

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: P959956

Luminaire Tested: **NAV-SB1B-827-U-T3R**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P959956  
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-827-U-T3R  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 80 CRI, 2700K, 450mA LIGHTSQUARE WITH 26 LEDS AND TYPE III ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: -

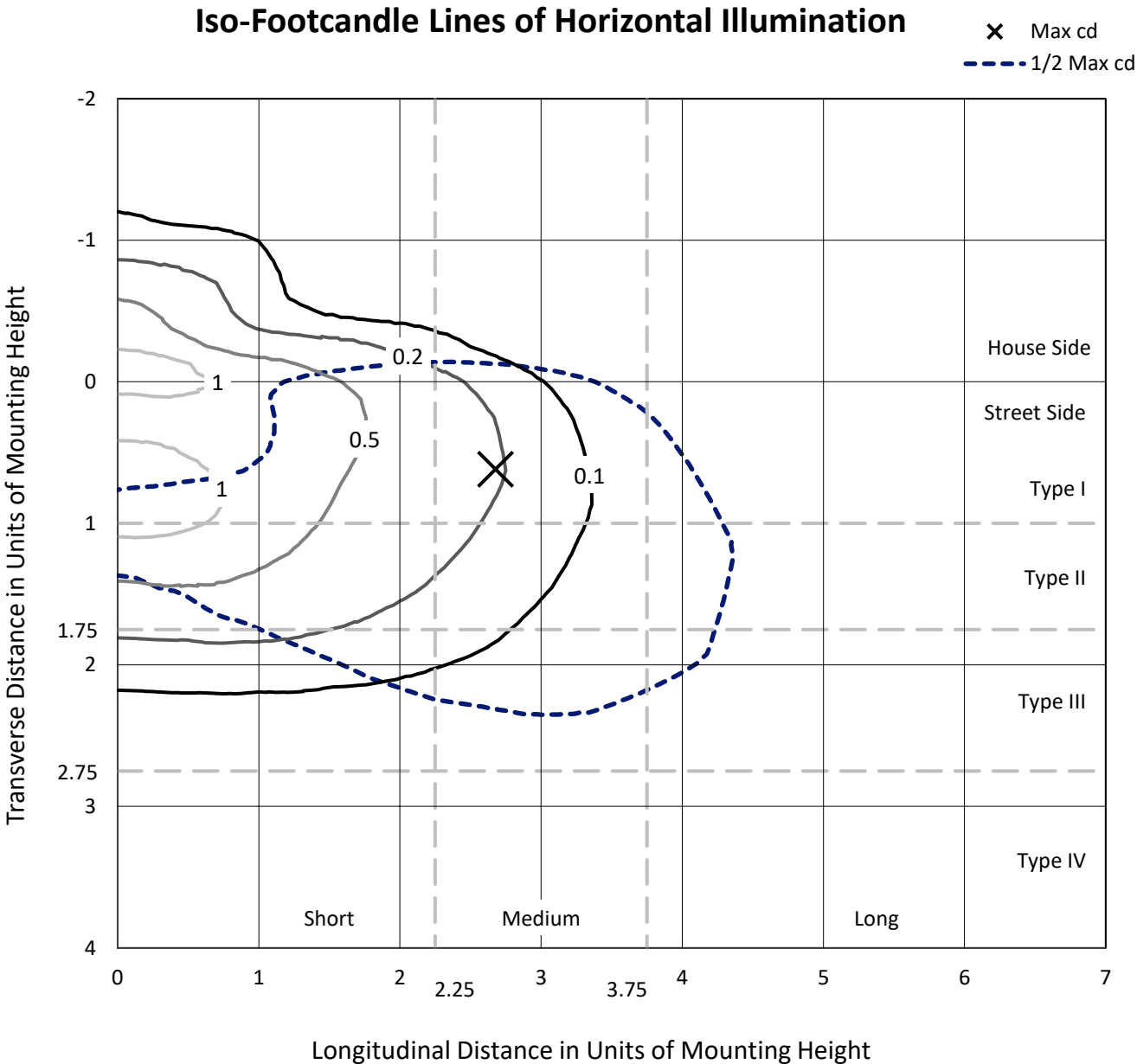
### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 5153.7 lumens  
Efficiency: N/A  
Efficacy: 129.5 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



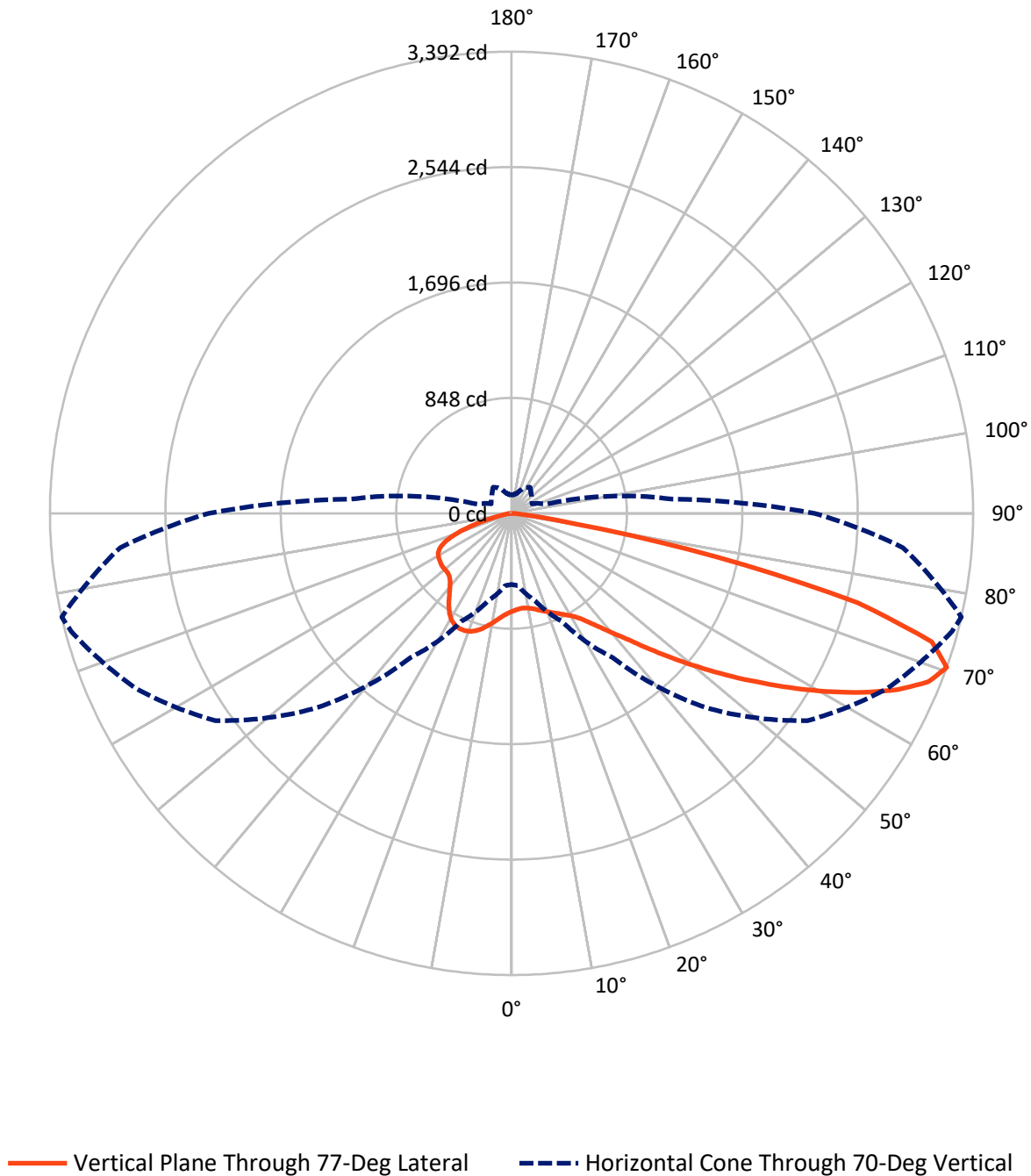
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Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1128.6   | 0.0    | 1128.6 |
|                    | % Fixture | 21.9     | 0.0    | 21.9   |
| <b>Street Side</b> | Lumens    | 4025.1   | 0.0    | 4025.1 |
|                    | % Fixture | 78.1     | 0.0    | 78.1   |
| <b>Total</b>       | Lumens    | 5153.7   | 0.0    | 5153.7 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 68.6   | 1.3       |
| 10°-20°   | 197.9  | 3.8       |
| 20°-30°   | 338.4  | 6.6       |
| 30°-40°   | 544.3  | 10.6      |
| 40°-50°   | 849.7  | 16.5      |
| 50°-60°   | 1135.0 | 22.0      |
| 60°-70°   | 1209.8 | 23.5      |
| 70°-80°   | 744.7  | 14.5      |
| 80°-90°   | 65.3   | 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°    | 5153.7 | 100.0     |
| 0°-180°   | 5153.7 | 100.0     |

**Coefficient of Utilization**



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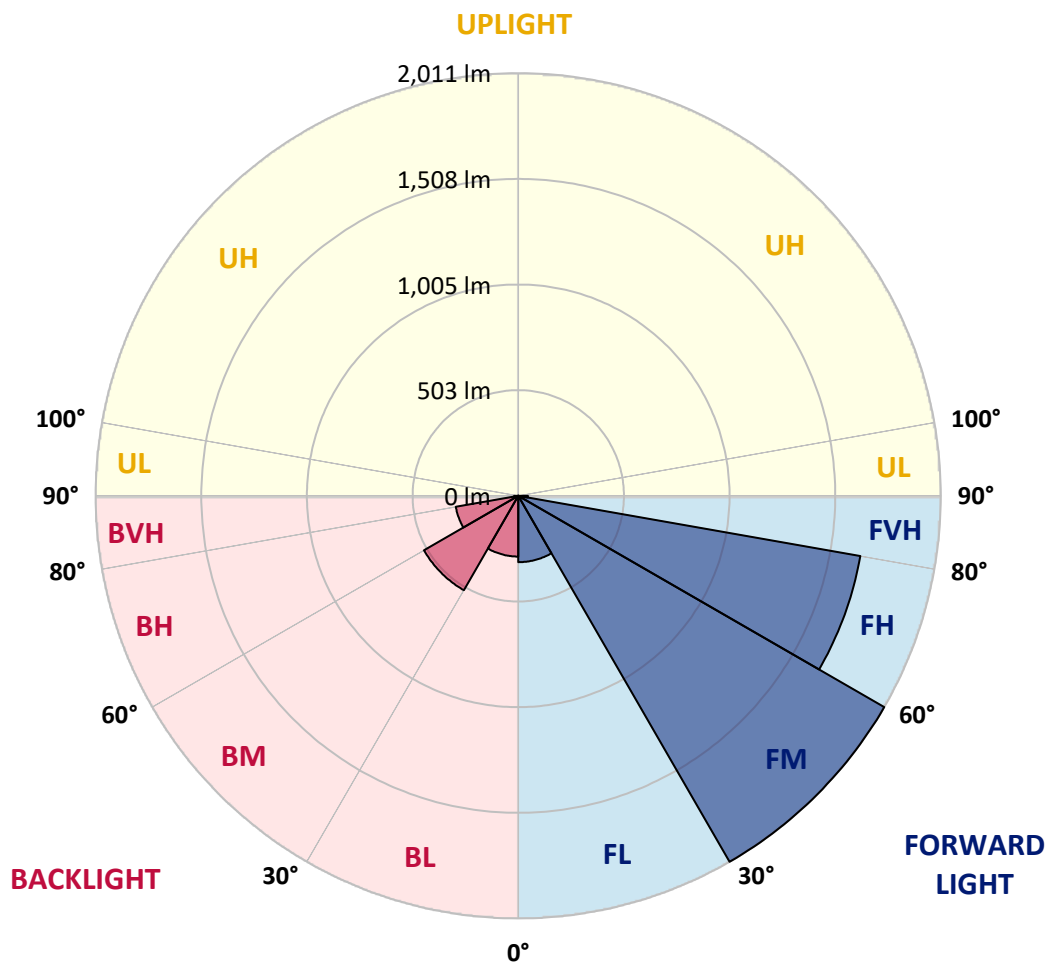
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 315.7  | 6.1       |                         |      |         |
| FM   | (30°-60°)   | 2010.9 | 39.0      |                         |      |         |
| FH   | (60°-80°)   | 1652.9 | 32.1      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 45.6   | 0.9       |                         |      | G1/100  |
| BL   | (0°-30°)    | 289.2  | 5.6       | B1/500                  |      |         |
| BM   | (30°-60°)   | 518.2  | 10.1      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 301.6  | 5.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 19.6   | 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°    | 719.0  | 719.0  | 719.0  | 719.0  | 719.0  | 719.0  | 719.0  | 719.0  | 719.0  | 719.0  | 719.0  |
| 2.5°  | 662.8  | 662.5  | 665.9  | 667.0  | 673.3  | 677.8  | 686.2  | 695.3  | 706.8  | 708.2  | 715.2  |
| 5°    | 624.5  | 624.5  | 628.4  | 632.6  | 640.8  | 649.8  | 662.8  | 678.3  | 698.4  | 701.6  | 719.2  |
| 7.5°  | 592.0  | 594.2  | 597.6  | 605.8  | 615.3  | 628.2  | 648.0  | 670.1  | 696.6  | 701.6  | 730.1  |
| 10°   | 565.9  | 568.3  | 572.5  | 579.1  | 593.4  | 611.3  | 637.1  | 665.6  | 701.0  | 709.0  | 745.9  |
| 12.5° | 557.7  | 560.1  | 562.4  | 567.4  | 580.7  | 601.8  | 632.6  | 667.8  | 711.9  | 719.8  | 767.5  |
| 15°   | 576.8  | 579.6  | 577.8  | 576.5  | 583.3  | 602.6  | 634.8  | 675.5  | 725.3  | 736.7  | 794.2  |
| 17.5° | 620.5  | 621.6  | 617.4  | 605.0  | 603.9  | 614.2  | 644.8  | 686.0  | 742.2  | 754.6  | 821.1  |
| 20°   | 691.3  | 689.4  | 680.7  | 656.2  | 642.2  | 640.1  | 661.9  | 701.8  | 759.6  | 772.8  | 850.1  |
| 22.5° | 787.3  | 785.3  | 767.8  | 729.0  | 697.9  | 677.3  | 686.7  | 722.4  | 779.2  | 794.0  | 878.4  |
| 25°   | 907.2  | 904.3  | 878.6  | 825.8  | 777.6  | 726.6  | 720.6  | 749.6  | 803.2  | 816.9  | 907.9  |
| 27.5° | 1047.0 | 1044.7 | 1017.0 | 947.3  | 877.6  | 794.2  | 762.5  | 781.6  | 828.3  | 843.9  | 941.3  |
| 30°   | 1197.5 | 1204.4 | 1155.3 | 1080.4 | 992.2  | 882.3  | 819.0  | 820.8  | 860.7  | 874.7  | 981.6  |
| 32.5° | 1374.3 | 1386.2 | 1327.2 | 1232.0 | 1111.7 | 978.2  | 890.3  | 875.8  | 907.9  | 919.6  | 1032.6 |
| 35°   | 1549.6 | 1563.1 | 1514.0 | 1409.0 | 1270.4 | 1091.1 | 964.7  | 938.9  | 970.8  | 983.5  | 1100.1 |
| 37.5° | 1701.1 | 1719.0 | 1693.7 | 1602.4 | 1440.1 | 1227.3 | 1061.9 | 1013.0 | 1048.2 | 1063.9 | 1190.9 |
| 40°   | 1820.7 | 1848.2 | 1846.3 | 1789.2 | 1640.2 | 1392.6 | 1185.1 | 1104.6 | 1144.2 | 1161.3 | 1301.0 |
| 42.5° | 1917.9 | 1941.6 | 1962.2 | 1959.3 | 1848.9 | 1580.2 | 1330.0 | 1223.6 | 1253.8 | 1273.6 | 1424.7 |
| 45°   | 1984.9 | 2010.2 | 2054.5 | 2102.4 | 2049.8 | 1781.1 | 1496.1 | 1364.9 | 1392.4 | 1422.2 | 1572.4 |
| 47.5° | 2044.8 | 2073.6 | 2131.1 | 2206.8 | 2220.4 | 1982.8 | 1677.9 | 1529.3 | 1554.4 | 1585.3 | 1720.4 |
| 50°   | 2050.1 | 2074.9 | 2164.1 | 2271.5 | 2341.5 | 2176.5 | 1873.2 | 1713.8 | 1737.3 | 1770.3 | 1879.0 |
| 52.5° | 1922.6 | 1961.6 | 2117.3 | 2269.7 | 2397.2 | 2338.5 | 2067.2 | 1905.7 | 1932.1 | 1971.7 | 2043.2 |
| 55°   | 1492.4 | 1549.6 | 1980.4 | 2198.9 | 2377.4 | 2443.4 | 2251.7 | 2109.8 | 2143.5 | 2185.0 | 2208.5 |
| 57.5° | 1285.5 | 1310.5 | 1572.0 | 2070.1 | 2287.1 | 2470.6 | 2407.4 | 2315.9 | 2370.2 | 2415.6 | 2383.1 |
| 60°   | 1155.3 | 1176.2 | 1330.9 | 1869.8 | 2168.3 | 2427.5 | 2527.9 | 2508.0 | 2602.0 | 2656.1 | 2561.9 |
| 62.5° | 1015.9 | 1035.8 | 1176.4 | 1561.3 | 2016.3 | 2356.0 | 2603.8 | 2685.4 | 2839.6 | 2898.7 | 2730.3 |
| 65°   | 877.6  | 894.5  | 1029.4 | 1311.8 | 1823.1 | 2284.4 | 2643.2 | 2838.7 | 3059.4 | 3120.6 | 2870.1 |
| 67.5° | 723.4  | 737.5  | 865.0  | 1106.7 | 1588.1 | 2186.5 | 2662.6 | 2959.4 | 3250.8 | 3303.3 | 2939.3 |
| 70°   | 522.1  | 532.9  | 664.6  | 875.2  | 1293.3 | 2018.1 | 2654.7 | 3044.9 | 3350.0 | 3391.9 | 2887.0 |
| 72.5° | 246.8  | 256.6  | 411.2  | 568.3  | 913.5  | 1690.3 | 2494.5 | 2977.0 | 3249.1 | 3228.3 | 2567.1 |
| 75°   | 131.7  | 140.1  | 236.3  | 311.7  | 482.5  | 1158.8 | 2041.4 | 2564.4 | 2728.4 | 2627.1 | 1897.3 |
| 77.5° | 89.2   | 95.8   | 146.3  | 187.2  | 220.4  | 550.0  | 1312.1 | 1775.6 | 1708.3 | 1540.9 | 950.2  |
| 80°   | 70.7   | 77.6   | 119.8  | 126.7  | 106.6  | 198.7  | 542.1  | 821.9  | 590.4  | 472.2  | 270.3  |
| 82.5° | 54.3   | 62.0   | 100.9  | 91.8   | 58.1   | 81.6   | 157.8  | 259.9  | 151.3  | 115.1  | 65.5   |
| 85°   | 33.2   | 41.4   | 79.2   | 58.6   | 32.7   | 37.2   | 53.6   | 72.4   | 46.2   | 38.5   | 23.5   |
| 87.5° | 16.9   | 23.8   | 40.1   | 21.4   | 14.8   | 8.7    | 14.2   | 14.2   | 12.1   | 10.6   | 6.0    |
| 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°    | 719.0  | 719.0  | 719.0 | 719.0 | 719.0 | 719.0 | 719.0 | 719.0 | 719.0 | 719.0 | 719.0 |
| 2.5°  | 721.6  | 726.9  | 735.8 | 744.4 | 750.9 | 757.3 | 763.6 | 767.0 | 768.0 | 772.3 | 774.7 |
| 5°    | 730.1  | 739.8  | 757.3 | 773.7 | 783.9 | 790.3 | 794.8 | 797.3 | 797.9 | 799.2 | 801.3 |
| 7.5°  | 745.7  | 761.3  | 785.5 | 801.9 | 809.5 | 809.0 | 807.2 | 800.5 | 797.9 | 795.5 | 796.0 |
| 10°   | 767.5  | 788.1  | 817.9 | 829.3 | 824.6 | 811.9 | 795.5 | 776.2 | 767.3 | 758.6 | 755.9 |
| 12.5° | 794.8  | 820.8  | 850.1 | 849.6 | 826.2 | 793.7 | 755.6 | 726.1 | 707.4 | 693.9 | 690.7 |
| 15°   | 827.7  | 857.8  | 880.3 | 862.3 | 810.9 | 752.6 | 696.8 | 658.3 | 641.3 | 626.6 | 625.0 |
| 17.5° | 861.8  | 894.0  | 904.3 | 858.3 | 772.3 | 691.6 | 628.4 | 598.1 | 581.5 | 573.6 | 575.9 |
| 20°   | 895.0  | 927.0  | 918.5 | 835.7 | 713.7 | 622.4 | 566.2 | 549.5 | 546.1 | 548.0 | 547.1 |
| 22.5° | 930.2  | 958.7  | 921.5 | 791.8 | 639.0 | 551.7 | 520.8 | 521.3 | 528.9 | 534.5 | 535.8 |
| 25°   | 966.1  | 985.3  | 913.8 | 728.5 | 558.7 | 499.7 | 492.0 | 500.4 | 515.5 | 526.3 | 529.2 |
| 27.5° | 1000.6 | 1009.1 | 897.2 | 650.1 | 489.8 | 462.5 | 463.7 | 481.1 | 503.9 | 519.0 | 522.6 |
| 30°   | 1039.7 | 1030.2 | 865.2 | 561.9 | 442.1 | 430.5 | 441.6 | 461.9 | 484.6 | 498.0 | 501.2 |
| 32.5° | 1083.7 | 1048.4 | 814.6 | 480.4 | 408.4 | 404.9 | 423.1 | 436.3 | 446.3 | 450.3 | 452.4 |
| 35°   | 1138.7 | 1074.0 | 749.6 | 423.1 | 378.0 | 386.1 | 403.5 | 397.0 | 393.0 | 390.9 | 393.0 |
| 37.5° | 1209.9 | 1108.5 | 673.6 | 385.9 | 353.4 | 372.7 | 379.9 | 359.3 | 343.7 | 336.0 | 337.8 |
| 40°   | 1295.7 | 1159.3 | 600.4 | 357.1 | 337.8 | 361.1 | 348.7 | 323.9 | 304.0 | 293.3 | 294.1 |
| 42.5° | 1391.0 | 1212.3 | 538.9 | 335.5 | 329.1 | 351.6 | 325.7 | 296.1 | 264.2 | 260.8 | 264.2 |
| 45°   | 1491.1 | 1266.9 | 497.0 | 318.9 | 324.9 | 343.4 | 312.5 | 264.8 | 242.0 | 256.0 | 263.4 |
| 47.5° | 1591.1 | 1317.1 | 471.7 | 306.5 | 322.8 | 334.2 | 300.9 | 247.3 | 231.2 | 251.5 | 261.1 |
| 50°   | 1702.4 | 1361.9 | 460.3 | 297.5 | 320.4 | 330.5 | 283.5 | 242.8 | 219.9 | 233.3 | 243.3 |
| 52.5° | 1813.0 | 1396.8 | 451.9 | 288.5 | 317.0 | 327.6 | 275.0 | 237.6 | 206.1 | 206.9 | 212.5 |
| 55°   | 1923.4 | 1419.5 | 442.6 | 276.6 | 309.3 | 321.2 | 274.3 | 231.8 | 195.9 | 192.2 | 194.7 |
| 57.5° | 2041.1 | 1432.4 | 431.3 | 263.4 | 296.1 | 305.1 | 273.5 | 227.2 | 192.7 | 186.7 | 187.4 |
| 60°   | 2160.9 | 1451.4 | 416.5 | 247.3 | 278.5 | 285.9 | 271.6 | 225.7 | 190.9 | 180.5 | 181.3 |
| 62.5° | 2268.3 | 1458.1 | 398.8 | 232.0 | 255.7 | 266.8 | 267.6 | 224.4 | 185.8 | 168.1 | 168.1 |
| 65°   | 2338.8 | 1429.6 | 368.0 | 214.6 | 231.2 | 247.3 | 259.9 | 219.9 | 176.8 | 159.2 | 159.2 |
| 67.5° | 2335.9 | 1348.3 | 319.6 | 192.2 | 207.5 | 225.7 | 248.9 | 212.2 | 166.0 | 148.1 | 148.8 |
| 70°   | 2227.2 | 1187.8 | 258.4 | 166.0 | 181.3 | 202.4 | 234.6 | 200.9 | 153.1 | 135.9 | 137.6 |
| 72.5° | 1910.2 | 929.6  | 187.7 | 135.4 | 151.0 | 178.5 | 216.2 | 187.2 | 139.9 | 125.2 | 124.3 |
| 75°   | 1364.6 | 588.3  | 127.2 | 104.0 | 117.5 | 151.3 | 193.2 | 171.1 | 127.7 | 125.7 | 118.5 |
| 77.5° | 697.1  | 281.1  | 84.2  | 76.1  | 81.8  | 119.3 | 162.4 | 152.8 | 129.6 | 103.7 | 92.4  |
| 80°   | 226.7  | 103.7  | 53.1  | 51.8  | 54.3  | 79.4  | 125.7 | 125.4 | 98.2  | 70.5  | 62.3  |
| 82.5° | 72.4   | 44.6   | 34.5  | 33.2  | 32.0  | 49.9  | 87.6  | 99.2  | 66.2  | 44.6  | 44.4  |
| 85°   | 28.8   | 26.6   | 20.3  | 18.8  | 13.4  | 23.5  | 45.9  | 66.0  | 49.4  | 32.2  | 33.0  |
| 87.5° | 10.6   | 10.6   | 5.5   | 4.0   | 2.9   | 7.9   | 12.4  | 19.8  | 28.3  | 16.6  | 16.4  |
| 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)