

**Test for the visual linearized output of Pictures D1W-130-0 to D7W-130-0**  
**Output test with the computer display ( ) or the external display ( )** please mark by (x)!

**Test of the (flower) image according to picture D1W-130-0**  
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**  
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":  
 .....  
 .....  
 .....  
 .....

**Test of the resolution of radial gratings  $W-R_d$ ,  $W-G_d$ ,  $W-B_d$  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 OE680-3N-130-1

**Documentation of file format, hardware and software for this test:**  
**PDF-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NP.PDF> **underline Yes/No**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NA.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 OE68L0NP.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 OE68L0NA.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 OE680-7N-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**

|                             | $W-R_d$                                                           | $W-G_d$     | $W-B_d$ | $W-N$ |
|-----------------------------|-------------------------------------------------------------------|-------------|---------|-------|
| $W-R_d$ 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 2 OE681-3N-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/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.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/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PS> **or underline Yes/No**  
**picture A7-130-2**

**colour measurement and specification for:**  
 CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: **underline Yes/No**  
 If No, please give other parameters: .....

**Colorimetric specification with PS file for colours in the columns A to T**  
 Exchange of CIELAB data in file [www.ps.bam.de/De17/10L/L17e00NP.PS](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 OE681-7N-130-1

OE68: Form A for test chart 4 according to ISO 15775; 1MR, DEH input:  $rgb (->rgb^*_{de})$  setrgbcolor  
 Image, radial gratings, 16 step colour scales, Landolt-rings output 130-1:  $g_P=1.0$ ;  $g_N=1.0$

**Test for the visual linearized output of Pictures D1W-131-0 to D7W-131-0**  
**Output test with the computer display ( ) or the external display ( )** please mark by (x)!

**Test of the (flower) image according to picture D1W-131-0**  
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**  
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":  
 .....  
 .....  
 .....  
 .....  
 .....

**Test of the resolution of radial gratings  $W-R_d$ ,  $W-G_d$ ,  $W-B_d$  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 OE680-3N-131-1

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

**PDF-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NP.PDF> **underline Yes/No**

**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NA.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 OE68L0NP.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 OE68L0NA.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 OE680-7N-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 2 OE681-3N-131-1

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

**For visual evaluation of the display (monitor, data projector) output**  
 Office workplace illumination is daylight (clouded/north sky) **underline Yes/No**  
**PDF file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.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/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PS> **or underline Yes/No**  
**picture A7-131-2** **underline Yes/No**

**colour measurement and specification for:**  
 CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: **underline Yes/No**  
 If No, please give other parameters: .....

**Colorimetric specification with PS file for colours in the columns A to T**  
 Exchange of CIELAB data in file [www.ps.bam.de/De17/10L/L17e00NP.PS](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 OE681-7N-131-1

OE68: Form A for test chart 4 according to ISO 15775; 1MR, DEH input:  $rgb(->rgb^*_{de})$  setrgbcolor  
 Image, radial gratings, 16 step colour scales, Landolt-rings output 131-1:  $g_P=0.92$ ;  $g_N=1.0$

**Test for the visual linearized output of Pictures D1W-132-0 to D7W-132-0**  
**Output test with the computer display ( ) or the external display ( )** please mark by (x)!

**Test of the (flower) image according to picture D1W-132-0**  
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**  
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":  
 .....  
 .....  
 .....  
 .....  
 .....

**Test of the resolution of radial gratings  $W-R_d$ ,  $W-G_d$ ,  $W-B_d$  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 OE680-3N-132-1

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

**PDF-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NP.PDF> **underline Yes/No**

**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NA.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 OE68L0NP.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 OE68L0NA.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 OE680-7N-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 2 OE681-3N-132-1

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

**For visual evaluation of the display (monitor, data projector) output**  
 Office workplace illumination is daylight (clouded/north sky) **underline Yes/No**  
**PDF file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.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/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PS> **or underline Yes/No**  
**Picture A7-132-2** **underline Yes/No**

**colour measurement and specification for:**  
 CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: **underline Yes/No**  
 If No, please give other parameters: .....

**Colorimetric specification with PS file for colours in the columns A to T**  
 Exchange of CIELAB data in file [www.ps.bam.de/De17/10L/L17e00NP.PS](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 OE681-7N-132-1

**Test for the visual linearized output of Pictures D1W-133-0 to D7W-133-0**  
**Output test with the computer display ( ) or the external display ( )** please mark by (x)!

**Test of the (flower) image according to picture D1W-133-0**  
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**  
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":  
 .....  
 .....  
 .....  
 .....  
 .....

**Test of the resolution of radial gratings  $W-R_d$ ,  $W-G_d$ ,  $W-B_d$  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 OE680-3N-133-1

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

**PDF-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NP.PDF> **underline Yes/No**

**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NA.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 OE68L0NP.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 OE68L0NA.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 OE680-7N-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 2 OE681-3N-133-1

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

**For visual evaluation of the display (monitor, data projector) output**  
 Office workplace illumination is daylight (clouded/north sky) **underline Yes/No**  
**PDF file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.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/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PS> **or underline Yes/No**  
**picture A7-133-2** **underline Yes/No**

**colour measurement and specification for:**  
 CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: **underline Yes/No**  
 If No, please give other parameters: .....

**Colorimetric specification with PS file for colours in the columns A to T**  
 Exchange of CIELAB data in file [www.ps.bam.de/De17/10L/L17e00NP.PS](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 OE681-7N-133-1

OE68: Form A for test chart 4 according to ISO 15775; 1MR, DEH input:  $rgb(->rgb_{de})$  setrgbcolor  
 Image, radial gratings, 16 step colour scales, Landolt-rings output 133-1:  $g_P=0.77$ ;  $g_N=1.0$

**Test for the visual linearized output of Pictures D1W-134-0 to D7W-134-0**  
**Output test with the computer display ( ) or the external display ( )** please mark by (x)!

**Test of the (flower) image according to picture D1W-134-0**  
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**  
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":  
 .....  
 .....  
 .....  
 .....  
 .....

**Test of the resolution of radial gratings  $W-R_d$ ,  $W-G_d$ ,  $W-B_d$  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 OE680-3N-134-1

**Documentation of file format, hardware and software for this test:**  
**PDF-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NP.PDF> **underline Yes/No**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NA.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 OE68L0NP.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 OE68L0NA.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 OE680-7N-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**

|                     | $W-R_d$                                                           | $W-G_d$     | $W-B_d$                                                           | $W-N$       |
|---------------------|-------------------------------------------------------------------|-------------|-------------------------------------------------------------------|-------------|
| White - Orangered:  | Are all the 16 steps distinguishable?                             | Yes/No      | Are all the 16 steps distinguishable?                             | Yes/No      |
|                     | If No: How many steps can be distinguished? of the given 16 steps | ..... Steps | If No: How many steps can be distinguished? of the given 16 steps | ..... Steps |
| White - Leafgreen:  | Are all the 16 steps distinguishable?                             | Yes/No      | Are all the 16 steps distinguishable?                             | Yes/No      |
|                     | If No: How many steps can be distinguished? of the given 16 steps | ..... Steps | If No: How many steps can be distinguished? of the given 16 steps | ..... Steps |
| White - Violetblue: | Are all the 16 steps distinguishable?                             | Yes/No      | Are all the 16 steps distinguishable?                             | Yes/No      |
|                     | If No: How many steps can be distinguished? of the given 16 steps | ..... Steps | If No: How many steps can be distinguished? of the given 16 steps | ..... Steps |
| White - Black:      | Are all the 16 steps distinguishable?                             | Yes/No      | Are all the 16 steps distinguishable?                             | Yes/No      |
|                     | If No: How many steps can be distinguished? of the given 16 steps | ..... Steps | 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 2 OE681-3N-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/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.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/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PS> **underline Yes/No**  
**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](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 OE681-7N-134-1

**Test for the visual linearized output of Pictures D1W-135-0 to D7W-135-0**  
**Output test with the computer display ( ) or the external display ( )** please mark by (x)!

**Test of the (flower) image according to picture D1W-135-0**  
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**  
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":  
 .....  
 .....  
 .....  
 .....  
 .....

**Test of the resolution of radial gratings  $W-R_d$ ,  $W-G_d$ ,  $W-B_d$  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 OE680-3N-135-1

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

**PDF-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NP.PDF> **underline Yes/No**

**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NA.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 OE68L0NP.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 OE68L0NA.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 OE680-7N-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 2 OE681-3N-135-1

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

**For visual evaluation of the display (monitor, data projector) output**  
 Office workplace illumination is daylight (clouded/north sky) **underline Yes/No**  
**PDF file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.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/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PS> **or underline Yes/No**  
**picture A7-135-2** **underline Yes/No**

**colour measurement and specification for:**  
 CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: **underline Yes/No**  
 If No, please give other parameters: .....

**Colorimetric specification with PS file for colours in the columns A to T**  
 Exchange of CIELAB data in file [www.ps.bam.de/De17/10L/L17e00NP.PS](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 OE681-7N-135-1

OE68: Form A for test chart 4 according to ISO 15775; 1MR, DEH input:  $rgb(->rgb^*_{de})$  setrgbcolor  
 Image, radial gratings, 16 step colour scales, Landolt-rings output 135-1:  $g_P=0.62$ ;  $g_N=1.0$

**Test for the visual linearized output of Pictures D1W-136-0 to D7W-136-0**  
**Output test with the computer display ( ) or the external display ( )** please mark by (x)!

**Test of the (flower) image according to picture D1W-136-0**  
 Are clear (immediately conspicuous) differences recognized between reproduction and test chart? **Yes/No**  
 Subjective remarks about the colour reproduction of the (flower) image, the CIE-test colours and the 16 grey steps within the image, for example "less contrast":  
 .....  
 .....  
 .....

**Test of the resolution of radial gratings  $W-R_d$ ,  $W-G_d$ ,  $W-B_d$  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 OE680-3N-136-1

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

**PDF-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NP.PDF> **underline Yes/No**

**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68L0NA.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 OE68L0NP.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 OE68L0NA.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 OE680-7N-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 2 OE681-3N-136-1

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

**For visual evaluation of the display (monitor, data projector) output**  
 Office workplace illumination is daylight (clouded/north sky) **underline Yes/No**  
**PDF file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS file:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PS> **underline Yes/No**  
**Picture A7-136-2: contrast range:** (>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/OE68/OE68F1P2.PDF> **underline Yes/No**  
**PS-File:** <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PS> **or underline Yes/No**  
**picture A7-136-2** **underline Yes/No**

**colour measurement and specification for:**  
 CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: **underline Yes/No**  
 If No, please give other parameters: .....

**Colorimetric specification with PS file for colours in the columns A to T**  
 Exchange of CIELAB data in file [www.ps.bam.de/De17/10L/L17e00NP.PS](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 OE681-7N-136-1

OE68: Form A for test chart 4 according to ISO 15775; 1MR, DEH input:  $rgb(->rgb_{de})$  setrgbcolor  
 Image, radial gratings, 16 step colour scales, Landolt-rings output 136-1:  $g_P=0.55$ ;  $g_N=1.0$

### Test for the visual linearized output of Pictures D1W-137-0 to D7W-137-0

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

#### Test of the (flower) image according to picture D1W-137-0

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

#### Test of the resolution of radial gratings $W-R_d$ , $W-G_d$ , $W-B_d$ 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

OE680-3N-137-1

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

PDF-File: <http://130.149.60.45/farbmetrik/OE68/OE68L0NP.PDF> **underline Yes/No**

PS-File: <http://130.149.60.45/farbmetrik/OE68/OE68L0NA.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 OE68L0NP.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 OE68L0NA.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

OE680-7N-137-1

OE68: Form A for test chart 4 according to ISO 15775; 1MR, DEH input:  $rgb(->rgb^*_{de})$  setrgbcolor  
 Image, radial gratings, 16 step colour scales, Landolt-rings output 137-1:  $g_P=0.47$ ;  $g_N=1.0$

### 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

| Colour row                  | Are all the 16 steps distinguishable? | of the given 16 steps | Yes/No        |
|-----------------------------|---------------------------------------|-----------------------|---------------|
| $W-R_d$ White - Orangered:  | Are all the 16 steps distinguishable? | ..... Steps           | <b>Yes/No</b> |
| $W-G_d$ White - Leafgreen:  | Are all the 16 steps distinguishable? | ..... Steps           | <b>Yes/No</b> |
| $W-B_d$ White - Violetblue: | Are all the 16 steps distinguishable? | ..... Steps           | <b>Yes/No</b> |
| $W-N$ White - Black:        | Are all the 16 steps distinguishable? | ..... Steps           | <b>Yes/No</b> |

#### 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 2

OE681-3N-137-1

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

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

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

Office workplace illumination is daylight (clouded/north sky) **underline Yes/No**  
 PDF file: <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PDF> **underline Yes/No**  
 PS file: <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PS> **underline Yes/No**  
 Picture A7-137-2: contrast range: (>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/OE68/OE68F1P2.PDF> **underline Yes/No**  
 picture A7-137-2 **underline Yes/No**  
 PS-File: <http://130.149.60.45/farbmetrik/OE68/OE68F1P2.PS> **or underline Yes/No**  
 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](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

OE681-7N-137-1