

Equal 9 step grey scaling between $L^*_{0aN}=23.6$ and $L^*_{0aW}=95.5$, $Y_{0ref}=3.6$, normalisation white W

$L^*_{0aN}=23.6, L^*_{0aU}=59.6, L^*_{0aW}=95.5, Y_{0aN}=3.6, Y_{0aU}=30.3, Y_{0aW}=90.0, C_{0aY}=Y_{0aW}:Y_{0aN}=25.0$

$L^*_{taN}=31.3, L^*_{taU}=61.5, L^*_{taW}=95.5, Y_{taN}=6.9, Y_{taU}=32.6, Y_{taW}=90.0, C_{taY}=Y_{taW}:Y_{taN}=13.0$

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

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}], L^*_{TUBsRGB,W} = 100 [Y/Y_n]^{[1/\ln(10)]}$ with $Y \geq 0.3, Y_n=100$

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

$g^*_5=81, g^*_9=76$

$g^*_5=95, g^*_9=93$

L* _{TUBsRGB} , unintended output					real output					linearized output		
100	n0. i	L*0a	L*0r	Y0a	Y0r	L*ta	ΔL*ta	L*tr	Yta	(L*tr) ^{1/1.12}	L*la	ΔL*la
	9	95.5	1.0	90.0	1.0	95.5		8.6	1.0	90.0	1.0	95.5
	8	86.5	0.875	71.7	0.788	86.9		8.6	0.866	72.4	0.879	87.7
75	7	77.5	0.75	55.7	0.603	78.3		8.5	0.732	57.0	0.756	79.9
	6	68.5	0.625	41.9	0.443	69.8		8.4	0.6	43.8	0.633	71.9
	5	59.6	0.5	30.3	0.309	61.5		8.2	0.469	32.6	0.508	63.9
50	4	50.6	0.375	20.8	0.199	53.3		7.9	0.342	23.5	0.382	55.9
	3	41.6	0.25	13.3	0.112	45.4		7.4	0.218	16.2	0.256	47.8
	2	32.6	0.125	7.6	0.046	37.9		6.6	0.103	10.7	0.13	39.7
25	1	23.6	0.0	3.6	0.0	31.3			0.0	6.9	0.0	31.3
0												

$\Delta L^*_{0a}=9.0$ (i=1,2,...,8)

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