Equal 9 step grey scaling between L^*_{0aN}=17.9 and L^*_{0aW}=95.9, Y_{0ref}=2.5, normalisation white *W*

L^*_{0aN}=17.9, L^*_{0aU}=56.9, L^*_{0aW}=96.0, Y_{0aN}=2.5, Y_{0aU}=24.9, Y_{0aW}=90.0, C_{0aY}=Y_{0aW}:Y_{0aN}=36.0
L^*_{taN}=26.3, L^*_{taU}=58.6, L^*_{taW}=96.0, Y_{taN}=4.9, Y_{taU}=26.6, Y_{taW}=90.0, C_{taY}=Y_{taW}:Y_{taN}=18.5

Regularity index according to ISO/IEC 15775:2022, annex G for 5 and 9 steps
g^* = 100 [ΔL^*_{min}] / [ΔL^*_{max}], L^*_{CIELAB} = 116 [Y/Y_n]$^{1/3}$ − 16 with Y >= 0,882, Y_n=100

L^*_{CIELAB}		g^*_5= 99, g^*_9= 99				g^*_5= 78, g^*_9= 72					g^*_5= 97, g^*_9= 97	
		intended output				real output					linearized output	
	n0. i	L*0a	L*0r	Y0a	Y0r	L*ta	ΔL*ta	L*tr	Yta	(L*tr)$^{1/1.11}$	L*la	ΔL*la
100	9	96.0	1.0	90.0	1.0	96.0		1.0	90.0	1.0	96.0	
							9.5					8.6
	8	86.2	0.875	68.5	0.754	86.5		0.864	69.0	0.877	87.4	
							9.4					8.7
75	7	76.5	0.75	50.7	0.55	77.1		0.729	51.7	0.752	78.7	
							9.3					8.7
	6	66.7	0.625	36.3	0.386	67.8		0.595	37.7	0.627	70.0	
							9.2					8.8
	5	56.9	0.5	24.9	0.256	58.6		0.464	26.6	0.5	61.2	
50							8.9					8.8
	4	47.2	0.375	16.2	0.156	49.7		0.335	18.2	0.374	52.4	
							8.6					8.8
	3	37.4	0.25	9.8	0.083	41.1		0.212	11.9	0.247	43.6	
							7.9					8.6
25	2	27.7	0.125	5.3	0.032	33.2		0.098	7.6	0.124	35.0	
							6.8					8.6
0	1	17.9	0.0	2.5	0.0	26.3		0.0	4.9	0.0	26.3	

ΔL^*_{0a}=9.7 (i=1,2,...,8) normalisation: Y_{taiW}=Y_{0aW} $\frac{Y_{0ai}+Y_{0ref}}{Y_{0aW}+Y_{0ref}}$

eeq80−3n

Equal 9 step grey scaling between L^*_{0aN}=17.9 and L^*_{0aW}=95.9, Y_{0ref}=20.0, normalisation white *W*

L^*_{0aN}=17.9, L^*_{0aU}=56.9, L^*_{0aW}=96.0, Y_{0aN}=2.5, Y_{0aU}=24.9, Y_{0aW}=90.0, C_{0aY}=Y_{0aW}:Y_{0aN}=36.0
L^*_{taN}=50.0, L^*_{taU}=67.1, L^*_{taW}=96.0, Y_{taN}=18.4, Y_{taU}=36.7, Y_{taW}=90.0, C_{taY}=Y_{taW}:Y_{taN}=4.9

Regularity index according to ISO/IEC 15775:2022, annex G for 5 and 9 steps
g^* = 100 [ΔL^*_{min}] / [ΔL^*_{max}], L^*_{CIELAB} = 116 [Y/Y_n]$^{1/3}$ − 16 with Y >= 0,882, Y_n=100

L^*_{CIELAB}		g^*_5= 99, g^*_9= 99				g^*_5= 42, g^*_9= 33					g^*_5= 97, g^*_9= 86	
		intended output				real output					linearized output	
	n0. i	L*0a	L*0r	Y0a	Y0r	L*ta	ΔL*ta	L*tr	Yta	(L*tr)$^{1/1.41}$	L*la	ΔL*la
100	9	96.0	1.0	90.0	1.0	96.0		1.0	90.0	1.0	96.0	
							7.8					5.7
	8	86.2	0.875	68.5	0.754	88.1		0.829	72.4	0.876	90.3	
							7.5					5.8
75	7	76.5	0.75	50.7	0.55	80.6		0.666	57.8	0.75	84.5	
							7.1					5.8
	6	66.7	0.625	36.3	0.386	73.6		0.512	46.0	0.623	78.7	
							6.5					5.8
	5	56.9	0.5	24.9	0.256	67.1		0.371	36.7	0.496	72.8	
50							5.8					5.8
	4	47.2	0.375	16.2	0.156	61.3		0.246	29.6	0.371	67.1	
							4.8					5.6
	3	37.4	0.25	9.8	0.083	56.4		0.14	24.4	0.25	61.5	
							3.8					5.3
25	2	27.7	0.125	5.3	0.032	52.6		0.058	20.7	0.134	56.1	
							2.7					6.1
0	1	17.9	0.0	2.5	0.0	50.0		0.0	18.4	0.0	50.0	

ΔL^*_{0a}=9.7 (i=1,2,...,8) normalisation: Y_{taiW}=Y_{0aW} $\frac{Y_{0ai}+Y_{0ref}}{Y_{0aW}+Y_{0ref}}$

eeq81−3n

Equal 9 step grey scaling between L^*_{0aN}=17.9 and L^*_{0aW}=95.9, Y_{0ref}=10.0, normalisation white *W*

L^*_{0aN}=17.9, L^*_{0aU}=56.9, L^*_{0aW}=96.0, Y_{0aN}=2.5, Y_{0aU}=24.9, Y_{0aW}=90.0, C_{0aY}=Y_{0aW}:Y_{0aN}=36.0
L^*_{taN}=40.0, L^*_{taU}=62.8, L^*_{taW}=96.0, Y_{taN}=11.2, Y_{taU}=31.4, Y_{taW}=90.0, C_{taY}=Y_{taW}:Y_{taN}=8.0

Regularity index according to ISO/IEC 15775:2022, annex G for 5 and 9 steps
g^* = 100 [ΔL^*_{min}] / [ΔL^*_{max}], L^*_{CIELAB} = 116 [Y/Y_n]$^{1/3}$ − 16 with Y >= 0,882, Y_n=100

L^*_{CIELAB}		g^*_5= 99, g^*_9= 99				g^*_5= 53, g^*_9= 45					g^*_5= 97, g^*_9= 93	
		intended output				real output					linearized output	
	n0. i	L*0a	L*0r	Y0a	Y0r	L*ta	ΔL*ta	L*tr	Yta	(L*tr)$^{1/1.29}$	L*la	ΔL*la
100	9	96.0	1.0	90.0	1.0	96.0		1.0	90.0	1.0	96.0	
							8.7					6.9
	8	86.2	0.875	68.5	0.754	87.3		0.845	70.6	0.877	89.1	
							8.5					7.0
75	7	76.5	0.75	50.7	0.55	78.8		0.693	54.6	0.752	82.1	
							8.2					7.1
	6	66.7	0.625	36.3	0.386	70.6		0.547	41.6	0.626	75.0	
							7.8					7.1
	5	56.9	0.5	24.9	0.256	62.8		0.408	31.4	0.499	67.9	
50							7.2					7.1
	4	47.2	0.375	16.2	0.156	55.6		0.279	23.5	0.372	60.8	
							6.4					7.0
	3	37.4	0.25	9.8	0.083	49.2		0.165	17.8	0.247	53.8	
							5.3					6.7
25	2	27.7	0.125	5.3	0.032	43.9		0.071	13.8	0.128	47.2	
							3.9					7.1
0	1	17.9	0.0	2.5	0.0	40.0		0.0	11.2	0.0	40.0	

ΔL^*_{0a}=9.7 (i=1,2,...,8) normalisation: Y_{taiW}=Y_{0aW} $\frac{Y_{0ai}+Y_{0ref}}{Y_{0aW}+Y_{0ref}}$

eeq80−7n

Equal 9 step grey scaling between L^*_{0aN}=17.9 and L^*_{0aW}=95.9, Y_{0ref}=90.0, normalisation white *W*

L^*_{0aN}=17.9, L^*_{0aU}=56.9, L^*_{0aW}=96.0, Y_{0aN}=2.5, Y_{0aU}=24.9, Y_{0aW}=90.0, C_{0aY}=Y_{0aW}:Y_{0aN}=36.0
L^*_{taN}=73.7, L^*_{taU}=80.4, L^*_{taW}=96.0, Y_{taN}=46.2, Y_{taU}=57.4, Y_{taW}=90.0, C_{taY}=Y_{taW}:Y_{taN}=1.9

Regularity index according to ISO/IEC 15775:2022, annex G for 5 and 9 steps
g^* = 100 [ΔL^*_{min}] / [ΔL^*_{max}], L^*_{CIELAB} = 116 [Y/Y_n]$^{1/3}$ − 16 with Y >= 0,882, Y_n=100

L^*_{CIELAB}		g^*_5= 99, g^*_9= 99				g^*_5= 25, g^*_9= 19					g^*_5= 89, g^*_9= 73	
		intended output				real output					linearized output	
	n0. i	L*0a	L*0r	Y0a	Y0r	L*ta	ΔL*ta	L*tr	Yta	(L*tr)$^{1/1.68}$	L*la	ΔL*la
100	9	96.0	1.0	90.0	1.0	96.0		1.0	90.0	1.0	96.0	
							4.6					2.9
	8	86.2	0.875	68.5	0.754	91.3		0.791	79.2	0.87	93.1	
							4.2					2.9
75	7	76.5	0.75	50.7	0.55	87.2		0.603	70.3	0.741	90.2	
							3.6					2.8
	6	66.7	0.625	36.3	0.386	83.5		0.44	63.1	0.613	87.4	
							3.1					2.7
	5	56.9	0.5	24.9	0.256	80.4		0.301	57.4	0.49	84.6	
50							2.5					2.6
	4	47.2	0.375	16.2	0.156	77.9		0.189	53.1	0.371	82.0	
							1.9					2.5
	3	37.4	0.25	9.8	0.083	76.0		0.103	49.9	0.258	79.5	
							1.4					2.4
25	2	27.7	0.125	5.3	0.032	74.6		0.041	47.7	0.149	77.0	
							0.9					3.3
0	1	17.9	0.0	2.5	0.0	73.7		0.0	46.2	0.0	73.7	

ΔL^*_{0a}=9.7 (i=1,2,...,8) normalisation: Y_{taiW}=Y_{0aW} $\frac{Y_{0ai}+Y_{0ref}}{Y_{0aW}+Y_{0ref}}$

eeq81−7n

Test chart eeq8; Equal 9 step grey scaling for four display reflections Y_{ref}= 2,5, 10, 20, 90, and black $L^*_{N,CIELAB}$=17.92, Y_N=2.5 and white $L^*_{W,CIELAB}$=95.99, Y_W=90, normalisation: white *W*