

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: io LED

Report Number: P170855

Luminaire Tested: **LDA4A13835D010TE LAR25NF 4LLWW1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P170855  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26102)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA4A13835D010TE LAR25NF 4LLWW1  
Description: PORTFOLIO 4" Lensed Wall Wash, Self-flanged, 25° Narrow Flood Optic,  
at 30° tilt  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1240.6 lumens  
Efficiency: N/A  
Efficacy: 55.7 lumens/watt  
Spacing Criteria (0/90/45): 2.11 / 1.09 / 1.54  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

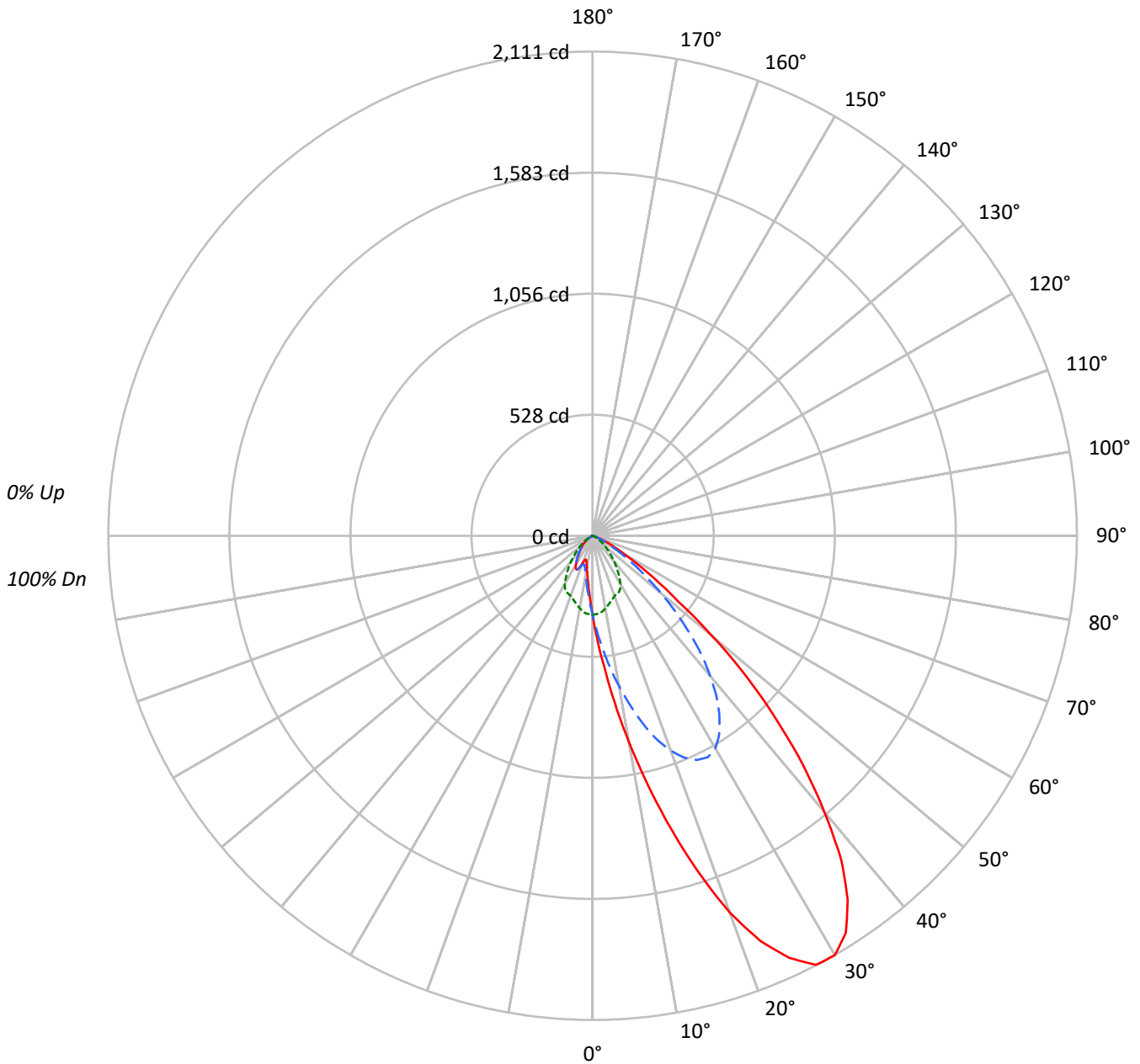
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 |  |  |  |  | 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  | 88  | 102 | 96  | 91  | 87  | 93  | 89  | 85  | 90  | 86  | 84  | 87  | 84  | 82  | 80  |    |    |    |  |  |  |  |   |
| 3   | 97  | 89  | 82  | 77  | 95  | 87  | 81  | 76  | 84  | 79  | 75  | 82  | 77  | 74  | 79  | 76  | 73  | 71  |    |    |    |  |  |  |  |   |
| 4   | 90  | 80  | 73  | 67  | 88  | 79  | 72  | 67  | 77  | 71  | 66  | 74  | 69  | 65  | 72  | 68  | 65  | 63  |    |    |    |  |  |  |  |   |
| 5   | 83  | 73  | 65  | 60  | 82  | 72  | 65  | 59  | 70  | 63  | 59  | 68  | 62  | 58  | 66  | 61  | 58  | 56  |    |    |    |  |  |  |  |   |
| 6   | 78  | 66  | 58  | 53  | 76  | 65  | 58  | 53  | 64  | 57  | 52  | 62  | 56  | 52  | 61  | 55  | 52  | 50  |    |    |    |  |  |  |  |   |
| 7   | 72  | 60  | 53  | 47  | 71  | 60  | 52  | 47  | 58  | 52  | 47  | 57  | 51  | 47  | 56  | 50  | 46  | 45  |    |    |    |  |  |  |  |   |
| 8   | 67  | 55  | 48  | 43  | 66  | 55  | 47  | 42  | 53  | 47  | 42  | 52  | 46  | 42  | 51  | 46  | 42  | 40  |    |    |    |  |  |  |  |   |
| 9   | 63  | 51  | 43  | 38  | 62  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 38  | 36  |    |    |    |  |  |  |  |   |
| 10  | 59  | 47  | 40  | 35  | 58  | 46  | 39  | 35  | 45  | 39  | 35  | 45  | 39  | 34  | 44  | 38  | 34  | 33  |    |    |    |  |  |  |  |   |

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

|     | 0°     | 90°   | 180°  |
|-----|--------|-------|-------|
| 0°  | 42431  | 42431 | 42431 |
| 5°  | 70576  | 42085 | 26497 |
| 10° | 114277 | 40242 | 17898 |
| 15° | 168981 | 38143 | 13919 |
| 20° | 229550 | 36675 | 16421 |
| 25° | 276358 | 36814 | 22306 |
| 30° | 300721 | 34496 | 20809 |
| 35° | 291909 | 29061 | 16654 |
| 40° | 252860 | 23396 | 13654 |
| 45° | 197184 | 18019 | 11687 |
| 50° | 130755 | 13471 | 8981  |
| 55° | 72922  | 9892  | 5376  |
| 60° | 38434  | 6562  | 2196  |
| 65° | 20751  | 3298  | 233   |
| 70° | 9918   | 1154  | 289   |
| 75° | 3479   | 763   | 381   |
| 80° | 1137   | 1137  | 0     |
| 85° | 3397   | 2264  | 0     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 36.7   | 3.0       |
| 10°-20°   | 144.8  | 11.7      |
| 20°-30°   | 297.8  | 24.0      |
| 30°-40°   | 355.7  | 28.7      |
| 40°-50°   | 262.7  | 21.2      |
| 50°-60°   | 110.5  | 8.9       |
| 60°-70°   | 27.2   | 2.2       |
| 70°-80°   | 3.7    | 0.3       |
| 80°-90°   | 1.5    | 0.1       |
| 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°    | 479.3  | 38.6      |
| 0°-40°    | 835.0  | 67.3      |
| 0°-60°    | 1208.2 | 97.4      |
| 0°-90°    | 1240.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1240.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90° | 135° | 180° | Flux |
|-----|------|------|-----|------|------|------|
| 0°  | 344  | 344  | 344 | 344  | 344  |      |
| 5°  | 570  | 491  | 340 | 244  | 214  | 65   |
| 15° | 1323 | 849  | 299 | 136  | 109  | 388  |
| 25° | 2031 | 1079 | 270 | 163  | 164  | 929  |
| 35° | 1939 | 964  | 193 | 116  | 111  | 1189 |
| 45° | 1130 | 594  | 103 | 68   | 67   | 868  |
| 55° | 339  | 220  | 46  | 29   | 25   | 324  |
| 65° | 71   | 48   | 11  | 2    | 1    | 77   |
| 75° | 7    | 4    | 2   | 1    | 1    | 10   |
| 85° | 2    | 2    | 2   | 1    | 0    | 2    |
| 90° | 0    | 0    | 0   | 0    | 0    |      |



TEST NUMBER: P170855

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 2.5°   | 5°     | 7.5°   | 10°    | 12.5°  | 15°    | 17.5°  | 20°    | 22.5°  | 25°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  |
| 2.5°  | 447.3  | 441.6  | 441.6  | 443.3  | 448.1  | 444.1  | 440.8  | 437.6  | 440.8  | 433.6  | 436.0  |
| 5°    | 570.0  | 569.2  | 569.2  | 562.8  | 568.4  | 569.2  | 562.8  | 557.1  | 558.7  | 548.2  | 548.2  |
| 7.5°  | 731.5  | 726.7  | 725.0  | 716.2  | 722.6  | 721.8  | 711.3  | 701.6  | 701.6  | 684.7  | 680.6  |
| 10°   | 912.4  | 905.9  | 902.7  | 891.4  | 897.0  | 893.8  | 878.5  | 863.9  | 859.9  | 835.7  | 826.8  |
| 12.5° | 1111.8 | 1107.8 | 1102.9 | 1088.4 | 1093.2 | 1086.8 | 1065.0 | 1044.0 | 1035.1 | 1002.8 | 987.5  |
| 15°   | 1323.3 | 1329.8 | 1321.7 | 1304.8 | 1308.0 | 1296.7 | 1268.4 | 1239.4 | 1225.6 | 1182.0 | 1159.4 |
| 17.5° | 1541.3 | 1549.4 | 1540.5 | 1521.1 | 1520.3 | 1505.0 | 1466.2 | 1430.7 | 1410.5 | 1354.8 | 1324.9 |
| 20°   | 1748.8 | 1751.3 | 1740.0 | 1719.0 | 1714.1 | 1693.1 | 1646.3 | 1596.2 | 1576.9 | 1508.2 | 1470.3 |
| 22.5° | 1911.9 | 1920.8 | 1907.1 | 1891.7 | 1876.4 | 1849.8 | 1794.9 | 1740.0 | 1712.5 | 1634.2 | 1588.2 |
| 25°   | 2030.6 | 2050.8 | 2034.7 | 2016.9 | 1999.9 | 1968.4 | 1907.1 | 1848.1 | 1814.2 | 1727.0 | 1674.6 |
| 27.5° | 2108.9 | 2128.3 | 2110.6 | 2090.4 | 2072.6 | 2036.3 | 1969.3 | 1912.7 | 1871.6 | 1776.3 | 1719.8 |
| 30°   | 2111.4 | 2134.8 | 2116.2 | 2094.4 | 2077.4 | 2041.1 | 1972.5 | 1914.4 | 1868.3 | 1773.1 | 1714.1 |
| 32.5° | 2053.2 | 2071.8 | 2053.2 | 2034.7 | 2015.3 | 1980.6 | 1911.9 | 1856.2 | 1807.8 | 1716.5 | 1657.6 |
| 35°   | 1938.6 | 1954.7 | 1936.2 | 1914.4 | 1900.6 | 1869.9 | 1804.5 | 1751.3 | 1702.8 | 1618.8 | 1567.2 |
| 37.5° | 1780.3 | 1794.9 | 1777.9 | 1765.8 | 1745.6 | 1718.2 | 1658.4 | 1610.8 | 1564.7 | 1488.9 | 1442.8 |
| 40°   | 1570.4 | 1601.1 | 1584.9 | 1576.9 | 1558.3 | 1534.9 | 1482.4 | 1440.4 | 1398.4 | 1332.2 | 1294.3 |
| 42.5° | 1360.5 | 1389.5 | 1375.0 | 1369.4 | 1353.2 | 1333.0 | 1289.4 | 1253.9 | 1215.1 | 1160.2 | 1127.9 |
| 45°   | 1130.4 | 1161.0 | 1147.3 | 1144.9 | 1131.2 | 1115.8 | 1069.0 | 1050.4 | 1016.5 | 964.8  | 949.5  |
| 47.5° | 914.0  | 919.6  | 906.7  | 907.5  | 897.8  | 887.3  | 849.4  | 838.1  | 821.1  | 781.6  | 763.8  |
| 50°   | 681.4  | 685.5  | 675.0  | 678.2  | 671.8  | 665.3  | 639.5  | 633.8  | 623.3  | 596.7  | 586.2  |
| 52.5° | 469.1  | 487.7  | 480.4  | 483.6  | 480.4  | 478.0  | 467.5  | 457.8  | 453.0  | 436.0  | 431.2  |
| 55°   | 339.1  | 340.7  | 335.1  | 338.3  | 335.9  | 335.1  | 328.6  | 323.0  | 320.5  | 310.0  | 308.4  |
| 57.5° | 235.0  | 236.6  | 236.6  | 235.0  | 234.1  | 232.5  | 228.5  | 225.3  | 223.7  | 221.2  | 216.4  |
| 60°   | 155.8  | 162.3  | 159.9  | 161.5  | 160.7  | 160.7  | 157.4  | 155.0  | 154.2  | 149.4  | 149.4  |
| 62.5° | 106.6  | 110.6  | 109.0  | 109.8  | 109.0  | 109.0  | 106.6  | 105.0  | 105.0  | 104.2  | 101.7  |
| 65°   | 71.1   | 73.5   | 71.9   | 72.7   | 72.7   | 72.7   | 71.1   | 69.4   | 69.4   | 68.6   | 67.0   |
| 67.5° | 45.2   | 46.8   | 46.0   | 46.8   | 46.0   | 46.8   | 45.2   | 44.4   | 43.6   | 43.6   | 42.8   |
| 70°   | 27.5   | 28.3   | 27.5   | 28.3   | 27.5   | 27.5   | 26.6   | 26.6   | 25.8   | 25.0   | 25.0   |
| 72.5° | 14.5   | 15.3   | 15.3   | 15.3   | 15.3   | 15.3   | 14.5   | 13.7   | 13.7   | 13.7   | 12.9   |
| 75°   | 7.3    | 7.3    | 7.3    | 7.3    | 7.3    | 7.3    | 7.3    | 7.3    | 6.5    | 6.5    | 6.5    |
| 77.5° | 3.2    | 3.2    | 3.2    | 3.2    | 4.0    | 3.2    | 3.2    | 3.2    | 3.2    | 3.2    | 3.2    |
| 80°   | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    |
| 82.5° | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    |
| 85°   | 2.4    | 2.4    | 2.4    | 2.4    | 2.4    | 2.4    | 3.2    | 3.2    | 3.2    | 3.2    | 2.4    |
| 87.5° | 3.2    | 3.2    | 3.2    | 3.2    | 3.2    | 3.2    | 3.2    | 4.0    | 4.0    | 3.2    | 3.2    |
| 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: P170855

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**CANDELA DISTRIBUTION (continued):**

|       | 27.5°  | 30°    | 32.5°  | 35°    | 37.5°  | 40°    | 42.5°  | 45°    | 47.5°  | 50°   | 52.5° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| 0°    | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  | 344.0  | 344.0 | 344.0 |
| 2.5°  | 429.5  | 425.5  | 423.9  | 420.7  | 416.6  | 414.2  | 411.8  | 412.6  | 406.9  | 402.9 | 397.2 |
| 5°    | 537.7  | 528.8  | 524.0  | 516.7  | 507.9  | 500.6  | 494.1  | 490.9  | 480.4  | 473.1 | 457.8 |
| 7.5°  | 665.3  | 650.0  | 640.3  | 627.4  | 612.0  | 599.1  | 586.2  | 577.3  | 561.1  | 547.4 | 524.0 |
| 10°   | 805.0  | 781.6  | 764.6  | 745.2  | 721.8  | 700.8  | 681.4  | 665.3  | 641.1  | 620.1 | 589.4 |
| 12.5° | 957.6  | 924.5  | 900.3  | 872.0  | 838.9  | 809.8  | 775.1  | 756.5  | 723.4  | 694.4 | 654.8 |
| 15°   | 1119.9 | 1076.3 | 1042.4 | 1003.6 | 960.0  | 921.2  | 876.8  | 849.4  | 805.8  | 768.6 | 719.4 |
| 17.5° | 1275.7 | 1220.8 | 1176.4 | 1127.1 | 1073.0 | 1023.0 | 970.5  | 931.7  | 878.5  | 832.4 | 773.5 |
| 20°   | 1411.3 | 1345.9 | 1291.8 | 1232.1 | 1168.3 | 1106.9 | 1049.6 | 997.9  | 935.8  | 881.7 | 814.7 |
| 22.5° | 1522.0 | 1446.1 | 1383.9 | 1314.5 | 1241.0 | 1171.5 | 1106.1 | 1047.2 | 976.1  | 916.4 | 842.9 |
| 25°   | 1601.9 | 1518.7 | 1449.3 | 1372.6 | 1291.8 | 1212.7 | 1143.3 | 1078.7 | 1001.2 | 937.4 | 859.1 |
| 27.5° | 1643.9 | 1555.9 | 1482.4 | 1400.0 | 1314.5 | 1232.1 | 1157.0 | 1088.4 | 1006.8 | 939.8 | 859.1 |
| 30°   | 1636.6 | 1547.0 | 1471.1 | 1386.3 | 1299.9 | 1217.6 | 1139.2 | 1070.6 | 986.6  | 918.8 | 838.1 |
| 32.5° | 1580.9 | 1492.9 | 1418.6 | 1336.3 | 1251.5 | 1171.5 | 1093.2 | 1027.0 | 943.0  | 876.8 | 798.5 |
| 35°   | 1488.9 | 1405.7 | 1335.4 | 1257.1 | 1177.2 | 1102.1 | 1031.1 | 964.0  | 883.3  | 820.3 | 746.8 |
| 37.5° | 1369.4 | 1293.5 | 1229.7 | 1157.0 | 1083.5 | 1015.7 | 945.5  | 888.1  | 816.3  | 757.3 | 685.5 |
| 40°   | 1226.4 | 1159.4 | 1102.9 | 1038.3 | 972.1  | 913.2  | 854.2  | 798.5  | 728.3  | 675.8 | 614.4 |
| 42.5° | 1069.0 | 1011.7 | 963.2  | 906.7  | 849.4  | 799.3  | 748.5  | 700.0  | 641.9  | 594.2 | 536.9 |
| 45°   | 899.4  | 851.0  | 811.4  | 766.2  | 718.6  | 671.8  | 634.6  | 594.2  | 540.2  | 504.6 | 456.2 |
| 47.5° | 724.2  | 687.1  | 657.2  | 622.5  | 584.6  | 555.5  | 520.0  | 487.7  | 448.1  | 415.0 | 375.4 |
| 50°   | 557.9  | 532.1  | 511.1  | 486.9  | 459.4  | 432.8  | 411.8  | 386.7  | 356.9  | 330.2 | 298.7 |
| 52.5° | 412.6  | 395.6  | 382.7  | 366.6  | 348.0  | 334.3  | 314.9  | 296.3  | 273.7  | 253.5 | 229.3 |
| 55°   | 295.5  | 285.8  | 277.7  | 268.1  | 255.1  | 243.0  | 233.3  | 220.4  | 204.3  | 188.9 | 171.2 |
| 57.5° | 212.3  | 201.9  | 201.0  | 190.5  | 185.7  | 176.8  | 167.9  | 158.3  | 146.9  | 136.5 | 123.5 |
| 60°   | 146.9  | 139.7  | 136.5  | 132.4  | 126.8  | 121.1  | 117.1  | 110.6  | 102.5  | 95.3  | 85.6  |
| 62.5° | 99.3   | 94.5   | 92.9   | 91.2   | 86.4   | 84.0   | 79.1   | 75.1   | 69.4   | 63.8  | 57.3  |
| 65°   | 65.4   | 62.2   | 60.6   | 58.1   | 55.7   | 54.1   | 51.7   | 48.4   | 43.6   | 40.4  | 36.3  |
| 67.5° | 41.2   | 38.8   | 37.1   | 36.3   | 33.9   | 33.1   | 30.7   | 29.1   | 25.8   | 24.2  | 21.8  |
| 70°   | 23.4   | 22.6   | 21.0   | 21.0   | 19.4   | 17.8   | 17.0   | 15.3   | 14.5   | 12.9  | 12.1  |
| 72.5° | 12.1   | 12.1   | 11.3   | 10.5   | 9.7    | 9.7    | 8.9    | 8.1    | 7.3    | 6.5   | 6.5   |
| 75°   | 5.7    | 5.7    | 5.7    | 4.8    | 4.8    | 4.8    | 4.0    | 4.0    | 4.0    | 3.2   | 3.2   |
| 77.5° | 3.2    | 2.4    | 2.4    | 2.4    | 2.4    | 2.4    | 2.4    | 2.4    | 2.4    | 1.6   | 1.6   |
| 80°   | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6   | 1.6   |
| 82.5° | 1.6    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8   | 0.8   |
| 85°   | 2.4    | 1.6    | 1.6    | 1.6    | 1.6    | 2.4    | 2.4    | 2.4    | 2.4    | 2.4   | 2.4   |
| 87.5° | 2.4    | 2.4    | 3.2    | 3.2    | 3.2    | 3.2    | 3.2    | 3.2    | 3.2    | 3.2   | 3.2   |
| 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: P170855

CATALOG NUMBER: LDA4A13835D010TE LAR25NF 4LLWW1

**CANDELA DISTRIBUTION (continued):**

|       | 55°   | 57.5° | 60°   | 62.5° | 65°   | 67.5° | 70°   | 72.5° | 75°   | 77.5° | 80°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 344.0 | 344.0 | 344.0 | 344.0 | 344.0 | 344.0 | 344.0 | 344.0 | 344.0 | 344.0 | 344.0 |
| 2.5°  | 393.2 | 391.6 | 387.6 | 386.7 | 377.9 | 376.2 | 371.4 | 364.1 | 358.5 | 356.9 | 358.5 |
| 5°    | 452.1 | 444.9 | 432.8 | 430.3 | 415.8 | 411.0 | 400.5 | 389.2 | 379.5 | 373.8 | 371.4 |
| 7.5°  | 512.7 | 500.6 | 482.8 | 473.9 | 453.0 | 442.5 | 427.1 | 411.0 | 395.6 | 385.1 | 378.7 |
| 10°   | 570.8 | 551.5 | 519.2 | 511.9 | 486.1 | 469.1 | 448.1 | 426.3 | 406.9 | 392.4 | 381.9 |
| 12.5° | 625.7 | 602.3 | 569.2 | 549.0 | 515.1 | 493.3 | 466.7 | 440.0 | 415.8 | 396.4 | 381.9 |
| 15°   | 682.3 | 651.6 | 610.4 | 582.1 | 543.4 | 514.3 | 482.0 | 451.3 | 423.1 | 398.9 | 381.1 |
| 17.5° | 729.1 | 691.1 | 642.7 | 608.8 | 563.6 | 528.8 | 491.7 | 456.2 | 425.5 | 398.0 | 377.9 |
| 20°   | 763.8 | 719.4 | 664.5 | 624.9 | 574.9 | 536.1 | 495.7 | 457.0 | 423.1 | 393.2 | 371.4 |
| 22.5° | 787.2 | 736.4 | 676.6 | 633.0 | 580.5 | 538.5 | 494.9 | 454.6 | 419.8 | 389.2 | 365.8 |
| 25°   | 798.5 | 743.6 | 681.4 | 634.6 | 579.7 | 536.1 | 490.9 | 449.7 | 414.2 | 382.7 | 360.1 |
| 27.5° | 796.9 | 738.8 | 675.0 | 625.7 | 570.0 | 524.8 | 478.8 | 437.6 | 402.9 | 371.4 | 348.0 |
| 30°   | 773.5 | 716.2 | 651.6 | 601.5 | 546.6 | 501.4 | 455.4 | 415.0 | 381.1 | 348.8 | 327.0 |
| 32.5° | 737.2 | 678.2 | 615.2 | 559.5 | 512.7 | 468.3 | 424.7 | 383.5 | 351.2 | 319.7 | 298.7 |
| 35°   | 687.9 | 631.4 | 570.8 | 523.2 | 472.3 | 429.5 | 387.6 | 348.8 | 318.1 | 287.4 | 268.1 |
| 37.5° | 630.6 | 576.5 | 520.8 | 471.5 | 427.1 | 387.6 | 348.0 | 313.3 | 282.6 | 255.1 | 236.6 |
| 40°   | 564.4 | 514.3 | 463.4 | 421.5 | 377.9 | 341.5 | 305.2 | 271.3 | 246.3 | 221.2 | 205.1 |
| 42.5° | 492.5 | 448.1 | 402.1 | 365.8 | 326.2 | 293.9 | 259.2 | 235.0 | 210.7 | 188.1 | 175.2 |
| 45°   | 417.4 | 378.7 | 339.9 | 306.8 | 274.5 | 246.3 | 216.4 | 193.8 | 175.2 | 156.6 | 145.3 |
| 47.5° | 343.1 | 310.0 | 278.6 | 251.9 | 223.7 | 200.2 | 179.2 | 159.1 | 141.3 | 126.0 | 117.1 |
| 50°   | 268.1 | 246.3 | 221.2 | 199.4 | 176.8 | 157.4 | 138.1 | 123.5 | 109.8 | 98.5  | 92.9  |
| 52.5° | 209.1 | 188.9 | 168.7 | 151.0 | 134.8 | 118.7 | 105.8 | 93.7  | 84.0  | 76.7  | 72.7  |
| 55°   | 155.8 | 139.7 | 124.3 | 110.6 | 97.7  | 87.2  | 78.3  | 71.1  | 64.6  | 58.9  | 57.3  |
| 57.5° | 111.4 | 99.3  | 88.8  | 78.3  | 70.2  | 63.8  | 58.1  | 53.3  | 49.3  | 45.2  | 44.4  |
| 60°   | 77.5  | 68.6  | 62.2  | 55.7  | 50.9  | 46.0  | 42.8  | 39.6  | 36.3  | 33.9  | 33.1  |
| 62.5° | 51.7  | 46.8  | 42.0  | 38.8  | 36.3  | 32.3  | 30.7  | 28.3  | 26.6  | 24.2  | 23.4  |
| 65°   | 33.1  | 29.9  | 27.5  | 25.0  | 23.4  | 21.8  | 20.2  | 18.6  | 17.0  | 15.3  | 15.3  |
| 67.5° | 20.2  | 17.8  | 17.0  | 15.3  | 13.7  | 12.9  | 12.1  | 10.5  | 9.7   | 9.7   | 8.9   |
| 70°   | 11.3  | 9.7   | 8.9   | 8.1   | 7.3   | 7.3   | 6.5   | 5.7   | 5.7   | 4.8   | 4.8   |
| 72.5° | 5.7   | 5.7   | 4.8   | 4.8   | 4.0   | 4.0   | 3.2   | 3.2   | 3.2   | 2.4   | 2.4   |
| 75°   | 3.2   | 3.2   | 2.4   | 2.4   | 2.4   | 2.4   | 2.4   | 2.4   | 1.6   | 1.6   | 1.6   |
| 77.5° | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   |
| 80°   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   |
| 82.5° | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   |
| 85°   | 2.4   | 2.4   | 2.4   | 2.4   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   |
| 87.5° | 2.4   | 2.4   | 2.4   | 2.4   | 2.4   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6   |
| 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: P170855

CATALOG NUMBER: LDA4A13835D010TE LAR25NF 4LLWW1

**CANDELA DISTRIBUTION (continued):**

|       | 82.5° | 85°   | 87.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  |
|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0°    | 344.0 | 344.0 | 344.0 | 344.0 | 344.0  | 344.0 | 344.0  | 344.0 |
| 2.5°  | 352.0 | 344.0 | 342.3 | 342.3 | 308.4  | 288.2 | 272.9  | 268.9 |
| 5°    | 360.1 | 348.8 | 343.1 | 339.9 | 279.4  | 243.8 | 220.4  | 214.0 |
| 7.5°  | 364.1 | 348.0 | 339.1 | 331.8 | 251.1  | 205.1 | 180.1  | 172.8 |
| 10°   | 362.5 | 343.1 | 331.0 | 321.3 | 225.3  | 175.2 | 149.4  | 142.9 |
| 12.5° | 359.3 | 337.5 | 322.2 | 310.0 | 203.5  | 151.8 | 128.4  | 121.9 |
| 15°   | 356.1 | 331.0 | 313.3 | 298.7 | 185.7  | 135.6 | 114.7  | 109.0 |
| 17.5° | 349.6 | 323.8 | 303.6 | 288.2 | 174.4  | 129.2 | 111.4  | 108.2 |
| 20°   | 342.3 | 315.7 | 294.7 | 279.4 | 171.2  | 135.6 | 125.1  | 125.1 |
| 22.5° | 337.5 | 310.0 | 289.9 | 274.5 | 176.8  | 151.0 | 146.9  | 149.4 |
| 25°   | 331.0 | 305.2 | 285.0 | 270.5 | 182.5  | 163.1 | 160.7  | 163.9 |
| 27.5° | 320.5 | 294.7 | 275.3 | 260.8 | 179.2  | 161.5 | 159.1  | 160.7 |
| 30°   | 299.5 | 274.5 | 257.6 | 242.2 | 166.3  | 149.4 | 145.3  | 146.1 |
| 32.5° | 272.9 | 248.7 | 232.5 | 218.0 | 147.8  | 131.6 | 127.6  | 127.6 |
| 35°   | 243.8 | 221.2 | 205.9 | 193.0 | 130.0  | 115.5 | 111.4  | 110.6 |
| 37.5° | 214.8 | 193.8 | 180.9 | 168.7 | 113.8  | 100.9 | 96.9   | 96.1  |
| 40°   | 185.7 | 167.1 | 155.0 | 145.3 | 100.1  | 89.6  | 85.6   | 84.8  |
| 42.5° | 158.3 | 142.1 | 131.6 | 123.5 | 87.2   | 79.1  | 75.9   | 75.1  |
| 45°   | 130.8 | 117.9 | 109.8 | 103.3 | 75.9   | 67.8  | 67.0   | 67.0  |
| 47.5° | 105.8 | 95.3  | 89.6  | 85.6  | 64.6   | 58.1  | 57.3   | 58.1  |
| 50°   | 84.8  | 77.5  | 73.5  | 70.2  | 54.9   | 49.3  | 46.8   | 46.8  |
| 52.5° | 67.0  | 62.2  | 59.7  | 57.3  | 45.2   | 39.6  | 36.3   | 35.5  |
| 55°   | 53.3  | 49.3  | 47.6  | 46.0  | 35.5   | 29.1  | 25.8   | 25.0  |
| 57.5° | 42.0  | 38.8  | 37.1  | 35.5  | 26.6   | 20.2  | 17.0   | 16.1  |
| 60°   | 31.5  | 29.1  | 27.5  | 26.6  | 18.6   | 12.1  | 9.7    | 8.9   |
| 62.5° | 22.6  | 21.0  | 19.4  | 18.6  | 11.3   | 6.5   | 4.0    | 3.2   |
| 65°   | 13.7  | 13.7  | 12.1  | 11.3  | 5.7    | 2.4   | 1.6    | 0.8   |
| 67.5° | 8.1   | 7.3   | 6.5   | 6.5   | 2.4    | 1.6   | 0.8    | 0.8   |
| 70°   | 4.0   | 4.0   | 3.2   | 3.2   | 1.6    | 0.8   | 0.8    | 0.8   |
| 72.5° | 2.4   | 2.4   | 2.4   | 1.6   | 1.6    | 0.8   | 0.8    | 0.8   |
| 75°   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6    | 0.8   | 0.8    | 0.8   |
| 77.5° | 1.6   | 1.6   | 1.6   | 1.6   | 1.6    | 0.8   | 0.8    | 0.0   |
| 80°   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6    | 0.8   | 0.8    | 0.0   |
| 82.5° | 1.6   | 1.6   | 1.6   | 1.6   | 1.6    | 0.8   | 0.8    | 0.8   |
| 85°   | 1.6   | 1.6   | 1.6   | 1.6   | 1.6    | 0.8   | 0.8    | 0.0   |
| 87.5° | 1.6   | 1.6   | 1.6   | 1.6   | 1.6    | 0.8   | 0.8    | 0.8   |
| 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)