

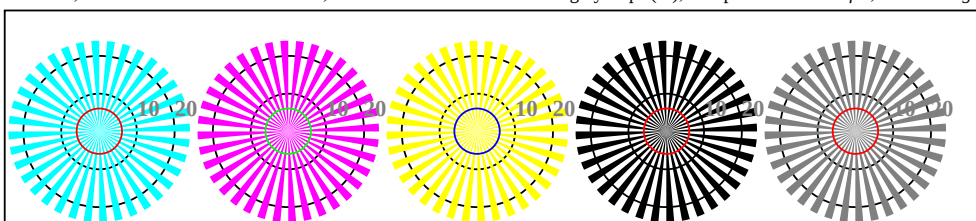
<http://130.149.60.45/~farbmatrik/OE57/OE57L0NA.TXT> /.PS; linearized output, Page 1/3
F: Output Linearization (OL) data OE57/OE57L0NA.TXT /.PS in File (F)



image pixel: 192 x 128
384 x 256
768 x 512
1536 x 1024
3072 x 2048



OE570-7, Picture B1-130-0: Flower motif, 14 CIE-test colours and 2 + 16 grey steps (nf); PS operators *settransfer*, 3 *colorimage*



Radial grating W-C_d Radial grating W-M_d Radial grating W-Y_d Radial grating W-N Radial grating W-Z

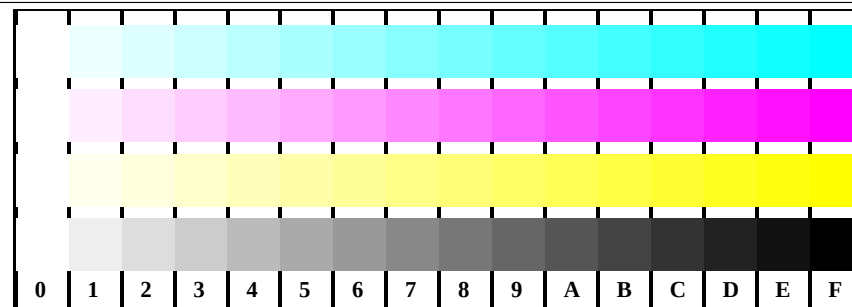
OE570-5, Picture B2W-130-0: Radial gratings W-C_d; W-M_d; W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



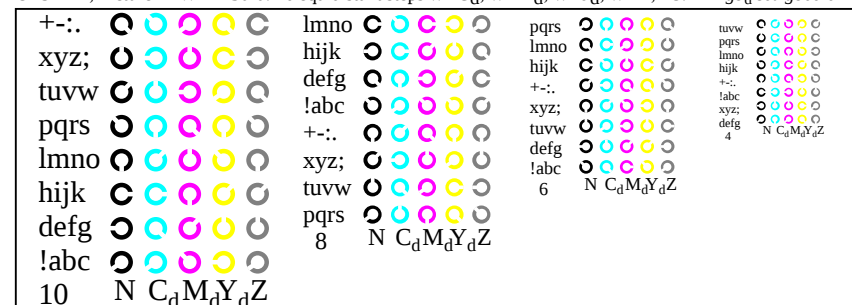
OE570-7, Picture B3W-130-0: 14 CIE-test colours and 2 + 16 grey steps; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



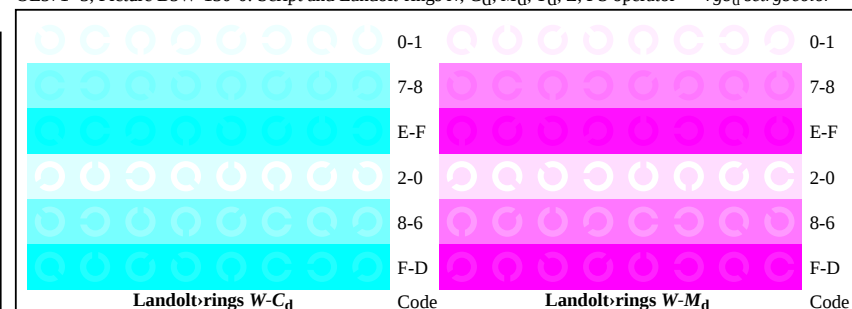
OE57: Test chart 2 according to ISO 15775, TR 24705; 1MR, DH
Image, radial gratings, 16 step colour scales, Landolt-rings



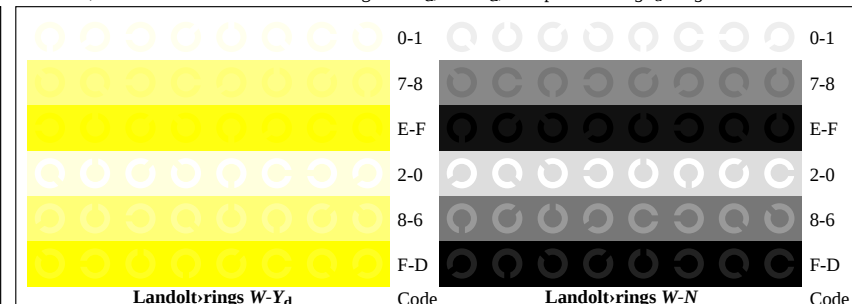
OE571-1, Picture B4W-L-130-0: 16 equidistant steps W-C_d; W-M_d; W-Y_d; W-N; PS: $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-3, Picture B5W-130-0: Script and Landolt-rings N; C_d; M_d; Y_d; Z; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

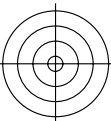


OE571-5, Picture B6W-L-130-0: Landolt-rings W-C_d; W-M_d; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

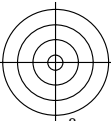


OE571-7, Picture B7W-L-130-0: Landolt-rings W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

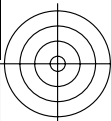
input: *rgb* ($\rightarrow \text{rgb}_d$) *setrgbcolor*
output 130-0: *g_P*=1.0; *g_N*=1.0



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, CIELAB

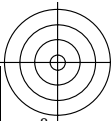


<http://130.149.60.45/~farbmetrik/OE57/OE57L0NA.TXT> /PS; linearized output, Page 2/3
 F: Output Linearization (OL) data OE57/OE57L0NA.TXT /PS in File (F)



TUB registration: 20110801-OE57/OE57L0NA.TXT /PS
 application for output of displays: monitor systems or data projector systems

TUB material: code=rh4ta



Test for the visual linearized output of Pictures B1W-130-0 to B7W-130-0

Output test with the computer display () or the external display () please mark by (x)!

Test of the (flower) image according to picture B1W-130-0

Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":

Test of the resolution of radial gratings $W-C_d$, $W-M_d$, $W-Y_d$ according to picture B2W-130-0

	$W-C_d$	$W-M_d$	$W-Y_d$	$W-N$	$W-Z$
Is the resolution diameter < 6 mm?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Test with magnifying glass (6x), Resolution diameter:	 mm	 mm	 mm	 mm	 mm

Test of the 14 CIE-test colours according to picture B3W-130-0

Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 If Yes: How many colours have clear differences? of the given 14 steps: Steps

Test of 16 visual equidistant L^* -grey steps according to picture B3W-130-0

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

Part 1

OE570-3N-130-1

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

PDF-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NP.PDF> **underline Yes/No**

PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NA.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 OE57L0NP.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 OE57L0NA.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

OE570-7N-130-1



OE57: Form A for test chart 2 according to ISO 15775; 1MR, DH
 Image, radial gratings, 16 step colour scales, Landolt-rings

Test of 16 visually equally spaced steps of the colour rows $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to picture B4W-130-0

Colour row	Are all the 16 steps distinguishable?	Yes/No
$W-C_d$ White - Cyanblue:	If No: How many steps can be distinguished? of the given 16 steps	 Steps
$W-M_d$ White - Magentared:	If No: How many steps can be distinguished? of the given 16 steps	 Steps
$W-Y_d$ White - Yellow:	If No: How many steps can be distinguished? of the given 16 steps	 Steps
$W-N$ White - Black:	If No: How many steps can be distinguished? of the given 16 steps	 Steps

Test of characters and Landolt-rings in four sizes according to picture B5W-130-0

Is the recognition frequency > 50% for letters (17 from 32 at least) and for Landolt-rings (minimum 5 of 8)?

Relative size	Letters	Ring N	Ring C_d	Ring M_d	Ring Y_d
10	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
8	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
6	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
4	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Test of recognition frequency of Landolt-rings $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to pictures B6W-130-0, and B7W-130-0

Is the recognition frequency of the Landolt-rings > 50% (min. 5 of 8 at least)?

Colour row $W-C_d$ background - ring	Colour row $W-M_d$ background - ring	Colour row $W-Y_d$ background - ring	Colour row $W-N$ background - ring
0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No
7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No
E - F Yes/No	E - F Yes/No	E - F Yes/No	E - F Yes/No
2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No
8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No
F - D Yes/No	F - D Yes/No	F - D Yes/No	F - D Yes/No

Part 1

OE571-3N-130-1

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
 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/OE57/OE57F1P2.PDF>

underline Yes/No

PS file: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.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/OE57/OE57F1P2.PDF>

picture A7-130-2

underline Yes/No

PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.PS>

picture A7-130-2

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

OE571-7N-130-1



input: $rgb (->rgb^*_d)$ setrgbcolor
 output 130-1: $g_P=1.0$; $g_N=1.0$

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

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

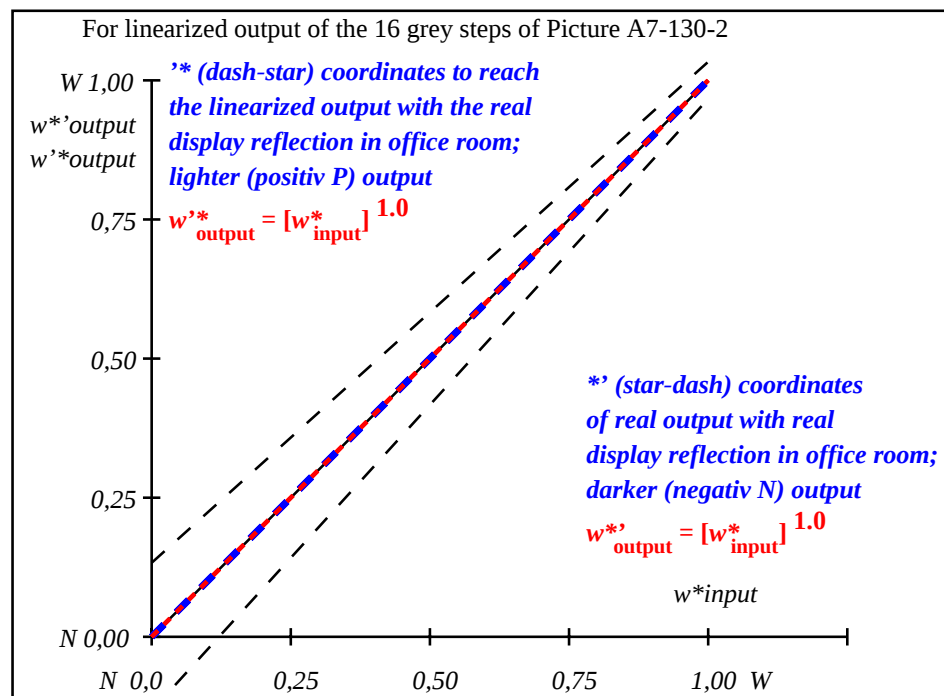
Start output S1
Specification according to
ISO/IEC 15775 Annex G
and DIN 33866-1 Annex G

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

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

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

OE570-3N-130-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE571-3N-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

OE570-7N, Picture A7-130-2: 16 visual equidistant L^* -grey steps; PS operator: $w^* w^* w^*$ setrgbcolor

OE57: In-output relation according to ISO 9241-306; 1MR, DH
Viewing Y contrast $Y_W:Y_N=88,9:0,31$; Y_N range 0,0 to <0,46

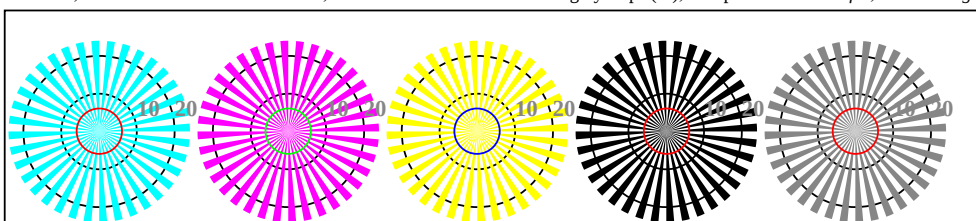
input: $rgb \rightarrow rgb^*_d$ setrgbcolor
output 130-2: $g_P=1.0$; $g_N=1.0$

TUB registration: 20110801-OE57/OE57L0NA.TXT /.PS
application for output of displays: monitor systems or data projector systems
TUB material: code=rh4ta

<http://130.149.60.45/~farbmetrik/OE57/OE57L0NA.TXT> /.PS; linearized output, Page 1/3
F: Output Linearization (OL) data OE57/OE57L0NA.TXT /.PS in File (F)



OE570-7, Picture B1-131-0: Flower motif, 14 CIE-test colours and 2 + 16 grey steps (nf); PS operators *settransfer*, 3 *colorimage*

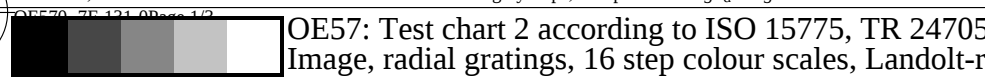


Radial grating W-C_d Radial grating W-M_d Radial grating W-Y_d Radial grating W-N Radial grating W-Z

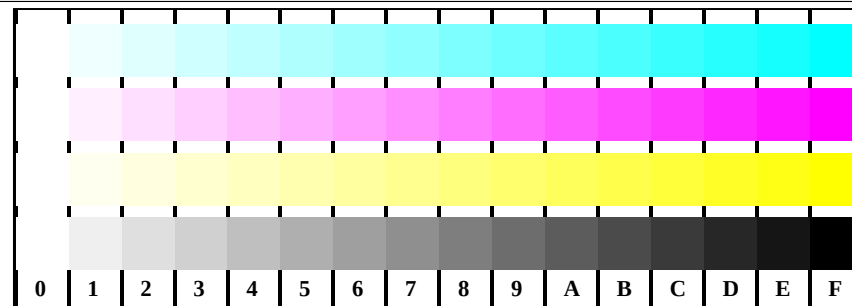
OE570-5, Picture B2W-131-0: Radial gratings W-C_d; W-M_d; W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



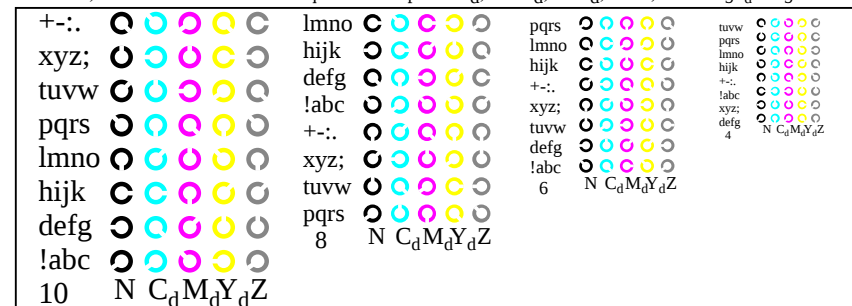
OE570-7, Picture B3W-131-0: 14 CIE-test colours and 2 + 16 grey steps; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



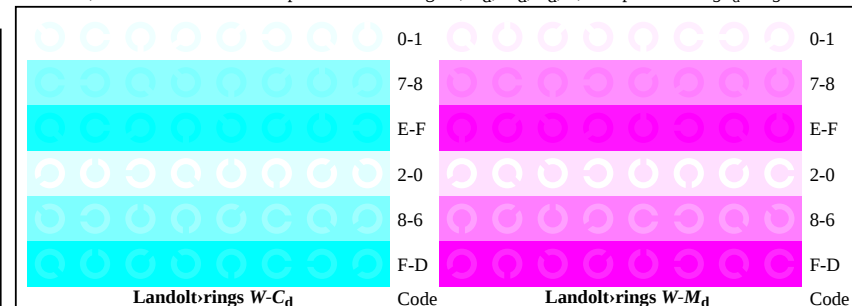
OE57: Test chart 2 according to ISO 15775, TR 24705; 1MR, DH
Image, radial gratings, 16 step colour scales, Landolt-rings



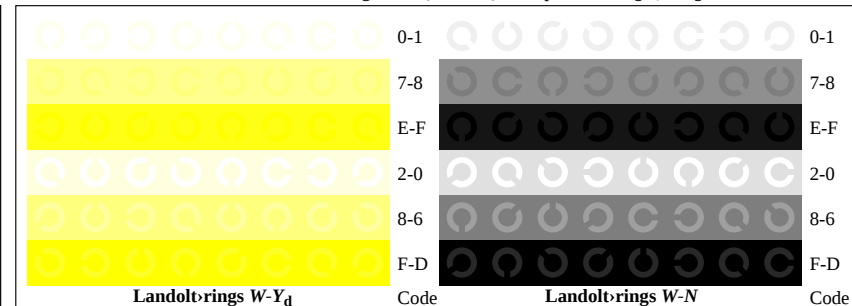
OE571-1, Picture B4W-L-131-0: 16 equidistant steps W-C_d; W-M_d; W-Y_d; W-N; PS: $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



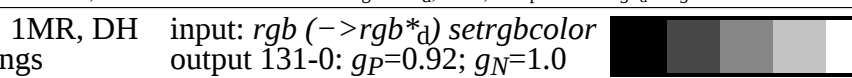
OE571-3, Picture B5W-131-0: Script and Landolt-rings N; C_d; M_d; Y_d; Z; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



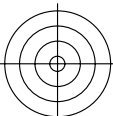
OE571-5, Picture B6W-L-131-0: Landolt-rings W-C_d; W-M_d; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



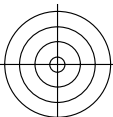
OE571-7, Picture B7W-L-131-0: Landolt-rings W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



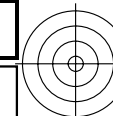
input: *rgb* ($\rightarrow \text{rgb}_d$) *setrgbcolor*
output 131-0: $g_P=0.92$; $g_N=1.0$



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

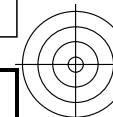


<http://130.149.60.45/~farbmetrik/OE57/OE57L0NA.TXT> /PS; linearized output, Page 2/3
 F: Output Linearization (OL) data OE57/OE57L0NA.TXT /PS in File (F)



TUB registration: 20110801-OE57/OE57L0NA.TXT /PS
 application for output of displays: monitor systems or data projector systems

TUB material: code=rh4ta



Test for the visual linearized output of Pictures B1W-131-0 to B7W-131-0
Output test with the computer display () or the external display () please mark by (x)!

Test of the (flower) image according to picture B1W-131-0
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":

Test of the resolution of radial gratings $W-C_d$, $W-M_d$, $W-Y_d$ according to picture B2W-131-0

	$W-C_d$	$W-M_d$	$W-Y_d$	$W-N$	$W-Z$
Is the resolution diameter < 6 mm?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Test with magnifying glass (6x), Resolution diameter:	 mm	 mm	 mm	 mm	 mm

Test of the 14 CIE-test colours according to picture B3W-131-0
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 If Yes: How many colours have clear differences? of the given 14 steps: **Steps**

Test of 16 visual equidistant L^* -grey steps according to picture B3W-131-0
 Are the 16 steps on the upper rows distinguishable? **Yes/No**
 If No: How many steps can be distinguished? of the given 16 steps: **Steps**

Part 1 OE570-3N-131-1

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

PDF-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NP.PDF> **underline Yes/No**

PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NA.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 OE57L0NP.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 OE57L0NA.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 OE570-7N-131-1



OE57: Form A for test chart 2 according to ISO 15775; 1MR, DH
 Image, radial gratings, 16 step colour scales, Landolt-rings

Test of 16 visually equally spaced steps of the colour rows $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to picture B4W-131-0

	$W-C_d$ White - Cyanblue:	$W-M_d$ White - Magentared:	$W-Y_d$ White - Yellow:	$W-N$ White - Black:
Are all the 16 steps distinguishable?	Yes/No	Yes/No	Yes/No	Yes/No
If No: How many steps can be distinguished? of the given 16 steps	 Steps	 Steps	 Steps	 Steps

Test of characters and Landolt-rings in four sizes according to picture B5W-131-0
 Is the recognition frequency > 50% for letters (17 from 32 at least) and for Landolt-rings (minimum 5 of 8)?

Relative size	Letters	Ring N	Ring C_d	Ring M_d	Ring Y_d
10	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
8	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
6	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
4	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Test of recognition frequency of Landolt-rings $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to pictures B6W-131-0, and B7W-131-0
 Is the recognition frequency of the Landolt-rings > 50% (min. 5 of 8 at least)?

Colour row $W-C_d$ background - ring	Colour row $W-M_d$ background - ring	Colour row $W-Y_d$ background - ring	Colour row $W-N$ background - ring
0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No
7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No
E - F Yes/No	E - F Yes/No	E - F Yes/No	E - F Yes/No
2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No
8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No
F - D Yes/No	F - D Yes/No	F - D Yes/No	F - D Yes/No

Part 1 OE571-3N-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/OE57/OE57F1P2.PDF> **underline Yes/No**
PS file: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.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/OE57/OE57F1P2.PDF> **underline Yes/No**
PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.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 and transfer
 of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF **underline Yes/No**
 If No, please describe other method:

Part 4 OE571-7N-131-1

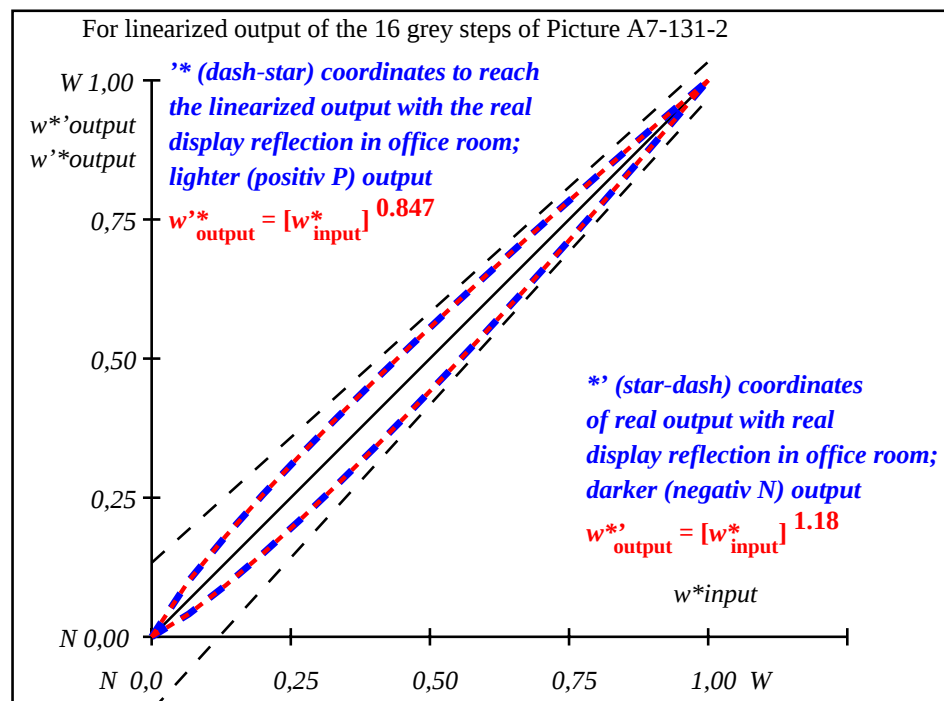


input: $rgb (->rgb^*_d)$ setrgbcolor
 output 131-1: $g_P=0.92$; $g_N=1.0$

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

i	LAB*ref	l*out	LAB*out	LAB*out/c-ref	ΔE*
1	5.69 0.0 0.0	0.0 0.0 0.0	5.69 0.0 0.0	0.0 0.0 0.0	0.01
2	11.67 0.0 0.0	0.1 0.0 0.0	14.73 0.0 0.0	3.06 0.0 0.0	3.06
3	17.65 0.0 0.0	0.18 0.0 0.0	21.96 0.0 0.0	4.3 0.0 0.0	4.3
4	23.63 0.0 0.0	0.26 0.0 0.0	28.63 0.0 0.0	4.99 0.0 0.0	4.99
5	29.62 0.0 0.0	0.33 0.0 0.0	34.96 0.0 0.0	5.34 0.0 0.0	5.34
6	35.6 0.0 0.0	0.39 0.0 0.0	41.05 0.0 0.0	5.46 0.0 0.0	5.46
7	41.58 0.0 0.0	0.46 0.0 0.0	46.96 0.0 0.0	5.38 0.0 0.0	5.38
8	47.56 0.0 0.0	0.52 0.0 0.0	52.72 0.0 0.0	5.16 0.0 0.0	5.16
9	53.54 0.0 0.0	0.59 0.0 0.0	58.36 0.0 0.0	4.82 0.0 0.0	4.82
10	59.52 0.0 0.0	0.65 0.0 0.0	63.88 0.0 0.0	4.36 0.0 0.0	4.36
11	65.5 0.0 0.0	0.71 0.0 0.0	69.32 0.0 0.0	3.82 0.0 0.0	3.82
12	71.48 0.0 0.0	0.77 0.0 0.0	74.67 0.0 0.0	3.19 0.0 0.0	3.19
13	77.47 0.0 0.0	0.83 0.0 0.0	79.95 0.0 0.0	2.49 0.0 0.0	2.49
14	83.45 0.0 0.0	0.89 0.0 0.0	85.16 0.0 0.0	1.72 0.0 0.0	1.72
15	89.43 0.0 0.0	0.94 0.0 0.0	90.31 0.0 0.0	0.89 0.0 0.0	0.89
16	95.41 0.0 0.0	1.0 0.0 0.0	95.41 0.0 0.0	0.0 0.0 0.0	0.01
17	5.69 0.0 0.0	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 0.0 0.0	33.4 0.0 0.0	5.28 0.0 0.0	5.28
19	50.55 0.0 0.0	0.56 0.0 0.0	55.55 0.0 0.0	5.0 0.0 0.0	5.0
20	72.98 0.0 0.0	0.78 0.0 0.0	76.0 0.0 0.0	3.02 0.0 0.0	3.02
21	95.41 0.0 0.0	1.0 0.0 0.0	95.41 0.0 0.0	0.0 0.0 0.0	0.01
Mean lightness difference (16 steps)					$\Delta E^*_{CIELAB} = 3.4$
Mean lightness difference (5 steps)					$\Delta L^*_{CIELAB} = 2.7$
Mean colour reproduction index:					$R^*_{ab,m} = 85$

OE570-3N-131-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE571-3N-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																
$g_P=0.92$																
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	0,082	0,155	0,226	0,295	0,362	0,428	0,494	0,559	0,623	0,688	0,75	0,814	0,876	0,938	1,0

OE570-7N, Picture A7-131-2: 16 visual equidistant L^* -grey steps; PS operator: $w^* w^* w^*$ setrgbcolor

OE57: In-output relation according to ISO 9241-306; 1MR, DH
Viewing Y contrast $Y_W:Y_N=88,9:0,62$; Y_N range 0,46 to <0,93

input: $rgb (->rgb_d)$ setrgbcolor
output 131-2: $g_P=0.92$; $g_N=1.0$

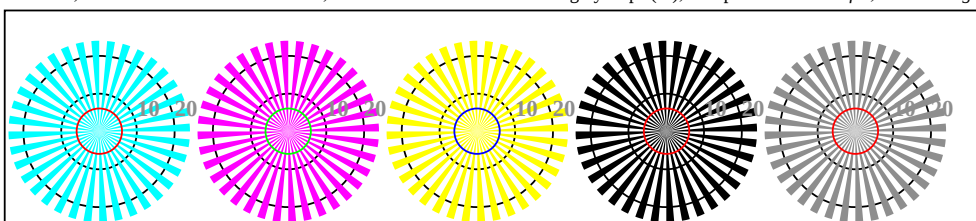
<http://130.149.60.45/~farbmatrik/OE57/OE57L0NA.TXT> /.PS; linearized output, Page 1/3
F: Output Linearization (OL) data OE57/OE57L0NA.TXT /.PS in File (F)



image pixel: 192 x 128
384 x 256
768 x 512
1536 x 1024
3072 x 2048



OE570-7, Picture B1-132-0: Flower motif, 14 CIE-test colours and 2 + 16 grey steps (nf); PS operators *settransfer*, 3 *colorimage*



Radial grating W-C_d Radial grating W-M_d Radial grating W-Y_d Radial grating W-N Radial grating W-Z

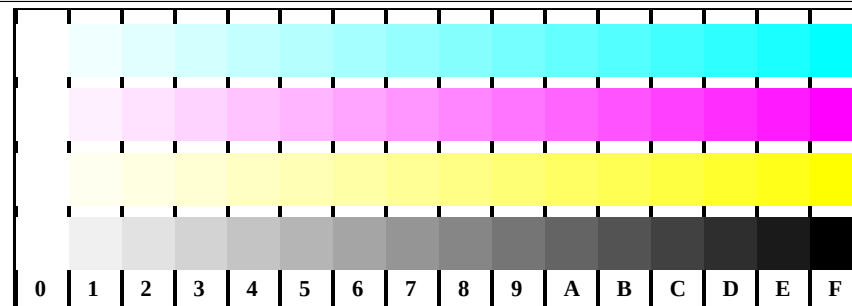
OE570-5, Picture B2W-132-0: Radial gratings W-C_d; W-M_d; W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



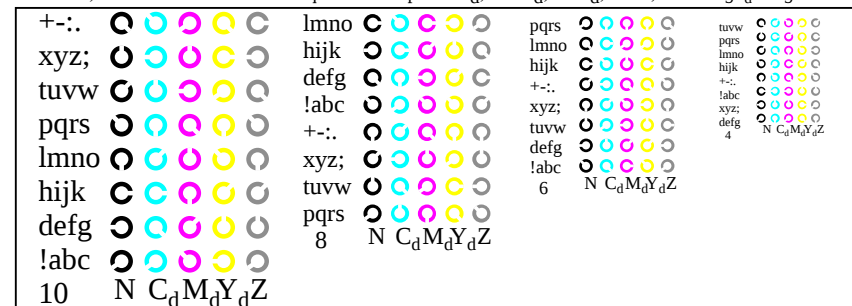
OE570-7, Picture B3W-132-0: 14 CIE-test colours and 2 + 16 grey steps; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

OE570-7E-132-0B-page 1/2

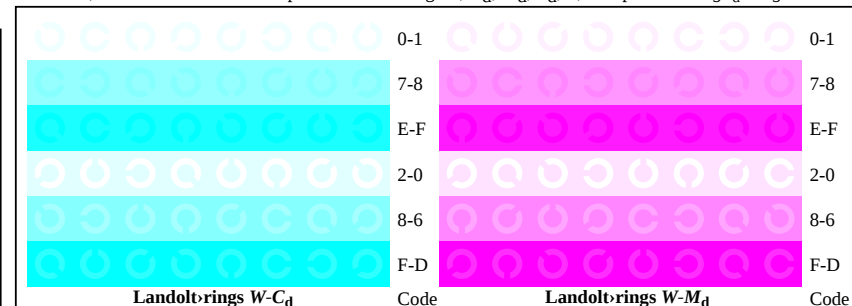
OE57: Test chart 2 according to ISO 15775, TR 24705; 1MR, DH
Image, radial gratings, 16 step colour scales, Landolt-rings



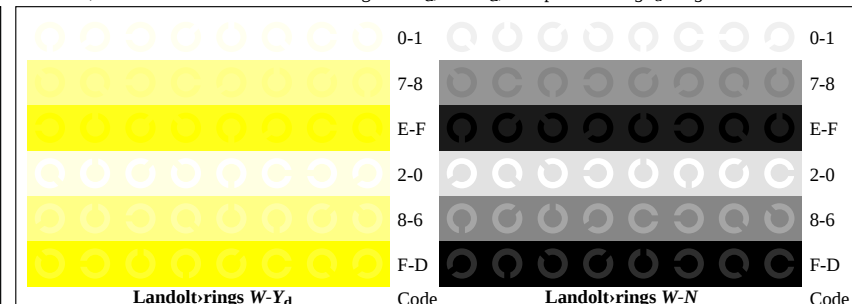
OE571-1, Picture B4W-L-132-0: 16 equidistant steps W-C_d; W-M_d; W-J_d; W-N; PS: $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-3, Picture B5W-132-0: Script and Landolt-rings N; C_d; M_d; Y_d; Z; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-5, Picture B6W-L-132-0: Landolt-rings W-C_d; W-M_d; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-7, Picture B7W-L-132-0: Landolt-rings W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

input: *rgb* ($\rightarrow \text{rgb}_d$) *setrgbcolor*
output 132-0: *g_P*=0.85; *g_N*=1.0

Test for the visual linearized output of Pictures B1W-132-0 to B7W-132-0

Output test with the computer display () or the external display () please mark by (x)!

Test of the (flower) image according to picture B1W-132-0

Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":
.....
.....
.....

Test of the resolution of radial gratings $W-C_d$, $W-M_d$, $W-Y_d$ according to picture B2W-132-0

	$W-C_d$	$W-M_d$	$W-Y_d$	$W-N$	$W-Z$
Is the resolution diameter < 6 mm?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Test with magnifying glass (6x), Resolution diameter:	 mm	 mm	 mm	 mm	 mm

Test of the 14 CIE-test colours according to picture B3W-132-0

Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
If Yes: How many colours have clear differences? of the given 14 steps: Steps

Test of 16 visual equidistant L^* -grey steps according to picture B3W-132-0

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

Part 1

OE570-3N-132-1

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

PDF-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NP.PDF> **underline Yes/No**

PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NA.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 OE57L0NP.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 OE57L0NA.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

OE570-7N-132-1

OE57: Form A for test chart 2 according to ISO 15775; 1MR, DH
Image, radial gratings, 16 step colour scales, Landolt-rings

Test of 16 visually equally spaced steps of the colour rows $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to picture B4W-132-0

Colour row	Are all the 16 steps distinguishable?	Yes/No
$W-C_d$ White - Cyanblue:	If No: How many steps can be distinguished? of the given 16 steps	 Steps
$W-M_d$ White - Magentared:	If No: How many steps can be distinguished? of the given 16 steps	 Steps
$W-Y_d$ White - Yellow:	If No: How many steps can be distinguished? of the given 16 steps	 Steps
$W-N$ White - Black:	If No: How many steps can be distinguished? of the given 16 steps	 Steps

Test of characters and Landolt-rings in four sizes according to picture B5W-132-0

Is the recognition frequency > 50% for letters (17 from 32 at least) and for Landolt-rings (minimum 5 of 8)?

Relative size	Letters	Ring N	Ring C_d	Ring M_d	Ring Y_d
10	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
8	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
6	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
4	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Test of recognition frequency of Landolt-rings $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to pictures B6W-132-0, and B7W-132-0

Is the recognition frequency of the Landolt-rings > 50% (min. 5 of 8 at least)?

Colour row $W-C_d$ background - ring	Colour row $W-M_d$ background - ring	Colour row $W-Y_d$ background - ring	Colour row $W-N$ background - ring
0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No
7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No
E - F Yes/No	E - F Yes/No	E - F Yes/No	E - F Yes/No
2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No
8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No
F - D Yes/No	F - D Yes/No	F - D Yes/No	F - D Yes/No

Part 1

OE571-3N-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/OE57/OE57F1P2.PDF> **underline Yes/No**

PS file: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.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/OE57/OE57F1P2.PDF> **underline Yes/No**
picture A7-132-2

PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.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 and transfer of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF **underline Yes/No**
If No, please describe other method:

Part 4

OE571-7N-132-1

input: $rgb (->rgb^*_d)$ setrgbcolor
output 132-1: $g_P=0.85$; $g_N=1.0$

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

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

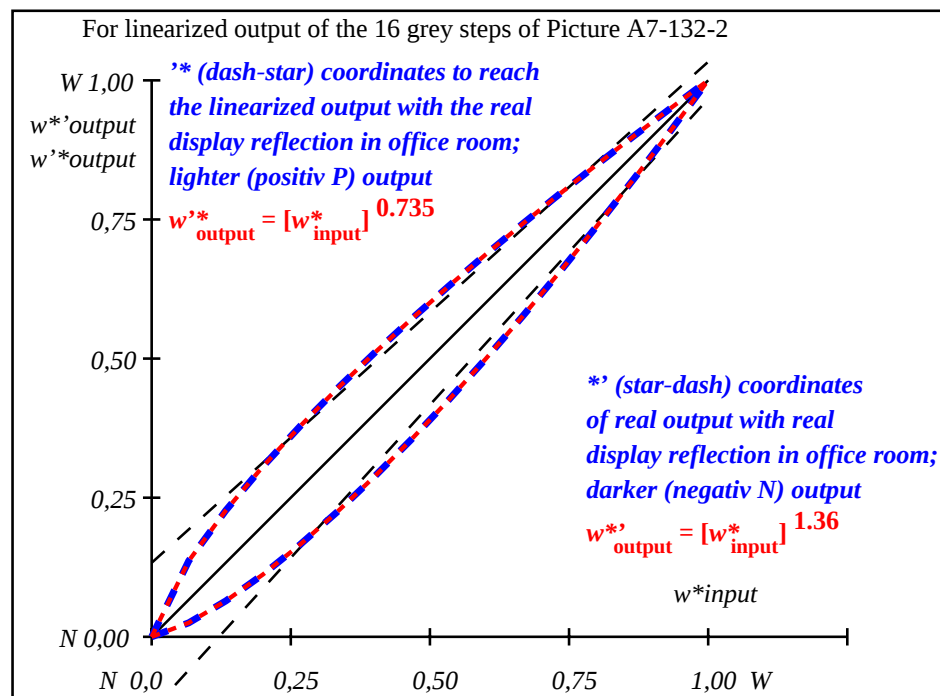
Start output S1
Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G

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

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

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

OE570-3N-132-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE571-3N-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 $g_P=0.85$ 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
$w^*=l^*_{CIELAB, r}$ (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	0.1	0.18	0.255	0.325	0.393	0.459	0.524	0.586	0.648	0.709	0.768	0.827	0.886	0.943	1.0

OE570-7N, Picture A7-132-2: 16 visual equidistant L^* -grey steps; PS operator: $w^* w^* w^*$ setrgbcolor

OE57: In-output relation according to ISO 9241-306; 1MR, DH
Viewing Y contrast $Y_W:Y_N=88,9:1,25$; Y_N range 0,93 to <1,87

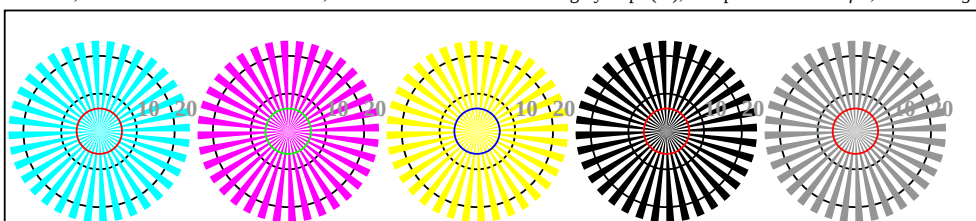
input: $rgb \rightarrow rgb^*_d$ setrgbcolor
output 132-2: $g_P=0.85$; $g_N=1.0$

TUB registration: 20110801-OE57/OE57L0NA.TXT /.PS
application for output of displays: monitor systems or data projector systems
TUB material: code=rh4ta

<http://130.149.60.45/~farbmetrik/OE57/OE57L0NA.TXT> /.PS; linearized output, Page 1/3
F: Output Linearization (OL) data OE57/OE57L0NA.TXT /.PS in File (F)



OE570-7, Picture B1-133-0: Flower motif, 14 CIE-test colours and 2 + 16 grey steps (nf); PS operators *settransfer*, 3 *colorimage*



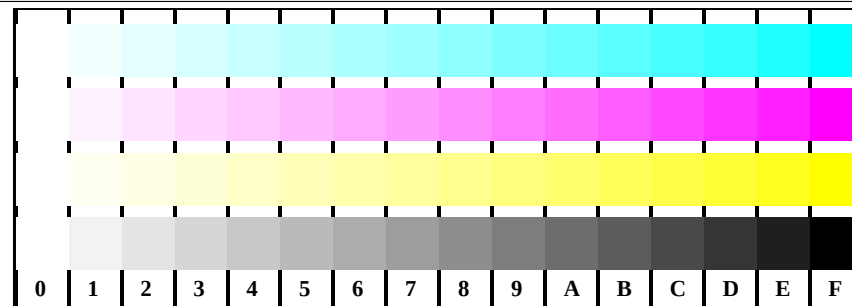
Radial grating W-C_d Radial grating W-M_d Radial grating W-Y_d Radial grating W-N Radial grating W-Z

OE570-5, Picture B2W-133-0: Radial gratings W-C_d; W-M_d; W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

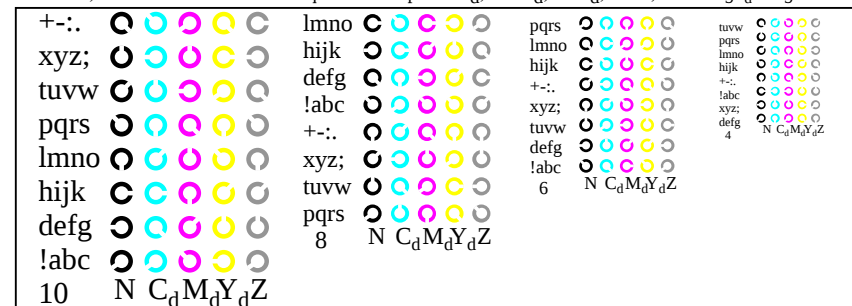


OE570-7, Picture B3W-133-0: 14 CIE-test colours and 2 + 16 grey steps; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

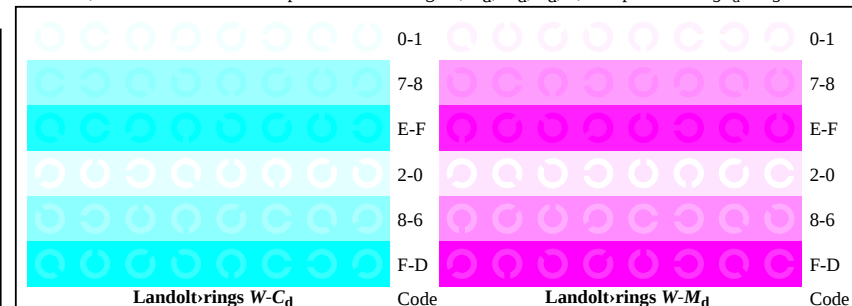
OE57: Test chart 2 according to ISO 15775, TR 24705; 1MR, DH
Image, radial gratings, 16 step colour scales, Landolt-rings



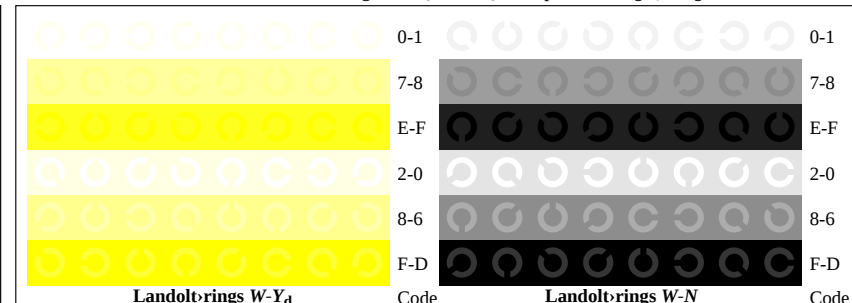
OE571-1, Picture B4W-L-133-0: 16 equidistant steps W-C_d; W-M_d; W-Y_d; W-N; PS: $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-3, Picture B5W-133-0: Script and Landolt-rings N; C_d; M_d; Y_d; Z; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-5, Picture B6W-L-133-0: Landolt-rings W-C_d; W-M_d; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-7, Picture B7W-L-133-0: Landolt-rings W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

input: *rgb* ($\rightarrow \text{rgb}_d$) *setrgbcolor*
output 133-0: *g_P*=0.77; *g_N*=1.0

Test for the visual linearized output of Pictures B1W-133-0 to B7W-133-0

Output test with the computer display () or the external display () please mark by (x)!

Test of the (flower) image according to picture B1W-133-0

Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":

Test of the resolution of radial gratings $W-C_d$, $W-M_d$, $W-Y_d$ according to picture B2W-133-0

	$W-C_d$	$W-M_d$	$W-Y_d$	$W-N$	$W-Z$
Is the resolution diameter < 6 mm?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Test with magnifying glass (6x), Resolution diameter:	 mm	 mm	 mm	 mm	 mm

Test of the 14 CIE-test colours according to picture B3W-133-0

Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 If Yes: How many colours have clear differences? of the given 14 steps: Steps

Test of 16 visual equidistant L^* -grey steps according to picture B3W-133-0

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

Part 1

OE570-3N-133-1

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

PDF-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NP.PDF> **underline Yes/No**

PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NA.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 OE57L0NP.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 OE57L0NA.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

OE570-7N-133-1

OE57: Form A for test chart 2 according to ISO 15775; 1MR, DH
 Image, radial gratings, 16 step colour scales, Landolt-rings

Test of 16 visually equally spaced steps of the colour rows $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to picture B4W-133-0

Colour row	Are all the 16 steps distinguishable?	Yes/No
$W-C_d$ White - Cyanblue:	If No: How many steps can be distinguished? of the given 16 steps	 Steps
$W-M_d$ White - Magentared:	If No: How many steps can be distinguished? of the given 16 steps	 Steps
$W-Y_d$ White - Yellow:	If No: How many steps can be distinguished? of the given 16 steps	 Steps
$W-N$ White - Black:	If No: How many steps can be distinguished? of the given 16 steps	 Steps

Test of characters and Landolt-rings in four sizes according to picture B5W-133-0

Is the recognition frequency > 50% for letters (17 from 32 at least) and for Landolt-rings (minimum 5 of 8)?

Relative size	Letters	Ring N	Ring C_d	Ring M_d	Ring Y_d
10	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
8	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
6	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
4	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Test of recognition frequency of Landolt-rings $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to pictures B6W-133-0, and B7W-133-0

Is the recognition frequency of the Landolt-rings > 50% (min. 5 of 8 at least)?

Colour row $W-C_d$ background - ring	Colour row $W-M_d$ background - ring	Colour row $W-Y_d$ background - ring	Colour row $W-N$ background - ring
0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No
7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No
E - F Yes/No	E - F Yes/No	E - F Yes/No	E - F Yes/No
2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No
8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No
F - D Yes/No	F - D Yes/No	F - D Yes/No	F - D Yes/No

Part 1

OE571-3N-133-1

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/OE57/OE57F1P2.PDF> **underline Yes/No**

PS file: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.PS> **underline 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 **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/OE57/OE57F1P2.PDF> **underline Yes/No**
 picture A7-133-2

PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.PS> **or underline Yes/No**
 picture A7-133-2

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

Part 4

OE571-7N-133-1

input: $rgb (->rgb^*_d)$ setrgbcolor
 output 133-1: $g_P=0.77$; $g_N=1.0$

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

i	LAB*ref	L*out	LAB*out	LAB*out/c-ref	ΔE*
1	18.01 0.0 0.0	0.0 18.01 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01
2	23.17 0.0 0.0	0.17 31.35 0.0	0.0 0.0 0.0	8.18 0.0 0.0	8.18
3	28.33 0.0 0.0	0.27 38.93 0.0	0.0 0.0 0.0	10.6 0.0 0.0	10.6
4	33.49 0.0 0.0	0.35 45.23 0.0	0.0 0.0 0.0	11.74 0.0 0.0	11.74
5	38.65 0.0 0.0	0.42 50.82 0.0	0.0 0.0 0.0	12.17 0.0 0.0	12.17
6	43.81 0.0 0.0	0.49 55.93 0.0	0.0 0.0 0.0	12.12 0.0 0.0	12.12
7	48.97 0.0 0.0	0.55 60.7 0.0	0.0 0.0 0.0	11.73 0.0 0.0	11.73
8	54.13 0.0 0.0	0.61 65.2 0.0	0.0 0.0 0.0	11.07 0.0 0.0	11.07
9	59.29 0.0 0.0	0.66 69.47 0.0	0.0 0.0 0.0	10.18 0.0 0.0	10.18
10	64.45 0.0 0.0	0.72 73.56 0.0	0.0 0.0 0.0	9.11 0.0 0.0	9.11
11	69.61 0.0 0.0	0.77 77.49 0.0	0.0 0.0 0.0	7.88 0.0 0.0	7.88
12	74.77 0.0 0.0	0.82 81.29 0.0	0.0 0.0 0.0	6.52 0.0 0.0	6.52
13	79.93 0.0 0.0	0.87 84.97 0.0	0.0 0.0 0.0	5.04 0.0 0.0	5.04
14	85.09 0.0 0.0	0.91 88.54 0.0	0.0 0.0 0.0	3.45 0.0 0.0	3.45
15	90.25 0.0 0.0	0.96 92.02 0.0	0.0 0.0 0.0	1.77 0.0 0.0	1.77
16	95.41 0.0 0.0	1.0 95.41 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01
17	18.01 0.0 0.0	0.0 18.01 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01
18	37.36 0.0 0.0	0.41 49.47 0.0	0.0 0.0 0.0	12.11 0.0 0.0	12.11
19	56.71 0.0 0.0	0.64 67.36 0.0	0.0 0.0 0.0	10.65 0.0 0.0	10.65
20	76.06 0.0 0.0	0.83 82.22 0.0	0.0 0.0 0.0	6.16 0.0 0.0	6.16
21	95.41 0.0 0.0	1.0 95.41 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01

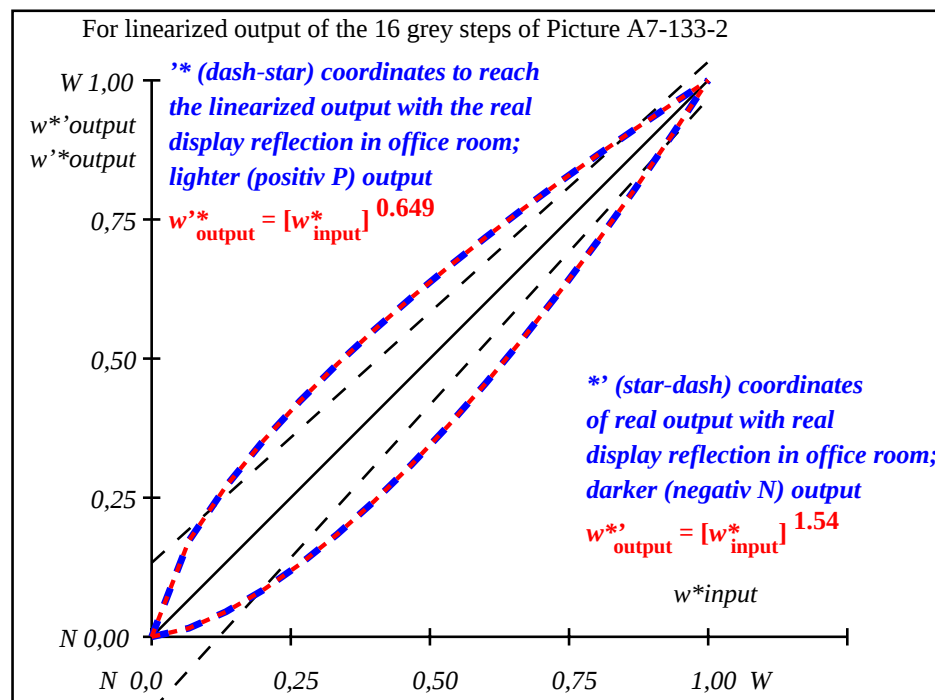
Start output S1
Specification according to
ISO/IEC 15775 Annex G
and DIN 33866-1 Annex G

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

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

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

OE570-3N-133-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE571-3N-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 $g_P=0.78$ 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	0,123	0,209	0,287	0,359	0,426	0,492	0,554	0,614	0,673	0,731	0,786	0,841	0,895	0,948	1,0

OE570-7N, Picture A7-133-2: 16 visual equidistant L^* -grey steps; PS operator: $w^* w^* w^*$ setrgbcolor

OE57: In-output relation according to ISO 9241-306; 1MR, DH
Viewing Y contrast $Y_W:Y_N=88,9:2,5$; Y_N range 1,87 to <3,75

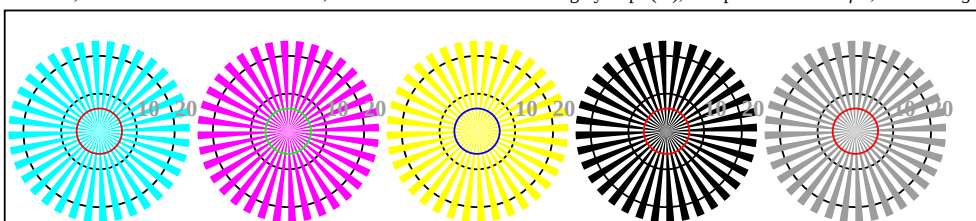
input: $rgb \rightarrow rgb^*_d$ setrgbcolor
output 133-2: $g_P=0.77$; $g_N=1.0$

TUB registration: 20110801-OE57/OE57L0NA.TXT /.PS
application for output of displays: monitor systems or data projector systems
TUB material: code=rh4ta

<http://130.149.60.45/~farbmatrik/OE57/OE57L0NA.TXT> /PS; linearized output, Page 1/3
F: Output Linearization (OL) data OE57/OE57L0NA.TXT /PS in File (F)



OE570-7, Picture B1-134-0: Flower motif, 14 CIE-test colours and 2 + 16 grey steps (nf); PS operators *settransfer*, 3 *colorimage*



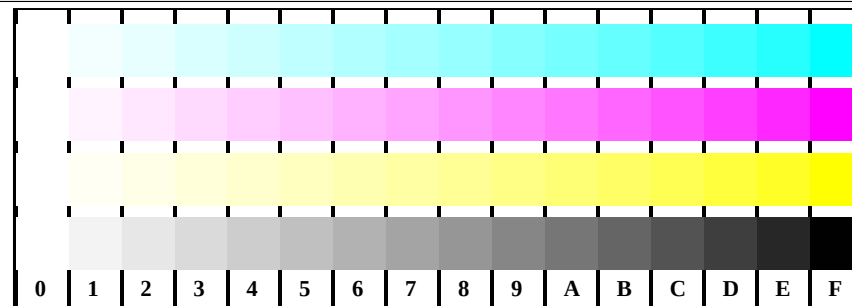
Radial grating W-C_d Radial grating W-M_d Radial grating W-Y_d Radial grating W-N Radial grating W-Z

OE570-5, Picture B2W-134-0: Radial gratings W-C_d; W-M_d; W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

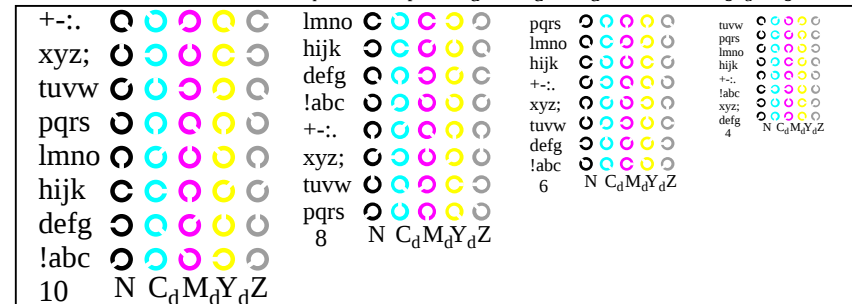


OE570-7, Picture B3W-134-0: 14 CIE-test colours and 2 + 16 grey steps; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

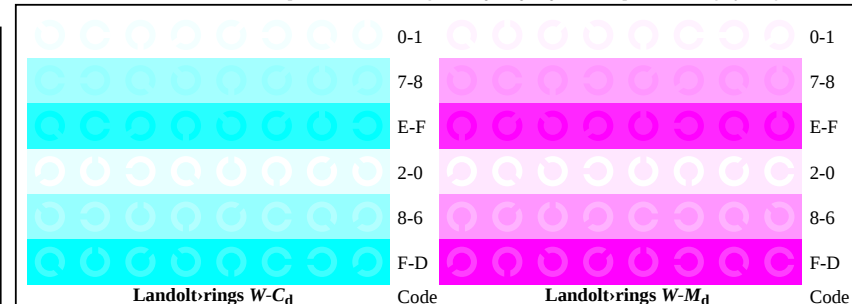
OE57: Test chart 2 according to ISO 15775, TR 24705; 1MR, DH
Image, radial gratings, 16 step colour scales, Landolt-rings



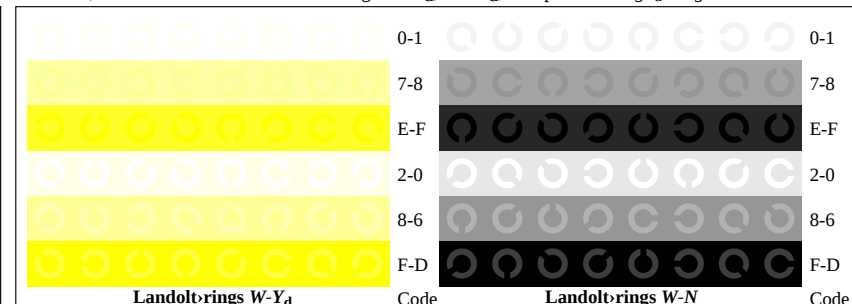
OE571-1, Picture B4W-L-134-0: 16 equidistant steps W-C_d; W-M_d; W-Y_d; W-N; PS: $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-3, Picture B5W-134-0: Script and Landolt-rings N; C_d; M_d; Y_d; Z; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-5, Picture B6W-L-134-0: Landolt-rings W-C_d; W-M_d; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-7, Picture B7W-L-134-0: Landolt-rings W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

input: *rgb* ($\rightarrow \text{rgb}^*_d$) *setrgbcolor*
output 134-0: $g_P=0.7$; $g_N=1.0$

Test for the visual linearized output of Pictures B1W-134-0 to B7W-134-0
Output test with the computer display () or the external display () please mark by (x)!

Test of the (flower) image according to picture B1W-134-0
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":

Test of the resolution of radial gratings $W-C_d$, $W-M_d$, $W-Y_d$ according to picture B2W-134-0

	$W-C_d$	$W-M_d$	$W-Y_d$	$W-N$	$W-Z$
Is the resolution diameter < 6 mm?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Test with magnifying glass (6x), Resolution diameter:	 mm	 mm	 mm	 mm	 mm

Test of the 14 CIE-test colours according to picture B3W-134-0
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 If Yes: How many colours have clear differences? of the given 14 steps: **Steps**

Test of 16 visual equidistant L^* -grey steps according to picture B3W-134-0
 Are the 16 steps on the upper rows distinguishable? **Yes/No**
 If No: How many steps can be distinguished? of the given 16 steps: **Steps**

Part 1 OE570-3N-134-1

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

PDF-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NP.PDF> **underline Yes/No**

PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NA.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 OE57L0NP.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 OE57L0NA.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 OE570-7N-134-1

Test of 16 visually equally spaced steps of the colour rows $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to picture B4W-134-0

	$W-C_d$ White - Cyanblue:	$W-M_d$ White - Magentared:	$W-Y_d$ White - Yellow:	$W-N$ White - Black:
Are all the 16 steps distinguishable?	Yes/No	Yes/No	Yes/No	Yes/No
If No: How many steps can be distinguished? of the given 16 steps	 Steps	 Steps	 Steps	 Steps

Test of characters and Landolt-rings in four sizes according to picture B5W-134-0
 Is the recognition frequency > 50% for letters (17 from 32 at least) and for Landolt-rings (minimum 5 of 8)?

Relative size	Letters	Ring N	Ring C_d	Ring M_d	Ring Y_d
10	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
8	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
6	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
4	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Test of recognition frequency of Landolt-rings $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to pictures B6W-134-0, and B7W-134-0
 Is the recognition frequency of the Landolt-rings > 50% (min. 5 of 8 at least)?

Colour row $W-C_d$ background - ring	Colour row $W-M_d$ background - ring	Colour row $W-Y_d$ background - ring	Colour row $W-N$ background - ring
0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No
7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No
E - F Yes/No	E - F Yes/No	E - F Yes/No	E - F Yes/No
2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No
8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No
F - D Yes/No	F - D Yes/No	F - D Yes/No	F - D Yes/No

Part 1 OE571-3N-134-1

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 **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/OE57/OE57F1P2.PDF> **underline Yes/No**
PS file: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.PS> **underline 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 **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/OE57/OE57F1P2.PDF> **underline Yes/No**
PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.PS> **or underline Yes/No**
picture A7-134-2

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

Part 4 OE571-7N-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

i	LAB*ref	L*out	LAB*out	LAB*out/c-ref	ΔE*
1	26.85 0.0 0.0	0.0 26.85 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01
2	31.42 0.0 0.0	0.21 41.05 0.0	0.0 0.0 9.63	0.0 0.0 0.0	9.63
3	35.99 0.0 0.0	0.31 48.1 0.0	0.0 0.0 12.11	0.0 0.0 0.0	12.11
4	40.56 0.0 0.0	0.39 53.75 0.0	0.0 0.0 13.18	0.0 0.0 0.0	13.18
5	45.13 0.0 0.0	0.46 58.64 0.0	0.0 0.0 13.51	0.0 0.0 0.0	13.51
6	49.7 0.0 0.0	0.53 63.05 0.0	0.0 0.0 13.34	0.0 0.0 0.0	13.34
7	54.27 0.0 0.0	0.59 67.09 0.0	0.0 0.0 12.82	0.0 0.0 0.0	12.82
8	58.84 0.0 0.0	0.64 70.87 0.0	0.0 0.0 12.02	0.0 0.0 0.0	12.02
9	63.41 0.0 0.0	0.69 74.42 0.0	0.0 0.0 11.01	0.0 0.0 0.0	11.01
10	67.99 0.0 0.0	0.74 77.79 0.0	0.0 0.0 9.81	0.0 0.0 0.0	9.81
11	72.56 0.0 0.0	0.79 81.01 0.0	0.0 0.0 8.46	0.0 0.0 0.0	8.46
12	77.13 0.0 0.0	0.84 84.1 0.0	0.0 0.0 6.97	0.0 0.0 0.0	6.97
13	81.7 0.0 0.0	0.88 87.07 0.0	0.0 0.0 5.37	0.0 0.0 0.0	5.37
14	86.27 0.0 0.0	0.92 89.94 0.0	0.0 0.0 3.67	0.0 0.0 0.0	3.67
15	90.84 0.0 0.0	0.96 92.71 0.0	0.0 0.0 1.88	0.0 0.0 0.0	1.88
16	95.41 0.0 0.0	1.0 95.41 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01
17	26.85 0.0 0.0	0.0 26.85 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01
18	43.99 0.0 0.0	0.45 57.47 0.0	0.0 0.0 13.48	0.0 0.0 0.0	13.48
19	61.13 0.0 0.0	0.67 72.67 0.0	0.0 0.0 11.54	0.0 0.0 0.0	11.54
20	78.27 0.0 0.0	0.85 84.85 0.0	0.0 0.0 6.58	0.0 0.0 0.0	6.58
21	95.41 0.0 0.0	1.0 95.41 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01

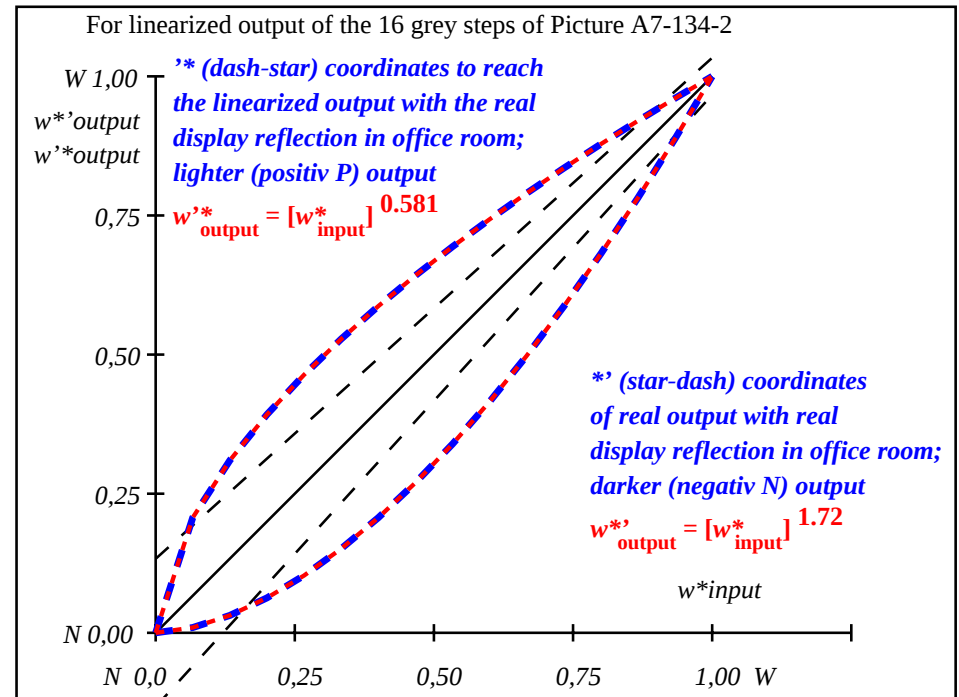
Start output S1
Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G

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

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

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

OE570-3N-134-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE571-3N-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 $g_P=0.7$ 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)	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
$w^*_{intended}$ w^*_{out}	0.0	0.151	0.244	0.324	0.397	0.463	0.527	0.587	0.644	0.699	0.753	0.805	0.855	0.905	0.953	1.0

OE570-7N, Picture A7-134-2: 16 visual equidistant L^* -grey steps; PS operator: $w^* w^* w^*_{setrgbcolor}$

OE57: In-output relation according to ISO 9241-306; 1MR, DH
Viewing Y contrast $Y_W:Y_N=88,9:5$; Y_N range 3,75 to <7,5

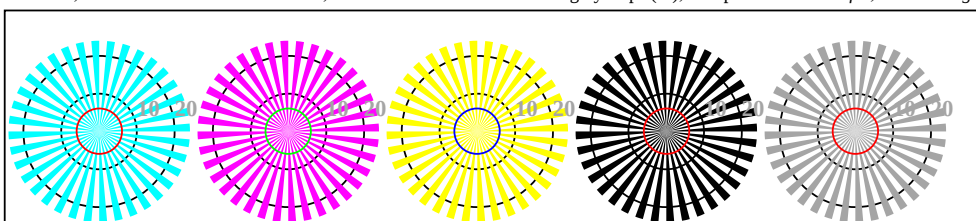
input: $rgb \rightarrow rgb^*_d$ setrgbcolor
output 134-2: $g_P=0.7$; $g_N=1.0$

TUB registration: 20110801-OE57/OE57L0NA.TXT /.PS
application for output of displays: monitor systems or data projector systems
TUB material: code=rh4ta

<http://130.149.60.45/~farbmetrik/OE57/OE57L0NA.TXT> /PS; linearized output, Page 1/3
F: Output Linearization (OL) data OE57/OE57L0NA.TXT /PS in File (F)



OE570-7, Picture B1-135-0: Flower motif, 14 CIE-test colours and 2 + 16 grey steps (nf); PS operators *settransfer*, 3 *colorimage*



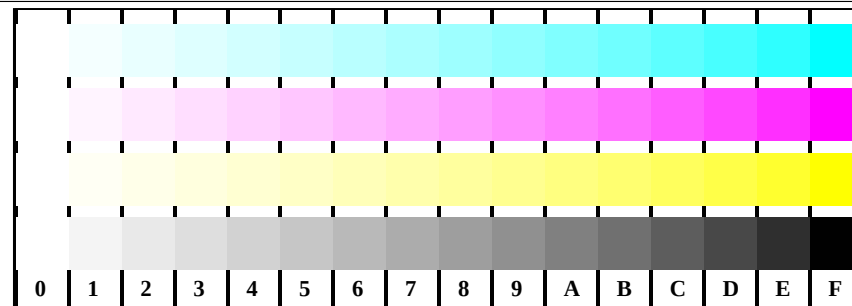
Radial grating W-C_d Radial grating W-M_d Radial grating W-Y_d Radial grating W-N Radial grating W-Z

OE570-5, Picture B2W-135-0: Radial gratings W-C_d; W-M_d; W-Y_d; W-N; PS operator $\rightarrow rgb_d$ setrgbcolor

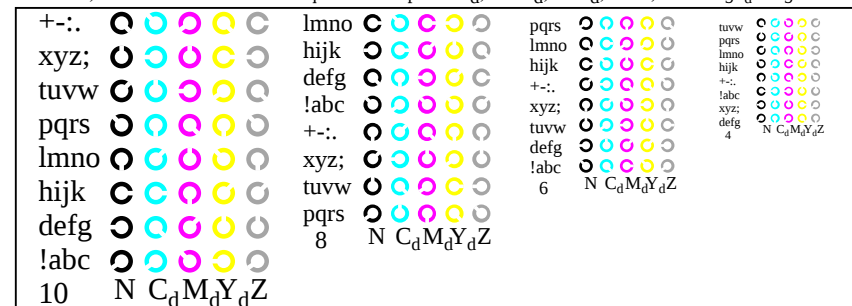


OE570-7, Picture B3W-135-0: 14 CIE-test colours and 2 + 16 grey steps; PS operator $\rightarrow rgb_d$ setrgbcolor

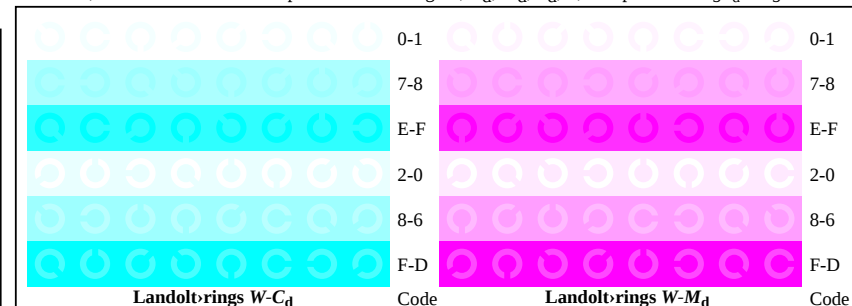
OE57: Test chart 2 according to ISO 15775, TR 24705; 1MR, DH
Image, radial gratings, 16 step colour scales, Landolt-rings



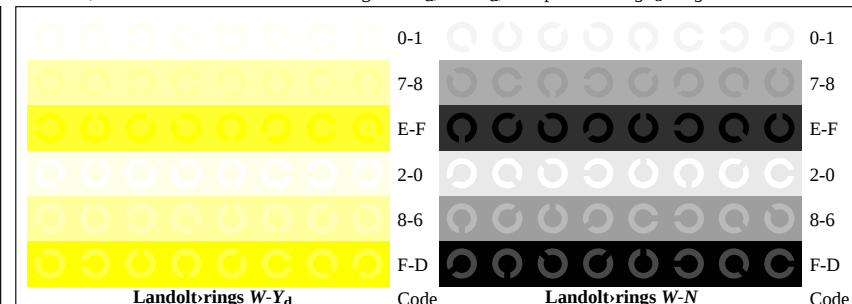
OE571-1, Picture B4W-L-135-0: 16 equidistant steps W-C_d; W-M_d; W-Y_d; W-N; PS: $\rightarrow rgb_d$ setrgbcolor



OE571-3, Picture B5W-135-0: Script and Landolt-rings N; C_d; M_d; Y_d; Z; PS operator $\rightarrow rgb_d$ setrgbcolor



OE571-5, Picture B6W-L-135-0: Landolt-rings W-C_d; W-M_d; PS operator $\rightarrow rgb_d$ setrgbcolor



OE571-7, Picture B7W-L-135-0: Landolt-rings W-Y_d; W-N; PS operator $\rightarrow rgb_d$ setrgbcolor

input: *rgb* ($\rightarrow rgb_d$) setrgbcolor
output 135-0: *g_P*=0.62; *g_N*=1.0

Test for the visual linearized output of Pictures B1W-135-0 to B7W-135-0
Output test with the computer display () or the external display () please mark by (x)!

Test of the (flower) image according to picture B1W-135-0
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":

Test of the resolution of radial gratings $W-C_d$, $W-M_d$, $W-Y_d$ according to picture B2W-135-0

	$W-C_d$	$W-M_d$	$W-Y_d$	$W-N$	$W-Z$
Is the resolution diameter < 6 mm?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Test with magnifying glass (6x), Resolution diameter:	 mm	 mm	 mm	 mm	 mm

Test of the 14 CIE-test colours according to picture B3W-135-0
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 If Yes: How many colours have clear differences? of the given 14 steps: **Steps**

Test of 16 visual equidistant L^* -grey steps according to picture B3W-135-0
 Are the 16 steps on the upper rows distinguishable? **Yes/No**
 If No: How many steps can be distinguished? of the given 16 steps: **Steps**

Part 1 OE570-3N-135-1

Documentation of file format, hardware and software for this test:
PDF-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NP.PDF> **underline Yes/No**
PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NA.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 OE57L0NP.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 OE57L0NA.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 OE570-7N-135-1

Test of 16 visually equally spaced steps of the colour rows $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to picture B4W-135-0

	$W-C_d$ White - Cyanblue:	$W-M_d$ White - Magentared:	$W-Y_d$ White - Yellow:	$W-N$ White - Black:
Are all the 16 steps distinguishable?	Yes/No	Yes/No	Yes/No	Yes/No
If No: How many steps can be distinguished? of the given 16 steps	 Steps	 Steps	 Steps	 Steps

Test of characters and Landolt-rings in four sizes according to picture B5W-135-0
 Is the recognition frequency > 50% for letters (17 from 32 at least) and for Landolt-rings (minimum 5 of 8)?

Relative size	Letters	Ring N	Ring C_d	Ring M_d	Ring Y_d
10	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
8	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
6	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
4	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Test of recognition frequency of Landolt-rings $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to pictures B6W-135-0, and B7W-135-0
 Is the recognition frequency of the Landolt-rings > 50% (min. 5 of 8 at least)?

Colour row $W-C_d$ background - ring	Colour row $W-M_d$ background - ring	Colour row $W-Y_d$ background - ring	Colour row $W-N$ background - ring
0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No
7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No
E - F Yes/No	E - F Yes/No	E - F Yes/No	E - F Yes/No
2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No
8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No
F - D Yes/No	F - D Yes/No	F - D Yes/No	F - D Yes/No

Part 1 OE571-3N-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/OE57/OE57F1P2.PDF> **underline Yes/No**
PS file: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.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/OE57/OE57F1P2.PDF> **underline Yes/No**
PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.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 and transfer
 of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF **underline Yes/No**
 If No, please describe other method:

Part 4 OE571-7N-135-1

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

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

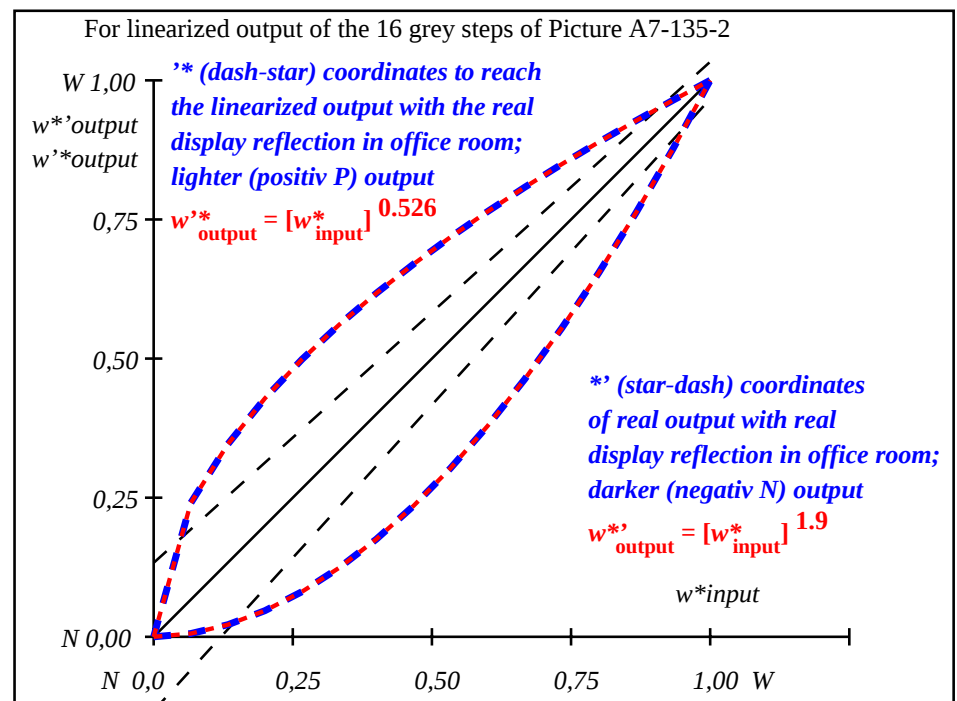
Start output S1
Specification according to
ISO/IEC 15775 Annex G
and DIN 33866-1 Annex G

Mean lightness difference (16 steps)
 $\Delta E^*_{CIELAB} = 8.2$

Mean lightness difference (5 steps)
 $\Delta L^*_{CIELAB} = 6.2$

Mean colour reproduction index: $R^*_{ab,m} = 65$

OE570-3N-135-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE571-3N-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 $g_P=0.63$ 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	0.185	0.283	0.366	0.438	0.503	0.564	0.621	0.675	0.727	0.776	0.824	0.87	0.915	0.958	1.0

OE570-7N, Picture A7-135-2: 16 visual equidistant L^* -grey steps; PS operator: $w^* w^* w^*$ setrgbcolor

OE57: In-output relation according to ISO 9241-306; 1MR, DH
Viewing Y contrast $Y_W:Y_N=88,9:10$; Y_N range 7,5 to <15

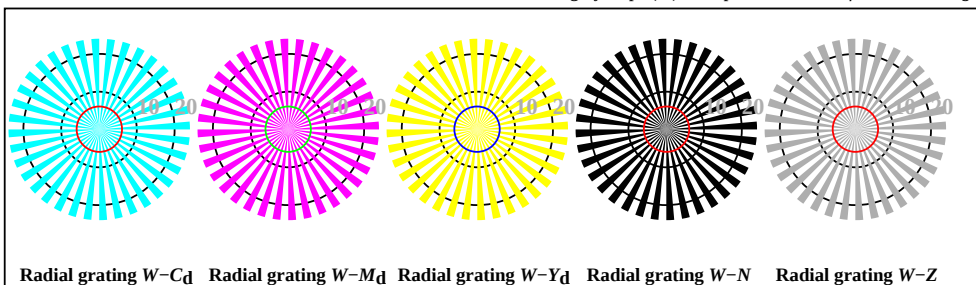
input: $rgb \rightarrow rgb^*_d$ setrgbcolor
output 135-2: $g_P=0.62$; $g_N=1.0$

TUB registration: 20110801-OE57/OE57L0NA.TXT /.PS
application for output of displays: monitor systems or data projector systems
TUB material: code=rh4ta

<http://130.149.60.45/~farbmatrik/OE57/OE57L0NA.TXT> /PS; linearized output, Page 1/3
F: Output Linearization (OL) data OE57/OE57L0NA.TXT /PS in File (F)



OE570-7, Picture B1-136-0: Flower motif, 14 CIE-test colours and 2 + 16 grey steps (nf); PS operators *settransfer*, 3 *colorimage*



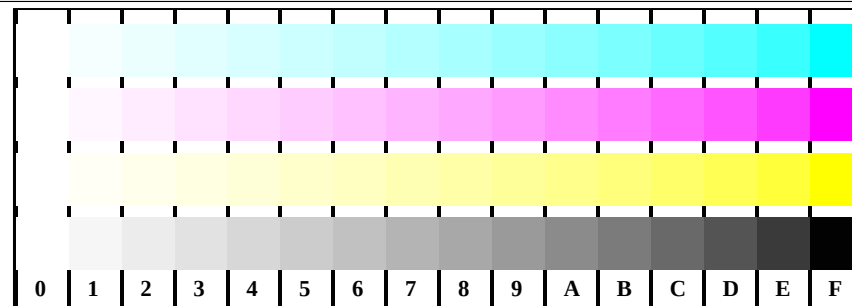
Radial grating W-C_d Radial grating W-M_d Radial grating W-Y_d Radial grating W-N Radial grating W-Z

OE570-5, Picture B2W-136-0: Radial gratings W-C_d; W-M_d; W-Y_d; W-N; PS operator $\rightarrow rgb_d$ setrgbcolor

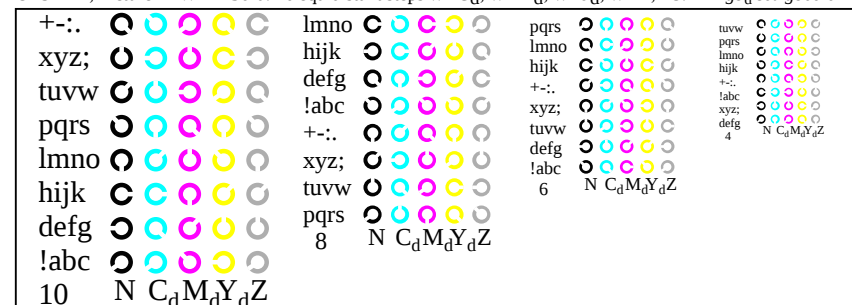


OE570-7, Picture B3W-136-0: 14 CIE-test colours and 2 + 16 grey steps; PS operator $\rightarrow rgb_d$ setrgbcolor

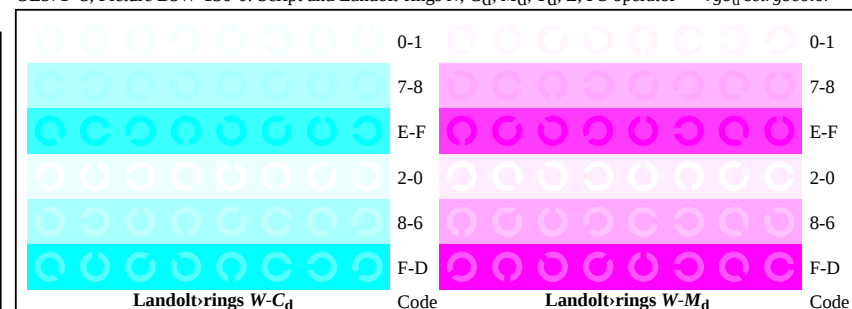
OE57: Test chart 2 according to ISO 15775, TR 24705; 1MR, DH
Image, radial gratings, 16 step colour scales, Landolt-rings



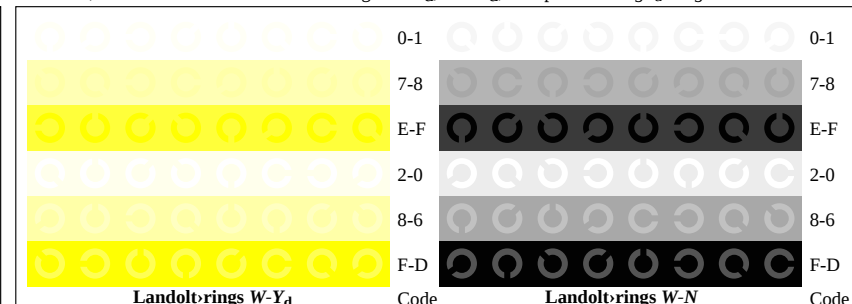
OE571-1, Picture B4W-L-136-0: 16 equidistant steps W-C_d; W-M_d; W-Y_d; W-N; PS: $\rightarrow rgb_d$ setrgbcolor



OE571-3, Picture B5W-136-0: Script and Landolt-rings N; C_d; M_d; Y_d; Z; PS operator $\rightarrow rgb_d$ setrgbcolor



OE571-5, Picture B6W-L-136-0: Landolt-rings W-C_d; W-M_d; PS operator $\rightarrow rgb_d$ setrgbcolor



OE571-7, Picture B7W-L-136-0: Landolt-rings W-Y_d; W-N; PS operator $\rightarrow rgb_d$ setrgbcolor

input: *rgb* ($\rightarrow rgb_d$) setrgbcolor
output 136-0: *g_P*=0.55; *g_N*=1.0

Test for the visual linearized output of Pictures B1W-136-0 to B7W-136-0

Output test with the computer display () or the external display () please mark by (x)!

Test of the (flower) image according to picture B1W-136-0

Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":

Test of the resolution of radial gratings W-C_d, W-M_d, W-Y_d according to picture B2W-136-0

	W-C _d	W-M _d	W-Y _d	W-N	W-Z
Is the resolution diameter < 6 mm?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Test with magnifying glass (6x), Resolution diameter:	 mm	 mm	 mm	 mm	 mm

Test of the 14 CIE-test colours according to picture B3W-136-0

Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 If Yes: How many colours have clear differences? of the given 14 steps: Steps

Test of 16 visual equidistant L*-grey steps according to picture B3W-136-0

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

Part 1

OE570-3N-136-1

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

PDF-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NP.PDF> **underline Yes/No**

PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NA.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 OE57L0NP.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 OE57L0NA.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

OE570-7N-136-1

OE57: Form A for test chart 2 according to ISO 15775; 1MR, DH
 Image, radial gratings, 16 step colour scales, Landolt-rings

Test of 16 visually equally spaced steps of the colour rows W-C_d, W-M_d, W-Y_d and W-N according to picture B4W-136-0

W-C _d White - Cyanblue:	Are all the 16 steps distinguishable?	Yes/No
If No: How many steps can be distinguished?	of the given 16 steps	 Steps
W-M _d White - Magentared:	Are all the 16 steps distinguishable?	Yes/No
If No: How many steps can be distinguished?	of the given 16 steps	 Steps
W-Y _d White - Yellow:	Are all the 16 steps distinguishable?	Yes/No
If No: How many steps can be distinguished?	of the given 16 steps	 Steps
W-N White - Black:	Are all the 16 steps distinguishable?	Yes/No
If No: How many steps can be distinguished?	of the given 16 steps	 Steps

Test of characters and Landolt-rings in four sizes according to picture B5W-136-0

Is the recognition frequency > 50% for letters (17 from 32 at least) and for Landolt-rings (minimum 5 of 8)?

Relative size	Letters	Ring N	Ring C _d	Ring M _d	Ring Y _d
10	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
8	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
6	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
4	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Test of recognition frequency of Landolt-rings W-C_d, W-M_d, W-Y_d and W-N according to pictures B6W-136-0, and B7W-136-0

Is the recognition frequency of the Landolt-rings > 50% (min. 5 of 8 at least)?

Colour row W-C _d background - ring	Colour row W-M _d background - ring	Colour row W-Y _d background - ring	Colour row W-N background - ring
0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No
7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No
E - F Yes/No	E - F Yes/No	E - F Yes/No	E - F Yes/No
2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No
8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No
F - D Yes/No	F - D Yes/No	F - D Yes/No	F - D Yes/No

Part 1

OE571-3N-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/OE57/OE57F1P2.PDF> **underline Yes/No**

PS file: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.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/OE57/OE57F1P2.PDF> **underline Yes/No**

PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.PS> **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

OE571-7N-136-1

input: *rgb* (->*rgb***d*) *setrgbcolor*
 output 136-1: *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

i	LAB*ref	L*out	LAB*out	LAB*out/c-ref	ΔE*
1	52.02 0.0 0.0	0.0 52.02 0.0	0.0 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 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 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 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 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 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 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 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 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 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 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 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 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 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 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 0.0 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 0.0 0.0	0.01
18	62.87 0.0 0.0	0.51 74.3 0.0	0.0 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 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 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 0.0 0.0	0.01

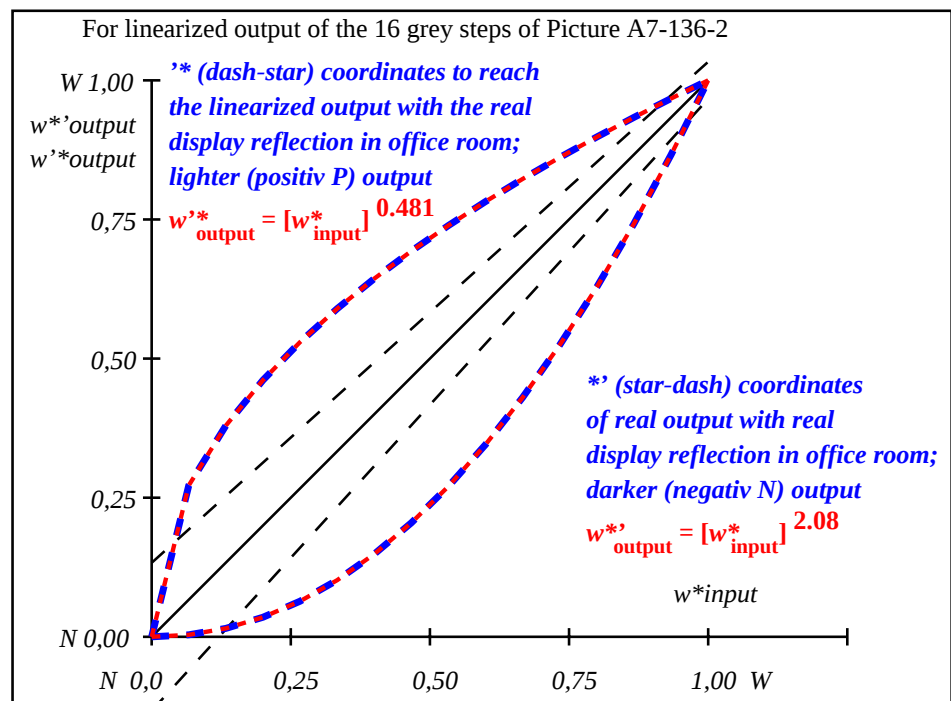
Start output S1
Specification according to
ISO/IEC 15775 Annex G
and DIN 33866-1 Annex G

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

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

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

OE570-3N-136-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE571-3N-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 $g_P=0.55$ 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	0.226	0.33	0.413	0.484	0.546	0.604	0.658	0.707	0.755	0.8	0.843	0.885	0.925	0.963	1.0

OE570-7N, Picture A7-136-2: 16 visual equidistant L^* -grey steps; PS operator: $w^* w^* w^*$ setrgbcolor

OE57: In-output relation according to ISO 9241-306; 1MR, DH
Viewing Y contrast $Y_W:Y_N=88,9:20$; Y_N range 15 to <30

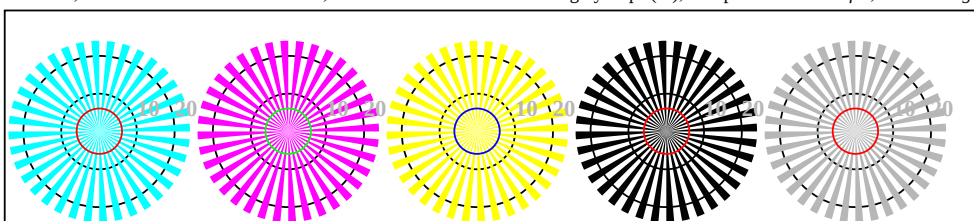
input: $rgb \rightarrow rgb^*_d$ setrgbcolor
output 136-2: $g_P=0.55$; $g_N=1.0$

TUB registration: 20110801-OE57/OE57L0NA.TXT /.PS
application for output of displays: monitor systems or data projector systems
TUB material: code=rh4ta

<http://130.149.60.45/~farbmetrik/OE57/OE57L0NA.TXT> /PS; linearized output, Page 1/3
F: Output Linearization (OL) data OE57/OE57L0NA.TXT /PS in File (F)



OE570-7, Picture B1-137-0: Flower motif, 14 CIE-test colours and 2 + 16 grey steps (nf); PS operators *settransfer*, 3 *colorimage*



Radial grating W-C_d Radial grating W-M_d Radial grating W-Y_d Radial grating W-N Radial grating W-Z

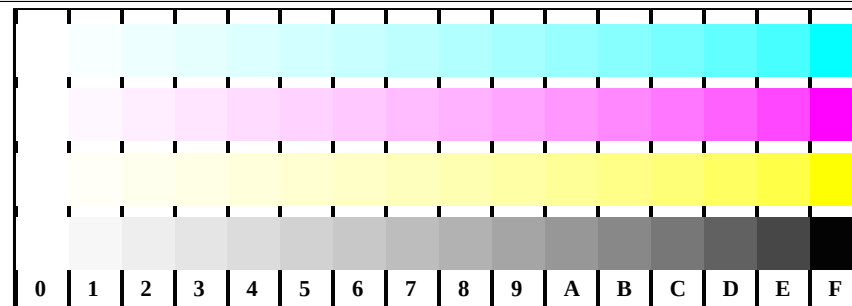
OE570-5, Picture B2W-137-0: Radial gratings W-C_d; W-M_d; W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



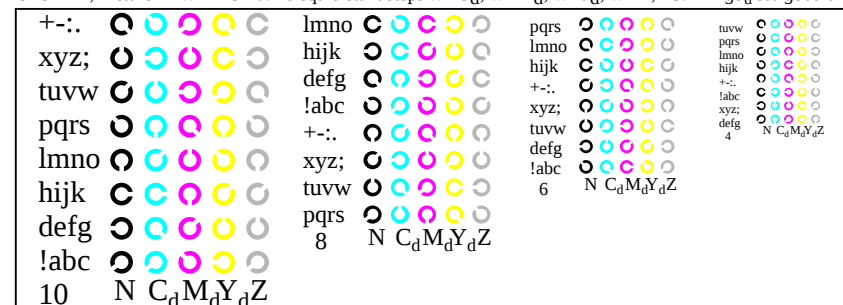
OE570-7, Picture B3W-137-0: 14 CIE-test colours and 2 + 16 grey steps; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

OE570-7, Picture B4W-137-0: 16 equidistant steps W-C_d; W-M_d; W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

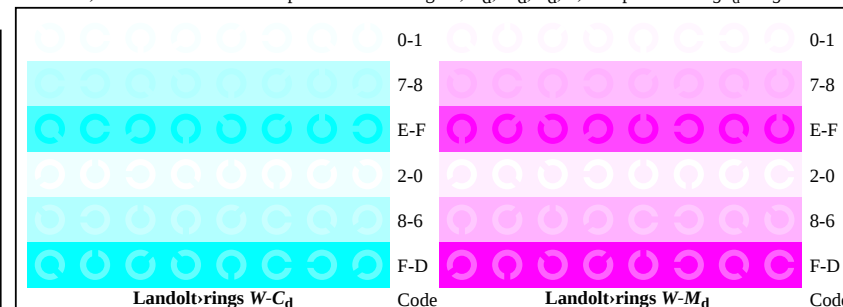
OE57: Test chart 2 according to ISO 15775, TR 24705; 1MR, DH
Image, radial gratings, 16 step colour scales, Landolt-rings



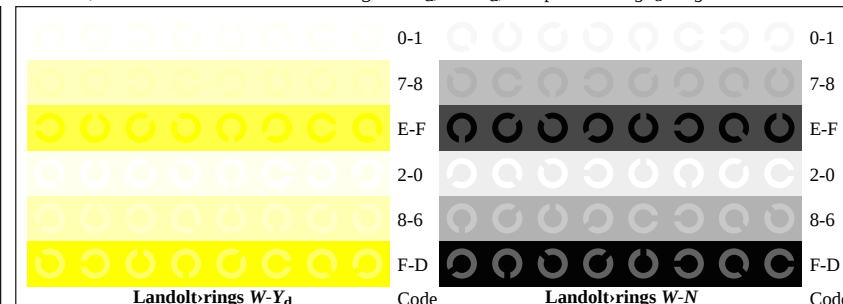
OE571-1, Picture B4W-L-137-0: 16 equidistant steps W-C_d; W-M_d; W-Y_d; W-N; PS: $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-3, Picture B5W-137-0: Script and Landolt-rings N; C_d; M_d; Y_d; Z; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-5, Picture B6W-L-137-0: Landolt-rings W-C_d; W-M_d; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$



OE571-7, Picture B7W-L-137-0: Landolt-rings W-Y_d; W-N; PS operator $\rightarrow \text{rgb}_d \text{ setrgbcolor}$

input: *rgb* ($\rightarrow \text{rgb}_d$) *setrgbcolor*
output 137-0: $g_P=0.47$; $g_N=1.0$

Test for the visual linearized output of Pictures B1W-137-0 to B7W-137-0
Output test with the computer display () or the external display () please mark by (x)!

Test of the (flower) image according to picture B1W-137-0
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":

Test of the resolution of radial gratings $W-C_d$, $W-M_d$, $W-Y_d$ according to picture B2W-137-0

	$W-C_d$	$W-M_d$	$W-Y_d$	$W-N$	$W-Z$
Is the resolution diameter < 6 mm?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Test with magnifying glass (6x), Resolution diameter:	 mm	 mm	 mm	 mm	 mm

Test of the 14 CIE-test colours according to picture B3W-137-0
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**
 If Yes: How many colours have clear differences? of the given 14 steps: **Steps**

Test of 16 visual equidistant L^* -grey steps according to picture B3W-137-0
 Are the 16 steps on the upper rows distinguishable? **Yes/No**
 If No: How many steps can be distinguished? of the given 16 steps: **Steps**

Part 1 OE570-3N-137-1

Documentation of file format, hardware and software for this test:
PDF-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NP.PDF> **underline Yes/No**
PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57L0NA.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 OE57L0NP.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 OE57L0NA.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 OE570-7N-137-1

Test of 16 visually equally spaced steps of the colour rows $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to picture B4W-137-0

	$W-C_d$ White - Cyanblue:	$W-M_d$ White - Magentared:	$W-Y_d$ White - Yellow:	$W-N$ White - Black:
Are all the 16 steps distinguishable?	Yes/No	Yes/No	Yes/No	Yes/No
If No: How many steps can be distinguished? of the given 16 steps	 Steps	 Steps	 Steps	 Steps

Test of characters and Landolt-rings in four sizes according to picture B5W-137-0
 Is the recognition frequency > 50% for letters (17 from 32 at least) and for Landolt-rings (minimum 5 of 8)?

Relative size	Letters	Ring N	Ring C_d	Ring M_d	Ring Y_d
10	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
8	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
6	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
4	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Test of recognition frequency of Landolt-rings $W-C_d$, $W-M_d$, $W-Y_d$ and $W-N$ according to pictures B6W-137-0, and B7W-137-0
 Is the recognition frequency of the Landolt-rings > 50% (min. 5 of 8 at least)?

Colour row $W-C_d$ background - ring	Colour row $W-M_d$ background - ring	Colour row $W-Y_d$ background - ring	Colour row $W-N$ background - ring
0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No	0 - 1 Yes/No
7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No	7 - 8 Yes/No
E - F Yes/No	E - F Yes/No	E - F Yes/No	E - F Yes/No
2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No	2 - 0 Yes/No
8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No	8 - 6 Yes/No
F - D Yes/No	F - D Yes/No	F - D Yes/No	F - D Yes/No

Part 1 OE571-3N-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/OE57/OE57F1P2.PDF> **underline Yes/No**
PS file: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.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/OE57/OE57F1P2.PDF> **underline Yes/No**
PS-File: <http://130.149.60.45/farbmetrik/OE57/OE57F1P2.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 and transfer
 of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF **underline Yes/No**
 If No, please describe other method:

Part 4 OE571-7N-137-1

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

i	LAB*ref	L*out	LAB*out	LAB*out/c-ref	ΔE*
1	69.7 0.0 0.0	0.0 69.7 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01
2	71.41 0.0 0.0	0.3 77.46 0.0	0.0 0.0 0.0	6.04 0.0 0.0	6.04
3	73.13 0.0 0.0	0.41 80.24 0.0	0.0 0.0 0.0	7.11 0.0 0.0	7.11
4	74.84 0.0 0.0	0.49 82.31 0.0	0.0 0.0 0.0	7.47 0.0 0.0	7.47
5	76.55 0.0 0.0	0.56 84.02 0.0	0.0 0.0 0.0	7.47 0.0 0.0	7.47
6	78.27 0.0 0.0	0.62 85.51 0.0	0.0 0.0 0.0	7.24 0.0 0.0	7.24
7	79.98 0.0 0.0	0.67 86.84 0.0	0.0 0.0 0.0	6.86 0.0 0.0	6.86
8	81.7 0.0 0.0	0.71 88.05 0.0	0.0 0.0 0.0	6.35 0.0 0.0	6.35
9	83.41 0.0 0.0	0.76 89.17 0.0	0.0 0.0 0.0	5.76 0.0 0.0	5.76
10	85.12 0.0 0.0	0.8 90.21 0.0	0.0 0.0 0.0	5.08 0.0 0.0	5.08
11	86.84 0.0 0.0	0.84 91.19 0.0	0.0 0.0 0.0	4.35 0.0 0.0	4.35
12	88.55 0.0 0.0	0.87 92.11 0.0	0.0 0.0 0.0	3.56 0.0 0.0	3.56
13	90.27 0.0 0.0	0.91 92.99 0.0	0.0 0.0 0.0	2.73 0.0 0.0	2.73
14	91.98 0.0 0.0	0.94 93.83 0.0	0.0 0.0 0.0	1.85 0.0 0.0	1.85
15	93.7 0.0 0.0	0.97 94.64 0.0	0.0 0.0 0.0	0.94 0.0 0.0	0.94
16	95.41 0.0 0.0	1.0 95.41 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01
17	69.7 0.0 0.0	0.0 69.7 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01
18	76.13 0.0 0.0	0.54 83.62 0.0	0.0 0.0 0.0	7.5 0.0 0.0	7.5
19	82.55 0.0 0.0	0.74 88.62 0.0	0.0 0.0 0.0	6.06 0.0 0.0	6.06
20	88.98 0.0 0.0	0.88 92.34 0.0	0.0 0.0 0.0	3.35 0.0 0.0	3.35
21	95.41 0.0 0.0	1.0 95.41 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.01

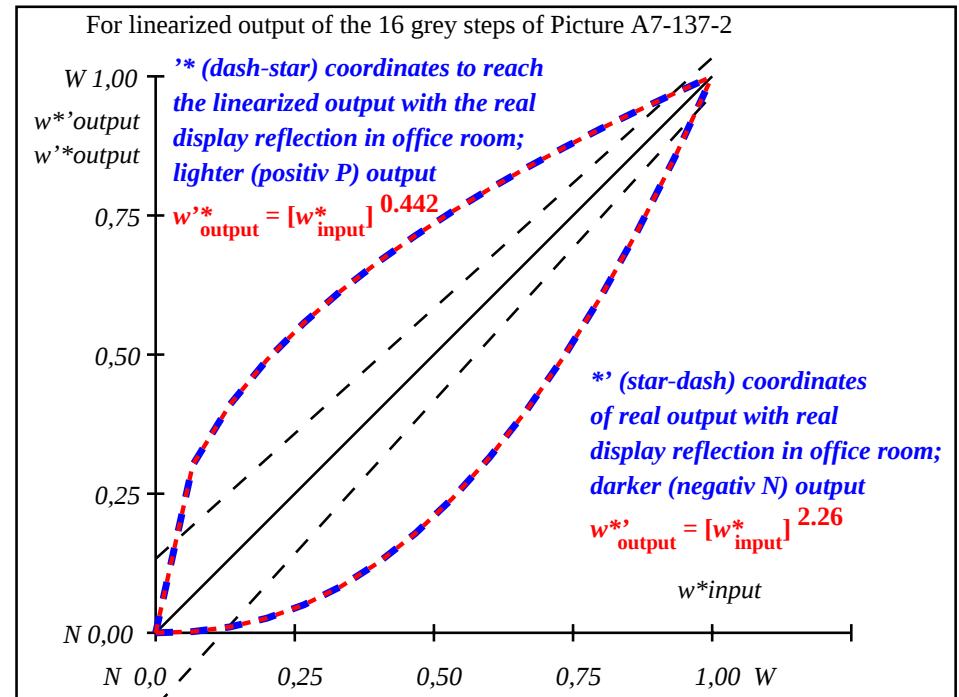
Start output S1
Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G

Mean lightness difference (16 steps)
 $\Delta E^*_{CIELAB} = 4.6$

Mean lightness difference (5 steps)
 $\Delta L^*_{CIELAB} = 3.4$

Mean colour reproduction index: $R^*_{ab,m} = 80$

OE570-3N-137-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE571-3N-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 $g_P=0.48$ 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	0.277	0.384	0.466	0.534	0.593	0.647	0.697	0.742	0.785	0.825	0.863	0.899	0.934	0.968	1.0

OE570-7N, Picture A7-137-2: 16 visual equidistant L^* -grey steps; PS operator: $w^*w^*w^*$ setrgbcolor

OE57: In-output relation according to ISO 9241-306; 1MR, DH
Viewing Y contrast $Y_W:Y_N=88,9:40$; Y_N range 30 to <60

input: $rgb \rightarrow rgb^*_d$ setrgbcolor
output 137-2: $g_P=0.47$; $g_N=1.0$

TUB registration: 20110801-OE57/OE57L0NA.TXT /.PS
application for output of displays: monitor systems or data projector systems
TUB material: code=rh4ta