

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: P298908

Luminaire Tested: **GLNA-AF-09-LED-E1-T2-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298908
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-09-LED-E1-T2-7060
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 5700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 52041.5 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G5

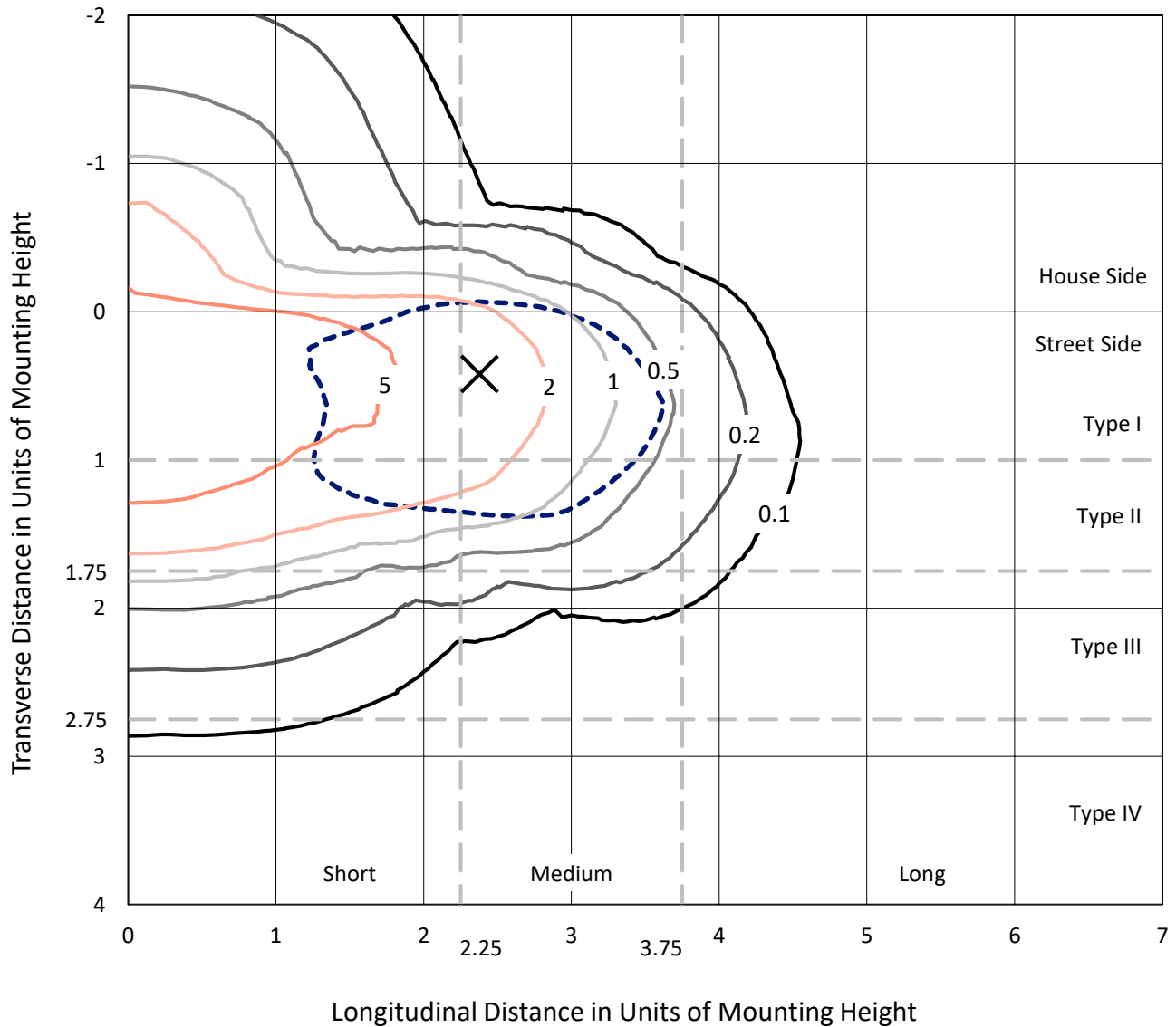
Input Watts (W): 501
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

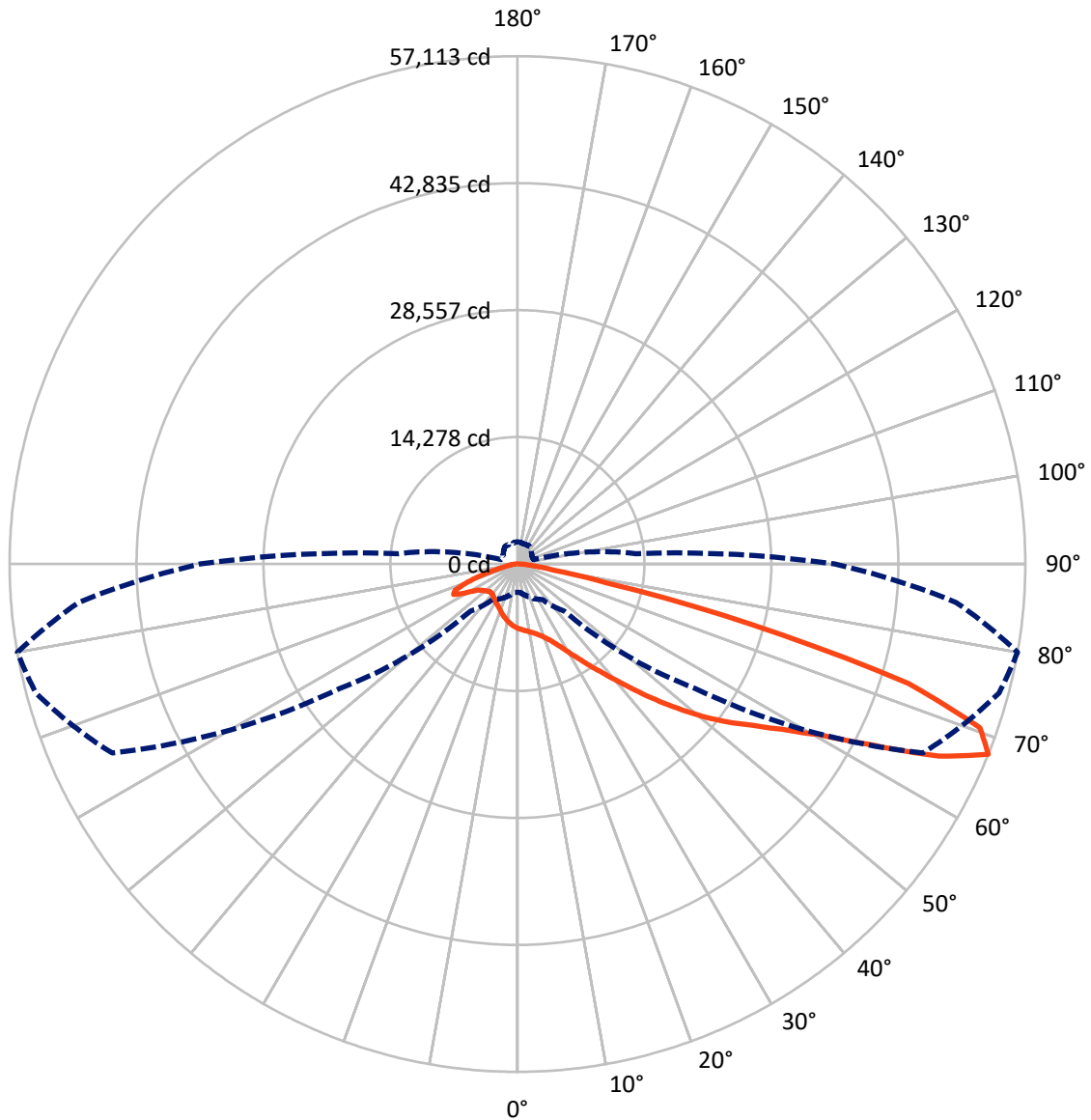
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.8 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 | 9584.1 | 0.0 | 9584.1 |
| | % Fixture | 18.4 | 0.0 | 18.4 |
| Street Side | Lumens | 42457.4 | 0.0 | 42457.4 |
| | % Fixture | 81.6 | 0.0 | 81.6 |
| Total | Lumens | 52041.5 | 0.0 | 52041.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 666.9 | 1.3 |
| 10°-20° | 1921.3 | 3.7 |
| 20°-30° | 3180.1 | 6.1 |
| 30°-40° | 5201.8 | 10.0 |
| 40°-50° | 8398.9 | 16.1 |
| 50°-60° | 12125.6 | 23.3 |
| 60°-70° | 13381.3 | 25.7 |
| 70°-80° | 6167.9 | 11.9 |
| 80°-90° | 997.6 | 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° | 52041.5 | 100.0 |
| 0°-180° | 52041.5 | 100.0 |



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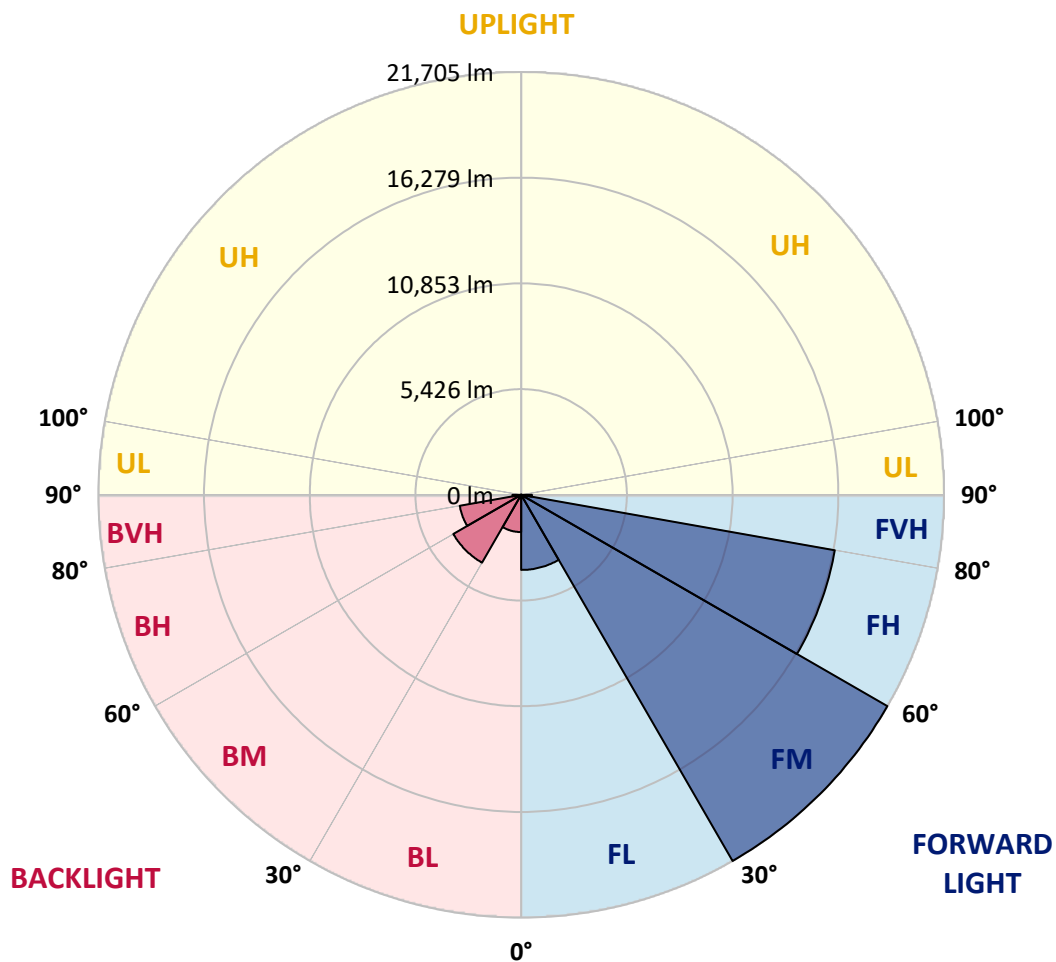
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 3856.2 | 7.4 | | | |
| FM | (30°-60°) | 21705.2 | 41.7 | | | |
| FH | (60°-80°) | 16347.6 | 31.4 | | | G5 |
| FVH | (80°-90°) | 548.5 | 1.1 | | | G4/750 |
| BL | (0°-30°) | 1912.2 | 3.7 | B3/2500 | | |
| BM | (30°-60°) | 4021.1 | 7.7 | B3/5000 | | |
| BH | (60°-80°) | 3201.6 | 6.2 | B4/5000 | | G4/5000 |
| BVH | (80°-90°) | 449.1 | 0.9 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G5

Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 80° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 |
| 2.5° | 7909.0 | 7862.9 | 7870.6 | 7857.8 | 7819.3 | 7752.7 | 7681.0 | 7550.3 | 7414.5 | 7342.8 | 7286.4 |
| 5° | 8570.0 | 8557.2 | 8539.3 | 8498.3 | 8400.9 | 8262.6 | 8090.9 | 7860.3 | 7611.8 | 7481.2 | 7355.6 |
| 7.5° | 9064.5 | 9056.8 | 9033.7 | 9008.1 | 8913.3 | 8746.8 | 8488.0 | 8160.1 | 7798.8 | 7619.5 | 7424.8 |
| 10° | 9105.5 | 9118.3 | 9136.2 | 9205.4 | 9218.2 | 9128.5 | 8864.7 | 8467.5 | 7993.6 | 7763.0 | 7514.5 |
| 12.5° | 8757.0 | 8785.2 | 8854.4 | 9031.2 | 9218.2 | 9328.4 | 9192.6 | 8790.4 | 8221.6 | 7942.3 | 7627.2 |
| 15° | 8295.9 | 8311.3 | 8395.8 | 8639.2 | 8974.8 | 9315.6 | 9443.7 | 9146.5 | 8516.2 | 8172.9 | 7796.3 |
| 17.5° | 8098.6 | 8106.3 | 8165.2 | 8326.6 | 8639.2 | 9126.0 | 9584.6 | 9533.3 | 8877.5 | 8459.9 | 8003.8 |
| 20° | 7998.7 | 8016.6 | 8101.2 | 8260.0 | 8457.3 | 8882.6 | 9605.1 | 9951.0 | 9307.9 | 8818.5 | 8265.1 |
| 22.5° | 8283.1 | 8275.4 | 8306.1 | 8385.6 | 8552.1 | 8808.3 | 9589.7 | 10381.4 | 9856.2 | 9279.7 | 8605.9 |
| 25° | 8946.6 | 8974.8 | 8921.0 | 8831.3 | 8885.2 | 9064.5 | 9671.7 | 10847.7 | 10542.8 | 9871.5 | 9051.7 |
| 27.5° | 9892.0 | 9863.8 | 9784.4 | 9574.3 | 9464.2 | 9541.0 | 9943.3 | 11349.8 | 11395.9 | 10650.4 | 9641.0 |
| 30° | 10834.9 | 10811.8 | 10734.9 | 10478.7 | 10253.3 | 10189.2 | 10471.1 | 11926.3 | 12413.1 | 11585.5 | 10363.4 |
| 32.5° | 11813.6 | 11787.9 | 11716.2 | 11460.0 | 11188.4 | 11039.8 | 11221.7 | 12592.4 | 13612.1 | 12702.6 | 11214.0 |
| 35° | 13020.3 | 12971.6 | 12820.4 | 12464.3 | 12197.9 | 12082.6 | 12167.1 | 13430.2 | 14995.6 | 14024.6 | 12246.5 |
| 37.5° | 14155.3 | 14229.6 | 14075.8 | 13583.9 | 13238.1 | 13197.1 | 13291.9 | 14452.5 | 16486.7 | 15502.9 | 13432.8 |
| 40° | 15295.4 | 15308.2 | 15169.8 | 14767.6 | 14411.5 | 14344.9 | 14583.1 | 15692.5 | 18246.8 | 17270.7 | 14875.2 |
| 42.5° | 16473.9 | 16499.5 | 16266.4 | 15894.9 | 15633.6 | 15646.4 | 15917.9 | 17145.2 | 20265.7 | 19353.6 | 16535.4 |
| 45° | 17870.2 | 17908.7 | 17652.4 | 17165.7 | 16927.4 | 17406.5 | 17293.8 | 18774.6 | 22479.3 | 21721.0 | 18441.6 |
| 47.5° | 19330.6 | 19389.5 | 19194.8 | 18738.8 | 18441.6 | 19100.0 | 18669.6 | 20580.9 | 24862.0 | 24259.9 | 20534.7 |
| 50° | 20127.4 | 20211.9 | 20401.5 | 20368.2 | 20304.2 | 20194.0 | 20204.2 | 22517.8 | 27319.0 | 26904.0 | 22686.9 |
| 52.5° | 19699.5 | 19697.0 | 20388.7 | 21229.1 | 22125.8 | 22192.4 | 22074.5 | 24559.7 | 29614.6 | 29489.1 | 24713.4 |
| 55° | 17742.1 | 17875.3 | 18923.2 | 20550.1 | 22999.4 | 24529.0 | 24877.4 | 26898.8 | 31869.2 | 32015.2 | 26770.7 |
| 57.5° | 14483.2 | 14593.4 | 16007.6 | 18275.0 | 21820.9 | 25917.6 | 28863.9 | 30298.7 | 34390.2 | 35071.7 | 29509.6 |
| 60° | 9822.9 | 9956.1 | 11454.9 | 14178.3 | 18649.1 | 25143.8 | 32658.3 | 36365.6 | 37408.3 | 38958.4 | 33352.6 |
| 62.5° | 5772.3 | 5892.7 | 7114.8 | 8944.1 | 13130.4 | 21549.3 | 34323.6 | 44997.1 | 42201.9 | 44822.9 | 39214.6 |
| 65° | 3973.7 | 4055.7 | 4650.1 | 5567.3 | 7545.2 | 14513.9 | 32258.6 | 50956.4 | 49578.0 | 52088.8 | 46011.7 |
| 67.5° | 3197.4 | 3187.2 | 3658.6 | 4283.7 | 4857.6 | 7483.7 | 24393.2 | 50282.6 | 56065.1 | 57113.0 | 49539.6 |
| 70° | 2633.8 | 2623.5 | 2943.8 | 3461.3 | 3881.5 | 4214.6 | 13286.7 | 42432.5 | 54743.1 | 55168.4 | 46290.9 |
| 72.5° | 2203.4 | 2213.6 | 2418.6 | 2802.9 | 3184.6 | 3174.4 | 5838.9 | 29850.3 | 43065.3 | 46006.5 | 36901.0 |
| 75° | 1860.0 | 1865.2 | 2001.0 | 2272.5 | 2585.1 | 2556.9 | 3166.7 | 16171.6 | 25033.7 | 27080.7 | 20455.3 |
| 77.5° | 1583.3 | 1588.5 | 1675.6 | 1826.7 | 2049.6 | 2039.4 | 2311.0 | 6986.7 | 10442.9 | 10314.8 | 6996.9 |
| 80° | 1411.7 | 1411.7 | 1452.7 | 1480.9 | 1603.8 | 1557.7 | 1714.0 | 3356.3 | 4414.4 | 4076.2 | 2792.6 |
| 82.5° | 1106.8 | 1111.9 | 1363.0 | 1352.8 | 1263.1 | 1204.2 | 1204.2 | 1977.9 | 2339.1 | 2162.4 | 1634.6 |
| 85° | 622.6 | 620.0 | 878.8 | 1060.7 | 1111.9 | 848.0 | 840.3 | 1106.8 | 1273.3 | 1122.2 | 791.7 |
| 87.5° | 266.5 | 271.6 | 407.4 | 471.4 | 630.3 | 527.8 | 520.1 | 571.3 | 648.2 | 561.1 | 366.4 |
| 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):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 | 7230.1 |
| 2.5° | 7232.6 | 7166.0 | 7020.0 | 6838.1 | 6674.1 | 6566.5 | 6469.1 | 6328.2 | 6335.9 | 6238.6 | 6166.8 |
| 5° | 7227.5 | 7089.2 | 6751.0 | 6348.7 | 5961.9 | 5682.6 | 5472.5 | 5282.9 | 5236.8 | 5147.1 | 5093.3 |
| 7.5° | 7232.6 | 7007.2 | 6438.4 | 5795.3 | 5316.2 | 4962.7 | 4783.3 | 4683.4 | 4660.3 | 4629.6 | 4632.2 |
| 10° | 7250.6 | 6932.9 | 6095.1 | 5277.8 | 4775.6 | 4542.5 | 4498.9 | 4529.7 | 4565.6 | 4575.8 | 4578.4 |
| 12.5° | 7291.6 | 6866.3 | 5718.5 | 4816.6 | 4437.5 | 4365.7 | 4440.0 | 4545.1 | 4614.2 | 4647.5 | 4645.0 |
| 15° | 7383.8 | 6815.0 | 5357.2 | 4455.4 | 4250.4 | 4288.9 | 4427.2 | 4575.8 | 4675.7 | 4721.8 | 4724.4 |
| 17.5° | 7483.7 | 6740.7 | 4985.7 | 4178.7 | 4112.1 | 4209.4 | 4381.1 | 4555.3 | 4678.3 | 4729.5 | 4739.8 |
| 20° | 7614.4 | 6648.5 | 4596.3 | 3971.2 | 3981.4 | 4091.6 | 4253.0 | 4427.2 | 4563.0 | 4606.5 | 4627.0 |
| 22.5° | 7786.0 | 6548.6 | 4255.5 | 3802.1 | 3832.8 | 3917.4 | 4042.9 | 4194.1 | 4311.9 | 4332.4 | 4350.3 |
| 25° | 8016.6 | 6441.0 | 3984.0 | 3648.3 | 3661.2 | 3709.8 | 3794.4 | 3884.1 | 3966.0 | 3943.0 | 3960.9 |
| 27.5° | 8326.6 | 6348.7 | 3781.6 | 3507.4 | 3484.4 | 3494.6 | 3538.2 | 3566.4 | 3609.9 | 3545.9 | 3553.5 |
| 30° | 8690.4 | 6248.8 | 3625.3 | 3384.5 | 3320.4 | 3302.5 | 3312.7 | 3328.1 | 3361.4 | 3274.3 | 3261.5 |
| 32.5° | 9113.2 | 6128.4 | 3479.2 | 3276.8 | 3187.2 | 3151.3 | 3156.4 | 3197.4 | 3325.5 | 3271.7 | 3243.5 |
| 35° | 9605.1 | 5992.6 | 3325.5 | 3159.0 | 3097.5 | 3046.3 | 3041.1 | 3169.2 | 3551.0 | 3517.7 | 3492.1 |
| 37.5° | 10181.5 | 5856.8 | 3171.8 | 3025.8 | 3030.9 | 2974.5 | 2956.6 | 3102.6 | 3594.5 | 3463.9 | 3445.9 |
| 40° | 10914.3 | 5785.1 | 3041.1 | 2884.9 | 2948.9 | 2941.2 | 2905.4 | 2979.7 | 3307.6 | 3069.3 | 3038.6 |
| 42.5° | 11821.2 | 5795.3 | 2943.8 | 2733.7 | 2851.5 | 2933.5 | 2877.2 | 2879.7 | 2997.6 | 2818.2 | 2790.1 |
| 45° | 12940.9 | 5915.7 | 2874.6 | 2613.3 | 2741.4 | 2925.8 | 2866.9 | 2825.9 | 2836.2 | 2741.4 | 2726.0 |
| 47.5° | 14247.5 | 6164.3 | 2825.9 | 2513.4 | 2636.3 | 2897.7 | 2864.4 | 2810.6 | 2787.5 | 2736.3 | 2723.4 |
| 50° | 15700.2 | 6525.5 | 2790.1 | 2418.6 | 2541.5 | 2851.5 | 2866.9 | 2795.2 | 2769.6 | 2749.1 | 2741.4 |
| 52.5° | 17127.2 | 6938.0 | 2736.3 | 2336.6 | 2467.2 | 2795.2 | 2874.6 | 2779.8 | 2751.6 | 2736.3 | 2728.6 |
| 55° | 18718.3 | 7453.0 | 2654.3 | 2267.4 | 2405.8 | 2723.4 | 2874.6 | 2756.8 | 2726.0 | 2728.6 | 2726.0 |
| 57.5° | 20867.8 | 8285.6 | 2556.9 | 2208.5 | 2331.5 | 2636.3 | 2825.9 | 2731.1 | 2692.7 | 2695.3 | 2697.8 |
| 60° | 24226.6 | 9753.7 | 2439.1 | 2149.6 | 2239.2 | 2533.9 | 2759.3 | 2674.8 | 2636.3 | 2646.6 | 2649.1 |
| 62.5° | 29166.2 | 11908.4 | 2285.3 | 2062.4 | 2141.9 | 2423.7 | 2667.1 | 2603.0 | 2564.6 | 2590.2 | 2590.2 |
| 65° | 34300.6 | 13809.4 | 2095.7 | 1952.3 | 2039.4 | 2303.3 | 2551.8 | 2513.4 | 2474.9 | 2533.9 | 2531.3 |
| 67.5° | 35681.5 | 13384.1 | 1906.2 | 1831.9 | 1936.9 | 2170.0 | 2413.4 | 2392.9 | 2372.4 | 2474.9 | 2469.8 |
| 70° | 31697.5 | 10745.2 | 1731.9 | 1708.9 | 1824.2 | 2026.6 | 2264.8 | 2264.8 | 2252.0 | 2328.9 | 2311.0 |
| 72.5° | 24149.8 | 7619.5 | 1565.4 | 1578.2 | 1696.1 | 1870.3 | 2103.4 | 2121.4 | 2100.9 | 2139.3 | 2123.9 |
| 75° | 12928.0 | 4360.6 | 1398.9 | 1434.7 | 1537.2 | 1711.4 | 1924.1 | 1942.0 | 1929.2 | 1926.7 | 1934.3 |
| 77.5° | 4296.5 | 2131.6 | 1224.7 | 1281.0 | 1370.7 | 1547.5 | 1737.1 | 1765.2 | 1734.5 | 1729.4 | 1726.8 |
| 80° | 1913.8 | 1339.9 | 1032.5 | 1106.8 | 1186.2 | 1360.4 | 1539.8 | 1562.8 | 1529.5 | 1575.7 | 1516.7 |
| 82.5° | 1229.8 | 881.3 | 827.5 | 909.5 | 986.4 | 1173.4 | 1342.5 | 1347.6 | 1316.9 | 1529.5 | 1304.1 |
| 85° | 597.0 | 545.7 | 622.6 | 696.9 | 763.5 | 922.3 | 1111.9 | 1114.5 | 1037.6 | 945.4 | 912.1 |
| 87.5° | 297.2 | 317.7 | 415.1 | 481.7 | 515.0 | 632.8 | 809.6 | 794.2 | 760.9 | 691.8 | 637.9 |
| 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)