

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: P196941

Luminaire Tested: **NVN-AF-03-LED-U-5WQ-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196941
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-03-LED-U-5WQ-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16869 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

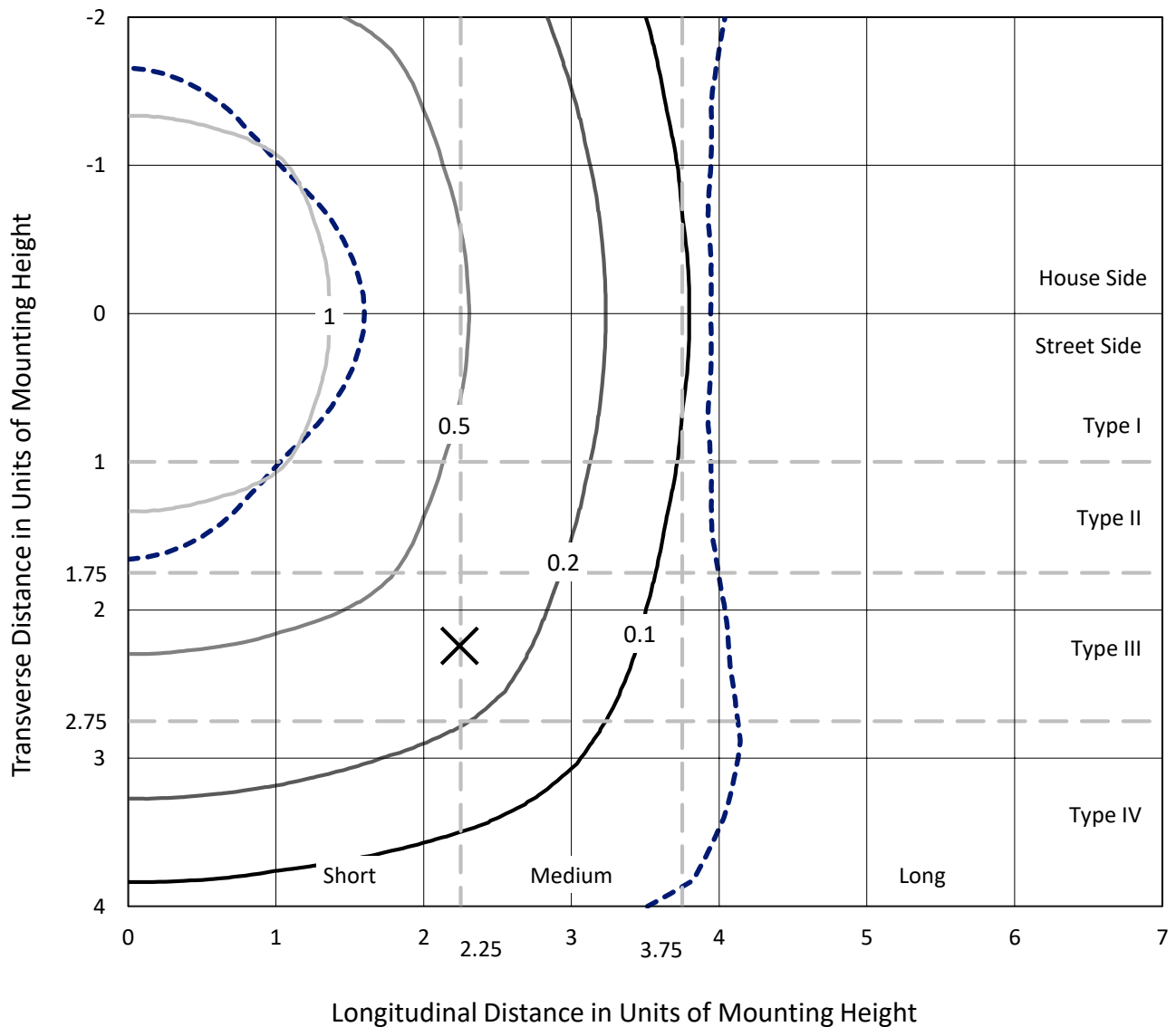
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

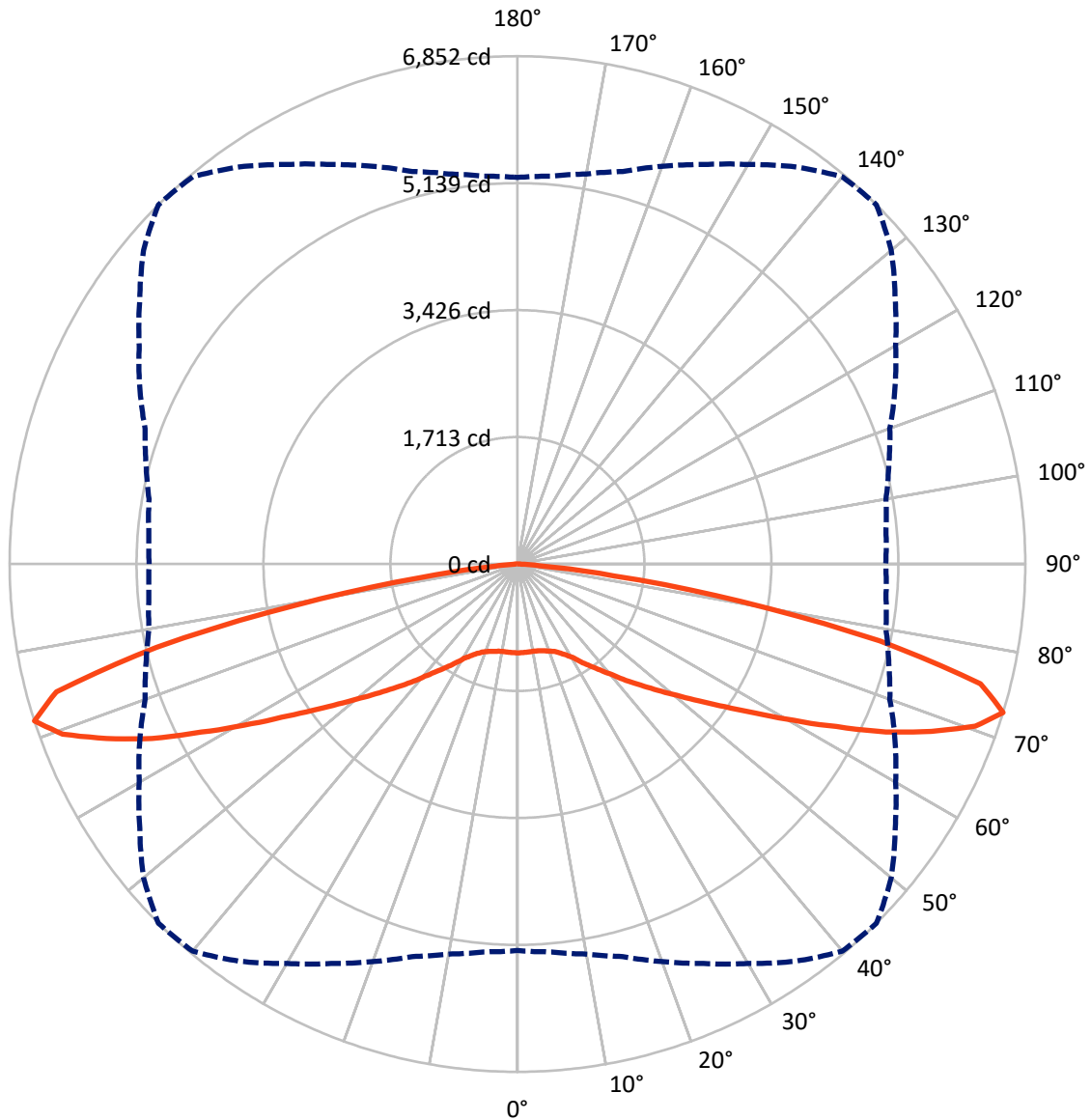
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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 | 8434.5 | 0.0 | 8434.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 8434.5 | 0.0 | 8434.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 16869.0 | 0.0 | 16869.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 114.5 | 0.7 |
| 10°-20° | 346.4 | 2.1 |
| 20°-30° | 625.4 | 3.7 |
| 30°-40° | 1066.8 | 6.3 |
| 40°-50° | 1816.2 | 10.8 |
| 50°-60° | 2922.9 | 17.3 |
| 60°-70° | 4860.8 | 28.8 |
| 70°-80° | 4702.3 | 27.9 |
| 80°-90° | 413.9 | 2.5 |
| 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° | 16869.0 | 100.0 |
| 0°-180° | 16869.0 | 100.0 |



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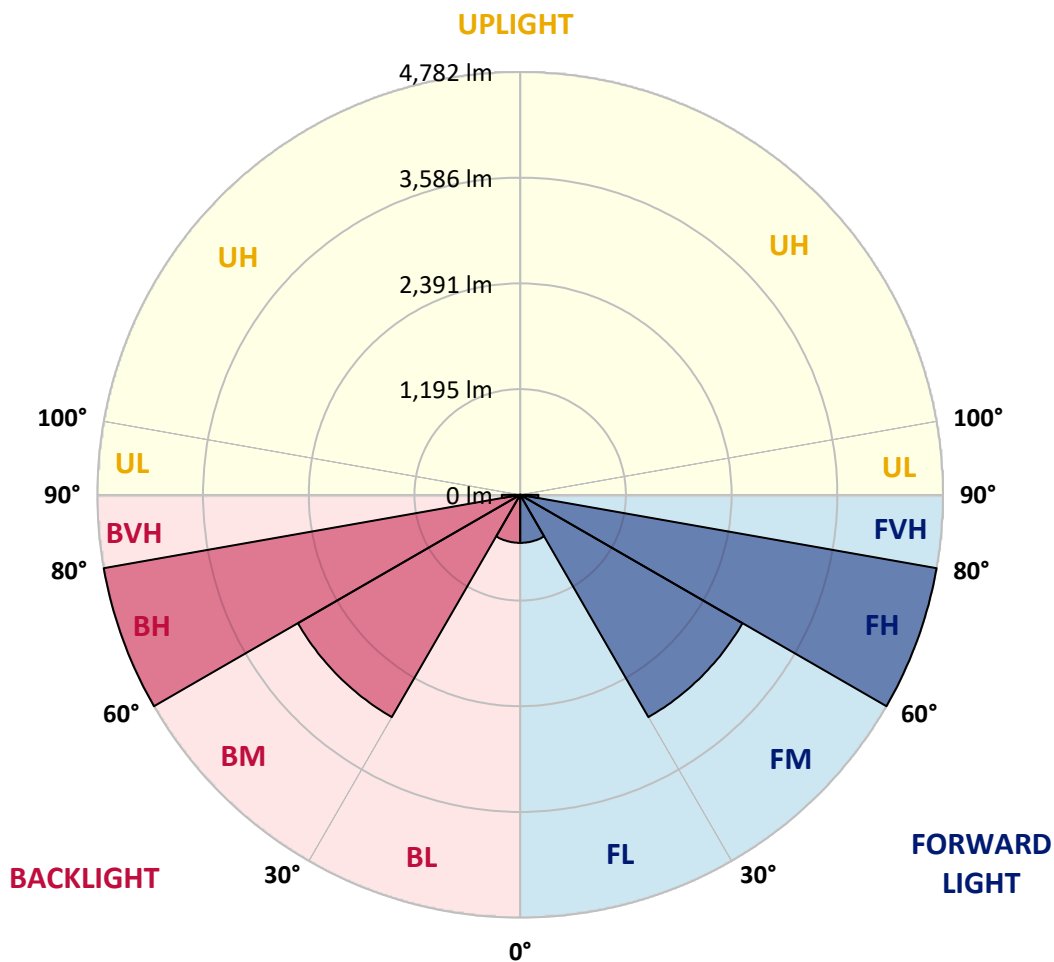
CATALOG NUMBER: NVN-AF-03-LED-U-5WQ-8030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 543.1 | 3.2 | | | |
| FM | (30°-60°) | 2902.9 | 17.2 | | | |
| FH | (60°-80°) | 4781.5 | 28.3 | | | G2/5000 |
| FVH | (80°-90°) | 206.9 | 1.2 | | | G2/225 |
| BL | (0°-30°) | 543.1 | 3.2 | B2/1000 | | |
| BM | (30°-60°) | 2902.9 | 17.2 | B3/5000 | | |
| BH | (60°-80°) | 4781.5 | 28.3 | B4/5000 | | G2/5000 |
| BVH | (80°-90°) | 206.9 | 1.2 | | | 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° | 1199.3 | 1199.3 | 1199.3 | 1199.3 | 1199.3 | 1199.3 | 1199.3 | 1199.3 | 1199.3 | 1199.3 | 1199.3 |
| 2.5° | 1208.6 | 1208.6 | 1209.6 | 1208.6 | 1206.5 | 1205.5 | 1202.4 | 1200.3 | 1198.2 | 1197.2 | 1195.1 |
| 5° | 1209.6 | 1209.6 | 1210.7 | 1209.6 | 1207.6 | 1205.5 | 1203.4 | 1200.3 | 1198.2 | 1196.1 | 1195.1 |
| 7.5° | 1213.8 | 1214.8 | 1215.9 | 1214.8 | 1210.7 | 1208.6 | 1205.5 | 1202.4 | 1198.2 | 1196.1 | 1194.1 |
| 10° | 1222.1 | 1222.1 | 1222.1 | 1221.1 | 1217.9 | 1213.8 | 1209.6 | 1206.5 | 1201.3 | 1196.1 | 1193.0 |
| 12.5° | 1228.3 | 1229.4 | 1229.4 | 1227.3 | 1223.1 | 1217.9 | 1213.8 | 1210.7 | 1206.5 | 1202.4 | 1199.3 |
| 15° | 1237.7 | 1237.7 | 1236.6 | 1232.5 | 1226.3 | 1222.1 | 1220.0 | 1219.0 | 1217.9 | 1215.9 | 1212.8 |
| 17.5° | 1256.4 | 1255.3 | 1252.2 | 1246.0 | 1238.7 | 1235.6 | 1233.5 | 1233.5 | 1233.5 | 1232.5 | 1230.4 |
| 20° | 1283.4 | 1283.4 | 1279.2 | 1268.8 | 1262.6 | 1259.5 | 1256.4 | 1256.4 | 1256.4 | 1253.3 | 1250.1 |
| 22.5° | 1327.0 | 1328.0 | 1321.8 | 1309.3 | 1301.0 | 1294.8 | 1290.6 | 1287.5 | 1284.4 | 1282.3 | 1277.1 |
| 25° | 1386.2 | 1385.1 | 1377.9 | 1362.3 | 1356.0 | 1349.8 | 1341.5 | 1336.3 | 1332.2 | 1329.0 | 1322.8 |
| 27.5° | 1448.5 | 1447.4 | 1439.1 | 1425.6 | 1421.5 | 1412.1 | 1405.9 | 1398.6 | 1393.4 | 1388.2 | 1382.0 |
| 30° | 1528.4 | 1523.2 | 1517.0 | 1506.6 | 1504.5 | 1497.3 | 1489.0 | 1478.6 | 1470.3 | 1462.0 | 1454.7 |
| 32.5° | 1600.1 | 1600.1 | 1590.7 | 1585.5 | 1589.7 | 1586.6 | 1587.6 | 1581.4 | 1576.2 | 1573.1 | 1565.8 |
| 35° | 1699.7 | 1699.7 | 1695.6 | 1689.3 | 1690.4 | 1683.1 | 1682.1 | 1683.1 | 1687.3 | 1687.3 | 1679.0 |
| 37.5° | 1832.6 | 1834.7 | 1821.2 | 1819.1 | 1813.9 | 1803.6 | 1798.4 | 1800.4 | 1809.8 | 1815.0 | 1803.6 |
| 40° | 1997.7 | 2001.9 | 1997.7 | 1984.2 | 1978.0 | 1960.3 | 1950.0 | 1950.0 | 1957.2 | 1962.4 | 1958.3 |
| 42.5° | 2160.7 | 2168.0 | 2160.7 | 2150.4 | 2145.2 | 2131.7 | 2126.5 | 2130.6 | 2140.0 | 2146.2 | 2140.0 |
| 45° | 2342.4 | 2347.6 | 2338.3 | 2325.8 | 2319.6 | 2312.3 | 2309.2 | 2312.3 | 2322.7 | 2329.0 | 2326.9 |
| 47.5° | 2521.0 | 2528.3 | 2516.9 | 2511.7 | 2511.7 | 2504.4 | 2512.7 | 2521.0 | 2530.4 | 2544.9 | 2538.7 |
| 50° | 2695.5 | 2704.8 | 2697.6 | 2698.6 | 2706.9 | 2720.4 | 2736.0 | 2752.6 | 2769.2 | 2784.8 | 2786.9 |
| 52.5° | 2851.2 | 2865.8 | 2866.8 | 2885.5 | 2911.4 | 2932.2 | 2975.8 | 3012.2 | 3051.6 | 3065.1 | 3058.9 |
| 55° | 3015.3 | 3035.0 | 3061.0 | 3090.0 | 3131.6 | 3174.1 | 3247.9 | 3313.3 | 3365.2 | 3397.4 | 3392.2 |
| 57.5° | 3249.9 | 3269.7 | 3296.7 | 3344.4 | 3406.7 | 3464.9 | 3565.6 | 3667.3 | 3746.3 | 3795.1 | 3771.2 |
| 60° | 3554.2 | 3574.9 | 3610.2 | 3661.1 | 3742.1 | 3821.0 | 3959.1 | 4105.5 | 4228.0 | 4284.1 | 4240.5 |
| 62.5° | 3957.0 | 3976.8 | 3999.6 | 4067.1 | 4157.4 | 4259.2 | 4432.6 | 4620.5 | 4776.3 | 4830.3 | 4769.0 |
| 65° | 4531.2 | 4555.1 | 4562.4 | 4617.4 | 4705.7 | 4800.2 | 4987.0 | 5198.9 | 5376.4 | 5464.7 | 5342.2 |
| 67.5° | 5178.1 | 5187.4 | 5216.5 | 5280.9 | 5371.2 | 5456.4 | 5603.8 | 5804.2 | 5974.5 | 6023.3 | 5892.5 |
| 70° | 5557.1 | 5575.8 | 5626.7 | 5716.0 | 5823.9 | 5957.9 | 6118.8 | 6334.8 | 6527.9 | 6550.8 | 6384.6 |
| 72.5° | 5214.4 | 5252.9 | 5343.2 | 5482.3 | 5708.7 | 5946.5 | 6223.7 | 6542.5 | 6819.7 | 6851.9 | 6585.0 |
| 75° | 4182.4 | 4226.0 | 4333.9 | 4486.6 | 4754.5 | 5107.5 | 5508.3 | 5987.0 | 6402.3 | 6455.2 | 6102.2 |
| 77.5° | 2229.3 | 2283.3 | 2440.1 | 2645.6 | 3027.7 | 3495.0 | 3977.8 | 4524.0 | 4877.0 | 4996.4 | 4742.0 |
| 80° | 561.7 | 590.8 | 666.6 | 787.0 | 1045.6 | 1422.5 | 1838.9 | 2426.6 | 2864.7 | 3050.6 | 2864.7 |
| 82.5° | 218.0 | 239.9 | 260.6 | 275.2 | 300.1 | 352.0 | 485.9 | 792.2 | 1067.4 | 1314.5 | 1138.0 |
| 85° | 84.1 | 89.3 | 128.8 | 146.4 | 146.4 | 160.9 | 184.8 | 218.0 | 270.0 | 294.9 | 247.1 |
| 87.5° | 33.2 | 36.3 | 44.6 | 68.5 | 70.6 | 62.3 | 66.5 | 74.8 | 57.1 | 47.8 | 54.0 |
| 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° | 1199.3 | 1199.3 | 1199.3 | 1199.3 | 1199.3 | 1199.3 | 1199.3 | 1199.3 |
| 2.5° | 1194.1 | 1193.0 | 1191.0 | 1192.0 | 1191.0 | 1191.0 | 1191.0 | 1191.0 |
| 5° | 1193.0 | 1193.0 | 1191.0 | 1191.0 | 1191.0 | 1192.0 | 1191.0 | 1191.0 |
| 7.5° | 1192.0 | 1191.0 | 1188.9 | 1187.8 | 1187.8 | 1186.8 | 1186.8 | 1186.8 |
| 10° | 1189.9 | 1187.8 | 1185.8 | 1184.7 | 1184.7 | 1182.6 | 1182.6 | 1182.6 |
| 12.5° | 1195.1 | 1192.0 | 1189.9 | 1188.9 | 1188.9 | 1188.9 | 1189.9 | 1189.9 |
| 15° | 1209.6 | 1203.4 | 1200.3 | 1199.3 | 1200.3 | 1202.4 | 1203.4 | 1204.5 |
| 17.5° | 1225.2 | 1219.0 | 1213.8 | 1211.7 | 1212.8 | 1215.9 | 1219.0 | 1221.1 |
| 20° | 1244.9 | 1239.8 | 1233.5 | 1231.4 | 1231.4 | 1235.6 | 1237.7 | 1240.8 |
| 22.5° | 1273.0 | 1268.8 | 1263.6 | 1260.5 | 1258.4 | 1263.6 | 1266.8 | 1268.8 |
| 25° | 1317.6 | 1313.5 | 1309.3 | 1306.2 | 1305.2 | 1310.4 | 1312.4 | 1313.5 |
| 27.5° | 1376.8 | 1372.7 | 1370.6 | 1369.5 | 1366.4 | 1368.5 | 1371.6 | 1370.6 |
| 30° | 1453.6 | 1456.8 | 1453.6 | 1453.6 | 1448.5 | 1450.5 | 1448.5 | 1446.4 |
| 32.5° | 1556.4 | 1553.3 | 1544.0 | 1537.8 | 1530.5 | 1530.5 | 1527.4 | 1524.3 |
| 35° | 1659.2 | 1648.9 | 1643.7 | 1646.8 | 1643.7 | 1645.7 | 1640.5 | 1635.4 |
| 37.5° | 1780.7 | 1774.5 | 1773.5 | 1782.8 | 1780.7 | 1782.8 | 1782.8 | 1775.5 |
| 40° | 1941.7 | 1937.5 | 1944.8 | 1960.3 | 1966.6 | 1965.5 | 1967.6 | 1958.3 |
| 42.5° | 2126.5 | 2119.2 | 2122.3 | 2135.8 | 2143.1 | 2145.2 | 2144.1 | 2135.8 |
| 45° | 2311.3 | 2313.4 | 2313.4 | 2327.9 | 2335.2 | 2339.3 | 2332.1 | 2329.0 |
| 47.5° | 2520.0 | 2523.1 | 2515.8 | 2525.2 | 2527.3 | 2534.5 | 2528.3 | 2523.1 |
| 50° | 2760.9 | 2749.5 | 2732.9 | 2736.0 | 2736.0 | 2733.9 | 2726.6 | 2720.4 |
| 52.5° | 3029.8 | 3003.9 | 2972.7 | 2962.3 | 2950.9 | 2939.5 | 2924.9 | 2913.5 |
| 55° | 3336.1 | 3291.5 | 3235.4 | 3209.4 | 3187.6 | 3161.7 | 3128.5 | 3117.0 |
| 57.5° | 3691.2 | 3614.4 | 3539.6 | 3492.9 | 3436.8 | 3402.6 | 3360.0 | 3357.9 |
| 60° | 4112.8 | 4009.0 | 3877.1 | 3807.5 | 3751.4 | 3711.0 | 3678.8 | 3666.3 |
| 62.5° | 4599.8 | 4421.2 | 4278.9 | 4204.2 | 4138.7 | 4113.8 | 4073.3 | 4078.5 |
| 65° | 5099.2 | 4917.5 | 4779.4 | 4719.2 | 4657.9 | 4641.3 | 4603.9 | 4617.4 |
| 67.5° | 5640.2 | 5490.6 | 5339.0 | 5283.0 | 5226.9 | 5210.3 | 5171.9 | 5183.3 |
| 70° | 6125.0 | 5935.0 | 5762.7 | 5652.6 | 5557.1 | 5480.3 | 5431.5 | 5411.7 |
| 72.5° | 6221.6 | 5892.5 | 5621.5 | 5346.3 | 5187.4 | 5048.3 | 4991.2 | 4969.4 |
| 75° | 5590.3 | 5079.5 | 4693.2 | 4370.3 | 4191.7 | 3989.2 | 3967.4 | 3937.3 |
| 77.5° | 4348.5 | 3767.0 | 3299.8 | 2884.5 | 2644.6 | 2397.5 | 2312.3 | 2248.0 |
| 80° | 2593.7 | 1993.6 | 1545.0 | 1083.0 | 883.6 | 711.2 | 668.7 | 624.0 |
| 82.5° | 928.3 | 595.0 | 400.8 | 312.5 | 279.3 | 257.5 | 240.9 | 219.1 |
| 85° | 224.3 | 189.0 | 178.6 | 162.0 | 159.9 | 136.0 | 96.6 | 86.2 |
| 87.5° | 71.6 | 65.4 | 66.5 | 63.3 | 66.5 | 49.8 | 40.5 | 36.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)