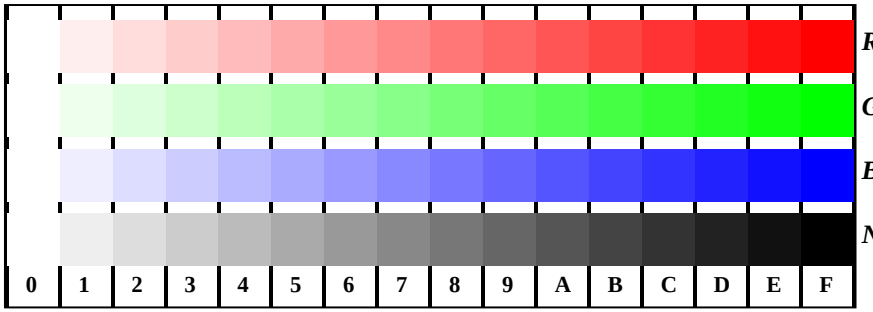
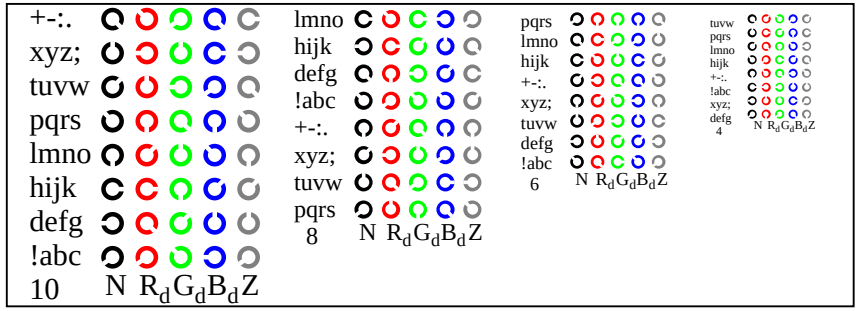
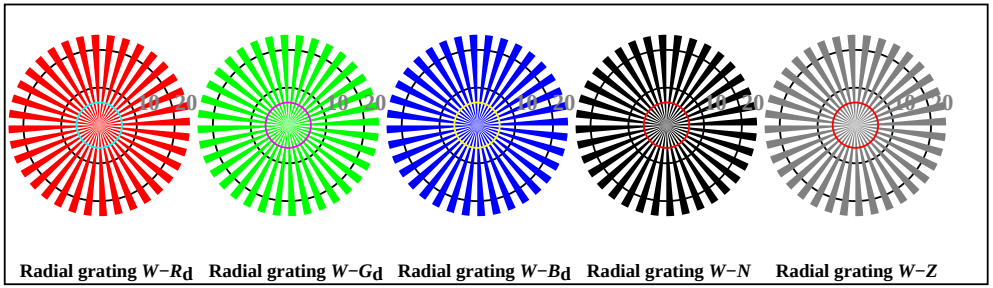


OE591−1, Picture D4W-L-130-0: 16 equidistant steps $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS:* $->rgb_d$ *setrgbcolor*

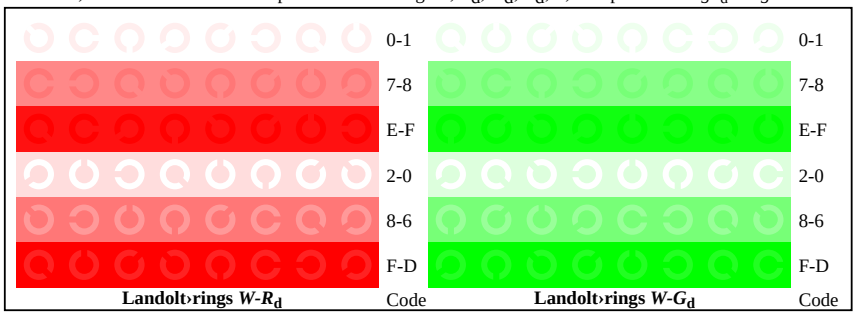


OE591−3, Picture D5W-L-130-0: Script and Landolt-rings *N*; R_d; G_d; B_d; *Z*; *PS* operator $->rgb_d$ *setrgbcolor*



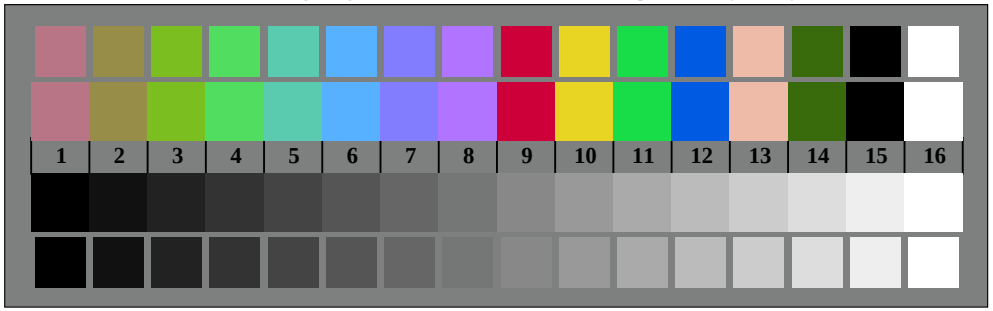
Radial grating $W-R_d$ **Radial grating $W-G_d$** **Radial grating $W-B_d$** **Radial grating $W-N$** **Radial grating $W-Z$**

OE590−5, Picture D2W-L-130-0: Radial gratings $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*

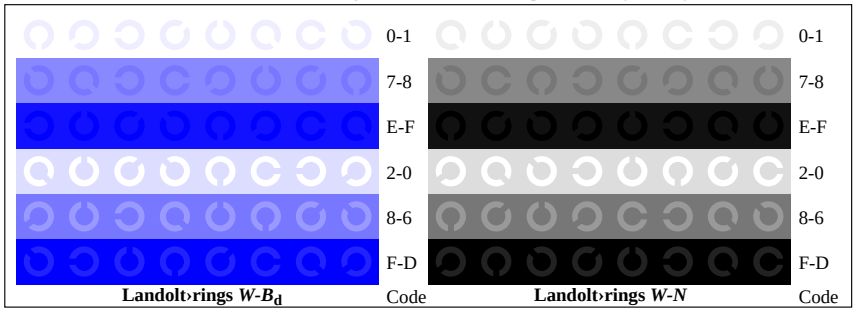


Landolt›rings $W-R_d$ **Landolt›rings $W-G_d$**

OE591−5, Picture D6W-L-130-0: Landolt-rings $W-R_d$; $W-G_d$; *PS* operator $->rgb_d$ *setrgbcolor*



OE590−7, Picture D3W-L-130-0: 14 CIE-test colours and 2 + 16 grey steps; *PS* operator $->rgb_d$ *setrgbcolor*



Landolt›rings $W-B_d$ **Landolt›rings $W-N$**

OE591−7, Picture D7W-L-130-0: Landolt-rings $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*

Test for the visual linearized output of Pictures D2W-130-0 **to D7W**-130-0

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

Test of the resolution of radial gratings *W−R*$_d$, *W−G*$_d$, *W−B*$_d$ according to picture D2W-130-0

	***W−R*$_d$**	***W−G*$_d$**	***W−B*$_d$**	***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 D3W-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 D3W**-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 OE590−3N-130-1

Test of 16 visually equally spaced steps of the colour rows *W−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to picture D4W-130-0

***W−R*$_d$** White − Orangered:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−G*$_d$** White − Leafgreen:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−B*$_d$** White − Violetblue:	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 D5W-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 ***R*$_d$**	Ring ***G*$_d$**	Ring ***B*$_d$**
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−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to pictures D6W-130-0**, and D7W**-130-0

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

Colour row ***W−R*$_d$** background − ring		Colour row ***W−G*$_d$** background − ring		Colour row ***W−B*$_d$** 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 OE590−3N-130-1

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

PDF-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NP.PDF **underline Yes/No**

PS-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NA.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 OE59L0NP.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 OE59L0NA.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 OE590−7N-130-1

Documentation of assessor colour vision properties for visual assessment

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

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

Office workplace illumination is daylight (clouded/north sky) **underline Yes/No**
PDF file: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.PDF **underline Yes/No**
PS file: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.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/OE59/OE59F1P2.PDF
picture A7-130-2 **underline Yes/No**
PS-File: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.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 OE591−7N-130-1

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

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

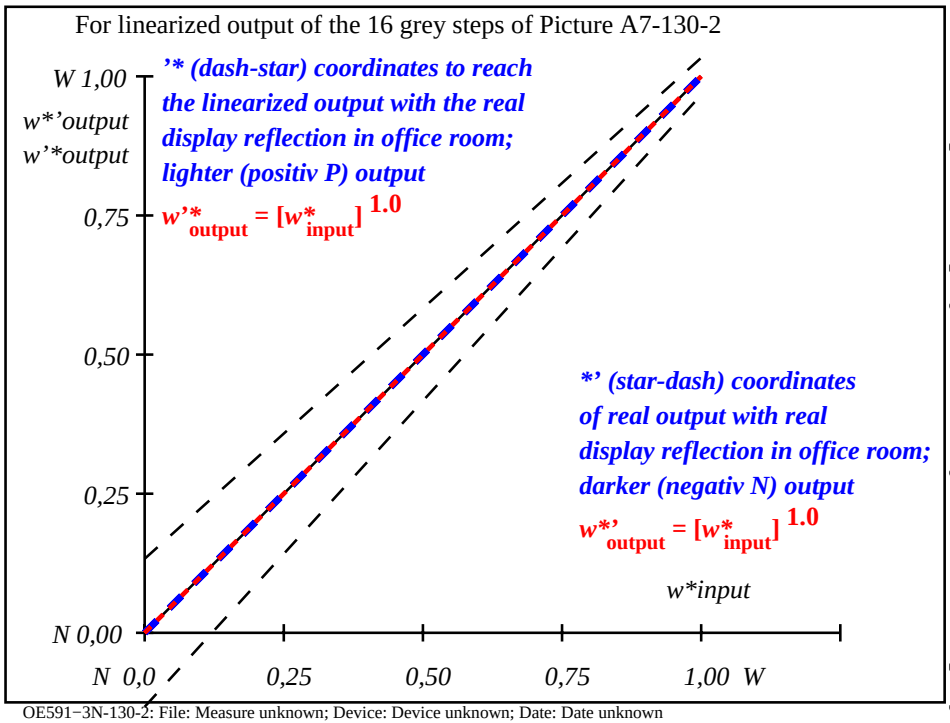
Mean lightness difference (16 steps)
ΔE^*_{CIELAB} = **0.0**

Mean lightness difference (5 steps)
ΔL^*_{CIELAB} = **0.0**

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

OE590−3N-130-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

For linearized output of the 16 grey steps of Picture A7-130-2



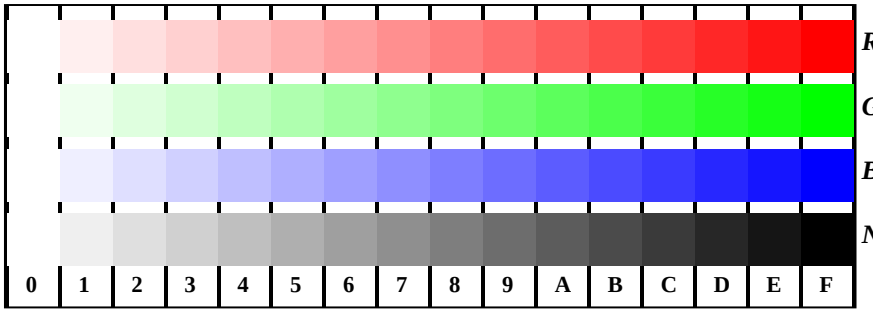
OE591−3N-130-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{intended}$ (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

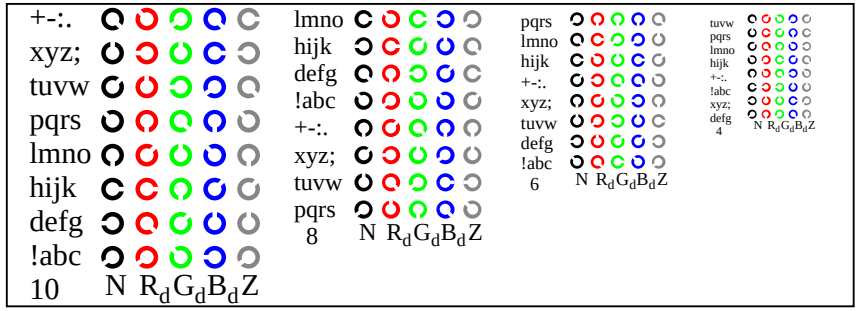
OE590−7N, Picture A7-130-2: 16 visual equidistant L^*-grey steps; PS operator: *w* w* w* setrgbcolor*

OE59: 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

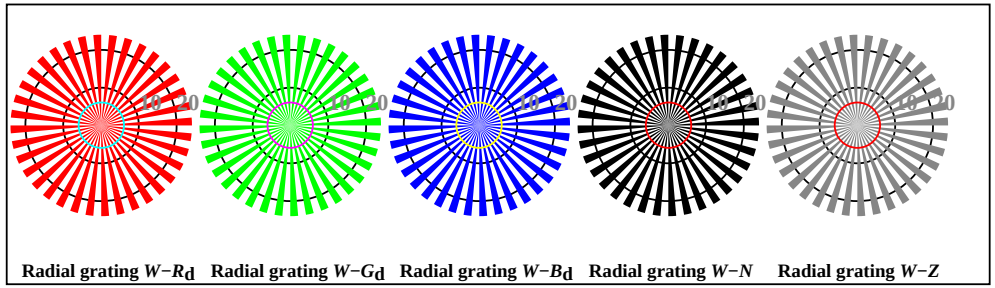
input: *rgb (−>rgb*d) setrgbcolor*
output 130-2: g_P=1.0; g_N=1.0



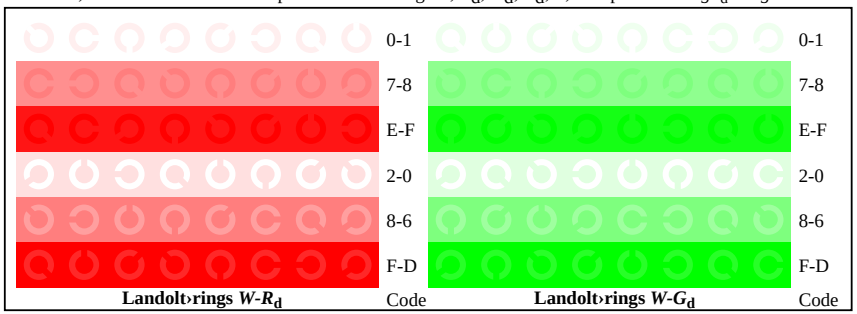
OE591−1, Picture D4W-L-131-0: 16 equidistant steps $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS*: $->rgb_d$ *setrgbcolor*



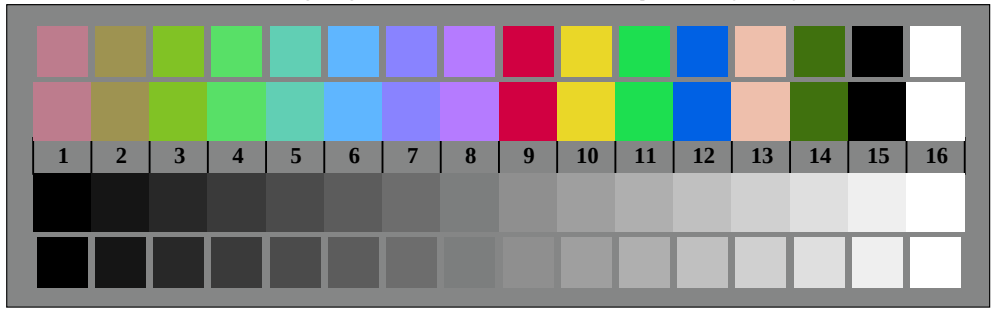
OE591−3, Picture D5W-L-131-0: Script and Landolt-rings *N*; R_d; G_d; B_d; *Z*; *PS* operator $->rgb_d$ *setrgbcolor*



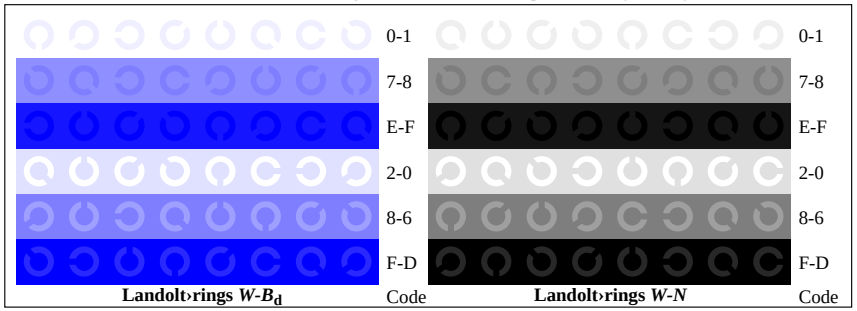
OE590−5, Picture D2W-131-0: Radial gratings $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*



OE591−5, Picture D6W-L-131-0: Landolt-rings $W-R_d$; $W-G_d$; *PS* operator $->rgb_d$ *setrgbcolor*



OE590−7, Picture D3W-131-0: 14 CIE-test colours and 2 + 16 grey steps; *PS* operator $->rgb_d$ *setrgbcolor*



OE591−7, Picture D7W-L-131-0: Landolt-rings $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*

Test for the visual linearized output of Pictures D2W-131-0 **to D7W**-131-0

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

Test for the resolution of radial gratings *W−R*$_d$, *W−G*$_d$, *W−B*$_d$ according to picture D2W-131-0

	***W−R*$_d$**	***W−G*$_d$**	***W−B*$_d$**	***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 D3W-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 D3W**-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 OE590−3N-131-1

Test of 16 visually equally spaced steps of the colour rows *W−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to picture D4W-131-0

***W−R*$_d$** White − Orangered:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−G*$_d$** White − Leafgreen:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−B*$_d$** White − Violetblue:	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 D5W-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 ***R*$_d$**	Ring ***G*$_d$**	Ring ***B*$_d$**
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−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to pictures D6W-131-0**, and D7W**-131-0

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

Colour row ***W−R*$_d$** background − ring		Colour row ***W−G*$_d$** background − ring		Colour row ***W−B*$_d$** 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 OE590−3N-131-1

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

PDF-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NP.PDF **underline Yes/No**

PS-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NA.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 OE59L0NP.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 OE59L0NA.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 OE590−7N-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/OE59/OE59F1P2.PDF **underline Yes/No**
PS file: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.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/OE59/OE59F1P2.PDF
picture A7-131-2 **underline Yes/No**
PS-File: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.PS
picture A7-131-2 **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 OE591−7N-131-1

i	LAB*ref			l*out	LAB*out			LAB*out/c−ref			ΔE*
1	5.69	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	14.73	0.0	0.0	3.06	0.0	0.0	3.06
3	17.65	0.0	0.0	0.18	21.96	0.0	0.0	4.3	0.0	0.0	4.3
4	23.63	0.0	0.0	0.26	28.63	0.0	0.0	4.99	0.0	0.0	4.99
5	29.62	0.0	0.0	0.33	34.96	0.0	0.0	5.34	0.0	0.0	5.34
6	35.6	0.0	0.0	0.39	41.05	0.0	0.0	5.46	0.0	0.0	5.46
7	41.58	0.0	0.0	0.46	46.96	0.0	0.0	5.38	0.0	0.0	5.38
8	47.56	0.0	0.0	0.52	52.72	0.0	0.0	5.16	0.0	0.0	5.16
9	53.54	0.0	0.0	0.59	58.36	0.0	0.0	4.82	0.0	0.0	4.82
10	59.52	0.0	0.0	0.65	63.88	0.0	0.0	4.36	0.0	0.0	4.36
11	65.5	0.0	0.0	0.71	69.32	0.0	0.0	3.82	0.0	0.0	3.82
12	71.48	0.0	0.0	0.77	74.67	0.0	0.0	3.19	0.0	0.0	3.19
13	77.47	0.0	0.0	0.83	79.95	0.0	0.0	2.49	0.0	0.0	2.49
14	83.45	0.0	0.0	0.89	85.16	0.0	0.0	1.72	0.0	0.0	1.72
15	89.43	0.0	0.0	0.94	90.31	0.0	0.0	0.89	0.0	0.0	0.89
16	95.41	0.0	0.0	1.0	95.41	0.0	0.0	0.0	0.0	0.0	0.01
17	5.69	0.0	0.0	0.0	5.69	0.0	0.0	0.0	0.0	0.0	0.01
18	28.12	0.0	0.0	0.31	33.4	0.0	0.0	5.28	0.0	0.0	5.28
19	50.55	0.0	0.0	0.56	55.55	0.0	0.0	5.0	0.0	0.0	5.0
20	72.98	0.0	0.0	0.78	76.0	0.0	0.0	3.02	0.0	0.0	3.02
21	95.41	0.0	0.0	1.0	95.41	0.0	0.0	0.0	0.0	0.0	0.01

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

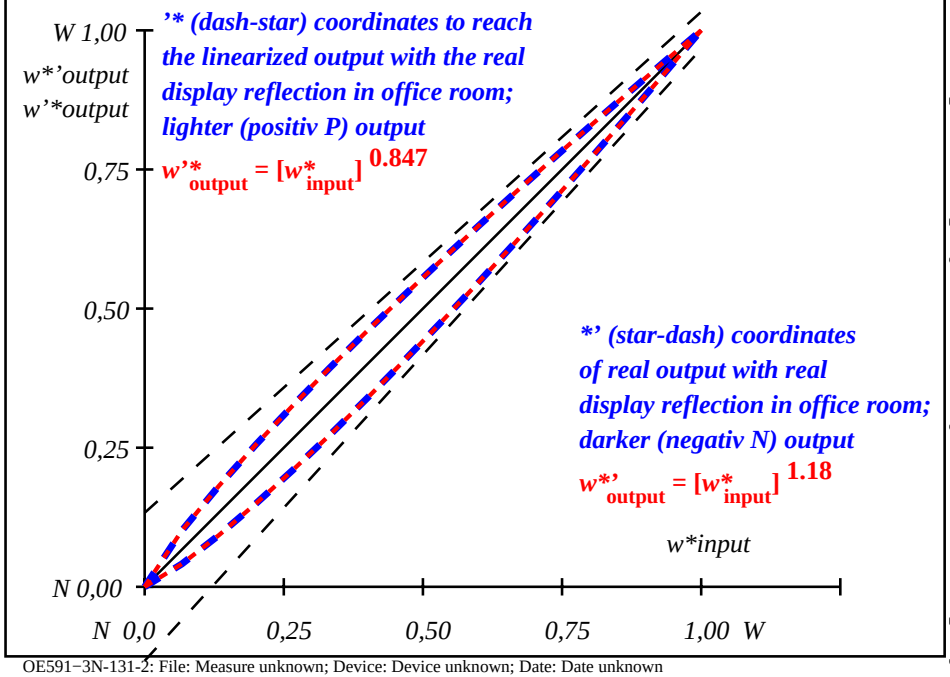
Mean lightness difference (16 steps)
ΔE^*_{CIELAB} = **3.4**

Mean lightness difference (5 steps)
ΔL^*_{CIELAB} = **2.7**

Mean colour reproduction index: $R^*_{ab,m}$ = **85**

OE590−3N-131-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

For linearized output of the 16 grey steps of Picture A7-131-2



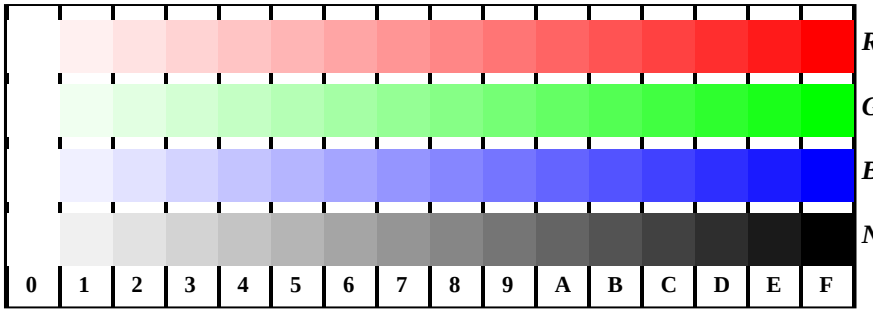
OE591−3N-131-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{intended}$ (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

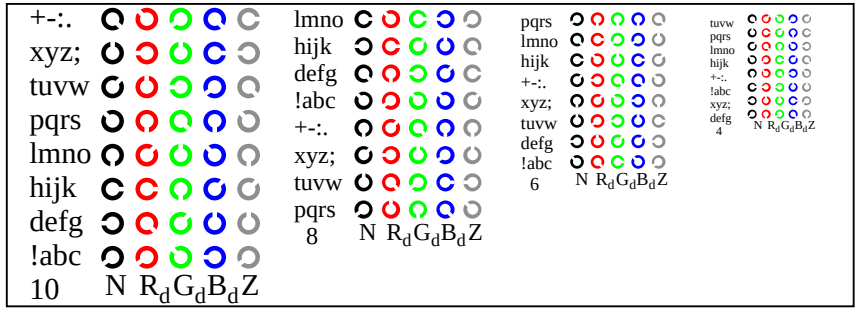
OE590−7N, Picture A7-131-2: 16 visual equidistant *L**-grey steps; PS operator: *w* w* w* setrgbcolor*

OE59: 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

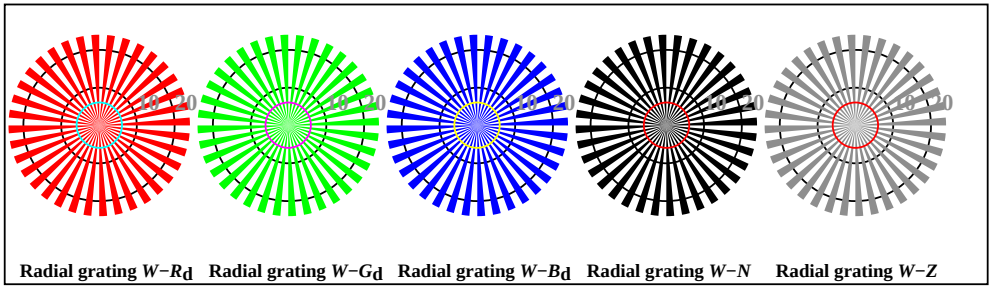
input: *rgb (−>rgb*d) setrgbcolor*
output 131-2: g_P=0.92; g_N=1.0



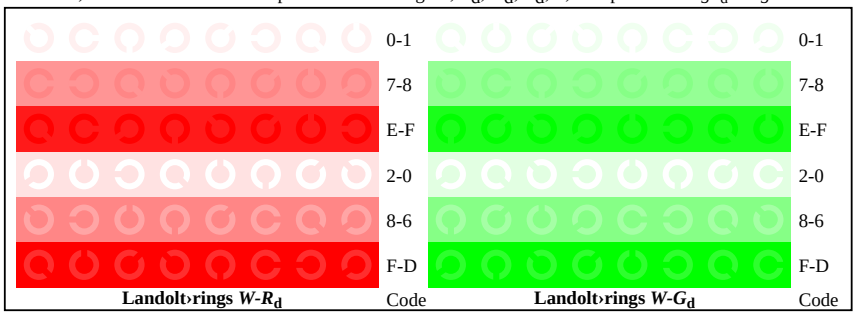
OE591−1, Picture D4W-L-132-0: 16 equidistant steps *W−R*d; *W−G*d; *W−B*d; *W−N*; *PS: −>rgb*d *setrgbcolor*



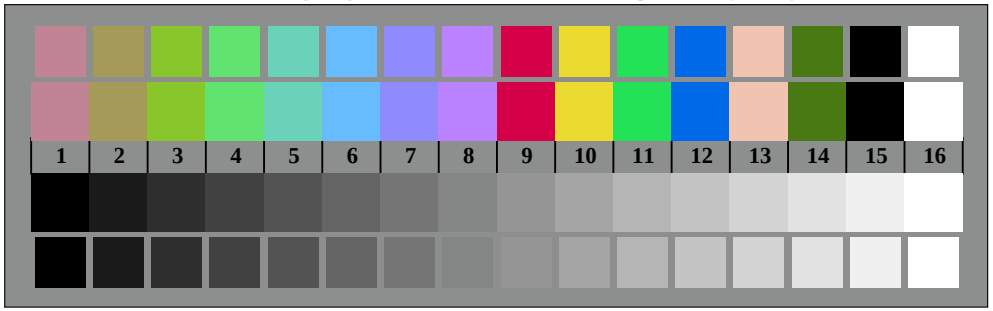
OE591−3, Picture D5W-L-132-0: Script and Landolt-rings *N*; *R*d; *G*d; *B*d; *Z*; *PS* operator *−>rgb*d *setrgbcolor*



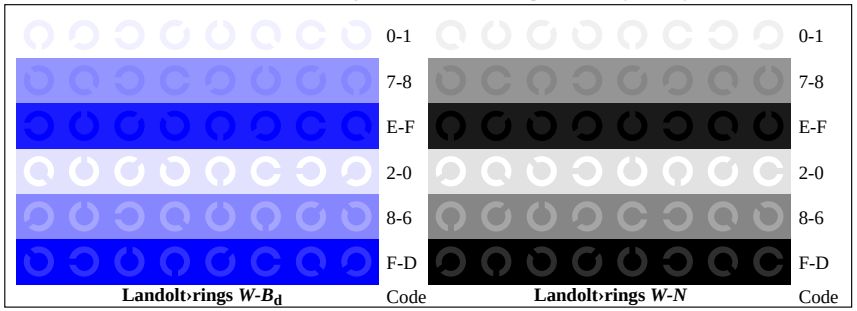
OE590−5, Picture D2W-132-0: Radial gratings *W−R*d; *W−G*d; *W−B*d; *W−N*; *PS* operator *−>rgb*d *setrgbcolor*



OE591−5, Picture D6W-L-132-0: Landolt-rings *W−R*d; *W−G*d; *PS* operator *−>rgb*d *setrgbcolor*



OE590−7, Picture D3W-132-0: 14 CIE-test colours and 2 + 16 grey steps; *PS* operator *−>rgb*d *setrgbcolor*



OE591−7, Picture D7W-L-132-0: Landolt-rings *W−B*d; *W−N*; *PS* operator *−>rgb*d *setrgbcolor*

OE59: Test chart 4 according to ISO 15775, TR 24705; 1MR, DH
Radial gratings, 16 step colour scales, Landolt-rings

input: *rgb (−>rgb*d) setrgbcolor*
output 132-0: g_P=0.85; g_N=1.0

Test for the visual linearized output of Pictures D2W-132-0 **to D7W**-132-0

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

Test of the resolution of radial gratings *W−R*$_d$, *W−G*$_d$, *W−B*$_d$ according to picture D2W-132-0

	***W−R*$_d$**	***W−G*$_d$**	***W−B*$_d$**	***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 D3W-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 D3W**-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 OE590−3N-132-1

Test of 16 visually equally spaced steps of the colour rows *W−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to picture D4W-132-0

***W−R*$_d$** White − Orangered:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−G*$_d$** White − Leafgreen:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−B*$_d$** White − Violetblue:	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 D5W-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 ***R*$_d$**	Ring ***G*$_d$**	Ring ***B*$_d$**
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−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to pictures D6W-132-0**, and D7W**-132-0

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

Colour row ***W−R*$_d$** background − ring		Colour row ***W−G*$_d$** background − ring		Colour row ***W−B*$_d$** 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 OE590−3N-132-1

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

PDF-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NP.PDF **underline Yes/No**

PS-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NA.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 OE59L0NP.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 OE59L0NA.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 OE590−7N-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/OE59/OE59F1P2.PDF **underline Yes/No**
PS file: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.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/OE59/OE59F1P2.PDF
picture A7-132-2 **underline Yes/No**
PS-File: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.PS
picture A7-132-2 **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 OE591−7N-132-1

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	0.01
2	16.62	0.0	0.0	0.14	22.52	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	7.93	0.0	0.0	7.93
4	27.88	0.0	0.0	0.31	36.84	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	9.43	0.0	0.0	9.43
6	39.13	0.0	0.0	0.45	48.63	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	9.27	0.0	0.0	9.27
8	50.39	0.0	0.0	0.57	59.19	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	8.15	0.0	0.0	8.15
10	61.64	0.0	0.0	0.69	68.98	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	6.38	0.0	0.0	6.38
12	72.9	0.0	0.0	0.8	78.2	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	4.11	0.0	0.0	4.11
14	84.15	0.0	0.0	0.9	86.98	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	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	0.01
17	10.99	0.0	0.0	0.0	10.99	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	9.36	0.0	0.0	9.36
19	53.2	0.0	0.0	0.6	61.7	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	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	0.01

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

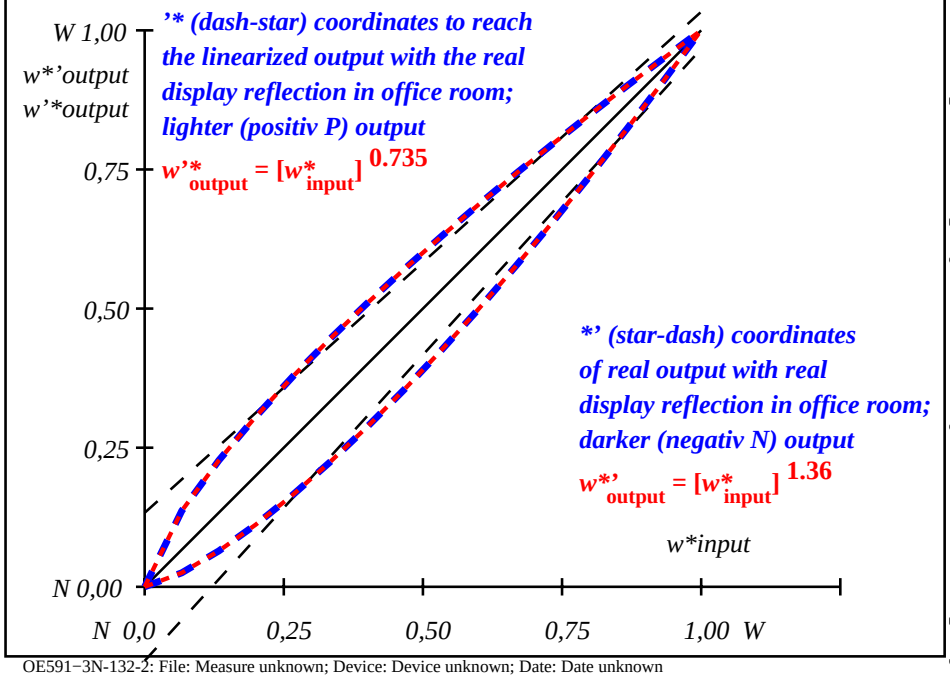
Mean lightness difference (16 steps)
ΔE^*_{CIELAB} = **6.0**

Mean lightness difference (5 steps)
ΔL^*_{CIELAB} = **4.6**

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

OE590−3N-132-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

For linearized output of the 16 grey steps of Picture A7-132-2



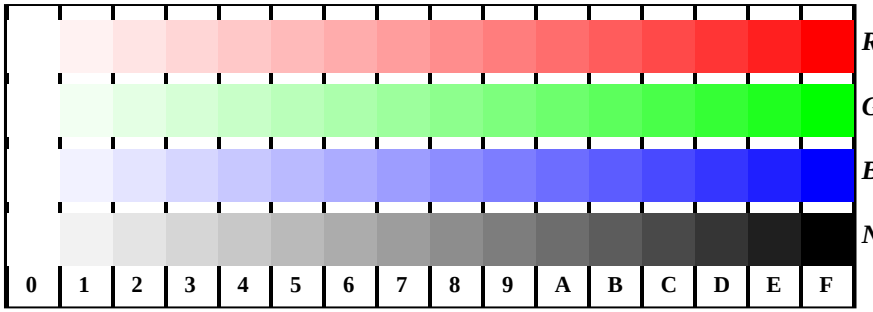
OE591−3N-132-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{intended}$ (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

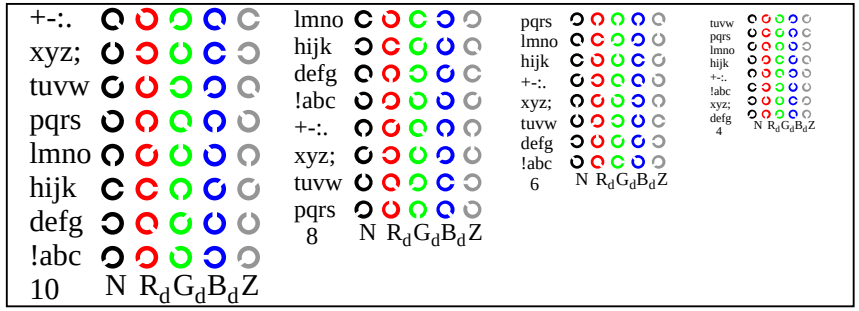
OE590−7N, Picture A7-132-2: 16 visual equidistant L^*-grey steps; PS operator: *w* w* w* setrgbcolor*

OE59: 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

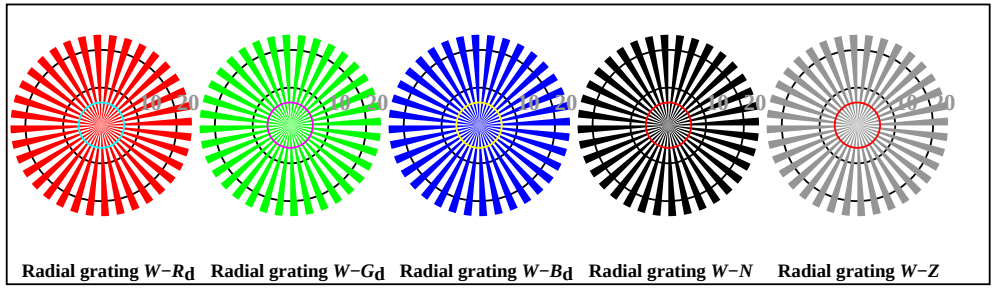
input: *rgb (−>rgb*d) setrgbcolor*
output 132-2: g_P=0.85; g_N=1.0



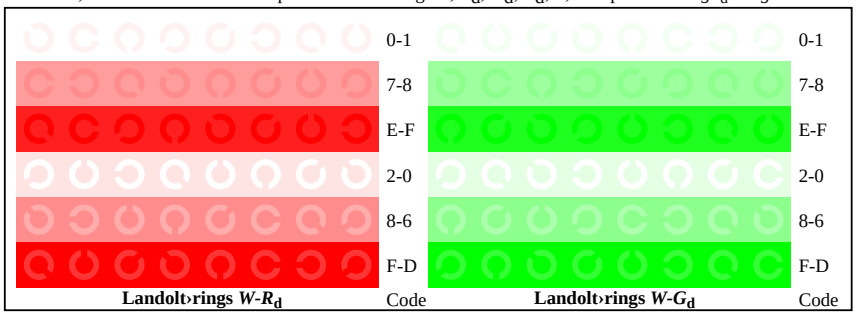
OE591−1, Picture D4W-L-133-0: 16 equidistant steps $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS*: $->rgb_d$ *setrgbcolor*



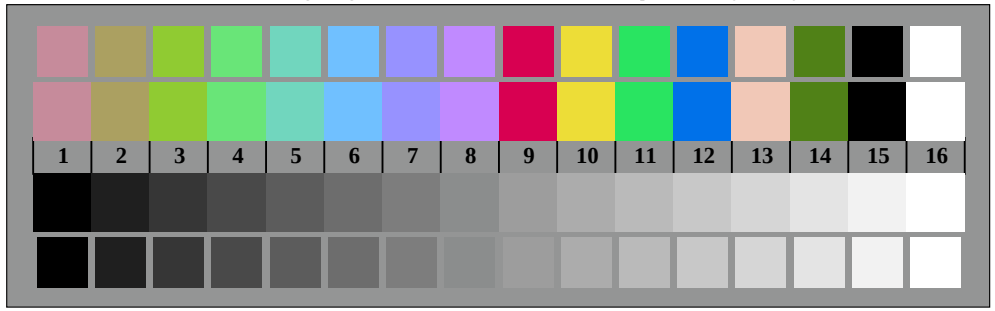
OE591−3, Picture D5W-L-133-0: Script and Landolt-rings *N*; R_d; G_d; B_d; *Z*; *PS* operator $->rgb_d$ *setrgbcolor*



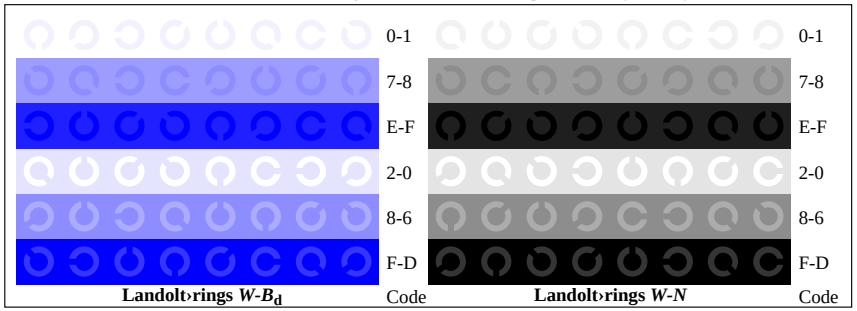
OE590−5, Picture D2W-L-133-0: Radial gratings $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*



OE591−5, Picture D6W-L-133-0: Landolt-rings $W-R_d$; $W-G_d$; *PS* operator $->rgb_d$ *setrgbcolor*



OE590−7, Picture D3W-L-133-0: 14 CIE-test colours and 2 + 16 grey steps; *PS* operator $->rgb_d$ *setrgbcolor*



OE591−7, Picture D7W-L-133-0: Landolt-rings $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*

OE590−7F-133-0Page 1/2

OE59: Test chart 4 according to ISO 15775, TR 24705; 1MR, DH
Radial gratings, 16 step colour scales, Landolt-rings

input: *rgb* ($->rgb^*_d$) *setrgbcolor*
output 133-0: g_P=0.77; g_N=1.0

Test for the visual linearized output of Pictures D2W-133-0 **to D7W**-133-0

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

Test of the resolution of radial gratings *W−R*$_d$, *W−G*$_d$, *W−B*$_d$ according to picture D2W-133-0

	***W−R*$_d$**	***W−G*$_d$**	***W−B*$_d$**	***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 D3W-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 D3W**-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 OE590−3N-133-1

Test of 16 visually equally spaced steps of the colour rows *W−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to picture D4W-133-0

***W−R*$_d$** White − Orangered:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−G*$_d$** White − Leafgreen:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−B*$_d$** White − Violetblue:	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 D5W-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 ***R*$_d$**	Ring ***G*$_d$**	Ring ***B*$_d$**
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−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to pictures D6W-133-0**, and D7W**-133-0

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

Colour row ***W−R*$_d$** background − ring		Colour row ***W−G*$_d$** background − ring		Colour row ***W−B*$_d$** 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 OE590−3N-133-1

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

PDF-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NP.PDF **underline Yes/No**

PS-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NA.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 OE59L0NP.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 OE59L0NA.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 OE590−7N-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/OE59/OE59F1P2.PDF **underline Yes/No**
PS file: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.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/OE59/OE59F1P2.PDF
picture A7-133-2 **underline Yes/No**
PS-File: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.PS
picture A7-133-2 **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 OE591−7N-133-1

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	0.01
2	23.17	0.0	0.0	0.17	31.35	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	10.6	0.0	0.0	10.6
4	33.49	0.0	0.0	0.35	45.23	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	12.17	0.0	0.0	12.17
6	43.81	0.0	0.0	0.49	55.93	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	11.73	0.0	0.0	11.73
8	54.13	0.0	0.0	0.61	65.2	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	10.18	0.0	0.0	10.18
10	64.45	0.0	0.0	0.72	73.56	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	7.88	0.0	0.0	7.88
12	74.77	0.0	0.0	0.82	81.29	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	5.04	0.0	0.0	5.04
14	85.09	0.0	0.0	0.91	88.54	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	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	0.01
17	18.01	0.0	0.0	0.0	18.01	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	12.11	0.0	0.0	12.11
19	56.71	0.0	0.0	0.64	67.36	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	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	0.01

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

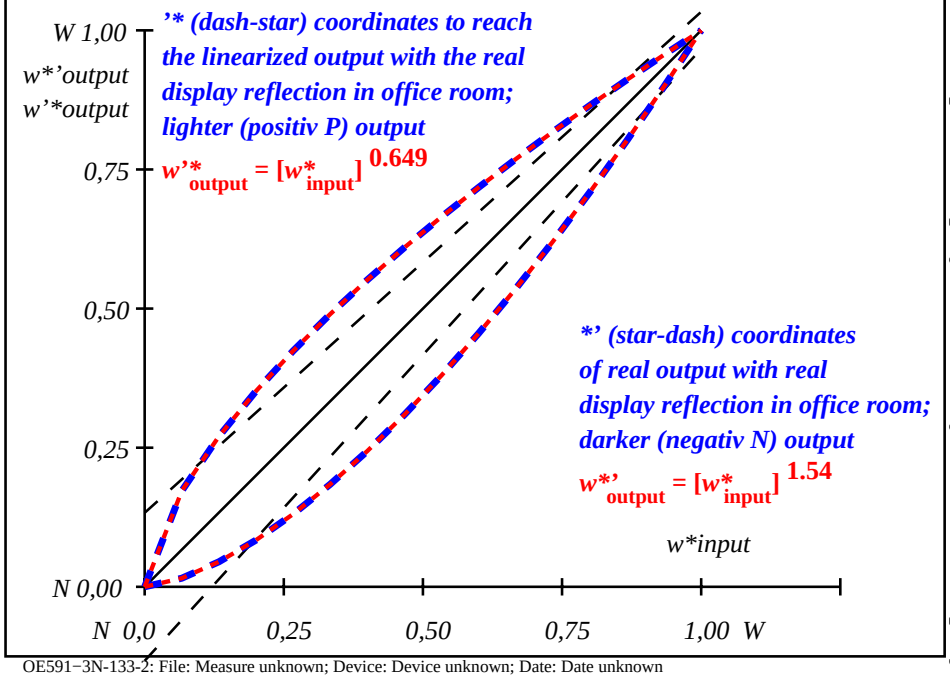
Mean lightness difference (16 steps)
ΔE^*_{CIELAB} = **7.6**

Mean lightness difference (5 steps)
ΔL^*_{CIELAB} = **5.8**

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

OE590−3N-133-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

For linearized output of the 16 grey steps of Picture A7-133-2



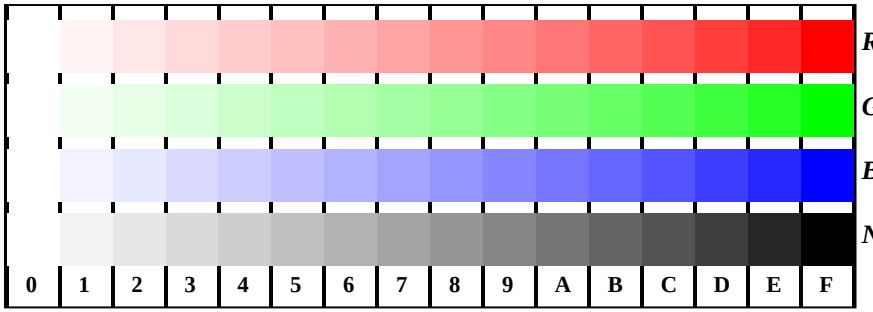
OE591−3N-133-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{intended}$ (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

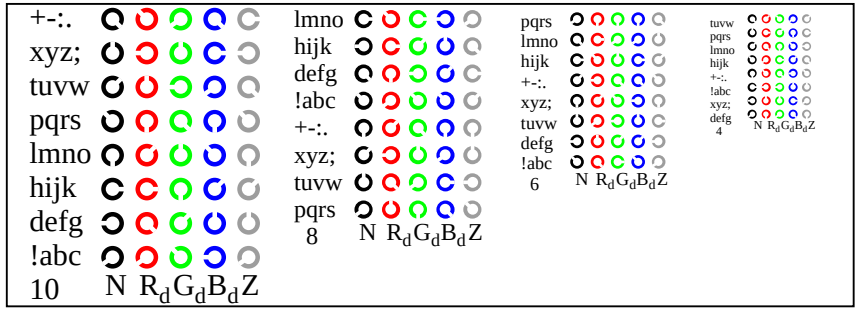
OE590−7N, Picture A7-133-2: 16 visual equidistant L^*-grey steps; PS operator: *w* w* w* setrgbcolor*

OE59: 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

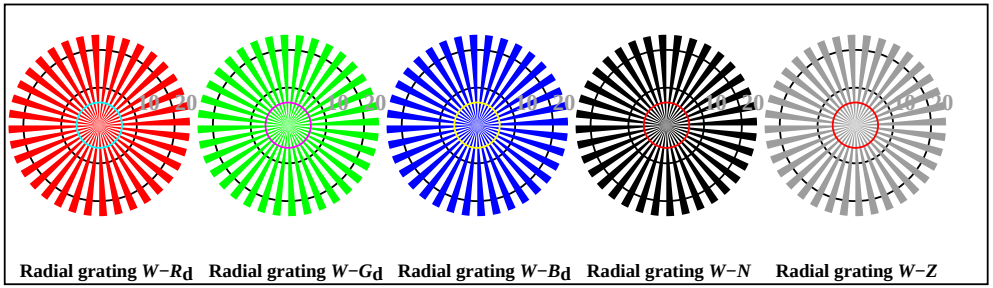
input: *rgb (−>rgb*d) setrgbcolor*
output 133-2: g_P=0.77; g_N=1.0



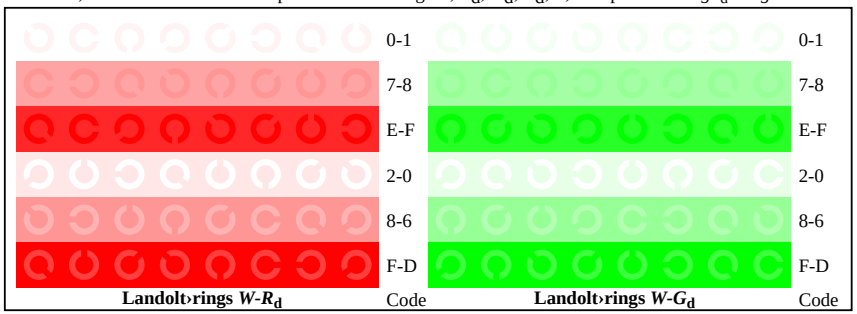
OE591−1, Picture D4W-L-134-0: 16 equidistant steps *W−R*d; *W−G*d; *W−B*d; *W−N*; *PS: −>rgb*d *setrgbcolor*



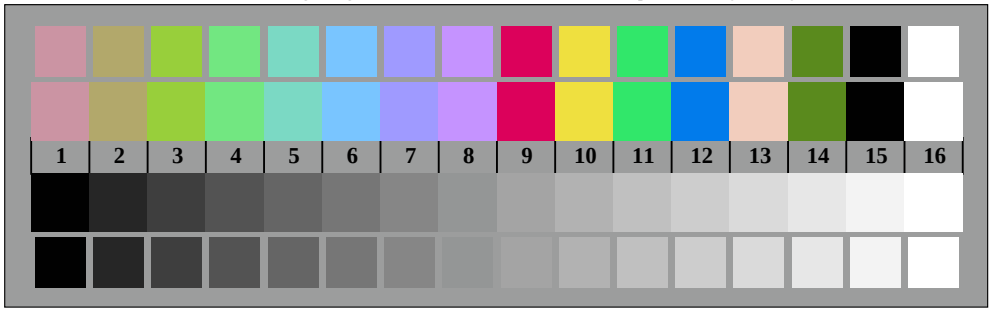
OE591−3, Picture D5W-L-134-0: Script and Landolt-rings *N*; *R*d; *G*d; *B*d; *Z*; *PS* operator *−>rgb*d *setrgbcolor*



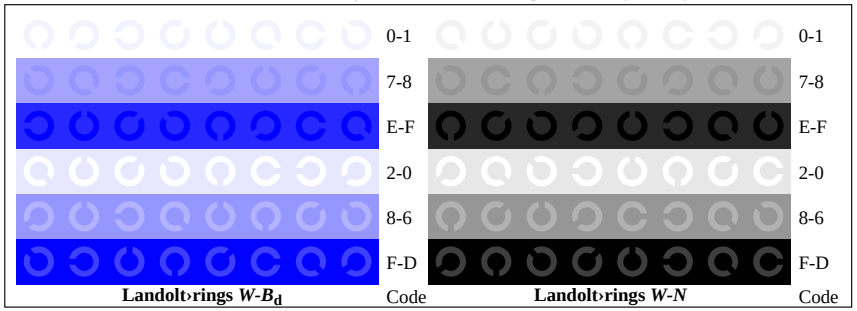
OE590−5, Picture D2W-134-0: Radial gratings *W−R*d; *W−G*d; *W−B*d; *W−N*; *PS* operator *−>rgb*d *setrgbcolor*



OE591−5, Picture D6W-L-134-0: Landolt-rings *W−R*d; *W−G*d; *PS* operator *−>rgb*d *setrgbcolor*



OE590−7, Picture D3W-134-0: 14 CIE-test colours and 2 + 16 grey steps; *PS* operator *−>rgb*d *setrgbcolor*



OE591−7, Picture D7W-L-134-0: Landolt-rings *W−B*d; *W−N*; *PS* operator *−>rgb*d *setrgbcolor*

Test for the visual linearized output of Pictures D2W-134-0 **to D7W**-134-0

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

Test of the resolution of radial gratings *W−R*$_d$, *W−G*$_d$, *W−B*$_d$ according to picture D2W-134-0

	***W−R*$_d$**	***W−G*$_d$**	***W−B*$_d$**	***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 D3W-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 D3W**-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 OE590−3N-134-1

Test of 16 visually equally spaced steps of the colour rows *W−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to picture D4W-134-0

***W−R*$_d$** White − Orangered:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−G*$_d$** White − Leafgreen:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−B*$_d$** White − Violetblue:	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 D5W-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 ***R*$_d$**	Ring ***G*$_d$**	Ring ***B*$_d$**
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−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to pictures D6W-134-0**, and D7W**-134-0

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

Colour row ***W−R*$_d$** background − ring		Colour row ***W−G*$_d$** background − ring		Colour row ***W−B*$_d$** 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 OE590−3N-134-1

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

PDF-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NP.PDF **underline Yes/No**

PS-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NA.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 OE59L0NP.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 OE59L0NA.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 OE590−7N-134-1

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/OE59/OE59F1P2.PDF **underline Yes/No**
PS file: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.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/OE59/OE59F1P2.PDF
picture A7-134-2 **underline Yes/No**
PS-File: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.PS
picture A7-134-2 **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 OE591−7N-134-1

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

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

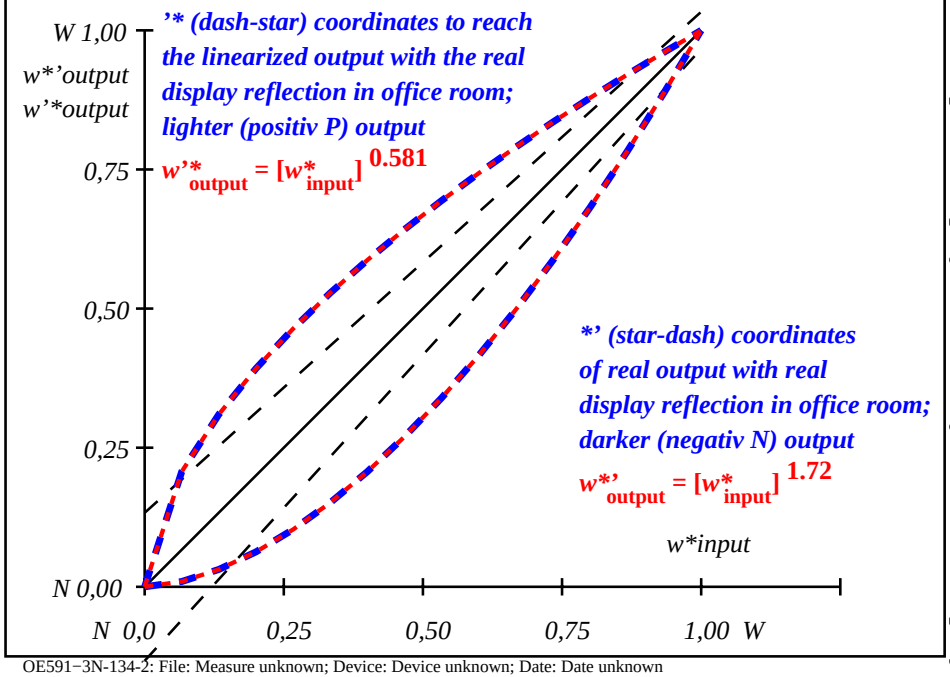
Mean lightness difference (16 steps)
ΔE^*_{CIELAB} = **8.4**

Mean lightness difference (5 steps)
ΔL^*_{CIELAB} = **6.3**

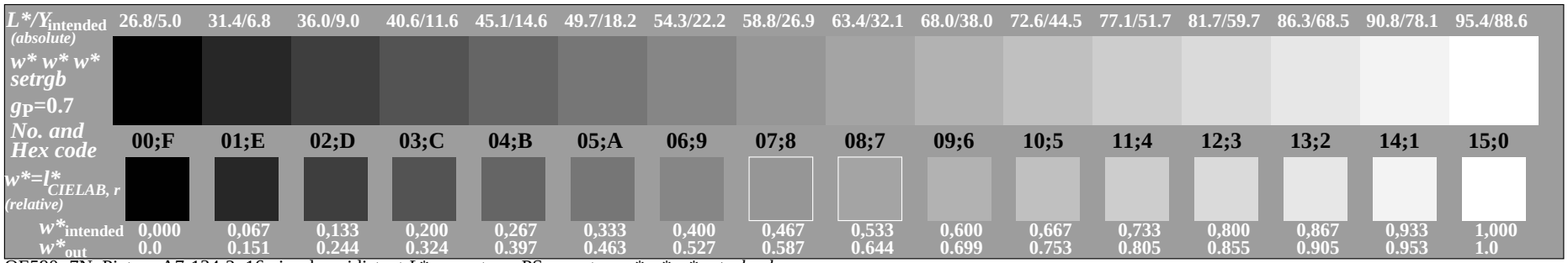
Mean colour reproduction index: $R^*_{ab,m}$ = **64**

OE590−3N-134-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

For linearized output of the 16 grey steps of Picture A7-134-2



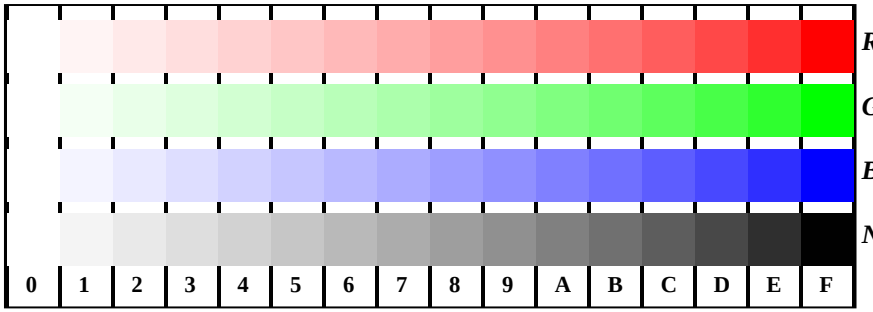
OE591−3N-134-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



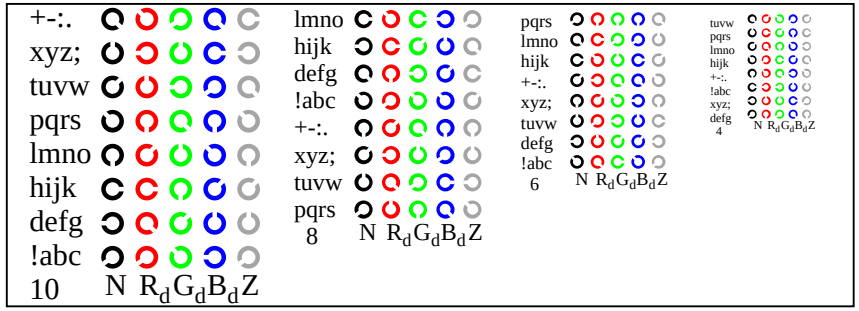
OE590−7N, Picture A7-134-2: 16 visual equidistant *L**-grey steps; PS operator: *w* w* w* setrgbcolor*

OE59: 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

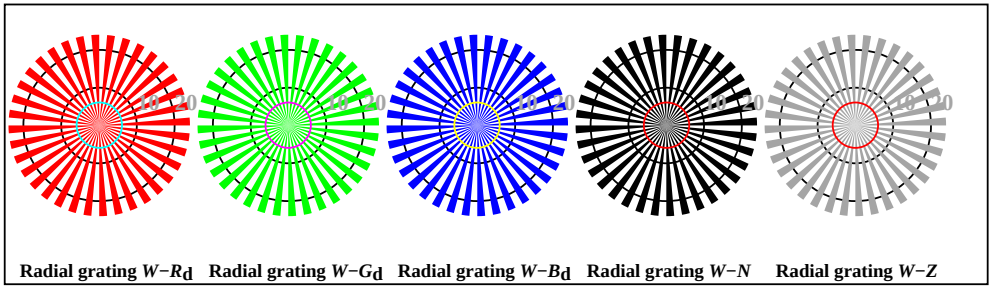
input: *rgb (−>rgb*d) setrgbcolor*
output 134-2: g_P=0.7; g_N=1.0



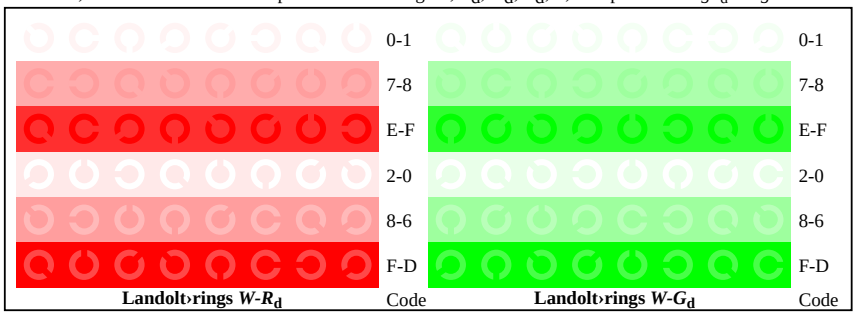
OE591−1, Picture D4W-L-135-0: 16 equidistant steps $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS*: $->rgb_d$ *setrgbcolor*



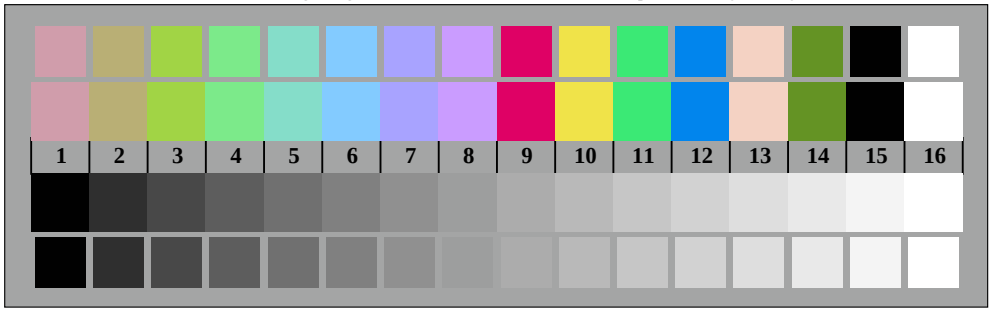
OE591−3, Picture D5W-135-0: Script and Landolt-rings *N*; R_d; G_d; B_d; *Z*; *PS* operator $->rgb_d$ *setrgbcolor*



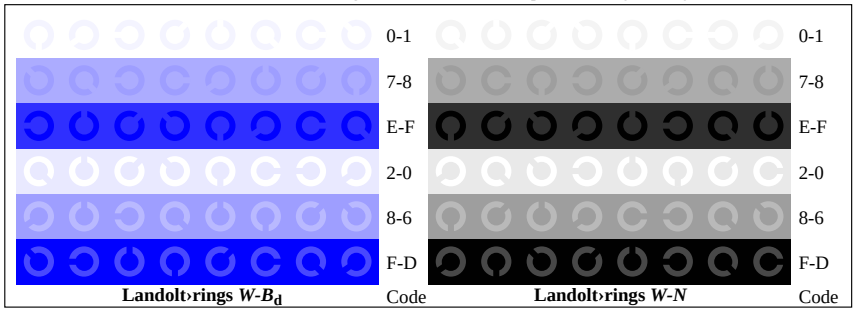
OE590−5, Picture D2W-135-0: Radial gratings $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*



OE591−5, Picture D6W-135-0: Landolt-rings $W-R_d$; $W-G_d$; *PS* operator $->rgb_d$ *setrgbcolor*



OE590−7, Picture D3W-135-0: 14 CIE-test colours and 2 + 16 grey steps; *PS* operator $->rgb_d$ *setrgbcolor*



OE591−7, Picture D7W-L-135-0: Landolt-rings $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*

Test for the visual linearized output of Pictures D2W-135-0 **to D7W**-135-0

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

Test for the resolution of radial gratings *W−R*$_d$, *W−G*$_d$, *W−B*$_d$ according to picture D2W-135-0

	***W−R*$_d$**	***W−G*$_d$**	***W−B*$_d$**	***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 D3W-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 D3W**-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 OE590−3N-135-1

Test of 16 visually equally spaced steps of the colour rows *W−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to picture D4W-135-0

***W−R*$_d$** White − Orangered:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−G*$_d$** White − Leafgreen:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−B*$_d$** White − Violetblue:	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 D5W-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 ***R*$_d$**	Ring ***G*$_d$**	Ring ***B*$_d$**
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−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to pictures D6W-135-0**, and D7W**-135-0

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

Colour row ***W−R*$_d$** background − ring		Colour row ***W−G*$_d$** background − ring		Colour row ***W−B*$_d$** 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 OE590−3N-135-1

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

PDF-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NP.PDF **underline Yes/No**

PS-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NA.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 OE59L0NP.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 OE59L0NA.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 OE590−7N-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/OE59/OE59F1P2.PDF **underline Yes/No**
PS file: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.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/OE59/OE59F1P2.PDF
picture A7-135-2 **underline Yes/No**
PS-File: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.PS
picture A7-135-2 **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 OE591−7N-135-1

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

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

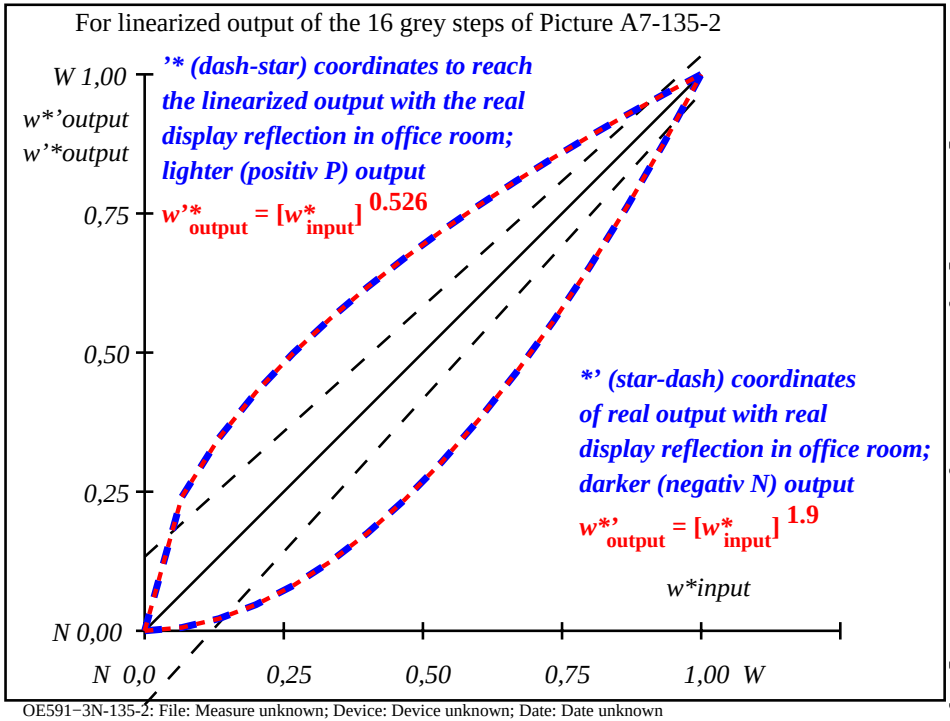
Mean lightness difference (16 steps)
ΔE^*_{CIELAB} = **8.2**

Mean lightness difference (5 steps)
ΔL^*_{CIELAB} = **6.2**

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

OE590−3N-135-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

For linearized output of the 16 grey steps of Picture A7-135-2



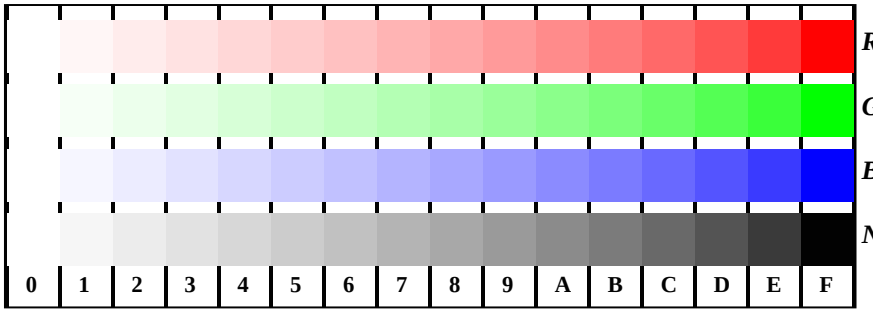
OE591−3N-135-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{intended}$ (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

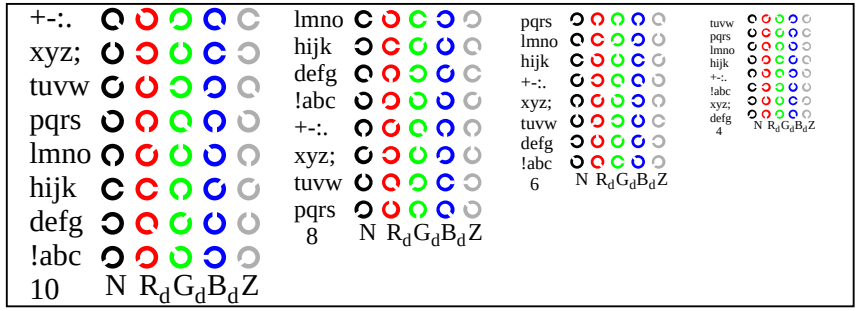
OE590−7N, Picture A7-135-2: 16 visual equidistant L^*-grey steps; PS operator: *w* w* w* setrgbcolor*

OE59: 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

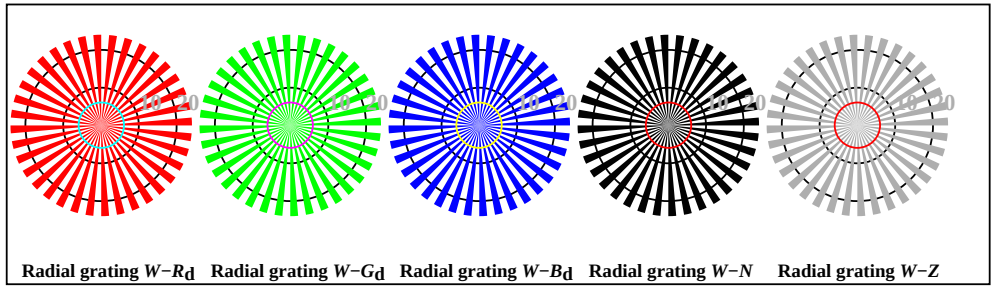
input: *rgb (−>rgb*$_d$) setrgbcolor*
output 135-2: g_P=0.62; g_N=1.0



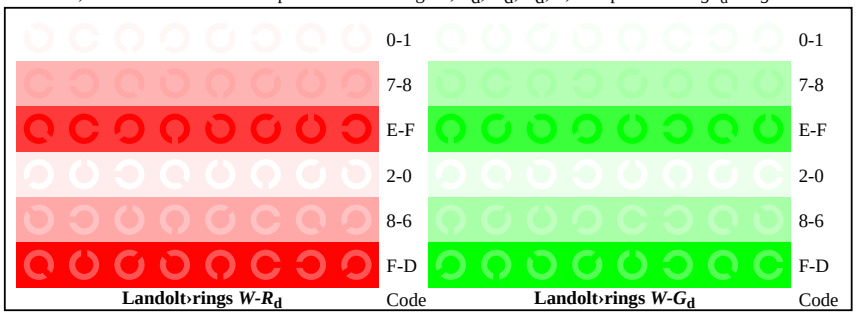
OE591−1, Picture D4W-L-136-0: 16 equidistant steps $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS*: $->rgb_d$ *setrgbcolor*



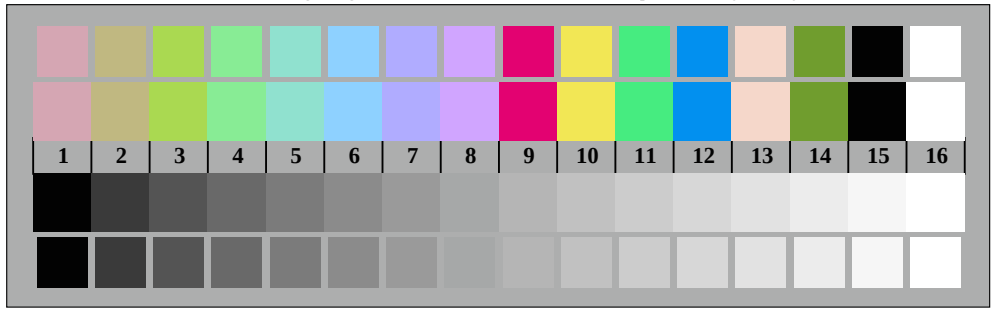
OE591−3, Picture D5W-L-136-0: Script and Landolt-rings *N*; R_d; G_d; B_d; *Z*; *PS* operator $->rgb_d$ *setrgbcolor*



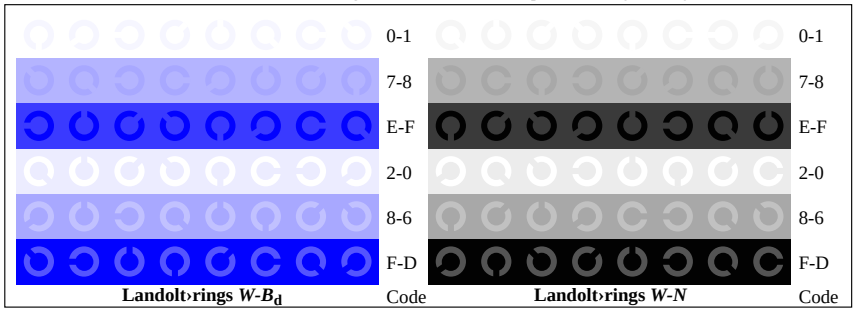
OE590−5, Picture D2W-L-136-0: Radial gratings $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*



OE591−5, Picture D6W-L-136-0: Landolt-rings $W-R_d$; $W-G_d$; *PS* operator $->rgb_d$ *setrgbcolor*



OE590−7, Picture D3W-L-136-0: 14 CIE-test colours and 2 + 16 grey steps; *PS* operator $->rgb_d$ *setrgbcolor*



OE591−7, Picture D7W-L-136-0: Landolt-rings $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*

Test for the visual linearized output of Pictures D2W-136-0 **to D7W**-136-0

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

Test of the resolution of radial gratings *W−R*$_d$, *W−G*$_d$, *W−B*$_d$ according to picture D2W-136-0

	***W−R*$_d$**	***W−G*$_d$**	***W−B*$_d$**	***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 D3W-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 D3W**-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 OE590−3N-136-1

Test of 16 visually equally spaced steps of the colour rows *W−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to picture D4W-136-0

***W−R*$_d$** White − Orangered:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−G*$_d$** White − Leafgreen:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−B*$_d$** White − Violetblue:	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 D5W-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 ***R*$_d$**	Ring ***G*$_d$**	Ring ***B*$_d$**
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−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to pictures D6W-136-0**, and D7W**-136-0

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

Colour row ***W−R*$_d$** background − ring		Colour row ***W−G*$_d$** background − ring		Colour row ***W−B*$_d$** 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 OE590−3N-136-1

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

PDF-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NP.PDF **underline Yes/No**

PS-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NA.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 OE59L0NP.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 OE59L0NA.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 OE590−7N-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/OE59/OE59F1P2.PDF **underline Yes/No**
PS file: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.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/OE59/OE59F1P2.PDF
picture A7-136-2 **underline Yes/No**
PS-File: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.PS
picture A7-136-2 **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 OE591−7N-136-1

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

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

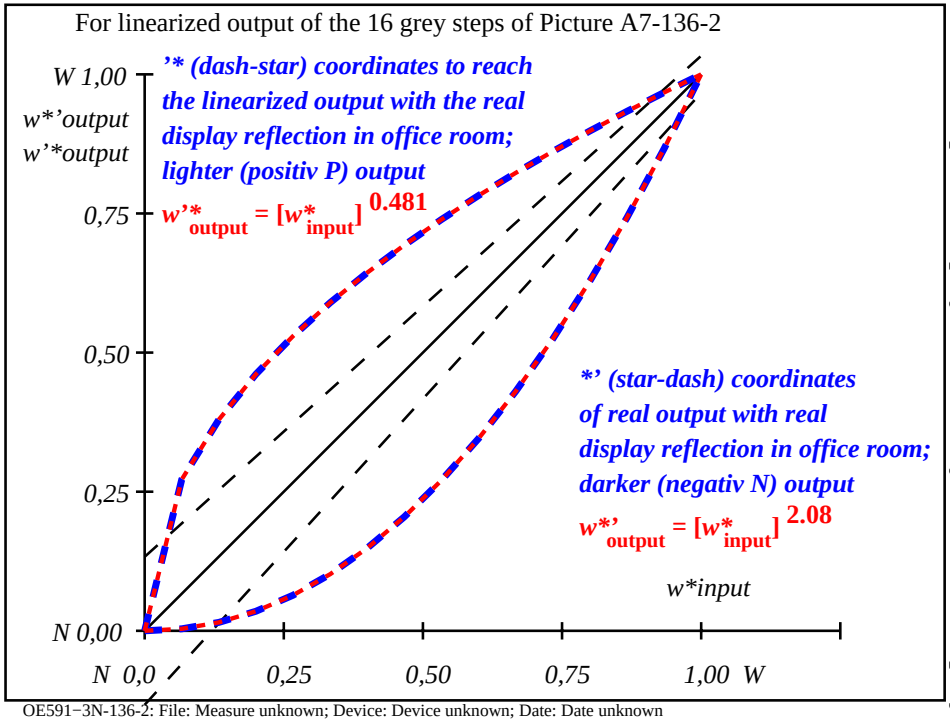
Mean lightness difference (16 steps)
ΔE^*_{CIELAB} = **7.0**

Mean lightness difference (5 steps)
ΔL^*_{CIELAB} = **5.2**

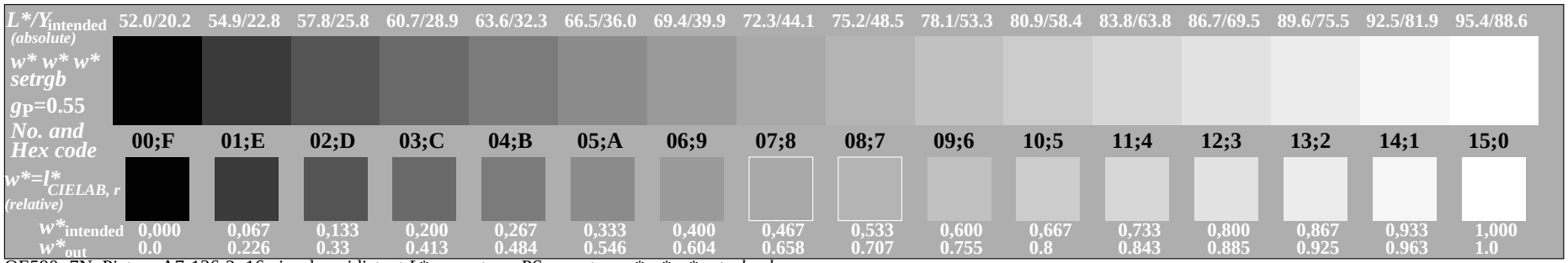
Mean colour reproduction index: $R^*_{ab,m}$ = **70**

OE590−3N-136-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

For linearized output of the 16 grey steps of Picture A7-136-2



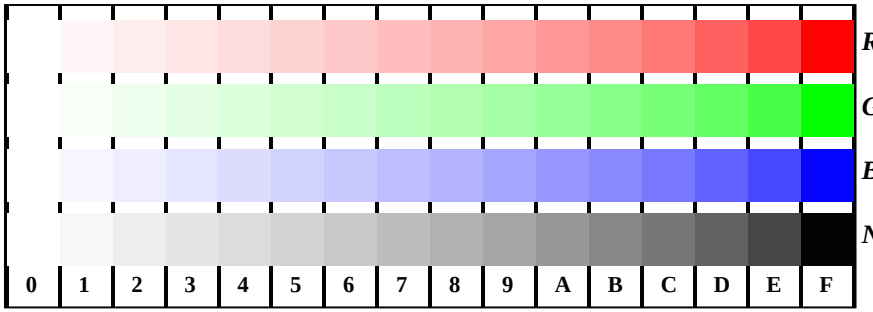
OE591−3N-136-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



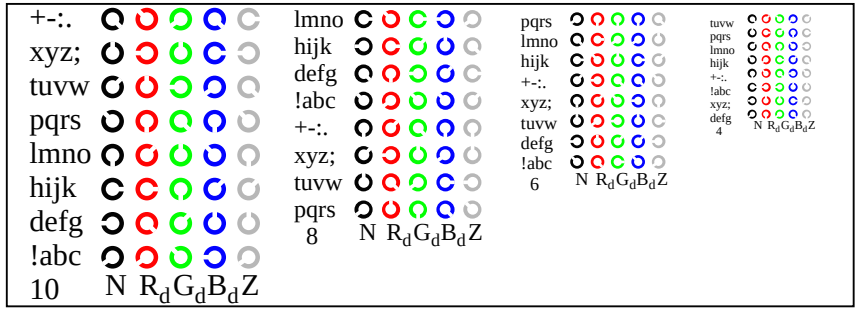
OE590−7N, Picture A7-136-2: 16 visual equidistant *L**-grey steps; PS operator: *w* w* w* setrgbcolor*

OE59: 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

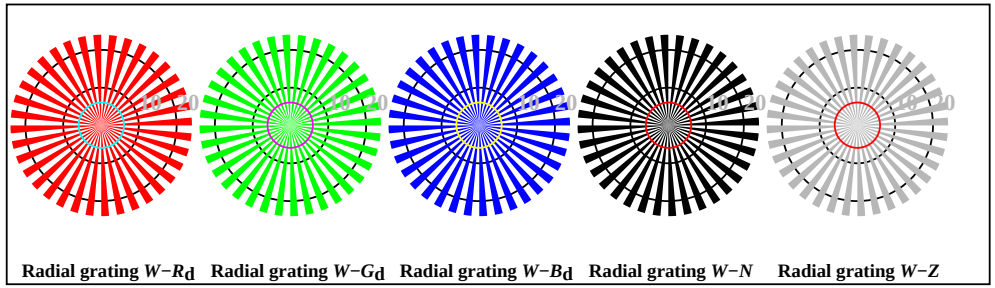
input: *rgb (−>rgb*d) setrgbcolor*
output 136-2: g_P=0.55; g_N=1.0



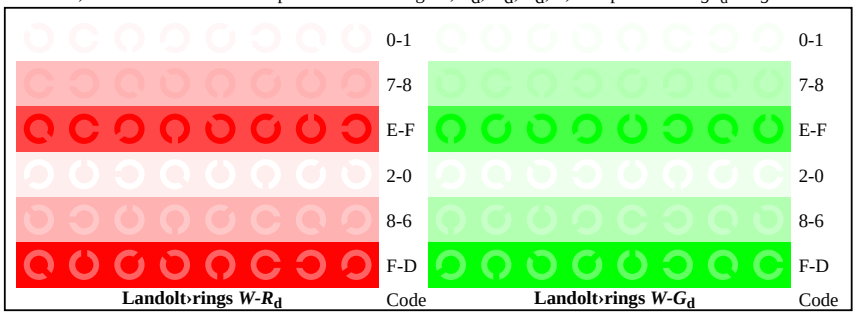
OE591−1, Picture D4W-L-137-0: 16 equidistant steps $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS*: $->rgb_d$ *setrgbcolor*



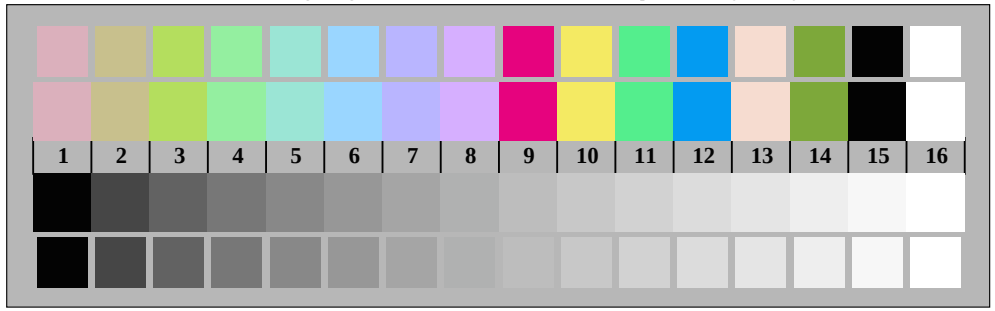
OE591−3, Picture D5W-L-137-0: Script and Landolt-rings *N*; R_d; G_d; B_d; *Z*; *PS* operator $->rgb_d$ *setrgbcolor*



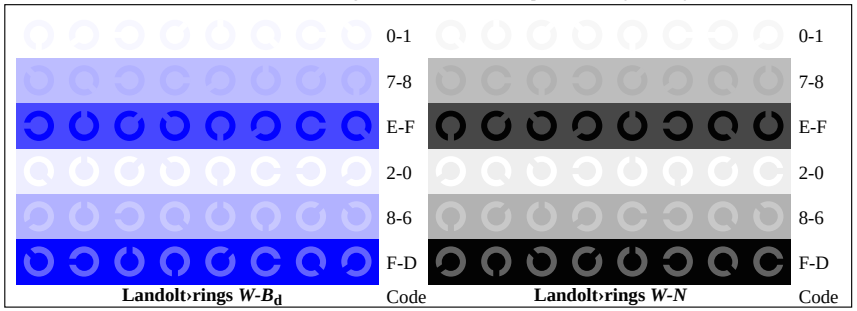
OE590−5, Picture D2W-L-137-0: Radial gratings $W-R_d$; $W-G_d$; $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*



OE591−5, Picture D6W-L-137-0: Landolt-rings $W-R_d$; $W-G_d$; *PS* operator $->rgb_d$ *setrgbcolor*



OE590−7, Picture D3W-L-137-0: 14 CIE-test colours and 2 + 16 grey steps; *PS* operator $->rgb_d$ *setrgbcolor*



OE591−7, Picture D7W-L-137-0: Landolt-rings $W-B_d$; $W-N$; *PS* operator $->rgb_d$ *setrgbcolor*

Test for the visual linearized output of Pictures D2W-137-0 **to D7W**-137-0

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

Test of the resolution of radial gratings *W−R*$_d$, *W−G*$_d$, *W−B*$_d$ according to picture D2W-137-0

	***W−R*$_d$**	***W−G*$_d$**	***W−B*$_d$**	***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 D3W-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 D3W**-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 OE590−3N-137-1

Test of 16 visually equally spaced steps of the colour rows *W−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to picture D4W-137-0

***W−R*$_d$** White − Orangered:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−G*$_d$** White − Leafgreen:	Are all the 16 steps distinguishable?		**Yes/No**
	If No: How many steps can be distinguished?	of the given 16 steps	..... Steps
***W−B*$_d$** White − Violetblue:	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 D5W-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 ***R*$_d$**	Ring ***G*$_d$**	Ring ***B*$_d$**
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−R*$_d$, *W−G*$_d$, *W−B*$_d$, and *W−N* according to pictures D6W-137-0**, and D7W**-137-0

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

Colour row ***W−R*$_d$** background − ring		Colour row ***W−G*$_d$** background − ring		Colour row ***W−B*$_d$** 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 OE590−3N-137-1

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

PDF-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NP.PDF **underline Yes/No**

PS-File: http://130.149.60.45/farbmetrik/OE59/OE59L0NA.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 OE59L0NP.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 OE59L0NA.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 OE590−7N-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/OE59/OE59F1P2.PDF **underline Yes/No**
PS file: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.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/OE59/OE59F1P2.PDF
picture A7-137-2 **underline Yes/No**
PS-File: http://130.149.60.45/farbmetrik/OE59/OE59F1P2.PS
picture A7-137-2 **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 OE591−7N-137-1

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	0.01
2	71.41	0.0	0.0	0.3	77.46	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	7.11	0.0	0.0	7.11
4	74.84	0.0	0.0	0.49	82.31	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	7.47	0.0	0.0	7.47
6	78.27	0.0	0.0	0.62	85.51	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	6.86	0.0	0.0	6.86
8	81.7	0.0	0.0	0.71	88.05	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	5.76	0.0	0.0	5.76
10	85.12	0.0	0.0	0.8	90.21	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	4.35	0.0	0.0	4.35
12	88.55	0.0	0.0	0.87	92.11	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	2.73	0.0	0.0	2.73
14	91.98	0.0	0.0	0.94	93.83	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	0.94	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	0.01
17	69.7	0.0	0.0	0.0	69.7	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	7.5	0.0	0.0	7.5
19	82.55	0.0	0.0	0.74	88.62	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	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	0.01

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

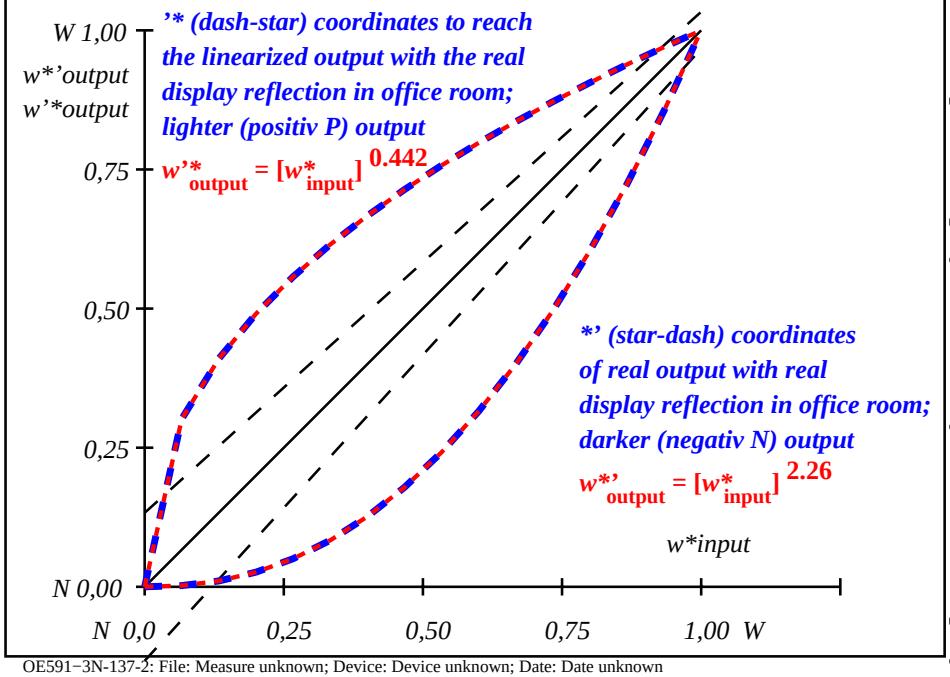
Mean lightness difference (16 steps)
ΔE^*_{CIELAB} = **4.6**

Mean lightness difference (5 steps)
ΔL^*_{CIELAB} = **3.4**

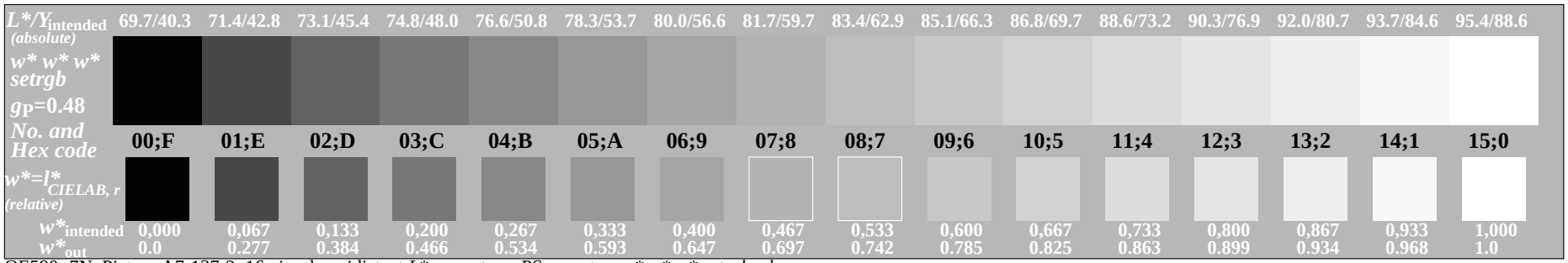
Mean colour reproduction index: $R^*_{ab,m}$ = **80**

OE590−3N-137-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

For linearized output of the 16 grey steps of Picture A7-137-2



OE591−3N-137-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE590−7N, Picture A7-137-2: 16 visual equidistant *L**-grey steps; PS operator: *w* w* w* setrgbcolor*

OE59: 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 (−>rgb*d) setrgbcolor*
output 137-2: g_P=0.47; g_N=1.0