

# LM-79 Test Report

## Relevant Standards

IES LM-79-2008  
IES TM-30-2015  
CIE 13.3-1995  
IESNA TM-15-11  
CIE 117:1995

## Product SKU

VALENT® MINI 10MM LED Tape Light  
DI-24V-VL10MN5-63

## Test Conditions

Test Temperature: 26.5 °C  
Luminaire Sample Length: 1000 mm.  
Power Supply: Agilent E3634A DC Power Supply  
Voltage: 24.0 VDC  
Current: 0.615 A  
Power Consumption: 14.8 W

## Test Date

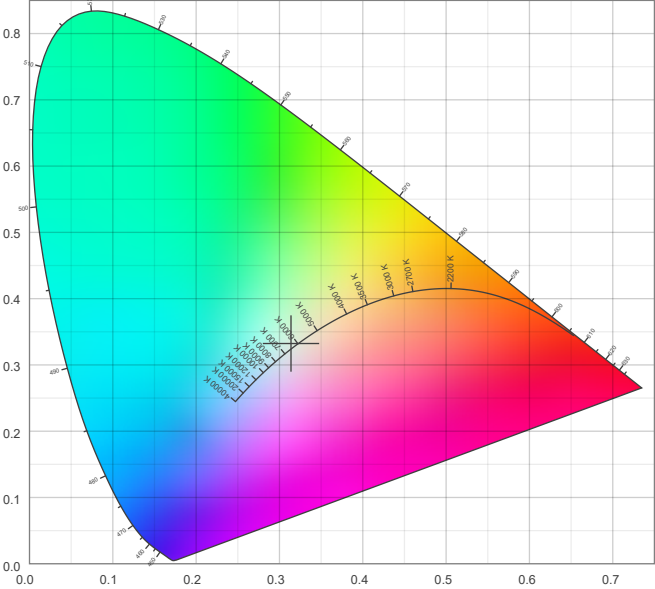
10/21/2025

**Color Details**

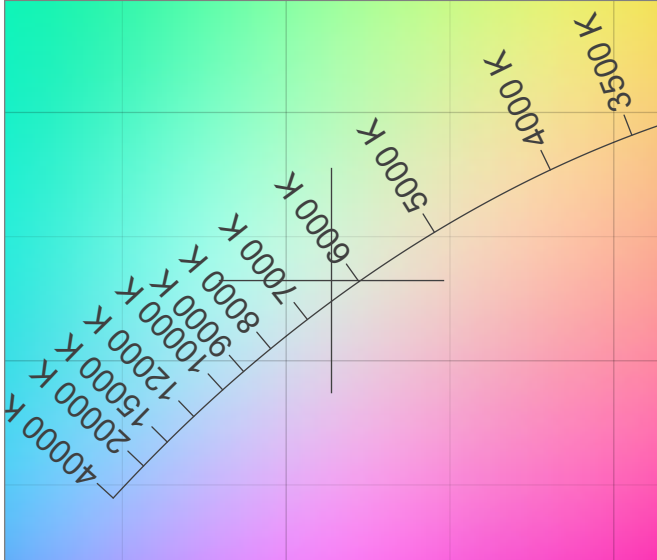
|   |                       |
|---|-----------------------|
| Correlated Color Temperature            | CCT = 6428            |
| CIE Test Color Method General Index     | CRI = 90.8            |
| CIE Test Color Method Sample Nine Score | R9 = 55.0             |
| IES TM-30-15 Fidelity Index             | R <sub>f</sub> = 86.5 |
| IES TM-30-15 Gamut Index                | R <sub>g</sub> = 95.2 |
| Luminous Flux                           | Lm = 2401             |

|                            |                         |
|----------------------------|-------------------------|
| Color coordinates CIE 1931 | (x;y) = (0.314;0.332)   |
| Color coordinate CIEs 1960 | (u;v) = (0.197;0.313)   |
| Color coordinate CIEs 1976 | (u';v') = (0.197;0.470) |
| Color deviation from BBL   | Duv = 0.0011            |
| Color Quality Scale (CQS)  | CQS = 87.8              |

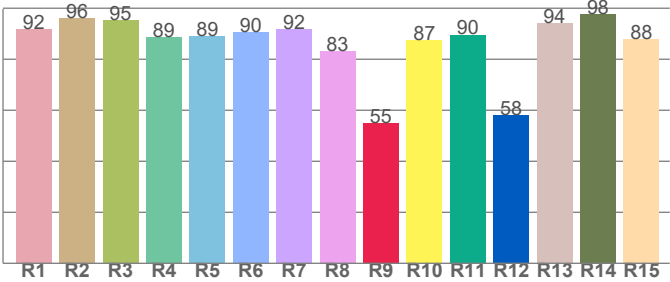
**CIE 1931**



**CIE 1931 – zoomed on Planckian locus**



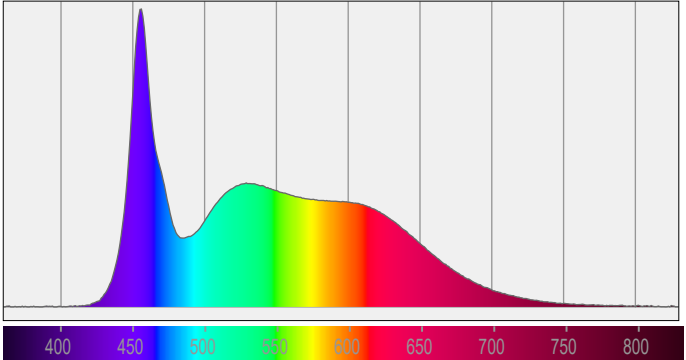
**Color Rendering Index per Reference Color (CIE 1995)**



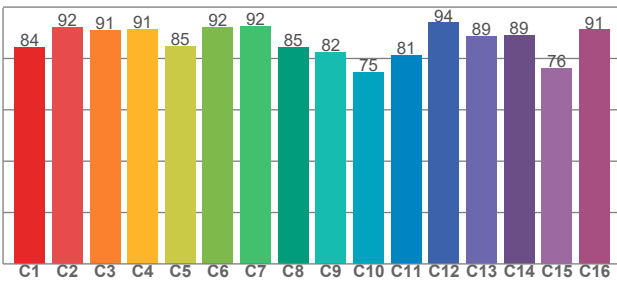
CRI R values, only R1-R8 are used to calculate final CRI value

|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| R1   | R2   | R3   | R4   | R5   | R6   | R7   | R8   | R9   | R10  | R11  | R12  | R13  | R14  | R15  |
| 91.8 | 95.9 | 95.4 | 88.5 | 88.8 | 90.5 | 91.9 | 83.2 | 55.0 | 87.4 | 89.6 | 58.1 | 94.2 | 97.8 | 88.0 |

**Spectral Power Distribution (SPD) / W/nm – 0-100%**



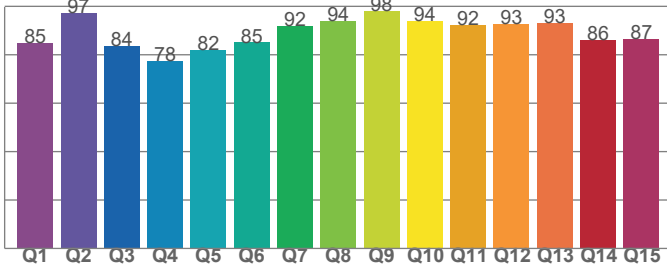
**TM30-18 Rf-Values per Hue Bin**



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  |
| 84.2 | 92.2 | 90.9 | 91.5 | 84.8 | 92.1 | 92.4 | 84.5 | 82.4 | 74.7 | 81.2 | 93.9 | 88.5 | 88.9 | 76.2 | 91.2 |

**Color Quality Scale by Reference Color**



CQS Q values

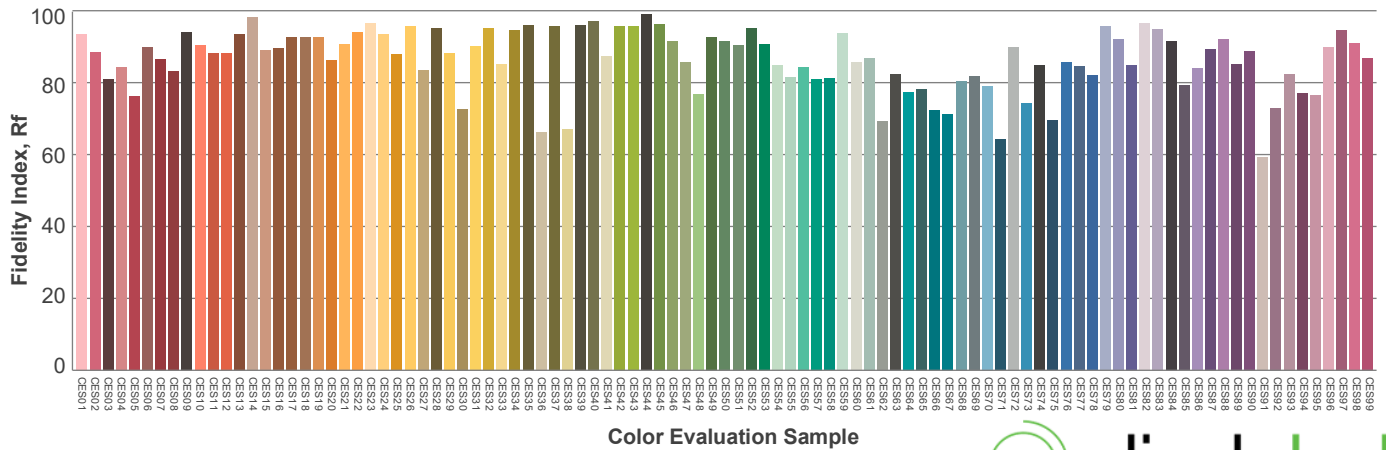
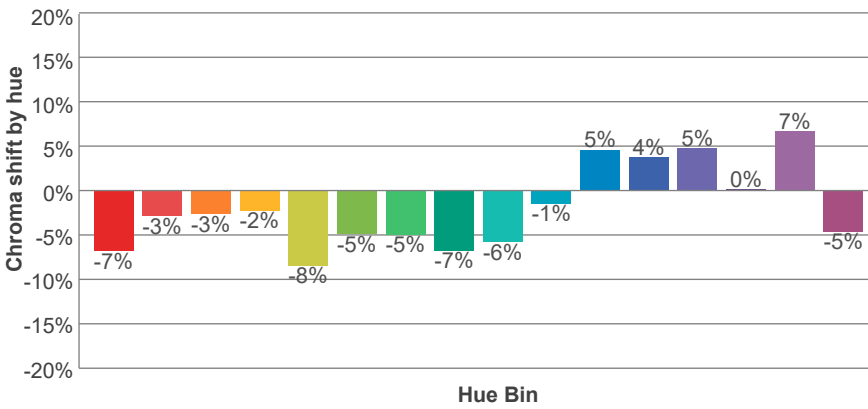
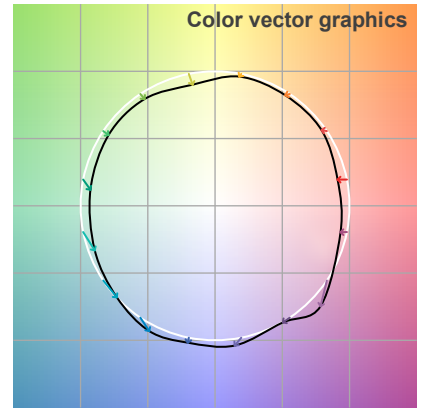
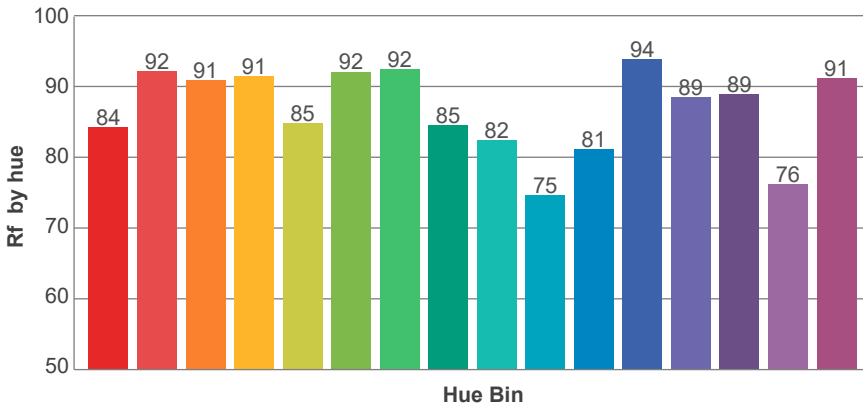
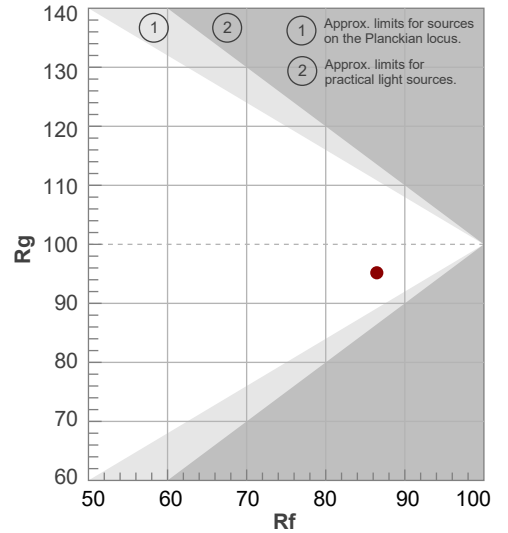
|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q1   | Q2   | Q3   | Q4   | Q5   | Q6   | Q7   | Q8   | Q9   | Q10  | Q11  | Q12  | Q13  | Q14  | Q15  |
| 84.8 | 97.3 | 83.7 | 77.5 | 81.9 | 85.1 | 91.8 | 93.9 | 98.0 | 94.1 | 92.3 | 92.8 | 93.0 | 86.0 | 86.6 |



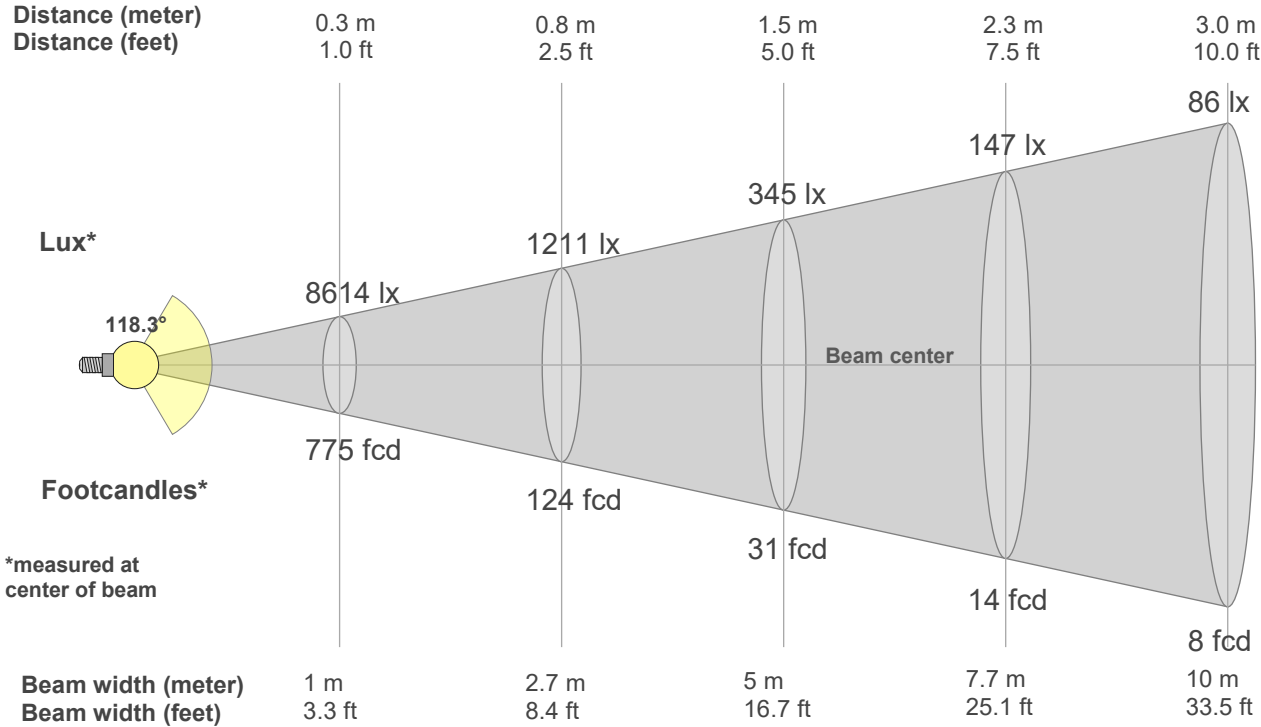
**Rf 86.5**  
Fidelity index Rf

**Rg 95.2**  
Gamut index Rg

| Hue Bin | R <sub>f</sub> | Shifts (%) |      |
|---------|----------------|------------|------|
|         |                | Chroma     | Hue  |
| 1       | 84             | -7%        | 1%   |
| 2       | 92             | -3%        | 3%   |
| 3       | 91             | -3%        | 2%   |
| 4       | 91             | -2%        | 1%   |
| 5       | 85             | -8%        | -1%  |
| 6       | 92             | -5%        | -1%  |
| 7       | 92             | -5%        | 0%   |
| 8       | 85             | -7%        | 6%   |
| 9       | 82             | -6%        | 15%  |
| 10      | 75             | -1%        | 16%  |
| 11      | 81             | 5%         | 11%  |
| 12      | 94             | 4%         | 0%   |
| 13      | 89             | 5%         | -6%  |
| 14      | 89             | 0%         | -6%  |
| 15      | 76             | 7%         | -19% |
| 16      | 91             | -5%        | -1%  |



**Beam Details**



**Beam Intensities 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 |
| 775lx | 194lx | 86lx  | 48lx   | 31lx   | 22lx   | 16lx   | 12lx   | 10lx   | 8lx    | 6lx    | 5lx    | 5lx    | 4lx    | 3lx    | 3lx    | 3lx    | 2lx    | 2lx    | 2lx    |
| 72fcd | 18fcd | 8fcd  | 4.5fcd | 2.9fcd | 2fcd   | 1.5fcd | 1.1fcd | 0.9fcd | 0.7fcd | 0.6fcd | 0.5fcd | 0.4fcd | 0.4fcd | 0.3fcd | 0.3fcd | 0.2fcd | 0.2fcd | 0.2fcd | 0.2fcd |

**Intensities in 0° c-plane**

| 0°   | 5°   | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 775  | 773  | 765 | 751 | 732 | 707 | 677 | 641 | 598 | 550 | 498 | 439 | 377 | 310 | 240 | 169 | 103 | 49  | 9   | 0   |
| 100% | 100% | 99% | 97% | 94% | 91% | 87% | 83% | 77% | 71% | 64% | 57% | 49% | 40% | 31% | 22% | 13% | 6%  | 1%  | 0%  |

**Intensities in 90° c-plane**

| 0°   | 5°   | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 775  | 772  | 765 | 752 | 733 | 709 | 680 | 645 | 604 | 556 | 504 | 445 | 382 | 313 | 242 | 168 | 98  | 41  | 4   | 4   |
| 100% | 100% | 99% | 97% | 95% | 92% | 88% | 83% | 78% | 72% | 65% | 57% | 49% | 40% | 31% | 22% | 13% | 5%  | 1%  | 0%  |

**Intensities in 180° c-plane**

| 0°   | 5°   | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 775  | 773  | 765 | 751 | 732 | 707 | 677 | 641 | 598 | 550 | 498 | 439 | 377 | 310 | 240 | 169 | 103 | 49  | 9   | 0   |
| 100% | 100% | 99% | 97% | 94% | 91% | 87% | 83% | 77% | 71% | 64% | 57% | 49% | 40% | 31% | 22% | 13% | 6%  | 1%  | 0%  |

**Intensities in 270° c-plane**

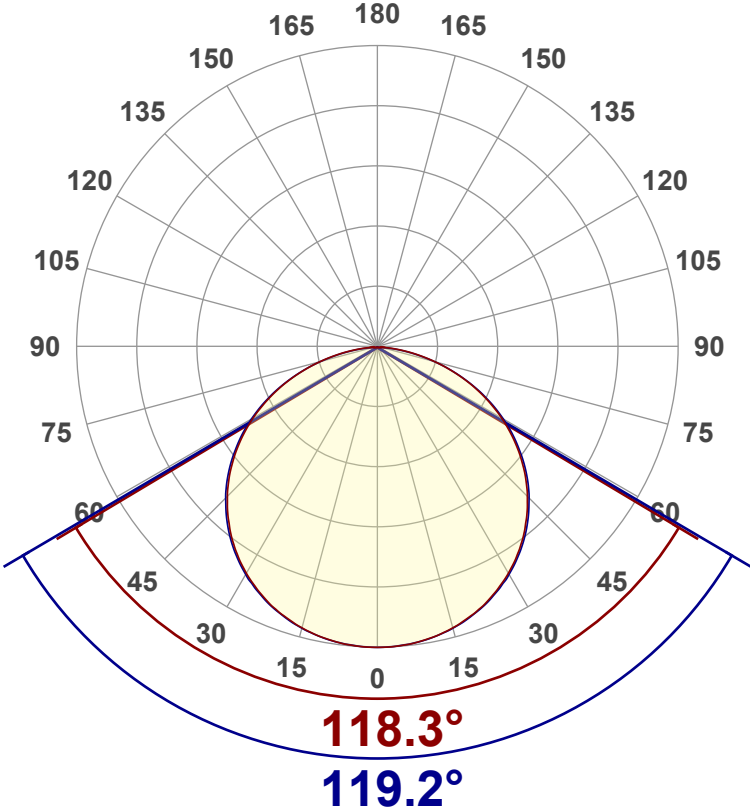
| 0°   | 5°   | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 775  | 772  | 765 | 752 | 733 | 709 | 680 | 645 | 604 | 556 | 504 | 445 | 382 | 313 | 242 | 168 | 98  | 41  | 4   | 4   |
| 100% | 100% | 99% | 97% | 95% | 92% | 88% | 83% | 78% | 72% | 65% | 57% | 49% | 40% | 31% | 22% | 13% | 5%  | 1%  | 0%  |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 118.8°         | 164.1°          | 176.7°            | 76.6%                        | 51.2%                       |



**Luminous Intensity Diagram**

Unit: 0-100% of peak intensity



**Main Values**

|                      |                |
|----------------------|----------------|
| Output (Total Lumen) | 2401 lm        |
| Lumen Up% / Down%    | 0.85% / 99.15% |
| Peak Intensity       | 776 cd         |
| Beam Angle (50%)     | 118.8°         |
| Beam Angle (90%)     | 119.2°         |
| Beam Angle (10%)     | 118.3°         |

**Cut-off Angle**

|              |        |
|--------------|--------|
| Average 2,5% | 176.7° |
|--------------|--------|

**Field Angle**

|             |        |
|-------------|--------|
| Average 10% | 164.1° |
|-------------|--------|

**Intensity Ratio**

|              |       |
|--------------|-------|
| In 120° cone | 76.6% |
| In 90° cone  | 51.2% |

**C000-C180 C090-C270**

**Zonal Lumen Summary**

|          |           |           |           |           |           |           |           |           |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0°-10°   | 10°-20°   | 20°-30°   | 30°-40°   | 40°-50°   | 50°-60°   | 60°-70°   | 70°-80°   | 80°-90°   |
| 73.5 lm  | 212 lm    | 327 lm    | 402 lm    | 427 lm    | 396 lm    | 309 lm    | 179 lm    | 54.0 lm   |
| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
| 8.11 lm  | 2.94 lm   | 2.49 lm   | 2.25 lm   | 1.75 lm   | 1.26 lm   | 0.930 lm  | 0.570 lm  | 0.192 lm  |



LCS Table

| BUG rating:          | B1 U0 G1 |          |
|----------------------|----------|----------|
| <b>Forward light</b> | Lumens   | Lumens % |
| Low(0-30):           | 309      | 12.9%    |
| Medium(30-60):       | 618      | 25.7%    |
| High(60-80):         | 246.1    | 10.2%    |
| Very high(80-90):    | 27.5     | 1.1%     |
| <b>Back light</b>    |          |          |
| Low(0-30):           | 309      | 12.9%    |
| Medium(30-60):       | 618      | 25.7%    |
| High(60-80):         | 246.1    | 10.2%    |
| Very high(80-90):    | 27.1     | 1.1%     |
| <b>Uplight</b>       |          |          |
| Low(90-100):         | 0        | 0%       |
| High(100-180):       | 0        | 0%       |

LCS Graph

