

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

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

$L^*_{taN}=48.4$, $L^*_{taU}=64.1$, $L^*_{taW}=96.0$, $Y_{taN}=17.1$, $Y_{taU}=32.9$, $Y_{taW}=90.0$, $C_{taY}=Y_{taW}:Y_{taN}=5.3$

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	96.0		1.0	90.0	1.0	96.0	
	8	85.0	0.875	66.0	0.731	87.2	8.8	0.815	70.4	0.879	90.2	5.7
75	7	74.0	0.75	46.7	0.515	78.8	8.4	0.639	54.6	0.755	84.3	5.9
	6	63.0	0.625	31.6	0.345	71.0	7.8	0.476	42.2	0.627	78.2	6.1
	5	52.1	0.5	20.2	0.217	64.1	7.0	0.329	32.9	0.498	72.1	6.2
50	4	41.1	0.375	11.9	0.124	58.1	5.9	0.205	26.1	0.369	66.0	6.1
	3	30.1	0.25	6.3	0.06	53.5	4.6	0.107	21.5	0.246	60.1	5.9
25	2	19.1	0.125	2.8	0.021	50.2	3.2	0.039	18.6	0.131	54.6	5.5
	1	8.1	0.0	0.9	0.0	48.4	1.9	0.0	17.1	0.0	48.4	6.2

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

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