

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: P321099

Luminaire Tested: **GAN-SA5D-827-U-AFL**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P321099  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-29)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAN-SA5D-827-U-AFL  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(5) 80 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE  
FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 29246 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

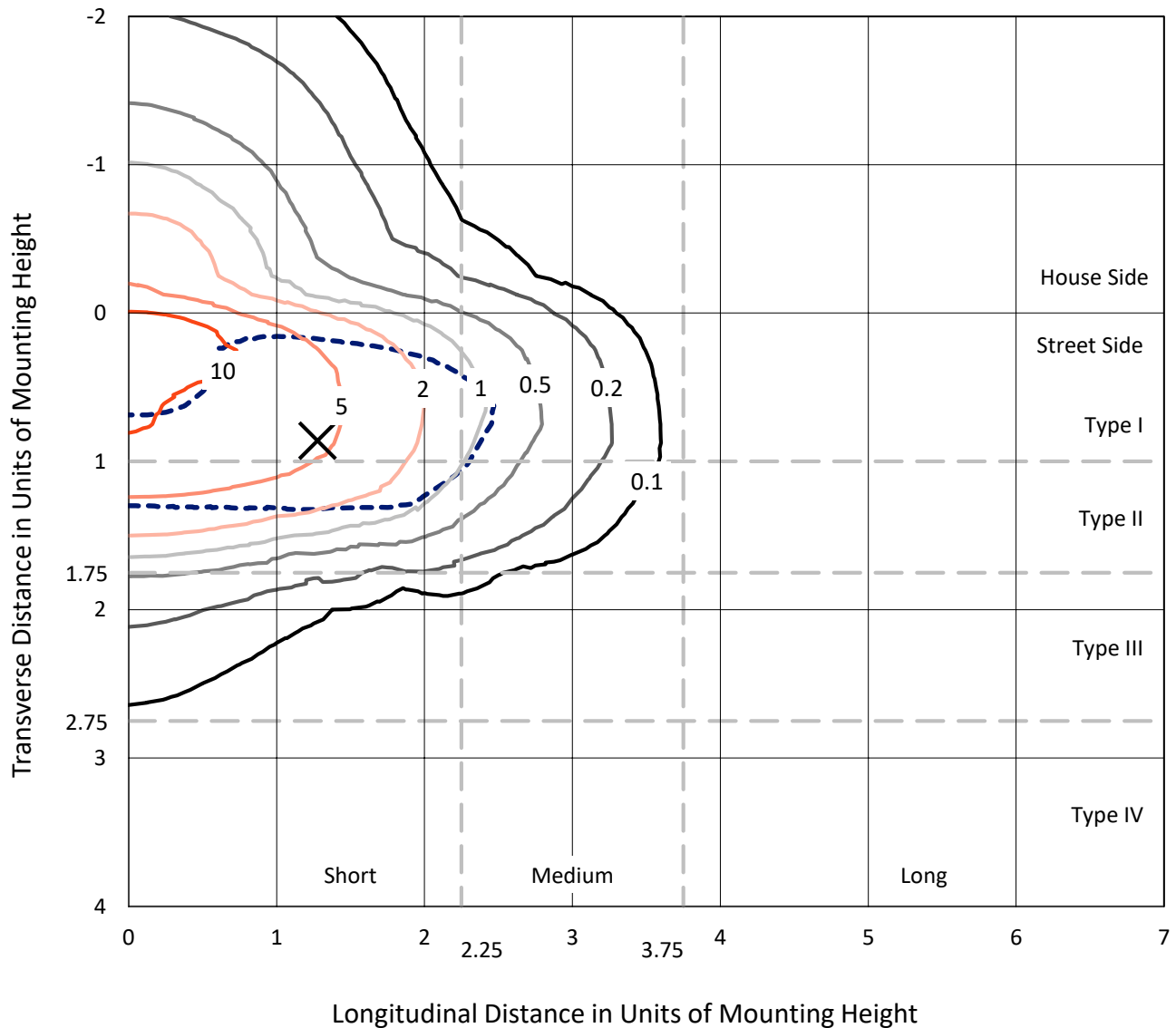
Input Watts (W): 320  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P321099  
CATALOG NUMBER: GAN-SA5D-827-U-AFL

## Iso-Footcandle Lines of Horizontal Illumination

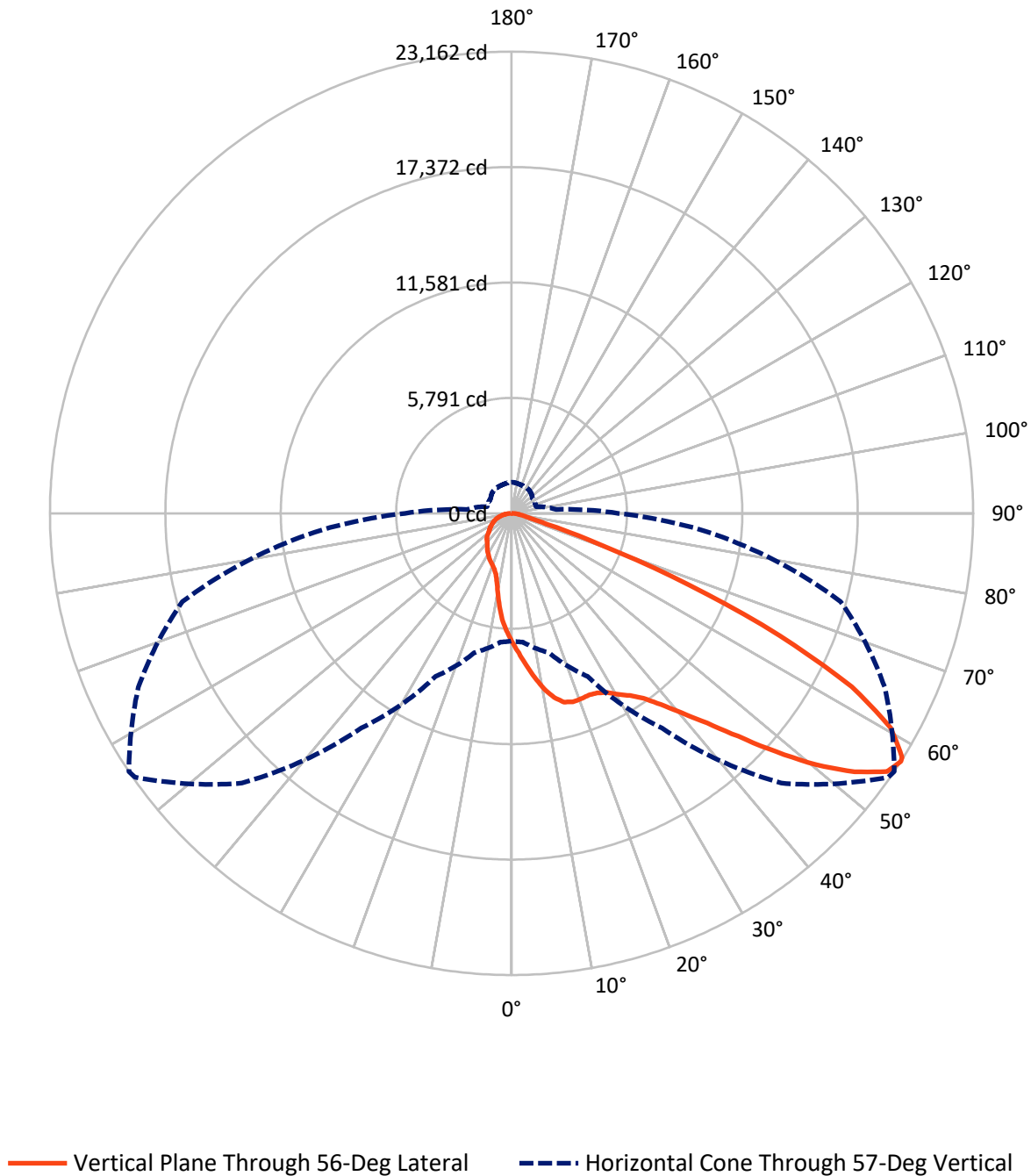
✕ Max cd  
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.4 fc  
Type II - Short - N/A

REPORT NUMBER: P321099  
CATALOG NUMBER: GAN-SA5D-827-U-AFL

## Luminous Intensity Polar Plot



REPORT NUMBER: P321099

CATALOG NUMBER: GAN-SA5D-827-U-AFL

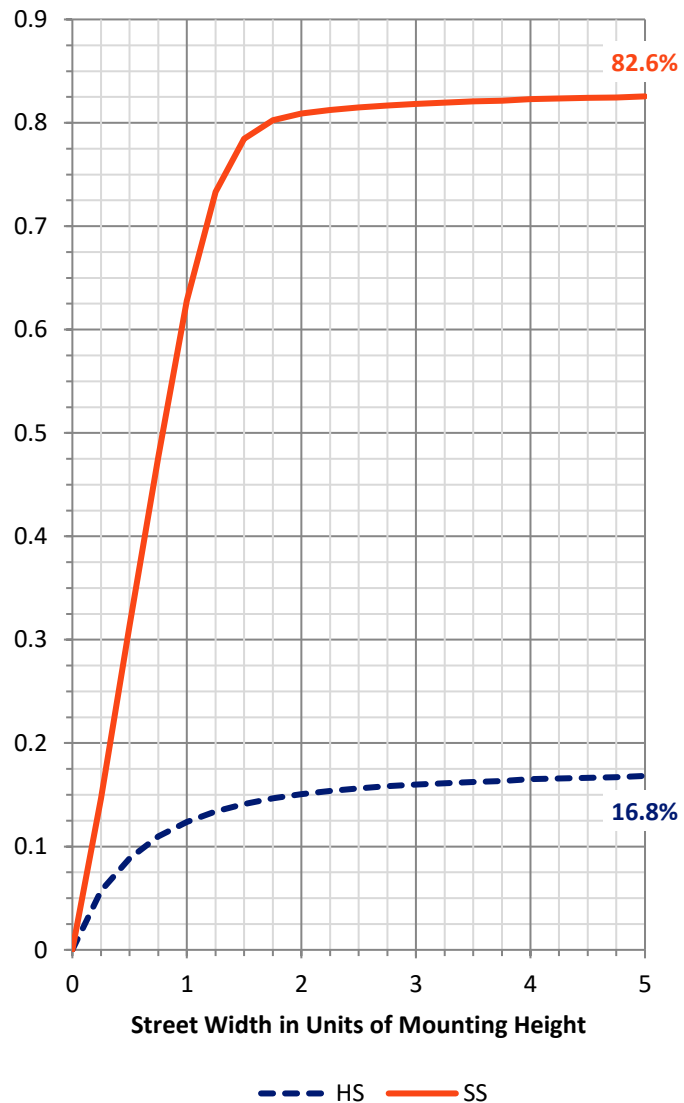
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 5041.4   | 0.0    | 5041.4  |
|                    | % Fixture | 17.2     | 0.0    | 17.2    |
| <b>Street Side</b> | Lumens    | 24204.6  | 0.0    | 24204.6 |
|                    | % Fixture | 82.8     | 0.0    | 82.8    |
| <b>Total</b>       | Lumens    | 29246.0  | 0.0    | 29246.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 619.7   | 2.1       |
| 10°-20°   | 1751.9  | 6.0       |
| 20°-30°   | 2853.5  | 9.8       |
| 30°-40°   | 4265.7  | 14.6      |
| 40°-50°   | 6470.1  | 22.1      |
| 50°-60°   | 7251.9  | 24.8      |
| 60°-70°   | 4283.2  | 14.6      |
| 70°-80°   | 1403.4  | 4.8       |
| 80°-90°   | 346.7   | 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°    | 29246.0 | 100.0     |
| 0°-180°   | 29246.0 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P321099

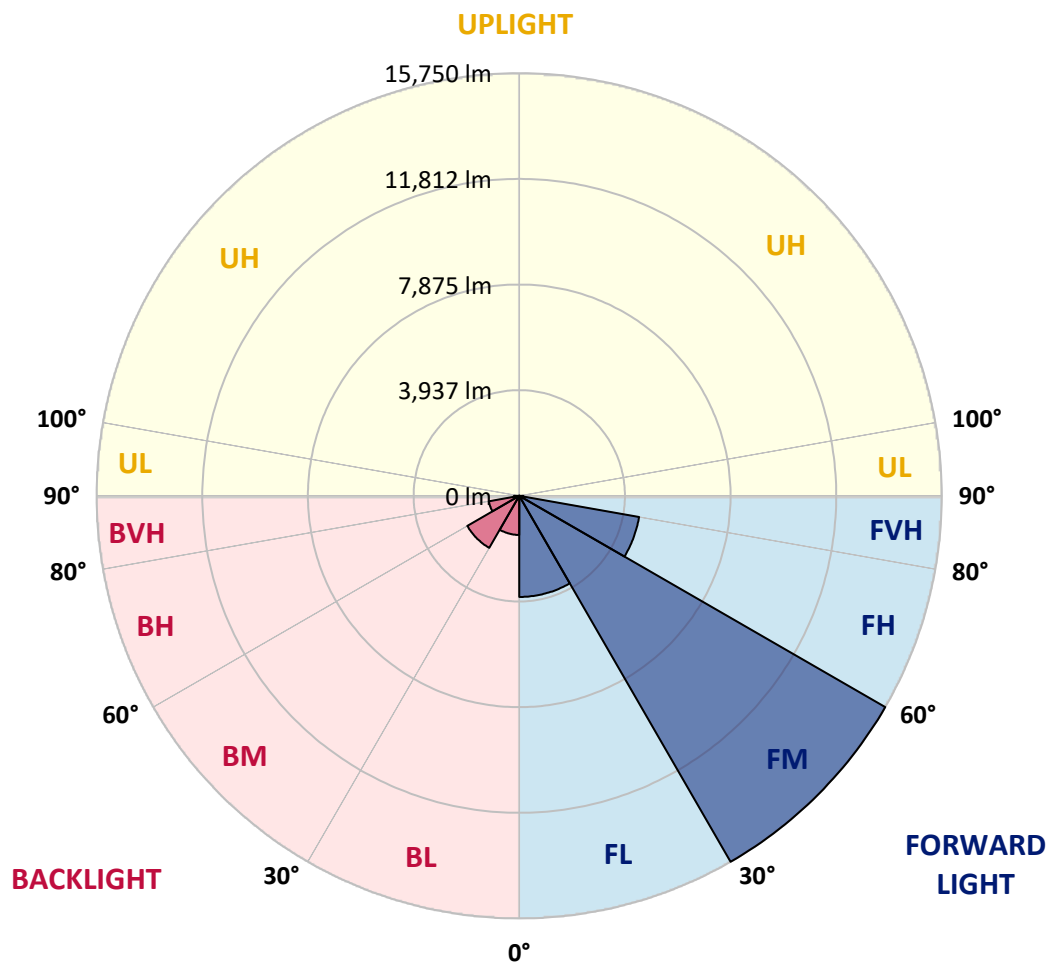
CATALOG NUMBER: GAN-SA5D-827-U-AFL

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 3767.3  | 12.9      |                         |      |         |
| FM   | (30°-60°)   | 15749.9 | 53.9      |                         |      |         |
| FH   | (60°-80°)   | 4534.7  | 15.5      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 152.7   | 0.5       |                         |      | G2/225  |
| BL   | (0°-30°)    | 1457.7  | 5.0       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 2237.7  | 7.7       | B2/2500                 |      |         |
| BH   | (60°-80°)   | 1151.9  | 3.9       | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 194.1   | 0.7       |                         |      | 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 Short





REPORT NUMBER: P321099

CATALOG NUMBER: GAN-SA5D-827-U-AFL

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 56°     | 65°     | 75°     | 85°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0°    | 6486.8  | 6486.8  | 6486.8  | 6486.8  | 6486.8  | 6486.8  | 6486.8  | 6486.8  | 6486.8  | 6486.8  | 6486.8 |
| 2.5°  | 7448.7  | 7517.0  | 7486.8  | 7382.3  | 7301.9  | 7188.3  | 7061.7  | 7023.5  | 6889.8  | 6740.1  | 6560.2 |
| 5°    | 8627.6  | 8593.4  | 8544.2  | 8381.4  | 8209.5  | 8009.5  | 7691.9  | 7641.6  | 7344.1  | 7005.4  | 6647.6 |
| 7.5°  | 9299.0  | 9296.0  | 9266.8  | 9171.4  | 9014.6  | 8753.2  | 8370.3  | 8311.0  | 7861.7  | 7317.0  | 6762.2 |
| 10°   | 9201.5  | 9194.5  | 9242.7  | 9342.2  | 9389.5  | 9335.2  | 9012.6  | 8953.3  | 8401.5  | 7661.7  | 6894.9 |
| 12.5° | 8647.7  | 8651.7  | 8729.1  | 8938.2  | 9222.6  | 9564.3  | 9512.1  | 9482.9  | 8961.3  | 8051.7  | 7055.7 |
| 15°   | 8216.5  | 8225.6  | 8286.9  | 8468.8  | 8804.5  | 9424.6  | 9815.6  | 9825.7  | 9503.0  | 8481.9  | 7243.6 |
| 17.5° | 8027.6  | 8046.7  | 8074.8  | 8202.5  | 8510.0  | 9146.2  | 9888.0  | 9942.3  | 9977.4  | 8928.1  | 7424.5 |
| 20°   | 8087.9  | 8106.0  | 8114.0  | 8195.4  | 8447.7  | 8977.4  | 9837.7  | 9935.2  | 10341.3 | 9348.3  | 7605.4 |
| 22.5° | 8358.2  | 8369.3  | 8374.3  | 8395.4  | 8591.4  | 9025.6  | 9804.6  | 9907.1  | 10604.6 | 9725.2  | 7742.1 |
| 25°   | 8806.5  | 8798.5  | 8766.3  | 8739.2  | 8870.8  | 9216.6  | 9880.9  | 9978.4  | 10818.7 | 10066.9 | 7831.6 |
| 27.5° | 9343.2  | 9333.2  | 9270.9  | 9196.5  | 9271.9  | 9514.1  | 10101.1 | 10178.5 | 11010.7 | 10386.5 | 7876.8 |
| 30°   | 9987.5  | 9961.4  | 9843.8  | 9755.3  | 9784.5  | 9960.3  | 10463.9 | 10534.2 | 11307.2 | 10749.3 | 7921.0 |
| 32.5° | 10732.2 | 10704.1 | 10534.2 | 10387.5 | 10387.5 | 10534.2 | 10837.8 | 10896.1 | 11558.4 | 11159.4 | 7992.4 |
| 35°   | 11665.0 | 11629.8 | 11408.7 | 11162.4 | 11093.1 | 11167.4 | 11347.4 | 11388.6 | 12010.7 | 11676.0 | 8122.1 |
| 37.5° | 12764.5 | 12717.3 | 12430.8 | 12101.2 | 11949.4 | 11945.4 | 12075.0 | 12159.5 | 12733.4 | 12354.4 | 8342.2 |
| 40°   | 13867.1 | 13833.9 | 13583.7 | 13324.4 | 13026.8 | 12931.4 | 13131.4 | 13157.5 | 13678.1 | 13196.7 | 8623.6 |
| 42.5° | 14719.4 | 14713.4 | 14667.1 | 14701.3 | 14396.8 | 14203.8 | 14360.6 | 14381.7 | 14832.0 | 14108.3 | 8923.1 |
| 45°   | 15169.7 | 15179.7 | 15403.9 | 15900.4 | 16012.9 | 15872.2 | 15949.6 | 15955.7 | 16150.6 | 15028.0 | 9197.5 |
| 47.5° | 14808.9 | 14861.1 | 15428.0 | 16538.6 | 17460.3 | 17927.6 | 17799.0 | 17873.3 | 17429.1 | 15818.0 | 9412.6 |
| 50°   | 13402.7 | 13467.1 | 14432.0 | 16254.2 | 18135.7 | 19916.7 | 19849.3 | 19832.2 | 18460.3 | 16396.9 | 9529.2 |
| 52.5° | 11660.9 | 11711.2 | 12507.2 | 14775.7 | 17640.2 | 21016.2 | 21634.4 | 21545.9 | 19376.9 | 16830.1 | 9551.3 |
| 55°   | 9008.5  | 9086.9  | 9849.8  | 11824.8 | 15636.0 | 20596.1 | 22947.0 | 22867.6 | 20212.2 | 17057.2 | 9525.1 |
| 57°   | 6404.4  | 6486.8  | 7244.6  | 9024.6  | 13153.5 | 19141.8 | 23077.7 | 23162.1 | 20663.4 | 17095.4 | 9554.3 |
| 57.5° | 5714.9  | 5799.3  | 6550.1  | 8278.8  | 12379.6 | 18616.1 | 22965.1 | 23105.8 | 20744.9 | 17089.4 | 9570.4 |
| 60°   | 2877.5  | 2909.7  | 3388.1  | 4621.4  | 7825.6  | 15050.1 | 21496.7 | 21859.5 | 20818.2 | 16793.9 | 9639.7 |
| 62.5° | 1789.0  | 1765.9  | 1750.9  | 2128.8  | 3807.2  | 9980.4  | 18466.3 | 19164.9 | 19414.1 | 16078.3 | 9471.9 |
| 65°   | 1573.0  | 1529.7  | 1363.9  | 1333.7  | 1681.5  | 4847.5  | 13906.3 | 14775.7 | 16414.0 | 14950.6 | 9071.9 |
| 67.5° | 1477.5  | 1435.3  | 1248.3  | 1135.7  | 1136.7  | 1921.7  | 8633.6  | 9612.6  | 12786.6 | 13043.9 | 8128.1 |
| 70°   | 1379.0  | 1340.8  | 1165.9  | 1033.2  | 967.9   | 1064.4  | 3972.1  | 4714.8  | 8335.1  | 10252.8 | 6793.3 |
| 72.5° | 1252.3  | 1226.2  | 1060.4  | 923.7   | 854.3   | 797.0   | 1520.7  | 1796.1  | 4825.4  | 6885.8  | 4717.8 |
| 75°   | 1119.7  | 1095.5  | 953.8   | 823.2   | 738.7   | 627.2   | 856.3   | 922.7   | 2451.4  | 3522.8  | 2322.7 |
| 77.5° | 973.9   | 959.9   | 848.3   | 727.7   | 660.3   | 519.6   | 606.1   | 638.2   | 1051.3  | 1510.6  | 1164.9 |
| 80°   | 774.9   | 802.1   | 741.7   | 648.3   | 586.0   | 416.1   | 429.2   | 450.3   | 612.1   | 737.7   | 661.3  |
| 82.5° | 504.6   | 551.8   | 580.9   | 526.7   | 482.4   | 327.7   | 308.6   | 317.6   | 399.0   | 450.3   | 287.5  |
| 85°   | 210.1   | 236.2   | 381.9   | 344.7   | 320.6   | 239.2   | 207.0   | 211.1   | 247.2   | 256.3   | 117.6  |
| 87.5° | 93.5    | 99.5    | 167.8   | 157.8   | 135.7   | 82.4    | 88.4    | 96.5    | 131.7   | 124.6   | 45.2   |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0    |



REPORT NUMBER: P321099

CATALOG NUMBER: GAN-SA5D-827-U-AFL

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 6486.8 | 6486.8 | 6486.8 | 6486.8 | 6486.8 | 6486.8 | 6486.8 | 6486.8 | 6486.8 | 6486.8 | 6486.8 |
| 2.5°  | 6492.8 | 6408.4 | 6263.7 | 6103.9 | 5973.2 | 5868.7 | 5763.1 | 5690.8 | 5606.3 | 5561.1 | 5538.0 |
| 5°    | 6497.8 | 6332.0 | 6027.5 | 5714.9 | 5435.5 | 5180.2 | 4937.0 | 4750.0 | 4575.1 | 4480.6 | 4454.5 |
| 7.5°  | 6519.0 | 6269.7 | 5777.2 | 5262.6 | 4766.1 | 4312.8 | 3963.0 | 3743.9 | 3586.1 | 3515.8 | 3495.7 |
| 10°   | 6536.0 | 6196.3 | 5467.6 | 4705.8 | 4030.4 | 3571.1 | 3299.7 | 3177.1 | 3122.8 | 3113.7 | 3104.7 |
| 12.5° | 6576.2 | 6120.9 | 5142.0 | 4124.9 | 3458.5 | 3140.9 | 3046.4 | 3038.4 | 3053.4 | 3075.5 | 3075.5 |
| 15°   | 6639.6 | 6046.6 | 4770.1 | 3626.3 | 3094.6 | 2983.1 | 3002.2 | 3046.4 | 3087.6 | 3121.8 | 3126.8 |
| 17.5° | 6685.8 | 5955.1 | 4370.1 | 3227.3 | 2900.7 | 2930.8 | 2999.2 | 3061.5 | 3103.7 | 3136.9 | 3139.9 |
| 20°   | 6719.0 | 5813.4 | 3942.9 | 2922.8 | 2789.1 | 2882.6 | 2968.0 | 3023.3 | 3052.4 | 3085.6 | 3090.6 |
| 22.5° | 6701.9 | 5623.4 | 3564.0 | 2704.7 | 2698.6 | 2812.2 | 2893.6 | 2960.0 | 2937.9 | 2905.7 | 2926.8 |
| 25°   | 6619.5 | 5362.1 | 3174.0 | 2541.8 | 2603.2 | 2717.7 | 2818.2 | 2774.0 | 2699.6 | 2685.6 | 2693.6 |
| 27.5° | 6472.7 | 5028.4 | 2813.2 | 2391.1 | 2492.6 | 2630.3 | 2624.3 | 2580.0 | 2553.9 | 2535.8 | 2546.9 |
| 30°   | 6314.9 | 4666.6 | 2497.6 | 2259.4 | 2370.0 | 2483.6 | 2460.4 | 2459.4 | 2433.3 | 2404.2 | 2418.2 |
| 32.5° | 6159.1 | 4302.7 | 2247.4 | 2150.9 | 2277.5 | 2292.6 | 2342.8 | 2357.9 | 2306.7 | 2245.3 | 2241.3 |
| 35°   | 6023.4 | 3959.0 | 2057.4 | 2052.4 | 2165.9 | 2168.0 | 2241.3 | 2220.2 | 2092.6 | 2029.3 | 2029.3 |
| 37.5° | 5921.9 | 3616.3 | 1912.7 | 1963.9 | 2019.2 | 2071.5 | 2108.7 | 2021.2 | 2000.1 | 1964.9 | 1963.9 |
| 40°   | 5877.7 | 3314.8 | 1822.2 | 1896.6 | 1915.7 | 1982.0 | 1886.5 | 1920.7 | 1930.8 | 1912.7 | 1912.7 |
| 42.5° | 5831.5 | 3052.4 | 1743.8 | 1845.3 | 1842.3 | 1833.3 | 1785.0 | 1829.2 | 1869.4 | 1870.5 | 1867.4 |
| 45°   | 5785.2 | 2826.3 | 1674.5 | 1735.8 | 1778.0 | 1680.5 | 1689.5 | 1736.8 | 1793.1 | 1813.2 | 1813.2 |
| 47.5° | 5734.0 | 2647.4 | 1611.1 | 1620.2 | 1685.5 | 1620.2 | 1613.2 | 1649.3 | 1715.7 | 1747.8 | 1754.9 |
| 50°   | 5621.4 | 2486.6 | 1538.8 | 1518.7 | 1536.8 | 1558.9 | 1564.9 | 1582.0 | 1655.4 | 1706.6 | 1718.7 |
| 52.5° | 5465.6 | 2342.8 | 1446.3 | 1425.2 | 1425.2 | 1508.6 | 1536.8 | 1541.8 | 1604.1 | 1665.4 | 1677.5 |
| 55°   | 5336.0 | 2251.4 | 1350.8 | 1346.8 | 1342.8 | 1455.4 | 1503.6 | 1511.6 | 1554.9 | 1603.1 | 1609.1 |
| 57°   | 5345.0 | 2244.3 | 1277.5 | 1281.5 | 1280.5 | 1401.1 | 1472.4 | 1489.5 | 1511.6 | 1552.8 | 1559.9 |
| 57.5° | 5350.0 | 2249.4 | 1261.4 | 1263.4 | 1262.4 | 1386.0 | 1463.4 | 1482.5 | 1499.6 | 1542.8 | 1549.8 |
| 60°   | 5425.4 | 2262.4 | 1196.0 | 1173.9 | 1179.0 | 1305.6 | 1412.1 | 1436.3 | 1447.3 | 1504.6 | 1513.7 |
| 62.5° | 5313.9 | 2204.1 | 1143.8 | 1090.5 | 1090.5 | 1221.2 | 1340.8 | 1379.0 | 1396.1 | 1473.4 | 1488.5 |
| 65°   | 4990.2 | 2040.3 | 1082.5 | 996.0  | 1006.1 | 1136.7 | 1255.3 | 1317.7 | 1343.8 | 1440.3 | 1456.4 |
| 67.5° | 4490.7 | 1850.4 | 1017.1 | 911.6  | 921.7  | 1048.3 | 1166.9 | 1234.2 | 1275.4 | 1404.1 | 1417.2 |
| 70°   | 3840.4 | 1618.2 | 928.7  | 822.2  | 834.2  | 951.8  | 1062.4 | 1138.8 | 1200.1 | 1369.9 | 1373.9 |
| 72.5° | 2831.3 | 1326.7 | 805.1  | 723.7  | 736.7  | 839.2  | 956.8  | 1045.3 | 1127.7 | 1284.5 | 1282.5 |
| 75°   | 1683.5 | 1037.2 | 668.4  | 624.2  | 633.2  | 728.7  | 861.4  | 968.9  | 1092.5 | 1251.3 | 1270.4 |
| 77.5° | 1021.2 | 780.9  | 544.8  | 522.6  | 533.7  | 631.2  | 793.0  | 907.6  | 1077.4 | 1180.0 | 1173.9 |
| 80°   | 617.1  | 557.8  | 435.2  | 421.1  | 432.2  | 539.7  | 733.7  | 861.4  | 941.8  | 1008.1 | 1008.1 |
| 82.5° | 322.6  | 340.7  | 319.6  | 308.6  | 323.6  | 438.2  | 667.4  | 751.8  | 832.2  | 714.6  | 667.4  |
| 85°   | 131.7  | 177.9  | 194.0  | 193.0  | 202.0  | 303.5  | 575.9  | 643.3  | 536.7  | 509.6  | 521.6  |
| 87.5° | 44.2   | 75.4   | 94.5   | 81.4   | 85.4   | 191.0  | 399.0  | 310.6  | 368.9  | 257.3  | 244.2  |
| 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)