

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: P299184

Luminaire Tested: **GLNA-AF-05-LED-E1-SL2-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299184
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24286)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-05-LED-E1-SL2-7060-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 5700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Narrow OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23463.9 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

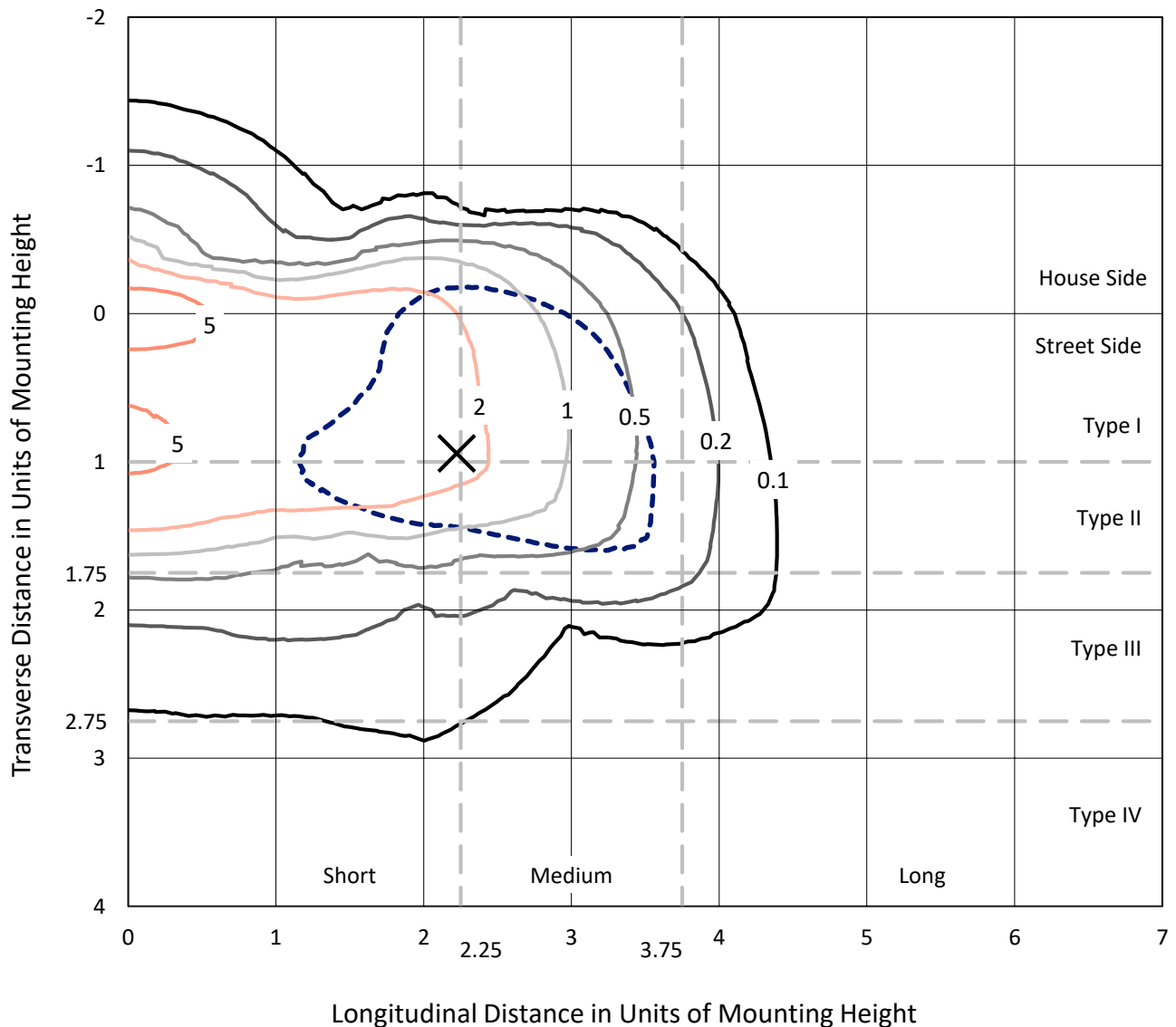
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

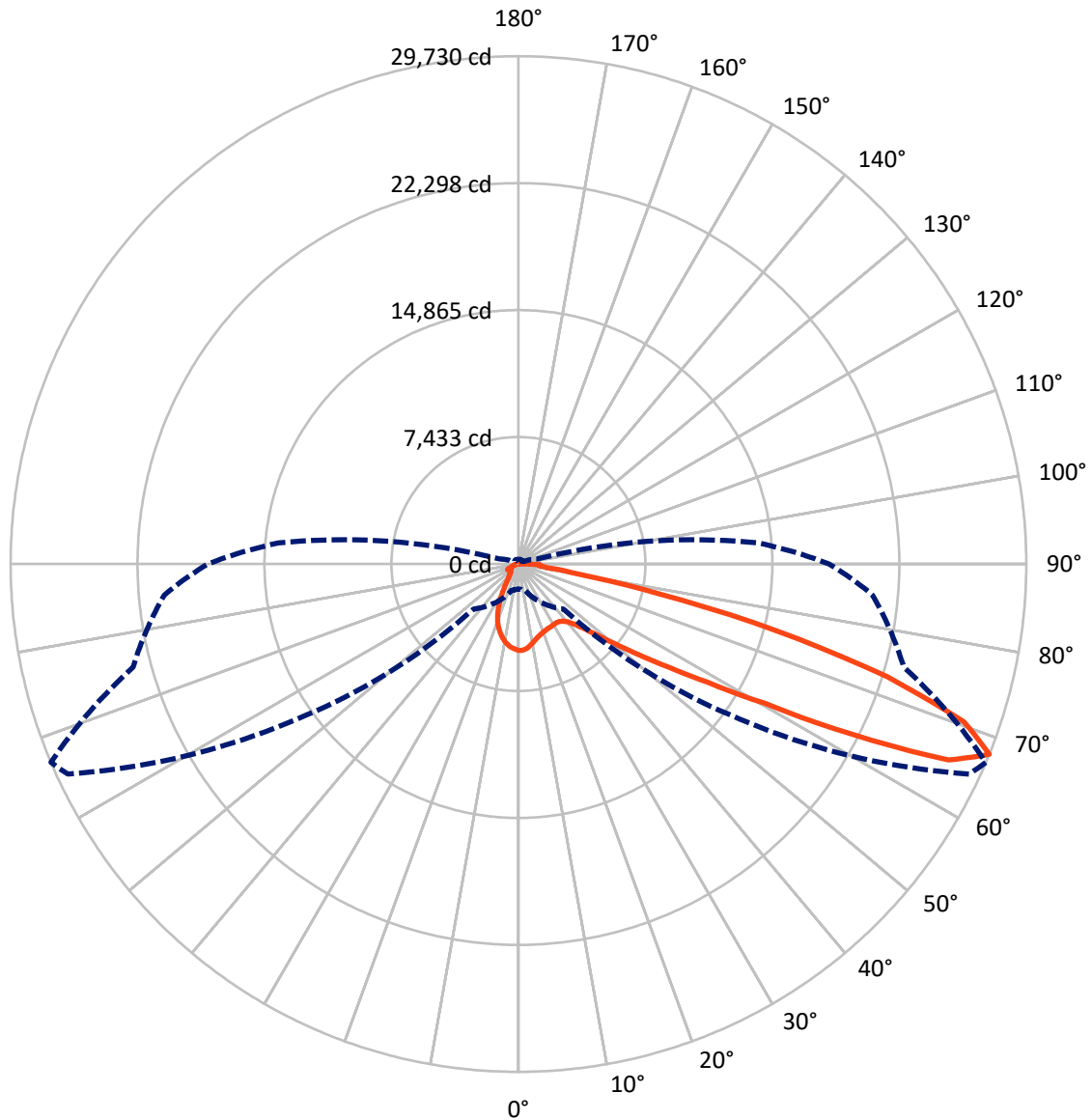
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.1 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3887.7 | 0.0 | 3887.7 |
| | % Fixture | 16.6 | 0.0 | 16.6 |
| Street Side | Lumens | 19576.2 | 0.0 | 19576.2 |
| | % Fixture | 83.4 | 0.0 | 83.4 |
| Total | Lumens | 23463.9 | 0.0 | 23463.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 431.8 | 1.8 |
| 10°-20° | 999.1 | 4.3 |
| 20°-30° | 1354.3 | 5.8 |
| 30°-40° | 1925.3 | 8.2 |
| 40°-50° | 3221.0 | 13.7 |
| 50°-60° | 5095.6 | 21.7 |
| 60°-70° | 6491.3 | 27.7 |
| 70°-80° | 3400.2 | 14.5 |
| 80°-90° | 545.3 | 2.3 |
| 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° | 23463.9 | 100.0 |
| 0°-180° | 23463.9 | 100.0 |



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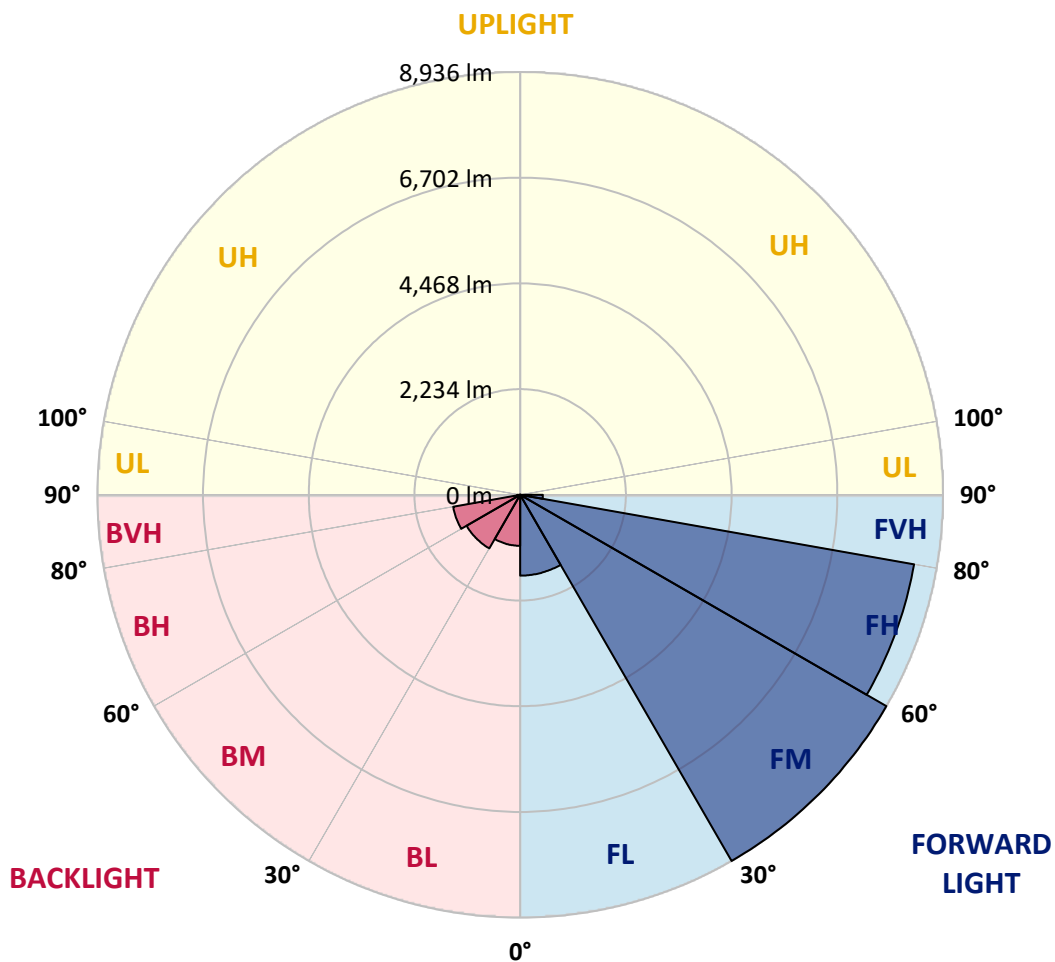
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1707.6 | 7.3 | | | |
| FM | (30°-60°) | 8935.5 | 38.1 | | | |
| FH | (60°-80°) | 8453.5 | 36.0 | | | G4/12000 |
| FVH | (80°-90°) | 479.5 | 2.0 | | | G3/500 |
| BL | (0°-30°) | 1077.6 | 4.6 | B3/2500 | | |
| BM | (30°-60°) | 1306.4 | 5.6 | B2/2500 | | |
| BH | (60°-80°) | 1437.9 | 6.1 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 65.8 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|---------|---------|---------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 |
| 2.5° | 4852.8 | 4860.9 | 4886.4 | 4902.6 | 4975.5 | 5006.7 | 5028.7 | 5050.7 | 5054.2 | 5064.6 | 5054.2 |
| 5° | 4343.7 | 4361.1 | 4408.5 | 4461.7 | 4602.9 | 4714.0 | 4830.8 | 4952.3 | 4974.3 | 5053.0 | 5075.0 |
| 7.5° | 3949.1 | 3944.5 | 3983.9 | 4047.5 | 4192.1 | 4346.0 | 4550.8 | 4792.7 | 4840.1 | 5017.1 | 5102.8 |
| 10° | 3661.0 | 3657.6 | 3699.2 | 3765.2 | 3902.9 | 4048.7 | 4280.1 | 4611.0 | 4678.1 | 4960.4 | 5129.4 |
| 12.5° | 3448.1 | 3449.3 | 3490.9 | 3563.8 | 3703.8 | 3850.8 | 4085.7 | 4435.1 | 4520.7 | 4894.5 | 5157.1 |
| 15° | 3307.0 | 3316.2 | 3349.8 | 3427.3 | 3563.8 | 3710.8 | 3941.0 | 4303.2 | 4399.3 | 4842.4 | 5188.4 |
| 17.5° | 3259.5 | 3274.6 | 3286.1 | 3342.8 | 3459.7 | 3606.6 | 3832.3 | 4206.0 | 4307.8 | 4806.5 | 5216.2 |
| 20° | 3303.5 | 3320.8 | 3298.9 | 3318.5 | 3392.6 | 3522.2 | 3746.7 | 4129.6 | 4233.8 | 4766.0 | 5219.6 |
| 22.5° | 3492.1 | 3508.3 | 3443.5 | 3386.8 | 3382.2 | 3460.9 | 3676.1 | 4069.5 | 4177.1 | 4736.0 | 5220.8 |
| 25° | 3824.2 | 3834.6 | 3725.8 | 3593.9 | 3465.5 | 3438.9 | 3626.3 | 4027.8 | 4142.4 | 4709.4 | 5198.8 |
| 27.5° | 4231.5 | 4239.6 | 4114.6 | 3920.2 | 3662.2 | 3490.9 | 3609.0 | 4003.5 | 4122.7 | 4686.2 | 5161.8 |
| 30° | 4726.7 | 4764.9 | 4597.1 | 4351.8 | 3975.8 | 3644.8 | 3643.7 | 3990.8 | 4100.7 | 4646.9 | 5088.9 |
| 32.5° | 5233.5 | 5249.7 | 5134.0 | 4885.2 | 4398.1 | 3915.6 | 3740.9 | 4000.1 | 4094.9 | 4599.4 | 4996.3 |
| 35° | 5747.3 | 5768.1 | 5692.9 | 5492.7 | 4975.5 | 4312.5 | 3930.6 | 4054.4 | 4130.8 | 4583.2 | 4931.5 |
| 37.5° | 6412.6 | 6440.4 | 6336.2 | 6104.8 | 5677.8 | 4850.5 | 4246.5 | 4191.0 | 4240.7 | 4629.5 | 4911.8 |
| 40° | 7464.4 | 7451.7 | 7147.3 | 6802.5 | 6446.1 | 5539.0 | 4697.8 | 4422.4 | 4451.3 | 4778.8 | 4972.0 |
| 42.5° | 8688.6 | 8657.3 | 8133.2 | 7591.7 | 7290.8 | 6372.1 | 5294.8 | 4823.9 | 4818.1 | 5072.7 | 5183.8 |
| 45° | 9665.2 | 9639.7 | 9167.6 | 8500.0 | 8259.3 | 7320.9 | 6066.6 | 5422.1 | 5379.3 | 5539.0 | 5574.9 |
| 47.5° | 10194.0 | 10195.1 | 9923.2 | 9378.2 | 9372.4 | 8526.6 | 7058.2 | 6287.6 | 6213.6 | 6288.8 | 6250.6 |
| 50° | 10008.8 | 10033.1 | 10004.2 | 9830.6 | 10388.3 | 10107.2 | 8353.0 | 7494.5 | 7345.2 | 7419.3 | 7272.3 |
| 52.5° | 9113.2 | 9144.5 | 9315.7 | 9581.9 | 10815.3 | 12017.5 | 10255.3 | 8994.0 | 8820.5 | 8793.9 | 8630.7 |
| 55° | 7525.7 | 7563.9 | 7913.3 | 8636.5 | 10460.1 | 13300.7 | 13256.8 | 10905.6 | 10629.0 | 10377.9 | 10308.5 |
| 57.5° | 5187.2 | 5250.9 | 5813.2 | 6887.0 | 9311.1 | 13688.4 | 16831.0 | 13630.5 | 13068.2 | 12191.1 | 12207.3 |
| 60° | 2924.0 | 2998.0 | 3661.0 | 4636.5 | 6992.3 | 13267.2 | 19550.2 | 17757.8 | 16570.7 | 14314.3 | 14434.7 |
| 62.5° | 1859.4 | 1939.3 | 2442.6 | 3221.3 | 4195.6 | 10999.3 | 20664.4 | 23495.8 | 21988.2 | 16931.7 | 17049.7 |
| 65° | 1505.4 | 1540.1 | 1777.3 | 2659.0 | 3046.6 | 6626.6 | 19818.6 | 28222.5 | 27660.2 | 20253.7 | 19702.9 |
| 67.5° | 1469.5 | 1481.1 | 1603.7 | 2232.0 | 2921.6 | 3724.7 | 15808.1 | 29106.6 | 29730.2 | 23355.8 | 20807.9 |
| 70° | 1452.1 | 1492.6 | 1807.4 | 2130.2 | 2797.8 | 3141.5 | 9499.7 | 26683.6 | 27668.3 | 24167.0 | 19337.3 |
| 72.5° | 704.7 | 702.4 | 909.5 | 1926.6 | 3151.9 | 3258.4 | 4880.6 | 21590.1 | 22578.3 | 20937.5 | 15890.3 |
| 75° | 568.1 | 519.5 | 496.4 | 705.8 | 3030.4 | 3364.8 | 3110.3 | 14855.9 | 15570.9 | 14037.8 | 9768.1 |
| 77.5° | 539.2 | 481.3 | 440.9 | 442.0 | 1280.9 | 3568.5 | 2634.7 | 8222.3 | 8430.5 | 6340.8 | 2676.3 |
| 80° | 446.6 | 393.4 | 364.5 | 410.8 | 620.2 | 3398.4 | 2848.8 | 3721.2 | 3414.6 | 1557.4 | 891.0 |
| 82.5° | 310.1 | 282.3 | 274.2 | 344.8 | 496.4 | 2421.8 | 3312.7 | 1999.4 | 1676.6 | 779.9 | 549.6 |
| 85° | 197.9 | 168.9 | 187.4 | 251.1 | 386.5 | 1117.7 | 3412.3 | 1558.6 | 1239.2 | 495.2 | 310.1 |
| 87.5° | 91.4 | 74.1 | 92.6 | 138.9 | 252.2 | 385.3 | 3246.8 | 1750.7 | 1276.3 | 261.5 | 195.5 |
| 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° | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 | 5061.1 |
| 2.5° | 5063.4 | 5041.4 | 5024.1 | 4991.7 | 4955.8 | 4921.1 | 4889.9 | 4850.5 | 4838.9 | 4828.5 | 4844.7 |
| 5° | 5079.6 | 5057.6 | 4994.0 | 4894.5 | 4784.6 | 4681.6 | 4578.6 | 4490.7 | 4436.3 | 4406.2 | 4423.5 |
| 7.5° | 5103.9 | 5072.7 | 4940.8 | 4757.9 | 4560.1 | 4379.6 | 4193.3 | 4044.0 | 3934.1 | 3882.0 | 3897.1 |
| 10° | 5125.9 | 5065.7 | 4850.5 | 4576.3 | 4287.0 | 4018.6 | 3724.7 | 3481.7 | 3301.2 | 3206.3 | 3229.4 |
| 12.5° | 5135.2 | 5039.1 | 4724.4 | 4349.5 | 3952.6 | 3559.2 | 3126.5 | 2763.1 | 2503.9 | 2409.1 | 2389.4 |
| 15° | 5144.4 | 5009.0 | 4585.5 | 4091.5 | 3548.8 | 2992.2 | 2385.9 | 1950.9 | 1735.6 | 1688.2 | 1677.8 |
| 17.5° | 5146.7 | 4957.0 | 4428.2 | 3811.4 | 3075.5 | 2317.6 | 1631.5 | 1355.0 | 1356.1 | 1432.5 | 1441.7 |
| 20° | 5122.4 | 4879.4 | 4237.3 | 3463.2 | 2508.6 | 1602.6 | 1120.1 | 1072.6 | 1247.3 | 1438.3 | 1461.4 |
| 22.5° | 5066.9 | 4776.5 | 4020.9 | 3057.0 | 1859.4 | 1055.3 | 866.7 | 918.7 | 1144.4 | 1378.1 | 1404.7 |
| 25° | 4996.3 | 4651.5 | 3765.2 | 2586.1 | 1231.1 | 754.4 | 726.7 | 790.3 | 943.0 | 1099.2 | 1114.3 |
| 27.5° | 4900.3 | 4503.4 | 3478.2 | 2046.9 | 799.5 | 621.4 | 639.9 | 682.7 | 745.2 | 814.6 | 821.5 |
| 30° | 4776.5 | 4326.4 | 3171.6 | 1492.6 | 604.0 | 558.9 | 585.5 | 608.6 | 635.2 | 674.6 | 678.1 |
| 32.5° | 4634.1 | 4156.3 | 2856.9 | 1031.0 | 535.7 | 526.5 | 547.3 | 558.9 | 579.7 | 604.0 | 606.3 |
| 35° | 4515.0 | 3994.3 | 2530.6 | 729.0 | 506.8 | 502.2 | 516.1 | 520.7 | 540.4 | 567.0 | 569.3 |
| 37.5° | 4446.7 | 3862.4 | 2193.8 | 587.8 | 487.1 | 480.2 | 488.3 | 488.3 | 516.1 | 555.4 | 561.2 |
| 40° | 4451.3 | 3789.5 | 1857.1 | 531.1 | 470.9 | 461.7 | 462.8 | 462.8 | 498.7 | 541.5 | 545.0 |
| 42.5° | 4577.4 | 3808.0 | 1558.6 | 509.1 | 458.2 | 447.8 | 442.0 | 445.5 | 475.6 | 503.3 | 505.6 |
| 45° | 4873.7 | 3938.7 | 1278.6 | 495.2 | 445.5 | 442.0 | 429.3 | 428.1 | 439.7 | 452.4 | 452.4 |
| 47.5° | 5359.6 | 4196.8 | 1088.8 | 486.0 | 435.1 | 433.9 | 418.9 | 403.8 | 402.7 | 407.3 | 407.3 |
| 50° | 6149.9 | 4641.1 | 961.5 | 475.6 | 428.1 | 418.9 | 401.5 | 378.4 | 370.3 | 373.7 | 373.7 |
| 52.5° | 7334.8 | 5433.7 | 912.9 | 461.7 | 413.1 | 398.0 | 378.4 | 355.2 | 348.3 | 349.4 | 349.4 |
| 55° | 8888.8 | 6650.9 | 906.0 | 445.5 | 396.9 | 372.6 | 356.4 | 339.0 | 330.9 | 333.2 | 333.2 |
| 57.5° | 10787.5 | 8334.5 | 1029.8 | 420.0 | 374.9 | 347.1 | 337.9 | 326.3 | 320.5 | 324.0 | 322.8 |
| 60° | 13095.9 | 10537.6 | 1527.4 | 393.4 | 352.9 | 324.0 | 324.0 | 314.7 | 310.1 | 313.6 | 312.4 |
| 62.5° | 15754.9 | 13068.2 | 2147.6 | 373.7 | 329.8 | 305.5 | 310.1 | 305.5 | 300.8 | 303.2 | 302.0 |
| 65° | 18113.1 | 14717.0 | 2011.0 | 358.7 | 306.6 | 288.1 | 296.2 | 293.9 | 290.4 | 292.7 | 291.6 |
| 67.5° | 18181.3 | 14106.1 | 1129.3 | 342.5 | 284.6 | 270.8 | 282.3 | 281.2 | 278.9 | 281.2 | 280.0 |
| 70° | 16225.9 | 11911.1 | 636.4 | 312.4 | 261.5 | 249.9 | 266.1 | 265.0 | 262.7 | 267.3 | 266.1 |
| 72.5° | 12999.9 | 8643.5 | 465.1 | 275.4 | 238.4 | 227.9 | 246.5 | 245.3 | 245.3 | 252.2 | 248.8 |
| 75° | 7480.6 | 4447.8 | 371.4 | 236.0 | 214.1 | 206.0 | 222.2 | 223.3 | 225.6 | 234.9 | 227.9 |
| 77.5° | 2132.5 | 1386.2 | 303.2 | 200.2 | 184.0 | 180.5 | 196.7 | 199.0 | 200.2 | 210.6 | 201.3 |
| 80° | 792.6 | 638.7 | 249.9 | 167.8 | 150.4 | 151.6 | 166.6 | 170.1 | 171.2 | 181.7 | 170.1 |
| 82.5° | 505.6 | 421.2 | 202.5 | 129.6 | 118.0 | 116.9 | 135.4 | 140.0 | 140.0 | 141.2 | 134.2 |
| 85° | 295.1 | 252.2 | 152.7 | 93.7 | 83.3 | 79.8 | 100.7 | 108.8 | 105.3 | 103.0 | 98.4 |
| 87.5° | 197.9 | 173.6 | 93.7 | 52.1 | 45.1 | 42.8 | 59.0 | 64.8 | 62.5 | 59.0 | 55.5 |
| 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)