

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

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

$L^*_{taN}=23.6$, $L^*_{taU}=59.4$, $L^*_{taW}=96.0$, $Y_{taN}=4.0$, $Y_{taU}=27.5$, $Y_{taW}=90.0$, $C_{taY}=Y_{taW}:Y_{taN}=22.6$

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 $Y \geq 0,882$, $Y_n=100$

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

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

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

$L^*_{CIE LAB}$ intended output real output linearized output
 n0. i 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	96.0		1.0	90.0	1.0	96.0	
								9.2					9.0
	●	8	86.8	0.875	69.6	0.763	86.8		0.873	69.7	0.875	87.0	
								9.1					9.0
75	●	7	77.6	0.75	52.5	0.566	77.7		0.747	52.6	0.75	77.9	
								9.1					9.0
	●	6	68.4	0.625	38.5	0.403	68.5		0.62	38.7	0.625	68.9	
								9.1					9.1
	●	5	59.1	0.5	27.2	0.273	59.4		0.494	27.5	0.5	59.8	
								9.1					9.1
50	●	4	49.9	0.375	18.4	0.171	50.3		0.369	18.7	0.375	50.7	
								9.0					9.0
	●	3	40.7	0.25	11.7	0.094	41.3		0.244	12.0	0.249	41.7	
								8.9					9.0
	●	2	31.5	0.125	6.9	0.038	32.3		0.121	7.2	0.125	32.6	
								8.7					9.0
25	●	1	22.3	0.0	3.6	0.0	23.6		0.0	4.0	0.0	23.6	

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

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

normalisation: $Y_{taiW}=Y_{0aW} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aW}+Y_{0ref}}$