

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2010-1-2 20:38:06
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
EDID-Name: W2420
EDID-Serial:
Profile: C:/WINDOWS/System32/spool/DRIVERS/COLOR/lg-w2420r-ugra2.icc
Created: 2010-1-2 20:35
Measurement device: eye-one pro

Summary

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

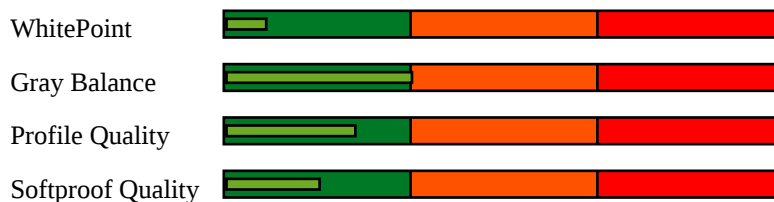
Calibration

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:	131.80 138.42 134.36
XYZ (normalized):	95.22 100.00 97.07
Luminance:	138.4 Cd/m2
Next Temperature:	5797 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:	1.0 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	8498	0.24	1.60	0.97	
5	6280	0.81	5.26	0.66	1.84
10	5840	2.49	14.39	0.12	1.79
15	5765	4.83	21.92	0.84	1.80
20	5931	7.76	28.40	0.57	1.81
25	5800	11.16	34.11	0.36	1.83
30	5823	15.88	40.37	0.17	1.81
35	5836	21.11	45.97	0.36	1.80
40	5731	26.46	50.82	0.62	1.81
45	5871	32.83	55.81	0.60	1.81
50	5853	39.34	60.26	0.50	1.82
55	5864	47.05	64.95	0.53	1.81
60	5805	54.87	69.21	0.45	1.81
65	5825	63.12	73.28	0.65	1.84
70	5838	72.43	77.48	0.41	1.82
75	5818	82.06	81.45	0.60	1.81
80	5864	91.94	85.21	0.65	1.82
85	5855	102.75	89.03	0.54	1.83
90	5826	113.50	92.57	0.29	1.88
95	5818	125.13	96.16	1.16	1.85
100	5797	138.42	100.00	0.00	
Average	5829			0.50	1.82
Range				2.01	
Max				1.16	

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	1.6 -0.2 -1.0	-1.6 0.2 1.0	1.9
0 0 128	12.8 57.6 -81.4	-1.4 0.4 0.6	1.6
0 0 255	26.3 89.6 -124.7	-0.9 -1.8 2.5	3.2
0 128 0	52.5 -92.3 58.1	-0.6 0.3 0.6	0.9
0 128 128	54.1 -61.0 -12.8	-0.7 0.4 0.5	1.0
0 170 255	68.9 -42.3 -54.5	-1.0 -1.2 2.9	3.2
0 255 0	88.2 -141.2 90.0	-1.5 2.0 -1.2	2.8
0 255 170	89.0 -115.6 18.3	-1.3 1.7 -0.6	2.2
0 255 255	89.4 -91.0 -20.8	-0.6 -0.6 2.1	2.3
85 85 85	44.3 -0.2 -0.0	-0.3 0.2 0.0	0.4
128 0 0	33.8 71.5 51.9	-0.7 -0.1 1.7	1.8
128 0 128	36.2 81.3 -39.3	-0.5 -0.4 0.2	0.7
128 128 0	59.4 -12.4 69.1	0.1 -0.0 1.1	1.1
128 128 128	60.6 -0.6 -0.2	0.1 0.6 0.2	0.6
128 128 255	63.8 25.8 -61.7	-0.4 -1.0 3.2	3.4
128 255 128	91.0 -81.4 45.1	-0.1 3.3 -1.8	3.7
170 0 255	49.1 107.8 -85.2	-0.7 -1.6 2.4	3.0
170 170 170	74.7 -0.4 -0.1	0.2 0.4 0.1	0.4
170 255 0	92.8 -66.7 97.9	-0.2 2.1 -0.2	2.2
170 255 255	94.6 -39.2 -9.9	-0.0 1.6 0.7	1.8
255 0 0	59.4 109.8 89.4	-1.2 -1.8 -0.9	2.3
255 0 170	61.7 117.7 -19.8	-1.6 -2.4 -1.5	3.2
255 0 255	63.7 125.0 -59.5	-1.5 -2.6 0.3	3.0
255 128 128	74.6 63.6 25.0	-0.1 -2.6 -2.0	3.3
255 170 0	81.7 32.8 95.5	-0.1 -2.5 -0.5	2.5
255 170 255	83.9 50.7 -25.1	0.1 -1.8 0.6	1.9
255 255 0	98.3 -17.9 106.9	-0.1 -0.9 -0.7	1.2
255 255 170	99.0 -9.6 38.1	0.1 0.1 -1.6	1.6
255 255 255	100.0 0.0 0.0	-0.0 0.0 -0.0	0.0
170 85 85	55.9 49.3 19.6	-1.1 -1.3 -1.5	2.2
85 170 85	69.3 -64.4 35.7	-1.5 2.9 -1.6	3.7
85 85 170	47.3 20.2 -48.2	-1.2 -0.6 2.1	2.5
85 170 170	70.5 -45.8 -10.9	-1.6 1.7 0.8	2.4
170 85 170	57.4 59.3 -29.9	-1.0 -1.7 1.3	2.3
170 170 85	75.1 -11.3 46.6	-1.1 1.0 -2.4	2.8
Average			2.1
Maximum			3.7

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	100 %
AdobeRGB	100 %
ECI-RGB v1.0	95 %

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	56.2 -30.2 -52.3	7.3
66.9 -24.7 -37.1	68.2 -24.8 -39.9	3.1
79.7 -12.5 -21.8	80.0 -13.9 -22.9	1.8
48.0 74.0 -3.0	49.0 75.6 -1.9	2.2
60.8 50.6 -6.7	62.0 53.2 -6.6	2.8
76.4 25.8 -6.9	76.6 27.2 -7.8	1.7
89.0 -5.0 93.0	88.9 -5.3 95.1	2.1
90.3 -4.7 62.6	90.9 -4.8 65.6	3.1
92.2 -3.5 31.1	92.0 -3.4 32.7	1.6
53.1 37.7 28.9	54.5 38.9 31.7	3.3
41.5 22.7 16.8	42.3 23.3 17.6	1.2
31.9 40.0 24.0	32.5 39.5 25.8	2.0
32.5 44.4 -1.8	33.4 44.3 -0.7	1.4
51.3 1.3 44.5	51.8 1.9 45.6	1.4
34.6 -36.4 13.9	35.0 -36.0 13.8	0.6
36.0 -26.2 -20.9	36.8 -26.9 -21.4	1.3
20.9 9.6 -23.6	22.0 8.5 -22.6	1.9
89.0 0.0 -1.8	88.9 -0.3 -2.8	1.0
82.8 0.0 -1.7	82.5 0.6 -3.0	1.4
69.3 0.0 -1.4	69.2 0.1 -1.7	0.4
54.1 0.0 -1.0	53.9 0.8 -2.1	1.4
36.6 -0.0 -0.5	36.6 0.4 -0.9	0.5
16.0 0.0 0.0	17.2 0.1 0.2	1.2
24.0 22.0 -46.0	25.0 21.7 -47.0	1.5
40.9 17.9 -36.6	41.9 18.2 -38.4	2.1
63.7 10.3 -23.8	64.0 10.1 -25.2	1.5
47.0 68.0 48.0	47.9 69.8 50.1	2.9
58.5 47.1 37.9	59.9 49.3 40.8	3.9
74.2 22.9 21.4	74.7 24.7 22.7	2.3
50.0 -65.0 27.0	50.9 -66.9 28.5	2.6
62.1 -39.8 21.0	62.8 -40.9 21.6	1.4
77.0 -19.1 11.0	77.5 -21.3 12.0	2.5
71.2 18.8 17.3	71.9 20.0 18.5	1.8
71.2 22.2 73.1	71.4 23.5 75.1	2.5
47.7 71.2 16.2	49.0 73.6 18.0	3.3
38.0 55.4 -20.9	39.1 56.4 -20.9	1.5
73.7 -22.8 67.6	75.2 -24.3 70.5	3.6
52.3 -52.3 -20.2	53.3 -53.3 -21.1	1.6
43.3 -17.0 -48.6	44.3 -16.5 -50.5	2.2
95.0 0.0 -2.0	94.8 -0.1 -3.3	1.3
88.5 -0.4 -3.1	88.5 -1.1 -4.2	1.3
82.0 -0.9 -4.1	81.8 -0.4 -5.5	1.5
67.7 -2.0 -4.4	67.4 -2.3 -5.6	1.3
52.2 -2.5 -3.5	52.0 -1.9 -5.1	1.7
37.5 -3.9 -3.1	37.8 -5.3 -4.0	1.7
26.3 -6.8 -3.4	26.9 -8.6 -2.9	2.0
Average		2.0
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	131.80 138.42 134.36	85 85 170	27.81 22.89 65.75
0 0 0	0.23 0.24 0.32	85 170 170	37.52 57.79 68.72
12 12 12	0.76 0.81 0.84	170 85 170	56.59 35.03 64.75
25 25 25	2.36 2.49 2.43	170 170 85	57.21 66.65 22.37
38 38 38	4.55 4.83 4.57	0 129 206	25.36 34.17 93.05
51 51 51	7.33 7.76 7.62	84 159 219	42.62 53.74 106.72
63 63 63	10.67 11.16 10.92	153 193 231	68.71 79.04 112.49
76 76 76	15.09 15.88 15.43	170 47 102	47.20 23.96 25.05
89 89 89	20.01 21.11 20.48	185 100 142	62.09 41.73 47.35
102 102 102	25.36 26.46 25.66	206 161 190	81.73 70.17 78.97
114 114 114	31.09 32.83 31.98	237 215 26	91.55 101.67 10.18
127 127 127	37.29 39.34 38.27	238 220 93	97.61 107.57 27.70
140 140 140	44.62 47.05 45.91	237 227 160	102.58 111.17 60.42
153 153 153	52.38 54.87 53.60	156 87 64	41.73 30.66 12.19
165 165 165	59.81 63.12 61.03	105 69 57	21.49 17.37 9.56
178 178 178	68.77 72.43 70.48	96 40 31	15.94 9.96 3.27
191 191 191	78.33 82.06 80.35	97 39 63	17.82 10.54 10.69
204 204 204	87.44 91.94 90.21	116 101 37	26.23 27.45 6.01
216 216 216	97.59 102.75 100.37	35 73 45	6.47 11.79 6.78
229 229 229	108.01 113.50 110.67	26 76 97	8.91 13.24 23.91
242 242 242	119.73 125.13 123.08	36 36 66	5.60 4.93 11.53
0 0 128	7.32 2.39 37.96	215 216 220	97.52 102.53 104.12
0 0 255	24.67 7.68 130.21	194 195 199	81.21 84.86 86.74
0 128 0	8.35 28.54 3.38	152 153 155	52.30 54.86 55.15
0 128 128	15.30 30.88 40.04	110 110 112	29.17 30.34 31.03
0 170 255	38.58 55.51 136.63	68 68 69	12.33 12.88 12.86
0 255 0	29.21 100.65 11.24	30 30 30	3.08 3.23 3.11
0 255 170	40.42 103.49 71.85	38 39 106	8.87 6.30 27.57
0 255 255	52.52 105.23 139.55	77 73 137	21.02 17.43 44.55
85 85 85	18.44 19.42 18.87	136 133 182	47.97 45.63 73.07
128 0 0	24.15 10.56 0.60	169 48 31	42.46 22.54 3.69
128 0 128	30.80 12.55 36.62	185 94 64	55.23 38.19 12.29
128 128 0	31.28 37.77 3.62	206 154 128	74.76 65.65 40.06
128 128 128	37.75 39.84 38.84	36 118 56	11.21 26.65 10.82
128 128 255	55.92 45.83 133.57	93 146 94	27.85 43.53 24.95
128 255 128	56.70 108.91 44.89	156 185 154	58.28 72.43 55.53
170 0 255	64.35 24.81 130.02	189 148 127	66.20 59.87 39.55
170 170 170	62.92 66.28 64.41	205 144 32	65.95 58.52 7.09
170 255 0	66.20 113.82 11.36	171 48 73	46.12 23.87 14.12
170 255 255	89.19 120.51 135.40	116 43 104	26.96 14.74 26.34
255 0 0	84.75 36.66 1.30	159 174 42	51.43 66.93 10.64
255 0 170	97.62 40.78 61.66	11 124 139	16.29 29.88 46.58
255 0 255	109.94 44.48 129.03	15 92 165	16.55 19.93 62.09
255 128 128	97.38 65.02 38.06	236 237 242	115.09 120.78 123.38
255 170 0	96.07 81.58 6.29	212 215 221	95.95 101.39 105.34
255 170 255	118.18 88.12 129.44	189 193 201	79.10 83.15 88.76
255 255 0	109.45 131.40 11.65	143 149 156	48.32 51.61 56.12
255 255 170	119.41 134.43 68.70	101 106 111	26.13 27.89 30.71
170 85 85	48.28 32.56 19.21	65 72 75	12.33 13.83 15.20
85 170 85	28.83 55.15 22.91	41 50 51	5.81 7.02 7.61