

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: P299341

Luminaire Tested: **GAA-AF-02-LED-U-5NQ-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299341
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24141)
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-5NQ-7027
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(2) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10877 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

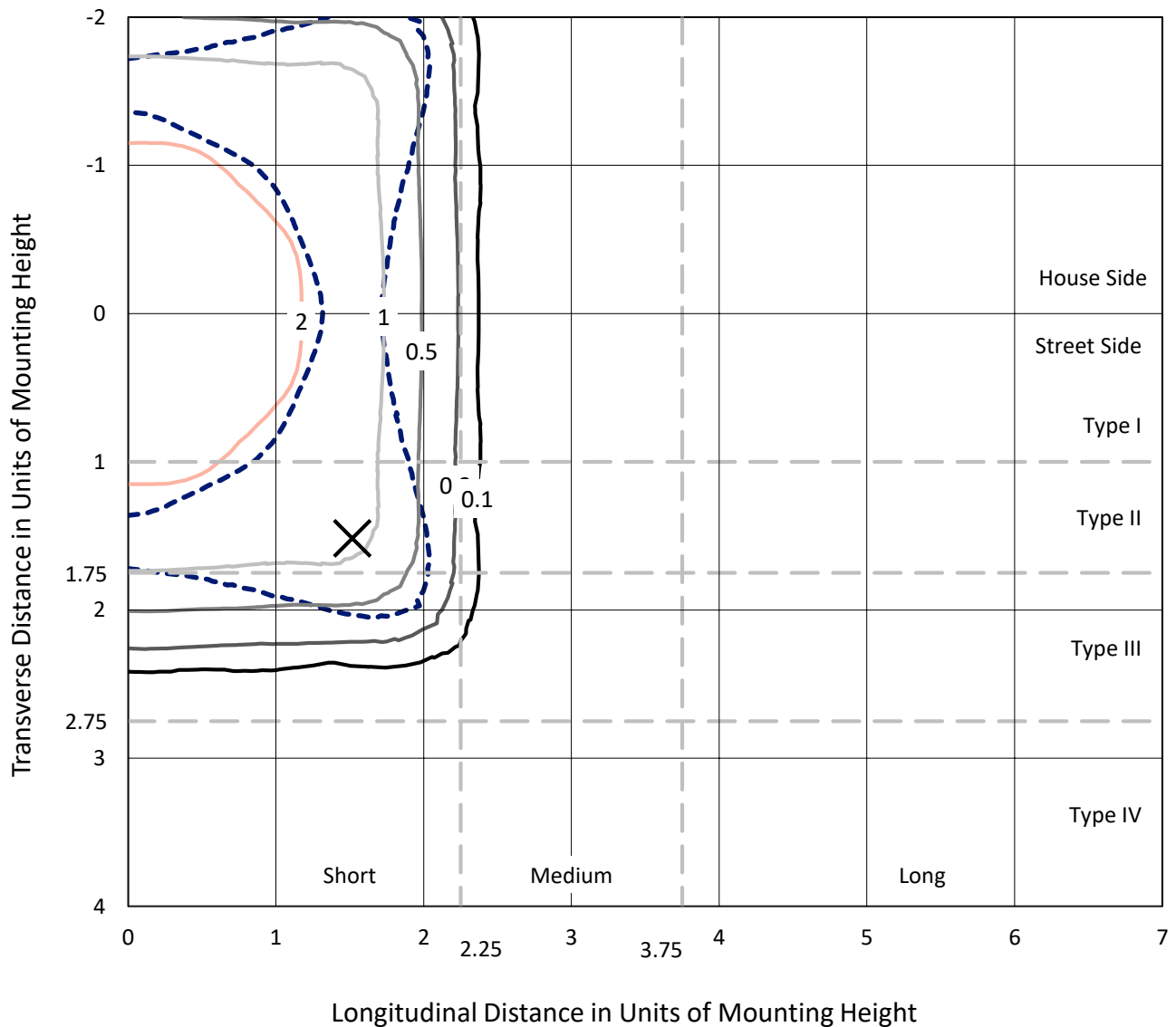
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

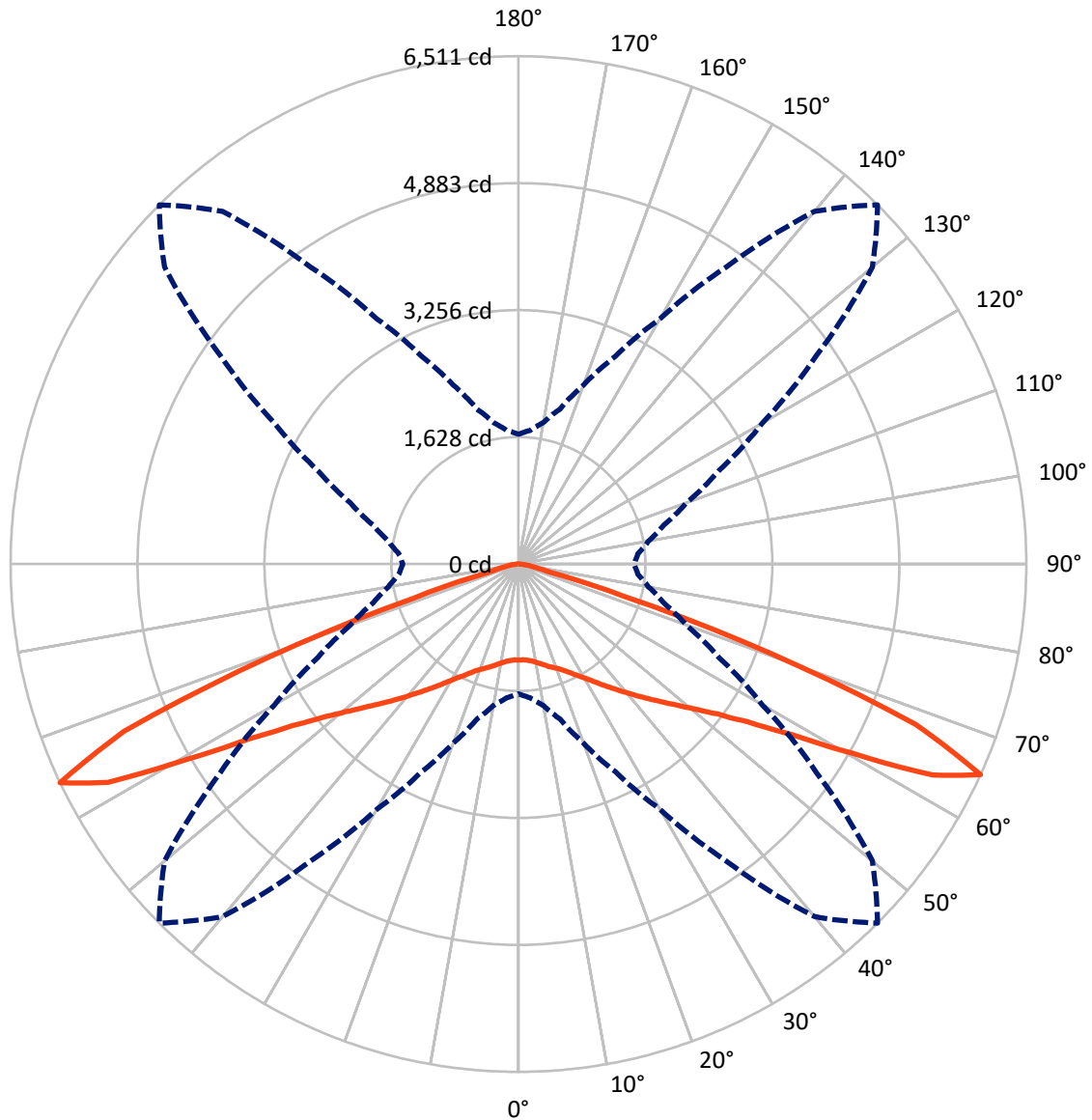
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.1 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5438.5 | 0.0 | 5438.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 5438.5 | 0.0 | 5438.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 10877.0 | 0.0 | 10877.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 120.0 | 1.1 |
| 10°-20° | 384.7 | 3.5 |
| 20°-30° | 719.4 | 6.6 |
| 30°-40° | 1216.6 | 11.2 |
| 40°-50° | 1989.3 | 18.3 |
| 50°-60° | 3163.4 | 29.1 |
| 60°-70° | 2859.5 | 26.3 |
| 70°-80° | 361.9 | 3.3 |
| 80°-90° | 62.3 | 0.6 |
| 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° | 10877.0 | 100.0 |
| 0°-180° | 10877.0 | 100.0 |



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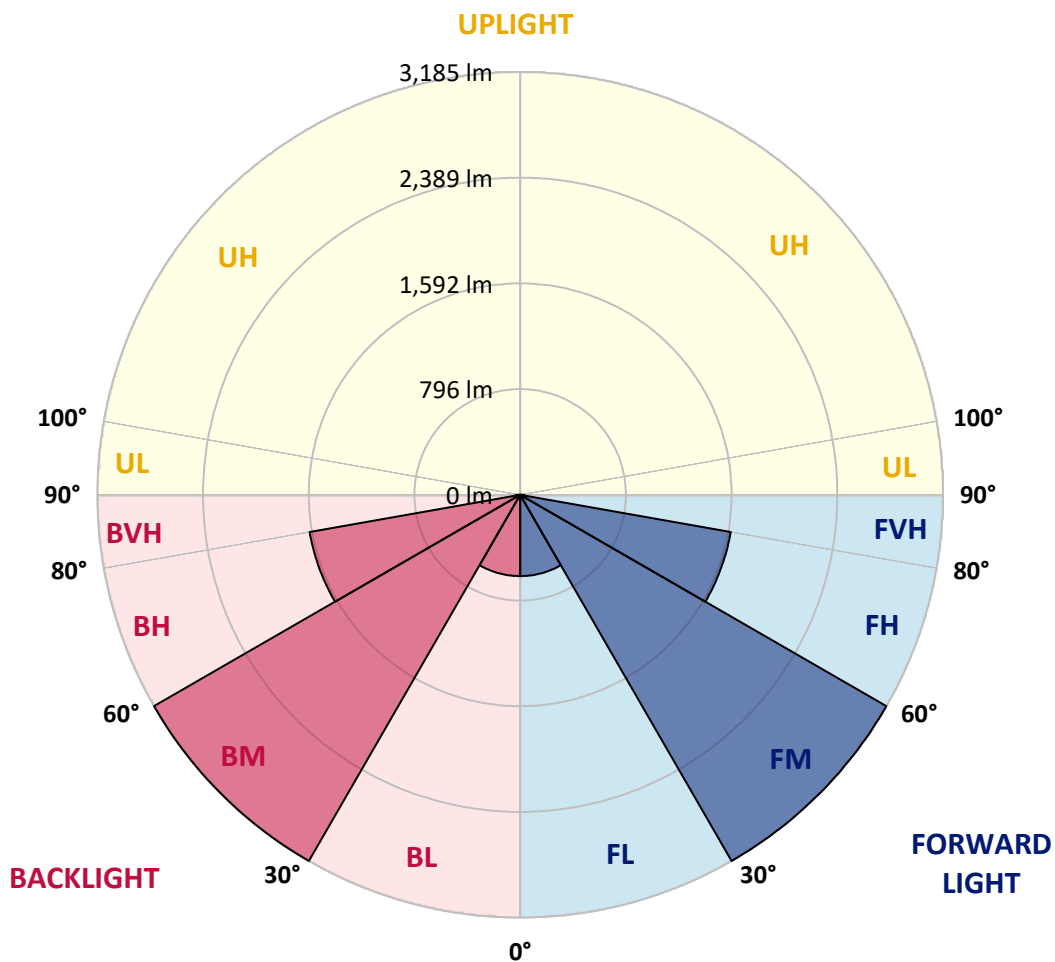
CATALOG NUMBER: GAA-AF-02-LED-U-5NQ-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 612.0 | 5.6 | | | |
| FM | (30°-60°) | 3184.7 | 29.3 | | | |
| FH | (60°-80°) | 1610.7 | 14.8 | | | G1/1800 |
| FVH | (80°-90°) | 31.1 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 612.0 | 5.6 | B2/1000 | | |
| BM | (30°-60°) | 3184.7 | 29.3 | B3/5000 | | |
| BH | (60°-80°) | 1610.7 | 14.8 | B3/2500 | | G1/1800 |
| BVH | (80°-90°) | 31.1 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1230.7 | 1230.7 | 1230.7 | 1230.7 | 1230.7 | 1230.7 | 1230.7 | 1230.7 | 1230.7 | 1230.7 | 1230.7 |
| 2.5° | 1231.8 | 1232.8 | 1233.8 | 1232.8 | 1233.8 | 1232.3 | 1231.3 | 1232.8 | 1231.3 | 1229.7 | 1230.7 |
| 5° | 1242.5 | 1243.0 | 1243.0 | 1241.4 | 1243.0 | 1241.9 | 1240.4 | 1242.5 | 1240.9 | 1239.4 | 1240.4 |
| 7.5° | 1260.3 | 1262.3 | 1260.8 | 1259.3 | 1260.3 | 1259.3 | 1258.2 | 1258.8 | 1258.2 | 1256.7 | 1257.2 |
| 10° | 1284.2 | 1285.8 | 1284.7 | 1284.2 | 1285.2 | 1284.7 | 1283.7 | 1283.2 | 1283.7 | 1282.2 | 1282.2 |
| 12.5° | 1313.3 | 1312.8 | 1312.2 | 1312.8 | 1314.3 | 1314.3 | 1313.8 | 1314.3 | 1315.3 | 1315.8 | 1314.8 |
| 15° | 1341.8 | 1342.8 | 1342.8 | 1342.8 | 1345.9 | 1348.4 | 1349.9 | 1351.0 | 1353.0 | 1353.5 | 1351.5 |
| 17.5° | 1377.5 | 1377.5 | 1376.9 | 1377.5 | 1380.5 | 1384.6 | 1386.1 | 1388.1 | 1390.2 | 1391.7 | 1389.2 |
| 20° | 1417.2 | 1418.2 | 1418.2 | 1419.2 | 1423.3 | 1427.9 | 1427.9 | 1428.9 | 1427.9 | 1428.9 | 1427.4 |
| 22.5° | 1465.6 | 1468.6 | 1468.6 | 1469.1 | 1473.2 | 1478.8 | 1477.3 | 1478.8 | 1476.3 | 1478.3 | 1476.3 |
| 25° | 1528.7 | 1533.3 | 1532.3 | 1532.3 | 1535.4 | 1538.9 | 1539.4 | 1542.5 | 1542.0 | 1544.5 | 1543.0 |
| 27.5° | 1600.1 | 1607.2 | 1609.2 | 1608.7 | 1610.8 | 1614.3 | 1615.3 | 1618.9 | 1616.9 | 1618.9 | 1617.9 |
| 30° | 1685.6 | 1688.7 | 1692.8 | 1694.3 | 1696.9 | 1700.4 | 1700.4 | 1700.9 | 1698.4 | 1701.4 | 1703.0 |
| 32.5° | 1774.3 | 1779.9 | 1784.0 | 1793.1 | 1797.7 | 1800.3 | 1799.8 | 1800.8 | 1798.2 | 1802.3 | 1805.4 |
| 35° | 1891.4 | 1895.5 | 1902.1 | 1909.3 | 1915.4 | 1914.9 | 1913.4 | 1913.9 | 1913.9 | 1917.4 | 1920.5 |
| 37.5° | 2032.6 | 2033.6 | 2042.2 | 2052.4 | 2055.5 | 2052.4 | 2043.3 | 2041.2 | 2036.6 | 2041.2 | 2046.3 |
| 40° | 2181.8 | 2185.4 | 2202.7 | 2209.3 | 2210.9 | 2205.2 | 2192.0 | 2184.4 | 2174.2 | 2179.8 | 2186.9 |
| 42.5° | 2338.2 | 2345.3 | 2361.1 | 2372.8 | 2377.9 | 2374.4 | 2356.0 | 2344.3 | 2331.1 | 2334.1 | 2341.3 |
| 45° | 2511.4 | 2520.1 | 2542.5 | 2553.7 | 2563.4 | 2557.8 | 2539.9 | 2522.1 | 2501.2 | 2502.7 | 2514.0 |
| 47.5° | 2705.0 | 2713.6 | 2742.7 | 2761.5 | 2766.6 | 2765.6 | 2745.7 | 2721.3 | 2692.8 | 2691.7 | 2701.4 |
| 50° | 2922.0 | 2930.7 | 2966.8 | 2995.9 | 3010.6 | 3009.1 | 2985.7 | 2951.0 | 2916.4 | 2916.9 | 2929.1 |
| 52.5° | 3133.9 | 3144.6 | 3182.3 | 3232.2 | 3261.3 | 3282.1 | 3267.9 | 3235.3 | 3193.0 | 3194.0 | 3205.2 |
| 55° | 3332.6 | 3350.4 | 3393.7 | 3461.5 | 3515.5 | 3574.0 | 3590.8 | 3589.8 | 3564.4 | 3571.5 | 3582.7 |
| 57.5° | 3428.9 | 3455.3 | 3522.1 | 3629.1 | 3739.1 | 3858.3 | 3959.2 | 4034.5 | 4066.6 | 4115.0 | 4103.8 |
| 60° | 3246.5 | 3288.8 | 3387.1 | 3544.5 | 3762.0 | 4010.6 | 4277.0 | 4537.3 | 4759.4 | 4927.0 | 4830.8 |
| 62.5° | 2658.1 | 2713.1 | 2832.3 | 3034.1 | 3363.1 | 3761.0 | 4270.9 | 4886.3 | 5556.7 | 5961.1 | 5672.3 |
| 65° | 1663.2 | 1720.3 | 1841.5 | 2057.5 | 2442.6 | 2937.3 | 3629.1 | 4648.9 | 5901.5 | 6511.3 | 5923.4 |
| 67.5° | 648.5 | 679.6 | 745.3 | 883.3 | 1172.7 | 1612.8 | 2307.1 | 3464.5 | 4962.7 | 5497.1 | 4870.5 |
| 70° | 325.0 | 328.1 | 340.3 | 365.8 | 427.9 | 555.8 | 845.6 | 1606.2 | 2846.1 | 3437.5 | 2743.7 |
| 72.5° | 234.8 | 235.3 | 241.5 | 252.7 | 272.5 | 301.1 | 356.1 | 491.6 | 925.6 | 1414.6 | 867.5 |
| 75° | 179.8 | 181.9 | 185.4 | 191.5 | 202.2 | 216.5 | 236.4 | 283.2 | 351.0 | 407.0 | 342.3 |
| 77.5° | 138.6 | 142.6 | 145.2 | 150.8 | 157.4 | 167.1 | 172.7 | 190.5 | 221.6 | 233.3 | 229.7 |
| 80° | 105.4 | 109.0 | 114.6 | 119.2 | 123.8 | 128.4 | 126.3 | 134.5 | 150.8 | 160.5 | 155.4 |
| 82.5° | 67.2 | 71.3 | 87.6 | 91.7 | 93.7 | 96.8 | 93.2 | 93.7 | 100.9 | 107.0 | 100.9 |
| 85° | 43.3 | 45.8 | 55.5 | 60.6 | 61.1 | 63.2 | 61.6 | 58.1 | 58.1 | 53.0 | 59.6 |
| 87.5° | 19.9 | 20.4 | 25.0 | 29.5 | 30.6 | 27.5 | 27.0 | 26.0 | 20.9 | 19.9 | 21.4 |
| 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° | 1230.7 | 1230.7 | 1230.7 | 1230.7 | 1230.7 | 1230.7 | 1230.7 | 1230.7 |
| 2.5° | 1230.2 | 1231.3 | 1231.8 | 1233.3 | 1233.8 | 1233.8 | 1234.3 | 1235.3 |
| 5° | 1239.9 | 1241.4 | 1241.9 | 1244.0 | 1244.5 | 1244.0 | 1245.0 | 1245.5 |
| 7.5° | 1257.2 | 1259.8 | 1260.8 | 1262.8 | 1261.3 | 1263.3 | 1263.9 | 1263.9 |
| 10° | 1282.7 | 1285.2 | 1285.8 | 1287.8 | 1286.8 | 1287.8 | 1287.8 | 1286.8 |
| 12.5° | 1316.3 | 1316.8 | 1315.3 | 1316.8 | 1314.8 | 1315.8 | 1314.3 | 1313.3 |
| 15° | 1353.5 | 1352.0 | 1348.4 | 1348.4 | 1345.4 | 1345.9 | 1345.4 | 1344.8 |
| 17.5° | 1389.7 | 1386.6 | 1384.1 | 1383.1 | 1380.5 | 1380.0 | 1378.5 | 1378.5 |
| 20° | 1429.4 | 1427.9 | 1426.4 | 1424.3 | 1421.8 | 1419.2 | 1418.7 | 1419.7 |
| 22.5° | 1477.3 | 1476.8 | 1476.8 | 1475.8 | 1472.2 | 1469.7 | 1468.1 | 1468.1 |
| 25° | 1541.5 | 1536.9 | 1536.9 | 1536.4 | 1534.9 | 1533.3 | 1530.3 | 1531.8 |
| 27.5° | 1613.8 | 1611.3 | 1613.3 | 1612.8 | 1611.3 | 1611.3 | 1609.2 | 1609.2 |
| 30° | 1703.0 | 1701.9 | 1705.0 | 1702.5 | 1697.4 | 1696.9 | 1694.8 | 1692.3 |
| 32.5° | 1805.9 | 1804.8 | 1809.4 | 1806.4 | 1798.2 | 1793.6 | 1789.6 | 1787.5 |
| 35° | 1920.5 | 1921.0 | 1926.6 | 1924.6 | 1915.4 | 1912.3 | 1905.2 | 1904.2 |
| 37.5° | 2045.8 | 2054.0 | 2063.6 | 2065.7 | 2058.0 | 2056.0 | 2048.3 | 2044.3 |
| 40° | 2193.0 | 2203.7 | 2218.5 | 2222.1 | 2213.9 | 2212.4 | 2201.7 | 2196.1 |
| 42.5° | 2349.9 | 2368.3 | 2386.6 | 2389.7 | 2381.5 | 2373.4 | 2363.2 | 2359.1 |
| 45° | 2525.2 | 2547.1 | 2571.0 | 2577.1 | 2564.9 | 2555.2 | 2542.0 | 2542.0 |
| 47.5° | 2721.8 | 2749.3 | 2776.3 | 2793.1 | 2781.9 | 2771.7 | 2755.9 | 2745.7 |
| 50° | 2954.1 | 2991.8 | 3026.9 | 3044.2 | 3026.4 | 3007.1 | 2979.6 | 2970.4 |
| 52.5° | 3245.5 | 3286.2 | 3316.8 | 3307.6 | 3280.1 | 3253.1 | 3223.1 | 3210.8 |
| 55° | 3617.3 | 3631.1 | 3631.1 | 3596.5 | 3541.4 | 3496.1 | 3448.7 | 3432.9 |
| 57.5° | 4082.4 | 4029.5 | 3947.9 | 3844.5 | 3714.6 | 3601.5 | 3525.1 | 3489.0 |
| 60° | 4629.0 | 4374.3 | 4086.5 | 3803.8 | 3571.5 | 3380.0 | 3266.4 | 3214.4 |
| 62.5° | 4993.3 | 4326.9 | 3750.3 | 3296.4 | 2962.2 | 2731.5 | 2574.6 | 2513.4 |
| 65° | 4666.7 | 3608.7 | 2836.4 | 2293.4 | 1929.1 | 1694.3 | 1538.9 | 1481.9 |
| 67.5° | 3418.2 | 2261.3 | 1510.4 | 1082.5 | 793.2 | 632.7 | 569.0 | 542.5 |
| 70° | 1534.4 | 796.2 | 488.0 | 381.0 | 328.6 | 301.6 | 289.9 | 285.8 |
| 72.5° | 462.5 | 334.7 | 282.2 | 254.7 | 233.8 | 220.6 | 210.9 | 209.9 |
| 75° | 279.2 | 232.3 | 206.3 | 190.0 | 176.8 | 166.1 | 161.0 | 159.4 |
| 77.5° | 195.1 | 170.7 | 158.4 | 146.7 | 136.5 | 128.4 | 123.8 | 120.2 |
| 80° | 137.0 | 125.3 | 119.7 | 113.1 | 106.5 | 98.8 | 92.2 | 89.1 |
| 82.5° | 91.7 | 89.1 | 89.1 | 85.1 | 79.5 | 72.3 | 59.1 | 56.0 |
| 85° | 59.1 | 58.6 | 59.6 | 58.1 | 54.0 | 46.4 | 38.2 | 36.2 |
| 87.5° | 27.5 | 28.0 | 31.1 | 30.6 | 29.5 | 24.5 | 19.4 | 18.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)