

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2007-5-14 11:23:41
Report-Version: v1.2.1
Monitor-Name: \\.\DISPLAY1
Profile: C:/WINDOWS/System32/spool/DRIVERS/COLOR/0u_nec2470wnx.icm
Created: 2007-5-14 11:18
Measurement device: eye-one display

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	no
Offset/Gravure Paper Type 1/2	yes
Offset on uncoated paper	yes
Newspaper Printing	yes
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: 113.56 118.84 116.75
XYZ (normalized): 95.56 100.00 98.24
Luminance: 118.8 Cd/m2
Next Temperature: 5824 Kelvin
Assumed Target Whitepoint: 5800 Kelvin
Distance to assumed Target Whitepoint: 0.6 deltaE

Blackpoint

Luminance: 0.1 Cd/m2
Chromaticity: 0.4 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	7216	0.10	0.73	0.37	
5	5429	0.55	4.18	0.46	1.86
10	5798	1.83	12.85	0.09	1.84
15	5737	3.90	21.13	0.29	1.82
20	5772	6.60	28.25	0.31	1.81
25	5756	9.55	34.06	0.40	1.83
30	5841	13.54	40.24	0.11	1.81
35	5787	17.52	45.28	0.56	1.82
40	5798	22.88	50.98	0.33	1.80
45	5813	28.05	55.69	1.10	1.82
50	5783	33.56	60.11	0.34	1.83
55	5728	40.10	64.76	0.81	1.82
60	5821	47.58	69.50	0.24	1.80
65	5885	54.23	73.31	0.64	1.83
70	5783	62.30	77.53	0.52	1.82
75	5810	70.79	81.60	0.52	1.81
80	5804	79.63	85.51	0.32	1.80
85	5790	88.19	89.02	0.47	1.85
90	5804	98.21	92.86	1.07	1.87
95	5821	108.69	96.60	0.66	1.80
100	5824	118.84	100.00	0.00	
Average	5798			0.46	1.82
Range				1.65	

Tone values = 90.3%

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: CAT02

RGB	Lab	deltaLab	deltaE
0 0 0	0.7 -0.4 -0.0	-0.7 0.4 0.0	0.8
0 0 128	14.4 36.4 -72.0	1.2 -0.1 0.7	1.4
0 0 255	30.9 54.1 -109.5	0.9 0.9 1.6	2.1
0 128 0	50.9 -57.7 50.5	0.3 1.2 0.7	1.4
0 128 128	52.8 -39.7 -11.9	0.6 1.5 0.4	1.6
0 170 255	69.0 -29.9 -48.3	0.1 2.2 0.6	2.2
0 255 0	85.8 -85.8 78.5	-0.2 0.3 -1.0	1.1
0 255 170	87.3 -71.9 16.5	0.0 0.8 -0.4	0.9
0 255 255	89.0 -59.0 -17.8	0.1 1.2 0.4	1.3
85 85 85	44.0 -0.2 -0.3	0.0 0.2 0.3	0.4
128 0 0	32.8 53.7 45.7	0.0 -0.4 0.8	0.9
128 0 128	36.5 59.4 -34.9	0.4 -1.0 -0.9	1.4
128 128 0	58.8 -8.8 59.9	0.1 0.2 0.7	0.7
128 128 128	60.5 -0.0 0.2	0.2 0.0 -0.2	0.3
128 128 255	64.6 16.3 -54.5	0.3 0.5 0.7	0.9
128 255 128	90.3 -51.0 39.8	-0.1 0.0 -0.5	0.5
170 0 255	50.7 75.5 -75.9	0.5 -0.7 0.7	1.1
170 170 170	75.0 -0.5 0.3	-0.1 0.5 -0.3	0.6
170 255 0	91.7 -43.1 85.6	-0.2 0.1 -0.9	0.9
170 255 255	94.6 -25.4 -8.5	-0.0 0.4 -0.1	0.4
255 0 0	57.5 82.3 72.3	0.3 -1.7 -1.3	2.2
255 0 170	60.3 86.2 -18.7	0.6 -1.7 -0.6	1.9
255 0 255	63.4 89.7 -54.7	0.6 -1.4 0.7	1.6
255 128 128	74.1 44.5 21.4	0.3 -0.8 -0.3	0.9
255 170 0	81.1 21.1 82.0	-0.3 0.4 -0.7	0.8
255 170 255	84.6 33.6 -22.3	-0.1 0.6 -0.2	0.6
255 255 0	97.4 -12.8 92.9	-0.1 -0.2 -1.2	1.2
255 255 170	98.6 -6.2 34.0	0.0 -0.3 -0.7	0.8
255 255 255	100.0 -0.0 0.0	0.0 0.0 -0.0	0.0
170 85 85	54.7 34.8 16.4	0.0 -0.4 0.2	0.5
85 170 85	67.6 -40.8 30.9	-0.4 0.7 -0.0	0.8
85 85 170	47.0 12.8 -42.3	0.3 0.4 0.0	0.5
85 170 170	69.2 -30.0 -8.9	-0.2 1.1 -0.5	1.3
170 85 170	56.9 41.0 -26.2	0.3 -0.2 -0.0	0.3
170 170 85	73.7 -7.6 39.9	-0.3 0.5 0.1	0.6
Average			1.0
Maximum			2.2

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	57.4 -22.8 -46.6	17.7
67.6 -27.1 -36.5	67.6 -28.2 -36.7	1.2
80.8 -13.8 -21.0	81.1 -15.2 -20.6	1.4
47.2 75.9 -3.8	48.5 72.6 -0.7	4.7
60.7 52.2 -7.1	60.4 53.2 -6.7	1.2
77.0 26.2 -7.7	76.8 26.2 -6.9	0.8
89.7 -4.5 94.7	90.2 -4.4 87.3	7.5
91.3 -4.6 63.1	91.4 -4.8 63.6	0.5
93.3 -3.3 30.6	93.6 -4.0 31.1	0.9
53.5 38.4 28.8	53.4 38.5 28.9	0.2
41.4 23.1 16.6	41.4 23.2 16.9	0.3
32.4 40.3 21.9	32.3 41.3 21.3	1.2
32.6 44.6 -1.8	32.3 45.2 -1.4	0.8
51.3 1.9 44.3	51.6 1.3 43.9	0.8
34.0 -40.9 14.5	34.0 -38.7 14.1	2.3
36.2 -30.6 -20.6	36.4 -25.7 -18.8	5.2
21.2 3.4 -23.0	20.6 3.5 -22.9	0.6
89.8 0.3 -3.5	89.9 0.2 -3.1	0.4
83.6 0.2 -3.7	83.9 -0.4 -3.1	0.9
70.2 0.0 -3.7	70.0 0.4 -4.2	0.7
55.1 0.0 -3.1	55.3 -1.0 -2.0	1.5
37.5 0.1 -2.1	37.2 0.6 -2.2	0.6
16.9 0.4 -0.4	16.6 0.0 -1.0	0.7
24.4 16.2 -47.1	23.7 17.2 -47.9	1.4
41.2 16.0 -36.5	40.7 16.3 -36.1	0.7
64.6 9.3 -23.6	64.5 9.6 -23.6	0.3
47.3 69.0 45.1	47.2 70.4 45.1	1.4
58.9 47.7 37.0	58.9 48.2 37.4	0.7
75.0 23.2 20.3	75.0 23.2 20.7	0.4
48.6 -67.5 28.0	50.0 -52.9 29.4	14.7
62.5 -41.7 22.4	62.4 -42.2 22.5	0.6
77.9 -19.6 11.3	78.2 -20.4 11.7	0.9
72.0 19.1 16.5	72.0 18.8 16.8	0.4
72.2 22.1 73.2	72.2 22.1 72.9	0.3
47.5 72.3 15.3	48.0 71.9 17.4	2.2
37.5 56.5 -21.1	37.4 57.9 -19.8	2.0
74.1 -22.1 69.3	74.6 -22.4 69.5	0.6
52.3 -55.2 -20.1	54.0 -37.9 -16.5	17.7
43.9 -20.9 -49.8	44.9 -13.6 -47.2	7.8
96.0 0.5 -3.3	96.2 -0.4 -2.8	1.0
89.5 -0.1 -3.7	89.7 -0.7 -2.9	1.1
83.0 -1.1 -4.3	83.2 -1.6 -3.7	0.8
68.6 -2.7 -4.0	68.7 -3.6 -4.1	0.9
53.0 -5.1 -2.3	53.0 -5.8 -1.5	1.1
37.8 -8.1 -0.9	37.7 -8.2 -1.0	0.2
25.9 -13.3 -2.2	25.8 -13.8 -2.0	0.5
Average		2.4
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	113.56 118.84 116.75	85 85 170	21.90 19.43 50.10
0 0 0	0.08 0.10 0.10	85 170 170	35.32 47.36 55.15
12 12 12	0.54 0.55 0.52	170 85 170	41.26 29.62 51.04
25 25 25	1.75 1.83 1.79	170 170 85	48.49 54.59 22.19
38 38 38	3.74 3.90 3.79	0 134 212	24.55 30.75 75.56
51 51 51	6.30 6.60 6.40	46 165 224	34.79 45.12 86.04
63 63 63	9.13 9.55 9.26	142 199 236	60.62 70.11 96.89
76 76 76	12.92 13.54 13.31	196 0 103	38.82 20.16 20.44
89 89 89	16.85 17.52 17.29	209 80 144	50.84 33.85 38.74
102 102 102	21.83 22.88 22.31	222 154 194	70.46 60.83 67.89
114 114 114	26.59 28.05 27.08	244 221 0	82.23 90.26 13.13
127 127 127	32.08 33.56 32.72	243 227 82	85.20 93.47 26.47
140 140 140	38.57 40.10 39.16	241 233 160	92.06 99.71 57.53
153 153 153	45.41 47.58 46.59	174 78 63	34.35 25.14 10.97
165 165 165	51.57 54.23 53.41	115 64 55	17.78 14.30 8.11
178 178 178	59.49 62.30 60.63	111 29 33	13.90 8.46 3.51
191 191 191	67.49 70.79 69.04	111 24 64	14.72 8.52 8.88
204 204 204	76.04 79.63 77.83	119 102 30	22.15 23.24 5.64
216 216 216	84.23 88.19 85.98	0 78 41	4.97 9.54 5.49
229 229 229	93.42 98.21 95.27	0 80 98	7.62 11.12 18.97
242 242 242	103.54 108.69 106.08	31 37 67	4.00 3.81 9.26
0 0 128	5.08 2.45 28.00	217 219 227	86.57 90.39 93.32
0 0 255	18.24 8.97 100.31	196 198 206	72.46 75.98 78.70
0 128 0	10.67 22.65 4.02	153 155 163	46.53 48.44 51.63
0 128 128	15.83 25.06 32.45	111 113 118	26.12 27.58 28.42
0 170 255	36.76 47.63 107.63	69 70 73	11.10 11.50 12.12
0 255 0	38.39 79.97 13.52	31 31 32	2.53 2.65 2.73
0 255 170	47.08 84.03 61.59	33 36 112	6.63 4.97 22.86
0 255 255	56.71 88.82 114.54	80 69 140	16.79 14.15 35.02
85 85 85	15.68 16.45 16.30	141 133 187	41.88 39.95 62.36
128 0 0	16.34 8.63 0.84	196 4 31	35.78 18.76 3.87
128 0 128	21.60 11.10 28.67	208 81 62	45.57 31.57 11.36
128 128 0	27.21 31.57 4.90	222 151 130	64.23 56.90 36.88
128 128 128	32.54 34.06 33.29	0 124 48	10.99 21.82 8.79
128 128 255	45.82 40.68 105.42	64 156 89	23.12 36.59 20.89
128 255 128	60.27 91.26 43.34	147 193 154	51.80 63.55 49.94
170 0 255	45.74 23.36 101.35	203 146 129	56.73 51.62 35.96
170 170 170	54.64 57.40 56.05	222 143 10	57.48 51.46 7.38
170 255 0	65.67 94.46 14.90	197 0 73	37.70 19.64 11.79
170 255 255	84.24 103.38 115.24	134 13 105	21.84 11.56 20.37
255 0 0	56.39 29.48 2.47	153 182 18	43.96 56.17 9.69
255 0 170	65.04 33.62 49.47	0 131 140	17.21 26.40 37.64
255 0 255	74.83 38.50 102.49	0 96 173	15.17 17.65 51.28
255 128 128	72.67 55.12 35.14	239 240 249	102.59 107.52 110.19
255 170 0	75.14 68.86 9.34	215 218 226	85.61 89.94 92.52
255 170 255	93.55 77.76 109.40	191 197 205	70.36 74.37 77.77
255 255 0	94.95 109.82 16.08	143 153 159	43.03 46.29 49.32
255 255 170	103.79 113.92 63.97	98 110 111	22.59 25.06 25.53
170 85 85	35.12 26.67 17.18	59 75 72	10.12 11.79 11.93
85 170 85	29.14 44.40 21.27	29 52 49	4.23 5.59 5.94

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	117.25	101%	2.61
2	121.62	105%	3.05
3	133.21	115%	1.59
4	112.48	97%	0.11
5	115.83	100%	0.00
6	126.06	109%	0.45
7	101.20	87%	0.69
8	105.44	91%	1.15
9	117.57	102%	0.15

	Av	Max
Luminance Deviation	6%	15%
Chroma Deviation	1	3