

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: P648181

Luminaire Tested: **GALN-SA9A-835-U-T3R-HSS**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P648181
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-9)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GALN-SA9A-835-U-T3R-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 3500K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25415.4 lumens
Efficiency: N/A
Efficacy: 92.8 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G4

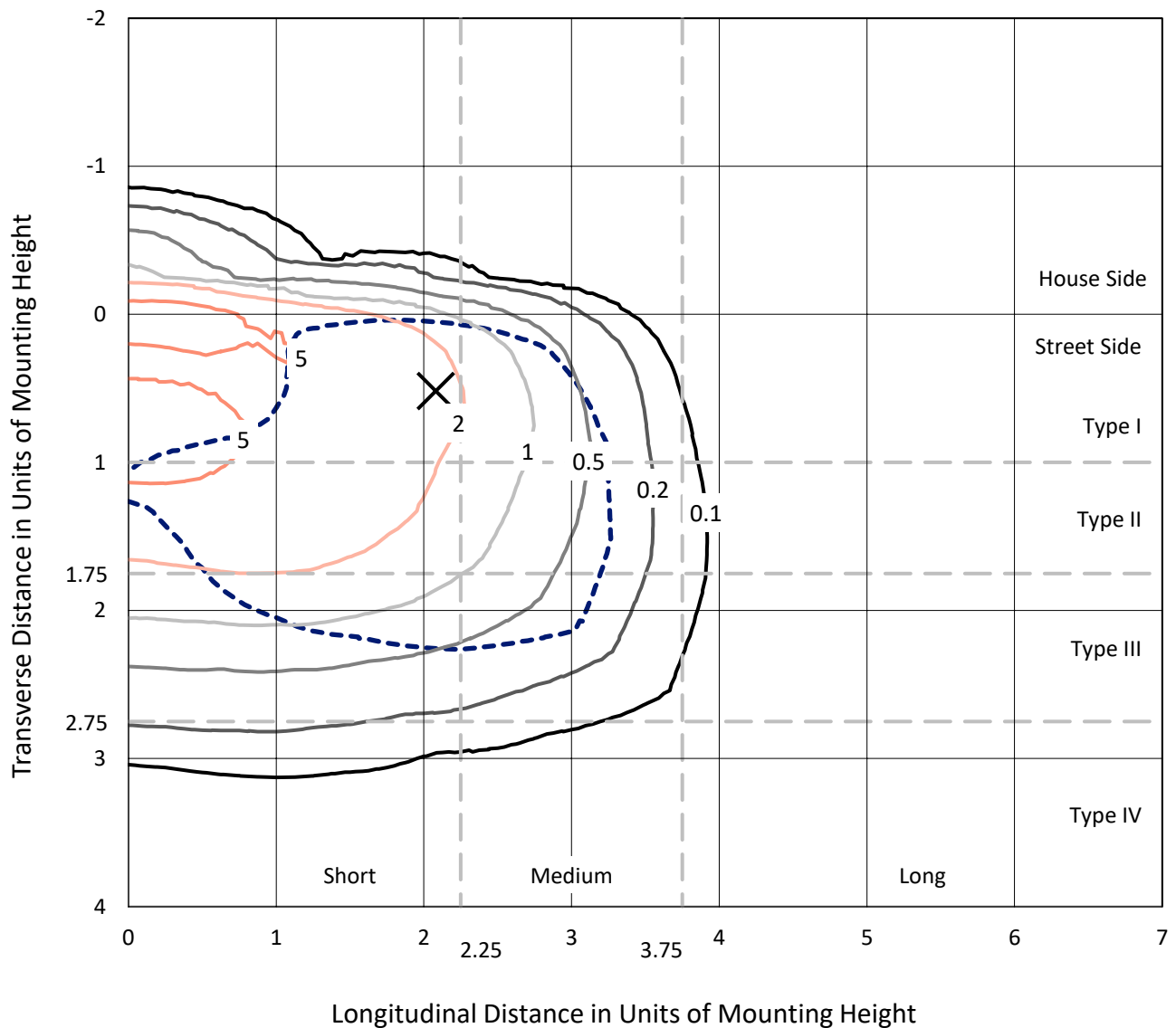
Input Watts (W): 274
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

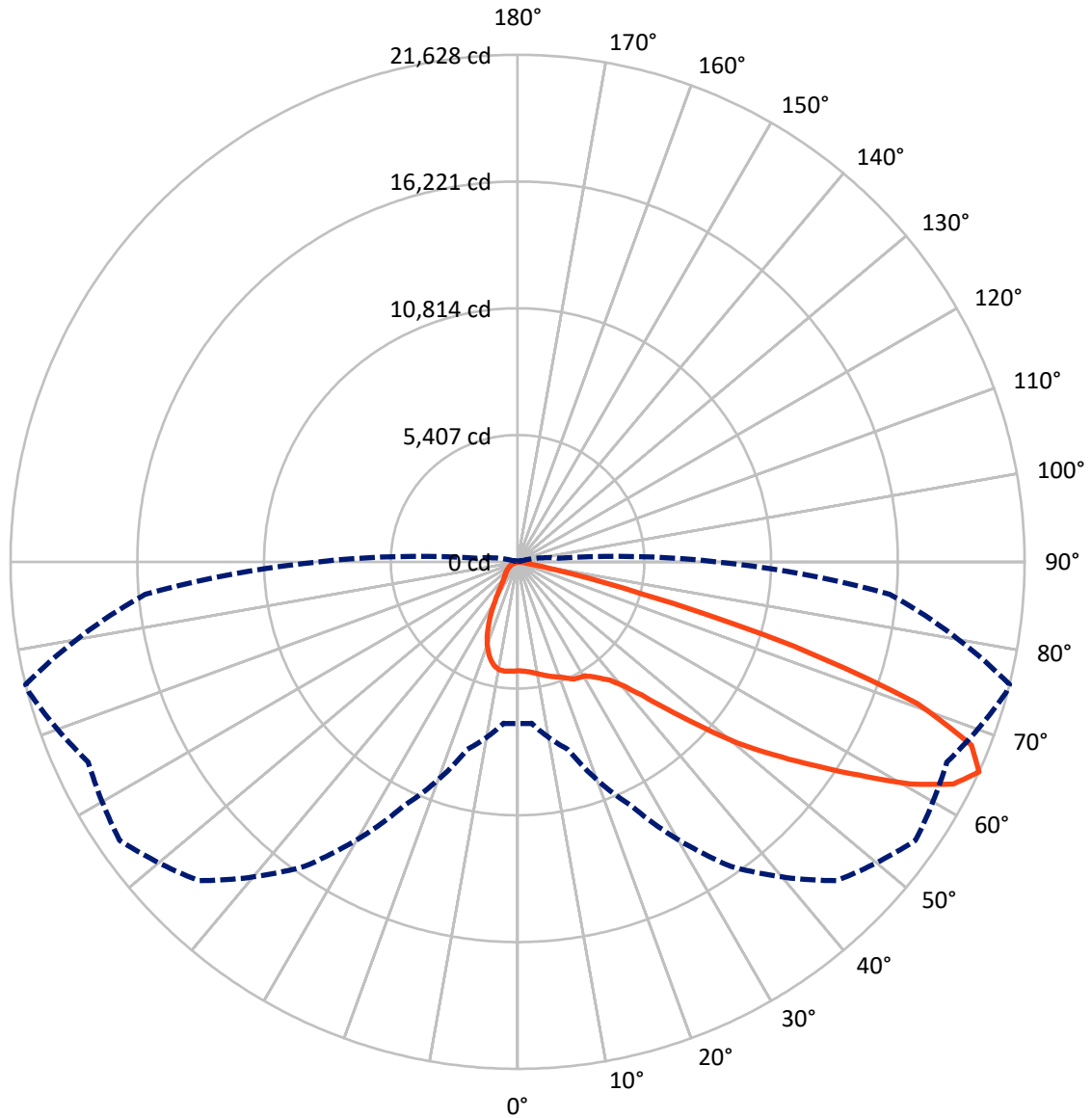
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 76-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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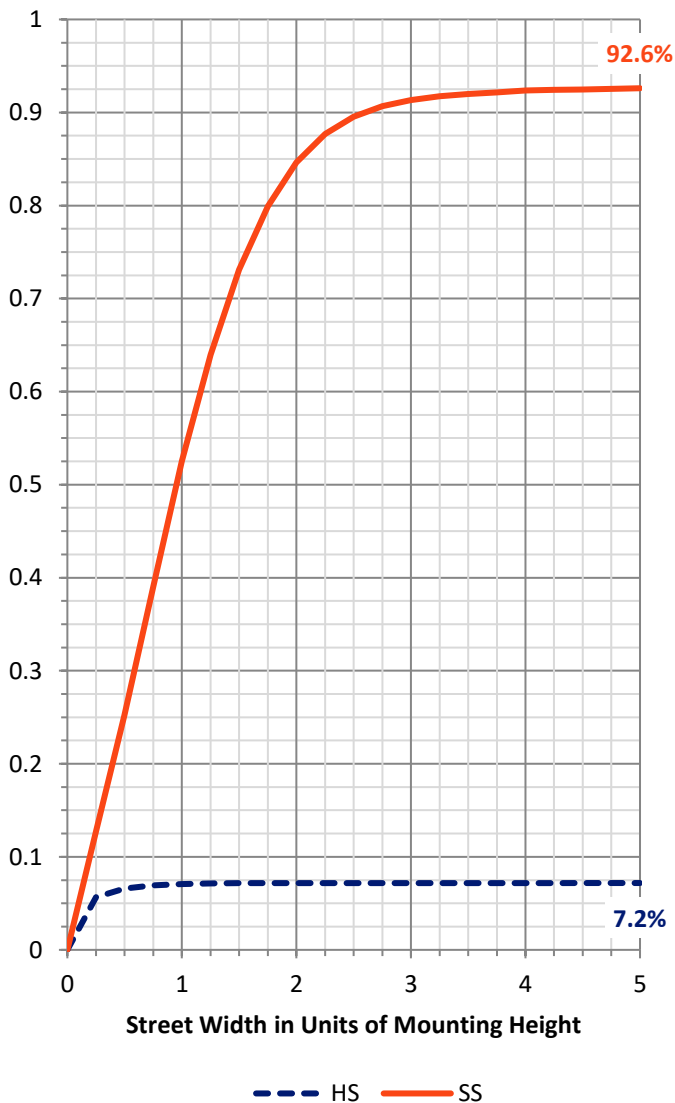
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1835.5 | 0.0 | 1835.5 |
| | % Fixture | 7.2 | 0.0 | 7.2 |
| Street Side | Lumens | 23579.9 | 0.0 | 23579.9 |
| | % Fixture | 92.8 | 0.0 | 92.8 |
| Total | Lumens | 25415.4 | 0.0 | 25415.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 383.0 | 1.5 |
| 10°-20° | 852.8 | 3.4 |
| 20°-30° | 1374.1 | 5.4 |
| 30°-40° | 2389.3 | 9.4 |
| 40°-50° | 3948.2 | 15.5 |
| 50°-60° | 6099.1 | 24.0 |
| 60°-70° | 7447.9 | 29.3 |
| 70°-80° | 2826.7 | 11.1 |
| 80°-90° | 94.3 | 0.4 |
| 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° | 25415.4 | 100.0 |
| 0°-180° | 25415.4 | 100.0 |

Coefficient of Utilization

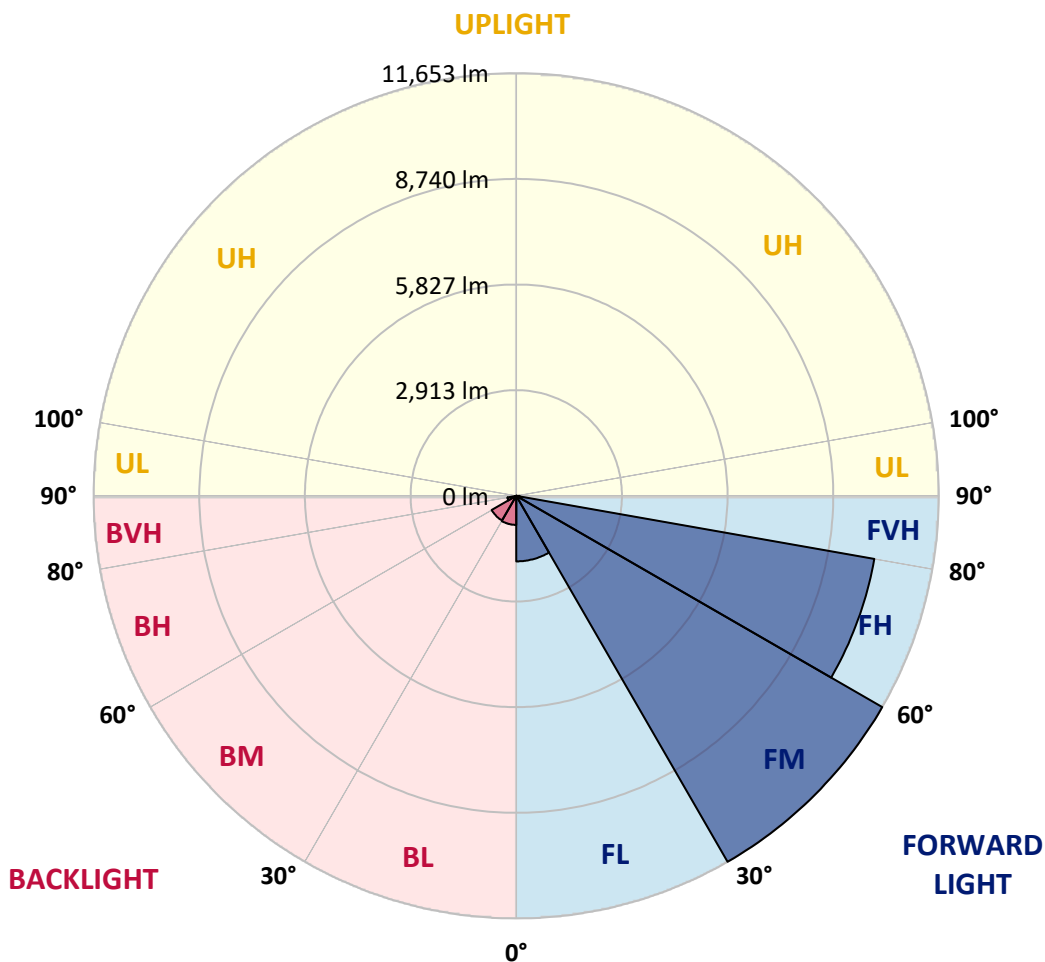


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1808.0 | 7.1 | | | |
| FM (30°-60°) | 11653.3 | 45.9 | | | |
| FH (60°-80°) | 10025.5 | 39.4 | | | G4/12000 |
| FVH (80°-90°) | 93.0 | 0.4 | | | G1/100 |
| BL (0°-30°) | 801.9 | 3.2 | B2/1000 | | |
| BM (30°-60°) | 783.3 | 3.1 | B1/1000 | | |
| BH (60°-80°) | 249.1 | 1.0 | B1/500 | | G1/500 |
| BVH (80°-90°) | 1.3 | 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 III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 76° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 |
| 2.5° | 4442.9 | 4444.7 | 4455.5 | 4482.4 | 4523.7 | 4557.8 | 4586.5 | 4633.2 | 4665.4 | 4669.0 | 4679.8 |
| 5° | 4136.1 | 4114.6 | 4136.1 | 4206.0 | 4268.8 | 4364.0 | 4480.6 | 4597.2 | 4701.3 | 4708.5 | 4758.8 |
| 7.5° | 3791.6 | 3809.5 | 3843.6 | 3915.4 | 4033.8 | 4179.2 | 4347.8 | 4556.0 | 4753.4 | 4771.3 | 4870.0 |
| 10° | 3441.7 | 3481.1 | 3536.7 | 3646.2 | 3811.3 | 3999.7 | 4229.4 | 4527.3 | 4835.9 | 4861.0 | 5031.5 |
| 12.5° | 3118.7 | 3136.6 | 3204.8 | 3351.9 | 3556.5 | 3822.1 | 4139.6 | 4511.1 | 4927.4 | 4958.0 | 5203.7 |
| 15° | 2871.0 | 2894.4 | 2953.6 | 3086.4 | 3314.3 | 3655.2 | 4066.1 | 4505.8 | 5017.2 | 5060.2 | 5376.0 |
| 17.5° | 2824.4 | 2838.8 | 2863.8 | 2953.6 | 3152.7 | 3522.4 | 3999.7 | 4504.0 | 5103.3 | 5155.3 | 5535.7 |
| 20° | 3016.4 | 3003.8 | 2978.7 | 2969.8 | 3079.2 | 3420.1 | 3951.3 | 4518.3 | 5185.8 | 5245.0 | 5704.4 |
| 22.5° | 3497.3 | 3513.4 | 3366.3 | 3192.2 | 3156.4 | 3403.9 | 3944.1 | 4586.5 | 5316.8 | 5386.8 | 5892.8 |
| 25° | 4518.3 | 4394.5 | 4164.8 | 3748.5 | 3434.5 | 3502.7 | 4024.9 | 4748.0 | 5469.3 | 5546.5 | 6063.2 |
| 27.5° | 5647.0 | 5609.3 | 5252.2 | 4566.8 | 3981.8 | 3710.8 | 4168.4 | 4871.8 | 5519.6 | 5598.5 | 6160.2 |
| 30° | 6755.9 | 6800.7 | 6391.6 | 5634.4 | 4776.7 | 4096.6 | 4303.0 | 4918.4 | 5564.5 | 5647.0 | 6284.0 |
| 32.5° | 7784.1 | 7837.9 | 7479.1 | 6729.0 | 5713.4 | 4764.2 | 4534.4 | 5099.7 | 5752.9 | 5837.2 | 6490.4 |
| 35° | 8593.3 | 8600.6 | 8329.6 | 7732.0 | 6736.1 | 5575.2 | 5035.1 | 5417.3 | 6007.6 | 6106.3 | 6709.3 |
| 37.5° | 9336.3 | 9325.5 | 9007.9 | 8492.9 | 7588.5 | 6380.9 | 5664.9 | 5783.3 | 6298.4 | 6400.6 | 7025.1 |
| 40° | 9887.2 | 9894.3 | 9792.0 | 9307.5 | 8383.4 | 7125.5 | 6163.8 | 6126.1 | 6786.4 | 6946.1 | 7484.5 |
| 42.5° | 10255.0 | 10321.3 | 10371.6 | 10125.8 | 9382.9 | 8042.5 | 6929.9 | 6860.0 | 7633.4 | 7766.2 | 8134.0 |
| 45° | 10552.9 | 10671.3 | 10922.5 | 10909.9 | 10342.9 | 9167.6 | 7981.5 | 7837.9 | 8833.8 | 8975.6 | 8961.2 |
| 47.5° | 10770.0 | 10890.2 | 11306.5 | 11557.7 | 11245.5 | 10258.6 | 9303.9 | 9180.1 | 10267.6 | 10421.9 | 9874.6 |
| 50° | 10881.3 | 11024.8 | 11555.9 | 12042.2 | 11950.7 | 11310.1 | 10811.3 | 10818.4 | 11999.2 | 12148.1 | 10933.3 |
| 52.5° | 10621.1 | 10807.7 | 11688.7 | 12564.4 | 12742.0 | 12316.7 | 12223.4 | 12460.3 | 13540.5 | 13668.0 | 11889.7 |
| 55° | 9790.2 | 10025.3 | 11507.5 | 13009.4 | 13659.0 | 13504.6 | 13827.6 | 14188.3 | 15225.4 | 15308.0 | 12871.2 |
| 57.5° | 9264.5 | 9513.9 | 10972.7 | 13388.0 | 14760.7 | 14997.6 | 15509.0 | 15772.8 | 16964.2 | 17174.2 | 13998.1 |
| 60° | 8821.3 | 9016.9 | 10533.2 | 13468.8 | 15880.4 | 16824.3 | 17321.4 | 17594.1 | 19110.4 | 19246.7 | 15238.0 |
| 62.5° | 8083.8 | 8308.1 | 9790.2 | 12905.3 | 16443.9 | 18286.7 | 19316.7 | 19194.7 | 20770.2 | 20865.3 | 15998.9 |
| 65° | 6897.7 | 6917.4 | 8283.0 | 11489.5 | 15862.5 | 19236.0 | 20718.1 | 20206.7 | 21563.3 | 21627.9 | 15939.6 |
| 67.5° | 5148.1 | 5338.3 | 6371.9 | 9031.2 | 13398.8 | 18424.9 | 21172.1 | 20233.7 | 21062.6 | 20883.2 | 14674.6 |
| 70° | 3316.1 | 3461.4 | 4319.1 | 6262.4 | 9661.0 | 15376.2 | 19666.6 | 18846.6 | 18485.9 | 18087.5 | 12011.7 |
| 72.5° | 1530.6 | 1717.3 | 2566.0 | 3578.0 | 5729.5 | 10953.0 | 15964.7 | 15311.6 | 13305.4 | 12322.1 | 7635.2 |
| 75° | 667.5 | 714.2 | 1266.8 | 1887.7 | 2686.2 | 5792.3 | 10525.9 | 9504.9 | 6009.4 | 5489.1 | 3055.9 |
| 77.5° | 407.3 | 437.9 | 663.9 | 1012.0 | 1055.1 | 2207.1 | 5670.3 | 4146.8 | 1857.2 | 1638.3 | 829.0 |
| 80° | 276.3 | 310.5 | 482.7 | 529.4 | 360.6 | 615.5 | 2128.2 | 1107.2 | 375.1 | 358.8 | 177.7 |
| 82.5° | 134.6 | 170.5 | 357.0 | 296.1 | 156.1 | 197.4 | 619.0 | 236.9 | 109.5 | 102.3 | 62.8 |
| 85° | 19.7 | 34.1 | 201.0 | 193.8 | 70.0 | 46.7 | 109.5 | 59.2 | 37.7 | 35.9 | 28.7 |
| 87.5° | 0.0 | 0.0 | 68.2 | 30.5 | 7.2 | 7.2 | 12.5 | 12.5 | 14.3 | 12.5 | 14.3 |
| 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° | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 | 4649.3 |
| 2.5° | 4685.2 | 4694.2 | 4660.0 | 4611.6 | 4559.6 | 4507.5 | 4434.0 | 4367.6 | 4328.1 | 4351.4 | 4294.0 |
| 5° | 4769.5 | 4762.4 | 4672.6 | 4525.5 | 4329.9 | 4094.9 | 3861.5 | 3662.4 | 3597.8 | 3500.9 | 3490.1 |
| 7.5° | 4886.2 | 4866.4 | 4676.2 | 4338.8 | 3897.5 | 3456.0 | 3025.4 | 2740.0 | 2576.8 | 2438.6 | 2442.2 |
| 10° | 5049.4 | 4992.0 | 4635.0 | 4010.4 | 3283.7 | 2618.0 | 2068.9 | 1692.1 | 1528.8 | 1476.8 | 1435.6 |
| 12.5° | 5218.1 | 5106.9 | 4520.1 | 3567.3 | 2557.0 | 1789.0 | 1257.9 | 1028.2 | 927.7 | 895.4 | 891.8 |
| 15° | 5368.9 | 5193.0 | 4319.1 | 3034.4 | 1859.0 | 1143.0 | 857.7 | 782.4 | 769.8 | 771.6 | 769.8 |
| 17.5° | 5517.8 | 5261.2 | 4041.0 | 2469.1 | 1263.3 | 820.0 | 737.5 | 719.6 | 724.9 | 732.1 | 730.3 |
| 20° | 5641.6 | 5275.5 | 3685.7 | 1884.1 | 893.6 | 719.6 | 692.6 | 689.0 | 694.4 | 699.8 | 699.8 |
| 22.5° | 5776.2 | 5286.3 | 3264.0 | 1304.6 | 730.3 | 669.3 | 655.0 | 655.0 | 662.1 | 669.3 | 671.1 |
| 25° | 5876.6 | 5227.1 | 2759.8 | 936.7 | 644.2 | 620.8 | 613.7 | 615.5 | 622.6 | 626.2 | 624.4 |
| 27.5° | 5892.8 | 5060.2 | 2225.1 | 717.8 | 585.0 | 561.6 | 554.4 | 561.6 | 552.6 | 558.0 | 554.4 |
| 30° | 5907.2 | 4848.5 | 1683.1 | 604.7 | 531.1 | 495.2 | 484.5 | 473.7 | 466.5 | 457.6 | 455.8 |
| 32.5° | 5952.1 | 4599.0 | 1229.2 | 543.7 | 480.9 | 441.5 | 416.3 | 385.8 | 362.5 | 355.3 | 353.5 |
| 35° | 5971.8 | 4299.4 | 902.6 | 495.2 | 436.1 | 393.0 | 348.1 | 305.1 | 270.9 | 258.4 | 267.4 |
| 37.5° | 6047.1 | 4008.7 | 699.8 | 459.4 | 396.6 | 342.7 | 285.3 | 231.5 | 199.2 | 192.0 | 195.6 |
| 40° | 6201.4 | 3692.9 | 586.8 | 428.8 | 362.5 | 296.1 | 226.1 | 174.1 | 152.5 | 145.3 | 143.5 |
| 42.5° | 6449.1 | 3378.9 | 522.2 | 400.1 | 328.4 | 249.4 | 177.7 | 136.4 | 118.5 | 113.1 | 113.1 |
| 45° | 6750.6 | 3077.4 | 477.3 | 369.7 | 292.5 | 201.0 | 140.0 | 109.5 | 98.7 | 95.1 | 95.1 |
| 47.5° | 7147.1 | 2813.6 | 439.7 | 339.1 | 253.0 | 159.7 | 113.1 | 95.1 | 87.9 | 89.7 | 91.5 |
| 50° | 7549.1 | 2618.0 | 398.4 | 305.1 | 208.1 | 131.0 | 96.9 | 84.3 | 82.5 | 84.3 | 84.3 |
| 52.5° | 7852.3 | 2503.2 | 342.7 | 258.4 | 163.3 | 109.5 | 86.1 | 78.9 | 77.1 | 73.6 | 73.6 |
| 55° | 8261.4 | 2478.0 | 272.7 | 209.9 | 129.2 | 91.5 | 77.1 | 71.8 | 66.4 | 62.8 | 61.0 |
| 57.5° | 8787.1 | 2506.8 | 209.9 | 163.3 | 100.5 | 75.4 | 68.2 | 59.2 | 52.1 | 44.9 | 44.9 |
| 60° | 9113.7 | 2442.2 | 163.3 | 125.6 | 73.6 | 61.0 | 52.1 | 43.1 | 34.1 | 28.7 | 26.9 |
| 62.5° | 9009.7 | 2169.5 | 129.2 | 93.3 | 52.1 | 44.9 | 34.1 | 28.7 | 19.7 | 14.3 | 12.5 |
| 65° | 8473.2 | 1751.3 | 104.1 | 64.6 | 37.7 | 26.9 | 17.9 | 17.9 | 9.0 | 1.8 | 0.0 |
| 67.5° | 7416.3 | 1297.4 | 82.5 | 43.1 | 21.5 | 12.5 | 9.0 | 5.4 | 0.0 | 0.0 | 0.0 |
| 70° | 6036.4 | 936.7 | 64.6 | 26.9 | 12.5 | 9.0 | 3.6 | 1.8 | 0.0 | 0.0 | 0.0 |
| 72.5° | 3832.9 | 536.5 | 50.3 | 16.1 | 9.0 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 1482.1 | 209.9 | 34.1 | 10.8 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 419.9 | 98.7 | 19.7 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 109.5 | 43.1 | 10.8 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 52.1 | 17.9 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 30.5 | 7.2 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 14.3 | 1.8 | 0.0 | 0.0 | 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)