

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: P299030

Luminaire Tested: **GLNA-AF-10-LED-E1-T2-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299030
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-10-LED-E1-T2-7030-600
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 3000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36714.8 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G4

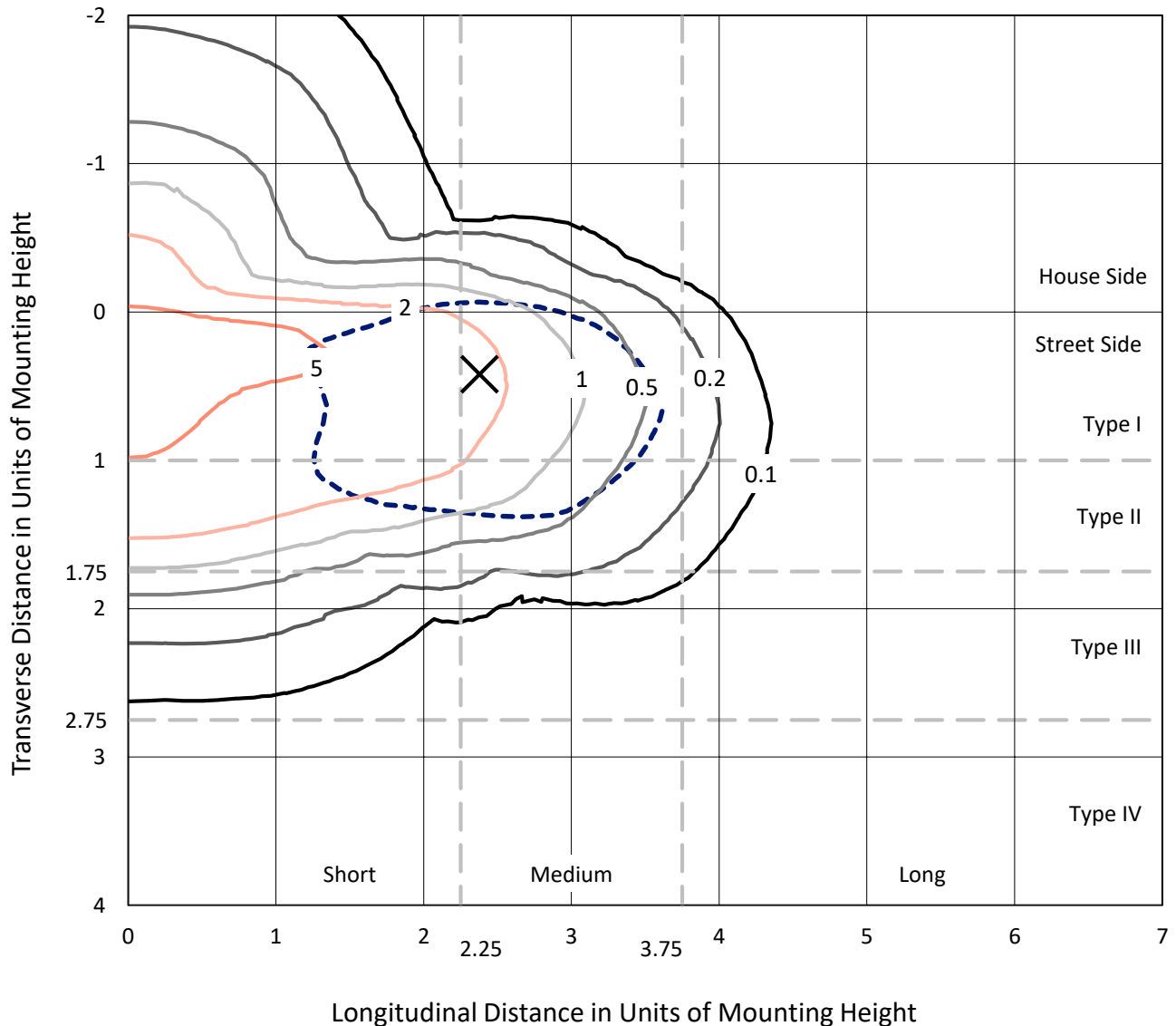
Input Watts (W): 323
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

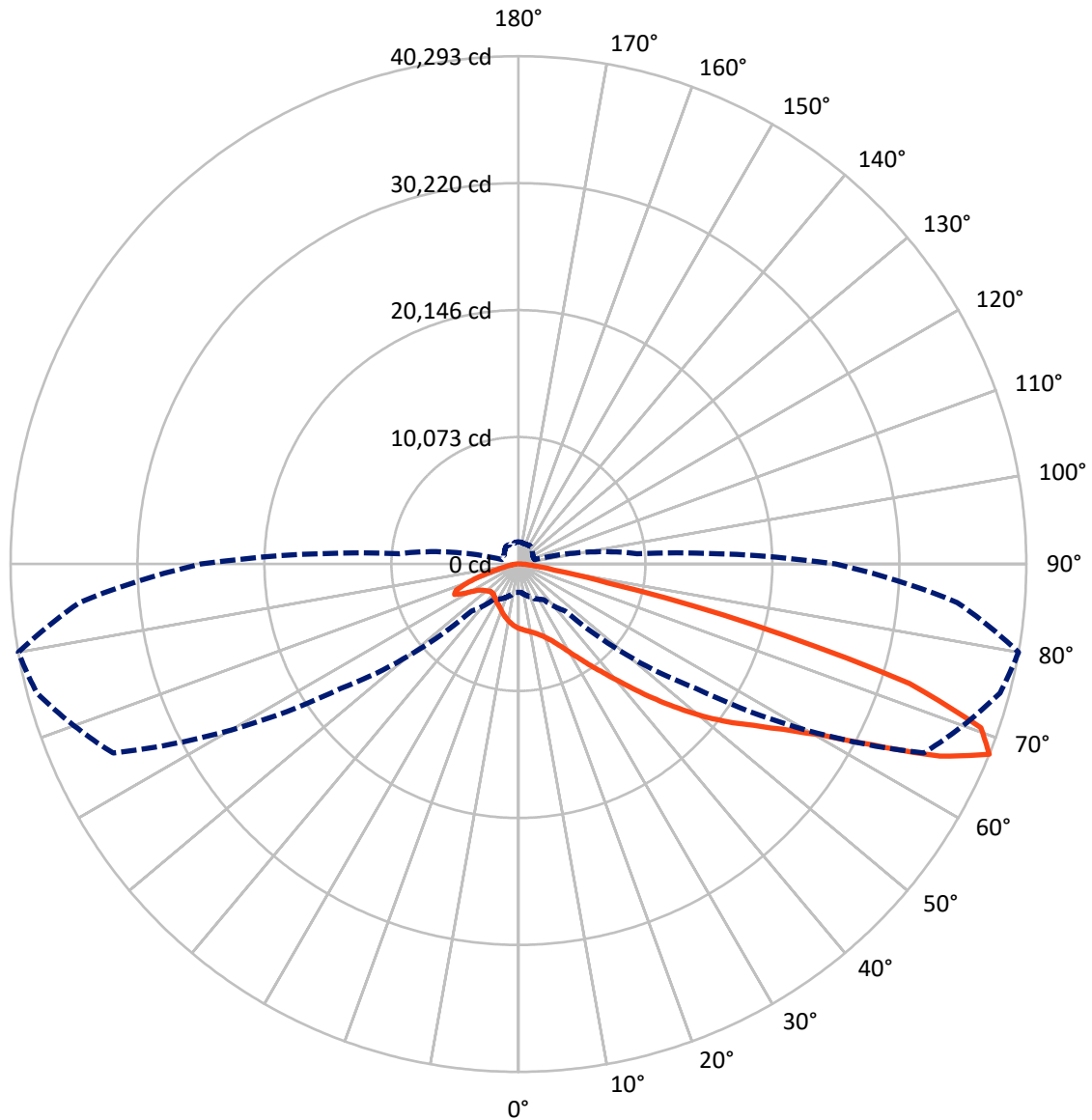
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.9 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 | 6761.5 | 0.0 | 6761.5 |
| | % Fixture | 18.4 | 0.0 | 18.4 |
| Street Side | Lumens | 29953.4 | 0.0 | 29953.4 |
| | % Fixture | 81.6 | 0.0 | 81.6 |
| Total | Lumens | 36714.8 | 0.0 | 36714.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 470.5 | 1.3 |
| 10°-20° | 1355.4 | 3.7 |
| 20°-30° | 2243.5 | 6.1 |
| 30°-40° | 3669.9 | 10.0 |
| 40°-50° | 5925.4 | 16.1 |
| 50°-60° | 8554.5 | 23.3 |
| 60°-70° | 9440.4 | 25.7 |
| 70°-80° | 4351.4 | 11.9 |
| 80°-90° | 703.8 | 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° | 36714.8 | 100.0 |
| 0°-180° | 36714.8 | 100.0 |



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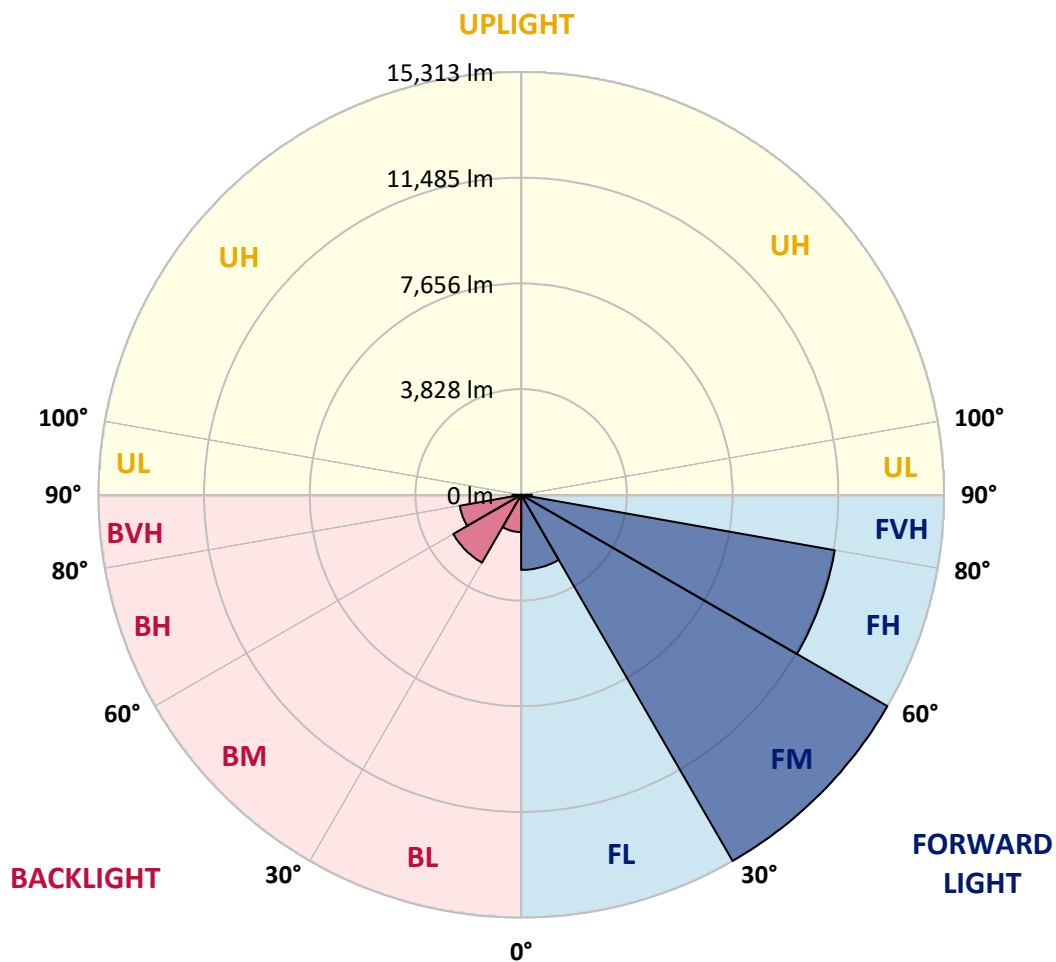
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 2720.5 | 7.4 | | | |
| FM (30°-60°) | 15312.8 | 41.7 | | | |
| FH (60°-80°) | 11533.1 | 31.4 | | | G4/12000 |
| FVH (80°-90°) | 387.0 | 1.1 | | | G3/500 |
| BL (0°-30°) | 1349.0 | 3.7 | B3/2500 | | |
| BM (30°-60°) | 2836.9 | 7.7 | B3/5000 | | |
| BH (60°-80°) | 2258.7 | 6.2 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 316.9 | 0.9 | | | 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 II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 80° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 |
| 2.5° | 5579.7 | 5547.2 | 5552.6 | 5543.6 | 5516.5 | 5469.5 | 5418.9 | 5326.7 | 5230.9 | 5180.3 | 5140.5 |
| 5° | 6046.1 | 6037.0 | 6024.4 | 5995.5 | 5926.8 | 5829.2 | 5708.1 | 5545.4 | 5370.1 | 5277.9 | 5189.3 |
| 7.5° | 6394.9 | 6389.5 | 6373.2 | 6355.2 | 6288.3 | 6170.8 | 5988.2 | 5756.9 | 5502.0 | 5375.5 | 5238.1 |
| 10° | 6423.8 | 6432.9 | 6445.5 | 6494.3 | 6503.4 | 6440.1 | 6253.9 | 5973.8 | 5639.4 | 5476.7 | 5301.4 |
| 12.5° | 6178.0 | 6197.9 | 6246.7 | 6371.4 | 6503.4 | 6581.1 | 6485.3 | 6201.5 | 5800.3 | 5603.2 | 5380.9 |
| 15° | 5852.7 | 5863.5 | 5923.2 | 6094.9 | 6331.7 | 6572.1 | 6662.4 | 6452.8 | 6008.1 | 5765.9 | 5500.2 |
| 17.5° | 5713.5 | 5718.9 | 5760.5 | 5874.4 | 6094.9 | 6438.3 | 6761.8 | 6725.7 | 6263.0 | 5968.4 | 5646.6 |
| 20° | 5643.0 | 5655.7 | 5715.3 | 5827.4 | 5966.5 | 6266.6 | 6776.3 | 7020.3 | 6566.6 | 6221.4 | 5831.0 |
| 22.5° | 5843.6 | 5838.2 | 5859.9 | 5915.9 | 6033.4 | 6214.2 | 6765.5 | 7324.0 | 6953.4 | 6546.8 | 6071.4 |
| 25° | 6311.8 | 6331.7 | 6293.7 | 6230.4 | 6268.4 | 6394.9 | 6823.3 | 7652.9 | 7437.9 | 6964.3 | 6385.9 |
| 27.5° | 6978.7 | 6958.9 | 6902.8 | 6754.6 | 6676.9 | 6731.1 | 7014.9 | 8007.2 | 8039.7 | 7513.8 | 6801.6 |
| 30° | 7643.9 | 7627.6 | 7573.4 | 7392.7 | 7233.6 | 7188.4 | 7387.2 | 8413.9 | 8757.3 | 8173.5 | 7311.3 |
| 32.5° | 8334.4 | 8316.3 | 8265.7 | 8084.9 | 7893.3 | 7788.5 | 7916.8 | 8883.9 | 9603.2 | 8961.6 | 7911.4 |
| 35° | 9185.7 | 9151.4 | 9044.7 | 8793.5 | 8605.5 | 8524.2 | 8583.8 | 9474.9 | 10579.3 | 9894.2 | 8639.8 |
| 37.5° | 9986.4 | 10038.8 | 9930.4 | 9583.4 | 9339.3 | 9310.4 | 9377.3 | 10196.1 | 11631.2 | 10937.2 | 9476.7 |
| 40° | 10790.8 | 10799.8 | 10702.2 | 10418.4 | 10167.2 | 10120.2 | 10288.3 | 11070.9 | 12873.0 | 12184.3 | 10494.3 |
| 42.5° | 11622.2 | 11640.3 | 11475.8 | 11213.7 | 11029.4 | 11038.4 | 11230.0 | 12095.8 | 14297.3 | 13653.8 | 11665.6 |
| 45° | 12607.3 | 12634.4 | 12453.7 | 12110.2 | 11942.1 | 12280.1 | 12200.6 | 13245.3 | 15859.0 | 15324.0 | 13010.4 |
| 47.5° | 13637.6 | 13679.1 | 13541.8 | 13220.0 | 13010.4 | 13474.9 | 13171.2 | 14519.6 | 17540.0 | 17115.2 | 14487.1 |
| 50° | 14199.7 | 14259.3 | 14393.1 | 14369.6 | 14324.4 | 14246.7 | 14253.9 | 15886.1 | 19273.3 | 18980.5 | 16005.4 |
| 52.5° | 13897.8 | 13896.0 | 14384.1 | 14976.9 | 15609.5 | 15656.5 | 15573.4 | 17326.7 | 20892.9 | 20804.3 | 17435.1 |
| 55° | 12516.9 | 12610.9 | 13350.2 | 14497.9 | 16225.9 | 17305.0 | 17550.8 | 18976.9 | 22483.5 | 22586.5 | 18886.5 |
| 57.5° | 10217.8 | 10295.5 | 11293.2 | 12892.9 | 15394.5 | 18284.6 | 20363.3 | 21375.5 | 24262.0 | 24742.8 | 20818.8 |
| 60° | 6929.9 | 7023.9 | 8081.3 | 10002.7 | 13156.8 | 17738.8 | 23040.2 | 25655.6 | 26391.3 | 27484.8 | 23530.0 |
| 62.5° | 4072.3 | 4157.2 | 5019.4 | 6310.0 | 9263.4 | 15202.9 | 24215.0 | 31745.1 | 29773.1 | 31622.2 | 27665.6 |
| 65° | 2803.4 | 2861.3 | 3280.6 | 3927.7 | 5323.1 | 10239.5 | 22758.2 | 35949.3 | 34976.9 | 36748.2 | 32460.9 |
| 67.5° | 2255.8 | 2248.5 | 2581.1 | 3022.1 | 3427.0 | 5279.7 | 17209.2 | 35473.9 | 39553.5 | 40292.7 | 34949.8 |
| 70° | 1858.1 | 1850.9 | 2076.8 | 2441.9 | 2738.4 | 2973.3 | 9373.7 | 29935.8 | 38620.8 | 38920.8 | 32657.9 |
| 72.5° | 1554.4 | 1561.7 | 1706.3 | 1977.4 | 2246.7 | 2239.5 | 4119.3 | 21059.2 | 30382.2 | 32457.2 | 26033.4 |
| 75° | 1312.2 | 1315.9 | 1411.7 | 1603.3 | 1823.8 | 1803.9 | 2234.1 | 11408.9 | 17661.1 | 19105.3 | 14431.1 |
| 77.5° | 1117.0 | 1120.6 | 1182.1 | 1288.7 | 1446.0 | 1438.8 | 1630.4 | 4929.0 | 7367.4 | 7277.0 | 4936.3 |
| 80° | 995.9 | 995.9 | 1024.9 | 1044.7 | 1131.5 | 1099.0 | 1209.2 | 2367.8 | 3114.3 | 2875.7 | 1970.2 |
| 82.5° | 780.8 | 784.5 | 961.6 | 954.4 | 891.1 | 849.5 | 849.5 | 1395.4 | 1650.2 | 1525.5 | 1153.2 |
| 85° | 439.2 | 437.4 | 620.0 | 748.3 | 784.5 | 598.3 | 592.9 | 780.8 | 898.3 | 791.7 | 558.5 |
| 87.5° | 188.0 | 191.6 | 287.4 | 332.6 | 444.6 | 372.3 | 366.9 | 403.1 | 457.3 | 395.8 | 258.5 |
| 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° | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 | 5100.8 |
| 2.5° | 5102.6 | 5055.6 | 4952.5 | 4824.2 | 4708.5 | 4632.6 | 4563.9 | 4464.5 | 4469.9 | 4401.3 | 4350.6 |
| 5° | 5099.0 | 5001.3 | 4762.8 | 4479.0 | 4206.0 | 4009.0 | 3860.8 | 3727.1 | 3694.5 | 3631.3 | 3593.3 |
| 7.5° | 5102.6 | 4943.5 | 4542.2 | 4088.6 | 3750.6 | 3501.1 | 3374.6 | 3304.1 | 3287.8 | 3266.1 | 3268.0 |
| 10° | 5115.2 | 4891.1 | 4300.0 | 3723.4 | 3369.2 | 3204.7 | 3174.0 | 3195.7 | 3221.0 | 3228.2 | 3230.0 |
| 12.5° | 5144.1 | 4844.1 | 4034.3 | 3398.1 | 3130.6 | 3080.0 | 3132.4 | 3206.5 | 3255.3 | 3278.8 | 3277.0 |
| 15° | 5209.2 | 4807.9 | 3779.5 | 3143.2 | 2998.6 | 3025.8 | 3123.4 | 3228.2 | 3298.7 | 3331.2 | 3333.0 |
| 17.5° | 5279.7 | 4755.5 | 3517.4 | 2948.0 | 2901.0 | 2969.7 | 3090.8 | 3213.7 | 3300.5 | 3336.6 | 3343.9 |
| 20° | 5371.9 | 4690.5 | 3242.7 | 2801.6 | 2808.9 | 2886.6 | 3000.4 | 3123.4 | 3219.2 | 3249.9 | 3264.3 |
| 22.5° | 5493.0 | 4620.0 | 3002.3 | 2682.3 | 2704.0 | 2763.7 | 2852.2 | 2958.9 | 3042.0 | 3056.5 | 3069.1 |
| 25° | 5655.7 | 4544.0 | 2810.7 | 2573.9 | 2582.9 | 2617.3 | 2676.9 | 2740.2 | 2798.0 | 2781.7 | 2794.4 |
| 27.5° | 5874.4 | 4479.0 | 2667.9 | 2474.5 | 2458.2 | 2465.4 | 2496.2 | 2516.0 | 2546.8 | 2501.6 | 2507.0 |
| 30° | 6131.0 | 4408.5 | 2557.6 | 2387.7 | 2342.5 | 2329.9 | 2337.1 | 2347.9 | 2371.4 | 2310.0 | 2300.9 |
| 32.5° | 6429.3 | 4323.5 | 2454.6 | 2311.8 | 2248.5 | 2223.2 | 2226.8 | 2255.8 | 2346.1 | 2308.2 | 2288.3 |
| 35° | 6776.3 | 4227.7 | 2346.1 | 2228.6 | 2185.3 | 2149.1 | 2145.5 | 2235.9 | 2505.2 | 2481.7 | 2463.6 |
| 37.5° | 7183.0 | 4131.9 | 2237.7 | 2134.7 | 2138.3 | 2098.5 | 2085.9 | 2188.9 | 2535.9 | 2443.7 | 2431.1 |
| 40° | 7699.9 | 4081.3 | 2145.5 | 2035.2 | 2080.4 | 2075.0 | 2049.7 | 2102.1 | 2333.5 | 2165.4 | 2143.7 |
| 42.5° | 8339.8 | 4088.6 | 2076.8 | 1928.6 | 2011.7 | 2069.6 | 2029.8 | 2031.6 | 2114.8 | 1988.2 | 1968.4 |
| 45° | 9129.7 | 4173.5 | 2028.0 | 1843.6 | 1934.0 | 2064.2 | 2022.6 | 1993.7 | 2000.9 | 1934.0 | 1923.2 |
| 47.5° | 10051.5 | 4348.8 | 1993.7 | 1773.2 | 1859.9 | 2044.3 | 2020.8 | 1982.8 | 1966.6 | 1930.4 | 1921.4 |
| 50° | 11076.3 | 4603.7 | 1968.4 | 1706.3 | 1793.0 | 2011.7 | 2022.6 | 1972.0 | 1953.9 | 1939.4 | 1934.0 |
| 52.5° | 12083.1 | 4894.7 | 1930.4 | 1648.4 | 1740.6 | 1972.0 | 2028.0 | 1961.1 | 1941.3 | 1930.4 | 1925.0 |
| 55° | 13205.6 | 5258.0 | 1872.6 | 1599.6 | 1697.2 | 1921.4 | 2028.0 | 1944.9 | 1923.2 | 1925.0 | 1923.2 |
| 57.5° | 14722.1 | 5845.4 | 1803.9 | 1558.1 | 1644.8 | 1859.9 | 1993.7 | 1926.8 | 1899.7 | 1901.5 | 1903.3 |
| 60° | 17091.7 | 6881.1 | 1720.7 | 1516.5 | 1579.8 | 1787.6 | 1946.7 | 1887.0 | 1859.9 | 1867.1 | 1869.0 |
| 62.5° | 20576.6 | 8401.2 | 1612.3 | 1455.0 | 1511.1 | 1709.9 | 1881.6 | 1836.4 | 1809.3 | 1827.4 | 1827.4 |
| 65° | 24198.8 | 9742.4 | 1478.5 | 1377.3 | 1438.8 | 1624.9 | 1800.3 | 1773.2 | 1746.0 | 1787.6 | 1785.8 |
| 67.5° | 25173.0 | 9442.4 | 1344.8 | 1292.4 | 1366.5 | 1531.0 | 1702.7 | 1688.2 | 1673.7 | 1746.0 | 1742.4 |
| 70° | 22362.4 | 7580.6 | 1221.9 | 1205.6 | 1286.9 | 1429.7 | 1597.8 | 1597.8 | 1588.8 | 1643.0 | 1630.4 |
| 72.5° | 17037.5 | 5375.5 | 1104.4 | 1113.4 | 1196.6 | 1319.5 | 1484.0 | 1496.6 | 1482.1 | 1509.3 | 1498.4 |
| 75° | 9120.6 | 3076.4 | 986.9 | 1012.2 | 1084.5 | 1207.4 | 1357.4 | 1370.1 | 1361.0 | 1359.2 | 1364.7 |
| 77.5° | 3031.2 | 1503.8 | 864.0 | 903.7 | 967.0 | 1091.7 | 1225.5 | 1245.4 | 1223.7 | 1220.1 | 1218.3 |
| 80° | 1350.2 | 945.3 | 728.4 | 780.8 | 836.9 | 959.8 | 1086.3 | 1102.6 | 1079.1 | 1111.6 | 1070.0 |
| 82.5° | 867.6 | 621.8 | 583.8 | 641.7 | 695.9 | 827.8 | 947.1 | 950.7 | 929.1 | 1079.1 | 920.0 |
| 85° | 421.1 | 385.0 | 439.2 | 491.6 | 538.6 | 650.7 | 784.5 | 786.3 | 732.0 | 667.0 | 643.5 |
| 87.5° | 209.7 | 224.1 | 292.8 | 339.8 | 363.3 | 446.5 | 571.2 | 560.3 | 536.8 | 488.0 | 450.1 |
| 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)