

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: P963022

Luminaire Tested: **NAV-SB2D-740-U-T2**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P963022  
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-SB2D-740-U-T2  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21866.3 lumens  
Efficiency: N/A  
Efficacy: 148.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G3

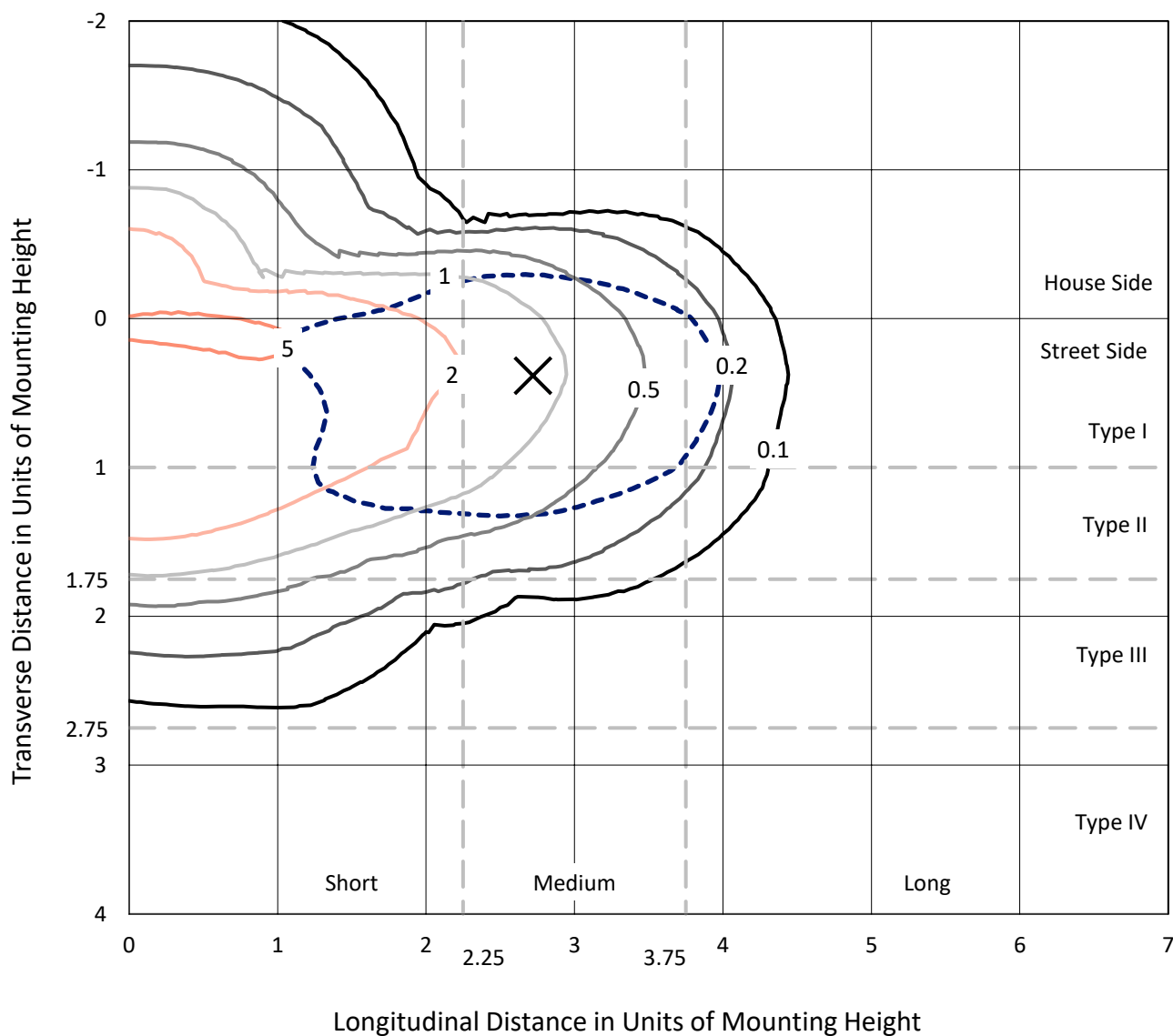
Input Watts (W): 147.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

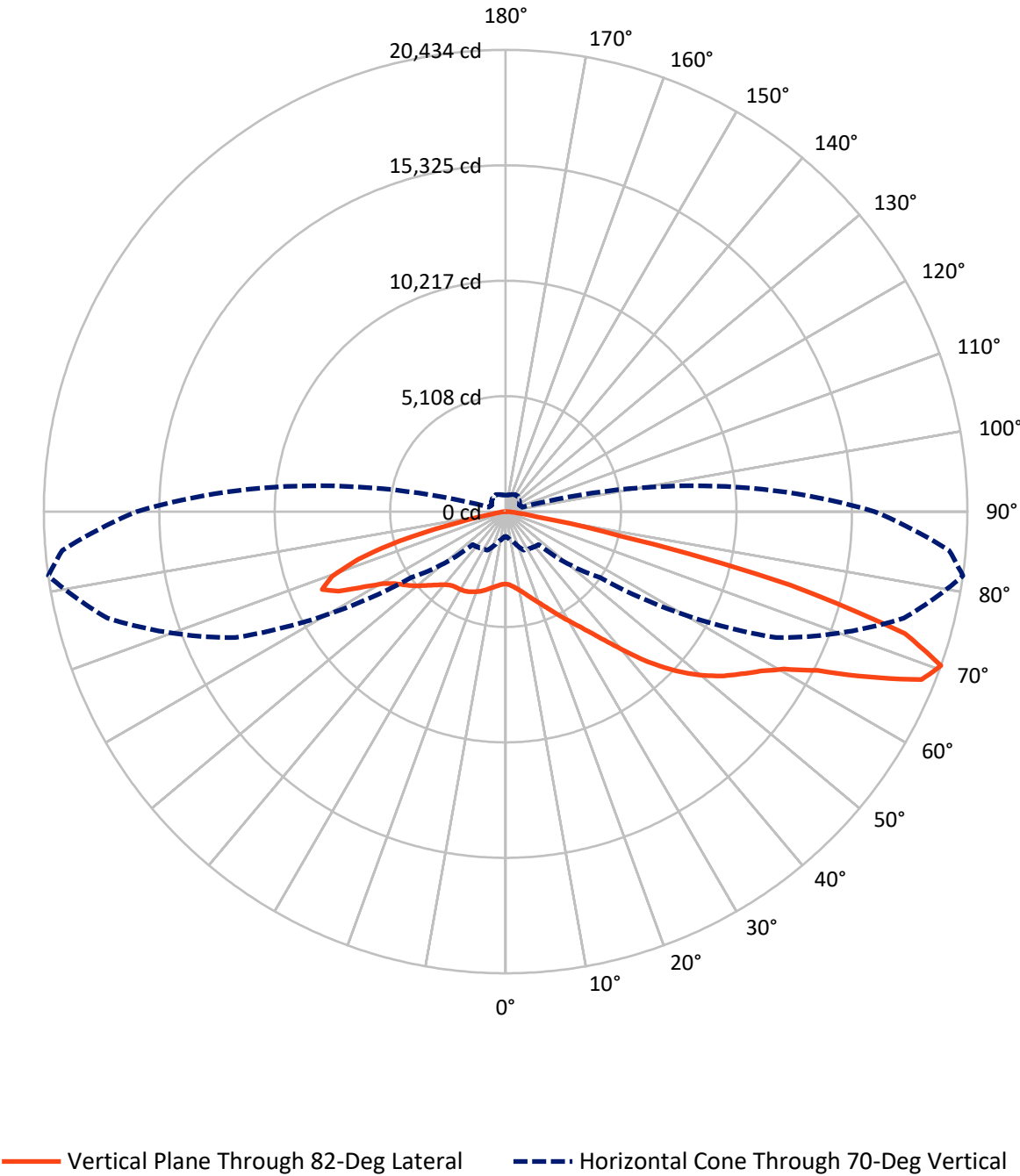
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.8 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    | 5390.6   | 0.0    | 5390.6  |
|                    | % Fixture | 24.7     | 0.0    | 24.7    |
| <b>Street Side</b> | Lumens    | 16475.7  | 0.0    | 16475.7 |
|                    | % Fixture | 75.3     | 0.0    | 75.3    |
| <b>Total</b>       | Lumens    | 21866.3  | 0.0    | 21866.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 302.7   | 1.4       |
| 10°-20°   | 869.6   | 4.0       |
| 20°-30°   | 1454.8  | 6.7       |
| 30°-40°   | 2272.8  | 10.4      |
| 40°-50°   | 3619.7  | 16.6      |
| 50°-60°   | 5037.3  | 23.0      |
| 60°-70°   | 5269.3  | 24.1      |
| 70°-80°   | 2754.0  | 12.6      |
| 80°-90°   | 286.0   | 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°    | 21866.3 | 100.0     |
| 0°-180°   | 21866.3 | 100.0     |

**Coefficient of Utilization**



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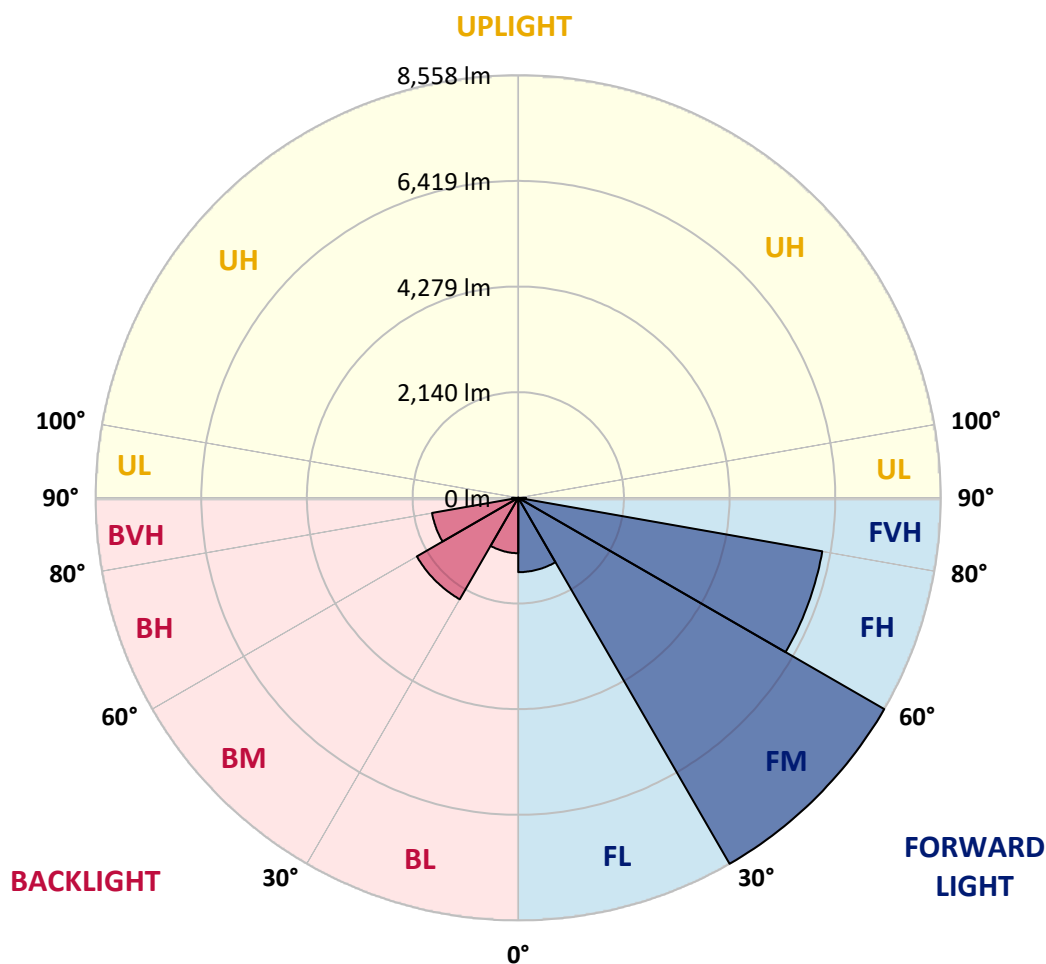
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1505.7 | 6.9       |                         |      |         |
| FM   | (30°-60°)   | 8558.3 | 39.1      |                         |      |         |
| FH   | (60°-80°)   | 6251.6 | 28.6      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 160.1  | 0.7       |                         |      | G2/225  |
| BL   | (0°-30°)    | 1121.4 | 5.1       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 2371.6 | 10.8      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 1771.6 | 8.1       | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 125.9  | 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°    | 3205.9 | 3205.9 | 3205.9 | 3205.9 | 3205.9 | 3205.9 | 3205.9  | 3205.9  | 3205.9  | 3205.9  | 3205.9  |
| 2.5°  | 3282.5 | 3301.0 | 3295.2 | 3289.4 | 3289.4 | 3281.3 | 3280.1  | 3268.5  | 3259.3  | 3244.1  | 3240.6  |
| 5°    | 3324.2 | 3344.0 | 3341.6 | 3346.3 | 3361.4 | 3364.9 | 3368.4  | 3361.4  | 3342.8  | 3324.2  | 3316.1  |
| 7.5°  | 3287.1 | 3309.1 | 3316.1 | 3344.0 | 3390.4 | 3432.1 | 3463.5  | 3476.2  | 3458.9  | 3432.1  | 3419.4  |
| 10°   | 3161.8 | 3186.1 | 3210.5 | 3276.6 | 3359.0 | 3457.6 | 3541.2  | 3591.1  | 3587.6  | 3562.1  | 3540.0  |
| 12.5° | 2907.7 | 2933.2 | 2985.4 | 3114.3 | 3265.0 | 3439.1 | 3594.6  | 3699.0  | 3735.0  | 3716.4  | 3678.1  |
| 15°   | 2704.7 | 2726.7 | 2766.2 | 2898.4 | 3094.5 | 3359.0 | 3614.3  | 3817.3  | 3909.0  | 3898.6  | 3852.2  |
| 17.5° | 2698.8 | 2708.2 | 2732.4 | 2795.2 | 2946.0 | 3233.8 | 3593.4  | 3933.3  | 4108.6  | 4107.4  | 4049.4  |
| 20°   | 2800.9 | 2804.4 | 2818.3 | 2831.2 | 2916.9 | 3138.5 | 3540.0  | 4029.7  | 4332.5  | 4332.5  | 4269.8  |
| 22.5° | 2942.5 | 2940.2 | 2954.0 | 2942.5 | 2984.3 | 3130.5 | 3506.4  | 4114.3  | 4582.0  | 4600.5  | 4521.7  |
| 25°   | 3154.8 | 3143.3 | 3139.8 | 3113.0 | 3121.1 | 3205.9 | 3543.5  | 4210.7  | 4877.9  | 4916.1  | 4817.5  |
| 27.5° | 3438.0 | 3419.4 | 3406.6 | 3345.1 | 3324.2 | 3361.4 | 3657.2  | 4326.7  | 5207.4  | 5273.5  | 5148.2  |
| 30°   | 3807.0 | 3773.2 | 3754.7 | 3648.0 | 3572.5 | 3578.4 | 3829.0  | 4481.0  | 5552.0  | 5658.7  | 5499.7  |
| 32.5° | 4310.4 | 4258.3 | 4208.3 | 4033.2 | 3895.1 | 3849.8 | 4050.6  | 4694.5  | 5925.6  | 6096.2  | 5891.9  |
| 35°   | 4874.4 | 4832.6 | 4779.3 | 4508.9 | 4296.6 | 4192.1 | 4349.9  | 4992.7  | 6363.0  | 6633.4  | 6367.7  |
| 37.5° | 5417.4 | 5381.5 | 5407.0 | 5042.6 | 4768.8 | 4616.8 | 4742.1  | 5393.0  | 6902.6  | 7301.7  | 6964.1  |
| 40°   | 5978.9 | 5951.2 | 5954.6 | 5606.5 | 5287.5 | 5116.9 | 5217.9  | 5895.4  | 7521.0  | 8096.5  | 7681.1  |
| 42.5° | 6589.3 | 6568.4 | 6498.8 | 6190.2 | 5831.6 | 5672.7 | 5765.5  | 6475.5  | 8184.6  | 9001.6  | 8467.8  |
| 45°   | 7272.7 | 7260.0 | 7195.0 | 6841.1 | 6430.3 | 6251.7 | 6376.9  | 7116.1  | 8851.8  | 9853.1  | 9257.9  |
| 47.5° | 7863.3 | 7873.7 | 7865.6 | 7567.4 | 7141.6 | 6879.4 | 7029.0  | 7784.4  | 9472.6  | 10653.7 | 10015.6 |
| 50°   | 8147.5 | 8202.0 | 8282.1 | 8189.3 | 7924.8 | 7657.9 | 7686.9  | 8429.5  | 10064.4 | 11404.5 | 10742.0 |
| 52.5° | 7999.0 | 8102.3 | 8320.4 | 8469.0 | 8571.0 | 8515.4 | 8437.6  | 9070.0  | 10621.3 | 12082.1 | 11428.9 |
| 55°   | 7445.6 | 7590.6 | 7952.7 | 8311.1 | 8832.1 | 9237.1 | 9339.2  | 9780.0  | 11164.3 | 12678.4 | 12078.6 |
| 57.5° | 6437.3 | 6672.9 | 6997.7 | 7722.9 | 8600.1 | 9586.3 | 10390.4 | 10765.2 | 11739.8 | 13315.5 | 12758.5 |
| 60°   | 4708.4 | 5024.0 | 5427.8 | 6506.9 | 7787.8 | 9399.5 | 11284.9 | 12278.2 | 12557.8 | 14140.4 | 13643.9 |
| 62.5° | 3013.3 | 3208.1 | 3579.5 | 4595.9 | 6068.3 | 8442.2 | 11558.8 | 14169.4 | 13944.3 | 15493.3 | 14971.1 |
| 65°   | 2063.0 | 2188.3 | 2528.3 | 3099.1 | 3923.0 | 6284.2 | 10825.5 | 15587.3 | 16146.6 | 17637.6 | 17240.7 |
| 67.5° | 1499.1 | 1594.3 | 1884.3 | 2384.4 | 2556.1 | 3718.7 | 8400.5  | 15522.3 | 18287.3 | 19846.8 | 19229.4 |
| 70°   | 1093.0 | 1160.3 | 1403.9 | 1884.3 | 1966.7 | 2068.8 | 5089.0  | 13194.8 | 18240.9 | 20433.9 | 19694.8 |
| 72.5° | 809.9  | 856.3  | 1019.9 | 1462.0 | 1591.9 | 1397.0 | 2518.9  | 9589.8  | 15674.3 | 18482.2 | 17889.3 |
| 75°   | 586.0  | 620.7  | 741.4  | 1118.5 | 1274.0 | 1063.9 | 1256.5  | 5604.2  | 10933.4 | 13001.0 | 13105.4 |
| 77.5° | 447.8  | 474.6  | 553.5  | 819.2  | 1019.9 | 798.3  | 779.7   | 2578.2  | 5184.1  | 5209.7  | 5502.1  |
| 80°   | 359.7  | 377.1  | 420.0  | 576.7  | 782.1  | 597.6  | 508.2   | 1040.8  | 1638.4  | 1386.5  | 1455.0  |
| 82.5° | 264.6  | 293.6  | 355.1  | 405.0  | 559.2  | 411.9  | 309.8   | 525.6   | 623.1   | 536.1   | 540.7   |
| 85°   | 150.9  | 170.6  | 214.6  | 290.1  | 357.4  | 251.7  | 177.5   | 233.2   | 290.1   | 237.9   | 212.4   |
| 87.5° | 53.4   | 69.6   | 75.4   | 113.7  | 155.5  | 104.4  | 68.5    | 67.3    | 95.1    | 70.8    | 59.1    |
| 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°    | 3205.9  | 3205.9  | 3205.9 | 3205.9 | 3205.9 | 3205.9 | 3205.9 | 3205.9 | 3205.9 | 3205.9 | 3205.9 |
| 2.5°  | 3229.1  | 3223.3  | 3200.0 | 3168.8 | 3136.3 | 3104.9 | 3094.5 | 3072.4 | 3057.4 | 3049.3 | 3058.5 |
| 5°    | 3294.0  | 3275.5  | 3221.0 | 3151.4 | 3078.3 | 2999.4 | 2943.7 | 2892.5 | 2855.4 | 2820.7 | 2834.5 |
| 7.5°  | 3386.9  | 3354.4  | 3260.4 | 3138.5 | 3008.6 | 2877.5 | 2780.0 | 2705.8 | 2655.9 | 2623.4 | 2630.4 |
| 10°   | 3494.7  | 3444.9  | 3301.0 | 3118.9 | 2918.2 | 2730.2 | 2615.3 | 2551.4 | 2520.2 | 2502.7 | 2507.4 |
| 12.5° | 3619.0  | 3548.1  | 3342.8 | 3073.6 | 2780.0 | 2565.4 | 2486.5 | 2467.9 | 2469.1 | 2470.2 | 2472.6 |
| 15°   | 3772.1  | 3673.5  | 3376.5 | 2975.0 | 2600.2 | 2438.9 | 2425.0 | 2455.2 | 2486.5 | 2501.6 | 2500.4 |
| 17.5° | 3945.0  | 3805.7  | 3382.2 | 2812.5 | 2423.8 | 2357.7 | 2401.8 | 2466.8 | 2514.3 | 2535.2 | 2539.8 |
| 20°   | 4130.6  | 3940.3  | 3340.5 | 2582.8 | 2278.8 | 2291.6 | 2370.5 | 2454.1 | 2506.2 | 2532.9 | 2539.8 |
| 22.5° | 4342.9  | 4084.2  | 3240.6 | 2341.5 | 2160.5 | 2219.6 | 2312.5 | 2393.7 | 2448.2 | 2474.9 | 2481.8 |
| 25°   | 4585.4  | 4245.4  | 3084.0 | 2138.5 | 2058.3 | 2138.5 | 2231.2 | 2298.6 | 2342.6 | 2367.0 | 2373.9 |
| 27.5° | 4854.6  | 4413.8  | 2875.2 | 1977.1 | 1969.0 | 2054.9 | 2131.5 | 2183.7 | 2206.8 | 2225.5 | 2232.3 |
| 30°   | 5125.0  | 4566.9  | 2622.3 | 1855.2 | 1891.2 | 1972.5 | 2027.0 | 2050.2 | 2057.2 | 2060.7 | 2068.8 |
| 32.5° | 5417.4  | 4699.2  | 2356.6 | 1754.4 | 1817.0 | 1892.5 | 1925.0 | 1935.4 | 1902.9 | 1880.9 | 1887.7 |
| 35°   | 5771.3  | 4840.8  | 2096.6 | 1674.3 | 1743.9 | 1808.9 | 1819.4 | 1810.0 | 1771.7 | 1726.5 | 1728.9 |
| 37.5° | 6208.7  | 5017.1  | 1889.0 | 1617.4 | 1675.5 | 1718.4 | 1705.6 | 1703.3 | 1706.8 | 1653.4 | 1656.9 |
| 40°   | 6744.7  | 5246.9  | 1737.0 | 1573.4 | 1619.8 | 1629.0 | 1593.1 | 1612.8 | 1630.2 | 1549.0 | 1551.3 |
| 42.5° | 7340.0  | 5524.1  | 1640.6 | 1543.1 | 1573.4 | 1551.3 | 1495.6 | 1517.6 | 1515.4 | 1408.6 | 1407.4 |
| 45°   | 7946.8  | 5825.8  | 1607.0 | 1521.1 | 1530.4 | 1486.4 | 1424.9 | 1430.6 | 1381.9 | 1285.6 | 1289.0 |
| 47.5° | 8550.1  | 6149.5  | 1627.9 | 1502.5 | 1477.0 | 1427.1 | 1379.5 | 1354.0 | 1282.1 | 1210.2 | 1210.2 |
| 50°   | 9141.9  | 6489.5  | 1704.5 | 1465.4 | 1403.9 | 1374.9 | 1340.1 | 1294.9 | 1218.3 | 1156.8 | 1152.2 |
| 52.5° | 9690.8  | 6831.7  | 1790.4 | 1403.9 | 1312.3 | 1329.7 | 1307.7 | 1255.4 | 1180.0 | 1117.4 | 1118.5 |
| 55°   | 10210.5 | 7174.1  | 1824.0 | 1319.3 | 1226.4 | 1290.3 | 1277.5 | 1181.2 | 1090.7 | 1039.7 | 1034.9 |
| 57.5° | 10776.7 | 7585.9  | 1786.9 | 1211.3 | 1156.8 | 1245.0 | 1196.3 | 1089.5 | 1037.3 | 999.0  | 995.5  |
| 60°   | 11561.1 | 8232.3  | 1706.8 | 1077.9 | 1090.7 | 1177.7 | 1094.2 | 1050.0 | 993.2  | 950.3  | 947.9  |
| 62.5° | 12864.2 | 9437.8  | 1578.0 | 945.7  | 1012.9 | 1077.9 | 1045.4 | 1001.3 | 943.3  | 901.6  | 901.6  |
| 65°   | 14790.2 | 11113.3 | 1335.5 | 842.3  | 925.9  | 980.4  | 993.2  | 949.1  | 888.8  | 844.7  | 847.1  |
| 67.5° | 16414.6 | 12164.5 | 1010.6 | 756.6  | 836.6  | 901.6  | 937.5  | 894.6  | 830.8  | 787.8  | 789.0  |
| 70°   | 16325.3 | 11401.0 | 771.6  | 671.8  | 757.7  | 823.8  | 870.2  | 836.6  | 768.1  | 727.5  | 731.0  |
| 72.5° | 14500.2 | 9537.5  | 624.2  | 586.0  | 677.6  | 742.6  | 798.3  | 772.7  | 703.2  | 663.7  | 663.7  |
| 75°   | 10652.6 | 6770.3  | 499.0  | 499.0  | 577.8  | 657.8  | 719.3  | 703.2  | 639.3  | 611.5  | 603.3  |
| 77.5° | 4490.3  | 2840.4  | 391.0  | 414.2  | 480.3  | 565.1  | 641.6  | 647.4  | 591.7  | 626.6  | 568.6  |
| 80°   | 1193.9  | 783.2   | 298.2  | 326.1  | 377.1  | 466.5  | 558.1  | 555.8  | 495.5  | 463.0  | 430.5  |
| 82.5° | 454.8   | 308.6   | 212.4  | 229.7  | 272.6  | 357.4  | 442.1  | 456.0  | 395.6  | 342.2  | 342.2  |
| 85°   | 175.2   | 132.2   | 131.1  | 138.1  | 159.0  | 236.7  | 334.2  | 345.7  | 298.2  | 253.0  | 261.1  |
| 87.5° | 45.2    | 39.5    | 48.7   | 46.4   | 73.1   | 126.5  | 191.5  | 198.4  | 182.1  | 105.6  | 150.9  |
| 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)