

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P584776

Luminaire Tested: **HCC8W45D010MW-HM82555940-81WWBB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584776  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCC8W45D010MW-HM82555940-81WWBB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
CYLINDER  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4378.3 lumens  
Efficiency: N/A  
Efficacy: 99.5 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

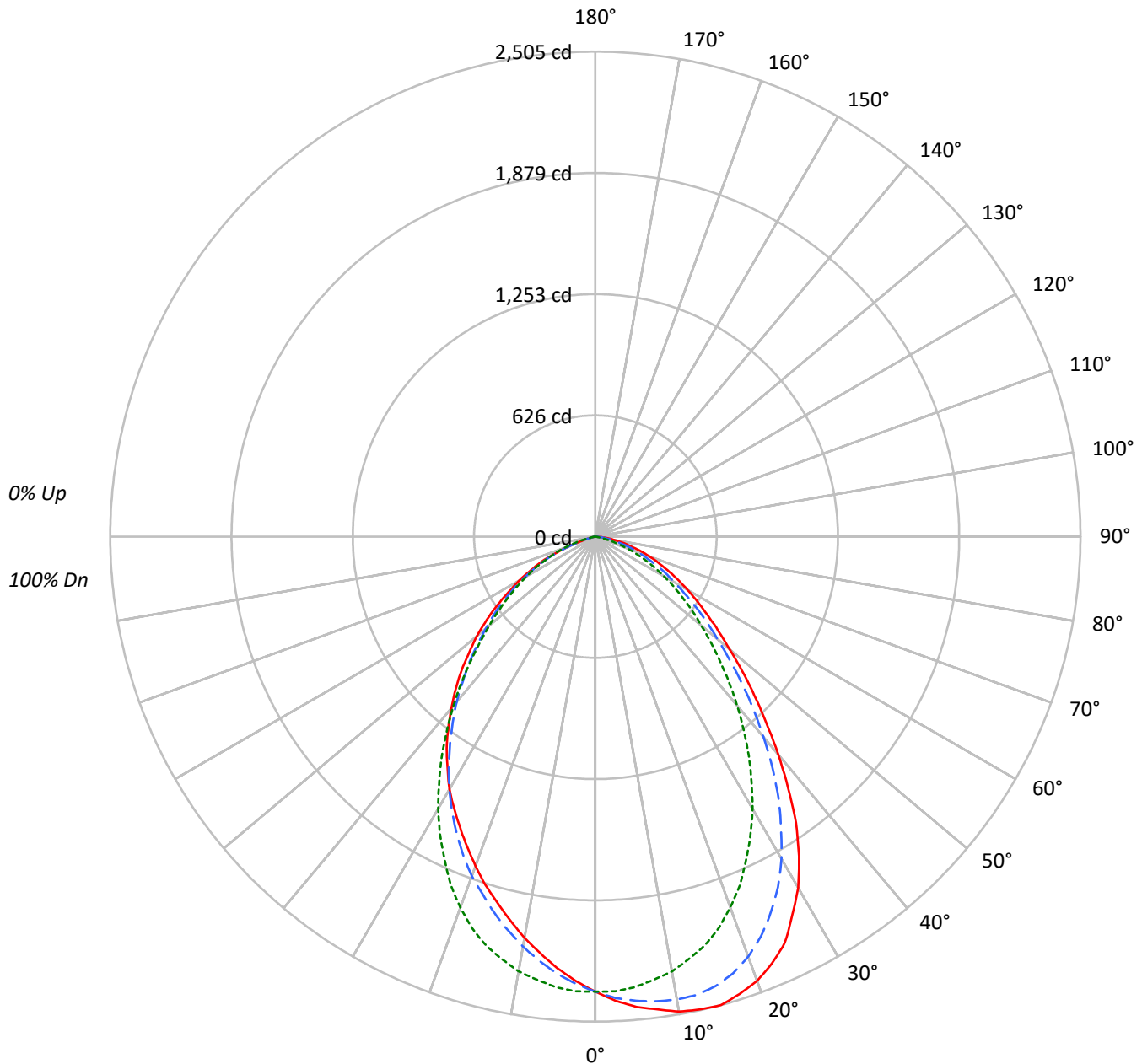
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
| RF  | 20  |     |     |     | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |     |    | 20 |
| RC  | 80  |     |     |     | 70  |     |     |     |     | 50  |     |     |     |     | 30  |     |     |     |    | 10 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99  | 101 | 98  | 96  | 97  | 95  | 93  | 93  | 92  | 90  | 88  |    |    |
| 2   | 103 | 96  | 90  | 86  | 100 | 94  | 89  | 85  | 91  | 86  | 83  | 88  | 84  | 81  | 85  | 82  | 79  | 77  |    |    |
| 3   | 95  | 86  | 79  | 74  | 93  | 85  | 78  | 73  | 82  | 76  | 72  | 79  | 74  | 71  | 77  | 73  | 69  | 67  |    |    |
| 4   | 88  | 78  | 70  | 64  | 86  | 76  | 69  | 64  | 74  | 68  | 63  | 72  | 66  | 62  | 70  | 65  | 61  | 59  |    |    |
| 5   | 82  | 70  | 63  | 57  | 80  | 69  | 62  | 56  | 67  | 61  | 56  | 65  | 60  | 55  | 64  | 59  | 55  | 53  |    |    |
| 6   | 76  | 64  | 56  | 51  | 74  | 63  | 56  | 50  | 62  | 55  | 50  | 60  | 54  | 50  | 58  | 53  | 49  | 47  |    |    |
| 7   | 71  | 59  | 51  | 45  | 69  | 58  | 51  | 45  | 57  | 50  | 45  | 55  | 49  | 45  | 54  | 49  | 44  | 43  |    |    |
| 8   | 66  | 54  | 46  | 41  | 65  | 53  | 46  | 41  | 52  | 46  | 41  | 51  | 45  | 41  | 50  | 44  | 40  | 39  |    |    |
| 9   | 62  | 50  | 43  | 37  | 61  | 50  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 37  | 46  | 41  | 37  | 35  |    |    |
| 10  | 59  | 47  | 39  | 34  | 57  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 43  | 38  | 34  | 32  |    |    |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 90°   | 180°  |
|-----|-------|-------|-------|
| 0°  | 72484 | 72484 | 72484 |
| 5°  | 75478 | 72324 | 69278 |
| 10° | 78001 | 71401 | 65899 |
| 15° | 79976 | 69767 | 62475 |
| 20° | 80135 | 66874 | 59379 |
| 25° | 78779 | 62642 | 56306 |
| 30° | 74560 | 57797 | 53670 |
| 35° | 67985 | 51983 | 50391 |
| 40° | 59117 | 45825 | 46534 |
| 45° | 50717 | 39684 | 42597 |
| 50° | 43319 | 34219 | 38258 |
| 55° | 37972 | 29467 | 33246 |
| 60° | 33803 | 25138 | 27950 |
| 65° | 29996 | 20510 | 22305 |
| 70° | 26606 | 15210 | 12667 |
| 75° | 22196 | 7947  | 3777  |
| 80° | 17474 | 2504  | 622   |
| 85° | 12454 | 1238  | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 221.5  | 5.1       |
| 10°-20°   | 620.8  | 14.2      |
| 20°-30°   | 878.6  | 20.1      |
| 30°-40°   | 919.2  | 21.0      |
| 40°-50°   | 766.7  | 17.5      |
| 50°-60°   | 543.7  | 12.4      |
| 60°-70°   | 313.1  | 7.2       |
| 70°-80°   | 100.8  | 2.3       |
| 80°-90°   | 13.9   | 0.3       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 1720.9 | 39.3      |
| 0°-40°    | 2640.1 | 60.3      |
| 0°-60°    | 3950.6 | 90.2      |
| 0°-90°    | 4378.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4378.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 2351 | 2351 | 2351 | 2351 | 2351 |      |
| 5°  | 2438 | 2407 | 2336 | 2266 | 2238 | 234  |
| 15° | 2505 | 2403 | 2185 | 2013 | 1957 | 704  |
| 25° | 2315 | 2143 | 1841 | 1694 | 1655 | 1057 |
| 35° | 1806 | 1648 | 1381 | 1307 | 1339 | 1120 |
| 45° | 1163 | 1068 | 910  | 921  | 977  | 901  |
| 55° | 706  | 632  | 548  | 576  | 618  | 638  |
| 65° | 411  | 344  | 281  | 281  | 306  | 411  |
| 75° | 186  | 137  | 67   | 32   | 32   | 202  |
| 85° | 35   | 18   | 4    | 0    | 0    | 44   |
| 90° | 0    | 0    | 0    | 0    | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 22.5°  | 25°    | 30°    | 35°    | 40°    | 45°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 |
| 2.5°  | 2399.7 | 2396.2 | 2392.7 | 2396.2 | 2392.7 | 2396.2 | 2392.7 | 2392.7 | 2389.2 | 2385.6 | 2385.6 |
| 5°    | 2438.4 | 2434.9 | 2434.9 | 2434.9 | 2431.4 | 2427.9 | 2427.9 | 2424.4 | 2417.3 | 2413.8 | 2406.8 |
| 7.5°  | 2462.9 | 2466.5 | 2466.5 | 2466.5 | 2459.4 | 2459.4 | 2452.4 | 2445.4 | 2438.4 | 2431.4 | 2420.8 |
| 10°   | 2491.1 | 2491.1 | 2487.6 | 2484.1 | 2477.0 | 2473.5 | 2470.0 | 2462.9 | 2452.4 | 2438.4 | 2427.9 |
| 12.5° | 2501.7 | 2501.7 | 2498.1 | 2491.1 | 2487.6 | 2484.1 | 2480.5 | 2470.0 | 2455.9 | 2438.4 | 2424.4 |
| 15°   | 2505.2 | 2498.1 | 2494.6 | 2491.1 | 2484.1 | 2473.5 | 2473.5 | 2459.4 | 2442.0 | 2420.8 | 2403.2 |
| 17.5° | 2477.0 | 2480.5 | 2473.5 | 2466.5 | 2455.9 | 2448.9 | 2438.4 | 2427.9 | 2406.8 | 2382.1 | 2364.7 |
| 20°   | 2442.0 | 2438.4 | 2434.9 | 2424.4 | 2410.3 | 2406.8 | 2396.2 | 2378.6 | 2361.1 | 2333.0 | 2308.3 |
| 22.5° | 2385.6 | 2382.1 | 2375.1 | 2368.1 | 2354.1 | 2347.1 | 2336.5 | 2315.4 | 2290.9 | 2262.7 | 2234.6 |
| 25°   | 2315.4 | 2308.3 | 2297.8 | 2283.8 | 2273.3 | 2266.2 | 2252.2 | 2231.0 | 2203.0 | 2171.3 | 2143.2 |
| 27.5° | 2203.0 | 2213.6 | 2206.5 | 2185.4 | 2174.9 | 2160.8 | 2157.3 | 2129.2 | 2104.6 | 2072.9 | 2041.4 |
| 30°   | 2094.0 | 2094.0 | 2083.5 | 2072.9 | 2055.4 | 2044.9 | 2030.8 | 2009.7 | 1985.2 | 1946.5 | 1921.8 |
| 32.5° | 1957.0 | 1953.5 | 1939.4 | 1935.9 | 1921.8 | 1900.8 | 1897.3 | 1869.2 | 1844.5 | 1816.5 | 1784.8 |
| 35°   | 1806.0 | 1798.9 | 1784.8 | 1774.3 | 1767.2 | 1756.8 | 1746.2 | 1721.6 | 1697.0 | 1668.9 | 1647.8 |
| 37.5° | 1633.8 | 1633.8 | 1630.2 | 1612.8 | 1605.7 | 1598.7 | 1588.1 | 1563.5 | 1549.4 | 1521.4 | 1500.3 |
| 40°   | 1468.6 | 1465.2 | 1454.6 | 1451.1 | 1444.1 | 1433.5 | 1426.5 | 1412.4 | 1391.3 | 1370.3 | 1349.2 |
| 42.5° | 1307.1 | 1310.6 | 1296.5 | 1300.0 | 1286.0 | 1278.9 | 1275.4 | 1254.3 | 1243.7 | 1222.7 | 1205.1 |
| 45°   | 1163.0 | 1159.5 | 1152.5 | 1149.0 | 1141.9 | 1134.9 | 1127.8 | 1117.3 | 1099.7 | 1078.7 | 1068.1 |
| 47.5° | 1029.4 | 1018.9 | 1018.9 | 1015.3 | 1011.9 | 997.9  | 994.4  | 983.8  | 973.2  | 952.1  | 938.2  |
| 50°   | 903.0  | 903.0  | 903.0  | 899.5  | 888.9  | 885.4  | 878.3  | 867.8  | 857.3  | 843.3  | 822.2  |
| 52.5° | 801.0  | 801.0  | 801.0  | 797.5  | 783.6  | 780.0  | 776.5  | 762.4  | 748.4  | 737.8  | 723.7  |
| 55°   | 706.3  | 709.8  | 706.3  | 699.2  | 688.7  | 688.7  | 678.1  | 671.1  | 657.0  | 646.4  | 632.5  |
| 57.5° | 625.4  | 625.4  | 618.4  | 614.9  | 607.8  | 604.3  | 597.3  | 590.3  | 572.7  | 562.2  | 544.6  |
| 60°   | 548.1  | 544.6  | 544.6  | 537.6  | 530.5  | 523.5  | 520.0  | 509.4  | 502.4  | 484.9  | 470.8  |
| 62.5° | 477.9  | 477.9  | 470.8  | 470.8  | 456.8  | 456.8  | 453.2  | 442.7  | 432.1  | 414.5  | 407.6  |
| 65°   | 411.1  | 411.1  | 407.6  | 404.1  | 393.5  | 390.0  | 386.5  | 375.9  | 365.4  | 354.8  | 344.3  |
| 67.5° | 351.3  | 351.3  | 344.3  | 340.8  | 333.8  | 330.3  | 323.3  | 316.2  | 305.7  | 295.1  | 284.6  |
| 70°   | 295.1  | 291.6  | 288.1  | 284.6  | 277.5  | 274.0  | 267.0  | 260.1  | 249.5  | 242.5  | 231.9  |
| 72.5° | 238.9  | 238.9  | 235.4  | 228.4  | 224.9  | 221.3  | 217.8  | 210.8  | 200.2  | 189.7  | 182.8  |
| 75°   | 186.3  | 186.3  | 186.3  | 179.2  | 172.2  | 168.7  | 168.7  | 161.6  | 154.6  | 144.0  | 137.0  |
| 77.5° | 144.0  | 140.5  | 137.0  | 137.0  | 130.0  | 126.4  | 122.9  | 119.4  | 109.0  | 105.5  | 98.4   |
| 80°   | 98.4   | 101.9  | 98.4   | 94.9   | 91.4   | 87.9   | 87.9   | 80.8   | 77.3   | 70.3   | 63.2   |
| 82.5° | 66.7   | 63.2   | 63.2   | 59.7   | 59.7   | 56.2   | 56.2   | 49.1   | 45.6   | 42.1   | 38.6   |
| 85°   | 35.2   | 35.2   | 31.7   | 31.7   | 31.7   | 28.2   | 28.2   | 24.6   | 24.6   | 21.1   | 17.6   |
| 87.5° | 10.6   | 10.6   | 10.6   | 10.6   | 10.6   | 10.6   | 10.6   | 10.6   | 7.0    | 7.0    | 7.0    |
| 90°   | 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):**

|       | 50°    | 55°    | 60°    | 65°    | 67.5°  | 70°    | 75°    | 80°    | 85°    | 90°    | 95°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 |
| 2.5°  | 2382.1 | 2375.1 | 2371.6 | 2371.6 | 2368.1 | 2364.7 | 2361.1 | 2357.6 | 2350.6 | 2350.6 | 2343.5 |
| 5°    | 2399.7 | 2392.7 | 2389.2 | 2378.6 | 2371.6 | 2371.6 | 2357.6 | 2354.1 | 2343.5 | 2336.5 | 2329.5 |
| 7.5°  | 2413.8 | 2399.7 | 2389.2 | 2378.6 | 2371.6 | 2364.7 | 2350.6 | 2336.5 | 2322.4 | 2308.3 | 2301.3 |
| 10°   | 2413.8 | 2399.7 | 2382.1 | 2364.7 | 2357.6 | 2350.6 | 2333.0 | 2311.9 | 2294.3 | 2280.3 | 2262.7 |
| 12.5° | 2406.8 | 2385.6 | 2364.7 | 2350.6 | 2336.5 | 2325.9 | 2304.8 | 2283.8 | 2262.7 | 2234.6 | 2220.5 |
| 15°   | 2385.6 | 2357.6 | 2336.5 | 2311.9 | 2301.3 | 2283.8 | 2266.2 | 2234.6 | 2210.0 | 2185.4 | 2167.8 |
| 17.5° | 2343.5 | 2308.3 | 2283.8 | 2259.2 | 2241.6 | 2231.0 | 2203.0 | 2174.9 | 2146.7 | 2118.7 | 2097.6 |
| 20°   | 2280.3 | 2248.6 | 2220.5 | 2188.9 | 2174.9 | 2160.8 | 2125.7 | 2097.6 | 2069.4 | 2037.9 | 2016.7 |
| 22.5° | 2203.0 | 2171.3 | 2132.7 | 2108.1 | 2087.0 | 2069.4 | 2037.9 | 2006.2 | 1978.1 | 1950.0 | 1921.8 |
| 25°   | 2108.1 | 2076.4 | 2041.4 | 2002.7 | 1988.7 | 1971.1 | 1935.9 | 1904.4 | 1872.7 | 1841.1 | 1816.5 |
| 27.5° | 2006.2 | 1964.1 | 1935.9 | 1893.8 | 1879.7 | 1862.1 | 1823.5 | 1788.4 | 1760.3 | 1735.7 | 1707.5 |
| 30°   | 1883.3 | 1851.6 | 1813.0 | 1774.3 | 1760.3 | 1742.7 | 1711.1 | 1679.5 | 1651.3 | 1623.2 | 1595.2 |
| 32.5° | 1749.8 | 1718.1 | 1679.5 | 1651.3 | 1630.2 | 1616.2 | 1584.6 | 1556.5 | 1528.4 | 1500.3 | 1475.6 |
| 35°   | 1609.2 | 1574.0 | 1545.9 | 1517.9 | 1500.3 | 1482.7 | 1451.1 | 1426.5 | 1405.4 | 1380.9 | 1356.2 |
| 37.5° | 1465.2 | 1440.6 | 1412.4 | 1380.9 | 1363.3 | 1349.2 | 1324.6 | 1296.5 | 1278.9 | 1257.8 | 1240.3 |
| 40°   | 1324.6 | 1296.5 | 1271.9 | 1243.7 | 1229.8 | 1219.2 | 1194.6 | 1173.5 | 1156.0 | 1138.4 | 1127.8 |
| 42.5° | 1180.5 | 1156.0 | 1131.4 | 1113.8 | 1103.2 | 1092.6 | 1075.2 | 1050.5 | 1040.0 | 1022.4 | 1011.9 |
| 45°   | 1047.0 | 1025.9 | 1008.4 | 983.8  | 976.8  | 969.7  | 948.6  | 931.1  | 920.6  | 910.0  | 903.0  |
| 47.5° | 920.6  | 906.5  | 885.4  | 871.3  | 860.9  | 853.8  | 839.8  | 825.7  | 815.1  | 808.1  | 801.0  |
| 50°   | 811.6  | 794.0  | 780.0  | 766.0  | 758.9  | 748.4  | 734.3  | 727.3  | 720.2  | 713.3  | 713.3  |
| 52.5° | 709.8  | 692.2  | 678.1  | 667.6  | 660.5  | 653.5  | 642.9  | 639.4  | 632.5  | 632.5  | 629.0  |
| 55°   | 614.9  | 604.3  | 590.3  | 576.2  | 572.7  | 569.1  | 562.2  | 555.2  | 551.7  | 548.1  | 551.7  |
| 57.5° | 534.1  | 523.5  | 509.4  | 498.9  | 495.4  | 491.8  | 488.4  | 481.4  | 477.9  | 477.9  | 477.9  |
| 60°   | 460.3  | 449.7  | 439.2  | 428.6  | 428.6  | 421.6  | 418.1  | 414.5  | 411.1  | 407.6  | 407.6  |
| 62.5° | 393.5  | 383.0  | 372.4  | 365.4  | 361.9  | 358.4  | 351.3  | 347.8  | 344.3  | 344.3  | 340.8  |
| 65°   | 333.8  | 319.8  | 316.2  | 305.7  | 302.2  | 298.6  | 295.1  | 288.1  | 284.6  | 281.1  | 277.5  |
| 67.5° | 274.0  | 267.0  | 256.5  | 249.5  | 246.0  | 242.5  | 238.9  | 231.9  | 228.4  | 224.9  | 217.8  |
| 70°   | 221.3  | 214.3  | 207.3  | 200.2  | 196.7  | 193.2  | 186.3  | 179.2  | 175.7  | 168.7  | 158.1  |
| 72.5° | 172.2  | 165.2  | 158.1  | 151.1  | 147.6  | 144.0  | 137.0  | 130.0  | 122.9  | 115.9  | 109.0  |
| 75°   | 130.0  | 122.9  | 112.5  | 105.5  | 101.9  | 101.9  | 91.4   | 84.3   | 77.3   | 66.7   | 59.7   |
| 77.5° | 91.4   | 80.8   | 77.3   | 70.3   | 66.7   | 59.7   | 52.7   | 45.6   | 38.6   | 35.2   | 28.2   |
| 80°   | 59.7   | 52.7   | 45.6   | 42.1   | 38.6   | 35.2   | 31.7   | 24.6   | 17.6   | 14.1   | 10.6   |
| 82.5° | 35.2   | 31.7   | 28.2   | 24.6   | 21.1   | 17.6   | 14.1   | 14.1   | 10.6   | 7.0    | 3.5    |
| 85°   | 17.6   | 14.1   | 10.6   | 10.6   | 7.0    | 7.0    | 7.0    | 3.5    | 3.5    | 3.5    | 3.5    |
| 87.5° | 7.0    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 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):**

|       | 100°   | 105°   | 110°   | 112.5° | 115°   | 120°   | 125°   | 130°   | 135°   | 140°   | 145°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 |
| 2.5°  | 2340.0 | 2336.5 | 2333.0 | 2329.5 | 2329.5 | 2322.4 | 2322.4 | 2318.9 | 2311.9 | 2308.3 | 2308.3 |
| 5°    | 2318.9 | 2308.3 | 2301.3 | 2297.8 | 2294.3 | 2283.8 | 2280.3 | 2273.3 | 2266.2 | 2259.2 | 2255.7 |
| 7.5°  | 2287.4 | 2269.8 | 2262.7 | 2259.2 | 2248.6 | 2238.1 | 2231.0 | 2220.5 | 2210.0 | 2199.5 | 2196.0 |
| 10°   | 2248.6 | 2231.0 | 2213.6 | 2206.5 | 2196.0 | 2188.9 | 2174.9 | 2160.8 | 2150.2 | 2139.8 | 2129.2 |
| 12.5° | 2199.5 | 2178.4 | 2160.8 | 2153.7 | 2143.2 | 2129.2 | 2108.1 | 2101.1 | 2083.5 | 2076.4 | 2062.5 |
| 15°   | 2143.2 | 2118.7 | 2101.1 | 2090.5 | 2080.0 | 2059.0 | 2044.9 | 2030.8 | 2013.2 | 2006.2 | 1992.1 |
| 17.5° | 2072.9 | 2044.9 | 2027.3 | 2016.7 | 2009.7 | 1992.1 | 1971.1 | 1953.5 | 1935.9 | 1928.9 | 1918.3 |
| 20°   | 1988.7 | 1971.1 | 1946.5 | 1935.9 | 1928.9 | 1907.9 | 1886.8 | 1879.7 | 1865.7 | 1851.6 | 1841.1 |
| 22.5° | 1893.8 | 1876.2 | 1851.6 | 1841.1 | 1837.6 | 1820.0 | 1802.4 | 1791.9 | 1781.3 | 1770.8 | 1760.3 |
| 25°   | 1795.4 | 1774.3 | 1753.3 | 1746.2 | 1739.2 | 1725.1 | 1711.1 | 1704.0 | 1693.5 | 1686.5 | 1679.5 |
| 27.5° | 1690.1 | 1668.9 | 1651.3 | 1640.8 | 1633.8 | 1623.2 | 1616.2 | 1609.2 | 1602.2 | 1595.2 | 1591.6 |
| 30°   | 1577.6 | 1556.5 | 1542.4 | 1535.5 | 1528.4 | 1524.9 | 1514.3 | 1510.8 | 1507.3 | 1500.3 | 1503.8 |
| 32.5° | 1465.2 | 1447.6 | 1433.5 | 1423.0 | 1423.0 | 1415.9 | 1412.4 | 1412.4 | 1408.9 | 1408.9 | 1408.9 |
| 35°   | 1342.1 | 1331.6 | 1321.0 | 1317.5 | 1314.1 | 1310.6 | 1307.1 | 1310.6 | 1307.1 | 1310.6 | 1314.1 |
| 37.5° | 1229.8 | 1219.2 | 1212.2 | 1208.7 | 1205.1 | 1208.7 | 1205.1 | 1205.1 | 1208.7 | 1215.7 | 1219.2 |
| 40°   | 1113.8 | 1106.7 | 1099.7 | 1103.2 | 1099.7 | 1099.7 | 1099.7 | 1110.2 | 1113.8 | 1117.3 | 1120.8 |
| 42.5° | 1004.9 | 997.9  | 994.4  | 994.4  | 997.9  | 994.4  | 1001.4 | 1004.9 | 1011.9 | 1022.4 | 1029.4 |
| 45°   | 899.5  | 895.9  | 895.9  | 899.5  | 895.9  | 903.0  | 903.0  | 910.0  | 920.6  | 927.6  | 934.6  |
| 47.5° | 801.0  | 801.0  | 801.0  | 804.6  | 804.6  | 808.1  | 815.1  | 818.6  | 825.7  | 832.7  | 839.8  |
| 50°   | 709.8  | 713.3  | 716.7  | 716.7  | 716.7  | 723.7  | 730.8  | 734.3  | 737.8  | 741.3  | 751.9  |
| 52.5° | 629.0  | 632.5  | 632.5  | 636.0  | 639.4  | 642.9  | 646.4  | 653.5  | 657.0  | 664.0  | 667.6  |
| 55°   | 551.7  | 551.7  | 558.7  | 562.2  | 562.2  | 562.2  | 569.1  | 569.1  | 576.2  | 579.7  | 586.7  |
| 57.5° | 477.9  | 481.4  | 481.4  | 484.9  | 484.9  | 488.4  | 491.8  | 495.4  | 498.9  | 502.4  | 505.9  |
| 60°   | 407.6  | 407.6  | 407.6  | 411.1  | 414.5  | 418.1  | 414.5  | 421.6  | 421.6  | 428.6  | 432.1  |
| 62.5° | 340.8  | 344.3  | 344.3  | 344.3  | 344.3  | 344.3  | 344.3  | 347.8  | 351.3  | 354.8  | 358.4  |
| 65°   | 277.5  | 277.5  | 277.5  | 274.0  | 277.5  | 274.0  | 277.5  | 281.1  | 281.1  | 284.6  | 288.1  |
| 67.5° | 214.3  | 214.3  | 207.3  | 207.3  | 210.8  | 210.8  | 210.8  | 210.8  | 207.3  | 214.3  | 214.3  |
| 70°   | 154.6  | 151.1  | 147.6  | 144.0  | 144.0  | 140.5  | 140.5  | 137.0  | 137.0  | 137.0  | 137.0  |
| 72.5° | 101.9  | 94.9   | 87.9   | 84.3   | 80.8   | 80.8   | 73.8   | 70.3   | 73.8   | 73.8   | 73.8   |
| 75°   | 52.7   | 45.6   | 42.1   | 38.6   | 35.2   | 35.2   | 31.7   | 31.7   | 31.7   | 31.7   | 31.7   |
| 77.5° | 21.1   | 17.6   | 14.1   | 14.1   | 10.6   | 10.6   | 10.6   | 10.6   | 10.6   | 10.6   | 10.6   |
| 80°   | 7.0    | 7.0    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    |
| 82.5° | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    |
| 85°   | 3.5    | 0.0    | 0.0    | 3.5    | 0.0    | 3.5    | 3.5    | 3.5    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 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



TEST NUMBER: P584776

CATALOG NUMBER: HCC8W45D010MW-HM82555940-81WWBB

**CANDELA DISTRIBUTION (continued):**

|       | 150°   | 155°   | 157.5° | 160°   | 165°   | 170°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 | 2350.6 |
| 2.5°  | 2304.8 | 2304.8 | 2301.3 | 2304.8 | 2297.8 | 2301.3 | 2297.8 | 2297.8 |
| 5°    | 2252.2 | 2245.1 | 2245.1 | 2245.1 | 2241.6 | 2241.6 | 2238.1 | 2238.1 |
| 7.5°  | 2188.9 | 2185.4 | 2181.9 | 2178.4 | 2174.9 | 2171.3 | 2171.3 | 2171.3 |
| 10°   | 2125.7 | 2118.7 | 2118.7 | 2115.2 | 2108.1 | 2104.6 | 2104.6 | 2104.6 |
| 12.5° | 2051.9 | 2048.4 | 2044.9 | 2044.9 | 2030.8 | 2034.3 | 2030.8 | 2030.8 |
| 15°   | 1981.7 | 1978.1 | 1978.1 | 1967.6 | 1960.6 | 1960.6 | 1960.6 | 1957.0 |
| 17.5° | 1907.9 | 1904.4 | 1900.8 | 1893.8 | 1886.8 | 1886.8 | 1883.3 | 1886.8 |
| 20°   | 1830.6 | 1827.1 | 1820.0 | 1820.0 | 1816.5 | 1813.0 | 1806.0 | 1809.5 |
| 22.5° | 1753.3 | 1746.2 | 1742.7 | 1742.7 | 1739.2 | 1739.2 | 1732.2 | 1732.2 |
| 25°   | 1672.5 | 1668.9 | 1665.4 | 1668.9 | 1661.9 | 1661.9 | 1654.9 | 1654.9 |
| 27.5° | 1588.1 | 1584.6 | 1584.6 | 1584.6 | 1581.1 | 1584.6 | 1581.1 | 1581.1 |
| 30°   | 1503.8 | 1503.8 | 1500.3 | 1500.3 | 1503.8 | 1500.3 | 1503.8 | 1507.3 |
| 32.5° | 1412.4 | 1412.4 | 1415.9 | 1415.9 | 1419.4 | 1419.4 | 1419.4 | 1419.4 |
| 35°   | 1317.5 | 1324.6 | 1324.6 | 1328.1 | 1331.6 | 1335.1 | 1335.1 | 1338.6 |
| 37.5° | 1229.8 | 1233.3 | 1236.8 | 1240.3 | 1247.3 | 1247.3 | 1247.3 | 1247.3 |
| 40°   | 1134.9 | 1138.4 | 1145.4 | 1141.9 | 1156.0 | 1159.5 | 1156.0 | 1156.0 |
| 42.5° | 1036.5 | 1043.5 | 1047.0 | 1054.1 | 1057.6 | 1064.6 | 1068.1 | 1068.1 |
| 45°   | 945.1  | 948.6  | 955.6  | 962.7  | 966.2  | 976.8  | 976.8  | 976.8  |
| 47.5° | 850.3  | 857.3  | 860.9  | 867.8  | 871.3  | 881.9  | 885.4  | 881.9  |
| 50°   | 758.9  | 766.0  | 773.0  | 773.0  | 783.6  | 787.1  | 794.0  | 797.5  |
| 52.5° | 671.1  | 674.6  | 681.6  | 685.1  | 692.2  | 699.2  | 702.7  | 706.3  |
| 55°   | 586.7  | 590.3  | 597.3  | 597.3  | 607.8  | 611.4  | 618.4  | 618.4  |
| 57.5° | 509.4  | 513.0  | 520.0  | 516.5  | 523.5  | 530.5  | 530.5  | 527.0  |
| 60°   | 435.7  | 435.7  | 435.7  | 442.7  | 446.2  | 449.7  | 453.2  | 453.2  |
| 62.5° | 358.4  | 365.4  | 368.9  | 368.9  | 372.4  | 375.9  | 375.9  | 372.4  |
| 65°   | 288.1  | 295.1  | 298.6  | 298.6  | 302.2  | 302.2  | 302.2  | 305.7  |
| 67.5° | 217.8  | 217.8  | 217.8  | 221.3  | 217.8  | 217.8  | 217.8  | 217.8  |
| 70°   | 137.0  | 137.0  | 137.0  | 137.0  | 133.5  | 137.0  | 137.0  | 140.5  |
| 72.5° | 73.8   | 73.8   | 73.8   | 73.8   | 73.8   | 73.8   | 73.8   | 73.8   |
| 75°   | 31.7   | 31.7   | 31.7   | 35.2   | 31.7   | 31.7   | 31.7   | 31.7   |
| 77.5° | 14.1   | 10.6   | 14.1   | 14.1   | 10.6   | 10.6   | 10.6   | 10.6   |
| 80°   | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    |
| 82.5° | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    |
| 85°   | 0.0    | 3.5    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

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Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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Peachtree City, GA 30269

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Peachtree City, GA 30269



— 0°-180°    - - 45°-225°    - - - 90°-270°

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