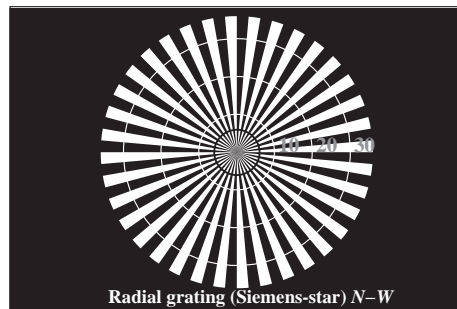
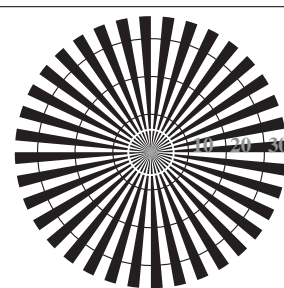


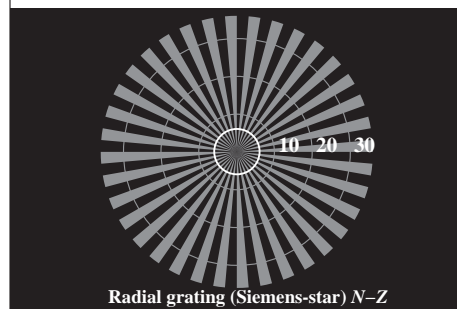
See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1



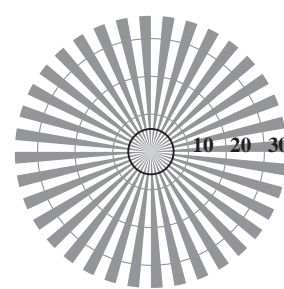
Radial grating (Siemens-star) N-W



Radial grating (Siemens-star) W-N

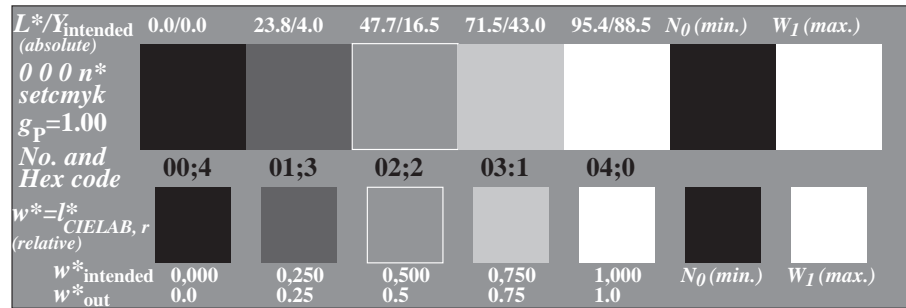


Radial grating (Siemens-star) N-Z

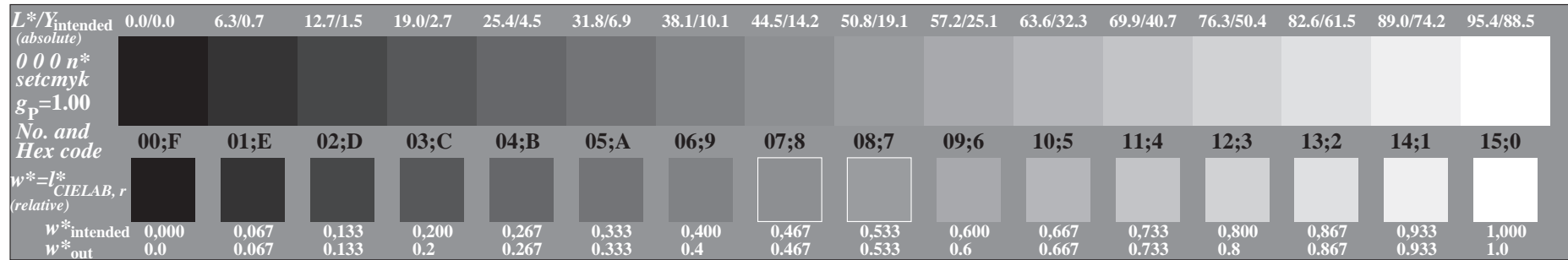


Radial grating (Siemens-star) W-Z

OE640-3N, Picture A1-000-0: 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

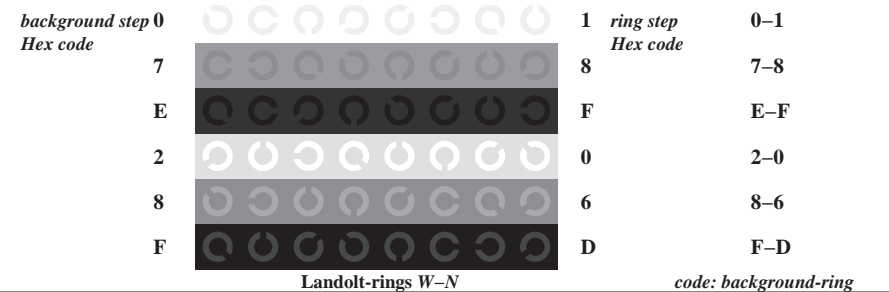


OE640-7N, Picture A3-000-0: 16 visual equidistant L^* -grey steps; PS operator: 0 0 0 n* setcmkcolor

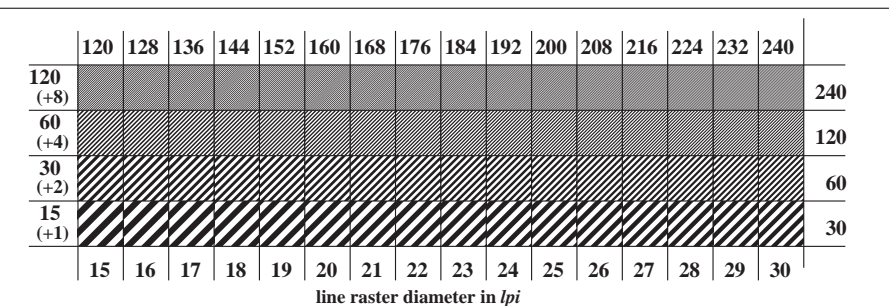


OE64: similar ME16 according to ISO 9241-306; DH
Viewing Y contrast $Y_W:Y_N=88,9:0,31$; Y_N range 0,0 to <0,46

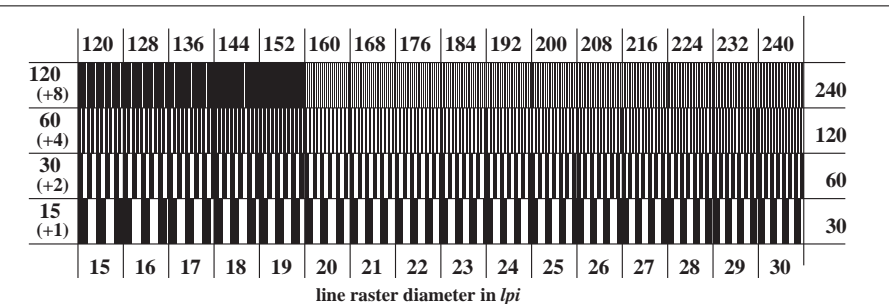
input: all ($\rightarrow rgb^*_d$) setrgbcolor
output 030-0: no change



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

TUB registration: 20110801-OE64/OE64L0NP.PDF /.PS
application for output of displays: monitor systems or data projector systems
TUB material: code=rh4ta

Test for the best visual linearized output of Picture A7-000-0		Yes/No
Output test with the computer display () or the external display ()		
Test of the radial grating according to picture A1-000-0		
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 A2-000-0		
Are the 5 steps on the upper rows distinguishable?		Yes/No
If No: How many steps can be distinguished?		..... Steps
Test of 16 visual equidistant L*-grey steps according to picture A3-000-0		
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> or underline 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
Output test with the computer display () or the external display ()		
Test of the Landolt-rings N-W according to picture A4-000-0		
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 A5-000-0		
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 A6-000-0		
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-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 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> 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 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

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

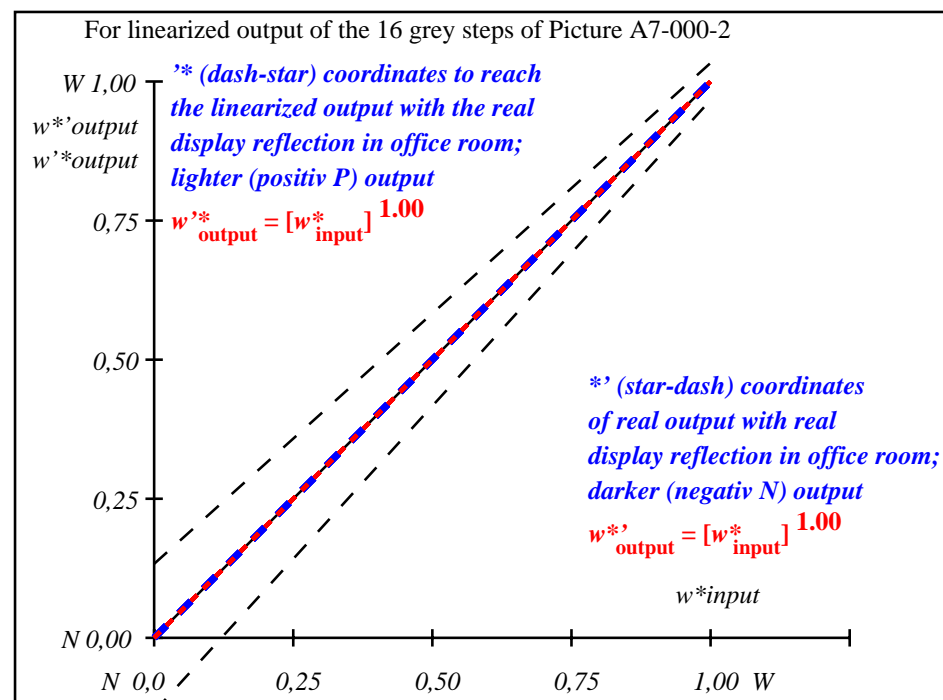
Start output S1
Specification according to
ISO/IEC 15775 Annex G
and DIN 33866-1 Annex G

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_{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
$w^* = [L^*_{\text{CIELAB}}]^{1/r}$ (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}	0.000	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

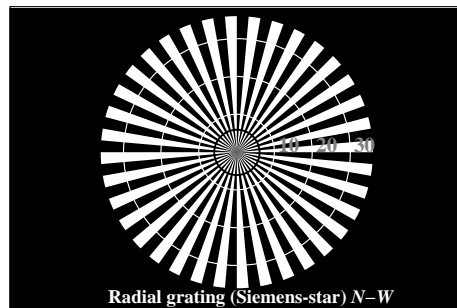
OE640-7N, Picture A7-000-2: 16 visual equidistant L^* -grey steps; PS operator: $000n^*$ setcmykcolor

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

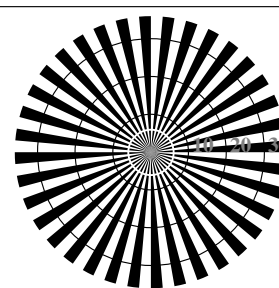
input: all ($\rightarrow rgb^*_d$) setrgbcolor
output 030-2: no change

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

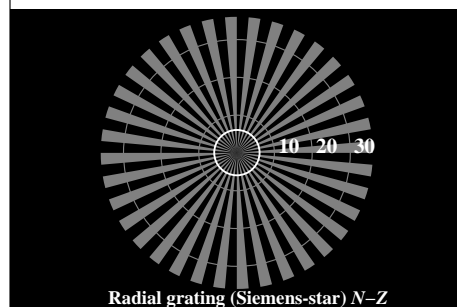
TUB registration: 20110801-OE64/OE64L0NP.PDF /.PS
application for output of displays: monitor systems or data projector systems
TUB material: code=rh4ta



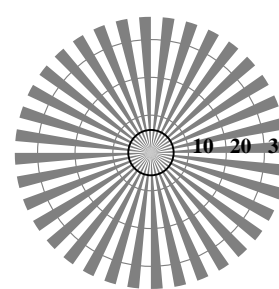
Radial grating (Siemens-star) N-W



Radial grating (Siemens-star) W-N

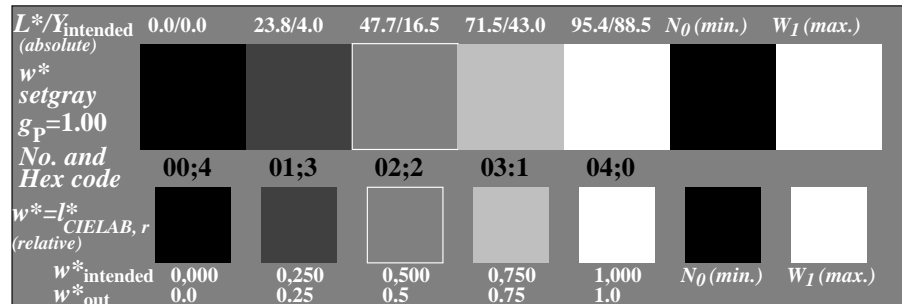


Radial grating (Siemens-star) N-Z

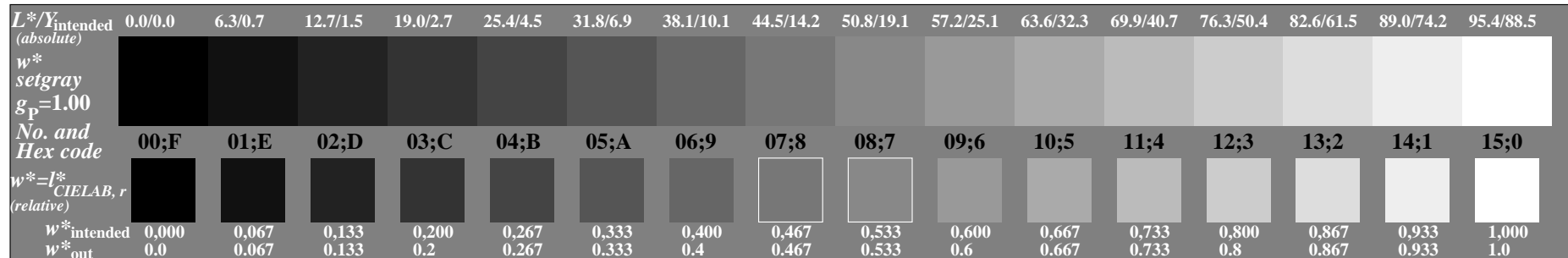


Radial grating (Siemens-star) W-Z

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

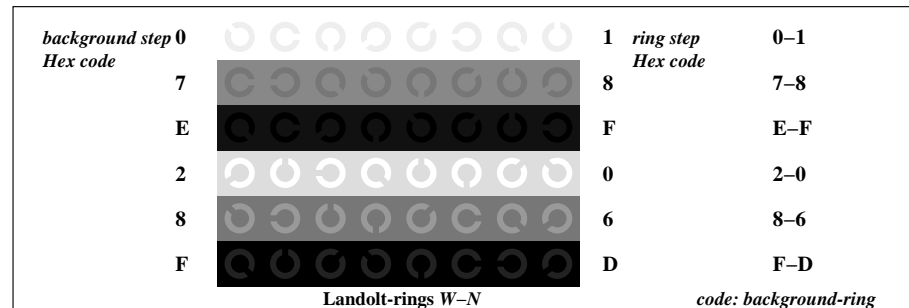


OE640-7N, Picture A3-010-3: 16 visual equidistant L^* -grey steps; PS operator: w^* setgray

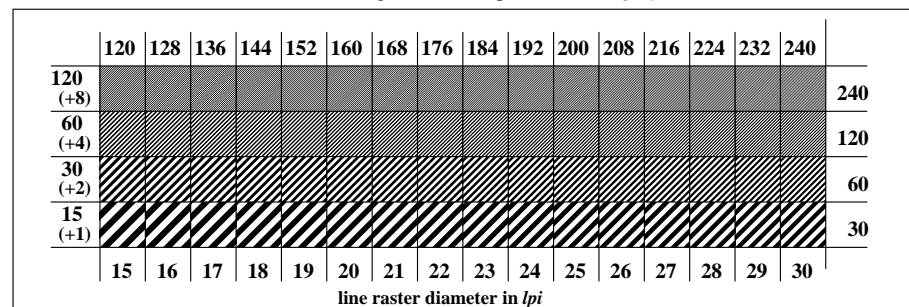


OE64: similar ME16 according to ISO 9241-306; DH
Viewing Y contrast $Y_W:Y_N=88,9:0,31$; Y_N range 0,0 to <0,46

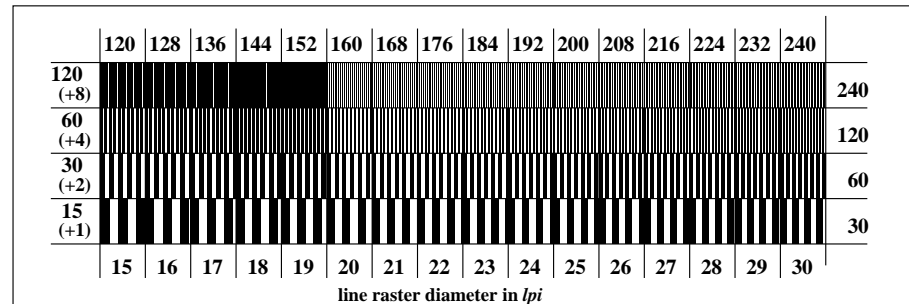
input: all ($\rightarrow rgb^*_d$) setrgbcolor
output 030-3: no change



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
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

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> 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-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		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 A5-010-0		
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 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 A7-010-2: 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 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 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 030-4: no change

OE641-7N-010-4

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

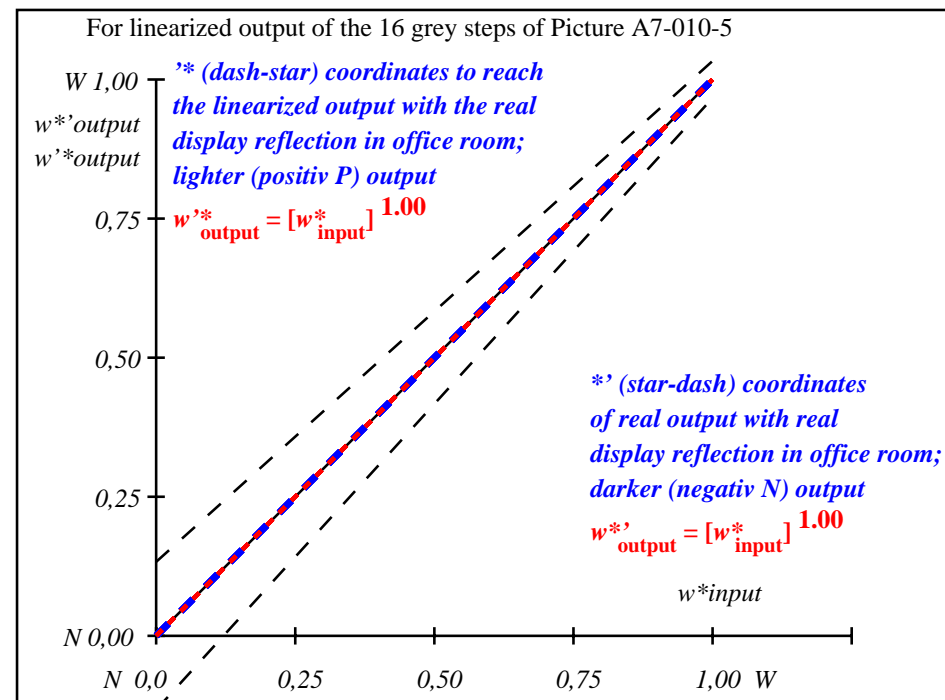
Start output S1
Specification according to
ISO/IEC 15775 Annex G
and DIN 33866-1 Annex G

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-010-5: File: Measure unknown; Device: Device unknown; Date: Date unknown



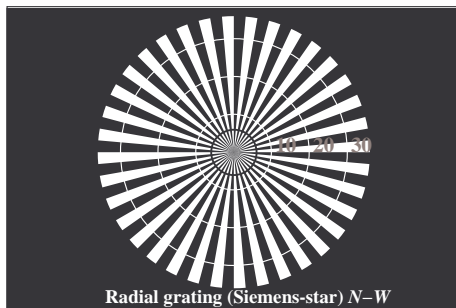
OE641-3N-010-5: File: Measure unknown; Device: Device unknown; Date: Date unknown

L^*/Y_{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^*_{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

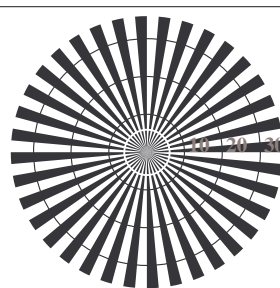
OE640-7N, Picture A7-010-5: 16 visual equidistant L^* -grey steps; PS operator: w^* setgray

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

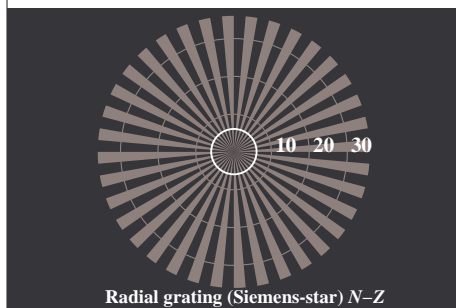
input: all ($\rightarrow \text{rgb}^*_d$) setrgbcolor
output 030-5: no change



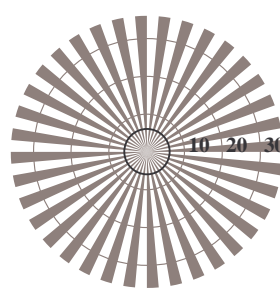
Radial grating (Siemens-star) N-W



Radial grating (Siemens-star) W-N

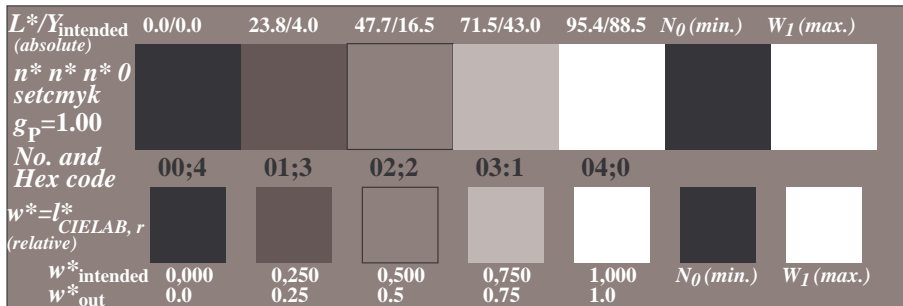


Radial grating (Siemens-star) N-Z

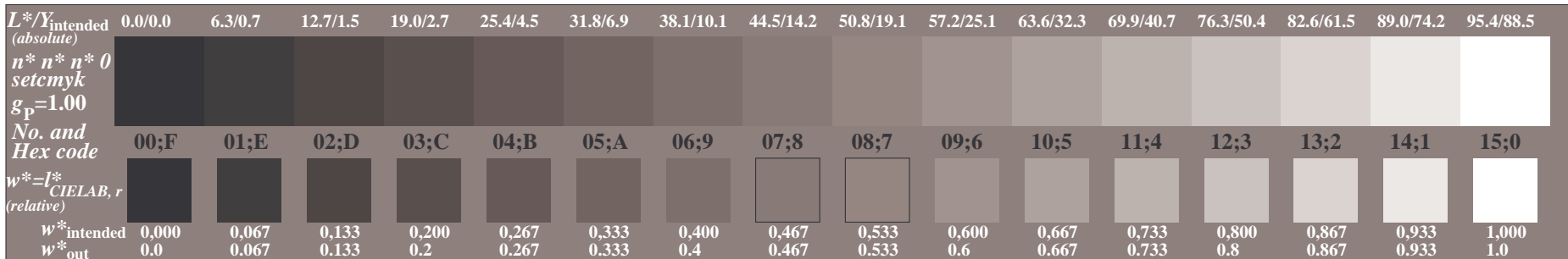


Radial grating (Siemens-star) W-Z

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



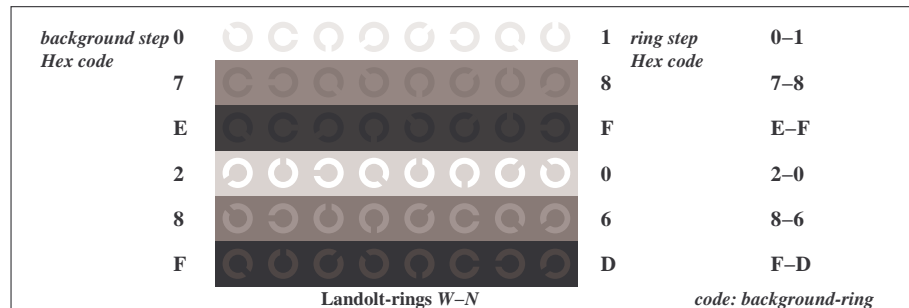
OE640-5N, Picture A2-020-6: 5 equidistant L^* -grey steps+N0+W1; PS operator: $n^*n^*n^*0$ setcmykcolor



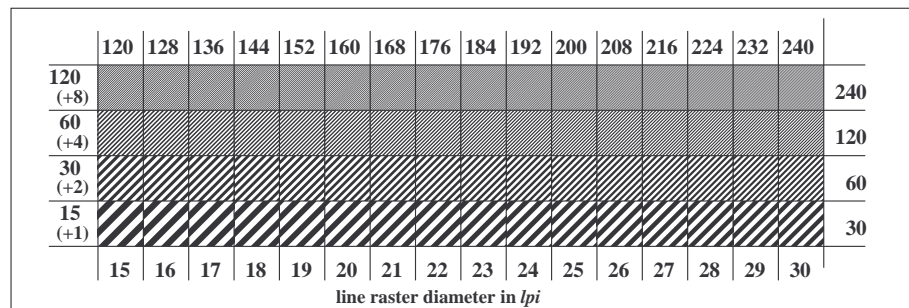
OE640-7N, Picture A3-020-6: 16 visual equidistant L^* -grey steps; PS operator: $n^*n^*n^*0$ setcmykcolor

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

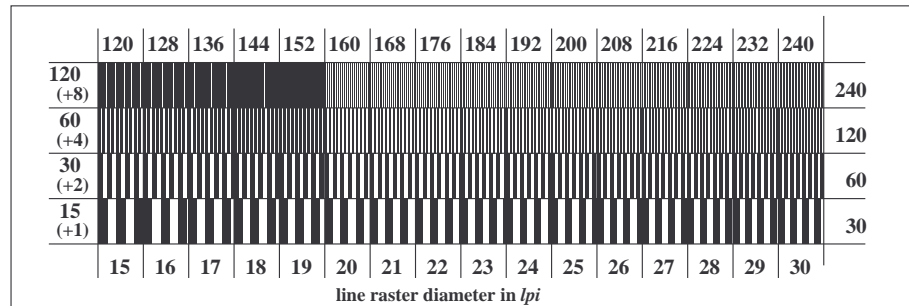
input: all ($\rightarrow rgb^*_d$) setrgbcolor
output 030-6: no change



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
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

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> 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: 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-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	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 A5-020-0		
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 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 A7-020-2: 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> 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 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 030-7: no change

OE641-7N-020-7

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

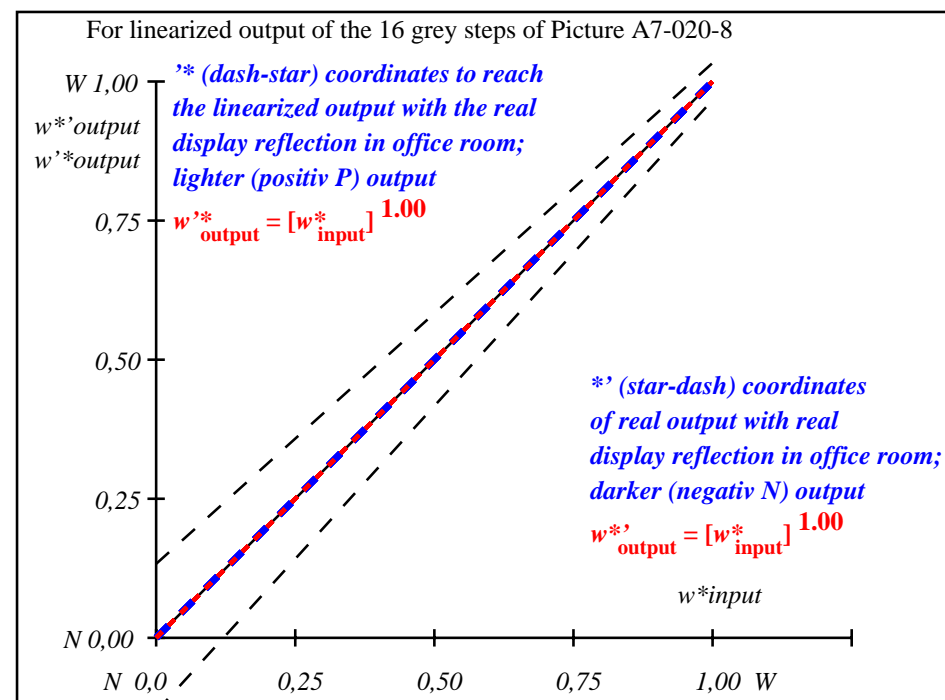
Start output S1
Specification according to
ISO/IEC 15775 Annex G
and DIN 33866-1 Annex G

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-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_{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
$w^* = [L^*_{\text{CIELAB}}]^{1/r}$ (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

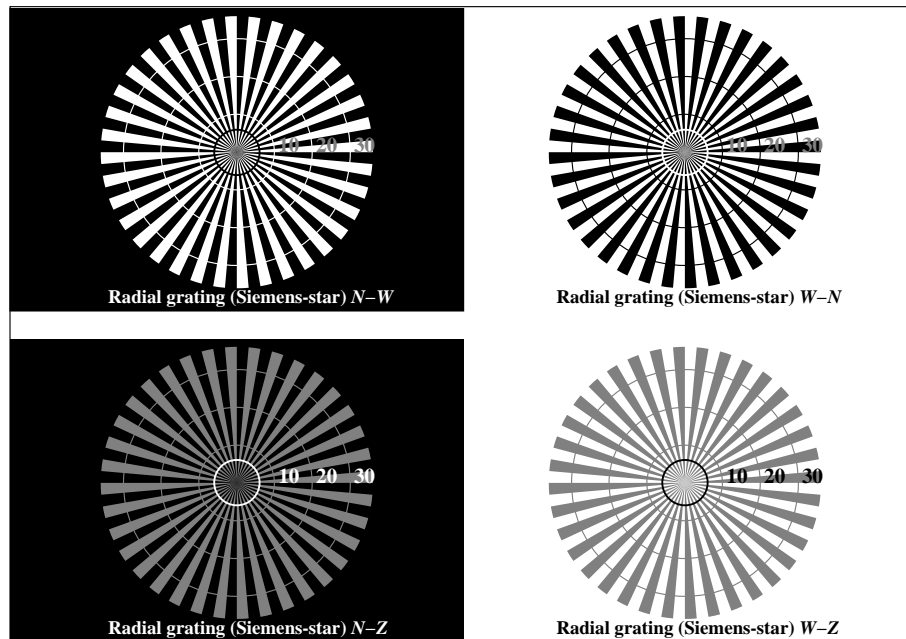
OE640-7N, Picture A7-020-8: 16 visual equidistant L^* -grey steps; PS operator: $n^* n^* n^* 0$ setcmykcolor

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

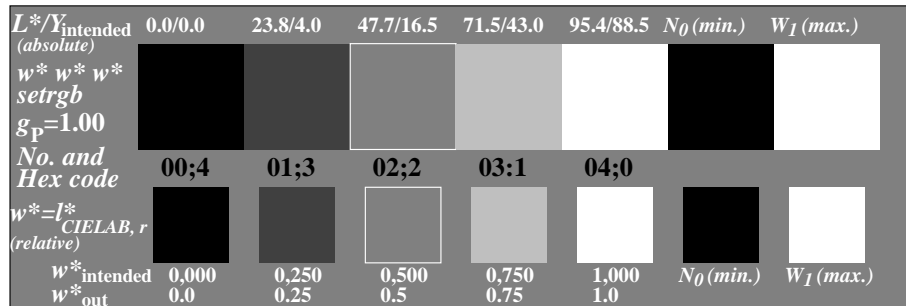
input: all ($\rightarrow \text{rgb}^*_d$) setrgbcolor
output 030-8: no change

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

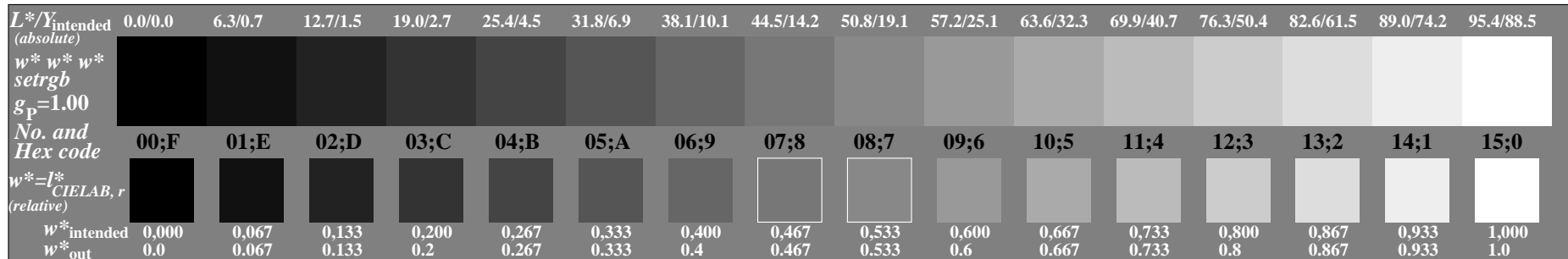
TUB registration: 20110801-OE64/OE64L0NP.PDF /.PS TUB material: code=rh4ta
application for output of displays: monitor systems or data projector systems



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



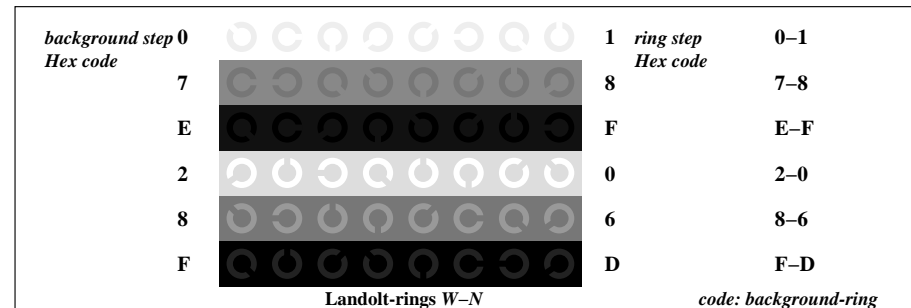
OE640-5N, Picture A2-030-9: 5 equidistant L^* -grey steps+ N_0 + W_1 ; PS operator: $w^*w^*w^*setrgbcolor$



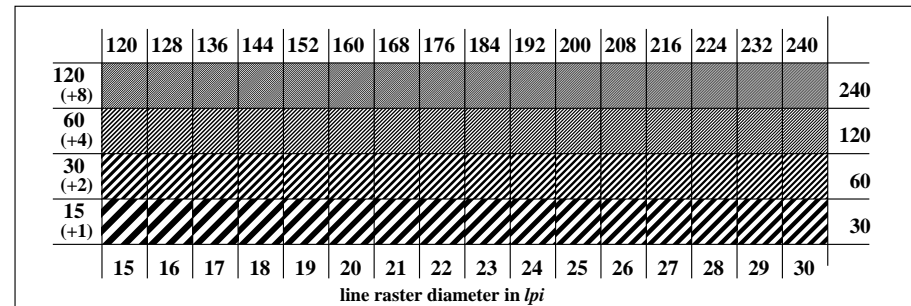
OE640-7N, Picture A3-030-9: 16 visual equidistant L^* -grey steps; PS operator: $w^*w^*w^*setrgbcolor$

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

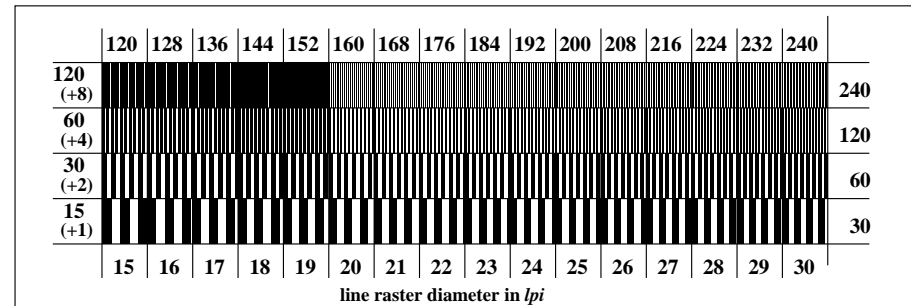
input: all ($\rightarrow rgb^*_d$) *setrgbcolor*
output 030-9: no change



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
Output test with the computer display () or the external display ()		
Test of the radial grating according to picture A1-030-0		
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 A2-030-0		
Are the 5 steps on the upper rows distinguishable?		Yes/No
If No: How many steps can be distinguished?		..... Steps
Test of 16 visual equidistant L*-grey steps according to picture A3-030-0		
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> 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-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
Output test with the computer display () or the external display ()		
Test of the Landolt-rings N-W according to picture A4-030-0		
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 A5-030-0

Can equally spaced lines be seen?

Visual testing: for radial diameter from 15 to 60 lpi

Test with a magnifying glass (e.g. 6x): - from 15 lpi: Yes/No to lpi

Test of the radial grating under 90° according to picture A6-030-0

Can equally spaced lines be seen?

Visual testing: for radial diameter from 15 to 60 lpi

Test with a magnifying glass (e.g. 6x): - from 15 lpi: Yes/No 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:

Yes/No

Yes/unknown

Yes/unknown

Yes/unknown

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

Office workplace illumination is daylight (clouded/north sky)

PDF file: <http://130.149.60.45/farbmetrik/OE64/OE64F1P2.PDF>

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

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

Yes/No

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

picture A7-030-2

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

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

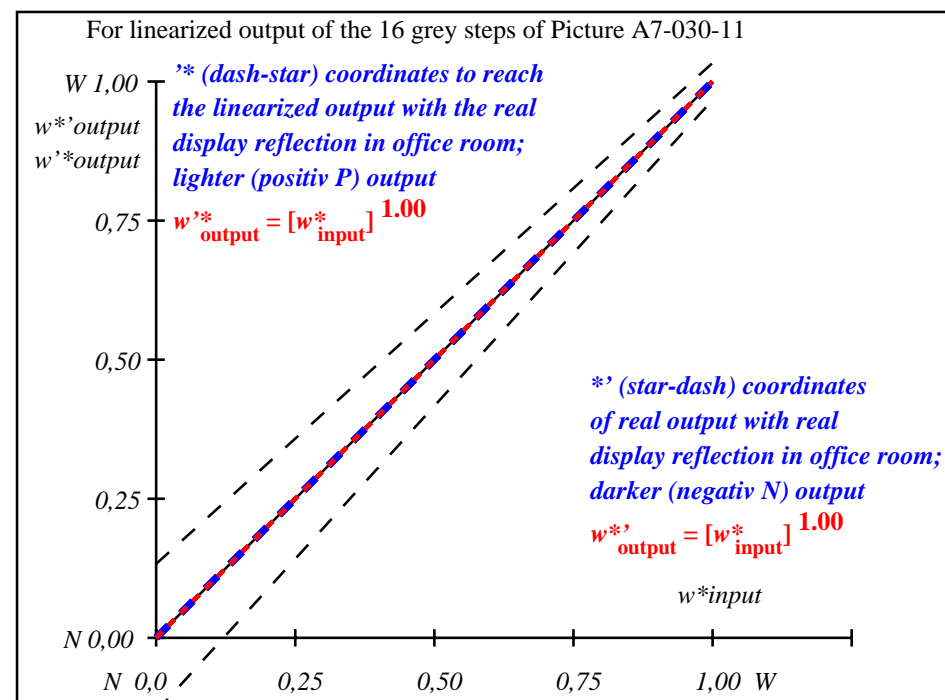
Start output S1
Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G

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-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_{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^*_{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

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 ($\rightarrow \text{rgb}^*_d$) setrgbcolor
output 030-11: no change