

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: P299622

Luminaire Tested: **GLNA-AF-08-LED-E1-SL2-7060-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299622
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: MCGRAW-EDISON
Catalog Number: GLNA-AF-08-LED-E1-SL2-7060-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(8) 70 CRI, 5700K CCT 1050mA 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: 35892.2 lumens
Efficiency: N/A
Efficacy: 80.7 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 445
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

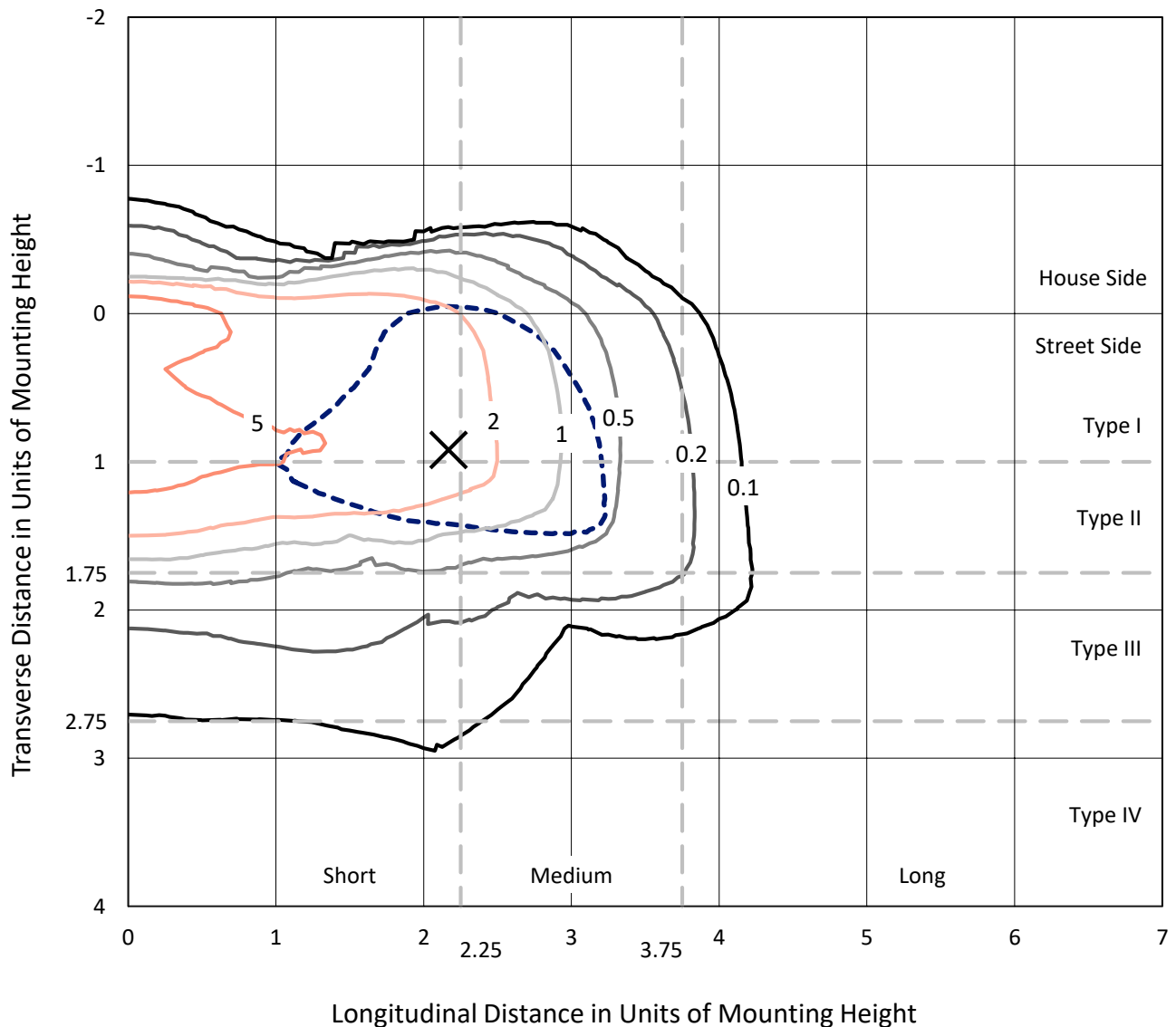


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

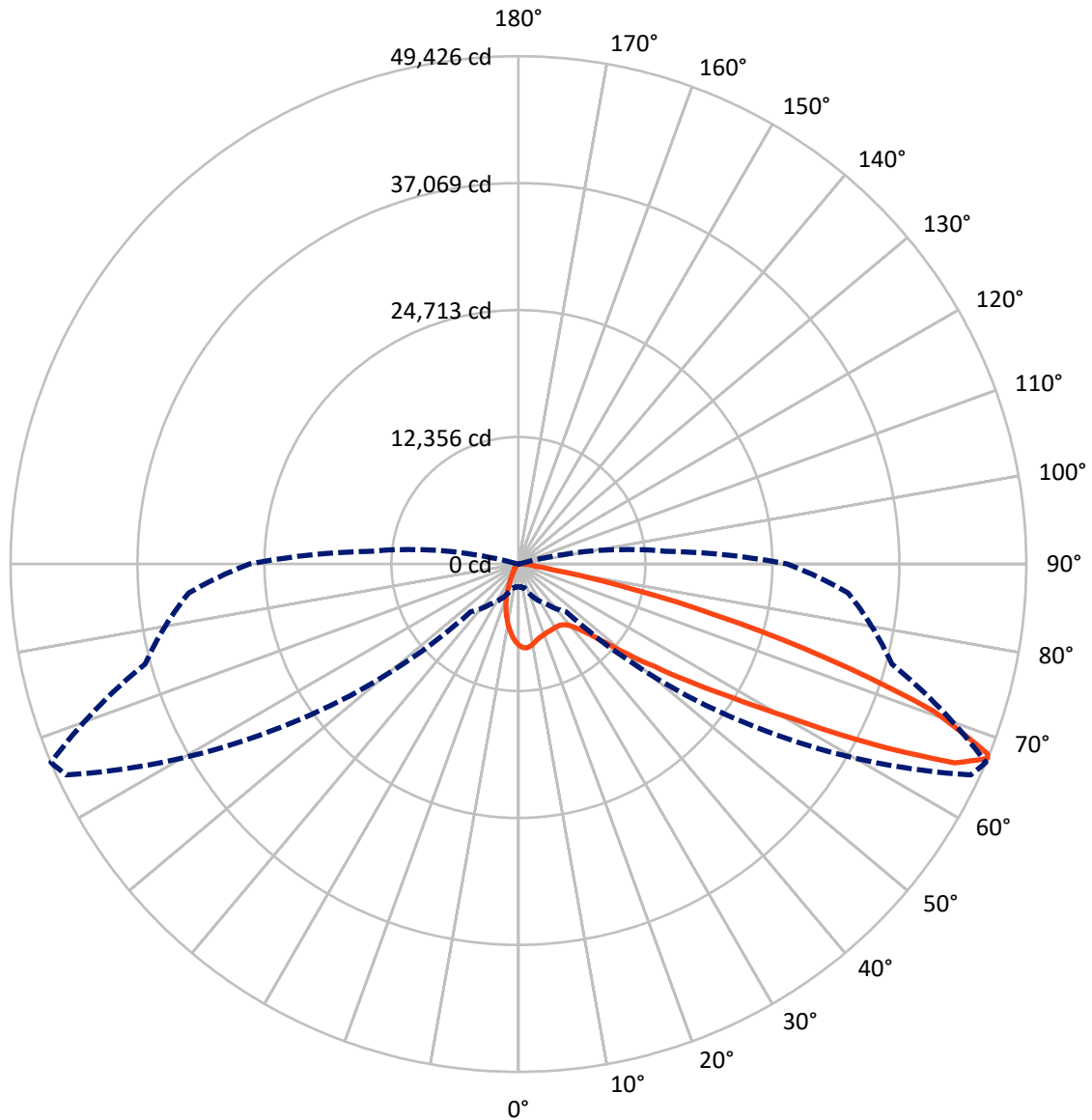


Based on 30 foot mounting height. Maximum calculated value = 8.8 fc
 Type II - Short - Semi-Cutoff

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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 |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3726.7 | 0.0 | 3726.7 |
| | % Fixture | 10.4 | 0.0 | 10.4 |
| Street Side | Lumens | 32165.5 | 0.0 | 32165.5 |
| | % Fixture | 89.6 | 0.0 | 89.6 |
| Total | Lumens | 35892.2 | 0.0 | 35892.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 644.1 | 1.8 |
| 10°-20° | 1370.8 | 3.8 |
| 20°-30° | 1993.1 | 5.6 |
| 30°-40° | 3109.3 | 8.7 |
| 40°-50° | 5507.9 | 15.3 |
| 50°-60° | 8715.8 | 24.3 |
| 60°-70° | 9982.7 | 27.8 |
| 70°-80° | 4140.8 | 11.5 |
| 80°-90° | 427.7 | 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° | 35892.2 | 100.0 |
| 0°-180° | 35892.2 | 100.0 |

Coefficient of Utilization



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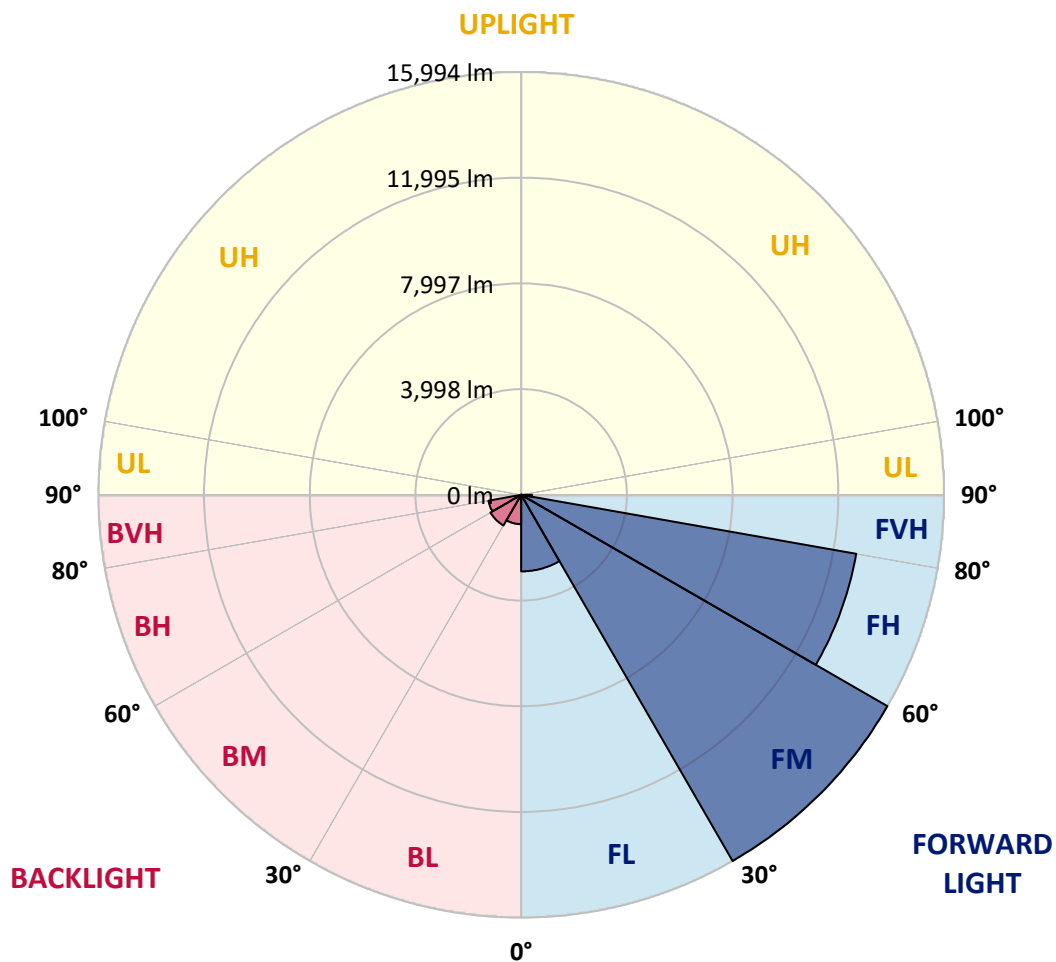
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2896.0 | 8.1 | | | |
| FM (30°-60°) | 15993.7 | 44.6 | | | |
| FH (60°-80°) | 12867.4 | 35.9 | | | G5 |
| FVH (80°-90°) | 408.5 | 1.1 | | | G3/500 |
| BL (0°-30°) | 1112.0 | 3.1 | B3/2500 | | |
| BM (30°-60°) | 1339.3 | 3.7 | B2/2500 | | |
| BH (60°-80°) | 1256.0 | 3.5 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 19.3 | 0.1 | | | 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 II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 |
| 2.5° | 8183.5 | 8200.3 | 8198.2 | 8210.7 | 8240.0 | 8242.1 | 8212.8 | 8156.3 | 8143.7 | 8070.5 | 7942.8 |
| 5° | 7547.1 | 7595.2 | 7624.6 | 7743.9 | 7877.9 | 8039.1 | 8160.5 | 8204.5 | 8198.2 | 8145.8 | 7953.2 |
| 7.5° | 6820.6 | 6868.8 | 6902.3 | 7042.6 | 7220.5 | 7496.9 | 7813.0 | 8072.6 | 8095.6 | 8152.1 | 7944.9 |
| 10° | 6337.0 | 6345.4 | 6391.5 | 6525.5 | 6711.8 | 6994.4 | 7371.2 | 7825.5 | 7894.6 | 8101.9 | 7923.9 |
| 12.5° | 5939.3 | 5945.6 | 6006.3 | 6150.7 | 6349.6 | 6634.3 | 7030.0 | 7555.5 | 7662.2 | 8039.1 | 7919.7 |
| 15° | 5656.7 | 5679.7 | 5734.1 | 5884.9 | 6096.3 | 6378.9 | 6785.1 | 7356.6 | 7484.3 | 8016.0 | 7957.4 |
| 17.5° | 5562.5 | 5587.6 | 5604.3 | 5713.2 | 5905.8 | 6182.1 | 6598.7 | 7226.8 | 7371.2 | 8028.6 | 8030.7 |
| 20° | 5660.8 | 5679.7 | 5642.0 | 5669.2 | 5788.5 | 6035.6 | 6441.7 | 7115.8 | 7287.5 | 8043.3 | 8124.9 |
| 22.5° | 6027.2 | 6035.6 | 5933.0 | 5813.7 | 5792.7 | 5928.8 | 6318.2 | 7027.9 | 7212.1 | 8083.0 | 8235.9 |
| 25° | 6655.3 | 6640.6 | 6473.1 | 6215.6 | 5972.8 | 5910.0 | 6244.9 | 6973.5 | 7174.5 | 8124.9 | 8351.0 |
| 27.5° | 7413.1 | 7434.0 | 7203.8 | 6829.0 | 6366.4 | 6035.6 | 6234.5 | 6950.4 | 7157.7 | 8154.2 | 8451.5 |
| 30° | 8334.3 | 8363.6 | 8099.8 | 7628.7 | 6965.1 | 6345.4 | 6330.8 | 6946.3 | 7147.2 | 8135.4 | 8459.9 |
| 32.5° | 9274.2 | 9309.8 | 9102.6 | 8616.9 | 7764.8 | 6864.6 | 6548.5 | 6992.3 | 7168.2 | 8070.5 | 8411.7 |
| 35° | 10258.2 | 10308.4 | 10170.3 | 9753.7 | 8849.3 | 7614.1 | 6931.6 | 7132.6 | 7266.6 | 8064.2 | 8363.6 |
| 37.5° | 11616.9 | 11662.9 | 11403.3 | 10961.6 | 10161.9 | 8619.0 | 7547.1 | 7396.4 | 7498.9 | 8164.7 | 8376.1 |
| 40° | 13645.5 | 13639.2 | 12969.3 | 12293.1 | 11604.3 | 9896.0 | 8411.7 | 7873.7 | 7926.0 | 8468.2 | 8531.0 |
| 42.5° | 15856.2 | 15845.8 | 14855.5 | 13827.6 | 13205.8 | 11468.2 | 9548.5 | 8698.5 | 8662.9 | 9027.2 | 8933.0 |
| 45° | 17560.3 | 17558.3 | 16750.2 | 15592.4 | 15134.0 | 13272.8 | 11018.1 | 9845.8 | 9791.3 | 9935.8 | 9674.1 |
| 47.5° | 18286.8 | 18299.4 | 17893.2 | 17078.8 | 17271.4 | 15713.9 | 12870.9 | 11508.0 | 11426.4 | 11367.7 | 10970.0 |
| 50° | 17721.5 | 17746.7 | 17780.2 | 17621.1 | 18839.5 | 18994.4 | 15355.9 | 13850.6 | 13810.9 | 13549.2 | 12927.4 |
| 52.5° | 15875.1 | 16002.8 | 16396.4 | 16900.9 | 19383.8 | 22143.0 | 19251.9 | 16760.6 | 16547.1 | 16268.7 | 15584.1 |
| 55° | 12764.1 | 12904.4 | 13651.8 | 14876.5 | 18573.6 | 24211.4 | 24711.8 | 20512.2 | 20156.3 | 19325.2 | 18337.0 |
| 57.5° | 8447.3 | 8665.0 | 9749.5 | 11307.0 | 16220.5 | 24544.3 | 30159.1 | 25718.7 | 24479.4 | 22203.7 | 21090.0 |
| 60° | 4653.9 | 4863.2 | 6039.8 | 7450.8 | 11715.3 | 22898.8 | 33822.7 | 32497.5 | 30307.7 | 25421.5 | 24433.3 |
| 62.5° | 2866.0 | 2979.1 | 3847.9 | 5160.5 | 7025.8 | 18073.3 | 34580.6 | 41016.0 | 38480.8 | 29564.5 | 28471.7 |
| 65° | 2281.9 | 2330.1 | 2755.1 | 4218.4 | 5037.0 | 10750.2 | 32133.3 | 47510.1 | 46664.3 | 34580.6 | 32087.2 |
| 67° | 2214.9 | 2233.8 | 2434.7 | 3621.8 | 4748.1 | 6590.4 | 26920.4 | 48567.3 | 49425.6 | 37616.2 | 32200.2 |
| 67.5° | 2229.6 | 2250.5 | 2441.0 | 3456.4 | 4739.7 | 6056.5 | 25124.2 | 48150.7 | 49235.1 | 37856.9 | 31699.9 |
| 70° | 2150.0 | 2214.9 | 2794.8 | 3454.3 | 4507.3 | 5032.8 | 15046.0 | 41719.4 | 42847.8 | 35175.1 | 26897.4 |
| 72.5° | 762.0 | 766.2 | 1208.0 | 2794.8 | 4900.9 | 5087.2 | 7555.5 | 30584.1 | 31419.4 | 26907.9 | 19392.2 |
| 75° | 452.2 | 385.2 | 402.0 | 795.5 | 4683.2 | 4940.7 | 4358.7 | 19542.9 | 19854.8 | 15418.7 | 9820.6 |
| 77.5° | 311.9 | 272.2 | 280.5 | 351.7 | 1783.7 | 4871.6 | 3462.7 | 10191.2 | 9858.3 | 5407.5 | 2091.4 |
| 80° | 177.9 | 157.0 | 167.5 | 307.7 | 649.0 | 4545.0 | 3265.9 | 4132.6 | 3523.4 | 917.0 | 577.8 |
| 82.5° | 94.2 | 79.6 | 96.3 | 253.3 | 452.2 | 2832.5 | 3272.2 | 1997.2 | 1582.7 | 309.8 | 393.6 |
| 85° | 33.5 | 27.2 | 46.1 | 173.8 | 301.5 | 868.8 | 3033.5 | 1679.0 | 1318.9 | 150.7 | 299.4 |
| 87.5° | 6.3 | 6.3 | 18.8 | 71.2 | 121.4 | 265.9 | 1794.1 | 996.5 | 667.8 | 90.0 | 205.2 |
| 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° | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 | 7915.6 |
| 2.5° | 7890.4 | 7800.4 | 7679.0 | 7530.3 | 7354.5 | 7199.6 | 7084.4 | 6965.1 | 6940.0 | 6898.1 | 6891.8 |
| 5° | 7838.1 | 7683.2 | 7381.7 | 7036.3 | 6667.8 | 6335.0 | 6064.9 | 5824.1 | 5717.4 | 5625.3 | 5614.8 |
| 7.5° | 7760.6 | 7528.3 | 7015.3 | 6458.5 | 5882.8 | 5359.4 | 4915.6 | 4601.5 | 4312.6 | 4174.5 | 4153.5 |
| 10° | 7670.6 | 7337.7 | 6602.9 | 5830.4 | 5034.9 | 4295.9 | 3636.4 | 3083.7 | 2748.8 | 2549.9 | 2524.8 |
| 12.5° | 7586.9 | 7151.4 | 6182.1 | 5179.3 | 4122.1 | 3134.0 | 2286.1 | 1758.5 | 1406.8 | 1264.5 | 1247.7 |
| 15° | 7547.1 | 7000.7 | 5788.5 | 4513.6 | 3167.5 | 1995.1 | 1249.8 | 967.2 | 852.1 | 818.6 | 816.5 |
| 17.5° | 7542.9 | 6873.0 | 5403.3 | 3824.8 | 2219.1 | 1159.8 | 814.4 | 743.2 | 720.2 | 711.8 | 711.8 |
| 20° | 7540.8 | 6751.6 | 5018.1 | 3111.0 | 1408.9 | 772.5 | 678.3 | 661.5 | 644.8 | 634.3 | 634.3 |
| 22.5° | 7563.8 | 6642.7 | 4616.2 | 2382.4 | 887.6 | 626.0 | 596.6 | 579.9 | 559.0 | 544.3 | 542.2 |
| 25° | 7586.9 | 6559.0 | 4205.9 | 1695.7 | 642.7 | 544.3 | 515.0 | 492.0 | 462.7 | 443.8 | 441.7 |
| 27.5° | 7591.1 | 6454.3 | 3766.2 | 1134.7 | 538.0 | 475.2 | 437.5 | 402.0 | 368.5 | 349.6 | 347.5 |
| 30° | 7528.3 | 6278.4 | 3278.4 | 766.2 | 475.2 | 412.4 | 362.2 | 324.5 | 293.1 | 278.4 | 278.4 |
| 32.5° | 7404.7 | 6060.7 | 2742.5 | 577.8 | 422.9 | 353.8 | 299.4 | 263.8 | 242.8 | 236.6 | 234.5 |
| 35° | 7293.8 | 5826.2 | 2191.9 | 489.9 | 378.9 | 299.4 | 244.9 | 221.9 | 209.4 | 207.3 | 205.2 |
| 37.5° | 7228.9 | 5637.8 | 1674.8 | 443.8 | 337.1 | 251.2 | 207.3 | 190.5 | 184.2 | 180.0 | 182.1 |
| 40° | 7279.1 | 5480.8 | 1237.3 | 406.1 | 295.2 | 209.4 | 175.9 | 167.5 | 161.2 | 159.1 | 159.1 |
| 42.5° | 7498.9 | 5453.6 | 919.1 | 372.6 | 255.4 | 173.8 | 152.8 | 146.5 | 142.4 | 140.3 | 142.4 |
| 45° | 8076.8 | 5621.1 | 713.9 | 341.2 | 215.6 | 146.5 | 129.8 | 127.7 | 125.6 | 125.6 | 125.6 |
| 47.5° | 8945.6 | 5966.5 | 594.6 | 305.7 | 180.0 | 125.6 | 113.0 | 111.0 | 108.9 | 111.0 | 111.0 |
| 50° | 10417.3 | 6598.7 | 531.8 | 270.1 | 148.6 | 106.8 | 96.3 | 96.3 | 96.3 | 96.3 | 98.4 |
| 52.5° | 12655.3 | 7842.3 | 489.9 | 234.5 | 121.4 | 90.0 | 81.6 | 81.6 | 83.7 | 83.7 | 85.8 |
| 55° | 15148.6 | 9492.0 | 452.2 | 198.9 | 102.6 | 75.4 | 67.0 | 69.1 | 71.2 | 73.3 | 73.3 |
| 57.5° | 17853.4 | 11319.6 | 420.8 | 163.3 | 87.9 | 60.7 | 56.5 | 58.6 | 60.7 | 64.9 | 64.9 |
| 60° | 21117.2 | 13298.0 | 374.7 | 127.7 | 73.3 | 48.2 | 44.0 | 48.2 | 54.4 | 58.6 | 60.7 |
| 62.5° | 24701.3 | 15211.4 | 316.1 | 100.5 | 60.7 | 37.7 | 35.6 | 44.0 | 52.3 | 56.5 | 58.6 |
| 65° | 27150.7 | 15812.3 | 242.8 | 81.6 | 46.1 | 27.2 | 29.3 | 39.8 | 50.2 | 56.5 | 56.5 |
| 67° | 26158.4 | 14336.3 | 198.9 | 69.1 | 37.7 | 20.9 | 27.2 | 39.8 | 50.2 | 54.4 | 56.5 |
| 67.5° | 25469.6 | 13758.5 | 190.5 | 67.0 | 35.6 | 20.9 | 27.2 | 39.8 | 50.2 | 56.5 | 56.5 |
| 70° | 20723.6 | 10335.6 | 159.1 | 50.2 | 29.3 | 18.8 | 23.0 | 37.7 | 48.2 | 54.4 | 54.4 |
| 72.5° | 14399.1 | 6372.6 | 142.4 | 35.6 | 25.1 | 16.7 | 20.9 | 35.6 | 46.1 | 52.3 | 54.4 |
| 75° | 6845.8 | 2307.0 | 121.4 | 27.2 | 23.0 | 14.7 | 18.8 | 35.6 | 46.1 | 52.3 | 52.3 |
| 77.5° | 1396.4 | 535.9 | 98.4 | 23.0 | 18.8 | 14.7 | 16.7 | 33.5 | 44.0 | 50.2 | 50.2 |
| 80° | 458.5 | 207.3 | 73.3 | 20.9 | 18.8 | 14.7 | 16.7 | 31.4 | 44.0 | 48.2 | 50.2 |
| 82.5° | 330.8 | 104.7 | 48.2 | 20.9 | 18.8 | 14.7 | 14.7 | 31.4 | 41.9 | 48.2 | 48.2 |
| 85° | 253.3 | 73.3 | 31.4 | 20.9 | 18.8 | 14.7 | 14.7 | 29.3 | 39.8 | 46.1 | 46.1 |
| 87.5° | 167.5 | 29.3 | 25.1 | 20.9 | 18.8 | 14.7 | 14.7 | 29.3 | 37.7 | 44.0 | 46.1 |
| 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)