UGRA
Display Analysis & Certification Tool
Report

Basics

Date:	2009-11-10 13:49:51
Report-Version:	v1.3.1
Monitor-Name:	LCD2490WUXi2
EDID-Name:	LCD2490WUXi2
EDID-Serial:	98301387YB
Profile:	/Users/BENDIC/Library/.../LCD2490WUXi2_5800_cat02_matrix.icc
Created:	2009-11-10 13:40
Measurement device:	eye-one pro

Summary

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

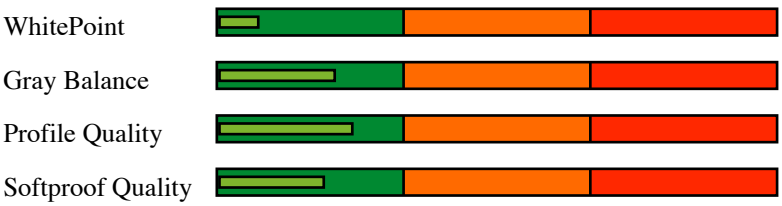
Calibration

White Point	yes
Gray balance	yes
Profile quality	yes

Softproofing

MultiColor, HighBody	no
Offset/Gravure Paper Type 1/2	yes
Offset on uncoated paper	yes
Newspaper Printing	yes
sRGB	yes
AdobeRGB	no
ECI-RGB	no

Diagram



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:	109.92 115.27 111.68
XYZ (normalized):	95.36 100.00 96.89
Luminance:	115.3 Cd/m2
Next Temperature:	5774 Kelvin
Assumed Target Whitepoint:	5800 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:	0.2 Cd/m2
Chromaticity:	3.6 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	0	0.17	1.33	3.62	
5	29629	0.24	1.86	3.13	2.55
10	6772	0.89	6.99	2.56	2.21
15	6207	1.82	13.08	1.08	2.26
20	5923	3.42	19.91	0.48	2.23
25	5849	5.26	25.46	0.29	2.26
30	5963	7.74	31.14	0.79	2.26
35	5849	11.04	37.07	0.43	2.25
40	5778	15.01	42.80	0.03	2.24
45	5789	19.12	47.73	0.25	2.26
50	5784	24.44	53.17	0.20	2.25
55	5784	30.22	58.24	0.10	2.25
60	5799	36.64	63.17	0.24	2.25
65	5776	43.58	67.88	0.02	2.27
70	5801	51.43	72.64	0.44	2.26
75	5781	60.02	77.32	0.15	2.28
80	5780	69.52	82.01	0.11	2.27
85	5786	79.17	86.35	0.17	2.31
90	5756	90.14	90.87	0.20	2.35
95	5799	102.04	95.38	0.38	2.34
100	5774	115.27	100.00	0.00	
Average	5832			0.30	2.28
Range				1.25	
Max				1.08	

Tone values = 100.0%
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: CAT02

RGB	Lab	deltaLab	deltaE
0 0 0	1.3 -1.1 -3.6	-1.3 1.1 3.6	3.9
0 0 128	13.2 31.8 -63.7	-0.6 2.2 -2.5	3.4
0 0 255	30.8 57.0 -110.1	0.6 -0.7 0.3	0.9
0 128 0	44.9 -48.0 46.9	0.9 -0.9 3.1	3.3
0 128 128	47.1 -33.0 -9.9	0.7 0.1 -0.1	0.7
0 170 255	65.3 -19.4 -54.1	0.6 -0.2 0.6	0.8
0 255 0	86.4 -81.6 82.8	0.1 0.6 -0.0	0.6
0 255 170	87.8 -70.4 25.6	0.0 1.2 -1.4	1.8
0 255 255	89.7 -55.4 -16.1	0.0 0.9 -0.4	1.0
85 85 85	35.3 -0.5 -0.2	0.5 0.5 0.2	0.8
128 0 0	27.5 47.0 37.7	0.1 1.6 4.0	4.3
128 0 128	31.1 52.6 -34.3	0.3 1.0 -0.4	1.1
128 128 0	51.5 -7.3 56.8	0.8 -0.6 1.4	1.7
128 128 128	53.6 0.1 -0.2	0.4 -0.1 0.2	0.5
128 128 255	58.8 21.7 -64.4	0.5 -0.4 0.7	0.9
128 255 128	89.7 -56.2 48.8	0.1 0.6 -0.5	0.7
170 0 255	47.4 73.2 -82.7	0.6 0.0 0.8	1.0
170 170 170	69.7 -0.2 -0.0	0.4 0.2 0.0	0.5
170 255 0	91.0 -47.3 89.0	0.2 0.6 -0.3	0.7
170 255 255	94.1 -28.4 -9.2	0.1 0.6 -0.1	0.6
255 0 0	56.5 80.2 73.4	-0.2 0.5 -0.4	0.6
255 0 170	59.0 84.0 -14.3	-0.0 0.2 -1.0	1.0
255 0 255	62.4 89.1 -57.7	0.1 -0.2 0.3	0.4
255 128 128	70.0 50.4 25.6	0.1 -0.5 -0.3	0.6
255 170 0	77.2 27.9 84.0	0.3 -1.1 -0.8	1.4
255 170 255	81.3 40.3 -28.0	0.2 -0.4 0.2	0.5
255 255 0	97.2 -12.8 97.3	0.1 -0.4 -0.9	1.0
255 255 170	98.4 -7.5 41.2	0.0 -0.0 -0.7	0.7
255 255 255	100.0 0.0 0.0	0.0 0.0 0.0	0.0
170 85 85	47.5 36.9 18.9	0.4 0.3 0.0	0.5
85 170 85	62.0 -41.7 36.1	0.5 0.2 -0.0	0.5
85 85 170	39.2 15.7 -47.6	0.6 0.2 0.0	0.7
85 170 170	63.8 -29.3 -9.3	0.5 0.1 -0.0	0.5
170 85 170	50.1 43.8 -29.7	0.4 0.2 -0.0	0.4
170 170 85	68.1 -7.6 44.9	0.5 0.1 0.1	0.5
Average			1.1
Maximum			4.3

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	94 %
sRGB	98 %
AdobeRGB	78 %
ECI-RGB v1.0	74 %

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	57.3 -20.1 -45.0	17.8
66.9 -24.7 -37.1	66.1 -24.9 -37.2	0.8
79.7 -12.5 -21.8	79.2 -12.3 -22.9	1.3
48.0 74.0 -3.0	48.4 71.7 -1.6	2.7
60.8 50.6 -6.7	60.6 50.8 -6.7	0.3
76.4 25.8 -6.9	76.0 26.5 -7.1	0.8
89.0 -5.0 93.0	88.5 -3.8 90.7	2.6
90.3 -4.7 62.6	89.9 -4.5 63.0	0.6
92.2 -3.5 31.1	91.9 -3.6 31.3	0.4
53.1 37.7 28.9	52.7 37.8 28.8	0.4
41.5 22.7 16.8	41.0 22.8 16.1	0.9
31.9 40.0 24.0	31.8 39.4 23.6	0.7
32.5 44.4 -1.8	32.6 43.5 -1.8	1.0
51.3 1.3 44.5	50.7 1.8 44.0	0.9
34.6 -36.4 13.9	34.0 -34.1 13.7	2.4
36.0 -26.2 -20.9	36.2 -21.7 -19.0	4.9
20.9 9.6 -23.6	21.1 9.1 -23.3	0.6
89.0 0.0 -1.8	88.7 -0.4 -1.9	0.5
82.8 0.0 -1.7	82.4 -0.2 -2.3	0.7
69.3 0.0 -1.4	68.9 0.0 -1.6	0.4
54.1 0.0 -1.0	53.6 0.4 -1.7	1.0
36.6 -0.0 -0.5	36.2 0.2 -1.5	1.0
16.0 0.0 0.0	16.0 -0.6 -0.8	1.0
24.0 22.0 -46.0	23.6 21.0 -46.0	1.0
40.9 17.9 -36.6	40.4 17.9 -36.7	0.5
63.7 10.3 -23.8	63.0 10.3 -24.3	0.8
47.0 68.0 48.0	47.0 67.1 48.2	1.0
58.5 47.1 37.9	58.2 46.7 38.1	0.5
74.2 22.9 21.4	73.8 23.1 21.1	0.5
50.0 -65.0 27.0	51.2 -48.9 29.7	16.4
62.1 -39.8 21.0	61.5 -40.0 20.7	0.8
77.0 -19.1 11.0	76.5 -19.4 10.6	0.7
71.2 18.8 17.3	70.9 18.7 17.3	0.3
71.2 22.2 73.1	70.7 22.6 73.3	0.7
47.7 71.2 16.2	47.6 70.2 16.7	1.1
38.0 55.4 -20.9	37.9 54.6 -21.1	0.8
73.7 -22.8 67.6	73.1 -22.8 67.4	0.6
52.3 -52.3 -20.2	54.3 -34.4 -15.7	18.5
43.3 -17.0 -48.6	43.9 -10.1 -46.3	7.3
95.0 0.0 -2.0	94.7 0.1 -3.3	1.4
88.5 -0.4 -3.1	88.2 -0.9 -3.5	0.7
82.0 -0.9 -4.1	81.4 -1.2 -5.5	1.6
67.7 -2.0 -4.4	67.3 -3.1 -4.9	1.3
52.2 -2.5 -3.5	51.8 -2.5 -4.1	0.7
37.5 -3.9 -3.1	37.1 -5.1 -3.4	1.3
26.3 -6.8 -3.4	25.9 -6.8 -4.6	1.3
Average		2.3
Gamut-Volume		94 %

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	109.92 115.27 111.68	85 85 170	15.16 12.71 40.47
0 0 0	0.14 0.17 0.42	85 170 170	27.80 37.80 44.30
12 12 12	0.20 0.24 0.45	170 85 170	31.78 21.48 41.38
25 25 25	0.87 0.89 1.04	170 170 85	38.46 43.61 14.08
38 38 38	1.70 1.82 1.85	0 149 216	24.11 29.63 70.06
51 51 51	3.25 3.42 3.38	59 175 227	32.67 41.51 79.70
63 63 63	5.01 5.26 5.16	155 204 237	56.36 64.06 91.12
76 76 76	7.32 7.74 7.67	211 0 121	37.30 19.51 19.97
89 89 89	10.52 11.04 10.84	219 103 159	48.55 33.02 37.25
102 102 102	14.31 15.01 14.55	228 168 201	66.68 57.46 63.56
114 114 114	18.26 19.12 18.63	243 225 0	76.05 83.32 10.22
127 127 127	23.33 24.44 23.78	242 229 104	79.44 87.10 24.12
140 140 140	28.82 30.22 29.35	240 234 172	85.28 92.33 51.82
153 153 153	34.95 36.64 35.69	188 97 81	32.26 23.69 10.12
165 165 165	41.55 43.58 42.23	134 83 74	16.82 13.57 7.79
178 178 178	49.11 51.43 50.23	130 44 45	12.75 7.92 2.86
191 191 191	57.17 60.02 58.12	132 39 82	14.14 8.38 8.73
204 204 204	66.31 69.52 67.48	137 120 47	20.82 21.74 5.06
216 216 216	75.52 79.17 76.93	0 96 60	5.19 9.25 5.34
229 229 229	85.97 90.14 87.06	0 97 116	7.69 10.66 18.09
242 242 242	97.34 102.04 99.44	54 49 86	4.40 3.82 9.23
0 0 128	4.01 2.05 20.64	221 223 226	80.60 84.71 84.67
0 0 255	17.91 8.58 96.70	204 205 208	66.98 70.30 70.82
0 128 0	8.35 16.61 2.78	167 168 170	43.15 45.22 45.22
0 128 128	12.26 18.72 23.34	128 128 130	23.83 24.88 25.11
0 170 255	33.91 40.51 102.08	87 87 88	10.05 10.51 10.67
0 255 0	39.34 78.93 11.69	44 44 44	2.29 2.43 2.46
0 255 170	46.63 82.68 50.42	59 47 126	6.67 4.75 20.73
0 255 255	57.52 87.94 108.92	102 86 155	16.26 13.49 33.53
85 85 85	9.45 9.98 9.73	156 146 195	38.68 36.70 57.70
128 0 0	11.11 5.94 0.71	208 26 41	33.51 18.09 3.14
128 0 128	15.04 7.80 21.46	217 101 79	42.57 29.76 10.21
128 128 0	19.52 22.52 3.02	227 164 144	59.96 53.07 33.40
128 128 128	23.74 24.86 24.19	0 144 71	12.01 22.40 8.99
128 128 255	37.91 31.68 100.71	79 168 111	22.04 34.29 20.09
128 255 128	54.69 86.84 33.24	158 200 168	47.73 58.38 46.03
170 0 255	38.76 19.53 98.42	211 160 143	52.99 48.23 32.59
170 170 170	44.32 46.54 45.12	227 157 32	53.46 47.59 6.33
170 255 0	60.31 89.82 12.36	210 6 91	35.41 18.65 11.24
170 255 255	78.70 98.92 110.00	154 33 124	20.92 11.54 20.64
255 0 0	52.19 27.53 2.03	163 192 46	40.25 51.79 9.05
255 0 170	59.40 30.91 41.32	0 147 156	17.43 25.84 35.69
255 0 255	70.11 35.98 100.08	0 111 181	14.38 16.24 46.55
255 128 128	64.81 46.49 25.86	239 240 244	95.74 100.24 102.23
255 170 0	68.05 59.04 6.49	219 222 227	79.45 83.72 85.91
255 170 255	86.26 68.16 104.45	198 203 210	64.67 68.28 72.78
255 255 0	91.61 106.08 13.36	157 165 171	39.75 42.68 45.68
255 255 170	99.02 109.92 53.18	118 125 129	21.51 23.09 24.77
170 85 85	25.98 18.69 10.41	81 91 93	9.91 11.10 11.96
85 170 85	22.00 34.99 13.38	53 67 69	4.66 5.46 6.35