

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: P884316

Luminaire Tested: **NAV-SB5A-827-U-T2-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P884316  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB5A-827-U-T2-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(5) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II  
OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

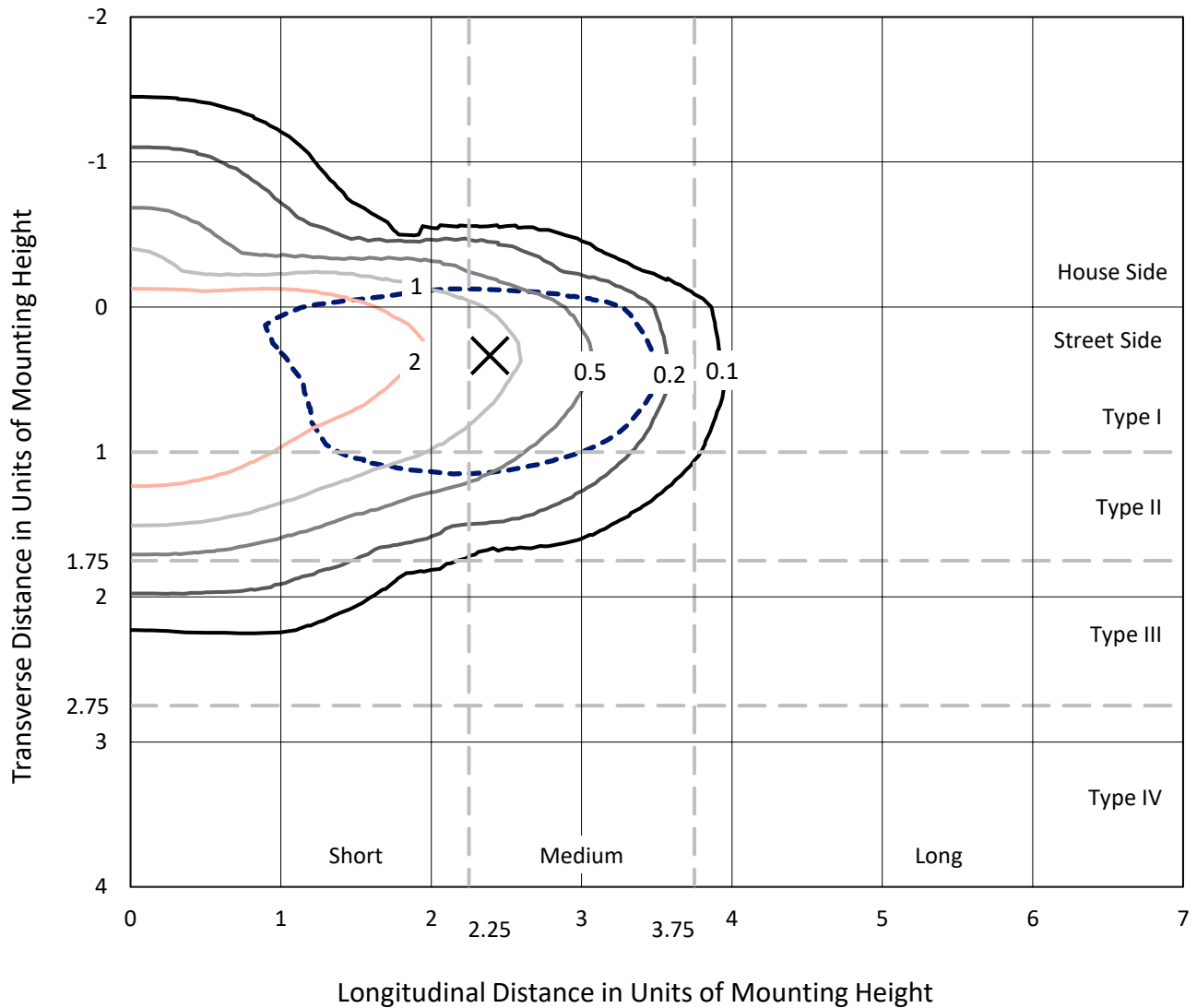
Lumens per Lamp: N/A  
Luminaire Lumens: 13505 lumens  
Efficiency: N/A  
Efficacy: 95.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 141.7  
Input Voltage (V): 120.0  
Input Current (Ain): 1.201  
Voltage Rise (V): NR  
Power Factor: 0.992  
Total Harmonic Distortion (THDi): 10.503  
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

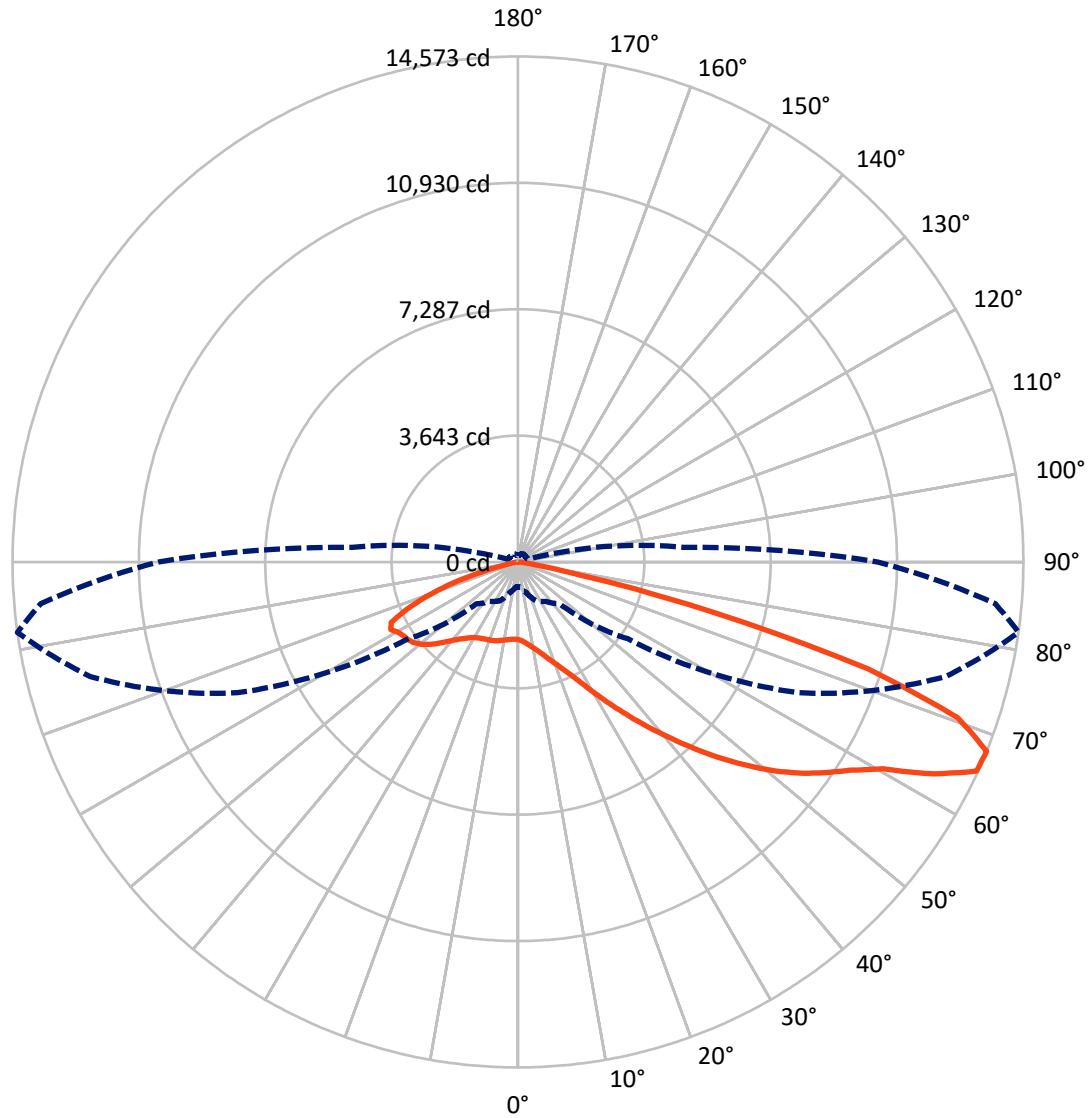
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2446.3   | 0.0    | 2446.3  |
|                    | % Fixture | 18.1     | 0.0    | 18.1    |
| <b>Street Side</b> | Lumens    | 11058.7  | 0.0    | 11058.7 |
|                    | % Fixture | 81.9     | 0.0    | 81.9    |
| <b>Total</b>       | Lumens    | 13505.0  | 0.0    | 13505.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 199.3   | 1.5       |
| 10°-20°   | 518.0   | 3.8       |
| 20°-30°   | 829.6   | 6.1       |
| 30°-40°   | 1467.0  | 10.9      |
| 40°-50°   | 2570.4  | 19.0      |
| 50°-60°   | 3428.2  | 25.4      |
| 60°-70°   | 3191.5  | 23.6      |
| 70°-80°   | 1224.9  | 9.1       |
| 80°-90°   | 76.1    | 0.6       |
| 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°    | 13505.0 | 100.0     |
| 0°-180°   | 13505.0 | 100.0     |

**Coefficient of Utilization**



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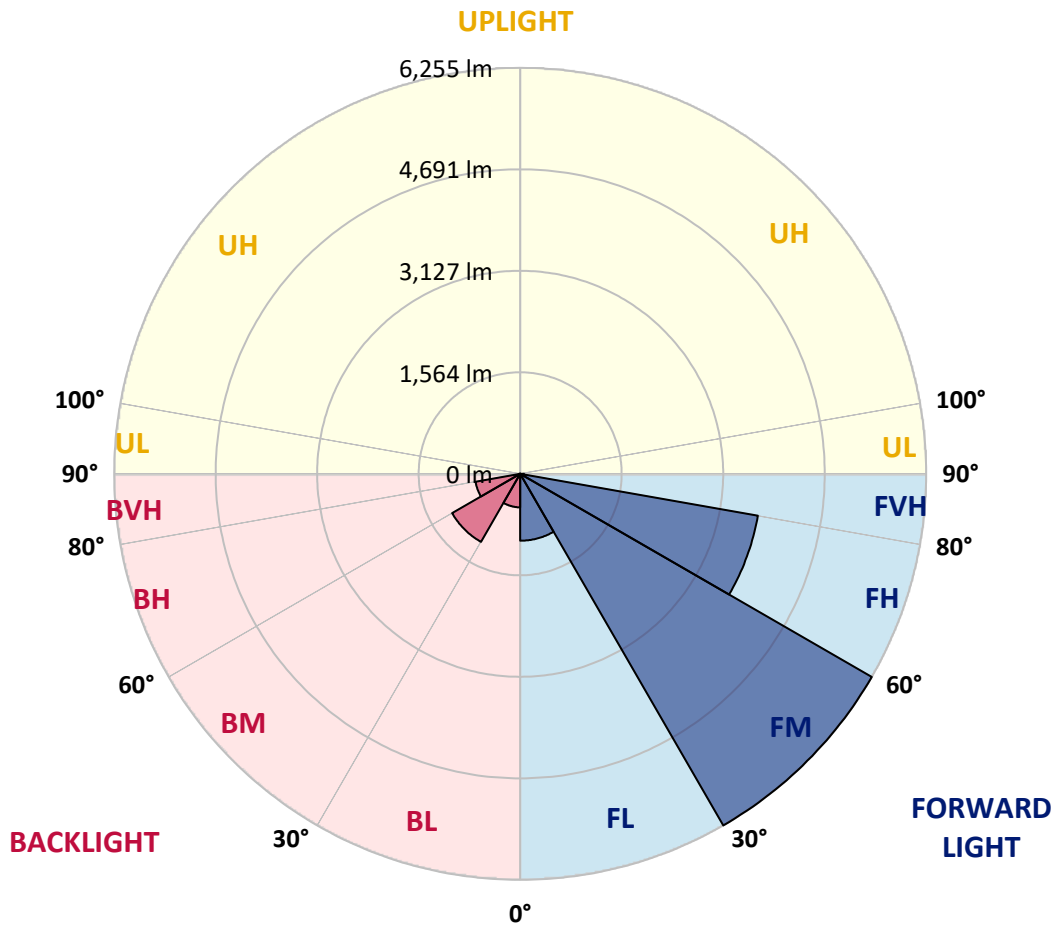
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1030.3 | 7.6       |                         |      |         |
| FM (30°-60°)   | 6255.0 | 46.3      |                         |      |         |
| FH (60°-80°)   | 3718.1 | 27.5      |                         |      | G2/5000 |
| FVH (80°-90°)  | 55.3   | 0.4       |                         |      | G1/100  |
| BL (0°-30°)    | 516.7  | 3.8       | B2/1000                 |      |         |
| BM (30°-60°)   | 1210.7 | 9.0       | B2/2500                 |      |         |
| BH (60°-80°)   | 698.2  | 5.2       | B2/1000                 |      | G2/1000 |
| BVH (80°-90°)  | 20.8   | 0.2       |                         |      | 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°     | 82°     | 85°     |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0°    | 2237.3 | 2237.3 | 2237.3 | 2237.3 | 2237.3 | 2237.3 | 2237.3 | 2237.3  | 2237.3  | 2237.3  | 2237.3  |
| 2.5°  | 2364.7 | 2378.3 | 2370.5 | 2366.6 | 2359.8 | 2350.1 | 2342.3 | 2318.0  | 2292.7  | 2276.2  | 2270.4  |
| 5°    | 2412.3 | 2426.0 | 2425.0 | 2428.9 | 2433.7 | 2436.6 | 2434.7 | 2407.5  | 2371.5  | 2343.3  | 2326.8  |
| 7.5°  | 2371.5 | 2387.1 | 2399.7 | 2419.1 | 2453.2 | 2489.2 | 2506.7 | 2500.8  | 2463.9  | 2425.0  | 2404.6  |
| 10°   | 2255.8 | 2272.3 | 2302.5 | 2348.2 | 2420.1 | 2497.9 | 2563.1 | 2593.2  | 2569.9  | 2527.1  | 2498.9  |
| 12.5° | 2043.8 | 2060.4 | 2119.7 | 2218.8 | 2339.4 | 2474.6 | 2599.0 | 2679.7  | 2685.6  | 2642.8  | 2609.7  |
| 15°   | 1805.6 | 1822.1 | 1885.3 | 2009.8 | 2193.6 | 2410.4 | 2618.5 | 2771.1  | 2822.7  | 2785.7  | 2745.8  |
| 17.5° | 1657.8 | 1672.4 | 1720.0 | 1820.2 | 2011.7 | 2282.0 | 2611.7 | 2868.4  | 2986.0  | 2956.8  | 2909.2  |
| 20°   | 1613.1 | 1625.7 | 1648.1 | 1718.1 | 1877.6 | 2148.8 | 2566.9 | 2959.8  | 3162.0  | 3145.5  | 3092.0  |
| 22.5° | 1660.7 | 1672.4 | 1679.2 | 1710.3 | 1810.5 | 2061.3 | 2510.5 | 3053.1  | 3366.2  | 3368.1  | 3303.0  |
| 25°   | 1770.6 | 1782.3 | 1774.5 | 1793.9 | 1837.7 | 2034.1 | 2489.2 | 3163.0  | 3622.9  | 3644.3  | 3570.4  |
| 27.5° | 1951.5 | 1952.4 | 1934.0 | 1933.0 | 1939.8 | 2074.9 | 2511.5 | 3280.6  | 3946.7  | 3986.5  | 3895.1  |
| 30°   | 2314.1 | 2299.6 | 2228.6 | 2151.8 | 2116.8 | 2197.5 | 2573.7 | 3419.7  | 4328.8  | 4399.8  | 4285.0  |
| 32.5° | 2873.2 | 2851.8 | 2721.5 | 2537.8 | 2353.0 | 2394.8 | 2685.6 | 3578.2  | 4744.9  | 4873.3  | 4733.3  |
| 35°   | 3480.0 | 3474.1 | 3338.0 | 3064.8 | 2742.0 | 2675.8 | 2867.4 | 3786.2  | 5199.0  | 5403.2  | 5236.9  |
| 37.5° | 4043.9 | 4041.0 | 3963.2 | 3641.4 | 3248.5 | 3067.7 | 3159.1 | 4058.5  | 5685.2  | 5980.8  | 5784.4  |
| 40°   | 4559.2 | 4568.0 | 4490.2 | 4202.4 | 3806.7 | 3570.4 | 3555.8 | 4394.9  | 6225.8  | 6609.9  | 6376.5  |
| 42.5° | 5004.6 | 5014.3 | 4935.5 | 4722.6 | 4358.0 | 4126.6 | 4042.9 | 4807.2  | 6753.8  | 7285.6  | 7009.5  |
| 45°   | 5307.0 | 5367.2 | 5355.6 | 5185.4 | 4923.9 | 4683.7 | 4628.3 | 5324.5  | 7355.6  | 8002.2  | 7678.5  |
| 47.5° | 5392.5 | 5447.9 | 5535.5 | 5558.8 | 5399.3 | 5163.0 | 5229.2 | 5947.7  | 7964.3  | 8719.8  | 8351.3  |
| 50°   | 5181.5 | 5233.1 | 5414.9 | 5657.0 | 5767.8 | 5694.9 | 5813.5 | 6615.7  | 8587.6  | 9435.4  | 9011.5  |
| 52.5° | 4765.4 | 4817.9 | 5047.3 | 5430.4 | 5882.6 | 6112.0 | 6399.8 | 7274.0  | 9191.4  | 10113.2 | 9636.7  |
| 55°   | 4163.5 | 4218.9 | 4513.5 | 4947.2 | 5663.8 | 6284.1 | 6888.9 | 7931.3  | 9744.6  | 10722.8 | 10200.7 |
| 57.5° | 3344.8 | 3385.6 | 3691.9 | 4298.7 | 5113.5 | 6113.0 | 7249.7 | 8648.8  | 10265.8 | 11321.8 | 10759.8 |
| 60°   | 2180.0 | 2215.9 | 2571.8 | 3248.5 | 4201.4 | 5541.3 | 7321.6 | 9449.1  | 10958.1 | 12100.6 | 11513.3 |
| 62.5° | 1449.7 | 1474.0 | 1685.0 | 2181.9 | 2958.8 | 4443.5 | 6900.6 | 10087.9 | 11973.2 | 13456.0 | 12805.5 |
| 65°   | 994.7  | 1019.0 | 1230.0 | 1576.1 | 1911.6 | 2939.3 | 5690.1 | 10003.3 | 12893.0 | 14532.4 | 13763.3 |
| 67.5° | 709.8  | 730.2  | 909.1  | 1235.8 | 1383.6 | 1707.4 | 3857.2 | 8922.1  | 12760.8 | 14573.2 | 13814.8 |
| 70°   | 508.5  | 520.2  | 668.0  | 962.6  | 1099.7 | 1025.8 | 2145.0 | 6823.8  | 11173.0 | 13457.0 | 12762.7 |
| 72.5° | 355.9  | 359.8  | 463.8  | 733.1  | 885.8  | 748.7  | 1020.9 | 4549.5  | 8450.5  | 10562.4 | 9894.4  |
| 75°   | 241.1  | 246.0  | 312.1  | 537.7  | 710.8  | 571.7  | 540.6  | 2439.6  | 4960.8  | 5846.6  | 5240.8  |
| 77.5° | 147.8  | 149.7  | 201.3  | 367.5  | 531.9  | 435.6  | 348.1  | 1033.6  | 1919.4  | 1884.4  | 1606.3  |
| 80°   | 83.6   | 83.6   | 128.3  | 228.5  | 362.7  | 281.0  | 244.1  | 439.5   | 607.7   | 533.8   | 470.6   |
| 82.5° | 46.7   | 47.6   | 93.3   | 142.0  | 240.2  | 166.3  | 134.2  | 203.2   | 262.5   | 232.4   | 202.2   |
| 85°   | 19.4   | 21.4   | 57.4   | 67.1   | 114.7  | 82.6   | 54.5   | 85.6    | 97.2    | 86.5    | 63.2    |
| 87.5° | 1.9    | 2.9    | 17.5   | 12.6   | 13.6   | 16.5   | 7.8    | 16.5    | 13.6    | 13.6    | 9.7     |
| 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°    | 2237.3  | 2237.3 | 2237.3 | 2237.3 | 2237.3 | 2237.3 | 2237.3 | 2237.3 | 2237.3 | 2237.3 | 2237.3 |
| 2.5°  | 2251.9  | 2237.3 | 2200.4 | 2157.6 | 2101.2 | 2074.0 | 2037.0 | 2011.7 | 1990.4 | 1992.3 | 1972.8 |
| 5°    | 2295.7  | 2258.7 | 2176.1 | 2073.0 | 1944.7 | 1853.3 | 1756.0 | 1688.9 | 1634.5 | 1622.8 | 1596.6 |
| 7.5°  | 2355.9  | 2297.6 | 2152.7 | 1967.0 | 1750.2 | 1585.9 | 1439.0 | 1344.7 | 1277.6 | 1256.2 | 1234.9 |
| 10°   | 2433.7  | 2349.1 | 2122.6 | 1833.8 | 1521.7 | 1312.6 | 1155.1 | 1081.2 | 1035.5 | 1020.0 | 1008.3 |
| 12.5° | 2524.2  | 2408.5 | 2082.7 | 1671.4 | 1286.4 | 1085.1 | 985.0  | 948.0  | 933.4  | 928.6  | 925.7  |
| 15°   | 2637.9  | 2482.3 | 2022.4 | 1478.9 | 1087.1 | 946.1  | 903.3  | 898.4  | 900.4  | 898.4  | 897.5  |
| 17.5° | 2773.1  | 2563.1 | 1924.2 | 1280.6 | 952.9  | 875.1  | 859.5  | 863.4  | 868.3  | 867.3  | 865.4  |
| 20°   | 2920.9  | 2642.8 | 1798.8 | 1104.6 | 861.5  | 824.5  | 815.8  | 819.7  | 823.6  | 821.6  | 820.6  |
| 22.5° | 3089.1  | 2728.3 | 1659.8 | 967.5  | 800.2  | 777.9  | 768.1  | 769.1  | 769.1  | 765.2  | 763.3  |
| 25°   | 3290.4  | 2822.7 | 1513.9 | 870.2  | 753.6  | 736.1  | 724.4  | 720.5  | 714.7  | 703.0  | 701.0  |
| 27.5° | 3530.5  | 2922.8 | 1373.9 | 802.2  | 716.6  | 700.1  | 686.5  | 676.7  | 662.2  | 642.7  | 640.8  |
| 30°   | 3800.8  | 3044.4 | 1255.3 | 759.4  | 687.4  | 670.9  | 655.3  | 640.8  | 619.4  | 595.1  | 593.1  |
| 32.5° | 4118.8  | 3174.6 | 1168.7 | 731.2  | 661.2  | 643.7  | 625.2  | 607.7  | 584.4  | 560.1  | 561.0  |
| 35°   | 4498.0  | 3332.2 | 1118.2 | 711.7  | 640.8  | 617.4  | 597.0  | 577.6  | 560.1  | 538.7  | 536.7  |
| 37.5° | 4909.3  | 3499.4 | 1102.6 | 702.0  | 627.2  | 591.2  | 567.8  | 554.2  | 552.3  | 539.6  | 538.7  |
| 40°   | 5359.5  | 3697.8 | 1114.3 | 696.2  | 612.6  | 565.9  | 540.6  | 537.7  | 542.6  | 520.2  | 521.2  |
| 42.5° | 5835.9  | 3933.1 | 1133.7 | 689.4  | 592.1  | 540.6  | 516.3  | 516.3  | 512.4  | 481.3  | 481.3  |
| 45°   | 6351.2  | 4204.3 | 1153.2 | 672.8  | 567.8  | 515.3  | 496.9  | 490.1  | 473.5  | 443.4  | 442.4  |
| 47.5° | 6870.5  | 4480.5 | 1167.8 | 642.7  | 538.7  | 493.9  | 477.4  | 461.9  | 437.5  | 410.3  | 409.3  |
| 50°   | 7363.4  | 4728.4 | 1152.2 | 598.0  | 505.6  | 473.5  | 456.0  | 434.6  | 408.4  | 389.9  | 387.0  |
| 52.5° | 7803.9  | 4943.3 | 1086.1 | 545.5  | 470.6  | 452.1  | 436.6  | 414.2  | 392.8  | 373.4  | 371.4  |
| 55°   | 8187.0  | 5117.4 | 969.4  | 495.9  | 439.5  | 433.7  | 418.1  | 389.9  | 360.7  | 344.2  | 342.3  |
| 57.5° | 8554.5  | 5249.6 | 823.6  | 455.0  | 411.3  | 413.2  | 389.9  | 364.6  | 337.4  | 319.9  | 318.0  |
| 60°   | 9043.6  | 5426.5 | 675.8  | 417.1  | 381.2  | 387.0  | 361.7  | 343.2  | 309.2  | 286.8  | 283.9  |
| 62.5° | 9825.4  | 5701.7 | 536.7  | 370.5  | 346.1  | 348.1  | 337.4  | 315.0  | 274.2  | 247.9  | 246.0  |
| 65°   | 10445.7 | 5600.6 | 423.0  | 319.9  | 306.3  | 309.2  | 309.2  | 284.9  | 241.1  | 211.0  | 208.1  |
| 67.5° | 10375.7 | 4795.5 | 337.4  | 270.3  | 268.4  | 270.3  | 277.1  | 256.7  | 213.9  | 189.6  | 185.7  |
| 70°   | 9558.0  | 3814.4 | 270.3  | 224.6  | 233.4  | 228.5  | 247.9  | 234.3  | 192.5  | 168.2  | 165.3  |
| 72.5° | 7799.0  | 2747.8 | 206.1  | 185.7  | 178.9  | 186.7  | 223.6  | 211.0  | 160.4  | 133.2  | 130.3  |
| 75°   | 4557.3  | 1466.3 | 153.6  | 146.8  | 129.3  | 155.6  | 198.4  | 179.9  | 122.5  | 98.2   | 95.3   |
| 77.5° | 1483.8  | 511.4  | 112.8  | 107.9  | 96.3   | 125.4  | 169.2  | 151.7  | 100.1  | 77.8   | 74.9   |
| 80°   | 397.7   | 154.6  | 76.8   | 71.0   | 62.2   | 93.3   | 134.2  | 120.6  | 72.0   | 50.6   | 49.6   |
| 82.5° | 159.5   | 65.1   | 44.7   | 39.9   | 34.0   | 64.2   | 106.0  | 97.2   | 53.5   | 32.1   | 32.1   |
| 85°   | 51.5    | 21.4   | 16.5   | 12.6   | 15.6   | 39.9   | 63.2   | 66.1   | 37.9   | 16.5   | 12.6   |
| 87.5° | 6.8     | 2.9    | 2.9    | 3.9    | 2.9    | 6.8    | 19.4   | 18.5   | 10.7   | 1.9    | 0.0    |
| 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)