UGRA
Display Analysis & Certification Tool
Report

Basics

Date:	2013-4-3 18:30:09
Report-Version:	v1.3.1
Monitor-Name:	\\.\DISPLAY1
EDID-Name:	DELL U3014
EDID-Serial:	P1V6N313206L
Profile:	C:/Windows/system32/spool/drivers/color/DELL_U3014-ugra2.icc
Created:	2013-4-3 18:27
Measurement device:	eye-one pro, Rev. 3, Serial: 342165, no correction

Summary

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

Calibration (Assumed Target Whitepoint: 5800.00 Kelvin)

White Point	yes
Gray balance	yes
Profile quality	yes

Softproofing
Depends on the calibration verification.

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

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:	139.19 145.90 142.69
XYZ (normalized):	95.40 100.00 97.80
xy:	0.3254 0.3411
Luminance:	145.9 Cd/m2
Next Temperature:	5818 Kelvin
Assumed Target Whitepoint:	5800.0 Kelvin
Distance to assumed Target Whitepoint:	0.2 DeltaE-76

Blackpoint

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

Luminance:	0.2 Cd/m2
Chromaticity:	0.9 Chroma (Lab)

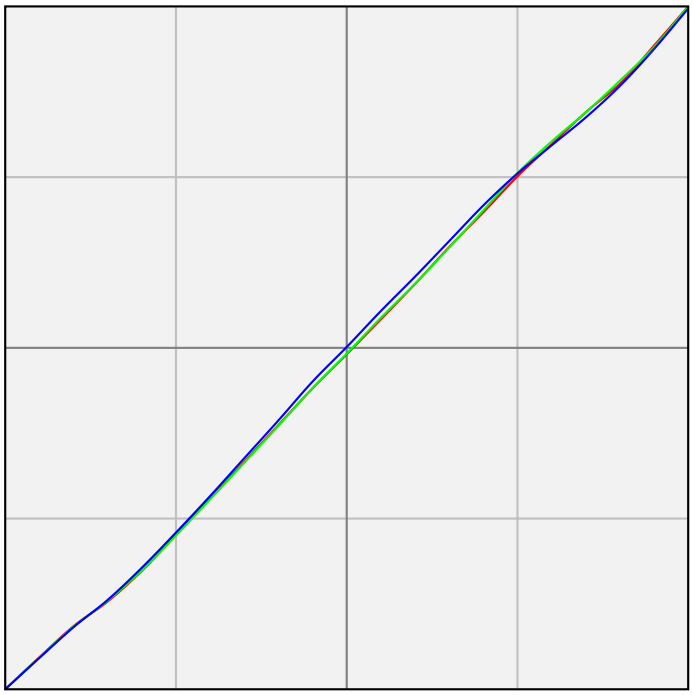
Gray balance

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	10568	0.17	1.05	0.89	
5	6548	0.51	3.18	0.97	2.00
10	5409	2.36	13.33	1.41	1.84
15	5886	4.89	21.39	0.58	1.81
20	5818	8.10	28.25	0.19	1.81
25	5720	11.78	34.14	0.44	1.83
30	5725	16.67	40.29	0.54	1.81
35	5798	22.00	45.74	0.11	1.81
40	5773	28.09	50.98	0.27	1.81
45	5808	34.68	55.85	0.31	1.81
50	5781	41.78	60.46	0.34	1.81
55	5811	49.53	64.92	0.12	1.81
60	5827	58.33	69.45	0.62	1.81
65	5822	66.52	73.28	0.15	1.82
70	5802	76.31	77.46	0.14	1.82
75	5820	87.37	81.77	0.16	1.78
80	5815	98.35	85.71	0.61	1.79
85	5796	108.38	89.05	0.21	1.84
90	5808	120.51	92.84	0.12	1.82
95	5791	132.98	96.47	0.27	1.82
100	5818	145.90	100.00	0.00	
Average	5780			0.35	1.82
Max				1.41	
Range				1.52	

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 = 95.6%

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: 0.3254 0.3411).

The assumed chromatic adaptation is: Bradford

RGB	Lab	deltaLab	DeltaE-76
0 0 0	1.0 -0.6 -0.7	-1.0 0.6 0.7	1.4
0 0 128	11.8 56.2 -79.2	-0.4 2.5 -1.6	3.0
0 0 255	25.4 88.8 -122.2	0.1 -0.0 -0.0	0.1
0 128 0	51.3 -86.8 57.7	0.4 -1.0 1.2	1.6
0 128 128	53.2 -57.9 -11.5	-0.1 0.9 -1.2	1.5
0 170 255	68.1 -40.2 -51.4	-0.3 0.8 -0.7	1.1
0 255 0	86.2 -132.7 88.7	0.1 -0.2 0.3	0.3
0 255 170	87.4 -108.6 18.1	-0.0 0.6 -0.8	1.0
0 255 255	88.6 -86.5 -18.9	-0.0 0.4 -0.4	0.5
85 85 85	44.2 -0.5 0.4	-0.2 0.5 -0.4	0.7
128 0 0	33.3 67.2 52.8	0.2 0.5 1.6	1.7
128 0 128	36.0 77.1 -38.8	0.1 0.8 0.1	0.8
128 128 0	59.2 -11.2 70.1	0.4 -1.5 0.7	1.7
128 128 128	60.8 -0.0 0.4	-0.1 0.0 -0.4	0.4
128 128 255	63.8 24.6 -58.1	-0.3 0.7 -0.5	0.9
128 255 128	90.7 -74.3 43.5	-0.0 -0.6 -0.4	0.7
170 0 255	48.6 103.2 -82.7	0.3 -0.0 0.5	0.6
170 170 170	75.1 -0.0 0.2	-0.1 0.0 -0.2	0.3
170 255 0	92.3 -61.7 98.4	0.1 -1.0 -0.2	1.0
170 255 255	94.4 -35.2 -9.2	-0.1 -0.3 -0.2	0.4
255 0 0	58.7 102.3 90.5	0.1 0.1 -0.3	0.3
255 0 170	60.7 110.2 -21.1	0.0 0.1 0.6	0.6
255 0 255	62.6 118.0 -58.8	0.2 -0.2 0.4	0.4
255 128 128	74.8 57.7 23.0	-0.0 0.0 0.5	0.5
255 170 0	81.4 28.8 96.2	0.3 -0.9 -0.1	1.0
255 170 255	84.3 46.6 -24.1	-0.1 0.5 -0.2	0.5
255 255 0	98.0 -18.9 107.2	0.2 -0.4 -0.2	0.5
255 255 170	99.1 -9.5 36.3	0.0 -0.1 0.3	0.4
255 255 255	100.0 0.0 -0.0	-0.0 0.0 -0.0	0.0
170 85 85	55.2 45.2 18.6	-0.1 0.3 -0.1	0.3
85 170 85	67.6 -58.9 34.3	0.0 -0.1 -0.3	0.3
85 85 170	46.5 18.9 -45.6	-0.3 1.1 -0.6	1.2
85 170 170	68.9 -41.7 -10.0	-0.2 0.2 -0.4	0.5
170 85 170	56.8 55.0 -28.1	-0.2 0.6 -0.2	0.7
170 170 85	74.0 -10.2 44.5	-0.0 -0.3 -0.1	0.4
Average			0.8
Maximum			3.0

Gamut-Volume

These measurements are only informative.

Gamut-Volume (ISO)	99 %
sRGB	100 %
AdobeRGB	100 %
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)	Measurement (Lab)	Measurement (Yxy)	DeltaE-76
55.0 -37.0 -50.0	56.1 -31.4 -47.5	0.1807 0.2579	6.3
66.9 -24.7 -37.1	67.1 -24.9 -36.8	0.2275 0.2929	0.4
79.7 -12.5 -21.8	80.1 -13.6 -21.1	0.2856 0.3274	1.3
48.0 74.0 -3.0	48.1 73.5 -2.8	0.5088 0.2599	0.5
60.8 50.6 -6.7	61.0 49.9 -6.4	0.4293 0.2925	0.8
76.4 25.8 -6.9	76.7 26.4 -7.1	0.3759 0.3219	0.7
89.0 -5.0 93.0	88.9 -4.7 93.0	0.4605 0.4929	0.3
90.3 -4.7 62.6	90.3 -4.8 62.3	0.4303 0.4605	0.3
92.2 -3.5 31.1	92.2 -3.4 31.5	0.3904 0.4138	0.4
53.1 37.7 28.9	53.1 37.6 28.3	0.5022 0.3646	0.6
41.5 22.7 16.8	41.7 21.9 16.6	0.4570 0.3678	0.8
31.9 40.0 24.0	32.2 39.1 23.6	0.5543 0.3424	0.9
32.5 44.4 -1.8	32.5 43.7 -1.3	0.4779 0.2803	0.9
51.3 1.3 44.5	51.3 1.5 44.6	0.4510 0.4605	0.3
34.6 -36.4 13.9	34.8 -36.2 14.4	0.2747 0.4897	0.6
36.0 -26.2 -20.9	36.2 -25.6 -20.6	0.2097 0.3125	0.7
20.9 9.6 -23.6	21.1 9.9 -23.4	0.2715 0.2352	0.5
89.0 0.0 -1.8	89.1 0.4 -1.9	0.3431 0.3550	0.4
82.8 0.0 -1.7	83.0 -0.6 -1.7	0.3418 0.3559	0.6
69.3 0.0 -1.4	69.4 -0.7 -0.7	0.3428 0.3577	1.0
54.1 0.0 -1.0	54.1 0.1 -1.4	0.3425 0.3548	0.4
36.6 -0.0 -0.5	36.9 -0.1 -0.4	0.3441 0.3572	0.3
16.0 0.0 0.0	16.2 1.5 0.7	0.3567 0.3585	1.6
24.0 22.0 -46.0	24.1 21.3 -46.0	0.2212 0.1619	0.7
40.9 17.9 -36.6	41.2 17.2 -36.3	0.2751 0.2330	0.8
63.7 10.3 -23.8	63.8 9.9 -23.5	0.3112 0.2964	0.5
47.0 68.0 48.0	47.0 68.0 48.4	0.6229 0.3306	0.4
58.5 47.1 37.9	58.3 47.6 37.2	0.5300 0.3629	0.9
74.2 22.9 21.4	74.5 23.3 21.9	0.4296 0.3742	0.7
50.0 -65.0 27.0	50.0 -64.5 26.9	0.2458 0.5514	0.5
62.1 -39.8 21.0	61.9 -39.2 21.1	0.3078 0.4633	0.6
77.0 -19.1 11.0	76.9 -18.8 11.1	0.3339 0.4000	0.3
71.2 18.8 17.3	71.2 19.1 17.4	0.4160 0.3718	0.3
71.2 22.2 73.1	71.5 23.0 73.2	0.5086 0.4417	0.9
47.7 71.2 16.2	47.7 70.6 15.9	0.5583 0.2914	0.7
38.0 55.4 -20.9	38.3 55.1 -21.0	0.4199 0.2308	0.4
73.7 -22.8 67.6	73.5 -21.7 67.8	0.4143 0.5114	1.1
52.3 -52.3 -20.2	52.6 -51.8 -18.9	0.1915 0.3537	1.4
43.3 -17.0 -48.6	43.8 -19.2 -47.1	0.1773 0.2319	2.7
95.0 0.0 -2.0	95.1 -0.3 -1.7	0.3426 0.3560	0.5
88.5 -0.4 -3.1	88.6 -0.5 -3.2	0.3395 0.3533	0.1
82.0 -0.9 -4.1	82.2 -0.8 -4.0	0.3372 0.3518	0.3
67.7 -2.0 -4.4	67.6 -1.7 -4.2	0.3336 0.3509	0.3
52.2 -2.5 -3.5	52.5 -3.3 -3.5	0.3291 0.3529	0.8
37.5 -3.9 -3.1	37.8 -4.2 -2.8	0.3243 0.3552	0.6

26.3 -6.8 -3.4	26.6 -6.3 -2.8	0.3113 0.3582	0.9
Average			0.8
Gamut-Volume			99 %

Measurement Data

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

RGB	XYZ	Yxy
255 255 255	139.19 145.90 142.69	145.90 0.3254 0.3411
0 0 0	0.14 0.17 0.23	0.17 0.2630 0.3109
12 12 12	0.50 0.51 0.59	0.51 0.3131 0.3207
25 25 25	2.25 2.36 2.12	2.36 0.3347 0.3504
38 38 38	4.61 4.89 4.75	4.89 0.3238 0.3430
51 51 51	7.75 8.10 7.96	8.10 0.3254 0.3403
63 63 63	11.28 11.78 11.37	11.78 0.3275 0.3422
76 76 76	15.91 16.67 16.03	16.67 0.3274 0.3429
89 89 89	21.01 22.00 21.48	22.00 0.3258 0.3412
102 102 102	26.83 28.09 27.30	28.09 0.3263 0.3416
114 114 114	33.01 34.68 33.72	34.68 0.3255 0.3419
127 127 127	39.85 41.78 40.55	41.78 0.3261 0.3420
140 140 140	47.30 49.53 48.48	49.53 0.3255 0.3409
153 153 153	55.40 58.33 56.68	58.33 0.3251 0.3423
165 165 165	63.51 66.52 65.21	66.52 0.3253 0.3407
178 178 178	72.86 76.31 74.53	76.31 0.3257 0.3411
191 191 191	83.41 87.37 85.62	87.37 0.3253 0.3407
204 204 204	93.52 98.35 95.55	98.35 0.3254 0.3422
216 216 216	103.43 108.38 105.64	108.38 0.3258 0.3414
229 229 229	114.96 120.51 117.64	120.51 0.3256 0.3413
242 242 242	127.01 132.98 129.70	132.98 0.3259 0.3412
0 0 128	7.10 2.30 36.86	2.30 0.1534 0.0497
0 0 255	24.88 7.67 130.20	7.67 0.1529 0.0471
0 128 0	8.87 28.52 3.28	28.52 0.2181 0.7011
0 128 128	16.05 31.39 39.93	31.39 0.1837 0.3592
0 170 255	40.00 56.66 135.32	56.66 0.1724 0.2442
0 255 0	30.91 100.08 11.07	100.08 0.2176 0.7045
0 255 170	42.78 104.14 72.80	104.14 0.1947 0.4740
0 255 255	55.84 108.24 140.86	108.24 0.1831 0.3549
85 85 85	19.28 20.34 19.69	20.34 0.3251 0.3430
128 0 0	23.76 10.81 0.46	10.81 0.6781 0.3086
128 0 128	30.88 13.06 38.00	13.06 0.3768 0.1594
128 128 0	33.03 39.38 3.55	39.38 0.4349 0.5184
128 128 128	40.44 42.40 41.12	42.40 0.3262 0.3420
128 128 255	58.19 48.13 133.91	48.13 0.2422 0.2004
128 255 128	62.68 113.72 48.79	113.72 0.2783 0.5050
170 0 255	64.47 25.56 131.02	25.56 0.2917 0.1156
170 170 170	67.34 70.61 68.76	70.61 0.3258 0.3416
170 255 0	71.41 118.30 11.46	118.30 0.3550 0.5881
170 255 255	96.42 126.56 141.87	126.56 0.2643 0.3469
255 0 0	82.99 37.64 1.13	37.64 0.6816 0.3092
255 0 170	95.10 41.40 64.74	41.40 0.4725 0.2057
255 0 255	107.81 45.17 131.81	45.17 0.3786 0.1586
255 128 128	99.41 69.03 42.52	69.03 0.4712 0.3272
255 170 0	97.89 85.31 6.33	85.31 0.5165 0.4501
255 170 255	123.25 94.28 137.08	94.28 0.3476 0.2659
255 255 0	114.00 137.58 12.01	137.58 0.4325 0.5220
255 255 170	126.34 141.88 75.54	141.88 0.3675 0.4127
170 85 85	47.96 33.33 20.22	33.33 0.4725 0.3284
85 170 85	29.93 54.67 23.33	54.67 0.2773 0.5065
85 85 170	27.87 23.15 64.50	23.15 0.2413 0.2004
85 170 170	38.62 57.65 68.18	57.65 0.2348 0.3505
170 85 170	56.45 36.03 65.00	36.03 0.3584 0.2288
170 170 85	58.73 67.75 23.89	67.75 0.3906 0.4505
0 131 205	26.25 35.85 90.81	35.85 0.1716 0.2345

80 160 219	42.93 54.26 104.15	54.26 0.2132 0.2695
152 194 231	72.77 83.42 116.30	83.42 0.2671 0.3061
173 42 102	47.29 24.18 26.13	24.18 0.4845 0.2478
187 98 142	61.77 42.33 48.27	42.33 0.4054 0.2778
207 160 190	86.17 74.36 83.12	74.36 0.3537 0.3052
238 215 29	96.75 106.84 11.58	106.84 0.4496 0.4965
238 220 94	101.48 111.60 31.18	111.60 0.4155 0.4569
237 227 160	108.95 117.84 66.13	117.84 0.3720 0.4023
157 85 65	41.26 30.42 13.36	30.42 0.4852 0.3576
106 68 57	21.74 17.78 10.13	17.78 0.4379 0.3580
98 38 32	16.40 10.25 3.75	10.25 0.5395 0.3371
99 37 63	17.82 10.50 10.94	10.50 0.4540 0.2674
116 101 37	26.92 28.25 6.38	28.25 0.4374 0.4589
34 74 45	6.71 12.26 6.91	12.26 0.2593 0.4737
24 76 97	9.24 13.48 24.12	13.48 0.1972 0.2877
36 36 66	5.67 4.84 11.94	4.84 0.2527 0.2156
215 216 220	103.76 108.43 109.33	108.43 0.3227 0.3372
194 195 199	86.21 90.68 91.31	90.68 0.3214 0.3381
152 153 155	55.21 58.20 57.75	58.20 0.3226 0.3400
110 110 112	30.80 32.22 32.59	32.22 0.3221 0.3370
68 68 69	13.18 13.82 13.70	13.82 0.3237 0.3396
30 30 30	3.06 3.11 2.94	3.11 0.3361 0.3417
37 39 106	8.76 6.20 27.31	6.20 0.2073 0.1467
77 73 137	21.23 17.73 43.99	17.73 0.2559 0.2137
136 133 182	50.10 47.66 74.65	47.66 0.2906 0.2764
172 43 31	42.72 22.85 3.97	22.85 0.6144 0.3285
187 91 64	54.44 37.82 13.46	37.82 0.5149 0.3577
207 153 128	77.60 68.71 42.97	68.71 0.4100 0.3630
32 119 57	11.63 26.98 11.55	26.98 0.2319 0.5378
91 147 94	28.75 44.28 25.73	44.28 0.2911 0.4484
155 185 154	61.62 74.97 58.99	74.97 0.3150 0.3833
190 147 127	67.89 61.64 41.93	61.64 0.3960 0.3595
207 143 34	69.48 61.85 8.17	61.85 0.4981 0.4434
173 43 73	45.16 23.67 14.89	23.67 0.5394 0.2827
118 41 104	27.06 14.84 26.97	14.84 0.3929 0.2155
159 174 43	52.19 66.61 11.20	66.61 0.4015 0.5124
0 125 139	16.92 30.62 46.06	30.62 0.1808 0.3272
3 94 165	16.50 20.53 60.67	20.53 0.1688 0.2101
236 237 241	121.99 128.09 128.53	128.09 0.3222 0.3383
212 215 221	101.79 106.94 110.19	106.94 0.3192 0.3353
189 193 201	84.09 88.54 92.78	88.54 0.3168 0.3336
143 149 156	51.44 54.59 58.14	54.59 0.3133 0.3325
101 107 111	27.76 30.02 32.03	30.02 0.3091 0.3343
65 72 75	13.21 14.59 15.58	14.59 0.3045 0.3364
41 50 51	6.24 7.24 7.89	7.24 0.2921 0.3386