

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: P821281

Luminaire Tested: **TT-D3-750-24VDC-5CQ-PM-HSS**

Issue Date: 12/2/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P821281  
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-D3-750-24VDC-5CQ-PM-HSS  
Description: TOPTIER LED SITE LUMINAIRE  
5000K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

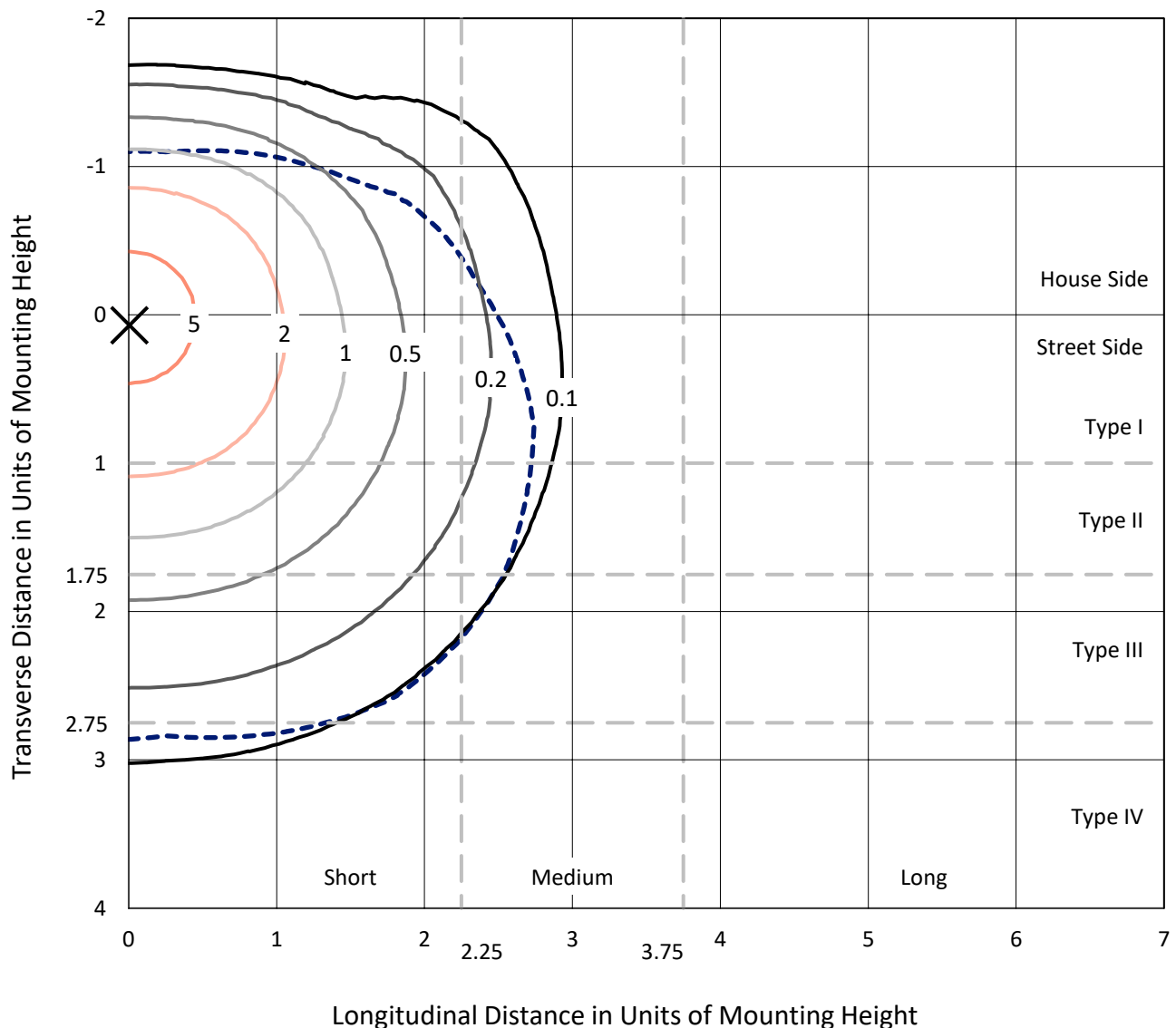
Lumens per Lamp: N/A  
Luminaire Lumens: 5318 lumens  
Efficiency: N/A  
Efficacy: 115.6 lumens/watt  
Luminous Opening: Circular (Dia: 1.12' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U2 - G1

Input Watts (W): 46  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

REPORT NUMBER: P821281  
 CATALOG NUMBER: TT-D3-750-24VDC-5CQ-PM-HSS

## Iso-Footcandle Lines of Horizontal Illumination

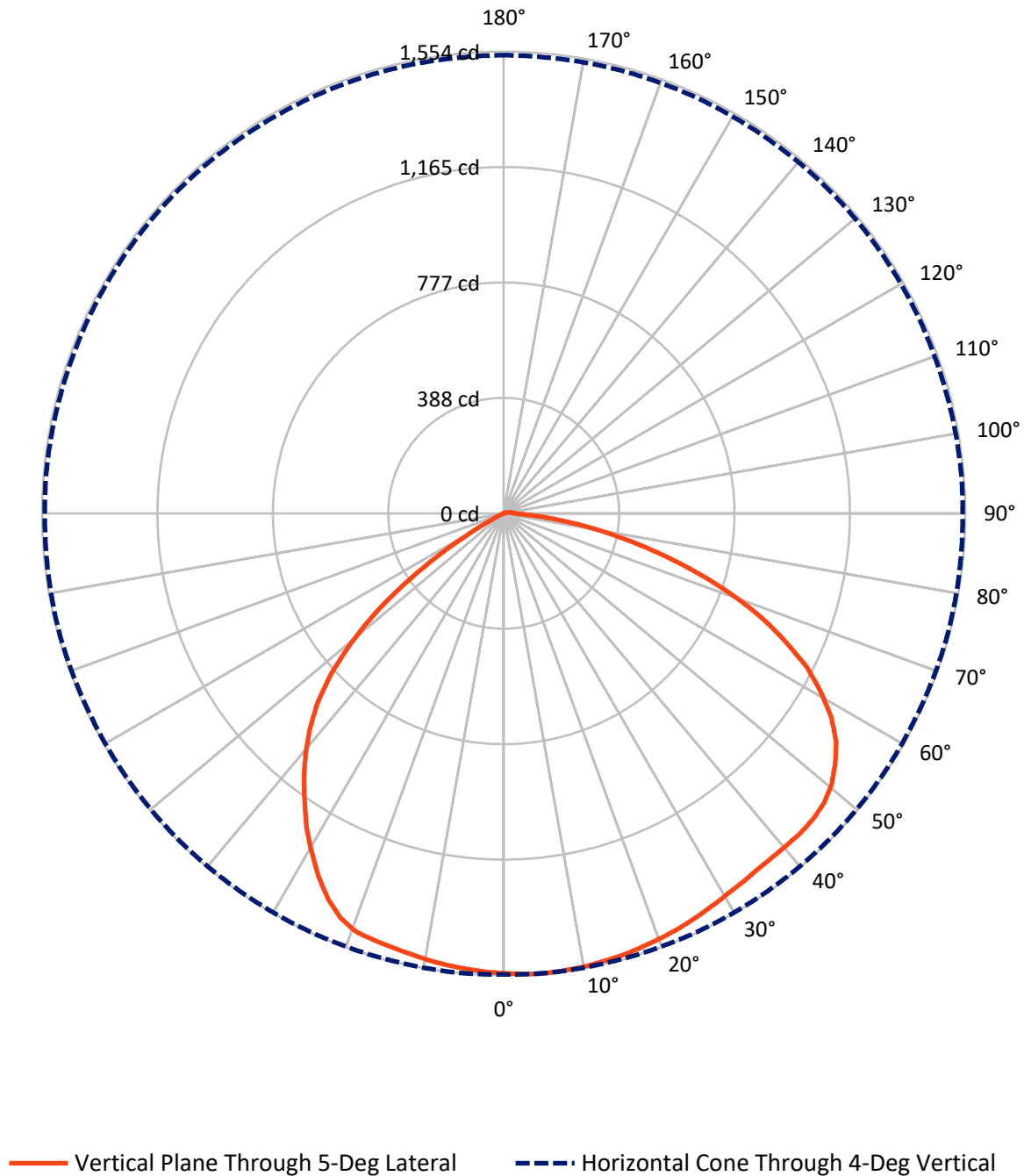
✕ Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 6.9 fc  
 Type IV - Short - N/A

REPORT NUMBER: P821281  
CATALOG NUMBER: TT-D3-750-24VDC-5CQ-PM-HSS

## Luminous Intensity Polar Plot



REPORT NUMBER: P821281

CATALOG NUMBER: TT-D3-750-24VDC-5CQ-PM-HSS

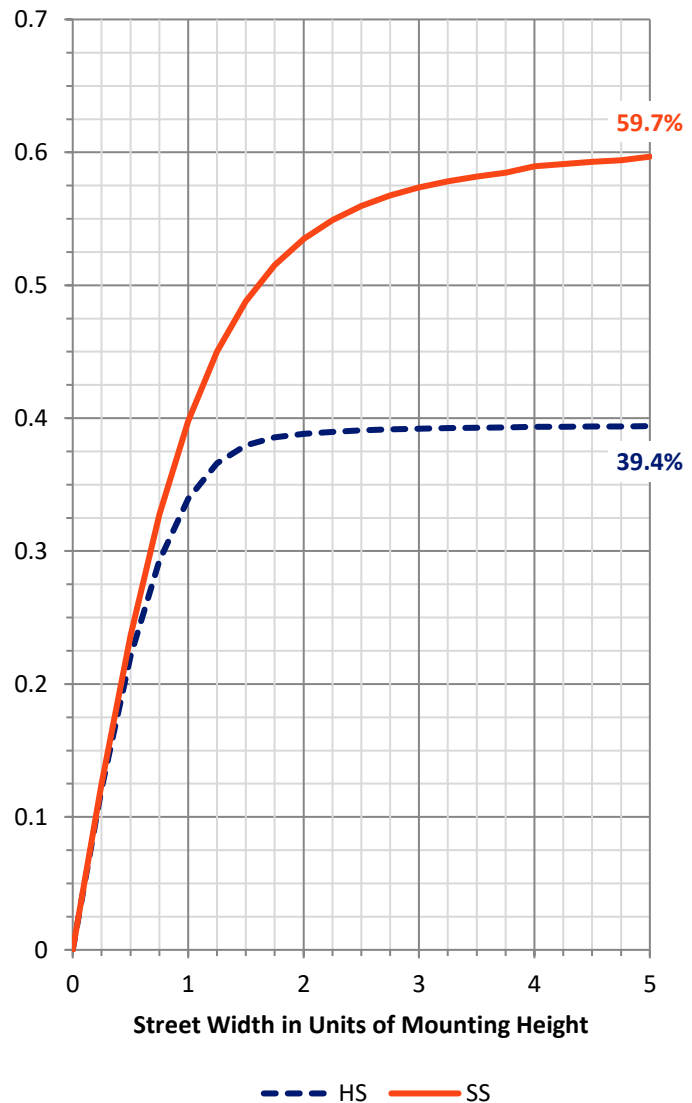
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 2107.5   | 2.7    | 2110.2 |
|                    | % Fixture | 39.6     | 0.1    | 39.7   |
| <b>Street Side</b> | Lumens    | 3193.0   | 14.8   | 3207.8 |
|                    | % Fixture | 60.0     | 0.3    | 60.3   |
| <b>Total</b>       | Lumens    | 5300.4   | 17.5   | 5318.0 |
|                    | % Fixture | 99.7     | 0.3    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 147.2  | 2.8       |
| 10°-20°   | 431.1  | 8.1       |
| 20°-30°   | 679.2  | 12.8      |
| 30°-40°   | 864.4  | 16.3      |
| 40°-50°   | 998.4  | 18.8      |
| 50°-60°   | 977.6  | 18.4      |
| 60°-70°   | 728.1  | 13.7      |
| 70°-80°   | 394.4  | 7.4       |
| 80°-90°   | 79.9   | 1.5       |
| 90°-100°  | 10.1   | 0.2       |
| 100°-110° | 3.9    | 0.1       |
| 110°-120° | 1.1    | 0.0       |
| 120°-130° | 0.8    | 0.0       |
| 130°-140° | 0.6    | 0.0       |
| 140°-150° | 0.4    | 0.0       |
| 150°-160° | 0.3    | 0.0       |
| 160°-170° | 0.2    | 0.0       |
| 170°-180° | 0.1    | 0.0       |
| 0°-90°    | 5300.4 | 99.7      |
| 0°-180°   | 5318.0 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P821281

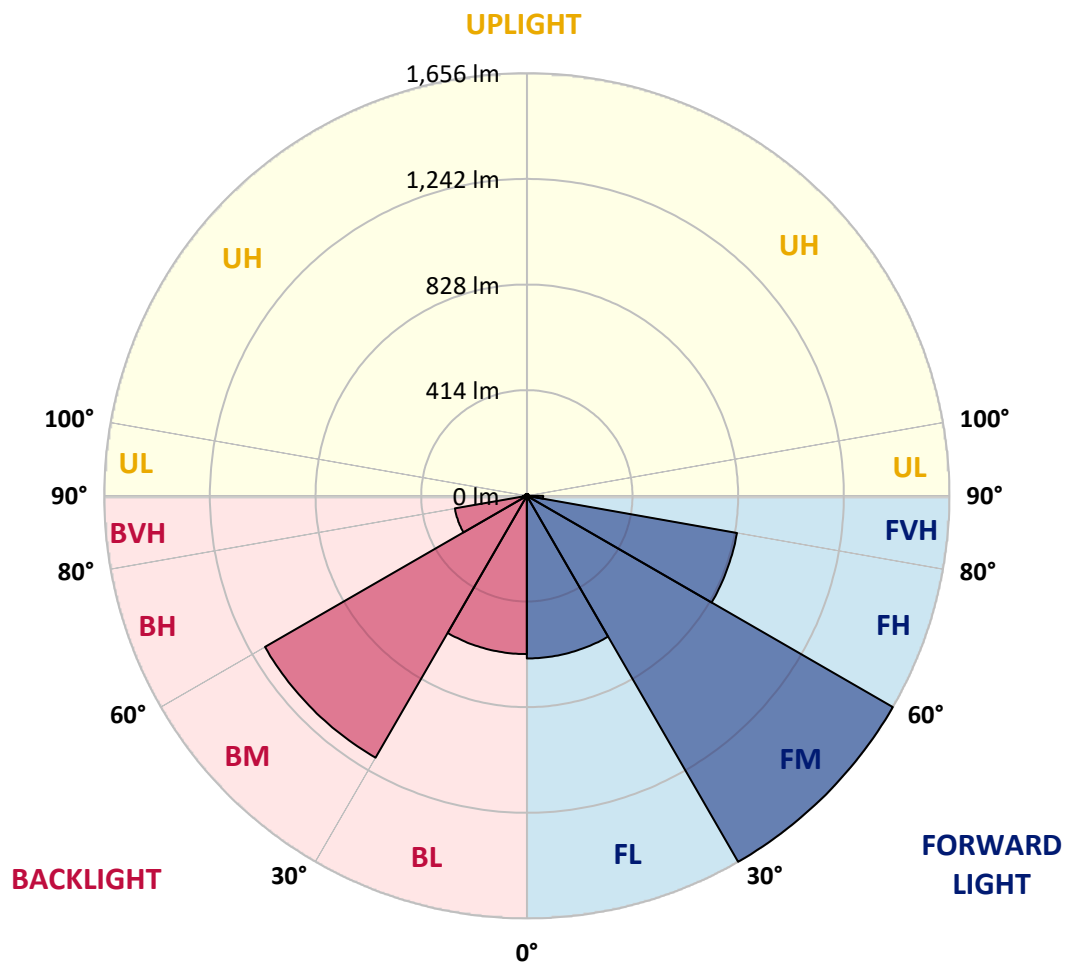
CATALOG NUMBER: TT-D3-750-24VDC-5CQ-PM-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |       |         |
|------|-------------|--------|-----------|-------------------------|-------|---------|
|      |             |        |           | B                       | U     | G       |
| FL   | (0°-30°)    | 637.2  | 12.0      |                         |       |         |
| FM   | (30°-60°)   | 1655.8 | 31.1      |                         |       |         |
| FH   | (60°-80°)   | 836.1  | 15.7      |                         |       | G1/1800 |
| FVH  | (80°-90°)   | 63.8   | 1.2       |                         |       | G1/100  |
| BL   | (0°-30°)    | 620.3  | 11.7      | B2/1000                 |       |         |
| BM   | (30°-60°)   | 1184.7 | 22.3      | B2/2500                 |       |         |
| BH   | (60°-80°)   | 286.4  | 5.4       | B1/500                  |       | G1/500  |
| BVH  | (80°-90°)   | 16.1   | 0.3       |                         |       | G1/100  |
| UL   | (90°-100°)  | 10.1   | 0.2       |                         | U2/50 |         |
| UH   | (100°-180°) | 7.4    | 0.1       |                         | U1/10 |         |

**BUG Rating: B2-U2-G1**

Type IV Short



REPORT NUMBER: P821281

CATALOG NUMBER: TT-D3-750-24VDC-5CQ-PM-HSS

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    | 90°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 |
| 2.5°   | 1550.9 | 1552.9 | 1551.9 | 1551.9 | 1549.9 | 1550.9 | 1549.9 | 1549.9 | 1548.9 | 1547.9 | 1547.9 |
| 4°     | 1551.9 | 1553.9 | 1551.9 | 1551.9 | 1550.9 | 1550.9 | 1549.9 | 1547.9 | 1548.9 | 1545.9 | 1544.9 |
| 5°     | 1552.9 | 1553.9 | 1552.9 | 1552.9 | 1550.9 | 1549.9 | 1547.9 | 1547.9 | 1546.9 | 1544.9 | 1544.9 |
| 7.5°   | 1550.9 | 1551.9 | 1551.9 | 1550.9 | 1548.9 | 1546.9 | 1545.9 | 1544.9 | 1543.9 | 1540.9 | 1540.9 |
| 10°    | 1546.9 | 1548.9 | 1546.9 | 1546.9 | 1545.9 | 1543.9 | 1540.9 | 1539.9 | 1536.9 | 1534.9 | 1533.9 |
| 12.5°  | 1542.9 | 1543.9 | 1542.9 | 1542.9 | 1540.9 | 1537.9 | 1536.9 | 1534.9 | 1530.9 | 1527.9 | 1527.9 |
| 15°    | 1536.9 | 1538.9 | 1537.9 | 1536.9 | 1535.9 | 1532.9 | 1529.9 | 1526.9 | 1523.9 | 1520.9 | 1520.9 |
| 17.5°  | 1529.9 | 1530.9 | 1531.9 | 1530.9 | 1528.9 | 1526.9 | 1523.9 | 1519.9 | 1516.9 | 1513.9 | 1512.9 |
| 20°    | 1521.9 | 1523.9 | 1523.9 | 1523.9 | 1521.9 | 1519.9 | 1515.9 | 1511.9 | 1509.9 | 1505.9 | 1504.9 |
| 22.5°  | 1513.9 | 1515.9 | 1514.9 | 1515.9 | 1514.9 | 1511.9 | 1507.9 | 1503.9 | 1499.9 | 1496.9 | 1494.9 |
| 25°    | 1505.9 | 1505.9 | 1505.9 | 1505.9 | 1505.9 | 1501.9 | 1497.9 | 1492.9 | 1488.9 | 1483.9 | 1483.9 |
| 27.5°  | 1495.9 | 1495.9 | 1496.9 | 1496.9 | 1495.9 | 1492.9 | 1487.9 | 1481.9 | 1475.9 | 1470.9 | 1468.9 |
| 30°    | 1486.9 | 1485.9 | 1487.9 | 1489.9 | 1488.9 | 1485.9 | 1479.9 | 1472.9 | 1463.9 | 1456.9 | 1450.9 |
| 32.5°  | 1475.9 | 1478.9 | 1480.9 | 1484.9 | 1485.9 | 1481.9 | 1474.9 | 1465.9 | 1456.9 | 1443.9 | 1432.9 |
| 35°    | 1471.9 | 1471.9 | 1476.9 | 1482.9 | 1484.9 | 1482.9 | 1472.9 | 1462.9 | 1449.9 | 1430.9 | 1417.9 |
| 37.5°  | 1467.9 | 1468.9 | 1476.9 | 1485.9 | 1488.9 | 1488.9 | 1477.9 | 1464.9 | 1446.9 | 1419.9 | 1403.9 |
| 40°    | 1465.9 | 1467.9 | 1477.9 | 1490.9 | 1498.9 | 1497.9 | 1484.9 | 1468.9 | 1446.9 | 1411.9 | 1391.9 |
| 42.5°  | 1463.9 | 1467.9 | 1478.9 | 1496.9 | 1508.9 | 1507.9 | 1493.9 | 1472.9 | 1444.9 | 1401.9 | 1378.9 |
| 45°    | 1460.9 | 1463.9 | 1478.9 | 1501.9 | 1517.9 | 1520.9 | 1504.9 | 1477.9 | 1444.9 | 1392.9 | 1362.9 |
| 47.5°  | 1451.9 | 1452.9 | 1472.9 | 1499.9 | 1523.9 | 1527.9 | 1511.9 | 1479.9 | 1440.9 | 1377.9 | 1342.9 |
| 50°    | 1427.9 | 1430.9 | 1453.9 | 1489.9 | 1517.9 | 1523.9 | 1509.9 | 1474.9 | 1430.9 | 1352.9 | 1310.9 |
| 52.5°  | 1396.9 | 1396.9 | 1424.9 | 1464.9 | 1498.9 | 1508.9 | 1495.9 | 1456.9 | 1405.9 | 1315.9 | 1267.9 |
| 55°    | 1350.9 | 1357.9 | 1386.9 | 1428.9 | 1465.9 | 1479.9 | 1461.9 | 1423.9 | 1364.9 | 1268.9 | 1215.9 |
| 57.5°  | 1298.9 | 1300.9 | 1330.9 | 1380.9 | 1418.9 | 1427.9 | 1412.9 | 1367.9 | 1310.9 | 1212.9 | 1149.9 |
| 60°    | 1223.9 | 1227.9 | 1265.9 | 1309.9 | 1350.9 | 1362.9 | 1343.9 | 1298.9 | 1238.9 | 1140.9 | 1076.9 |
| 62.5°  | 1140.9 | 1146.9 | 1180.9 | 1225.9 | 1264.9 | 1283.9 | 1260.9 | 1213.9 | 1154.9 | 1054.9 | 998.9  |
| 65°    | 1040.9 | 1042.9 | 1079.9 | 1130.9 | 1169.9 | 1176.9 | 1156.9 | 1110.9 | 1051.9 | 955.9  | 905.9  |
| 67.5°  | 925.9  | 935.9  | 971.9  | 1009.9 | 1043.9 | 1051.9 | 1037.9 | 984.9  | 937.9  | 852.9  | 804.0  |
| 70°    | 815.0  | 810.0  | 839.9  | 877.9  | 908.9  | 915.9  | 899.9  | 850.9  | 807.0  | 727.0  | 689.0  |
| 72.5°  | 681.0  | 677.0  | 709.0  | 738.0  | 768.0  | 764.0  | 748.0  | 709.0  | 671.0  | 603.0  | 568.0  |
| 75°    | 546.0  | 542.0  | 567.0  | 592.0  | 607.0  | 609.0  | 598.0  | 569.0  | 528.0  | 475.0  | 448.0  |
| 77.5°  | 414.0  | 418.0  | 429.0  | 450.0  | 464.0  | 470.0  | 451.0  | 422.0  | 396.0  | 355.0  | 335.0  |
| 80°    | 295.0  | 296.0  | 300.0  | 315.0  | 325.0  | 325.0  | 316.0  | 293.0  | 264.0  | 235.0  | 225.0  |
| 82.5°  | 186.0  | 190.0  | 190.0  | 205.0  | 205.0  | 197.0  | 193.0  | 178.0  | 163.0  | 140.0  | 126.0  |
| 85°    | 102.0  | 100.0  | 106.0  | 107.0  | 106.0  | 100.0  | 94.0   | 85.0   | 75.0   | 59.0   | 53.0   |
| 87.5°  | 45.0   | 44.0   | 44.0   | 44.0   | 43.0   | 39.0   | 33.0   | 26.0   | 18.0   | 11.0   | 8.0    |
| 90°    | 35.0   | 35.0   | 34.0   | 32.0   | 29.0   | 26.0   | 21.0   | 16.0   | 10.0   | 4.0    | 2.0    |
| 92.5°  | 32.0   | 32.0   | 31.0   | 30.0   | 27.0   | 24.0   | 19.0   | 14.0   | 9.0    | 4.0    | 2.0    |
| 95°    | 28.0   | 27.0   | 27.0   | 25.0   | 23.0   | 20.0   | 17.0   | 12.0   | 8.0    | 3.0    | 2.0    |
| 97.5°  | 23.0   | 22.0   | 22.0   | 21.0   | 19.0   | 16.0   | 14.0   | 10.0   | 7.0    | 3.0    | 2.0    |
| 100°   | 17.0   | 18.0   | 17.0   | 16.0   | 15.0   | 13.0   | 11.0   | 8.0    | 5.0    | 2.0    | 2.0    |
| 102.5° | 13.0   | 13.0   | 12.0   | 12.0   | 11.0   | 10.0   | 8.0    | 6.0    | 4.0    | 2.0    | 1.0    |
| 105°   | 9.0    | 9.0    | 9.0    | 8.0    | 8.0    | 7.0    | 6.0    | 4.0    | 3.0    | 2.0    | 1.0    |
| 107.5° | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 5.0    | 4.0    | 3.0    | 2.0    | 1.0    | 1.0    |



REPORT NUMBER: P821281

CATALOG NUMBER: TT-D3-750-24VDC-5CQ-PM-HSS

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 5°  | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 110°   | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 2.0 | 1.0 | 1.0 | 1.0 |
| 112.5° | 1.0 | 1.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 115°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 117.5° | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 120°   | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 122.5° | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 125°   | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 127.5° | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 130°   | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 132.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 135°   | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 140°   | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 142.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 145°   | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 147.5° | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 150°   | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 155°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 160°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 165°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 170°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 175°   | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 180°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |



REPORT NUMBER: P821281

CATALOG NUMBER: TT-D3-750-24VDC-5CQ-PM-HSS

**CANDELA DISTRIBUTION (continued):**

|        | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 | 1548.9 |
| 2.5°   | 1546.9 | 1543.9 | 1545.9 | 1544.9 | 1545.9 | 1543.9 | 1543.9 | 1543.9 | 1544.9 | 1542.9 |
| 4°     | 1545.9 | 1543.9 | 1543.9 | 1543.9 | 1543.9 | 1541.9 | 1541.9 | 1541.9 | 1540.9 | 1541.9 |
| 5°     | 1543.9 | 1542.9 | 1541.9 | 1540.9 | 1541.9 | 1539.9 | 1538.9 | 1538.9 | 1538.9 | 1539.9 |
| 7.5°   | 1539.9 | 1536.9 | 1536.9 | 1533.9 | 1534.9 | 1533.9 | 1532.9 | 1533.9 | 1532.9 | 1532.9 |
| 10°    | 1532.9 | 1530.9 | 1529.9 | 1527.9 | 1527.9 | 1525.9 | 1524.9 | 1524.9 | 1524.9 | 1523.9 |
| 12.5°  | 1525.9 | 1523.9 | 1522.9 | 1520.9 | 1519.9 | 1517.9 | 1516.9 | 1517.9 | 1515.9 | 1515.9 |
| 15°    | 1517.9 | 1515.9 | 1514.9 | 1514.9 | 1512.9 | 1510.9 | 1509.9 | 1507.9 | 1507.9 | 1507.9 |
| 17.5°  | 1510.9 | 1508.9 | 1509.9 | 1507.9 | 1506.9 | 1504.9 | 1504.9 | 1500.9 | 1500.9 | 1499.9 |
| 20°    | 1503.9 | 1501.9 | 1501.9 | 1500.9 | 1500.9 | 1498.9 | 1495.9 | 1493.9 | 1492.9 | 1492.9 |
| 22.5°  | 1494.9 | 1491.9 | 1486.9 | 1479.9 | 1475.9 | 1472.9 | 1471.9 | 1468.9 | 1467.9 | 1465.9 |
| 25°    | 1480.9 | 1472.9 | 1461.9 | 1449.9 | 1437.9 | 1431.9 | 1429.9 | 1425.9 | 1425.9 | 1425.9 |
| 27.5°  | 1463.9 | 1448.9 | 1433.9 | 1415.9 | 1397.9 | 1385.9 | 1377.9 | 1373.9 | 1371.9 | 1371.9 |
| 30°    | 1441.9 | 1422.9 | 1401.9 | 1378.9 | 1358.9 | 1336.9 | 1322.9 | 1314.9 | 1310.9 | 1311.9 |
| 32.5°  | 1421.9 | 1397.9 | 1373.9 | 1344.9 | 1317.9 | 1291.9 | 1267.9 | 1255.9 | 1250.9 | 1248.9 |
| 35°    | 1401.9 | 1374.9 | 1345.9 | 1314.9 | 1279.9 | 1241.9 | 1209.9 | 1191.9 | 1181.9 | 1182.9 |
| 37.5°  | 1386.9 | 1354.9 | 1322.9 | 1284.9 | 1244.9 | 1198.9 | 1157.9 | 1128.9 | 1116.9 | 1118.9 |
| 40°    | 1370.9 | 1334.9 | 1299.9 | 1255.9 | 1208.9 | 1153.9 | 1100.9 | 1061.9 | 1047.9 | 1044.9 |
| 42.5°  | 1355.9 | 1313.9 | 1273.9 | 1226.9 | 1167.9 | 1105.9 | 1040.9 | 994.9  | 973.9  | 970.9  |
| 45°    | 1336.9 | 1289.9 | 1246.9 | 1192.9 | 1127.9 | 1050.9 | 974.9  | 914.9  | 892.9  | 883.9  |
| 47.5°  | 1311.9 | 1259.9 | 1211.9 | 1149.9 | 1078.9 | 991.9  | 896.9  | 822.9  | 795.0  | 788.0  |
| 50°    | 1274.9 | 1214.9 | 1165.9 | 1095.9 | 1009.9 | 913.9  | 808.0  | 717.0  | 680.0  | 675.0  |
| 52.5°  | 1225.9 | 1164.9 | 1109.9 | 1029.9 | 924.9  | 812.0  | 692.0  | 598.0  | 555.0  | 552.0  |
| 55°    | 1166.9 | 1100.9 | 1040.9 | 950.9  | 827.9  | 697.0  | 572.0  | 453.0  | 411.0  | 406.0  |
| 57.5°  | 1097.9 | 1029.9 | 964.9  | 853.9  | 712.0  | 566.0  | 421.0  | 307.0  | 267.0  | 257.0  |
| 60°    | 1021.9 | 951.9  | 878.9  | 744.0  | 556.0  | 401.0  | 255.0  | 163.0  | 133.0  | 123.0  |
| 62.5°  | 947.9  | 871.9  | 795.0  | 613.0  | 381.0  | 229.0  | 116.0  | 47.0   | 30.0   | 29.0   |
| 65°    | 860.9  | 789.0  | 710.0  | 494.0  | 241.0  | 103.0  | 34.0   | 1.0    | 0.0    | 0.0    |
| 67.5°  | 760.0  | 699.0  | 629.0  | 442.0  | 213.0  | 90.0   | 29.0   | 1.0    | 0.0    | 0.0    |
| 70°    | 652.0  | 604.0  | 542.0  | 380.0  | 183.0  | 76.0   | 25.0   | 0.0    | 0.0    | 0.0    |
| 72.5°  | 538.0  | 497.0  | 451.0  | 316.0  | 152.0  | 63.0   | 20.0   | 0.0    | 0.0    | 0.0    |
| 75°    | 422.0  | 396.0  | 355.0  | 250.0  | 118.0  | 48.0   | 15.0   | 0.0    | 0.0    | 0.0    |
| 77.5°  | 313.0  | 292.0  | 262.0  | 184.0  | 89.0   | 35.0   | 11.0   | 0.0    | 0.0    | 0.0    |
| 80°    | 211.0  | 195.0  | 178.0  | 125.0  | 60.0   | 23.0   | 7.0    | 0.0    | 0.0    | 0.0    |
| 82.5°  | 123.0  | 111.0  | 100.0  | 71.0   | 33.0   | 13.0   | 3.0    | 0.0    | 0.0    | 0.0    |
| 85°    | 50.0   | 46.0   | 44.0   | 30.0   | 13.0   | 4.0    | 1.0    | 0.0    | 0.0    | 0.0    |
| 87.5°  | 6.0    | 5.0    | 5.0    | 3.0    | 1.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°    | 1.0    | 1.0    | 1.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 92.5°  | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 95°    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 97.5°  | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 0.0    |
| 100°   | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    |
| 102.5° | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    |
| 105°   | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    |
| 107.5° | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    |

REPORT NUMBER: P821281

CATALOG NUMBER: TT-D3-750-24VDC-5CQ-PM-HSS

**CANDELA DISTRIBUTION (continued):**

|        | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|--------|-----|------|------|------|------|------|------|------|------|------|
| 110°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 112.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 115°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 117.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 120°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 122.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 125°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 127.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 130°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 132.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 135°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |
| 137.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  |
| 140°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  |
| 142.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  |
| 145°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 147.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 1.0  |
| 150°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 152.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 155°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 157.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 160°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 162.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 165°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 167.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 170°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 172.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 175°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 177.5° | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 180°   | 1.0 | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  |

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

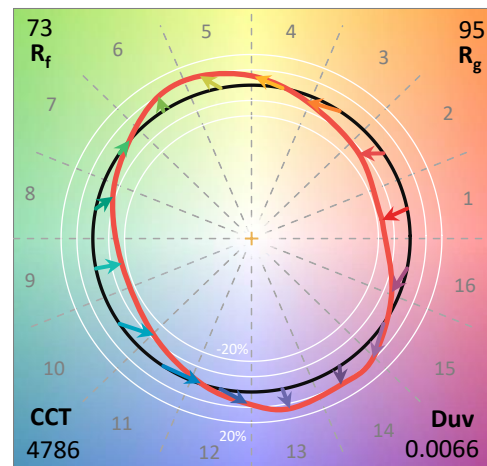
Data in this report applies to families of products including MEM2-HTN-VA-30-750-U-WQ

### 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

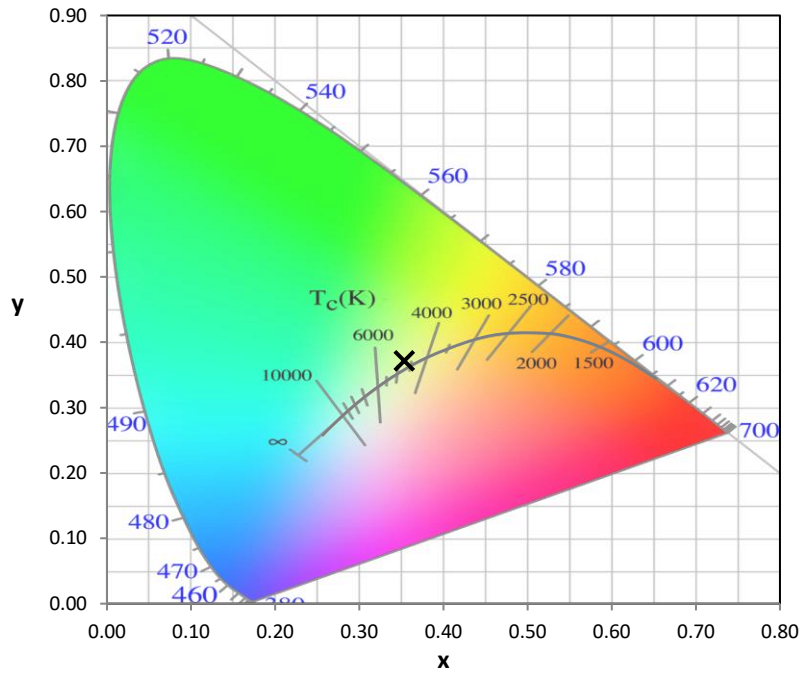
Stabilization Time: 45M  
 Operation Time: 1H 45M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-176-6

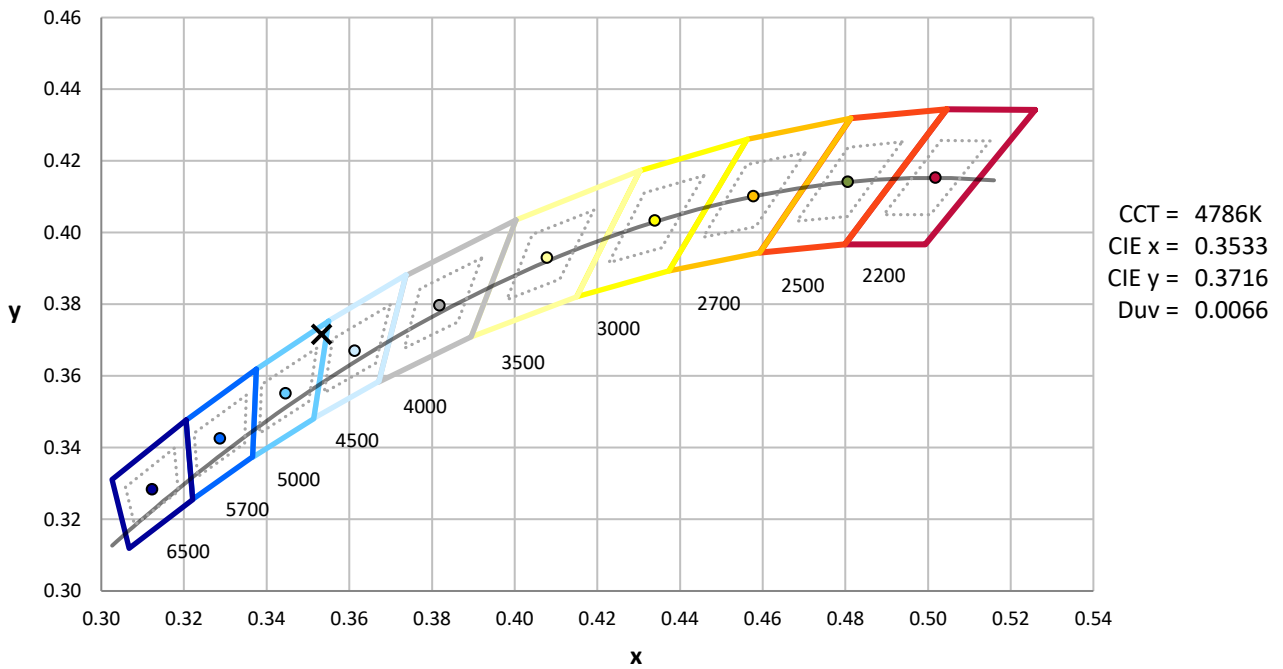
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date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

REPORT NUMBER: SP1-2407-176-6

**CIE 1931 Chromaticity Diagram**



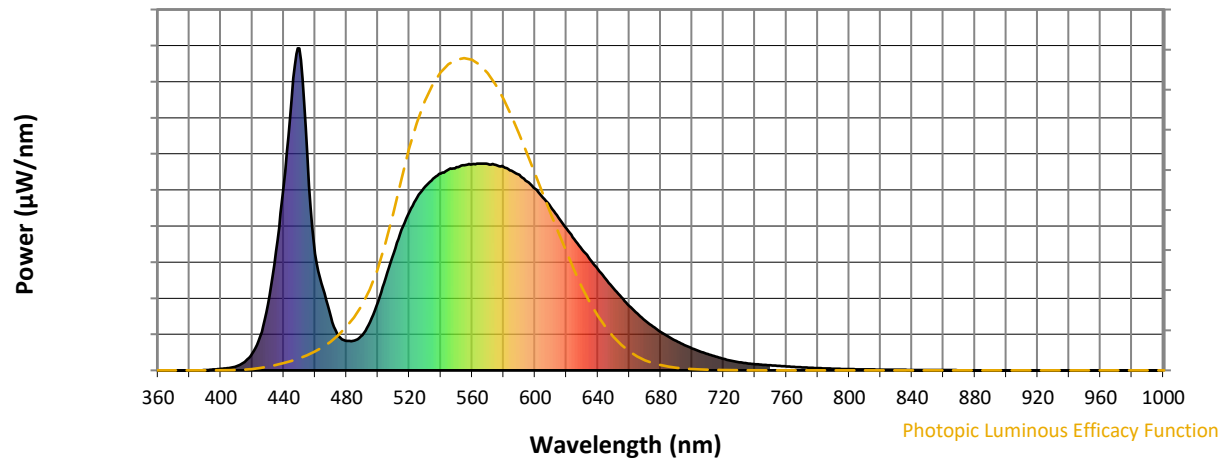
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2407-176-6

### Photopic Flux vs. Wavelength

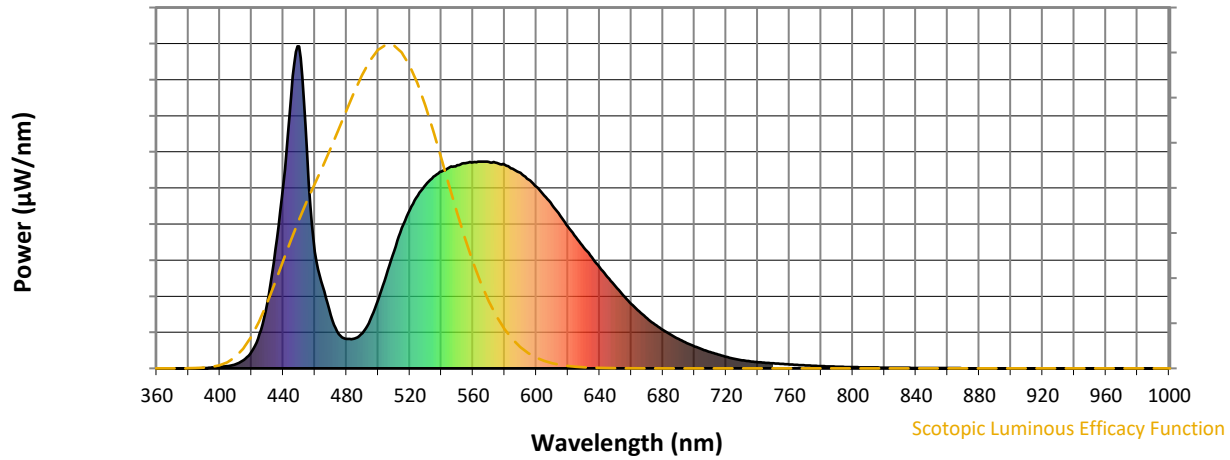


### Photopic Lumens: NR

| $\lambda$<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

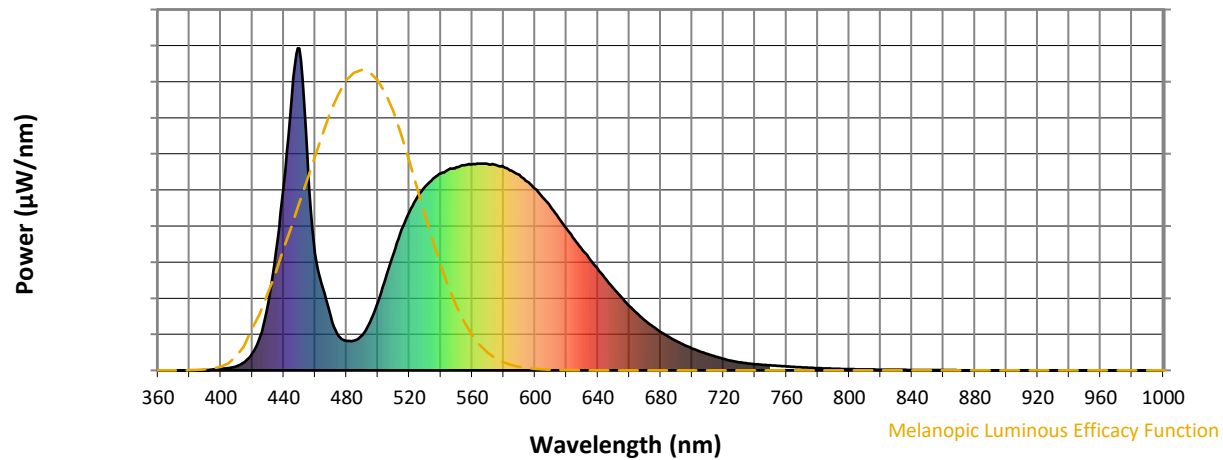
S/P: 1.69

| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</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

### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.36

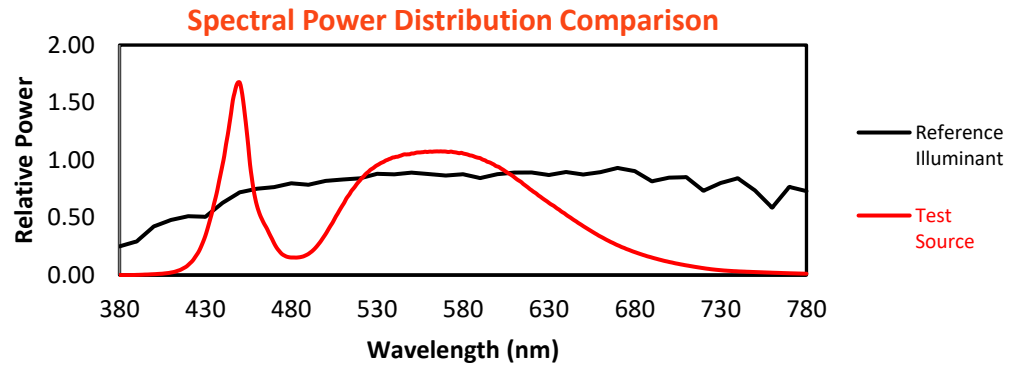
| λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 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

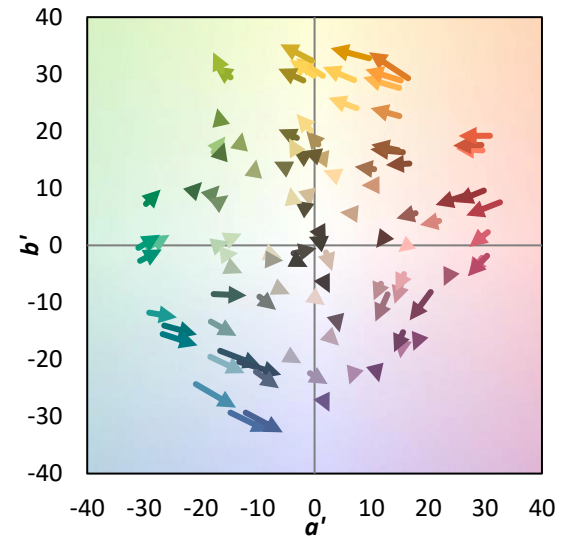
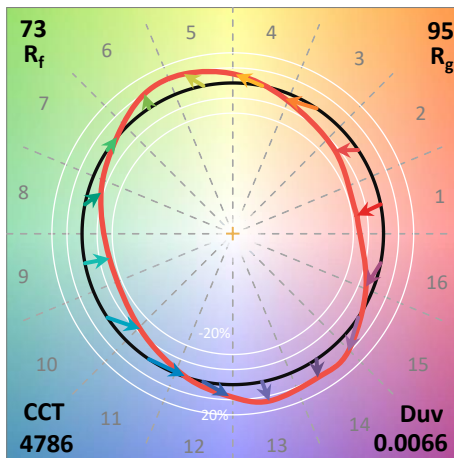
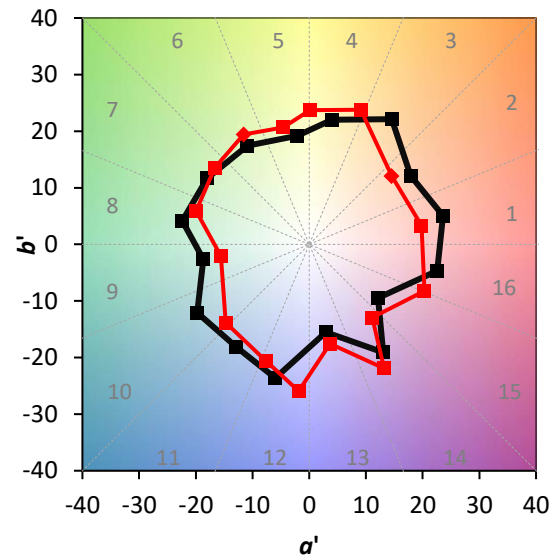
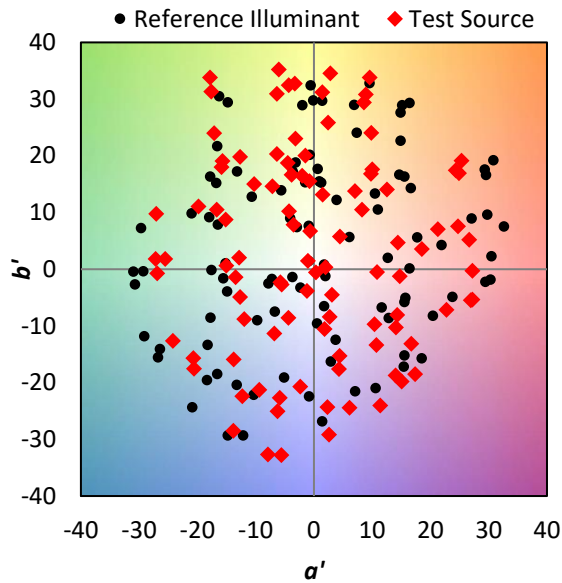
TM-30-18

### Summary

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

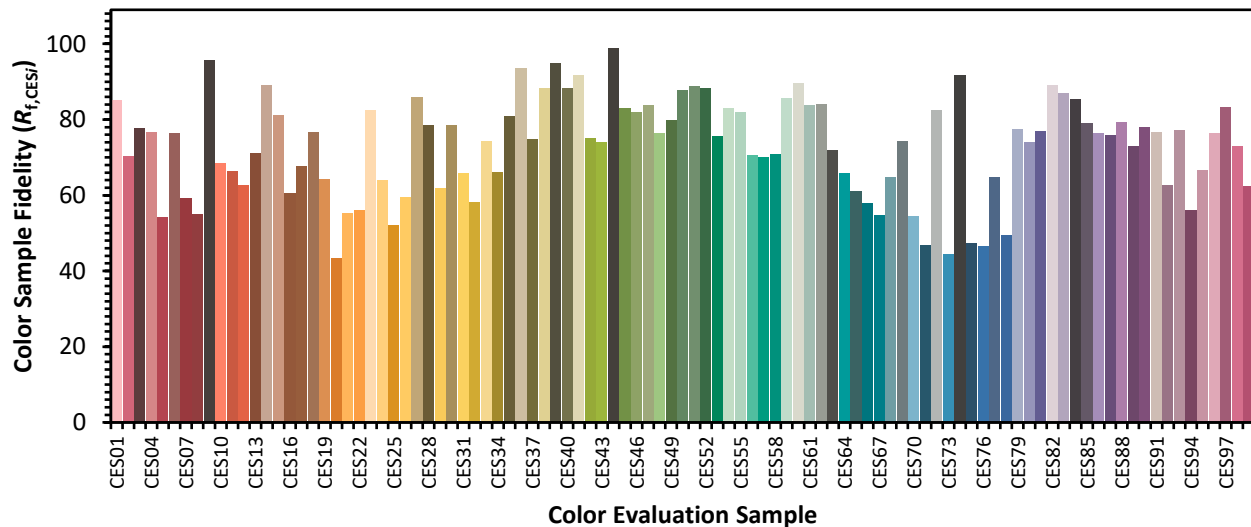


### Color Vector Graphics

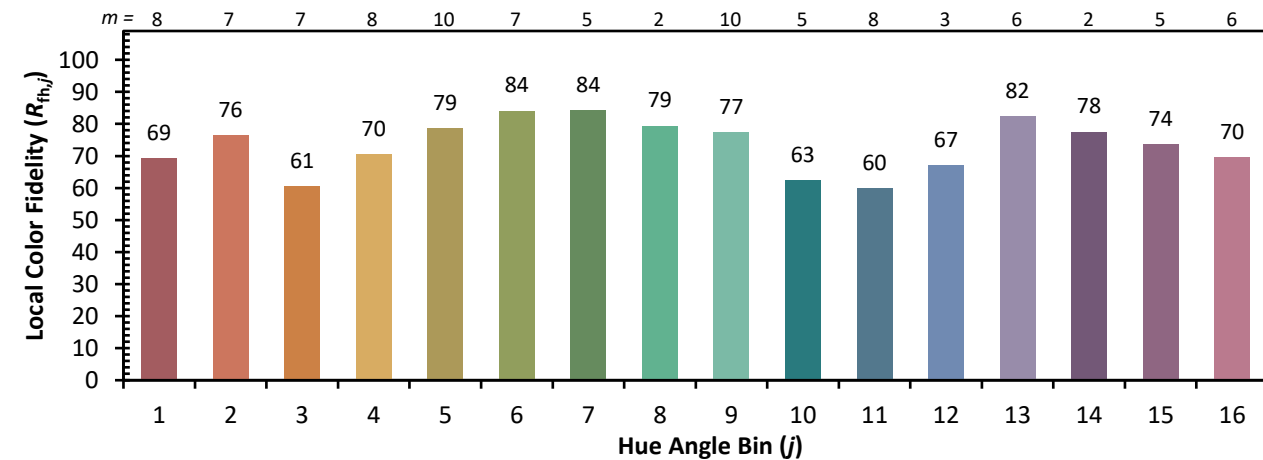
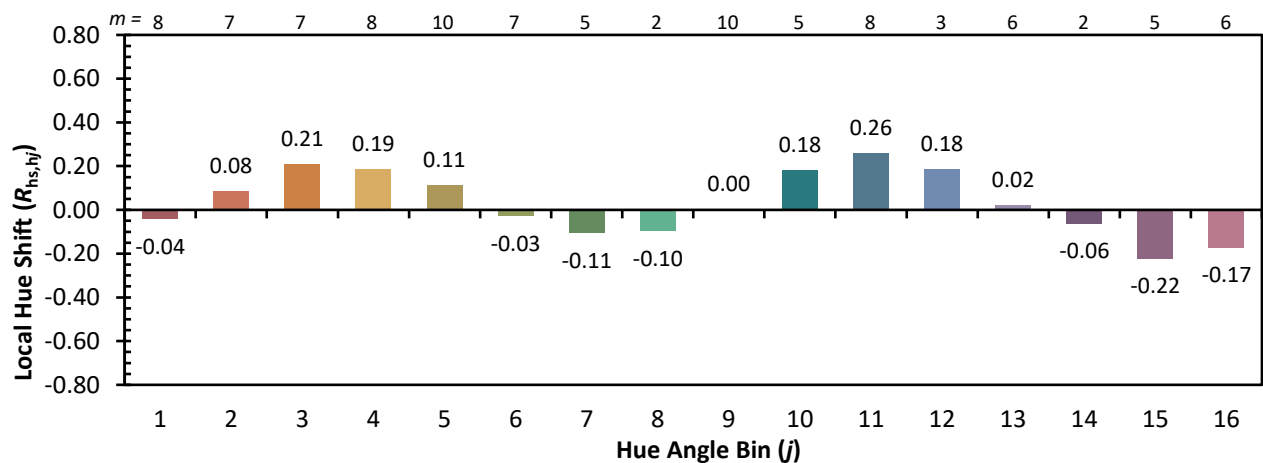
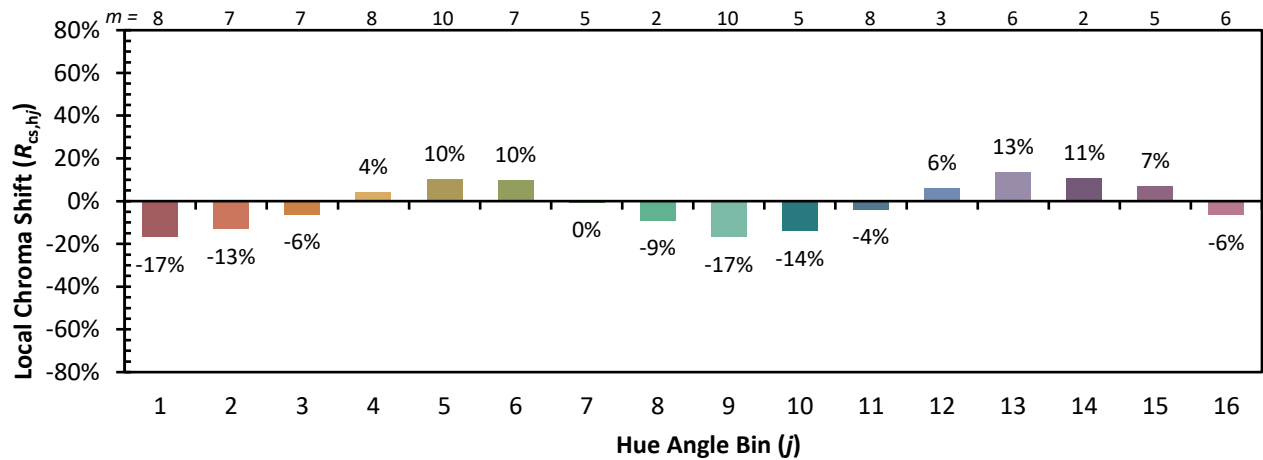


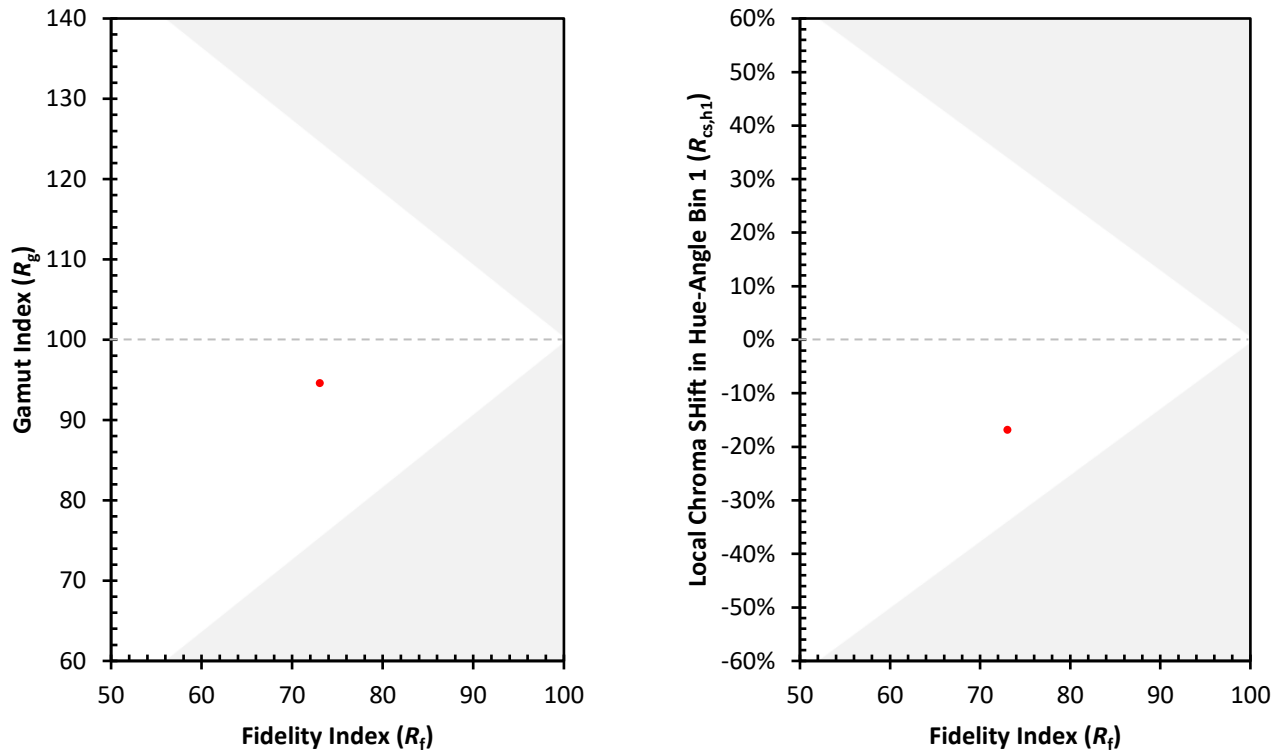
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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