

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: STREETWORKS

Report Number: P323949

Luminaire Tested: **GAN-SA5A-827-U-SL4-HSS**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P323949  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAN-SA5A-827-U-SL4-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(5) 80 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 13897 lumens  
Efficiency: N/A  
Efficacy: 85.8 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

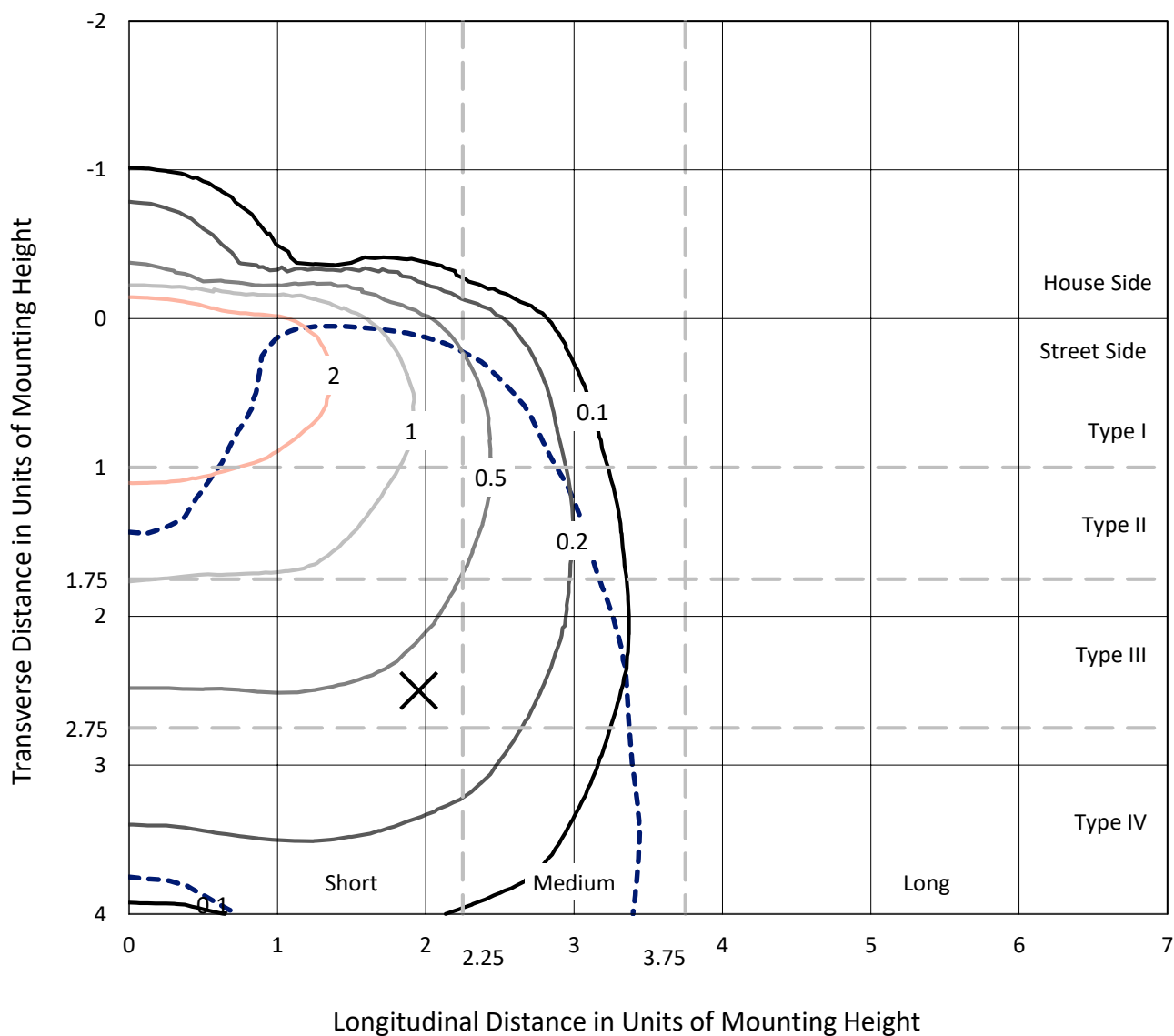
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

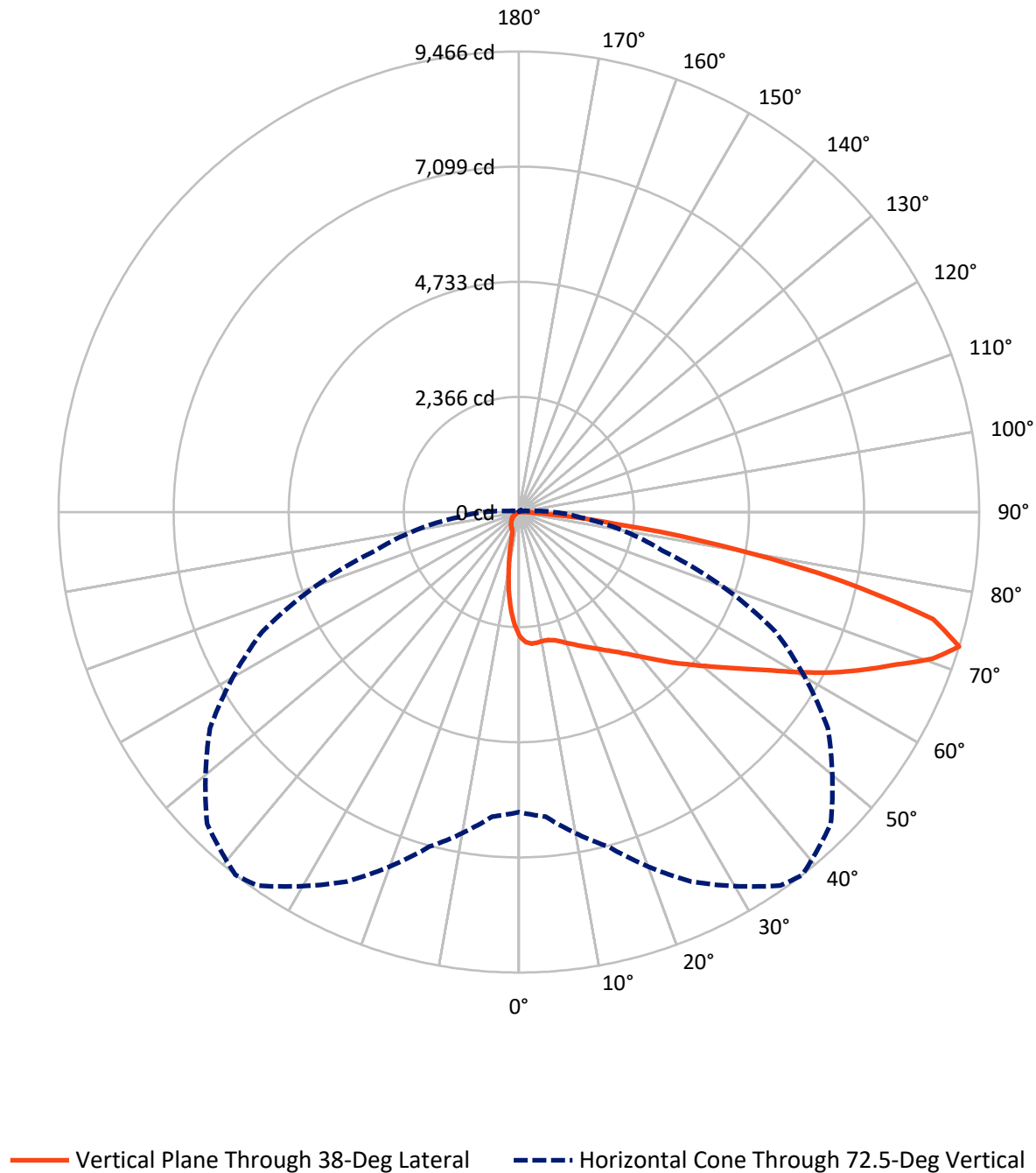
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc  
 Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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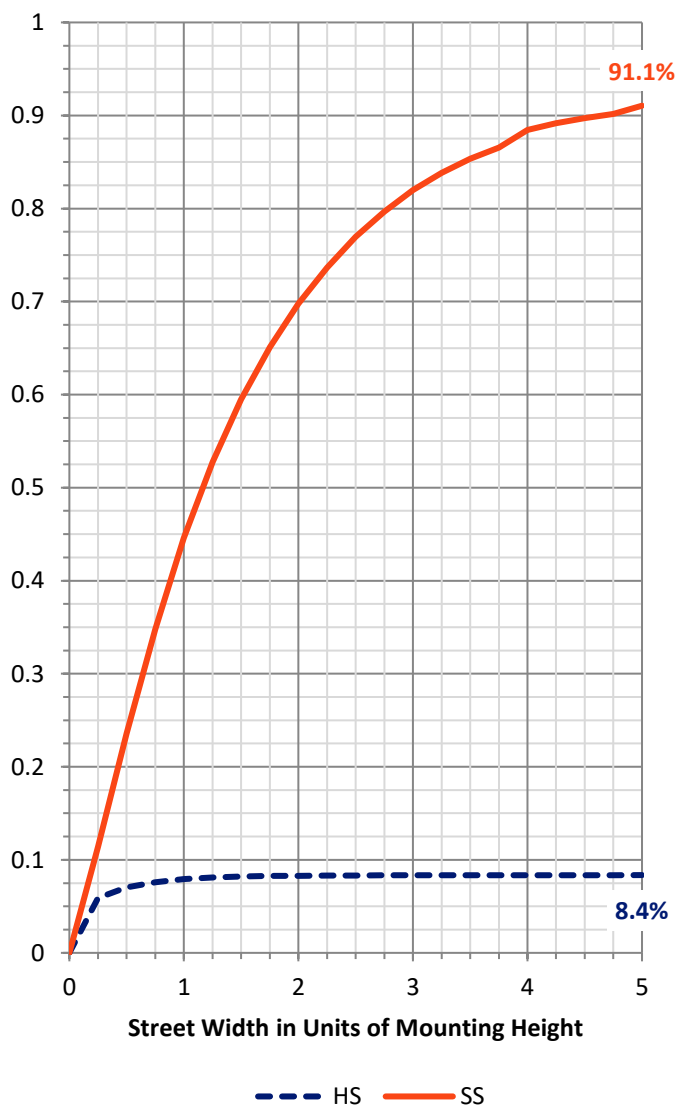
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1169.5   | 0.0    | 1169.5  |
|                    | % Fixture | 8.4      | 0.0    | 8.4     |
| <b>Street Side</b> | Lumens    | 12727.5  | 0.0    | 12727.5 |
|                    | % Fixture | 91.6     | 0.0    | 91.6    |
| <b>Total</b>       | Lumens    | 13897.0  | 0.0    | 13897.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 217.8   | 1.6       |
| 10°-20°   | 532.5   | 3.8       |
| 20°-30°   | 847.0   | 6.1       |
| 30°-40°   | 1273.4  | 9.2       |
| 40°-50°   | 1942.6  | 14.0      |
| 50°-60°   | 2745.6  | 19.8      |
| 60°-70°   | 3443.8  | 24.8      |
| 70°-80°   | 2575.0  | 18.5      |
| 80°-90°   | 319.3   | 2.3       |
| 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°    | 13897.0 | 100.0     |
| 0°-180°   | 13897.0 | 100.0     |

**Coefficient of Utilization**



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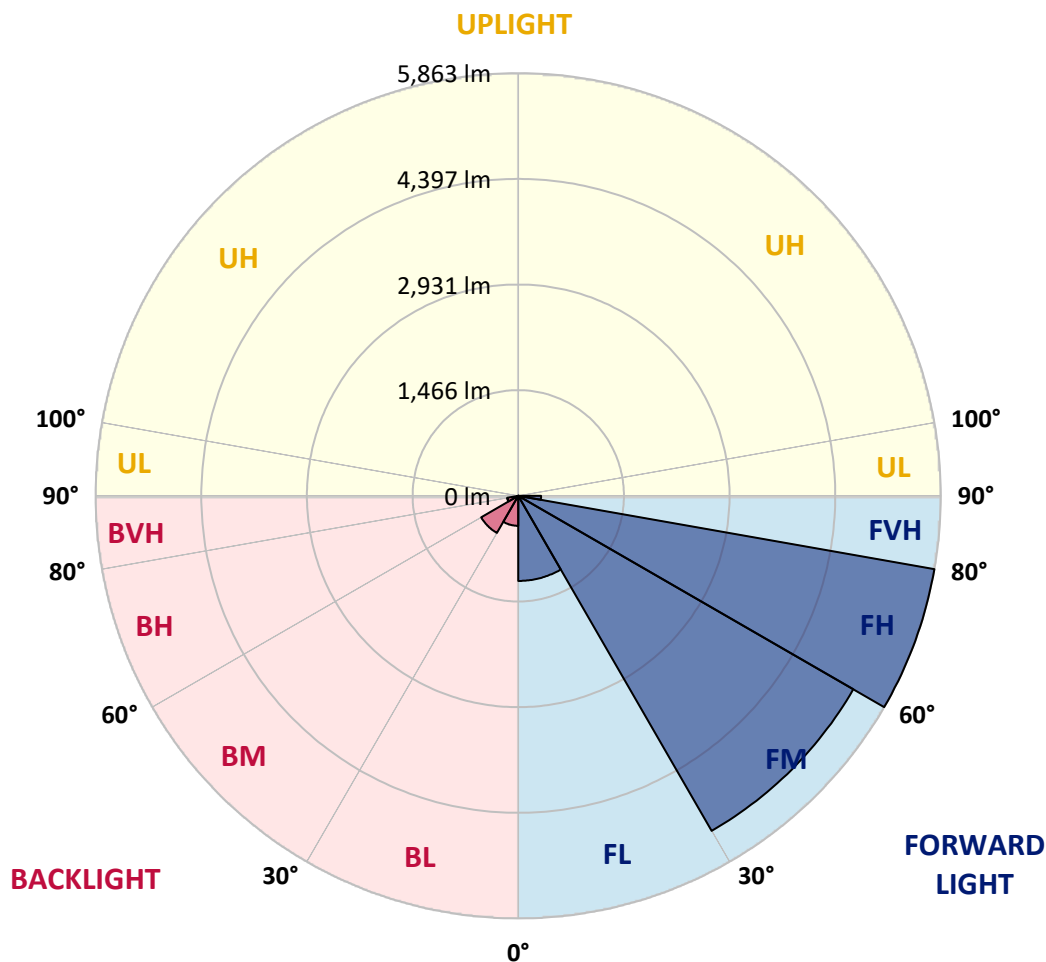
CATALOG NUMBER: GAN-SA5A-827-U-SL4-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1180.9 | 8.5       |                         |      |         |
| FM   | (30°-60°)   | 5367.6 | 38.6      |                         |      |         |
| FH   | (60°-80°)   | 5862.6 | 42.2      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 316.3  | 2.3       |                         |      | G3/500  |
| BL   | (0°-30°)    | 416.4  | 3.0       | B1/500                  |      |         |
| BM   | (30°-60°)   | 593.9  | 4.3       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 156.2  | 1.1       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 3.0    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G3**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 38°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 |
| 2.5°  | 2712.6 | 2713.2 | 2706.8 | 2696.4 | 2683.2 | 2676.2 | 2664.7 | 2646.2 | 2626.6 | 2591.4 | 2553.3 |
| 5°    | 2768.0 | 2768.0 | 2759.9 | 2746.1 | 2724.7 | 2718.4 | 2696.4 | 2667.0 | 2626.6 | 2569.5 | 2505.4 |
| 7.5°  | 2762.2 | 2763.4 | 2752.4 | 2738.0 | 2716.6 | 2710.9 | 2684.3 | 2651.4 | 2601.2 | 2531.9 | 2450.0 |
| 10°   | 2732.2 | 2735.1 | 2726.4 | 2719.5 | 2699.9 | 2693.6 | 2668.7 | 2635.8 | 2585.6 | 2511.7 | 2417.7 |
| 12.5° | 2701.6 | 2704.5 | 2707.4 | 2713.8 | 2701.6 | 2699.3 | 2679.7 | 2652.0 | 2604.1 | 2527.3 | 2421.1 |
| 15°   | 2682.0 | 2687.8 | 2708.6 | 2733.4 | 2736.3 | 2734.0 | 2721.3 | 2695.3 | 2646.8 | 2567.2 | 2446.0 |
| 17.5° | 2682.0 | 2691.2 | 2734.5 | 2781.9 | 2798.6 | 2800.3 | 2789.4 | 2753.0 | 2695.3 | 2609.9 | 2469.0 |
| 20°   | 2704.5 | 2717.2 | 2784.7 | 2851.7 | 2879.4 | 2879.4 | 2858.0 | 2807.2 | 2739.7 | 2648.5 | 2484.6 |
| 22.5° | 2762.2 | 2779.0 | 2863.8 | 2941.1 | 2970.6 | 2964.2 | 2935.4 | 2861.5 | 2785.9 | 2692.4 | 2504.2 |
| 25°   | 2875.9 | 2888.6 | 2976.9 | 3054.8 | 3072.7 | 3058.3 | 3021.9 | 2927.3 | 2844.8 | 2751.8 | 2540.0 |
| 27.5° | 3022.5 | 3024.3 | 3115.4 | 3181.2 | 3170.3 | 3160.5 | 3114.9 | 3009.8 | 2929.6 | 2836.7 | 2601.8 |
| 30°   | 3183.5 | 3183.5 | 3263.8 | 3314.0 | 3280.5 | 3272.4 | 3226.8 | 3109.7 | 3038.1 | 2952.1 | 2689.5 |
| 32.5° | 3339.4 | 3346.3 | 3411.5 | 3443.3 | 3405.8 | 3397.7 | 3353.2 | 3236.1 | 3182.4 | 3128.1 | 2826.3 |
| 35°   | 3490.0 | 3495.2 | 3557.0 | 3574.3 | 3538.5 | 3540.8 | 3509.1 | 3409.8 | 3389.6 | 3382.7 | 3032.3 |
| 37.5° | 3636.0 | 3637.2 | 3700.1 | 3711.1 | 3693.2 | 3712.8 | 3715.7 | 3628.0 | 3665.5 | 3721.5 | 3322.6 |
| 40°   | 3769.4 | 3770.5 | 3832.8 | 3861.1 | 3891.7 | 3917.1 | 3939.6 | 3892.9 | 4017.0 | 4146.8 | 3668.4 |
| 42.5° | 3876.1 | 3888.2 | 3967.3 | 4021.0 | 4101.8 | 4150.3 | 4211.5 | 4209.1 | 4435.4 | 4630.5 | 4086.2 |
| 45°   | 3970.2 | 3991.0 | 4101.2 | 4195.3 | 4333.8 | 4411.1 | 4507.0 | 4582.0 | 4906.3 | 5168.9 | 4509.3 |
| 47.5° | 4094.3 | 4113.9 | 4239.7 | 4393.8 | 4578.5 | 4680.1 | 4838.8 | 5001.0 | 5424.0 | 5697.6 | 4922.5 |
| 50°   | 4269.2 | 4260.5 | 4384.6 | 4605.6 | 4842.9 | 4976.2 | 5202.4 | 5445.4 | 5937.7 | 6158.2 | 5165.5 |
| 52.5° | 4455.6 | 4452.1 | 4543.9 | 4835.9 | 5154.5 | 5310.3 | 5609.3 | 5904.8 | 6428.9 | 6475.6 | 5276.9 |
| 55°   | 4686.4 | 4661.6 | 4739.0 | 5098.5 | 5524.5 | 5691.8 | 6043.9 | 6359.6 | 6820.2 | 6654.5 | 5332.8 |
| 57.5° | 4928.3 | 4887.3 | 4961.2 | 5391.1 | 5941.7 | 6139.7 | 6525.2 | 6802.8 | 7080.5 | 6776.9 | 5332.3 |
| 60°   | 5178.2 | 5129.7 | 5217.4 | 5757.1 | 6460.0 | 6689.1 | 7047.0 | 7102.4 | 7323.4 | 6838.6 | 5293.0 |
| 62.5° | 5387.1 | 5358.2 | 5488.7 | 6148.4 | 7038.9 | 7264.0 | 7441.2 | 7374.8 | 7528.3 | 6886.5 | 5201.3 |
| 65°   | 5608.1 | 5609.9 | 5820.5 | 6604.9 | 7654.1 | 7805.9 | 7820.9 | 7728.0 | 7699.7 | 6876.7 | 4890.8 |
| 67.5° | 5907.1 | 5934.8 | 6286.3 | 7224.7 | 8252.6 | 8369.8 | 8368.6 | 8110.7 | 7825.0 | 6486.6 | 4202.2 |
| 70°   | 6223.4 | 6288.6 | 6823.0 | 7934.1 | 8906.0 | 9024.9 | 8963.7 | 8354.2 | 7367.9 | 5245.1 | 2974.0 |
| 72.5° | 6170.3 | 6283.4 | 7121.4 | 8381.3 | 9375.2 | 9465.8 | 9068.2 | 7755.7 | 5823.4 | 3048.5 | 1266.3 |
| 75°   | 4760.3 | 4891.3 | 6529.9 | 7938.1 | 8882.9 | 8801.5 | 7791.5 | 6035.2 | 3182.4 | 850.7  | 285.1  |
| 77.5° | 2514.6 | 2584.5 | 4313.6 | 6047.4 | 6926.4 | 6756.1 | 5488.7 | 3348.0 | 970.2  | 210.7  | 128.1  |
| 80°   | 1317.1 | 1333.2 | 1879.8 | 3431.1 | 4274.9 | 4276.1 | 3252.8 | 1470.6 | 400.0  | 107.9  | 86.0   |
| 82.5° | 705.3  | 719.1  | 993.3  | 1585.4 | 2239.9 | 2030.4 | 1245.5 | 809.2  | 232.6  | 61.2   | 82.5   |
| 85°   | 169.7  | 172.6  | 563.3  | 724.3  | 880.7  | 629.1  | 370.0  | 679.3  | 62.9   | 35.8   | 66.9   |
| 87.5° | 65.2   | 66.4   | 208.9  | 313.4  | 224.5  | 145.4  | 173.1  | 253.4  | 8.1    | 13.9   | 10.4   |
| 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°    | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 | 2555.6 |
| 2.5°  | 2530.2 | 2515.2 | 2478.3 | 2431.5 | 2390.0 | 2360.0 | 2314.9 | 2285.5 | 2265.9 | 2265.3 | 2257.8 |
| 5°    | 2466.2 | 2435.6 | 2355.9 | 2261.3 | 2175.3 | 2097.9 | 2006.7 | 1934.6 | 1880.9 | 1872.3 | 1853.8 |
| 7.5°  | 2397.5 | 2347.3 | 2224.9 | 2077.2 | 1932.9 | 1786.3 | 1616.0 | 1510.4 | 1419.8 | 1376.5 | 1371.9 |
| 10°   | 2355.3 | 2284.9 | 2111.2 | 1897.7 | 1671.4 | 1433.1 | 1210.3 | 1056.2 | 944.8  | 913.0  | 889.4  |
| 12.5° | 2346.7 | 2253.8 | 2023.5 | 1729.1 | 1405.9 | 1090.8 | 844.4  | 680.5  | 591.6  | 563.3  | 555.8  |
| 15°   | 2355.3 | 2239.3 | 1949.6 | 1562.3 | 1137.0 | 774.0  | 566.8  | 471.5  | 438.1  | 430.0  | 429.4  |
| 17.5° | 2360.5 | 2222.0 | 1865.9 | 1377.1 | 876.1  | 552.9  | 434.0  | 406.3  | 401.1  | 400.5  | 401.7  |
| 20°   | 2360.0 | 2195.5 | 1766.1 | 1170.5 | 651.6  | 434.6  | 392.5  | 386.7  | 385.5  | 386.1  | 385.5  |
| 22.5° | 2355.9 | 2164.3 | 1656.4 | 957.5  | 492.3  | 388.4  | 374.6  | 371.1  | 370.5  | 370.5  | 370.5  |
| 25°   | 2363.4 | 2139.5 | 1535.8 | 753.8  | 405.7  | 367.1  | 358.4  | 355.5  | 354.9  | 354.9  | 353.8  |
| 27.5° | 2390.5 | 2125.6 | 1403.6 | 580.0  | 366.5  | 348.0  | 341.1  | 340.5  | 338.8  | 338.2  | 339.4  |
| 30°   | 2434.4 | 2125.6 | 1258.8 | 451.3  | 342.8  | 328.4  | 323.2  | 322.0  | 321.5  | 320.9  | 321.5  |
| 32.5° | 2511.7 | 2141.8 | 1100.6 | 375.1  | 320.3  | 306.5  | 303.0  | 304.7  | 303.0  | 303.0  | 303.0  |
| 35°   | 2651.4 | 2190.3 | 935.0  | 327.2  | 296.7  | 285.1  | 281.6  | 284.0  | 282.8  | 282.8  | 282.2  |
| 37.5° | 2855.2 | 2280.3 | 768.2  | 298.4  | 275.9  | 263.8  | 259.1  | 262.6  | 261.4  | 261.4  | 260.9  |
| 40°   | 3103.3 | 2411.3 | 609.5  | 276.5  | 255.7  | 243.0  | 238.9  | 240.7  | 237.8  | 237.8  | 238.9  |
| 42.5° | 3409.8 | 2577.5 | 471.0  | 255.1  | 235.5  | 223.4  | 221.0  | 219.3  | 214.1  | 211.2  | 211.8  |
| 45°   | 3750.3 | 2750.7 | 367.1  | 234.3  | 216.4  | 206.6  | 203.2  | 198.5  | 189.9  | 184.1  | 184.7  |
| 47.5° | 4054.5 | 2884.0 | 298.4  | 214.1  | 199.1  | 191.6  | 186.4  | 177.8  | 165.1  | 158.1  | 158.7  |
| 50°   | 4214.3 | 2904.2 | 253.9  | 193.9  | 183.0  | 175.5  | 168.0  | 154.7  | 139.7  | 132.2  | 131.6  |
| 52.5° | 4255.3 | 2809.6 | 221.0  | 175.5  | 166.8  | 158.1  | 148.3  | 130.4  | 113.7  | 105.6  | 104.5  |
| 55°   | 4270.3 | 2665.3 | 191.6  | 158.1  | 149.5  | 139.7  | 127.0  | 106.8  | 91.2   | 83.1   | 82.5   |
| 57.5° | 4220.7 | 2450.0 | 168.5  | 142.6  | 132.2  | 120.0  | 104.5  | 85.4   | 70.4   | 64.1   | 64.1   |
| 60°   | 4110.4 | 2158.5 | 150.6  | 125.8  | 114.3  | 100.4  | 84.3   | 66.4   | 52.5   | 47.3   | 47.3   |
| 62.5° | 3890.6 | 1781.1 | 133.9  | 108.5  | 97.5   | 83.1   | 68.1   | 50.2   | 36.9   | 34.1   | 34.6   |
| 65°   | 3475.6 | 1351.1 | 117.2  | 92.9   | 83.1   | 68.7   | 53.1   | 35.8   | 24.8   | 24.8   | 26.0   |
| 67.5° | 2834.4 | 938.4  | 99.8   | 79.1   | 71.6   | 56.0   | 40.4   | 24.8   | 17.3   | 19.6   | 21.9   |
| 70°   | 1876.3 | 526.4  | 85.4   | 65.2   | 61.2   | 44.4   | 30.0   | 16.7   | 13.9   | 18.5   | 22.5   |
| 72.5° | 708.2  | 204.9  | 71.6   | 52.5   | 53.1   | 34.1   | 21.4   | 12.7   | 12.7   | 20.2   | 26.5   |
| 75°   | 197.4  | 100.4  | 51.4   | 38.7   | 41.6   | 24.8   | 15.6   | 11.0   | 12.1   | 23.1   | 31.2   |
| 77.5° | 116.0  | 73.9   | 33.5   | 22.5   | 28.3   | 17.3   | 10.4   | 8.7    | 10.4   | 19.6   | 30.0   |
| 80°   | 93.5   | 39.2   | 19.6   | 11.5   | 15.6   | 9.8    | 6.9    | 5.2    | 2.9    | 7.5    | 15.6   |
| 82.5° | 93.5   | 23.7   | 9.2    | 8.1    | 8.1    | 5.2    | 3.5    | 2.3    | 0.6    | 0.0    | 4.0    |
| 85°   | 62.9   | 9.8    | 5.8    | 5.2    | 4.0    | 1.7    | 1.2    | 0.6    | 0.0    | 0.0    | 0.0    |
| 87.5° | 10.4   | 4.0    | 2.3    | 1.2    | 0.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 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)