

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: P458365

Luminaire Tested: **GALN-SA9D-730-U-T4FT**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P458365
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-28)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GALN-SA9D-730-U-T4FT
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 63728 lumens
Efficiency: N/A
Efficacy: 115.4 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U0 - G5

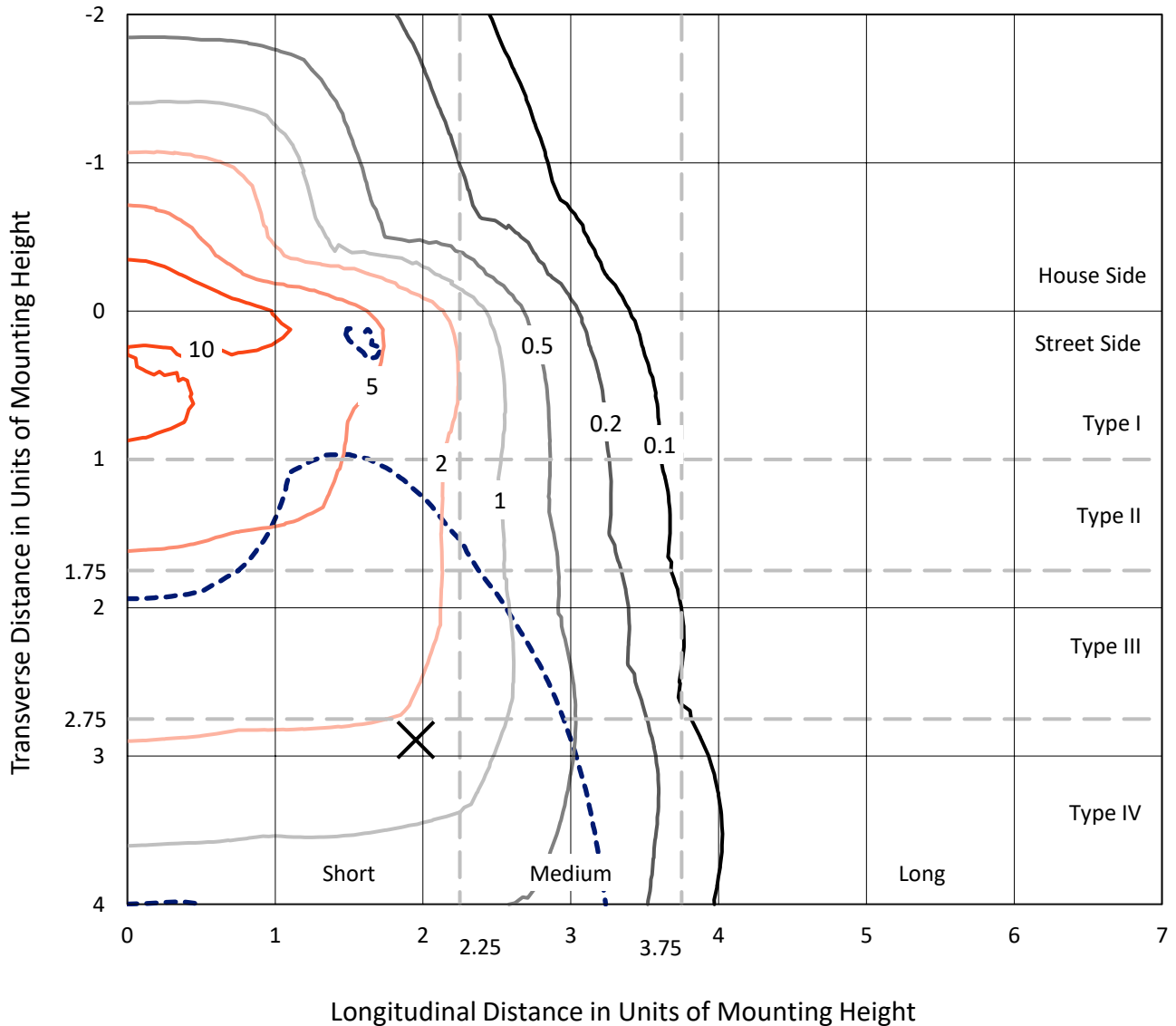
Input Watts (W): 552
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P458365
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Iso-Footcandle Lines of Horizontal Illumination

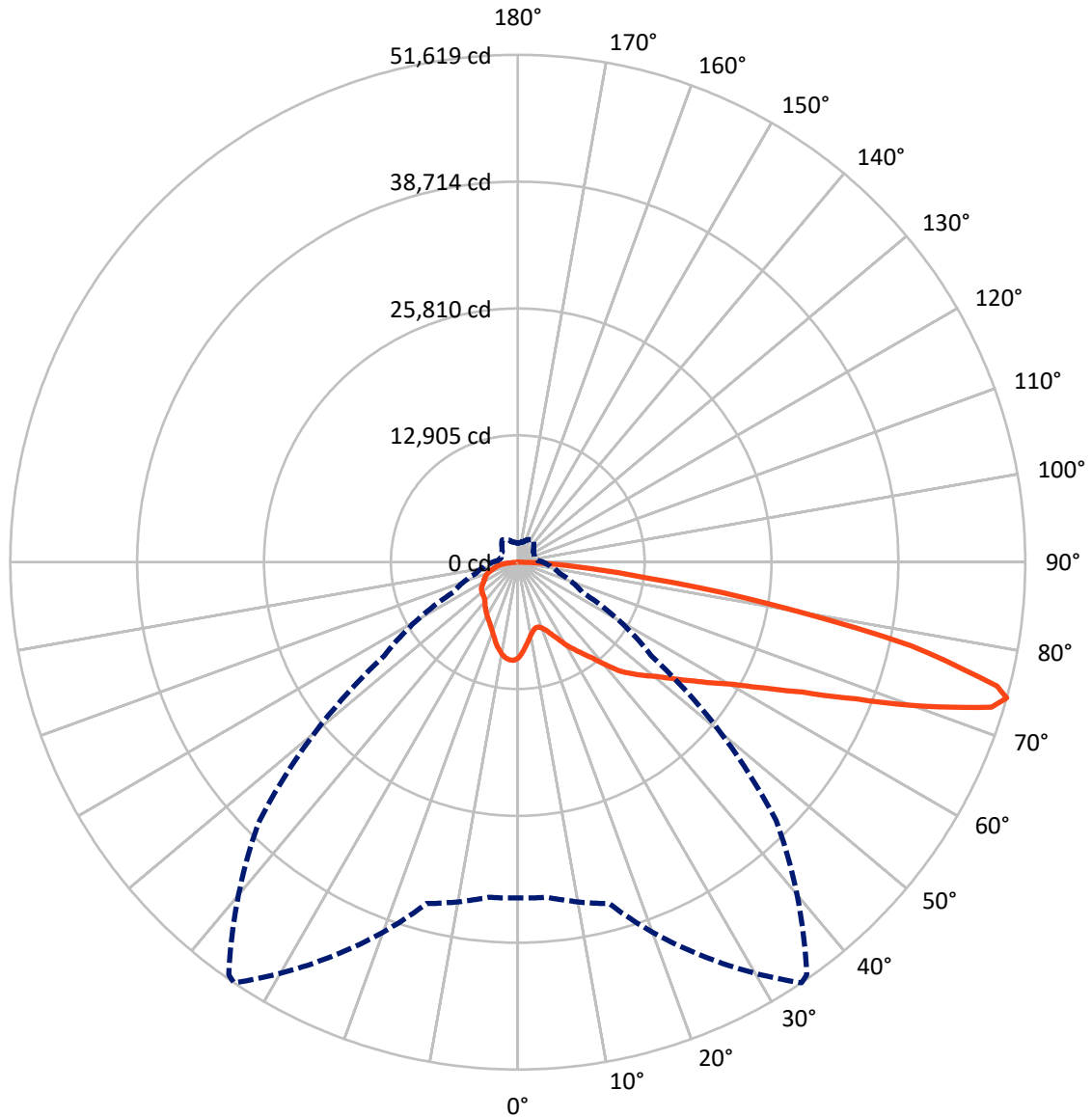
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 34-Deg Lateral - - - Horizontal Cone Through 74-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 13561.8 | 0.0 | 13561.8 |
| | % Fixture | 21.3 | 0.0 | 21.3 |
| Street Side | Lumens | 50166.2 | 0.0 | 50166.2 |
| | % Fixture | 78.7 | 0.0 | 78.7 |
| Total | Lumens | 63728.0 | 0.0 | 63728.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 884.9 | 1.4 |
| 10°-20° | 2422.4 | 3.8 |
| 20°-30° | 3993.9 | 6.3 |
| 30°-40° | 5982.4 | 9.4 |
| 40°-50° | 8696.7 | 13.6 |
| 50°-60° | 12147.3 | 19.1 |
| 60°-70° | 15207.8 | 23.9 |
| 70°-80° | 12575.6 | 19.7 |
| 80°-90° | 1817.1 | 2.9 |
| 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° | 63728.0 | 100.0 |
| 0°-180° | 63728.0 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P458365

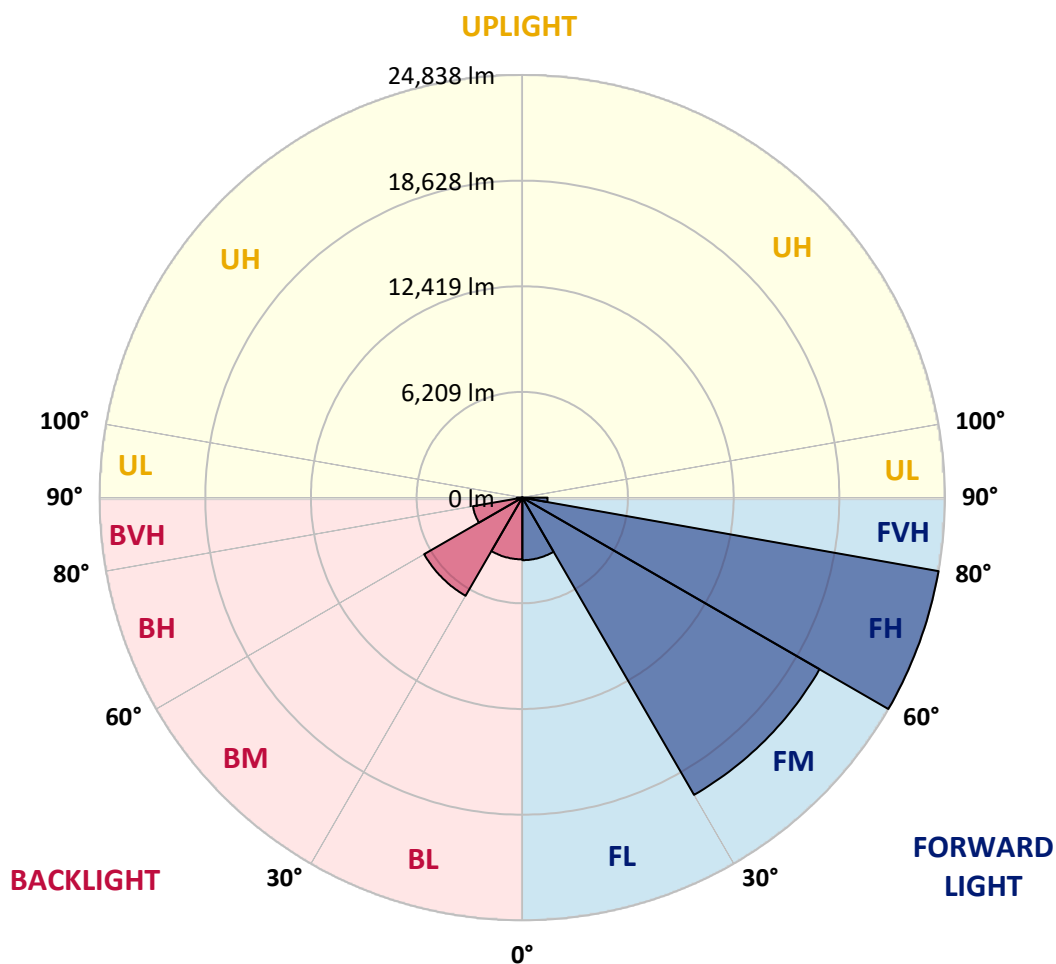
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 3673.6 | 5.8 | | | |
| FM | (30°-60°) | 20166.2 | 31.6 | | | |
| FH | (60°-80°) | 24837.8 | 39.0 | | | G5 |
| FVH | (80°-90°) | 1488.6 | 2.3 | | | G5 |
| BL | (0°-30°) | 3627.6 | 5.7 | B4/5000 | | |
| BM | (30°-60°) | 6660.2 | 10.5 | B4/8500 | | |
| BH | (60°-80°) | 2945.5 | 4.6 | B4/5000 | | G4/5000 |
| BVH | (80°-90°) | 328.5 | 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 IV Short





REPORT NUMBER: P458365

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 34° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 |
| 2.5° | 8992.1 | 9038.0 | 9062.7 | 9151.0 | 9172.2 | 9200.4 | 9274.6 | 9373.4 | 9500.5 | 9613.5 | 9712.4 |
| 5° | 8243.7 | 8314.3 | 8356.6 | 8434.3 | 8586.1 | 8600.3 | 8798.0 | 9023.9 | 9281.6 | 9521.7 | 9719.4 |
| 7.5° | 7534.0 | 7611.7 | 7647.0 | 7788.2 | 7989.5 | 8021.3 | 8310.8 | 8667.3 | 9098.0 | 9461.7 | 9765.3 |
| 10° | 7000.9 | 7039.8 | 7117.4 | 7223.4 | 7463.4 | 7484.6 | 7862.4 | 8339.0 | 8896.8 | 9433.4 | 9843.0 |
| 12.5° | 6711.4 | 6732.6 | 6750.3 | 6863.3 | 7099.8 | 7131.6 | 7527.0 | 8067.1 | 8737.9 | 9454.6 | 9970.1 |
| 15° | 6753.8 | 6760.9 | 6683.2 | 6704.4 | 6895.0 | 6940.9 | 7332.8 | 7887.1 | 8639.1 | 9507.6 | 10160.7 |
| 17.5° | 7110.4 | 7085.7 | 6895.0 | 6796.2 | 6930.3 | 6951.5 | 7294.0 | 7816.5 | 8593.2 | 9606.4 | 10358.4 |
| 20° | 7671.7 | 7636.4 | 7308.1 | 7089.2 | 7166.9 | 7184.5 | 7421.1 | 7869.4 | 8639.1 | 9768.8 | 10665.6 |
| 22.5° | 8370.8 | 8356.6 | 7858.9 | 7594.1 | 7590.5 | 7590.5 | 7714.1 | 8060.1 | 8776.8 | 9991.3 | 10986.9 |
| 25° | 9348.7 | 9274.6 | 8625.0 | 8282.5 | 8187.2 | 8180.1 | 8166.0 | 8374.3 | 8953.3 | 10227.8 | 11368.1 |
| 27.5° | 10351.4 | 10224.3 | 9645.3 | 9119.2 | 8914.5 | 8889.8 | 8798.0 | 8819.1 | 9179.3 | 10496.1 | 11802.4 |
| 30° | 11251.6 | 11170.4 | 10626.7 | 10044.2 | 9800.6 | 9744.1 | 9489.9 | 9373.4 | 9557.0 | 10979.8 | 12494.4 |
| 32.5° | 11940.1 | 11890.7 | 11467.0 | 10937.4 | 10577.3 | 10566.7 | 10196.0 | 10100.7 | 10146.6 | 11565.9 | 13285.2 |
| 35° | 12497.9 | 12515.6 | 12300.2 | 11841.2 | 11428.2 | 11368.1 | 11121.0 | 11001.0 | 10866.8 | 12413.2 | 14280.8 |
| 37.5° | 13260.5 | 13299.3 | 13285.2 | 12889.8 | 12384.9 | 12399.0 | 12342.6 | 12144.9 | 11788.3 | 13359.3 | 15385.8 |
| 40° | 14100.7 | 14129.0 | 14125.5 | 13973.6 | 13708.9 | 13723.0 | 13701.8 | 13475.8 | 12942.7 | 14563.2 | 16614.4 |
| 42.5° | 15262.3 | 15128.1 | 14778.6 | 14930.4 | 15085.7 | 15152.8 | 15297.6 | 15082.2 | 14351.4 | 15848.3 | 17768.9 |
| 45° | 16561.5 | 16307.3 | 15516.5 | 15587.1 | 16162.5 | 16289.6 | 17087.5 | 16791.0 | 15880.1 | 17324.1 | 19128.1 |
| 47.5° | 17380.6 | 17129.9 | 16462.6 | 16448.5 | 17211.1 | 17334.7 | 18746.9 | 18637.4 | 17271.1 | 18916.3 | 20787.5 |
| 50° | 18111.4 | 18076.1 | 17324.1 | 17504.1 | 18249.1 | 18432.6 | 20554.5 | 20452.1 | 18658.6 | 20794.5 | 22595.1 |
| 52.5° | 19195.2 | 18909.3 | 18309.1 | 18679.8 | 19664.8 | 19904.9 | 22347.9 | 22047.9 | 19933.1 | 22453.9 | 24349.7 |
| 55° | 19682.4 | 19615.4 | 19580.0 | 19901.3 | 21253.5 | 21426.5 | 24092.0 | 23403.6 | 21020.5 | 23859.0 | 25684.2 |
| 57.5° | 20985.2 | 20861.6 | 21211.1 | 21430.0 | 23124.6 | 23389.4 | 25913.7 | 24819.3 | 21973.7 | 24974.6 | 26333.9 |
| 60° | 22672.7 | 22605.7 | 22926.9 | 23322.4 | 25214.7 | 25617.2 | 27989.7 | 26026.7 | 22739.8 | 25536.0 | 25977.3 |
| 62.5° | 25193.5 | 25186.5 | 25126.4 | 25973.7 | 28176.8 | 28547.5 | 30372.7 | 27202.4 | 22859.9 | 25115.8 | 24134.4 |
| 65° | 28808.7 | 28681.6 | 28159.1 | 29084.1 | 31862.6 | 32296.8 | 32854.7 | 27859.0 | 22136.1 | 22958.7 | 20321.4 |
| 67.5° | 32589.9 | 32582.8 | 32159.2 | 33359.5 | 37154.8 | 37603.2 | 35957.9 | 27714.3 | 20127.3 | 18598.6 | 14432.6 |
| 70° | 35724.9 | 35573.1 | 36113.3 | 39311.9 | 43915.7 | 44434.6 | 38672.9 | 26009.1 | 16031.9 | 12282.5 | 8575.5 |
| 72.5° | 36476.9 | 36484.0 | 37606.7 | 43901.5 | 50408.2 | 50489.4 | 39650.8 | 21080.5 | 10729.1 | 6775.0 | 4289.5 |
| 74° | 34160.9 | 34221.0 | 35961.5 | 44131.0 | 51619.2 | 51252.0 | 37151.2 | 16568.5 | 7255.1 | 4423.7 | 3092.7 |
| 75° | 31181.2 | 30803.4 | 33320.7 | 42602.3 | 50362.3 | 49966.9 | 34224.5 | 13295.8 | 5535.8 | 3534.0 | 2707.9 |
| 77.5° | 16670.9 | 17055.8 | 20939.3 | 31792.0 | 40914.7 | 40459.3 | 23205.9 | 6376.0 | 2990.3 | 2460.7 | 1948.8 |
| 80° | 5934.7 | 6545.5 | 9200.4 | 16635.6 | 26231.5 | 26372.7 | 11075.1 | 2923.2 | 2104.2 | 1814.7 | 1376.9 |
| 82.5° | 2421.9 | 2489.0 | 3950.6 | 7382.2 | 13320.5 | 13447.6 | 4522.5 | 1737.0 | 1504.0 | 1249.8 | 822.6 |
| 85° | 946.2 | 974.4 | 1747.6 | 3318.7 | 5684.1 | 6054.8 | 1564.0 | 917.9 | 925.0 | 716.7 | 420.1 |
| 87.5° | 317.7 | 360.1 | 716.7 | 1105.0 | 1931.2 | 1892.3 | 455.4 | 271.8 | 331.9 | 310.7 | 130.6 |
| 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° | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 | 9730.0 |
| 2.5° | 9761.8 | 9828.9 | 9874.8 | 9924.2 | 9970.1 | 9984.2 | 9973.6 | 10005.4 | 10008.9 | 10012.4 | 10016.0 |
| 5° | 9818.3 | 9910.1 | 9998.3 | 10047.7 | 10068.9 | 10051.3 | 9991.3 | 9959.5 | 9931.2 | 9910.1 | 9917.1 |
| 7.5° | 9895.9 | 10026.6 | 10107.8 | 10128.9 | 10072.5 | 9991.3 | 9843.0 | 9726.5 | 9652.3 | 9602.9 | 9599.4 |
| 10° | 10016.0 | 10143.1 | 10210.2 | 10150.1 | 9994.8 | 9797.1 | 9564.1 | 9345.2 | 9179.3 | 9129.8 | 9126.3 |
| 12.5° | 10167.8 | 10312.5 | 10309.0 | 10132.5 | 9860.6 | 9507.6 | 9129.8 | 8875.6 | 8649.7 | 8536.7 | 8582.6 |
| 15° | 10365.5 | 10474.9 | 10372.6 | 10054.8 | 9624.1 | 9140.4 | 8674.4 | 8328.4 | 8074.2 | 7954.2 | 7961.2 |
| 17.5° | 10595.0 | 10690.3 | 10418.4 | 9917.1 | 9292.2 | 8670.9 | 8130.7 | 7802.4 | 7601.1 | 7512.9 | 7505.8 |
| 20° | 10880.9 | 10909.2 | 10418.4 | 9677.0 | 8865.0 | 8123.6 | 7608.2 | 7378.7 | 7265.7 | 7219.8 | 7234.0 |
| 22.5° | 11188.1 | 11131.6 | 10362.0 | 9338.1 | 8303.7 | 7551.7 | 7205.7 | 7103.3 | 7046.8 | 7039.8 | 7046.8 |
| 25° | 11534.1 | 11375.2 | 10245.5 | 8879.2 | 7717.6 | 7057.4 | 6856.2 | 6873.8 | 6884.4 | 6884.4 | 6909.2 |
| 27.5° | 11957.7 | 11640.0 | 10051.3 | 8300.2 | 7032.7 | 6598.5 | 6542.0 | 6665.5 | 6722.0 | 6732.6 | 6750.3 |
| 30° | 12515.6 | 11929.5 | 9730.0 | 7576.4 | 6450.2 | 6185.4 | 6284.3 | 6450.2 | 6513.7 | 6552.6 | 6545.5 |
| 32.5° | 13179.3 | 12247.2 | 9295.8 | 6852.7 | 5980.6 | 5895.9 | 6015.9 | 6185.4 | 6256.0 | 6277.2 | 6249.0 |
| 35° | 13959.5 | 12607.3 | 8723.8 | 6174.8 | 5571.1 | 5620.5 | 5761.7 | 5814.7 | 5878.3 | 5878.3 | 5892.4 |
| 37.5° | 14799.8 | 12896.8 | 8024.8 | 5553.4 | 5253.4 | 5433.4 | 5535.8 | 5486.4 | 5458.1 | 5422.8 | 5440.5 |
| 40° | 15654.2 | 13112.2 | 7117.4 | 4939.1 | 4935.6 | 5239.2 | 5267.5 | 5126.3 | 5013.3 | 4978.0 | 4960.3 |
| 42.5° | 16399.1 | 13246.4 | 6298.4 | 4462.5 | 4635.5 | 5048.6 | 5069.8 | 4843.8 | 4663.8 | 4557.9 | 4522.5 |
| 45° | 17278.2 | 13401.7 | 5497.0 | 4067.1 | 4356.6 | 4896.8 | 4949.7 | 4646.1 | 4381.3 | 4158.9 | 4102.4 |
| 47.5° | 18482.1 | 13754.8 | 4865.0 | 3760.0 | 4155.4 | 4801.5 | 4875.6 | 4483.7 | 4134.2 | 3844.7 | 3798.8 |
| 50° | 19841.3 | 14238.4 | 4374.3 | 3551.7 | 4000.0 | 4716.7 | 4808.5 | 4317.8 | 3904.7 | 3583.4 | 3548.1 |
| 52.5° | 21087.6 | 14499.7 | 3950.6 | 3364.5 | 3848.2 | 4561.4 | 4720.3 | 4197.7 | 3678.8 | 3322.2 | 3290.4 |
| 55° | 21768.9 | 14076.0 | 3534.0 | 3181.0 | 3639.9 | 4360.1 | 4596.7 | 4031.8 | 3459.9 | 3184.5 | 3138.6 |
| 57.5° | 21860.7 | 13200.5 | 3156.2 | 2983.3 | 3421.0 | 4113.0 | 4367.2 | 3830.6 | 3318.7 | 3089.2 | 3050.3 |
| 60° | 21151.1 | 11894.2 | 2863.2 | 2820.9 | 3198.6 | 3834.1 | 4109.5 | 3654.0 | 3173.9 | 2983.3 | 2944.4 |
| 62.5° | 19385.9 | 10474.9 | 2658.5 | 2672.6 | 2972.7 | 3541.1 | 3918.8 | 3484.6 | 3036.2 | 2866.8 | 2831.4 |
| 65° | 16349.7 | 8646.1 | 2460.7 | 2520.8 | 2771.4 | 3311.6 | 3745.8 | 3343.4 | 2898.5 | 2778.5 | 2746.7 |
| 67.5° | 11357.6 | 6241.9 | 2298.3 | 2361.9 | 2580.8 | 3078.6 | 3544.6 | 3191.6 | 2743.2 | 2679.6 | 2630.2 |
| 70° | 6287.8 | 3841.2 | 2107.7 | 2181.8 | 2383.1 | 2817.3 | 3318.7 | 2962.1 | 2517.2 | 2489.0 | 2418.4 |
| 72.5° | 3304.5 | 2446.6 | 1892.3 | 1973.5 | 2114.8 | 2481.9 | 2972.7 | 2711.4 | 2294.8 | 2174.8 | 2083.0 |
| 74° | 2580.8 | 2005.3 | 1747.6 | 1832.3 | 1927.6 | 2284.2 | 2767.9 | 2531.4 | 2135.9 | 1994.7 | 1924.1 |
| 75° | 2248.9 | 1786.4 | 1624.0 | 1733.5 | 1818.2 | 2150.1 | 2609.0 | 2404.3 | 2047.7 | 1913.5 | 1850.0 |
| 77.5° | 1588.7 | 1338.1 | 1327.5 | 1458.1 | 1504.0 | 1885.3 | 2351.3 | 2188.9 | 1825.3 | 1684.0 | 1624.0 |
| 80° | 1115.6 | 1002.7 | 1052.1 | 1133.3 | 1196.8 | 1666.4 | 2181.8 | 1892.3 | 1496.9 | 1331.0 | 1309.8 |
| 82.5° | 727.3 | 656.7 | 752.0 | 826.1 | 847.3 | 1228.6 | 1761.7 | 1436.9 | 1090.9 | 886.2 | 822.6 |
| 85° | 335.4 | 328.3 | 430.7 | 420.1 | 416.6 | 600.2 | 1045.0 | 840.3 | 628.4 | 469.6 | 441.3 |
| 87.5° | 84.7 | 81.2 | 105.9 | 88.3 | 105.9 | 91.8 | 95.3 | 24.7 | 3.5 | 0.0 | 0.0 |
| 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)