

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: LUMARK

Report Number: P272337

Luminaire Tested: **CTKR2-B2-D-UNV-T2**

Issue Date: 9/28/2018

**Test Information**

Test Method: LM-79-08  
Report Number: P272337  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1809-939-3)  
Test Lab: INNOVATIONS CENTER(G2)  
Issue Date: 9/28/2018  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: CTKR2-B2-D-UNV-T2  
Description: CARETAKER AREA AND ROADWAY LUMINAIRE  
(1) 70 CRI, 4000K LED WITH TYPE II OPTIC AND U0 SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6685 lumens  
Efficiency: N/A  
Efficacy: 133.7 lumens/watt  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1

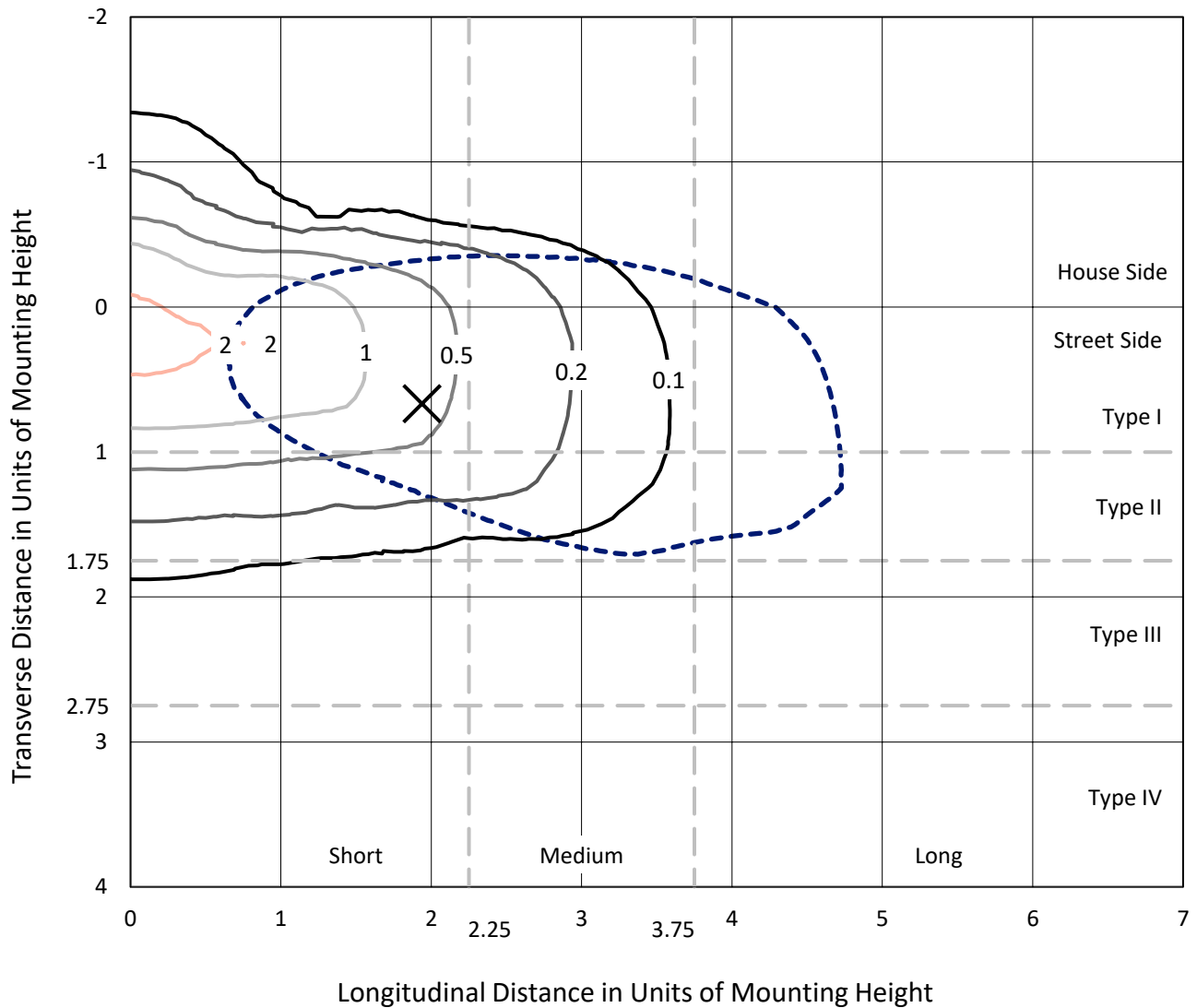
Input Watts (W): 50  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

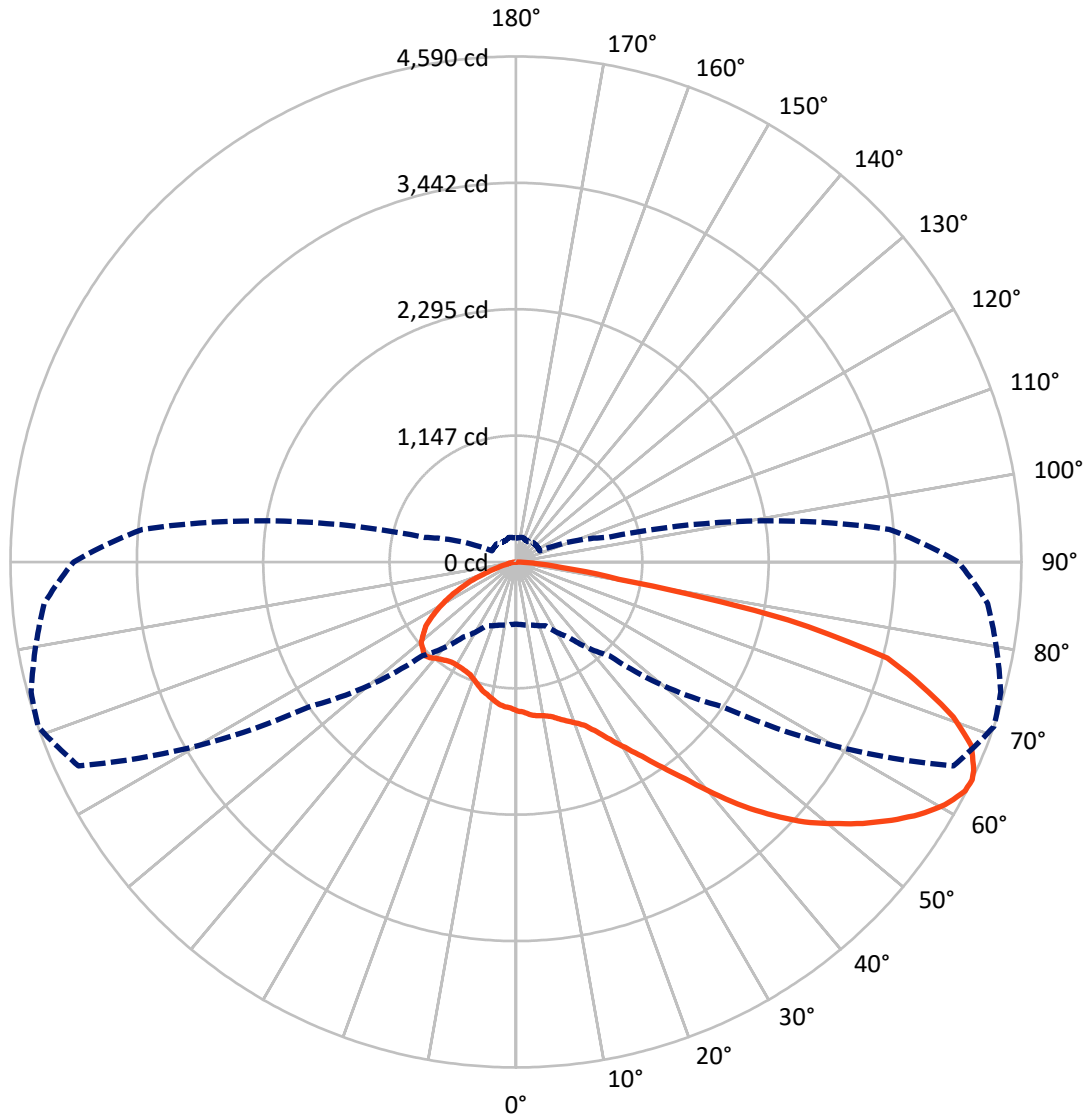
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 71-Deg Lateral      - - - Horizontal Cone Through 64-Deg Vertical

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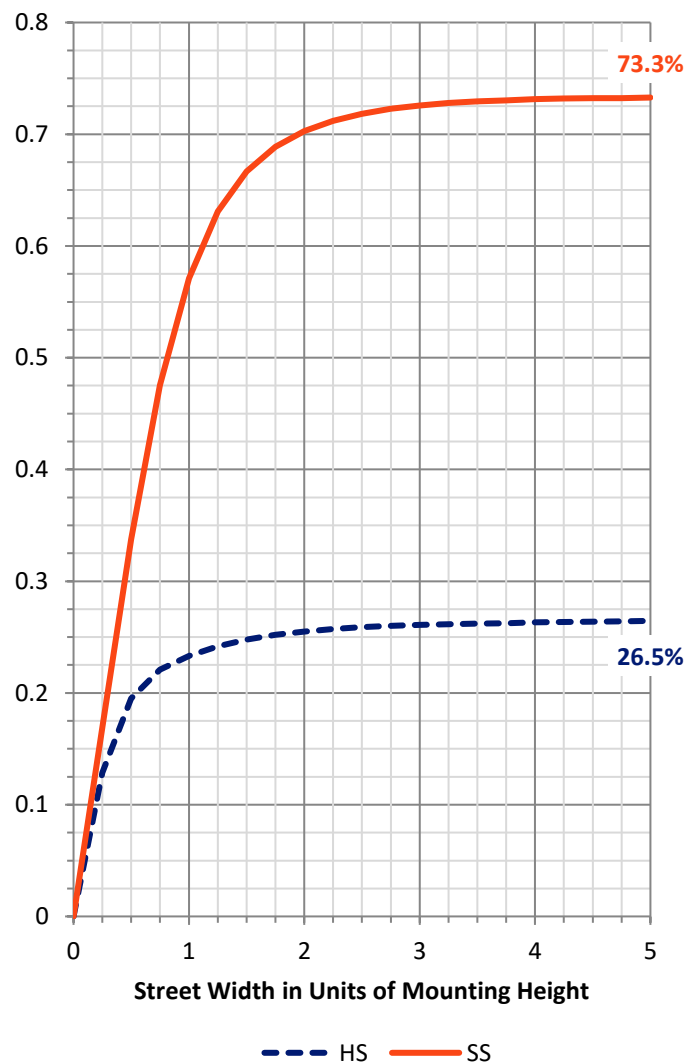
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1792.1   | 0.0    | 1792.1 |
|                    | % Fixture | 26.8     | 0.0    | 26.8   |
| <b>Street Side</b> | Lumens    | 4892.9   | 0.0    | 4892.9 |
|                    | % Fixture | 73.2     | 0.0    | 73.2   |
| <b>Total</b>       | Lumens    | 6685.0   | 0.0    | 6685.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 129.5  | 1.9       |
| 10°-20°   | 379.1  | 5.7       |
| 20°-30°   | 607.5  | 9.1       |
| 30°-40°   | 843.5  | 12.6      |
| 40°-50°   | 1123.7 | 16.8      |
| 50°-60°   | 1332.5 | 19.9      |
| 60°-70°   | 1349.3 | 20.2      |
| 70°-80°   | 823.9  | 12.3      |
| 80°-90°   | 96.1   | 1.4       |
| 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°-90°    | 6685.0 | 100.0     |
| 0°-180°   | 6685.0 | 100.0     |



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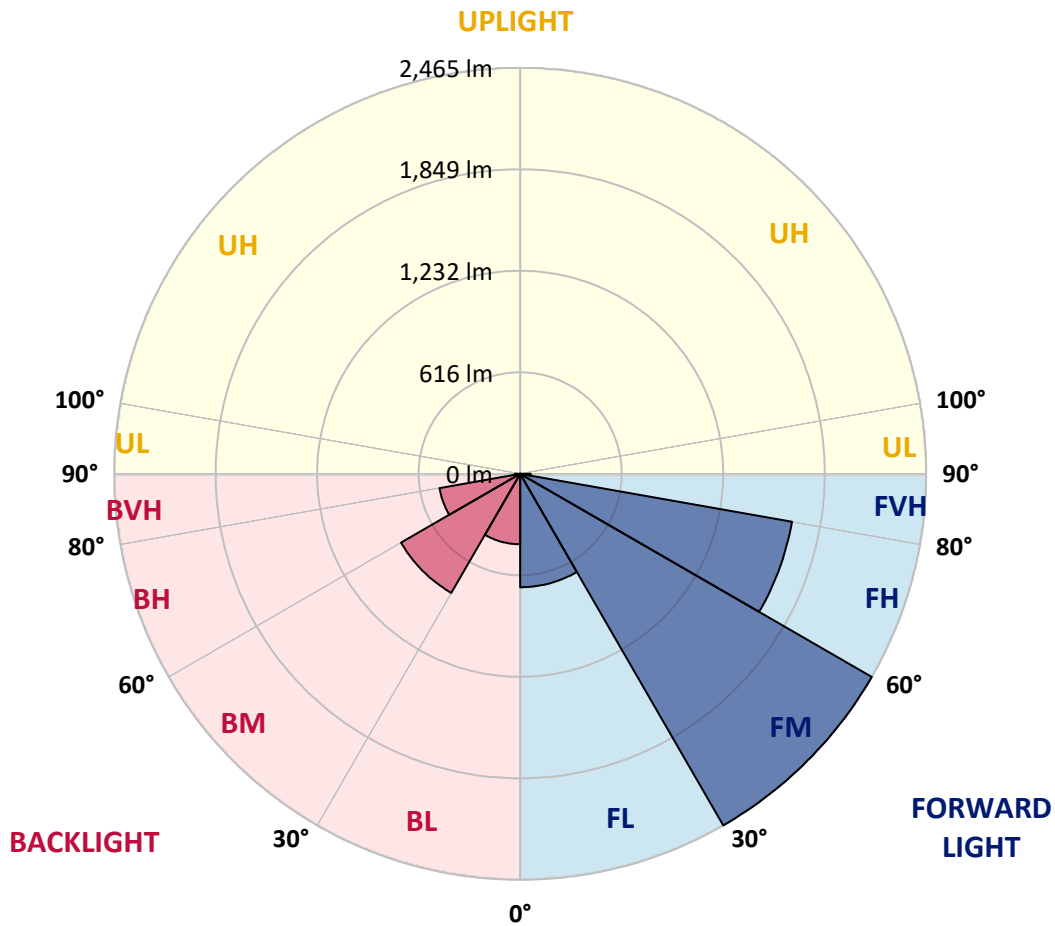
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 688.5  | 10.3      |                         |      |         |
| FM (30°-60°)   | 2464.7 | 36.9      |                         |      |         |
| FH (60°-80°)   | 1675.7 | 25.1      |                         |      | G1/1800 |
| FVH (80°-90°)  | 63.8   | 1.0       |                         |      | G1/100  |
| BL (0°-30°)    | 427.5  | 6.4       | B1/500                  |      |         |
| BM (30°-60°)   | 834.9  | 12.5      | B1/1000                 |      |         |
| BH (60°-80°)   | 497.5  | 7.4       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 32.2   | 0.5       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G1**

Type II Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 71°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 |
| 2.5°  | 1408.1 | 1405.0 | 1403.4 | 1400.3 | 1394.8 | 1390.1 | 1383.9 | 1371.4 | 1365.9 | 1357.3 | 1344.8 |
| 5°    | 1472.9 | 1470.6 | 1467.5 | 1461.2 | 1453.4 | 1437.0 | 1422.2 | 1404.2 | 1394.0 | 1383.1 | 1358.9 |
| 7.5°  | 1522.9 | 1520.6 | 1518.2 | 1514.3 | 1504.2 | 1484.6 | 1456.5 | 1426.8 | 1410.4 | 1395.6 | 1363.6 |
| 10°   | 1563.5 | 1562.0 | 1557.3 | 1550.2 | 1534.6 | 1512.0 | 1482.3 | 1444.0 | 1419.0 | 1400.3 | 1355.0 |
| 12.5° | 1614.3 | 1613.5 | 1602.6 | 1590.1 | 1572.9 | 1550.2 | 1513.5 | 1473.7 | 1440.9 | 1415.9 | 1355.0 |
| 15°   | 1658.0 | 1655.7 | 1646.3 | 1633.0 | 1615.1 | 1594.0 | 1558.1 | 1511.2 | 1479.2 | 1446.4 | 1370.6 |
| 17.5° | 1675.2 | 1672.9 | 1665.8 | 1656.5 | 1648.6 | 1629.1 | 1599.4 | 1553.4 | 1519.0 | 1483.9 | 1392.5 |
| 20°   | 1690.0 | 1686.1 | 1683.8 | 1683.8 | 1679.1 | 1664.3 | 1639.3 | 1601.0 | 1560.4 | 1519.8 | 1417.5 |
| 22.5° | 1676.0 | 1682.2 | 1703.3 | 1719.7 | 1722.1 | 1714.2 | 1698.6 | 1661.9 | 1613.5 | 1575.2 | 1457.3 |
| 25°   | 1680.7 | 1681.4 | 1722.8 | 1760.3 | 1772.0 | 1776.7 | 1768.9 | 1747.0 | 1707.2 | 1672.1 | 1525.3 |
| 27.5° | 1679.9 | 1687.7 | 1718.9 | 1765.0 | 1811.9 | 1833.7 | 1849.4 | 1850.1 | 1825.1 | 1791.6 | 1619.8 |
| 30°   | 1654.9 | 1660.4 | 1699.4 | 1764.2 | 1840.8 | 1894.7 | 1928.2 | 1972.8 | 1954.8 | 1918.9 | 1739.2 |
| 32.5° | 1605.7 | 1604.9 | 1652.6 | 1751.0 | 1868.9 | 1962.6 | 2025.1 | 2100.8 | 2104.0 | 2072.7 | 1884.5 |
| 35°   | 1528.4 | 1530.7 | 1594.0 | 1712.7 | 1875.1 | 2024.3 | 2119.6 | 2256.2 | 2289.0 | 2282.8 | 2092.2 |
| 37.5° | 1452.6 | 1455.0 | 1526.8 | 1664.3 | 1871.2 | 2074.3 | 2214.9 | 2416.3 | 2496.0 | 2534.3 | 2352.3 |
| 40°   | 1372.2 | 1379.2 | 1451.8 | 1601.0 | 1845.5 | 2105.5 | 2317.9 | 2595.2 | 2763.1 | 2819.3 | 2615.5 |
| 42.5° | 1283.9 | 1292.5 | 1384.7 | 1541.7 | 1804.1 | 2119.6 | 2411.7 | 2822.5 | 3034.1 | 3072.4 | 2837.3 |
| 45°   | 1213.6 | 1216.8 | 1284.7 | 1430.0 | 1737.7 | 2130.5 | 2506.2 | 3095.0 | 3285.6 | 3325.4 | 3047.4 |
| 47.5° | 1144.9 | 1147.3 | 1202.7 | 1333.1 | 1647.9 | 2118.8 | 2603.8 | 3313.7 | 3527.7 | 3545.6 | 3235.6 |
| 50°   | 870.8  | 878.6  | 1094.9 | 1246.4 | 1531.5 | 2079.7 | 2697.5 | 3556.6 | 3733.9 | 3745.6 | 3412.9 |
| 52.5° | 774.7  | 783.3  | 842.7  | 1155.8 | 1409.7 | 1994.6 | 2767.0 | 3805.7 | 3944.7 | 3926.0 | 3598.8 |
| 55°   | 724.7  | 731.8  | 763.0  | 929.4  | 1297.2 | 1849.4 | 2803.7 | 4034.5 | 4140.0 | 4103.3 | 3770.6 |
| 57.5° | 682.6  | 689.6  | 715.4  | 790.4  | 1169.9 | 1638.5 | 2781.8 | 4233.7 | 4325.1 | 4267.3 | 3950.2 |
| 60°   | 634.2  | 639.6  | 671.6  | 720.1  | 1025.4 | 1439.3 | 2662.4 | 4391.4 | 4477.4 | 4419.6 | 4118.1 |
| 62.5° | 592.0  | 599.8  | 621.7  | 663.8  | 890.3  | 1282.4 | 2421.0 | 4441.4 | 4578.9 | 4536.7 | 4252.4 |
| 64°   | 563.9  | 570.9  | 593.5  | 638.1  | 832.5  | 1204.3 | 2289.0 | 4382.1 | 4589.8 | 4557.8 | 4299.3 |
| 65°   | 542.8  | 549.0  | 574.8  | 615.4  | 785.7  | 1164.4 | 2179.7 | 4322.7 | 4567.9 | 4559.4 | 4309.4 |
| 67.5° | 488.1  | 492.0  | 519.4  | 551.4  | 676.3  | 1052.8 | 1867.3 | 4247.0 | 4461.0 | 4443.0 | 4235.2 |
| 70°   | 428.8  | 428.8  | 451.4  | 484.2  | 573.2  | 917.7  | 1551.0 | 3976.7 | 4214.2 | 4150.9 | 3968.2 |
| 72.5° | 354.6  | 353.0  | 371.7  | 413.1  | 477.2  | 773.2  | 1193.3 | 3521.4 | 3856.5 | 3865.8 | 3573.8 |
| 75°   | 201.5  | 199.1  | 214.0  | 281.9  | 352.2  | 619.3  | 829.4  | 2717.0 | 3484.7 | 3516.0 | 3081.7 |
| 77.5° | 29.7   | 30.5   | 37.5   | 57.8   | 88.3   | 268.7  | 338.2  | 1345.6 | 2527.2 | 2806.8 | 2395.3 |
| 80°   | 24.2   | 24.2   | 29.7   | 45.3   | 64.0   | 157.0  | 113.2  | 496.7  | 947.3  | 1449.5 | 1404.2 |
| 82.5° | 10.9   | 11.7   | 19.5   | 29.7   | 41.4   | 35.1   | 43.7   | 250.7  | 435.0  | 559.2  | 692.7  |
| 85°   | 7.0    | 7.0    | 10.9   | 14.8   | 16.4   | 12.5   | 10.2   | 100.7  | 192.1  | 253.0  | 274.9  |
| 87.5° | 3.9    | 3.9    | 4.7    | 4.7    | 3.9    | 3.1    | 3.1    | 2.3    | 3.1    | 5.5    | 10.9   |
| 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):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 | 1351.1 |
| 2.5°  | 1340.9 | 1334.7 | 1327.7 | 1325.3 | 1322.2 | 1317.5 | 1311.3 | 1306.6 | 1303.5 | 1303.5 | 1303.5 |
| 5°    | 1350.3 | 1339.4 | 1323.8 | 1307.4 | 1291.7 | 1280.8 | 1273.8 | 1265.2 | 1266.0 | 1264.4 | 1266.0 |
| 7.5°  | 1351.1 | 1337.0 | 1309.7 | 1281.6 | 1260.5 | 1243.3 | 1229.3 | 1221.5 | 1217.5 | 1223.0 | 1224.6 |
| 10°   | 1337.0 | 1318.3 | 1275.3 | 1251.1 | 1214.4 | 1189.4 | 1171.5 | 1161.3 | 1166.8 | 1173.8 | 1173.8 |
| 12.5° | 1330.8 | 1305.0 | 1252.7 | 1205.8 | 1178.5 | 1137.9 | 1118.4 | 1105.9 | 1116.8 | 1118.4 | 1117.6 |
| 15°   | 1335.5 | 1299.5 | 1231.6 | 1170.7 | 1119.9 | 1096.5 | 1057.4 | 1044.9 | 1066.8 | 1072.3 | 1073.8 |
| 17.5° | 1341.7 | 1295.6 | 1203.5 | 1119.9 | 1059.8 | 1027.8 | 984.8  | 967.6  | 990.3  | 1010.6 | 1011.4 |
| 20°   | 1351.9 | 1291.0 | 1178.5 | 1069.9 | 987.2  | 947.3  | 909.1  | 894.2  | 905.2  | 935.6  | 937.2  |
| 22.5° | 1384.7 | 1298.0 | 1156.6 | 1029.3 | 930.1  | 872.4  | 838.0  | 813.0  | 816.9  | 848.1  | 850.5  |
| 25°   | 1440.9 | 1333.1 | 1151.9 | 1000.4 | 875.5  | 800.5  | 770.8  | 736.5  | 731.8  | 756.0  | 759.9  |
| 27.5° | 1516.7 | 1387.0 | 1160.5 | 966.9  | 823.9  | 730.2  | 695.1  | 653.7  | 639.6  | 657.6  | 663.1  |
| 30°   | 1613.5 | 1459.6 | 1174.6 | 935.6  | 765.4  | 649.0  | 595.1  | 565.4  | 553.7  | 565.4  | 568.6  |
| 32.5° | 1732.2 | 1547.9 | 1193.3 | 906.7  | 698.2  | 551.4  | 491.2  | 481.9  | 464.7  | 470.1  | 475.6  |
| 35°   | 1920.4 | 1674.4 | 1235.5 | 871.6  | 625.6  | 463.9  | 420.9  | 404.5  | 389.7  | 392.8  | 399.9  |
| 37.5° | 2140.7 | 1853.3 | 1291.7 | 839.6  | 544.3  | 407.7  | 356.9  | 343.6  | 342.1  | 344.4  | 349.1  |
| 40°   | 2395.3 | 2063.3 | 1359.7 | 795.0  | 462.3  | 358.5  | 296.0  | 299.1  | 312.4  | 315.5  | 323.3  |
| 42.5° | 2587.4 | 2282.0 | 1453.4 | 741.1  | 396.7  | 306.9  | 256.9  | 279.6  | 309.3  | 314.7  | 324.9  |
| 45°   | 2787.3 | 2423.4 | 1536.2 | 667.0  | 349.1  | 259.3  | 246.8  | 278.0  | 309.3  | 317.9  | 324.1  |
| 47.5° | 2966.2 | 2599.1 | 1544.8 | 569.3  | 299.1  | 240.5  | 247.6  | 274.9  | 306.1  | 310.0  | 311.6  |
| 50°   | 3119.2 | 2770.9 | 1583.0 | 452.2  | 274.1  | 241.3  | 250.7  | 269.4  | 298.3  | 300.7  | 297.6  |
| 52.5° | 3312.9 | 2947.4 | 1543.2 | 351.4  | 258.5  | 246.0  | 256.9  | 263.2  | 291.3  | 290.5  | 292.1  |
| 55°   | 3501.9 | 3101.3 | 1471.4 | 308.5  | 249.9  | 249.1  | 262.4  | 260.1  | 281.9  | 285.8  | 289.0  |
| 57.5° | 3688.6 | 3235.6 | 1318.3 | 290.5  | 249.1  | 250.7  | 256.9  | 255.4  | 281.2  | 281.2  | 276.5  |
| 60°   | 3844.0 | 3339.5 | 1150.4 | 278.8  | 249.9  | 250.7  | 245.2  | 246.8  | 269.4  | 273.3  | 272.6  |
| 62.5° | 3964.2 | 3404.3 | 977.0  | 256.2  | 245.2  | 242.9  | 228.0  | 228.8  | 245.2  | 239.8  | 235.9  |
| 64°   | 4017.4 | 3403.5 | 862.2  | 239.8  | 238.2  | 237.4  | 218.7  | 216.3  | 232.0  | 220.2  | 217.9  |
| 65°   | 4034.5 | 3377.0 | 792.7  | 228.8  | 227.3  | 232.0  | 211.6  | 208.5  | 222.6  | 209.3  | 207.7  |
| 67.5° | 3913.5 | 3188.0 | 602.1  | 207.7  | 198.4  | 207.0  | 192.9  | 186.7  | 191.3  | 180.4  | 178.8  |
| 70°   | 3589.4 | 2843.5 | 405.3  | 178.8  | 173.4  | 184.3  | 178.1  | 168.7  | 156.2  | 147.6  | 148.4  |
| 72.5° | 3153.6 | 2467.1 | 239.8  | 142.9  | 146.8  | 165.6  | 162.4  | 146.8  | 129.6  | 118.7  | 117.9  |
| 75°   | 2724.1 | 2022.0 | 149.9  | 94.5   | 97.6   | 131.2  | 133.5  | 121.8  | 112.5  | 115.6  | 121.8  |
| 77.5° | 2142.2 | 1461.2 | 98.4   | 46.9   | 43.7   | 75.8   | 83.6   | 73.4   | 98.4   | 153.1  | 149.9  |
| 80°   | 1206.6 | 884.8  | 78.1   | 28.9   | 28.9   | 41.4   | 60.9   | 67.2   | 137.5  | 99.2   | 93.7   |
| 82.5° | 607.6  | 428.0  | 43.7   | 18.7   | 18.0   | 22.6   | 35.1   | 110.1  | 93.7   | 64.0   | 61.7   |
| 85°   | 234.3  | 128.1  | 13.3   | 10.9   | 10.9   | 13.3   | 18.7   | 106.2  | 60.1   | 46.9   | 46.1   |
| 87.5° | 8.6    | 3.1    | 3.9    | 4.7    | 5.5    | 5.5    | 6.2    | 11.7   | 13.3   | 14.8   | 14.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)