

Equal 9 step grey scaling between $L^*_{0aN}=14.4$ and $L^*_{0aW}=95.9$, $Y_{0ref}=20.0$, normalisation white W

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

$L^*_{taN}=49.3, L^*_{taU}=66.0, L^*_{taW}=96.0, Y_{taN}=17.8, Y_{taU}=35.3, Y_{taW}=90.0, C_{taY}=Y_{taW}:Y_{taN}=5.0$

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

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

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

$g^*_5=37, g^*_9=29$

$g^*_5=97, g^*_9=87$

L^*_{CIELAB}	intended output				real output				linearized output		
	n0. i	L^*0a	L^*0r	$Y0a$	$Y0r$	L^*ta	ΔL^*ta	L^*tr	Yta	$(L^*tr)^{1/1.47}$	L^*la

9	96.0	1.0	90.0	1.0	96.0	8.2	1.0	90.0	1.0	96.0	5.7
8	85.8	0.875	67.6	0.746	87.8	7.8	0.824	71.6	0.877	90.3	5.8
7	75.6	0.75	49.2	0.538	80.0	7.3	0.657	56.6	0.752	84.4	5.9
6	65.4	0.625	34.5	0.371	72.6	6.7	0.5	44.6	0.624	78.5	6.0
5	55.2	0.5	23.1	0.242	66.0	5.8	0.357	35.3	0.497	72.5	5.9
4	45.0	0.375	14.5	0.144	60.1	4.8	0.232	28.3	0.37	66.6	5.7
3	34.8	0.25	8.4	0.075	55.3	3.6	0.129	23.2	0.248	60.9	5.4
2	24.6	0.125	4.3	0.028	51.7	2.4	0.051	19.9	0.133	55.5	6.2
1	14.4	0.0	1.8	0.0	49.3	0.0	0.0	17.8	0.0	49.3	

$\Delta L^*_{0a}=10.2$

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

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