

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2010-4-6 20:31:13
Report-Version: v1.3.1
Monitor-Name: DELL U2410
EDID-Name: DELL U2410
EDID-Serial: F525M9AL1NLL
Profile: /Library/ColorSync/.../Dell-Ugra-ange06.04.10-5800K-18-140cd-lut.icc
Created: 2010-4-6 20:20
Measurement device: DTP94-LCD mode (Wide Gamut S-IPS (generic))

Summary

WARNING: You are using a LookUpTable-Profile. Some applications do not support LUT-Profiles correctly. The monitor has passed the certification according to the UGRA DACT specifications.

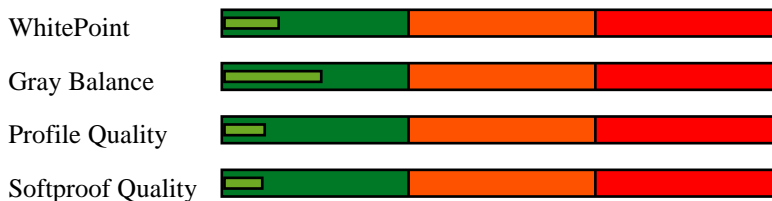
Calibration

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

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:	135.36 141.42 137.45
XYZ (normalized):	95.71 100.00 97.19
Luminance:	141.4 Cd/m ²
Next Temperature:	5753 Kelvin
Assumed Target Whitepoint:	5800 Kelvin
Distance to assumed Target Whitepoint:	0.6 deltaE

Blackpoint

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

Luminance:	0.2 Cd/m ²
Chromaticity:	1.5 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/m ²	L	Chroma	Gamma
0	14331	0.19	1.24	1.50	
5	6718	0.61	3.89	0.96	1.96
10	5594	2.31	13.42	0.58	1.83
15	5634	4.75	21.42	0.49	1.81
20	5745	7.98	28.49	0.18	1.80
25	5758	11.64	34.46	0.13	1.81
30	5767	16.14	40.26	0.07	1.81
35	5758	21.46	45.88	0.13	1.80
40	5807	27.30	51.04	0.35	1.80
45	5820	33.37	55.68	0.48	1.82
50	5732	40.21	60.27	0.46	1.82
55	5776	48.08	64.96	0.17	1.81
60	5749	56.40	69.38	0.04	1.81
65	5758	64.68	73.38	0.09	1.82
70	5784	74.15	77.54	0.30	1.81
75	5767	83.89	81.47	0.15	1.82
80	5780	94.71	85.49	0.24	1.80
85	5776	104.76	88.96	0.27	1.84
90	5771	116.86	92.85	0.20	1.81
95	5780	128.79	96.44	0.35	1.83
100	5753	141.42	100.00	0.00	
Average	5753			0.25	1.82
Range				1.05	
Max				0.58	

Tone values = 97.5%

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	1.2 -0.4 -1.5	0.0 -0.0 0.1	0.1
0 0 128	13.9 46.0 -74.9	0.2 -0.7 1.1	1.3
0 0 255	28.9 71.8 -115.3	-0.1 0.2 0.1	0.2
0 128 0	50.2 -89.3 51.9	-0.1 1.1 0.1	1.1
0 128 128	52.4 -60.3 -13.3	0.3 0.6 -0.1	0.7
0 170 255	67.7 -45.3 -51.8	-0.0 0.2 0.3	0.4
0 255 0	85.0 -137.0 80.8	0.0 0.5 0.2	0.6
0 255 170	86.4 -113.0 15.0	-0.0 0.4 0.2	0.4
0 255 255	87.8 -91.5 -20.5	-0.0 0.3 0.0	0.3
85 85 85	44.2 0.1 -0.2	0.1 0.1 0.1	0.2
128 0 0	34.4 66.7 52.0	-0.1 -0.5 0.2	0.6
128 0 128	37.5 73.8 -35.3	0.4 0.1 0.2	0.5
128 128 0	58.9 -10.0 65.1	0.4 0.0 0.3	0.5
128 128 128	60.7 0.2 -0.2	0.2 -0.2 0.2	0.3
128 128 255	64.3 21.4 -56.7	0.1 -0.2 0.5	0.5
128 255 128	89.8 -75.2 39.8	-0.1 0.5 0.0	0.5
170 0 255	51.1 95.5 -77.5	-0.1 -0.2 0.2	0.3
170 170 170	75.0 -0.1 -0.2	0.0 0.1 0.2	0.2
170 255 0	91.5 -61.2 90.9	-0.0 0.3 0.1	0.3
170 255 255	94.0 -36.8 -10.2	-0.0 0.1 0.3	0.3
255 0 0	60.4 101.9 88.7	-0.0 -0.1 0.1	0.1
255 0 170	62.7 107.4 -16.6	-0.0 -0.4 0.3	0.5
255 0 255	65.1 112.5 -53.6	-0.1 -0.1 0.3	0.3
255 128 128	75.6 58.4 24.1	0.0 -0.4 0.0	0.4
255 170 0	81.9 30.9 91.5	-0.1 -0.0 -0.1	0.2
255 170 255	85.1 45.4 -22.5	-0.2 0.3 0.0	0.3
255 255 0	97.7 -16.4 100.6	0.1 0.0 -0.1	0.1
255 255 170	98.9 -8.2 34.9	-0.1 0.2 0.3	0.4
255 255 255	100.0 0.0 0.0	0.0 -0.0 0.0	0.0
170 85 85	55.8 45.7 18.8	0.2 -0.2 -0.1	0.3
85 170 85	66.9 -58.8 31.0	0.1 0.8 -0.2	0.9
85 85 170	47.0 16.6 -44.1	0.3 0.2 0.4	0.5
85 170 170	68.4 -43.1 -11.0	0.1 0.4 0.1	0.4
170 85 170	57.8 53.3 -26.1	0.2 -0.1 0.2	0.3
170 170 85	73.7 -9.0 41.9	0.1 0.4 -0.0	0.4
Average			0.4
Maximum			1.3

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	100 %
AdobeRGB	99 %
ECI-RGB v1.0	94 %

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	55.3 -33.1 -49.9	3.9
66.9 -24.7 -37.1	66.6 -25.0 -37.6	0.6
79.7 -12.5 -21.8	79.7 -12.5 -22.1	0.3
48.0 74.0 -3.0	47.6 75.3 -2.9	1.3
60.8 50.6 -6.7	60.7 50.6 -6.7	0.2
76.4 25.8 -6.9	76.3 25.7 -7.1	0.3
89.0 -5.0 93.0	89.1 -5.2 93.2	0.3
90.3 -4.7 62.6	90.3 -4.7 62.3	0.3
92.2 -3.5 31.1	92.2 -3.4 31.1	0.1
53.1 37.7 28.9	52.6 38.0 29.5	0.8
41.5 22.7 16.8	41.2 22.1 17.2	0.9
31.9 40.0 24.0	31.6 40.8 25.8	2.1
32.5 44.4 -1.8	32.0 44.8 -1.9	0.7
51.3 1.3 44.5	51.0 0.2 45.8	1.7
34.6 -36.4 13.9	34.4 -36.6 14.8	1.0
36.0 -26.2 -20.9	35.6 -26.7 -20.9	0.6
20.9 9.6 -23.6	20.7 10.0 -23.7	0.5
89.0 0.0 -1.8	89.0 0.1 -2.1	0.3
82.8 0.0 -1.7	82.7 -0.1 -2.2	0.5
69.3 0.0 -1.4	69.1 0.3 -1.6	0.4
54.1 0.0 -1.0	54.1 -1.2 -1.0	1.2
36.6 -0.0 -0.5	36.8 -0.0 -0.2	0.4
16.0 0.0 0.0	16.1 -0.2 1.1	1.1
24.0 22.0 -46.0	23.3 22.7 -47.3	1.6
40.9 17.9 -36.6	40.4 17.8 -36.9	0.6
63.7 10.3 -23.8	63.5 10.4 -23.8	0.2
47.0 68.0 48.0	46.9 68.9 51.0	3.2
58.5 47.1 37.9	58.3 46.8 38.7	0.9
74.2 22.9 21.4	74.0 23.1 21.6	0.4
50.0 -65.0 27.0	49.8 -66.5 27.7	1.7
62.1 -39.8 21.0	61.9 -40.1 21.1	0.4
77.0 -19.1 11.0	76.9 -19.3 11.3	0.4
71.2 18.8 17.3	71.0 18.6 17.0	0.4
71.2 22.2 73.1	71.3 22.1 74.3	1.2
47.7 71.2 16.2	47.3 72.2 16.6	1.2
38.0 55.4 -20.9	37.5 55.6 -21.6	0.9
73.7 -22.8 67.6	73.6 -24.1 68.6	1.6
52.3 -52.3 -20.2	52.0 -52.6 -20.4	0.5
43.3 -17.0 -48.6	43.2 -17.7 -49.0	0.8
95.0 0.0 -2.0	95.1 0.1 -2.3	0.3
88.5 -0.4 -3.1	88.5 -0.8 -3.3	0.5
82.0 -0.9 -4.1	81.9 -1.0 -4.4	0.3
67.7 -2.0 -4.4	67.6 -2.4 -4.4	0.4
52.2 -2.5 -3.5	52.2 -2.7 -3.4	0.3
37.5 -3.9 -3.1	37.5 -3.7 -3.3	0.2
26.3 -6.8 -3.4	26.2 -6.9 -2.9	0.5
Average		0.8
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	135.36 141.42 137.45	85 85 170	27.00 22.97 61.45
0 0 0	0.18 0.19 0.32	85 170 170	36.45 54.94 65.97
12 12 12	0.57 0.61 0.67	170 85 170	55.89 36.34 62.17
25 25 25	2.24 2.31 2.23	170 170 85	57.28 65.11 24.44
38 38 38	4.58 4.75 4.58	0 129 208	24.16 33.54 88.97
51 51 51	7.66 7.98 7.78	83 158 220	40.94 51.71 100.42
63 63 63	11.15 11.64 11.35	154 193 232	70.52 79.93 112.67
76 76 76	15.44 16.14 15.72	170 33 101	45.85 22.96 24.69
89 89 89	20.56 21.46 20.92	184 94 142	59.76 40.58 46.24
102 102 102	26.05 27.30 26.65	205 158 190	82.37 71.19 79.16
114 114 114	31.80 33.37 32.59	236 218 9	94.50 104.25 11.22
127 127 127	38.63 40.21 39.21	237 222 88	98.90 108.23 30.06
140 140 140	45.99 48.08 46.88	236 228 158	106.19 114.42 64.31
153 153 153	53.98 56.40 54.76	154 83 61	39.60 28.94 12.06
165 165 165	61.93 64.68 62.96	104 67 54	20.71 16.83 9.27
178 178 178	70.82 74.15 72.21	96 35 28	15.82 9.61 3.08
191 191 191	80.29 83.89 81.76	96 33 62	17.19 9.92 10.51
204 204 204	90.54 94.71 92.32	114 101 31	25.51 27.03 5.71
216 216 216	100.27 104.76 102.28	34 74 42	6.32 11.62 6.38
229 229 229	111.71 116.86 113.71	25 75 96	8.53 12.64 22.84
242 242 242	123.00 128.79 125.31	35 34 66	5.35 4.54 11.37
0 0 128	6.69 2.68 34.88	215 216 220	100.47 104.81 105.49
0 0 255	23.47 9.16 123.66	194 195 199	83.52 87.28 88.08
0 128 0	7.83 26.37 3.93	152 152 155	53.68 55.89 56.06
0 128 128	14.52 29.31 38.75	109 110 111	29.54 31.21 31.10
0 170 255	36.61 54.16 129.83	68 68 68	12.76 13.33 13.03
0 255 0	27.46 93.44 13.15	29 29 28	2.85 3.00 2.75
0 255 170	38.59 97.82 71.87	36 34 107	8.27 5.68 26.30
0 255 255	50.80 102.53 136.35	76 69 137	19.97 16.49 41.73
85 85 85	18.98 19.81 19.34	136 131 182	48.35 45.70 71.67
128 0 0	24.20 11.26 0.68	169 39 26	41.62 22.00 3.29
128 0 128	30.96 13.85 35.89	183 90 60	52.62 36.72 12.31
128 128 0	32.23 37.79 4.32	205 152 126	74.40 65.71 40.95
128 128 128	39.14 40.82 39.85	34 121 52	10.91 25.92 10.68
128 128 255	55.96 47.51 127.91	92 148 91	27.67 42.79 24.74
128 255 128	58.86 107.37 49.19	156 186 152	59.71 72.69 56.62
170 0 255	63.98 27.81 124.63	188 146 126	65.43 59.44 40.46
170 170 170	65.31 68.28 66.58	204 144 24	66.67 59.51 7.41
170 255 0	68.20 112.15 13.74	170 36 71	43.93 22.59 13.77
170 255 255	91.70 121.33 137.21	115 35 104	25.52 13.79 25.50
255 0 0	84.83 39.26 1.51	157 177 33	50.13 64.92 10.59
255 0 170	96.12 43.54 61.21	14 125 139	15.79 28.87 44.80
255 0 255	108.18 48.21 125.33	16 91 167	15.80 19.28 59.41
255 128 128	99.37 68.81 41.31	236 237 242	119.11 124.25 125.06
255 170 0	97.92 83.86 7.66	212 215 221	98.72 103.60 106.28
255 170 255	121.23 93.48 131.40	189 193 201	81.01 85.10 89.27
255 255 0	111.93 132.33 14.30	143 149 156	49.90 53.08 56.44
255 255 170	123.37 136.80 74.31	101 106 110	26.86 28.80 30.47
170 85 85	47.90 33.20 19.97	65 71 74	12.68 13.88 14.96
85 170 85	28.41 51.74 23.83	40 49 50	5.86 6.85 7.48