

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: P301973

Luminaire Tested: **GLNA-AF-09-LED-E1-SL4-7060-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301973
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-09-LED-E1-SL4-7060-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 5700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25850.9 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

Input Watts (W): 290
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

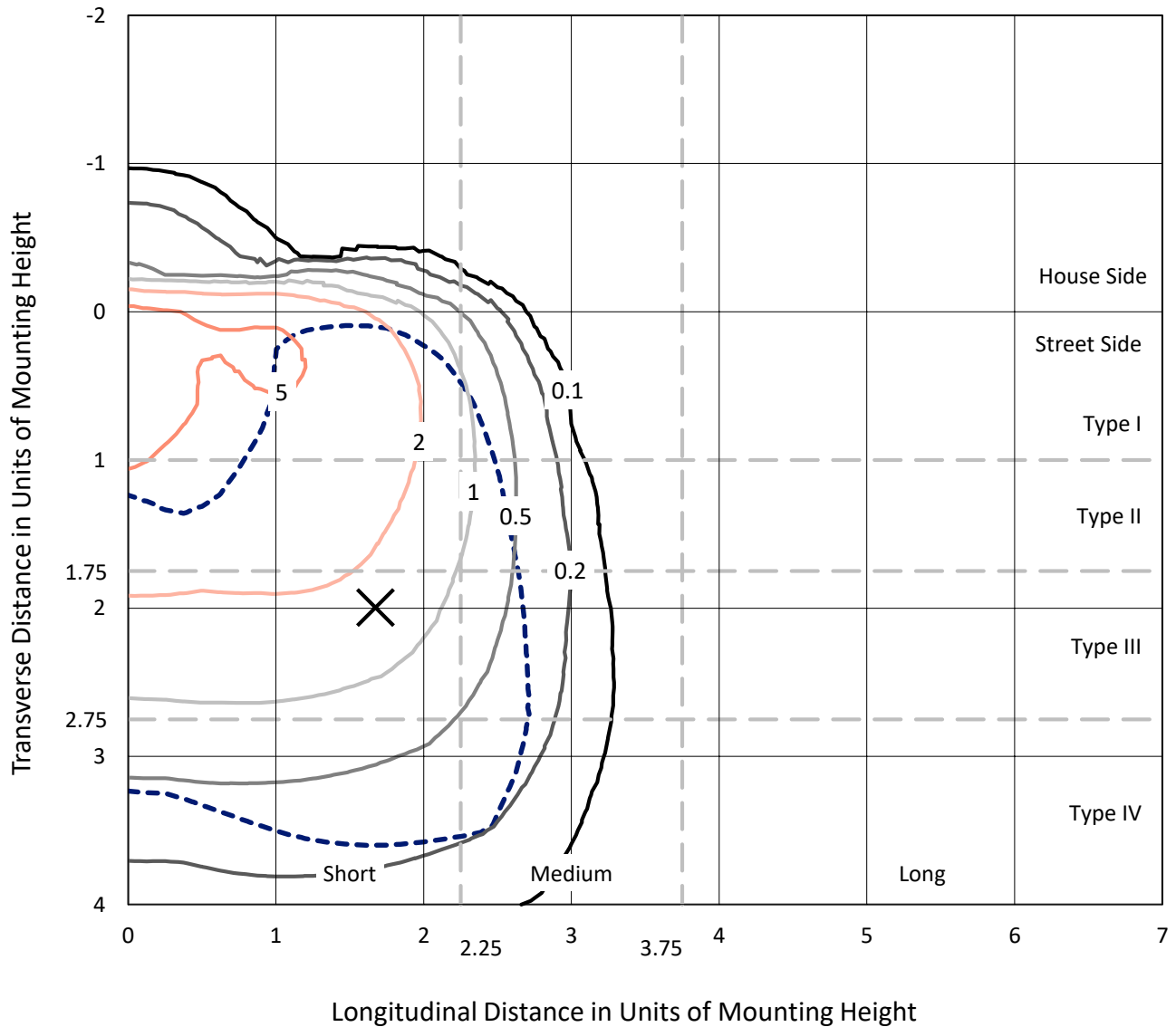


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

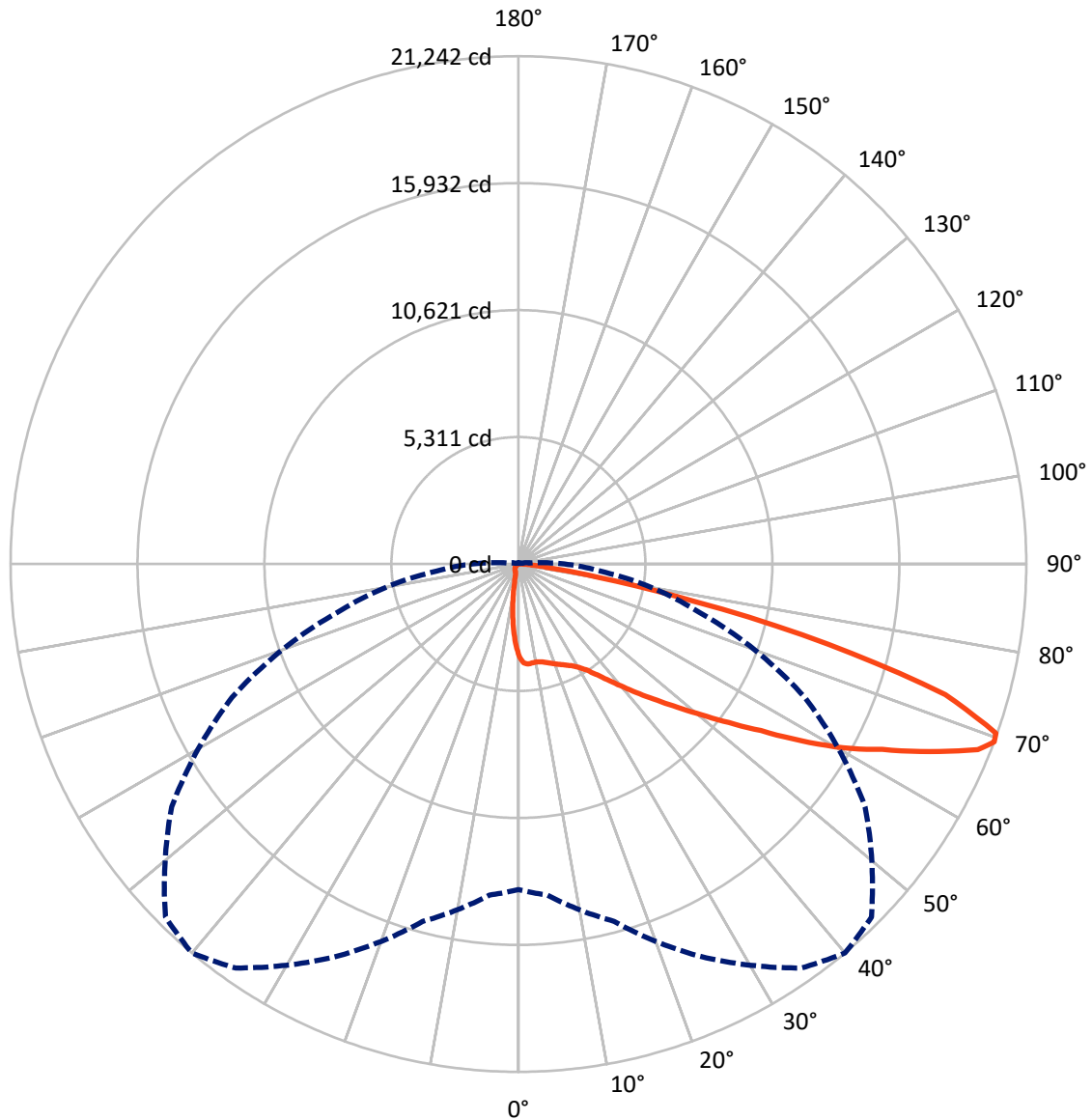


Based on 25 foot mounting height. Maximum calculated value = 6.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1512.4 | 0.0 | 1512.4 |
| | % Fixture | 5.9 | 0.0 | 5.9 |
| Street Side | Lumens | 24338.5 | 0.0 | 24338.5 |
| | % Fixture | 94.1 | 0.0 | 94.1 |
| Total | Lumens | 25850.9 | 0.0 | 25850.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 313.1 | 1.2 |
| 10°-20° | 770.1 | 3.0 |
| 20°-30° | 1297.1 | 5.0 |
| 30°-40° | 2123.4 | 8.2 |
| 40°-50° | 3676.6 | 14.2 |
| 50°-60° | 5791.1 | 22.4 |
| 60°-70° | 7562.9 | 29.3 |
| 70°-80° | 3895.2 | 15.1 |
| 80°-90° | 421.4 | 1.6 |
| 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° | 25850.9 | 100.0 |
| 0°-180° | 25850.9 | 100.0 |

Coefficient of Utilization



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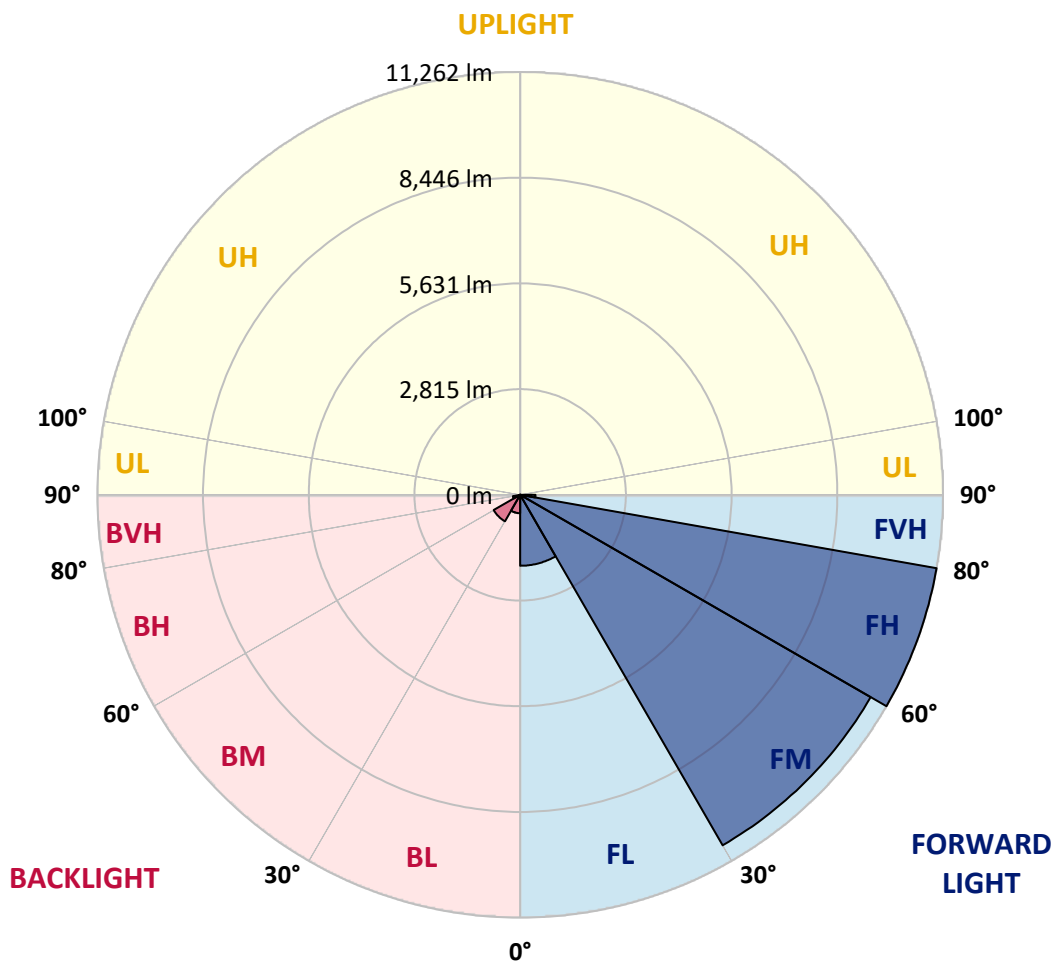
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1890.4 | 7.3 | | | |
| FM | (30°-60°) | 10778.2 | 41.7 | | | |
| FH | (60°-80°) | 11261.7 | 43.6 | | | G4/12000 |
| FVH | (80°-90°) | 408.1 | 1.6 | | | G3/500 |
| BL | (0°-30°) | 489.9 | 1.9 | B1/500 | | |
| BM | (30°-60°) | 812.9 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 196.4 | 0.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 13.2 | 0.1 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 |
| 2.5° | 4240.8 | 4217.7 | 4203.9 | 4185.4 | 4162.3 | 4142.3 | 4134.6 | 4077.7 | 4023.8 | 3950.0 | 3865.3 |
| 5° | 4319.3 | 4311.6 | 4287.0 | 4262.3 | 4234.6 | 4203.9 | 4186.9 | 4119.2 | 4042.3 | 3934.6 | 3786.9 |
| 7.5° | 4327.0 | 4317.7 | 4287.0 | 4253.1 | 4214.6 | 4177.7 | 4148.5 | 4080.8 | 4010.0 | 3900.7 | 3720.7 |
| 10° | 4314.6 | 4303.9 | 4280.8 | 4243.9 | 4196.2 | 4160.8 | 4131.5 | 4066.9 | 4006.9 | 3908.4 | 3708.4 |
| 12.5° | 4300.8 | 4290.0 | 4279.3 | 4260.8 | 4219.2 | 4194.6 | 4170.0 | 4108.5 | 4054.6 | 3971.5 | 3753.0 |
| 15° | 4314.6 | 4308.5 | 4320.8 | 4313.1 | 4290.0 | 4268.5 | 4243.9 | 4188.5 | 4139.2 | 4070.0 | 3834.6 |
| 17.5° | 4373.1 | 4373.1 | 4411.6 | 4416.2 | 4394.7 | 4363.9 | 4328.5 | 4273.1 | 4231.6 | 4173.1 | 3931.5 |
| 20° | 4510.1 | 4505.5 | 4554.7 | 4563.9 | 4511.6 | 4463.9 | 4411.6 | 4343.9 | 4311.6 | 4274.6 | 4026.9 |
| 22.5° | 4745.5 | 4724.0 | 4753.2 | 4744.0 | 4640.9 | 4567.0 | 4502.4 | 4419.3 | 4402.4 | 4385.4 | 4133.1 |
| 25° | 5051.7 | 5039.4 | 5059.4 | 4968.6 | 4787.0 | 4687.0 | 4610.1 | 4516.2 | 4516.2 | 4533.2 | 4253.1 |
| 27.5° | 5496.4 | 5450.2 | 5382.5 | 5222.5 | 4950.2 | 4822.4 | 4739.3 | 4639.3 | 4665.5 | 4728.6 | 4411.6 |
| 30° | 5951.9 | 5901.1 | 5745.7 | 5499.5 | 5148.7 | 5014.8 | 4917.8 | 4813.2 | 4874.8 | 4990.2 | 4623.9 |
| 32.5° | 6401.2 | 6344.3 | 6124.2 | 5813.4 | 5433.3 | 5299.4 | 5205.6 | 5090.2 | 5193.3 | 5387.2 | 4934.8 |
| 35° | 6836.7 | 6785.9 | 6532.0 | 6165.8 | 5811.9 | 5701.1 | 5614.9 | 5514.9 | 5647.2 | 5918.0 | 5373.3 |
| 37.5° | 7326.0 | 7270.6 | 6961.3 | 6564.3 | 6271.9 | 6191.9 | 6128.8 | 6028.8 | 6259.6 | 6656.6 | 5984.2 |
| 40° | 7927.6 | 7833.8 | 7416.8 | 7021.3 | 6804.3 | 6765.9 | 6722.8 | 6708.9 | 7067.5 | 7616.8 | 6798.2 |
| 42.5° | 8617.0 | 8463.1 | 7893.8 | 7502.9 | 7389.1 | 7416.8 | 7406.0 | 7467.5 | 8078.4 | 8810.9 | 7789.1 |
| 45° | 9306.3 | 9107.8 | 8424.6 | 8016.9 | 8032.3 | 8129.2 | 8189.2 | 8435.4 | 9344.8 | 10180.4 | 8855.5 |
| 47.5° | 9891.1 | 9695.7 | 8934.0 | 8572.4 | 8757.0 | 8947.8 | 9110.9 | 9577.2 | 10646.6 | 11528.3 | 9684.9 |
| 50° | 10391.2 | 10206.5 | 9474.1 | 9183.2 | 9598.7 | 9906.5 | 10171.1 | 10862.0 | 12046.9 | 12554.6 | 10266.5 |
| 52.5° | 10800.5 | 10677.4 | 10034.2 | 9883.4 | 10560.4 | 11011.3 | 11399.0 | 12226.9 | 13287.1 | 13388.6 | 10718.9 |
| 55° | 11199.0 | 11111.3 | 10635.8 | 10715.8 | 11689.9 | 12303.8 | 12794.7 | 13674.9 | 14355.0 | 14084.2 | 11152.8 |
| 57.5° | 11657.6 | 11577.5 | 11322.1 | 11771.4 | 13174.8 | 13947.2 | 14482.7 | 14958.2 | 15295.2 | 14795.1 | 11562.2 |
| 60° | 12125.3 | 12079.2 | 12085.3 | 12943.9 | 14879.7 | 15621.4 | 15916.8 | 16039.9 | 16218.4 | 15464.4 | 11585.2 |
| 62.5° | 12571.6 | 12659.3 | 12957.8 | 14248.8 | 16512.3 | 17081.6 | 17230.9 | 17352.5 | 17143.2 | 15570.6 | 10703.5 |
| 65° | 13327.1 | 13470.2 | 14182.6 | 15995.3 | 18308.0 | 18917.4 | 19071.2 | 18654.2 | 17289.4 | 14198.0 | 8706.2 |
| 67.5° | 13696.4 | 13958.0 | 15229.0 | 17623.3 | 20049.9 | 20726.9 | 20670.0 | 18738.9 | 15515.2 | 10826.6 | 5587.2 |
| 69° | 13619.5 | 13898.0 | 15470.6 | 18121.8 | 20628.5 | 21242.4 | 20880.8 | 17703.3 | 13217.8 | 7843.0 | 3429.9 |
| 70° | 13314.8 | 13596.4 | 15345.9 | 18103.4 | 20702.3 | 21188.6 | 20490.0 | 16424.6 | 11175.9 | 5734.9 | 2145.0 |
| 72.5° | 11119.0 | 11362.1 | 13624.1 | 16363.0 | 19071.2 | 18675.8 | 17141.7 | 11379.0 | 5445.6 | 1561.8 | 483.2 |
| 75° | 6844.4 | 6979.8 | 9775.7 | 12326.9 | 14404.2 | 13388.6 | 11420.6 | 5661.1 | 1623.4 | 441.6 | 267.7 |
| 77.5° | 3616.1 | 3677.6 | 5351.8 | 7266.0 | 9130.9 | 7555.3 | 5853.4 | 2208.1 | 747.8 | 277.0 | 193.9 |
| 80° | 2137.3 | 2183.5 | 2882.1 | 3322.2 | 3951.5 | 3300.6 | 2340.4 | 1355.6 | 535.5 | 173.9 | 172.3 |
| 82.5° | 1223.3 | 1252.5 | 2089.6 | 1846.5 | 1557.2 | 1329.5 | 1164.8 | 1284.9 | 321.6 | 116.9 | 178.5 |
| 85° | 449.3 | 455.5 | 1175.6 | 1404.9 | 926.3 | 550.9 | 578.6 | 1064.8 | 86.2 | 73.9 | 140.0 |
| 87.5° | 209.3 | 204.7 | 604.7 | 860.2 | 541.6 | 349.3 | 450.9 | 233.9 | 33.9 | 47.7 | 38.5 |
| 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° | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 | 3862.3 |
| 2.5° | 3816.1 | 3759.2 | 3656.1 | 3549.9 | 3442.2 | 3359.1 | 3277.5 | 3212.9 | 3191.4 | 3151.4 | 3154.4 |
| 5° | 3699.2 | 3594.5 | 3379.1 | 3160.6 | 2932.9 | 2745.1 | 2568.2 | 2425.1 | 2355.8 | 2285.0 | 2285.0 |
| 7.5° | 3597.6 | 3445.3 | 3108.3 | 2752.8 | 2385.1 | 2075.8 | 1797.3 | 1588.0 | 1472.6 | 1380.3 | 1378.7 |
| 10° | 3559.1 | 3352.9 | 2882.1 | 2372.7 | 1860.3 | 1438.7 | 1107.9 | 895.6 | 786.3 | 715.5 | 712.4 |
| 12.5° | 3576.1 | 3320.6 | 2708.2 | 2021.9 | 1378.7 | 924.8 | 641.7 | 504.7 | 458.5 | 437.0 | 437.0 |
| 15° | 3625.3 | 3311.4 | 2534.3 | 1678.8 | 974.0 | 578.6 | 426.2 | 389.3 | 386.2 | 386.2 | 386.2 |
| 17.5° | 3685.3 | 3314.5 | 2355.8 | 1344.9 | 663.2 | 413.9 | 367.8 | 363.1 | 366.2 | 366.2 | 366.2 |
| 20° | 3746.9 | 3316.0 | 2163.5 | 1035.6 | 467.8 | 360.1 | 346.2 | 344.7 | 347.8 | 347.8 | 349.3 |
| 22.5° | 3822.2 | 3323.7 | 1971.1 | 774.0 | 386.2 | 340.1 | 329.3 | 329.3 | 330.8 | 330.8 | 329.3 |
| 25° | 3908.4 | 3339.1 | 1771.1 | 574.0 | 352.4 | 326.2 | 317.0 | 315.4 | 317.0 | 315.4 | 313.9 |
| 27.5° | 4016.1 | 3360.6 | 1548.0 | 449.3 | 337.0 | 312.4 | 304.7 | 304.7 | 303.1 | 301.6 | 300.1 |
| 30° | 4151.5 | 3385.2 | 1297.2 | 381.6 | 321.6 | 300.1 | 292.4 | 290.8 | 289.3 | 286.2 | 286.2 |
| 32.5° | 4357.7 | 3439.1 | 1049.4 | 346.2 | 304.7 | 283.1 | 277.0 | 277.0 | 273.9 | 270.8 | 269.3 |
| 35° | 4674.7 | 3545.3 | 827.8 | 324.7 | 286.2 | 264.7 | 257.0 | 257.0 | 253.9 | 252.4 | 250.8 |
| 37.5° | 5113.3 | 3706.8 | 643.2 | 304.7 | 267.7 | 244.7 | 237.0 | 235.4 | 232.4 | 229.3 | 227.7 |
| 40° | 5696.4 | 3906.9 | 506.2 | 286.2 | 249.3 | 224.7 | 218.5 | 215.4 | 209.3 | 204.7 | 204.7 |
| 42.5° | 6428.9 | 4134.6 | 410.8 | 266.2 | 227.7 | 206.2 | 201.6 | 197.0 | 186.2 | 181.6 | 180.0 |
| 45° | 7195.2 | 4339.3 | 347.8 | 243.1 | 206.2 | 187.7 | 184.6 | 177.0 | 163.1 | 158.5 | 158.5 |
| 47.5° | 7747.6 | 4387.0 | 306.2 | 221.6 | 186.2 | 167.7 | 166.2 | 152.3 | 140.0 | 136.9 | 135.4 |
| 50° | 8092.3 | 4293.1 | 272.4 | 200.0 | 167.7 | 149.3 | 144.6 | 127.7 | 120.0 | 116.9 | 115.4 |
| 52.5° | 8324.6 | 4125.4 | 244.7 | 181.6 | 150.8 | 132.3 | 121.6 | 109.3 | 103.1 | 100.0 | 100.0 |
| 55° | 8510.8 | 3888.4 | 217.0 | 164.6 | 136.9 | 118.5 | 103.1 | 93.9 | 87.7 | 84.6 | 84.6 |
| 57.5° | 8563.1 | 3566.8 | 189.3 | 150.8 | 123.1 | 104.6 | 87.7 | 81.6 | 73.9 | 72.3 | 72.3 |
| 60° | 8183.1 | 2986.7 | 167.7 | 133.9 | 110.8 | 90.8 | 76.9 | 69.2 | 61.5 | 60.0 | 58.5 |
| 62.5° | 7181.3 | 2311.2 | 147.7 | 118.5 | 96.9 | 78.5 | 66.2 | 56.9 | 50.8 | 50.8 | 50.8 |
| 65° | 5477.9 | 1549.5 | 129.3 | 103.1 | 84.6 | 66.2 | 56.9 | 46.2 | 43.1 | 43.1 | 44.6 |
| 67.5° | 3279.1 | 843.2 | 110.8 | 87.7 | 72.3 | 55.4 | 47.7 | 40.0 | 38.5 | 40.0 | 40.0 |
| 69° | 1921.9 | 495.5 | 100.0 | 78.5 | 63.1 | 49.2 | 41.5 | 35.4 | 38.5 | 40.0 | 40.0 |
| 70° | 1186.4 | 333.9 | 92.3 | 70.8 | 56.9 | 44.6 | 38.5 | 33.9 | 36.9 | 38.5 | 38.5 |
| 72.5° | 330.8 | 172.3 | 73.9 | 55.4 | 46.2 | 36.9 | 30.8 | 30.8 | 35.4 | 36.9 | 36.9 |
| 75° | 215.4 | 127.7 | 56.9 | 41.5 | 35.4 | 29.2 | 26.2 | 29.2 | 33.9 | 35.4 | 35.4 |
| 77.5° | 178.5 | 104.6 | 46.2 | 33.9 | 29.2 | 27.7 | 24.6 | 26.2 | 30.8 | 32.3 | 32.3 |
| 80° | 163.1 | 73.9 | 36.9 | 30.8 | 26.2 | 24.6 | 23.1 | 21.5 | 27.7 | 29.2 | 29.2 |
| 82.5° | 155.4 | 58.5 | 32.3 | 27.7 | 24.6 | 21.5 | 20.0 | 21.5 | 24.6 | 26.2 | 27.7 |
| 85° | 96.9 | 38.5 | 29.2 | 26.2 | 21.5 | 20.0 | 20.0 | 20.0 | 23.1 | 24.6 | 24.6 |
| 87.5° | 35.4 | 30.8 | 26.2 | 21.5 | 18.5 | 18.5 | 18.5 | 18.5 | 20.0 | 23.1 | 23.1 |
| 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)