

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: P298998

Luminaire Tested: **GLNA-AF-04-LED-E1-T2-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298998
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24139)
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-T2-7060-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 5700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15469.1 lumens
Efficiency: N/A
Efficacy: 119.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B2 - U0 - G2

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

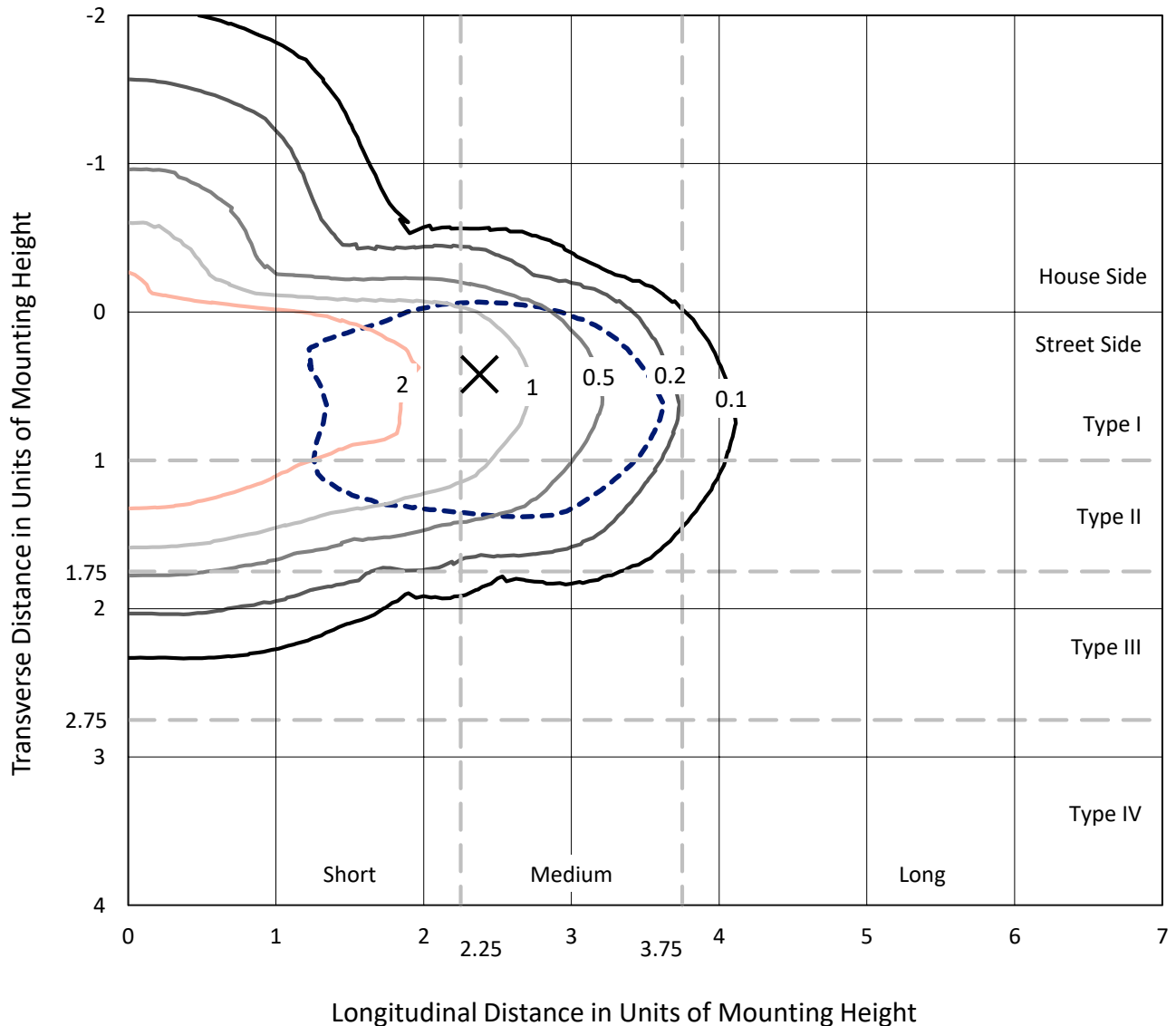


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

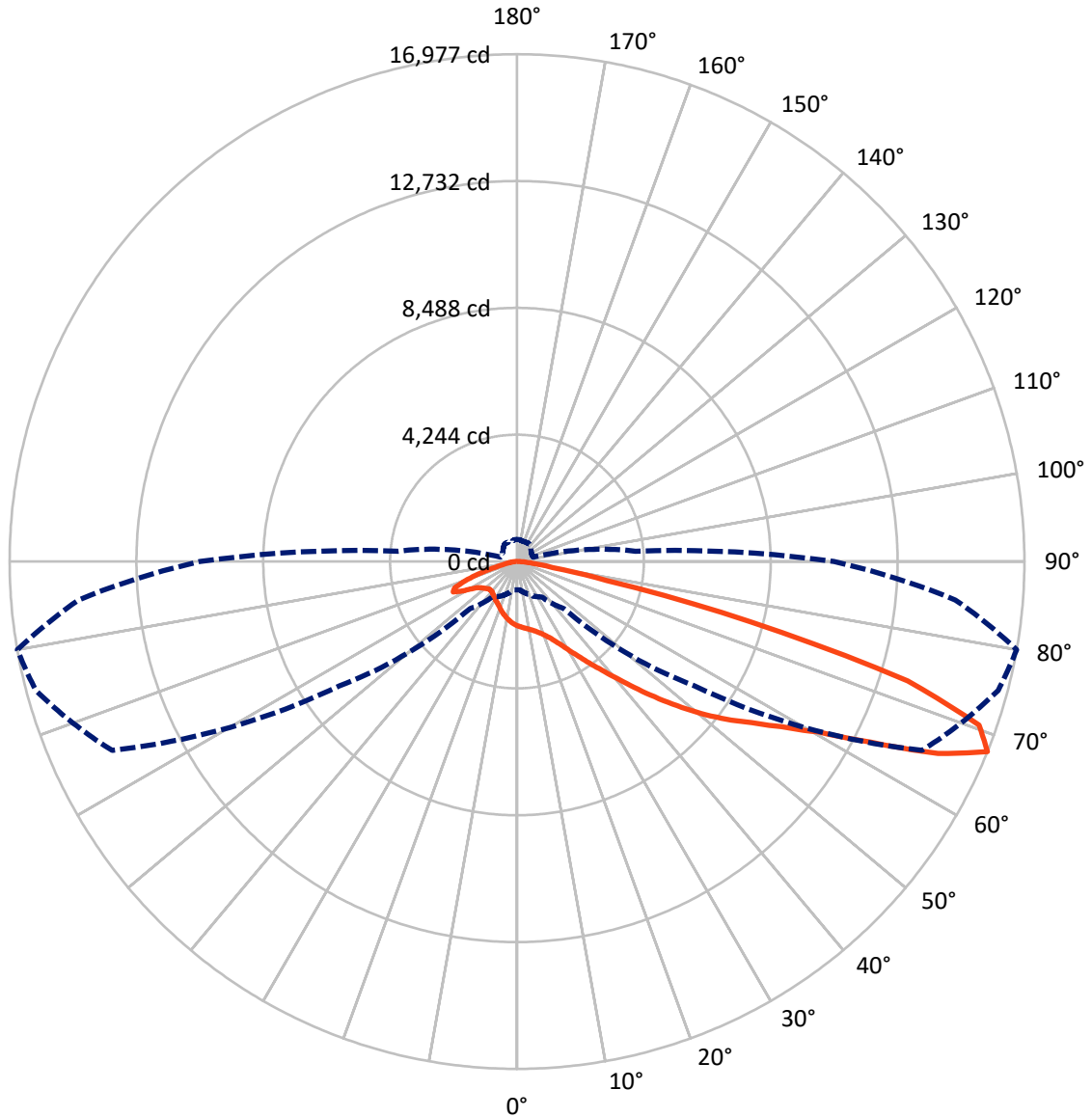


Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 80-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2848.8 | 0.0 | 2848.8 |
| | % Fixture | 18.4 | 0.0 | 18.4 |
| Street Side | Lumens | 12620.3 | 0.0 | 12620.3 |
| | % Fixture | 81.6 | 0.0 | 81.6 |
| Total | Lumens | 15469.1 | 0.0 | 15469.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 198.2 | 1.3 |
| 10°-20° | 571.1 | 3.7 |
| 20°-30° | 945.3 | 6.1 |
| 30°-40° | 1546.2 | 10.0 |
| 40°-50° | 2496.5 | 16.1 |
| 50°-60° | 3604.3 | 23.3 |
| 60°-70° | 3977.5 | 25.7 |
| 70°-80° | 1833.4 | 11.9 |
| 80°-90° | 296.5 | 1.9 |
| 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° | 15469.1 | 100.0 |
| 0°-180° | 15469.1 | 100.0 |



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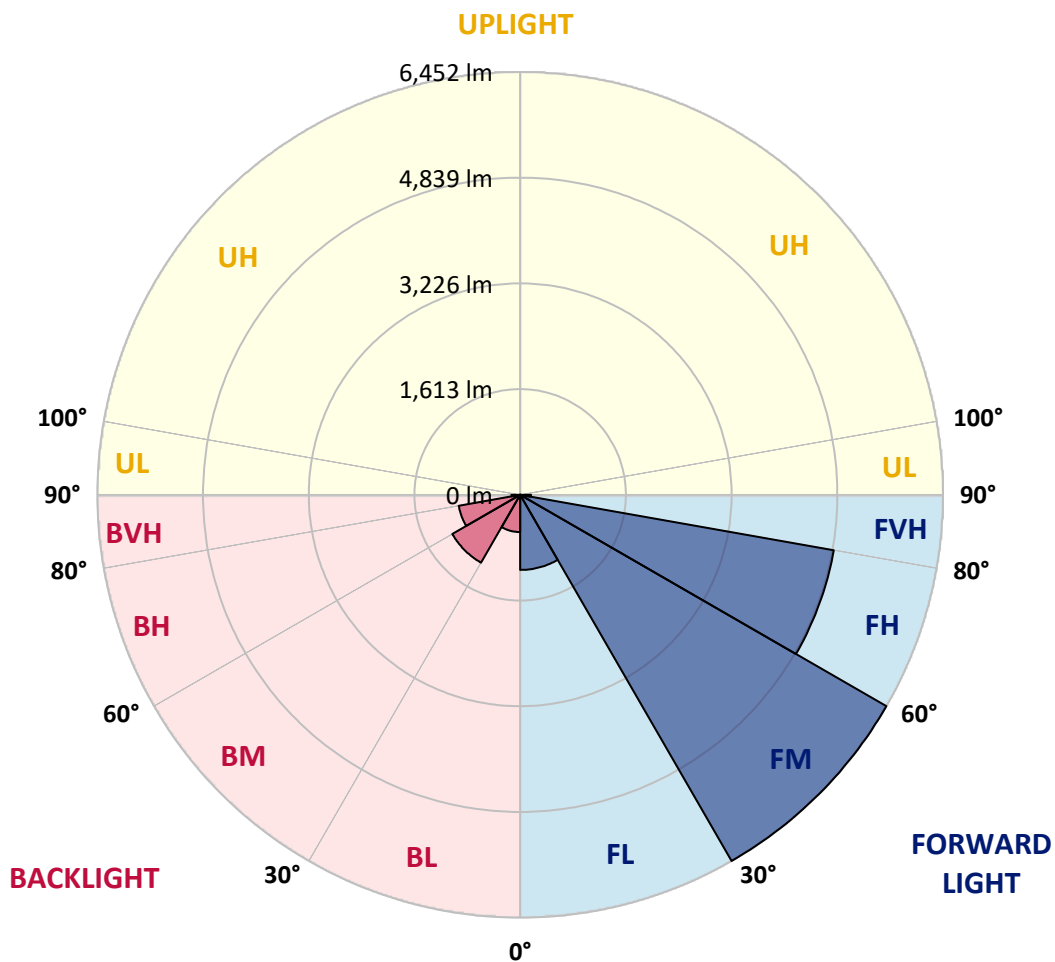
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1146.2 | 7.4 | | | |
| FM (30°-60°) | 6451.8 | 41.7 | | | |
| FH (60°-80°) | 4859.2 | 31.4 | | | G2/5000 |
| FVH (80°-90°) | 163.0 | 1.1 | | | G2/225 |
| BL (0°-30°) | 568.4 | 3.7 | B2/1000 | | |
| BM (30°-60°) | 1195.3 | 7.7 | B2/2500 | | |
| BH (60°-80°) | 951.7 | 6.2 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 133.5 | 0.9 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 80° | 85° |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 0° | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 |
| 2.5° | 2350.9 | 2337.2 | 2339.5 | 2335.7 | 2324.3 | 2304.5 | 2283.1 | 2244.3 | 2203.9 | 2182.6 | 2165.9 |
| 5° | 2547.4 | 2543.6 | 2538.3 | 2526.1 | 2497.1 | 2456.0 | 2405.0 | 2336.4 | 2262.6 | 2223.7 | 2186.4 |
| 7.5° | 2694.4 | 2692.1 | 2685.2 | 2677.6 | 2649.4 | 2599.9 | 2523.0 | 2425.6 | 2318.2 | 2264.9 | 2207.0 |
| 10° | 2706.6 | 2710.4 | 2715.7 | 2736.3 | 2740.1 | 2713.4 | 2635.0 | 2516.9 | 2376.0 | 2307.5 | 2233.6 |
| 12.5° | 2603.0 | 2611.4 | 2631.9 | 2684.5 | 2740.1 | 2772.8 | 2732.5 | 2612.9 | 2443.8 | 2360.8 | 2267.1 |
| 15° | 2465.9 | 2470.5 | 2495.6 | 2568.0 | 2667.7 | 2769.0 | 2807.1 | 2718.7 | 2531.4 | 2429.4 | 2317.4 |
| 17.5° | 2407.3 | 2409.6 | 2427.1 | 2475.1 | 2568.0 | 2712.7 | 2849.0 | 2833.7 | 2638.8 | 2514.7 | 2379.1 |
| 20° | 2377.6 | 2382.9 | 2408.0 | 2455.3 | 2513.9 | 2640.3 | 2855.1 | 2957.9 | 2766.7 | 2621.3 | 2456.8 |
| 22.5° | 2462.1 | 2459.8 | 2469.0 | 2492.6 | 2542.1 | 2618.2 | 2850.5 | 3085.8 | 2929.7 | 2758.3 | 2558.1 |
| 25° | 2659.3 | 2667.7 | 2651.7 | 2625.1 | 2641.1 | 2694.4 | 2874.9 | 3224.4 | 3133.8 | 2934.3 | 2690.6 |
| 27.5° | 2940.4 | 2932.0 | 2908.4 | 2845.9 | 2813.2 | 2836.0 | 2955.6 | 3373.7 | 3387.4 | 3165.8 | 2865.7 |
| 30° | 3220.6 | 3213.8 | 3190.9 | 3114.8 | 3047.7 | 3028.7 | 3112.5 | 3545.0 | 3689.7 | 3443.7 | 3080.5 |
| 32.5° | 3511.5 | 3503.9 | 3482.6 | 3406.4 | 3325.7 | 3281.5 | 3335.6 | 3743.0 | 4046.1 | 3775.8 | 3333.3 |
| 35° | 3870.2 | 3855.7 | 3810.8 | 3705.0 | 3625.8 | 3591.5 | 3616.6 | 3992.1 | 4457.4 | 4168.7 | 3640.2 |
| 37.5° | 4207.6 | 4229.7 | 4184.0 | 4037.8 | 3935.0 | 3922.8 | 3950.9 | 4295.9 | 4900.6 | 4608.2 | 3992.8 |
| 40° | 4546.5 | 4550.3 | 4509.2 | 4389.6 | 4283.7 | 4263.9 | 4334.8 | 4664.5 | 5423.8 | 5133.6 | 4421.6 |
| 42.5° | 4896.8 | 4904.4 | 4835.1 | 4724.7 | 4647.0 | 4650.8 | 4731.5 | 5096.3 | 6023.9 | 5752.8 | 4915.1 |
| 45° | 5311.8 | 5323.3 | 5247.1 | 5102.4 | 5031.6 | 5174.0 | 5140.5 | 5580.7 | 6681.9 | 6456.5 | 5481.7 |
| 47.5° | 5745.9 | 5763.4 | 5705.6 | 5570.0 | 5481.7 | 5677.4 | 5549.4 | 6117.6 | 7390.1 | 7211.2 | 6103.9 |
| 50° | 5982.8 | 6007.9 | 6064.3 | 6054.4 | 6035.3 | 6002.6 | 6005.6 | 6693.3 | 8120.5 | 7997.1 | 6743.6 |
| 52.5° | 5855.6 | 5854.8 | 6060.4 | 6310.2 | 6576.8 | 6596.6 | 6561.6 | 7300.3 | 8802.8 | 8765.5 | 7346.0 |
| 55° | 5273.8 | 5313.4 | 5624.8 | 6108.4 | 6836.5 | 7291.1 | 7394.7 | 7995.6 | 9473.0 | 9516.4 | 7957.5 |
| 57.5° | 4305.1 | 4337.8 | 4758.2 | 5432.2 | 6486.2 | 7703.9 | 8579.7 | 9006.1 | 10222.3 | 10424.9 | 8771.6 |
| 60° | 2919.8 | 2959.4 | 3404.9 | 4214.4 | 5543.4 | 7473.9 | 9707.5 | 10809.5 | 11119.5 | 11580.2 | 9913.9 |
| 62.5° | 1715.8 | 1751.6 | 2114.8 | 2658.6 | 3903.0 | 6405.4 | 10202.5 | 13375.2 | 12544.3 | 13323.4 | 11656.4 |
| 65° | 1181.2 | 1205.5 | 1382.2 | 1654.9 | 2242.8 | 4314.2 | 9588.7 | 15146.6 | 14736.8 | 15483.2 | 13676.8 |
| 67.5° | 950.4 | 947.4 | 1087.5 | 1273.3 | 1443.9 | 2224.5 | 7250.8 | 14946.3 | 16665.1 | 16976.6 | 14725.4 |
| 70° | 782.9 | 779.8 | 875.0 | 1028.9 | 1153.8 | 1252.8 | 3949.4 | 12612.9 | 16272.1 | 16398.5 | 13759.8 |
| 72.5° | 654.9 | 658.0 | 718.9 | 833.1 | 946.6 | 943.6 | 1735.6 | 8872.9 | 12801.0 | 13675.2 | 10968.7 |
| 75° | 552.9 | 554.4 | 594.8 | 675.5 | 768.4 | 760.0 | 941.3 | 4806.9 | 7441.1 | 8049.6 | 6080.2 |
| 77.5° | 470.6 | 472.2 | 498.1 | 543.0 | 609.2 | 606.2 | 686.9 | 2076.8 | 3104.1 | 3066.0 | 2079.8 |
| 80° | 419.6 | 419.6 | 431.8 | 440.2 | 476.7 | 463.0 | 509.5 | 997.6 | 1312.2 | 1211.6 | 830.1 |
| 82.5° | 329.0 | 330.5 | 405.1 | 402.1 | 375.4 | 357.9 | 357.9 | 587.9 | 695.3 | 642.8 | 485.9 |
| 85° | 185.1 | 184.3 | 261.2 | 315.3 | 330.5 | 252.1 | 249.8 | 329.0 | 378.5 | 333.6 | 235.3 |
| 87.5° | 79.2 | 80.7 | 121.1 | 140.1 | 187.3 | 156.9 | 154.6 | 169.8 | 192.7 | 166.8 | 108.9 |
| 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° | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 | 2149.1 |
| 2.5° | 2149.9 | 2130.1 | 2086.7 | 2032.6 | 1983.8 | 1951.9 | 1922.9 | 1881.0 | 1883.3 | 1854.4 | 1833.1 |
| 5° | 2148.3 | 2107.2 | 2006.7 | 1887.1 | 1772.1 | 1689.1 | 1626.7 | 1570.3 | 1556.6 | 1530.0 | 1514.0 |
| 7.5° | 2149.9 | 2082.9 | 1913.8 | 1722.6 | 1580.2 | 1475.1 | 1421.8 | 1392.1 | 1385.3 | 1376.1 | 1376.9 |
| 10° | 2155.2 | 2060.8 | 1811.7 | 1568.8 | 1419.5 | 1350.2 | 1337.3 | 1346.4 | 1357.1 | 1360.1 | 1360.9 |
| 12.5° | 2167.4 | 2041.0 | 1699.8 | 1431.7 | 1319.0 | 1297.7 | 1319.8 | 1351.0 | 1371.6 | 1381.5 | 1380.7 |
| 15° | 2194.8 | 2025.7 | 1592.4 | 1324.3 | 1263.4 | 1274.8 | 1316.0 | 1360.1 | 1389.8 | 1403.5 | 1404.3 |
| 17.5° | 2224.5 | 2003.6 | 1482.0 | 1242.1 | 1222.3 | 1251.2 | 1302.3 | 1354.0 | 1390.6 | 1405.8 | 1408.9 |
| 20° | 2263.3 | 1976.2 | 1366.2 | 1180.4 | 1183.5 | 1216.2 | 1264.2 | 1316.0 | 1356.3 | 1369.3 | 1375.4 |
| 22.5° | 2314.4 | 1946.5 | 1264.9 | 1130.1 | 1139.3 | 1164.4 | 1201.7 | 1246.7 | 1281.7 | 1287.8 | 1293.1 |
| 25° | 2382.9 | 1914.5 | 1184.2 | 1084.5 | 1088.3 | 1102.7 | 1127.9 | 1154.5 | 1178.9 | 1172.0 | 1177.4 |
| 27.5° | 2475.1 | 1887.1 | 1124.1 | 1042.6 | 1035.7 | 1038.8 | 1051.7 | 1060.1 | 1073.0 | 1054.0 | 1056.3 |
| 30° | 2583.2 | 1857.4 | 1077.6 | 1006.0 | 987.0 | 981.6 | 984.7 | 989.3 | 999.2 | 973.3 | 969.5 |
| 32.5° | 2708.8 | 1821.6 | 1034.2 | 974.0 | 947.4 | 936.7 | 938.2 | 950.4 | 988.5 | 972.5 | 964.1 |
| 35° | 2855.1 | 1781.3 | 988.5 | 939.0 | 920.7 | 905.5 | 904.0 | 942.0 | 1055.5 | 1045.6 | 1038.0 |
| 37.5° | 3026.4 | 1740.9 | 942.8 | 899.4 | 900.9 | 884.2 | 878.8 | 922.2 | 1068.5 | 1029.6 | 1024.3 |
| 40° | 3244.2 | 1719.6 | 904.0 | 857.5 | 876.5 | 874.3 | 863.6 | 885.7 | 983.2 | 912.3 | 903.2 |
| 42.5° | 3513.8 | 1722.6 | 875.0 | 812.6 | 847.6 | 872.0 | 855.2 | 856.0 | 891.0 | 837.7 | 829.3 |
| 45° | 3846.6 | 1758.4 | 854.5 | 776.8 | 814.9 | 869.7 | 852.2 | 840.0 | 843.0 | 814.9 | 810.3 |
| 47.5° | 4235.0 | 1832.3 | 840.0 | 747.1 | 783.6 | 861.3 | 851.4 | 835.4 | 828.6 | 813.3 | 809.5 |
| 50° | 4666.8 | 1939.7 | 829.3 | 718.9 | 755.5 | 847.6 | 852.2 | 830.9 | 823.2 | 817.1 | 814.9 |
| 52.5° | 5091.0 | 2062.3 | 813.3 | 694.5 | 733.4 | 830.9 | 854.5 | 826.3 | 817.9 | 813.3 | 811.1 |
| 55° | 5563.9 | 2215.4 | 789.0 | 674.0 | 715.1 | 809.5 | 854.5 | 819.4 | 810.3 | 811.1 | 810.3 |
| 57.5° | 6202.9 | 2462.9 | 760.0 | 656.5 | 693.0 | 783.6 | 840.0 | 811.8 | 800.4 | 801.2 | 801.9 |
| 60° | 7201.3 | 2899.2 | 725.0 | 638.9 | 665.6 | 753.2 | 820.2 | 795.1 | 783.6 | 786.7 | 787.4 |
| 62.5° | 8669.5 | 3539.7 | 679.3 | 613.1 | 636.7 | 720.4 | 792.8 | 773.7 | 762.3 | 769.9 | 769.9 |
| 65° | 10195.7 | 4104.8 | 623.0 | 580.3 | 606.2 | 684.6 | 758.5 | 747.1 | 735.7 | 753.2 | 752.4 |
| 67.5° | 10606.2 | 3978.4 | 566.6 | 544.5 | 575.7 | 645.0 | 717.4 | 711.3 | 705.2 | 735.7 | 734.1 |
| 70° | 9421.9 | 3194.0 | 514.8 | 508.0 | 542.2 | 602.4 | 673.2 | 673.2 | 669.4 | 692.3 | 686.9 |
| 72.5° | 7178.4 | 2264.9 | 465.3 | 469.1 | 504.1 | 555.9 | 625.2 | 630.6 | 624.5 | 635.9 | 631.3 |
| 75° | 3842.8 | 1296.2 | 415.8 | 426.5 | 456.9 | 508.7 | 571.9 | 577.3 | 573.5 | 572.7 | 575.0 |
| 77.5° | 1277.1 | 633.6 | 364.0 | 380.8 | 407.4 | 460.0 | 516.3 | 524.7 | 515.6 | 514.0 | 513.3 |
| 80° | 568.9 | 398.3 | 306.9 | 329.0 | 352.6 | 404.4 | 457.7 | 464.5 | 454.6 | 468.4 | 450.8 |
| 82.5° | 365.5 | 262.0 | 246.0 | 270.4 | 293.2 | 348.8 | 399.1 | 400.6 | 391.4 | 454.6 | 387.6 |
| 85° | 177.4 | 162.2 | 185.1 | 207.1 | 226.9 | 274.2 | 330.5 | 331.3 | 308.4 | 281.0 | 271.1 |
| 87.5° | 88.3 | 94.4 | 123.4 | 143.2 | 153.1 | 188.1 | 240.7 | 236.1 | 226.2 | 205.6 | 189.6 |
| 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)