

Equal 9 step grey scaling between $L^*_{0aN}=-34$ & $L^*_{0aW}=34.1$, $Y_{0ref}=4$, normalisation white W

$L^*_{0aN}=-34.0$, $L^*_{0aU}=0.0$, $L^*_{0aW}=34.1$, $Y_{0aN}=6.7$, $Y_{0aU}=20.0$, $Y_{0aW}=60.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=9.0$

$L^*_{taN}=-21.4$, $L^*_{taU}=3.7$, $L^*_{taW}=34.1$, $Y_{taN}=10.0$, $Y_{taU}=22.5$, $Y_{taW}=60.0$, $C_{taY}=Y_{taW}:Y_{taN}=6.0$

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

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}]$, $L^*_{TUBLOG,Ua} = 50 / \log(5) [\log(Y/Y_u)]$ with $Y_u=20$

$g^*_5=100$, $g^*_9=100$

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

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

$L^*_{TUBLOG,Ua}$ 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	34.1	1.0	60.0	1.0	34.1		1.0	60.0	1.0	34.1		
● 8	25.6	0.875	45.6	0.73	26.2	7.9	0.858	46.5	0.873	27.1	7.0	
● 7	17.1	0.75	34.6	0.524	18.4	7.7	0.718	36.2	0.747	20.0	7.0	
● 6	8.5	0.625	26.3	0.368	10.9	7.5	0.583	28.4	0.621	13.0	7.0	
● 5	0.0	0.5	20.0	0.25	3.7	7.3	0.453	22.5	0.497	6.1	6.9	
● 4	-8.4	0.375	15.2	0.16	-3.2	6.9	0.328	18.0	0.374	-0.6	6.8	
● 3	-17.0	0.25	11.5	0.091	-9.7	6.5	0.21	14.6	0.252	-7.4	6.7	
● 2	-25.5	0.125	8.8	0.039	-15.8	6.1	0.101	12.0	0.132	-14.1	6.7	
● 1	-34.0	0.0	6.7	0.0	-21.4	5.6	0.0	10.0	0.0	-21.4	7.3	

$\Delta L^*_{0a}=8.5$

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

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