

Equal 9 step grey scaling between $L^*_{0aN}=29.4$ and $L^*_{0aW}=78.4$, $Y_{0ref}=54.0$, normalisation white W

$L^*_{0aN}=29.4, L^*_{0aU}=53.9, L^*_{0aW}=78.5, Y_{0aN}=6.0, Y_{0aU}=21.9, Y_{0aW}=54.0, C_{0aY}=Y_{0aW}:Y_{0aN}=9.0$

$L^*_{taN}=61.6, L^*_{taU}=68.0, L^*_{taW}=78.5, Y_{taN}=30.0, Y_{taU}=38.0, Y_{taW}=54.0, C_{taY}=Y_{taW}:Y_{taN}=1.8$

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

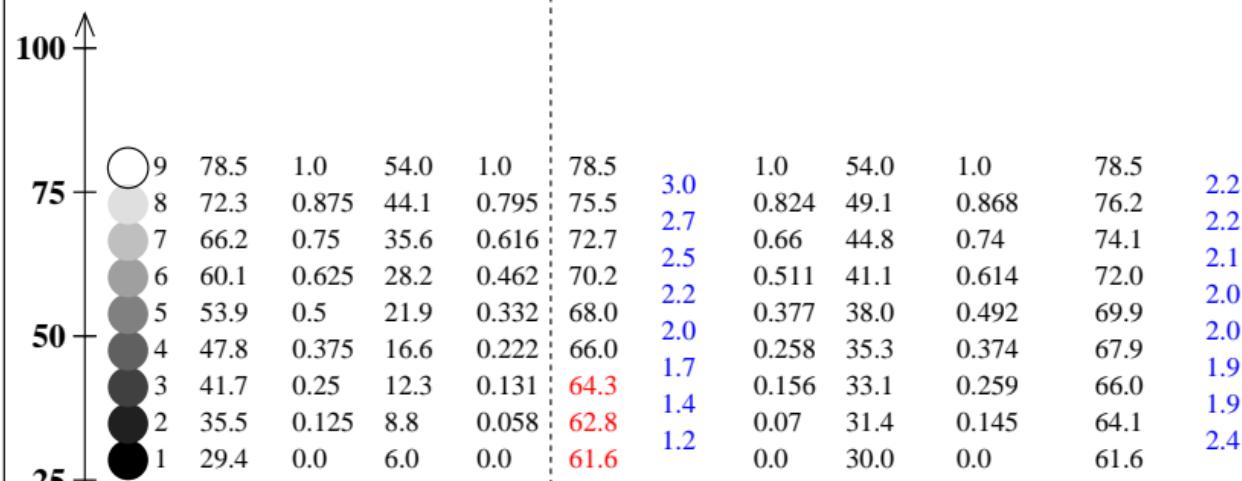
$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}], L^*_{CIELAB} = 116 [Y/Y_n]^{1/3} - 16 \text{ with } Y \geq 0.882, Y_n=100$

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

$g^*_5=45, g^*_9=39$

$g^*_5=89, g^*_9=78$

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}	$(L^*_{tr})^{1/1.38}$	L^*_{la}	ΔL^*_{la}
9	78.5	1.0	54.0	1.0	78.5	3.0	1.0	54.0	1.0	78.5	2.2
8	72.3	0.875	44.1	0.795	75.5	2.7	0.824	49.1	0.868	76.2	2.2
7	66.2	0.75	35.6	0.616	72.7	2.5	0.66	44.8	0.74	74.1	2.1
6	60.1	0.625	28.2	0.462	70.2	2.2	0.511	41.1	0.614	72.0	2.0
5	53.9	0.5	21.9	0.332	68.0	2.0	0.377	38.0	0.492	69.9	2.0
4	47.8	0.375	16.6	0.222	66.0	1.7	0.258	35.3	0.374	67.9	1.9
3	41.7	0.25	12.3	0.131	64.3	1.4	0.156	33.1	0.259	66.0	1.9
2	35.5	0.125	8.8	0.058	62.8	1.2	0.07	31.4	0.145	64.1	2.4
1	29.4	0.0	6.0	0.0	61.6		0.0	30.0	0.0	61.6	



$\Delta L^*_{0a}=6.1$

$(i=1,2,\dots,8)$

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