

<http://farbe.li.tu-berlin.de/eep7/eep710na.txt> /.ps; only vector graphic VG; start output
 see similar files: <http://farbe.li.tu-berlin.de/eep7/eep7.htm>

Equal 9 step grey scaling between $L^*_{0aN}=14.4$ and $L^*_{0aW}=95.9$, $Y_{0ref}=3.6$, normalisation grey U

$L^*_{0aN}=14.4$, $L^*_{0aU}=55.2$, $L^*_{0aW}=96.0$, $Y_{0aN}=1.8$, $Y_{0aU}=23.1$, $Y_{0aW}=90.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=50.0$
 $L^*_{taN}=25.8$, $L^*_{taU}=55.2$, $L^*_{taW}=92.1$, $Y_{taN}=4.7$, $Y_{taU}=23.1$, $Y_{taW}=81.0$, $C_{taY}=Y_{taW}:Y_{taN}=17.3$

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

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}]$, $L^*_{CIELAB} = 116 [Y/Y_n]^{1/3} - 16$ with $Y \geq 0.882$, $Y_n=100$

L^*_{CIELAB} n0.i	intended output				real output				linearized output			
	L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.18}$	L^*_{la}	ΔL^*_{la}	
9	96.0	1.0	90.0	1.0	92.1	9.4	1.0	81.0	1.0	92.1	8.1	
8	85.8	0.875	67.6	0.746	82.7	9.3	0.858	61.6	0.878	84.0	8.2	
7	75.6	0.75	49.2	0.538	73.4	9.2	0.717	45.7	0.754	75.8	8.3	
6	65.4	0.625	34.5	0.371	64.2	9.0	0.579	33.0	0.628	67.4	8.4	
5	55.2	0.5	23.1	0.242	55.2	8.6	0.443	23.1	0.501	59.0	8.5	
4	45.0	0.375	14.5	0.144	46.6	8.0	0.313	15.7	0.373	50.5	8.4	
3	34.8	0.25	8.4	0.075	38.5	7.1	0.192	10.4	0.246	42.1	8.2	
2	24.6	0.125	4.3	0.028	31.4	5.6	0.085	6.8	0.123	33.9	8.1	
1	14.4	0.0	1.8	0.0	25.8		0.0	4.7	0.0	25.8		

$\Delta L^*_{0a}=10.2$ (i=1,2,...,8) normalisation: $Y_{taiU}=Y_{0aU} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aU}+Y_{0ref}}$

eep70-3n

Equal 9 step grey scaling between $L^*_{0aN}=14.4$ and $L^*_{0aW}=95.9$, $Y_{0ref}=0.9$, normalisation grey U

$L^*_{0aN}=14.4$, $L^*_{0aU}=55.2$, $L^*_{0aW}=96.0$, $Y_{0aN}=1.8$, $Y_{0aU}=23.1$, $Y_{0aW}=90.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=50.0$
 $L^*_{taN}=18.4$, $L^*_{taU}=55.2$, $L^*_{taW}=94.9$, $Y_{taN}=2.6$, $Y_{taU}=23.1$, $Y_{taW}=87.5$, $C_{taY}=Y_{taW}:Y_{taN}=33.6$

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

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}]$, $L^*_{CIELAB} = 116 [Y/Y_n]^{1/3} - 16$ with $Y \geq 0.882$, $Y_n=100$

L^*_{CIELAB} n0.i	intended output				real output				linearized output			
	L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.06}$	L^*_{la}	ΔL^*_{la}	
9	96.0	1.0	90.0	1.0	94.9	10.0	1.0	87.5	1.0	94.9	9.5	
8	85.8	0.875	67.6	0.746	84.9	10.0	0.869	65.9	0.876	85.5	9.5	
7	75.6	0.75	49.2	0.538	75.0	9.9	0.739	48.2	0.751	75.9	9.6	
6	65.4	0.625	34.5	0.371	65.1	9.9	0.61	34.1	0.626	66.3	9.6	
5	55.2	0.5	23.1	0.242	55.2	9.9	0.481	23.1	0.5	56.7	9.6	
4	45.0	0.375	14.5	0.144	45.4	9.7	0.354	14.9	0.374	47.0	9.7	
3	34.8	0.25	8.4	0.075	35.9	9.5	0.229	8.9	0.248	37.3	9.6	
2	24.6	0.125	4.3	0.028	26.7	8.3	0.109	5.0	0.123	27.8	9.6	
1	14.4	0.0	1.8	0.0	18.4		0.0	2.6	0.0	18.4		

$\Delta L^*_{0a}=10.2$ (i=1,2,...,8) normalisation: $Y_{taiU}=Y_{0aU} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aU}+Y_{0ref}}$

eep71-3n

Equal 9 step grey scaling between $L^*_{0aN}=14.4$ and $L^*_{0aW}=95.9$, $Y_{0ref}=0.4$, normalisation grey U

$L^*_{0aN}=14.4$, $L^*_{0aU}=55.2$, $L^*_{0aW}=96.0$, $Y_{0aN}=1.8$, $Y_{0aU}=23.1$, $Y_{0aW}=90.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=50.0$
 $L^*_{taN}=16.3$, $L^*_{taU}=55.2$, $L^*_{taW}=95.5$, $Y_{taN}=2.2$, $Y_{taU}=23.1$, $Y_{taW}=88.9$, $C_{taY}=Y_{taW}:Y_{taN}=41.1$

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

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}]$, $L^*_{CIELAB} = 116 [Y/Y_n]^{1/3} - 16$ with $Y \geq 0.882$, $Y_n=100$

L^*_{CIELAB} n0.i	intended output				real output				linearized output			
	L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.03}$	L^*_{la}	ΔL^*_{la}	
9	96.0	1.0	90.0	1.0	95.5	10.1	1.0	88.9	1.0	95.5	9.9	
8	85.8	0.875	67.6	0.746	85.4	10.1	0.872	66.8	0.875	85.6	9.9	
7	75.6	0.75	49.2	0.538	75.3	10.1	0.745	48.8	0.75	75.8	9.9	
6	65.4	0.625	34.5	0.371	65.2	10.0	0.618	34.3	0.625	65.8	9.9	
5	55.2	0.5	23.1	0.242	55.2	10.0	0.491	23.1	0.5	55.9	9.9	
4	45.0	0.375	14.5	0.144	45.2	9.9	0.365	14.7	0.374	46.0	9.9	
3	34.8	0.25	8.4	0.075	35.3	9.7	0.24	8.6	0.248	36.0	9.9	
2	24.6	0.125	4.3	0.028	25.6	9.3	0.117	4.6	0.124	26.1	9.9	
1	14.4	0.0	1.8	0.0	16.3		0.0	2.2	0.0	16.3		

$\Delta L^*_{0a}=10.2$ (i=1,2,...,8) normalisation: $Y_{taiU}=Y_{0aU} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aU}+Y_{0ref}}$

eep70-7n

Equal 9 step grey scaling between $L^*_{0aN}=14.4$ and $L^*_{0aW}=95.9$, $Y_{0ref}=1.8$, normalisation grey U

$L^*_{0aN}=14.4$, $L^*_{0aU}=55.2$, $L^*_{0aW}=96.0$, $Y_{0aN}=1.8$, $Y_{0aU}=23.1$, $Y_{0aW}=90.0$, $C_{0aY}=Y_{0aW}:Y_{0aN}=50.0$
 $L^*_{taN}=21.4$, $L^*_{taU}=55.2$, $L^*_{taW}=93.9$, $Y_{taN}=3.3$, $Y_{taU}=23.1$, $Y_{taW}=85.2$, $C_{taY}=Y_{taW}:Y_{taN}=25.5$

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

$g^* = 100 [\Delta L^*_{min}] / [\Delta L^*_{max}]$, $L^*_{CIELAB} = 116 [Y/Y_n]^{1/3} - 16$ with $Y \geq 0.882$, $Y_n=100$

L^*_{CIELAB} n0.i	intended output				real output				linearized output			
	L^*_{0a}	L^*_{0r}	Y_{0a}	Y_{0r}	L^*_{ta}	ΔL^*_{ta}	L^*_{tr}	Y_{ta}	$(L^*_{tr})^{1/1.1}$	L^*_{la}	ΔL^*_{la}	
9	96.0	1.0	90.0	1.0	93.9	9.8	1.0	85.2	1.0	93.9	8.9	
8	85.8	0.875	67.6	0.746	84.2	9.7	0.865	64.4	0.877	85.0	9.0	
7	75.6	0.75	49.2	0.538	74.4	9.7	0.731	47.3	0.753	76.0	9.1	
6	65.4	0.625	34.5	0.371	64.7	9.5	0.598	33.7	0.627	66.9	9.2	
5	55.2	0.5	23.1	0.242	55.2	9.3	0.466	23.1	0.501	57.7	9.2	
4	45.0	0.375	14.5	0.144	45.9	9.0	0.337	15.2	0.374	48.5	9.2	
3	34.8	0.25	8.4	0.075	36.9	8.3	0.213	9.5	0.247	39.3	9.0	
2	24.6	0.125	4.3	0.028	28.5	7.1	0.098	5.6	0.122	30.3	8.9	
1	14.4	0.0	1.8	0.0	21.4		0.0	3.3	0.0	21.4		

$\Delta L^*_{0a}=10.2$ (i=1,2,...,8) normalisation: $Y_{taiU}=Y_{0aU} \frac{Y_{0ai}+Y_{0ref}}{Y_{0aU}+Y_{0ref}}$

eep71-7n

Test chart eep7; Equal 9 step grey scaling for four display reflections $Y_{ref}= 3,6, 0,4, 0,9, 1,8$, and black $L^*_{N,CIELAB}=14.4$, $Y_N=1.8$ and white $L^*_{W,CIELAB}=95.99$, $Y_W=90$, normalisation: grey U

see similar files of the whole serie: <http://farbe.li.tu-berlin.de/eeps.htm>
 technical information: <http://farbe.li.tu-berlin.de> or <http://color.li.tu-berlin.de>

TUB registration: 20230701-eep7/eep710na.txt /.ps
 application for evaluation and measurement of display or print output
 TUB material: code=rh4ta