

# UGRA

# Display Analysis & Certification Tool

# Report

## Basics

Date: 2014-2-14 18:47:51  
Report-Version: v2.0.0  
Monitor-Name: \\.\DISPLAY1  
EDID-Name: DELL U2711  
EDID-Serial: G606T19U0AGL  
Profile: C:/Windows/system32/spool/.../DELL U2711 i1Profiler 14-02-2014.icm  
Created: 2014-2-14 16:13  
Measurement device: i1Pro, Rev. 3, Serial: 1006031  
Evaluation method: UDACT v2.0

## Summary

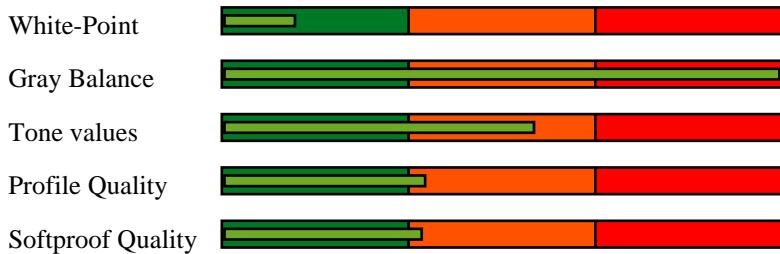
**Calibration** (Reference Whitepoint: 5500.00 Kelvin)

|                 |     |
|-----------------|-----|
| White Point     | yes |
| Gray balance    | no  |
| Tone values     | no  |
| Profile quality | no  |
| Gamut ability   | no  |

**Softproof quality** (depends on the calibration verification)

|                          |    |
|--------------------------|----|
| ISO Coated v2 (FOGRA39L) | no |
| sRGB                     | no |
| AdobeRGB                 | no |
| ECI-RGB v2.0             | no |

## Diagram



The monitor has  
not passed the certification  
according to the UDACT v2.0  
specifications.

## 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 2.0 dE00.

|  |                         |
|--|-------------------------|
| XYZ (measured):                        | 120.35 125.94 114.79    |
| XYZ (normalized):                      | 95.56 100.00 91.15      |
| xy:                                    | 0.3333 0.3488           |
| Luminance:                             | 125.9 Cd/m <sup>2</sup> |
| Next Temperature:                      | 5465 Kelvin             |
| Reference Whitepoint:                  | 5500.0 Kelvin           |
| Deviation XYZ to Reference Whitepoint: | 0.8 dE00                |
|  | 0.7 dE76                |

## Blackpoint

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

|               |                       |
|---------------|-----------------------|
| Luminance:    | 0.3 Cd/m <sup>2</sup> |
| Chromaticity: | 1.0 Chroma (Lab)      |

## Gray balance

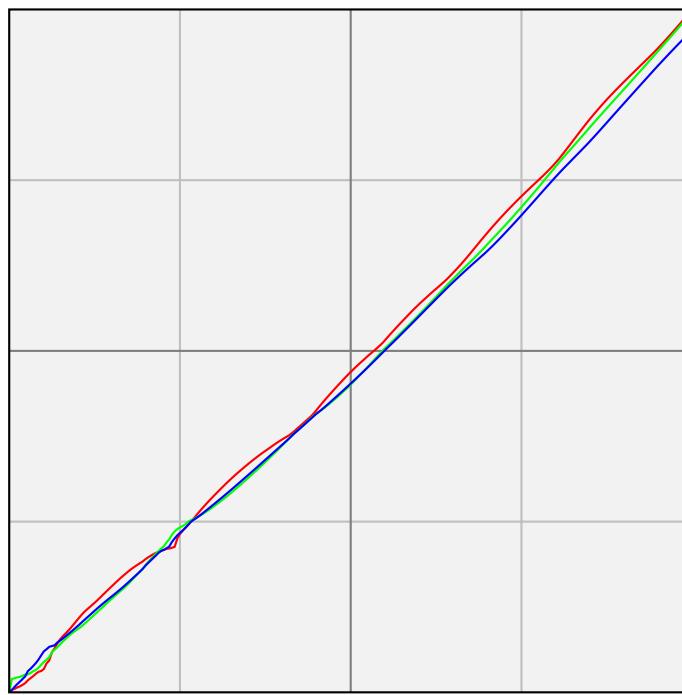
Average and maximum calculation will respect measurements with 1% minimum luminance only. The L-deviation shows the difference between the profile and measurement value.

The maximum allowed deviations to comply with this test are an average of 1.0 DeltaC, a range of 2.0 DeltaC. A maximum L-deviation of 2.3 dL00 in the luminance range of 20%-100% shall not be exceeded.

| %       | Kelvin | Cd/m <sup>2</sup> | L      | Chroma | Gamma | Delta-L |
|---------|--------|-------------------|--------|--------|-------|---------|
| 0       | 7329   | 0.26              | 1.84   | 1.00   |       |         |
| 5       | 11858  | 0.24              | 1.73   | 1.97   | 2.95  | +0.6    |
| 10      | 5115   | 0.93              | 6.66   | 2.15   | 2.25  | +1.1    |
| 15      | 4617   | 1.98              | 13.05  | 3.70   | 2.24  | +0.1    |
| 20      | 5105   | 3.73              | 19.88  | 1.59   | 2.23  | +0.0    |
| 25      | 5972   | 6.27              | 26.67  | 4.18   | 2.22  | +0.8    |
| 30      | 5252   | 8.86              | 31.89  | 1.65   | 2.22  | -0.1    |
| 35      | 5165   | 12.49             | 37.70  | 2.45   | 2.21  | -0.1    |
| 40      | 5515   | 16.66             | 43.11  | 0.44   | 2.22  | -0.3    |
| 45      | 5682   | 21.60             | 48.45  | 2.02   | 2.23  | -0.0    |
| 50      | 5366   | 26.89             | 53.33  | 1.47   | 2.23  | -0.4    |
| 55      | 5474   | 33.57             | 58.66  | 0.19   | 2.22  | -0.2    |
| 60      | 5439   | 40.56             | 63.51  | 0.37   | 2.22  | -0.4    |
| 65      | 5564   | 48.07             | 68.15  | 0.88   | 2.23  | -0.3    |
| 70      | 5425   | 56.81             | 72.96  | 0.38   | 2.24  | -0.3    |
| 75      | 5442   | 66.30             | 77.66  | 0.50   | 2.23  | -0.3    |
| 80      | 5554   | 76.83             | 82.38  | 0.89   | 2.22  | -0.2    |
| 85      | 5435   | 86.97             | 86.53  | 0.49   | 2.28  | -0.2    |
| 90      | 5430   | 99.08             | 91.09  | 0.87   | 2.25  | -0.2    |
| 95      | 5481   | 111.67            | 95.44  | 0.48   | 2.30  | -0.2    |
| 100     | 5465   | 125.94            | 100.00 | 0.00   |       |         |
| Average | 5457   |                   |        | 1.11   | 2.27  | 0.2     |
| Max     |        |                   |        | 4.18   |       | 0.8     |
| Range   |        |                   |        | 7.85   |       |         |

## Tone values

This test checks the calibration curves (vcgt) 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 = 91.6%

## 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 2.0 dE00 and a maximum of 4.0 dE00.

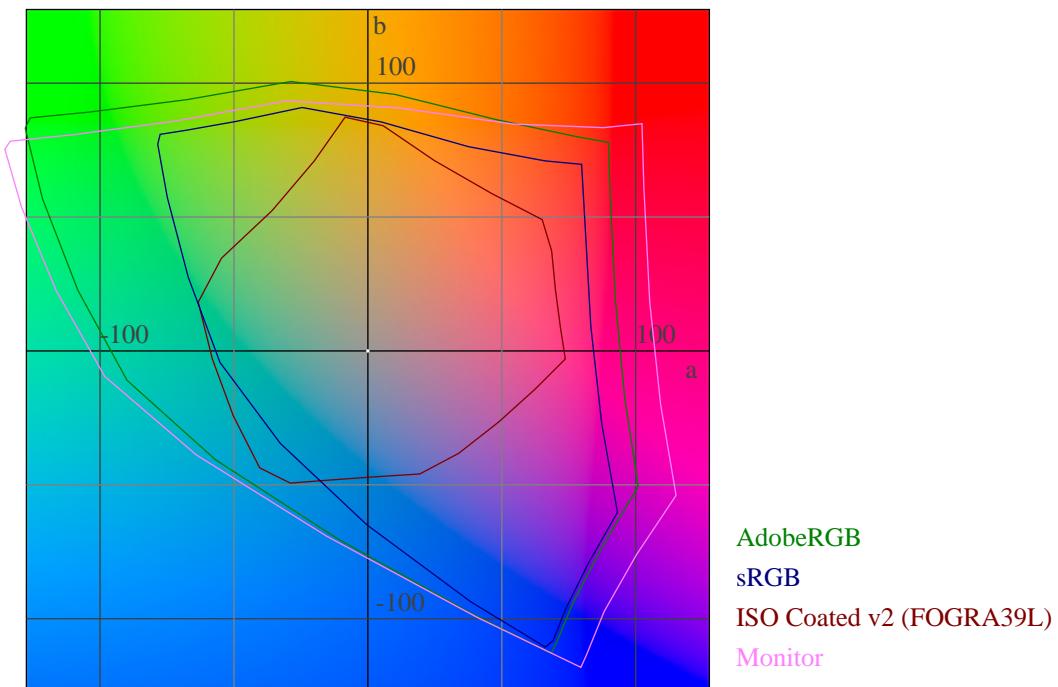
The Lab values are calculated, based on the measured white point (xy: 0.3333 0.3488).

| RGB         | Lab              | deltaLab       | dE76 | dE00 |
|-------------|------------------|----------------|------|------|
| 0 0 0       | 1.8 -0.9 -0.4    | -1.8 0.9 0.4   | 2.1  | 1.7  |
| 0 0 128     | 10.6 48.4 -69.3  | -1.2 0.3 -2.7  | 3.0  | 1.2  |
| 0 0 255     | 27.2 83.9 -117.5 | -1.2 -3.3 -1.5 | 3.9  | 1.9  |
| 0 128 0     | 44.4 -83.1 45.9  | 1.1 0.4 1.5    | 1.9  | 1.1  |
| 0 128 128   | 46.3 -53.3 -12.3 | 0.6 -2.2 0.2   | 2.2  | 0.9  |
| 0 170 255   | 63.8 -31.9 -57.4 | -0.2 -3.8 0.1  | 3.8  | 1.5  |
| 0 255 0     | 85.7 -139.7 78.9 | -0.1 3.0 -0.5  | 3.0  | 0.4  |
| 0 255 170   | 86.7 -117.2 21.9 | -0.2 1.2 -1.0  | 1.6  | 0.4  |
| 0 255 255   | 88.2 -90.4 -19.8 | -0.3 -1.3 -0.3 | 1.4  | 0.3  |
| 85 85 85    | 35.8 3.2 0.3     | 0.3 -3.2 -0.3  | 3.2  | 4.3  |
| 128 0 0     | 29.7 61.3 45.9   | 0.2 1.0 1.7    | 2.0  | 0.6  |
| 128 0 128   | 32.3 70.2 -32.7  | 0.1 -0.3 -0.1  | 0.3  | 0.1  |
| 128 128 0   | 52.1 -9.2 58.1   | 0.9 -1.1 0.4   | 1.5  | 1.1  |
| 128 128 128 | 53.7 1.6 -0.6    | 0.5 -1.6 0.6   | 1.8  | 2.4  |
| 128 128 255 | 57.8 31.8 -66.5  | 0.0 -3.8 0.5   | 3.8  | 2.1  |
| 128 255 128 | 89.2 -88.6 46.6  | -0.1 1.3 -0.6  | 1.4  | 0.3  |
| 170 0 255   | 47.4 98.9 -82.9  | 0.0 -1.9 0.6   | 2.0  | 0.4  |
| 170 170 170 | 70.0 0.2 -0.4    | 0.3 -0.2 0.4   | 0.6  | 0.6  |
| 170 255 0   | 91.0 -72.3 87.5  | 0.1 2.5 -0.9   | 2.7  | 0.6  |
| 170 255 255 | 93.4 -43.1 -11.1 | -0.1 -0.3 -0.1 | 0.4  | 0.1  |
| 255 0 0     | 59.7 102.8 89.1  | 0.3 0.2 -3.9   | 3.9  | 1.3  |
| 255 0 170   | 61.5 109.0 -10.1 | 0.3 -0.6 0.2   | 0.7  | 0.2  |
| 255 0 255   | 64.0 117.1 -54.7 | 0.1 -1.5 0.5   | 1.6  | 0.3  |
| 255 128 128 | 71.7 68.3 29.1   | 0.5 -0.9 0.4   | 1.1  | 0.5  |
| 255 170 0   | 79.0 38.5 88.3   | 0.5 -0.1 -1.4  | 1.5  | 0.5  |
| 255 170 255 | 82.0 55.8 -26.6  | 0.1 -1.1 0.3   | 1.1  | 0.3  |
| 255 255 0   | 98.0 -18.7 98.3  | 0.2 1.6 -1.6   | 2.3  | 0.7  |
| 255 255 170 | 98.9 -10.7 41.3  | 0.1 0.9 -0.3   | 1.0  | 0.6  |
| 255 255 255 | 100.0 0.0 0.0    | -0.0 0.0 -0.0  | 0.0  | 0.0  |
| 170 85 85   | 48.9 50.9 21.8   | 0.7 -0.5 0.2   | 0.9  | 0.8  |
| 85 170 85   | 62.1 -64.5 35.0  | 0.0 -0.7 -0.7  | 1.0  | 0.4  |
| 85 85 170   | 38.8 25.5 -49.3  | 0.0 -4.4 0.1   | 4.4  | 2.8  |
| 85 170 170  | 63.6 -44.7 -11.1 | -0.1 -2.2 -0.3 | 2.2  | 0.7  |
| 170 85 170  | 50.9 60.5 -29.0  | 0.5 -1.4 0.9   | 1.7  | 0.6  |
| 170 170 85  | 68.9 -10.9 45.8  | 0.3 1.2 -0.3   | 1.3  | 0.8  |
| Average     |                  |                | 1.9  | 0.9  |
| Maximum     |                  |                | 4.4  | 4.3  |

## Gamut-Volume

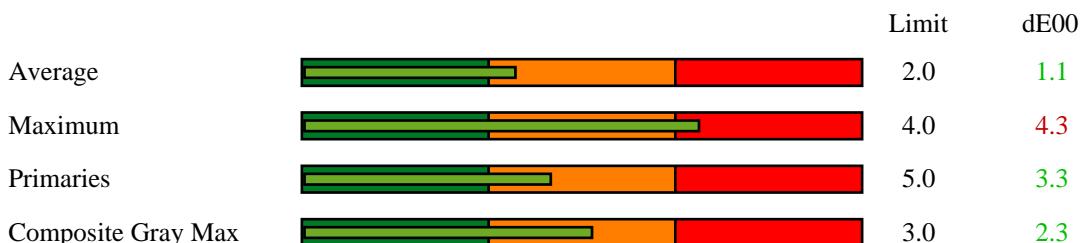
These measurements are only informative.

|                          |       |
|--------------------------|-------|
| ISO Coated v2 (FOGRA39L) | 100 % |
| sRGB                     | 100 % |
| AdobeRGB                 | 98 %  |
| ECI-RGB v2.0             | 93 %  |



## Softproof Quality

The measurements are converted to Lab values based on the measured whitepoint (xy: 0.3333 0.3488) and compared with the selected reference. The maximum allowed deviations to comply with this test are an average of 2.0 dE00 and a minimum Gamut volume of 90% for ISO Coated v2 (FOGRA39L).



| Reference (Lab)  | Measurement (Lab) | Measurement (Yxy)   | dE76 | dE00 |
|------------------|-------------------|---------------------|------|------|
| 55.0 -37.0 -50.0 | 55.5 -30.9 -48.8  | 23.44 0.1781 0.2535 | 6.3  | 2.3  |
| 66.9 -24.7 -37.1 | 66.8 -22.6 -37.0  | 36.33 0.2302 0.2907 | 2.1  | 1.0  |
| 79.7 -12.5 -21.8 | 79.5 -11.6 -22.2  | 55.85 0.2864 0.3236 | 1.1  | 0.7  |
| 87.7 -5.8 -11.8  | 87.4 -5.5 -12.4   | 70.77 0.3162 0.3404 | 0.7  | 0.6  |
| 91.5 -3.0 -7.0   | 91.5 -1.6 -7.0    | 79.48 0.3318 0.3477 | 1.4  | 1.7  |
| 48.0 74.0 -3.0   | 47.9 73.7 -2.4    | 16.73 0.5107 0.2601 | 0.6  | 0.2  |
| 60.8 50.6 -6.7   | 60.6 50.2 -7.4    | 28.85 0.4277 0.2902 | 0.8  | 0.4  |
| 76.4 25.8 -6.9   | 76.2 26.2 -7.3    | 50.19 0.3754 0.3214 | 0.6  | 0.3  |
| 86.2 12.0 -5.2   | 86.0 12.7 -5.5    | 67.89 0.3555 0.3385 | 0.8  | 0.6  |
| 90.7 5.9 -3.9    | 90.4 6.9 -4.1     | 77.11 0.3491 0.3461 | 1.1  | 1.1  |
| 89.0 -5.0 93.0   | 88.5 -5.4 91.1    | 73.07 0.4582 0.4928 | 2.0  | 0.6  |
| 90.3 -4.7 62.6   | 89.9 -5.6 62.6    | 76.14 0.4296 0.4623 | 1.0  | 0.6  |
| 92.2 -3.5 31.1   | 91.7 -3.8 30.8    | 80.01 0.3888 0.4132 | 0.7  | 0.4  |
| 93.6 -1.6 13.3   | 93.3 -1.3 13.0    | 83.63 0.3646 0.3813 | 0.6  | 0.5  |
| 94.3 -0.9 5.4    | 93.9 -0.7 5.3     | 84.94 0.3532 0.3680 | 0.5  | 0.4  |
| 89.0 0.0 -1.8    | 88.7 1.2 -2.0     | 73.52 0.3440 0.3540 | 1.2  | 1.7  |
| 82.8 0.0 -1.7    | 82.6 -0.7 -2.1    | 61.45 0.3407 0.3552 | 0.9  | 1.1  |
| 69.3 0.0 -1.4    | 69.0 -0.0 -2.0    | 39.28 0.3414 0.3541 | 0.8  | 0.7  |
| 54.1 0.0 -1.0    | 53.8 1.8 -1.7     | 21.82 0.3454 0.3518 | 2.0  | 2.7  |
| 36.6 -0.0 -0.5   | 36.3 2.4 -0.7     | 9.18 0.3504 0.3521  | 2.4  | 3.3  |
| 16.0 0.0 0.0     | 16.0 2.3 0.3      | 2.10 0.3588 0.3543  | 2.3  | 3.2  |
| 10.4 13.9 1.4    | 11.2 15.9 1.1     | 1.29 0.4439 0.3143  | 2.2  | 1.6  |
| 33.4 25.4 20.9   | 33.6 22.0 20.8    | 7.80 0.4880 0.3771  | 3.3  | 2.0  |
| 34.4 -3.3 22.3   | 34.3 -1.1 22.3    | 8.16 0.4151 0.4373  | 2.2  | 2.1  |
| 24.0 22.0 -46.0  | 24.4 22.3 -45.3   | 4.23 0.2272 0.1641  | 0.9  | 0.6  |
| 40.9 17.9 -36.6  | 40.7 19.8 -36.2   | 11.68 0.2805 0.2304 | 1.9  | 1.4  |
| 63.7 10.3 -23.8  | 63.6 11.3 -24.3   | 32.34 0.3119 0.2935 | 1.1  | 0.6  |
| 79.4 5.1 -13.6   | 79.0 6.4 -14.4    | 54.93 0.3287 0.3254 | 1.6  | 1.4  |
| 87.2 2.6 -8.1    | 87.0 4.1 -8.5     | 70.00 0.3372 0.3402 | 1.5  | 1.9  |
| 47.0 68.0 48.0   | 46.8 67.7 49.1    | 15.90 0.6238 0.3314 | 1.1  | 0.6  |
| 58.5 47.1 37.9   | 58.1 46.5 37.9    | 26.08 0.5297 0.3654 | 0.7  | 0.4  |
| 74.2 22.9 21.4   | 73.9 22.8 21.6    | 46.55 0.4287 0.3744 | 0.4  | 0.3  |
| 85.0 10.0 9.8    | 84.9 10.5 10.0    | 65.78 0.3799 0.3669 | 0.5  | 0.4  |
| 90.0 4.7 3.7     | 89.9 5.0 4.1      | 75.98 0.3601 0.3614 | 0.5  | 0.4  |
| 50.0 -65.0 27.0  | 49.8 -65.2 26.7   | 18.24 0.2434 0.5528 | 0.4  | 0.3  |
| 62.1 -39.8 21.0  | 61.8 -41.1 20.4   | 30.21 0.3022 0.4641 | 1.5  | 0.7  |
| 77.0 -19.1 11.0  | 76.6 -18.5 10.6   | 50.84 0.3335 0.3988 | 0.8  | 0.5  |
| 86.3 -8.4 4.2    | 86.1 -9.7 3.8     | 68.15 0.3372 0.3740 | 1.4  | 1.3  |
| 90.8 -4.1 0.9    | 90.7 -3.2 0.8     | 77.80 0.3423 0.3626 | 0.9  | 1.1  |
| 88.5 -0.4 -3.1   | 88.2 0.4 -3.2     | 72.57 0.3408 0.3525 | 0.8  | 1.2  |

|                  |                  |                     |     |       |
|------------------|------------------|---------------------|-----|-------|
| 82.0 -0.9 -4.1   | 81.6 -1.0 -4.7   | 59.57 0.3355 0.3505 | 0.7 | 0.6   |
| 67.7 -2.0 -4.4   | 67.4 -2.3 -5.1   | 37.16 0.3306 0.3495 | 0.8 | 0.7   |
| 52.2 -2.5 -3.5   | 51.8 -2.1 -4.4   | 19.94 0.3292 0.3490 | 1.0 | 1.0   |
| 37.5 -3.9 -3.1   | 37.4 -2.0 -2.8   | 9.78 0.3304 0.3518  | 1.9 | 2.3   |
| 26.3 -6.8 -3.4   | 27.0 -8.9 -3.2   | 5.08 0.3005 0.3610  | 2.2 | 2.1   |
| 10.4 -8.2 -10.2  | 10.0 -5.1 -10.3  | 1.12 0.2483 0.2961  | 3.1 | 3.2   |
| 24.3 32.7 13.1   | 24.1 34.0 13.6   | 4.13 0.5366 0.3248  | 1.4 | 0.6   |
| 24.7 -17.0 7.5   | 25.9 -18.6 8.6   | 4.71 0.3080 0.4427  | 2.3 | 1.5   |
| 23.0 0.0 0.0     | 23.2 -2.2 -0.1   | 3.86 0.3367 0.3630  | 2.2 | 3.0   |
| 38.5 6.6 3.9     | 38.3 7.5 4.1     | 10.24 0.3812 0.3595 | 1.0 | 1.0   |
| 61.5 5.4 3.8     | 61.3 5.4 3.4     | 29.57 0.3646 0.3604 | 0.4 | 0.4   |
| 78.1 2.9 0.9     | 77.8 2.9 0.5     | 52.82 0.3516 0.3568 | 0.6 | 0.5   |
| 86.6 1.5 -0.7    | 86.5 1.9 -0.6    | 68.90 0.3476 0.3559 | 0.5 | 0.6   |
| 53.1 37.7 28.9   | 52.5 36.8 28.4   | 20.57 0.5018 0.3658 | 1.2 | 0.7   |
| 41.5 22.7 16.8   | 41.1 23.5 16.6   | 11.92 0.4624 0.3646 | 0.9 | 0.7   |
| 31.9 40.0 24.0   | 31.1 38.7 23.4   | 6.70 0.5564 0.3418  | 1.6 | 0.8   |
| 32.5 44.4 -1.8   | 32.2 43.9 -2.7   | 7.16 0.4731 0.2762  | 1.1 | 0.6   |
| 51.3 1.3 44.5    | 50.8 1.8 44.9    | 19.12 0.4527 0.4608 | 0.8 | 0.6   |
| 34.6 -36.4 13.9  | 33.7 -34.5 13.8  | 7.84 0.2768 0.4863  | 2.2 | 1.1   |
| 36.0 -26.2 -20.9 | 35.5 -21.9 -21.5 | 8.77 0.2149 0.3042  | 4.4 | 2.4   |
| 20.9 9.6 -23.6   | 21.1 10.8 -22.5  | 3.28 0.2789 0.2376  | 1.7 | 1.6   |
| 71.2 18.8 17.3   | 70.8 17.9 16.9   | 41.91 0.4132 0.3725 | 1.1 | 0.7   |
| 71.2 22.2 73.1   | 70.3 22.1 73.4   | 41.15 0.5088 0.4437 | 1.0 | 0.7   |
| 47.7 71.2 16.2   | 47.7 70.7 16.6   | 16.59 0.5601 0.2923 | 0.6 | 0.2   |
| 38.0 55.4 -20.9  | 38.1 54.7 -20.3  | 10.15 0.4216 0.2323 | 0.9 | 0.3   |
| 73.7 -22.8 67.6  | 73.1 -24.0 67.9  | 45.26 0.4099 0.5161 | 1.4 | 0.7   |
| 52.3 -52.3 -20.2 | 52.3 -49.6 -20.5 | 20.43 0.1920 0.3462 | 2.7 | 1.0   |
| 43.3 -17.0 -48.6 | 43.7 -14.3 -47.6 | 13.65 0.1850 0.2278 | 3.0 | 1.5   |
| 95.0 0.0 -2.0    | 94.5 0.6 -2.7    | 86.42 0.3422 0.3536 | 1.0 | 1.1   |
| 15.7 -3.1 11.7   | 15.9 0.2 10.8    | 2.08 0.4044 0.4173  | 3.4 | 4.3   |
| 34.7 28.5 -4.0   | 34.6 25.7 -4.0   | 8.32 0.4091 0.3038  | 2.8 | 1.3   |
| 25.8 -11.0 -14.4 | 27.1 -11.0 -12.6 | 5.13 0.2571 0.3204  | 2.2 | 1.5   |
| Average          |                  |                     | 1.5 | 1.1   |
| Gamut-Volume     |                  |                     |     | 100 % |

## Measurement Data

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

| RGB         | XYZ                  | Yxy                  |
|-------------|----------------------|----------------------|
| 255 255 255 | 120.35 125.94 114.79 | 125.94 0.3333 0.3488 |
| 0 0 0       | 0.22 0.26 0.27       | 0.26 0.2938 0.3467   |
| 12 12 12    | 0.20 0.24 0.35       | 0.24 0.2557 0.3037   |
| 25 25 25    | 0.95 0.93 0.91       | 0.93 0.3409 0.3336   |
| 38 38 38    | 2.06 1.98 1.80       | 1.98 0.3534 0.3389   |
| 51 51 51    | 3.67 3.73 3.33       | 3.73 0.3421 0.3475   |
| 63 63 63    | 5.59 6.27 5.57       | 6.27 0.3209 0.3595   |
| 76 76 76    | 8.67 8.86 8.10       | 8.86 0.3383 0.3457   |
| 89 89 89    | 12.32 12.49 11.38    | 12.49 0.3404 0.3452  |
| 102 102 102 | 15.84 16.66 15.19    | 16.66 0.3321 0.3493  |
| 114 114 114 | 20.20 21.60 19.75    | 21.60 0.3282 0.3510  |
| 127 127 127 | 26.07 26.89 24.72    | 26.89 0.3356 0.3462  |
| 140 140 140 | 32.03 33.57 30.55    | 33.57 0.3331 0.3492  |
| 153 153 153 | 38.88 40.56 37.01    | 40.56 0.3339 0.3483  |
| 165 165 165 | 45.82 48.07 44.57    | 48.07 0.3309 0.3472  |
| 178 178 178 | 54.43 56.81 51.59    | 56.81 0.3343 0.3489  |
| 191 191 191 | 63.58 66.30 60.57    | 66.30 0.3338 0.3481  |
| 204 204 204 | 73.04 76.83 70.67    | 76.83 0.3312 0.3484  |
| 216 216 216 | 83.39 86.97 79.29    | 86.97 0.3340 0.3484  |
| 229 229 229 | 95.21 99.08 90.65    | 99.08 0.3341 0.3477  |
| 242 242 242 | 106.86 111.67 102.46 | 111.67 0.3329 0.3479 |
| 0 0 128     | 4.17 1.52 21.88      | 1.52 0.1512 0.0550   |
| 0 0 255     | 18.97 6.50 101.43    | 6.50 0.1495 0.0512   |
| 0 128 0     | 5.34 17.73 2.82      | 17.73 0.2063 0.6847  |
| 0 128 128   | 9.58 19.48 24.62     | 19.48 0.1785 0.3629  |
| 0 170 255   | 29.27 41.00 106.43   | 41.00 0.1656 0.2320  |
| 0 255 0     | 25.61 84.78 12.84    | 84.78 0.2078 0.6880  |
| 0 255 170   | 33.26 87.50 53.69    | 87.50 0.1907 0.5016  |
| 0 255 255   | 44.46 91.33 113.84   | 91.33 0.1781 0.3659  |
| 85 85 85    | 11.18 11.21 10.12    | 11.21 0.3439 0.3448  |
| 128 0 0     | 16.61 7.72 0.40      | 7.72 0.6718 0.3122   |
| 128 0 128   | 20.77 9.09 22.36     | 9.09 0.3977 0.1741   |
| 128 128 0   | 22.13 25.49 3.00     | 25.49 0.4372 0.5036  |
| 128 128 128 | 26.51 27.30 25.25    | 27.30 0.3353 0.3453  |
| 128 128 255 | 41.31 32.47 104.41   | 32.47 0.2318 0.1822  |
| 128 255 128 | 46.81 94.04 35.21    | 94.04 0.2659 0.5341  |
| 170 0 255   | 49.58 20.52 101.85   | 20.52 0.2883 0.1194  |
| 170 170 170 | 49.07 51.24 47.08    | 51.24 0.3329 0.3477  |
| 170 255 0   | 56.63 98.86 13.10    | 98.86 0.3359 0.5864  |
| 170 255 255 | 75.62 105.51 114.23  | 105.51 0.2560 0.3572 |
| 255 0 0     | 75.99 34.96 1.02     | 34.96 0.6787 0.3122  |
| 255 0 170   | 83.66 37.52 42.52    | 37.52 0.5111 0.2292  |
| 255 0 255   | 94.76 41.24 102.38   | 41.24 0.3975 0.1730  |
| 255 128 128 | 85.69 54.47 26.13    | 54.47 0.5153 0.3276  |
| 255 170 0   | 86.46 69.11 6.15     | 69.11 0.5346 0.4273  |
| 255 170 255 | 105.28 75.95 107.36  | 75.95 0.3648 0.2632  |
| 255 255 0   | 101.64 119.49 13.59  | 119.49 0.4330 0.5091 |
| 255 255 170 | 109.42 122.25 55.29  | 122.25 0.3813 0.4260 |
| 170 85 85   | 34.73 22.02 10.45    | 22.02 0.5168 0.3276  |
| 85 170 85   | 19.44 38.50 14.24    | 38.50 0.2694 0.5334  |
| 85 85 170   | 17.23 13.26 42.64    | 13.26 0.2356 0.1813  |

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| 85 170 170  | 25.57 40.69 46.79   | 40.69 0.2262 0.3599  |
| 170 85 170  | 40.84 24.14 43.11   | 24.14 0.3778 0.2233  |
| 170 170 85  | 43.03 49.32 14.59   | 49.32 0.4023 0.4612  |
| 0 147 216   | 20.55 29.52 73.15   | 29.52 0.1668 0.2395  |
| 104 173 227 | 35.91 45.75 83.30   | 45.75 0.2177 0.2773  |
| 169 203 236 | 61.69 70.33 93.68   | 70.33 0.2733 0.3116  |
| 206 222 241 | 82.06 89.12 99.33   | 89.12 0.3033 0.3294  |
| 223 232 243 | 94.67 100.10 101.97 | 100.10 0.3190 0.3373 |
| 182 55 121  | 41.01 21.07 20.51   | 21.07 0.4965 0.2552  |
| 195 115 159 | 53.07 36.33 39.03   | 36.33 0.4132 0.2829  |
| 213 173 201 | 73.18 63.21 65.89   | 63.21 0.3618 0.3125  |
| 226 208 225 | 89.02 85.50 85.42   | 85.50 0.3425 0.3289  |
| 233 224 235 | 97.07 97.10 94.53   | 97.10 0.3362 0.3364  |
| 240 222 0   | 84.80 92.02 10.11   | 92.02 0.4536 0.4923  |
| 240 226 104 | 88.32 95.89 24.80   | 95.89 0.4225 0.4588  |
| 239 232 171 | 93.96 100.76 53.33  | 100.76 0.3788 0.4062 |
| 240 236 210 | 99.81 105.32 77.52  | 105.32 0.3531 0.3726 |
| 239 238 227 | 101.76 106.97 89.52 | 106.97 0.3412 0.3587 |
| 222 222 226 | 89.17 92.58 87.28   | 92.58 0.3315 0.3441  |
| 204 205 208 | 73.57 77.39 73.19   | 77.39 0.3282 0.3453  |
| 167 167 170 | 47.27 49.47 47.01   | 49.47 0.3289 0.3441  |
| 128 128 130 | 26.73 27.48 26.13   | 27.48 0.3328 0.3420  |
| 86 86 87    | 11.40 11.56 10.79   | 11.56 0.3378 0.3425  |
| 44 44 44    | 2.65 2.64 2.36      | 2.64 0.3463 0.3450   |
| 44 28 32    | 2.28 1.63 1.39      | 1.63 0.4307 0.3077   |
| 106 66 51   | 12.60 9.83 3.89     | 9.83 0.4789 0.3734   |
| 84 82 49    | 9.67 10.28 3.84     | 10.28 0.4066 0.4322  |
| 54 53 126   | 7.31 5.32 21.83     | 5.32 0.2121 0.1545   |
| 96 90 154   | 17.75 14.71 34.50   | 14.71 0.2651 0.2197  |
| 153 149 195 | 42.89 40.72 60.49   | 40.72 0.2976 0.2826  |
| 195 193 221 | 69.25 69.18 81.23   | 69.18 0.3153 0.3149  |
| 217 216 233 | 86.60 88.16 92.39   | 88.16 0.3242 0.3300  |
| 181 58 43   | 37.36 20.03 2.99    | 20.03 0.6188 0.3317  |
| 195 109 80  | 47.20 32.85 10.42   | 32.85 0.5217 0.3631  |
| 213 167 143 | 66.52 58.62 34.06   | 58.62 0.4178 0.3682  |
| 227 205 193 | 85.02 82.85 63.19   | 82.85 0.3680 0.3585  |
| 233 223 218 | 94.50 95.69 81.49   | 95.69 0.3478 0.3522  |
| 52 137 70   | 10.02 22.97 9.36    | 22.97 0.2366 0.5424  |
| 112 163 110 | 24.56 38.05 21.17   | 38.05 0.2931 0.4541  |
| 171 196 167 | 53.06 64.02 47.50   | 64.02 0.3224 0.3890  |
| 206 219 206 | 76.71 85.83 73.24   | 85.83 0.3253 0.3640  |
| 223 230 226 | 91.67 97.98 88.09   | 97.98 0.3301 0.3528  |
| 219 221 227 | 87.57 91.39 87.84   | 91.39 0.3282 0.3425  |
| 199 203 210 | 71.17 75.02 74.24   | 75.02 0.3229 0.3403  |
| 159 164 171 | 43.89 46.80 47.34   | 46.80 0.3180 0.3391  |
| 119 124 129 | 23.47 25.11 25.58   | 25.11 0.3165 0.3386  |
| 83 90 93    | 11.46 12.31 12.29   | 12.31 0.3178 0.3414  |
| 57 66 68    | 5.28 6.40 6.63      | 6.40 0.2883 0.3496   |
| 22 36 45    | 1.18 1.41 2.41      | 1.41 0.2354 0.2831   |
| 88 42 44    | 8.51 5.20 2.45      | 5.20 0.5267 0.3216   |
| 48 66 50    | 4.09 5.93 3.69      | 5.93 0.2982 0.4326   |
| 57 57 57    | 4.47 4.86 4.45      | 4.86 0.3244 0.3529   |
| 98 88 85    | 13.56 12.90 10.28   | 12.90 0.3690 0.3511  |
| 154 144 141 | 37.34 37.23 31.40   | 37.23 0.3523 0.3514  |
| 195 190 190 | 64.96 66.52 60.08   | 66.52 0.3391 0.3473  |
| 217 215 217 | 84.00 86.77 79.89   | 86.77 0.3351 0.3462  |

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| 169 103 81  | 35.23 25.91 10.36    | 25.91 0.4927 0.3624  |
| 123 86 73   | 18.87 15.02 7.87     | 15.02 0.4520 0.3596  |
| 114 52 45   | 13.60 8.43 2.77      | 8.43 0.5483 0.3399   |
| 115 51 82   | 15.31 9.02 9.05      | 9.02 0.4588 0.2702   |
| 133 119 47  | 23.45 24.08 4.99     | 24.08 0.4464 0.4585  |
| 50 92 60    | 5.57 9.88 5.32       | 9.88 0.2683 0.4757   |
| 41 94 116   | 7.73 11.05 19.29     | 11.05 0.2032 0.2901  |
| 51 51 85    | 4.81 4.13 9.29       | 4.13 0.2637 0.2267   |
| 199 162 143 | 58.03 52.78 33.55    | 52.78 0.4019 0.3656  |
| 212 158 33  | 58.90 51.83 6.14     | 51.83 0.5040 0.4435  |
| 183 57 91   | 39.68 20.90 11.66    | 20.90 0.5493 0.2893  |
| 133 55 123  | 22.98 12.78 21.04    | 12.78 0.4047 0.2250  |
| 172 187 45  | 44.86 56.99 9.03     | 56.99 0.4046 0.5140  |
| 27 142 156  | 14.14 25.73 37.91    | 25.73 0.1818 0.3308  |
| 31 111 181  | 13.84 17.20 48.99    | 17.20 0.1730 0.2149  |
| 239 240 244 | 104.38 108.83 103.42 | 108.83 0.3297 0.3437 |
| 43 44 29    | 2.51 2.62 1.24       | 2.62 0.3948 0.4111   |
| 106 68 89   | 13.99 10.48 10.94    | 10.48 0.3950 0.2959  |
| 46 67 83    | 5.14 6.46 9.42       | 6.46 0.2445 0.3075   |