

# Colorimetric Report

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|                  |                                         |
|------------------|-----------------------------------------|
| Date             | Monday, December 2, 2019                |
| Tester           | Manuel Findeis                          |
| Display          | Philips 439P9H                          |
| Sensor           | X-Rite i1 Display Pro (Corr.: WLED, XR) |
| Testchart        | In accordance with ISO 12646:2007 (1)   |
| Target           | sRGB                                    |
| Display Profile  | Considered                              |
| Rendering Intent | Relative colorimetric                   |

(1) Five equally spaced code values for each channel

|                                     |                     |
|-------------------------------------|---------------------|
| White Point (CCT)                   | 6475 Kelvin         |
| White Point XYZ (normalized)        | 94.87 100.00 108.15 |
| DeltaE to D50/ D65                  | 19.06/ 0.55         |
| Assumed Target Whitepoint (2)       | 6500 Kelvin         |
| DeltaE to Assumed Target Whitepoint | 0.46                |
| Brightness                          | 141.63 cd/m²        |
| Black Point                         | 0.07 cd/m²          |
| Contrast (x:1)                      | 2023:1              |
| Gradation (Average)                 | 2.19                |

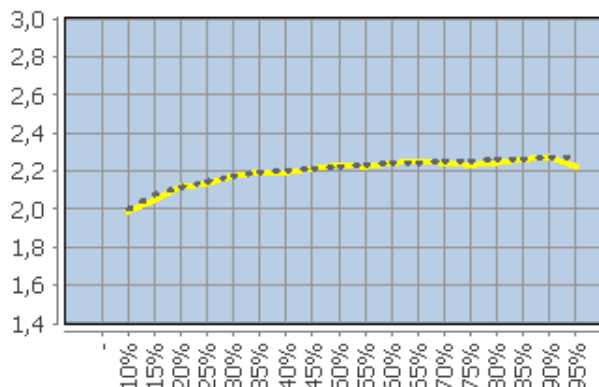
(2) Daylight

|  | Percent     | Kelvin | Delta C | Delta E | Gamma |
|--|-------------|--------|---------|---------|-------|
|  | 5           | -      | -       | -       | -     |
|  | 10          | 6936   | 1.22    | 1.25    | 1.99  |
|  | 15          | 6676   | 0.48    | 0.59    | 2.05  |
|  | 20          | 6594   | 0.51    | 0.54    | 2.11  |
|  | 25          | 6492   | 1.04    | 1.11    | 2.13  |
|  | 30          | 6467   | 0.15    | 0.19    | 2.17  |
|  | 35          | 6610   | 0.55    | 0.56    | 2.19  |
|  | 40          | 6502   | 0.14    | 0.21    | 2.19  |
|  | 45          | 6567   | 0.42    | 0.42    | 2.21  |
|  | 50          | 6533   | 0.45    | 0.47    | 2.23  |
|  | 55          | 6554   | 0.86    | 0.87    | 2.22  |
|  | 60          | 6496   | 0.16    | 0.17    | 2.24  |
|  | 65          | 6526   | 0.33    | 0.34    | 2.25  |
|  | 70          | 6455   | 0.33    | 0.36    | 2.24  |
|  | 75          | 6489   | 0.17    | 0.29    | 2.23  |
|  | 80          | 6552   | 0.70    | 0.72    | 2.24  |
|  | 85          | 6472   | 0.29    | 0.30    | 2.26  |
|  | 90          | 6568   | 0.70    | 0.70    | 2.27  |
|  | 95          | 6537   | 0.57    | 0.58    | 2.22  |
|  | 100 (3)     | 6475   | -       | -       | -     |
|  | Average (4) | -      | 0.5     | 0.54    | 2.19  |
|  | Maximum (4) | -      | 1.22    | 1.25    | -     |
|  | Range (4)   | -      | 2.12    | -       | -     |

(3) Visual adaptation to display whitepoint is assumed

(4) Only luminance > 1% considered

### Corresponding Gamma



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| Sensor           | X-Rite i1 Display Pro (Corr.: WLED, XR) |
| Testchart        | In accordance with ISO 12646:2007 (1)   |
| Target           | sRGB                                    |
| Display Profile  | Considered                              |
| Rendering Intent | Relative colorimetric                   |

(1) Five equally spaced code values for each channel

|  | RGB        | Delta C | Delta H | Delta L | Delta E94 |
|--|------------|---------|---------|---------|-----------|
|  | 0 0 0      | 0.47    | 0.00    | 0.43    | 0.64      |
|  | 0 0 63     | 3.19    | 0.78    | 0.03    | 1.18      |
|  | 0 0 127    | 2.98    | 0.31    | 0.36    | 0.76      |
|  | 0 0 191    | 3.58    | 0.76    | 0.25    | 0.72      |
|  | 0 0 255    | 6.60    | 3.43    | 2.43    | 2.84      |
|  | 0 63 0     | 0.12    | 1.93    | 0.59    | 1.31      |
|  | 0 63 63    | 0.78    | 0.65    | 0.13    | 0.68      |
|  | 0 63 127   | 0.31    | 0.76    | 0.40    | 0.63      |
|  | 0 63 191   | 1.35    | 1.68    | 0.71    | 1.08      |
|  | 0 63 255   | 0.06    | 0.12    | 0.51    | 0.52      |
|  | 0 127 0    | 1.66    | 2.17    | 0.18    | 1.13      |
|  | 0 127 63   | 0.91    | 1.73    | 0.43    | 1.10      |
|  | 0 127 127  | 0.31    | 0.36    | 0.27    | 0.39      |
|  | 0 127 191  | 0.00    | 0.80    | 0.58    | 0.76      |
|  | 0 127 255  | 0.37    | 0.78    | 0.69    | 0.79      |
|  | 0 191 0    | 0.83    | 2.25    | 0.25    | 0.97      |
|  | 0 191 63   | 0.02    | 1.49    | 0.28    | 0.72      |
|  | 0 191 127  | 0.46    | 0.28    | 0.07    | 0.21      |
|  | 0 191 191  | 0.60    | 0.81    | 0.28    | 0.61      |
|  | 0 191 255  | 0.52    | 0.29    | 0.36    | 0.44      |
|  | 0 255 0    | 1.86    | 0.22    | 0.07    | 0.31      |
|  | 0 255 63   | 2.05    | 0.11    | 0.12    | 0.37      |
|  | 0 255 127  | 1.32    | 0.39    | 0.14    | 0.34      |
|  | 0 255 191  | 1.72    | 0.28    | 0.10    | 0.46      |
|  | 0 255 255  | 0.44    | 0.19    | 0.53    | 0.56      |
|  | 63 0 0     | 0.22    | 2.16    | 0.75    | 1.63      |
|  | 63 0 63    | 1.70    | 0.47    | 0.67    | 0.94      |
|  | 63 0 127   | 0.29    | 0.89    | 0.69    | 0.82      |
|  | 63 0 191   | 2.01    | 0.22    | 0.16    | 0.40      |
|  | 63 0 255   | 5.24    | 2.56    | 2.01    | 2.32      |
|  | 63 63 0    | 0.08    | 1.77    | 0.32    | 1.20      |
|  | 63 63 63   | 0.84    | 0.14    | 0.27    | 0.89      |
|  | 63 63 127  | 0.29    | 0.68    | 0.21    | 0.48      |
|  | 63 63 191  | 0.40    | 1.02    | 0.33    | 0.58      |
|  | 63 63 255  | 0.28    | 0.07    | 0.58    | 0.58      |
|  | 63 127 0   | 2.49    | 1.85    | 0.30    | 1.17      |
|  | 63 127 63  | 1.42    | 0.91    | 0.14    | 0.73      |
|  | 63 127 127 | 0.58    | 1.04    | 0.25    | 0.88      |
|  | 63 127 191 | 0.14    | 0.70    | 0.19    | 0.48      |
|  | 63 127 255 | 0.60    | 0.65    | 0.78    | 0.85      |
|  | 63 191 0   | 1.03    | 2.70    | 0.14    | 1.16      |
|  | 63 191 63  | 0.05    | 1.82    | 0.13    | 0.84      |
|  | 63 191 127 | 1.49    | 0.62    | 0.19    | 0.58      |
|  | 63 191 191 | 0.79    | 0.59    | 0.14    | 0.51      |
|  | 63 191 255 | 0.31    | 1.13    | 0.77    | 1.04      |
|  | 63 255 0   | 1.34    | 0.17    | 0.33    | 0.40      |
|  | 63 255 63  | 2.25    | 0.38    | 0.10    | 0.42      |

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|                  |                                         |
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| Tester           | Manuel Findeis                          |
| Display          | Philips 439P9H                          |
| Sensor           | X-Rite i1 Display Pro (Corr.: WLED, XR) |
| Testchart        | In accordance with ISO 12646:2007 (1)   |
| Target           | sRGB                                    |
| Display Profile  | Considered                              |
| Rendering Intent | Relative colorimetric                   |

(1) Five equally spaced code values for each channel

|  | RGB         | Delta C | Delta H | Delta L | Delta E94 |
|--|-------------|---------|---------|---------|-----------|
|  | 63 255 127  | 1.97    | 0.13    | 0.13    | 0.42      |
|  | 63 255 191  | 1.35    | 0.34    | 0.19    | 0.44      |
|  | 63 255 255  | 0.87    | 0.11    | 0.53    | 0.60      |
|  | 127 0 0     | 0.22    | 0.05    | 0.04    | 0.07      |
|  | 127 0 63    | 0.96    | 0.84    | 0.14    | 0.58      |
|  | 127 0 127   | 2.70    | 0.99    | 0.63    | 1.03      |
|  | 127 0 191   | 1.92    | 1.53    | 0.89    | 1.14      |
|  | 127 0 255   | 1.67    | 0.58    | 0.91    | 0.97      |
|  | 127 63 0    | 1.04    | 0.09    | 0.02    | 0.32      |
|  | 127 63 63   | 0.52    | 0.10    | 0.16    | 0.28      |
|  | 127 63 127  | 0.87    | 0.12    | 0.01    | 0.30      |
|  | 127 63 191  | 0.77    | 1.14    | 0.26    | 0.62      |
|  | 127 63 255  | 0.19    | 0.10    | 0.77    | 0.77      |
|  | 127 127 0   | 3.19    | 1.53    | 0.13    | 1.21      |
|  | 127 127 63  | 1.45    | 1.25    | 0.01    | 0.99      |
|  | 127 127 127 | 0.74    | 0.13    | 0.18    | 0.77      |
|  | 127 127 191 | 0.19    | 0.32    | 0.16    | 0.27      |
|  | 127 127 255 | 0.31    | 0.10    | 0.36    | 0.37      |
|  | 127 191 0   | 2.18    | 2.44    | 0.08    | 1.18      |
|  | 127 191 63  | 0.93    | 1.83    | 0.11    | 0.93      |
|  | 127 191 127 | 0.52    | 1.01    | 0.22    | 0.68      |
|  | 127 191 191 | 0.56    | 0.57    | 0.13    | 0.53      |
|  | 127 191 255 | 0.09    | 1.22    | 0.72    | 1.06      |
|  | 127 255 0   | 2.14    | 0.22    | 0.15    | 0.40      |
|  | 127 255 63  | 1.86    | 0.01    | 0.15    | 0.37      |
|  | 127 255 127 | 1.61    | 0.38    | 0.22    | 0.46      |
|  | 127 255 191 | 1.64    | 0.34    | 0.02    | 0.52      |
|  | 127 255 255 | 0.87    | 0.25    | 0.31    | 0.48      |
|  | 191 0 0     | 0.64    | 0.38    | 0.15    | 0.26      |
|  | 191 0 63    | 0.31    | 0.19    | 0.22    | 0.25      |
|  | 191 0 127   | 0.84    | 0.24    | 0.14    | 0.27      |
|  | 191 0 191   | 1.11    | 0.95    | 0.26    | 0.52      |
|  | 191 0 255   | 1.49    | 0.26    | 0.08    | 0.27      |
|  | 191 63 0    | 1.90    | 1.21    | 0.12    | 0.73      |
|  | 191 63 63   | 0.96    | 0.86    | 0.20    | 0.57      |
|  | 191 63 127  | 0.57    | 0.05    | 0.09    | 0.18      |
|  | 191 63 191  | 0.27    | 0.73    | 0.03    | 0.34      |
|  | 191 63 255  | 0.31    | 0.22    | 0.60    | 0.61      |
|  | 191 127 0   | 3.47    | 0.94    | 0.02    | 0.99      |
|  | 191 127 63  | 1.68    | 0.69    | 0.03    | 0.67      |
|  | 191 127 127 | 0.12    | 0.50    | 0.13    | 0.38      |
|  | 191 127 191 | 0.13    | 0.30    | 0.02    | 0.19      |
|  | 191 127 255 | 0.27    | 0.79    | 0.68    | 0.78      |
|  | 191 191 0   | 2.48    | 1.03    | 0.21    | 0.76      |
|  | 191 191 63  | 1.91    | 1.03    | 0.26    | 0.77      |
|  | 191 191 127 | 0.47    | 0.76    | 0.29    | 0.61      |
|  | 191 191 191 | 0.15    | 0.09    | 0.24    | 0.30      |

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| Tester           | Manuel Findeis                          |
| Display          | Philips 439P9H                          |
| Sensor           | X-Rite i1 Display Pro (Corr.: WLED, XR) |
| Testchart        | In accordance with ISO 12646:2007 (1)   |
| Target           | sRGB                                    |
| Display Profile  | Considered                              |
| Rendering Intent | Relative colorimetric                   |

(1) Five equally spaced code values for each channel

|  | RGB             | Delta C | Delta H | Delta L | Delta E94 |
|--|-----------------|---------|---------|---------|-----------|
|  | 191 191 255     | 0.03    | 0.87    | 0.75    | 0.94      |
|  | 191 255 0       | 1.66    | 0.25    | 0.15    | 0.35      |
|  | 191 255 63      | 1.75    | 0.19    | 0.15    | 0.38      |
|  | 191 255 127     | 1.73    | 0.25    | 0.08    | 0.45      |
|  | 191 255 191     | 1.11    | 0.08    | 0.15    | 0.43      |
|  | 191 255 255     | 0.43    | 0.09    | 0.32    | 0.39      |
|  | 255 0 0         | 2.37    | 1.21    | 0.34    | 0.71      |
|  | 255 0 63        | 1.46    | 1.24    | 0.26    | 0.65      |
|  | 255 0 127       | 0.17    | 0.56    | 0.05    | 0.25      |
|  | 255 0 191       | 0.65    | 0.21    | 0.01    | 0.15      |
|  | 255 0 255       | 0.57    | 0.48    | 0.38    | 0.43      |
|  | 255 63 0        | 2.84    | 1.16    | 0.53    | 0.88      |
|  | 255 63 63       | 1.41    | 1.10    | 0.37    | 0.68      |
|  | 255 63 127      | 0.55    | 0.20    | 0.30    | 0.34      |
|  | 255 63 191      | 0.22    | 0.13    | 0.18    | 0.19      |
|  | 255 63 255      | 1.27    | 0.60    | 0.53    | 0.62      |
|  | 255 127 0       | 3.42    | 0.20    | 0.46    | 0.84      |
|  | 255 127 63      | 2.67    | 0.48    | 0.51    | 0.85      |
|  | 255 127 127     | 0.99    | 0.39    | 0.27    | 0.45      |
|  | 255 127 191     | 0.74    | 0.29    | 0.22    | 0.34      |
|  | 255 127 255     | 1.45    | 1.09    | 0.71    | 0.93      |
|  | 255 191 0       | 3.27    | 1.38    | 0.19    | 0.94      |
|  | 255 191 63      | 3.54    | 1.10    | 0.23    | 1.03      |
|  | 255 191 127     | 2.06    | 0.15    | 0.49    | 0.86      |
|  | 255 191 191     | 0.93    | 0.26    | 0.35    | 0.59      |
|  | 255 191 255     | 1.46    | 1.13    | 0.73    | 1.14      |
|  | 255 255 0       | 3.25    | 0.35    | 0.48    | 0.78      |
|  | 255 255 63      | 3.57    | 0.32    | 0.46    | 0.87      |
|  | 255 255 127     | 3.17    | 0.23    | 0.44    | 0.95      |
|  | 255 255 191     | 1.80    | 0.16    | 0.40    | 0.84      |
|  | 255 255 255 (1) | -       | -       | -       | -         |
|  | Average (2)     | 1.28    | 0.73    | 0.34    | 0.68      |
|  | Maximum (2)     | 6.60    | 3.43    | 2.43    | 2.84      |

(1) Visual adaptation to display whitepoint is assumed; CIELAB reference values are adapted (Bradford transformation) to display whitepoint  
(2) Without Black

|             |                         |
|-------------|-------------------------|
| Color Space | Gamut Volume CIELAB D50 |
| sRGB        | 99%                     |

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| Target           | sRGB                                    |
| Display Profile  | Considered                              |
| Rendering Intent | Relative colorimetric                   |

(1) Five equally spaced code values for each channel

| Property             | Device adjustments                                                                 |
|----------------------|------------------------------------------------------------------------------------|
| Backlight brightness |                                                                                    |
| Brightness           | 13                                                                                 |
| Contrast             | 50                                                                                 |
| RGB Gain             |                                                                                    |
| Gradation            | 2,2                                                                                |
| Other                | Farbtemperatur: 6500K, es waren keinerlei Anpassungen an den RGB-Reglern notwendig |