

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: P961041

Luminaire Tested: **NAV-SB1D-830-U-T3R**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P961041  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB1D-830-U-T3R  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 80 CRI, 3000K, 900mA LIGHTSQUARE WITH 26 LEDS AND TYPE III ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9624.8 lumens  
Efficiency: N/A  
Efficacy: 120.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G2

Input Watts (W): 79.6  
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: 24 FT



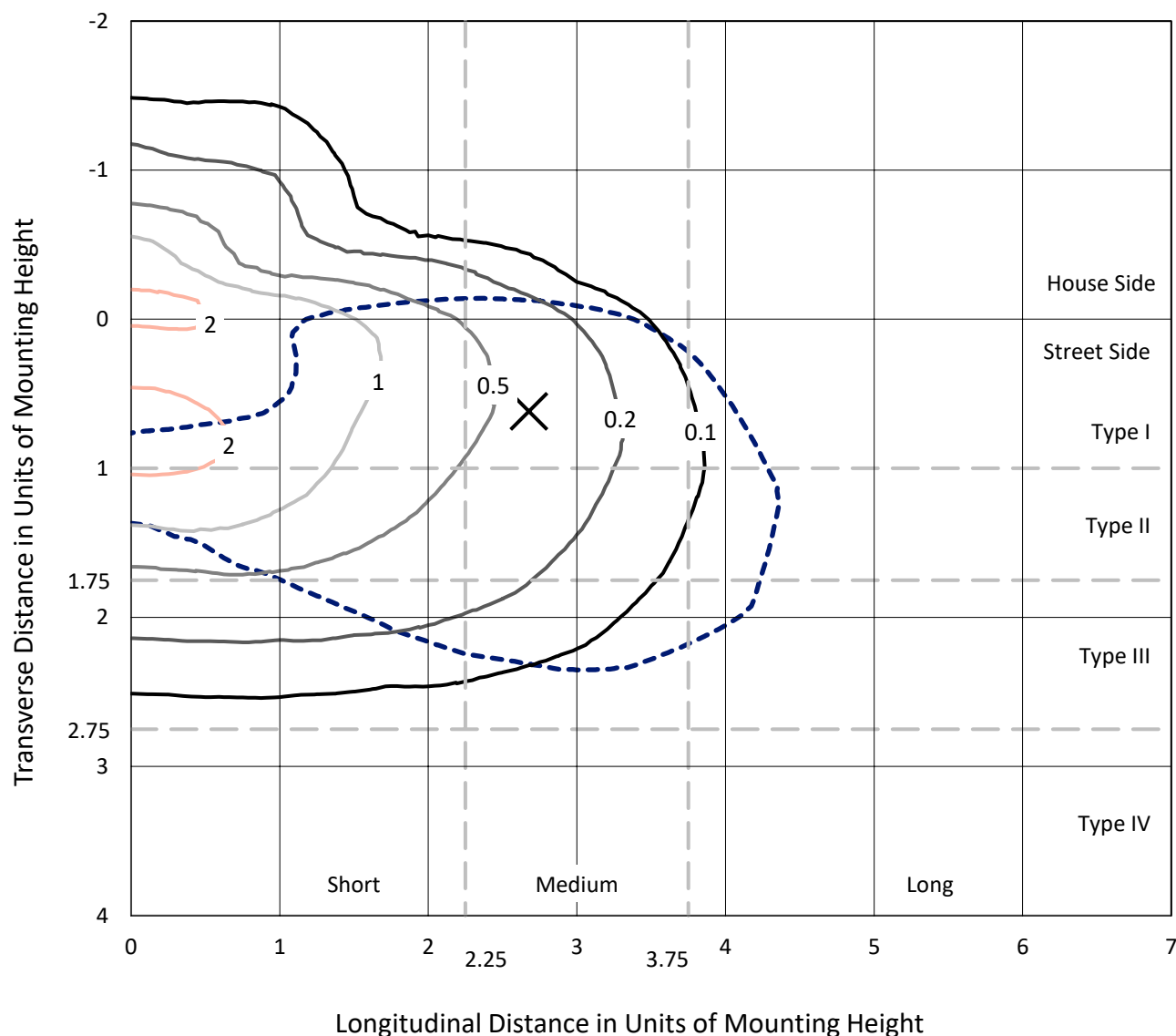
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

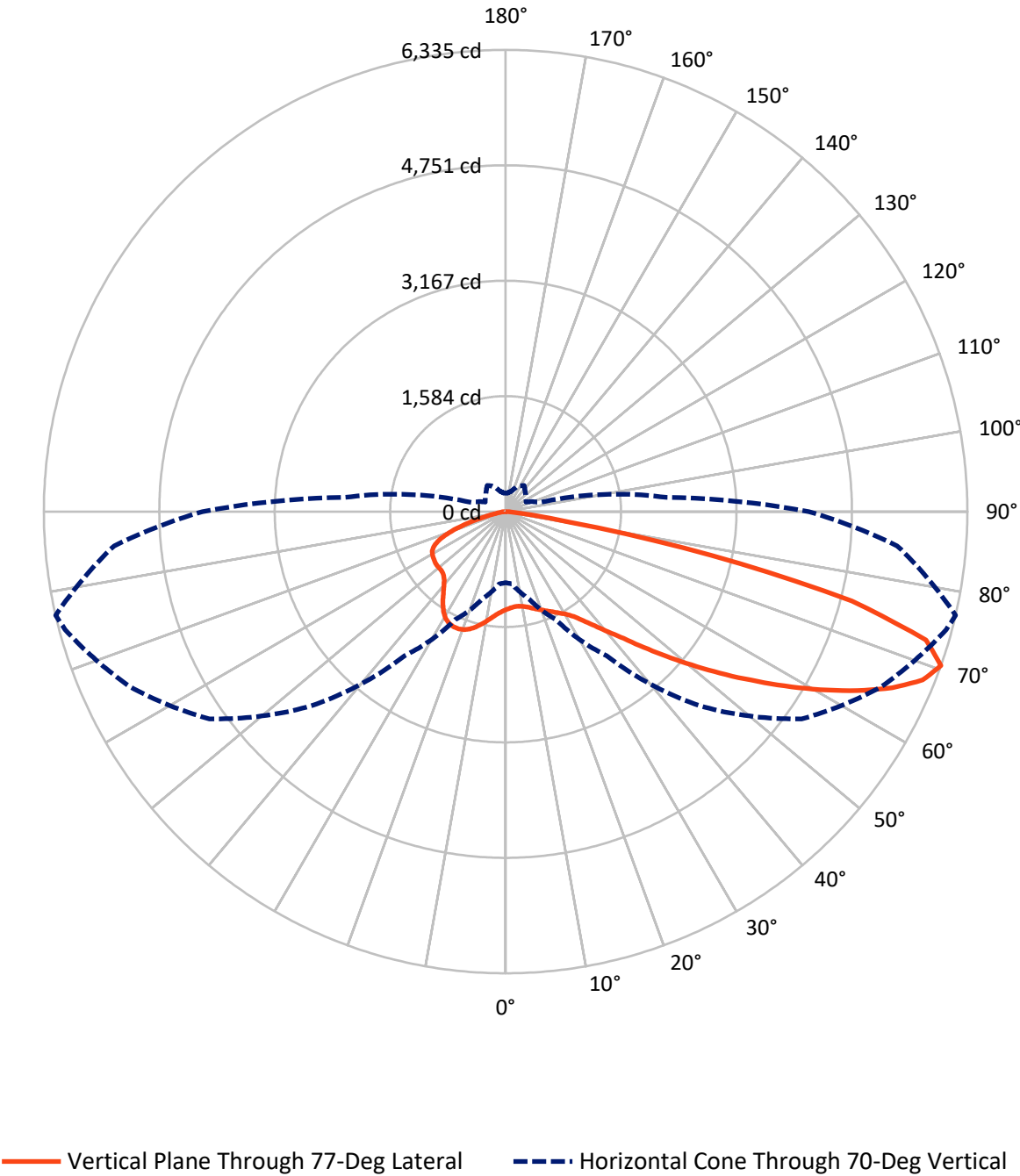
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc  
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 2107.7   | 0.0    | 2107.7 |
|                    | % Fixture | 21.9     | 0.0    | 21.9   |
| <b>Street Side</b> | Lumens    | 7517.1   | 0.0    | 7517.1 |
|                    | % Fixture | 78.1     | 0.0    | 78.1   |
| <b>Total</b>       | Lumens    | 9624.8   | 0.0    | 9624.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 128.1  | 1.3       |
| 10°-20°   | 369.6  | 3.8       |
| 20°-30°   | 632.1  | 6.6       |
| 30°-40°   | 1016.4 | 10.6      |
| 40°-50°   | 1586.9 | 16.5      |
| 50°-60°   | 2119.7 | 22.0      |
| 60°-70°   | 2259.3 | 23.5      |
| 70°-80°   | 1390.8 | 14.5      |
| 80°-90°   | 121.9  | 1.3       |
| 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°    | 9624.8 | 100.0     |
| 0°-180°   | 9624.8 | 100.0     |

**Coefficient of Utilization**



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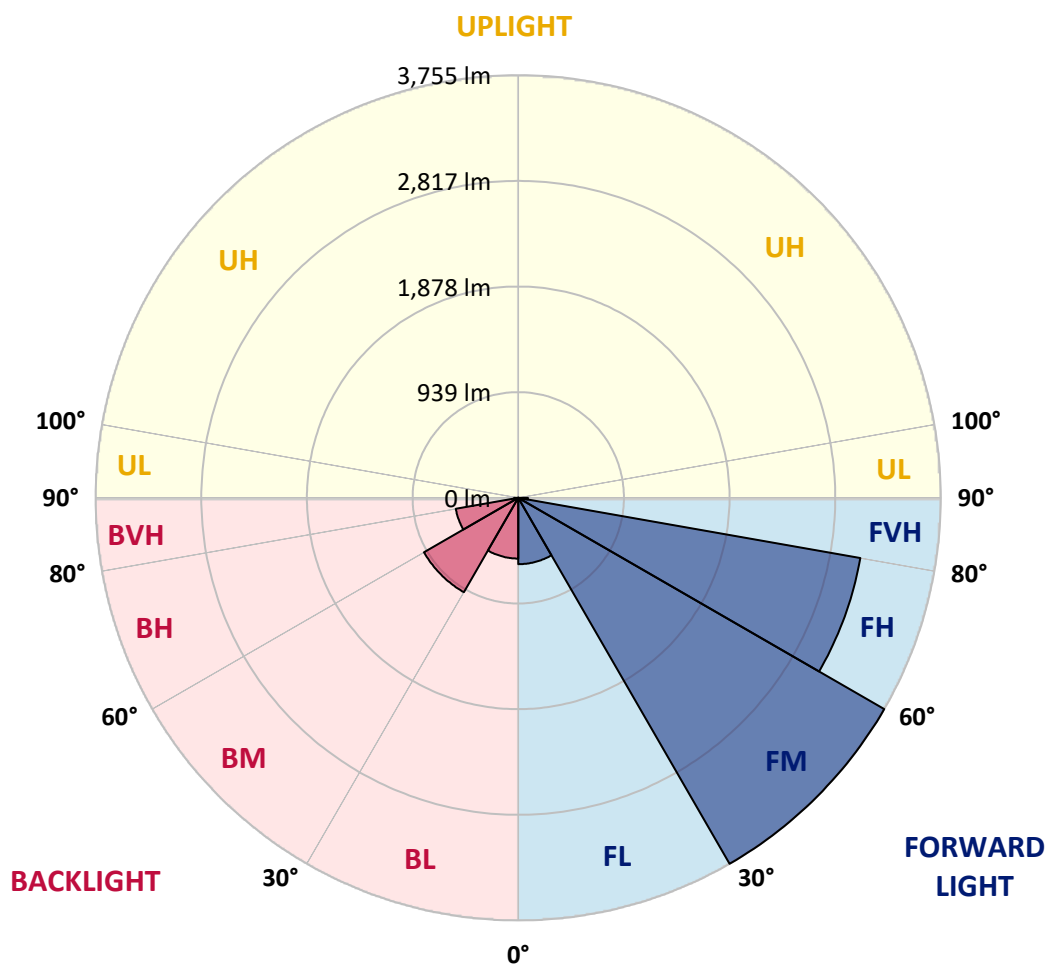
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 589.7  | 6.1       |                         |      |         |
| FM   | (30°-60°)   | 3755.4 | 39.0      |                         |      |         |
| FH   | (60°-80°)   | 3086.8 | 32.1      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 85.2   | 0.9       |                         |      | G1/100  |
| BL   | (0°-30°)    | 540.1  | 5.6       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 967.7  | 10.1      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 563.3  | 5.9       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 36.7   | 0.4       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G2**

Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 77°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 |
| 2.5°  | 1237.8 | 1237.3 | 1243.6 | 1245.7 | 1257.5 | 1265.9 | 1281.7 | 1298.4 | 1320.1 | 1322.6 | 1335.9 |
| 5°    | 1166.2 | 1166.2 | 1173.6 | 1181.5 | 1196.8 | 1213.6 | 1237.8 | 1266.8 | 1304.3 | 1310.3 | 1343.3 |
| 7.5°  | 1105.7 | 1109.6 | 1116.0 | 1131.3 | 1149.0 | 1173.2 | 1210.1 | 1251.5 | 1300.8 | 1310.3 | 1363.5 |
| 10°   | 1056.9 | 1061.3 | 1069.2 | 1081.5 | 1108.1 | 1141.6 | 1189.9 | 1243.1 | 1309.2 | 1324.0 | 1393.0 |
| 12.5° | 1041.6 | 1046.0 | 1050.4 | 1059.8 | 1084.4 | 1123.9 | 1181.5 | 1247.1 | 1329.4 | 1344.2 | 1433.5 |
| 15°   | 1077.1 | 1082.5 | 1079.0 | 1076.6 | 1089.4 | 1125.3 | 1185.5 | 1261.4 | 1354.5 | 1375.8 | 1483.2 |
| 17.5° | 1158.9 | 1160.8 | 1152.9 | 1129.8 | 1127.8 | 1147.1 | 1204.3 | 1281.1 | 1386.1 | 1409.3 | 1533.5 |
| 20°   | 1291.0 | 1287.5 | 1271.3 | 1225.4 | 1199.2 | 1195.4 | 1236.3 | 1310.7 | 1418.7 | 1443.3 | 1587.7 |
| 22.5° | 1470.4 | 1466.5 | 1434.0 | 1361.5 | 1303.3 | 1264.8 | 1282.6 | 1349.1 | 1455.1 | 1482.8 | 1640.5 |
| 25°   | 1694.2 | 1688.8 | 1640.9 | 1542.4 | 1452.2 | 1357.0 | 1345.7 | 1399.9 | 1500.0 | 1525.6 | 1695.7 |
| 27.5° | 1955.5 | 1951.0 | 1899.2 | 1769.2 | 1639.0 | 1483.2 | 1424.0 | 1459.6 | 1546.8 | 1575.9 | 1757.8 |
| 30°   | 2236.4 | 2249.3 | 2157.5 | 2017.6 | 1852.9 | 1647.9 | 1529.6 | 1533.0 | 1607.4 | 1633.5 | 1833.2 |
| 32.5° | 2566.7 | 2588.8 | 2478.4 | 2301.0 | 2076.2 | 1826.8 | 1662.7 | 1635.5 | 1695.7 | 1717.4 | 1928.3 |
| 35°   | 2894.0 | 2919.1 | 2827.5 | 2631.3 | 2372.5 | 2037.8 | 1801.6 | 1753.4 | 1813.0 | 1836.7 | 2054.5 |
| 37.5° | 3176.9 | 3210.4 | 3163.1 | 2992.6 | 2689.4 | 2292.1 | 1983.1 | 1891.8 | 1957.4 | 1987.0 | 2224.1 |
| 40°   | 3400.2 | 3451.5 | 3448.0 | 3341.6 | 3063.1 | 2600.7 | 2213.3 | 2062.9 | 2136.8 | 2168.9 | 2429.7 |
| 42.5° | 3581.7 | 3626.0 | 3664.5 | 3659.0 | 3453.0 | 2951.2 | 2483.9 | 2285.2 | 2341.4 | 2378.4 | 2660.8 |
| 45°   | 3706.8 | 3754.2 | 3837.0 | 3926.2 | 3828.1 | 3326.3 | 2793.9 | 2549.0 | 2600.2 | 2655.9 | 2936.4 |
| 47.5° | 3818.7 | 3872.4 | 3979.9 | 4121.4 | 4146.5 | 3702.9 | 3133.5 | 2856.1 | 2902.9 | 2960.5 | 3213.0 |
| 50°   | 3828.6 | 3874.9 | 4041.6 | 4242.2 | 4372.8 | 4064.7 | 3498.3 | 3200.6 | 3244.4 | 3306.0 | 3509.2 |
| 52.5° | 3590.5 | 3663.5 | 3954.2 | 4238.7 | 4476.8 | 4367.3 | 3860.7 | 3558.9 | 3608.2 | 3682.2 | 3815.8 |
| 55°   | 2787.0 | 2894.0 | 3698.4 | 4106.6 | 4439.8 | 4563.1 | 4205.2 | 3940.0 | 4003.0 | 4080.4 | 4124.3 |
| 57.5° | 2400.5 | 2447.4 | 2935.9 | 3866.1 | 4271.3 | 4613.8 | 4496.1 | 4325.0 | 4426.5 | 4511.3 | 4450.7 |
| 60°   | 2157.5 | 2196.5 | 2485.3 | 3491.9 | 4049.5 | 4533.5 | 4720.7 | 4683.8 | 4859.3 | 4960.4 | 4784.4 |
| 62.5° | 1897.3 | 1934.3 | 2197.0 | 2915.7 | 3765.4 | 4399.9 | 4862.7 | 5015.0 | 5302.9 | 5413.3 | 5098.9 |
| 65°   | 1639.0 | 1670.5 | 1922.4 | 2449.9 | 3404.6 | 4266.4 | 4936.2 | 5301.5 | 5713.6 | 5827.9 | 5360.1 |
| 67.5° | 1351.2 | 1377.3 | 1615.3 | 2066.8 | 2965.9 | 4083.4 | 4972.7 | 5526.7 | 6071.0 | 6169.1 | 5489.3 |
| 70°   | 975.0  | 995.3  | 1241.2 | 1634.6 | 2415.3 | 3768.9 | 4957.9 | 5686.4 | 6256.3 | 6334.6 | 5391.7 |
| 72.5° | 460.8  | 479.1  | 768.0  | 1061.3 | 1706.0 | 3156.7 | 4658.7 | 5559.8 | 6068.0 | 6029.0 | 4794.2 |
| 75°   | 246.0  | 261.8  | 441.2  | 582.2  | 901.1  | 2164.0 | 3812.3 | 4789.3 | 5095.4 | 4906.2 | 3543.2 |
| 77.5° | 166.6  | 179.0  | 273.1  | 349.5  | 411.6  | 1027.3 | 2450.4 | 3316.0 | 3190.2 | 2877.7 | 1774.6 |
| 80°   | 132.1  | 144.9  | 223.8  | 236.6  | 199.2  | 371.2  | 1012.5 | 1534.9 | 1102.7 | 881.8  | 504.7  |
| 82.5° | 101.6  | 115.8  | 188.3  | 171.6  | 108.4  | 152.3  | 294.8  | 485.5  | 282.5  | 214.9  | 122.3  |
| 85°   | 62.1   | 77.4   | 147.9  | 109.5  | 61.1   | 69.5   | 100.0  | 135.1  | 86.3   | 72.0   | 43.9   |
| 87.5° | 31.6   | 44.4   | 74.9   | 40.0   | 27.6   | 16.3   | 26.6   | 26.6   | 22.7   | 19.7   | 11.4   |
| 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):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 | 1342.7 |
| 2.5°  | 1347.7 | 1357.5 | 1374.3 | 1390.1 | 1402.4 | 1414.2 | 1426.1 | 1432.4 | 1434.4 | 1442.3 | 1446.8 |
| 5°    | 1363.5 | 1381.7 | 1414.2 | 1444.7 | 1464.0 | 1475.8 | 1484.2 | 1489.1 | 1490.1 | 1492.6 | 1496.5 |
| 7.5°  | 1392.6 | 1421.6 | 1467.0 | 1497.5 | 1511.8 | 1510.8 | 1507.4 | 1495.1 | 1490.1 | 1485.7 | 1486.7 |
| 10°   | 1433.5 | 1471.9 | 1527.6 | 1548.8 | 1540.0 | 1516.3 | 1485.7 | 1449.7 | 1432.9 | 1416.7 | 1411.7 |
| 12.5° | 1484.2 | 1533.0 | 1587.7 | 1586.7 | 1542.8 | 1482.3 | 1411.2 | 1356.1 | 1321.0 | 1295.9 | 1290.0 |
| 15°   | 1545.8 | 1602.0 | 1643.9 | 1610.4 | 1514.2 | 1405.4 | 1301.3 | 1229.4 | 1197.8 | 1170.2 | 1167.3 |
| 17.5° | 1609.5 | 1669.5 | 1688.8 | 1603.0 | 1442.3 | 1291.5 | 1173.6 | 1116.9 | 1085.9 | 1071.1 | 1075.5 |
| 20°   | 1671.6 | 1731.1 | 1715.4 | 1560.7 | 1332.9 | 1162.4 | 1057.3 | 1026.2 | 1019.9 | 1023.4 | 1021.8 |
| 22.5° | 1737.1 | 1790.4 | 1720.8 | 1478.8 | 1193.4 | 1030.2 | 972.5  | 973.5  | 987.8  | 998.1  | 1000.6 |
| 25°   | 1804.1 | 1840.1 | 1706.5 | 1360.5 | 1043.6 | 933.2  | 918.8  | 934.6  | 962.7  | 982.9  | 988.3  |
| 27.5° | 1868.7 | 1884.5 | 1675.5 | 1214.1 | 914.9  | 863.6  | 866.1  | 898.6  | 941.1  | 969.1  | 976.0  |
| 30°   | 1941.7 | 1923.9 | 1615.8 | 1049.5 | 825.6  | 804.0  | 824.7  | 862.6  | 905.0  | 930.2  | 936.0  |
| 32.5° | 2024.0 | 1958.0 | 1521.2 | 897.2  | 762.6  | 756.1  | 790.2  | 814.8  | 833.5  | 840.9  | 844.9  |
| 35°   | 2126.5 | 2005.7 | 1399.9 | 790.2  | 705.9  | 721.2  | 753.7  | 741.4  | 734.0  | 730.0  | 734.0  |
| 37.5° | 2259.6 | 2070.3 | 1258.0 | 720.7  | 660.0  | 696.0  | 709.3  | 670.9  | 641.8  | 627.5  | 631.0  |
| 40°   | 2419.8 | 2164.9 | 1121.5 | 667.0  | 631.0  | 674.3  | 651.2  | 604.9  | 567.8  | 547.7  | 549.1  |
| 42.5° | 2597.8 | 2264.0 | 1006.6 | 626.5  | 614.7  | 656.6  | 608.2  | 553.1  | 493.4  | 487.0  | 493.4  |
| 45°   | 2784.5 | 2366.1 | 928.1  | 595.4  | 606.8  | 641.3  | 583.6  | 494.4  | 452.0  | 478.2  | 491.9  |
| 47.5° | 2971.4 | 2459.7 | 880.9  | 572.3  | 602.8  | 624.0  | 561.9  | 461.9  | 431.8  | 469.8  | 487.5  |
| 50°   | 3179.4 | 2543.5 | 859.7  | 555.6  | 598.4  | 617.2  | 529.4  | 453.5  | 410.6  | 435.7  | 454.5  |
| 52.5° | 3386.0 | 2608.6 | 843.9  | 538.7  | 592.0  | 611.7  | 513.6  | 443.6  | 385.0  | 386.4  | 396.8  |
| 55°   | 3592.0 | 2651.0 | 826.7  | 516.6  | 577.7  | 599.9  | 512.2  | 432.8  | 365.7  | 358.9  | 363.8  |
| 57.5° | 3811.9 | 2675.1 | 805.4  | 491.9  | 553.1  | 569.8  | 510.7  | 424.5  | 359.9  | 348.5  | 349.9  |
| 60°   | 4035.6 | 2710.6 | 777.9  | 461.9  | 520.1  | 533.8  | 507.3  | 421.5  | 356.4  | 337.1  | 338.7  |
| 62.5° | 4236.2 | 2722.9 | 744.9  | 433.3  | 477.6  | 498.4  | 499.8  | 419.0  | 347.1  | 314.0  | 314.0  |
| 65°   | 4367.8 | 2669.7 | 687.2  | 400.8  | 431.8  | 461.9  | 485.5  | 410.6  | 330.3  | 297.2  | 297.2  |
| 67.5° | 4362.4 | 2517.9 | 597.0  | 358.9  | 387.4  | 421.5  | 464.8  | 396.3  | 310.1  | 276.5  | 278.0  |
| 70°   | 4159.3 | 2218.2 | 482.6  | 310.1  | 338.7  | 378.1  | 438.2  | 375.2  | 285.9  | 253.9  | 256.9  |
| 72.5° | 3567.3 | 1736.1 | 350.4  | 252.9  | 282.0  | 333.2  | 403.7  | 349.5  | 261.3  | 233.6  | 232.2  |
| 75°   | 2548.5 | 1098.7 | 237.6  | 194.2  | 219.4  | 282.5  | 360.8  | 319.4  | 238.6  | 234.6  | 221.3  |
| 77.5° | 1301.9 | 525.0  | 157.2  | 142.0  | 152.8  | 222.8  | 303.2  | 285.4  | 242.0  | 193.7  | 172.5  |
| 80°   | 423.4  | 193.7  | 99.1   | 96.7   | 101.6  | 148.4  | 234.6  | 234.1  | 183.4  | 131.6  | 116.3  |
| 82.5° | 135.1  | 83.3   | 64.6   | 62.1   | 59.7   | 93.2   | 163.7  | 185.3  | 123.7  | 83.3   | 82.8   |
| 85°   | 53.7   | 49.8   | 37.9   | 35.0   | 25.1   | 43.9   | 85.8   | 123.2  | 92.1   | 60.2   | 61.6   |
| 87.5° | 19.7   | 19.7   | 10.4   | 7.4    | 5.4    | 14.8   | 23.2   | 37.0   | 52.8   | 31.1   | 30.5   |
| 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)