

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-09-LED-U-SL3-600-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-09-LED-U-SL3-600-HSS  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI  
4000K CCT 600mA 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: 27204.6 lumens  
Efficiency: N/A  
Efficacy: 93.8 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G4

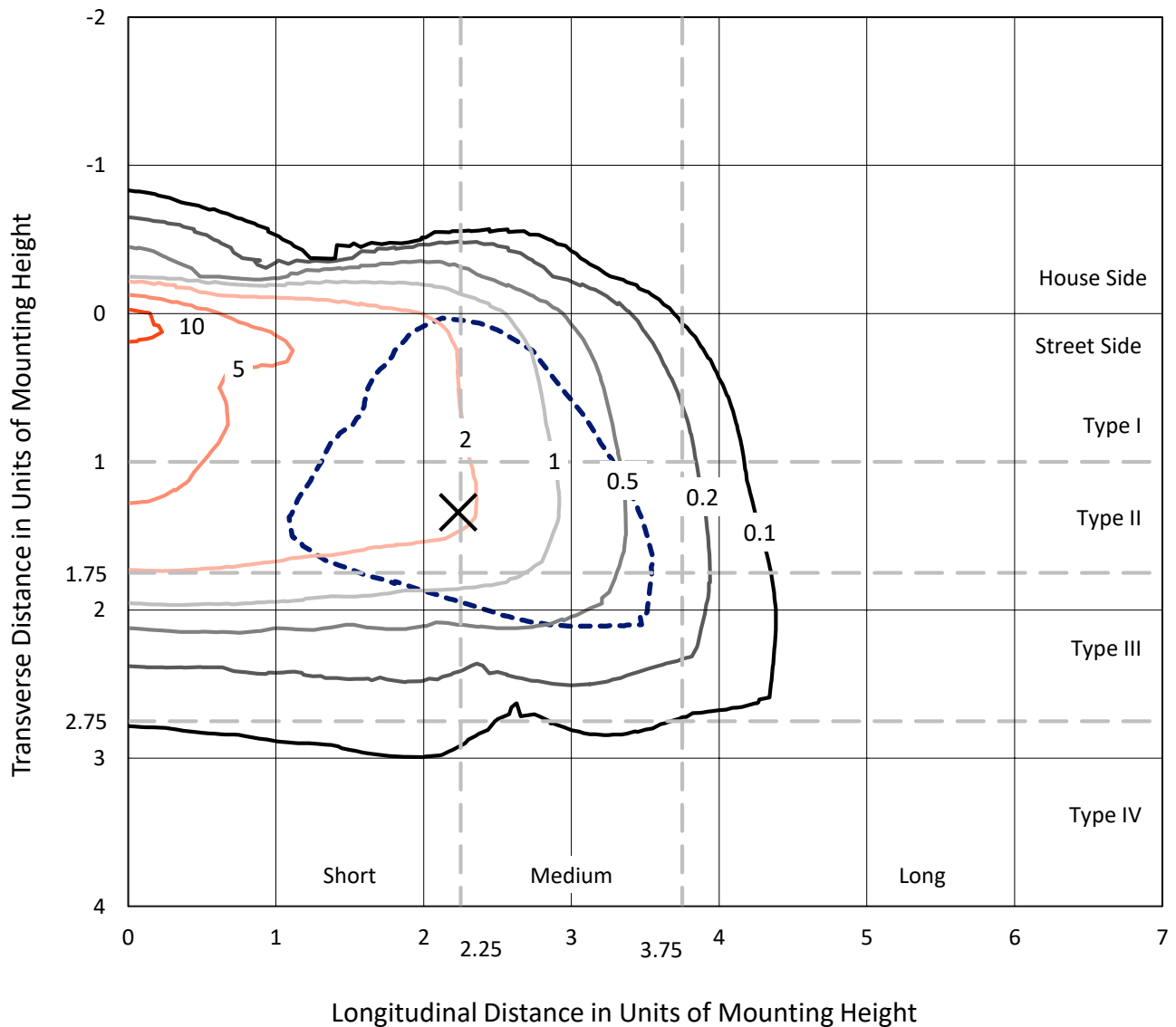
Input Watts (W): 290  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

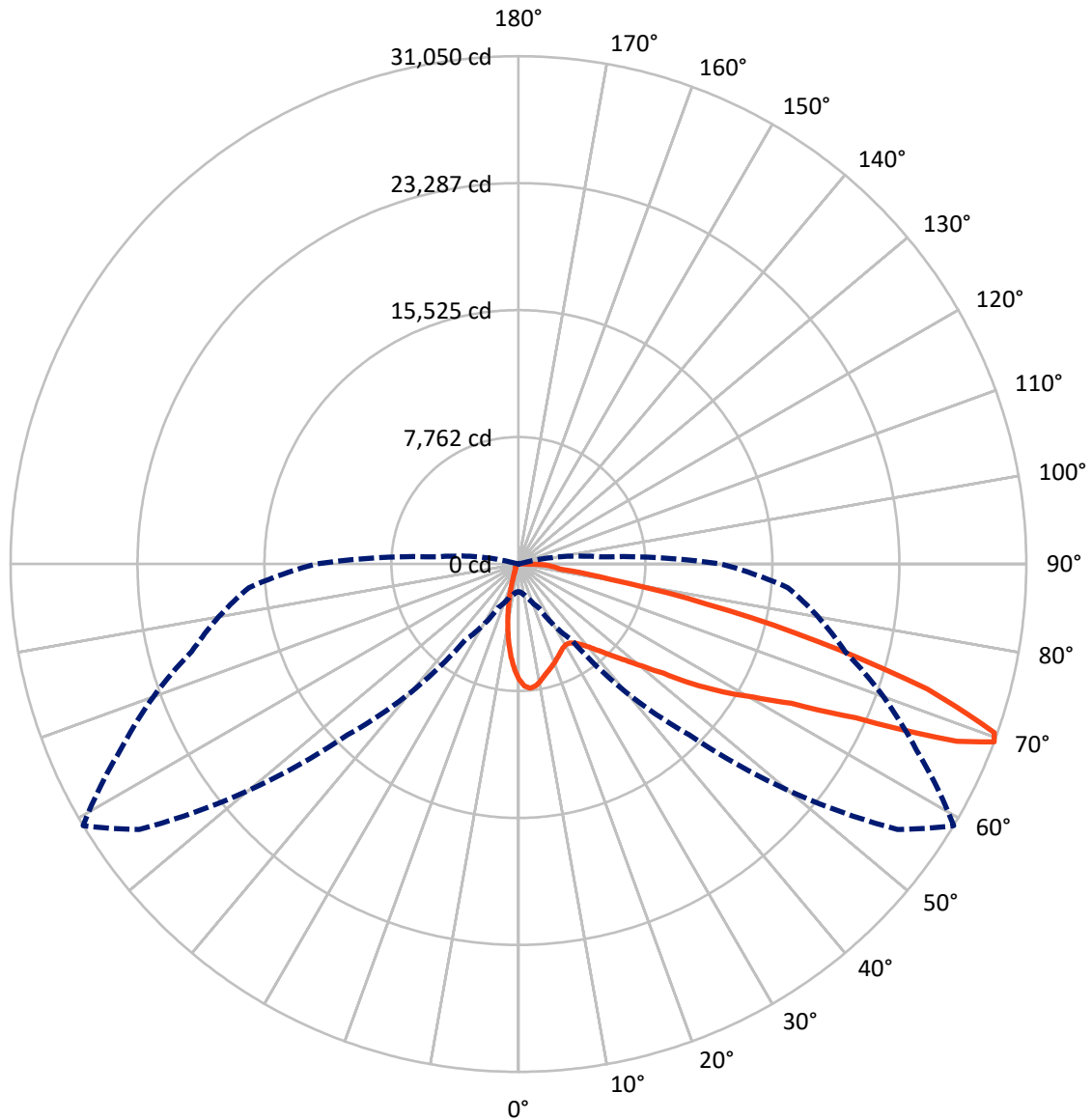


Based on 25 foot mounting height. Maximum calculated value = 11.4 fc  
 Type III - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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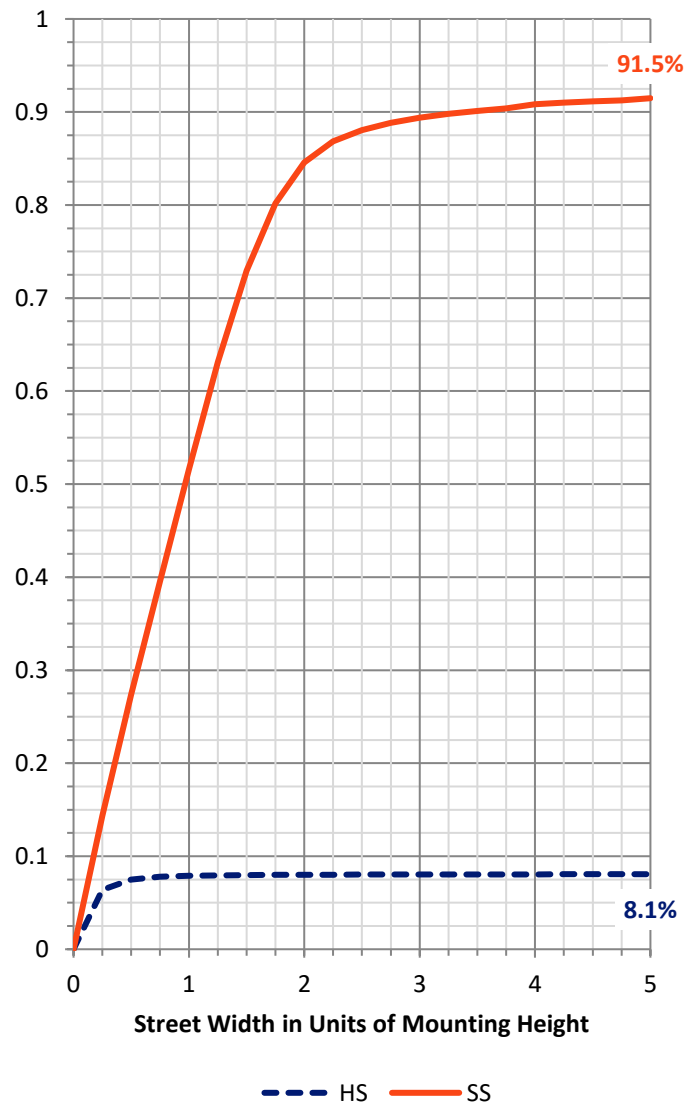
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2215.4   | 0.0    | 2215.4  |
|                    | % Fixture | 8.1      | 0.0    | 8.1     |
| <b>Street Side</b> | Lumens    | 24989.2  | 0.0    | 24989.2 |
|                    | % Fixture | 91.9     | 0.0    | 91.9    |
| <b>Total</b>       | Lumens    | 27204.6  | 0.0    | 27204.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 574.8   | 2.1       |
| 10°-20°   | 1187.6  | 4.4       |
| 20°-30°   | 1598.1  | 5.9       |
| 30°-40°   | 2320.3  | 8.5       |
| 40°-50°   | 3863.5  | 14.2      |
| 50°-60°   | 6027.1  | 22.2      |
| 60°-70°   | 7458.0  | 27.4      |
| 70°-80°   | 3779.7  | 13.9      |
| 80°-90°   | 395.5   | 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°    | 27204.6 | 100.0     |
| 0°-180°   | 27204.6 | 100.0     |



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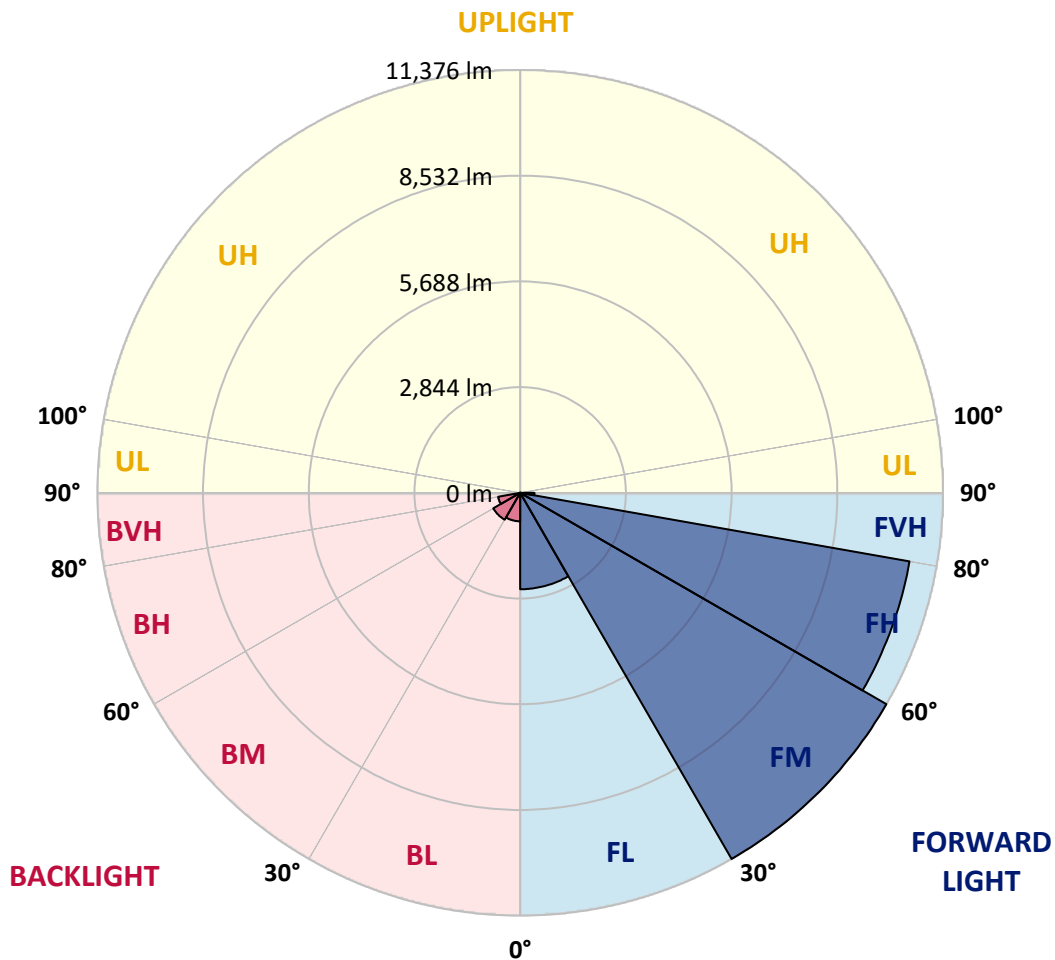
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 2593.7  | 9.5       |                         |      |          |
| FM   | (30°-60°)   | 11376.2 | 41.8      |                         |      |          |
| FH   | (60°-80°)   | 10636.0 | 39.1      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 383.3   | 1.4       |                         |      | G3/500   |
| BL   | (0°-30°)    | 766.8   | 2.8       | B2/1000                 |      |          |
| BM   | (30°-60°)   | 834.8   | 3.1       | B1/1000                 |      |          |
| BH   | (60°-80°)   | 601.7   | 2.2       | B2/1000                 |      | G2/1000  |
| BVH  | (80°-90°)   | 12.2    | 0.0       |                         |      | 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 III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 59°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 7080.8  | 7080.8  | 7080.8  | 7080.8  | 7080.8  | 7080.8  | 7080.8  | 7080.8  | 7080.8  | 7080.8  | 7080.8  |
| 2.5°  | 7760.8  | 7758.1  | 7724.1  | 7708.7  | 7680.7  | 7622.5  | 7531.7  | 7484.2  | 7407.3  | 7273.2  | 7093.4  |
| 5°    | 7690.1  | 7727.3  | 7746.9  | 7748.7  | 7768.8  | 7746.9  | 7665.4  | 7625.8  | 7519.6  | 7303.9  | 6981.2  |
| 7.5°  | 7210.3  | 7223.8  | 7281.1  | 7330.0  | 7425.5  | 7516.3  | 7545.7  | 7528.4  | 7465.6  | 7235.0  | 6805.6  |
| 10°   | 6696.6  | 6710.1  | 6778.1  | 6842.4  | 6971.9  | 7111.6  | 7259.2  | 7290.4  | 7316.5  | 7136.3  | 6636.5  |
| 12.5° | 6253.2  | 6267.2  | 6336.6  | 6420.9  | 6571.8  | 6744.1  | 6973.3  | 7024.0  | 7139.5  | 7042.7  | 6501.0  |
| 15°   | 5871.8  | 5877.8  | 5945.8  | 6050.1  | 6230.4  | 6451.6  | 6712.0  | 6793.5  | 6970.5  | 6976.5  | 6382.7  |
| 17.5° | 5547.1  | 5562.5  | 5604.4  | 5704.1  | 5901.1  | 6175.0  | 6478.2  | 6595.1  | 6802.3  | 6921.1  | 6267.2  |
| 20°   | 5348.7  | 5364.1  | 5362.7  | 5418.1  | 5595.1  | 5887.1  | 6244.4  | 6384.1  | 6636.5  | 6864.3  | 6164.2  |
| 22.5° | 5310.5  | 5310.5  | 5270.5  | 5262.5  | 5367.3  | 5611.9  | 6001.2  | 6171.7  | 6487.0  | 6839.6  | 6092.1  |
| 25°   | 5447.5  | 5440.9  | 5341.3  | 5259.8  | 5264.4  | 5410.2  | 5765.6  | 5968.6  | 6361.3  | 6856.4  | 6053.4  |
| 27.5° | 5736.7  | 5728.8  | 5602.5  | 5447.5  | 5322.6  | 5321.2  | 5587.2  | 5805.6  | 6261.1  | 6936.5  | 6068.8  |
| 30°   | 6136.3  | 6133.5  | 5996.6  | 5801.0  | 5575.1  | 5367.3  | 5525.7  | 5724.1  | 6196.4  | 7080.8  | 6104.2  |
| 32.5° | 6573.2  | 6568.5  | 6465.6  | 6259.7  | 5973.3  | 5575.1  | 5590.4  | 5756.7  | 6215.0  | 7273.2  | 6190.3  |
| 35°   | 7036.6  | 7028.7  | 6984.0  | 6804.2  | 6488.9  | 5957.9  | 5802.8  | 5931.8  | 6331.9  | 7561.0  | 6359.4  |
| 37.5° | 7537.8  | 7545.7  | 7577.8  | 7405.5  | 7074.8  | 6494.9  | 6158.2  | 6245.8  | 6567.1  | 7951.8  | 6634.7  |
| 40°   | 8277.8  | 8276.4  | 8287.1  | 8060.8  | 7742.7  | 7151.6  | 6654.7  | 6682.6  | 6961.1  | 8470.2  | 7053.4  |
| 42.5° | 9620.6  | 9527.0  | 9242.4  | 8780.8  | 8460.9  | 7902.4  | 7281.1  | 7251.8  | 7442.7  | 9111.5  | 7639.3  |
| 45°   | 11425.4 | 11225.1 | 10486.9 | 9602.4  | 9193.0  | 8748.7  | 8051.5  | 7957.9  | 8079.4  | 9882.4  | 8362.6  |
| 47.5° | 12977.3 | 12769.6 | 11725.3 | 10457.6 | 9969.9  | 9551.7  | 8954.6  | 8785.5  | 8825.6  | 10745.4 | 9279.2  |
| 50°   | 13505.0 | 13403.4 | 12491.5 | 11202.3 | 10722.1 | 10562.4 | 10002.5 | 9796.2  | 9739.4  | 11743.5 | 10342.1 |
| 52.5° | 13321.9 | 13314.5 | 12706.7 | 11685.3 | 11411.4 | 11608.4 | 11320.6 | 11082.1 | 10873.0 | 12796.1 | 11423.5 |
| 55°   | 13028.0 | 13066.7 | 12794.2 | 12108.2 | 12098.9 | 12563.7 | 13123.5 | 12925.1 | 12319.2 | 13939.1 | 12356.0 |
| 57.5° | 12217.6 | 12382.1 | 12745.3 | 12908.4 | 13286.5 | 13762.1 | 14625.1 | 14742.0 | 14025.2 | 14814.2 | 13129.6 |
| 60°   | 9913.1  | 10274.5 | 11462.2 | 13023.4 | 14817.5 | 16001.9 | 16437.4 | 16537.0 | 15424.8 | 15541.7 | 14174.3 |
| 62.5° | 7036.6  | 7405.5  | 8911.7  | 11553.0 | 14840.3 | 18944.5 | 19136.9 | 18744.7 | 16966.5 | 16620.4 | 15975.8 |
| 65°   | 3734.9  | 4019.9  | 5250.4  | 8339.3  | 12866.9 | 19627.8 | 23858.2 | 22689.2 | 19686.0 | 18741.4 | 18303.2 |
| 67.5° | 1910.5  | 1996.7  | 2486.2  | 4081.4  | 8845.6  | 17434.1 | 28090.0 | 28913.0 | 24373.3 | 20846.2 | 18190.9 |
| 69°   | 1690.7  | 1741.5  | 2066.1  | 2950.5  | 5664.0  | 14766.7 | 28296.4 | 31049.9 | 26827.4 | 20670.6 | 16531.0 |
| 70°   | 1636.7  | 1681.4  | 1976.7  | 2670.6  | 4427.5  | 12383.4 | 27506.9 | 30862.2 | 27454.8 | 20003.2 | 15291.1 |
| 72.5° | 1389.3  | 1427.5  | 1760.1  | 2360.0  | 3598.4  | 6147.0  | 22344.5 | 26152.0 | 24636.5 | 16663.3 | 11068.2 |
| 75°   | 929.2   | 1055.4  | 1689.3  | 2212.3  | 3347.4  | 3492.2  | 14731.3 | 18898.4 | 17555.6 | 11239.1 | 5765.6  |
| 77.5° | 223.1   | 239.9   | 476.9   | 1760.1  | 3061.4  | 3073.5  | 7576.4  | 11748.2 | 9582.4  | 4005.9  | 1362.8  |
| 80°   | 120.2   | 115.5   | 133.7   | 349.3   | 2850.4  | 2884.4  | 3410.7  | 5702.7  | 3421.4  | 664.6   | 449.0   |
| 82.5° | 84.8    | 80.1    | 86.2    | 146.2   | 897.0   | 2627.3  | 2467.6  | 2581.2  | 1418.2  | 255.2   | 201.7   |
| 85°   | 30.7    | 29.3    | 47.5    | 132.3   | 281.3   | 1510.4  | 2535.1  | 2129.0  | 1149.0  | 116.9   | 147.6   |
| 87.5° | 10.7    | 9.3     | 18.6    | 72.2    | 86.2    | 643.2   | 1564.5  | 1609.2  | 452.2   | 70.8    | 69.4    |
| 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°    | 7080.8  | 7080.8 | 7080.8 | 7080.8 | 7080.8 | 7080.8 | 7080.8 | 7080.8 | 7080.8 | 7080.8 | 7080.8 |
| 2.5°  | 7018.0  | 6922.5 | 6747.4 | 6567.1 | 6400.8 | 6201.0 | 6100.9 | 6002.6 | 5961.2 | 5945.8 | 5873.6 |
| 5°    | 6814.9  | 6653.3 | 6281.1 | 5907.1 | 5562.5 | 5196.4 | 4955.1 | 4761.4 | 4647.3 | 4591.9 | 4504.3 |
| 7.5°  | 6555.0  | 6290.5 | 5725.5 | 5148.9 | 4611.9 | 4082.8 | 3690.6 | 3388.8 | 3181.1 | 3081.4 | 2990.6 |
| 10°   | 6302.6  | 5950.5 | 5147.5 | 4361.3 | 3631.9 | 2930.5 | 2388.8 | 1996.7 | 1746.1 | 1630.6 | 1557.0 |
| 12.5° | 6076.7  | 5619.8 | 4589.1 | 3593.8 | 2678.1 | 1857.0 | 1306.0 | 993.9  | 838.4  | 784.3  | 758.2  |
| 15°   | 5875.0  | 5315.2 | 4061.4 | 2864.4 | 1813.6 | 1061.5 | 714.0  | 607.8  | 583.1  | 583.1  | 579.9  |
| 17.5° | 5684.1  | 5016.6 | 3551.8 | 2179.7 | 1138.3 | 649.3  | 543.1  | 529.1  | 529.1  | 535.2  | 535.2  |
| 20°   | 5501.0  | 4732.1 | 3059.5 | 1564.5 | 716.8  | 515.1  | 490.9  | 487.6  | 490.9  | 498.4  | 498.4  |
| 22.5° | 5344.1  | 4473.6 | 2599.8 | 1073.6 | 532.4  | 464.4  | 452.2  | 447.6  | 449.0  | 453.6  | 456.9  |
| 25°   | 5227.1  | 4255.1 | 2166.2 | 727.5  | 458.3  | 422.9  | 409.4  | 401.5  | 395.4  | 395.4  | 398.2  |
| 27.5° | 5153.6  | 4070.7 | 1746.1 | 529.1  | 412.2  | 384.7  | 362.8  | 350.7  | 336.7  | 329.3  | 332.1  |
| 30°   | 5099.5  | 3895.1 | 1352.1 | 432.2  | 369.3  | 341.4  | 313.9  | 293.9  | 273.9  | 264.5  | 267.8  |
| 32.5° | 5079.5  | 3753.5 | 1010.7 | 381.5  | 330.7  | 299.9  | 265.9  | 239.9  | 218.4  | 210.5  | 212.4  |
| 35°   | 5133.5  | 3641.3 | 740.1  | 344.7  | 299.9  | 261.3  | 223.1  | 193.8  | 177.0  | 172.3  | 173.7  |
| 37.5° | 5275.1  | 3581.2 | 553.8  | 313.9  | 272.5  | 229.2  | 186.3  | 158.4  | 147.6  | 147.6  | 149.0  |
| 40°   | 5542.5  | 3579.8 | 444.8  | 292.5  | 247.8  | 198.4  | 153.7  | 133.7  | 127.6  | 130.9  | 132.3  |
| 42.5° | 5933.2  | 3661.3 | 387.5  | 272.5  | 226.4  | 169.1  | 127.6  | 113.6  | 112.2  | 115.5  | 116.9  |
| 45°   | 6467.0  | 3810.3 | 356.8  | 255.2  | 203.1  | 141.6  | 107.6  | 98.3   | 98.3   | 102.9  | 104.8  |
| 47.5° | 7120.9  | 4028.8 | 330.7  | 238.5  | 179.8  | 118.3  | 92.2   | 86.2   | 87.6   | 92.2   | 93.6   |
| 50°   | 7908.5  | 4304.5 | 304.6  | 219.8  | 163.0  | 98.3   | 80.1   | 75.5   | 76.8   | 82.9   | 84.8   |
| 52.5° | 8805.5  | 4675.2 | 283.2  | 203.1  | 141.6  | 81.5   | 67.5   | 64.7   | 67.5   | 74.1   | 75.5   |
| 55°   | 9574.5  | 5007.3 | 257.1  | 189.1  | 113.6  | 67.5   | 55.4   | 55.4   | 58.7   | 66.1   | 67.5   |
| 57.5° | 10314.6 | 5354.8 | 233.8  | 163.0  | 89.4   | 54.0   | 46.1   | 47.5   | 52.2   | 60.1   | 61.5   |
| 60°   | 11400.7 | 5943.9 | 206.3  | 136.9  | 67.5   | 42.8   | 38.7   | 40.1   | 46.1   | 54.0   | 55.4   |
| 62.5° | 13245.1 | 6841.0 | 178.4  | 113.6  | 52.2   | 34.0   | 30.7   | 34.0   | 41.5   | 50.8   | 52.2   |
| 65°   | 14909.7 | 7205.7 | 146.2  | 95.5   | 40.1   | 26.1   | 26.1   | 30.7   | 40.1   | 49.4   | 50.8   |
| 67.5° | 13981.9 | 6065.5 | 113.6  | 75.5   | 30.7   | 20.0   | 21.4   | 29.3   | 38.7   | 49.4   | 50.8   |
| 69°   | 12365.3 | 4959.8 | 96.9   | 60.1   | 26.1   | 18.6   | 20.0   | 29.3   | 38.7   | 47.5   | 49.4   |
| 70°   | 11105.4 | 4187.6 | 86.2   | 50.8   | 23.3   | 18.6   | 20.0   | 27.5   | 38.7   | 47.5   | 49.4   |
| 72.5° | 7438.1  | 2261.2 | 69.4   | 36.8   | 21.4   | 16.8   | 16.8   | 27.5   | 36.8   | 46.1   | 47.5   |
| 75°   | 3196.5  | 624.6  | 55.4   | 26.1   | 18.6   | 15.4   | 15.4   | 26.1   | 35.4   | 44.7   | 47.5   |
| 77.5° | 584.5   | 158.4  | 44.7   | 23.3   | 18.6   | 15.4   | 14.0   | 24.7   | 34.0   | 42.8   | 44.7   |
| 80°   | 232.4   | 78.2   | 35.4   | 20.0   | 16.8   | 14.0   | 12.1   | 23.3   | 32.1   | 41.5   | 42.8   |
| 82.5° | 140.2   | 44.7   | 29.3   | 18.6   | 16.8   | 12.1   | 10.7   | 20.0   | 30.7   | 40.1   | 41.5   |
| 85°   | 113.6   | 30.7   | 23.3   | 18.6   | 15.4   | 12.1   | 9.3    | 18.6   | 27.5   | 38.7   | 40.1   |
| 87.5° | 55.4    | 21.4   | 21.4   | 16.8   | 15.4   | 12.1   | 9.3    | 16.8   | 26.1   | 36.8   | 38.7   |
| 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)