

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: P234802

Luminaire Tested: **ARCH-M-AF48-140-D-U-T2R-8027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P234802
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29623)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-M-AF48-140-D-U-T2R-8027-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 2700K, 905mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10765 lumens
Efficiency: N/A
Efficacy: 76.3 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 141
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: 28.75 FT

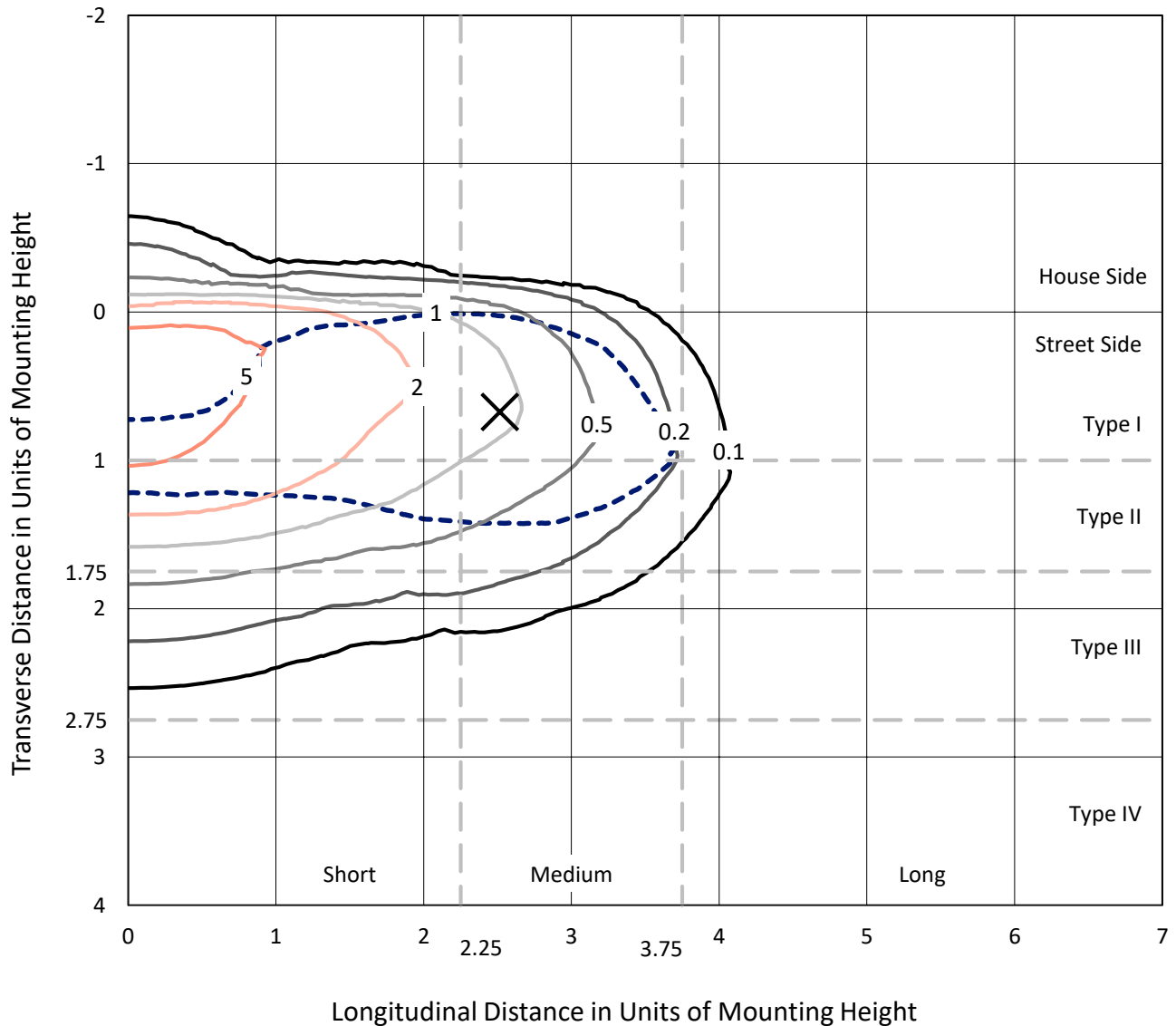


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

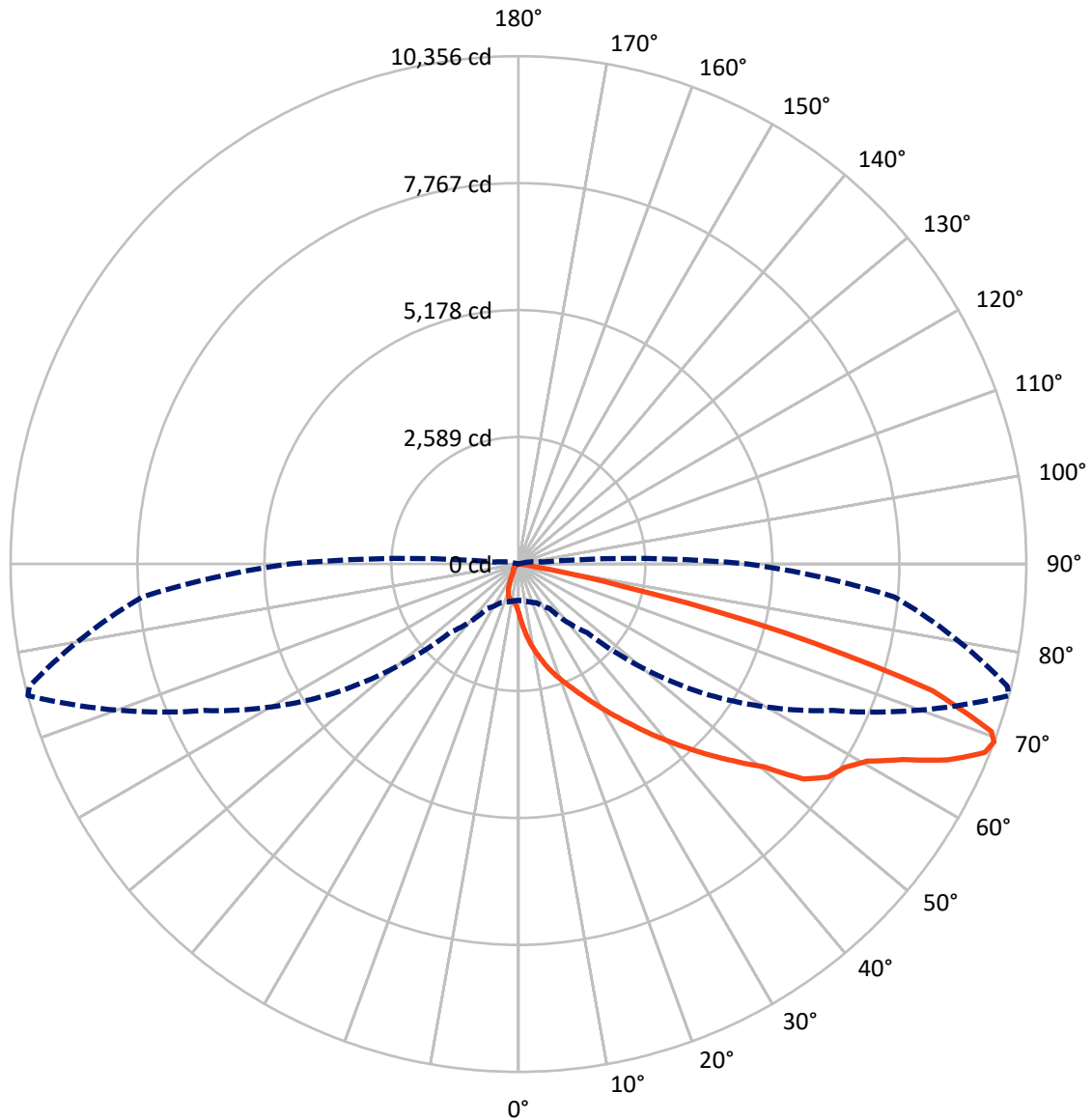


Based on 20 foot mounting height. Maximum calculated value = 6.9 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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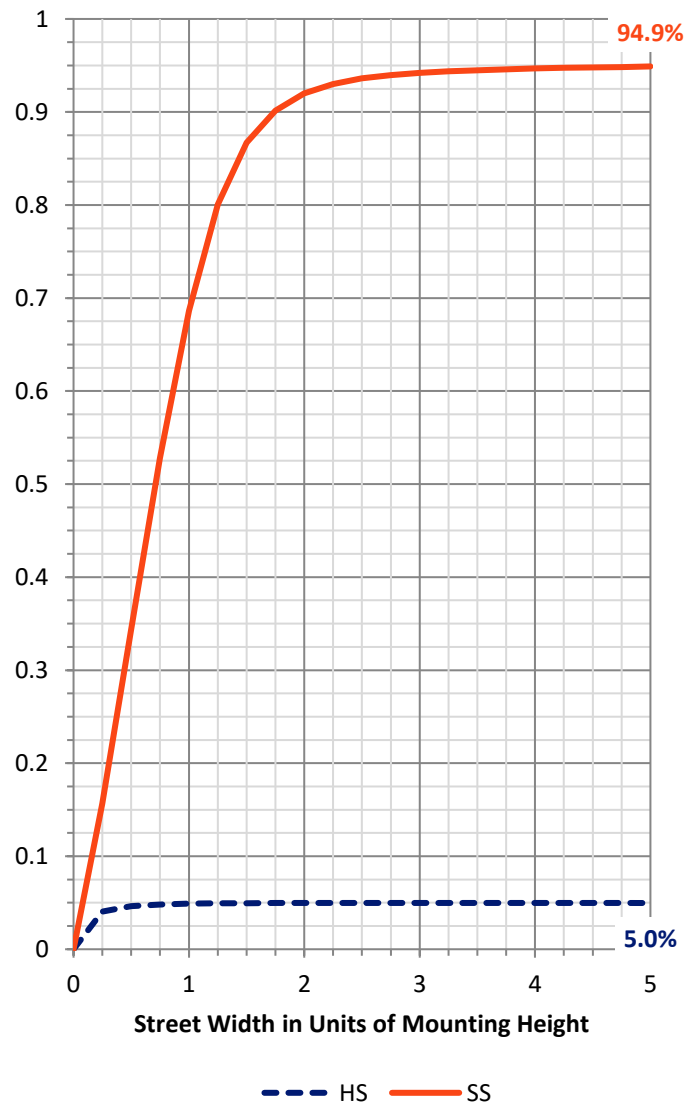
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 537.1 | 0.0 | 537.1 |
| | % Fixture | 5.0 | 0.0 | 5.0 |
| Street Side | Lumens | 10227.9 | 0.0 | 10227.9 |
| | % Fixture | 95.0 | 0.0 | 95.0 |
| Total | Lumens | 10765.0 | 0.0 | 10765.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 116.8 | 1.1 |
| 10°-20° | 417.6 | 3.9 |
| 20°-30° | 797.2 | 7.4 |
| 30°-40° | 1430.0 | 13.3 |
| 40°-50° | 2190.8 | 20.4 |
| 50°-60° | 2546.3 | 23.7 |
| 60°-70° | 2254.8 | 20.9 |
| 70°-80° | 972.6 | 9.0 |
| 80°-90° | 39.0 | 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° | 10765.0 | 100.0 |
| 0°-180° | 10765.0 | 100.0 |



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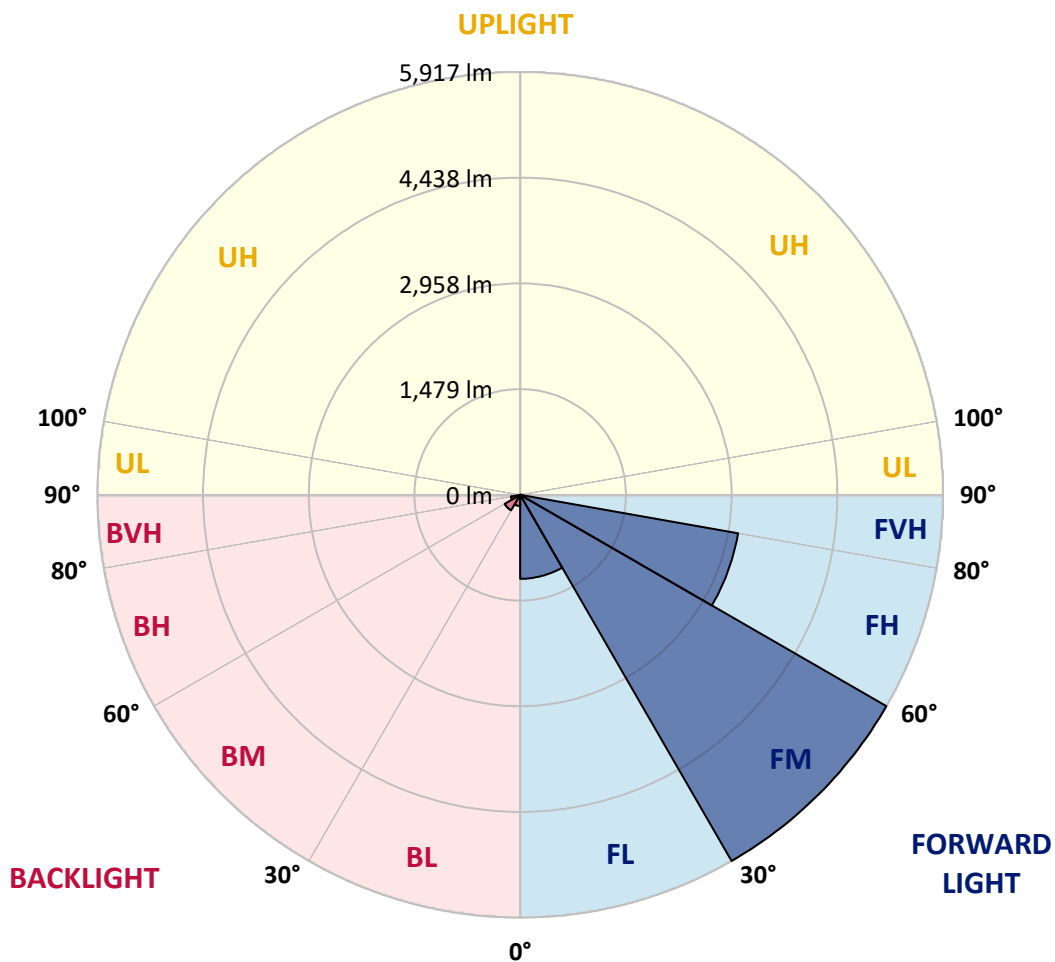
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1175.6 | 10.9 | | | |
| FM | (30°-60°) | 5916.7 | 55.0 | | | |
| FH | (60°-80°) | 3097.2 | 28.8 | | | G2/5000 |
| FVH | (80°-90°) | 38.4 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 156.0 | 1.4 | B1/500 | | |
| BM | (30°-60°) | 250.4 | 2.3 | B1/1000 | | |
| BH | (60°-80°) | 130.1 | 1.2 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 0.6 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: 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° | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 |
| 2.5° | 1650.1 | 1633.8 | 1617.6 | 1599.0 | 1557.1 | 1485.1 | 1394.4 | 1296.8 | 1176.0 | 1155.1 | 1057.5 |
| 5° | 2003.4 | 1996.4 | 1980.1 | 1954.6 | 1908.1 | 1829.1 | 1726.8 | 1582.7 | 1380.5 | 1345.6 | 1138.8 |
| 7.5° | 2252.0 | 2247.4 | 2233.4 | 2203.2 | 2161.4 | 2082.4 | 1975.5 | 1819.8 | 1585.0 | 1545.5 | 1241.1 |
| 10° | 2475.1 | 2472.8 | 2461.2 | 2433.3 | 2391.5 | 2305.5 | 2191.6 | 2028.9 | 1780.2 | 1736.1 | 1359.6 |
| 12.5° | 2677.3 | 2679.7 | 2675.0 | 2661.1 | 2630.9 | 2549.5 | 2419.4 | 2242.7 | 1968.5 | 1919.7 | 1501.4 |
| 15° | 2795.9 | 2802.8 | 2821.4 | 2849.3 | 2858.6 | 2793.5 | 2658.7 | 2463.5 | 2161.4 | 2119.6 | 1664.0 |
| 17.5° | 2756.4 | 2763.3 | 2821.4 | 2916.7 | 3007.4 | 3016.7 | 2895.8 | 2672.7 | 2352.0 | 2310.1 | 1824.4 |
| 20° | 2661.1 | 2670.4 | 2730.8 | 2860.9 | 3037.6 | 3160.8 | 3111.9 | 2900.5 | 2533.2 | 2482.1 | 1977.8 |
| 22.5° | 2768.0 | 2768.0 | 2786.6 | 2865.6 | 3026.0 | 3218.9 | 3283.9 | 3128.2 | 2719.2 | 2656.4 | 2131.2 |
| 25° | 3135.2 | 3128.2 | 3088.7 | 3056.2 | 3107.3 | 3279.3 | 3414.1 | 3360.6 | 2937.6 | 2865.6 | 2293.9 |
| 27.5° | 3600.0 | 3632.5 | 3558.2 | 3439.6 | 3323.4 | 3397.8 | 3530.3 | 3590.7 | 3179.3 | 3105.0 | 2461.2 |
| 30° | 4120.6 | 4134.5 | 4046.2 | 3888.2 | 3683.7 | 3611.6 | 3667.4 | 3788.3 | 3442.0 | 3360.6 | 2635.5 |
| 32.5° | 4590.1 | 4578.4 | 4504.1 | 4339.1 | 4085.7 | 3930.0 | 3844.0 | 3946.3 | 3727.8 | 3634.9 | 2814.5 |
| 35° | 5006.1 | 5015.4 | 4924.7 | 4734.2 | 4485.5 | 4320.5 | 4115.9 | 4125.2 | 4048.6 | 3941.6 | 3021.3 |
| 37.5° | 5380.2 | 5364.0 | 5278.0 | 5087.4 | 4862.0 | 4683.0 | 4466.9 | 4311.2 | 4399.5 | 4287.9 | 3253.7 |
| 40° | 5684.7 | 5668.4 | 5577.8 | 5391.9 | 5180.4 | 5034.0 | 4864.3 | 4559.8 | 4769.0 | 4641.2 | 3502.4 |
| 42.5° | 5926.4 | 5907.8 | 5831.1 | 5652.2 | 5447.6 | 5317.5 | 5236.2 | 4866.6 | 5164.1 | 5036.3 | 3781.3 |
| 45° | 6044.9 | 6028.7 | 5982.2 | 5847.4 | 5668.4 | 5554.6 | 5594.1 | 5219.9 | 5587.1 | 5480.2 | 4088.1 |
| 47.5° | 5905.5 | 5898.5 | 5952.0 | 5928.7 | 5826.5 | 5766.0 | 5903.2 | 5605.7 | 6031.0 | 5926.4 | 4441.3 |
| 50° | 5482.5 | 5494.1 | 5649.8 | 5842.7 | 5891.5 | 5963.6 | 6156.5 | 6012.4 | 6507.4 | 6395.9 | 4848.0 |
| 52.5° | 4439.0 | 4518.0 | 4987.5 | 5452.3 | 5812.5 | 6084.4 | 6454.0 | 6593.4 | 7283.7 | 7174.4 | 5482.5 |
| 55° | 3314.1 | 3346.7 | 3858.0 | 4652.8 | 5494.1 | 6075.1 | 6674.8 | 6935.1 | 7667.1 | 7555.6 | 5649.8 |
| 57.5° | 2628.5 | 2640.2 | 2893.5 | 3704.6 | 4838.7 | 5866.0 | 6791.0 | 7058.2 | 7834.5 | 7741.5 | 5898.5 |
| 60° | 2063.8 | 2077.7 | 2261.3 | 2819.1 | 3916.1 | 5301.2 | 6623.6 | 7165.1 | 8162.2 | 8087.8 | 6333.1 |
| 62.5° | 1605.9 | 1619.9 | 1731.4 | 2059.1 | 2937.6 | 4432.0 | 6286.6 | 7337.1 | 8785.0 | 8750.2 | 7044.3 |
| 65° | 1243.4 | 1248.0 | 1324.7 | 1478.1 | 2075.4 | 3490.8 | 5875.3 | 7497.5 | 9626.3 | 9596.1 | 7620.7 |
| 67.5° | 918.0 | 925.0 | 978.4 | 1073.7 | 1401.4 | 2507.7 | 5201.3 | 7374.3 | 10260.8 | 10172.5 | 7829.8 |
| 69° | 741.4 | 748.4 | 794.8 | 871.5 | 1106.3 | 1975.5 | 4585.4 | 7069.9 | 10356.1 | 10272.4 | 7697.4 |
| 70° | 634.5 | 639.1 | 685.6 | 750.7 | 943.6 | 1678.0 | 4097.4 | 6807.2 | 10230.6 | 10149.3 | 7395.2 |
| 72.5° | 406.7 | 430.0 | 476.4 | 518.3 | 625.2 | 1110.9 | 2765.7 | 5645.2 | 8826.9 | 8687.4 | 5791.6 |
| 75° | 225.4 | 232.4 | 316.1 | 367.2 | 416.0 | 722.8 | 1538.5 | 3521.0 | 5615.0 | 5517.4 | 3098.0 |
| 77.5° | 185.9 | 190.6 | 223.1 | 278.9 | 278.9 | 404.4 | 581.0 | 1387.5 | 2135.8 | 1926.7 | 839.0 |
| 80° | 130.1 | 134.8 | 169.7 | 183.6 | 199.9 | 227.8 | 188.3 | 304.5 | 330.0 | 292.8 | 125.5 |
| 82.5° | 90.6 | 95.3 | 116.2 | 151.1 | 160.4 | 106.9 | 69.7 | 90.6 | 95.3 | 95.3 | 48.8 |
| 85° | 16.3 | 23.2 | 86.0 | 125.5 | 95.3 | 32.5 | 39.5 | 32.5 | 30.2 | 32.5 | 11.6 |
| 87.5° | 0.0 | 0.0 | 53.5 | 60.4 | 51.1 | 13.9 | 16.3 | 11.6 | 7.0 | 9.3 | 4.6 |
| 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° | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 | 1001.7 |
| 2.5° | 1008.7 | 959.8 | 876.2 | 815.8 | 764.6 | 725.1 | 708.8 | 683.3 | 664.7 | 674.0 | 662.4 |
| 5° | 1036.5 | 950.5 | 815.8 | 729.8 | 669.3 | 618.2 | 576.4 | 543.8 | 518.3 | 513.6 | 509.0 |
| 7.5° | 1080.7 | 957.5 | 780.9 | 674.0 | 583.3 | 504.3 | 439.3 | 390.4 | 353.3 | 353.3 | 339.3 |
| 10° | 1141.1 | 976.1 | 760.0 | 618.2 | 483.4 | 376.5 | 311.4 | 264.9 | 246.4 | 244.0 | 239.4 |
| 12.5° | 1224.8 | 1011.0 | 743.7 | 546.2 | 376.5 | 274.2 | 234.7 | 218.5 | 211.5 | 209.2 | 206.8 |
| 15° | 1338.7 | 1062.1 | 725.1 | 457.8 | 285.9 | 225.4 | 209.2 | 195.2 | 188.3 | 185.9 | 183.6 |
| 17.5° | 1447.9 | 1108.6 | 685.6 | 367.2 | 232.4 | 204.5 | 185.9 | 174.3 | 165.0 | 162.7 | 162.7 |
| 20° | 1550.2 | 1148.1 | 618.2 | 285.9 | 209.2 | 183.6 | 165.0 | 151.1 | 141.8 | 139.4 | 139.4 |
| 22.5° | 1657.1 | 1180.6 | 534.5 | 232.4 | 190.6 | 162.7 | 144.1 | 130.1 | 120.9 | 118.5 | 116.2 |
| 25° | 1771.0 | 1203.9 | 439.3 | 206.8 | 172.0 | 144.1 | 123.2 | 111.6 | 104.6 | 102.3 | 99.9 |
| 27.5° | 1894.1 | 1213.2 | 348.6 | 188.3 | 151.1 | 125.5 | 106.9 | 95.3 | 90.6 | 88.3 | 88.3 |
| 30° | 2005.7 | 1203.9 | 269.6 | 167.3 | 132.5 | 109.2 | 93.0 | 83.7 | 79.0 | 76.7 | 76.7 |
| 32.5° | 2121.9 | 1180.6 | 216.1 | 148.7 | 116.2 | 93.0 | 79.0 | 72.0 | 69.7 | 67.4 | 67.4 |
| 35° | 2245.1 | 1150.4 | 185.9 | 132.5 | 99.9 | 81.3 | 69.7 | 65.1 | 62.8 | 60.4 | 60.4 |
| 37.5° | 2389.2 | 1113.2 | 169.7 | 118.5 | 88.3 | 72.0 | 60.4 | 58.1 | 55.8 | 55.8 | 55.8 |
| 40° | 2551.8 | 1066.8 | 158.0 | 106.9 | 79.0 | 62.8 | 53.5 | 51.1 | 48.8 | 48.8 | 48.8 |
| 42.5° | 2723.8 | 1013.3 | 146.4 | 95.3 | 69.7 | 53.5 | 46.5 | 46.5 | 44.2 | 44.2 | 41.8 |
| 45° | 2916.7 | 959.8 | 134.8 | 83.7 | 60.4 | 46.5 | 39.5 | 37.2 | 37.2 | 34.9 | 34.9 |
| 47.5° | 3144.5 | 911.0 | 123.2 | 74.4 | 53.5 | 39.5 | 34.9 | 32.5 | 30.2 | 27.9 | 27.9 |
| 50° | 3465.2 | 906.4 | 109.2 | 65.1 | 48.8 | 32.5 | 27.9 | 25.6 | 23.2 | 20.9 | 20.9 |
| 52.5° | 3783.6 | 864.6 | 93.0 | 53.5 | 39.5 | 27.9 | 20.9 | 18.6 | 16.3 | 16.3 | 13.9 |
| 55° | 3855.7 | 794.8 | 81.3 | 46.5 | 30.2 | 20.9 | 16.3 | 11.6 | 11.6 | 9.3 | 9.3 |
| 57.5° | 4013.7 | 762.3 | 69.7 | 37.2 | 23.2 | 16.3 | 9.3 | 7.0 | 7.0 | 7.0 | 7.0 |
| 60° | 4325.1 | 753.0 | 60.4 | 32.5 | 16.3 | 11.6 | 7.0 | 4.6 | 4.6 | 2.3 | 2.3 |
| 62.5° | 4755.1 | 743.7 | 51.1 | 27.9 | 11.6 | 7.0 | 4.6 | 2.3 | 0.0 | 0.0 | 0.0 |
| 65° | 4992.1 | 681.0 | 41.8 | 20.9 | 9.3 | 7.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 4929.4 | 562.4 | 37.2 | 13.9 | 7.0 | 4.6 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 69° | 4666.8 | 474.1 | 30.2 | 11.6 | 7.0 | 4.6 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 4350.7 | 409.0 | 27.9 | 9.3 | 4.6 | 2.3 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 3088.7 | 213.8 | 18.6 | 7.0 | 4.6 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 1443.3 | 95.3 | 11.6 | 4.6 | 2.3 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 318.4 | 44.2 | 7.0 | 4.6 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 60.4 | 16.3 | 4.6 | 2.3 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 20.9 | 7.0 | 2.3 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 7.0 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 2.3 | 0.0 | 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)