

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: P458473

Luminaire Tested: **GALN-SA9D-827-U-T2**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P458473
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-10)
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-T2
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 51848 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B4 - U0 - G5

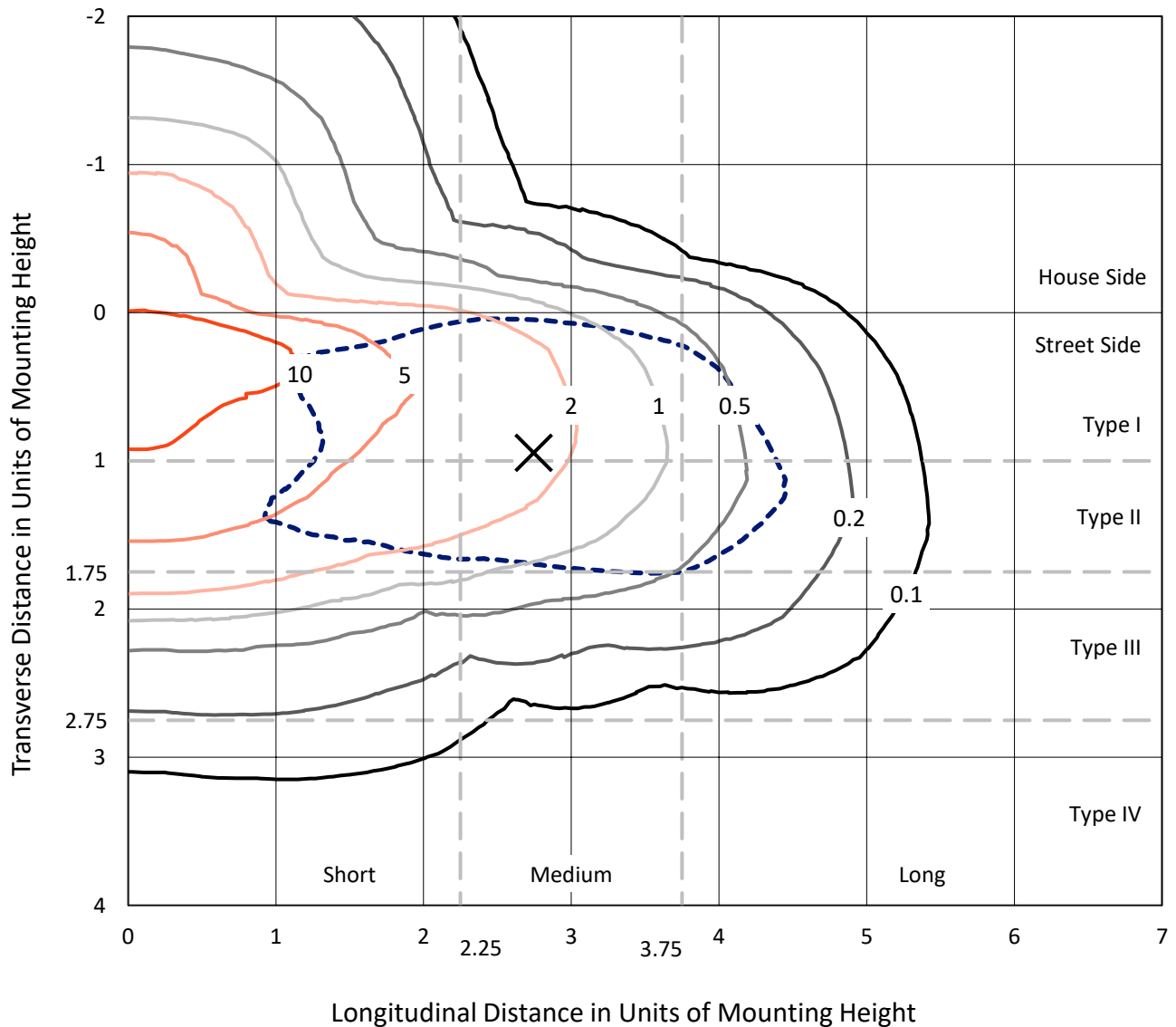
Input Watts (W): 552
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

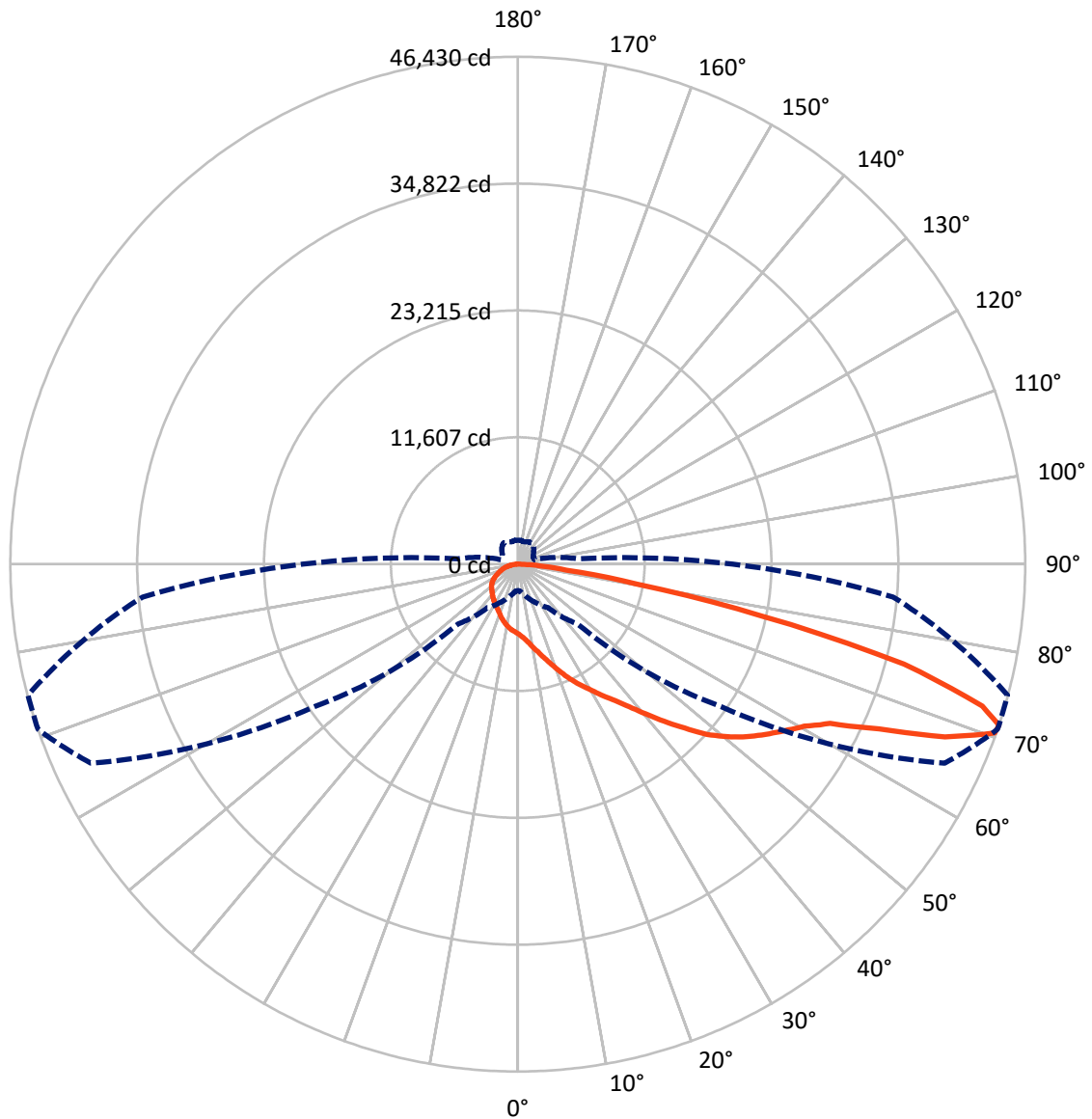
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.4 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 71-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 9324.7 | 0.0 | 9324.7 |
| | % Fixture | 18.0 | 0.0 | 18.0 |
| Street Side | Lumens | 42523.3 | 0.0 | 42523.3 |
| | % Fixture | 82.0 | 0.0 | 82.0 |
| Total | Lumens | 51848.0 | 0.0 | 51848.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 638.9 | 1.2 |
| 10°-20° | 2075.8 | 4.0 |
| 20°-30° | 3627.6 | 7.0 |
| 30°-40° | 5395.6 | 10.4 |
| 40°-50° | 7949.8 | 15.3 |
| 50°-60° | 11129.8 | 21.5 |
| 60°-70° | 12448.3 | 24.0 |
| 70°-80° | 7603.9 | 14.7 |
| 80°-90° | 978.2 | 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° | 51848.0 | 100.0 |
| 0°-180° | 51848.0 | 100.0 |

Coefficient of Utilization



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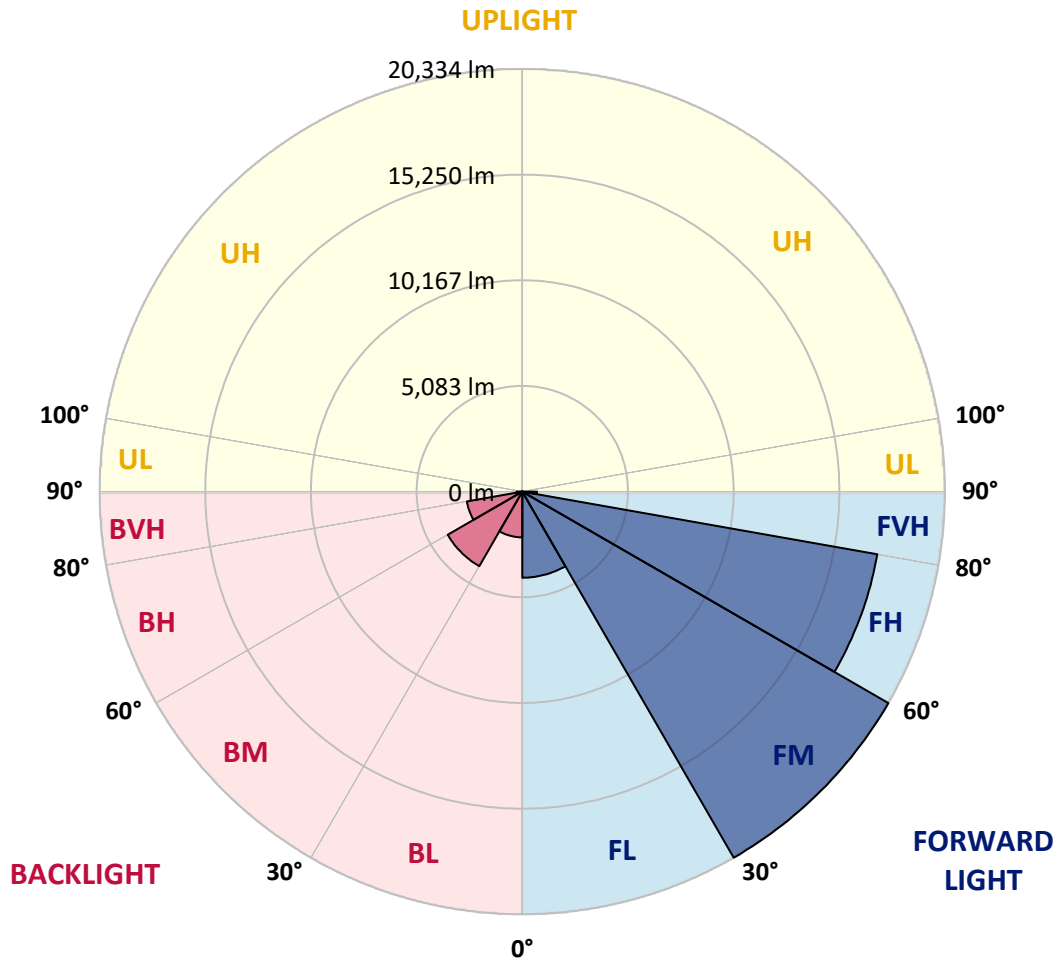
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 4142.7 | 8.0 | | | |
| FM | (30°-60°) | 20333.8 | 39.2 | | | |
| FH | (60°-80°) | 17343.0 | 33.4 | | | G5 |
| FVH | (80°-90°) | 703.8 | 1.4 | | | G4/750 |
| BL | (0°-30°) | 2199.7 | 4.2 | B3/2500 | | |
| BM | (30°-60°) | 4141.5 | 8.0 | B3/5000 | | |
| BH | (60°-80°) | 2709.2 | 5.2 | B4/5000 | | G4/5000 |
| BVH | (80°-90°) | 274.3 | 0.5 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G5

Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 71° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 |
| 2.5° | 7064.3 | 7030.1 | 7033.0 | 6984.5 | 6921.9 | 6853.5 | 6756.6 | 6671.1 | 6602.7 | 6562.8 | 6446.0 |
| 5° | 7828.1 | 7793.9 | 7751.1 | 7645.7 | 7600.1 | 7431.9 | 7218.2 | 7024.4 | 6876.3 | 6793.6 | 6559.9 |
| 7.5° | 8446.4 | 8437.9 | 8426.5 | 8366.6 | 8249.8 | 8016.1 | 7833.8 | 7497.5 | 7278.1 | 7121.3 | 6722.4 |
| 10° | 8828.3 | 8842.5 | 8851.1 | 8862.5 | 8814.0 | 8691.5 | 8440.7 | 8016.1 | 7736.9 | 7537.4 | 6933.3 |
| 12.5° | 9022.1 | 9036.3 | 9084.8 | 9190.2 | 9255.7 | 9241.5 | 9036.3 | 8620.3 | 8235.6 | 7973.4 | 7158.4 |
| 15° | 9141.8 | 9164.5 | 9250.0 | 9389.7 | 9609.1 | 9748.7 | 9649.0 | 9264.3 | 8842.5 | 8531.9 | 7426.2 |
| 17.5° | 9272.8 | 9298.5 | 9392.5 | 9592.0 | 9879.8 | 10181.9 | 10290.2 | 9959.6 | 9500.8 | 9130.4 | 7725.5 |
| 20° | 9346.9 | 9381.1 | 9515.1 | 9777.2 | 10113.5 | 10552.3 | 10911.4 | 10737.6 | 10236.0 | 9825.7 | 8070.3 |
| 22.5° | 9466.6 | 9495.1 | 9609.1 | 9888.4 | 10290.2 | 10840.2 | 11532.6 | 11495.6 | 11053.9 | 10523.8 | 8449.3 |
| 25° | 9791.5 | 9837.1 | 9894.1 | 10062.2 | 10449.8 | 11133.7 | 12048.4 | 12304.9 | 11846.1 | 11253.4 | 8796.9 |
| 27.5° | 10404.2 | 10441.2 | 10438.4 | 10461.1 | 10680.6 | 11387.3 | 12495.8 | 13105.6 | 12632.6 | 11991.4 | 9133.2 |
| 30° | 11102.3 | 11116.6 | 11128.0 | 11076.7 | 11125.1 | 11646.6 | 12906.2 | 13897.9 | 13424.8 | 12749.4 | 9426.7 |
| 32.5° | 11951.5 | 11980.0 | 11883.1 | 11752.1 | 11712.2 | 12031.3 | 13245.3 | 14690.1 | 14362.4 | 13518.8 | 9717.4 |
| 35° | 12954.6 | 13028.7 | 12832.1 | 12601.3 | 12438.8 | 12584.2 | 13701.2 | 15499.4 | 15322.7 | 14502.0 | 10102.1 |
| 37.5° | 14100.2 | 14191.4 | 14009.0 | 13555.9 | 13325.1 | 13365.0 | 14296.8 | 16499.6 | 16536.7 | 15621.9 | 10674.9 |
| 40° | 15037.7 | 15157.4 | 15163.1 | 14521.9 | 14171.4 | 14217.0 | 15052.0 | 17576.8 | 18001.4 | 17006.8 | 11350.2 |
| 42.5° | 15656.1 | 15772.9 | 15895.5 | 15519.3 | 15151.7 | 15411.0 | 15932.5 | 18745.1 | 19648.5 | 18688.2 | 12293.5 |
| 45° | 16334.3 | 16439.8 | 16508.2 | 16337.2 | 16132.0 | 16804.5 | 16995.4 | 19987.6 | 21403.9 | 20566.1 | 13325.1 |
| 47.5° | 17120.8 | 17237.7 | 17303.2 | 17140.8 | 17063.8 | 18027.0 | 18141.0 | 21147.4 | 23279.0 | 22389.9 | 14464.9 |
| 50° | 18169.5 | 18257.9 | 18223.7 | 18121.1 | 18104.0 | 18964.6 | 19241.0 | 22233.1 | 24826.3 | 24353.3 | 15647.6 |
| 52.5° | 19474.7 | 19580.1 | 19617.1 | 19471.8 | 19406.3 | 19634.2 | 20127.2 | 23222.0 | 26234.1 | 26040.3 | 16910.0 |
| 55° | 20264.0 | 20432.2 | 20996.4 | 21224.4 | 21381.1 | 20500.5 | 21081.9 | 24313.4 | 27496.5 | 27818.5 | 18266.4 |
| 57.5° | 19252.4 | 19469.0 | 20731.4 | 21871.2 | 23344.5 | 22666.3 | 22435.5 | 25453.3 | 28758.9 | 29542.6 | 19890.7 |
| 60° | 16784.6 | 16833.0 | 18460.2 | 20560.4 | 23524.0 | 25450.4 | 25259.5 | 27265.7 | 30126.7 | 31280.9 | 22030.8 |
| 62.5° | 11643.8 | 11746.4 | 13669.9 | 17021.1 | 21307.0 | 26453.5 | 30064.0 | 30394.6 | 32087.3 | 33882.6 | 25168.3 |
| 65° | 6004.3 | 5870.3 | 7622.9 | 10697.7 | 16063.6 | 24071.2 | 33956.7 | 36148.1 | 36339.0 | 37951.9 | 29585.3 |
| 67.5° | 3696.0 | 3755.9 | 4576.6 | 6246.5 | 9498.0 | 17494.1 | 33549.2 | 43178.2 | 42172.3 | 42947.4 | 33686.0 |
| 70° | 2775.6 | 2849.7 | 3413.9 | 4274.5 | 5790.5 | 10002.4 | 26980.7 | 44882.3 | 46287.2 | 46087.8 | 34934.1 |
| 71° | 2413.7 | 2490.6 | 3077.6 | 3889.8 | 4864.4 | 7719.8 | 22731.8 | 43098.5 | 46429.7 | 46395.5 | 34463.9 |
| 72.5° | 2057.5 | 2105.9 | 2564.7 | 3294.2 | 4100.7 | 5411.5 | 17078.1 | 38653.0 | 44449.2 | 45586.2 | 32785.5 |
| 75° | 1615.8 | 1652.8 | 1858.0 | 2513.4 | 3228.7 | 3322.7 | 9164.5 | 28978.3 | 36507.2 | 38672.9 | 27294.2 |
| 77.5° | 1316.5 | 1342.2 | 1447.6 | 1866.5 | 2490.6 | 2353.8 | 4807.4 | 18862.0 | 22871.5 | 25051.5 | 16077.9 |
| 80° | 1045.8 | 1074.3 | 1137.0 | 1265.3 | 1866.5 | 1678.5 | 2294.0 | 9557.8 | 11048.2 | 11025.4 | 6417.5 |
| 82.5° | 812.2 | 820.7 | 894.8 | 929.0 | 1276.7 | 1191.2 | 1242.5 | 4046.5 | 4482.5 | 4630.7 | 2316.8 |
| 85° | 512.9 | 538.6 | 792.2 | 712.4 | 763.7 | 698.2 | 612.7 | 1607.2 | 1980.5 | 1952.0 | 926.1 |
| 87.5° | 156.7 | 165.3 | 267.9 | 302.1 | 339.1 | 304.9 | 225.1 | 473.0 | 578.5 | 626.9 | 230.8 |
| 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° | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 | 6363.3 |
| 2.5° | 6400.4 | 6369.0 | 6257.9 | 6166.7 | 6081.2 | 5987.2 | 5907.4 | 5884.6 | 5864.6 | 5856.1 | 5853.2 |
| 5° | 6460.2 | 6366.2 | 6146.7 | 5967.2 | 5824.7 | 5693.6 | 5611.0 | 5574.0 | 5536.9 | 5536.9 | 5548.3 |
| 7.5° | 6545.7 | 6374.7 | 6035.6 | 5767.7 | 5588.2 | 5465.7 | 5405.8 | 5400.1 | 5408.7 | 5417.2 | 5420.1 |
| 10° | 6639.7 | 6369.0 | 5873.2 | 5539.8 | 5380.2 | 5323.2 | 5326.0 | 5374.5 | 5420.1 | 5454.3 | 5460.0 |
| 12.5° | 6730.9 | 6334.8 | 5682.2 | 5326.0 | 5223.5 | 5234.8 | 5314.6 | 5422.9 | 5511.3 | 5559.7 | 5562.6 |
| 15° | 6833.5 | 6280.7 | 5451.4 | 5123.7 | 5089.5 | 5177.9 | 5326.0 | 5491.3 | 5625.3 | 5705.0 | 5713.6 |
| 17.5° | 6919.0 | 6189.5 | 5209.2 | 4927.1 | 4969.8 | 5132.3 | 5337.4 | 5551.2 | 5713.6 | 5813.3 | 5830.4 |
| 20° | 7015.9 | 6072.7 | 4958.4 | 4739.0 | 4861.5 | 5081.0 | 5314.6 | 5545.5 | 5713.6 | 5810.5 | 5833.3 |
| 22.5° | 7092.8 | 5907.4 | 4719.1 | 4585.1 | 4764.7 | 5018.3 | 5237.7 | 5422.9 | 5559.7 | 5611.0 | 5645.2 |
| 25° | 7124.2 | 5699.3 | 4493.9 | 4459.7 | 4687.7 | 4915.7 | 5063.9 | 5169.3 | 5212.1 | 5206.4 | 5220.6 |
| 27.5° | 7107.1 | 5460.0 | 4300.2 | 4360.0 | 4590.8 | 4756.1 | 4830.2 | 4821.6 | 4744.7 | 4673.5 | 4707.7 |
| 30° | 7035.8 | 5175.0 | 4137.7 | 4257.4 | 4465.4 | 4556.6 | 4545.2 | 4434.1 | 4288.8 | 4154.8 | 4163.4 |
| 32.5° | 6907.6 | 4867.2 | 3986.7 | 4140.6 | 4288.8 | 4328.7 | 4251.7 | 4106.4 | 3898.4 | 3724.5 | 3698.9 |
| 35° | 6799.3 | 4573.7 | 3852.8 | 4006.6 | 4112.1 | 4092.1 | 4018.0 | 3830.0 | 3641.9 | 3488.0 | 3462.4 |
| 37.5° | 6782.2 | 4323.0 | 3724.5 | 3855.6 | 3915.5 | 3887.0 | 3795.8 | 3636.2 | 3567.8 | 3451.0 | 3436.7 |
| 40° | 6873.4 | 4146.3 | 3593.4 | 3696.0 | 3724.5 | 3701.7 | 3602.0 | 3510.8 | 3573.5 | 3545.0 | 3545.0 |
| 42.5° | 7121.3 | 4052.2 | 3476.6 | 3536.4 | 3559.2 | 3576.3 | 3505.1 | 3428.2 | 3505.1 | 3374.0 | 3331.3 |
| 45° | 7514.6 | 4055.1 | 3371.2 | 3379.7 | 3448.1 | 3507.9 | 3459.5 | 3345.5 | 3305.6 | 3043.5 | 2992.2 |
| 47.5° | 8093.1 | 4152.0 | 3285.7 | 3231.5 | 3354.1 | 3453.8 | 3385.4 | 3220.1 | 3043.5 | 2869.6 | 2838.3 |
| 50° | 8768.4 | 4325.8 | 3208.7 | 3077.6 | 3228.7 | 3385.4 | 3334.1 | 3140.3 | 2958.0 | 2852.5 | 2832.6 |
| 52.5° | 9517.9 | 4545.2 | 3114.7 | 2906.7 | 3074.8 | 3354.1 | 3345.5 | 3128.9 | 2878.2 | 2806.9 | 2789.8 |
| 55° | 10444.1 | 4761.8 | 2997.9 | 2707.2 | 2938.0 | 3328.4 | 3314.2 | 3034.9 | 2861.1 | 2809.8 | 2804.1 |
| 57.5° | 11521.2 | 5075.3 | 2829.7 | 2504.9 | 2781.3 | 3223.0 | 3191.6 | 2977.9 | 2804.1 | 2767.0 | 2764.2 |
| 60° | 13256.7 | 5562.6 | 2590.4 | 2319.6 | 2621.7 | 3037.8 | 3077.6 | 2881.0 | 2712.9 | 2704.3 | 2701.5 |
| 62.5° | 15539.3 | 6246.5 | 2342.4 | 2128.7 | 2436.5 | 2798.4 | 2912.4 | 2749.9 | 2616.0 | 2658.7 | 2664.4 |
| 65° | 18691.0 | 6822.1 | 2086.0 | 1966.3 | 2231.3 | 2567.6 | 2755.6 | 2627.4 | 2507.7 | 2590.4 | 2590.4 |
| 67.5° | 20745.6 | 6833.5 | 1852.3 | 1798.1 | 2023.3 | 2373.8 | 2590.4 | 2482.1 | 2368.1 | 2507.7 | 2513.4 |
| 70° | 20318.2 | 5987.2 | 1658.5 | 1621.5 | 1820.9 | 2165.8 | 2408.0 | 2322.5 | 2191.4 | 2316.8 | 2271.2 |
| 71° | 19628.5 | 5517.0 | 1581.6 | 1553.1 | 1741.2 | 2066.0 | 2322.5 | 2251.2 | 2120.2 | 2202.8 | 2177.1 |
| 72.5° | 18528.6 | 4790.3 | 1456.2 | 1461.9 | 1621.5 | 1940.6 | 2202.8 | 2128.7 | 1997.6 | 2043.2 | 2034.7 |
| 75° | 15661.8 | 4183.3 | 1245.3 | 1271.0 | 1393.5 | 1726.9 | 1963.4 | 1906.4 | 1772.5 | 1772.5 | 1763.9 |
| 77.5° | 9791.5 | 2923.8 | 1034.4 | 1048.7 | 1182.6 | 1479.0 | 1687.0 | 1638.6 | 1510.3 | 1467.6 | 1456.2 |
| 80° | 3653.3 | 1510.3 | 809.3 | 826.4 | 909.0 | 1165.5 | 1396.3 | 1350.7 | 1219.7 | 1171.2 | 1125.6 |
| 82.5° | 1382.1 | 758.0 | 595.6 | 581.3 | 669.7 | 889.1 | 1094.3 | 1040.1 | 937.5 | 820.7 | 786.5 |
| 85° | 521.5 | 376.2 | 364.8 | 353.4 | 393.3 | 527.2 | 678.2 | 666.8 | 558.5 | 475.9 | 467.3 |
| 87.5° | 136.8 | 122.5 | 142.5 | 105.4 | 111.1 | 99.7 | 102.6 | 42.7 | 19.9 | 8.5 | 5.7 |
| 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)