

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: P251965

Luminaire Tested: **LD4B50D010TE EU4B30509027 4LBDW1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P251965  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-15)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD4B50D010TE EU4B30509027 4LBDW1H  
Description: PORTFOLIO 4 INCH DOUBLE WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

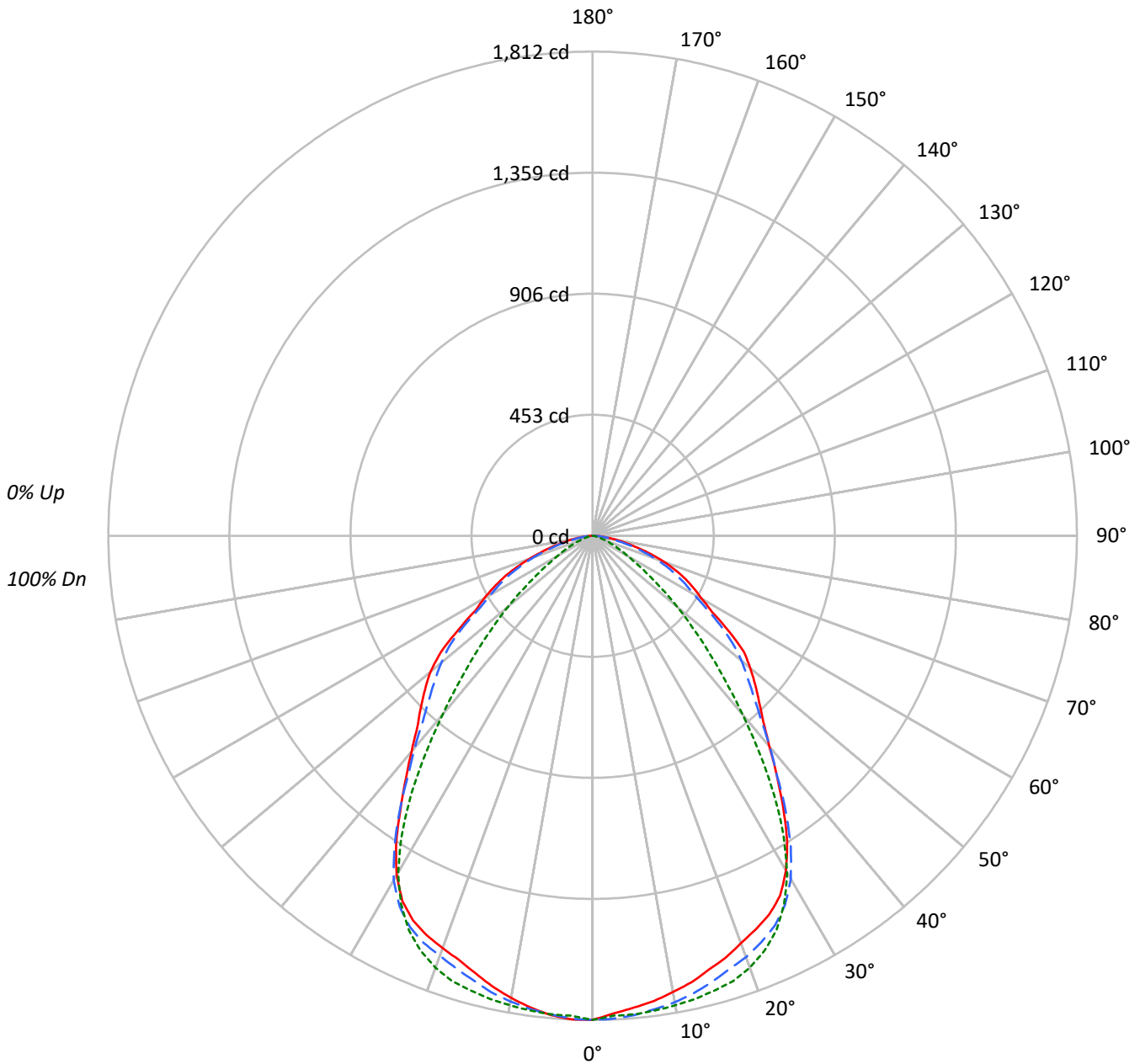
Lumens per Lamp: N/A  
Luminaire Lumens: 3687.0 lumens  
Efficiency: N/A  
Efficacy: 62.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19  
Luminous Opening: Circular (Dia: 0.38' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 58.77  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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 |    |    |    | 100 |  |  |  |   |
| 1   | 111 | 107 | 103 | 100 | 108 | 104 | 101 | 98  | 100 | 98  | 95  | 96  | 94  | 92  | 93  | 91  | 89  | 88  |    |    |    | 88  |  |  |  |   |
| 2   | 102 | 95  | 89  | 84  | 100 | 93  | 88  | 83  | 90  | 85  | 81  | 87  | 83  | 80  | 84  | 81  | 78  | 76  |    |    |    | 76  |  |  |  |   |
| 3   | 94  | 85  | 78  | 72  | 92  | 84  | 77  | 72  | 81  | 75  | 70  | 78  | 73  | 69  | 76  | 72  | 68  | 66  |    |    |    | 66  |  |  |  |   |
| 4   | 87  | 77  | 69  | 63  | 85  | 75  | 68  | 62  | 73  | 67  | 62  | 71  | 65  | 61  | 69  | 64  | 60  | 58  |    |    |    | 58  |  |  |  |   |
| 5   | 81  | 69  | 61  | 55  | 79  | 68  | 61  | 55  | 66  | 60  | 54  | 64  | 58  | 54  | 63  | 57  | 53  | 51  |    |    |    | 51  |  |  |  |   |
| 6   | 75  | 63  | 55  | 49  | 73  | 62  | 55  | 49  | 60  | 54  | 49  | 59  | 53  | 48  | 57  | 52  | 48  | 46  |    |    |    | 46  |  |  |  |   |
| 7   | 70  | 58  | 50  | 44  | 68  | 57  | 49  | 44  | 56  | 49  | 44  | 54  | 48  | 43  | 53  | 47  | 43  | 41  |    |    |    | 41  |  |  |  |   |
| 8   | 66  | 53  | 45  | 40  | 64  | 52  | 45  | 40  | 51  | 44  | 40  | 50  | 44  | 39  | 49  | 43  | 39  | 37  |    |    |    | 37  |  |  |  |   |
| 9   | 62  | 49  | 41  | 36  | 60  | 49  | 41  | 36  | 47  | 41  | 36  | 46  | 40  | 36  | 45  | 40  | 36  | 34  |    |    |    | 34  |  |  |  |   |
| 10  | 58  | 46  | 38  | 33  | 57  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 42  | 37  | 33  | 31  |    |    |    | 31  |  |  |  |   |

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

|     | 0°     | 90°    | 180°   |
|-----|--------|--------|--------|
| 0°  | 176555 | 176555 | 176555 |
| 5°  | 173414 | 175870 | 176144 |
| 10° | 171560 | 176528 | 173767 |
| 15° | 169576 | 177728 | 170978 |
| 20° | 168232 | 178355 | 170255 |
| 25° | 168139 | 175032 | 170838 |
| 30° | 162782 | 163727 | 164976 |
| 35° | 147897 | 140925 | 149218 |
| 40° | 130848 | 110989 | 134029 |
| 45° | 121384 | 84515  | 125229 |
| 50° | 116640 | 62542  | 120021 |
| 55° | 105601 | 43090  | 104191 |
| 60° | 91806  | 29335  | 91260  |
| 65° | 88691  | 21216  | 84194  |
| 70° | 80213  | 14304  | 71465  |
| 75° | 66122  | 9451   | 56671  |
| 80° | 53205  | 6230   | 42261  |
| 85° | 43610  | 3131   | 28067  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 171.0  | 4.6       |
| 10°-20°   | 489.0  | 13.3      |
| 20°-30°   | 738.7  | 20.0      |
| 30°-40°   | 773.1  | 21.0      |
| 40°-50°   | 626.1  | 17.0      |
| 50°-60°   | 455.4  | 12.4      |
| 60°-70°   | 280.9  | 7.6       |
| 70°-80°   | 126.9  | 3.4       |
| 80°-90°   | 25.8   | 0.7       |
| 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°    | 1398.7 | 37.9      |
| 0°-40°    | 2171.8 | 58.9      |
| 0°-60°    | 3253.4 | 88.2      |
| 0°-90°    | 3687.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3687.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 1812 | 1812 | 1812 | 1812 | 1812 |      |
| 5°  | 1773 | 1800 | 1798 | 1798 | 1800 | 168  |
| 15° | 1681 | 1728 | 1762 | 1722 | 1695 | 475  |
| 25° | 1564 | 1611 | 1628 | 1616 | 1589 | 716  |
| 35° | 1243 | 1260 | 1184 | 1260 | 1254 | 775  |
| 45° | 881  | 853  | 613  | 864  | 909  | 685  |
| 55° | 622  | 582  | 254  | 588  | 613  | 555  |
| 65° | 385  | 346  | 92   | 340  | 365  | 376  |
| 75° | 176  | 150  | 25   | 131  | 150  | 191  |
| 85° | 39   | 31   | 3    | 22   | 25   | 45   |
| 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°    | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 |
| 2.5°  | 1789.4 | 1789.4 | 1806.1 | 1825.6 | 1808.9 | 1792.1 | 1803.3 | 1797.7 | 1817.2 | 1817.2 | 1808.9 |
| 5°    | 1772.6 | 1778.2 | 1792.1 | 1808.9 | 1794.9 | 1778.2 | 1792.1 | 1786.6 | 1806.1 | 1806.1 | 1800.5 |
| 7.5°  | 1755.9 | 1758.7 | 1775.4 | 1794.9 | 1781.0 | 1764.3 | 1775.4 | 1772.6 | 1789.4 | 1792.1 | 1786.6 |
| 10°   | 1733.6 | 1736.4 | 1753.1 | 1772.6 | 1758.7 | 1744.8 | 1755.9 | 1753.1 | 1775.4 | 1775.4 | 1772.6 |
| 12.5° | 1711.3 | 1714.1 | 1730.8 | 1747.5 | 1733.6 | 1719.7 | 1730.8 | 1730.8 | 1753.1 | 1755.9 | 1753.1 |
| 15°   | 1680.7 | 1686.2 | 1700.2 | 1716.9 | 1708.5 | 1691.8 | 1702.9 | 1702.9 | 1722.5 | 1728.0 | 1728.0 |
| 17.5° | 1655.6 | 1658.4 | 1672.3 | 1689.0 | 1677.9 | 1663.9 | 1675.1 | 1675.1 | 1694.6 | 1700.2 | 1700.2 |
| 20°   | 1622.1 | 1627.7 | 1641.6 | 1658.4 | 1650.0 | 1638.8 | 1647.2 | 1647.2 | 1669.5 | 1675.1 | 1677.9 |
| 22.5° | 1594.3 | 1599.8 | 1611.0 | 1633.3 | 1619.3 | 1611.0 | 1622.1 | 1619.3 | 1644.4 | 1647.2 | 1647.2 |
| 25°   | 1563.6 | 1569.2 | 1583.1 | 1597.0 | 1588.7 | 1580.3 | 1588.7 | 1588.7 | 1608.2 | 1611.0 | 1611.0 |
| 27.5° | 1519.0 | 1521.8 | 1535.7 | 1549.7 | 1541.3 | 1530.1 | 1541.3 | 1538.5 | 1558.0 | 1560.8 | 1558.0 |
| 30°   | 1446.5 | 1452.1 | 1457.7 | 1477.2 | 1468.8 | 1460.5 | 1471.6 | 1466.0 | 1485.6 | 1485.6 | 1482.8 |
| 32.5° | 1354.6 | 1354.6 | 1365.7 | 1379.6 | 1368.5 | 1362.9 | 1371.3 | 1374.1 | 1388.0 | 1388.0 | 1379.6 |
| 35°   | 1243.1 | 1248.6 | 1257.0 | 1265.4 | 1257.0 | 1251.4 | 1259.8 | 1257.0 | 1273.7 | 1268.2 | 1259.8 |
| 37.5° | 1131.6 | 1134.4 | 1142.7 | 1153.9 | 1142.7 | 1134.4 | 1137.2 | 1134.4 | 1148.3 | 1148.3 | 1134.4 |
| 40°   | 1028.5 | 1034.0 | 1039.6 | 1050.8 | 1039.6 | 1034.0 | 1036.8 | 1028.5 | 1045.2 | 1039.6 | 1031.2 |
| 42.5° | 944.8  | 947.6  | 956.0  | 961.6  | 950.4  | 947.6  | 950.4  | 944.8  | 953.2  | 947.6  | 930.9  |
| 45°   | 880.7  | 880.7  | 883.5  | 891.9  | 880.7  | 878.0  | 878.0  | 872.4  | 880.7  | 869.6  | 852.9  |
| 47.5° | 825.0  | 827.8  | 830.6  | 836.1  | 827.8  | 819.4  | 822.2  | 811.1  | 816.6  | 808.3  | 786.0  |
| 50°   | 769.3  | 774.8  | 777.6  | 783.2  | 774.8  | 769.3  | 772.0  | 760.9  | 760.9  | 747.0  | 727.4  |
| 52.5° | 713.5  | 716.3  | 713.5  | 719.1  | 713.5  | 705.1  | 707.9  | 696.8  | 696.8  | 680.1  | 660.6  |
| 55°   | 621.5  | 624.3  | 627.1  | 632.7  | 627.1  | 618.7  | 624.3  | 616.0  | 616.0  | 604.8  | 582.5  |
| 57.5° | 529.6  | 532.3  | 535.1  | 537.9  | 537.9  | 532.3  | 535.1  | 529.6  | 526.8  | 518.4  | 501.7  |
| 60°   | 471.0  | 471.0  | 471.0  | 473.8  | 471.0  | 468.2  | 468.2  | 462.7  | 462.7  | 451.5  | 434.8  |
| 62.5° | 426.4  | 429.2  | 429.2  | 432.0  | 429.2  | 426.4  | 423.6  | 418.1  | 415.3  | 404.1  | 390.2  |
| 65°   | 384.6  | 384.6  | 381.8  | 387.4  | 384.6  | 381.8  | 381.8  | 376.3  | 370.7  | 359.5  | 345.6  |
| 67.5° | 334.5  | 337.2  | 334.5  | 337.2  | 337.2  | 334.5  | 331.7  | 326.1  | 323.3  | 314.9  | 298.2  |
| 70°   | 281.5  | 281.5  | 281.5  | 284.3  | 281.5  | 281.5  | 284.3  | 275.9  | 273.1  | 262.0  | 248.1  |
| 72.5° | 228.5  | 231.3  | 231.3  | 228.5  | 231.3  | 225.8  | 225.8  | 225.8  | 223.0  | 211.8  | 197.9  |
| 75°   | 175.6  | 178.4  | 178.4  | 181.2  | 178.4  | 175.6  | 175.6  | 172.8  | 170.0  | 161.7  | 150.5  |
| 77.5° | 131.0  | 131.0  | 133.8  | 133.8  | 133.8  | 131.0  | 131.0  | 125.4  | 125.4  | 119.8  | 108.7  |
| 80°   | 94.8   | 94.8   | 92.0   | 94.8   | 94.8   | 92.0   | 92.0   | 89.2   | 89.2   | 83.6   | 75.3   |
| 82.5° | 61.3   | 64.1   | 64.1   | 64.1   | 64.1   | 61.3   | 61.3   | 61.3   | 58.5   | 55.7   | 50.2   |
| 85°   | 39.0   | 39.0   | 39.0   | 39.0   | 41.8   | 39.0   | 41.8   | 39.0   | 39.0   | 33.4   | 30.7   |
| 87.5° | 16.7   | 16.7   | 16.7   | 19.5   | 19.5   | 16.7   | 16.7   | 16.7   | 16.7   | 16.7   | 13.9   |
| 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°    | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 |
| 2.5°  | 1808.9 | 1811.6 | 1803.3 | 1814.4 | 1806.1 | 1808.9 | 1811.6 | 1808.9 | 1797.7 | 1797.7 | 1828.4 |
| 5°    | 1797.7 | 1803.3 | 1794.9 | 1808.9 | 1803.3 | 1803.3 | 1808.9 | 1806.1 | 1794.9 | 1797.7 | 1825.6 |
| 7.5°  | 1786.6 | 1794.9 | 1789.4 | 1803.3 | 1794.9 | 1794.9 | 1800.5 | 1800.5 | 1789.4 | 1792.1 | 1817.2 |
| 10°   | 1769.8 | 1781.0 | 1778.2 | 1792.1 | 1783.8 | 1783.8 | 1792.1 | 1792.1 | 1781.0 | 1783.8 | 1808.9 |
| 12.5° | 1755.9 | 1767.1 | 1764.3 | 1778.2 | 1772.6 | 1775.4 | 1778.2 | 1783.8 | 1769.8 | 1775.4 | 1797.7 |
| 15°   | 1733.6 | 1744.8 | 1744.8 | 1758.7 | 1753.1 | 1758.7 | 1764.3 | 1772.6 | 1761.5 | 1761.5 | 1783.8 |
| 17.5° | 1708.5 | 1722.5 | 1722.5 | 1733.6 | 1733.6 | 1736.4 | 1747.5 | 1755.9 | 1744.8 | 1747.5 | 1767.1 |
| 20°   | 1680.7 | 1697.4 | 1697.4 | 1711.3 | 1708.5 | 1714.1 | 1722.5 | 1730.8 | 1719.7 | 1719.7 | 1742.0 |
| 22.5° | 1652.8 | 1666.7 | 1669.5 | 1677.9 | 1677.9 | 1680.7 | 1689.0 | 1694.6 | 1680.7 | 1680.7 | 1702.9 |
| 25°   | 1613.8 | 1627.7 | 1630.5 | 1636.1 | 1630.5 | 1630.5 | 1636.1 | 1641.6 | 1627.7 | 1627.7 | 1647.2 |
| 27.5° | 1560.8 | 1574.7 | 1574.7 | 1572.0 | 1566.4 | 1569.2 | 1566.4 | 1569.2 | 1555.2 | 1552.4 | 1572.0 |
| 30°   | 1482.8 | 1491.1 | 1491.1 | 1488.3 | 1480.0 | 1480.0 | 1471.6 | 1474.4 | 1454.9 | 1454.9 | 1471.6 |
| 32.5° | 1376.9 | 1385.2 | 1379.6 | 1374.1 | 1362.9 | 1357.3 | 1351.8 | 1349.0 | 1329.5 | 1329.5 | 1349.0 |
| 35°   | 1251.4 | 1257.0 | 1248.6 | 1237.5 | 1223.6 | 1215.2 | 1206.8 | 1195.7 | 1181.8 | 1184.5 | 1195.7 |
| 37.5° | 1123.2 | 1123.2 | 1112.1 | 1089.8 | 1078.6 | 1064.7 | 1050.8 | 1050.8 | 1028.5 | 1025.7 | 1034.0 |
| 40°   | 1014.5 | 1003.4 | 983.9  | 953.2  | 933.7  | 919.8  | 900.2  | 889.1  | 872.4  | 872.4  | 886.3  |
| 42.5° | 917.0  | 894.7  | 869.6  | 827.8  | 808.3  | 791.6  | 766.5  | 755.3  | 735.8  | 733.0  | 741.4  |
| 45°   | 830.6  | 808.3  | 772.0  | 727.4  | 702.4  | 682.9  | 646.6  | 632.7  | 616.0  | 613.2  | 618.7  |
| 47.5° | 760.9  | 735.8  | 691.2  | 632.7  | 607.6  | 582.5  | 546.3  | 526.8  | 512.8  | 504.5  | 512.8  |
| 50°   | 699.6  | 666.1  | 618.7  | 557.4  | 524.0  | 501.7  | 457.1  | 437.6  | 418.1  | 412.5  | 415.3  |
| 52.5° | 632.7  | 599.2  | 549.1  | 485.0  | 454.3  | 420.9  | 379.1  | 351.2  | 334.5  | 326.1  | 334.5  |
| 55°   | 560.2  | 526.8  | 476.6  | 412.5  | 379.1  | 348.4  | 303.8  | 281.5  | 262.0  | 253.6  | 262.0  |
| 57.5° | 482.2  | 451.5  | 406.9  | 342.8  | 312.2  | 284.3  | 242.5  | 220.2  | 200.7  | 195.1  | 200.7  |
| 60°   | 415.3  | 390.2  | 345.6  | 284.3  | 259.2  | 228.5  | 192.3  | 170.0  | 153.3  | 150.5  | 153.3  |
| 62.5° | 370.7  | 342.8  | 301.0  | 242.5  | 217.4  | 192.3  | 158.9  | 136.6  | 122.6  | 119.8  | 122.6  |
| 65°   | 326.1  | 295.4  | 256.4  | 206.2  | 181.2  | 161.7  | 128.2  | 108.7  | 94.8   | 92.0   | 94.8   |
| 67.5° | 275.9  | 248.1  | 214.6  | 170.0  | 150.5  | 131.0  | 103.1  | 83.6   | 72.5   | 69.7   | 72.5   |
| 70°   | 228.5  | 203.5  | 170.0  | 136.6  | 117.1  | 103.1  | 78.0   | 64.1   | 53.0   | 50.2   | 53.0   |
| 72.5° | 181.2  | 158.9  | 131.0  | 103.1  | 92.0   | 78.0   | 61.3   | 47.4   | 39.0   | 36.2   | 39.0   |
| 75°   | 139.4  | 122.6  | 100.3  | 75.3   | 66.9   | 58.5   | 41.8   | 33.4   | 27.9   | 25.1   | 27.9   |
| 77.5° | 97.6   | 86.4   | 69.7   | 55.7   | 47.4   | 41.8   | 30.7   | 22.3   | 19.5   | 16.7   | 19.5   |
| 80°   | 66.9   | 58.5   | 47.4   | 36.2   | 30.7   | 25.1   | 19.5   | 13.9   | 11.1   | 11.1   | 11.1   |
| 82.5° | 44.6   | 36.2   | 27.9   | 22.3   | 19.5   | 16.7   | 11.1   | 8.4    | 8.4    | 5.6    | 5.6    |
| 85°   | 25.1   | 22.3   | 16.7   | 13.9   | 11.1   | 8.4    | 5.6    | 5.6    | 2.8    | 2.8    | 2.8    |
| 87.5° | 11.1   | 8.4    | 5.6    | 5.6    | 2.8    | 2.8    | 2.8    | 2.8    | 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: P251965

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**CANDELA DISTRIBUTION (continued):**

|       | 100°   | 105°   | 110°   | 112.5° | 115°   | 120°   | 125°   | 130°   | 135°   | 140°   | 145°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 |
| 2.5°  | 1820.0 | 1811.6 | 1822.8 | 1811.6 | 1806.1 | 1811.6 | 1806.1 | 1822.8 | 1808.9 | 1797.7 | 1808.9 |
| 5°    | 1817.2 | 1806.1 | 1817.2 | 1808.9 | 1800.5 | 1803.3 | 1797.7 | 1814.4 | 1797.7 | 1789.4 | 1794.9 |
| 7.5°  | 1811.6 | 1803.3 | 1808.9 | 1800.5 | 1792.1 | 1794.9 | 1789.4 | 1803.3 | 1786.6 | 1778.2 | 1783.8 |
| 10°   | 1803.3 | 1794.9 | 1797.7 | 1792.1 | 1783.8 | 1783.8 | 1778.2 | 1789.4 | 1769.8 | 1758.7 | 1764.3 |
| 12.5° | 1792.1 | 1781.0 | 1786.6 | 1778.2 | 1767.1 | 1767.1 | 1761.5 | 1769.8 | 1750.3 | 1739.2 | 1742.0 |
| 15°   | 1778.2 | 1767.1 | 1767.1 | 1758.7 | 1747.5 | 1747.5 | 1736.4 | 1744.8 | 1722.5 | 1711.3 | 1711.3 |
| 17.5° | 1761.5 | 1747.5 | 1747.5 | 1739.2 | 1725.2 | 1722.5 | 1714.1 | 1722.5 | 1697.4 | 1686.2 | 1686.2 |
| 20°   | 1736.4 | 1725.2 | 1722.5 | 1716.9 | 1702.9 | 1700.2 | 1689.0 | 1691.8 | 1672.3 | 1663.9 | 1661.1 |
| 22.5° | 1702.9 | 1691.8 | 1694.6 | 1686.2 | 1675.1 | 1672.3 | 1661.1 | 1669.5 | 1650.0 | 1641.6 | 1644.4 |
| 25°   | 1644.4 | 1638.8 | 1644.4 | 1641.6 | 1633.3 | 1633.3 | 1627.7 | 1633.3 | 1616.5 | 1611.0 | 1613.8 |
| 27.5° | 1577.5 | 1574.7 | 1577.5 | 1577.5 | 1572.0 | 1572.0 | 1572.0 | 1580.3 | 1563.6 | 1560.8 | 1560.8 |
| 30°   | 1480.0 | 1480.0 | 1482.8 | 1485.6 | 1485.6 | 1491.1 | 1488.3 | 1499.5 | 1488.3 | 1482.8 | 1488.3 |
| 32.5° | 1351.8 | 1362.9 | 1371.3 | 1371.3 | 1371.3 | 1376.9 | 1382.4 | 1390.8 | 1379.6 | 1382.4 | 1382.4 |
| 35°   | 1206.8 | 1215.2 | 1220.8 | 1234.7 | 1226.3 | 1245.9 | 1251.4 | 1262.6 | 1259.8 | 1265.4 | 1262.6 |
| 37.5° | 1045.2 | 1056.3 | 1067.5 | 1087.0 | 1084.2 | 1106.5 | 1117.6 | 1139.9 | 1134.4 | 1145.5 | 1151.1 |
| 40°   | 894.7  | 911.4  | 928.1  | 942.1  | 953.2  | 975.5  | 997.8  | 1025.7 | 1034.0 | 1042.4 | 1045.2 |
| 42.5° | 749.7  | 766.5  | 794.3  | 813.8  | 830.6  | 866.8  | 897.5  | 930.9  | 939.3  | 956.0  | 961.6  |
| 45°   | 632.7  | 646.6  | 680.1  | 705.1  | 719.1  | 772.0  | 808.3  | 850.1  | 864.0  | 883.5  | 891.9  |
| 47.5° | 524.0  | 549.1  | 582.5  | 613.2  | 632.7  | 688.4  | 735.8  | 780.4  | 799.9  | 822.2  | 833.4  |
| 50°   | 429.2  | 457.1  | 501.7  | 529.6  | 557.4  | 618.7  | 671.7  | 719.1  | 738.6  | 763.7  | 774.8  |
| 52.5° | 351.2  | 381.8  | 423.6  | 454.3  | 485.0  | 549.1  | 604.8  | 649.4  | 674.5  | 691.2  | 707.9  |
| 55°   | 275.9  | 309.4  | 351.2  | 384.6  | 409.7  | 479.4  | 526.8  | 571.4  | 588.1  | 602.0  | 610.4  |
| 57.5° | 214.6  | 239.7  | 281.5  | 309.4  | 340.0  | 401.3  | 448.7  | 482.2  | 496.1  | 512.8  | 518.4  |
| 60°   | 167.2  | 192.3  | 231.3  | 259.2  | 287.1  | 345.6  | 393.0  | 426.4  | 440.4  | 454.3  | 462.7  |
| 62.5° | 133.8  | 158.9  | 195.1  | 220.2  | 245.3  | 298.2  | 340.0  | 373.5  | 390.2  | 404.1  | 412.5  |
| 65°   | 105.9  | 128.2  | 158.9  | 184.0  | 203.5  | 250.8  | 292.7  | 323.3  | 340.0  | 354.0  | 362.3  |
| 67.5° | 83.6   | 103.1  | 131.0  | 147.7  | 167.2  | 206.2  | 242.5  | 270.4  | 284.3  | 301.0  | 309.4  |
| 70°   | 64.1   | 78.0   | 103.1  | 117.1  | 131.0  | 164.4  | 192.3  | 220.2  | 234.1  | 245.3  | 250.8  |
| 72.5° | 47.4   | 58.5   | 78.0   | 89.2   | 97.6   | 125.4  | 147.7  | 167.2  | 178.4  | 189.5  | 195.1  |
| 75°   | 33.4   | 41.8   | 55.7   | 64.1   | 69.7   | 89.2   | 108.7  | 122.6  | 131.0  | 139.4  | 147.7  |
| 77.5° | 22.3   | 27.9   | 36.2   | 41.8   | 47.4   | 61.3   | 72.5   | 83.6   | 92.0   | 100.3  | 103.1  |
| 80°   | 13.9   | 19.5   | 25.1   | 27.9   | 30.7   | 39.0   | 50.2   | 55.7   | 61.3   | 66.9   | 69.7   |
| 82.5° | 8.4    | 11.1   | 13.9   | 16.7   | 19.5   | 25.1   | 30.7   | 36.2   | 39.0   | 44.6   | 47.4   |
| 85°   | 2.8    | 5.6    | 5.6    | 8.4    | 8.4    | 13.9   | 16.7   | 19.5   | 22.3   | 25.1   | 27.9   |
| 87.5° | 0.0    | 0.0    | 2.8    | 2.8    | 2.8    | 2.8    | 5.6    | 5.6    | 5.6    | 5.6    | 5.6    |
| 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: P251965

CATALOG NUMBER: LD4B50D010TE EU4B30509027 4LBDW1H

**CANDELA DISTRIBUTION (continued):**

|       | 150°   | 155°   | 157.5° | 160°   | 165°   | 170°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 | 1811.6 |
| 2.5°  | 1820.0 | 1811.6 | 1806.1 | 1803.3 | 1822.8 | 1797.7 | 1808.9 | 1811.6 |
| 5°    | 1808.9 | 1800.5 | 1794.9 | 1792.1 | 1808.9 | 1786.6 | 1794.9 | 1800.5 |
| 7.5°  | 1792.1 | 1786.6 | 1778.2 | 1775.4 | 1792.1 | 1767.1 | 1778.2 | 1781.0 |
| 10°   | 1772.6 | 1764.3 | 1758.7 | 1755.9 | 1769.8 | 1744.8 | 1755.9 | 1755.9 |
| 12.5° | 1747.5 | 1742.0 | 1730.8 | 1730.8 | 1742.0 | 1719.7 | 1728.0 | 1728.0 |
| 15°   | 1714.1 | 1708.5 | 1697.4 | 1697.4 | 1708.5 | 1686.2 | 1694.6 | 1694.6 |
| 17.5° | 1686.2 | 1680.7 | 1672.3 | 1669.5 | 1680.7 | 1658.4 | 1666.7 | 1663.9 |
| 20°   | 1663.9 | 1658.4 | 1647.2 | 1647.2 | 1655.6 | 1633.3 | 1641.6 | 1641.6 |
| 22.5° | 1644.4 | 1641.6 | 1630.5 | 1630.5 | 1641.6 | 1619.3 | 1624.9 | 1619.3 |
| 25°   | 1613.8 | 1611.0 | 1599.8 | 1602.6 | 1608.2 | 1585.9 | 1594.3 | 1588.7 |
| 27.5° | 1563.6 | 1563.6 | 1552.4 | 1549.7 | 1558.0 | 1538.5 | 1544.1 | 1541.3 |
| 30°   | 1485.6 | 1488.3 | 1474.4 | 1474.4 | 1477.2 | 1460.5 | 1468.8 | 1466.0 |
| 32.5° | 1379.6 | 1382.4 | 1371.3 | 1368.5 | 1376.9 | 1362.9 | 1368.5 | 1368.5 |
| 35°   | 1262.6 | 1265.4 | 1257.0 | 1257.0 | 1265.4 | 1257.0 | 1257.0 | 1254.2 |
| 37.5° | 1145.5 | 1151.1 | 1145.5 | 1148.3 | 1153.9 | 1145.5 | 1151.1 | 1148.3 |
| 40°   | 1050.8 | 1056.3 | 1048.0 | 1053.5 | 1059.1 | 1050.8 | 1059.1 | 1053.5 |
| 42.5° | 964.4  | 972.7  | 967.1  | 972.7  | 978.3  | 972.7  | 978.3  | 969.9  |
| 45°   | 900.2  | 905.8  | 903.0  | 905.8  | 911.4  | 908.6  | 911.4  | 908.6  |
| 47.5° | 838.9  | 850.1  | 844.5  | 850.1  | 858.4  | 852.9  | 858.4  | 850.1  |
| 50°   | 783.2  | 791.6  | 788.8  | 794.3  | 797.1  | 794.3  | 799.9  | 791.6  |
| 52.5° | 710.7  | 719.1  | 716.3  | 716.3  | 721.9  | 716.3  | 721.9  | 716.3  |
| 55°   | 616.0  | 618.7  | 618.7  | 621.5  | 618.7  | 616.0  | 618.7  | 613.2  |
| 57.5° | 524.0  | 529.6  | 521.2  | 529.6  | 526.8  | 524.0  | 524.0  | 518.4  |
| 60°   | 465.5  | 473.8  | 468.2  | 473.8  | 471.0  | 471.0  | 471.0  | 468.2  |
| 62.5° | 418.1  | 423.6  | 418.1  | 420.9  | 420.9  | 420.9  | 418.1  | 415.3  |
| 65°   | 365.1  | 373.5  | 367.9  | 370.7  | 367.9  | 365.1  | 367.9  | 365.1  |
| 67.5° | 312.2  | 314.9  | 314.9  | 312.2  | 312.2  | 312.2  | 312.2  | 306.6  |
| 70°   | 253.6  | 256.4  | 253.6  | 259.2  | 256.4  | 253.6  | 256.4  | 250.8  |
| 72.5° | 197.9  | 200.7  | 197.9  | 200.7  | 197.9  | 197.9  | 197.9  | 197.9  |
| 75°   | 147.7  | 150.5  | 150.5  | 150.5  | 150.5  | 150.5  | 144.9  | 150.5  |
| 77.5° | 105.9  | 105.9  | 105.9  | 108.7  | 105.9  | 105.9  | 105.9  | 105.9  |
| 80°   | 72.5   | 72.5   | 72.5   | 75.3   | 72.5   | 75.3   | 72.5   | 75.3   |
| 82.5° | 47.4   | 47.4   | 47.4   | 47.4   | 47.4   | 47.4   | 47.4   | 47.4   |
| 85°   | 25.1   | 27.9   | 27.9   | 25.1   | 25.1   | 25.1   | 25.1   | 25.1   |
| 87.5° | 5.6    | 2.8    | 2.8    | 2.8    | 2.8    | 2.8    | 2.8    | 2.8    |
| 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)