

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: P191477

Luminaire Tested: **GLEON-AF-09-LED-E1-T3R-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P191477
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P40129)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLEON-AF-09-LED-E1-T3R-600
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36670.7 lumens
Efficiency: N/A
Efficacy: 126.5 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 290
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

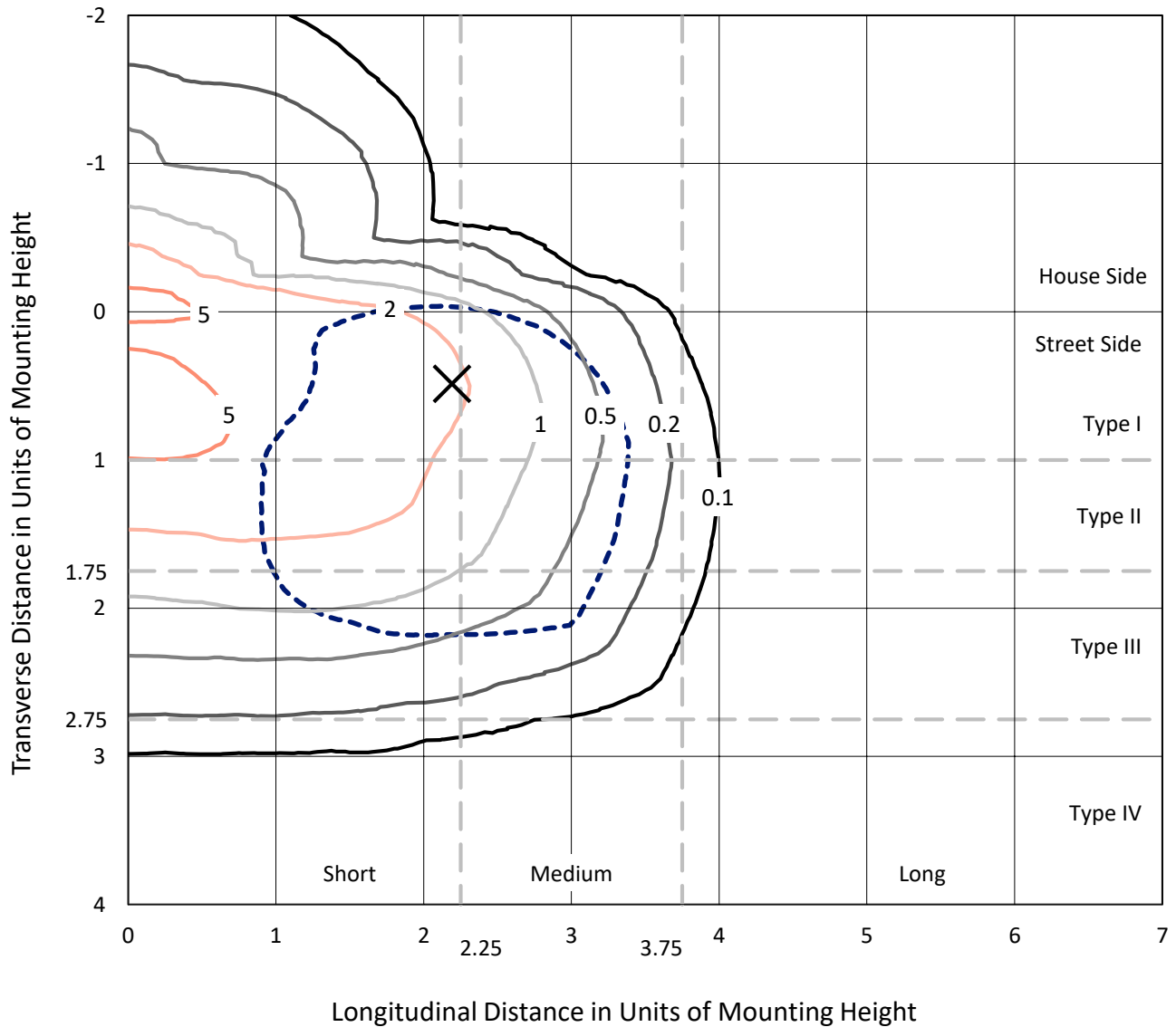


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

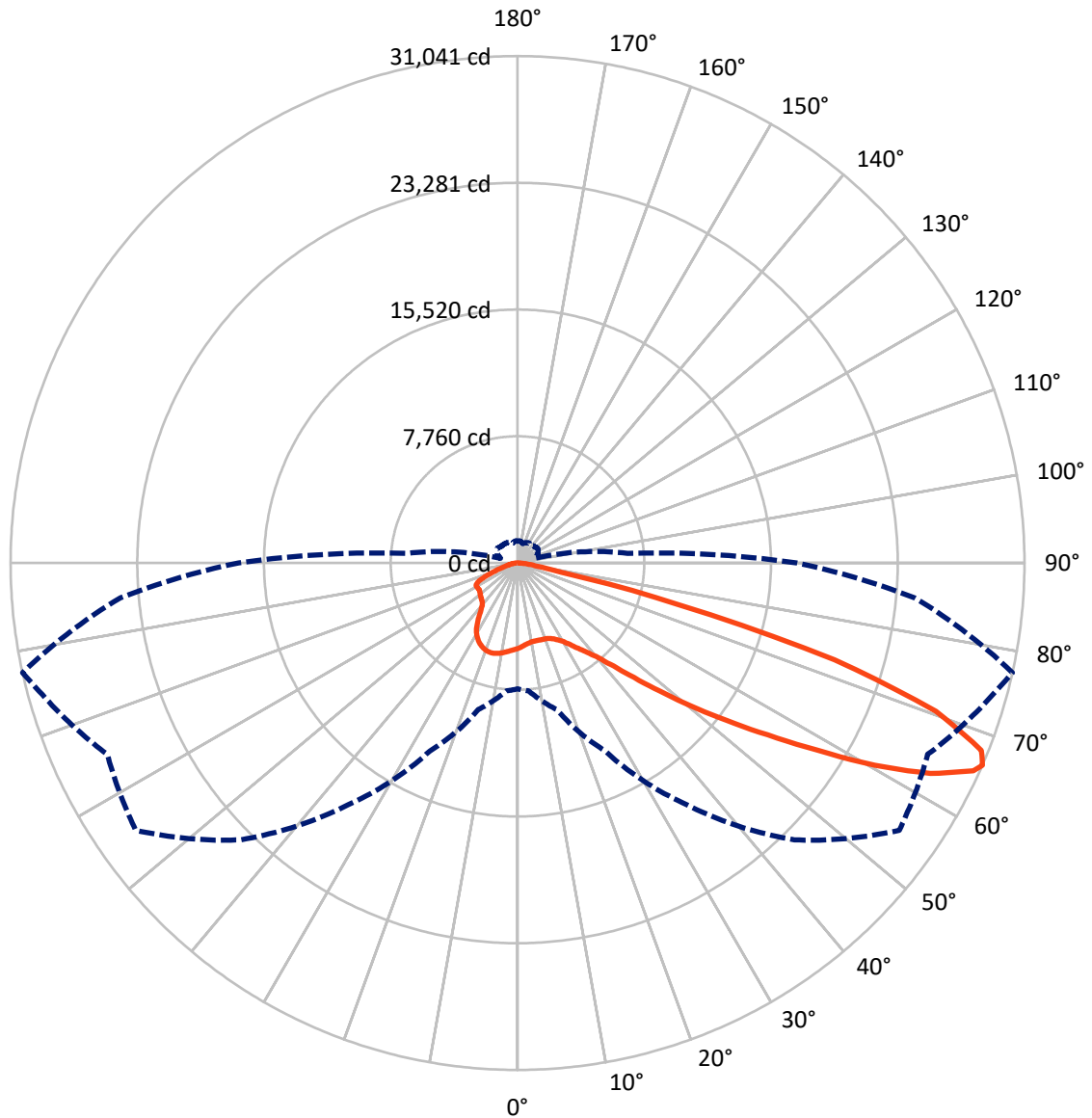


Based on 30 foot mounting height. Maximum calculated value = 7.2 fc
 Type III - Short - Full Cutoff

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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 | 6264.9 | 0.0 | 6264.9 |
| | % Fixture | 17.1 | 0.0 | 17.1 |
| Street Side | Lumens | 30405.8 | 0.0 | 30405.8 |
| | % Fixture | 82.9 | 0.0 | 82.9 |
| Total | Lumens | 36670.7 | 0.0 | 36670.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 466.9 | 1.3 |
| 10°-20° | 1317.1 | 3.6 |
| 20°-30° | 2247.9 | 6.1 |
| 30°-40° | 3598.5 | 9.8 |
| 40°-50° | 5559.3 | 15.2 |
| 50°-60° | 7885.0 | 21.5 |
| 60°-70° | 10548.0 | 28.8 |
| 70°-80° | 4580.8 | 12.5 |
| 80°-90° | 467.1 | 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° | 36670.7 | 100.0 |
| 0°-180° | 36670.7 | 100.0 |



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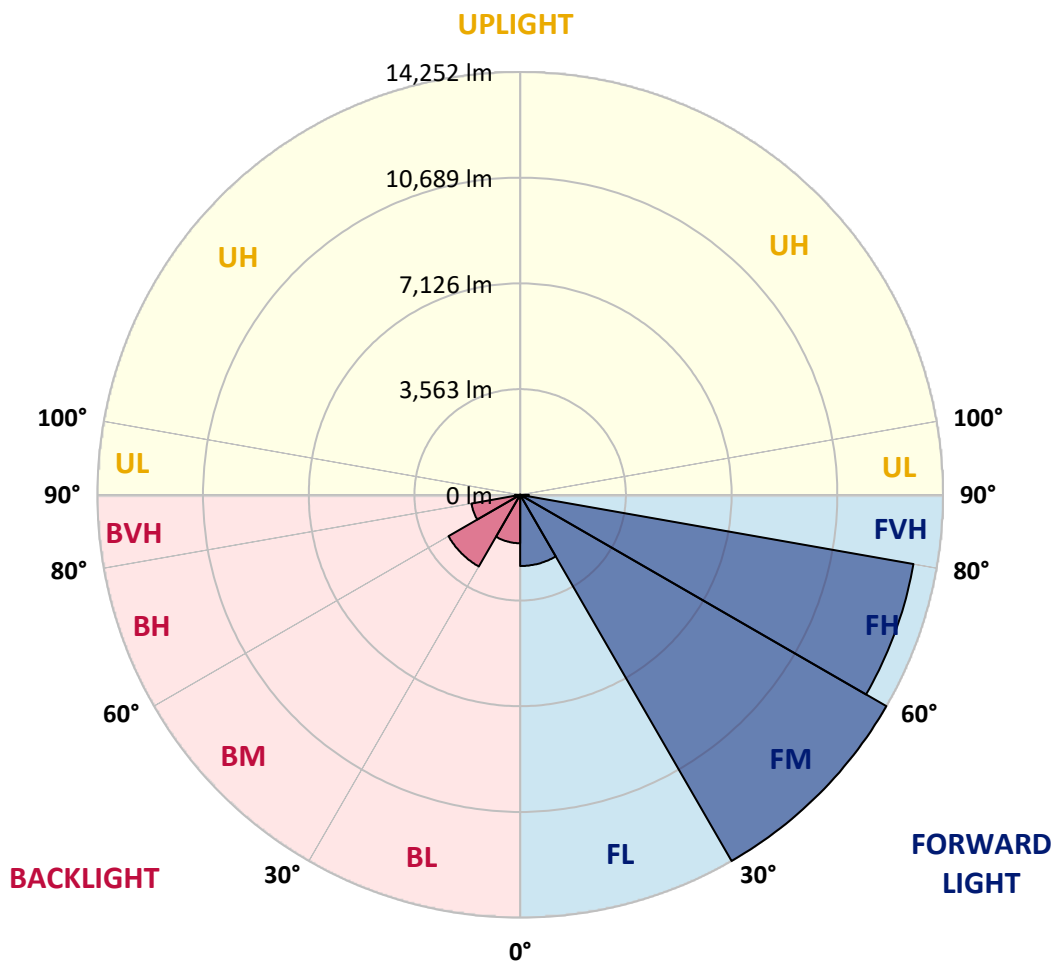
CATALOG NUMBER: GLEON-AF-09-LED-E1-T3R-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2400.3 | 6.5 | | | |
| FM (30°-60°) | 14252.2 | 38.9 | | | |
| FH (60°-80°) | 13460.4 | 36.7 | | | G5 |
| FVH (80°-90°) | 293.0 | 0.8 | | | G3/500 |
| BL (0°-30°) | 1631.7 | 4.4 | B3/2500 | | |
| BM (30°-60°) | 2790.7 | 7.6 | B3/5000 | | |
| BH (60°-80°) | 1668.5 | 4.5 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 174.1 | 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-G5

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77.5° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 |
| 2.5° | 4622.8 | 4654.0 | 4680.0 | 4704.2 | 4752.7 | 4832.4 | 4924.3 | 4998.8 | 5106.2 | 5127.0 | 5184.2 |
| 5° | 4198.3 | 4198.3 | 4219.1 | 4255.5 | 4321.3 | 4440.8 | 4565.6 | 4732.0 | 4965.8 | 5021.3 | 5173.8 |
| 7.5° | 3992.1 | 3993.8 | 4006.0 | 4037.2 | 4094.4 | 4203.5 | 4340.4 | 4536.2 | 4853.2 | 4945.0 | 5205.0 |
| 10° | 4068.3 | 4051.0 | 4025.0 | 4009.5 | 4018.0 | 4082.2 | 4212.1 | 4430.5 | 4783.9 | 4901.8 | 5274.2 |
| 12.5° | 4494.5 | 4461.6 | 4371.6 | 4252.0 | 4137.6 | 4090.9 | 4167.1 | 4380.2 | 4754.5 | 4891.3 | 5366.1 |
| 15° | 5191.1 | 5177.3 | 5009.2 | 4761.4 | 4484.2 | 4252.0 | 4200.0 | 4361.1 | 4757.9 | 4903.5 | 5475.2 |
| 17.5° | 6064.4 | 6045.3 | 5823.6 | 5463.2 | 5010.9 | 4558.7 | 4316.1 | 4376.7 | 4770.0 | 4924.3 | 5580.9 |
| 20° | 6946.3 | 6887.4 | 6648.3 | 6218.6 | 5638.1 | 4976.2 | 4508.5 | 4416.6 | 4785.7 | 4946.8 | 5691.8 |
| 22.5° | 7604.7 | 7556.2 | 7341.3 | 6923.7 | 6254.9 | 5459.7 | 4766.6 | 4485.9 | 4835.9 | 5012.7 | 5828.8 |
| 25° | 8183.4 | 8186.9 | 7973.8 | 7570.0 | 6878.7 | 5972.5 | 5099.3 | 4671.3 | 4964.1 | 5147.8 | 6015.9 |
| 27.5° | 8899.1 | 8857.4 | 8658.2 | 8258.0 | 7495.6 | 6490.6 | 5501.2 | 4926.0 | 5154.8 | 5340.1 | 6261.9 |
| 30° | 9755.0 | 9725.5 | 9495.0 | 9041.1 | 8179.9 | 7046.8 | 5960.4 | 5222.3 | 5400.8 | 5593.1 | 6584.2 |
| 32.5° | 10761.6 | 10747.8 | 10508.7 | 9924.8 | 8970.1 | 7701.8 | 6499.3 | 5613.9 | 5768.1 | 5967.4 | 7046.8 |
| 35° | 11943.4 | 11945.1 | 11662.7 | 10960.9 | 9834.6 | 8464.1 | 7110.9 | 6118.1 | 6215.1 | 6423.0 | 7597.8 |
| 37.5° | 12671.1 | 12759.5 | 12653.7 | 11938.1 | 10813.6 | 9316.6 | 7904.4 | 6786.9 | 6724.6 | 6934.2 | 8188.6 |
| 40° | 12827.0 | 12934.4 | 13268.8 | 12904.9 | 11908.7 | 10255.7 | 8607.9 | 7429.7 | 7351.7 | 7608.2 | 8949.3 |
| 42.5° | 12608.7 | 12757.7 | 13464.6 | 13721.0 | 13071.4 | 11413.2 | 9554.0 | 8384.4 | 8285.7 | 8630.4 | 9895.3 |
| 45° | 12478.8 | 12589.7 | 13407.4 | 14145.6 | 14079.7 | 12721.3 | 10758.2 | 9583.4 | 9547.1 | 9999.2 | 10986.9 |
| 47.5° | 12253.5 | 12354.0 | 13140.6 | 14244.4 | 14672.3 | 13920.3 | 12204.9 | 11049.3 | 11120.3 | 11712.9 | 12218.8 |
| 50° | 12374.7 | 12416.4 | 12842.6 | 13993.1 | 14843.8 | 14798.8 | 13821.6 | 12747.3 | 12989.8 | 13729.7 | 13613.6 |
| 52.5° | 12357.5 | 12464.9 | 12808.0 | 13580.7 | 14866.3 | 15341.1 | 15413.9 | 14641.1 | 15152.3 | 16001.3 | 15160.9 |
| 55° | 9990.6 | 10188.2 | 12400.7 | 13476.8 | 14946.0 | 15873.0 | 16831.2 | 16637.2 | 17590.2 | 18579.5 | 16907.4 |
| 57.5° | 9540.1 | 9664.8 | 10891.6 | 13695.1 | 15368.8 | 16888.4 | 18408.0 | 18834.2 | 20428.2 | 21577.0 | 19035.2 |
| 60° | 9451.8 | 9605.9 | 10876.0 | 13961.9 | 16226.6 | 18543.1 | 20745.3 | 21493.8 | 23881.5 | 25139.4 | 21502.5 |
| 62.5° | 9176.3 | 9342.6 | 10773.8 | 13927.3 | 17444.6 | 20832.0 | 23737.7 | 24321.6 | 27156.3 | 28379.5 | 23566.1 |
| 65° | 8303.0 | 8458.9 | 9940.3 | 13367.6 | 18265.9 | 23275.1 | 27279.2 | 26913.6 | 29741.4 | 30661.4 | 24595.3 |
| 66° | 7705.2 | 7857.7 | 9283.7 | 12709.1 | 18075.3 | 23968.1 | 28533.8 | 27715.9 | 30320.2 | 31040.9 | 24394.4 |
| 67.5° | 6611.9 | 6731.4 | 8008.5 | 11234.7 | 17061.7 | 24162.2 | 29589.0 | 28318.9 | 30380.7 | 30635.4 | 23245.6 |
| 70° | 4177.5 | 4212.1 | 5205.0 | 7755.5 | 12915.4 | 20955.0 | 27982.7 | 26821.9 | 27875.3 | 27185.7 | 19487.4 |
| 72.5° | 1812.4 | 1800.3 | 2498.6 | 3945.3 | 7311.8 | 14060.7 | 22635.7 | 22131.4 | 21866.4 | 20293.1 | 13641.4 |
| 75° | 1008.4 | 1022.2 | 1297.8 | 1831.4 | 2971.6 | 6906.5 | 14807.4 | 14169.8 | 11964.1 | 10208.9 | 6185.7 |
| 77.5° | 809.2 | 828.2 | 1076.0 | 1299.6 | 1334.1 | 2408.4 | 6929.0 | 5638.1 | 3394.4 | 2723.8 | 1718.9 |
| 80° | 639.3 | 674.0 | 939.1 | 1011.9 | 899.3 | 992.8 | 2238.6 | 1789.9 | 1342.8 | 1231.9 | 890.6 |
| 82.5° | 506.0 | 530.2 | 805.7 | 765.9 | 629.0 | 668.8 | 1072.6 | 1044.8 | 873.3 | 795.3 | 514.6 |
| 85° | 363.9 | 408.9 | 661.8 | 576.9 | 412.4 | 450.5 | 712.2 | 682.7 | 500.7 | 408.9 | 227.0 |
| 87.5° | 149.0 | 194.1 | 467.8 | 382.9 | 230.5 | 209.7 | 355.2 | 334.4 | 237.4 | 173.3 | 112.6 |
| 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° | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 | 5225.7 |
| 2.5° | 5220.5 | 5262.2 | 5315.9 | 5348.8 | 5366.1 | 5378.3 | 5397.3 | 5395.6 | 5400.8 | 5402.5 | 5409.5 |
| 5° | 5255.2 | 5324.6 | 5402.5 | 5423.3 | 5423.3 | 5404.2 | 5385.1 | 5354.0 | 5341.8 | 5338.4 | 5341.8 |
| 7.5° | 5345.3 | 5421.5 | 5489.2 | 5464.9 | 5412.8 | 5336.6 | 5237.9 | 5151.3 | 5104.4 | 5088.9 | 5085.4 |
| 10° | 5459.7 | 5551.5 | 5579.2 | 5487.4 | 5334.9 | 5151.3 | 4955.5 | 4813.4 | 4732.0 | 4709.5 | 4702.5 |
| 12.5° | 5598.3 | 5684.9 | 5646.8 | 5452.7 | 5170.3 | 4874.1 | 4603.7 | 4376.7 | 4207.0 | 4153.2 | 4149.8 |
| 15° | 5750.7 | 5818.3 | 5684.9 | 5345.3 | 4924.3 | 4487.7 | 4006.0 | 3614.4 | 3402.9 | 3335.4 | 3330.2 |
| 17.5° | 5892.8 | 5927.5 | 5662.3 | 5158.2 | 4562.2 | 3855.2 | 3215.9 | 2914.4 | 2841.6 | 2858.9 | 2862.4 |
| 20° | 6014.1 | 6014.1 | 5586.1 | 4889.6 | 3992.1 | 3021.8 | 2618.0 | 2612.9 | 2664.9 | 2716.9 | 2727.2 |
| 22.5° | 6147.5 | 6067.8 | 5452.7 | 4510.2 | 3184.7 | 2472.6 | 2413.7 | 2462.1 | 2521.1 | 2578.2 | 2586.8 |
| 25° | 6312.1 | 6111.1 | 5267.4 | 3934.9 | 2503.7 | 2245.6 | 2268.1 | 2307.9 | 2337.3 | 2373.8 | 2379.0 |
| 27.5° | 6495.8 | 6166.6 | 5023.0 | 3143.1 | 2172.7 | 2103.5 | 2120.8 | 2134.7 | 2131.2 | 2145.0 | 2148.5 |
| 30° | 6715.9 | 6230.7 | 4688.6 | 2456.9 | 2035.9 | 1982.2 | 1951.0 | 1938.9 | 1938.9 | 1961.4 | 1970.1 |
| 32.5° | 7010.4 | 6326.0 | 4208.6 | 2105.2 | 1970.1 | 1895.5 | 1795.1 | 1750.0 | 1767.4 | 1843.6 | 1860.8 |
| 35° | 7334.5 | 6428.2 | 3558.9 | 1985.6 | 1956.2 | 1855.7 | 1699.7 | 1616.6 | 1618.3 | 1689.4 | 1711.9 |
| 37.5° | 7687.9 | 6558.1 | 2846.8 | 1963.1 | 1987.4 | 1857.5 | 1649.5 | 1535.1 | 1488.4 | 1488.4 | 1497.0 |
| 40° | 8140.1 | 6691.6 | 2304.5 | 1978.7 | 2053.3 | 1878.2 | 1623.5 | 1471.0 | 1339.3 | 1342.8 | 1349.8 |
| 42.5° | 8729.2 | 6806.0 | 2013.4 | 2011.6 | 2133.0 | 1906.0 | 1621.8 | 1386.1 | 1271.8 | 1349.8 | 1420.8 |
| 45° | 9384.1 | 6863.2 | 1885.2 | 2041.1 | 2197.0 | 1923.2 | 1594.1 | 1372.3 | 1280.4 | 1512.6 | 1647.8 |
| 47.5° | 10137.9 | 6830.2 | 1814.1 | 2051.5 | 2212.6 | 1923.2 | 1562.9 | 1405.2 | 1341.1 | 1751.7 | 1909.4 |
| 50° | 10964.4 | 6734.9 | 1744.8 | 2030.7 | 2207.4 | 1919.8 | 1592.3 | 1438.2 | 1363.6 | 1793.3 | 1902.5 |
| 52.5° | 11936.4 | 6655.2 | 1672.0 | 1985.6 | 2171.0 | 1900.7 | 1627.0 | 1424.3 | 1292.6 | 1630.5 | 1706.7 |
| 55° | 13045.3 | 6677.7 | 1590.6 | 1921.5 | 2113.8 | 1864.3 | 1614.8 | 1368.8 | 1218.0 | 1436.4 | 1483.2 |
| 57.5° | 14462.7 | 6946.3 | 1493.6 | 1840.1 | 2035.9 | 1803.7 | 1571.6 | 1342.8 | 1195.5 | 1302.9 | 1330.7 |
| 60° | 16044.6 | 7414.1 | 1372.3 | 1758.7 | 1938.9 | 1706.7 | 1538.6 | 1355.0 | 1206.0 | 1292.6 | 1306.4 |
| 62.5° | 17205.5 | 7686.1 | 1268.4 | 1639.1 | 1807.1 | 1599.3 | 1497.0 | 1370.5 | 1233.7 | 1328.9 | 1325.5 |
| 65° | 17520.8 | 7239.1 | 1138.3 | 1464.1 | 1628.7 | 1486.7 | 1445.0 | 1387.8 | 1245.7 | 1358.4 | 1342.8 |
| 66° | 17079.0 | 6757.4 | 1081.2 | 1382.7 | 1538.6 | 1431.2 | 1419.0 | 1386.1 | 1240.6 | 1361.9 | 1335.9 |
| 67.5° | 16006.5 | 5769.9 | 982.4 | 1263.1 | 1394.8 | 1348.0 | 1377.5 | 1370.5 | 1226.7 | 1358.4 | 1322.1 |
| 70° | 13054.0 | 3936.6 | 840.4 | 1051.7 | 1160.8 | 1186.9 | 1297.8 | 1315.1 | 1181.7 | 1297.8 | 1218.0 |
| 72.5° | 9120.8 | 2398.0 | 743.3 | 816.1 | 939.1 | 1011.9 | 1188.6 | 1238.9 | 1121.1 | 1133.1 | 1056.9 |
| 75° | 4407.9 | 1273.5 | 674.0 | 632.4 | 729.5 | 845.6 | 1056.9 | 1134.9 | 1025.7 | 947.8 | 920.0 |
| 77.5° | 1374.0 | 778.0 | 571.8 | 509.4 | 571.8 | 682.7 | 883.6 | 994.5 | 913.1 | 793.6 | 783.2 |
| 80° | 738.2 | 571.8 | 440.1 | 408.9 | 452.2 | 535.4 | 694.8 | 829.9 | 784.9 | 712.2 | 635.9 |
| 82.5° | 486.9 | 370.8 | 325.7 | 317.1 | 344.8 | 408.9 | 516.4 | 687.8 | 687.8 | 609.9 | 443.6 |
| 85° | 251.2 | 227.0 | 223.5 | 223.5 | 240.8 | 272.0 | 351.7 | 530.2 | 564.9 | 322.2 | 266.8 |
| 87.5° | 124.8 | 129.9 | 121.3 | 126.4 | 135.1 | 133.4 | 168.1 | 266.8 | 318.9 | 195.8 | 162.9 |
| 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)