

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: P458045

Luminaire Tested: **GALN-SA9B-830-U-T4FT-HSS**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P458045
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-29)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA9B-830-U-T4FT-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29517 lumens
Efficiency: N/A
Efficacy: 81.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G5

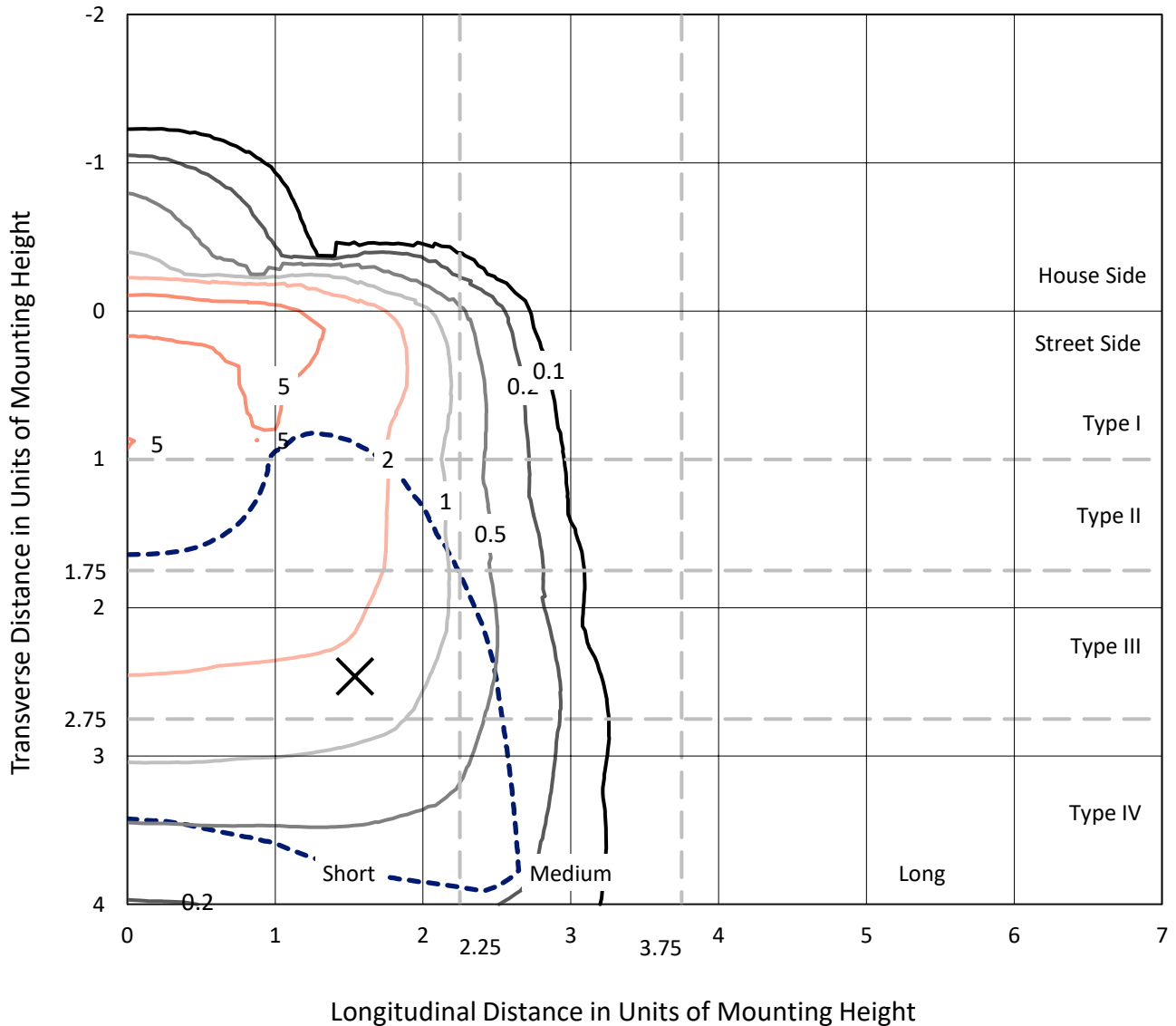
Input Watts (W): 364
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

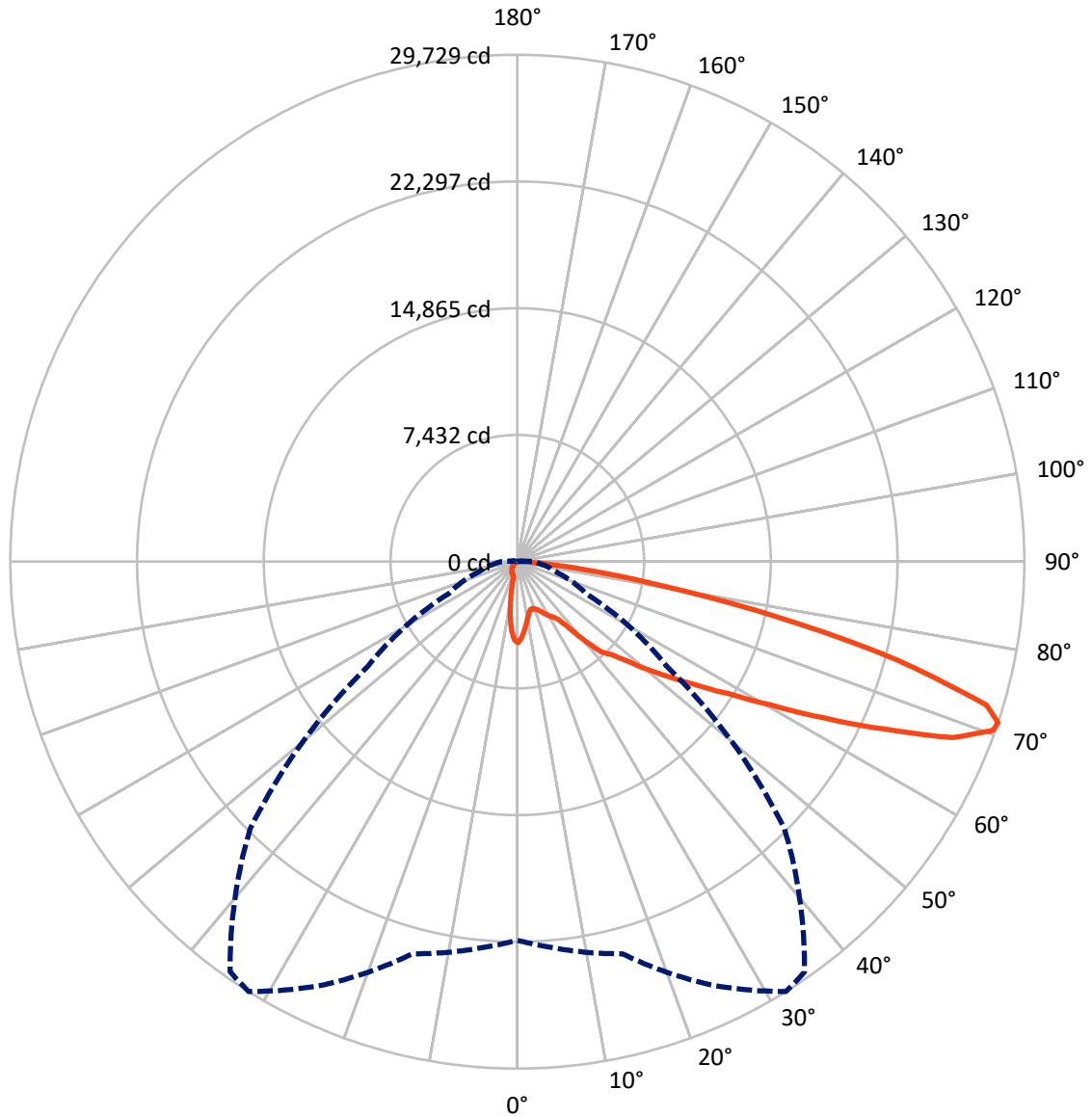
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.6 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 32-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2472.4 | 0.0 | 2472.4 |
| | % Fixture | 8.4 | 0.0 | 8.4 |
| Street Side | Lumens | 27044.6 | 0.0 | 27044.6 |
| | % Fixture | 91.6 | 0.0 | 91.6 |
| Total | Lumens | 29517.0 | 0.0 | 29517.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 386.0 | 1.3 |
| 10°-20° | 837.7 | 2.8 |
| 20°-30° | 1303.2 | 4.4 |
| 30°-40° | 2171.1 | 7.4 |
| 40°-50° | 4038.6 | 13.7 |
| 50°-60° | 6484.2 | 22.0 |
| 60°-70° | 8721.6 | 29.5 |
| 70°-80° | 5174.6 | 17.5 |
| 80°-90° | 400.0 | 1.4 |
| 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° | 29517.0 | 100.0 |
| 0°-180° | 29517.0 | 100.0 |



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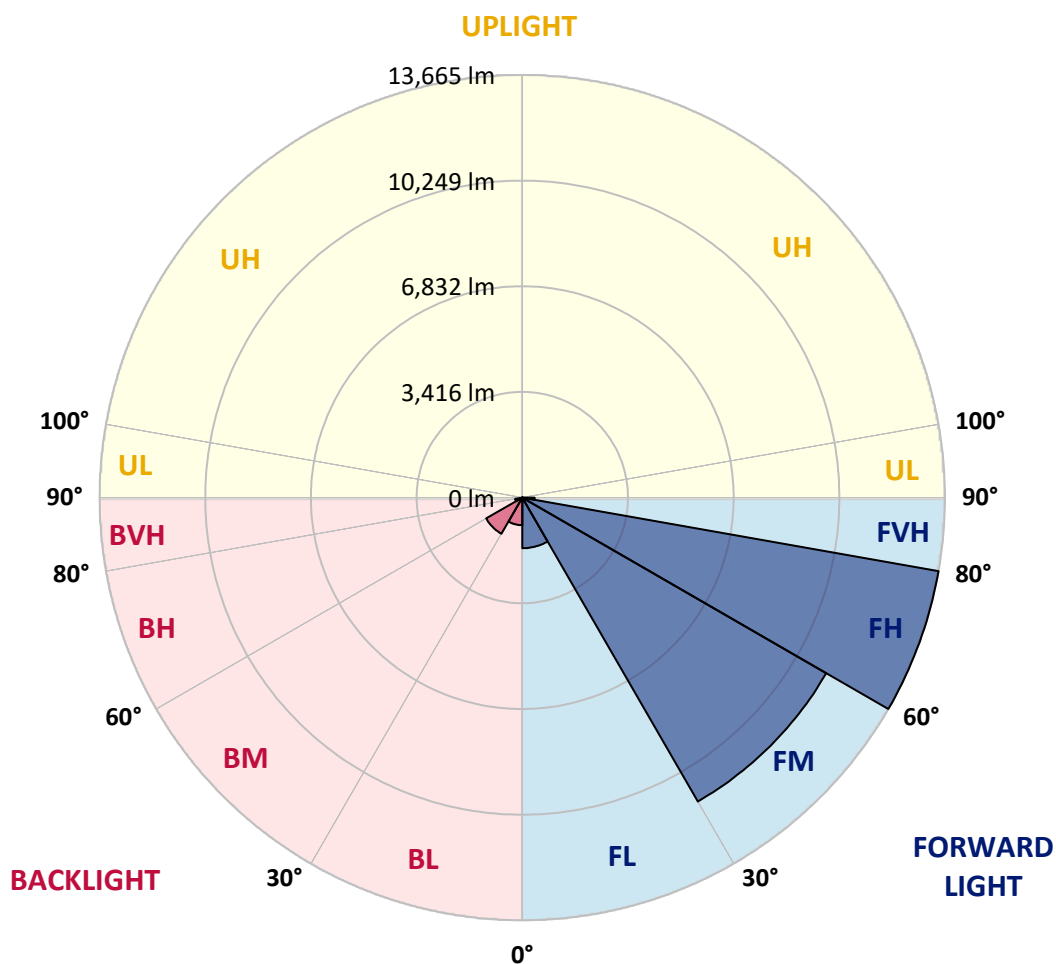
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|--------|
| | | | | B | U | G |
| FL | (0°-30°) | 1636.0 | 5.5 | | | |
| FM | (30°-60°) | 11345.2 | 38.4 | | | |
| FH | (60°-80°) | 13664.9 | 46.3 | | | G5 |
| FVH | (80°-90°) | 398.4 | 1.3 | | | G3/500 |
| BL | (0°-30°) | 890.8 | 3.0 | B2/1000 | | |
| BM | (30°-60°) | 1348.7 | 4.6 | B2/2500 | | |
| BH | (60°-80°) | 231.2 | 0.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 1.6 | 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-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 32° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 |
| 2.5° | 4402.4 | 4447.7 | 4440.9 | 4456.8 | 4495.3 | 4511.2 | 4554.2 | 4601.8 | 4667.5 | 4712.8 | 4742.3 |
| 5° | 3942.4 | 3976.4 | 3981.0 | 4060.3 | 4098.8 | 4141.8 | 4268.7 | 4406.9 | 4561.0 | 4683.4 | 4764.9 |
| 7.5° | 3450.8 | 3468.9 | 3505.2 | 3609.4 | 3706.8 | 3749.9 | 3942.4 | 4182.6 | 4425.1 | 4653.9 | 4801.2 |
| 10° | 3045.2 | 3065.6 | 3131.3 | 3242.3 | 3333.0 | 3389.6 | 3657.0 | 3958.3 | 4298.2 | 4638.0 | 4853.3 |
| 12.5° | 2814.1 | 2825.4 | 2850.3 | 2950.0 | 3065.6 | 3126.8 | 3414.5 | 3758.9 | 4196.2 | 4644.8 | 4941.7 |
| 15° | 2798.2 | 2793.7 | 2764.2 | 2805.0 | 2909.3 | 2972.7 | 3253.7 | 3623.0 | 4105.6 | 4667.5 | 5045.9 |
| 17.5° | 2882.1 | 2870.7 | 2800.5 | 2800.5 | 2886.6 | 2938.7 | 3185.7 | 3550.5 | 4060.3 | 4719.6 | 5193.2 |
| 20° | 3011.2 | 2993.1 | 2877.5 | 2868.5 | 2952.3 | 3006.7 | 3226.5 | 3555.0 | 4069.3 | 4817.0 | 5390.3 |
| 22.5° | 3174.3 | 3154.0 | 2979.5 | 2984.0 | 3074.7 | 3129.0 | 3344.3 | 3636.6 | 4126.0 | 4937.1 | 5601.0 |
| 25° | 3387.3 | 3364.7 | 3158.5 | 3149.4 | 3244.6 | 3292.2 | 3518.7 | 3781.6 | 4205.3 | 5086.7 | 5877.4 |
| 27.5° | 3670.6 | 3623.0 | 3376.0 | 3362.4 | 3464.4 | 3525.5 | 3729.5 | 3976.4 | 4345.8 | 5292.8 | 6249.0 |
| 30° | 3903.9 | 3851.8 | 3616.2 | 3579.9 | 3688.7 | 3736.3 | 3947.0 | 4239.3 | 4622.2 | 5653.1 | 6763.3 |
| 32.5° | 4209.8 | 4132.8 | 3856.3 | 3761.2 | 3876.7 | 3937.9 | 4261.9 | 4728.7 | 5032.3 | 6033.8 | 7375.1 |
| 35° | 4898.6 | 4851.0 | 4513.4 | 4180.4 | 4173.6 | 4250.6 | 4726.4 | 5222.6 | 5453.7 | 6627.4 | 8208.9 |
| 37.5° | 5884.2 | 5850.2 | 5492.2 | 5045.9 | 4916.7 | 4880.5 | 5290.6 | 5766.4 | 6126.7 | 7443.1 | 9178.6 |
| 40° | 7028.4 | 6949.1 | 6620.6 | 6242.2 | 6074.5 | 5968.0 | 5956.7 | 6575.3 | 7005.8 | 8551.0 | 10189.2 |
| 42.5° | 7848.6 | 7703.6 | 7304.9 | 7277.7 | 7241.4 | 7130.4 | 6808.6 | 7758.0 | 8140.9 | 9742.8 | 11270.0 |
| 45° | 8709.6 | 8489.9 | 7896.2 | 7794.3 | 7780.7 | 7773.9 | 8095.6 | 9158.3 | 9378.0 | 11034.3 | 12380.2 |
| 47.5° | 9378.0 | 9203.6 | 8716.4 | 8671.1 | 8727.8 | 8881.8 | 9797.2 | 10644.6 | 10599.3 | 12185.3 | 13311.4 |
| 50° | 10268.5 | 10137.1 | 9595.5 | 9681.6 | 9973.9 | 10225.4 | 11716.3 | 12264.6 | 11603.0 | 13091.6 | 13988.9 |
| 52.5° | 11319.8 | 11077.4 | 10574.4 | 10807.7 | 11256.4 | 11675.5 | 13753.2 | 13683.0 | 12307.7 | 13773.6 | 14494.2 |
| 55° | 12230.6 | 12058.4 | 11886.2 | 12128.7 | 12799.4 | 13322.7 | 15593.1 | 14745.7 | 12819.7 | 14322.0 | 14716.2 |
| 57.5° | 13771.4 | 13730.6 | 13553.9 | 13800.8 | 14614.2 | 15158.0 | 17240.3 | 15570.4 | 13148.3 | 14607.4 | 14455.6 |
| 60° | 16050.7 | 15985.0 | 15656.5 | 15971.4 | 17031.8 | 17886.0 | 18758.3 | 16311.3 | 13223.1 | 14496.4 | 13705.7 |
| 62.5° | 18792.3 | 18568.0 | 18287.1 | 18751.5 | 20206.2 | 20582.3 | 20188.0 | 16750.9 | 12944.4 | 13612.8 | 11897.6 |
| 65° | 21352.6 | 21121.5 | 21128.3 | 22107.1 | 23690.9 | 23947.0 | 21855.6 | 16685.2 | 12128.7 | 11399.1 | 8775.3 |
| 67.5° | 23312.5 | 23274.0 | 23550.4 | 25460.5 | 27531.4 | 27354.7 | 23346.5 | 15701.8 | 9711.1 | 7388.7 | 4663.0 |
| 70° | 23412.2 | 23487.0 | 24280.0 | 27504.2 | 29606.9 | 29325.9 | 23219.6 | 12763.1 | 6054.1 | 3398.7 | 1837.5 |
| 71° | 22206.8 | 22709.8 | 23806.5 | 27440.8 | 29729.2 | 29364.4 | 22150.2 | 10689.9 | 4440.9 | 2370.0 | 1325.5 |
| 72.5° | 18923.7 | 19188.8 | 21558.8 | 25825.3 | 28761.7 | 27982.3 | 19438.1 | 7492.9 | 2843.5 | 1450.1 | 761.3 |
| 75° | 10422.6 | 11075.1 | 14437.5 | 20260.5 | 23004.4 | 22320.1 | 12667.9 | 3559.5 | 1418.4 | 793.0 | 314.9 |
| 77.5° | 4962.0 | 4835.2 | 7044.3 | 12049.4 | 15597.6 | 15561.3 | 6382.7 | 1581.5 | 827.0 | 537.0 | 158.6 |
| 80° | 1418.4 | 1595.1 | 2696.3 | 5727.9 | 8659.8 | 8754.9 | 2451.6 | 763.6 | 573.2 | 419.2 | 81.6 |
| 82.5° | 428.2 | 437.3 | 990.1 | 2533.1 | 4307.2 | 4060.3 | 919.9 | 389.7 | 412.4 | 333.1 | 47.6 |
| 85° | 74.8 | 92.9 | 292.3 | 892.7 | 1642.7 | 1246.2 | 231.1 | 185.8 | 271.9 | 219.8 | 27.2 |
| 87.5° | 4.5 | 6.8 | 97.4 | 102.0 | 145.0 | 83.8 | 40.8 | 27.2 | 58.9 | 58.9 | 15.9 |
| 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° | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 | 4746.8 |
| 2.5° | 4762.7 | 4776.2 | 4767.2 | 4746.8 | 4712.8 | 4672.0 | 4617.6 | 4572.3 | 4533.8 | 4513.4 | 4538.3 |
| 5° | 4792.1 | 4810.2 | 4764.9 | 4663.0 | 4508.9 | 4341.2 | 4150.9 | 4003.6 | 3888.1 | 3851.8 | 3838.2 |
| 7.5° | 4837.4 | 4848.8 | 4726.4 | 4499.8 | 4173.6 | 3777.0 | 3430.4 | 3138.1 | 2911.5 | 2843.5 | 2743.9 |
| 10° | 4896.3 | 4889.5 | 4658.4 | 4237.0 | 3663.8 | 3067.9 | 2530.9 | 2132.1 | 1830.7 | 1722.0 | 1712.9 |
| 12.5° | 4987.0 | 4950.7 | 4572.3 | 3879.0 | 3056.5 | 2277.1 | 1613.2 | 1262.0 | 1071.7 | 1008.3 | 994.7 |
| 15° | 5100.3 | 5014.2 | 4436.4 | 3459.8 | 2340.5 | 1470.5 | 994.7 | 888.2 | 863.3 | 858.7 | 854.2 |
| 17.5° | 5233.9 | 5098.0 | 4257.4 | 2945.5 | 1645.0 | 953.9 | 831.5 | 829.3 | 831.5 | 827.0 | 824.7 |
| 20° | 5415.2 | 5186.4 | 4044.4 | 2336.0 | 1087.6 | 804.3 | 793.0 | 793.0 | 795.3 | 793.0 | 793.0 |
| 22.5° | 5607.8 | 5290.6 | 3781.6 | 1783.2 | 820.2 | 763.6 | 761.3 | 765.8 | 770.4 | 768.1 | 768.1 |
| 25° | 5845.7 | 5426.5 | 3434.9 | 1221.3 | 734.1 | 729.6 | 731.8 | 740.9 | 750.0 | 752.2 | 750.0 |
| 27.5° | 6190.1 | 5594.2 | 3063.3 | 840.6 | 672.9 | 677.5 | 700.1 | 722.8 | 736.4 | 738.6 | 738.6 |
| 30° | 6577.5 | 5780.0 | 2578.4 | 682.0 | 623.1 | 623.1 | 650.3 | 693.3 | 722.8 | 727.3 | 729.6 |
| 32.5° | 7076.0 | 5995.2 | 2041.5 | 614.0 | 575.5 | 571.0 | 595.9 | 648.0 | 702.4 | 718.3 | 718.3 |
| 35° | 7692.3 | 6249.0 | 1518.1 | 571.0 | 541.5 | 530.2 | 543.8 | 586.8 | 657.1 | 702.4 | 706.9 |
| 37.5° | 8415.1 | 6489.2 | 1110.2 | 532.5 | 509.8 | 493.9 | 503.0 | 537.0 | 593.6 | 661.6 | 679.7 |
| 40° | 9083.5 | 6702.2 | 829.3 | 500.7 | 478.1 | 466.7 | 473.5 | 489.4 | 537.0 | 600.4 | 611.8 |
| 42.5° | 9813.1 | 6867.6 | 659.3 | 466.7 | 446.4 | 441.8 | 441.8 | 448.6 | 480.3 | 516.6 | 518.9 |
| 45° | 10540.4 | 6926.5 | 552.8 | 426.0 | 412.4 | 416.9 | 414.6 | 410.1 | 423.7 | 419.2 | 419.2 |
| 47.5° | 11059.2 | 6856.2 | 457.7 | 387.4 | 387.4 | 394.2 | 382.9 | 367.1 | 360.3 | 333.1 | 335.3 |
| 50° | 11415.0 | 6600.2 | 376.1 | 342.1 | 360.3 | 369.3 | 346.7 | 321.7 | 296.8 | 267.4 | 260.6 |
| 52.5° | 11562.2 | 6144.8 | 308.1 | 283.2 | 319.5 | 330.8 | 303.6 | 274.2 | 235.6 | 210.7 | 203.9 |
| 55° | 11467.1 | 5582.9 | 256.0 | 231.1 | 269.6 | 283.2 | 256.0 | 222.0 | 179.0 | 151.8 | 147.3 |
| 57.5° | 11047.9 | 4912.2 | 217.5 | 183.5 | 215.2 | 224.3 | 206.2 | 169.9 | 126.9 | 99.7 | 99.7 |
| 60° | 10322.9 | 4218.9 | 176.7 | 145.0 | 160.9 | 174.5 | 156.3 | 122.4 | 86.1 | 61.2 | 56.6 |
| 62.5° | 8852.4 | 3425.8 | 142.7 | 113.3 | 113.3 | 124.6 | 108.8 | 88.4 | 54.4 | 31.7 | 29.5 |
| 65° | 6391.7 | 2349.6 | 113.3 | 83.8 | 81.6 | 81.6 | 68.0 | 58.9 | 31.7 | 13.6 | 9.1 |
| 67.5° | 3473.4 | 1325.5 | 90.6 | 63.4 | 56.6 | 54.4 | 43.0 | 34.0 | 13.6 | 2.3 | 0.0 |
| 70° | 1366.3 | 509.8 | 70.2 | 43.0 | 36.3 | 34.0 | 22.7 | 15.9 | 9.1 | 0.0 | 0.0 |
| 71° | 926.7 | 351.2 | 61.2 | 36.3 | 29.5 | 24.9 | 18.1 | 13.6 | 6.8 | 0.0 | 0.0 |
| 72.5° | 530.2 | 217.5 | 47.6 | 27.2 | 22.7 | 18.1 | 13.6 | 9.1 | 6.8 | 0.0 | 0.0 |
| 75° | 231.1 | 111.0 | 29.5 | 20.4 | 15.9 | 11.3 | 9.1 | 6.8 | 2.3 | 0.0 | 0.0 |
| 77.5° | 117.8 | 61.2 | 20.4 | 15.9 | 9.1 | 6.8 | 4.5 | 2.3 | 0.0 | 0.0 | 0.0 |
| 80° | 65.7 | 31.7 | 13.6 | 9.1 | 6.8 | 4.5 | 2.3 | 2.3 | 0.0 | 0.0 | 0.0 |
| 82.5° | 36.3 | 18.1 | 6.8 | 4.5 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 22.7 | 11.3 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 11.3 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 2.3 | 2.3 | 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)