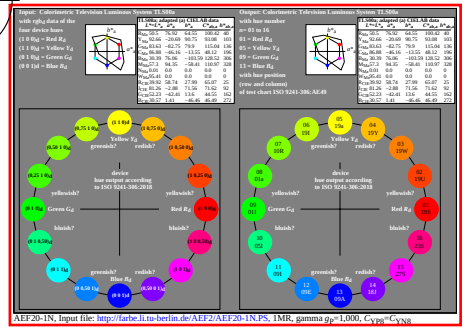
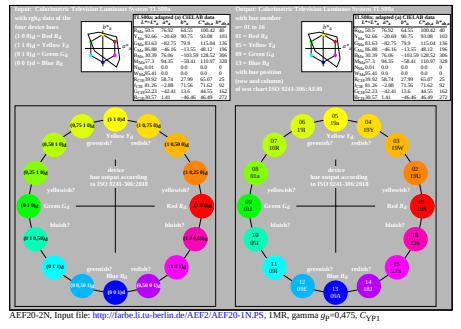
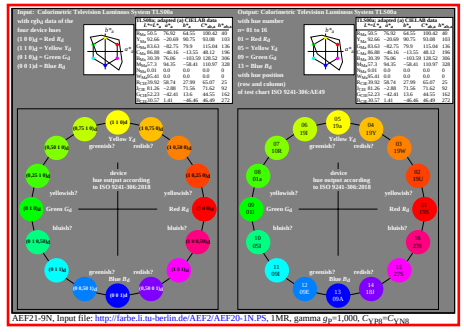


AEF20-1N, Input file: http://farbe.li.tu-berlin.de/AEF2/AEF20-1N.PS, 1MR, gamma $g_P$=1,000, $C_{YP8}$=$C_{YN8}$



AEF20-2N, Input file: http://farbe.li.tu-berlin.de/AEF2/AEF20-1N.PS, 1MR, gamma $g_P$=0,475, $C_{YP1}$



AEF21-9N, Input file: http://farbe.li.tu-berlin.de/AEF2/AEF20-1N.PS, 1MR, gamma $g_P$=1,000, $C_{YP8}$=$C_{YN8}$

VG –> VG

**Original VG with standard gamma $g_P$=1,000**

| File | graphic | ISO step | gamma $g_P$ |
|---|---|---|---|
| AEF21−1N | PG | $C_{YP8}$=$C_{YN8}$ | 1,000 |

*Application: luminance contrast of sRGB displays:*

$Y_W : Y_N$ = 90 : 0,31 = 288 : 1 according to ISO 9241-306.

*(contrast without display reflection of room light)*

AEF21-2N

VG –> VG

**Original VG with standard gamma $g_P$=1,000**

| File | graphic | ISO step | gamma $g_P$ |
|---|---|---|---|
| AEF20−1N | VG | $C_{YP8}$=$C_{YN8}$ | 1,000 |

*Application: luminance contrast of sRGB displays:*

$Y_W : Y_N$ = 90 : 0,31 = 288 : 1 according to ISO 9241-306.

*(contrast without display reflection of room light)*

AEF20-3N

VG –> VG

**Change of original VG with gamma $g_P$=0,475**

| File | graphic | ISO step | gamma $g_P$ |
|---|---|---|---|
| AEF20−2N | PG | $C_{YP1}$=$C_{YN15}$ | 0,475 |

*Application: Low luminance contrast of projectors:*

$Y_W : Y_N$ = 90 : 40 = 2,15 : 1 according to ISO 9241-306.

AEF20-4N

**Output test of colour devices at the work places**

**The visual colours change by the software and:**
on displays with the reflection of the room light.
in print with the printer driver and the workflow.

The luminance contrast ratio between White W and Black N determine, if the 9 gray steps between N and W appear equally spaced.
**Equal spacing shall apear for the intended device output:**
on displays for the output within the broken red rectangle.
in print for the output within the continuous red rectangle.

**If this is NOT the case, then determine visually with the next page the ISO-contrast step which gives the intended result.**
You may ask the device manufacturer for software solutions.
You may change the PDF-file gamma to produce the intended result.
Different gamma-change methods in VG or PG graphics are available.

AEF21-3N

**Ergonomics of human-system interaction ISO 9241-306:2018**

**Part 306: Field assessment methods for electronic visual displays**
For test charts see
http://standards.iso.org/iso/9241/306/ed-2/index.html

For similar ISO-test charts in A4 size see
http://standards.iso.org/iso/9241/306/ed-2/AE39/AE39.HTM

For similar ISO-test charts with output questions see
http://standards.iso.org/iso/9241/306/ed-2/AE39/AE39F0PX.PDF

For similar ISO/IEC-test charts according to ISO/IEC 15775,

and ISO/IEC TR 24705 see
http://farbe.li.tu-berlin.de/A/24705TE.html

For the relation and links to many other standards see
http://farbe.li.tu-berlin.de/EE68/EE68L0NP.PDF

AEF21-4N

VG –> VG

**Change of original VG with gamma $g_P$=0,775**

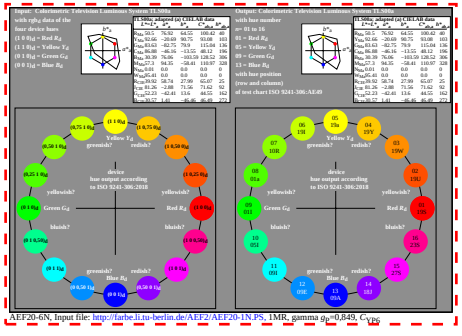
| File | graphic | ISO step | gamma $g_P$ |
|---|---|---|---|
| AEF20−6N | PG | $C_{YP5}$=$C_{YN11}$ | 0,775 |

*Application: office luminance contrast of displays:*

$Y_W : Y_N$ = 90 : 2,5 = 36 : 1 according to ISO 9241-306.

*(contrast of offset paper according to ISO/IEC 15775)*

AEF20-5N



AEF20-6N, Input file: http://farbe.li.tu-berlin.de/AEF2/AEF20-1N.PS, 1MR, gamma $g_P$=0,849, $C_{YP5}$

***PDF*- and *PS*-test files for relative colour image reproduction according to DIN 33872-1 to -6:2010**

These DIN-test charts serve for the colorimetric specification, and the visual assessment of the display and print output.

For free download of the test charts see
http://farbe.li.tu-berlin.de/A/33872E.html

For similar DIN-test charts according to DIN 33866-1 to -5:2000 see
http://farbe.li.tu-berlin.de/A/DE13/DE13.HTM

For more test charts, standards and applications see
http://farbe.li.tu-berlin.de/A/INFOALAE.html

AEF21-5N

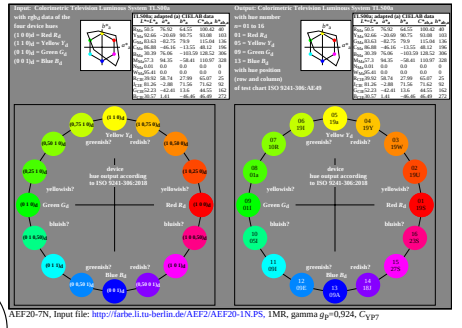
**Ergonomic and colorimetric colour image reproduction**

For the ergonomic and colorimetric colour image reproduction see *Richter, Klaus (2016)*, Output linearization method OLM16 for displays, printers, and offset, 61 pages, 1,4MB.
http://farbe.li.tu-berlin.de/OUTLIN16_01.PDF
(Content similar to CIE R8-09:2015, free download for CIE-members.)

For a list of publications of *Klaus Richter* see
http://farbe.li.tu-berlin.de/XY91FEN.html

For basic information in 6 languages (EN, GE, FR, IT, SP, NO):
*Klaus Richter (2015)*, Colour, colour vision, and elementary colours in colour information technology, 86 pages, 2,2 MB, see
http://standards.iso.org/iso/9241/306/ed-2/ES15.PDF

AEF21-6N



AEF20-7N, Input file: http://farbe.li.tu-berlin.de/AEF2/AEF20-1N.PS, 1MR, gamma $g_P$=0,924, $C_{YP7}$

VG –> VG

**Change original VG with gamma $g_P$=0,850**

| File | graphic | ISO step | gamma $g_P$ |
|---|---|---|---|
| AEF20−7N | PG | $C_{YP6}$=$C_{YN10}$ | 0,850 |

*Application: mean luminance contrast of displays:*

$Y_W : Y_N$ = 90 : 1,25 = 72 : 1 according to ISO 9241-306.

*(contrast higher offset paper according to ISO/IEC 15775)*

AEF20-8N

VG –> VG

**Change original VG with gamma $g_P$=2,105**

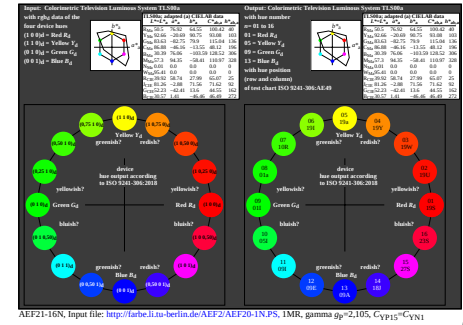
| File | graphic | ISO step | gamma $g_P$ |
|---|---|---|---|
| AEF21−8N | PG | $C_{YP15}$=$C_{YN1}$ | 2,105 |

*Application: extrem luminance contrast of displays:*

$Y_W : Y_N$=90:0,002=36864:1 according to ISO 9241-306.

*(extrem high contrast not known by the visual system)*

AEF21-7N



AEF21-16N, Input file: http://farbe.li.tu-berlin.de/AEF2/AEF20-1N.PS, 1MR, gamma $g_P$=2,105, $C_{YP15}$=$C_{YN1}$