

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: McGRAW-EDISON

Report Number: P299995

Luminaire Tested: **GLNA-AF-08-LED-E1-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: MCGRAW-EDISON
Catalog Number: GLNA-AF-08-LED-E1-SL3-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(8) 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: 24387.9 lumens
Efficiency: N/A
Efficacy: 94.9 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B2 - U0 - G4

Input Watts (W): 257
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: 25 FT

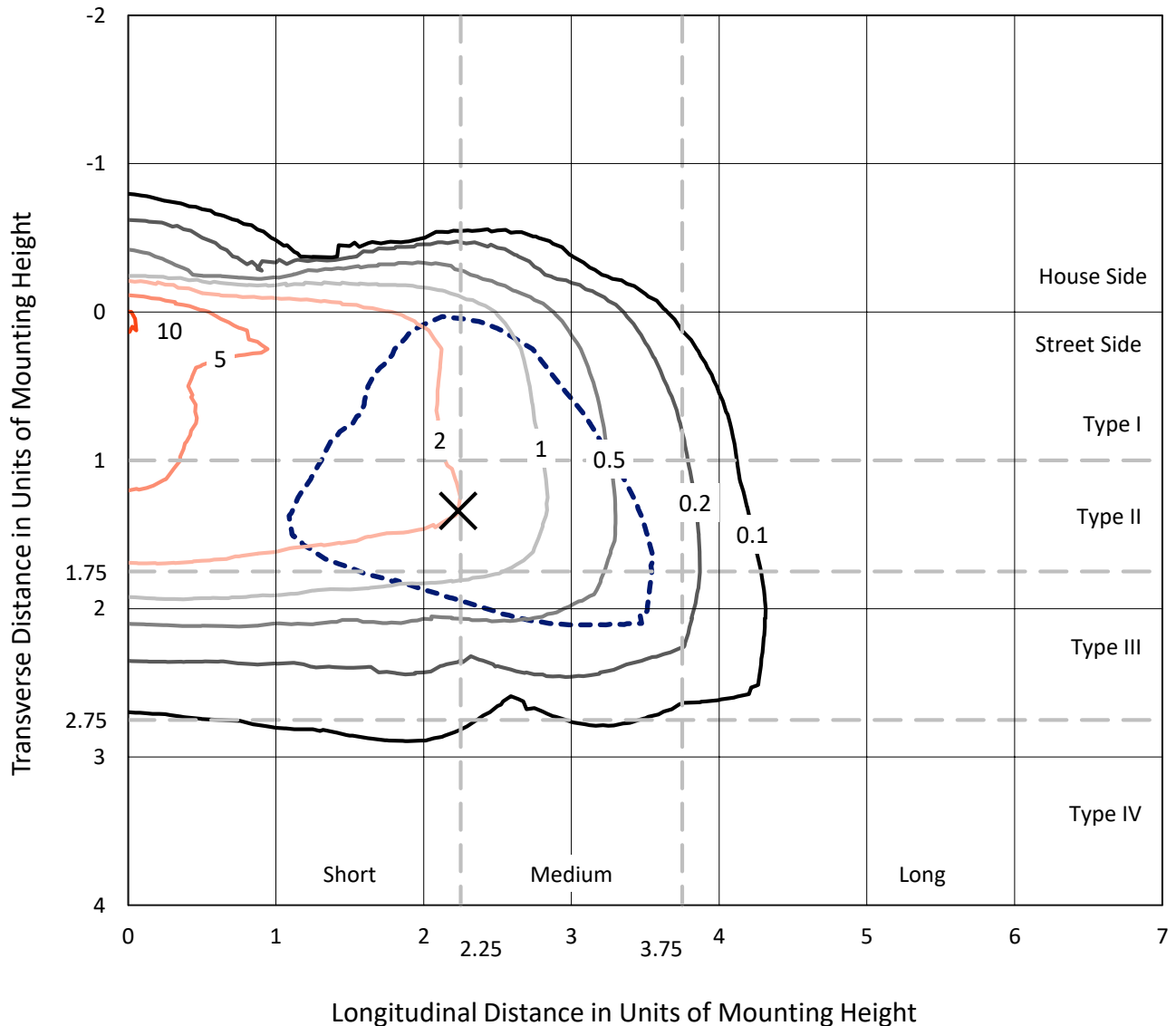


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

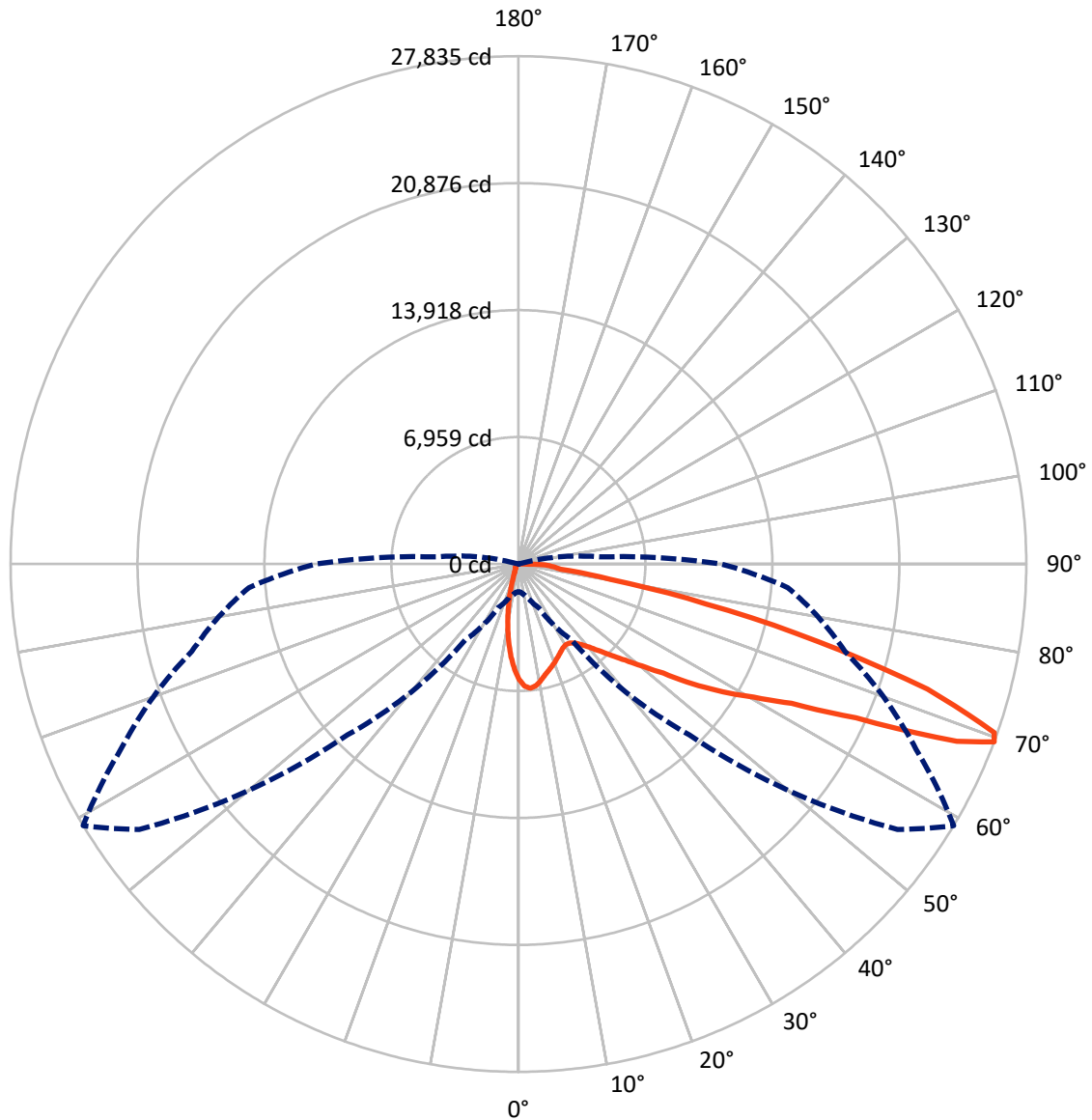


Based on 25 foot mounting height. Maximum calculated value = 10.2 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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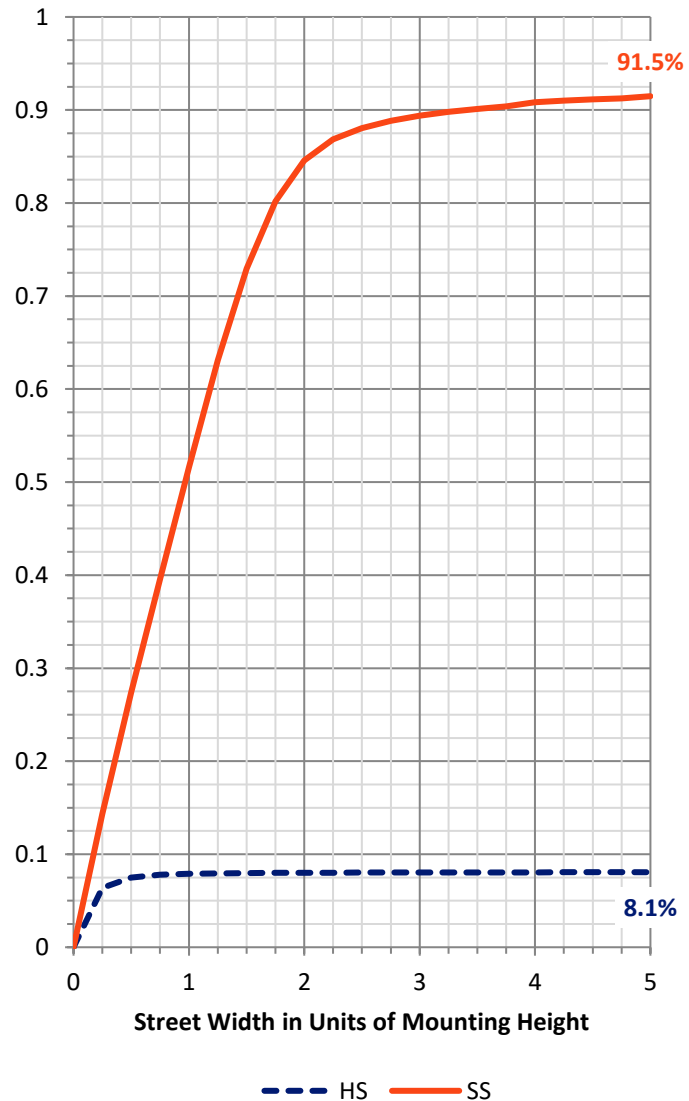
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1986.1 | 0.0 | 1986.1 |
| | % Fixture | 8.1 | 0.0 | 8.1 |
| Street Side | Lumens | 22401.8 | 0.0 | 22401.8 |
| | % Fixture | 91.9 | 0.0 | 91.9 |
| Total | Lumens | 24387.9 | 0.0 | 24387.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 515.3 | 2.1 |
| 10°-20° | 1064.7 | 4.4 |
| 20°-30° | 1432.6 | 5.9 |
| 30°-40° | 2080.1 | 8.5 |
| 40°-50° | 3463.5 | 14.2 |
| 50°-60° | 5403.0 | 22.2 |
| 60°-70° | 6685.8 | 27.4 |
| 70°-80° | 3388.3 | 13.9 |
| 80°-90° | 354.5 | 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° | 24387.9 | 100.0 |
| 0°-180° | 24387.9 | 100.0 |



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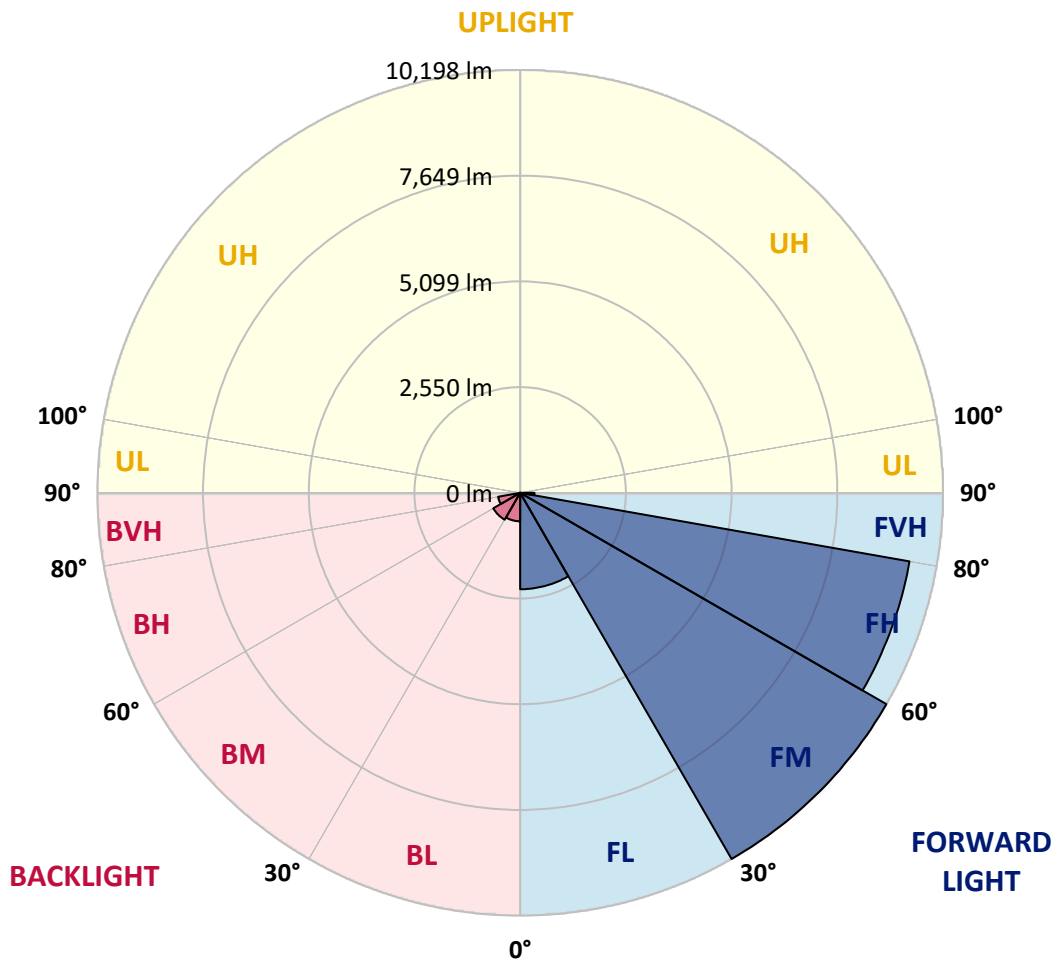
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 2325.1 | 9.5 | | | |
| FM | (30°-60°) | 10198.3 | 41.8 | | | |
| FH | (60°-80°) | 9534.8 | 39.1 | | | G4/12000 |
| FVH | (80°-90°) | 343.6 | 1.4 | | | G3/500 |
| BL | (0°-30°) | 687.4 | 2.8 | B2/1000 | | |
| BM | (30°-60°) | 748.3 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 539.4 | 2.2 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 10.9 | 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° | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 |
| 2.5° | 6957.3 | 6954.8 | 6924.3 | 6910.5 | 6885.5 | 6833.3 | 6751.9 | 6709.3 | 6640.4 | 6520.1 | 6359.0 |
| 5° | 6893.8 | 6927.2 | 6944.8 | 6946.4 | 6964.4 | 6944.8 | 6871.7 | 6836.2 | 6741.0 | 6547.7 | 6258.3 |
| 7.5° | 6463.8 | 6475.9 | 6527.2 | 6571.1 | 6656.7 | 6738.1 | 6764.4 | 6748.9 | 6692.6 | 6485.9 | 6100.9 |
| 10° | 6003.2 | 6015.3 | 6076.3 | 6133.9 | 6250.0 | 6375.2 | 6507.6 | 6535.6 | 6559.0 | 6397.4 | 5949.4 |
| 12.5° | 5605.7 | 5618.3 | 5680.5 | 5756.1 | 5891.3 | 6045.8 | 6251.2 | 6296.8 | 6400.3 | 6313.5 | 5827.9 |
| 15° | 5263.8 | 5269.2 | 5330.2 | 5423.7 | 5585.3 | 5783.6 | 6017.0 | 6090.1 | 6248.7 | 6254.2 | 5721.8 |
| 17.5° | 4972.8 | 4986.5 | 5024.1 | 5113.5 | 5290.1 | 5535.6 | 5807.4 | 5912.2 | 6098.0 | 6204.5 | 5618.3 |
| 20° | 4794.9 | 4808.7 | 4807.4 | 4857.1 | 5015.8 | 5277.6 | 5597.8 | 5723.1 | 5949.4 | 6153.5 | 5526.0 |
| 22.5° | 4760.7 | 4760.7 | 4724.8 | 4717.7 | 4811.6 | 5030.8 | 5379.9 | 5532.7 | 5815.3 | 6131.4 | 5461.3 |
| 25° | 4883.4 | 4877.6 | 4788.2 | 4715.2 | 4719.3 | 4850.0 | 5168.6 | 5350.6 | 5702.6 | 6146.4 | 5426.6 |
| 27.5° | 5142.7 | 5135.6 | 5022.5 | 4883.4 | 4771.5 | 4770.3 | 5008.7 | 5204.5 | 5612.8 | 6218.3 | 5440.4 |
| 30° | 5500.9 | 5498.4 | 5375.7 | 5200.3 | 4997.8 | 4811.6 | 4953.6 | 5131.4 | 5554.8 | 6347.7 | 5472.1 |
| 32.5° | 5892.6 | 5888.4 | 5796.1 | 5611.6 | 5354.8 | 4997.8 | 5011.6 | 5160.7 | 5571.5 | 6520.1 | 5549.4 |
| 35° | 6308.0 | 6300.9 | 6260.8 | 6099.7 | 5817.0 | 5341.0 | 5202.0 | 5317.6 | 5676.3 | 6778.2 | 5700.9 |
| 37.5° | 6757.3 | 6764.4 | 6793.2 | 6638.7 | 6342.3 | 5822.4 | 5520.6 | 5599.1 | 5887.2 | 7128.5 | 5947.7 |
| 40° | 7420.7 | 7419.5 | 7429.1 | 7226.2 | 6941.0 | 6411.2 | 5965.7 | 5990.7 | 6240.4 | 7593.2 | 6323.1 |
| 42.5° | 8624.5 | 8540.6 | 8285.4 | 7871.7 | 7584.8 | 7084.2 | 6527.2 | 6500.9 | 6672.1 | 8168.1 | 6848.3 |
| 45° | 10242.4 | 10062.9 | 9401.1 | 8608.2 | 8241.2 | 7842.9 | 7217.8 | 7133.9 | 7242.9 | 8859.1 | 7496.7 |
| 47.5° | 11633.6 | 11447.4 | 10511.3 | 9374.8 | 8937.6 | 8562.7 | 8027.4 | 7875.8 | 7911.8 | 9632.8 | 8318.4 |
| 50° | 12106.7 | 12015.6 | 11198.1 | 10042.4 | 9611.9 | 9468.7 | 8966.8 | 8781.9 | 8730.9 | 10527.6 | 9271.2 |
| 52.5° | 11942.6 | 11935.9 | 11391.0 | 10475.4 | 10229.9 | 10406.5 | 10148.5 | 9934.7 | 9747.2 | 11471.2 | 10240.7 |
| 55° | 11679.1 | 11713.8 | 11469.5 | 10854.5 | 10846.1 | 11262.8 | 11764.7 | 11586.8 | 11043.6 | 12495.8 | 11076.6 |
| 57.5° | 10952.6 | 11100.0 | 11425.7 | 11571.8 | 11910.8 | 12337.1 | 13110.8 | 13215.6 | 12573.0 | 13280.3 | 11770.1 |
| 60° | 8886.7 | 9210.7 | 10275.4 | 11674.9 | 13283.3 | 14345.0 | 14735.4 | 14824.8 | 13827.7 | 13932.5 | 12706.7 |
| 62.5° | 6308.0 | 6638.7 | 7989.0 | 10356.8 | 13303.7 | 16983.0 | 17155.4 | 16803.9 | 15209.7 | 14899.5 | 14321.7 |
| 65° | 3348.2 | 3603.7 | 4706.8 | 7475.9 | 11534.7 | 17595.5 | 21387.9 | 20339.9 | 17647.7 | 16800.9 | 16408.0 |
| 67.5° | 1712.7 | 1789.9 | 2228.8 | 3658.8 | 7929.7 | 15628.9 | 25181.6 | 25919.4 | 21849.7 | 18687.8 | 16307.4 |
| 69° | 1515.6 | 1561.1 | 1852.2 | 2645.0 | 5077.6 | 13237.8 | 25366.5 | 27835.0 | 24049.7 | 18530.3 | 14819.4 |
| 70° | 1467.2 | 1507.3 | 1772.0 | 2394.1 | 3969.0 | 11101.3 | 24658.8 | 27666.7 | 24612.1 | 17932.0 | 13707.9 |
| 72.5° | 1245.5 | 1279.7 | 1577.8 | 2115.6 | 3225.8 | 5510.5 | 20030.9 | 23444.2 | 22085.6 | 14937.9 | 9922.2 |
| 75° | 833.0 | 946.1 | 1514.4 | 1983.3 | 3000.8 | 3130.6 | 13206.0 | 16941.6 | 15737.9 | 10075.4 | 5168.6 |
| 77.5° | 200.0 | 215.0 | 427.5 | 1577.8 | 2744.4 | 2755.3 | 6791.9 | 10531.7 | 8590.2 | 3591.2 | 1221.7 |
| 80° | 107.7 | 103.5 | 119.8 | 313.1 | 2555.3 | 2585.8 | 3057.6 | 5112.2 | 3067.2 | 595.8 | 402.5 |
| 82.5° | 76.0 | 71.8 | 77.2 | 131.1 | 804.2 | 2355.3 | 2212.1 | 2313.9 | 1271.4 | 228.8 | 180.8 |
| 85° | 27.6 | 26.3 | 42.6 | 118.6 | 252.2 | 1354.0 | 2272.6 | 1908.5 | 1030.0 | 104.8 | 132.4 |
| 87.5° | 9.6 | 8.4 | 16.7 | 64.7 | 77.2 | 576.6 | 1402.5 | 1442.6 | 405.4 | 63.5 | 62.2 |
| 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° | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 | 6347.7 |
| 2.5° | 6291.3 | 6205.7 | 6048.7 | 5887.2 | 5738.1 | 5559.0 | 5469.2 | 5381.1 | 5344.0 | 5330.2 | 5265.5 |
| 5° | 6109.3 | 5964.4 | 5630.8 | 5295.5 | 4986.5 | 4658.4 | 4442.1 | 4268.4 | 4166.1 | 4116.4 | 4037.9 |
| 7.5° | 5876.3 | 5639.1 | 5132.7 | 4615.8 | 4134.4 | 3660.1 | 3308.5 | 3037.9 | 2851.7 | 2762.4 | 2681.0 |
| 10° | 5650.0 | 5334.3 | 4614.5 | 3909.7 | 3255.9 | 2627.1 | 2141.5 | 1789.9 | 1565.3 | 1461.8 | 1395.8 |
| 12.5° | 5447.5 | 5037.9 | 4113.9 | 3221.7 | 2400.8 | 1664.7 | 1170.8 | 891.0 | 751.6 | 703.1 | 679.7 |
| 15° | 5266.7 | 4764.8 | 3640.9 | 2567.8 | 1625.9 | 951.5 | 640.1 | 544.9 | 522.7 | 522.7 | 519.8 |
| 17.5° | 5095.5 | 4497.2 | 3184.1 | 1954.0 | 1020.4 | 582.0 | 486.8 | 474.3 | 474.3 | 479.7 | 479.7 |
| 20° | 4931.4 | 4242.1 | 2742.7 | 1402.5 | 642.6 | 461.8 | 440.1 | 437.2 | 440.1 | 446.8 | 446.8 |
| 22.5° | 4790.7 | 4010.4 | 2330.6 | 962.4 | 477.2 | 416.3 | 405.4 | 401.2 | 402.5 | 406.7 | 409.6 |
| 25° | 4685.9 | 3814.5 | 1941.9 | 652.2 | 410.8 | 379.1 | 367.0 | 359.9 | 354.5 | 354.5 | 357.0 |
| 27.5° | 4620.0 | 3649.2 | 1565.3 | 474.3 | 369.5 | 344.9 | 325.3 | 314.4 | 301.9 | 295.2 | 297.7 |
| 30° | 4571.5 | 3491.8 | 1212.1 | 387.5 | 331.1 | 306.0 | 281.4 | 263.5 | 245.5 | 237.2 | 240.1 |
| 32.5° | 4553.6 | 3364.9 | 906.0 | 342.0 | 296.4 | 268.9 | 238.4 | 215.0 | 195.8 | 188.7 | 190.4 |
| 35° | 4602.0 | 3264.2 | 663.5 | 309.0 | 268.9 | 234.2 | 200.0 | 173.7 | 158.7 | 154.5 | 155.7 |
| 37.5° | 4728.9 | 3210.4 | 496.4 | 281.4 | 244.3 | 205.4 | 167.0 | 142.0 | 132.4 | 132.4 | 133.6 |
| 40° | 4968.6 | 3209.1 | 398.7 | 262.2 | 222.1 | 177.9 | 137.8 | 119.8 | 114.4 | 117.3 | 118.6 |
| 42.5° | 5318.9 | 3282.2 | 347.4 | 244.3 | 202.9 | 151.6 | 114.4 | 101.9 | 100.6 | 103.5 | 104.8 |
| 45° | 5797.4 | 3415.8 | 319.8 | 228.8 | 182.0 | 126.9 | 96.4 | 88.1 | 88.1 | 92.3 | 93.9 |
| 47.5° | 6383.6 | 3611.6 | 296.4 | 213.8 | 161.2 | 106.1 | 82.7 | 77.2 | 78.5 | 82.7 | 83.9 |
| 50° | 7089.6 | 3858.8 | 273.1 | 197.1 | 146.1 | 88.1 | 71.8 | 67.6 | 68.9 | 74.3 | 76.0 |
| 52.5° | 7893.8 | 4191.2 | 253.9 | 182.0 | 126.9 | 73.1 | 60.5 | 58.0 | 60.5 | 66.4 | 67.6 |
| 55° | 8583.1 | 4488.9 | 230.5 | 169.5 | 101.9 | 60.5 | 49.7 | 49.7 | 52.6 | 59.3 | 60.5 |
| 57.5° | 9246.6 | 4800.3 | 209.6 | 146.1 | 80.2 | 48.4 | 41.3 | 42.6 | 46.8 | 53.9 | 55.1 |
| 60° | 10220.3 | 5328.5 | 185.0 | 122.8 | 60.5 | 38.4 | 34.7 | 35.9 | 41.3 | 48.4 | 49.7 |
| 62.5° | 11873.7 | 6132.7 | 159.9 | 101.9 | 46.8 | 30.5 | 27.6 | 30.5 | 37.2 | 45.5 | 46.8 |
| 65° | 13365.9 | 6459.6 | 131.1 | 85.6 | 35.9 | 23.4 | 23.4 | 27.6 | 35.9 | 44.3 | 45.5 |
| 67.5° | 12534.2 | 5437.5 | 101.9 | 67.6 | 27.6 | 18.0 | 19.2 | 26.3 | 34.7 | 44.3 | 45.5 |
| 69° | 11085.0 | 4446.3 | 86.8 | 53.9 | 23.4 | 16.7 | 18.0 | 26.3 | 34.7 | 42.6 | 44.3 |
| 70° | 9955.6 | 3754.0 | 77.2 | 45.5 | 20.9 | 16.7 | 18.0 | 24.6 | 34.7 | 42.6 | 44.3 |
| 72.5° | 6667.9 | 2027.1 | 62.2 | 33.0 | 19.2 | 15.0 | 15.0 | 24.6 | 33.0 | 41.3 | 42.6 |
| 75° | 2865.5 | 559.9 | 49.7 | 23.4 | 16.7 | 13.8 | 13.8 | 23.4 | 31.7 | 40.1 | 42.6 |
| 77.5° | 524.0 | 142.0 | 40.1 | 20.9 | 16.7 | 13.8 | 12.5 | 22.1 | 30.5 | 38.4 | 40.1 |
| 80° | 208.3 | 70.1 | 31.7 | 18.0 | 15.0 | 12.5 | 10.9 | 20.9 | 28.8 | 37.2 | 38.4 |
| 82.5° | 125.7 | 40.1 | 26.3 | 16.7 | 15.0 | 10.9 | 9.6 | 18.0 | 27.6 | 35.9 | 37.2 |
| 85° | 101.9 | 27.6 | 20.9 | 16.7 | 13.8 | 10.9 | 8.4 | 16.7 | 24.6 | 34.7 | 35.9 |
| 87.5° | 49.7 | 19.2 | 19.2 | 15.0 | 13.8 | 10.9 | 8.4 | 15.0 | 23.4 | 33.0 | 34.7 |
| 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)