

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: P301173

Luminaire Tested: **GLNA-AF-06-LED-E1-T3R-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301173
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194839)
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-T3R-800
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(6) 70 CRI, 4000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29304.2 lumens
Efficiency: N/A
Efficacy: 117.7 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

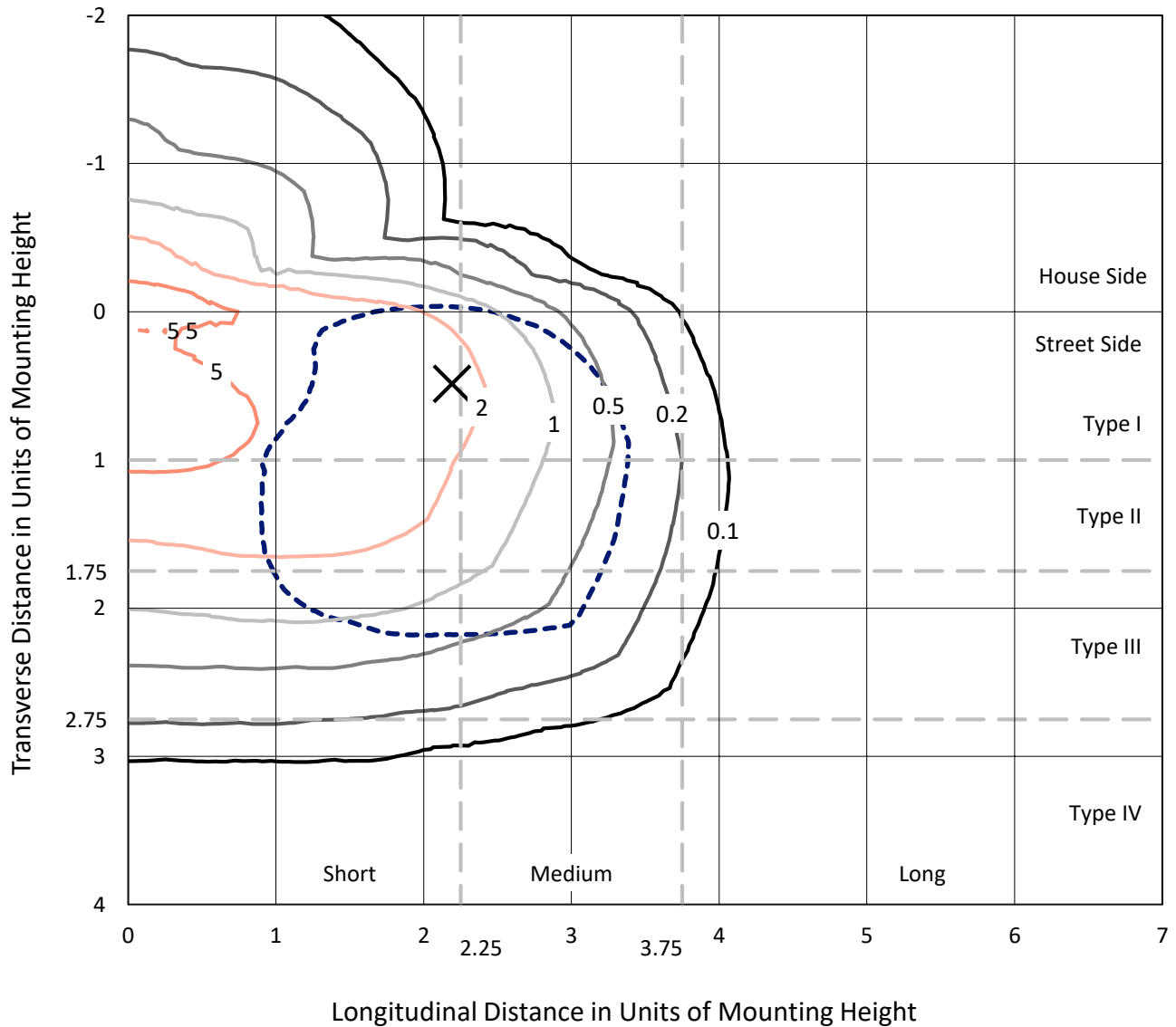
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

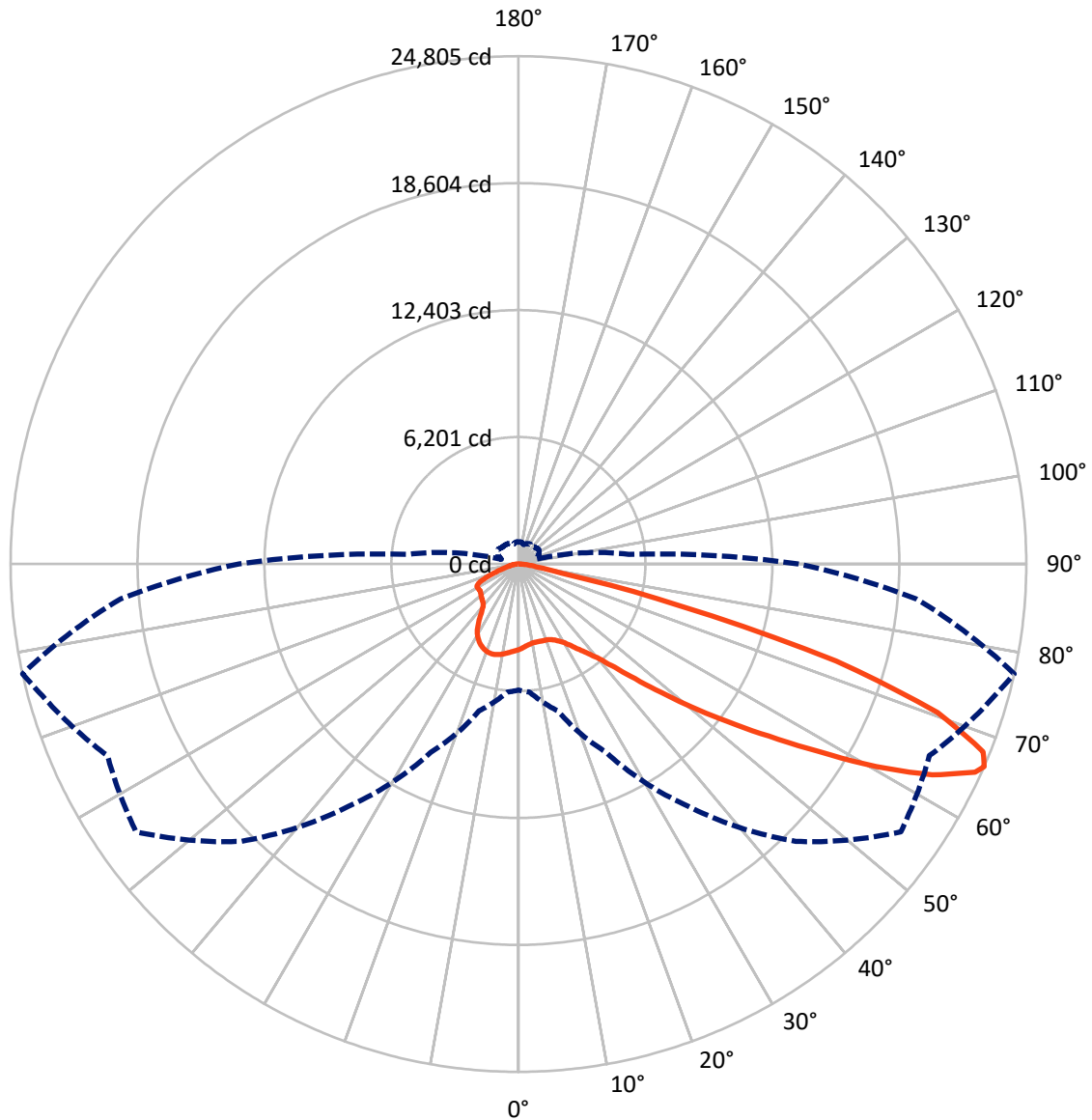
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.2 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5006.5 | 0.0 | 5006.5 |
| | % Fixture | 17.1 | 0.0 | 17.1 |
| Street Side | Lumens | 24297.7 | 0.0 | 24297.7 |
| | % Fixture | 82.9 | 0.0 | 82.9 |
| Total | Lumens | 29304.2 | 0.0 | 29304.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 373.1 | 1.3 |
| 10°-20° | 1052.6 | 3.6 |
| 20°-30° | 1796.3 | 6.1 |
| 30°-40° | 2875.6 | 9.8 |
| 40°-50° | 4442.5 | 15.2 |
| 50°-60° | 6301.1 | 21.5 |
| 60°-70° | 8429.1 | 28.8 |
| 70°-80° | 3660.6 | 12.5 |
| 80°-90° | 373.3 | 1.3 |
| 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° | 29304.2 | 100.0 |
| 0°-180° | 29304.2 | 100.0 |



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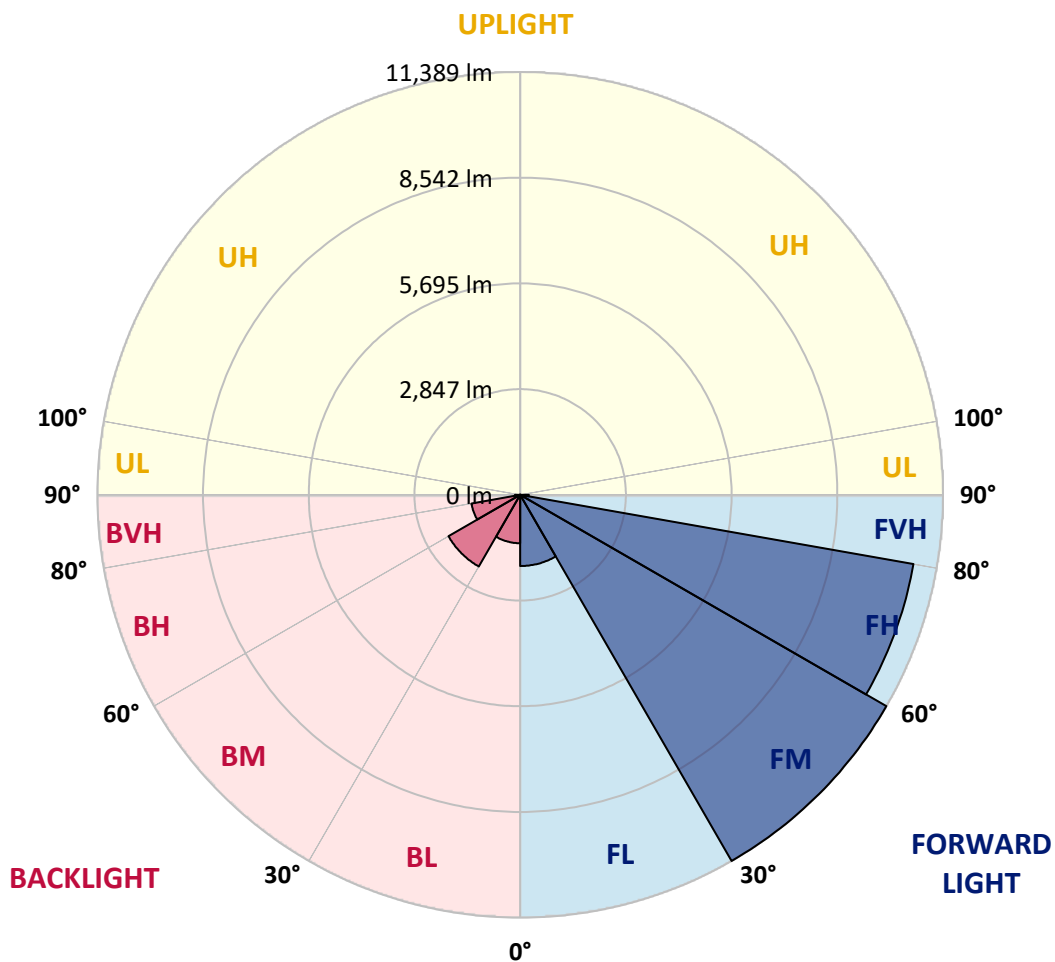
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1918.1 | 6.5 | | | |
| FM | (30°-60°) | 11389.1 | 38.9 | | | |
| FH | (60°-80°) | 10756.4 | 36.7 | | | G4/12000 |
| FVH | (80°-90°) | 234.1 | 0.8 | | | G3/500 |
| BL | (0°-30°) | 1303.9 | 4.4 | B3/2500 | | |
| BM | (30°-60°) | 2230.1 | 7.6 | B2/2500 | | |
| BH | (60°-80°) | 1333.3 | 4.5 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 139.2 | 0.5 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77.5° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 |
| 2.5° | 3694.2 | 3719.0 | 3739.9 | 3759.2 | 3797.8 | 3861.5 | 3934.9 | 3994.4 | 4080.4 | 4097.1 | 4142.8 |
| 5° | 3355.1 | 3355.1 | 3371.4 | 3400.8 | 3453.2 | 3548.8 | 3648.6 | 3781.4 | 3968.4 | 4012.4 | 4134.4 |
| 7.5° | 3190.3 | 3191.6 | 3201.2 | 3226.0 | 3271.7 | 3358.9 | 3468.3 | 3625.1 | 3878.3 | 3951.7 | 4159.2 |
| 10° | 3251.1 | 3237.3 | 3216.3 | 3204.2 | 3210.9 | 3262.0 | 3366.0 | 3540.4 | 3822.9 | 3916.9 | 4214.9 |
| 12.5° | 3591.5 | 3565.5 | 3493.4 | 3397.9 | 3306.5 | 3269.1 | 3329.9 | 3500.1 | 3799.5 | 3908.9 | 4288.3 |
| 15° | 4148.3 | 4137.4 | 4002.8 | 3804.9 | 3583.6 | 3397.9 | 3356.3 | 3485.1 | 3802.0 | 3918.5 | 4375.5 |
| 17.5° | 4846.3 | 4830.8 | 4653.9 | 4365.9 | 4004.5 | 3643.1 | 3449.0 | 3497.6 | 3811.6 | 3934.9 | 4459.8 |
| 20° | 5551.0 | 5503.6 | 5312.9 | 4969.5 | 4505.5 | 3976.4 | 3602.9 | 3529.5 | 3824.2 | 3952.9 | 4548.6 |
| 22.5° | 6077.1 | 6038.2 | 5866.7 | 5533.0 | 4998.5 | 4362.9 | 3809.1 | 3584.8 | 3864.5 | 4005.7 | 4657.6 |
| 25° | 6539.6 | 6542.1 | 6371.9 | 6049.5 | 5496.9 | 4772.9 | 4074.9 | 3732.8 | 3966.7 | 4113.5 | 4807.3 |
| 27.5° | 7111.4 | 7078.3 | 6919.0 | 6599.1 | 5989.9 | 5186.7 | 4396.0 | 3936.6 | 4119.3 | 4267.3 | 5003.9 |
| 30° | 7795.1 | 7771.7 | 7587.6 | 7225.0 | 6536.6 | 5631.1 | 4762.9 | 4173.0 | 4316.0 | 4469.4 | 5261.3 |
| 32.5° | 8599.6 | 8588.7 | 8397.6 | 7931.0 | 7168.0 | 6154.7 | 5193.8 | 4486.2 | 4609.4 | 4768.7 | 5631.1 |
| 35° | 9544.2 | 9545.4 | 9319.9 | 8759.0 | 7858.9 | 6763.8 | 5682.2 | 4889.0 | 4966.6 | 5132.6 | 6071.7 |
| 37.5° | 10125.6 | 10196.1 | 10111.8 | 9540.0 | 8641.1 | 7445.1 | 6316.5 | 5423.6 | 5373.7 | 5541.4 | 6543.7 |
| 40° | 10250.1 | 10336.1 | 10603.1 | 10312.6 | 9516.5 | 8195.5 | 6878.7 | 5937.1 | 5875.1 | 6079.7 | 7151.6 |
| 42.5° | 10075.8 | 10194.8 | 10759.9 | 10964.5 | 10445.5 | 9120.3 | 7634.6 | 6700.1 | 6621.3 | 6896.7 | 7907.5 |
| 45° | 9971.8 | 10060.7 | 10714.2 | 11304.1 | 11251.3 | 10165.9 | 8597.1 | 7658.1 | 7629.1 | 7990.5 | 8779.9 |
| 47.5° | 9791.9 | 9872.4 | 10500.8 | 11382.9 | 11725.0 | 11123.8 | 9753.4 | 8829.8 | 8886.4 | 9360.1 | 9764.3 |
| 50° | 9888.8 | 9921.9 | 10262.7 | 11182.1 | 11862.1 | 11826.0 | 11045.0 | 10186.4 | 10380.5 | 10971.6 | 10879.0 |
| 52.5° | 9874.9 | 9960.9 | 10235.1 | 10852.6 | 11880.1 | 12259.5 | 12317.4 | 11699.8 | 12108.6 | 12786.9 | 12115.3 |
| 55° | 7983.8 | 8141.4 | 9909.7 | 10769.6 | 11943.4 | 12684.2 | 13450.1 | 13295.0 | 14056.3 | 14847.0 | 13510.9 |
| 57.5° | 7623.7 | 7723.5 | 8703.6 | 10944.0 | 12281.3 | 13495.8 | 14709.9 | 15050.7 | 16324.4 | 17242.5 | 15211.3 |
| 60° | 7552.8 | 7676.1 | 8691.0 | 11157.4 | 12966.8 | 14818.1 | 16578.0 | 17176.2 | 19084.1 | 20089.5 | 17182.9 |
| 62.5° | 7332.7 | 7465.6 | 8609.3 | 11129.3 | 13940.2 | 16647.2 | 18969.3 | 19435.9 | 21701.0 | 22678.6 | 18832.2 |
| 65° | 6635.1 | 6759.6 | 7943.6 | 10682.4 | 14596.7 | 18599.5 | 21799.1 | 21507.3 | 23766.9 | 24501.8 | 19654.3 |
| 66° | 6157.2 | 6279.2 | 7418.7 | 10156.2 | 14444.1 | 19153.3 | 22801.9 | 22148.3 | 24229.3 | 24805.4 | 19493.7 |
| 67.5° | 5283.5 | 5379.1 | 6399.5 | 8977.8 | 13634.2 | 19308.4 | 23644.9 | 22630.0 | 24277.6 | 24481.3 | 18576.0 |
| 70° | 3338.3 | 3366.0 | 4159.2 | 6197.5 | 10321.0 | 16745.3 | 22361.3 | 21433.9 | 22275.7 | 21724.4 | 15572.7 |
| 72.5° | 1448.4 | 1438.8 | 1996.8 | 3152.6 | 5843.2 | 11236.2 | 18088.5 | 17685.6 | 17473.9 | 16216.6 | 10901.2 |
| 75° | 805.8 | 817.1 | 1037.2 | 1463.5 | 2374.5 | 5519.2 | 11832.7 | 11323.4 | 9560.5 | 8158.2 | 4943.1 |
| 77.5° | 646.5 | 662.0 | 859.8 | 1038.4 | 1066.1 | 1924.7 | 5537.2 | 4505.5 | 2712.4 | 2176.6 | 1373.4 |
| 80° | 511.0 | 538.7 | 750.4 | 808.7 | 718.6 | 793.2 | 1788.9 | 1430.4 | 1073.2 | 984.3 | 711.9 |
| 82.5° | 404.1 | 423.8 | 643.9 | 612.1 | 502.7 | 534.5 | 856.9 | 835.1 | 698.0 | 635.6 | 411.3 |
| 85° | 290.9 | 326.6 | 529.1 | 461.2 | 329.5 | 360.1 | 568.9 | 545.4 | 399.9 | 326.6 | 181.5 |
| 87.5° | 119.1 | 155.1 | 374.0 | 306.0 | 184.0 | 167.7 | 283.8 | 267.0 | 189.5 | 138.3 | 90.1 |
| 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° | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 | 4175.9 |
| 2.5° | 4171.7 | 4204.9 | 4248.0 | 4274.5 | 4288.3 | 4297.9 | 4313.0 | 4311.8 | 4316.0 | 4317.2 | 4322.7 |
| 5° | 4199.4 | 4254.8 | 4317.2 | 4334.0 | 4334.0 | 4318.5 | 4303.4 | 4278.2 | 4268.6 | 4266.1 | 4268.6 |
| 7.5° | 4271.5 | 4332.3 | 4386.4 | 4367.1 | 4325.6 | 4264.4 | 4185.6 | 4116.4 | 4079.1 | 4066.5 | 4064.0 |
| 10° | 4362.9 | 4436.3 | 4458.5 | 4385.1 | 4263.1 | 4116.4 | 3960.0 | 3846.4 | 3781.4 | 3763.4 | 3758.0 |
| 12.5° | 4473.6 | 4542.8 | 4512.6 | 4357.5 | 4131.5 | 3895.1 | 3678.7 | 3497.6 | 3361.8 | 3319.0 | 3316.1 |
| 15° | 4595.6 | 4649.7 | 4542.8 | 4271.5 | 3934.9 | 3586.1 | 3201.2 | 2888.5 | 2719.5 | 2665.5 | 2661.3 |
| 17.5° | 4709.2 | 4736.9 | 4524.7 | 4121.9 | 3645.6 | 3080.9 | 2569.9 | 2328.8 | 2271.0 | 2284.8 | 2287.3 |
| 20° | 4806.0 | 4806.0 | 4464.0 | 3907.2 | 3190.3 | 2414.8 | 2092.0 | 2088.2 | 2129.7 | 2171.2 | 2179.6 |
| 22.5° | 4912.5 | 4848.8 | 4357.5 | 3604.1 | 2544.7 | 1975.8 | 1928.9 | 1967.4 | 2014.4 | 2060.1 | 2067.2 |
| 25° | 5044.2 | 4883.6 | 4209.1 | 3144.6 | 2000.6 | 1794.3 | 1812.3 | 1844.2 | 1867.7 | 1897.0 | 1901.2 |
| 27.5° | 5190.9 | 4927.6 | 4014.1 | 2511.6 | 1736.4 | 1681.1 | 1694.9 | 1705.8 | 1702.9 | 1714.2 | 1716.7 |
| 30° | 5366.6 | 4979.2 | 3746.6 | 1963.2 | 1627.0 | 1583.8 | 1559.1 | 1549.5 | 1549.5 | 1567.5 | 1574.2 |
| 32.5° | 5602.2 | 5055.1 | 3363.1 | 1682.4 | 1574.2 | 1514.7 | 1434.6 | 1398.5 | 1412.4 | 1473.2 | 1487.0 |
| 35° | 5861.2 | 5136.8 | 2844.0 | 1586.8 | 1563.3 | 1482.8 | 1358.3 | 1291.6 | 1293.3 | 1349.9 | 1367.9 |
| 37.5° | 6143.4 | 5240.8 | 2274.7 | 1568.8 | 1588.0 | 1484.5 | 1318.1 | 1226.7 | 1189.4 | 1189.4 | 1196.5 |
| 40° | 6504.8 | 5347.3 | 1841.7 | 1581.3 | 1640.9 | 1500.8 | 1297.5 | 1175.5 | 1070.3 | 1073.2 | 1078.7 |
| 42.5° | 6975.6 | 5438.7 | 1609.0 | 1607.3 | 1704.6 | 1523.1 | 1295.8 | 1107.6 | 1016.2 | 1078.7 | 1135.3 |
| 45° | 7499.2 | 5484.4 | 1506.3 | 1631.2 | 1755.7 | 1536.9 | 1274.0 | 1096.7 | 1023.3 | 1208.6 | 1316.8 |
| 47.5° | 8101.2 | 5457.9 | 1449.7 | 1639.2 | 1768.3 | 1536.9 | 1248.9 | 1123.1 | 1071.5 | 1399.8 | 1526.0 |
| 50° | 8761.9 | 5382.1 | 1394.4 | 1622.8 | 1764.1 | 1534.0 | 1272.4 | 1149.1 | 1089.6 | 1432.9 | 1520.1 |
| 52.5° | 9538.7 | 5318.3 | 1336.1 | 1586.8 | 1734.8 | 1518.9 | 1300.0 | 1138.2 | 1033.0 | 1303.0 | 1363.8 |
| 55° | 10424.5 | 5336.4 | 1271.1 | 1535.6 | 1689.1 | 1489.9 | 1290.4 | 1093.8 | 973.4 | 1147.8 | 1185.2 |
| 57.5° | 11557.3 | 5551.0 | 1193.5 | 1470.7 | 1627.0 | 1441.3 | 1256.0 | 1073.2 | 955.4 | 1041.4 | 1063.6 |
| 60° | 12821.3 | 5924.5 | 1096.7 | 1405.3 | 1549.5 | 1363.8 | 1229.6 | 1082.9 | 963.8 | 1033.0 | 1043.9 |
| 62.5° | 13749.0 | 6142.1 | 1013.7 | 1309.7 | 1444.2 | 1277.8 | 1196.5 | 1095.0 | 986.0 | 1061.9 | 1059.4 |
| 65° | 14001.0 | 5784.9 | 909.7 | 1170.1 | 1301.7 | 1188.1 | 1154.6 | 1108.9 | 995.7 | 1085.4 | 1073.2 |
| 66° | 13648.0 | 5400.1 | 864.0 | 1105.1 | 1229.6 | 1143.7 | 1134.0 | 1107.6 | 991.5 | 1088.3 | 1067.4 |
| 67.5° | 12791.1 | 4610.7 | 785.2 | 1009.5 | 1114.7 | 1077.4 | 1100.9 | 1095.0 | 980.2 | 1085.4 | 1056.5 |
| 70° | 10431.7 | 3145.9 | 671.6 | 840.6 | 927.8 | 948.3 | 1037.2 | 1051.0 | 944.1 | 1037.2 | 973.4 |
| 72.5° | 7288.7 | 1916.3 | 594.0 | 652.3 | 750.4 | 808.7 | 950.0 | 989.8 | 895.9 | 905.5 | 844.7 |
| 75° | 3522.4 | 1017.9 | 538.7 | 505.6 | 582.7 | 675.8 | 844.7 | 906.8 | 819.6 | 757.5 | 735.3 |
| 77.5° | 1098.0 | 621.7 | 457.0 | 407.1 | 457.0 | 545.4 | 706.0 | 794.9 | 729.9 | 634.3 | 625.9 |
| 80° | 589.9 | 457.0 | 351.7 | 326.6 | 361.4 | 428.0 | 555.1 | 663.2 | 627.2 | 568.9 | 508.1 |
| 82.5° | 389.0 | 296.4 | 260.3 | 253.2 | 275.4 | 326.6 | 412.5 | 549.6 | 549.6 | 487.6 | 354.7 |
| 85° | 200.8 | 181.5 | 178.6 | 178.6 | 192.4 | 217.6 | 280.9 | 423.8 | 451.5 | 257.4 | 213.4 |
| 87.5° | 99.8 | 104.0 | 96.8 | 101.0 | 108.2 | 106.5 | 134.2 | 213.4 | 254.9 | 156.4 | 130.0 |
| 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)