

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: P299744

Luminaire Tested: **GAA-AF-09-LED-U-SL2-7030-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299744  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24287)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAA-AF-09-LED-U-SL2-7030-600-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 3000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 25512.4 lumens  
Efficiency: N/A  
Efficacy: 88.0 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G4  
  
Input Watts (W): 290  
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

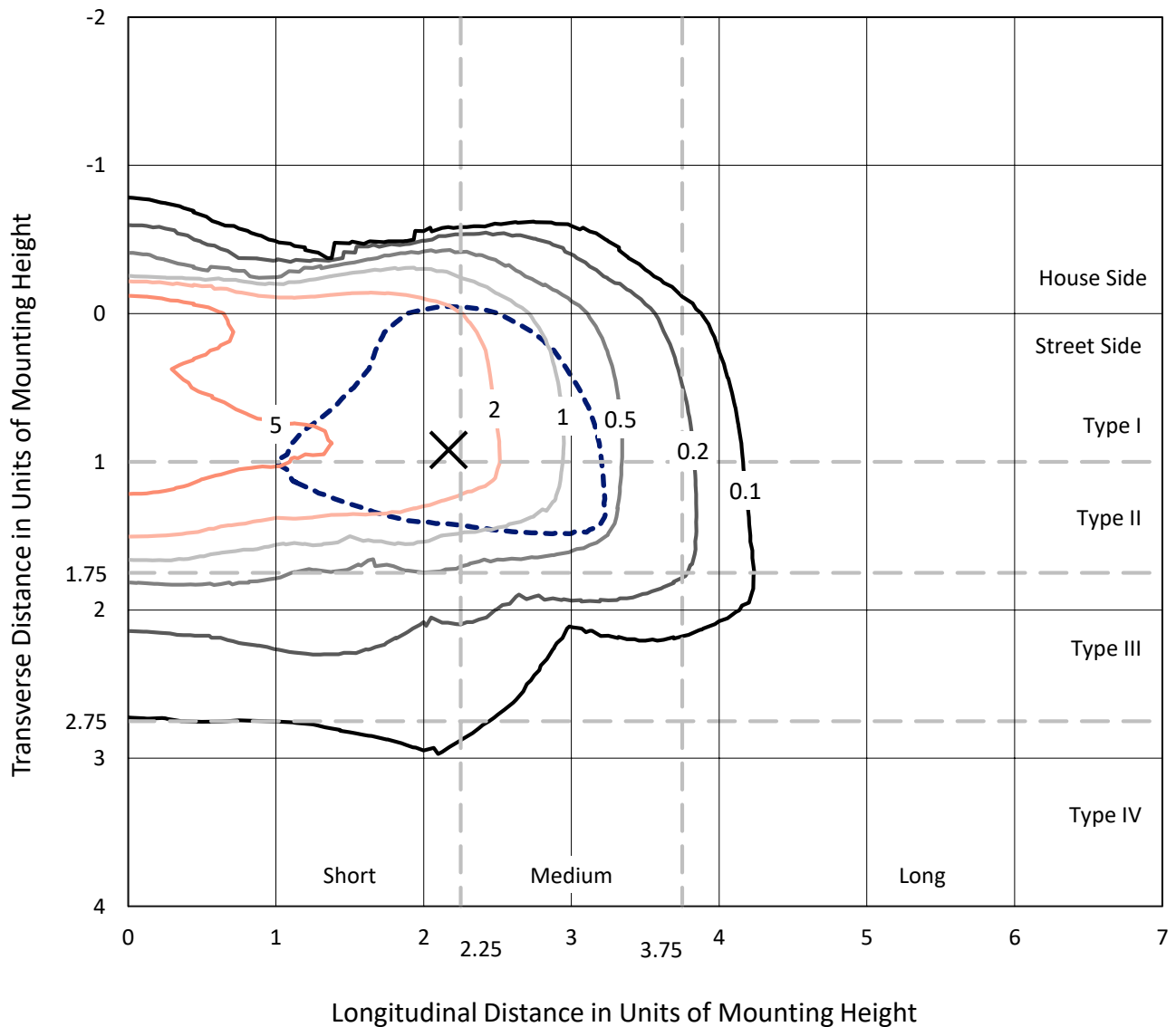


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

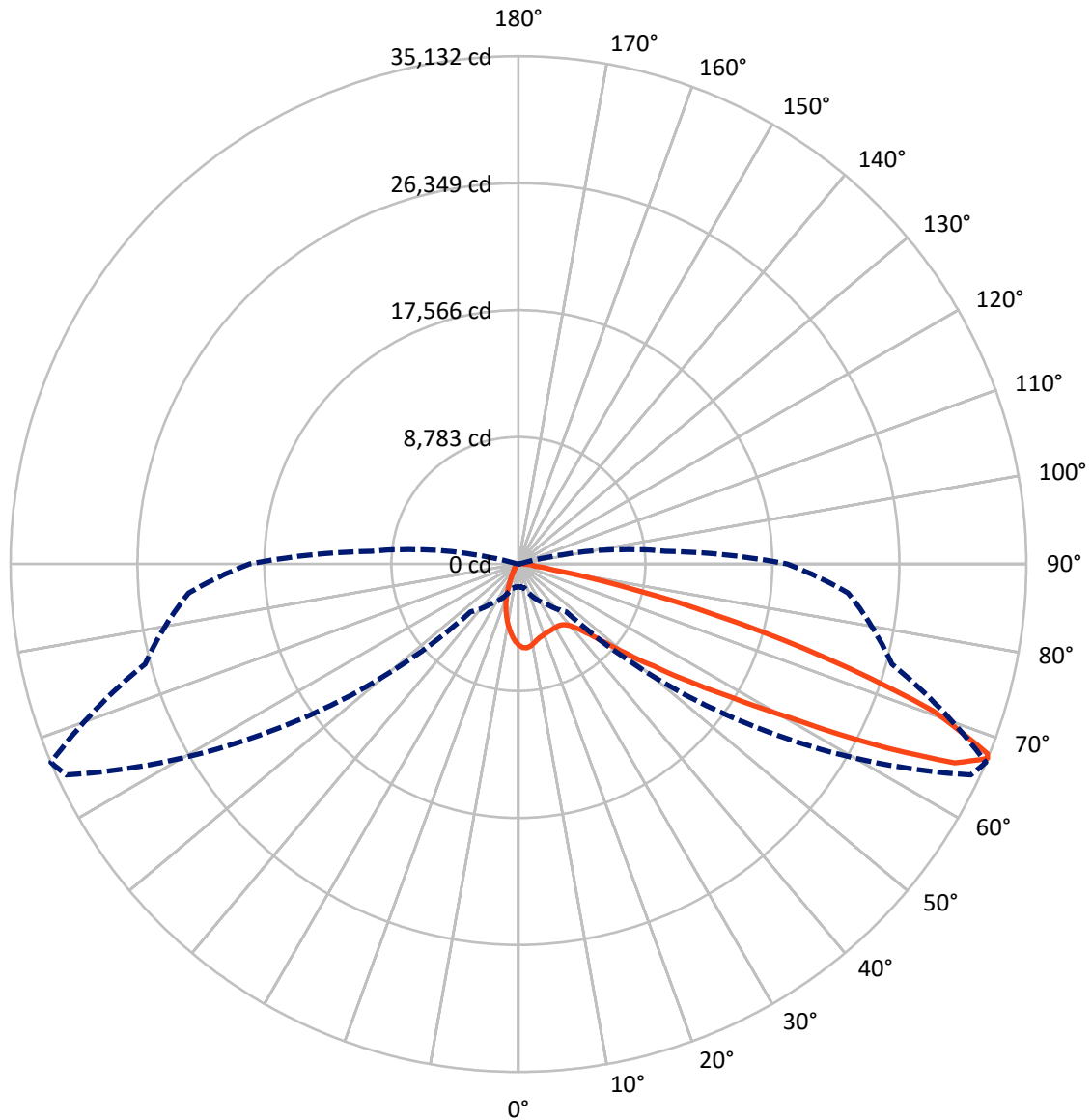


Based on 25 foot mounting height. Maximum calculated value = 9 fc  
 Type II - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral      - - - Horizontal Cone Through 67-Deg Vertical



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2648.9   | 0.0    | 2648.9  |
|                    | % Fixture | 10.4     | 0.0    | 10.4    |
| <b>Street Side</b> | Lumens    | 22863.4  | 0.0    | 22863.4 |
|                    | % Fixture | 89.6     | 0.0    | 89.6    |
| <b>Total</b>       | Lumens    | 25512.4  | 0.0    | 25512.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 457.8   | 1.8       |
| 10°-20°   | 974.4   | 3.8       |
| 20°-30°   | 1416.7  | 5.6       |
| 30°-40°   | 2210.1  | 8.7       |
| 40°-50°   | 3915.1  | 15.3      |
| 50°-60°   | 6195.2  | 24.3      |
| 60°-70°   | 7095.8  | 27.8      |
| 70°-80°   | 2943.3  | 11.5      |
| 80°-90°   | 304.0   | 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°    | 25512.4 | 100.0     |
| 0°-180°   | 25512.4 | 100.0     |



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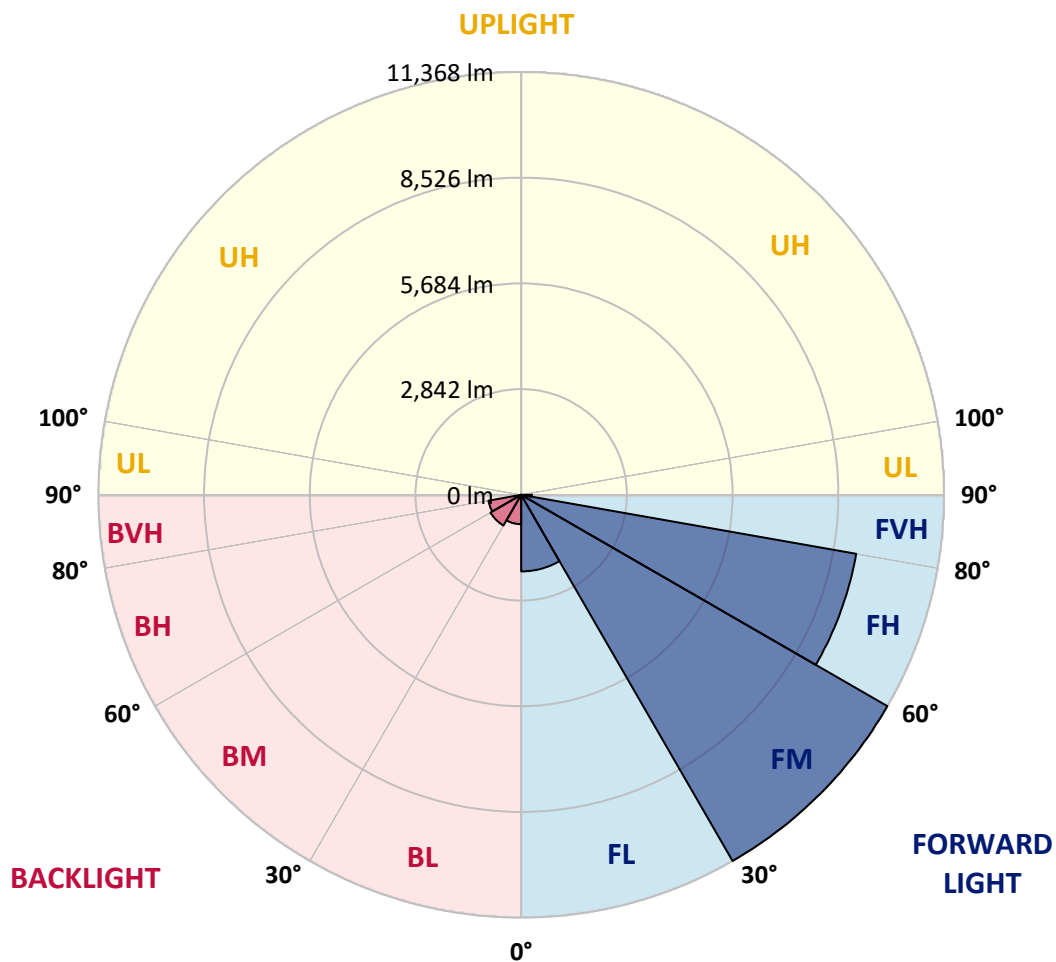
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|----------------|---------|-----------|-------------------------|------|----------|
|                |         |           | B                       | U    | G        |
| FL (0°-30°)    | 2058.5  | 8.1       |                         |      |          |
| FM (30°-60°)   | 11368.4 | 44.6      |                         |      |          |
| FH (60°-80°)   | 9146.3  | 35.9      |                         |      | G4/12000 |
| FVH (80°-90°)  | 290.3   | 1.1       |                         |      | G3/500   |
| BL (0°-30°)    | 790.4   | 3.1       | B2/1000                 |      |          |
| BM (30°-60°)   | 952.0   | 3.7       | B1/1000                 |      |          |
| BH (60°-80°)   | 892.8   | 3.5       | B2/1000                 |      | G2/1000  |
| BVH (80°-90°)  | 13.7    | 0.1       |                         |      | G1/100   |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B2-U0-G4**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 67°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 5626.4  | 5626.4  | 5626.4  | 5626.4  | 5626.4  | 5626.4  | 5626.4  | 5626.4  | 5626.4  | 5626.4  | 5626.4  |
| 2.5°  | 5816.9  | 5828.8  | 5827.3  | 5836.2  | 5857.1  | 5858.6  | 5837.7  | 5797.6  | 5788.6  | 5736.5  | 5645.8  |
| 5°    | 5364.5  | 5398.7  | 5419.6  | 5504.4  | 5599.6  | 5714.2  | 5800.5  | 5831.8  | 5827.3  | 5790.1  | 5653.2  |
| 7.5°  | 4848.2  | 4882.4  | 4906.2  | 5005.9  | 5132.4  | 5328.8  | 5553.5  | 5738.0  | 5754.4  | 5794.6  | 5647.3  |
| 10°   | 4504.4  | 4510.4  | 4543.1  | 4638.3  | 4770.8  | 4971.7  | 5239.5  | 5562.4  | 5611.5  | 5758.9  | 5632.4  |
| 12.5° | 4221.7  | 4226.1  | 4269.3  | 4372.0  | 4513.3  | 4715.7  | 4997.0  | 5370.5  | 5446.4  | 5714.2  | 5629.4  |
| 15°   | 4020.8  | 4037.2  | 4075.8  | 4183.0  | 4333.3  | 4534.2  | 4822.9  | 5229.1  | 5319.9  | 5697.9  | 5656.2  |
| 17.5° | 3953.8  | 3971.7  | 3983.6  | 4061.0  | 4197.9  | 4394.3  | 4690.4  | 5136.8  | 5239.5  | 5706.8  | 5708.3  |
| 20°   | 4023.8  | 4037.2  | 4010.4  | 4029.7  | 4114.5  | 4290.1  | 4578.8  | 5058.0  | 5180.0  | 5717.2  | 5775.2  |
| 22.5° | 4284.2  | 4290.1  | 4217.2  | 4132.4  | 4117.5  | 4214.2  | 4491.0  | 4995.5  | 5126.4  | 5745.5  | 5854.1  |
| 25°   | 4730.6  | 4720.2  | 4601.1  | 4418.1  | 4245.5  | 4200.8  | 4438.9  | 4956.8  | 5099.6  | 5775.2  | 5935.9  |
| 27.5° | 5269.3  | 5284.2  | 5120.5  | 4854.1  | 4525.2  | 4290.1  | 4431.5  | 4940.4  | 5087.7  | 5796.1  | 6007.4  |
| 30°   | 5924.0  | 5944.9  | 5757.4  | 5422.6  | 4950.8  | 4510.4  | 4499.9  | 4937.4  | 5080.3  | 5782.7  | 6013.3  |
| 32.5° | 6592.2  | 6617.5  | 6470.2  | 6124.9  | 5519.3  | 4879.4  | 4654.7  | 4970.2  | 5095.2  | 5736.5  | 5979.1  |
| 35°   | 7291.6  | 7327.3  | 7229.1  | 6933.0  | 6290.1  | 5412.1  | 4927.0  | 5069.9  | 5165.1  | 5732.1  | 5944.9  |
| 37.5° | 8257.3  | 8290.1  | 8105.6  | 7791.6  | 7223.1  | 6126.4  | 5364.5  | 5257.4  | 5330.3  | 5803.5  | 5953.8  |
| 40°   | 9699.3  | 9694.8  | 9218.6  | 8738.0  | 8248.4  | 7034.1  | 5979.1  | 5596.7  | 5633.9  | 6019.3  | 6063.9  |
| 42.5° | 11270.7 | 11263.3 | 10559.4 | 9828.8  | 9386.8  | 8151.7  | 6787.1  | 6183.0  | 6157.7  | 6416.6  | 6349.6  |
| 45°   | 12482.0 | 12480.5 | 11906.1 | 11083.2 | 10757.3 | 9434.4  | 7831.8  | 6998.4  | 6959.7  | 7062.4  | 6876.4  |
| 47.5° | 12998.4 | 13007.3 | 12718.6 | 12139.7 | 12276.6 | 11169.5 | 9148.7  | 8180.0  | 8121.9  | 8080.3  | 7797.5  |
| 50°   | 12596.6 | 12614.4 | 12638.2 | 12525.2 | 13391.2 | 13501.3 | 10915.1 | 9845.1  | 9816.9  | 9630.8  | 9188.9  |
| 52.5° | 11284.1 | 11374.9 | 11654.6 | 12013.3 | 13778.1 | 15739.4 | 13684.4 | 11913.6 | 11761.8 | 11563.9 | 11077.3 |
| 55°   | 9072.8  | 9172.5  | 9703.8  | 10574.3 | 13202.2 | 17209.6 | 17565.3 | 14580.2 | 14327.2 | 13736.5 | 13034.1 |
| 57.5° | 6004.4  | 6159.2  | 6930.0  | 8037.1  | 11529.6 | 17446.2 | 21437.3 | 18281.0 | 17400.1 | 15782.6 | 14990.9 |
| 60°   | 3308.0  | 3456.8  | 4293.1  | 5296.1  | 8327.3  | 16276.6 | 24041.4 | 23099.4 | 21542.9 | 18069.7 | 17367.4 |
| 62.5° | 2037.2  | 2117.5  | 2735.1  | 3668.1  | 4994.0  | 12846.6 | 24580.1 | 29154.4 | 27352.4 | 21014.6 | 20237.9 |
| 65°   | 1622.0  | 1656.2  | 1958.3  | 2998.5  | 3580.3  | 7641.3  | 22840.5 | 33770.4 | 33169.3 | 24580.1 | 22807.8 |
| 67°   | 1574.4  | 1587.8  | 1730.6  | 2574.4  | 3375.0  | 4684.5  | 19135.2 | 34521.9 | 35132.0 | 26737.8 | 22888.1 |
| 67.5° | 1584.8  | 1599.7  | 1735.1  | 2456.8  | 3369.0  | 4305.0  | 17858.4 | 34225.8 | 34996.6 | 26908.9 | 22532.5 |
| 70°   | 1528.3  | 1574.4  | 1986.6  | 2455.3  | 3203.8  | 3577.3  | 10694.8 | 29654.4 | 30456.5 | 25002.7 | 19118.8 |
| 72.5° | 541.7   | 544.6   | 858.6   | 1986.6  | 3483.6  | 3616.0  | 5370.5  | 21739.3 | 22333.1 | 19126.3 | 13784.1 |
| 75°   | 321.4   | 273.8   | 285.7   | 565.5   | 3328.8  | 3511.9  | 3098.2  | 13891.2 | 14112.9 | 10959.7 | 6980.6  |
| 77.5° | 221.7   | 193.5   | 199.4   | 250.0   | 1267.8  | 3462.8  | 2461.3  | 7244.0  | 7007.4  | 3843.7  | 1486.6  |
| 80°   | 126.5   | 111.6   | 119.0   | 218.7   | 461.3   | 3230.6  | 2321.4  | 2937.5  | 2504.4  | 651.8   | 410.7   |
| 82.5° | 67.0    | 56.5    | 68.5    | 180.1   | 321.4   | 2013.4  | 2325.9  | 1419.6  | 1125.0  | 220.2   | 279.8   |
| 85°   | 23.8    | 19.3    | 32.7    | 123.5   | 214.3   | 617.6   | 2156.2  | 1193.4  | 937.5   | 107.1   | 212.8   |
| 87.5° | 4.5     | 4.5     | 13.4    | 50.6    | 86.3    | 189.0   | 1275.3  | 708.3   | 474.7   | 64.0    | 145.8   |
| 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°    | 5626.4  | 5626.4  | 5626.4 | 5626.4 | 5626.4 | 5626.4 | 5626.4 | 5626.4 | 5626.4 | 5626.4 | 5626.4 |
| 2.5°  | 5608.6  | 5544.6  | 5458.3 | 5352.6 | 5227.6 | 5117.5 | 5035.7 | 4950.8 | 4933.0 | 4903.2 | 4898.8 |
| 5°    | 5571.4  | 5461.2  | 5247.0 | 5001.4 | 4739.5 | 4502.9 | 4311.0 | 4139.8 | 4063.9 | 3998.5 | 3991.0 |
| 7.5°  | 5516.3  | 5351.1  | 4986.6 | 4590.7 | 4181.5 | 3809.5 | 3494.0 | 3270.8 | 3065.4 | 2967.2 | 2952.3 |
| 10°   | 5452.3  | 5215.7  | 4693.4 | 4144.3 | 3578.8 | 3053.5 | 2584.8 | 2191.9 | 1953.8 | 1812.5 | 1794.6 |
| 12.5° | 5392.8  | 5083.3  | 4394.3 | 3681.5 | 2930.0 | 2227.7 | 1625.0 | 1250.0 | 1000.0 | 898.8  | 886.9  |
| 15°   | 5364.5  | 4976.1  | 4114.5 | 3208.3 | 2251.5 | 1418.1 | 888.4  | 687.5  | 605.6  | 581.8  | 580.4  |
| 17.5° | 5361.5  | 4885.4  | 3840.7 | 2718.7 | 1577.4 | 824.4  | 578.9  | 528.3  | 511.9  | 505.9  | 505.9  |
| 20°   | 5360.1  | 4799.1  | 3566.9 | 2211.3 | 1001.5 | 549.1  | 482.1  | 470.2  | 458.3  | 450.9  | 450.9  |
| 22.5° | 5376.4  | 4721.7  | 3281.2 | 1693.4 | 630.9  | 444.9  | 424.1  | 412.2  | 397.3  | 386.9  | 385.4  |
| 25°   | 5392.8  | 4662.1  | 2989.5 | 1205.3 | 456.8  | 386.9  | 366.1  | 349.7  | 328.9  | 315.5  | 314.0  |
| 27.5° | 5395.8  | 4587.7  | 2677.1 | 806.5  | 382.4  | 337.8  | 311.0  | 285.7  | 261.9  | 248.5  | 247.0  |
| 30°   | 5351.1  | 4462.7  | 2330.3 | 544.6  | 337.8  | 293.2  | 257.4  | 230.7  | 208.3  | 197.9  | 197.9  |
| 32.5° | 5263.3  | 4308.0  | 1949.4 | 410.7  | 300.6  | 251.5  | 212.8  | 187.5  | 172.6  | 168.2  | 166.7  |
| 35°   | 5184.5  | 4141.3  | 1558.0 | 348.2  | 269.3  | 212.8  | 174.1  | 157.7  | 148.8  | 147.3  | 145.8  |
| 37.5° | 5138.3  | 4007.4  | 1190.5 | 315.5  | 239.6  | 178.6  | 147.3  | 135.4  | 131.0  | 128.0  | 129.5  |
| 40°   | 5174.0  | 3895.8  | 879.5  | 288.7  | 209.8  | 148.8  | 125.0  | 119.0  | 114.6  | 113.1  | 113.1  |
| 42.5° | 5330.3  | 3876.4  | 653.3  | 264.9  | 181.5  | 123.5  | 108.6  | 104.2  | 101.2  | 99.7   | 101.2  |
| 45°   | 5741.0  | 3995.5  | 507.4  | 242.6  | 153.3  | 104.2  | 92.3   | 90.8   | 89.3   | 89.3   | 89.3   |
| 47.5° | 6358.6  | 4241.0  | 422.6  | 217.3  | 128.0  | 89.3   | 80.4   | 78.9   | 77.4   | 78.9   | 78.9   |
| 50°   | 7404.7  | 4690.4  | 378.0  | 192.0  | 105.7  | 75.9   | 68.5   | 68.5   | 68.5   | 68.5   | 69.9   |
| 52.5° | 8995.4  | 5574.3  | 348.2  | 166.7  | 86.3   | 64.0   | 58.0   | 58.0   | 59.5   | 59.5   | 61.0   |
| 55°   | 10767.7 | 6746.9  | 321.4  | 141.4  | 72.9   | 53.6   | 47.6   | 49.1   | 50.6   | 52.1   | 52.1   |
| 57.5° | 12690.3 | 8046.0  | 299.1  | 116.1  | 62.5   | 43.2   | 40.2   | 41.7   | 43.2   | 46.1   | 46.1   |
| 60°   | 15010.2 | 9452.3  | 266.4  | 90.8   | 52.1   | 34.2   | 31.2   | 34.2   | 38.7   | 41.7   | 43.2   |
| 62.5° | 17557.8 | 10812.4 | 224.7  | 71.4   | 43.2   | 26.8   | 25.3   | 31.2   | 37.2   | 40.2   | 41.7   |
| 65°   | 19298.9 | 11239.5 | 172.6  | 58.0   | 32.7   | 19.3   | 20.8   | 28.3   | 35.7   | 40.2   | 40.2   |
| 67°   | 18593.5 | 10190.4 | 141.4  | 49.1   | 26.8   | 14.9   | 19.3   | 28.3   | 35.7   | 38.7   | 40.2   |
| 67.5° | 18104.0 | 9779.7  | 135.4  | 47.6   | 25.3   | 14.9   | 19.3   | 28.3   | 35.7   | 40.2   | 40.2   |
| 70°   | 14730.5 | 7346.6  | 113.1  | 35.7   | 20.8   | 13.4   | 16.4   | 26.8   | 34.2   | 38.7   | 38.7   |
| 72.5° | 10235.0 | 4529.7  | 101.2  | 25.3   | 17.9   | 11.9   | 14.9   | 25.3   | 32.7   | 37.2   | 38.7   |
| 75°   | 4866.0  | 1639.9  | 86.3   | 19.3   | 16.4   | 10.4   | 13.4   | 25.3   | 32.7   | 37.2   | 37.2   |
| 77.5° | 992.5   | 380.9   | 69.9   | 16.4   | 13.4   | 10.4   | 11.9   | 23.8   | 31.2   | 35.7   | 35.7   |
| 80°   | 325.9   | 147.3   | 52.1   | 14.9   | 13.4   | 10.4   | 11.9   | 22.3   | 31.2   | 34.2   | 35.7   |
| 82.5° | 235.1   | 74.4    | 34.2   | 14.9   | 13.4   | 10.4   | 10.4   | 22.3   | 29.8   | 34.2   | 34.2   |
| 85°   | 180.1   | 52.1    | 22.3   | 14.9   | 13.4   | 10.4   | 10.4   | 20.8   | 28.3   | 32.7   | 32.7   |
| 87.5° | 119.0   | 20.8    | 17.9   | 14.9   | 13.4   | 10.4   | 10.4   | 20.8   | 26.8   | 31.2   | 32.7   |
| 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)