UGRA
Display Analysis & Certification Tool
Report

Basics

Date:	2011-5-15 22:10:45
Report-Version:	v1.3.1
Monitor-Name:	\\.\DISPLAY1
Profile:	C:/Windows/.../EIZO_FlexScan_S2433W_120cd_13_05_2011.icc
Created:	2011-5-13 22:53
Measurement device:	DTP94-LCD mode (Wide Gamut S-PVA (generic))

Summary

The monitor has passed the certification according to the UGRA DACT specifications.

Calibration

White Point	yes
Gray balance	yes
Profile quality	yes

Softproofing

MultiColor, HighBody	yes
Offset/Gravure Paper Type 1/2	yes
Offset on uncoated paper	yes
Newspaper Printing	yes
sRGB	yes
AdobeRGB	yes
ECI-RGB	yes

Diagram

WhitePoint 

Gray Balance 

Profile Quality 

Softproof Gamut 

Whitepoint

The whitepoint should be as close as possible to the black body curve and the calibration target.The maximum allowed distance to the target whitepoint is DeltaE 2.0.

XYZ:	114.80 120.51 131.61
XYZ (normalized):	95.27 100.00 109.21
Luminance:	120.5 Cd/m2
Next Temperature:	6498 Kelvin
Assumed Target Whitepoint:	6500 Kelvin
Distance to assumed Target Whitepoint:	0.4 deltaE

Blackpoint

The blackpoint is not defined in ISO 12646. Therefore UDACT does only measure but not assess it.

Luminance:	0.1 Cd/m2
Chromaticity:	0.3 Chroma (Lab)

Gray balance

Average and maximum calculation will respect measurements with 1% minimum luminance only. The maximum allowed deviations to comply with this test are an average of DeltaC 1.0 and a range of DeltaC 2.0.

%	Kelvin	Cd/m2	L	Chroma	Gamma
0	8292	0.11	0.80	0.27	
5	7194	0.41	3.07	0.67	2.01
10	7050	0.90	6.78	0.74	2.17
15	6771	1.63	11.65	1.02	2.29
20	6296	3.16	18.47	1.03	2.28
25	6496	5.20	24.67	0.65	2.28
30	6624	7.95	30.87	0.41	2.27
35	6488	11.39	36.85	0.20	2.26
40	6520	15.67	42.77	0.79	2.24
45	6511	19.95	47.70	0.09	2.26
50	6503	25.34	52.98	0.36	2.26
55	6434	31.47	58.15	0.67	2.25
60	6489	38.18	63.08	0.52	2.25
65	6485	45.72	67.98	0.16	2.26
70	6476	54.12	72.83	0.40	2.26
75	6474	63.26	77.57	0.34	2.24
80	6533	73.53	82.39	0.24	2.21
85	6489	82.82	86.37	0.19	2.31
90	6517	94.60	91.01	0.20	2.29
95	6485	107.39	95.63	0.37	2.22
100	6498	120.51	100.00	0.00	
Average	6505			0.43	2.24
Range				1.79	
Max				1.03	

Tone values = 94.4%

Through the calibration of a display tone values can be lost. A display for the printing industry should show at least 95% of the incoming tone values.

Profile Quality

This test displays and measures RGB values and compares them with the transformation of the profile. The maximum allowed deviations to comply with this test are an average of DeltaE 3.0 and a maximum of DeltaE 6.0.

The assumed chromatic adaptation is: Bradford

RGB	Lab	deltaLab	deltaE
0 0 0	0.8 -0.1 -0.3	-0.8 0.1 0.3	0.8
0 0 128	13.6 31.2 -62.8	1.4 -3.3 0.3	3.6
0 0 255	35.7 44.5 -103.6	-0.4 1.8 -0.0	1.8
0 128 0	42.8 -75.0 45.1	0.7 1.4 1.6	2.2
0 128 128	45.1 -50.5 -13.3	1.0 0.4 0.3	1.1
0 170 255	64.3 -36.5 -56.9	0.5 0.8 1.2	1.6
0 255 0	82.5 -123.3 77.5	0.1 1.4 -0.2	1.4
0 255 170	84.2 -104.8 18.7	0.2 1.1 -0.3	1.1
0 255 255	87.0 -84.8 -21.8	-0.0 1.6 0.3	1.7
85 85 85	34.9 0.2 0.1	0.9 -0.2 -0.1	0.9
128 0 0	30.4 55.5 46.2	0.4 0.4 2.4	2.4
128 0 128	34.2 59.2 -27.8	0.8 -1.5 -0.8	1.9
128 128 0	51.4 -8.7 57.1	0.5 1.4 1.6	2.2
128 128 128	53.4 -0.0 0.2	0.6 0.0 -0.2	0.7
128 128 255	60.5 18.4 -62.5	0.0 0.5 0.5	0.7
128 255 128	86.8 -78.5 44.4	0.2 1.2 -0.4	1.3
170 0 255	53.1 73.9 -73.8	-0.2 0.3 0.0	0.3
170 170 170	69.6 0.6 -0.2	0.6 -0.6 0.2	0.9
170 255 0	88.6 -62.0 86.4	0.1 1.5 -0.1	1.5
170 255 255	92.7 -40.2 -12.2	0.0 0.7 0.1	0.7
255 0 0	61.6 93.9 87.7	0.0 -1.2 -1.4	1.9
255 0 170	64.3 95.9 -4.3	0.3 -2.1 -1.3	2.5
255 0 255	68.6 95.9 -47.2	-0.1 -0.4 -0.2	0.4
255 128 128	73.1 62.2 32.5	0.1 -1.0 -1.4	1.7
255 170 0	79.1 37.9 88.7	0.1 -0.7 -0.4	0.8
255 170 255	83.8 46.9 -24.0	0.0 -0.2 0.2	0.3
255 255 0	96.6 -12.0 98.3	-0.1 -0.2 -0.9	0.9
255 255 170	97.9 -6.3 41.0	0.1 -0.6 -0.7	0.9
255 255 255	100.0 0.0 0.0	0.0 0.0 0.0	0.0
170 85 85	49.7 46.4 23.9	0.4 -0.8 -0.7	1.1
85 170 85	59.7 -59.0 32.6	0.7 1.3 0.2	1.5
85 85 170	39.7 15.8 -46.9	1.0 -1.7 0.7	2.1
85 170 170	62.1 -42.9 -12.7	0.8 0.2 0.5	0.9
170 85 170	52.6 51.3 -25.1	0.7 -1.5 -0.0	1.7
170 170 85	67.6 -6.9 45.0	0.5 0.0 -0.0	0.6
Average			1.3
Maximum			3.6

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	96 %
AdobeRGB	94 %
ECI-RGB v1.0	91 %

ISO-Gamut

This test displays and measures Lab values and compares them with the reference. The maximum allowed deviations to comply with this test are an average of DeltaE 4.0 and a minimum Gamut volume of 90% for ISOcoated.

Reference	Lab	deltaLab
55.0 -37.0 -50.0	54.6 -31.4 -50.1	5.6
66.9 -24.7 -37.1	66.3 -24.3 -38.4	1.5
79.7 -12.5 -21.8	79.3 -12.0 -22.6	1.1
48.0 74.0 -3.0	47.8 75.0 -2.1	1.4
60.8 50.6 -6.7	60.6 51.1 -5.7	1.2
76.4 25.8 -6.9	76.0 26.7 -7.4	1.1
89.0 -5.0 93.0	89.1 -4.6 91.9	1.2
90.3 -4.7 62.6	90.5 -4.6 63.4	0.9
92.2 -3.5 31.1	92.1 -2.7 31.7	1.0
53.1 37.7 28.9	52.6 38.2 29.4	0.8
41.5 22.7 16.8	41.1 23.1 16.8	0.6
31.9 40.0 24.0	31.7 40.6 24.1	0.7
32.5 44.4 -1.8	31.9 46.1 -0.8	2.0
51.3 1.3 44.5	50.8 0.8 44.6	0.7
34.6 -36.4 13.9	33.7 -37.7 13.5	1.5
36.0 -26.2 -20.9	34.9 -25.9 -21.5	1.3
20.9 9.6 -23.6	20.0 10.8 -23.9	1.5
89.0 0.0 -1.8	88.5 0.6 -2.2	0.9
82.8 0.0 -1.7	82.7 -0.3 -1.6	0.3
69.3 0.0 -1.4	68.8 0.4 -1.4	0.6
54.1 0.0 -1.0	53.4 0.3 -1.4	0.9
36.6 -0.0 -0.5	36.0 0.1 -0.5	0.6
16.0 0.0 0.0	14.9 0.3 -0.7	1.4
24.0 22.0 -46.0	22.6 25.0 -46.8	3.4
40.9 17.9 -36.6	40.3 19.8 -36.7	2.0
63.7 10.3 -23.8	62.9 11.9 -24.6	1.9
47.0 68.0 48.0	46.8 69.0 48.4	1.1
58.5 47.1 37.9	58.4 46.9 38.7	0.9
74.2 22.9 21.4	74.0 23.6 21.6	0.7
50.0 -65.0 27.0	49.4 -66.6 26.5	1.8
62.1 -39.8 21.0	61.4 -39.8 20.8	0.8
77.0 -19.1 11.0	76.4 -19.0 10.6	0.7
71.2 18.8 17.3	70.7 19.8 16.7	1.2
71.2 22.2 73.1	71.0 22.9 72.9	0.8
47.7 71.2 16.2	47.4 72.0 17.6	1.6
38.0 55.4 -20.9	37.6 56.7 -20.4	1.4
73.7 -22.8 67.6	73.2 -23.3 67.2	0.7
52.3 -52.3 -20.2	51.2 -51.0 -21.0	1.9
43.3 -17.0 -48.6	42.3 -16.1 -48.9	1.4
95.0 0.0 -2.0	95.1 0.4 -1.9	0.4
88.5 -0.4 -3.1	88.0 0.3 -3.9	1.1
82.0 -0.9 -4.1	81.8 -1.2 -4.1	0.3
67.7 -2.0 -4.4	67.2 -2.2 -4.3	0.5
52.2 -2.5 -3.5	51.7 -2.8 -3.5	0.6
37.5 -3.9 -3.1	36.8 -3.7 -3.0	0.7
26.3 -6.8 -3.4	25.2 -5.5 -4.0	1.8
Average		1.2
Gamut-Volume		100 %

Measurement Data

This table lists all RGB measurements. The XYZ values represent the values from the measurement device.

RGB	XYZ	RGB	XYZ
255 255 255	114.80 120.51 131.61	85 85 170	16.95 13.84 48.46
0 0 0	0.10 0.11 0.14	85 170 170	24.23 37.26 52.49
12 12 12	0.37 0.41 0.46	170 85 170	39.01 24.91 48.95
25 25 25	0.85 0.90 1.05	170 170 85	39.05 44.69 15.73
38 38 38	1.57 1.63 1.88	0 145 215	21.44 28.17 83.67
51 51 51	3.08 3.16 3.47	101 172 227	35.79 44.05 96.70
63 63 63	5.00 5.20 5.76	168 202 236	60.02 67.48 107.61
76 76 76	7.56 7.95 8.81	186 13 122	38.80 19.51 23.43
89 89 89	10.83 11.39 12.39	198 105 159	50.54 34.24 43.25
102 102 102	14.81 15.67 16.95	215 169 201	69.81 60.02 75.67
114 114 114	19.01 19.95 21.84	240 228 0	78.77 88.33 10.98
127 127 127	24.06 25.34 27.55	240 232 106	82.73 92.14 27.91
140 140 140	30.17 31.47 34.39	239 235 172	89.11 96.78 60.40
153 153 153	36.52 38.18 41.91	171 100 82	33.08 24.37 11.54
165 165 165	43.53 45.72 49.79	125 85 74	17.45 14.13 8.93
178 178 178	51.46 54.12 58.74	116 48 46	13.21 8.11 3.24
191 191 191	60.41 63.26 69.12	118 42 82	14.62 8.32 9.64
204 204 204	70.01 73.53 80.63	133 122 48	21.20 22.74 5.64
216 216 216	79.00 82.82 90.51	47 96 60	4.98 9.52 6.12
229 229 229	90.15 94.60 103.65	38 95 116	7.24 10.42 21.47
242 242 242	102.54 107.39 117.47	52 48 86	4.49 3.69 10.53
0 0 128	4.69 2.31 24.47	222 222 226	84.36 88.05 99.79
0 0 255	22.48 12.19 118.85	204 205 208	70.69 74.29 83.43
0 128 0	4.84 15.72 2.69	167 168 170	45.05 47.11 52.91
0 128 128	9.52 17.99 27.49	128 128 130	24.68 25.80 29.16
0 170 255	31.44 41.57 123.25	87 87 88	10.36 10.85 12.05
0 255 0	23.25 73.86 11.82	44 44 44	2.19 2.27 2.59
0 255 170	32.33 78.52 59.53	56 43 126	7.28 4.68 24.10
0 255 255	45.65 86.09 130.33	98 84 155	17.70 14.09 39.62
85 85 85	9.75 10.21 11.13	154 145 195	41.24 38.26 68.47
128 0 0	14.69 7.37 0.56	184 42 45	34.57 18.33 3.61
128 0 128	19.55 9.70 24.82	197 105 81	44.05 31.03 11.84
128 128 0	19.54 23.34 3.18	215 166 144	62.57 55.61 39.11
128 128 128	24.52 25.75 27.99	43 143 71	8.89 21.70 10.32
128 128 255	42.59 35.76 121.64	109 168 111	22.89 35.86 23.27
128 255 128	43.02 83.89 37.64	169 200 168	49.73 60.89 53.89
170 0 255	50.90 26.34 119.28	200 161 144	54.88 49.79 38.48
170 170 170	46.34 48.40 53.05	214 160 37	55.18 49.74 7.25
170 255 0	51.04 87.93 12.63	186 32 92	36.80 19.03 12.88
170 255 255	73.95 100.11 130.64	136 35 124	22.02 11.75 23.84
255 0 0	69.22 34.47 1.79	171 194 48	41.21 54.26 10.16
255 0 170	78.12 38.86 48.31	0 145 156	13.61 23.99 42.25
255 0 255	91.60 46.62 119.67	25 107 180	13.89 16.00 55.23
255 128 128	79.13 53.25 29.34	239 240 244	101.18 105.86 119.06
255 170 0	78.62 64.75 6.71	219 221 227	83.23 87.01 101.23
255 170 255	100.86 76.70 124.69	199 203 210	68.53 72.33 84.80
255 255 0	92.60 108.77 13.54	159 164 171	41.84 44.58 53.15
255 255 170	101.73 113.26 61.20	119 125 129	22.31 24.01 28.61
170 85 85	31.94 21.39 11.80	84 90 93	10.36 11.37 13.66
85 170 85	17.00 33.57 15.10	57 67 69	4.74 5.42 6.94