

# UGRA

## Display Analysis & Certification Tool

### Report

#### Grundsätzliches

|                     |                                                         |
|---------------------|---------------------------------------------------------|
| Datum:              | 2014-1-6 01:29:23                                       |
| Report-Version:     | v2.0.0                                                  |
| Monitorname:        | \\.\DISPLAY1                                            |
| EDID-Name:          | PA302W                                                  |
| EDID-Seriennummer:  | 3X100134TW                                              |
| Profil:             | C:/Windows/system32/spool/drivers/color/PA302W-ugra.icc |
| Erstellt am:        | 2014-1-6 1:25                                           |
| Messgerät:          | i1Pro, Rev. 3, Seriennummer: 342165                     |
| Auswertungsmethode: | UDACT v2.0                                              |

#### Zusammenfassung

**Kalibration** (Referenzweißpunkt: 5800.00 Kelvin)

|                 |    |
|-----------------|----|
| Weißpunkt       | ja |
| Graubalance     | ja |
| Tonwerte        | ja |
| Profilqualität  | ja |
| Farbraumeignung | ja |



Der Monitor hat die  
Zertifizierung bezüglich  
der UDACT v2.0 Spezifikation  
bestanden.

**Softproofeignung** (abhängig von der Kalibrationsprüfung)

|                          |    |
|--------------------------|----|
| ISO Coated v2 (FOGRA39L) | ja |
| sRGB                     | ja |
| AdobeRGB                 | ja |
| ECI-RGB v2.0             | ja |

#### Diagramm



## Weißpunkt

Der Weißpunkt sollte so nah wie möglich an der Schwarzkörperkurve und dem Kalibrationsziel liegen. Die maximale Abweichung zum Zielweißpunkt ist 2.0 dE00.

|                                      |                      |
|--------------------------------------|----------------------|
| XYZ (measured):                      | 135.03 141.39 138.27 |
| XYZ (normalisiert):                  | 95.50 100.00 97.79   |
| xy:                                  | 0.3256 0.3410        |
| Luminanz:                            | 141.4 Cd/m2          |
| Nächste Temperatur:                  | 5807 Kelvin          |
| Referenzweißpunkt:                   | 5800.0 Kelvin        |
| Abweichung XYZ zu Referenzweißpunkt: | 0.3 dE00             |
|                                      | 0.3 dE76             |

## Schwarzpunkt

Der Schwarzpunkt ist in ISO 12646 nicht definiert. UDACT misst den Schwarzpunkt ohne ihn zu bewerten.

|             |                  |
|-------------|------------------|
| Luminanz:   | 0.2 Cd/m2        |
| Farbigkeit: | 1.5 Chroma (Lab) |

## Graubalance

Die Durchschnitt- und die Maximumberechnung berücksichtigt nur Messungen mit 1% minimaler Luminanz. Die L-Abweichung zeigt den Unterschied zwischen den Werten des Profils und der Messung.

Die maximal erlaubten Abweichungen, um diesen Test zu bestehen, liegen bei einem Durchschnitt von 1.0 DeltaC, einem Bereich von 2.0 DeltaC. Zusätzlich darf die maximale L-Abweichung den Wert von 2.3 dL00 im Luminanz-Bereich von 20%-100% nicht überschreiten.

| %            | Kelvin | Cd/m2  | L      | Chroma | Gamma | Delta-L |
|--------------|--------|--------|--------|--------|-------|---------|
| 0            | 10734  | 0.23   | 1.50   | 1.48   |       |         |
| 5            | 6580   | 0.83   | 5.32   | 1.13   | 1.83  | +1.6    |
| 10           | 5650   | 2.49   | 14.17  | 1.34   | 1.82  | +1.4    |
| 15           | 5892   | 4.76   | 21.47  | 0.29   | 1.82  | +0.5    |
| 20           | 5791   | 7.98   | 28.50  | 0.24   | 1.81  | +0.4    |
| 25           | 5868   | 11.66  | 34.49  | 1.08   | 1.82  | +0.4    |
| 30           | 5798   | 16.05  | 40.17  | 0.09   | 1.82  | +0.1    |
| 35           | 5811   | 21.52  | 45.93  | 0.08   | 1.80  | +0.3    |
| 40           | 5736   | 27.62  | 51.31  | 0.59   | 1.79  | +0.4    |
| 45           | 5766   | 33.62  | 55.87  | 0.51   | 1.81  | +0.3    |
| 50           | 5788   | 40.56  | 60.51  | 0.13   | 1.81  | +0.2    |
| 55           | 5827   | 48.81  | 65.38  | 0.50   | 1.79  | +0.4    |
| 60           | 5822   | 56.49  | 69.44  | 0.35   | 1.80  | +0.1    |
| 65           | 5788   | 65.39  | 73.71  | 0.73   | 1.81  | +0.4    |
| 70           | 5827   | 74.86  | 77.84  | 0.28   | 1.79  | +0.4    |
| 75           | 5814   | 84.80  | 81.82  | 0.07   | 1.78  | +0.3    |
| 80           | 5802   | 95.01  | 85.60  | 0.36   | 1.80  | +0.1    |
| 85           | 5797   | 105.75 | 89.30  | 0.18   | 1.80  | +0.3    |
| 90           | 5809   | 117.51 | 93.06  | 0.75   | 1.79  | +0.3    |
| 95           | 5828   | 129.68 | 96.70  | 0.60   | 1.73  | +0.3    |
| 100          | 5807   | 141.39 | 100.00 | 0.00   |       |         |
| Durchschnitt | 5805   |        |        | 0.38   | 1.80  | 0.3     |
| Max          |        |        |        | 1.08   |       | 0.4     |
| Bereich      |        |        |        | 1.69   |       |         |

## Tonwerte

Dieser Test überprüft die Kalibrationskurven (vcgt) der Grafikkarte. Durch die Monitorkalibrierung kann man Tonwerte verlieren. Ein Monitor für die Druckindustrie sollte mindestens 95% der eingehenden Tonwerte anzeigen.



Tonwerte = 98.0%

## Profilqualität

Dieser Test zeigt RGB Farben an und vergleicht die Messwerte mit der Transformation des Monitorprofils. Um diesen Test zu bestehen, liegt die maximale Abweichung bei einem Durchschnitt von 2.0 dE00 und einem Maximum von 4.0 dE00.

Die Lab Werte werden anhand des gemessenen Weißpunktes (xy: 0.3256 0.3410) berechnet.

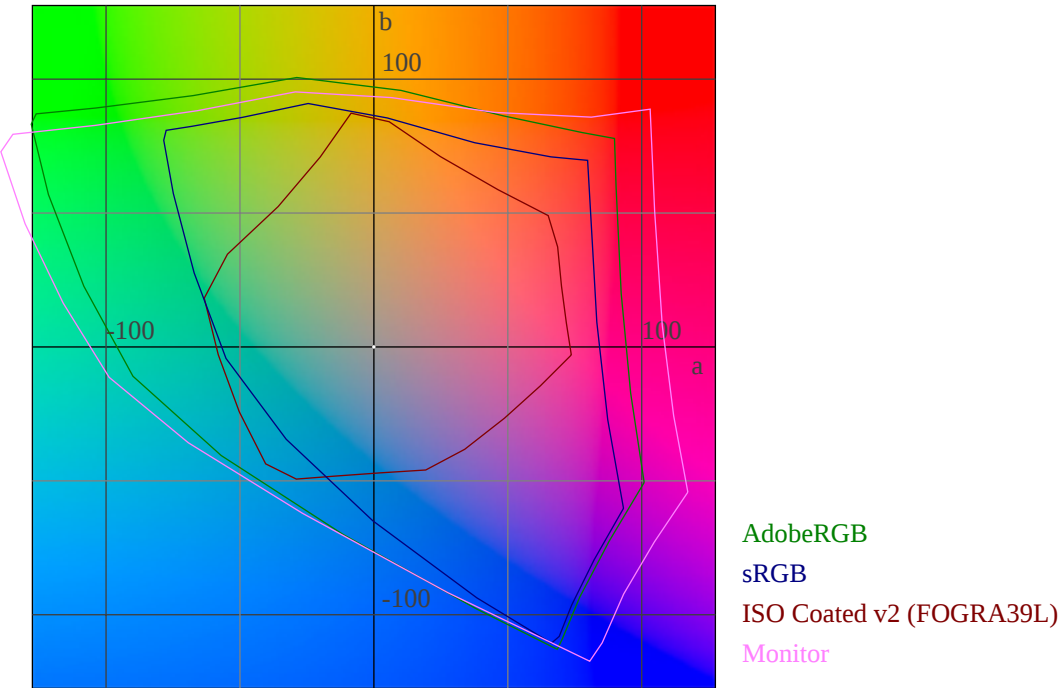
Die angenommene chromatische Adaption ist: CAT02

| RGB          | Lab              | deltaLab       | dE76 | dE00 |
|--------------|------------------|----------------|------|------|
| 0 0 0        | 1.5 0.0 -1.5     | -1.5 -0.0 1.5  | 2.1  | 1.7  |
| 0 0 128      | 12.3 53.5 -77.7  | -0.4 1.7 -1.0  | 2.0  | 0.5  |
| 0 0 255      | 25.4 85.5 -120.6 | 0.8 -2.1 1.6   | 2.8  | 0.7  |
| 0 128 0      | 51.1 -92.0 52.7  | 0.1 -1.4 -0.3  | 1.5  | 0.4  |
| 0 128 128    | 53.0 -62.4 -12.0 | -0.3 0.9 -1.3  | 1.6  | 0.8  |
| 0 170 255    | 67.9 -46.3 -50.8 | -0.4 1.6 -0.8  | 1.9  | 0.8  |
| 0 255 0      | 85.8 -141.0 81.8 | -0.2 -0.3 -2.6 | 2.6  | 0.6  |
| 0 255 170    | 87.0 -116.5 16.7 | -0.2 1.0 -1.9  | 2.1  | 0.6  |
| 0 255 255    | 88.2 -93.9 -19.3 | -0.2 0.8 -0.8  | 1.1  | 0.4  |
| 85 85 85     | 44.2 -0.0 -0.0   | -0.2 0.0 0.0   | 0.2  | 0.2  |
| 128 0 0      | 34.2 68.3 52.0   | 0.0 0.6 2.9    | 3.0  | 1.1  |
| 128 0 128    | 36.8 77.8 -37.0  | 0.1 -0.0 1.0   | 1.1  | 0.4  |
| 128 128 0    | 59.3 -10.5 66.2  | 0.1 -1.5 -1.2  | 1.9  | 1.0  |
| 128 128 128  | 60.9 0.1 0.1     | -0.2 -0.1 -0.1 | 0.3  | 0.3  |
| 128 128 255  | 63.8 23.3 -57.1  | -0.2 0.5 0.2   | 0.5  | 0.4  |
| 128 255 128  | 90.4 -77.7 41.1  | -0.2 -0.4 -1.3 | 1.4  | 0.5  |
| 170 0 255    | 49.4 102.9 -80.1 | 0.5 -1.2 1.6   | 2.0  | 0.6  |
| 170 170 170  | 75.3 -0.4 0.5    | -0.4 0.4 -0.5  | 0.7  | 0.8  |
| 170 255 0    | 92.2 -62.9 92.0  | -0.2 -1.0 -3.1 | 3.2  | 0.9  |
| 170 255 255  | 94.3 -37.4 -9.6  | -0.2 -0.2 -0.3 | 0.4  | 0.2  |
| 255 0 0      | 59.7 104.3 89.4  | 0.1 -0.0 -0.0  | 0.1  | 0.1  |
| 255 0 170    | 61.6 111.6 -18.6 | 0.3 -0.5 1.6   | 1.7  | 0.5  |
| 255 0 255    | 63.5 118.7 -56.2 | 0.5 -1.0 1.7   | 2.1  | 0.6  |
| 255 128 128  | 75.3 59.8 23.5   | 0.0 -0.0 0.7   | 0.7  | 0.4  |
| 255 170 0    | 82.0 30.6 92.1   | 0.1 -0.4 -2.3  | 2.4  | 0.5  |
| 255 170 255  | 84.7 47.1 -23.0  | -0.2 0.7 0.2   | 0.8  | 0.3  |
| 255 255 0    | 98.1 -17.7 101.4 | -0.0 -0.4 -3.2 | 3.2  | 0.7  |
| 255 255 170  | 99.1 -9.1 35.5   | -0.1 0.0 -0.4  | 0.4  | 0.2  |
| 255 255 255  | 100.0 0.0 0.0    | 0.0 -0.0 -0.0  | 0.0  | 0.0  |
| 170 85 85    | 55.7 47.3 18.8   | -0.2 -0.3 0.3  | 0.5  | 0.3  |
| 85 170 85    | 67.6 -61.8 32.4  | -0.4 0.4 -1.1  | 1.3  | 0.5  |
| 85 85 170    | 46.4 18.5 -45.0  | -0.1 0.3 0.2   | 0.4  | 0.3  |
| 85 170 170   | 68.8 -45.2 -10.2 | -0.4 0.9 -0.7  | 1.2  | 0.7  |
| 170 85 170   | 57.3 56.3 -26.9  | -0.1 -0.2 0.4  | 0.5  | 0.2  |
| 170 170 85   | 74.3 -10.0 43.1  | -0.4 0.1 -0.9  | 1.0  | 0.4  |
|              |                  |                |      |      |
| Durchschnitt |                  |                | 1.4  | 0.5  |
| Maximum      |                  |                | 3.2  | 1.7  |

# Gamutvolumen

Die Messungen sind ausschließlich informativ.

|                          |       |
|--------------------------|-------|
| ISO Coated v2 (FOGRA39L) | 100 % |
| sRGB                     | 100 % |
| AdobeRGB                 | 99 %  |
| ECI-RGB v2.0             | 93 %  |



## Softproof Qualität

Die Messwerte werden anhand des gemessenen Weißpunktes (xy: 0.3256 0.3410) nach Lab konvertiert und dann mit der ausgewählten Referenz verglichen. Die maximalen Abweichungen, um diesen Test zu bestehen liegen bei einem Durchschnitt von 2.0 dE00 und einem minimalen Gamutvolumen von 90% für ISO Coated v2 (FOGRA39L).

|                 |                                                                                   | Limit | dE00 |
|-----------------|-----------------------------------------------------------------------------------|-------|------|
| Durchschnitt    |  | 2.0   | 0.6  |
| Maximum         |  | 4.0   | 1.8  |
| Primärfarben    |  | 5.0   | 1.2  |
| Gemischtes Grau |  | 3.0   | 1.8  |

| Referenz (Lab)   | Messung (Lab)    | Messung (Yxy)       | dE76 | dE00 |
|------------------|------------------|---------------------|------|------|
| 55.0 -37.0 -50.0 | 55.7 -34.6 -48.6 | 23.62 0.1729 0.2561 | 2.9  | 1.1  |
| 66.9 -24.7 -37.1 | 66.9 -24.9 -37.5 | 36.53 0.2260 0.2912 | 0.4  | 0.1  |
| 79.7 -12.5 -21.8 | 79.9 -12.8 -21.5 | 56.58 0.2860 0.3260 | 0.4  | 0.3  |
| 87.7 -5.8 -11.8  | 88.0 -6.3 -11.7  | 72.16 0.3163 0.3423 | 0.6  | 0.6  |
| 91.5 -3.0 -7.0   | 91.9 -3.5 -6.5   | 80.48 0.3299 0.3501 | 0.9  | 0.9  |
| 48.0 74.0 -3.0   | 48.1 74.6 -4.3   | 16.85 0.5066 0.2564 | 1.4  | 0.5  |
| 60.8 50.6 -6.7   | 60.9 51.3 -7.3   | 29.17 0.4299 0.2896 | 0.9  | 0.3  |
| 76.4 25.8 -6.9   | 76.7 25.7 -7.5   | 50.97 0.3739 0.3215 | 0.7  | 0.4  |
| 86.2 12.0 -5.2   | 86.3 12.2 -5.5   | 68.54 0.3546 0.3388 | 0.4  | 0.3  |
| 90.7 5.9 -3.9    | 91.0 5.2 -3.5    | 78.58 0.3475 0.3485 | 0.9  | 0.9  |
| 89.0 -5.0 93.0   | 89.0 -4.6 94.4   | 74.11 0.4617 0.4937 | 1.5  | 0.4  |
| 90.3 -4.7 62.6   | 90.8 -6.0 63.9   | 78.08 0.4298 0.4637 | 2.0  | 0.9  |
| 92.2 -3.5 31.1   | 92.5 -3.7 31.8   | 81.82 0.3901 0.4143 | 0.7  | 0.3  |
| 93.6 -1.6 13.3   | 93.9 -2.0 13.6   | 85.08 0.3645 0.3829 | 0.6  | 0.5  |
| 94.3 -0.9 5.4    | 94.7 -1.8 5.7    | 86.83 0.3522 0.3695 | 1.0  | 1.2  |
| 89.0 0.0 -1.8    | 89.3 -0.0 -1.6   | 74.80 0.3430 0.3557 | 0.4  | 0.3  |
| 82.8 0.0 -1.7    | 83.0 -0.1 -1.6   | 62.17 0.3428 0.3557 | 0.3  | 0.2  |
| 69.3 0.0 -1.4    | 69.4 -0.6 -1.0   | 39.95 0.3425 0.3570 | 0.7  | 0.9  |
| 54.1 0.0 -1.0    | 54.4 0.2 -0.7    | 22.36 0.3445 0.3565 | 0.5  | 0.5  |
| 36.6 -0.0 -0.5   | 36.9 -0.7 -0.4   | 9.48 0.3424 0.3584  | 0.8  | 1.0  |
| 16.0 0.0 0.0     | 16.9 0.6 0.5     | 2.27 0.3514 0.3600  | 1.2  | 1.2  |
| 10.4 13.9 1.4    | 11.8 12.7 1.4    | 1.38 0.4266 0.3268  | 1.8  | 1.3  |
| 33.4 25.4 20.9   | 33.7 24.8 20.5   | 7.88 0.4955 0.3701  | 0.7  | 0.4  |
| 34.4 -3.3 22.3   | 34.8 -3.2 22.2   | 8.42 0.4074 0.4413  | 0.4  | 0.3  |
| 24.0 22.0 -46.0  | 24.4 21.7 -45.9  | 4.22 0.2233 0.1629  | 0.5  | 0.3  |
| 40.9 17.9 -36.6  | 41.2 17.3 -36.8  | 11.98 0.2737 0.2315 | 0.7  | 0.6  |
| 63.7 10.3 -23.8  | 64.0 9.9 -23.9   | 32.80 0.3104 0.2956 | 0.5  | 0.5  |
| 79.4 5.1 -13.6   | 79.8 5.2 -13.6   | 56.32 0.3286 0.3283 | 0.4  | 0.3  |
| 87.2 2.6 -8.1    | 87.5 1.8 -7.7    | 71.10 0.3351 0.3435 | 1.0  | 1.2  |
| 47.0 68.0 48.0   | 47.3 68.0 48.6   | 16.28 0.6221 0.3312 | 0.7  | 0.4  |
| 58.5 47.1 37.9   | 58.7 47.1 38.0   | 26.68 0.5299 0.3648 | 0.2  | 0.2  |
| 74.2 22.9 21.4   | 74.4 23.1 21.5   | 47.28 0.4285 0.3738 | 0.3  | 0.2  |
| 85.0 10.0 9.8    | 85.3 10.1 9.7    | 66.66 0.3785 0.3665 | 0.4  | 0.3  |
| 90.0 4.7 3.7     | 90.2 4.4 4.2     | 76.71 0.3593 0.3620 | 0.6  | 0.6  |
| 50.0 -65.0 27.0  | 50.2 -64.9 27.2  | 18.55 0.2457 0.5527 | 0.3  | 0.2  |
| 62.1 -39.8 21.0  | 62.5 -39.6 21.7  | 31.03 0.3084 0.4646 | 0.8  | 0.5  |
| 77.0 -19.1 11.0  | 77.5 -19.5 11.7  | 52.37 0.3340 0.4018 | 1.0  | 0.6  |
| 86.3 -8.4 4.2    | 86.6 -8.4 4.7    | 69.25 0.3409 0.3744 | 0.6  | 0.5  |
| 90.8 -4.1 0.9    | 91.3 -4.6 1.4    | 79.22 0.3413 0.3648 | 0.9  | 0.8  |
| 88.5 -0.4 -3.1   | 88.9 -0.7 -2.7   | 73.97 0.3402 0.3544 | 0.7  | 0.7  |

|                  |                  |                     |     |       |
|------------------|------------------|---------------------|-----|-------|
| 82.0 -0.9 -4.1   | 82.3 -1.0 -3.7   | 60.78 0.3374 0.3525 | 0.6 | 0.5   |
| 67.7 -2.0 -4.4   | 67.8 -2.0 -4.1   | 37.72 0.3334 0.3515 | 0.3 | 0.3   |
| 52.2 -2.5 -3.5   | 52.8 -2.6 -2.6   | 20.85 0.3330 0.3545 | 1.1 | 1.0   |
| 37.5 -3.9 -3.1   | 37.9 -5.4 -3.1   | 10.02 0.3201 0.3561 | 1.6 | 1.8   |
| 26.3 -6.8 -3.4   | 26.9 -6.8 -3.6   | 5.06 0.3063 0.3557  | 0.6 | 0.5   |
| 10.4 -8.2 -10.2  | 12.0 -9.1 -9.1   | 1.40 0.2419 0.3177  | 2.1 | 1.7   |
| 24.3 32.7 13.1   | 24.6 31.9 11.6   | 4.29 0.5183 0.3255  | 1.8 | 1.0   |
| 24.7 -17.0 7.5   | 25.2 -16.9 7.5   | 4.48 0.3100 0.4336  | 0.6 | 0.4   |
| 23.0 0.0 0.0     | 23.3 -0.1 -0.4   | 3.89 0.3436 0.3567  | 0.5 | 0.5   |
| 38.5 6.6 3.9     | 39.0 5.6 4.7     | 10.69 0.3769 0.3645 | 1.4 | 1.4   |
| 61.5 5.4 3.8     | 61.7 5.9 3.6     | 30.05 0.3658 0.3601 | 0.5 | 0.6   |
| 78.1 2.9 0.9     | 78.4 2.7 0.9     | 53.95 0.3518 0.3577 | 0.4 | 0.3   |
| 86.6 1.5 -0.7    | 86.9 0.4 -0.2    | 69.73 0.3461 0.3579 | 1.2 | 1.5   |
| 53.1 37.7 28.9   | 53.2 38.5 28.9   | 21.24 0.5054 0.3641 | 0.8 | 0.4   |
| 41.5 22.7 16.8   | 42.0 22.5 16.9   | 12.47 0.4589 0.3673 | 0.5 | 0.4   |
| 31.9 40.0 24.0   | 32.5 40.4 23.7   | 7.32 0.5569 0.3400  | 0.8 | 0.6   |
| 32.5 44.4 -1.8   | 33.1 44.7 -1.4   | 7.57 0.4787 0.2794  | 0.7 | 0.5   |
| 51.3 1.3 44.5    | 51.6 2.0 45.6    | 19.81 0.4535 0.4607 | 1.4 | 0.7   |
| 34.6 -36.4 13.9  | 34.6 -36.0 13.6  | 8.32 0.2730 0.4859  | 0.5 | 0.2   |
| 36.0 -26.2 -20.9 | 36.2 -25.4 -20.7 | 9.11 0.2099 0.3119  | 0.8 | 0.4   |
| 20.9 9.6 -23.6   | 21.4 8.8 -23.1   | 3.35 0.2696 0.2383  | 1.1 | 0.6   |
| 71.2 18.8 17.3   | 71.5 19.3 17.6   | 42.94 0.4165 0.3719 | 0.6 | 0.3   |
| 71.2 22.2 73.1   | 71.3 22.7 75.2   | 42.61 0.5103 0.4439 | 2.2 | 0.5   |
| 47.7 71.2 16.2   | 47.8 71.3 15.4   | 16.67 0.5579 0.2900 | 0.8 | 0.4   |
| 38.0 55.4 -20.9  | 38.2 55.7 -21.6  | 10.18 0.4192 0.2288 | 0.7 | 0.3   |
| 73.7 -22.8 67.6  | 74.1 -22.9 69.6  | 46.81 0.4138 0.5149 | 2.1 | 0.6   |
| 52.3 -52.3 -20.2 | 52.8 -52.7 -19.8 | 20.86 0.1883 0.3511 | 0.7 | 0.5   |
| 43.3 -17.0 -48.6 | 43.7 -17.8 -48.0 | 13.62 0.1775 0.2284 | 1.1 | 0.5   |
| 95.0 0.0 -2.0    | 95.4 -0.5 -2.0   | 88.45 0.3418 0.3556 | 0.6 | 0.8   |
| 15.7 -3.1 11.7   | 16.4 -1.9 10.8   | 2.18 0.3921 0.4240  | 1.6 | 1.5   |
| 34.7 28.5 -4.0   | 34.9 28.9 -4.2   | 8.43 0.4178 0.2987  | 0.5 | 0.2   |
| 25.8 -11.0 -14.4 | 26.2 -10.3 -14.2 | 4.80 0.2515 0.3106  | 0.8 | 0.7   |
|                  |                  |                     |     |       |
| Durchschnitt     |                  |                     | 0.9 | 0.6   |
| Gamutvolumen     |                  |                     |     | 100 % |

## Messdaten

Diese Tabelle listet alle RGB Messungen auf. Die XYZ Werte repräsentieren die gemessenen Daten.

| RGB         | XYZ                  | Yxy                  |
|-------------|----------------------|----------------------|
| 255 255 255 | 135.03 141.39 138.27 | 141.39 0.3256 0.3410 |
| 0 0 0       | 0.23 0.23 0.36       | 0.23 0.2760 0.2854   |
| 12 12 12    | 0.79 0.83 0.91       | 0.83 0.3114 0.3282   |
| 25 25 25    | 2.34 2.49 2.28       | 2.49 0.3289 0.3503   |
| 38 38 38    | 4.54 4.76 4.72       | 4.76 0.3238 0.3398   |
| 51 51 51    | 7.65 7.98 7.83       | 7.98 0.3260 0.3402   |
| 63 63 63    | 10.98 11.66 11.24    | 11.66 0.3241 0.3441  |
| 76 76 76    | 15.35 16.05 15.70    | 16.05 0.3258 0.3408  |
| 89 89 89    | 20.56 21.52 21.08    | 21.52 0.3255 0.3407  |
| 102 102 102 | 26.54 27.62 26.96    | 27.62 0.3272 0.3405  |
| 114 114 114 | 32.05 33.62 32.51    | 33.62 0.3264 0.3425  |
| 127 127 127 | 38.76 40.56 39.57    | 40.56 0.3260 0.3412  |
| 140 140 140 | 46.43 48.81 47.56    | 48.81 0.3251 0.3418  |
| 153 153 153 | 53.80 56.49 55.13    | 56.49 0.3252 0.3415  |
| 165 165 165 | 62.22 65.39 63.27    | 65.39 0.3260 0.3426  |
| 178 178 178 | 71.35 74.86 73.21    | 74.86 0.3252 0.3412  |
| 191 191 191 | 80.96 84.80 83.00    | 84.80 0.3254 0.3409  |
| 204 204 204 | 90.57 95.01 92.51    | 95.01 0.3257 0.3416  |
| 216 216 216 | 100.95 105.75 103.14 | 105.75 0.3258 0.3413 |
| 229 229 229 | 111.78 117.51 114.13 | 117.51 0.3255 0.3422 |
| 242 242 242 | 123.41 129.68 126.50 | 129.68 0.3251 0.3416 |
| 0 0 128     | 6.84 2.42 34.83      | 2.42 0.1551 0.0550   |
| 0 0 255     | 23.43 7.75 121.98    | 7.75 0.1530 0.0506   |
| 0 128 0     | 7.81 27.28 4.38      | 27.28 0.1978 0.6913  |
| 0 128 128   | 14.57 30.12 38.81    | 30.12 0.1745 0.3608  |
| 0 170 255   | 36.55 54.64 128.67   | 54.64 0.1662 0.2485  |
| 0 255 0     | 26.85 95.31 14.45    | 95.31 0.1966 0.6977  |
| 0 255 170   | 37.94 99.40 72.01    | 99.40 0.1812 0.4748  |
| 0 255 255   | 50.20 103.45 135.85  | 103.45 0.1734 0.3573 |
| 85 85 85    | 18.90 19.79 19.37    | 19.79 0.3255 0.3408  |
| 128 0 0     | 24.33 11.11 0.66     | 11.11 0.6739 0.3077  |
| 128 0 128   | 31.23 13.38 36.20    | 13.38 0.3865 0.1655  |
| 128 128 0   | 32.46 38.30 4.58     | 38.30 0.4309 0.5084  |
| 128 128 128 | 39.41 41.24 40.24    | 41.24 0.3260 0.3411  |
| 128 128 255 | 56.02 46.95 127.24   | 46.95 0.2434 0.2039  |
| 128 255 128 | 58.57 109.03 50.10   | 109.03 0.2690 0.5009 |
| 170 0 255   | 64.19 26.11 123.53   | 26.11 0.3002 0.1221  |
| 170 170 170 | 65.63 68.93 66.82    | 68.93 0.3259 0.3423  |
| 170 255 0   | 68.25 113.84 14.87   | 113.84 0.3465 0.5780 |
| 170 255 255 | 91.65 121.97 137.49  | 121.97 0.2610 0.3474 |
| 255 0 0     | 84.42 38.22 1.37     | 38.22 0.6807 0.3082  |
| 255 0 170   | 95.79 41.90 61.21    | 41.90 0.4816 0.2107  |
| 255 0 255   | 107.86 45.78 124.59  | 45.78 0.3877 0.1645  |
| 255 128 128 | 99.32 68.19 41.60    | 68.19 0.4750 0.3261  |
| 255 170 0   | 97.63 83.95 8.11     | 83.95 0.5147 0.4426  |
| 255 170 255 | 121.25 92.68 131.26  | 92.68 0.3513 0.2685  |
| 255 255 0   | 111.67 133.37 15.39  | 133.37 0.4288 0.5121 |
| 255 255 170 | 123.02 137.49 75.04  | 137.49 0.3666 0.4098 |
| 170 85 85   | 48.24 33.00 19.96    | 33.00 0.4766 0.3261  |
| 85 170 85   | 28.22 52.95 24.21    | 52.95 0.2678 0.5025  |
| 85 85 170   | 26.89 22.48 61.30    | 22.48 0.2430 0.2031  |

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| 85 170 170  | 36.19 55.69 66.10    | 55.69 0.2291 0.3525  |
| 170 85 170  | 56.20 35.67 62.01    | 35.67 0.3652 0.2318  |
| 170 170 85  | 57.64 66.19 24.81    | 66.19 0.3878 0.4453  |
| 0 130 208   | 24.27 34.23 88.07    | 34.23 0.1656 0.2336  |
| 85 159 221  | 41.49 52.43 101.34   | 52.43 0.2125 0.2685  |
| 154 193 232 | 70.74 80.54 112.73   | 80.54 0.2679 0.3051  |
| 196 216 238 | 94.13 102.35 120.60  | 102.35 0.2969 0.3228 |
| 216 227 240 | 106.63 113.98 123.29 | 113.98 0.3101 0.3314 |
| 169 41 104  | 46.38 23.55 26.13    | 23.55 0.4828 0.2452  |
| 184 97 144  | 60.56 41.06 47.35    | 41.06 0.4065 0.2756  |
| 205 160 191 | 83.14 72.01 80.90    | 72.01 0.3522 0.3051  |
| 220 199 219 | 100.65 96.93 103.93  | 96.93 0.3338 0.3215  |
| 228 218 231 | 109.86 111.14 114.87 | 111.14 0.3271 0.3309 |
| 237 215 0   | 94.17 103.66 11.54   | 103.66 0.4498 0.4951 |
| 237 221 87  | 98.89 109.45 30.29   | 109.45 0.4144 0.4586 |
| 237 227 158 | 106.35 115.10 64.91  | 115.10 0.3714 0.4020 |
| 237 232 202 | 112.71 120.02 94.17  | 120.02 0.3448 0.3671 |
| 236 235 222 | 115.60 122.65 109.63 | 122.65 0.3323 0.3526 |
| 215 216 220 | 101.09 105.79 106.16 | 105.79 0.3229 0.3380 |
| 194 195 199 | 83.98 87.94 88.35    | 87.94 0.3227 0.3379  |
| 152 153 155 | 53.72 56.50 56.36    | 56.50 0.3225 0.3392  |
| 110 110 112 | 30.27 31.62 31.41    | 31.62 0.3244 0.3389  |
| 68 68 69    | 12.69 13.41 13.26    | 13.41 0.3224 0.3406  |
| 30 30 30    | 3.10 3.21 3.05       | 3.21 0.3312 0.3428   |
| 30 18 21    | 2.51 1.94 1.75       | 1.94 0.4048 0.3133   |
| 87 50 36    | 14.51 11.00 4.82     | 11.00 0.4784 0.3627  |
| 67 64 34    | 10.67 11.82 4.86     | 11.82 0.3901 0.4322  |
| 38 38 108   | 8.74 6.20 26.59      | 6.20 0.2104 0.1494   |
| 77 72 138   | 20.64 17.23 42.86    | 17.23 0.2557 0.2135  |
| 136 133 183 | 49.08 46.69 73.20    | 46.69 0.2905 0.2763  |
| 184 182 214 | 79.58 79.86 98.61    | 79.86 0.3084 0.3095  |
| 209 209 228 | 97.57 100.69 111.49  | 100.69 0.3150 0.3251 |
| 168 44 30   | 41.92 22.51 3.93     | 22.51 0.6133 0.3292  |
| 183 92 63   | 53.24 37.18 13.01    | 37.18 0.5148 0.3595  |
| 205 153 127 | 74.97 66.39 41.98    | 66.39 0.4089 0.3621  |
| 221 196 182 | 95.84 93.99 77.79    | 93.99 0.3581 0.3512  |
| 228 216 211 | 106.34 108.33 99.03  | 108.33 0.3390 0.3453 |
| 39 119 54   | 11.28 26.23 11.38    | 26.23 0.2308 0.5365  |
| 95 148 92   | 28.47 43.81 25.45    | 43.81 0.2913 0.4483  |
| 157 186 153 | 60.62 73.99 57.76    | 73.99 0.3151 0.3846  |
| 198 211 197 | 88.15 97.89 88.33    | 97.89 0.3213 0.3568  |
| 217 225 220 | 103.77 112.03 107.03 | 112.03 0.3215 0.3470 |
| 212 215 221 | 99.59 104.65 106.83  | 104.65 0.3201 0.3364 |
| 189 193 201 | 81.66 86.01 89.58    | 86.01 0.3174 0.3344  |
| 143 149 156 | 50.26 53.40 56.67    | 53.40 0.3135 0.3331  |
| 101 107 111 | 27.50 29.51 30.79    | 29.51 0.3132 0.3361  |
| 65 72 75    | 12.67 14.20 15.27    | 14.20 0.3007 0.3369  |
| 41 50 52    | 6.15 7.18 8.06       | 7.18 0.2875 0.3357   |
| 13 24 31    | 1.54 2.00 3.25       | 2.00 0.2269 0.2948   |
| 70 29 31    | 9.44 5.99 3.47       | 5.99 0.4996 0.3170   |
| 34 49 35    | 4.45 6.34 4.45       | 6.34 0.2923 0.4158   |
| 41 41 41    | 5.25 5.50 5.47       | 5.50 0.3235 0.3390   |
| 80 70 67    | 15.39 15.07 12.72    | 15.07 0.3565 0.3490  |
| 138 127 124 | 42.62 42.42 38.35    | 42.42 0.3454 0.3438  |
| 184 178 178 | 74.24 76.25 73.43    | 76.25 0.3315 0.3405  |
| 209 207 209 | 94.45 98.60 96.71    | 98.60 0.3260 0.3403  |

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| 155 85 64   | 40.58 29.66 12.84    | 29.66 0.4885 0.3570  |
| 105 68 56   | 21.52 17.48 9.93     | 17.48 0.4398 0.3572  |
| 96 38 31    | 16.48 10.17 3.74     | 10.17 0.5421 0.3347  |
| 97 37 64    | 18.08 10.61 11.00    | 10.61 0.4555 0.2674  |
| 116 101 33  | 26.61 27.72 6.25     | 27.72 0.4391 0.4576  |
| 36 74 44    | 6.47 11.77 6.93      | 11.77 0.2569 0.4675  |
| 28 76 97    | 8.99 13.07 23.38     | 13.07 0.1979 0.2876  |
| 36 36 67    | 5.52 4.81 11.57      | 4.81 0.2520 0.2198   |
| 189 147 126 | 66.61 60.35 41.03    | 60.35 0.3965 0.3593  |
| 204 143 24  | 66.78 59.44 7.55     | 59.44 0.4992 0.4443  |
| 169 43 74   | 44.34 23.18 14.71    | 23.18 0.5392 0.2819  |
| 115 40 105  | 26.34 14.39 26.23    | 14.39 0.3934 0.2149  |
| 159 175 33  | 51.08 65.62 11.04    | 65.62 0.3999 0.5137  |
| 18 125 140  | 16.39 29.87 45.80    | 29.87 0.1780 0.3245  |
| 18 93 167   | 16.19 19.83 59.23    | 19.83 0.1699 0.2082  |
| 236 237 242 | 119.17 125.12 126.14 | 125.12 0.3217 0.3378 |
| 30 30 18    | 2.78 3.06 1.59       | 3.06 0.3738 0.4124   |
| 88 51 71    | 16.49 11.87 13.41    | 11.87 0.3948 0.2842  |
| 31 50 65    | 5.61 6.86 11.33      | 6.86 0.2357 0.2883   |