

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: P960841

Luminaire Tested: **NAV-SB1D-730-U-SL4**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P960841
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB1D-730-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(1) 70 CRI, 3000K, 900mA LIGHTSQUARE WITH 26 LEDS AND TYPE IV SPILL LIGHT
ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10342.2 lumens
Efficiency: N/A
Efficacy: 129.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B2 - U0 - G3

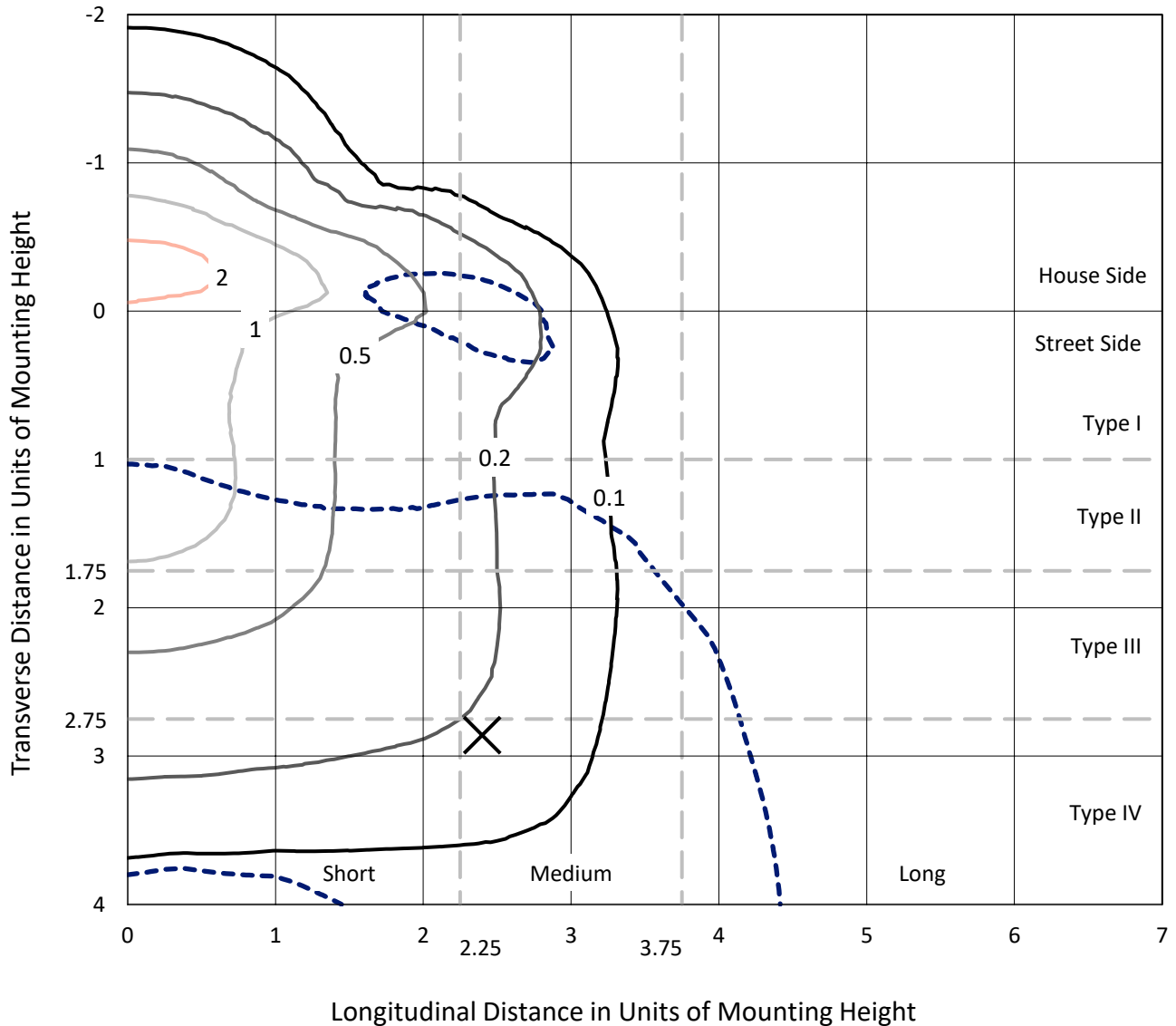
Input Watts (W): 79.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

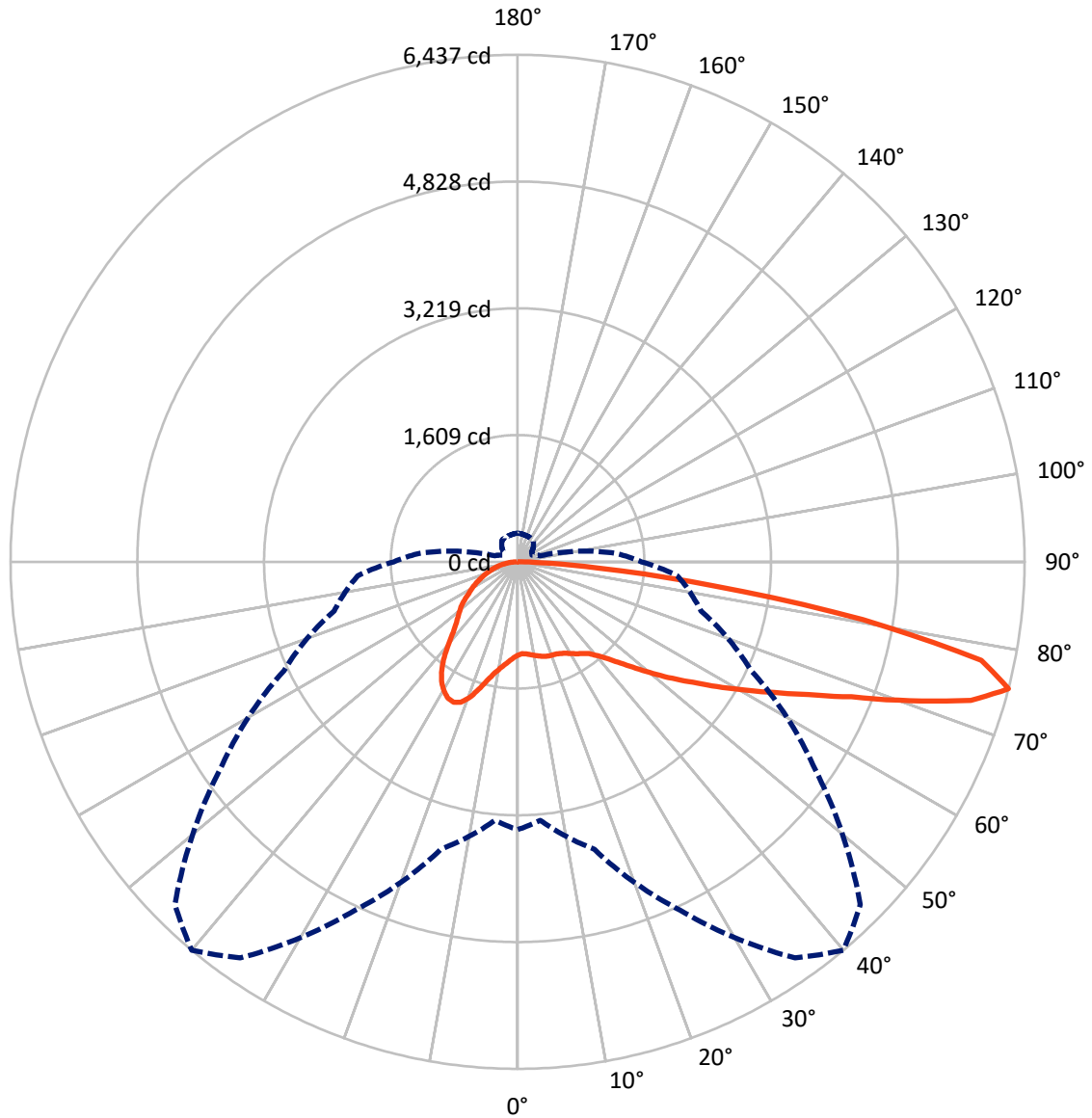
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3204.4 | 0.0 | 3204.4 |
| | % Fixture | 31.0 | 0.0 | 31.0 |
| Street Side | Lumens | 7137.9 | 0.0 | 7137.9 |
| | % Fixture | 69.0 | 0.0 | 69.0 |
| Total | Lumens | 10342.2 | 0.0 | 10342.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 118.1 | 1.1 |
| 10°-20° | 396.4 | 3.8 |
| 20°-30° | 723.7 | 7.0 |
| 30°-40° | 1026.4 | 9.9 |
| 40°-50° | 1386.0 | 13.4 |
| 50°-60° | 1864.5 | 18.0 |
| 60°-70° | 2366.5 | 22.9 |
| 70°-80° | 2147.7 | 20.8 |
| 80°-90° | 313.1 | 3.0 |
| 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° | 10342.2 | 100.0 |
| 0°-180° | 10342.2 | 100.0 |

Coefficient of Utilization

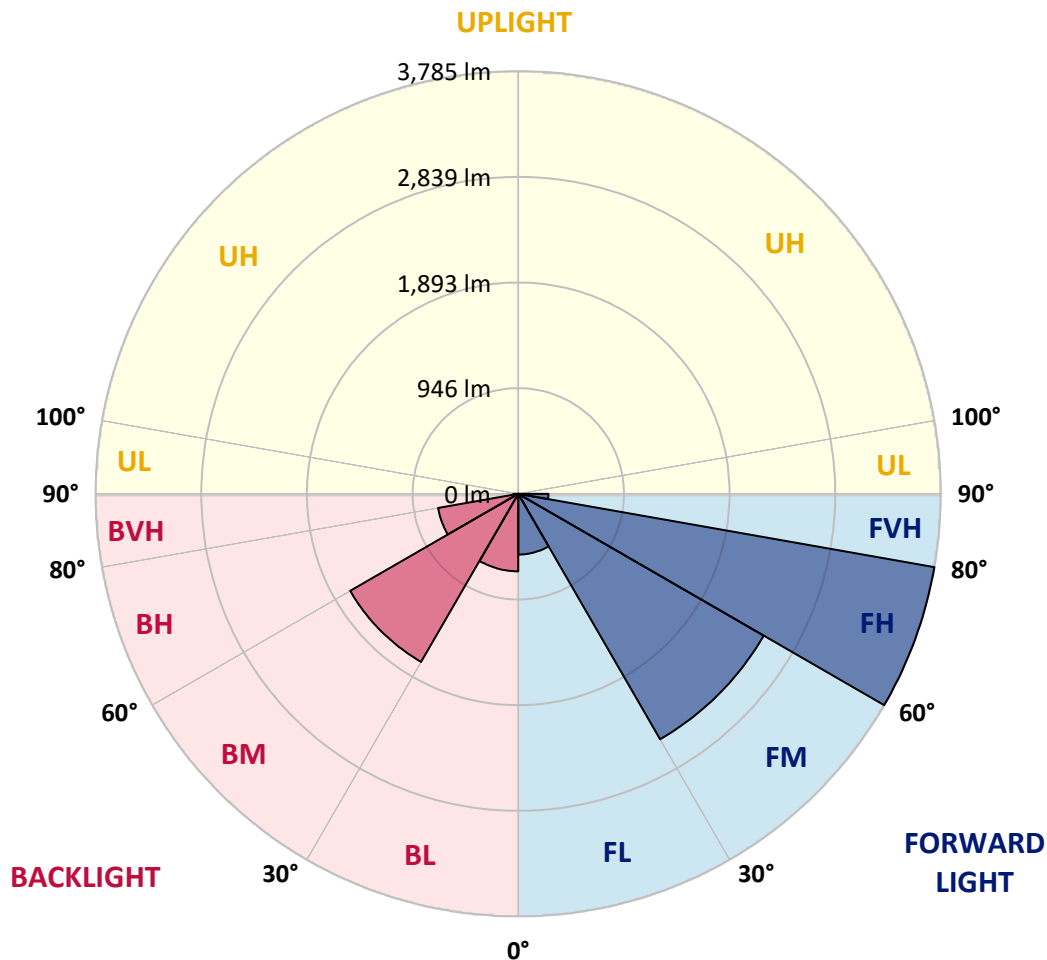


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 544.0 | 5.3 | | | |
| FM (30°-60°) | 2538.8 | 24.5 | | | |
| FH (60°-80°) | 3785.1 | 36.6 | | | G2/5000 |
| FVH (80°-90°) | 270.0 | 2.6 | | | G3/500 |
| BL (0°-30°) | 694.1 | 6.7 | B2/1000 | | |
| BM (30°-60°) | 1738.1 | 16.8 | B2/2500 | | |
| BH (60°-80°) | 729.1 | 7.0 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 43.1 | 0.4 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3
 Type IV Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 |
| 2.5° | 1164.5 | 1171.2 | 1169.5 | 1167.3 | 1167.3 | 1167.3 | 1167.3 | 1171.2 | 1175.0 | 1178.9 | 1184.8 |
| 5° | 1176.6 | 1183.2 | 1179.9 | 1177.2 | 1175.0 | 1175.0 | 1172.8 | 1172.2 | 1174.4 | 1179.4 | 1187.6 |
| 7.5° | 1200.2 | 1206.8 | 1201.8 | 1196.9 | 1192.5 | 1190.3 | 1188.2 | 1184.8 | 1183.2 | 1185.9 | 1197.5 |
| 10° | 1226.5 | 1233.1 | 1227.1 | 1218.3 | 1211.1 | 1208.5 | 1206.2 | 1202.9 | 1200.8 | 1202.4 | 1215.0 |
| 12.5° | 1252.9 | 1259.4 | 1251.2 | 1239.1 | 1229.8 | 1228.2 | 1225.4 | 1224.4 | 1223.7 | 1223.2 | 1235.8 |
| 15° | 1277.6 | 1283.0 | 1272.6 | 1258.4 | 1248.4 | 1245.7 | 1243.0 | 1244.7 | 1247.4 | 1250.7 | 1265.0 |
| 17.5° | 1296.7 | 1302.3 | 1286.9 | 1268.2 | 1258.9 | 1257.8 | 1256.1 | 1261.7 | 1269.4 | 1277.6 | 1295.1 |
| 20° | 1314.3 | 1319.8 | 1300.0 | 1274.8 | 1263.8 | 1263.8 | 1264.3 | 1275.9 | 1286.9 | 1299.0 | 1323.1 |
| 22.5° | 1339.0 | 1343.4 | 1319.3 | 1284.6 | 1268.7 | 1269.9 | 1274.3 | 1285.8 | 1299.5 | 1315.9 | 1349.4 |
| 25° | 1375.8 | 1379.0 | 1349.4 | 1303.3 | 1285.2 | 1288.5 | 1292.3 | 1297.9 | 1311.0 | 1330.2 | 1375.1 |
| 27.5° | 1435.0 | 1437.8 | 1398.8 | 1336.2 | 1308.8 | 1314.3 | 1319.8 | 1315.9 | 1321.9 | 1338.4 | 1396.0 |
| 30° | 1518.3 | 1520.0 | 1470.7 | 1387.8 | 1348.9 | 1351.6 | 1352.7 | 1336.8 | 1325.2 | 1338.4 | 1410.8 |
| 32.5° | 1617.1 | 1616.5 | 1557.9 | 1450.4 | 1394.4 | 1391.6 | 1382.3 | 1351.1 | 1324.2 | 1335.7 | 1424.0 |
| 35° | 1770.2 | 1764.1 | 1688.4 | 1538.1 | 1446.0 | 1429.0 | 1407.0 | 1366.9 | 1329.6 | 1332.9 | 1435.5 |
| 37.5° | 2023.6 | 2004.9 | 1900.1 | 1681.8 | 1522.7 | 1479.4 | 1447.1 | 1392.8 | 1341.7 | 1331.9 | 1449.2 |
| 40° | 2309.3 | 2285.8 | 2170.5 | 1878.7 | 1637.9 | 1568.2 | 1516.2 | 1429.5 | 1361.5 | 1336.8 | 1469.5 |
| 42.5° | 2648.4 | 2614.9 | 2491.0 | 2110.8 | 1783.8 | 1682.9 | 1604.4 | 1476.1 | 1390.5 | 1352.7 | 1497.0 |
| 45° | 3064.6 | 3020.3 | 2844.7 | 2372.5 | 1967.6 | 1833.2 | 1728.5 | 1546.9 | 1435.0 | 1383.4 | 1538.1 |
| 47.5° | 3485.4 | 3496.4 | 3246.8 | 2672.0 | 2188.2 | 2018.6 | 1883.6 | 1653.3 | 1499.7 | 1432.7 | 1604.4 |
| 50° | 3932.5 | 3940.2 | 3646.6 | 3003.8 | 2438.3 | 2228.1 | 2058.1 | 1772.3 | 1589.7 | 1503.0 | 1703.8 |
| 52.5° | 4281.3 | 4282.4 | 4009.8 | 3351.0 | 2698.8 | 2458.6 | 2246.3 | 1908.3 | 1693.9 | 1596.2 | 1836.0 |
| 55° | 4499.6 | 4496.9 | 4264.3 | 3679.6 | 2998.3 | 2700.5 | 2454.7 | 2063.0 | 1821.1 | 1705.9 | 2002.1 |
| 57.5° | 4658.2 | 4650.0 | 4439.9 | 3962.1 | 3317.5 | 2986.2 | 2690.6 | 2238.6 | 1971.5 | 1836.5 | 2221.1 |
| 60° | 4718.5 | 4713.6 | 4558.9 | 4206.2 | 3653.3 | 3302.2 | 2962.7 | 2435.0 | 2142.0 | 1990.7 | 2502.4 |
| 62.5° | 4741.5 | 4750.9 | 4675.7 | 4442.7 | 4012.6 | 3652.2 | 3261.7 | 2669.7 | 2334.0 | 2165.1 | 2799.2 |
| 65° | 4822.7 | 4839.7 | 4824.4 | 4752.0 | 4418.5 | 4062.0 | 3658.2 | 2948.9 | 2543.5 | 2352.2 | 3109.1 |
| 67.5° | 4983.4 | 5000.5 | 5007.0 | 5122.2 | 4914.4 | 4572.6 | 4153.0 | 3296.7 | 2788.8 | 2546.3 | 3342.2 |
| 70° | 4979.7 | 4974.7 | 5091.0 | 5416.8 | 5535.3 | 5279.7 | 4820.1 | 3724.5 | 3081.1 | 2707.5 | 3371.8 |
| 72.5° | 4532.5 | 4493.1 | 4767.9 | 5413.5 | 6052.0 | 6018.0 | 5634.6 | 4276.4 | 3333.5 | 2727.3 | 2925.9 |
| 75° | 3400.4 | 3295.1 | 3780.5 | 4878.7 | 6138.1 | 6437.1 | 6152.5 | 4618.6 | 3273.6 | 2409.8 | 2036.2 |
| 77.5° | 1454.2 | 1348.3 | 1920.4 | 3611.6 | 5493.6 | 6017.5 | 5677.4 | 4029.6 | 2613.2 | 1593.5 | 1000.0 |
| 80° | 380.7 | 380.2 | 580.4 | 1637.4 | 3736.1 | 4443.7 | 3898.5 | 2602.3 | 1493.1 | 569.4 | 275.9 |
| 82.5° | 157.4 | 153.5 | 213.4 | 636.8 | 1825.5 | 2493.6 | 2035.0 | 1160.7 | 539.3 | 154.2 | 91.6 |
| 85° | 58.7 | 58.1 | 103.6 | 220.0 | 644.0 | 1028.5 | 744.4 | 296.7 | 134.4 | 75.1 | 41.1 |
| 87.5° | 16.5 | 15.9 | 22.4 | 76.3 | 156.9 | 238.1 | 127.3 | 48.8 | 37.8 | 29.6 | 12.1 |
| 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° | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 | 1182.6 |
| 2.5° | 1186.5 | 1189.2 | 1194.1 | 1198.0 | 1202.9 | 1208.5 | 1216.1 | 1221.1 | 1226.0 | 1229.3 | 1227.1 |
| 5° | 1191.5 | 1197.5 | 1210.1 | 1222.7 | 1237.5 | 1251.2 | 1267.1 | 1278.7 | 1288.0 | 1290.7 | 1291.8 |
| 7.5° | 1202.4 | 1212.3 | 1233.7 | 1255.0 | 1278.7 | 1301.1 | 1324.2 | 1343.9 | 1359.9 | 1365.8 | 1366.4 |
| 10° | 1221.6 | 1234.7 | 1265.0 | 1295.1 | 1326.4 | 1360.9 | 1390.5 | 1419.1 | 1441.6 | 1450.9 | 1451.4 |
| 12.5° | 1245.7 | 1262.2 | 1301.6 | 1343.4 | 1386.7 | 1434.4 | 1472.8 | 1508.0 | 1535.9 | 1548.6 | 1548.6 |
| 15° | 1277.0 | 1298.4 | 1348.9 | 1404.8 | 1468.4 | 1534.8 | 1583.6 | 1622.6 | 1653.8 | 1669.2 | 1668.1 |
| 17.5° | 1311.0 | 1339.6 | 1403.1 | 1487.7 | 1578.7 | 1665.9 | 1722.9 | 1751.5 | 1783.8 | 1798.7 | 1798.2 |
| 20° | 1343.9 | 1379.0 | 1470.1 | 1593.0 | 1714.2 | 1806.9 | 1853.0 | 1860.7 | 1862.8 | 1864.5 | 1868.9 |
| 22.5° | 1377.9 | 1425.1 | 1554.0 | 1725.7 | 1855.7 | 1919.9 | 1926.5 | 1893.6 | 1847.5 | 1826.0 | 1832.1 |
| 25° | 1415.2 | 1477.7 | 1663.7 | 1872.2 | 1977.5 | 1985.1 | 1934.7 | 1854.6 | 1767.4 | 1727.3 | 1733.4 |
| 27.5° | 1451.4 | 1538.6 | 1795.4 | 2012.1 | 2065.3 | 1997.8 | 1889.2 | 1775.6 | 1670.3 | 1628.1 | 1633.0 |
| 30° | 1487.7 | 1608.3 | 1940.7 | 2134.4 | 2105.2 | 1966.5 | 1817.3 | 1690.6 | 1584.8 | 1540.3 | 1545.2 |
| 32.5° | 1524.4 | 1689.5 | 2108.0 | 2222.7 | 2098.2 | 1900.1 | 1727.9 | 1595.1 | 1501.9 | 1455.3 | 1461.3 |
| 35° | 1566.1 | 1789.3 | 2266.6 | 2271.0 | 2050.4 | 1802.5 | 1610.0 | 1481.0 | 1399.8 | 1362.5 | 1370.8 |
| 37.5° | 1620.4 | 1916.0 | 2406.4 | 2283.0 | 1967.1 | 1659.4 | 1463.5 | 1346.1 | 1279.2 | 1262.2 | 1274.3 |
| 40° | 1687.9 | 2068.6 | 2513.4 | 2263.8 | 1843.7 | 1485.4 | 1303.3 | 1209.5 | 1171.7 | 1175.5 | 1188.7 |
| 42.5° | 1775.6 | 2239.1 | 2588.5 | 2214.4 | 1672.0 | 1306.1 | 1162.9 | 1121.2 | 1139.3 | 1154.7 | 1168.9 |
| 45° | 1889.7 | 2416.3 | 2635.2 | 2130.6 | 1477.7 | 1154.1 | 1080.0 | 1090.0 | 1103.6 | 1105.3 | 1116.3 |
| 47.5° | 2035.6 | 2595.7 | 2665.9 | 2003.8 | 1279.7 | 1047.1 | 1027.5 | 1029.6 | 1026.8 | 1015.4 | 1024.1 |
| 50° | 2217.8 | 2770.2 | 2693.3 | 1836.0 | 1111.3 | 980.2 | 953.9 | 946.3 | 908.4 | 871.0 | 876.1 |
| 52.5° | 2425.0 | 2930.3 | 2704.9 | 1627.5 | 980.2 | 924.2 | 881.5 | 833.2 | 762.5 | 750.9 | 754.8 |
| 55° | 2655.5 | 3078.4 | 2675.2 | 1371.3 | 870.0 | 852.4 | 787.7 | 729.6 | 721.9 | 712.0 | 713.6 |
| 57.5° | 2930.9 | 3238.0 | 2614.9 | 1085.6 | 757.0 | 768.5 | 705.4 | 712.0 | 698.3 | 683.0 | 680.2 |
| 60° | 3232.0 | 3403.1 | 2509.0 | 825.0 | 640.1 | 663.7 | 684.0 | 683.5 | 679.7 | 667.1 | 662.7 |
| 62.5° | 3502.9 | 3511.8 | 2300.6 | 631.9 | 537.6 | 582.5 | 638.0 | 637.4 | 634.1 | 627.0 | 624.2 |
| 65° | 3664.3 | 3495.2 | 1952.8 | 497.5 | 453.0 | 515.7 | 575.4 | 579.8 | 580.4 | 579.8 | 579.8 |
| 67.5° | 3635.7 | 3302.8 | 1475.6 | 396.1 | 383.5 | 447.6 | 513.4 | 519.5 | 523.9 | 524.9 | 526.0 |
| 70° | 3313.2 | 2879.8 | 962.2 | 316.0 | 321.4 | 387.9 | 454.7 | 460.7 | 464.6 | 469.0 | 471.2 |
| 72.5° | 2582.5 | 2117.3 | 550.7 | 255.6 | 267.1 | 336.3 | 396.6 | 403.7 | 405.9 | 414.1 | 417.5 |
| 75° | 1573.8 | 1245.2 | 297.4 | 201.3 | 219.5 | 287.4 | 339.0 | 347.3 | 351.1 | 360.9 | 362.0 |
| 77.5° | 748.2 | 539.3 | 169.5 | 156.9 | 176.6 | 234.7 | 286.4 | 295.7 | 285.3 | 290.7 | 286.4 |
| 80° | 252.9 | 200.2 | 107.0 | 119.6 | 134.9 | 183.2 | 229.3 | 238.6 | 216.7 | 215.6 | 213.4 |
| 82.5° | 88.4 | 81.2 | 68.1 | 79.5 | 87.2 | 131.1 | 173.3 | 185.4 | 161.2 | 160.7 | 153.0 |
| 85° | 34.5 | 32.9 | 37.8 | 43.4 | 52.1 | 80.7 | 114.1 | 120.1 | 99.3 | 80.1 | 79.0 |
| 87.5° | 7.2 | 7.7 | 9.3 | 9.8 | 15.9 | 28.0 | 41.1 | 50.4 | 40.1 | 34.0 | 31.3 |
| 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)