

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: P231014

Luminaire Tested: **ARCH-M-AF48-80-D-U-T2R-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231014
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29635)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-M-AF48-80-D-U-T2R-7030
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 535mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9907 lumens
Efficiency: N/A
Efficacy: 119.4 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

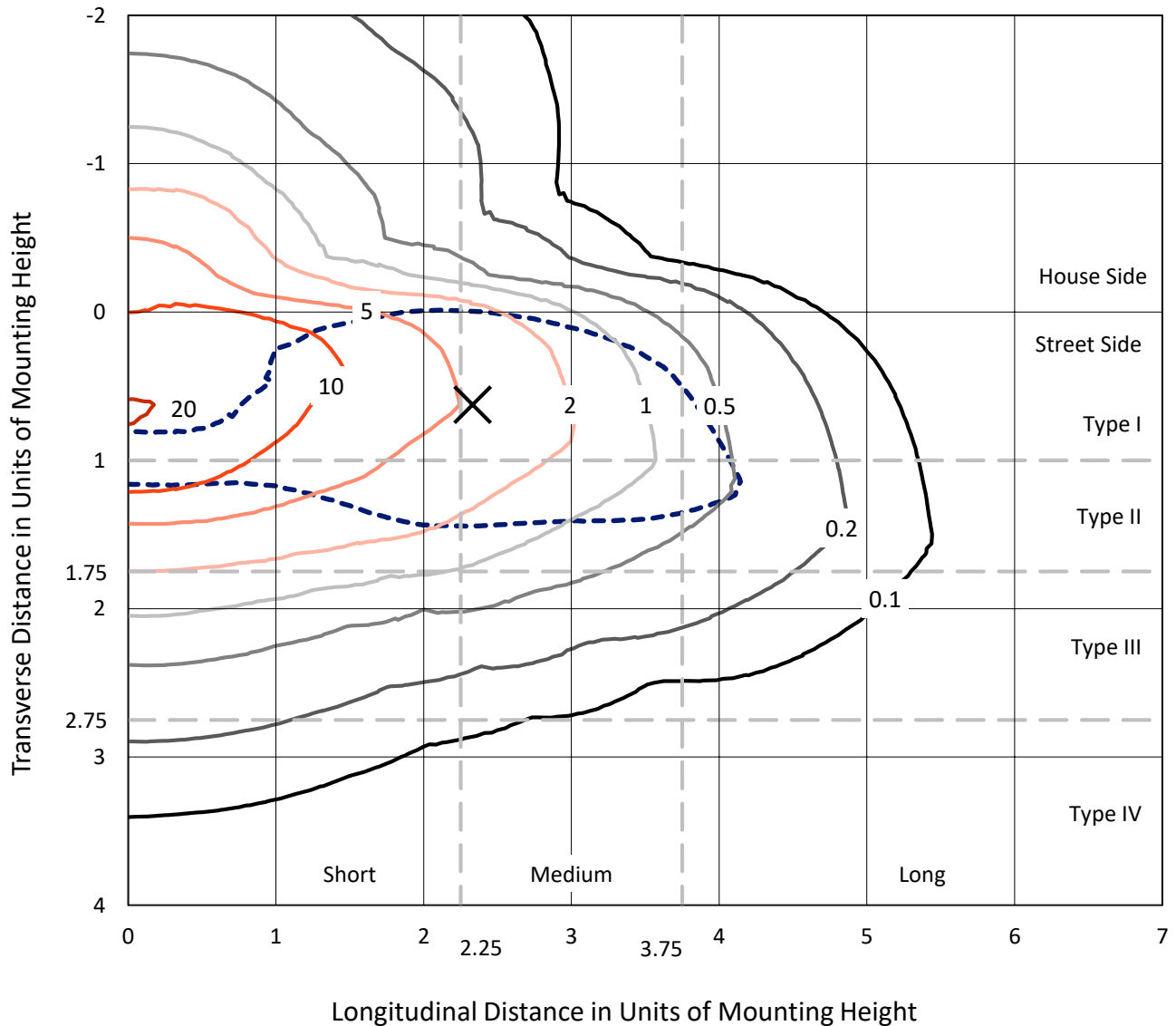
Input Watts (W): 83
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

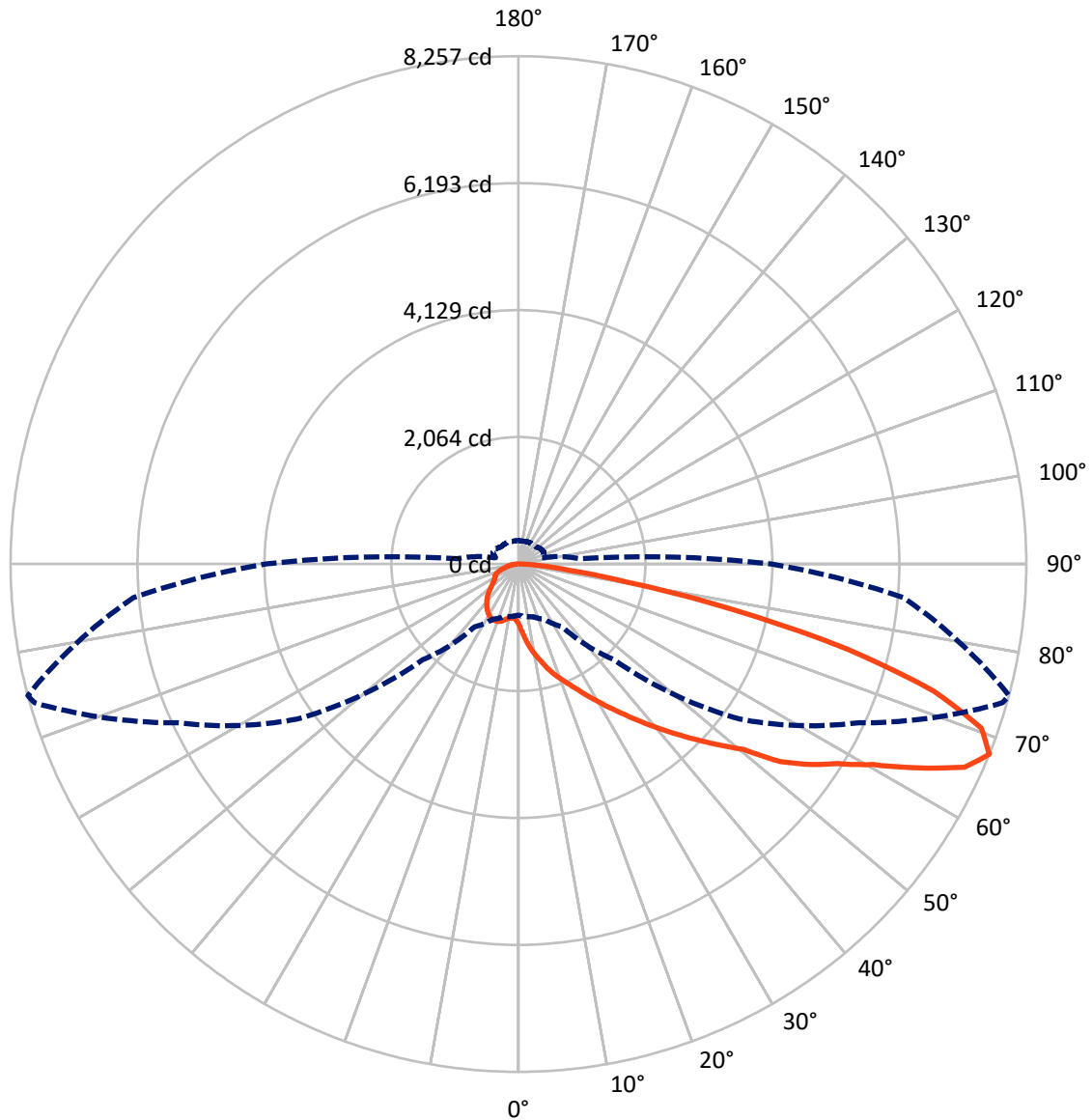
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 20.5 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical



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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1691.8 | 0.0 | 1691.8 |
| | % Fixture | 17.1 | 0.0 | 17.1 |
| Street Side | Lumens | 8215.3 | 0.0 | 8215.3 |
| | % Fixture | 82.9 | 0.0 | 82.9 |
| Total | Lumens | 9907.0 | 0.0 | 9907.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 115.3 | 1.2 |
| 10°-20° | 416.8 | 4.2 |
| 20°-30° | 760.2 | 7.7 |
| 30°-40° | 1247.8 | 12.6 |
| 40°-50° | 1804.4 | 18.2 |
| 50°-60° | 2126.5 | 21.5 |
| 60°-70° | 2066.5 | 20.9 |
| 70°-80° | 1148.7 | 11.6 |
| 80°-90° | 220.9 | 2.2 |
| 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° | 9907.0 | 100.0 |
| 0°-180° | 9907.0 | 100.0 |

Coefficient of Utilization



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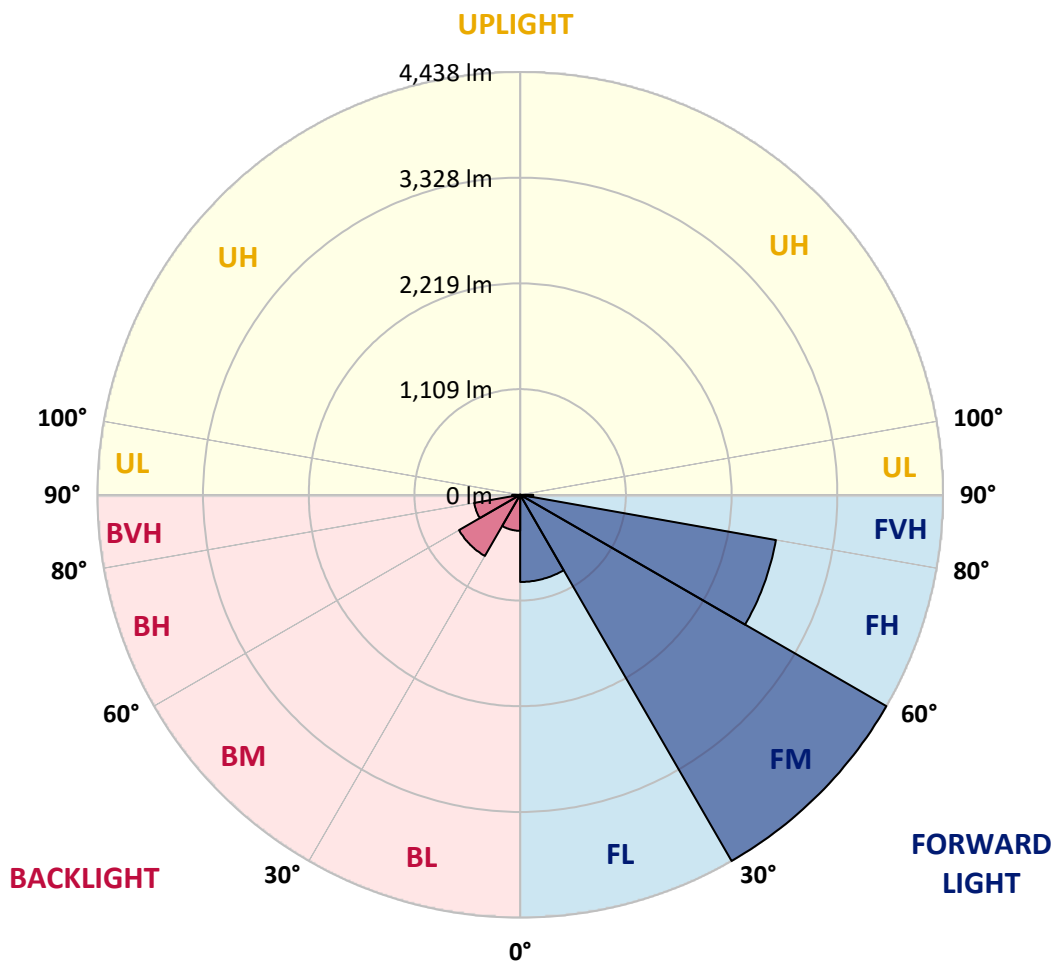
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 914.7 | 9.2 | | | |
| FM (30°-60°) | 4437.8 | 44.8 | | | |
| FH (60°-80°) | 2725.3 | 27.5 | | | G2/5000 |
| FVH (80°-90°) | 137.5 | 1.4 | | | G2/225 |
| BL (0°-30°) | 377.6 | 3.8 | B1/500 | | |
| BM (30°-60°) | 740.9 | 7.5 | B1/1000 | | |
| BH (60°-80°) | 489.8 | 4.9 | B1/500 | | G1/500 |
| BVH (80°-90°) | 83.4 | 0.8 | | | G1/100 |
| 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° | 74° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 |
| 2.5° | 1391.8 | 1395.9 | 1387.6 | 1369.0 | 1342.1 | 1292.3 | 1248.9 | 1172.2 | 1103.9 | 1095.6 | 1023.1 |
| 5° | 1636.1 | 1640.3 | 1629.9 | 1607.1 | 1578.2 | 1524.3 | 1464.2 | 1364.8 | 1255.1 | 1234.4 | 1081.1 |
| 7.5° | 1803.9 | 1806.0 | 1793.5 | 1770.8 | 1748.0 | 1694.1 | 1634.1 | 1522.2 | 1387.6 | 1371.0 | 1155.7 |
| 10° | 1946.8 | 1950.9 | 1934.4 | 1919.9 | 1895.0 | 1841.2 | 1779.0 | 1661.0 | 1522.2 | 1499.5 | 1232.3 |
| 12.5° | 2079.4 | 2083.5 | 2073.1 | 2060.7 | 2052.4 | 2002.7 | 1934.4 | 1793.5 | 1644.4 | 1619.6 | 1323.4 |
| 15° | 2168.4 | 2172.6 | 2174.6 | 2191.2 | 2201.5 | 2166.3 | 2098.0 | 1944.7 | 1777.0 | 1754.2 | 1431.1 |
| 17.5° | 2143.6 | 2153.9 | 2185.0 | 2245.0 | 2309.2 | 2311.3 | 2255.4 | 2093.9 | 1907.5 | 1882.6 | 1540.9 |
| 20° | 2071.1 | 2079.4 | 2116.6 | 2207.8 | 2334.1 | 2406.6 | 2402.4 | 2245.0 | 2029.6 | 2002.7 | 1642.4 |
| 22.5° | 2131.1 | 2141.5 | 2141.5 | 2197.4 | 2321.7 | 2456.3 | 2510.1 | 2394.2 | 2151.8 | 2127.0 | 1743.8 |
| 25° | 2387.9 | 2394.2 | 2350.7 | 2327.9 | 2373.4 | 2497.7 | 2599.2 | 2555.7 | 2301.0 | 2272.0 | 1853.6 |
| 27.5° | 2746.2 | 2735.9 | 2682.0 | 2590.9 | 2541.2 | 2574.3 | 2677.9 | 2709.0 | 2472.9 | 2437.6 | 1967.5 |
| 30° | 3102.5 | 3096.2 | 3034.1 | 2911.9 | 2800.1 | 2729.7 | 2764.9 | 2845.6 | 2659.3 | 2617.8 | 2077.3 |
| 32.5° | 3435.9 | 3425.5 | 3357.2 | 3214.3 | 3088.0 | 2957.5 | 2889.1 | 2969.9 | 2858.1 | 2810.4 | 2199.5 |
| 35° | 3742.4 | 3715.5 | 3647.2 | 3498.0 | 3367.6 | 3243.3 | 3075.5 | 3088.0 | 3073.5 | 3023.8 | 2334.1 |
| 37.5° | 3990.9 | 3970.2 | 3895.7 | 3756.9 | 3618.2 | 3500.1 | 3324.1 | 3222.6 | 3305.4 | 3257.8 | 2489.4 |
| 40° | 4210.5 | 4187.7 | 4111.1 | 3972.3 | 3843.9 | 3732.1 | 3593.3 | 3386.2 | 3566.4 | 3512.5 | 2663.4 |
| 42.5° | 4376.2 | 4359.6 | 4297.5 | 4160.8 | 4036.5 | 3935.0 | 3866.7 | 3593.3 | 3837.7 | 3785.9 | 2853.9 |
| 45° | 4465.2 | 4448.7 | 4415.5 | 4305.8 | 4191.8 | 4113.1 | 4119.4 | 3839.8 | 4121.4 | 4077.9 | 3079.7 |
| 47.5° | 4355.5 | 4367.9 | 4396.9 | 4376.2 | 4305.8 | 4268.5 | 4345.1 | 4094.5 | 4438.3 | 4396.9 | 3324.1 |
| 50° | 4061.4 | 4073.8 | 4189.8 | 4332.7 | 4357.5 | 4403.1 | 4548.1 | 4388.6 | 4773.8 | 4740.7 | 3626.4 |
| 52.5° | 3338.6 | 3406.9 | 3727.9 | 4069.7 | 4303.7 | 4492.1 | 4773.8 | 4825.6 | 5339.2 | 5339.2 | 4160.8 |
| 55° | 2522.6 | 2582.6 | 2949.2 | 3545.7 | 4094.5 | 4500.4 | 4939.5 | 5121.8 | 5747.2 | 5755.5 | 4440.4 |
| 57.5° | 2044.1 | 2081.4 | 2261.6 | 2872.6 | 3655.4 | 4396.9 | 5136.3 | 5376.5 | 6086.9 | 6124.2 | 4800.7 |
| 60° | 1658.9 | 1679.6 | 1797.7 | 2222.3 | 3048.6 | 4117.3 | 5277.1 | 5741.0 | 6571.5 | 6623.3 | 5260.5 |
| 62.5° | 1333.8 | 1354.5 | 1433.2 | 1687.9 | 2392.1 | 3593.3 | 5252.2 | 6120.0 | 7217.7 | 7302.6 | 5863.2 |
| 65° | 1064.5 | 1087.3 | 1139.1 | 1296.5 | 1772.8 | 2943.0 | 4997.5 | 6314.7 | 7886.6 | 7969.5 | 6262.9 |
| 67.5° | 830.5 | 851.2 | 886.4 | 990.0 | 1248.9 | 2201.5 | 4394.8 | 6109.7 | 8186.9 | 8257.4 | 6283.6 |
| 70° | 627.5 | 637.9 | 666.9 | 733.2 | 892.6 | 1462.2 | 3440.0 | 5422.1 | 7917.7 | 7981.9 | 5869.4 |
| 72.5° | 486.7 | 484.6 | 501.2 | 534.3 | 623.4 | 1006.5 | 2280.2 | 4409.3 | 7000.2 | 7066.5 | 5007.8 |
| 75° | 397.6 | 395.6 | 405.9 | 416.3 | 451.5 | 675.2 | 1346.2 | 3319.9 | 5649.9 | 5523.5 | 3756.9 |
| 77.5° | 335.5 | 333.4 | 343.8 | 345.9 | 360.4 | 466.0 | 766.3 | 2185.0 | 3769.3 | 3551.9 | 2116.6 |
| 80° | 283.7 | 281.7 | 294.1 | 298.2 | 308.6 | 341.7 | 441.1 | 1182.6 | 1893.0 | 1793.5 | 1010.7 |
| 82.5° | 213.3 | 221.6 | 244.4 | 254.7 | 267.2 | 252.7 | 273.4 | 521.9 | 878.1 | 838.8 | 439.1 |
| 85° | 103.6 | 122.2 | 184.3 | 205.0 | 219.5 | 159.5 | 186.4 | 246.5 | 395.6 | 376.9 | 178.1 |
| 87.5° | 35.2 | 31.1 | 109.8 | 130.5 | 142.9 | 72.5 | 103.6 | 136.7 | 163.6 | 149.1 | 55.9 |
| 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° | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 | 981.7 |
| 2.5° | 992.0 | 961.0 | 915.4 | 880.2 | 857.4 | 838.8 | 830.5 | 828.4 | 824.3 | 822.2 | 822.2 |
| 5° | 1012.8 | 956.8 | 886.4 | 849.1 | 838.8 | 830.5 | 834.6 | 836.7 | 836.7 | 836.7 | 836.7 |
| 7.5° | 1043.8 | 965.1 | 880.2 | 855.4 | 853.3 | 853.3 | 865.7 | 871.9 | 876.1 | 876.1 | 876.1 |
| 10° | 1085.2 | 979.6 | 890.6 | 869.8 | 876.1 | 880.2 | 894.7 | 903.0 | 907.1 | 909.2 | 911.3 |
| 12.5° | 1141.2 | 1010.7 | 911.3 | 894.7 | 903.0 | 905.1 | 915.4 | 919.6 | 923.7 | 925.8 | 925.8 |
| 15° | 1215.7 | 1056.2 | 944.4 | 923.7 | 925.8 | 923.7 | 923.7 | 919.6 | 917.5 | 917.5 | 921.6 |
| 17.5° | 1292.3 | 1099.7 | 973.4 | 944.4 | 936.1 | 919.6 | 907.1 | 896.8 | 890.6 | 886.4 | 888.5 |
| 20° | 1369.0 | 1139.1 | 990.0 | 948.5 | 925.8 | 898.8 | 876.1 | 861.6 | 853.3 | 845.0 | 849.1 |
| 22.5° | 1445.6 | 1176.4 | 996.2 | 936.1 | 903.0 | 863.6 | 838.8 | 816.0 | 797.4 | 784.9 | 787.0 |
| 25° | 1530.5 | 1217.8 | 996.2 | 921.6 | 871.9 | 830.5 | 799.4 | 762.2 | 735.2 | 724.9 | 729.0 |
| 27.5° | 1615.4 | 1253.0 | 985.8 | 894.7 | 836.7 | 795.3 | 749.7 | 706.2 | 689.7 | 683.5 | 685.5 |
| 30° | 1700.3 | 1279.9 | 963.0 | 861.6 | 799.4 | 753.9 | 693.8 | 664.8 | 644.1 | 627.5 | 629.6 |
| 32.5° | 1785.3 | 1298.6 | 932.0 | 820.1 | 760.1 | 702.1 | 652.4 | 619.2 | 582.0 | 561.3 | 563.3 |
| 35° | 1882.6 | 1313.1 | 894.7 | 778.7 | 716.6 | 656.5 | 619.2 | 565.4 | 526.1 | 509.5 | 505.3 |
| 37.5° | 1984.1 | 1323.4 | 855.4 | 733.2 | 673.1 | 623.4 | 586.1 | 519.8 | 482.6 | 459.8 | 457.7 |
| 40° | 2093.9 | 1327.6 | 807.7 | 685.5 | 631.7 | 602.7 | 542.6 | 492.9 | 428.7 | 414.2 | 414.2 |
| 42.5° | 2224.3 | 1325.5 | 760.1 | 637.9 | 586.1 | 555.0 | 511.6 | 488.8 | 432.9 | 418.4 | 410.1 |
| 45° | 2373.4 | 1325.5 | 708.3 | 582.0 | 540.5 | 495.0 | 476.3 | 461.8 | 424.6 | 430.8 | 434.9 |
| 47.5° | 2543.3 | 1321.3 | 646.2 | 536.4 | 503.3 | 463.9 | 453.6 | 422.5 | 408.0 | 412.1 | 416.3 |
| 50° | 2777.3 | 1327.6 | 590.3 | 499.1 | 476.3 | 443.2 | 430.8 | 414.2 | 408.0 | 410.1 | 408.0 |
| 52.5° | 3102.5 | 1306.8 | 536.4 | 476.3 | 455.6 | 412.1 | 412.1 | 410.1 | 412.1 | 410.1 | 410.1 |
| 55° | 3280.6 | 1261.3 | 497.1 | 463.9 | 441.1 | 397.6 | 405.9 | 410.1 | 414.2 | 412.1 | 412.1 |
| 57.5° | 3533.2 | 1230.2 | 466.0 | 455.6 | 432.9 | 393.5 | 401.8 | 410.1 | 412.1 | 410.1 | 410.1 |
| 60° | 3831.5 | 1209.5 | 445.3 | 457.7 | 426.6 | 393.5 | 403.9 | 410.1 | 408.0 | 405.9 | 405.9 |
| 62.5° | 4177.3 | 1201.2 | 430.8 | 463.9 | 420.4 | 395.6 | 403.9 | 410.1 | 401.8 | 399.7 | 399.7 |
| 65° | 4307.8 | 1126.7 | 412.1 | 468.1 | 424.6 | 395.6 | 401.8 | 403.9 | 393.5 | 391.4 | 389.4 |
| 67.5° | 4106.9 | 998.3 | 385.2 | 459.8 | 437.0 | 395.6 | 395.6 | 393.5 | 381.1 | 379.0 | 374.9 |
| 70° | 3657.5 | 828.4 | 343.8 | 432.9 | 445.3 | 397.6 | 387.3 | 376.9 | 364.5 | 364.5 | 356.2 |
| 72.5° | 2994.8 | 652.4 | 289.9 | 385.2 | 439.1 | 403.9 | 370.7 | 356.2 | 341.7 | 341.7 | 333.4 |
| 75° | 2158.1 | 486.7 | 232.0 | 321.0 | 412.1 | 401.8 | 350.0 | 331.4 | 314.8 | 312.7 | 302.4 |
| 77.5° | 1230.2 | 341.7 | 188.5 | 250.6 | 366.6 | 391.4 | 331.4 | 302.4 | 283.7 | 277.5 | 271.3 |
| 80° | 631.7 | 229.9 | 153.3 | 196.8 | 304.4 | 362.4 | 316.9 | 269.2 | 248.5 | 238.2 | 227.8 |
| 82.5° | 300.3 | 153.3 | 118.1 | 145.0 | 229.9 | 316.9 | 298.2 | 232.0 | 209.2 | 196.8 | 184.3 |
| 85° | 134.6 | 91.1 | 78.7 | 93.2 | 163.6 | 246.5 | 263.0 | 190.5 | 163.6 | 205.0 | 151.2 |
| 87.5° | 43.5 | 41.4 | 41.4 | 43.5 | 78.7 | 107.7 | 192.6 | 140.8 | 130.5 | 107.7 | 91.1 |
| 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)