

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: McGRAW-EDISON

Report Number: P453374

Luminaire Tested: **GALN-SA4B-827-U-T3R-HSS**

Issue Date: 1/4/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P453374  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/4/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GALN-SA4B-827-U-T3R-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(4) 80 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12956 lumens  
Efficiency: N/A  
Efficacy: 79.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G3

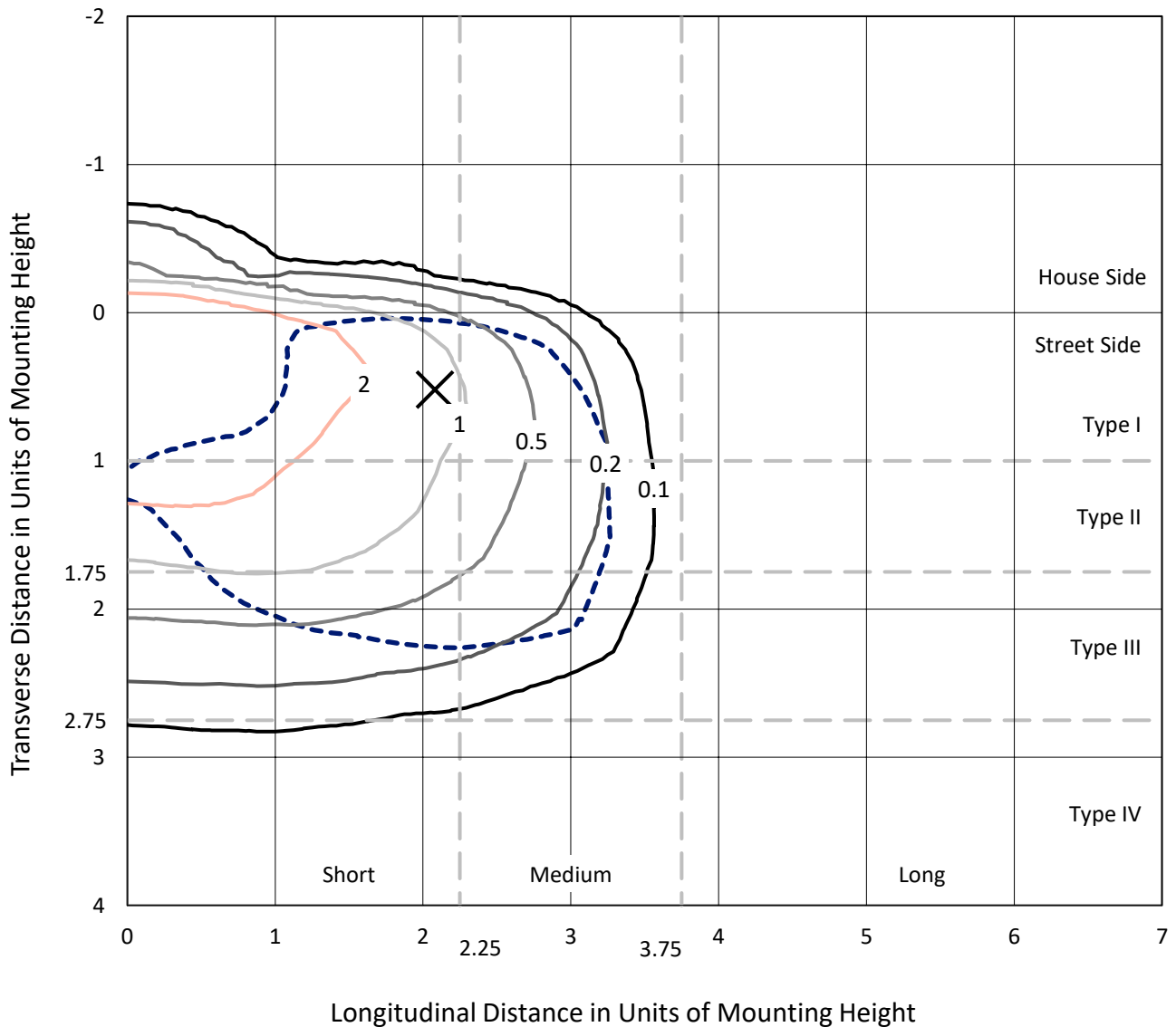
Input Watts (W): 164  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

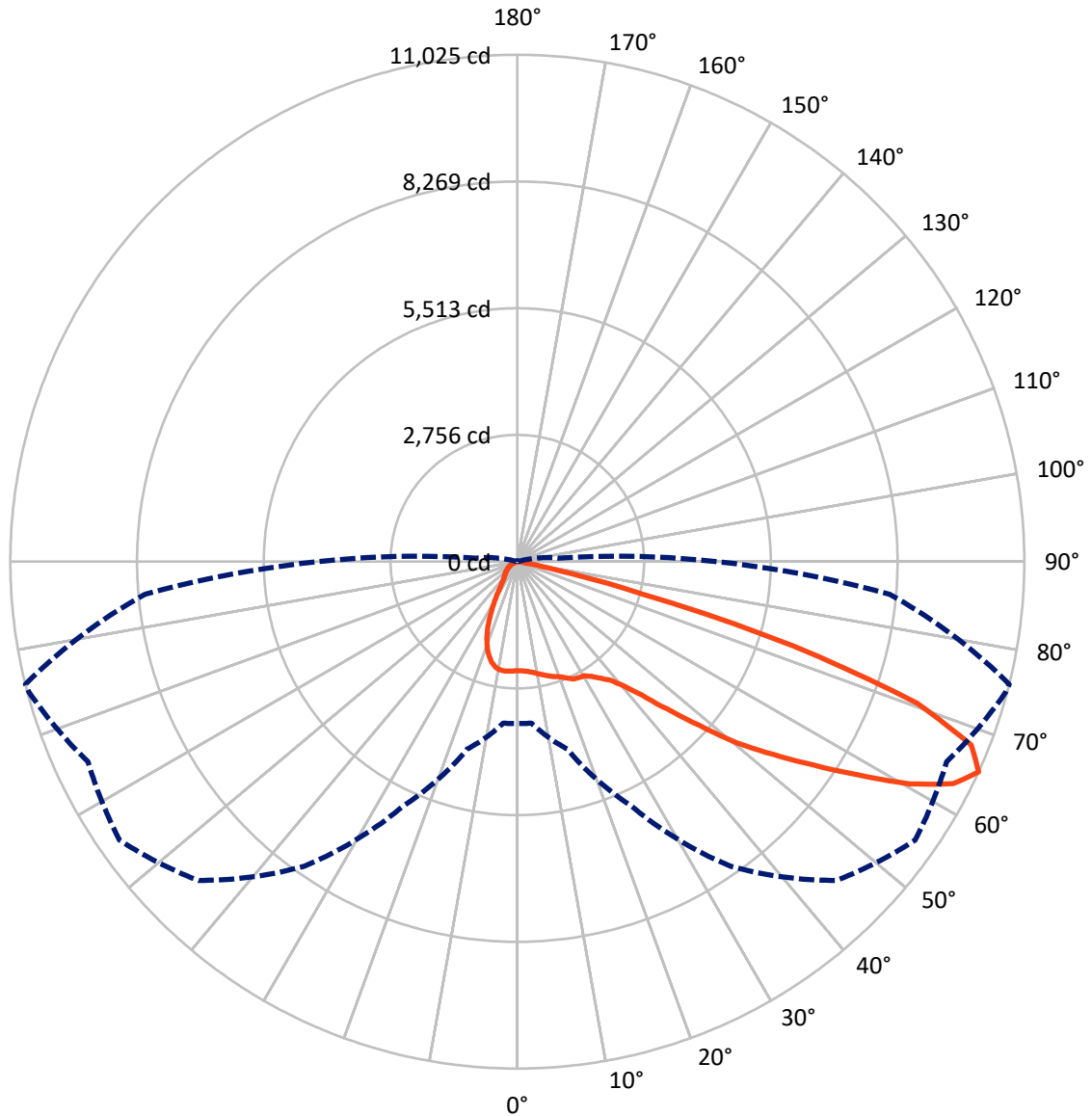
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 76-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 935.7    | 0.0    | 935.7   |
|                    | % Fixture | 7.2      | 0.0    | 7.2     |
| <b>Street Side</b> | Lumens    | 12020.3  | 0.0    | 12020.3 |
|                    | % Fixture | 92.8     | 0.0    | 92.8    |
| <b>Total</b>       | Lumens    | 12956.0  | 0.0    | 12956.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 195.2   | 1.5       |
| 10°-20°   | 434.7   | 3.4       |
| 20°-30°   | 700.5   | 5.4       |
| 30°-40°   | 1218.0  | 9.4       |
| 40°-50°   | 2012.7  | 15.5      |
| 50°-60°   | 3109.1  | 24.0      |
| 60°-70°   | 3796.7  | 29.3      |
| 70°-80°   | 1440.9  | 11.1      |
| 80°-90°   | 48.1    | 0.4       |
| 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°    | 12956.0 | 100.0     |
| 0°-180°   | 12956.0 | 100.0     |

**Coefficient of Utilization**



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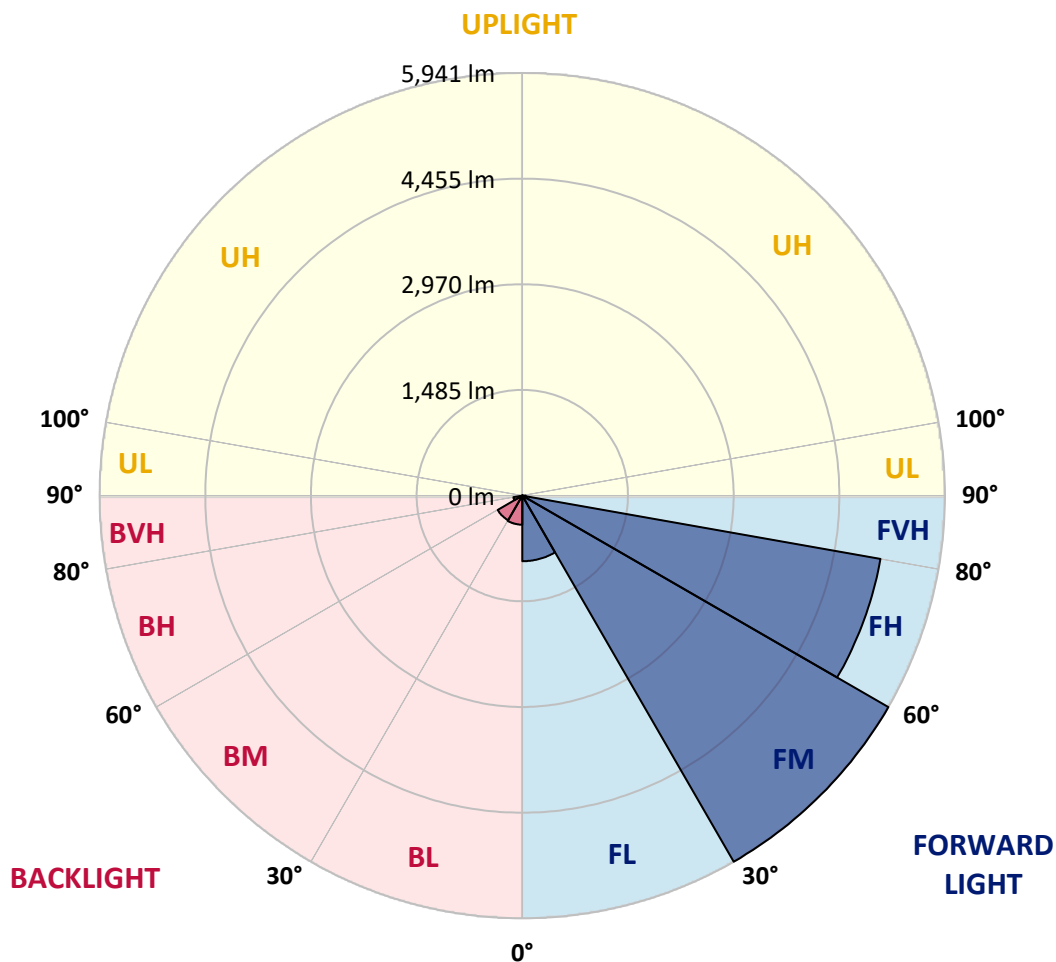
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 921.7  | 7.1       |                         |      |         |
| FM (30°-60°)   | 5940.5 | 45.9      |                         |      |         |
| FH (60°-80°)   | 5110.7 | 39.4      |                         |      | G3/7500 |
| FVH (80°-90°)  | 47.4   | 0.4       |                         |      | G1/100  |
| BL (0°-30°)    | 408.8  | 3.2       | B1/500                  |      |         |
| BM (30°-60°)   | 399.3  | 3.1       | B1/1000                 |      |         |
| BH (60°-80°)   | 127.0  | 1.0       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 0.7    | 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 III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°     | 65°     | 75°     | 76°     | 85°    |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|--------|
| 0°    | 2370.1 | 2370.1 | 2370.1 | 2370.1 | 2370.1 | 2370.1 | 2370.1  | 2370.1  | 2370.1  | 2370.1  | 2370.1 |
| 2.5°  | 2264.9 | 2265.8 | 2271.3 | 2285.0 | 2306.0 | 2323.4 | 2338.1  | 2361.8  | 2378.3  | 2380.1  | 2385.6 |
| 5°    | 2108.5 | 2097.5 | 2108.5 | 2144.1 | 2176.1 | 2224.6 | 2284.1  | 2343.5  | 2396.6  | 2400.3  | 2425.9 |
| 7.5°  | 1932.8 | 1942.0 | 1959.4 | 1995.9 | 2056.3 | 2130.4 | 2216.4  | 2322.5  | 2423.1  | 2432.3  | 2482.6 |
| 10°   | 1754.5 | 1774.6 | 1802.9 | 1858.7 | 1942.9 | 2038.9 | 2156.0  | 2307.9  | 2465.2  | 2478.0  | 2564.9 |
| 12.5° | 1589.8 | 1598.9 | 1633.7 | 1708.7 | 1813.0 | 1948.4 | 2110.3  | 2299.6  | 2511.8  | 2527.4  | 2652.7 |
| 15°   | 1463.6 | 1475.5 | 1505.6 | 1573.3 | 1689.5 | 1863.3 | 2072.8  | 2296.9  | 2557.6  | 2579.5  | 2740.5 |
| 17.5° | 1439.8 | 1447.1 | 1459.9 | 1505.6 | 1607.2 | 1795.6 | 2038.9  | 2296.0  | 2601.5  | 2628.0  | 2821.9 |
| 20°   | 1537.7 | 1531.3 | 1518.5 | 1513.9 | 1569.7 | 1743.5 | 2014.2  | 2303.3  | 2643.6  | 2673.8  | 2907.9 |
| 22.5° | 1782.8 | 1791.0 | 1716.0 | 1627.3 | 1609.0 | 1735.2 | 2010.6  | 2338.1  | 2710.3  | 2746.0  | 3004.0 |
| 25°   | 2303.3 | 2240.2 | 2123.1 | 1910.9 | 1750.8 | 1785.6 | 2051.7  | 2420.4  | 2788.1  | 2827.4  | 3090.9 |
| 27.5° | 2878.7 | 2859.4 | 2677.4 | 2328.0 | 2029.8 | 1891.7 | 2124.9  | 2483.5  | 2813.7  | 2854.0  | 3140.3 |
| 30°   | 3444.0 | 3466.8 | 3258.3 | 2872.3 | 2435.0 | 2088.3 | 2193.5  | 2507.3  | 2836.6  | 2878.7  | 3203.4 |
| 32.5° | 3968.1 | 3995.5 | 3812.6 | 3430.2 | 2912.5 | 2428.6 | 2311.5  | 2599.7  | 2932.6  | 2975.6  | 3308.6 |
| 35°   | 4380.6 | 4384.3 | 4246.2 | 3941.6 | 3433.9 | 2842.1 | 2566.7  | 2761.6  | 3062.5  | 3112.8  | 3420.2 |
| 37.5° | 4759.3 | 4753.9 | 4591.9 | 4329.4 | 3868.4 | 3252.8 | 2887.8  | 2948.2  | 3210.7  | 3262.8  | 3581.2 |
| 40°   | 5040.2 | 5043.8 | 4991.7 | 4744.7 | 4273.6 | 3632.4 | 3142.1  | 3122.9  | 3459.5  | 3540.9  | 3815.3 |
| 42.5° | 5227.7 | 5261.5 | 5287.1 | 5161.8 | 4783.1 | 4099.8 | 3532.7  | 3497.0  | 3891.3  | 3959.0  | 4146.5 |
| 45°   | 5379.5 | 5439.9 | 5568.0 | 5561.6 | 5272.5 | 4673.4 | 4068.7  | 3995.5  | 4503.2  | 4575.5  | 4568.2 |
| 47.5° | 5490.2 | 5551.5 | 5763.7 | 5891.8 | 5732.6 | 5229.5 | 4742.9  | 4679.8  | 5234.1  | 5312.8  | 5033.8 |
| 50°   | 5546.9 | 5620.1 | 5890.9 | 6138.8 | 6092.1 | 5765.5 | 5511.2  | 5514.9  | 6116.8  | 6192.7  | 5573.5 |
| 52.5° | 5414.3 | 5509.4 | 5958.6 | 6404.9 | 6495.5 | 6278.7 | 6231.1  | 6351.9  | 6902.6  | 6967.5  | 6061.0 |
| 55°   | 4990.8 | 5110.6 | 5866.2 | 6631.8 | 6962.9 | 6884.3 | 7048.9  | 7232.8  | 7761.5  | 7803.6  | 6561.4 |
| 57.5° | 4722.8 | 4849.9 | 5593.6 | 6824.8 | 7524.6 | 7645.3 | 7906.0  | 8040.5  | 8647.9  | 8754.9  | 7135.8 |
| 60°   | 4496.8 | 4596.5 | 5369.5 | 6866.0 | 8095.4 | 8576.5 | 8829.9  | 8968.9  | 9741.9  | 9811.4  | 7767.9 |
| 62.5° | 4120.9 | 4235.2 | 4990.8 | 6578.7 | 8382.6 | 9322.0 | 9847.1  | 9784.9  | 10588.0 | 10636.5 | 8155.7 |
| 65°   | 3516.2 | 3526.3 | 4222.4 | 5857.0 | 8086.2 | 9805.9 | 10561.5 | 10300.8 | 10992.3 | 11025.2 | 8125.5 |
| 67.5° | 2624.4 | 2721.3 | 3248.2 | 4603.8 | 6830.3 | 9392.4 | 10792.9 | 10314.5 | 10737.1 | 10645.6 | 7480.7 |
| 70°   | 1690.4 | 1764.5 | 2201.8 | 3192.4 | 4924.9 | 7838.3 | 10025.4 | 9607.4  | 9423.6  | 9220.5  | 6123.2 |
| 72.5° | 780.3  | 875.4  | 1308.1 | 1824.0 | 2920.7 | 5583.5 | 8138.4  | 7805.4  | 6782.7  | 6281.5  | 3892.2 |
| 75°   | 340.3  | 364.1  | 645.8  | 962.3  | 1369.4 | 2952.7 | 5365.8  | 4845.3  | 3063.4  | 2798.2  | 1557.8 |
| 77.5° | 207.6  | 223.2  | 338.5  | 515.9  | 537.9  | 1125.1 | 2890.5  | 2113.9  | 946.7   | 835.1   | 422.6  |
| 80°   | 140.9  | 158.2  | 246.1  | 269.8  | 183.9  | 313.8  | 1084.9  | 564.4   | 191.2   | 182.9   | 90.6   |
| 82.5° | 68.6   | 86.9   | 182.0  | 150.9  | 79.6   | 100.6  | 315.6   | 120.7   | 55.8    | 52.1    | 32.0   |
| 85°   | 10.1   | 17.4   | 102.4  | 98.8   | 35.7   | 23.8   | 55.8    | 30.2    | 19.2    | 18.3    | 14.6   |
| 87.5° | 0.0    | 0.0    | 34.8   | 15.6   | 3.7    | 3.7    | 6.4     | 6.4     | 7.3     | 6.4     | 7.3    |
| 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°    | 2370.1 | 2370.1 | 2370.1 | 2370.1 | 2370.1 | 2370.1 | 2370.1 | 2370.1 | 2370.1 | 2370.1 | 2370.1 |
| 2.5°  | 2388.4 | 2392.9 | 2375.6 | 2350.9 | 2324.3 | 2297.8 | 2260.3 | 2226.5 | 2206.3 | 2218.2 | 2188.9 |
| 5°    | 2431.4 | 2427.7 | 2382.0 | 2306.9 | 2207.2 | 2087.4 | 1968.5 | 1867.0 | 1834.0 | 1784.6 | 1779.2 |
| 7.5°  | 2490.8 | 2480.7 | 2383.8 | 2211.8 | 1986.8 | 1761.8 | 1542.2 | 1396.8 | 1313.6 | 1243.1 | 1244.9 |
| 10°   | 2574.1 | 2544.8 | 2362.7 | 2044.4 | 1674.0 | 1334.6 | 1054.7 | 862.6  | 779.4  | 752.8  | 731.8  |
| 12.5° | 2660.0 | 2603.3 | 2304.2 | 1818.5 | 1303.5 | 912.0  | 641.2  | 524.1  | 472.9  | 456.5  | 454.6  |
| 15°   | 2736.9 | 2647.2 | 2201.8 | 1546.8 | 947.7  | 582.7  | 437.2  | 398.8  | 392.4  | 393.3  | 392.4  |
| 17.5° | 2812.8 | 2682.0 | 2060.0 | 1258.7 | 644.0  | 418.0  | 376.0  | 366.8  | 369.6  | 373.2  | 372.3  |
| 20°   | 2875.9 | 2689.3 | 1878.9 | 960.5  | 455.5  | 366.8  | 353.1  | 351.3  | 354.0  | 356.7  | 356.7  |
| 22.5° | 2944.5 | 2694.8 | 1663.9 | 665.0  | 372.3  | 341.2  | 333.9  | 333.9  | 337.5  | 341.2  | 342.1  |
| 25°   | 2995.7 | 2664.6 | 1406.9 | 477.5  | 328.4  | 316.5  | 312.8  | 313.8  | 317.4  | 319.2  | 318.3  |
| 27.5° | 3004.0 | 2579.5 | 1134.3 | 365.9  | 298.2  | 286.3  | 282.7  | 286.3  | 281.7  | 284.5  | 282.7  |
| 30°   | 3011.3 | 2471.6 | 858.0  | 308.3  | 270.8  | 252.5  | 247.0  | 241.5  | 237.8  | 233.3  | 232.3  |
| 32.5° | 3034.2 | 2344.5 | 626.6  | 277.2  | 245.1  | 225.0  | 212.2  | 196.7  | 184.8  | 181.1  | 180.2  |
| 35°   | 3044.2 | 2191.7 | 460.1  | 252.5  | 222.3  | 200.3  | 177.5  | 155.5  | 138.1  | 131.7  | 136.3  |
| 37.5° | 3082.6 | 2043.5 | 356.7  | 234.2  | 202.2  | 174.7  | 145.4  | 118.0  | 101.5  | 97.9   | 99.7   |
| 40°   | 3161.3 | 1882.5 | 299.1  | 218.6  | 184.8  | 150.9  | 115.3  | 88.7   | 77.8   | 74.1   | 73.2   |
| 42.5° | 3287.5 | 1722.4 | 266.2  | 204.0  | 167.4  | 127.1  | 90.6   | 69.5   | 60.4   | 57.6   | 57.6   |
| 45°   | 3441.2 | 1568.8 | 243.3  | 188.4  | 149.1  | 102.4  | 71.3   | 55.8   | 50.3   | 48.5   | 48.5   |
| 47.5° | 3643.4 | 1434.3 | 224.1  | 172.9  | 129.0  | 81.4   | 57.6   | 48.5   | 44.8   | 45.7   | 46.7   |
| 50°   | 3848.3 | 1334.6 | 203.1  | 155.5  | 106.1  | 66.8   | 49.4   | 43.0   | 42.1   | 43.0   | 43.0   |
| 52.5° | 4002.9 | 1276.0 | 174.7  | 131.7  | 83.2   | 55.8   | 43.9   | 40.2   | 39.3   | 37.5   | 37.5   |
| 55°   | 4211.4 | 1263.2 | 139.0  | 107.0  | 65.9   | 46.7   | 39.3   | 36.6   | 33.8   | 32.0   | 31.1   |
| 57.5° | 4479.4 | 1277.9 | 107.0  | 83.2   | 51.2   | 38.4   | 34.8   | 30.2   | 26.5   | 22.9   | 22.9   |
| 60°   | 4645.9 | 1244.9 | 83.2   | 64.0   | 37.5   | 31.1   | 26.5   | 22.0   | 17.4   | 14.6   | 13.7   |
| 62.5° | 4592.9 | 1105.9 | 65.9   | 47.6   | 26.5   | 22.9   | 17.4   | 14.6   | 10.1   | 7.3    | 6.4    |
| 65°   | 4319.4 | 892.8  | 53.1   | 32.9   | 19.2   | 13.7   | 9.1    | 9.1    | 4.6    | 0.9    | 0.0    |
| 67.5° | 3780.6 | 661.3  | 42.1   | 22.0   | 11.0   | 6.4    | 4.6    | 2.7    | 0.0    | 0.0    | 0.0    |
| 70°   | 3077.2 | 477.5  | 32.9   | 13.7   | 6.4    | 4.6    | 1.8    | 0.9    | 0.0    | 0.0    | 0.0    |
| 72.5° | 1953.9 | 273.5  | 25.6   | 8.2    | 4.6    | 1.8    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 755.6  | 107.0  | 17.4   | 5.5    | 1.8    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5° | 214.0  | 50.3   | 10.1   | 2.7    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 55.8   | 22.0   | 5.5    | 0.9    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 26.5   | 9.1    | 1.8    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 15.6   | 3.7    | 0.9    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 7.3    | 0.9    | 0.0    | 0.0    | 0.0    | 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)