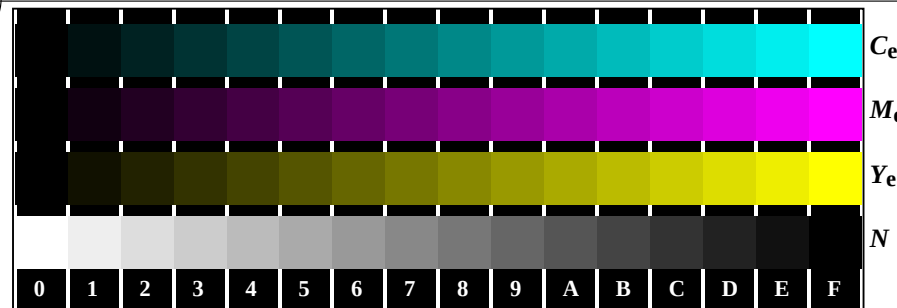
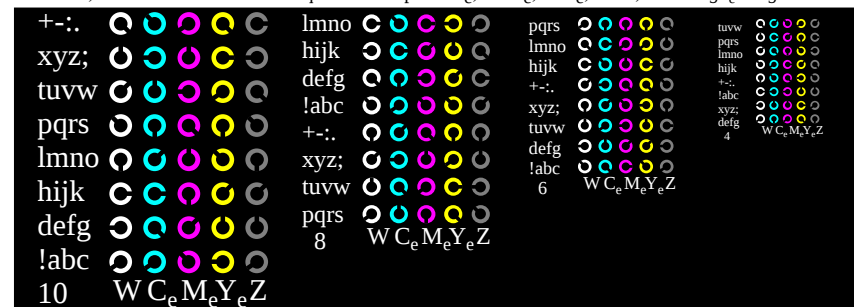


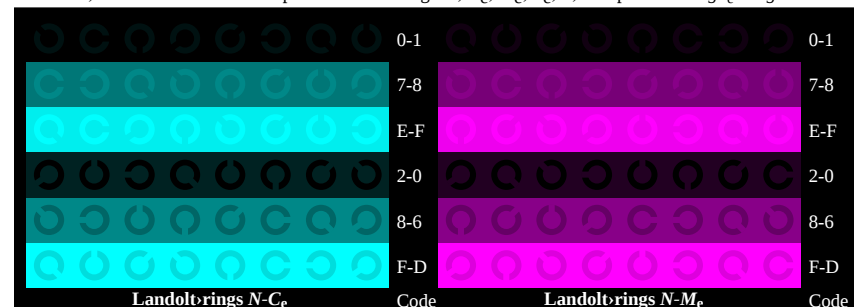
See similar ISO test charts: <http://www.ps.bam.de/24705TE>, <http://www.ps.bam.de/9241E>
Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1



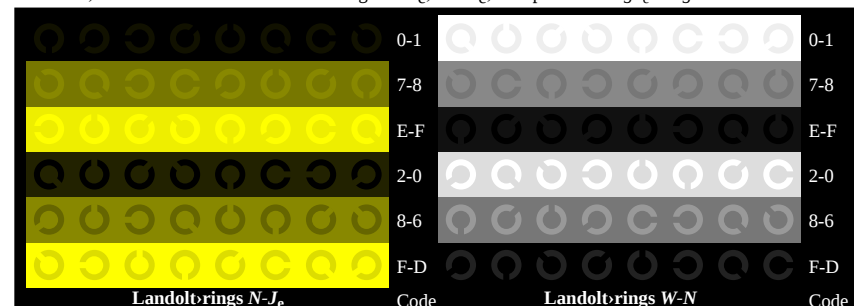
OE651-1, Picture B4N-D-030-0: 16 equidistant steps $N-C_e$; $N-M_e$; $N-J_e$; $W-N$; PS: $\rightarrow rgb_e$ setrgbcolor



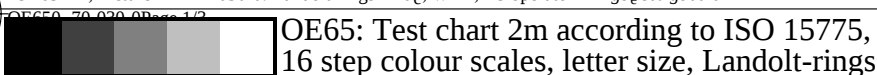
OE651-3, Picture B5N-030-0: Script and Landolt-rings W ; C_e ; M_e ; Y_e ; Z ; PS operator $\rightarrow rgb_e$ setrgbcolor



OE651-5, Picture B6N-D-030-0: Landolt-rings $N-C_e$; $N-M_e$; PS operator $\rightarrow rgb_e$ setrgbcolor

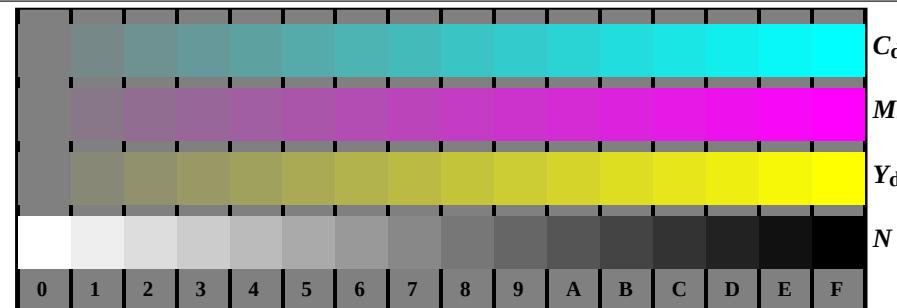


OE651-7, Picture B7N-D-030-0: Landolt-rings $N-J_e$; $W-N$; PS operator $\rightarrow rgb_e$ setrgbcolor

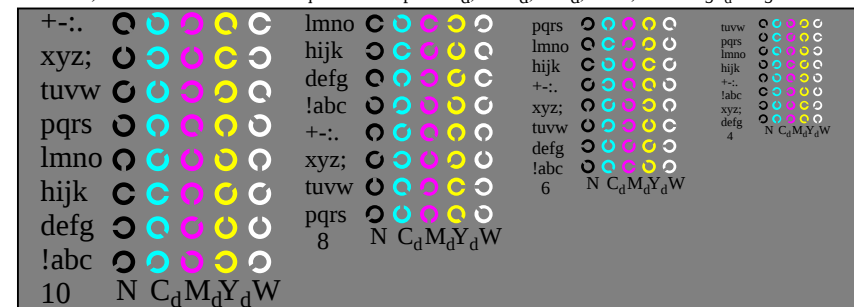


OE65: Test chart 2m according to ISO 15775, TR 24705; DH
16 step colour scales, letter size, Landolt-rings

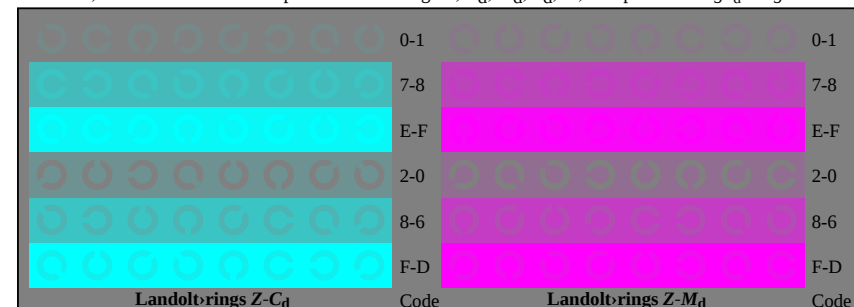
input: rgb ($\rightarrow rgb_d$) setrgbcolor
output 030-0: no change



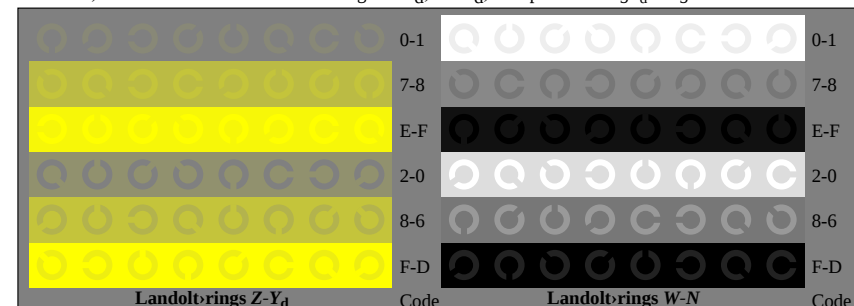
OE651-1, Picture B4Z-Z-030-0: 16 equidistant steps $Z-C_d$; $Z-M_d$; $Z-J_d$; $W-N$; PS: $\rightarrow rgb_d$ setrgbcolor



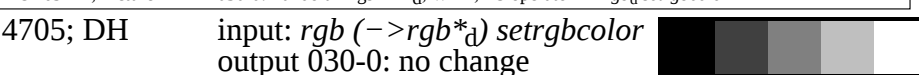
OE651-3, Picture B5Z-030-0: Script and Landolt-rings N ; C_d ; M_d ; Y_d ; W ; PS operator $\rightarrow rgb_d$ setrgbcolor



OE651-5, Picture B6Z-Z-030-0: Landolt-rings $Z-C_d$; $Z-M_d$; PS operator $\rightarrow rgb_d$ setrgbcolor



OE651-7, Picture B7Z-Z-030-0: Landolt-rings $Z-Y_d$; $W-N$; PS operator $\rightarrow rgb_d$ setrgbcolor



TUB registration: 20110801-OE65/OE65L0NA.TXT /.PS
application for output of displays: monitor systems or data projector systems
TUB material: code=rha4ta

Test of 16 visually equally spaced steps of the colour rows $N-C_d$, $N-M_d$, $N-Y_d$, and $W-N$ according to picture B4N-030-0

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

Test of characters and Landolt-rings in four sizes according to picture B5N-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 C_d	Ring M_d	Ring Y_d
10	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
8	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
6	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
4	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Test of recognition frequency of Landolt-rings $N-C_d$, $N-M_d$, $N-Y_d$, and $W-N$ according to pictures B6N-030-0, and B7N-030-0

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

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

Part 1

OE650-3N-030-1

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

PDF-File: http://130.149.60.45/farbmetrik/OE65/OE65L0NP.PDF **underline Yes/No**

PS-File: http://130.149.60.45/farbmetrik/OE65/OE65L0NA.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 OE65L0NP.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 OE65L0NA.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

OE650-7N-030-1

OE65: Form A for test chart 2m according to ISO 15775; DH
16 step colour scales, letter size, Landolt-rings

Test of 16 visually equally spaced steps of the colour rows $Z-C_d$, $Z-M_d$, $Z-Y_d$, and $W-N$ according to picture B4Z-030-0

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

Test of characters and Landolt-rings in four sizes according to picture B5Z-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 C_d	Ring M_d	Ring Y_d
10	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
8	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
6	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
4	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Test of recognition frequency of Landolt-rings $Z-C_d$, $Z-M_d$, $Z-Y_d$, and $W-N$ according to pictures B6Z-030-0, and B7Z-030-0

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

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

Part 1

OE650-3N-030-1

Documentation of assessor colour vision properties for visual assessment

The assessor has **normal** colour vision according to one test:
either according to DIN 6160:1996 with Anomaloskop of Nagel
or with test charts using colour points according to Ishihara
or tested with, please specify:

underline Yes/No
underline Yes/unknown
underline Yes/unknown
underline Yes/unknown

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

Office workplace illumination is daylight (clouded/north sky)

underline Yes/No

PDF file: http://130.149.60.45/farbmetrik/OE65/OE65F1P2.PDF

underline Yes/No

PS file: http://130.149.60.45/farbmetrik/OE65/OE65F1P2.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/OE65/OE65F1P2.PDF

underline Yes/No

picture A7-030-2

PS-File: http://130.149.60.45/farbmetrik/OE65/OE65F1P2.PS

or underline Yes/No

picture A7-030-2

colour measurement and specification for:

CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry:

underline Yes/No

If No, please give other parameters:

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

Exchange of CIELAB data in file www.ps.bam.de/De17/10L/L17e00NP.PS and transfer
of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF

underline Yes/No

If No, please describe other method:

Part 4

OE651-7N-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

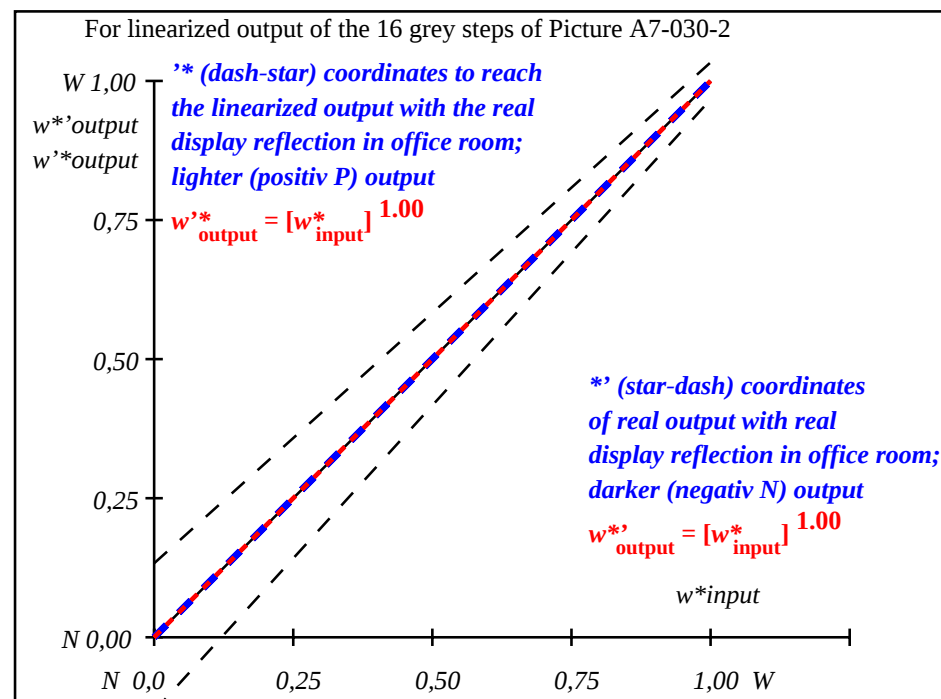
Start output S1
Specification according to
ISO/IEC 15775 Annex G
and DIN 33866-1 Annex G

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:
 $R^*_{\text{ab,m}} = 100$

OE650-3N-030-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE651-3N-030-2: 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 $g_p=1.00$																
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)																
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

OE650-7N, Picture A7-030-2: 16 visual equidistant L^* -grey steps; PS operator: $w^* w^* w^*$ setrgbcolor

OE65: 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: $rgb (->rgb^*_d)$ setrgbcolor
output 030-2: no change