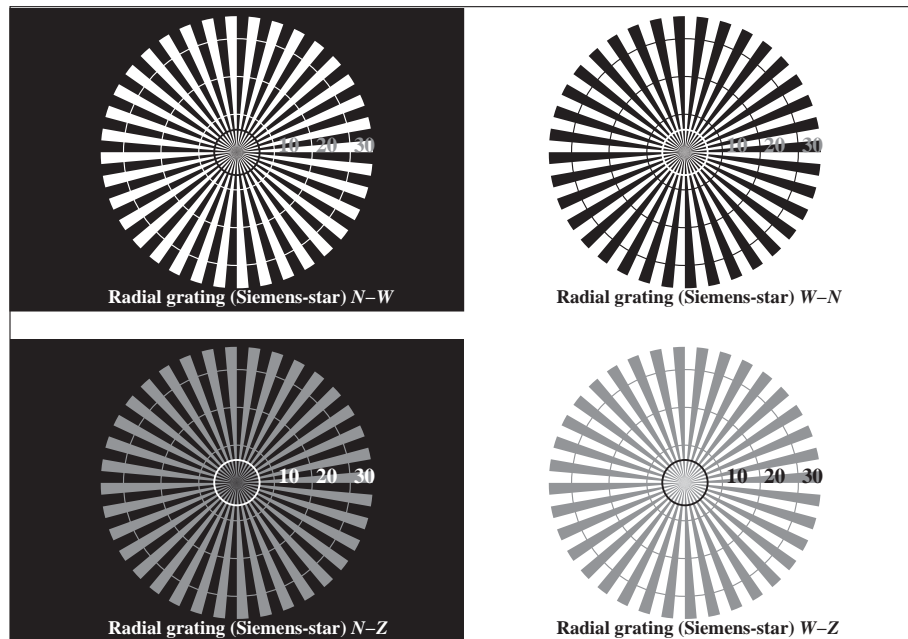
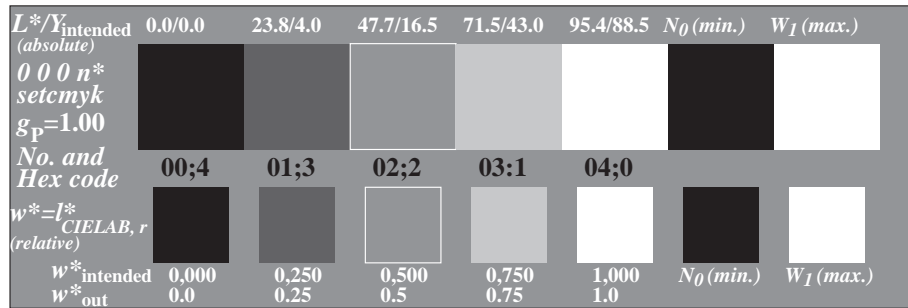


See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>  
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

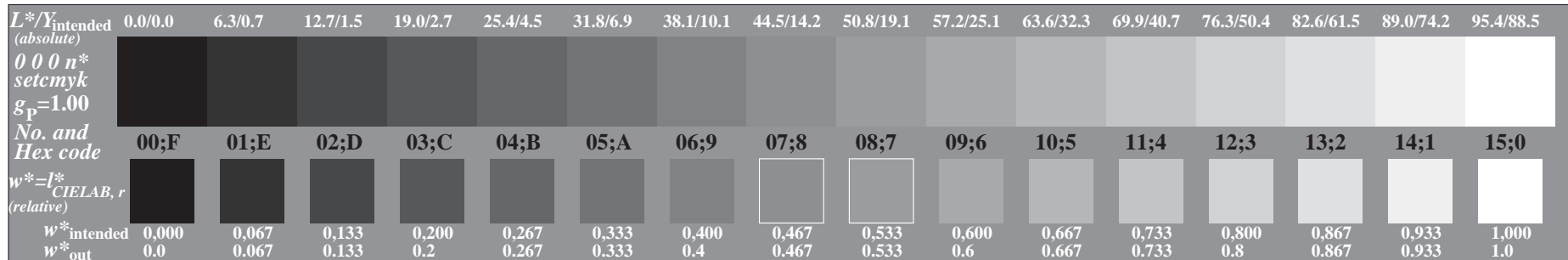
TUB registration: 20110801-OE64/OE64L0NA.TXT /PS TUB material: code=rh4ta  
application for output of displays: monitor systems or data projector systems



OE640-3N, Picture A1-000-0: Radial grating N-W, W-N, N-Z, W-Z; PS operator: 0 0 0 n\* setcmkcolor



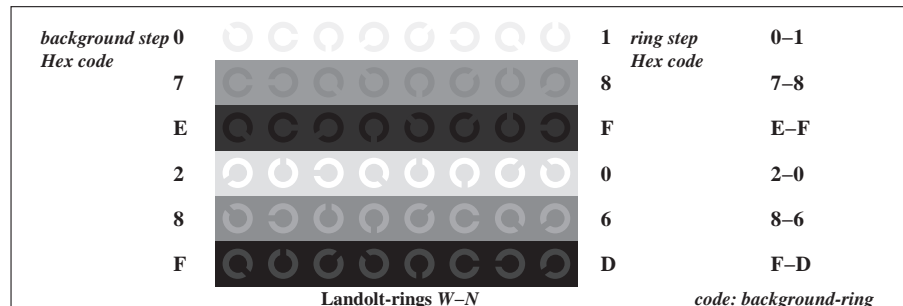
OE640-5N, Picture A2-000-0: 5 equidistant  $L^*$ -grey steps+N0+W1; PS operator: 0 0 0 n\* setcmkcolor



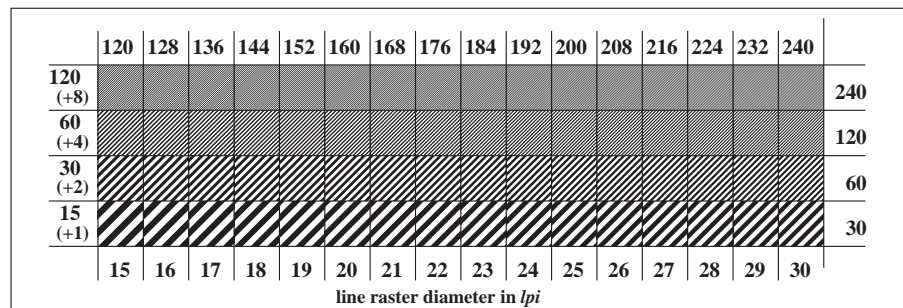
OE640-7N, Picture A3-000-0: 16 visual equidistant  $L^*$ -grey steps; PS operator: 0 0 0 n\* setcmkcolor

OE64: similar ME16 according to ISO 9241-306; DH  
Viewing Y contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

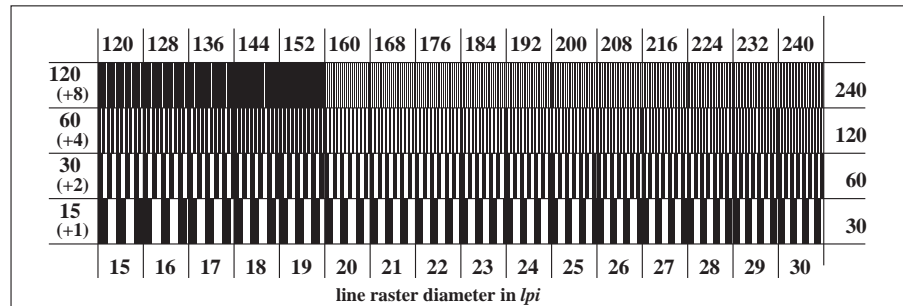
input: all ( $\rightarrow rgb^*_d$ ) setrgbcolor  
output 030-0: no change



OE641-1N, Picture A4-000-0: Landolt-rings W-N; PS operator: 0 0 0 n\* setcmkcolor



OE641-3N, Picture A5-000-0: Line raster under 45° (or 135°); PS operator: 0 0 0 n\* setcmkcolor



OE641-5N, Picture A6-000-0: Line raster under 90° (or 0°); PS operator: 0 0 0 n\* setcmkcolor

Test for the best visual linearized output of Picture A7-000-0		Yes/No
<b>Output test with the computer display ( ) or the external display ( )</b>		
<b>Test of the radial grating according to picture A1-000-0</b>		
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
<b>Test of 5 visual equidistant L*-grey steps according to picture A2-000-0</b>		
Are the 5 steps on the upper rows distinguishable?		Yes/No
If No: How many steps can be distinguished?		..... Steps
<b>Test of 16 visual equidistant L*-grey steps according to picture A3-000-0</b>		
Are the 16 steps on the upper rows distinguishable?		Yes/No
If No: How many steps can be distinguished?		.... Steps

Part 1 OE640-3N-000-1

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

**PDF-File:** <http://130.149.60.45/farbmetrik/OE64/OE64L0NP.PDF> Yes/No

**PS-File:** <http://130.149.60.45/farbmetrik/OE64/OE64L0NA.PS> 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 OE64L0NP.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 OE64L0NA.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 OE640-7N-000-1

OE64: Form A for test chart according to ISO 9241-306; DH  
Viewing Y contrast  $Y_W: Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

Test for the best visual linearized output of Picture A7-000-0		Yes/No
<b>Output test with the computer display ( ) or the external display ( )</b>		
<b>Test of the Landolt-rings N-W according to picture A4-000-0</b>		
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
<b>Test of the radial grating under 45° according to picture A5-000-0</b>		
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
<b>Test of the radial grating under 90° according to picture A6-000-0</b>		
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 OE641-3N-000-1

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

The assessor has **normal** colour vision according to one test:  
either according to DIN 6160:1996 with Anomaloskop of Nagel Yes/No  
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/OE64/OE64F1P2.PDF> Yes/No

**PS file:** <http://130.149.60.45/farbmetrik/OE64/OE64F1P2.PS> Yes/No

**Picture A7-000-2: 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/OE64/OE64F1P2.PDF> Yes/No

**PS-File:** <http://130.149.60.45/farbmetrik/OE64/OE64F1P2.PS> 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](http://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

input: all (->rgb\*\_d) setrgbcolor  
output 030-1: no change

OE641-7N-000-1

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

i	LAB*ref	L*out	LAB*out	LAB*out/c-ref	ΔE*
1	0.0	0.0	0.0	0.0	0.01
2	6.36	0.0	0.07	6.36	0.01
3	12.72	0.0	0.13	12.72	0.01
4	19.08	0.0	0.2	19.08	0.01
5	25.44	0.0	0.27	25.44	0.01
6	31.8	0.0	0.33	31.8	0.01
7	38.16	0.0	0.4	38.16	0.01
8	44.52	0.0	0.47	44.52	0.01
9	50.89	0.0	0.53	50.89	0.01
10	57.25	0.0	0.6	57.25	0.01
11	63.61	0.0	0.67	63.61	0.01
12	69.97	0.0	0.73	69.97	0.01
13	76.33	0.0	0.8	76.33	0.01
14	82.69	0.0	0.87	82.69	0.01
15	89.05	0.0	0.93	89.05	0.01
16	95.41	0.0	1.0	95.41	0.01
17	0.0	0.0	0.0	0.0	0.01
18	23.85	0.0	0.25	23.85	0.01
19	47.71	0.0	0.5	47.71	0.01
20	71.56	0.0	0.75	71.56	0.01
21	95.41	0.0	1.0	95.41	0.01

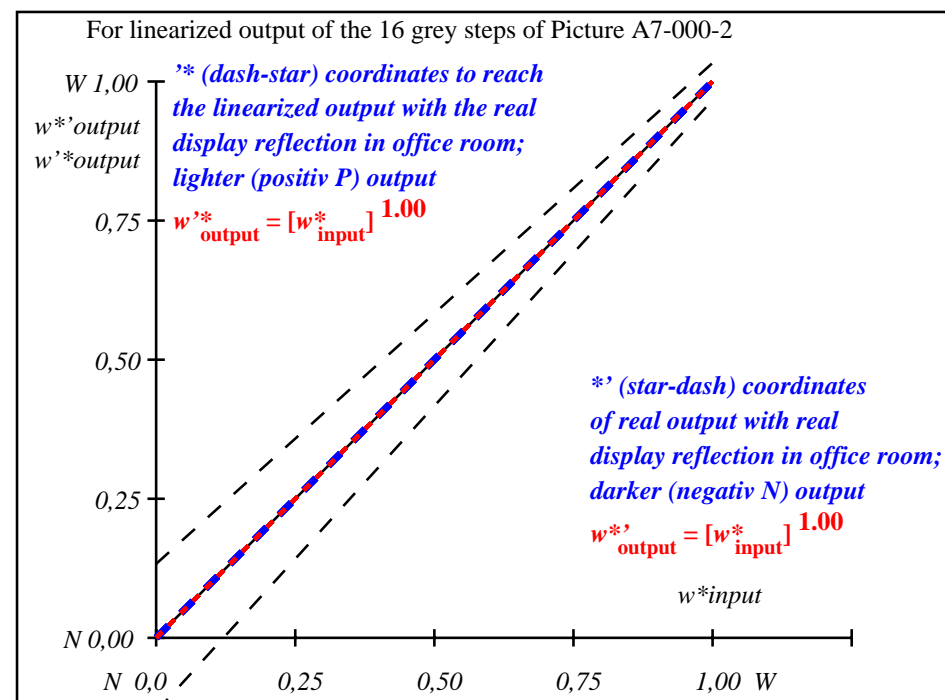
**Start output S1**  
**Specification according to**  
**ISO/IEC 15775 Annex G**  
**and DIN 33866-1 Annex G**

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

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

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

OE640-3N-000-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-000-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{\text{intended}}$ (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
$000n^*$ setcmyk gp=1.00 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
$w^* = [L^*]^{1/3}$ (relative)																
$w^*_{\text{intended}}$	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
$w^*_{\text{out}}$	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

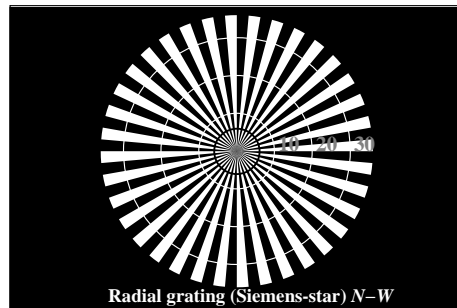
OE640-7N, Picture A7-000-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $000n^*$  setcmykcolor

OE64: In-output relation according to ISO 9241-306; DH  
Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

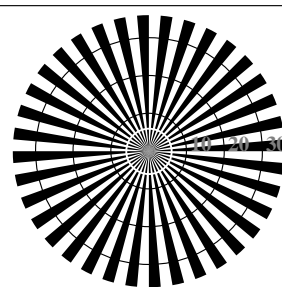
input: all ( $\rightarrow rgb^*_d$ ) setrgbcolor  
output 030-2: no change

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

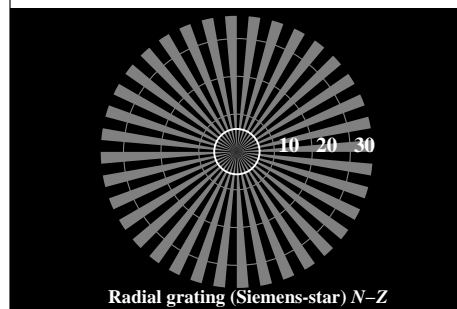
TUB registration: 20110801-OE64/OE64L0NA.TXT /PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rh4ta



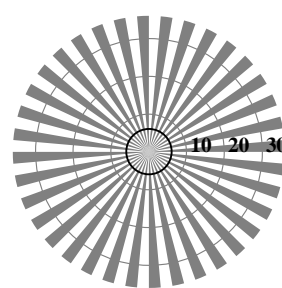
Radial grating (Siemens-star) N-W



Radial grating (Siemens-star) W-N

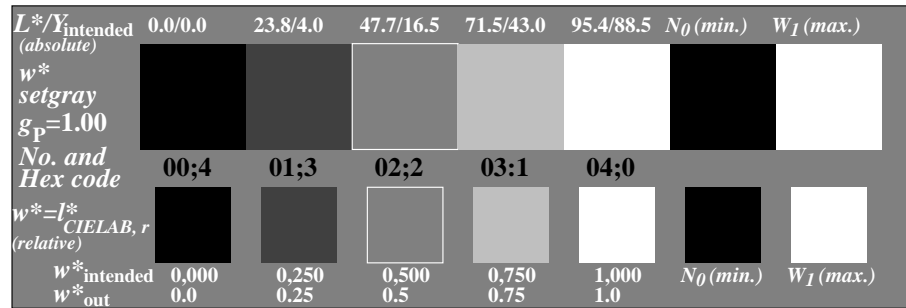


Radial grating (Siemens-star) N-Z

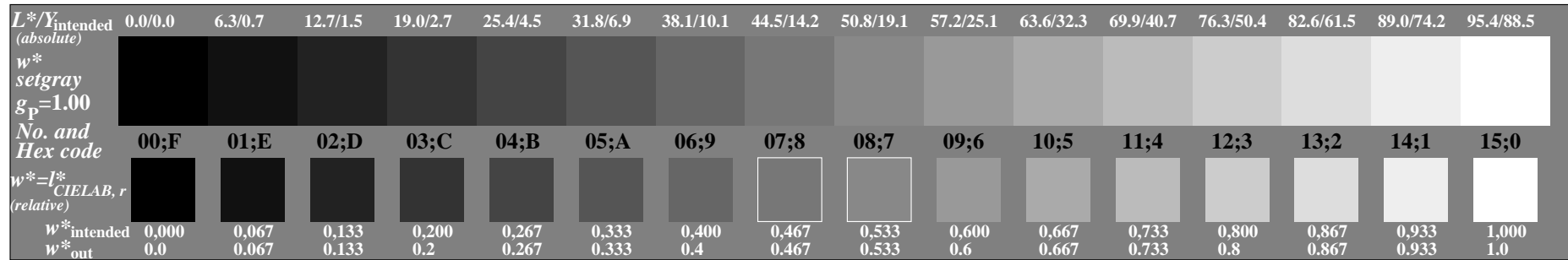


Radial grating (Siemens-star) W-Z

OE640-3N, Picture A1-010-3: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $w^*$  setgray



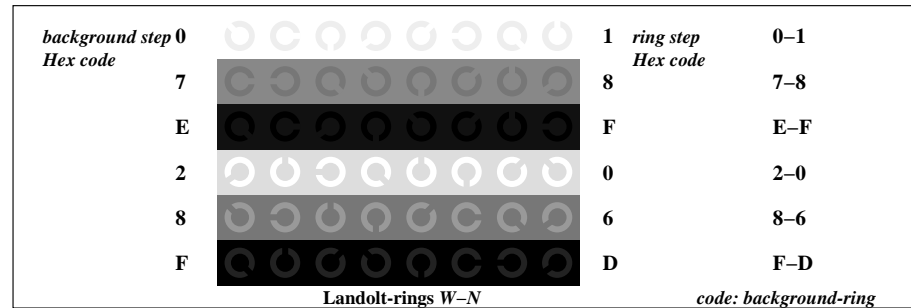
OE640-5N, Picture A2-010-3: 5 equidistant  $L^*$ -grey steps+ $N_0$ + $W_1$ ; PS operator:  $w^*$  setgray



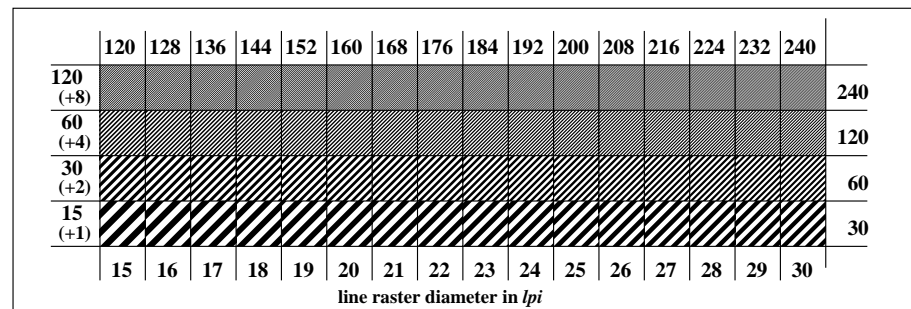
OE640-7N, Picture A3-010-3: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^*$  setgray

OE64: similar ME16 according to ISO 9241-306; DH  
Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

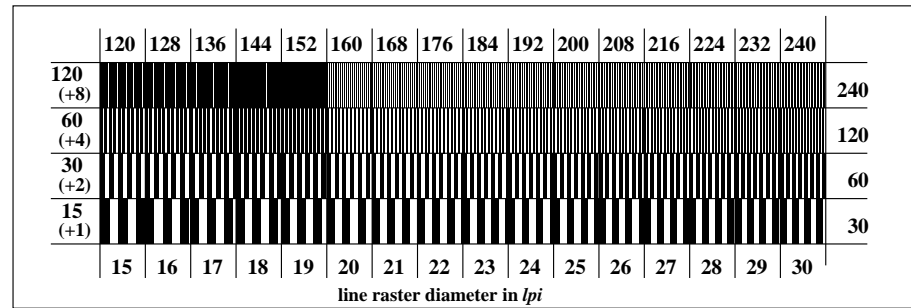
input: all ( $\rightarrow rgb^*_d$ ) setrgbcolor  
output 030-3: no change



OE641-1N, Picture A4-010-3: Landolt-rings W-N; PS operator:  $w^*$  setgray



OE641-3N, Picture A5-010-3: Line raster under 45° (or 135°); PS operator:  $w^*$  setgray



OE641-5N, Picture A6-010-3: Line raster under 90° (or 0°); PS operator:  $w^*$  setgray



**Test for the best visual linearized output of Picture A7-010-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the radial grating according to picture A1-010-0**  
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 A2-010-0**  
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 A3-010-0**  
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 OE640-3N-010-4

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

**PDF-File:** http://130.149.60.45/farbmetrik/OE64/OE64L0NP.PDF underline Yes/No  
**PS-File:** http://130.149.60.45/farbmetrik/OE64/OE64L0NA.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 OE64L0NP.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 OE64L0NA.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 OE640-7N-010-4

OE64: Form A for test chart according to ISO 9241-306; DH  
Viewing Y contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

**Test for the best visual linearized output of Picture A7-010-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the Landolt-rings N-W according to picture A4-010-0**  
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 A5-010-0**  
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 A6-010-0**  
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 OE641-3N-010-4

**Documentation of assessor colour vision properties for visual assessment**  
The assessor has normal colour vision according to one test:  
either according to DIN 6160:1996 with Anomaloskop of Nagel underline Yes/No  
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/OE64/OE64F1P2.PDF underline Yes/No  
**PS file:** http://130.149.60.45/farbmetrik/OE64/OE64F1P2.PS underline Yes/No  
**Picture A7-010-2: 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/OE64/OE64F1P2.PDF underline Yes/No  
**PS-File:** http://130.149.60.45/farbmetrik/OE64/OE64F1P2.PS or underline Yes/No  
**picture A7-010-2** underline Yes/No  
**picture A7-010-2** or underline Yes/No

**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 and transfer  
of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF underline Yes/No  
If No, please describe other method: .....

Part 4

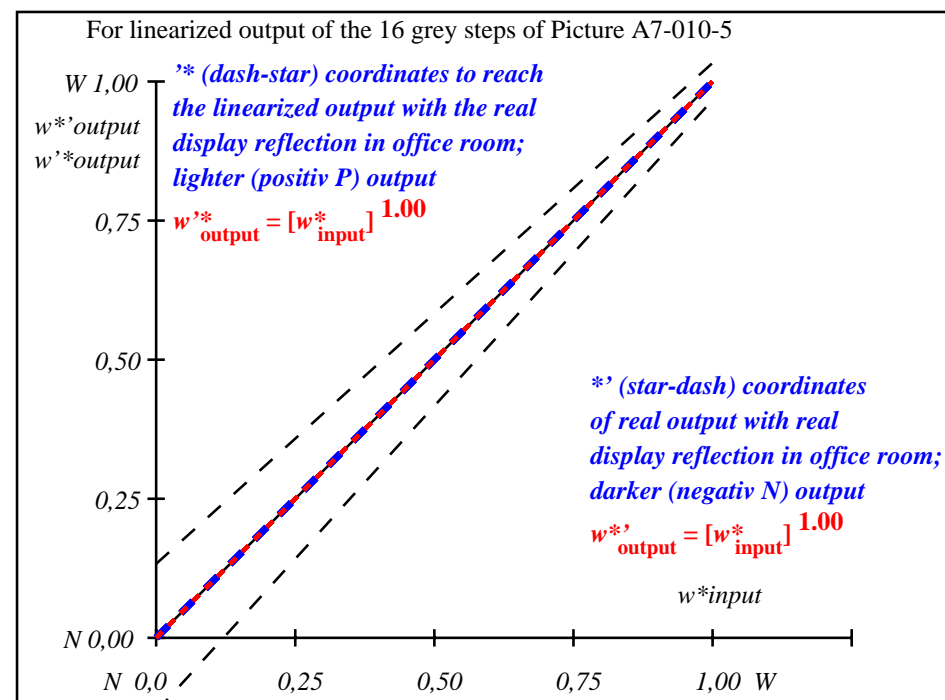
input: all (->rgb\*\_d) setrgbcolor  
output 030-4: no change

OE641-7N-010-4

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

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

OE640-3N-010-5: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-010-5: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{\text{intended}}$ (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
$w^*$ setgray $g_p=1.00$ 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
$w^* = L^*_{\text{CIELAB}, r}$ (relative)																
$w^*_{\text{intended}}$	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
$w^*_{\text{out}}$	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

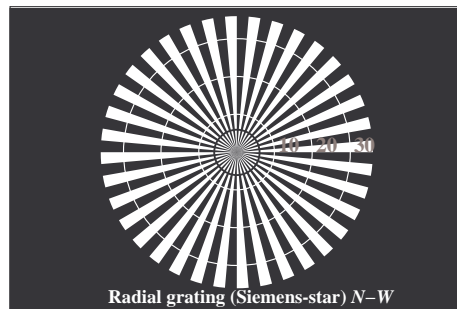
OE640-7N, Picture A7-010-5: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^*$  setgray

OE64: In-output relation according to ISO 9241-306; DH  
Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

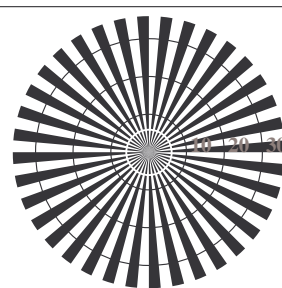
input: all ( $\rightarrow rgb^*_d$ ) setrgbcolor  
output 030-5: no change

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

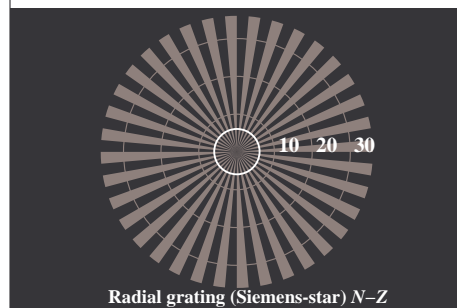
TUB registration: 20110801-OE64/OE64L0NA.TXT /PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rh4ta



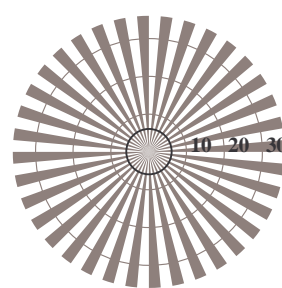
Radial grating (Siemens-star) N-W



Radial grating (Siemens-star) W-N

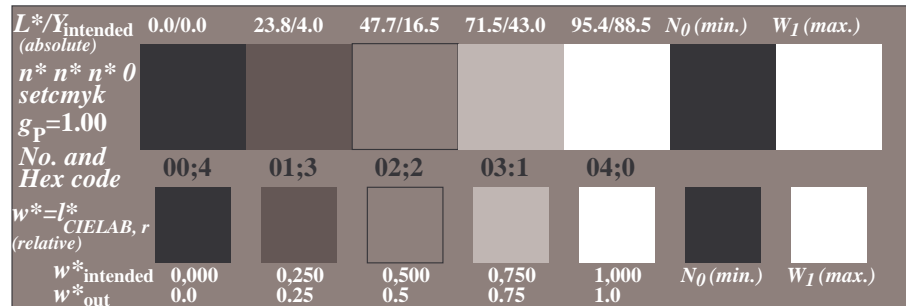


Radial grating (Siemens-star) N-Z

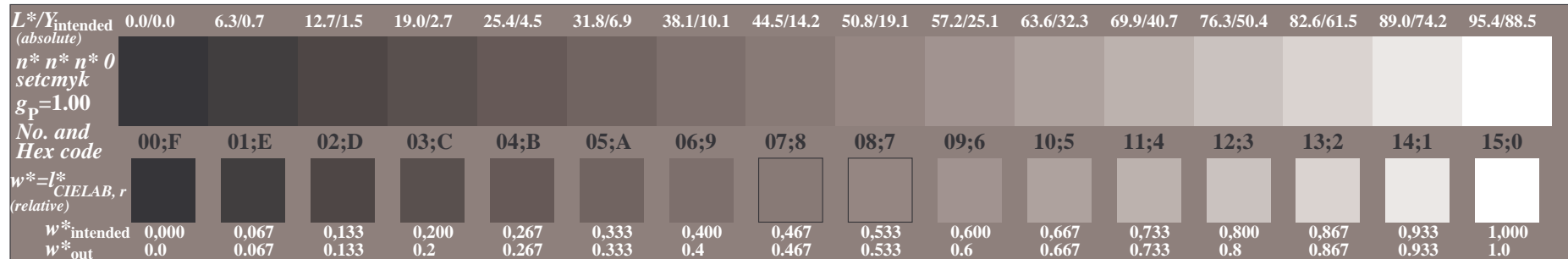


Radial grating (Siemens-star) W-Z

OE640-3N, Picture A1-020-6: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $n^*n^*n^*0$  setcmykcolor



OE640-5N, Picture A2-020-6: 5 equidistant  $L^*$ -grey steps+N0+W1; PS operator:  $n^*n^*n^*0$  setcmykcolor

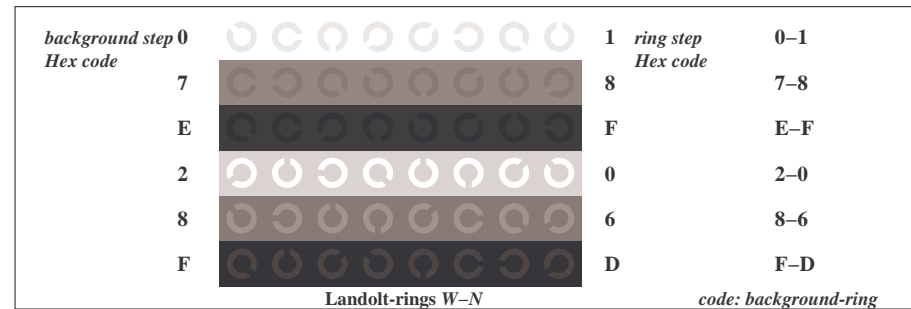


OE640-7N, Picture A3-020-6: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $n^*n^*n^*0$  setcmykcolor

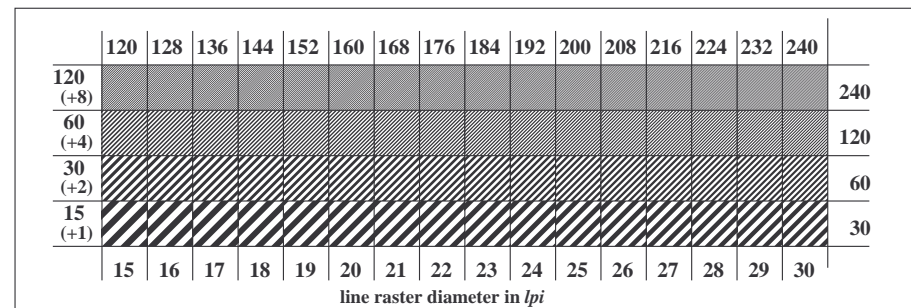


OE64: similar ME16 according to ISO 9241-306; DH  
Viewing Y contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

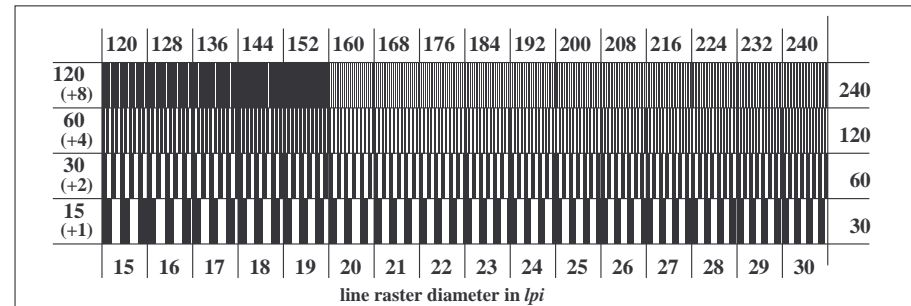
input: all ( $\rightarrow rgb^*_d$ ) setrgbcolor  
output 030-6: no change



OE641-1N, Picture A4-020-6: Landolt-rings W-N; PS operator:  $n^*n^*n^*0$  setcmykcolor



OE641-3N, Picture A5-020-6: Line raster under 45° (or 135°); PS operator:  $n^*n^*n^*0$  setcmykcolor



OE641-5N, Picture A6-020-6: Line raster under 90° (or 0°); PS operator:  $n^*n^*n^*0$  setcmykcolor

**Test for the best visual linearized output of Picture A7-020-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the radial grating according to picture A1-020-0**  
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 A2-020-0**  
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 A3-020-0**  
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 OE640-3N-020-7

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

**PDF-File:** http://130.149.60.45/farbmetrik/OE64/OE64L0NP.PDF underline Yes/No  
**PS-File:** http://130.149.60.45/farbmetrik/OE64/OE64L0NA.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 OE64L0NP.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 OE64L0NA.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 OE640-7N-020-7

OE64: Form A for test chart according to ISO 9241-306; DH  
Viewing Y contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

**Test for the best visual linearized output of Picture A7-020-0** Yes/No  
**Output test with the computer display ( ) or the external display ( )**

**Test of the Landolt-rings N-W according to picture A4-020-0**  
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 A5-020-0**  
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 A6-020-0**  
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 OE641-3N-020-7

**Documentation of assessor colour vision properties for visual assessment**  
The assessor has **normal** colour vision according to one test:  
either according to DIN 6160:1996 with Anomaloskop of Nagel underline Yes/No  
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/OE64/OE64F1P2.PDF underline Yes/No  
**PS file:** http://130.149.60.45/farbmetrik/OE64/OE64F1P2.PS underline Yes/No  
**Picture A7-020-2: 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/OE64/OE64F1P2.PDF underline Yes/No  
**PS-File:** http://130.149.60.45/farbmetrik/OE64/OE64F1P2.PS or underline Yes/No  
**picture A7-020-2** underline Yes/No

**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 and transfer  
of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF underline Yes/No  
If No, please describe other method: .....

Part 4

input: all (->rgb\*\_d) setrgbcolor  
output 030-7: no change

OE641-7N-020-7



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

i	LAB*ref	L*out	LAB*out	LAB*out/c-ref	$\Delta E^*$
1	0.0	0.0	0.0	0.0	0.01
2	6.36	0.0	0.07	6.36	0.01
3	12.72	0.0	0.13	12.72	0.01
4	19.08	0.0	0.2	19.08	0.01
5	25.44	0.0	0.27	25.44	0.01
6	31.8	0.0	0.33	31.8	0.01
7	38.16	0.0	0.4	38.16	0.01
8	44.52	0.0	0.47	44.52	0.01
9	50.89	0.0	0.53	50.89	0.01
10	57.25	0.0	0.6	57.25	0.01
11	63.61	0.0	0.67	63.61	0.01
12	69.97	0.0	0.73	69.97	0.01
13	76.33	0.0	0.8	76.33	0.01
14	82.69	0.0	0.87	82.69	0.01
15	89.05	0.0	0.93	89.05	0.01
16	95.41	0.0	1.0	95.41	0.01
17	0.0	0.0	0.0	0.0	0.01
18	23.85	0.0	0.25	23.85	0.01
19	47.71	0.0	0.5	47.71	0.01
20	71.56	0.0	0.75	71.56	0.01
21	95.41	0.0	1.0	95.41	0.01

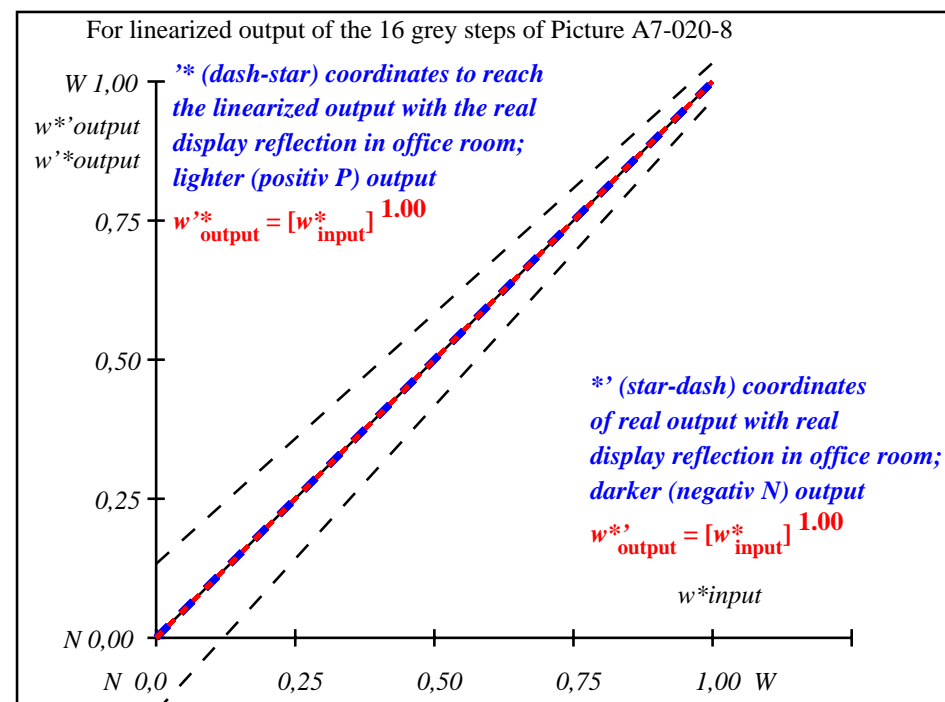
**Start output S1**  
**Specification according to**  
**ISO/IEC 15775 Annex G**  
**and DIN 33866-1 Annex G**

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

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

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

OE640-3N-020-8: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-020-8: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{\text{intended}}$ (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
$n^* n^* n^* 0$ setcmyk gp=1.00																
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
$w^* = [L^*_{\text{CIELAB}}, r]$ (relative)																
$w^*_{\text{intended}}$	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
$w^*_{\text{out}}$	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

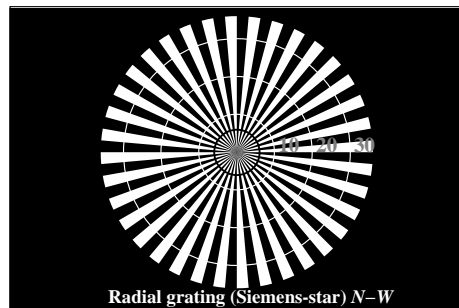
OE640-7N, Picture A7-020-8: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $n^* n^* n^* 0$  setcmykcolor

OE64: In-output relation according to ISO 9241-306; DH  
Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

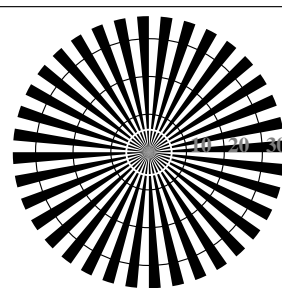
input: all ( $\rightarrow rgb^*_d$ ) setrgbcolor  
output 030-8: no change

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

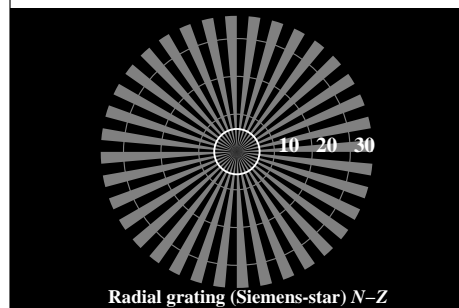
TUB registration: 20110801-OE64/OE64L0NA.TXT /PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=rh4ta



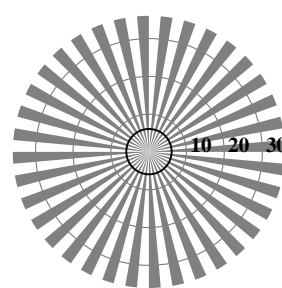
Radial grating (Siemens-star) N-W



Radial grating (Siemens-star) W-N

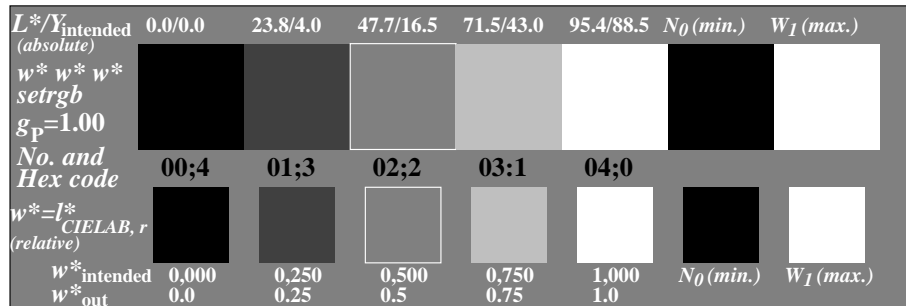


Radial grating (Siemens-star) N-Z

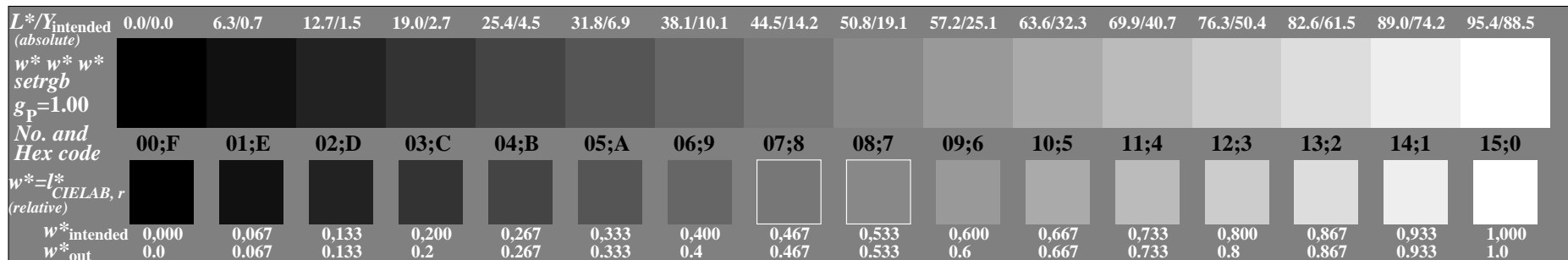


Radial grating (Siemens-star) W-Z

OE640-3N, Picture A1-030-9: Radial grating N-W, W-N, N-Z, W-Z; PS operator:  $w^*w^*w^*setrgbcolor$



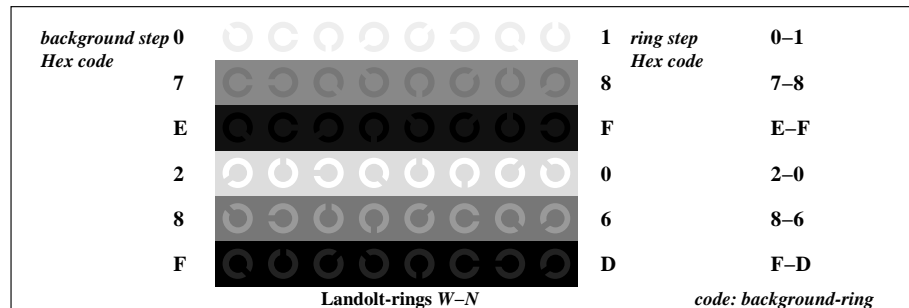
OE640-5N, Picture A2-030-9: 5 equidistant  $L^*$ -grey steps+ $N_0$ + $W_1$ ; PS operator:  $w^*w^*w^*setrgbcolor$



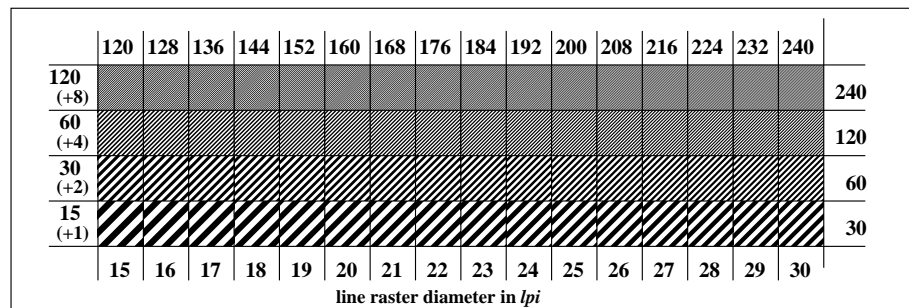
OE640-7N, Picture A3-030-9: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^*w^*w^*setrgbcolor$

OE64: similar ME16 according to ISO 9241-306; DH  
Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

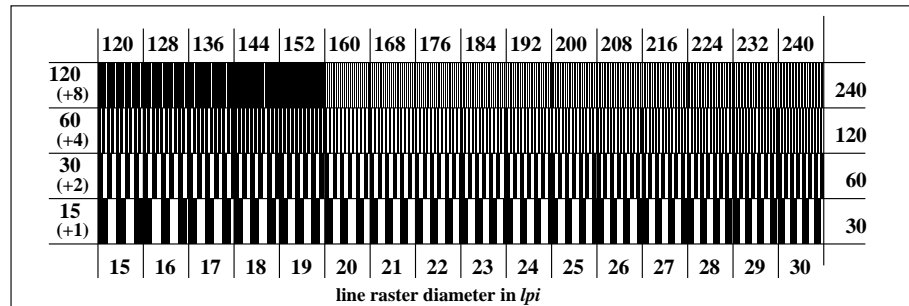
input: all ( $\rightarrow rgb^*_d$ )  $setrgbcolor$   
output 030-9: no change



OE641-1N, Picture A4-030-9: Landolt-rings W-N; PS operator:  $w^*w^*w^*setrgbcolor$



OE641-3N, Picture A5-030-9: Line raster under 45° (or 135°); PS operator:  $w^*w^*w^*setrgbcolor$



OE641-5N, Picture A6-030-9: Line raster under 90° (or 0°); PS operator:  $w^*w^*w^*setrgbcolor$

Test for the best visual linearized output of Picture A7-030-0		Yes/No
<b>Output test with the computer display ( ) or the external display ( )</b>		
<b>Test of the radial grating according to picture A1-030-0</b>		
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
<b>Test of 5 visual equidistant L*-grey steps according to picture A2-030-0</b>		
Are the 5 steps on the upper rows distinguishable?		Yes/No
If No: How many steps can be distinguished?		..... Steps
<b>Test of 16 visual equidistant L*-grey steps according to picture A3-030-0</b>		
Are the 16 steps on the upper rows distinguishable?		Yes/No
If No: How many steps can be distinguished?		.... Steps

Part 1 OE640-3N-030-10

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

**PDF-File:** <http://130.149.60.45/farbmetrik/OE64/OE64L0NP.PDF> underline Yes/No

**PS-File:** <http://130.149.60.45/farbmetrik/OE64/OE64L0NA.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 OE64L0NP.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 OE64L0NA.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 OE640-7N-030-10

OE64: Form A for test chart according to ISO 9241-306; DH  
Viewing Y contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

Test for the best visual linearized output of Picture A7-030-0		Yes/No
<b>Output test with the computer display ( ) or the external display ( )</b>		
<b>Test of the Landolt-rings N-W according to picture A4-030-0</b>		
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
<b>Test of the radial grating under 45° according to picture A5-030-0</b>		
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
<b>Test of the radial grating under 90° according to picture A6-030-0</b>		
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 OE641-3N-030-10

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

The assessor has **normal** colour vision according to one test:  
either according to DIN 6160:1996 with Anomaloskop of Nagel  
or with test charts using colour points according to Ishihara  
or tested with, please specify: .....

underline Yes/No  
underline Yes/unknown  
underline Yes/unknown  
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/OE64/OE64F1P2.PDF>

underline Yes/No

**PS file:** <http://130.149.60.45/farbmetrik/OE64/OE64F1P2.PS>

underline Yes/No

**Picture A7-030-2: 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/OE64/OE64F1P2.PDF>

**picture A7-030-2**

underline Yes/No

**PS-File:** <http://130.149.60.45/farbmetrik/OE64/OE64F1P2.PS>

**picture A7-030-2**

or underline Yes/No

**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: .....

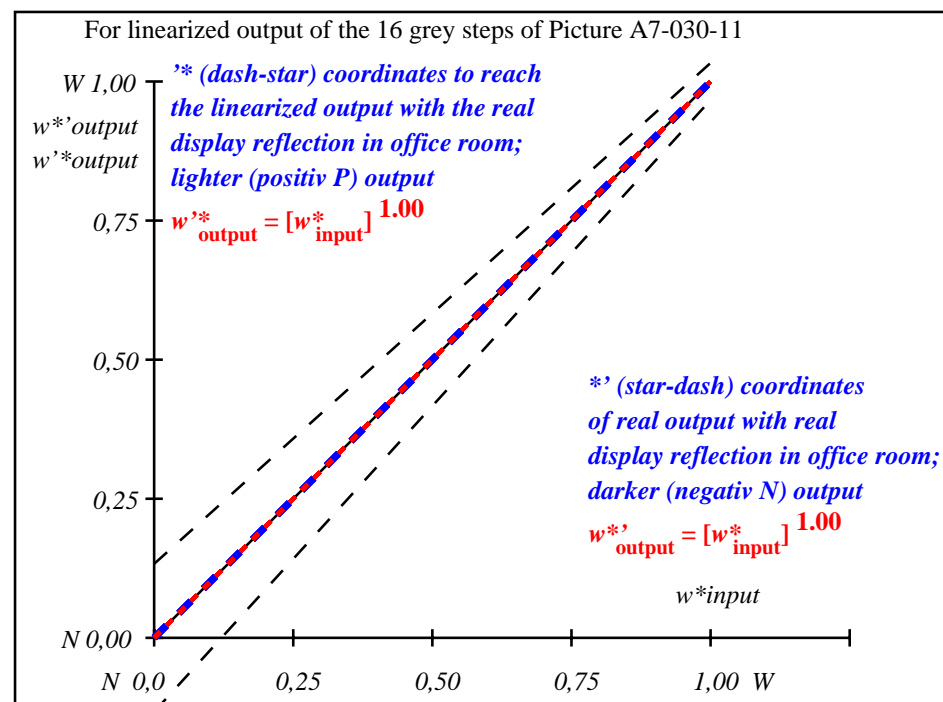
Part 4

input: *all (->rgb\*a) setrgbcolor*  
output 030-10: no change

OE641-7N-030-10

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

OE640-3N-030-11: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE641-3N-030-11: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{\text{intended}}$ (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 gp=1.00																
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
$w^* = [L^*_{\text{CIELAB}, r}]$ (relative)																
$w^*_{\text{intended}}$	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
$w^*_{\text{out}}$	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

OE640-7N, Picture A7-030-11: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

OE64: In-output relation according to ISO 9241-306; DH  
Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

input: all ( $\rightarrow$ rgb\*) setrgbcolor  
output 030-11: no change