

Equal 9 step grey scaling between $L^*_{0aN}=17.9$ and $L^*_{0aW}=95.9$, $Y_{0ref}=20.0$, normalisation grey U

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

$L^*_{taN}=42.0$, $L^*_{taU}=57.0$, $L^*_{taW}=82.4$, $Y_{taN}=12.5$, $Y_{taU}=24.9$, $Y_{taW}=61.0$, $C_{taY}=Y_{taW}:Y_{taN}=4.9$

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

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

$g^*_5=42$, $g^*_9=33$

$g^*_5=97$, $g^*_9=86$

$L^*_{CIE LAB}$	n0. i	intended output				real output					linearized output	
		L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.41}$	L^*_{la}	ΔL^*_{la}
100	○ 9	96.0	1.0	90.0	1.0	82.4		1.0	61.0	1.0	82.4	
	● 8	86.2	0.875	68.5	0.754	75.5	6.9	0.829	49.0	0.876	77.4	5.0
	● 7	76.5	0.75	50.7	0.55	68.9	6.6	0.666	39.2	0.75	72.3	5.1
75	● 6	66.7	0.625	36.3	0.386	62.7	6.2	0.512	31.2	0.623	67.2	5.1
	● 5	56.9	0.5	24.9	0.256	57.0	5.7	0.371	24.9	0.496	62.0	5.1
50	● 4	47.2	0.375	16.2	0.156	51.9	5.1	0.246	20.0	0.371	57.0	5.1
	● 3	37.4	0.25	9.8	0.083	47.6	4.3	0.14	16.5	0.25	52.1	4.9
	● 2	27.7	0.125	5.3	0.032	44.3	3.3	0.058	14.0	0.134	47.4	4.7
25	● 1	17.9	0.0	2.5	0.0	42.0	2.3	0.0	12.5	0.0	42.0	5.4
0												

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

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

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