

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: P234707

Luminaire Tested: **ARCH-AF24-80-D-U-T2R-8027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P234707
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-AF24-80-D-U-T2R-8027-HSS
Description: ARCHEON ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 2700K, 1050mA LIGHT ENGINE 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: 5515 lumens
Efficiency: N/A
Efficacy: 66.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B0 - U0 - G1

Input Watts (W): 83
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

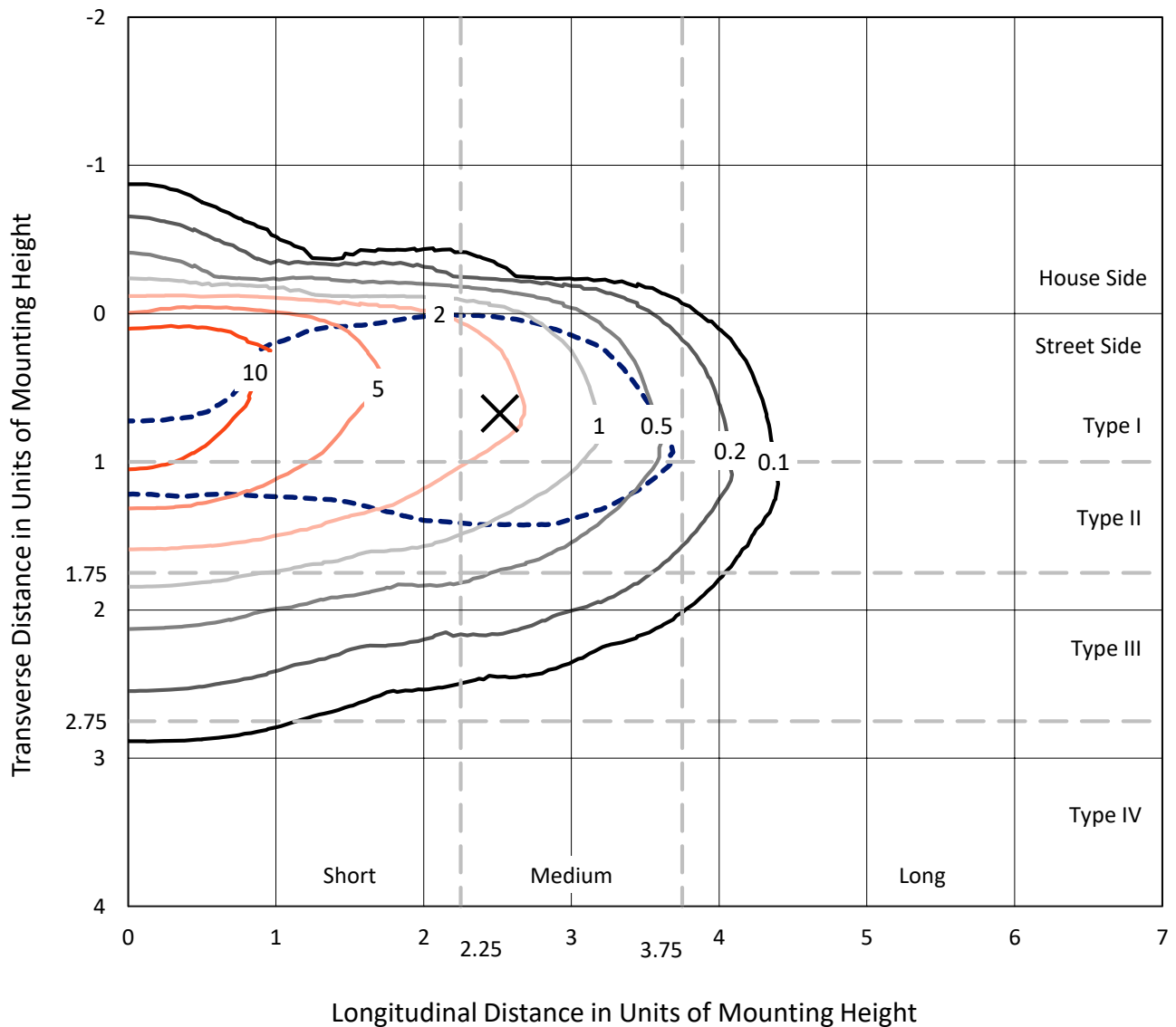


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

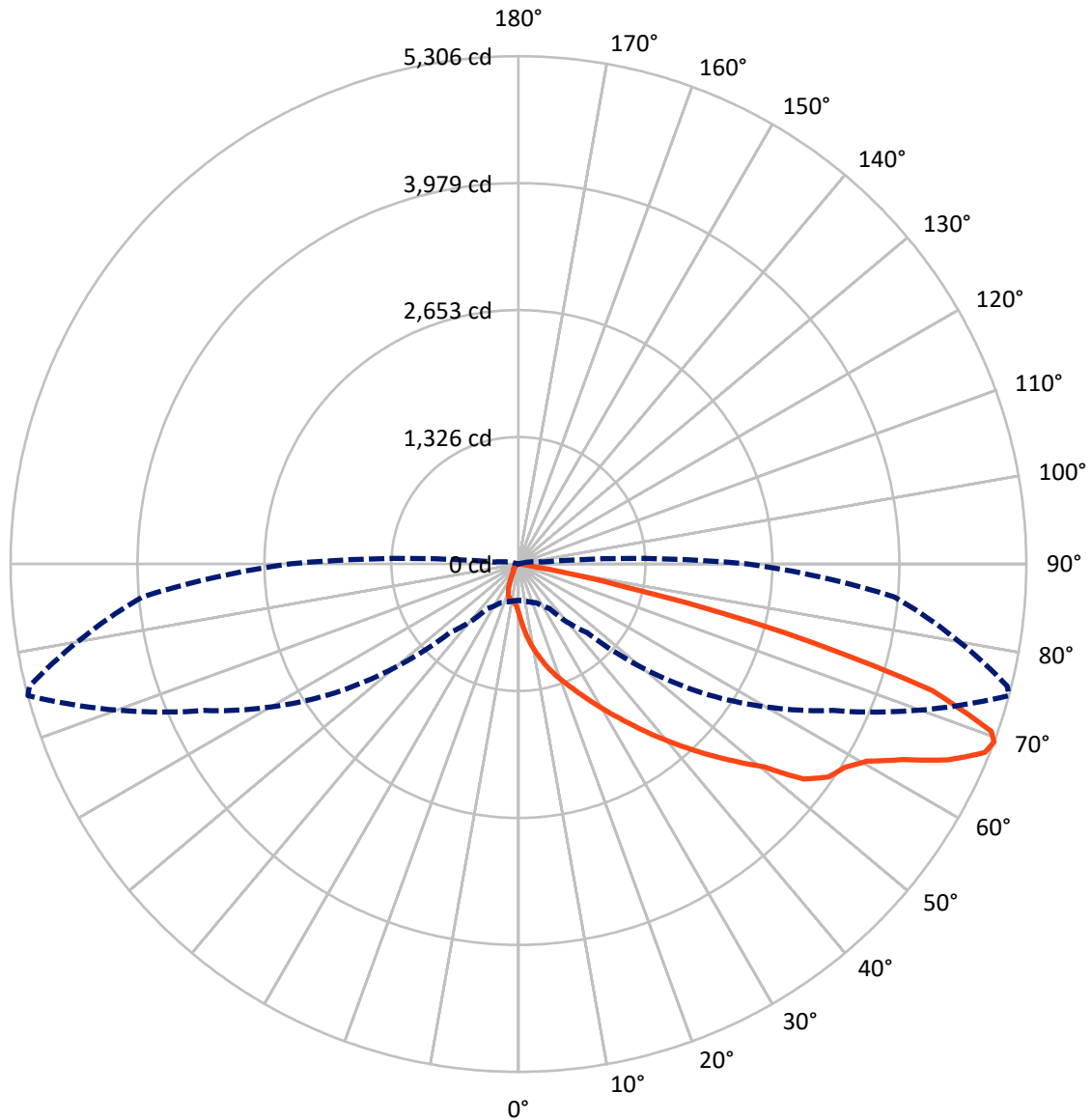


Based on 10 foot mounting height. Maximum calculated value = 14 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



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

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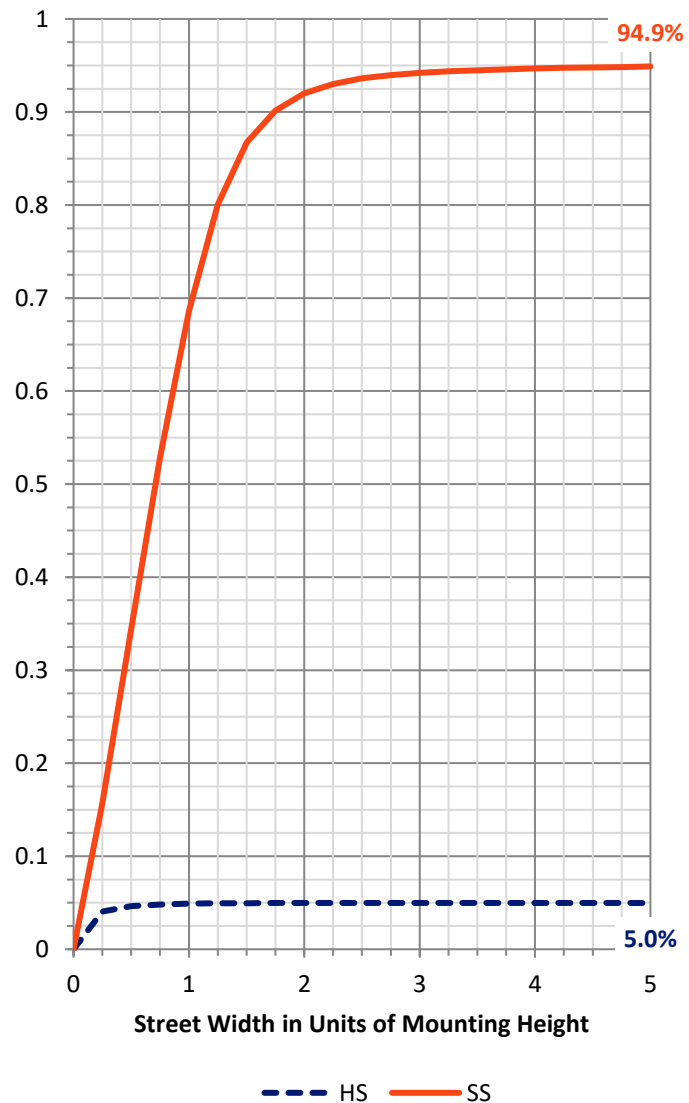
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 275.2 | 0.0 | 275.2 |
| | % Fixture | 5.0 | 0.0 | 5.0 |
| Street Side | Lumens | 5239.8 | 0.0 | 5239.8 |
| | % Fixture | 95.0 | 0.0 | 95.0 |
| Total | Lumens | 5515.0 | 0.0 | 5515.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 59.8 | 1.1 |
| 10°-20° | 213.9 | 3.9 |
| 20°-30° | 408.4 | 7.4 |
| 30°-40° | 732.6 | 13.3 |
| 40°-50° | 1122.4 | 20.4 |
| 50°-60° | 1304.5 | 23.7 |
| 60°-70° | 1155.2 | 20.9 |
| 70°-80° | 498.3 | 9.0 |
| 80°-90° | 20.0 | 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° | 5515.0 | 100.0 |
| 0°-180° | 5515.0 | 100.0 |

Coefficient of Utilization



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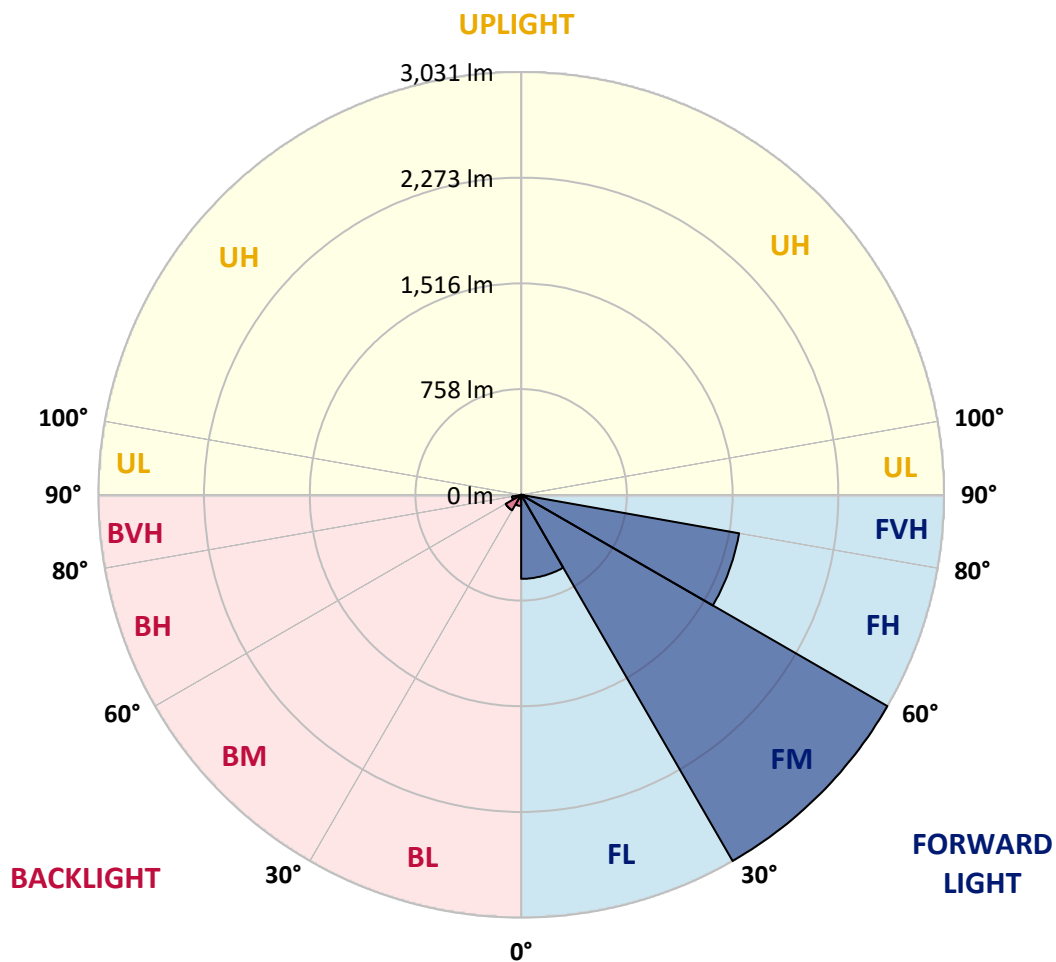
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 602.2 | 10.9 | | | |
| FM | (30°-60°) | 3031.2 | 55.0 | | | |
| FH | (60°-80°) | 1586.7 | 28.8 | | | G1/1800 |
| FVH | (80°-90°) | 19.7 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 79.9 | 1.4 | B0/110 | | |
| BM | (30°-60°) | 128.3 | 2.3 | B0/220 | | |
| BH | (60°-80°) | 66.7 | 1.2 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 0.3 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G1

Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 76° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 |
| 2.5° | 845.4 | 837.0 | 828.7 | 819.2 | 797.7 | 760.8 | 714.4 | 664.4 | 602.5 | 591.8 | 541.7 |
| 5° | 1026.3 | 1022.8 | 1014.4 | 1001.3 | 977.5 | 937.0 | 884.7 | 810.8 | 707.2 | 689.4 | 583.4 |
| 7.5° | 1153.7 | 1151.4 | 1144.2 | 1128.7 | 1107.3 | 1066.8 | 1012.0 | 932.3 | 812.0 | 791.8 | 635.8 |
| 10° | 1268.0 | 1266.8 | 1260.9 | 1246.6 | 1225.2 | 1181.1 | 1122.8 | 1039.4 | 912.0 | 889.4 | 696.5 |
| 12.5° | 1371.6 | 1372.8 | 1370.4 | 1363.3 | 1347.8 | 1306.1 | 1239.5 | 1149.0 | 1008.5 | 983.5 | 769.2 |
| 15° | 1432.3 | 1435.9 | 1445.4 | 1459.7 | 1464.5 | 1431.2 | 1362.1 | 1262.1 | 1107.3 | 1085.9 | 852.5 |
| 17.5° | 1412.1 | 1415.7 | 1445.4 | 1494.3 | 1540.7 | 1545.5 | 1483.5 | 1369.2 | 1204.9 | 1183.5 | 934.7 |
| 20° | 1363.3 | 1368.1 | 1399.0 | 1465.7 | 1556.2 | 1619.3 | 1594.3 | 1485.9 | 1297.8 | 1271.6 | 1013.2 |
| 22.5° | 1418.1 | 1418.1 | 1427.6 | 1468.1 | 1550.2 | 1649.0 | 1682.4 | 1602.6 | 1393.1 | 1360.9 | 1091.8 |
| 25° | 1606.2 | 1602.6 | 1582.4 | 1565.7 | 1591.9 | 1680.0 | 1749.1 | 1721.7 | 1505.0 | 1468.1 | 1175.2 |
| 27.5° | 1844.3 | 1861.0 | 1822.9 | 1762.2 | 1702.6 | 1740.7 | 1808.6 | 1839.5 | 1628.8 | 1590.7 | 1260.9 |
| 30° | 2111.0 | 2118.2 | 2072.9 | 1992.0 | 1887.2 | 1850.3 | 1878.8 | 1940.8 | 1763.3 | 1721.7 | 1350.2 |
| 32.5° | 2351.5 | 2345.6 | 2307.5 | 2222.9 | 2093.2 | 2013.4 | 1969.3 | 2021.7 | 1909.8 | 1862.2 | 1441.9 |
| 35° | 2564.7 | 2569.4 | 2523.0 | 2425.3 | 2297.9 | 2213.4 | 2108.6 | 2113.4 | 2074.1 | 2019.3 | 1547.8 |
| 37.5° | 2756.3 | 2748.0 | 2704.0 | 2606.3 | 2490.8 | 2399.2 | 2288.4 | 2208.6 | 2253.9 | 2196.7 | 1666.9 |
| 40° | 2912.3 | 2904.0 | 2857.6 | 2762.3 | 2654.0 | 2578.9 | 2492.0 | 2336.0 | 2443.2 | 2377.7 | 1794.3 |
| 42.5° | 3036.1 | 3026.6 | 2987.3 | 2895.7 | 2790.9 | 2724.2 | 2682.5 | 2493.2 | 2645.6 | 2580.1 | 1937.2 |
| 45° | 3096.9 | 3088.5 | 3064.7 | 2995.7 | 2904.0 | 2845.6 | 2865.9 | 2674.2 | 2862.3 | 2807.5 | 2094.3 |
| 47.5° | 3025.4 | 3021.9 | 3049.2 | 3037.3 | 2985.0 | 2954.0 | 3024.2 | 2871.8 | 3089.7 | 3036.1 | 2275.3 |
| 50° | 2808.7 | 2814.7 | 2894.5 | 2993.3 | 3018.3 | 3055.2 | 3154.0 | 3080.2 | 3333.8 | 3276.7 | 2483.7 |
| 52.5° | 2274.1 | 2314.6 | 2555.1 | 2793.3 | 2977.8 | 3117.1 | 3306.4 | 3377.9 | 3731.5 | 3675.5 | 2808.7 |
| 55° | 1697.9 | 1714.5 | 1976.5 | 2383.7 | 2814.7 | 3112.4 | 3419.5 | 3552.9 | 3927.9 | 3870.8 | 2894.5 |
| 57.5° | 1346.6 | 1352.6 | 1482.4 | 1897.9 | 2478.9 | 3005.2 | 3479.1 | 3616.0 | 4013.7 | 3966.0 | 3021.9 |
| 60° | 1057.3 | 1064.4 | 1158.5 | 1444.3 | 2006.2 | 2715.9 | 3393.3 | 3670.8 | 4181.6 | 4143.5 | 3244.5 |
| 62.5° | 822.7 | 829.9 | 887.0 | 1054.9 | 1505.0 | 2270.6 | 3220.7 | 3758.9 | 4500.6 | 4482.8 | 3608.8 |
| 65° | 637.0 | 639.4 | 678.7 | 757.3 | 1063.2 | 1788.4 | 3010.0 | 3841.0 | 4931.7 | 4916.2 | 3904.1 |
| 67.5° | 470.3 | 473.9 | 501.3 | 550.1 | 718.0 | 1284.7 | 2664.7 | 3777.9 | 5256.7 | 5211.5 | 4011.3 |
| 69° | 379.8 | 383.4 | 407.2 | 446.5 | 566.7 | 1012.0 | 2349.1 | 3621.9 | 5305.5 | 5262.7 | 3943.4 |
| 70° | 325.0 | 327.4 | 351.2 | 384.6 | 483.4 | 859.6 | 2099.1 | 3487.4 | 5241.2 | 5199.6 | 3788.6 |
| 72.5° | 208.4 | 220.3 | 244.1 | 265.5 | 320.3 | 569.1 | 1416.9 | 2892.1 | 4522.1 | 4450.6 | 2967.1 |
| 75° | 115.5 | 119.1 | 161.9 | 188.1 | 213.1 | 370.3 | 788.2 | 1803.8 | 2876.6 | 2826.6 | 1587.1 |
| 77.5° | 95.3 | 97.6 | 114.3 | 142.9 | 142.9 | 207.2 | 297.7 | 710.8 | 1094.2 | 987.0 | 429.8 |
| 80° | 66.7 | 69.1 | 86.9 | 94.1 | 102.4 | 116.7 | 96.4 | 156.0 | 169.1 | 150.0 | 64.3 |
| 82.5° | 46.4 | 48.8 | 59.5 | 77.4 | 82.2 | 54.8 | 35.7 | 46.4 | 48.8 | 48.8 | 25.0 |
| 85° | 8.3 | 11.9 | 44.1 | 64.3 | 48.8 | 16.7 | 20.2 | 16.7 | 15.5 | 16.7 | 6.0 |
| 87.5° | 0.0 | 0.0 | 27.4 | 31.0 | 26.2 | 7.1 | 8.3 | 6.0 | 3.6 | 4.8 | 2.4 |
| 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° | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 | 513.2 |
| 2.5° | 516.7 | 491.7 | 448.9 | 417.9 | 391.7 | 371.5 | 363.1 | 350.1 | 340.5 | 345.3 | 339.3 |
| 5° | 531.0 | 487.0 | 417.9 | 373.9 | 342.9 | 316.7 | 295.3 | 278.6 | 265.5 | 263.1 | 260.8 |
| 7.5° | 553.7 | 490.5 | 400.1 | 345.3 | 298.9 | 258.4 | 225.0 | 200.0 | 181.0 | 181.0 | 173.8 |
| 10° | 584.6 | 500.1 | 389.3 | 316.7 | 247.7 | 192.9 | 159.5 | 135.7 | 126.2 | 125.0 | 122.6 |
| 12.5° | 627.5 | 517.9 | 381.0 | 279.8 | 192.9 | 140.5 | 120.3 | 111.9 | 108.3 | 107.2 | 106.0 |
| 15° | 685.8 | 544.1 | 371.5 | 234.6 | 146.4 | 115.5 | 107.2 | 100.0 | 96.4 | 95.3 | 94.1 |
| 17.5° | 741.8 | 567.9 | 351.2 | 188.1 | 119.1 | 104.8 | 95.3 | 89.3 | 84.5 | 83.3 | 83.3 |
| 20° | 794.2 | 588.2 | 316.7 | 146.4 | 107.2 | 94.1 | 84.5 | 77.4 | 72.6 | 71.4 | 71.4 |
| 22.5° | 848.9 | 604.8 | 273.8 | 119.1 | 97.6 | 83.3 | 73.8 | 66.7 | 61.9 | 60.7 | 59.5 |
| 25° | 907.3 | 616.8 | 225.0 | 106.0 | 88.1 | 73.8 | 63.1 | 57.2 | 53.6 | 52.4 | 51.2 |
| 27.5° | 970.4 | 621.5 | 178.6 | 96.4 | 77.4 | 64.3 | 54.8 | 48.8 | 46.4 | 45.2 | 45.2 |
| 30° | 1027.5 | 616.8 | 138.1 | 85.7 | 67.9 | 56.0 | 47.6 | 42.9 | 40.5 | 39.3 | 39.3 |
| 32.5° | 1087.1 | 604.8 | 110.7 | 76.2 | 59.5 | 47.6 | 40.5 | 36.9 | 35.7 | 34.5 | 34.5 |
| 35° | 1150.2 | 589.4 | 95.3 | 67.9 | 51.2 | 41.7 | 35.7 | 33.3 | 32.1 | 31.0 | 31.0 |
| 37.5° | 1224.0 | 570.3 | 86.9 | 60.7 | 45.2 | 36.9 | 31.0 | 29.8 | 28.6 | 28.6 | 28.6 |
| 40° | 1307.3 | 546.5 | 81.0 | 54.8 | 40.5 | 32.1 | 27.4 | 26.2 | 25.0 | 25.0 | 25.0 |
| 42.5° | 1395.4 | 519.1 | 75.0 | 48.8 | 35.7 | 27.4 | 23.8 | 23.8 | 22.6 | 22.6 | 21.4 |
| 45° | 1494.3 | 491.7 | 69.1 | 42.9 | 31.0 | 23.8 | 20.2 | 19.1 | 19.1 | 17.9 | 17.9 |
| 47.5° | 1610.9 | 466.7 | 63.1 | 38.1 | 27.4 | 20.2 | 17.9 | 16.7 | 15.5 | 14.3 | 14.3 |
| 50° | 1775.3 | 464.4 | 56.0 | 33.3 | 25.0 | 16.7 | 14.3 | 13.1 | 11.9 | 10.7 | 10.7 |
| 52.5° | 1938.4 | 442.9 | 47.6 | 27.4 | 20.2 | 14.3 | 10.7 | 9.5 | 8.3 | 8.3 | 7.1 |
| 55° | 1975.3 | 407.2 | 41.7 | 23.8 | 15.5 | 10.7 | 8.3 | 6.0 | 6.0 | 4.8 | 4.8 |
| 57.5° | 2056.2 | 390.5 | 35.7 | 19.1 | 11.9 | 8.3 | 4.8 | 3.6 | 3.6 | 3.6 | 3.6 |
| 60° | 2215.8 | 385.8 | 31.0 | 16.7 | 8.3 | 6.0 | 3.6 | 2.4 | 2.4 | 1.2 | 1.2 |
| 62.5° | 2436.1 | 381.0 | 26.2 | 14.3 | 6.0 | 3.6 | 2.4 | 1.2 | 0.0 | 0.0 | 0.0 |
| 65° | 2557.5 | 348.9 | 21.4 | 10.7 | 4.8 | 3.6 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 2525.4 | 288.1 | 19.1 | 7.1 | 3.6 | 2.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 69° | 2390.8 | 242.9 | 15.5 | 6.0 | 3.6 | 2.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 2228.9 | 209.6 | 14.3 | 4.8 | 2.4 | 1.2 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 1582.4 | 109.5 | 9.5 | 3.6 | 2.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 739.4 | 48.8 | 6.0 | 2.4 | 1.2 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 163.1 | 22.6 | 3.6 | 2.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 31.0 | 8.3 | 2.4 | 1.2 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 10.7 | 3.6 | 1.2 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 3.6 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 1.2 | 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)