

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: P960018

Luminaire Tested: **NAV-SB1B-835-U-T3R**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P960018  
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-SB1B-835-U-T3R  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 80 CRI, 3500K, 450mA LIGHTSQUARE WITH 26 LEDS AND TYPE III ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: -

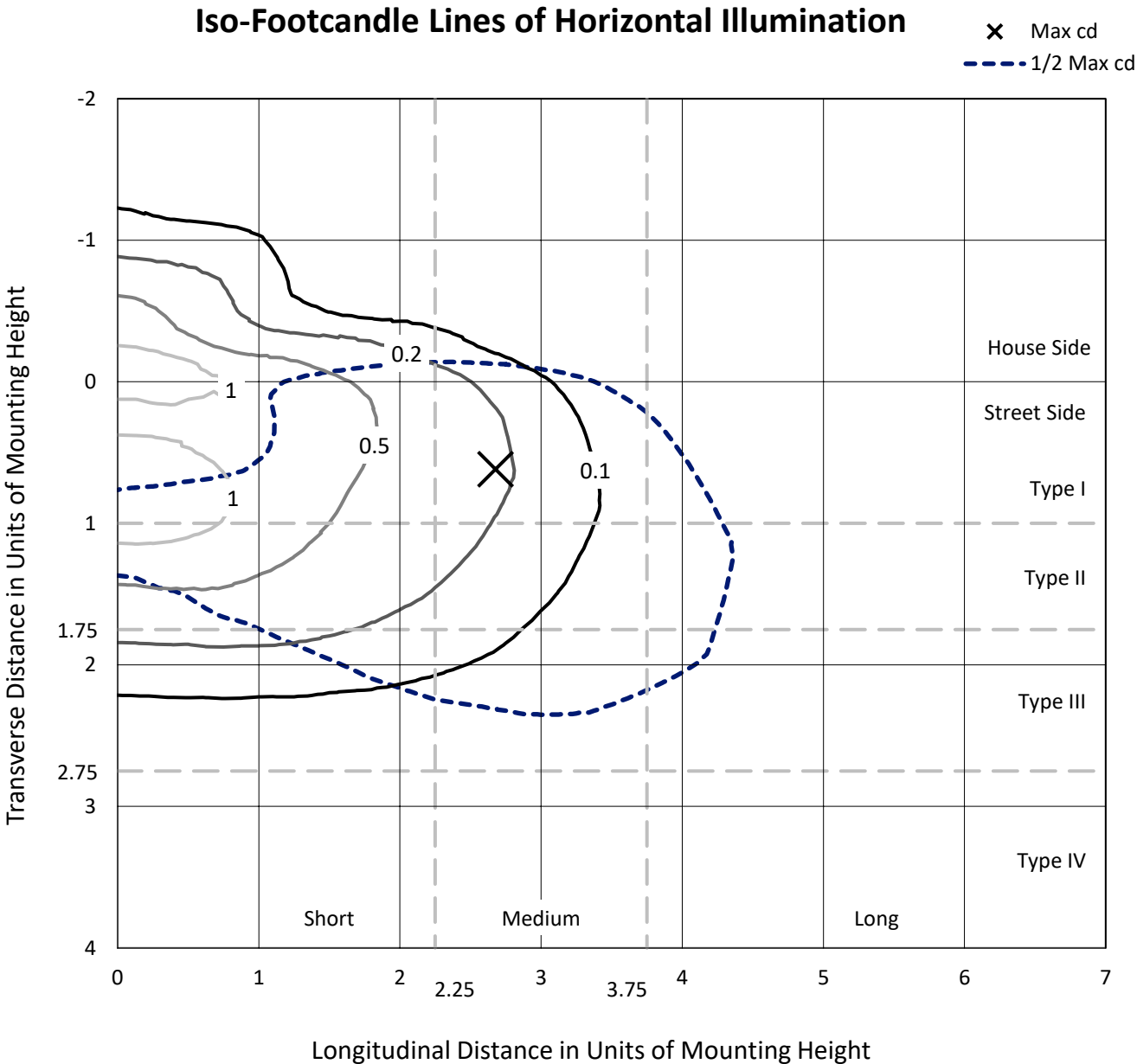
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5498.1 lumens  
Efficiency: N/A  
Efficacy: 138.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G1

Input Watts (W): 39.8  
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



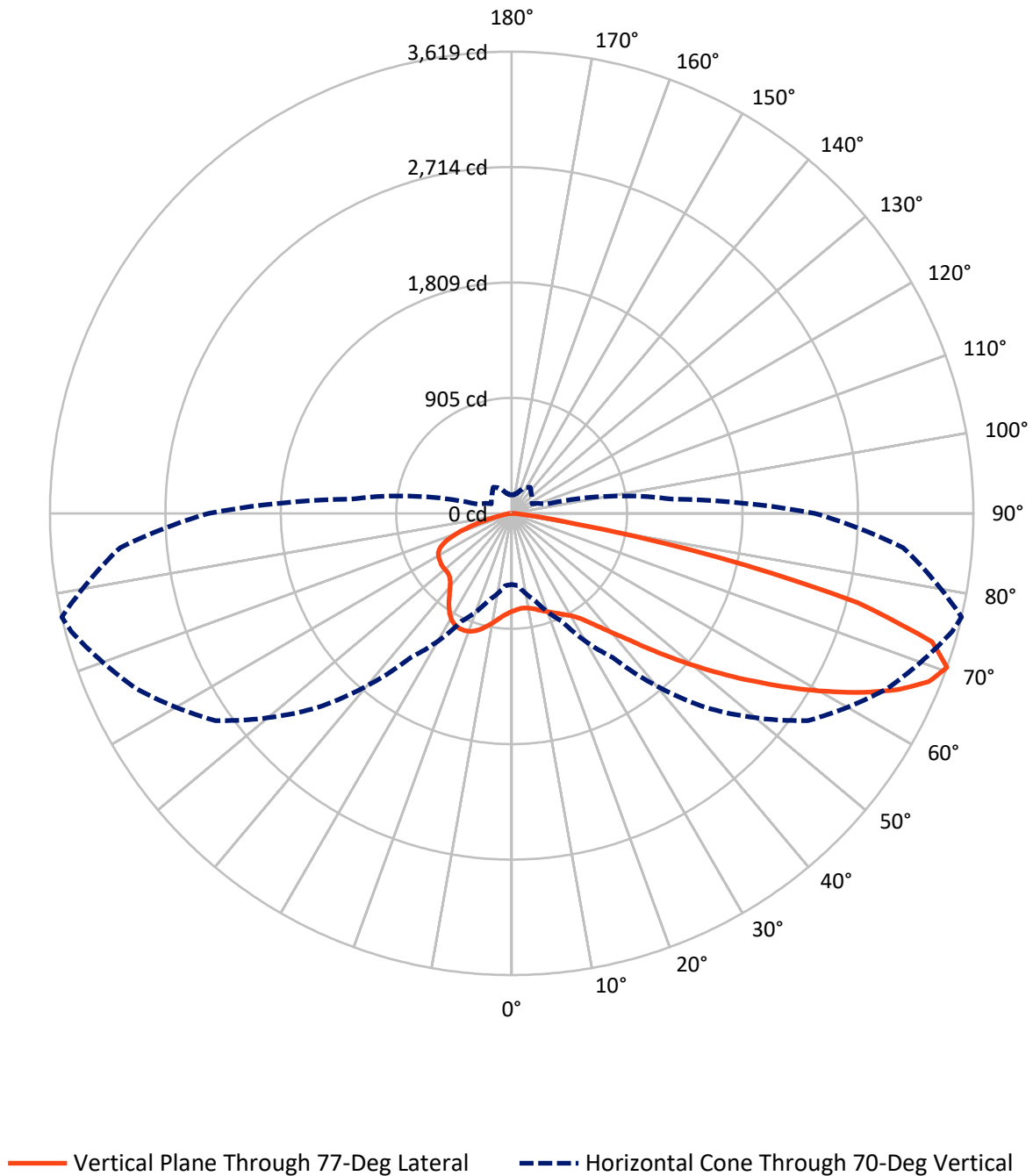
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Based on 25 foot mounting height. Maximum calculated value = 1.5 fc  
Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1204.0   | 0.0    | 1204.0 |
|                    | % Fixture | 21.9     | 0.0    | 21.9   |
| <b>Street Side</b> | Lumens    | 4294.1   | 0.0    | 4294.1 |
|                    | % Fixture | 78.1     | 0.0    | 78.1   |
| <b>Total</b>       | Lumens    | 5498.1   | 0.0    | 5498.1 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 73.2   | 1.3       |
| 10°-20°   | 211.1  | 3.8       |
| 20°-30°   | 361.1  | 6.6       |
| 30°-40°   | 580.6  | 10.6      |
| 40°-50°   | 906.5  | 16.5      |
| 50°-60°   | 1210.9 | 22.0      |
| 60°-70°   | 1290.6 | 23.5      |
| 70°-80°   | 794.5  | 14.5      |
| 80°-90°   | 69.6   | 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°    | 5498.1 | 100.0     |
| 0°-180°   | 5498.1 | 100.0     |

**Coefficient of Utilization**



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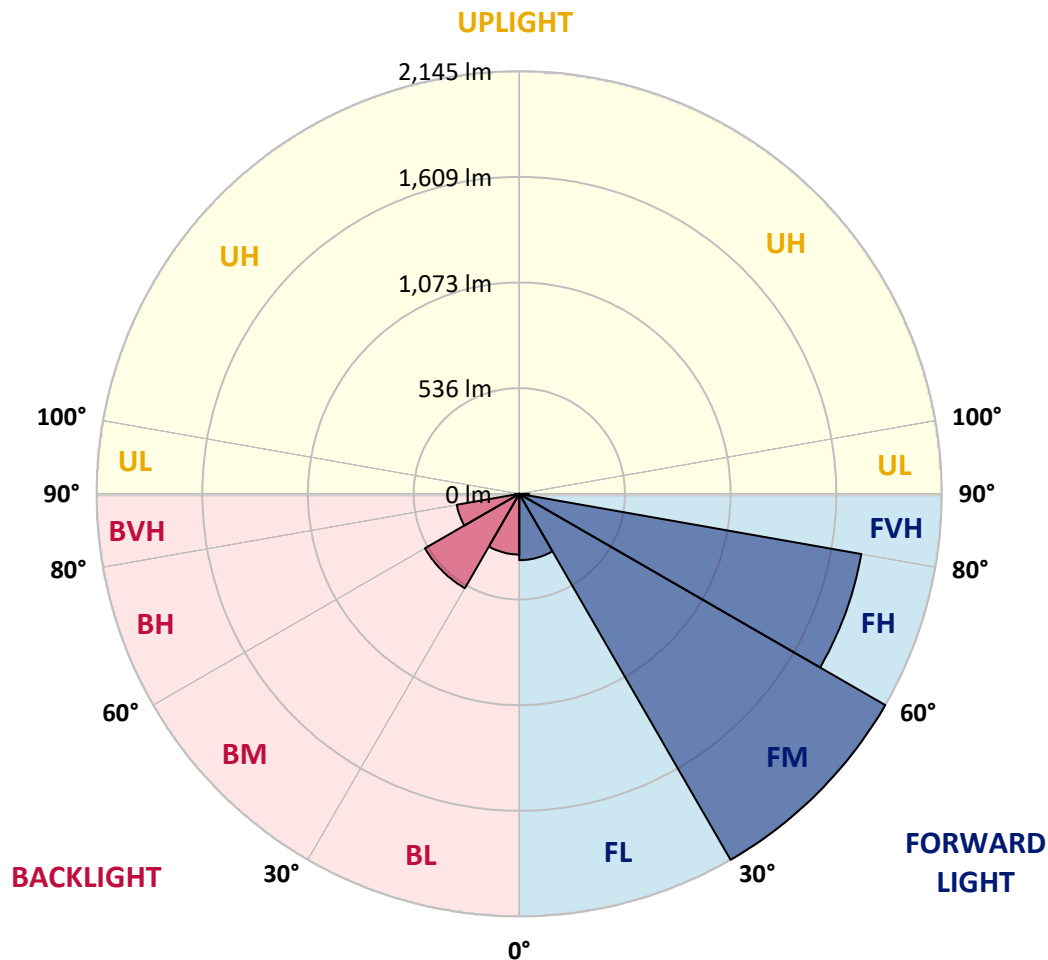
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 336.8  | 6.1       |                         |      |         |
| FM   | (30°-60°)   | 2145.2 | 39.0      |                         |      |         |
| FH   | (60°-80°)   | 1763.3 | 32.1      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 48.7   | 0.9       |                         |      | G1/100  |
| BL   | (0°-30°)    | 308.5  | 5.6       | B1/500                  |      |         |
| BM   | (30°-60°)   | 552.8  | 10.1      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 321.8  | 5.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 20.9   | 0.4       |                         |      | 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 III Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 77°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 767.0  | 767.0  | 767.0  | 767.0  | 767.0  | 767.0  | 767.0  | 767.0  | 767.0  | 767.0  | 767.0  |
| 2.5°  | 707.0  | 706.7  | 710.4  | 711.6  | 718.3  | 723.1  | 732.2  | 741.7  | 754.1  | 755.5  | 763.1  |
| 5°    | 666.2  | 666.2  | 670.5  | 675.0  | 683.7  | 693.3  | 707.0  | 723.6  | 745.1  | 748.5  | 767.3  |
| 7.5°  | 631.6  | 633.9  | 637.6  | 646.3  | 656.4  | 670.1  | 691.3  | 714.9  | 743.1  | 748.5  | 778.9  |
| 10°   | 603.7  | 606.3  | 610.8  | 617.8  | 633.0  | 652.1  | 679.8  | 710.1  | 747.8  | 756.3  | 795.7  |
| 12.5° | 595.0  | 597.5  | 600.0  | 605.4  | 619.5  | 642.1  | 675.0  | 712.4  | 759.4  | 767.9  | 818.9  |
| 15°   | 615.3  | 618.4  | 616.4  | 615.0  | 622.3  | 642.9  | 677.2  | 720.6  | 773.8  | 785.9  | 847.3  |
| 17.5° | 662.0  | 663.2  | 658.7  | 645.3  | 644.3  | 655.3  | 687.9  | 731.8  | 791.8  | 805.0  | 876.0  |
| 20°   | 737.5  | 735.5  | 726.2  | 700.0  | 685.1  | 682.9  | 706.2  | 748.8  | 810.4  | 824.5  | 907.0  |
| 22.5° | 840.0  | 837.7  | 819.1  | 777.8  | 744.5  | 722.5  | 732.7  | 770.7  | 831.3  | 847.0  | 937.2  |
| 25°   | 967.8  | 964.7  | 937.4  | 881.1  | 829.5  | 775.2  | 768.7  | 799.7  | 856.9  | 871.5  | 968.6  |
| 27.5° | 1117.0 | 1114.5 | 1085.0 | 1010.6 | 936.2  | 847.3  | 813.5  | 833.7  | 883.7  | 900.3  | 1004.1 |
| 30°   | 1277.6 | 1284.8 | 1232.5 | 1152.5 | 1058.5 | 941.4  | 873.7  | 875.8  | 918.2  | 933.2  | 1047.2 |
| 32.5° | 1466.2 | 1478.9 | 1415.8 | 1314.5 | 1186.0 | 1043.6 | 949.8  | 934.3  | 968.6  | 981.0  | 1101.6 |
| 35°   | 1653.2 | 1667.6 | 1615.2 | 1503.1 | 1355.3 | 1164.1 | 1029.2 | 1001.6 | 1035.7 | 1049.2 | 1173.6 |
| 37.5° | 1814.8 | 1833.9 | 1807.0 | 1709.5 | 1536.4 | 1309.3 | 1132.8 | 1080.8 | 1118.2 | 1135.1 | 1270.5 |
| 40°   | 1942.4 | 1971.7 | 1969.6 | 1908.9 | 1749.8 | 1485.6 | 1264.3 | 1178.4 | 1220.7 | 1239.0 | 1388.0 |
| 42.5° | 2046.0 | 2071.3 | 2093.3 | 2090.2 | 1972.5 | 1685.8 | 1418.9 | 1305.4 | 1337.5 | 1358.6 | 1520.0 |
| 45°   | 2117.5 | 2144.5 | 2191.9 | 2242.8 | 2186.7 | 1900.1 | 1596.0 | 1456.1 | 1485.3 | 1517.2 | 1677.4 |
| 47.5° | 2181.4 | 2212.2 | 2273.6 | 2354.3 | 2368.7 | 2115.3 | 1790.1 | 1631.5 | 1658.2 | 1691.1 | 1835.4 |
| 50°   | 2187.0 | 2213.5 | 2308.7 | 2423.3 | 2497.9 | 2321.9 | 1998.4 | 1828.3 | 1853.4 | 1888.6 | 2004.6 |
| 52.5° | 2051.0 | 2092.7 | 2258.9 | 2421.4 | 2557.4 | 2494.8 | 2205.4 | 2033.1 | 2061.2 | 2103.4 | 2179.8 |
| 55°   | 1592.0 | 1653.2 | 2112.7 | 2345.9 | 2536.3 | 2606.6 | 2402.2 | 2250.7 | 2286.8 | 2331.0 | 2356.1 |
| 57.5° | 1371.3 | 1398.1 | 1677.1 | 2208.5 | 2439.9 | 2635.6 | 2568.3 | 2470.7 | 2528.7 | 2577.1 | 2542.4 |
| 60°   | 1232.5 | 1254.7 | 1419.7 | 1994.8 | 2313.2 | 2589.8 | 2696.8 | 2675.7 | 2775.9 | 2833.6 | 2733.1 |
| 62.5° | 1083.8 | 1104.9 | 1255.0 | 1665.5 | 2151.1 | 2513.4 | 2777.9 | 2864.9 | 3029.3 | 3092.3 | 2912.7 |
| 65°   | 936.2  | 954.3  | 1098.2 | 1399.4 | 1944.9 | 2437.1 | 2819.8 | 3028.5 | 3263.8 | 3329.2 | 3062.0 |
| 67.5° | 771.8  | 786.8  | 922.7  | 1180.7 | 1694.3 | 2332.6 | 2840.6 | 3157.1 | 3468.0 | 3524.1 | 3135.7 |
| 70°   | 557.0  | 568.6  | 709.0  | 933.8  | 1379.8 | 2153.0 | 2832.2 | 3248.3 | 3573.9 | 3618.7 | 3079.9 |
| 72.5° | 263.3  | 273.7  | 438.7  | 606.3  | 974.6  | 1803.3 | 2661.2 | 3176.0 | 3466.3 | 3444.1 | 2738.7 |
| 75°   | 140.5  | 149.5  | 252.0  | 332.5  | 514.8  | 1236.1 | 2177.8 | 2735.8 | 2910.7 | 2802.7 | 2024.1 |
| 77.5° | 95.2   | 102.2  | 156.0  | 199.7  | 235.1  | 586.8  | 1399.7 | 1894.2 | 1822.4 | 1643.9 | 1013.7 |
| 80°   | 75.4   | 82.8   | 127.8  | 135.2  | 113.8  | 212.1  | 578.4  | 876.9  | 629.9  | 503.8  | 288.3  |
| 82.5° | 58.0   | 66.2   | 107.5  | 98.0   | 61.9   | 87.0   | 168.4  | 277.4  | 161.3  | 122.8  | 69.8   |
| 85°   | 35.5   | 44.2   | 84.5   | 62.5   | 35.0   | 39.7   | 57.2   | 77.2   | 49.3   | 41.1   | 25.0   |
| 87.5° | 18.0   | 25.3   | 42.8   | 22.9   | 15.8   | 9.3    | 15.2   | 15.2   | 12.9   | 11.3   | 6.5    |
| 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):**

|       | 90°    | 95°    | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 767.0  | 767.0  | 767.0 | 767.0 | 767.0 | 767.0 | 767.0 | 767.0 | 767.0 | 767.0 | 767.0 |
| 2.5°  | 769.9  | 775.5  | 785.0 | 794.1 | 801.1 | 807.9 | 814.7 | 818.3 | 819.4 | 823.9 | 826.5 |
| 5°    | 778.9  | 789.2  | 807.9 | 825.3 | 836.3 | 843.1 | 847.9 | 850.6 | 851.3 | 852.6 | 854.8 |
| 7.5°  | 795.5  | 812.1  | 838.0 | 855.5 | 863.7 | 863.0 | 861.1 | 854.0 | 851.3 | 848.7 | 849.2 |
| 10°   | 818.9  | 840.8  | 872.6 | 884.8 | 879.7 | 866.1 | 848.7 | 828.1 | 818.6 | 809.2 | 806.5 |
| 12.5° | 847.9  | 875.8  | 907.0 | 906.4 | 881.4 | 846.8 | 806.2 | 774.6 | 754.6 | 740.3 | 736.9 |
| 15°   | 883.0  | 915.1  | 939.1 | 919.9 | 865.0 | 802.8 | 743.4 | 702.2 | 684.3 | 668.5 | 666.8 |
| 17.5° | 919.3  | 953.8  | 964.7 | 915.7 | 823.9 | 737.8 | 670.5 | 638.1 | 620.3 | 611.9 | 614.4 |
| 20°   | 954.9  | 988.9  | 979.9 | 891.5 | 761.4 | 664.0 | 604.0 | 586.3 | 582.6 | 584.6 | 583.7 |
| 22.5° | 992.3  | 1022.7 | 983.0 | 844.7 | 681.7 | 588.6 | 555.6 | 556.2 | 564.3 | 570.2 | 571.6 |
| 25°   | 1030.6 | 1051.1 | 974.9 | 777.2 | 596.1 | 533.0 | 524.9 | 533.9 | 549.9 | 561.5 | 564.6 |
| 27.5° | 1067.4 | 1076.5 | 957.1 | 693.5 | 522.6 | 493.3 | 494.8 | 513.3 | 537.5 | 553.6 | 557.5 |
| 30°   | 1109.2 | 1099.0 | 923.0 | 599.5 | 471.6 | 459.3 | 471.1 | 492.8 | 517.0 | 531.4 | 534.7 |
| 32.5° | 1156.2 | 1118.5 | 869.0 | 512.5 | 435.6 | 431.9 | 451.4 | 465.5 | 476.1 | 480.4 | 482.7 |
| 35°   | 1214.7 | 1145.7 | 799.7 | 451.4 | 403.2 | 411.9 | 430.5 | 423.5 | 419.3 | 417.1 | 419.3 |
| 37.5° | 1290.8 | 1182.6 | 718.6 | 411.6 | 377.0 | 397.6 | 405.2 | 383.2 | 366.6 | 358.4 | 360.4 |
| 40°   | 1382.3 | 1236.8 | 640.6 | 381.0 | 360.4 | 385.2 | 372.0 | 345.5 | 324.4 | 312.8 | 313.6 |
| 42.5° | 1484.0 | 1293.3 | 575.0 | 357.9 | 351.2 | 375.0 | 347.5 | 315.9 | 281.9 | 278.2 | 281.9 |
| 45°   | 1590.7 | 1351.6 | 530.2 | 340.2 | 346.7 | 366.3 | 333.4 | 282.4 | 258.2 | 273.2 | 281.1 |
| 47.5° | 1697.4 | 1405.1 | 503.2 | 326.9 | 344.4 | 356.5 | 321.0 | 263.8 | 246.7 | 268.3 | 278.5 |
| 50°   | 1816.2 | 1452.9 | 491.1 | 317.3 | 341.8 | 352.5 | 302.4 | 259.0 | 234.5 | 248.9 | 259.6 |
| 52.5° | 1934.2 | 1490.1 | 482.1 | 307.8 | 338.1 | 349.4 | 293.5 | 253.4 | 220.0 | 220.8 | 226.6 |
| 55°   | 2051.9 | 1514.3 | 472.2 | 295.1 | 330.0 | 342.7 | 292.5 | 247.2 | 208.9 | 205.0 | 207.8 |
| 57.5° | 2177.5 | 1528.2 | 460.1 | 281.1 | 315.9 | 325.5 | 291.7 | 242.4 | 205.5 | 199.1 | 199.9 |
| 60°   | 2305.3 | 1548.5 | 444.3 | 263.8 | 297.0 | 304.9 | 289.8 | 240.8 | 203.6 | 192.6 | 193.4 |
| 62.5° | 2419.9 | 1555.4 | 425.5 | 247.5 | 272.9 | 284.6 | 285.6 | 239.3 | 198.2 | 179.4 | 179.4 |
| 65°   | 2495.2 | 1525.1 | 392.6 | 228.9 | 246.7 | 263.8 | 277.4 | 234.5 | 188.7 | 169.8 | 169.8 |
| 67.5° | 2492.0 | 1438.4 | 341.0 | 205.0 | 221.3 | 240.8 | 265.6 | 226.4 | 177.1 | 158.0 | 158.8 |
| 70°   | 2376.1 | 1267.1 | 275.6 | 177.1 | 193.4 | 216.0 | 250.3 | 214.3 | 163.3 | 145.0 | 146.7 |
| 72.5° | 2037.8 | 991.8  | 200.2 | 144.4 | 161.0 | 190.3 | 230.6 | 199.7 | 149.2 | 133.5 | 132.6 |
| 75°   | 1455.8 | 627.6  | 135.7 | 110.9 | 125.3 | 161.3 | 206.1 | 182.4 | 136.3 | 134.1 | 126.4 |
| 77.5° | 743.6  | 299.9  | 89.8  | 81.1  | 87.3  | 127.3 | 173.2 | 163.1 | 138.3 | 110.7 | 98.6  |
| 80°   | 241.9  | 110.7  | 56.6  | 55.1  | 58.0  | 84.8  | 134.1 | 133.8 | 104.8 | 75.1  | 66.4  |
| 82.5° | 77.2   | 47.6   | 36.9  | 35.5  | 34.0  | 53.2  | 93.5  | 105.9 | 70.7  | 47.6  | 47.4  |
| 85°   | 30.6   | 28.4   | 21.7  | 20.0  | 14.3  | 25.0  | 49.0  | 70.4  | 52.7  | 34.3  | 35.2  |
| 87.5° | 11.3   | 11.3   | 5.9   | 4.2   | 3.1   | 8.4   | 13.2  | 21.1  | 30.1  | 17.7  | 17.4  |
| 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)