

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: P299995

Luminaire Tested: **GAA-AF-04-LED-U-SL3-7060-HSS**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P299995  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194479)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAA-AF-04-LED-U-SL3-7060-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI  
5700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III w/Spill  
Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 18633.7 lumens  
Efficiency: N/A  
Efficacy: 82.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 225  
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: 28.75 FT

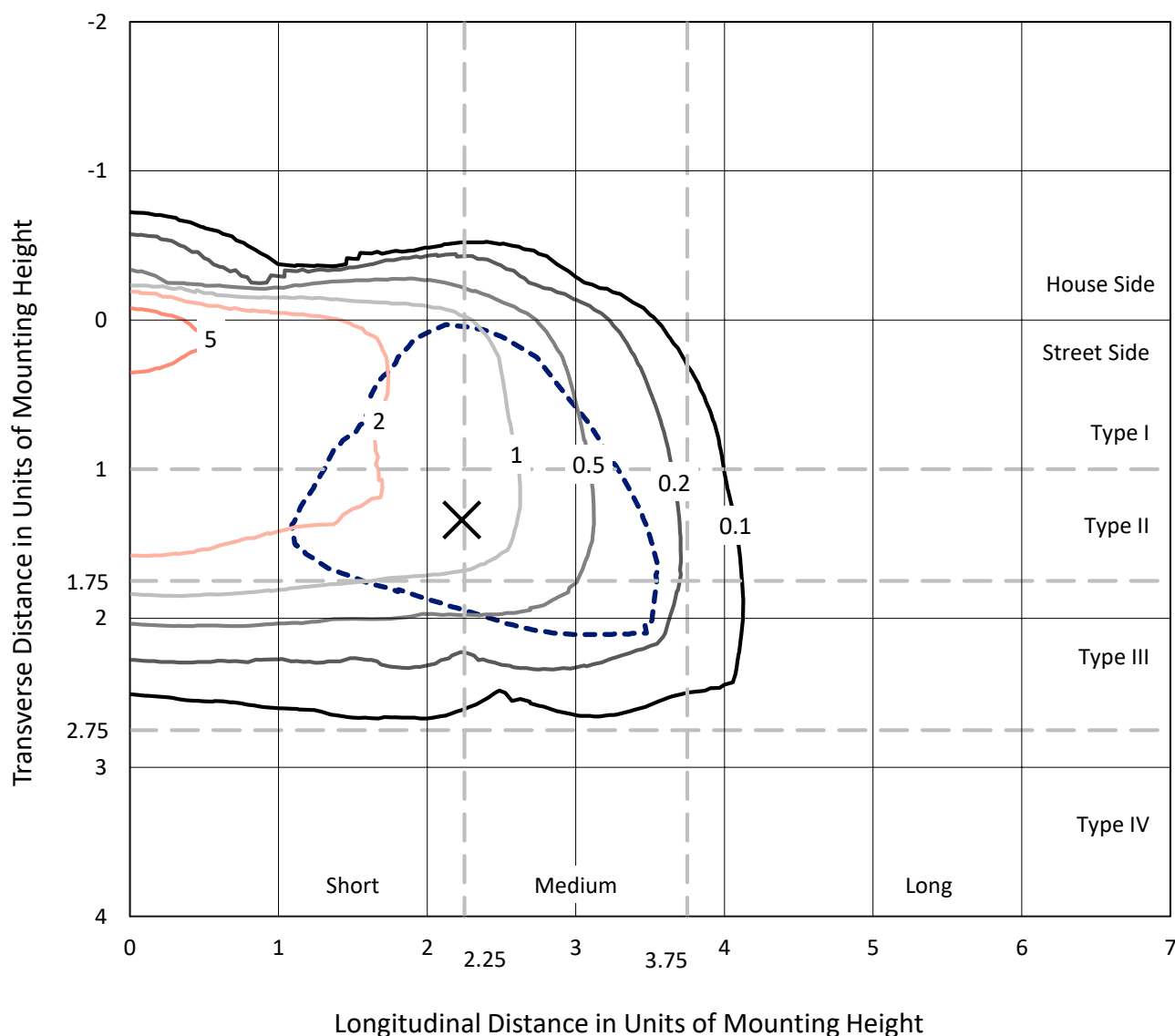


REPORT NUMBER: P299995

CATALOG NUMBER: GAA-AF-04-LED-U-SL3-7060-HSS

## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

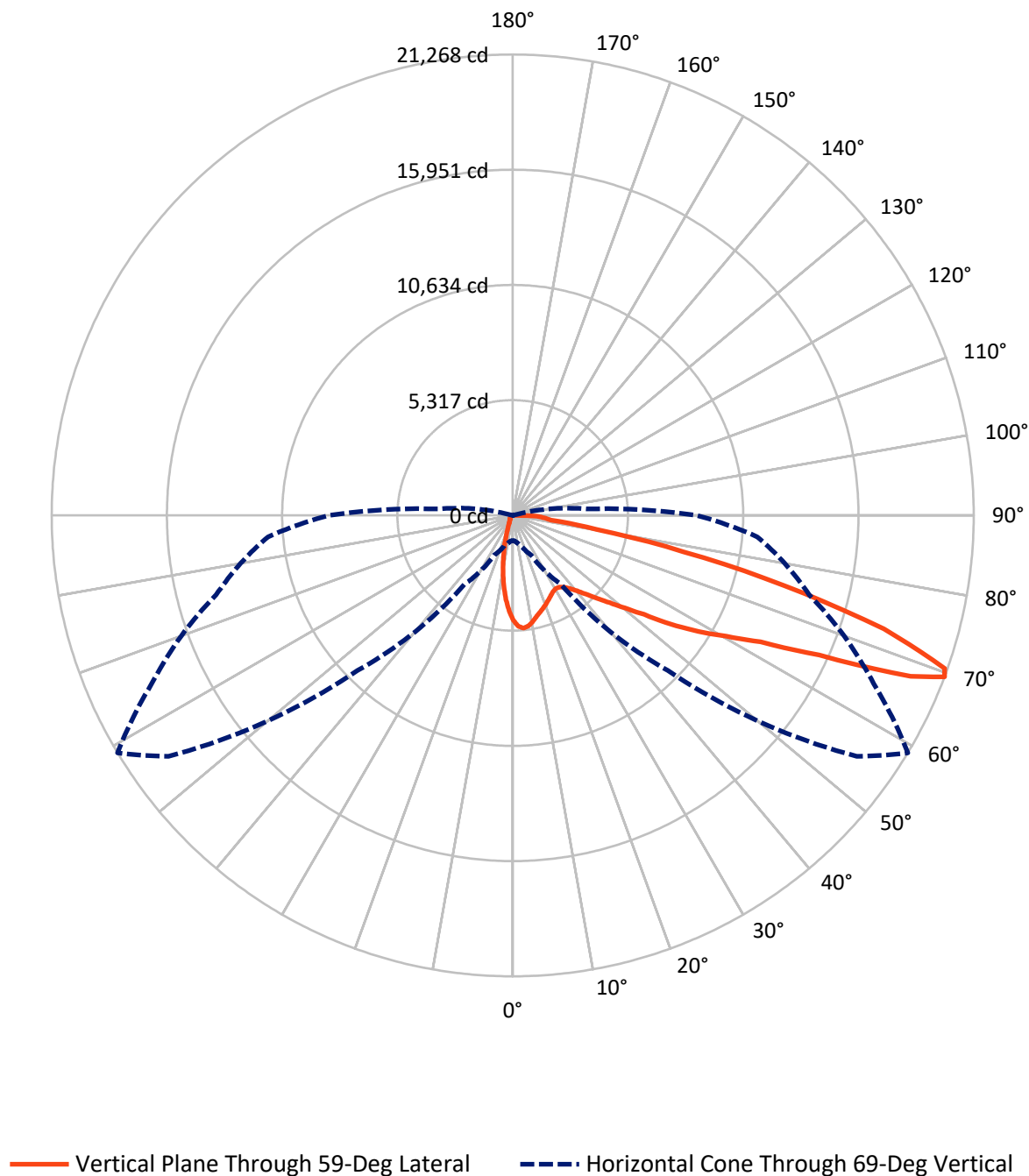


Based on 25 foot mounting height. Maximum calculated value = 7.8 fc  
 Type III - Short - Non-Cutoff

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1517.5   | 0.0    | 1517.5  |
|                    | % Fixture | 8.1      | 0.0    | 8.1     |
| <b>Street Side</b> | Lumens    | 17116.2  | 0.0    | 17116.2 |
|                    | % Fixture | 91.9     | 0.0    | 91.9    |
| <b>Total</b>       | Lumens    | 18633.7  | 0.0    | 18633.7 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 393.7   | 2.1       |
| 10°-20°   | 813.5   | 4.4       |
| 20°-30°   | 1094.6  | 5.9       |
| 30°-40°   | 1589.3  | 8.5       |
| 40°-50°   | 2646.3  | 14.2      |
| 50°-60°   | 4128.2  | 22.2      |
| 60°-70°   | 5108.4  | 27.4      |
| 70°-80°   | 2588.9  | 13.9      |
| 80°-90°   | 270.9   | 1.5       |
| 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°    | 18633.7 | 100.0     |
| 0°-180°   | 18633.7 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P299995

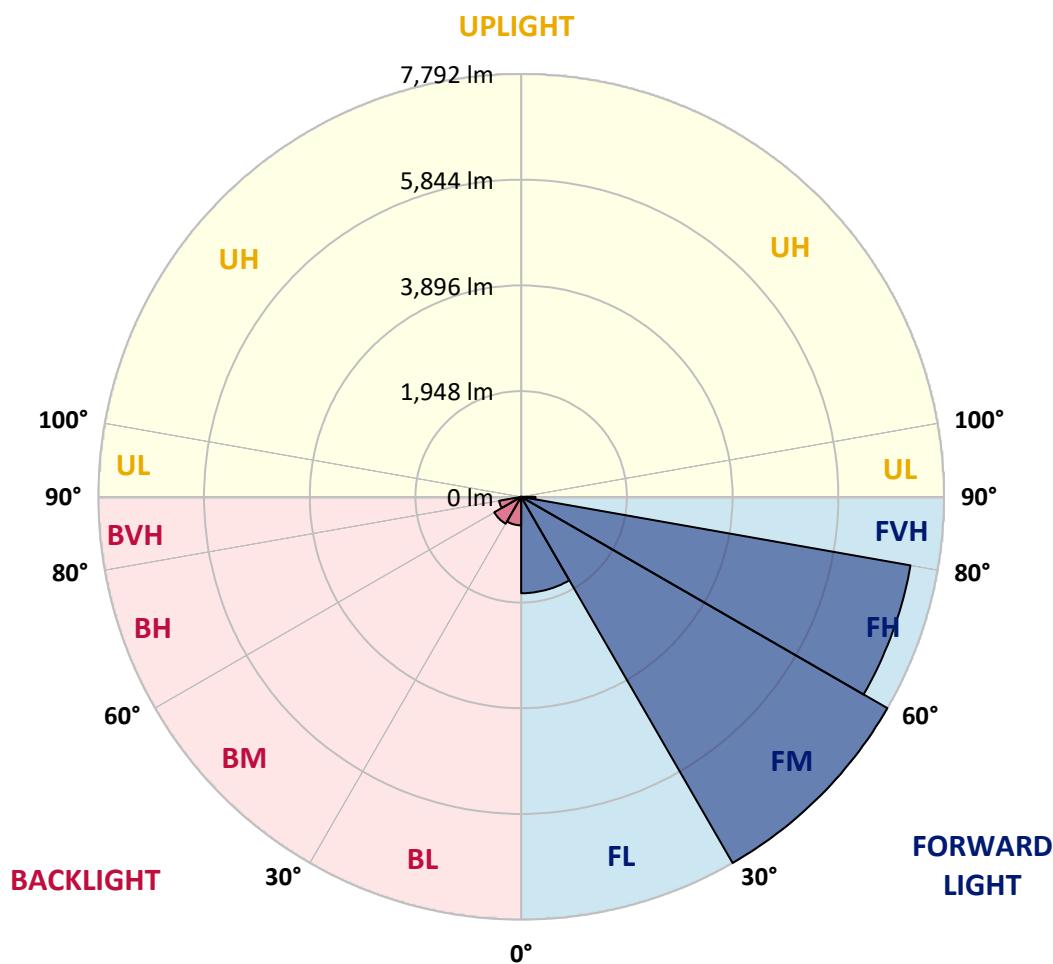
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1776.5 | 9.5       |                         |      |         |
| FM   | (30°-60°)   | 7792.1 | 41.8      |                         |      |         |
| FH   | (60°-80°)   | 7285.1 | 39.1      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 262.5  | 1.4       |                         |      | G3/500  |
| BL   | (0°-30°)    | 525.2  | 2.8       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 571.8  | 3.1       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 412.1  | 2.2       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 8.3    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°     | 45°     | 55°     | 59°     | 65°     | 75°     | 85°     |
|-------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4850.0 | 4850.0 | 4850.0 | 4850.0 | 4850.0  | 4850.0  | 4850.0  | 4850.0  | 4850.0  | 4850.0  | 4850.0  |
| 2.5°  | 5315.8 | 5313.8 | 5290.5 | 5280.0 | 5260.9  | 5221.0  | 5158.8  | 5126.3  | 5073.6  | 4981.7  | 4858.6  |
| 5°    | 5267.3 | 5292.8 | 5306.2 | 5307.5 | 5321.2  | 5306.2  | 5250.4  | 5223.2  | 5150.5  | 5002.8  | 4781.7  |
| 7.5°  | 4938.7 | 4947.9 | 4987.2 | 5020.7 | 5086.1  | 5148.3  | 5168.4  | 5156.6  | 5113.5  | 4955.6  | 4661.5  |
| 10°   | 4586.8 | 4596.1 | 4642.6 | 4686.7 | 4775.3  | 4871.0  | 4972.2  | 4993.5  | 5011.4  | 4888.0  | 4545.6  |
| 12.5° | 4283.1 | 4292.7 | 4340.2 | 4397.9 | 4501.3  | 4619.3  | 4776.3  | 4811.1  | 4890.2  | 4823.8  | 4452.8  |
| 15°   | 4021.8 | 4026.0 | 4072.5 | 4144.0 | 4267.5  | 4419.0  | 4597.3  | 4653.2  | 4774.4  | 4778.5  | 4371.8  |
| 17.5° | 3799.5 | 3810.0 | 3838.7 | 3907.0 | 4041.9  | 4229.5  | 4437.2  | 4517.3  | 4659.2  | 4740.6  | 4292.7  |
| 20°   | 3663.6 | 3674.1 | 3673.1 | 3711.1 | 3832.3  | 4032.4  | 4277.0  | 4372.7  | 4545.6  | 4701.6  | 4222.2  |
| 22.5° | 3637.4 | 3637.4 | 3610.0 | 3604.6 | 3676.3  | 3843.8  | 4110.5  | 4227.3  | 4443.2  | 4684.7  | 4172.7  |
| 25°   | 3731.2 | 3726.7 | 3658.5 | 3602.6 | 3605.8  | 3705.7  | 3949.1  | 4088.2  | 4357.1  | 4696.2  | 4146.2  |
| 27.5° | 3929.3 | 3923.9 | 3837.4 | 3731.2 | 3645.7  | 3644.7  | 3826.9  | 3976.5  | 4288.5  | 4751.1  | 4156.8  |
| 30°   | 4203.0 | 4201.1 | 4107.3 | 3973.3 | 3818.6  | 3676.3  | 3784.8  | 3920.7  | 4244.2  | 4850.0  | 4181.0  |
| 32.5° | 4502.3 | 4499.1 | 4428.6 | 4287.6 | 4091.4  | 3818.6  | 3829.1  | 3943.0  | 4256.9  | 4981.7  | 4240.0  |
| 35°   | 4819.7 | 4814.3 | 4783.6 | 4660.5 | 4444.5  | 4080.8  | 3974.6  | 4063.0  | 4337.0  | 5178.9  | 4355.8  |
| 37.5° | 5162.9 | 5168.4 | 5190.4 | 5072.3 | 4845.8  | 4448.7  | 4218.0  | 4278.0  | 4498.1  | 5446.5  | 4544.4  |
| 40°   | 5669.9 | 5668.9 | 5676.2 | 5521.2 | 5303.3  | 4898.5  | 4558.1  | 4577.2  | 4768.0  | 5801.6  | 4831.2  |
| 42.5° | 6589.6 | 6525.5 | 6330.5 | 6014.4 | 5795.2  | 5412.7  | 4987.2  | 4967.1  | 5097.9  | 6240.9  | 5232.5  |
| 45°   | 7825.8 | 7688.6 | 7182.9 | 6577.1 | 6296.7  | 5992.4  | 5514.8  | 5450.7  | 5534.0  | 6768.9  | 5727.9  |
| 47.5° | 8888.7 | 8746.4 | 8031.2 | 7162.9 | 6828.8  | 6542.4  | 6133.4  | 6017.6  | 6045.0  | 7360.0  | 6355.7  |
| 50°   | 9250.2 | 9180.6 | 8556.0 | 7673.0 | 7344.1  | 7234.6  | 6851.2  | 6709.8  | 6670.9  | 8043.7  | 7083.7  |
| 52.5° | 9124.8 | 9119.7 | 8703.4 | 8003.8 | 7816.2  | 7951.1  | 7754.0  | 7590.6  | 7447.4  | 8764.6  | 7824.5  |
| 55°   | 8923.5 | 8950.0 | 8763.4 | 8293.4 | 8287.1  | 8605.4  | 8988.9  | 8853.0  | 8438.0  | 9547.5  | 8463.2  |
| 57.5° | 8368.4 | 8481.0 | 8729.9 | 8841.5 | 9100.5  | 9426.3  | 10017.4 | 10097.5 | 9606.5  | 10146.9 | 8993.0  |
| 60°   | 6789.9 | 7037.5 | 7851.0 | 8920.3 | 10149.2 | 10960.4 | 11258.7 | 11327.0 | 10565.1 | 10645.2 | 9708.6  |
| 62.5° | 4819.7 | 5072.3 | 6104.0 | 7913.2 | 10164.8 | 12975.9 | 13107.7 | 12839.1 | 11621.1 | 11384.1 | 10942.5 |
| 65°   | 2558.2 | 2753.4 | 3596.3 | 5712.0 | 8813.1  | 13443.9 | 16341.6 | 15540.8 | 13483.8 | 12836.9 | 12536.7 |
| 67.5° | 1308.6 | 1367.6 | 1702.9 | 2795.5 | 6058.7  | 11941.4 | 19240.1 | 19803.8 | 16694.4 | 14278.5 | 12459.8 |
| 69°   | 1158.0 | 1192.8 | 1415.2 | 2021.0 | 3879.5  | 10114.4 | 19381.5 | 21267.5 | 18375.3 | 14158.2 | 11322.8 |
| 70°   | 1121.0 | 1151.6 | 1353.9 | 1829.2 | 3032.6  | 8482.0  | 18840.7 | 21138.9 | 18805.0 | 13701.1 | 10473.6 |
| 72.5° | 951.6  | 977.8  | 1205.6 | 1616.5 | 2464.7  | 4210.4  | 15304.8 | 17912.7 | 16874.6 | 11413.4 | 7581.1  |
| 75°   | 636.4  | 722.9  | 1157.1 | 1515.3 | 2292.8  | 2392.0  | 10090.1 | 12944.4 | 12024.6 | 7698.2  | 3949.1  |
| 77.5° | 152.8  | 164.3  | 326.7  | 1205.6 | 2096.9  | 2105.2  | 5189.4  | 8046.8  | 6563.4  | 2743.9  | 933.4   |
| 80°   | 82.3   | 79.1   | 91.6   | 239.3  | 1952.4  | 1975.7  | 2336.1  | 3906.0  | 2343.5  | 455.2   | 307.5   |
| 82.5° | 58.1   | 54.9   | 59.0   | 100.2  | 614.4   | 1799.6  | 1690.1  | 1768.0  | 971.4   | 174.8   | 138.1   |
| 85°   | 21.1   | 20.1   | 32.5   | 90.6   | 192.7   | 1034.6  | 1736.4  | 1458.2  | 787.0   | 80.1    | 101.1   |
| 87.5° | 7.3    | 6.4    | 12.8   | 49.4   | 59.0    | 440.6   | 1071.6  | 1102.2  | 309.8   | 48.5    | 47.5    |
| 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°    | 4850.0  | 4850.0 | 4850.0 | 4850.0 | 4850.0 | 4850.0 | 4850.0 | 4850.0 | 4850.0 | 4850.0 | 4850.0 |
| 2.5°  | 4806.9  | 4741.5 | 4621.6 | 4498.1 | 4384.2 | 4247.4 | 4178.8 | 4111.5 | 4083.1 | 4072.5 | 4023.1 |
| 5°    | 4667.8  | 4557.1 | 4302.2 | 4046.1 | 3810.0 | 3559.3 | 3394.0 | 3261.3 | 3183.1 | 3145.2 | 3085.2 |
| 7.5°  | 4489.8  | 4308.6 | 3921.7 | 3526.7 | 3158.9 | 2796.5 | 2527.9 | 2321.2 | 2178.9 | 2110.6 | 2048.4 |
| 10°   | 4316.9  | 4075.7 | 3525.8 | 2987.3 | 2487.7 | 2007.2 | 1636.2 | 1367.6 | 1196.0 | 1116.9 | 1066.5 |
| 12.5° | 4162.2  | 3849.2 | 3143.3 | 2461.5 | 1834.3 | 1271.9 | 894.5  | 680.8  | 574.2  | 537.2  | 519.4  |
| 15°   | 4024.1  | 3640.6 | 2781.8 | 1961.9 | 1242.2 | 727.0  | 489.1  | 416.3  | 399.4  | 399.4  | 397.2  |
| 17.5° | 3893.3  | 3436.1 | 2432.8 | 1493.0 | 779.7  | 444.7  | 372.0  | 362.4  | 362.4  | 366.5  | 366.5  |
| 20°   | 3767.9  | 3241.2 | 2095.6 | 1071.6 | 491.0  | 352.8  | 336.2  | 334.0  | 336.2  | 341.3  | 341.3  |
| 22.5° | 3660.4  | 3064.1 | 1780.7 | 735.3  | 364.6  | 318.1  | 309.8  | 306.6  | 307.5  | 310.7  | 313.0  |
| 25°   | 3580.3  | 2914.5 | 1483.7 | 498.3  | 313.9  | 289.7  | 280.4  | 275.0  | 270.8  | 270.8  | 272.8  |
| 27.5° | 3529.9  | 2788.2 | 1196.0 | 362.4  | 282.3  | 263.5  | 248.5  | 240.2  | 230.6  | 225.5  | 227.5  |
| 30°   | 3492.9  | 2667.9 | 926.1  | 296.0  | 253.0  | 233.8  | 215.0  | 201.3  | 187.6  | 181.2  | 183.4  |
| 32.5° | 3479.2  | 2570.9 | 692.3  | 261.3  | 226.5  | 205.4  | 182.2  | 164.3  | 149.6  | 144.2  | 145.5  |
| 35°   | 3516.2  | 2494.1 | 506.9  | 236.1  | 205.4  | 179.0  | 152.8  | 132.7  | 121.2  | 118.0  | 119.0  |
| 37.5° | 3613.2  | 2452.9 | 379.3  | 215.0  | 186.6  | 157.0  | 127.6  | 108.5  | 101.1  | 101.1  | 102.1  |
| 40°   | 3796.3  | 2452.0 | 304.7  | 200.3  | 169.7  | 135.9  | 105.3  | 91.6   | 87.4   | 89.6   | 90.6   |
| 42.5° | 4063.9  | 2507.8 | 265.4  | 186.6  | 155.0  | 115.8  | 87.4   | 77.8   | 76.9   | 79.1   | 80.1   |
| 45°   | 4429.5  | 2609.9 | 244.4  | 174.8  | 139.1  | 97.0   | 73.7   | 67.3   | 67.3   | 70.5   | 71.8   |
| 47.5° | 4877.4  | 2759.5 | 226.5  | 163.3  | 123.1  | 81.0   | 63.2   | 59.0   | 60.0   | 63.2   | 64.1   |
| 50°   | 5416.9  | 2948.3 | 208.6  | 150.6  | 111.7  | 67.3   | 54.9   | 51.7   | 52.6   | 56.8   | 58.1   |
| 52.5° | 6031.3  | 3202.3 | 194.0  | 139.1  | 97.0   | 55.8   | 46.3   | 44.3   | 46.3   | 50.7   | 51.7   |
| 55°   | 6558.0  | 3429.7 | 176.1  | 129.5  | 77.8   | 46.3   | 38.0   | 38.0   | 40.2   | 45.3   | 46.3   |
| 57.5° | 7064.9  | 3667.7 | 160.1  | 111.7  | 61.3   | 37.0   | 31.6   | 32.5   | 35.7   | 41.2   | 42.1   |
| 60°   | 7808.9  | 4071.3 | 141.3  | 93.8   | 46.3   | 29.3   | 26.5   | 27.4   | 31.6   | 37.0   | 38.0   |
| 62.5° | 9072.2  | 4685.7 | 122.2  | 77.8   | 35.7   | 23.3   | 21.1   | 23.3   | 28.4   | 34.8   | 35.7   |
| 65°   | 10212.3 | 4935.5 | 100.2  | 65.4   | 27.4   | 17.9   | 17.9   | 21.1   | 27.4   | 33.8   | 34.8   |
| 67.5° | 9576.8  | 4154.5 | 77.8   | 51.7   | 21.1   | 13.7   | 14.7   | 20.1   | 26.5   | 33.8   | 34.8   |
| 69°   | 8469.5  | 3397.2 | 66.4   | 41.2   | 17.9   | 12.8   | 13.7   | 20.1   | 26.5   | 32.5   | 33.8   |
| 70°   | 7606.6  | 2868.3 | 59.0   | 34.8   | 16.0   | 12.8   | 13.7   | 18.8   | 26.5   | 32.5   | 33.8   |
| 72.5° | 5094.7  | 1548.8 | 47.5   | 25.2   | 14.7   | 11.5   | 11.5   | 18.8   | 25.2   | 31.6   | 32.5   |
| 75°   | 2189.4  | 427.8  | 38.0   | 17.9   | 12.8   | 10.5   | 10.5   | 17.9   | 24.2   | 30.6   | 32.5   |
| 77.5° | 400.4   | 108.5  | 30.6   | 16.0   | 12.8   | 10.5   | 9.6    | 16.9   | 23.3   | 29.3   | 30.6   |
| 80°   | 159.2   | 53.6   | 24.2   | 13.7   | 11.5   | 9.6    | 8.3    | 16.0   | 22.0   | 28.4   | 29.3   |
| 82.5° | 96.0    | 30.6   | 20.1   | 12.8   | 11.5   | 8.3    | 7.3    | 13.7   | 21.1   | 27.4   | 28.4   |
| 85°   | 77.8    | 21.1   | 16.0   | 12.8   | 10.5   | 8.3    | 6.4    | 12.8   | 18.8   | 26.5   | 27.4   |
| 87.5° | 38.0    | 14.7   | 14.7   | 11.5   | 10.5   | 8.3    | 6.4    | 11.5   | 17.9   | 25.2   | 26.5   |
| 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)