UGRA
Display Analysis & Certification Tool
Report

Basics

Date:	2013-11-27 22:45:52
Report-Version:	v1.3.1
Monitor-Name:	\\.\DISPLAY2
EDID-Name:	S2411W
EDID-Serial:	44669057
Profile:	C:/.../S2411W-_neu_2013-11-27T223741-6500K-sRGB-120cd-trc.icm
Created:	2013-11-27 22:37
Measurement device:	Silver Haze Pro & DTP94 - LCD, no correction

Summary

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

Calibration (Assumed Target Whitepoint: 6500.00 Kelvin)

White Point	yes
Gray balance	yes
Profile quality	yes

Softproofing
Depends on the calibration verification.

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

White-Point 

Gray Balance 

Profile Quality 

Softproof Quality 

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:	113.08 119.24 129.27
XYZ (normalized):	94.83 100.00 108.41
xy:	0.3127 0.3298
Luminance:	119.2 Cd/m2
Next Temperature:	6496 Kelvin
Assumed Target Whitepoint:	6500.0 Kelvin
Distance to assumed Target Whitepoint:	0.5 DeltaE-76

Blackpoint

The blackpoint is not defined in ISO 12646. Therefore UDACT does only measure but not assess it.

Luminance:	0.1 Cd/m2
Chromaticity:	0.7 Chroma (Lab)

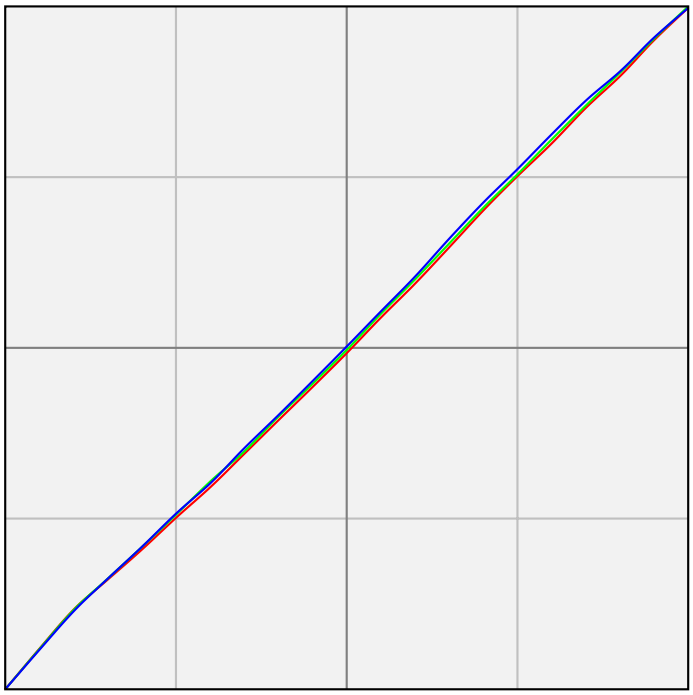
Gray balance

Average and maximum calculation will respect measurements with 1% minimum luminance only. The L-deviation shows the difference between the profile and measurement value.
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	11110	0.10	0.77	0.68	
5	6958	0.41	3.08	0.37	2.00
10	6405	1.32	9.84	0.48	1.99
15	6358	2.43	15.70	0.89	2.07
20	6444	4.06	21.59	0.18	2.12
25	6437	6.09	27.03	0.22	2.16
30	6489	8.73	32.52	0.28	2.19
35	6511	11.97	37.91	0.62	2.19
40	6503	16.03	43.43	0.34	2.19
45	6503	20.19	48.18	0.37	2.23
50	6496	25.37	53.25	0.00	2.24
55	6557	31.36	58.32	0.37	2.23
60	6496	37.75	63.06	0.00	2.26
65	6549	44.86	67.74	0.40	2.27
70	6503	53.17	72.62	0.51	2.26
75	6444	62.09	77.33	0.44	2.27
80	6557	71.85	81.98	0.49	2.26
85	6503	81.88	86.34	0.59	2.30
90	6496	92.85	90.72	0.00	2.38
95	6496	106.05	95.55	0.00	2.29
100	6496	119.24	100.00	0.00	
Average	6487			0.32	2.21
Max				0.89	
Range				1.24	

Tone values

This tests checks the calibration curves of the graphic card. 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.



Tone values = 96.9%

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 Lab values are calculated, based on the measured white point (xy: 0.3127 0.3298).

The assumed chromatic adaptation is: Bradford

RGB	Lab	deltaLab	DeltaE-76
0 0 0	0.8 0.2 -0.7	-0.8 -0.2 0.7	1.0
0 0 128	12.9 29.7 -63.2	0.5 -1.8 -0.3	1.9
0 0 255	34.1 44.4 -105.0	-1.0 2.2 -0.7	2.5
0 128 0	44.2 -54.3 43.6	0.2 0.5 0.9	1.1
0 128 128	46.3 -37.6 -12.0	0.3 -0.1 0.5	0.6
0 170 255	64.9 -25.9 -55.1	-0.1 0.1 0.5	0.5
0 255 0	84.4 -90.1 75.7	0.2 0.3 -1.5	1.5
0 255 170	85.9 -77.4 20.2	0.3 -0.5 0.5	0.8
0 255 255	88.2 -62.7 -19.5	0.1 -0.3 0.5	0.6
85 85 85	36.2 0.2 -0.2	-0.0 -0.2 0.2	0.3
128 0 0	29.0 49.9 42.6	0.1 -0.3 2.5	2.5
128 0 128	32.7 53.3 -30.4	0.3 -1.1 -0.1	1.2
128 128 0	51.8 -7.6 53.8	-0.0 1.0 1.2	1.5
128 128 128	53.6 0.3 -0.2	-0.0 -0.3 0.2	0.4
128 128 255	60.0 17.7 -62.5	-0.5 0.4 0.1	0.7
128 255 128	88.2 -60.5 44.6	0.2 -0.1 -0.3	0.4
170 0 255	50.7 68.3 -76.7	-0.5 0.3 -0.1	0.6
170 170 170	69.6 0.4 -0.3	0.0 -0.4 0.3	0.5
170 255 0	89.8 -49.5 83.3	0.2 0.4 -1.5	1.5
170 255 255	93.3 -31.2 -11.2	0.0 -0.6 0.3	0.7
255 0 0	59.0 83.2 80.3	0.1 -0.6 -0.0	0.7
255 0 170	61.6 85.8 -8.3	0.2 -1.4 0.0	1.4
255 0 255	65.7 86.8 -51.0	-0.2 0.2 0.2	0.3
255 128 128	71.6 52.6 29.0	-0.1 0.5 -0.3	0.6
255 170 0	78.2 30.7 82.7	-0.1 0.7 -0.5	0.9
255 170 255	82.7 40.2 -25.3	-0.3 1.0 -0.1	1.1
255 255 0	96.9 -11.1 93.2	0.1 -0.0 -1.5	1.5
255 255 170	98.0 -6.0 40.0	0.2 -0.4 -0.1	0.5
255 255 255	100.0 0.0 -0.0	-0.0 0.0 0.0	0.0
170 85 85	48.9 38.5 20.2	0.0 -0.1 0.4	0.4
85 170 85	61.1 -44.0 31.6	-0.0 0.1 0.4	0.4
85 85 170	40.4 13.9 -45.4	-0.1 -1.0 0.3	1.0
85 170 170	63.1 -32.3 -11.0	0.0 -0.3 0.4	0.5
170 85 170	51.8 43.6 -26.4	-0.0 -0.5 0.4	0.6
170 170 85	67.9 -6.6 42.2	-0.0 0.4 0.3	0.5
Average			0.9
Maximum			2.5

Gamut-Volume

These measurements are only informative.

Gamut-Volume (ISO)	95 %
sRGB	95 %
AdobeRGB	82 %
ECI-RGB v1.0	78 %

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)	Measurement (Lab)	Measurement (Yxy)	DeltaE-76
55.0 -37.0 -50.0	56.9 -24.3 -47.6	0.1933 0.2552	13.1
66.9 -24.7 -37.1	67.0 -24.5 -36.9	0.2277 0.2923	0.3
79.7 -12.5 -21.8	79.8 -12.6 -22.1	0.2852 0.3245	0.4
48.0 74.0 -3.0	49.0 72.2 -1.2	0.5088 0.2651	2.7
60.8 50.6 -6.7	61.0 50.4 -6.3	0.4306 0.2922	0.5
76.4 25.8 -6.9	76.5 25.9 -7.4	0.3746 0.3216	0.5
89.0 -5.0 93.0	89.0 -5.0 86.8	0.4552 0.4880	6.2
90.3 -4.7 62.6	90.1 -3.9 62.2	0.4317 0.4593	0.9
92.2 -3.5 31.1	92.2 -3.5 31.0	0.3894 0.4130	0.2
53.1 37.7 28.9	53.3 37.5 28.6	0.5021 0.3653	0.5
41.5 22.7 16.8	41.6 22.4 16.6	0.4583 0.3669	0.4
31.9 40.0 24.0	31.9 39.8 22.8	0.5549 0.3392	1.1
32.5 44.4 -1.8	32.5 44.7 -1.7	0.4789 0.2779	0.3
51.3 1.3 44.5	51.5 1.0 43.4	0.4474 0.4592	1.2
34.6 -36.4 13.9	34.8 -36.8 13.5	0.2700 0.4869	0.6
36.0 -26.2 -20.9	35.7 -24.8 -21.6	0.2076 0.3069	1.6
20.9 9.6 -23.6	21.4 10.4 -23.5	0.2732 0.2348	1.0
89.0 0.0 -1.8	88.9 0.3 -2.0	0.3429 0.3548	0.4
82.8 0.0 -1.7	82.7 -0.1 -2.0	0.3419 0.3549	0.4
69.3 0.0 -1.4	69.2 -0.2 -2.2	0.3409 0.3540	0.8
54.1 0.0 -1.0	54.2 -0.1 -1.1	0.3428 0.3558	0.1
36.6 -0.0 -0.5	36.7 0.4 -0.9	0.3439 0.3547	0.6
16.0 0.0 0.0	16.6 0.7 -0.2	0.3479 0.3553	0.9
24.0 22.0 -46.0	24.0 22.9 -45.8	0.2263 0.1613	1.0
40.9 17.9 -36.6	41.0 18.7 -36.1	0.2789 0.2322	1.0
63.7 10.3 -23.8	63.9 10.3 -23.6	0.3119 0.2960	0.3
47.0 68.0 48.0	46.7 69.0 46.6	0.6233 0.3269	1.8
58.5 47.1 37.9	58.6 46.7 37.9	0.5291 0.3654	0.5
74.2 22.9 21.4	74.3 22.9 21.3	0.4278 0.3738	0.1
50.0 -65.0 27.0	50.8 -55.9 28.0	0.2712 0.5368	9.2
62.1 -39.8 21.0	62.2 -39.5 20.8	0.3068 0.4623	0.4
77.0 -19.1 11.0	76.9 -18.8 10.6	0.3331 0.3990	0.5
71.2 18.8 17.3	71.2 18.8 17.4	0.4153 0.3722	0.2
71.2 22.2 73.1	71.3 22.0 73.0	0.5068 0.4433	0.2
47.7 71.2 16.2	47.9 70.9 16.5	0.5599 0.2921	0.5
38.0 55.4 -20.9	37.8 56.9 -21.4	0.4234 0.2274	1.6
73.7 -22.8 67.6	73.5 -23.3 67.3	0.4107 0.5134	0.6
52.3 -52.3 -20.2	53.8 -39.8 -17.6	0.2192 0.3482	12.8
43.3 -17.0 -48.6	43.7 -14.0 -47.7	0.1853 0.2273	3.2
95.0 0.0 -2.0	95.2 -0.1 -1.7	0.3428 0.3558	0.4
88.5 -0.4 -3.1	88.4 0.3 -3.0	0.3410 0.3530	0.7
82.0 -0.9 -4.1	81.8 -0.8 -4.6	0.3360 0.3505	0.5
67.7 -2.0 -4.4	67.7 -1.9 -4.8	0.3319 0.3499	0.4
52.2 -2.5 -3.5	52.3 -2.5 -3.5	0.3308 0.3520	0.1
37.5 -3.9 -3.1	37.5 -3.6 -3.8	0.3226 0.3507	0.7

26.3 -6.8 -3.4	26.6 -7.0 -3.3	0.3068 0.3573	0.4
Average			1.6
Gamut-Volume			95 %

Measurement Data

This table lists all RGB measurements. The XYZ values represent the values from the measurement device.

RGB	XYZ	Yxy
255 255 255	113.08 119.24 129.27	119.24 0.3127 0.3298
0 0 0	0.10 0.10 0.16	0.10 0.2786 0.2762
12 12 12	0.39 0.41 0.47	0.41 0.3060 0.3215
25 25 25	1.27 1.32 1.44	1.32 0.3147 0.3277
38 38 38	2.35 2.43 2.66	2.43 0.3157 0.3266
51 51 51	3.86 4.06 4.39	4.06 0.3137 0.3298
63 63 63	5.77 6.09 6.54	6.09 0.3137 0.3308
76 76 76	8.25 8.73 9.41	8.73 0.3127 0.3308
89 89 89	11.43 11.97 13.14	11.97 0.3128 0.3277
102 102 102	15.25 16.03 17.49	16.03 0.3127 0.3287
114 114 114	19.21 20.19 22.02	20.19 0.3127 0.3287
127 127 127	24.06 25.37 27.50	25.37 0.3127 0.3298
140 140 140	29.74 31.36 34.29	31.36 0.3118 0.3287
153 153 153	35.80 37.75 40.92	37.75 0.3127 0.3298
165 165 165	42.41 44.86 48.77	44.86 0.3118 0.3298
178 178 178	50.58 53.17 57.99	53.17 0.3127 0.3287
191 191 191	59.07 62.09 67.13	62.09 0.3137 0.3298
204 204 204	68.15 71.85 78.58	71.85 0.3118 0.3287
216 216 216	77.90 81.88 89.31	81.88 0.3127 0.3287
229 229 229	88.06 92.85 100.66	92.85 0.3127 0.3298
242 242 242	100.57 106.05 114.96	106.05 0.3127 0.3298
0 0 128	4.30 2.14 23.53	2.14 0.1434 0.0715
0 0 255	20.67 11.04 114.26	11.04 0.1416 0.0756
0 128 0	7.35 16.67 3.31	16.67 0.2690 0.6099
0 128 128	11.70 18.82 27.52	18.82 0.2017 0.3242
0 170 255	34.25 41.89 119.56	41.89 0.1750 0.2140
0 255 0	34.22 77.32 13.93	77.32 0.2727 0.6162
0 255 170	42.49 81.30 59.97	81.30 0.2312 0.4424
0 255 255	54.77 87.94 127.66	87.94 0.2026 0.3253
85 85 85	10.33 10.86 11.84	10.86 0.3127 0.3287
128 0 0	12.58 6.65 0.63	6.65 0.6333 0.3347
128 0 128	16.93 8.79 24.34	8.79 0.3381 0.1757
128 128 0	19.89 23.54 3.87	23.54 0.4205 0.4976
128 128 128	24.52 25.77 28.11	25.77 0.3127 0.3287
128 128 255	40.91 34.66 117.82	34.66 0.2115 0.1792
128 255 128	51.30 86.33 38.98	86.33 0.2905 0.4888
170 0 255	44.38 23.47 114.68	23.47 0.2431 0.1286
170 170 170	45.56 47.89 52.23	47.89 0.3127 0.3287
170 255 0	57.50 89.78 14.76	89.78 0.3549 0.5541
170 255 255	78.57 100.69 128.68	100.69 0.2551 0.3270
255 0 0	58.25 30.77 2.01	30.77 0.6399 0.3380
255 0 170	66.56 34.84 46.88	34.84 0.4489 0.2349
255 0 255	78.80 41.70 115.29	41.70 0.3342 0.1769
255 128 128	70.07 50.22 29.45	50.22 0.4680 0.3354
255 170 0	72.02 62.47 7.89	62.47 0.5059 0.4387
255 170 255	92.55 73.40 121.11	73.40 0.3224 0.2557
255 255 0	92.51 108.41 15.95	108.41 0.4266 0.4999
255 255 170	100.70 112.39 61.54	112.39 0.3667 0.4092
170 85 85	28.41 20.46 12.52	20.46 0.4628 0.3333
85 170 85	21.05 35.08 16.56	35.08 0.2896 0.4826
85 85 170	16.85 14.17 47.24	14.17 0.2153 0.1811
85 170 170	27.42 38.30 51.74	38.30 0.2334 0.3261
170 85 170	34.91 23.77 47.84	23.77 0.3277 0.2232
170 170 85	39.04 44.69 17.12	44.69 0.3871 0.4431
0 149 218	24.69 30.59 84.36	30.59 0.1768 0.2191

82 176 229	35.93 44.66 94.56	44.66 0.2052 0.2550
163 205 238	59.79 67.83 106.32	67.83 0.2556 0.2900
203 0 124	38.96 20.36 23.70	20.36 0.4693 0.2452
212 101 162	50.30 34.44 43.73	34.44 0.3915 0.2681
224 169 203	69.39 60.27 75.28	60.27 0.3386 0.2941
240 228 0	77.25 87.14 12.85	87.14 0.4358 0.4917
240 231 100	81.03 90.17 27.87	90.17 0.4070 0.4530
239 236 172	87.67 96.10 60.47	96.10 0.3590 0.3935
182 97 81	33.39 24.92 12.16	24.92 0.4739 0.3536
131 82 72	17.54 14.41 9.16	14.41 0.4267 0.3504
125 39 42	13.08 8.14 3.47	8.14 0.5297 0.3297
127 31 82	14.64 8.55 10.14	8.55 0.4393 0.2565
136 122 40	21.56 23.14 6.12	23.14 0.4242 0.4554
19 97 56	5.36 10.04 6.47	10.04 0.2451 0.4590
0 96 117	7.63 10.83 22.03	10.83 0.1883 0.2675
51 44 86	4.87 4.08 11.06	4.08 0.2432 0.2038
223 223 227	83.93 88.20 98.74	88.20 0.3099 0.3256
205 206 209	69.72 73.50 82.49	73.50 0.3089 0.3256
168 169 172	44.79 47.21 53.45	47.21 0.3079 0.3246
129 129 131	25.03 26.39 29.37	26.39 0.3099 0.3267
86 86 87	10.66 11.16 12.46	11.16 0.3108 0.3256
40 40 40	2.54 2.64 2.89	2.64 0.3147 0.3266
57 39 128	7.60 5.13 24.58	5.13 0.2036 0.1376
102 83 157	17.77 14.45 39.44	14.45 0.2480 0.2016
158 147 197	41.44 39.22 68.00	39.22 0.2788 0.2638
200 11 41	34.09 18.08 3.86	18.08 0.6083 0.3227
210 100 79	43.59 30.86 12.03	30.86 0.5040 0.3568
223 166 145	61.89 55.52 39.13	55.52 0.3954 0.3547
0 146 66	10.97 22.90 10.49	22.90 0.2473 0.5162
91 171 109	23.42 36.61 23.73	36.61 0.2796 0.4371
164 202 168	49.97 61.33 53.88	61.33 0.3025 0.3713
208 161 144	54.64 50.23 38.02	50.23 0.3824 0.3515
222 159 16	54.56 49.75 7.25	49.75 0.4890 0.4460
202 0 93	36.57 19.21 13.42	19.21 0.5285 0.2776
149 17 126	22.02 11.76 24.24	11.76 0.3794 0.2028
166 195 28	41.02 54.24 10.15	54.24 0.3891 0.5146
0 148 157	16.99 26.42 42.36	26.42 0.1981 0.3080
0 110 183	14.91 16.94 55.54	16.94 0.1706 0.1939
240 241 244	99.75 105.17 117.02	105.17 0.3099 0.3267
220 222 228	82.71 86.90 98.97	86.90 0.3080 0.3236
200 204 211	67.75 71.63 84.12	71.63 0.3031 0.3205
160 166 173	42.01 44.84 53.51	44.84 0.2993 0.3195
119 126 130	22.65 24.41 28.86	24.41 0.2983 0.3216
81 90 93	10.66 11.72 14.29	11.72 0.2906 0.3195
51 66 67	5.04 5.93 7.29	5.93 0.2761 0.3248