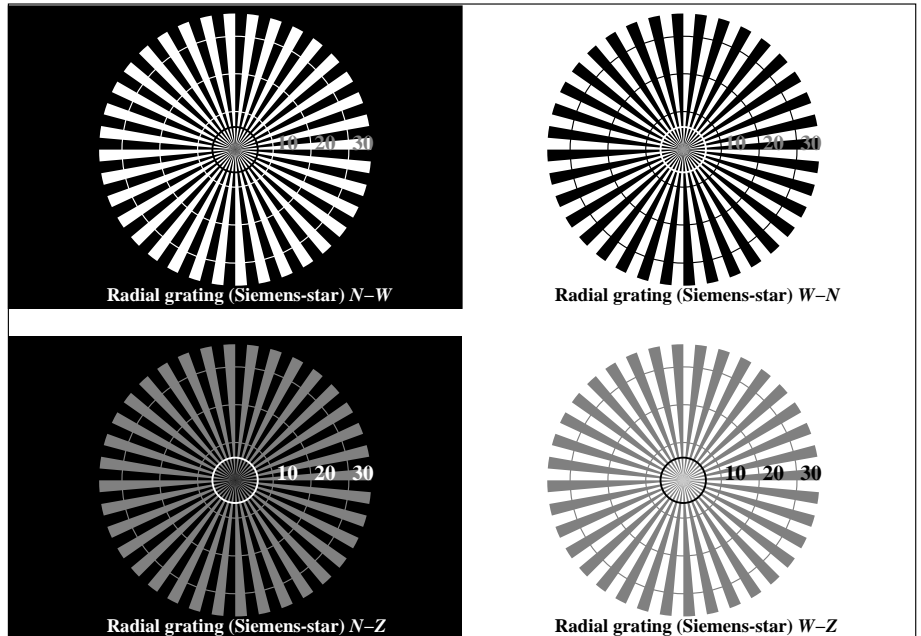
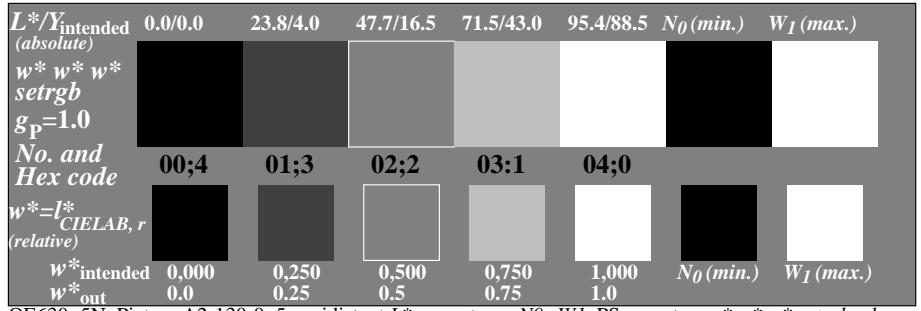


See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>  
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1.1, CIILAB

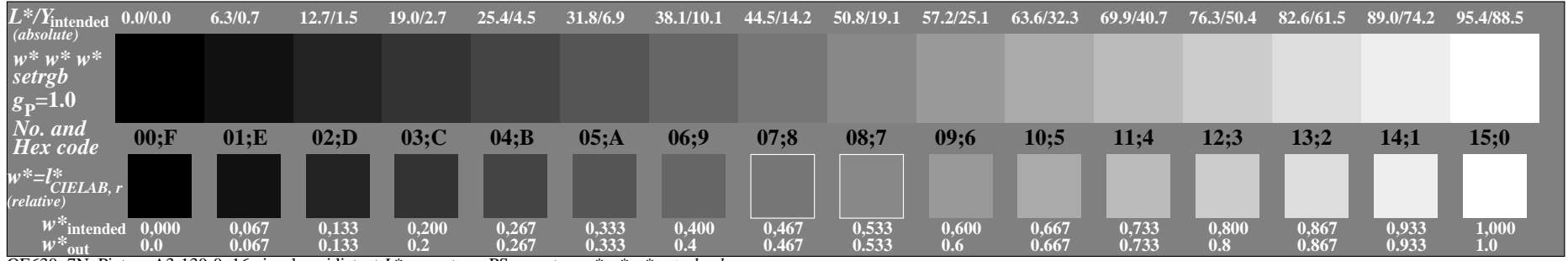
TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thata



OE630-3N, Picture A1-130-0: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

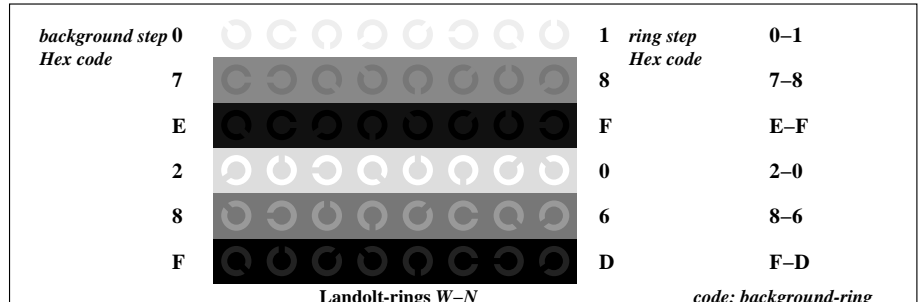


OE630-5N, Picture A2-130-0: 5 equidistant  $L^*$ -grey steps+ $N_0$ + $W_1$ ; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

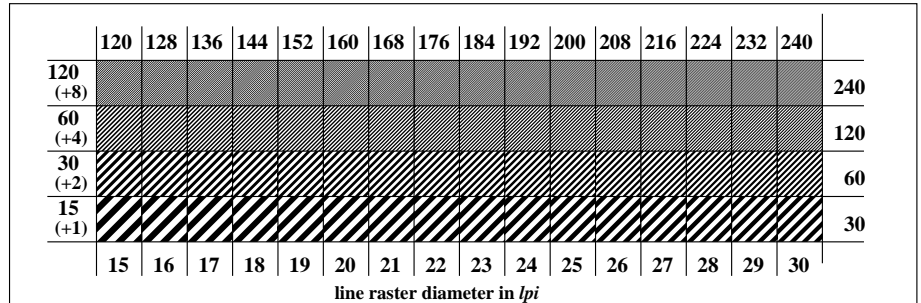


OE630-7N, Picture A3-130-0: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

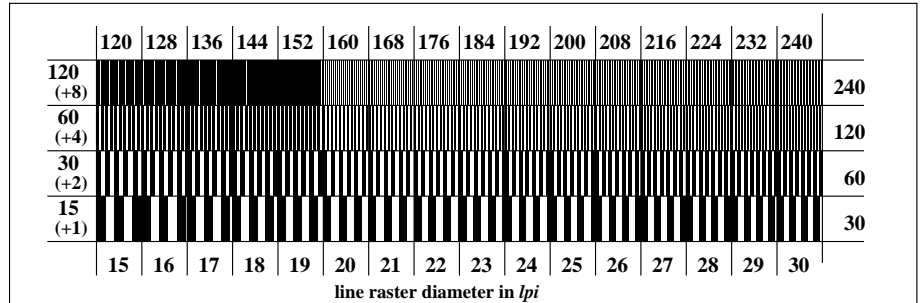
OE63: similar ME16 according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46



OE631-1N, Picture A4-130-0: Landolt-rings W-N; PS operator:  $w^* w^* w^* \text{setrgbcolor}$



OE631-3N, Picture A5-130-0: Line raster under 45° (or 135°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$



OE631-5N, Picture A6-130-0: Line raster under 90° (or 0°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

input:  $rgb (-> rgb^*_{de}) \text{setrgbcolor}$   
 output 130-0:  $g_p=1.0$ ;  $g_N=1.0$

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, CIHLAB

**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? ..... Steps  
 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? ..... Steps  
 of the given 16 steps: ..... Steps

Part 1 OE630-3N-130-1

**Documentation of file format, hardware and software for this test:**

**PDF-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NP.PDF> underline Yes/No

**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NA.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 OE63L0NP.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 OE63L0NA.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 OE630-7N-130-1

**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 OE631-3N-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/OE63/OE63F1P2.PDF> underline Yes/No  
**PS file:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.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/OE63/OE63F1P2.PDF> underline Yes/No  
**picture A7-130-2**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.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 OE631-7N-130-1

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=thata

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

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thadata

i	LAB*ref	I*out	LAB*out	LAB*out/c-ref	$\Delta E^*$	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

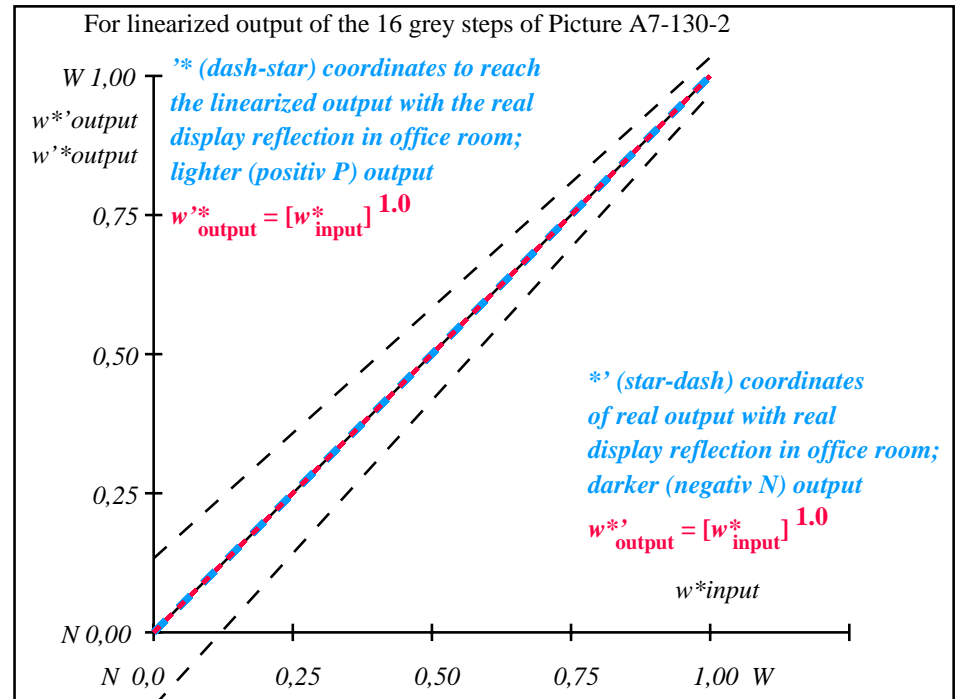
**Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G**

Mean lightness difference (16 steps)  $\Delta E^*_{CIELAB} = 0.0$

Mean lightness difference (5 steps)  $\Delta L^*_{CIELAB} = 0.0$

Mean colour reproduction index:  $R^*_{ab,m} = 100$

OE630-3N-130-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE631-3N-130-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

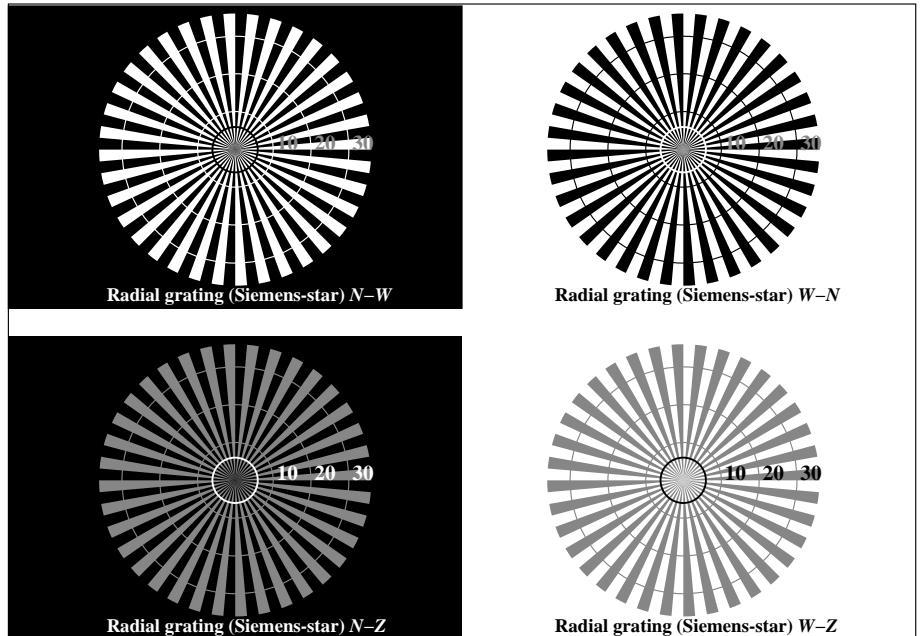
$L^*/Y_{intended}$ (absolute)	0.0/0.0	6.4/0.7	12.7/1.5	19.1/2.8	25.4/4.6	31.8/7.0	38.2/10.2	44.5/14.2	50.9/19.2	57.2/25.2	63.6/32.3	70.0/40.7	76.3/50.4	82.7/61.6	89.0/74.3	95.4/88.6
$w^* w^* w^*$ setrgb $g_p=1.0$																
No. and Hex code	00;F	01;E	02;D	03;C	04;B	05;A	06;9	07;8	08;7	09;6	10;5	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

OE630-7N, Picture A7-130-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

OE63: In-output relation according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

input:  $rgb (-> rgb^*_{de})$  setrgbcolor  
 output 130-2:  $g_p=1.0$ ;  $g_N=1.0$

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



OE630-3N, Picture A1-131-0: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

$L^*/Y_{intended}$ (absolute)	5.6/0.6	28.1/5.5	50.5/18.8	72.9/45.1	95.4/88.5	$N_0$ (min.)	$W_1$ (max.)
$w^* w^* w^*$ setrgb	[Color patches]						
$g_p=0.84$ No. and Hex code	00;4	01;3	02;2	03;1	04;0		
$w^* = l^*$ CIELAB, r (relative)	[Color patches]						
$w^*_{intended}$	0.000	0.250	0.500	0.750	1.000	$N_0$ (min.)	$W_1$ (max.)
$w^*_{out}$	0.0	0.308	0.555	0.783	1.0		

OE630-5N, Picture A2-131-0: 5 equidistant  $L^*$ -grey steps+ $N_0$ + $W_1$ ; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

$L^*/Y_{intended}$ (absolute)	5.6/0.6	11.6/1.3	17.6/2.4	23.6/3.9	29.6/6.0	35.5/8.8	41.5/12.2	47.5/16.4	53.5/21.5	59.5/27.5	65.5/34.6	71.4/42.8	77.4/52.3	83.4/63.0	89.4/75.0	95.4/88.5
$w^* w^* w^*$ setrgb	[Color patches]															
$g_p=0.84$ 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)	[Color patches]															
$w^*_{intended}$	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	0.101	0.18	0.255	0.326	0.393	0.46	0.524	0.586	0.648	0.709	0.768	0.827	0.886	0.942	1.0

OE630-7N, Picture A3-131-0: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

OE63: similar ME16 according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,62$ ;  $Y_N$  range 0,46 to <0,93

background step 0 Hex code	1 ring step Hex code	0-1 Hex code
7	8	7-8
E	F	E-F
2	0	2-0
8	6	8-6
F	D	F-D

OE631-1N, Picture A4-131-0: Landolt-rings W-N; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

	120	128	136	144	152	160	168	176	184	192	200	208	216	224	232	240	
120 (+8)	[Color patches]																240
60 (+4)	[Color patches]																120
30 (+2)	[Color patches]																60
15 (+1)	[Color patches]																30
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

OE631-3N, Picture A5-131-0: Line raster under 45° (or 135°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

	120	128	136	144	152	160	168	176	184	192	200	208	216	224	232	240	
120 (+8)	[Color patches]																240
60 (+4)	[Color patches]																120
30 (+2)	[Color patches]																60
15 (+1)	[Color patches]																30
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

OE631-5N, Picture A6-131-0: Line raster under 90° (or 0°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

input:  $rgb (-> rgb^*_{de}) \text{setrgbcolor}$   
 output 131-0:  $g_p=0.92$ ;  $g_N=1.0$

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thata



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, CIHLAB

**Test for the best visual linearized output of Picture A7-131-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the radial grating according to picture A1-131-0**  
*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 A2-131-0**  
 Are the 5 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 5 steps: ..... Steps

**Test of 16 visual equidistant L\*-grey steps according to picture A3-131-0**  
 Are the 16 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 16 steps: ..... Steps

Part 1 OE630-3N-131-1

**Documentation of file format, hardware and software for this test:**

**PDF-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NP.PDF> underline Yes/No

**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NA.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 OE63L0NP.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 OE63L0NA.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 OE630-7N-131-1

**Test for the best visual linearized output of Picture A7-131-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the Landolt-rings N-W according to picture A4-131-0**  
*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 A5-131-0**  
 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 A6-131-0**  
 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 OE631-3N-131-1

**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/OE63/OE63F1P2.PDF> underline Yes/No  
**PS file:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS> underline Yes/No  
**Picture A7-131-2: 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/OE63/OE63F1P2.PDF> underline Yes/No  
**picture A7-131-2**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS> or underline Yes/No  
**picture A7-131-2**

**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 OE631-7N-131-1

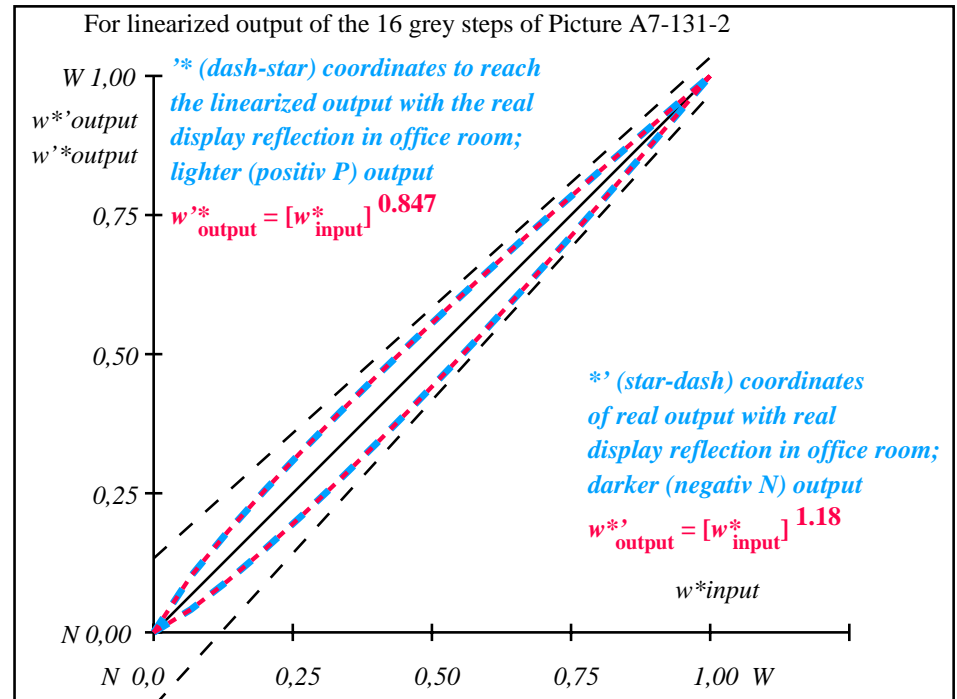
TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=thata

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, CIE LAB

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thadata

i	LAB*ref	I*out	LAB*out	LAB*out/c-ref	ΔE*	Start output S1
1	5.69 0.0 0.0	0.0	5.69 0.0 0.0	0.0 0.0 0.0	0.01	Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G
2	11.67 0.0 0.0	0.1	14.73 0.0 0.0	3.06 0.0 0.0	3.06	
3	17.65 0.0 0.0	0.18	21.96 0.0 0.0	4.3 0.0 0.0	4.3	
4	23.63 0.0 0.0	0.26	28.63 0.0 0.0	4.99 0.0 0.0	4.99	
5	29.62 0.0 0.0	0.33	34.96 0.0 0.0	5.34 0.0 0.0	5.34	
6	35.6 0.0 0.0	0.39	41.05 0.0 0.0	5.46 0.0 0.0	5.46	
7	41.58 0.0 0.0	0.46	46.96 0.0 0.0	5.38 0.0 0.0	5.38	
8	47.56 0.0 0.0	0.52	52.72 0.0 0.0	5.16 0.0 0.0	5.16	
9	53.54 0.0 0.0	0.59	58.36 0.0 0.0	4.82 0.0 0.0	4.82	
10	59.52 0.0 0.0	0.65	63.88 0.0 0.0	4.36 0.0 0.0	4.36	
11	65.5 0.0 0.0	0.71	69.32 0.0 0.0	3.82 0.0 0.0	3.82	
12	71.48 0.0 0.0	0.77	74.67 0.0 0.0	3.19 0.0 0.0	3.19	
13	77.47 0.0 0.0	0.83	79.95 0.0 0.0	2.49 0.0 0.0	2.49	
14	83.45 0.0 0.0	0.89	85.16 0.0 0.0	1.72 0.0 0.0	1.72	
15	89.43 0.0 0.0	0.94	90.31 0.0 0.0	0.89 0.0 0.0	0.89	Mean lightness difference (16 steps)
16	95.41 0.0 0.0	1.0	95.41 0.0 0.0	0.0 0.0 0.0	0.01	ΔE* <sub>CIELAB</sub> = 3.4
17	5.69 0.0 0.0	0.0	5.69 0.0 0.0	0.0 0.0 0.0	0.01	
18	28.12 0.0 0.0	0.31	33.4 0.0 0.0	5.28 0.0 0.0	5.28	
19	50.55 0.0 0.0	0.56	55.55 0.0 0.0	5.0 0.0 0.0	5.0	
20	72.98 0.0 0.0	0.78	76.0 0.0 0.0	3.02 0.0 0.0	3.02	Mean lightness difference (5 steps)
21	95.41 0.0 0.0	1.0	95.41 0.0 0.0	0.0 0.0 0.0	0.01	ΔL* <sub>CIELAB</sub> = 2.7
<b>Mean colour reproduction index:</b>					<b>R*<sub>ab,m</sub> = 85</b>	

OE630-3N-131-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE631-3N-131-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{intended}$ (absolute)	5.7/0.6	11.7/1.4	17.7/2.4	23.6/4.0	29.6/6.1	35.6/8.8	41.6/12.2	47.6/16.5	53.5/21.5	59.5/27.6	65.5/34.7	71.5/42.9	77.5/52.3	83.4/63.0	89.4/75.1	95.4/88.6
$w^* w^* w^*$ setrgb																
$g_p=0.85$																
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
$w^* = I^*_{CIELAB, r}$ (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	0.101	0.181	0.256	0.327	0.394	0.46	0.467	0.533	0.600	0.667	0.733	0.800	0.867	0.933	1.0

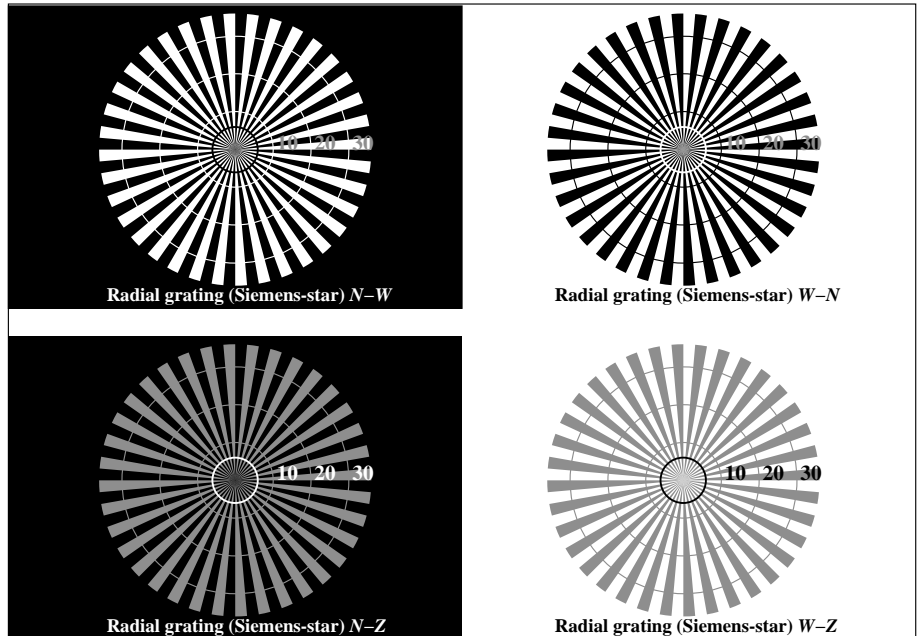
OE630-7N, Picture A7-131-2: 16 visual equidistant L\*-grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

OE63: In-output relation according to ISO 9241-306; 1MR, DEH  
 Viewing Y contrast  $Y_W:Y_N=88,9:0,62$ ;  $Y_N$  range 0,46 to <0,93

input:  $rgb (-> rgb^*_{de})$  setrgbcolor  
 output 131-2:  $g_p=0.92$ ;  $g_N=1.0$

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

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thata



OE630-3N, Picture A1-132-0: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

$L^*/Y_{intended}$ (absolute)	10.9/1.2	32.0/7.1	53.2/21.2	74.3/47.1	95.4/88.5	$N_0$ (min.)	$W_1$ (max.)
$w^* w^* w^*$ setrgb	[Color patches]						
$g_p=0.73$ No. and Hex code	00;4	01;3	02;2	03;1	04;0		
$w^* = l^*$ CIELAB, r (relative)	[Color patches]						
$w^*_{intended}$	0,000	0,250	0,500	0,750	1,000	$N_0$ (min.)	$W_1$ (max.)
$w^*_{out}$	0.0	0.36	0.6	0.809	1.0		

OE630-5N, Picture A2-132-0: 5 equidistant  $L^*$ -grey steps+ $N_0$ + $W_1$ ; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

$L^*/Y_{intended}$ (absolute)	10.9/1.2	16.6/2.2	22.2/3.5	27.8/5.4	33.5/7.7	39.1/10.7	44.7/14.3	50.3/18.7	56.0/23.9	61.6/29.9	67.2/36.9	72.8/45.0	78.5/54.1	84.1/64.3	89.7/75.8	95.4/88.5
$w^* w^* w^*$ setrgb	[Color patches]															
$g_p=0.73$ 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)	[Color patches]															
$w^*_{intended}$	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	0.137	0.226	0.306	0.378	0.445	0.509	0.571	0.629	0.686	0.742	0.795	0.848	0.9	0.95	1.0

OE630-7N, Picture A3-132-0: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

OE63: similar ME16 according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:1,25$ ;  $Y_N$  range 0,93 to <1,87

background step 0	[Color patches]	1 ring step	0-1
Hex code		Hex code	
7	[Color patches]	8	7-8
E	[Color patches]	F	E-F
2	[Color patches]	0	2-0
8	[Color patches]	6	8-6
F	[Color patches]	D	F-D

OE631-1N, Picture A4-132-0: Landolt-rings W-N; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

	120	128	136	144	152	160	168	176	184	192	200	208	216	224	232	240	
120 (+8)	[Line raster]																240
60 (+4)	[Line raster]																120
30 (+2)	[Line raster]																60
15 (+1)	[Line raster]																30
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

OE631-3N, Picture A5-132-0: Line raster under 45° (or 135°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

	120	128	136	144	152	160	168	176	184	192	200	208	216	224	232	240	
120 (+8)	[Line raster]																240
60 (+4)	[Line raster]																120
30 (+2)	[Line raster]																60
15 (+1)	[Line raster]																30
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

OE631-5N, Picture A6-132-0: Line raster under 90° (or 0°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

input:  $rgb (-> rgb^*_{de}) \text{setrgbcolor}$   
 output 132-0:  $g_p=0.85$ ;  $g_N=1.0$

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, CIHLAB

**Test for the best visual linearized output of Picture A7-132-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the radial grating according to picture A1-132-0**  
*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 A2-132-0**  
 Are the 5 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 5 steps: ..... Steps

**Test of 16 visual equidistant L\*-grey steps according to picture A3-132-0**  
 Are the 16 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 16 steps: ..... Steps

Part 1 OE630-3N-132-1

**Documentation of file format, hardware and software for this test:**

**PDF-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NP.PDF> underline Yes/No

**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NA.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 OE63L0NP.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 OE63L0NA.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 OE630-7N-132-1

**Test for the best visual linearized output of Picture A7-132-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the Landolt-rings N-W according to picture A4-132-0**  
*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 A5-132-0**  
 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 A6-132-0**  
 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 OE631-3N-132-1

**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/OE63/OE63F1P2.PDF> underline Yes/No  
**PS file:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS> underline Yes/No  
**Picture A7-132-2: 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/OE63/OE63F1P2.PDF> underline Yes/No  
**Picture A7-132-2**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS> or underline Yes/No  
**Picture A7-132-2**

**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 OE631-7N-132-1

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=thata



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

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thadata

i	LAB*ref	I*out	LAB*out	LAB*out/c-ref	$\Delta E^*$	Start output S1
1	10.99	0.0	0.0	10.99	0.0	0.01
2	16.62	0.0	0.14	22.52	0.0	5.9
3	22.25	0.0	0.23	30.18	0.0	7.93
4	27.88	0.0	0.31	36.84	0.0	8.97
5	33.5	0.0	0.38	42.93	0.0	9.43
6	39.13	0.0	0.45	48.63	0.0	9.5
7	44.76	0.0	0.51	54.03	0.0	9.27
8	50.39	0.0	0.57	59.19	0.0	8.81
9	56.02	0.0	0.63	64.17	0.0	8.15
10	61.64	0.0	0.69	68.98	0.0	7.33
11	67.27	0.0	0.74	73.65	0.0	6.38
12	72.9	0.0	0.8	78.2	0.0	5.3
13	78.53	0.0	0.85	82.64	0.0	4.11
14	84.15	0.0	0.9	86.98	0.0	2.82
15	89.78	0.0	0.95	91.23	0.0	1.45
16	95.41	0.0	1.0	95.41	0.0	0.01
17	10.99	0.0	0.0	10.99	0.0	0.01
18	32.1	0.0	0.36	41.45	0.0	9.36
19	53.2	0.0	0.6	61.7	0.0	8.5
20	74.31	0.0	0.81	79.32	0.0	5.01
21	95.41	0.0	1.0	95.41	0.0	0.01

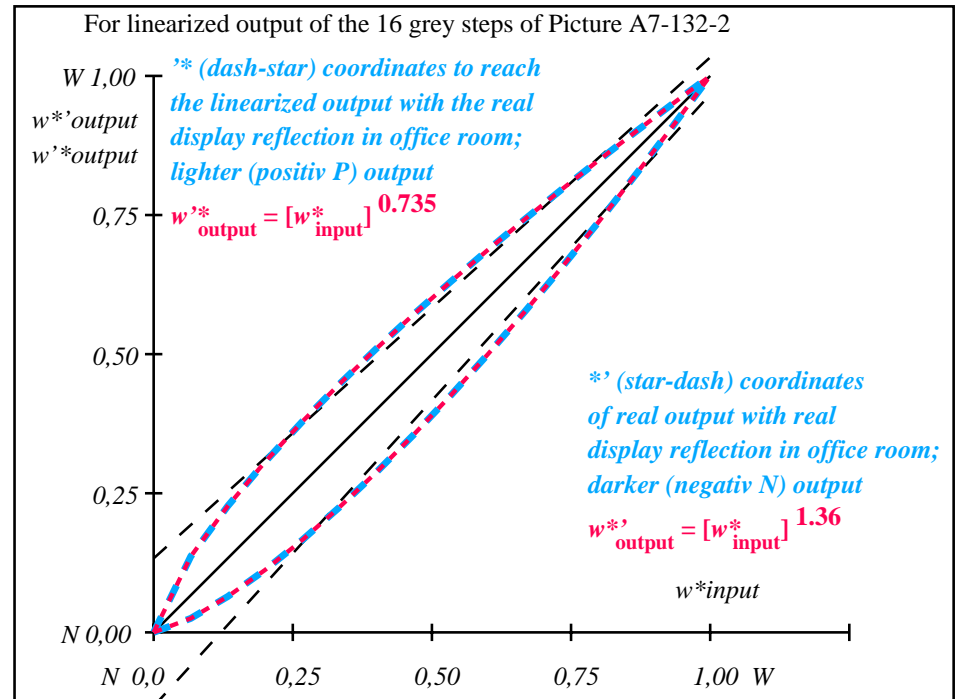
**Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G**

Mean lightness difference (16 steps)  $\Delta E^*_{CIELAB} = 6.0$

Mean lightness difference (5 steps)  $\Delta L^*_{CIELAB} = 4.6$

Mean colour reproduction index:  $R^*_{ab,m} = 74$

OE630-3N-132-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE631-3N-132-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

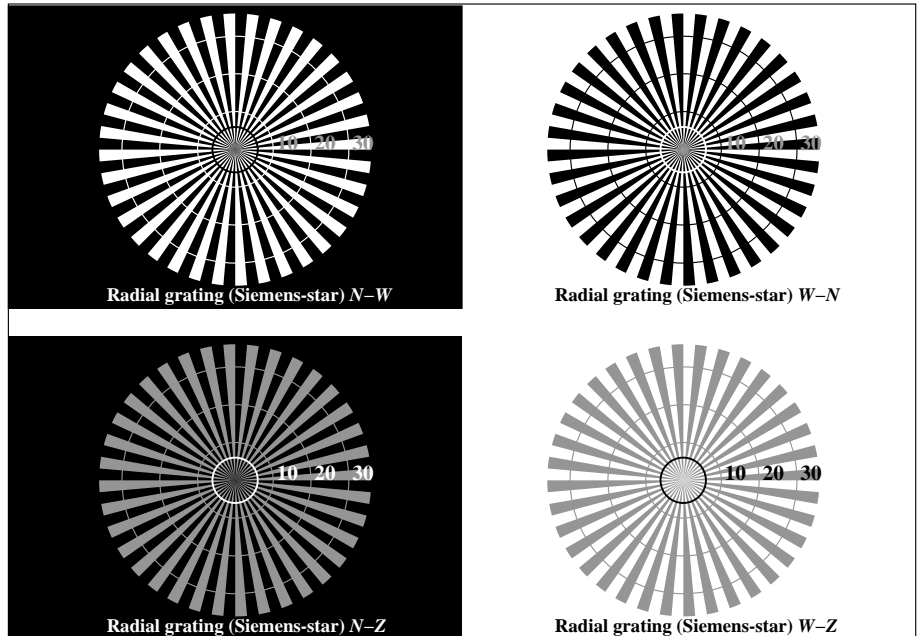
$L^*/Y_{intended}$ (absolute)	11.0/1.3	16.6/2.2	22.2/3.6	27.9/5.4	33.5/7.8	39.1/10.7	44.8/14.4	50.4/18.7	56.0/23.9	61.6/30.0	67.3/37.0	72.9/45.0	78.5/54.1	84.2/64.4	89.8/75.8	95.4/88.6
$w^* w^* w^*$ setrgb gp=0.74	00;F	01;E	02;D	03;C	04;B	05;A	06;9	07;8	08;7	09;6	10;5	11;4	12;3	13;2	14;1	15;0
$w^* = I^*_{CIELAB, r}$ (relative)	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
$w^*_{intended}$	0.0	0.137	0.227	0.306	0.379	0.446	0.51	0.571	0.63	0.687	0.742	0.796	0.849	0.9	0.95	1.0

OE630-7N, Picture A7-132-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

OE63: In-output relation according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:1,25$ ;  $Y_N$  range 0,93 to <1,87

input:  $rgb \rightarrow rgb^*_{de}$  setrgbcolor  
 output 132-2:  $g_P=0.85$ ;  $g_N=1.0$

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



OE630-3N, Picture A1-133-0: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

$L^*/Y_{intended}$ (absolute)	18.0/2.5	37.3/9.7	56.7/24.6	76.0/49.9	95.4/88.5	$N_0$ (min.)	$W_1$ (max.)
$w^* w^* w^*$ setrgb							
$g_p=0.64$							
No. and Hex code	00;4	01;3	02;2	03;1	04;0		
$w^* = l^*$ CIELAB, r (relative)							
$w^*_{intended}$	0.000	0.250	0.500	0.750	1.000	$N_0$ (min.)	$W_1$ (max.)
$w^*_{out}$	0.0	0.406	0.637	0.829	1.0		

OE630-5N, Picture A2-133-0: 5 equidistant  $L^*$ -grey steps+ $N_0$ + $W_1$ ; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

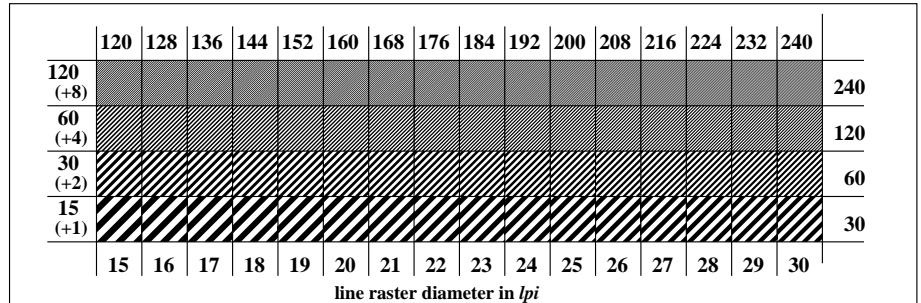
$L^*/Y_{intended}$ (absolute)	18.0/2.5	23.1/3.8	28.3/5.5	33.4/7.7	38.6/10.4	43.8/13.7	48.9/17.5	54.1/22.0	59.2/27.3	64.4/33.3	69.6/40.1	74.7/47.9	79.9/56.5	85.0/66.1	90.2/76.8	95.4/88.5
$w^* w^* w^*$ setrgb																
$g_p=0.64$																
No. and Hex code	00;F	01;E	02;D	03;C	04;B	05;A	06;9	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	0.172	0.269	0.351	0.424	0.489	0.551	0.609	0.664	0.717	0.768	0.817	0.865	0.911	0.955	1.0

OE630-7N, Picture A3-133-0: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

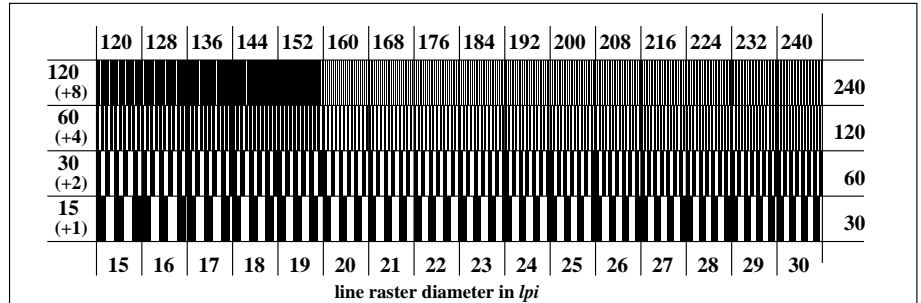
OE63: similar ME16 according to ISO 9241-306; 1MR, DEH  
 Viewing Y contrast  $Y_W:Y_N=88,9:2,5$ ;  $Y_N$  range 1,87 to <3,75

background step 0 Hex code	1 ring step Hex code	0-1 Hex code
7	8	7-8
E	F	E-F
2	0	2-0
8	6	8-6
F	D	F-D

OE631-1N, Picture A4-133-0: Landolt-rings W-N; PS operator:  $w^* w^* w^* \text{setrgbcolor}$



OE631-3N, Picture A5-133-0: Line raster under 45° (or 135°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$



OE631-5N, Picture A6-133-0: Line raster under 90° (or 0°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

input:  $rgb (-> rgb^*_{de}) \text{setrgbcolor}$   
 output 133-0:  $g_p=0.77$ ;  $g_N=1.0$

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thata

**Test for the best visual linearized output of Picture A7-133-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the radial grating according to picture A1-133-0**

*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 A2-133-0**

Are the 5 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 5 steps: ..... Steps

**Test of 16 visual equidistant L\*-grey steps according to picture A3-133-0**

Are the 16 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 16 steps: ..... Steps

Part 1 OE630-3N-133-1

**Documentation of file format, hardware and software for this test:**

**PDF-File:** http://130.149.60.45/farbmetrik/OE63/OE63L0NP.PDF Yes/No

**PS-File:** http://130.149.60.45/farbmetrik/OE63/OE63L0NA.PS or Yes/No

**Used computer operating system:**  
 either one of Windows/Mac/Unix/other and version:.....

**This evaluation is for the device output:** monitor/data projector/printer  
 Device model, driver and version:.....

**Device output with PDF/PS-file:** PDF/PS-file

**For device output with PDF-file OE63L0NP.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 OE63L0NA.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 OE630-7N-133-1

**Test for the best visual linearized output of Picture A7-133-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the Landolt-rings N-W according to picture A4-133-0**

*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 A5-133-0**

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 A6-133-0**

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 OE631-3N-133-1

**Documentation of assessor colour vision properties for visual assessment**

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

**For visual evaluation of the display (monitor, data projector) output**

Office workplace illumination is daylight (clouded/north sky) Yes/No  
**PDF file:** http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PDF Yes/No  
**PS file:** http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS Yes/No  
**Picture A7-133-2: 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 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/OE63/OE63F1P2.PDF Yes/No  
**picture A7-133-2**

**PS-File:** http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS Yes/No  
**picture A7-133-2** or Yes/No

**colour measurement and specification for:**  
 CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: 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 and transfer  
 of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF Yes/No  
 If No, please describe other method: .....

Part 4 OE631-7N-133-1

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

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thata

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

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thadata

i	LAB*ref	I*out	LAB*out	LAB*out/c-ref	ΔE*
1	18.01	0.0	18.01	0.0	0.01
2	23.17	0.0	31.35	0.0	8.18
3	28.33	0.0	38.93	0.0	10.6
4	33.49	0.0	45.23	0.0	11.74
5	38.65	0.0	50.82	0.0	12.17
6	43.81	0.0	55.93	0.0	12.12
7	48.97	0.0	60.7	0.0	11.73
8	54.13	0.0	65.2	0.0	11.07
9	59.29	0.0	69.47	0.0	10.18
10	64.45	0.0	73.56	0.0	9.11
11	69.61	0.0	77.49	0.0	7.88
12	74.77	0.0	81.29	0.0	6.52
13	79.93	0.0	84.97	0.0	5.04
14	85.09	0.0	88.54	0.0	3.45
15	90.25	0.0	92.02	0.0	1.77
16	95.41	0.0	95.41	0.0	0.01
17	18.01	0.0	18.01	0.0	0.01
18	37.36	0.0	49.47	0.0	12.11
19	56.71	0.0	67.36	0.0	10.65
20	76.06	0.0	82.22	0.0	6.16
21	95.41	0.0	95.41	0.0	0.01

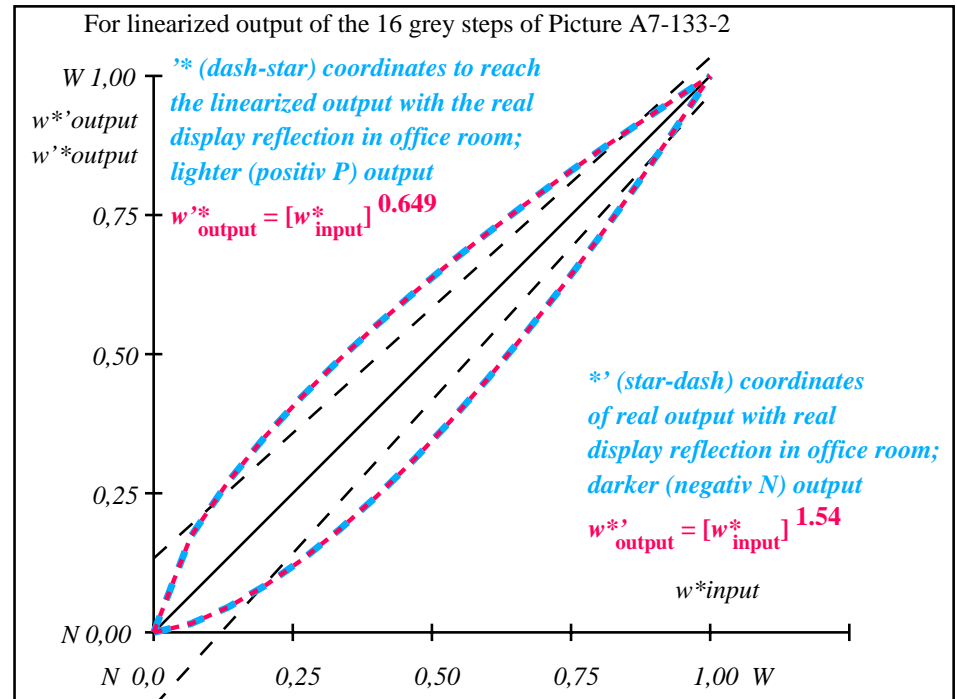
**Start output S1**  
**Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G**

Mean lightness difference (16 steps)  $\Delta E^*_{CIELAB} = 7.6$

Mean lightness difference (5 steps)  $\Delta L^*_{CIELAB} = 5.8$

Mean colour reproduction index:  $R^*_{ab,m} = 67$

OE630-3N-133-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE631-3N-133-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{intended}$ (absolute)	18.0/2.5	23.2/3.8	28.3/5.6	33.5/7.8	38.6/10.5	43.8/13.7	49.0/17.6	54.1/22.1	59.3/27.3	64.4/33.4	69.6/40.2	74.8/47.9	79.9/56.6	85.1/66.2	90.2/76.8	95.4/88.6
$w^* w^* w^*$ setrgb $g_p=0.65$																
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
$w^* = I^*_{CIELAB, r}$ (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	0.173	0.27	0.352	0.424	0.49	0.552	0.61	0.665	0.718	0.769	0.817	0.865	0.911	0.956	1.0

OE630-7N, Picture A7-133-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* setrgbcolor$

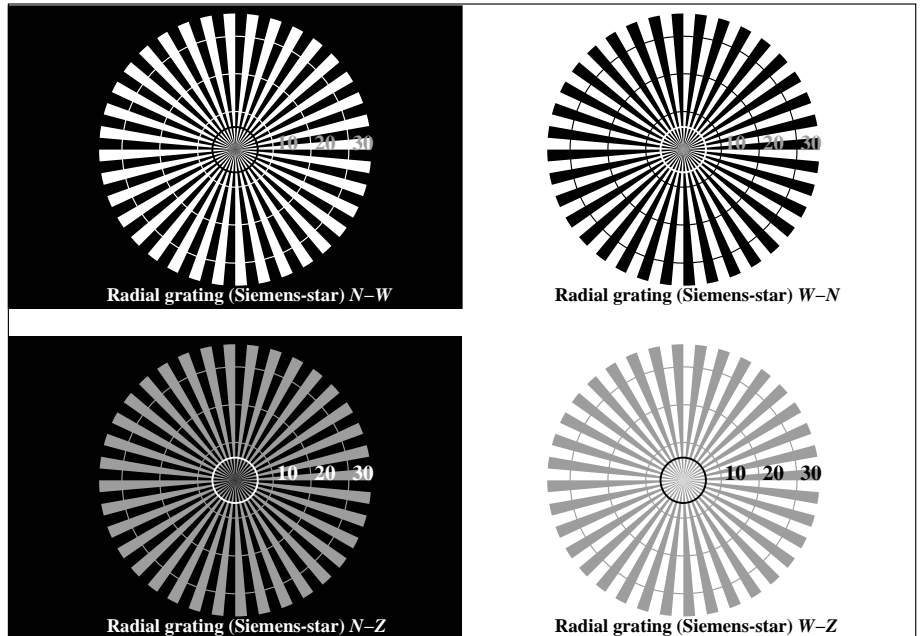
OE63: In-output relation according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:2,5$ ;  $Y_N$  range 1,87 to <3,75

input:  $rgb (-> rgb^*_{de}) setrgbcolor$   
 output 133-2:  $g_p=0.77$ ;  $g_N=1.0$



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

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thata



OE630-3N, Picture A1-134-0: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

$L^*/Y_{intended}$ (absolute)	26.8/5.0	43.9/13.8	61.1/29.3	78.2/53.6	95.4/88.5	$N_0$ (min.)	$W_1$ (max.)
$w^* w^* w^*$ setrgb $g_p=0.58$ No. and Hex code	00;4	01;3	02;2	03;1	04;0		
$w^* = l^*$ CIELAB, r (relative)							
$w^*_{intended}$	0.000	0.250	0.500	0.750	1.000	$N_0$ (min.)	$W_1$ (max.)
$w^*_{out}$	0.0	0.446	0.668	0.845	1.0		

OE630-5N, Picture A2-134-0: 5 equidistant  $L^*$ -grey steps+ $N_0$ + $W_1$ ; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

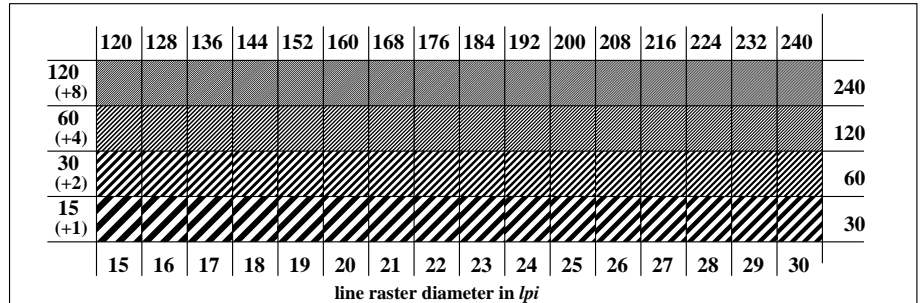
$L^*/Y_{intended}$ (absolute)	26.8/5.0	31.4/6.8	35.9/9.0	40.5/11.5	45.1/14.6	49.7/18.1	54.2/22.2	58.8/26.8	63.4/32.0	67.9/37.9	72.5/44.4	77.1/51.7	81.6/59.7	86.2/68.5	90.8/78.1	95.4/88.5
$w^* w^* w^*$ setrgb $g_p=0.58$ No. and Hex code	00;F	01;E	02;D	03;C	04;B	05;A	06;9	07;8	08;7	09;6	10;5	11;4	12;3	13;2	14;1	15;0
$w^*_{intended}$	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	0.207	0.309	0.392	0.464	0.527	0.587	0.642	0.693	0.743	0.79	0.834	0.878	0.92	0.96	1.0

OE630-7N, Picture A3-134-0: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

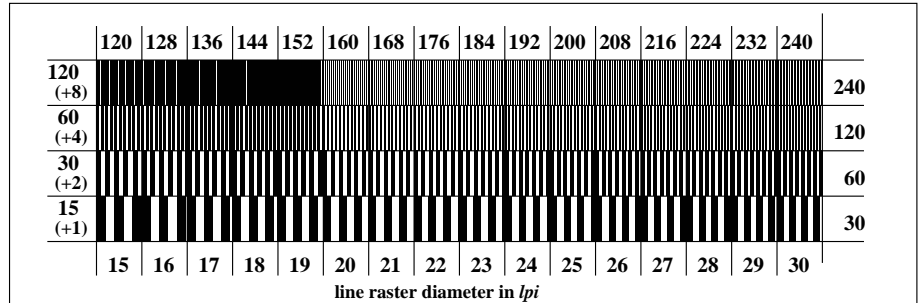
OE63: similar ME16 according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:5$ ;  $Y_N$  range 3,75 to <7,5

background step 0 Hex code	1 ring step Hex code	0-1 Hex code
7	8	7-8
E	F	E-F
2	0	2-0
8	6	8-6
F	D	F-D

OE631-1N, Picture A4-134-0: Landolt-rings W-N; PS operator:  $w^* w^* w^* \text{setrgbcolor}$



OE631-3N, Picture A5-134-0: Line raster under 45° (or 135°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$



OE631-5N, Picture A6-134-0: Line raster under 90° (or 0°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

input:  $rgb (-> rgb^*_{de}) \text{setrgbcolor}$   
 output 134-0:  $g_p=0.7$ ;  $g_N=1.0$

**Test for the best visual linearized output of Picture A7-134-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the radial grating according to picture A1-134-0**

*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 A2-134-0**

Are the 5 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 5 steps: ..... Steps

**Test of 16 visual equidistant L\*-grey steps according to picture A3-134-0**

Are the 16 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 16 steps: ..... Steps

Part 1 OE630-3N-134-1

**Documentation of file format, hardware and software for this test:**

**PDF-File:** http://130.149.60.45/farbmetrik/OE63/OE63L0NP.PDF Yes/No

**PS-File:** http://130.149.60.45/farbmetrik/OE63/OE63L0NA.PS or Yes/No

**Used computer operating system:**  
 either one of Windows/Mac/Unix/other and version:.....

**This evaluation is for the device output:** monitor/data projector/printer  
 Device model, driver and version:.....

**Device output with PDF/PS-file:** PDF/PS-file

**For device output with PDF-file OE63L0NP.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 OE63L0NA.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 OE630-7N-134-1

**Test for the best visual linearized output of Picture A7-134-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the Landolt-rings N-W according to picture A4-134-0**

*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 A5-134-0**

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 A6-134-0**

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 OE631-3N-134-1

**Documentation of assessor colour vision properties for visual assessment**

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

**For visual evaluation of the display (monitor, data projector) output**

Office workplace illumination is daylight (clouded/north sky) Yes/No  
**PDF file:** http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PDF Yes/No  
**PS file:** http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS Yes/No  
**Picture A7-134-2: 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 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/OE63/OE63F1P2.PDF Yes/No  
**picture A7-134-2**

**PS-File:** http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS Yes/No  
**picture A7-134-2** or Yes/No

**colour measurement and specification for:**  
 CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: 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 and transfer  
 of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF Yes/No  
 If No, please describe other method: .....

Part 4 OE631-7N-134-1

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

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=thata

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

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thadata

i	LAB*ref	I*out	LAB*out	LAB*out/c-ref	ΔE*	Start output S1
1	26.85	0.0	0.0	26.85	0.0	0.0
2	31.42	0.0	0.21	41.05	0.0	0.0
3	35.99	0.0	0.31	48.1	0.0	0.0
4	40.56	0.0	0.39	53.75	0.0	0.0
5	45.13	0.0	0.46	58.64	0.0	0.0
6	49.7	0.0	0.53	63.05	0.0	0.0
7	54.27	0.0	0.59	67.09	0.0	0.0
8	58.84	0.0	0.64	70.87	0.0	0.0
9	63.41	0.0	0.69	74.42	0.0	0.0
10	67.99	0.0	0.74	77.79	0.0	0.0
11	72.56	0.0	0.79	81.01	0.0	0.0
12	77.13	0.0	0.84	84.1	0.0	0.0
13	81.7	0.0	0.88	87.07	0.0	0.0
14	86.27	0.0	0.92	89.94	0.0	0.0
15	90.84	0.0	0.96	92.71	0.0	0.0
16	95.41	0.0	1.0	95.41	0.0	0.0
17	26.85	0.0	0.0	26.85	0.0	0.0
18	43.99	0.0	0.45	57.47	0.0	0.0
19	61.13	0.0	0.67	72.67	0.0	0.0
20	78.27	0.0	0.85	84.85	0.0	0.0
21	95.41	0.0	1.0	95.41	0.0	0.0

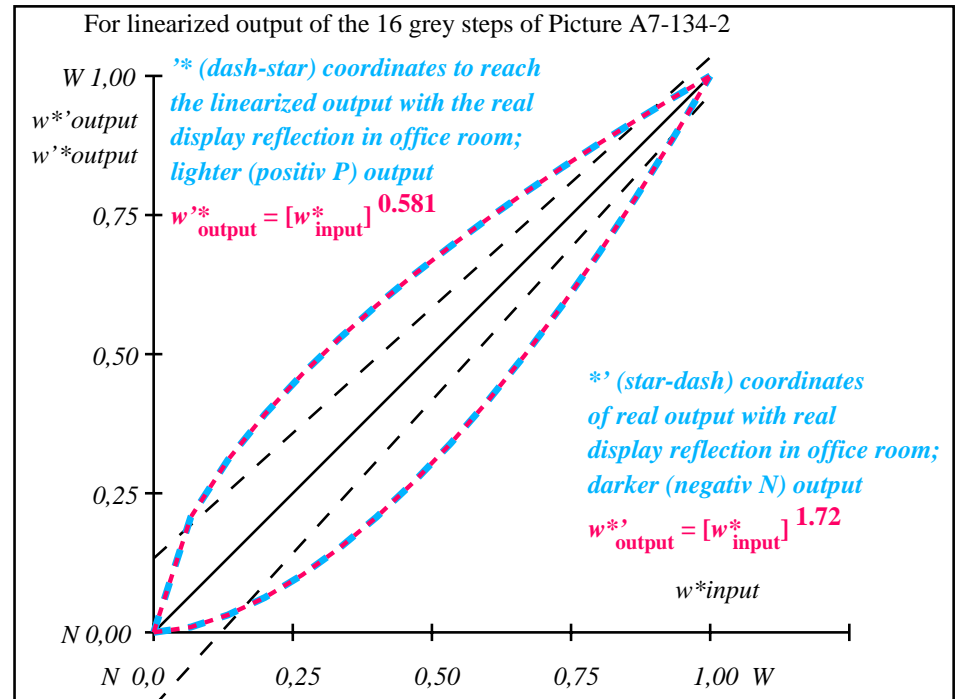
**Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G**

Mean lightness difference (16 steps)  $\Delta E^*_{CIELAB} = 8.4$

Mean lightness difference (5 steps)  $\Delta L^*_{CIELAB} = 6.3$

Mean colour reproduction index:  $R^*_{ab,m} = 64$

OE630-3N-134-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE631-3N-134-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{intended}$ (absolute)	26.8/5.0	31.4/6.8	36.0/9.0	40.6/11.6	45.1/14.6	49.7/18.2	54.3/22.2	58.8/26.9	63.4/32.1	68.0/38.0	72.6/44.5	77.1/51.7	81.7/59.7	86.3/68.5	90.8/78.1	95.4/88.6
$w^* w^* w^*$ setrgb gp=0.58																
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
$w^* = I^*_{CIELAB, r}$ (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	0,208	0,309	0,392	0,464	0,528	0,587	0,642	0,694	0,743	0,79	0,835	0,878	0,92	0,96	1,0

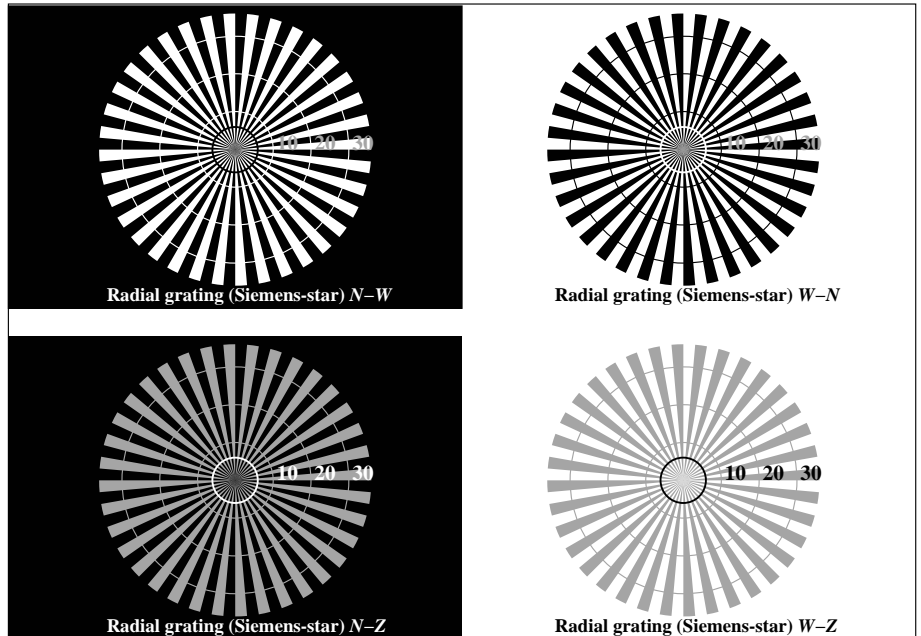
OE630-7N, Picture A7-134-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* setrgbcolor$

OE63: In-output relation according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:5$ ;  $Y_N$  range 3,75 to <7,5

input:  $rgb (-> rgb^*_{de}) setrgbcolor$   
 output 134-2:  $g_P=0.7$ ;  $g_N=1.0$

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

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS application for output of displays: monitor systems or data projector systems TUB material: code=thata



OE630-3N, Picture A1-135-0: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

$L^*/Y_{intended}$ (absolute)	37.9/10.0	52.3/20.4	66.6/36.2	81.0/58.5	95.4/88.5	$N_0$ (min.)	$W_1$ (max.)
$w^* w^* w^* \text{setrgb}$	[Color patches]						
$g_p=0.52$	[Color patches]						
No. and Hex code	00;4	01;3	02;2	03;1	04;0		
$w^* = l^*_{CIELAB, r}$ (relative)	[Color patches]						
$w^*_{intended}$	0.000	0.250	0.500	0.750	1.000	$N_0$ (min.)	$W_1$ (max.)
$w^*_{out}$	0.0	0.482	0.694	0.859	1.0		

OE630-5N, Picture A2-135-0: 5 equidistant  $L^*$ -grey steps+ $N_0$ + $W_1$ ; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

$L^*/Y_{intended}$ (absolute)	37.9/10.0	41.8/12.3	45.6/15.0	49.4/17.9	53.2/21.3	57.1/25.0	60.9/29.1	64.7/33.7	68.6/38.8	72.4/44.3	76.2/50.3	80.0/56.8	83.9/63.9	87.7/71.5	91.5/79.7	95.4/88.5
$w^* w^* w^* \text{setrgb}$	[Color patches]															
$g_p=0.52$	[Color patches]															
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)	[Color patches]															
$w^*_{intended}$	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	0.241	0.345	0.428	0.499	0.56	0.617	0.669	0.718	0.764	0.808	0.849	0.889	0.927	0.964	1.0

OE630-7N, Picture A3-135-0: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

OE63: similar ME16 according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:10$ ;  $Y_N$  range 7,5 to <15

background step 0	Hex code	1 ring step	Hex code	0-1
7	[Patch]	8	[Patch]	7-8
E	[Patch]	F	[Patch]	E-F
2	[Patch]	0	[Patch]	2-0
8	[Patch]	6	[Patch]	8-6
F	[Patch]	D	[Patch]	F-D

OE631-1N, Picture A4-135-0: Landolt-rings W-N; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

	120	128	136	144	152	160	168	176	184	192	200	208	216	224	232	240	
120 (+8)	[Patch]																240
60 (+4)	[Patch]																120
30 (+2)	[Patch]																60
15 (+1)	[Patch]																30
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

OE631-3N, Picture A5-135-0: Line raster under 45° (or 135°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

	120	128	136	144	152	160	168	176	184	192	200	208	216	224	232	240	
120 (+8)	[Patch]																240
60 (+4)	[Patch]																120
30 (+2)	[Patch]																60
15 (+1)	[Patch]																30
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

OE631-5N, Picture A6-135-0: Line raster under 90° (or 0°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

input:  $rgb (->rgb^*_{de}) \text{setrgbcolor}$   
 output 135-0:  $g_p=0.62$ ;  $g_N=1.0$



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, CIHLAB

**Test for the best visual linearized output of Picture A7-135-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the radial grating according to picture A1-135-0**

*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 A2-135-0**

Are the 5 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 5 steps: ..... Steps

**Test of 16 visual equidistant L\*-grey steps according to picture A3-135-0**

Are the 16 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 16 steps: ..... Steps

Part 1 OE630-3N-135-1

**Documentation of file format, hardware and software for this test:**

**PDF-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NP.PDF> underline Yes/No

**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NA.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 OE63L0NP.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 OE63L0NA.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 OE630-7N-135-1

**Test for the best visual linearized output of Picture A7-135-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the Landolt-rings N-W according to picture A4-135-0**

*N-W*-radial grating:  
 Is the recognition frequency of the Landolt-rings > 50% (5 of 8 at least)?  
 background - ring Yes/No  
 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 A5-135-0**

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 A6-135-0**

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 OE631-3N-135-1

**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/OE63/OE63F1P2.PDF> underline Yes/No  
**PS file:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS> underline Yes/No  
**Picture A7-135-2: 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/OE63/OE63F1P2.PDF> underline Yes/No  
**picture A7-135-2**

**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS> or underline Yes/No  
**picture A7-135-2**

**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 OE631-7N-135-1

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=thata

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

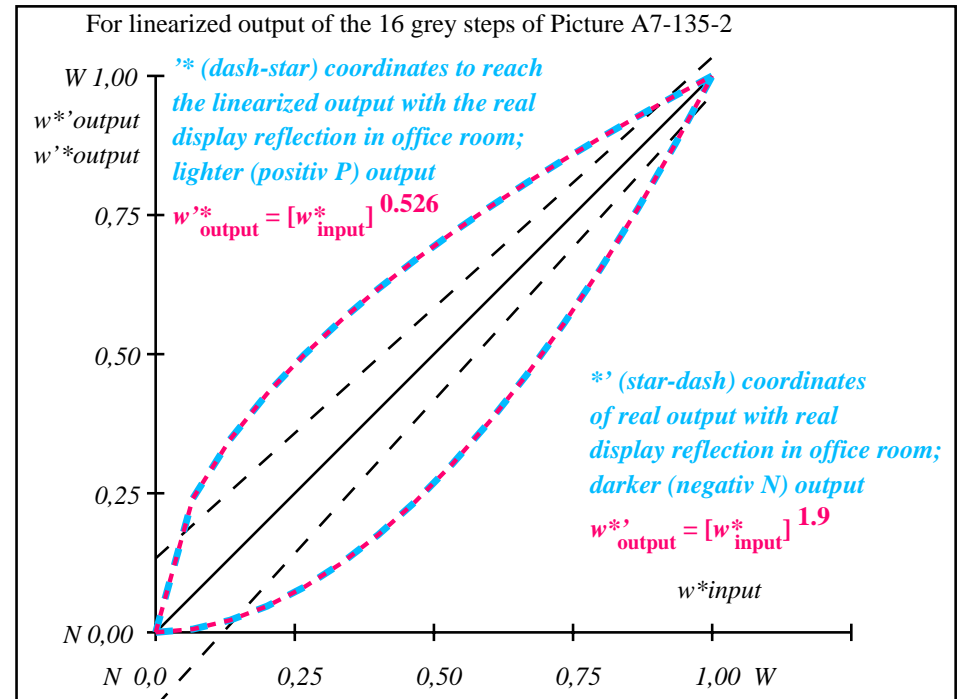
TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thadata

i	LAB*ref	L*out	LAB*out	LAB*out/c-ref	ΔE*					
1	37.99	0.0	0.0	37.99	0.0	0.0	0.0	0.0	0.01	
2	41.81	0.0	0.0	0.24	51.79	0.0	0.0	9.98	0.0	9.98
3	45.64	0.0	0.0	0.35	57.87	0.0	0.0	12.23	0.0	12.23
4	49.47	0.0	0.0	0.43	62.6	0.0	0.0	13.13	0.0	13.13
5	53.3	0.0	0.0	0.5	66.63	0.0	0.0	13.33	0.0	13.33
6	57.13	0.0	0.0	0.56	70.19	0.0	0.0	13.07	0.0	13.07
7	60.96	0.0	0.0	0.62	73.44	0.0	0.0	12.48	0.0	12.48
8	64.78	0.0	0.0	0.67	76.44	0.0	0.0	11.65	0.0	11.65
9	68.61	0.0	0.0	0.72	79.23	0.0	0.0	10.62	0.0	10.62
10	72.44	0.0	0.0	0.76	81.87	0.0	0.0	9.43	0.0	9.43
11	76.27	0.0	0.0	0.81	84.37	0.0	0.0	8.11	0.0	8.11
12	80.1	0.0	0.0	0.85	86.76	0.0	0.0	6.66	0.0	6.66
13	83.93	0.0	0.0	0.89	89.05	0.0	0.0	5.12	0.0	5.12
14	87.75	0.0	0.0	0.93	91.24	0.0	0.0	3.49	0.0	3.49
15	91.58	0.0	0.0	0.96	93.36	0.0	0.0	1.78	0.0	1.78
16	95.41	0.0	0.0	1.0	95.41	0.0	0.0	0.0	0.0	0.01
17	37.99	0.0	0.0	0.0	37.99	0.0	0.0	0.0	0.0	0.01
18	52.34	0.0	0.0	0.48	65.67	0.0	0.0	13.33	0.0	13.33
19	66.7	0.0	0.0	0.69	77.86	0.0	0.0	11.16	0.0	11.16
20	81.05	0.0	0.0	0.86	87.34	0.0	0.0	6.29	0.0	6.29
21	95.41	0.0	0.0	1.0	95.41	0.0	0.0	0.0	0.0	0.01

**Start output S1**  
**Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G**

Mean lightness difference (16 steps)  $\Delta E^*_{CIELAB} = 8.2$   
 Mean lightness difference (5 steps)  $\Delta L^*_{CIELAB} = 6.2$   
 Mean colour reproduction index:  $R^*_{ab,m} = 65$

OE630-3N-135-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE631-3N-135-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{intended}$ (absolute)	38.0/10.1	41.8/12.4	45.6/15.0	49.5/18.0	53.3/21.3	57.1/25.1	61.0/29.2	64.8/33.8	68.6/38.8	72.4/44.3	76.3/50.3	80.1/56.9	83.9/63.9	87.8/71.6	91.6/79.8	95.4/88.6
$w^* w^* w^*$ setrgb																
gp=0.53																
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	0.241	0.346	0.429	0.499	0.561	0.617	0.67	0.718	0.764	0.808	0.849	0.889	0.928	0.964	1.0

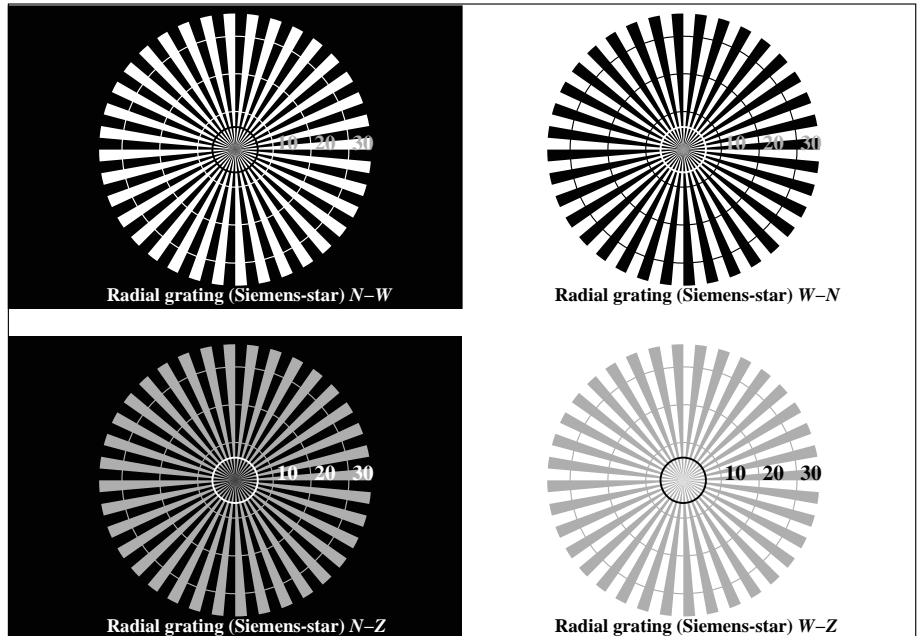
OE630-7N, Picture A7-135-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

OE63: In-output relation according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:10$ ;  $Y_N$  range 7,5 to <15

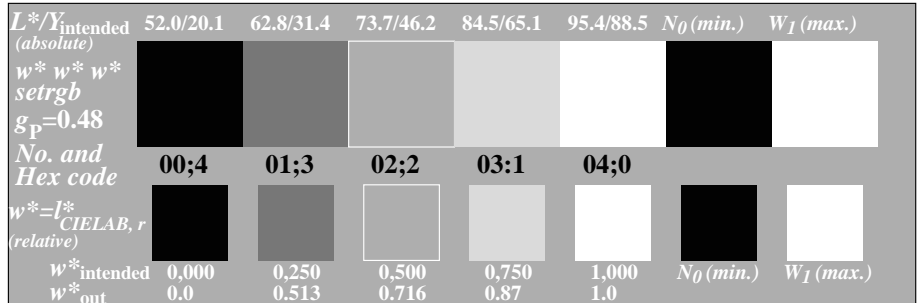
input:  $rgb (-> rgb^*_{de})$  setrgbcolor  
 output 135-2:  $g_P=0.62$ ;  $g_N=1.0$

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

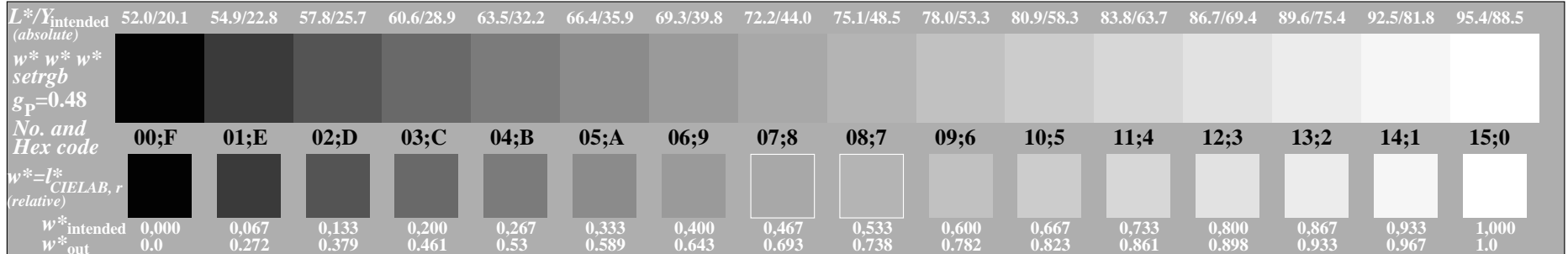
TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS application for output of displays: monitor systems or data projector systems TUB material: code=thata



OE630-3N, Picture A1-136-0: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

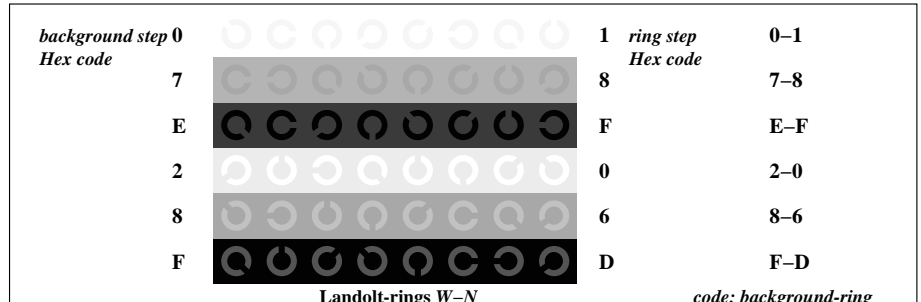


OE630-5N, Picture A2-136-0: 5 equidistant  $L^*$ -grey steps+ $N_0$ + $W_1$ ; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

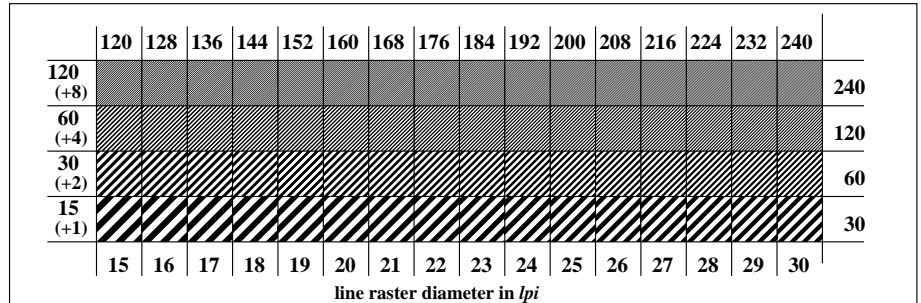


OE630-7N, Picture A3-136-0: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

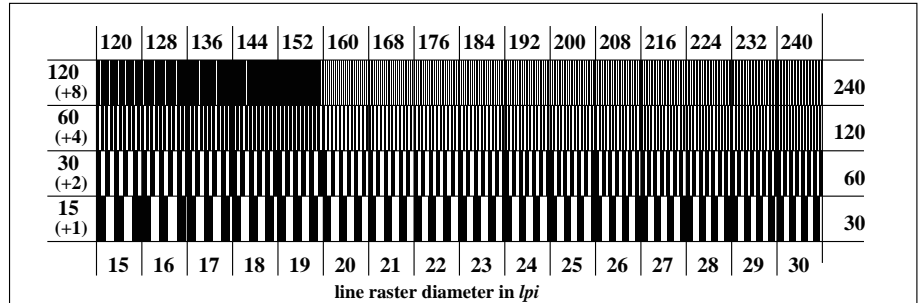
OE63: similar ME16 according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:20$ ;  $Y_N$  range 15 to <30



OE631-1N, Picture A4-136-0: Landolt-rings W-N; PS operator:  $w^* w^* w^* \text{setrgbcolor}$



OE631-3N, Picture A5-136-0: Line raster under 45° (or 135°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$



OE631-5N, Picture A6-136-0: Line raster under 90° (or 0°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

input:  $rgb (-> rgb^*_{de}) \text{setrgbcolor}$   
 output 136-0:  $g_p=0.55$ ;  $g_N=1.0$

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, CIHLAB

**Test for the best visual linearized output of Picture A7-136-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the radial grating according to picture A1-136-0**  
*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 A2-136-0**  
 Are the 5 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 5 steps: ..... Steps

**Test of 16 visual equidistant L\*-grey steps according to picture A3-136-0**  
 Are the 16 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 16 steps: ..... Steps

Part 1 OE630-3N-136-1

**Documentation of file format, hardware and software for this test:**

**PDF-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NP.PDF> underline Yes/No

**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NA.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 OE63L0NP.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 OE63L0NA.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 OE630-7N-136-1

**Test for the best visual linearized output of Picture A7-136-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the Landolt-rings N-W according to picture A4-136-0**  
*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 A5-136-0**  
 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 A6-136-0**  
 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 OE631-3N-136-1

**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/OE63/OE63F1P2.PDF> underline Yes/No  
**PS file:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS> underline Yes/No  
**Picture A7-136-2: 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/OE63/OE63F1P2.PDF> underline Yes/No  
**picture A7-136-2**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS> or underline Yes/No  
**picture A7-136-2**

**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 OE631-7N-136-1

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=thata



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	L*out	LAB*out	LAB*out/c-ref	ΔE*						
1	52.02	0.0	0.0	52.02	0.0	0.0	0.0	0.0	0.0	0.01	
2	54.91	0.0	0.0	0.27	63.82	0.0	0.0	8.91	0.0	0.0	8.91
3	57.8	0.0	0.0	0.38	68.49	0.0	0.0	10.69	0.0	0.0	10.69
4	60.7	0.0	0.0	0.46	72.03	0.0	0.0	11.34	0.0	0.0	11.34
5	63.59	0.0	0.0	0.53	75.0	0.0	0.0	11.41	0.0	0.0	11.41
6	66.48	0.0	0.0	0.59	77.61	0.0	0.0	11.12	0.0	0.0	11.12
7	69.37	0.0	0.0	0.64	79.95	0.0	0.0	10.57	0.0	0.0	10.57
8	72.27	0.0	0.0	0.69	82.1	0.0	0.0	9.83	0.0	0.0	9.83
9	75.16	0.0	0.0	0.74	84.09	0.0	0.0	8.93	0.0	0.0	8.93
10	78.05	0.0	0.0	0.78	85.96	0.0	0.0	7.91	0.0	0.0	7.91
11	80.95	0.0	0.0	0.82	87.72	0.0	0.0	6.78	0.0	0.0	6.78
12	83.84	0.0	0.0	0.86	89.4	0.0	0.0	5.56	0.0	0.0	5.56
13	86.73	0.0	0.0	0.9	91.0	0.0	0.0	4.26	0.0	0.0	4.26
14	89.62	0.0	0.0	0.93	92.53	0.0	0.0	2.9	0.0	0.0	2.9
15	92.52	0.0	0.0	0.97	93.99	0.0	0.0	1.48	0.0	0.0	1.48
16	95.41	0.0	0.0	1.0	95.41	0.0	0.0	0.0	0.0	0.0	0.01
17	52.02	0.0	0.0	0.0	52.02	0.0	0.0	0.0	0.0	0.0	0.01
18	62.87	0.0	0.0	0.51	74.3	0.0	0.0	11.43	0.0	0.0	11.43
19	73.71	0.0	0.0	0.72	83.11	0.0	0.0	9.4	0.0	0.0	9.4
20	84.56	0.0	0.0	0.87	89.81	0.0	0.0	5.24	0.0	0.0	5.24
21	95.41	0.0	0.0	1.0	95.41	0.0	0.0	0.0	0.0	0.0	0.01

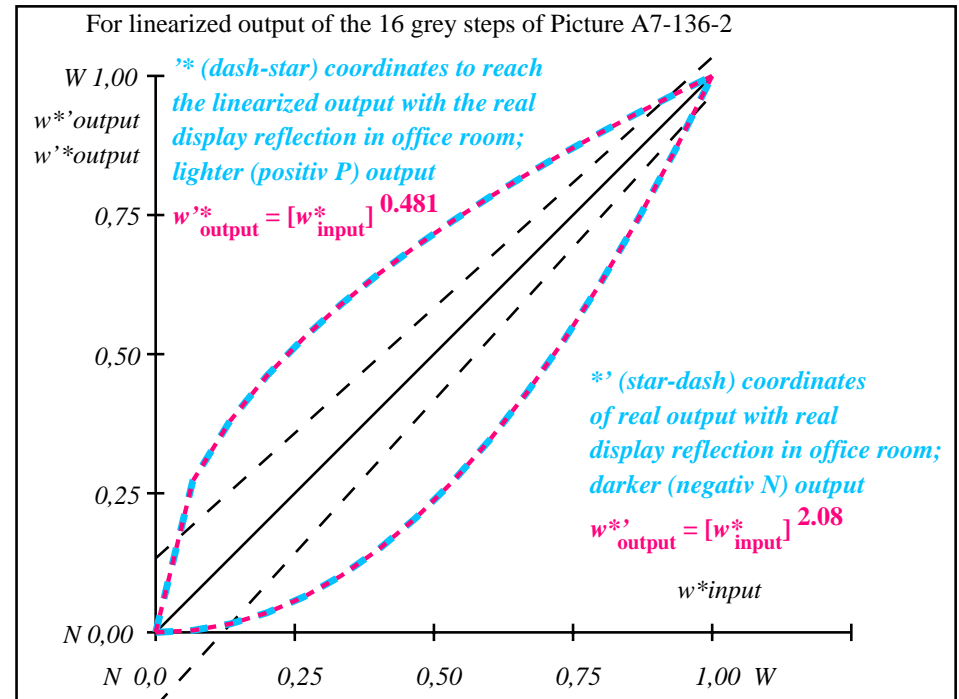
**Start output S1**  
**Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G**

Mean lightness difference (16 steps)  $\Delta E^*_{CIELAB} = 7.0$

Mean lightness difference (5 steps)  $\Delta L^*_{CIELAB} = 5.2$

Mean colour reproduction index:  $R^*_{ab,m} = 70$

OE630-3N-136-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE631-3N-136-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{intended}$ (absolute)	52.0/20.2	54.9/22.8	57.8/25.8	60.7/28.9	63.6/32.3	66.5/36.0	69.4/39.9	72.3/44.1	75.2/48.5	78.1/53.3	80.9/58.4	83.8/63.8	86.7/69.5	89.6/75.5	92.5/81.9	95.4/88.6
$w^* w^* w^*$ setrgb gp=0.48																
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	0.273	0.379	0.461	0.533	0.589	0.644	0.693	0.739	0.782	0.823	0.861	0.898	0.934	0.967	1.0

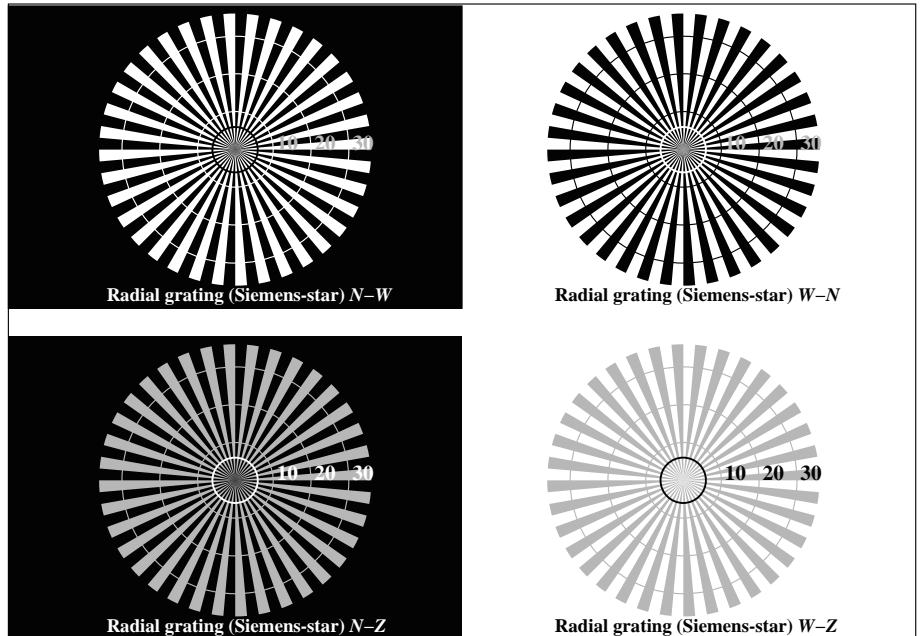
OE630-7N, Picture A7-136-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

OE63: In-output relation according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:20$ ;  $Y_N$  range 15 to <30

input:  $rgb (-> rgb^*_{de})$  setrgbcolor  
 output 136-2:  $g_P=0.55$ ;  $g_N=1.0$

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

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thata



OE630-3N, Picture A1-137-0: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

$L^*/Y_{intended}$ (absolute)	69.6/40.3	76.1/50.0	82.5/61.3	88.9/74.1	95.4/88.5	$N_0$ (min.)	$W_1$ (max.)
$w^* w^* w^*$ setrgb $g_p=0.44$	[Color swatches]						
No. and Hex code	00;4	01;3	02;2	03;1	04;0		
$w^* = I^*$ CIELAB, r (relative)	[Color swatches]						
$w^*_{intended}$	0.000	0.250	0.500	0.750	1.000	$N_0$ (min.)	$W_1$ (max.)
$w^*_{out}$	0.0	0.541	0.735	0.88	1.0		

OE630-5N, Picture A2-137-0: 5 equidistant  $L^*$ -grey steps+ $N_0+W_1$ ; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

$L^*/Y_{intended}$ (absolute)	69.6/40.3	71.4/42.7	73.1/45.3	74.8/48.0	76.5/50.7	78.2/53.6	79.9/56.6	81.6/59.7	83.4/62.9	85.1/66.2	86.8/69.6	88.5/73.2	90.2/76.8	91.9/80.6	93.6/84.5	95.4/88.5
$w^* w^* w^*$ setrgb $g_p=0.44$	[Color swatches]															
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
$w^* = I^*$ CIELAB, r (relative)	[Color swatches]															
$w^*_{intended}$	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	0.302	0.409	0.49	0.557	0.614	0.666	0.713	0.756	0.797	0.835	0.871	0.905	0.938	0.969	1.0

OE630-7N, Picture A3-137-0: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

OE63: similar ME16 according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:40$ ;  $Y_N$  range 30 to <60

background step 0	Hex code	1 ring step	Hex code	0-1
7	[Swatch]	8	[Swatch]	7-8
E	[Swatch]	F	[Swatch]	E-F
2	[Swatch]	0	[Swatch]	2-0
8	[Swatch]	6	[Swatch]	8-6
F	[Swatch]	D	[Swatch]	F-D

OE631-1N, Picture A4-137-0: Landolt-rings W-N; PS operator:  $w^* w^* w^* \text{setrgbcolor}$

	120	128	136	144	152	160	168	176	184	192	200	208	216	224	232	240
120 (+8)	[Swatches]															240
60 (+4)	[Swatches]															120
30 (+2)	[Swatches]															60
15 (+1)	[Swatches]															30
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

OE631-3N, Picture A5-137-0: Line raster under 45° (or 135°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

	120	128	136	144	152	160	168	176	184	192	200	208	216	224	232	240
120 (+8)	[Swatches]															240
60 (+4)	[Swatches]															120
30 (+2)	[Swatches]															60
15 (+1)	[Swatches]															30
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

OE631-5N, Picture A6-137-0: Line raster under 90° (or 0°); PS operator:  $w^* w^* w^* \text{setrgbcolor}$

input:  $rgb (-> rgb^*_{de}) \text{setrgbcolor}$   
 output 137-0:  $g_p=0.47$ ;  $g_N=1.0$

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, CIHLAB

**Test for the best visual linearized output of Picture A7-137-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the radial grating according to picture A1-137-0**

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 A2-137-0**

Are the 5 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 5 steps: ..... Steps

**Test of 16 visual equidistant L\*-grey steps according to picture A3-137-0**

Are the 16 steps on the upper rows distinguishable? Yes/No  
 If No: How many steps can be distinguished? ..... Steps  
 of the given 16 steps: ..... Steps

Part 1 OE630-3N-137-1

**Documentation of file format, hardware and software for this test:**

**PDF-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NP.PDF> underline Yes/No

**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63L0NA.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 OE63L0NP.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 OE63L0NA.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 OE630-7N-137-1

**Test for the best visual linearized output of Picture A7-137-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the Landolt-rings N-W according to picture A4-137-0**

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 A5-137-0**

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 A6-137-0**

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 OE631-3N-137-1

**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/OE63/OE63F1P2.PDF> underline Yes/No

**PS file:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS> underline Yes/No

**Picture A7-137-2: 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/OE63/OE63F1P2.PDF> underline Yes/No  
**picture A7-137-2**

**PS-File:** <http://130.149.60.45/farbmetrik/OE63/OE63F1P2.PS> or underline Yes/No  
**picture A7-137-2**

**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 OE631-7N-137-1

TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=thata

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

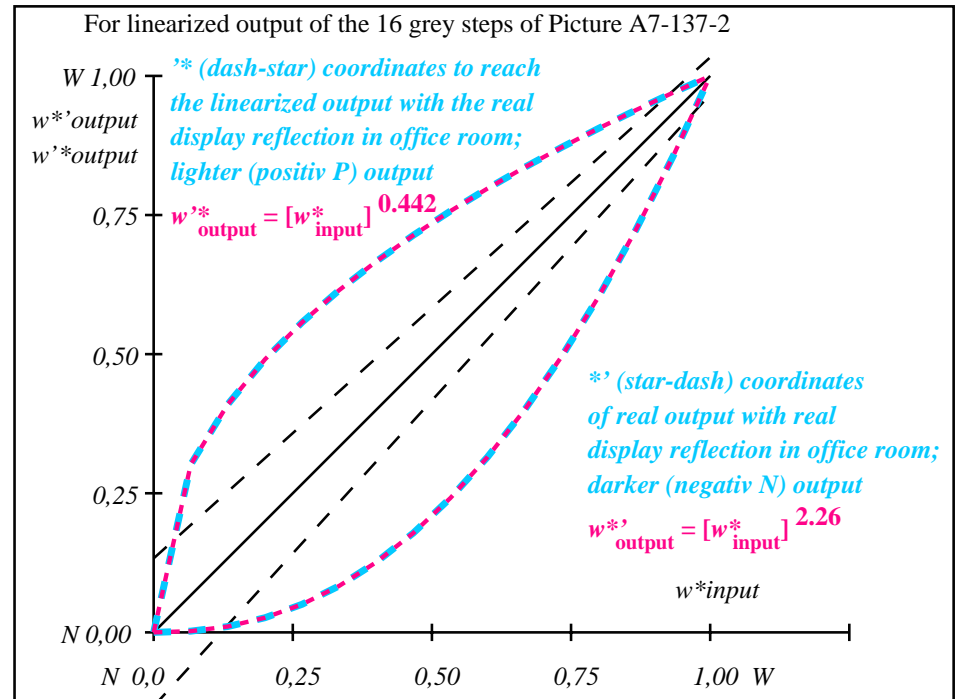
TUB registration: 20110801-OE63/OE63L0NA.TXT /.PS  
 application for output of displays: monitor systems or data projector systems  
 TUB material: code=thadata

i	LAB*ref	L*out	LAB*out	LAB*out/c-ref	$\Delta E^*$
1	69.7	0.0	69.7	0.0	0.01
2	71.41	0.0	77.46	0.0	6.04
3	73.13	0.0	80.24	0.0	7.11
4	74.84	0.0	82.31	0.0	7.47
5	76.55	0.0	84.02	0.0	7.47
6	78.27	0.0	85.51	0.0	7.24
7	79.98	0.0	86.84	0.0	6.86
8	81.7	0.0	88.05	0.0	6.35
9	83.41	0.0	89.17	0.0	5.76
10	85.12	0.0	90.21	0.0	5.08
11	86.84	0.0	91.19	0.0	4.35
12	88.55	0.0	92.11	0.0	3.56
13	90.27	0.0	92.99	0.0	2.73
14	91.98	0.0	93.83	0.0	1.85
15	93.7	0.0	94.64	0.0	0.94
16	95.41	0.0	95.41	0.0	0.01
17	69.7	0.0	69.7	0.0	0.01
18	76.13	0.0	83.62	0.0	7.5
19	82.55	0.0	88.62	0.0	6.06
20	88.98	0.0	92.34	0.0	3.35
21	95.41	0.0	95.41	0.0	0.01

**Start output S1**  
**Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G**

Mean lightness difference (16 steps)  $\Delta E^*_{CIELAB} = 4.6$   
 Mean lightness difference (5 steps)  $\Delta L^*_{CIELAB} = 3.4$   
 Mean colour reproduction index:  $R^*_{ab,m} = 80$

OE630-3N-137-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE631-3N-137-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y^*_{intended}$ (absolute)	69.7/40.3	71.4/42.8	73.1/45.4	74.8/48.0	76.6/50.8	78.3/53.7	80.0/56.6	81.7/59.7	83.4/62.9	85.1/66.3	86.8/69.7	88.6/73.2	90.3/76.9	92.0/80.7	93.7/84.6	95.4/88.6
$w^* w^* w^*$ setrgb gp=0.44																
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	0.302	0.41	0.491	0.557	0.615	0.667	0.714	0.757	0.798	0.836	0.872	0.906	0.939	0.97	1.0

OE630-7N, Picture A7-137-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^* setrgbcolor$

OE63: In-output relation according to ISO 9241-306; 1MR, DEH  
 Viewing  $Y$  contrast  $Y_W:Y_N=88,9:40$ ;  $Y_N$  range 30 to <60

input:  $rgb (-> rgb^*_{de}) setrgbcolor$   
 output 137-2:  $g_P=0.47$ ;  $g_N=1.0$