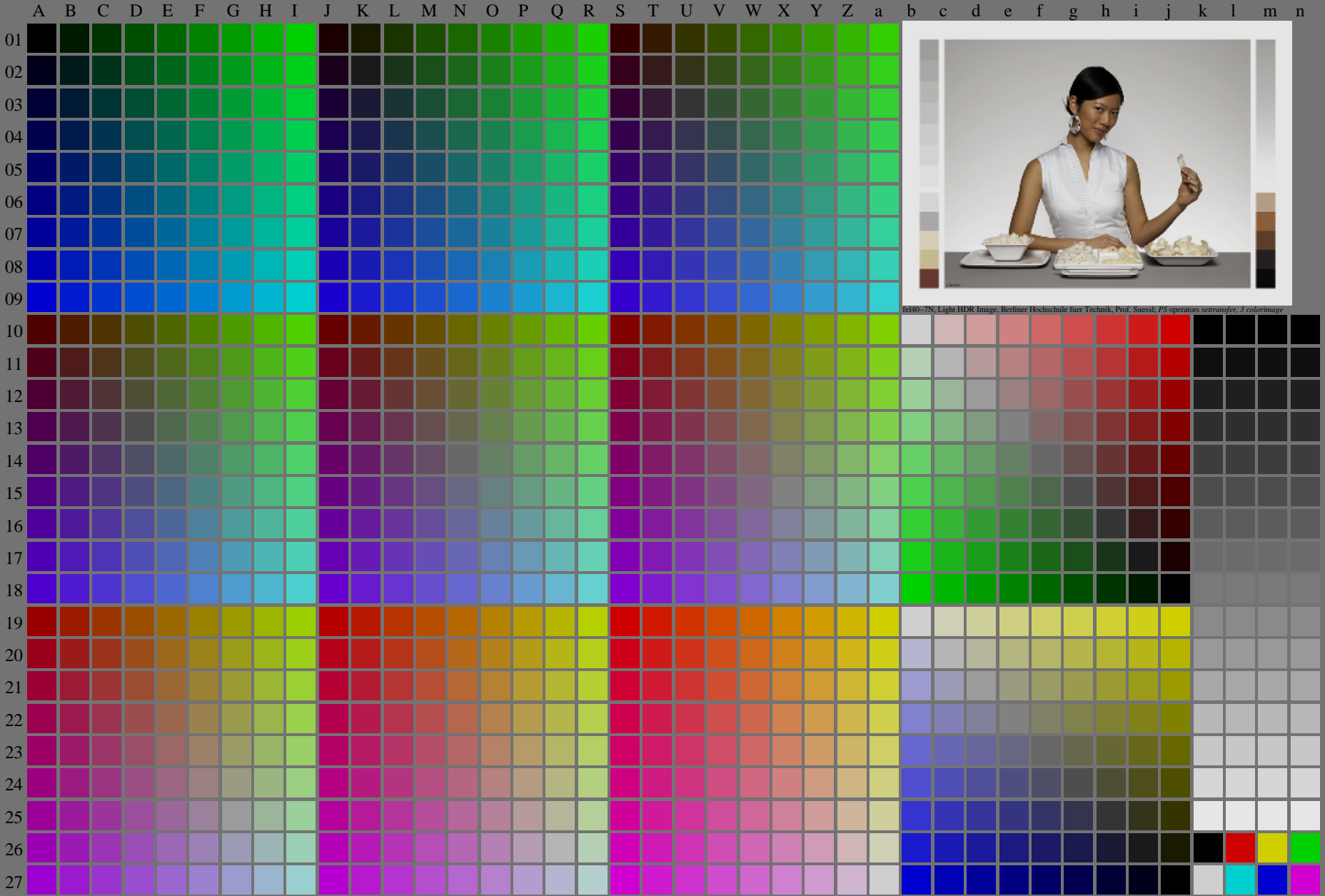


<http://farbe.li.tu-berlin.de/fel4/fel410na.txt> /ps; only vector graphic VG; start output  
see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

see similar files of the whole series: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta



fel40-7N, Page 1/16, Test chart 2G with 40x27=1080 colours; digital equidistant 9 or 16 step colour scales; Colour data in column (A-n):  $rgb^*_d(A_n)$ ,  $colorm = 1$ ,  $xchart = 0$ ,  $pchart = 0$

TUB-test chart fel4; fel4: Test chart uh\_d09 with 40x27=1080 colours; 1MR, DH 000n/w/cmy0/rgb  
Digital equidistant 9 or 16 step colour scales, L-HDR;  $\gamma_R=0,9$   
-> $rgb^*_d, 130-0$

http://farbe.li.tu-berlin.de/fel4/fel410fa.txt / .ps; only vector graphic VG; start output

see separate images of this page: http://farbe.li.tu-berlin.de/fel4/fel4.htm

TUB registration: 20240301-fel4/fel410fa.txt / .ps  
application for evaluation and measurement of display or print output  
TUB material: code rh4ta

see similar files of the whole serie: http://farbe.li.tu-berlin.de/fels.htm  
technical information: http://farbe.li.tu-berlin.de/A/33872E.html  
or http://standards.iso.org/iso/9241/306/ed-2/index.html

Table with 28 columns (A-Z) and 28 rows (01-27). Each cell contains a 28x28 grid of numerical values representing color calibration data. The values are organized in a structured grid format, with each row and column corresponding to a specific color and step.

fel4-10, Page 2/16, Test chart G with 40x27=1080 colors; digital equivalent 9 or 16 step colour scales; Colour data in (A-n): rgb\*(A\_j + k26\_n/9), 000n\*(k), w\*(l), nnn\*(m), www\*(n), column = 1, xchart = 0, pchart = 1

TUB-test chart fel4; fel4: Test chart ut\_d09 with 40x27=1080 colors; 1MR, DH 000n/w/cmy0/rgb  
Digital equivalent 9 or 16 step colour scales, L-DR=2,  $\gamma_R=0.9 \rightarrow rgb^*_d, 130:1$

<http://farbe.li.tu-berlin.de/fel4/fel410fa.txt> /.ps; only vector graphic VG; start output  
 see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

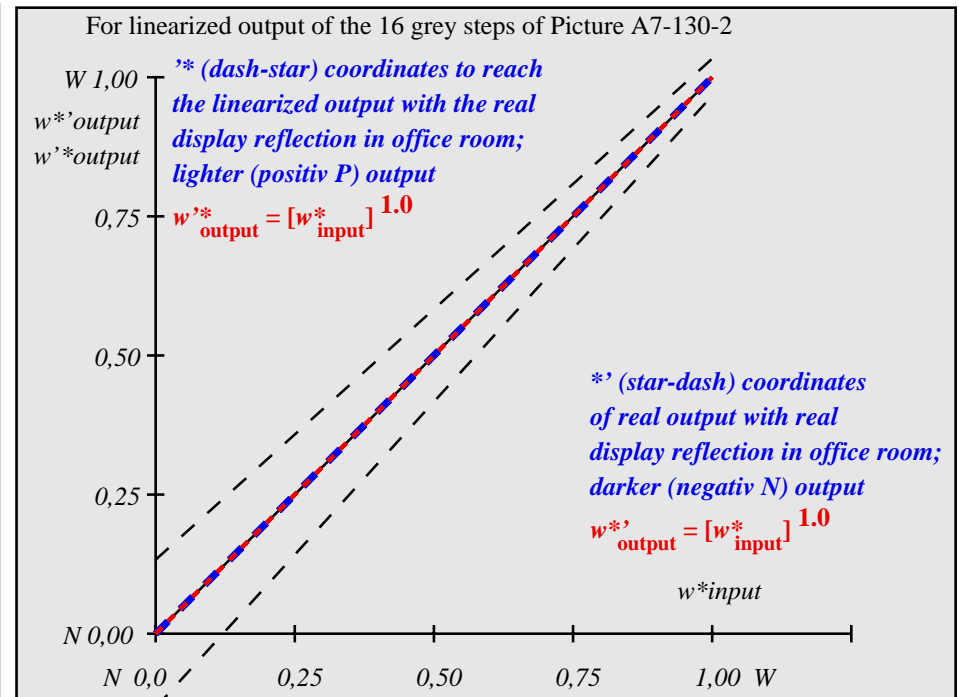
see similar files of the whole serie: <http://farbe.li.tu-berlin.de/fels.htm>  
 technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
 or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /.ps  
 application for evaluation and measurement of display or print output  
 TUB material: code=rh4ta

i	LAB*ref	l*out	LAB*out	LAB*out/c-ref	$\Delta E^*$	Start output S1
1	0.0	0.0	0.0	0.0	0.0	Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G
2	6.36	0.0	0.07	6.36	0.0	
3	12.72	0.0	0.13	12.72	0.0	
4	19.08	0.0	0.2	19.08	0.0	
5	25.44	0.0	0.27	25.44	0.0	
6	31.8	0.0	0.33	31.8	0.0	
7	38.16	0.0	0.4	38.16	0.0	
8	44.52	0.0	0.47	44.52	0.0	
9	50.89	0.0	0.53	50.89	0.0	
10	57.25	0.0	0.6	57.25	0.0	
11	63.61	0.0	0.67	63.61	0.0	
12	69.97	0.0	0.73	69.97	0.0	
13	76.33	0.0	0.8	76.33	0.0	
14	82.69	0.0	0.87	82.69	0.0	
15	89.05	0.0	0.93	89.05	0.0	Mean lightness difference (16 steps)
16	95.41	0.0	1.0	95.41	0.0	$\Delta E^*_{CIELAB} = 0.0$
17	0.0	0.0	0.0	0.0	0.0	
18	23.85	0.0	0.25	23.85	0.0	
19	47.71	0.0	0.5	47.71	0.0	
20	71.56	0.0	0.75	71.56	0.0	Mean lightness difference (5 steps)
21	95.41	0.0	1.0	95.41	0.0	$\Delta L^*_{CIELAB} = 0.0$

Mean colour reproduction index:  $R^*_{ab,m} = 100$

fel40-3N-130-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



fel41-3N-130-2: 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 gp=1.0																
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

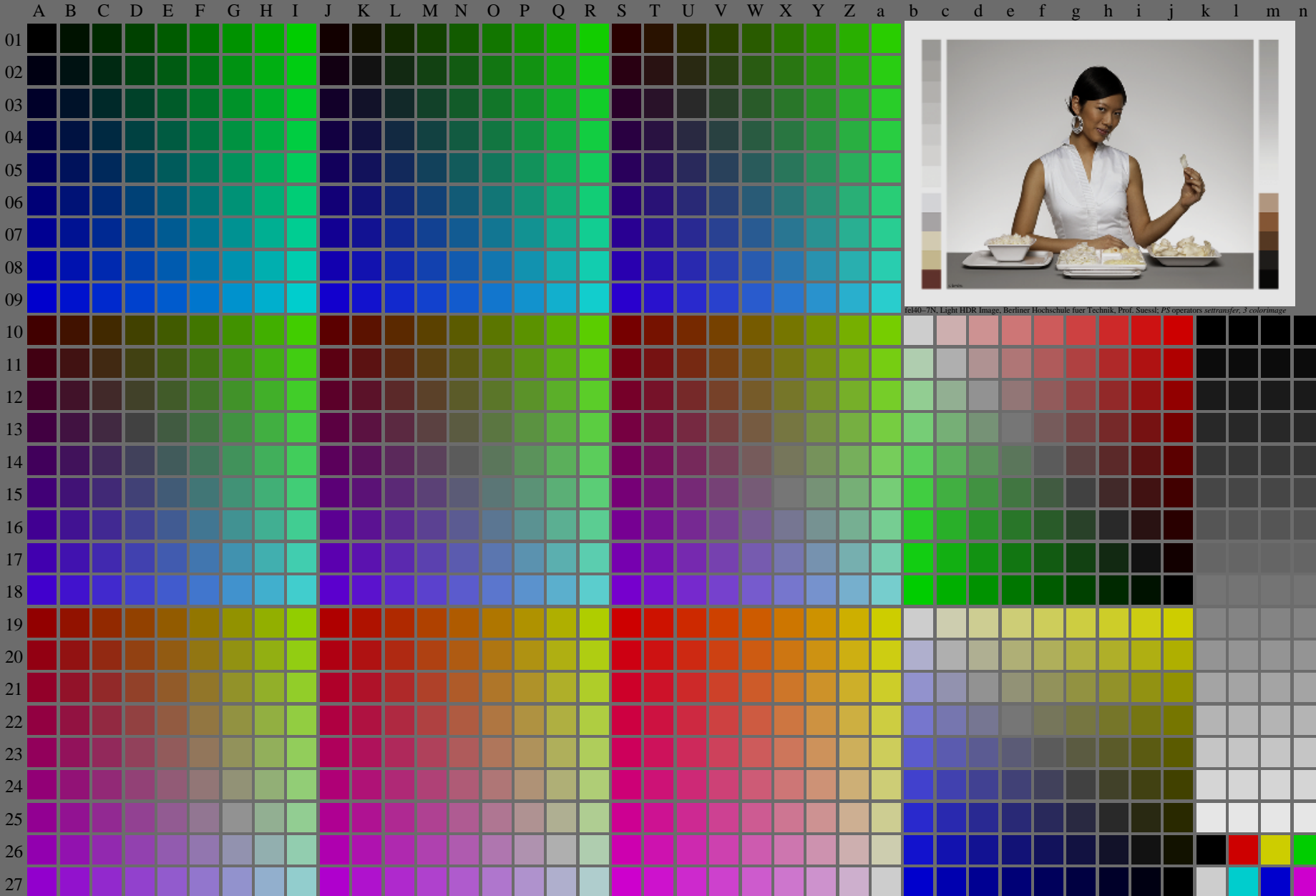
fel40-7N-130-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

TUB-test chart fel4; fel4: In-output relation according to ISO 9241-306; 1MR, DH 000n/w/cmy0/rgb  
 Viewing Y contrast  $Y_W:Y_N=88,9:0,31$ ;  $Y_N$  range 0,0 to <0,46, L-HDR;  $\gamma_R=0,9$  ->rgb\*d, 130-2:

<http://farbe.li.tu-berlin.de/fel4/fel410na.txt/.ps>; only vector graphic VG;  
see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

see similar files of the whole series: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt/.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta



fel40-7N, Light HDR Image, Berliner Hochschule fuer Technik, Prof. Suesst; PS operators seltransfer, 3 colorimage

fel40-7N, Page 1/16, Test chart 2G with 40x27=1080 colours; digital equidistant 9 or 16 step colour scales; Colour data in column (A-n):  $rgb^*_d(A_n)$ ,  $colorm = 1$ ,  $xchart = 8$ ,  $pchart = 0$

TUB-test chart fel4; fel4: Test chart uh\_d09 with 40x27=1080 colours; 1MR, DH 000n/w/cmy0/rgb  
Digital equidistant 9 or 16 step colour scales, L-HDR;  $\gamma_R=0,9$   
-> $rgb^*_d, 130:0$





<http://farbe.li.tu-berlin.de/fel4/fel410fa.txt> /.ps; only vector graphic VG;  
 see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

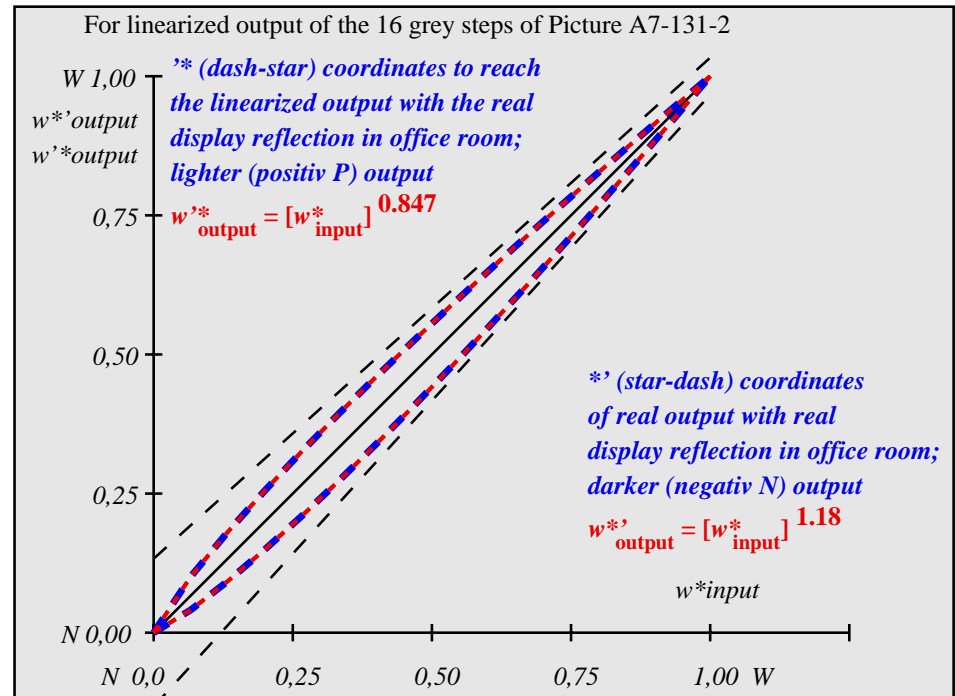
see similar files of the whole serie: <http://farbe.li.tu-berlin.de/fels.htm>  
 technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
 or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /.ps  
 application for evaluation and measurement of display or print output  
 TUB material: code=rh4ta

i	LAB*ref	l*out	LAB*out	LAB*out/c-ref	$\Delta E^*$	Start output S1
1	5.69	0.0	0.0	5.69	0.0	Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G
2	11.67	0.0	0.04	9.36	0.0	
3	17.65	0.0	0.09	14.01	0.0	
4	23.63	0.0	0.15	19.12	0.0	
5	29.62	0.0	0.21	24.55	0.0	
6	35.6	0.0	0.27	30.23	0.0	
7	41.58	0.0	0.34	36.12	0.0	
8	47.56	0.0	0.41	42.19	0.0	
9	53.54	0.0	0.48	48.42	0.0	
10	59.52	0.0	0.55	54.79	0.0	
11	65.5	0.0	0.62	61.29	0.0	
12	71.48	0.0	0.69	67.91	0.0	
13	77.47	0.0	0.77	74.64	0.0	
14	83.45	0.0	0.84	81.47	0.0	
15	89.43	0.0	0.92	88.4	0.0	
16	95.41	0.0	1.0	95.41	0.0	
17	5.69	0.0	0.0	5.69	0.0	Mean lightness difference (16 steps)
18	28.12	0.0	0.19	23.17	0.0	$\Delta E^*_{CIELAB} = 3.4$
19	50.55	0.0	0.44	45.29	0.0	
20	72.98	0.0	0.71	69.58	0.0	Mean lightness difference (5 steps)
21	95.41	0.0	1.0	95.41	0.0	$\Delta L^*_{CIELAB} = 2.7$

Mean colour reproduction index:  $R^*_{ab,m} = 85$

fel40-3N-131-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



fel41-3N-131-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y^*_{intended}$ (absolute)	5.7/0.6	11.7/1.4	17.7/2.4	23.6/4.0	29.6/6.1	35.6/8.8	41.6/12.2	47.6/16.5	53.5/21.5	59.5/27.6	65.5/34.7	71.5/42.9	77.5/52.3	83.4/63.0	89.4/75.1	95.4/88.6
$w^* w^* w^*$ setrgb																
$g_N = 1.08$																
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	0,054	0,113	0,176	0,24	0,305	0,371	0,439	0,506	0,576	0,645	0,715	0,786	0,857	0,928	1,0

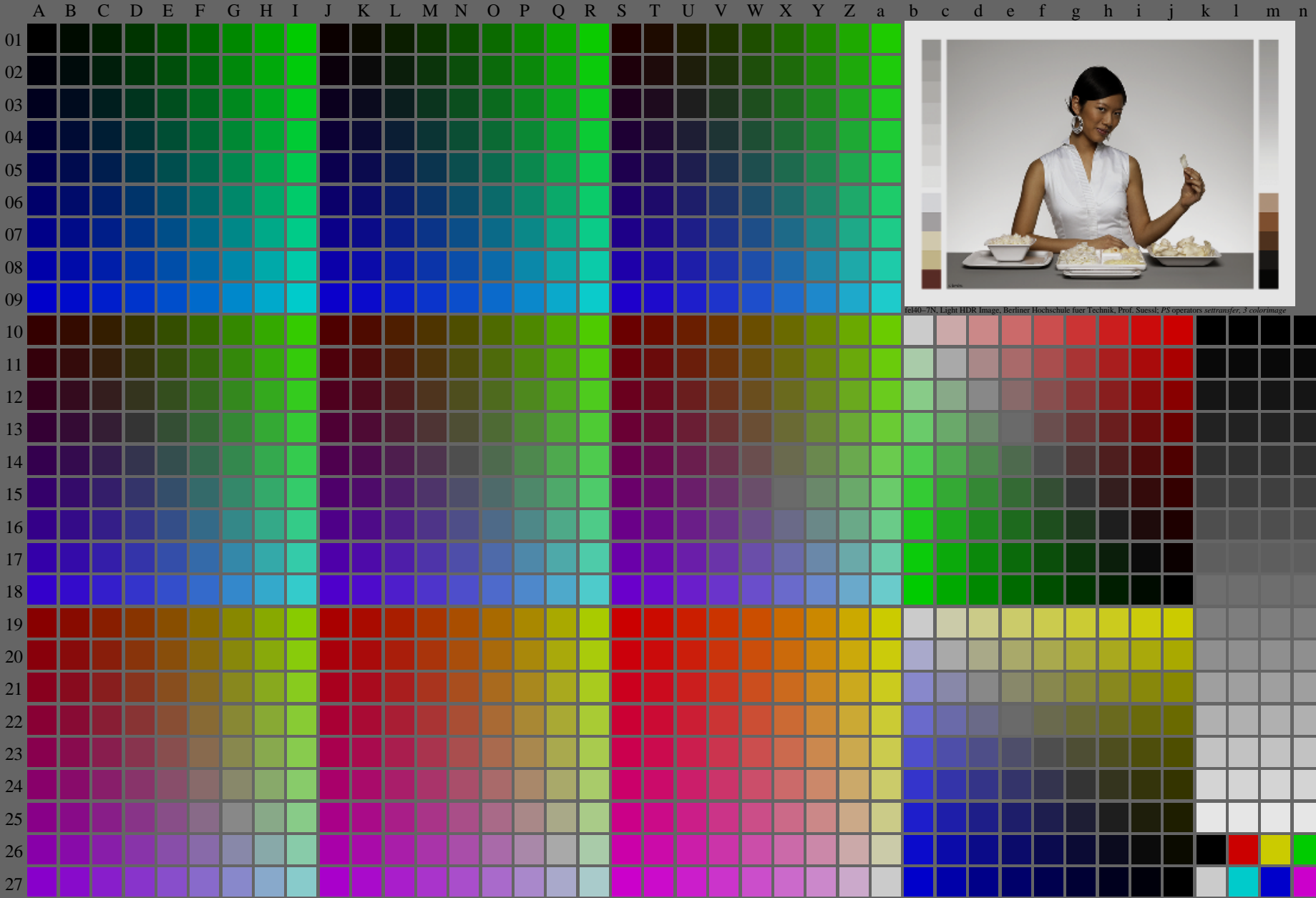
fel40-7N-131-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

TUB-test chart fel4; fel4: In-output relation according to ISO 9241-306; 1MR, DH 000n/w/cmy0/rgb  
 Viewing Y contrast  $Y_W:Y_N=88,9:0,62$ ;  $Y_N$  range 0,46 to <0,93, L-HDR;  $\gamma_R=0,9$  ->rgb\*d, 130-2:

<http://farbe.li.tu-berlin.de/fel4/fel410na.txt/.ps>; only vector graphic VG;  
see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

see similar files of the whole series: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/31664-2/index.html>

TUB registration: 20240301-fel4/fel410na.txt/.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta



fel40-7N, Light HDR Image, Berliner Hochschule fuer Technik, Prof. Suesst, PS operators seltransfer, 3 colorimage

fel40-7N, Page 1/16, Test chart 2G with 40x27=1080 colours; digital equidistant 9 or 16 step colour scales; Colour data in column (A-n):  $rgb^*_d(A_n)$ ,  $colorm = 1$ ,  $xchart = 16$ ,  $pchart = 0$

TUB-test chart fel4; fel4: Test chart uh\_d09 with 40x27=1080 colours; 1MR, DH 000n/w/cmy0/rgb  
Digital equidistant 9 or 16 step colour scales, L-HDR;  $\gamma_R=0,9$   
-> $rgb^*_d, 130-0$





<http://farbe.li.tu-berlin.de/fel4/fel410fa.txt> /.ps; only vector graphic VG;  
see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

see similar files of the whole serie: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta

i	LAB*ref	l*out	LAB*out	LAB*out/c-ref	$\Delta E^*$	
1	10.99	0.0	0.0	10.99 0.0 0.0	0.01	
2	16.62	0.0	0.03	13.12 0.0 0.0	-3.49 0.0 0.0	3.5
3	22.25	0.0	0.06	16.44 0.0 0.0	-5.8 0.0 0.0	5.81
4	27.88	0.0	0.11	20.45 0.0 0.0	-7.41 0.0 0.0	7.42
5	33.5	0.0	0.17	24.98 0.0 0.0	-8.51 0.0 0.0	8.52
6	39.13	0.0	0.22	29.94 0.0 0.0	-9.18 0.0 0.0	9.19
7	44.76	0.0	0.29	35.27 0.0 0.0	-9.48 0.0 0.0	9.49
8	50.39	0.0	0.35	40.93 0.0 0.0	-9.44 0.0 0.0	9.45
9	56.02	0.0	0.43	46.9 0.0 0.0	-9.11 0.0 0.0	9.12
10	61.64	0.0	0.5	53.13 0.0 0.0	-8.5 0.0 0.0	8.51
11	67.27	0.0	0.58	59.63 0.0 0.0	-7.63 0.0 0.0	7.64
12	72.9	0.0	0.66	66.36 0.0 0.0	-6.53 0.0 0.0	6.54
13	78.53	0.0	0.74	73.31 0.0 0.0	-5.2 0.0 0.0	5.21
14	84.15	0.0	0.82	80.48 0.0 0.0	-3.66 0.0 0.0	3.67
15	89.78	0.0	0.91	87.85 0.0 0.0	-1.92 0.0 0.0	1.93
16	95.41	0.0	1.0	95.41 0.0 0.0	0.0 0.0 0.0	0.01
17	10.99	0.0	0.0	10.99 0.0 0.0	0.0 0.0 0.0	0.01
18	32.1	0.0	0.15	23.81 0.0 0.0	-8.28 0.0 0.0	8.29
19	53.2	0.0	0.39	43.88 0.0 0.0	-9.31 0.0 0.0	9.32
20	74.31	0.0	0.68	68.08 0.0 0.0	-6.22 0.0 0.0	6.23
21	95.41	0.0	1.0	95.41 0.0 0.0	0.0 0.0 0.0	0.01

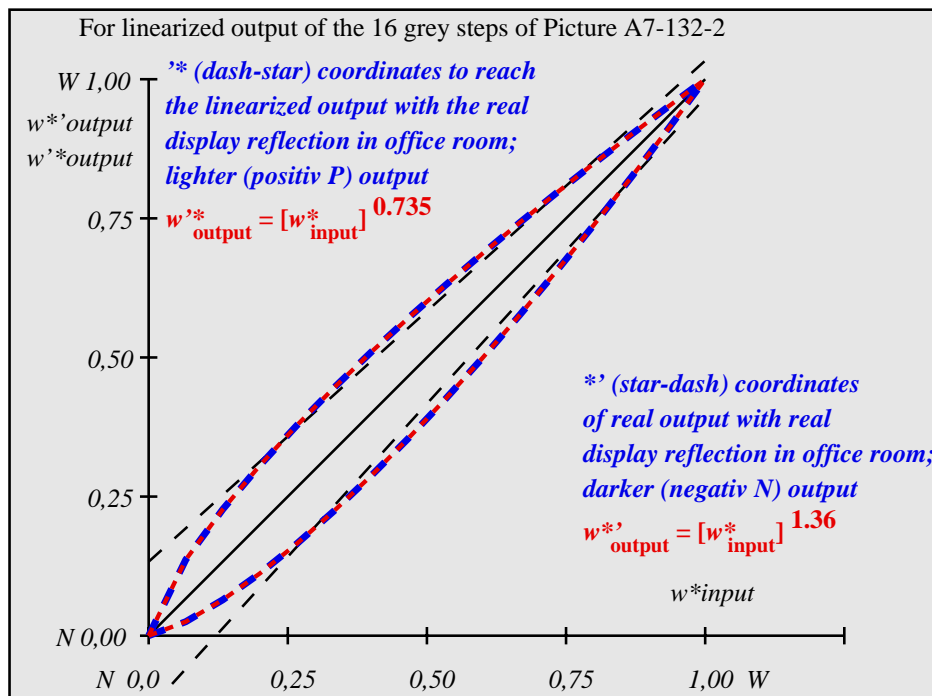
**Start output S1**  
**Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G**

Mean lightness difference (16 steps)  
 $\Delta E^*_{CIELAB} = 6.0$

Mean lightness difference (5 steps)  
 $\Delta L^*_{CIELAB} = 4.8$

Mean colour reproduction index:  $R^*_{ab,m} = 74$

fel40-3N-132-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



fel41-3N-132-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y^*_{intended}$ (absolute)	11.0/1.3	16.6/2.2	22.2/3.6	27.9/5.4	33.5/7.8	39.1/10.7	44.8/14.4	50.4/18.7	56.0/23.9	61.6/30.0	67.3/37.0	72.9/45.0	78.5/54.1	84.2/64.4	89.8/75.8	95.4/88.6
$w^* w^* w^*$ setrgb																
$g_N = 1.18$																
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	0,042	0,093	0,151	0,211	0,274	0,34	0,408	0,477	0,548	0,621	0,694	0,769	0,845	0,922	1,0

fel40-7N-132-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

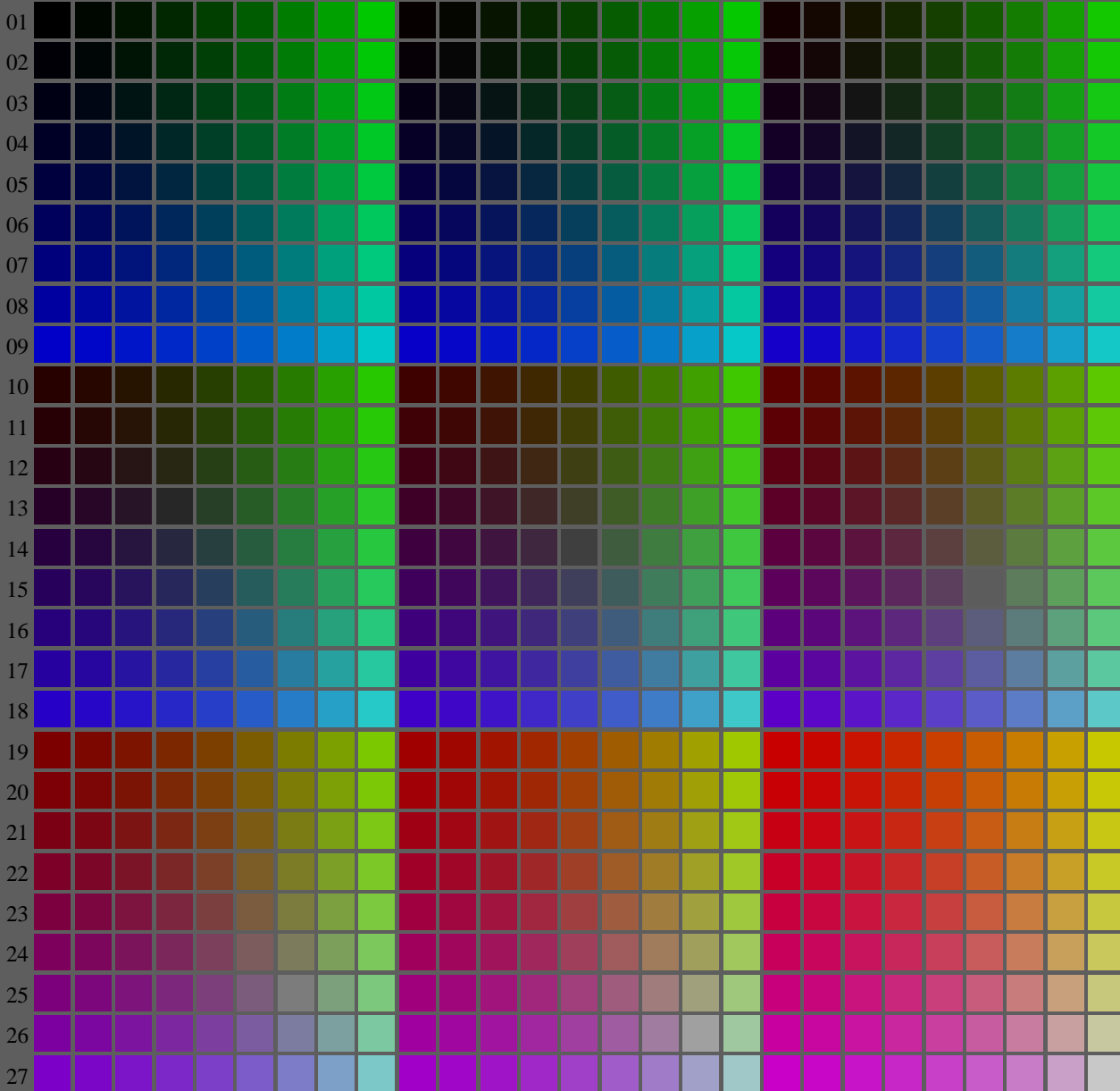
TUB-test chart fel4; fel4: In-output relation according to ISO 9241-306; 1MR, DH 000n/w/cmy0/rgb  
Viewing Y contrast  $Y_W:Y_N=88,9:1,25$ ;  $Y_N$  range 0,93 to <1,87, L-HDR;  $\gamma_R=0,9$  ->rgb\*d, 130-2:

<http://farbe.li.tu-berlin.de/fel4/fel410fa.txt/.ps>; only vector graphic VG;  
see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

see similar files of the whole series: <http://farbe.li.tu-berlin.de/fel4.htm>  
technical information: <http://farbe.li.tu-berlin.de/AV/33872E.html>  
or <http://standards.iso.org/iso/9241/5M6/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt/.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n



fel40-7N, Light HDR Image, Berliner Hochschule fuer Technik, Prof. Suesst, PS operators seltransfer, 3 colorimage

fel40-7N, Page 1/16, Test chart 2G with 40x27=1080 colours; digital equidistant 9 or 16 step colour scales; Colour data in column (A-n):  $rgb^*$  (A\_n), colorm = 1, xchart = 24, pchart = 0

TUB-test chart fel4; fel4: Test chart uh\_d09 with 40x27=1080 colours; 1MR, DH 000n/w/cmy0/rgb  
Digital equidistant 9 or 16 step colour scales, L-HDR;  $\gamma_R=0,9$   
-> $rgb^*_d$ , 130-0:



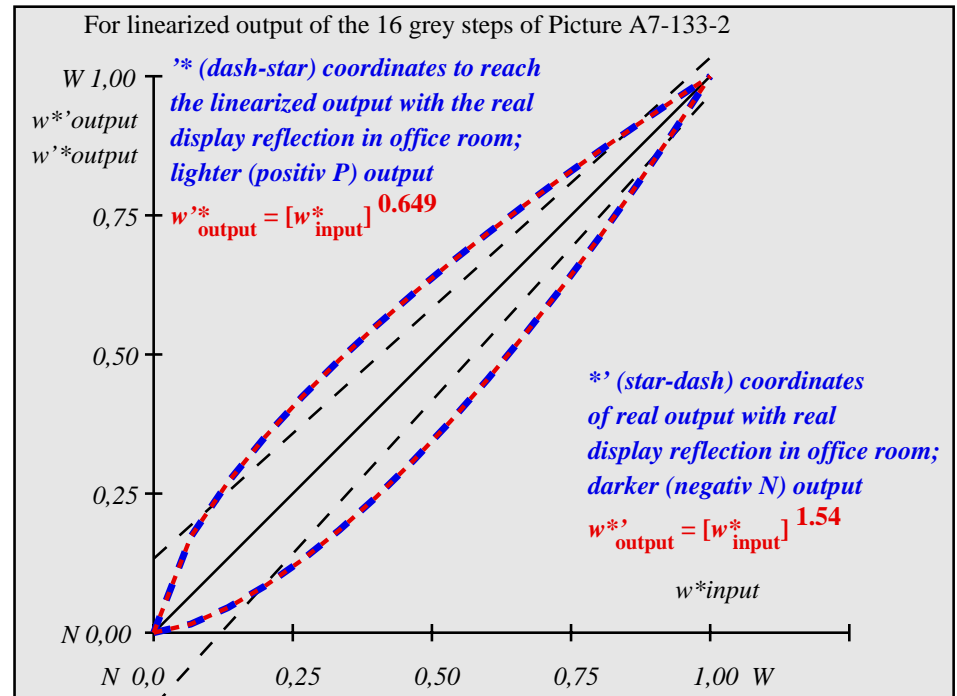
see similar files of the whole serie: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta

i	LAB*ref	l*out	LAB*out	LAB*out/c-ref	$\Delta E^*$	Start output S1
1	18.01	0.0	0.0	18.01	0.0	Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G
2	23.17	0.0	0.02	19.2	0.0	
3	28.33	0.0	0.04	21.49	0.0	
4	33.49	0.0	0.08	24.5	0.0	
5	38.65	0.0	0.13	28.12	0.0	
6	43.81	0.0	0.18	32.26	0.0	
7	48.97	0.0	0.24	36.89	0.0	
8	54.13	0.0	0.31	41.94	0.0	
9	59.29	0.0	0.38	47.41	0.0	
10	64.45	0.0	0.46	53.25	0.0	
11	69.61	0.0	0.54	59.46	0.0	
12	74.77	0.0	0.62	66.02	0.0	
13	79.93	0.0	0.71	72.9	0.0	
14	85.09	0.0	0.8	80.1	0.0	
15	90.25	0.0	0.9	87.61	0.0	
16	95.41	0.0	1.0	95.41	0.0	
17	18.01	0.0	0.0	18.01	0.0	Mean lightness difference (16 steps)
18	37.36	0.0	0.12	27.16	0.0	$\Delta E^*_{CIELAB} = 7.7$
19	56.71	0.0	0.34	44.63	0.0	
20	76.06	0.0	0.64	67.71	0.0	Mean lightness difference (5 steps)
21	95.41	0.0	1.0	95.41	0.0	$\Delta L^*_{CIELAB} = 6.1$

Mean colour reproduction index:  $R^*_{ab,m} = 66$

fel40-3N-133-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



fel41-3N-133-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y^*_{intended}$ (absolute)	18.0/2.5	23.2/3.8	28.3/5.6	33.5/7.8	38.6/10.5	43.8/13.7	49.0/17.6	54.1/22.1	59.3/27.3	64.4/33.4	69.6/40.2	74.8/47.9	79.9/56.6	85.1/66.2	90.2/76.8	95.4/88.6
$w^* w^* w^*$ setrgb	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)	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
$w^*_{intended}$	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	0,031	0,074	0,125	0,182	0,242	0,307	0,374	0,444	0,517	0,593	0,67	0,75	0,832	0,914	1,0

fel40-7N-133-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*_{setrgbcolor}$

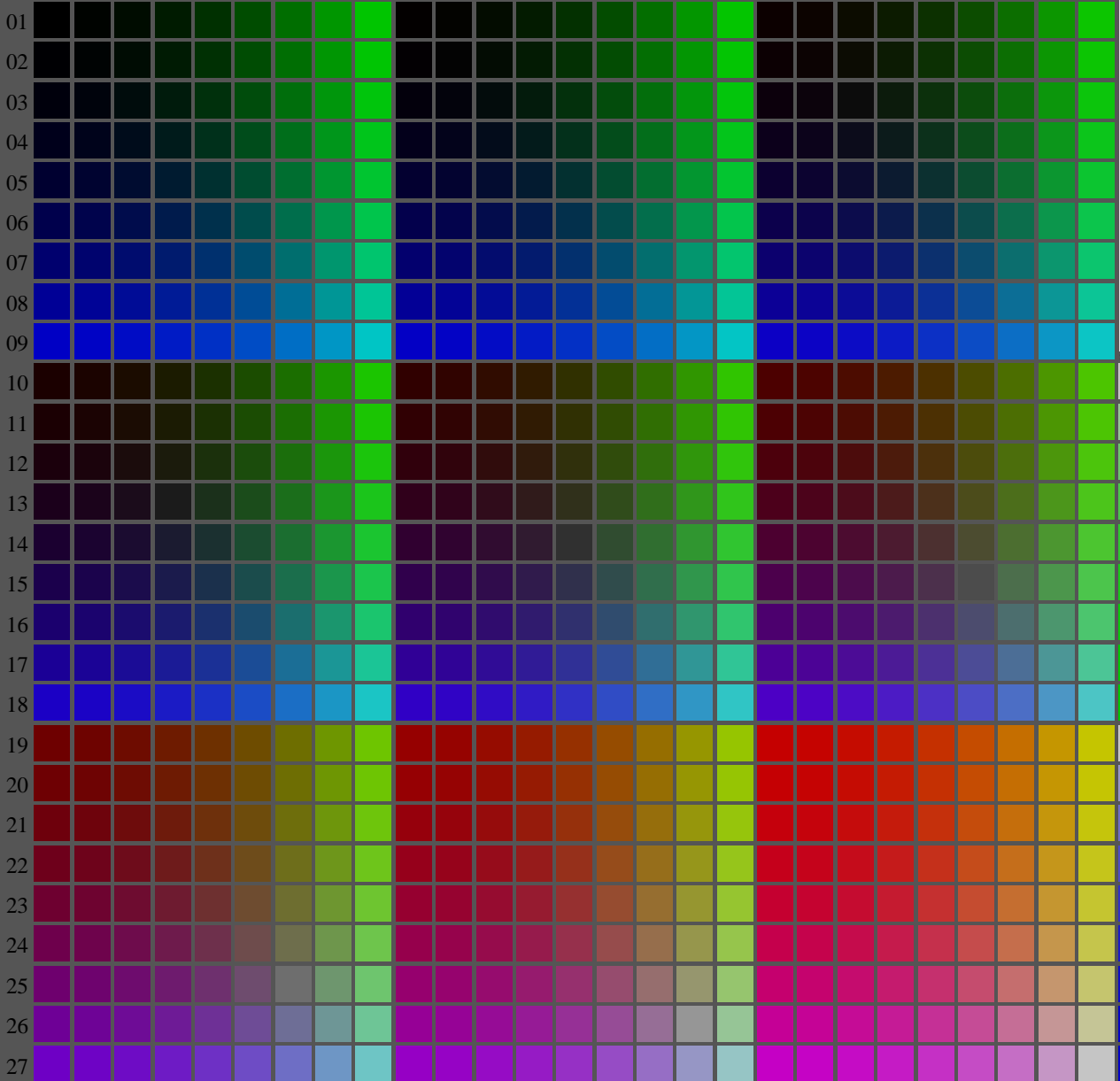
TUB-test chart fel4; fel4: In-output relation according to ISO 9241-306; 1MR, DH 000n/w/cmy0/rgb  
Viewing Y contrast  $Y_W:Y_N=88,9:2,5$ ;  $Y_N$  range 1,87 to <3,75, L-HDR;  $\gamma_R=0,9$  ->rgb\*d, 130-2:

<http://farbe.li.tu-berlin.de/fel4/fel410fa.txt/.ps>; only vector graphic VG;  
see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

see similar files of the whole series: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/AV33872E.html>  
or <http://standards.iso.org/iso/9241/5M6/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt/.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n



fel40-7N, Light HDR Image, Berliner Hochschule fuer Technik, Prof. Suesst, PS operators seltransfer, 3 colorimage

fel40-7N, Page 1/16, Test chart 2G with 40x27=1080 colours; digital equidistant 9 or 16 step colour scales; Colour data in column (A-n):  $rgb^*$  (A\_n), colorm = 1, xchart = 32, pchart = 0

TUB-test chart fel4; fel4: Test chart uh\_d09 with 40x27=1080 colours; 1MR, DH 000n/w/cmy0/rgb  
Digital equidistant 9 or 16 step colour scales, L-HDR;  $\gamma_R=0,9$   
-> $rgb^*_d$ , 130-0:



http://farbe.li.tu-berlin.de/fel4/fel410fa.txt /ps; only vector graphic VG;  
see separate images of this page: http://farbe.li.tu-berlin.de/fel4/fel4.htm

see similar files of the whole serie: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /ps  
application for evaluation and measurement of display or print output

Table with columns labeled A-Z and a-b, and rows labeled 01-27. Each cell contains a 4x4 grid of numerical values representing color data for a specific color and step.

fel4-70, Page 2/16, Test chart G with 40x27=1080 colours; digital equidistant N of 16 step colour scales; Colour data in column (A-V):  $rgb^*(A_j + k26_{n-1}, 000n^*(k), w^*(l), nnn^*(m), www^*(n), colors = 1, xchart = 32, pchart = 1$

TUB-test chart fel4; fel4: Test chart u1\_d09 with 40x27=1080 colours; 1MR, DH 000n/w/cmy0/rgb  
Digital equidistant N of 16 step colour scales, L- $\chi^2$ =0.9  $\rightarrow$  rgb\*<sub>d, 130:1</sub>

see similar files of the whole serie: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta

i	LAB*ref	l*out	LAB*out	LAB*out/c-ref	$\Delta E^*$	Start output S1
1	26.85	0.0	0.0	26.85	0.0	0.0
2	31.42	0.0	0.01	27.5	0.0	-3.91
3	35.99	0.0	0.03	28.99	0.0	-6.99
4	40.56	0.0	0.06	31.15	0.0	-9.4
5	45.13	0.0	0.1	33.91	0.0	-11.21
6	49.7	0.0	0.15	37.21	0.0	-12.48
7	54.27	0.0	0.21	41.03	0.0	-13.24
8	58.84	0.0	0.27	45.33	0.0	-13.5
9	63.41	0.0	0.34	50.1	0.0	-13.3
10	67.99	0.0	0.42	55.33	0.0	-12.65
11	72.56	0.0	0.5	60.98	0.0	-11.56
12	77.13	0.0	0.59	67.06	0.0	-10.05
13	81.7	0.0	0.68	73.56	0.0	-8.13
14	86.27	0.0	0.78	80.45	0.0	-5.81
15	90.84	0.0	0.89	87.74	0.0	-3.09
16	95.41	0.0	1.0	95.41	0.0	0.0
17	26.85	0.0	0.0	26.85	0.0	0.0
18	43.99	0.0	0.09	33.17	0.0	-10.81
19	61.13	0.0	0.3	47.66	0.0	-13.46
20	78.27	0.0	0.61	68.65	0.0	-9.61
21	95.41	0.0	1.0	95.41	0.0	0.0

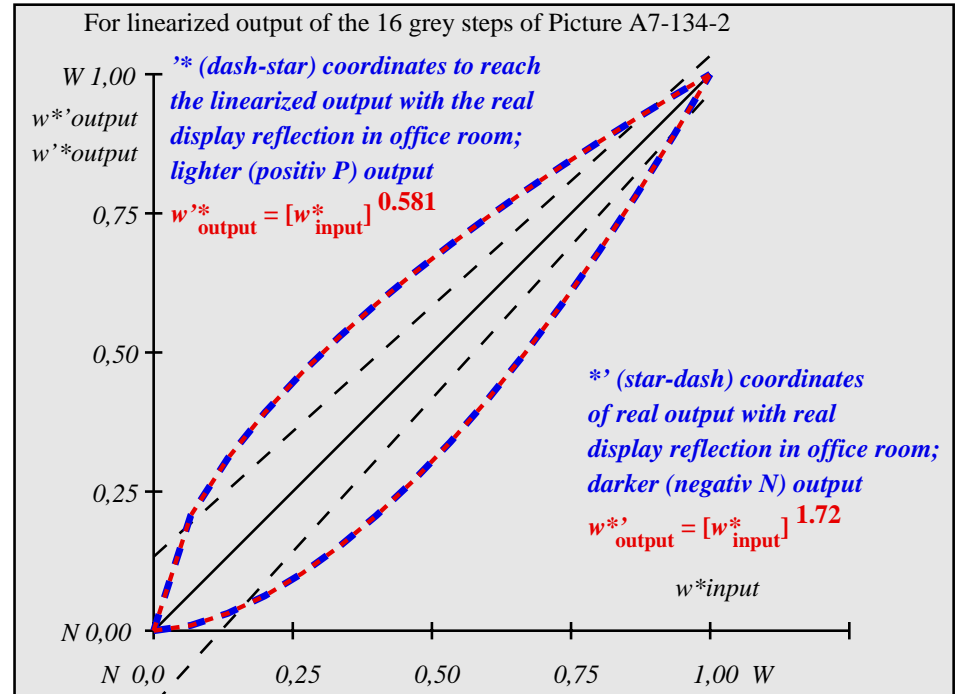
Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G

Mean lightness difference (16 steps)  $\Delta E^*_{CIELAB} = 8.5$

Mean lightness difference (5 steps)  $\Delta L^*_{CIELAB} = 6.8$

Mean colour reproduction index:  $R^*_{ab,m} = 63$

fel40-3N-134-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



fel41-3N-134-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y^*_{intended}$ (absolute)	26.8/5.0	31.4/6.8	36.0/9.0	40.6/11.6	45.1/14.6	49.7/18.2	54.3/22.2	58.8/26.9	63.4/32.1	68.0/38.0	72.6/44.5	77.1/51.7	81.7/59.7	86.3/68.5	90.8/78.1	95.4/88.6
$w^* w^* w^*$ setrgb	[Color bars]															
$g_N = 1.43$	[Color bars]															
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)	[Color bars]															
$w^*_{intended}$	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	0,021	0,056	0,1	0,152	0,208	0,27	0,337	0,407	0,482	0,561	0,642	0,727	0,816	0,906	1,0

fel40-7N-134-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

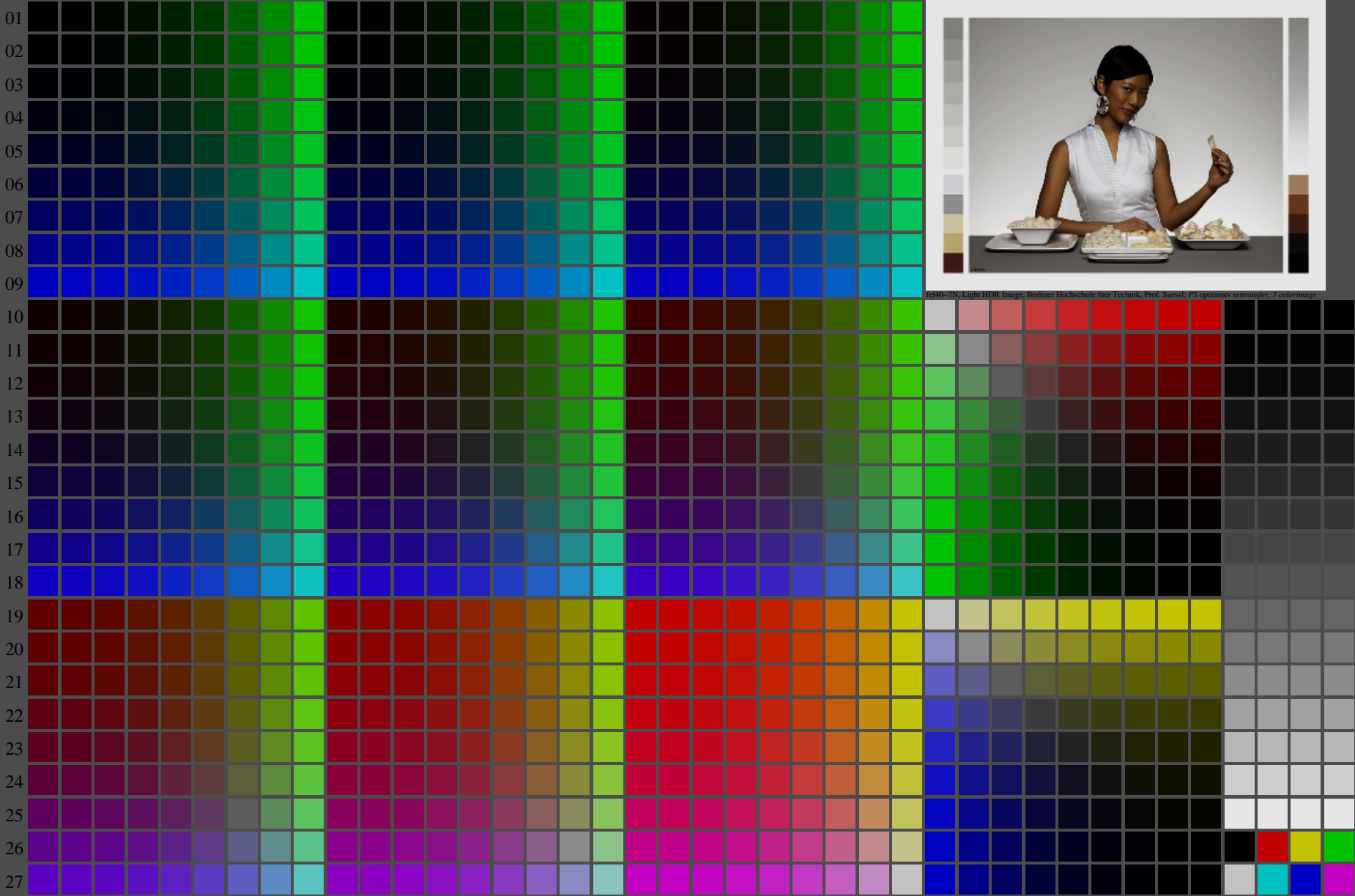
TUB-test chart fel4; fel4: In-output relation according to ISO 9241-306; 1MR, DH 000n/w/cmy0/rgb  
Viewing Y contrast  $Y_W:Y_N = 88,9:5$ ;  $Y_N$  range 3,75 to <7,5, L-HDR;  $\gamma_R = 0,9$  ->rgb\*d, 130-2:

<http://farbe.li.tu-berlin.de/fel4/fel410fa.txt/.ps>; only vector graphic VG;  
see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

see similar files of the whole serie: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/506/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt/.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n



fel40-7N, Light HDR Image, Berliner Hochschule fuer Technik, Prof. Suesst, PS operators selbster, 3 colorimage

fel40-7N, Page 1/16, Test chart 2G with 40x27=1080 colours; digital equidistant 9 or 16 step colour scales; Colour data in column (A-n):  $rgb^* (A_n)$ , colorm = 1, xchart = 40, pchart = 0

TUB-test chart fel4; fel4: Test chart uh\_d09 with 40x27=1080 colours; 1MR, DH 000n/w/cmy0/rgb  
Digital equidistant 9 or 16 step colour scales, L-HDR;  $\gamma_R=0,9$   
-> $rgb^*_d, 130-0$



see similar files of the whole serie: <http://farbe.li.tu-berlin.de/fels.htm>  
 technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
 or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /.ps  
 application for evaluation and measurement of display or print output  
 TUB material: code=rh4ta

i	LAB*ref	l*out	LAB*out	LAB*out/c-ref	$\Delta E^*$
1	37.99	0.0	0.0	37.99 0.0 0.0	0.01
2	41.81	0.0	0.01	38.32 0.0 0.0	3.49
3	45.64	0.0	0.02	39.23 0.0 0.0	6.41
4	49.47	0.0	0.05	40.68 0.0 0.0	8.79
5	53.3	0.0	0.08	42.65 0.0 0.0	10.65
6	57.13	0.0	0.12	45.11 0.0 0.0	12.02
7	60.96	0.0	0.18	48.06 0.0 0.0	12.9
8	64.78	0.0	0.24	51.48 0.0 0.0	13.3
9	68.61	0.0	0.3	55.38 0.0 0.0	13.23
10	72.44	0.0	0.38	59.74 0.0 0.0	12.7
11	76.27	0.0	0.46	64.56 0.0 0.0	11.7
12	80.1	0.0	0.55	69.84 0.0 0.0	10.26
13	83.93	0.0	0.65	75.57 0.0 0.0	8.36
14	87.75	0.0	0.76	81.74 0.0 0.0	6.01
15	91.58	0.0	0.88	88.35 0.0 0.0	3.23
16	95.41	0.0	1.0	95.41 0.0 0.0	0.01
17	37.99	0.0	0.0	37.99 0.0 0.0	0.01
18	52.34	0.0	0.07	42.11 0.0 0.0	10.23
19	66.7	0.0	0.27	53.37 0.0 0.0	13.33
20	81.05	0.0	0.58	71.23 0.0 0.0	9.82
21	95.41	0.0	1.0	95.41 0.0 0.0	0.01

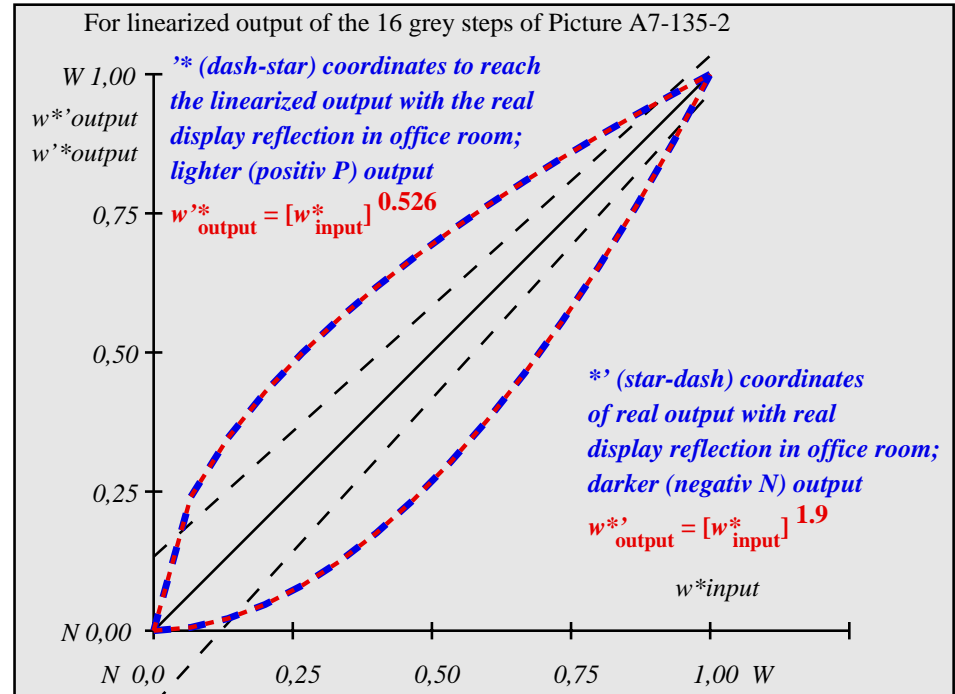
**Start output S1**  
**Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G**

Mean lightness difference (16 steps)  
 $\Delta E^*_{CIELAB} = 8.3$

Mean lightness difference (5 steps)  
 $\Delta L^*_{CIELAB} = 6.7$

Mean colour reproduction index:  $R^*_{ab,m} = 64$

fel40-3N-135-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



fel41-3N-135-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y^*_{intended}$ (absolute)	38.0/10.1	41.8/12.4	45.6/15.0	49.5/18.0	53.3/21.3	57.1/25.1	61.0/29.2	64.8/33.8	68.6/38.8	72.4/44.3	76.3/50.3	80.1/56.9	83.9/63.9	87.8/71.6	91.6/79.8	95.4/88.6
$w^* w^* w^*$ setrgb	[Color patches]															
$g_N=1.6$	[Color patches]															
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)	[Color patches]															
$w^*_{intended}$	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	0,013	0,04	0,076	0,121	0,172	0,231	0,296	0,365	0,442	0,523	0,608	0,7	0,796	0,895	1,0

fel40-7N-135-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

TUB-test chart fel4; fel4: In-output relation according to ISO 9241-306; 1MR, DH 000n/w/cmy0/rgb  
 Viewing Y contrast  $Y_W:Y_N=88,9:10$ ;  $Y_N$  range 7,5 to <15, L-HDR;  $\gamma_R=0,9$  ->rgb\*d, 130-2:

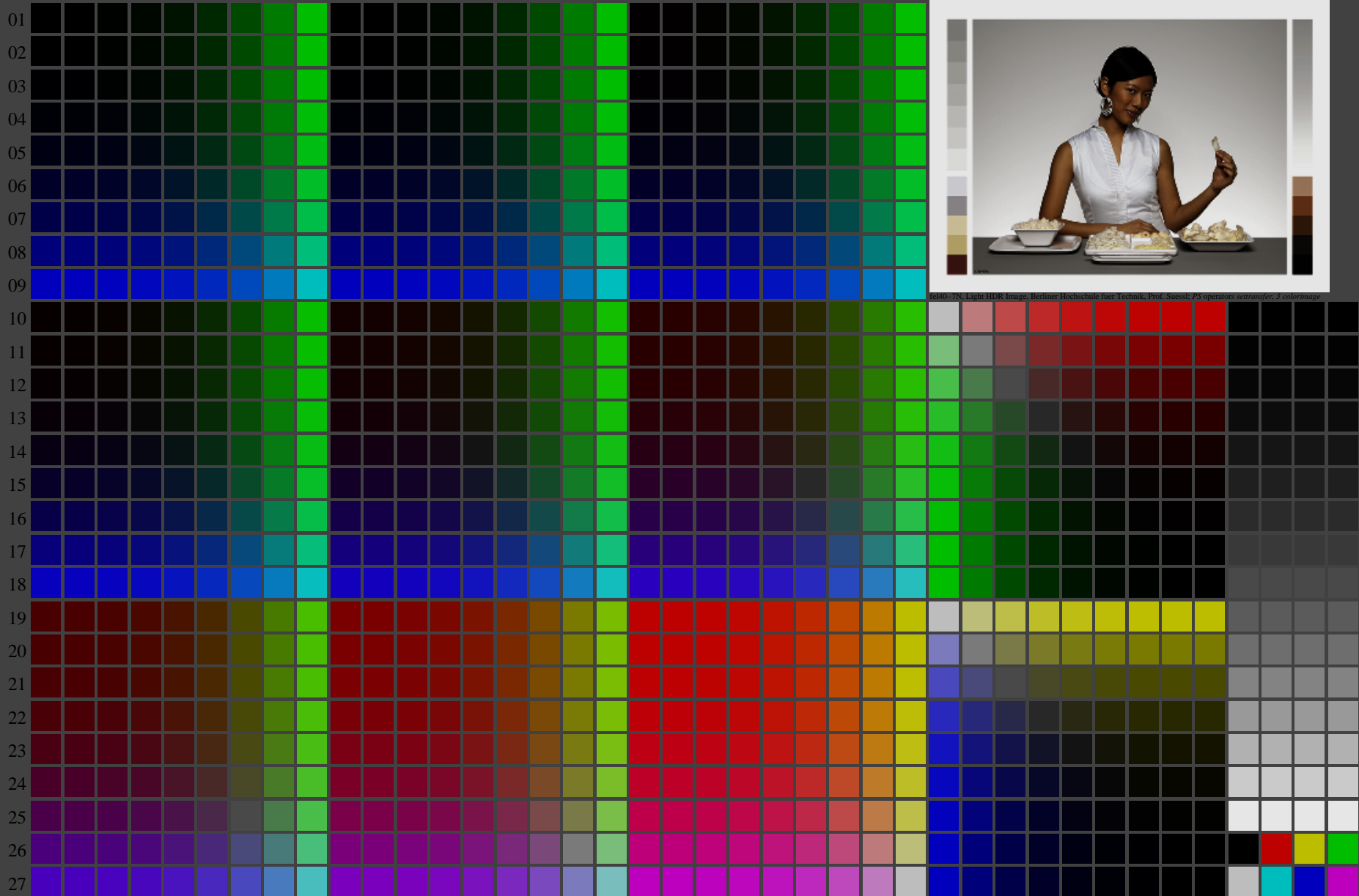


<http://farbe.li.tu-berlin.de/fel4/fel410fa.txt> /.ps; only vector graphic VG;  
see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

see similar files of the whole series: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n



fel40-7N, Light HDR Image, Berliner Hochschule fuer Technik, Prof. Suesst, PS operators selbster, 3 colorimage

fel40-7N, Page 1/16, Test chart 2G with 40x27=1080 colours; digital equidistant 9 or 16 step colour scales; Colour data in column (A-n):  $rgb^* (A_n)$ , colorm = 1, xchart = 48, pchart = 0

TUB-test chart fel4; fel4: Test chart uh\_d09 with 40x27=1080 colours; 1MR, DH 000n/w/cmy0/rgb  
Digital equidistant 9 or 16 step colour scales, L-HDR;  $\gamma_R=0,9$   
-> $rgb^*_d, 130-0$ :



<http://farbe.li.tu-berlin.de/fel4/fel410fa.txt> /.ps; only vector graphic VG;  
see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

see similar files of the whole serie: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta

i	LAB*ref	l*out	LAB*out	LAB*out/c-ref	$\Delta E^*$
1	52.02	0.0	0.0	52.02 0.0 0.0	0.01
2	54.91	0.0	0.0	52.17 0.0 0.0	2.74
3	57.8	0.0	0.02	52.67 0.0 0.0	5.13
4	60.7	0.0	0.04	53.54 0.0 0.0	7.15
5	63.59	0.0	0.06	54.79 0.0 0.0	8.8
6	66.48	0.0	0.1	56.43 0.0 0.0	10.05
7	69.37	0.0	0.15	58.47 0.0 0.0	10.9
8	72.27	0.0	0.2	60.91 0.0 0.0	11.36
9	75.16	0.0	0.27	63.75 0.0 0.0	11.41
10	78.05	0.0	0.35	67.01 0.0 0.0	11.04
11	80.95	0.0	0.43	70.69 0.0 0.0	10.26
12	83.84	0.0	0.52	74.78 0.0 0.0	9.06
13	86.73	0.0	0.63	79.3 0.0 0.0	7.43
14	89.62	0.0	0.74	84.24 0.0 0.0	5.39
15	92.52	0.0	0.87	89.61 0.0 0.0	2.91
16	95.41	0.0	1.0	95.41 0.0 0.0	0.01
17	52.02	0.0	0.0	52.02 0.0 0.0	0.01
18	62.87	0.0	0.06	54.44 0.0 0.0	8.42
19	73.71	0.0	0.24	62.28 0.0 0.0	11.43
20	84.56	0.0	0.55	75.87 0.0 0.0	8.69
21	95.41	0.0	1.0	95.41 0.0 0.0	0.01

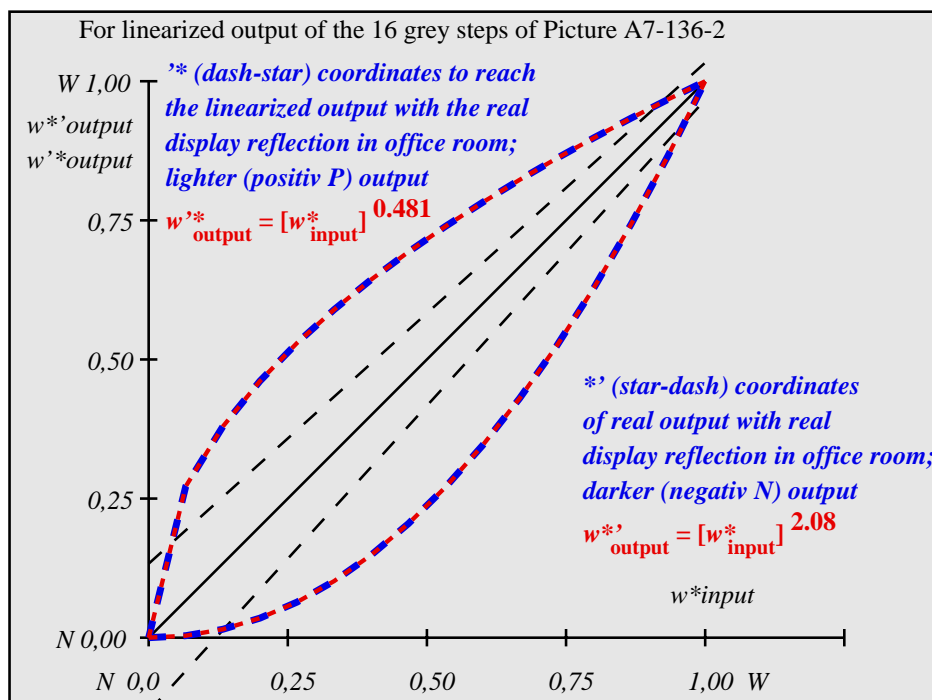
**Start output S1**  
**Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G**

Mean lightness difference (16 steps)  
 $\Delta E^*_{CIELAB} = 7.1$

Mean lightness difference (5 steps)  
 $\Delta L^*_{CIELAB} = 5.7$

Mean colour reproduction index:  $R^*_{ab,m} = 69$

fel40-3N-136-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



fel41-3N-136-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y^*_{intended}$ (absolute)	52.0/20.2	54.9/22.8	57.8/25.8	60.7/28.9	63.6/32.3	66.5/36.0	69.4/39.9	72.3/44.1	75.2/48.5	78.1/53.3	80.9/58.4	83.8/63.8	86.7/69.5	89.6/75.5	92.5/81.9	95.4/88.6
$w^* w^* w^*$ setrgb																
$g_N=1.82$																
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	0,007	0,026	0,054	0,091	0,135	0,189	0,25	0,319	0,395	0,479	0,569	0,666	0,771	0,882	1,0

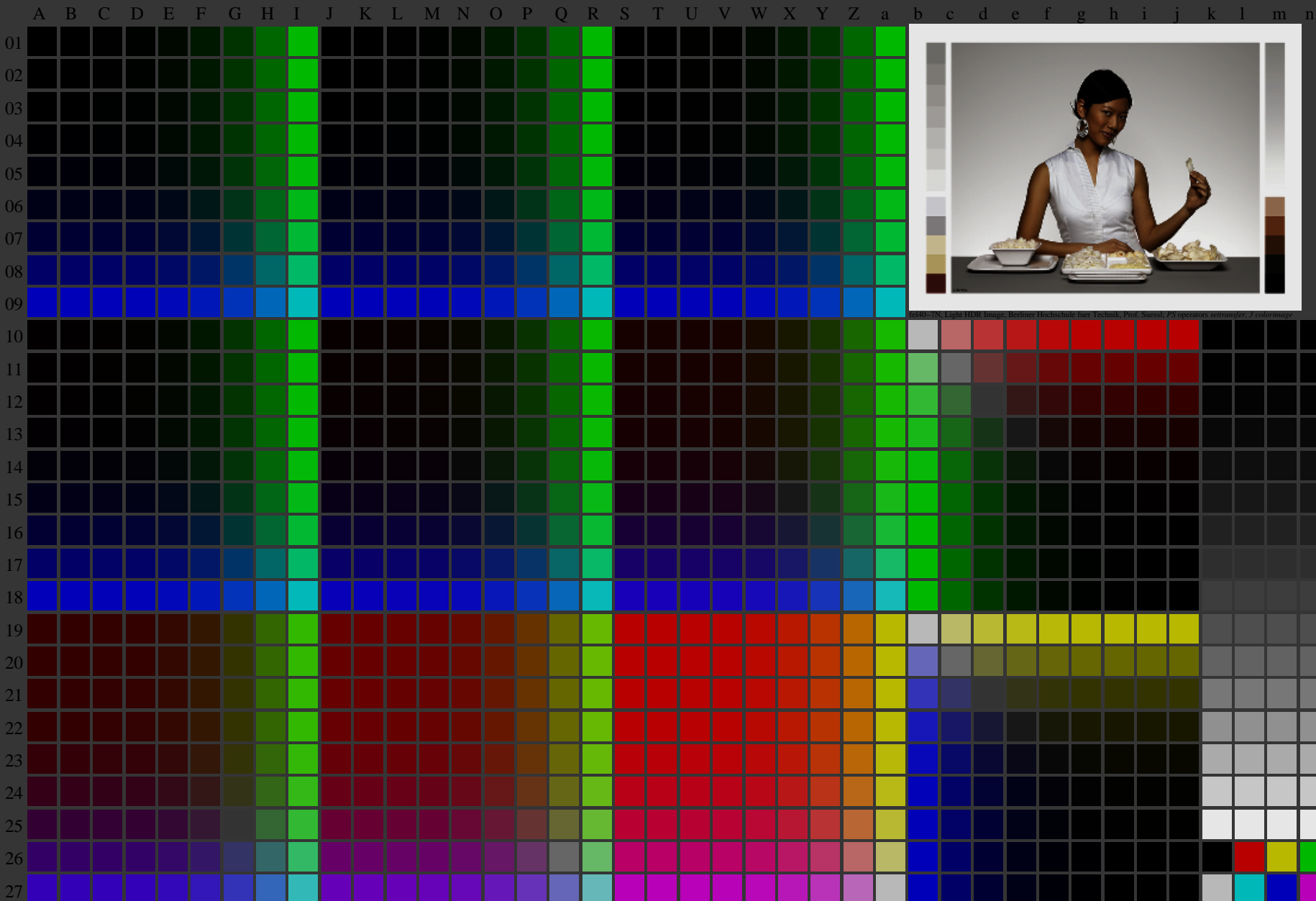
fel40-7N-136-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

TUB-test chart fel4; fel4: In-output relation according to ISO 9241-306; 1MR, DH 000n/w/cmy0/rgb  
Viewing Y contrast  $Y_W:Y_N=88,9:20$ ;  $Y_N$  range 15 to <30, L-HDR;  $\gamma_R=0,9$  ->rgb\*d, 130-2:

<http://farbe.li.tu-berlin.de/fel4/fel410fa.txt> /.ps; only vector graphic VG;  
see separate images of this page: <http://farbe.li.tu-berlin.de/fel4/fel4.htm>

see similar files of the whole serie: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta



fel40-7N, Light HDR Image, Berliner Hochschule fuer Technik, Prof. Süssel, PS operators seltrauner, 3 colorimage

fel40-7N, Page 1/16, Test chart 2G with 40x27=1080 colours; digital equidistant 9 or 16 step colour scales; Colour data in column (A-n):  $rgb^* \cdot (A_n)$ ,  $colorm = 1$ ,  $xchart = 56$ ,  $pchart = 0$

TUB-test chart fel4; fel4: Test chart uh\_d09 with 40x27=1080 colours; 1MR, DH 000n/w/cmy0/rgb  
Digital equidistant 9 or 16 step colour scales, L-HDR;  $\gamma_R=0,9$   
-> $rgb^*_d, 130-0$ :

http://farbe.li.tu-berlin.de/fel4/fel410fa.txt /ps; only vector graphic VG;  
see separate images of this page: http://farbe.li.tu-berlin.de/fel4/fel41m

TUB registration: 20240301-fel4/fel410fa.txt /ps  
application for evaluation and measurement of display or print output  
TUB material: code rha4ta

see similar files of the whole serie: http://farbe.li.tu-berlin.de/fels.htm  
technical information: http://farbe.li.tu-berlin.de/A/33872E.html  
or http://standards.iso.org/iso/9241/306/ed-2/index.html

Table with columns A through Z and rows 01 through 27. Each cell contains a 10-digit color code (e.g., 0000A0, 0001A0, etc.) representing color values for the chart.

fel4-70, Page 2/24, Test chart G with 40x27=1080 colours; digital equidistant 9 or 16 step colour scales; Colour data in column (A-n): rgb\*(A, j + k26, 200n\*(k), w\*(l), nnn0\*(m), www\*(n), colorm = 1, xchart = 1

TUB-test chart fel4; fel4: Test chart uh\_d09 with 40x27=1080 colours; 1MR, DH 000n/w/cmy0/rgb  
Digital equidistant 9 or 16 step colour scales, L-XYZ;  $\gamma_R=0.9 \rightarrow \text{rgb}^*_d, 130:1$

l=3361

CYN(1,2,25:1);gp=1.0;gN=2.1

http://farbe.li.tu-berlin.de/fel4/fel41n.pdf



see similar files of the whole serie: <http://farbe.li.tu-berlin.de/fels.htm>  
technical information: <http://farbe.li.tu-berlin.de/A/33872E.html>  
or <http://standards.iso.org/iso/9241/306/ed-2/index.html>

TUB registration: 20240301-fel4/fel410fa.txt /.ps  
application for evaluation and measurement of display or print output  
TUB material: code=rh4ta

i	LAB*ref	l*out	LAB*out	LAB*out/c-ref	$\Delta E^*$
1	69.7	0.0	69.7	0.0	0.01
2	71.41	0.0	69.75	-1.65	1.66
3	73.13	0.0	69.97	-3.15	3.16
4	74.84	0.0	70.37	-4.46	4.47
5	76.55	0.0	70.99	-5.55	5.56
6	78.27	0.0	71.84	-6.41	6.42
7	79.98	0.0	72.94	-7.03	7.04
8	81.7	0.0	74.29	-7.4	7.41
9	83.41	0.0	75.91	-7.49	7.5
10	85.12	0.0	77.8	-7.31	7.32
11	86.84	0.0	79.98	-6.85	6.86
12	88.55	0.0	82.45	-6.09	6.1
13	90.27	0.0	85.23	-5.03	5.04
14	91.98	0.0	88.3	-3.67	3.68
15	93.7	0.0	91.7	-1.99	2.0
16	95.41	0.0	95.41	0.0	0.01
17	69.7	0.0	69.7	0.0	0.01
18	76.13	0.0	70.82	-5.3	5.31
19	82.55	0.0	75.07	-7.48	7.49
20	88.98	0.0	83.12	-5.85	5.86
21	95.41	0.0	95.41	0.0	0.01

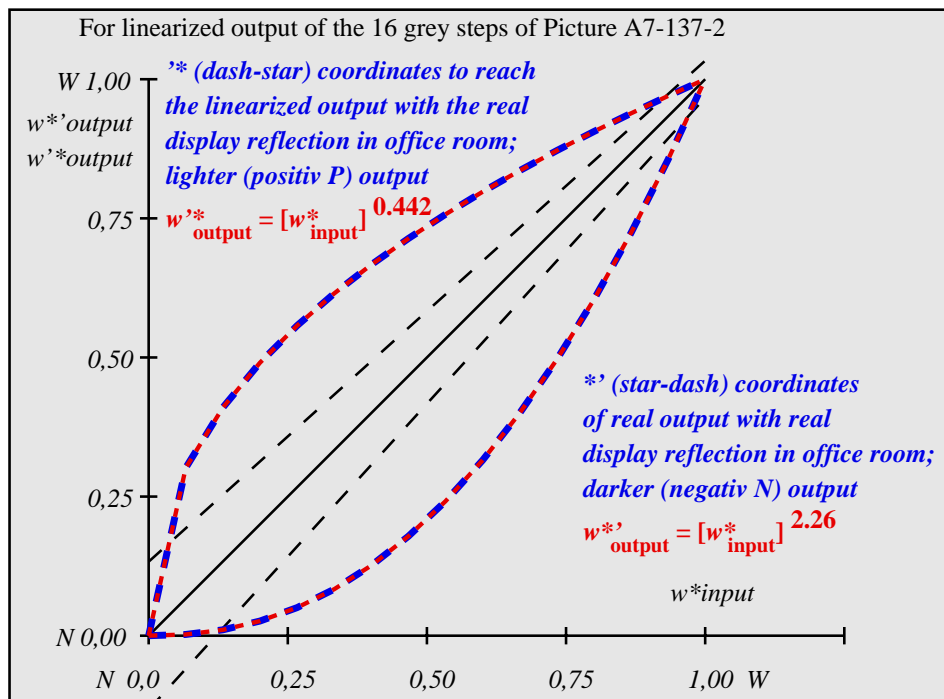
**Start output S1**  
**Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G**

Mean lightness difference (16 steps)  
 $\Delta E^*_{CIELAB} = 4.6$

Mean lightness difference (5 steps)  
 $\Delta L^*_{CIELAB} = 3.7$

Mean colour reproduction index:  $R^*_{ab,m} = 80$

fel40-3N-137-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



fel41-3N-137-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

$L^*/Y^*_{intended}$ (absolute)	69.7/40.3	71.4/42.8	73.1/45.4	74.8/48.0	76.6/50.8	78.3/53.7	80.0/56.6	81.7/59.7	83.4/62.9	85.1/66.3	86.8/69.7	88.6/73.2	90.3/76.9	92.0/80.7	93.7/84.6	95.4/88.6
$w^* w^* w^*$ setrgb																
$g_N=2.11$																
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	0,003	0,014	0,034	0,062	0,099	0,145	0,201	0,266	0,341	0,426	0,52	0,625	0,74	0,864	1,0

fel40-7N-137-2: 16 visual equidistant  $L^*$ -grey steps; PS operator:  $w^* w^* w^*$  setrgbcolor

TUB-test chart fel4; fel4: In-output relation according to ISO 9241-306; 1MR, DH 000n/w/cmy0/rgb  
Viewing Y contrast  $Y_W:Y_N=88,9:40$ ;  $Y_N$  range 30 to <60, L-HDR;  $\gamma_R=0,9$  ->rgb\*d, 130-2: