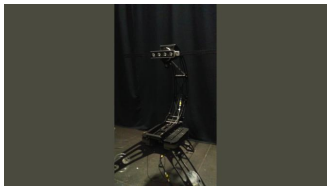
# STR9-G3-300-CM-20W-DWT-10x10-ELV (4000K)

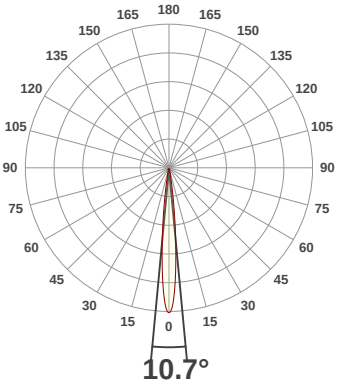
PRODUCT PHOTOMETRIC REPORT



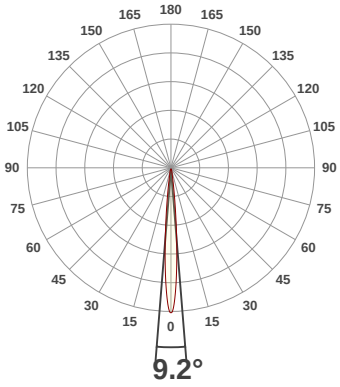
## PRODUCT INFORMATION

| | |
|---|---|
| SERIAL NUMBER: | **VFR-210603-0021-MS** |
| DATE OF MEASUREMENT: | **2021-06-03** |
| SIZE (l x w. x h): | **298 mm x 71 mm x 59.5 mm** |

## ANGULAR DISTRIBUTION AT C0/180




## ANGULAR DISTRIBUTION AT C90/270



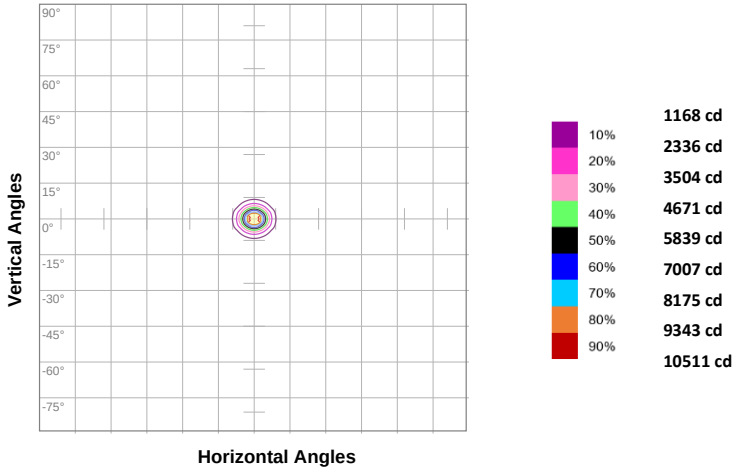

## LIGHT OUTPUT DATA

| | |
|---|---|
| TOTAL LUMEN OUTPUT: | **566 lm** |
| EFFICACY: | **39 lm/W** |
| PEAK INTENSITY: | **11696 cd** |
| COLOR RENDERING INDEX (CRI): | **79.3** |
| COLOR TEMPERATURE (CCT): | **3725K** |
| FIDELITY INDEX (TM30Rf): | **80.6** |
| GAMUT INDEX (TM30Rg): | **97.8** |

## BEAM OUTPUT DATA

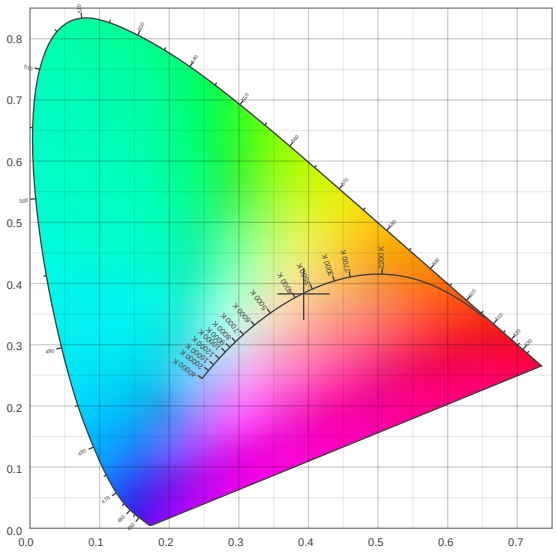
| | |
|---|---|
| BEAM ANGLE (FWHM) \| C0/180: | **10.7°** |
| BEAM ANGLE (FWHM) \| C90/270: | **9.2°** |
| FIELD ANGLE (10%) \| C0/180: | **20.4°** |
| FIELD ANGLE (10%) \| C90/270: | **18.2°** |
| NUMBER OF PLANES MEASURED: | **8** |

## ISOCANDELA DIAGRAM

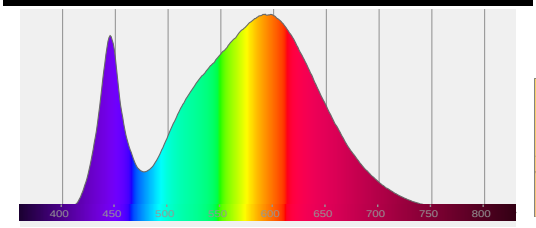



| | |
|---|---|
| INPUT POWER: | **14.7 W** |
| POWER FACTOR: | **1.0** |
| OPTICAL POWER: | **1.72 mW** |
| PEAK WAVELENGTH: | **592 nm** |
| DOMINANT WAVELENGTH: | **582 nm** |

## CIE 1931




## SPECTRAL DISTRIBUTION




## CIE 1931 ZOOM

x: 0.393
y: 0.383
u: 0.231
v: 0.337
Δuv: -0.0006

## STR9-G3-300-CM-20W-DWT-10x10-ELV (4000K)

PRODUCT PHOTOMETRIC REPORT

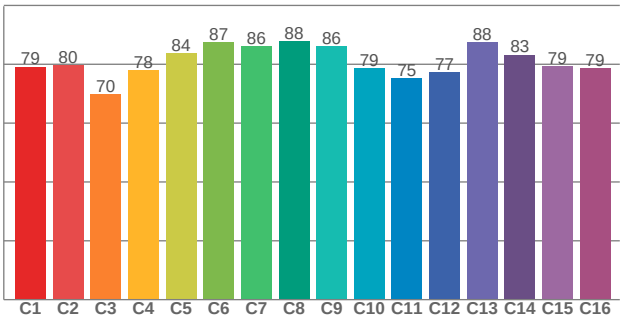
## ZONAL LUMEN SUMMARY

| 0°-10° | 10°-20° | 20°-30° | 30°-40° | 40°-50° | 50°-60° | 60°-70° | 70°-80° | 80°-90° |
|---|---|---|---|---|---|---|---|---|
| 383 lm | 107 lm | 48.7 lm | 15.4 lm | 7.56 lm | 4.94 lm | 0.759 lm | 0.009 lm | 0.003 lm |

| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
|---|---|---|---|---|---|---|---|---|
| 0.002 lm | 0.002 lm | 0.002 lm | 0.002 lm | 0.002 lm | 0.002 lm | 0.001 lm | 0.001 lm | 0.000 lm |

## COLOR DETAILS

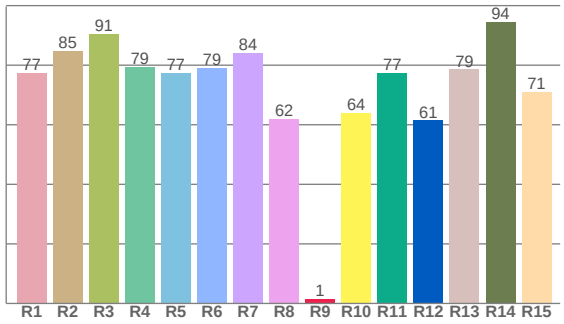
**TM30: 80.6**




TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 79.2 | 79.8 | 69.9 | 77.9 | 83.8 | 87.4 | 86.3 | 87.7 | 86.0 | 78.5 | 75.3 | 77.3 | 87.5 | 83.2 | 79.3 | 78.7 |

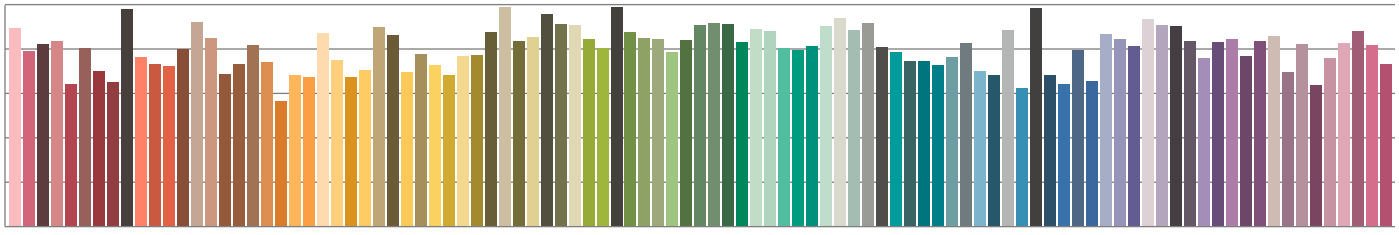
**CRI: 79.3 (R1-R8)**




CRI R values, only R1-R8 are used to calculate final CRI value

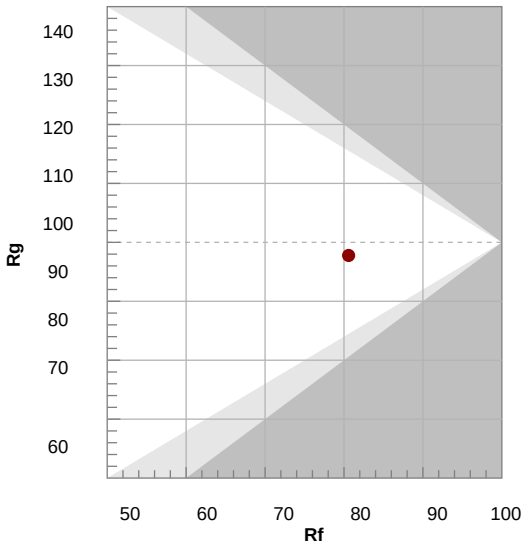
| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 77.5 | 84.7 | 90.6 | 79.4 | 77.3 | 79.1 | 84.2 | 62.0 | 1.4 | 64.0 | 77.3 | 61.5 | 78.6 | 94.5 | 71.1 |

## TM30 COLOR EVALUATION SAMPLE



## TM30 DETAILS

| | | Graphic shifts (%) | |
|---|---|---|---|
| Hue Bin | $R_f$ | Chroma | Hue |
| 1 | 79 | -13% | -3% |
| 2 | 80 | -9% | 7% |
| 3 | 70 | -4% | 16% |
| 4 | 78 | 4% | 14% |
| 5 | 84 | 9% | 8% |
| 6 | 87 | 8% | -2% |
| 7 | 86 | 1% | -9% |
| 8 | 88 | -4% | -6% |
| 9 | 86 | -9% | -2% |
| 10 | 79 | -11% | 8% |
| 11 | 75 | -2% | 17% |
| 12 | 77 | 6% | 11% |
| 13 | 88 | 8% | 2% |
| 14 | 83 | 9% | -9% |
| 15 | 79 | 2% | -14% |
| 16 | 79 | -5% | -13% |

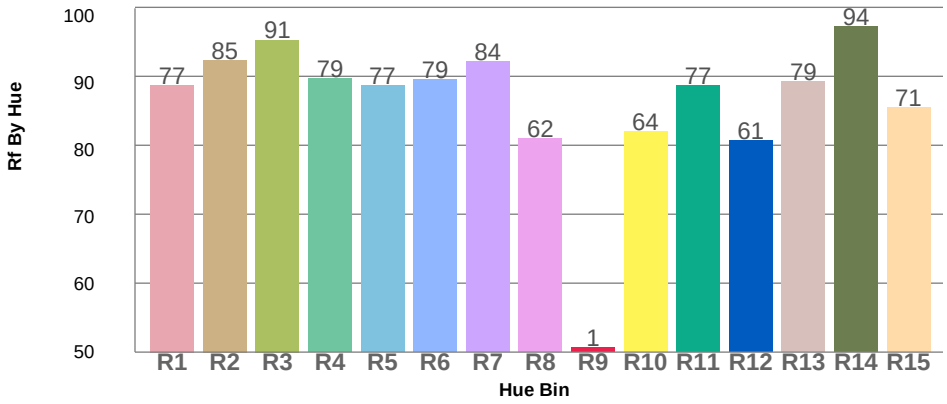



FIDELITY INDEX
**Rf 80.6**

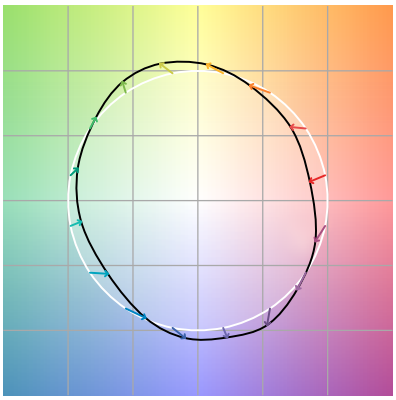
GAMUT INDEX
**Rg 97.8**

Approx. limits for sources on the Planckian locus.
Approx. limits for practical light sources.

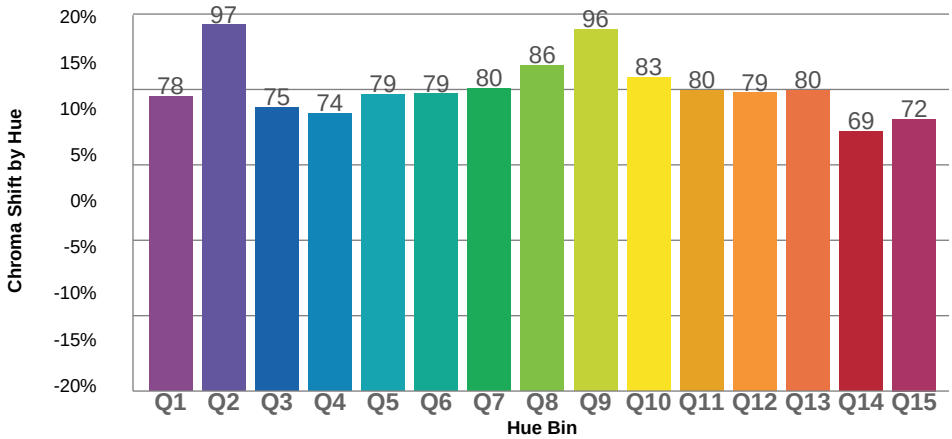
### TM30 OVER 50




### COLOR VECTOR GRAPHICS

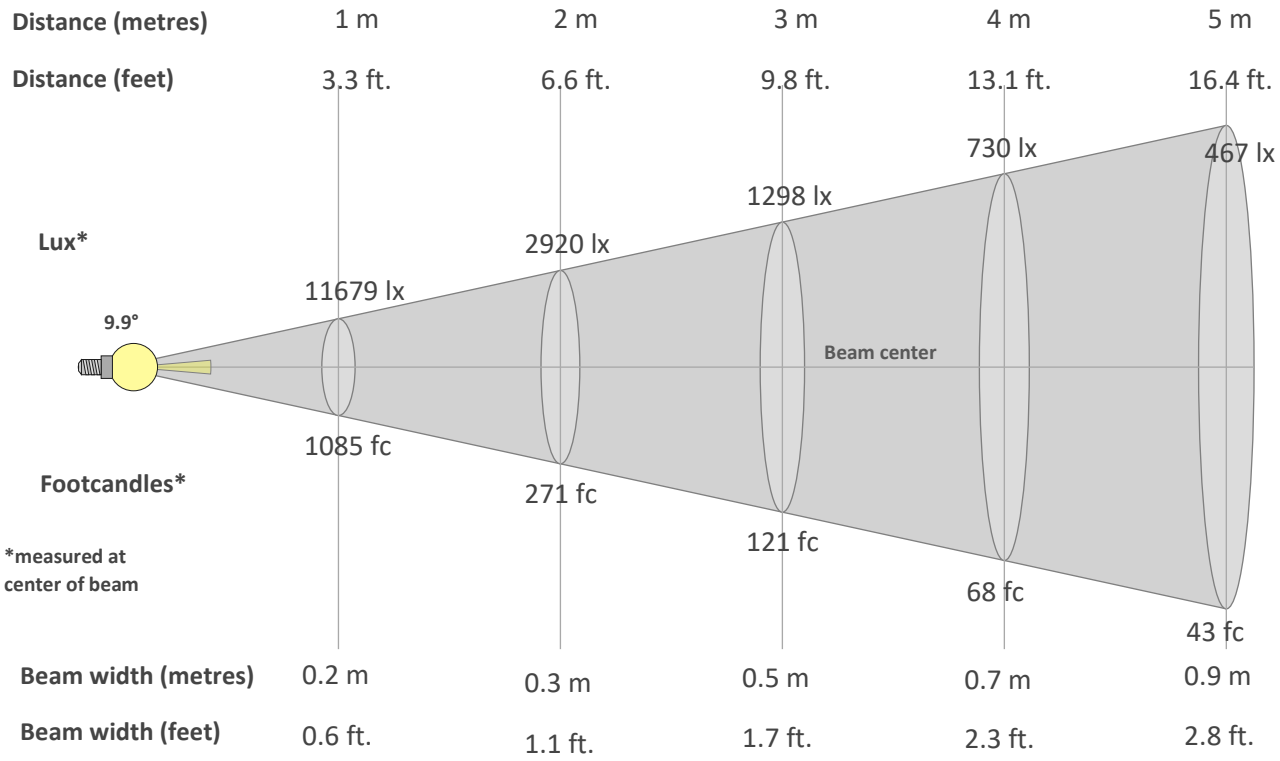


### TM30 CHROMA SHIFT




### COLOR DISTORTION GRAPHICS

## BEAM DETAILS




## Beam intensity from 1-20m

| 1m | 2m | 3m | 4m | 5m | 6m | 7m | 8m | 9m | 10m | 11m | 12m | 13m | 14m | 15m | 16m | 17m | 18m | 19m | 20m |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.3ft | 6.6ft | 9.8ft | 13.1ft | 16.4ft | 19.7ft | 23ft | 26.2ft | 29.5ft | 32.8ft | 36.1ft | 39.4ft | 42.7ft | 45.9ft | 49.2ft | 52.5ft | 55.8ft | 59.1ft | 62.3ft | 65.6ft |
| 11679lx | 2920lx | 1298lx | 730lx | 467lx | 324lx | 238lx | 182lx | 144lx | 117lx | 97lx | 81lx | 69lx | 60lx | 52lx | 46lx | 40lx | 36lx | 32lx | 29lx |
| 1085fc | 271.2fc | 120.6fc | 67.8fc | 43.4fc | 30.1fc | 22.1fc | 17fc | 13.4fc | 10.8fc | 9fc | 7.5fc | 6.4fc | 5.5fc | 4.8fc | 4.2fc | 3.8fc | 3.3fc | 3fc | 2.7fc |

## Intensity in 0° c-plane

| 0° | 1° | 2° | 3° | 4° | 5° | 6° | 7° | 8° | 9° | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.7K | 11.4K | 10.6K | 9.4K | 7.9K | 6.4K | 4.9K | 3.7K | 2.6K | 1.8K | 1.3K | 0.9K | 0.7K | 0.5K | 0.4K | 0.3K | 0.3K | 0.3K | 0.2K | 0.2K |
| 100% | 98% | 91% | 81% | 68% | 55% | 42% | 31% | 22% | 15% | 11% | 8% | 6% | 4% | 3% | 3% | 3% | 2% | 2% | 2% |

## Intensity in 90° c-plane

| 0° | 1° | 2° | 3° | 4° | 5° | 6° | 7° | 8° | 9° | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.7K | 11.3K | 10.1K | 8.6K | 6.8K | 5.1K | 3.7K | 2.5K | 1.7K | 1.2K | 0.9K | 0.7K | 0.5K | 0.4K | 0.4K | 0.3K | 0.3K | 0.3K | 0.3K | 0.2K |
| 100% | 96% | 87% | 73% | 58% | 44% | 31% | 22% | 15% | 10% | 8% | 6% | 4% | 4% | 3% | 3% | 2% | 2% | 2% | 2% |

## Intensity in 180° c-plane

| 0° | 1° | 2° | 3° | 4° | 5° | 6° | 7° | 8° | 9° | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.7K | 11.4K | 10.6K | 9.4K | 7.9K | 6.4K | 4.9K | 3.7K | 2.6K | 1.8K | 1.3K | 0.9K | 0.7K | 0.5K | 0.4K | 0.3K | 0.3K | 0.3K | 0.2K | 0.2K |
| 100% | 98% | 91% | 81% | 68% | 55% | 42% | 31% | 22% | 15% | 11% | 8% | 6% | 4% | 3% | 3% | 3% | 2% | 2% | 2% |

## Intensity in 270° c-plane

| 0° | 1° | 2° | 3° | 4° | 5° | 6° | 7° | 8° | 9° | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.7K | 11.3K | 10.1K | 8.6K | 6.8K | 5.1K | 3.7K | 2.5K | 1.7K | 1.2K | 0.9K | 0.7K | 0.5K | 0.4K | 0.4K | 0.3K | 0.3K | 0.3K | 0.3K | 0.2K |
| 100% | 96% | 87% | 73% | 58% | 44% | 31% | 22% | 15% | 10% | 8% | 6% | 4% | 4% | 3% | 3% | 2% | 2% | 2% | 2% |

## GLARE EVALUATION ACCORDING TO UGR

| p Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| p Walls | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| p Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room size X | Y | Viewing direction at right angles to lamp axis | | | | | Viewing direction parallel to lamp axis | | | | |
| 2H | 2H | 0.3 | 0.6 | 0.3 | 0.8 | 0.9 | 1.7 | 2.0 | 1.8 | 2.2 | 2.4 |
| | 3H | -0.1 | 0.4 | 0.3 | 0.6 | 0.8 | 1.5 | 1.9 | 1.8 | 2.1 | 2.3 |
| | 4H | -0.1 | 0.3 | 0.2 | 0.6 | 0.8 | 1.4 | 1.9 | 1.8 | 2.1 | 2.3 |
| | 6H | -0.1 | 0.2 | 0.1 | 0.5 | 0.9 | 1.4 | 1.7 | 1.7 | 2.1 | 2.4 |
| | 8H | -0.2 | 0.2 | 0.1 | 0.5 | 0.9 | 1.3 | 1.7 | 1.6 | 2.0 | 2.4 |
| | 12H | -0.3 | 0.1 | 0.1 | 0.5 | 0.9 | 1.3 | 1.6 | 1.6 | 2.0 | 2.4 |
| 4H | 2H | 0.0 | 0.5 | 0.4 | 0.7 | 0.9 | 1.4 | 1.9 | 1.8 | 2.1 | 2.3 |
| | 3H | -0.1 | 0.2 | 0.2 | 0.6 | 1.0 | 1.3 | 1.7 | 1.7 | 2.1 | 2.5 |
| | 4H | -0.3 | 0.1 | 0.1 | 0.5 | 1.0 | 1.2 | 1.5 | 1.6 | 2.0 | 2.5 |
| | 6H | -0.4 | 0.1 | 0.1 | 0.4 | 0.7 | 1.1 | 1.5 | 1.6 | 1.8 | 2.2 |
| | 8H | -0.4 | 0.0 | 0.1 | 0.3 | 0.6 | 1.0 | 1.4 | 1.5 | 1.7 | 2.1 |
| | 12H | -0.5 | -0.2 | 0.0 | 0.2 | 0.6 | 1.0 | 1.2 | 1.5 | 1.6 | 2.1 |
| 8H | 4H | -0.4 | 0.0 | 0.1 | 0.3 | 0.6 | 1.0 | 1.4 | 1.5 | 1.7 | 2.1 |
| | 6H | -0.5 | -0.3 | 0.0 | 0.2 | 0.7 | 1.0 | 1.2 | 1.5 | 1.6 | 2.2 |
| | 8H | -0.5 | -0.3 | 0.0 | 0.2 | 0.8 | 1.0 | 1.1 | 1.5 | 1.6 | 2.3 |
| | 12H | -0.6 | -0.4 | 0.0 | 0.1 | 0.7 | 0.9 | 1.0 | 1.5 | 1.5 | 2.1 |
| 12H | 4H | -0.5 | -0.2 | 0.0 | 0.2 | 0.6 | 1.0 | 1.2 | 1.5 | 1.6 | 2.1 |
| | 6H | -0.5 | -0.3 | 0.0 | 0.2 | 0.8 | 1.0 | 1.1 | 1.5 | 1.6 | 2.3 |
| | 8H | -0.6 | -0.4 | 0.0 | 0.1 | 0.7 | 0.9 | 1.0 | 1.5 | 1.5 | 2.1 |
| Variation of the observer position for the luminaire distance S | | | | | | | | | | | |
| S = 1.0H | | 3.6 / -3.0 | | | | | 3.3 / -2.3 | | | | |
| S = 1.5H | | 6.0 / -14.7 | | | | | 5.3 / -8.8 | | | | |
| S = 2.0H | | 7.8 / -33.6 | | | | | 7.1 / -25.3 | | | | |
| CIE 117-1995. Corrected glare indices referring to 566 lm total luminous flux | | | | | | | | | | | |

## ROAD REPORT

| LCS Table | | |
|---|---|---|
| **BUG rating:** | **B1 U1 G0** | |
| **Forward light** | **Lumens** | **Lumens %** |
| Low(0-30): | 268.8 | 47.5% |
| Medium(30-60): | 14.1 | 2.5% |
| High(60-80): | 0.4 | 0.1% |
| Very high(80-90): | 0 | 0% |
| **Back light** | | |
| Low(0-30): | 268.8 | 47.4% |
| Medium(30-60): | 14.1 | 2.5% |
| High(60-80): | 0.4 | 0.1% |
| Very high(80-90): | 0 | 0% |
| **Uplight** | | |
| Low(90-100): | 0 | 0% |
| High(100-180): | 0 | 0% |

### LCS graph