

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: STREETWORKS

Report Number: P579613

Luminaire Tested: **CST-CA8-480-760-U-T5N-HSS-HM-EX120**

Issue Date: 11/18/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P579613  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2110-429-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/18/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: CST-CA8-480-760-U-T5N-HSS-HM-EX120  
Description: CELESTEON HIGH MAST LUMINAIRE WITH FIELD INSTALLED SHIELD  
Light Source: (8) 5700K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 55643 lumens  
Efficiency: N/A  
Efficacy: 115.7 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B5 - U2 - G5

Input Watts (W): 480.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

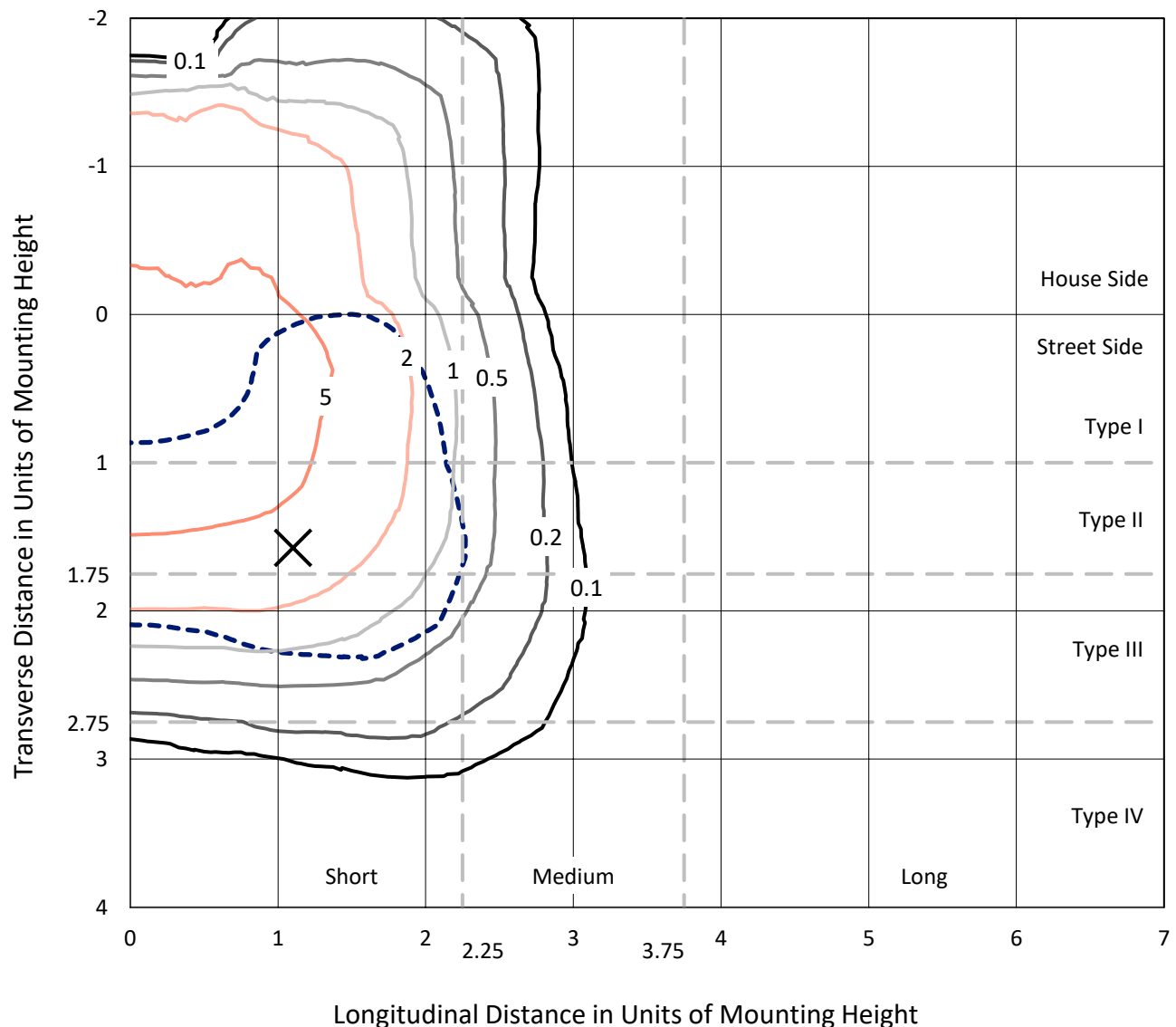


REPORT NUMBER: P579613

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## Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

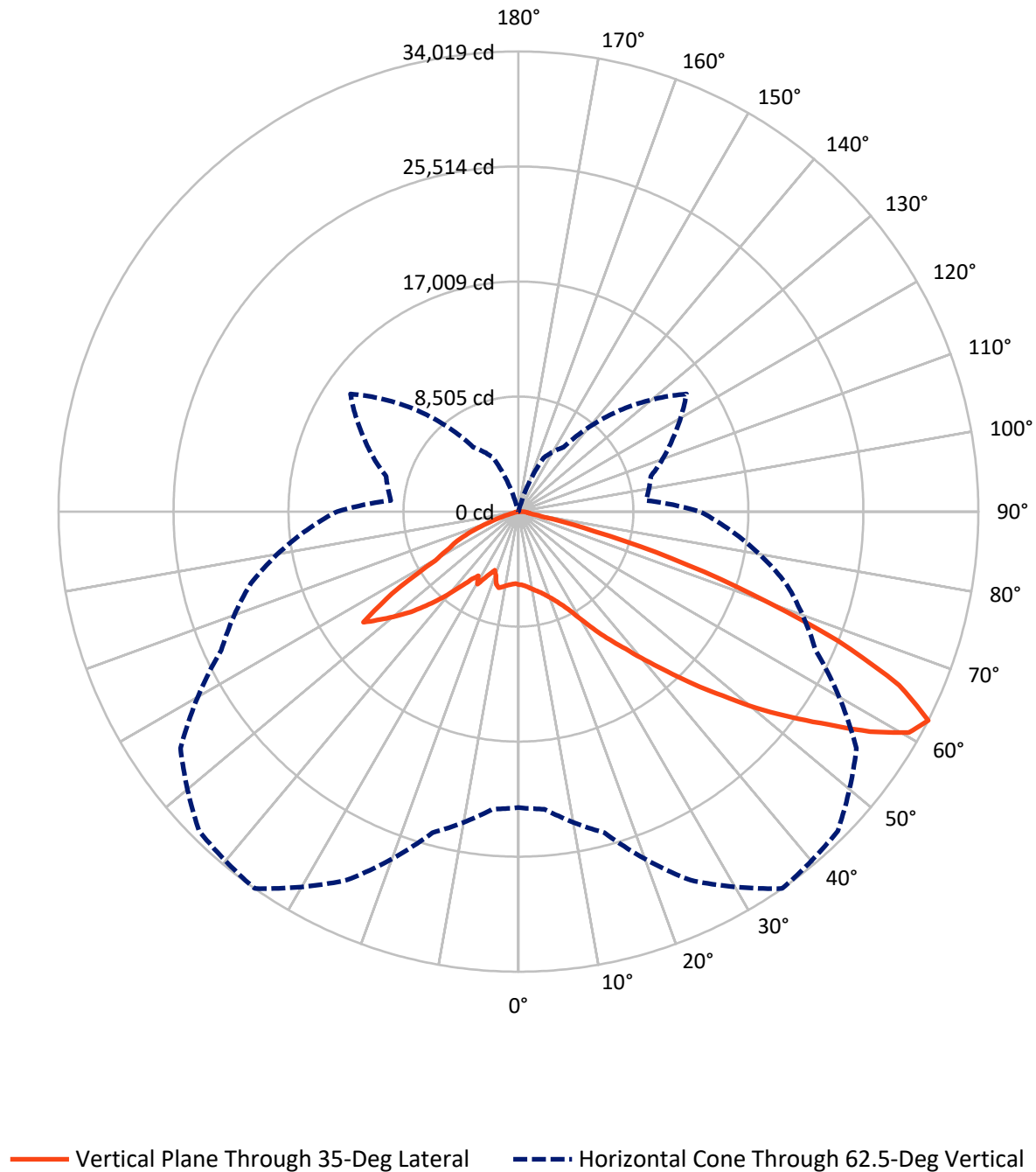


Based on 30 foot mounting height. Maximum calculated value = 8.1 fc  
 Type III - Short - N/A

REPORT NUMBER: P579613

CATALOG NUMBER: CST-CA8-480-760-U-T5N-HSS-HM-EX120

## Luminous Intensity Polar Plot



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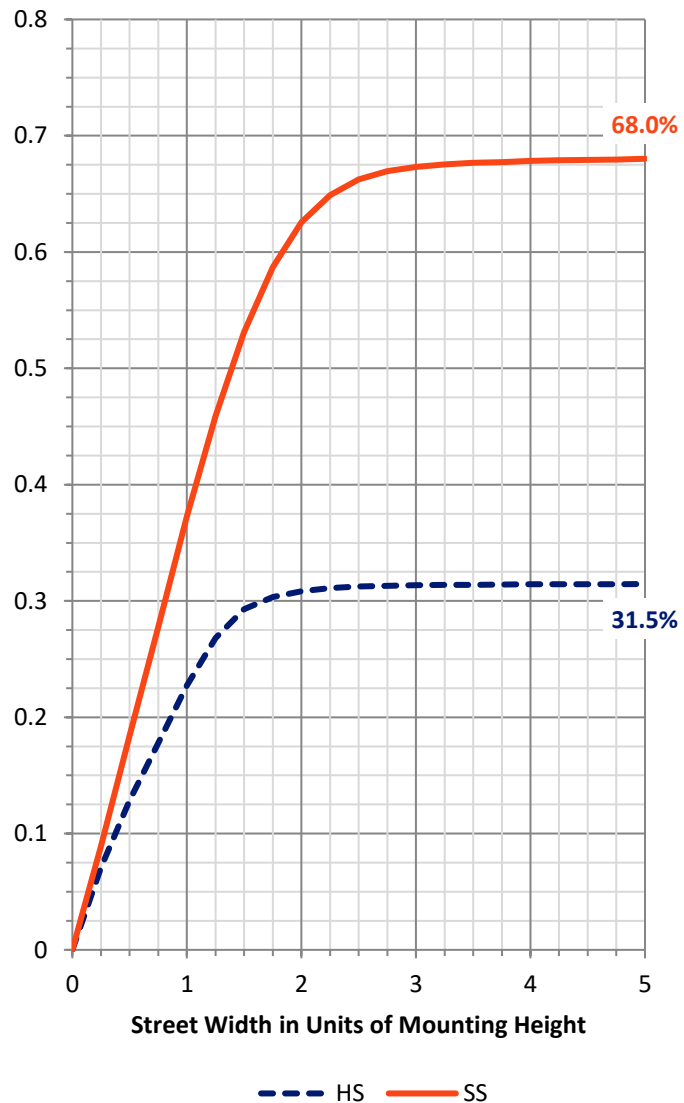
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 17603.1  | 0.0    | 17603.1 |
|                    | % Fixture | 31.6     | 0.0    | 31.6    |
| <b>Street Side</b> | Lumens    | 38008.2  | 31.8   | 38039.9 |
|                    | % Fixture | 68.3     | 0.1    | 68.4    |
| <b>Total</b>       | Lumens    | 55611.2  | 31.8   | 55643.0 |
|                    | % Fixture | 99.9     | 0.1    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 532.6   | 1.0       |
| 10°-20°   | 1712.4  | 3.1       |
| 20°-30°   | 3179.7  | 5.7       |
| 30°-40°   | 6269.0  | 11.3      |
| 40°-50°   | 11253.7 | 20.2      |
| 50°-60°   | 16358.4 | 29.4      |
| 60°-70°   | 13444.0 | 24.2      |
| 70°-80°   | 2555.5  | 4.6       |
| 80°-90°   | 305.9   | 0.5       |
| 90°-100°  | 29.0    | 0.1       |
| 100°-110° | 2.8     | 0.0       |
| 110°-120° | 0.0     | 0.0       |
| 120°-130° | 0.0     | 0.0       |
| 130°-140° | 0.0     | 0.0       |
| 140°-150° | 0.0     | 0.0       |
| 150°-160° | 0.0     | 0.0       |
| 160°-170° | 0.0     | 0.0       |
| 170°-180° | 0.0     | 0.0       |
| 0°-90°    | 55611.2 | 99.9      |
| 0°-180°   | 55643.0 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P579613

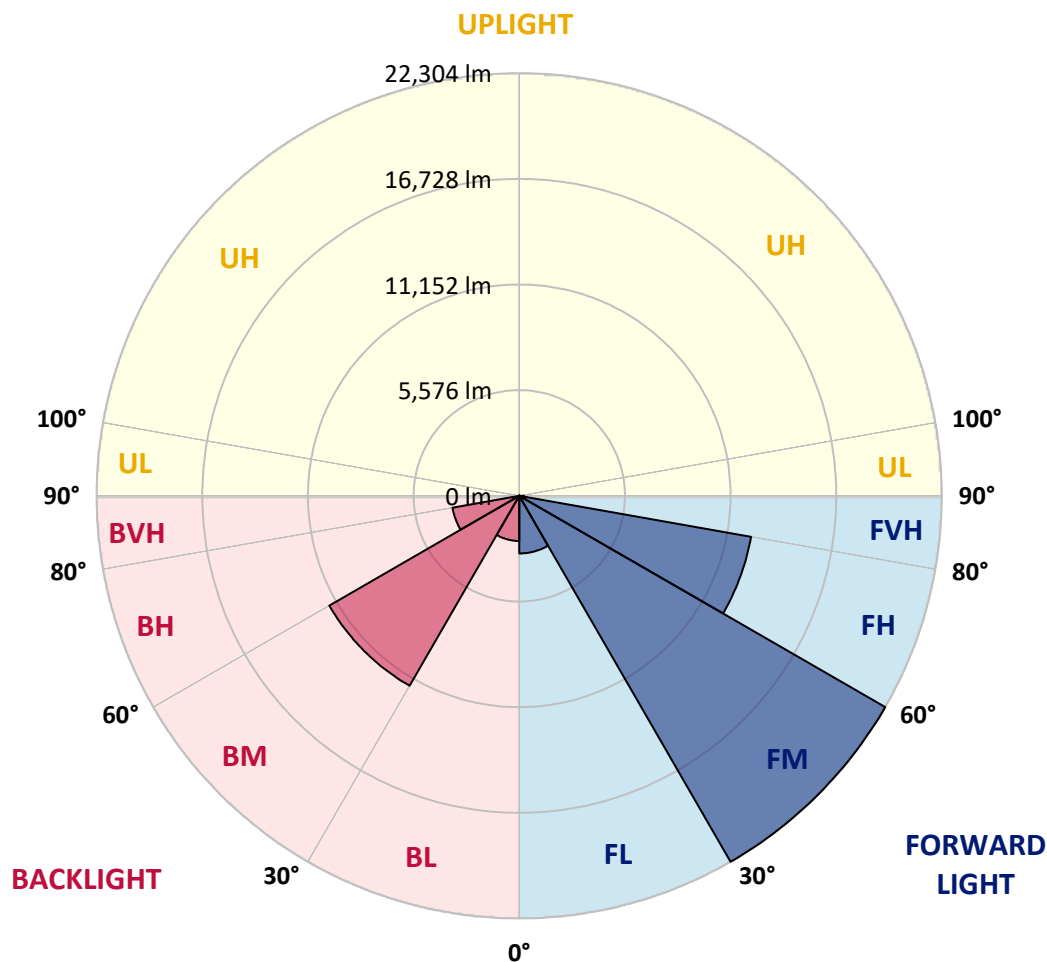
CATALOG NUMBER: CST-CA8-480-760-U-T5N-HSS-HM-EX120

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |       |         |
|------|-------------|---------|-----------|-------------------------|-------|---------|
|      |             |         |           | B                       | U     | G       |
| FL   | (0°-30°)    | 3041.2  | 5.5       |                         |       |         |
| FM   | (30°-60°)   | 22304.3 | 40.1      |                         |       |         |
| FH   | (60°-80°)   | 12420.8 | 22.3      |                         |       | G5      |
| FVH  | (80°-90°)   | 241.9   | 0.4       |                         |       | G3/500  |
| BL   | (0°-30°)    | 2383.5  | 4.3       | B3/2500                 |       |         |
| BM   | (30°-60°)   | 11576.8 | 20.8      | B5                      |       |         |
| BH   | (60°-80°)   | 3578.7  | 6.4       | B4/5000                 |       | G4/5000 |
| BVH  | (80°-90°)   | 64.0    | 0.1       |                         |       | G1/100  |
| UL   | (90°-100°)  | 29.0    | 0.1       |                         | U2/50 |         |
| UH   | (100°-180°) | 2.8     | 0.0       |                         | U1/10 |         |

**BUG Rating: B5-U2-G5**

Type III Short



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CATALOG NUMBER: CST-CA8-480-760-U-T5N-HSS-HM-EX120

**CANDELA DISTRIBUTION (FULL):**

|        | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 85°     | 90°     |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°     | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  |
| 2.5°   | 5539.0  | 5493.7  | 5498.3  | 5532.2  | 5430.4  | 5464.3  | 5416.8  | 5457.6  | 5439.5  | 5457.6  | 5468.9  |
| 5°     | 5649.8  | 5593.3  | 5591.0  | 5624.9  | 5543.5  | 5563.9  | 5509.6  | 5536.7  | 5511.8  | 5534.5  | 5534.5  |
| 7.5°   | 5785.5  | 5738.0  | 5726.7  | 5753.8  | 5681.5  | 5690.5  | 5636.2  | 5647.5  | 5618.1  | 5647.5  | 5624.9  |
| 10°    | 5955.1  | 5912.2  | 5894.1  | 5907.6  | 5842.1  | 5846.6  | 5787.8  | 5792.3  | 5749.3  | 5774.2  | 5756.1  |
| 12.5°  | 6133.8  | 6075.0  | 6066.0  | 6088.6  | 6020.7  | 6011.7  | 5961.9  | 5966.4  | 5918.9  | 5941.6  | 5928.0  |
| 15°    | 6319.3  | 6258.2  | 6260.5  | 6283.1  | 6215.2  | 6219.8  | 6167.7  | 6176.8  | 6129.3  | 6151.9  | 6133.8  |
| 17.5°  | 6565.8  | 6504.7  | 6500.2  | 6540.9  | 6484.4  | 6502.5  | 6448.2  | 6459.5  | 6425.6  | 6430.1  | 6409.7  |
| 20°    | 6918.6  | 6839.5  | 6823.6  | 6882.4  | 6807.8  | 6830.4  | 6801.0  | 6839.5  | 6825.9  | 6814.6  | 6798.8  |
| 22.5°  | 7339.3  | 7278.2  | 7246.6  | 7291.8  | 7203.6  | 7246.6  | 7262.4  | 7341.6  | 7361.9  | 7348.4  | 7099.6  |
| 25°    | 7902.5  | 7870.8  | 7839.2  | 7818.8  | 7712.5  | 7780.4  | 7861.8  | 7993.0  | 8078.9  | 8112.8  | 7766.8  |
| 27.5°  | 8662.4  | 8678.3  | 8540.3  | 8517.7  | 8397.8  | 8504.1  | 8651.1  | 8863.7  | 9037.9  | 9101.2  | 8635.3  |
| 30°    | 9639.5  | 9659.9  | 9472.1  | 9417.8  | 9345.5  | 9435.9  | 9709.6  | 9942.6  | 10200.4 | 10306.7 | 9684.7  |
| 32.5°  | 10937.7 | 10919.6 | 10643.7 | 10539.7 | 10474.1 | 10510.3 | 10797.5 | 11116.4 | 11405.9 | 11645.7 | 10881.2 |
| 35°    | 12523.2 | 12466.7 | 12172.6 | 11885.4 | 11625.3 | 11736.1 | 11946.5 | 12333.2 | 12772.0 | 13124.8 | 12061.8 |
| 37.5°  | 14364.3 | 14310.0 | 13862.1 | 13394.0 | 12880.6 | 12928.1 | 13115.8 | 13746.8 | 14312.2 | 14405.0 | 11860.5 |
| 40°    | 16266.4 | 16243.7 | 15820.8 | 15226.0 | 14427.6 | 14203.7 | 14452.5 | 15221.4 | 15818.5 | 14201.4 | 12328.7 |
| 42.5°  | 18166.2 | 18057.7 | 17820.2 | 17225.3 | 16162.3 | 15669.3 | 16004.0 | 16773.0 | 17415.3 | 14889.0 | 13414.3 |
| 45°    | 20081.9 | 19971.1 | 19769.8 | 19333.3 | 18227.3 | 17510.3 | 17607.6 | 18460.2 | 19041.5 | 16178.2 | 14545.2 |
| 47.5°  | 21782.7 | 21701.3 | 21556.6 | 21312.3 | 20326.2 | 19677.1 | 19489.3 | 20086.4 | 20482.2 | 17225.3 | 15413.7 |
| 50°    | 23248.3 | 23178.2 | 23234.8 | 23153.3 | 22863.8 | 22183.1 | 21563.3 | 21524.9 | 21714.9 | 18157.2 | 16212.1 |
| 52.5°  | 24537.5 | 24442.5 | 24684.5 | 24971.8 | 25238.7 | 25087.1 | 23587.6 | 22888.7 | 22716.8 | 18856.0 | 16748.1 |
| 55°    | 25602.8 | 25568.9 | 25985.0 | 26760.8 | 27776.3 | 28174.4 | 25752.1 | 24148.5 | 23612.5 | 19448.6 | 16797.9 |
| 57.5°  | 26240.6 | 26322.0 | 27201.8 | 28703.6 | 30689.4 | 30877.1 | 28285.2 | 25487.4 | 24401.8 | 19808.2 | 17035.4 |
| 60°    | 25150.4 | 25426.4 | 27009.6 | 30160.2 | 33168.3 | 33249.7 | 30105.9 | 25754.3 | 23368.2 | 18514.5 | 15766.5 |
| 62.5°  | 21884.5 | 22083.5 | 24573.7 | 30067.4 | 34018.7 | 33399.0 | 30513.0 | 24248.0 | 20480.0 | 15705.5 | 13409.8 |
| 65°    | 15463.5 | 15694.1 | 18695.5 | 27113.6 | 30949.5 | 30972.1 | 27950.5 | 20968.5 | 16370.4 | 12159.1 | 10354.2 |
| 67.5°  | 9327.4  | 9700.6  | 12543.6 | 19683.8 | 25482.9 | 25946.6 | 23318.4 | 15875.1 | 11715.8 | 7938.7  | 6701.5  |
| 70°    | 3060.1  | 3401.6  | 5726.7  | 11650.2 | 18369.8 | 20355.6 | 17512.6 | 10315.8 | 6118.0  | 3356.4  | 2702.8  |
| 72.5°  | 1212.3  | 1368.3  | 2017.5  | 5152.2  | 11837.9 | 13590.7 | 10790.7 | 4984.9  | 2053.7  | 891.1   | 775.8   |
| 75°    | 809.7   | 825.5   | 931.8   | 1755.1  | 5792.3  | 7432.0  | 5202.0  | 1449.8  | 762.2   | 556.4   | 488.5   |
| 77.5°  | 705.7   | 707.9   | 755.4   | 925.0   | 1886.3  | 2849.8  | 1497.3  | 778.0   | 631.0   | 456.9   | 404.8   |
| 80°    | 646.9   | 655.9   | 685.3   | 789.3   | 864.0   | 968.0   | 739.6   | 649.1   | 547.3   | 420.7   | 382.2   |
| 82.5°  | 619.7   | 626.5   | 644.6   | 714.7   | 698.9   | 726.0   | 597.1   | 515.7   | 461.4   | 386.8   | 366.4   |
| 85°    | 565.4   | 576.7   | 588.0   | 631.0   | 574.5   | 497.6   | 461.4   | 346.0   | 330.2   | 291.8   | 269.1   |
| 87.5°  | 427.5   | 425.2   | 413.9   | 420.7   | 384.5   | 314.4   | 260.1   | 194.5   | 158.3   | 131.2   | 108.6   |
| 90°    | 178.7   | 180.9   | 174.2   | 165.1   | 144.8   | 119.9   | 90.5    | 54.3    | 27.1    | 9.0     | 4.5     |
| 92.5°  | 135.7   | 138.0   | 133.4   | 119.9   | 104.0   | 83.7    | 61.1    | 31.7    | 18.1    | 6.8     | 2.3     |
| 95°    | 83.7    | 85.9    | 81.4    | 72.4    | 63.3    | 47.5    | 31.7    | 20.4    | 11.3    | 4.5     | 0.0     |
| 97.5°  | 49.8    | 52.0    | 47.5    | 43.0    | 33.9    | 22.6    | 18.1    | 13.6    | 9.0     | 4.5     | 0.0     |
| 100°   | 29.4    | 29.4    | 27.1    | 22.6    | 15.8    | 13.6    | 11.3    | 9.0     | 6.8     | 2.3     | 0.0     |
| 102.5° | 13.6    | 13.6    | 13.6    | 9.0     | 6.8     | 6.8     | 6.8     | 6.8     | 6.8     | 2.3     | 0.0     |
| 105°   | 4.5     | 4.5     | 2.3     | 2.3     | 2.3     | 4.5     | 4.5     | 4.5     | 4.5     | 2.3     | 0.0     |
| 107.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 2.3     | 4.5     | 4.5     | 2.3     | 0.0     |
| 110°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 2.3     | 2.3     | 2.3     | 0.0     |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 5°  | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 112.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

REPORT NUMBER: P579613

CATALOG NUMBER: CST-CA8-480-760-U-T5N-HSS-HM-EX120

**CANDELA DISTRIBUTION (continued):**

|        | 95°     | 105°    | 115°    | 125°    | 135°    | 145°    | 155°    | 165°    | 175°    | 180°    |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°     | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  | 5401.0  |
| 2.5°   | 5457.6  | 5414.6  | 5421.4  | 5382.9  | 5373.9  | 5333.2  | 5405.5  | 5412.3  | 5392.0  | 5412.3  |
| 5°     | 5525.4  | 5473.4  | 5487.0  | 5444.0  | 5432.7  | 5376.1  | 5434.9  | 5430.4  | 5414.6  | 5434.9  |
| 7.5°   | 5624.9  | 5566.1  | 5572.9  | 5523.1  | 5511.8  | 5448.5  | 5502.8  | 5487.0  | 5468.9  | 5493.7  |
| 10°    | 5751.6  | 5695.0  | 5697.3  | 5629.4  | 5622.7  | 5550.3  | 5620.4  | 5591.0  | 5563.9  | 5600.0  |
| 12.5°  | 5928.0  | 5848.8  | 5842.1  | 5767.4  | 5765.2  | 5690.5  | 5762.9  | 5738.0  | 5701.8  | 5758.4  |
| 15°    | 6131.6  | 6025.3  | 5998.1  | 5903.1  | 5900.9  | 5821.7  | 5894.1  | 5855.6  | 5837.5  | 5905.4  |
| 17.5°  | 6396.2  | 6262.7  | 6056.9  | 5733.5  | 5586.5  | 5611.4  | 5866.9  | 5959.7  | 5717.7  | 5753.8  |
| 20°    | 6556.8  | 5909.9  | 5609.1  | 5475.6  | 5405.5  | 5002.9  | 4457.9  | 4503.1  | 5039.1  | 5294.7  |
| 22.5°  | 6285.3  | 6093.1  | 5982.3  | 5794.6  | 4817.5  | 4679.5  | 4711.2  | 4702.1  | 4010.0  | 3804.2  |
| 25°    | 6850.8  | 6669.8  | 6468.5  | 5310.5  | 5109.2  | 5050.4  | 5066.3  | 4417.2  | 4039.5  | 4055.3  |
| 27.5°  | 7665.0  | 7432.0  | 6156.4  | 5654.3  | 5613.6  | 5527.7  | 5215.6  | 4435.3  | 4482.8  | 4514.4  |
| 30°    | 8694.1  | 7866.3  | 6556.8  | 6337.4  | 6255.9  | 6163.2  | 4840.1  | 4955.5  | 5043.7  | 5140.9  |
| 32.5°  | 9689.3  | 7651.4  | 7323.5  | 7095.0  | 6968.4  | 5595.5  | 5459.8  | 5672.4  | 5760.6  | 5844.3  |
| 35°    | 9598.8  | 8572.0  | 8146.8  | 7857.3  | 7619.8  | 6038.8  | 6158.7  | 6482.1  | 6715.1  | 6712.8  |
| 37.5°  | 9847.6  | 9573.9  | 9083.1  | 8716.7  | 6613.3  | 6764.8  | 7015.9  | 7384.6  | 7667.3  | 7665.0  |
| 40°    | 10885.7 | 10589.4 | 10128.0 | 9340.9  | 7328.0  | 7680.8  | 8024.6  | 8370.7  | 8574.2  | 8590.1  |
| 42.5°  | 11917.1 | 11688.6 | 11272.5 | 8250.8  | 8203.3  | 8691.8  | 9051.4  | 9270.8  | 9395.2  | 9438.2  |
| 45°    | 12943.9 | 12729.0 | 11075.7 | 9126.1  | 9270.8  | 9754.8  | 9974.2  | 10017.2 | 10150.6 | 10146.1 |
| 47.5°  | 13760.4 | 13577.2 | 10189.1 | 10166.5 | 10526.1 | 10860.8 | 10790.7 | 10736.4 | 10770.4 | 10788.5 |
| 50°    | 14513.5 | 11819.8 | 10985.2 | 11315.4 | 11862.8 | 11903.5 | 11611.7 | 9198.5  | 11387.8 | 11349.4 |
| 52.5°  | 13482.2 | 11534.8 | 11727.1 | 12500.6 | 13432.4 | 12959.7 | 12389.8 | 8063.1  | 10679.9 | 11695.4 |
| 55°    | 11797.2 | 11991.7 | 12425.9 | 13724.2 | 14644.7 | 14083.8 | 13131.6 | 8302.8  | 7088.3  | 5769.7  |
| 57.5°  | 12032.4 | 12340.0 | 13165.5 | 14959.1 | 15762.0 | 11154.9 | 12256.3 | 5853.4  | 3962.6  | 3960.3  |
| 60°    | 11204.6 | 11670.5 | 13149.7 | 15513.2 | 12758.4 | 7147.1  | 4910.2  | 133.4   | 769.0   | 762.2   |
| 62.5°  | 9472.1  | 10134.8 | 12545.8 | 15162.6 | 10569.1 | 5808.1  | 4374.2  | 11.3    | 4.5     | 4.5     |
| 65°    | 7325.7  | 8106.0  | 10460.5 | 13129.3 | 9363.6  | 5002.9  | 3247.8  | 0.0     | 0.0     | 0.0     |
| 67.5°  | 4803.9  | 5527.7  | 7855.0  | 10906.1 | 7773.6  | 3781.6  | 2182.6  | 0.0     | 0.0     | 0.0     |
| 70°    | 2001.6  | 2895.0  | 4880.8  | 7882.1  | 5717.7  | 2476.6  | 1035.9  | 0.0     | 0.0     | 0.0     |
| 72.5°  | 579.0   | 882.1   | 2198.4  | 4706.7  | 3548.7  | 1296.0  | 384.5   | 0.0     | 0.0     | 0.0     |
| 75°    | 382.2   | 402.6   | 664.9   | 1893.1  | 1725.7  | 475.0   | 156.1   | 0.0     | 0.0     | 0.0     |
| 77.5°  | 321.2   | 330.2   | 422.9   | 529.2   | 554.1   | 187.7   | 126.7   | 0.0     | 0.0     | 0.0     |
| 80°    | 296.3   | 298.5   | 380.0   | 393.5   | 296.3   | 156.1   | 124.4   | 0.0     | 0.0     | 0.0     |
| 82.5°  | 275.9   | 269.1   | 323.4   | 312.1   | 246.5   | 135.7   | 115.3   | 0.0     | 0.0     | 0.0     |
| 85°    | 190.0   | 194.5   | 219.4   | 278.2   | 149.3   | 67.9    | 81.4    | 0.0     | 0.0     | 0.0     |
| 87.5°  | 58.8    | 67.9    | 85.9    | 88.2    | 27.1    | 9.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 90°    | 2.3     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 92.5°  | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 95°    | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 97.5°  | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 100°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 102.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 105°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 107.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 110°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |



REPORT NUMBER: P579613

CATALOG NUMBER: CST-CA8-480-760-U-T5N-HSS-HM-EX120

**CANDELA DISTRIBUTION (continued):**

|        | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|--------|-----|------|------|------|------|------|------|------|------|------|
| 112.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 115°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 117.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 120°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 122.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 125°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 127.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 130°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 132.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 135°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 137.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 140°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 142.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 145°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 147.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 150°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 152.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 155°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 157.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 160°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 162.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 165°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 167.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 170°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 172.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 175°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 177.5° | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 180°   | 0.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |

LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

STREETWORKS

Report Number: SP1-2104-215-3

Luminaire Tested: CST-CA6-230-757-U-T4

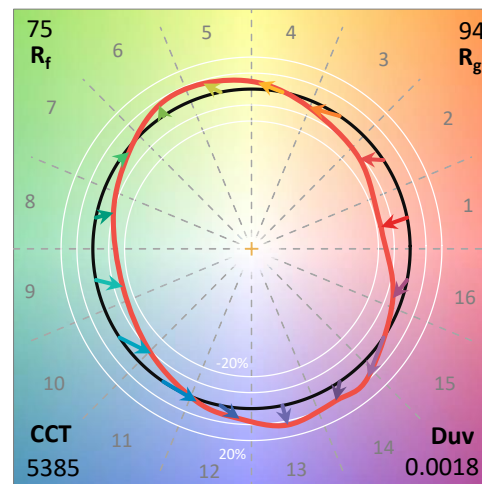
Test Date: 04/21/2021

### Test Information

Test Method: LM-79-08  
 Report Number: SP1-2104-215-3  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry:  $4\pi$   
 Issue Date: 04/21/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: STREETWORKS  
 Catalog Number: **CST-CA6-230-757-U-T4**  
 Description: STREETWORKS HIGH MAST LUMINAIRE

### Spectral Parameters

|                           |        |           |      |      |       |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K):                  | 5385   | CRI (Ra): | 74.4 |      |       |
| CIE u':                   | 0.2065 | R1:       | 71.8 | R9:  | -25.2 |
| CIE v':                   | 0.4808 | R2:       | 79.4 | R10: | 50.6  |
| Duv:                      | 0.0018 | R3:       | 84.2 | R11: | 72.0  |
| CIE x:                    | 0.3351 | R4:       | 74.7 | R12: | 46.0  |
| CIE y:                    | 0.3467 | R5:       | 72.8 | R13: | 73.1  |
| CIE z:                    | 0.3182 | R6:       | 71.2 | R14: | 91.2  |
| Peak Wavelength (nm):     | 450    | R7:       | 82.2 |      |       |
| Dominant Wavelength (nm): | 560    | R8:       | 58.6 |      |       |
| Purity:                   | 4.7    |           |      |      |       |
| Rf:                       | 75.3   |           |      |      |       |
| Rg:                       | 94.2   |           |      |      |       |



### Test Conditions

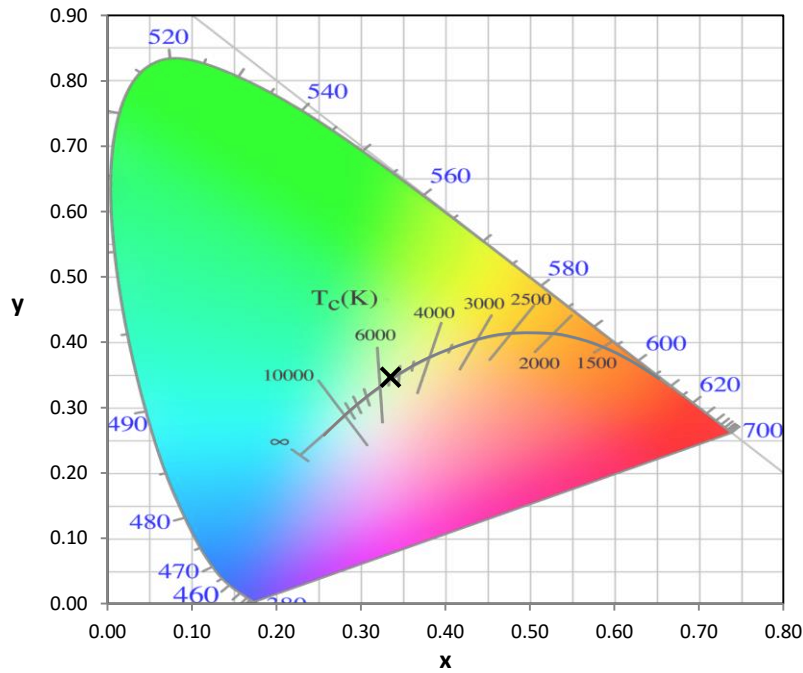
Stabilization Time: 66M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 25.7/32%  
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2104-215-3

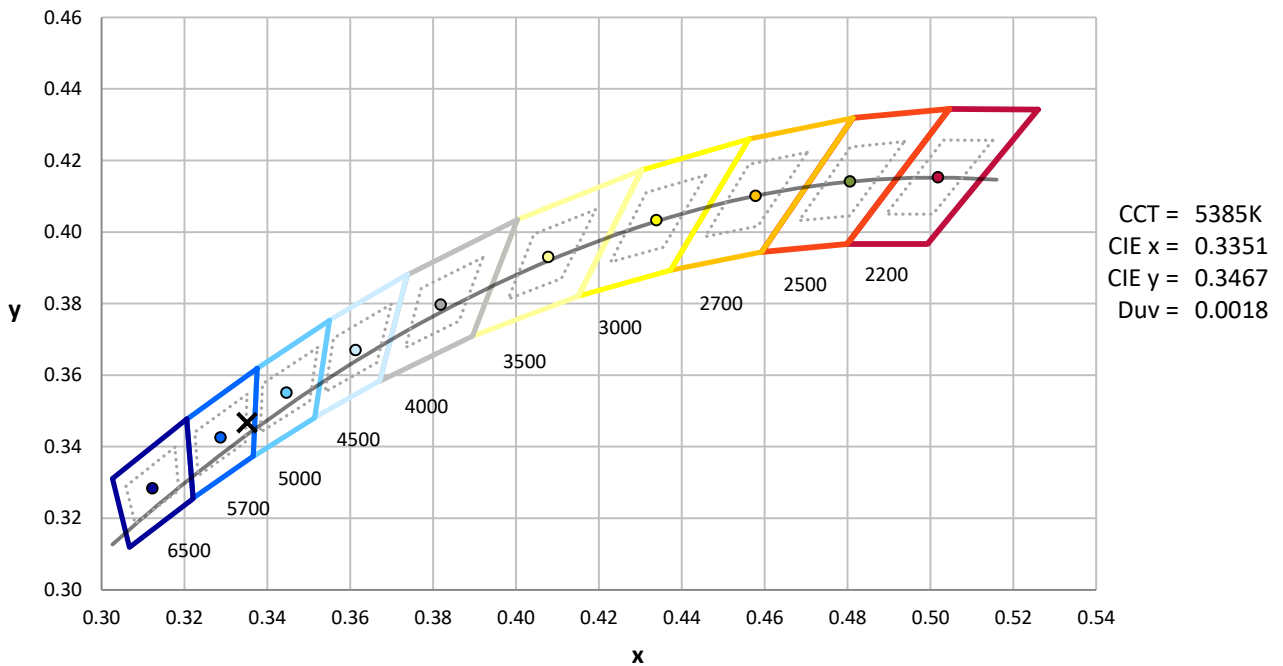
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 1/31/2021        | 7/31/2021            |
| Power Meter                    | IN0071                | 12/1/2020        | 12/1/2021            |
| AC Power Source                | IN0063                | 12/1/2020        | 12/1/2021            |
| DC Power Source                | IN0208                | 12/1/2020        | 12/1/2021            |
| Sphere Thermometer             | IN0085                | 12/1/2020        | 12/1/2021            |
| Room Thermometer               | IN0046                | 12/1/2020        | 12/1/2021            |

REPORT NUMBER: SP1-2104-215-3

**CIE 1931 Chromaticity Diagram**



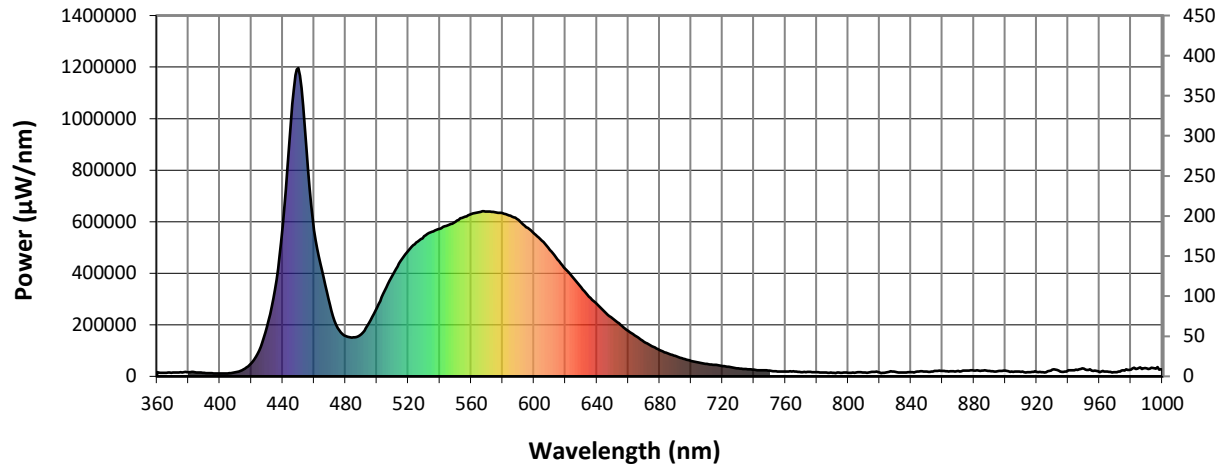
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 5700K 7-step quadrangle

REPORT NUMBER: SP1-2104-215-3

### Photopic Flux vs. Wavelength

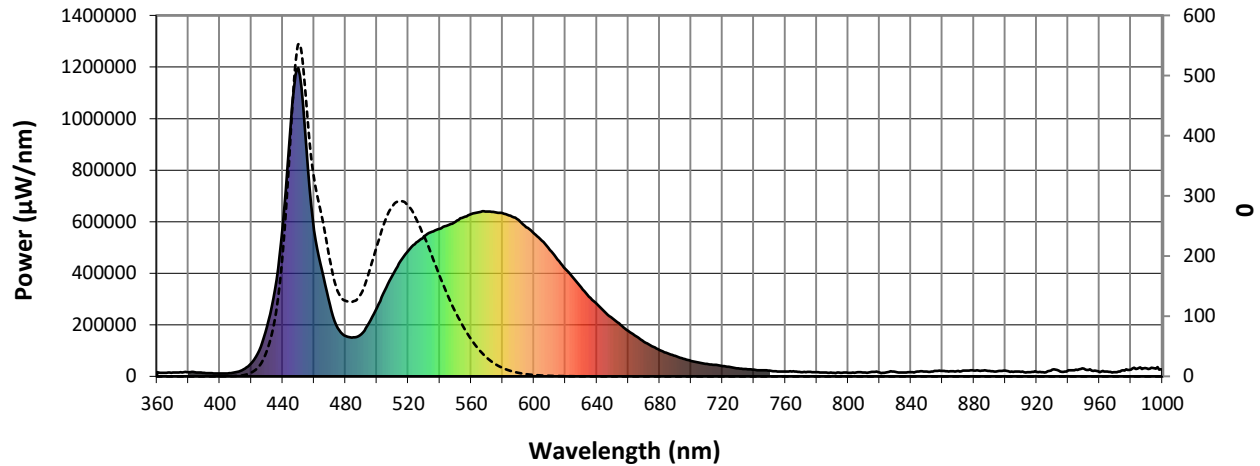


#####

| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 16696            | 0.0              | 490       | 164243           | 23.3             | 620       | 415797           | 108.2            | 750       | 22190            | 0.0              | 880       | 22866            | 0.0              |
| 365       | 13447            | 0.0              | 495       | 207773           | 37.7             | 625       | 382869           | 84.5             | 755       | 18942            | 0.0              | 885       | 21901            | 0.0              |
| 370       | 14521            | 0.0              | 500       | 267487           | 59.0             | 630       | 344785           | 62.4             | 760       | 18760            | 0.0              | 890       | 20912            | 0.0              |
| 375       | 15598            | 0.0              | 505       | 333279           | 93.2             | 635       | 309549           | 46.5             | 765       | 19375            | 0.0              | 895       | 19858            | 0.0              |
| 380       | 16553            | 0.0              | 510       | 393084           | 135.0            | 640       | 280226           | 33.5             | 770       | 16788            | 0.0              | 900       | 21828            | 0.0              |
| 385       | 15196            | 0.0              | 515       | 446481           | 185.0            | 645       | 249624           | 24.0             | 775       | 17302            | 0.0              | 905       | 17086            | 0.0              |
| 390       | 13481            | 0.0              | 520       | 488198           | 236.7            | 650       | 224464           | 16.4             | 780       | 15672            | 0.0              | 910       | 17542            | 0.0              |
| 395       | 11977            | 0.0              | 525       | 518433           | 278.3            | 655       | 199646           | 11.5             | 785       | 14771            | 0.0              | 915       | 16185            | 0.0              |
| 400       | 11331            | 0.0              | 530       | 543281           | 319.9            | 660       | 175926           | 7.3              | 790       | 13984            | 0.0              | 920       | 17995            | 0.0              |
| 405       | 11814            | 0.0              | 535       | 561190           | 348.0            | 665       | 155139           | 4.9              | 795       | 14040            | 0.0              | 925       | 15557            | 0.0              |
| 410       | 16208            | 0.0              | 540       | 572451           | 373.0            | 670       | 134630           | 2.9              | 800       | 13342            | 0.0              | 930       | 26095            | 0.0              |
| 415       | 26808            | 0.0              | 545       | 585457           | 389.7            | 675       | 117218           | 2.0              | 805       | 14668            | 0.0              | 935       | 19199            | 0.0              |
| 420       | 50871            | 0.1              | 550       | 599090           | 407.1            | 680       | 102027           | 1.2              | 810       | 14789            | 0.0              | 940       | 23080            | 0.0              |
| 425       | 101020           | 0.5              | 555       | 616995           | 421.4            | 685       | 89213            | 0.8              | 815       | 17650            | 0.0              | 945       | 26343            | 0.0              |
| 430       | 192411           | 1.5              | 560       | 629425           | 427.7            | 690       | 78917            | 0.4              | 820       | 14937            | 0.0              | 950       | 29934            | 0.0              |
| 435       | 336902           | 4.0              | 565       | 636833           | 423.4            | 695       | 68780            | 0.3              | 825       | 16011            | 0.0              | 955       | 22346            | 0.0              |
| 440       | 581105           | 9.1              | 570       | 639836           | 416.0            | 700       | 60229            | 0.2              | 830       | 16981            | 0.0              | 960       | 16017            | 0.0              |
| 445       | 974221           | 20.3             | 575       | 636704           | 396.2            | 705       | 53321            | 0.1              | 835       | 15554            | 0.0              | 965       | 18299            | 0.0              |
| 450       | 1195987          | 31.0             | 580       | 633339           | 376.3            | 710       | 47871            | 0.1              | 840       | 16030            | 0.0              | 970       | 16401            | 0.0              |
| 455       | 889289           | 29.8             | 585       | 623206           | 346.3            | 715       | 44671            | 0.0              | 845       | 19004            | 0.0              | 975       | 23481            | 0.0              |
| 460       | 566512           | 23.2             | 590       | 607134           | 313.9            | 720       | 40236            | 0.0              | 850       | 18632            | 0.0              | 980       | 26457            | 0.0              |
| 465       | 410582           | 21.2             | 595       | 578226           | 274.1            | 725       | 35616            | 0.0              | 855       | 21549            | 0.0              | 985       | 32065            | 0.0              |
| 470       | 276356           | 17.2             | 600       | 554348           | 238.9            | 730       | 31102            | 0.0              | 860       | 21257            | 0.0              | 990       | 31414            | 0.0              |
| 475       | 187504           | 14.7             | 605       | 526616           | 203.9            | 735       | 28341            | 0.0              | 865       | 20272            | 0.0              | 995       | 30650            | 0.0              |
| 480       | 156769           | 14.9             | 610       | 490933           | 168.7            | 740       | 25553            | 0.0              | 870       | 20808            | 0.0              | 1000      | 26490            | 0.0              |
| 485       | 151040           | 17.9             | 615       | 453646           | 136.9            | 745       | 23976            | 0.0              | 875       | 22729            | 0.0              |           |                  |                  |

REPORT NUMBER: SP1-2104-215-3

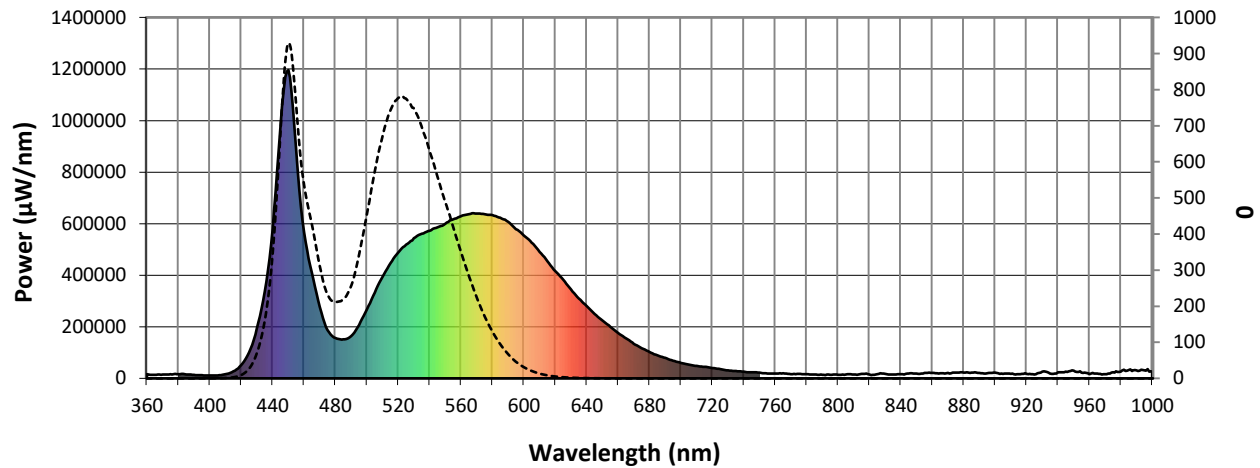
### Scotopic Flux vs. Wavelength


**Scotopic Lumens: 72376.6**
**S/P: 1.89**

| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 16696            | 0.0              | 490       | 164243           | 252.9            | 620       | 415797           | 5.2              | 750       | 22190            | 0.0              | 880       | 22866            | 0.0              |
| 365       | 13447            | 0.0              | 495       | 207773           | 335.9            | 625       | 382869           | 3.2              | 755       | 18942            | 0.0              | 885       | 21901            | 0.0              |
| 370       | 14521            | 0.0              | 500       | 267487           | 447.4            | 630       | 344785           | 2.0              | 760       | 18760            | 0.0              | 890       | 20912            | 0.0              |
| 375       | 15598            | 0.0              | 505       | 333279           | 566.6            | 635       | 309549           | 1.2              | 765       | 19375            | 0.0              | 895       | 19858            | 0.0              |
| 380       | 16553            | 0.0              | 510       | 393084           | 666.2            | 640       | 280226           | 0.7              | 770       | 16788            | 0.0              | 900       | 21828            | 0.0              |
| 385       | 15196            | 0.0              | 515       | 446481           | 740.0            | 645       | 249624           | 0.4              | 775       | 17302            | 0.0              | 905       | 17086            | 0.0              |
| 390       | 13481            | 0.1              | 520       | 488198           | 776.0            | 650       | 224464           | 0.3              | 780       | 15672            | 0.0              | 910       | 17542            | 0.0              |
| 395       | 11977            | 0.1              | 525       | 518433           | 775.6            | 655       | 199646           | 0.2              | 785       | 14771            | 0.0              | 915       | 16185            | 0.0              |
| 400       | 11331            | 0.2              | 530       | 543281           | 749.0            | 660       | 175926           | 0.1              | 790       | 13984            | 0.0              | 920       | 17995            | 0.0              |
| 405       | 11814            | 0.4              | 535       | 561190           | 699.3            | 665       | 155139           | 0.1              | 795       | 14040            | 0.0              | 925       | 15557            | 0.0              |
| 410       | 16208            | 1.0              | 540       | 572451           | 632.6            | 670       | 134630           | 0.0              | 800       | 13342            | 0.0              | 930       | 26095            | 0.0              |
| 415       | 26808            | 2.8              | 545       | 585457           | 561.3            | 675       | 117218           | 0.0              | 805       | 14668            | 0.0              | 935       | 19199            | 0.0              |
| 420       | 50871            | 8.4              | 550       | 599090           | 489.9            | 680       | 102027           | 0.0              | 810       | 14789            | 0.0              | 940       | 23080            | 0.0              |
| 425       | 101020           | 24.7             | 555       | 616995           | 421.7            | 685       | 89213            | 0.0              | 815       | 17650            | 0.0              | 945       | 26343            | 0.0              |
| 430       | 192411           | 65.5             | 560       | 629425           | 351.8            | 690       | 78917            | 0.0              | 820       | 14937            | 0.0              | 950       | 29934            | 0.0              |
| 435       | 336902           | 150.6            | 565       | 636833           | 285.7            | 695       | 68780            | 0.0              | 825       | 16011            | 0.0              | 955       | 22346            | 0.0              |
| 440       | 581105           | 324.8            | 570       | 639836           | 225.8            | 700       | 60229            | 0.0              | 830       | 16981            | 0.0              | 960       | 16017            | 0.0              |
| 445       | 974221           | 652.3            | 575       | 636704           | 173.4            | 705       | 53321            | 0.0              | 835       | 15554            | 0.0              | 965       | 18299            | 0.0              |
| 450       | 1195987          | 927.0            | 580       | 633339           | 130.5            | 710       | 47871            | 0.0              | 840       | 16030            | 0.0              | 970       | 16401            | 0.0              |
| 455       | 889289           | 777.1            | 585       | 623206           | 95.2             | 715       | 44671            | 0.0              | 845       | 19004            | 0.0              | 975       | 23481            | 0.0              |
| 460       | 566512           | 547.2            | 590       | 607134           | 67.6             | 720       | 40236            | 0.0              | 850       | 18632            | 0.0              | 980       | 26457            | 0.0              |
| 465       | 410582           | 433.6            | 595       | 578226           | 46.1             | 725       | 35616            | 0.0              | 855       | 21549            | 0.0              | 985       | 32065            | 0.0              |
| 470       | 276356           | 318.2            | 600       | 554348           | 31.2             | 730       | 31102            | 0.0              | 860       | 21257            | 0.0              | 990       | 31414            | 0.0              |
| 475       | 187504           | 234.4            | 605       | 526616           | 20.7             | 735       | 28341            | 0.0              | 865       | 20272            | 0.0              | 995       | 30650            | 0.0              |
| 480       | 156769           | 211.8            | 610       | 490933           | 13.3             | 740       | 25553            | 0.0              | 870       | 20808            | 0.0              | 1000      | 26490            | 0.0              |
| 485       | 151040           | 218.9            | 615       | 453646           | 8.4              | 745       | 23976            | 0.0              | 875       | 22729            | 0.0              |           |                  |                  |

REPORT NUMBER: SP1-2104-215-3

### Melanopic Flux vs. Wavelength



**Melanopic Lumens: 29860.2**      **M/P: 0.78**

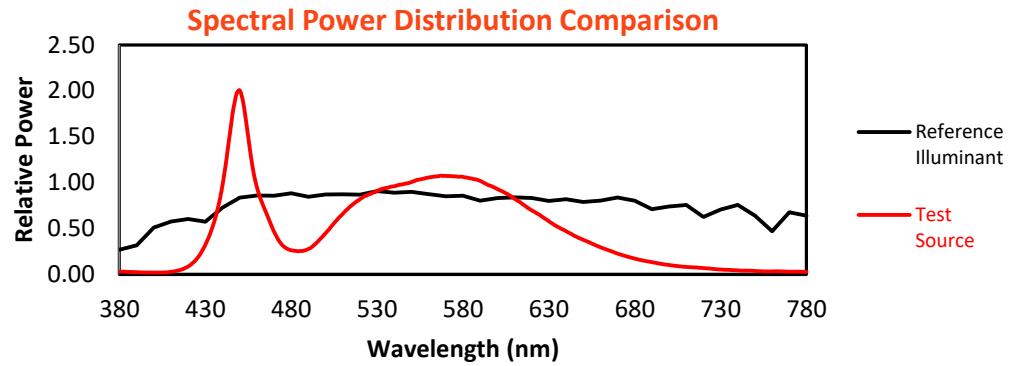
| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 16696            | 0.0              | 490       | 164243           | 136.7            | 620       | 415797           | 0.3              | 750       | 22190            | 0.0              | 880       | 22866            | 0.0              |
| 365       | 13447            | 0.0              | 495       | 207773           | 171.5            | 625       | 382869           | 0.2              | 755       | 18942            | 0.0              | 885       | 21901            | 0.0              |
| 370       | 14521            | 0.0              | 500       | 267487           | 215.0            | 630       | 344785           | 0.1              | 760       | 18760            | 0.0              | 890       | 20912            | 0.0              |
| 375       | 15598            | 0.0              | 505       | 333279           | 255.8            | 635       | 309549           | 0.1              | 765       | 19375            | 0.0              | 895       | 19858            | 0.0              |
| 380       | 16553            | 0.0              | 510       | 393084           | 282.2            | 640       | 280226           | 0.0              | 770       | 16788            | 0.0              | 900       | 21828            | 0.0              |
| 385       | 15196            | 0.0              | 515       | 446481           | 291.7            | 645       | 249624           | 0.0              | 775       | 17302            | 0.0              | 905       | 17086            | 0.0              |
| 390       | 13481            | 0.0              | 520       | 488198           | 284.2            | 650       | 224464           | 0.0              | 780       | 15672            | 0.0              | 910       | 17542            | 0.0              |
| 395       | 11977            | 0.1              | 525       | 518433           | 262.9            | 655       | 199646           | 0.0              | 785       | 14771            | 0.0              | 915       | 16185            | 0.0              |
| 400       | 11331            | 0.1              | 530       | 543281           | 234.8            | 660       | 175926           | 0.0              | 790       | 13984            | 0.0              | 920       | 17995            | 0.0              |
| 405       | 11814            | 0.2              | 535       | 561190           | 202.0            | 665       | 155139           | 0.0              | 795       | 14040            | 0.0              | 925       | 15557            | 0.0              |
| 410       | 16208            | 0.6              | 540       | 572451           | 167.5            | 670       | 134630           | 0.0              | 800       | 13342            | 0.0              | 930       | 26095            | 0.0              |
| 415       | 26808            | 1.8              | 545       | 585457           | 136.0            | 675       | 117218           | 0.0              | 805       | 14668            | 0.0              | 935       | 19199            | 0.0              |
| 420       | 50871            | 5.8              | 550       | 599090           | 107.5            | 680       | 102027           | 0.0              | 810       | 14789            | 0.0              | 940       | 23080            | 0.0              |
| 425       | 101020           | 15.7             | 555       | 616995           | 83.2             | 685       | 89213            | 0.0              | 815       | 17650            | 0.0              | 945       | 26343            | 0.0              |
| 430       | 192411           | 40.6             | 560       | 629425           | 62.1             | 690       | 78917            | 0.0              | 820       | 14937            | 0.0              | 950       | 29934            | 0.0              |
| 435       | 336902           | 89.9             | 565       | 636833           | 44.7             | 695       | 68780            | 0.0              | 825       | 16011            | 0.0              | 955       | 22346            | 0.0              |
| 440       | 581105           | 194.2            | 570       | 639836           | 31.3             | 700       | 60229            | 0.0              | 830       | 16981            | 0.0              | 960       | 16017            | 0.0              |
| 445       | 974221           | 384.3            | 575       | 636704           | 21.2             | 705       | 53321            | 0.0              | 835       | 15554            | 0.0              | 965       | 18299            | 0.0              |
| 450       | 1195987          | 551.1            | 580       | 633339           | 14.2             | 710       | 47871            | 0.0              | 840       | 16030            | 0.0              | 970       | 16401            | 0.0              |
| 455       | 889289           | 465.9            | 585       | 623206           | 9.3              | 715       | 44671            | 0.0              | 845       | 19004            | 0.0              | 975       | 23481            | 0.0              |
| 460       | 566512           | 333.8            | 590       | 607134           | 6.0              | 720       | 40236            | 0.0              | 850       | 18632            | 0.0              | 980       | 26457            | 0.0              |
| 465       | 410582           | 268.3            | 595       | 578226           | 3.7              | 725       | 35616            | 0.0              | 855       | 21549            | 0.0              | 985       | 32065            | 0.0              |
| 470       | 276356           | 197.8            | 600       | 554348           | 2.3              | 730       | 31102            | 0.0              | 860       | 21257            | 0.0              | 990       | 31414            | 0.0              |
| 475       | 187504           | 143.2            | 605       | 526616           | 1.5              | 735       | 28341            | 0.0              | 865       | 20272            | 0.0              | 995       | 30650            | 0.0              |
| 480       | 156769           | 126.0            | 610       | 490933           | 0.9              | 740       | 25553            | 0.0              | 870       | 20808            | 0.0              | 1000      | 26490            | 0.0              |
| 485       | 151040           | 124.5            | 615       | 453646           | 0.5              | 745       | 23976            | 0.0              | 875       | 22729            | 0.0              |           |                  |                  |

REPORT NUMBER: SP1-2104-215-3

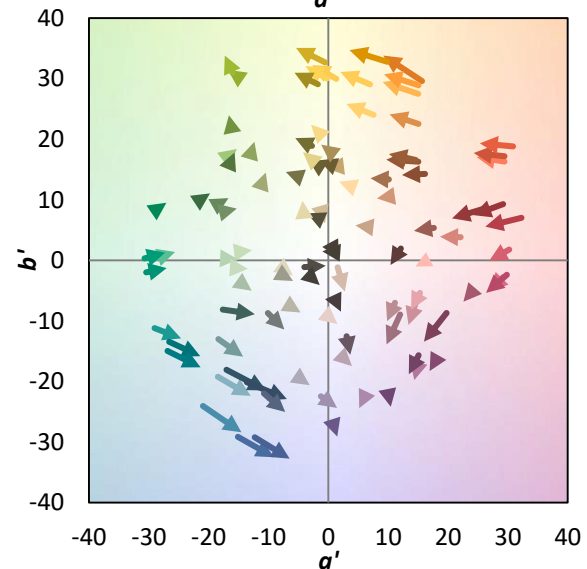
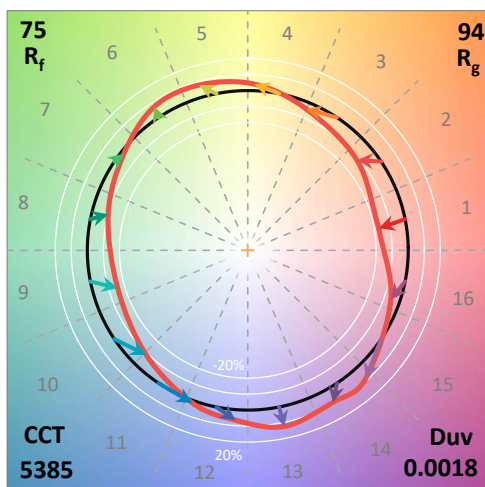
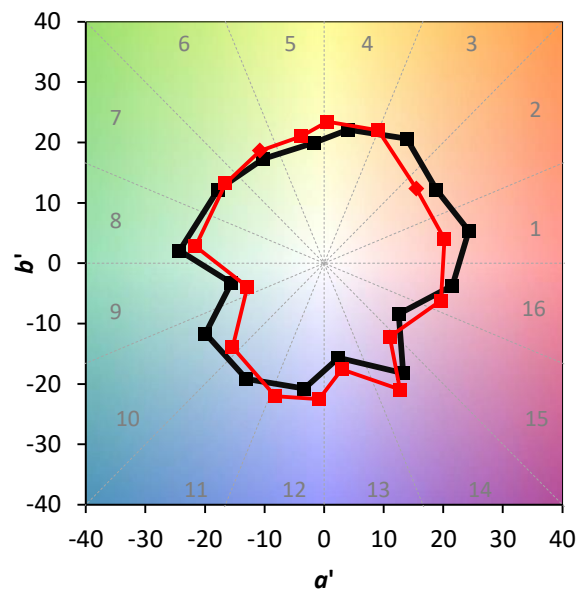
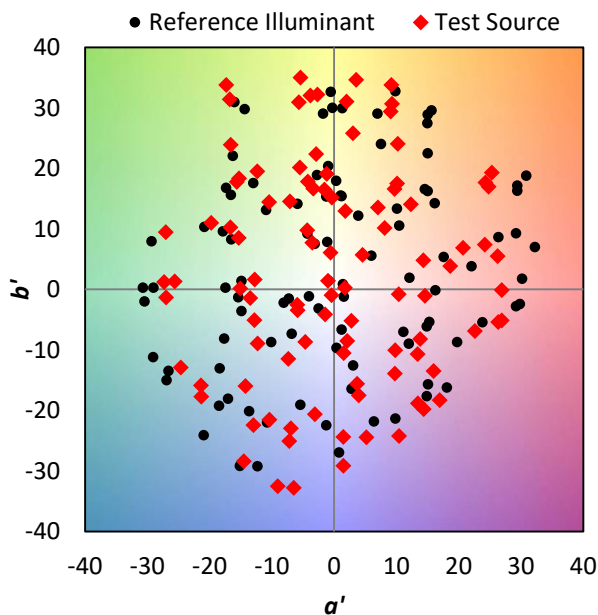
TM-30-18

### Summary

$R_f = 75.3$   
 $R_g = 94.2$   
 CIE  $R_a = 74.4$   
 $R_g = -25.2$

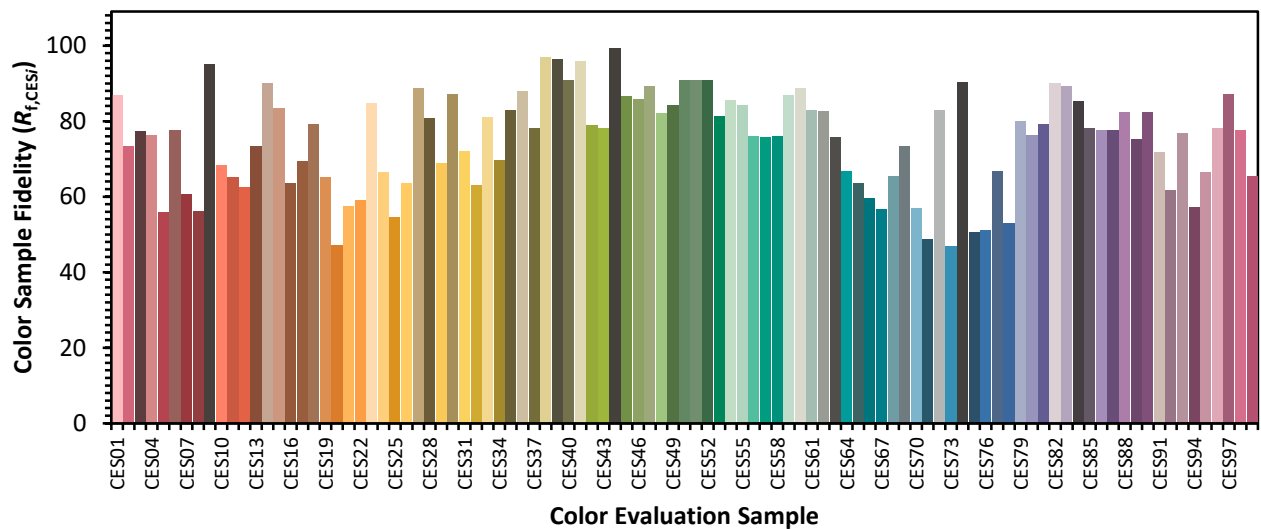


### Color Vector Graphics

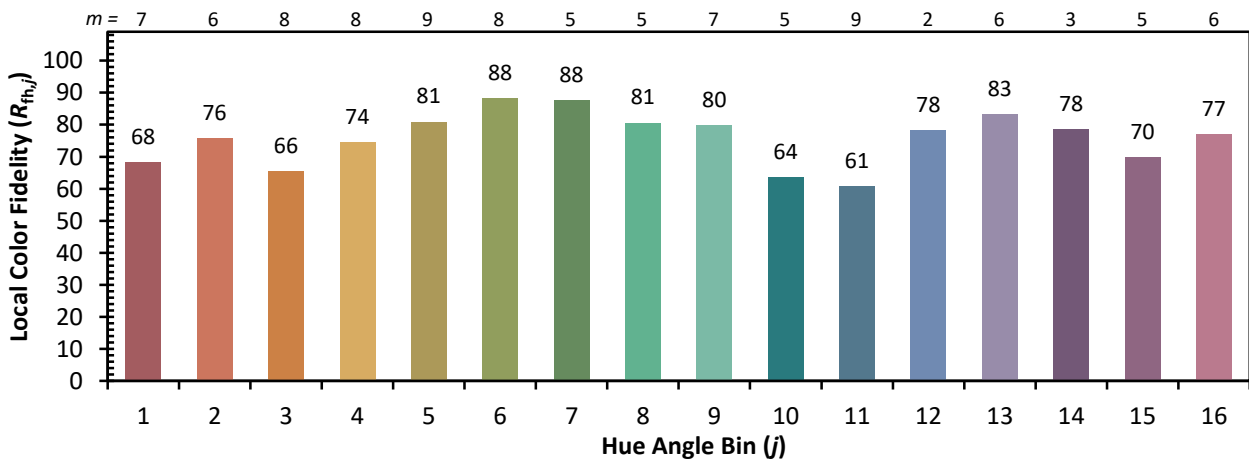
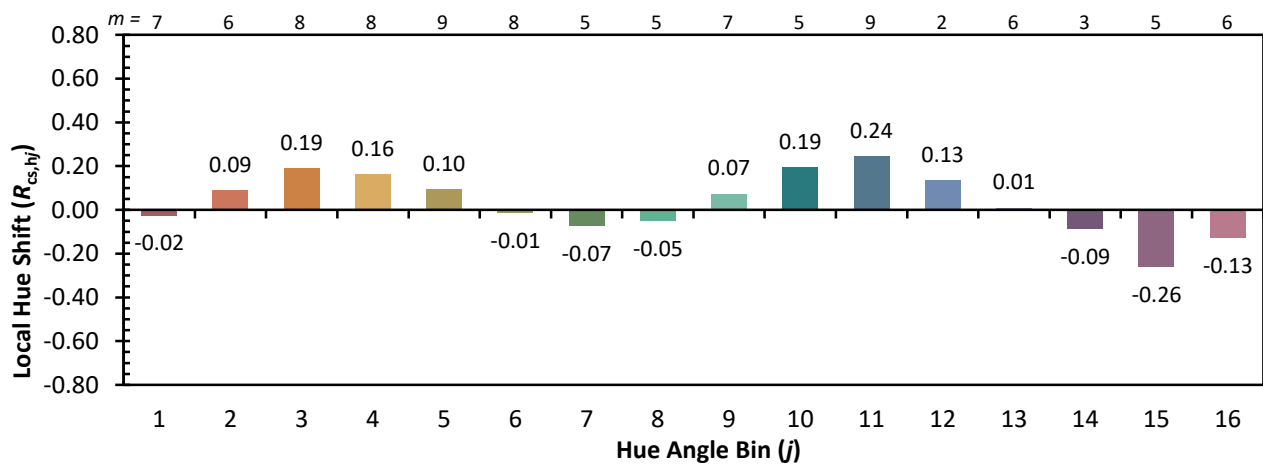
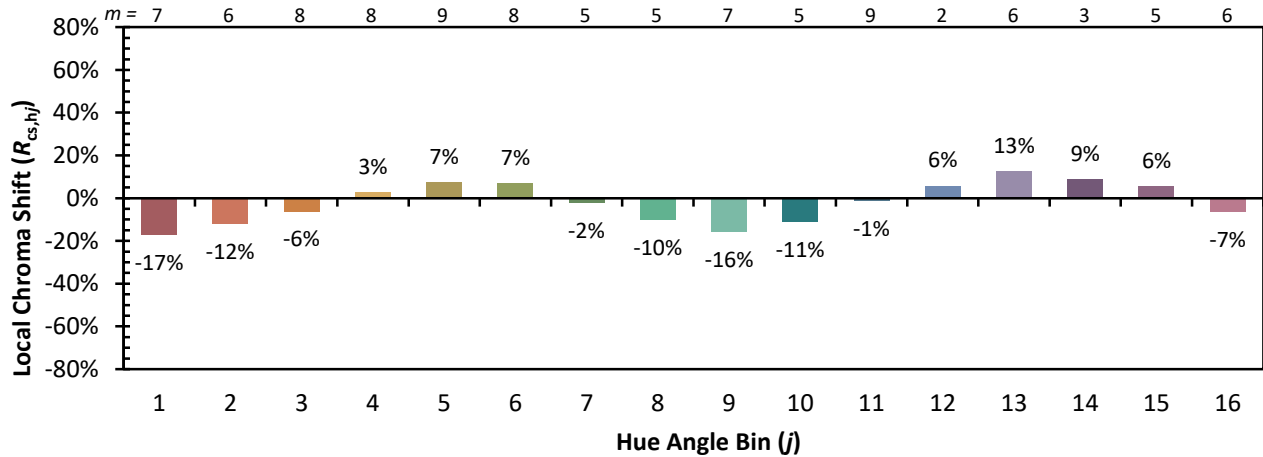


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

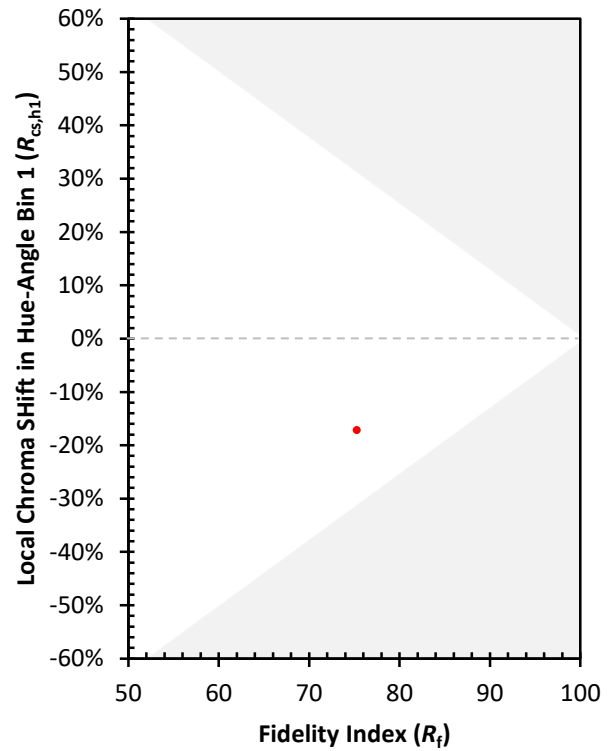
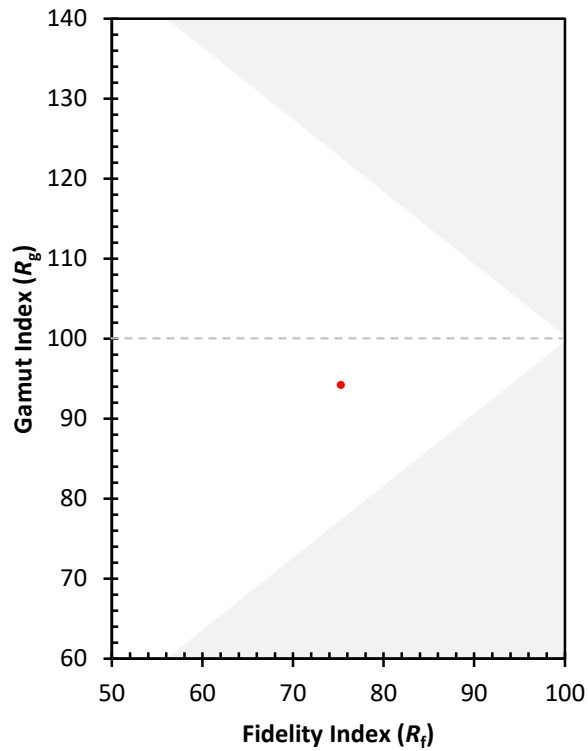
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 64 | CES51 = 91 | CES76 = 51 |
| CES02 = 59 | CES27 = 89 | CES52 = 91 | CES77 = 67 |
| CES03 = 30 | CES28 = 81 | CES53 = 81 | CES78 = 53 |
| CES04 = 69 | CES29 = 69 | CES54 = 86 | CES79 = 80 |
| CES05 = 46 | CES30 = 87 | CES55 = 84 | CES80 = 76 |
| CES06 = 50 | CES31 = 72 | CES56 = 76 | CES81 = 79 |
| CES07 = 38 | CES32 = 63 | CES57 = 76 | CES82 = 90 |
| CES08 = 38 | CES33 = 81 | CES58 = 76 | CES83 = 89 |
| CES09 = 29 | CES34 = 70 | CES59 = 87 | CES84 = 85 |
| CES10 = 72 | CES35 = 83 | CES60 = 89 | CES85 = 78 |
| CES11 = 55 | CES36 = 88 | CES61 = 83 | CES86 = 78 |
| CES12 = 61 | CES37 = 78 | CES62 = 83 | CES87 = 77 |
| CES13 = 41 | CES38 = 97 | CES63 = 76 | CES88 = 82 |
| CES14 = 74 | CES39 = 96 | CES64 = 67 | CES89 = 75 |
| CES15 = 70 | CES40 = 91 | CES65 = 64 | CES90 = 82 |
| CES16 = 46 | CES41 = 96 | CES66 = 60 | CES91 = 72 |
| CES17 = 48 | CES42 = 79 | CES67 = 57 | CES92 = 62 |
| CES18 = 55 | CES43 = 78 | CES68 = 65 | CES93 = 77 |
| CES19 = 71 | CES44 = 99 | CES69 = 73 | CES94 = 57 |
| CES20 = 64 | CES45 = 87 | CES70 = 57 | CES95 = 66 |
| CES21 = 85 | CES46 = 86 | CES71 = 49 | CES96 = 78 |
| CES22 = 77 | CES47 = 89 | CES72 = 83 | CES97 = 87 |
| CES23 = 91 | CES48 = 82 | CES73 = 47 | CES98 = 78 |
| CES24 = 90 | CES49 = 84 | CES74 = 90 | CES99 = 65 |
| CES25 = 71 | CES50 = 91 | CES75 = 51 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)