

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: P299995

Luminaire Tested: **GAA-AF-05-LED-U-SL3-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299995
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194479)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: GAA-AF-05-LED-U-SL3-7050-HSS
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI
5000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III w/Spill
Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23087.5 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B2 - U0 - G4

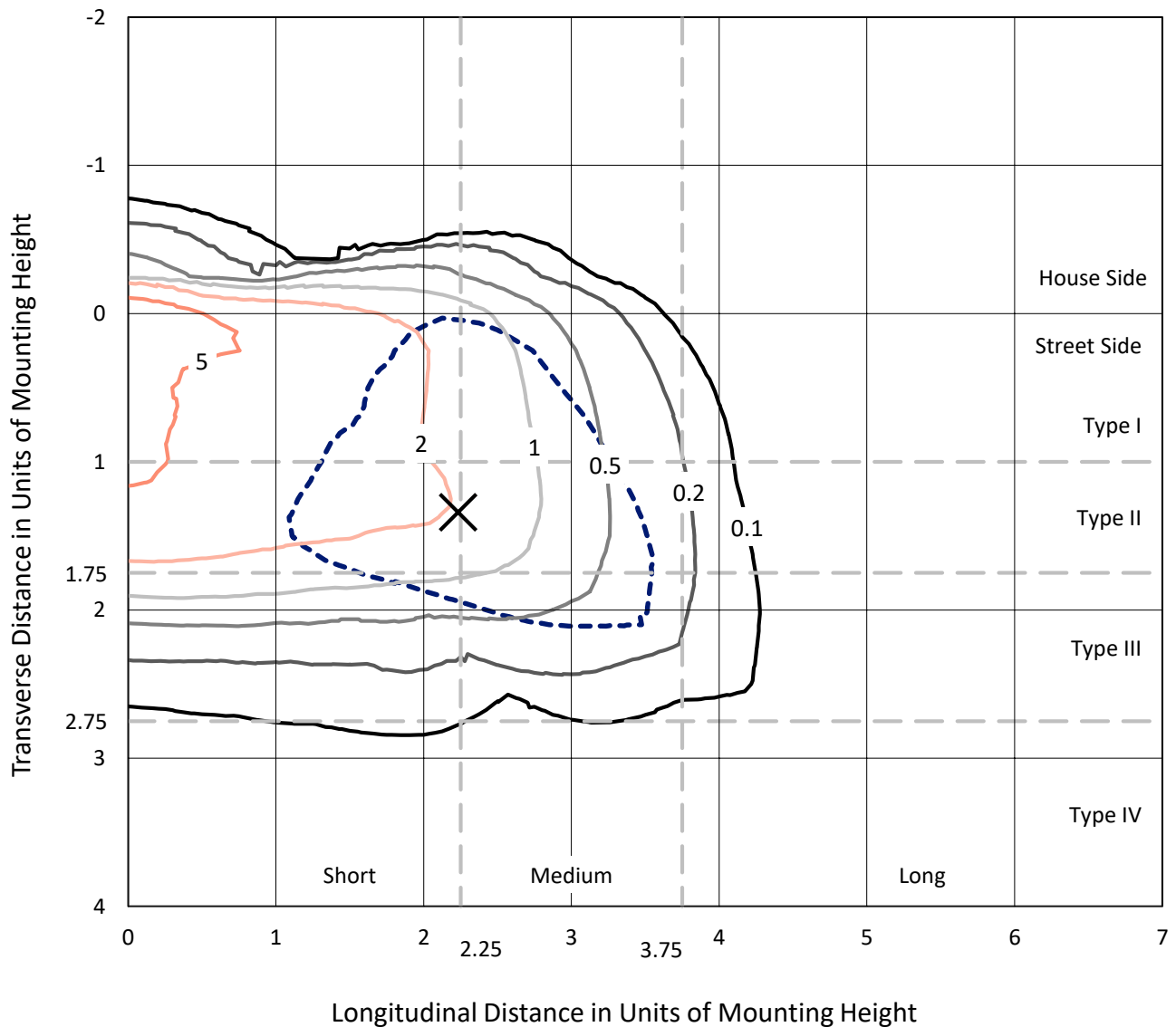
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

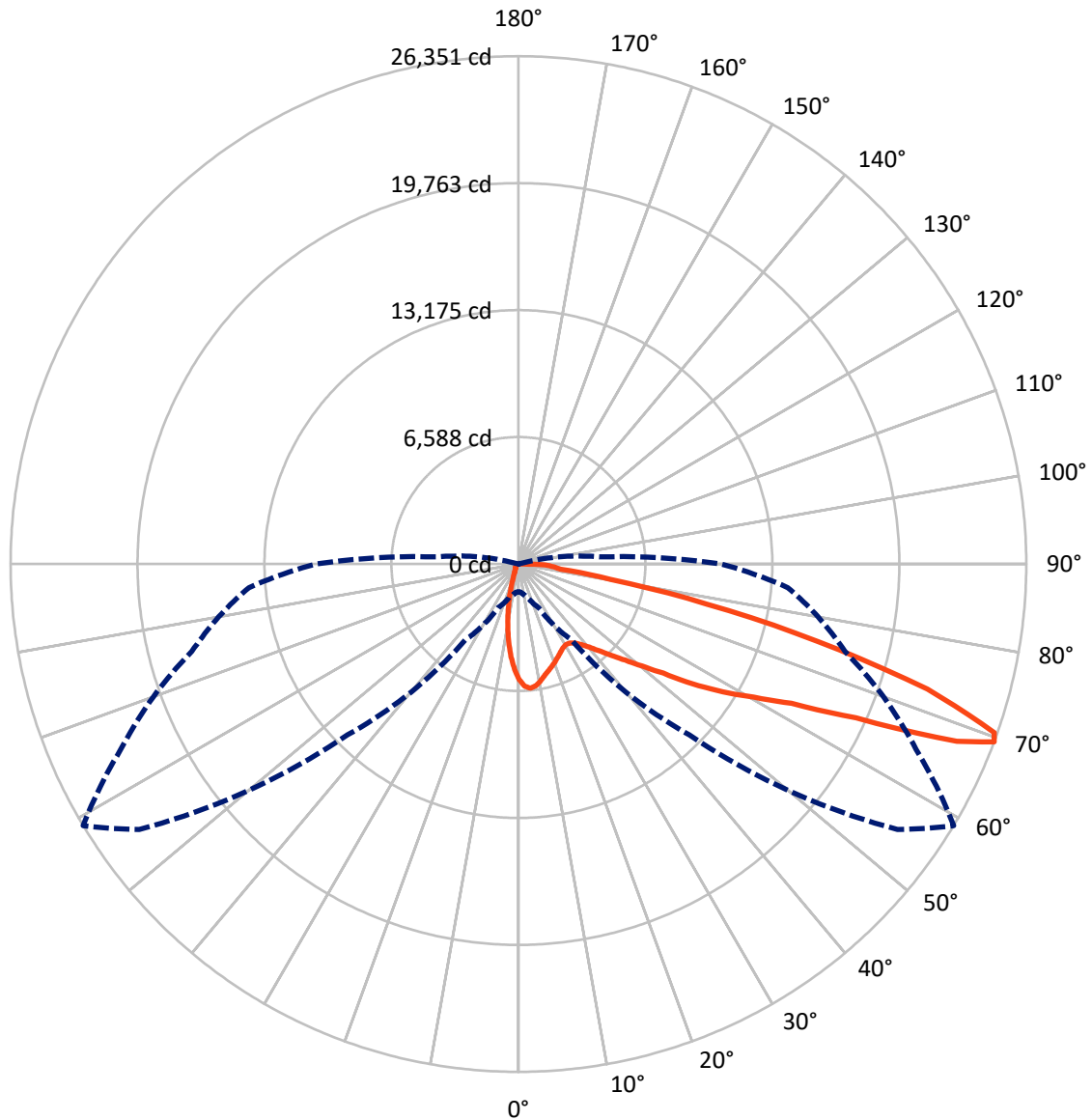
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.7 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical



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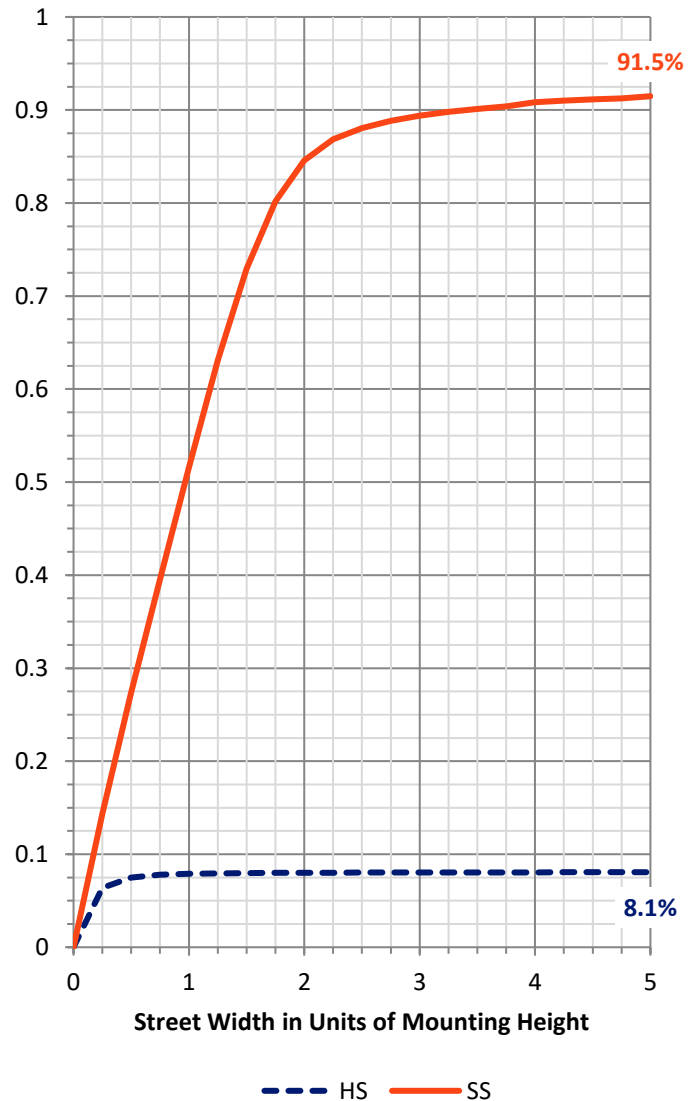
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1880.1 | 0.0 | 1880.1 |
| | % Fixture | 8.1 | 0.0 | 8.1 |
| Street Side | Lumens | 21207.3 | 0.0 | 21207.3 |
| | % Fixture | 91.9 | 0.0 | 91.9 |
| Total | Lumens | 23087.5 | 0.0 | 23087.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 487.8 | 2.1 |
| 10°-20° | 1007.9 | 4.4 |
| 20°-30° | 1356.2 | 5.9 |
| 30°-40° | 1969.2 | 8.5 |
| 40°-50° | 3278.8 | 14.2 |
| 50°-60° | 5114.9 | 22.2 |
| 60°-70° | 6329.3 | 27.4 |
| 70°-80° | 3207.6 | 13.9 |
| 80°-90° | 335.6 | 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° | 23087.5 | 100.0 |
| 0°-180° | 23087.5 | 100.0 |



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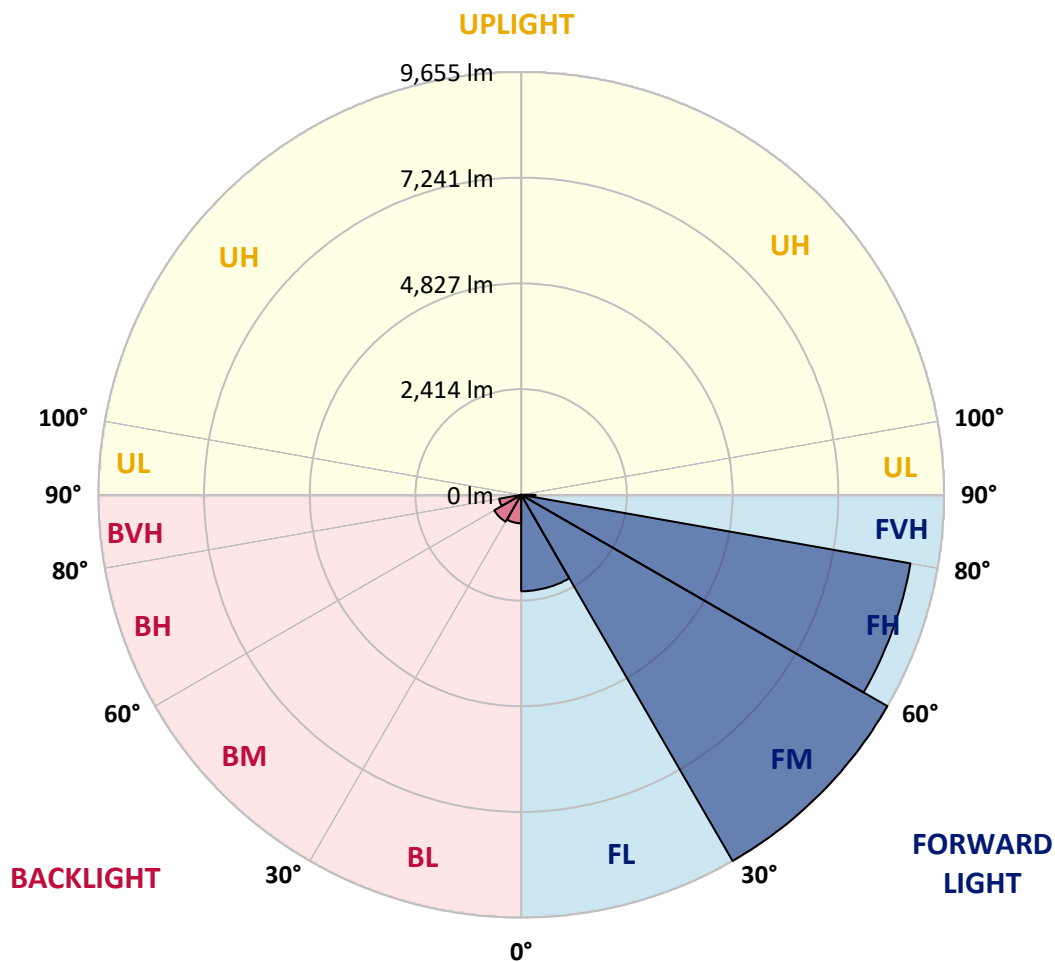
CATALOG NUMBER: GAA-AF-05-LED-U-SL3-7050-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 2201.1 | 9.5 | | | |
| FM | (30°-60°) | 9654.5 | 41.8 | | | |
| FH | (60°-80°) | 9026.4 | 39.1 | | | G4/12000 |
| FVH | (80°-90°) | 325.3 | 1.4 | | | G3/500 |
| BL | (0°-30°) | 650.8 | 2.8 | B2/1000 | | |
| BM | (30°-60°) | 708.4 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 510.6 | 2.2 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 10.3 | 0.0 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 |
| 2.5° | 6586.3 | 6583.9 | 6555.1 | 6542.0 | 6518.3 | 6468.9 | 6391.8 | 6351.5 | 6286.3 | 6172.5 | 6019.9 |
| 5° | 6526.2 | 6557.9 | 6574.5 | 6576.0 | 6593.0 | 6574.5 | 6505.3 | 6471.7 | 6381.6 | 6198.6 | 5924.6 |
| 7.5° | 6119.1 | 6130.6 | 6179.2 | 6220.7 | 6301.7 | 6378.8 | 6403.7 | 6389.1 | 6335.7 | 6140.1 | 5775.6 |
| 10° | 5683.1 | 5694.6 | 5752.3 | 5806.9 | 5916.7 | 6035.3 | 6160.6 | 6187.1 | 6209.2 | 6056.3 | 5632.1 |
| 12.5° | 5306.8 | 5318.7 | 5377.6 | 5449.1 | 5577.2 | 5723.5 | 5917.9 | 5961.0 | 6059.0 | 5976.8 | 5517.1 |
| 15° | 4983.1 | 4988.3 | 5046.0 | 5134.5 | 5287.5 | 5475.2 | 5696.2 | 5765.3 | 5915.6 | 5920.7 | 5416.7 |
| 17.5° | 4707.6 | 4720.7 | 4756.2 | 4840.8 | 5008.0 | 5240.4 | 5497.8 | 5597.0 | 5772.9 | 5873.7 | 5318.7 |
| 20° | 4539.2 | 4552.3 | 4551.1 | 4598.1 | 4748.3 | 4996.2 | 5299.3 | 5417.9 | 5632.1 | 5825.4 | 5231.3 |
| 22.5° | 4506.8 | 4506.8 | 4472.8 | 4466.1 | 4555.0 | 4762.6 | 5093.0 | 5237.7 | 5505.3 | 5804.5 | 5170.1 |
| 25° | 4623.0 | 4617.5 | 4532.9 | 4463.7 | 4467.7 | 4591.4 | 4893.0 | 5065.3 | 5398.5 | 5818.7 | 5137.3 |
| 27.5° | 4868.5 | 4861.8 | 4754.7 | 4623.0 | 4517.1 | 4515.9 | 4741.6 | 4927.0 | 5313.6 | 5886.7 | 5150.3 |
| 30° | 5207.6 | 5205.3 | 5089.0 | 4923.0 | 4731.3 | 4555.0 | 4689.4 | 4857.8 | 5258.6 | 6009.2 | 5180.4 |
| 32.5° | 5578.4 | 5574.4 | 5487.1 | 5312.4 | 5069.3 | 4731.3 | 4744.4 | 4885.5 | 5274.4 | 6172.5 | 5253.5 |
| 35° | 5971.7 | 5965.0 | 5927.0 | 5774.4 | 5506.8 | 5056.2 | 4924.6 | 5034.1 | 5373.6 | 6416.7 | 5397.0 |
| 37.5° | 6397.0 | 6403.7 | 6431.0 | 6284.7 | 6004.1 | 5512.0 | 5226.2 | 5300.5 | 5573.2 | 6748.4 | 5630.6 |
| 40° | 7025.1 | 7023.9 | 7033.0 | 6840.9 | 6570.9 | 6069.3 | 5647.6 | 5671.3 | 5907.6 | 7188.3 | 5985.9 |
| 42.5° | 8164.6 | 8085.2 | 7843.7 | 7451.9 | 7180.4 | 6706.5 | 6179.2 | 6154.3 | 6316.3 | 7732.6 | 6483.2 |
| 45° | 9696.3 | 9526.3 | 8899.8 | 8149.2 | 7801.8 | 7424.7 | 6833.0 | 6753.5 | 6856.7 | 8386.8 | 7097.0 |
| 47.5° | 11013.3 | 10837.0 | 9950.8 | 8874.9 | 8461.1 | 8106.1 | 7599.4 | 7455.9 | 7489.9 | 9119.2 | 7874.9 |
| 50° | 11461.1 | 11375.0 | 10601.0 | 9506.9 | 9099.4 | 8963.8 | 8488.7 | 8313.6 | 8265.4 | 9966.2 | 8776.9 |
| 52.5° | 11305.8 | 11299.5 | 10783.6 | 9916.8 | 9684.4 | 9851.6 | 9607.3 | 9405.0 | 9227.5 | 10859.5 | 9694.7 |
| 55° | 11056.4 | 11089.2 | 10858.0 | 10275.7 | 10267.8 | 10662.3 | 11137.4 | 10969.0 | 10454.8 | 11829.5 | 10486.0 |
| 57.5° | 10368.6 | 10508.1 | 10816.5 | 10954.8 | 11275.8 | 11679.3 | 12411.7 | 12511.0 | 11902.6 | 12572.2 | 11142.5 |
| 60° | 8412.8 | 8719.6 | 9727.5 | 11052.4 | 12575.0 | 13580.2 | 13949.7 | 14034.3 | 13090.4 | 13189.6 | 12029.1 |
| 62.5° | 5971.7 | 6284.7 | 7563.0 | 9804.6 | 12594.4 | 16077.4 | 16240.7 | 15907.9 | 14398.7 | 14105.1 | 13558.0 |
| 65° | 3169.6 | 3411.5 | 4455.8 | 7077.2 | 10919.6 | 16657.3 | 20247.5 | 19255.4 | 16706.7 | 15905.1 | 15533.2 |
| 67.5° | 1621.4 | 1694.5 | 2109.9 | 3463.7 | 7506.9 | 14795.6 | 23838.9 | 24537.3 | 20684.7 | 17691.3 | 15437.9 |
| 69° | 1434.8 | 1477.9 | 1753.4 | 2504.0 | 4806.8 | 12531.9 | 24014.0 | 26350.8 | 22767.3 | 17542.3 | 14029.2 |
| 70° | 1389.0 | 1426.9 | 1677.5 | 2266.5 | 3757.4 | 10509.3 | 23344.0 | 26191.5 | 23299.7 | 16975.9 | 12977.0 |
| 72.5° | 1179.1 | 1211.5 | 1493.7 | 2002.8 | 3053.8 | 5216.7 | 18962.9 | 22194.2 | 20908.0 | 14141.4 | 9393.1 |
| 75° | 788.6 | 895.7 | 1433.6 | 1877.5 | 2840.8 | 2963.7 | 12501.9 | 16038.3 | 14898.8 | 9538.2 | 4893.0 |
| 77.5° | 189.3 | 203.6 | 404.8 | 1493.7 | 2598.1 | 2608.4 | 6429.8 | 9970.2 | 8132.2 | 3399.7 | 1156.5 |
| 80° | 102.0 | 98.0 | 113.4 | 296.4 | 2419.0 | 2447.9 | 2894.5 | 4839.6 | 2903.6 | 564.0 | 381.0 |
| 82.5° | 71.9 | 68.0 | 73.1 | 124.1 | 761.3 | 2229.7 | 2094.1 | 2190.6 | 1203.6 | 216.6 | 171.2 |
| 85° | 26.1 | 24.9 | 40.3 | 112.3 | 238.7 | 1281.8 | 2151.4 | 1806.8 | 975.1 | 99.2 | 125.3 |
| 87.5° | 9.1 | 7.9 | 15.8 | 61.3 | 73.1 | 545.9 | 1327.7 | 1365.6 | 383.8 | 60.1 | 58.9 |
| 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° | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 | 6009.2 |
| 2.5° | 5955.9 | 5874.8 | 5726.2 | 5573.2 | 5432.1 | 5262.6 | 5177.6 | 5094.2 | 5059.0 | 5046.0 | 4984.7 |
| 5° | 5783.5 | 5646.4 | 5330.6 | 5013.2 | 4720.7 | 4410.0 | 4205.2 | 4040.8 | 3944.0 | 3896.9 | 3822.6 |
| 7.5° | 5563.0 | 5338.5 | 4859.0 | 4369.7 | 3913.9 | 3464.9 | 3132.1 | 2876.0 | 2699.7 | 2615.1 | 2538.0 |
| 10° | 5348.7 | 5049.9 | 4368.5 | 3701.3 | 3082.3 | 2487.0 | 2027.3 | 1694.5 | 1481.9 | 1383.8 | 1321.4 |
| 12.5° | 5157.0 | 4769.3 | 3894.6 | 3049.9 | 2272.8 | 1575.9 | 1108.3 | 843.5 | 711.5 | 665.6 | 643.5 |
| 15° | 4985.9 | 4510.8 | 3446.7 | 2430.9 | 1539.2 | 900.8 | 605.9 | 515.8 | 494.9 | 494.9 | 492.1 |
| 17.5° | 4823.8 | 4257.4 | 3014.3 | 1849.8 | 966.0 | 551.0 | 460.9 | 449.0 | 449.0 | 454.2 | 454.2 |
| 20° | 4668.5 | 4015.9 | 2596.5 | 1327.7 | 608.3 | 437.2 | 416.6 | 413.8 | 416.6 | 422.9 | 422.9 |
| 22.5° | 4535.3 | 3796.5 | 2206.4 | 911.1 | 451.8 | 394.1 | 383.8 | 379.9 | 381.0 | 385.0 | 387.8 |
| 25° | 4436.1 | 3611.1 | 1838.4 | 617.4 | 388.9 | 358.9 | 347.4 | 340.7 | 335.6 | 335.6 | 338.0 |
| 27.5° | 4373.6 | 3454.6 | 1481.9 | 449.0 | 349.8 | 326.5 | 307.9 | 297.6 | 285.8 | 279.5 | 281.8 |
| 30° | 4327.8 | 3305.6 | 1147.5 | 366.8 | 313.4 | 289.7 | 266.4 | 249.4 | 232.4 | 224.5 | 227.3 |
| 32.5° | 4310.8 | 3185.4 | 857.7 | 323.7 | 280.6 | 254.6 | 225.7 | 203.6 | 185.4 | 178.7 | 180.2 |
| 35° | 4356.6 | 3090.2 | 628.1 | 292.5 | 254.6 | 221.7 | 189.3 | 164.4 | 150.2 | 146.2 | 147.4 |
| 37.5° | 4476.8 | 3039.2 | 470.0 | 266.4 | 231.2 | 194.5 | 158.1 | 134.4 | 125.3 | 125.3 | 126.5 |
| 40° | 4703.7 | 3038.0 | 377.5 | 248.2 | 210.3 | 168.4 | 130.4 | 113.4 | 108.3 | 111.1 | 112.3 |
| 42.5° | 5035.3 | 3107.2 | 328.9 | 231.2 | 192.1 | 143.5 | 108.3 | 96.4 | 95.3 | 98.0 | 99.2 |
| 45° | 5488.3 | 3233.7 | 302.8 | 216.6 | 172.3 | 120.2 | 91.3 | 83.4 | 83.4 | 87.4 | 88.9 |
| 47.5° | 6043.2 | 3419.1 | 280.6 | 202.4 | 152.6 | 100.4 | 78.3 | 73.1 | 74.3 | 78.3 | 79.4 |
| 50° | 6711.6 | 3653.0 | 258.5 | 186.6 | 138.3 | 83.4 | 68.0 | 64.0 | 65.2 | 70.4 | 71.9 |
| 52.5° | 7472.9 | 3967.7 | 240.3 | 172.3 | 120.2 | 69.2 | 57.3 | 54.9 | 57.3 | 62.8 | 64.0 |
| 55° | 8125.5 | 4249.5 | 218.2 | 160.5 | 96.4 | 57.3 | 47.0 | 47.0 | 49.8 | 56.1 | 57.3 |
| 57.5° | 8753.6 | 4544.4 | 198.4 | 138.3 | 75.9 | 45.9 | 39.1 | 40.3 | 44.3 | 51.0 | 52.2 |
| 60° | 9675.3 | 5044.4 | 175.1 | 116.2 | 57.3 | 36.4 | 32.8 | 34.0 | 39.1 | 45.9 | 47.0 |
| 62.5° | 11240.6 | 5805.7 | 151.4 | 96.4 | 44.3 | 28.9 | 26.1 | 28.9 | 35.2 | 43.1 | 44.3 |
| 65° | 12653.3 | 6115.2 | 124.1 | 81.0 | 34.0 | 22.1 | 22.1 | 26.1 | 34.0 | 41.9 | 43.1 |
| 67.5° | 11865.9 | 5147.5 | 96.4 | 64.0 | 26.1 | 17.0 | 18.2 | 24.9 | 32.8 | 41.9 | 43.1 |
| 69° | 10493.9 | 4209.2 | 82.2 | 51.0 | 22.1 | 15.8 | 17.0 | 24.9 | 32.8 | 40.3 | 41.9 |
| 70° | 9424.7 | 3553.8 | 73.1 | 43.1 | 19.8 | 15.8 | 17.0 | 23.3 | 32.8 | 40.3 | 41.9 |
| 72.5° | 6312.4 | 1919.0 | 58.9 | 31.2 | 18.2 | 14.2 | 14.2 | 23.3 | 31.2 | 39.1 | 40.3 |
| 75° | 2712.7 | 530.1 | 47.0 | 22.1 | 15.8 | 13.0 | 13.0 | 22.1 | 30.0 | 37.9 | 40.3 |
| 77.5° | 496.1 | 134.4 | 37.9 | 19.8 | 15.8 | 13.0 | 11.9 | 20.9 | 28.9 | 36.4 | 37.9 |
| 80° | 197.2 | 66.4 | 30.0 | 17.0 | 14.2 | 11.9 | 10.3 | 19.8 | 27.3 | 35.2 | 36.4 |
| 82.5° | 119.0 | 37.9 | 24.9 | 15.8 | 14.2 | 10.3 | 9.1 | 17.0 | 26.1 | 34.0 | 35.2 |
| 85° | 96.4 | 26.1 | 19.8 | 15.8 | 13.0 | 10.3 | 7.9 | 15.8 | 23.3 | 32.8 | 34.0 |
| 87.5° | 47.0 | 18.2 | 18.2 | 14.2 | 13.0 | 10.3 | 7.9 | 14.2 | 22.1 | 31.2 | 32.8 |
| 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)