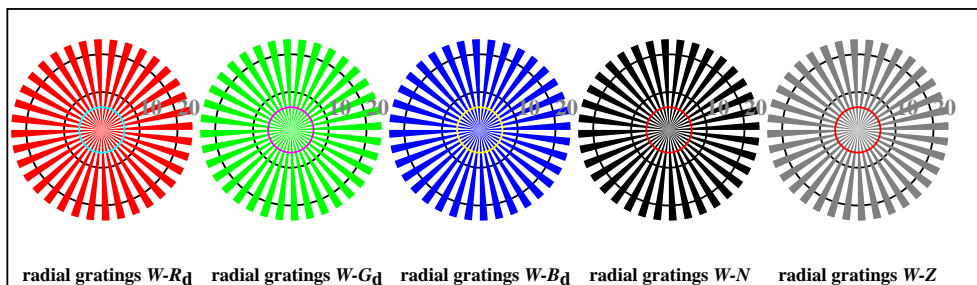


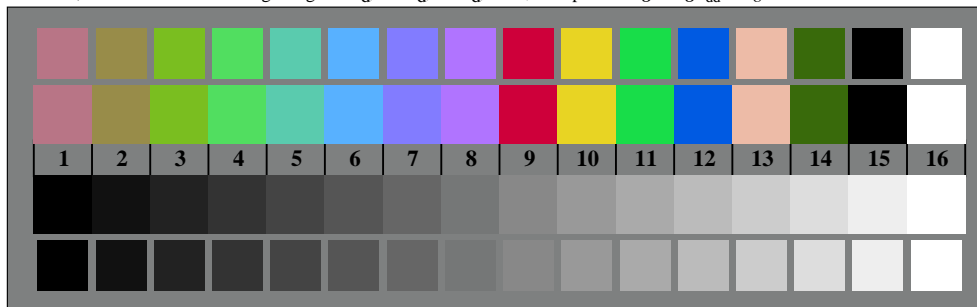
see similar files: <http://farbe.li.tu-berlin.de/AE19/AE19.HTM>
technical information: <http://farbe.li.tu-berlin.de/> or <http://farbe.li.tu-berlin.de/AE.HTM>

TUB Registration: 20190301-AE19/AE19L0NA.TXT /PS
application for measurement or viewing of display and print output

TUB material: code=rh4ta

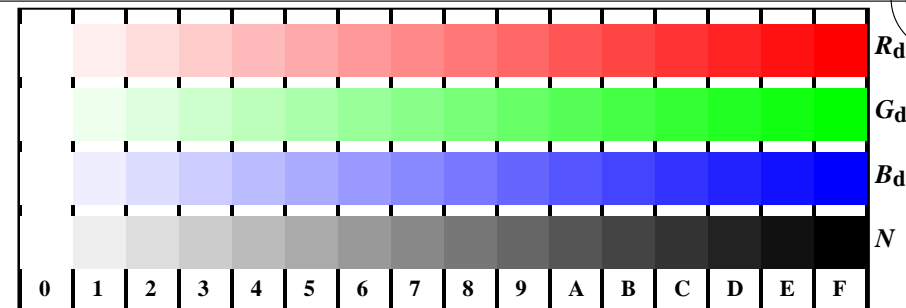


AE190-5, Picture D2Wdd: radial gratings W-R_d; W-G_d; W-B_d; W-N; PS operator: *rgb->rgb_{dd} setrgbcolor*

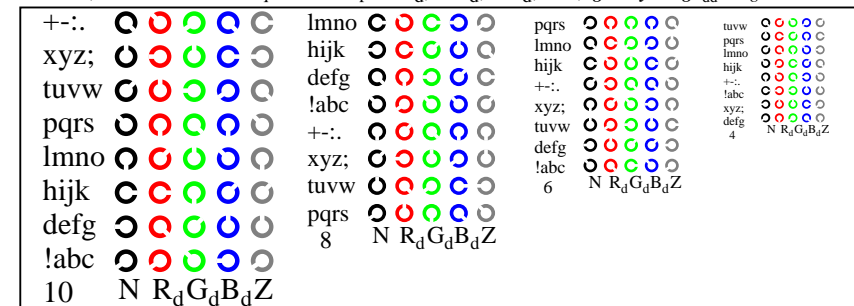


AE190-7, Picture D3Wdd: 14 CIE-test colours and 2 + 16 grey steps (sf); *rgb/cmy0->rgb_{dd} setrgbcolor*

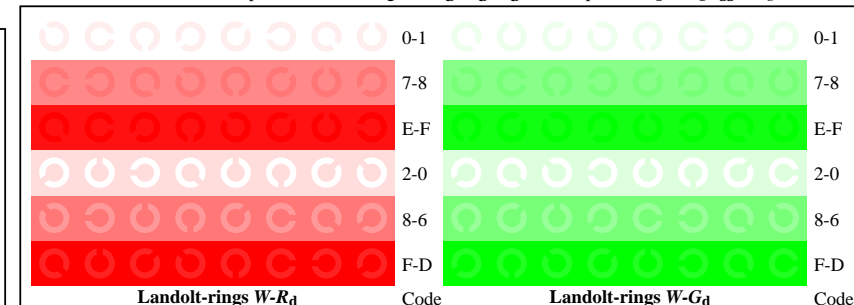
Test chart AE19 according to test chart 4 of ISO/IEC 15775
chromatic test chart RGB



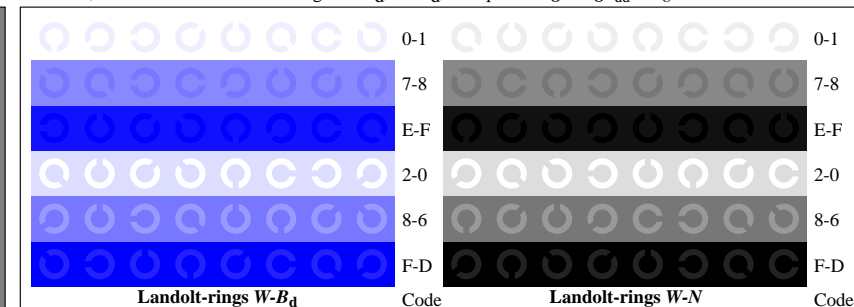
AE191-1, Picture D4Wdd: 16 equidistant steps W-R_d; W-G_d; W-B_d; W-N; *rgb/cmy0->rgb_{dd} setrgbcolor*



AE191-3, Picture D5Wdd: Sript and Landolt-rings N; R_d; G_d; B_d; Z; PS operator: *rgb->rgb_{dd} setrgbcolor*



AE191-5, Picture D6Wdd: Landolt-rings W-R_d; W-G_d; PS operator: *rgb->rgb_{dd} setrgbcolor*



AE191-7, Picture D7Wdd: Landolt-rings W-B_d; W-N; PS operator: *rgb->rgb_{dd} setrgbcolor*

input: *rgb/cmy0/000n/w set...*
output: *->rgb_{dd} setrgbcolor*

Test of visual linearized output of pictures D2W_{dd} to D3W_{dd} please underline Yes/No
Output test with 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_{dd}
Is the resolution diameter < 6 mm? W-R_d W-G_d W-B_d W-N W-Z
Test with magnifying glass (e.g. 6x) Yes/No Yes/No Yes/No Yes/No Yes/No
resolution diameter mm mm mm mm mm

Test of the 14 CIE-test colours according to picture D3W_{dd}
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_{dd}
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, AE190-3dd: 00301

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

PDF file: http://farbe.li.tu-berlin.de/AE19/AE19F0PX_CY8_1.PDF underline: Yes/No

PS file: http://farbe.li.tu-berlin.de/AE19/AE19F0PX_CY8_1.PS underline: Yes/No

Used computer operating system:
either one of Windows/Mac/Unix/other and version:.....

This evaluation is for the output: underline: monitor/data projector/printer
Device model, driver and version:.....

output with PDF/PS-file: underline: PDF/PS file

For output with PDF file AE19F0PX_CY8_1.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 output with PS file AE19F0PX_CY8_1.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: e. g. output of Landscape (L)

part 3, AE190-7dd: 00301

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_{dd}

W-R _d	Are all the 16 steps distinguishable?		Yes/No
White - Red:	If No: How many steps can be distinguished?	of the given 16 steps: Steps
W-G _d	Are all the 16 steps distinguishable?		Yes/No
White - Green:	If No: How many steps can be distinguished?	of the given 16 steps: Steps
W-B _d	Are all the 16 steps distinguishable?		Yes/No
White - Blue:	If No: How many steps can be distinguished?	of the given 16 steps: Steps
W-N	Are all the 16 steps distinguishable?		Yes/No
White - Black:	If No: How many steps can be distinguished?	of the given 16 steps: Steps

Test of characters and Landolt-rings in four sizes according to picture D5W_{dd}
Is the recognition > 50% for letters (17 of 32 at least)? , and for Landolt-rings (minimum 5 of 8)?

Relative size	Letters	Rings N	Rings R _d	Rings G _d	Rings 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 the recognition frequency of the Landolt rings W-R_d, W-G_d, W-B_d, and W-N according to picture D6W_{dd} and D7W_{dd}
Is the recognition frequency of the Landolt rings > 50% (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, AE191-3Ndd: 00301

Documentation of assessor colour-vision properties for visual assessment

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

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

Office workplace illumination is daylight (clouded/north sky) underline: Yes/No
PDF file: http://farbe.li.tu-berlin.de/AE19/AE19F0PX_CY8_3.PDF underline: Yes/No
PS file: http://farbe.li.tu-berlin.de/AE19/AE19F0PX_CY8_3.PS underline: Yes/No
picture A7_{dd} 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: Yes/No

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://farbe.li.tu-berlin.de/AE19/AE19F0PX_CY8_3.PDF underline: Yes/No
picture A7_{dd} underline: Yes/No
PS file: http://farbe.li.tu-berlin.de/AE19/AE19F0PX_CY8_3.PS or underline: Yes/No
picture A7_{dd}

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 for 17 step colours of http://farbe.li.tu-berlin.de/OE70/OE70L1NP.PDF
Exchange of CIELAB data in file http://farbe.li.tu-berlin.de/AE82/AE82L0NP.TXT and transfer
of the PS file AE82L0NP.PS (= .TXT) to the PDF-file AE82L0NP.PDF underline: Yes/No
If No, please describe other method:

part 4, AE191-7dd: 00301

see similar files: <http://farbe.li.tu-berlin.de/AE19/AE19.HTM>
technical information: <http://farbe.li.tu-berlin.de/> or <http://farbe.li.tu-berlin.de/AE.HTM>

TUB Registration: 20190301-AE19/AE19L0NA.TXT /PS
application for measurement or viewing of display and print output
TUB material: code=rh4ta

i	LAB* _{ref}	l* _{out}	LAB* _{out}	LAB* _{out-ref}	ΔE*
1	0,00	0,00	0,00	0,00	0,01
2	6,36	0,00	0,00	0,00	0,01
3	12,72	0,00	0,13	0,00	0,01
4	19,08	0,00	0,20	0,00	0,01
5	25,44	0,00	0,26	0,00	0,01
6	31,80	0,00	0,33	0,00	0,01
7	38,16	0,00	0,40	0,00	0,01
8	44,52	0,00	0,46	0,00	0,01
9	50,88	0,00	0,53	0,00	0,01
10	57,24	0,00	0,60	0,00	0,01
11	63,60	0,00	0,66	0,00	0,01
12	69,96	0,00	0,73	0,00	0,01
13	76,32	0,00	0,80	0,00	0,01
14	82,68	0,00	0,86	0,00	0,01
15	89,04	0,00	0,93	0,00	0,01
16	95,41	0,00	1,00	0,00	0,01
17	0,00	0,00	0,00	0,00	0,01
18	23,85	0,00	0,25	0,00	0,01
19	47,70	0,00	0,50	0,00	0,01
20	71,55	0,00	0,75	0,00	0,01
21	95,41	0,00	1,00	0,00	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: $R^*_{\text{ab,m}} = 99,9$

part 1,

AE190-3dd: 00302



part 2,

AE191-3dd: 00302

L^*/Y_{intended} (absolute)	0,0/0,0	6,3/0,7	12,7/1,5	19,0/2,7	25,4/4,5	31,8/6,9	38,1/10,1	44,5/14,2	50,8/19,1	57,2/25,1	63,6/32,3	69,9/40,7	76,3/50,4	82,6/61,5	89,0/74,2	95,4/88,5
$w^* w^* w^*$ setrgb																
gp=1,000																
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
$w^*=l^*_{\text{CIELAB}, r}$ (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^*_{output}	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

part 3, picture A7_{dd}: 16 visual equidistant L^* -grey steps; PS operator: $w^* w^* w^*$ setrgbcolor

AE190-7dd: 00302

In-out: Test chart AE19 according to test chart 4 of ISO/IEC 15775
Viewing Y contrast $Y_W:Y_N=88,9:0,31$; Y_N -range 0,0 to <0,46

input: $rgb/cmy0/000n/w$ set...
output: $->rgb_{dd}$ setrgbcolor