

# Colorimetric Report

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|                  |                                        |
|------------------|----------------------------------------|
| Date             | Tuesday, September 5, 2023             |
| Tester           | Simon Blohm                            |
| Display          | BenQ GW2790QT                          |
| Sensor           | X-Rite i1 Display Pro (Corr.: Generic) |
| Testchart        | In accordance with ISO 12646:2007 (1)  |
| Target           | Display Profile (Profile Quality)      |
| Display Profile  | Used as target                         |
| Rendering Intent | -                                      |

(1) Five equally spaced code values for each channel

|                                     |                          |
|-------------------------------------|--------------------------|
| White Point (CCT)                   | 6352 Kelvin              |
| White Point XYZ (normalized)        | 94.61 100.00 105.70      |
| DeltaE to D50/ D65                  | 17.49/ 2.11              |
| Assumed Target Whitepoint (2)       | 6400 Kelvin              |
| DeltaE to Assumed Target Whitepoint | 1.23                     |
| Brightness                          | 140.56 cd/m <sup>2</sup> |
| Black Point                         | 0.13 cd/m <sup>2</sup>   |
| Contrast (x:1)                      | 1081:1                   |
| Gradation (Average)                 | 2.23                     |

(2) Daylight

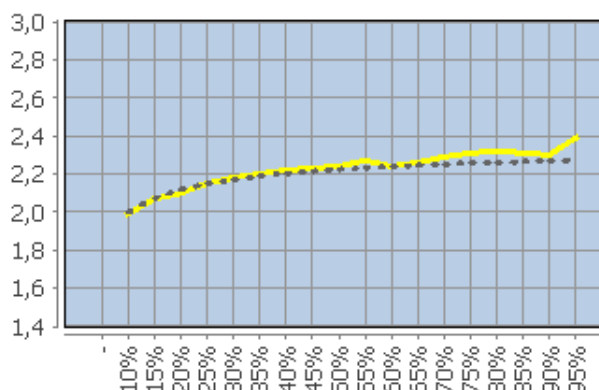
|  | Percent     | Kelvin | Delta C | Delta E (3) | Gamma |
|--|-------------|--------|---------|-------------|-------|
|  | 5           | -      | -       | -           | -     |
|  | 10          | 6384   | 0.14    | 0.35        | 1.99  |
|  | 15          | 6411   | 0.45    | 0.46        | 2.07  |
|  | 20          | 6309   | 0.17    | 0.32        | 2.10  |
|  | 25          | 6277   | 0.26    | 0.27        | 2.15  |
|  | 30          | 6494   | 0.53    | 0.58        | 2.18  |
|  | 35          | 6344   | 0.46    | 0.49        | 2.20  |
|  | 40          | 6451   | 0.93    | 0.99        | 2.22  |
|  | 45          | 6306   | 0.43    | 0.48        | 2.23  |
|  | 50          | 6409   | 0.32    | 0.46        | 2.24  |
|  | 55          | 6321   | 0.27    | 0.58        | 2.27  |
|  | 60          | 6335   | 0.25    | 0.26        | 2.24  |
|  | 65          | 6374   | 0.60    | 0.63        | 2.26  |
|  | 70          | 6389   | 0.42    | 0.59        | 2.29  |
|  | 75          | 6393   | 0.39    | 0.59        | 2.31  |
|  | 80          | 6354   | 0.08    | 0.47        | 2.32  |
|  | 85          | 6346   | 0.26    | 0.35        | 2.31  |
|  | 90          | 6344   | 0.10    | 0.17        | 2.30  |
|  | 95          | 6349   | 0.26    | 0.35        | 2.39  |
|  | 100 (4)     | 6352   | -       | -           | -     |
|  | Average (5) | -      | 0.35    | 0.46        | 2.23  |
|  | Maximum (5) | -      | 0.93    | 0.99        | -     |
|  | Range (5)   | -      | 1.44    | -           | -     |

(3) Reference: Display Profile; a\*, b\* = 0

(4) Visual adaptation to display whitepoint is assumed

(5) Only luminance > 1% considered

### Corresponding Gamma



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| Testchart        | In accordance with ISO 12646:2007 (1)  |
| Target           | Display Profile (Profile Quality)      |
| Display Profile  | Used as target                         |
| Rendering Intent | -                                      |

(1) Five equally spaced code values for each channel

|  | RGB        | Delta C | Delta H | Delta L | Delta E94 |
|--|------------|---------|---------|---------|-----------|
|  | 0 0 0      | 1.89    | 0.00    | 0.85    | 2.07      |
|  | 0 0 63     | 1.07    | 0.76    | 0.60    | 0.85      |
|  | 0 0 127    | 1.93    | 0.23    | 0.17    | 0.47      |
|  | 0 0 191    | 1.22    | 0.12    | 0.15    | 0.27      |
|  | 0 0 255    | 0.97    | 0.83    | 0.20    | 0.37      |
|  | 0 63 0     | 3.43    | 0.57    | 0.51    | 1.35      |
|  | 0 63 63    | 0.88    | 0.57    | 0.41    | 0.76      |
|  | 0 63 127   | 0.52    | 0.35    | 0.34    | 0.44      |
|  | 0 63 191   | 0.14    | 0.45    | 0.31    | 0.38      |
|  | 0 63 255   | 0.94    | 0.88    | 0.31    | 0.48      |
|  | 0 127 0    | 1.53    | 0.23    | 0.82    | 0.91      |
|  | 0 127 63   | 1.17    | 0.01    | 0.62    | 0.72      |
|  | 0 127 127  | 0.69    | 0.00    | 0.53    | 0.59      |
|  | 0 127 191  | 0.16    | 0.76    | 0.45    | 0.64      |
|  | 0 127 255  | 0.55    | 0.92    | 0.34    | 0.57      |
|  | 0 191 0    | 1.56    | 0.12    | 0.68    | 0.75      |
|  | 0 191 63   | 1.10    | 0.18    | 0.55    | 0.61      |
|  | 0 191 127  | 0.59    | 0.22    | 0.59    | 0.62      |
|  | 0 191 191  | 0.75    | 0.36    | 0.53    | 0.63      |
|  | 0 191 255  | 0.00    | 1.21    | 0.47    | 0.82      |
|  | 0 255 0    | 0.02    | 0.25    | 0.30    | 0.32      |
|  | 0 255 63   | 0.04    | 0.09    | 0.28    | 0.28      |
|  | 0 255 127  | 0.13    | 0.05    | 0.27    | 0.27      |
|  | 0 255 191  | 0.28    | 0.39    | 0.17    | 0.27      |
|  | 0 255 255  | 0.02    | 0.21    | 0.16    | 0.19      |
|  | 63 0 0     | 1.75    | 0.39    | 0.43    | 0.85      |
|  | 63 0 63    | 0.95    | 0.39    | 0.19    | 0.45      |
|  | 63 0 127   | 1.78    | 0.42    | 0.16    | 0.49      |
|  | 63 0 191   | 0.64    | 0.17    | 0.18    | 0.22      |
|  | 63 0 255   | 0.80    | 0.54    | 0.10    | 0.24      |
|  | 63 63 0    | 1.92    | 0.74    | 0.32    | 0.93      |
|  | 63 63 63   | 0.31    | 0.09    | 0.11    | 0.34      |
|  | 63 63 127  | 0.28    | 0.38    | 0.21    | 0.33      |
|  | 63 63 191  | 0.06    | 0.43    | 0.21    | 0.29      |
|  | 63 63 255  | 0.63    | 0.67    | 0.19    | 0.34      |
|  | 63 127 0   | 1.50    | 0.19    | 0.55    | 0.68      |
|  | 63 127 63  | 0.98    | 0.38    | 0.33    | 0.52      |
|  | 63 127 127 | 0.54    | 0.00    | 0.34    | 0.43      |
|  | 63 127 191 | 0.10    | 0.53    | 0.28    | 0.43      |
|  | 63 127 255 | 0.23    | 0.60    | 0.17    | 0.34      |
|  | 63 191 0   | 1.01    | 0.13    | 0.59    | 0.62      |
|  | 63 191 63  | 1.01    | 0.15    | 0.44    | 0.50      |
|  | 63 191 127 | 0.72    | 0.19    | 0.36    | 0.44      |
|  | 63 191 191 | 0.70    | 0.50    | 0.43    | 0.59      |
|  | 63 191 255 | 0.14    | 1.06    | 0.24    | 0.66      |
|  | 63 255 0   | 0.12    | 0.32    | 0.33    | 0.35      |
|  | 63 255 63  | 0.12    | 0.12    | 0.27    | 0.27      |

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| Testchart        | In accordance with ISO 12646:2007 (1)  |
| Target           | Display Profile (Profile Quality)      |
| Display Profile  | Used as target                         |
| Rendering Intent | -                                      |

(1) Five equally spaced code values for each channel

|  | RGB         | Delta C | Delta H | Delta L | Delta E94 |
|--|-------------|---------|---------|---------|-----------|
|  | 63 255 127  | 0.13    | 0.08    | 0.24    | 0.25      |
|  | 63 255 191  | 0.11    | 0.22    | 0.21    | 0.24      |
|  | 63 255 255  | 0.20    | 0.10    | 0.10    | 0.13      |
|  | 127 0 0     | 2.41    | 1.01    | 0.60    | 1.00      |
|  | 127 0 63    | 1.27    | 0.63    | 0.45    | 0.70      |
|  | 127 0 127   | 0.88    | 0.34    | 0.46    | 0.54      |
|  | 127 0 191   | 0.50    | 0.29    | 0.47    | 0.50      |
|  | 127 0 255   | 0.90    | 0.02    | 0.41    | 0.43      |
|  | 127 63 0    | 1.70    | 0.40    | 0.60    | 0.80      |
|  | 127 63 63   | 0.75    | 0.89    | 0.50    | 0.84      |
|  | 127 63 127  | 0.35    | 0.67    | 0.41    | 0.59      |
|  | 127 63 191  | 0.38    | 0.44    | 0.36    | 0.42      |
|  | 127 63 255  | 0.57    | 0.13    | 0.33    | 0.35      |
|  | 127 127 0   | 1.19    | 0.08    | 0.64    | 0.72      |
|  | 127 127 63  | 0.93    | 0.29    | 0.50    | 0.64      |
|  | 127 127 127 | 0.35    | 0.14    | 0.43    | 0.57      |
|  | 127 127 191 | 0.02    | 0.14    | 0.35    | 0.36      |
|  | 127 127 255 | 0.26    | 0.23    | 0.24    | 0.27      |
|  | 127 191 0   | 0.56    | 0.23    | 0.63    | 0.65      |
|  | 127 191 63  | 0.58    | 0.10    | 0.48    | 0.51      |
|  | 127 191 127 | 0.56    | 0.21    | 0.41    | 0.47      |
|  | 127 191 191 | 0.15    | 0.30    | 0.44    | 0.50      |
|  | 127 191 255 | 0.12    | 0.68    | 0.26    | 0.50      |
|  | 127 255 0   | 0.11    | 0.77    | 0.23    | 0.38      |
|  | 127 255 63  | 0.04    | 0.48    | 0.17    | 0.26      |
|  | 127 255 127 | 0.01    | 0.33    | 0.17    | 0.23      |
|  | 127 255 191 | 0.36    | 0.07    | 0.16    | 0.20      |
|  | 127 255 255 | 0.00    | 0.02    | 0.08    | 0.08      |
|  | 191 0 0     | 1.95    | 0.32    | 0.76    | 0.85      |
|  | 191 0 63    | 1.15    | 0.20    | 0.60    | 0.67      |
|  | 191 0 127   | 0.88    | 0.46    | 0.67    | 0.74      |
|  | 191 0 191   | 0.43    | 0.49    | 0.64    | 0.68      |
|  | 191 0 255   | 1.01    | 0.58    | 0.56    | 0.62      |
|  | 191 63 0    | 2.41    | 0.98    | 0.66    | 0.94      |
|  | 191 63 63   | 1.15    | 0.44    | 0.60    | 0.71      |
|  | 191 63 127  | 0.78    | 0.35    | 0.57    | 0.64      |
|  | 191 63 191  | 0.14    | 0.55    | 0.49    | 0.56      |
|  | 191 63 255  | 0.47    | 0.36    | 0.41    | 0.44      |
|  | 191 127 0   | 0.81    | 0.05    | 0.68    | 0.71      |
|  | 191 127 63  | 0.87    | 0.00    | 0.55    | 0.61      |
|  | 191 127 127 | 0.54    | 0.11    | 0.49    | 0.55      |
|  | 191 127 191 | 0.16    | 0.47    | 0.38    | 0.48      |
|  | 191 127 255 | 0.21    | 0.37    | 0.31    | 0.36      |
|  | 191 191 0   | 0.89    | 0.06    | 0.68    | 0.71      |
|  | 191 191 63  | 0.35    | 0.34    | 0.51    | 0.55      |
|  | 191 191 127 | 0.45    | 0.17    | 0.56    | 0.60      |
|  | 191 191 191 | 0.30    | 0.16    | 0.47    | 0.59      |

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| Display          | BenQ GW2790QT                          |
| Sensor           | X-Rite i1 Display Pro (Corr.: Generic) |
| Testchart        | In accordance with ISO 12646:2007 (1)  |
| Target           | Display Profile (Profile Quality)      |
| Display Profile  | Used as target                         |
| Rendering Intent | -                                      |

(1) Five equally spaced code values for each channel

|  | RGB             | Delta C | Delta H | Delta L | Delta E94 |
|--|-----------------|---------|---------|---------|-----------|
|  | 191 191 255     | 0.41    | 0.07    | 0.30    | 0.34      |
|  | 191 255 0       | 0.04    | 1.20    | 0.06    | 0.49      |
|  | 191 255 63      | 0.05    | 0.87    | 0.08    | 0.38      |
|  | 191 255 127     | 0.07    | 0.78    | 0.08    | 0.40      |
|  | 191 255 191     | 0.46    | 0.48    | 0.09    | 0.36      |
|  | 191 255 255     | 0.16    | 0.11    | 0.00    | 0.11      |
|  | 255 0 0         | 0.09    | 0.20    | 0.08    | 0.11      |
|  | 255 0 63        | 0.15    | 0.34    | 0.06    | 0.15      |
|  | 255 0 127       | 0.01    | 0.09    | 0.08    | 0.09      |
|  | 255 0 191       | 0.03    | 0.39    | 0.18    | 0.24      |
|  | 255 0 255       | 0.62    | 0.16    | 0.18    | 0.22      |
|  | 255 63 0        | 0.45    | 0.04    | 0.07    | 0.10      |
|  | 255 63 63       | 0.03    | 0.05    | 0.05    | 0.05      |
|  | 255 63 127      | 0.18    | 0.04    | 0.00    | 0.05      |
|  | 255 63 191      | 0.15    | 0.21    | 0.14    | 0.17      |
|  | 255 63 255      | 0.24    | 0.01    | 0.06    | 0.07      |
|  | 255 127 0       | 0.34    | 0.31    | 0.18    | 0.23      |
|  | 255 127 63      | 0.07    | 0.40    | 0.04    | 0.19      |
|  | 255 127 127     | 0.03    | 0.09    | 0.00    | 0.05      |
|  | 255 127 191     | 0.04    | 0.25    | 0.08    | 0.16      |
|  | 255 127 255     | 0.12    | 0.04    | 0.03    | 0.05      |
|  | 255 191 0       | 0.31    | 0.80    | 0.36    | 0.50      |
|  | 255 191 63      | 0.06    | 0.75    | 0.23    | 0.42      |
|  | 255 191 127     | 0.09    | 0.75    | 0.19    | 0.48      |
|  | 255 191 191     | 0.50    | 0.18    | 0.13    | 0.29      |
|  | 255 191 255     | 0.50    | 0.11    | 0.16    | 0.25      |
|  | 255 255 0       | 0.11    | 0.21    | 0.15    | 0.18      |
|  | 255 255 63      | 0.40    | 0.44    | 0.14    | 0.24      |
|  | 255 255 127     | 0.48    | 0.24    | 0.14    | 0.23      |
|  | 255 255 191     | 0.33    | 0.06    | 0.06    | 0.15      |
|  | 255 255 255 (1) | -       | -       | -       | -         |
|  | Average (2)     | 0.60    | 0.35    | 0.33    | 0.45      |
|  | Maximum (2)     | 3.43    | 1.21    | 0.85    | 1.35      |

(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%                     |
| AdobeRGB                 | 72%                     |
| ECI-RGB v2               | 64%                     |
| DCI-P3 RGB               | 71%                     |
| ISO Coated v2 (FOGRA39L) | 91%                     |

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| Display Profile  | Used as target                         |
| Rendering Intent | -                                      |

(1) Five equally spaced code values for each channel

| Property             | Device adjustments |
|----------------------|--------------------|
| Backlight brightness |                    |
| Brightness           | 25                 |
| Contrast             | 50                 |
| RGB Gain             | 98 100 99          |
| Gradation            | 3                  |
| Other                |                    |