

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: P299668

Luminaire Tested: **GLNA-AF-06-LED-E1-SL2-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299668
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-06-LED-E1-SL2-800-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(6) 70 CRI, 4000K CCT 800mA 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: 21640 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G4

Input Watts (W): 249
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

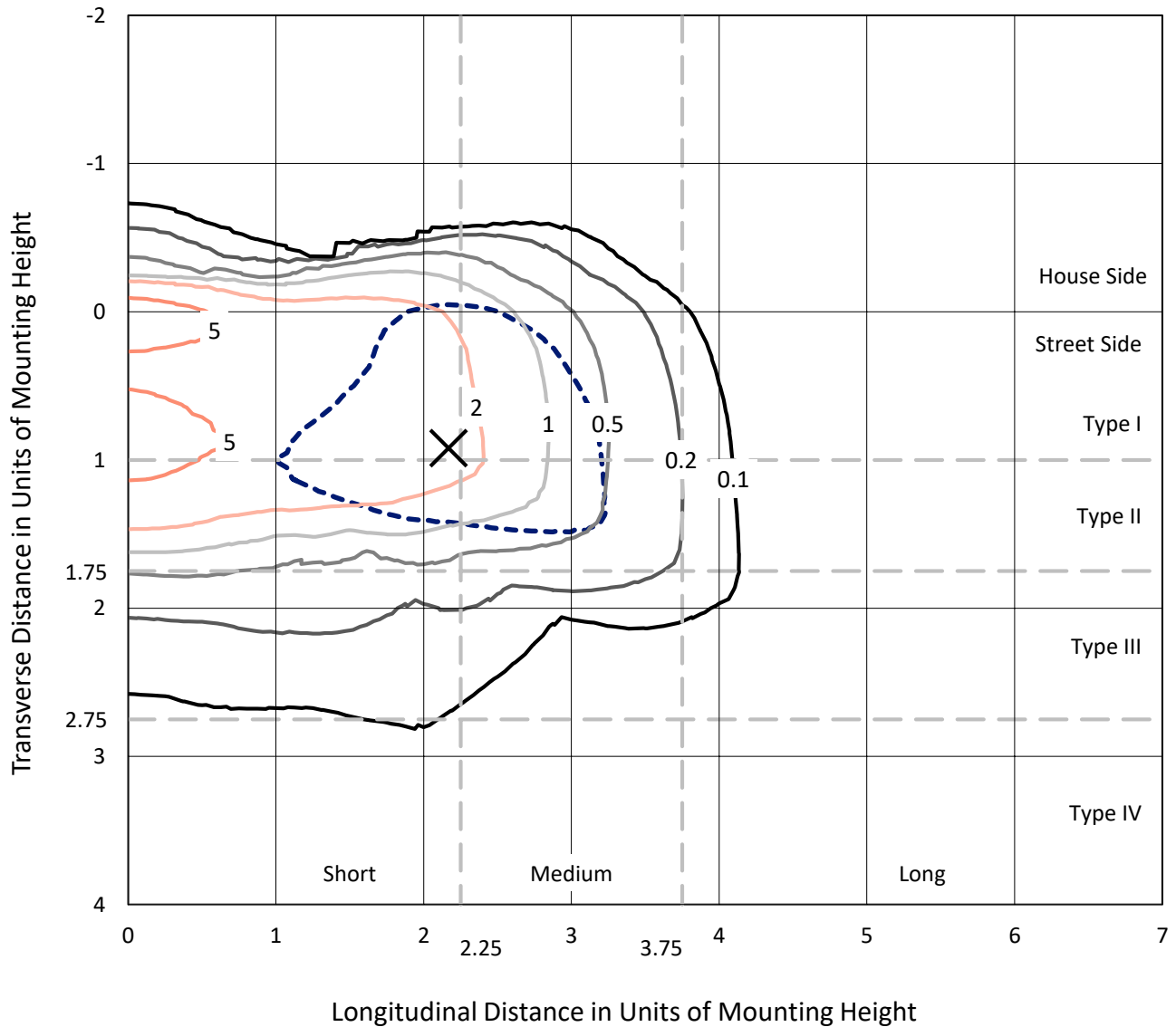


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

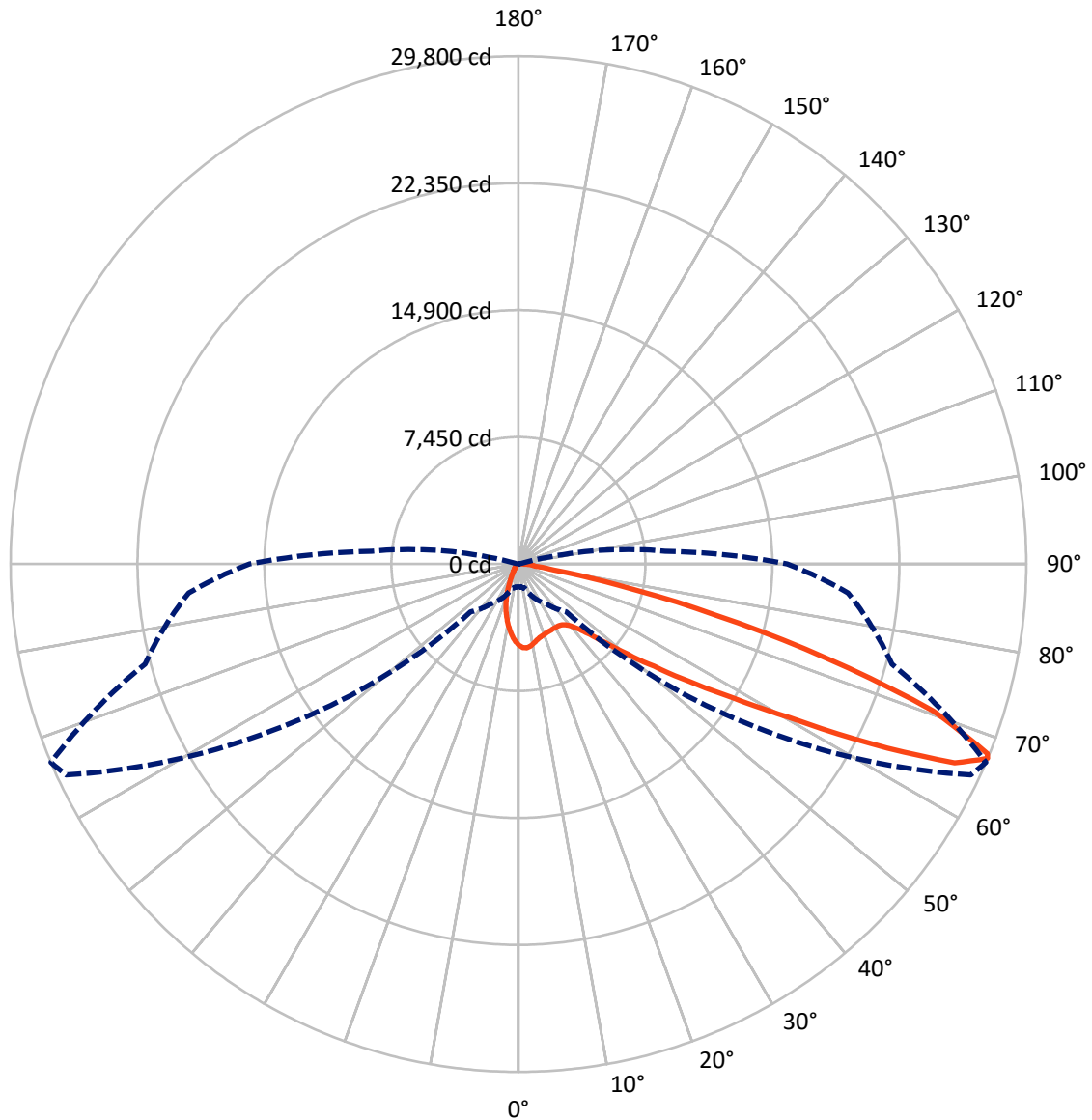


Based on 25 foot mounting height. Maximum calculated value = 7.6 fc
 Type II - Short - Semi-Cutoff

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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 | 2246.9 | 0.0 | 2246.9 |
| | % Fixture | 10.4 | 0.0 | 10.4 |
| Street Side | Lumens | 19393.1 | 0.0 | 19393.1 |
| | % Fixture | 89.6 | 0.0 | 89.6 |
| Total | Lumens | 21640.0 | 0.0 | 21640.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 388.3 | 1.8 |
| 10°-20° | 826.5 | 3.8 |
| 20°-30° | 1201.7 | 5.6 |
| 30°-40° | 1874.6 | 8.7 |
| 40°-50° | 3320.8 | 15.3 |
| 50°-60° | 5254.9 | 24.3 |
| 60°-70° | 6018.7 | 27.8 |
| 70°-80° | 2496.5 | 11.5 |
| 80°-90° | 257.9 | 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° | 21640.0 | 100.0 |
| 0°-180° | 21640.0 | 100.0 |

Coefficient of Utilization



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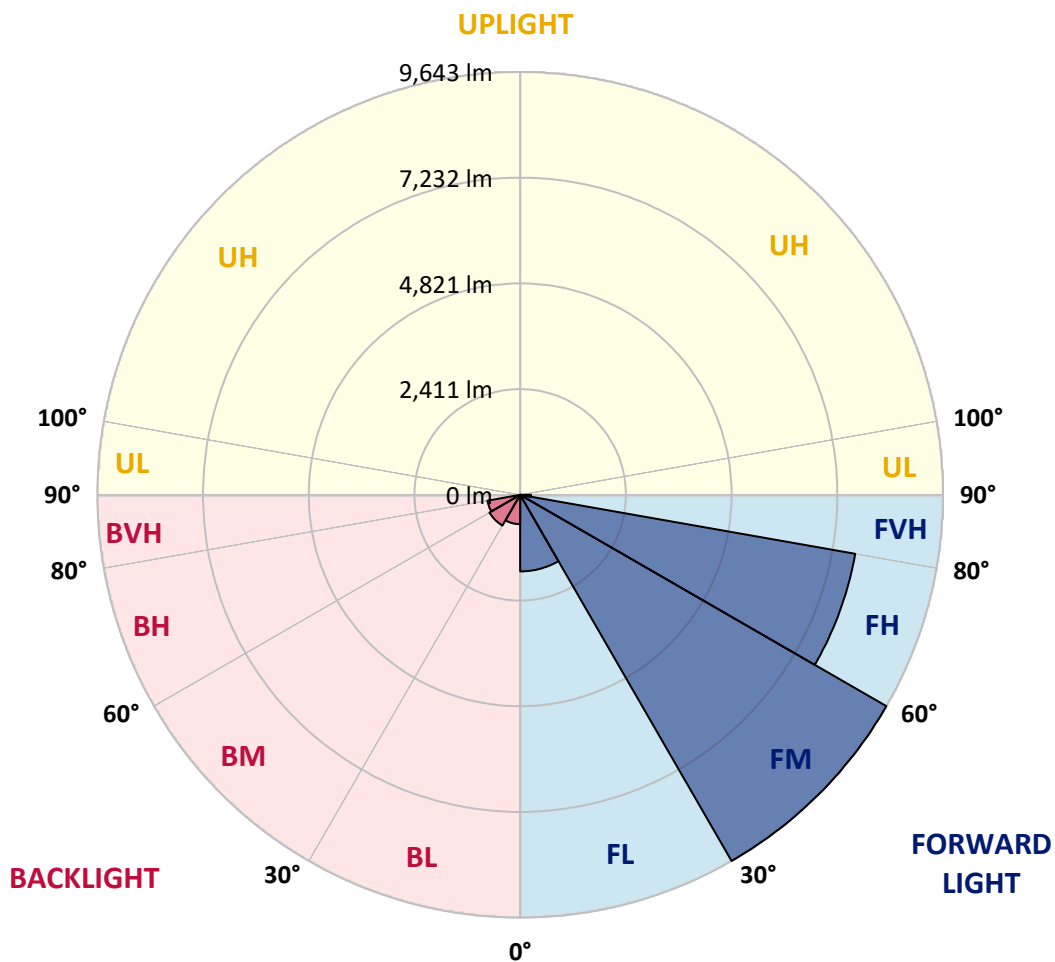
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1746.0 | 8.1 | | | |
| FM (30°-60°) | 9642.8 | 44.6 | | | |
| FH (60°-80°) | 7758.0 | 35.9 | | | G4/12000 |
| FVH (80°-90°) | 246.3 | 1.1 | | | G3/500 |
| BL (0°-30°) | 670.5 | 3.1 | B2/1000 | | |
| BM (30°-60°) | 807.5 | 3.7 | B1/1000 | | |
| BH (60°-80°) | 757.3 | 3.5 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 11.6 | 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° | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 |
| 2.5° | 4934.0 | 4944.1 | 4942.8 | 4950.4 | 4968.1 | 4969.3 | 4951.7 | 4917.6 | 4910.0 | 4865.8 | 4788.8 |
| 5° | 4550.3 | 4579.3 | 4597.0 | 4668.9 | 4749.7 | 4846.9 | 4920.1 | 4946.6 | 4942.8 | 4911.3 | 4795.1 |
| 7.5° | 4112.3 | 4141.3 | 4161.5 | 4246.1 | 4353.4 | 4520.0 | 4710.6 | 4867.1 | 4881.0 | 4915.0 | 4790.1 |
| 10° | 3820.7 | 3825.8 | 3853.5 | 3934.3 | 4046.6 | 4217.0 | 4444.2 | 4718.1 | 4759.8 | 4884.8 | 4777.5 |
| 12.5° | 3580.9 | 3584.7 | 3621.3 | 3708.4 | 3828.3 | 3999.9 | 4238.5 | 4555.3 | 4619.7 | 4846.9 | 4774.9 |
| 15° | 3410.5 | 3424.4 | 3457.2 | 3548.1 | 3675.6 | 3846.0 | 4090.8 | 4435.4 | 4512.4 | 4833.0 | 4797.7 |
| 17.5° | 3353.7 | 3368.8 | 3378.9 | 3444.6 | 3560.7 | 3727.3 | 3978.5 | 4357.2 | 4444.2 | 4840.6 | 4841.8 |
| 20° | 3413.0 | 3424.4 | 3401.7 | 3418.1 | 3490.0 | 3639.0 | 3883.8 | 4290.3 | 4393.8 | 4849.4 | 4898.6 |
| 22.5° | 3633.9 | 3639.0 | 3577.1 | 3505.2 | 3492.5 | 3574.6 | 3809.4 | 4237.2 | 4348.3 | 4873.4 | 4965.5 |
| 25° | 4012.6 | 4003.7 | 3902.8 | 3747.5 | 3601.1 | 3563.2 | 3765.2 | 4204.4 | 4325.6 | 4898.6 | 5035.0 |
| 27.5° | 4469.5 | 4482.1 | 4343.3 | 4117.3 | 3838.4 | 3639.0 | 3758.9 | 4190.5 | 4315.5 | 4916.3 | 5095.5 |
| 30° | 5024.9 | 5042.5 | 4883.5 | 4599.5 | 4199.4 | 3825.8 | 3816.9 | 4188.0 | 4309.2 | 4905.0 | 5100.6 |
| 32.5° | 5591.6 | 5613.1 | 5488.1 | 5195.3 | 4681.5 | 4138.8 | 3948.2 | 4215.8 | 4321.8 | 4865.8 | 5071.6 |
| 35° | 6184.8 | 6215.1 | 6131.8 | 5880.6 | 5335.4 | 4590.7 | 4179.2 | 4300.4 | 4381.1 | 4862.0 | 5042.5 |
| 37.5° | 7004.0 | 7031.8 | 6875.3 | 6608.9 | 6126.8 | 5196.5 | 4550.3 | 4459.4 | 4521.2 | 4922.6 | 5050.1 |
| 40° | 8227.1 | 8223.3 | 7819.4 | 7411.7 | 6996.4 | 5966.5 | 5071.6 | 4747.2 | 4778.7 | 5105.6 | 5143.5 |
| 42.5° | 9560.0 | 9553.7 | 8956.6 | 8336.9 | 7962.0 | 6914.4 | 5756.9 | 5244.5 | 5223.0 | 5442.7 | 5385.9 |
| 45° | 10587.4 | 10586.2 | 10098.9 | 9400.9 | 9124.5 | 8002.4 | 6643.0 | 5936.2 | 5903.4 | 5990.5 | 5832.7 |
| 47.5° | 11025.4 | 11033.0 | 10788.1 | 10297.1 | 10413.2 | 9474.2 | 7760.1 | 6938.4 | 6889.1 | 6853.8 | 6614.0 |
| 50° | 10684.6 | 10699.8 | 10720.0 | 10624.0 | 11358.6 | 11452.0 | 9258.3 | 8350.8 | 8326.8 | 8169.0 | 7794.2 |
| 52.5° | 9571.3 | 9648.3 | 9885.6 | 10189.8 | 11686.8 | 13350.4 | 11607.3 | 10105.3 | 9976.5 | 9808.6 | 9395.9 |
| 55° | 7695.7 | 7780.3 | 8230.9 | 8969.3 | 11198.3 | 14597.5 | 14899.1 | 12367.1 | 12152.6 | 11651.5 | 11055.7 |
| 57.5° | 5093.0 | 5224.3 | 5878.1 | 6817.2 | 9779.6 | 14798.2 | 18183.4 | 15506.3 | 14759.0 | 13387.0 | 12715.5 |
| 60° | 2805.9 | 2932.1 | 3641.5 | 4492.2 | 7063.3 | 13806.1 | 20392.3 | 19593.3 | 18273.0 | 15327.0 | 14731.3 |
| 62.5° | 1728.0 | 1796.1 | 2319.9 | 3111.3 | 4236.0 | 10896.7 | 20849.2 | 24729.2 | 23200.7 | 17824.9 | 17166.1 |
| 65° | 1375.8 | 1404.8 | 1661.1 | 2543.4 | 3036.9 | 6481.5 | 19373.7 | 28644.6 | 28134.7 | 20849.2 | 19345.9 |
| 67° | 1335.4 | 1346.8 | 1468.0 | 2183.6 | 2862.7 | 3973.4 | 16230.8 | 29282.0 | 29799.5 | 22679.4 | 19414.1 |
| 67.5° | 1344.3 | 1356.9 | 1471.7 | 2083.9 | 2857.6 | 3651.6 | 15147.8 | 29030.8 | 29684.7 | 22824.6 | 19112.4 |
| 70° | 1296.3 | 1335.4 | 1685.1 | 2082.6 | 2717.5 | 3034.4 | 9071.5 | 25153.3 | 25833.7 | 21207.7 | 16216.9 |
| 72.5° | 459.4 | 462.0 | 728.3 | 1685.1 | 2954.8 | 3067.2 | 4555.3 | 18439.6 | 18943.3 | 16223.2 | 11691.9 |
| 75° | 272.6 | 232.2 | 242.3 | 479.6 | 2823.6 | 2978.8 | 2627.9 | 11782.7 | 11970.8 | 9296.2 | 5921.0 |
| 77.5° | 188.1 | 164.1 | 169.1 | 212.1 | 1075.4 | 2937.2 | 2087.7 | 6144.4 | 5943.8 | 3260.3 | 1260.9 |
| 80° | 107.3 | 94.7 | 101.0 | 185.5 | 391.3 | 2740.3 | 1969.0 | 2491.6 | 2124.3 | 552.8 | 348.4 |
| 82.5° | 56.8 | 48.0 | 58.1 | 152.7 | 272.6 | 1707.8 | 1972.8 | 1204.1 | 954.2 | 186.8 | 237.3 |
| 85° | 20.2 | 16.4 | 27.8 | 104.8 | 181.8 | 523.8 | 1828.9 | 1012.3 | 795.2 | 90.9 | 180.5 |
| 87.5° | 3.8 | 3.8 | 11.4 | 42.9 | 73.2 | 160.3 | 1081.7 | 600.8 | 402.6 | 54.3 | 123.7 |
| 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° | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 | 4772.4 |
| 2.5° | 4757.3 | 4703.0 | 4629.8 | 4540.2 | 4434.1 | 4340.7 | 4271.3 | 4199.4 | 4184.2 | 4159.0 | 4155.2 |
| 5° | 4725.7 | 4632.3 | 4450.6 | 4242.3 | 4020.1 | 3819.4 | 3656.6 | 3511.5 | 3447.1 | 3391.6 | 3385.2 |
| 7.5° | 4679.0 | 4538.9 | 4229.7 | 3893.9 | 3546.8 | 3231.3 | 2963.7 | 2774.3 | 2600.2 | 2516.8 | 2504.2 |
| 10° | 4624.7 | 4424.0 | 3981.0 | 3515.3 | 3035.6 | 2590.1 | 2192.5 | 1859.2 | 1657.3 | 1537.4 | 1522.2 |
| 12.5° | 4574.3 | 4311.7 | 3727.3 | 3122.7 | 2485.3 | 1889.5 | 1378.3 | 1060.3 | 848.2 | 762.4 | 752.3 |
| 15° | 4550.3 | 4220.8 | 3490.0 | 2721.3 | 1909.7 | 1202.9 | 753.5 | 583.1 | 513.7 | 493.5 | 492.3 |
| 17.5° | 4547.7 | 4143.8 | 3257.8 | 2306.1 | 1337.9 | 699.3 | 491.0 | 448.1 | 434.2 | 429.2 | 429.2 |
| 20° | 4546.5 | 4070.6 | 3025.5 | 1875.6 | 849.5 | 465.8 | 409.0 | 398.9 | 388.8 | 382.4 | 382.4 |
| 22.5° | 4560.4 | 4005.0 | 2783.2 | 1436.4 | 535.2 | 377.4 | 359.7 | 349.6 | 337.0 | 328.2 | 326.9 |
| 25° | 4574.3 | 3954.5 | 2535.8 | 1022.4 | 387.5 | 328.2 | 310.5 | 296.6 | 278.9 | 267.6 | 266.3 |
| 27.5° | 4576.8 | 3891.4 | 2270.7 | 684.1 | 324.4 | 286.5 | 263.8 | 242.3 | 222.1 | 210.8 | 209.5 |
| 30° | 4538.9 | 3785.4 | 1976.6 | 462.0 | 286.5 | 248.7 | 218.4 | 195.6 | 176.7 | 167.9 | 167.9 |
| 32.5° | 4464.4 | 3654.1 | 1653.5 | 348.4 | 255.0 | 213.3 | 180.5 | 159.0 | 146.4 | 142.6 | 141.4 |
| 35° | 4397.5 | 3512.7 | 1321.5 | 295.4 | 228.5 | 180.5 | 147.7 | 133.8 | 126.2 | 125.0 | 123.7 |
| 37.5° | 4358.4 | 3399.1 | 1009.8 | 267.6 | 203.2 | 151.5 | 125.0 | 114.9 | 111.1 | 108.6 | 109.8 |
| 40° | 4388.7 | 3304.5 | 746.0 | 244.9 | 178.0 | 126.2 | 106.0 | 101.0 | 97.2 | 95.9 | 95.9 |
| 42.5° | 4521.2 | 3288.1 | 554.1 | 224.7 | 154.0 | 104.8 | 92.1 | 88.4 | 85.8 | 84.6 | 85.8 |
| 45° | 4869.6 | 3389.0 | 430.4 | 205.7 | 130.0 | 88.4 | 78.3 | 77.0 | 75.7 | 75.7 | 75.7 |
| 47.5° | 5393.4 | 3597.3 | 358.5 | 184.3 | 108.6 | 75.7 | 68.2 | 66.9 | 65.6 | 66.9 | 66.9 |
| 50° | 6280.8 | 3978.5 | 320.6 | 162.8 | 89.6 | 64.4 | 58.1 | 58.1 | 58.1 | 58.1 | 59.3 |
| 52.5° | 7630.1 | 4728.2 | 295.4 | 141.4 | 73.2 | 54.3 | 49.2 | 49.2 | 50.5 | 50.5 | 51.8 |
| 55° | 9133.4 | 5722.9 | 272.6 | 119.9 | 61.8 | 45.4 | 40.4 | 41.7 | 42.9 | 44.2 | 44.2 |
| 57.5° | 10764.1 | 6824.8 | 253.7 | 98.5 | 53.0 | 36.6 | 34.1 | 35.3 | 36.6 | 39.1 | 39.1 |
| 60° | 12731.9 | 8017.6 | 225.9 | 77.0 | 44.2 | 29.0 | 26.5 | 29.0 | 32.8 | 35.3 | 36.6 |
| 62.5° | 14892.8 | 9171.2 | 190.6 | 60.6 | 36.6 | 22.7 | 21.5 | 26.5 | 31.6 | 34.1 | 35.3 |
| 65° | 16369.6 | 9533.5 | 146.4 | 49.2 | 27.8 | 16.4 | 17.7 | 24.0 | 30.3 | 34.1 | 34.1 |
| 67° | 15771.3 | 8643.6 | 119.9 | 41.7 | 22.7 | 12.6 | 16.4 | 24.0 | 30.3 | 32.8 | 34.1 |
| 67.5° | 15356.1 | 8295.2 | 114.9 | 40.4 | 21.5 | 12.6 | 16.4 | 24.0 | 30.3 | 34.1 | 34.1 |
| 70° | 12494.6 | 6231.5 | 95.9 | 30.3 | 17.7 | 11.4 | 13.9 | 22.7 | 29.0 | 32.8 | 32.8 |
| 72.5° | 8681.5 | 3842.2 | 85.8 | 21.5 | 15.1 | 10.1 | 12.6 | 21.5 | 27.8 | 31.6 | 32.8 |
| 75° | 4127.4 | 1391.0 | 73.2 | 16.4 | 13.9 | 8.8 | 11.4 | 21.5 | 27.8 | 31.6 | 31.6 |
| 77.5° | 841.9 | 323.1 | 59.3 | 13.9 | 11.4 | 8.8 | 10.1 | 20.2 | 26.5 | 30.3 | 30.3 |
| 80° | 276.4 | 125.0 | 44.2 | 12.6 | 11.4 | 8.8 | 10.1 | 18.9 | 26.5 | 29.0 | 30.3 |
| 82.5° | 199.4 | 63.1 | 29.0 | 12.6 | 11.4 | 8.8 | 8.8 | 18.9 | 25.2 | 29.0 | 29.0 |
| 85° | 152.7 | 44.2 | 18.9 | 12.6 | 11.4 | 8.8 | 8.8 | 17.7 | 24.0 | 27.8 | 27.8 |
| 87.5° | 101.0 | 17.7 | 15.1 | 12.6 | 11.4 | 8.8 | 8.8 | 17.7 | 22.7 | 26.5 | 27.8 |
| 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)