

Equal 9 step grey scaling between $L^*_{0aN}=14.4$ and $L^*_{0aW}=95.9$, $Y_{0ref}=3.6$, normalisation grey U

$L^*_{0aN}=14.4, L^*_{0aU}=55.2, L^*_{0aW}=96.0, Y_{0aN}=1.8, Y_{0aU}=23.1, Y_{0aW}=90.0, C_{0aY}=Y_{0aW}:Y_{0aN}=50.0$

$L^*_{taN}=25.8, L^*_{taU}=55.2, L^*_{taW}=92.1, Y_{taN}=4.7, Y_{taU}=23.1, Y_{taW}=81.0, C_{taY}=Y_{taW}:Y_{taN}=17.3$

Regularity index according to ISO/IEC 15775:2022, annex G for 5 and 9 steps

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}], L^*_{CIELAB} = 116 [Y/Y_n]^{1/3} - 16 \text{ with } Y \geq 0.882, Y_n=100$

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

$g^*_5=67, g^*_9=59$

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

L^*_{CIELAB}	intended output			Y_{0r}	real output			linearized output		
	n0. i	L^*_{0a}	L^*_{0r}		Y_{0a}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.18}$

120											
90	9	96.0	1.0	90.0	1.0	92.1	9.4	1.0	81.0	1.0	92.1
8	85.8	0.875	67.6	0.746	82.7	9.3	0.858	61.6	0.878	84.0	8.1
7	75.6	0.75	49.2	0.538	73.4	9.2	0.717	45.7	0.754	75.8	8.2
6	65.4	0.625	34.5	0.371	64.2	9.0	0.579	33.0	0.628	67.4	8.3
5	55.2	0.5	23.1	0.242	55.2	8.6	0.443	23.1	0.501	59.0	8.4
4	45.0	0.375	14.5	0.144	46.6	8.0	0.313	15.7	0.373	50.5	8.5
3	34.8	0.25	8.4	0.075	38.5	7.1	0.192	10.4	0.246	42.1	8.4
2	24.6	0.125	4.3	0.028	31.4	5.6	0.085	6.8	0.123	33.9	8.2
1	14.4	0.0	1.8	0.0	25.8		0.0	4.7	0.0	25.8	8.1
$\Delta L^*_{0a}=10.2$						normalisation: $Y_{taU}=Y_{0aU} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aU}+Y_{0ref}}$					