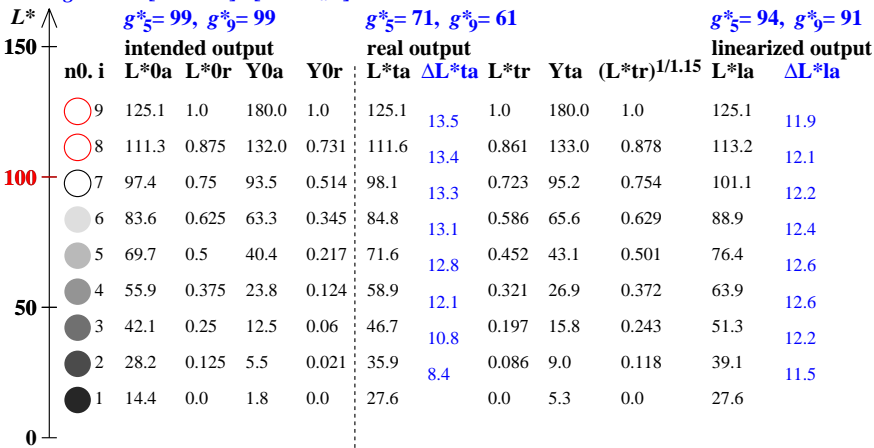**Equal 9 step grey scaling between $L*_{0aN}=14.4$ and $L*_{0aW}=125$, $Y_{0ref}=3.6$, normalisation: white W**

$L*_{0aN}=14.4$, $L*_{0aU}=69.7$, $L*_{0aW}=125.1$, $Y_{0aN}=1.8$, $Y_{0aU}=40.4$, $Y_{0aW}=180.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=100.0$

$L*_{tN}=27.6$, $L*_{taU}=71.6$, $L*_{taW}=125.1$, $Y_{taN}=5.3$, $Y_{taU}=43.1$, $Y_{taW}=180.0$, $C_{taY}=Y_{taN}:Y_{taN}=34.0$

regularity index according to ISO/IEC 15775:2022, Annex G for 5 and 9 steps
$g* = 100 \, [\Delta L*_{min}] / [\Delta L*_{max}]$

$L*$

150 —

$g*_5= 99$, $g*_9= 99$ ⋮ **$g*_5= 71$, $g*_9= 61$** ⋮ **$g*_5= 94$, $g*_9= 91$**

	n0. i	L*0a	L*0r	Y0a	Y0r	L*ta	ΔL*ta	L*tr	Yta	(L*tr)^(1/1.15)	L*la	ΔL*la
			intended output				**real output**				**linearized output**	
○	9	125.1	1.0	180.0	1.0	125.1		1.0	180.0	1.0	125.1	
							13.5					11.9
○	8	111.3	0.875	132.0	0.731	111.6		0.861	133.0	0.878	113.2	
							13.4					12.1
○	7	97.4	0.75	93.5	0.514	98.1		0.723	95.2	0.754	101.1	
							13.3					12.2
◔	6	83.6	0.625	63.3	0.345	84.8		0.586	65.6	0.629	88.9	
							13.1					12.4
◕	5	69.7	0.5	40.4	0.217	71.6		0.452	43.1	0.501	76.4	
							12.8					12.6
●	4	55.9	0.375	23.8	0.124	58.9		0.321	26.9	0.372	63.9	
							12.1					12.6
●	3	42.1	0.25	12.5	0.06	46.7		0.197	15.8	0.243	51.3	
							10.8					12.2
●	2	28.2	0.125	5.5	0.021	35.9		0.086	9.0	0.118	39.1	
							8.4					11.5
●	1	14.4	0.0	1.8	0.0	27.6		0.0	5.3	0.0	27.6	

100 (red)

50 —

0 —

$\Delta L*_{ta}=13.8$ (i=1,2,...,9)

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

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