

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: P960860

Luminaire Tested: **NAV-SB1D-730-U-T4W**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P960860
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-SB1D-730-U-T4W
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(1) 70 CRI, 3000K, 900mA LIGHTSQUARE WITH 26 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10414 lumens
Efficiency: N/A
Efficacy: 130.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

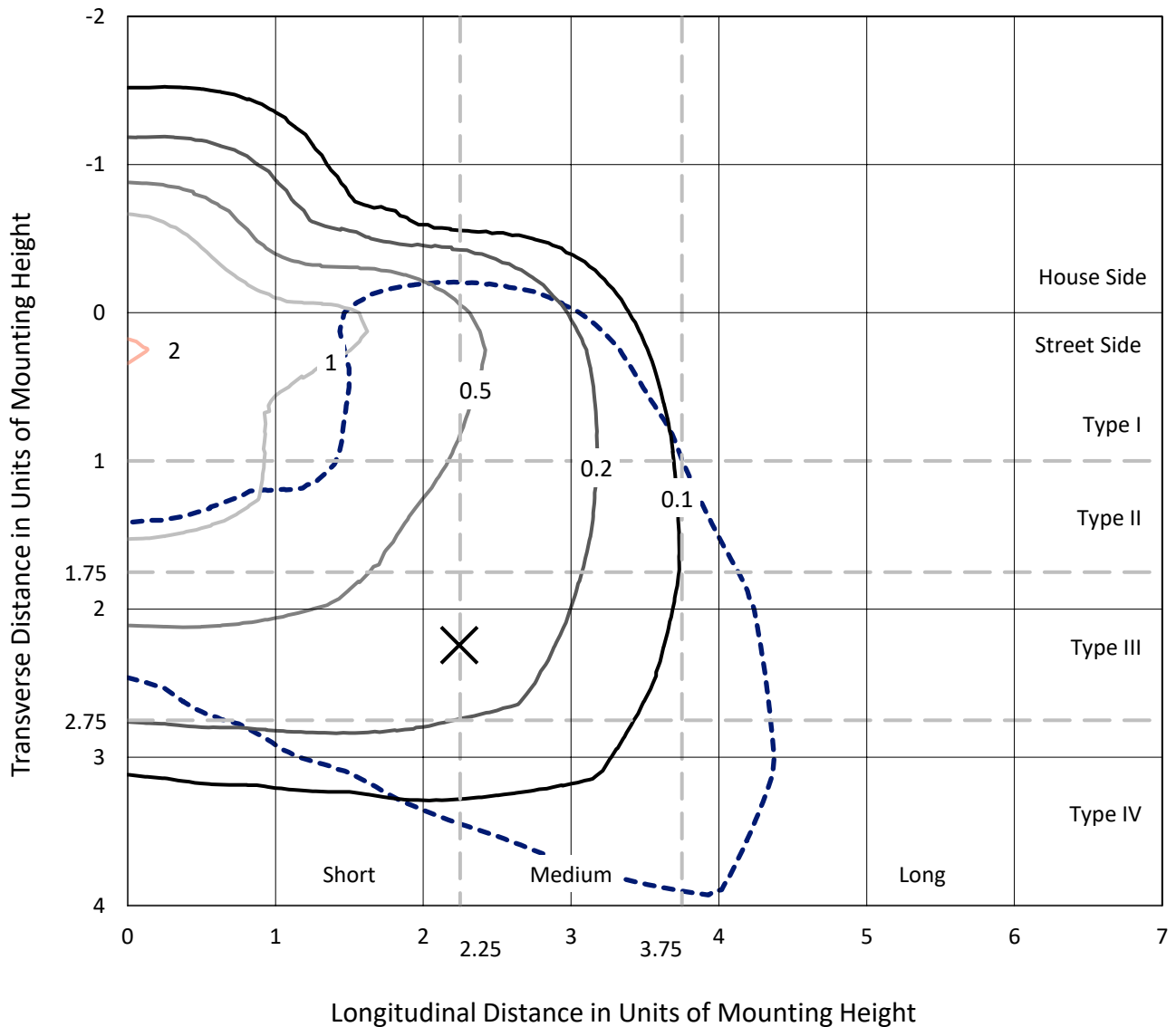
Input Watts (W): 79.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

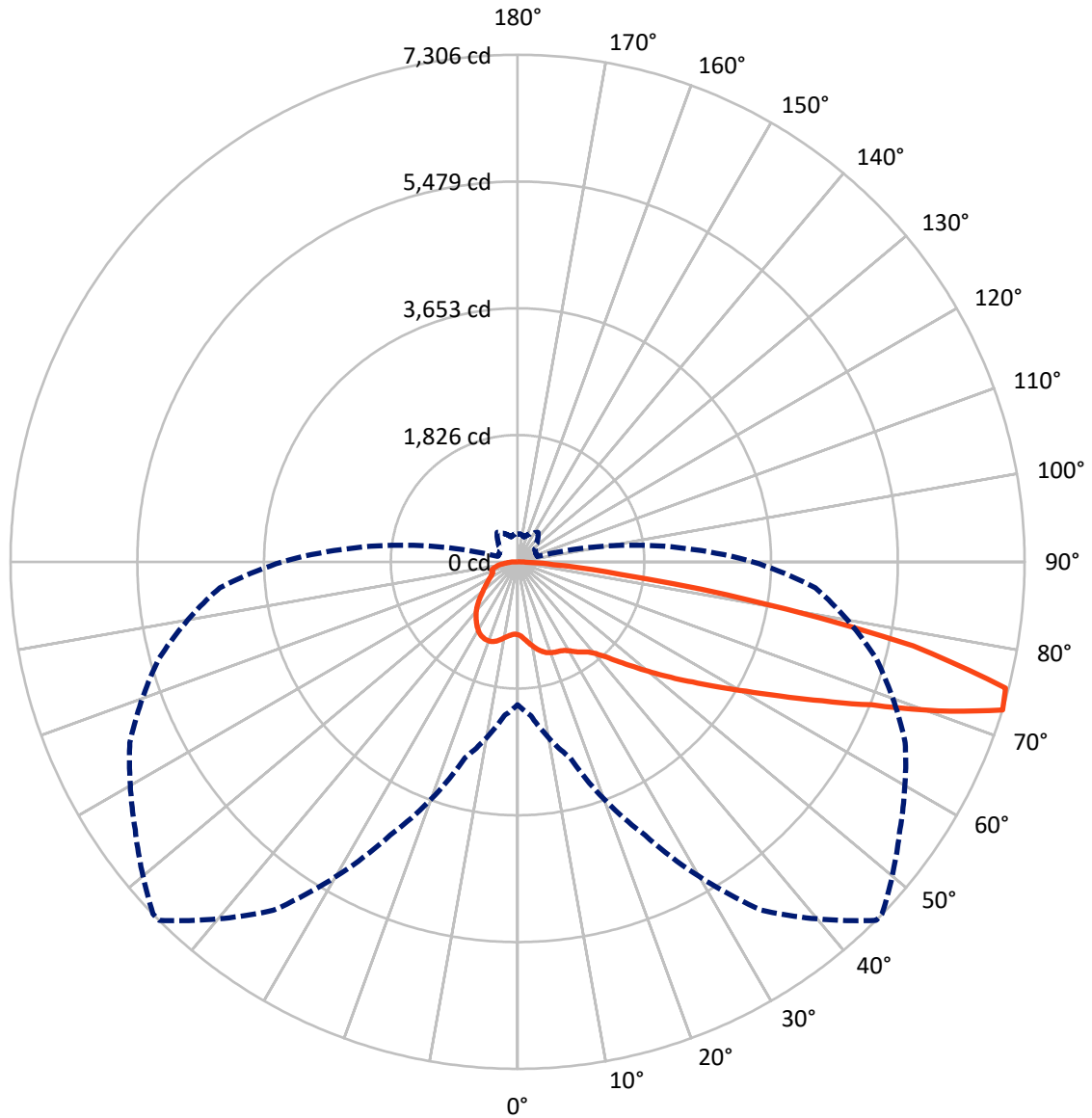
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 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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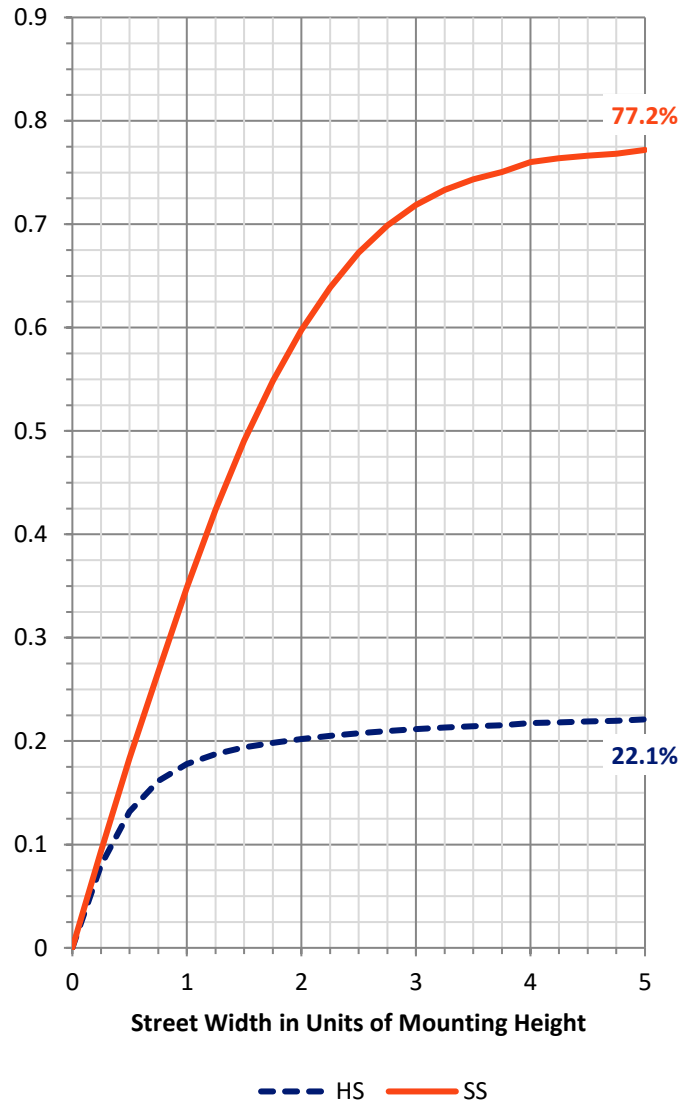
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2354.2 | 0.0 | 2354.2 |
| | % Fixture | 22.6 | 0.0 | 22.6 |
| Street Side | Lumens | 8059.8 | 0.0 | 8059.8 |
| | % Fixture | 77.4 | 0.0 | 77.4 |
| Total | Lumens | 10414.0 | 0.0 | 10414.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 106.9 | 1.0 |
| 10°-20° | 356.5 | 3.4 |
| 20°-30° | 620.2 | 6.0 |
| 30°-40° | 889.0 | 8.5 |
| 40°-50° | 1251.8 | 12.0 |
| 50°-60° | 1917.4 | 18.4 |
| 60°-70° | 2777.7 | 26.7 |
| 70°-80° | 2218.1 | 21.3 |
| 80°-90° | 276.3 | 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° | 10414.0 | 100.0 |
| 0°-180° | 10414.0 | 100.0 |

Coefficient of Utilization



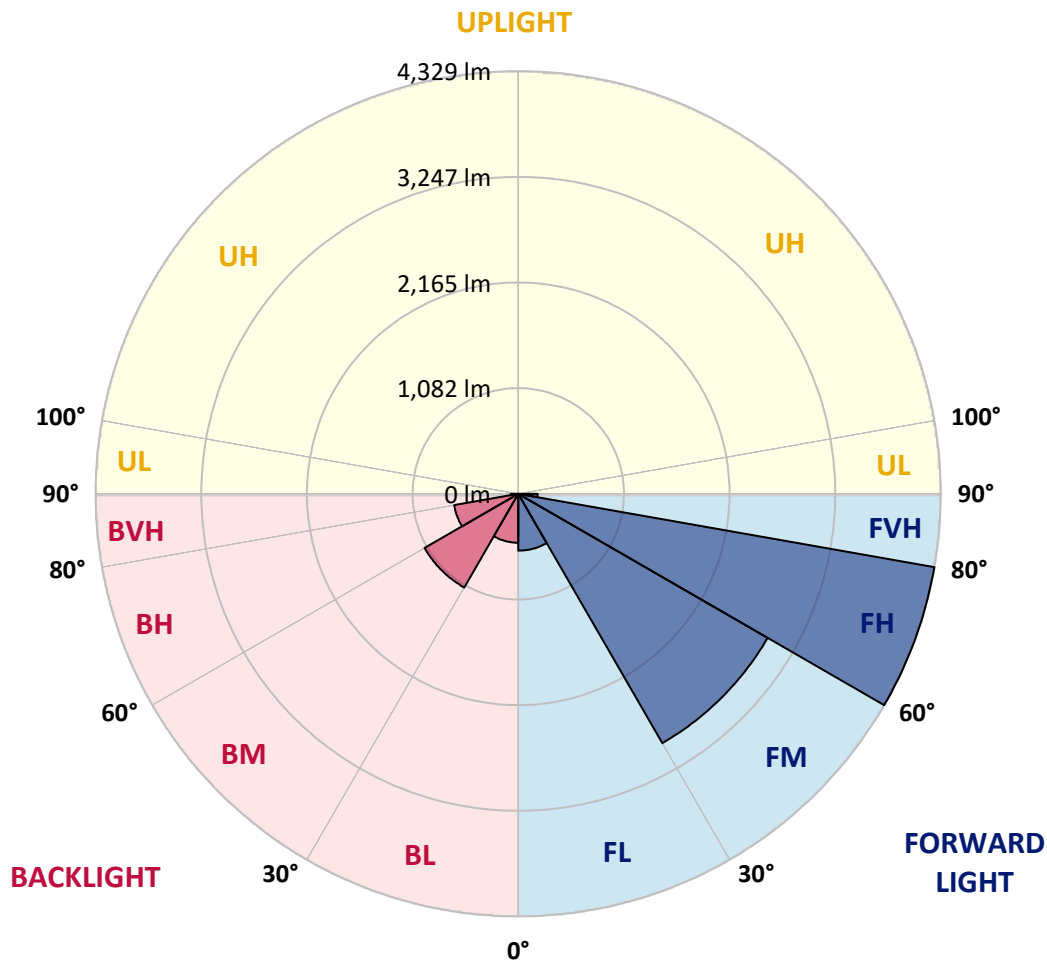
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 582.4 | 5.6 | | | |
| FM (30°-60°) | 2949.8 | 28.3 | | | |
| FH (60°-80°) | 4329.4 | 41.6 | | | G2/5000 |
| FVH (80°-90°) | 198.2 | 1.9 | | | G2/225 |
| BL (0°-30°) | 501.2 | 4.8 | B2/1000 | | |
| BM (30°-60°) | 1108.5 | 10.6 | B2/2500 | | |
| BH (60°-80°) | 666.4 | 6.4 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 78.1 | 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° | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 |
| 2.5° | 1091.7 | 1098.8 | 1092.2 | 1086.2 | 1083.5 | 1076.4 | 1075.8 | 1071.4 | 1068.7 | 1061.0 | 1058.8 |
| 5° | 1168.0 | 1177.3 | 1166.3 | 1154.3 | 1143.3 | 1125.8 | 1123.5 | 1110.9 | 1096.6 | 1080.1 | 1070.8 |
| 7.5° | 1254.1 | 1262.3 | 1249.7 | 1231.6 | 1212.4 | 1183.4 | 1182.7 | 1159.8 | 1137.2 | 1109.3 | 1093.4 |
| 10° | 1329.2 | 1340.2 | 1323.3 | 1298.6 | 1274.4 | 1241.5 | 1237.7 | 1211.3 | 1182.7 | 1146.6 | 1122.5 |
| 12.5° | 1395.6 | 1403.3 | 1386.8 | 1356.7 | 1328.7 | 1295.8 | 1290.9 | 1261.8 | 1230.0 | 1188.8 | 1158.0 |
| 15° | 1448.3 | 1458.2 | 1436.2 | 1403.8 | 1374.2 | 1341.8 | 1337.5 | 1311.2 | 1279.3 | 1236.0 | 1196.5 |
| 17.5° | 1482.9 | 1491.1 | 1468.6 | 1432.4 | 1403.8 | 1377.0 | 1373.7 | 1351.8 | 1323.8 | 1279.9 | 1237.7 |
| 20° | 1496.0 | 1504.8 | 1481.2 | 1444.4 | 1418.1 | 1397.3 | 1395.6 | 1379.8 | 1360.5 | 1320.5 | 1277.7 |
| 22.5° | 1509.2 | 1517.4 | 1486.7 | 1448.3 | 1425.3 | 1412.1 | 1411.5 | 1401.2 | 1393.5 | 1360.5 | 1318.9 |
| 25° | 1562.4 | 1564.6 | 1523.5 | 1468.0 | 1435.1 | 1423.6 | 1423.1 | 1422.5 | 1425.8 | 1400.0 | 1363.2 |
| 27.5° | 1608.5 | 1607.9 | 1572.9 | 1520.7 | 1469.7 | 1445.6 | 1445.0 | 1450.5 | 1460.9 | 1439.5 | 1409.4 |
| 30° | 1676.0 | 1669.9 | 1628.2 | 1573.9 | 1527.4 | 1490.0 | 1486.7 | 1481.7 | 1490.0 | 1473.0 | 1455.4 |
| 32.5° | 1819.2 | 1800.0 | 1732.5 | 1635.9 | 1575.0 | 1546.5 | 1542.1 | 1511.4 | 1514.6 | 1504.3 | 1495.5 |
| 35° | 2024.4 | 1999.1 | 1909.2 | 1753.4 | 1634.3 | 1593.7 | 1591.5 | 1552.6 | 1545.9 | 1536.7 | 1540.0 |
| 37.5° | 2268.4 | 2237.2 | 2132.4 | 1923.4 | 1736.4 | 1648.5 | 1645.2 | 1610.2 | 1583.2 | 1573.4 | 1592.0 |
| 40° | 2513.7 | 2474.1 | 2387.5 | 2130.8 | 1886.6 | 1740.1 | 1729.7 | 1676.5 | 1645.8 | 1629.3 | 1668.8 |
| 42.5° | 2751.8 | 2718.9 | 2644.8 | 2363.3 | 2072.0 | 1874.0 | 1850.9 | 1759.9 | 1736.9 | 1721.5 | 1792.8 |
| 45° | 2962.5 | 2932.8 | 2878.5 | 2611.9 | 2289.3 | 2056.1 | 2033.7 | 1885.0 | 1877.9 | 1877.9 | 1981.0 |
| 47.5° | 3133.6 | 3127.1 | 3069.5 | 2865.4 | 2545.5 | 2263.5 | 2224.6 | 2058.9 | 2078.1 | 2107.7 | 2248.1 |
| 50° | 3323.5 | 3305.3 | 3243.9 | 3115.0 | 2846.7 | 2501.1 | 2469.2 | 2272.3 | 2344.2 | 2425.4 | 2634.4 |
| 52.5° | 3497.9 | 3507.8 | 3439.2 | 3375.0 | 3186.8 | 2766.1 | 2710.1 | 2524.1 | 2679.4 | 2813.7 | 3087.0 |
| 55° | 3677.3 | 3677.8 | 3658.6 | 3649.8 | 3543.4 | 3059.0 | 2997.5 | 2827.0 | 3073.8 | 3240.5 | 3614.8 |
| 57.5° | 3845.7 | 3846.8 | 3875.3 | 3952.7 | 3957.0 | 3397.0 | 3327.3 | 3198.9 | 3512.2 | 3682.2 | 4158.9 |
| 60° | 3996.0 | 4003.6 | 4081.6 | 4262.7 | 4320.8 | 3784.2 | 3718.4 | 3638.3 | 3965.3 | 4136.5 | 4731.1 |
| 62.5° | 4046.5 | 4074.5 | 4247.8 | 4505.1 | 4680.2 | 4259.3 | 4194.6 | 4146.8 | 4441.4 | 4600.6 | 5209.5 |
| 65° | 3960.9 | 4025.1 | 4360.2 | 4705.4 | 5049.9 | 4823.9 | 4759.7 | 4707.5 | 4936.3 | 5086.0 | 5602.3 |
| 67.5° | 3750.8 | 3833.6 | 4353.7 | 4915.5 | 5498.6 | 5503.0 | 5443.3 | 5320.9 | 5466.8 | 5524.4 | 5730.2 |
| 70° | 3197.3 | 3321.2 | 3970.2 | 4993.9 | 6013.8 | 6431.8 | 6374.2 | 6059.3 | 5996.2 | 5717.6 | 5370.3 |
| 72.5° | 2060.0 | 2226.8 | 2923.5 | 4348.3 | 6128.4 | 7305.7 | 7302.4 | 6725.8 | 6163.5 | 5342.3 | 4307.0 |
| 75° | 751.6 | 853.6 | 1358.3 | 2729.3 | 5144.3 | 7261.3 | 7282.6 | 6611.8 | 5626.4 | 4126.5 | 2683.2 |
| 77.5° | 273.8 | 299.5 | 443.3 | 1048.9 | 3163.8 | 5826.1 | 5870.6 | 5285.7 | 4004.8 | 2071.0 | 1063.2 |
| 80° | 143.7 | 158.0 | 227.1 | 407.0 | 1355.6 | 3460.0 | 3529.7 | 3141.3 | 1882.2 | 623.7 | 318.8 |
| 82.5° | 79.5 | 86.1 | 127.3 | 221.1 | 610.6 | 1479.6 | 1521.3 | 1241.0 | 662.2 | 264.4 | 131.7 |
| 85° | 42.7 | 45.5 | 59.8 | 120.6 | 298.5 | 512.9 | 524.5 | 370.8 | 263.8 | 155.3 | 63.7 |
| 87.5° | 12.6 | 15.4 | 19.8 | 38.4 | 116.8 | 115.2 | 118.0 | 73.5 | 104.2 | 78.4 | 20.8 |
| 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° | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 | 1050.5 |
| 2.5° | 1055.5 | 1053.9 | 1047.9 | 1045.1 | 1041.8 | 1041.2 | 1044.0 | 1044.6 | 1045.1 | 1045.6 | 1047.9 |
| 5° | 1065.4 | 1059.8 | 1054.4 | 1051.1 | 1052.3 | 1052.8 | 1058.2 | 1062.1 | 1064.9 | 1067.0 | 1068.2 |
| 7.5° | 1084.6 | 1080.1 | 1070.8 | 1070.3 | 1071.9 | 1076.9 | 1084.0 | 1092.9 | 1097.8 | 1101.6 | 1102.7 |
| 10° | 1113.1 | 1104.8 | 1093.9 | 1095.5 | 1098.8 | 1106.0 | 1120.8 | 1127.9 | 1136.1 | 1143.3 | 1141.6 |
| 12.5° | 1142.2 | 1135.1 | 1122.5 | 1123.5 | 1129.0 | 1141.6 | 1155.9 | 1164.7 | 1170.1 | 1175.7 | 1177.8 |
| 15° | 1180.1 | 1167.4 | 1153.7 | 1153.7 | 1163.6 | 1177.3 | 1183.9 | 1191.0 | 1194.3 | 1200.4 | 1202.5 |
| 17.5° | 1219.0 | 1202.5 | 1184.4 | 1183.4 | 1195.4 | 1202.0 | 1205.8 | 1206.9 | 1208.1 | 1214.6 | 1216.8 |
| 20° | 1258.0 | 1239.8 | 1214.0 | 1211.9 | 1214.6 | 1213.5 | 1213.0 | 1211.9 | 1213.5 | 1221.7 | 1225.0 |
| 22.5° | 1296.3 | 1275.5 | 1239.8 | 1230.0 | 1222.3 | 1211.9 | 1211.3 | 1210.7 | 1211.9 | 1220.1 | 1225.6 |
| 25° | 1341.3 | 1316.1 | 1268.3 | 1238.7 | 1213.0 | 1198.7 | 1200.4 | 1200.9 | 1202.0 | 1208.6 | 1217.4 |
| 27.5° | 1390.1 | 1362.2 | 1294.7 | 1236.0 | 1189.4 | 1179.5 | 1176.7 | 1178.4 | 1182.2 | 1192.7 | 1203.0 |
| 30° | 1439.0 | 1406.1 | 1318.9 | 1225.0 | 1159.8 | 1146.1 | 1137.2 | 1141.1 | 1153.1 | 1163.6 | 1175.1 |
| 32.5° | 1483.4 | 1450.5 | 1338.0 | 1200.9 | 1121.9 | 1100.5 | 1089.0 | 1093.9 | 1106.0 | 1109.9 | 1123.5 |
| 35° | 1535.6 | 1498.2 | 1346.2 | 1162.5 | 1080.8 | 1047.9 | 1032.5 | 1025.3 | 1031.4 | 1027.6 | 1039.6 |
| 37.5° | 1593.7 | 1554.7 | 1345.2 | 1112.0 | 1032.5 | 994.7 | 973.2 | 946.4 | 933.7 | 920.6 | 928.8 |
| 40° | 1679.8 | 1623.9 | 1332.0 | 1051.1 | 972.6 | 938.1 | 899.7 | 854.1 | 825.6 | 799.9 | 801.6 |
| 42.5° | 1797.2 | 1719.8 | 1307.9 | 984.2 | 905.2 | 872.8 | 820.7 | 767.5 | 722.5 | 679.7 | 675.9 |
| 45° | 1972.2 | 1845.5 | 1277.7 | 912.9 | 832.2 | 800.4 | 743.9 | 684.1 | 633.0 | 578.2 | 571.6 |
| 47.5° | 2224.6 | 2014.4 | 1249.2 | 831.7 | 755.4 | 726.3 | 675.4 | 619.9 | 559.5 | 506.4 | 500.3 |
| 50° | 2571.3 | 2256.9 | 1222.8 | 752.7 | 679.7 | 657.7 | 617.2 | 560.7 | 499.8 | 456.9 | 454.3 |
| 52.5° | 3012.4 | 2586.7 | 1211.9 | 676.4 | 609.0 | 600.8 | 568.4 | 515.7 | 458.1 | 421.9 | 419.1 |
| 55° | 3518.7 | 2981.1 | 1211.9 | 603.4 | 546.9 | 549.7 | 527.2 | 478.4 | 428.4 | 396.1 | 392.8 |
| 57.5° | 4035.5 | 3380.4 | 1189.9 | 536.0 | 494.3 | 505.8 | 491.6 | 448.7 | 403.7 | 370.3 | 364.8 |
| 60° | 4511.6 | 3715.1 | 1101.1 | 474.6 | 447.6 | 465.8 | 456.4 | 419.6 | 364.8 | 336.8 | 332.4 |
| 62.5° | 4877.6 | 3903.8 | 929.9 | 425.7 | 409.3 | 430.1 | 425.2 | 381.3 | 357.7 | 346.1 | 342.3 |
| 65° | 5060.8 | 3873.2 | 710.9 | 382.3 | 376.9 | 409.3 | 398.8 | 397.2 | 378.5 | 365.4 | 361.0 |
| 67.5° | 4948.4 | 3608.7 | 515.7 | 350.5 | 358.2 | 390.0 | 430.1 | 436.6 | 402.1 | 376.4 | 372.0 |
| 70° | 4455.2 | 3130.4 | 384.1 | 320.4 | 334.7 | 390.6 | 490.5 | 456.9 | 394.4 | 364.3 | 359.4 |
| 72.5° | 3389.3 | 2334.3 | 297.9 | 288.5 | 303.9 | 393.4 | 517.3 | 447.6 | 372.5 | 402.7 | 399.3 |
| 75° | 1938.2 | 1281.6 | 239.2 | 249.6 | 265.5 | 367.6 | 503.6 | 423.5 | 355.5 | 369.7 | 369.7 |
| 77.5° | 738.9 | 492.6 | 197.5 | 211.3 | 213.4 | 320.9 | 481.6 | 421.9 | 338.5 | 330.3 | 301.1 |
| 80° | 256.1 | 192.6 | 163.5 | 167.9 | 165.1 | 285.3 | 462.0 | 367.1 | 277.1 | 247.9 | 239.7 |
| 82.5° | 104.8 | 96.0 | 129.5 | 124.0 | 117.4 | 221.6 | 373.0 | 300.1 | 226.5 | 200.3 | 198.0 |
| 85° | 45.5 | 60.9 | 85.6 | 75.1 | 68.1 | 153.6 | 299.0 | 254.0 | 191.5 | 165.1 | 164.6 |
| 87.5° | 9.3 | 23.1 | 36.2 | 34.0 | 35.2 | 102.6 | 212.3 | 180.5 | 135.5 | 101.5 | 79.5 |
| 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)