

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2010-2-7 23:30:41
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name: DELL U2711
EDID-Serial: D970T9BS09UL
Profile: C:/WINDOWS/System32/spool/.../COLOR/dell-u2711-ugra4.icc
Created: 2010-2-7 23:28
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	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:	111.35 116.82 113.08
XYZ (normalized):	95.32 100.00 96.80
Luminance:	116.8 Cd/m2
Next Temperature:	5773 Kelvin
Assumed Target Whitepoint:	5800 Kelvin
Distance to assumed Target Whitepoint:	0.5 deltaE

Blackpoint

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

Luminance:	0.3 Cd/m2
Chromaticity:	2.0 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	5627	0.25	1.95	2.00	
5	4614	0.74	5.73	2.07	1.87
10	5656	2.10	14.37	0.76	1.81
15	5664	4.16	22.16	0.59	1.79
20	5869	6.65	28.62	0.44	1.81
25	5907	9.58	34.40	0.71	1.82
30	5843	13.23	40.12	0.70	1.82
35	5821	17.74	45.89	0.27	1.81
40	5846	22.52	51.01	0.45	1.81
45	5764	27.46	55.60	0.45	1.82
50	5779	33.21	60.27	0.61	1.82
55	5767	39.49	64.81	0.79	1.81
60	5797	46.04	69.05	0.68	1.82
65	5816	52.94	73.10	0.45	1.84
70	5803	60.72	77.27	0.92	1.82
75	5781	68.94	81.30	0.70	1.83
80	5820	77.70	85.26	0.65	1.84
85	5782	86.00	88.74	0.16	1.88
90	5794	95.39	92.43	0.52	1.90
95	5784	105.58	96.15	0.45	1.93
100	5773	116.82	100.00	0.00	
Average	5793			0.54	1.83
Range				1.40	
Max				0.92	

Tone values = 95.0%

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: Bradford

RGB	Lab	deltaLab	deltaE
0 0 0	1.9 1.6 -1.2	-1.9 -1.6 1.2	2.8
0 0 128	13.0 48.7 -75.9	-0.6 1.5 -1.6	2.3
0 0 255	27.1 75.5 -116.8	-0.1 0.4 -0.4	0.6
0 128 0	50.8 -87.9 50.5	0.3 -1.1 1.3	1.8
0 128 128	52.7 -59.6 -13.1	0.0 -0.5 -0.1	0.5
0 170 255	67.3 -45.0 -51.6	0.2 -0.2 0.4	0.5
0 255 0	85.6 -134.8 78.5	-0.2 0.1 -0.1	0.2
0 255 170	86.8 -112.0 15.3	-0.1 0.5 -0.6	0.8
0 255 255	88.1 -91.4 -19.8	-0.1 0.4 -0.2	0.5
85 85 85	44.2 -0.2 -0.2	-0.2 0.2 0.2	0.4
128 0 0	34.2 66.9 50.5	0.0 1.0 3.2	3.3
128 0 128	37.0 74.8 -35.7	0.0 0.6 0.1	0.6
128 128 0	59.1 -10.2 63.2	0.3 -0.6 0.8	1.0
128 128 128	60.7 0.1 -0.3	-0.0 -0.1 0.3	0.3
128 128 255	63.8 21.4 -56.4	-0.0 0.2 0.0	0.2
128 255 128	90.2 -75.0 39.5	-0.1 -0.0 -0.0	0.1
170 0 255	50.0 97.3 -77.9	0.2 0.2 0.3	0.5
170 170 170	74.7 0.4 -0.3	0.2 -0.4 0.3	0.6
170 255 0	91.9 -61.0 88.2	-0.0 0.2 -0.3	0.4
170 255 255	94.2 -37.1 -9.8	-0.1 0.2 -0.0	0.2
255 0 0	59.9 102.7 85.6	-0.0 0.1 -0.3	0.3
255 0 170	62.0 108.5 -16.9	0.1 -0.1 0.0	0.1
255 0 255	64.2 114.1 -53.9	0.1 -0.1 0.1	0.1
255 128 128	75.3 58.9 23.5	-0.0 -0.2 0.5	0.5
255 170 0	81.7 31.6 88.4	0.3 -1.1 -0.3	1.2
255 170 255	84.5 46.6 -22.7	0.1 -0.4 0.2	0.4
255 255 0	98.0 -16.2 97.5	0.0 -0.2 -0.8	0.8
255 255 170	99.0 -8.1 34.7	-0.0 -0.1 0.0	0.1
255 255 255	100.0 0.0 -0.0	0.0 0.0 -0.0	0.0
170 85 85	55.6 45.7 18.3	-0.1 0.5 0.6	0.8
85 170 85	66.9 -58.3 30.4	0.2 -0.8 0.6	1.0
85 85 170	46.6 16.5 -43.9	-0.2 0.5 -0.5	0.8
85 170 170	68.3 -42.7 -10.9	0.2 -0.7 0.2	0.7
170 85 170	57.3 53.7 -26.0	-0.1 0.7 -0.2	0.7
170 170 85	73.6 -8.5 40.8	0.2 -0.5 0.9	1.1
Average			0.8
Maximum			3.3

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	100 %
AdobeRGB	98 %
ECI-RGB v1.0	92 %

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	55.4 -34.2 -48.8	3.1
66.9 -24.7 -37.1	66.8 -24.5 -37.1	0.3
79.7 -12.5 -21.8	79.5 -12.1 -22.6	1.0
48.0 74.0 -3.0	48.2 72.5 -2.6	1.5
60.8 50.6 -6.7	60.7 50.4 -7.4	0.7
76.4 25.8 -6.9	76.3 25.9 -7.5	0.6
89.0 -5.0 93.0	88.6 -3.8 90.0	3.3
90.3 -4.7 62.6	90.0 -3.3 61.6	1.7
92.2 -3.5 31.1	91.9 -2.8 30.9	0.8
53.1 37.7 28.9	53.1 36.9 28.4	1.0
41.5 22.7 16.8	41.5 22.3 16.2	0.7
31.9 40.0 24.0	32.1 38.5 22.1	2.4
32.5 44.4 -1.8	32.8 42.5 -1.9	2.0
51.3 1.3 44.5	51.2 1.4 42.9	1.6
34.6 -36.4 13.9	34.7 -33.7 12.7	3.0
36.0 -26.2 -20.9	36.1 -25.0 -20.8	1.2
20.9 9.6 -23.6	22.0 9.0 -22.2	1.9
89.0 0.0 -1.8	88.7 0.0 -2.1	0.4
82.8 0.0 -1.7	82.5 0.5 -2.2	0.7
69.3 0.0 -1.4	69.0 0.1 -1.4	0.3
54.1 0.0 -1.0	53.9 0.4 -1.5	0.7
36.6 -0.0 -0.5	36.6 0.5 -1.3	0.9
16.0 0.0 0.0	17.3 0.3 0.1	1.3
24.0 22.0 -46.0	25.0 20.9 -44.4	2.2
40.9 17.9 -36.6	40.7 18.1 -36.7	0.3
63.7 10.3 -23.8	63.6 10.5 -24.2	0.5
47.0 68.0 48.0	47.1 67.1 47.3	1.2
58.5 47.1 37.9	58.3 46.9 36.8	1.2
74.2 22.9 21.4	73.8 23.1 20.3	1.1
50.0 -65.0 27.0	50.0 -63.4 26.6	1.7
62.1 -39.8 21.0	61.8 -39.1 20.1	1.2
77.0 -19.1 11.0	76.6 -18.8 10.3	0.9
71.2 18.8 17.3	71.0 19.4 16.4	1.1
71.2 22.2 73.1	70.9 22.2 72.5	0.7
47.7 71.2 16.2	48.1 70.0 16.4	1.3
38.0 55.4 -20.9	38.4 53.5 -20.6	1.9
73.7 -22.8 67.6	73.4 -22.7 66.7	0.9
52.3 -52.3 -20.2	52.4 -51.0 -20.1	1.3
43.3 -17.0 -48.6	43.4 -15.9 -48.4	1.2
95.0 0.0 -2.0	94.8 0.4 -2.3	0.6
88.5 -0.4 -3.1	88.2 -0.7 -3.8	0.8
82.0 -0.9 -4.1	81.6 -0.7 -4.0	0.4
67.7 -2.0 -4.4	67.3 -1.5 -4.6	0.7
52.2 -2.5 -3.5	52.2 -2.6 -3.5	0.2
37.5 -3.9 -3.1	37.6 -4.0 -3.8	0.7
26.3 -6.8 -3.4	27.0 -6.5 -3.0	0.9
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	111.35 116.82 113.08	85 85 170	21.84 18.64 49.67
0 0 0	0.29 0.25 0.33	85 170 170	29.84 45.11 53.84
12 12 12	0.75 0.74 0.63	170 85 170	45.42 29.44 50.27
25 25 25	2.03 2.10 2.05	170 170 85	47.15 53.59 20.59
38 38 38	4.01 4.16 4.02	0 130 208	19.67 27.78 71.84
51 51 51	6.30 6.65 6.48	85 159 221	34.06 43.03 82.38
63 63 63	9.05 9.58 9.36	154 193 233	57.69 65.49 92.88
76 76 76	12.65 13.23 13.06	170 39 103	37.66 19.45 20.66
89 89 89	16.88 17.74 17.27	185 96 144	49.13 33.47 38.58
102 102 102	21.43 22.52 22.03	206 159 191	67.76 58.65 65.43
114 114 114	26.28 27.46 26.74	236 216 0	77.60 85.07 10.11
127 127 127	31.78 33.21 32.44	237 221 86	81.45 88.65 24.86
140 140 140	37.85 39.49 38.60	236 228 157	86.96 93.72 52.58
153 153 153	44.03 46.04 45.07	155 85 63	32.82 24.35 10.55
165 165 165	50.47 52.94 51.70	105 68 56	17.34 14.11 8.08
178 178 178	58.12 60.72 59.60	96 37 31	13.03 8.20 3.20
191 191 191	65.96 68.94 67.32	97 36 64	14.33 8.60 9.06
204 204 204	73.73 77.70 75.26	115 101 33	21.44 22.52 5.40
216 216 216	82.00 86.00 83.46	35 74 44	5.59 9.81 5.88
229 229 229	91.08 95.39 93.02	27 76 98	7.39 10.72 19.18
242 242 242	100.81 105.58 102.77	36 35 67	4.75 4.15 9.56
0 0 128	5.41 2.04 28.40	215 216 220	81.98 85.91 86.07
0 0 255	18.50 6.74 99.19	194 195 199	68.57 71.64 72.04
0 128 0	6.80 22.34 3.63	152 153 155	43.91 46.00 45.82
0 128 128	12.25 24.60 32.21	110 110 112	24.53 25.60 25.71
0 170 255	29.73 44.18 105.51	68 68 69	10.47 10.89 10.99
0 255 0	23.73 78.79 12.15	30 30 30	2.65 2.76 2.67
0 255 170	32.51 81.96 59.65	39 37 108	7.33 5.28 21.60
0 255 255	42.14 85.43 111.72	78 71 139	16.73 13.83 34.55
85 85 85	15.54 16.34 15.93	137 132 184	40.00 37.90 59.60
128 0 0	19.79 9.16 0.65	169 42 29	34.07 18.39 3.34
128 0 128	25.20 11.10 29.26	184 91 62	43.27 30.22 10.77
128 128 0	26.70 31.48 3.97	205 153 127	60.78 53.86 34.38
128 128 128	32.25 33.79 32.92	36 120 53	9.47 21.62 9.25
128 128 255	45.31 38.57 103.60	93 148 92	22.89 35.25 20.82
128 255 128	49.19 89.84 41.46	156 186 153	48.87 59.51 47.08
170 0 255	51.42 21.77 100.15	189 147 126	54.06 48.94 33.65
170 170 170	53.39 55.83 54.40	204 144 21	54.29 48.55 6.40
170 255 0	56.96 93.81 12.66	171 41 73	36.43 19.28 11.86
170 255 255	75.50 100.56 112.48	116 39 106	21.45 11.99 21.32
255 0 0	69.30 31.75 1.44	158 176 31	41.33 53.17 9.17
255 0 170	78.10 34.86 49.38	15 125 140	13.50 24.30 37.19
255 0 255	87.62 38.30 100.90	20 92 168	13.37 16.06 48.66
255 128 128	81.57 56.33 34.10	236 237 242	97.43 101.84 102.20
255 170 0	80.52 68.81 7.05	212 215 222	80.40 84.64 87.20
255 170 255	99.02 75.90 106.80	189 193 201	66.25 69.73 72.45
255 255 0	92.95 110.11 13.20	143 149 156	40.88 43.32 46.06
255 255 170	101.86 113.38 61.52	101 107 111	22.06 23.72 25.06
170 85 85	39.17 27.17 16.50	65 72 75	10.47 11.54 12.59
85 170 85	23.46 42.73 19.92	41 50 52	5.13 5.97 6.48