

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: P579574

Luminaire Tested: **CST-CA10-310-760-U-T5-HSS-HM-EX120**

Issue Date: 11/18/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P579574  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2110-429-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/18/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: CST-CA10-310-760-U-T5-HSS-HM-EX120  
Description: CELESTEON HIGH MAST LUMINAIRE WITH FIELD INSTALLED SHIELD  
Light Source: (10) 5700K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 35504 lumens  
Efficiency: N/A  
Efficacy: 113.6 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B4 - U2 - G5

Input Watts (W): 312.4  
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

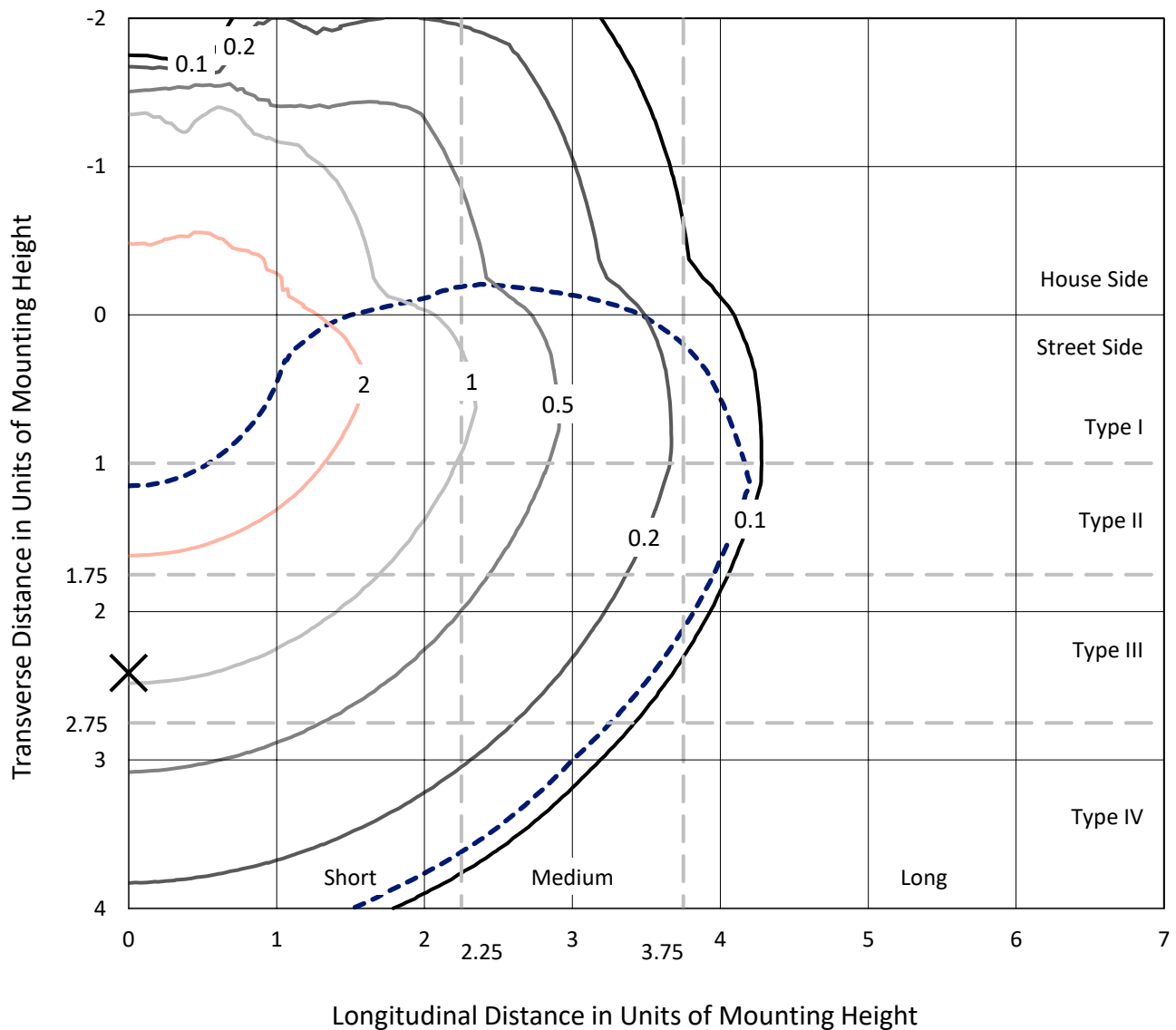


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

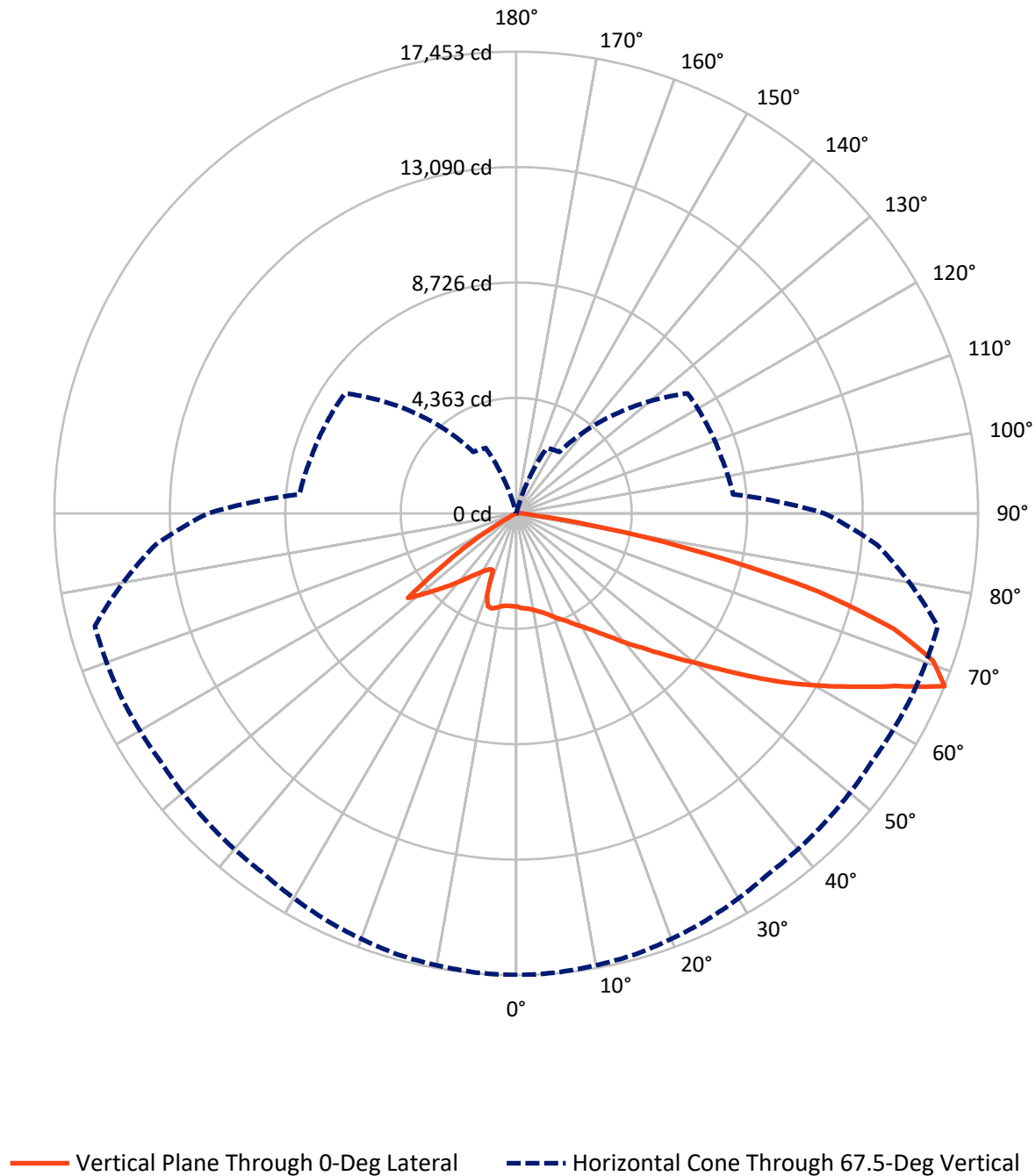


Based on 30 foot mounting height. Maximum calculated value = 4 fc  
 Type IV - Short - N/A

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## Luminous Intensity Polar Plot



REPORT NUMBER: P579574

CATALOG NUMBER: CST-CA10-310-760-U-T5-HSS-HM-EX120

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 10598.1  | 3.6    | 10601.7 |
|                    | % Fixture | 29.9     | 0.0    | 29.9    |
| <b>Street Side</b> | Lumens    | 24862.3  | 40.0   | 24902.3 |
|                    | % Fixture | 70.0     | 0.1    | 70.1    |
| <b>Total</b>       | Lumens    | 35460.5  | 43.5   | 35504.0 |
|                    | % Fixture | 99.9     | 0.1    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 339.2   | 1.0       |
| 10°-20°   | 1050.0  | 3.0       |
| 20°-30°   | 1762.1  | 5.0       |
| 30°-40°   | 2857.4  | 8.0       |
| 40°-50°   | 4669.2  | 13.2      |
| 50°-60°   | 7317.5  | 20.6      |
| 60°-70°   | 9800.4  | 27.6      |
| 70°-80°   | 7143.1  | 20.1      |
| 80°-90°   | 521.6   | 1.5       |
| 90°-100°  | 33.4    | 0.1       |
| 100°-110° | 9.5     | 0.0       |
| 110°-120° | 0.7     | 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°    | 35460.5 | 99.9      |
| 0°-180°   | 35504.0 | 100.0     |

**Coefficient of Utilization**



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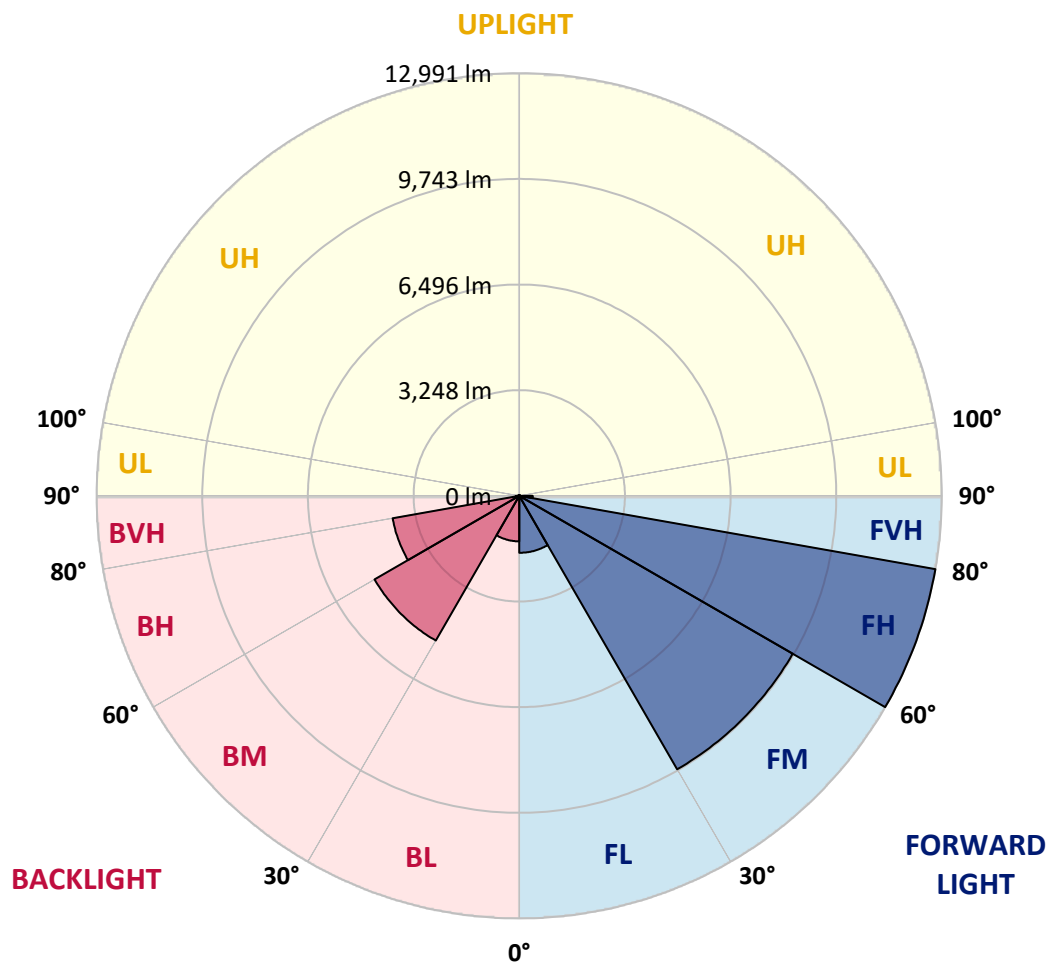
CATALOG NUMBER: CST-CA10-310-760-U-T5-HSS-HM-EX120

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |       |         |
|------|-------------|---------|-----------|-------------------------|-------|---------|
|      |             |         |           | B                       | U     | G       |
| FL   | (0°-30°)    | 1751.2  | 4.9       |                         |       |         |
| FM   | (30°-60°)   | 9707.4  | 27.3      |                         |       |         |
| FH   | (60°-80°)   | 12991.2 | 36.6      |                         |       | G5      |
| FVH  | (80°-90°)   | 412.5   | 1.2       |                         |       | G3/500  |
| BL   | (0°-30°)    | 1400.0  | 3.9       | B3/2500                 |       |         |
| BM   | (30°-60°)   | 5136.6  | 14.5      | B4/8500                 |       |         |
| BH   | (60°-80°)   | 3952.4  | 11.1      | B4/5000                 |       | G4/5000 |
| BVH  | (80°-90°)   | 109.1   | 0.3       |                         |       | G2/225  |
| UL   | (90°-100°)  | 33.4    | 0.1       |                         | U2/50 |         |
| UH   | (100°-180°) | 10.2    | 0.0       |                         | U2/50 |         |

**BUG Rating: B4-U2-G5**

Type IV Short



REPORT NUMBER: P579574

CATALOG NUMBER: CST-CA10-310-760-U-T5-HSS-HM-EX120

**CANDELA DISTRIBUTION (FULL):**

|        | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 85°     | 90°     |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°     | 3518.0  | 3518.0  | 3518.0  | 3518.0  | 3518.0  | 3518.0  | 3518.0  | 3518.0  | 3518.0  | 3518.0  | 3518.0  |
| 2.5°   | 3585.2  | 3564.3  | 3565.8  | 3585.2  | 3527.0  | 3546.4  | 3521.0  | 3540.4  | 3527.0  | 3531.5  | 3540.4  |
| 5°     | 3607.6  | 3585.2  | 3586.7  | 3610.6  | 3558.3  | 3574.8  | 3540.4  | 3550.9  | 3538.9  | 3544.9  | 3544.9  |
| 7.5°   | 3652.4  | 3627.0  | 3625.5  | 3640.4  | 3586.7  | 3592.7  | 3561.3  | 3562.8  | 3544.9  | 3556.8  | 3550.9  |
| 10°    | 3719.5  | 3698.6  | 3683.7  | 3692.7  | 3644.9  | 3641.9  | 3601.6  | 3603.1  | 3580.7  | 3594.2  | 3583.7  |
| 12.5°  | 3801.6  | 3773.3  | 3770.3  | 3773.3  | 3721.0  | 3709.1  | 3667.3  | 3670.3  | 3630.0  | 3650.9  | 3638.9  |
| 15°    | 3906.1  | 3861.3  | 3861.3  | 3877.8  | 3810.6  | 3801.6  | 3750.9  | 3753.9  | 3712.1  | 3728.5  | 3716.6  |
| 17.5°  | 4034.5  | 3991.2  | 3983.7  | 3995.7  | 3937.5  | 3925.5  | 3873.3  | 3870.3  | 3824.0  | 3828.5  | 3818.1  |
| 20°    | 4200.2  | 4156.9  | 4139.0  | 4168.8  | 4095.7  | 4086.7  | 4024.0  | 4018.1  | 3968.8  | 3955.4  | 3949.4  |
| 22.5°  | 4353.9  | 4319.6  | 4310.6  | 4343.4  | 4267.3  | 4259.9  | 4200.2  | 4192.7  | 4146.4  | 4127.0  | 4009.1  |
| 25°    | 4527.0  | 4519.6  | 4516.6  | 4527.0  | 4455.4  | 4440.5  | 4394.2  | 4383.7  | 4344.9  | 4321.1  | 4177.8  |
| 27.5°  | 4750.9  | 4747.9  | 4739.0  | 4740.5  | 4674.8  | 4661.4  | 4618.1  | 4610.6  | 4570.3  | 4543.5  | 4359.9  |
| 30°    | 4985.3  | 4985.3  | 4965.9  | 4976.3  | 4943.5  | 4922.6  | 4888.2  | 4861.4  | 4836.0  | 4807.6  | 4576.3  |
| 32.5°  | 5255.4  | 5253.9  | 5236.0  | 5267.4  | 5243.5  | 5243.5  | 5222.6  | 5194.2  | 5149.4  | 5136.0  | 4855.4  |
| 35°    | 5603.2  | 5580.8  | 5573.3  | 5624.1  | 5616.6  | 5630.1  | 5622.6  | 5592.7  | 5555.4  | 5524.1  | 5183.8  |
| 37.5°  | 5988.3  | 5982.3  | 6004.7  | 6036.0  | 6052.5  | 6088.3  | 6065.9  | 6064.4  | 6058.4  | 5979.3  | 5095.7  |
| 40°    | 6462.9  | 6437.6  | 6468.9  | 6485.3  | 6473.4  | 6531.6  | 6512.2  | 6528.6  | 6573.4  | 5937.5  | 5089.7  |
| 42.5°  | 6936.1  | 6913.7  | 6936.1  | 7016.7  | 6998.8  | 7068.9  | 7060.0  | 7124.1  | 7149.5  | 6025.6  | 5503.2  |
| 45°    | 7518.2  | 7492.8  | 7510.7  | 7606.3  | 7615.2  | 7700.3  | 7746.6  | 7807.8  | 7819.7  | 6595.8  | 6001.7  |
| 47.5°  | 8186.9  | 8145.1  | 8179.4  | 8224.2  | 8360.0  | 8440.6  | 8485.4  | 8560.0  | 8636.1  | 7282.4  | 6568.9  |
| 50°    | 8924.2  | 8921.2  | 8958.5  | 9036.2  | 9191.4  | 9272.0  | 9349.6  | 9427.2  | 9552.6  | 8048.1  | 7204.7  |
| 52.5°  | 9861.6  | 9842.2  | 9906.3  | 9979.5  | 10116.8 | 10240.7 | 10333.2 | 10413.8 | 10548.2 | 8822.7  | 7892.8  |
| 55°    | 10933.2 | 10866.1 | 10988.5 | 11112.4 | 11170.6 | 11316.8 | 11381.0 | 11448.2 | 11576.5 | 9637.7  | 8294.3  |
| 57.5°  | 12090.0 | 12073.6 | 12158.7 | 12203.4 | 12328.8 | 12419.9 | 12454.2 | 12527.3 | 12525.8 | 10485.5 | 8977.9  |
| 60°    | 13228.8 | 13210.9 | 13310.9 | 13337.8 | 13437.8 | 13519.9 | 13508.0 | 13573.6 | 13597.5 | 11281.0 | 9648.1  |
| 62.5°  | 14427.4 | 14397.5 | 14490.1 | 14496.1 | 14436.4 | 14569.2 | 14555.8 | 14611.0 | 14590.1 | 12058.7 | 10307.8 |
| 65°    | 15737.9 | 15760.3 | 15790.1 | 15667.7 | 15524.5 | 15639.4 | 15636.4 | 15740.9 | 15815.5 | 13145.3 | 11191.5 |
| 67.5°  | 17452.9 | 17424.5 | 17270.8 | 16975.3 | 16627.5 | 16511.1 | 16387.2 | 16463.3 | 16484.2 | 13685.6 | 11643.7 |
| 70°    | 16712.6 | 16649.9 | 16581.2 | 16279.7 | 15860.3 | 15564.8 | 15372.2 | 15452.8 | 15537.9 | 12933.3 | 10936.2 |
| 72.5°  | 14908.0 | 14752.8 | 14433.4 | 14167.7 | 13925.9 | 13637.8 | 13403.5 | 13543.8 | 13730.4 | 11472.1 | 9683.9  |
| 75°    | 11761.6 | 11616.8 | 11384.0 | 11203.4 | 11073.5 | 11070.6 | 11060.1 | 11169.1 | 11142.2 | 9315.3  | 7873.4  |
| 77.5°  | 7283.9  | 7586.8  | 7801.8  | 7648.0  | 7701.8  | 7591.3  | 7834.6  | 7977.9  | 8107.8  | 6677.9  | 5609.2  |
| 80°    | 3362.8  | 3440.4  | 3821.0  | 3722.5  | 3643.4  | 3621.0  | 3636.0  | 3885.2  | 3958.4  | 2997.1  | 2510.5  |
| 82.5°  | 767.2   | 735.8   | 762.7   | 707.5   | 704.5   | 671.7   | 676.1   | 676.1   | 652.3   | 552.3   | 462.7   |
| 85°    | 388.1   | 397.0   | 400.0   | 383.6   | 338.8   | 304.5   | 282.1   | 238.8   | 206.0   | 176.1   | 149.3   |
| 87.5°  | 259.7   | 267.2   | 271.7   | 249.3   | 223.9   | 195.5   | 177.6   | 144.8   | 114.9   | 71.6    | 55.2    |
| 90°    | 177.6   | 176.1   | 171.6   | 159.7   | 143.3   | 122.4   | 98.5    | 68.7    | 40.3    | 14.9    | 10.4    |
| 92.5°  | 126.9   | 123.9   | 122.4   | 111.9   | 100.0   | 83.6    | 64.2    | 43.3    | 22.4    | 10.4    | 6.0     |
| 95°    | 83.6    | 82.1    | 82.1    | 76.1    | 67.2    | 55.2    | 43.3    | 28.4    | 16.4    | 9.0     | 6.0     |
| 97.5°  | 58.2    | 56.7    | 56.7    | 53.7    | 47.8    | 40.3    | 29.9    | 19.4    | 13.4    | 9.0     | 6.0     |
| 100°   | 40.3    | 40.3    | 40.3    | 37.3    | 34.3    | 28.4    | 22.4    | 14.9    | 11.9    | 9.0     | 6.0     |
| 102.5° | 26.9    | 26.9    | 28.4    | 26.9    | 23.9    | 19.4    | 14.9    | 11.9    | 10.4    | 7.5     | 6.0     |
| 105°   | 17.9    | 17.9    | 17.9    | 17.9    | 16.4    | 13.4    | 11.9    | 10.4    | 9.0     | 7.5     | 6.0     |
| 107.5° | 11.9    | 11.9    | 11.9    | 11.9    | 10.4    | 9.0     | 9.0     | 9.0     | 7.5     | 7.5     | 6.0     |
| 110°   | 7.5     | 7.5     | 7.5     | 9.0     | 7.5     | 7.5     | 7.5     | 7.5     | 7.5     | 6.0     | 6.0     |



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CATALOG NUMBER: CST-CA10-310-760-U-T5-HSS-HM-EX120

**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 |



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**CANDELA DISTRIBUTION (continued):**

|        | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 3518.0 | 3518.0 | 3518.0 | 3518.0 | 3518.0 | 3518.0 | 3518.0 | 3518.0 | 3518.0 | 3518.0 |
| 2.5°   | 3533.0 | 3512.1 | 3522.5 | 3501.6 | 3492.7 | 3473.3 | 3510.6 | 3513.6 | 3510.6 | 3516.5 |
| 5°     | 3537.4 | 3513.6 | 3525.5 | 3501.6 | 3497.1 | 3474.8 | 3512.1 | 3512.1 | 3503.1 | 3507.6 |
| 7.5°   | 3547.9 | 3522.5 | 3531.5 | 3503.1 | 3503.1 | 3476.2 | 3521.0 | 3518.0 | 3510.6 | 3521.0 |
| 10°    | 3583.7 | 3553.9 | 3553.9 | 3527.0 | 3530.0 | 3501.6 | 3556.8 | 3556.8 | 3550.9 | 3568.8 |
| 12.5°  | 3638.9 | 3601.6 | 3603.1 | 3565.8 | 3571.8 | 3549.4 | 3616.6 | 3619.5 | 3619.5 | 3649.4 |
| 15°    | 3710.6 | 3653.9 | 3659.8 | 3619.5 | 3631.5 | 3604.6 | 3664.3 | 3661.3 | 3668.8 | 3712.1 |
| 17.5°  | 3798.6 | 3736.0 | 3683.7 | 3552.4 | 3474.8 | 3477.7 | 3655.4 | 3737.5 | 3641.9 | 3670.3 |
| 20°    | 3836.0 | 3531.5 | 3365.8 | 3318.0 | 3307.6 | 3141.9 | 2803.1 | 2855.3 | 3174.7 | 3313.6 |
| 22.5°  | 3585.2 | 3488.2 | 3471.8 | 3410.6 | 2958.3 | 2832.9 | 2853.8 | 2824.0 | 2510.5 | 2332.9 |
| 25°    | 3707.6 | 3643.4 | 3606.1 | 3067.3 | 2965.8 | 2943.4 | 2928.5 | 2644.9 | 2304.6 | 2321.0 |
| 27.5°  | 3880.7 | 3797.2 | 3349.4 | 3080.7 | 3100.1 | 3065.8 | 2979.2 | 2379.2 | 2368.7 | 2395.6 |
| 30°    | 4085.2 | 3874.8 | 3264.3 | 3238.9 | 3261.3 | 3216.5 | 2504.6 | 2480.7 | 2480.7 | 2507.6 |
| 32.5°  | 4336.0 | 3515.1 | 3464.3 | 3467.3 | 3452.4 | 2944.9 | 2635.9 | 2629.9 | 2647.9 | 2670.2 |
| 35°    | 4265.8 | 3749.4 | 3753.9 | 3779.2 | 3744.9 | 2880.7 | 2841.9 | 2819.5 | 2834.4 | 2843.4 |
| 37.5°  | 4128.5 | 4101.6 | 4101.6 | 4073.3 | 3197.1 | 3106.1 | 3064.3 | 3061.3 | 3059.8 | 3059.8 |
| 40°    | 4474.8 | 4449.4 | 4418.1 | 4368.8 | 3344.9 | 3368.8 | 3306.1 | 3298.6 | 3303.1 | 3319.5 |
| 42.5°  | 4868.8 | 4858.4 | 4855.4 | 3749.4 | 3652.4 | 3670.3 | 3603.1 | 3583.7 | 3583.7 | 3621.0 |
| 45°    | 5333.0 | 5319.6 | 4989.7 | 4007.6 | 3991.2 | 4012.1 | 3937.5 | 3891.2 | 3916.6 | 3943.4 |
| 47.5°  | 5865.9 | 5865.9 | 4418.1 | 4394.2 | 4394.2 | 4406.1 | 4331.5 | 4268.8 | 4294.2 | 4303.1 |
| 50°    | 6449.5 | 5537.5 | 4861.4 | 4839.0 | 4859.9 | 4853.9 | 4776.3 | 4194.2 | 4733.0 | 4737.5 |
| 52.5°  | 6612.2 | 5385.3 | 5348.0 | 5322.6 | 5348.0 | 5343.5 | 5262.9 | 3498.6 | 5119.6 | 5192.7 |
| 55°    | 5861.4 | 5865.9 | 5858.4 | 5821.1 | 5848.0 | 5837.5 | 5758.4 | 3819.5 | 3774.8 | 3364.3 |
| 57.5°  | 6337.5 | 6343.5 | 6340.5 | 6334.6 | 6358.4 | 4619.6 | 5964.4 | 3450.9 | 2107.5 | 2109.0 |
| 60°    | 6855.5 | 6825.6 | 6816.7 | 6803.2 | 5765.9 | 3274.7 | 2485.2 | 240.3  | 823.9  | 812.0  |
| 62.5°  | 7325.6 | 7315.2 | 7283.9 | 7276.4 | 4892.7 | 2579.2 | 2519.5 | 55.2   | 43.3   | 41.8   |
| 65°    | 7979.4 | 7886.9 | 7861.5 | 7782.4 | 5215.1 | 2746.4 | 2689.7 | 16.4   | 1.5    | 0.0    |
| 67.5°  | 8222.7 | 8034.6 | 7943.6 | 7901.8 | 5306.2 | 2832.9 | 2724.0 | 16.4   | 1.5    | 0.0    |
| 70°    | 7763.0 | 7530.1 | 7415.2 | 7368.9 | 4958.4 | 2647.9 | 2540.4 | 16.4   | 1.5    | 0.0    |
| 72.5°  | 6883.8 | 6712.2 | 6665.9 | 6518.2 | 4371.8 | 2324.0 | 2229.9 | 16.4   | 0.0    | 0.0    |
| 75°    | 5646.5 | 5583.8 | 5527.1 | 5370.3 | 3553.9 | 1846.3 | 1762.8 | 14.9   | 0.0    | 0.0    |
| 77.5°  | 4109.1 | 4016.6 | 3912.1 | 3741.9 | 2398.6 | 1206.0 | 1162.7 | 13.4   | 0.0    | 0.0    |
| 80°    | 1852.3 | 1776.2 | 1750.8 | 1485.1 | 850.8  | 392.6  | 346.3  | 11.9   | 0.0    | 0.0    |
| 82.5°  | 359.7  | 323.9  | 307.5  | 295.5  | 191.1  | 106.0  | 92.5   | 9.0    | 0.0    | 0.0    |
| 85°    | 122.4  | 135.8  | 158.2  | 174.6  | 107.5  | 64.2   | 53.7   | 6.0    | 0.0    | 0.0    |
| 87.5°  | 47.8   | 64.2   | 77.6   | 80.6   | 40.3   | 26.9   | 14.9   | 3.0    | 0.0    | 0.0    |
| 90°    | 9.0    | 11.9   | 10.4   | 7.5    | 4.5    | 1.5    | 0.0    | 0.0    | 0.0    | 0.0    |
| 92.5°  | 4.5    | 6.0    | 4.5    | 4.5    | 3.0    | 1.5    | 0.0    | 0.0    | 0.0    | 0.0    |
| 95°    | 6.0    | 6.0    | 6.0    | 4.5    | 3.0    | 1.5    | 0.0    | 0.0    | 0.0    | 0.0    |
| 97.5°  | 6.0    | 6.0    | 6.0    | 4.5    | 3.0    | 1.5    | 0.0    | 0.0    | 0.0    | 0.0    |
| 100°   | 6.0    | 6.0    | 6.0    | 4.5    | 3.0    | 1.5    | 0.0    | 0.0    | 0.0    | 0.0    |
| 102.5° | 6.0    | 6.0    | 6.0    | 4.5    | 3.0    | 1.5    | 0.0    | 0.0    | 0.0    | 0.0    |
| 105°   | 6.0    | 7.5    | 6.0    | 4.5    | 3.0    | 1.5    | 0.0    | 0.0    | 0.0    | 0.0    |
| 107.5° | 6.0    | 7.5    | 6.0    | 4.5    | 3.0    | 1.5    | 0.0    | 0.0    | 0.0    | 0.0    |
| 110°   | 6.0    | 7.5    | 6.0    | 4.5    | 3.0    | 1.5    | 0.0    | 0.0    | 0.0    | 0.0    |

REPORT NUMBER: P579574

CATALOG NUMBER: CST-CA10-310-760-U-T5-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

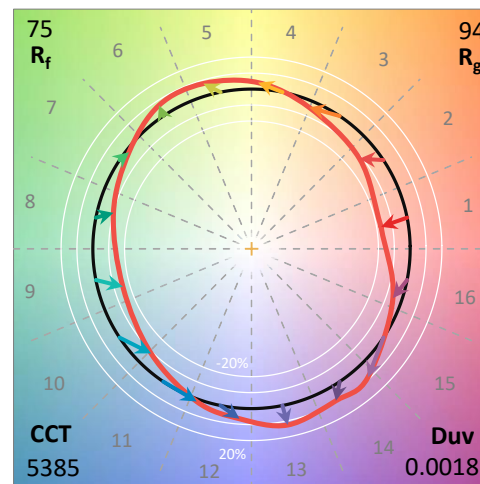
Test Date: 04/21/2021

### 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

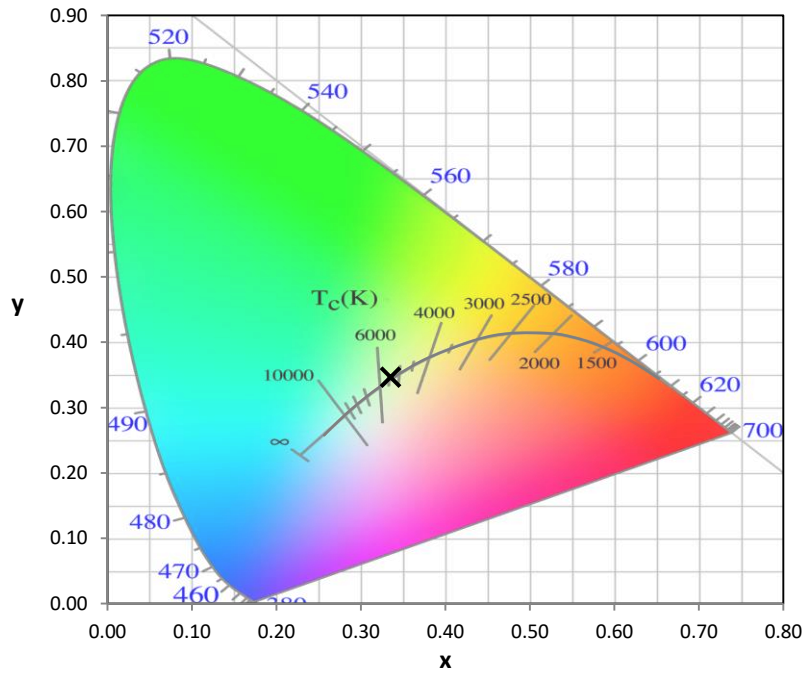
Stabilization Time: 66M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 25.7/32%  
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2104-215-3

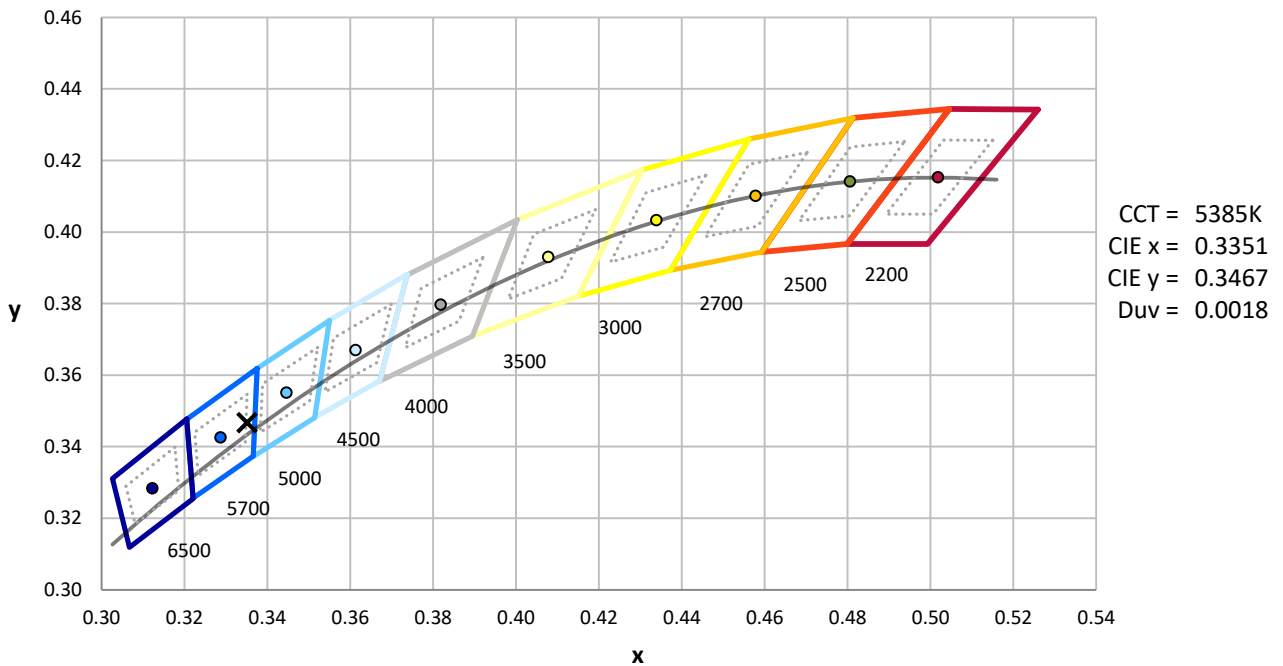
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| 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**



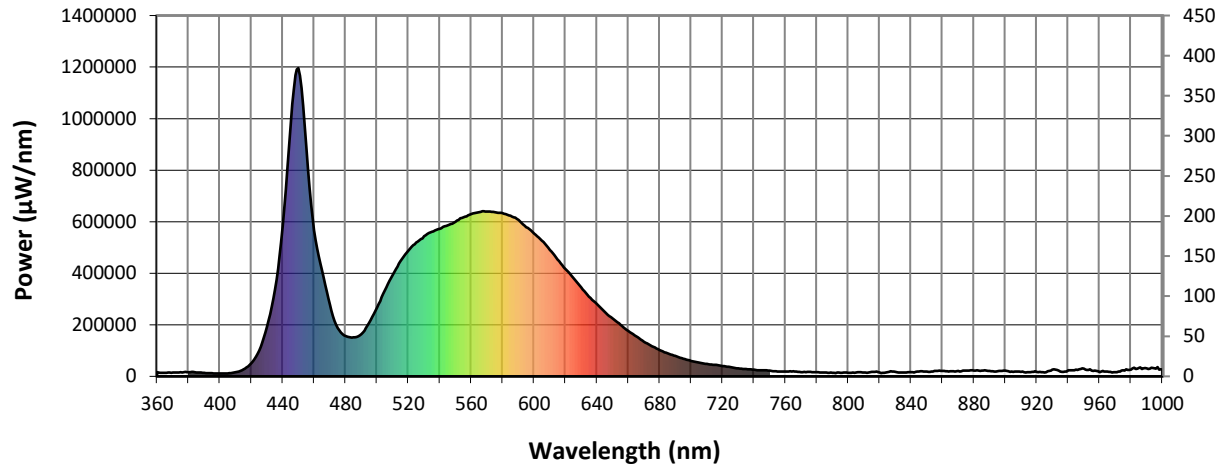
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 5700K 7-step quadrangle

REPORT NUMBER: SP1-2104-215-3

### Photopic Flux vs. Wavelength

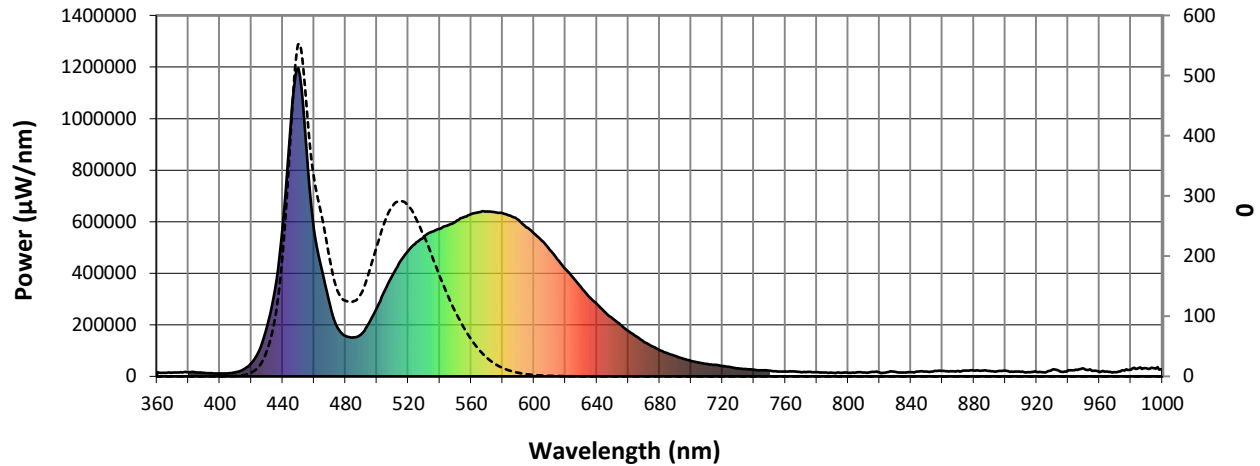


#####

| 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

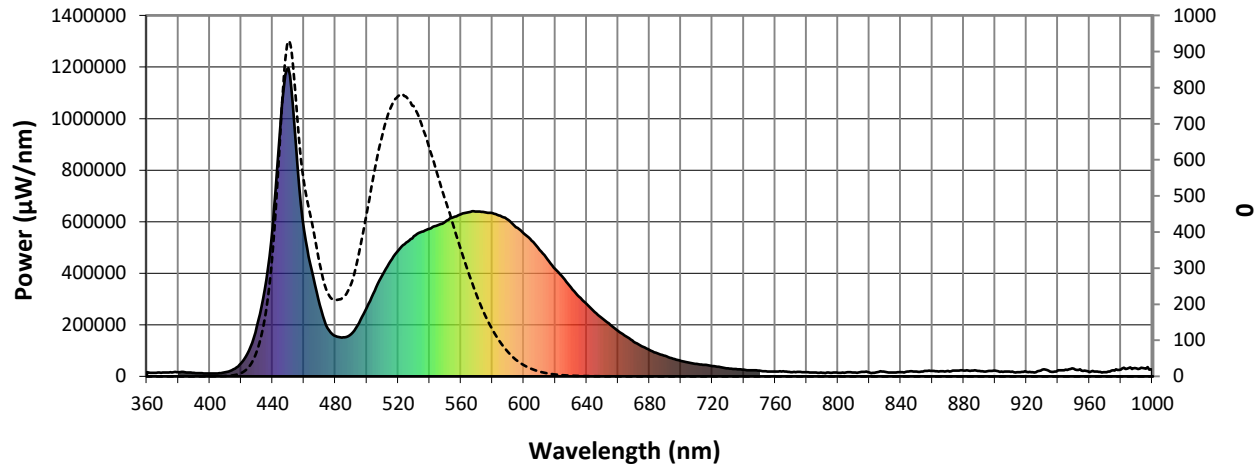
S/P: 1.89

| 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              |           |                  |                  |



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### 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              |           |                  |                  |

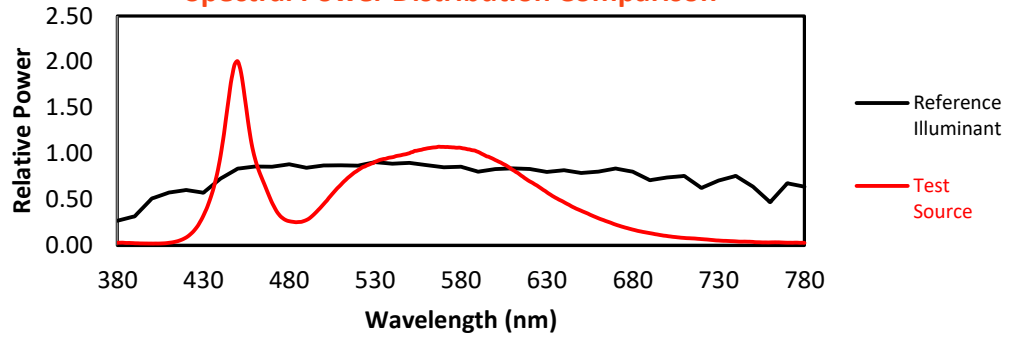
REPORT NUMBER: SP1-2104-215-3

TM-30-18

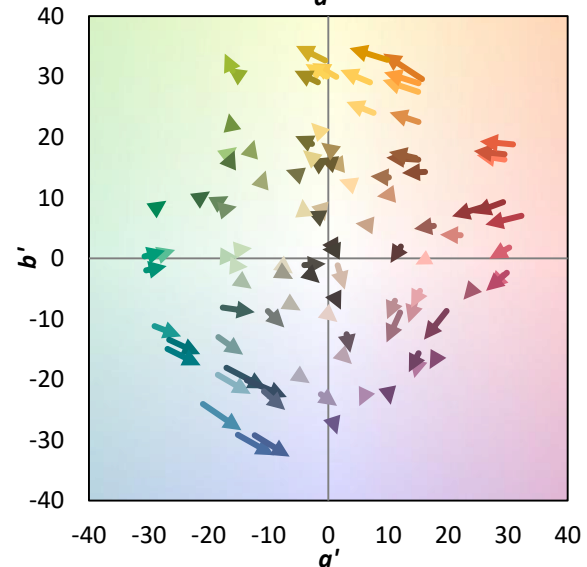
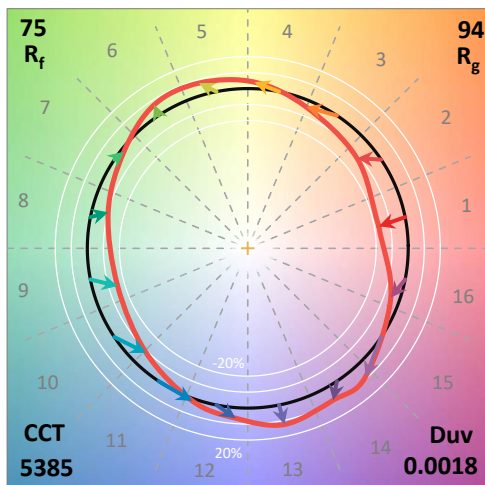
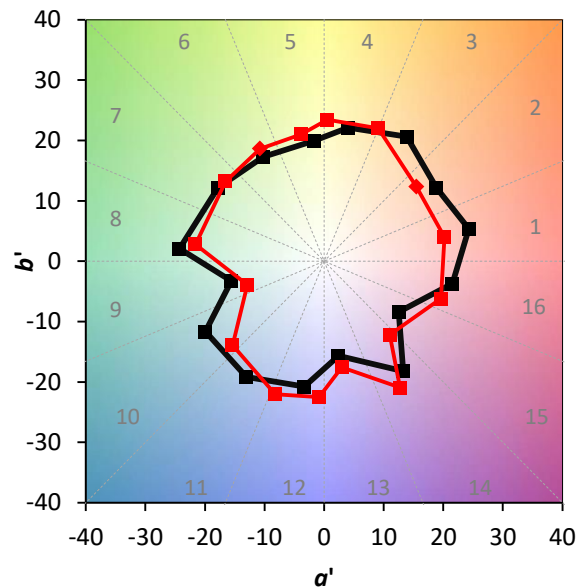
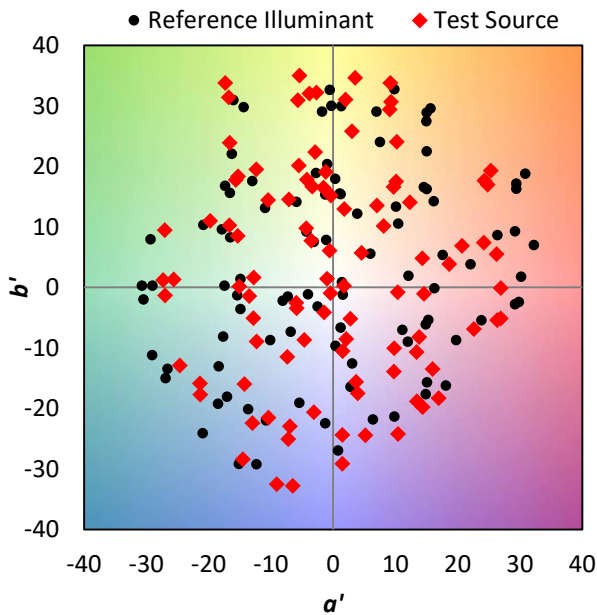
### Summary

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

### Spectral Power Distribution Comparison

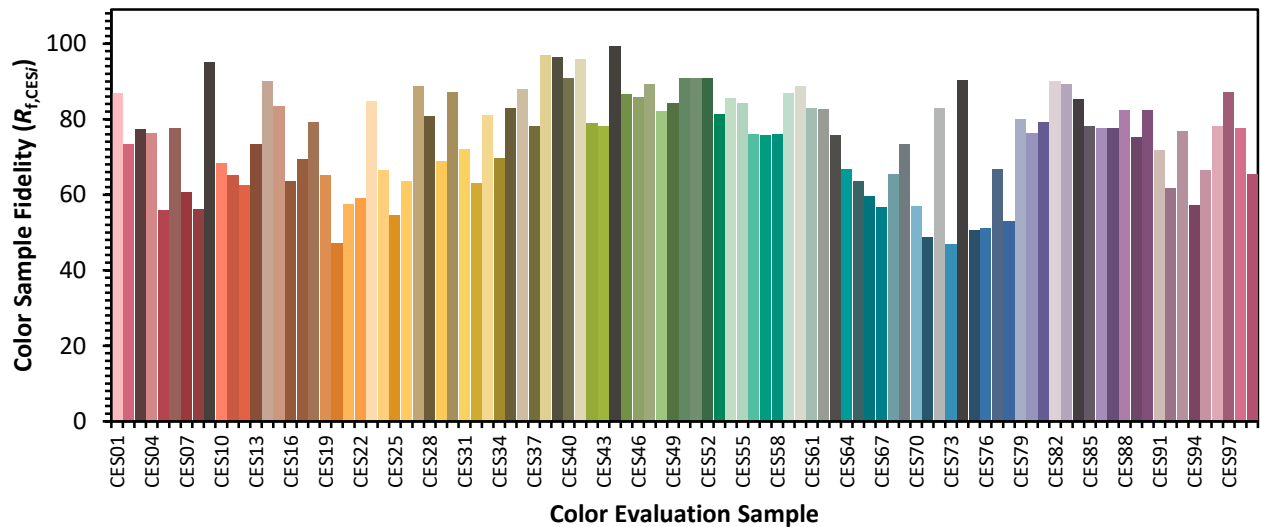


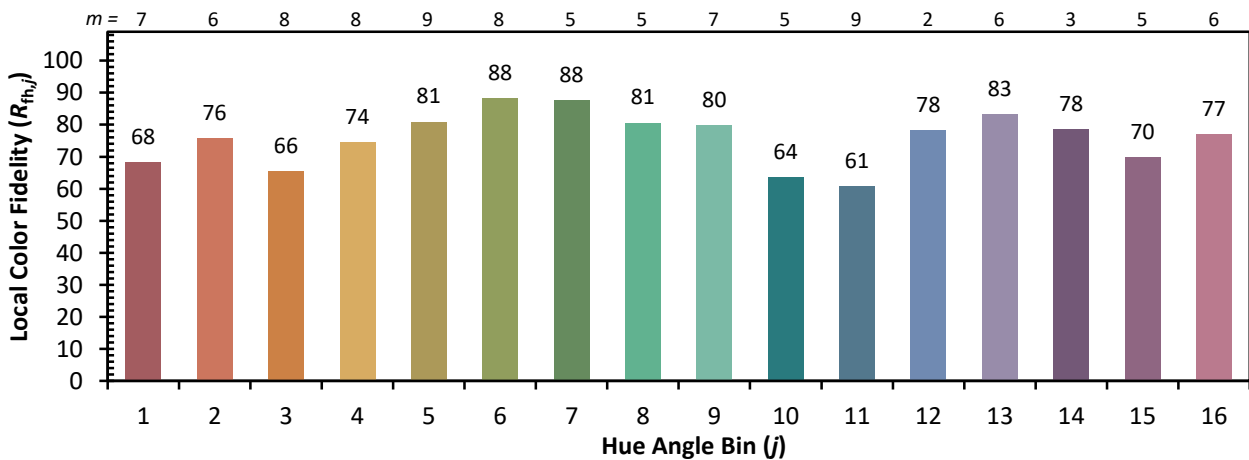
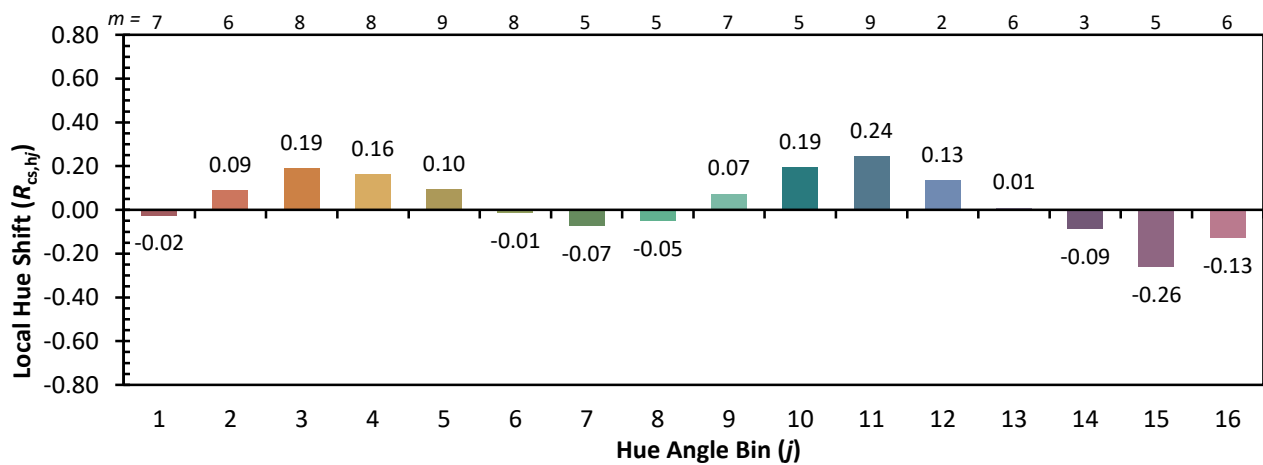
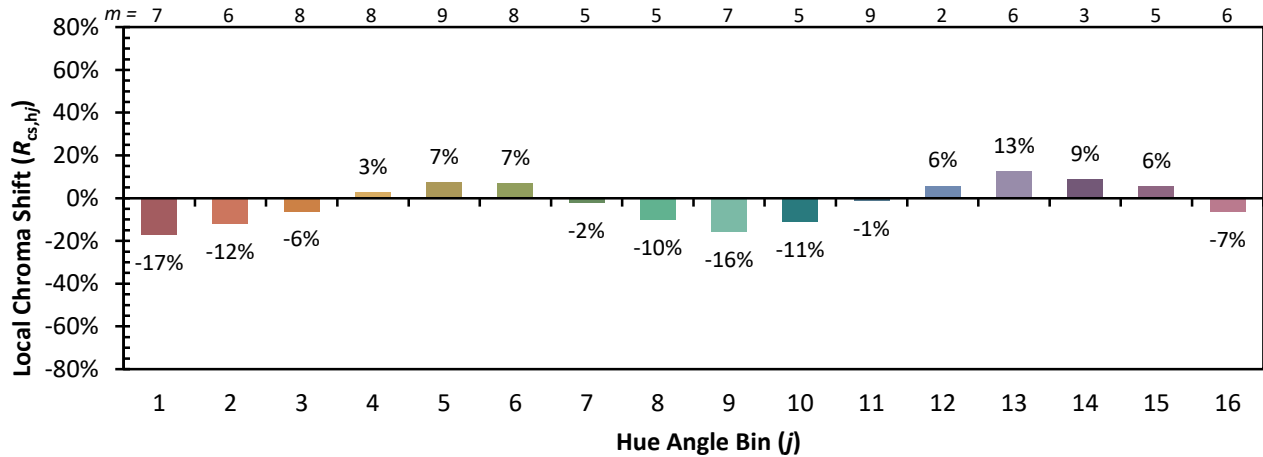
### Color Vector Graphics



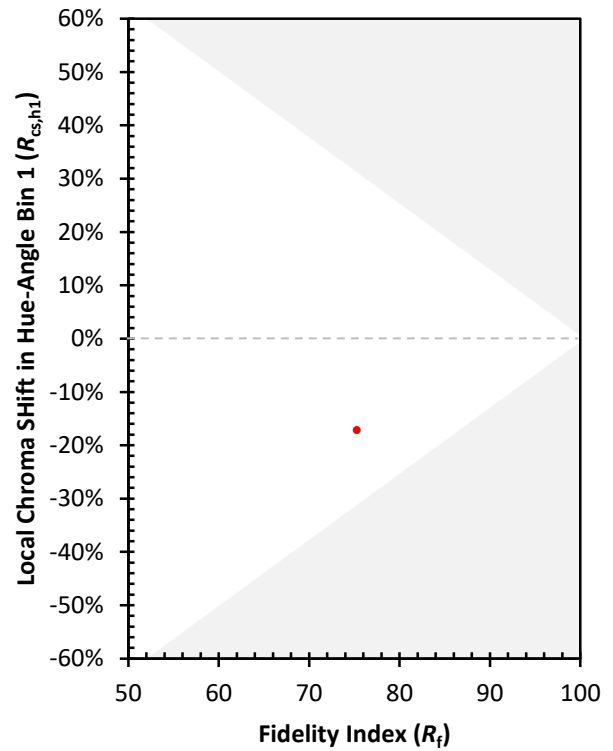
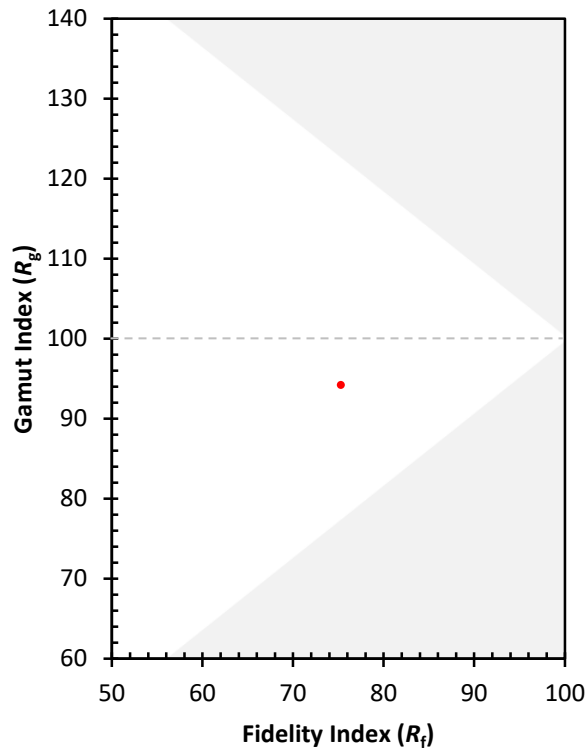
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| 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)