

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: P579593

Luminaire Tested: **CST-CA6-230-760-U-T5-HSS-HM-EX180**

Issue Date: 11/18/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P579593  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2110-429-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/18/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: CST-CA6-230-760-U-T5-HSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE WITH FIELD INSTALLED SHIELD  
Light Source: (6) 5700K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21179 lumens  
Efficiency: N/A  
Efficacy: 93.0 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U2 - G4

Input Watts (W): 227.8  
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

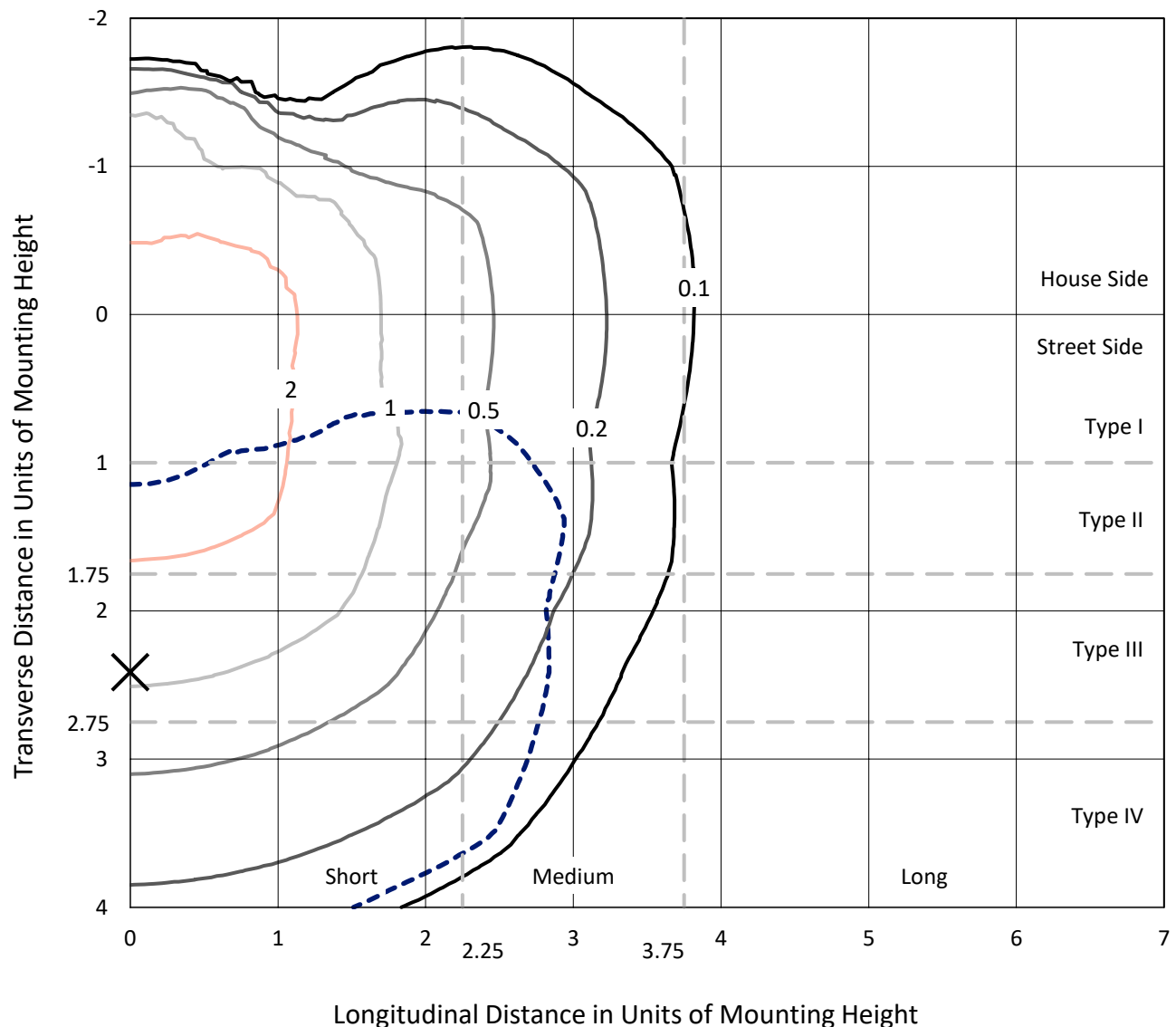


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

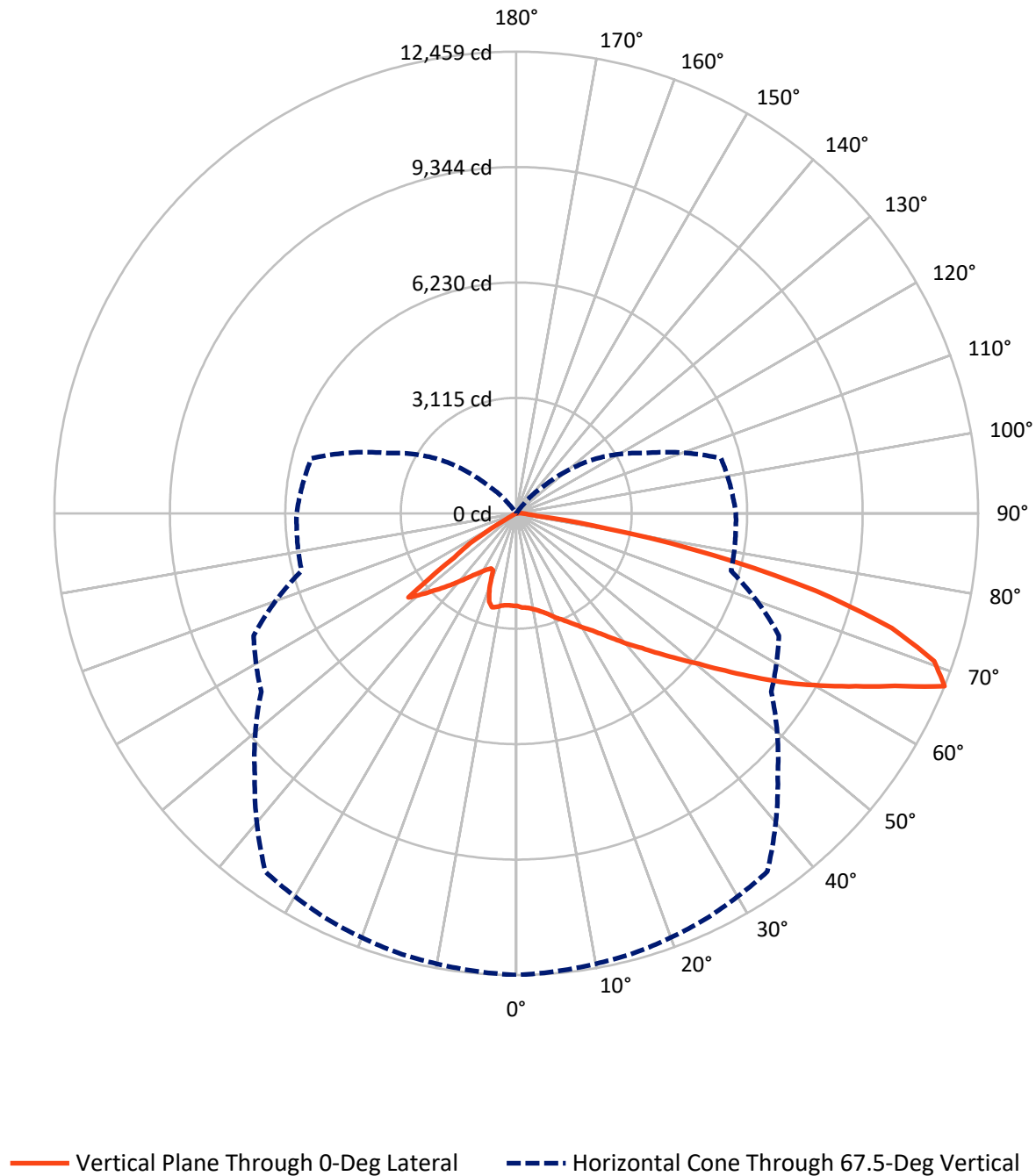


Based on 25 foot mounting height. Maximum calculated value = 4 fc

Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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CATALOG NUMBER: CST-CA6-230-760-U-T5-HSS-HM-EX180

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 6002.5   | 0.1    | 6002.6  |
|                    | % Fixture | 28.3     | 0.0    | 28.3    |
| <b>Street Side</b> | Lumens    | 15149.4  | 27.0   | 15176.4 |
|                    | % Fixture | 71.5     | 0.1    | 71.7    |
| <b>Total</b>       | Lumens    | 21152.0  | 27.1   | 21179.0 |
|                    | % Fixture | 99.9     | 0.1    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 240.5   | 1.1       |
| 10°-20°   | 740.5   | 3.5       |
| 20°-30°   | 1226.2  | 5.8       |
| 30°-40°   | 1930.2  | 9.1       |
| 40°-50°   | 3020.8  | 14.3      |
| 50°-60°   | 4361.5  | 20.6      |
| 60°-70°   | 5403.2  | 25.5      |
| 70°-80°   | 3935.0  | 18.6      |
| 80°-90°   | 294.0   | 1.4       |
| 90°-100°  | 23.1    | 0.1       |
| 100°-110° | 3.9     | 0.0       |
| 110°-120° | 0.1     | 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°    | 21152.0 | 99.9      |
| 0°-180°   | 21179.0 | 100.0     |

**Coefficient of Utilization**



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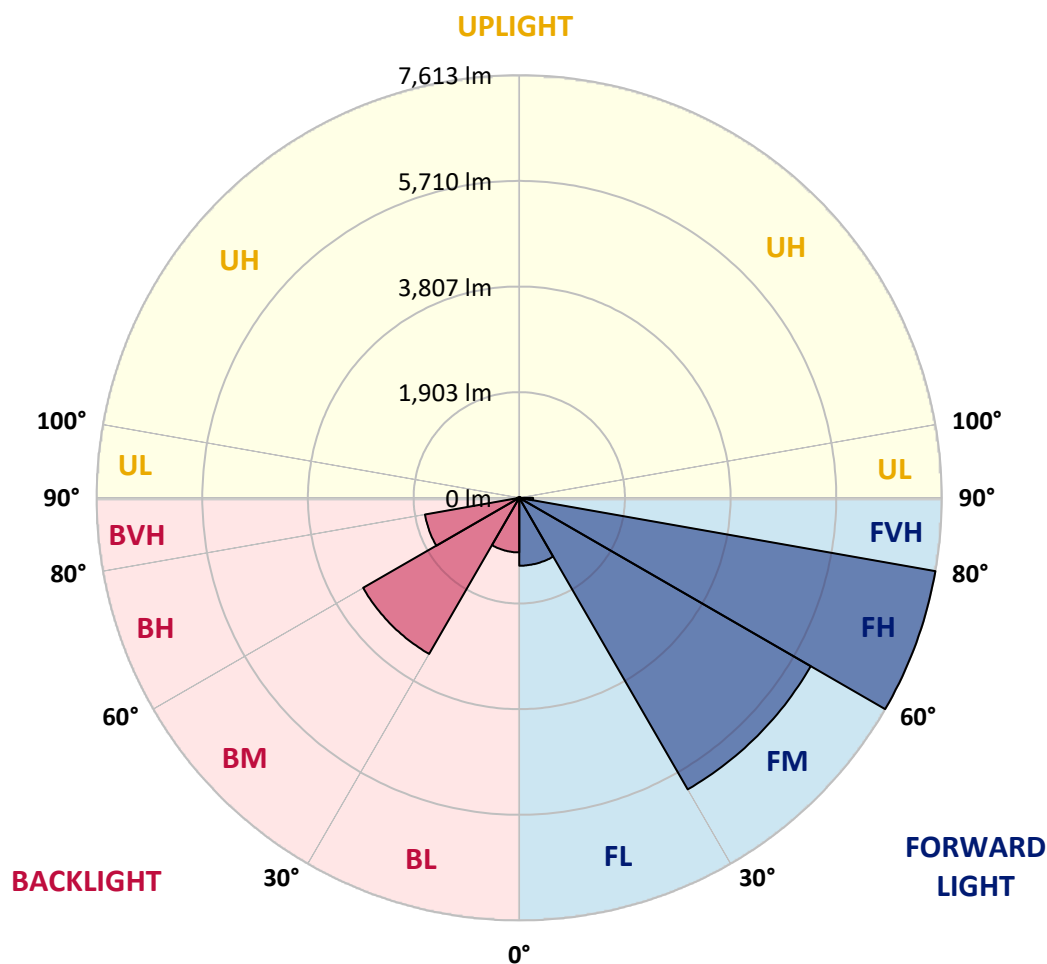
CATALOG NUMBER: CST-CA6-230-760-U-T5-HSS-HM-EX180

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |       |          |
|------|-------------|--------|-----------|-------------------------|-------|----------|
|      |             |        |           | B                       | U     | G        |
| FL   | (0°-30°)    | 1223.3 | 5.8       |                         |       |          |
| FM   | (30°-60°)   | 6065.1 | 28.6      |                         |       |          |
| FH   | (60°-80°)   | 7613.2 | 35.9      |                         |       | G4/12000 |
| FVH  | (80°-90°)   | 248.0  | 1.2       |                         |       | G3/500   |
| BL   | (0°-30°)    | 984.0  | 4.6       | B2/1000                 |       |          |
| BM   | (30°-60°)   | 3247.5 | 15.3      | B3/5000                 |       |          |
| BH   | (60°-80°)   | 1725.0 | 8.1       | B3/2500                 |       | G3/2500  |
| BVH  | (80°-90°)   | 46.0   | 0.2       |                         |       | G1/100   |
| UL   | (90°-100°)  | 23.1   | 0.1       |                         | U2/50 |          |
| UH   | (100°-180°) | 4.0    | 0.0       |                         | U1/10 |          |

**BUG Rating: B3-U2-G4**

Type IV Short



REPORT NUMBER: P579593

CATALOG NUMBER: CST-CA6-230-760-U-T5-HSS-HM-EX180

**CANDELA DISTRIBUTION (FULL):**

|        | 0°      | 5°      | 15°     | 25°     | 35°     | 45°    | 55°    | 65°    | 75°    | 85°    | 90°    |
|--------|---------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|
| 0°     | 2494.3  | 2494.3  | 2494.3  | 2494.3  | 2494.3  | 2494.3 | 2494.3 | 2494.3 | 2494.3 | 2494.3 | 2494.3 |
| 2.5°   | 2540.0  | 2526.2  | 2526.2  | 2541.0  | 2499.6  | 2512.4 | 2495.4 | 2510.3 | 2501.8 | 2506.0 | 2511.3 |
| 5°     | 2554.8  | 2538.9  | 2540.0  | 2558.0  | 2520.9  | 2531.5 | 2511.3 | 2518.8 | 2511.3 | 2514.5 | 2514.5 |
| 7.5°   | 2582.4  | 2568.6  | 2568.6  | 2579.3  | 2542.1  | 2545.3 | 2527.2 | 2527.2 | 2517.7 | 2525.1 | 2518.8 |
| 10°    | 2634.4  | 2619.6  | 2612.2  | 2617.5  | 2584.6  | 2580.3 | 2555.9 | 2555.9 | 2541.0 | 2552.7 | 2543.2 |
| 12.5°  | 2697.1  | 2675.8  | 2673.7  | 2674.8  | 2637.6  | 2630.2 | 2602.6 | 2603.7 | 2576.1 | 2592.0 | 2580.3 |
| 15°    | 2772.4  | 2745.9  | 2743.8  | 2748.0  | 2708.7  | 2694.9 | 2664.2 | 2664.2 | 2633.4 | 2641.9 | 2626.0 |
| 17.5°  | 2869.0  | 2838.2  | 2832.9  | 2840.4  | 2801.1  | 2788.4 | 2752.3 | 2745.9 | 2711.9 | 2705.6 | 2691.8 |
| 20°    | 2996.4  | 2961.4  | 2950.8  | 2966.7  | 2916.8  | 2905.1 | 2861.6 | 2847.8 | 2802.2 | 2726.8 | 2628.1 |
| 22.5°  | 3111.0  | 3083.4  | 3077.1  | 3087.7  | 3042.0  | 3030.4 | 2987.9 | 2959.2 | 2848.9 | 2697.1 | 2605.8 |
| 25°    | 3241.6  | 3231.0  | 3227.8  | 3221.4  | 3180.0  | 3159.9 | 3119.5 | 3079.2 | 2828.7 | 2620.7 | 2618.5 |
| 27.5°  | 3402.9  | 3397.6  | 3382.8  | 3377.4  | 3331.8  | 3319.1 | 3266.0 | 3005.9 | 2756.5 | 2741.7 | 2733.2 |
| 30°    | 3579.1  | 3568.5  | 3553.6  | 3554.7  | 3523.9  | 3500.6 | 3374.3 | 2941.2 | 2895.6 | 2895.6 | 2873.3 |
| 32.5°  | 3774.4  | 3762.7  | 3747.9  | 3751.1  | 3738.3  | 3718.2 | 3338.2 | 3112.1 | 3077.1 | 3086.6 | 3059.0 |
| 35°    | 4016.4  | 3997.3  | 3992.0  | 4004.7  | 4005.8  | 3875.3 | 3401.9 | 3344.5 | 3316.9 | 3310.6 | 3206.6 |
| 37.5°  | 4298.8  | 4282.8  | 4301.9  | 4331.7  | 4297.7  | 3915.6 | 3655.5 | 3637.5 | 3609.9 | 3456.0 | 3209.7 |
| 40°    | 4637.4  | 4608.7  | 4632.0  | 4651.1  | 4628.9  | 4155.5 | 3922.0 | 3928.3 | 3903.9 | 3447.5 | 3174.7 |
| 42.5°  | 4972.8  | 4945.2  | 4965.3  | 5013.1  | 5004.6  | 4452.7 | 4246.7 | 4260.5 | 4014.3 | 3467.7 | 3446.4 |
| 45°    | 5387.8  | 5378.2  | 5371.9  | 5411.1  | 5444.0  | 4808.2 | 4632.0 | 4631.0 | 3935.8 | 3788.2 | 3769.1 |
| 47.5°  | 5858.0  | 5845.2  | 5848.4  | 5898.3  | 5948.2  | 5232.8 | 5087.4 | 4660.7 | 4138.5 | 4153.3 | 4136.4 |
| 50°    | 6382.3  | 6368.5  | 6409.9  | 6482.1  | 6507.6  | 5709.4 | 5531.1 | 4580.0 | 4560.9 | 4576.9 | 4548.2 |
| 52.5°  | 7047.8  | 7017.1  | 7080.7  | 7158.2  | 7191.1  | 6273.0 | 5555.5 | 5056.6 | 5024.8 | 5028.0 | 4936.7 |
| 55°    | 7804.6  | 7780.2  | 7837.5  | 7924.6  | 7973.4  | 6902.4 | 6062.8 | 5520.5 | 5501.3 | 4960.0 | 4466.5 |
| 57.5°  | 8627.2  | 8599.6  | 8676.1  | 8701.5  | 8714.3  | 7553.1 | 6573.4 | 6023.6 | 5139.4 | 4529.1 | 4501.5 |
| 60°    | 9433.9  | 9404.2  | 9500.8  | 9505.0  | 9542.2  | 8202.7 | 7058.5 | 6508.6 | 4951.5 | 4870.9 | 4847.5 |
| 62.5°  | 10280.9 | 10243.8 | 10328.7 | 10325.5 | 10252.3 | 8797.1 | 7539.3 | 6974.6 | 5286.9 | 5223.3 | 5187.2 |
| 65°    | 11221.4 | 11193.8 | 11253.2 | 11157.7 | 11012.3 | 9411.6 | 8038.1 | 7482.0 | 5677.5 | 5665.9 | 5657.4 |
| 67.5°  | 12459.0 | 12404.8 | 12284.9 | 12081.1 | 11803.0 | 9975.2 | 8394.8 | 7816.3 | 5994.9 | 5940.8 | 5923.8 |
| 70°    | 11961.2 | 11897.5 | 11806.2 | 11582.2 | 11298.8 | 9445.6 | 7821.6 | 7311.1 | 5605.4 | 5607.5 | 5567.2 |
| 72.5°  | 10590.9 | 10480.5 | 10394.5 | 10080.3 | 9924.3  | 8249.4 | 6815.4 | 6345.2 | 4848.6 | 4938.8 | 4919.7 |
| 75°    | 8354.5  | 8241.9  | 8100.8  | 7977.6  | 7960.7  | 6691.2 | 5495.0 | 5156.4 | 3865.7 | 3931.5 | 3979.3 |
| 77.5°  | 5415.4  | 5374.0  | 5552.3  | 5435.5  | 5540.6  | 4607.6 | 3925.1 | 3634.3 | 2664.2 | 2830.8 | 2808.5 |
| 80°    | 2478.4  | 2430.7  | 2717.2  | 2636.6  | 2675.8  | 2263.0 | 1918.0 | 1842.6 | 1205.8 | 1214.3 | 1239.7 |
| 82.5°  | 560.4   | 541.3   | 561.5   | 515.9   | 503.1   | 425.6  | 374.7  | 339.7  | 213.3  | 226.1  | 237.8  |
| 85°    | 306.8   | 306.8   | 302.5   | 281.3   | 240.9   | 198.5  | 157.1  | 121.0  | 65.8   | 72.2   | 71.1   |
| 87.5°  | 215.5   | 210.2   | 209.1   | 186.8   | 160.3   | 135.9  | 108.3  | 77.5   | 37.1   | 25.5   | 23.4   |
| 90°    | 147.5   | 145.4   | 138.0   | 124.2   | 107.2   | 88.1   | 65.8   | 38.2   | 15.9   | 7.4    | 5.3    |
| 92.5°  | 107.2   | 105.1   | 99.8    | 88.1    | 73.2    | 59.4   | 43.5   | 25.5   | 12.7   | 5.3    | 1.1    |
| 95°    | 71.1    | 70.1    | 66.9    | 57.3    | 47.8    | 38.2   | 27.6   | 15.9   | 10.6   | 4.2    | 1.1    |
| 97.5°  | 48.8    | 47.8    | 44.6    | 38.2    | 30.8    | 24.4   | 17.0   | 11.7   | 8.5    | 3.2    | 1.1    |
| 100°   | 32.9    | 31.8    | 29.7    | 24.4    | 19.1    | 14.9   | 10.6   | 8.5    | 6.4    | 3.2    | 1.1    |
| 102.5° | 21.2    | 20.2    | 18.0    | 14.9    | 10.6    | 8.5    | 7.4    | 6.4    | 4.2    | 2.1    | 1.1    |
| 105°   | 12.7    | 11.7    | 9.6     | 7.4     | 6.4     | 5.3    | 5.3    | 4.2    | 3.2    | 1.1    | 1.1    |
| 107.5° | 6.4     | 5.3     | 4.2     | 4.2     | 4.2     | 3.2    | 3.2    | 3.2    | 2.1    | 1.1    | 0.0    |
| 110°   | 1.1     | 1.1     | 2.1     | 2.1     | 2.1     | 2.1    | 2.1    | 2.1    | 2.1    | 1.1    | 0.0    |



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CATALOG NUMBER: CST-CA6-230-760-U-T5-HSS-HM-EX180

**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°     | 2494.3 | 2494.3 | 2494.3 | 2494.3 | 2494.3 | 2494.3 | 2494.3 | 2494.3 | 2494.3 | 2494.3 |
| 2.5°   | 2506.0 | 2489.0 | 2498.6 | 2483.7 | 2480.5 | 2464.6 | 2490.1 | 2493.3 | 2491.2 | 2495.4 |
| 5°     | 2509.2 | 2491.2 | 2501.8 | 2483.7 | 2483.7 | 2466.7 | 2491.2 | 2491.2 | 2484.8 | 2486.9 |
| 7.5°   | 2517.7 | 2499.6 | 2507.1 | 2486.9 | 2488.0 | 2467.8 | 2497.5 | 2494.3 | 2489.0 | 2496.5 |
| 10°    | 2542.1 | 2521.9 | 2520.9 | 2501.8 | 2506.0 | 2484.8 | 2521.9 | 2521.9 | 2516.6 | 2530.4 |
| 12.5°  | 2581.4 | 2551.7 | 2546.4 | 2523.0 | 2531.5 | 2513.4 | 2559.1 | 2561.2 | 2562.3 | 2584.6 |
| 15°    | 2622.8 | 2586.7 | 2592.0 | 2564.4 | 2561.2 | 2551.7 | 2593.1 | 2590.9 | 2589.9 | 2620.7 |
| 17.5°  | 2681.2 | 2511.3 | 2483.7 | 2464.6 | 2460.4 | 2437.0 | 2475.2 | 2548.5 | 2510.3 | 2489.0 |
| 20°    | 2588.8 | 2499.6 | 2390.3 | 2353.2 | 2345.7 | 2143.0 | 1982.7 | 2054.9 | 2152.6 | 2161.1 |
| 22.5°  | 2505.0 | 2473.1 | 2464.6 | 2406.2 | 2082.5 | 2014.6 | 2020.9 | 1994.4 | 1763.0 | 1662.2 |
| 25°    | 2609.0 | 2581.4 | 2545.3 | 2188.7 | 2112.2 | 2087.8 | 2080.4 | 1808.7 | 1626.1 | 1637.8 |
| 27.5°  | 2724.7 | 2693.9 | 2379.7 | 2194.0 | 2210.9 | 2177.0 | 2009.3 | 1687.7 | 1677.0 | 1697.2 |
| 30°    | 2869.0 | 2622.8 | 2322.4 | 2311.8 | 2327.7 | 2284.2 | 1785.3 | 1762.0 | 1758.8 | 1780.0 |
| 32.5°  | 3033.5 | 2529.4 | 2475.2 | 2475.2 | 2467.8 | 1997.6 | 1880.8 | 1864.9 | 1873.4 | 1895.7 |
| 35°    | 2972.0 | 2675.8 | 2669.5 | 2696.0 | 2517.7 | 2049.6 | 2033.7 | 2006.1 | 2012.5 | 2019.9 |
| 37.5°  | 2904.0 | 2916.8 | 2920.0 | 2906.2 | 1836.3 | 2198.2 | 2185.5 | 2180.2 | 2173.8 | 2175.9 |
| 40°    | 3156.7 | 3165.2 | 3162.0 | 3035.7 | 1981.7 | 2226.9 | 2357.4 | 2347.9 | 2346.8 | 2359.5 |
| 42.5°  | 3451.7 | 3475.1 | 3457.1 | 2678.0 | 2175.9 | 1872.3 | 2555.9 | 2550.6 | 2548.5 | 2575.0 |
| 45°    | 3784.0 | 3806.3 | 3427.3 | 2868.0 | 2382.9 | 1938.2 | 2569.7 | 2767.1 | 2783.0 | 2806.4 |
| 47.5°  | 4143.8 | 4139.5 | 3163.0 | 3159.9 | 2626.0 | 2120.7 | 2136.6 | 3026.1 | 3052.6 | 3061.1 |
| 50°    | 4557.7 | 3877.4 | 3463.4 | 3346.7 | 2900.9 | 2325.6 | 2265.1 | 2776.7 | 3362.6 | 3371.1 |
| 52.5°  | 4469.6 | 3836.0 | 3808.4 | 2935.9 | 3147.1 | 2551.7 | 2492.2 | 2476.3 | 3485.7 | 3690.6 |
| 55°    | 4166.1 | 4197.9 | 4158.7 | 3221.4 | 2307.5 | 2753.3 | 2716.2 | 2700.3 | 2593.1 | 2052.8 |
| 57.5°  | 4503.6 | 4513.2 | 4479.2 | 3483.6 | 2346.8 | 1716.3 | 2673.7 | 2293.7 | 1490.2 | 1482.8 |
| 60°    | 4853.9 | 4869.8 | 3336.0 | 2559.1 | 1504.0 | 574.2  | 136.9  | 144.4  | 411.8  | 361.9  |
| 62.5°  | 5188.2 | 5204.2 | 3531.3 | 2338.3 | 950.0  | 42.5   | 27.6   | 19.1   | 21.2   | 21.2   |
| 65°    | 5624.5 | 5630.8 | 3779.7 | 2475.2 | 987.1  | 10.6   | 3.2    | 0.0    | 0.0    | 0.0    |
| 67.5°  | 5850.6 | 5720.0 | 3842.3 | 2537.9 | 1013.7 | 6.4    | 2.1    | 0.0    | 0.0    | 0.0    |
| 70°    | 5508.8 | 5368.7 | 3577.0 | 2378.6 | 944.7  | 5.3    | 1.1    | 0.0    | 0.0    | 0.0    |
| 72.5°  | 4853.9 | 4786.0 | 3210.8 | 2109.0 | 836.4  | 3.2    | 1.1    | 0.0    | 0.0    | 0.0    |
| 75°    | 4022.8 | 3932.6 | 2662.0 | 1757.7 | 692.0  | 2.1    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5°  | 2861.6 | 2872.2 | 1855.4 | 1281.1 | 471.3  | 2.1    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°    | 1252.5 | 1281.1 | 813.0  | 588.0  | 166.6  | 1.1    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5°  | 238.8  | 219.7  | 106.1  | 83.9   | 21.2   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°    | 78.5   | 86.0   | 39.3   | 31.8   | 9.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5°  | 27.6   | 35.0   | 11.7   | 9.6    | 2.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°    | 4.2    | 4.2    | 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: P579593

CATALOG NUMBER: CST-CA6-230-760-U-T5-HSS-HM-EX180

**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

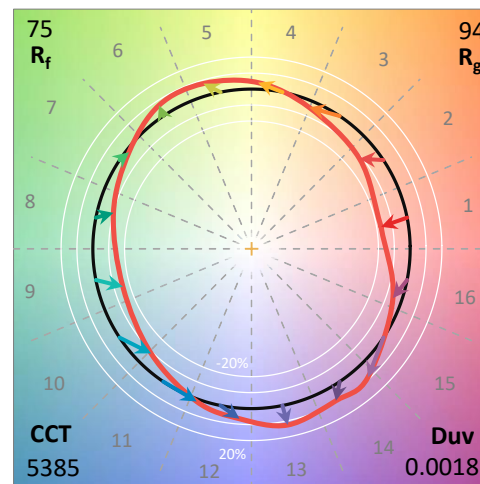
Test Date: 04/21/2021

### 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**



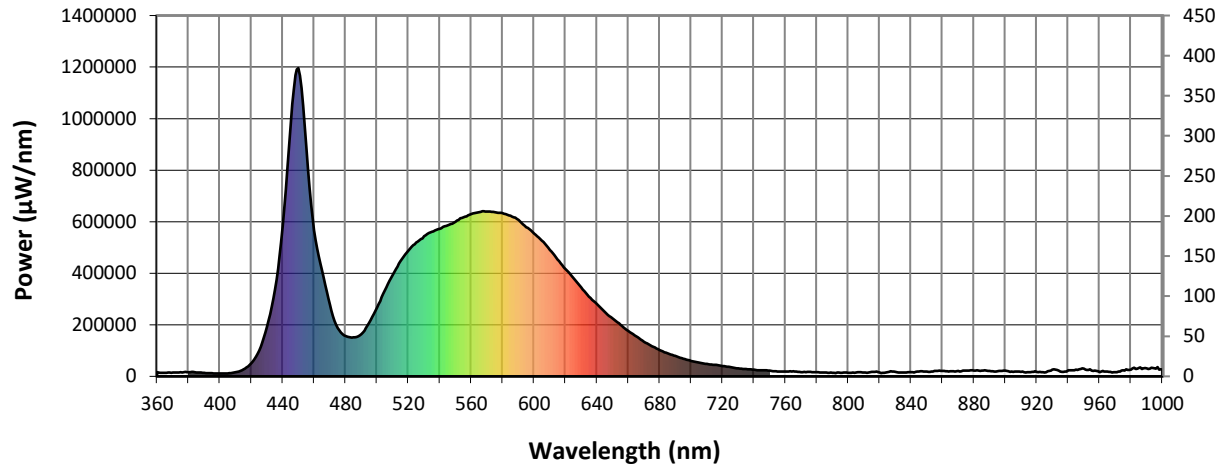
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



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              |           |                  |                  |

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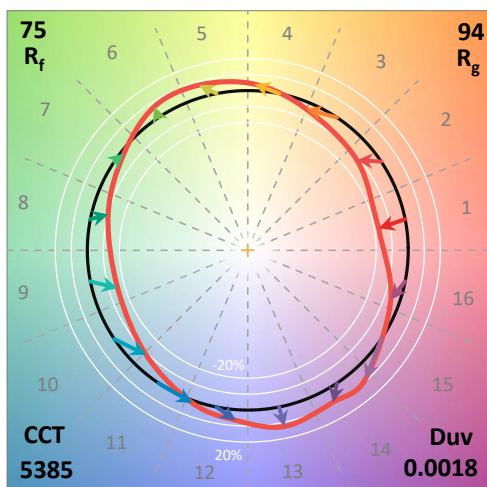
TM-30-18

### 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)