

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: P299914

Luminaire Tested: **GLNA-AF-07-LED-E1-5WQ-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299914
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-07-LED-E1-5WQ-800
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(7) 70 CRI, 4000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35702.5 lumens
Efficiency: N/A
Efficacy: 121.0 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 295
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

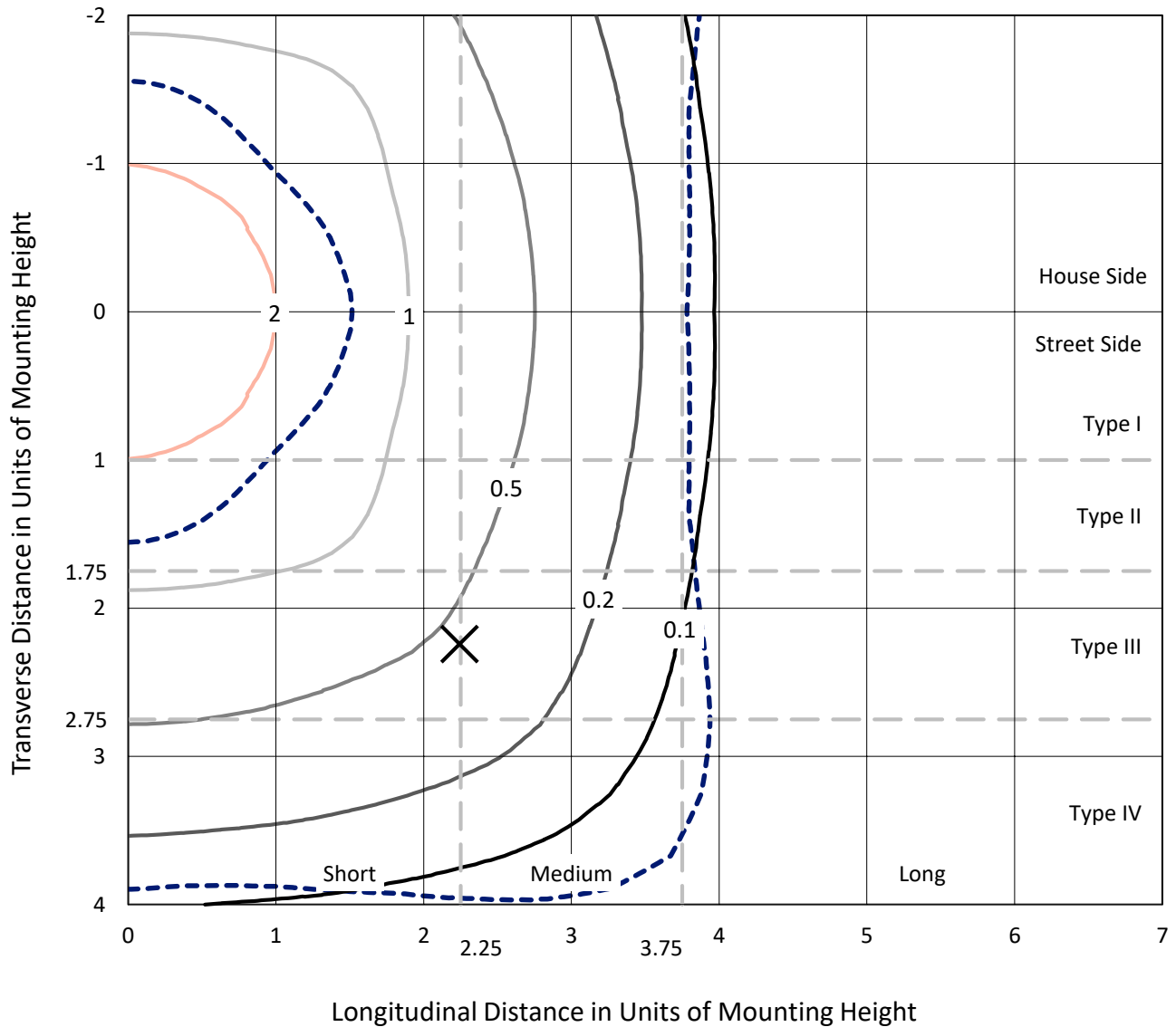


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

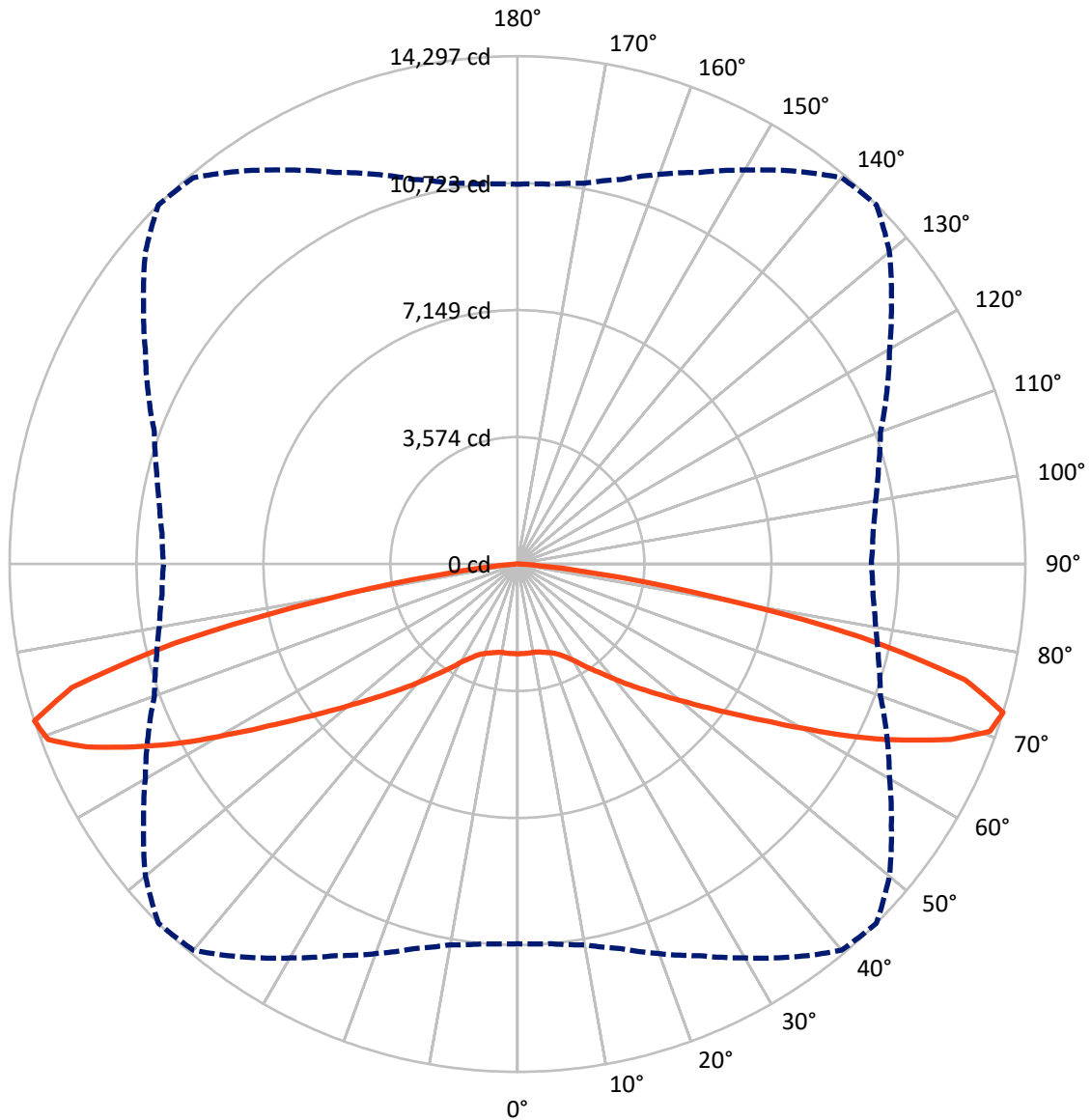


Based on 30 foot mounting height. Maximum calculated value = 2.8 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 17851.2 | 0.0 | 17851.2 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 17851.2 | 0.0 | 17851.2 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 35702.5 | 0.0 | 35702.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 241.4 | 0.7 |
| 10°-20° | 733.2 | 2.1 |
| 20°-30° | 1339.9 | 3.8 |
| 30°-40° | 2310.2 | 6.5 |
| 40°-50° | 3949.3 | 11.1 |
| 50°-60° | 6401.3 | 17.9 |
| 60°-70° | 10619.6 | 29.7 |
| 70°-80° | 9353.3 | 26.2 |
| 80°-90° | 754.1 | 2.1 |
| 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° | 35702.5 | 100.0 |
| 0°-180° | 35702.5 | 100.0 |



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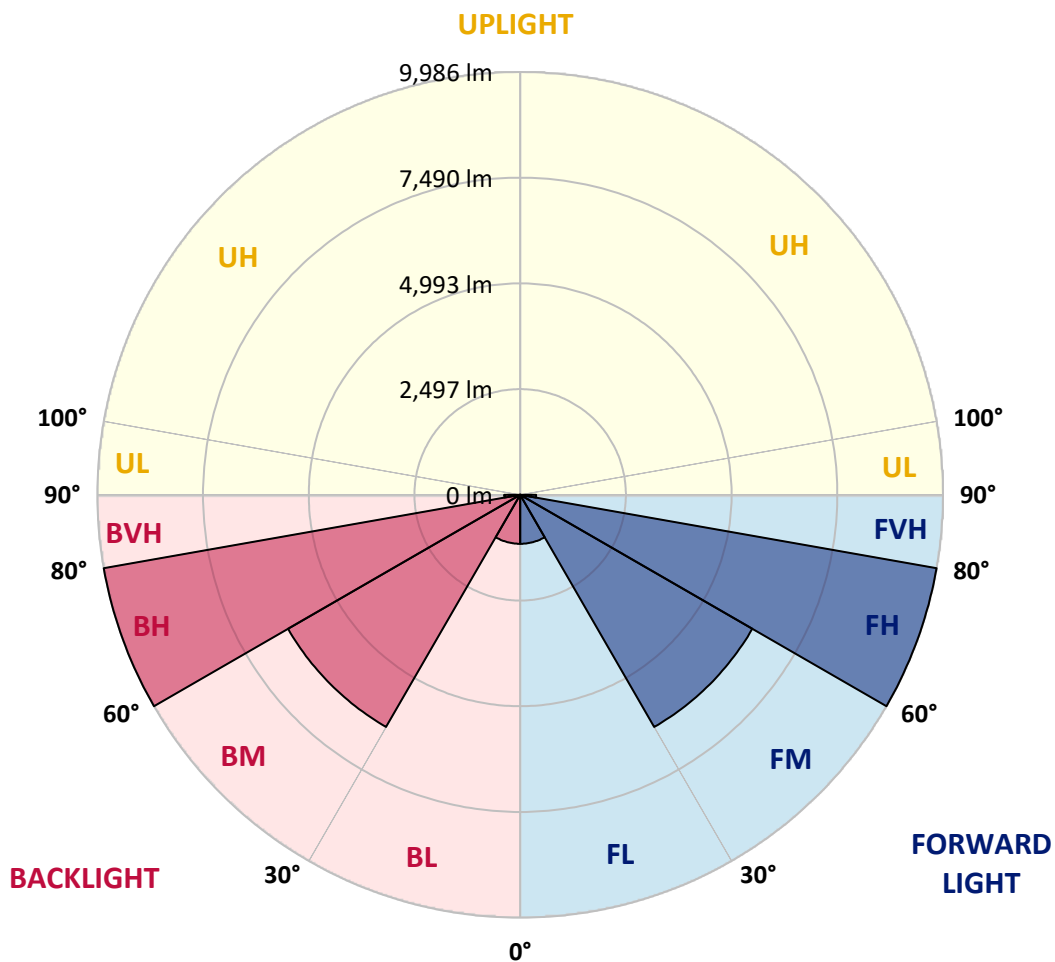
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1157.3 | 3.2 | | | |
| FM | (30°-60°) | 6330.4 | 17.7 | | | |
| FH | (60°-80°) | 9986.5 | 28.0 | | | G4/12000 |
| FVH | (80°-90°) | 377.1 | 1.1 | | | G3/500 |
| BL | (0°-30°) | 1157.3 | 3.2 | B3/2500 | | |
| BM | (30°-60°) | 6330.4 | 17.7 | B4/8500 | | |
| BH | (60°-80°) | 9986.5 | 28.0 | B5 | | G4/12000 |
| BVH | (80°-90°) | 377.1 | 1.1 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 2528.3 | 2528.3 | 2528.3 | 2528.3 | 2528.3 | 2528.3 | 2528.3 | 2528.3 | 2528.3 | 2528.3 | 2528.3 |
| 2.5° | 2528.3 | 2529.9 | 2531.6 | 2529.9 | 2529.9 | 2528.3 | 2526.7 | 2528.3 | 2526.7 | 2523.4 | 2525.0 |
| 5° | 2536.5 | 2539.8 | 2539.8 | 2536.5 | 2538.1 | 2536.5 | 2533.2 | 2534.8 | 2531.6 | 2526.7 | 2526.7 |
| 7.5° | 2546.3 | 2547.9 | 2547.9 | 2544.7 | 2546.3 | 2543.0 | 2539.8 | 2538.1 | 2534.8 | 2528.3 | 2523.4 |
| 10° | 2561.0 | 2562.7 | 2561.0 | 2557.8 | 2557.8 | 2552.9 | 2544.7 | 2541.4 | 2534.8 | 2525.0 | 2520.1 |
| 12.5° | 2577.4 | 2579.1 | 2577.4 | 2574.1 | 2572.5 | 2564.3 | 2557.8 | 2552.9 | 2547.9 | 2539.8 | 2531.6 |
| 15° | 2600.3 | 2603.6 | 2600.3 | 2593.8 | 2588.9 | 2582.3 | 2579.1 | 2580.7 | 2582.3 | 2575.8 | 2567.6 |
| 17.5° | 2642.9 | 2644.6 | 2639.6 | 2624.9 | 2618.4 | 2611.8 | 2611.8 | 2615.1 | 2620.0 | 2616.7 | 2608.5 |
| 20° | 2721.5 | 2716.6 | 2705.1 | 2687.1 | 2678.9 | 2667.5 | 2665.8 | 2667.5 | 2667.5 | 2665.8 | 2659.3 |
| 22.5° | 2819.8 | 2816.5 | 2801.8 | 2778.8 | 2767.4 | 2760.8 | 2751.0 | 2742.8 | 2741.2 | 2736.3 | 2729.7 |
| 25° | 2937.7 | 2936.0 | 2918.0 | 2898.4 | 2890.2 | 2882.0 | 2873.8 | 2862.3 | 2852.5 | 2841.1 | 2834.5 |
| 27.5° | 3088.3 | 3081.8 | 3055.6 | 3045.7 | 3034.3 | 3029.4 | 3017.9 | 3004.8 | 2996.6 | 2981.9 | 2973.7 |
| 30° | 3253.7 | 3253.7 | 3232.4 | 3229.1 | 3229.1 | 3217.7 | 3204.6 | 3181.6 | 3166.9 | 3152.2 | 3147.3 |
| 32.5° | 3419.1 | 3420.7 | 3399.4 | 3406.0 | 3410.9 | 3419.1 | 3422.4 | 3414.2 | 3404.3 | 3402.7 | 3392.9 |
| 35° | 3658.2 | 3651.6 | 3630.3 | 3635.2 | 3633.6 | 3632.0 | 3632.0 | 3650.0 | 3653.2 | 3656.5 | 3636.9 |
| 37.5° | 3954.5 | 3954.5 | 3933.3 | 3933.3 | 3923.4 | 3913.6 | 3900.5 | 3912.0 | 3930.0 | 3934.9 | 3921.8 |
| 40° | 4293.5 | 4305.0 | 4278.8 | 4277.1 | 4280.4 | 4249.3 | 4234.6 | 4252.6 | 4264.0 | 4283.7 | 4268.9 |
| 42.5° | 4693.1 | 4684.9 | 4658.7 | 4655.4 | 4637.4 | 4627.6 | 4614.5 | 4629.2 | 4647.2 | 4660.3 | 4665.2 |
| 45° | 5076.2 | 5069.7 | 5040.2 | 5040.2 | 5022.2 | 5014.0 | 5020.6 | 5045.1 | 5053.3 | 5071.3 | 5089.3 |
| 47.5° | 5454.5 | 5446.3 | 5426.7 | 5434.8 | 5436.5 | 5451.2 | 5472.5 | 5495.4 | 5518.4 | 5542.9 | 5551.1 |
| 50° | 5840.9 | 5842.6 | 5821.3 | 5840.9 | 5865.5 | 5906.4 | 5963.7 | 6001.4 | 6048.9 | 6080.0 | 6089.8 |
| 52.5° | 6193.0 | 6199.5 | 6222.5 | 6268.3 | 6317.4 | 6397.7 | 6495.9 | 6587.6 | 6666.2 | 6718.6 | 6715.4 |
| 55° | 6615.5 | 6625.3 | 6681.0 | 6759.6 | 6839.8 | 6961.0 | 7106.7 | 7268.8 | 7399.8 | 7475.2 | 7427.7 |
| 57.5° | 7155.8 | 7177.1 | 7239.4 | 7345.8 | 7465.3 | 7622.5 | 7822.3 | 8066.3 | 8269.3 | 8370.9 | 8293.9 |
| 60° | 7897.6 | 7910.7 | 7986.1 | 8104.0 | 8248.1 | 8442.9 | 8709.8 | 9037.3 | 9323.9 | 9458.2 | 9369.7 |
| 62.5° | 8875.2 | 8899.8 | 8960.4 | 9079.9 | 9227.3 | 9448.3 | 9774.2 | 10183.6 | 10540.5 | 10727.2 | 10527.4 |
| 65° | 10042.7 | 10121.3 | 10172.1 | 10293.3 | 10430.8 | 10665.0 | 11005.6 | 11444.4 | 11827.6 | 11950.4 | 11719.5 |
| 67.5° | 11198.8 | 11267.6 | 11356.0 | 11495.2 | 11634.4 | 11898.0 | 12214.1 | 12639.8 | 13060.6 | 13172.0 | 12813.4 |
| 70° | 11704.8 | 11744.1 | 11881.6 | 12071.6 | 12338.5 | 12649.6 | 13014.8 | 13492.9 | 14013.7 | 14105.4 | 13650.1 |
| 72.5° | 10691.2 | 10730.5 | 10884.4 | 11207.0 | 11672.0 | 12166.6 | 12803.6 | 13506.0 | 14193.8 | 14297.0 | 13669.8 |
| 75° | 8085.9 | 8022.1 | 8249.7 | 8677.1 | 9304.2 | 9993.6 | 10884.4 | 11891.5 | 12885.4 | 13014.8 | 12266.5 |
| 77.5° | 4178.9 | 4170.7 | 4342.6 | 4873.2 | 5621.5 | 6405.9 | 7386.7 | 8524.8 | 9497.5 | 9890.5 | 9281.3 |
| 80° | 1177.4 | 1190.5 | 1272.3 | 1536.0 | 1973.2 | 2539.8 | 3306.1 | 4372.1 | 5167.9 | 5574.0 | 5233.4 |
| 82.5° | 461.8 | 497.8 | 528.9 | 578.0 | 635.3 | 718.9 | 959.6 | 1427.9 | 1915.9 | 2289.2 | 1874.9 |
| 85° | 165.4 | 176.8 | 250.5 | 296.4 | 301.3 | 317.7 | 361.9 | 422.5 | 509.3 | 607.5 | 499.4 |
| 87.5° | 62.2 | 68.8 | 80.2 | 132.6 | 131.0 | 119.5 | 145.7 | 152.3 | 114.6 | 104.8 | 129.4 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 2528.3 | 2528.3 | 2528.3 | 2528.3 | 2528.3 | 2528.3 | 2528.3 | 2528.3 |
| 2.5° | 2521.7 | 2523.4 | 2523.4 | 2525.0 | 2526.7 | 2526.7 | 2529.9 | 2529.9 |
| 5° | 2523.4 | 2523.4 | 2520.1 | 2521.7 | 2520.1 | 2520.1 | 2521.7 | 2521.7 |
| 7.5° | 2520.1 | 2518.5 | 2515.2 | 2513.6 | 2510.3 | 2510.3 | 2510.3 | 2510.3 |
| 10° | 2515.2 | 2513.6 | 2510.3 | 2508.6 | 2507.0 | 2507.0 | 2507.0 | 2507.0 |
| 12.5° | 2528.3 | 2523.4 | 2520.1 | 2518.5 | 2518.5 | 2518.5 | 2518.5 | 2518.5 |
| 15° | 2562.7 | 2551.2 | 2543.0 | 2543.0 | 2544.7 | 2547.9 | 2547.9 | 2551.2 |
| 17.5° | 2605.3 | 2592.2 | 2584.0 | 2577.4 | 2580.7 | 2585.6 | 2588.9 | 2592.2 |
| 20° | 2656.0 | 2649.5 | 2638.0 | 2631.5 | 2631.5 | 2638.0 | 2641.3 | 2642.9 |
| 22.5° | 2726.4 | 2721.5 | 2716.6 | 2708.4 | 2708.4 | 2711.7 | 2718.2 | 2718.2 |
| 25° | 2831.2 | 2828.0 | 2824.7 | 2818.1 | 2816.5 | 2816.5 | 2819.8 | 2823.0 |
| 27.5° | 2962.2 | 2963.9 | 2960.6 | 2958.9 | 2954.0 | 2952.4 | 2957.3 | 2955.7 |
| 30° | 3137.4 | 3145.6 | 3153.8 | 3147.3 | 3139.1 | 3134.2 | 3129.2 | 3122.7 |
| 32.5° | 3374.9 | 3365.0 | 3358.5 | 3347.0 | 3332.3 | 3319.2 | 3309.4 | 3297.9 |
| 35° | 3599.2 | 3582.8 | 3576.3 | 3586.1 | 3584.5 | 3576.3 | 3564.8 | 3555.0 |
| 37.5° | 3874.3 | 3871.0 | 3874.3 | 3892.3 | 3889.0 | 3897.2 | 3874.3 | 3872.7 |
| 40° | 4221.5 | 4224.7 | 4247.7 | 4268.9 | 4280.4 | 4291.9 | 4278.8 | 4265.7 |
| 42.5° | 4624.3 | 4622.6 | 4630.8 | 4660.3 | 4680.0 | 4693.1 | 4665.2 | 4661.9 |
| 45° | 5050.0 | 5038.6 | 5045.1 | 5069.7 | 5089.3 | 5104.1 | 5073.0 | 5073.0 |
| 47.5° | 5518.4 | 5498.7 | 5477.4 | 5505.3 | 5516.7 | 5526.5 | 5502.0 | 5493.8 |
| 50° | 6040.7 | 5999.8 | 5953.9 | 5965.4 | 5965.4 | 5962.1 | 5931.0 | 5929.4 |
| 52.5° | 6640.0 | 6564.7 | 6481.2 | 6450.1 | 6432.1 | 6412.4 | 6358.4 | 6332.2 |
| 55° | 7329.4 | 7216.4 | 7085.4 | 7005.2 | 6962.6 | 6908.6 | 6818.5 | 6794.0 |
| 57.5° | 8135.1 | 7958.2 | 7732.2 | 7634.0 | 7539.0 | 7450.6 | 7350.7 | 7322.9 |
| 60° | 9089.7 | 8829.4 | 8529.7 | 8347.9 | 8244.8 | 8159.6 | 8056.5 | 8051.6 |
| 62.5° | 10154.1 | 9743.1 | 9404.1 | 9240.4 | 9165.0 | 9089.7 | 8991.5 | 9004.6 |
| 65° | 11236.5 | 10807.5 | 10489.8 | 10357.1 | 10286.7 | 10224.5 | 10126.3 | 10141.0 |
| 67.5° | 12304.1 | 11909.5 | 11560.7 | 11424.8 | 11346.2 | 11267.6 | 11179.2 | 11193.9 |
| 70° | 13070.5 | 12580.9 | 12187.9 | 11886.6 | 11698.2 | 11485.4 | 11347.8 | 11313.4 |
| 72.5° | 12851.0 | 12096.2 | 11472.3 | 10874.6 | 10524.2 | 10239.2 | 10046.0 | 9962.5 |
| 75° | 11121.9 | 10090.2 | 9287.9 | 8554.3 | 8141.6 | 7805.9 | 7561.9 | 7409.7 |
| 77.5° | 8259.5 | 7100.2 | 6152.1 | 5307.1 | 4639.0 | 4190.3 | 3874.3 | 3669.6 |
| 80° | 4521.1 | 3438.7 | 2513.6 | 1766.9 | 1298.5 | 1079.1 | 953.0 | 892.4 |
| 82.5° | 1408.2 | 908.8 | 669.7 | 578.0 | 537.1 | 514.2 | 476.5 | 415.9 |
| 85° | 448.7 | 393.0 | 365.2 | 348.8 | 332.4 | 289.8 | 199.8 | 181.8 |
| 87.5° | 173.6 | 178.5 | 176.8 | 167.0 | 170.3 | 122.8 | 98.2 | 86.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)