

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: LUMARK

Report Number: P961354

Luminaire Tested: **NAV-SB2A-727-U-T4FT**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P961354
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2A-727-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8429.6 lumens
Efficiency: N/A
Efficacy: 147.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

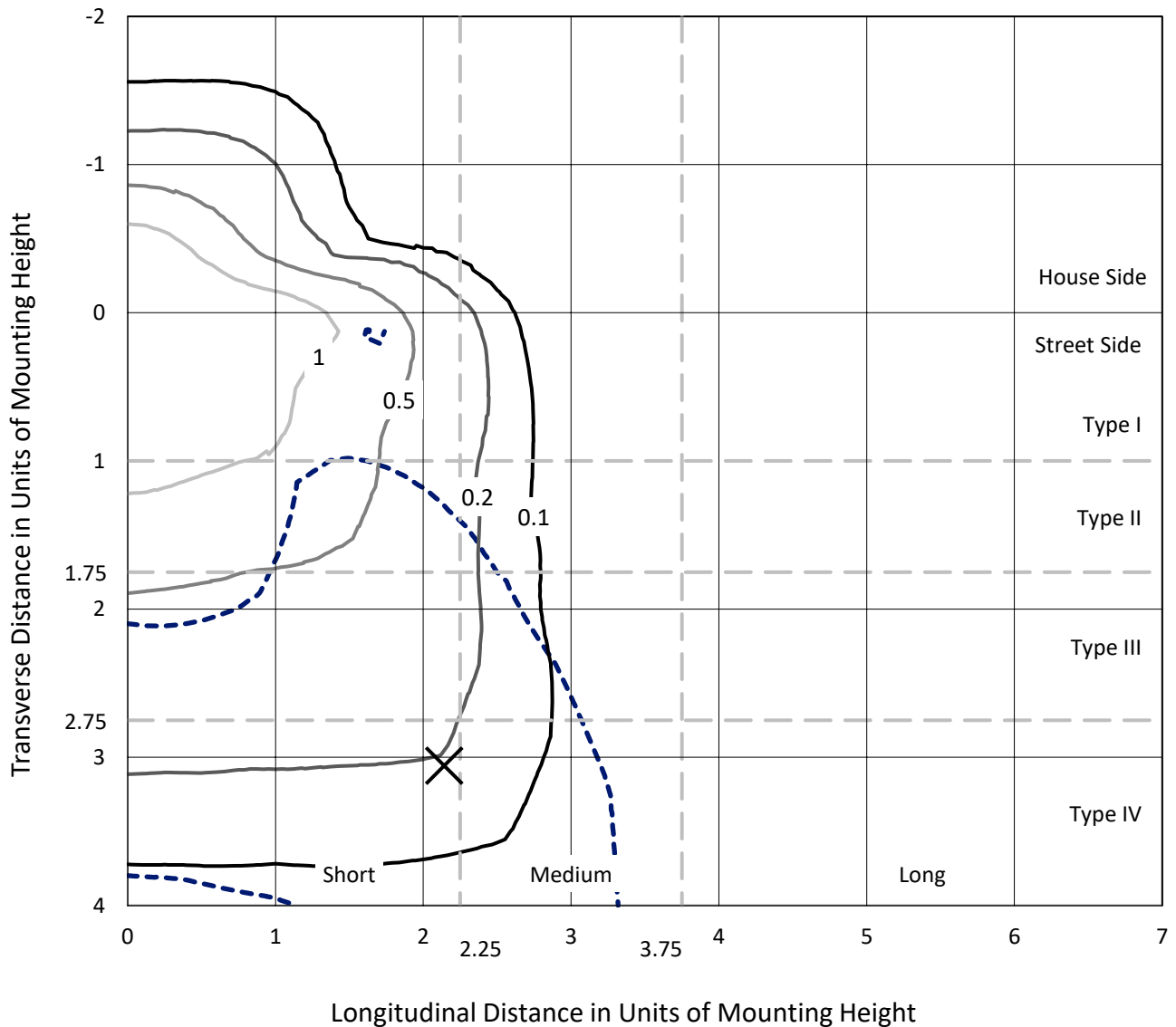
Input Watts (W): 57.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

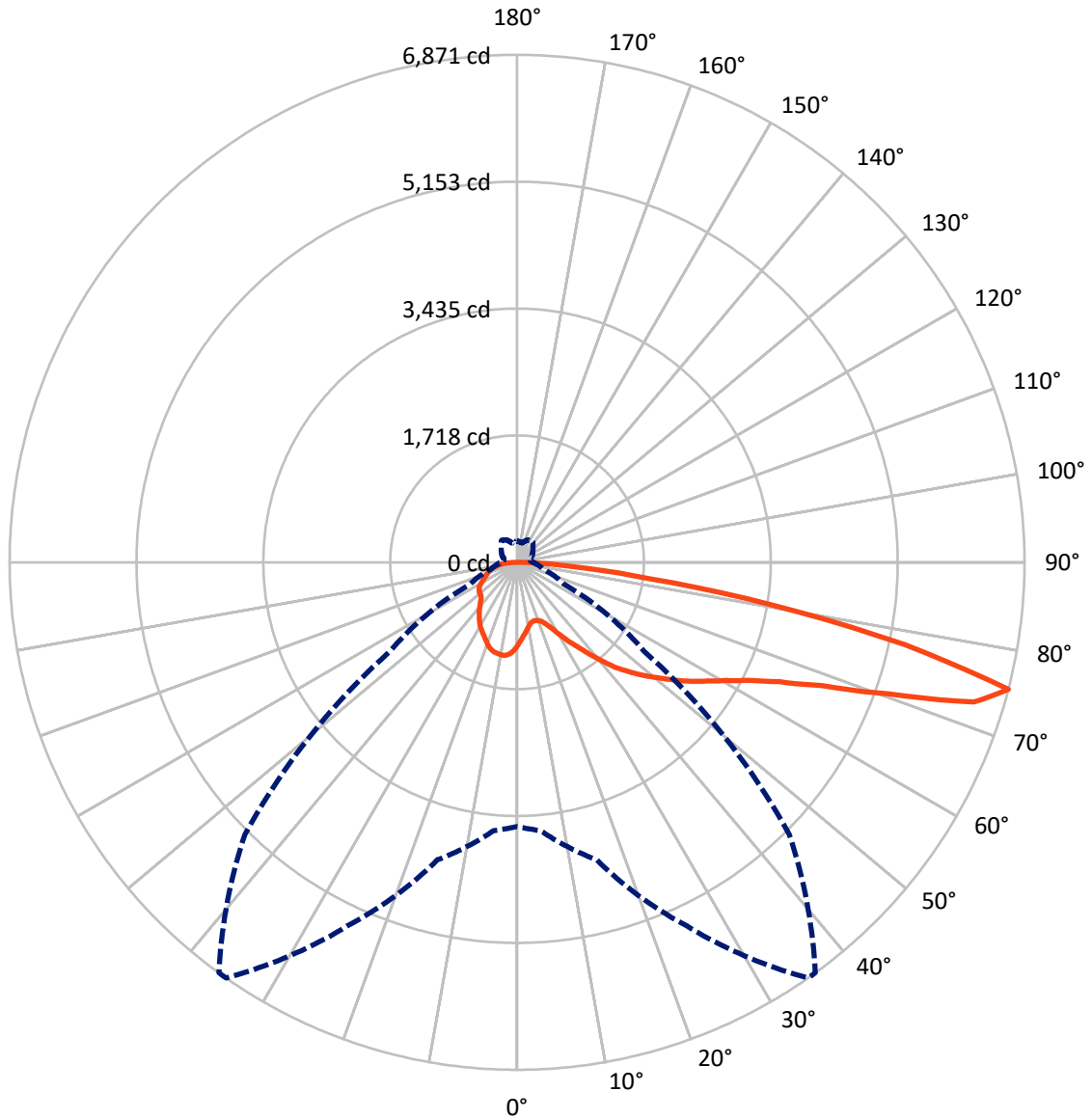
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 2006.0 | 0.0 | 2006.0 |
| | % Fixture | 23.8 | 0.0 | 23.8 |
| Street Side | Lumens | 6423.6 | 0.0 | 6423.6 |
| | % Fixture | 76.2 | 0.0 | 76.2 |
| Total | Lumens | 8429.6 | 0.0 | 8429.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 106.4 | 1.3 |
| 10°-20° | 306.8 | 3.6 |
| 20°-30° | 515.1 | 6.1 |
| 30°-40° | 800.6 | 9.5 |
| 40°-50° | 1188.3 | 14.1 |
| 50°-60° | 1640.5 | 19.5 |
| 60°-70° | 1990.4 | 23.6 |
| 70°-80° | 1644.9 | 19.5 |
| 80°-90° | 236.6 | 2.8 |
| 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° | 8429.6 | 100.0 |
| 0°-180° | 8429.6 | 100.0 |

Coefficient of Utilization

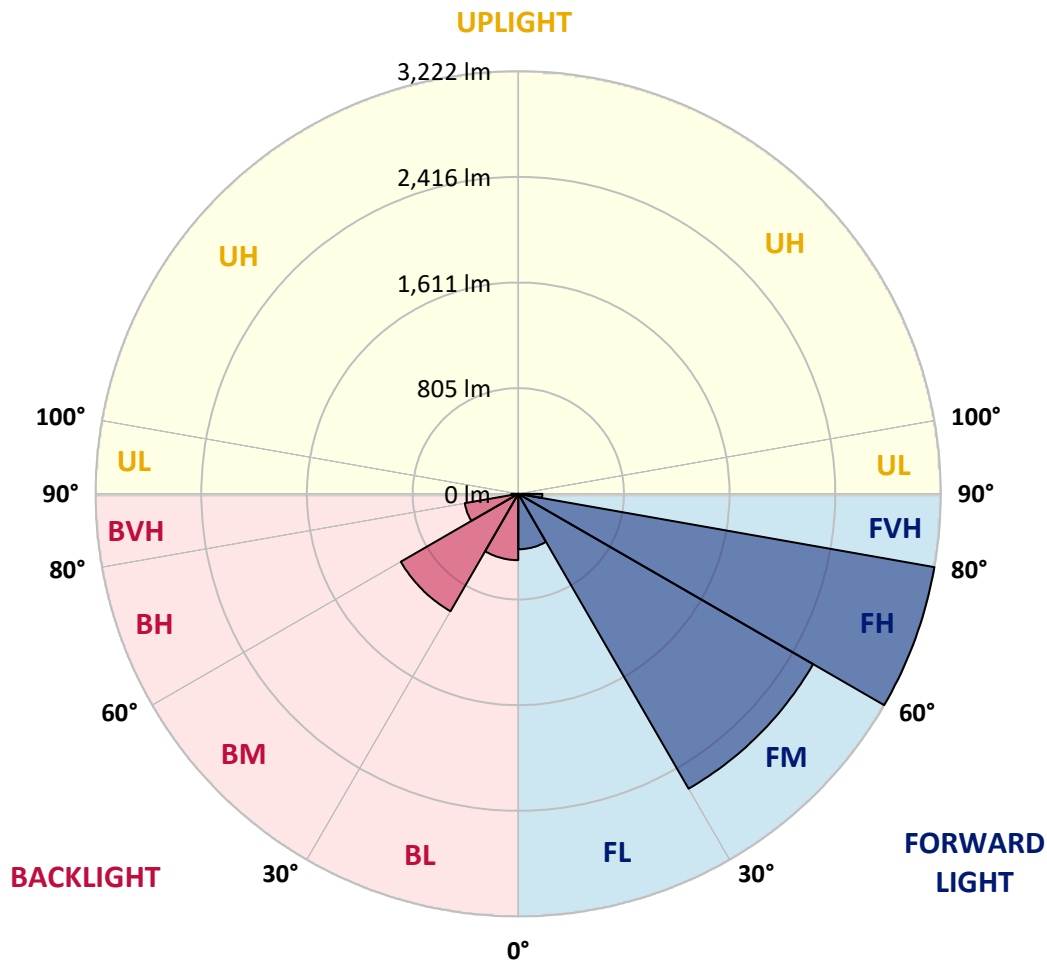


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 422.7 | 5.0 | | | |
| FM (30°-60°) | 2595.9 | 30.8 | | | |
| FH (60°-80°) | 3221.7 | 38.2 | | | G2/5000 |
| FVH (80°-90°) | 183.3 | 2.2 | | | G2/225 |
| BL (0°-30°) | 505.5 | 6.0 | B2/1000 | | |
| BM (30°-60°) | 1033.6 | 12.3 | B2/2500 | | |
| BH (60°-80°) | 413.6 | 4.9 | B1/500 | | G1/500 |
| BVH (80°-90°) | 53.3 | 0.6 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2
 Type IV Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 |
| 2.5° | 1035.8 | 1042.2 | 1044.9 | 1043.6 | 1050.4 | 1049.5 | 1059.0 | 1070.9 | 1087.3 | 1103.2 | 1126.5 |
| 5° | 956.0 | 962.9 | 968.8 | 974.3 | 987.5 | 991.6 | 1006.7 | 1029.4 | 1059.5 | 1090.0 | 1128.3 |
| 7.5° | 881.8 | 887.8 | 896.8 | 906.8 | 929.2 | 933.3 | 958.4 | 993.8 | 1035.8 | 1080.5 | 1133.3 |
| 10° | 821.1 | 827.1 | 836.7 | 848.1 | 875.9 | 880.9 | 912.8 | 960.1 | 1014.9 | 1071.3 | 1138.8 |
| 12.5° | 795.2 | 797.0 | 802.5 | 813.8 | 838.0 | 841.2 | 876.3 | 930.5 | 994.4 | 1064.6 | 1147.0 |
| 15° | 793.9 | 797.4 | 798.0 | 803.8 | 823.9 | 825.2 | 857.6 | 911.4 | 981.5 | 1063.1 | 1159.3 |
| 17.5° | 807.5 | 810.3 | 806.2 | 809.7 | 826.7 | 828.9 | 854.4 | 902.3 | 977.4 | 1069.1 | 1180.3 |
| 20° | 844.0 | 846.2 | 833.9 | 828.9 | 841.2 | 843.1 | 868.1 | 908.3 | 981.5 | 1081.4 | 1209.0 |
| 22.5° | 921.5 | 922.8 | 892.7 | 872.2 | 873.1 | 874.0 | 896.0 | 932.3 | 997.5 | 1103.7 | 1245.5 |
| 25° | 1042.2 | 1041.3 | 993.4 | 953.8 | 931.0 | 926.0 | 940.5 | 971.6 | 1024.4 | 1133.3 | 1292.3 |
| 27.5° | 1183.5 | 1176.6 | 1128.7 | 1069.5 | 1019.9 | 1012.6 | 1009.4 | 1022.6 | 1062.7 | 1172.5 | 1349.8 |
| 30° | 1343.0 | 1336.6 | 1285.0 | 1207.7 | 1138.8 | 1127.0 | 1096.9 | 1090.0 | 1119.6 | 1225.8 | 1429.6 |
| 32.5° | 1517.9 | 1513.8 | 1452.3 | 1358.4 | 1266.4 | 1252.8 | 1202.1 | 1183.9 | 1207.1 | 1306.5 | 1540.7 |
| 35° | 1664.7 | 1661.0 | 1610.0 | 1513.4 | 1400.9 | 1384.0 | 1332.5 | 1312.0 | 1323.8 | 1409.9 | 1686.1 |
| 37.5° | 1797.2 | 1795.5 | 1751.7 | 1675.6 | 1559.4 | 1538.9 | 1481.0 | 1474.2 | 1471.9 | 1546.2 | 1862.4 |
| 40° | 1920.3 | 1915.7 | 1870.2 | 1830.1 | 1743.9 | 1725.3 | 1674.2 | 1668.3 | 1651.0 | 1713.9 | 2062.1 |
| 42.5° | 2056.6 | 2044.8 | 1978.7 | 1960.0 | 1936.7 | 1921.3 | 1890.7 | 1891.6 | 1853.3 | 1903.0 | 2273.4 |
| 45° | 2167.8 | 2160.9 | 2093.0 | 2082.1 | 2107.2 | 2100.7 | 2127.2 | 2134.0 | 2059.7 | 2101.2 | 2493.1 |
| 47.5° | 2287.2 | 2280.8 | 2223.3 | 2215.6 | 2283.5 | 2285.3 | 2378.7 | 2381.1 | 2261.1 | 2307.2 | 2713.3 |
| 50° | 2434.4 | 2425.3 | 2368.3 | 2377.8 | 2454.0 | 2460.8 | 2631.7 | 2616.2 | 2446.7 | 2516.4 | 2931.5 |
| 52.5° | 2531.4 | 2536.9 | 2524.6 | 2540.1 | 2644.0 | 2650.3 | 2880.5 | 2840.8 | 2630.3 | 2722.8 | 3145.7 |
| 55° | 2603.0 | 2613.9 | 2652.2 | 2687.8 | 2844.5 | 2850.8 | 3115.2 | 3054.6 | 2782.5 | 2914.2 | 3347.1 |
| 57.5° | 2695.0 | 2679.6 | 2751.1 | 2820.3 | 3034.9 | 3051.8 | 3343.4 | 3260.5 | 2917.4 | 3079.2 | 3485.2 |
| 60° | 2827.2 | 2816.2 | 2871.8 | 2974.3 | 3248.2 | 3275.1 | 3585.0 | 3446.0 | 3016.3 | 3210.0 | 3512.1 |
| 62.5° | 3095.1 | 3067.8 | 3076.4 | 3167.1 | 3517.1 | 3552.6 | 3857.5 | 3607.8 | 3065.5 | 3261.0 | 3368.0 |
| 65° | 3495.7 | 3448.7 | 3404.9 | 3467.9 | 3895.8 | 3930.9 | 4165.1 | 3734.9 | 3047.2 | 3162.1 | 2985.7 |
| 67.5° | 4000.2 | 3953.6 | 3899.9 | 3959.2 | 4453.5 | 4481.4 | 4544.7 | 3806.4 | 2903.7 | 2781.1 | 2309.9 |
| 70° | 4416.2 | 4398.9 | 4463.2 | 4706.9 | 5344.5 | 5345.4 | 5031.4 | 3747.2 | 2510.4 | 1971.8 | 1336.6 |
| 72.5° | 4361.1 | 4350.6 | 4689.2 | 5442.9 | 6467.3 | 6443.2 | 5492.1 | 3298.9 | 1691.1 | 889.5 | 500.8 |
| 75° | 3577.7 | 3645.6 | 4170.1 | 5429.6 | 6870.6 | 6867.4 | 5210.0 | 2097.1 | 699.5 | 368.7 | 258.8 |
| 77.5° | 1918.5 | 2026.0 | 2707.3 | 4008.8 | 5363.6 | 5444.3 | 3662.9 | 733.7 | 300.3 | 236.1 | 179.1 |
| 80° | 625.7 | 719.6 | 1079.1 | 2041.1 | 3485.2 | 3470.1 | 1569.9 | 288.0 | 205.5 | 167.3 | 123.9 |
| 82.5° | 265.7 | 276.6 | 482.2 | 963.8 | 1788.6 | 1760.8 | 499.9 | 165.4 | 144.4 | 114.4 | 76.6 |
| 85° | 103.9 | 116.2 | 212.8 | 445.7 | 774.7 | 757.8 | 180.5 | 82.0 | 92.6 | 74.7 | 45.6 |
| 87.5° | 34.1 | 41.5 | 76.1 | 152.6 | 241.1 | 232.4 | 44.2 | 28.3 | 40.1 | 34.1 | 16.4 |
| 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):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 | 1123.3 |
| 2.5° | 1132.8 | 1140.2 | 1148.8 | 1161.5 | 1172.5 | 1181.6 | 1191.2 | 1197.1 | 1199.4 | 1206.2 | 1205.8 |
| 5° | 1141.0 | 1157.0 | 1178.4 | 1199.4 | 1220.0 | 1232.3 | 1243.1 | 1248.7 | 1253.7 | 1257.3 | 1258.2 |
| 7.5° | 1154.8 | 1175.3 | 1209.0 | 1236.4 | 1253.7 | 1263.6 | 1270.9 | 1269.2 | 1270.9 | 1271.8 | 1273.3 |
| 10° | 1166.6 | 1195.3 | 1235.4 | 1261.4 | 1274.6 | 1275.1 | 1273.3 | 1266.8 | 1263.6 | 1264.1 | 1265.1 |
| 12.5° | 1180.7 | 1212.6 | 1255.9 | 1277.8 | 1281.5 | 1271.4 | 1263.6 | 1252.8 | 1248.7 | 1246.8 | 1245.9 |
| 15° | 1199.9 | 1236.4 | 1278.3 | 1286.5 | 1277.4 | 1264.5 | 1251.3 | 1233.6 | 1224.5 | 1217.2 | 1219.4 |
| 17.5° | 1223.1 | 1263.2 | 1295.6 | 1289.7 | 1270.1 | 1249.1 | 1227.6 | 1200.8 | 1182.1 | 1174.3 | 1174.8 |
| 20° | 1255.4 | 1291.5 | 1308.7 | 1282.8 | 1253.2 | 1221.3 | 1184.8 | 1152.0 | 1134.7 | 1127.0 | 1126.1 |
| 22.5° | 1294.7 | 1329.3 | 1321.5 | 1270.9 | 1229.0 | 1178.0 | 1132.4 | 1108.2 | 1099.6 | 1094.2 | 1095.0 |
| 25° | 1341.6 | 1371.2 | 1330.7 | 1253.7 | 1189.4 | 1120.5 | 1085.5 | 1077.7 | 1073.6 | 1069.5 | 1069.5 |
| 27.5° | 1402.6 | 1418.6 | 1337.5 | 1228.2 | 1127.4 | 1059.5 | 1046.7 | 1048.1 | 1046.7 | 1039.9 | 1041.3 |
| 30° | 1483.3 | 1480.1 | 1343.9 | 1186.6 | 1056.3 | 1004.4 | 1005.3 | 1011.2 | 1012.1 | 1007.6 | 1009.8 |
| 32.5° | 1589.5 | 1557.1 | 1347.1 | 1132.8 | 988.4 | 956.0 | 956.9 | 963.4 | 967.9 | 960.1 | 963.8 |
| 35° | 1718.0 | 1646.9 | 1342.0 | 1065.4 | 936.0 | 910.0 | 903.2 | 905.0 | 906.4 | 899.1 | 904.2 |
| 37.5° | 1868.0 | 1747.6 | 1319.7 | 990.7 | 892.7 | 864.9 | 850.3 | 838.0 | 830.8 | 823.9 | 828.5 |
| 40° | 2032.5 | 1857.4 | 1278.7 | 917.8 | 844.4 | 817.0 | 795.2 | 771.9 | 747.3 | 738.2 | 742.3 |
| 42.5° | 2204.7 | 1970.5 | 1229.0 | 848.1 | 788.8 | 766.5 | 743.2 | 709.5 | 672.6 | 653.9 | 656.2 |
| 45° | 2383.3 | 2086.2 | 1180.3 | 779.2 | 731.8 | 722.3 | 695.4 | 654.9 | 614.7 | 591.0 | 589.2 |
| 47.5° | 2558.3 | 2195.5 | 1108.7 | 710.0 | 678.6 | 689.0 | 668.1 | 630.7 | 586.0 | 548.7 | 544.6 |
| 50° | 2725.6 | 2298.0 | 991.6 | 639.8 | 635.3 | 679.0 | 659.0 | 605.2 | 554.1 | 506.2 | 502.1 |
| 52.5° | 2891.4 | 2381.1 | 841.6 | 576.0 | 612.0 | 676.3 | 647.1 | 587.8 | 525.4 | 475.3 | 469.9 |
| 55° | 3032.3 | 2423.9 | 697.2 | 521.3 | 578.3 | 653.0 | 632.9 | 567.3 | 484.8 | 431.5 | 427.0 |
| 57.5° | 3112.4 | 2389.3 | 576.9 | 467.5 | 531.8 | 614.7 | 608.8 | 523.6 | 436.5 | 395.5 | 390.1 |
| 60° | 3077.8 | 2248.8 | 478.5 | 420.7 | 487.6 | 573.3 | 566.9 | 480.3 | 399.6 | 360.9 | 355.5 |
| 62.5° | 2886.9 | 1981.4 | 400.6 | 379.6 | 447.5 | 530.8 | 525.0 | 447.0 | 371.4 | 334.0 | 328.1 |
| 65° | 2502.2 | 1611.8 | 340.0 | 345.4 | 406.9 | 479.8 | 488.5 | 419.2 | 349.1 | 312.6 | 306.7 |
| 67.5° | 1908.4 | 1167.5 | 292.5 | 315.8 | 367.3 | 429.7 | 454.8 | 399.2 | 330.4 | 295.7 | 290.3 |
| 70° | 1087.7 | 663.1 | 252.5 | 287.1 | 332.2 | 383.2 | 428.9 | 383.2 | 310.4 | 281.7 | 278.0 |
| 72.5° | 412.5 | 304.4 | 218.3 | 258.4 | 298.5 | 344.1 | 400.1 | 358.1 | 287.1 | 265.7 | 262.0 |
| 75° | 220.1 | 185.4 | 183.7 | 224.7 | 259.7 | 305.8 | 364.1 | 333.5 | 269.8 | 280.7 | 289.9 |
| 77.5° | 150.0 | 131.2 | 153.5 | 192.3 | 217.4 | 263.4 | 325.8 | 296.2 | 233.8 | 232.9 | 214.6 |
| 80° | 103.9 | 93.0 | 124.8 | 155.0 | 168.2 | 221.5 | 284.3 | 254.3 | 190.4 | 177.7 | 169.9 |
| 82.5° | 62.4 | 60.6 | 93.4 | 115.7 | 118.9 | 170.9 | 235.6 | 213.3 | 155.8 | 135.8 | 136.7 |
| 85° | 34.1 | 36.0 | 59.7 | 67.9 | 69.3 | 119.4 | 184.6 | 164.9 | 119.8 | 100.8 | 101.6 |
| 87.5° | 9.5 | 12.3 | 21.8 | 26.9 | 33.3 | 62.0 | 109.8 | 98.0 | 60.2 | 41.9 | 41.9 |
| 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)