

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: P270882

Luminaire Tested: **NVN-AF-03-LED-U-5MQ-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270882
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11042.6 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 96
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

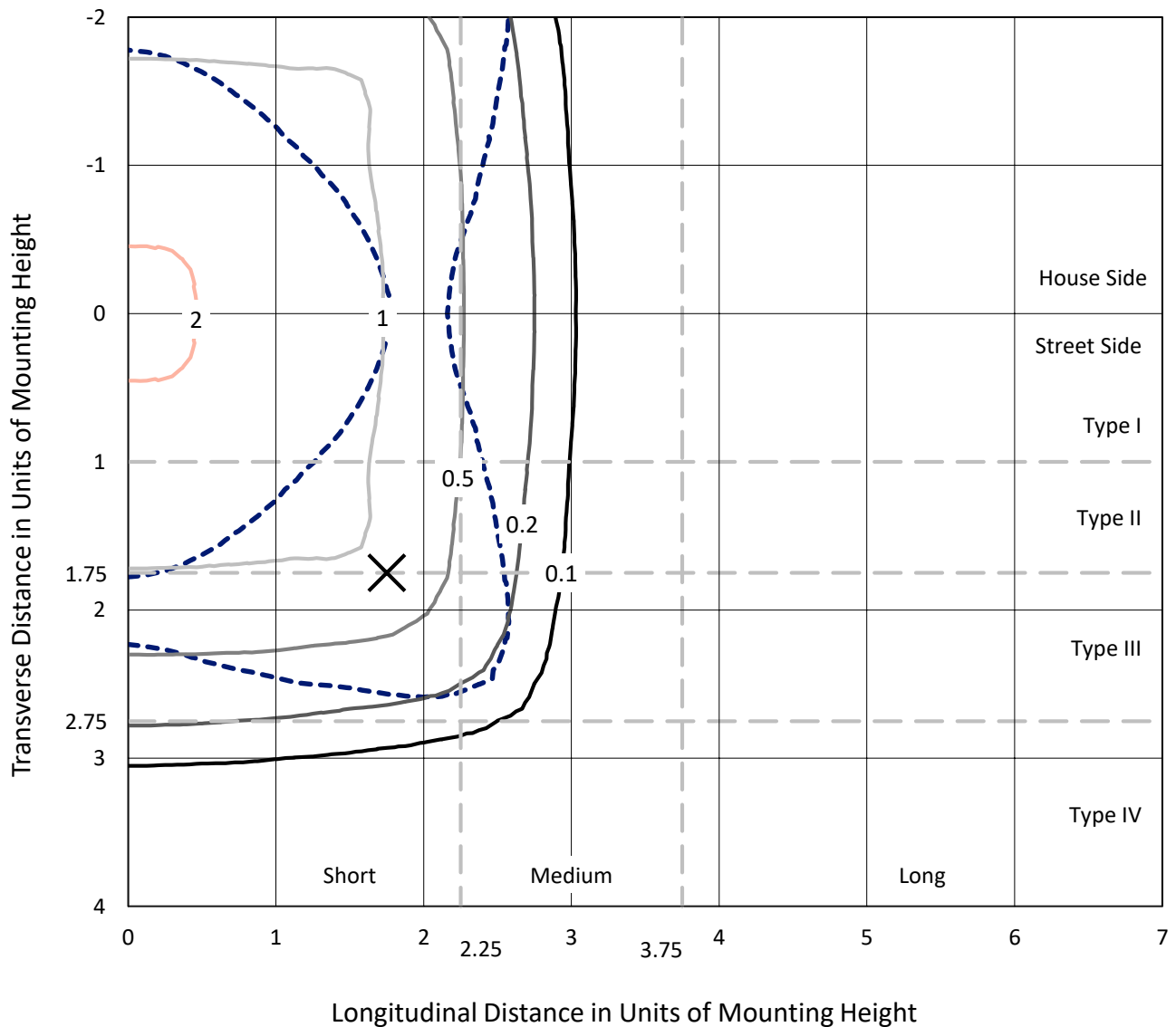


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

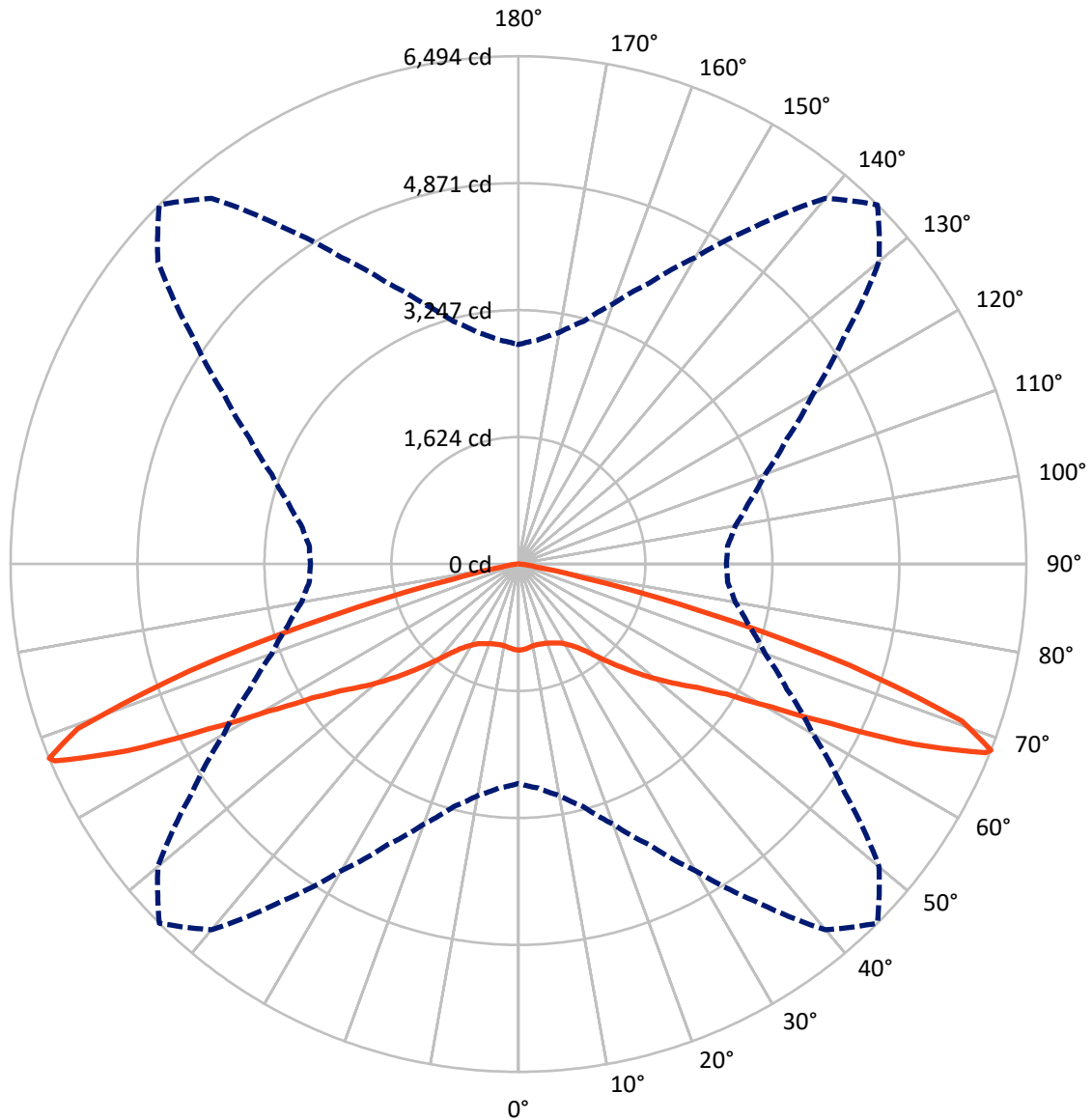


Based on 20 foot mounting height. Maximum calculated value = 2.8 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5521.3 | 0.0 | 5521.3 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 5521.3 | 0.0 | 5521.3 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 11042.6 | 0.0 | 11042.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 103.1 | 0.9 |
| 10°-20° | 298.9 | 2.7 |
| 20°-30° | 508.2 | 4.6 |
| 30°-40° | 831.7 | 7.5 |
| 40°-50° | 1486.3 | 13.5 |
| 50°-60° | 2510.2 | 22.7 |
| 60°-70° | 3892.4 | 35.2 |
| 70°-80° | 1338.3 | 12.1 |
| 80°-90° | 73.5 | 0.7 |
| 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° | 11042.6 | 100.0 |
| 0°-180° | 11042.6 | 100.0 |



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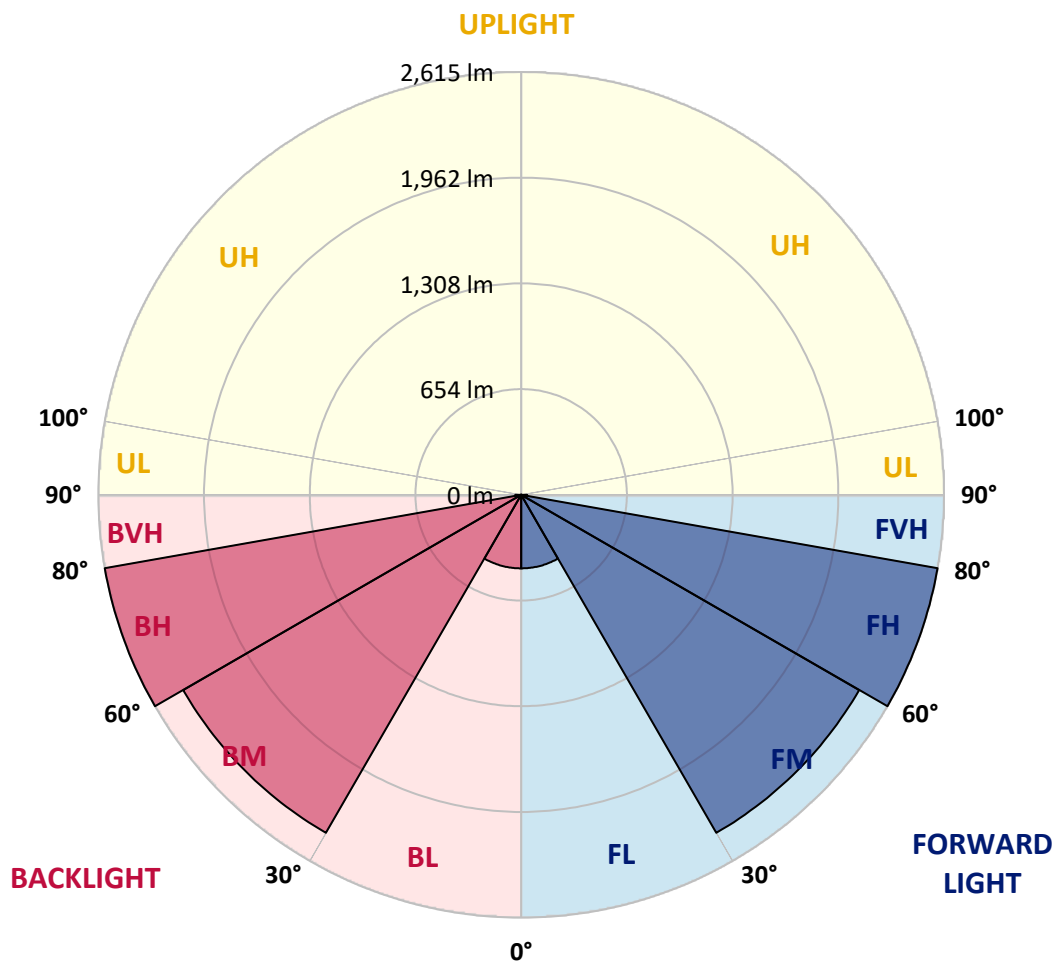
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 455.1 | 4.1 | | | |
| FM | (30°-60°) | 2414.1 | 21.9 | | | |
| FH | (60°-80°) | 2615.3 | 23.7 | | | G2/5000 |
| FVH | (80°-90°) | 36.8 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 455.1 | 4.1 | B1/500 | | |
| BM | (30°-60°) | 2414.1 | 21.9 | B2/2500 | | |
| BH | (60°-80°) | 2615.3 | 23.7 | B4/5000 | | G2/5000 |
| BVH | (80°-90°) | 36.8 | 0.3 | | | G1/100 |
| 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° | 1101.5 | 1101.5 | 1101.5 | 1101.5 | 1101.5 | 1101.5 | 1101.5 | 1101.5 | 1101.5 | 1101.5 | 1101.5 |
| 2.5° | 1106.3 | 1106.3 | 1107.6 | 1106.9 | 1104.9 | 1102.8 | 1100.9 | 1098.8 | 1097.5 | 1096.1 | 1094.8 |
| 5° | 1094.8 | 1094.8 | 1096.8 | 1095.5 | 1094.0 | 1092.1 | 1090.7 | 1088.7 | 1087.4 | 1086.1 | 1086.7 |
| 7.5° | 1079.9 | 1081.3 | 1082.5 | 1081.9 | 1079.3 | 1078.5 | 1076.4 | 1075.8 | 1074.6 | 1072.4 | 1073.1 |
| 10° | 1067.0 | 1067.7 | 1069.2 | 1068.4 | 1067.7 | 1065.7 | 1065.0 | 1064.3 | 1063.7 | 1061.0 | 1060.3 |
| 12.5° | 1054.3 | 1055.6 | 1056.9 | 1057.6 | 1056.9 | 1057.6 | 1058.3 | 1058.9 | 1058.3 | 1056.9 | 1056.9 |
| 15° | 1044.1 | 1045.4 | 1047.5 | 1049.5 | 1050.2 | 1054.3 | 1056.9 | 1059.6 | 1061.6 | 1062.3 | 1060.3 |
| 17.5° | 1038.6 | 1040.6 | 1043.4 | 1047.5 | 1050.7 | 1055.6 | 1060.3 | 1064.3 | 1067.7 | 1068.4 | 1066.4 |
| 20° | 1038.0 | 1040.0 | 1044.1 | 1048.9 | 1054.9 | 1061.0 | 1068.4 | 1074.6 | 1077.8 | 1079.9 | 1077.8 |
| 22.5° | 1042.8 | 1045.4 | 1050.7 | 1056.9 | 1064.3 | 1072.4 | 1081.9 | 1088.7 | 1095.5 | 1098.2 | 1096.1 |
| 25° | 1056.2 | 1058.9 | 1065.0 | 1072.4 | 1080.7 | 1090.7 | 1100.2 | 1109.0 | 1115.8 | 1119.1 | 1116.5 |
| 27.5° | 1084.7 | 1085.3 | 1092.1 | 1100.2 | 1109.6 | 1118.4 | 1130.5 | 1134.6 | 1140.0 | 1143.5 | 1140.0 |
| 30° | 1124.5 | 1125.8 | 1132.0 | 1144.8 | 1153.7 | 1165.1 | 1171.8 | 1175.9 | 1182.0 | 1185.5 | 1181.4 |
| 32.5° | 1185.5 | 1186.8 | 1192.1 | 1204.3 | 1212.4 | 1221.2 | 1229.3 | 1232.0 | 1238.1 | 1242.1 | 1237.4 |
| 35° | 1271.3 | 1273.9 | 1278.6 | 1286.8 | 1293.6 | 1300.3 | 1306.5 | 1304.3 | 1308.4 | 1314.0 | 1309.1 |
| 37.5° | 1388.9 | 1388.2 | 1389.6 | 1395.6 | 1402.4 | 1406.4 | 1416.0 | 1411.2 | 1415.3 | 1420.0 | 1417.3 |
| 40° | 1526.2 | 1526.2 | 1525.5 | 1536.3 | 1539.1 | 1543.1 | 1553.2 | 1547.2 | 1552.6 | 1558.0 | 1553.2 |
| 42.5° | 1682.3 | 1685.1 | 1688.5 | 1697.3 | 1704.8 | 1706.2 | 1710.8 | 1708.0 | 1714.9 | 1719.5 | 1714.9 |
| 45° | 1862.2 | 1866.3 | 1870.5 | 1890.7 | 1894.0 | 1896.7 | 1900.2 | 1891.3 | 1898.7 | 1902.8 | 1901.5 |
| 47.5° | 2048.9 | 2056.3 | 2065.2 | 2086.1 | 2099.6 | 2105.6 | 2108.4 | 2098.4 | 2098.9 | 2105.0 | 2105.6 |
| 50° | 2259.9 | 2268.0 | 2276.8 | 2300.5 | 2313.2 | 2324.2 | 2327.5 | 2316.0 | 2317.4 | 2322.1 | 2323.5 |
| 52.5° | 2454.6 | 2464.1 | 2483.1 | 2514.8 | 2533.1 | 2551.9 | 2553.3 | 2539.1 | 2545.3 | 2548.6 | 2545.8 |
| 55° | 2637.9 | 2650.0 | 2675.1 | 2717.6 | 2750.8 | 2788.0 | 2804.9 | 2789.3 | 2789.3 | 2786.6 | 2785.3 |
| 57.5° | 2851.6 | 2865.1 | 2890.7 | 2940.2 | 2986.1 | 3039.5 | 3085.5 | 3101.0 | 3129.4 | 3138.9 | 3124.0 |
| 60° | 3173.4 | 3187.6 | 3214.0 | 3279.0 | 3337.1 | 3414.8 | 3490.5 | 3552.1 | 3652.1 | 3706.2 | 3657.5 |
| 62.5° | 3467.5 | 3489.1 | 3551.4 | 3665.1 | 3790.8 | 3934.8 | 4101.8 | 4220.9 | 4402.8 | 4493.4 | 4371.1 |
| 65° | 3400.7 | 3444.6 | 3566.4 | 3744.9 | 4004.5 | 4316.9 | 4657.1 | 4983.6 | 5359.6 | 5552.3 | 5303.5 |
| 67.5° | 2970.5 | 3007.7 | 3138.9 | 3346.5 | 3670.5 | 4101.2 | 4630.0 | 5306.2 | 6081.7 | 6442.9 | 6002.7 |
| 68° | 2806.2 | 2876.0 | 3006.4 | 3212.7 | 3539.2 | 3962.6 | 4527.2 | 5257.5 | 6104.2 | 6494.2 | 6019.0 |
| 70° | 2151.7 | 2176.8 | 2301.7 | 2487.0 | 2839.5 | 3254.6 | 3824.7 | 4657.1 | 5613.9 | 6015.5 | 5526.6 |
| 72.5° | 1022.5 | 1037.4 | 1118.4 | 1301.0 | 1524.9 | 1862.9 | 2366.0 | 3151.2 | 4013.3 | 4431.2 | 3943.6 |
| 75° | 374.7 | 377.9 | 397.0 | 440.2 | 524.0 | 651.2 | 892.6 | 1380.9 | 2044.2 | 2437.7 | 2052.3 |
| 77.5° | 202.2 | 202.8 | 210.4 | 221.2 | 236.0 | 253.0 | 289.4 | 388.2 | 626.2 | 852.0 | 661.3 |
| 80° | 127.1 | 126.4 | 133.8 | 142.7 | 152.8 | 160.9 | 164.3 | 175.8 | 198.2 | 231.9 | 213.0 |
| 82.5° | 64.9 | 71.0 | 87.9 | 97.3 | 112.3 | 115.0 | 111.6 | 110.9 | 117.7 | 127.1 | 131.2 |
| 85° | 35.8 | 31.8 | 46.6 | 62.3 | 67.6 | 69.7 | 70.3 | 66.3 | 64.9 | 63.6 | 67.0 |
| 87.5° | 18.2 | 16.9 | 20.3 | 31.1 | 33.1 | 27.0 | 27.7 | 23.6 | 16.2 | 16.2 | 16.9 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1101.5 | 1101.5 | 1101.5 | 1101.5 | 1101.5 | 1101.5 | 1101.5 | 1101.5 |
| 2.5° | 1093.4 | 1094.0 | 1092.8 | 1092.8 | 1092.8 | 1093.4 | 1092.8 | 1092.1 |
| 5° | 1084.7 | 1086.1 | 1086.1 | 1086.7 | 1087.4 | 1087.4 | 1087.4 | 1087.4 |
| 7.5° | 1071.8 | 1072.4 | 1073.8 | 1073.8 | 1073.8 | 1073.8 | 1073.8 | 1073.8 |
| 10° | 1059.6 | 1058.3 | 1057.6 | 1056.2 | 1056.2 | 1054.3 | 1054.9 | 1055.6 |
| 12.5° | 1053.5 | 1050.7 | 1049.5 | 1047.5 | 1046.0 | 1044.1 | 1044.1 | 1044.6 |
| 15° | 1056.2 | 1052.2 | 1048.1 | 1046.7 | 1045.4 | 1044.1 | 1042.8 | 1043.4 |
| 17.5° | 1061.6 | 1056.9 | 1052.2 | 1049.5 | 1046.7 | 1044.6 | 1044.1 | 1044.6 |
| 20° | 1073.1 | 1066.4 | 1058.9 | 1054.3 | 1048.9 | 1047.5 | 1045.4 | 1047.5 |
| 22.5° | 1088.7 | 1080.7 | 1071.0 | 1062.3 | 1056.2 | 1053.5 | 1050.7 | 1052.9 |
| 25° | 1107.6 | 1098.8 | 1089.4 | 1079.3 | 1072.4 | 1070.4 | 1067.0 | 1067.0 |
| 27.5° | 1134.0 | 1126.6 | 1118.4 | 1109.0 | 1102.2 | 1100.2 | 1094.8 | 1094.8 |
| 30° | 1175.9 | 1168.4 | 1161.0 | 1153.0 | 1146.1 | 1144.1 | 1137.3 | 1137.3 |
| 32.5° | 1231.3 | 1223.2 | 1218.6 | 1211.8 | 1206.3 | 1203.0 | 1194.8 | 1194.1 |
| 35° | 1305.7 | 1298.3 | 1297.6 | 1292.9 | 1287.5 | 1288.2 | 1280.1 | 1278.6 |
| 37.5° | 1412.6 | 1406.4 | 1408.5 | 1404.5 | 1399.7 | 1403.8 | 1399.1 | 1399.1 |
| 40° | 1549.1 | 1547.2 | 1549.1 | 1546.5 | 1547.2 | 1547.8 | 1543.7 | 1545.2 |
| 42.5° | 1714.1 | 1708.8 | 1721.0 | 1719.5 | 1717.6 | 1722.9 | 1713.4 | 1706.7 |
| 45° | 1904.1 | 1902.3 | 1914.4 | 1916.4 | 1912.3 | 1915.6 | 1898.7 | 1898.1 |
| 47.5° | 2110.5 | 2110.5 | 2121.3 | 2119.9 | 2115.9 | 2116.5 | 2096.3 | 2083.3 |
| 50° | 2325.4 | 2324.2 | 2335.0 | 2332.2 | 2326.8 | 2326.2 | 2305.2 | 2292.4 |
| 52.5° | 2549.3 | 2549.3 | 2564.8 | 2557.5 | 2544.5 | 2538.5 | 2512.7 | 2495.9 |
| 55° | 2796.9 | 2793.4 | 2798.1 | 2773.7 | 2748.8 | 2730.5 | 2698.8 | 2685.9 |
| 57.5° | 3109.8 | 3070.6 | 3036.8 | 3005.6 | 2970.5 | 2949.0 | 2911.8 | 2898.2 |
| 60° | 3554.1 | 3449.3 | 3403.9 | 3341.9 | 3283.7 | 3254.6 | 3205.2 | 3178.8 |
| 62.5° | 4169.5 | 3995.8 | 3872.7 | 3735.3 | 3602.8 | 3509.5 | 3434.4 | 3401.3 |
| 65° | 4880.9 | 4502.1 | 4189.1 | 3895.0 | 3645.4 | 3447.2 | 3337.1 | 3302.6 |
| 67.5° | 5151.3 | 4456.2 | 3915.9 | 3494.0 | 3191.0 | 2955.1 | 2823.2 | 2795.4 |
| 68° | 5093.8 | 4350.8 | 3789.4 | 3357.3 | 3053.1 | 2815.1 | 2683.9 | 2658.9 |
| 70° | 4493.4 | 3670.5 | 3078.1 | 2648.1 | 2364.0 | 2137.4 | 2044.8 | 2004.9 |
| 72.5° | 3063.2 | 2357.2 | 1808.2 | 1446.5 | 1234.1 | 1090.7 | 1005.6 | 976.5 |
| 75° | 1409.9 | 952.7 | 636.3 | 475.4 | 403.7 | 369.3 | 342.9 | 336.1 |
| 77.5° | 411.2 | 298.9 | 256.9 | 238.1 | 223.8 | 211.6 | 202.8 | 202.2 |
| 80° | 195.4 | 183.3 | 177.9 | 165.6 | 152.8 | 141.4 | 133.2 | 134.6 |
| 82.5° | 131.2 | 127.7 | 127.7 | 115.6 | 95.3 | 81.8 | 67.6 | 60.8 |
| 85° | 69.7 | 72.4 | 76.4 | 72.4 | 62.9 | 46.6 | 30.5 | 33.1 |
| 87.5° | 23.6 | 27.0 | 28.3 | 27.7 | 25.1 | 19.0 | 14.3 | 14.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)