

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: P458462

Luminaire Tested: **GALN-SA9D-827-U-SL2**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P458462
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-14)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA9D-827-U-SL2
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 51461 lumens
Efficiency: N/A
Efficacy: 93.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B4 - U0 - G5

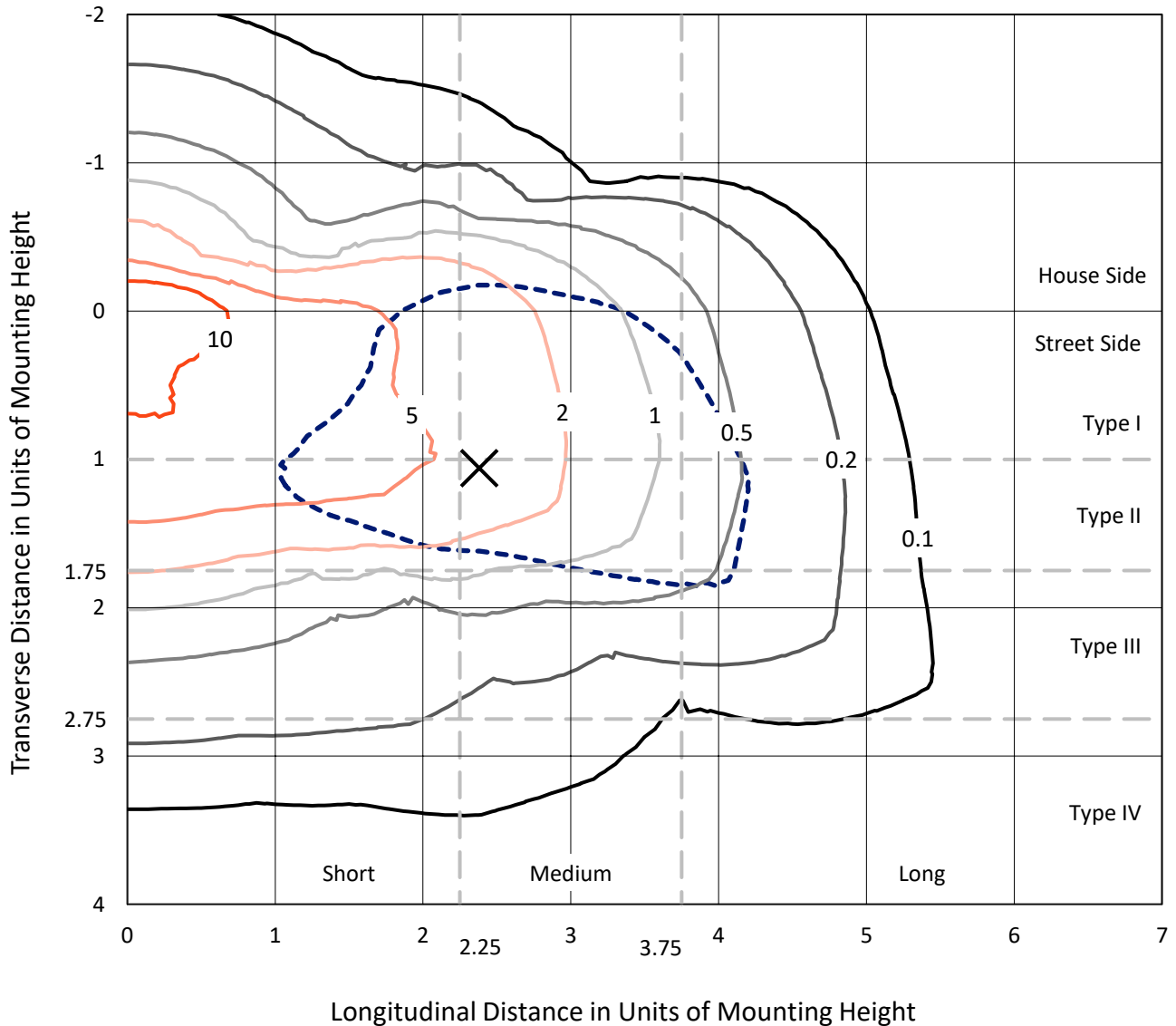
Input Watts (W): 552
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

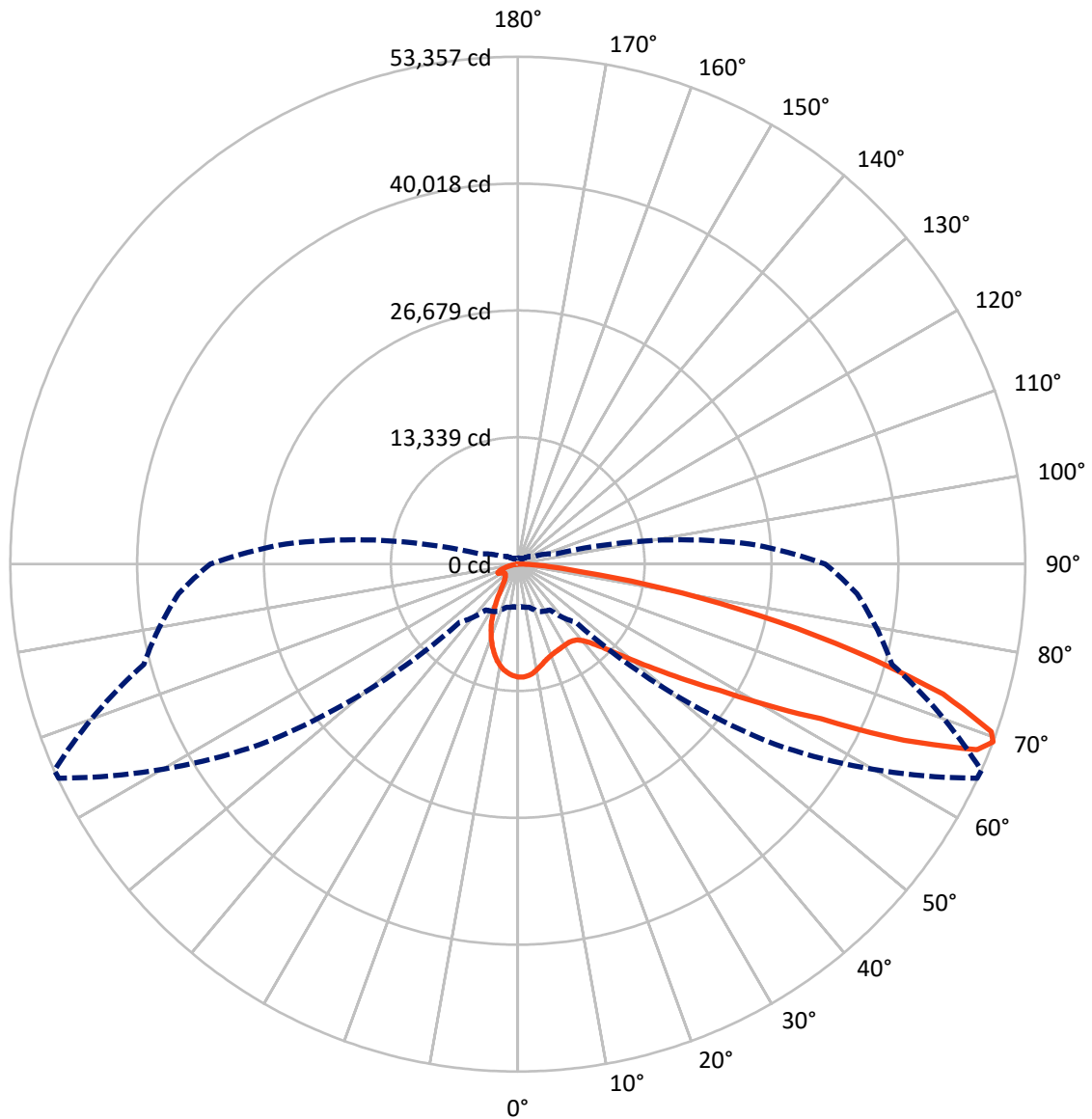
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 19 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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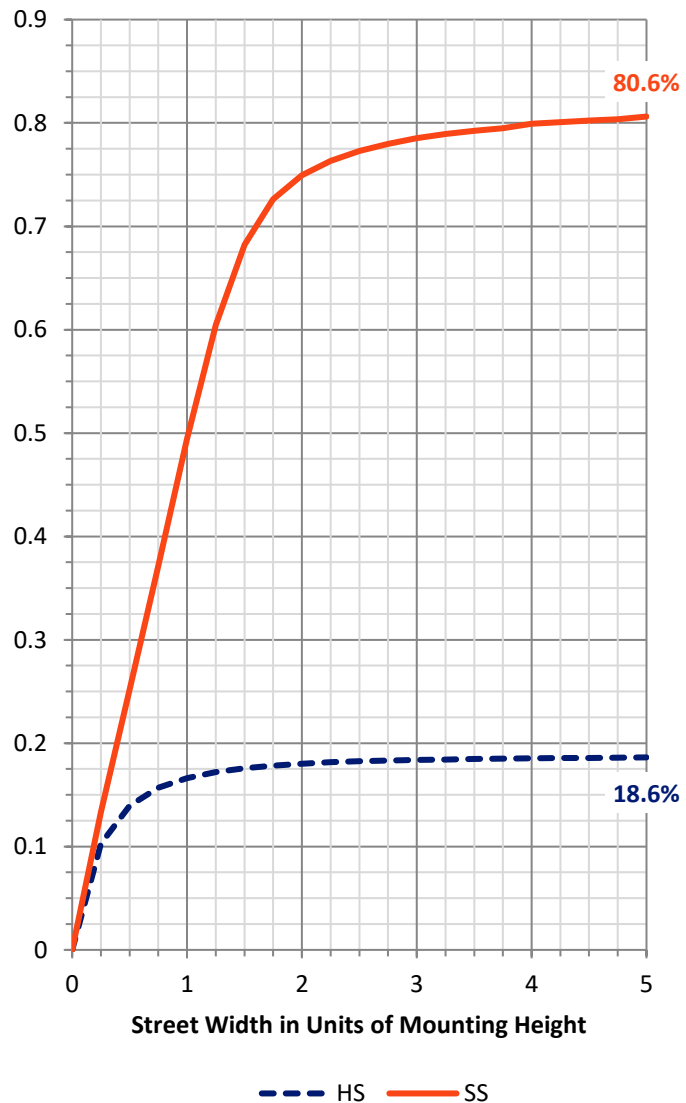
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 9677.9 | 0.0 | 9677.9 |
| | % Fixture | 18.8 | 0.0 | 18.8 |
| Street Side | Lumens | 41783.1 | 0.0 | 41783.1 |
| | % Fixture | 81.2 | 0.0 | 81.2 |
| Total | Lumens | 51461.0 | 0.0 | 51461.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1032.0 | 2.0 |
| 10°-20° | 2447.8 | 4.8 |
| 20°-30° | 3332.3 | 6.5 |
| 30°-40° | 4477.9 | 8.7 |
| 40°-50° | 6686.3 | 13.0 |
| 50°-60° | 10635.6 | 20.7 |
| 60°-70° | 13081.2 | 25.4 |
| 70°-80° | 8511.2 | 16.5 |
| 80°-90° | 1256.8 | 2.4 |
| 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° | 51461.0 | 100.0 |
| 0°-180° | 51461.0 | 100.0 |



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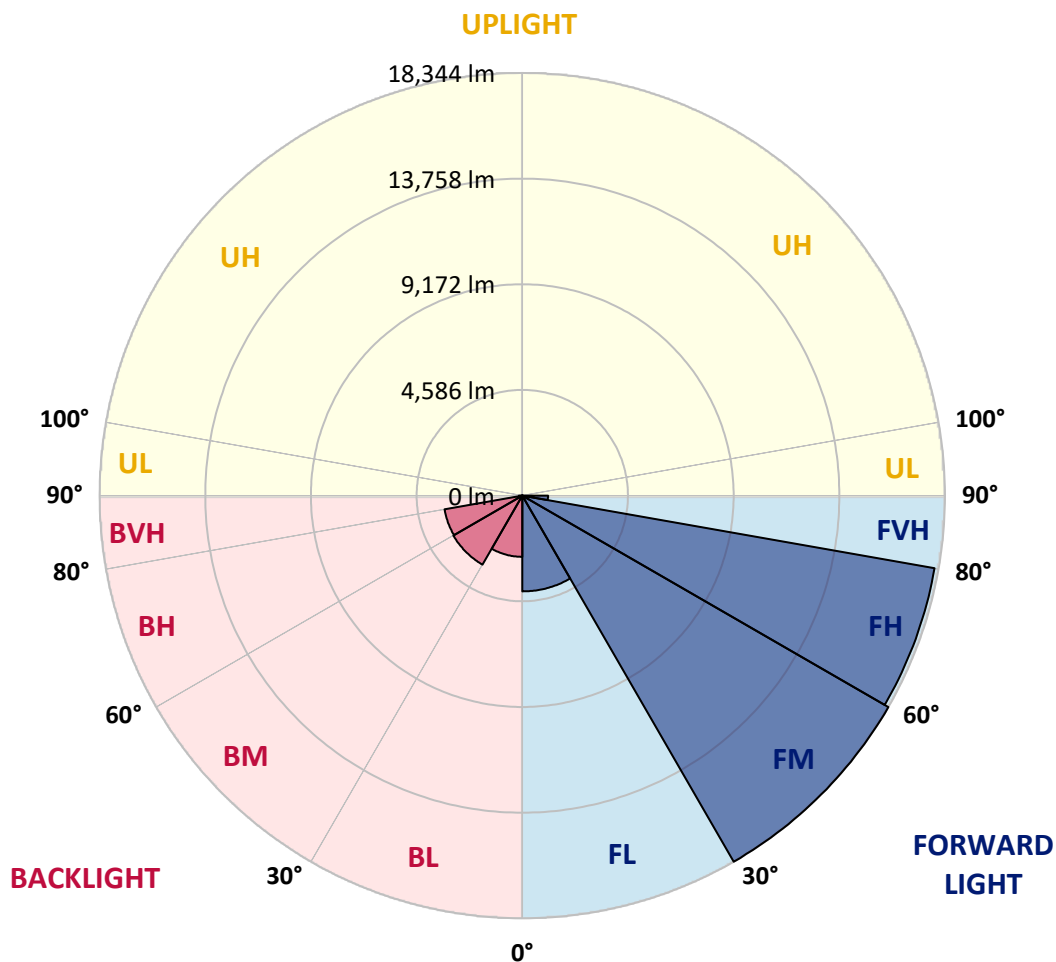
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 4155.4 | 8.1 | | | |
| FM | (30°-60°) | 18344.3 | 35.6 | | | |
| FH | (60°-80°) | 18166.0 | 35.3 | | | G5 |
| FVH | (80°-90°) | 1117.4 | 2.2 | | | G5 |
| BL | (0°-30°) | 2656.6 | 5.2 | B4/5000 | | |
| BM | (30°-60°) | 3455.4 | 6.7 | B3/5000 | | |
| BH | (60°-80°) | 3426.4 | 6.7 | B4/5000 | | G4/5000 |
| BVH | (80°-90°) | 139.4 | 0.3 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G5

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 66° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 |
| 2.5° | 11467.7 | 11513.3 | 11564.6 | 11621.6 | 11729.9 | 11789.7 | 11832.5 | 11880.9 | 11886.6 | 11912.3 | 11892.3 |
| 5° | 10621.3 | 10675.4 | 10752.4 | 10860.7 | 11023.1 | 11276.8 | 11538.9 | 11752.7 | 11778.3 | 11898.0 | 11932.2 |
| 7.5° | 9914.5 | 9945.9 | 10008.6 | 10182.4 | 10413.3 | 10695.4 | 11077.3 | 11510.4 | 11573.1 | 11858.1 | 11957.9 |
| 10° | 9338.9 | 9370.2 | 9444.3 | 9623.9 | 9851.8 | 10205.2 | 10624.2 | 11194.1 | 11245.4 | 11735.6 | 11963.6 |
| 12.5° | 8908.6 | 8937.1 | 9016.8 | 9193.5 | 9455.7 | 9786.3 | 10248.0 | 10852.1 | 10926.2 | 11573.1 | 11909.4 |
| 15° | 8580.8 | 8635.0 | 8700.5 | 8845.9 | 9122.3 | 9441.5 | 9888.9 | 10538.7 | 10598.5 | 11402.2 | 11872.4 |
| 17.5° | 8441.2 | 8466.8 | 8512.4 | 8646.4 | 8848.7 | 9162.2 | 9612.5 | 10293.6 | 10364.8 | 11282.5 | 11863.8 |
| 20° | 8446.9 | 8472.5 | 8481.1 | 8555.2 | 8700.5 | 8971.3 | 9415.8 | 10099.8 | 10185.3 | 11177.0 | 11878.1 |
| 22.5° | 8640.7 | 8643.5 | 8612.2 | 8586.5 | 8643.5 | 8868.7 | 9276.2 | 9954.4 | 10054.2 | 11131.4 | 11889.5 |
| 25° | 8939.9 | 8991.2 | 8945.6 | 8825.9 | 8720.5 | 8828.8 | 9222.0 | 9874.6 | 9968.7 | 11065.9 | 11875.2 |
| 27.5° | 9424.4 | 9432.9 | 9395.9 | 9233.4 | 8959.9 | 8880.1 | 9199.2 | 9814.8 | 9894.6 | 11017.4 | 11804.0 |
| 30° | 10074.1 | 10048.5 | 10014.3 | 9834.7 | 9404.4 | 9076.7 | 9247.7 | 9760.7 | 9843.3 | 10946.2 | 11718.5 |
| 32.5° | 10732.4 | 10812.2 | 10780.9 | 10570.0 | 10011.4 | 9458.6 | 9404.4 | 9755.0 | 9823.4 | 10892.0 | 11624.4 |
| 35° | 11430.7 | 11467.7 | 11615.9 | 11507.6 | 10934.8 | 10077.0 | 9698.0 | 9843.3 | 9897.4 | 10894.9 | 11558.9 |
| 37.5° | 11977.8 | 12077.6 | 12425.2 | 12519.3 | 11980.7 | 10894.9 | 10173.9 | 10094.1 | 10116.9 | 11034.5 | 11584.5 |
| 40° | 12639.0 | 12810.0 | 13257.4 | 13642.1 | 13288.7 | 11957.9 | 10983.2 | 10558.6 | 10587.1 | 11370.8 | 11752.7 |
| 42.5° | 13476.8 | 13596.5 | 14197.8 | 14719.4 | 14662.4 | 13362.8 | 11963.6 | 11319.5 | 11333.8 | 12040.5 | 12222.9 |
| 45° | 14457.2 | 14628.2 | 15303.6 | 16087.3 | 16221.2 | 14953.0 | 13379.9 | 12470.8 | 12462.3 | 13080.7 | 13100.7 |
| 47.5° | 15711.1 | 15816.5 | 16486.2 | 17341.2 | 17882.7 | 16950.8 | 15098.4 | 14123.7 | 14032.5 | 14596.8 | 14434.4 |
| 50° | 16865.3 | 17030.6 | 17537.8 | 18472.6 | 19820.5 | 19290.5 | 17358.3 | 16266.8 | 16053.1 | 16580.3 | 16306.7 |
| 52.5° | 17349.7 | 17523.6 | 17951.1 | 19110.9 | 21482.0 | 22317.0 | 20228.1 | 18823.1 | 18466.9 | 18871.5 | 18771.8 |
| 55° | 16509.0 | 16734.2 | 17133.2 | 18543.8 | 22211.5 | 25808.0 | 24098.1 | 21778.4 | 21519.0 | 21345.2 | 21373.7 |
| 57.5° | 14249.1 | 14462.9 | 15001.5 | 16557.5 | 21339.5 | 28341.5 | 29623.9 | 25577.2 | 25021.5 | 24220.7 | 24357.5 |
| 60° | 10846.4 | 10980.4 | 11259.7 | 12983.8 | 18754.7 | 28999.8 | 35899.3 | 30379.1 | 30025.8 | 27084.7 | 27181.6 |
| 62.5° | 7703.1 | 7854.1 | 8047.9 | 8908.6 | 13730.5 | 27144.6 | 40812.4 | 37084.8 | 35822.3 | 30051.4 | 29957.4 |
| 65° | 6255.4 | 6152.8 | 6386.5 | 6788.3 | 8056.5 | 21037.4 | 41918.1 | 46392.3 | 44653.9 | 33958.5 | 32653.3 |
| 67.5° | 5143.9 | 5035.6 | 5266.5 | 5981.8 | 6127.1 | 12211.5 | 37934.0 | 52434.0 | 52086.3 | 38207.6 | 35392.0 |
| 69° | 4554.0 | 4497.0 | 4699.4 | 5514.4 | 5882.0 | 8672.0 | 33046.6 | 53274.6 | 53357.3 | 40712.6 | 35813.8 |
| 70° | 4103.7 | 4126.5 | 4323.2 | 5277.9 | 5770.9 | 7150.2 | 28244.6 | 52114.8 | 52815.8 | 41963.7 | 35357.8 |
| 72.5° | 3020.8 | 3069.3 | 3342.8 | 4371.6 | 5665.5 | 6067.3 | 16808.3 | 45520.3 | 46759.9 | 42037.8 | 32345.5 |
| 75° | 2111.7 | 2088.9 | 2331.2 | 3291.5 | 5352.0 | 6013.1 | 9871.8 | 35203.9 | 36608.9 | 36335.3 | 27178.8 |
| 77.5° | 1382.2 | 1419.2 | 1613.0 | 2325.5 | 4502.7 | 5967.5 | 6434.9 | 24975.9 | 25887.8 | 24300.5 | 16075.9 |
| 80° | 974.6 | 971.8 | 1080.1 | 1587.4 | 3340.0 | 5733.9 | 5269.3 | 15742.4 | 15511.6 | 9549.8 | 4767.8 |
| 82.5° | 558.6 | 598.5 | 723.9 | 1117.1 | 2234.3 | 5047.0 | 4847.6 | 7529.2 | 6873.8 | 2721.6 | 1610.2 |
| 85° | 310.6 | 324.9 | 430.3 | 675.4 | 1305.2 | 3801.7 | 4232.0 | 3425.5 | 3231.7 | 1137.1 | 692.5 |
| 87.5° | 99.7 | 108.3 | 179.5 | 342.0 | 592.8 | 1795.4 | 2396.7 | 1581.7 | 1459.1 | 410.4 | 279.3 |
| 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° | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 | 11883.8 |
| 2.5° | 11900.9 | 11935.1 | 11843.9 | 11755.5 | 11675.7 | 11564.6 | 11464.9 | 11382.2 | 11325.2 | 11316.7 | 11288.2 |
| 5° | 11940.8 | 11943.6 | 11769.8 | 11536.1 | 11308.1 | 11057.3 | 10798.0 | 10612.8 | 10438.9 | 10342.0 | 10293.6 |
| 7.5° | 11969.3 | 11943.6 | 11630.1 | 11251.1 | 10812.2 | 10356.3 | 9900.3 | 9535.5 | 9253.4 | 9142.2 | 9185.0 |
| 10° | 11957.9 | 11878.1 | 11419.3 | 10812.2 | 10173.9 | 9492.8 | 8837.3 | 8324.3 | 7854.1 | 7611.9 | 7617.6 |
| 12.5° | 11895.2 | 11764.1 | 11105.8 | 10319.2 | 9381.6 | 8469.7 | 7466.5 | 6774.0 | 6229.7 | 5907.7 | 5807.9 |
| 15° | 11841.0 | 11613.0 | 10738.1 | 9649.5 | 8483.9 | 7181.6 | 5959.0 | 5104.0 | 4648.1 | 4394.4 | 4391.6 |
| 17.5° | 11784.0 | 11467.7 | 10336.3 | 8939.9 | 7452.3 | 5776.6 | 4494.2 | 3841.6 | 3627.8 | 3653.5 | 3610.7 |
| 20° | 11724.2 | 11296.7 | 9917.4 | 8150.5 | 6195.5 | 4308.9 | 3365.6 | 3100.6 | 3160.5 | 3277.3 | 3294.4 |
| 22.5° | 11655.8 | 11114.3 | 9467.1 | 7281.3 | 4873.2 | 3243.1 | 2730.1 | 2690.2 | 2844.1 | 3026.5 | 3052.2 |
| 25° | 11550.3 | 10886.3 | 8900.0 | 6372.2 | 3758.9 | 2613.3 | 2391.0 | 2419.5 | 2570.5 | 2724.4 | 2741.5 |
| 27.5° | 11402.2 | 10604.2 | 8327.2 | 5238.0 | 2824.2 | 2242.8 | 2185.8 | 2222.9 | 2297.0 | 2391.0 | 2413.8 |
| 30° | 11202.7 | 10285.0 | 7668.9 | 4257.6 | 2262.8 | 2057.6 | 2034.8 | 2054.7 | 2097.5 | 2137.4 | 2148.8 |
| 32.5° | 11003.2 | 9977.2 | 7004.9 | 3260.2 | 2017.7 | 1935.0 | 1912.2 | 1912.2 | 1912.2 | 1917.9 | 1920.8 |
| 35° | 10817.9 | 9686.6 | 6292.4 | 2539.2 | 1889.4 | 1838.1 | 1806.8 | 1772.6 | 1766.9 | 1746.9 | 1746.9 |
| 37.5° | 10715.3 | 9421.5 | 5534.4 | 2126.0 | 1795.4 | 1758.3 | 1715.6 | 1658.6 | 1627.3 | 1630.1 | 1624.4 |
| 40° | 10735.3 | 9247.7 | 4844.7 | 1892.3 | 1718.4 | 1678.5 | 1613.0 | 1547.5 | 1527.5 | 1527.5 | 1521.8 |
| 42.5° | 10960.4 | 9190.7 | 4183.5 | 1769.7 | 1644.3 | 1598.8 | 1516.1 | 1456.3 | 1444.9 | 1442.0 | 1447.7 |
| 45° | 11479.1 | 9330.3 | 3590.8 | 1689.9 | 1581.7 | 1513.3 | 1430.6 | 1376.5 | 1365.1 | 1365.1 | 1362.2 |
| 47.5° | 12490.8 | 9783.5 | 3166.2 | 1638.6 | 1536.1 | 1447.7 | 1362.2 | 1308.1 | 1288.1 | 1282.4 | 1282.4 |
| 50° | 14063.9 | 10766.6 | 2849.8 | 1593.1 | 1479.1 | 1387.9 | 1299.5 | 1236.8 | 1205.5 | 1202.6 | 1199.8 |
| 52.5° | 16249.7 | 12299.8 | 2727.3 | 1558.9 | 1416.4 | 1325.2 | 1228.3 | 1168.4 | 1128.5 | 1120.0 | 1114.3 |
| 55° | 18806.0 | 14440.1 | 2895.4 | 1533.2 | 1350.8 | 1253.9 | 1154.2 | 1091.5 | 1054.4 | 1037.3 | 1034.5 |
| 57.5° | 21767.0 | 17010.6 | 3533.8 | 1499.0 | 1291.0 | 1177.0 | 1080.1 | 1017.4 | 977.5 | 957.5 | 951.8 |
| 60° | 24425.9 | 19652.4 | 4648.1 | 1479.1 | 1239.7 | 1094.3 | 994.6 | 937.6 | 900.5 | 880.6 | 877.7 |
| 62.5° | 27346.9 | 22171.6 | 5978.9 | 1533.2 | 1216.9 | 1014.5 | 914.8 | 863.5 | 832.1 | 812.2 | 812.2 |
| 65° | 30467.5 | 24693.7 | 6859.5 | 1715.6 | 1251.1 | 951.8 | 829.3 | 786.6 | 758.1 | 743.8 | 741.0 |
| 67.5° | 32570.7 | 25565.8 | 5651.2 | 1903.7 | 1336.6 | 883.4 | 746.7 | 712.5 | 695.4 | 681.1 | 681.1 |
| 69° | 32342.7 | 24462.9 | 4169.3 | 1952.1 | 1362.2 | 849.2 | 701.1 | 675.4 | 652.6 | 646.9 | 641.2 |
| 70° | 31621.7 | 23206.1 | 3493.9 | 1920.8 | 1342.3 | 817.9 | 672.6 | 641.2 | 621.3 | 615.6 | 612.7 |
| 72.5° | 28164.8 | 20125.5 | 2601.9 | 1670.0 | 1142.8 | 709.6 | 595.6 | 567.1 | 550.0 | 541.5 | 541.5 |
| 75° | 23399.9 | 16449.2 | 2031.9 | 1328.0 | 894.8 | 598.5 | 510.1 | 487.3 | 473.1 | 467.4 | 464.5 |
| 77.5° | 13114.9 | 9185.0 | 1459.1 | 1040.2 | 678.3 | 484.5 | 427.5 | 407.5 | 393.3 | 387.6 | 387.6 |
| 80° | 3653.5 | 2624.7 | 857.8 | 686.8 | 461.7 | 367.6 | 339.1 | 324.9 | 304.9 | 290.7 | 299.2 |
| 82.5° | 1376.5 | 1137.1 | 490.2 | 413.2 | 293.5 | 245.1 | 236.5 | 225.1 | 216.6 | 196.6 | 196.6 |
| 85° | 669.7 | 552.9 | 313.5 | 219.4 | 162.4 | 128.2 | 122.5 | 116.8 | 111.1 | 96.9 | 99.7 |
| 87.5° | 230.8 | 245.1 | 136.8 | 79.8 | 48.4 | 31.3 | 25.6 | 14.2 | 14.2 | 14.2 | 14.2 |
| 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)