Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: P321198

Luminaire Tested: **GAN-SA4B-727-U-T2R-HSS**

Issue Date: 3/3/2020

Report Generated By E0585644

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Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P321198 |
| | 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-SA4B-727-U-T2R-HSS |
| Description: | GALLEON AREA AND ROADWAY LUMINAIRE |
| | (4) 70 CRI, 2700K, 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: | 15562 lumens |
| Efficiency: | N/A |
| Efficacy: | 91.0 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 1' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B1 - U0 - G2 |

| | |
|---|---|
| Input Watts (W): | 171 |
| 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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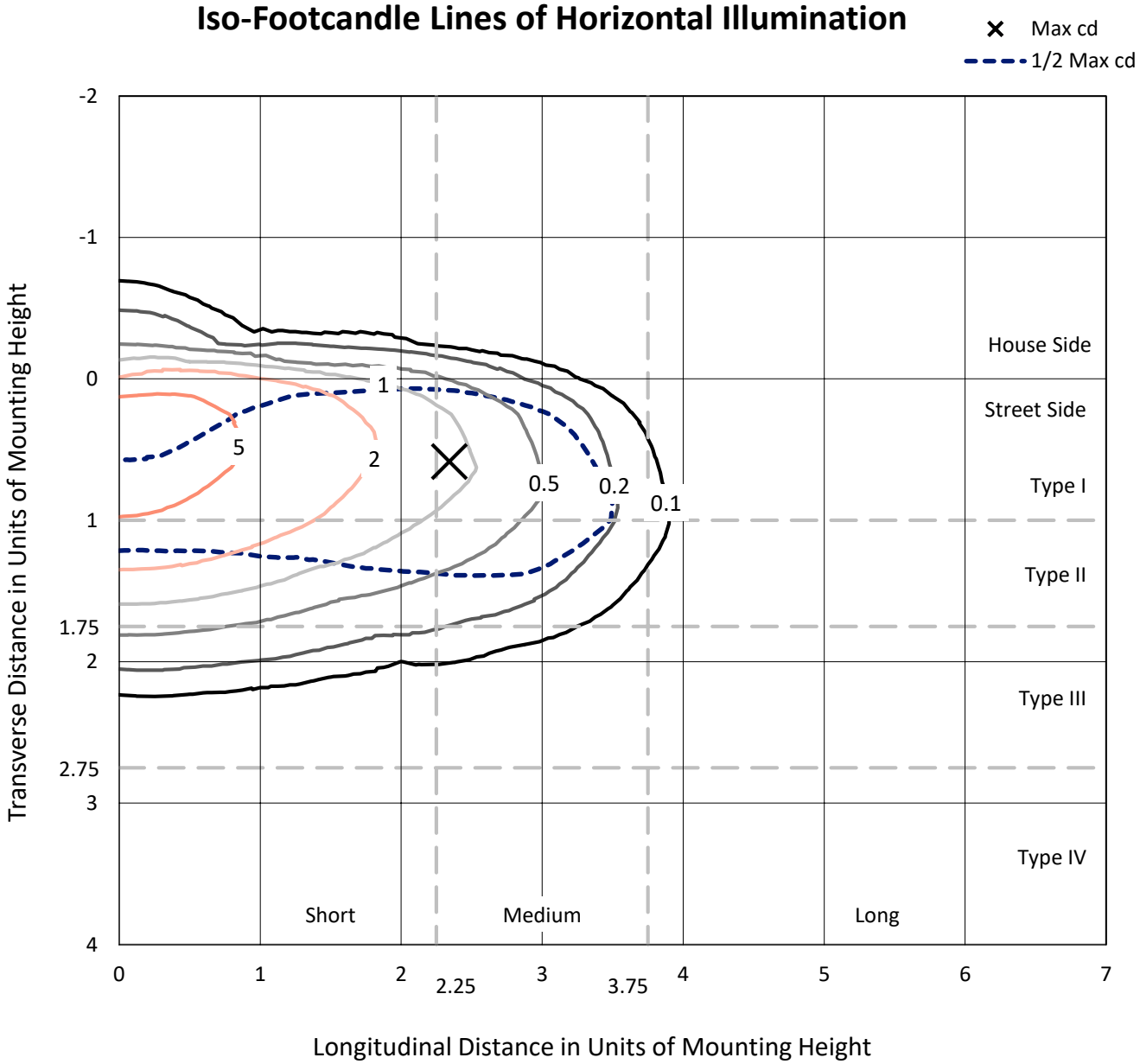
## Iso-Footcandle Lines of Horizontal Illumination




Based on 25 foot mounting height. Maximum calculated value = 7.4 fc
Type II - Medium - N/A

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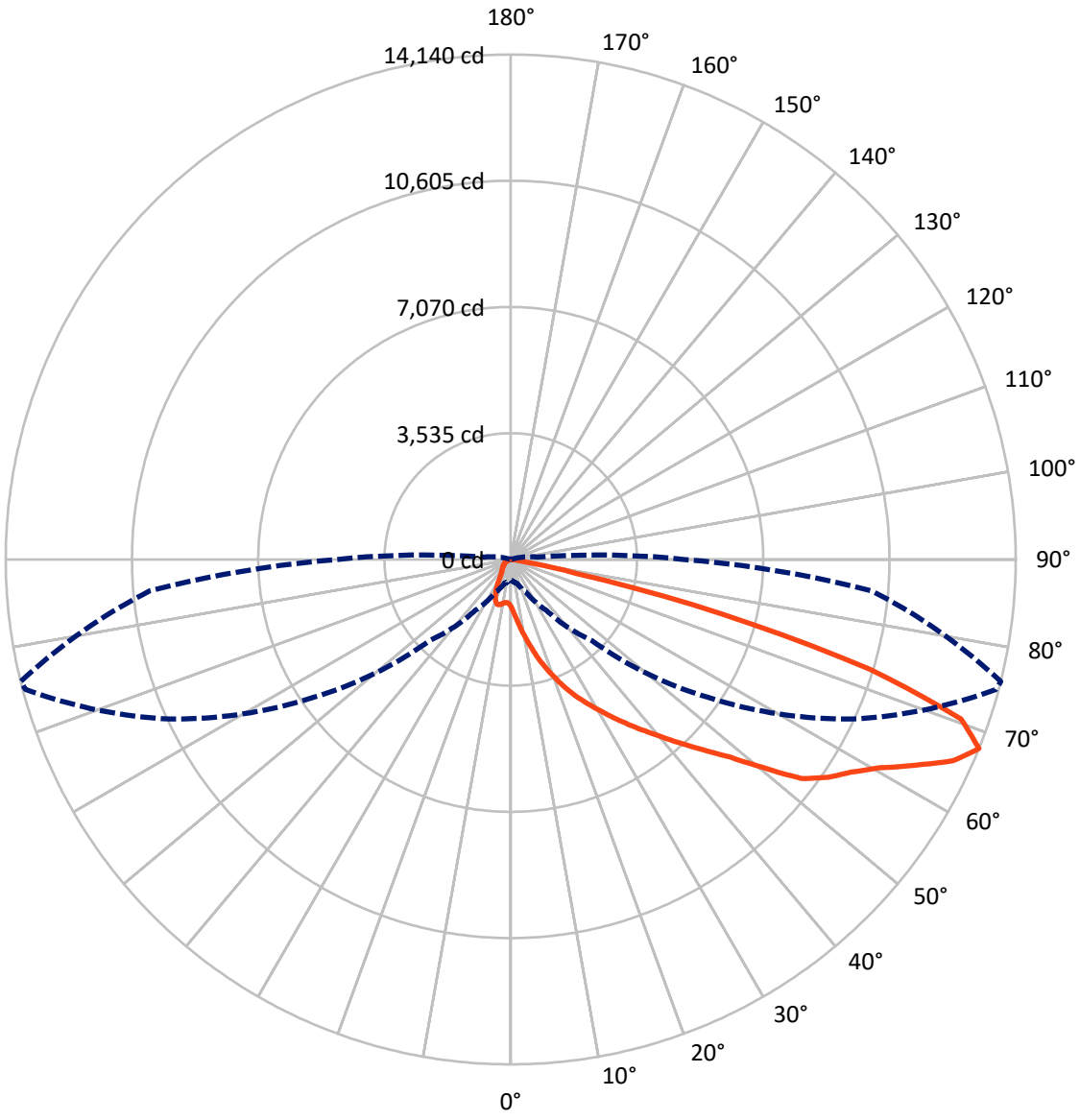
## Luminous Intensity Polar Plot



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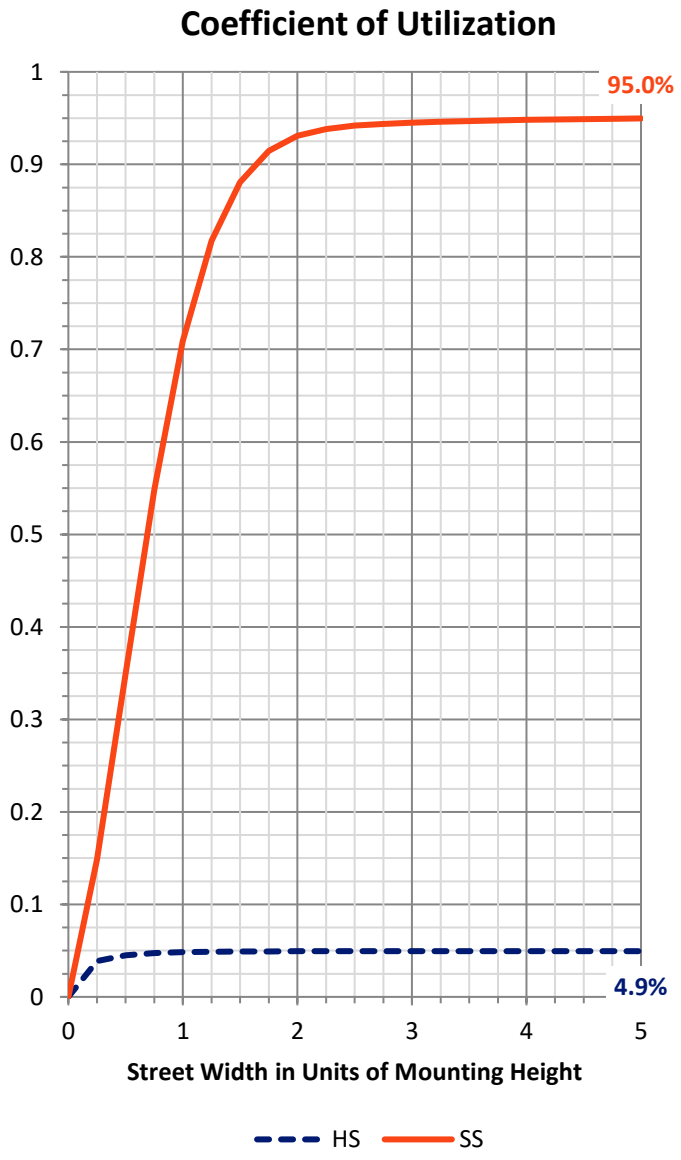
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 772.8 | 0.0 | 772.8 |
| | % Fixture | 5.0 | 0.0 | 5.0 |
| **Street Side** | Lumens | 14789.2 | 0.0 | 14789.2 |
| | % Fixture | 95.0 | 0.0 | 95.0 |
| **Total** | Lumens | 15562.0 | 0.0 | 15562.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 164.2 | 1.1 |
| 10°-20° | 650.7 | 4.2 |
| 20°-30° | 1324.0 | 8.5 |
| 30°-40° | 2298.1 | 14.8 |
| 40°-50° | 3246.9 | 20.9 |
| 50°-60° | 3682.1 | 23.7 |
| 60°-70° | 3054.0 | 19.6 |
| 70°-80° | 1106.2 | 7.1 |
| 80°-90° | 35.9 | 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° | 15562.0 | 100.0 |
| 0°-180° | 15562.0 | 100.0 |



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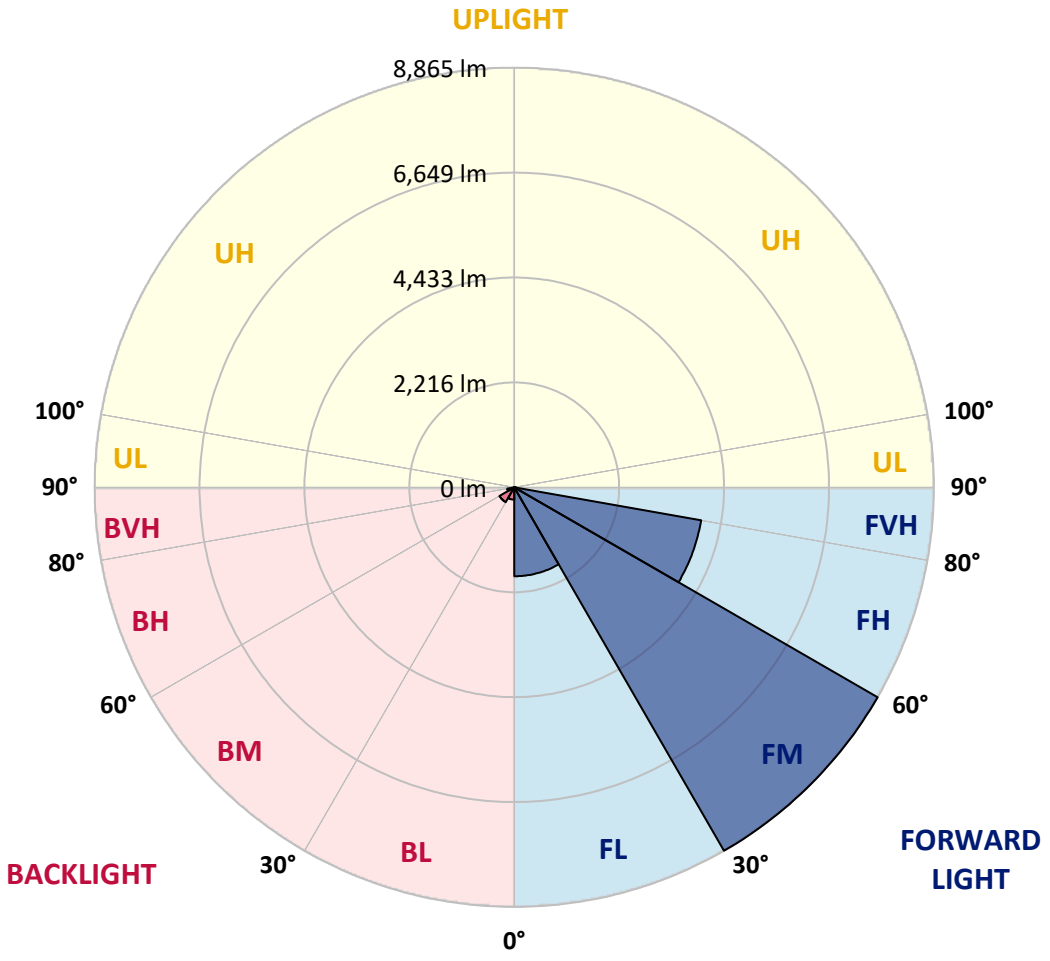
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1878.3 | 12.1 | | | |
| FM | (30°-60°) | 8865.4 | 57.0 | | | |
| FH | (60°-80°) | 4010.9 | 25.8 | | | G2/5000 |
| FVH | (80°-90°) | 34.7 | 0.2 | | | G1/100 |
| BL | (0°-30°) | 260.6 | 1.7 | B1/500 | | |
| BM | (30°-60°) | 361.7 | 2.3 | B1/1000 | | |
| BH | (60°-80°) | 149.3 | 1.0 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 1.1 | 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 Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 76° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 | *1320.1* | 1320.1 |
| 2.5° | 1970.6 | 1926.3 | 1936.5 | 1907.9 | 1856.1 | 1749.7 | 1659.0 | 1573.1 | 1472.8 | *1469.4* | 1386.9 |
| 5° | 2657.3 | 2619.8 | 2615.0 | 2557.0 | 2462.9 | 2282.2 | 2106.3 | 1905.8 | 1682.2 | *1665.8* | 1490.6 |
| 7.5° | 3280.5 | 3250.5 | 3239.6 | 3170.7 | 2995.5 | 2819.5 | 2590.4 | 2295.9 | 1946.1 | *1916.1* | 1630.4 |
| 10° | 3759.2 | 3744.9 | 3747.6 | 3698.5 | 3548.5 | 3384.8 | 3084.1 | 2708.4 | 2245.4 | *2199.0* | 1798.1 |
| 12.5° | 4121.9 | 4125.3 | 4149.9 | 4119.9 | 4036.0 | 3914.6 | 3593.5 | 3148.2 | 2576.8 | *2513.4* | 1989.7 |
| 15° | 4388.5 | 4405.6 | 4450.6 | 4488.1 | 4482.0 | 4377.0 | 4082.4 | 3594.8 | 2928.6 | *2858.4* | 2203.1 |
| 17.5° | 4561.1 | 4580.1 | 4645.6 | 4728.8 | 4805.2 | 4780.6 | 4554.2 | 4025.8 | 3284.6 | *3203.4* | 2431.6 |
| 20° | 4712.4 | 4734.9 | 4805.2 | 4914.9 | 5057.5 | 5088.1 | 4939.5 | 4443.8 | 3639.8 | *3541.0* | 2667.5 |
| 22.5° | 5040.4 | 5039.7 | 5082.7 | 5146.8 | 5282.5 | 5361.6 | 5267.5 | 4831.8 | 3991.0 | *3888.0* | 2908.2 |
| 25° | 5633.6 | 5611.1 | 5596.1 | 5545.7 | 5575.7 | 5624.8 | 5572.3 | 5194.5 | 4344.2 | *4239.9* | 3152.3 |
| 27.5° | 6338.7 | 6352.3 | 6231.0 | 6095.3 | 5990.3 | 5939.8 | 5853.9 | 5530.7 | 4683.8 | *4569.2* | 3391.0 |
| 30° | 7082.6 | 7086.7 | 6943.5 | 6770.3 | 6539.2 | 6347.6 | 6198.9 | 5851.8 | 5032.9 | *4908.1* | 3622.8 |
| 32.5° | 7753.6 | 7727.0 | 7585.2 | 7349.2 | 7057.4 | 6841.9 | 6533.0 | 6210.5 | 5402.5 | *5281.8* | 3880.5 |
| 35° | 8285.5 | 8254.1 | 8081.6 | 7866.8 | 7564.0 | 7347.2 | 6975.6 | 6568.5 | 5791.2 | *5673.2* | 4139.0 |
| 37.5° | 8674.1 | 8637.3 | 8460.0 | 8239.1 | 7977.9 | 7851.8 | 7489.0 | 6957.8 | 6215.3 | *6088.5* | 4411.0 |
| 40° | 8809.1 | 8777.1 | 8665.9 | 8504.3 | 8294.3 | 8265.7 | 8033.8 | 7405.8 | 6676.9 | *6541.9* | 4719.3 |
| 42.5° | 8728.7 | 8697.3 | 8657.8 | 8603.2 | 8515.9 | 8543.2 | 8548.0 | 7916.6 | 7189.7 | *7056.7* | 5059.5 |
| 45° | 8409.6 | 8381.6 | 8422.5 | 8502.3 | 8610.7 | 8745.7 | 9017.1 | 8465.5 | 7762.5 | *7620.6* | 5452.9 |
| 47.5° | 7939.7 | 7919.3 | 8032.5 | 8231.6 | 8548.7 | 8921.0 | 9446.0 | 9042.3 | 8405.5 | *8273.9* | 5943.9 |
| 50° | 7271.5 | 7268.1 | 7494.5 | 7857.9 | 8345.5 | 9005.5 | 9889.2 | 9698.3 | 9298.7 | *9160.3* | 6626.5 |
| 52.5° | 6231.0 | 6237.8 | 6683.0 | 7264.7 | 7988.8 | 8948.2 | 10174.2 | 10541.1 | 10337.9 | *10194.0* | 7217.6 |
| 55° | 5240.2 | 5281.1 | 5596.8 | 6435.5 | 7442.0 | 8735.5 | 10272.4 | 10934.5 | 10911.3 | *10775.0* | 7546.3 |
| 57.5° | 4269.9 | 4344.2 | 4648.3 | 5431.8 | 6643.5 | 8245.2 | 10218.6 | 11105.0 | 11338.2 | *11233.9* | 7980.0 |
| 60° | 3218.4 | 3252.5 | 3603.0 | 4335.4 | 5618.6 | 7350.6 | 9827.9 | 11197.7 | 11921.9 | *11849.6* | 8609.3 |
| 62.5° | 2047.7 | 2132.9 | 2443.8 | 3150.3 | 4374.9 | 6108.2 | 9169.2 | 11196.4 | 12652.2 | *12691.7* | 9421.5 |
| 65° | 1078.7 | 1178.3 | 1343.3 | 1952.2 | 3006.4 | 4720.6 | 8178.4 | 11091.4 | 13548.2 | *13603.4* | 10056.3 |
| 67.5° | *581.6* | *610.3* | *697.6* | *1013.3* | *1743.6* | *3198.0* | *6722.6* | *10573.1* | *14067.1* | *14140.0* | *10144.9* |
| 70° | 425.5 | 441.2 | 473.9 | 560.5 | 877.6 | 1857.4 | 4905.4 | 9398.3 | 13398.1 | *13370.9* | 9013.7 |
| 72.5° | 326.6 | 351.2 | 375.7 | 410.5 | 504.6 | 991.4 | 3054.1 | 7359.5 | 10690.4 | *10510.4* | 6737.6 |
| 75° | 257.7 | 261.8 | 296.6 | 328.0 | 378.4 | 564.6 | 1356.2 | 4286.3 | 6524.9 | *6098.7* | 3493.9 |
| 77.5° | 205.9 | 208.7 | 229.1 | 256.4 | 304.1 | 370.9 | 420.0 | 1686.3 | 2083.1 | *1858.8* | 758.2 |
| 80° | 122.1 | 128.9 | 170.5 | 197.7 | 252.3 | 233.9 | 153.4 | 366.2 | 325.3 | *294.6* | 127.5 |
| 82.5° | 68.2 | 73.6 | 96.1 | 156.1 | 175.9 | 111.8 | 76.4 | 98.9 | 76.4 | *74.3* | 36.1 |
| 85° | 0.0 | 3.4 | 62.1 | 96.8 | 71.6 | 24.5 | 32.0 | 32.7 | 22.5 | *21.1* | 14.3 |
| 87.5° | 0.0 | 0.0 | 19.1 | 18.4 | 2.7 | 4.1 | 7.5 | 10.9 | 8.9 | *8.9* | 7.5 |
| 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° | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 | 1320.1 |
| 2.5° | 1346.0 | 1309.2 | 1239.6 | 1171.5 | 1114.2 | 1067.1 | 1024.9 | 1007.8 | 994.2 | 992.1 | 981.2 |
| 5° | 1406.0 | 1331.7 | 1198.7 | 1089.6 | 1016.7 | 964.9 | 920.5 | 893.3 | 872.1 | 863.9 | 856.4 |
| 7.5° | 1496.7 | 1384.2 | 1193.3 | 1067.8 | 980.5 | 893.3 | 811.4 | 722.8 | 667.6 | 646.4 | 634.1 |
| 10° | 1607.2 | 1453.8 | 1213.7 | 1061.7 | 908.9 | 724.8 | 589.1 | 476.6 | 430.9 | 415.9 | 411.9 |
| 12.5° | 1736.1 | 1540.4 | 1249.2 | 1023.5 | 756.2 | 514.8 | 406.4 | 368.2 | 358.0 | 353.2 | 353.2 |
| 15° | 1884.0 | 1635.1 | 1274.4 | 913.0 | 559.1 | 389.4 | 351.8 | 334.1 | 323.2 | 317.1 | 317.8 |
| 17.5° | 2035.4 | 1727.9 | 1262.1 | 752.8 | 412.5 | 346.4 | 318.4 | 299.3 | 284.3 | 278.2 | 276.8 |
| 20° | 2188.1 | 1813.8 | 1194.0 | 560.5 | 349.1 | 314.3 | 283.0 | 261.8 | 246.8 | 240.7 | 239.3 |
| 22.5° | 2346.3 | 1886.7 | 1074.0 | 411.2 | 313.7 | 278.9 | 248.2 | 227.1 | 212.7 | 207.3 | 204.6 |
| 25° | 2500.4 | 1946.1 | 906.2 | 332.8 | 280.3 | 245.5 | 216.2 | 196.4 | 183.4 | 178.0 | 177.3 |
| 27.5° | 2644.3 | 1983.6 | 711.9 | 293.9 | 250.9 | 215.5 | 188.9 | 171.2 | 160.2 | 156.1 | 155.5 |
| 30° | 2773.9 | 1987.0 | 526.4 | 265.2 | 225.0 | 189.6 | 165.0 | 149.3 | 139.8 | 135.7 | 134.3 |
| 32.5° | 2904.8 | 1958.3 | 383.2 | 239.3 | 201.2 | 167.1 | 143.2 | 130.9 | 124.1 | 120.7 | 120.7 |
| 35° | 3028.2 | 1892.2 | 298.7 | 216.8 | 178.0 | 145.2 | 126.1 | 117.3 | 113.2 | 109.8 | 109.8 |
| 37.5° | 3148.9 | 1797.4 | 253.7 | 197.1 | 156.1 | 126.8 | 111.1 | 105.7 | 102.3 | 98.9 | 98.9 |
| 40° | 3271.6 | 1678.1 | 230.5 | 178.7 | 138.4 | 112.5 | 98.9 | 94.1 | 90.7 | 88.0 | 87.3 |
| 42.5° | 3422.3 | 1540.4 | 215.5 | 161.6 | 122.7 | 99.6 | 87.3 | 81.8 | 79.1 | 76.4 | 75.0 |
| 45° | 3596.9 | 1421.7 | 203.2 | 144.6 | 109.8 | 88.6 | 75.7 | 70.2 | 66.1 | 62.7 | 62.1 |
| 47.5° | 3848.5 | 1335.8 | 186.8 | 126.1 | 97.5 | 77.1 | 65.5 | 59.3 | 53.2 | 49.8 | 49.1 |
| 50° | 4169.7 | 1264.9 | 165.7 | 109.8 | 85.2 | 65.5 | 54.5 | 47.0 | 41.6 | 38.2 | 38.2 |
| 52.5° | 4329.2 | 1172.1 | 146.6 | 95.5 | 71.6 | 55.2 | 44.3 | 35.5 | 32.7 | 29.3 | 29.3 |
| 55° | 4393.3 | 1101.2 | 127.5 | 81.1 | 59.3 | 45.7 | 34.8 | 27.3 | 25.2 | 23.2 | 22.5 |
| 57.5° | 4573.3 | 1080.8 | 111.1 | 68.9 | 49.1 | 36.1 | 26.6 | 20.5 | 19.1 | 16.4 | 16.4 |
| 60° | 4863.1 | 1091.0 | 96.1 | 58.6 | 39.5 | 28.0 | 19.8 | 15.7 | 14.3 | 11.6 | 11.6 |
| 62.5° | 5176.1 | 1078.0 | 81.1 | 50.5 | 30.7 | 20.5 | 13.6 | 11.6 | 11.6 | 6.8 | 6.1 |
| 65° | 5236.1 | 960.1 | 69.6 | 41.6 | 23.9 | 15.0 | 8.9 | 7.5 | 10.2 | 1.4 | 0.0 |
| 67.5° | *4859.7* | *744.6* | *60.0* | *32.0* | *17.7* | *11.6* | *6.8* | *3.4* | *8.9* | *0.0* | *0.0* |
| 70° | 3886.0 | 473.2 | 48.4 | 23.2 | 13.6 | 9.5 | 5.5 | 1.4 | 6.8 | 0.0 | 0.0 |
| 72.5° | 2748.0 | 274.8 | 38.2 | 16.4 | 11.6 | 7.5 | 4.1 | 0.0 | 4.1 | 0.0 | 0.0 |
| 75° | 1389.7 | 146.6 | 23.9 | 12.3 | 8.9 | 5.5 | 2.7 | 0.0 | 0.7 | 0.0 | 0.0 |
| 77.5° | 300.7 | 68.2 | 15.0 | 8.9 | 6.1 | 3.4 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 65.5 | 30.0 | 9.5 | 5.5 | 3.4 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 23.9 | 15.7 | 4.8 | 2.7 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 13.0 | 8.2 | 2.7 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 6.8 | 2.7 | 0.7 | 0.7 | 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)