

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: P963515

Luminaire Tested: **NAV-SB3A-735-U-T2R**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P963515  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB3A-735-U-T2R  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(3) 70 CRI, 3500K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

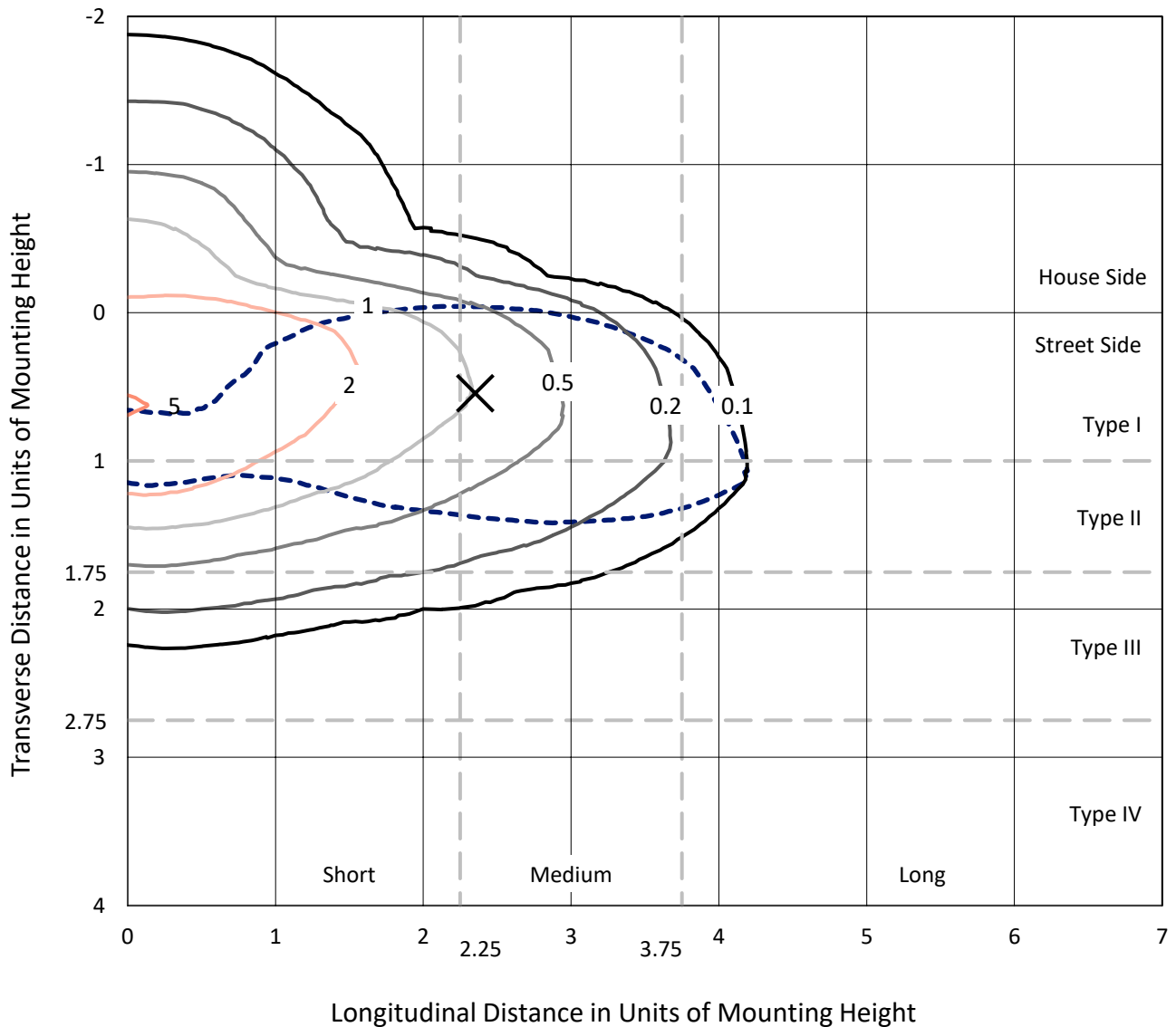
Lumens per Lamp: N/A  
Luminaire Lumens: 14051.7 lumens  
Efficiency: N/A  
Efficacy: 165.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 84.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

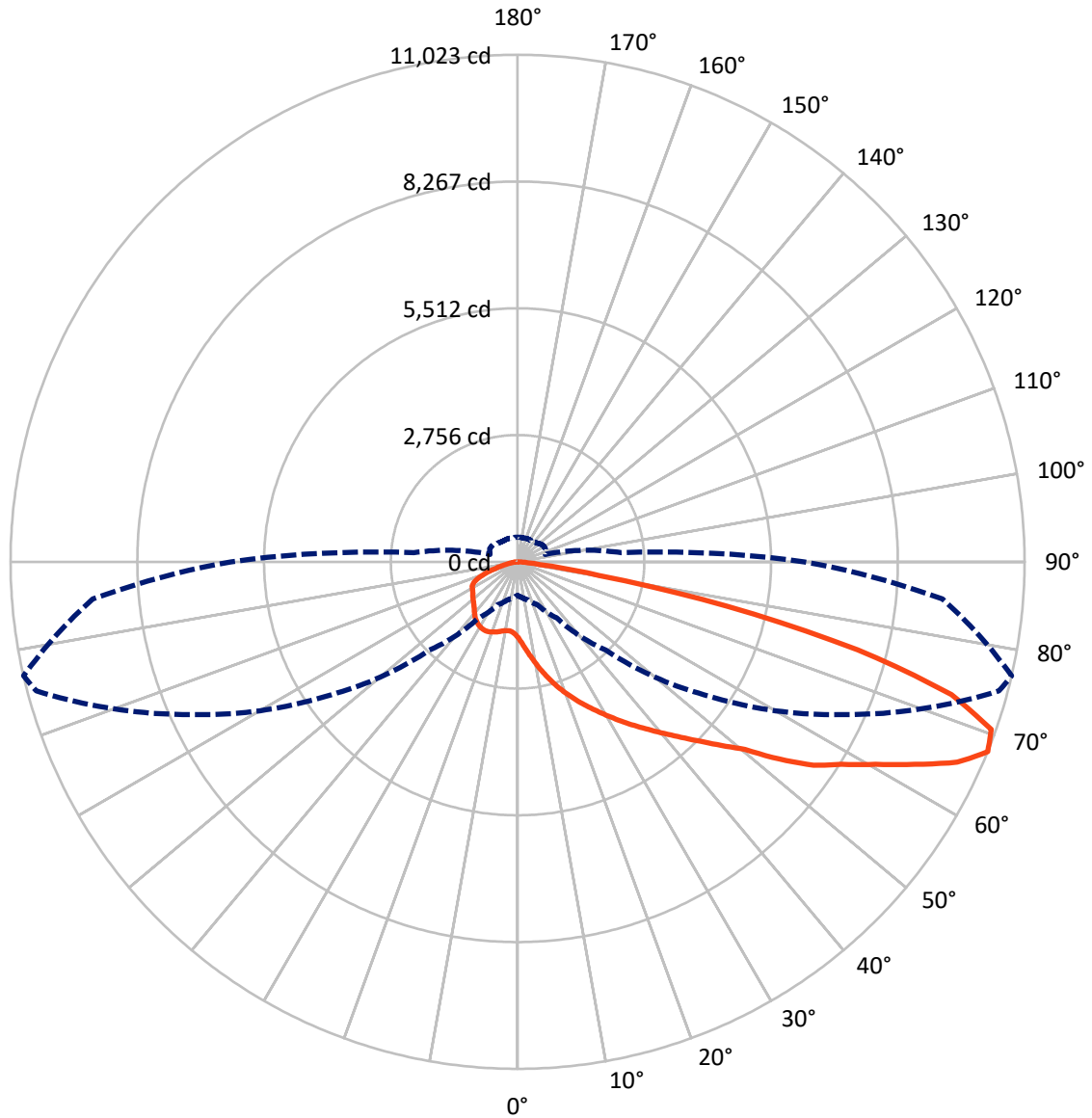
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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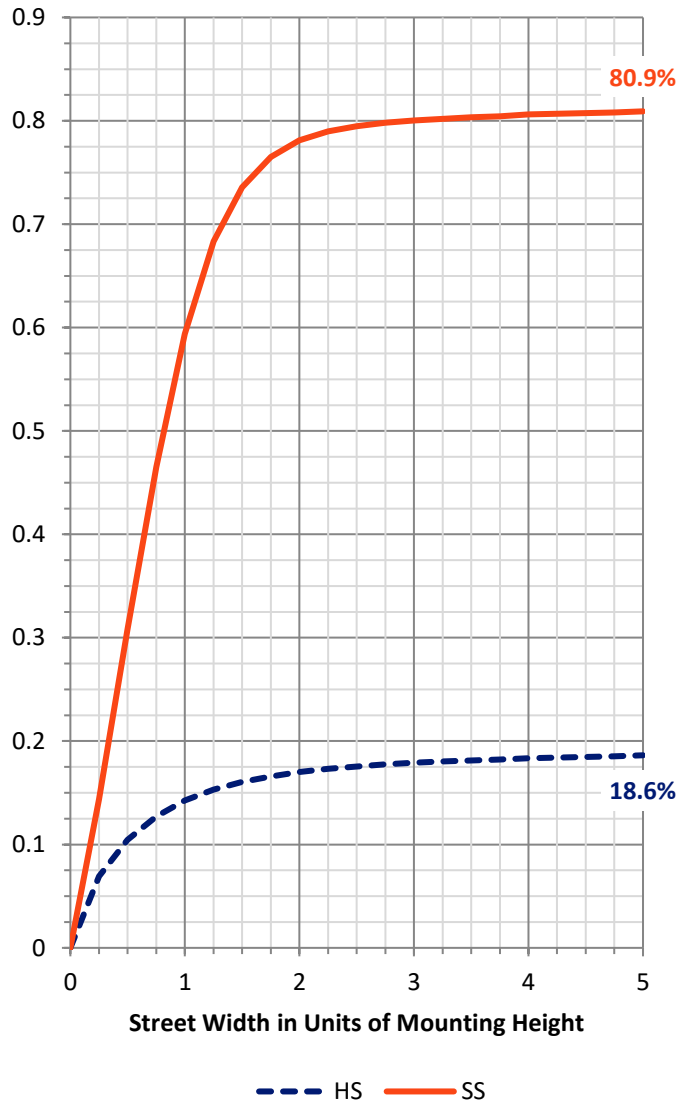
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2658.0   | 0.0    | 2658.0  |
|                    | % Fixture | 18.9     | 0.0    | 18.9    |
| <b>Street Side</b> | Lumens    | 11393.7  | 0.0    | 11393.7 |
|                    | % Fixture | 81.1     | 0.0    | 81.1    |
| <b>Total</b>       | Lumens    | 14051.7  | 0.0    | 14051.7 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 176.7   | 1.3       |
| 10°-20°   | 634.9   | 4.5       |
| 20°-30°   | 1198.7  | 8.5       |
| 30°-40°   | 1931.1  | 13.7      |
| 40°-50°   | 2641.4  | 18.8      |
| 50°-60°   | 2979.5  | 21.2      |
| 60°-70°   | 2781.0  | 19.8      |
| 70°-80°   | 1524.5  | 10.8      |
| 80°-90°   | 183.9   | 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°    | 14051.7 | 100.0     |
| 0°-180°   | 14051.7 | 100.0     |

**Coefficient of Utilization**

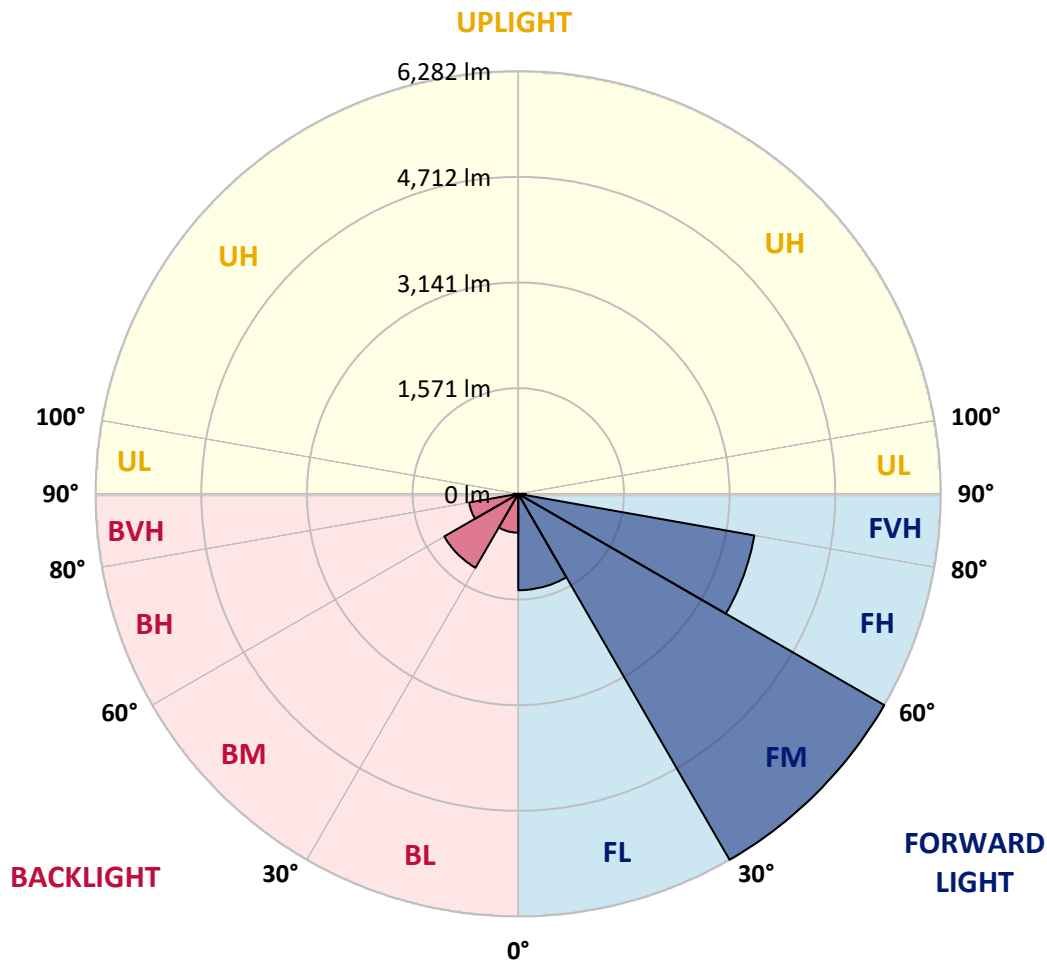


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1432.4 | 10.2      |                         |      |         |
| FM (30°-60°)   | 6282.4 | 44.7      |                         |      |         |
| FH (60°-80°)   | 3563.9 | 25.4      |                         |      | G2/5000 |
| FVH (80°-90°)  | 115.0  | 0.8       |                         |      | G2/225  |
| BL (0°-30°)    | 577.9  | 4.1       | B2/1000                 |      |         |
| BM (30°-60°)   | 1269.7 | 9.0       | B2/2500                 |      |         |
| BH (60°-80°)   | 741.5  | 5.3       | B2/1000                 |      | G2/1000 |
| BVH (80°-90°)  | 68.9   | 0.5       |                         |      | 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 II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°     | 77°     | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|
| 0°    | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7  | 1648.7  | 1648.7 |
| 2.5°  | 2064.4 | 2078.8 | 2060.7 | 2060.7 | 1999.8 | 1967.9 | 1906.9 | 1860.5 | 1777.0  | 1762.6  | 1707.4 |
| 5°    | 2440.0 | 2458.2 | 2432.8 | 2421.9 | 2350.1 | 2284.1 | 2181.8 | 2081.1 | 1932.3  | 1917.1  | 1787.3 |
| 7.5°  | 2730.9 | 2754.2 | 2731.6 | 2720.0 | 2656.2 | 2582.2 | 2462.6 | 2321.8 | 2112.2  | 2082.5  | 1894.6 |
| 10°   | 2968.1 | 2971.7 | 2964.5 | 2968.8 | 2918.8 | 2857.8 | 2735.3 | 2571.3 | 2309.5  | 2268.8  | 2024.5 |
| 12.5° | 3102.3 | 3119.0 | 3133.5 | 3159.6 | 3150.8 | 3113.1 | 3002.9 | 2807.1 | 2518.4  | 2466.1  | 2165.8 |
| 15°   | 3165.4 | 3194.4 | 3227.0 | 3287.3 | 3335.9 | 3345.3 | 3261.1 | 3060.2 | 2730.9  | 2667.8  | 2308.8 |
| 17.5° | 3187.9 | 3215.4 | 3267.0 | 3354.0 | 3458.5 | 3528.8 | 3491.0 | 3306.1 | 2941.2  | 2868.8  | 2458.9 |
| 20°   | 3301.7 | 3309.7 | 3340.9 | 3423.6 | 3536.8 | 3653.5 | 3681.8 | 3542.6 | 3149.4  | 3067.5  | 2614.2 |
| 22.5° | 3545.5 | 3529.5 | 3538.2 | 3575.9 | 3657.2 | 3770.4 | 3834.9 | 3751.5 | 3363.4  | 3269.1  | 2770.8 |
| 25°   | 3948.0 | 3901.7 | 3855.2 | 3811.7 | 3853.0 | 3916.8 | 3990.1 | 3960.4 | 3587.5  | 3467.9  | 2928.9 |
| 27.5° | 4456.5 | 4399.9 | 4297.6 | 4154.7 | 4104.7 | 4127.2 | 4159.9 | 4154.0 | 3795.0  | 3673.9  | 3092.1 |
| 30°   | 4957.0 | 4891.0 | 4769.1 | 4562.4 | 4430.4 | 4370.9 | 4346.2 | 4329.6 | 4020.6  | 3891.4  | 3256.8 |
| 32.5° | 5356.6 | 5304.5 | 5184.8 | 4953.4 | 4761.8 | 4660.4 | 4578.4 | 4518.9 | 4256.3  | 4127.2  | 3430.9 |
| 35°   | 5706.3 | 5657.7 | 5520.5 | 5268.2 | 5060.0 | 4951.9 | 4844.6 | 4717.7 | 4501.5  | 4370.9  | 3618.0 |
| 37.5° | 6025.5 | 5976.8 | 5789.0 | 5526.4 | 5316.8 | 5242.1 | 5146.3 | 4930.9 | 4747.4  | 4624.1  | 3816.1 |
| 40°   | 6227.1 | 6216.2 | 6040.6 | 5743.3 | 5525.7 | 5488.7 | 5456.8 | 5178.2 | 5020.1  | 4905.4  | 4033.6 |
| 42.5° | 6278.5 | 6302.5 | 6163.2 | 5918.8 | 5711.3 | 5681.6 | 5756.3 | 5458.2 | 5326.2  | 5216.6  | 4280.3 |
| 45°   | 6154.5 | 6223.4 | 6132.1 | 5965.9 | 5843.3 | 5827.4 | 6021.8 | 5764.3 | 5665.0  | 5564.8  | 4577.6 |
| 47.5° | 5840.4 | 5957.2 | 5919.5 | 5896.3 | 5878.9 | 5947.8 | 6255.4 | 6089.2 | 6048.6  | 5961.6  | 4917.1 |
| 50°   | 5206.5 | 5427.8 | 5493.8 | 5640.3 | 5808.6 | 6041.3 | 6467.9 | 6444.0 | 6496.9  | 6409.1  | 5330.5 |
| 52.5° | 4110.6 | 4415.2 | 4798.1 | 5165.2 | 5592.4 | 6010.2 | 6701.4 | 6953.1 | 7176.5  | 7128.7  | 5987.7 |
| 55°   | 3393.2 | 3530.2 | 3824.7 | 4497.8 | 5173.2 | 5878.9 | 6806.6 | 7364.4 | 7851.1  | 7808.3  | 6486.0 |
| 57.5° | 2841.9 | 2964.5 | 3145.8 | 3707.9 | 4539.2 | 5580.8 | 6871.9 | 7615.3 | 8313.2  | 8308.8  | 6977.8 |
| 60°   | 2250.7 | 2380.6 | 2566.3 | 2964.5 | 3798.6 | 5065.8 | 6857.4 | 7901.1 | 8902.8  | 8939.1  | 7577.6 |
| 62.5° | 1583.4 | 1726.3 | 1932.3 | 2303.7 | 3042.1 | 4398.5 | 6561.4 | 8107.9 | 9597.0  | 9695.7  | 8299.3 |
| 65°   | 1040.9 | 1135.2 | 1290.4 | 1611.0 | 2266.7 | 3540.4 | 5996.5 | 8134.7 | 10339.8 | 10506.6 | 8976.8 |
| 67.5° | 729.7  | 766.0  | 857.3  | 1031.5 | 1494.2 | 2714.9 | 5096.3 | 7856.9 | 10835.2 | 11023.1 | 9270.6 |
| 70°   | 569.4  | 587.5  | 634.0  | 703.6  | 938.6  | 1825.7 | 3905.2 | 7134.5 | 10729.3 | 10925.1 | 8963.8 |
| 72.5° | 491.8  | 509.2  | 526.6  | 535.3  | 629.6  | 1127.2 | 2645.3 | 5965.2 | 9732.0  | 9864.7  | 7793.8 |
| 75°   | 446.1  | 450.5  | 464.9  | 462.1  | 480.2  | 731.1  | 1526.8 | 4346.2 | 7678.5  | 7632.8  | 5753.4 |
| 77.5° | 375.0  | 380.8  | 404.8  | 401.1  | 426.5  | 499.8  | 792.8  | 2804.9 | 4978.0  | 4667.5  | 3202.4 |
| 80°   | 317.8  | 320.6  | 346.8  | 342.3  | 370.6  | 361.9  | 404.8  | 1429.7 | 2111.5  | 1788.7  | 923.3  |
| 82.5° | 110.3  | 136.3  | 264.8  | 272.8  | 282.9  | 219.0  | 233.6  | 583.2  | 644.8   | 493.9   | 193.6  |
| 85°   | 53.7   | 57.3   | 134.9  | 191.5  | 190.8  | 110.3  | 113.9  | 208.2  | 203.1   | 159.6   | 64.6   |
| 87.5° | 8.7    | 10.9   | 16.0   | 74.7   | 59.4   | 29.0   | 39.2   | 40.6   | 42.0    | 36.3    | 14.6   |
| 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°    | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7 | 1648.7 |
| 2.5°  | 1666.9 | 1630.6 | 1554.4 | 1484.1 | 1429.0 | 1376.0 | 1346.2 | 1320.8 | 1306.4 | 1303.4 | 1303.4 |
| 5°    | 1711.9 | 1637.1 | 1498.6 | 1381.8 | 1305.6 | 1249.1 | 1219.3 | 1200.5 | 1191.0 | 1185.2 | 1184.5 |
| 7.5°  | 1776.3 | 1666.9 | 1469.5 | 1336.8 | 1257.1 | 1216.4 | 1201.2 | 1198.2 | 1197.5 | 1198.2 | 1200.5 |
| 10°   | 1865.6 | 1715.4 | 1466.7 | 1325.9 | 1259.2 | 1236.7 | 1235.9 | 1236.7 | 1239.6 | 1240.4 | 1241.1 |
| 12.5° | 1962.1 | 1765.5 | 1478.3 | 1335.4 | 1286.8 | 1274.4 | 1272.2 | 1271.5 | 1273.7 | 1275.2 | 1275.9 |
| 15°   | 2067.2 | 1831.5 | 1497.8 | 1355.7 | 1317.2 | 1304.2 | 1302.0 | 1297.6 | 1296.9 | 1296.2 | 1295.5 |
| 17.5° | 2175.3 | 1896.8 | 1519.6 | 1377.4 | 1336.8 | 1318.7 | 1310.7 | 1300.5 | 1292.5 | 1290.4 | 1292.5 |
| 20°   | 2284.8 | 1961.3 | 1534.8 | 1388.3 | 1338.2 | 1312.8 | 1296.9 | 1279.5 | 1265.8 | 1257.8 | 1260.6 |
| 22.5° | 2401.6 | 2028.8 | 1544.3 | 1385.4 | 1325.2 | 1290.4 | 1261.4 | 1241.1 | 1220.1 | 1206.2 | 1206.9 |
| 25°   | 2515.5 | 2087.5 | 1543.5 | 1370.2 | 1299.8 | 1255.5 | 1218.6 | 1192.5 | 1163.5 | 1148.9 | 1148.9 |
| 27.5° | 2625.0 | 2140.5 | 1525.4 | 1343.4 | 1263.5 | 1214.2 | 1169.9 | 1138.8 | 1110.5 | 1096.8 | 1096.0 |
| 30°   | 2738.2 | 2184.7 | 1497.1 | 1304.2 | 1220.8 | 1166.3 | 1117.8 | 1090.9 | 1065.5 | 1052.5 | 1051.8 |
| 32.5° | 2850.6 | 2225.4 | 1457.2 | 1255.5 | 1171.5 | 1119.2 | 1071.3 | 1046.6 | 1031.5 | 1031.5 | 1032.2 |
| 35°   | 2969.5 | 2253.7 | 1404.2 | 1198.9 | 1119.2 | 1069.2 | 1031.5 | 1016.9 | 1015.5 | 1006.8 | 1004.6 |
| 37.5° | 3095.0 | 2271.8 | 1339.7 | 1140.9 | 1067.7 | 1020.6 | 1008.9 | 991.6  | 977.0  | 958.2  | 955.3  |
| 40°   | 3227.0 | 2290.0 | 1262.1 | 1080.8 | 1013.3 | 987.2  | 982.2  | 958.9  | 917.6  | 871.1  | 864.6  |
| 42.5° | 3387.3 | 2302.3 | 1181.6 | 1020.6 | 956.0  | 947.3  | 954.6  | 914.6  | 848.7  | 813.8  | 814.6  |
| 45°   | 3573.0 | 2322.5 | 1107.6 | 961.0  | 897.3  | 897.3  | 927.7  | 875.5  | 821.1  | 799.3  | 803.0  |
| 47.5° | 3813.8 | 2369.7 | 1038.7 | 895.7  | 842.9  | 857.3  | 868.3  | 828.3  | 797.9  | 771.0  | 770.3  |
| 50°   | 4162.0 | 2482.9 | 967.6  | 829.8  | 801.6  | 830.6  | 815.3  | 792.1  | 756.6  | 734.8  | 732.6  |
| 52.5° | 4594.4 | 2549.6 | 904.5  | 770.3  | 766.0  | 795.0  | 773.3  | 751.4  | 724.6  | 695.6  | 689.8  |
| 55°   | 4888.8 | 2561.9 | 851.6  | 726.8  | 742.0  | 739.1  | 731.1  | 711.6  | 697.1  | 658.6  | 659.4  |
| 57.5° | 5218.1 | 2586.6 | 808.0  | 700.7  | 726.8  | 694.8  | 692.0  | 675.3  | 656.4  | 630.3  | 621.7  |
| 60°   | 5612.0 | 2625.0 | 770.3  | 690.5  | 713.7  | 665.8  | 651.4  | 644.8  | 626.0  | 612.9  | 616.5  |
| 62.5° | 6041.3 | 2659.9 | 731.8  | 692.0  | 698.5  | 637.6  | 615.8  | 613.7  | 602.1  | 597.7  | 597.7  |
| 65°   | 6334.4 | 2564.9 | 684.0  | 690.5  | 674.6  | 608.5  | 581.0  | 580.3  | 570.8  | 569.4  | 568.7  |
| 67.5° | 6232.1 | 2263.8 | 619.4  | 670.2  | 650.0  | 579.5  | 549.1  | 546.2  | 533.8  | 534.5  | 534.5  |
| 70°   | 5720.0 | 1834.4 | 530.2  | 620.1  | 619.4  | 553.4  | 515.7  | 506.2  | 489.6  | 492.5  | 495.4  |
| 72.5° | 4759.7 | 1359.3 | 410.5  | 536.8  | 570.8  | 529.5  | 477.2  | 462.1  | 441.1  | 443.9  | 443.2  |
| 75°   | 3437.4 | 924.0  | 298.9  | 408.4  | 496.8  | 501.2  | 439.5  | 413.5  | 388.1  | 392.4  | 393.9  |
| 77.5° | 1759.0 | 523.7  | 219.8  | 281.5  | 390.2  | 455.5  | 405.5  | 370.6  | 364.8  | 405.5  | 399.6  |
| 80°   | 573.8  | 262.6  | 152.3  | 197.3  | 256.0  | 372.8  | 355.4  | 315.5  | 314.1  | 323.5  | 277.8  |
| 82.5° | 171.2  | 111.0  | 97.9   | 129.9  | 141.4  | 285.8  | 306.8  | 238.6  | 205.3  | 216.2  | 223.4  |
| 85°   | 58.7   | 53.7   | 55.9   | 64.6   | 67.4   | 167.6  | 214.7  | 158.2  | 149.4  | 164.6  | 162.5  |
| 87.5° | 13.7   | 18.9   | 16.0   | 14.6   | 14.6   | 40.6   | 83.4   | 66.0   | 91.4   | 60.9   | 58.7   |
| 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)