

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: McGRAW-EDISON

Report Number: P436904

Luminaire Tested: **TT-D6-750-U-CQ-HSS**

Issue Date: 12/2/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P436904  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TT-D6-750-U-CQ-HSS  
Description: TOPTIER LED PARKING GARAGE LUMINAIRE  
5000K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10483.1 lumens  
Efficiency: N/A  
Efficacy: 99.6 lumens/watt  
Luminous Opening: Circular (Dia: 1.12' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U2 - G2

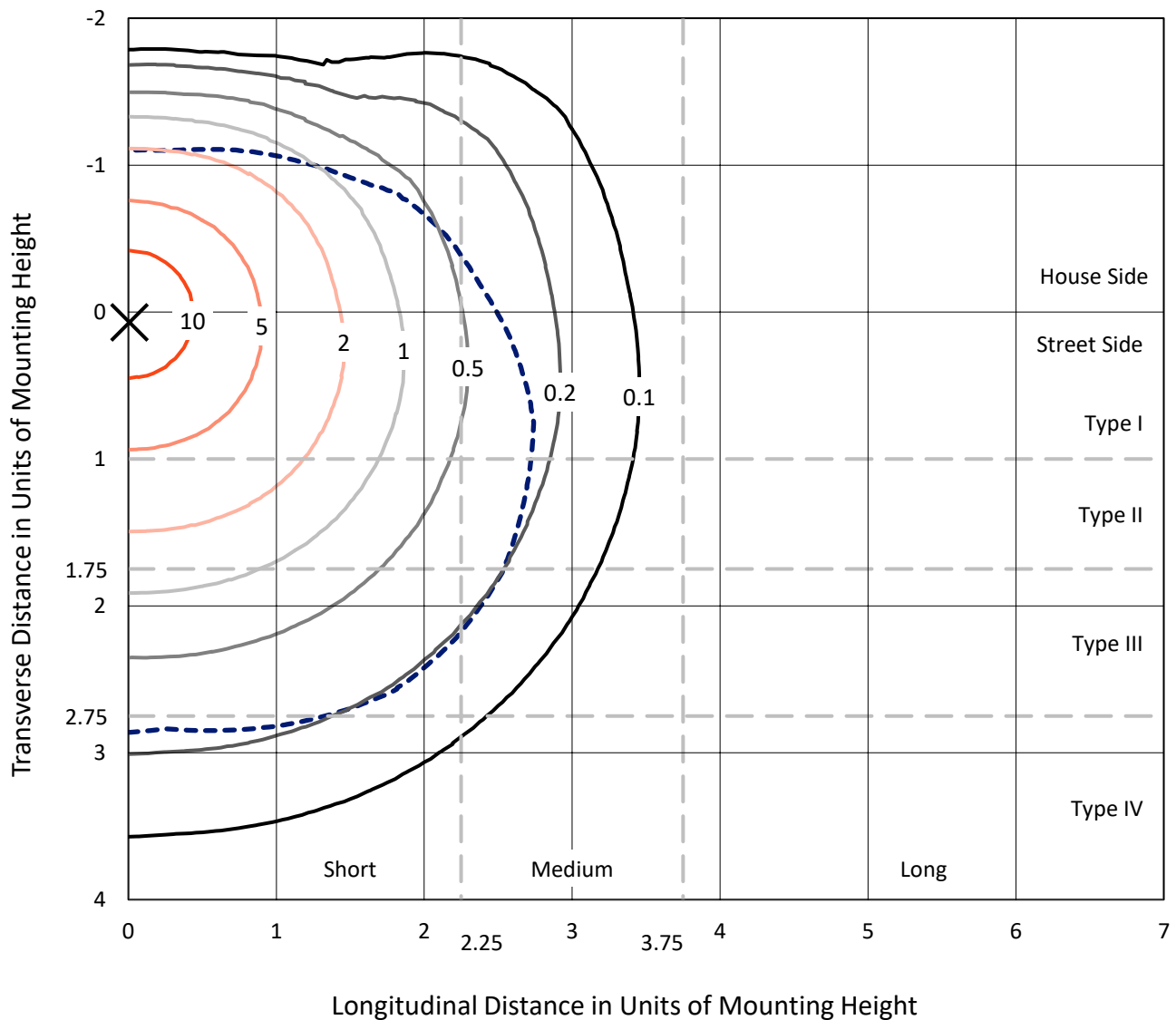
Input Watts (W): 105.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 --- 1/2 Max cd

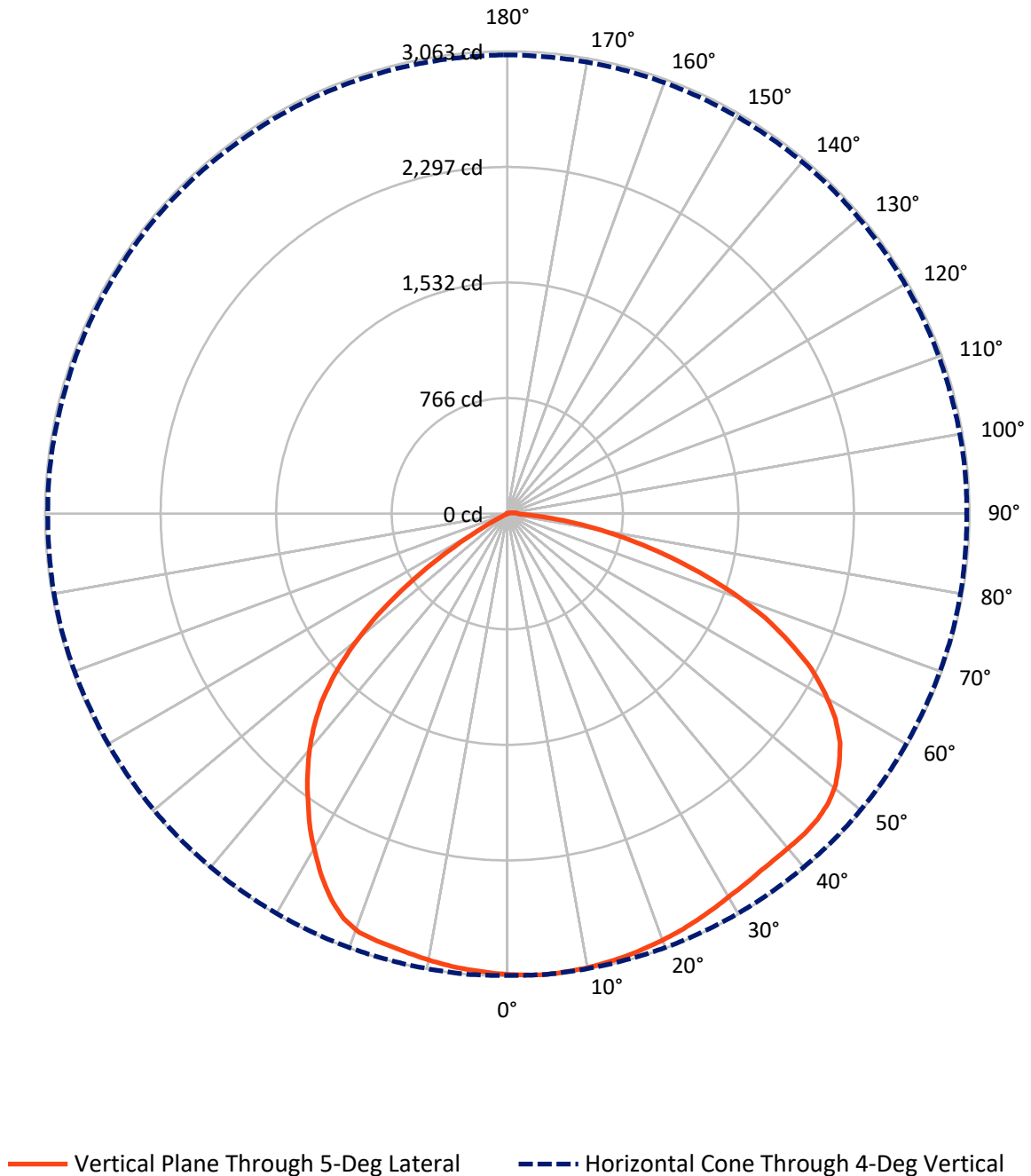


Based on 15 foot mounting height. Maximum calculated value = 13.6 fc  
 Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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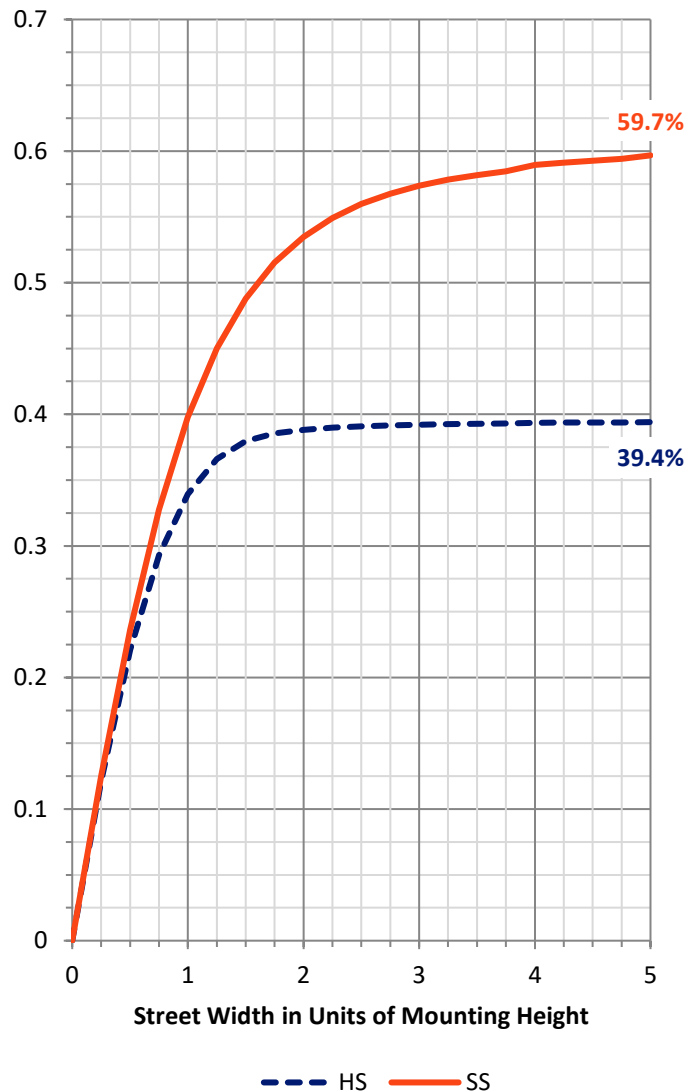
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 4154.3   | 5.4    | 4159.8  |
|                    | % Fixture | 39.6     | 0.1    | 39.7    |
| <b>Street Side</b> | Lumens    | 6294.1   | 29.3   | 6323.4  |
|                    | % Fixture | 60.0     | 0.3    | 60.3    |
| <b>Total</b>       | Lumens    | 10448.4  | 34.7   | 10483.1 |
|                    | % Fixture | 99.7     | 0.3    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 290.2   | 2.8       |
| 10°-20°   | 849.7   | 8.1       |
| 20°-30°   | 1338.9  | 12.8      |
| 30°-40°   | 1704.0  | 16.3      |
| 40°-50°   | 1968.2  | 18.8      |
| 50°-60°   | 1927.1  | 18.4      |
| 60°-70°   | 1435.3  | 13.7      |
| 70°-80°   | 777.4   | 7.4       |
| 80°-90°   | 157.6   | 1.5       |
| 90°-100°  | 20.0    | 0.2       |
| 100°-110° | 7.8     | 0.1       |
| 110°-120° | 2.2     | 0.0       |
| 120°-130° | 1.6     | 0.0       |
| 130°-140° | 1.3     | 0.0       |
| 140°-150° | 0.8     | 0.0       |
| 150°-160° | 0.5     | 0.0       |
| 160°-170° | 0.3     | 0.0       |
| 170°-180° | 0.1     | 0.0       |
| 0°-90°    | 10448.4 | 99.7      |
| 0°-180°   | 10483.1 | 100.0     |



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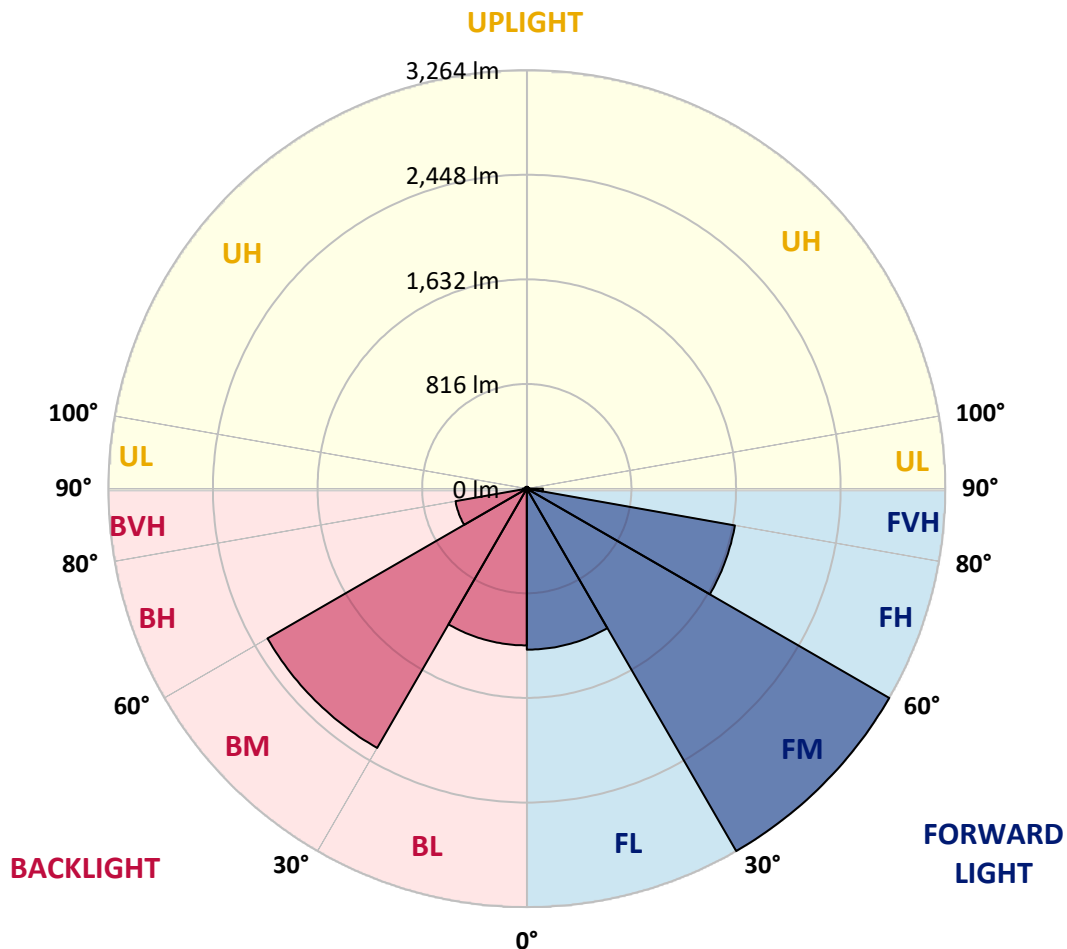
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |       |         |
|------|-------------|--------|-----------|-------------------------|-------|---------|
|      |             |        |           | B                       | U     | G       |
| FL   | (0°-30°)    | 1256.1 | 12.0      |                         |       |         |
| FM   | (30°-60°)   | 3264.0 | 31.1      |                         |       |         |
| FH   | (60°-80°)   | 1648.2 | 15.7      |                         |       | G1/1800 |
| FVH  | (80°-90°)   | 125.8  | 1.2       |                         |       | G2/225  |
| BL   | (0°-30°)    | 1222.7 | 11.7      | B3/2500                 |       |         |
| BM   | (30°-60°)   | 2335.4 | 22.3      | B2/2500                 |       |         |
| BH   | (60°-80°)   | 564.5  | 5.4       | B2/1000                 |       | G2/1000 |
| BVH  | (80°-90°)   | 31.7   | 0.3       |                         |       | G1/100  |
| UL   | (90°-100°)  | 20.0   | 0.2       |                         | U2/50 |         |
| UH   | (100°-180°) | 14.7   | 0.1       |                         | U2/50 |         |

**BUG Rating: B3-U2-G2**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    | 90°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 |
| 2.5°   | 3057.2 | 3061.1 | 3059.2 | 3059.2 | 3055.2 | 3057.2 | 3055.2 | 3055.2 | 3053.2 | 3051.3 | 3051.3 |
| 4°     | 3059.2 | 3063.1 | 3059.2 | 3059.2 | 3057.2 | 3057.2 | 3055.2 | 3051.3 | 3053.2 | 3047.3 | 3045.4 |
| 5°     | 3061.1 | 3063.1 | 3061.1 | 3061.1 | 3057.2 | 3055.2 | 3051.3 | 3051.3 | 3049.3 | 3045.4 | 3045.4 |
| 7.5°   | 3057.2 | 3059.2 | 3059.2 | 3057.2 | 3053.2 | 3049.3 | 3047.3 | 3045.4 | 3043.4 | 3037.5 | 3037.5 |
| 10°    | 3049.3 | 3053.2 | 3049.3 | 3049.3 | 3047.3 | 3043.4 | 3037.5 | 3035.5 | 3029.6 | 3025.7 | 3023.7 |
| 12.5°  | 3041.4 | 3043.4 | 3041.4 | 3041.4 | 3037.5 | 3031.6 | 3029.6 | 3025.7 | 3017.8 | 3011.9 | 3011.9 |
| 15°    | 3029.6 | 3033.5 | 3031.6 | 3029.6 | 3027.6 | 3021.7 | 3015.8 | 3009.9 | 3004.0 | 2998.1 | 2998.1 |
| 17.5°  | 3015.8 | 3017.8 | 3019.7 | 3017.8 | 3013.8 | 3009.9 | 3004.0 | 2996.1 | 2990.2 | 2984.3 | 2982.3 |
| 20°    | 3000.0 | 3004.0 | 3004.0 | 3004.0 | 3000.0 | 2996.1 | 2988.2 | 2980.3 | 2976.4 | 2968.5 | 2966.5 |
| 22.5°  | 2984.3 | 2988.2 | 2986.2 | 2988.2 | 2986.2 | 2980.3 | 2972.4 | 2964.5 | 2956.7 | 2950.8 | 2946.8 |
| 25°    | 2968.5 | 2968.5 | 2968.5 | 2968.5 | 2968.5 | 2960.6 | 2952.7 | 2942.9 | 2935.0 | 2925.1 | 2925.1 |
| 27.5°  | 2948.8 | 2948.8 | 2950.8 | 2950.8 | 2948.8 | 2942.9 | 2933.0 | 2921.2 | 2909.4 | 2899.5 | 2895.6 |
| 30°    | 2931.0 | 2929.1 | 2933.0 | 2937.0 | 2935.0 | 2929.1 | 2917.2 | 2903.4 | 2885.7 | 2871.9 | 2860.1 |
| 32.5°  | 2909.4 | 2915.3 | 2919.2 | 2927.1 | 2929.1 | 2921.2 | 2907.4 | 2889.6 | 2871.9 | 2846.3 | 2824.6 |
| 35°    | 2901.5 | 2901.5 | 2911.3 | 2923.2 | 2927.1 | 2923.2 | 2903.4 | 2883.7 | 2858.1 | 2820.7 | 2795.0 |
| 37.5°  | 2893.6 | 2895.6 | 2911.3 | 2929.1 | 2935.0 | 2935.0 | 2913.3 | 2887.7 | 2852.2 | 2799.0 | 2767.4 |
| 40°    | 2889.6 | 2893.6 | 2913.3 | 2938.9 | 2954.7 | 2952.7 | 2927.1 | 2895.6 | 2852.2 | 2783.2 | 2743.8 |
| 42.5°  | 2885.7 | 2893.6 | 2915.3 | 2950.8 | 2974.4 | 2972.4 | 2944.8 | 2903.4 | 2848.3 | 2763.5 | 2718.2 |
| 45°    | 2879.8 | 2885.7 | 2915.3 | 2960.6 | 2992.1 | 2998.1 | 2966.5 | 2913.3 | 2848.3 | 2745.8 | 2686.6 |
| 47.5°  | 2862.1 | 2864.0 | 2903.4 | 2956.7 | 3004.0 | 3011.9 | 2980.3 | 2917.2 | 2840.4 | 2716.2 | 2647.2 |
| 50°    | 2814.7 | 2820.7 | 2866.0 | 2937.0 | 2992.1 | 3004.0 | 2976.4 | 2907.4 | 2820.7 | 2666.9 | 2584.1 |
| 52.5°  | 2753.6 | 2753.6 | 2808.8 | 2887.7 | 2954.7 | 2974.4 | 2948.8 | 2871.9 | 2771.4 | 2594.0 | 2499.4 |
| 55°    | 2663.0 | 2676.8 | 2733.9 | 2816.7 | 2889.6 | 2917.2 | 2881.8 | 2806.9 | 2690.6 | 2501.3 | 2396.9 |
| 57.5°  | 2560.5 | 2564.4 | 2623.5 | 2722.1 | 2797.0 | 2814.7 | 2785.2 | 2696.5 | 2584.1 | 2391.0 | 2266.8 |
| 60°    | 2412.6 | 2420.5 | 2495.4 | 2582.2 | 2663.0 | 2686.6 | 2649.2 | 2560.5 | 2442.2 | 2249.0 | 2122.9 |
| 62.5°  | 2249.0 | 2260.9 | 2327.9 | 2416.6 | 2493.5 | 2530.9 | 2485.6 | 2392.9 | 2276.6 | 2079.5 | 1969.1 |
| 65°    | 2051.9 | 2055.9 | 2128.8 | 2229.3 | 2306.2 | 2320.0 | 2280.6 | 2189.9 | 2073.6 | 1884.4 | 1785.8 |
| 67.5°  | 1825.2 | 1845.0 | 1915.9 | 1990.8 | 2057.8 | 2073.6 | 2046.0 | 1941.5 | 1848.9 | 1681.4 | 1584.8 |
| 70°    | 1606.5 | 1596.6 | 1655.7 | 1730.6 | 1791.7 | 1805.5 | 1774.0 | 1677.4 | 1590.7 | 1433.0 | 1358.1 |
| 72.5°  | 1342.3 | 1334.4 | 1397.5 | 1454.7 | 1513.8 | 1505.9 | 1474.4 | 1397.5 | 1322.6 | 1188.6 | 1119.6 |
| 75°    | 1076.2 | 1068.3 | 1117.6 | 1166.9 | 1196.5 | 1200.4 | 1178.7 | 1121.6 | 1040.7 | 936.3  | 883.1  |
| 77.5°  | 816.0  | 823.9  | 845.6  | 887.0  | 914.6  | 926.4  | 889.0  | 831.8  | 780.6  | 699.7  | 660.3  |
| 80°    | 581.5  | 583.4  | 591.3  | 620.9  | 640.6  | 640.6  | 622.9  | 577.5  | 520.4  | 463.2  | 443.5  |
| 82.5°  | 366.6  | 374.5  | 374.5  | 404.1  | 404.1  | 388.3  | 380.4  | 350.9  | 321.3  | 276.0  | 248.4  |
| 85°    | 201.1  | 197.1  | 208.9  | 210.9  | 208.9  | 197.1  | 185.3  | 167.5  | 147.8  | 116.3  | 104.5  |
| 87.5°  | 88.7   | 86.7   | 86.7   | 86.7   | 84.8   | 76.9   | 65.0   | 51.2   | 35.5   | 21.7   | 15.8   |
| 90°    | 69.0   | 69.0   | 67.0   | 63.1   | 57.2   | 51.2   | 41.4   | 31.5   | 19.7   | 7.9    | 3.9    |
| 92.5°  | 63.1   | 63.1   | 61.1   | 59.1   | 53.2   | 47.3   | 37.5   | 27.6   | 17.7   | 7.9    | 3.9    |
| 95°    | 55.2   | 53.2   | 53.2   | 49.3   | 45.3   | 39.4   | 33.5   | 23.7   | 15.8   | 5.9    | 3.9    |
| 97.5°  | 45.3   | 43.4   | 43.4   | 41.4   | 37.5   | 31.5   | 27.6   | 19.7   | 13.8   | 5.9    | 3.9    |
| 100°   | 33.5   | 35.5   | 33.5   | 31.5   | 29.6   | 25.6   | 21.7   | 15.8   | 9.9    | 3.9    | 3.9    |
| 102.5° | 25.6   | 25.6   | 23.7   | 23.7   | 21.7   | 19.7   | 15.8   | 11.8   | 7.9    | 3.9    | 2.0    |
| 105°   | 17.7   | 17.7   | 17.7   | 15.8   | 15.8   | 13.8   | 11.8   | 7.9    | 5.9    | 3.9    | 2.0    |
| 107.5° | 9.9    | 9.9    | 9.9    | 9.9    | 9.9    | 9.9    | 7.9    | 5.9    | 3.9    | 2.0    | 2.0    |



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CATALOG NUMBER: TT-D6-750-U-CQ-HSS

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 5°  | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 110°   | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 3.9 | 3.9 | 2.0 | 2.0 | 2.0 |
| 112.5° | 2.0 | 2.0 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 2.0 | 2.0 | 2.0 | 2.0 |
| 115°   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 117.5° | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 120°   | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 122.5° | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 125°   | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 127.5° | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 130°   | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 132.5° | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 135°   | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 140°   | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 142.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 145°   | 2.0 | 2.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 147.5° | 2.0 | 2.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 150°   | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 155°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 160°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 165°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 170°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 175°   | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 180°   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |



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**CANDELA DISTRIBUTION (continued):**

|        | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 | 3053.2 |
| 2.5°   | 3049.3 | 3043.4 | 3047.3 | 3045.4 | 3047.3 | 3043.4 | 3043.4 | 3043.4 | 3045.4 | 3041.4 |
| 4°     | 3047.3 | 3043.4 | 3043.4 | 3043.4 | 3043.4 | 3039.5 | 3039.5 | 3039.5 | 3037.5 | 3039.5 |
| 5°     | 3043.4 | 3041.4 | 3039.5 | 3037.5 | 3039.5 | 3035.5 | 3033.5 | 3033.5 | 3033.5 | 3035.5 |
| 7.5°   | 3035.5 | 3029.6 | 3029.6 | 3023.7 | 3025.7 | 3023.7 | 3021.7 | 3023.7 | 3021.7 | 3021.7 |
| 10°    | 3021.7 | 3017.8 | 3015.8 | 3011.9 | 3011.9 | 3007.9 | 3005.9 | 3005.9 | 3005.9 | 3004.0 |
| 12.5°  | 3007.9 | 3004.0 | 3002.0 | 2998.1 | 2996.1 | 2992.1 | 2990.2 | 2992.1 | 2988.2 | 2988.2 |
| 15°    | 2992.1 | 2988.2 | 2986.2 | 2986.2 | 2982.3 | 2978.3 | 2976.4 | 2972.4 | 2972.4 | 2972.4 |
| 17.5°  | 2978.3 | 2974.4 | 2976.4 | 2972.4 | 2970.5 | 2966.5 | 2966.5 | 2958.6 | 2958.6 | 2956.7 |
| 20°    | 2964.5 | 2960.6 | 2960.6 | 2958.6 | 2958.6 | 2954.7 | 2948.8 | 2944.8 | 2942.9 | 2942.9 |
| 22.5°  | 2946.8 | 2940.9 | 2931.0 | 2917.2 | 2909.4 | 2903.4 | 2901.5 | 2895.6 | 2893.6 | 2889.6 |
| 25°    | 2919.2 | 2903.4 | 2881.8 | 2858.1 | 2834.5 | 2822.6 | 2818.7 | 2810.8 | 2810.8 | 2810.8 |
| 27.5°  | 2885.7 | 2856.1 | 2826.6 | 2791.1 | 2755.6 | 2732.0 | 2716.2 | 2708.3 | 2704.4 | 2704.4 |
| 30°    | 2842.3 | 2804.9 | 2763.5 | 2718.2 | 2678.7 | 2635.4 | 2607.8 | 2592.0 | 2584.1 | 2586.1 |
| 32.5°  | 2802.9 | 2755.6 | 2708.3 | 2651.1 | 2597.9 | 2546.7 | 2499.4 | 2475.7 | 2465.9 | 2461.9 |
| 35°    | 2763.5 | 2710.3 | 2653.1 | 2592.0 | 2523.0 | 2448.1 | 2385.0 | 2349.6 | 2329.9 | 2331.8 |
| 37.5°  | 2733.9 | 2670.9 | 2607.8 | 2532.9 | 2454.0 | 2363.4 | 2282.5 | 2225.4 | 2201.7 | 2205.7 |
| 40°    | 2702.4 | 2631.4 | 2562.4 | 2475.7 | 2383.1 | 2274.7 | 2170.2 | 2093.3 | 2065.7 | 2059.8 |
| 42.5°  | 2672.8 | 2590.0 | 2511.2 | 2418.6 | 2302.3 | 2180.0 | 2051.9 | 1961.3 | 1919.9 | 1913.9 |
| 45°    | 2635.4 | 2542.7 | 2458.0 | 2351.5 | 2223.4 | 2071.6 | 1921.8 | 1803.6 | 1760.2 | 1742.5 |
| 47.5°  | 2586.1 | 2483.6 | 2389.0 | 2266.8 | 2126.8 | 1955.3 | 1768.1 | 1622.2 | 1567.0 | 1553.2 |
| 50°    | 2513.2 | 2394.9 | 2298.3 | 2160.3 | 1990.8 | 1801.6 | 1592.7 | 1413.3 | 1340.4 | 1330.5 |
| 52.5°  | 2416.6 | 2296.3 | 2187.9 | 2030.2 | 1823.3 | 1600.5 | 1364.0 | 1178.7 | 1094.0 | 1088.1 |
| 55°    | 2300.3 | 2170.2 | 2051.9 | 1874.5 | 1632.1 | 1373.9 | 1127.5 | 892.9  | 810.1  | 800.3  |
| 57.5°  | 2164.3 | 2030.2 | 1902.1 | 1683.3 | 1403.4 | 1115.6 | 829.8  | 605.1  | 526.3  | 506.6  |
| 60°    | 2014.5 | 1876.5 | 1732.6 | 1466.5 | 1095.9 | 790.4  | 502.6  | 321.3  | 262.2  | 242.4  |
| 62.5°  | 1868.6 | 1718.8 | 1567.0 | 1208.3 | 751.0  | 451.4  | 228.6  | 92.6   | 59.1   | 57.2   |
| 65°    | 1697.1 | 1555.2 | 1399.5 | 973.7  | 475.0  | 203.0  | 67.0   | 2.0    | 0.0    | 0.0    |
| 67.5°  | 1498.0 | 1377.8 | 1239.8 | 871.2  | 419.8  | 177.4  | 57.2   | 2.0    | 0.0    | 0.0    |
| 70°    | 1285.2 | 1190.6 | 1068.3 | 749.0  | 360.7  | 149.8  | 49.3   | 0.0    | 0.0    | 0.0    |
| 72.5°  | 1060.5 | 979.6  | 889.0  | 622.9  | 299.6  | 124.2  | 39.4   | 0.0    | 0.0    | 0.0    |
| 75°    | 831.8  | 780.6  | 699.7  | 492.8  | 232.6  | 94.6   | 29.6   | 0.0    | 0.0    | 0.0    |
| 77.5°  | 617.0  | 575.6  | 516.4  | 362.7  | 175.4  | 69.0   | 21.7   | 0.0    | 0.0    | 0.0    |
| 80°    | 415.9  | 384.4  | 350.9  | 246.4  | 118.3  | 45.3   | 13.8   | 0.0    | 0.0    | 0.0    |
| 82.5°  | 242.4  | 218.8  | 197.1  | 139.9  | 65.0   | 25.6   | 5.9    | 0.0    | 0.0    | 0.0    |
| 85°    | 98.6   | 90.7   | 86.7   | 59.1   | 25.6   | 7.9    | 2.0    | 0.0    | 0.0    | 0.0    |
| 87.5°  | 11.8   | 9.9    | 9.9    | 5.9    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 92.5°  | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 95°    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 97.5°  | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 0.0    |
| 100°   | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    |
| 102.5° | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    |
| 105°   | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    |
| 107.5° | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    |



REPORT NUMBER: P436904

CATALOG NUMBER: TT-D6-750-U-CQ-HSS

**CANDELA DISTRIBUTION (continued):**

|        | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|--------|-----|------|------|------|------|------|------|------|------|------|
| 110°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 112.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 115°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 117.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 120°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 122.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 125°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 127.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 130°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 132.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 135°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| 137.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  |
| 140°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  |
| 142.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  |
| 145°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 147.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 2.0  |
| 150°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 152.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 155°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 157.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 160°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 162.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 165°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 167.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 170°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 172.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 175°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 177.5° | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 180°   | 2.0 | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2407-176-6

Test Date: 09/26/2024

Luminaire Tested: MEM2-HTN-VA-30-750-U-WQ

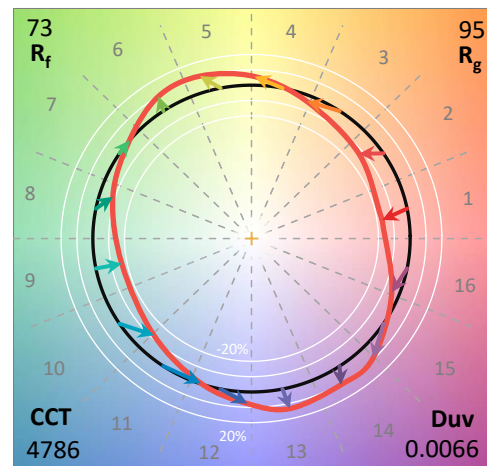
Data in this report applies to families of products including MEM2-HTN-VA-30-750-U-WQ

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-176-6  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 09/27/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Streetworks  
 Catalog Number: **MEM2-HTN-VA-30-750-U-WQ**  
 Description: EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

### Spectral Parameters

|                           |          |           |      |      |       |
|---------------------------|----------|-----------|------|------|-------|
| CCT (K):                  | 4786     | CRI (Ra): | 70.9 |      |       |
| CIE u':                   | 0.2093   | R1:       | 67.8 | R9:  | -29.8 |
| CIE v':                   | 0.4953   | R2:       | 75.1 | R10: | 40.9  |
| Duv:                      | 0.0066   | R3:       | 80.6 | R11: | 67.4  |
| CIE x:                    | 0.3533   | R4:       | 71.6 | R12: | 35.3  |
| CIE y:                    | 0.3716   | R5:       | 67.8 | R13: | 68.5  |
| CIE z:                    | 0.2751   | R6:       | 65.4 | R14: | 89.0  |
| Peak Wavelength (nm):     | 449      | R7:       | 82.0 | R15: | 60.9  |
| Dominant Wavelength (nm): | 570      | R8:       | 57.0 |      |       |
| Purity:                   | 17.53512 |           |      |      |       |
| Rf:                       | 73       |           |      |      |       |
| Rg:                       | 94.6     |           |      |      |       |



### Test Conditions

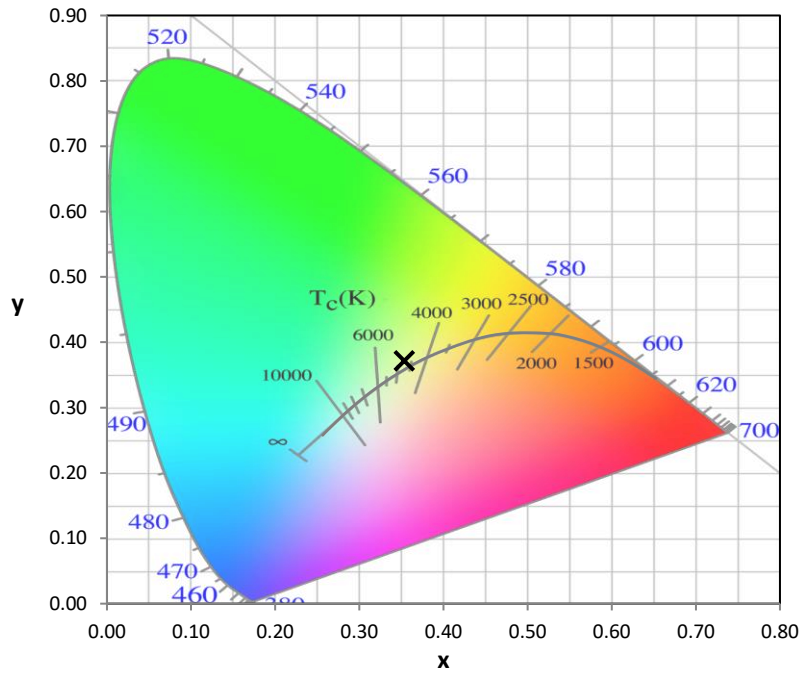
Stabilization Time: 45M  
 Operation Time: 1H 45M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-176-6

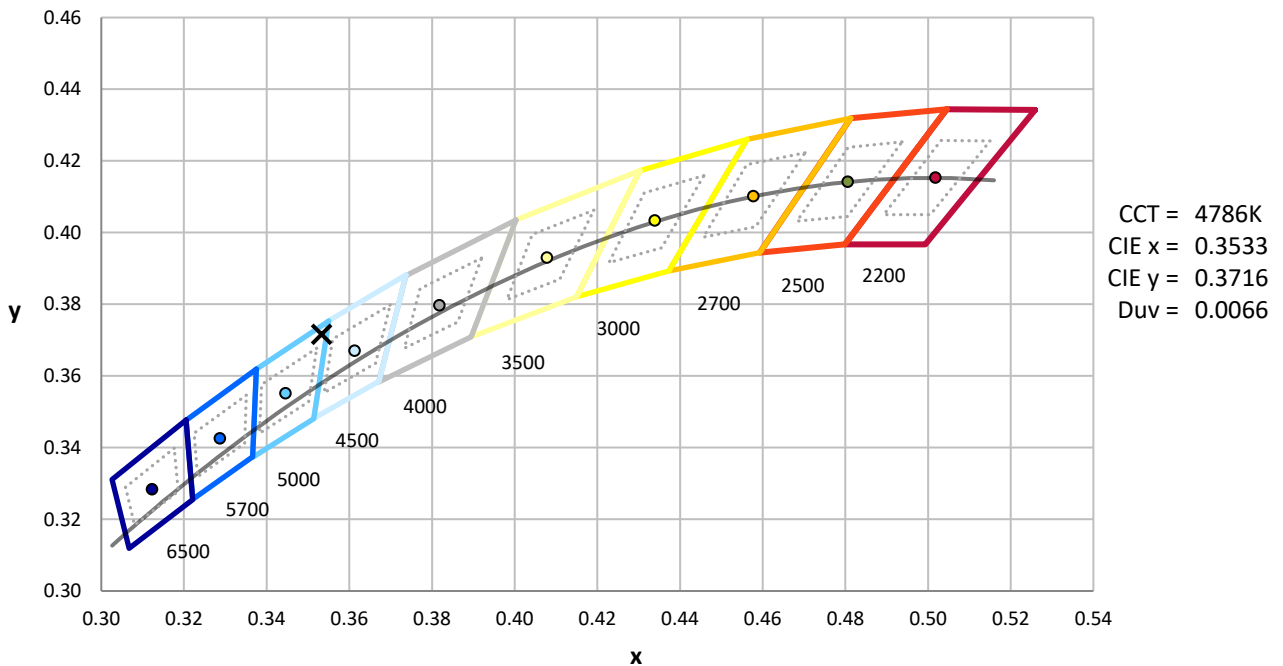
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 6/18/2024        | 12/18/2024           |
| Power Meter                    | INXT2011004           | 2/8/2024         | 2/8/2025             |
| AC Power Source                | IN0063                | 10/24/2023       | 10/24/2024           |
| DC Power Source                | IN0208                | 10/24/2023       | 10/24/2024           |
| Sphere Thermometer             | IN0085                | 10/24/2023       | 10/24/2024           |
| Room Thermometer               | IN0046                | 10/24/2023       | 10/24/2024           |

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**CIE 1931 Chromaticity Diagram**



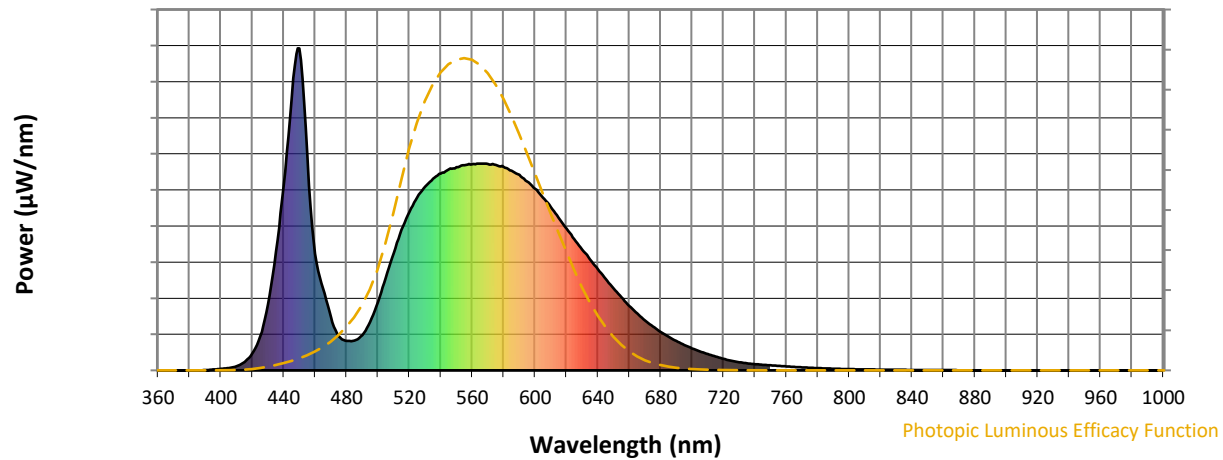
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-6

### Photopic Flux vs. Wavelength

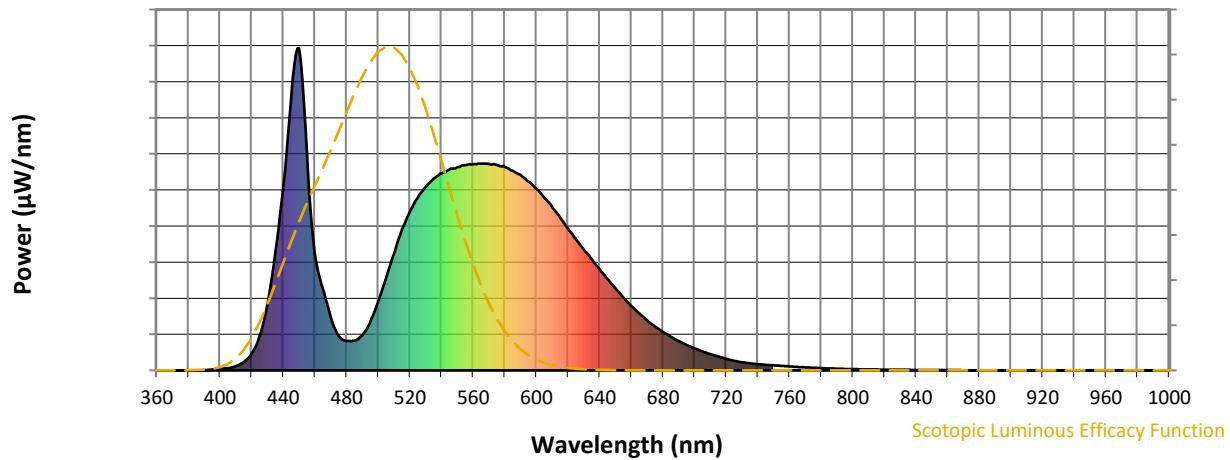


### Photopic Lumens: NR

| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 110                                  | NR                             | 620               | 440                                  | NR                             | 750               | 16                                   | NR                             | 880               | 0                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 150                                  | NR                             | 625               | 407                                  | NR                             | 755               | 14                                   | NR                             | 885               | 0                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 213                                  | NR                             | 630               | 375                                  | NR                             | 760               | 12                                   | NR                             | 890               | 0                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 288                                  | NR                             | 635               | 345                                  | NR                             | 765               | 11                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 364                                  | NR                             | 640               | 314                                  | NR                             | 770               | 9                                    | NR                             | 900               | 0                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 436                                  | NR                             | 645               | 283                                  | NR                             | 775               | 8                                    | NR                             | 905               | 0                                    | NR                             |
| 390               | 1                                    | NR                             | 520               | 492                                  | NR                             | 650               | 254                                  | NR                             | 780               | 7                                    | NR                             | 910               | 0                                    | NR                             |
| 395               | 3                                    | NR                             | 525               | 537                                  | NR                             | 655               | 227                                  | NR                             | 785               | 6                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 5                                    | NR                             | 530               | 570                                  | NR                             | 660               | 200                                  | NR                             | 790               | 5                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 7                                    | NR                             | 535               | 595                                  | NR                             | 665               | 177                                  | NR                             | 795               | 4                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 13                                   | NR                             | 540               | 611                                  | NR                             | 670               | 155                                  | NR                             | 800               | 4                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 25                                   | NR                             | 545               | 624                                  | NR                             | 675               | 136                                  | NR                             | 805               | 3                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 52                                   | NR                             | 550               | 631                                  | NR                             | 680               | 119                                  | NR                             | 810               | 3                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 106                                  | NR                             | 555               | 637                                  | NR                             | 685               | 104                                  | NR                             | 815               | 3                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 204                                  | NR                             | 560               | 640                                  | NR                             | 690               | 91                                   | NR                             | 820               | 2                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 369                                  | NR                             | 565               | 642                                  | NR                             | 695               | 79                                   | NR                             | 825               | 2                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 573                                  | NR                             | 570               | 641                                  | NR                             | 700               | 68                                   | NR                             | 830               | 2                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 844                                  | NR                             | 575               | 638                                  | NR                             | 705               | 59                                   | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 999                                  | NR                             | 580               | 632                                  | NR                             | 710               | 50                                   | NR                             | 840               | 1                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 668                                  | NR                             | 585               | 620                                  | NR                             | 715               | 43                                   | NR                             | 845               | 1                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 361                                  | NR                             | 590               | 607                                  | NR                             | 720               | 36                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 255                                  | NR                             | 595               | 586                                  | NR                             | 725               | 30                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 165                                  | NR                             | 600               | 564                                  | NR                             | 730               | 25                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 106                                  | NR                             | 605               | 537                                  | NR                             | 735               | 22                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 91                                   | NR                             | 610               | 507                                  | NR                             | 740               | 19                                   | NR                             | 870               | 0                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 93                                   | NR                             | 615               | 474                                  | NR                             | 745               | 17                                   | NR                             | 875               | 0                                    | NR                             |                   |                                      |                                |

REPORT NUMBER: SP1-2407-176-6

### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

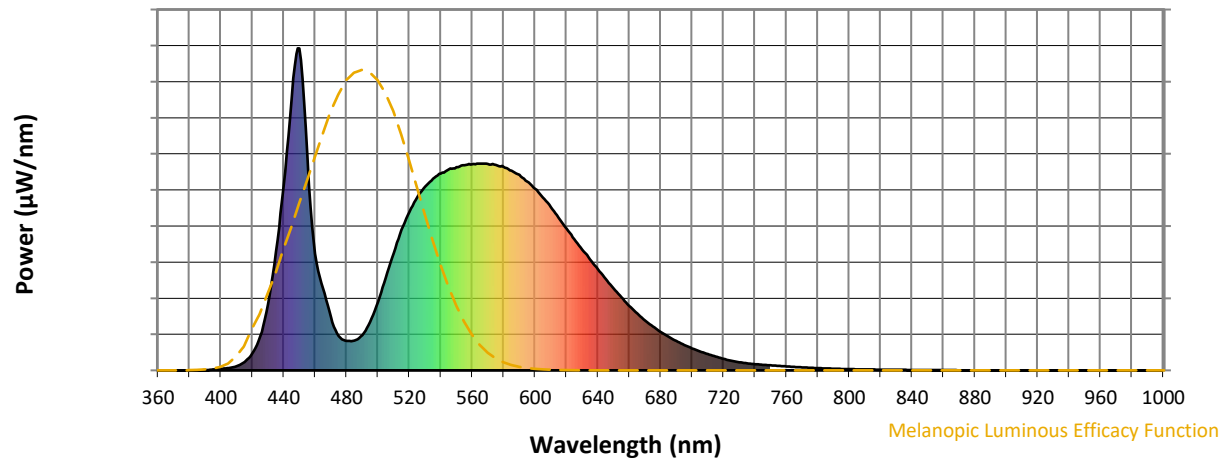
S/P: 1.69

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 110                      | NR            | 620    | 440                      | NR            | 750    | 16                       | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 150                      | NR            | 625    | 407                      | NR            | 755    | 14                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 213                      | NR            | 630    | 375                      | NR            | 760    | 12                       | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 288                      | NR            | 635    | 345                      | NR            | 765    | 11                       | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 364                      | NR            | 640    | 314                      | NR            | 770    | 9                        | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 436                      | NR            | 645    | 283                      | NR            | 775    | 8                        | NR            | 905    | 0                        | NR            |
| 390    | 1                        | NR            | 520    | 492                      | NR            | 650    | 254                      | NR            | 780    | 7                        | NR            | 910    | 0                        | NR            |
| 395    | 3                        | NR            | 525    | 537                      | NR            | 655    | 227                      | NR            | 785    | 6                        | NR            | 915    | 0                        | NR            |
| 400    | 5                        | NR            | 530    | 570                      | NR            | 660    | 200                      | NR            | 790    | 5                        | NR            | 920    | 0                        | NR            |
| 405    | 7                        | NR            | 535    | 595                      | NR            | 665    | 177                      | NR            | 795    | 4                        | NR            | 925    | 0                        | NR            |
| 410    | 13                       | NR            | 540    | 611                      | NR            | 670    | 155                      | NR            | 800    | 4                        | NR            | 930    | 0                        | NR            |
| 415    | 25                       | NR            | 545    | 624                      | NR            | 675    | 136                      | NR            | 805    | 3                        | NR            | 935    | 0                        | NR            |
| 420    | 52                       | NR            | 550    | 631                      | NR            | 680    | 119                      | NR            | 810    | 3                        | NR            | 940    | 0                        | NR            |
| 425    | 106                      | NR            | 555    | 637                      | NR            | 685    | 104                      | NR            | 815    | 3                        | NR            | 945    | 0                        | NR            |
| 430    | 204                      | NR            | 560    | 640                      | NR            | 690    | 91                       | NR            | 820    | 2                        | NR            | 950    | 0                        | NR            |
| 435    | 369                      | NR            | 565    | 642                      | NR            | 695    | 79                       | NR            | 825    | 2                        | NR            | 955    | 0                        | NR            |
| 440    | 573                      | NR            | 570    | 641                      | NR            | 700    | 68                       | NR            | 830    | 2                        | NR            | 960    | 0                        | NR            |
| 445    | 844                      | NR            | 575    | 638                      | NR            | 705    | 59                       | NR            | 835    | 2                        | NR            | 965    | 0                        | NR            |
| 450    | 999                      | NR            | 580    | 632                      | NR            | 710    | 50                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 668                      | NR            | 585    | 620                      | NR            | 715    | 43                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 361                      | NR            | 590    | 607                      | NR            | 720    | 36                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 255                      | NR            | 595    | 586                      | NR            | 725    | 30                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 165                      | NR            | 600    | 564                      | NR            | 730    | 25                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 106                      | NR            | 605    | 537                      | NR            | 735    | 22                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 91                       | NR            | 610    | 507                      | NR            | 740    | 19                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 93                       | NR            | 615    | 474                      | NR            | 745    | 17                       | NR            | 875    | 0                        | NR            |        |                          |               |



REPORT NUMBER: SP1-2407-176-6

### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.36

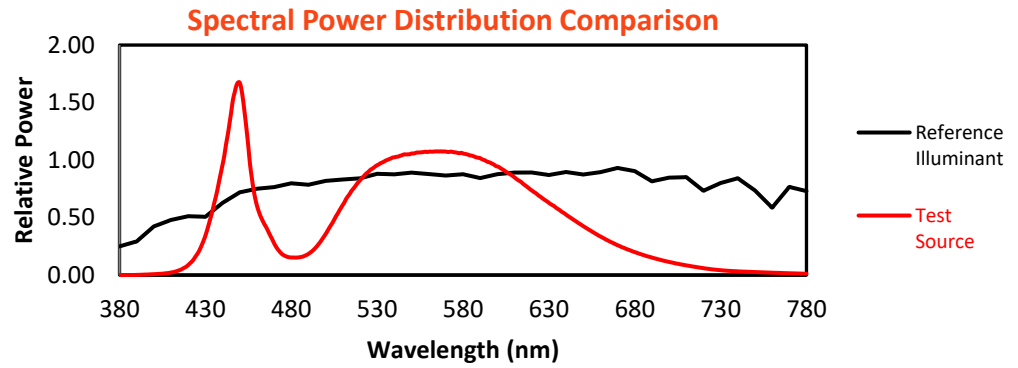
| λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 110                         | NR               | 620       | 440                         | NR               | 750       | 16                          | NR               | 880       | 0                           | NR               |
| 365       | 0                           | NR               | 495       | 150                         | NR               | 625       | 407                         | NR               | 755       | 14                          | NR               | 885       | 0                           | NR               |
| 370       | 0                           | NR               | 500       | 213                         | NR               | 630       | 375                         | NR               | 760       | 12                          | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 288                         | NR               | 635       | 345                         | NR               | 765       | 11                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 364                         | NR               | 640       | 314                         | NR               | 770       | 9                           | NR               | 900       | 0                           | NR               |
| 385       | 0                           | NR               | 515       | 436                         | NR               | 645       | 283                         | NR               | 775       | 8                           | NR               | 905       | 0                           | NR               |
| 390       | 1                           | NR               | 520       | 492                         | NR               | 650       | 254                         | NR               | 780       | 7                           | NR               | 910       | 0                           | NR               |
| 395       | 3                           | NR               | 525       | 537                         | NR               | 655       | 227                         | NR               | 785       | 6                           | NR               | 915       | 0                           | NR               |
| 400       | 5                           | NR               | 530       | 570                         | NR               | 660       | 200                         | NR               | 790       | 5                           | NR               | 920       | 0                           | NR               |
| 405       | 7                           | NR               | 535       | 595                         | NR               | 665       | 177                         | NR               | 795       | 4                           | NR               | 925       | 0                           | NR               |
| 410       | 13                          | NR               | 540       | 611                         | NR               | 670       | 155                         | NR               | 800       | 4                           | NR               | 930       | 0                           | NR               |
| 415       | 25                          | NR               | 545       | 624                         | NR               | 675       | 136                         | NR               | 805       | 3                           | NR               | 935       | 0                           | NR               |
| 420       | 52                          | NR               | 550       | 631                         | NR               | 680       | 119                         | NR               | 810       | 3                           | NR               | 940       | 0                           | NR               |
| 425       | 106                         | NR               | 555       | 637                         | NR               | 685       | 104                         | NR               | 815       | 3                           | NR               | 945       | 0                           | NR               |
| 430       | 204                         | NR               | 560       | 640                         | NR               | 690       | 91                          | NR               | 820       | 2                           | NR               | 950       | 0                           | NR               |
| 435       | 369                         | NR               | 565       | 642                         | NR               | 695       | 79                          | NR               | 825       | 2                           | NR               | 955       | 0                           | NR               |
| 440       | 573                         | NR               | 570       | 641                         | NR               | 700       | 68                          | NR               | 830       | 2                           | NR               | 960       | 0                           | NR               |
| 445       | 844                         | NR               | 575       | 638                         | NR               | 705       | 59                          | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 999                         | NR               | 580       | 632                         | NR               | 710       | 50                          | NR               | 840       | 1                           | NR               | 970       | 0                           | NR               |
| 455       | 668                         | NR               | 585       | 620                         | NR               | 715       | 43                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 361                         | NR               | 590       | 607                         | NR               | 720       | 36                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 255                         | NR               | 595       | 586                         | NR               | 725       | 30                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 165                         | NR               | 600       | 564                         | NR               | 730       | 25                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 106                         | NR               | 605       | 537                         | NR               | 735       | 22                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 91                          | NR               | 610       | 507                         | NR               | 740       | 19                          | NR               | 870       | 0                           | NR               | 1000      | 0                           | NR               |
| 485       | 93                          | NR               | 615       | 474                         | NR               | 745       | 17                          | NR               | 875       | 0                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2407-176-6

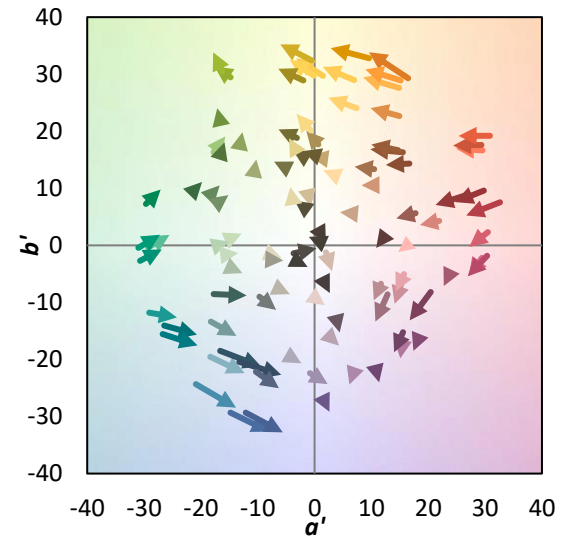
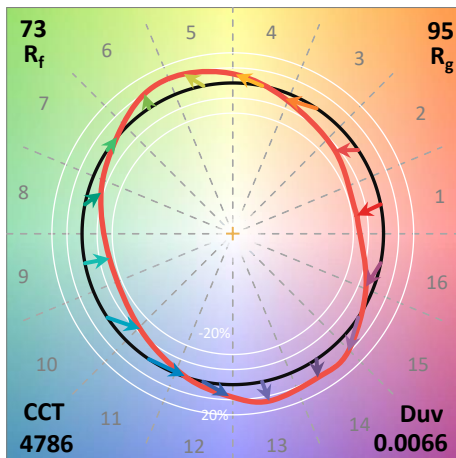
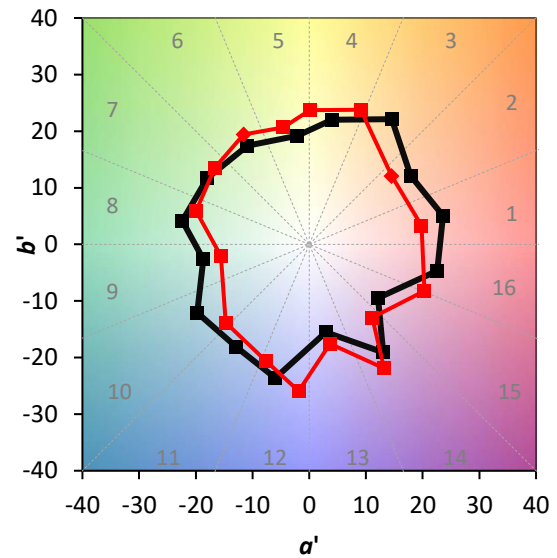
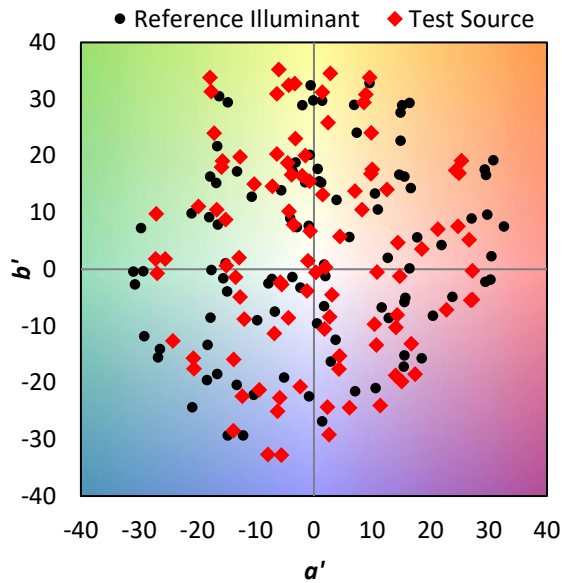
TM-30-18

### Summary

$R_f = 73$   
 $R_g = 94.6$   
 $CIE R_a = 70.9$   
 $R_g = -29.8$

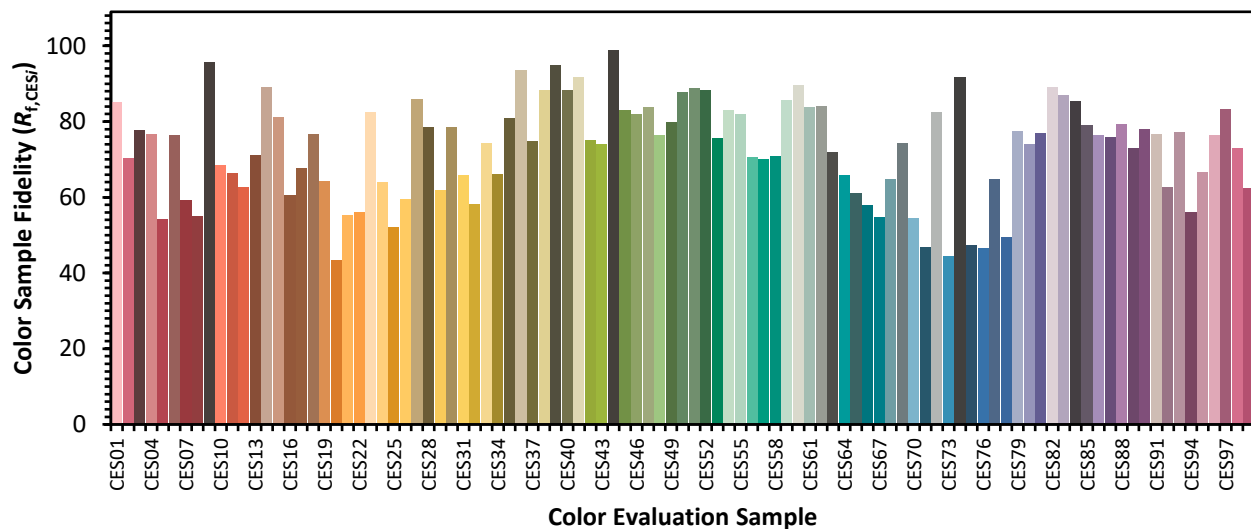


### Color Vector Graphics

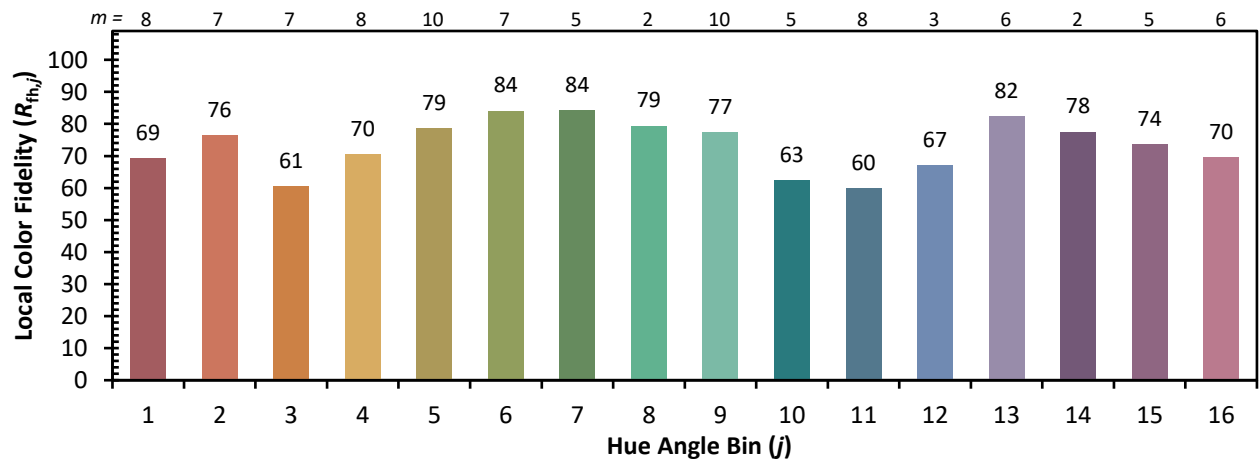
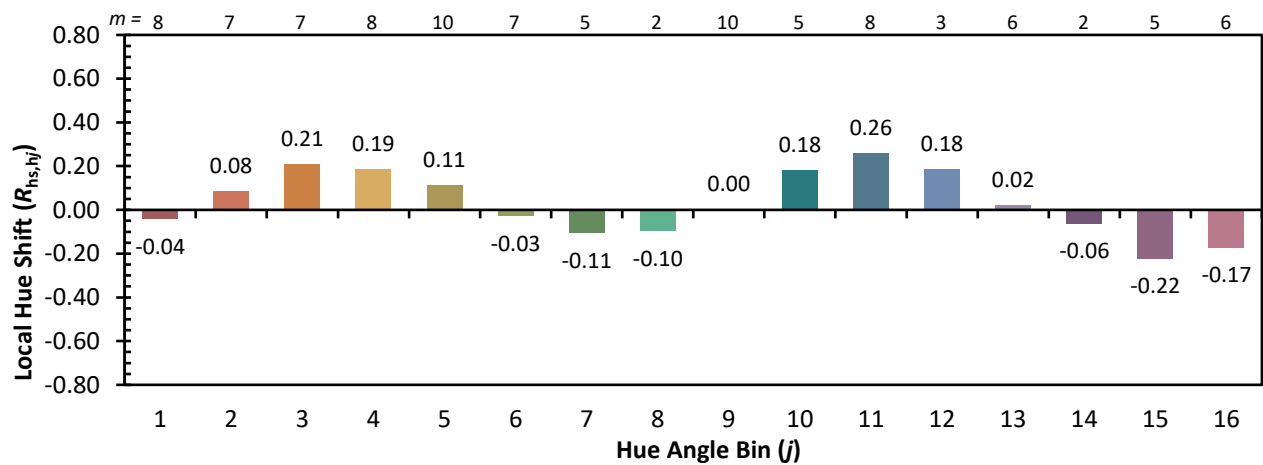
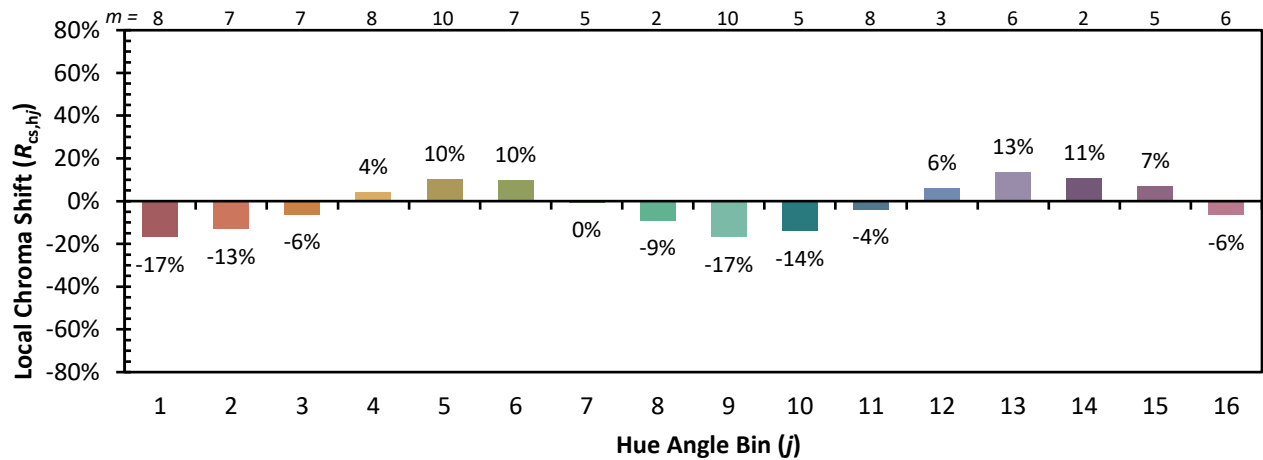


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

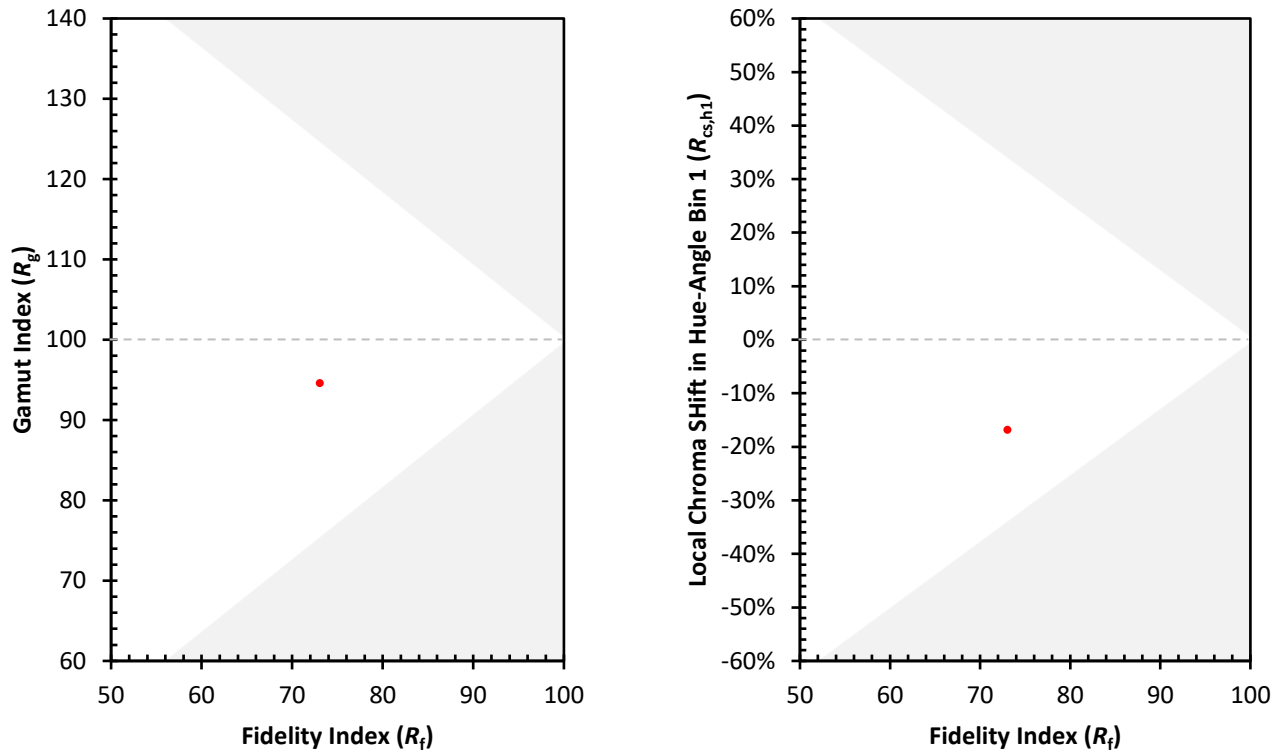
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 60 | CES51 = 89 | CES76 = 46 |
| CES02 = 59 | CES27 = 86 | CES52 = 88 | CES77 = 65 |
| CES03 = 30 | CES28 = 78 | CES53 = 76 | CES78 = 49 |
| CES04 = 69 | CES29 = 62 | CES54 = 83 | CES79 = 78 |
| CES05 = 46 | CES30 = 79 | CES55 = 82 | CES80 = 74 |
| CES06 = 50 | CES31 = 66 | CES56 = 71 | CES81 = 77 |
| CES07 = 39 | CES32 = 58 | CES57 = 70 | CES82 = 89 |
| CES08 = 38 | CES33 = 74 | CES58 = 71 | CES83 = 87 |
| CES09 = 29 | CES34 = 66 | CES59 = 86 | CES84 = 86 |
| CES10 = 72 | CES35 = 81 | CES60 = 90 | CES85 = 79 |
| CES11 = 56 | CES36 = 94 | CES61 = 84 | CES86 = 76 |
| CES12 = 61 | CES37 = 75 | CES62 = 84 | CES87 = 76 |
| CES13 = 41 | CES38 = 88 | CES63 = 72 | CES88 = 79 |
| CES14 = 74 | CES39 = 95 | CES64 = 66 | CES89 = 73 |
| CES15 = 70 | CES40 = 88 | CES65 = 61 | CES90 = 78 |
| CES16 = 46 | CES41 = 92 | CES66 = 58 | CES91 = 77 |
| CES17 = 49 | CES42 = 75 | CES67 = 55 | CES92 = 63 |
| CES18 = 55 | CES43 = 74 | CES68 = 65 | CES93 = 77 |
| CES19 = 71 | CES44 = 99 | CES69 = 74 | CES94 = 56 |
| CES20 = 64 | CES45 = 83 | CES70 = 55 | CES95 = 67 |
| CES21 = 85 | CES46 = 82 | CES71 = 47 | CES96 = 76 |
| CES22 = 77 | CES47 = 84 | CES72 = 82 | CES97 = 83 |
| CES23 = 91 | CES48 = 76 | CES73 = 44 | CES98 = 73 |
| CES24 = 90 | CES49 = 80 | CES74 = 92 | CES99 = 62 |
| CES25 = 71 | CES50 = 88 | CES75 = 47 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)