

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: P321503

Luminaire Tested: **GAN-SA9D-722-U-T2R-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P321503
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-9)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: GAN-SA9D-722-U-T2R-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2200K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 41159 lumens
Efficiency: N/A
Efficacy: 71.6 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G4

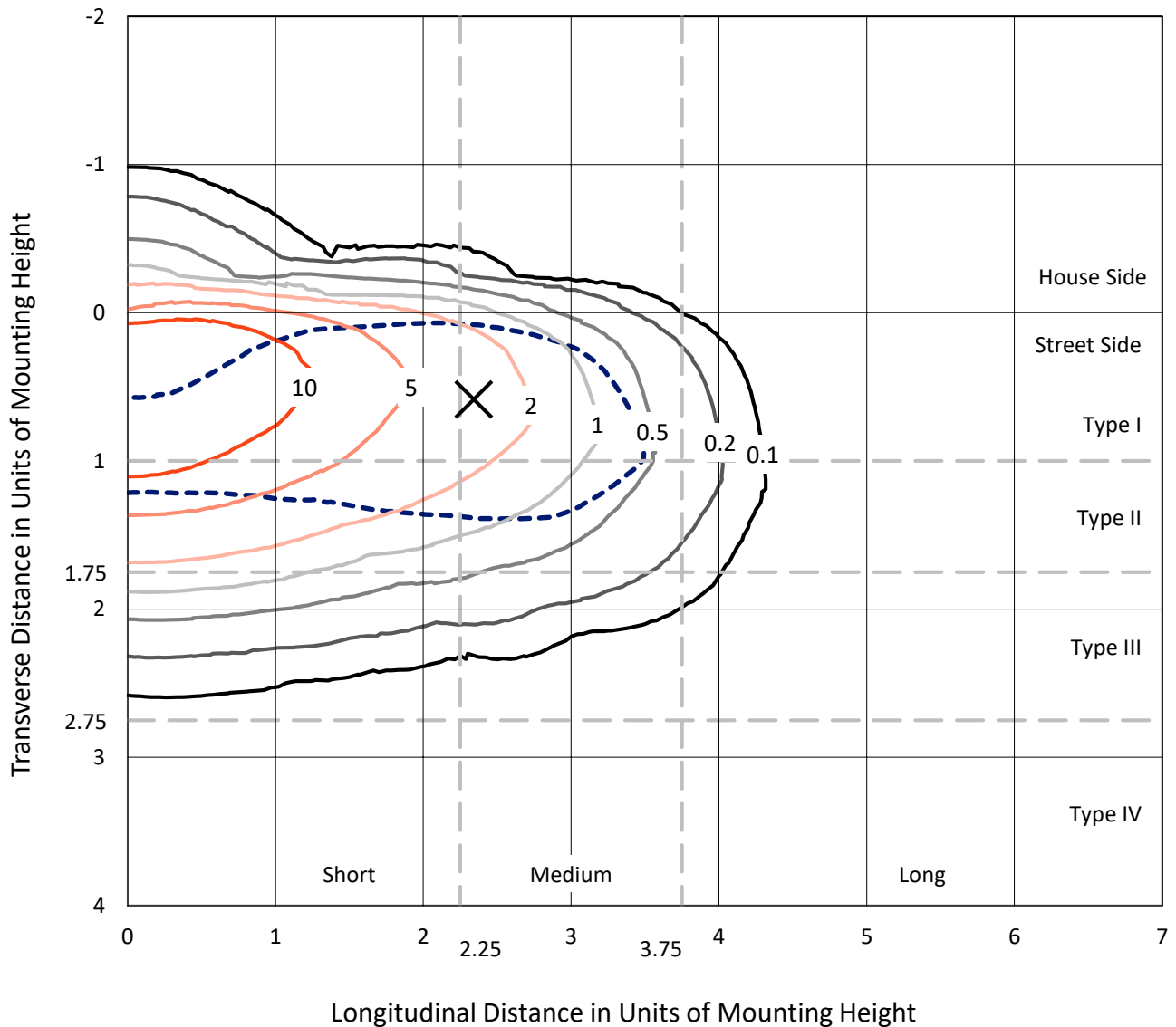
Input Watts (W): 575
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

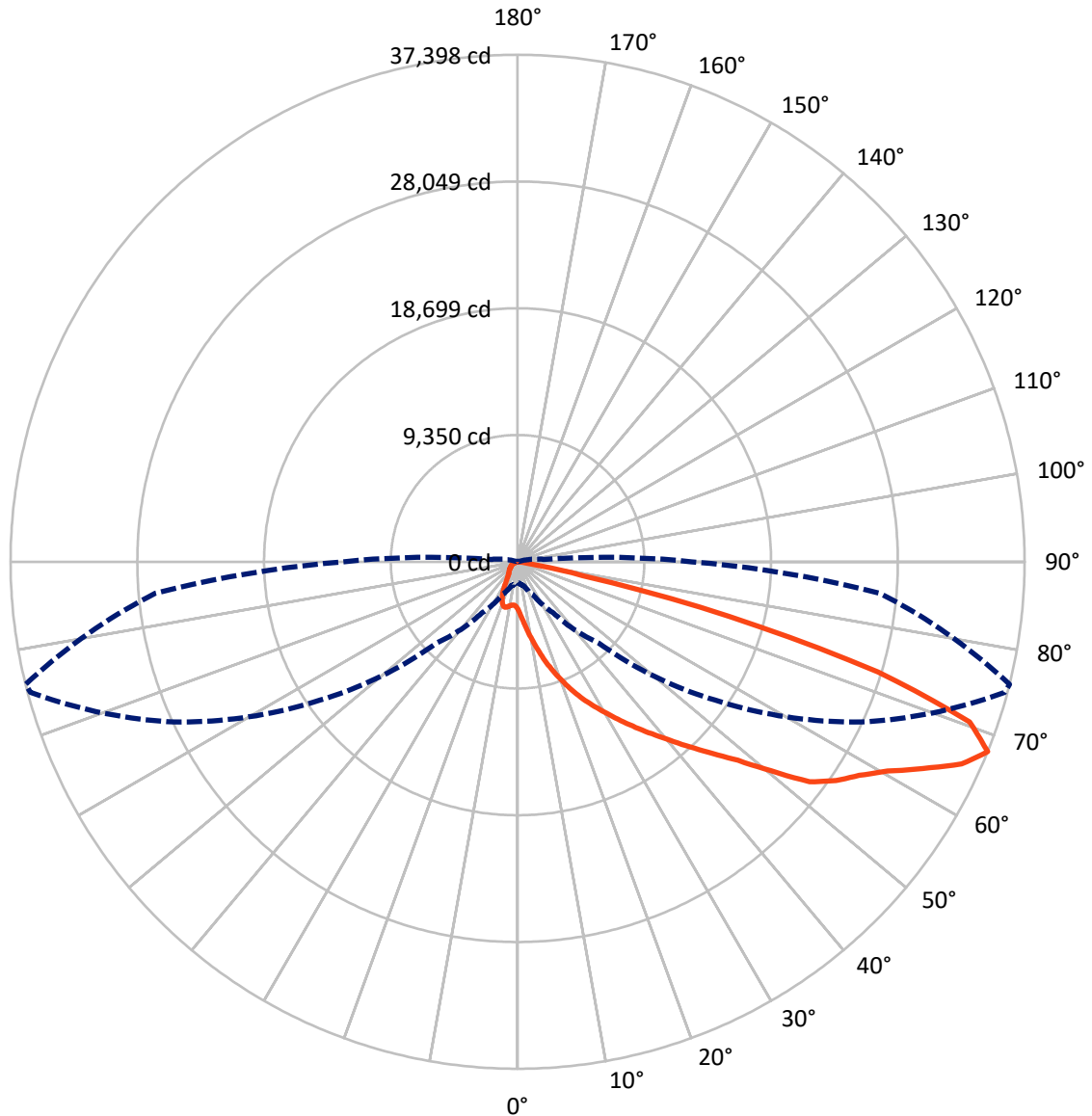
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 19.7 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 76-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2043.8 | 0.0 | 2043.8 |
| | % Fixture | 5.0 | 0.0 | 5.0 |
| Street Side | Lumens | 39115.2 | 0.0 | 39115.2 |
| | % Fixture | 95.0 | 0.0 | 95.0 |
| Total | Lumens | 41159.0 | 0.0 | 41159.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 434.2 | 1.1 |
| 10°-20° | 1721.1 | 4.2 |
| 20°-30° | 3501.8 | 8.5 |
| 30°-40° | 6078.0 | 14.8 |
| 40°-50° | 8587.4 | 20.9 |
| 50°-60° | 9738.6 | 23.7 |
| 60°-70° | 8077.2 | 19.6 |
| 70°-80° | 2925.8 | 7.1 |
| 80°-90° | 94.9 | 0.2 |
| 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° | 41159.0 | 100.0 |
| 0°-180° | 41159.0 | 100.0 |

Coefficient of Utilization

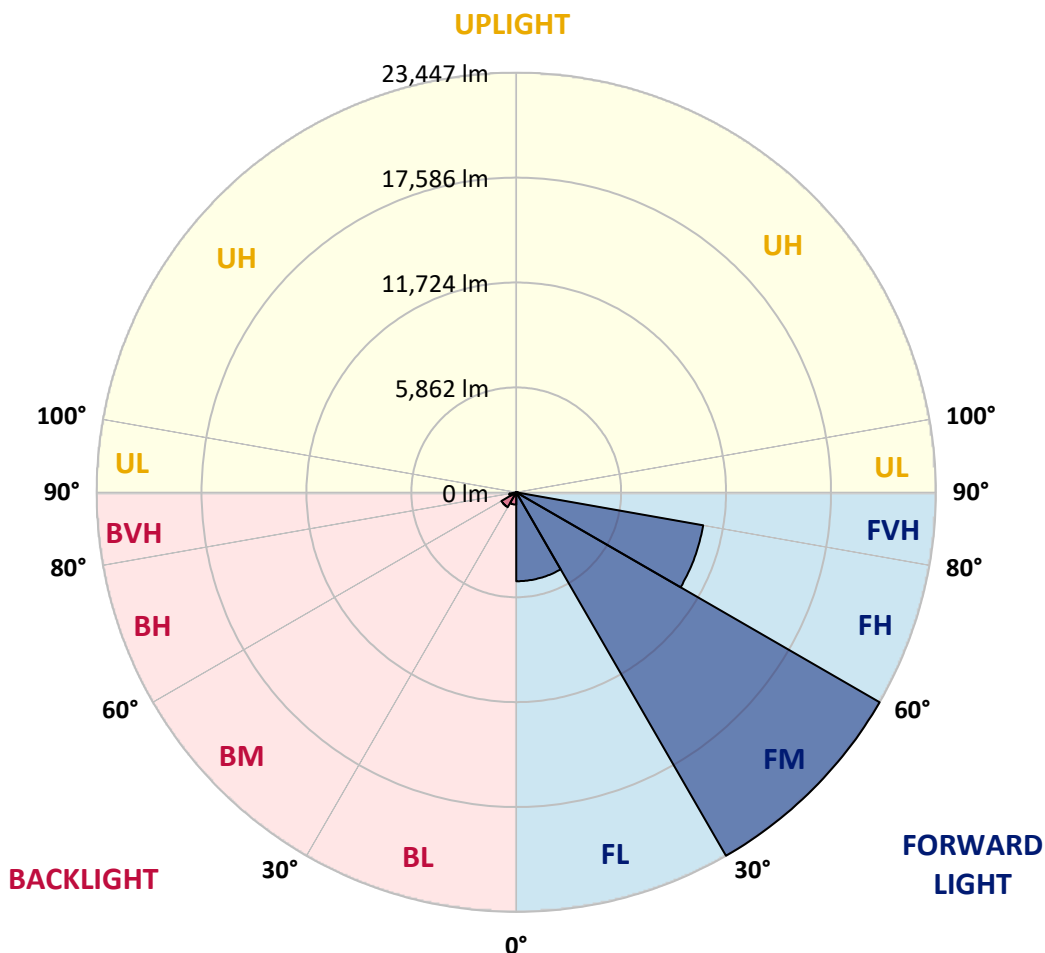


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 4967.8 | 12.1 | | | |
| FM (30°-60°) | 23447.4 | 57.0 | | | |
| FH (60°-80°) | 10608.1 | 25.8 | | | G4/12000 |
| FVH (80°-90°) | 91.9 | 0.2 | | | G1/100 |
| BL (0°-30°) | 689.3 | 1.7 | B2/1000 | | |
| BM (30°-60°) | 956.6 | 2.3 | B1/1000 | | |
| BH (60°-80°) | 395.0 | 1.0 | B1/500 | | G1/500 |
| BVH (80°-90°) | 3.0 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4
 Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 76° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 |
| 2.5° | 5212.0 | 5094.7 | 5121.8 | 5046.0 | 4909.0 | 4627.6 | 4387.8 | 4160.6 | 3895.4 | 3886.4 | 3668.2 |
| 5° | 7028.0 | 6928.8 | 6916.2 | 6762.9 | 6514.1 | 6036.1 | 5570.9 | 5040.6 | 4449.1 | 4405.8 | 3942.3 |
| 7.5° | 8676.4 | 8597.0 | 8568.2 | 8386.0 | 7922.5 | 7457.3 | 6851.3 | 6072.2 | 5147.0 | 5067.7 | 4312.0 |
| 10° | 9942.4 | 9904.5 | 9911.8 | 9781.9 | 9385.1 | 8952.3 | 8157.0 | 7163.3 | 5938.8 | 5816.1 | 4755.7 |
| 12.5° | 10901.8 | 10910.9 | 10975.8 | 10896.4 | 10674.6 | 10353.6 | 9504.2 | 8326.5 | 6815.2 | 6647.5 | 5262.5 |
| 15° | 11607.0 | 11652.1 | 11771.1 | 11870.3 | 11854.1 | 11576.3 | 10797.2 | 9507.8 | 7745.8 | 7560.1 | 5826.9 |
| 17.5° | 12063.3 | 12113.8 | 12286.9 | 12506.9 | 12708.9 | 12644.0 | 12045.2 | 10647.6 | 8687.2 | 8472.6 | 6431.1 |
| 20° | 12463.6 | 12523.1 | 12708.9 | 12999.3 | 13376.2 | 13457.3 | 13064.2 | 11753.1 | 9626.8 | 9365.3 | 7055.1 |
| 22.5° | 13331.1 | 13329.3 | 13442.9 | 13612.4 | 13971.3 | 14180.5 | 13931.6 | 12779.2 | 10555.6 | 10283.3 | 7691.7 |
| 25° | 14900.1 | 14840.6 | 14800.9 | 14667.4 | 14746.8 | 14876.6 | 14737.8 | 13738.7 | 11489.8 | 11213.8 | 8337.3 |
| 27.5° | 16764.9 | 16800.9 | 16479.9 | 16121.0 | 15843.3 | 15709.8 | 15482.6 | 14627.8 | 12387.9 | 12084.9 | 8968.5 |
| 30° | 18732.4 | 18743.2 | 18364.5 | 17906.4 | 17295.1 | 16788.3 | 16395.1 | 15477.2 | 13311.2 | 12981.2 | 9581.7 |
| 32.5° | 20507.0 | 20436.7 | 20061.6 | 19437.6 | 18665.7 | 18095.8 | 17278.8 | 16425.8 | 14288.7 | 13969.5 | 10263.4 |
| 35° | 21913.7 | 21830.7 | 21374.5 | 20806.4 | 20005.6 | 19432.2 | 18449.3 | 17372.6 | 15316.7 | 15004.7 | 10946.9 |
| 37.5° | 22941.7 | 22844.3 | 22375.4 | 21791.1 | 21100.3 | 20766.7 | 19807.3 | 18402.4 | 16438.4 | 16103.0 | 11666.5 |
| 40° | 23298.7 | 23214.0 | 22920.0 | 22492.6 | 21937.1 | 21861.4 | 21248.2 | 19587.2 | 17659.4 | 17302.3 | 12481.7 |
| 42.5° | 23085.9 | 23003.0 | 22898.4 | 22754.1 | 22523.3 | 22595.4 | 22608.0 | 20938.0 | 19015.6 | 18663.9 | 13381.6 |
| 45° | 22241.9 | 22168.0 | 22276.2 | 22487.2 | 22773.9 | 23131.0 | 23848.8 | 22389.8 | 20530.5 | 20155.3 | 14422.2 |
| 47.5° | 20999.3 | 20945.2 | 21244.6 | 21771.2 | 22609.8 | 23594.5 | 24983.2 | 23915.5 | 22231.1 | 21883.0 | 15720.7 |
| 50° | 19232.0 | 19223.0 | 19821.7 | 20782.9 | 22072.4 | 23818.1 | 26155.4 | 25650.4 | 24593.6 | 24227.5 | 17525.9 |
| 52.5° | 16479.9 | 16497.9 | 17675.6 | 19213.9 | 21129.2 | 23666.6 | 26909.2 | 27879.5 | 27342.1 | 26961.5 | 19089.5 |
| 55° | 13859.5 | 13967.7 | 14802.7 | 17020.9 | 19682.8 | 23104.0 | 27168.9 | 28920.1 | 28858.8 | 28498.1 | 19958.8 |
| 57.5° | 11293.2 | 11489.8 | 12294.1 | 14366.3 | 17571.0 | 21807.3 | 27026.5 | 29371.0 | 29987.7 | 29711.8 | 21105.8 |
| 60° | 8512.3 | 8602.4 | 9529.4 | 11466.3 | 14860.4 | 19441.2 | 25993.1 | 29616.2 | 31531.5 | 31340.3 | 22770.3 |
| 62.5° | 5415.8 | 5641.2 | 6463.6 | 8331.9 | 11570.9 | 16155.3 | 24251.0 | 29612.6 | 33463.0 | 33567.6 | 24918.2 |
| 65° | 2853.1 | 3116.4 | 3552.8 | 5163.3 | 7951.4 | 12485.3 | 21630.6 | 29334.9 | 35832.7 | 35978.8 | 26597.3 |
| 67.5° | 1538.3 | 1614.1 | 1844.9 | 2679.9 | 4611.4 | 8458.2 | 17780.2 | 27964.3 | 37205.1 | 37398.1 | 26831.7 |
| 70° | 1125.4 | 1166.8 | 1253.4 | 1482.4 | 2321.0 | 4912.6 | 12974.0 | 24856.9 | 35435.9 | 35363.8 | 23839.8 |
| 72.5° | 863.9 | 928.8 | 993.7 | 1085.7 | 1334.6 | 2622.2 | 8077.6 | 19464.6 | 28274.5 | 27798.3 | 17819.9 |
| 75° | 681.7 | 692.5 | 784.5 | 867.5 | 1000.9 | 1493.3 | 3587.1 | 11336.5 | 17257.2 | 16130.0 | 9240.9 |
| 77.5° | 544.6 | 551.9 | 606.0 | 678.1 | 804.3 | 981.1 | 1110.9 | 4459.9 | 5509.5 | 4916.2 | 2005.4 |
| 80° | 322.8 | 340.9 | 450.9 | 523.0 | 667.3 | 618.6 | 405.8 | 968.5 | 860.2 | 779.1 | 337.2 |
| 82.5° | 180.3 | 194.8 | 254.3 | 413.0 | 465.3 | 295.8 | 202.0 | 261.5 | 202.0 | 196.6 | 95.6 |
| 85° | 0.0 | 9.0 | 164.1 | 256.1 | 189.4 | 64.9 | 84.8 | 86.6 | 59.5 | 55.9 | 37.9 |
| 87.5° | 0.0 | 0.0 | 50.5 | 48.7 | 7.2 | 10.8 | 19.8 | 28.9 | 23.4 | 23.4 | 19.8 |
| 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° | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 | 3491.5 |
| 2.5° | 3560.0 | 3462.6 | 3278.7 | 3098.3 | 2946.8 | 2822.4 | 2710.6 | 2665.5 | 2629.4 | 2624.0 | 2595.2 |
| 5° | 3718.7 | 3522.1 | 3170.5 | 2881.9 | 2688.9 | 2551.9 | 2434.7 | 2362.5 | 2306.6 | 2285.0 | 2265.1 |
| 7.5° | 3958.6 | 3661.0 | 3156.0 | 2824.2 | 2593.4 | 2362.5 | 2146.1 | 1911.7 | 1765.6 | 1709.7 | 1677.2 |
| 10° | 4250.7 | 3845.0 | 3210.1 | 2808.0 | 2404.0 | 1917.1 | 1558.2 | 1260.6 | 1139.8 | 1100.1 | 1089.3 |
| 12.5° | 4591.6 | 4074.0 | 3303.9 | 2707.0 | 2000.0 | 1361.6 | 1074.9 | 973.9 | 946.8 | 934.2 | 934.2 |
| 15° | 4982.9 | 4324.7 | 3370.6 | 2414.8 | 1478.8 | 1029.8 | 930.6 | 883.7 | 854.8 | 838.6 | 840.4 |
| 17.5° | 5383.3 | 4569.9 | 3338.2 | 1991.0 | 1091.1 | 916.2 | 842.2 | 791.7 | 752.0 | 735.8 | 732.2 |
| 20° | 5787.3 | 4797.2 | 3157.8 | 1482.4 | 923.4 | 831.4 | 748.4 | 692.5 | 652.8 | 636.6 | 633.0 |
| 22.5° | 6205.7 | 4990.1 | 2840.4 | 1087.5 | 829.6 | 737.6 | 656.5 | 600.5 | 562.7 | 548.2 | 541.0 |
| 25° | 6613.2 | 5147.0 | 2396.8 | 880.1 | 741.2 | 649.2 | 571.7 | 519.4 | 485.1 | 470.7 | 468.9 |
| 27.5° | 6993.8 | 5246.2 | 1882.8 | 777.3 | 663.7 | 569.9 | 499.6 | 452.7 | 423.8 | 413.0 | 411.2 |
| 30° | 7336.4 | 5255.2 | 1392.3 | 701.5 | 595.1 | 501.4 | 436.4 | 395.0 | 369.7 | 358.9 | 355.3 |
| 32.5° | 7682.7 | 5179.5 | 1013.5 | 633.0 | 532.0 | 441.8 | 378.7 | 346.3 | 328.2 | 319.2 | 319.2 |
| 35° | 8009.1 | 5004.6 | 789.9 | 573.5 | 470.7 | 384.1 | 333.6 | 310.2 | 299.4 | 290.4 | 290.4 |
| 37.5° | 8328.3 | 4753.9 | 670.9 | 521.2 | 413.0 | 335.4 | 294.0 | 279.5 | 270.5 | 261.5 | 261.5 |
| 40° | 8652.9 | 4438.3 | 609.6 | 472.5 | 366.1 | 297.6 | 261.5 | 248.9 | 239.9 | 232.6 | 230.8 |
| 42.5° | 9051.5 | 4074.0 | 569.9 | 427.4 | 324.6 | 263.3 | 230.8 | 216.4 | 209.2 | 202.0 | 198.4 |
| 45° | 9513.2 | 3760.2 | 537.4 | 382.3 | 290.4 | 234.4 | 200.2 | 185.8 | 174.9 | 165.9 | 164.1 |
| 47.5° | 10178.7 | 3533.0 | 494.1 | 333.6 | 257.9 | 203.8 | 173.1 | 156.9 | 140.7 | 131.7 | 129.8 |
| 50° | 11028.1 | 3345.4 | 438.2 | 290.4 | 225.4 | 173.1 | 144.3 | 124.4 | 110.0 | 101.0 | 101.0 |
| 52.5° | 11450.1 | 3100.1 | 387.7 | 252.5 | 189.4 | 146.1 | 117.2 | 93.8 | 86.6 | 77.5 | 77.5 |
| 55° | 11619.6 | 2912.6 | 337.2 | 214.6 | 156.9 | 120.8 | 92.0 | 72.1 | 66.7 | 61.3 | 59.5 |
| 57.5° | 12095.7 | 2858.5 | 294.0 | 182.1 | 129.8 | 95.6 | 70.3 | 54.1 | 50.5 | 43.3 | 43.3 |
| 60° | 12862.2 | 2885.5 | 254.3 | 155.1 | 104.6 | 73.9 | 52.3 | 41.5 | 37.9 | 30.7 | 30.7 |
| 62.5° | 13690.0 | 2851.3 | 214.6 | 133.5 | 81.2 | 54.1 | 36.1 | 30.7 | 30.7 | 18.0 | 16.2 |
| 65° | 13848.7 | 2539.3 | 184.0 | 110.0 | 63.1 | 39.7 | 23.4 | 19.8 | 27.1 | 3.6 | 0.0 |
| 67.5° | 12853.2 | 1969.4 | 158.7 | 84.8 | 46.9 | 30.7 | 18.0 | 9.0 | 23.4 | 0.0 | 0.0 |
| 70° | 10277.8 | 1251.6 | 128.0 | 61.3 | 36.1 | 25.2 | 14.4 | 3.6 | 18.0 | 0.0 | 0.0 |
| 72.5° | 7267.9 | 726.8 | 101.0 | 43.3 | 30.7 | 19.8 | 10.8 | 0.0 | 10.8 | 0.0 | 0.0 |
| 75° | 3675.4 | 387.7 | 63.1 | 32.5 | 23.4 | 14.4 | 7.2 | 0.0 | 1.8 | 0.0 | 0.0 |
| 77.5° | 795.3 | 180.3 | 39.7 | 23.4 | 16.2 | 9.0 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 173.1 | 79.4 | 25.2 | 14.4 | 9.0 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 63.1 | 41.5 | 12.6 | 7.2 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 34.3 | 21.6 | 7.2 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 18.0 | 7.2 | 1.8 | 1.8 | 0.0 | 0.0 | 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)