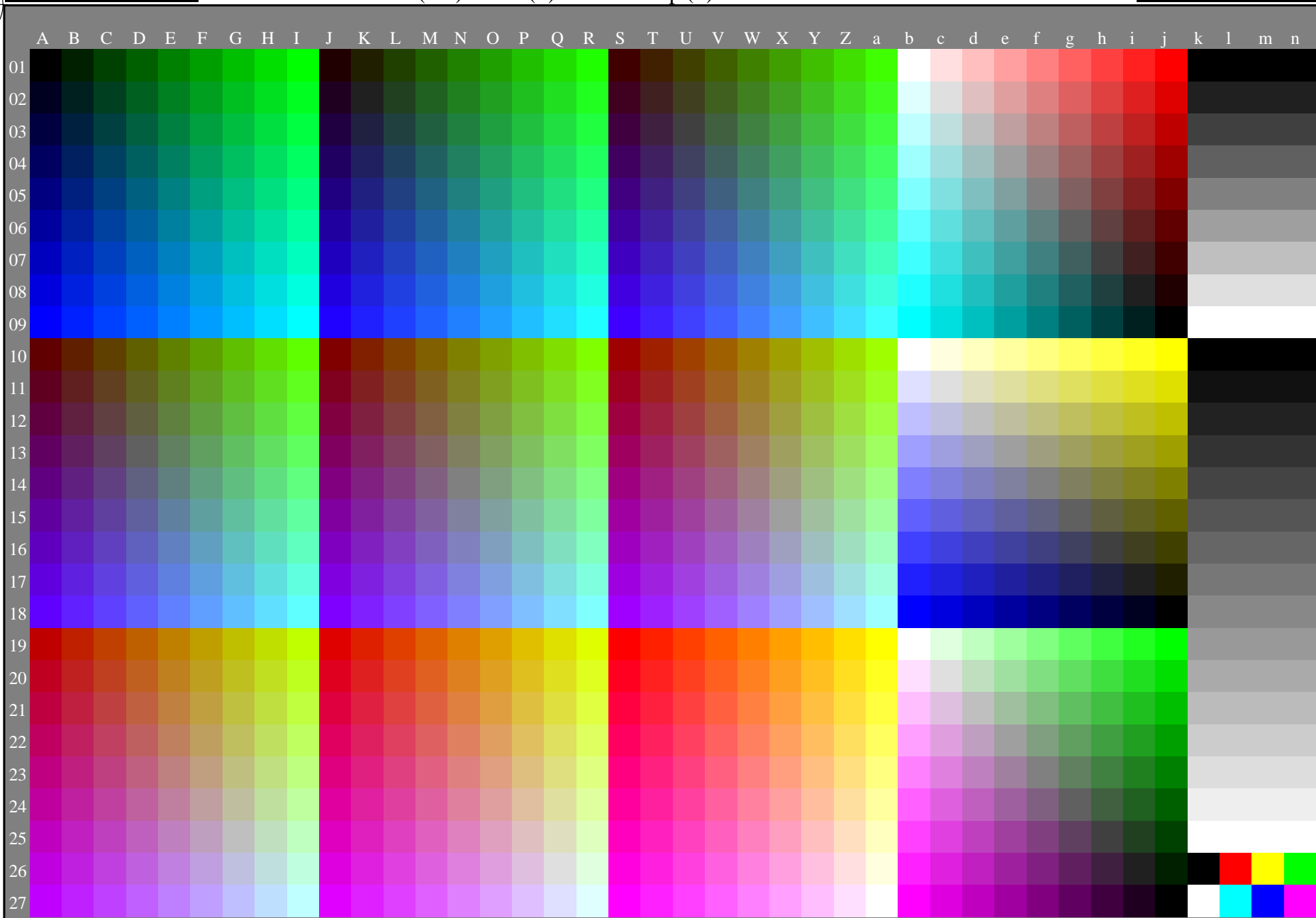


see similar files: <http://farbe.li.tu-berlin.de/AE49/AE49.HTM>
technical information: <http://farbe.li.tu-berlin.de/> or <http://farbe.li.tu-berlin.de/AE.HTM>



AE490-70

Test chart AE49 similar to test chart 1 of DIN 33872-6
1080 standard colours; Test chart similar to DIN 33872-6

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

1-003000-L0 cmy_n6

TUB Registration: 20190301-AE49/AE49L0NA.TXT /.PS
application for measurement or viewing of display and print output

TUB material: code=rh4ta

see similar files: <http://farbe.li.tu-berlin.de/AE49/AE49L0NA.TXT> / .PS
technical information: <http://farbe.li.tu-berlin.de/> or <http://farbe.li.tu-berlin.de/AE.HTM>

TUB Registration: 20190301-AE49/AE49L0NA.TXT /.PS
application for measurement or viewing of display and print output
TUB material: code=rh4ta



Discriminability of chromatic colours

Remarks: This test uses many colour scales of 9 steps

Hue plane Red - Cyan blue (rows 01 to 09, column b to j)

Discriminability of 81 chromatic colours

Are all the 81 colours different?

Yes/No

Only in case of "No": How many are different? Of the 81 are different

Hue plane Yellow - Blue (rows 10 to 18, column b to j)

Discriminability of 81 chromatic colours

Are all the 81 colours different?

Yes/No

Only in case of "No": How many are different? Of the 81 are different

Hue plane Green - Magenta red (rows 19 to 27, column b to j)

Discriminability of 81 chromatic colours

Are all the 81 colours different?

Yes/No

Only in case of "No": How many are different? Of the 81 are different

Result: Of the 243 (=3x81) colours are different

Artifacts, please describe if visible:

Remarks about the creation and content of the PDF files:

Sometimes "colour smoothing" is a default setting.
In this case the 9 steps are often not visible and may be counted as one step.
Sometimes "optimizing the PDF output for the web" is a default setting.
For example this setting may reduce the 1080 colours on a page to 256 colours.

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

PDF file:

http://farbe.li.tu-berlin.de/AE49/AE49F0PX_CY8_1.PDF

underline: Yes/No

PS file:

http://farbe.li.tu-berlin.de/AE49/AE49F0PX_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 AE49F0PX_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 AE49F0PX_CY8_1.PS

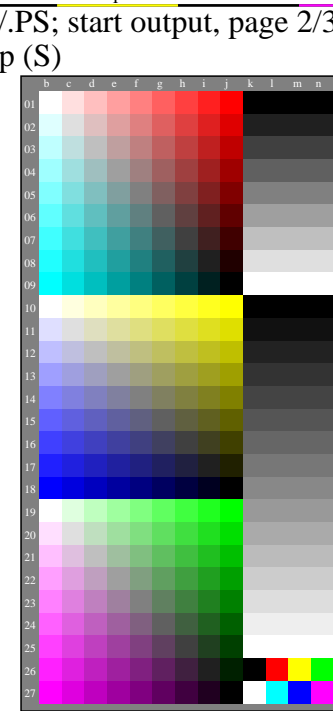
either PS-file transfer "download, copy" to PS device.....
or with computer system interpretation by "Display-PS":.....
or with software e. g. Ghostscript and version:.....
or with software e. g. Mac-Yap and version:.....

Special remarks: e. g. output of Landscape (L)

part 3,

AE490-7dd: 00301

Form A: Test chart AE49 similar to test chart 1 of DIN 33872-6
1080 standard colours; Test chart similar to DIN 33872-6



Agreement with elementary colours

Remarks: This test uses many colour scales of 9 steps

Red R_e and Green G_e are defined by the visual criteria: *neither yellowish nor blueish*.
Yellow Y_e and Blue B_e are defined by the visual criteria: *neither reddish nor greenish*.

Hue plane Red - Cyan blue (rows 01 to 09, column b to j)

Agreement with elementary colours

Is the colour at the position (j,01) the elementary colour Red R_e ?

Yes/No

Only in case of "No": The colour at this position appears:

yellowish/blueish

Hue plane Yellow - Blue B_e (rows 10 to 18, column b to j)

Agreement with elementary colours

Is the colour at the position (j,10) the elementary colour Yellow Y_e ?

Yes/No

Only in case of "No": The colour at this position appears:

reddish/greenish

Is the colour at the position (b,18) the elementary colour Blue B_e ?

Yes/No

Only in case of "No": The colour at this position appears:

reddish/greenish

Hue plane Green - Magenta red (rows 19 to 27, column b to j)

Agreement with elementary colours

Is the colour at the position (j,19) the elementary colour Green G_e ?

Yes/No

Only in case of "No": The colour at this position appears:

yellowish/blueish

Result: Of the 4 elementary colours (e. g. 3) are acceptable as elementary colours.

Discriminability of 9 and 16 grey steps

Discriminability of 9 steps (rows 01 to 09, column k to n)

Are the 9 steps distinguishable?

Yes/No

If No: How many can be distinguished? of 9 greys are distinguishable.

Discriminability of 16 steps (rows 10 to 27, column k to n)

Are the 16 steps distinguishable?

Yes/No

If No: How many can be distinguished? of 16 greys are distinguishable.

Artifacts, please describe if visible:

Remarks about the creation and content of the PDF files:

Sometimes "colour smoothing" is a default setting.
In this case the 9 steps are often not visible and may be counted as one step.
Sometimes "optimizing the PDF output for the web" is a default setting.
For example this setting may reduce the 1080 colours on a page to 256 colours.

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://farbe.li.tu-berlin.de/AE49/AE49F0PX_CY8_3.PDF

underline: Yes/No

PS file: http://farbe.li.tu-berlin.de/AE49/AE49F0PX_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)

underline: Yes/No

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/AE49/AE49F0PX_CY8_3.PDF

underline: Yes/No

PS file: http://farbe.li.tu-berlin.de/AE49/AE49F0PX_CY8_3.PS

underline: Yes/No

picture A7_{dd}

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 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:

underline: Yes/No

part 4,

AE491-7dd: 00301

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

see similar files: <http://farbe.li.tu-berlin.de/AE49/AE49L0NA.TXT> /
technical information: <http://farbe.li.tu-berlin.de/> or <http://farbe.li.tu-berlin.de/AE49.HTM>

TUB Registration: 20190301-AE49/AE49L0NA.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 [*]	Start output S1
1	0,00	0,00	0,00	0,00	0,00	Specification according to
2	6,36	0,00	0,00	0,00	0,00	ISO/IEC 15775 Annex G
3	12,72	0,00	0,13	0,00	0,00	and DIN 33866-1 Annex G
4	19,08	0,00	0,20	0,00	0,00	
5	25,44	0,00	0,26	0,00	0,00	
6	31,80	0,00	0,33	0,00	0,00	
7	38,16	0,00	0,40	0,00	0,00	
8	44,52	0,00	0,46	0,00	0,00	
9	50,88	0,00	0,53	0,00	0,00	
10	57,24	0,00	0,60	0,00	0,00	
11	63,60	0,00	0,66	0,00	0,00	
12	69,96	0,00	0,73	0,00	0,00	
13	76,32	0,00	0,80	0,00	0,00	
14	82,68	0,00	0,86	0,00	0,00	
15	89,04	0,00	0,93	0,00	0,00	
16	95,41	0,00	1,00	0,00	0,00	
17	0,00	0,00	0,00	0,00	0,00	
18	23,85	0,00	0,25	0,00	0,00	
19	47,70	0,00	0,50	0,00	0,00	
20	71,55	0,00	0,75	0,00	0,00	
21	95,41	0,00	1,00	0,00	0,00	

Mean lightness difference (16 steps)
ΔE^{*}_{CIELAB} = 0,0

Mean lightness difference (5 steps)
ΔL^{*}_{CIELAB} = 0,0

Mean colour reproduction index: R^{*}_{ab,m} = 99,9

part 1,

AE490-3dd: 00302



part 2,

AE491-3dd: 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 [*] 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

AE490-7dd: 00302

In-out: Test chart AE49 similar to test chart 1 of DIN 33872-6
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