

Equal 9 step grey scaling between $L^*_{0aN}=8.1$ and $L^*_{0aW}=95.9$, $Y_{0ref}=10.0$, normalisation white W

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

$L^*_{taN}=37.5$, $L^*_{taU}=59.1$, $L^*_{taW}=96.0$, $Y_{taN}=9.8$, $Y_{taU}=27.2$, $Y_{taW}=90.0$, $C_{taY}=Y_{taW}:Y_{taN}=9.2$

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

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

$g^*_5=39$, $g^*_9=29$

$g^*_5=94$, $g^*_9=91$

$L^*_{CIE LAB}$	n0. i	intended output				real output					linearized output	
		L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.44}$	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	86.2	9.8	0.833	68.4	0.88	89.0	7.0
75	7	74.0	0.75	46.7	0.515	76.7	9.5	0.67	51.1	0.757	81.8	7.2
	6	63.0	0.625	31.6	0.345	67.6	9.1	0.515	37.5	0.63	74.4	7.4
	5	52.1	0.5	20.2	0.217	59.1	8.5	0.37	27.2	0.5	66.8	7.6
50	4	41.1	0.375	11.9	0.124	51.5	7.6	0.24	19.7	0.37	59.1	7.6
	3	30.1	0.25	6.3	0.06	45.1	6.4	0.131	14.6	0.242	51.7	7.4
25	2	19.1	0.125	2.8	0.021	40.4	4.7	0.05	11.5	0.123	44.7	6.9
	1	8.1	0.0	0.9	0.0	37.5	2.9	0.0	9.8	0.0	37.5	7.2

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

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