

# UGRA

## Display Analysis & Certification Tool

### Report

#### Basics

Date: 2009-5-18 15:45:49  
Report-Version: v1.3.1  
Monitor-Name: Cinema HD  
EDID-Name: Cinema HD  
EDID-Serial: CY72501RXMP  
Profile: /Library/ColorSync/Profiles/18.05.09-6000K-22\_mac-100%.icc  
Created: 2009-5-18 15:42  
Measurement device: eye-one display 2

#### Summary

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

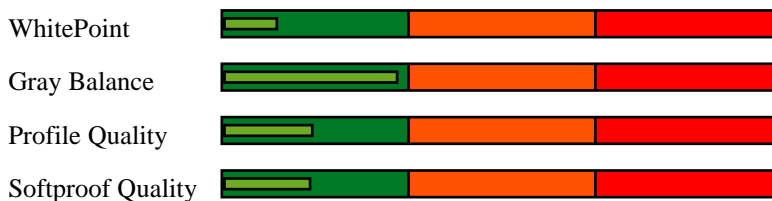
#### Calibration

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
sRGB	yes
AdobeRGB	no
ECI-RGB	no

#### 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:	324.73 340.74 346.73
XYZ (normalized):	95.30 100.00 101.76
Luminance:	340.7 Cd/m2
Next Temperature:	6044 Kelvin
Assumed Target Whitepoint:	6000 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:	0.7 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	11195	0.66	1.76	2.03	
5	8120	1.08	2.87	1.92	2.24
10	6448	2.81	7.44	1.03	2.22
15	5959	5.97	14.13	0.32	2.21
20	6013	10.74	20.64	0.12	2.20
25	6071	16.48	26.27	0.10	2.22
30	6092	24.54	32.26	0.21	2.21
35	6062	34.39	38.01	0.11	2.21
40	6033	46.06	43.53	0.18	2.20
45	6054	58.89	48.61	0.14	2.21
50	6063	73.96	53.71	0.14	2.22
55	6055	92.24	59.04	0.37	2.20
60	6027	111.56	63.95	0.37	2.20
65	5992	131.90	68.54	0.69	2.22
70	6016	155.23	73.26	0.42	2.22
75	6082	179.76	77.73	0.29	2.23
80	6048	208.86	82.54	0.38	2.21
85	6076	236.49	86.70	0.31	2.25
90	6046	269.64	91.30	0.72	2.26
95	6056	303.88	95.66	0.38	2.26
100	6044	340.74	100.00	0.00	
Average	6044			0.29	2.22
Range				0.99	
Max				0.72	

Tone values = 94.5%

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	1.7 0.6 -1.9	-1.7 -0.6 1.9	2.7
0 0 128	14.1 29.9 -64.1	-0.7 0.6 -0.9	1.3
0 0 255	32.8 50.7 -107.8	-0.1 -0.2 0.2	0.3
0 128 0	45.5 -50.4 46.6	-0.2 -0.3 2.0	2.0
0 128 128	47.6 -34.7 -10.8	-0.1 -0.1 0.1	0.2
0 170 255	65.9 -22.8 -54.0	-0.1 0.4 0.1	0.4
0 255 0	85.7 -83.8 80.1	-0.1 -0.2 0.4	0.5
0 255 170	87.1 -72.1 22.8	-0.0 -0.1 -0.2	0.2
0 255 255	89.2 -57.5 -17.9	0.0 -0.1 0.2	0.2
85 85 85	36.2 -0.2 -0.2	-0.4 0.2 0.2	0.5
128 0 0	28.8 48.3 41.7	-0.5 0.7 2.7	2.8
128 0 128	32.6 52.4 -32.7	-0.3 0.3 -0.3	0.5
128 128 0	52.4 -7.4 57.0	-0.2 0.0 1.3	1.3
128 128 128	54.1 -0.0 0.0	-0.1 0.0 -0.0	0.1
128 128 255	59.7 19.4 -63.2	-0.0 0.0 0.1	0.1
128 255 128	89.2 -57.0 47.0	-0.0 -0.2 -0.0	0.2
170 0 255	49.4 70.5 -79.5	-0.1 -0.1 -0.0	0.1
170 170 170	70.3 -0.3 0.5	-0.2 0.3 -0.5	0.6
170 255 0	90.7 -46.8 87.6	-0.1 -0.3 -0.1	0.3
170 255 255	93.9 -28.9 -10.0	-0.0 -0.2 0.0	0.2
255 0 0	57.4 81.2 81.0	0.0 0.2 -1.1	1.2
255 0 170	60.1 84.0 -12.3	0.2 -0.1 -0.3	0.4
255 0 255	63.8 87.4 -55.0	0.2 -0.1 0.2	0.3
255 128 128	70.6 50.8 27.2	0.1 0.2 -0.1	0.2
255 170 0	77.9 27.9 85.6	-0.0 0.6 -0.4	0.7
255 170 255	82.0 39.4 -26.8	0.1 0.4 0.1	0.4
255 255 0	97.0 -12.3 97.1	0.1 0.1 -0.5	0.6
255 255 170	98.1 -7.0 40.8	0.1 0.0 -0.3	0.4
255 255 255	100.0 0.0 0.0	0.0 0.0 -0.0	0.0
170 85 85	48.7 37.7 20.3	-0.3 0.3 -0.1	0.5
85 170 85	62.3 -43.0 34.7	-0.2 0.4 0.4	0.6
85 85 170	40.2 14.4 -46.7	-0.1 0.1 -0.4	0.4
85 170 170	64.1 -31.2 -9.8	-0.1 0.5 -0.3	0.6
170 85 170	51.4 43.5 -27.9	-0.2 0.1 -0.6	0.6
170 170 85	68.7 -7.3 44.9	-0.2 0.3 0.1	0.4
Average			0.6
Maximum			2.8

# Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	95 %
sRGB	96 %
AdobeRGB	80 %
ECI-RGB v1.0	76 %

# 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	57.6 -21.9 -46.0	15.8
66.9 -24.7 -37.1	66.7 -24.9 -37.3	0.2
79.7 -12.5 -21.8	79.7 -12.9 -21.2	0.7
48.0 74.0 -3.0	49.0 71.1 -1.5	3.4
60.8 50.6 -6.7	60.8 50.0 -6.7	0.6
76.4 25.8 -6.9	76.5 25.2 -6.5	0.7
89.0 -5.0 93.0	89.1 -5.7 90.6	2.5
90.3 -4.7 62.6	90.3 -5.2 62.6	0.5
92.2 -3.5 31.1	92.4 -4.3 31.8	1.0
53.1 37.7 28.9	53.2 37.4 28.9	0.4
41.5 22.7 16.8	41.9 22.7 16.8	0.4
31.9 40.0 24.0	32.2 39.1 23.2	1.2
32.5 44.5 -1.8	33.0 44.1 -2.0	0.6
51.3 1.3 44.5	51.6 1.3 44.0	0.6
34.6 -36.4 13.9	34.9 -35.8 13.5	0.8
36.0 -26.2 -20.9	36.4 -22.3 -20.6	3.9
20.9 9.6 -23.6	21.7 9.5 -23.3	0.9
89.0 0.0 -1.9	88.7 0.1 -1.9	0.3
82.8 0.0 -1.7	82.7 -0.4 -1.7	0.4
69.3 0.0 -1.4	69.5 -0.5 -0.7	0.8
54.1 0.0 -1.0	54.1 0.1 -1.0	0.1
36.6 0.0 -0.5	37.1 0.0 -0.7	0.5
16.0 0.0 0.0	17.2 0.2 0.1	1.2
24.0 22.0 -46.0	24.6 21.4 -45.3	1.1
40.9 17.9 -36.6	41.1 17.5 -36.0	0.7
63.7 10.3 -23.8	63.9 10.2 -23.4	0.4
47.0 68.0 48.0	47.2 67.3 48.2	0.8
58.5 47.1 37.9	58.5 46.9 37.8	0.2
74.2 22.9 21.4	74.0 22.3 21.3	0.6
50.0 -65.0 27.0	51.5 -51.3 28.9	13.9
62.1 -39.8 21.0	62.3 -40.2 21.0	0.4
77.0 -19.1 11.0	76.8 -19.2 11.4	0.4
71.2 18.9 17.2	71.3 18.0 17.7	0.9
71.2 22.1 73.1	71.0 21.3 73.2	0.8
47.7 71.2 16.2	48.1 70.2 16.6	1.2
38.0 55.4 -20.9	38.2 54.8 -20.9	0.6
73.7 -22.8 67.6	73.5 -22.8 66.9	0.7
52.3 -52.3 -20.1	54.7 -36.7 -16.3	16.2
43.3 -17.0 -48.6	44.3 -11.6 -46.9	5.7
95.0 0.0 -2.0	94.8 -0.5 -2.0	0.5
88.5 -0.4 -3.1	88.2 -0.4 -3.2	0.4
82.0 -0.9 -4.1	81.8 -1.2 -4.2	0.4
67.7 -2.0 -4.4	67.6 -2.0 -4.2	0.2
52.2 -2.5 -3.5	52.1 -2.5 -3.4	0.1
37.5 -3.9 -3.1	37.9 -4.0 -2.7	0.6
26.3 -6.8 -3.4	26.6 -6.4 -3.8	0.7
Average		1.9
Gamut-Volume		95 %

# 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	324.73 340.74 346.73	85 85 170	47.16 39.77 129.05
0 0 0	0.69 0.66 1.10	85 170 170	82.19 113.25 140.25
12 12 12	1.09 1.08 1.50	170 85 170	98.30 66.79 130.17
25 25 25	2.69 2.81 3.08	170 170 85	115.73 131.61 44.12
38 38 38	5.73 5.97 6.07	0 148 216	72.35 89.08 224.83
51 51 51	10.26 10.74 10.91	71 174 227	100.10 125.68 252.88
63 63 63	15.70 16.48 16.84	158 204 236	169.38 192.86 280.48
76 76 76	23.38 24.54 25.16	207 0 122	111.30 58.67 63.93
89 89 89	32.73 34.39 35.01	215 102 160	143.16 97.97 117.10
102 102 102	43.84 46.06 46.67	226 168 201	197.74 172.10 198.54
114 114 114	56.04 58.89 59.86	241 227 0	224.18 250.68 30.76
127 127 127	70.40 73.96 75.33	241 230 105	234.74 260.20 75.02
140 140 140	87.64 92.24 93.52	240 235 172	253.37 276.64 161.00
153 153 153	106.11 111.56 112.79	185 97 82	96.22 71.32 32.16
165 165 165	125.42 131.90 132.47	133 83 74	51.54 41.96 24.88
178 178 178	147.74 155.23 156.79	127 43 46	38.21 23.95 9.39
191 191 191	171.08 179.76 183.67	130 37 83	42.93 25.33 28.22
204 204 204	198.58 208.86 211.81	136 121 48	63.08 66.72 16.21
216 216 216	224.94 236.49 241.13	0 97 60	15.92 28.92 17.59
229 229 229	255.99 269.64 272.59	0 96 116	23.16 31.98 59.33
242 242 242	288.96 303.88 308.61	54 48 86	13.88 11.91 30.00
0 0 128	12.81 6.65 68.17	222 222 226	239.20 250.55 263.11
0 0 255	56.41 28.49 308.88	204 205 208	200.03 210.29 220.27
0 128 0	24.62 50.78 8.66	167 168 170	129.67 136.51 140.87
0 128 128	36.78 56.82 75.79	128 128 130	71.86 75.24 78.42
0 170 255	101.33 122.67 323.09	87 87 88	31.18 32.68 34.05
0 255 0	110.60 229.31 35.32	44 44 44	7.64 7.98 8.09
0 255 170	133.15 240.42 160.17	60 45 126	21.49 15.12 66.73
0 255 255	166.28 257.11 343.03	102 85 155	49.88 41.30 105.99
85 85 85	29.58 31.14 31.86	157 146 195	118.06 111.86 181.74
128 0 0	35.54 19.05 1.82	204 23 45	98.86 53.36 9.87
128 0 128	47.68 25.05 68.87	214 100 81	126.09 88.40 32.23
128 128 0	59.51 69.19 9.39	225 164 144	176.76 157.96 103.90
128 128 128	71.69 75.25 76.54	0 144 70	34.93 67.30 28.57
128 128 255	115.33 97.18 316.99	84 169 110	67.29 104.80 63.53
128 255 128	157.67 253.67 103.32	160 200 167	142.82 174.67 141.97
170 0 255	121.67 62.93 310.06	209 160 143	156.90 144.04 101.34
170 170 170	133.47 140.42 141.48	224 157 35	156.64 141.82 19.16
170 255 0	175.81 263.62 36.65	207 0 93	105.99 56.04 36.18
170 255 255	231.56 291.47 344.19	151 28 124	62.82 34.50 65.17
255 0 0	158.25 83.49 4.30	163 193 46	119.81 155.30 27.84
255 0 170	180.79 94.59 129.12	0 147 156	51.79 77.95 114.31
255 0 255	213.86 111.26 311.81	0 110 181	43.69 49.30 149.49
255 128 128	194.36 139.70 79.23	239 240 244	282.67 297.30 312.15
255 170 0	203.07 177.57 18.55	219 221 227	235.01 246.85 264.92
255 170 255	258.76 205.44 326.07	199 203 210	193.48 204.39 223.55
255 255 0	267.89 311.79 38.46	158 164 171	120.07 127.80 141.63
255 255 170	290.46 322.83 163.51	118 125 129	64.43 69.19 76.61
170 85 85	80.73 58.15 32.94	82 91 93	30.99 34.17 37.86
85 170 85	64.60 104.58 42.99	53 67 69	14.63 16.97 20.02