

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: PORTFOLIO

Report Number: P#

Luminaire Tested: **LD4C45D010 EX4C459035 4LBSQLWWH**

Issue Date: 2/18/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P#  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/18/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C45D010 EX4C459035 4LBSQLWWH  
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

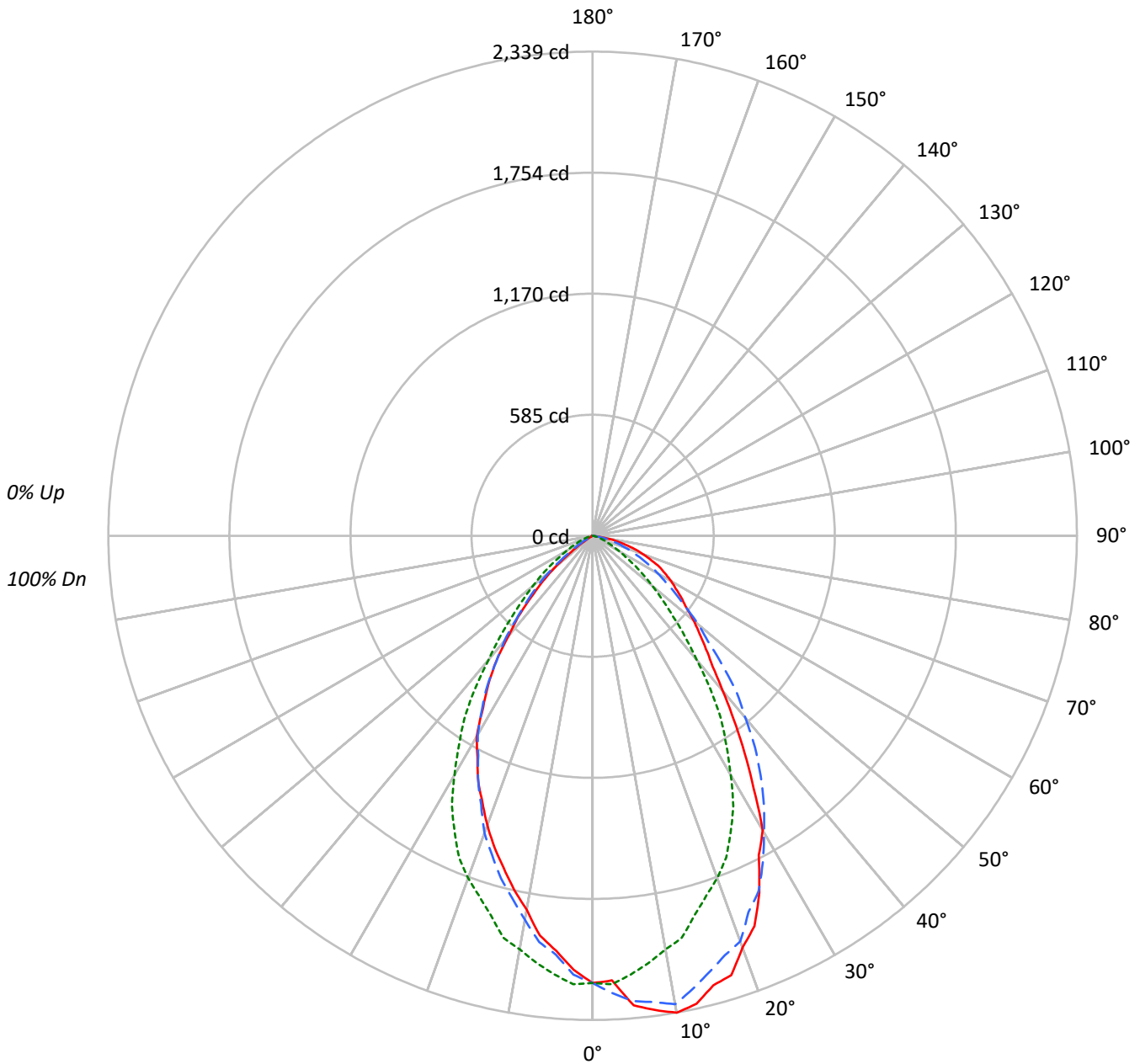
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3097.0 lumens  
Efficiency: N/A  
Efficacy: 62.4 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 49.6  
Input Voltage (V):  
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

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CATALOG NUMBER: LD4C45D010 EX4C459035 4LBSQLWWH

### Luminous Intensity Polar Plot





TEST NUMBER: P#

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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   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98  | 98  | 96  | 95  | 95  | 93  | 92  | 90  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 104 | 98  | 93  | 89  | 102 | 96  | 92  | 88  | 93  | 89  | 86  | 90  | 87  | 84  | 87  | 84  | 82  | 80  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 97  | 89  | 83  | 78  | 95  | 88  | 82  | 77  | 85  | 80  | 76  | 82  | 78  | 75  | 80  | 77  | 74  | 72  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 91  | 81  | 74  | 69  | 89  | 80  | 74  | 69  | 78  | 72  | 68  | 76  | 71  | 67  | 74  | 70  | 66  | 64  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 85  | 75  | 67  | 62  | 83  | 74  | 67  | 62  | 72  | 66  | 61  | 70  | 65  | 60  | 68  | 64  | 60  | 58  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 80  | 69  | 61  | 56  | 78  | 68  | 61  | 56  | 66  | 60  | 55  | 65  | 59  | 55  | 63  | 58  | 54  | 53  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 75  | 63  | 56  | 51  | 73  | 63  | 56  | 51  | 61  | 55  | 50  | 60  | 54  | 50  | 59  | 54  | 50  | 48  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 70  | 59  | 52  | 47  | 69  | 58  | 51  | 46  | 57  | 51  | 46  | 56  | 50  | 46  | 55  | 50  | 46  | 44  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 66  | 55  | 48  | 43  | 65  | 54  | 47  | 43  | 53  | 47  | 43  | 52  | 46  | 42  | 51  | 46  | 42  | 41  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 62  | 51  | 44  | 40  | 61  | 51  | 44  | 40  | 50  | 44  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 38  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°     | 90°    | 180°   |
|-----|--------|--------|--------|
| 0°  | 208464 | 208464 | 208464 |
| 5°  | 220564 | 206006 | 194974 |
| 10° | 229208 | 198747 | 179700 |
| 15° | 224619 | 189686 | 165882 |
| 20° | 217335 | 180616 | 152687 |
| 25° | 202728 | 167957 | 139286 |
| 30° | 183000 | 148651 | 124697 |
| 35° | 150749 | 127250 | 103444 |
| 40° | 123023 | 98222  | 79618  |
| 45° | 105699 | 74600  | 57271  |
| 50° | 95665  | 56787  | 36177  |
| 55° | 88031  | 40962  | 13071  |
| 60° | 84505  | 27982  | 2007   |
| 65° | 81622  | 18927  | 594    |
| 70° | 73068  | 13147  | 733    |
| 75° | 59910  | 6785   | 0      |
| 80° | 37451  | 2889   | 0      |
| 85° | 0      | 0      | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 202.4  | 6.5       |
| 10°-20°   | 545.4  | 17.6      |
| 20°-30°   | 728.3  | 23.5      |
| 30°-40°   | 691.3  | 22.3      |
| 40°-50°   | 477.9  | 15.4      |
| 50°-60°   | 264.0  | 8.5       |
| 60°-70°   | 131.1  | 4.2       |
| 70°-80°   | 51.7   | 1.7       |
| 80°-90°   | 4.9    | 0.2       |
| 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°    | 1476.1 | 47.7      |
| 0°-40°    | 2167.4 | 70.0      |
| 0°-60°    | 2909.3 | 93.9      |
| 0°-90°    | 3097.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3097.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 2160 | 2160 | 2160 | 2160 | 2160 |      |
| 5°  | 2277 | 2256 | 2127 | 2031 | 2013 | 218  |
| 15° | 2249 | 2181 | 1899 | 1712 | 1661 | 636  |
| 25° | 1904 | 1896 | 1578 | 1308 | 1308 | 868  |
| 35° | 1280 | 1414 | 1080 | 889  | 878  | 802  |
| 45° | 775  | 889  | 547  | 448  | 420  | 604  |
| 55° | 523  | 492  | 244  | 124  | 78   | 471  |
| 65° | 358  | 259  | 83   | 3    | 3    | 347  |
| 75° | 161  | 98   | 18   | 0    | 0    | 171  |
| 85° | 0    | 3    | 0    | 0    | 0    | 15   |
| 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°    | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 |
| 2.5°  | 2150.2 | 2209.8 | 2214.9 | 2209.8 | 2217.6 | 2214.9 | 2227.9 | 2214.9 | 2230.6 | 2207.2 | 2212.4 |
| 5°    | 2277.2 | 2253.8 | 2303.0 | 2277.2 | 2277.2 | 2274.6 | 2266.8 | 2264.2 | 2274.6 | 2240.9 | 2256.5 |
| 7.5°  | 2310.9 | 2344.5 | 2388.6 | 2334.2 | 2336.7 | 2336.7 | 2321.2 | 2316.0 | 2316.0 | 2253.8 | 2272.0 |
| 10°   | 2339.4 | 2318.6 | 2341.9 | 2321.2 | 2339.4 | 2336.7 | 2347.1 | 2313.4 | 2336.7 | 2300.5 | 2297.9 |
| 12.5° | 2316.0 | 2308.2 | 2339.4 | 2305.7 | 2295.3 | 2297.9 | 2285.0 | 2277.2 | 2285.0 | 2243.5 | 2240.9 |
| 15°   | 2248.6 | 2256.5 | 2303.0 | 2266.8 | 2261.6 | 2256.5 | 2240.9 | 2214.9 | 2235.7 | 2178.7 | 2181.3 |
| 17.5° | 2225.4 | 2212.4 | 2220.2 | 2189.1 | 2196.9 | 2191.7 | 2189.1 | 2165.8 | 2160.5 | 2124.3 | 2124.3 |
| 20°   | 2116.6 | 2145.0 | 2145.0 | 2124.3 | 2124.3 | 2121.8 | 2088.1 | 2108.8 | 2085.4 | 2075.1 | 2085.4 |
| 22.5° | 2041.4 | 2044.0 | 2044.0 | 2025.9 | 2028.5 | 2018.1 | 2000.0 | 1987.0 | 2000.0 | 1987.0 | 1966.3 |
| 25°   | 1904.2 | 1909.3 | 1940.4 | 1906.7 | 1901.5 | 1911.9 | 1896.3 | 1888.5 | 1886.0 | 1854.9 | 1896.3 |
| 27.5° | 1738.3 | 1790.1 | 1787.5 | 1774.6 | 1790.1 | 1769.4 | 1761.7 | 1764.2 | 1772.0 | 1769.4 | 1779.7 |
| 30°   | 1642.5 | 1650.2 | 1658.0 | 1647.7 | 1650.2 | 1642.5 | 1642.5 | 1645.0 | 1665.7 | 1658.0 | 1655.4 |
| 32.5° | 1448.1 | 1474.0 | 1494.8 | 1494.8 | 1497.4 | 1505.2 | 1502.5 | 1556.9 | 1569.9 | 1544.1 | 1538.9 |
| 35°   | 1279.8 | 1297.9 | 1316.0 | 1318.6 | 1352.3 | 1354.9 | 1357.5 | 1373.0 | 1409.3 | 1417.1 | 1414.4 |
| 37.5° | 1119.2 | 1137.3 | 1142.4 | 1165.8 | 1183.9 | 1202.0 | 1222.8 | 1243.5 | 1274.6 | 1300.5 | 1287.6 |
| 40°   | 976.7  | 984.4  | 997.4  | 1007.8 | 1044.0 | 1044.0 | 1054.3 | 1095.8 | 1129.5 | 1150.3 | 1147.6 |
| 42.5° | 857.5  | 860.1  | 870.4  | 888.6  | 922.3  | 914.5  | 922.3  | 950.8  | 999.9  | 1002.6 | 1031.1 |
| 45°   | 774.6  | 772.0  | 779.8  | 782.3  | 803.1  | 813.5  | 818.7  | 839.4  | 880.8  | 886.0  | 888.6  |
| 47.5° | 699.5  | 696.9  | 709.9  | 715.0  | 722.8  | 733.1  | 733.1  | 735.7  | 751.3  | 764.3  | 753.9  |
| 50°   | 637.3  | 637.3  | 637.3  | 642.5  | 655.5  | 652.8  | 655.5  | 665.8  | 673.5  | 668.3  | 665.8  |
| 52.5° | 569.9  | 580.3  | 588.1  | 590.7  | 593.2  | 593.2  | 595.9  | 590.7  | 588.1  | 580.3  | 564.7  |
| 55°   | 523.3  | 533.7  | 533.7  | 533.7  | 533.7  | 544.0  | 531.1  | 533.7  | 533.7  | 513.0  | 492.3  |
| 57.5° | 476.7  | 487.1  | 494.8  | 484.4  | 494.8  | 484.4  | 479.3  | 476.7  | 471.4  | 450.7  | 419.7  |
| 60°   | 437.9  | 443.0  | 440.4  | 437.9  | 443.0  | 435.2  | 430.0  | 419.7  | 414.5  | 386.0  | 365.3  |
| 62.5° | 393.8  | 396.3  | 399.0  | 393.8  | 388.6  | 386.0  | 375.6  | 360.1  | 349.8  | 326.4  | 308.2  |
| 65°   | 357.5  | 349.8  | 347.1  | 344.6  | 339.4  | 331.6  | 323.9  | 305.7  | 297.9  | 277.2  | 259.0  |
| 67.5° | 303.1  | 300.5  | 305.7  | 297.9  | 285.0  | 285.0  | 277.2  | 261.7  | 243.5  | 230.6  | 212.4  |
| 70°   | 259.0  | 256.5  | 251.3  | 243.5  | 241.0  | 230.6  | 230.6  | 212.4  | 207.3  | 183.9  | 168.4  |
| 72.5° | 212.4  | 212.4  | 204.6  | 196.9  | 189.1  | 183.9  | 181.4  | 168.4  | 160.7  | 147.7  | 134.7  |
| 75°   | 160.7  | 160.7  | 158.0  | 150.2  | 145.0  | 139.9  | 137.3  | 127.0  | 119.2  | 106.3  | 98.5   |
| 77.5° | 114.0  | 114.0  | 103.6  | 98.5   | 101.0  | 95.8   | 90.6   | 88.1   | 85.5   | 77.7   | 67.4   |
| 80°   | 67.4   | 64.8   | 57.0   | 59.6   | 57.0   | 57.0   | 54.4   | 51.8   | 46.6   | 41.4   | 36.2   |
| 82.5° | 18.2   | 20.7   | 20.7   | 20.7   | 23.3   | 18.2   | 18.2   | 18.2   | 20.7   | 20.7   | 13.0   |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 2.6    | 2.6    | 2.6    |
| 87.5° | 2.6    | 5.2    | 10.4   | 10.4   | 10.4   | 10.4   | 10.4   | 7.8    | 7.8    | 7.8    | 5.2    |
| 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°    | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 |
| 2.5°  | 2186.5 | 2183.9 | 2186.5 | 2168.4 | 2209.8 | 2178.7 | 2173.5 | 2168.4 | 2186.5 | 2168.4 | 2142.5 |
| 5°    | 2233.1 | 2207.2 | 2199.4 | 2191.7 | 2214.9 | 2178.7 | 2171.0 | 2173.5 | 2160.5 | 2126.9 | 2129.5 |
| 7.5°  | 2248.6 | 2225.4 | 2202.0 | 2152.8 | 2173.5 | 2165.8 | 2145.0 | 2129.5 | 2108.8 | 2080.3 | 2075.1 |
| 10°   | 2253.8 | 2227.9 | 2194.2 | 2178.7 | 2147.6 | 2137.3 | 2129.5 | 2103.6 | 2077.7 | 2028.5 | 2015.5 |
| 12.5° | 2238.3 | 2207.2 | 2165.8 | 2152.8 | 2129.5 | 2095.8 | 2077.7 | 2051.7 | 2028.5 | 1989.6 | 1961.1 |
| 15°   | 2171.0 | 2145.0 | 2132.1 | 2088.1 | 2077.7 | 2056.9 | 2020.7 | 1984.4 | 1950.7 | 1898.9 | 1883.4 |
| 17.5° | 2093.2 | 2082.9 | 2069.9 | 2036.2 | 2033.7 | 2013.0 | 1979.3 | 1948.1 | 1904.2 | 1823.8 | 1797.9 |
| 20°   | 2013.0 | 2013.0 | 1971.5 | 1958.6 | 1984.4 | 1942.9 | 1917.0 | 1888.5 | 1797.9 | 1759.0 | 1712.4 |
| 22.5° | 1953.4 | 1924.9 | 1901.5 | 1880.8 | 1883.4 | 1857.5 | 1821.2 | 1764.2 | 1730.5 | 1683.9 | 1629.5 |
| 25°   | 1836.8 | 1847.1 | 1795.4 | 1787.5 | 1795.4 | 1735.7 | 1717.6 | 1670.9 | 1621.7 | 1577.6 | 1536.2 |
| 27.5° | 1764.2 | 1735.7 | 1702.1 | 1673.6 | 1673.6 | 1650.2 | 1598.5 | 1588.1 | 1512.9 | 1471.5 | 1419.6 |
| 30°   | 1655.4 | 1634.7 | 1606.2 | 1564.8 | 1559.6 | 1541.4 | 1500.0 | 1474.0 | 1396.4 | 1334.2 | 1305.6 |
| 32.5° | 1518.1 | 1510.4 | 1487.0 | 1440.4 | 1424.9 | 1404.1 | 1352.3 | 1308.3 | 1272.0 | 1202.0 | 1168.4 |
| 35°   | 1419.6 | 1391.2 | 1342.0 | 1303.1 | 1290.1 | 1253.9 | 1212.4 | 1181.3 | 1142.4 | 1080.3 | 1036.3 |
| 37.5° | 1272.0 | 1243.5 | 1196.8 | 1150.3 | 1150.3 | 1114.0 | 1057.0 | 1025.9 | 971.5  | 935.2  | 898.9  |
| 40°   | 1142.4 | 1106.2 | 1059.6 | 1005.2 | 997.4  | 945.5  | 922.3  | 870.4  | 836.7  | 779.8  | 774.6  |
| 42.5° | 997.4  | 963.7  | 922.3  | 880.8  | 849.7  | 823.8  | 764.3  | 725.4  | 689.2  | 660.6  | 652.8  |
| 45°   | 865.3  | 821.2  | 785.0  | 733.1  | 702.0  | 671.0  | 632.1  | 606.2  | 577.7  | 546.7  | 528.5  |
| 47.5° | 751.3  | 715.0  | 663.2  | 616.6  | 585.5  | 569.9  | 525.8  | 497.4  | 474.1  | 453.4  | 440.4  |
| 50°   | 634.8  | 590.7  | 562.2  | 510.3  | 505.1  | 468.9  | 432.7  | 409.3  | 396.3  | 378.3  | 360.1  |
| 52.5° | 546.7  | 505.1  | 466.3  | 427.5  | 406.7  | 393.8  | 360.1  | 336.8  | 318.7  | 305.7  | 295.4  |
| 55°   | 461.1  | 424.9  | 393.8  | 354.9  | 341.9  | 323.9  | 285.0  | 279.8  | 261.7  | 243.5  | 230.6  |
| 57.5° | 396.3  | 362.6  | 326.4  | 300.5  | 277.2  | 264.3  | 233.1  | 212.4  | 202.1  | 186.5  | 173.6  |
| 60°   | 336.8  | 300.5  | 272.0  | 241.0  | 230.6  | 212.4  | 189.1  | 171.0  | 158.0  | 145.0  | 132.1  |
| 62.5° | 282.4  | 251.3  | 220.2  | 194.3  | 178.7  | 168.4  | 150.2  | 134.7  | 121.8  | 111.4  | 101.0  |
| 65°   | 233.1  | 204.6  | 178.7  | 152.9  | 145.0  | 132.1  | 119.2  | 106.3  | 95.8   | 82.9   | 72.6   |
| 67.5° | 191.7  | 165.8  | 139.9  | 121.8  | 114.0  | 108.8  | 93.3   | 80.3   | 72.6   | 64.8   | 54.4   |
| 70°   | 150.2  | 132.1  | 111.4  | 95.8   | 88.1   | 80.3   | 69.9   | 62.2   | 51.8   | 46.6   | 38.9   |
| 72.5° | 116.6  | 101.0  | 82.9   | 69.9   | 64.8   | 59.6   | 49.2   | 41.4   | 36.2   | 31.1   | 25.9   |
| 75°   | 82.9   | 69.9   | 59.6   | 46.6   | 44.0   | 41.4   | 33.7   | 28.5   | 23.3   | 18.2   | 15.5   |
| 77.5° | 57.0   | 46.6   | 36.2   | 31.1   | 28.5   | 23.3   | 20.7   | 15.5   | 13.0   | 10.4   | 7.8    |
| 80°   | 31.1   | 23.3   | 18.2   | 15.5   | 13.0   | 10.4   | 10.4   | 7.8    | 5.2    | 5.2    | 2.6    |
| 82.5° | 10.4   | 7.8    | 5.2    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 0.0    | 2.6    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 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    |



TEST NUMBER: P#

CATALOG NUMBER: LD4C45D010 EX4C459035 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

|       | 100°   | 105°   | 110°   | 112.5° | 115°   | 120°   | 125°   | 130°   | 135°   | 140°   | 145°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 |
| 2.5°  | 2158.0 | 2129.5 | 2137.3 | 2137.3 | 2132.1 | 2132.1 | 2126.9 | 2119.1 | 2121.8 | 2106.1 | 2072.5 |
| 5°    | 2134.7 | 2098.4 | 2093.2 | 2098.4 | 2077.7 | 2072.5 | 2062.2 | 2077.7 | 2031.0 | 2049.2 | 2028.5 |
| 7.5°  | 2067.4 | 2033.7 | 2025.9 | 2044.0 | 2018.1 | 2002.5 | 2000.0 | 2020.7 | 1979.3 | 1958.6 | 1935.2 |
| 10°   | 1992.2 | 1979.3 | 1955.9 | 1942.9 | 1935.2 | 1937.8 | 1917.0 | 1891.2 | 1883.4 | 1878.2 | 1857.5 |
| 12.5° | 1924.9 | 1896.3 | 1875.6 | 1860.1 | 1854.9 | 1854.9 | 1821.2 | 1816.1 | 1792.7 | 1787.5 | 1756.5 |
| 15°   | 1844.5 | 1810.9 | 1797.9 | 1777.2 | 1759.0 | 1769.4 | 1730.5 | 1720.1 | 1712.4 | 1678.7 | 1683.9 |
| 17.5° | 1774.6 | 1738.3 | 1707.3 | 1694.3 | 1678.7 | 1663.2 | 1626.9 | 1634.7 | 1616.5 | 1616.5 | 1569.9 |
| 20°   | 1683.9 | 1645.0 | 1621.7 | 1595.8 | 1595.8 | 1575.1 | 1549.2 | 1551.8 | 1528.4 | 1505.2 | 1463.7 |
| 22.5° | 1588.1 | 1546.6 | 1518.1 | 1507.7 | 1481.8 | 1476.7 | 1445.6 | 1437.8 | 1406.7 | 1409.3 | 1373.0 |
| 25°   | 1487.0 | 1445.6 | 1406.7 | 1409.3 | 1386.0 | 1375.7 | 1357.5 | 1321.3 | 1308.3 | 1292.8 | 1282.4 |
| 27.5° | 1367.9 | 1339.3 | 1305.6 | 1303.1 | 1259.1 | 1261.6 | 1238.3 | 1228.0 | 1196.8 | 1204.7 | 1181.3 |
| 30°   | 1259.1 | 1217.6 | 1186.5 | 1178.8 | 1160.6 | 1155.4 | 1119.2 | 1103.6 | 1108.8 | 1088.0 | 1075.1 |
| 32.5° | 1147.6 | 1085.5 | 1072.5 | 1057.0 | 1046.6 | 1033.6 | 1007.8 | 1018.1 | 994.8  | 999.9  | 979.2  |
| 35°   | 999.9  | 974.1  | 940.4  | 940.4  | 930.0  | 919.7  | 901.6  | 911.9  | 888.6  | 878.2  | 857.5  |
| 37.5° | 875.6  | 852.4  | 818.7  | 829.0  | 810.8  | 795.3  | 779.8  | 782.3  | 761.6  | 759.1  | 738.3  |
| 40°   | 740.9  | 727.9  | 704.7  | 704.7  | 691.7  | 691.7  | 683.9  | 676.2  | 663.2  | 647.6  | 624.3  |
| 42.5° | 613.9  | 603.6  | 593.2  | 595.9  | 577.7  | 593.2  | 572.5  | 585.5  | 544.0  | 541.5  | 525.8  |
| 45°   | 520.7  | 497.4  | 500.0  | 489.6  | 479.3  | 484.4  | 466.3  | 471.4  | 448.2  | 443.0  | 427.5  |
| 47.5° | 422.3  | 414.5  | 399.0  | 393.8  | 393.8  | 386.0  | 378.3  | 375.6  | 365.3  | 352.3  | 331.6  |
| 50°   | 347.1  | 318.7  | 313.4  | 305.7  | 300.5  | 300.5  | 290.2  | 274.6  | 277.2  | 264.3  | 243.5  |
| 52.5° | 272.0  | 248.7  | 238.3  | 235.8  | 225.4  | 220.2  | 207.3  | 196.9  | 189.1  | 183.9  | 171.0  |
| 55°   | 209.8  | 189.1  | 176.2  | 176.2  | 160.7  | 160.7  | 142.5  | 134.7  | 124.3  | 114.0  | 106.3  |
| 57.5° | 158.0  | 147.7  | 134.7  | 124.3  | 119.2  | 106.3  | 95.8   | 82.9   | 75.1   | 59.6   | 49.2   |
| 60°   | 119.2  | 108.8  | 95.8   | 88.1   | 82.9   | 69.9   | 57.0   | 46.6   | 28.5   | 23.3   | 20.7   |
| 62.5° | 88.1   | 77.7   | 64.8   | 59.6   | 54.4   | 44.0   | 31.1   | 15.5   | 7.8    | 7.8    | 7.8    |
| 65°   | 64.8   | 51.8   | 41.4   | 36.2   | 31.1   | 23.3   | 10.4   | 5.2    | 2.6    | 2.6    | 2.6    |
| 67.5° | 44.0   | 33.7   | 23.3   | 20.7   | 15.5   | 7.8    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    |
| 70°   | 28.5   | 20.7   | 10.4   | 7.8    | 5.2    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    |
| 72.5° | 18.2   | 10.4   | 5.2    | 2.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 10.4   | 5.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5° | 5.2    | 2.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 2.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 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    | 2.6    | 2.6    | 2.6    |
| 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: P#

CATALOG NUMBER: LD4C45D010 EX4C459035 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

|       | 150°   | 155°   | 157.5° | 160°   | 165°   | 170°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 | 2160.5 |
| 2.5°  | 2108.8 | 2090.6 | 2101.0 | 2077.7 | 2088.1 | 2106.1 | 2093.2 | 2098.4 |
| 5°    | 2036.2 | 2025.9 | 2013.0 | 1979.3 | 2005.1 | 2025.9 | 2015.5 | 2013.0 |
| 7.5°  | 1958.6 | 1922.2 | 1940.4 | 1930.0 | 1924.9 | 1945.6 | 1922.2 | 1948.1 |
| 10°   | 1878.2 | 1852.3 | 1849.8 | 1831.6 | 1831.6 | 1847.1 | 1849.8 | 1834.1 |
| 12.5° | 1759.0 | 1746.1 | 1746.1 | 1743.5 | 1740.9 | 1756.5 | 1759.0 | 1751.3 |
| 15°   | 1673.6 | 1668.4 | 1655.4 | 1652.9 | 1637.3 | 1660.6 | 1663.2 | 1660.6 |
| 17.5° | 1569.9 | 1572.5 | 1559.6 | 1559.6 | 1569.9 | 1577.6 | 1556.9 | 1577.6 |
| 20°   | 1500.0 | 1487.0 | 1481.8 | 1458.5 | 1471.5 | 1484.5 | 1484.5 | 1487.0 |
| 22.5° | 1398.9 | 1378.2 | 1386.0 | 1373.0 | 1365.2 | 1383.4 | 1383.4 | 1391.2 |
| 25°   | 1284.9 | 1284.9 | 1290.1 | 1282.4 | 1287.6 | 1297.9 | 1290.1 | 1308.3 |
| 27.5° | 1176.1 | 1186.5 | 1186.5 | 1176.1 | 1181.3 | 1212.4 | 1225.4 | 1204.7 |
| 30°   | 1075.1 | 1077.7 | 1085.5 | 1080.3 | 1095.8 | 1106.2 | 1103.6 | 1119.2 |
| 32.5° | 961.2  | 974.1  | 979.2  | 971.5  | 976.7  | 999.9  | 987.0  | 984.4  |
| 35°   | 873.1  | 849.7  | 847.2  | 849.7  | 860.1  | 865.3  | 860.1  | 878.2  |
| 37.5° | 746.1  | 738.3  | 727.9  | 730.6  | 738.3  | 748.7  | 753.9  | 766.8  |
| 40°   | 624.3  | 613.9  | 613.9  | 611.4  | 603.6  | 632.1  | 632.1  | 632.1  |
| 42.5° | 518.1  | 515.5  | 502.6  | 502.6  | 513.0  | 520.7  | 515.5  | 533.7  |
| 45°   | 424.9  | 414.5  | 406.7  | 406.7  | 414.5  | 414.5  | 422.3  | 419.7  |
| 47.5° | 334.2  | 323.9  | 326.4  | 318.7  | 326.4  | 336.8  | 323.9  | 326.4  |
| 50°   | 251.3  | 251.3  | 246.1  | 251.3  | 248.7  | 251.3  | 246.1  | 241.0  |
| 52.5° | 171.0  | 194.3  | 196.9  | 186.5  | 163.2  | 142.5  | 129.5  | 139.9  |
| 55°   | 98.5   | 88.1   | 88.1   | 85.5   | 80.3   | 77.7   | 69.9   | 77.7   |
| 57.5° | 49.2   | 44.0   | 44.0   | 44.0   | 41.4   | 38.9   | 33.7   | 33.7   |
| 60°   | 20.7   | 18.2   | 18.2   | 15.5   | 13.0   | 10.4   | 7.8    | 10.4   |
| 62.5° | 7.8    | 5.2    | 5.2    | 5.2    | 5.2    | 5.2    | 5.2    | 5.2    |
| 65°   | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    |
| 67.5° | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    |
| 70°   | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    | 2.6    |
| 72.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 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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— 0°-180°    - - 45°-225°    - - - - 90°-270°















(END OF REPORT)