

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: P321188

Luminaire Tested: **GAN-SA4A-727-U-T2R-HSS**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P321188  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAN-SA4A-727-U-T2R-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 12690 lumens  
Efficiency: N/A  
Efficacy: 98.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G2

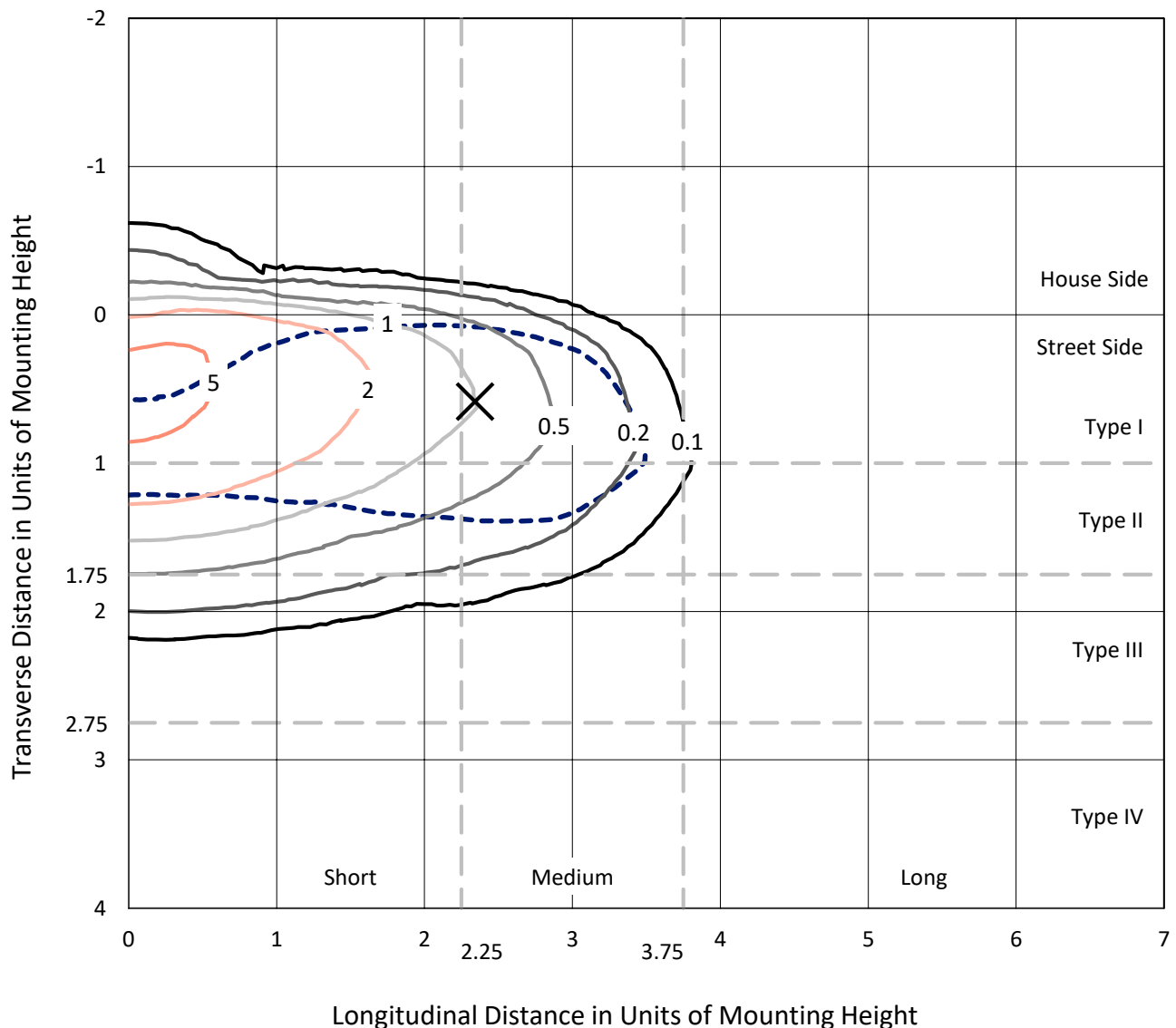
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

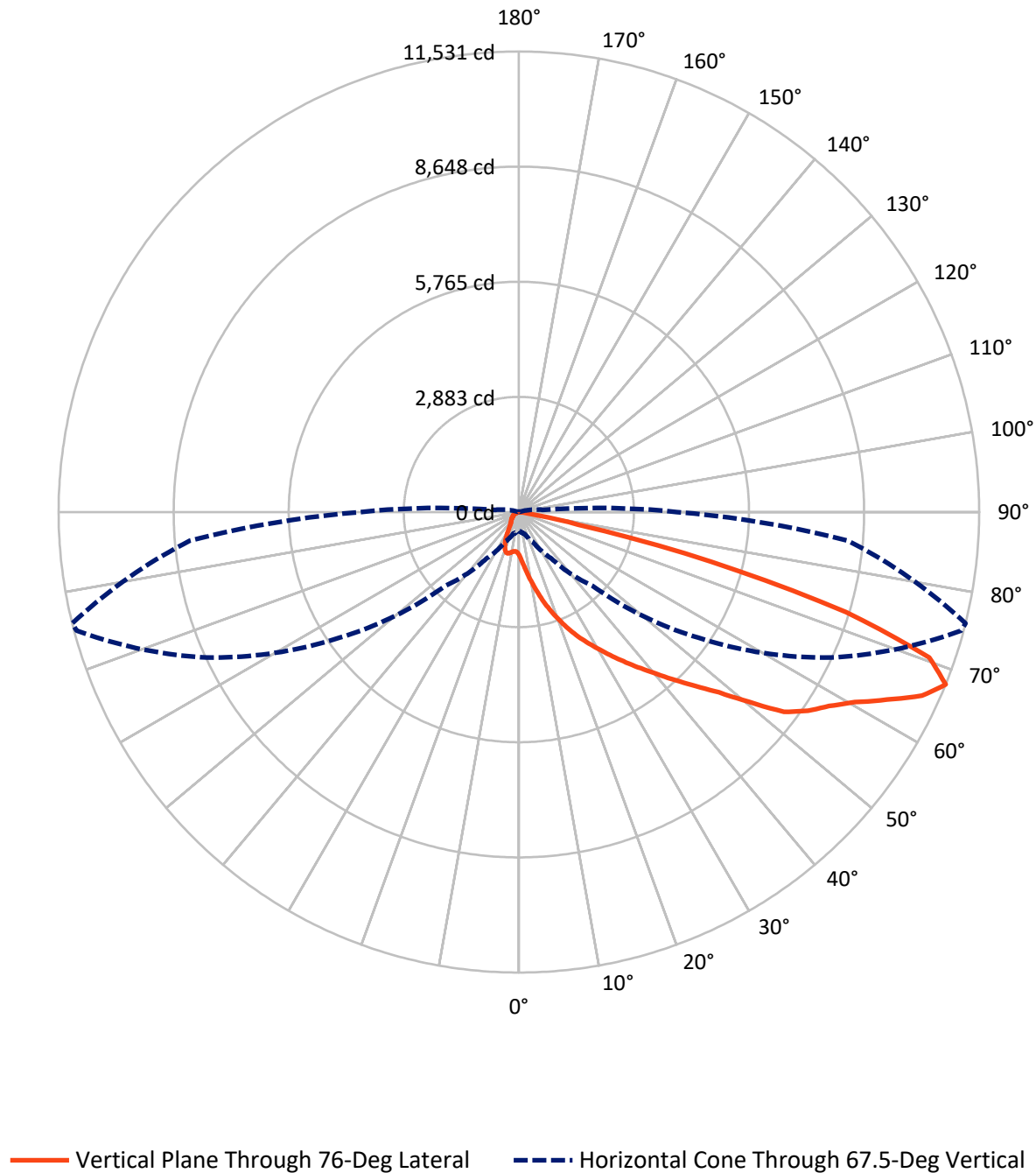
✕ Max cd  
 - - - 1/2 Max cd



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

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 630.2    | 0.0    | 630.2   |
|                    | % Fixture | 5.0      | 0.0    | 5.0     |
| <b>Street Side</b> | Lumens    | 12059.9  | 0.0    | 12059.9 |
|                    | % Fixture | 95.0     | 0.0    | 95.0    |
| <b>Total</b>       | Lumens    | 12690.0  | 0.0    | 12690.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 133.9   | 1.1       |
| 10°-20°   | 530.6   | 4.2       |
| 20°-30°   | 1079.7  | 8.5       |
| 30°-40°   | 1873.9  | 14.8      |
| 40°-50°   | 2647.7  | 20.9      |
| 50°-60°   | 3002.6  | 23.7      |
| 60°-70°   | 2490.3  | 19.6      |
| 70°-80°   | 902.1   | 7.1       |
| 80°-90°   | 29.3    | 0.2       |
| 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°    | 12690.0 | 100.0     |
| 0°-180°   | 12690.0 | 100.0     |

**Coefficient of Utilization**



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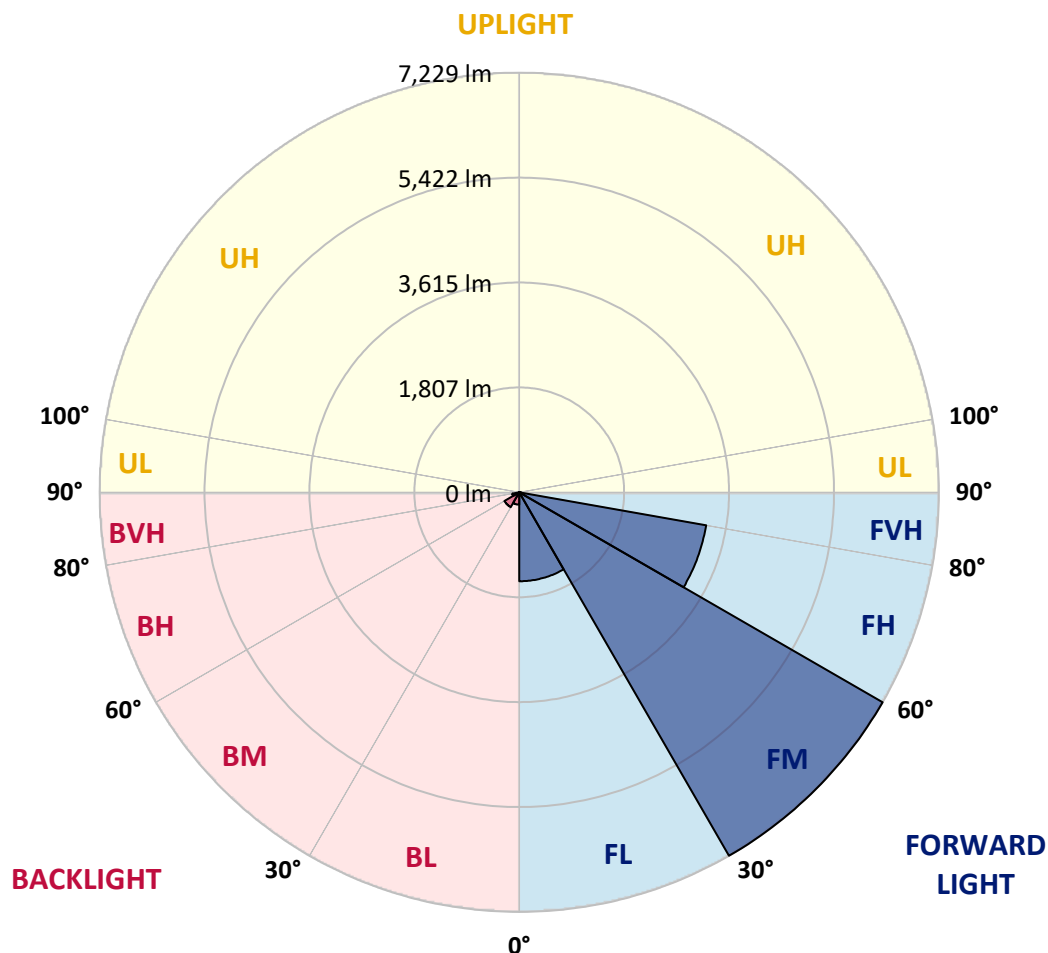
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1531.6 | 12.1      |                         |      |         |
| FM   | (30°-60°)   | 7229.2 | 57.0      |                         |      |         |
| FH   | (60°-80°)   | 3270.6 | 25.8      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 28.3   | 0.2       |                         |      | G1/100  |
| BL   | (0°-30°)    | 212.5  | 1.7       | B1/500                  |      |         |
| BM   | (30°-60°)   | 294.9  | 2.3       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 121.8  | 1.0       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 0.9    | 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-G2**

Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°     | 76°     | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|
| 0°    | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5  | 1076.5  | 1076.5 |
| 2.5°  | 1606.9 | 1570.8 | 1579.1 | 1555.8 | 1513.5 | 1426.8 | 1352.8 | 1282.8 | 1201.0  | 1198.3  | 1131.0 |
| 5°    | 2166.9 | 2136.3 | 2132.4 | 2085.1 | 2008.4 | 1861.0 | 1717.6 | 1554.1 | 1371.7  | 1358.4  | 1215.5 |
| 7.5°  | 2675.1 | 2650.6 | 2641.7 | 2585.6 | 2442.7 | 2299.2 | 2112.4 | 1872.2 | 1586.9  | 1562.5  | 1329.5 |
| 10°   | 3065.4 | 3053.7 | 3056.0 | 3015.9 | 2893.6 | 2760.1 | 2514.9 | 2208.6 | 1831.0  | 1793.2  | 1466.3 |
| 12.5° | 3361.2 | 3364.0 | 3384.0 | 3359.6 | 3291.2 | 3192.2 | 2930.3 | 2567.2 | 2101.2  | 2049.5  | 1622.5 |
| 15°   | 3578.6 | 3592.5 | 3629.2 | 3659.8 | 3654.8 | 3569.2 | 3329.0 | 2931.4 | 2388.2  | 2330.9  | 1796.5 |
| 17.5° | 3719.3 | 3734.9 | 3788.3 | 3856.1 | 3918.4 | 3898.3 | 3713.7 | 3282.8 | 2678.4  | 2612.2  | 1982.8 |
| 20°   | 3842.7 | 3861.1 | 3918.4 | 4007.9 | 4124.1 | 4149.1 | 4027.9 | 3623.7 | 2968.1  | 2887.5  | 2175.2 |
| 22.5° | 4110.2 | 4109.6 | 4144.7 | 4196.9 | 4307.6 | 4372.1 | 4295.4 | 3940.0 | 3254.5  | 3170.5  | 2371.5 |
| 25°   | 4593.9 | 4575.6 | 4563.4 | 4522.2 | 4546.7 | 4586.7 | 4543.9 | 4235.9 | 3542.5  | 3457.4  | 2570.5 |
| 27.5° | 5168.9 | 5180.0 | 5081.0 | 4970.4 | 4884.7 | 4843.6 | 4773.5 | 4510.0 | 3819.4  | 3726.0  | 2765.2 |
| 30°   | 5775.5 | 5778.8 | 5662.1 | 5520.8 | 5332.4 | 5176.1 | 5054.9 | 4771.9 | 4104.1  | 4002.3  | 2954.2 |
| 32.5° | 6322.6 | 6301.0 | 6185.3 | 5992.9 | 5754.9 | 5579.2 | 5327.4 | 5064.3 | 4405.4  | 4307.0  | 3164.4 |
| 35°   | 6756.4 | 6730.8 | 6590.1 | 6415.0 | 6168.1 | 5991.3 | 5688.2 | 5356.3 | 4722.4  | 4626.2  | 3375.1 |
| 37.5° | 7073.3 | 7043.3 | 6898.7 | 6718.5 | 6505.6 | 6402.7 | 6106.9 | 5673.8 | 5068.2  | 4964.8  | 3597.0 |
| 40°   | 7183.4 | 7157.3 | 7066.6 | 6934.8 | 6763.6 | 6740.2 | 6551.2 | 6039.1 | 5444.7  | 5334.6  | 3848.3 |
| 42.5° | 7117.8 | 7092.2 | 7059.9 | 7015.5 | 6944.3 | 6966.5 | 6970.4 | 6455.5 | 5862.8  | 5754.4  | 4125.8 |
| 45°   | 6857.6 | 6834.8 | 6868.1 | 6933.2 | 7021.6 | 7131.7 | 7353.0 | 6903.1 | 6329.9  | 6214.2  | 4446.6 |
| 47.5° | 6474.4 | 6457.8 | 6550.1 | 6712.4 | 6971.0 | 7274.6 | 7702.7 | 7373.6 | 6854.2  | 6746.9  | 4846.9 |
| 50°   | 5929.5 | 5926.8 | 6111.4 | 6407.7 | 6805.3 | 7343.5 | 8064.1 | 7908.5 | 7582.6  | 7469.7  | 5403.5 |
| 52.5° | 5081.0 | 5086.6 | 5449.7 | 5924.0 | 6514.5 | 7296.8 | 8296.6 | 8595.7 | 8430.0  | 8312.7  | 5885.6 |
| 55°   | 4273.1 | 4306.5 | 4563.9 | 5247.8 | 6068.5 | 7123.3 | 8376.6 | 8916.5 | 8897.6  | 8786.4  | 6153.6 |
| 57.5° | 3481.9 | 3542.5 | 3790.5 | 4429.4 | 5417.4 | 6723.5 | 8332.7 | 9055.6 | 9245.7  | 9160.6  | 6507.3 |
| 60°   | 2624.5 | 2652.3 | 2938.1 | 3535.3 | 4581.7 | 5994.0 | 8014.1 | 9131.2 | 9721.7  | 9662.7  | 7020.5 |
| 62.5° | 1669.8 | 1739.3 | 1992.8 | 2568.9 | 3567.5 | 4980.9 | 7477.0 | 9130.1 | 10317.2 | 10349.4 | 7682.7 |
| 65°   | 879.6  | 960.8  | 1095.4 | 1591.9 | 2451.5 | 3849.4 | 6669.1 | 9044.4 | 11047.8 | 11092.9 | 8200.4 |
| 67.5° | 474.3  | 497.6  | 568.8  | 826.3  | 1421.8 | 2607.8 | 5481.9 | 8621.8 | 11471.0 | 11530.5 | 8272.7 |
| 70°   | 347.0  | 359.8  | 386.4  | 457.1  | 715.6  | 1514.6 | 4000.1 | 7663.8 | 10925.5 | 10903.2 | 7350.2 |
| 72.5° | 266.3  | 286.4  | 306.4  | 334.7  | 411.5  | 808.5  | 2490.5 | 6001.3 | 8717.5  | 8570.7  | 5494.2 |
| 75°   | 210.2  | 213.5  | 241.9  | 267.5  | 308.6  | 460.4  | 1105.9 | 3495.2 | 5320.7  | 4973.2  | 2849.1 |
| 77.5° | 167.9  | 170.1  | 186.8  | 209.1  | 248.0  | 302.5  | 342.5  | 1375.1 | 1698.7  | 1515.7  | 618.3  |
| 80°   | 99.5   | 105.1  | 139.0  | 161.2  | 205.7  | 190.7  | 125.1  | 298.6  | 265.2   | 240.2   | 104.0  |
| 82.5° | 55.6   | 60.1   | 78.4   | 127.3  | 143.5  | 91.2   | 62.3   | 80.6   | 62.3    | 60.6    | 29.5   |
| 85°   | 0.0    | 2.8    | 50.6   | 79.0   | 58.4   | 20.0   | 26.1   | 26.7   | 18.3    | 17.2    | 11.7   |
| 87.5° | 0.0    | 0.0    | 15.6   | 15.0   | 2.2    | 3.3    | 6.1    | 8.9    | 7.2     | 7.2     | 6.1    |
| 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°    | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5 | 1076.5 |
| 2.5°  | 1097.6 | 1067.6 | 1010.9 | 955.3  | 908.6  | 870.2  | 835.7  | 821.8  | 810.7  | 809.0  | 800.1  |
| 5°    | 1146.5 | 1085.9 | 977.5  | 888.5  | 829.0  | 786.8  | 750.6  | 728.4  | 711.2  | 704.5  | 698.4  |
| 7.5°  | 1220.5 | 1128.7 | 973.1  | 870.7  | 799.6  | 728.4  | 661.7  | 589.4  | 544.4  | 527.1  | 517.1  |
| 10°   | 1310.6 | 1185.5 | 989.7  | 865.7  | 741.2  | 591.1  | 480.4  | 388.7  | 351.4  | 339.2  | 335.8  |
| 12.5° | 1415.7 | 1256.1 | 1018.7 | 834.6  | 616.6  | 419.8  | 331.4  | 300.3  | 291.9  | 288.0  | 288.0  |
| 15°   | 1536.3 | 1333.4 | 1039.2 | 744.5  | 455.9  | 317.5  | 286.9  | 272.5  | 263.6  | 258.6  | 259.1  |
| 17.5° | 1659.8 | 1409.0 | 1029.2 | 613.9  | 336.4  | 282.5  | 259.7  | 244.1  | 231.9  | 226.9  | 225.7  |
| 20°   | 1784.3 | 1479.0 | 973.6  | 457.1  | 284.7  | 256.3  | 230.8  | 213.5  | 201.3  | 196.3  | 195.2  |
| 22.5° | 1913.3 | 1538.5 | 875.8  | 335.3  | 255.8  | 227.4  | 202.4  | 185.2  | 173.5  | 169.0  | 166.8  |
| 25°   | 2039.0 | 1586.9 | 739.0  | 271.3  | 228.5  | 200.2  | 176.3  | 160.1  | 149.6  | 145.1  | 144.6  |
| 27.5° | 2156.3 | 1617.5 | 580.5  | 239.7  | 204.6  | 175.7  | 154.0  | 139.6  | 130.7  | 127.3  | 126.8  |
| 30°   | 2261.9 | 1620.3 | 429.3  | 216.3  | 183.5  | 154.6  | 134.6  | 121.8  | 114.0  | 110.7  | 109.5  |
| 32.5° | 2368.7 | 1596.9 | 312.5  | 195.2  | 164.0  | 136.2  | 116.8  | 106.8  | 101.2  | 98.4   | 98.4   |
| 35°   | 2469.3 | 1543.0 | 243.5  | 176.8  | 145.1  | 118.4  | 102.9  | 95.6   | 92.3   | 89.5   | 89.5   |
| 37.5° | 2567.8 | 1465.7 | 206.8  | 160.7  | 127.3  | 103.4  | 90.6   | 86.2   | 83.4   | 80.6   | 80.6   |
| 40°   | 2667.8 | 1368.4 | 187.9  | 145.7  | 112.9  | 91.7   | 80.6   | 76.7   | 74.0   | 71.7   | 71.2   |
| 42.5° | 2790.7 | 1256.1 | 175.7  | 131.8  | 100.1  | 81.2   | 71.2   | 66.7   | 64.5   | 62.3   | 61.2   |
| 45°   | 2933.1 | 1159.3 | 165.7  | 117.9  | 89.5   | 72.3   | 61.7   | 57.3   | 53.9   | 51.2   | 50.6   |
| 47.5° | 3138.2 | 1089.3 | 152.4  | 102.9  | 79.5   | 62.8   | 53.4   | 48.4   | 43.4   | 40.6   | 40.0   |
| 50°   | 3400.1 | 1031.4 | 135.1  | 89.5   | 69.5   | 53.4   | 44.5   | 38.4   | 33.9   | 31.1   | 31.1   |
| 52.5° | 3530.3 | 955.8  | 119.5  | 77.8   | 58.4   | 45.0   | 36.1   | 28.9   | 26.7   | 23.9   | 23.9   |
| 55°   | 3582.5 | 898.0  | 104.0  | 66.2   | 48.4   | 37.3   | 28.4   | 22.2   | 20.6   | 18.9   | 18.3   |
| 57.5° | 3729.3 | 881.3  | 90.6   | 56.2   | 40.0   | 29.5   | 21.7   | 16.7   | 15.6   | 13.3   | 13.3   |
| 60°   | 3965.6 | 889.7  | 78.4   | 47.8   | 32.2   | 22.8   | 16.1   | 12.8   | 11.7   | 9.5    | 9.5    |
| 62.5° | 4220.8 | 879.1  | 66.2   | 41.1   | 25.0   | 16.7   | 11.1   | 9.5    | 9.5    | 5.6    | 5.0    |
| 65°   | 4269.8 | 782.9  | 56.7   | 33.9   | 19.5   | 12.2   | 7.2    | 6.1    | 8.3    | 1.1    | 0.0    |
| 67.5° | 3962.8 | 607.2  | 48.9   | 26.1   | 14.5   | 9.5    | 5.6    | 2.8    | 7.2    | 0.0    | 0.0    |
| 70°   | 3168.8 | 385.9  | 39.5   | 18.9   | 11.1   | 7.8    | 4.4    | 1.1    | 5.6    | 0.0    | 0.0    |
| 72.5° | 2240.8 | 224.1  | 31.1   | 13.3   | 9.5    | 6.1    | 3.3    | 0.0    | 3.3    | 0.0    | 0.0    |
| 75°   | 1133.2 | 119.5  | 19.5   | 10.0   | 7.2    | 4.4    | 2.2    | 0.0    | 0.6    | 0.0    | 0.0    |
| 77.5° | 245.2  | 55.6   | 12.2   | 7.2    | 5.0    | 2.8    | 1.1    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 53.4   | 24.5   | 7.8    | 4.4    | 2.8    | 1.7    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 19.5   | 12.8   | 3.9    | 2.2    | 1.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 10.6   | 6.7    | 2.2    | 1.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 5.6    | 2.2    | 0.6    | 0.6    | 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)