

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: P522210

Luminaire Tested: **CST-CA8-230-750-U-T5R-HSS-HM-EX120**

Issue Date: 5/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P522210  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-894-6)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: CST-CA8-230-750-U-T5R-HSS-HM-EX120  
Description: CELESTEON HIGH MAST LUMINAIRE  
Light Source: (8) 5000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 28122.1 lumens  
Efficiency: N/A  
Efficacy: 123.1 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B4 - U2 - G4

Input Watts (W): 228.4  
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

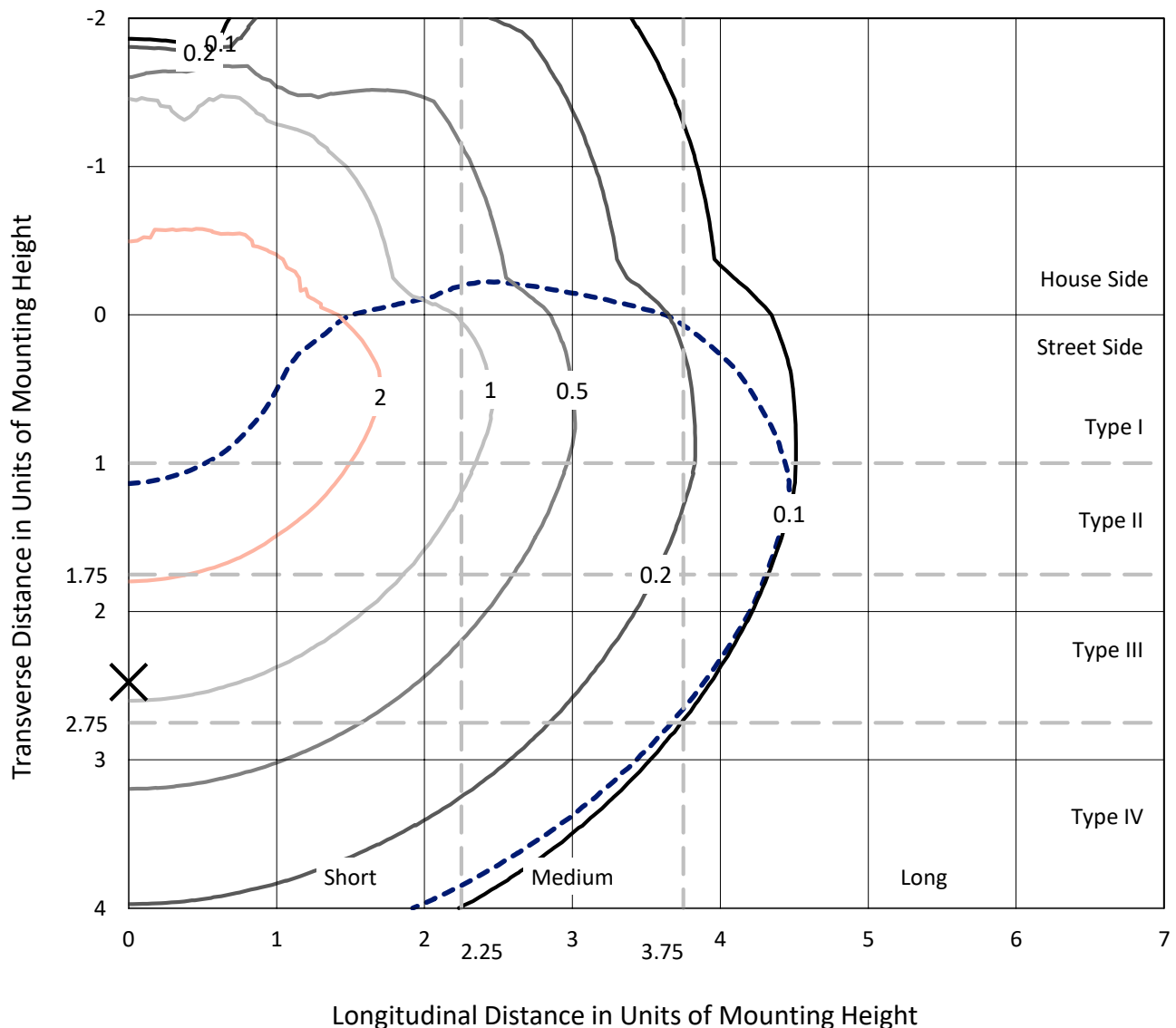


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## Iso-Footcandle Lines of Horizontal Illumination

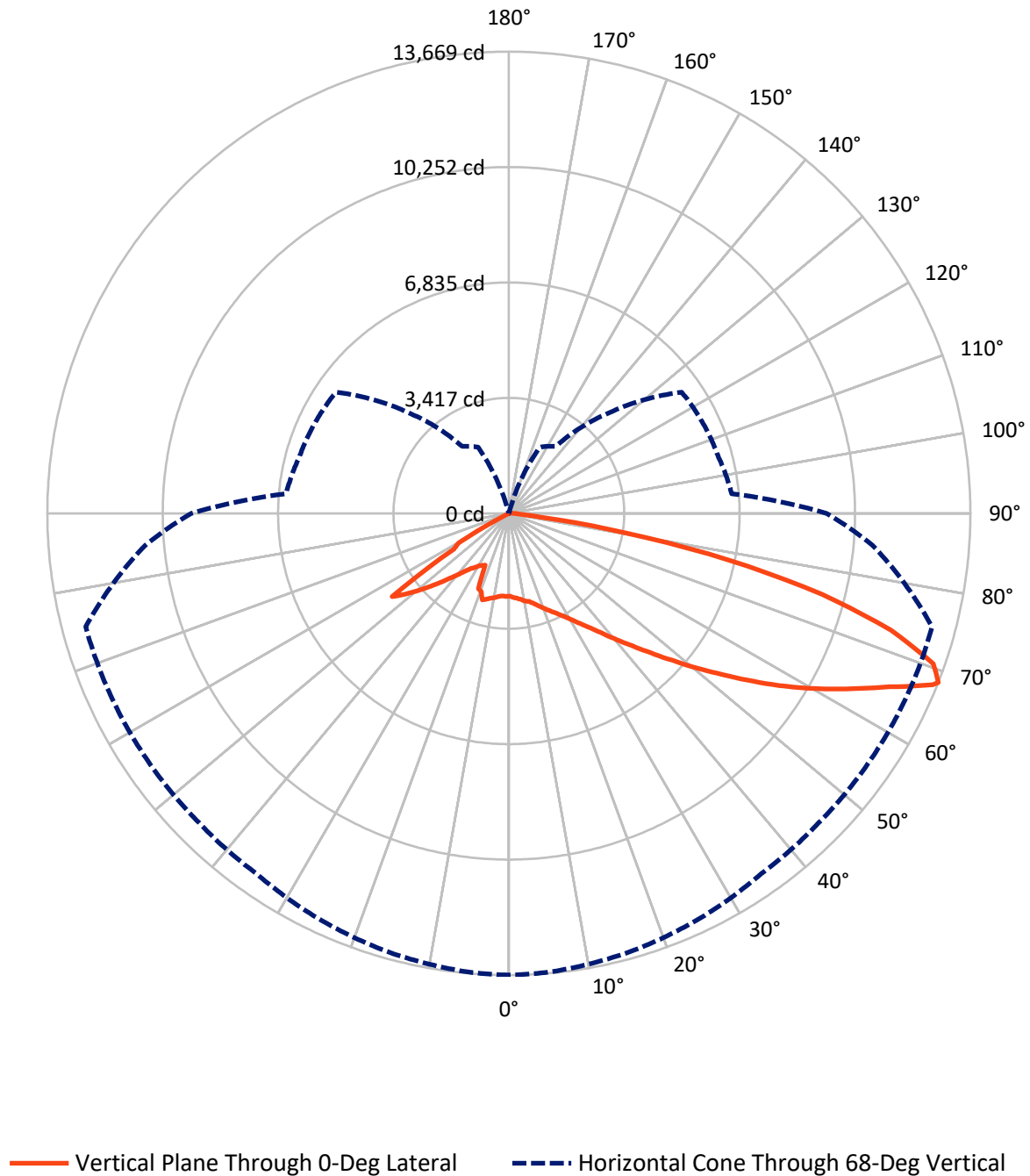
× Max cd  
 - - - 1/2 Max cd



Based on 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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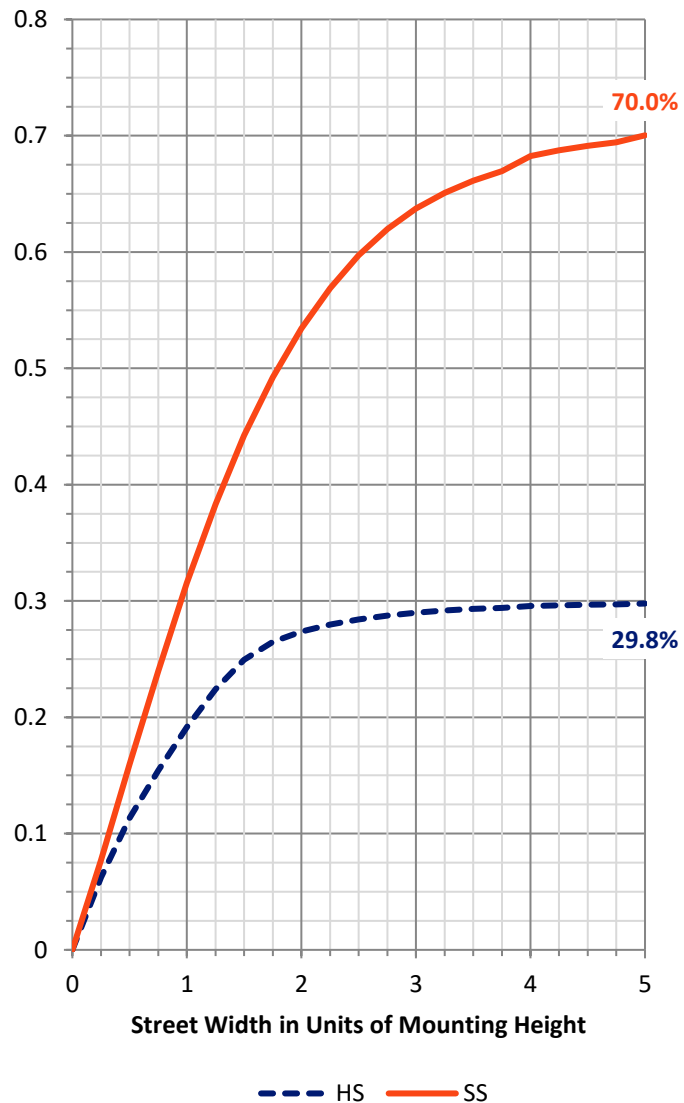
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 8382.9   | 1.3    | 8384.2  |
|                    | % Fixture | 29.8     | 0.0    | 29.8    |
| <b>Street Side</b> | Lumens    | 19726.3  | 11.5   | 19737.9 |
|                    | % Fixture | 70.1     | 0.0    | 70.2    |
| <b>Total</b>       | Lumens    | 28109.2  | 12.9   | 28122.1 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 238.0   | 0.8       |
| 10°-20°   | 757.3   | 2.7       |
| 20°-30°   | 1297.2  | 4.6       |
| 30°-40°   | 2104.4  | 7.5       |
| 40°-50°   | 3549.0  | 12.6      |
| 50°-60°   | 5784.9  | 20.6      |
| 60°-70°   | 7758.5  | 27.6      |
| 70°-80°   | 6026.4  | 21.4      |
| 80°-90°   | 593.5   | 2.1       |
| 90°-100°  | 11.3    | 0.0       |
| 100°-110° | 0.7     | 0.0       |
| 110°-120° | 0.2     | 0.0       |
| 120°-130° | 0.1     | 0.0       |
| 130°-140° | 0.2     | 0.0       |
| 140°-150° | 0.2     | 0.0       |
| 150°-160° | 0.2     | 0.0       |
| 160°-170° | 0.1     | 0.0       |
| 170°-180° | 0.0     | 0.0       |
| 0°-90°    | 28109.2 | 100.0     |
| 0°-180°   | 28122.1 | 100.0     |

**Coefficient of Utilization**



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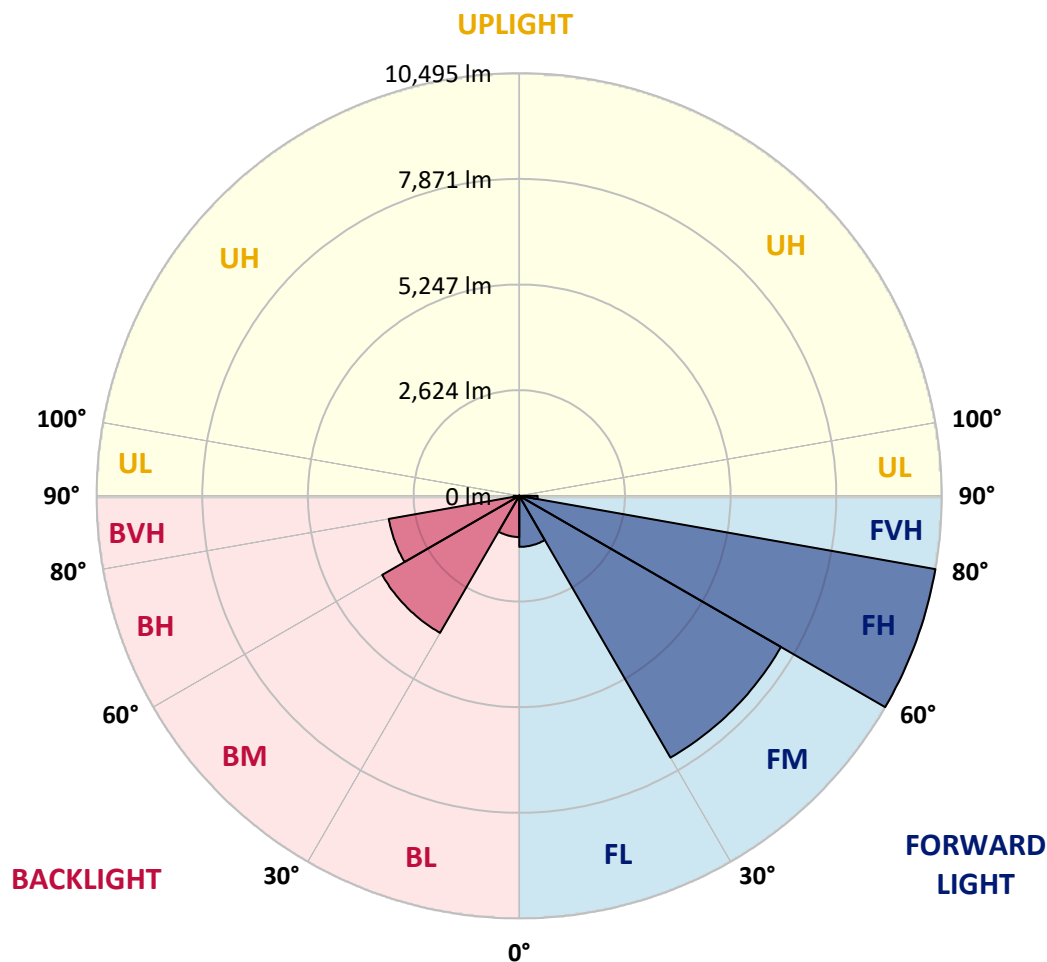
CATALOG NUMBER: CST-CA8-230-750-U-T5R-HSS-HM-EX120

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |       |          |
|------|-------------|---------|-----------|-------------------------|-------|----------|
|      |             |         |           | B                       | U     | G        |
| FL   | (0°-30°)    | 1268.5  | 4.5       |                         |       |          |
| FM   | (30°-60°)   | 7506.7  | 26.7      |                         |       |          |
| FH   | (60°-80°)   | 10494.8 | 37.3      |                         |       | G4/12000 |
| FVH  | (80°-90°)   | 456.3   | 1.6       |                         |       | G3/500   |
| BL   | (0°-30°)    | 1024.1  | 3.6       | B3/2500                 |       |          |
| BM   | (30°-60°)   | 3931.5  | 14.0      | B3/5000                 |       |          |
| BH   | (60°-80°)   | 3290.1  | 11.7      | B4/5000                 |       | G4/5000  |
| BVH  | (80°-90°)   | 137.2   | 0.5       |                         |       | G2/225   |
| UL   | (90°-100°)  | 11.3    | 0.0       |                         | U2/50 |          |
| UH   | (100°-180°) | 1.6     | 0.0       |                         | U1/10 |          |

**BUG Rating: B4-U2-G4**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 85°     | 90°    |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0°     | 2451.7  | 2451.7  | 2451.7  | 2451.7  | 2451.7  | 2451.7  | 2451.7  | 2451.7  | 2451.7  | 2451.7  | 2451.7 |
| 2.5°   | 2492.4  | 2485.4  | 2484.3  | 2498.2  | 2454.0  | 2476.1  | 2456.4  | 2472.7  | 2462.2  | 2470.3  | 2471.5 |
| 5°     | 2526.2  | 2513.4  | 2505.2  | 2521.5  | 2493.6  | 2504.1  | 2482.0  | 2488.9  | 2459.9  | 2476.1  | 2478.5 |
| 7.5°   | 2575.0  | 2554.1  | 2551.7  | 2556.4  | 2532.0  | 2540.1  | 2504.1  | 2512.2  | 2491.3  | 2482.0  | 2490.1 |
| 10°    | 2641.3  | 2621.5  | 2606.4  | 2616.9  | 2584.3  | 2589.0  | 2550.6  | 2551.7  | 2536.6  | 2519.2  | 2533.1 |
| 12.5°  | 2678.5  | 2680.8  | 2673.9  | 2682.0  | 2655.3  | 2640.1  | 2613.4  | 2604.1  | 2589.0  | 2568.0  | 2561.0 |
| 15°    | 2771.6  | 2766.9  | 2752.9  | 2765.7  | 2762.3  | 2748.3  | 2715.7  | 2694.8  | 2662.2  | 2650.6  | 2639.0 |
| 17.5°  | 2885.5  | 2870.4  | 2858.8  | 2875.1  | 2892.5  | 2863.4  | 2832.0  | 2803.0  | 2759.9  | 2736.7  | 2722.7 |
| 20°    | 3005.3  | 2994.9  | 2983.2  | 3008.8  | 3014.6  | 2992.5  | 2969.3  | 2926.2  | 2876.2  | 2846.0  | 2816.9 |
| 22.5°  | 3139.1  | 3118.1  | 3121.6  | 3155.4  | 3144.9  | 3134.4  | 3104.2  | 3069.3  | 3008.8  | 2970.4  | 2886.7 |
| 25°    | 3277.5  | 3265.9  | 3282.1  | 3297.3  | 3289.1  | 3267.0  | 3251.9  | 3226.3  | 3158.9  | 3112.3  | 2990.2 |
| 27.5°  | 3449.6  | 3431.0  | 3451.9  | 3457.8  | 3450.8  | 3445.0  | 3424.0  | 3404.3  | 3331.0  | 3278.7  | 3126.3 |
| 30°    | 3652.0  | 3629.9  | 3663.6  | 3655.5  | 3648.5  | 3653.2  | 3640.4  | 3597.3  | 3532.2  | 3461.2  | 3308.9 |
| 32.5°  | 3892.7  | 3863.7  | 3902.0  | 3884.6  | 3868.3  | 3900.9  | 3870.6  | 3829.9  | 3753.2  | 3670.6  | 3521.7 |
| 35°    | 4171.9  | 4173.0  | 4192.8  | 4163.7  | 4157.9  | 4192.8  | 4173.0  | 4123.0  | 4052.1  | 3966.0  | 3754.3 |
| 37.5°  | 4510.3  | 4501.0  | 4551.0  | 4537.1  | 4516.1  | 4562.7  | 4568.5  | 4505.7  | 4377.7  | 4292.8  | 4042.8 |
| 40°    | 4922.0  | 4919.7  | 4936.0  | 4938.3  | 4932.5  | 4954.6  | 4965.1  | 4881.3  | 4798.8  | 4670.8  | 3814.8 |
| 42.5°  | 5361.7  | 5371.0  | 5400.1  | 5379.1  | 5407.0  | 5436.1  | 5439.6  | 5369.8  | 5251.2  | 4481.2  | 4052.1 |
| 45°    | 5889.7  | 5918.8  | 5938.6  | 5933.9  | 5946.7  | 5988.6  | 5992.1  | 5954.8  | 5838.5  | 4854.6  | 4482.4 |
| 47.5°  | 6495.7  | 6523.6  | 6529.4  | 6566.6  | 6555.0  | 6614.3  | 6606.1  | 6607.3  | 6482.9  | 5374.5  | 4951.1 |
| 50°    | 7192.3  | 7205.1  | 7252.8  | 7273.7  | 7244.7  | 7324.9  | 7304.0  | 7329.6  | 7176.0  | 5970.0  | 5454.7 |
| 52.5°  | 7932.0  | 7954.1  | 7973.9  | 8053.0  | 8015.8  | 8085.6  | 8057.6  | 8117.0  | 7939.0  | 6575.9  | 6014.2 |
| 55°    | 8772.9  | 8776.4  | 8810.1  | 8890.4  | 8841.5  | 8925.3  | 8884.6  | 8906.7  | 8764.8  | 7245.8  | 6596.8 |
| 57.5°  | 9663.8  | 9652.2  | 9665.0  | 9728.9  | 9684.8  | 9747.6  | 9731.3  | 9752.2  | 9619.6  | 7950.6  | 7022.5 |
| 60°    | 10545.4 | 10528.0 | 10546.6 | 10589.6 | 10529.1 | 10637.3 | 10579.1 | 10598.9 | 10455.9 | 8670.6  | 7629.6 |
| 62.5°  | 11431.7 | 11418.9 | 11397.9 | 11441.0 | 11352.6 | 11408.4 | 11432.8 | 11400.3 | 11274.6 | 9321.9  | 8157.7 |
| 65°    | 12383.0 | 12370.2 | 12293.5 | 12320.2 | 12162.1 | 12135.3 | 12144.6 | 12155.1 | 12071.3 | 9967.4  | 8736.9 |
| 67.5°  | 13539.1 | 13520.5 | 13376.3 | 13194.9 | 12966.9 | 12916.9 | 12921.5 | 12949.4 | 12961.1 | 10797.8 | 9414.9 |
| 68°    | 13669.4 | 13635.6 | 13475.1 | 13264.6 | 13026.2 | 12968.1 | 12962.2 | 12968.1 | 12973.9 | 10804.8 | 9407.9 |
| 70°    | 13336.7 | 13324.0 | 13201.8 | 12947.1 | 12702.9 | 12563.3 | 12442.4 | 12437.7 | 12381.9 | 10252.3 | 8888.1 |
| 72.5°  | 11835.2 | 11819.0 | 11673.6 | 11493.3 | 11342.1 | 11123.5 | 10966.4 | 10975.7 | 10883.9 | 9061.4  | 7779.7 |
| 75°    | 9577.8  | 9576.6  | 9402.1  | 9250.9  | 9253.3  | 9237.0  | 9184.6  | 9276.5  | 9181.2  | 7685.5  | 6635.2 |
| 77.5°  | 6674.8  | 6698.0  | 6686.4  | 6598.0  | 6722.5  | 6894.6  | 7081.8  | 7258.6  | 7204.0  | 6071.1  | 5290.7 |
| 80°    | 3486.8  | 3552.0  | 3782.3  | 3792.7  | 3879.9  | 4047.4  | 4175.4  | 4294.0  | 4302.1  | 3445.0  | 3056.5 |
| 82.5°  | 927.0   | 946.7   | 1024.7  | 1002.6  | 995.6   | 1029.3  | 1057.2  | 1060.7  | 1063.0  | 897.9   | 838.6  |
| 85°    | 288.4   | 296.6   | 287.3   | 274.5   | 254.7   | 232.6   | 226.8   | 184.9   | 146.5   | 121.0   | 105.8  |
| 87.5°  | 204.7   | 218.7   | 197.7   | 186.1   | 165.2   | 157.0   | 140.7   | 110.5   | 86.1    | 60.5    | 40.7   |
| 90°    | 105.8   | 108.2   | 96.5    | 82.6    | 76.8    | 72.1    | 61.6    | 44.2    | 22.1    | 11.6    | 10.5   |
| 92.5°  | 53.5    | 54.7    | 47.7    | 40.7    | 34.9    | 30.2    | 23.3    | 12.8    | 7.0     | 3.5     | 1.2    |
| 95°    | 20.9    | 22.1    | 19.8    | 17.4    | 14.0    | 10.5    | 9.3     | 7.0     | 4.7     | 2.3     | 1.2    |
| 97.5°  | 7.0     | 7.0     | 7.0     | 5.8     | 5.8     | 5.8     | 5.8     | 4.7     | 3.5     | 2.3     | 1.2    |
| 100°   | 0.0     | 0.0     | 0.0     | 1.2     | 2.3     | 3.5     | 3.5     | 3.5     | 2.3     | 1.2     | 1.2    |
| 102.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 1.2     | 2.3     | 2.3     | 2.3     | 1.2     | 1.2    |
| 105°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 1.2     | 1.2     | 1.2     | 1.2     | 1.2     | 1.2    |
| 107.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 1.2     | 1.2     | 1.2     | 1.2     | 1.2    |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 5°  | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 110°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 |
| 112.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 |
| 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 | 1.2 |
| 130°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 |
| 132.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 |
| 135°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 |
| 140°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 |
| 142.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 |
| 145°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 |
| 150°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 |
| 155°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 |
| 160°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 |
| 165°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 170°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 175°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| 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°     | 2451.7 | 2451.7 | 2451.7 | 2451.7 | 2451.7 | 2451.7 | 2451.7 | 2451.7 | 2451.7 | 2451.7 |
| 2.5°   | 2465.7 | 2458.7 | 2462.2 | 2433.1 | 2440.1 | 2421.5 | 2461.0 | 2450.6 | 2445.9 | 2462.2 |
| 5°     | 2471.5 | 2445.9 | 2466.8 | 2447.1 | 2450.6 | 2423.8 | 2456.4 | 2443.6 | 2442.4 | 2451.7 |
| 7.5°   | 2473.8 | 2461.0 | 2480.8 | 2448.2 | 2458.7 | 2448.2 | 2472.7 | 2459.9 | 2471.5 | 2479.6 |
| 10°    | 2506.4 | 2499.4 | 2497.1 | 2485.4 | 2493.6 | 2470.3 | 2500.6 | 2500.6 | 2506.4 | 2528.5 |
| 12.5°  | 2554.1 | 2544.8 | 2538.9 | 2518.0 | 2526.2 | 2519.2 | 2543.6 | 2548.3 | 2558.7 | 2568.0 |
| 15°    | 2619.2 | 2602.9 | 2597.1 | 2578.5 | 2584.3 | 2583.1 | 2600.6 | 2601.8 | 2625.0 | 2623.9 |
| 17.5°  | 2702.9 | 2679.7 | 2686.7 | 2672.7 | 2673.9 | 2664.6 | 2655.3 | 2655.3 | 2676.2 | 2680.8 |
| 20°    | 2803.0 | 2670.4 | 2495.9 | 2398.2 | 2380.8 | 2393.6 | 2443.6 | 2526.2 | 2422.6 | 2451.7 |
| 22.5°  | 2622.7 | 2502.9 | 2494.8 | 2472.7 | 2458.7 | 2147.0 | 2066.7 | 2041.2 | 2174.9 | 2405.2 |
| 25°    | 2645.9 | 2594.8 | 2579.7 | 2551.7 | 2140.0 | 2136.5 | 2113.3 | 2074.9 | 1695.7 | 1687.6 |
| 27.5°  | 2769.2 | 2719.2 | 2694.8 | 2235.4 | 2226.1 | 2224.9 | 2190.0 | 1805.1 | 1717.8 | 1729.5 |
| 30°    | 2913.5 | 2855.3 | 2418.0 | 2348.2 | 2340.1 | 2321.5 | 2121.4 | 1783.0 | 1781.8 | 1783.0 |
| 32.5°  | 3079.8 | 2886.7 | 2487.8 | 2484.3 | 2488.9 | 2431.9 | 1879.5 | 1872.5 | 1871.4 | 1883.0 |
| 35°    | 3307.7 | 2678.5 | 2662.2 | 2679.7 | 2655.3 | 2102.8 | 1992.3 | 1988.8 | 1990.0 | 1984.2 |
| 37.5°  | 3156.5 | 2887.9 | 2884.4 | 2884.4 | 2827.4 | 2151.7 | 2129.6 | 2145.8 | 2143.5 | 2135.4 |
| 40°    | 3220.5 | 3141.4 | 3120.5 | 3113.5 | 2390.1 | 2321.5 | 2308.7 | 2329.6 | 2333.1 | 2338.9 |
| 42.5°  | 3531.0 | 3458.9 | 3448.5 | 3365.9 | 2600.6 | 2578.5 | 2538.9 | 2561.0 | 2558.7 | 2565.7 |
| 45°    | 3912.5 | 3863.7 | 3818.3 | 2918.1 | 2884.4 | 2856.5 | 2815.8 | 2841.3 | 2848.3 | 2843.7 |
| 47.5°  | 4356.8 | 4303.3 | 3975.3 | 3208.9 | 3207.7 | 3185.6 | 3140.2 | 3161.2 | 3157.7 | 3157.7 |
| 50°    | 4803.4 | 4745.3 | 3611.3 | 3578.7 | 3567.1 | 3532.2 | 3495.0 | 3498.5 | 3499.6 | 3511.3 |
| 52.5°  | 5302.4 | 4238.2 | 3997.4 | 3932.3 | 3941.6 | 3918.3 | 3882.3 | 2939.0 | 3864.8 | 3875.3 |
| 55°    | 4955.8 | 4435.9 | 4421.9 | 4335.9 | 4358.0 | 4327.7 | 4304.5 | 2899.5 | 3843.9 | 4247.5 |
| 57.5°  | 4899.9 | 4862.7 | 4851.1 | 4762.7 | 4790.6 | 4503.3 | 4718.5 | 3172.8 | 2658.7 | 1942.3 |
| 60°    | 5326.8 | 5287.2 | 5280.3 | 5202.3 | 5200.0 | 3578.7 | 4289.3 | 2176.1 | 1700.4 | 1712.0 |
| 62.5°  | 5740.8 | 5676.9 | 5694.3 | 5602.4 | 3949.7 | 2180.7 | 1922.5 | 48.8   | 77.9   | 82.6   |
| 65°    | 6202.6 | 6095.6 | 6113.0 | 6028.1 | 4074.2 | 2299.4 | 2078.4 | 25.6   | 22.1   | 20.9   |
| 67.5°  | 6646.9 | 6459.6 | 6370.0 | 6280.5 | 4231.2 | 2421.5 | 2165.6 | 7.0    | 0.0    | 0.0    |
| 68°    | 6624.8 | 6427.0 | 6335.2 | 6250.3 | 4214.9 | 2418.0 | 2161.0 | 7.0    | 0.0    | 0.0    |
| 70°    | 6251.4 | 6073.5 | 5986.2 | 5921.1 | 4024.2 | 2335.4 | 2073.7 | 7.0    | 0.0    | 0.0    |
| 72.5°  | 5465.2 | 5366.3 | 5310.5 | 5253.5 | 3575.2 | 2088.8 | 1859.7 | 7.0    | 0.0    | 0.0    |
| 75°    | 4644.1 | 4616.2 | 4581.3 | 4455.7 | 2979.7 | 1709.7 | 1528.3 | 7.0    | 0.0    | 0.0    |
| 77.5°  | 3679.9 | 3678.7 | 3593.8 | 3446.1 | 2243.5 | 1254.9 | 1127.0 | 5.8    | 0.0    | 0.0    |
| 80°    | 1990.0 | 2169.1 | 2104.0 | 2028.4 | 1272.4 | 682.7  | 650.1  | 4.7    | 0.0    | 0.0    |
| 82.5°  | 559.4  | 529.2  | 508.3  | 475.7  | 267.5  | 148.9  | 145.4  | 4.7    | 0.0    | 0.0    |
| 85°    | 77.9   | 86.1   | 95.4   | 108.2  | 61.6   | 39.5   | 34.9   | 2.3    | 0.0    | 0.0    |
| 87.5°  | 44.2   | 50.0   | 61.6   | 64.0   | 23.3   | 18.6   | 5.8    | 0.0    | 0.0    | 0.0    |
| 90°    | 9.3    | 10.5   | 11.6   | 11.6   | 4.7    | 4.7    | 0.0    | 0.0    | 0.0    | 0.0    |
| 92.5°  | 0.0    | 1.2    | 1.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 95°    | 1.2    | 1.2    | 1.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 97.5°  | 1.2    | 1.2    | 1.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 100°   | 1.2    | 1.2    | 1.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 102.5° | 1.2    | 1.2    | 1.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 105°   | 1.2    | 1.2    | 1.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 107.5° | 1.2    | 1.2    | 1.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P522210

CATALOG NUMBER: CST-CA8-230-750-U-T5R-HSS-HM-EX120

**CANDELA DISTRIBUTION (continued):**

|        | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|--------|-----|------|------|------|------|------|------|------|------|------|
| 110°   | 1.2 | 1.2  | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 112.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 115°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 117.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 120°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 122.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 125°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 127.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 130°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 132.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 135°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 137.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 140°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 142.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 145°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 147.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 150°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 152.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 155°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 157.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 160°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 162.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 165°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 167.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 170°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 172.5° | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 175°   | 1.2 | 1.2  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 177.5° | 1.2 | 1.2  | 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  |

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

STREETWORKS

Report Number: SP1-2104-215-7

Luminaire Tested: CST-CA6-230-750-U-T4

Test Date: 04/22/2021

### Test Information

Test Method: LM-79-08  
 Report Number: SP1-2104-215-7  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry:  $4\pi$   
 Issue Date: 04/22/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: STREETWORKS  
 Catalog Number: **CST-CA6-230-750-U-T4**  
 Description: STREETWORKS HIGH MAST LUMINAIRE

### Spectral Parameters

|                           |        |           |      |      |       |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K):                  | 4852   | CRI (Ra): | 74.1 |      |       |
| CIE u':                   | 0.2118 | R1:       | 71.0 | R9:  | -25.4 |
| CIE v':                   | 0.4888 | R2:       | 79.6 | R10: | 51.4  |
| Duv:                      | 0.0017 | R3:       | 85.8 | R11: | 70.1  |
| CIE x:                    | 0.3498 | R4:       | 73.5 | R12: | 42.9  |
| CIE y:                    | 0.3588 | R5:       | 71.4 | R13: | 72.5  |
| CIE z:                    | 0.2914 | R6:       | 71.2 | R14: | 92.1  |
| Peak Wavelength (nm):     | 449    | R7:       | 82.9 |      |       |
| Dominant Wavelength (nm): | 572    | R8:       | 57.2 |      |       |
| Purity:                   | 12.7   |           |      |      |       |
| Rf:                       | 75.2   |           |      |      |       |
| Rg:                       | 94.7   |           |      |      |       |



### Test Conditions

Stabilization Time: 72M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 25.4/13%  
 Sphere Temperature (°C): 24.0

REPORT NUMBER: SP1-2104-215-7

| 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: SP1-2104-215-7

**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2104-215-7

### 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       | 15077            | 0.0              | 490       | 146327           | 20.8             | 620       | 434415           | 113.0            | 750       | 22886            | 0.0              | 880       | 20960            | 0.0              |
| 365       | 12138            | 0.0              | 495       | 188585           | 34.2             | 625       | 400670           | 88.4             | 755       | 19692            | 0.0              | 885       | 20315            | 0.0              |
| 370       | 12993            | 0.0              | 500       | 245069           | 54.1             | 630       | 360611           | 65.3             | 760       | 18199            | 0.0              | 890       | 15211            | 0.0              |
| 375       | 14513            | 0.0              | 505       | 307682           | 86.1             | 635       | 326986           | 49.1             | 765       | 19191            | 0.0              | 895       | 15502            | 0.0              |
| 380       | 15679            | 0.0              | 510       | 367102           | 126.1            | 640       | 295583           | 35.3             | 770       | 16229            | 0.0              | 900       | 15935            | 0.0              |
| 385       | 14569            | 0.0              | 515       | 416068           | 172.4            | 645       | 264664           | 25.5             | 775       | 16351            | 0.0              | 905       | 15965            | 0.0              |
| 390       | 13091            | 0.0              | 520       | 457470           | 221.8            | 650       | 238441           | 17.4             | 780       | 14567            | 0.0              | 910       | 16119            | 0.0              |
| 395       | 10927            | 0.0              | 525       | 486980           | 261.4            | 655       | 210047           | 12.1             | 785       | 13349            | 0.0              | 915       | 13972            | 0.0              |
| 400       | 9655             | 0.0              | 530       | 511184           | 301.0            | 660       | 186019           | 7.8              | 790       | 12552            | 0.0              | 920       | 14830            | 0.0              |
| 405       | 10895            | 0.0              | 535       | 527191           | 326.9            | 665       | 164001           | 5.2              | 795       | 11517            | 0.0              | 925       | 13744            | 0.0              |
| 410       | 14929            | 0.0              | 540       | 540658           | 352.3            | 670       | 142007           | 3.1              | 800       | 13250            | 0.0              | 930       | 20340            | 0.0              |
| 415       | 25993            | 0.0              | 545       | 555639           | 369.8            | 675       | 123441           | 2.1              | 805       | 15135            | 0.0              | 935       | 13272            | 0.0              |
| 420       | 49620            | 0.1              | 550       | 572229           | 388.9            | 680       | 106894           | 1.2              | 810       | 9873             | 0.0              | 940       | 16357            | 0.0              |
| 425       | 95836            | 0.5              | 555       | 589788           | 402.8            | 685       | 94026            | 0.8              | 815       | 11566            | 0.0              | 945       | 19257            | 0.0              |
| 430       | 178101           | 1.4              | 560       | 608278           | 413.4            | 690       | 82099            | 0.5              | 820       | 11216            | 0.0              | 950       | 19804            | 0.0              |
| 435       | 300144           | 3.5              | 565       | 619317           | 411.8            | 695       | 70275            | 0.3              | 825       | 15165            | 0.0              | 955       | 14877            | 0.0              |
| 440       | 512674           | 8.1              | 570       | 627176           | 407.8            | 700       | 61784            | 0.2              | 830       | 14983            | 0.0              | 960       | 9882             | 0.0              |
| 445       | 857336           | 17.9             | 575       | 631114           | 392.7            | 705       | 55550            | 0.1              | 835       | 13993            | 0.0              | 965       | 11741            | 0.0              |
| 450       | 1021494          | 26.5             | 580       | 630436           | 374.6            | 710       | 50234            | 0.1              | 840       | 15281            | 0.0              | 970       | 11068            | 0.0              |
| 455       | 730207           | 24.4             | 585       | 625204           | 347.4            | 715       | 44909            | 0.0              | 845       | 15737            | 0.0              | 975       | 18108            | 0.0              |
| 460       | 467897           | 19.2             | 590       | 612752           | 316.8            | 720       | 41441            | 0.0              | 850       | 15148            | 0.0              | 980       | 17506            | 0.0              |
| 465       | 344659           | 17.8             | 595       | 589048           | 279.2            | 725       | 36834            | 0.0              | 855       | 17198            | 0.0              | 985       | 23821            | 0.0              |
| 470       | 230541           | 14.3             | 600       | 567479           | 244.6            | 730       | 32988            | 0.0              | 860       | 19169            | 0.0              | 990       | 25862            | 0.0              |
| 475       | 157156           | 12.3             | 605       | 542722           | 210.2            | 735       | 28984            | 0.0              | 865       | 18632            | 0.0              | 995       | 21133            | 0.0              |
| 480       | 134805           | 12.8             | 610       | 507118           | 174.2            | 740       | 26177            | 0.0              | 870       | 18831            | 0.0              | 1000      | 25640            | 0.0              |
| 485       | 132031           | 15.6             | 615       | 472188           | 142.5            | 745       | 22680            | 0.0              | 875       | 16978            | 0.0              |           |                  |                  |

REPORT NUMBER: SP1-2104-215-7

### Scotopic Flux vs. Wavelength



Scotopic Lumens: 66024.8

S/P: 1.78

| $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) |
|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|
| 360               | 15077                         | 0.0                            | 490               | 146327                        | 225.3                          | 620               | 434415                        | 5.4                            | 750               | 22886                         | 0.0                            | 880               | 20960                         | 0.0                            |
| 365               | 12138                         | 0.0                            | 495               | 188585                        | 304.9                          | 625               | 400670                        | 3.4                            | 755               | 19692                         | 0.0                            | 885               | 20315                         | 0.0                            |
| 370               | 12993                         | 0.0                            | 500               | 245069                        | 409.9                          | 630               | 360611                        | 2.0                            | 760               | 18199                         | 0.0                            | 890               | 15211                         | 0.0                            |
| 375               | 14513                         | 0.0                            | 505               | 307682                        | 523.1                          | 635               | 326986                        | 1.2                            | 765               | 19191                         | 0.0                            | 895               | 15502                         | 0.0                            |
| 380               | 15679                         | 0.0                            | 510               | 367102                        | 622.2                          | 640               | 295583                        | 0.8                            | 770               | 16229                         | 0.0                            | 900               | 15935                         | 0.0                            |
| 385               | 14569                         | 0.0                            | 515               | 416068                        | 689.6                          | 645               | 264664                        | 0.5                            | 775               | 16351                         | 0.0                            | 905               | 15965                         | 0.0                            |
| 390               | 13091                         | 0.0                            | 520               | 457470                        | 727.1                          | 650               | 238441                        | 0.3                            | 780               | 14567                         | 0.0                            | 910               | 16119                         | 0.0                            |
| 395               | 10927                         | 0.1                            | 525               | 486980                        | 728.5                          | 655               | 210047                        | 0.2                            | 785               | 13349                         | 0.0                            | 915               | 13972                         | 0.0                            |
| 400               | 9655                          | 0.2                            | 530               | 511184                        | 704.8                          | 660               | 186019                        | 0.1                            | 790               | 12552                         | 0.0                            | 920               | 14830                         | 0.0                            |
| 405               | 10895                         | 0.3                            | 535               | 527191                        | 656.9                          | 665               | 164001                        | 0.1                            | 795               | 11517                         | 0.0                            | 925               | 13744                         | 0.0                            |
| 410               | 14929                         | 0.9                            | 540               | 540658                        | 597.4                          | 670               | 142007                        | 0.0                            | 800               | 13250                         | 0.0                            | 930               | 20340                         | 0.0                            |
| 415               | 25993                         | 2.7                            | 545               | 555639                        | 532.7                          | 675               | 123441                        | 0.0                            | 805               | 15135                         | 0.0                            | 935               | 13272                         | 0.0                            |
| 420               | 49620                         | 8.2                            | 550               | 572229                        | 467.9                          | 680               | 106894                        | 0.0                            | 810               | 9873                          | 0.0                            | 940               | 16357                         | 0.0                            |
| 425               | 95836                         | 23.4                           | 555               | 589788                        | 403.1                          | 685               | 94026                         | 0.0                            | 815               | 11566                         | 0.0                            | 945               | 19257                         | 0.0                            |
| 430               | 178101                        | 60.6                           | 560               | 608278                        | 340.0                          | 690               | 82099                         | 0.0                            | 820               | 11216                         | 0.0                            | 950               | 19804                         | 0.0                            |
| 435               | 300144                        | 134.2                          | 565               | 619317                        | 277.8                          | 695               | 70275                         | 0.0                            | 825               | 15165                         | 0.0                            | 955               | 14877                         | 0.0                            |
| 440               | 512674                        | 286.5                          | 570               | 627176                        | 221.3                          | 700               | 61784                         | 0.0                            | 830               | 14983                         | 0.0                            | 960               | 9882                          | 0.0                            |
| 445               | 857336                        | 574.1                          | 575               | 631114                        | 171.9                          | 705               | 55550                         | 0.0                            | 835               | 13993                         | 0.0                            | 965               | 11741                         | 0.0                            |
| 450               | 1021494                       | 791.7                          | 580               | 630436                        | 129.9                          | 710               | 50234                         | 0.0                            | 840               | 15281                         | 0.0                            | 970               | 11068                         | 0.0                            |
| 455               | 730207                        | 638.1                          | 585               | 625204                        | 95.5                           | 715               | 44909                         | 0.0                            | 845               | 15737                         | 0.0                            | 975               | 18108                         | 0.0                            |
| 460               | 467897                        | 451.9                          | 590               | 612752                        | 68.2                           | 720               | 41441                         | 0.0                            | 850               | 15148                         | 0.0                            | 980               | 17506                         | 0.0                            |
| 465               | 344659                        | 364.0                          | 595               | 589048                        | 47.0                           | 725               | 36834                         | 0.0                            | 855               | 17198                         | 0.0                            | 985               | 23821                         | 0.0                            |
| 470               | 230541                        | 265.5                          | 600               | 567479                        | 32.0                           | 730               | 32988                         | 0.0                            | 860               | 19169                         | 0.0                            | 990               | 25862                         | 0.0                            |
| 475               | 157156                        | 196.5                          | 605               | 542722                        | 21.3                           | 735               | 28984                         | 0.0                            | 865               | 18632                         | 0.0                            | 995               | 21133                         | 0.0                            |
| 480               | 134805                        | 182.1                          | 610               | 507118                        | 13.7                           | 740               | 26177                         | 0.0                            | 870               | 18831                         | 0.0                            | 1000              | 25640                         | 0.0                            |
| 485               | 132031                        | 191.4                          | 615               | 472188                        | 8.7                            | 745               | 22680                         | 0.0                            | 875               | 16978                         | 0.0                            |                   |                               |                                |

REPORT NUMBER: SP1-2104-215-7

### Melanopic Flux vs. Wavelength



**Melanopic Lumens: 26696.3**      **M/P: 0.72**

| 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       | 15077            | 0.0              | 490       | 146327           | 121.8            | 620       | 434415           | 0.3              | 750       | 22886            | 0.0              | 880       | 20960            | 0.0              |
| 365       | 12138            | 0.0              | 495       | 188585           | 155.7            | 625       | 400670           | 0.2              | 755       | 19692            | 0.0              | 885       | 20315            | 0.0              |
| 370       | 12993            | 0.0              | 500       | 245069           | 197.0            | 630       | 360611           | 0.1              | 760       | 18199            | 0.0              | 890       | 15211            | 0.0              |
| 375       | 14513            | 0.0              | 505       | 307682           | 236.1            | 635       | 326986           | 0.1              | 765       | 19191            | 0.0              | 895       | 15502            | 0.0              |
| 380       | 15679            | 0.0              | 510       | 367102           | 263.6            | 640       | 295583           | 0.0              | 770       | 16229            | 0.0              | 900       | 15935            | 0.0              |
| 385       | 14569            | 0.0              | 515       | 416068           | 271.9            | 645       | 264664           | 0.0              | 775       | 16351            | 0.0              | 905       | 15965            | 0.0              |
| 390       | 13091            | 0.0              | 520       | 457470           | 266.3            | 650       | 238441           | 0.0              | 780       | 14567            | 0.0              | 910       | 16119            | 0.0              |
| 395       | 10927            | 0.1              | 525       | 486980           | 247.0            | 655       | 210047           | 0.0              | 785       | 13349            | 0.0              | 915       | 13972            | 0.0              |
| 400       | 9655             | 0.1              | 530       | 511184           | 220.9            | 660       | 186019           | 0.0              | 790       | 12552            | 0.0              | 920       | 14830            | 0.0              |
| 405       | 10895            | 0.2              | 535       | 527191           | 189.7            | 665       | 164001           | 0.0              | 795       | 11517            | 0.0              | 925       | 13744            | 0.0              |
| 410       | 14929            | 0.6              | 540       | 540658           | 158.2            | 670       | 142007           | 0.0              | 800       | 13250            | 0.0              | 930       | 20340            | 0.0              |
| 415       | 25993            | 1.7              | 545       | 555639           | 129.1            | 675       | 123441           | 0.0              | 805       | 15135            | 0.0              | 935       | 13272            | 0.0              |
| 420       | 49620            | 5.7              | 550       | 572229           | 102.7            | 680       | 106894           | 0.0              | 810       | 9873             | 0.0              | 940       | 16357            | 0.0              |
| 425       | 95836            | 14.9             | 555       | 589788           | 79.5             | 685       | 94026            | 0.0              | 815       | 11566            | 0.0              | 945       | 19257            | 0.0              |
| 430       | 178101           | 37.6             | 560       | 608278           | 60.0             | 690       | 82099            | 0.0              | 820       | 11216            | 0.0              | 950       | 19804            | 0.0              |
| 435       | 300144           | 80.1             | 565       | 619317           | 43.5             | 695       | 70275            | 0.0              | 825       | 15165            | 0.0              | 955       | 14877            | 0.0              |
| 440       | 512674           | 171.3            | 570       | 627176           | 30.6             | 700       | 61784            | 0.0              | 830       | 14983            | 0.0              | 960       | 9882             | 0.0              |
| 445       | 857336           | 338.2            | 575       | 631114           | 21.0             | 705       | 55550            | 0.0              | 835       | 13993            | 0.0              | 965       | 11741            | 0.0              |
| 450       | 1021494          | 470.7            | 580       | 630436           | 14.1             | 710       | 50234            | 0.0              | 840       | 15281            | 0.0              | 970       | 11068            | 0.0              |
| 455       | 730207           | 382.6            | 585       | 625204           | 9.3              | 715       | 44909            | 0.0              | 845       | 15737            | 0.0              | 975       | 18108            | 0.0              |
| 460       | 467897           | 275.7            | 590       | 612752           | 6.0              | 720       | 41441            | 0.0              | 850       | 15148            | 0.0              | 980       | 17506            | 0.0              |
| 465       | 344659           | 225.2            | 595       | 589048           | 3.8              | 725       | 36834            | 0.0              | 855       | 17198            | 0.0              | 985       | 23821            | 0.0              |
| 470       | 230541           | 165.0            | 600       | 567479           | 2.4              | 730       | 32988            | 0.0              | 860       | 19169            | 0.0              | 990       | 25862            | 0.0              |
| 475       | 157156           | 120.0            | 605       | 542722           | 1.5              | 735       | 28984            | 0.0              | 865       | 18632            | 0.0              | 995       | 21133            | 0.0              |
| 480       | 134805           | 108.3            | 610       | 507118           | 0.9              | 740       | 26177            | 0.0              | 870       | 18831            | 0.0              | 1000      | 25640            | 0.0              |
| 485       | 132031           | 108.8            | 615       | 472188           | 0.6              | 745       | 22680            | 0.0              | 875       | 16978            | 0.0              |           |                  |                  |

### Summary

$R_f = 75.2$   
 $R_g = 94.7$   
 CIE  $R_a = 74.1$   
 $R_g = -25.4$



### Color Vector Graphics



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 63 | CES51 = 90 | CES76 = 52 |
| CES02 = 60 | CES27 = 88 | CES52 = 90 | CES77 = 68 |
| CES03 = 30 | CES28 = 81 | CES53 = 81 | CES78 = 54 |
| CES04 = 69 | CES29 = 67 | CES54 = 86 | CES79 = 81 |
| CES05 = 46 | CES30 = 85 | CES55 = 84 | CES80 = 77 |
| CES06 = 50 | CES31 = 71 | CES56 = 76 | CES81 = 79 |
| CES07 = 39 | CES32 = 63 | CES57 = 75 | CES82 = 91 |
| CES08 = 38 | CES33 = 79 | CES58 = 76 | CES83 = 89 |
| CES09 = 29 | CES34 = 70 | CES59 = 87 | CES84 = 86 |
| CES10 = 73 | CES35 = 83 | CES60 = 89 | CES85 = 79 |
| CES11 = 56 | CES36 = 90 | CES61 = 83 | CES86 = 76 |
| CES12 = 62 | CES37 = 79 | CES62 = 85 | CES87 = 78 |
| CES13 = 42 | CES38 = 94 | CES63 = 76 | CES88 = 82 |
| CES14 = 74 | CES39 = 96 | CES64 = 67 | CES89 = 74 |
| CES15 = 70 | CES40 = 91 | CES65 = 64 | CES90 = 81 |
| CES16 = 46 | CES41 = 95 | CES66 = 61 | CES91 = 74 |
| CES17 = 49 | CES42 = 80 | CES67 = 58 | CES92 = 61 |
| CES18 = 55 | CES43 = 78 | CES68 = 66 | CES93 = 77 |
| CES19 = 71 | CES44 = 99 | CES69 = 74 | CES94 = 56 |
| CES20 = 64 | CES45 = 86 | CES70 = 58 | CES95 = 67 |
| CES21 = 85 | CES46 = 85 | CES71 = 51 | CES96 = 78 |
| CES22 = 77 | CES47 = 88 | CES72 = 83 | CES97 = 86 |
| CES23 = 91 | CES48 = 80 | CES73 = 48 | CES98 = 77 |
| CES24 = 90 | CES49 = 83 | CES74 = 92 | CES99 = 65 |
| CES25 = 71 | CES50 = 90 | CES75 = 52 |            |



**Color Rendition by Hue-Angle Bin**


**Measure Comparisons**



(END OF REPORT)