9	0.0	2.5	0.0	21.1	8.3	0.0	3.3	0.0	21.1	9.2

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

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

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