

Equal 9 step grey scaling between $L^*_{0aN}=17.9$ and $L^*_{0aW}=95.9$, $Y_{0ref}=0.4$, normalisation white W

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

$L^*_{taN}=19.6$, $L^*_{taU}=57.2$, $L^*_{taW}=96.0$, $Y_{taN}=2.9$, $Y_{taU}=25.2$, $Y_{taW}=90.0$, $C_{taY}=Y_{taW}:Y_{taN}=31.2$

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

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

$g^*_5=95$, $g^*_9=93$

$g^*_5=99$, $g^*_9=98$

$L^*_{CIE LAB}$	n0. i	intended output				real output					linearized output	
		L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.02}$	L^*_{la}	ΔL^*_{la}
100	9	96.0	1.0	90.0	1.0	96.0		1.0	90.0	1.0	96.0	
	8	86.2	0.875	68.5	0.754	86.3	9.7	0.873	68.5	0.875	86.5	9.5
	7	76.5	0.75	50.7	0.55	76.6	9.7	0.746	50.8	0.75	76.9	9.5
75	6	66.7	0.625	36.3	0.386	66.9	9.7	0.619	36.5	0.625	67.4	9.6
	5	56.9	0.5	24.9	0.256	57.2	9.6	0.493	25.2	0.5	57.8	9.6
	4	47.2	0.375	16.2	0.156	47.6	9.6	0.367	16.5	0.374	48.2	9.6
50	3	37.4	0.25	9.8	0.083	38.1	9.5	0.242	10.1	0.249	38.6	9.6
	2	27.7	0.125	5.3	0.032	28.7	9.4	0.119	5.7	0.124	29.1	9.5
25	1	17.9	0.0	2.5	0.0	19.6	9.1	0.0	2.9	0.0	19.6	9.5

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

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

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