

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2007-10-11 12:56:36
Report-Version: v1.2.1
Monitor-Name: LCD2090UXi
EDID-Name: LCD2090UXi
EDID-Serial: 78106814JB
Profile: /Library/ColorSync/Profiles/Monitor_11-10-07_1.icc
Created: 2007-10-11 12:47
Measurement device: eye-one monitor

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
Layout	yes

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

XYZ: 114.72 120.34 117.81
XYZ (normalized): 95.33 100.00 97.90
Luminance: 120.3 Cd/m2
Next Temperature: 5830 Kelvin
Assumed Target Whitepoint: 5800 Kelvin
Distance to assumed Target Whitepoint: 0.3 deltaE

Blackpoint

Luminance: 0.2 Cd/m2
Chromaticity: 1.7 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	8875	0.23	1.75	1.66	
5	6903	0.74	5.56	3.23	1.80
10	5793	2.17	14.40	1.08	1.79
15	5890	4.24	22.02	0.55	1.79
20	5870	7.07	29.09	0.18	1.78
25	5851	10.24	35.02	0.24	1.79
30	5857	14.17	40.85	0.15	1.79
35	5826	18.61	46.27	0.03	1.79
40	5722	23.59	51.39	0.78	1.79
45	5843	28.70	55.94	0.55	1.80
50	5858	34.91	60.79	0.21	1.79
55	5808	41.47	65.33	0.17	1.79
60	5754	48.38	69.61	0.68	1.79
65	5762	55.57	73.66	0.67	1.80
70	5794	63.67	77.82	0.64	1.80
75	5763	72.16	81.82	0.74	1.78
80	5828	81.70	85.95	0.22	1.74
85	5760	90.09	89.33	0.66	1.80
90	5771	99.88	93.01	0.60	1.78
95	5786	110.09	96.61	0.72	1.82
100	5830	120.34	100.00	0.00	
Average	5809			0.47	1.79
Range				1.68	

Tone values = 92.2%

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	1.7 0.5 -1.6	-1.7 -0.5 1.6	2.4
0 0 128	17.1 32.0 -69.0	-0.8 1.1 -1.6	2.1
0 0 255	33.0 49.5 -106.0	-0.1 0.8 -1.2	1.4
0 128 0	51.2 -53.8 50.4	-0.0 -0.4 2.9	2.9
0 128 128	54.1 -37.4 -11.3	-0.5 0.2 0.2	0.6
0 170 255	69.8 -28.2 -47.2	-0.3 0.8 -0.6	1.1
0 255 0	85.6 -82.0 78.0	0.2 -0.0 2.6	2.6
0 255 170	87.6 -68.8 16.6	-0.0 0.2 0.4	0.4
0 255 255	89.3 -56.3 -17.4	0.1 0.2 0.2	0.3
85 85 85	44.7 -0.1 -0.0	-0.9 -0.2 0.2	1.0
128 0 0	32.6 52.3 46.9	-0.5 0.8 1.5	1.8
128 0 128	37.0 56.5 -36.5	-0.5 0.6 0.1	0.7
128 128 0	58.8 -7.6 61.8	-0.3 -0.6 1.3	1.5
128 128 128	61.2 -0.1 -0.2	-0.6 -0.1 0.3	0.7
128 128 255	65.7 14.9 -53.0	-0.7 0.6 -1.4	1.6
128 255 128	90.3 -48.5 38.9	-0.1 -1.0 1.7	2.0
170 0 255	51.4 71.7 -75.3	-0.2 0.5 -0.9	1.1
170 170 170	75.4 -0.2 0.7	-0.6 0.1 -0.6	0.8
170 255 0	91.4 -40.4 86.7	0.0 -1.1 1.5	1.9
170 255 255	94.8 -24.0 -8.6	-0.1 -0.7 0.0	0.7
255 0 0	57.2 79.9 79.7	-0.1 0.7 -3.8	3.9
255 0 170	60.5 83.1 -19.7	-0.2 0.5 -0.3	0.6
255 0 255	63.8 86.0 -54.8	-0.1 0.6 -0.4	0.8
255 128 128	74.3 42.5 20.8	-0.4 0.9 0.7	1.2
255 170 0	80.5 21.4 85.3	-0.1 0.4 -0.2	0.5
255 170 255	84.8 32.5 -22.4	-0.4 1.0 -0.6	1.2
255 255 0	96.9 -11.8 94.8	0.2 -0.3 0.8	0.9
255 255 170	98.4 -5.8 33.2	0.0 -0.3 1.0	1.0
255 255 255	100.0 0.0 -0.0	0.0 0.0 0.0	0.0
170 85 85	55.1 33.7 16.8	-0.9 0.4 0.2	0.9
85 170 85	67.6 -38.3 30.6	-0.4 -0.7 1.4	1.6
85 85 170	48.1 11.9 -41.5	-0.8 0.3 -1.2	1.5
85 170 170	69.5 -28.1 -9.0	-0.4 -0.2 -0.2	0.5
170 85 170	57.6 39.4 -25.7	-0.7 0.5 -1.0	1.3
170 170 85	73.6 -6.3 40.1	-0.5 -0.5 1.2	1.3
Average			1.3
Maximum			3.9

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
55.2 -39.9 -50.7	58.3 -21.5 -45.5	19.4
67.6 -27.1 -36.5	67.7 -26.7 -36.6	0.4
80.8 -13.8 -21.0	81.2 -13.8 -20.3	0.8
47.2 75.9 -3.8	49.2 70.7 -1.4	6.1
60.7 52.2 -7.1	61.6 51.6 -6.1	1.4
77.0 26.2 -7.7	77.7 26.4 -7.5	0.8
89.7 -4.5 94.7	89.8 -3.7 89.7	5.1
91.3 -4.6 63.1	91.3 -4.1 61.3	1.9
93.3 -3.3 30.6	93.4 -2.7 29.9	0.9
53.5 38.4 28.8	54.2 37.6 28.1	1.3
41.4 23.1 16.6	42.3 22.0 15.1	2.1
32.4 40.3 21.9	33.3 39.9 21.3	1.1
32.6 44.6 -1.8	33.6 44.4 -2.3	1.1
51.3 1.9 44.3	51.9 1.9 43.6	0.9
34.0 -40.9 14.5	35.4 -35.2 14.5	5.8
36.2 -30.6 -20.6	37.9 -23.0 -19.0	8.0
21.2 3.4 -23.0	22.7 3.7 -22.6	1.5
89.8 0.3 -3.5	90.2 0.3 -3.4	0.4
83.6 0.2 -3.7	83.9 0.5 -3.8	0.4
70.2 0.0 -3.7	70.7 0.3 -4.4	0.9
55.1 0.0 -3.1	55.5 0.8 -4.1	1.4
37.5 0.1 -2.1	38.6 -0.3 -2.6	1.2
16.9 0.4 -0.4	18.1 0.9 -0.9	1.4
24.4 16.2 -47.1	25.7 15.7 -46.2	1.6
41.2 16.0 -36.5	42.3 15.3 -35.3	1.8
64.6 9.3 -23.6	64.9 10.0 -23.4	0.7
47.3 69.0 45.1	47.8 68.4 45.3	0.8
58.9 47.7 37.0	59.7 47.5 36.5	1.0
75.0 23.2 20.3	75.7 23.3 20.3	0.7
48.6 -67.5 28.0	51.0 -49.8 29.3	17.9
62.5 -41.7 22.4	63.0 -41.1 21.2	1.5
77.9 -19.6 11.3	78.1 -19.2 10.9	0.6
72.0 19.1 16.5	72.4 19.4 15.8	0.9
72.2 22.1 73.2	72.7 22.7 73.1	0.8
47.5 72.3 15.3	48.4 69.9 15.6	2.6
37.5 56.5 -21.1	38.0 55.9 -20.8	0.8
74.1 -22.1 69.3	74.2 -21.5 67.7	1.7
52.3 -55.2 -20.1	54.9 -35.7 -16.0	20.1
43.9 -20.9 -49.8	46.2 -12.7 -45.4	9.5
96.0 0.5 -3.3	96.0 0.8 -3.6	0.5
89.5 -0.1 -3.7	89.8 0.1 -4.1	0.6
83.0 -1.1 -4.3	83.4 -0.9 -5.0	0.8
68.6 -2.7 -4.0	69.0 -2.3 -4.9	1.1
53.0 -5.1 -2.3	53.9 -5.7 -2.8	1.2
37.8 -8.1 -0.9	38.8 -8.5 -1.8	1.4
25.9 -13.3 -2.2	27.2 -13.0 -3.0	1.6
Average		2.9
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	114.72 120.34 117.81	85 85 170	22.93 20.60 51.89
0 0 0	0.24 0.23 0.35	85 170 170	36.66 48.47 56.39
12 12 12	0.75 0.74 0.94	170 85 170	42.14 30.77 52.58
25 25 25	2.11 2.17 2.19	170 170 85	49.38 55.19 21.90
38 38 38	4.06 4.24 4.24	0 133 211	26.01 32.20 77.20
51 51 51	6.74 7.07 6.97	44 164 223	35.77 45.89 87.47
63 63 63	9.78 10.24 10.10	142 199 235	62.02 71.20 97.77
76 76 76	13.50 14.17 13.93	200 0 104	39.70 21.06 21.89
89 89 89	17.75 18.61 18.22	212 81 145	52.68 35.74 40.51
102 102 102	22.66 23.59 22.95	223 155 195	73.22 63.30 71.35
114 114 114	27.46 28.70 28.37	243 223 0	82.64 90.62 11.35
127 127 127	33.27 34.91 34.34	242 228 87	86.41 94.59 27.54
140 140 140	39.55 41.47 40.46	241 234 162	93.35 100.57 58.64
153 153 153	46.36 48.38 47.13	176 79 65	35.45 26.29 11.81
165 165 165	53.24 55.57 54.20	116 65 57	18.48 15.14 9.20
178 178 178	60.57 63.67 61.66	113 30 35	14.50 9.07 3.82
191 191 191	69.14 72.16 70.41	114 24 65	15.72 9.30 10.02
204 204 204	77.98 81.70 80.15	120 103 33	22.90 23.94 5.75
216 216 216	86.15 90.09 87.52	0 79 42	5.87 10.50 5.94
229 229 229	95.51 99.88 97.25	0 80 99	8.74 12.21 20.66
242 242 242	104.82 110.09 106.62	32 37 68	4.72 4.51 10.50
0 0 128	5.68 3.03 29.65	217 219 227	88.31 92.36 95.51
0 0 255	19.04 9.90 102.26	196 198 206	73.66 76.91 80.32
0 128 0	11.62 23.38 3.97	154 156 164	48.20 50.33 53.72
0 128 128	17.39 26.74 33.93	112 113 119	27.18 28.23 30.50
0 170 255	38.66 49.48 109.64	70 71 74	11.93 12.54 13.32
0 255 0	39.95 80.89 12.94	32 31 32	2.98 3.07 3.14
0 255 170	49.27 85.99 62.21	35 35 112	7.42 5.76 24.37
0 255 255	59.08 90.90 115.96	82 69 140	18.01 15.45 37.00
85 85 85	16.41 17.22 16.88	142 132 187	42.96 40.94 63.69
128 0 0	16.08 8.62 0.72	199 9 34	36.36 19.51 4.04
128 0 128	21.64 11.48 30.93	210 82 65	46.97 32.90 12.25
128 128 0	27.85 32.06 4.33	223 152 132	66.58 59.13 38.60
128 128 128	33.73 35.41 34.84	0 125 49	12.25 23.19 9.27
128 128 255	47.32 42.57 107.52	61 157 91	24.36 38.06 22.26
128 255 128	62.15 92.67 43.93	146 193 155	52.81 64.36 51.02
170 0 255	45.81 24.08 103.99	204 146 130	58.26 52.89 37.52
170 170 170	55.98 58.83 56.88	223 145 23	59.36 53.10 7.32
170 255 0	67.22 95.20 13.53	200 0 75	38.01 20.20 12.94
170 255 255	86.44 105.38 117.18	137 12 105	22.16 12.02 21.84
255 0 0	55.35 29.41 1.54	151 183 27	44.23 56.30 9.68
255 0 170	64.68 34.18 51.69	0 131 140	18.59 27.81 38.93
255 0 255	74.38 39.18 105.31	0 95 172	16.38 18.94 52.54
255 128 128	72.96 56.22 36.25	240 240 248	104.05 108.47 112.30
255 170 0	74.75 68.50 7.64	215 218 226	87.33 91.39 95.66
255 170 255	94.21 78.99 111.61	191 197 206	71.87 75.70 80.68
255 255 0	95.33 110.00 14.10	144 153 159	44.50 47.45 51.20
255 255 170	104.83 115.10 64.77	98 111 112	23.76 26.35 27.60
170 85 85	35.68 27.46 17.48	59 75 73	10.85 12.69 13.12
85 170 85	30.13 45.00 21.31	29 52 50	4.82 6.25 6.85