

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: P966308

Luminaire Tested: **NAV-SB4B-830-U-T2**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P966308  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4B-830-U-T2  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 20595.3 lumens  
Efficiency: N/A  
Efficacy: 140.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G3

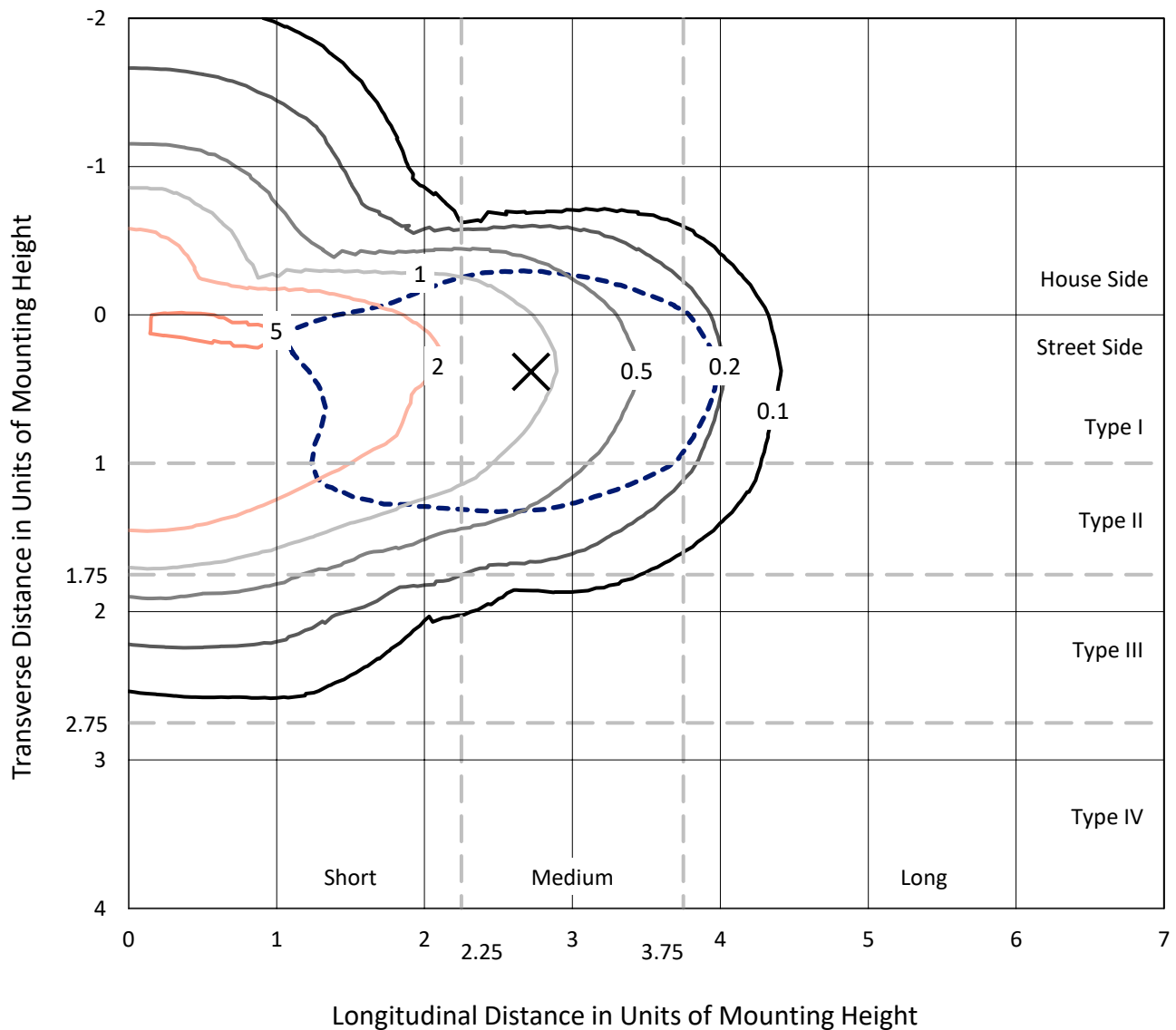
Input Watts (W): 147  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

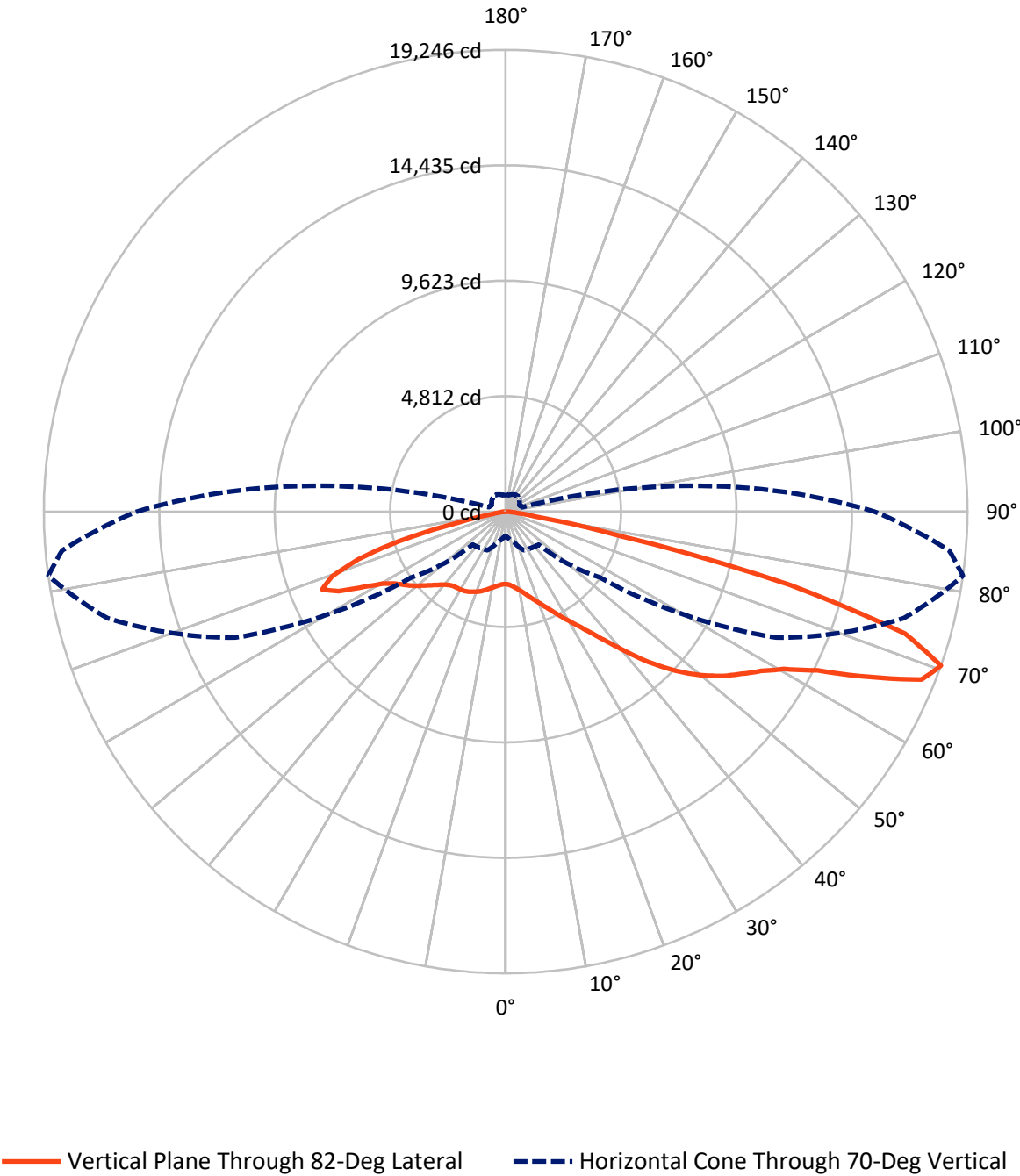
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.5 fc  
 Type II - 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    | 5077.2   | 0.0    | 5077.2  |
|                    | % Fixture | 24.7     | 0.0    | 24.7    |
| <b>Street Side</b> | Lumens    | 15518.1  | 0.0    | 15518.1 |
|                    | % Fixture | 75.3     | 0.0    | 75.3    |
| <b>Total</b>       | Lumens    | 20595.3  | 0.0    | 20595.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 285.1   | 1.4       |
| 10°-20°   | 819.1   | 4.0       |
| 20°-30°   | 1370.3  | 6.7       |
| 30°-40°   | 2140.7  | 10.4      |
| 40°-50°   | 3409.3  | 16.6      |
| 50°-60°   | 4744.5  | 23.0      |
| 60°-70°   | 4963.0  | 24.1      |
| 70°-80°   | 2593.9  | 12.6      |
| 80°-90°   | 269.4   | 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°    | 20595.3 | 100.0     |
| 0°-180°   | 20595.3 | 100.0     |

**Coefficient of Utilization**



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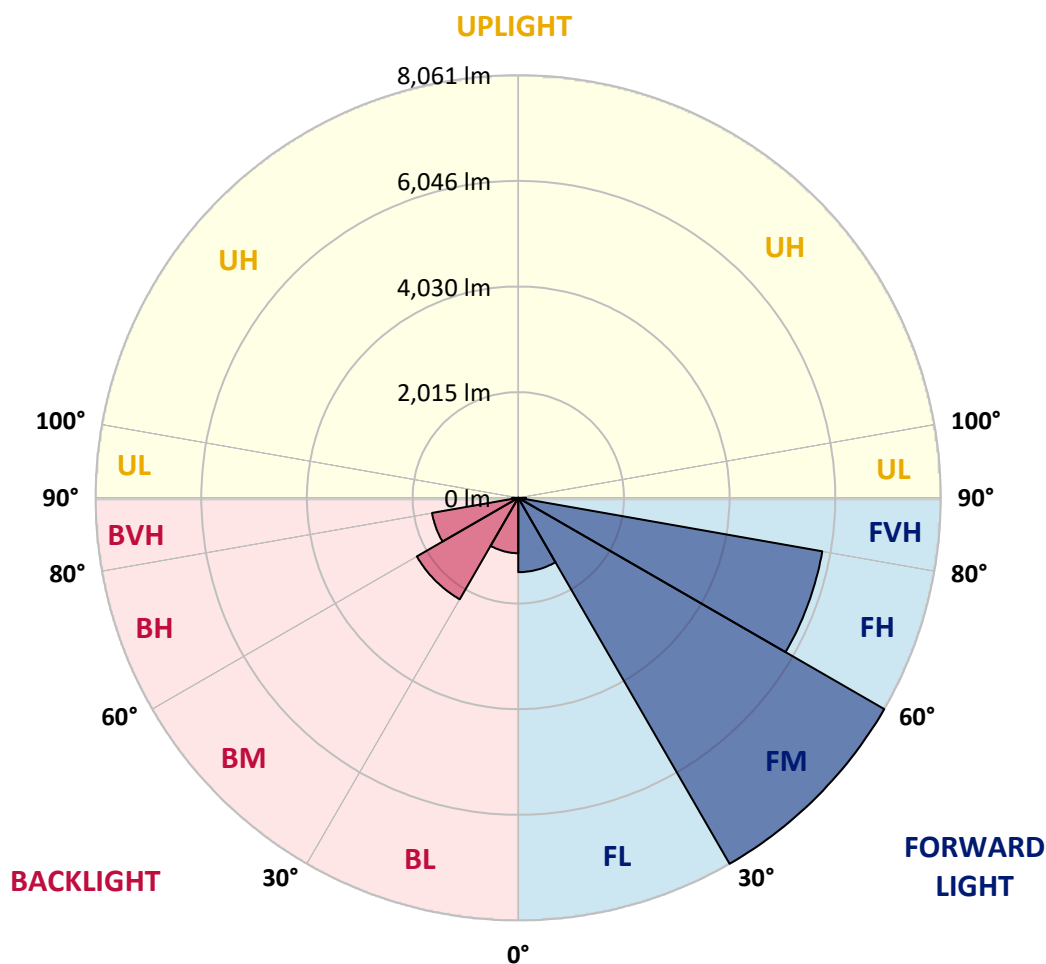
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1418.2 | 6.9       |                         |      |         |
| FM   | (30°-60°)   | 8060.8 | 39.1      |                         |      |         |
| FH   | (60°-80°)   | 5888.3 | 28.6      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 150.8  | 0.7       |                         |      | G2/225  |
| BL   | (0°-30°)    | 1056.3 | 5.1       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 2233.8 | 10.8      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 1668.6 | 8.1       | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 118.6  | 0.6       |                         |      | G2/225  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°     | 65°     | 75°     | 82°     | 85°     |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 0°    | 3019.5 | 3019.5 | 3019.5 | 3019.5 | 3019.5 | 3019.5 | 3019.5  | 3019.5  | 3019.5  | 3019.5  | 3019.5  |
| 2.5°  | 3091.7 | 3109.1 | 3103.7 | 3098.3 | 3098.3 | 3090.6 | 3089.5  | 3078.6  | 3069.8  | 3055.6  | 3052.3  |
| 5°    | 3131.0 | 3149.6 | 3147.4 | 3151.8 | 3166.0 | 3169.3 | 3172.6  | 3166.0  | 3148.5  | 3131.0  | 3123.4  |
| 7.5°  | 3096.0 | 3116.8 | 3123.4 | 3149.6 | 3193.3 | 3232.6 | 3262.2  | 3274.2  | 3257.8  | 3232.6  | 3220.7  |
| 10°   | 2978.0 | 3001.0 | 3023.9 | 3086.2 | 3163.8 | 3256.6 | 3335.4  | 3382.4  | 3379.1  | 3355.0  | 3334.2  |
| 12.5° | 2738.7 | 2762.7 | 2811.9 | 2933.2 | 3075.3 | 3239.2 | 3385.7  | 3484.0  | 3517.9  | 3500.4  | 3464.3  |
| 15°   | 2547.4 | 2568.1 | 2605.3 | 2729.9 | 2914.6 | 3163.8 | 3404.2  | 3595.5  | 3681.8  | 3672.0  | 3628.3  |
| 17.5° | 2542.0 | 2550.7 | 2573.7 | 2632.7 | 2774.8 | 3045.8 | 3384.6  | 3704.8  | 3869.8  | 3868.7  | 3814.0  |
| 20°   | 2638.1 | 2641.4 | 2654.5 | 2666.5 | 2747.4 | 2956.1 | 3334.2  | 3795.5  | 4080.7  | 4080.7  | 4021.7  |
| 22.5° | 2771.5 | 2769.2 | 2782.4 | 2771.5 | 2810.8 | 2948.5 | 3302.6  | 3875.2  | 4315.7  | 4333.1  | 4258.8  |
| 25°   | 2971.5 | 2960.5 | 2957.2 | 2932.1 | 2939.8 | 3019.5 | 3337.5  | 3965.9  | 4594.4  | 4630.4  | 4537.5  |
| 27.5° | 3238.1 | 3220.7 | 3208.6 | 3150.6 | 3131.0 | 3166.0 | 3444.6  | 4075.2  | 4904.7  | 4966.9  | 4849.0  |
| 30°   | 3585.7 | 3554.0 | 3536.5 | 3435.9 | 3364.9 | 3370.3 | 3606.4  | 4220.5  | 5229.2  | 5329.8  | 5180.0  |
| 32.5° | 4059.9 | 4010.7 | 3963.8 | 3798.8 | 3668.7 | 3626.0 | 3815.2  | 4421.6  | 5581.1  | 5741.8  | 5549.5  |
| 35°   | 4591.1 | 4551.7 | 4501.4 | 4246.8 | 4046.8 | 3948.4 | 4097.0  | 4702.5  | 5993.2  | 6247.8  | 5997.6  |
| 37.5° | 5102.4 | 5068.6 | 5092.6 | 4749.5 | 4491.5 | 4348.5 | 4466.4  | 5079.6  | 6501.4  | 6877.2  | 6559.3  |
| 40°   | 5631.5 | 5605.2 | 5608.5 | 5280.6 | 4980.1 | 4819.4 | 4914.6  | 5552.7  | 7083.8  | 7625.9  | 7234.7  |
| 42.5° | 6206.3 | 6186.6 | 6121.0 | 5830.3 | 5492.7 | 5342.9 | 5430.3  | 6099.2  | 7708.9  | 8478.3  | 7975.6  |
| 45°   | 6850.0 | 6838.0 | 6776.7 | 6443.5 | 6056.5 | 5888.2 | 6006.3  | 6702.4  | 8337.3  | 9280.5  | 8719.8  |
| 47.5° | 7406.2 | 7416.1 | 7408.4 | 7127.5 | 6726.5 | 6479.4 | 6620.5  | 7331.9  | 8922.0  | 10034.5 | 9433.5  |
| 50°   | 7674.0 | 7725.3 | 7800.8 | 7713.3 | 7464.2 | 7212.8 | 7240.1  | 7939.5  | 9479.3  | 10741.6 | 10117.6 |
| 52.5° | 7534.1 | 7631.3 | 7836.8 | 7976.7 | 8072.9 | 8020.4 | 7947.1  | 8542.8  | 10003.9 | 11379.8 | 10764.6 |
| 55°   | 7012.7 | 7149.4 | 7490.4 | 7828.0 | 8318.7 | 8700.1 | 8796.3  | 9211.6  | 10515.4 | 11941.6 | 11376.5 |
| 57.5° | 6063.1 | 6285.0 | 6591.0 | 7274.0 | 8100.2 | 9029.1 | 9786.4  | 10139.4 | 11057.4 | 12541.5 | 12016.9 |
| 60°   | 4434.8 | 4732.0 | 5112.3 | 6128.7 | 7335.2 | 8853.1 | 10629.0 | 11564.5 | 11827.9 | 13318.5 | 12850.7 |
| 62.5° | 2838.1 | 3021.7 | 3371.4 | 4328.8 | 5715.6 | 7951.5 | 10886.9 | 13345.8 | 13133.8 | 14592.7 | 14101.0 |
| 65°   | 1943.1 | 2061.1 | 2381.3 | 2919.0 | 3694.9 | 5918.9 | 10196.3 | 14681.3 | 15208.0 | 16612.4 | 16238.6 |
| 67.5° | 1411.9 | 1501.5 | 1774.8 | 2245.8 | 2407.5 | 3502.5 | 7912.2  | 14620.1 | 17224.3 | 18693.1 | 18111.8 |
| 70°   | 1029.5 | 1092.9 | 1322.4 | 1774.8 | 1852.4 | 1948.5 | 4793.2  | 12427.8 | 17180.6 | 19246.1 | 18549.9 |
| 72.5° | 762.8  | 806.5  | 960.6  | 1377.0 | 1499.4 | 1315.8 | 2372.6  | 9032.4  | 14763.3 | 17408.0 | 16849.5 |
| 75°   | 551.9  | 584.7  | 698.3  | 1053.5 | 1200.0 | 1002.1 | 1183.6  | 5278.4  | 10297.9 | 12245.4 | 12343.7 |
| 77.5° | 421.8  | 447.0  | 521.3  | 771.5  | 960.6  | 751.8  | 734.4   | 2428.3  | 4882.8  | 4906.9  | 5182.3  |
| 80°   | 338.8  | 355.2  | 395.6  | 543.1  | 736.6  | 562.8  | 478.7   | 980.3   | 1543.1  | 1306.0  | 1370.4  |
| 82.5° | 249.2  | 276.4  | 334.5  | 381.4  | 526.7  | 388.0  | 291.8   | 495.1   | 586.8   | 504.9   | 509.2   |
| 85°   | 142.1  | 160.6  | 202.1  | 273.2  | 336.6  | 237.2  | 167.2   | 219.7   | 273.2   | 224.1   | 200.0   |
| 87.5° | 50.2   | 65.6   | 71.0   | 107.1  | 146.5  | 98.4   | 64.5    | 63.3    | 89.6    | 66.6    | 55.8    |
| 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°    | 3019.5  | 3019.5  | 3019.5 | 3019.5 | 3019.5 | 3019.5 | 3019.5 | 3019.5 | 3019.5 | 3019.5 | 3019.5 |
| 2.5°  | 3041.4  | 3035.9  | 3014.1 | 2984.6 | 2953.9 | 2924.4 | 2914.6 | 2893.9 | 2879.6 | 2871.9 | 2880.8 |
| 5°    | 3102.6  | 3085.1  | 3033.7 | 2968.2 | 2899.3 | 2825.0 | 2772.5 | 2724.4 | 2689.5 | 2656.7 | 2669.8 |
| 7.5°  | 3190.0  | 3159.5  | 3070.9 | 2956.1 | 2833.7 | 2710.3 | 2618.5 | 2548.6 | 2501.5 | 2471.0 | 2477.5 |
| 10°   | 3291.7  | 3244.6  | 3109.1 | 2937.5 | 2748.5 | 2571.4 | 2463.3 | 2403.2 | 2373.7 | 2357.3 | 2361.6 |
| 12.5° | 3408.5  | 3341.9  | 3148.5 | 2894.9 | 2618.5 | 2416.2 | 2341.9 | 2324.5 | 2325.6 | 2326.6 | 2328.9 |
| 15°   | 3552.9  | 3460.0  | 3180.2 | 2802.0 | 2449.0 | 2297.1 | 2284.0 | 2312.5 | 2341.9 | 2356.2 | 2355.0 |
| 17.5° | 3715.6  | 3584.5  | 3185.6 | 2649.0 | 2283.0 | 2220.7 | 2262.2 | 2323.4 | 2368.2 | 2387.8 | 2392.2 |
| 20°   | 3890.5  | 3711.3  | 3146.3 | 2432.6 | 2146.4 | 2158.3 | 2232.7 | 2311.4 | 2360.6 | 2385.7 | 2392.2 |
| 22.5° | 4090.6  | 3846.8  | 3052.3 | 2205.4 | 2034.8 | 2090.6 | 2178.0 | 2254.6 | 2305.9 | 2331.1 | 2337.6 |
| 25°   | 4318.9  | 3998.7  | 2904.7 | 2014.1 | 1938.7 | 2014.1 | 2101.6 | 2164.9 | 2206.4 | 2229.4 | 2235.9 |
| 27.5° | 4572.4  | 4157.2  | 2708.0 | 1862.2 | 1854.5 | 1935.4 | 2007.6 | 2056.8 | 2078.6 | 2096.1 | 2102.7 |
| 30°   | 4827.1  | 4301.4  | 2469.8 | 1747.4 | 1781.3 | 1857.8 | 1909.2 | 1931.1 | 1937.7 | 1940.9 | 1948.5 |
| 32.5° | 5102.4  | 4426.1  | 2219.5 | 1652.4 | 1711.4 | 1782.5 | 1813.0 | 1822.9 | 1792.3 | 1771.5 | 1778.1 |
| 35°   | 5435.8  | 4559.3  | 1974.8 | 1577.0 | 1642.6 | 1703.8 | 1713.6 | 1704.9 | 1668.8 | 1626.2 | 1628.3 |
| 37.5° | 5847.8  | 4725.5  | 1779.2 | 1523.5 | 1578.1 | 1618.5 | 1606.5 | 1604.3 | 1607.6 | 1557.3 | 1560.6 |
| 40°   | 6352.7  | 4941.8  | 1636.0 | 1481.9 | 1525.6 | 1534.3 | 1500.5 | 1519.0 | 1535.4 | 1459.0 | 1461.1 |
| 42.5° | 6913.3  | 5203.0  | 1545.3 | 1453.4 | 1481.9 | 1461.1 | 1408.7 | 1429.5 | 1427.2 | 1326.8 | 1325.6 |
| 45°   | 7484.9  | 5487.1  | 1513.6 | 1432.7 | 1441.5 | 1399.9 | 1342.0 | 1347.5 | 1301.5 | 1210.8 | 1214.1 |
| 47.5° | 8053.2  | 5792.1  | 1533.3 | 1415.2 | 1391.2 | 1344.2 | 1299.4 | 1275.3 | 1207.6 | 1139.8 | 1139.8 |
| 50°   | 8610.5  | 6112.3  | 1605.4 | 1380.3 | 1322.4 | 1295.0 | 1262.3 | 1219.6 | 1147.5 | 1089.6 | 1085.2 |
| 52.5° | 9127.4  | 6434.6  | 1686.2 | 1322.4 | 1236.0 | 1252.4 | 1231.6 | 1182.4 | 1111.4 | 1052.4 | 1053.5 |
| 55°   | 9617.1  | 6757.1  | 1718.0 | 1242.6 | 1155.2 | 1215.2 | 1203.2 | 1112.5 | 1027.3 | 979.2  | 974.8  |
| 57.5° | 10150.4 | 7145.1  | 1682.9 | 1140.9 | 1089.6 | 1172.6 | 1126.7 | 1026.2 | 977.0  | 941.0  | 937.7  |
| 60°   | 10889.1 | 7753.7  | 1607.6 | 1015.3 | 1027.3 | 1109.3 | 1030.5 | 989.0  | 935.5  | 895.0  | 892.9  |
| 62.5° | 12116.4 | 8889.2  | 1486.2 | 890.6  | 954.1  | 1015.3 | 984.6  | 943.1  | 888.5  | 849.1  | 849.1  |
| 65°   | 13930.5 | 10467.3 | 1257.9 | 793.5  | 872.1  | 923.4  | 935.5  | 893.9  | 837.1  | 795.6  | 797.8  |
| 67.5° | 15460.5 | 11457.3 | 951.9  | 712.6  | 787.9  | 849.1  | 883.0  | 842.6  | 782.5  | 742.0  | 743.1  |
| 70°   | 15376.3 | 10738.3 | 726.7  | 632.7  | 713.6  | 775.9  | 819.6  | 787.9  | 723.4  | 685.2  | 688.5  |
| 72.5° | 13657.3 | 8983.2  | 587.9  | 551.9  | 638.3  | 699.5  | 751.8  | 727.9  | 662.3  | 625.1  | 625.1  |
| 75°   | 10033.4 | 6376.7  | 470.0  | 470.0  | 544.3  | 619.6  | 677.5  | 662.3  | 602.2  | 575.9  | 568.3  |
| 77.5° | 4229.4  | 2675.2  | 368.3  | 390.1  | 452.4  | 532.2  | 604.3  | 609.8  | 557.4  | 590.1  | 535.5  |
| 80°   | 1124.5  | 737.7   | 280.8  | 307.1  | 355.2  | 439.3  | 525.6  | 523.5  | 466.7  | 436.0  | 405.5  |
| 82.5° | 428.3   | 290.7   | 200.0  | 216.4  | 256.9  | 336.6  | 416.4  | 429.5  | 372.7  | 322.4  | 322.4  |
| 85°   | 165.0   | 124.5   | 123.5  | 130.1  | 149.8  | 222.9  | 314.8  | 325.6  | 280.8  | 238.2  | 245.9  |
| 87.5° | 42.6    | 37.2    | 45.9   | 43.7   | 68.9   | 119.1  | 180.3  | 186.9  | 171.6  | 99.4   | 142.1  |
| 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)