

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: P299237

Luminaire Tested: **GLNA-AF-04-LED-E1-SL2-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299237
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-04-LED-E1-SL2-7050-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Narrow OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15442 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G3

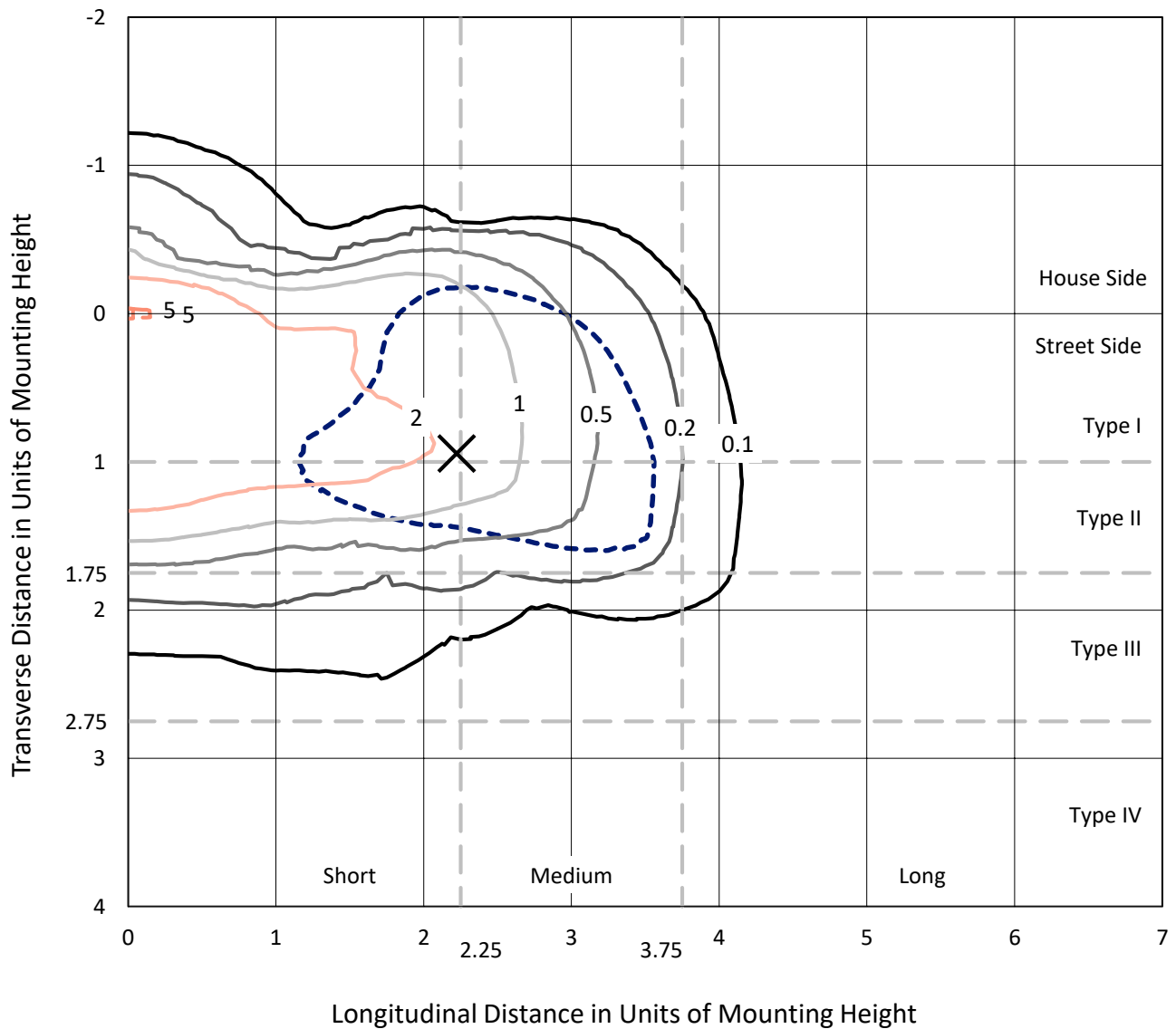
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

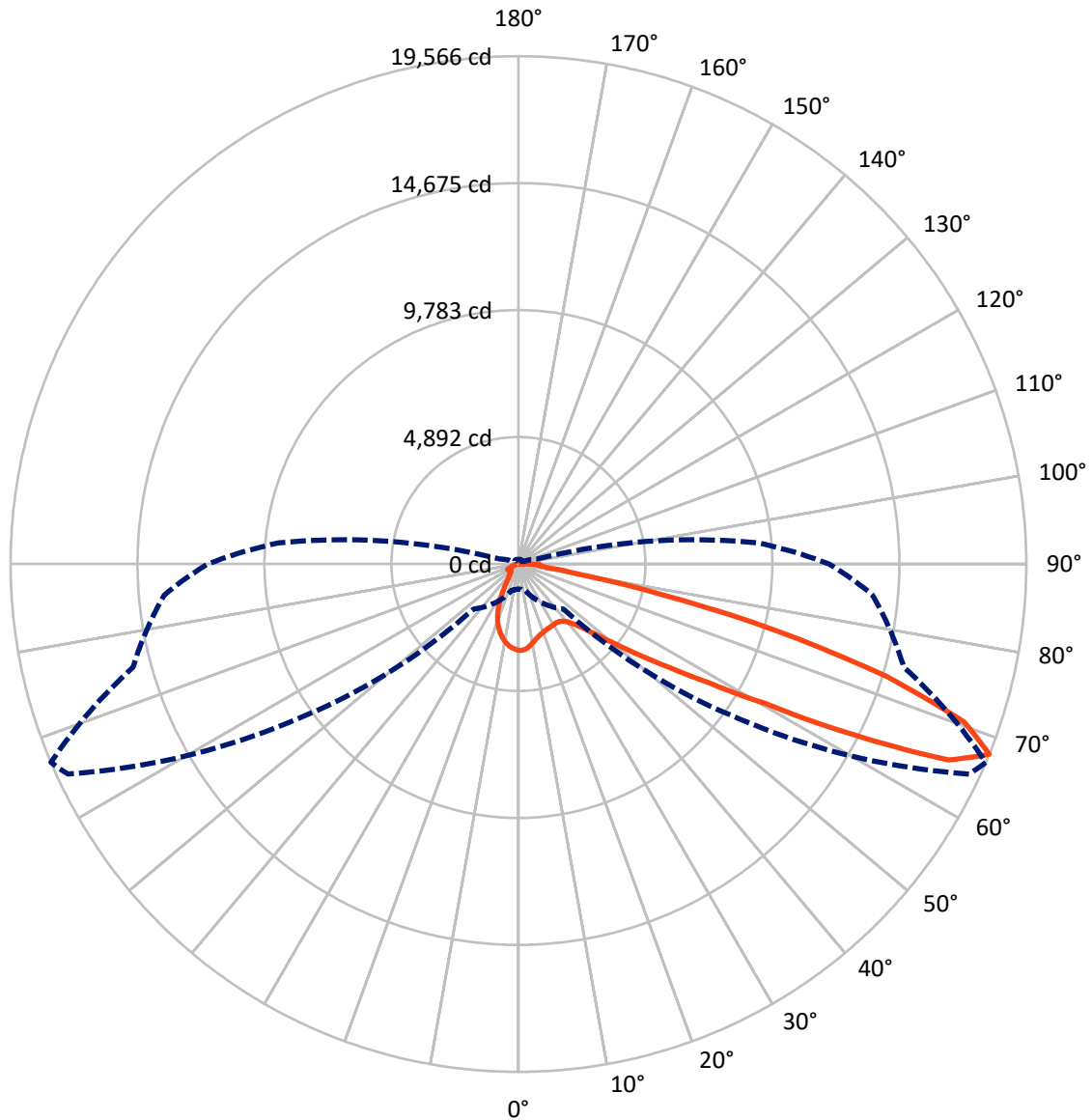
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.3 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 | 2558.6 | 0.0 | 2558.6 |
| | % Fixture | 16.6 | 0.0 | 16.6 |
| Street Side | Lumens | 12883.5 | 0.0 | 12883.5 |
| | % Fixture | 83.4 | 0.0 | 83.4 |
| Total | Lumens | 15442.0 | 0.0 | 15442.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 284.2 | 1.8 |
| 10°-20° | 657.5 | 4.3 |
| 20°-30° | 891.3 | 5.8 |
| 30°-40° | 1267.0 | 8.2 |
| 40°-50° | 2119.8 | 13.7 |
| 50°-60° | 3353.5 | 21.7 |
| 60°-70° | 4272.1 | 27.7 |
| 70°-80° | 2237.7 | 14.5 |
| 80°-90° | 358.9 | 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° | 15442.0 | 100.0 |
| 0°-180° | 15442.0 | 100.0 |

Coefficient of Utilization



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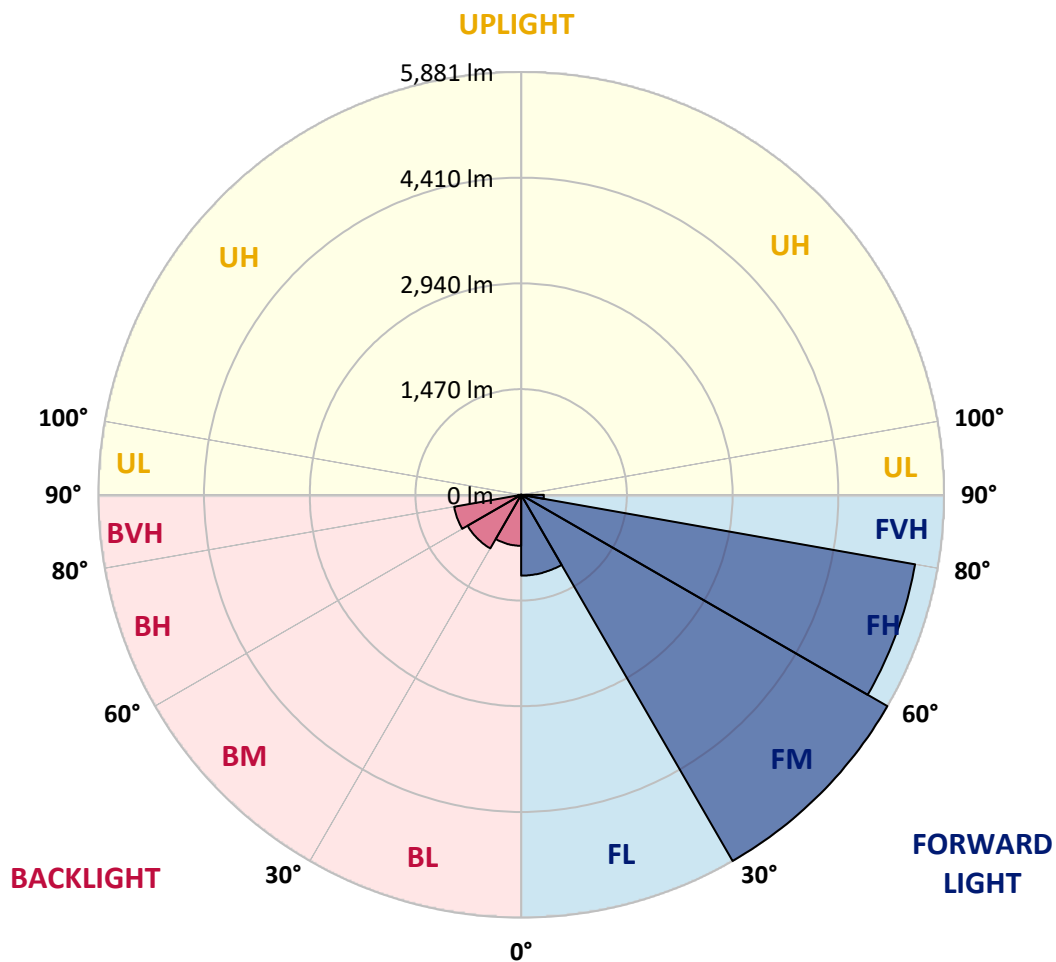
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1123.8 | 7.3 | | | |
| FM (30°-60°) | 5880.7 | 38.1 | | | |
| FH (60°-80°) | 5563.4 | 36.0 | | | G3/7500 |
| FVH (80°-90°) | 315.6 | 2.0 | | | G3/500 |
| BL (0°-30°) | 709.2 | 4.6 | B2/1000 | | |
| BM (30°-60°) | 859.8 | 5.6 | B1/1000 | | |
| BH (60°-80°) | 946.3 | 6.1 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 43.3 | 0.3 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 0° | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 |
| 2.5° | 3193.7 | 3199.1 | 3215.8 | 3226.5 | 3274.5 | 3295.0 | 3309.5 | 3324.0 | 3326.2 | 3333.1 | 3326.2 |
| 5° | 2858.7 | 2870.1 | 2901.3 | 2936.4 | 3029.3 | 3102.4 | 3179.3 | 3259.2 | 3273.7 | 3325.5 | 3339.9 |
| 7.5° | 2599.0 | 2596.0 | 2621.9 | 2663.7 | 2758.9 | 2860.2 | 2995.0 | 3154.1 | 3185.4 | 3301.9 | 3358.2 |
| 10° | 2409.4 | 2407.1 | 2434.5 | 2477.9 | 2568.5 | 2664.5 | 2816.8 | 3034.6 | 3078.8 | 3264.6 | 3375.7 |
| 12.5° | 2269.3 | 2270.0 | 2297.5 | 2345.4 | 2437.6 | 2534.3 | 2688.9 | 2918.8 | 2975.2 | 3221.2 | 3394.0 |
| 15° | 2176.4 | 2182.5 | 2204.5 | 2255.6 | 2345.4 | 2442.1 | 2593.7 | 2832.0 | 2895.2 | 3186.9 | 3414.6 |
| 17.5° | 2145.2 | 2155.1 | 2162.7 | 2200.0 | 2276.9 | 2373.6 | 2522.1 | 2768.1 | 2835.1 | 3163.3 | 3432.9 |
| 20° | 2174.1 | 2185.5 | 2171.0 | 2184.0 | 2232.7 | 2318.0 | 2465.7 | 2717.8 | 2786.3 | 3136.6 | 3435.1 |
| 22.5° | 2298.2 | 2308.9 | 2266.2 | 2228.9 | 2225.9 | 2277.7 | 2419.3 | 2678.2 | 2749.0 | 3116.8 | 3435.9 |
| 25° | 2516.8 | 2523.6 | 2452.0 | 2365.2 | 2280.7 | 2263.2 | 2386.5 | 2650.8 | 2726.2 | 3099.3 | 3421.4 |
| 27.5° | 2784.8 | 2790.1 | 2707.9 | 2580.0 | 2410.2 | 2297.5 | 2375.1 | 2634.8 | 2713.2 | 3084.1 | 3397.1 |
| 30° | 3110.7 | 3135.9 | 3025.4 | 2864.0 | 2616.5 | 2398.7 | 2398.0 | 2626.4 | 2698.8 | 3058.2 | 3349.1 |
| 32.5° | 3444.3 | 3454.9 | 3378.8 | 3215.1 | 2894.5 | 2576.9 | 2461.9 | 2632.5 | 2695.0 | 3027.0 | 3288.2 |
| 35° | 3782.4 | 3796.1 | 3746.6 | 3614.9 | 3274.5 | 2838.1 | 2586.8 | 2668.3 | 2718.6 | 3016.3 | 3245.5 |
| 37.5° | 4220.2 | 4238.5 | 4170.0 | 4017.7 | 3736.7 | 3192.2 | 2794.7 | 2758.2 | 2790.9 | 3046.8 | 3232.6 |
| 40° | 4912.5 | 4904.1 | 4703.8 | 4476.9 | 4242.3 | 3645.3 | 3091.7 | 2910.5 | 2929.5 | 3145.0 | 3272.2 |
| 42.5° | 5718.1 | 5697.6 | 5352.6 | 4996.2 | 4798.2 | 4193.6 | 3484.6 | 3174.7 | 3170.9 | 3338.4 | 3411.5 |
| 45° | 6360.8 | 6344.1 | 6033.4 | 5594.0 | 5435.6 | 4818.0 | 3992.6 | 3568.4 | 3540.2 | 3645.3 | 3668.9 |
| 47.5° | 6708.8 | 6709.6 | 6530.6 | 6172.0 | 6168.2 | 5611.5 | 4645.2 | 4138.0 | 4089.3 | 4138.8 | 4113.6 |
| 50° | 6587.0 | 6603.0 | 6583.9 | 6469.7 | 6836.8 | 6651.7 | 5497.3 | 4932.2 | 4834.0 | 4882.8 | 4786.0 |
| 52.5° | 5997.6 | 6018.2 | 6130.9 | 6306.0 | 7117.8 | 7909.0 | 6749.2 | 5919.2 | 5804.9 | 5787.4 | 5680.0 |
| 55° | 4952.8 | 4977.9 | 5207.9 | 5683.9 | 6884.0 | 8753.5 | 8724.5 | 7177.2 | 6995.2 | 6829.9 | 6784.2 |
| 57.5° | 3413.8 | 3455.7 | 3825.8 | 4532.5 | 6127.8 | 9008.6 | 11076.8 | 8970.5 | 8600.4 | 8023.2 | 8033.8 |
| 60° | 1924.3 | 1973.1 | 2409.4 | 3051.3 | 4601.8 | 8731.4 | 12866.3 | 11686.8 | 10905.5 | 9420.5 | 9499.7 |
| 62.5° | 1223.7 | 1276.3 | 1607.5 | 2120.0 | 2761.2 | 7238.8 | 13599.7 | 15463.1 | 14470.8 | 11143.1 | 11220.7 |
| 65° | 990.7 | 1013.6 | 1169.7 | 1749.9 | 2005.0 | 4361.1 | 13043.0 | 18573.8 | 18203.7 | 13329.3 | 12966.9 |
| 67.5° | 967.1 | 974.7 | 1055.4 | 1468.9 | 1922.8 | 2451.3 | 10403.6 | 19155.6 | 19566.0 | 15370.9 | 13694.1 |
| 70° | 955.7 | 982.3 | 1189.5 | 1401.9 | 1841.3 | 2067.5 | 6251.9 | 17561.0 | 18209.0 | 15904.7 | 12726.2 |
| 72.5° | 463.8 | 462.2 | 598.5 | 1267.9 | 2074.3 | 2144.4 | 3212.0 | 14208.9 | 14859.2 | 13779.4 | 10457.7 |
| 75° | 373.9 | 341.9 | 326.7 | 464.5 | 1994.4 | 2214.4 | 2046.9 | 9776.9 | 10247.5 | 9238.5 | 6428.6 |
| 77.5° | 354.9 | 316.8 | 290.1 | 290.9 | 843.0 | 2348.5 | 1733.9 | 5411.2 | 5548.3 | 4173.0 | 1761.4 |
| 80° | 293.9 | 258.9 | 239.9 | 270.3 | 408.2 | 2236.5 | 1874.8 | 2449.0 | 2247.2 | 1025.0 | 586.4 |
| 82.5° | 204.1 | 185.8 | 180.5 | 226.9 | 326.7 | 1593.8 | 2180.2 | 1315.9 | 1103.4 | 513.3 | 361.7 |
| 85° | 130.2 | 111.2 | 123.4 | 165.2 | 254.3 | 735.6 | 2245.7 | 1025.7 | 815.6 | 325.9 | 204.1 |
| 87.5° | 60.2 | 48.7 | 60.9 | 91.4 | 166.0 | 253.6 | 2136.8 | 1152.2 | 839.9 | 172.1 | 128.7 |
| 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° | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 |
| 2.5° | 3332.3 | 3317.9 | 3306.4 | 3285.1 | 3261.5 | 3238.7 | 3218.1 | 3192.2 | 3184.6 | 3177.7 | 3188.4 |
| 5° | 3343.0 | 3328.5 | 3286.6 | 3221.2 | 3148.8 | 3081.0 | 3013.3 | 2955.4 | 2919.6 | 2899.8 | 2911.2 |
| 7.5° | 3359.0 | 3338.4 | 3251.6 | 3131.3 | 3001.1 | 2882.3 | 2759.7 | 2661.4 | 2589.1 | 2554.8 | 2564.7 |
| 10° | 3373.5 | 3333.9 | 3192.2 | 3011.7 | 2821.4 | 2644.7 | 2451.3 | 2291.4 | 2172.6 | 2110.1 | 2125.4 |
| 12.5° | 3379.5 | 3316.3 | 3109.2 | 2862.5 | 2601.3 | 2342.4 | 2057.6 | 1818.5 | 1647.9 | 1585.4 | 1572.5 |
| 15° | 3385.6 | 3296.5 | 3017.8 | 2692.7 | 2335.5 | 1969.2 | 1570.2 | 1283.9 | 1142.3 | 1111.0 | 1104.2 |
| 17.5° | 3387.2 | 3262.3 | 2914.3 | 2508.4 | 2024.1 | 1525.3 | 1073.7 | 891.7 | 892.5 | 942.7 | 948.8 |
| 20° | 3371.2 | 3211.3 | 2788.6 | 2279.2 | 1650.9 | 1054.7 | 737.1 | 705.9 | 820.9 | 946.5 | 961.8 |
| 22.5° | 3334.6 | 3143.5 | 2646.2 | 2011.9 | 1223.7 | 694.5 | 570.4 | 604.6 | 753.1 | 906.9 | 924.5 |
| 25° | 3288.2 | 3061.2 | 2477.9 | 1702.0 | 810.2 | 496.5 | 478.2 | 520.1 | 620.6 | 723.4 | 733.3 |
| 27.5° | 3225.0 | 2963.8 | 2289.1 | 1347.1 | 526.2 | 408.9 | 421.1 | 449.3 | 490.4 | 536.1 | 540.7 |
| 30° | 3143.5 | 2847.3 | 2087.3 | 982.3 | 397.5 | 367.8 | 385.3 | 400.6 | 418.1 | 444.0 | 446.2 |
| 32.5° | 3049.8 | 2735.3 | 1880.1 | 678.5 | 352.6 | 346.5 | 360.2 | 367.8 | 381.5 | 397.5 | 399.0 |
| 35° | 2971.4 | 2628.7 | 1665.4 | 479.7 | 333.5 | 330.5 | 339.6 | 342.7 | 355.6 | 373.1 | 374.7 |
| 37.5° | 2926.5 | 2541.9 | 1443.8 | 386.8 | 320.6 | 316.0 | 321.4 | 321.4 | 339.6 | 365.5 | 369.3 |
| 40° | 2929.5 | 2493.9 | 1222.2 | 349.5 | 309.9 | 303.8 | 304.6 | 304.6 | 328.2 | 356.4 | 358.7 |
| 42.5° | 3012.5 | 2506.1 | 1025.7 | 335.1 | 301.6 | 294.7 | 290.9 | 293.2 | 313.0 | 331.3 | 332.8 |
| 45° | 3207.4 | 2592.2 | 841.5 | 325.9 | 293.2 | 290.9 | 282.5 | 281.8 | 289.4 | 297.7 | 297.7 |
| 47.5° | 3527.3 | 2762.0 | 716.6 | 319.8 | 286.3 | 285.6 | 275.7 | 265.8 | 265.0 | 268.0 | 268.0 |
| 50° | 4047.4 | 3054.4 | 632.8 | 313.0 | 281.8 | 275.7 | 264.2 | 249.0 | 243.7 | 246.0 | 246.0 |
| 52.5° | 4827.2 | 3576.0 | 600.8 | 303.8 | 271.9 | 262.0 | 249.0 | 233.8 | 229.2 | 230.0 | 230.0 |
| 55° | 5849.9 | 4377.1 | 596.3 | 293.2 | 261.2 | 245.2 | 234.5 | 223.1 | 217.8 | 219.3 | 219.3 |
| 57.5° | 7099.5 | 5485.1 | 677.7 | 276.4 | 246.7 | 228.5 | 222.4 | 214.7 | 210.9 | 213.2 | 212.5 |
| 60° | 8618.7 | 6935.0 | 1005.2 | 258.9 | 232.3 | 213.2 | 213.2 | 207.1 | 204.1 | 206.4 | 205.6 |
| 62.5° | 10368.6 | 8600.4 | 1413.3 | 246.0 | 217.0 | 201.0 | 204.1 | 201.0 | 198.0 | 199.5 | 198.8 |
| 65° | 11920.6 | 9685.5 | 1323.5 | 236.1 | 201.8 | 189.6 | 194.9 | 193.4 | 191.1 | 192.7 | 191.9 |
| 67.5° | 11965.5 | 9283.5 | 743.2 | 225.4 | 187.3 | 178.2 | 185.8 | 185.0 | 183.5 | 185.0 | 184.3 |
| 70° | 10678.5 | 7838.9 | 418.8 | 205.6 | 172.1 | 164.5 | 175.1 | 174.4 | 172.9 | 175.9 | 175.1 |
| 72.5° | 8555.5 | 5688.4 | 306.1 | 181.2 | 156.9 | 150.0 | 162.2 | 161.4 | 161.4 | 166.0 | 163.7 |
| 75° | 4923.1 | 2927.2 | 244.4 | 155.3 | 140.9 | 135.5 | 146.2 | 147.0 | 148.5 | 154.6 | 150.0 |
| 77.5° | 1403.4 | 912.3 | 199.5 | 131.7 | 121.1 | 118.8 | 129.5 | 131.0 | 131.7 | 138.6 | 132.5 |
| 80° | 521.6 | 420.3 | 164.5 | 110.4 | 99.0 | 99.8 | 109.7 | 111.9 | 112.7 | 119.6 | 111.9 |
| 82.5° | 332.8 | 277.2 | 133.3 | 85.3 | 77.7 | 76.9 | 89.1 | 92.1 | 92.1 | 92.9 | 88.3 |
| 85° | 194.2 | 166.0 | 100.5 | 61.7 | 54.8 | 52.5 | 66.3 | 71.6 | 69.3 | 67.8 | 64.7 |
| 87.5° | 130.2 | 114.2 | 61.7 | 34.3 | 29.7 | 28.2 | 38.8 | 42.6 | 41.1 | 38.8 | 36.6 |
| 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)