

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P776734

Luminaire Tested: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-5000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776734  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B018)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-5000K  
Description: 6 INCH SQUARE MEDIUM LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4307.4 lumens  
Efficiency: N/A  
Efficacy: 89.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.19 / 1.3  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

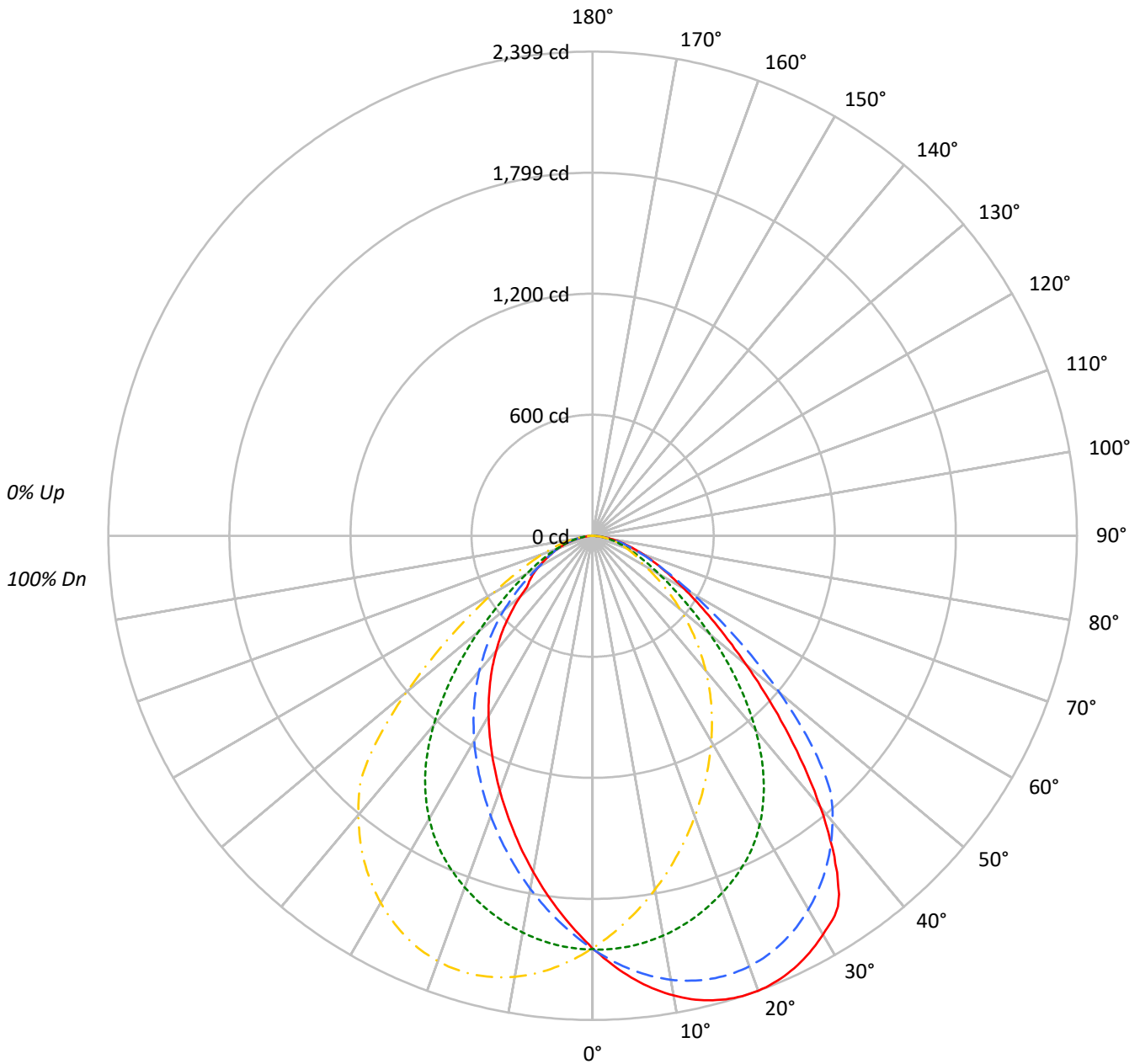
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P776734

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### Luminous Intensity Polar Plot





TEST NUMBER: P776734

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

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |   |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 50  |     |     |     |     |     |     |     |     | 30 |    |   |  |  |  |  |  |  | 10 |  |  |  |  |  |  |  |  | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 | 0 |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 111 | 107 | 103 | 100 | 108 | 104 | 101 | 98  | 100 | 97  | 95  | 96  | 94  | 92  | 93  | 91  | 89  | 87  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 102 | 95  | 89  | 84  | 100 | 93  | 88  | 83  | 90  | 85  | 81  | 86  | 83  | 79  | 83  | 80  | 78  | 76  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 94  | 85  | 78  | 72  | 92  | 83  | 77  | 71  | 80  | 75  | 70  | 78  | 73  | 69  | 75  | 71  | 68  | 66  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 87  | 76  | 69  | 63  | 85  | 75  | 68  | 62  | 73  | 66  | 61  | 70  | 65  | 61  | 68  | 64  | 60  | 58  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 81  | 69  | 61  | 55  | 79  | 68  | 60  | 55  | 66  | 59  | 54  | 64  | 58  | 54  | 62  | 57  | 53  | 51  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 75  | 63  | 55  | 49  | 73  | 62  | 54  | 49  | 60  | 53  | 48  | 59  | 52  | 48  | 57  | 52  | 47  | 45  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 70  | 57  | 49  | 44  | 68  | 57  | 49  | 44  | 55  | 48  | 43  | 54  | 48  | 43  | 52  | 47  | 43  | 41  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 65  | 53  | 45  | 39  | 64  | 52  | 45  | 39  | 51  | 44  | 39  | 50  | 43  | 39  | 48  | 43  | 39  | 37  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 61  | 49  | 41  | 36  | 60  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 35  | 45  | 39  | 35  | 33  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 57  | 45  | 38  | 33  | 56  | 45  | 37  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 31  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°     | 90°   | 180°  | 270°  |
|-----|--------|-------|-------|-------|
| 0°  | 88122  | 88122 | 88122 | 88122 |
| 5°  | 94963  | 88312 | 80822 | 87975 |
| 10° | 101115 | 87934 | 73965 | 87274 |
| 15° | 106168 | 87228 | 67486 | 86229 |
| 20° | 109910 | 86190 | 61562 | 84921 |
| 25° | 112296 | 84799 | 56172 | 83232 |
| 30° | 113463 | 82251 | 51228 | 80486 |
| 35° | 111535 | 77638 | 46501 | 76030 |
| 40° | 98713  | 70577 | 41755 | 68857 |
| 45° | 82226  | 61322 | 36784 | 59550 |
| 50° | 66514  | 50840 | 31227 | 49246 |
| 55° | 53874  | 40678 | 28360 | 39732 |
| 60° | 44950  | 32989 | 26634 | 32653 |
| 65° | 38245  | 27456 | 24288 | 27650 |
| 70° | 33259  | 23528 | 22370 | 23956 |
| 75° | 28996  | 20362 | 20279 | 21077 |
| 80° | 23828  | 17456 | 16984 | 18299 |
| 85° | 15364  | 13437 | 9337  | 14870 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 96979 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 193.3  | 4.5       |
| 10°-20°   | 548.8  | 12.7      |
| 20°-30°   | 814.1  | 18.9      |
| 30°-40°   | 930.3  | 21.6      |
| 40°-50°   | 808.8  | 18.8      |
| 50°-60°   | 526.2  | 12.2      |
| 60°-70°   | 299.9  | 7.0       |
| 70°-80°   | 150.2  | 3.5       |
| 80°-90°   | 35.7   | 0.8       |
| 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°    | 1556.2 | 36.1      |
| 0°-40°    | 2486.6 | 57.7      |
| 0°-60°    | 3821.6 | 88.7      |
| 0°-90°    | 4307.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4307.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 90°  | 180° | 270° | 360° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 2047 | 2047 | 2047 | 2047 | 2047 |      |
| 5°  | 2197 | 2043 | 1870 | 2036 | 2197 | 213  |
| 15° | 2382 | 1957 | 1514 | 1934 | 2382 | 674  |
| 25° | 2364 | 1785 | 1182 | 1752 | 2364 | 1089 |
| 35° | 2122 | 1477 | 885  | 1446 | 2122 | 1302 |
| 45° | 1350 | 1007 | 604  | 978  | 1350 | 1043 |
| 55° | 718  | 542  | 378  | 529  | 718  | 653  |
| 65° | 375  | 270  | 238  | 271  | 375  | 376  |
| 75° | 174  | 122  | 122  | 127  | 174  | 185  |
| 85° | 31   | 27   | 19   | 30   | 31   | 40   |
| 90° | 0    | 0    | 0    | 0    | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   | 202.5° | 225°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2046.7 | 2046.7 | 2046.7 | 2046.7 | 2046.7 | 2046.7 | 2046.7 | 2046.7 | 2046.7 | 2046.7 | 2046.7 |
| 0.5°  | 2059.3 | 2059.3 | 2059.3 | 2056.9 | 2051.1 | 2046.7 | 2031.7 | 2025.8 | 2025.8 | 2028.3 | 2034.6 |
| 1°    | 2075.4 | 2074.4 | 2070.5 | 2063.2 | 2051.1 | 2040.4 | 2020.0 | 2010.3 | 2008.8 | 2012.2 | 2022.4 |
| 1.5°  | 2091.9 | 2089.9 | 2082.2 | 2069.5 | 2051.1 | 2033.6 | 2007.4 | 1994.8 | 1991.4 | 1996.2 | 2009.8 |
| 2°    | 2107.9 | 2105.0 | 2093.3 | 2075.4 | 2050.6 | 2026.8 | 1995.2 | 1978.7 | 1974.4 | 1980.7 | 1997.2 |
| 2.5°  | 2123.4 | 2119.1 | 2105.0 | 2081.2 | 2050.1 | 2019.5 | 1983.1 | 1962.7 | 1956.9 | 1964.2 | 1984.1 |
| 3°    | 2139.0 | 2133.6 | 2115.7 | 2086.5 | 2049.1 | 2012.7 | 1970.0 | 1946.7 | 1939.9 | 1948.1 | 1971.0 |
| 3.5°  | 2154.0 | 2147.7 | 2125.9 | 2091.9 | 2048.2 | 2005.4 | 1957.4 | 1930.7 | 1922.4 | 1931.6 | 1957.8 |
| 4°    | 2168.6 | 2161.3 | 2136.5 | 2096.7 | 2046.2 | 1997.2 | 1944.3 | 1914.6 | 1905.4 | 1915.6 | 1944.7 |
| 4.5°  | 2183.2 | 2174.4 | 2146.3 | 2101.6 | 2044.8 | 1989.9 | 1931.6 | 1897.6 | 1887.4 | 1898.6 | 1931.6 |
| 5°    | 2197.2 | 2187.5 | 2156.0 | 2106.4 | 2043.3 | 1981.6 | 1918.5 | 1881.6 | 1870.0 | 1882.1 | 1918.0 |
| 5.5°  | 2210.3 | 2200.2 | 2165.7 | 2110.3 | 2040.9 | 1973.4 | 1904.9 | 1865.1 | 1852.5 | 1865.6 | 1904.4 |
| 6°    | 2223.5 | 2212.3 | 2174.4 | 2114.2 | 2038.5 | 1964.6 | 1891.3 | 1848.6 | 1835.0 | 1848.6 | 1890.4 |
| 6.5°  | 2236.6 | 2223.9 | 2183.2 | 2118.1 | 2036.0 | 1956.4 | 1878.2 | 1832.1 | 1817.0 | 1832.1 | 1876.8 |
| 7°    | 2248.7 | 2235.6 | 2191.4 | 2121.5 | 2033.1 | 1948.1 | 1864.6 | 1815.1 | 1799.1 | 1815.1 | 1862.7 |
| 7.5°  | 2260.4 | 2246.3 | 2199.7 | 2124.9 | 2030.2 | 1938.4 | 1850.5 | 1798.1 | 1781.1 | 1798.1 | 1848.6 |
| 8°    | 2271.5 | 2257.0 | 2207.0 | 2127.8 | 2026.8 | 1929.7 | 1836.5 | 1781.6 | 1763.6 | 1781.1 | 1834.5 |
| 8.5°  | 2282.7 | 2266.7 | 2214.2 | 2130.2 | 2023.4 | 1920.0 | 1822.9 | 1764.6 | 1745.7 | 1764.6 | 1819.9 |
| 9°    | 2293.4 | 2276.9 | 2221.0 | 2132.2 | 2019.5 | 1910.7 | 1808.8 | 1748.1 | 1727.2 | 1747.1 | 1805.9 |
| 9.5°  | 2303.6 | 2286.1 | 2227.3 | 2134.1 | 2015.6 | 1901.5 | 1794.7 | 1730.6 | 1709.7 | 1730.1 | 1791.3 |
| 10°   | 2312.8 | 2294.8 | 2233.7 | 2136.1 | 2011.3 | 1891.3 | 1780.1 | 1713.6 | 1691.8 | 1713.1 | 1776.7 |
| 10.5° | 2322.0 | 2303.6 | 2239.5 | 2137.5 | 2007.4 | 1881.6 | 1765.6 | 1696.6 | 1674.3 | 1696.1 | 1762.2 |
| 11°   | 2330.8 | 2311.3 | 2244.3 | 2138.5 | 2002.5 | 1871.4 | 1751.0 | 1679.6 | 1656.3 | 1678.6 | 1747.6 |
| 11.5° | 2339.0 | 2318.6 | 2249.7 | 2139.5 | 1997.7 | 1860.7 | 1736.4 | 1663.1 | 1637.9 | 1662.1 | 1733.0 |
| 12°   | 2346.8 | 2325.9 | 2254.1 | 2139.5 | 1992.3 | 1850.1 | 1721.9 | 1645.1 | 1620.4 | 1644.7 | 1718.0 |
| 12.5° | 2354.1 | 2332.2 | 2257.9 | 2139.9 | 1987.0 | 1839.4 | 1707.3 | 1628.6 | 1602.9 | 1627.7 | 1703.4 |
| 13°   | 2360.4 | 2338.5 | 2261.8 | 2139.5 | 1981.6 | 1829.2 | 1692.2 | 1611.6 | 1584.9 | 1610.2 | 1688.4 |
| 13.5° | 2366.7 | 2343.9 | 2265.2 | 2139.0 | 1975.3 | 1818.0 | 1677.2 | 1594.6 | 1567.0 | 1593.7 | 1673.3 |
| 14°   | 2372.0 | 2349.2 | 2268.1 | 2138.5 | 1969.5 | 1806.8 | 1662.6 | 1577.6 | 1549.5 | 1576.2 | 1658.2 |
| 14.5° | 2377.4 | 2353.6 | 2270.6 | 2137.5 | 1963.2 | 1795.7 | 1647.1 | 1560.2 | 1531.5 | 1559.2 | 1643.2 |
| 15°   | 2381.8 | 2358.0 | 2272.5 | 2136.1 | 1956.9 | 1784.0 | 1632.0 | 1543.2 | 1514.0 | 1542.2 | 1628.1 |
| 15.5° | 2386.1 | 2361.4 | 2274.4 | 2134.1 | 1950.1 | 1772.8 | 1617.0 | 1526.7 | 1496.6 | 1525.7 | 1612.6 |
| 16°   | 2389.5 | 2364.8 | 2275.4 | 2132.2 | 1943.3 | 1761.2 | 1601.9 | 1509.7 | 1479.1 | 1508.2 | 1597.6 |
| 16.5° | 2392.4 | 2367.2 | 2276.4 | 2129.7 | 1936.5 | 1749.5 | 1586.9 | 1492.7 | 1462.1 | 1491.7 | 1582.5 |
| 17°   | 2394.9 | 2369.1 | 2276.9 | 2126.8 | 1928.7 | 1737.4 | 1571.3 | 1475.7 | 1444.6 | 1474.7 | 1567.4 |
| 17.5° | 2396.8 | 2370.6 | 2276.9 | 2123.9 | 1921.4 | 1725.7 | 1556.3 | 1459.2 | 1427.6 | 1457.7 | 1551.9 |
| 18°   | 2398.3 | 2371.6 | 2276.4 | 2121.0 | 1913.7 | 1714.1 | 1541.2 | 1442.2 | 1410.1 | 1441.2 | 1536.4 |
| 18.5° | 2399.2 | 2372.5 | 2275.4 | 2117.1 | 1905.9 | 1701.5 | 1525.7 | 1425.7 | 1393.6 | 1424.7 | 1521.3 |
| 19°   | 2399.2 | 2372.5 | 2274.0 | 2113.2 | 1897.6 | 1688.8 | 1510.6 | 1409.1 | 1377.1 | 1408.2 | 1506.3 |
| 19.5° | 2399.2 | 2372.0 | 2272.5 | 2109.3 | 1889.9 | 1676.7 | 1495.1 | 1392.6 | 1360.1 | 1391.7 | 1491.2 |
| 20°   | 2398.8 | 2371.1 | 2270.1 | 2104.5 | 1881.1 | 1664.6 | 1479.6 | 1376.1 | 1343.6 | 1375.2 | 1475.7 |
| 20.5° | 2397.3 | 2369.6 | 2267.6 | 2100.1 | 1872.9 | 1651.9 | 1464.5 | 1359.6 | 1326.6 | 1359.1 | 1460.1 |
| 21°   | 2395.8 | 2367.7 | 2264.2 | 2094.8 | 1863.6 | 1638.8 | 1449.0 | 1343.6 | 1310.6 | 1342.6 | 1445.1 |

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**CANDELA DISTRIBUTION (continued):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°   | 157.5° | 180°   | 202.5° | 225°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 22.5° | 2387.1 | 2358.5 | 2252.6 | 2077.8 | 1836.0 | 1600.5 | 1403.3 | 1295.5 | 1261.5 | 1295.0 | 1398.9 |
| 23°   | 2383.7 | 2354.6 | 2247.7 | 2071.5 | 1826.7 | 1587.4 | 1387.8 | 1279.5 | 1245.5 | 1279.0 | 1383.9 |
| 23.5° | 2379.3 | 2350.2 | 2242.4 | 2065.2 | 1816.5 | 1574.2 | 1372.7 | 1263.5 | 1229.5 | 1263.5 | 1368.8 |
| 24°   | 2374.5 | 2344.9 | 2237.1 | 2057.9 | 1806.3 | 1560.6 | 1357.2 | 1247.9 | 1213.9 | 1247.4 | 1353.3 |
| 24.5° | 2369.1 | 2339.5 | 2230.7 | 2051.1 | 1796.2 | 1547.5 | 1342.1 | 1232.4 | 1198.4 | 1231.4 | 1338.3 |
| 25°   | 2363.8 | 2333.7 | 2224.4 | 2043.3 | 1785.0 | 1533.5 | 1327.1 | 1216.4 | 1182.4 | 1215.9 | 1322.7 |
| 25.5° | 2357.5 | 2326.9 | 2217.6 | 2035.5 | 1774.3 | 1520.3 | 1311.5 | 1200.8 | 1166.8 | 1200.8 | 1308.1 |
| 26°   | 2350.7 | 2320.6 | 2210.3 | 2026.8 | 1762.6 | 1506.3 | 1296.5 | 1185.3 | 1151.3 | 1184.8 | 1292.6 |
| 26.5° | 2343.4 | 2312.8 | 2202.6 | 2018.5 | 1751.0 | 1492.2 | 1281.4 | 1170.2 | 1135.8 | 1169.8 | 1277.6 |
| 27°   | 2336.1 | 2305.5 | 2194.8 | 2009.8 | 1738.9 | 1478.1 | 1266.4 | 1154.7 | 1120.7 | 1154.2 | 1262.5 |
| 27.5° | 2328.3 | 2297.3 | 2186.1 | 2000.1 | 1725.7 | 1464.0 | 1250.8 | 1139.2 | 1105.7 | 1139.2 | 1247.9 |
| 28°   | 2319.6 | 2289.0 | 2176.8 | 1989.9 | 1712.1 | 1449.4 | 1235.8 | 1123.6 | 1090.1 | 1123.6 | 1232.9 |
| 28.5° | 2310.9 | 2279.8 | 2168.1 | 1979.7 | 1699.0 | 1434.4 | 1221.2 | 1108.6 | 1075.1 | 1108.6 | 1217.8 |
| 29°   | 2301.6 | 2270.1 | 2158.4 | 1968.5 | 1684.5 | 1419.3 | 1205.7 | 1093.5 | 1060.5 | 1093.5 | 1202.8 |
| 29.5° | 2291.9 | 2260.4 | 2148.2 | 1956.9 | 1669.9 | 1404.3 | 1191.1 | 1078.5 | 1045.4 | 1079.0 | 1187.7 |
| 30°   | 2282.2 | 2250.2 | 2138.0 | 1944.7 | 1654.4 | 1388.3 | 1175.6 | 1063.9 | 1030.4 | 1063.4 | 1172.7 |
| 30.5° | 2272.0 | 2239.5 | 2127.3 | 1932.1 | 1638.8 | 1372.2 | 1160.5 | 1048.4 | 1015.3 | 1048.8 | 1158.1 |
| 31°   | 2262.3 | 2228.8 | 2116.1 | 1919.0 | 1622.8 | 1356.7 | 1145.5 | 1033.3 | 1000.8 | 1034.3 | 1143.0 |
| 31.5° | 2252.6 | 2217.6 | 2104.5 | 1904.4 | 1606.3 | 1340.2 | 1130.4 | 1019.2 | 986.2  | 1019.2 | 1128.0 |
| 32°   | 2242.9 | 2206.0 | 2092.8 | 1889.9 | 1589.3 | 1323.7 | 1115.4 | 1004.2 | 971.6  | 1004.7 | 1112.9 |
| 32.5° | 2231.2 | 2194.8 | 2080.2 | 1874.3 | 1571.3 | 1307.2 | 1100.3 | 989.1  | 957.1  | 990.1  | 1098.4 |
| 33°   | 2218.1 | 2183.2 | 2068.1 | 1858.3 | 1552.9 | 1290.2 | 1085.3 | 975.0  | 942.5  | 975.5  | 1083.3 |
| 33.5° | 2202.1 | 2172.0 | 2055.5 | 1841.8 | 1534.9 | 1273.2 | 1070.2 | 960.5  | 927.9  | 961.4  | 1068.3 |
| 34°   | 2177.3 | 2160.3 | 2042.3 | 1824.8 | 1516.0 | 1255.7 | 1054.7 | 945.9  | 913.9  | 946.4  | 1053.2 |
| 34.5° | 2155.5 | 2147.7 | 2028.3 | 1806.3 | 1497.0 | 1238.2 | 1039.6 | 930.9  | 899.3  | 932.3  | 1038.2 |
| 35°   | 2122.0 | 2132.7 | 2014.2 | 1787.4 | 1477.1 | 1220.3 | 1024.6 | 916.8  | 884.7  | 917.7  | 1023.6 |
| 35.5° | 2090.9 | 2115.7 | 1999.6 | 1768.0 | 1457.2 | 1202.8 | 1010.0 | 902.2  | 870.6  | 903.7  | 1008.5 |
| 36°   | 2060.8 | 2091.9 | 1984.6 | 1747.6 | 1436.3 | 1184.8 | 994.5  | 888.1  | 856.6  | 889.6  | 993.5  |
| 36.5° | 2021.9 | 2068.6 | 1969.0 | 1727.2 | 1415.0 | 1166.8 | 978.9  | 873.6  | 842.0  | 875.0  | 978.0  |
| 37°   | 1990.4 | 2038.0 | 1953.0 | 1705.8 | 1393.6 | 1148.4 | 963.9  | 859.0  | 827.9  | 860.4  | 963.4  |
| 37.5° | 1952.0 | 2005.4 | 1936.5 | 1683.0 | 1371.8 | 1129.9 | 948.3  | 844.9  | 813.8  | 846.4  | 947.8  |
| 38°   | 1912.2 | 1978.2 | 1920.0 | 1659.7 | 1348.4 | 1111.5 | 933.3  | 830.3  | 799.7  | 832.3  | 932.8  |
| 38.5° | 1876.3 | 1939.9 | 1902.5 | 1636.4 | 1326.6 | 1093.0 | 917.7  | 816.3  | 785.7  | 818.2  | 917.7  |
| 39°   | 1833.5 | 1907.3 | 1885.5 | 1612.6 | 1303.3 | 1074.6 | 902.2  | 802.2  | 771.1  | 804.1  | 903.2  |
| 39.5° | 1796.6 | 1872.4 | 1867.0 | 1587.4 | 1280.0 | 1055.6 | 886.7  | 787.6  | 757.0  | 790.0  | 887.6  |
| 40°   | 1756.3 | 1832.1 | 1848.6 | 1561.1 | 1255.7 | 1036.2 | 871.1  | 773.5  | 742.9  | 776.0  | 872.1  |
| 40.5° | 1711.7 | 1800.0 | 1829.7 | 1534.9 | 1231.9 | 1017.3 | 856.1  | 759.4  | 729.3  | 761.9  | 857.0  |
| 41°   | 1675.2 | 1758.8 | 1812.2 | 1508.2 | 1207.6 | 998.3  | 840.0  | 745.4  | 715.3  | 747.8  | 842.5  |
| 41.5° | 1631.1 | 1719.9 | 1792.8 | 1480.0 | 1182.9 | 978.9  | 824.5  | 731.3  | 701.7  | 734.2  | 826.5  |
| 42°   | 1591.2 | 1683.5 | 1771.4 | 1451.4 | 1158.1 | 960.0  | 809.5  | 717.2  | 687.6  | 720.1  | 811.4  |
| 42.5° | 1551.4 | 1641.3 | 1748.6 | 1423.2 | 1133.3 | 940.6  | 794.4  | 703.6  | 673.5  | 706.0  | 796.8  |
| 43°   | 1506.3 | 1605.8 | 1724.8 | 1394.1 | 1108.1 | 921.6  | 778.9  | 689.5  | 659.4  | 692.4  | 781.8  |
| 43.5° | 1471.3 | 1565.5 | 1693.7 | 1364.0 | 1082.8 | 902.2  | 762.8  | 675.4  | 645.8  | 678.4  | 766.2  |

TEST NUMBER: P776734

CATALOG NUMBER: HCDJBL4050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|-------|--------|--------|--------|--------|--------|--------|-------|--------|-------|--------|-------|
| 45°   | 1350.4 | 1445.1 | 1592.7 | 1273.7 | 1007.1 | 843.9  | 717.2 | 633.7  | 604.1 | 637.1  | 721.6 |
| 45.5° | 1307.7 | 1409.1 | 1559.2 | 1242.6 | 981.4  | 825.0  | 702.1 | 619.6  | 590.5 | 623.5  | 706.5 |
| 46°   | 1275.1 | 1370.3 | 1520.8 | 1212.0 | 956.6  | 805.6  | 686.6 | 606.0  | 576.4 | 609.4  | 691.5 |
| 46.5° | 1233.4 | 1329.0 | 1482.0 | 1180.4 | 931.3  | 786.6  | 671.6 | 591.9  | 562.3 | 595.8  | 675.9 |
| 47°   | 1198.9 | 1295.5 | 1446.1 | 1148.9 | 906.1  | 767.7  | 656.0 | 577.8  | 548.7 | 581.7  | 661.4 |
| 47.5° | 1163.4 | 1253.8 | 1404.3 | 1117.8 | 880.8  | 748.8  | 641.0 | 564.2  | 535.1 | 568.6  | 646.3 |
| 48°   | 1123.6 | 1221.2 | 1366.4 | 1086.7 | 856.1  | 730.3  | 626.4 | 550.2  | 521.5 | 554.5  | 631.3 |
| 48.5° | 1095.0 | 1184.3 | 1327.6 | 1055.2 | 831.3  | 710.9  | 611.3 | 536.6  | 507.9 | 540.9  | 616.2 |
| 49°   | 1054.7 | 1146.4 | 1285.8 | 1024.1 | 806.5  | 692.4  | 595.8 | 522.5  | 493.8 | 527.3  | 601.6 |
| 49.5° | 1027.5 | 1115.4 | 1249.4 | 992.5  | 782.8  | 674.0  | 581.2 | 508.9  | 480.2 | 513.7  | 586.6 |
| 50°   | 993.0  | 1075.6 | 1208.6 | 961.4  | 759.0  | 656.0  | 566.2 | 495.3  | 466.2 | 500.1  | 572.0 |
| 50.5° | 961.4  | 1047.4 | 1169.8 | 930.4  | 734.2  | 637.6  | 551.6 | 481.2  | 452.6 | 486.5  | 557.4 |
| 51°   | 933.8  | 1010.5 | 1131.9 | 899.3  | 710.9  | 619.6  | 537.0 | 468.1  | 439.4 | 473.0  | 542.4 |
| 51.5° | 898.3  | 981.4  | 1091.6 | 869.2  | 688.5  | 602.6  | 522.5 | 454.0  | 425.4 | 459.4  | 528.3 |
| 52°   | 876.0  | 950.8  | 1057.1 | 839.1  | 666.2  | 584.6  | 507.9 | 440.4  | 412.7 | 446.2  | 513.7 |
| 52.5° | 843.0  | 917.7  | 1019.2 | 809.5  | 643.4  | 567.6  | 494.3 | 426.8  | 406.4 | 432.6  | 499.7 |
| 53°   | 820.1  | 891.5  | 983.3  | 780.3  | 622.5  | 550.6  | 479.8 | 416.1  | 400.6 | 421.5  | 485.6 |
| 53.5° | 793.4  | 856.6  | 947.8  | 751.7  | 601.1  | 533.6  | 465.7 | 405.5  | 394.8 | 410.3  | 471.5 |
| 54°   | 766.7  | 833.3  | 911.4  | 723.5  | 581.2  | 517.6  | 452.1 | 395.3  | 389.4 | 399.1  | 457.9 |
| 54.5° | 744.9  | 801.7  | 879.9  | 696.3  | 561.3  | 501.1  | 438.5 | 384.6  | 383.6 | 388.0  | 444.8 |
| 55°   | 717.7  | 777.4  | 844.9  | 670.1  | 541.9  | 485.6  | 424.9 | 374.4  | 377.8 | 376.8  | 431.2 |
| 55.5° | 699.2  | 751.2  | 814.8  | 644.8  | 523.5  | 470.5  | 411.8 | 368.6  | 371.5 | 371.0  | 418.1 |
| 56°   | 672.0  | 724.5  | 781.8  | 620.1  | 505.0  | 455.0  | 398.7 | 362.7  | 365.2 | 365.6  | 405.5 |
| 56.5° | 655.0  | 702.1  | 752.6  | 596.3  | 488.0  | 440.4  | 385.1 | 356.4  | 358.8 | 359.3  | 392.8 |
| 57°   | 632.2  | 674.5  | 723.5  | 573.5  | 471.0  | 425.9  | 372.0 | 350.6  | 352.0 | 353.5  | 380.2 |
| 57.5° | 614.3  | 655.0  | 693.9  | 551.1  | 455.0  | 412.7  | 360.3 | 344.3  | 345.2 | 347.2  | 367.1 |
| 58°   | 594.8  | 628.8  | 667.2  | 530.3  | 439.4  | 399.1  | 347.7 | 338.0  | 338.4 | 340.9  | 355.4 |
| 58.5° | 575.4  | 610.9  | 640.0  | 509.9  | 424.4  | 385.5  | 335.5 | 331.6  | 331.2 | 334.6  | 342.8 |
| 59°   | 558.4  | 586.6  | 615.7  | 490.9  | 410.3  | 372.4  | 323.9 | 325.3  | 323.9 | 328.3  | 331.2 |
| 59.5° | 539.0  | 569.6  | 590.0  | 472.0  | 396.7  | 360.3  | 312.2 | 318.5  | 316.6 | 321.5  | 320.0 |
| 60°   | 522.0  | 547.7  | 567.2  | 454.5  | 383.1  | 348.6  | 301.1 | 312.2  | 309.3 | 314.7  | 308.8 |
| 60.5° | 504.5  | 531.2  | 543.8  | 437.5  | 369.0  | 337.0  | 290.4 | 304.9  | 302.0 | 307.9  | 298.1 |
| 61°   | 488.0  | 510.8  | 523.0  | 421.0  | 356.4  | 325.8  | 280.7 | 298.6  | 294.7 | 301.1  | 287.9 |
| 61.5° | 472.5  | 494.3  | 501.1  | 405.5  | 344.3  | 314.7  | 274.4 | 291.3  | 287.0 | 294.3  | 278.7 |
| 62°   | 457.4  | 476.4  | 482.7  | 390.4  | 332.6  | 304.5  | 269.0 | 284.5  | 279.7 | 287.0  | 271.9 |
| 62.5° | 441.9  | 460.8  | 462.3  | 376.3  | 321.0  | 294.3  | 263.2 | 277.8  | 272.4 | 280.2  | 266.6 |
| 63°   | 428.3  | 443.8  | 444.8  | 362.7  | 310.3  | 284.5  | 257.4 | 270.5  | 265.1 | 272.9  | 260.8 |
| 63.5° | 413.7  | 429.3  | 426.8  | 349.1  | 299.6  | 274.8  | 252.0 | 263.7  | 258.3 | 266.1  | 255.4 |
| 64°   | 401.1  | 413.2  | 410.3  | 336.5  | 289.4  | 265.6  | 246.2 | 256.9  | 251.5 | 258.8  | 250.1 |
| 64.5° | 387.0  | 399.6  | 393.8  | 324.4  | 279.2  | 256.9  | 240.4 | 250.1  | 244.7 | 252.5  | 244.2 |
| 65°   | 375.4  | 385.1  | 378.8  | 312.7  | 269.5  | 248.1  | 234.5 | 243.3  | 238.4 | 245.7  | 238.9 |
| 65.5° | 362.7  | 372.4  | 364.2  | 302.0  | 260.3  | 239.9  | 229.2 | 237.0  | 232.1 | 238.9  | 233.1 |
| 66°   | 351.1  | 358.4  | 350.1  | 290.9  | 251.0  | 231.6  | 222.9 | 230.6  | 225.8 | 232.1  | 227.3 |





TEST NUMBER: P776734

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 67.5° | 316.1 | 321.9 | 310.3 | 260.3 | 225.3 | 208.8  | 205.4 | 211.7  | 207.3 | 213.2  | 209.8 |
| 68°   | 305.4 | 309.8 | 297.7 | 250.6 | 217.1 | 201.5  | 199.6 | 205.9  | 201.5 | 207.3  | 203.9 |
| 68.5° | 294.7 | 298.6 | 286.5 | 241.3 | 209.3 | 194.7  | 193.7 | 200.1  | 195.2 | 201.0  | 198.1 |
| 69°   | 284.1 | 287.9 | 274.4 | 232.1 | 202.0 | 187.9  | 187.9 | 193.7  | 189.4 | 195.2  | 191.8 |
| 69.5° | 273.9 | 276.8 | 263.7 | 223.4 | 193.7 | 181.6  | 182.1 | 187.9  | 183.5 | 188.9  | 186.0 |
| 70°   | 264.2 | 266.6 | 253.5 | 215.1 | 186.9 | 174.8  | 176.3 | 182.1  | 177.7 | 183.1  | 180.1 |
| 70.5° | 254.0 | 255.9 | 242.8 | 206.4 | 179.7 | 169.0  | 170.9 | 176.3  | 171.9 | 177.2  | 174.8 |
| 71°   | 244.2 | 246.2 | 233.1 | 198.6 | 172.9 | 162.7  | 165.1 | 170.4  | 166.6 | 171.4  | 169.0 |
| 71.5° | 235.0 | 236.5 | 223.4 | 190.8 | 166.1 | 156.8  | 159.3 | 165.1  | 160.7 | 165.6  | 163.2 |
| 72°   | 225.8 | 226.8 | 213.7 | 183.1 | 159.3 | 151.0  | 153.9 | 159.3  | 154.9 | 159.8  | 157.3 |
| 72.5° | 216.6 | 217.5 | 204.4 | 175.8 | 153.0 | 145.2  | 148.6 | 153.4  | 149.6 | 153.9  | 152.0 |
| 73°   | 207.3 | 207.8 | 195.7 | 169.0 | 146.6 | 139.8  | 143.2 | 147.6  | 143.7 | 148.1  | 146.6 |
| 73.5° | 198.6 | 199.1 | 186.9 | 161.7 | 140.3 | 135.0  | 137.9 | 142.3  | 138.4 | 142.8  | 140.8 |
| 74°   | 189.9 | 190.3 | 178.2 | 154.9 | 134.0 | 129.6  | 132.6 | 136.4  | 133.0 | 136.9  | 135.5 |
| 74.5° | 181.1 | 181.6 | 170.4 | 148.1 | 128.2 | 125.3  | 127.2 | 131.1  | 127.2 | 131.6  | 130.1 |
| 75°   | 174.3 | 174.3 | 162.7 | 141.3 | 122.4 | 120.9  | 121.9 | 125.3  | 121.9 | 125.8  | 124.8 |
| 75.5° | 166.1 | 166.1 | 154.9 | 135.0 | 117.0 | 116.5  | 116.5 | 119.9  | 116.5 | 120.4  | 119.5 |
| 76°   | 157.8 | 157.8 | 147.1 | 128.7 | 111.2 | 112.2  | 111.7 | 114.1  | 111.2 | 115.1  | 114.1 |
| 76.5° | 149.1 | 149.6 | 139.4 | 122.4 | 105.9 | 107.3  | 106.3 | 108.8  | 105.9 | 109.3  | 108.8 |
| 77°   | 140.8 | 141.3 | 131.6 | 116.1 | 100.5 | 102.9  | 101.0 | 103.4  | 100.5 | 103.9  | 103.4 |
| 77.5° | 133.5 | 134.0 | 124.3 | 109.7 | 95.2  | 98.1   | 95.7  | 98.1   | 95.2  | 98.6   | 98.1  |
| 78°   | 125.8 | 126.3 | 117.5 | 103.9 | 89.8  | 93.7   | 90.8  | 92.3   | 89.3  | 93.2   | 93.2  |
| 78.5° | 118.0 | 119.0 | 110.2 | 98.1  | 85.0  | 88.9   | 85.5  | 86.9   | 84.0  | 87.9   | 87.9  |
| 79°   | 110.7 | 111.2 | 103.4 | 92.3  | 80.1  | 84.0   | 80.6  | 81.6   | 78.7  | 82.1   | 82.5  |
| 79.5° | 103.4 | 104.4 | 96.6  | 86.9  | 75.3  | 79.6   | 75.8  | 76.2   | 73.8  | 76.7   | 77.2  |
| 80°   | 96.1  | 97.1  | 89.8  | 81.1  | 70.4  | 74.8   | 70.9  | 70.9   | 68.5  | 71.4   | 72.4  |
| 80.5° | 89.3  | 90.3  | 83.5  | 75.8  | 65.6  | 70.4   | 66.0  | 65.1   | 63.1  | 66.0   | 67.5  |
| 81°   | 82.5  | 83.5  | 77.2  | 70.4  | 61.2  | 65.6   | 61.2  | 60.2   | 58.3  | 60.7   | 62.2  |
| 81.5° | 75.8  | 76.7  | 70.9  | 65.1  | 56.8  | 61.2   | 56.3  | 54.4   | 52.9  | 55.4   | 57.3  |
| 82°   | 69.0  | 69.9  | 65.1  | 60.2  | 52.0  | 56.8   | 51.5  | 49.5   | 48.1  | 50.5   | 52.9  |
| 82.5° | 62.6  | 63.6  | 59.2  | 55.4  | 48.1  | 52.4   | 47.1  | 44.7   | 42.7  | 45.6   | 48.1  |
| 83°   | 56.3  | 57.3  | 53.9  | 50.5  | 43.7  | 48.1   | 42.7  | 39.8   | 37.9  | 40.3   | 44.2  |
| 83.5° | 49.5  | 50.5  | 48.1  | 45.6  | 39.8  | 43.7   | 38.4  | 35.4   | 33.0  | 35.4   | 39.8  |
| 84°   | 43.2  | 44.2  | 43.2  | 40.8  | 35.4  | 39.3   | 34.5  | 30.6   | 28.2  | 30.6   | 35.9  |
| 84.5° | 36.9  | 38.4  | 38.4  | 36.4  | 31.6  | 35.0   | 30.1  | 25.7   | 23.3  | 25.7   | 31.6  |
| 85°   | 31.1  | 32.5  | 34.0  | 32.0  | 27.2  | 30.6   | 25.7  | 21.9   | 18.9  | 21.4   | 27.7  |
| 85.5° | 24.8  | 26.7  | 29.1  | 27.7  | 23.3  | 26.2   | 21.9  | 18.5   | 16.0  | 18.0   | 23.8  |
| 86°   | 20.4  | 22.3  | 24.8  | 23.3  | 19.9  | 22.3   | 18.0  | 15.5   | 13.6  | 15.1   | 19.9  |
| 86.5° | 17.0  | 18.5  | 20.4  | 19.4  | 16.0  | 18.0   | 14.1  | 12.6   | 11.2  | 12.1   | 16.5  |
| 87°   | 14.1  | 15.1  | 16.5  | 15.1  | 12.6  | 14.1   | 10.7  | 9.7    | 8.3   | 9.7    | 13.1  |
| 87.5° | 10.7  | 11.2  | 12.6  | 11.2  | 9.2   | 10.2   | 6.8   | 6.3    | 5.8   | 6.8    | 9.2   |
| 88°   | 7.8   | 7.8   | 8.7   | 7.3   | 5.8   | 6.3    | 3.4   | 3.4    | 3.4   | 3.9    | 5.8   |
| 88.5° | 4.4   | 4.4   | 4.9   | 3.4   | 2.4   | 2.9    | 1.0   | 1.0    | 1.5   | 1.5    | 2.4   |



TEST NUMBER: P776734

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-----|-----|-------|-----|-------|-----|--------|------|--------|------|--------|------|
| 90° | 0.0 | 0.0   | 0.0 | 0.0   | 0.0 | 0.0    | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |



TEST NUMBER: P776734

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270°   | 292.5° | 315°   | 337.5° | 360°   |
|-------|--------|--------|--------|--------|--------|--------|
| 0°    | 2046.7 | 2046.7 | 2046.7 | 2046.7 | 2046.7 | 2046.7 |
| 0.5°  | 2043.3 | 2050.6 | 2058.4 | 2055.0 | 2056.9 | 2059.3 |
| 1°    | 2036.0 | 2049.6 | 2063.7 | 2066.6 | 2071.5 | 2075.4 |
| 1.5°  | 2028.7 | 2048.7 | 2069.5 | 2077.3 | 2086.5 | 2091.9 |
| 2°    | 2021.0 | 2047.7 | 2074.4 | 2088.0 | 2101.1 | 2107.9 |
| 2.5°  | 2013.7 | 2046.2 | 2079.2 | 2098.7 | 2115.2 | 2123.4 |
| 3°    | 2005.4 | 2044.3 | 2083.6 | 2108.9 | 2129.3 | 2139.0 |
| 3.5°  | 1997.2 | 2042.3 | 2088.0 | 2119.1 | 2143.3 | 2154.0 |
| 4°    | 1988.9 | 2040.4 | 2091.9 | 2128.8 | 2156.5 | 2168.6 |
| 4.5°  | 1980.2 | 2038.0 | 2096.2 | 2138.0 | 2169.6 | 2183.2 |
| 5°    | 1971.4 | 2035.5 | 2099.6 | 2147.2 | 2182.2 | 2197.2 |
| 5.5°  | 1962.7 | 2032.1 | 2103.0 | 2156.0 | 2194.8 | 2210.3 |
| 6°    | 1953.5 | 2029.2 | 2106.0 | 2164.7 | 2206.5 | 2223.5 |
| 6.5°  | 1944.3 | 2025.8 | 2108.4 | 2172.5 | 2217.6 | 2236.6 |
| 7°    | 1935.0 | 2022.4 | 2111.3 | 2180.2 | 2228.8 | 2248.7 |
| 7.5°  | 1925.3 | 2018.5 | 2113.2 | 2187.5 | 2239.5 | 2260.4 |
| 8°    | 1915.6 | 2014.7 | 2115.2 | 2194.8 | 2249.7 | 2271.5 |
| 8.5°  | 1905.9 | 2010.3 | 2116.6 | 2201.1 | 2259.4 | 2282.7 |
| 9°    | 1895.7 | 2005.9 | 2118.1 | 2207.4 | 2268.6 | 2293.4 |
| 9.5°  | 1885.5 | 2001.1 | 2119.1 | 2213.3 | 2277.8 | 2303.6 |
| 10°   | 1875.3 | 1996.2 | 2119.5 | 2219.1 | 2286.1 | 2312.8 |
| 10.5° | 1864.6 | 1990.9 | 2120.0 | 2223.9 | 2293.9 | 2322.0 |
| 11°   | 1853.9 | 1985.5 | 2120.0 | 2228.8 | 2301.6 | 2330.8 |
| 11.5° | 1843.3 | 1980.2 | 2119.5 | 2232.7 | 2308.9 | 2339.0 |
| 12°   | 1832.6 | 1973.9 | 2119.1 | 2236.6 | 2315.2 | 2346.8 |
| 12.5° | 1821.4 | 1968.0 | 2118.6 | 2240.5 | 2321.5 | 2354.1 |
| 13°   | 1810.2 | 1961.7 | 2117.1 | 2243.4 | 2327.4 | 2360.4 |
| 13.5° | 1798.6 | 1955.4 | 2115.7 | 2246.3 | 2332.7 | 2366.7 |
| 14°   | 1786.9 | 1948.6 | 2113.7 | 2248.7 | 2337.1 | 2372.0 |
| 14.5° | 1775.3 | 1941.8 | 2111.8 | 2250.2 | 2341.5 | 2377.4 |
| 15°   | 1763.6 | 1934.5 | 2109.3 | 2252.1 | 2345.3 | 2381.8 |
| 15.5° | 1752.0 | 1927.3 | 2106.9 | 2253.1 | 2348.3 | 2386.1 |
| 16°   | 1740.3 | 1920.0 | 2103.5 | 2253.6 | 2351.2 | 2389.5 |
| 16.5° | 1728.2 | 1912.2 | 2100.1 | 2253.6 | 2353.1 | 2392.4 |
| 17°   | 1715.5 | 1904.4 | 2096.7 | 2253.1 | 2354.6 | 2394.9 |
| 17.5° | 1703.4 | 1896.2 | 2092.8 | 2252.6 | 2356.0 | 2396.8 |
| 18°   | 1691.3 | 1887.9 | 2088.5 | 2251.6 | 2356.5 | 2398.3 |
| 18.5° | 1678.6 | 1879.7 | 2083.6 | 2250.2 | 2356.5 | 2399.2 |
| 19°   | 1666.5 | 1870.9 | 2079.2 | 2247.7 | 2356.5 | 2399.2 |
| 19.5° | 1653.4 | 1862.2 | 2073.9 | 2245.3 | 2355.5 | 2399.2 |
| 20°   | 1640.8 | 1853.4 | 2068.6 | 2242.9 | 2354.1 | 2398.8 |
| 20.5° | 1628.1 | 1844.2 | 2062.7 | 2239.5 | 2352.1 | 2397.3 |
| 21°   | 1615.0 | 1834.5 | 2056.9 | 2235.6 | 2349.7 | 2395.8 |



TEST NUMBER: P776734

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270°   | 292.5° | 315°   | 337.5° | 360°   |
|-------|--------|--------|--------|--------|--------|--------|
| 22.5° | 1575.7 | 1805.4 | 2037.0 | 2222.0 | 2339.5 | 2387.1 |
| 23°   | 1562.6 | 1795.2 | 2029.7 | 2216.7 | 2335.1 | 2383.7 |
| 23.5° | 1549.0 | 1785.0 | 2021.9 | 2210.8 | 2330.3 | 2379.3 |
| 24°   | 1535.9 | 1774.3 | 2014.2 | 2204.5 | 2324.9 | 2374.5 |
| 24.5° | 1521.8 | 1763.1 | 2005.9 | 2198.2 | 2319.1 | 2369.1 |
| 25°   | 1508.2 | 1752.0 | 1997.7 | 2190.9 | 2312.8 | 2363.8 |
| 25.5° | 1494.6 | 1740.3 | 1988.4 | 2183.6 | 2306.0 | 2357.5 |
| 26°   | 1480.5 | 1728.7 | 1979.7 | 2175.4 | 2298.7 | 2350.7 |
| 26.5° | 1466.4 | 1716.5 | 1970.0 | 2167.6 | 2291.0 | 2343.4 |
| 27°   | 1452.4 | 1703.9 | 1960.3 | 2158.9 | 2283.7 | 2336.1 |
| 27.5° | 1437.8 | 1690.3 | 1949.6 | 2149.7 | 2274.9 | 2328.3 |
| 28°   | 1422.7 | 1677.2 | 1938.9 | 2140.4 | 2266.2 | 2319.6 |
| 28.5° | 1408.2 | 1663.1 | 1927.7 | 2130.7 | 2256.5 | 2310.9 |
| 29°   | 1393.1 | 1648.5 | 1915.6 | 2120.5 | 2247.3 | 2301.6 |
| 29.5° | 1377.6 | 1634.0 | 1903.5 | 2110.3 | 2237.1 | 2291.9 |
| 30°   | 1361.6 | 1618.9 | 1890.4 | 2099.2 | 2226.9 | 2282.2 |
| 30.5° | 1346.0 | 1602.9 | 1876.8 | 2088.0 | 2215.7 | 2272.0 |
| 31°   | 1330.0 | 1587.4 | 1862.7 | 2076.3 | 2204.5 | 2262.3 |
| 31.5° | 1314.0 | 1570.8 | 1848.1 | 2064.7 | 2193.4 | 2252.6 |
| 32°   | 1297.9 | 1554.3 | 1833.1 | 2052.1 | 2181.2 | 2242.9 |
| 32.5° | 1281.0 | 1536.9 | 1817.0 | 2039.4 | 2169.6 | 2231.2 |
| 33°   | 1264.4 | 1519.9 | 1801.0 | 2026.8 | 2157.4 | 2218.1 |
| 33.5° | 1247.9 | 1502.4 | 1784.0 | 2013.7 | 2145.3 | 2202.1 |
| 34°   | 1230.9 | 1483.9 | 1766.5 | 2000.1 | 2134.1 | 2177.3 |
| 34.5° | 1213.5 | 1465.5 | 1749.1 | 1986.0 | 2122.0 | 2155.5 |
| 35°   | 1196.5 | 1446.5 | 1730.6 | 1971.4 | 2107.4 | 2122.0 |
| 35.5° | 1179.5 | 1426.1 | 1711.2 | 1956.9 | 2091.9 | 2090.9 |
| 36°   | 1161.5 | 1406.2 | 1691.8 | 1941.3 | 2071.0 | 2060.8 |
| 36.5° | 1144.0 | 1384.9 | 1671.8 | 1925.8 | 2045.7 | 2021.9 |
| 37°   | 1126.5 | 1363.5 | 1650.5 | 1909.8 | 2021.5 | 1990.4 |
| 37.5° | 1108.6 | 1341.2 | 1628.6 | 1893.3 | 1987.5 | 1952.0 |
| 38°   | 1090.6 | 1318.3 | 1605.3 | 1876.3 | 1958.8 | 1912.2 |
| 38.5° | 1071.2 | 1295.5 | 1581.0 | 1858.3 | 1926.3 | 1876.3 |
| 39°   | 1052.7 | 1272.2 | 1556.8 | 1841.3 | 1888.9 | 1833.5 |
| 39.5° | 1034.3 | 1248.9 | 1531.0 | 1823.8 | 1859.8 | 1796.6 |
| 40°   | 1015.3 | 1225.1 | 1503.8 | 1805.4 | 1821.4 | 1756.3 |
| 40.5° | 996.4  | 1200.8 | 1476.6 | 1786.0 | 1784.5 | 1711.7 |
| 41°   | 977.0  | 1176.1 | 1449.0 | 1768.0 | 1750.5 | 1675.2 |
| 41.5° | 958.0  | 1152.8 | 1421.3 | 1749.5 | 1710.2 | 1631.1 |
| 42°   | 939.1  | 1128.0 | 1392.6 | 1730.1 | 1674.3 | 1591.2 |
| 42.5° | 919.7  | 1102.7 | 1364.0 | 1710.2 | 1635.9 | 1551.4 |
| 43°   | 900.7  | 1078.0 | 1334.4 | 1688.8 | 1595.1 | 1506.3 |
| 43.5° | 881.3  | 1053.2 | 1304.7 | 1665.5 | 1560.6 | 1471.3 |



TEST NUMBER: P776734

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270°  | 292.5° | 315°   | 337.5° | 360°   |
|-------|--------|-------|--------|--------|--------|--------|
| 45°   | 824.0  | 978.0 | 1213.9 | 1577.6 | 1445.1 | 1350.4 |
| 45.5° | 804.6  | 953.2 | 1183.8 | 1540.7 | 1402.8 | 1307.7 |
| 46°   | 785.2  | 928.4 | 1152.8 | 1506.7 | 1369.3 | 1275.1 |
| 46.5° | 766.2  | 903.7 | 1122.2 | 1471.3 | 1330.0 | 1233.4 |
| 47°   | 747.8  | 879.4 | 1091.6 | 1431.0 | 1294.1 | 1198.9 |
| 47.5° | 729.3  | 854.1 | 1060.5 | 1395.1 | 1258.1 | 1163.4 |
| 48°   | 710.4  | 829.9 | 1029.9 | 1355.7 | 1217.8 | 1123.6 |
| 48.5° | 691.9  | 806.1 | 999.8  | 1315.4 | 1187.7 | 1095.0 |
| 49°   | 674.0  | 781.8 | 969.2  | 1279.0 | 1148.9 | 1054.7 |
| 49.5° | 656.5  | 758.5 | 938.6  | 1237.7 | 1117.8 | 1027.5 |
| 50°   | 638.0  | 735.2 | 908.5  | 1199.4 | 1084.8 | 993.0  |
| 50.5° | 619.6  | 711.9 | 878.4  | 1162.0 | 1047.9 | 961.4  |
| 51°   | 602.6  | 689.5 | 848.8  | 1122.7 | 1019.7 | 933.8  |
| 51.5° | 585.6  | 667.2 | 820.1  | 1087.2 | 982.8  | 898.3  |
| 52°   | 568.6  | 646.3 | 792.0  | 1048.8 | 957.1  | 876.0  |
| 52.5° | 551.1  | 625.4 | 763.8  | 1012.4 | 925.5  | 843.0  |
| 53°   | 535.1  | 604.5 | 735.7  | 978.4  | 895.4  | 820.1  |
| 53.5° | 519.1  | 584.6 | 709.9  | 941.5  | 868.2  | 793.4  |
| 54°   | 503.1  | 565.7 | 683.7  | 909.0  | 835.7  | 766.7  |
| 54.5° | 488.0  | 547.7 | 658.9  | 874.5  | 812.9  | 744.9  |
| 55°   | 472.5  | 529.3 | 634.7  | 843.0  | 781.3  | 717.7  |
| 55.5° | 457.9  | 511.8 | 611.8  | 811.9  | 759.4  | 699.2  |
| 56°   | 443.8  | 494.8 | 589.5  | 779.8  | 731.3  | 672.0  |
| 56.5° | 429.7  | 479.3 | 568.1  | 752.2  | 708.5  | 655.0  |
| 57°   | 417.1  | 463.2 | 547.2  | 722.5  | 684.7  | 632.2  |
| 57.5° | 404.0  | 447.7 | 527.8  | 695.8  | 659.9  | 614.3  |
| 58°   | 391.4  | 433.1 | 508.9  | 667.7  | 639.5  | 594.8  |
| 58.5° | 378.8  | 419.1 | 490.4  | 642.9  | 615.2  | 575.4  |
| 59°   | 365.6  | 405.5 | 473.4  | 618.1  | 597.3  | 558.4  |
| 59.5° | 354.0  | 391.9 | 456.9  | 593.9  | 574.4  | 539.0  |
| 60°   | 342.8  | 379.2 | 440.9  | 571.0  | 557.9  | 522.0  |
| 60.5° | 332.1  | 366.6 | 425.4  | 548.2  | 536.1  | 504.5  |
| 61°   | 321.5  | 354.5 | 410.3  | 527.8  | 520.5  | 488.0  |
| 61.5° | 311.3  | 343.3 | 396.2  | 506.5  | 500.6  | 472.5  |
| 62°   | 301.1  | 332.1 | 382.6  | 488.0  | 485.6  | 457.4  |
| 62.5° | 291.3  | 321.0 | 369.5  | 469.1  | 467.1  | 441.9  |
| 63°   | 282.1  | 310.3 | 356.9  | 451.1  | 452.6  | 428.3  |
| 63.5° | 272.9  | 300.1 | 344.3  | 433.6  | 436.0  | 413.7  |
| 64°   | 264.2  | 290.4 | 332.1  | 417.6  | 422.0  | 401.1  |
| 64.5° | 255.9  | 280.7 | 321.0  | 401.1  | 405.9  | 387.0  |
| 65°   | 247.6  | 271.4 | 309.8  | 386.0  | 393.3  | 375.4  |
| 65.5° | 239.4  | 262.2 | 299.1  | 371.5  | 378.3  | 362.7  |
| 66°   | 231.6  | 253.5 | 288.4  | 357.4  | 366.6  | 351.1  |



TEST NUMBER: P776734

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

|       | 247.5° | 270°  | 292.5° | 315°  | 337.5° | 360°  |
|-------|--------|-------|--------|-------|--------|-------|
| 67.5° | 209.3  | 228.2 | 259.3  | 318.5 | 328.3  | 316.1 |
| 68°   | 202.5  | 220.0 | 249.6  | 306.4 | 317.1  | 305.4 |
| 68.5° | 195.7  | 212.2 | 240.8  | 294.7 | 305.4  | 294.7 |
| 69°   | 188.9  | 204.9 | 232.1  | 283.6 | 294.3  | 284.1 |
| 69.5° | 182.6  | 197.6 | 223.4  | 272.4 | 283.6  | 273.9 |
| 70°   | 176.3  | 190.3 | 215.1  | 261.7 | 272.4  | 264.2 |
| 70.5° | 170.0  | 183.1 | 206.9  | 251.5 | 262.2  | 254.0 |
| 71°   | 164.1  | 175.8 | 199.1  | 241.3 | 252.0  | 244.2 |
| 71.5° | 158.3  | 169.5 | 191.3  | 231.6 | 242.3  | 235.0 |
| 72°   | 152.5  | 163.2 | 183.5  | 221.9 | 232.6  | 225.8 |
| 72.5° | 146.6  | 156.8 | 176.3  | 213.2 | 222.9  | 216.6 |
| 73°   | 141.3  | 151.0 | 169.5  | 203.9 | 214.1  | 207.3 |
| 73.5° | 136.0  | 144.7 | 162.7  | 194.7 | 204.4  | 198.6 |
| 74°   | 131.1  | 138.4 | 155.9  | 186.5 | 195.7  | 189.9 |
| 74.5° | 125.8  | 132.6 | 149.1  | 177.7 | 186.9  | 181.1 |
| 75°   | 121.4  | 126.7 | 142.3  | 170.0 | 178.2  | 174.3 |
| 75.5° | 117.0  | 120.9 | 136.0  | 162.2 | 170.4  | 166.1 |
| 76°   | 112.7  | 115.1 | 129.2  | 154.4 | 162.2  | 157.8 |
| 76.5° | 107.8  | 109.7 | 123.3  | 146.6 | 154.4  | 149.1 |
| 77°   | 103.4  | 104.4 | 117.0  | 138.9 | 146.2  | 140.8 |
| 77.5° | 98.6   | 99.1  | 111.2  | 131.6 | 138.4  | 133.5 |
| 78°   | 93.7   | 93.7  | 105.4  | 124.3 | 130.6  | 125.8 |
| 78.5° | 89.3   | 88.9  | 99.1   | 117.0 | 123.3  | 118.0 |
| 79°   | 84.5   | 83.5  | 93.7   | 109.7 | 115.6  | 110.7 |
| 79.5° | 79.6   | 78.7  | 87.9   | 102.9 | 108.3  | 103.4 |
| 80°   | 75.3   | 73.8  | 82.5   | 96.1  | 101.0  | 96.1  |
| 80.5° | 70.4   | 69.0  | 77.2   | 89.8  | 94.2   | 89.3  |
| 81°   | 65.6   | 64.6  | 71.9   | 83.5  | 86.9   | 82.5  |
| 81.5° | 61.2   | 59.7  | 66.5   | 77.2  | 80.1   | 75.8  |
| 82°   | 56.8   | 55.4  | 61.2   | 70.9  | 73.3   | 69.0  |
| 82.5° | 52.4   | 51.0  | 56.3   | 65.1  | 67.0   | 62.6  |
| 83°   | 48.1   | 46.6  | 51.5   | 59.2  | 60.7   | 56.3  |
| 83.5° | 43.7   | 42.2  | 46.6   | 53.9  | 53.9   | 49.5  |
| 84°   | 39.3   | 38.4  | 41.8   | 48.6  | 47.6   | 43.2  |
| 84.5° | 35.0   | 34.0  | 37.4   | 43.2  | 41.8   | 36.9  |
| 85°   | 30.6   | 30.1  | 32.5   | 38.4  | 36.4   | 31.1  |
| 85.5° | 26.2   | 26.2  | 28.2   | 33.5  | 31.1   | 24.8  |
| 86°   | 21.9   | 22.3  | 23.8   | 29.1  | 26.2   | 20.4  |
| 86.5° | 18.0   | 18.5  | 19.4   | 24.3  | 21.9   | 17.0  |
| 87°   | 14.1   | 14.6  | 15.5   | 19.9  | 18.0   | 14.1  |
| 87.5° | 10.2   | 11.2  | 11.7   | 16.0  | 14.1   | 10.7  |
| 88°   | 6.3    | 7.3   | 7.8    | 12.1  | 10.2   | 7.8   |
| 88.5° | 2.9    | 3.9   | 3.4    | 8.3   | 6.8    | 4.4   |



TEST NUMBER: P776734

CATALOG NUMBER: HCDJBL54050CSD-HCD6TSQH-HCD6TSQLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

|     | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-----|--------|------|--------|------|--------|------|
| 90° | 0.0    | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |



Report Generated By 670245859 / DESKTOP-T8S5UU9



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

Scaled Data Report





— 0°-180°    - - 45°-225°    - - - - 90°-270°    - · - 135°-315°

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

Scaled Data Report



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

Scaled Data Report





|       |        |        |        |        |        |        |        |        |        |        |        |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 21.5° | 2393.4 | 2364.8 | 2260.8 | 2089.4 | 1854.9 | 1625.7 | 1433.9 | 1327.6 | 1294.1 | 1326.6 | 1429.5 |
| 22°   | 2390.5 | 2361.8 | 2257.0 | 2083.6 | 1845.7 | 1613.6 | 1418.4 | 1311.5 | 1278.0 | 1310.6 | 1414.5 |



|       |        |        |        |        |        |       |       |       |       |       |       |
|-------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 44°   | 1427.6 | 1523.3 | 1663.6 | 1334.9 | 1057.6 | 882.8 | 747.8 | 661.4 | 632.2 | 664.3 | 751.2 |
| 44.5° | 1389.7 | 1487.3 | 1630.1 | 1303.8 | 1032.3 | 863.4 | 732.7 | 647.3 | 618.1 | 650.7 | 736.1 |



|       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 66.5° | 338.9 | 346.7 | 336.0 | 280.2 | 242.3 | 223.9 | 217.1 | 224.3 | 219.5 | 225.8 | 221.4 |
| 67°   | 327.8 | 333.6 | 322.9 | 270.0 | 233.6 | 216.1 | 211.2 | 218.0 | 213.2 | 219.5 | 215.6 |



|       |     |     |     |     |     |     |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 89°   | 1.5 | 1.0 | 1.0 | 1.0 | 0.5 | 0.5 | 0.0 | 0.5 | 0.0 | 0.5 | 0.5 |
| 89.5° | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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

Scaled Data Report





|       |        |        |        |        |        |        |
|-------|--------|--------|--------|--------|--------|--------|
| 21.5° | 1601.9 | 1825.3 | 2050.1 | 2231.7 | 2346.8 | 2393.4 |
| 22°   | 1588.8 | 1815.6 | 2043.8 | 2227.3 | 2343.4 | 2390.5 |



|       |       |        |        |        |        |        |
|-------|-------|--------|--------|--------|--------|--------|
| 44°   | 861.9 | 1028.5 | 1274.2 | 1637.4 | 1518.9 | 1427.6 |
| 44.5° | 843.4 | 1003.7 | 1244.0 | 1606.3 | 1482.5 | 1389.7 |



|       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|
| 66.5° | 223.9 | 244.7 | 278.7 | 344.3 | 352.5 | 338.9 |
| 67°   | 216.6 | 236.5 | 268.5 | 330.7 | 341.4 | 327.8 |

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

Scaled Data Report



|       |     |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|-----|
| 89°   | 0.5 | 1.0 | 1.0 | 4.4 | 2.9 | 1.5 |
| 89.5° | 0.0 | 0.0 | 0.0 | 1.0 | 0.5 | 0.0 |

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

Scaled Data Report



(END OF REPORT)