

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2007-9-12 16:53:33
Report-Version: v1.2.1
Monitor-Name: iMac
EDID-Name: Color LCD
EDID-Serial:
Profile: /Library/ColorSync/Profiles/Monitor_12-9-07_1.icc
Created: 2007-9-12 16:42
Measurement device: eye-one monitor

Summary

The monitor has not passed the certification according to the UGRA DACT specifications.

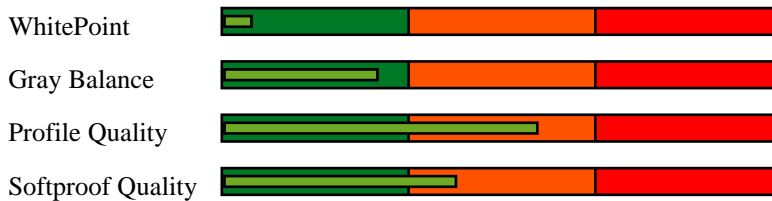
Calibration

White Point	yes
Gray balance	yes
Profile quality	no

Softproofing

MultiColor, HighBody	no
Offset/Gravure Paper Type 1/2	no
Offset on uncoated paper	no
Newspaper Printing	no
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: 128.09 134.42 131.49
XYZ (normalized): 95.29 100.00 97.83
Luminance: 134.4 Cd/m2
Next Temperature: 5830 Kelvin
Assumed Target Whitepoint: 5800 Kelvin
Distance to assumed Target Whitepoint: 0.3 deltaE

Blackpoint

Luminance: 0.1 Cd/m2
Chromaticity: 2.3 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	0	0.13	0.87	2.28	
5	7053	0.70	4.68	1.58	1.84
10	6335	2.31	13.92	1.26	1.80
15	6016	4.80	22.19	0.70	1.77
20	5875	8.12	29.52	0.75	1.75
25	5915	12.03	35.88	0.39	1.75
30	5873	16.48	41.62	0.24	1.75
35	5764	21.86	47.32	0.53	1.74
40	5941	27.68	52.50	0.70	1.73
45	5903	33.35	56.89	0.47	1.75
50	5865	40.94	62.05	0.82	1.73
55	5928	47.85	66.21	0.77	1.72
60	5938	55.73	70.50	0.84	1.72
65	5872	64.60	74.86	0.58	1.71
70	5899	73.92	79.04	0.94	1.69
75	5877	82.13	82.43	0.41	1.71
80	5844	91.38	86.00	0.41	1.74
85	5847	101.10	89.49	0.16	1.75
90	5852	111.79	93.09	0.41	1.73
95	5848	122.97	96.61	0.42	1.69
100	5830	134.42	100.00	0.00	
Average	5906			0.57	1.74
Range				1.65	

Tone values = 85.4%

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.

RGB	Lab	deltaLab	deltaE
0 0 0	0.9 0.0 -2.3	-0.9 -0.0 2.3	2.4
0 0 128	15.1 47.4 -72.1	-1.0 -8.3 0.4	8.3
0 0 255	31.9 66.9 -107.1	-1.4 -6.4 -3.7	7.5
0 128 0	52.5 -59.0 50.4	-1.1 5.6 3.4	6.7
0 128 128	55.3 -37.7 -9.3	-1.8 1.5 0.3	2.4
0 170 255	70.7 -24.0 -45.0	-1.7 -0.0 -3.0	3.4
0 255 0	86.2 -84.7 81.5	0.2 3.7 0.1	3.7
0 255 170	88.0 -67.1 17.7	-0.2 -0.1 1.4	1.4
0 255 255	89.8 -52.2 -15.3	-0.3 -1.3 -1.4	2.0
85 85 85	45.7 -0.4 -0.4	-2.2 -0.5 2.8	3.6
128 0 0	32.5 51.4 44.7	-0.5 -0.0 0.2	0.6
128 0 128	36.5 61.4 -37.8	-0.8 -3.7 2.2	4.4
128 128 0	60.0 -11.9 60.2	-1.2 2.5 2.0	3.4
128 128 128	62.3 -1.3 0.6	-1.9 0.6 1.3	2.4
128 128 255	66.6 19.0 -52.1	-2.2 -0.9 -3.1	3.9
128 255 128	90.9 -48.9 40.8	-0.3 -0.7 2.1	2.3
170 0 255	50.8 79.9 -76.6	-0.9 -3.9 -1.6	4.3
170 170 170	76.3 -0.5 -0.3	-1.6 0.1 1.6	2.2
170 255 0	92.0 -43.6 89.4	-0.1 1.2 -1.4	1.8
170 255 255	95.3 -21.3 -7.4	-0.6 -2.3 -0.9	2.5
255 0 0	56.2 77.6 79.1	0.8 0.5 -10.1	10.1
255 0 170	59.4 85.5 -23.6	0.3 -2.5 3.7	4.5
255 0 255	62.8 90.8 -56.8	0.0 -2.6 0.0	2.6
255 128 128	74.4 38.7 20.1	-0.7 3.0 2.4	3.9
255 170 0	80.6 15.3 84.0	0.0 4.3 -1.4	4.5
255 170 255	85.1 31.9 -22.8	-1.0 1.8 -0.9	2.3
255 255 0	97.0 -17.1 97.5	0.4 3.2 -3.1	4.5
255 255 170	98.6 -7.9 32.7	0.1 0.7 2.7	2.8
255 255 255	100.0 0.0 0.0	0.0 0.0 0.0	0.0
170 85 85	55.7 31.7 15.4	-1.6 0.8 3.1	3.5
85 170 85	68.9 -40.9 30.6	-1.5 1.7 3.9	4.5
85 85 170	48.8 16.8 -42.1	-2.2 -3.2 0.1	3.9
85 170 170	70.7 -26.9 -9.1	-1.7 -0.7 1.4	2.3
170 85 170	58.0 41.2 -27.1	-1.7 -1.3 0.9	2.4
170 170 85	74.7 -10.1 39.5	-1.4 2.1 3.5	4.3
Average			3.6
Maximum			10.1

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	60.2 -19.1 -42.3	23.0
67.6 -27.1 -36.5	69.5 -27.0 -34.6	2.7
80.8 -13.8 -21.0	82.0 -12.2 -20.9	2.0
47.2 75.9 -3.8	48.9 72.1 -4.2	4.2
60.7 52.2 -7.1	61.7 52.4 -9.0	2.1
77.0 26.2 -7.7	78.0 25.1 -8.0	1.5
89.7 -4.5 94.7	89.5 -7.6 89.6	6.0
91.3 -4.6 63.1	91.5 -7.2 61.1	3.3
93.3 -3.3 30.6	93.6 -4.4 27.9	2.9
53.5 38.4 28.8	54.7 37.3 26.3	3.0
41.4 23.1 16.6	43.4 22.7 14.0	3.3
32.4 40.3 21.9	34.0 40.4 19.8	2.6
32.6 44.6 -1.8	34.1 46.3 -4.7	3.7
51.3 1.9 44.3	53.0 1.0 41.3	3.6
34.0 -40.9 14.5	36.8 -37.9 13.1	4.3
36.2 -30.6 -20.6	39.0 -21.1 -19.9	10.0
21.2 3.4 -23.0	23.0 6.7 -25.7	4.6
89.8 0.3 -3.5	90.5 0.1 -3.8	0.8
83.6 0.2 -3.7	84.5 -0.3 -3.7	1.1
70.2 0.0 -3.7	71.7 0.4 -5.4	2.3
55.1 0.0 -3.1	56.9 0.5 -5.0	2.7
37.5 0.1 -2.1	39.7 1.1 -4.8	3.6
16.9 0.4 -0.4	18.9 0.8 -3.3	3.6
24.4 16.2 -47.1	26.2 21.7 -48.3	5.9
41.2 16.0 -36.5	43.4 18.8 -37.0	3.6
64.6 9.3 -23.6	66.5 10.4 -23.9	2.2
47.3 69.0 45.1	47.1 67.9 43.5	1.9
58.9 47.7 37.0	59.8 45.6 35.2	2.9
75.0 23.2 20.3	76.0 21.5 17.7	3.3
48.6 -67.5 28.0	51.9 -52.7 27.9	15.1
62.5 -41.7 22.4	63.9 -42.9 18.9	3.9
77.9 -19.6 11.3	78.8 -18.9 8.8	2.8
72.0 19.1 16.5	73.2 17.4 14.2	3.1
72.2 22.1 73.2	72.6 18.6 72.7	3.5
47.5 72.3 15.3	48.1 70.3 12.4	3.6
37.5 56.5 -21.1	38.6 59.6 -23.6	4.1
74.1 -22.1 69.3	75.2 -25.3 67.1	4.1
52.3 -55.2 -20.1	56.7 -34.1 -16.8	21.8
43.9 -20.9 -49.8	48.0 -8.1 -45.7	14.0
96.0 0.5 -3.3	96.2 0.8 -4.1	0.8
89.5 -0.1 -3.7	90.3 0.4 -4.2	1.0
83.0 -1.1 -4.3	84.0 -0.9 -4.5	1.0
68.6 -2.7 -4.0	70.0 -1.9 -5.5	2.2
53.0 -5.1 -2.3	54.5 -3.8 -4.7	3.1
37.8 -8.1 -0.9	39.8 -7.6 -3.7	3.5
25.9 -13.3 -2.2	27.6 -13.0 -4.4	2.8
Average		4.5
Gamut-Volume		93 %

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	128.09 134.42 131.49	85 85 170	26.66 23.48 59.96
0 0 0	0.12 0.13 0.32	85 170 170	42.66 56.03 65.45
12 12 12	0.66 0.70 0.81	170 85 170	47.97 34.96 60.92
25 25 25	2.15 2.31 2.38	170 170 85	56.55 64.21 26.22
38 38 38	4.56 4.80 4.84	0 136 213	30.32 38.08 86.11
51 51 51	7.80 8.12 8.12	32 167 225	40.83 53.83 99.12
63 63 63	11.42 12.03 11.88	140 200 236	70.72 81.05 112.42
76 76 76	15.66 16.48 16.17	203 0 106	44.58 23.51 25.69
89 89 89	20.82 21.86 21.08	214 81 147	59.61 40.46 48.06
102 102 102	26.22 27.68 27.35	225 155 197	81.70 71.60 80.90
114 114 114	31.68 33.35 32.88	245 220 0	91.53 101.01 12.91
127 127 127	38.75 40.94 39.81	244 226 89	97.19 106.91 31.48
140 140 140	45.53 47.85 47.55	242 233 165	105.02 113.31 68.60
153 153 153	52.83 55.73 55.10	179 77 67	41.06 30.47 14.37
165 165 165	61.28 64.60 63.18	118 64 60	22.17 18.04 11.35
178 178 178	69.96 73.92 72.33	115 29 36	17.16 10.76 4.81
191 191 191	78.15 82.13 80.86	116 24 68	18.49 10.84 12.44
204 204 204	86.85 91.38 89.18	122 101 35	27.21 28.27 7.70
216 216 216	96.25 101.10 99.05	0 79 46	6.97 12.64 7.75
229 229 229	106.63 111.79 110.02	0 81 103	10.33 14.33 24.83
242 242 242	117.32 122.97 120.99	31 38 72	5.47 5.10 13.17
0 0 128	6.12 2.59 32.66	217 219 228	99.24 104.09 108.24
0 0 255	20.93 9.47 112.17	196 198 208	83.20 87.49 91.25
0 128 0	13.54 27.74 5.12	154 156 167	55.61 58.15 63.17
0 128 128	20.05 31.16 37.94	112 114 123	31.98 33.40 36.72
0 170 255	43.84 56.12 120.97	71 71 78	14.37 14.88 16.86
0 255 0	46.14 91.89 13.94	32 32 35	3.54 3.66 4.21
0 255 170	56.66 96.73 69.24	33 38 116	8.65 6.47 29.16
0 255 255	67.42 101.90 126.84	81 71 144	21.24 18.02 44.51
85 85 85	19.23 20.27 20.06	142 134 190	50.19 48.30 75.26
128 0 0	18.12 9.84 0.96	202 0 33	40.26 21.67 4.58
128 0 128	24.38 12.44 34.72	213 80 66	52.92 37.52 14.31
128 128 0	32.23 37.81 5.84	226 151 135	74.81 66.99 45.96
128 128 128	38.93 41.31 39.87	0 124 53	14.18 27.00 11.69
128 128 255	54.01 48.48 120.79	58 156 95	28.03 43.86 27.54
128 255 128	71.58 105.18 48.60	145 193 159	60.69 73.43 60.89
170 0 255	51.01 25.67 115.92	206 146 133	66.55 61.18 44.75
170 170 170	64.17 67.62 66.49	226 142 18	65.87 59.93 8.43
170 255 0	77.03 108.56 14.91	203 0 77	42.66 22.69 15.53
170 255 255	98.80 118.83 130.20	139 14 109	26.30 14.02 26.86
255 0 0	60.23 32.42 1.54	152 181 28	50.96 65.31 12.02
255 0 170	70.98 36.97 59.65	0 132 145	22.27 33.03 47.10
255 0 255	81.68 42.11 117.47	0 98 176	19.67 22.57 62.42
255 128 128	80.64 63.71 41.20	239 240 249	116.49 121.65 126.66
255 170 0	82.41 77.63 9.24	215 218 228	98.68 103.31 108.09
255 170 255	104.74 88.93 125.76	191 197 208	81.47 86.04 91.01
255 255 0	106.43 124.33 15.18	144 153 162	51.44 54.84 59.88
255 255 170	117.53 129.46 73.52	98 111 116	27.63 30.12 33.02
170 85 85	40.47 31.68 20.78	59 76 77	12.94 14.95 16.39
85 170 85	35.15 52.66 25.47	28 53 53	5.49 7.14 8.30

Uniformity

This informative-only test shows the luminance (in %) and color deviations (in DeltaC) on the entire screen area based on 9 measurements.

Region	Cd/m2	%	Chroma
1	129.28	99%	1.99
2	136.33	105%	0.41
3	139.35	107%	0.96
4	120.77	93%	2.04
5	130.08	100%	0.00
6	134.18	103%	1.10
7	115.42	89%	1.06
8	125.11	96%	0.76
9	127.96	98%	1.48

	Av	Max
Luminance Deviation	4%	11%
Chroma Deviation	1	2