

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-SL3-7060-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-09-LED-U-SL3-7060-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 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: 41296.5 lumens  
Efficiency: N/A  
Efficacy: 82.4 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G5

Input Watts (W): 501  
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

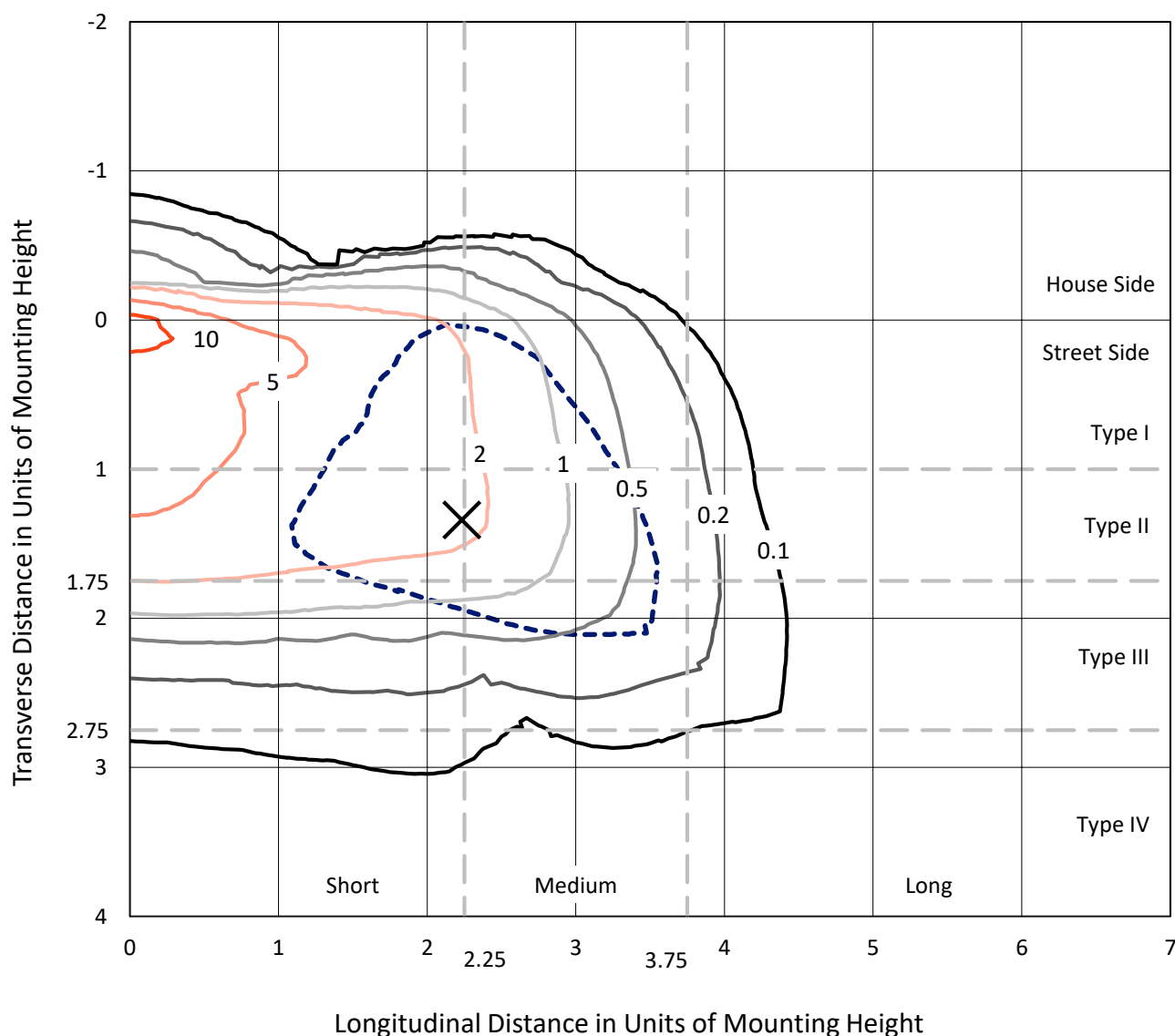


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
- - - 1/2 Max cd

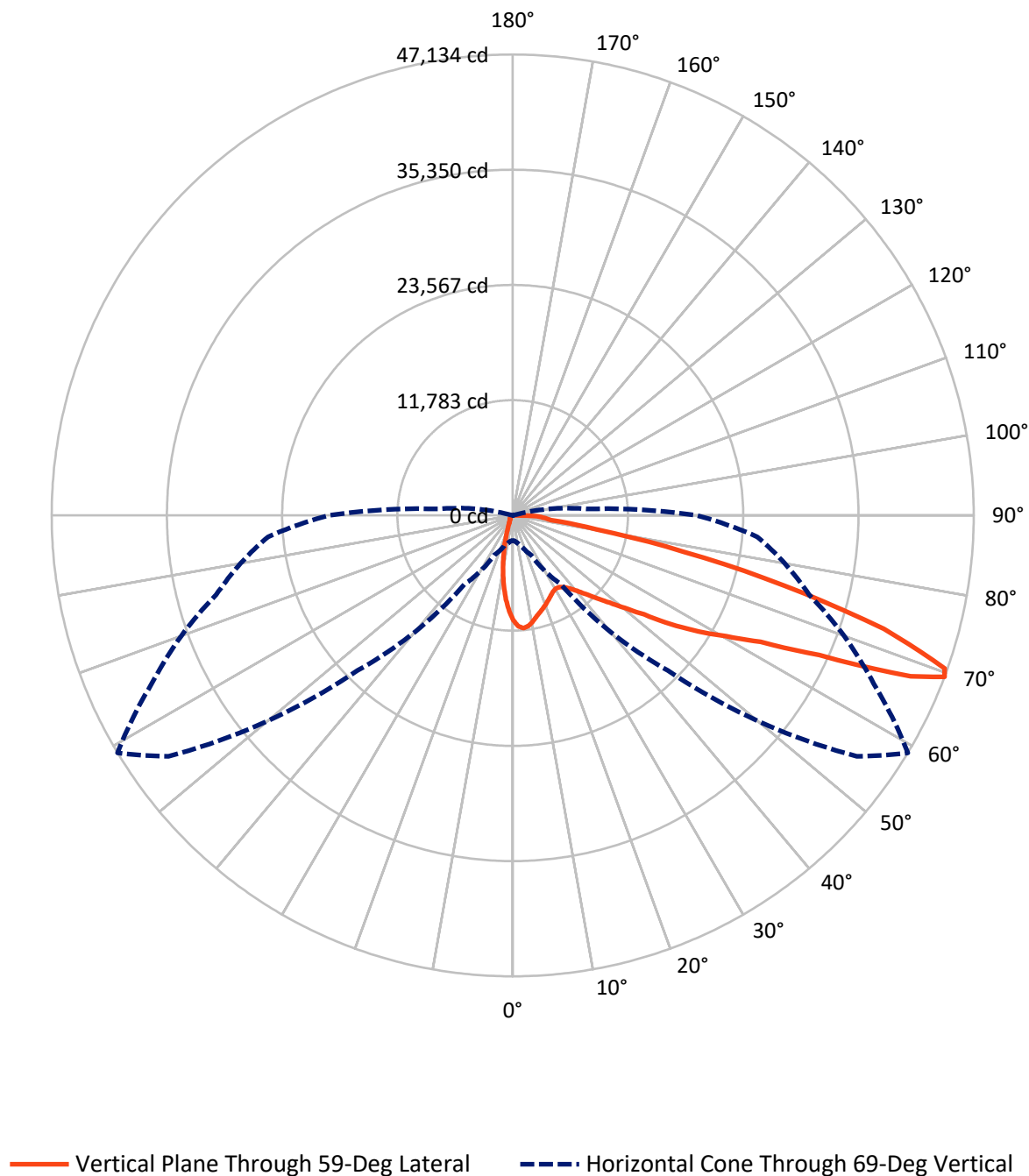


Based on 30 foot mounting height. Maximum calculated value = 12 fc  
Type III - Short - Non-Cutoff

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## Luminous Intensity Polar Plot



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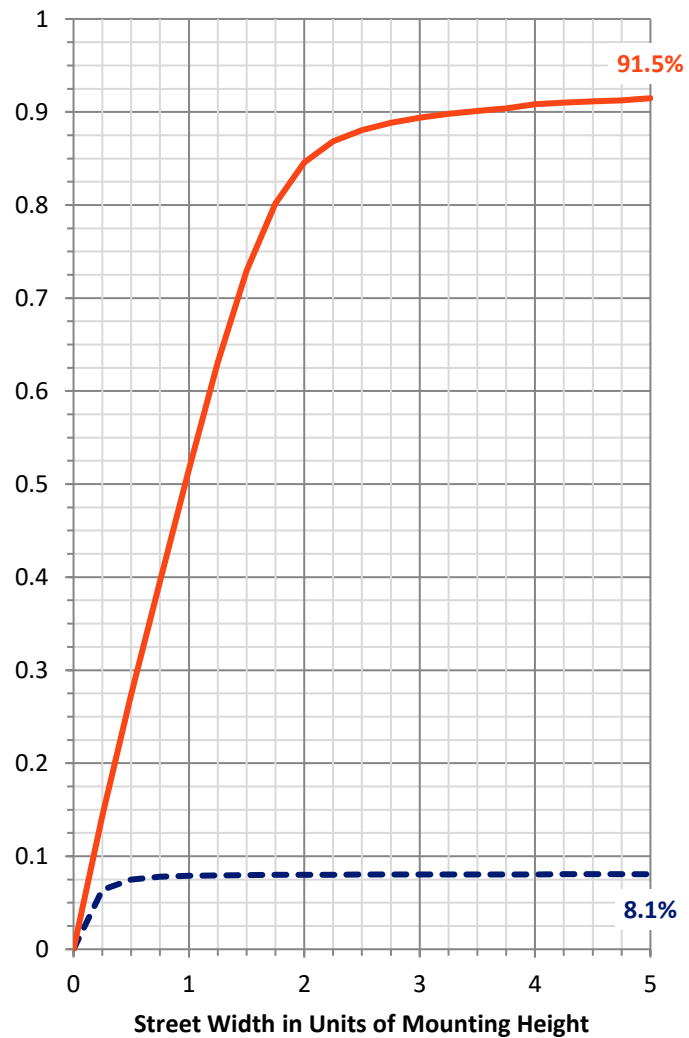
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3363.0   | 0.0    | 3363.0  |
|                    | % Fixture | 8.1      | 0.0    | 8.1     |
| <b>Street Side</b> | Lumens    | 37933.5  | 0.0    | 37933.5 |
|                    | % Fixture | 91.9     | 0.0    | 91.9    |
| <b>Total</b>       | Lumens    | 41296.5  | 0.0    | 41296.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 872.5   | 2.1       |
| 10°-20°   | 1802.8  | 4.4       |
| 20°-30°   | 2425.9  | 5.9       |
| 30°-40°   | 3522.3  | 8.5       |
| 40°-50°   | 5864.8  | 14.2      |
| 50°-60°   | 9149.1  | 22.2      |
| 60°-70°   | 11321.3 | 27.4      |
| 70°-80°   | 5737.5  | 13.9      |
| 80°-90°   | 600.3   | 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°    | 41296.5 | 100.0     |
| 0°-180°   | 41296.5 | 100.0     |

**Coefficient of Utilization**



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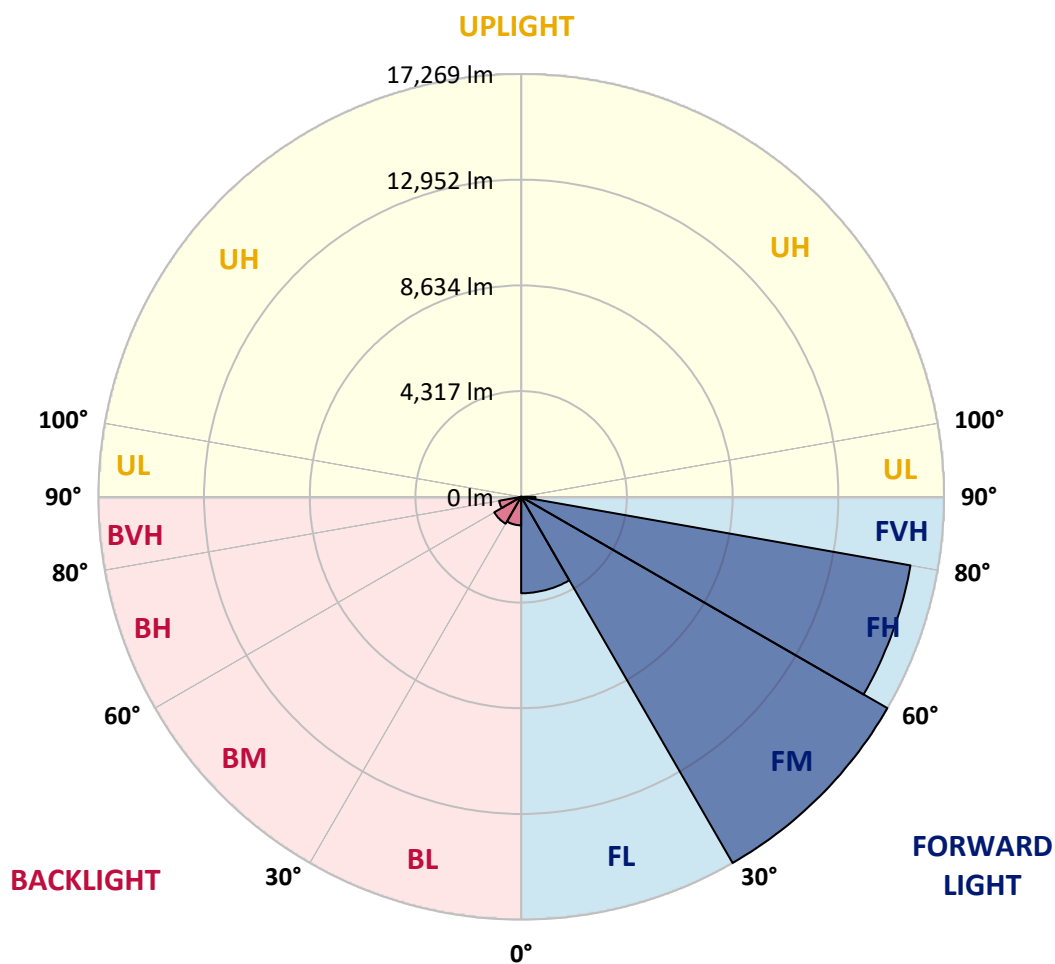
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 3937.2  | 9.5       |                         |      |         |
| FM   | (30°-60°)   | 17269.0 | 41.8      |                         |      |         |
| FH   | (60°-80°)   | 16145.5 | 39.1      |                         |      | G5      |
| FVH  | (80°-90°)   | 581.9   | 1.4       |                         |      | G4/750  |
| BL   | (0°-30°)    | 1164.1  | 2.8       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 1267.2  | 3.1       | B2/2500                 |      |         |
| BH   | (60°-80°)   | 913.3   | 2.2       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 18.5    | 0.0       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

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

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 59°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 |
| 2.5°  | 11780.9 | 11776.7 | 11725.1 | 11701.7 | 11659.3 | 11570.9 | 11433.1 | 11361.0 | 11244.3 | 11040.7 | 10767.8 |
| 5°    | 11673.5 | 11730.0 | 11759.7 | 11762.5 | 11792.9 | 11759.7 | 11636.0 | 11575.9 | 11414.7 | 11087.3 | 10597.4 |
| 7.5°  | 10945.2 | 10965.7 | 11052.7 | 11126.9 | 11271.9 | 11409.7 | 11454.3 | 11428.1 | 11332.7 | 10982.7 | 10330.8 |
| 10°   | 10165.4 | 10185.9 | 10289.1 | 10386.7 | 10583.2 | 10795.3 | 11019.5 | 11066.8 | 11106.4 | 10832.8 | 10074.2 |
| 12.5° | 9492.3  | 9513.5  | 9618.9  | 9746.9  | 9975.9  | 10237.5 | 10585.4 | 10662.4 | 10837.8 | 10690.7 | 9868.5  |
| 15°   | 8913.3  | 8922.5  | 9025.7  | 9184.1  | 9457.7  | 9793.5  | 10188.7 | 10312.5 | 10581.1 | 10590.3 | 9688.9  |
| 17.5° | 8420.5  | 8443.8  | 8507.5  | 8658.8  | 8957.8  | 9373.6  | 9833.8  | 10011.3 | 10325.9 | 10506.2 | 9513.5  |
| 20°   | 8119.3  | 8142.6  | 8140.5  | 8224.7  | 8493.3  | 8936.6  | 9478.9  | 9691.0  | 10074.2 | 10419.9 | 9357.3  |
| 22.5° | 8061.3  | 8061.3  | 8000.5  | 7988.5  | 8147.6  | 8518.8  | 9109.8  | 9368.6  | 9847.2  | 10382.5 | 9247.7  |
| 25°   | 8269.2  | 8259.3  | 8108.0  | 7984.3  | 7991.3  | 8212.6  | 8752.1  | 9060.3  | 9656.4  | 10407.9 | 9189.0  |
| 27.5° | 8708.3  | 8696.2  | 8504.6  | 8269.2  | 8079.7  | 8077.6  | 8481.3  | 8812.9  | 9504.3  | 10529.5 | 9212.4  |
| 30°   | 9314.9  | 9310.6  | 9102.8  | 8805.8  | 8462.9  | 8147.6  | 8388.0  | 8689.2  | 9406.1  | 10748.7 | 9266.1  |
| 32.5° | 9978.0  | 9971.0  | 9814.7  | 9502.2  | 9067.4  | 8462.9  | 8486.3  | 8738.7  | 9434.4  | 11040.7 | 9396.9  |
| 35°   | 10681.5 | 10669.5 | 10601.6 | 10328.7 | 9850.1  | 9044.1  | 8808.6  | 9004.5  | 9611.8  | 11477.6 | 9653.5  |
| 37.5° | 11442.3 | 11454.3 | 11503.1 | 11241.5 | 10739.5 | 9859.3  | 9348.1  | 9481.0  | 9968.9  | 12070.8 | 10071.4 |
| 40°   | 12565.7 | 12563.6 | 12579.8 | 12236.2 | 11753.3 | 10856.2 | 10101.8 | 10144.2 | 10567.0 | 12857.7 | 10707.0 |
| 42.5° | 14604.0 | 14461.9 | 14029.9 | 13329.3 | 12843.6 | 11995.9 | 11052.7 | 11008.2 | 11298.0 | 13831.3 | 11596.4 |
| 45°   | 17343.7 | 17039.7 | 15919.1 | 14576.4 | 13955.0 | 13280.5 | 12222.1 | 12080.0 | 12264.5 | 15001.4 | 12694.4 |
| 47.5° | 19699.4 | 19384.1 | 17799.0 | 15874.5 | 15134.3 | 14499.4 | 13593.0 | 13336.3 | 13397.1 | 16311.4 | 14085.8 |
| 50°   | 20500.5 | 20346.4 | 18962.0 | 17005.0 | 16276.1 | 16033.6 | 15183.8 | 14870.6 | 14784.3 | 17826.6 | 15699.2 |
| 52.5° | 20222.6 | 20211.3 | 19288.7 | 17738.2 | 17322.5 | 17621.5 | 17184.6 | 16822.6 | 16505.2 | 19424.4 | 17340.9 |
| 55°   | 19776.5 | 19835.2 | 19421.6 | 18380.2 | 18366.0 | 19071.6 | 19921.4 | 19620.3 | 18700.4 | 21159.4 | 18756.3 |
| 57.5° | 18546.3 | 18795.9 | 19347.4 | 19594.8 | 20168.9 | 20890.8 | 22200.8 | 22378.3 | 21290.2 | 22487.9 | 19930.6 |
| 60°   | 15048.0 | 15596.7 | 17399.5 | 19769.4 | 22492.8 | 24290.8 | 24951.8 | 25103.1 | 23414.8 | 23592.2 | 21516.5 |
| 62.5° | 10681.5 | 11241.5 | 13527.9 | 17537.4 | 22527.5 | 28757.7 | 29049.7 | 28454.4 | 25755.0 | 25229.7 | 24251.2 |
| 65°   | 5669.5  | 6102.2  | 7970.1  | 12659.0 | 19531.9 | 29794.9 | 36216.6 | 34442.0 | 29883.2 | 28449.4 | 27784.1 |
| 67.5° | 2900.2  | 3031.0  | 3774.0  | 6195.5  | 13427.6 | 26464.8 | 42640.5 | 43889.8 | 36998.6 | 31644.4 | 27613.7 |
| 69°   | 2566.4  | 2643.5  | 3136.3  | 4478.9  | 8598.0  | 22415.8 | 42953.7 | 47133.6 | 40723.8 | 31377.9 | 25093.9 |
| 70°   | 2484.4  | 2552.3  | 3000.6  | 4054.0  | 6720.8  | 18798.0 | 41755.4 | 46848.7 | 41676.2 | 30364.7 | 23211.9 |
| 72.5° | 2109.0  | 2167.0  | 2671.8  | 3582.4  | 5462.4  | 9331.1  | 33918.8 | 39698.7 | 37398.0 | 25294.7 | 16801.4 |
| 75°   | 1410.5  | 1602.1  | 2564.3  | 3358.3  | 5081.3  | 5301.2  | 22362.0 | 28687.7 | 26649.4 | 17060.9 | 8752.1  |
| 77.5° | 338.7   | 364.1   | 724.0   | 2671.8  | 4647.2  | 4665.6  | 11500.9 | 17833.6 | 14546.0 | 6081.0  | 2068.7  |
| 80°   | 182.4   | 175.3   | 202.9   | 530.3   | 4326.9  | 4378.5  | 5177.4  | 8656.6  | 5193.7  | 1008.9  | 681.6   |
| 82.5° | 128.7   | 121.6   | 130.8   | 222.0   | 1361.7  | 3988.2  | 3745.7  | 3918.3  | 2152.8  | 387.4   | 306.1   |
| 85°   | 46.7    | 44.5    | 72.1    | 200.8   | 427.0   | 2292.8  | 3848.3  | 3231.7  | 1744.2  | 177.5   | 224.1   |
| 87.5° | 16.3    | 14.1    | 28.3    | 109.6   | 130.8   | 976.4   | 2374.8  | 2442.7  | 686.5   | 107.5   | 105.3   |
| 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°    | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 | 10748.7 |
| 2.5°  | 10653.2 | 10508.3 | 10242.5 | 9968.9  | 9716.5  | 9413.1  | 9261.1  | 9112.0  | 9049.0  | 9025.7  | 8916.1  |
| 5°    | 10345.0 | 10099.7 | 9534.7  | 8967.0  | 8443.8  | 7888.1  | 7521.9  | 7227.8  | 7054.6  | 6970.4  | 6837.5  |
| 7.5°  | 9950.5  | 9548.9  | 8691.3  | 7816.0  | 7000.8  | 6197.7  | 5602.4  | 5144.2  | 4828.9  | 4677.6  | 4539.7  |
| 10°   | 9567.3  | 9032.8  | 7813.9  | 6620.4  | 5513.3  | 4448.5  | 3626.3  | 3031.0  | 2650.6  | 2475.2  | 2363.5  |
| 12.5° | 9224.4  | 8530.8  | 6966.2  | 5455.3  | 4065.3  | 2818.9  | 1982.5  | 1508.8  | 1272.6  | 1190.6  | 1151.0  |
| 15°   | 8918.2  | 8068.4  | 6165.1  | 4348.1  | 2753.1  | 1611.3  | 1083.8  | 922.6   | 885.2   | 885.2   | 880.2   |
| 17.5° | 8628.4  | 7615.2  | 5391.7  | 3308.8  | 1727.9  | 985.6   | 824.4   | 803.2   | 803.2   | 812.4   | 812.4   |
| 20°   | 8350.5  | 7183.2  | 4644.4  | 2374.8  | 1088.1  | 782.0   | 745.2   | 740.2   | 745.2   | 756.5   | 756.5   |
| 22.5° | 8112.2  | 6790.8  | 3946.5  | 1629.7  | 808.1   | 704.9   | 686.5   | 679.4   | 681.6   | 688.6   | 693.6   |
| 25°   | 7934.8  | 6459.3  | 3288.3  | 1104.4  | 695.7   | 642.0   | 621.5   | 609.4   | 600.3   | 600.3   | 604.5   |
| 27.5° | 7823.1  | 6179.3  | 2650.6  | 803.2   | 625.7   | 584.0   | 550.8   | 532.4   | 511.2   | 499.9   | 504.1   |
| 30°   | 7741.1  | 5912.7  | 2052.5  | 656.1   | 560.7   | 518.2   | 476.5   | 446.1   | 415.7   | 401.6   | 406.5   |
| 32.5° | 7710.7  | 5697.8  | 1534.2  | 579.0   | 502.0   | 455.3   | 403.7   | 364.1   | 331.6   | 319.6   | 322.4   |
| 35°   | 7792.7  | 5527.4  | 1123.4  | 523.2   | 455.3   | 396.6   | 338.7   | 294.1   | 268.7   | 261.6   | 263.7   |
| 37.5° | 8007.6  | 5436.2  | 840.6   | 476.5   | 413.6   | 347.8   | 282.8   | 240.4   | 224.1   | 224.1   | 226.2   |
| 40°   | 8413.4  | 5434.1  | 675.2   | 444.0   | 376.1   | 301.2   | 233.3   | 202.9   | 193.7   | 198.7   | 200.8   |
| 42.5° | 9006.6  | 5557.8  | 588.2   | 413.6   | 343.6   | 256.6   | 193.7   | 172.5   | 170.4   | 175.3   | 177.5   |
| 45°   | 9816.8  | 5784.1  | 541.6   | 387.4   | 308.3   | 214.9   | 163.3   | 149.2   | 149.2   | 156.2   | 159.1   |
| 47.5° | 10809.5 | 6115.6  | 502.0   | 362.0   | 272.9   | 179.6   | 140.0   | 130.8   | 132.9   | 140.0   | 142.1   |
| 50°   | 12005.0 | 6534.2  | 462.4   | 333.7   | 247.5   | 149.2   | 121.6   | 114.5   | 116.7   | 125.8   | 128.7   |
| 52.5° | 13366.7 | 7097.0  | 429.9   | 308.3   | 214.9   | 123.7   | 102.5   | 98.3    | 102.5   | 112.4   | 114.5   |
| 55°   | 14534.0 | 7601.1  | 390.3   | 287.0   | 172.5   | 102.5   | 84.1    | 84.1    | 89.1    | 100.4   | 102.5   |
| 57.5° | 15657.5 | 8128.5  | 354.9   | 247.5   | 135.7   | 82.0    | 70.0    | 72.1    | 79.2    | 91.2    | 93.3    |
| 60°   | 17306.2 | 9022.9  | 313.2   | 207.9   | 102.5   | 65.0    | 58.7    | 60.8    | 70.0    | 82.0    | 84.1    |
| 62.5° | 20106.0 | 10384.6 | 270.8   | 172.5   | 79.2    | 51.6    | 46.7    | 51.6    | 62.9    | 77.1    | 79.2    |
| 65°   | 22632.8 | 10938.2 | 222.0   | 144.9   | 60.8    | 39.6    | 39.6    | 46.7    | 60.8    | 74.9    | 77.1    |
| 67.5° | 21224.5 | 9207.4  | 172.5   | 114.5   | 46.7    | 30.4    | 32.5    | 44.5    | 58.7    | 74.9    | 77.1    |
| 69°   | 18770.4 | 7529.0  | 147.1   | 91.2    | 39.6    | 28.3    | 30.4    | 44.5    | 58.7    | 72.1    | 74.9    |
| 70°   | 16858.0 | 6356.7  | 130.8   | 77.1    | 35.4    | 28.3    | 30.4    | 41.7    | 58.7    | 72.1    | 74.9    |
| 72.5° | 11291.0 | 3432.5  | 105.3   | 55.9    | 32.5    | 25.5    | 25.5    | 41.7    | 55.9    | 70.0    | 72.1    |
| 75°   | 4852.2  | 948.1   | 84.1    | 39.6    | 28.3    | 23.3    | 23.3    | 39.6    | 53.7    | 67.9    | 72.1    |
| 77.5° | 887.3   | 240.4   | 67.9    | 35.4    | 28.3    | 23.3    | 21.2    | 37.5    | 51.6    | 65.0    | 67.9    |
| 80°   | 352.8   | 118.8   | 53.7    | 30.4    | 25.5    | 21.2    | 18.4    | 35.4    | 48.8    | 62.9    | 65.0    |
| 82.5° | 212.8   | 67.9    | 44.5    | 28.3    | 25.5    | 18.4    | 16.3    | 30.4    | 46.7    | 60.8    | 62.9    |
| 85°   | 172.5   | 46.7    | 35.4    | 28.3    | 23.3    | 18.4    | 14.1    | 28.3    | 41.7    | 58.7    | 60.8    |
| 87.5° | 84.1    | 32.5    | 32.5    | 25.5    | 23.3    | 18.4    | 14.1    | 25.5    | 39.6    | 55.9    | 58.7    |
| 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)