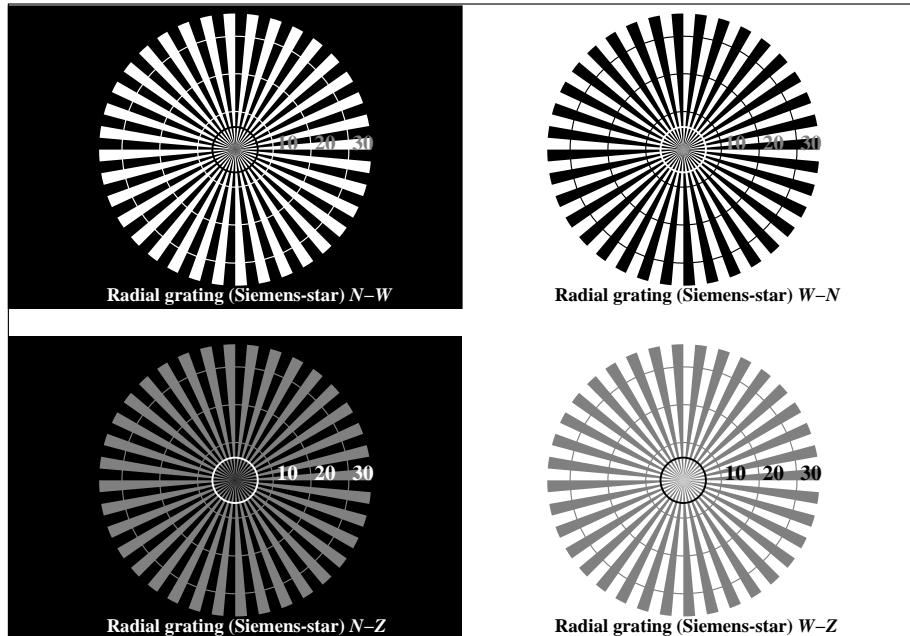
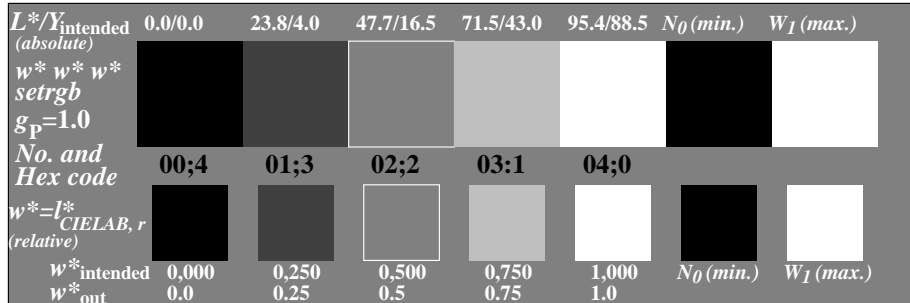


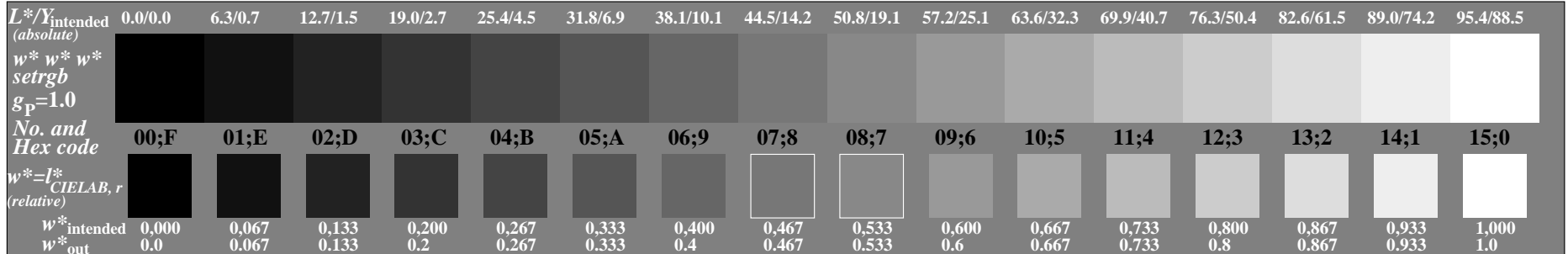
See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>  
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1.1, CIELAB



OE510-3N, Picture A1-130-0: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

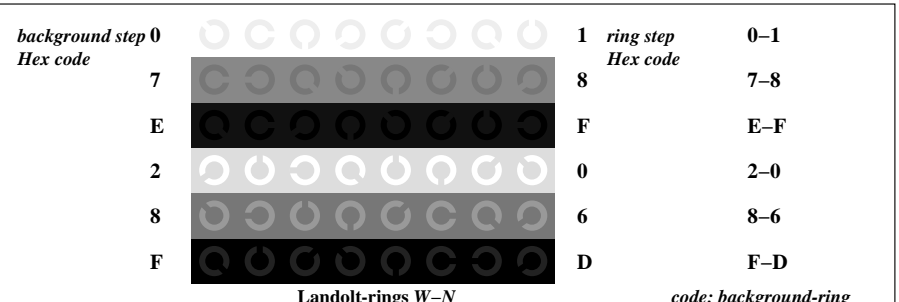


OE510-5N, Picture A2-130-0: 5 equidistant  $L^*$ -grey steps+ $N_0$ + $W_1$ ; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

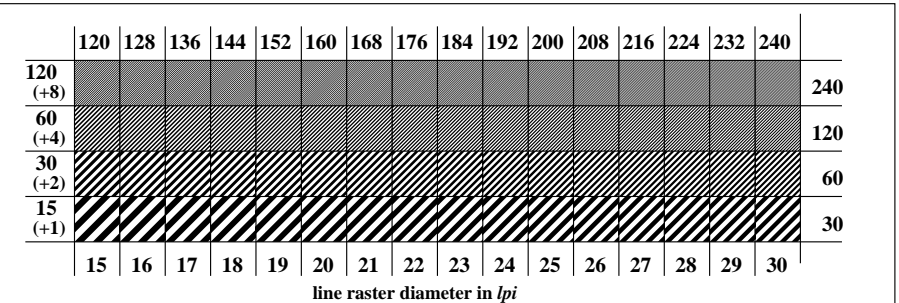


OE510-7N, Picture A3-130-0: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

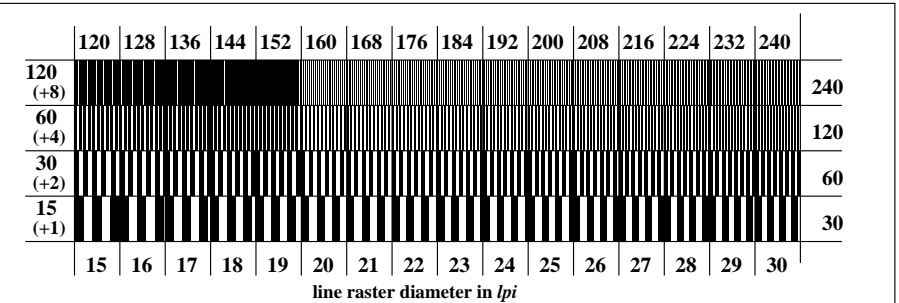
OE51: similar ME16 according to ISO 9241-306; 1MR, DH  
Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46



OE511-1N, Picture A4-130-0: Landolt-rings W-N; PS operator:  $w^* w^* w^* \text{setrgbcolor}$



OE511-3N, Picture A5-130-0: Line raster under 45° (or 135°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$



OE511-5N, Picture A6-130-0: Line raster under 90° (or 0°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

input:  $w$  ( $\rightarrow \text{rgb}^*_d$ )  $\text{setgray}$   
output 130-0:  $g_p=1.0$ ;  $g_N=1.0$

**Test for the best visual linearized output of Picture A7-130-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**  
**Test of the radial grating according to picture A1-130-0**  
**N-W-radial grating:** Is the resolution diameter < 6 mm? Yes/No  
 Test with magnifying glass (e.g. 6x) resolution diameter ..... mm  
**W-N-radial grating:** Is the resolution diameter < 6 mm? Yes/No  
 Test with magnifying glass (e.g. 6x) resolution diameter ..... mm  
**N-Z-radial grating:** Is the resolution diameter < 6 mm? Yes/No  
 Test with magnifying glass (e.g. 6x) resolution diameter ..... mm  
**W-Z-radial grating:** Is the resolution diameter < 6 mm? Yes/No  
 Test with magnifying glass (e.g. 6x) resolution diameter ..... mm  
**Test of 5 visual equidistant L\*-grey steps according to picture A2-130-0**  
 Are the 5 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? of the given 5 steps: .... Steps  
**Test of 16 visual equidistant L\*-grey steps according to picture A3-130-0**  
 Are the 16 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? of the given 16 steps: .... Steps

Part 1 OE510-3N-130-1

**Documentation of file format, hardware and software for this test:**  
**PDF-File:** <http://130.149.60.45/farbmetrik/OE51/OE51L0NP.PDF> underline Yes/No  
**PS-File:** <http://130.149.60.45/farbmetrik/OE51/OE51L0NA.PS> or underline Yes/No

**Used computer operating system:**  
 either one of Windows/Mac/Unix/other and version:.....  
**This evaluation is for the device output:** underline monitor/data projector/printer  
 Device model, driver and version:.....  
**Device output with PDF/PS-file:** underline PDF/PS-file  
**For device output with PDF-file OE51L0NP.PDF:**  
 either PDF-file transfer "download, copy" to PDF device.....  
 or with computer system interpretation by "Display-PDF":.....  
 or with software e. g. Adobe-Reader/-Acrobat and version:.....  
 or with software e. g. Ghostscript and version:.....  
**For device output with PS-file OE51L0NA.PS:**  
 either PS-file transfer "download, copy" to PS device.....  
 or with computer system interpretation by "Display-PS":.....  
 or with software e. g. Ghostscript and version:.....  
 or with software e. g. Mac-Yap and version:.....  
 Special remarks: Special remarks, e. g. output of Landscape (L)  
 .....  
 .....

Part 3 OE510-7N-130-1

OE51: Form A for test chart according to ISO 9241-306; 1MR, DH input:  $w \rightarrow rgb_d$  setgray  
 Viewing  $Y$  contrast  $Y_W: Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46 output 130-1:  $g_P=1.0$ ;  $g_N=1.0$

**Test for the best visual linearized output of Picture A7-130-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**  
**Test of the Landolt-rings N-W according to picture A4-130-0**  
**N-W-radial grating:**  
 Is the recognition frequency of the Landolt-rings > 50% (5 of 8 at least)?  
 background – ring  
 0 – 1 Yes/No  
 7 – 8 Yes/No  
 E – F Yes/No  
 2 – 0 Yes/No  
 8 – 6 Yes/No  
 F – D Yes/No  
**Test of the radial grating under 45° according to picture A5-130-0**  
 Can equally spaced lines be seen?  
 Visual testing: for radial diameter from 15 to 60 lpi Yes/No  
 Test with a magnifying glass (e.g. 6x): – from 15 lpi: to ..... lpi  
**Test of the radial grating under 90° according to picture A6-130-0**  
 Can equally spaced lines be seen?  
 Visual testing: for radial diameter from 15 to 60 lpi Yes/No  
 Test with a magnifying glass (e.g. 6x): – from 15 lpi: to ..... lpi

Part 2 OE511-3N-130-1

**Documentation of assessor colour vision properties for visual assessment**  
 The assessor has normal colour vision according to one test: underline Yes/No  
 either according to DIN 6160:1996 with Anomaloskop of Nagel underline Yes/unknown  
 or with test charts using colour points according to Ishihara underline Yes/unknown  
 or tested with, please specify: ..... underline Yes/unknown

**For visual evaluation of the display (monitor, data projector) output**  
 Office workplace illumination is daylight (clouded/north sky) underline Yes/No  
**PDF file:** <http://130.149.60.45/farbmetrik/OE51/OE51F1P2.PDF> underline Yes/No  
**PS file:** <http://130.149.60.45/farbmetrik/OE51/OE51F1P2.PS> underline Yes/No  
**Picture A7-130-2: contrast range:** (>F:0) (F:0) (E:0) (D:0) (C:0) (A:0) (9:0) (7:0) (5:0) (3:0) (<3:0)  
 compare standard print output according to ISO/IEC 15775 with range F:0 underline range  
 Remark: In daylighted offices the contrast range is in many cases:  
 on display between: >F:0 and E:0 (monitor), D:0 and 3:0 (data projector)

**Only for optional colorimetric specification with PDF/PS file output**

**PDF-File:** <http://130.149.60.45/farbmetrik/OE51/OE51F1P2.PDF> underline Yes/No  
**picture A7-130-2**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE51/OE51F1P2.PS> or underline Yes/No  
**picture A7-130-2**

**colour measurement and specification for:**  
 CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: underline Yes/No  
 If No, please give other parameters: .....

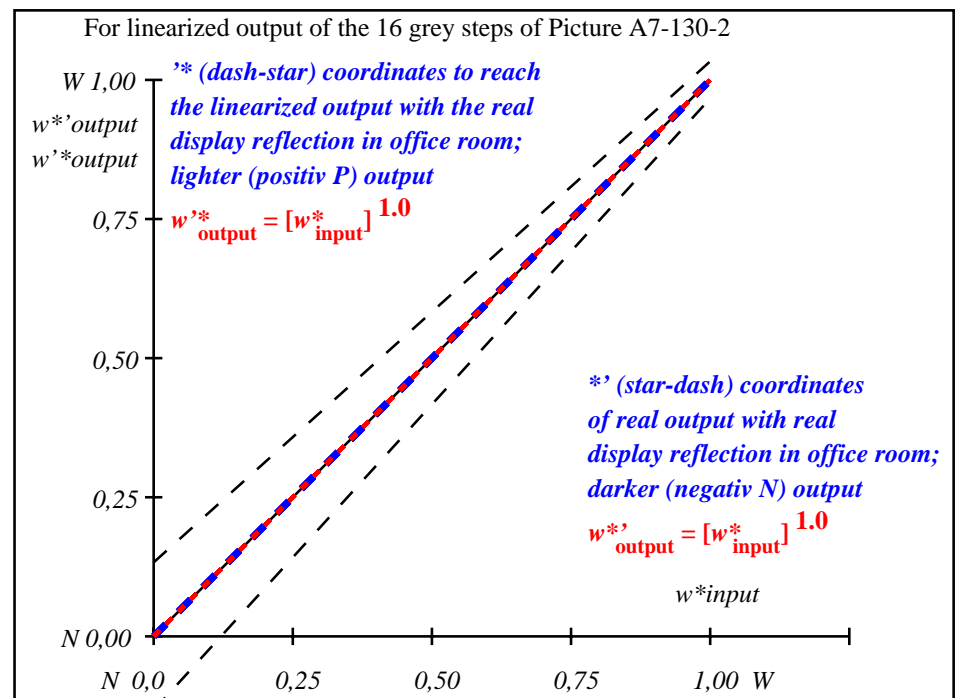
**Colorimetric specification with PS file for colours in the columns A to T**  
 Exchange of CIELAB data in file [www.ps.bam.de/De17/10L/L17e00NP.PS](http://www.ps.bam.de/De17/10L/L17e00NP.PS) and transfer  
 of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF underline Yes/No  
 If No, please describe other method: .....

Part 4 OE511-7N-130-1

See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>  
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1, CIELAB

i	LAB*ref	I*out	LAB*out	LAB*out/c-ref	ΔE*	Start output S1
1	0.0	0.0	0.0	0.0	0.0	0.01
2	6.36	0.0	0.07	6.36	0.0	0.01
3	12.72	0.0	0.13	12.72	0.0	0.01
4	19.08	0.0	0.2	19.08	0.0	0.01
5	25.44	0.0	0.27	25.44	0.0	0.01
6	31.8	0.0	0.33	31.8	0.0	0.01
7	38.16	0.0	0.4	38.16	0.0	0.01
8	44.52	0.0	0.47	44.52	0.0	0.01
9	50.89	0.0	0.53	50.89	0.0	0.01
10	57.25	0.0	0.6	57.25	0.0	0.01
11	63.61	0.0	0.67	63.61	0.0	0.01
12	69.97	0.0	0.73	69.97	0.0	0.01
13	76.33	0.0	0.8	76.33	0.0	0.01
14	82.69	0.0	0.87	82.69	0.0	0.01
15	89.05	0.0	0.93	89.05	0.0	0.01
16	95.41	0.0	1.0	95.41	0.0	0.01
17	0.0	0.0	0.0	0.0	0.0	0.01
18	23.85	0.0	0.25	23.85	0.0	0.01
19	47.71	0.0	0.5	47.71	0.0	0.01
20	71.56	0.0	0.75	71.56	0.0	0.01
21	95.41	0.0	1.0	95.41	0.0	0.01
Mean lightness difference (16 steps)						ΔE* <sub>CIELAB</sub> = 0.0
Mean lightness difference (5 steps)						ΔE* <sub>CIELAB</sub> = 0.0
Mean colour reproduction index:						R* <sub>ab,m</sub> = 100

OE510-3N-130-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE511-3N-130-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y^*_{intended}$ (absolute)	0.0/0.0	6.4/0.7	12.7/1.5	19.1/2.8	25.4/4.6	31.8/7.0	38.2/10.2	44.5/14.2	50.9/19.2	57.2/25.2	63.6/32.3	70.0/40.7	76.3/50.4	82.7/61.6	89.0/74.3	95.4/88.6
$w^* w^* w^*$ setrgb g <sub>p</sub> =1.0																
No. and Hex code	00;F	01;E	02;D	03;C	04;B	05;A	06;9	07;8	08;7	09;6	10;5	11;4	12;3	13;2	14;1	15;0
$w^* = [L^*_{CIELAB, r}]$ (relative)																
$w^*_{intended}$	0.000	0.067	0.133	0.200	0.267	0.333	0.400	0.467	0.533	0.600	0.667	0.733	0.800	0.867	0.933	1.000
$w^*_{out}$	0.0	0.067	0.133	0.2	0.267	0.333	0.4	0.467	0.533	0.6	0.667	0.733	0.8	0.867	0.933	1.0

OE510-7N, Picture A7-130-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

OE51: In-output relation according to ISO 9241-306; 1MR, DH  
Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

input:  $w$  ( $\rightarrow rgb^*_d$ ) setgray  
output 130-2:  $g_p=1.0$ ;  $g_N=1.0$

TUB registration: 20110801-OE51/OE51L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=th4ta