

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: P457699

Luminaire Tested: **GALN-SA9A-740-U-T4W-HSS**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P457699
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-27)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA9A-740-U-T4W-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29991 lumens
Efficiency: N/A
Efficacy: 109.5 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G5

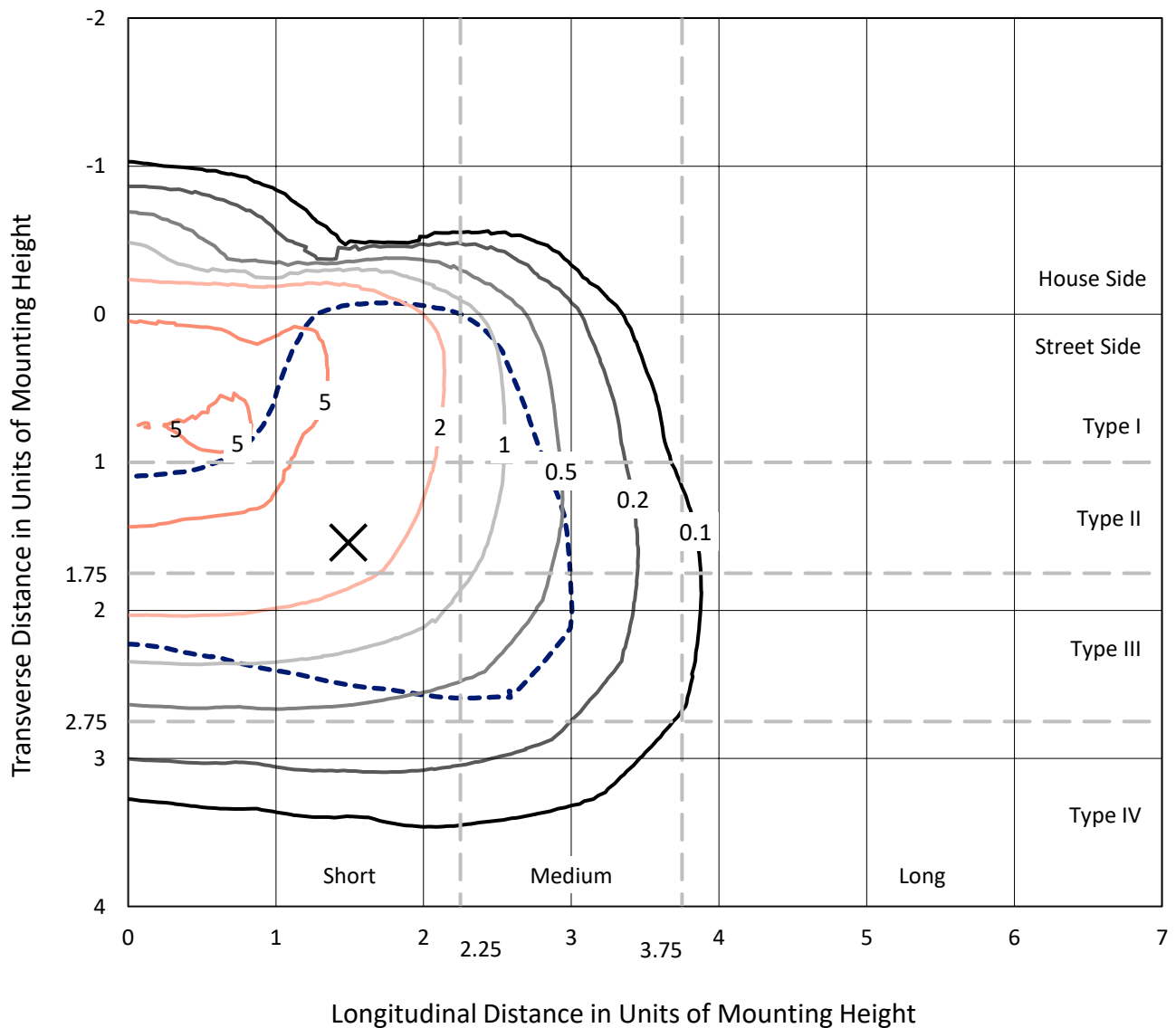
Input Watts (W): 274
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

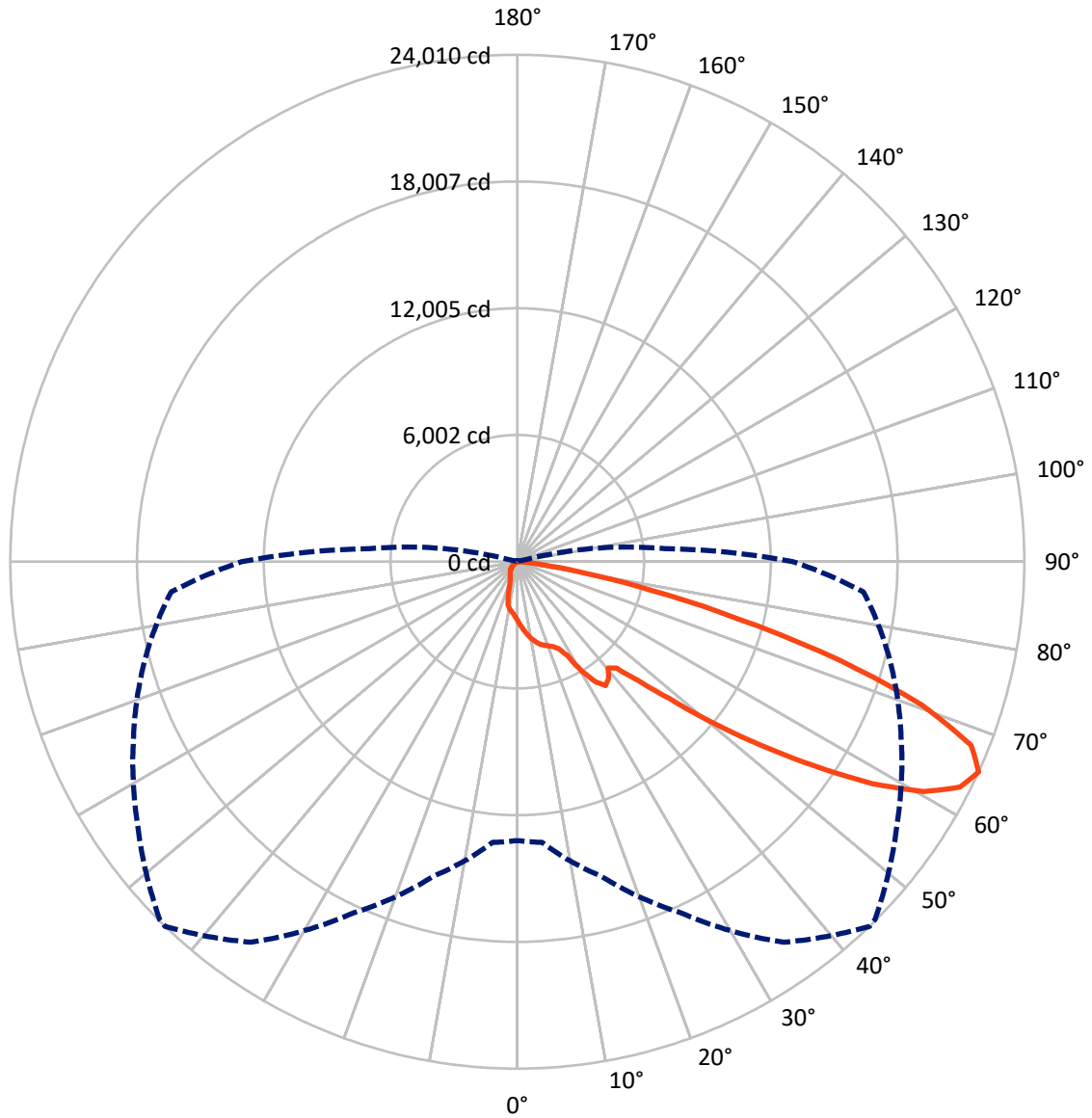
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.5 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2763.2 | 0.0 | 2763.2 |
| | % Fixture | 9.2 | 0.0 | 9.2 |
| Street Side | Lumens | 27227.8 | 0.0 | 27227.8 |
| | % Fixture | 90.8 | 0.0 | 90.8 |
| Total | Lumens | 29991.0 | 0.0 | 29991.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 277.6 | 0.9 |
| 10°-20° | 835.5 | 2.8 |
| 20°-30° | 1416.8 | 4.7 |
| 30°-40° | 2355.6 | 7.9 |
| 40°-50° | 4113.0 | 13.7 |
| 50°-60° | 8035.4 | 26.8 |
| 60°-70° | 9322.9 | 31.1 |
| 70°-80° | 3394.9 | 11.3 |
| 80°-90° | 239.2 | 0.8 |
| 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° | 29991.0 | 100.0 |
| 0°-180° | 29991.0 | 100.0 |



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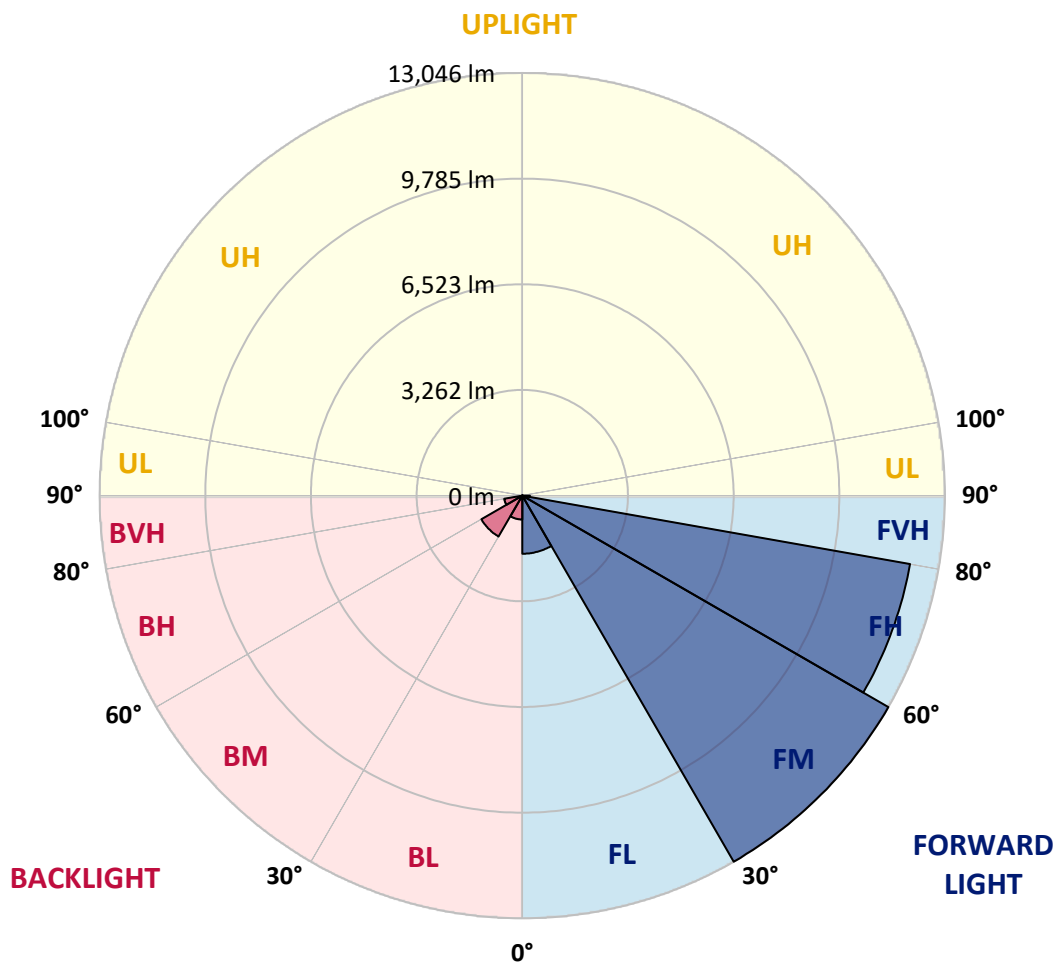
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1793.7 | 6.0 | | | |
| FM (30°-60°) | 13046.1 | 43.5 | | | |
| FH (60°-80°) | 12152.0 | 40.5 | | | G5 |
| FVH (80°-90°) | 236.0 | 0.8 | | | G3/500 |
| BL (0°-30°) | 736.2 | 2.5 | B2/1000 | | |
| BM (30°-60°) | 1457.9 | 4.9 | B2/2500 | | |
| BH (60°-80°) | 565.9 | 1.9 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 3.3 | 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-G5

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 44° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 |
| 2.5° | 3141.9 | 3128.1 | 3121.3 | 3084.6 | 3057.1 | 3022.7 | 3022.7 | 2979.2 | 2928.8 | 2873.8 | 2823.4 |
| 5° | 3492.5 | 3469.6 | 3439.8 | 3407.7 | 3343.6 | 3251.9 | 3251.9 | 3160.2 | 3054.8 | 2960.9 | 2857.7 |
| 7.5° | 3829.4 | 3808.8 | 3758.4 | 3696.5 | 3591.1 | 3494.8 | 3487.9 | 3355.0 | 3229.0 | 3086.9 | 2940.2 |
| 10° | 4125.0 | 4109.0 | 4065.4 | 3946.3 | 3836.3 | 3710.2 | 3707.9 | 3559.0 | 3412.3 | 3238.1 | 3057.1 |
| 12.5° | 4331.3 | 4333.6 | 4276.3 | 4161.7 | 4019.6 | 3900.4 | 3891.3 | 3744.6 | 3591.1 | 3403.1 | 3180.9 |
| 15° | 4477.9 | 4477.9 | 4418.4 | 4290.0 | 4161.7 | 4056.3 | 4047.1 | 3918.8 | 3760.6 | 3556.7 | 3316.1 |
| 17.5° | 4519.2 | 4532.9 | 4468.8 | 4354.2 | 4251.1 | 4159.4 | 4157.1 | 4049.4 | 3923.4 | 3726.3 | 3453.6 |
| 20° | 4503.2 | 4516.9 | 4466.5 | 4377.1 | 4306.1 | 4253.4 | 4246.5 | 4202.9 | 4086.1 | 3900.4 | 3600.2 |
| 22.5° | 4468.8 | 4482.5 | 4445.9 | 4393.2 | 4358.8 | 4374.8 | 4363.4 | 4400.0 | 4338.2 | 4113.6 | 3774.4 |
| 25° | 4475.7 | 4489.4 | 4461.9 | 4432.1 | 4461.9 | 4560.4 | 4590.2 | 4748.4 | 4693.4 | 4384.0 | 3962.3 |
| 27.5° | 4691.1 | 4718.6 | 4679.6 | 4693.4 | 4798.8 | 5027.9 | 5085.2 | 5358.0 | 5115.0 | 4727.7 | 4255.7 |
| 30° | 5170.0 | 5151.7 | 5078.4 | 5144.8 | 5511.5 | 5997.3 | 5981.3 | 5937.7 | 5557.3 | 5124.2 | 4604.0 |
| 32.5° | 5605.5 | 5589.4 | 5584.8 | 5871.3 | 6535.9 | 6771.9 | 6760.5 | 6338.8 | 5953.8 | 5578.0 | 4947.7 |
| 35° | 5781.9 | 5720.0 | 5706.3 | 6400.7 | 7512.1 | 7200.5 | 7129.4 | 6503.8 | 6435.0 | 6073.0 | 5298.4 |
| 37.5° | 6313.6 | 6270.0 | 6056.9 | 6487.7 | 7122.5 | 7019.4 | 6964.4 | 6788.0 | 6948.4 | 6510.7 | 5694.8 |
| 40° | 7409.0 | 7287.5 | 7095.0 | 6673.4 | 6570.2 | 6613.8 | 6668.8 | 7152.3 | 7555.7 | 7108.8 | 6224.2 |
| 42.5° | 8770.3 | 8742.8 | 8385.3 | 7599.2 | 6826.9 | 6886.5 | 6957.5 | 7913.2 | 8428.8 | 8009.4 | 7088.2 |
| 45° | 10404.2 | 10443.2 | 9927.6 | 8999.4 | 7986.5 | 8036.9 | 8140.1 | 9036.1 | 9611.3 | 9409.6 | 8447.1 |
| 47.5° | 11889.2 | 11859.5 | 11685.3 | 10720.5 | 9785.5 | 9673.2 | 9840.5 | 10477.6 | 11247.6 | 11279.7 | 10133.8 |
| 50° | 13383.4 | 13541.5 | 13282.6 | 12904.5 | 12210.1 | 11974.0 | 11912.2 | 12223.8 | 13397.2 | 13243.6 | 12159.7 |
| 52.5° | 15530.7 | 15613.2 | 15127.4 | 15031.1 | 15189.3 | 14423.8 | 14362.0 | 14437.6 | 15487.2 | 14960.1 | 13676.8 |
| 55° | 16880.5 | 16832.4 | 16651.4 | 17403.0 | 18028.7 | 17073.0 | 16995.1 | 16690.3 | 17222.0 | 16172.4 | 15136.6 |
| 57.5° | 17306.8 | 17375.5 | 17797.2 | 19156.2 | 20636.6 | 19825.3 | 19683.2 | 18817.0 | 18473.2 | 17302.2 | 16479.5 |
| 60° | 17116.6 | 17242.6 | 18152.4 | 20173.7 | 22227.0 | 22105.6 | 21984.1 | 20528.9 | 19371.6 | 18246.4 | 17421.4 |
| 62.5° | 15762.2 | 15938.6 | 17393.9 | 19992.6 | 22765.6 | 23524.1 | 23372.9 | 21596.8 | 19969.7 | 18704.7 | 17586.4 |
| 65° | 13209.3 | 13339.9 | 15429.9 | 18349.5 | 22000.1 | 24009.9 | 23954.9 | 21931.4 | 20063.7 | 18285.3 | 16456.6 |
| 67.5° | 9416.5 | 9861.1 | 11797.6 | 15464.3 | 19736.0 | 23180.4 | 23274.3 | 21530.3 | 19181.4 | 16472.6 | 13628.6 |
| 70° | 5919.4 | 6221.9 | 7610.7 | 11071.1 | 15821.8 | 20336.4 | 20645.8 | 19694.7 | 16646.8 | 12840.3 | 9123.2 |
| 72.5° | 2823.4 | 3047.9 | 4037.9 | 7008.0 | 11167.4 | 16000.5 | 16245.7 | 16167.8 | 12872.4 | 8089.6 | 4707.1 |
| 75° | 1258.1 | 1342.9 | 1927.3 | 3577.3 | 7209.6 | 10754.9 | 11389.7 | 11495.1 | 8043.8 | 3957.7 | 1831.1 |
| 77.5° | 641.7 | 644.0 | 902.9 | 1732.5 | 3600.2 | 6416.7 | 6542.7 | 6911.7 | 4361.1 | 1744.0 | 637.1 |
| 80° | 341.5 | 364.4 | 479.0 | 818.1 | 1867.7 | 3160.2 | 3144.2 | 3455.9 | 1934.2 | 854.8 | 213.1 |
| 82.5° | 153.5 | 169.6 | 270.4 | 428.5 | 912.1 | 1198.5 | 1292.5 | 1414.0 | 829.6 | 545.4 | 94.0 |
| 85° | 45.8 | 55.0 | 132.9 | 215.4 | 330.0 | 346.0 | 387.3 | 499.6 | 469.8 | 387.3 | 48.1 |
| 87.5° | 6.9 | 6.9 | 55.0 | 59.6 | 48.1 | 61.9 | 64.2 | 71.0 | 151.3 | 142.1 | 25.2 |
| 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° | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 | 2791.3 |
| 2.5° | 2795.9 | 2779.8 | 2722.5 | 2674.4 | 2633.1 | 2607.9 | 2578.1 | 2559.8 | 2550.6 | 2543.8 | 2546.1 |
| 5° | 2807.3 | 2768.4 | 2669.8 | 2591.9 | 2532.3 | 2468.1 | 2424.6 | 2399.4 | 2387.9 | 2369.6 | 2369.6 |
| 7.5° | 2871.5 | 2809.6 | 2672.1 | 2552.9 | 2449.8 | 2362.7 | 2280.2 | 2250.4 | 2229.8 | 2225.2 | 2220.6 |
| 10° | 2963.1 | 2885.2 | 2697.3 | 2532.3 | 2385.6 | 2266.5 | 2149.6 | 2046.5 | 1966.3 | 1918.1 | 1911.3 |
| 12.5° | 3077.7 | 2965.4 | 2736.3 | 2518.6 | 2330.6 | 2119.8 | 1810.4 | 1601.9 | 1462.1 | 1418.6 | 1425.4 |
| 15° | 3183.1 | 3061.7 | 2775.2 | 2507.1 | 2229.8 | 1757.7 | 1407.1 | 1168.8 | 1097.7 | 1090.8 | 1093.1 |
| 17.5° | 3309.2 | 3164.8 | 2821.1 | 2491.1 | 1952.5 | 1342.9 | 1045.0 | 980.8 | 994.6 | 1017.5 | 1015.2 |
| 20° | 3439.8 | 3274.8 | 2876.1 | 2394.8 | 1558.3 | 1010.6 | 923.5 | 930.4 | 951.0 | 971.7 | 976.3 |
| 22.5° | 3579.6 | 3400.9 | 2940.2 | 2163.3 | 1189.4 | 880.0 | 875.4 | 884.6 | 905.2 | 928.1 | 932.7 |
| 25° | 3772.1 | 3559.0 | 2988.4 | 1860.8 | 900.6 | 813.5 | 822.7 | 838.8 | 857.1 | 882.3 | 886.9 |
| 27.5° | 4019.6 | 3772.1 | 3013.6 | 1466.7 | 779.2 | 754.0 | 756.3 | 779.2 | 802.1 | 825.0 | 825.0 |
| 30° | 4340.4 | 4026.5 | 2963.1 | 1109.2 | 719.6 | 696.7 | 687.5 | 701.3 | 731.0 | 754.0 | 756.3 |
| 32.5° | 4626.9 | 4267.1 | 2830.2 | 847.9 | 676.0 | 644.0 | 621.0 | 623.3 | 634.8 | 648.5 | 650.8 |
| 35° | 4913.4 | 4500.9 | 2603.3 | 712.7 | 630.2 | 593.5 | 559.2 | 540.8 | 531.7 | 524.8 | 531.7 |
| 37.5° | 5280.0 | 4791.9 | 2300.8 | 648.5 | 591.3 | 545.4 | 497.3 | 458.3 | 426.3 | 405.6 | 410.2 |
| 40° | 5752.1 | 5195.2 | 1943.3 | 607.3 | 554.6 | 499.6 | 435.4 | 385.0 | 330.0 | 311.7 | 302.5 |
| 42.5° | 6531.3 | 5807.1 | 1567.5 | 572.9 | 517.9 | 451.5 | 371.3 | 302.5 | 252.1 | 233.8 | 238.3 |
| 45° | 7761.9 | 6579.4 | 1207.7 | 536.3 | 481.3 | 398.8 | 311.7 | 238.3 | 197.1 | 187.9 | 192.5 |
| 47.5° | 9393.6 | 7578.6 | 930.4 | 495.0 | 435.4 | 341.5 | 245.2 | 187.9 | 162.7 | 160.4 | 158.1 |
| 50° | 10929.0 | 8509.0 | 776.9 | 449.2 | 380.4 | 284.2 | 201.7 | 158.1 | 142.1 | 139.8 | 139.8 |
| 52.5° | 12317.8 | 9175.9 | 632.5 | 396.5 | 320.8 | 233.8 | 169.6 | 139.8 | 126.0 | 119.2 | 119.2 |
| 55° | 13553.0 | 9611.3 | 513.3 | 332.3 | 252.1 | 185.6 | 146.7 | 126.0 | 110.0 | 100.8 | 98.5 |
| 57.5° | 14485.7 | 9664.0 | 385.0 | 265.8 | 187.9 | 144.4 | 126.0 | 110.0 | 91.7 | 80.2 | 75.6 |
| 60° | 14884.5 | 9208.0 | 284.2 | 201.7 | 139.8 | 114.6 | 100.8 | 89.4 | 68.8 | 57.3 | 55.0 |
| 62.5° | 14483.4 | 8321.1 | 210.8 | 153.5 | 107.7 | 84.8 | 71.0 | 66.5 | 48.1 | 34.4 | 32.1 |
| 65° | 13046.5 | 7040.0 | 167.3 | 116.9 | 80.2 | 61.9 | 45.8 | 43.5 | 29.8 | 16.0 | 13.8 |
| 67.5° | 10452.4 | 5513.8 | 132.9 | 87.1 | 57.3 | 41.3 | 29.8 | 27.5 | 16.0 | 4.6 | 4.6 |
| 70° | 6797.1 | 3524.6 | 107.7 | 64.2 | 36.7 | 27.5 | 18.3 | 13.8 | 9.2 | 2.3 | 0.0 |
| 72.5° | 3361.9 | 1647.7 | 87.1 | 50.4 | 25.2 | 13.8 | 6.9 | 4.6 | 6.9 | 0.0 | 0.0 |
| 75° | 1304.0 | 586.7 | 64.2 | 34.4 | 13.8 | 6.9 | 4.6 | 0.0 | 2.3 | 0.0 | 0.0 |
| 77.5° | 433.1 | 194.8 | 39.0 | 18.3 | 9.2 | 4.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 160.4 | 75.6 | 20.6 | 11.5 | 4.6 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 64.2 | 29.8 | 13.8 | 9.2 | 4.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 32.1 | 18.3 | 9.2 | 6.9 | 4.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 22.9 | 13.8 | 9.2 | 6.9 | 4.6 | 2.3 | 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)