

Equal 9 step grey scaling between $L^*_{0aN}=-71$ & $L^*_{0aW}=71.5$, $Y_{0ref}=1$, normalisation white W

$L^*_{0aN}=-71.4$, $L^*_{0aU}=0.0$, $L^*_{0aW}=71.5$, $Y_{0aN}=2.0$, $Y_{0aU}=20.0$, $Y_{0aW}=200.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=100.0$
 $L^*_{taN}=-59.0$, $L^*_{taU}=1.4$, $L^*_{taW}=71.5$, $Y_{taN}=3.0$, $Y_{taU}=20.9$, $Y_{taW}=200.0$, $C_{taY}=Y_{taW}:Y_{taN}=67.0$

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 $Y_u=20$

$g^*_5 = 100$, $g^*_9 = 99$

$g^*_5 = 78$, $g^*_9 = 73$

$g^*_5 = 98$, $g^*_9 = 96$

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

real output

linearized output

70	n0. i	intended output				real output					linearized output	
		L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.11}$	L^*_{la}	ΔL^*_{la}
	9	71.5	1.0	200.0	1.0	71.5		1.0	200.0	1.0	71.5	
	8	53.6	0.875	112.5	0.558	53.8	17.8	0.864	112.9	0.877	55.4	16.1
35	7	35.8	0.75	63.2	0.309	36.1	17.7	0.729	63.9	0.752	39.1	16.3
	6	17.9	0.625	35.6	0.169	18.6	17.5	0.595	36.4	0.626	22.7	16.4
	5	0.0	0.5	20.0	0.091	1.4	17.2	0.463	20.9	0.5	6.2	16.5
	4	-17.8	0.375	11.2	0.047	-15.3	16.7	0.334	12.2	0.373	-10.3	16.5
	3	-35.7	0.25	6.3	0.022	-31.3	16.0	0.212	7.3	0.248	-26.6	16.4
-35	2	-53.6	0.125	3.5	0.008	-46.0	14.7	0.099	4.5	0.125	-42.7	16.0
	1	-71.4	0.0	2.0	0.0	-59.0	13.0	0.0	3.0	0.0	-59.0	16.3

$\Delta L^*_{0a} = 17.9$ (i=1,2,...,8)

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