

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2011-12-13 18:23:59
Report-Version: v1.3.1
Monitor-Name: \\.\DISPLAY1
Profile: C:/Windows/system32/spool/drivers/.../11.12.11-5000K-22-160cd-trc.icc
Created: 2011-12-11 3:29
Measurement device: DTP94-LCD mode

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:	266.69 278.60 248.44
XYZ (normalized):	95.73 100.00 89.17
Luminance:	278.6 Cd/m2
Next Temperature:	5356 Kelvin
Assumed Target Whitepoint:	5400 Kelvin
Distance to assumed Target Whitepoint:	0.8 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:	1.2 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	9923	0.30	0.97	1.18	
5	7137	0.60	1.95	1.25	2.28
10	5561	2.10	6.81	0.60	2.21
15	5192	4.60	13.54	0.75	2.20
20	5323	8.60	20.39	0.91	2.20
25	5394	13.10	25.87	0.61	2.22
30	5198	19.90	32.13	0.81	2.21
35	5240	28.40	38.19	0.72	2.19
40	5236	38.30	43.87	0.83	2.17
45	5234	48.20	48.64	1.10	2.20
50	5356	62.40	54.45	0.00	2.17
55	5277	77.00	59.56	0.64	2.16
60	5274	92.40	64.29	1.02	2.16
65	5313	107.80	68.53	1.14	2.20
70	5355	126.90	73.25	0.48	2.20
75	5356	148.70	78.10	0.00	2.19
80	5355	170.70	82.52	0.53	2.19
85	5316	193.00	86.64	0.48	2.26
90	5316	220.20	91.25	0.50	2.24
95	5277	247.30	95.48	0.94	2.38
100	5356	278.60	100.00	0.00	
Average	5298			0.64	2.21
Range				1.99	
Max				1.14	

Tone values = 94.2%

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	1.0 0.1 -1.2	-1.0 -0.1 1.2	1.5
0 0 128	12.0 42.9 -68.8	-1.0 0.4 -0.7	1.3
0 0 255	29.4 72.8 -115.4	-0.8 -1.1 0.2	1.4
0 128 0	45.4 -76.8 48.6	-0.3 -1.6 0.4	1.6
0 128 128	47.3 -51.2 -11.3	-0.5 -1.3 -0.7	1.6
0 170 255	64.2 -31.3 -56.8	-0.1 -2.5 -0.2	2.5
0 255 0	85.4 -127.8 82.6	-0.2 -2.1 -1.4	2.6
0 255 170	86.5 -107.6 22.5	-0.1 -2.6 -1.0	2.8
0 255 255	88.2 -84.3 -19.5	-0.2 -2.7 -0.4	2.7
85 85 85	36.6 -0.4 0.6	-0.8 0.4 -0.6	1.1
128 0 0	30.3 59.0 45.8	-0.5 1.5 1.8	2.3
128 0 128	33.3 65.8 -32.7	-0.6 1.0 0.2	1.2
128 128 0	53.2 -9.7 60.3	-0.5 -0.1 -0.2	0.6
128 128 128	54.8 0.0 0.0	-0.8 0.0 -0.0	0.8
128 128 255	59.3 25.8 -64.8	-0.9 0.6 -0.8	1.3
128 255 128	89.1 -80.9 47.5	-0.3 -2.8 -0.5	2.8
170 0 255	48.8 91.3 -81.7	-0.4 0.2 0.3	0.5
170 170 170	70.4 1.1 0.0	-0.2 -1.1 -0.0	1.1
170 255 0	90.8 -65.8 91.0	-0.1 -1.3 -1.7	2.1
170 255 255	93.4 -39.9 -10.2	-0.1 -1.8 -1.0	2.1
255 0 0	60.1 97.9 86.4	-0.3 2.3 -0.0	2.3
255 0 170	62.0 102.6 -10.3	-0.1 2.1 0.4	2.2
255 0 255	64.9 108.8 -54.2	-0.2 1.9 0.2	2.0
255 128 128	72.5 63.7 28.8	-0.5 1.9 0.8	2.1
255 170 0	79.0 37.1 90.7	0.1 0.4 -1.6	1.7
255 170 255	82.6 51.8 -26.1	-0.3 0.8 -0.4	1.0
255 255 0	97.9 -16.8 101.2	-0.2 0.6 -1.6	1.7
255 255 170	98.8 -9.7 41.6	-0.2 0.4 -0.0	0.5
255 255 255	100.0 0.0 0.0	0.0 0.0 -0.0	0.0
170 85 85	50.0 47.3 22.4	-0.7 1.6 -0.3	1.8
85 170 85	61.9 -60.5 35.9	-0.0 -1.9 -0.8	2.1
85 85 170	40.0 19.5 -48.1	-0.8 0.1 -0.9	1.2
85 170 170	63.5 -42.5 -10.9	-0.1 -2.4 -0.4	2.4
170 85 170	52.2 55.1 -27.4	-0.7 1.6 -0.8	1.9
170 170 85	69.0 -8.6 46.4	-0.2 -0.7 -0.1	0.7
Average			1.6
Maximum			2.8

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	100 %
AdobeRGB	99 %
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	56.0 -31.7 -47.1	6.1
66.9 -24.7 -37.1	67.0 -22.8 -36.0	2.3
79.7 -12.5 -21.8	79.8 -11.4 -20.3	1.8
48.0 74.0 -3.0	48.6 72.4 -3.1	1.8
60.8 50.6 -6.7	61.0 49.7 -7.1	1.0
76.4 25.8 -6.9	76.7 25.2 -6.8	0.7
89.0 -5.0 93.0	88.9 -5.0 93.6	0.6
90.3 -4.7 62.6	90.4 -5.0 62.6	0.3
92.2 -3.5 31.1	92.2 -2.8 31.2	0.7
53.1 37.7 28.9	53.6 36.6 29.7	1.5
41.5 22.7 16.8	42.2 21.6 17.3	1.4
31.9 40.0 24.0	32.7 38.9 24.0	1.3
32.5 44.4 -1.8	33.3 43.3 -0.7	1.8
51.3 1.3 44.5	51.6 0.9 45.0	0.7
34.6 -36.4 13.9	35.4 -36.1 14.4	1.0
36.0 -26.2 -20.9	36.6 -26.2 -19.4	1.6
20.9 9.6 -23.6	21.6 9.4 -22.6	1.2
89.0 0.0 -1.8	88.8 0.8 -1.8	0.8
82.8 0.0 -1.7	82.7 0.3 -1.4	0.5
69.3 0.0 -1.4	69.6 0.6 -1.5	0.7
54.1 0.0 -1.0	54.8 0.5 -1.2	0.9
36.6 -0.0 -0.5	37.6 -0.0 -0.3	1.0
16.0 0.0 0.0	16.8 0.6 0.4	1.1
24.0 22.0 -46.0	24.7 22.5 -45.7	0.9
40.9 17.9 -36.6	41.6 18.8 -36.2	1.2
63.7 10.3 -23.8	64.4 10.9 -23.2	1.0
47.0 68.0 48.0	47.1 66.0 47.6	2.1
58.5 47.1 37.9	58.9 45.4 37.6	1.8
74.2 22.9 21.4	74.2 22.4 20.9	0.7
50.0 -65.0 27.0	50.7 -64.2 28.8	2.1
62.1 -39.8 21.0	62.2 -37.9 21.8	2.1
77.0 -19.1 11.0	77.0 -17.7 10.7	1.4
71.2 18.8 17.3	71.3 18.5 16.7	0.7
71.2 22.2 73.1	71.4 20.8 73.6	1.4
47.7 71.2 16.2	48.2 69.8 15.7	1.5
38.0 55.4 -20.9	38.8 54.7 -20.6	1.1
73.7 -22.8 67.6	73.9 -22.5 68.4	0.9
52.3 -52.3 -20.2	53.0 -51.4 -19.1	1.5
43.3 -17.0 -48.6	43.5 -16.5 -47.1	1.6
95.0 0.0 -2.0	94.8 0.4 -1.6	0.6
88.5 -0.4 -3.1	88.4 -0.6 -3.0	0.3
82.0 -0.9 -4.1	81.8 -1.1 -4.0	0.2
67.7 -2.0 -4.4	67.7 -0.6 -4.6	1.3
52.2 -2.5 -3.5	52.9 -2.3 -3.8	0.7
37.5 -3.9 -3.1	38.0 -3.0 -3.2	1.0
26.3 -6.8 -3.4	26.8 -5.9 -3.4	1.1
Average		1.3
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	266.69 278.60 248.44	85 85 170	38.84 31.60 94.14
0 0 0	0.30 0.30 0.45	85 170 170	58.18 90.00 100.44
12 12 12	0.58 0.60 0.73	170 85 170	91.34 56.60 94.98
25 25 25	1.97 2.10 1.88	170 170 85	96.91 109.50 31.12
38 38 38	4.48 4.60 4.10	0 146 215	47.69 67.20 156.08
51 51 51	8.14 8.60 7.42	101 173 226	81.49 102.50 178.20
63 63 63	12.61 13.10 11.93	168 203 236	138.82 157.10 198.10
76 76 76	19.22 19.90 17.41	185 51 121	91.86 47.70 46.77
89 89 89	27.27 28.40 24.78	197 113 159	118.38 81.10 85.08
102 102 102	36.99 38.30 33.83	215 173 201	163.80 142.20 144.00
114 114 114	46.69 48.20 42.83	240 224 0	188.51 205.50 20.30
127 127 127	59.73 62.40 55.64	240 228 107	197.15 214.40 54.53
140 140 140	73.94 77.00 67.81	240 233 173	211.41 225.80 116.22
153 153 153	89.23 92.40 82.37	171 103 82	80.71 59.80 22.87
165 165 165	104.09 107.80 96.99	124 86 74	42.96 35.10 17.84
178 178 178	121.82 126.90 113.85	116 52 46	32.57 20.40 6.68
191 191 191	142.35 148.70 132.60	117 50 82	35.54 21.20 19.52
204 204 204	163.87 170.70 153.14	133 120 49	52.74 55.00 11.31
216 216 216	185.30 193.00 171.56	49 94 61	13.54 24.30 12.68
229 229 229	211.42 220.20 195.73	38 95 116	17.58 26.20 41.56
242 242 242	237.46 247.30 217.79	52 50 85	10.90 9.50 20.73
0 0 128	9.99 4.10 49.97	222 223 226	197.70 205.40 188.83
0 0 255	44.43 17.60 226.49	204 205 208	164.60 171.50 156.72
0 128 0	13.79 41.30 5.65	167 168 170	107.61 111.80 102.78
0 128 128	23.55 45.50 54.25	128 128 130	61.02 63.40 58.28
0 170 255	68.82 93.20 231.23	87 87 88	26.32 27.50 24.75
0 255 0	61.61 186.20 23.61	44 44 44	6.10 6.30 5.49
0 255 170	79.47 192.90 113.43	55 51 125	17.10 12.20 48.41
0 255 255	105.10 203.00 245.04	97 89 154	41.34 34.30 77.48
85 85 85	24.75 26.00 22.69	153 148 194	97.96 92.80 131.47
128 0 0	36.45 17.40 1.04	183 56 44	81.73 44.40 7.20
128 0 128	46.27 21.30 50.77	197 109 81	105.73 74.50 23.88
128 128 0	50.57 58.90 6.25	214 167 144	147.36 130.40 75.62
128 128 128	60.59 63.30 56.45	47 139 72	23.51 53.10 19.76
128 128 255	94.12 76.90 229.50	110 164 111	56.74 85.30 44.61
128 255 128	108.77 207.40 73.68	170 197 168	119.81 143.70 104.01
170 0 255	111.12 49.00 225.71	200 162 144	130.69 118.40 74.40
170 170 170	111.06 115.00 102.51	213 159 39	132.44 118.40 14.04
170 255 0	129.16 217.50 24.50	185 54 92	88.23 46.70 26.66
170 255 255	172.40 234.20 243.96	135 52 123	52.77 29.30 47.58
255 0 0	163.50 77.60 2.93	172 189 51	102.46 129.40 19.89
255 0 170	179.99 83.90 94.66	0 143 156	32.30 58.90 81.53
255 0 255	205.55 94.10 226.05	24 111 180	30.65 38.10 104.43
255 128 128	187.12 122.90 59.05	239 240 244	232.94 242.70 221.78
255 170 0	187.77 151.90 11.96	219 222 227	193.71 203.10 190.19
255 170 255	231.85 170.70 234.39	199 203 210	158.94 167.20 159.91
255 255 0	224.39 262.90 26.19	159 164 171	99.98 104.90 102.75
255 255 170	242.06 269.80 118.51	119 125 129	54.56 58.30 57.11
170 85 85	77.49 51.00 23.75	84 90 93	25.99 28.20 27.79
85 170 85	44.01 84.40 29.34	57 67 69	12.18 14.00 14.28