

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: P302856

Luminaire Tested: **GLNA-AF-06-LED-E1-T4W-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P302856
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P191569)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-06-LED-E1-T4W-7050-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(6) 70 CRI, 5000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28464 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

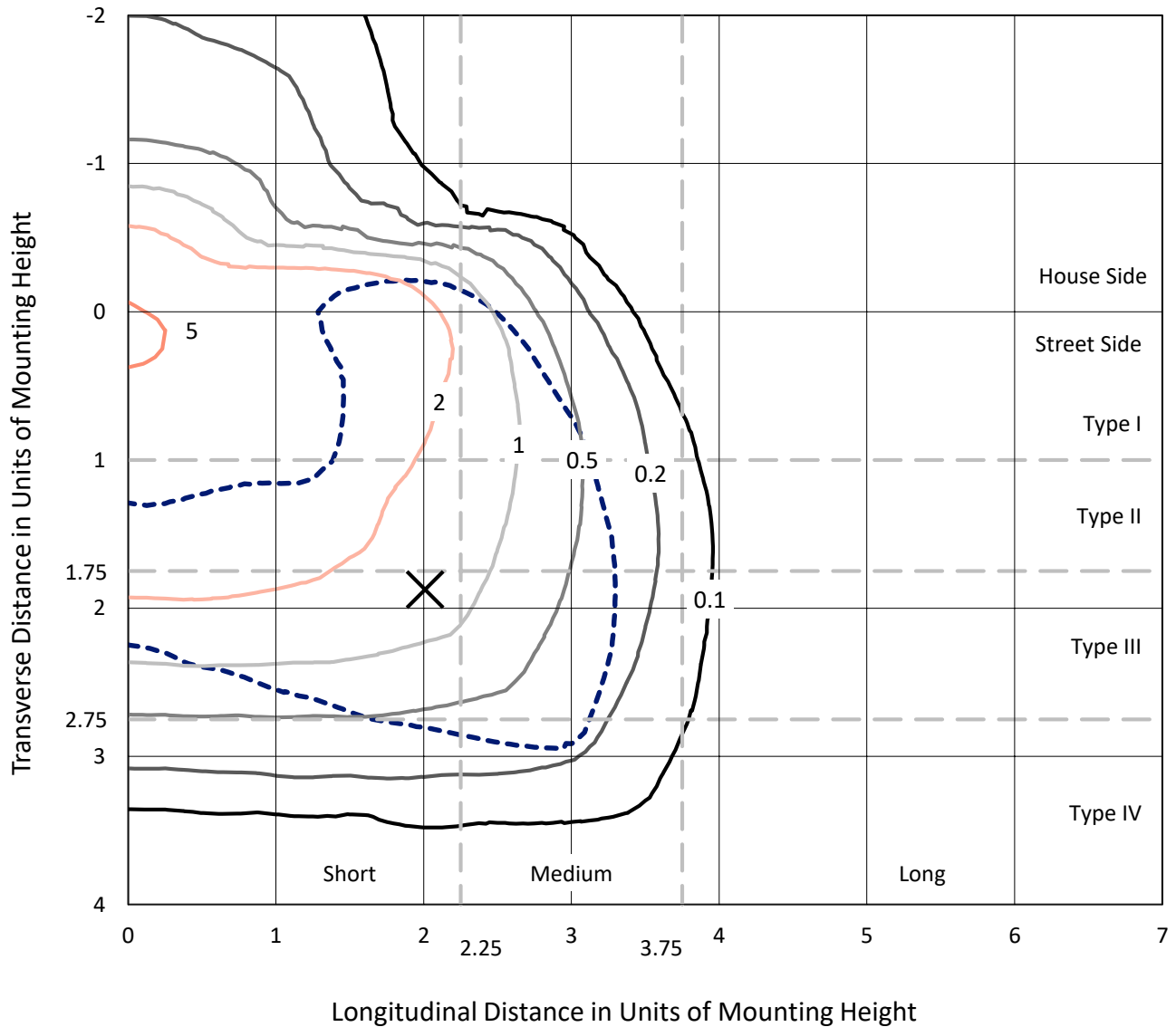
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

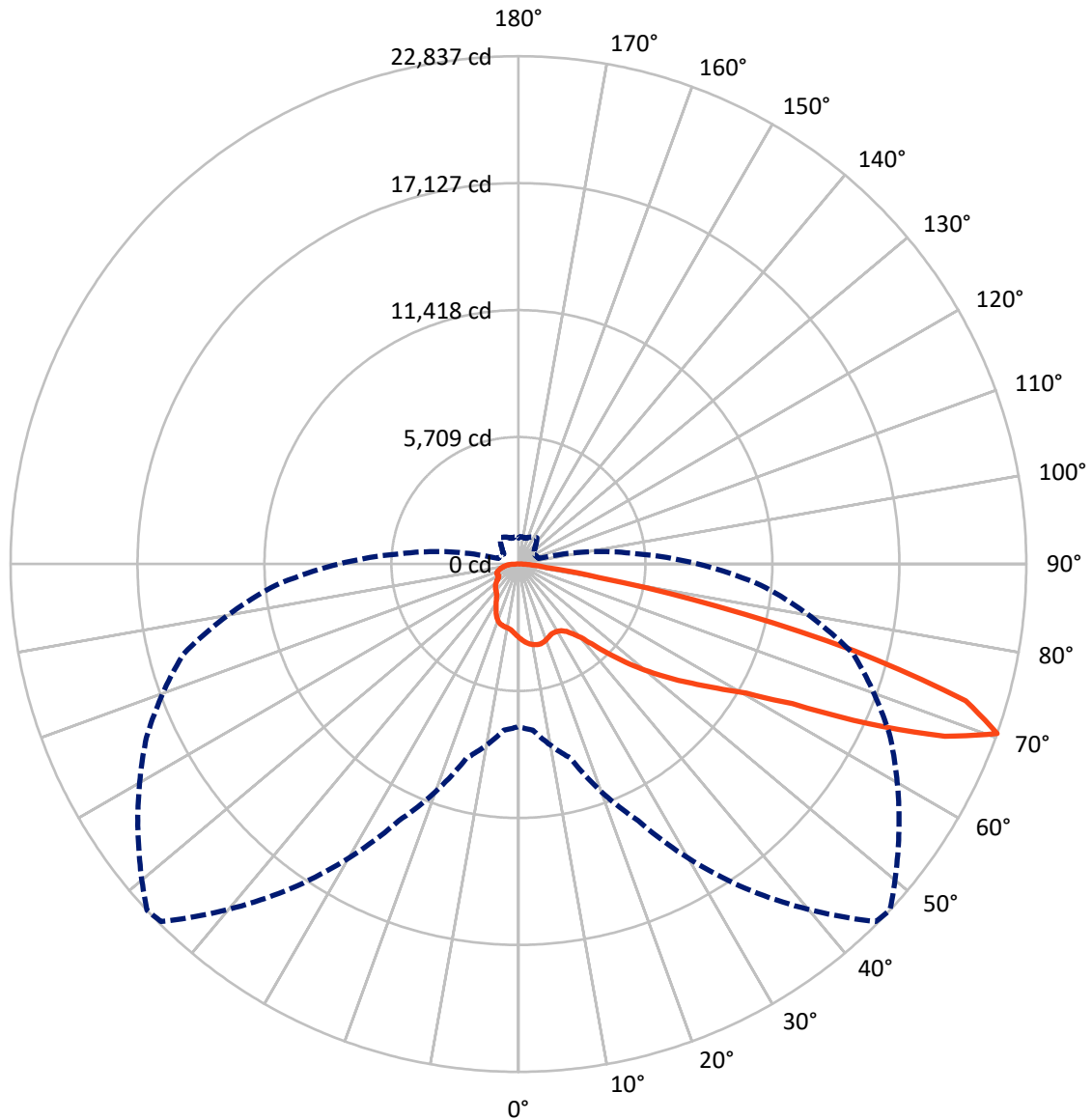
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.1 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5938.2 | 0.0 | 5938.2 |
| | % Fixture | 20.9 | 0.0 | 20.9 |
| Street Side | Lumens | 22525.8 | 0.0 | 22525.8 |
| | % Fixture | 79.1 | 0.0 | 79.1 |
| Total | Lumens | 28464.0 | 0.0 | 28464.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 316.5 | 1.1 |
| 10°-20° | 928.4 | 3.3 |
| 20°-30° | 1371.0 | 4.8 |
| 30°-40° | 1992.7 | 7.0 |
| 40°-50° | 3586.2 | 12.6 |
| 50°-60° | 6212.7 | 21.8 |
| 60°-70° | 8867.3 | 31.2 |
| 70°-80° | 4552.0 | 16.0 |
| 80°-90° | 637.3 | 2.2 |
| 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° | 28464.0 | 100.0 |
| 0°-180° | 28464.0 | 100.0 |

Coefficient of Utilization



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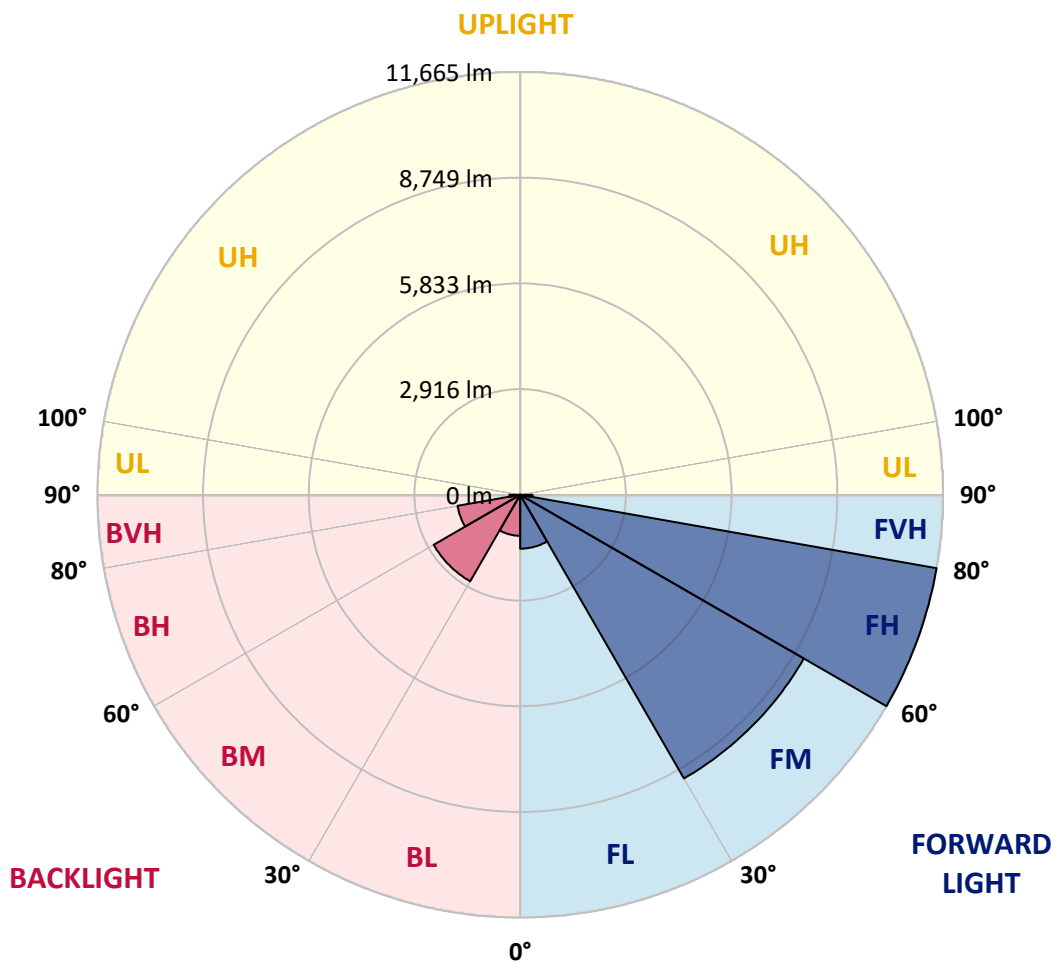
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1485.2 | 5.2 | | | |
| FM | (30°-60°) | 9035.3 | 31.7 | | | |
| FH | (60°-80°) | 11665.3 | 41.0 | | | G4/12000 |
| FVH | (80°-90°) | 340.1 | 1.2 | | | G3/500 |
| BL | (0°-30°) | 1130.6 | 4.0 | B3/2500 | | |
| BM | (30°-60°) | 2756.3 | 9.7 | B3/5000 | | |
| BH | (60°-80°) | 1754.0 | 6.2 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 297.2 | 1.0 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 47° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 |
| 2.5° | 3496.7 | 3489.8 | 3487.1 | 3481.5 | 3474.6 | 3439.7 | 3432.8 | 3408.0 | 3373.5 | 3337.1 | 3299.9 |
| 5° | 3726.7 | 3725.3 | 3709.7 | 3682.1 | 3637.9 | 3561.6 | 3543.6 | 3482.9 | 3401.1 | 3321.9 | 3243.3 |
| 7.5° | 3928.6 | 3916.2 | 3887.2 | 3831.5 | 3754.3 | 3650.3 | 3625.5 | 3540.9 | 3428.6 | 3320.6 | 3213.9 |
| 10° | 4076.7 | 4069.8 | 4006.3 | 3930.0 | 3828.8 | 3713.8 | 3684.8 | 3590.5 | 3467.3 | 3330.2 | 3197.3 |
| 12.5° | 4161.3 | 4147.5 | 4073.9 | 3982.8 | 3862.3 | 3750.1 | 3720.7 | 3625.5 | 3487.1 | 3330.2 | 3173.9 |
| 15° | 4155.8 | 4146.1 | 4072.5 | 3972.7 | 3851.3 | 3752.9 | 3726.7 | 3631.0 | 3482.9 | 3316.4 | 3143.5 |
| 17.5° | 4044.9 | 4049.1 | 3987.0 | 3888.6 | 3788.8 | 3713.8 | 3690.3 | 3602.0 | 3454.9 | 3288.8 | 3107.6 |
| 20° | 3851.3 | 3870.6 | 3828.8 | 3741.8 | 3686.2 | 3635.1 | 3620.0 | 3545.0 | 3412.1 | 3248.8 | 3068.5 |
| 22.5° | 3657.2 | 3675.2 | 3658.6 | 3585.0 | 3576.7 | 3546.4 | 3538.1 | 3484.3 | 3374.8 | 3224.0 | 3045.1 |
| 25° | 3514.7 | 3531.2 | 3528.5 | 3464.5 | 3489.8 | 3488.4 | 3481.5 | 3454.9 | 3366.6 | 3224.0 | 3049.2 |
| 27.5° | 3476.0 | 3481.5 | 3476.0 | 3417.6 | 3452.1 | 3480.2 | 3474.6 | 3470.0 | 3391.4 | 3264.0 | 3102.1 |
| 30° | 3608.9 | 3600.7 | 3557.4 | 3439.7 | 3471.9 | 3510.5 | 3505.0 | 3507.8 | 3465.9 | 3369.3 | 3219.8 |
| 32.5° | 4139.2 | 4101.5 | 3965.8 | 3635.1 | 3550.5 | 3571.2 | 3574.0 | 3620.0 | 3626.9 | 3531.2 | 3402.4 |
| 35° | 4932.6 | 4891.2 | 4715.0 | 4158.5 | 3795.7 | 3723.9 | 3723.9 | 3792.9 | 3834.3 | 3763.9 | 3686.2 |
| 37.5° | 5773.3 | 5727.3 | 5633.5 | 4884.3 | 4310.8 | 3988.4 | 3981.5 | 4029.8 | 4089.1 | 4106.1 | 4125.4 |
| 40° | 6728.5 | 6680.2 | 6706.4 | 5698.3 | 5029.6 | 4446.4 | 4348.0 | 4313.5 | 4474.0 | 4580.7 | 4736.2 |
| 42.5° | 7774.4 | 7751.8 | 7761.5 | 6605.3 | 5847.8 | 5132.2 | 4992.4 | 4813.4 | 5007.5 | 5197.0 | 5522.6 |
| 45° | 8742.0 | 8761.3 | 8751.7 | 7576.1 | 6759.3 | 5968.3 | 5820.2 | 5473.9 | 5663.8 | 5989.0 | 6519.7 |
| 47.5° | 9589.6 | 9509.2 | 9633.8 | 8636.7 | 7779.9 | 6904.7 | 6721.6 | 6258.0 | 6450.3 | 6851.8 | 7749.1 |
| 50° | 10618.5 | 10607.4 | 10424.8 | 10052.3 | 9013.4 | 7844.7 | 7605.1 | 7067.9 | 7366.9 | 7925.2 | 9299.0 |
| 52.5° | 11700.2 | 11499.2 | 11331.8 | 11152.9 | 10322.3 | 8808.7 | 8514.8 | 7875.1 | 8444.5 | 9146.3 | 11187.8 |
| 55° | 11921.4 | 11831.7 | 12039.1 | 12339.9 | 11583.8 | 9809.9 | 9467.8 | 8887.4 | 9657.7 | 10542.6 | 13366.0 |
| 57.5° | 12395.1 | 12393.7 | 12823.3 | 13359.1 | 12882.6 | 10871.9 | 10526.9 | 10110.3 | 11021.3 | 12141.7 | 15678.4 |
| 60° | 12715.2 | 12804.9 | 13602.8 | 14642.7 | 14158.0 | 12098.9 | 11781.6 | 11521.3 | 12572.6 | 13929.4 | 17833.1 |
| 62.5° | 12882.6 | 13004.5 | 14093.1 | 15163.3 | 15960.8 | 14141.4 | 13824.5 | 13449.2 | 14624.8 | 15890.4 | 19093.3 |
| 65° | 12186.3 | 12425.5 | 14016.8 | 15613.6 | 17539.7 | 17452.3 | 17309.7 | 16650.7 | 17190.6 | 17439.9 | 18638.0 |
| 67.5° | 10258.4 | 10503.5 | 12356.5 | 15193.7 | 18666.9 | 20645.9 | 20676.3 | 19550.4 | 18769.5 | 17572.8 | 15670.1 |
| 70° | 7308.9 | 7501.2 | 9034.5 | 12738.7 | 17808.3 | 22732.6 | 22836.5 | 20886.5 | 18454.9 | 15584.1 | 10948.2 |
| 72.5° | 3470.0 | 3587.8 | 5039.3 | 8290.8 | 14131.7 | 20828.5 | 21029.5 | 19180.7 | 15692.2 | 11537.8 | 5972.4 |
| 75° | 1275.3 | 1311.2 | 1703.1 | 3527.1 | 8196.6 | 15360.2 | 15597.0 | 13749.5 | 10402.3 | 5744.3 | 2275.2 |
| 77.5° | 764.4 | 787.8 | 955.7 | 1488.7 | 3224.0 | 8779.7 | 9129.7 | 7477.7 | 4546.2 | 2138.1 | 1119.0 |
| 80° | 534.4 | 551.0 | 685.3 | 926.3 | 1523.2 | 3345.9 | 3657.2 | 3052.0 | 1811.1 | 1353.1 | 814.0 |
| 82.5° | 361.5 | 369.8 | 482.0 | 625.9 | 1012.3 | 1194.9 | 1289.1 | 1357.2 | 1221.5 | 1006.7 | 516.5 |
| 85° | 236.9 | 245.1 | 327.0 | 412.5 | 643.9 | 617.7 | 631.5 | 798.9 | 891.8 | 683.9 | 286.5 |
| 87.5° | 135.7 | 141.2 | 196.8 | 220.3 | 316.0 | 261.7 | 264.4 | 420.8 | 570.8 | 461.3 | 174.3 |
| 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° | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 | 3302.6 |
| 2.5° | 3290.2 | 3272.3 | 3232.3 | 3207.0 | 3183.5 | 3178.0 | 3168.3 | 3167.0 | 3165.6 | 3165.6 | 3161.4 |
| 5° | 3216.6 | 3186.3 | 3124.2 | 3089.2 | 3060.3 | 3057.5 | 3056.1 | 3063.0 | 3065.8 | 3068.5 | 3064.4 |
| 7.5° | 3169.7 | 3128.3 | 3050.6 | 3000.9 | 2966.4 | 2957.7 | 2972.0 | 3003.7 | 3024.4 | 3032.7 | 3028.5 |
| 10° | 3140.7 | 3089.2 | 2999.6 | 2945.3 | 2916.3 | 2912.2 | 2930.1 | 2967.8 | 3010.6 | 3027.1 | 3025.8 |
| 12.5° | 3107.6 | 3049.2 | 2953.6 | 2897.0 | 2880.4 | 2888.7 | 2912.2 | 2946.7 | 2991.3 | 3017.5 | 3018.9 |
| 15° | 3074.1 | 3006.4 | 2908.0 | 2858.4 | 2851.5 | 2862.5 | 2884.6 | 2910.8 | 2945.3 | 2972.0 | 2974.7 |
| 17.5° | 3034.0 | 2963.2 | 2865.3 | 2813.7 | 2808.2 | 2813.7 | 2815.1 | 2828.9 | 2851.5 | 2876.3 | 2883.2 |
| 20° | 2991.3 | 2919.1 | 2816.5 | 2765.5 | 2740.6 | 2718.5 | 2693.2 | 2696.0 | 2702.9 | 2728.2 | 2733.7 |
| 22.5° | 2960.5 | 2888.7 | 2779.3 | 2708.4 | 2642.2 | 2575.5 | 2525.8 | 2518.9 | 2521.7 | 2542.4 | 2549.3 |
| 25° | 2963.2 | 2887.3 | 2769.6 | 2647.7 | 2502.4 | 2395.7 | 2329.0 | 2318.0 | 2316.6 | 2331.8 | 2341.9 |
| 27.5° | 3017.5 | 2941.1 | 2805.5 | 2585.2 | 2350.2 | 2191.9 | 2121.6 | 2113.3 | 2102.3 | 2106.4 | 2117.4 |
| 30° | 3138.0 | 3067.2 | 2892.9 | 2521.7 | 2185.0 | 1992.8 | 1919.2 | 1910.9 | 1895.8 | 1888.9 | 1897.1 |
| 32.5° | 3334.4 | 3276.4 | 3020.2 | 2460.5 | 2020.4 | 1822.2 | 1747.7 | 1729.7 | 1720.1 | 1711.8 | 1718.7 |
| 35° | 3661.4 | 3636.5 | 3190.4 | 2394.3 | 1875.1 | 1690.6 | 1623.0 | 1595.4 | 1581.6 | 1596.8 | 1607.9 |
| 37.5° | 4173.7 | 4187.5 | 3413.5 | 2290.4 | 1762.8 | 1603.7 | 1546.7 | 1515.0 | 1494.3 | 1506.7 | 1519.1 |
| 40° | 4899.4 | 4909.1 | 3660.0 | 2143.7 | 1665.8 | 1552.2 | 1491.5 | 1462.5 | 1433.1 | 1411.0 | 1409.6 |
| 42.5° | 5851.9 | 5754.0 | 3902.4 | 1984.5 | 1553.6 | 1520.5 | 1452.9 | 1416.5 | 1372.4 | 1311.2 | 1298.8 |
| 45° | 6981.9 | 6637.5 | 4086.3 | 1801.5 | 1427.6 | 1481.8 | 1409.6 | 1360.0 | 1290.5 | 1224.3 | 1217.4 |
| 47.5° | 8283.9 | 7585.8 | 4176.5 | 1612.0 | 1309.8 | 1424.8 | 1357.2 | 1278.1 | 1190.7 | 1157.6 | 1153.5 |
| 50° | 9873.4 | 8711.7 | 4219.2 | 1427.6 | 1207.7 | 1350.3 | 1280.9 | 1188.0 | 1114.8 | 1107.9 | 1103.8 |
| 52.5° | 11683.6 | 10066.1 | 4233.5 | 1276.7 | 1123.1 | 1253.3 | 1218.8 | 1128.6 | 1070.2 | 1076.2 | 1076.2 |
| 55° | 13578.0 | 11464.7 | 4044.9 | 1167.3 | 1045.4 | 1153.5 | 1176.9 | 1105.2 | 1056.4 | 1079.0 | 1087.2 |
| 57.5° | 15316.9 | 12704.2 | 3452.1 | 1083.1 | 972.3 | 1077.6 | 1161.7 | 1127.2 | 1094.1 | 1183.8 | 1189.3 |
| 60° | 16652.1 | 13436.3 | 2578.3 | 1006.7 | 918.0 | 1050.9 | 1202.2 | 1211.9 | 1220.1 | 1434.5 | 1463.9 |
| 62.5° | 16931.7 | 13193.1 | 1772.5 | 947.4 | 893.2 | 1073.4 | 1275.3 | 1276.7 | 1267.1 | 1416.5 | 1434.5 |
| 65° | 15648.1 | 11651.4 | 1289.1 | 913.8 | 872.5 | 1113.4 | 1337.9 | 1308.5 | 1245.0 | 1358.6 | 1325.0 |
| 67.5° | 12426.8 | 8778.4 | 1073.4 | 889.0 | 842.1 | 1110.7 | 1404.1 | 1337.9 | 1232.6 | 1331.0 | 1276.7 |
| 70° | 8066.4 | 5307.9 | 955.7 | 868.3 | 805.8 | 1057.8 | 1442.7 | 1335.1 | 1196.2 | 1238.1 | 1174.2 |
| 72.5° | 3935.5 | 2373.6 | 876.6 | 838.0 | 768.5 | 984.7 | 1441.4 | 1309.8 | 1159.0 | 1156.2 | 1121.7 |
| 75° | 1539.8 | 1087.2 | 804.4 | 792.0 | 705.0 | 901.4 | 1402.7 | 1274.0 | 1114.8 | 1070.2 | 1057.8 |
| 77.5° | 901.4 | 775.4 | 713.3 | 724.4 | 628.7 | 818.2 | 1346.2 | 1211.9 | 1053.7 | 1001.2 | 987.4 |
| 80° | 656.3 | 580.4 | 608.0 | 625.9 | 537.2 | 735.4 | 1269.8 | 1135.5 | 986.1 | 1012.3 | 993.0 |
| 82.5° | 420.8 | 373.9 | 493.0 | 511.0 | 447.5 | 650.8 | 1186.6 | 1055.0 | 890.4 | 808.5 | 789.2 |
| 85° | 214.8 | 236.9 | 367.0 | 389.1 | 344.9 | 534.4 | 1085.9 | 948.8 | 782.3 | 672.9 | 683.9 |
| 87.5° | 120.5 | 161.9 | 234.1 | 261.7 | 243.8 | 411.2 | 880.7 | 782.3 | 638.4 | 519.2 | 457.2 |
| 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)