

# UGRA

## Display Analysis & Certification Tool

### Report

#### Basics

Date: 2010-11-4 0:52:32  
Report-Version: v1.3.1  
Monitor-Name: \\.\DISPLAY1  
Profile: C:/Windows/system32/spool/drivers/color/eizo-cg303w-ugra.icc  
Created: 2010-11-4 0:48  
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:	133.42 140.01 137.40
XYZ (normalized):	95.30 100.00 98.14
Luminance:	140.0 Cd/m2
Next Temperature:	5846 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:	0.7 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	6822	0.32	2.04	0.70	
5	6457	0.83	5.36	0.84	1.87
10	5711	2.43	14.05	0.36	1.83
15	5675	4.76	21.58	0.58	1.82
20	5820	7.98	28.64	0.45	1.81
25	5814	11.45	34.35	0.87	1.83
30	5875	15.78	40.03	0.70	1.82
35	5848	20.88	45.52	0.78	1.82
40	5786	27.07	51.08	0.80	1.81
45	5759	32.75	55.47	0.64	1.83
50	5755	39.91	60.34	0.63	1.82
55	5845	47.53	64.92	0.17	1.82
60	5798	55.80	69.36	0.71	1.82
65	5852	63.96	73.34	0.31	1.83
70	5775	73.37	77.52	0.73	1.83
75	5786	83.21	81.53	0.55	1.82
80	5783	93.49	85.39	0.57	1.82
85	5769	103.51	88.89	0.73	1.88
90	5770	115.44	92.77	0.87	1.88
95	5778	127.51	96.44	0.93	1.92
100	5846	140.01	100.00	0.00	
Average	5792			0.60	1.84
Range				1.65	
Max				0.93	

Tone values = 97.3%

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: CAT02

RGB	Lab	deltaLab	deltaE
0 0 0	2.0 0.1 -0.7	-2.0 -0.1 0.7	2.2
0 0 128	14.0 45.7 -74.4	-0.3 1.4 -1.3	1.9
0 0 255	28.4 72.5 -115.5	0.6 -1.3 1.2	1.9
0 128 0	50.4 -87.5 52.8	0.3 -1.8 -0.4	1.8
0 128 128	52.4 -59.9 -12.0	0.2 0.3 -1.4	1.5
0 170 255	67.6 -45.1 -51.1	0.1 0.5 -0.1	0.6
0 255 0	85.0 -134.5 81.8	-0.2 -0.5 -2.6	2.6
0 255 170	86.4 -112.0 16.7	-0.1 1.0 -2.4	2.6
0 255 255	87.8 -90.7 -19.8	-0.0 0.5 -0.6	0.8
85 85 85	43.9 0.5 -0.5	0.1 -0.5 0.5	0.7
128 0 0	34.5 66.2 51.3	-0.1 0.7 3.0	3.0
128 0 128	37.3 73.3 -35.1	0.4 0.3 0.3	0.5
128 128 0	58.9 -9.5 65.9	0.2 -1.2 -1.0	1.6
128 128 128	60.7 0.5 0.4	0.0 -0.5 -0.4	0.6
128 128 255	64.0 21.6 -56.9	0.2 -0.5 0.9	1.0
128 255 128	89.8 -74.3 41.2	-0.1 -0.3 -1.8	1.8
170 0 255	50.5 95.0 -78.1	0.8 -0.4 1.9	2.1
170 170 170	74.8 -0.2 0.5	0.1 0.2 -0.5	0.5
170 255 0	91.3 -60.3 91.6	0.1 -0.3 -2.7	2.7
170 255 255	93.8 -36.4 -9.8	0.2 -0.1 -0.1	0.2
255 0 0	60.2 101.4 86.5	0.1 -0.2 0.1	0.2
255 0 170	62.2 106.7 -16.5	0.5 -0.4 0.5	0.8
255 0 255	64.5 112.2 -54.3	0.7 -0.8 1.5	1.9
255 128 128	75.2 58.9 24.2	0.4 -0.9 0.2	1.0
255 170 0	81.6 31.4 91.6	0.3 -1.2 -2.1	2.5
255 170 255	84.9 45.3 -22.1	0.1 0.2 -0.1	0.2
255 255 0	97.7 -15.7 101.3	0.0 -0.6 -3.2	3.2
255 255 170	98.8 -8.0 35.7	0.0 -0.1 -0.9	0.9
255 255 255	100.0 -0.0 0.0	-0.0 0.0 -0.0	0.0
170 85 85	55.5 45.9 18.5	0.2 -0.3 0.7	0.8
85 170 85	67.0 -58.8 32.3	-0.2 0.1 -1.2	1.3
85 85 170	46.4 16.9 -44.2	0.3 -0.2 0.1	0.4
85 170 170	68.4 -43.6 -9.7	-0.0 0.7 -1.3	1.4
170 85 170	57.3 53.5 -26.0	0.3 -0.2 0.2	0.4
170 170 85	73.7 -9.0 42.2	-0.0 0.2 -0.3	0.3
Average			1.3
Maximum			3.2

# Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	100 %
sRGB	100 %
AdobeRGB	99 %
ECI-RGB v1.0	93 %

# 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	55.2 -33.3 -48.9	3.9
66.9 -24.7 -37.1	66.9 -25.0 -36.7	0.5
79.7 -12.5 -21.8	79.7 -12.9 -21.1	0.8
48.0 74.0 -3.0	47.7 73.6 -3.1	0.5
60.8 50.6 -6.7	60.7 51.2 -6.7	0.6
76.4 25.8 -6.9	76.4 26.2 -6.4	0.7
89.0 -5.0 93.0	88.8 -3.2 94.2	2.2
90.3 -4.7 62.6	90.5 -4.5 63.7	1.1
92.2 -3.5 31.1	92.2 -3.0 31.5	0.6
53.1 37.7 28.9	52.9 37.5 28.7	0.3
41.5 22.7 16.8	41.7 22.0 17.3	0.9
31.9 40.0 24.0	32.1 38.9 23.6	1.1
32.5 44.4 -1.8	32.6 43.6 -1.8	0.9
51.3 1.3 44.5	51.6 1.3 45.6	1.1
34.6 -36.4 13.9	34.6 -34.6 13.9	1.8
36.0 -26.2 -20.9	35.8 -25.7 -19.6	1.4
20.9 9.6 -23.6	21.6 9.6 -22.5	1.4
89.0 0.0 -1.8	88.7 0.5 -1.5	0.7
82.8 0.0 -1.7	82.6 0.1 -1.4	0.3
69.3 0.0 -1.4	69.3 -0.5 -1.0	0.5
54.1 0.0 -1.0	54.2 0.1 -0.6	0.4
36.6 -0.0 -0.5	36.7 -0.2 -0.1	0.5
16.0 0.0 0.0	16.9 0.5 0.1	1.0
24.0 22.0 -46.0	24.3 21.5 -45.4	0.9
40.9 17.9 -36.6	40.8 17.9 -36.4	0.2
63.7 10.3 -23.8	63.7 10.2 -23.3	0.5
47.0 68.0 48.0	46.9 67.9 47.4	0.6
58.5 47.1 37.9	58.4 47.3 38.3	0.5
74.2 22.9 21.4	74.3 22.8 21.9	0.6
50.0 -65.0 27.0	49.9 -64.1 28.2	1.5
62.1 -39.8 21.0	62.2 -39.8 21.4	0.4
77.0 -19.1 11.0	76.9 -19.1 11.6	0.6
71.2 18.8 17.3	71.3 18.9 17.9	0.6
71.2 22.2 73.1	71.3 22.3 74.6	1.5
47.7 71.2 16.2	47.7 70.6 16.5	0.6
38.0 55.4 -20.9	38.0 54.8 -20.5	0.8
73.7 -22.8 67.6	73.6 -23.1 69.2	1.6
52.3 -52.3 -20.2	52.1 -52.2 -19.5	0.7
43.3 -17.0 -48.6	43.1 -17.7 -47.7	1.1
95.0 0.0 -2.0	95.0 0.0 -1.5	0.5
88.5 -0.4 -3.1	88.5 -0.6 -2.4	0.7
82.0 -0.9 -4.1	81.9 -0.8 -3.5	0.6
67.7 -2.0 -4.4	67.6 -2.4 -4.2	0.5
52.2 -2.5 -3.5	52.4 -3.1 -2.7	1.1
37.5 -3.9 -3.1	37.5 -3.9 -3.2	0.1
26.3 -6.8 -3.4	27.1 -6.2 -2.9	1.1
Average		0.9
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	133.42 140.01 137.40	85 85 170	26.21 22.30 60.06
0 0 0	0.31 0.32 0.37	85 170 170	35.58 54.25 64.13
12 12 12	0.78 0.83 0.89	170 85 170	54.42 35.39 60.69
25 25 25	2.33 2.43 2.35	170 170 85	56.22 64.27 24.53
38 38 38	4.57 4.76 4.58	0 129 208	23.76 33.17 86.55
51 51 51	7.57 7.98 7.72	85 159 221	40.86 51.80 99.22
63 63 63	10.82 11.45 11.00	154 193 232	69.24 79.08 110.41
76 76 76	15.12 15.78 15.74	170 36 103	44.87 22.93 24.80
89 89 89	20.04 20.88 20.77	185 95 143	59.35 40.28 46.08
102 102 102	25.71 27.07 26.08	206 158 190	81.76 70.70 78.11
114 114 114	31.39 32.75 31.96	237 217 0	93.24 101.96 11.39
127 127 127	38.19 39.91 38.79	237 222 87	97.69 107.30 29.87
140 140 140	45.24 47.53 46.54	236 228 158	104.57 112.92 64.17
153 153 153	53.06 55.80 54.03	155 85 64	39.31 29.01 12.66
165 165 165	60.82 63.96 62.60	105 68 56	20.89 17.10 9.59
178 178 178	69.92 73.37 71.02	96 37 31	15.66 9.82 3.62
191 191 191	79.40 83.21 80.91	97 35 64	17.24 10.22 10.81
204 204 204	89.30 93.49 91.05	116 102 33	26.05 27.42 6.21
216 216 216	98.85 103.51 100.49	35 75 44	6.51 11.64 6.80
229 229 229	110.06 115.44 111.73	27 76 97	8.62 12.67 22.16
242 242 242	121.45 127.51 123.36	36 35 67	5.62 4.85 11.42
0 0 128	6.72 2.79 34.27	215 216 220	98.57 103.01 103.57
0 0 255	23.20 9.17 121.28	194 195 199	82.13 86.05 86.59
0 128 0	7.88 26.21 4.10	152 153 155	52.81 55.60 55.71
0 128 128	14.37 29.08 37.72	110 110 112	29.62 31.03 30.93
0 170 255	36.20 53.64 127.59	68 68 69	12.51 13.15 12.94
0 255 0	27.33 92.29 13.75	30 30 30	3.07 3.19 3.11
0 255 170	38.10 96.79 70.19	38 36 108	8.58 6.10 25.94
0 255 255	50.31 101.49 134.69	78 71 138	20.17 16.73 41.60
85 85 85	18.48 19.28 19.18	137 132 183	48.03 45.67 71.12
128 0 0	23.86 11.22 0.77	169 40 30	40.69 21.77 3.98
128 0 128	30.19 13.62 35.11	184 91 62	52.23 36.43 12.62
128 128 0	31.83 37.35 4.47	205 153 127	73.64 65.50 41.15
128 128 128	38.67 40.41 39.32	36 121 54	11.07 25.68 10.75
128 128 255	55.15 46.92 126.78	93 149 92	27.67 42.87 25.13
128 255 128	58.13 106.16 48.60	156 186 153	58.81 71.83 56.35
170 0 255	62.03 27.14 122.63	189 147 126	65.23 59.38 40.21
170 170 170	63.97 67.24 65.40	204 144 24	65.72 58.80 7.70
170 255 0	66.91 110.22 14.31	171 39 73	43.40 22.81 14.05
170 255 255	90.10 119.47 135.74	116 37 105	25.63 14.14 25.19
255 0 0	82.76 38.46 1.72	158 177 33	49.56 64.02 10.86
255 0 170	93.16 42.40 59.55	14 125 140	15.68 28.67 43.92
255 0 255	105.05 46.97 123.33	18 92 167	15.53 19.04 57.29
255 128 128	97.14 67.14 40.54	236 237 242	116.94 122.64 123.13
255 170 0	95.98 82.22 8.04	212 215 221	97.22 102.31 104.44
255 170 255	119.05 92.20 129.28	189 193 201	80.03 84.37 88.02
255 255 0	110.25 130.40 14.98	143 149 156	49.15 52.53 56.07
255 255 170	121.28 135.00 73.49	101 107 111	26.62 28.80 30.22
170 85 85	46.75 32.39 19.81	65 72 75	12.49 13.76 14.92
85 170 85	27.90 51.23 23.47	41 50 52	6.20 7.18 7.88