

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: P458909

Luminaire Tested: **GALN-SA4B-735-U-T2R-HSS**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P458909
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-7)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA4B-735-U-T2R-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 3500K, 800mA 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: 16788 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

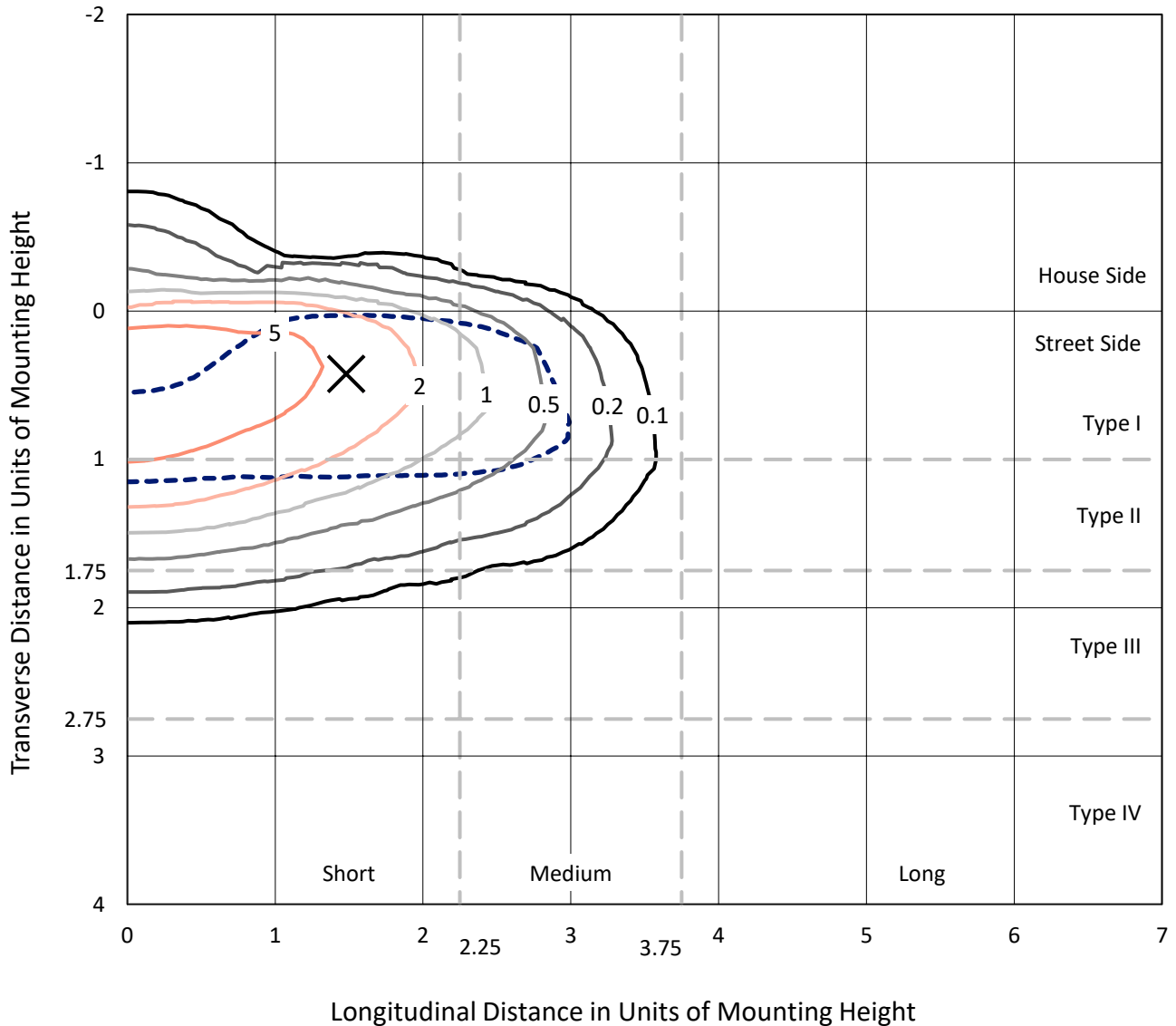
Input Watts (W): 164
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

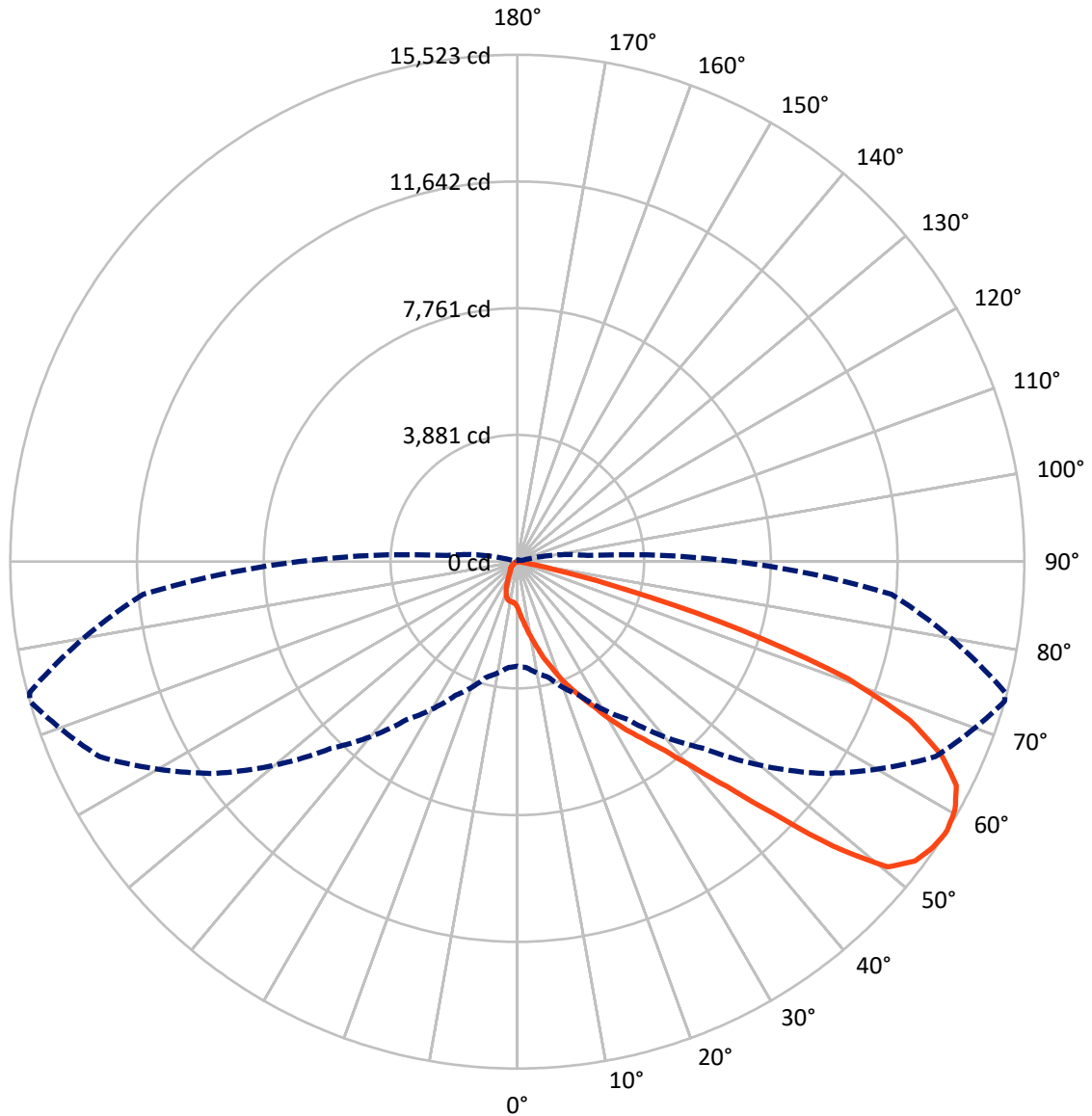
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 74-Deg Lateral - - - Horizontal Cone Through 57-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 968.3 | 0.0 | 968.3 |
| | % Fixture | 5.8 | 0.0 | 5.8 |
| Street Side | Lumens | 15819.7 | 0.0 | 15819.7 |
| | % Fixture | 94.2 | 0.0 | 94.2 |
| Total | Lumens | 16788.0 | 0.0 | 16788.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 169.7 | 1.0 |
| 10°-20° | 668.9 | 4.0 |
| 20°-30° | 1431.3 | 8.5 |
| 30°-40° | 2630.7 | 15.7 |
| 40°-50° | 4032.9 | 24.0 |
| 50°-60° | 4266.3 | 25.4 |
| 60°-70° | 2786.0 | 16.6 |
| 70°-80° | 761.2 | 4.5 |
| 80°-90° | 41.0 | 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° | 16788.0 | 100.0 |
| 0°-180° | 16788.0 | 100.0 |

Coefficient of Utilization



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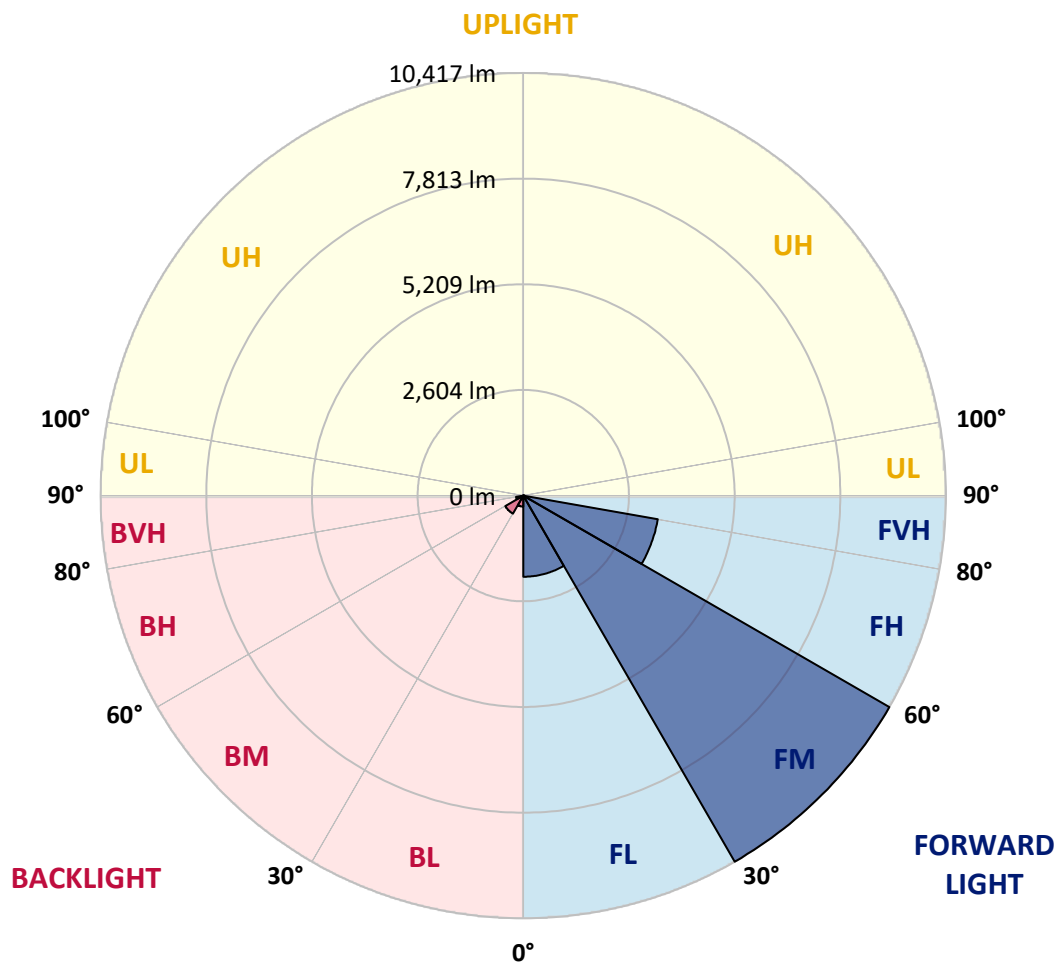
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1999.4 | 11.9 | | | |
| FM | (30°-60°) | 10417.3 | 62.1 | | | |
| FH | (60°-80°) | 3365.4 | 20.0 | | | G2/5000 |
| FVH | (80°-90°) | 37.6 | 0.2 | | | G1/100 |
| BL | (0°-30°) | 270.5 | 1.6 | B1/500 | | |
| BM | (30°-60°) | 512.6 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 181.8 | 1.1 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 3.4 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 74° | 75° | 85° |
|-------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 |
| 2.5° | 2057.4 | 2038.8 | 2001.7 | 1989.0 | 1934.5 | 1849.9 | 1775.7 | 1676.0 | 1597.2 | 1589.1 | 1494.1 |
| 5° | 2755.2 | 2713.4 | 2696.0 | 2612.6 | 2481.6 | 2358.7 | 2147.8 | 1987.8 | 1803.5 | 1789.6 | 1598.4 |
| 7.5° | 3427.4 | 3369.5 | 3352.1 | 3273.3 | 3120.3 | 2926.7 | 2653.2 | 2362.2 | 2070.1 | 2043.5 | 1738.6 |
| 10° | 3914.2 | 3922.4 | 3891.1 | 3838.9 | 3714.9 | 3517.8 | 3180.5 | 2783.0 | 2366.9 | 2333.2 | 1896.3 |
| 12.5° | 4263.1 | 4262.0 | 4267.8 | 4266.6 | 4200.5 | 4051.0 | 3696.3 | 3238.5 | 2693.7 | 2627.7 | 2077.1 |
| 15° | 4490.3 | 4493.8 | 4511.2 | 4571.4 | 4578.4 | 4485.7 | 4190.1 | 3674.3 | 3072.7 | 2990.4 | 2273.0 |
| 17.5° | 4719.8 | 4744.1 | 4772.0 | 4828.8 | 4879.8 | 4842.7 | 4634.0 | 4128.7 | 3415.8 | 3354.4 | 2482.8 |
| 20° | 5098.8 | 5132.4 | 5116.2 | 5151.0 | 5177.6 | 5181.1 | 5020.0 | 4548.3 | 3831.9 | 3728.8 | 2722.7 |
| 22.5° | 5705.0 | 5703.9 | 5662.1 | 5599.6 | 5547.4 | 5545.1 | 5399.0 | 4979.4 | 4209.8 | 4110.1 | 2963.8 |
| 25° | 6471.2 | 6474.7 | 6393.5 | 6215.0 | 6085.2 | 5926.4 | 5758.3 | 5357.3 | 4614.3 | 4491.5 | 3217.6 |
| 27.5° | 7349.8 | 7327.8 | 7204.9 | 6959.2 | 6701.8 | 6430.6 | 6188.4 | 5796.6 | 5043.2 | 4941.2 | 3508.6 |
| 30° | 8139.1 | 8131.0 | 7987.3 | 7687.1 | 7348.6 | 7076.2 | 6725.0 | 6347.2 | 5598.4 | 5473.2 | 3834.3 |
| 32.5° | 8874.0 | 8885.6 | 8686.2 | 8375.6 | 8048.7 | 7734.6 | 7363.7 | 6873.4 | 6143.2 | 5965.8 | 4188.9 |
| 35° | 9447.7 | 9459.3 | 9253.0 | 8994.5 | 8658.4 | 8397.6 | 8044.1 | 7434.4 | 6681.0 | 6531.5 | 4596.9 |
| 37.5° | 9753.7 | 9768.8 | 9649.4 | 9454.7 | 9244.9 | 9113.9 | 8784.7 | 8156.5 | 7334.7 | 7244.3 | 5079.1 |
| 40° | 9811.7 | 9829.1 | 9776.9 | 9724.7 | 9713.2 | 9807.0 | 9710.8 | 9007.3 | 8241.1 | 8099.7 | 5797.8 |
| 42.5° | 9637.8 | 9661.0 | 9684.2 | 9800.1 | 10036.5 | 10380.8 | 10715.8 | 10161.7 | 9408.3 | 9218.2 | 6676.3 |
| 45° | 9181.1 | 9178.8 | 9270.4 | 9570.6 | 10100.3 | 10835.1 | 11765.9 | 11607.1 | 10998.6 | 10772.6 | 7917.7 |
| 47.5° | 8399.9 | 8388.3 | 8586.5 | 9014.2 | 9839.5 | 10918.6 | 12622.5 | 13362.0 | 13028.1 | 12819.5 | 9251.8 |
| 50° | 7209.5 | 7266.3 | 7578.1 | 8175.0 | 9191.6 | 10665.9 | 12886.7 | 14512.9 | 14693.8 | 14472.4 | 10329.8 |
| 52.5° | 5815.1 | 5812.8 | 6302.0 | 7112.2 | 8231.8 | 10109.6 | 12702.4 | 14721.6 | 15235.0 | 15065.8 | 10860.6 |
| 55° | 4303.7 | 4333.8 | 4842.7 | 5659.8 | 6985.8 | 9094.2 | 12100.9 | 14507.1 | 15441.4 | 15322.0 | 11210.7 |
| 57° | 3201.4 | 3254.7 | 3662.7 | 4527.4 | 5900.9 | 8089.3 | 11299.9 | 14123.5 | 15522.5 | 15457.6 | 11501.6 |
| 57.5° | 2988.1 | 2990.4 | 3388.0 | 4173.9 | 5583.3 | 7703.3 | 11070.4 | 13963.5 | 15520.2 | 15484.2 | 11549.1 |
| 60° | 1839.5 | 1897.4 | 2172.1 | 2821.2 | 4086.9 | 6012.2 | 9532.3 | 13044.4 | 15399.6 | 15451.8 | 11752.0 |
| 62.5° | 1101.1 | 1125.5 | 1304.0 | 1700.4 | 2634.6 | 4388.3 | 7800.7 | 11867.9 | 15085.5 | 15244.3 | 11738.1 |
| 65° | 708.2 | 714.0 | 795.1 | 1029.3 | 1647.1 | 2966.1 | 6011.0 | 10313.6 | 14273.0 | 14565.1 | 11279.1 |
| 67.5° | 547.1 | 556.4 | 588.8 | 675.7 | 955.1 | 1847.6 | 4251.5 | 8654.9 | 12958.6 | 13335.3 | 10166.4 |
| 70° | 485.7 | 490.3 | 501.9 | 529.7 | 631.7 | 1043.2 | 2645.0 | 6761.0 | 10745.9 | 10852.5 | 7956.0 |
| 72.5° | 396.4 | 409.2 | 445.1 | 454.4 | 500.7 | 651.4 | 1472.0 | 4537.8 | 7220.0 | 7246.6 | 4450.9 |
| 75° | 307.2 | 309.5 | 362.8 | 389.5 | 421.9 | 448.6 | 657.2 | 2288.0 | 3468.0 | 3282.5 | 1715.4 |
| 77.5° | 229.5 | 239.9 | 264.3 | 297.9 | 344.2 | 321.1 | 294.4 | 862.4 | 1076.8 | 1057.1 | 498.4 |
| 80° | 147.2 | 153.0 | 184.3 | 223.7 | 267.7 | 209.8 | 165.7 | 252.7 | 236.5 | 243.4 | 119.4 |
| 82.5° | 74.2 | 75.3 | 118.2 | 182.0 | 170.4 | 105.5 | 104.3 | 103.2 | 88.1 | 86.9 | 55.6 |
| 85° | 8.1 | 17.4 | 76.5 | 104.3 | 76.5 | 34.8 | 48.7 | 47.5 | 46.4 | 47.5 | 32.5 |
| 87.5° | 1.2 | 1.2 | 12.7 | 15.1 | 10.4 | 11.6 | 13.9 | 15.1 | 18.5 | 17.4 | 13.9 |
| 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° | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 | 1406.0 |
| 2.5° | 1447.7 | 1401.3 | 1315.6 | 1233.3 | 1171.8 | 1132.4 | 1081.4 | 1062.9 | 1036.2 | 1032.7 | 1020.0 |
| 5° | 1510.3 | 1422.2 | 1272.7 | 1154.5 | 1059.4 | 987.5 | 925.0 | 872.8 | 831.1 | 821.8 | 826.4 |
| 7.5° | 1599.5 | 1468.6 | 1259.9 | 1098.8 | 966.7 | 843.8 | 744.1 | 682.7 | 638.7 | 622.4 | 624.7 |
| 10° | 1700.4 | 1530.0 | 1257.6 | 1039.7 | 838.0 | 687.3 | 578.4 | 523.9 | 498.4 | 489.1 | 478.7 |
| 12.5° | 1819.8 | 1600.7 | 1251.8 | 948.1 | 696.6 | 548.2 | 470.6 | 438.1 | 413.8 | 406.8 | 406.8 |
| 15° | 1954.2 | 1676.0 | 1224.0 | 834.5 | 565.6 | 453.2 | 401.0 | 375.5 | 367.4 | 360.5 | 360.5 |
| 17.5° | 2094.5 | 1750.2 | 1166.0 | 694.3 | 469.4 | 388.3 | 355.8 | 340.8 | 329.2 | 321.1 | 321.1 |
| 20° | 2254.4 | 1823.2 | 1073.3 | 570.3 | 396.4 | 346.6 | 321.1 | 303.7 | 294.4 | 287.5 | 285.1 |
| 22.5° | 2406.3 | 1882.4 | 955.1 | 468.3 | 345.4 | 311.8 | 288.6 | 270.1 | 260.8 | 257.3 | 257.3 |
| 25° | 2563.9 | 1918.3 | 812.5 | 387.1 | 315.3 | 282.8 | 257.3 | 242.2 | 234.1 | 231.8 | 230.7 |
| 27.5° | 2716.9 | 1939.2 | 687.3 | 338.5 | 287.5 | 256.2 | 231.8 | 220.2 | 212.1 | 209.8 | 211.0 |
| 30° | 2902.4 | 1942.6 | 565.6 | 303.7 | 263.1 | 230.7 | 208.6 | 198.2 | 193.6 | 191.2 | 190.1 |
| 32.5° | 3090.1 | 1938.0 | 475.2 | 282.8 | 239.9 | 208.6 | 190.1 | 182.0 | 178.5 | 175.0 | 175.0 |
| 35° | 3301.1 | 1913.7 | 404.5 | 262.0 | 217.9 | 190.1 | 173.9 | 166.9 | 162.3 | 158.8 | 157.6 |
| 37.5° | 3563.0 | 1900.9 | 364.0 | 238.8 | 198.2 | 172.7 | 157.6 | 150.7 | 147.2 | 142.6 | 141.4 |
| 40° | 3975.7 | 1957.7 | 351.2 | 217.9 | 178.5 | 156.5 | 142.6 | 134.5 | 129.8 | 125.2 | 124.0 |
| 42.5° | 4490.3 | 2057.4 | 330.3 | 197.0 | 161.1 | 141.4 | 127.5 | 118.2 | 110.1 | 104.3 | 102.0 |
| 45° | 5156.8 | 2188.4 | 297.9 | 175.0 | 146.0 | 125.2 | 112.4 | 100.8 | 90.4 | 85.8 | 84.6 |
| 47.5° | 5855.7 | 2314.7 | 268.9 | 157.6 | 129.8 | 111.3 | 97.4 | 84.6 | 75.3 | 71.9 | 70.7 |
| 50° | 6284.6 | 2340.2 | 250.4 | 137.9 | 113.6 | 96.2 | 82.3 | 70.7 | 64.9 | 61.4 | 61.4 |
| 52.5° | 6480.5 | 2299.6 | 224.9 | 120.5 | 98.5 | 84.6 | 70.7 | 61.4 | 58.0 | 55.6 | 54.5 |
| 55° | 6617.2 | 2237.0 | 191.2 | 104.3 | 84.6 | 71.9 | 62.6 | 55.6 | 51.0 | 48.7 | 47.5 |
| 57° | 6697.2 | 2152.4 | 165.7 | 91.6 | 73.0 | 62.6 | 55.6 | 49.8 | 45.2 | 40.6 | 40.6 |
| 57.5° | 6700.7 | 2120.0 | 158.8 | 90.4 | 69.5 | 60.3 | 54.5 | 48.7 | 42.9 | 38.2 | 37.1 |
| 60° | 6597.5 | 1897.4 | 127.5 | 76.5 | 55.6 | 51.0 | 45.2 | 38.2 | 30.1 | 25.5 | 24.3 |
| 62.5° | 6266.0 | 1614.6 | 105.5 | 64.9 | 45.2 | 39.4 | 32.5 | 29.0 | 20.9 | 15.1 | 15.1 |
| 65° | 5764.1 | 1309.8 | 90.4 | 52.2 | 37.1 | 29.0 | 22.0 | 20.9 | 12.7 | 7.0 | 5.8 |
| 67.5° | 5038.6 | 1020.0 | 76.5 | 42.9 | 31.3 | 20.9 | 15.1 | 13.9 | 7.0 | 2.3 | 0.0 |
| 70° | 3838.9 | 695.5 | 63.7 | 34.8 | 23.2 | 15.1 | 10.4 | 8.1 | 4.6 | 1.2 | 0.0 |
| 72.5° | 2212.7 | 382.5 | 53.3 | 26.7 | 17.4 | 11.6 | 8.1 | 4.6 | 4.6 | 0.0 | 0.0 |
| 75° | 790.5 | 164.6 | 40.6 | 19.7 | 13.9 | 9.3 | 5.8 | 2.3 | 3.5 | 1.2 | 0.0 |
| 77.5° | 251.5 | 88.1 | 26.7 | 15.1 | 11.6 | 7.0 | 4.6 | 2.3 | 2.3 | 1.2 | 0.0 |
| 80° | 74.2 | 46.4 | 16.2 | 12.7 | 8.1 | 5.8 | 3.5 | 1.2 | 2.3 | 1.2 | 0.0 |
| 82.5° | 40.6 | 23.2 | 12.7 | 9.3 | 8.1 | 4.6 | 3.5 | 1.2 | 1.2 | 1.2 | 0.0 |
| 85° | 20.9 | 13.9 | 10.4 | 9.3 | 8.1 | 4.6 | 3.5 | 1.2 | 0.0 | 1.2 | 1.2 |
| 87.5° | 11.6 | 10.4 | 10.4 | 9.3 | 8.1 | 5.8 | 3.5 | 1.2 | 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)