

Equal 9 step grey scaling between $L^*_{0aN}=-27.3$ and $L^*_{0aW}=27.3$, $Y_{0ref}=3.6$, normalisation grey U

$L^*_{0aN}=-27.2$, $L^*_{0aU}=0.0$, $L^*_{0aW}=27.3$, $Y_{0aN}=6.0$, $Y_{0aU}=18.0$, $Y_{0aW}=54.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=9.0$

$L^*_{taN}=-20.1$, $L^*_{taU}=0.0$, $L^*_{taW}=24.4$, $Y_{taN}=8.0$, $Y_{taU}=18.0$, $Y_{taW}=48.0$, $C_{taY}=Y_{taW}:Y_{taN}=6.0$

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

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}]$, $L^*_{TUBJND1} = 40 / \log(5) [\log (Y/Y_u)]$ with $Y_u=18$

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

$g^*_5=74$, $g^*_9=70$

$g^*_5=96$, $g^*_9=91$

$L^*_{TUBJND1}$ intended output real output linearized output

n0. i	intended output				real output						linearized output	
	L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.13}$	L^*_{la}	ΔL^*_{la}	
9	27.3	1.0	54.0	1.0	24.4		1.0	48.0	1.0	24.4		
8	20.5	0.875	41.0	0.73	18.0	6.3	0.858	37.2	0.873	18.7	5.6	
7	13.6	0.75	31.2	0.524	11.8	6.2	0.718	29.0	0.747	13.1	5.6	
6	6.8	0.625	23.7	0.368	5.8	6.0	0.583	22.7	0.621	7.5	5.6	
5	0.0	0.5	18.0	0.25	0.0	5.8	0.452	18.0	0.497	2.0	5.5	
4	-6.7	0.375	13.7	0.16	-5.5	5.5	0.328	14.4	0.374	-3.4	5.5	
3	-13.6	0.25	10.4	0.091	-10.7	5.2	0.21	11.7	0.253	-8.8	5.4	
2	-20.4	0.125	7.9	0.039	-15.6	4.9	0.101	9.6	0.132	-14.2	5.4	
1	-27.2	0.0	6.0	0.0	-20.1	4.5	0.0	8.0	0.0	-20.1	5.9	

$\Delta L^*_{0a}=6.8$

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

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