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: P821599

Luminaire Tested: **TT-D5-750-12VDC-WQ-HSS**

Issue Date: 12/2/2020

Report Generated By 670245763

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Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P821599 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-2) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 12/2/2020 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | TT-D5-750-12VDC-WQ-HSS |
| Description: | TOPTIER LED PARKING GARAGE LUMINAIRE |
| | 5000K, 70 CRI LEDS AND WIDE DISTRIBUTION WITH HOUSE SIDE SHIELD |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 7674 lumens |
| Efficiency: | N/A |
| Efficacy: | 105.1 lumens/watt |
| Luminous Opening: | Circular (Dia: 1.12' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B2 - U2 - G3 |

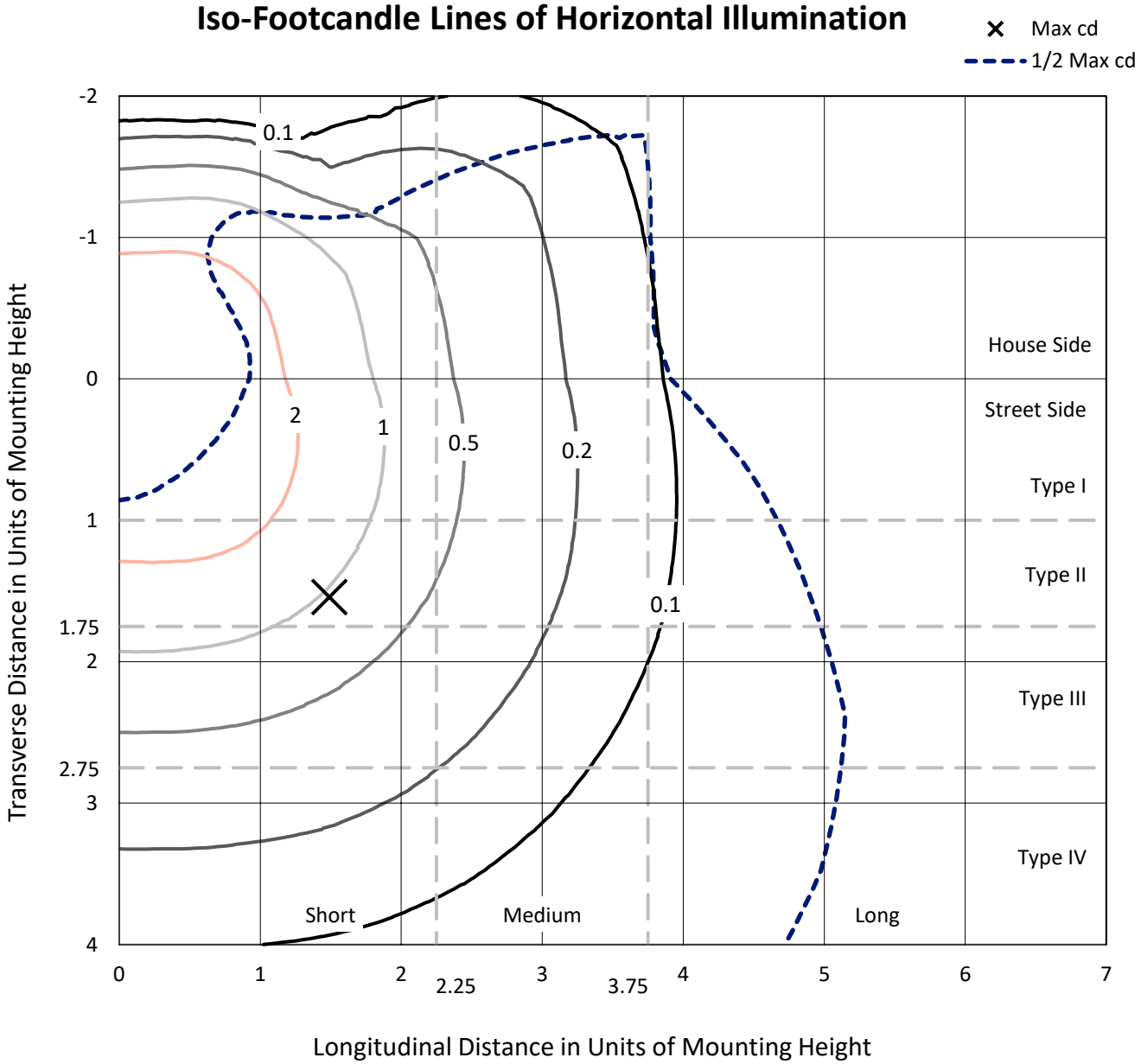
| | |
|---|---|
| Input Watts (W): | 73 |
| Input Voltage (V): | NR |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | NR |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 25 FT |

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REPORT NUMBER: P821599
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## Iso-Footcandle Lines of Horizontal Illumination



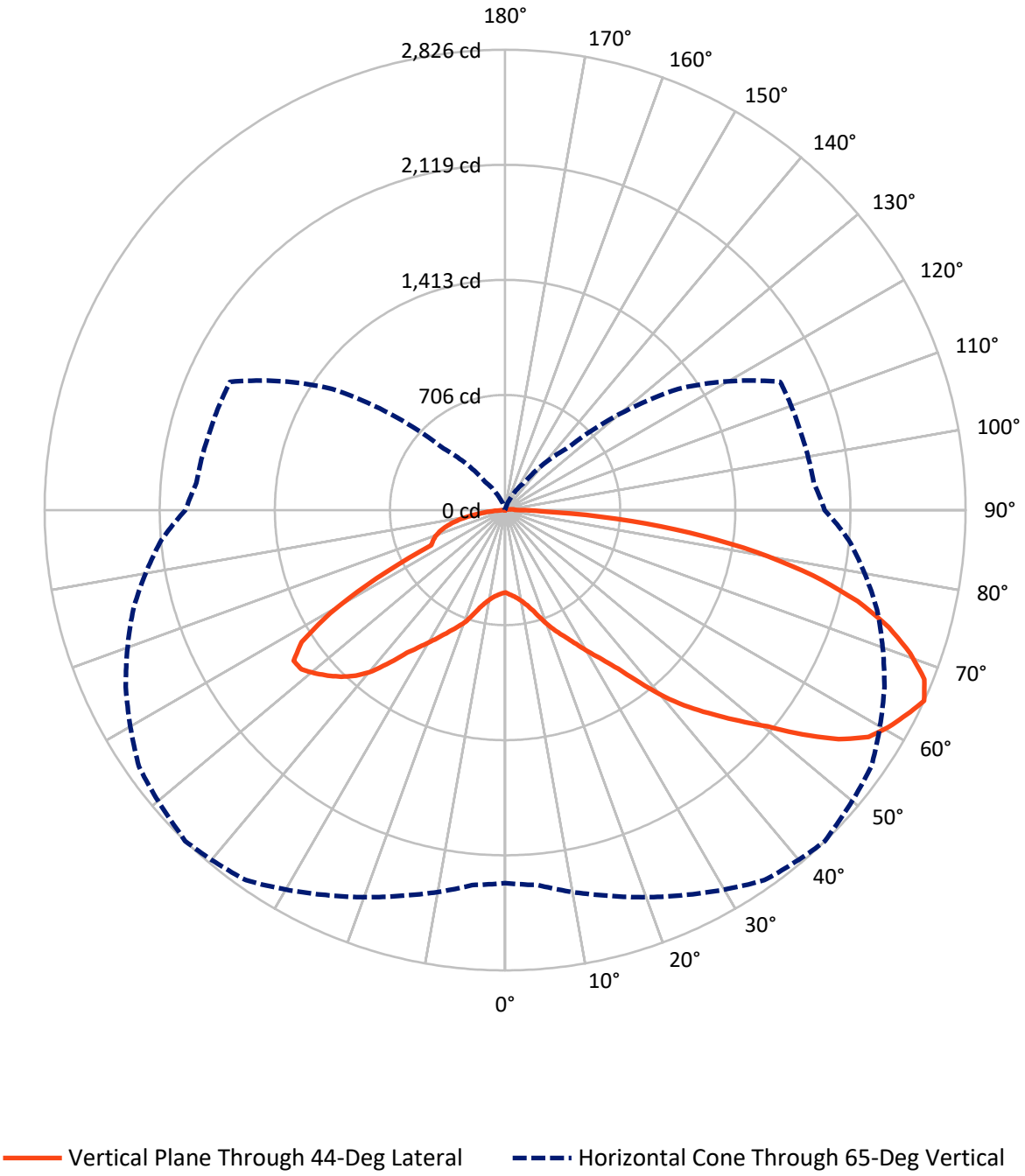

Based on 15 foot mounting height. Maximum calculated value = 3 fc
Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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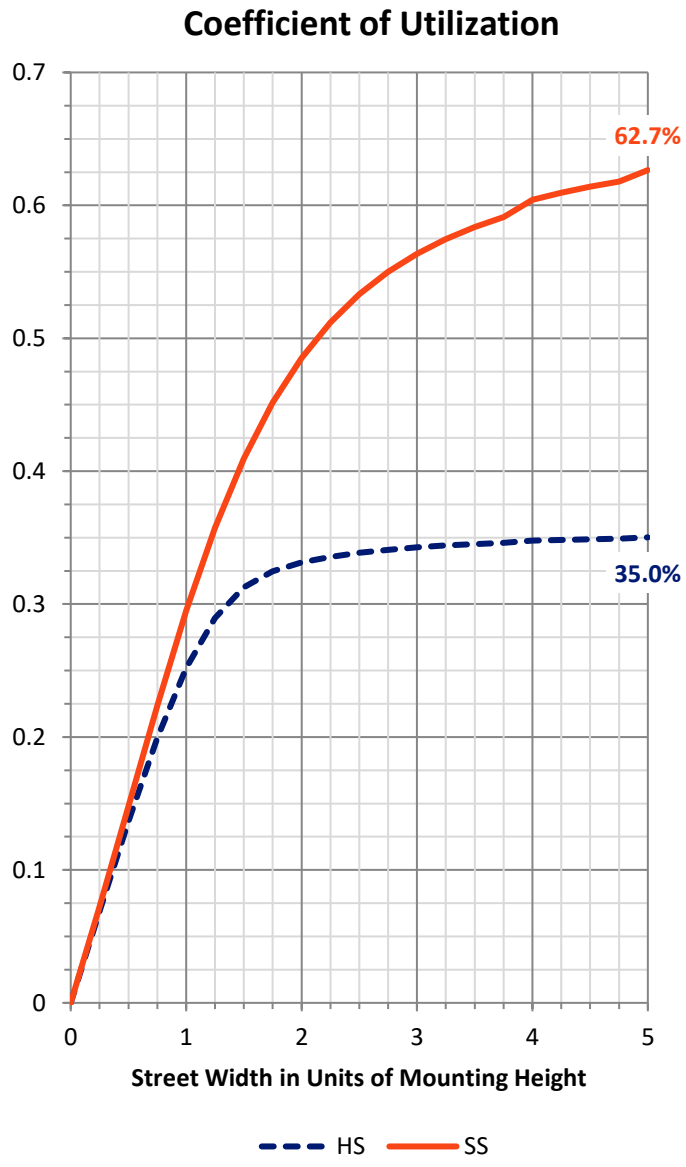
REPORT NUMBER: P821599
CATALOG NUMBER: TT-D5-750-12VDC-WQ-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2702.9 | 1.8 | 2704.7 |
| | % Fixture | 35.2 | 0.0 | 35.2 |
| **Street Side** | Lumens | 4938.2 | 31.1 | 4969.3 |
| | % Fixture | 64.3 | 0.4 | 64.8 |
| **Total** | Lumens | 7641.2 | 32.9 | 7674.0 |
| | % Fixture | 99.6 | 0.4 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 51.3 | 0.7 |
| 10°-20° | 182.3 | 2.4 |
| 20°-30° | 390.6 | 5.1 |
| 30°-40° | 707.4 | 9.2 |
| 40°-50° | 1180.4 | 15.4 |
| 50°-60° | 1635.0 | 21.3 |
| 60°-70° | 1694.4 | 22.1 |
| 70°-80° | 1363.6 | 17.8 |
| 80°-90° | 436.2 | 5.7 |
| 90°-100° | 22.1 | 0.3 |
| 100°-110° | 7.1 | 0.1 |
| 110°-120° | 1.4 | 0.0 |
| 120°-130° | 0.9 | 0.0 |
| 130°-140° | 0.6 | 0.0 |
| 140°-150° | 0.5 | 0.0 |
| 150°-160° | 0.2 | 0.0 |
| 160°-170° | 0.2 | 0.0 |
| 170°-180° | 0.1 | 0.0 |
| 0°-90° | 7641.2 | 99.6 |
| 0°-180° | 7674.0 | 100.0 |



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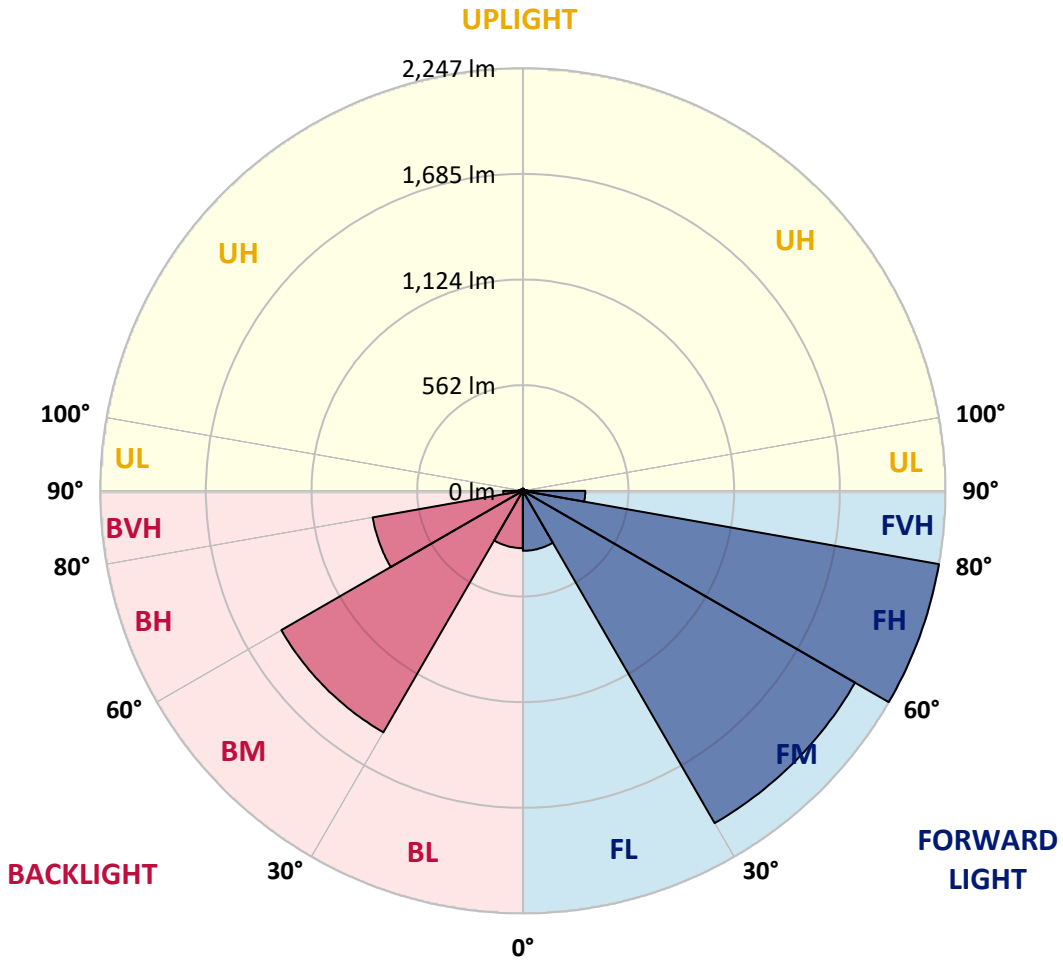
Scaled Data Report

REPORT NUMBER: P821599
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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°) | 319.1 | 4.2 | | | |
| FM | (30°-60°) | 2040.2 | 26.6 | | | |
| FH | (60°-80°) | 2247.1 | 29.3 | | | G2/5000 |
| FVH | (80°-90°) | 331.9 | 4.3 | | | G3/500 |
| BL | (0°-30°) | 305.1 | 4.0 | B1/500 | | |
| BM | (30°-60°) | 1482.6 | 19.3 | B2/2500 | | |
| BH | (60°-80°) | 810.9 | 10.6 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 104.3 | 1.4 | | | G2/225 |
| UL | (90°-100°) | 22.1 | 0.3 | | U2/50 | |
| UH | (100°-180°) | 10.8 | 0.1 | | U2/50 | |

**BUG Rating: B2-U2-G3**
Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 44° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 506.4 | 506.4 | 506.4 | 506.4 | 506.4 | *506.4* | 506.4 | 506.4 | 506.4 | 506.4 | 506.4 |
| 2.5° | 521.4 | 519.9 | 519.9 | 518.4 | 518.4 | *518.4* | 518.4 | 518.4 | 516.9 | 515.4 | 513.9 |
| 5° | 534.8 | 534.8 | 533.3 | 533.3 | 531.8 | *530.4* | 531.8 | 530.4 | 528.9 | 527.4 | 525.9 |
| 7.5° | 552.8 | 551.3 | 551.3 | 548.3 | 548.3 | *546.8* | 546.8 | 546.8 | 545.3 | 542.3 | 540.8 |
| 10° | 578.3 | 575.3 | 575.3 | 572.3 | 570.8 | *569.3* | 569.3 | 566.3 | 566.3 | 564.8 | 563.3 |
| 12.5° | 606.8 | 603.8 | 606.8 | 605.3 | 602.3 | *599.3* | 599.3 | 596.3 | 594.8 | 593.3 | 587.3 |
| 15° | 644.2 | 639.7 | 642.7 | 642.7 | 641.2 | *639.7* | 639.7 | 633.7 | 630.7 | 627.7 | 621.7 |
| 17.5° | 689.2 | 686.2 | 687.7 | 689.2 | 693.7 | *693.7* | 695.1 | 687.7 | 681.7 | 671.2 | 666.7 |
| 20° | 746.1 | 744.6 | 749.1 | 749.1 | 753.6 | *753.6* | 755.1 | 747.6 | 737.1 | 729.6 | 720.6 |
| 22.5° | 801.5 | 801.5 | 807.5 | 807.5 | 812.0 | *809.0* | 809.0 | 806.0 | 794.0 | 785.0 | 776.1 |
| 25° | 858.4 | 857.0 | 862.9 | 867.4 | 873.4 | *865.9* | 868.9 | 864.4 | 852.5 | 840.5 | 828.5 |
| 27.5° | 921.4 | 918.4 | 921.4 | 927.4 | 937.9 | *931.9* | 934.9 | 927.4 | 915.4 | 898.9 | 888.4 |
| 30° | 990.3 | 985.8 | 990.3 | 999.3 | 1006.8 | *1009.8* | 1008.3 | 997.8 | 987.3 | 963.3 | 955.8 |
| 32.5° | 1057.7 | 1057.7 | 1068.2 | 1084.7 | 1093.7 | *1092.2* | 1093.7 | 1084.7 | 1069.7 | 1039.7 | 1021.7 |
| 35° | 1140.1 | 1146.1 | 1159.6 | 1183.6 | 1203.0 | *1195.5* | 1195.5 | 1192.5 | 1167.1 | 1131.1 | 1107.1 |
| 37.5° | 1249.5 | 1255.5 | 1282.4 | 1310.9 | 1346.9 | *1343.9* | 1345.4 | 1336.4 | 1286.9 | 1249.5 | 1215.0 |
| 40° | 1376.8 | 1382.8 | 1423.3 | 1463.7 | 1498.2 | *1508.7* | 1510.2 | 1490.7 | 1436.7 | 1382.8 | 1328.9 |
| 42.5° | 1493.7 | 1501.2 | 1543.1 | 1600.0 | 1637.5 | *1654.0* | 1657.0 | 1625.5 | 1568.6 | 1507.2 | 1439.7 |
| 45° | 1610.5 | 1619.5 | 1667.5 | 1727.4 | 1781.3 | *1788.8* | 1790.3 | 1763.3 | 1700.4 | 1630.0 | 1543.1 |
| 47.5° | 1730.4 | 1737.9 | 1787.3 | 1859.2 | 1917.7 | *1932.6* | 1934.1 | 1908.7 | 1832.3 | 1746.9 | 1645.0 |
| 50° | 1839.7 | 1854.7 | 1922.1 | 1998.6 | 2076.5 | *2088.4* | 2089.9 | 2061.5 | 1971.6 | 1875.7 | 1740.9 |
| 52.5° | 1968.6 | 1976.1 | 2048.0 | 2175.3 | 2241.3 | *2287.7* | 2289.2 | 2233.8 | 2137.9 | 2009.0 | 1835.3 |
| 55° | 2118.4 | 2131.9 | 2205.3 | 2332.6 | 2451.0 | *2482.5* | 2491.5 | 2425.5 | 2298.2 | 2158.9 | 1955.1 |
| 57.5° | 2205.3 | 2230.8 | 2338.6 | 2460.0 | 2608.3 | *2629.3* | 2633.8 | 2564.9 | 2424.0 | 2271.2 | 2045.0 |
| 60° | 2251.7 | 2266.7 | 2380.6 | 2569.4 | 2684.7 | *2704.2* | 2702.7 | 2650.3 | 2509.4 | 2323.7 | 2086.9 |
| 62.5° | 2304.2 | 2329.6 | 2425.5 | 2617.3 | 2717.7 | *2765.6* | 2758.1 | 2704.2 | 2560.4 | 2356.6 | 2127.4 |
| 65° | *2289.2* | *2310.2* | *2451.0* | *2606.8* | *2773.1* | *2825.5* | *2815.1* | *2743.1* | *2567.9* | *2362.6* | *2116.9* |
| 67.5° | 2229.3 | 2245.8 | 2385.1 | 2578.3 | 2737.1 | *2774.6* | 2792.6 | 2722.2 | 2525.9 | 2298.2 | 2051.0 |
| 70° | 2106.4 | 2131.9 | 2266.7 | 2464.5 | 2609.8 | *2636.8* | 2639.8 | 2596.3 | 2419.5 | 2179.8 | 1941.6 |
| 72.5° | 1937.1 | 1958.1 | 2104.9 | 2305.7 | 2431.5 | *2463.0* | 2466.0 | 2400.1 | 2266.7 | 2018.0 | 1784.3 |
| 75° | 1734.9 | 1754.4 | 1868.2 | 2078.0 | 2202.3 | *2233.8* | 2230.8 | 2169.3 | 2028.5 | 1793.3 | 1576.1 |
| 77.5° | 1484.7 | 1520.6 | 1621.0 | 1793.3 | 1914.7 | *1931.1* | 1934.1 | 1866.7 | 1752.9 | 1549.1 | 1337.9 |
| 80° | 1171.6 | 1206.0 | 1319.9 | 1448.7 | 1550.6 | *1564.1* | 1568.6 | 1511.6 | 1408.3 | 1228.5 | 1048.7 |
| 82.5° | 833.0 | 862.9 | 952.8 | 1057.7 | 1143.1 | *1143.1* | 1146.1 | 1099.7 | 1020.3 | 865.9 | 725.1 |
| 85° | 474.9 | 497.4 | 557.3 | 632.2 | 693.7 | *686.2* | 687.7 | 645.7 | 593.3 | 473.4 | 383.5 |
| 87.5° | 155.8 | 166.3 | 179.8 | 208.2 | 236.7 | *218.7* | 227.7 | 188.8 | 170.8 | 127.3 | 98.9 |
| 90° | 82.4 | 82.4 | 79.4 | 76.4 | 70.4 | *61.4* | 61.4 | 49.4 | 37.5 | 24.0 | 9.0 |
| 92.5° | 74.9 | 74.9 | 71.9 | 68.9 | 62.9 | *55.4* | 55.4 | 44.9 | 33.0 | 21.0 | 7.5 |
| 95° | 61.4 | 61.4 | 59.9 | 56.9 | 52.4 | *46.4* | 44.9 | 37.5 | 28.5 | 16.5 | 6.0 |
| 97.5° | 47.9 | 47.9 | 46.4 | 44.9 | 40.5 | *36.0* | 36.0 | 28.5 | 21.0 | 13.5 | 4.5 |
| 100° | 36.0 | 36.0 | 36.0 | 33.0 | 31.5 | *27.0* | 27.0 | 22.5 | 16.5 | 10.5 | 3.0 |
| 102.5° | 25.5 | 27.0 | 25.5 | 24.0 | 22.5 | *19.5* | 19.5 | 16.5 | 12.0 | 7.5 | 3.0 |
| 105° | 18.0 | 18.0 | 16.5 | 16.5 | 15.0 | *13.5* | 13.5 | 10.5 | 7.5 | 4.5 | 1.5 |
| 107.5° | 10.5 | 10.5 | 10.5 | 10.5 | 9.0 | *9.0* | 9.0 | 7.5 | 4.5 | 3.0 | 1.5 |
| 110° | 6.0 | 6.0 | 6.0 | 6.0 | 4.5 | *4.5* | 4.5 | 3.0 | 3.0 | 1.5 | 1.5 |

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**CANDELA DISTRIBUTION (continued):**

| | 0° | 5° | 15° | 25° | 35° | 44° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 112.5° | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | *3.0* | 3.0 | 1.5 | 1.5 | 1.5 | 1.5 |
| 115° | 1.5 | 1.5 | 1.5 | 3.0 | 1.5 | *1.5* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 117.5° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | *1.5* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 120° | 0.0 | 0.0 | 1.5 | 1.5 | 1.5 | *1.5* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 122.5° | 0.0 | 0.0 | 1.5 | 1.5 | 1.5 | *1.5* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 125° | 0.0 | 0.0 | 1.5 | 1.5 | 1.5 | *1.5* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 127.5° | 0.0 | 0.0 | 0.0 | 1.5 | 1.5 | *1.5* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 130° | 0.0 | 0.0 | 0.0 | 1.5 | 1.5 | *1.5* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 132.5° | 0.0 | 0.0 | 0.0 | 1.5 | 1.5 | *1.5* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | *1.5* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 140° | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | *0.0* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 142.5° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | *1.5* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 145° | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 1.5 | 1.5 | 1.5 | 1.5 |
| 147.5° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | *1.5* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 150° | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | *0.0* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 1.5 | 1.5 | 1.5 | 1.5 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 0.0 | 1.5 | 1.5 | 1.5 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 1.5 | 1.5 | 1.5 | 1.5 |
| 160° | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 1.5 | 1.5 | 1.5 | 1.5 |
| 162.5° | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 1.5 | 1.5 | 1.5 | 1.5 |
| 165° | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 167.5° | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | *0.0* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 170° | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | *1.5* | 0.0 | 1.5 | 1.5 | 1.5 | 1.5 |
| 172.5° | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | *0.0* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 175° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | *0.0* | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| 177.5° | 0.0 | 1.5 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 1.5 | 1.5 | 1.5 | 1.5 |
| 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):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 506.4 | 506.4 | 506.4 | 506.4 | 506.4 | 506.4 | 506.4 | 506.4 | 506.4 | 506.4 | 506.4 |
| 2.5° | 513.9 | 513.9 | 512.4 | 510.9 | 510.9 | 510.9 | 509.4 | 509.4 | 509.4 | 507.9 | 507.9 |
| 5° | 525.9 | 524.4 | 524.4 | 522.9 | 522.9 | 521.4 | 521.4 | 519.9 | 518.4 | 518.4 | 516.9 |
| 7.5° | 542.3 | 540.8 | 537.8 | 539.3 | 536.3 | 534.8 | 533.3 | 533.3 | 533.3 | 531.8 | 531.8 |
| 10° | 561.8 | 561.8 | 558.8 | 558.8 | 555.8 | 554.3 | 552.8 | 552.8 | 554.3 | 554.3 | 552.8 |
| 12.5° | 587.3 | 585.8 | 585.8 | 584.3 | 582.8 | 581.3 | 582.8 | 582.8 | 581.3 | 579.8 | 578.3 |
| 15° | 618.7 | 618.7 | 618.7 | 620.2 | 618.7 | 618.7 | 618.7 | 617.2 | 614.2 | 611.3 | 611.3 |
| 17.5° | 666.7 | 665.2 | 662.2 | 663.7 | 666.7 | 671.2 | 666.7 | 662.2 | 657.7 | 657.7 | 656.2 |
| 20° | 716.1 | 717.6 | 717.6 | 719.1 | 723.6 | 728.1 | 722.1 | 719.1 | 716.1 | 713.1 | 710.1 |
| 22.5° | 770.1 | 771.6 | 771.6 | 770.1 | 773.1 | 771.6 | 768.6 | 765.6 | 762.6 | 758.1 | 755.1 |
| 25° | 822.5 | 824.0 | 822.5 | 821.0 | 822.5 | 818.0 | 813.5 | 809.0 | 801.5 | 794.0 | 794.0 |
| 27.5° | 880.9 | 879.4 | 873.4 | 874.9 | 871.9 | 868.9 | 859.9 | 849.5 | 839.0 | 831.5 | 831.5 |
| 30° | 942.3 | 942.3 | 930.4 | 936.4 | 930.4 | 928.9 | 909.4 | 895.9 | 880.9 | 870.4 | 868.9 |
| 32.5° | 1009.8 | 1006.8 | 997.8 | 1003.8 | 997.8 | 991.8 | 967.8 | 949.8 | 924.4 | 909.4 | 907.9 |
| 35° | 1090.7 | 1083.2 | 1075.7 | 1081.7 | 1081.7 | 1065.2 | 1041.2 | 1008.3 | 972.3 | 954.3 | 952.8 |
| 37.5° | 1189.5 | 1185.0 | 1176.1 | 1183.6 | 1189.5 | 1173.1 | 1137.1 | 1089.2 | 1038.2 | 1011.3 | 1009.8 |
| 40° | 1298.9 | 1292.9 | 1288.4 | 1298.9 | 1303.4 | 1286.9 | 1239.0 | 1171.6 | 1102.7 | 1063.7 | 1057.7 |
| 42.5° | 1402.3 | 1388.8 | 1381.3 | 1396.3 | 1391.8 | 1373.8 | 1307.9 | 1230.0 | 1135.6 | 1090.7 | 1083.2 |
| 45° | 1495.2 | 1480.2 | 1469.7 | 1483.2 | 1477.2 | 1441.2 | 1367.8 | 1263.0 | 1149.1 | 1093.7 | 1084.7 |
| 47.5° | 1586.6 | 1564.1 | 1547.6 | 1565.6 | 1553.6 | 1498.2 | 1408.3 | 1279.4 | 1134.1 | 1068.2 | 1053.2 |
| 50° | 1664.5 | 1637.5 | 1627.0 | 1648.0 | 1630.0 | 1552.1 | 1436.7 | 1271.9 | 1096.7 | 1000.8 | 976.8 |
| 52.5° | 1757.3 | 1716.9 | 1706.4 | 1746.9 | 1706.4 | 1603.0 | 1442.7 | 1254.0 | 1011.3 | 895.9 | 873.4 |
| 55° | 1851.7 | 1806.8 | 1790.3 | 1827.8 | 1766.3 | 1613.5 | 1412.8 | 1150.6 | 882.4 | 759.6 | 726.6 |
| 57.5° | 1901.2 | 1859.2 | 1844.2 | 1871.2 | 1757.3 | 1511.6 | 1279.4 | 958.8 | 689.2 | 551.3 | 515.4 |
| 60° | 1946.1 | 1872.7 | 1853.2 | 1889.2 | 1664.5 | 1274.9 | 990.3 | 687.7 | 416.5 | 313.1 | 286.1 |
| 62.5° | 1977.6 | 1907.2 | 1866.7 | 1883.2 | 1493.7 | 927.4 | 569.3 | 331.1 | 157.3 | 109.4 | 107.9 |
| 65° | *1961.1* | *1901.2* | *1874.2* | *1862.2* | *1297.4* | *533.3* | *209.7* | *83.9* | *4.5* | *4.5* | *3.0* |
| 67.5° | 1910.2 | 1844.2 | 1836.8 | 1847.2 | 1283.9 | 512.4 | 194.8 | 76.4 | 0.0 | 0.0 | 0.0 |
| 70° | 1797.8 | 1751.4 | 1751.4 | 1787.3 | 1225.5 | 485.4 | 181.3 | 70.4 | 0.0 | 0.0 | 0.0 |
| 72.5° | 1646.5 | 1610.5 | 1631.5 | 1685.4 | 1138.6 | 448.0 | 163.3 | 62.9 | 0.0 | 0.0 | 0.0 |
| 75° | 1465.2 | 1427.8 | 1454.7 | 1514.6 | 1030.7 | 400.0 | 142.3 | 53.9 | 0.0 | 0.0 | 0.0 |
| 77.5° | 1234.5 | 1209.0 | 1251.0 | 1306.4 | 886.9 | 337.1 | 116.9 | 43.4 | 0.0 | 0.0 | 0.0 |
| 80° | 961.8 | 948.3 | 1003.8 | 1053.2 | 716.1 | 265.2 | 88.4 | 31.5 | 0.0 | 0.0 | 0.0 |
| 82.5° | 663.7 | 657.7 | 711.6 | 762.6 | 512.4 | 185.8 | 59.9 | 21.0 | 0.0 | 0.0 | 0.0 |
| 85° | 347.6 | 347.6 | 389.5 | 436.0 | 286.1 | 100.4 | 30.0 | 9.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 76.4 | 73.4 | 79.4 | 101.9 | 56.9 | 19.5 | 4.5 | 1.5 | 0.0 | 0.0 | 0.0 |
| 90° | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 92.5° | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95° | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97.5° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102.5° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107.5° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 110° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P821599
CATALOG NUMBER: TT-D5-750-12VDC-WQ-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 112.5° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117.5° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122.5° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125° | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127.5° | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130° | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132.5° | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135° | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137.5° | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142.5° | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147.5° | 1.5 | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.5° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 1.5 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

# 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

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

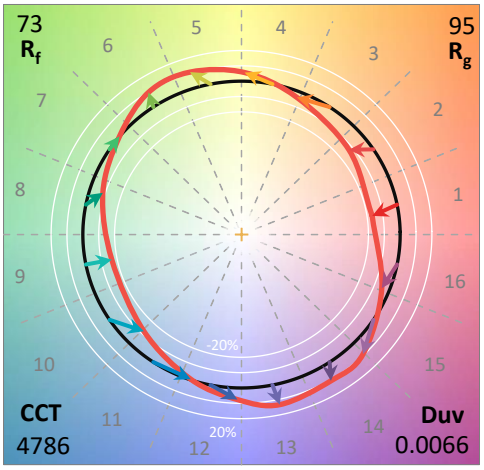
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-176-6 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| 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 |
| CIE u': | 0.2093 |
| CIE v': | 0.4953 |
| Duv: | 0.0066 |
| CIE x: | 0.3533 |
| CIE y: | 0.3716 |
| CIE z: | 0.2751 |
| Peak Wavelength (nm): | 449 |
| Dominant Wavelength (nm): | 570 |
| Purity: | 17.53512 |
| Rf: | 73 |
| Rg: | 94.6 |

| | | | | | |
|---|---|---|---|---|---|
| CRI (Ra): | 70.9 | | | | |
| R1: | 67.8 | R9: | -29.8 | | |
| R2: | 75.1 | R10: | 40.9 | | |
| R3: | 80.6 | R11: | 67.4 | | |
| R4: | 71.6 | R12: | 35.3 | | |
| R5: | 67.8 | R13: | 68.5 | | |
| R6: | 65.4 | R14: | 89.0 | | |
| R7: | 82.0 | R15: | 60.9 | | |
| R8: | 57.0 | | | | |




## Test Conditions

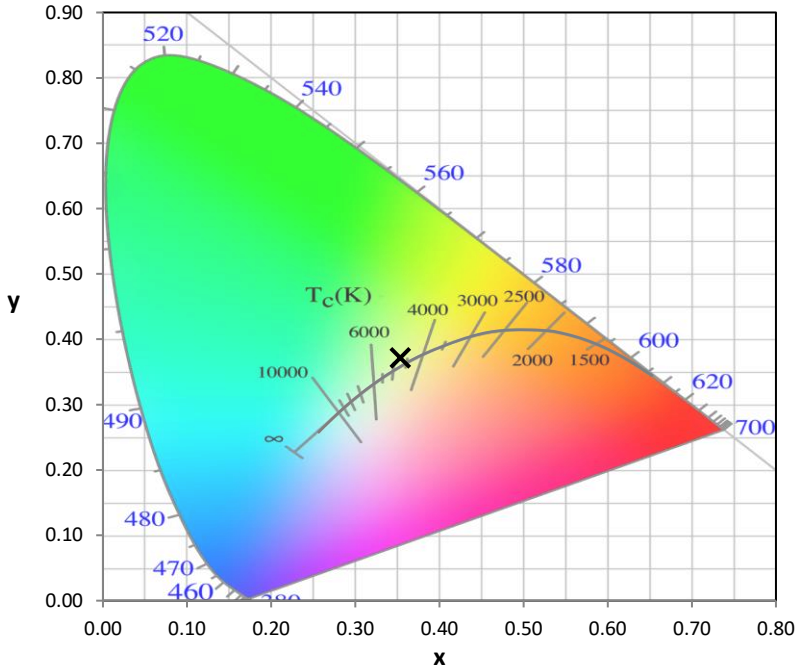
| | |
|---|---|
| Stabilization Time: | 45M |
| Operation Time: | 1H 45M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-176-6

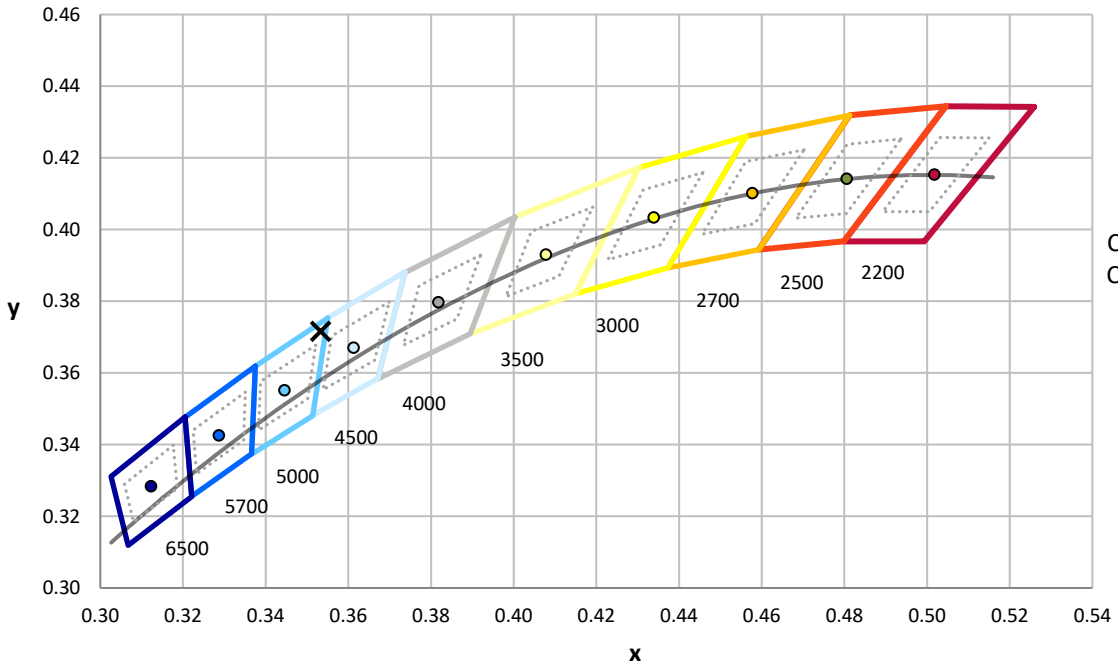
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

REPORT NUMBER: SP1-2407-176-6

## CIE 1931 Chromaticity Diagram




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

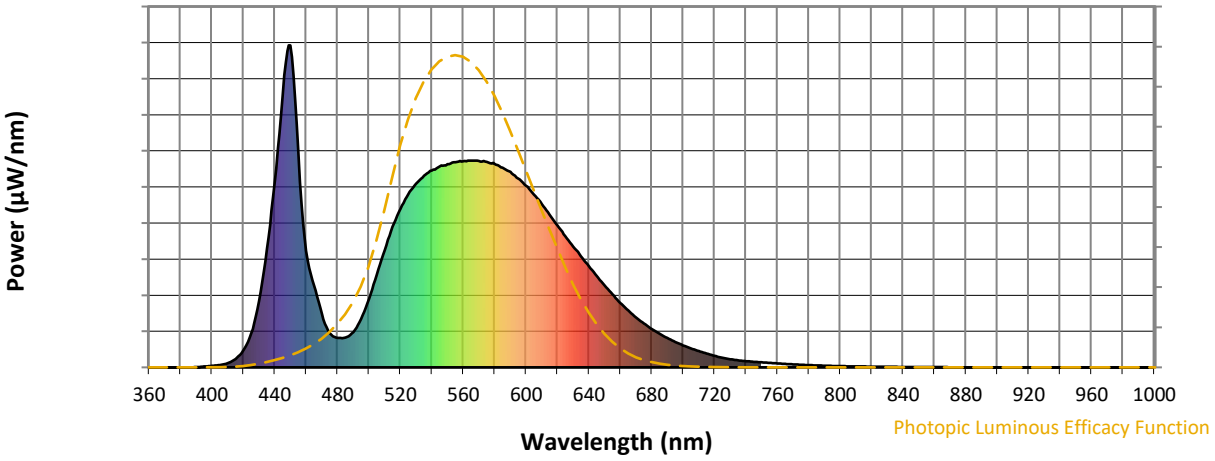



CCT = 4786K
CIE x = 0.3533
CIE y = 0.3716
Duv = 0.0066

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-6

## Photopic Flux vs. Wavelength

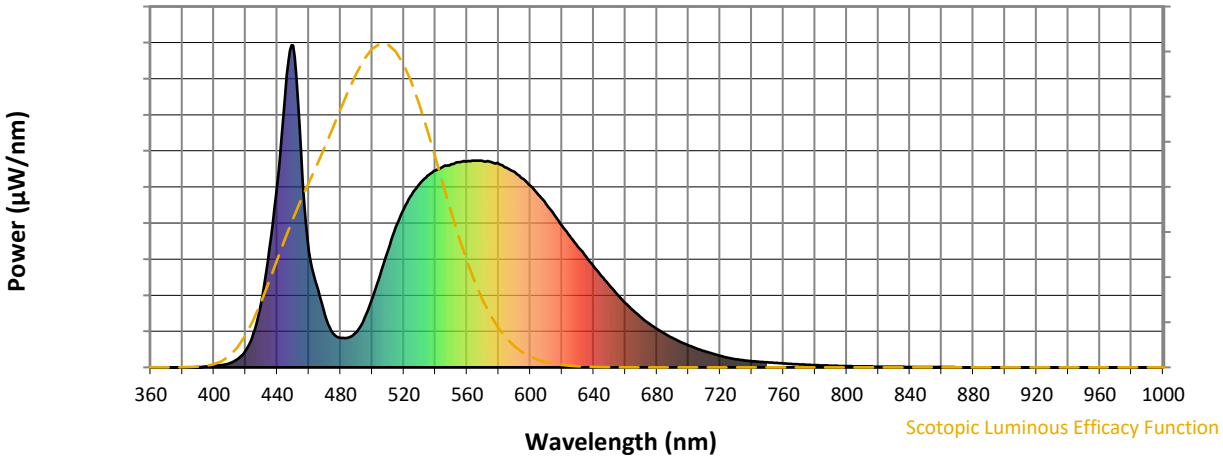



## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/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

## Scotopic Flux vs. Wavelength

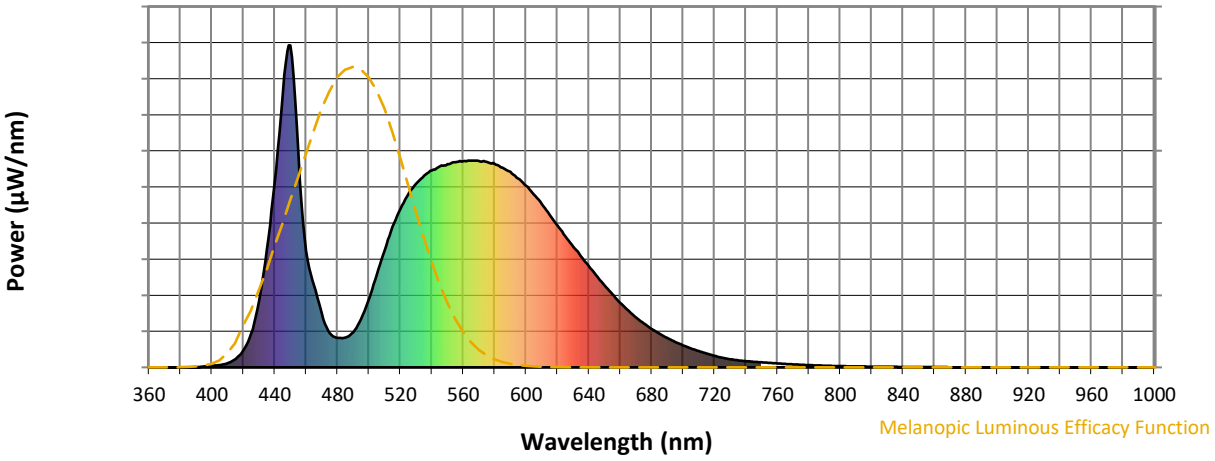



**Scotopic Lumens: NR** **S/P: 1.69**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/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 (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/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 | | | |

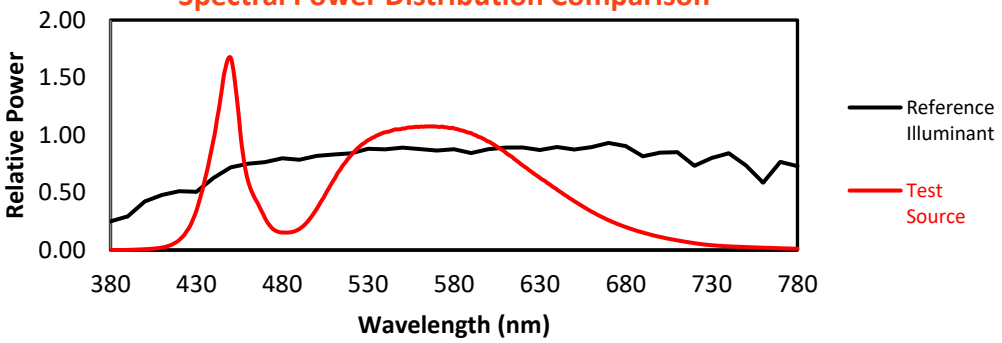
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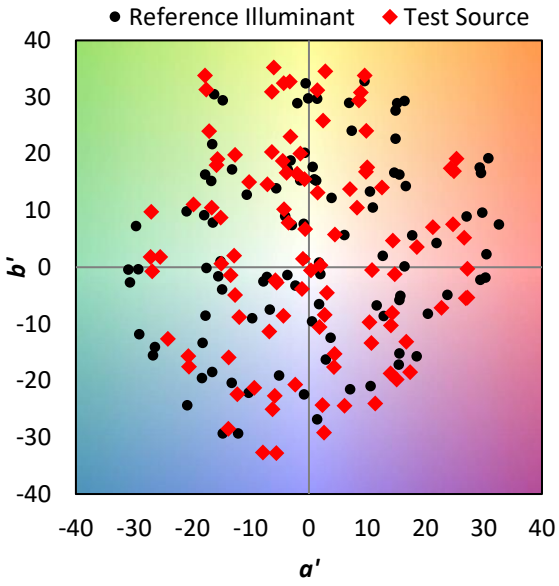
## Summary

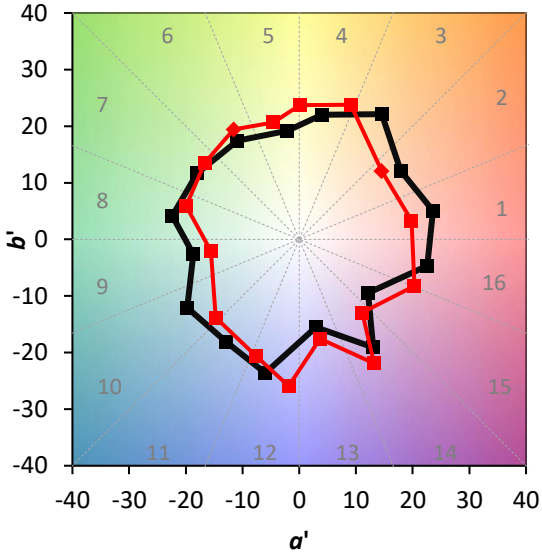
$R_f$ = 73
$R_g$ = 94.6
CIE $R_a$ = 70.9
$R_9$ = -29.8

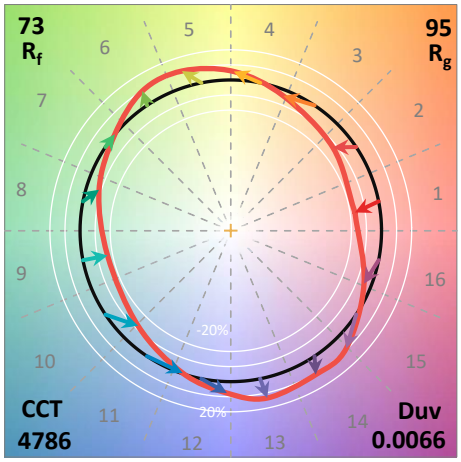
## Spectral Power Distribution Comparison

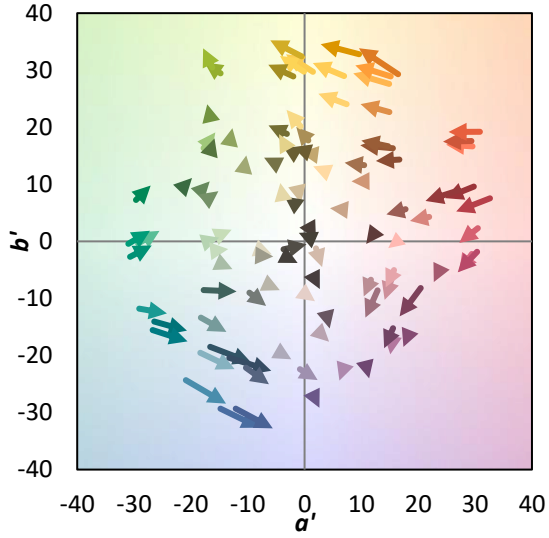



## Color Vector Graphics



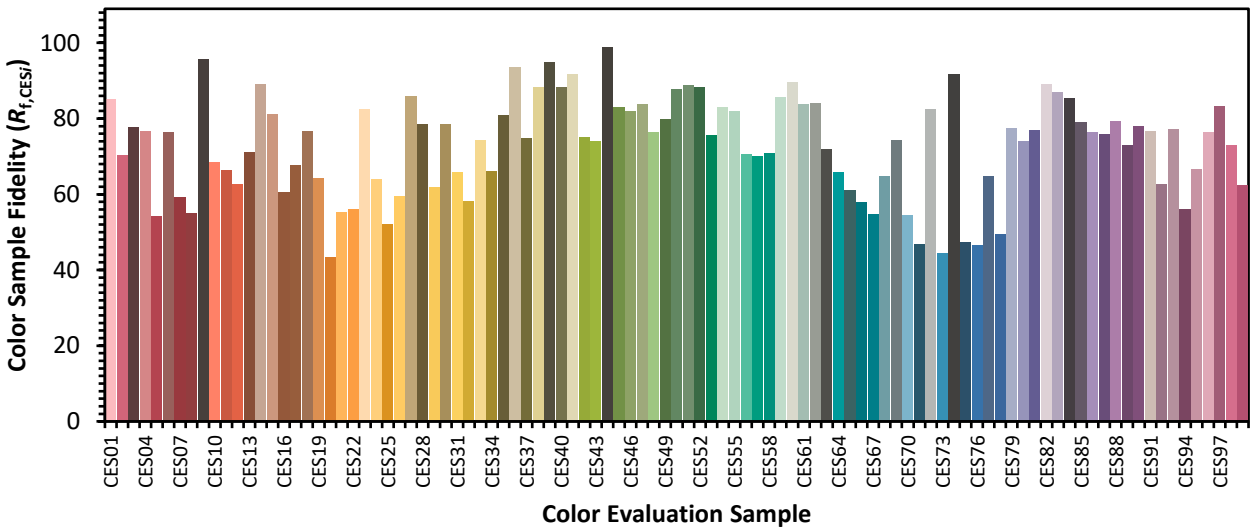



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## Individual Sample Fidelity Index ($R_{f,i}$)

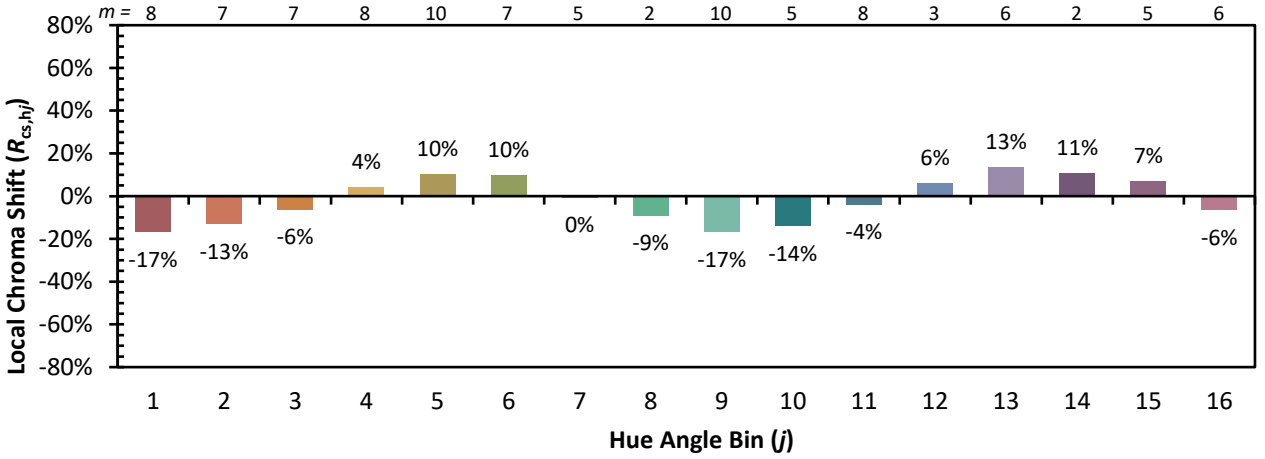
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 60 | CES51 = 89 | CES76 = 46 |
| CES02 = 59 | CES27 = 86 | CES52 = 88 | CES77 = 65 |
| CES03 = 30 | CES28 = 78 | CES53 = 76 | CES78 = 49 |
| CES04 = 69 | CES29 = 62 | CES54 = 83 | CES79 = 78 |
| CES05 = 46 | CES30 = 79 | CES55 = 82 | CES80 = 74 |
| CES06 = 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 | |

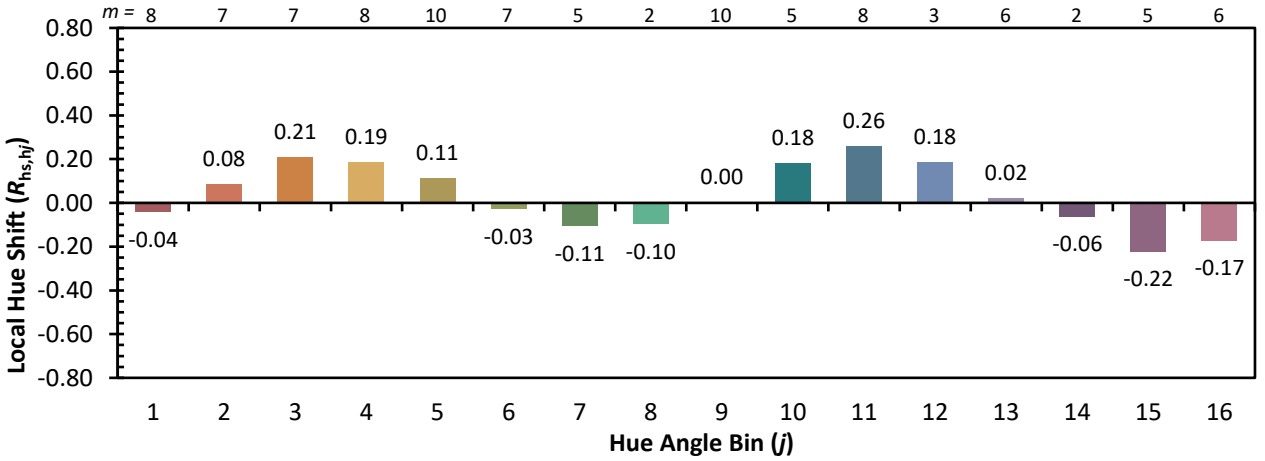


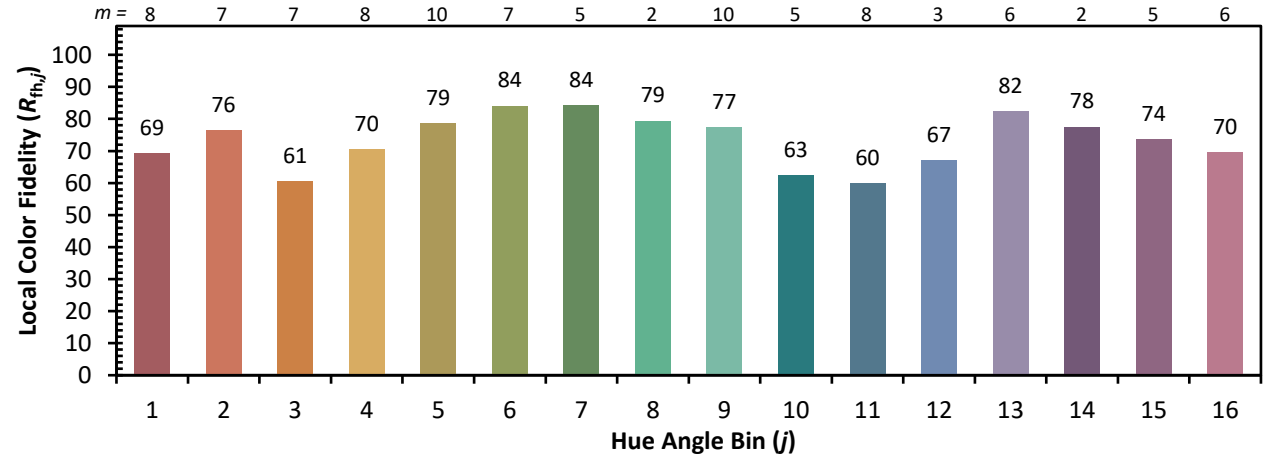
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## Color Rendition by Hue-Angle Bin



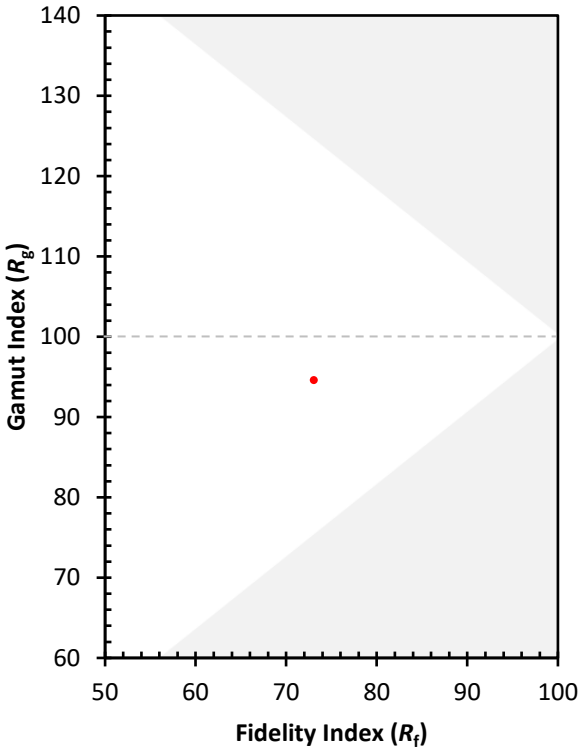



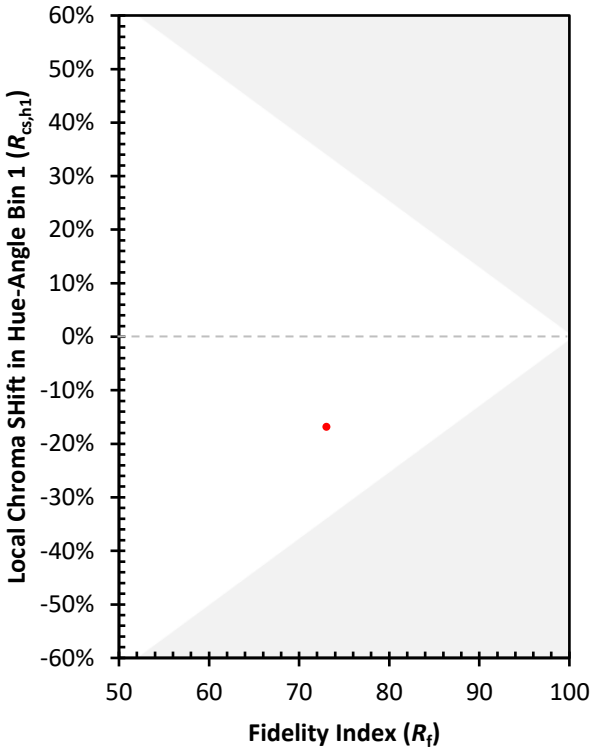



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## Measure Comparisons




(END OF REPORT)