

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: P651537

Luminaire Tested: **GALN-SA7D-840-U-T3R**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P651537
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-8)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GALN-SA7D-840-U-T3R
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(7) 80 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 46371.9 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G5

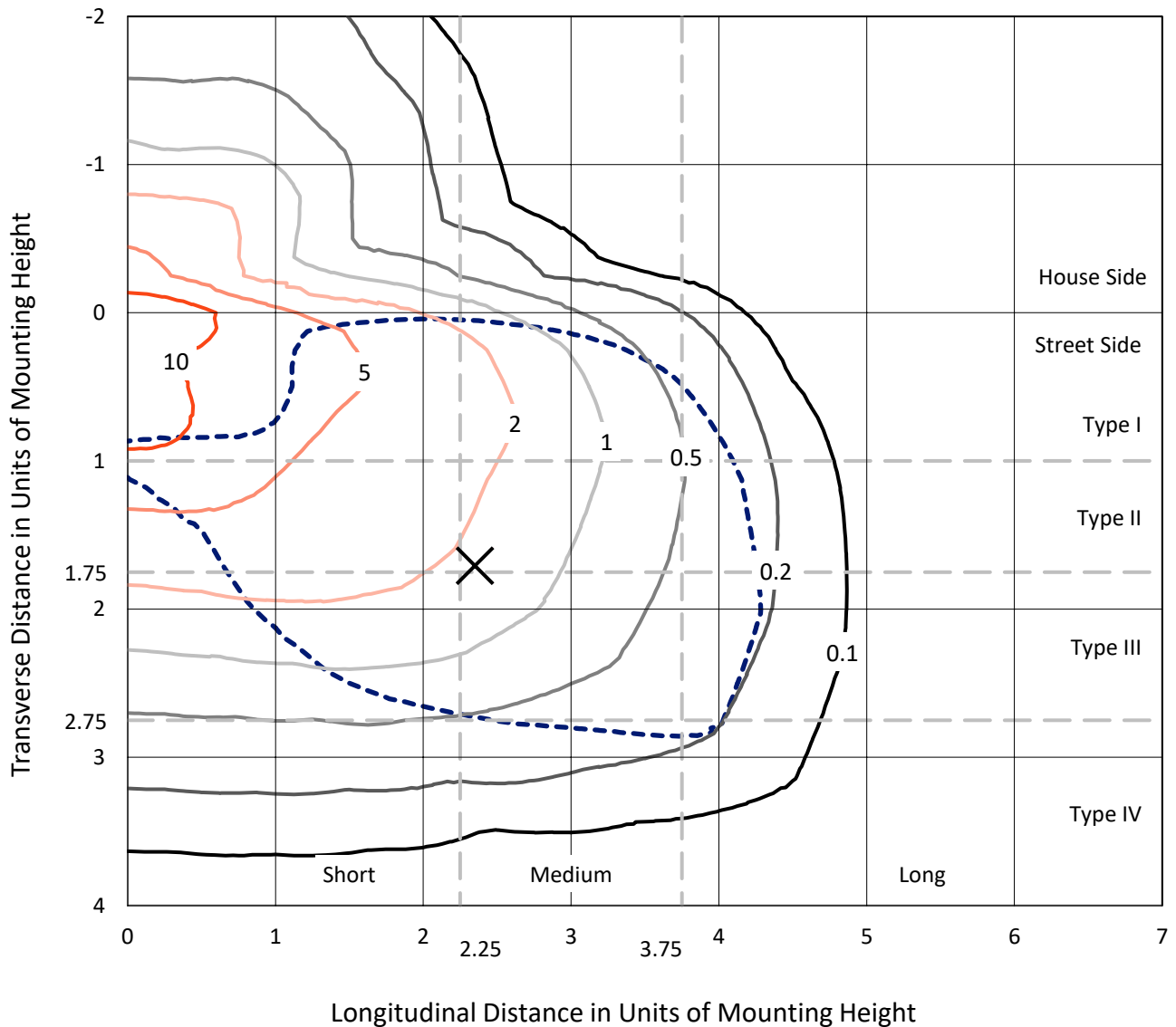
Input Watts (W): 433
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

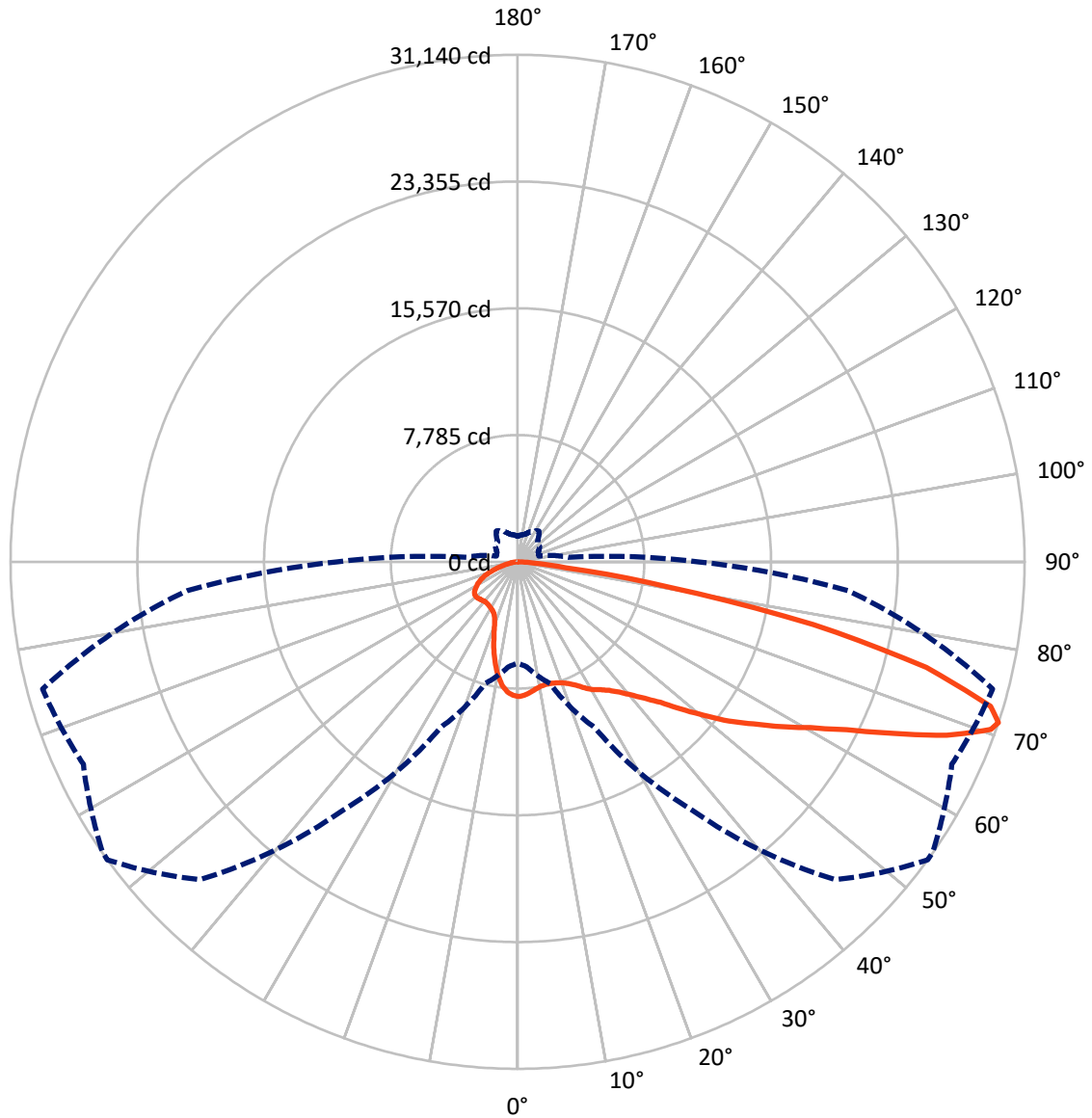
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 13.3 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 54-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 8372.2 | 0.0 | 8372.2 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| Street Side | Lumens | 37999.7 | 0.0 | 37999.7 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| Total | Lumens | 46371.9 | 0.0 | 46371.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 737.3 | 1.6 |
| 10°-20° | 1946.8 | 4.2 |
| 20°-30° | 3241.5 | 7.0 |
| 30°-40° | 4793.2 | 10.3 |
| 40°-50° | 6751.3 | 14.6 |
| 50°-60° | 9040.3 | 19.5 |
| 60°-70° | 11394.6 | 24.6 |
| 70°-80° | 7782.5 | 16.8 |
| 80°-90° | 684.4 | 1.5 |
| 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° | 46371.9 | 100.0 |
| 0°-180° | 46371.9 | 100.0 |

Coefficient of Utilization

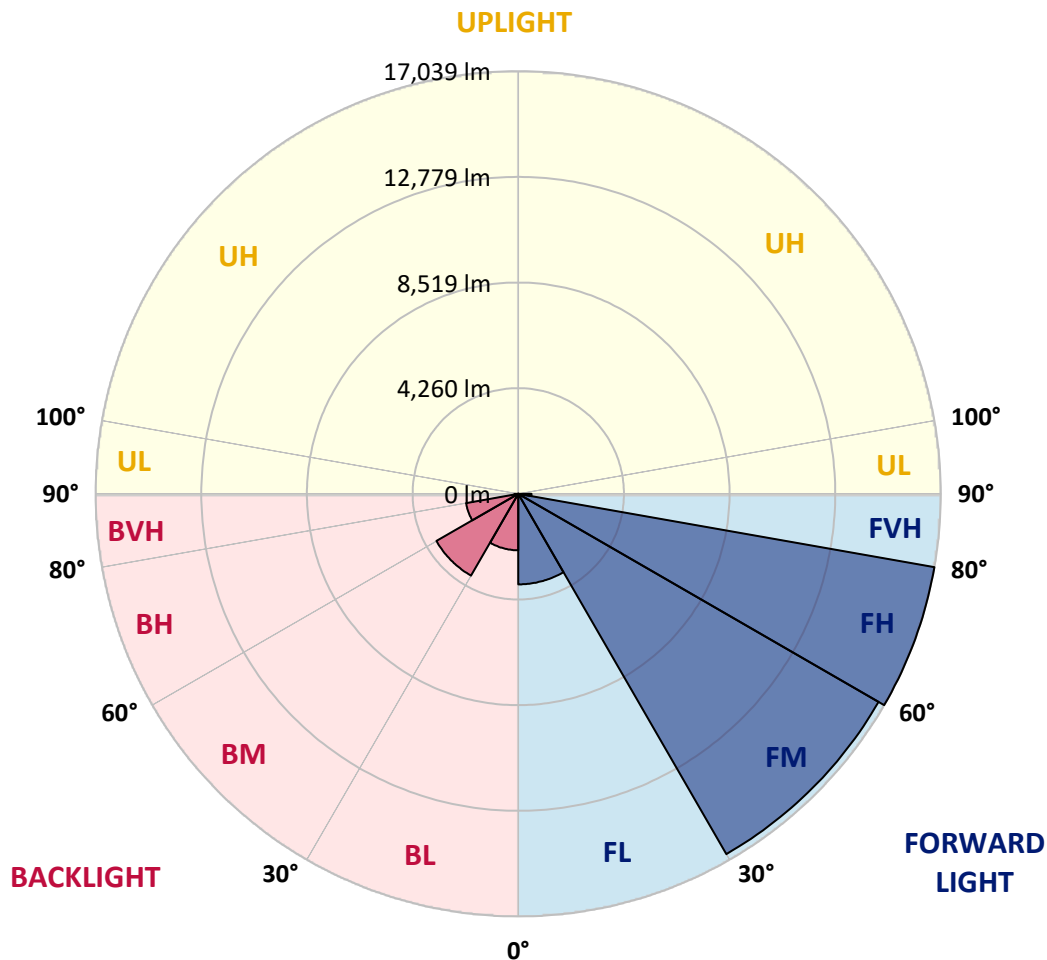


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 3650.2 | 7.9 | | | |
| FM (30°-60°) | 16775.7 | 36.2 | | | |
| FH (60°-80°) | 17038.9 | 36.7 | | | G5 |
| FVH (80°-90°) | 535.0 | 1.2 | | | G4/750 |
| BL (0°-30°) | 2275.4 | 4.9 | B3/2500 | | |
| BM (30°-60°) | 3809.1 | 8.2 | B3/5000 | | |
| BH (60°-80°) | 2138.2 | 4.6 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 149.4 | 0.3 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G5
 Type IV Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 54° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 |
| 2.5° | 7992.9 | 8030.5 | 8040.5 | 8065.5 | 8118.2 | 8160.7 | 8203.3 | 8198.3 | 8258.4 | 8283.4 | 8306.0 |
| 5° | 7637.2 | 7647.2 | 7684.8 | 7734.9 | 7827.6 | 7945.3 | 8060.6 | 8063.0 | 8210.9 | 8328.5 | 8386.1 |
| 7.5° | 7376.7 | 7409.3 | 7434.4 | 7486.9 | 7584.6 | 7712.4 | 7895.2 | 7910.2 | 8173.3 | 8406.2 | 8528.9 |
| 10° | 7206.4 | 7244.0 | 7271.5 | 7336.6 | 7434.4 | 7577.1 | 7775.0 | 7802.5 | 8145.7 | 8528.9 | 8744.4 |
| 12.5° | 7051.1 | 7088.6 | 7113.7 | 7198.9 | 7326.6 | 7502.0 | 7724.8 | 7757.5 | 8155.7 | 8671.7 | 8979.8 |
| 15° | 7146.2 | 7176.3 | 7166.3 | 7191.4 | 7276.5 | 7476.9 | 7744.9 | 7777.5 | 8193.3 | 8809.5 | 9212.7 |
| 17.5° | 7569.6 | 7594.7 | 7512.0 | 7416.8 | 7376.7 | 7524.5 | 7807.5 | 7842.6 | 8268.5 | 8952.3 | 9450.7 |
| 20° | 8193.3 | 8260.9 | 8080.6 | 7867.6 | 7674.8 | 7694.8 | 7937.8 | 7975.4 | 8373.6 | 9095.0 | 9693.7 |
| 22.5° | 9004.8 | 9055.0 | 8834.5 | 8483.8 | 8128.2 | 7945.3 | 8133.1 | 8155.7 | 8531.4 | 9280.4 | 9959.2 |
| 25° | 9959.2 | 9989.2 | 9683.6 | 9232.8 | 8719.3 | 8373.6 | 8401.2 | 8441.3 | 8791.9 | 9490.8 | 10194.6 |
| 27.5° | 10886.0 | 10981.2 | 10628.0 | 10076.9 | 9400.6 | 8824.5 | 8769.4 | 8794.4 | 9075.0 | 9608.5 | 10357.4 |
| 30° | 11985.6 | 11978.0 | 11604.9 | 10966.1 | 10099.5 | 9315.4 | 9117.5 | 9112.6 | 9227.8 | 9666.1 | 10475.2 |
| 32.5° | 12862.3 | 12964.9 | 12599.3 | 11902.9 | 10898.5 | 9823.9 | 9358.1 | 9348.0 | 9345.5 | 9766.3 | 10650.5 |
| 35° | 13859.2 | 13874.2 | 13538.6 | 12837.2 | 11762.6 | 10462.6 | 9693.7 | 9643.6 | 9586.0 | 9981.7 | 10888.5 |
| 37.5° | 14750.9 | 14821.0 | 14513.0 | 13726.5 | 12611.8 | 11126.4 | 10154.6 | 10122.0 | 9946.7 | 10355.0 | 11269.2 |
| 40° | 15447.2 | 15499.9 | 15314.5 | 14565.5 | 13448.4 | 11842.8 | 10740.7 | 10680.5 | 10467.7 | 10966.1 | 11777.7 |
| 42.5° | 15675.1 | 15782.9 | 15855.5 | 15487.4 | 14410.3 | 12692.0 | 11462.1 | 11386.9 | 11224.2 | 11892.9 | 12363.8 |
| 45° | 15692.7 | 15863.0 | 16246.3 | 16263.8 | 15377.1 | 13708.9 | 12303.7 | 12251.1 | 12238.6 | 13080.2 | 13187.9 |
| 47.5° | 15559.9 | 15732.8 | 16376.5 | 16724.7 | 16238.8 | 14735.9 | 13518.6 | 13435.9 | 13443.4 | 14548.0 | 14112.1 |
| 50° | 15239.3 | 15444.7 | 16226.3 | 17020.2 | 16912.6 | 15802.9 | 14801.0 | 14773.4 | 14928.8 | 16223.7 | 15071.6 |
| 52.5° | 14635.7 | 14883.7 | 16070.9 | 17205.6 | 17413.6 | 16722.2 | 16258.8 | 16181.2 | 16574.4 | 18042.2 | 16121.0 |
| 55° | 12964.9 | 13338.2 | 15502.3 | 17308.4 | 17889.4 | 17601.4 | 17571.3 | 17711.6 | 18232.6 | 20026.1 | 17275.7 |
| 57.5° | 12093.3 | 12373.8 | 14267.5 | 17325.9 | 18490.6 | 18623.4 | 19104.3 | 19139.4 | 20051.1 | 22132.6 | 18580.8 |
| 60° | 11617.4 | 11865.3 | 13591.1 | 17210.6 | 19329.7 | 19888.3 | 20672.3 | 20797.6 | 21827.1 | 24414.5 | 19933.4 |
| 62.5° | 11201.5 | 11414.5 | 13185.4 | 16812.3 | 20276.5 | 21764.4 | 22703.7 | 22763.9 | 23843.4 | 26934.4 | 21268.5 |
| 65° | 10222.2 | 10465.2 | 12368.8 | 16414.1 | 21093.1 | 24108.9 | 25398.9 | 25328.8 | 25990.0 | 29108.5 | 22105.1 |
| 67.5° | 8902.2 | 9210.2 | 10843.3 | 15038.9 | 21496.4 | 26671.4 | 28434.8 | 28347.1 | 28109.2 | 30533.8 | 22345.5 |
| 70° | 7216.4 | 7381.7 | 8892.1 | 12661.8 | 19885.8 | 28016.5 | 30831.9 | 30739.2 | 29421.6 | 30721.6 | 21208.3 |
| 71° | 6209.4 | 6467.5 | 7742.4 | 11246.7 | 18545.7 | 27605.7 | 31140.0 | 31114.9 | 29424.2 | 30203.2 | 20351.7 |
| 72.5° | 4846.9 | 5004.6 | 6131.8 | 8714.3 | 15762.9 | 25271.2 | 30378.5 | 30473.7 | 28785.4 | 28762.9 | 18585.8 |
| 75° | 3065.9 | 3136.0 | 3847.4 | 5129.8 | 8649.2 | 17897.0 | 25932.4 | 26190.4 | 25559.3 | 23542.9 | 13821.6 |
| 77.5° | 1780.9 | 1871.1 | 2304.4 | 3023.3 | 3737.2 | 9713.7 | 18555.7 | 18836.3 | 17759.2 | 12962.5 | 5658.4 |
| 80° | 1037.0 | 1137.2 | 1517.9 | 1755.8 | 1715.8 | 3604.4 | 9448.2 | 9926.6 | 7689.8 | 3273.8 | 1588.1 |
| 82.5° | 576.1 | 643.7 | 1067.1 | 1069.6 | 914.3 | 1177.2 | 2973.2 | 3111.0 | 2194.3 | 1320.0 | 648.7 |
| 85° | 418.3 | 473.4 | 688.9 | 623.7 | 438.3 | 505.9 | 1034.5 | 1084.6 | 886.7 | 556.1 | 210.4 |
| 87.5° | 147.8 | 210.4 | 378.2 | 300.6 | 120.3 | 105.2 | 298.1 | 243.0 | 225.5 | 155.3 | 47.6 |
| 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° | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 | 8273.4 |
| 2.5° | 8318.5 | 8323.5 | 8298.5 | 8253.4 | 8208.3 | 8150.7 | 8085.5 | 8035.5 | 8013.0 | 8010.4 | 8007.9 |
| 5° | 8408.7 | 8421.2 | 8326.1 | 8185.8 | 8030.5 | 7840.1 | 7677.3 | 7492.0 | 7444.4 | 7369.2 | 7391.7 |
| 7.5° | 8554.0 | 8546.5 | 8358.6 | 8060.6 | 7697.3 | 7294.1 | 6953.4 | 6755.5 | 6550.1 | 6492.5 | 6495.0 |
| 10° | 8761.9 | 8714.3 | 8358.6 | 7805.1 | 7198.9 | 6600.3 | 6124.3 | 5823.8 | 5660.9 | 5525.6 | 5475.6 |
| 12.5° | 8982.3 | 8862.0 | 8278.5 | 7446.8 | 6557.6 | 5823.8 | 5312.8 | 4907.0 | 4801.8 | 4691.5 | 4694.0 |
| 15° | 9192.7 | 8992.3 | 8120.6 | 6943.4 | 5866.3 | 4994.6 | 4498.7 | 4255.7 | 4223.2 | 4235.7 | 4233.2 |
| 17.5° | 9383.0 | 9085.0 | 7880.2 | 6382.3 | 5059.7 | 4283.2 | 4020.2 | 4037.8 | 4125.4 | 4188.1 | 4195.6 |
| 20° | 9576.0 | 9140.1 | 7522.0 | 5630.8 | 4298.3 | 3852.5 | 3862.5 | 4000.2 | 4132.9 | 4218.1 | 4230.7 |
| 22.5° | 9758.8 | 9165.1 | 7101.2 | 4904.5 | 3747.2 | 3669.5 | 3817.4 | 3965.1 | 4095.4 | 4178.1 | 4190.5 |
| 25° | 9879.1 | 9107.5 | 6505.1 | 4145.5 | 3476.7 | 3604.4 | 3759.8 | 3885.0 | 3995.2 | 4080.4 | 4100.4 |
| 27.5° | 9911.6 | 8922.2 | 5766.1 | 3531.8 | 3351.5 | 3541.8 | 3684.6 | 3777.3 | 3862.5 | 3942.6 | 3957.7 |
| 30° | 9894.0 | 8649.2 | 4954.6 | 3171.1 | 3278.8 | 3469.2 | 3579.4 | 3647.0 | 3749.7 | 3812.3 | 3824.9 |
| 32.5° | 9866.5 | 8331.0 | 4107.9 | 2978.2 | 3218.7 | 3401.6 | 3466.7 | 3526.8 | 3524.3 | 3499.2 | 3516.8 |
| 35° | 9876.5 | 7950.3 | 3421.6 | 2863.0 | 3166.1 | 3351.5 | 3406.6 | 3331.5 | 3116.0 | 3106.0 | 3096.0 |
| 37.5° | 9929.1 | 7574.6 | 2923.1 | 2782.9 | 3138.5 | 3343.9 | 3374.0 | 3028.4 | 2838.0 | 2750.3 | 2727.8 |
| 40° | 10064.4 | 7136.2 | 2595.0 | 2722.7 | 3136.0 | 3401.6 | 3226.2 | 2875.5 | 2509.8 | 2339.5 | 2327.0 |
| 42.5° | 10244.7 | 6705.4 | 2394.6 | 2685.1 | 3166.1 | 3489.2 | 3166.1 | 2660.1 | 2261.9 | 2161.6 | 2146.7 |
| 45° | 10512.8 | 6212.0 | 2284.4 | 2667.7 | 3211.2 | 3521.8 | 3146.1 | 2502.3 | 2161.6 | 2081.5 | 2081.5 |
| 47.5° | 10815.8 | 5741.1 | 2224.3 | 2655.1 | 3268.8 | 3499.2 | 2968.2 | 2452.2 | 2114.1 | 2124.1 | 2171.7 |
| 50° | 11116.4 | 5332.8 | 2179.2 | 2627.5 | 3318.9 | 3486.7 | 2895.6 | 2449.7 | 2126.6 | 2254.3 | 2339.5 |
| 52.5° | 11464.6 | 5044.7 | 2124.1 | 2582.5 | 3318.9 | 3406.6 | 2873.0 | 2499.8 | 2161.6 | 2199.2 | 2236.8 |
| 55° | 11885.3 | 4954.6 | 2054.0 | 2484.8 | 3258.8 | 3206.1 | 2860.5 | 2572.5 | 2186.7 | 2099.1 | 2114.1 |
| 57.5° | 12441.5 | 5099.8 | 1986.4 | 2362.0 | 3121.0 | 2998.2 | 2855.5 | 2592.5 | 2129.1 | 2056.5 | 2041.4 |
| 60° | 13087.7 | 5387.9 | 1966.3 | 2236.8 | 2933.2 | 2820.5 | 2825.4 | 2534.9 | 2048.9 | 1973.8 | 1986.4 |
| 62.5° | 13541.1 | 5560.7 | 1953.7 | 2141.6 | 2727.8 | 2625.1 | 2752.8 | 2464.7 | 2013.9 | 1948.8 | 1961.3 |
| 65° | 13541.1 | 5350.3 | 1838.5 | 1996.4 | 2462.3 | 2389.6 | 2665.1 | 2377.1 | 1968.8 | 1893.7 | 1881.1 |
| 67.5° | 13027.6 | 4736.6 | 1663.2 | 1778.5 | 2169.2 | 2121.6 | 2542.4 | 2271.9 | 1901.2 | 1843.6 | 1813.5 |
| 70° | 11690.0 | 3591.9 | 1442.8 | 1523.0 | 1798.5 | 1841.0 | 2384.6 | 2129.1 | 1788.5 | 1718.3 | 1673.3 |
| 71° | 11101.4 | 3128.5 | 1350.1 | 1392.7 | 1655.7 | 1718.3 | 2309.5 | 2068.9 | 1738.3 | 1638.2 | 1558.0 |
| 72.5° | 9966.7 | 2635.1 | 1209.9 | 1227.4 | 1415.2 | 1527.9 | 2151.6 | 1953.7 | 1643.1 | 1500.4 | 1410.2 |
| 75° | 7572.1 | 1923.7 | 974.4 | 964.4 | 1047.0 | 1212.3 | 1821.0 | 1740.9 | 1440.3 | 1247.4 | 1194.8 |
| 77.5° | 3271.3 | 1047.0 | 728.9 | 736.4 | 711.4 | 919.3 | 1432.7 | 1495.4 | 1234.8 | 1014.4 | 966.9 |
| 80° | 991.9 | 603.7 | 498.5 | 508.5 | 475.9 | 616.2 | 1009.5 | 1172.3 | 991.9 | 789.0 | 723.9 |
| 82.5° | 508.5 | 360.7 | 340.7 | 335.6 | 303.1 | 348.2 | 611.2 | 801.6 | 708.9 | 493.4 | 435.8 |
| 85° | 220.4 | 192.8 | 167.9 | 162.8 | 142.8 | 125.2 | 217.9 | 400.7 | 375.8 | 275.5 | 263.0 |
| 87.5° | 55.1 | 50.1 | 32.5 | 30.0 | 17.5 | 2.5 | 0.0 | 0.0 | 0.0 | 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)