

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: P299884

Luminaire Tested: **GAA-AF-02-LED-U-5WQ-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299884
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: GAA-AF-02-LED-U-5WQ-800
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(2) 70 CRI, 4000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10327 lumens
Efficiency: N/A
Efficacy: 121.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 85
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

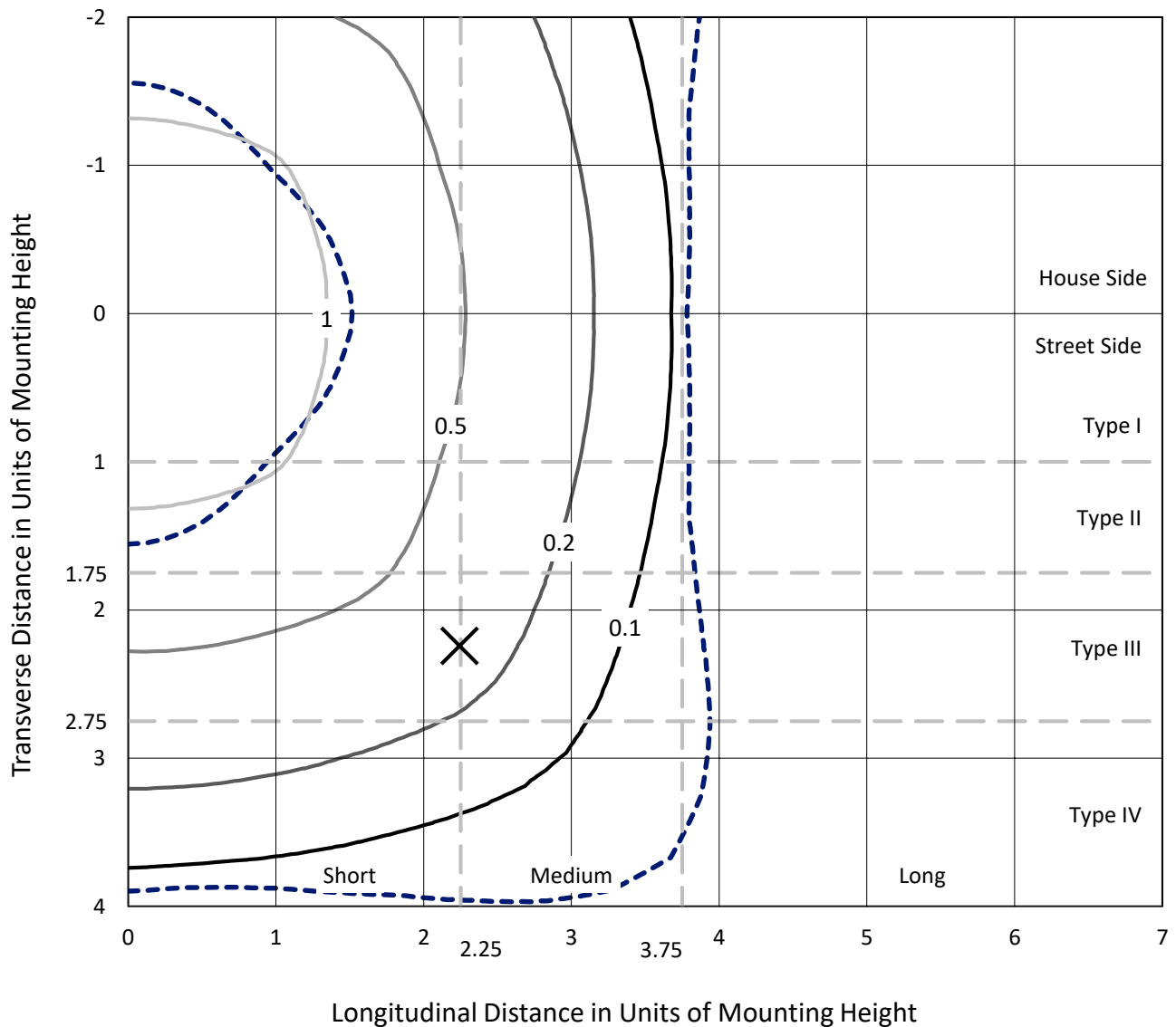


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

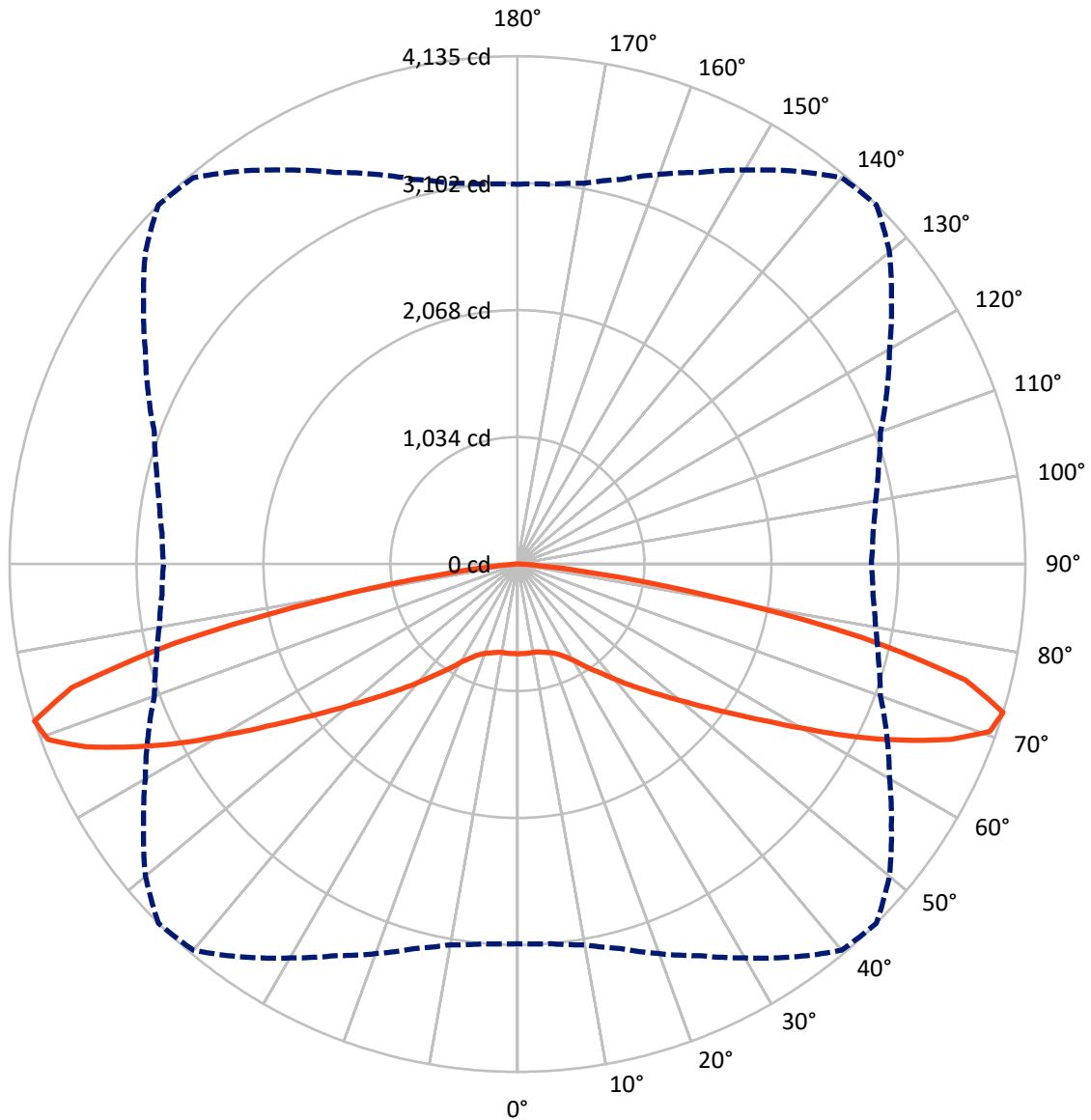


Based on 20 foot mounting height. Maximum calculated value = 1.8 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5163.5 | 0.0 | 5163.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 5163.5 | 0.0 | 5163.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 10327.0 | 0.0 | 10327.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 69.8 | 0.7 |
| 10°-20° | 212.1 | 2.1 |
| 20°-30° | 387.6 | 3.8 |
| 30°-40° | 668.2 | 6.5 |
| 40°-50° | 1142.3 | 11.1 |
| 50°-60° | 1851.6 | 17.9 |
| 60°-70° | 3071.7 | 29.7 |
| 70°-80° | 2705.5 | 26.2 |
| 80°-90° | 218.1 | 2.1 |
| 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° | 10327.0 | 100.0 |
| 0°-180° | 10327.0 | 100.0 |



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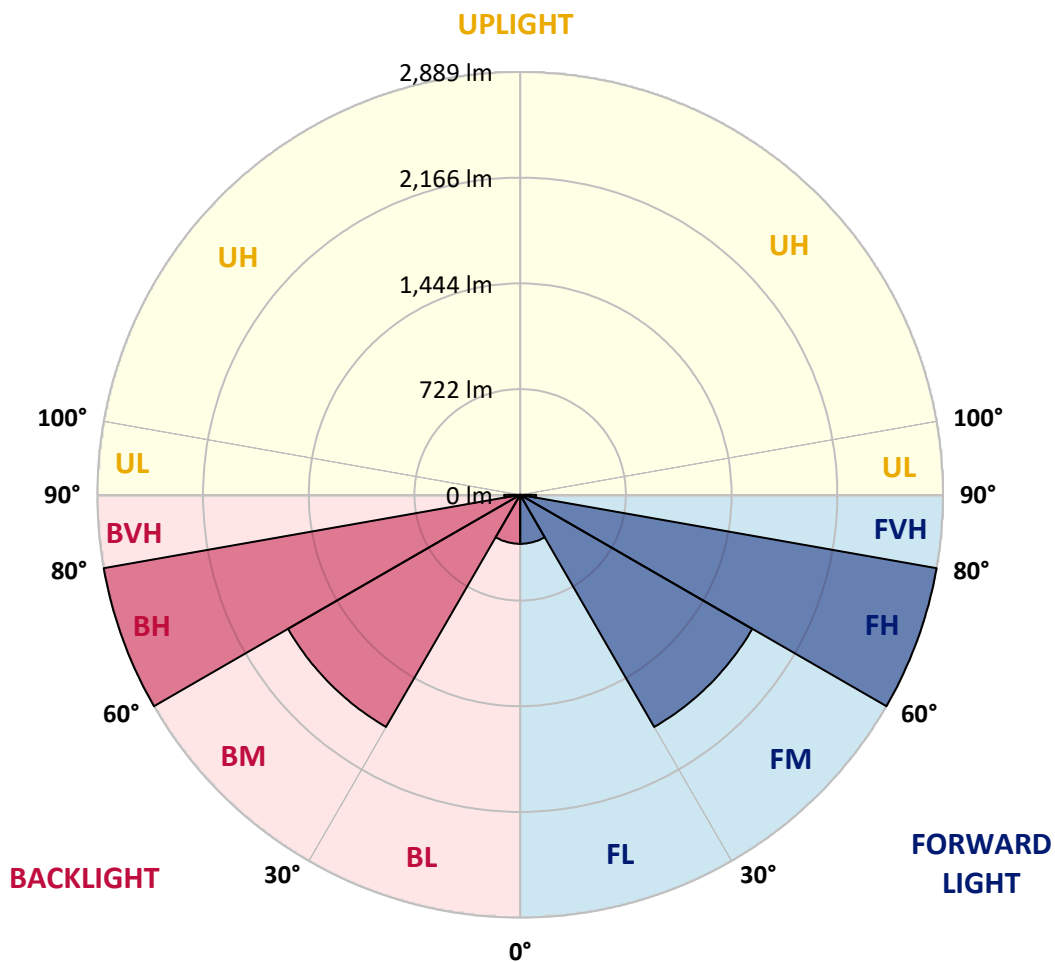
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 334.7 | 3.2 | | | |
| FM | (30°-60°) | 1831.1 | 17.7 | | | |
| FH | (60°-80°) | 2888.6 | 28.0 | | | G2/5000 |
| FVH | (80°-90°) | 109.1 | 1.1 | | | G2/225 |
| BL | (0°-30°) | 334.7 | 3.2 | B1/500 | | |
| BM | (30°-60°) | 1831.1 | 17.7 | B2/2500 | | |
| BH | (60°-80°) | 2888.6 | 28.0 | B4/5000 | | G2/5000 |
| BVH | (80°-90°) | 109.1 | 1.1 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 731.3 | 731.3 | 731.3 | 731.3 | 731.3 | 731.3 | 731.3 | 731.3 | 731.3 | 731.3 | 731.3 |
| 2.5° | 731.3 | 731.8 | 732.3 | 731.8 | 731.8 | 731.3 | 730.8 | 731.3 | 730.8 | 729.9 | 730.4 |
| 5° | 733.7 | 734.6 | 734.6 | 733.7 | 734.2 | 733.7 | 732.7 | 733.2 | 732.3 | 730.8 | 730.8 |
| 7.5° | 736.5 | 737.0 | 737.0 | 736.0 | 736.5 | 735.6 | 734.6 | 734.2 | 733.2 | 731.3 | 729.9 |
| 10° | 740.8 | 741.3 | 740.8 | 739.8 | 739.8 | 738.4 | 736.0 | 735.1 | 733.2 | 730.4 | 728.9 |
| 12.5° | 745.5 | 746.0 | 745.5 | 744.6 | 744.1 | 741.7 | 739.8 | 738.4 | 737.0 | 734.6 | 732.3 |
| 15° | 752.2 | 753.1 | 752.2 | 750.3 | 748.8 | 746.9 | 746.0 | 746.5 | 746.9 | 745.0 | 742.7 |
| 17.5° | 764.5 | 764.9 | 763.5 | 759.3 | 757.4 | 755.5 | 755.5 | 756.4 | 757.8 | 756.9 | 754.5 |
| 20° | 787.2 | 785.8 | 782.5 | 777.3 | 774.9 | 771.6 | 771.1 | 771.6 | 771.6 | 771.1 | 769.2 |
| 22.5° | 815.6 | 814.7 | 810.4 | 803.8 | 800.5 | 798.6 | 795.7 | 793.4 | 792.9 | 791.5 | 789.6 |
| 25° | 849.7 | 849.2 | 844.0 | 838.4 | 836.0 | 833.6 | 831.3 | 827.9 | 825.1 | 821.8 | 819.9 |
| 27.5° | 893.3 | 891.4 | 883.8 | 881.0 | 877.7 | 876.2 | 872.9 | 869.1 | 866.8 | 862.5 | 860.1 |
| 30° | 941.1 | 941.1 | 935.0 | 934.0 | 934.0 | 930.7 | 926.9 | 920.3 | 916.0 | 911.8 | 910.3 |
| 32.5° | 989.0 | 989.4 | 983.3 | 985.2 | 986.6 | 989.0 | 989.9 | 987.6 | 984.7 | 984.2 | 981.4 |
| 35° | 1058.1 | 1056.2 | 1050.1 | 1051.5 | 1051.0 | 1050.5 | 1050.5 | 1055.8 | 1056.7 | 1057.7 | 1052.0 |
| 37.5° | 1143.9 | 1143.9 | 1137.7 | 1137.7 | 1134.9 | 1132.0 | 1128.2 | 1131.5 | 1136.8 | 1138.2 | 1134.4 |
| 40° | 1241.9 | 1245.2 | 1237.6 | 1237.2 | 1238.1 | 1229.1 | 1224.9 | 1230.1 | 1233.4 | 1239.1 | 1234.8 |
| 42.5° | 1357.5 | 1355.1 | 1347.5 | 1346.6 | 1341.4 | 1338.5 | 1334.7 | 1339.0 | 1344.2 | 1348.0 | 1349.4 |
| 45° | 1468.3 | 1466.4 | 1457.9 | 1457.9 | 1452.7 | 1450.3 | 1452.2 | 1459.3 | 1461.7 | 1466.9 | 1472.1 |
| 47.5° | 1577.7 | 1575.4 | 1569.7 | 1572.0 | 1572.5 | 1576.8 | 1582.9 | 1589.6 | 1596.2 | 1603.3 | 1605.7 |
| 50° | 1689.5 | 1690.0 | 1683.8 | 1689.5 | 1696.6 | 1708.4 | 1725.0 | 1735.9 | 1749.7 | 1758.7 | 1761.5 |
| 52.5° | 1791.3 | 1793.2 | 1799.9 | 1813.1 | 1827.3 | 1850.5 | 1879.0 | 1905.5 | 1928.2 | 1943.4 | 1942.4 |
| 55° | 1913.5 | 1916.4 | 1932.5 | 1955.2 | 1978.4 | 2013.5 | 2055.6 | 2102.5 | 2140.4 | 2162.2 | 2148.5 |
| 57.5° | 2069.8 | 2076.0 | 2094.0 | 2124.8 | 2159.4 | 2204.8 | 2262.6 | 2333.2 | 2391.9 | 2421.3 | 2399.0 |
| 60° | 2284.4 | 2288.2 | 2310.0 | 2344.1 | 2385.8 | 2442.1 | 2519.3 | 2614.1 | 2696.9 | 2735.8 | 2710.2 |
| 62.5° | 2567.2 | 2574.3 | 2591.8 | 2626.4 | 2669.0 | 2732.9 | 2827.2 | 2945.6 | 3048.9 | 3102.9 | 3045.1 |
| 65° | 2904.9 | 2927.6 | 2942.3 | 2977.3 | 3017.1 | 3084.9 | 3183.4 | 3310.3 | 3421.2 | 3456.7 | 3389.9 |
| 67.5° | 3239.3 | 3259.2 | 3284.7 | 3325.0 | 3365.3 | 3441.5 | 3532.9 | 3656.1 | 3777.8 | 3810.0 | 3706.3 |
| 70° | 3385.6 | 3397.0 | 3436.8 | 3491.7 | 3568.9 | 3658.9 | 3764.5 | 3902.9 | 4053.5 | 4080.0 | 3948.3 |
| 72.5° | 3092.4 | 3103.8 | 3148.3 | 3241.6 | 3376.2 | 3519.2 | 3703.4 | 3906.6 | 4105.6 | 4135.4 | 3954.0 |
| 75° | 2338.9 | 2320.4 | 2386.2 | 2509.9 | 2691.3 | 2890.7 | 3148.3 | 3439.6 | 3727.1 | 3764.5 | 3548.1 |
| 77.5° | 1208.7 | 1206.4 | 1256.1 | 1409.6 | 1626.0 | 1852.9 | 2136.6 | 2465.8 | 2747.2 | 2860.8 | 2684.6 |
| 80° | 340.6 | 344.3 | 368.0 | 444.3 | 570.7 | 734.6 | 956.3 | 1264.6 | 1494.8 | 1612.3 | 1513.8 |
| 82.5° | 133.6 | 144.0 | 153.0 | 167.2 | 183.8 | 207.9 | 277.6 | 413.0 | 554.2 | 662.2 | 542.3 |
| 85° | 47.8 | 51.2 | 72.5 | 85.7 | 87.2 | 91.9 | 104.7 | 122.2 | 147.3 | 175.7 | 144.5 |
| 87.5° | 18.0 | 19.9 | 23.2 | 38.4 | 37.9 | 34.6 | 42.2 | 44.0 | 33.2 | 30.3 | 37.4 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 731.3 | 731.3 | 731.3 | 731.3 | 731.3 | 731.3 | 731.3 | 731.3 |
| 2.5° | 729.4 | 729.9 | 729.9 | 730.4 | 730.8 | 730.8 | 731.8 | 731.8 |
| 5° | 729.9 | 729.9 | 728.9 | 729.4 | 728.9 | 728.9 | 729.4 | 729.4 |
| 7.5° | 728.9 | 728.5 | 727.5 | 727.0 | 726.1 | 726.1 | 726.1 | 726.1 |
| 10° | 727.5 | 727.0 | 726.1 | 725.6 | 725.2 | 725.2 | 725.2 | 725.2 |
| 12.5° | 731.3 | 729.9 | 728.9 | 728.5 | 728.5 | 728.5 | 728.5 | 728.5 |
| 15° | 741.3 | 737.9 | 735.6 | 735.6 | 736.0 | 737.0 | 737.0 | 737.9 |
| 17.5° | 753.6 | 749.8 | 747.4 | 745.5 | 746.5 | 747.9 | 748.8 | 749.8 |
| 20° | 768.3 | 766.4 | 763.0 | 761.2 | 761.2 | 763.0 | 764.0 | 764.5 |
| 22.5° | 788.6 | 787.2 | 785.8 | 783.4 | 783.4 | 784.4 | 786.3 | 786.3 |
| 25° | 818.9 | 818.0 | 817.0 | 815.1 | 814.7 | 814.7 | 815.6 | 816.6 |
| 27.5° | 856.8 | 857.3 | 856.4 | 855.9 | 854.5 | 854.0 | 855.4 | 854.9 |
| 30° | 907.5 | 909.9 | 912.2 | 910.3 | 908.0 | 906.6 | 905.1 | 903.2 |
| 32.5° | 976.2 | 973.3 | 971.5 | 968.1 | 963.9 | 960.1 | 957.2 | 953.9 |
| 35° | 1041.1 | 1036.3 | 1034.4 | 1037.3 | 1036.8 | 1034.4 | 1031.1 | 1028.3 |
| 37.5° | 1120.6 | 1119.7 | 1120.6 | 1125.9 | 1124.9 | 1127.3 | 1120.6 | 1120.2 |
| 40° | 1221.1 | 1222.0 | 1228.6 | 1234.8 | 1238.1 | 1241.4 | 1237.6 | 1233.9 |
| 42.5° | 1337.6 | 1337.1 | 1339.5 | 1348.0 | 1353.7 | 1357.5 | 1349.4 | 1348.5 |
| 45° | 1460.7 | 1457.4 | 1459.3 | 1466.4 | 1472.1 | 1476.4 | 1467.4 | 1467.4 |
| 47.5° | 1596.2 | 1590.5 | 1584.3 | 1592.4 | 1595.7 | 1598.6 | 1591.5 | 1589.1 |
| 50° | 1747.3 | 1735.4 | 1722.2 | 1725.5 | 1725.5 | 1724.5 | 1715.5 | 1715.1 |
| 52.5° | 1920.6 | 1898.9 | 1874.7 | 1865.7 | 1860.5 | 1854.8 | 1839.2 | 1831.6 |
| 55° | 2120.0 | 2087.4 | 2049.5 | 2026.3 | 2013.9 | 1998.3 | 1972.3 | 1965.2 |
| 57.5° | 2353.1 | 2301.9 | 2236.6 | 2208.1 | 2180.7 | 2155.1 | 2126.2 | 2118.1 |
| 60° | 2629.2 | 2553.9 | 2467.2 | 2414.7 | 2384.8 | 2360.2 | 2330.3 | 2328.9 |
| 62.5° | 2937.1 | 2818.2 | 2720.2 | 2672.8 | 2651.0 | 2629.2 | 2600.8 | 2604.6 |
| 65° | 3250.2 | 3126.1 | 3034.2 | 2995.8 | 2975.5 | 2957.5 | 2929.0 | 2933.3 |
| 67.5° | 3559.0 | 3444.8 | 3343.9 | 3304.6 | 3281.9 | 3259.2 | 3233.6 | 3237.9 |
| 70° | 3780.7 | 3639.0 | 3525.4 | 3438.2 | 3383.7 | 3322.2 | 3282.4 | 3272.4 |
| 72.5° | 3717.2 | 3498.8 | 3318.4 | 3145.5 | 3044.1 | 2961.7 | 2905.8 | 2881.7 |
| 75° | 3217.0 | 2918.6 | 2686.5 | 2474.3 | 2355.0 | 2257.9 | 2187.3 | 2143.3 |
| 77.5° | 2389.1 | 2053.7 | 1779.5 | 1535.1 | 1341.8 | 1212.1 | 1120.6 | 1061.4 |
| 80° | 1307.7 | 994.7 | 727.0 | 511.1 | 375.6 | 312.1 | 275.7 | 258.1 |
| 82.5° | 407.3 | 262.9 | 193.7 | 167.2 | 155.4 | 148.7 | 137.8 | 120.3 |
| 85° | 129.8 | 113.7 | 105.6 | 100.9 | 96.2 | 83.8 | 57.8 | 52.6 |
| 87.5° | 50.2 | 51.6 | 51.2 | 48.3 | 49.3 | 35.5 | 28.4 | 25.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)