

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: P299598

Luminaire Tested: **GLNA-AF-04-LED-E1-5MQ-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299598
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24142)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-04-LED-E1-5MQ-7060
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 5700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25138 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

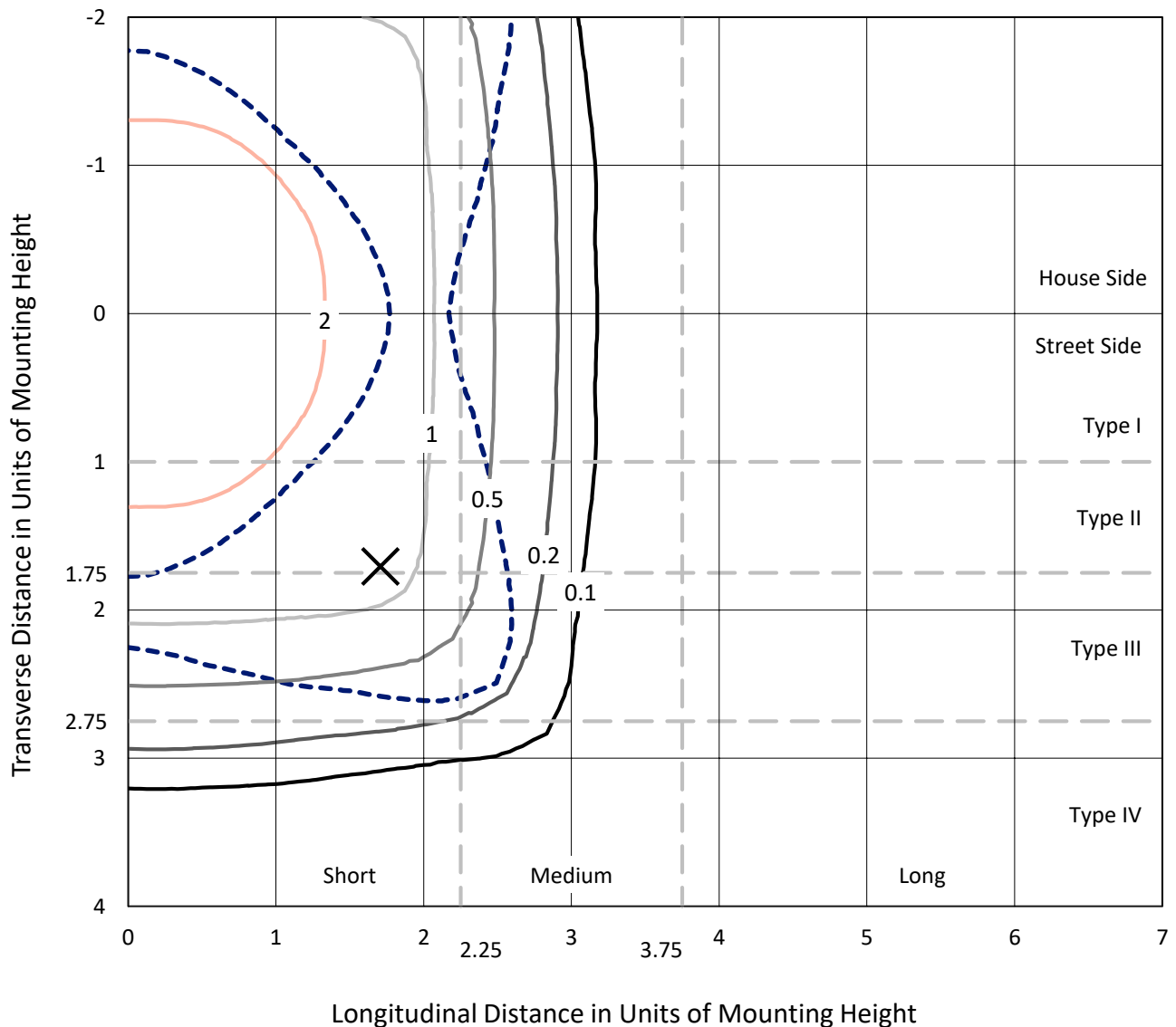
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

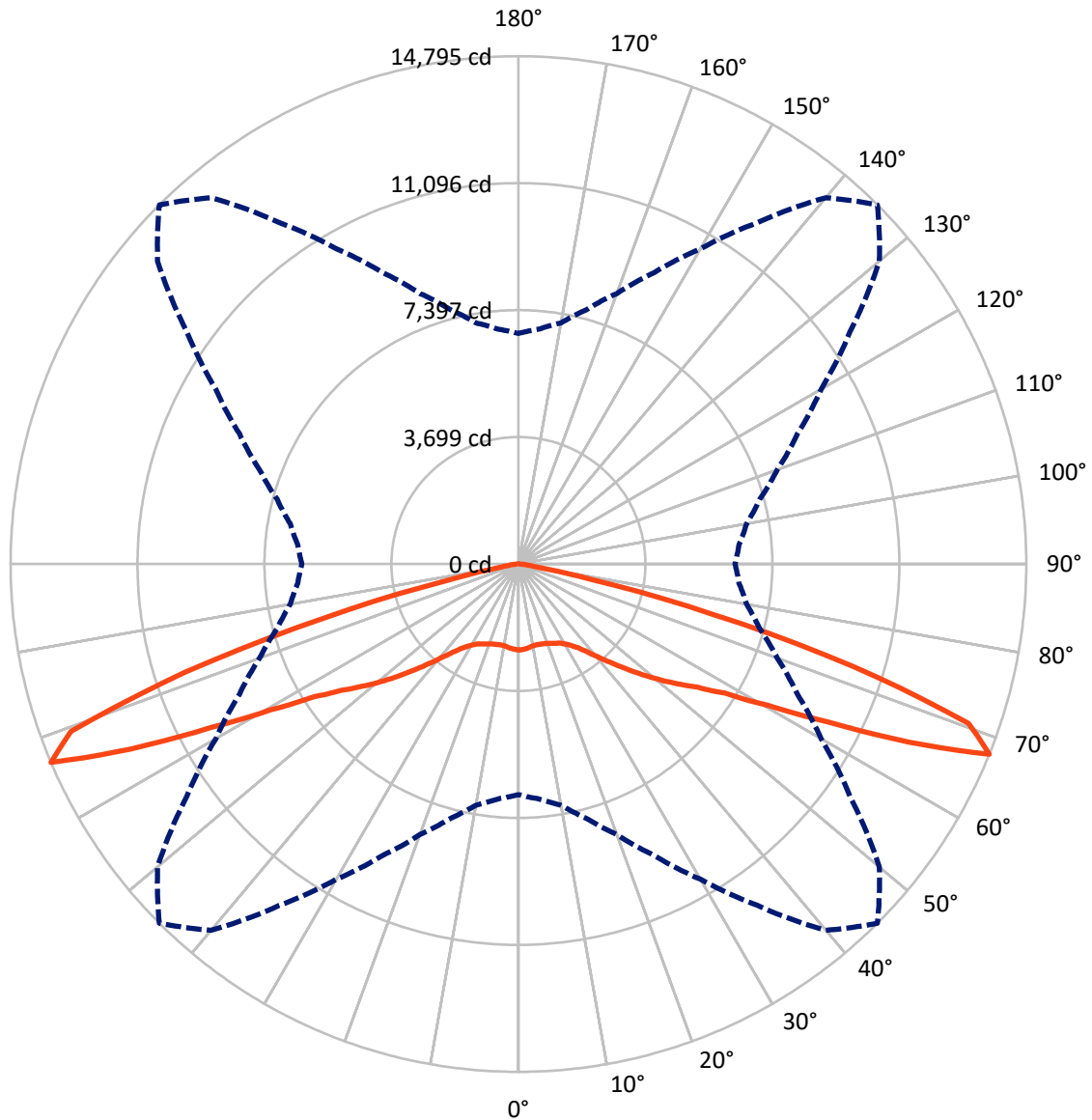
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 12569.0 | 0.0 | 12569.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 12569.0 | 0.0 | 12569.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 25138.0 | 0.0 | 25138.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 234.5 | 0.9 |
| 10°-20° | 680.4 | 2.7 |
| 20°-30° | 1156.6 | 4.6 |
| 30°-40° | 1890.7 | 7.5 |
| 40°-50° | 3375.3 | 13.4 |
| 50°-60° | 5690.8 | 22.6 |
| 60°-70° | 8831.4 | 35.1 |
| 70°-80° | 3102.9 | 12.3 |
| 80°-90° | 175.4 | 0.7 |
| 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° | 25138.0 | 100.0 |
| 0°-180° | 25138.0 | 100.0 |



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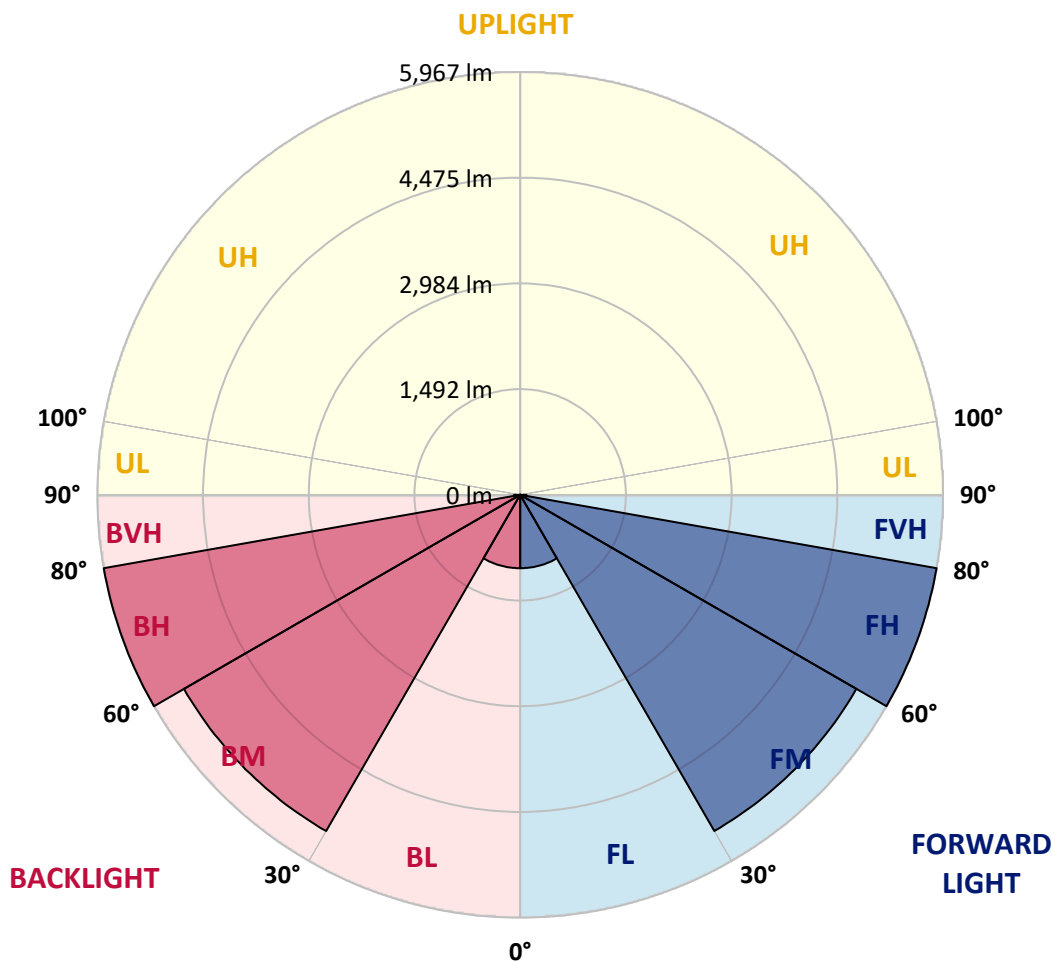
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1035.7 | 4.1 | | | |
| FM | (30°-60°) | 5478.4 | 21.8 | | | |
| FH | (60°-80°) | 5967.2 | 23.7 | | | G3/7500 |
| FVH | (80°-90°) | 87.7 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 1035.7 | 4.1 | B3/2500 | | |
| BM | (30°-60°) | 5478.4 | 21.8 | B4/8500 | | |
| BH | (60°-80°) | 5967.2 | 23.7 | B5 | | G3/7500 |
| BVH | (80°-90°) | 87.7 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 0° | 2505.1 | 2505.1 | 2505.1 | 2505.1 | 2505.1 | 2505.1 | 2505.1 | 2505.1 | 2505.1 | 2505.1 | 2505.1 |
| 2.5° | 2495.9 | 2498.2 | 2498.2 | 2498.2 | 2497.0 | 2497.0 | 2494.7 | 2497.0 | 2495.9 | 2492.4 | 2493.5 |
| 5° | 2475.1 | 2477.4 | 2477.4 | 2476.2 | 2479.7 | 2478.5 | 2475.1 | 2477.4 | 2476.2 | 2473.9 | 2475.1 |
| 7.5° | 2445.0 | 2448.5 | 2448.5 | 2447.3 | 2450.8 | 2449.6 | 2447.3 | 2448.5 | 2448.5 | 2445.0 | 2445.0 |
| 10° | 2411.5 | 2413.8 | 2413.8 | 2412.6 | 2418.4 | 2418.4 | 2417.3 | 2420.7 | 2421.9 | 2418.4 | 2416.1 |
| 12.5° | 2380.3 | 2383.7 | 2383.7 | 2388.4 | 2394.1 | 2396.4 | 2402.2 | 2406.8 | 2411.5 | 2410.3 | 2405.7 |
| 15° | 2361.8 | 2364.1 | 2368.7 | 2374.5 | 2383.7 | 2391.8 | 2401.1 | 2411.5 | 2420.7 | 2423.0 | 2416.1 |
| 17.5° | 2350.2 | 2353.7 | 2360.6 | 2368.7 | 2381.4 | 2395.3 | 2409.2 | 2423.0 | 2435.7 | 2440.4 | 2432.3 |
| 20° | 2346.7 | 2349.0 | 2356.0 | 2369.9 | 2387.2 | 2408.0 | 2427.7 | 2443.8 | 2461.2 | 2467.0 | 2461.2 |
| 22.5° | 2353.7 | 2358.3 | 2366.4 | 2382.6 | 2405.7 | 2432.3 | 2455.4 | 2477.4 | 2499.3 | 2509.7 | 2501.6 |
| 25° | 2384.9 | 2389.5 | 2399.9 | 2420.7 | 2446.2 | 2473.9 | 2500.5 | 2525.9 | 2545.6 | 2556.0 | 2550.2 |
| 27.5° | 2442.7 | 2448.5 | 2461.2 | 2482.0 | 2509.7 | 2539.8 | 2568.7 | 2589.5 | 2605.7 | 2609.2 | 2602.2 |
| 30° | 2529.4 | 2542.1 | 2557.1 | 2580.3 | 2612.6 | 2638.1 | 2667.0 | 2685.4 | 2705.1 | 2705.1 | 2699.3 |
| 32.5° | 2664.6 | 2677.4 | 2693.5 | 2715.5 | 2740.9 | 2768.7 | 2794.1 | 2810.3 | 2831.1 | 2832.3 | 2818.4 |
| 35° | 2866.9 | 2872.7 | 2886.6 | 2900.5 | 2923.6 | 2947.9 | 2969.8 | 2980.2 | 2997.6 | 2998.7 | 2986.0 |
| 37.5° | 3134.0 | 3135.1 | 3144.4 | 3149.0 | 3169.8 | 3196.4 | 3217.2 | 3224.2 | 3240.3 | 3238.0 | 3225.3 |
| 40° | 3445.0 | 3450.7 | 3454.2 | 3461.1 | 3483.1 | 3508.5 | 3530.5 | 3534.0 | 3551.3 | 3547.8 | 3531.7 |
| 42.5° | 3804.5 | 3806.8 | 3826.4 | 3836.9 | 3857.7 | 3870.4 | 3898.1 | 3901.6 | 3922.4 | 3913.1 | 3894.7 |
| 45° | 4207.9 | 4228.7 | 4247.2 | 4268.0 | 4290.0 | 4305.0 | 4327.0 | 4322.4 | 4336.3 | 4322.4 | 4312.0 |
| 47.5° | 4632.2 | 4647.2 | 4688.8 | 4721.2 | 4757.0 | 4769.8 | 4801.0 | 4787.1 | 4801.0 | 4781.3 | 4777.9 |
| 50° | 5099.2 | 5125.8 | 5161.7 | 5198.7 | 5236.8 | 5257.6 | 5298.1 | 5280.7 | 5299.2 | 5280.7 | 5270.3 |
| 52.5° | 5559.3 | 5566.3 | 5644.9 | 5699.2 | 5752.4 | 5776.7 | 5800.9 | 5792.8 | 5794.0 | 5792.8 | 5782.4 |
| 55° | 5996.3 | 6012.5 | 6091.1 | 6165.1 | 6257.6 | 6325.8 | 6367.4 | 6362.8 | 6352.4 | 6342.0 | 6324.6 |
| 57.5° | 6488.8 | 6505.0 | 6595.1 | 6686.5 | 6791.7 | 6888.8 | 6973.2 | 7059.9 | 7093.4 | 7102.6 | 7064.5 |
| 60° | 7154.6 | 7153.5 | 7273.7 | 7384.7 | 7535.0 | 7679.5 | 7864.4 | 8052.9 | 8269.1 | 8369.6 | 8236.7 |
| 62.5° | 7832.1 | 7859.8 | 8033.2 | 8229.8 | 8539.6 | 8841.3 | 9182.3 | 9517.6 | 9859.7 | 10138.4 | 9842.4 |
| 65° | 7751.2 | 7857.5 | 8115.3 | 8560.4 | 9132.6 | 9812.4 | 10547.6 | 11325.6 | 12028.5 | 12511.7 | 11969.5 |
| 67.5° | 6717.7 | 6869.1 | 7131.5 | 7672.5 | 8388.1 | 9368.4 | 10603.1 | 12141.7 | 13930.1 | 14794.8 | 13723.2 |
| 70° | 4869.2 | 5040.3 | 5315.4 | 5843.7 | 6552.4 | 7484.1 | 8825.1 | 10672.4 | 13040.0 | 13911.6 | 12731.3 |
| 72.5° | 2423.0 | 2515.5 | 2685.4 | 3021.9 | 3558.2 | 4314.3 | 5530.4 | 7306.1 | 9400.8 | 10200.8 | 9122.2 |
| 75° | 823.1 | 865.9 | 894.8 | 1004.6 | 1174.5 | 1471.6 | 2076.2 | 3194.1 | 4872.7 | 5841.4 | 4803.3 |
| 77.5° | 475.1 | 476.3 | 495.9 | 515.6 | 544.5 | 576.9 | 657.8 | 863.6 | 1493.6 | 2121.3 | 1545.6 |
| 80° | 307.5 | 306.3 | 322.5 | 337.6 | 357.2 | 373.4 | 378.0 | 400.0 | 461.3 | 546.8 | 489.0 |
| 82.5° | 159.5 | 179.2 | 215.0 | 234.7 | 271.7 | 278.6 | 269.4 | 261.3 | 276.3 | 286.7 | 293.6 |
| 85° | 87.9 | 76.3 | 114.4 | 148.0 | 164.2 | 166.5 | 166.5 | 157.2 | 163.0 | 159.5 | 173.4 |
| 87.5° | 40.5 | 37.0 | 45.1 | 72.8 | 77.5 | 65.9 | 69.4 | 61.3 | 43.9 | 42.8 | 48.6 |
| 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° | 2505.1 | 2505.1 | 2505.1 | 2505.1 | 2505.1 | 2505.1 | 2505.1 | 2505.1 |
| 2.5° | 2493.5 | 2494.7 | 2494.7 | 2498.2 | 2499.3 | 2501.6 | 2504.0 | 2505.1 |
| 5° | 2473.9 | 2477.4 | 2475.1 | 2478.5 | 2478.5 | 2480.8 | 2480.8 | 2482.0 |
| 7.5° | 2445.0 | 2448.5 | 2448.5 | 2448.5 | 2447.3 | 2450.8 | 2450.8 | 2450.8 |
| 10° | 2414.9 | 2417.3 | 2416.1 | 2413.8 | 2411.5 | 2414.9 | 2413.8 | 2412.6 |
| 12.5° | 2405.7 | 2399.9 | 2395.3 | 2393.0 | 2388.4 | 2389.5 | 2386.0 | 2386.0 |
| 15° | 2411.5 | 2401.1 | 2393.0 | 2389.5 | 2384.9 | 2382.6 | 2380.3 | 2381.4 |
| 17.5° | 2426.5 | 2413.8 | 2403.4 | 2397.6 | 2391.8 | 2388.4 | 2383.7 | 2384.9 |
| 20° | 2453.1 | 2438.1 | 2423.0 | 2411.5 | 2401.1 | 2395.3 | 2391.8 | 2390.7 |
| 22.5° | 2492.4 | 2470.4 | 2448.5 | 2431.1 | 2417.3 | 2409.2 | 2405.7 | 2403.4 |
| 25° | 2537.5 | 2513.2 | 2487.8 | 2468.1 | 2454.2 | 2443.8 | 2436.9 | 2436.9 |
| 27.5° | 2594.1 | 2574.5 | 2551.4 | 2528.2 | 2515.5 | 2505.1 | 2500.5 | 2498.2 |
| 30° | 2688.9 | 2670.4 | 2651.9 | 2630.0 | 2613.8 | 2603.4 | 2595.3 | 2588.3 |
| 32.5° | 2810.3 | 2795.3 | 2780.2 | 2764.1 | 2749.0 | 2735.2 | 2722.4 | 2716.7 |
| 35° | 2981.4 | 2969.8 | 2959.4 | 2940.9 | 2935.2 | 2927.1 | 2920.1 | 2914.3 |
| 37.5° | 3217.2 | 3212.6 | 3212.6 | 3192.9 | 3188.3 | 3184.9 | 3177.9 | 3179.1 |
| 40° | 3527.0 | 3531.7 | 3525.9 | 3518.9 | 3515.5 | 3506.2 | 3506.2 | 3514.3 |
| 42.5° | 3893.5 | 3897.0 | 3909.7 | 3898.1 | 3910.8 | 3899.3 | 3892.3 | 3898.1 |
| 45° | 4318.9 | 4331.6 | 4357.1 | 4345.5 | 4353.6 | 4333.9 | 4309.7 | 4310.8 |
| 47.5° | 4796.4 | 4807.9 | 4818.3 | 4810.2 | 4811.4 | 4779.0 | 4746.6 | 4738.6 |
| 50° | 5292.3 | 5296.9 | 5302.7 | 5291.1 | 5293.4 | 5257.6 | 5220.6 | 5221.8 |
| 52.5° | 5782.4 | 5804.4 | 5827.5 | 5796.3 | 5789.4 | 5748.9 | 5696.9 | 5676.1 |
| 55° | 6343.1 | 6374.3 | 6347.7 | 6293.4 | 6239.1 | 6184.7 | 6116.5 | 6105.0 |
| 57.5° | 7034.4 | 6981.2 | 6898.0 | 6795.1 | 6720.0 | 6643.7 | 6574.3 | 6545.4 |
| 60° | 7996.2 | 7796.2 | 7646.0 | 7493.4 | 7397.4 | 7303.8 | 7212.4 | 7198.6 |
| 62.5° | 9355.7 | 9010.1 | 8710.7 | 8395.1 | 8137.3 | 7936.1 | 7775.4 | 7730.3 |
| 65° | 11059.7 | 10242.4 | 9533.7 | 8872.5 | 8298.0 | 7864.4 | 7591.6 | 7471.4 |
| 67.5° | 11792.6 | 10178.8 | 8963.8 | 8025.1 | 7273.7 | 6748.9 | 6454.1 | 6307.3 |
| 70° | 10362.6 | 8441.3 | 7120.0 | 6180.1 | 5495.7 | 4936.2 | 4669.2 | 4512.0 |
| 72.5° | 7129.2 | 5369.7 | 4246.1 | 3465.8 | 2919.0 | 2450.8 | 2265.8 | 2251.9 |
| 75° | 3201.0 | 2120.2 | 1461.2 | 1126.0 | 947.9 | 824.2 | 786.1 | 757.2 |
| 77.5° | 895.9 | 662.4 | 590.7 | 552.6 | 515.6 | 472.8 | 456.6 | 460.1 |
| 80° | 435.8 | 411.5 | 395.4 | 371.1 | 337.6 | 301.7 | 285.5 | 292.5 |
| 82.5° | 289.0 | 285.5 | 295.9 | 278.6 | 230.0 | 195.4 | 164.2 | 150.3 |
| 85° | 175.7 | 178.0 | 181.5 | 182.7 | 154.9 | 108.7 | 74.0 | 83.2 |
| 87.5° | 69.4 | 79.8 | 86.7 | 90.2 | 84.4 | 52.0 | 41.6 | 42.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)