

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: P884489

Luminaire Tested: **NAV-SB5B-827-U-T3**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P884489  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB5B-827-U-T3  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(5) 80 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

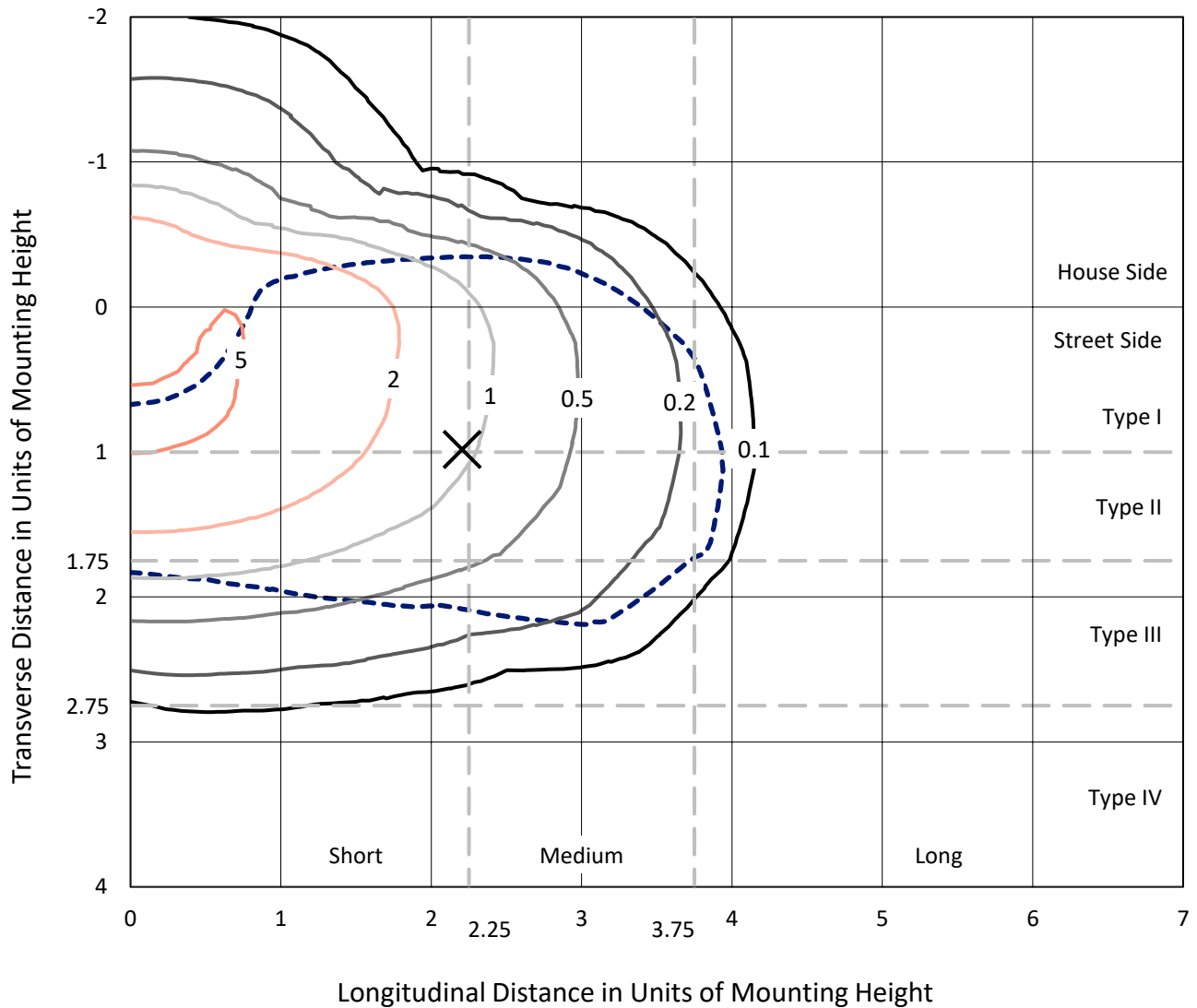
Lumens per Lamp: N/A  
Luminaire Lumens: 23232 lumens  
Efficiency: N/A  
Efficacy: 127.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 182.7  
Input Voltage (V): 120.0  
Input Current (Ain): 1.547  
Voltage Rise (V): NR  
Power Factor: 0.992  
Total Harmonic Distortion (THDi): 11.125  
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

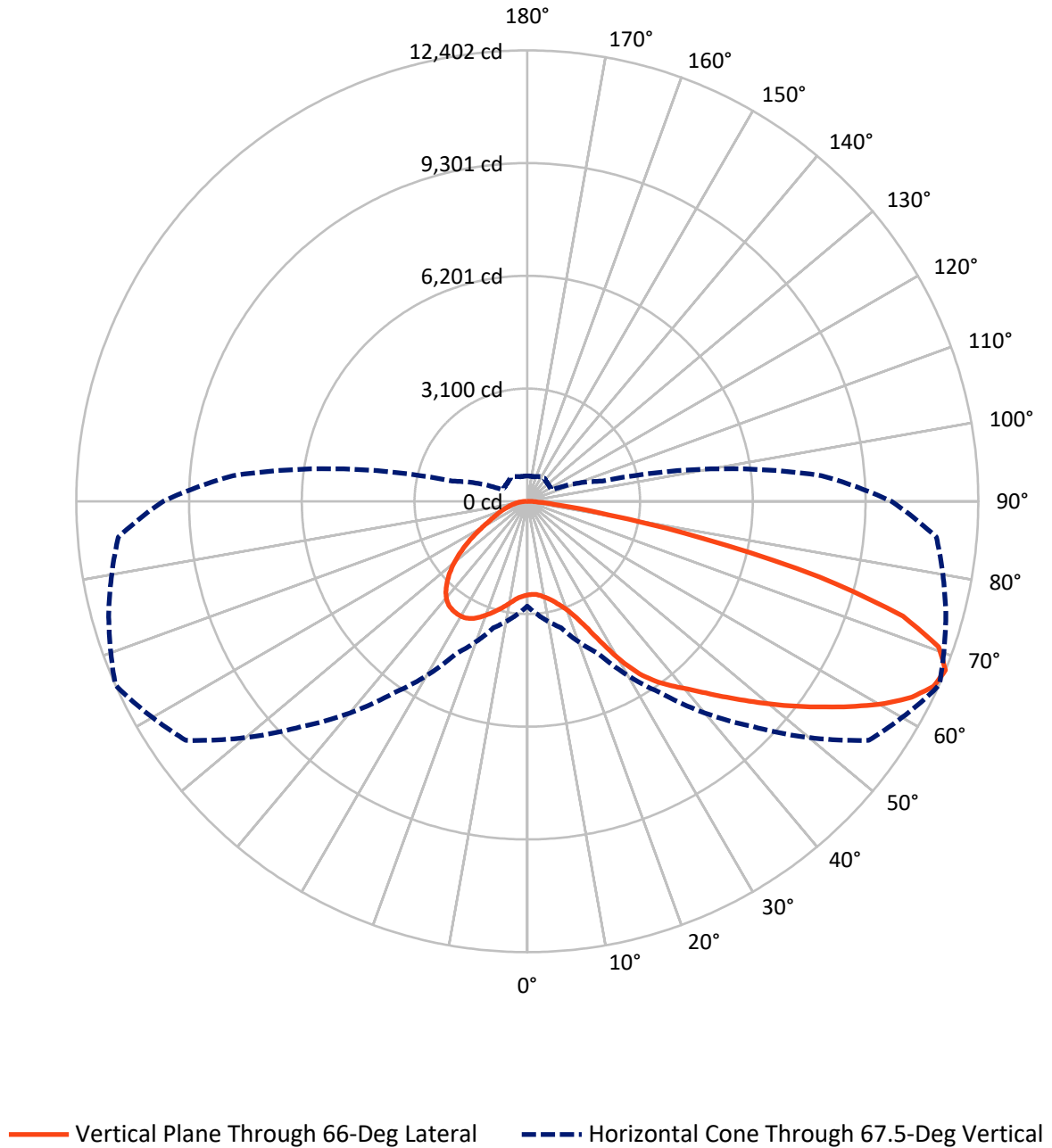
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.8 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 5776.6   | 0.0    | 5776.6  |
|                    | % Fixture | 24.9     | 0.0    | 24.9    |
| <b>Street Side</b> | Lumens    | 17455.4  | 0.0    | 17455.4 |
|                    | % Fixture | 75.1     | 0.0    | 75.1    |
| <b>Total</b>       | Lumens    | 23232.0  | 0.0    | 23232.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 255.5   | 1.1       |
| 10°-20°   | 844.0   | 3.6       |
| 20°-30°   | 1626.9  | 7.0       |
| 30°-40°   | 2852.5  | 12.3      |
| 40°-50°   | 4240.7  | 18.3      |
| 50°-60°   | 5375.5  | 23.1      |
| 60°-70°   | 5259.8  | 22.6      |
| 70°-80°   | 2509.0  | 10.8      |
| 80°-90°   | 268.1   | 1.2       |
| 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°    | 23232.0 | 100.0     |
| 0°-180°   | 23232.0 | 100.0     |

**Coefficient of Utilization**



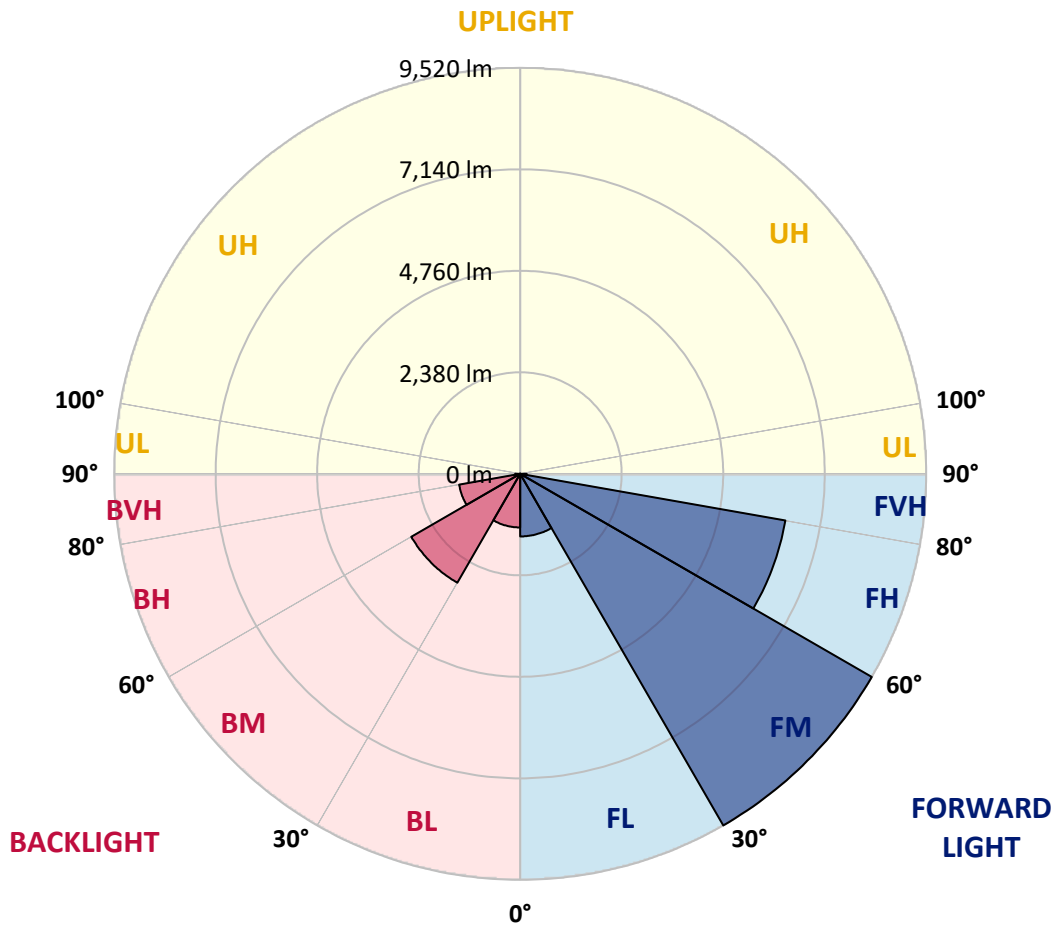
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1468.0 | 6.3       |                         |      |         |
| FM (30°-60°)   | 9520.3 | 41.0      |                         |      |         |
| FH (60°-80°)   | 6315.1 | 27.2      |                         |      | G3/7500 |
| FVH (80°-90°)  | 152.0  | 0.7       |                         |      | G2/225  |
| BL (0°-30°)    | 1258.3 | 5.4       | B3/2500                 |      |         |
| BM (30°-60°)   | 2948.4 | 12.7      | B3/5000                 |      |         |
| BH (60°-80°)   | 1453.7 | 6.3       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 116.1  | 0.5       |                         |      | 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 III Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°     | 45°     | 55°     | 65°     | 66°     | 75°     | 85°     |
|-------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2576.7 | 2576.7 | 2576.7 | 2576.7 | 2576.7  | 2576.7  | 2576.7  | 2576.7  | 2576.7  | 2576.7  | 2576.7  |
| 2.5°  | 2549.9 | 2564.5 | 2560.9 | 2554.8 | 2553.5  | 2556.0  | 2559.6  | 2563.3  | 2562.1  | 2568.2  | 2578.0  |
| 5°    | 2542.6 | 2557.2 | 2556.0 | 2556.0 | 2560.9  | 2570.6  | 2576.7  | 2582.8  | 2576.7  | 2584.1  | 2597.5  |
| 7.5°  | 2547.4 | 2558.4 | 2563.3 | 2568.2 | 2580.4  | 2598.7  | 2613.4  | 2626.8  | 2619.5  | 2628.0  | 2645.1  |
| 10°   | 2609.7 | 2618.2 | 2623.1 | 2623.1 | 2631.7  | 2652.4  | 2667.1  | 2691.5  | 2685.4  | 2698.8  | 2720.8  |
| 12.5° | 2723.2 | 2731.8 | 2731.8 | 2726.9 | 2733.0  | 2746.4  | 2751.3  | 2778.1  | 2767.2  | 2789.1  | 2811.1  |
| 15°   | 2862.4 | 2879.5 | 2866.0 | 2857.5 | 2859.9  | 2873.3  | 2872.1  | 2892.9  | 2881.9  | 2900.2  | 2919.7  |
| 17.5° | 3016.2 | 3038.1 | 3016.2 | 3014.9 | 3010.1  | 3024.7  | 3025.9  | 3044.2  | 3024.7  | 3038.1  | 3051.6  |
| 20°   | 3198.0 | 3228.5 | 3210.2 | 3216.3 | 3205.4  | 3211.5  | 3217.6  | 3244.4  | 3213.9  | 3223.7  | 3220.0  |
| 22.5° | 3454.4 | 3491.0 | 3471.5 | 3494.6 | 3487.3  | 3482.4  | 3481.2  | 3528.8  | 3481.2  | 3484.9  | 3449.5  |
| 25°   | 3827.9 | 3871.8 | 3837.6 | 3869.4 | 3869.4  | 3885.2  | 3903.6  | 3964.6  | 3885.2  | 3862.1  | 3770.5  |
| 27.5° | 4379.6 | 4423.5 | 4356.4 | 4375.9 | 4369.8  | 4408.9  | 4389.4  | 4540.7  | 4455.3  | 4417.4  | 4233.1  |
| 30°   | 5043.6 | 5121.7 | 4994.8 | 4989.9 | 4983.8  | 5046.1  | 5074.1  | 5174.2  | 5087.6  | 5049.7  | 4827.6  |
| 32.5° | 5761.3 | 5843.1 | 5691.8 | 5647.8 | 5624.6  | 5662.5  | 5639.3  | 5719.8  | 5660.0  | 5601.4  | 5326.8  |
| 35°   | 6520.6 | 6601.1 | 6457.1 | 6371.7 | 6278.9  | 6199.5  | 6116.5  | 6137.3  | 6081.1  | 5992.0  | 5707.6  |
| 37.5° | 7238.3 | 7386.0 | 7233.4 | 7141.9 | 6971.0  | 6816.0  | 6584.0  | 6487.6  | 6435.1  | 6353.3  | 6066.5  |
| 40°   | 7969.4 | 8053.7 | 7937.7 | 7859.6 | 7674.1  | 7431.2  | 7060.1  | 6856.2  | 6785.4  | 6706.1  | 6463.2  |
| 42.5° | 8507.7 | 8588.3 | 8526.1 | 8472.3 | 8327.1  | 8045.1  | 7565.4  | 7310.3  | 7207.8  | 7118.7  | 6912.4  |
| 45°   | 8935.0 | 8994.8 | 8955.7 | 8975.2 | 8913.0  | 8639.6  | 8089.1  | 7797.3  | 7691.1  | 7582.5  | 7420.2  |
| 47.5° | 9107.1 | 9170.5 | 9232.8 | 9348.8 | 9454.9  | 9253.5  | 8651.8  | 8324.7  | 8212.4  | 8101.3  | 7941.4  |
| 50°   | 9087.5 | 9152.2 | 9332.9 | 9579.5 | 9909.0  | 9841.9  | 9245.0  | 8886.1  | 8782.4  | 8655.4  | 8507.7  |
| 52.5° | 8931.3 | 9004.5 | 9236.5 | 9646.6 | 10171.5 | 10282.5 | 9849.2  | 9465.9  | 9368.3  | 9216.9  | 9069.2  |
| 55°   | 8521.2 | 8565.1 | 8913.0 | 9494.0 | 10233.7 | 10590.1 | 10441.2 | 10083.6 | 9985.9  | 9774.8  | 9613.6  |
| 57.5° | 7760.7 | 7824.2 | 8330.8 | 9082.7 | 10077.5 | 10798.9 | 10961.2 | 10732.9 | 10639.0 | 10335.0 | 10166.6 |
| 60°   | 6768.4 | 6869.7 | 7449.5 | 8391.8 | 9679.5  | 10797.6 | 11433.6 | 11371.3 | 11293.2 | 10886.7 | 10711.0 |
| 62.5° | 5645.4 | 5762.6 | 6320.4 | 7415.3 | 8983.8  | 10491.3 | 11729.0 | 11906.0 | 11865.7 | 11395.7 | 11171.1 |
| 65°   | 4335.7 | 4416.2 | 4971.6 | 6151.9 | 7901.1  | 9833.3  | 11763.1 | 12270.9 | 12278.2 | 11782.7 | 11411.6 |
| 67.5° | 2886.8 | 3118.7 | 3600.8 | 4616.4 | 6451.0  | 8758.0  | 11462.9 | 12330.7 | 12401.5 | 11915.7 | 11290.8 |
| 70°   | 1408.6 | 1713.8 | 2186.1 | 3000.3 | 4616.4  | 7108.9  | 10678.0 | 11840.0 | 11997.5 | 11527.6 | 10570.6 |
| 72.5° | 584.7  | 683.5  | 941.1  | 1480.6 | 2650.0  | 4797.0  | 9101.0  | 10509.6 | 10801.3 | 10214.2 | 8887.4  |
| 75°   | 394.3  | 427.2  | 538.3  | 759.2  | 1207.2  | 2365.6  | 6563.3  | 7836.4  | 8306.3  | 7714.3  | 6305.7  |
| 77.5° | 303.9  | 324.7  | 391.8  | 531.0  | 717.7   | 894.7   | 3513.0  | 4722.6  | 4965.5  | 4596.9  | 3281.0  |
| 80°   | 239.2  | 255.1  | 292.9  | 386.9  | 509.0   | 478.5   | 1197.4  | 2139.8  | 2280.1  | 1912.7  | 1054.6  |
| 82.5° | 207.5  | 213.6  | 209.9  | 262.4  | 338.1   | 279.5   | 393.0   | 789.7   | 871.5   | 632.3   | 344.2   |
| 85°   | 150.1  | 167.2  | 174.5  | 162.3  | 179.4   | 141.6   | 161.1   | 279.5   | 307.6   | 274.6   | 194.1   |
| 87.5° | 61.0   | 90.3   | 111.1  | 105.0  | 65.9    | 40.3    | 50.0    | 81.8    | 94.0    | 102.5   | 63.5    |
| 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°    | 2576.7  | 2576.7 | 2576.7 | 2576.7 | 2576.7 | 2576.7 | 2576.7 | 2576.7 | 2576.7 | 2576.7 | 2576.7 |
| 2.5°  | 2579.2  | 2587.7 | 2593.8 | 2601.1 | 2606.0 | 2613.4 | 2628.0 | 2636.5 | 2637.8 | 2643.9 | 2642.6 |
| 5°    | 2602.4  | 2614.6 | 2628.0 | 2647.5 | 2669.5 | 2687.8 | 2715.9 | 2735.4 | 2742.7 | 2748.8 | 2747.6 |
| 7.5°  | 2652.4  | 2669.5 | 2693.9 | 2728.1 | 2759.8 | 2784.2 | 2818.4 | 2841.6 | 2864.8 | 2873.3 | 2874.6 |
| 10°   | 2726.9  | 2751.3 | 2786.7 | 2833.1 | 2867.2 | 2899.0 | 2934.4 | 2953.9 | 2977.1 | 2986.9 | 2991.7 |
| 12.5° | 2819.6  | 2845.3 | 2891.7 | 2956.3 | 2988.1 | 3010.1 | 3022.3 | 3017.4 | 3022.3 | 3030.8 | 3033.2 |
| 15°   | 2925.8  | 2953.9 | 3006.4 | 3076.0 | 3097.9 | 3078.4 | 3051.6 | 3027.1 | 3023.5 | 3025.9 | 3034.5 |
| 17.5° | 3051.6  | 3072.3 | 3133.3 | 3191.9 | 3176.1 | 3095.5 | 3036.9 | 2997.9 | 2978.3 | 2972.2 | 2980.8 |
| 20°   | 3227.3  | 3227.3 | 3277.4 | 3314.0 | 3207.8 | 3071.1 | 2979.5 | 2916.1 | 2875.8 | 2858.7 | 2855.0 |
| 22.5° | 3440.9  | 3421.4 | 3453.1 | 3427.5 | 3201.7 | 3002.7 | 2875.8 | 2765.9 | 2704.9 | 2680.5 | 2676.8 |
| 25°   | 3711.9  | 3688.7 | 3680.2 | 3521.5 | 3157.8 | 2894.1 | 2687.8 | 2554.8 | 2501.1 | 2487.6 | 2490.1 |
| 27.5° | 4120.8  | 4062.2 | 3951.2 | 3572.8 | 3077.2 | 2723.2 | 2468.1 | 2344.8 | 2314.3 | 2315.5 | 2319.2 |
| 30°   | 4665.2  | 4548.0 | 4275.8 | 3581.3 | 2945.4 | 2481.5 | 2243.5 | 2155.6 | 2141.0 | 2147.1 | 2167.8 |
| 32.5° | 5169.3  | 5058.3 | 4607.9 | 3542.2 | 2742.7 | 2244.7 | 2042.1 | 1983.5 | 1961.5 | 1968.9 | 1978.6 |
| 35°   | 5564.8  | 5534.3 | 4915.5 | 3487.3 | 2493.7 | 2022.6 | 1861.5 | 1811.4 | 1768.7 | 1758.9 | 1766.2 |
| 37.5° | 5938.3  | 5926.1 | 5146.1 | 3410.4 | 2247.2 | 1865.1 | 1716.2 | 1650.3 | 1588.0 | 1553.9 | 1555.1 |
| 40°   | 6348.5  | 6336.3 | 5297.5 | 3292.0 | 2028.7 | 1728.4 | 1585.6 | 1498.9 | 1422.0 | 1359.8 | 1365.9 |
| 42.5° | 6809.9  | 6737.8 | 5369.5 | 3122.4 | 1843.1 | 1612.4 | 1479.4 | 1362.2 | 1260.9 | 1203.5 | 1207.2 |
| 45°   | 7314.0  | 7151.6 | 5368.3 | 2906.3 | 1686.9 | 1506.2 | 1365.9 | 1199.9 | 1105.9 | 1052.2 | 1049.7 |
| 47.5° | 7848.6  | 7547.1 | 5302.4 | 2667.1 | 1535.5 | 1389.1 | 1190.1 | 1063.2 | 1000.9 | 968.0  | 960.6  |
| 50°   | 8400.3  | 7917.0 | 5190.1 | 2392.4 | 1380.5 | 1256.0 | 1080.3 | 993.6  | 946.0  | 915.5  | 904.5  |
| 52.5° | 8919.1  | 8252.6 | 5054.6 | 2081.2 | 1223.1 | 1126.6 | 1031.4 | 964.3  | 914.2  | 880.1  | 865.4  |
| 55°   | 9401.2  | 8541.9 | 4863.0 | 1762.6 | 1094.9 | 1040.0 | 1008.2 | 952.1  | 894.7  | 854.4  | 838.6  |
| 57.5° | 9829.7  | 8729.9 | 4532.2 | 1463.5 | 1003.4 | 980.2  | 983.8  | 931.3  | 865.4  | 831.2  | 809.3  |
| 60°   | 10186.1 | 8867.8 | 4042.7 | 1186.4 | 928.9  | 921.6  | 946.0  | 892.3  | 815.4  | 776.3  | 759.2  |
| 62.5° | 10399.7 | 8865.4 | 3442.2 | 971.6  | 865.4  | 867.9  | 895.9  | 843.5  | 765.3  | 728.7  | 717.7  |
| 65°   | 10381.4 | 8648.1 | 2783.0 | 831.2  | 804.4  | 806.8  | 843.5  | 789.7  | 723.8  | 701.9  | 700.6  |
| 67.5° | 10014.0 | 8118.4 | 2134.9 | 739.7  | 737.3  | 748.2  | 791.0  | 753.1  | 698.2  | 695.8  | 699.4  |
| 70°   | 9019.2  | 7018.6 | 1538.0 | 666.5  | 667.7  | 683.5  | 739.7  | 729.9  | 684.8  | 689.7  | 688.4  |
| 72.5° | 7232.2  | 5351.2 | 1032.6 | 589.6  | 590.8  | 616.4  | 690.9  | 711.6  | 671.3  | 736.0  | 745.8  |
| 75°   | 4816.6  | 3337.2 | 664.0  | 507.8  | 509.0  | 542.0  | 648.2  | 676.2  | 634.7  | 733.6  | 739.7  |
| 77.5° | 2314.3  | 1500.1 | 480.9  | 427.2  | 427.2  | 457.7  | 560.3  | 605.4  | 540.7  | 570.0  | 522.4  |
| 80°   | 799.5   | 563.9  | 378.4  | 344.2  | 336.9  | 357.6  | 472.4  | 524.9  | 466.3  | 429.7  | 402.8  |
| 82.5° | 314.9   | 292.9  | 303.9  | 267.3  | 242.9  | 256.3  | 367.4  | 433.3  | 343.0  | 310.0  | 308.8  |
| 85°   | 180.7   | 190.4  | 214.8  | 177.0  | 140.4  | 157.5  | 269.8  | 311.3  | 258.8  | 228.3  | 233.1  |
| 87.5° | 48.8    | 67.1   | 98.9   | 91.5   | 63.5   | 67.1   | 128.2  | 172.1  | 148.9  | 114.7  | 118.4  |
| 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)