

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: STREETWORKS

Report Number: P299623

Luminaire Tested: **GAA-AF-09-LED-U-SL2-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299623
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24287)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: GAA-AF-09-LED-U-SL2-7027-HSS
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI
2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II w/Spill
Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34786.3 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 501
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: 28.75 FT

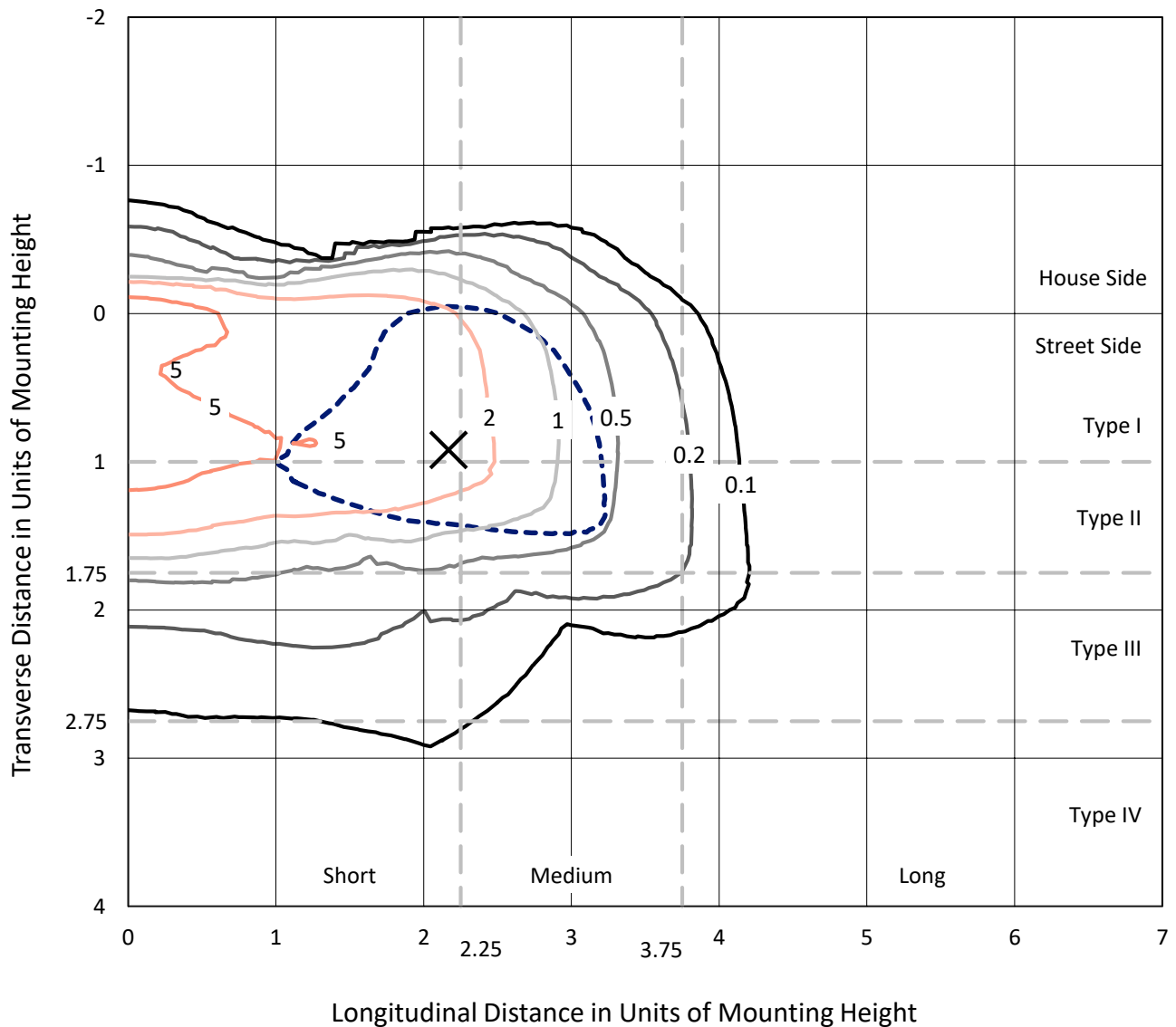


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

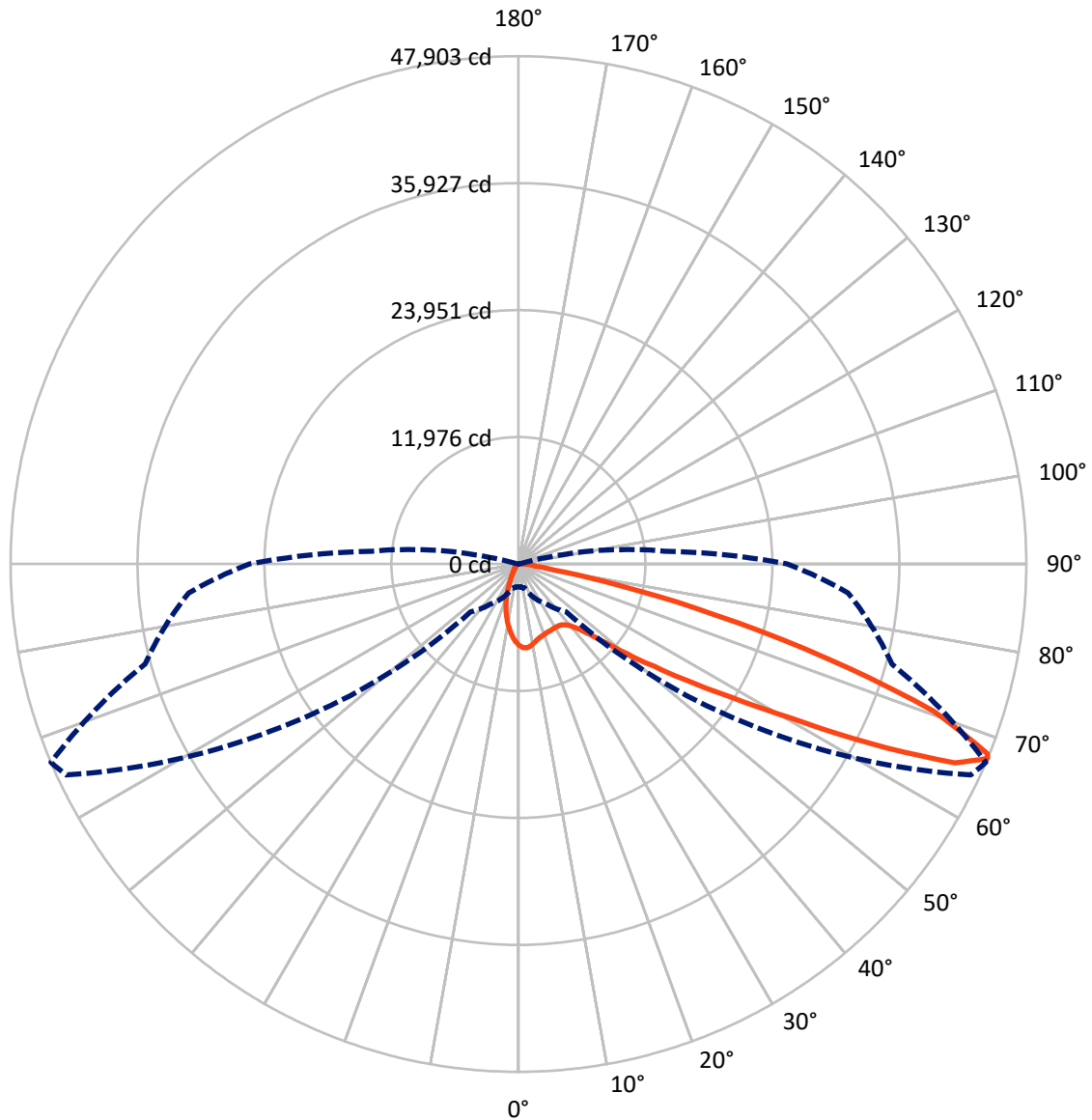


Based on 30 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3611.9 | 0.0 | 3611.9 |
| | % Fixture | 10.4 | 0.0 | 10.4 |
| Street Side | Lumens | 31174.5 | 0.0 | 31174.5 |
| | % Fixture | 89.6 | 0.0 | 89.6 |
| Total | Lumens | 34786.3 | 0.0 | 34786.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 624.2 | 1.8 |
| 10°-20° | 1328.6 | 3.8 |
| 20°-30° | 1931.7 | 5.6 |
| 30°-40° | 3013.5 | 8.7 |
| 40°-50° | 5338.2 | 15.3 |
| 50°-60° | 8447.2 | 24.3 |
| 60°-70° | 9675.1 | 27.8 |
| 70°-80° | 4013.2 | 11.5 |
| 80°-90° | 414.5 | 1.2 |
| 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° | 34786.3 | 100.0 |
| 0°-180° | 34786.3 | 100.0 |

Coefficient of Utilization



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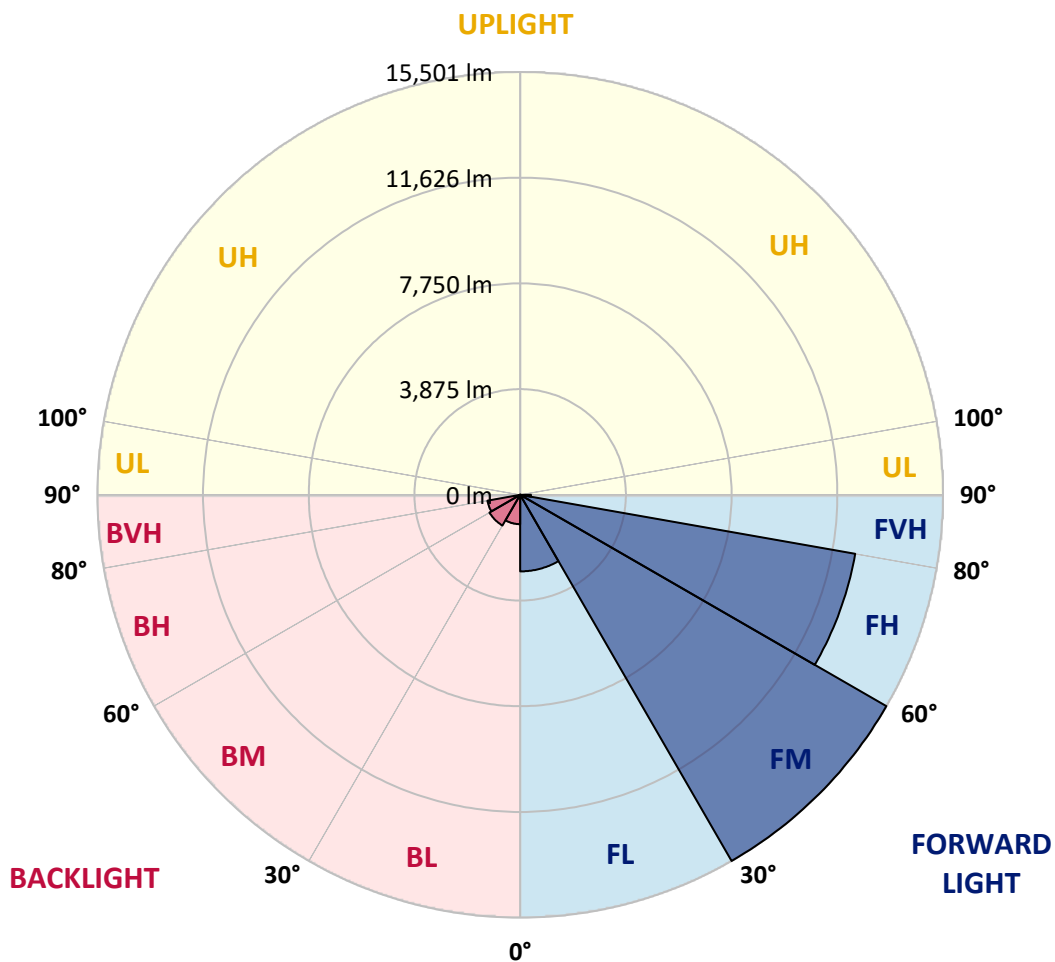
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 2806.7 | 8.1 | | | |
| FM | (30°-60°) | 15500.9 | 44.6 | | | |
| FH | (60°-80°) | 12471.0 | 35.9 | | | G5 |
| FVH | (80°-90°) | 395.9 | 1.1 | | | G3/500 |
| BL | (0°-30°) | 1077.8 | 3.1 | B3/2500 | | |
| BM | (30°-60°) | 1298.1 | 3.7 | B2/2500 | | |
| BH | (60°-60°) | 1217.3 | 3.5 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 18.7 | 0.1 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G5

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 |
| 2.5° | 7931.4 | 7947.6 | 7945.6 | 7957.8 | 7986.2 | 7988.2 | 7959.8 | 7905.0 | 7892.8 | 7821.8 | 7698.0 |
| 5° | 7314.6 | 7361.2 | 7389.6 | 7505.3 | 7635.1 | 7791.4 | 7909.1 | 7951.7 | 7945.6 | 7894.9 | 7708.2 |
| 7.5° | 6610.5 | 6657.2 | 6689.6 | 6825.6 | 6998.0 | 7265.9 | 7572.2 | 7823.8 | 7846.2 | 7900.9 | 7700.1 |
| 10° | 6141.8 | 6149.9 | 6194.6 | 6324.4 | 6505.0 | 6778.9 | 7144.1 | 7584.4 | 7651.4 | 7852.3 | 7679.8 |
| 12.5° | 5756.3 | 5762.4 | 5821.2 | 5961.2 | 6154.0 | 6429.9 | 6813.4 | 7322.7 | 7426.2 | 7791.4 | 7675.7 |
| 15° | 5482.4 | 5504.7 | 5557.4 | 5703.5 | 5908.5 | 6182.4 | 6576.0 | 7129.9 | 7253.7 | 7769.1 | 7712.3 |
| 17.5° | 5391.1 | 5415.4 | 5431.6 | 5537.2 | 5723.8 | 5991.7 | 6395.4 | 7004.1 | 7144.1 | 7781.2 | 7783.3 |
| 20° | 5486.4 | 5504.7 | 5468.2 | 5494.5 | 5610.2 | 5849.6 | 6243.3 | 6896.6 | 7063.0 | 7795.4 | 7874.6 |
| 22.5° | 5841.5 | 5849.6 | 5750.2 | 5634.5 | 5614.3 | 5746.1 | 6123.5 | 6811.4 | 6989.9 | 7834.0 | 7982.1 |
| 25° | 6450.2 | 6436.0 | 6273.7 | 6024.1 | 5788.8 | 5727.9 | 6052.5 | 6758.6 | 6953.4 | 7874.6 | 8093.7 |
| 27.5° | 7184.7 | 7205.0 | 6981.8 | 6618.6 | 6170.2 | 5849.6 | 6042.4 | 6736.3 | 6937.2 | 7903.0 | 8191.1 |
| 30° | 8077.5 | 8105.9 | 7850.2 | 7393.7 | 6750.5 | 6149.9 | 6135.7 | 6732.2 | 6927.0 | 7884.7 | 8199.2 |
| 32.5° | 8988.5 | 9023.0 | 8822.1 | 8351.4 | 7525.6 | 6653.1 | 6346.7 | 6776.9 | 6947.3 | 7821.8 | 8152.5 |
| 35° | 9942.1 | 9990.8 | 9856.9 | 9453.1 | 8576.6 | 7379.5 | 6718.0 | 6912.8 | 7042.7 | 7815.7 | 8105.9 |
| 37.5° | 11259.0 | 11303.6 | 11052.0 | 10623.9 | 9848.8 | 8353.4 | 7314.6 | 7168.5 | 7267.9 | 7913.1 | 8118.1 |
| 40° | 13225.1 | 13219.0 | 12569.7 | 11914.3 | 11246.8 | 9591.1 | 8152.5 | 7631.1 | 7681.8 | 8207.3 | 8268.2 |
| 42.5° | 15367.7 | 15357.5 | 14397.8 | 13401.6 | 12799.0 | 11114.9 | 9254.3 | 8430.5 | 8396.0 | 8749.1 | 8657.8 |
| 45° | 17019.3 | 17017.3 | 16234.1 | 15112.0 | 14667.7 | 12863.9 | 10678.7 | 9542.4 | 9489.7 | 9629.7 | 9376.0 |
| 47.5° | 17723.4 | 17735.5 | 17341.9 | 16552.6 | 16739.3 | 15229.7 | 12474.3 | 11153.4 | 11074.3 | 11017.5 | 10632.0 |
| 50° | 17175.5 | 17199.9 | 17232.3 | 17078.1 | 18259.0 | 18409.2 | 14882.8 | 13423.9 | 13385.4 | 13131.7 | 12529.1 |
| 52.5° | 15386.0 | 15509.7 | 15891.2 | 16380.2 | 18786.6 | 21460.8 | 18658.7 | 16244.2 | 16037.3 | 15767.4 | 15103.9 |
| 55° | 12370.8 | 12506.8 | 13231.1 | 14418.1 | 18001.3 | 23465.5 | 23950.4 | 19880.2 | 19535.3 | 18729.8 | 17772.1 |
| 57.5° | 8187.0 | 8398.1 | 9449.1 | 10958.7 | 15720.7 | 23788.1 | 29229.9 | 24926.3 | 23725.2 | 21519.6 | 20440.2 |
| 60° | 4510.5 | 4713.4 | 5853.7 | 7221.2 | 11354.3 | 22193.3 | 32780.6 | 31496.3 | 29373.9 | 24638.2 | 23680.5 |
| 62.5° | 2777.7 | 2887.3 | 3729.3 | 5001.5 | 6809.3 | 17516.4 | 33515.1 | 39752.3 | 37295.2 | 28653.6 | 27594.5 |
| 65° | 2211.6 | 2258.3 | 2670.2 | 4088.4 | 4881.8 | 10418.9 | 31143.2 | 46046.3 | 45226.5 | 33515.1 | 31098.6 |
| 67° | 2146.7 | 2164.9 | 2359.7 | 3510.2 | 4601.8 | 6387.3 | 26091.0 | 47070.9 | 47902.8 | 36457.2 | 31208.1 |
| 67.5° | 2160.9 | 2181.2 | 2365.8 | 3349.9 | 4593.7 | 5869.9 | 24350.1 | 46667.1 | 47718.2 | 36690.5 | 30723.2 |
| 70° | 2083.8 | 2146.7 | 2708.7 | 3347.9 | 4368.4 | 4877.7 | 14582.5 | 40434.0 | 41527.7 | 34091.4 | 26068.7 |
| 72.5° | 738.6 | 742.6 | 1170.7 | 2708.7 | 4749.9 | 4930.5 | 7322.7 | 29641.7 | 30451.3 | 26078.8 | 18794.7 |
| 75° | 438.3 | 373.3 | 389.6 | 771.0 | 4538.9 | 4788.5 | 4224.4 | 18940.8 | 19243.1 | 14943.6 | 9518.1 |
| 77.5° | 302.3 | 263.8 | 271.9 | 340.9 | 1728.7 | 4721.5 | 3356.0 | 9877.2 | 9554.6 | 5240.9 | 2027.0 |
| 80° | 172.5 | 152.2 | 162.3 | 298.3 | 629.0 | 4405.0 | 3165.2 | 4005.3 | 3414.8 | 888.7 | 560.0 |
| 82.5° | 91.3 | 77.1 | 93.3 | 245.5 | 438.3 | 2745.2 | 3171.3 | 1935.7 | 1533.9 | 300.3 | 381.5 |
| 85° | 32.5 | 26.4 | 44.6 | 168.4 | 292.2 | 842.0 | 2940.0 | 1627.3 | 1278.3 | 146.1 | 290.1 |
| 87.5° | 6.1 | 6.1 | 18.3 | 69.0 | 117.7 | 257.7 | 1738.9 | 965.8 | 647.3 | 87.2 | 198.8 |
| 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° | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 | 7671.7 |
| 2.5° | 7647.3 | 7560.1 | 7442.4 | 7298.3 | 7127.9 | 6977.8 | 6866.2 | 6750.5 | 6726.2 | 6685.6 | 6679.5 |
| 5° | 7596.6 | 7446.5 | 7154.3 | 6819.5 | 6462.4 | 6139.8 | 5878.0 | 5644.7 | 5541.2 | 5451.9 | 5441.8 |
| 7.5° | 7521.5 | 7296.3 | 6799.2 | 6259.5 | 5701.5 | 5194.3 | 4764.1 | 4459.8 | 4179.8 | 4045.8 | 4025.5 |
| 10° | 7434.3 | 7111.7 | 6399.5 | 5650.8 | 4879.8 | 4163.5 | 3524.4 | 2988.7 | 2664.1 | 2471.3 | 2447.0 |
| 12.5° | 7353.1 | 6931.1 | 5991.7 | 5019.8 | 3995.1 | 3037.4 | 2215.7 | 1704.4 | 1363.5 | 1225.5 | 1209.3 |
| 15° | 7314.6 | 6785.0 | 5610.2 | 4374.5 | 3069.9 | 1933.6 | 1211.3 | 937.4 | 825.8 | 793.3 | 791.3 |
| 17.5° | 7310.5 | 6661.2 | 5236.9 | 3707.0 | 2150.7 | 1124.1 | 789.3 | 720.3 | 698.0 | 689.9 | 689.9 |
| 20° | 7308.5 | 6543.5 | 4863.5 | 3015.1 | 1365.5 | 748.7 | 657.4 | 641.2 | 624.9 | 614.8 | 614.8 |
| 22.5° | 7330.8 | 6438.0 | 4474.0 | 2309.0 | 860.3 | 606.7 | 578.3 | 562.0 | 541.7 | 527.5 | 525.5 |
| 25° | 7353.1 | 6356.9 | 4076.3 | 1643.5 | 622.9 | 527.5 | 499.1 | 476.8 | 448.4 | 430.1 | 428.1 |
| 27.5° | 7357.2 | 6255.4 | 3650.2 | 1099.7 | 521.5 | 460.6 | 424.1 | 389.6 | 357.1 | 338.8 | 336.8 |
| 30° | 7296.3 | 6085.0 | 3177.4 | 742.6 | 460.6 | 399.7 | 351.0 | 314.5 | 284.1 | 269.9 | 269.9 |
| 32.5° | 7176.6 | 5874.0 | 2658.0 | 560.0 | 409.9 | 342.9 | 290.1 | 255.7 | 235.4 | 229.3 | 227.2 |
| 35° | 7069.1 | 5646.7 | 2124.4 | 474.8 | 367.3 | 290.1 | 237.4 | 215.1 | 202.9 | 200.9 | 198.8 |
| 37.5° | 7006.2 | 5464.1 | 1623.2 | 430.1 | 326.7 | 243.5 | 200.9 | 184.6 | 178.6 | 174.5 | 176.5 |
| 40° | 7054.9 | 5311.9 | 1199.1 | 393.6 | 286.1 | 202.9 | 170.4 | 162.3 | 156.2 | 154.2 | 154.2 |
| 42.5° | 7267.9 | 5285.6 | 890.7 | 361.2 | 247.5 | 168.4 | 148.1 | 142.0 | 138.0 | 135.9 | 138.0 |
| 45° | 7827.9 | 5447.9 | 691.9 | 330.7 | 209.0 | 142.0 | 125.8 | 123.8 | 121.7 | 121.7 | 121.7 |
| 47.5° | 8669.9 | 5782.7 | 576.2 | 296.2 | 174.5 | 121.7 | 109.6 | 107.5 | 105.5 | 107.5 | 107.5 |
| 50° | 10096.3 | 6395.4 | 515.4 | 261.7 | 144.1 | 103.5 | 93.3 | 93.3 | 93.3 | 93.3 | 95.4 |
| 52.5° | 12265.3 | 7600.7 | 474.8 | 227.2 | 117.7 | 87.2 | 79.1 | 79.1 | 81.2 | 81.2 | 83.2 |
| 55° | 14681.9 | 9199.5 | 438.3 | 192.8 | 99.4 | 73.0 | 64.9 | 67.0 | 69.0 | 71.0 | 71.0 |
| 57.5° | 17303.4 | 10970.8 | 407.8 | 158.3 | 85.2 | 58.8 | 54.8 | 56.8 | 58.8 | 62.9 | 62.9 |
| 60° | 20466.6 | 12888.2 | 363.2 | 123.8 | 71.0 | 46.7 | 42.6 | 46.7 | 52.8 | 56.8 | 58.8 |
| 62.5° | 23940.2 | 14742.8 | 306.4 | 97.4 | 58.8 | 36.5 | 34.5 | 42.6 | 50.7 | 54.8 | 56.8 |
| 65° | 26314.2 | 15325.1 | 235.4 | 79.1 | 44.6 | 26.4 | 28.4 | 38.6 | 48.7 | 54.8 | 54.8 |
| 67° | 25352.4 | 13894.6 | 192.8 | 67.0 | 36.5 | 20.3 | 26.4 | 38.6 | 48.7 | 52.8 | 54.8 |
| 67.5° | 24684.9 | 13334.6 | 184.6 | 64.9 | 34.5 | 20.3 | 26.4 | 38.6 | 48.7 | 54.8 | 54.8 |
| 70° | 20085.1 | 10017.2 | 154.2 | 48.7 | 28.4 | 18.3 | 22.3 | 36.5 | 46.7 | 52.8 | 52.8 |
| 72.5° | 13955.5 | 6176.3 | 138.0 | 34.5 | 24.3 | 16.2 | 20.3 | 34.5 | 44.6 | 50.7 | 52.8 |
| 75° | 6634.8 | 2236.0 | 117.7 | 26.4 | 22.3 | 14.2 | 18.3 | 34.5 | 44.6 | 50.7 | 50.7 |
| 77.5° | 1353.3 | 519.4 | 95.4 | 22.3 | 18.3 | 14.2 | 16.2 | 32.5 | 42.6 | 48.7 | 48.7 |
| 80° | 444.4 | 200.9 | 71.0 | 20.3 | 18.3 | 14.2 | 16.2 | 30.4 | 42.6 | 46.7 | 48.7 |
| 82.5° | 320.6 | 101.5 | 46.7 | 20.3 | 18.3 | 14.2 | 14.2 | 30.4 | 40.6 | 46.7 | 46.7 |
| 85° | 245.5 | 71.0 | 30.4 | 20.3 | 18.3 | 14.2 | 14.2 | 28.4 | 38.6 | 44.6 | 44.6 |
| 87.5° | 162.3 | 28.4 | 24.3 | 20.3 | 18.3 | 14.2 | 14.2 | 28.4 | 36.5 | 42.6 | 44.6 |
| 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)