

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: FAIL-SAFE

Report Number: P

Luminaire Tested: **4APN-28-30L850-UNV-NP**

Issue Date: 06/06/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 06/06/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN-28-30L850-UNV-NP  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light  
w/ Nature Pattern Lens  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

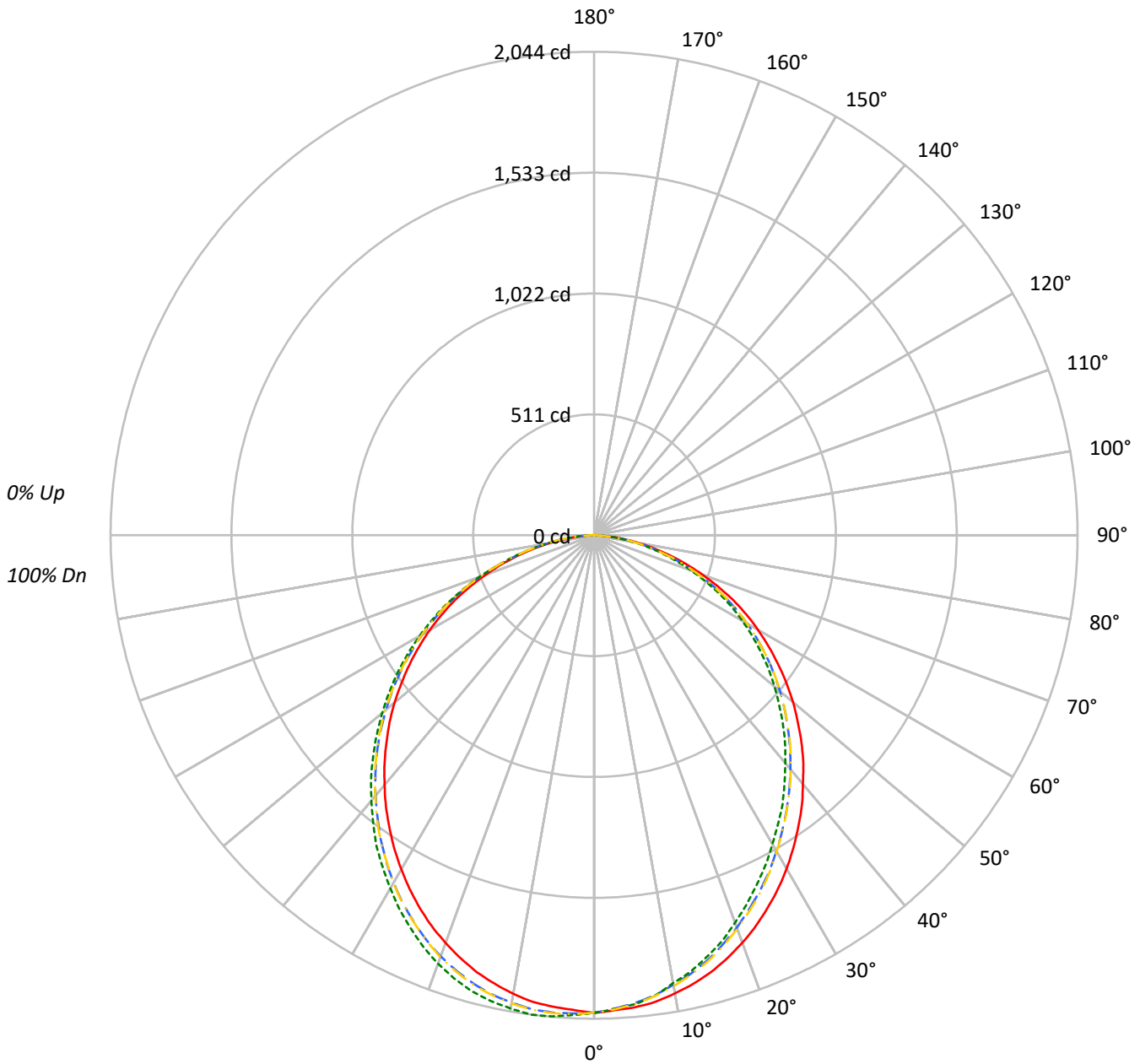
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5338.2 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.32  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 65  
Input Voltage (V): 120  
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



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



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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 | 102 | 102 | 102 | 100 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 86  | 86  | 86  | 84  |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 72  | 72  | 72  | 72  | 70  |
| 3   | 90  | 80  | 72  | 66  | 88  | 78  | 71  | 65  | 75  | 69  | 64  | 73  | 67  | 63  | 70  | 66  | 62  | 62  | 62  | 62  | 59  |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 54  | 65  | 59  | 54  | 63  | 57  | 53  | 53  | 53  | 53  | 51  |
| 5   | 76  | 64  | 55  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 56  | 51  | 46  | 46  | 46  | 46  | 44  |
| 6   | 71  | 57  | 48  | 42  | 69  | 56  | 48  | 42  | 55  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 41  | 41  | 41  | 41  | 39  |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 50  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 36  | 36  | 36  | 34  |
| 8   | 61  | 48  | 39  | 33  | 59  | 47  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 32  | 32  | 32  | 32  | 31  |
| 9   | 57  | 44  | 35  | 30  | 56  | 43  | 35  | 30  | 42  | 35  | 30  | 41  | 34  | 30  | 40  | 34  | 29  | 29  | 29  | 29  | 28  |
| 10  | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 27  | 27  | 27  | 27  | 25  |

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

|     | 0°    | 90°   | 180°  | 270°  |
|-----|-------|-------|-------|-------|
| 0°  | 18632 | 18632 | 18632 | 18632 |
| 5°  | 18550 | 18428 | 18528 | 18912 |
| 10° | 18431 | 18019 | 18442 | 19031 |
| 15° | 18259 | 17624 | 18269 | 19063 |
| 20° | 18000 | 17114 | 18012 | 18932 |
| 25° | 17685 | 16575 | 17721 | 18663 |
| 30° | 17346 | 16057 | 17371 | 18356 |
| 35° | 16949 | 15640 | 16989 | 18058 |
| 40° | 16539 | 15139 | 16595 | 17638 |
| 45° | 16185 | 14730 | 16200 | 17236 |
| 50° | 15761 | 14297 | 15795 | 16782 |
| 55° | 15259 | 13830 | 15317 | 16309 |
| 60° | 14769 | 13347 | 14791 | 15712 |
| 65° | 14160 | 12762 | 14160 | 15015 |
| 70° | 13148 | 11805 | 13116 | 13949 |
| 75° | 11920 | 10694 | 11835 | 12555 |
| 80° | 10270 | 9202  | 10079 | 10770 |
| 85° | 7908  | 7029  | 7664  | 8659  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 190.7  | 3.6       |
| 10°-20°   | 540.0  | 10.1      |
| 20°-30°   | 799.4  | 15.0      |
| 30°-40°   | 937.9  | 17.6      |
| 40°-50°   | 950.6  | 17.8      |
| 50°-60°   | 843.6  | 15.8      |
| 60°-70°   | 633.4  | 11.9      |
| 70°-80°   | 351.7  | 6.6       |
| 80°-90°   | 90.8   | 1.7       |
| 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°    | 1530.1 | 28.7      |
| 0°-40°    | 2468.1 | 46.2      |
| 0°-60°    | 4262.3 | 79.8      |
| 0°-90°    | 5338.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5338.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 90°  | 180° | 270° | 360° | Flux |
|-----|------|------|------|------|------|------|
| 0°  | 2020 | 2020 | 2020 | 2020 | 2020 |      |
| 5°  | 2003 | 1990 | 2000 | 2042 | 2003 | 190  |
| 15° | 1912 | 1845 | 1913 | 1996 | 1912 | 539  |
| 25° | 1737 | 1628 | 1741 | 1833 | 1737 | 800  |
| 35° | 1505 | 1389 | 1508 | 1603 | 1505 | 942  |
| 45° | 1240 | 1129 | 1242 | 1321 | 1240 | 956  |
| 55° | 949  | 860  | 952  | 1014 | 949  | 849  |
| 65° | 649  | 585  | 649  | 688  | 649  | 639  |
| 75° | 334  | 300  | 332  | 352  | 334  | 355  |
| 85° | 75   | 66   | 72   | 82   | 75   | 90   |
| 90° | 0    | 0    | 0    | 0    | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 10°    | 20°    | 30°    | 40°    | 50°    | 60°    | 70°    | 80°    | 90°    | 100°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 |
| 2.5°  | 2010.0 | 2014.8 | 2020.7 | 2014.8 | 2005.3 | 2000.5 | 2000.5 | 1999.3 | 2002.9 | 2004.1 | 2002.9 |
| 5°    | 2002.9 | 2005.3 | 2006.5 | 1999.3 | 1988.7 | 1982.7 | 1980.4 | 1979.2 | 1983.9 | 1989.8 | 1983.9 |
| 7.5°  | 1989.8 | 1988.7 | 1987.5 | 1978.0 | 1966.1 | 1957.8 | 1954.3 | 1953.1 | 1957.8 | 1963.8 | 1959.0 |
| 10°   | 1967.3 | 1966.1 | 1962.6 | 1950.7 | 1935.3 | 1924.6 | 1921.1 | 1917.5 | 1921.1 | 1923.4 | 1921.1 |
| 12.5° | 1942.4 | 1937.7 | 1932.9 | 1919.9 | 1903.3 | 1891.4 | 1885.5 | 1880.7 | 1885.5 | 1889.0 | 1886.7 |
| 15°   | 1911.6 | 1904.4 | 1896.1 | 1881.9 | 1865.3 | 1852.3 | 1845.1 | 1840.4 | 1844.0 | 1845.1 | 1845.1 |
| 17.5° | 1874.8 | 1866.5 | 1858.2 | 1840.4 | 1820.2 | 1806.0 | 1797.7 | 1791.8 | 1796.5 | 1798.9 | 1798.9 |
| 20°   | 1833.3 | 1823.8 | 1813.1 | 1794.1 | 1772.8 | 1757.4 | 1747.9 | 1740.8 | 1741.9 | 1743.1 | 1743.1 |
| 22.5° | 1788.2 | 1776.3 | 1763.3 | 1743.1 | 1720.6 | 1704.0 | 1694.5 | 1686.2 | 1686.2 | 1687.4 | 1687.4 |
| 25°   | 1737.2 | 1724.2 | 1711.1 | 1690.9 | 1667.3 | 1649.5 | 1637.7 | 1629.4 | 1629.4 | 1628.2 | 1630.5 |
| 27.5° | 1685.0 | 1670.8 | 1657.8 | 1636.5 | 1611.6 | 1593.8 | 1581.9 | 1573.6 | 1572.4 | 1571.2 | 1573.6 |
| 30°   | 1628.2 | 1611.6 | 1597.3 | 1574.8 | 1551.1 | 1533.3 | 1521.4 | 1511.9 | 1509.6 | 1507.2 | 1509.6 |
| 32.5° | 1567.7 | 1552.3 | 1536.8 | 1513.1 | 1489.4 | 1471.6 | 1459.7 | 1450.3 | 1449.1 | 1447.9 | 1450.3 |
| 35°   | 1504.8 | 1488.2 | 1474.0 | 1451.4 | 1427.7 | 1409.9 | 1396.9 | 1388.6 | 1388.6 | 1388.6 | 1388.6 |
| 37.5° | 1443.1 | 1426.5 | 1411.1 | 1388.6 | 1364.9 | 1347.1 | 1334.0 | 1325.7 | 1323.3 | 1322.1 | 1323.3 |
| 40°   | 1373.2 | 1358.9 | 1344.7 | 1323.3 | 1299.7 | 1281.9 | 1271.2 | 1261.8 | 1259.4 | 1257.0 | 1260.6 |
| 42.5° | 1309.1 | 1294.9 | 1279.5 | 1259.4 | 1235.7 | 1217.9 | 1206.0 | 1197.7 | 1196.5 | 1195.3 | 1196.5 |
| 45°   | 1240.4 | 1223.8 | 1208.4 | 1189.4 | 1168.1 | 1151.4 | 1139.6 | 1131.3 | 1130.1 | 1128.9 | 1130.1 |
| 47.5° | 1168.1 | 1155.0 | 1142.0 | 1123.0 | 1101.6 | 1085.0 | 1074.3 | 1064.9 | 1062.5 | 1060.1 | 1062.5 |
| 50°   | 1098.1 | 1083.8 | 1070.8 | 1053.0 | 1032.8 | 1017.4 | 1007.9 | 999.6  | 997.2  | 996.1  | 997.2  |
| 52.5° | 1024.5 | 1011.5 | 999.6  | 981.8  | 965.2  | 949.8  | 939.1  | 932.0  | 930.9  | 929.7  | 930.9  |
| 55°   | 948.6  | 936.8  | 926.1  | 911.9  | 895.3  | 881.1  | 871.6  | 863.3  | 862.1  | 859.8  | 862.1  |
| 57.5° | 875.2  | 865.7  | 855.0  | 839.6  | 824.2  | 811.1  | 802.8  | 795.7  | 794.5  | 793.3  | 794.5  |
| 60°   | 800.4  | 791.0  | 781.5  | 768.4  | 753.0  | 740.0  | 732.8  | 726.9  | 724.5  | 723.3  | 724.5  |
| 62.5° | 725.7  | 716.2  | 709.1  | 696.1  | 681.8  | 671.2  | 664.0  | 658.1  | 655.7  | 654.6  | 655.7  |
| 65°   | 648.6  | 640.3  | 632.0  | 620.2  | 609.5  | 601.2  | 594.1  | 588.1  | 585.8  | 584.6  | 584.6  |
| 67.5° | 566.8  | 559.7  | 553.8  | 543.2  | 531.3  | 523.0  | 515.9  | 511.1  | 508.8  | 507.6  | 508.8  |
| 70°   | 487.4  | 481.5  | 475.5  | 467.2  | 457.8  | 450.6  | 445.9  | 441.1  | 438.8  | 437.6  | 437.6  |
| 72.5° | 411.5  | 406.7  | 400.8  | 393.7  | 386.6  | 379.5  | 374.7  | 371.2  | 368.8  | 367.6  | 367.6  |
| 75°   | 334.4  | 329.6  | 327.3  | 321.3  | 314.2  | 309.5  | 304.7  | 302.4  | 300.0  | 300.0  | 300.0  |
| 77.5° | 262.0  | 259.7  | 257.3  | 251.4  | 246.6  | 241.9  | 238.3  | 237.1  | 234.8  | 234.8  | 234.8  |
| 80°   | 193.3  | 192.1  | 190.9  | 187.4  | 182.6  | 177.9  | 175.5  | 174.4  | 173.2  | 173.2  | 173.2  |
| 82.5° | 130.5  | 130.5  | 129.3  | 125.7  | 122.2  | 121.0  | 118.6  | 117.4  | 117.4  | 117.4  | 117.4  |
| 85°   | 74.7   | 74.7   | 74.7   | 73.5   | 71.2   | 71.2   | 68.8   | 67.6   | 66.4   | 66.4   | 66.4   |
| 87.5° | 29.7   | 30.8   | 32.0   | 30.8   | 28.5   | 28.5   | 28.5   | 28.5   | 28.5   | 28.5   | 28.5   |
| 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):**

|       | 110°   | 120°   | 130°   | 140°   | 150°   | 160°   | 170°   | 180°   | 190°   | 200°   | 210°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 |
| 2.5°  | 1999.3 | 2001.7 | 2002.9 | 2008.8 | 2015.9 | 2020.7 | 2014.8 | 2008.8 | 2018.3 | 2029.0 | 2029.0 |
| 5°    | 1979.2 | 1981.5 | 1985.1 | 1992.2 | 2001.7 | 2007.6 | 2005.3 | 2000.5 | 2014.8 | 2026.6 | 2027.8 |
| 7.5°  | 1954.3 | 1956.6 | 1961.4 | 1968.5 | 1980.4 | 1988.7 | 1988.7 | 1989.8 | 2002.9 | 2017.1 | 2020.7 |
| 10°   | 1917.5 | 1923.4 | 1930.5 | 1941.2 | 1953.1 | 1963.8 | 1967.3 | 1968.5 | 1985.1 | 2000.5 | 2005.3 |
| 12.5° | 1883.1 | 1889.0 | 1896.1 | 1908.0 | 1922.2 | 1934.1 | 1937.7 | 1942.4 | 1960.2 | 1978.0 | 1985.1 |
| 15°   | 1844.0 | 1849.9 | 1858.2 | 1870.0 | 1885.5 | 1898.5 | 1905.6 | 1912.7 | 1930.5 | 1949.5 | 1957.8 |
| 17.5° | 1797.7 | 1803.6 | 1811.9 | 1826.2 | 1844.0 | 1859.4 | 1867.7 | 1876.0 | 1896.1 | 1916.3 | 1924.6 |
| 20°   | 1743.1 | 1751.4 | 1763.3 | 1777.5 | 1797.7 | 1815.5 | 1825.0 | 1834.5 | 1855.8 | 1876.0 | 1885.5 |
| 22.5° | 1687.4 | 1696.9 | 1709.9 | 1726.5 | 1747.9 | 1766.9 | 1778.7 | 1790.6 | 1811.9 | 1832.1 | 1842.8 |
| 25°   | 1631.7 | 1642.4 | 1655.5 | 1673.2 | 1693.3 | 1712.3 | 1726.5 | 1740.8 | 1762.1 | 1783.5 | 1794.1 |
| 27.5° | 1574.8 | 1584.3 | 1597.3 | 1615.1 | 1637.7 | 1657.8 | 1672.0 | 1687.4 | 1708.7 | 1731.3 | 1741.9 |
| 30°   | 1511.9 | 1522.6 | 1534.5 | 1552.3 | 1577.2 | 1599.7 | 1613.9 | 1630.5 | 1651.9 | 1674.4 | 1685.0 |
| 32.5° | 1451.4 | 1460.9 | 1472.8 | 1490.6 | 1515.5 | 1539.2 | 1554.6 | 1571.2 | 1592.6 | 1615.1 | 1624.6 |
| 35°   | 1388.6 | 1398.1 | 1411.1 | 1428.9 | 1453.8 | 1476.3 | 1491.8 | 1508.4 | 1528.5 | 1549.9 | 1560.6 |
| 37.5° | 1326.9 | 1336.4 | 1349.4 | 1367.2 | 1390.9 | 1413.5 | 1428.9 | 1445.5 | 1465.7 | 1485.8 | 1495.3 |
| 40°   | 1262.9 | 1272.4 | 1283.1 | 1300.8 | 1324.5 | 1347.1 | 1361.3 | 1377.9 | 1398.1 | 1419.4 | 1428.9 |
| 42.5° | 1197.7 | 1207.2 | 1220.2 | 1238.0 | 1260.6 | 1280.7 | 1296.1 | 1311.5 | 1330.5 | 1349.4 | 1358.9 |
| 45°   | 1132.5 | 1140.8 | 1153.8 | 1170.4 | 1191.8 | 1210.8 | 1226.2 | 1241.6 | 1259.4 | 1277.2 | 1286.7 |
| 47.5° | 1064.9 | 1074.3 | 1085.0 | 1101.6 | 1123.0 | 1143.1 | 1158.6 | 1172.8 | 1189.4 | 1207.2 | 1215.5 |
| 50°   | 999.6  | 1007.9 | 1018.6 | 1034.0 | 1054.2 | 1073.2 | 1086.2 | 1100.4 | 1115.9 | 1132.5 | 1139.6 |
| 52.5° | 932.0  | 940.3  | 951.0  | 966.4  | 983.0  | 1000.8 | 1012.7 | 1025.7 | 1041.1 | 1056.6 | 1063.7 |
| 55°   | 863.3  | 869.2  | 878.7  | 893.0  | 910.8  | 927.3  | 939.1  | 952.2  | 965.2  | 978.3  | 986.6  |
| 57.5° | 795.7  | 802.8  | 812.3  | 825.4  | 840.8  | 856.2  | 866.9  | 877.5  | 890.6  | 903.6  | 909.6  |
| 60°   | 726.9  | 732.8  | 740.0  | 751.8  | 767.2  | 780.3  | 791.0  | 801.6  | 812.3  | 824.2  | 830.1  |
| 62.5° | 656.9  | 662.9  | 670.0  | 681.8  | 694.9  | 706.7  | 716.2  | 725.7  | 735.2  | 745.9  | 751.8  |
| 65°   | 586.9  | 592.9  | 600.0  | 608.3  | 619.0  | 629.6  | 639.1  | 648.6  | 655.7  | 662.9  | 668.8  |
| 67.5° | 511.1  | 517.1  | 524.2  | 531.3  | 540.8  | 551.4  | 558.5  | 566.8  | 573.9  | 582.2  | 585.8  |
| 70°   | 440.0  | 444.7  | 451.8  | 457.8  | 466.1  | 473.2  | 479.1  | 486.2  | 491.0  | 498.1  | 504.0  |
| 72.5° | 370.0  | 374.7  | 380.7  | 386.6  | 391.3  | 397.3  | 404.4  | 410.3  | 416.2  | 423.4  | 425.7  |
| 75°   | 302.4  | 304.7  | 309.5  | 314.2  | 319.0  | 323.7  | 327.3  | 332.0  | 336.8  | 341.5  | 345.1  |
| 77.5° | 235.9  | 238.3  | 243.1  | 246.6  | 250.2  | 253.7  | 256.1  | 258.5  | 263.2  | 266.8  | 270.3  |
| 80°   | 173.2  | 175.5  | 179.1  | 182.6  | 186.2  | 189.7  | 189.7  | 189.7  | 195.6  | 200.4  | 201.5  |
| 82.5° | 117.4  | 118.6  | 121.0  | 123.4  | 125.7  | 128.1  | 128.1  | 126.9  | 130.5  | 134.0  | 136.4  |
| 85°   | 67.6   | 68.8   | 71.2   | 71.2   | 72.4   | 72.4   | 72.4   | 72.4   | 74.7   | 78.3   | 80.7   |
| 87.5° | 27.3   | 27.3   | 28.5   | 28.5   | 29.7   | 29.7   | 28.5   | 27.3   | 29.7   | 33.2   | 34.4   |
| 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):**

|       | 220°   | 230°   | 240°   | 250°   | 260°   | 270°   | 280°   | 290°   | 300°   | 310°   | 320°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 | 2019.5 |
| 2.5°  | 2024.2 | 2023.1 | 2026.6 | 2027.8 | 2030.2 | 2030.2 | 2031.4 | 2031.4 | 2029.0 | 2025.4 | 2026.6 |
| 5°    | 2025.4 | 2025.4 | 2029.0 | 2032.5 | 2037.3 | 2042.0 | 2038.4 | 2034.9 | 2032.5 | 2029.0 | 2027.8 |
| 7.5°  | 2019.5 | 2021.9 | 2025.4 | 2031.4 | 2037.3 | 2044.4 | 2039.6 | 2034.9 | 2029.0 | 2024.2 | 2021.9 |
| 10°   | 2005.3 | 2007.6 | 2013.6 | 2019.5 | 2025.4 | 2031.4 | 2026.6 | 2021.9 | 2017.1 | 2011.2 | 2008.8 |
| 12.5° | 1987.5 | 1991.0 | 1998.2 | 2004.1 | 2010.0 | 2017.1 | 2011.2 | 2005.3 | 1999.3 | 1993.4 | 1989.8 |
| 15°   | 1961.4 | 1966.1 | 1974.4 | 1981.5 | 1989.8 | 1995.8 | 1991.0 | 1986.3 | 1979.2 | 1970.9 | 1964.9 |
| 17.5° | 1928.2 | 1935.3 | 1943.6 | 1951.9 | 1959.0 | 1964.9 | 1961.4 | 1956.6 | 1948.3 | 1938.8 | 1931.7 |
| 20°   | 1891.4 | 1898.5 | 1905.6 | 1913.9 | 1922.2 | 1928.2 | 1923.4 | 1917.5 | 1909.2 | 1902.1 | 1895.0 |
| 22.5° | 1848.7 | 1855.8 | 1864.1 | 1871.2 | 1878.4 | 1884.3 | 1878.4 | 1871.2 | 1864.1 | 1857.0 | 1849.9 |
| 25°   | 1800.1 | 1807.2 | 1816.7 | 1823.8 | 1828.5 | 1833.3 | 1828.5 | 1822.6 | 1815.5 | 1808.4 | 1801.3 |
| 27.5° | 1749.1 | 1756.2 | 1765.7 | 1772.8 | 1777.5 | 1782.3 | 1777.5 | 1771.6 | 1764.5 | 1757.4 | 1750.2 |
| 30°   | 1692.1 | 1699.2 | 1708.7 | 1715.8 | 1719.4 | 1723.0 | 1718.2 | 1713.5 | 1707.5 | 1700.4 | 1693.3 |
| 32.5° | 1631.7 | 1638.9 | 1646.0 | 1653.1 | 1659.0 | 1663.7 | 1659.0 | 1654.3 | 1647.2 | 1637.7 | 1630.5 |
| 35°   | 1567.7 | 1574.8 | 1583.1 | 1590.2 | 1597.3 | 1603.3 | 1596.1 | 1587.8 | 1581.9 | 1576.0 | 1570.1 |
| 37.5° | 1500.1 | 1508.4 | 1517.9 | 1526.2 | 1528.5 | 1533.3 | 1528.5 | 1523.8 | 1517.9 | 1511.9 | 1504.8 |
| 40°   | 1433.6 | 1440.8 | 1449.1 | 1457.4 | 1460.9 | 1464.5 | 1459.7 | 1455.0 | 1447.9 | 1442.0 | 1434.8 |
| 42.5° | 1364.9 | 1372.0 | 1379.1 | 1386.2 | 1390.9 | 1395.7 | 1390.9 | 1383.8 | 1379.1 | 1374.3 | 1368.4 |
| 45°   | 1293.8 | 1300.8 | 1306.8 | 1313.9 | 1317.4 | 1321.0 | 1316.2 | 1310.3 | 1305.6 | 1302.0 | 1296.1 |
| 47.5° | 1221.4 | 1227.4 | 1233.3 | 1239.2 | 1241.6 | 1245.2 | 1240.4 | 1236.8 | 1233.3 | 1229.7 | 1225.0 |
| 50°   | 1145.5 | 1151.4 | 1158.6 | 1164.5 | 1165.7 | 1169.2 | 1164.5 | 1160.9 | 1157.4 | 1153.8 | 1150.3 |
| 52.5° | 1070.8 | 1075.5 | 1081.5 | 1087.4 | 1089.8 | 1092.1 | 1087.4 | 1082.6 | 1079.1 | 1076.7 | 1073.2 |
| 55°   | 992.5  | 997.2  | 1003.2 | 1007.9 | 1011.5 | 1013.9 | 1009.1 | 1004.4 | 1000.8 | 999.6  | 996.1  |
| 57.5° | 914.3  | 919.0  | 925.0  | 929.7  | 932.0  | 934.4  | 929.7  | 925.0  | 922.6  | 920.2  | 917.9  |
| 60°   | 834.8  | 839.6  | 844.3  | 847.9  | 850.3  | 851.5  | 846.7  | 843.1  | 842.0  | 840.8  | 838.4  |
| 62.5° | 756.6  | 758.9  | 763.7  | 766.0  | 768.4  | 769.6  | 766.0  | 763.7  | 762.5  | 761.3  | 760.1  |
| 65°   | 674.7  | 680.6  | 684.2  | 686.6  | 686.6  | 687.8  | 684.2  | 683.0  | 681.8  | 680.6  | 678.3  |
| 67.5° | 590.5  | 595.2  | 597.6  | 600.0  | 600.0  | 600.0  | 600.0  | 600.0  | 598.8  | 596.4  | 594.1  |
| 70°   | 509.9  | 513.5  | 515.9  | 517.1  | 517.1  | 517.1  | 514.7  | 513.5  | 514.7  | 514.7  | 513.5  |
| 72.5° | 428.1  | 430.5  | 431.7  | 432.8  | 431.7  | 431.7  | 431.7  | 434.0  | 434.0  | 432.8  | 430.5  |
| 75°   | 348.6  | 351.0  | 352.2  | 353.4  | 352.2  | 352.2  | 352.2  | 354.6  | 353.4  | 353.4  | 352.2  |
| 77.5° | 273.9  | 275.1  | 275.1  | 276.3  | 275.1  | 275.1  | 276.3  | 278.6  | 277.5  | 277.5  | 277.5  |
| 80°   | 202.7  | 202.7  | 202.7  | 203.9  | 202.7  | 202.7  | 203.9  | 206.3  | 205.1  | 205.1  | 205.1  |
| 82.5° | 137.6  | 138.8  | 138.8  | 138.8  | 140.0  | 141.2  | 141.2  | 141.2  | 141.2  | 141.2  | 140.0  |
| 85°   | 81.8   | 83.0   | 81.8   | 81.8   | 81.8   | 81.8   | 83.0   | 84.2   | 84.2   | 84.2   | 84.2   |
| 87.5° | 35.6   | 36.8   | 35.6   | 34.4   | 33.2   | 33.2   | 35.6   | 38.0   | 38.0   | 36.8   | 36.8   |
| 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: 4APN-28-30L850-UNV-NP

**CANDELA DISTRIBUTION (continued):**

|       | 330°   | 340°   | 350°   | 360°   |
|-------|--------|--------|--------|--------|
| 0°    | 2019.5 | 2019.5 | 2019.5 | 2019.5 |
| 2.5°  | 2031.4 | 2031.4 | 2020.7 | 2010.0 |
| 5°    | 2030.2 | 2027.8 | 2015.9 | 2002.9 |
| 7.5°  | 2023.1 | 2019.5 | 2004.1 | 1989.8 |
| 10°   | 2006.5 | 2001.7 | 1985.1 | 1967.3 |
| 12.5° | 1986.3 | 1979.2 | 1960.2 | 1942.4 |
| 15°   | 1960.2 | 1951.9 | 1931.7 | 1911.6 |
| 17.5° | 1925.8 | 1916.3 | 1896.1 | 1874.8 |
| 20°   | 1889.0 | 1878.4 | 1855.8 | 1833.3 |
| 22.5° | 1844.0 | 1834.5 | 1810.7 | 1788.2 |
| 25°   | 1795.3 | 1784.6 | 1760.9 | 1737.2 |
| 27.5° | 1743.1 | 1731.3 | 1707.5 | 1685.0 |
| 30°   | 1686.2 | 1674.4 | 1650.7 | 1628.2 |
| 32.5° | 1625.8 | 1616.3 | 1592.6 | 1567.7 |
| 35°   | 1564.1 | 1552.3 | 1528.5 | 1504.8 |
| 37.5° | 1498.9 | 1488.2 | 1465.7 | 1443.1 |
| 40°   | 1430.1 | 1419.4 | 1395.7 | 1373.2 |
| 42.5° | 1362.5 | 1353.0 | 1330.5 | 1309.1 |
| 45°   | 1290.2 | 1280.7 | 1259.4 | 1240.4 |
| 47.5° | 1217.9 | 1208.4 | 1188.2 | 1168.1 |
| 50°   | 1144.3 | 1134.8 | 1115.9 | 1098.1 |
| 52.5° | 1067.2 | 1060.1 | 1042.3 | 1024.5 |
| 55°   | 990.1  | 981.8  | 964.0  | 948.6  |
| 57.5° | 913.1  | 907.2  | 890.6  | 875.2  |
| 60°   | 833.7  | 826.5  | 813.5  | 800.4  |
| 62.5° | 756.6  | 750.6  | 737.6  | 725.7  |
| 65°   | 674.7  | 670.0  | 659.3  | 648.6  |
| 67.5° | 590.5  | 586.9  | 576.3  | 566.8  |
| 70°   | 509.9  | 504.0  | 495.7  | 487.4  |
| 72.5° | 428.1  | 425.7  | 418.6  | 411.5  |
| 75°   | 349.8  | 347.4  | 340.3  | 334.4  |
| 77.5° | 276.3  | 273.9  | 268.0  | 262.0  |
| 80°   | 203.9  | 202.7  | 198.0  | 193.3  |
| 82.5° | 140.0  | 138.8  | 135.2  | 130.5  |
| 85°   | 84.2   | 81.8   | 78.3   | 74.7   |
| 87.5° | 36.8   | 35.6   | 32.0   | 29.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)