

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: P322503

Luminaire Tested: **GAN-SA9D-727-U-T4FT-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P322503  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAN-SA9D-727-U-T4FT-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 41196 lumens  
Efficiency: N/A  
Efficacy: 71.6 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G5

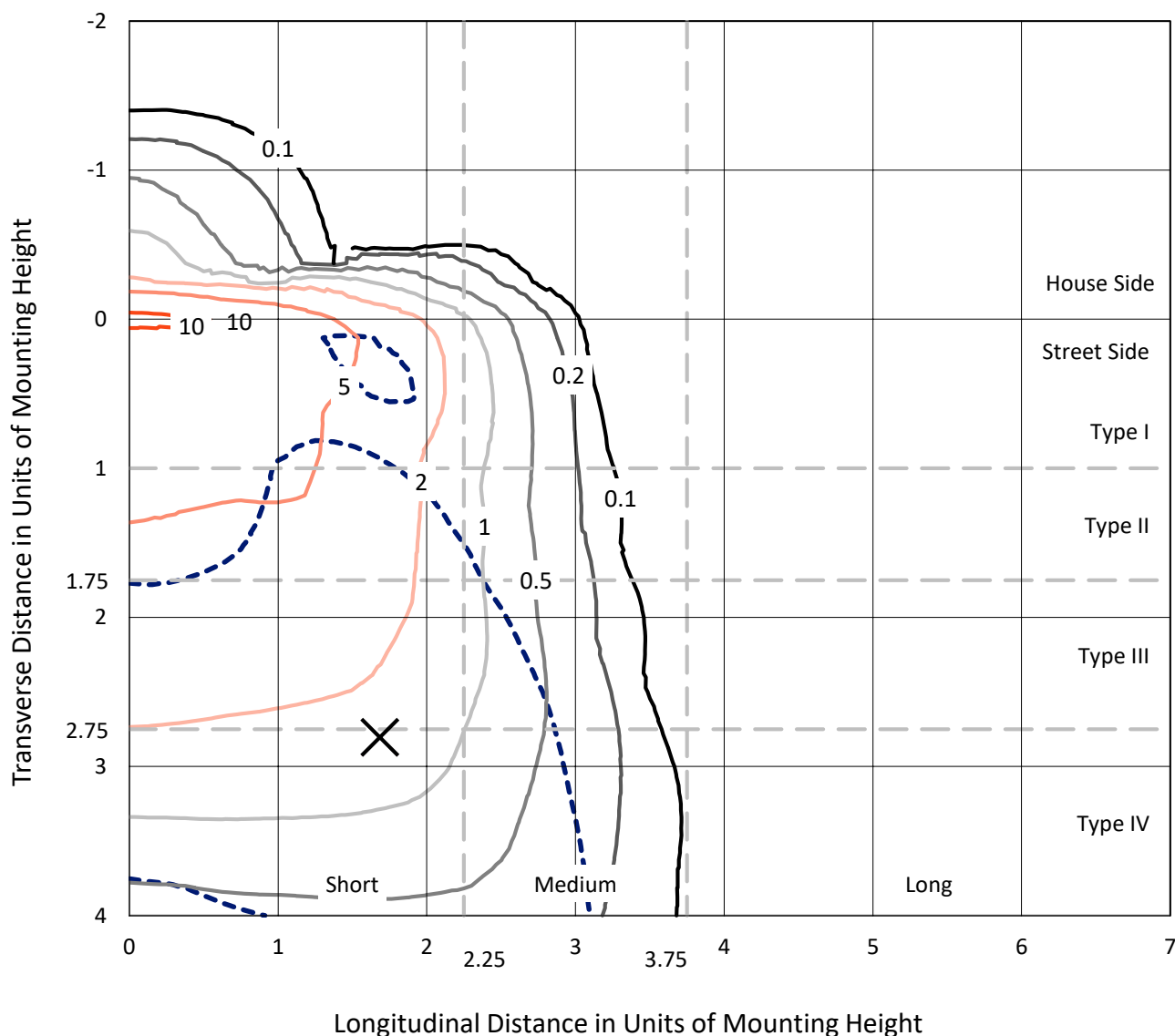
Input Watts (W): 575  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P322503  
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## Iso-Footcandle Lines of Horizontal Illumination

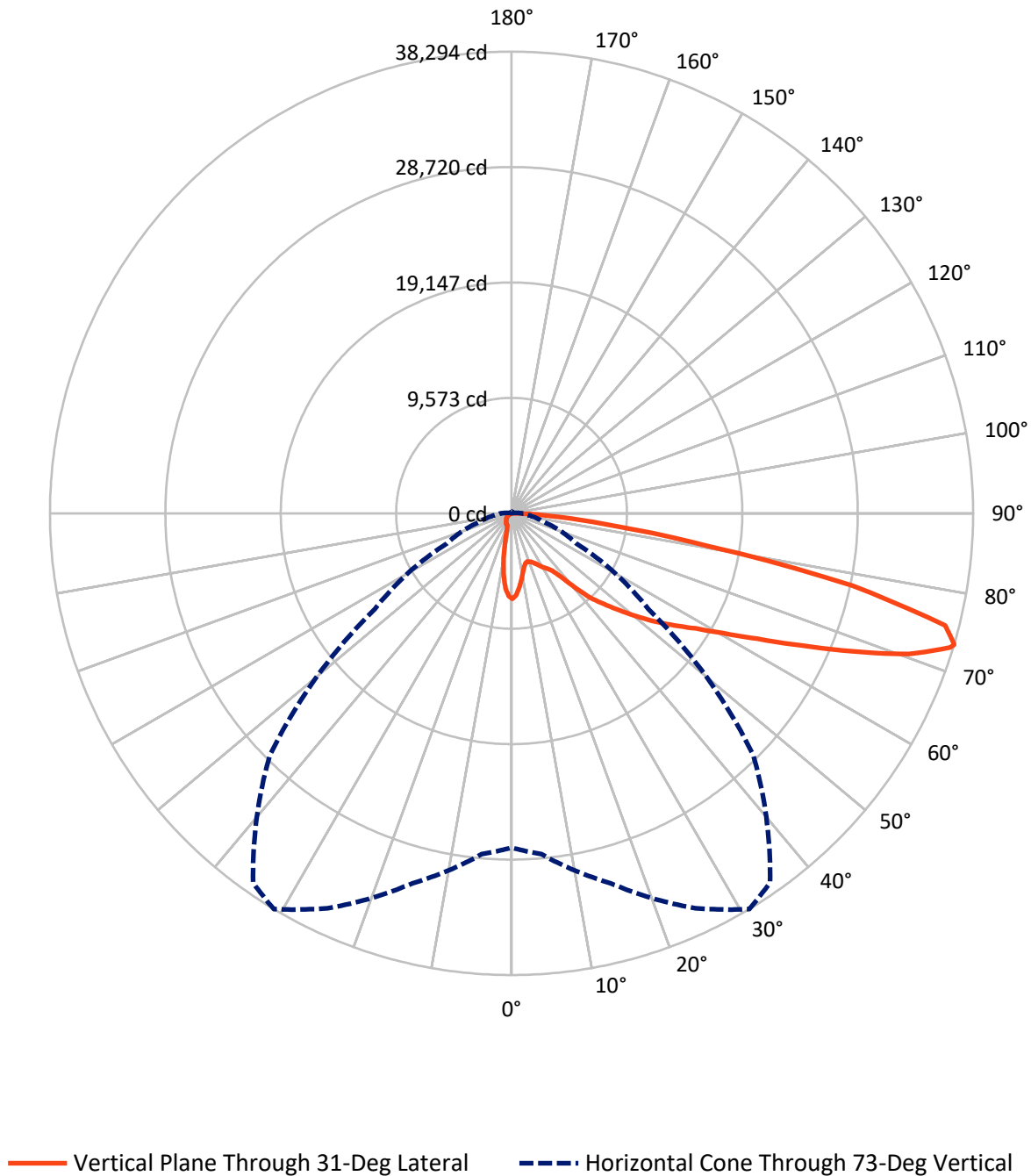
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.3 fc  
 Type IV - Short - N/A

REPORT NUMBER: P322503  
CATALOG NUMBER: GAN-SA9D-727-U-T4FT-HSS

## Luminous Intensity Polar Plot



REPORT NUMBER: P322503

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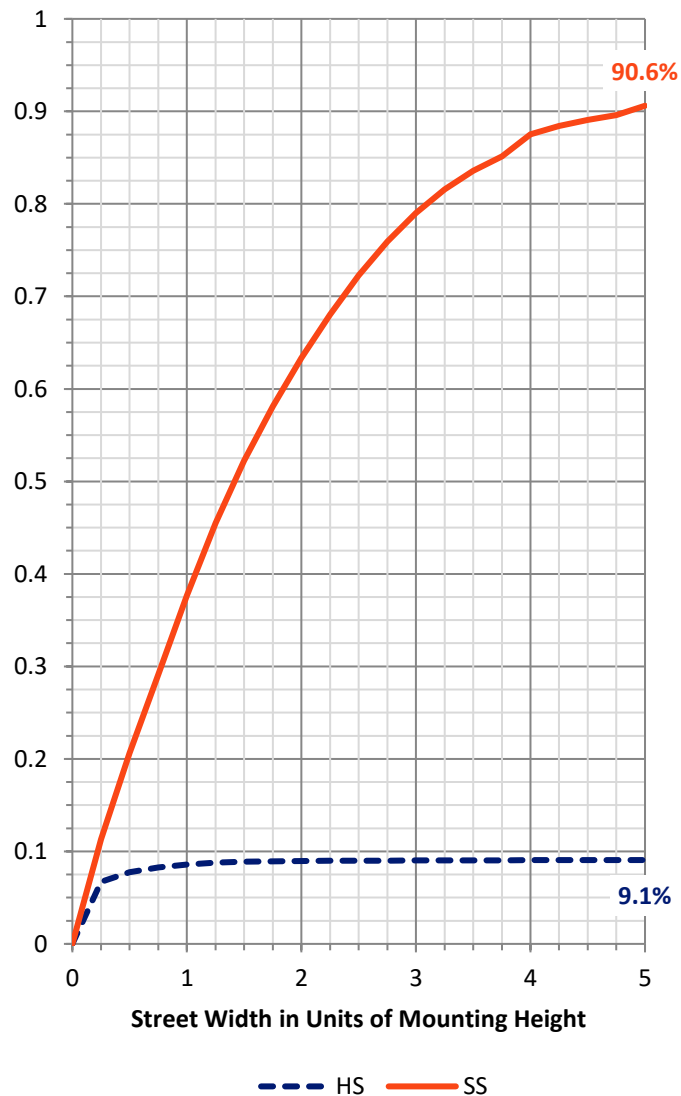
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3755.2   | 0.0    | 3755.2  |
|                    | % Fixture | 9.1      | 0.0    | 9.1     |
| <b>Street Side</b> | Lumens    | 37440.8  | 0.0    | 37440.8 |
|                    | % Fixture | 90.9     | 0.0    | 90.9    |
| <b>Total</b>       | Lumens    | 41196.0  | 0.0    | 41196.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 587.7   | 1.4       |
| 10°-20°   | 1276.0  | 3.1       |
| 20°-30°   | 1911.9  | 4.6       |
| 30°-40°   | 3041.8  | 7.4       |
| 40°-50°   | 5431.8  | 13.2      |
| 50°-60°   | 8428.6  | 20.5      |
| 60°-70°   | 11204.6 | 27.2      |
| 70°-80°   | 8428.1  | 20.5      |
| 80°-90°   | 885.6   | 2.1       |
| 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°    | 41196.0 | 100.0     |
| 0°-180°   | 41196.0 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P322503

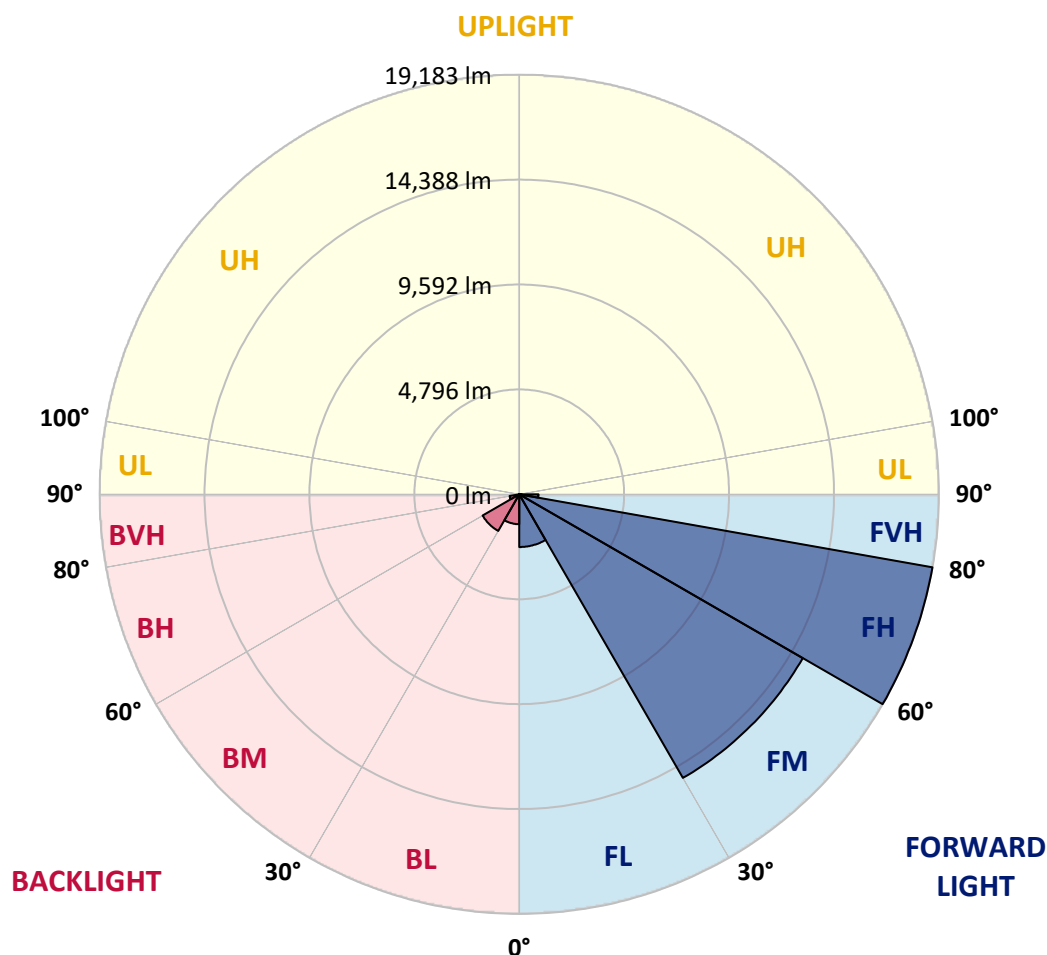
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |        |
|------|-------------|---------|-----------|-------------------------|------|--------|
|      |             |         |           | B                       | U    | G      |
| FL   | (0°-30°)    | 2410.0  | 5.9       |                         |      |        |
| FM   | (30°-60°)   | 14969.2 | 36.3      |                         |      |        |
| FH   | (60°-80°)   | 19183.4 | 46.6      |                         |      | G5     |
| FVH  | (80°-90°)   | 878.2   | 2.1       |                         |      | G5     |
| BL   | (0°-30°)    | 1365.5  | 3.3       | B3/2500                 |      |        |
| BM   | (30°-60°)   | 1932.9  | 4.7       | B2/2500                 |      |        |
| BH   | (60°-80°)   | 449.3   | 1.1       | B1/500                  |      | G1/500 |
| BVH  | (80°-90°)   | 7.5     | 0.0       |                         |      | G0/10  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |        |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |        |

**BUG Rating: B3-U0-G5**

Type IV Short





REPORT NUMBER: P322503

CATALOG NUMBER: GAN-SA9D-727-U-T4FT-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 31°     | 35°     | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 7087.9  | 7087.9  | 7087.9  | 7087.9  | 7087.9  | 7087.9  | 7087.9  | 7087.9  | 7087.9  | 7087.9  | 7087.9  |
| 2.5°  | 6716.9  | 6745.2  | 6775.4  | 6781.4  | 6831.8  | 6833.9  | 6906.4  | 6960.9  | 7015.3  | 7067.7  | 7085.8  |
| 5°    | 6027.5  | 6073.9  | 6128.3  | 6182.7  | 6289.6  | 6331.9  | 6509.3  | 6690.7  | 6864.1  | 7029.4  | 7110.0  |
| 7.5°  | 5291.7  | 5344.1  | 5420.7  | 5555.8  | 5674.7  | 5757.4  | 6037.6  | 6360.1  | 6682.7  | 6987.1  | 7162.4  |
| 10°   | 4620.4  | 4668.8  | 4749.4  | 4892.6  | 5076.0  | 5188.9  | 5565.9  | 6013.4  | 6487.1  | 6948.8  | 7241.1  |
| 12.5° | 4193.0  | 4219.3  | 4263.6  | 4416.8  | 4582.1  | 4709.1  | 5152.6  | 5707.0  | 6325.9  | 6946.7  | 7368.1  |
| 15°   | 4114.4  | 4122.5  | 4086.2  | 4154.7  | 4283.8  | 4406.7  | 4856.3  | 5459.0  | 6202.9  | 6979.0  | 7533.4  |
| 17.5° | 4239.4  | 4235.4  | 4114.4  | 4106.4  | 4209.2  | 4310.0  | 4711.1  | 5287.7  | 6116.2  | 7053.6  | 7747.1  |
| 20°   | 4428.9  | 4414.8  | 4205.1  | 4166.8  | 4275.7  | 4370.4  | 4701.0  | 5223.2  | 6083.9  | 7178.6  | 8007.1  |
| 22.5° | 4680.9  | 4656.7  | 4328.1  | 4287.8  | 4404.7  | 4503.5  | 4826.0  | 5285.7  | 6112.2  | 7345.9  | 8309.5  |
| 25°   | 4993.4  | 4957.1  | 4539.8  | 4495.4  | 4614.4  | 4713.1  | 5049.8  | 5465.1  | 6196.8  | 7549.5  | 8692.5  |
| 27.5° | 5346.1  | 5293.7  | 4878.4  | 4763.5  | 4898.6  | 5001.4  | 5348.1  | 5739.2  | 6329.9  | 7765.2  | 9162.2  |
| 30°   | 5678.8  | 5610.2  | 5235.3  | 5045.8  | 5211.1  | 5326.0  | 5670.7  | 6065.8  | 6543.6  | 8097.8  | 9805.3  |
| 32.5° | 6013.4  | 5936.8  | 5553.8  | 5328.0  | 5477.2  | 5602.1  | 6003.3  | 6515.3  | 6944.7  | 8605.8  | 10660.0 |
| 35°   | 6783.5  | 6702.8  | 6233.1  | 5860.2  | 5858.2  | 5928.7  | 6469.0  | 7130.2  | 7474.9  | 9313.4  | 11680.0 |
| 37.5° | 8079.7  | 8033.3  | 7585.8  | 6878.2  | 6688.7  | 6610.1  | 7104.0  | 7864.0  | 8236.9  | 10287.1 | 12831.1 |
| 40°   | 9498.9  | 9458.5  | 8956.6  | 8315.5  | 8027.3  | 7833.7  | 8015.2  | 8886.0  | 9313.4  | 11476.4 | 14006.4 |
| 42.5° | 11101.5 | 10910.0 | 10014.9 | 9823.4  | 9565.4  | 9418.2  | 9254.9  | 10146.0 | 10635.8 | 12770.6 | 15171.6 |
| 45°   | 12557.0 | 12234.4 | 11073.3 | 10783.0 | 10724.5 | 10760.8 | 10851.5 | 11839.3 | 12123.5 | 14308.8 | 16332.7 |
| 47.5° | 13423.8 | 13169.8 | 12278.8 | 12000.6 | 11984.4 | 12224.3 | 12909.7 | 13752.4 | 13605.2 | 15649.3 | 17354.8 |
| 50°   | 14248.3 | 14018.5 | 13278.6 | 13347.2 | 13421.8 | 13748.3 | 15246.1 | 15719.9 | 14957.9 | 16864.9 | 18292.2 |
| 52.5° | 14915.5 | 14564.8 | 14177.7 | 14562.8 | 14929.7 | 15455.8 | 17657.1 | 17485.8 | 15917.4 | 17832.5 | 19094.5 |
| 55°   | 15300.6 | 15141.3 | 15328.8 | 15715.8 | 16405.3 | 17260.0 | 19933.1 | 18955.4 | 16619.0 | 18715.5 | 19628.7 |
| 57.5° | 16711.7 | 16399.2 | 16772.2 | 17106.8 | 18005.9 | 19201.3 | 21882.4 | 20050.0 | 17125.0 | 19261.8 | 19751.7 |
| 60°   | 18419.2 | 18167.2 | 18386.9 | 18943.3 | 20156.8 | 21561.9 | 23704.8 | 20943.0 | 17389.0 | 19612.6 | 19433.1 |
| 62.5° | 21136.6 | 20803.9 | 20666.9 | 21289.8 | 22898.5 | 24432.5 | 25087.7 | 21561.9 | 17330.6 | 19457.3 | 18340.5 |
| 65°   | 24777.3 | 24432.5 | 23819.7 | 24384.2 | 26430.3 | 27512.8 | 26633.9 | 21693.0 | 16927.4 | 18201.4 | 15578.8 |
| 67.5° | 28506.6 | 28256.7 | 27732.5 | 28684.0 | 30530.6 | 30879.3 | 28268.8 | 21374.4 | 15629.2 | 14758.3 | 11006.7 |
| 70°   | 30970.1 | 30863.2 | 31203.9 | 33308.5 | 34955.5 | 34854.7 | 29768.6 | 19663.0 | 12182.0 | 9075.5  | 5444.9  |
| 72.5° | 29194.1 | 29706.1 | 32221.9 | 36038.0 | 38049.9 | 37227.4 | 28998.5 | 15099.0 | 6962.9  | 3491.5  | 1574.4  |
| 73°   | 27722.5 | 28377.6 | 31764.3 | 36140.8 | 38293.8 | 37392.7 | 28351.4 | 13859.2 | 5934.8  | 2755.7  | 1193.4  |
| 75°   | 19286.0 | 20090.3 | 26297.2 | 33659.3 | 37152.8 | 35626.8 | 23632.2 | 8482.8  | 2749.7  | 1221.6  | 481.8   |
| 77.5° | 9363.8  | 9958.5  | 14480.1 | 24319.7 | 28893.7 | 27835.4 | 14711.9 | 3160.9  | 1241.8  | 764.0   | 221.7   |
| 80°   | 3495.5  | 3886.6  | 6285.5  | 12377.5 | 16697.6 | 17135.0 | 6471.0  | 1195.4  | 826.5   | 614.8   | 112.9   |
| 82.5° | 915.2   | 1020.0  | 2318.3  | 5519.5  | 8557.4  | 8956.6  | 2040.1  | 602.8   | 604.8   | 506.0   | 68.5    |
| 85°   | 292.3   | 334.6   | 723.7   | 2477.5  | 4031.8  | 3539.9  | 532.2   | 292.3   | 439.5   | 377.0   | 38.3    |
| 87.5° | 36.3    | 46.4    | 229.8   | 582.6   | 889.0   | 493.9   | 82.7    | 86.7    | 187.5   | 209.7   | 22.2    |
| 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: P322503

CATALOG NUMBER: GAN-SA9D-727-U-T4FT-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 7087.9  | 7087.9 | 7087.9 | 7087.9 | 7087.9 | 7087.9 | 7087.9 | 7087.9 | 7087.9 | 7087.9 | 7087.9 |
| 2.5°  | 7104.0  | 7093.9 | 7095.9 | 7043.5 | 7009.2 | 6940.7 | 6870.1 | 6837.9 | 6803.6 | 6789.5 | 6803.6 |
| 5°    | 7140.3  | 7122.1 | 7069.7 | 6908.4 | 6737.1 | 6515.3 | 6307.7 | 6150.5 | 5952.9 | 5898.5 | 5954.9 |
| 7.5°  | 7196.7  | 7160.4 | 7007.2 | 6678.6 | 6297.6 | 5874.3 | 5398.5 | 5051.8 | 4767.6 | 4584.1 | 4650.6 |
| 10°   | 7279.4  | 7210.8 | 6902.4 | 6344.0 | 5662.6 | 4912.7 | 4237.4 | 3711.2 | 3338.3 | 3185.1 | 3179.1 |
| 12.5° | 7418.5  | 7289.4 | 6773.4 | 5908.6 | 4886.5 | 3886.6 | 3001.7 | 2431.2 | 2128.8 | 1933.2 | 1929.2 |
| 15°   | 7571.7  | 7382.2 | 6610.1 | 5386.4 | 3983.4 | 2783.9 | 1933.2 | 1499.8 | 1304.3 | 1241.8 | 1233.7 |
| 17.5° | 7759.1  | 7489.0 | 6398.4 | 4743.4 | 3037.9 | 1844.5 | 1261.9 | 1137.0 | 1128.9 | 1122.8 | 1122.8 |
| 20°   | 7995.0  | 7616.0 | 6126.3 | 4007.6 | 2155.0 | 1231.7 | 1072.5 | 1080.5 | 1084.5 | 1076.5 | 1078.5 |
| 22.5° | 8269.2  | 7745.0 | 5801.7 | 3217.4 | 1457.5 | 1030.1 | 1026.1 | 1036.2 | 1040.2 | 1036.2 | 1038.2 |
| 25°   | 8587.7  | 7894.2 | 5406.6 | 2388.8 | 1052.3 | 977.7  | 987.8  | 1001.9 | 1012.0 | 1012.0 | 1012.0 |
| 27.5° | 8982.8  | 8075.6 | 4930.9 | 1667.1 | 909.2  | 923.3  | 951.5  | 977.7  | 991.8  | 995.8  | 995.8  |
| 30°   | 9496.8  | 8301.4 | 4360.4 | 1143.0 | 826.5  | 850.7  | 903.1  | 953.5  | 979.7  | 983.8  | 985.8  |
| 32.5° | 10146.0 | 8555.4 | 3699.2 | 844.7  | 756.0  | 774.1  | 830.5  | 915.2  | 965.6  | 973.7  | 973.7  |
| 35°   | 10889.8 | 8849.7 | 2987.5 | 735.8  | 705.6  | 711.6  | 756.0  | 852.7  | 941.4  | 963.6  | 965.6  |
| 37.5° | 11704.2 | 9140.0 | 2271.9 | 687.4  | 663.2  | 663.2  | 695.5  | 778.1  | 883.0  | 951.5  | 959.6  |
| 40°   | 12464.2 | 9315.4 | 1592.6 | 649.1  | 624.9  | 624.9  | 653.1  | 713.6  | 812.4  | 915.2  | 937.4  |
| 42.5° | 13165.8 | 9375.9 | 1108.7 | 612.8  | 588.6  | 594.7  | 618.9  | 667.3  | 741.8  | 844.7  | 864.8  |
| 45°   | 13887.4 | 9365.8 | 808.4  | 570.5  | 552.4  | 570.5  | 588.6  | 624.9  | 679.4  | 737.8  | 741.8  |
| 47.5° | 14431.7 | 9281.1 | 641.1  | 530.2  | 518.1  | 542.3  | 558.4  | 582.6  | 612.8  | 608.8  | 608.8  |
| 50°   | 14941.7 | 9075.5 | 516.1  | 475.7  | 483.8  | 512.0  | 520.1  | 528.2  | 530.2  | 491.9  | 487.8  |
| 52.5° | 15328.8 | 8755.0 | 413.3  | 417.3  | 449.5  | 477.8  | 469.7  | 457.6  | 437.4  | 391.1  | 383.0  |
| 55°   | 15457.8 | 8138.1 | 324.6  | 344.7  | 399.1  | 435.4  | 405.2  | 379.0  | 340.7  | 302.4  | 294.3  |
| 57.5° | 15224.0 | 7341.9 | 264.1  | 268.1  | 336.7  | 366.9  | 332.6  | 302.4  | 260.0  | 227.8  | 221.7  |
| 60°   | 14728.1 | 6456.9 | 217.7  | 201.6  | 260.0  | 286.3  | 264.1  | 233.8  | 195.5  | 171.4  | 169.3  |
| 62.5° | 13744.3 | 5513.4 | 179.4  | 157.2  | 197.6  | 219.7  | 205.6  | 183.4  | 151.2  | 135.1  | 133.0  |
| 65°   | 11676.0 | 4410.8 | 145.1  | 127.0  | 153.2  | 171.4  | 159.3  | 143.1  | 118.9  | 106.8  | 104.8  |
| 67.5° | 8150.2  | 2981.5 | 118.9  | 104.8  | 121.0  | 135.1  | 125.0  | 116.9  | 94.7   | 92.7   | 94.7   |
| 70°   | 3931.0  | 1437.3 | 98.8   | 84.7   | 94.7   | 104.8  | 100.8  | 94.7   | 90.7   | 104.8  | 121.0  |
| 72.5° | 1126.9  | 481.8  | 78.6   | 70.6   | 76.6   | 82.7   | 86.7   | 84.7   | 98.8   | 127.0  | 147.2  |
| 73°   | 866.8   | 389.1  | 74.6   | 66.5   | 72.6   | 80.6   | 84.7   | 82.7   | 100.8  | 129.0  | 147.2  |
| 75°   | 370.9   | 187.5  | 56.4   | 54.4   | 60.5   | 70.6   | 74.6   | 74.6   | 100.8  | 131.0  | 141.1  |
| 77.5° | 167.3   | 100.8  | 36.3   | 42.3   | 52.4   | 56.4   | 62.5   | 62.5   | 80.6   | 100.8  | 100.8  |
| 80°   | 94.7    | 54.4   | 28.2   | 32.3   | 38.3   | 38.3   | 38.3   | 34.3   | 36.3   | 40.3   | 44.3   |
| 82.5° | 60.5    | 36.3   | 22.2   | 26.2   | 24.2   | 20.2   | 16.1   | 16.1   | 14.1   | 16.1   | 20.2   |
| 85°   | 34.3    | 20.2   | 20.2   | 16.1   | 10.1   | 8.1    | 10.1   | 8.1    | 2.0    | 0.0    | 2.0    |
| 87.5° | 20.2    | 12.1   | 6.0    | 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)