

# STR9-300-CM-15W-4000K-30x60-ELV

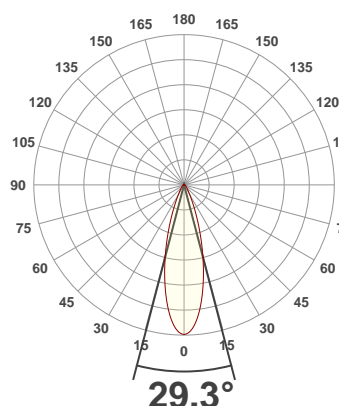
## PRODUCT PHOTOMETRIC REPORT



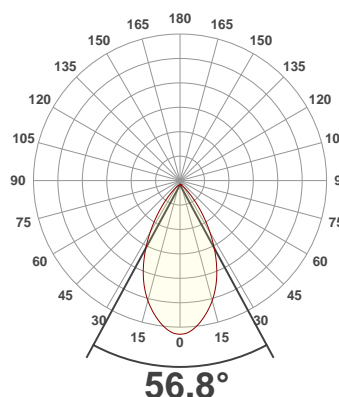
### PRODUCT INFORMATION

|                        |                     |
|------------------------|---------------------|
| SERIAL NUMBER:         | LL-20190821-533-BMS |
| DATE OF MEASUREMENT:   | 2019-08-21          |
| SIZE (mm): (L x W x H) | 298 x 71 x 59.5     |

### ANGULAR DISTRIBUTION AT C0/180



### ANGULAR DISTRIBUTION AT C90/270



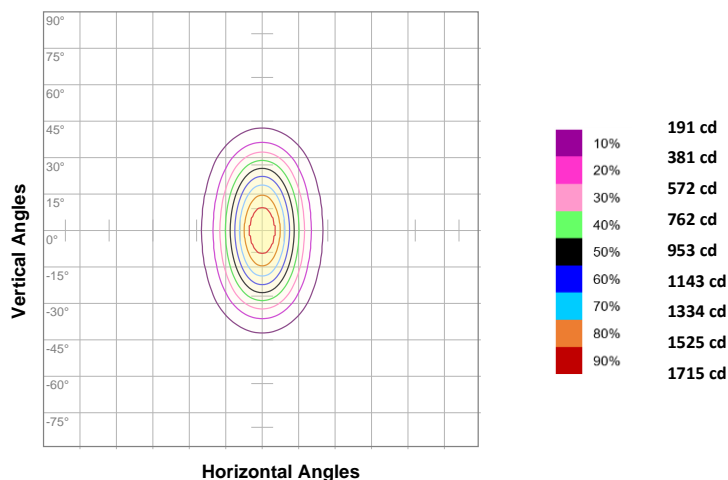
### LIGHT OUTPUT DATA

|                              |         |
|------------------------------|---------|
| TOTAL LUMEN OUTPUT:          | 1108 lm |
| EFFICACY:                    | 73 lm/W |
| PEAK INTENSITY:              | 1908 cd |
| COLOR RENDERING INDEX (CRI): | 83.8    |
| COLOR TEMPERATURE (CCT):     | 3746K   |
| FIDELITY INDEX (TM30Rf):     | 84.6    |
| GAMUT INDEX (TM30Rg):        | 93.6    |

### BEAM OUTPUT DATA

|                              |       |
|------------------------------|-------|
| BEAM ANGLE (FWHM)   C0/180:  | 29.3° |
| BEAM ANGLE (FWHM)   C90/270: | 56.8° |
| FIELD ANGLE (10%)   C0/180:  | 55.6° |
| FIELD ANGLE (10%)   C90/270: | 93.7° |
| NUMBER OF PLANES MEASURED:   | 36    |

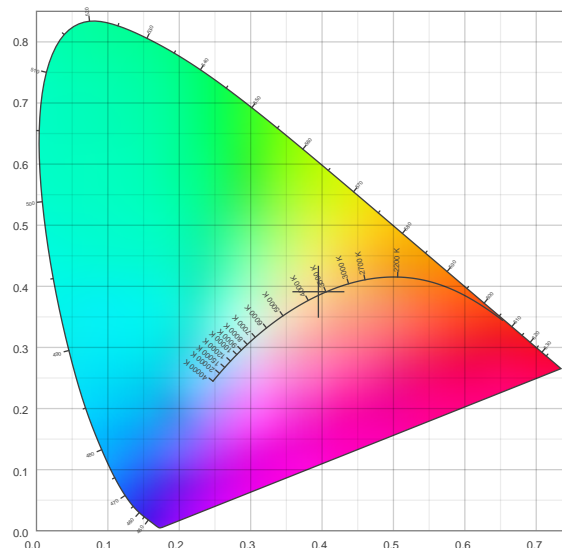
### ISO CANDELA DIAGRAM



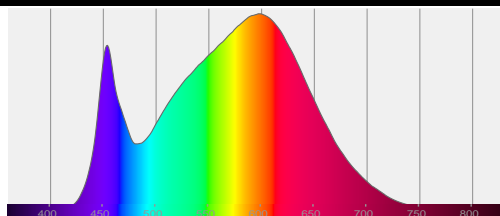
### DATA

|                      |         |
|----------------------|---------|
| INPUT POWER:         | 15.2 W  |
| POWER FACTOR:        | 1.0     |
| OPTICAL POWER:       | 3.35 mW |
| PEAK WAVELENGTH:     | 598 nm  |
| DOMINANT WAVELENGTH: | 581 nm  |

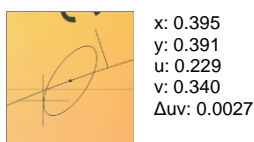
### CIE 1931:



### SPECTRA

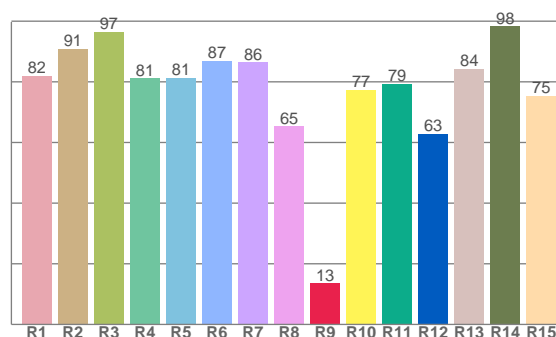
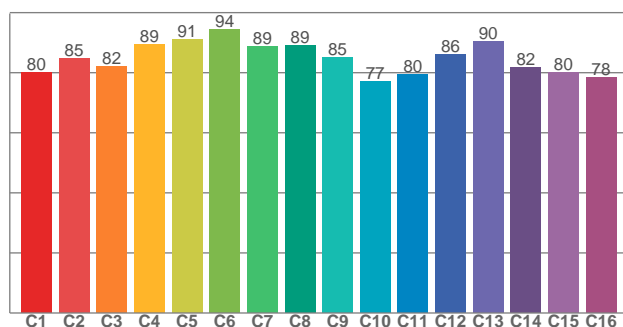


### CIE 1931 ZOOM



**ZONAL LUMEN SUMMARY**

|                      |                       |                       |                       |                       |                       |                       |                       |                       |
|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0°-10°<br>144 lm     | 10°-20°<br>339 lm     | 20°-30°<br>289 lm     | 30°-40°<br>172 lm     | 40°-50°<br>87.4 lm    | 50°-60°<br>42.6 lm    | 60°-70°<br>22.4 lm    | 70°-80°<br>9.97 lm    | 80°-90°<br>1.40 lm    |
| 90°-100°<br>0.019 lm | 100°-110°<br>0.014 lm | 110°-120°<br>0.089 lm | 120°-130°<br>0.010 lm | 130°-140°<br>0.010 lm | 140°-150°<br>0.002 lm | 150°-160°<br>0.001 lm | 160°-170°<br>0.001 lm | 170°-180°<br>0.072 lm |

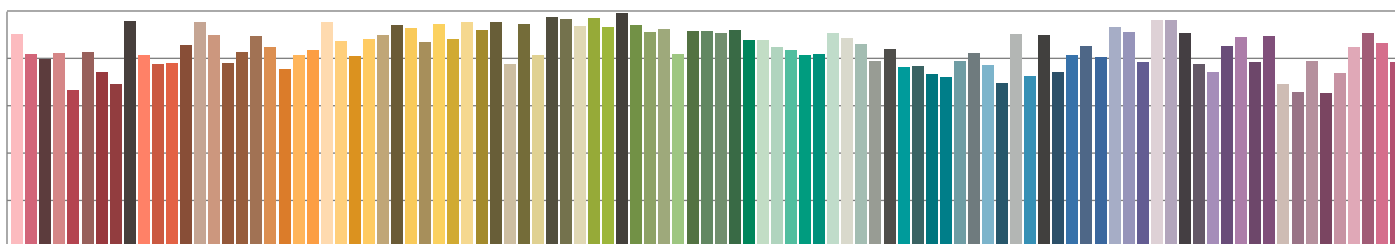
**COLOR DETAILS**
**TM30: 84.6**
**CRI: 83.8 (R1-R8)**


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

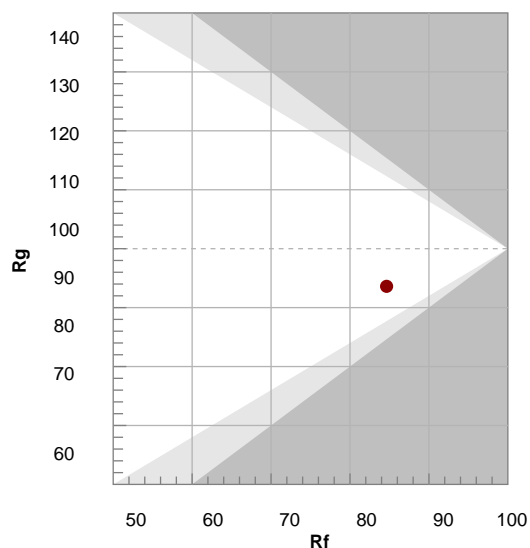
CRI R values, only R1-R8 are used to calculate final CRI value

| C1   | C2   | C3   | C4   | C5   | C6   | C7   | C8   | C9   | C10  | C11  | C12  | C13  | C14  | C15  | C16  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 80.2 | 84.6 | 82.0 | 89.3 | 91.1 | 94.3 | 88.8 | 89.1 | 85.1 | 77.0 | 79.5 | 86.1 | 90.3 | 81.9 | 80.1 | 78.3 |

| R1   | R2   | R3   | R4   | R5   | R6   | R7   | R8   | R9   | R10  | R11  | R12  | R13  | R14  | R15  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 82.0 | 90.7 | 96.5 | 81.1 | 81.3 | 86.9 | 86.4 | 65.3 | 13.5 | 77.3 | 79.2 | 62.8 | 84.3 | 98.2 | 75.2 |

**TM30 COLOR EVALUATION SAMPLE**

**TM30 DETAILS**

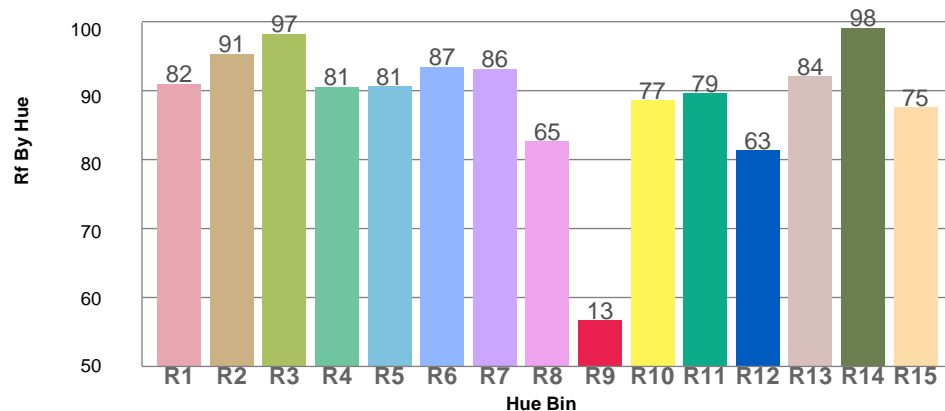
| Hue Bin | $R_f$ | Graphic shifts (%) |      |
|---------|-------|--------------------|------|
|         |       | Chroma             | Hue  |
| 1       | 80    | -11%               | 0%   |
| 2       | 85    | -7%                | 5%   |
| 3       | 82    | -4%                | 8%   |
| 4       | 89    | -2%                | 4%   |
| 5       | 91    | -3%                | 2%   |
| 6       | 94    | -2%                | -2%  |
| 7       | 89    | -7%                | -1%  |
| 8       | 89    | -6%                | 2%   |
| 9       | 85    | -6%                | 8%   |
| 10      | 77    | -4%                | 15%  |
| 11      | 80    | 3%                 | 14%  |
| 12      | 86    | 6%                 | 3%   |
| 13      | 90    | 3%                 | -5%  |
| 14      | 82    | 5%                 | -14% |
| 15      | 80    | -3%                | -13% |
| 16      | 78    | -7%                | -11% |



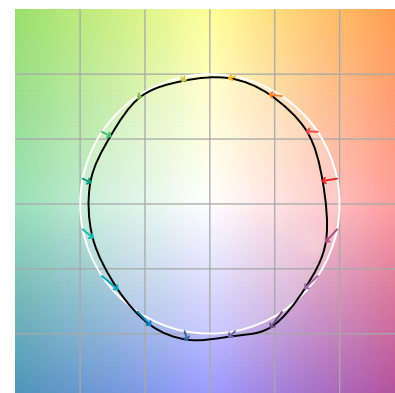
FIDELITY INDEX  
 **$R_f$  84.6**

GAMUT INDEX  
 **$R_g$  93.6**

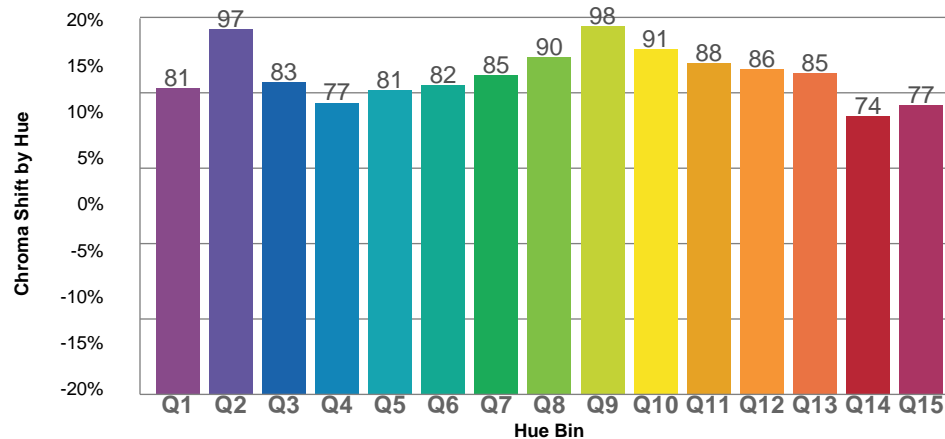
TM30 OVER 50



COLOR VECTOR GRAPHICS

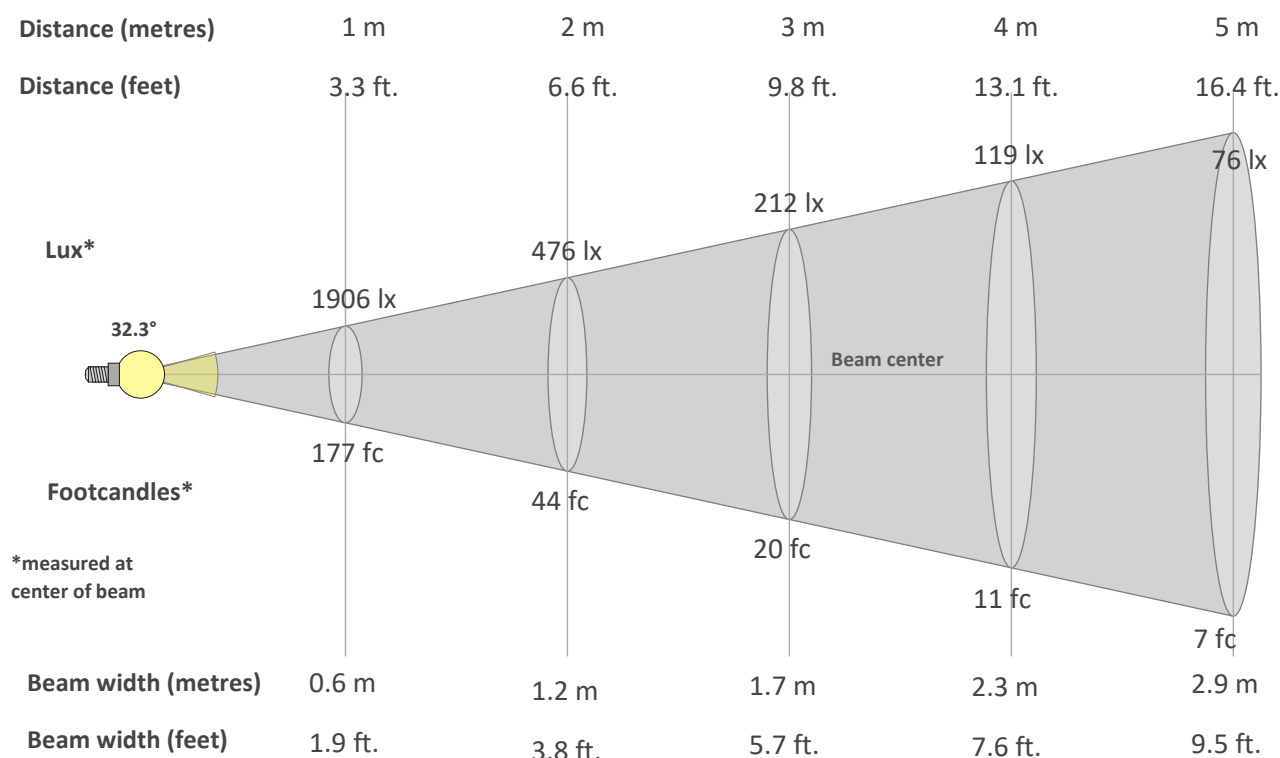


TM30 CHROMA SHIFT



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 |
| 1906lx | 476lx  | 212lx  | 119lx  | 76lx   | 53lx   | 39lx  | 30lx   | 24lx   | 19lx   | 16lx   | 13lx   | 11lx   | 10lx   | 8lx    | 7lx    | 7lx    | 6lx    | 5lx    | 5lx    |
| 177fc  | 44.3fc | 19.7fc | 11.1fc | 7.1fc  | 4.9fc  | 3.6fc | 2.8fc  | 2.2fc  | 1.8fc  | 1.5fc  | 1.2fc  | 1fc    | 0.9fc  | 0.8fc  | 0.7fc  | 0.6fc  | 0.5fc  | 0.5fc  | 0.4fc  |

**Intensity in 0° c-plane**

| 0°   | 2°   | 4°   | 6°   | 8°   | 10°  | 12°  | 14°  | 16° | 18° | 20° | 22° | 24° | 26° | 28° | 30° | 32° | 34° | 36° | 38° |
|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1906 | 1881 | 1803 | 1686 | 1538 | 1368 | 1189 | 1009 | 836 | 674 | 533 | 413 | 315 | 242 | 186 | 147 | 118 | 98  | 83  | 71  |
| 100% | 99%  | 95%  | 88%  | 81%  | 72%  | 62%  | 53%  | 44% | 35% | 28% | 22% | 17% | 13% | 10% | 8%  | 6%  | 5%  | 4%  | 4%  |

**Intensity in 90° c-plane**

| 0°   | 2°   | 4°   | 6°   | 8°   | 10°  | 12°  | 14°  | 16°  | 18°  | 20°  | 22°  | 24°  | 26°  | 28° | 30° | 32° | 34° | 36° | 38° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 1906 | 1897 | 1873 | 1834 | 1785 | 1728 | 1667 | 1601 | 1530 | 1452 | 1368 | 1277 | 1180 | 1078 | 974 | 869 | 765 | 663 | 566 | 477 |
| 100% | 100% | 98%  | 96%  | 94%  | 91%  | 87%  | 84%  | 80%  | 76%  | 72%  | 67%  | 62%  | 57%  | 51% | 46% | 40% | 35% | 30% | 25% |

**Intensity in 180° c-plane**

| 0°   | 2°   | 4°   | 6°   | 8°   | 10°  | 12°  | 14°  | 16° | 18° | 20° | 22° | 24° | 26° | 28° | 30° | 32° | 34° | 36° | 38° |
|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1906 | 1881 | 1803 | 1686 | 1538 | 1368 | 1189 | 1009 | 836 | 674 | 533 | 413 | 315 | 242 | 186 | 147 | 118 | 98  | 83  | 71  |
| 100% | 99%  | 95%  | 88%  | 81%  | 72%  | 62%  | 53%  | 44% | 35% | 28% | 22% | 17% | 13% | 10% | 8%  | 6%  | 5%  | 4%  | 4%  |

**Intensity in 270° c-plane**

| 0°   | 2°   | 4°   | 6°   | 8°   | 10°  | 12°  | 14°  | 16°  | 18°  | 20°  | 22°  | 24°  | 26°  | 28° | 30° | 32° | 34° | 36° | 38° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 1906 | 1897 | 1873 | 1834 | 1785 | 1728 | 1667 | 1601 | 1530 | 1452 | 1368 | 1277 | 1180 | 1078 | 974 | 869 | 765 | 663 | 566 | 477 |
| 100% | 100% | 98%  | 96%  | 94%  | 91%  | 87%  | 84%  | 80%  | 76%  | 72%  | 67%  | 62%  | 57%  | 51% | 46% | 40% | 35% | 30% | 25% |