

Equal 9 step grey scaling between $L^*_{0aN}=17.9$ and $L^*_{0aW}=95.9$, $Y_{0ref}=2.5$, normalisation grey U

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

$L^*_{taN}=25.4$, $L^*_{taU}=57.0$, $L^*_{taW}=93.5$, $Y_{taN}=4.5$, $Y_{taU}=24.9$, $Y_{taW}=84.0$, $C_{taY}=Y_{taW}:Y_{taN}=18.5$

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

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

$g^*_5=78$, $g^*_9=72$

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

$L^*_{CIE LAB}$	n0. i	intended output				real output					linearized output	
		L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.11}$	L^*_{la}	ΔL^*_{la}
100	9	96.0	1.0	90.0	1.0	93.5		1.0	84.0	1.0	93.5	
	8	86.2	0.875	68.5	0.754	84.2	9.2	0.864	64.5	0.877	85.1	8.4
	7	76.5	0.75	50.7	0.55	75.0	9.2	0.729	48.3	0.752	76.6	8.5
75	6	66.7	0.625	36.3	0.386	65.9	9.1	0.595	35.2	0.627	68.1	8.5
	5	56.9	0.5	24.9	0.256	57.0	9.0	0.464	24.9	0.5	59.5	8.6
	4	47.2	0.375	16.2	0.156	48.2	8.7	0.335	17.0	0.374	50.8	8.6
50	3	37.4	0.25	9.8	0.083	39.8	8.4	0.212	11.1	0.247	42.2	8.6
	2	27.7	0.125	5.3	0.032	32.1	7.7	0.098	7.1	0.124	33.8	8.4
25	1	17.9	0.0	2.5	0.0	25.4	6.7	0.0	4.5	0.0	25.4	8.4

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

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

normalisation: $Y_{taiU}=Y_{0aU} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aU}+Y_{0ref}}$