

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: P884424

Luminaire Tested: **NAV-SB5B-727-U-SL4**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P884424  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB5B-727-U-SL4  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(5) 70 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

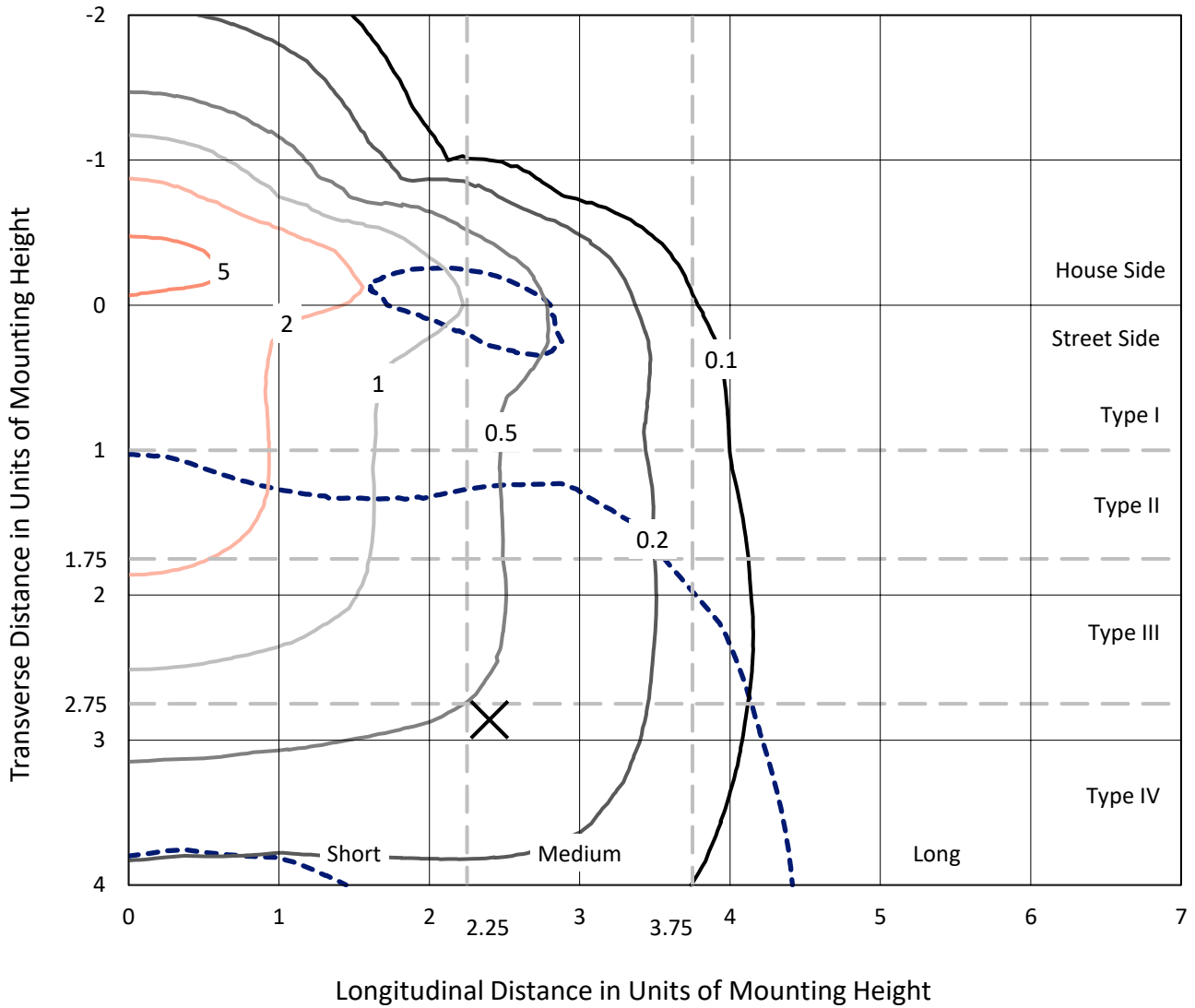
Lumens per Lamp: N/A  
Luminaire Lumens: 25669 lumens  
Efficiency: N/A  
Efficacy: 140.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B3 - U0 - G4  
  
Input Watts (W): 182.7  
Input Voltage (V): 120.0  
Input Current (Ain): 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

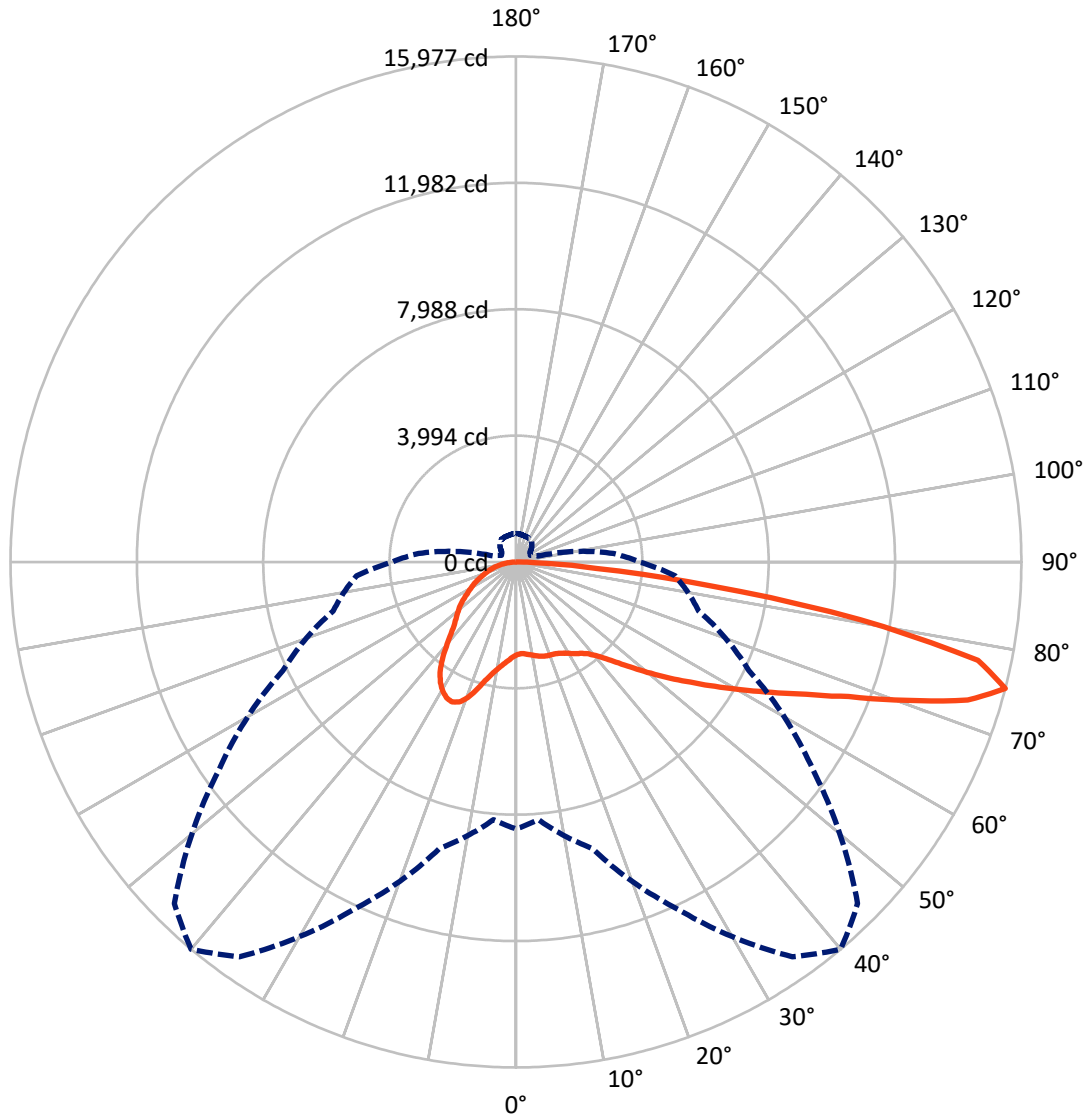
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.1 fc  
 Type IV - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 7953.1   | 0.0    | 7953.1  |
|                    | % Fixture | 31.0     | 0.0    | 31.0    |
| <b>Street Side</b> | Lumens    | 17715.9  | 0.0    | 17715.9 |
|                    | % Fixture | 69.0     | 0.0    | 69.0    |
| <b>Total</b>       | Lumens    | 25669.0  | 0.0    | 25669.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 293.0   | 1.1       |
| 10°-20°   | 983.7   | 3.8       |
| 20°-30°   | 1796.2  | 7.0       |
| 30°-40°   | 2547.5  | 9.9       |
| 40°-50°   | 3439.9  | 13.4      |
| 50°-60°   | 4627.6  | 18.0      |
| 60°-70°   | 5873.5  | 22.9      |
| 70°-80°   | 5330.5  | 20.8      |
| 80°-90°   | 777.0   | 3.0       |
| 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°    | 25669.0 | 100.0     |
| 0°-180°   | 25669.0 | 100.0     |

**Coefficient of Utilization**



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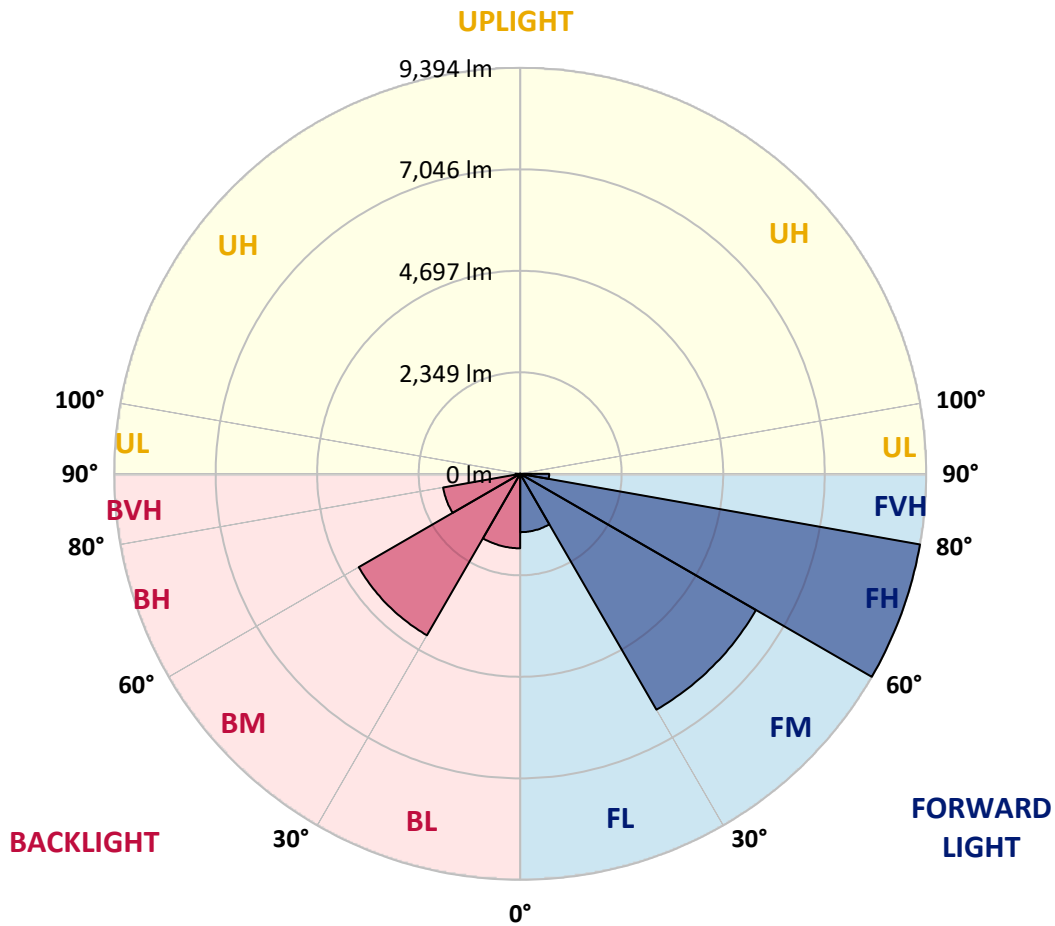
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |          |
|----------------|--------|-----------|-------------------------|------|----------|
|                |        |           | B                       | U    | G        |
| FL (0°-30°)    | 1350.2 | 5.3       |                         |      |          |
| FM (30°-60°)   | 6301.2 | 24.5      |                         |      |          |
| FH (60°-80°)   | 9394.5 | 36.6      |                         |      | G4/12000 |
| FVH (80°-90°)  | 670.0  | 2.6       |                         |      | G4/750   |
| BL (0°-30°)    | 1722.7 | 6.7       | B3/2500                 |      |          |
| BM (30°-60°)   | 4313.8 | 16.8      | B3/5000                 |      |          |
| BH (60°-80°)   | 1809.6 | 7.0       | B3/2500                 |      | G3/2500  |
| BVH (80°-90°)  | 107.0  | 0.4       |                         |      | G2/225   |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |          |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |          |

**BUG Rating: B3-U0-G4**

Type IV Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 40°     | 45°     | 55°     | 65°    | 75°    | 85°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| 0°    | 2935.3  | 2935.3  | 2935.3  | 2935.3  | 2935.3  | 2935.3  | 2935.3  | 2935.3  | 2935.3 | 2935.3 | 2935.3 |
| 2.5°  | 2890.4  | 2906.7  | 2902.6  | 2897.2  | 2897.2  | 2898.5  | 2897.2  | 2906.7  | 2916.2 | 2925.8 | 2940.7 |
| 5°    | 2920.3  | 2936.6  | 2928.5  | 2921.7  | 2916.2  | 2914.9  | 2910.8  | 2909.4  | 2914.9 | 2927.1 | 2947.5 |
| 7.5°  | 2978.9  | 2995.2  | 2982.9  | 2970.7  | 2959.8  | 2954.3  | 2948.9  | 2940.7  | 2936.6 | 2943.5 | 2972.0 |
| 10°   | 3044.2  | 3060.5  | 3045.6  | 3023.8  | 3006.1  | 2999.3  | 2993.8  | 2985.7  | 2980.2 | 2984.3 | 3015.6 |
| 12.5° | 3109.5  | 3125.9  | 3105.5  | 3075.5  | 3052.4  | 3048.3  | 3041.5  | 3038.8  | 3037.4 | 3036.0 | 3067.3 |
| 15°   | 3170.8  | 3184.4  | 3158.6  | 3123.2  | 3098.7  | 3091.9  | 3085.0  | 3089.1  | 3095.9 | 3104.1 | 3139.5 |
| 17.5° | 3218.5  | 3232.1  | 3194.0  | 3147.7  | 3124.5  | 3121.8  | 3117.7  | 3131.3  | 3150.4 | 3170.8 | 3214.4 |
| 20°   | 3262.0  | 3275.6  | 3226.6  | 3164.0  | 3136.8  | 3136.8  | 3138.1  | 3166.7  | 3194.0 | 3223.9 | 3283.8 |
| 22.5° | 3323.3  | 3334.2  | 3274.3  | 3188.5  | 3149.0  | 3151.8  | 3162.6  | 3191.2  | 3225.3 | 3266.1 | 3349.2 |
| 25°   | 3414.5  | 3422.7  | 3349.2  | 3234.8  | 3189.9  | 3198.0  | 3207.6  | 3221.2  | 3253.9 | 3301.5 | 3413.2 |
| 27.5° | 3561.6  | 3568.4  | 3471.7  | 3316.5  | 3248.4  | 3262.0  | 3275.6  | 3266.1  | 3281.1 | 3321.9 | 3464.9 |
| 30°   | 3768.5  | 3772.6  | 3650.0  | 3444.5  | 3347.8  | 3354.6  | 3357.3  | 3317.9  | 3289.3 | 3321.9 | 3501.6 |
| 32.5° | 4013.6  | 4012.2  | 3866.5  | 3599.7  | 3460.8  | 3454.0  | 3430.9  | 3353.2  | 3286.5 | 3315.1 | 3534.3 |
| 35°   | 4393.4  | 4378.4  | 4190.5  | 3817.5  | 3588.8  | 3546.6  | 3492.1  | 3392.7  | 3300.2 | 3308.3 | 3562.9 |
| 37.5° | 5022.4  | 4976.1  | 4716.1  | 4174.2  | 3779.4  | 3671.8  | 3591.5  | 3456.7  | 3330.1 | 3305.6 | 3596.9 |
| 40°   | 5731.7  | 5673.2  | 5387.3  | 4663.0  | 4065.3  | 3892.4  | 3763.0  | 3547.9  | 3379.1 | 3317.9 | 3647.3 |
| 42.5° | 6573.1  | 6490.0  | 6182.3  | 5238.9  | 4427.4  | 4176.9  | 3982.2  | 3663.7  | 3451.3 | 3357.3 | 3715.4 |
| 45°   | 7606.4  | 7496.1  | 7060.5  | 5888.3  | 4883.5  | 4550.0  | 4289.9  | 3839.3  | 3561.6 | 3433.6 | 3817.5 |
| 47.5° | 8650.6  | 8677.9  | 8058.4  | 6631.6  | 5430.8  | 5010.1  | 4675.2  | 4103.4  | 3722.2 | 3556.1 | 3982.2 |
| 50°   | 9760.2  | 9779.3  | 9050.9  | 7455.3  | 6051.6  | 5530.2  | 5108.2  | 4398.8  | 3945.5 | 3730.4 | 4228.7 |
| 52.5° | 10626.1 | 10628.8 | 9952.2  | 8317.1  | 6698.3  | 6102.0  | 5575.1  | 4736.5  | 4204.2 | 3961.8 | 4556.8 |
| 55°   | 11168.0 | 11161.2 | 10583.9 | 9132.6  | 7441.7  | 6702.4  | 6092.5  | 5120.4  | 4520.0 | 4234.1 | 4969.3 |
| 57.5° | 11561.4 | 11541.0 | 11019.6 | 9833.7  | 8234.0  | 7411.7  | 6677.9  | 5556.1  | 4893.0 | 4558.1 | 5512.5 |
| 60°   | 11711.2 | 11698.9 | 11315.0 | 10439.6 | 9067.3  | 8195.9  | 7353.2  | 6043.5  | 5316.5 | 4940.7 | 6210.9 |
| 62.5° | 11768.4 | 11791.5 | 11605.0 | 11026.4 | 9959.0  | 9064.5  | 8095.2  | 6626.2  | 5793.0 | 5373.6 | 6947.5 |
| 65°   | 11969.9 | 12012.1 | 11973.9 | 11794.2 | 10966.5 | 10081.5 | 9079.5  | 7319.2  | 6313.0 | 5837.9 | 7716.7 |
| 67.5° | 12368.8 | 12411.0 | 12427.3 | 12713.2 | 12197.2 | 11349.0 | 10307.5 | 8182.3  | 6921.6 | 6319.8 | 8295.3 |
| 70°   | 12359.2 | 12347.0 | 12635.6 | 13444.3 | 13738.4 | 13103.9 | 11963.1 | 9244.2  | 7647.3 | 6720.1 | 8368.8 |
| 72.5° | 11249.7 | 11151.6 | 11833.7 | 13436.1 | 15020.9 | 14936.5 | 13984.8 | 10613.9 | 8273.5 | 6769.1 | 7262.0 |
| 75°   | 8439.6  | 8178.2  | 9383.1  | 12108.7 | 15234.6 | 15976.6 | 15270.0 | 11463.4 | 8125.1 | 5980.8 | 5053.7 |
| 77.5° | 3609.2  | 3346.4  | 4766.4  | 8963.8  | 13634.9 | 14935.1 | 14091.0 | 10001.2 | 6485.9 | 3955.0 | 2481.9 |
| 80°   | 944.8   | 943.5   | 1440.4  | 4063.9  | 9272.8  | 11029.1 | 9675.8  | 6458.7  | 3705.9 | 1413.2 | 684.8  |
| 82.5° | 390.7   | 381.2   | 529.6   | 1580.6  | 4530.9  | 6189.1  | 5051.0  | 2880.8  | 1338.3 | 382.6  | 227.4  |
| 85°   | 145.7   | 144.3   | 257.3   | 545.9   | 1598.3  | 2552.7  | 1847.5  | 736.5   | 333.6  | 186.5  | 102.1  |
| 87.5° | 40.8    | 39.5    | 55.8    | 189.2   | 389.4   | 590.9   | 315.9   | 121.2   | 93.9   | 73.5   | 30.0   |
| 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°    | 2935.3 | 2935.3 | 2935.3 | 2935.3 | 2935.3 | 2935.3 | 2935.3 | 2935.3 | 2935.3 | 2935.3 | 2935.3 |
| 2.5°  | 2944.8 | 2951.6 | 2963.9 | 2973.4 | 2985.7 | 2999.3 | 3018.3 | 3030.6 | 3042.8 | 3051.0 | 3045.6 |
| 5°    | 2957.1 | 2972.0 | 3003.4 | 3034.7 | 3071.4 | 3105.5 | 3144.9 | 3173.5 | 3196.7 | 3203.5 | 3206.2 |
| 7.5°  | 2984.3 | 3008.8 | 3061.9 | 3115.0 | 3173.5 | 3229.4 | 3286.5 | 3335.6 | 3375.0 | 3390.0 | 3391.4 |
| 10°   | 3031.9 | 3064.6 | 3139.5 | 3214.4 | 3292.0 | 3377.8 | 3451.3 | 3522.1 | 3577.9 | 3601.0 | 3602.4 |
| 12.5° | 3091.9 | 3132.7 | 3230.7 | 3334.2 | 3441.7 | 3560.2 | 3655.5 | 3742.6 | 3812.1 | 3843.4 | 3843.4 |
| 15°   | 3169.5 | 3222.6 | 3347.8 | 3486.7 | 3644.6 | 3809.3 | 3930.5 | 4027.2 | 4104.8 | 4142.9 | 4140.2 |
| 17.5° | 3253.9 | 3324.7 | 3482.6 | 3692.3 | 3918.3 | 4134.7 | 4276.3 | 4347.1 | 4427.4 | 4464.2 | 4462.8 |
| 20°   | 3335.6 | 3422.7 | 3648.7 | 3953.6 | 4254.5 | 4484.6 | 4599.0 | 4618.0 | 4623.5 | 4627.6 | 4638.5 |
| 22.5° | 3420.0 | 3537.0 | 3857.0 | 4283.1 | 4605.8 | 4765.1 | 4781.4 | 4699.7 | 4585.4 | 4532.3 | 4547.2 |
| 25°   | 3512.5 | 3667.7 | 4129.3 | 4646.6 | 4908.0 | 4927.1 | 4801.8 | 4603.1 | 4386.6 | 4287.2 | 4302.2 |
| 27.5° | 3602.4 | 3818.9 | 4456.0 | 4993.8 | 5125.9 | 4958.4 | 4688.8 | 4407.0 | 4145.6 | 4040.8 | 4053.0 |
| 30°   | 3692.3 | 3991.8 | 4816.8 | 5297.4 | 5225.2 | 4880.8 | 4510.5 | 4196.0 | 3933.2 | 3822.9 | 3835.2 |
| 32.5° | 3783.5 | 4193.3 | 5232.0 | 5516.6 | 5207.5 | 4716.1 | 4288.6 | 3959.1 | 3727.6 | 3611.9 | 3626.9 |
| 35°   | 3886.9 | 4441.0 | 5625.5 | 5636.4 | 5089.1 | 4473.7 | 3995.9 | 3675.9 | 3474.4 | 3381.8 | 3402.3 |
| 37.5° | 4021.7 | 4755.5 | 5972.7 | 5666.4 | 4882.2 | 4118.4 | 3632.3 | 3341.0 | 3174.9 | 3132.7 | 3162.6 |
| 40°   | 4189.2 | 5134.0 | 6238.2 | 5618.7 | 4575.8 | 3686.8 | 3234.8 | 3002.0 | 2908.1 | 2917.6 | 2950.3 |
| 42.5° | 4407.0 | 5557.4 | 6424.7 | 5496.2 | 4149.7 | 3241.6 | 2886.3 | 2782.8 | 2827.7 | 2865.9 | 2901.2 |
| 45°   | 4690.2 | 5997.2 | 6540.4 | 5287.9 | 3667.7 | 2864.5 | 2680.7 | 2705.2 | 2739.2 | 2743.3 | 2770.5 |
| 47.5° | 5052.3 | 6442.4 | 6616.6 | 4973.4 | 3176.3 | 2599.0 | 2550.0 | 2555.4 | 2548.6 | 2520.0 | 2541.8 |
| 50°   | 5504.3 | 6875.3 | 6684.7 | 4556.8 | 2758.3 | 2432.9 | 2367.6 | 2348.5 | 2254.6 | 2162.0 | 2174.2 |
| 52.5° | 6019.0 | 7272.9 | 6713.3 | 4039.4 | 2432.9 | 2294.0 | 2187.8 | 2068.0 | 1892.4 | 1863.8 | 1873.4 |
| 55°   | 6590.8 | 7640.5 | 6639.8 | 3403.6 | 2159.3 | 2115.7 | 1955.0 | 1810.7 | 1791.7 | 1767.2 | 1771.2 |
| 57.5° | 7274.2 | 8036.6 | 6490.0 | 2694.3 | 1878.8 | 1907.4 | 1750.8 | 1767.2 | 1733.1 | 1695.0 | 1688.2 |
| 60°   | 8021.7 | 8446.4 | 6227.3 | 2047.6 | 1588.8 | 1647.4 | 1697.7 | 1696.4 | 1686.8 | 1655.5 | 1644.6 |
| 62.5° | 8694.2 | 8716.0 | 5709.9 | 1568.4 | 1334.2 | 1445.9 | 1583.4 | 1582.0 | 1573.8 | 1556.1 | 1549.3 |
| 65°   | 9094.5 | 8675.2 | 4846.8 | 1234.8 | 1124.6 | 1279.8 | 1428.2 | 1439.1 | 1440.4 | 1439.1 | 1439.1 |
| 67.5° | 9023.7 | 8197.3 | 3662.3 | 983.0  | 951.7  | 1110.9 | 1274.3 | 1289.3 | 1300.2 | 1302.9 | 1305.6 |
| 70°   | 8223.2 | 7147.6 | 2388.0 | 784.2  | 797.8  | 962.5  | 1128.6 | 1143.6 | 1153.1 | 1164.0 | 1169.5 |
| 72.5° | 6409.7 | 5255.2 | 1366.9 | 634.4  | 663.0  | 834.6  | 984.3  | 1002.0 | 1007.5 | 1027.9 | 1036.1 |
| 75°   | 3906.0 | 3090.5 | 737.9  | 499.7  | 544.6  | 713.4  | 841.4  | 861.8  | 871.3  | 895.8  | 898.6  |
| 77.5° | 1857.0 | 1338.3 | 420.7  | 389.4  | 438.4  | 582.7  | 710.7  | 733.8  | 708.0  | 721.6  | 710.7  |
| 80°   | 627.6  | 496.9  | 265.5  | 296.8  | 334.9  | 454.7  | 569.1  | 592.2  | 537.8  | 535.0  | 529.6  |
| 82.5° | 219.2  | 201.5  | 168.8  | 197.4  | 216.5  | 325.4  | 430.2  | 460.2  | 400.3  | 398.9  | 379.8  |
| 85°   | 85.8   | 81.7   | 93.9   | 107.6  | 129.3  | 200.1  | 283.2  | 298.2  | 246.4  | 198.8  | 196.0  |
| 87.5° | 17.7   | 19.1   | 23.1   | 24.5   | 39.5   | 69.4   | 102.1  | 125.3  | 99.4   | 84.4   | 77.6   |
| 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)