

Test for the visual linearized output of Pictures D2W-030-0 to D7W-030-0

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-030-0

Is the resolution diameter < 6 mm?  $W-R_d$  Yes/No  $W-G_d$  Yes/No  $W-B_d$  Yes/No  $W-N$  Yes/No  $W-Z$  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-030-0

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-030-0

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-030-1

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-030-1

OE59: Form A for test chart 4 according to ISO/IEC 15775; DH  
 Radial gratings, 16 step colour scales, Landolt-rings

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-030-0

$W-R_d$  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-030-0

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-030-0, and D7W-030-0

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-030-1

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 A7-030-2: contrast range: (>F:0) (F:0) (E:0) (D:0) (C:0) (A:0) (9:0) (7:0) (5:0) (3:0) (<3:0)

compare standard print output according to ISO/IEC 15775 with range F:0 underline range

Remark: In daylighted offices the contrast range is in many cases:  
 on display between: >F:0 and E:0 (monitor), D:0 and 3:0 (data projector)

Only for optional colorimetric specification with PDF/PS file output

PDF-File: <http://130.149.60.45/farbmetrik/OE59/OE59F1P2.PDF>

picture A7-030-2 underline Yes/No

PS-File: <http://130.149.60.45/farbmetrik/OE59/OE59F1P2.PS>

picture A7-030-2 or underline Yes/No

colour measurement and specification for:

CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: underline Yes/No

If No, please give other parameters: .....

Colorimetric specification with PS file for colours in the columns A to T

Exchange of CIELAB data in file [www.ps.bam.de/De17/10L/L17e00NP.PS](http://www.ps.bam.de/De17/10L/L17e00NP.PS) and transfer

of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF

underline Yes/No

If No, please describe other method: .....

Part 4

OE591-7N-030-1

input:  $rgb$  ( $\rightarrow rgb_d$ )  $setrgbcolor$   
 output 030-1: no change

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

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

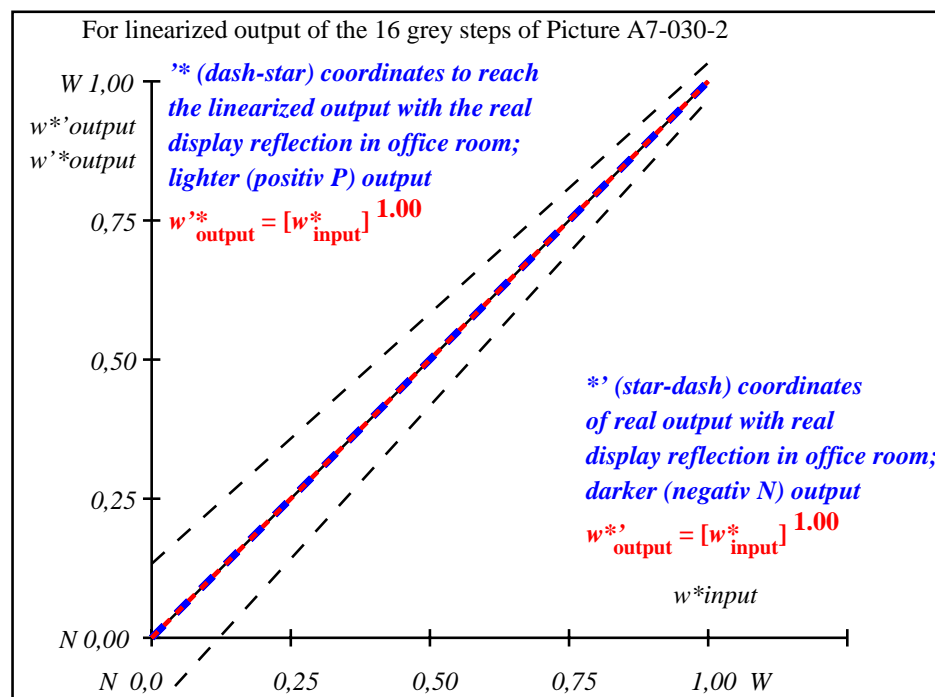
**Start output S1**  
**Specification according to**  
**ISO/IEC 15775 Annex G**  
**and DIN 33866-1 Annex G**

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

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

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

OE590-3N-030-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE591-3N-030-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y_{\text{intended}}$ (absolute)	0.0/0.0	6.4/0.7	12.7/1.5	19.1/2.8	25.4/4.6	31.8/7.0	38.2/10.2	44.5/14.2	50.9/19.2	57.2/25.2	63.6/32.3	70.0/40.7	76.3/50.4	82.7/61.6	89.0/74.3	95.4/88.6
$w^* w^* w^*$ setrgb gp=1.00 No. and Hex code	00;F	01;E	02;D	03;C	04;B	05;A	06;9	07;8	08;7	09;6	10;5	11;4	12;3	13;2	14;1	15;0
$w^* = l^*$ 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
$w^*_{\text{intended}}$ $w^*_{\text{out}}$	0.000 0.0	0.067 0.067	0.133 0.133	0.200 0.2	0.267 0.267	0.333 0.333	0.400 0.4	0.467 0.467	0.533 0.533	0.600 0.6	0.667 0.667	0.733 0.733	0.800 0.8	0.867 0.867	0.933 0.933	1.000 1.0

OE590-7N, Picture A7-030-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

OE59: In-output relation according to ISO 9241-306; DH  
Viewing  $Y$  contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46

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

TUB registration: 20110801-OE59/OE59L0NA.TXT /PS  
application for output of displays: monitor systems or data projector systems  
TUB material: code=th4ta