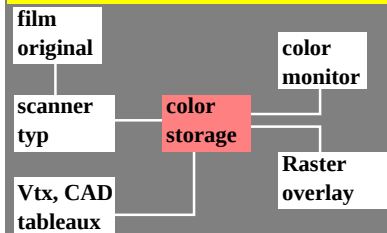


http://130.149.60.45/~farbmetrik/SN23/SN23L0NP.PDF /.PS; start output
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 1/1

diagram for interfaces in the area image handling – printing



SN230-1, B6_28

sensation scaling functions lightness L^* and tristimulus value Y

adaptation on surround white:

$$L^* = 100 (Y / 100)^{1/2,0}$$

adaptation on surround gray:

$$L^* = 100 (Y / 100)^{1/2,4}$$

description with CIELAB 1976:

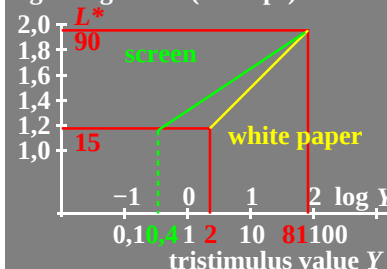
$$L^* = 116 (Y / 100)^{1/3,0} - 16$$

adaptation on surround black:

$$L^* = 100 (Y / 100)^{1/3,0}$$

SN230-2, B6_29

log L^* lightness (75 steps)



SN230-3, B6_30

colorness luminous value N^* L^* $Y = (L^*/10)^2 Y = (L^*/10)^3 / 9$

	N^*	L^*	$Y = (L^*/10)^2 Y = (L^*/10)^3 / 9$	Y_{max}	$Y_{normalized} (=Y_{paper})$
0	90	81	Y_{max}	81,0	
2	80	64		56,9	
4	70	49		38,1	
6	60	36		24,0	
8	50	25		13,9	
10	40	16		7,1	
12	30	9		3,0	
14	20	4		0,9	
15	15	2,25	Y_{min}	0,4	

SN230-4, B6_31

linear scan area	lightness- area Y	lightness color L^* h^* no. d
76,6 ... 85,5	87,5 ... 92,4	90 FFF 4095
60,1 ... 68,1	77,5 ... 82,4	80 DDD 3549
45,6 ... 52,5	67,5 ... 72,4	70 BBB 3003
33,1 ... 39,0	57,5 ... 62,4	60 999 2457
22,6 ... 27,5	47,5 ... 52,4	50 777 1911
14,1 ... 18,0	37,5 ... 42,4	40 555 1365
7,6 ... 10,5	27,5 ... 32,4	30 333 819
3,1 ... 5,0	17,5 ... 22,4	20 111 273
1,6 ... 3,0	12,5 ... 17,4	15 000 0

SN230-5, B6_32

whiteness $r_a^* g_a^* b_a^*$	black- ness N^*	tristimulus value Y	cover- age b
15,15,15	0	81 Y_{max}	0,00
13,13,13	2	64	0,22
11,11,11	4	49	0,41
9, 9, 9	6	36	0,57
7, 7, 7	8	25	0,71
5, 5, 5	10	16	0,83
3, 3, 3	12	9	0,91
1, 1, 1	14	4	0,98
0, 0, 0	15	2,25 Y_{min}	1,00

SN230-6, B6_33

whiteness $r_a^* g_a^* b_a^*$	yellow- ness Y^*	tristimulus value Y	cover- age b
15,15,15	0	81 Y_{max}	0,00
15,15,13	2		0,22
15,15,11	4		0,41
15,15, 9	6		0,57
15,15, 7	8		0,71
15,15, 5	10		0,83
15,15, 3	12		0,91
15,15, 1	14		0,98
15,15, 0	15	76 Y_{min}	1,00

SN230-7, B6_34

whiteness $r_a^* g_a^* b_a^*$	black- ness N^*	tristimulus value Y	cover- age b
15,15,15	0	81 Y_{max}	0,00
13,13,13	2	64	0,22
11,11,11	4	49	0,41
9, 9, 9	6	36	0,57
7, 7, 7	8	25	0,71
5, 5, 5	10	16	0,83
3, 3, 3	12	9	0,91
1, 1, 1	14	4	0,98
0, 0, 0	15	2,25 Y_{min}	1,00

SN231-8, B7_03

point amount:
 $n = 16^2 - 15^2$
 $= 31$



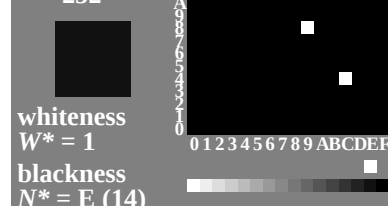
SN231-1, B6_36_1

point amount:
 $n = 16^2 - 8^2$
 $= 192$



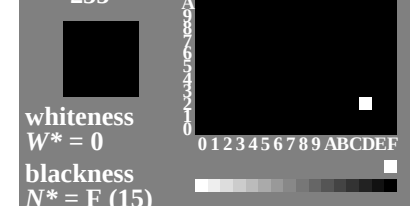
SN231-2, B6_36_2

point amount:
 $n = 16^2 - 2^2$
 $= 252$



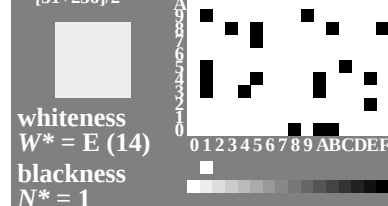
SN231-3, B6_36_3

point amount:
 $n = 16^2 - 1^2$
 $= 255$



SN231-4, B6_36_4

point amount:
 $n = [16^2 - 15^2 + 256] / 2$
 $= [31 + 256] / 2$



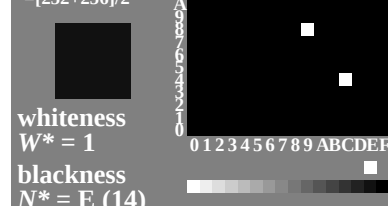
SN231-5, B6_36_1

point amount:
 $n = [16^2 - 8^2 + 256] / 2$
 $= [192 + 256] / 2$



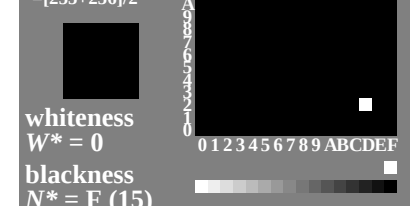
SN231-6, B6_36_2

point amount:
 $n = [16^2 - 2^2 + 256] / 2$
 $= [252 + 256] / 2$



SN231-7, B6_36_3

point amount:
 $n = [16^2 - 1^2 + 256] / 2$
 $= [255 + 256] / 2$



SN231-8, B6_36_4

TUB-test chart SN23; Colour scaling
Lightness and scaling functions, area coverage

input: w/rgb/cmyk -> w/rgb/cmyk_d
output: no change compared

TUB registration: 20130201-SN23/SN23L0NP.PDF /.PS
application for measurement of display output

TUB material: code=rha4ta