

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: P563863

Luminaire Tested: **LD4C50D010 EX4C509030 4LBSQLWWH**

Issue Date: 2/18/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P563863  
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: LD4C50D010 EX4C509030 4LBSQLWWH  
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH, DIM TO WARM  
Light Source: -  
Ballast/Driver: -

**Summary**

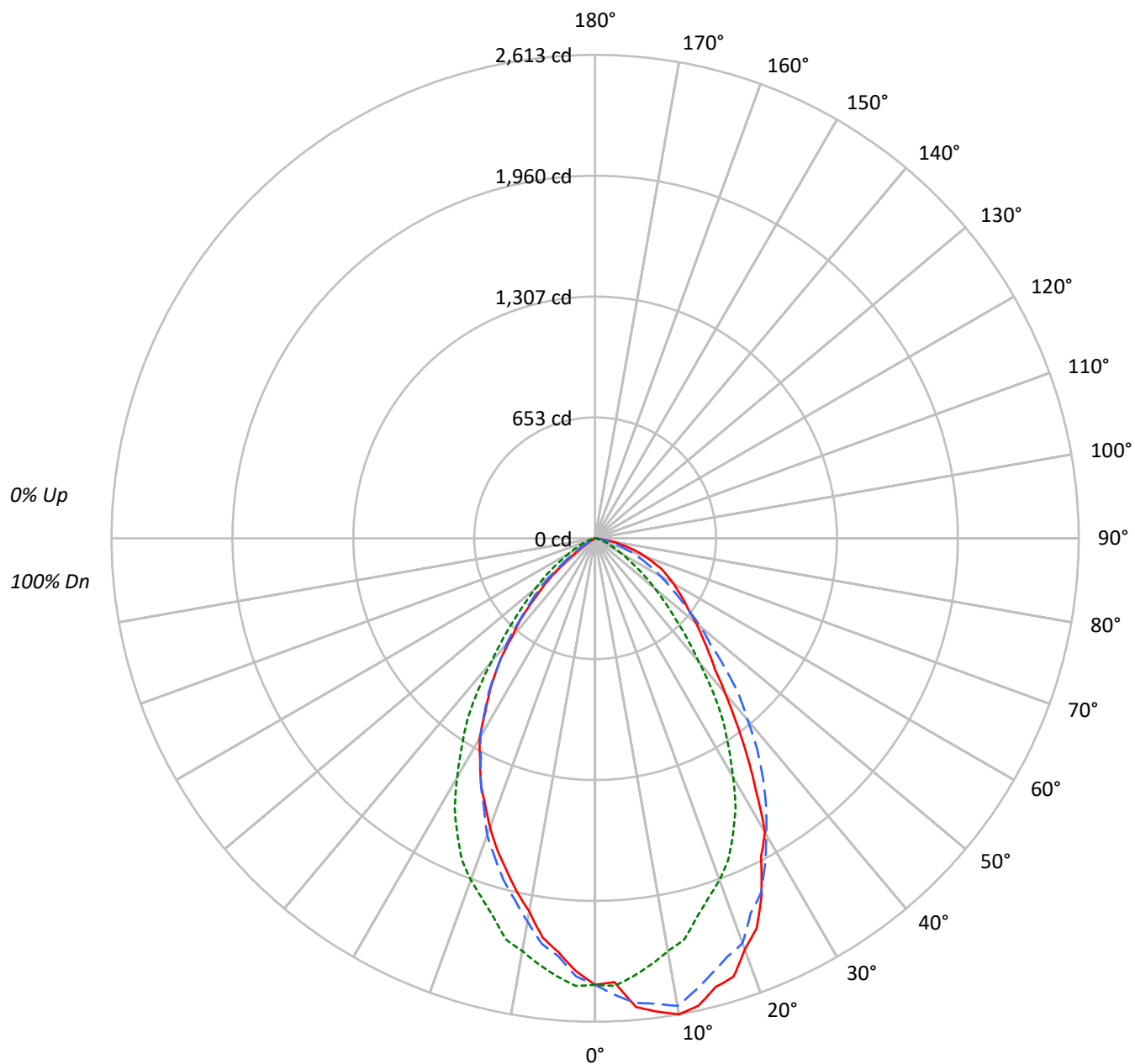
Lumens per Lamp: N/A  
Luminaire Lumens: 3459.0 lumens  
Efficiency: N/A  
Efficacy: 59.2 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 58.4  
Input Voltage (V):  
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





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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  |
| RCR |     |     |     |     |  |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 |  | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 112 | 108 | 105 | 102 |  | 109 | 106 | 103 | 101 |  | 102 | 100 | 98  |  | 98  | 96  | 95  |  | 95  | 93  | 92  |
| 2   | 104 | 98  | 93  | 89  |  | 102 | 96  | 92  | 88  |  | 93  | 89  | 86  |  | 90  | 87  | 84  |  | 87  | 84  | 82  |
| 3   | 97  | 89  | 83  | 78  |  | 95  | 88  | 82  | 77  |  | 85  | 80  | 76  |  | 82  | 78  | 75  |  | 80  | 77  | 74  |
| 4   | 91  | 81  | 74  | 69  |  | 89  | 80  | 74  | 69  |  | 78  | 72  | 68  |  | 76  | 71  | 67  |  | 74  | 70  | 66  |
| 5   | 85  | 75  | 67  | 62  |  | 83  | 74  | 67  | 62  |  | 72  | 66  | 61  |  | 70  | 65  | 60  |  | 68  | 64  | 60  |
| 6   | 80  | 69  | 61  | 56  |  | 78  | 68  | 61  | 56  |  | 66  | 60  | 55  |  | 65  | 59  | 55  |  | 63  | 58  | 54  |
| 7   | 75  | 63  | 56  | 51  |  | 73  | 63  | 56  | 51  |  | 61  | 55  | 50  |  | 60  | 54  | 50  |  | 59  | 54  | 50  |
| 8   | 70  | 59  | 52  | 47  |  | 69  | 58  | 51  | 46  |  | 57  | 51  | 46  |  | 56  | 50  | 46  |  | 55  | 50  | 46  |
| 9   | 66  | 55  | 48  | 43  |  | 65  | 54  | 47  | 43  |  | 53  | 47  | 43  |  | 52  | 46  | 42  |  | 51  | 46  | 42  |
| 10  | 62  | 51  | 44  | 40  |  | 61  | 51  | 44  | 40  |  | 50  | 44  | 39  |  | 49  | 43  | 39  |  | 48  | 43  | 39  |

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

|     | 0°     | 90°    | 180°   |
|-----|--------|--------|--------|
| 0°  | 232837 | 232837 | 232837 |
| 5°  | 246338 | 230095 | 217765 |
| 10° | 255995 | 221978 | 200707 |
| 15° | 250880 | 211852 | 185271 |
| 20° | 242739 | 201728 | 170533 |
| 25° | 226416 | 187600 | 155565 |
| 30° | 204392 | 166021 | 139270 |
| 35° | 168359 | 142127 | 115541 |
| 40° | 137407 | 109696 | 88926  |
| 45° | 118062 | 83320  | 63957  |
| 50° | 106848 | 63422  | 40395  |
| 55° | 98326  | 45740  | 14602  |
| 60° | 94366  | 31262  | 2239   |
| 65° | 91165  | 21142  | 662    |
| 70° | 81616  | 14670  | 818    |
| 75° | 66881  | 7568   | 0      |
| 80° | 41841  | 3223   | 0      |
| 85° | 0      | 0      | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 226.1  | 6.5       |
| 10°-20°   | 609.1  | 17.6      |
| 20°-30°   | 813.4  | 23.5      |
| 30°-40°   | 772.1  | 22.3      |
| 40°-50°   | 533.7  | 15.4      |
| 50°-60°   | 294.9  | 8.5       |
| 60°-70°   | 146.4  | 4.2       |
| 70°-80°   | 57.7   | 1.7       |
| 80°-90°   | 5.5    | 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°    | 1648.6 | 47.7      |
| 0°-40°    | 2420.7 | 70.0      |
| 0°-60°    | 3249.4 | 93.9      |
| 0°-90°    | 3459.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3459.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 2413 | 2413 | 2413 | 2413 | 2413 |      |
| 5°  | 2543 | 2520 | 2376 | 2268 | 2248 | 243  |
| 15° | 2512 | 2436 | 2121 | 1913 | 1855 | 710  |
| 25° | 2127 | 2118 | 1762 | 1461 | 1461 | 970  |
| 35° | 1429 | 1580 | 1207 | 992  | 981  | 895  |
| 45° | 865  | 992  | 611  | 501  | 469  | 675  |
| 55° | 584  | 550  | 272  | 139  | 87   | 526  |
| 65° | 399  | 289  | 93   | 3    | 3    | 388  |
| 75° | 179  | 110  | 20   | 0    | 0    | 191  |
| 85° | 0    | 3    | 0    | 0    | 0    | 17   |
| 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°    | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 |
| 2.5°  | 2401.5 | 2468.1 | 2473.8 | 2468.1 | 2476.8 | 2473.8 | 2488.3 | 2473.8 | 2491.3 | 2465.2 | 2471.0 |
| 5°    | 2543.3 | 2517.3 | 2572.2 | 2543.3 | 2543.3 | 2540.5 | 2531.8 | 2528.8 | 2540.5 | 2502.9 | 2520.2 |
| 7.5°  | 2581.0 | 2618.6 | 2667.8 | 2607.0 | 2609.9 | 2609.9 | 2592.5 | 2586.7 | 2586.7 | 2517.3 | 2537.5 |
| 10°   | 2612.8 | 2589.6 | 2615.7 | 2592.5 | 2612.8 | 2609.9 | 2621.4 | 2583.8 | 2609.9 | 2569.4 | 2566.5 |
| 12.5° | 2586.7 | 2578.0 | 2612.8 | 2575.2 | 2563.6 | 2566.5 | 2552.1 | 2543.3 | 2552.1 | 2505.7 | 2502.9 |
| 15°   | 2511.5 | 2520.2 | 2572.2 | 2531.8 | 2526.0 | 2520.2 | 2502.9 | 2473.8 | 2497.1 | 2433.4 | 2436.3 |
| 17.5° | 2485.5 | 2471.0 | 2479.7 | 2444.9 | 2453.7 | 2447.9 | 2444.9 | 2419.0 | 2413.1 | 2372.6 | 2372.6 |
| 20°   | 2364.0 | 2395.7 | 2395.7 | 2372.6 | 2372.6 | 2369.8 | 2332.1 | 2355.3 | 2329.2 | 2317.6 | 2329.2 |
| 22.5° | 2280.0 | 2282.9 | 2282.9 | 2262.6 | 2265.6 | 2254.0 | 2233.7 | 2219.2 | 2233.7 | 2219.2 | 2196.1 |
| 25°   | 2126.7 | 2132.5 | 2167.2 | 2129.6 | 2123.8 | 2135.3 | 2118.0 | 2109.3 | 2106.4 | 2071.8 | 2118.0 |
| 27.5° | 1941.5 | 1999.3 | 1996.5 | 1982.0 | 1999.3 | 1976.2 | 1967.6 | 1970.4 | 1979.1 | 1976.2 | 1987.8 |
| 30°   | 1834.5 | 1843.1 | 1851.8 | 1840.3 | 1843.1 | 1834.5 | 1834.5 | 1837.3 | 1860.5 | 1851.8 | 1848.9 |
| 32.5° | 1617.4 | 1646.3 | 1669.6 | 1669.6 | 1672.4 | 1681.1 | 1678.2 | 1738.9 | 1753.4 | 1724.5 | 1718.8 |
| 35°   | 1429.3 | 1449.6 | 1469.8 | 1472.8 | 1510.4 | 1513.2 | 1516.2 | 1533.5 | 1574.0 | 1582.7 | 1579.8 |
| 37.5° | 1250.0 | 1270.2 | 1276.0 | 1302.0 | 1322.3 | 1342.5 | 1365.8 | 1388.9 | 1423.6 | 1452.5 | 1438.1 |
| 40°   | 1090.9 | 1099.5 | 1114.0 | 1125.5 | 1166.0 | 1166.0 | 1177.6 | 1223.9 | 1261.6 | 1284.7 | 1281.8 |
| 42.5° | 957.8  | 960.6  | 972.2  | 992.5  | 1030.1 | 1021.4 | 1030.1 | 1061.9 | 1116.8 | 1119.8 | 1151.6 |
| 45°   | 865.2  | 862.2  | 870.9  | 873.8  | 897.0  | 908.6  | 914.4  | 937.5  | 983.7  | 989.5  | 992.5  |
| 47.5° | 781.3  | 778.3  | 792.8  | 798.6  | 807.2  | 818.8  | 818.8  | 821.7  | 839.1  | 853.6  | 842.0  |
| 50°   | 711.8  | 711.8  | 711.8  | 717.6  | 732.1  | 729.1  | 732.1  | 743.6  | 752.3  | 746.5  | 743.6  |
| 52.5° | 636.5  | 648.1  | 656.8  | 659.8  | 662.6  | 662.6  | 665.5  | 659.8  | 656.8  | 648.1  | 630.7  |
| 55°   | 584.5  | 596.0  | 596.0  | 596.0  | 596.0  | 607.6  | 593.2  | 596.0  | 596.0  | 572.9  | 549.8  |
| 57.5° | 532.4  | 544.0  | 552.6  | 541.1  | 552.6  | 541.1  | 535.3  | 532.4  | 526.6  | 503.4  | 468.7  |
| 60°   | 489.0  | 494.8  | 491.9  | 489.0  | 494.8  | 486.1  | 480.3  | 468.7  | 463.0  | 431.1  | 408.0  |
| 62.5° | 439.8  | 442.7  | 445.6  | 439.8  | 434.1  | 431.1  | 419.5  | 402.2  | 390.6  | 364.6  | 344.3  |
| 65°   | 399.3  | 390.6  | 387.7  | 384.9  | 379.1  | 370.3  | 361.7  | 341.4  | 332.7  | 309.6  | 289.3  |
| 67.5° | 338.5  | 335.7  | 341.4  | 332.7  | 318.3  | 318.3  | 309.6  | 292.2  | 271.9  | 257.6  | 237.3  |
| 70°   | 289.3  | 286.5  | 280.7  | 271.9  | 269.1  | 257.6  | 257.6  | 237.3  | 231.5  | 205.4  | 188.1  |
| 72.5° | 237.3  | 237.3  | 228.5  | 219.9  | 211.2  | 205.4  | 202.6  | 188.1  | 179.4  | 164.9  | 150.4  |
| 75°   | 179.4  | 179.4  | 176.5  | 167.8  | 162.0  | 156.2  | 153.4  | 141.8  | 133.1  | 118.7  | 110.0  |
| 77.5° | 127.3  | 127.3  | 115.7  | 110.0  | 112.8  | 107.0  | 101.2  | 98.4   | 95.4   | 86.8   | 75.3   |
| 80°   | 75.3   | 72.3   | 63.7   | 66.5   | 63.7   | 63.7   | 60.8   | 57.8   | 52.0   | 46.3   | 40.5   |
| 82.5° | 20.3   | 23.1   | 23.1   | 23.1   | 26.1   | 20.3   | 20.3   | 20.3   | 23.1   | 23.1   | 14.5   |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 2.9    | 2.9    | 2.9    |
| 87.5° | 2.9    | 5.8    | 11.6   | 11.6   | 11.6   | 11.6   | 11.6   | 8.7    | 8.7    | 8.7    | 5.8    |
| 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°    | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 |
| 2.5°  | 2442.1 | 2439.2 | 2442.1 | 2421.8 | 2468.1 | 2433.4 | 2427.6 | 2421.8 | 2442.1 | 2421.8 | 2392.9 |
| 5°    | 2494.1 | 2465.2 | 2456.5 | 2447.9 | 2473.8 | 2433.4 | 2424.8 | 2427.6 | 2413.1 | 2375.6 | 2378.4 |
| 7.5°  | 2511.5 | 2485.5 | 2459.4 | 2404.5 | 2427.6 | 2419.0 | 2395.7 | 2378.4 | 2355.3 | 2323.4 | 2317.6 |
| 10°   | 2517.3 | 2488.3 | 2450.7 | 2433.4 | 2398.7 | 2387.1 | 2378.4 | 2349.5 | 2320.6 | 2265.6 | 2251.1 |
| 12.5° | 2499.9 | 2465.2 | 2419.0 | 2404.5 | 2378.4 | 2340.8 | 2320.6 | 2291.6 | 2265.6 | 2222.2 | 2190.3 |
| 15°   | 2424.8 | 2395.7 | 2381.3 | 2332.1 | 2320.6 | 2297.3 | 2256.9 | 2216.4 | 2178.8 | 2120.8 | 2103.5 |
| 17.5° | 2337.9 | 2326.4 | 2311.8 | 2274.2 | 2271.4 | 2248.3 | 2210.6 | 2175.8 | 2126.7 | 2037.0 | 2008.0 |
| 20°   | 2248.3 | 2248.3 | 2201.9 | 2187.5 | 2216.4 | 2170.0 | 2141.1 | 2109.3 | 2008.0 | 1964.6 | 1912.6 |
| 22.5° | 2181.7 | 2149.9 | 2123.8 | 2100.7 | 2103.5 | 2074.6 | 2034.1 | 1970.4 | 1932.8 | 1880.7 | 1820.0 |
| 25°   | 2051.5 | 2063.0 | 2005.2 | 1996.5 | 2005.2 | 1938.6 | 1918.4 | 1866.2 | 1811.3 | 1762.1 | 1715.8 |
| 27.5° | 1970.4 | 1938.6 | 1901.0 | 1869.2 | 1869.2 | 1843.1 | 1785.3 | 1773.7 | 1689.7 | 1643.5 | 1585.6 |
| 30°   | 1848.9 | 1825.8 | 1793.9 | 1747.7 | 1741.9 | 1721.6 | 1675.3 | 1646.3 | 1559.6 | 1490.1 | 1458.3 |
| 32.5° | 1695.5 | 1686.9 | 1660.8 | 1608.8 | 1591.4 | 1568.2 | 1510.4 | 1461.2 | 1420.7 | 1342.5 | 1305.0 |
| 35°   | 1585.6 | 1553.8 | 1498.8 | 1455.4 | 1440.9 | 1400.4 | 1354.1 | 1319.4 | 1276.0 | 1206.6 | 1157.4 |
| 37.5° | 1420.7 | 1388.9 | 1336.7 | 1284.7 | 1284.7 | 1244.2 | 1180.5 | 1145.8 | 1085.1 | 1044.5 | 1004.0 |
| 40°   | 1276.0 | 1235.5 | 1183.5 | 1122.7 | 1114.0 | 1056.1 | 1030.1 | 972.2  | 934.5  | 870.9  | 865.2  |
| 42.5° | 1114.0 | 1076.3 | 1030.1 | 983.7  | 949.0  | 920.1  | 853.6  | 810.2  | 769.7  | 737.9  | 729.1  |
| 45°   | 966.4  | 917.2  | 876.7  | 818.8  | 784.1  | 749.4  | 706.0  | 677.1  | 645.2  | 610.6  | 590.3  |
| 47.5° | 839.1  | 798.6  | 740.7  | 688.7  | 654.0  | 636.5  | 587.3  | 555.6  | 529.5  | 506.4  | 491.9  |
| 50°   | 708.9  | 659.8  | 627.9  | 570.0  | 564.2  | 523.7  | 483.3  | 457.2  | 442.7  | 422.5  | 402.2  |
| 52.5° | 610.6  | 564.2  | 520.8  | 477.5  | 454.2  | 439.8  | 402.2  | 376.1  | 355.9  | 341.4  | 329.9  |
| 55°   | 515.0  | 474.5  | 439.8  | 396.4  | 381.9  | 361.7  | 318.3  | 312.5  | 292.2  | 271.9  | 257.6  |
| 57.5° | 442.7  | 405.0  | 364.6  | 335.7  | 309.6  | 295.2  | 260.4  | 237.3  | 225.7  | 208.4  | 193.8  |
| 60°   | 376.1  | 335.7  | 303.8  | 269.1  | 257.6  | 237.3  | 211.2  | 191.0  | 176.5  | 162.0  | 147.6  |
| 62.5° | 315.4  | 280.7  | 246.0  | 217.0  | 199.6  | 188.1  | 167.8  | 150.4  | 136.0  | 124.5  | 112.8  |
| 65°   | 260.4  | 228.5  | 199.6  | 170.7  | 162.0  | 147.6  | 133.1  | 118.7  | 107.0  | 92.6   | 81.1   |
| 67.5° | 214.1  | 185.2  | 156.2  | 136.0  | 127.3  | 121.5  | 104.2  | 89.7   | 81.1   | 72.3   | 60.8   |
| 70°   | 167.8  | 147.6  | 124.5  | 107.0  | 98.4   | 89.7   | 78.1   | 69.5   | 57.8   | 52.0   | 43.4   |
| 72.5° | 130.2  | 112.8  | 92.6   | 78.1   | 72.3   | 66.5   | 55.0   | 46.3   | 40.5   | 34.7   | 28.9   |
| 75°   | 92.6   | 78.1   | 66.5   | 52.0   | 49.2   | 46.3   | 37.6   | 31.9   | 26.1   | 20.3   | 17.3   |
| 77.5° | 63.7   | 52.0   | 40.5   | 34.7   | 31.9   | 26.1   | 23.1   | 17.3   | 14.5   | 11.6   | 8.7    |
| 80°   | 34.7   | 26.1   | 20.3   | 17.3   | 14.5   | 11.6   | 11.6   | 8.7    | 5.8    | 5.8    | 2.9    |
| 82.5° | 11.6   | 8.7    | 5.8    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 0.0    | 2.9    |
| 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° | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 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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CATALOG NUMBER: LD4C50D010 EX4C509030 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

|       | 100°   | 105°   | 110°   | 112.5° | 115°   | 120°   | 125°   | 130°   | 135°   | 140°   | 145°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 |
| 2.5°  | 2410.2 | 2378.4 | 2387.1 | 2387.1 | 2381.3 | 2381.3 | 2375.6 | 2366.8 | 2369.8 | 2352.3 | 2314.8 |
| 5°    | 2384.2 | 2343.7 | 2337.9 | 2343.7 | 2320.6 | 2314.8 | 2303.2 | 2320.6 | 2268.4 | 2288.7 | 2265.6 |
| 7.5°  | 2309.0 | 2271.4 | 2262.6 | 2282.9 | 2254.0 | 2236.6 | 2233.7 | 2256.9 | 2210.6 | 2187.5 | 2161.4 |
| 10°   | 2225.0 | 2210.6 | 2184.5 | 2170.0 | 2161.4 | 2164.3 | 2141.1 | 2112.2 | 2103.5 | 2097.7 | 2074.6 |
| 12.5° | 2149.9 | 2118.0 | 2094.9 | 2077.5 | 2071.8 | 2071.8 | 2034.1 | 2028.3 | 2002.3 | 1996.5 | 1961.8 |
| 15°   | 2060.1 | 2022.6 | 2008.0 | 1984.9 | 1964.6 | 1976.2 | 1932.8 | 1921.2 | 1912.6 | 1875.0 | 1880.7 |
| 17.5° | 1982.0 | 1941.5 | 1906.8 | 1892.3 | 1875.0 | 1857.6 | 1817.0 | 1825.8 | 1805.5 | 1805.5 | 1753.4 |
| 20°   | 1880.7 | 1837.3 | 1811.3 | 1782.3 | 1782.3 | 1759.2 | 1730.3 | 1733.1 | 1707.1 | 1681.1 | 1634.8 |
| 22.5° | 1773.7 | 1727.4 | 1695.5 | 1684.0 | 1655.0 | 1649.3 | 1614.6 | 1605.8 | 1571.2 | 1574.0 | 1533.5 |
| 25°   | 1660.8 | 1614.6 | 1571.2 | 1574.0 | 1548.0 | 1536.5 | 1516.2 | 1475.7 | 1461.2 | 1443.9 | 1432.3 |
| 27.5° | 1527.7 | 1495.9 | 1458.3 | 1455.4 | 1406.2 | 1409.1 | 1383.1 | 1371.5 | 1336.7 | 1345.5 | 1319.4 |
| 30°   | 1406.2 | 1360.0 | 1325.2 | 1316.6 | 1296.3 | 1290.5 | 1250.0 | 1232.6 | 1238.4 | 1215.2 | 1200.8 |
| 32.5° | 1281.8 | 1212.4 | 1197.9 | 1180.5 | 1169.0 | 1154.5 | 1125.5 | 1137.1 | 1111.0 | 1116.8 | 1093.7 |
| 35°   | 1116.8 | 1087.9 | 1050.3 | 1050.3 | 1038.7 | 1027.1 | 1007.0 | 1018.5 | 992.5  | 980.9  | 957.8  |
| 37.5° | 977.9  | 952.0  | 914.4  | 925.9  | 905.6  | 888.3  | 870.9  | 873.8  | 850.6  | 847.8  | 824.6  |
| 40°   | 827.5  | 813.0  | 787.1  | 787.1  | 772.5  | 772.5  | 763.8  | 755.2  | 740.7  | 723.3  | 697.3  |
| 42.5° | 685.7  | 674.1  | 662.6  | 665.5  | 645.2  | 662.6  | 639.5  | 654.0  | 607.6  | 604.8  | 587.3  |
| 45°   | 581.5  | 555.6  | 558.4  | 546.8  | 535.3  | 541.1  | 520.8  | 526.6  | 500.6  | 494.8  | 477.5  |
| 47.5° | 471.7  | 463.0  | 445.6  | 439.8  | 439.8  | 431.1  | 422.5  | 419.5  | 408.0  | 393.5  | 370.3  |
| 50°   | 387.7  | 355.9  | 350.1  | 341.4  | 335.7  | 335.7  | 324.1  | 306.8  | 309.6  | 295.2  | 271.9  |
| 52.5° | 303.8  | 277.7  | 266.2  | 263.3  | 251.8  | 246.0  | 231.5  | 219.9  | 211.2  | 205.4  | 191.0  |
| 55°   | 234.3  | 211.2  | 196.8  | 196.8  | 179.4  | 179.4  | 159.2  | 150.4  | 138.9  | 127.3  | 118.7  |
| 57.5° | 176.5  | 164.9  | 150.4  | 138.9  | 133.1  | 118.7  | 107.0  | 92.6   | 83.9   | 66.5   | 55.0   |
| 60°   | 133.1  | 121.5  | 107.0  | 98.4   | 92.6   | 78.1   | 63.7   | 52.0   | 31.9   | 26.1   | 23.1   |
| 62.5° | 98.4   | 86.8   | 72.3   | 66.5   | 60.8   | 49.2   | 34.7   | 17.3   | 8.7    | 8.7    | 8.7    |
| 65°   | 72.3   | 57.8   | 46.3   | 40.5   | 34.7   | 26.1   | 11.6   | 5.8    | 2.9    | 2.9    | 2.9    |
| 67.5° | 49.2   | 37.6   | 26.1   | 23.1   | 17.3   | 8.7    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    |
| 70°   | 31.9   | 23.1   | 11.6   | 8.7    | 5.8    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    |
| 72.5° | 20.3   | 11.6   | 5.8    | 2.9    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 11.6   | 5.8    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5° | 5.8    | 2.9    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 2.9    | 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    | 2.9    | 2.9    | 2.9    |
| 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: P563863

CATALOG NUMBER: LD4C50D010 EX4C509030 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

|       | 150°   | 155°   | 157.5° | 160°   | 165°   | 170°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 | 2413.1 |
| 2.5°  | 2355.3 | 2335.0 | 2346.5 | 2320.6 | 2332.1 | 2352.3 | 2337.9 | 2343.7 |
| 5°    | 2274.2 | 2262.6 | 2248.3 | 2210.6 | 2239.5 | 2262.6 | 2251.1 | 2248.3 |
| 7.5°  | 2187.5 | 2146.9 | 2167.2 | 2155.6 | 2149.9 | 2173.0 | 2146.9 | 2175.8 |
| 10°   | 2097.7 | 2068.8 | 2066.0 | 2045.7 | 2045.7 | 2063.0 | 2066.0 | 2048.5 |
| 12.5° | 1964.6 | 1950.2 | 1950.2 | 1947.3 | 1944.3 | 1961.8 | 1964.6 | 1956.0 |
| 15°   | 1869.2 | 1863.4 | 1848.9 | 1846.1 | 1828.7 | 1854.7 | 1857.6 | 1854.7 |
| 17.5° | 1753.4 | 1756.3 | 1741.9 | 1741.9 | 1753.4 | 1762.1 | 1738.9 | 1762.1 |
| 20°   | 1675.3 | 1660.8 | 1655.0 | 1629.0 | 1643.5 | 1658.0 | 1658.0 | 1660.8 |
| 22.5° | 1562.4 | 1539.3 | 1548.0 | 1533.5 | 1524.8 | 1545.1 | 1545.1 | 1553.8 |
| 25°   | 1435.1 | 1435.1 | 1440.9 | 1432.3 | 1438.1 | 1449.6 | 1440.9 | 1461.2 |
| 27.5° | 1313.6 | 1325.2 | 1325.2 | 1313.6 | 1319.4 | 1354.1 | 1368.6 | 1345.5 |
| 30°   | 1200.8 | 1203.6 | 1212.4 | 1206.6 | 1223.9 | 1235.5 | 1232.6 | 1250.0 |
| 32.5° | 1073.5 | 1087.9 | 1093.7 | 1085.1 | 1090.9 | 1116.8 | 1102.4 | 1099.5 |
| 35°   | 975.1  | 949.0  | 946.2  | 949.0  | 960.6  | 966.4  | 960.6  | 980.9  |
| 37.5° | 833.3  | 824.6  | 813.0  | 816.0  | 824.6  | 836.3  | 842.0  | 856.4  |
| 40°   | 697.3  | 685.7  | 685.7  | 682.9  | 674.1  | 706.0  | 706.0  | 706.0  |
| 42.5° | 578.7  | 575.8  | 561.4  | 561.4  | 572.9  | 581.5  | 575.8  | 596.0  |
| 45°   | 474.5  | 463.0  | 454.2  | 454.2  | 463.0  | 463.0  | 471.7  | 468.7  |
| 47.5° | 373.3  | 361.7  | 364.6  | 355.9  | 364.6  | 376.1  | 361.7  | 364.6  |
| 50°   | 280.7  | 280.7  | 274.9  | 280.7  | 277.7  | 280.7  | 274.9  | 269.1  |
| 52.5° | 191.0  | 217.0  | 219.9  | 208.4  | 182.3  | 159.2  | 144.6  | 156.2  |
| 55°   | 110.0  | 98.4   | 98.4   | 95.4   | 89.7   | 86.8   | 78.1   | 86.8   |
| 57.5° | 55.0   | 49.2   | 49.2   | 49.2   | 46.3   | 43.4   | 37.6   | 37.6   |
| 60°   | 23.1   | 20.3   | 20.3   | 17.3   | 14.5   | 11.6   | 8.7    | 11.6   |
| 62.5° | 8.7    | 5.8    | 5.8    | 5.8    | 5.8    | 5.8    | 5.8    | 5.8    |
| 65°   | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    |
| 67.5° | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    |
| 70°   | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    | 2.9    |
| 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)