

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: P961387

Luminaire Tested: **NAV-SB2A-730-U-T4W**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P961387
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-1)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2A-730-U-T4W
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 3000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9176.8 lumens
Efficiency: N/A
Efficacy: 160.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

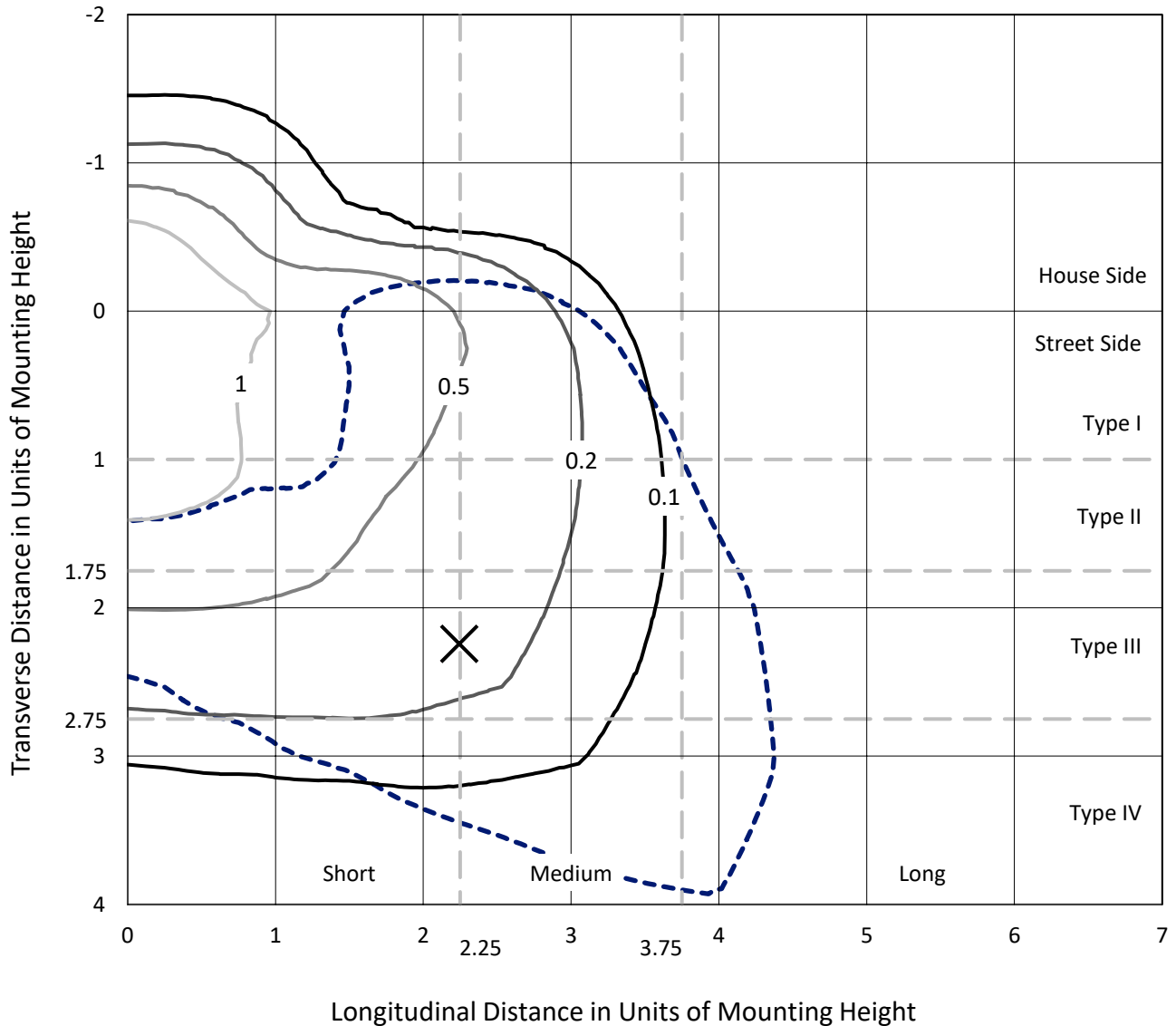
Input Watts (W): 57.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

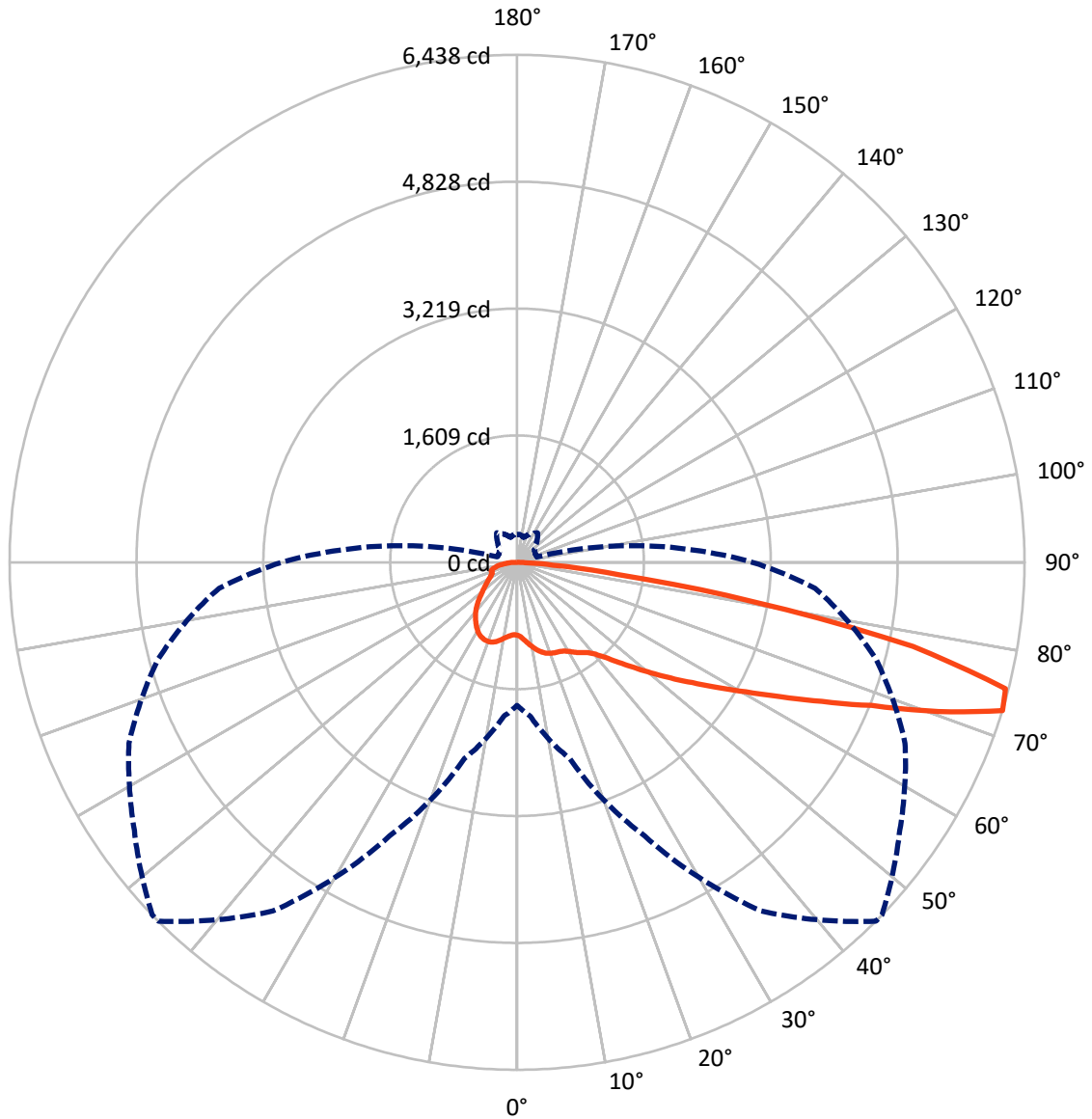
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 fc
 Type IV - Short - N/A

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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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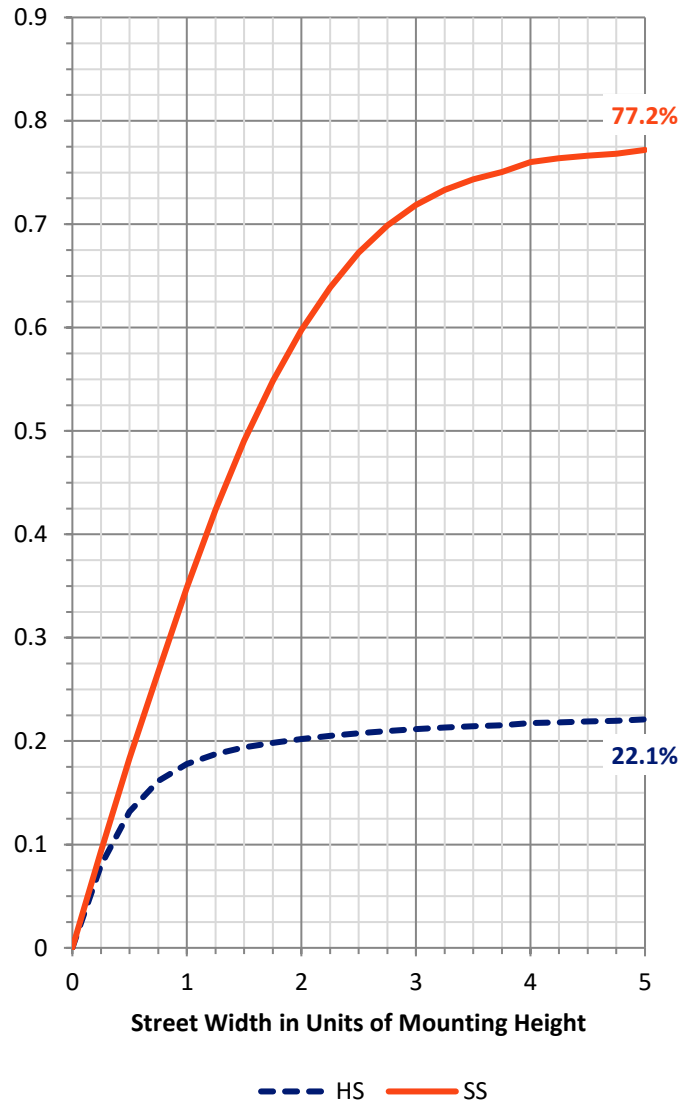
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 2074.6 | 0.0 | 2074.6 |
| | % Fixture | 22.6 | 0.0 | 22.6 |
| Street Side | Lumens | 7102.3 | 0.0 | 7102.3 |
| | % Fixture | 77.4 | 0.0 | 77.4 |
| Total | Lumens | 9176.8 | 0.0 | 9176.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 94.2 | 1.0 |
| 10°-20° | 314.2 | 3.4 |
| 20°-30° | 546.5 | 6.0 |
| 30°-40° | 783.4 | 8.5 |
| 40°-50° | 1103.1 | 12.0 |
| 50°-60° | 1689.6 | 18.4 |
| 60°-70° | 2447.7 | 26.7 |
| 70°-80° | 1954.6 | 21.3 |
| 80°-90° | 243.4 | 2.7 |
| 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° | 9176.8 | 100.0 |
| 0°-180° | 9176.8 | 100.0 |

Coefficient of Utilization



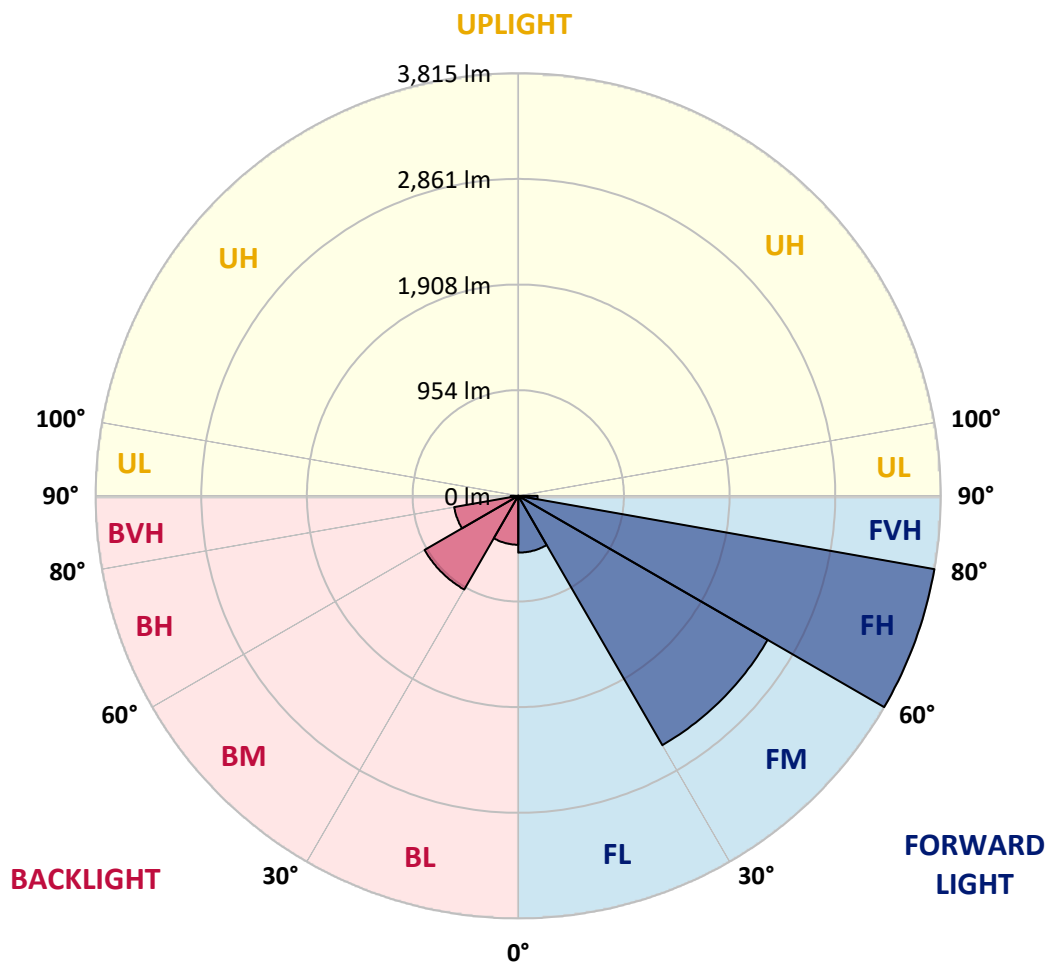
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 513.2 | 5.6 | | | |
| FM (30°-60°) | 2599.4 | 28.3 | | | |
| FH (60°-80°) | 3815.1 | 41.6 | | | G2/5000 |
| FVH (80°-90°) | 174.6 | 1.9 | | | G2/225 |
| BL (0°-30°) | 441.7 | 4.8 | B1/500 | | |
| BM (30°-60°) | 976.8 | 10.6 | B1/1000 | | |
| BH (60°-80°) | 587.3 | 6.4 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 68.8 | 0.7 | | | 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° | 45° | 46° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 |
| 2.5° | 962.1 | 968.3 | 962.5 | 957.1 | 954.8 | 948.5 | 948.0 | 944.1 | 941.7 | 934.9 | 933.1 |
| 5° | 1029.2 | 1037.4 | 1027.8 | 1017.1 | 1007.5 | 992.0 | 990.0 | 979.0 | 966.4 | 951.9 | 943.6 |
| 7.5° | 1105.2 | 1112.3 | 1101.3 | 1085.3 | 1068.4 | 1042.7 | 1042.2 | 1021.9 | 1002.1 | 977.4 | 963.5 |
| 10° | 1171.4 | 1181.0 | 1166.0 | 1144.3 | 1123.0 | 1094.0 | 1090.6 | 1067.4 | 1042.2 | 1010.3 | 989.1 |
| 12.5° | 1229.8 | 1236.6 | 1222.1 | 1195.6 | 1170.9 | 1141.8 | 1137.5 | 1111.9 | 1083.8 | 1047.6 | 1020.5 |
| 15° | 1276.2 | 1284.9 | 1265.6 | 1237.1 | 1210.9 | 1182.4 | 1178.5 | 1155.4 | 1127.4 | 1089.2 | 1054.3 |
| 17.5° | 1306.7 | 1313.9 | 1294.2 | 1262.2 | 1237.1 | 1213.4 | 1210.5 | 1191.2 | 1166.6 | 1127.8 | 1090.6 |
| 20° | 1318.4 | 1326.0 | 1305.2 | 1272.8 | 1249.7 | 1231.3 | 1229.8 | 1215.9 | 1198.9 | 1163.6 | 1125.9 |
| 22.5° | 1329.9 | 1337.1 | 1310.1 | 1276.2 | 1255.9 | 1244.4 | 1243.8 | 1234.7 | 1227.9 | 1198.9 | 1162.1 |
| 25° | 1376.8 | 1378.7 | 1342.4 | 1293.7 | 1264.6 | 1254.5 | 1254.0 | 1253.6 | 1256.4 | 1233.7 | 1201.3 |
| 27.5° | 1417.4 | 1417.0 | 1386.0 | 1340.1 | 1295.1 | 1273.9 | 1273.4 | 1278.2 | 1287.4 | 1268.5 | 1241.9 |
| 30° | 1476.8 | 1471.6 | 1434.8 | 1386.9 | 1345.8 | 1313.0 | 1310.1 | 1305.7 | 1313.0 | 1298.0 | 1282.6 |
| 32.5° | 1603.0 | 1586.1 | 1526.6 | 1441.6 | 1388.0 | 1362.7 | 1358.9 | 1331.9 | 1334.8 | 1325.5 | 1317.8 |
| 35° | 1783.8 | 1761.6 | 1682.3 | 1545.0 | 1440.1 | 1404.4 | 1402.4 | 1368.1 | 1362.3 | 1354.1 | 1357.0 |
| 37.5° | 1999.0 | 1971.4 | 1879.1 | 1694.9 | 1530.0 | 1452.7 | 1449.8 | 1418.9 | 1395.1 | 1386.5 | 1402.9 |
| 40° | 2215.0 | 2180.3 | 2103.9 | 1877.6 | 1662.6 | 1533.4 | 1524.3 | 1477.3 | 1450.3 | 1435.8 | 1470.6 |
| 42.5° | 2424.8 | 2395.8 | 2330.6 | 2082.6 | 1825.9 | 1651.4 | 1631.1 | 1550.8 | 1530.5 | 1517.0 | 1579.8 |
| 45° | 2610.5 | 2584.4 | 2536.6 | 2301.6 | 2017.3 | 1811.9 | 1792.1 | 1661.0 | 1654.8 | 1654.8 | 1745.7 |
| 47.5° | 2761.4 | 2755.5 | 2704.8 | 2525.0 | 2243.1 | 1994.6 | 1960.3 | 1814.4 | 1831.3 | 1857.3 | 1981.1 |
| 50° | 2928.6 | 2912.6 | 2858.5 | 2745.0 | 2508.5 | 2204.0 | 2175.9 | 2002.3 | 2065.7 | 2137.2 | 2321.4 |
| 52.5° | 3082.4 | 3091.0 | 3030.6 | 2974.0 | 2808.2 | 2437.4 | 2388.1 | 2224.2 | 2361.1 | 2479.5 | 2720.2 |
| 55° | 3240.4 | 3240.8 | 3223.9 | 3216.2 | 3122.5 | 2695.5 | 2641.4 | 2491.1 | 2708.7 | 2855.6 | 3185.3 |
| 57.5° | 3388.9 | 3389.8 | 3414.9 | 3483.1 | 3486.9 | 2993.4 | 2932.0 | 2818.9 | 3094.9 | 3244.7 | 3664.9 |
| 60° | 3521.3 | 3528.0 | 3596.7 | 3756.2 | 3807.5 | 3334.6 | 3276.7 | 3206.1 | 3494.2 | 3645.0 | 4169.1 |
| 62.5° | 3565.8 | 3590.4 | 3743.2 | 3969.9 | 4124.1 | 3753.3 | 3696.3 | 3654.2 | 3913.9 | 4054.0 | 4590.7 |
| 65° | 3490.3 | 3546.9 | 3842.3 | 4146.3 | 4449.9 | 4250.8 | 4194.2 | 4148.3 | 4349.9 | 4481.8 | 4936.7 |
| 67.5° | 3305.2 | 3378.2 | 3836.5 | 4331.5 | 4845.4 | 4849.3 | 4796.6 | 4688.8 | 4817.4 | 4868.1 | 5049.4 |
| 70° | 2817.4 | 2926.7 | 3498.5 | 4400.6 | 5299.4 | 5667.7 | 5616.9 | 5339.4 | 5283.9 | 5038.3 | 4732.2 |
| 72.5° | 1815.3 | 1962.3 | 2576.1 | 3831.7 | 5400.3 | 6437.8 | 6435.0 | 5926.9 | 5431.3 | 4707.6 | 3795.4 |
| 75° | 662.3 | 752.2 | 1197.0 | 2405.1 | 4533.1 | 6398.7 | 6417.5 | 5826.3 | 4958.0 | 3636.3 | 2364.5 |
| 77.5° | 241.2 | 263.9 | 390.6 | 924.3 | 2787.9 | 5134.0 | 5173.2 | 4657.8 | 3529.0 | 1824.9 | 936.8 |
| 80° | 126.7 | 139.2 | 200.2 | 358.7 | 1194.5 | 3049.0 | 3110.4 | 2768.1 | 1658.7 | 549.7 | 280.8 |
| 82.5° | 70.1 | 75.8 | 112.1 | 194.9 | 538.0 | 1303.8 | 1340.5 | 1093.5 | 583.5 | 233.0 | 116.0 |
| 85° | 37.7 | 40.1 | 52.7 | 106.4 | 263.0 | 452.0 | 462.2 | 326.8 | 232.6 | 136.8 | 56.1 |
| 87.5° | 11.1 | 13.5 | 17.4 | 33.8 | 103.0 | 101.5 | 103.9 | 64.8 | 91.8 | 69.1 | 18.3 |
| 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° | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 | 925.8 |
| 2.5° | 930.1 | 928.6 | 923.3 | 921.0 | 918.0 | 917.6 | 919.9 | 920.4 | 921.0 | 921.4 | 923.3 |
| 5° | 938.8 | 934.0 | 929.2 | 926.3 | 927.2 | 927.7 | 932.5 | 935.9 | 938.3 | 940.2 | 941.3 |
| 7.5° | 955.7 | 951.9 | 943.6 | 943.2 | 944.6 | 948.9 | 955.3 | 963.0 | 967.3 | 970.7 | 971.7 |
| 10° | 980.8 | 973.6 | 963.9 | 965.4 | 968.3 | 974.6 | 987.7 | 993.9 | 1001.2 | 1007.5 | 1006.0 |
| 12.5° | 1006.4 | 1000.2 | 989.1 | 990.0 | 994.9 | 1006.0 | 1018.5 | 1026.3 | 1031.1 | 1036.0 | 1037.9 |
| 15° | 1039.9 | 1028.7 | 1016.7 | 1016.7 | 1025.3 | 1037.4 | 1043.2 | 1049.5 | 1052.5 | 1057.7 | 1059.6 |
| 17.5° | 1074.2 | 1059.6 | 1043.8 | 1042.7 | 1053.4 | 1059.2 | 1062.6 | 1063.5 | 1064.5 | 1070.3 | 1072.3 |
| 20° | 1108.5 | 1092.5 | 1069.8 | 1067.8 | 1070.3 | 1069.4 | 1068.9 | 1067.8 | 1069.4 | 1076.6 | 1079.5 |
| 22.5° | 1142.4 | 1124.0 | 1092.5 | 1083.8 | 1077.1 | 1067.8 | 1067.4 | 1066.9 | 1067.8 | 1075.1 | 1079.9 |
| 25° | 1182.0 | 1159.8 | 1117.7 | 1091.6 | 1068.9 | 1056.3 | 1057.7 | 1058.2 | 1059.2 | 1065.0 | 1072.8 |
| 27.5° | 1225.0 | 1200.4 | 1140.9 | 1089.2 | 1048.1 | 1039.4 | 1037.0 | 1038.4 | 1041.8 | 1050.9 | 1060.2 |
| 30° | 1268.0 | 1239.0 | 1162.1 | 1079.5 | 1021.9 | 1009.8 | 1002.1 | 1005.5 | 1016.2 | 1025.3 | 1035.5 |
| 32.5° | 1307.2 | 1278.2 | 1179.1 | 1058.2 | 988.6 | 969.8 | 959.6 | 963.9 | 974.6 | 978.0 | 990.0 |
| 35° | 1353.1 | 1320.2 | 1186.3 | 1024.4 | 952.3 | 923.3 | 909.8 | 903.5 | 908.9 | 905.5 | 916.1 |
| 37.5° | 1404.4 | 1370.0 | 1185.4 | 979.9 | 909.8 | 876.5 | 857.6 | 833.9 | 822.8 | 811.2 | 818.5 |
| 40° | 1480.3 | 1430.9 | 1173.7 | 926.3 | 857.1 | 826.7 | 792.8 | 752.7 | 727.5 | 704.8 | 706.3 |
| 42.5° | 1583.7 | 1515.6 | 1152.5 | 867.3 | 797.7 | 769.2 | 723.2 | 676.3 | 636.6 | 599.0 | 595.6 |
| 45° | 1737.9 | 1626.3 | 1125.9 | 804.4 | 733.4 | 705.3 | 655.5 | 602.8 | 557.9 | 509.5 | 503.7 |
| 47.5° | 1960.3 | 1775.1 | 1100.7 | 732.9 | 665.6 | 640.0 | 595.1 | 546.2 | 493.1 | 446.2 | 440.9 |
| 50° | 2265.9 | 1988.8 | 1077.6 | 663.3 | 599.0 | 579.6 | 543.9 | 494.0 | 440.4 | 402.7 | 400.3 |
| 52.5° | 2654.5 | 2279.4 | 1067.8 | 596.0 | 536.6 | 529.3 | 500.8 | 454.4 | 403.6 | 371.8 | 369.3 |
| 55° | 3100.7 | 2627.0 | 1067.8 | 531.8 | 482.0 | 484.4 | 464.5 | 421.6 | 377.5 | 349.0 | 346.1 |
| 57.5° | 3556.1 | 2978.9 | 1048.6 | 472.3 | 435.5 | 445.7 | 433.2 | 395.4 | 355.8 | 326.4 | 321.4 |
| 60° | 3975.7 | 3273.7 | 970.3 | 418.2 | 394.5 | 410.4 | 402.2 | 369.8 | 321.4 | 296.8 | 292.9 |
| 62.5° | 4298.1 | 3440.1 | 819.4 | 375.2 | 360.6 | 379.0 | 374.6 | 336.0 | 315.2 | 305.0 | 301.7 |
| 65° | 4459.6 | 3413.0 | 626.5 | 336.9 | 332.1 | 360.6 | 351.5 | 350.0 | 333.5 | 322.0 | 318.1 |
| 67.5° | 4360.6 | 3180.0 | 454.4 | 308.9 | 315.7 | 343.7 | 379.0 | 384.8 | 354.3 | 331.6 | 327.8 |
| 70° | 3926.0 | 2758.5 | 338.4 | 282.3 | 294.9 | 344.2 | 432.1 | 402.7 | 347.6 | 321.0 | 316.6 |
| 72.5° | 2986.6 | 2057.0 | 262.5 | 254.3 | 267.8 | 346.7 | 455.9 | 394.5 | 328.2 | 354.9 | 352.0 |
| 75° | 1708.0 | 1129.2 | 210.7 | 220.0 | 234.0 | 323.9 | 443.8 | 373.2 | 313.2 | 325.8 | 325.8 |
| 77.5° | 651.2 | 434.1 | 174.0 | 186.1 | 188.1 | 282.8 | 424.5 | 371.8 | 298.3 | 291.0 | 265.4 |
| 80° | 225.8 | 169.6 | 144.0 | 147.9 | 145.5 | 251.4 | 407.0 | 323.4 | 244.2 | 218.5 | 211.3 |
| 82.5° | 92.4 | 84.6 | 114.1 | 109.3 | 103.4 | 195.3 | 328.7 | 264.4 | 199.7 | 176.4 | 174.6 |
| 85° | 40.1 | 53.7 | 75.4 | 66.2 | 60.0 | 135.4 | 263.4 | 223.9 | 168.7 | 145.5 | 145.0 |
| 87.5° | 8.2 | 20.3 | 31.9 | 29.9 | 31.0 | 90.4 | 187.1 | 159.1 | 119.4 | 89.5 | 70.1 |
| 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)