

Equal 9 step grey scaling between $L^*_{0aN}=-50.0$ and $L^*_{0aW}=50.0$, $Y_{0ref}=1.8$, normalisation grey U

$L^*_{0aN}=-49.9$, $L^*_{0aU}=0.0$, $L^*_{0aW}=50.0$, $Y_{0aN}=3.6$, $Y_{0aU}=18.0$, $Y_{0aW}=90.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=25.0$

$L^*_{taN}=-40.3$, $L^*_{taU}=0.0$, $L^*_{taW}=47.6$, $Y_{taN}=4.9$, $Y_{taU}=18.0$, $Y_{taW}=83.4$, $C_{taY}=Y_{taW}:Y_{taN}=17.0$

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 $Y_u=18$

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

$g^*_5 = 76$, $g^*_9 = 72$

$g^*_5 = 98$, $g^*_9 = 94$

$L^*_{TUBLOG,Ua}$ intended output real output linearized output

50 25 0 -25 -50	n0. i	intended output				real output					linearized output	
		L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.12}$	L^*_{la}	ΔL^*_{la}
	9	50.0	1.0	90.0	1.0	47.6		1.0	83.4	1.0	47.6	
	8	37.5	0.875	60.2	0.655	35.4	12.2	0.861	56.3	0.875	36.7	11.0
	7	25.0	0.75	40.2	0.424	23.4	12.0	0.724	38.2	0.75	25.6	11.0
	6	12.5	0.625	26.9	0.27	11.5	11.8	0.59	26.1	0.624	14.5	11.1
	5	0.0	0.5	18.0	0.167	0.0	11.5	0.458	18.0	0.498	3.5	11.0
	4	-12.4	0.375	12.0	0.098	-11.0	11.1	0.332	12.6	0.373	-7.4	11.0
	3	-24.9	0.25	8.0	0.051	-21.6	10.6	0.212	8.9	0.25	-18.2	10.8
	2	-37.4	0.125	5.4	0.021	-31.4	9.8	0.101	6.5	0.129	-29.0	10.7
	1	-49.9	0.0	3.6	0.0	-40.3	8.9	0.0	4.9	0.0	-40.3	11.3

$\Delta L^*_{0a}=12.5$ (i=1,2,...,8)

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