

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: P960916

Luminaire Tested: **NAV-SB1D-740-U-T3R-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P960916  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB1D-740-U-T3R-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 70 CRI, 4000K, 900mA LIGHTSQUARE WITH 26 LEDS AND TYPE III ROADWAY  
OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 9190.1 lumens  
Efficiency: N/A  
Efficacy: 115.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G2

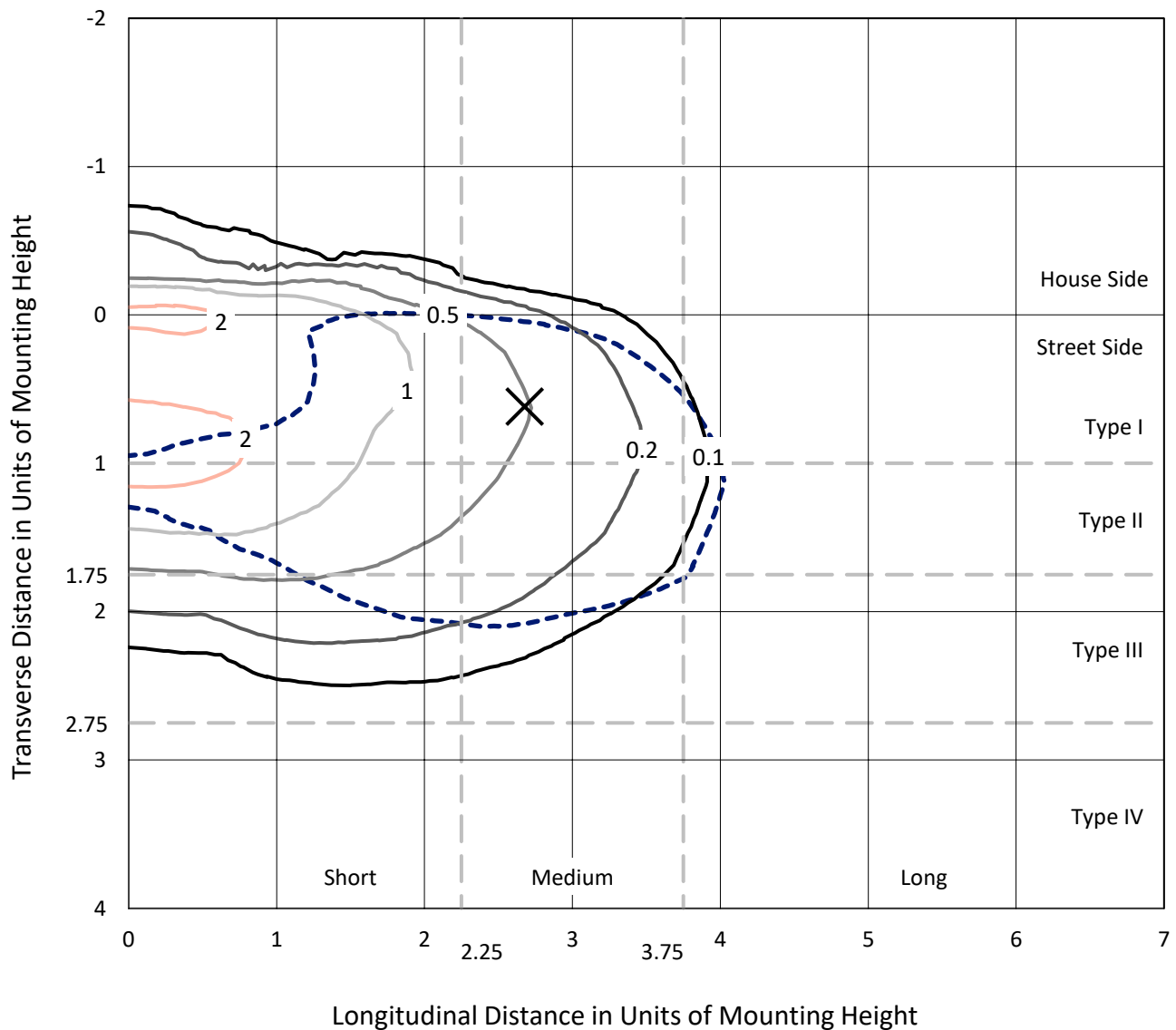
Input Watts (W): 79.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

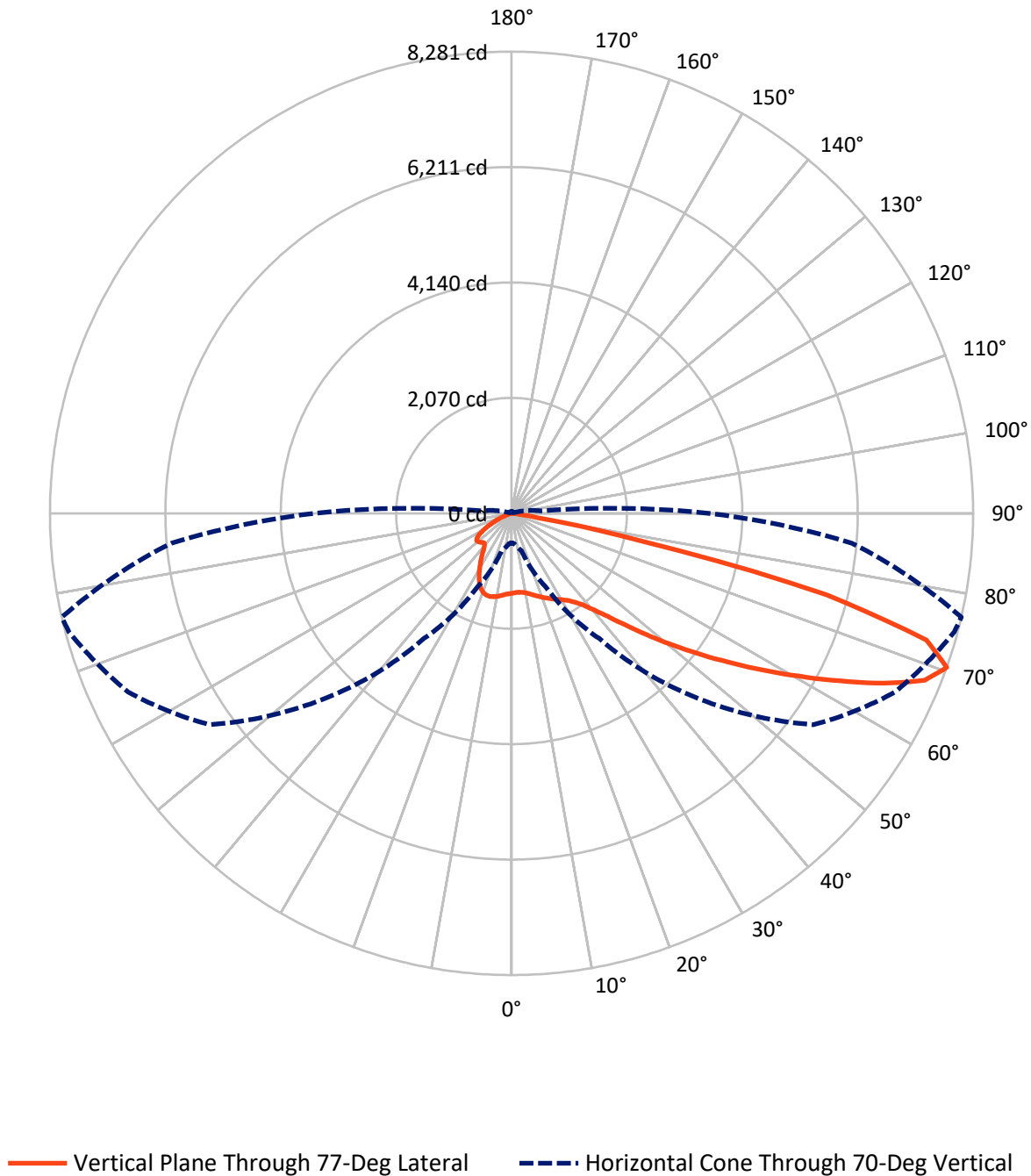
× Max cd  
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc  
Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 968.8    | 0.0    | 968.8  |
|                    | % Fixture | 10.5     | 0.0    | 10.5   |
| <b>Street Side</b> | Lumens    | 8221.4   | 0.0    | 8221.4 |
|                    | % Fixture | 89.5     | 0.0    | 89.5   |
| <b>Total</b>       | Lumens    | 9190.1   | 0.0    | 9190.1 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 123.5  | 1.3       |
| 10°-20°   | 293.3  | 3.2       |
| 20°-30°   | 453.6  | 4.9       |
| 30°-40°   | 823.1  | 9.0       |
| 40°-50°   | 1553.7 | 16.9      |
| 50°-60°   | 2245.0 | 24.4      |
| 60°-70°   | 2389.8 | 26.0      |
| 70°-80°   | 1266.4 | 13.8      |
| 80°-90°   | 41.6   | 0.5       |
| 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°    | 9190.1 | 100.0     |
| 0°-180°   | 9190.1 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P960916

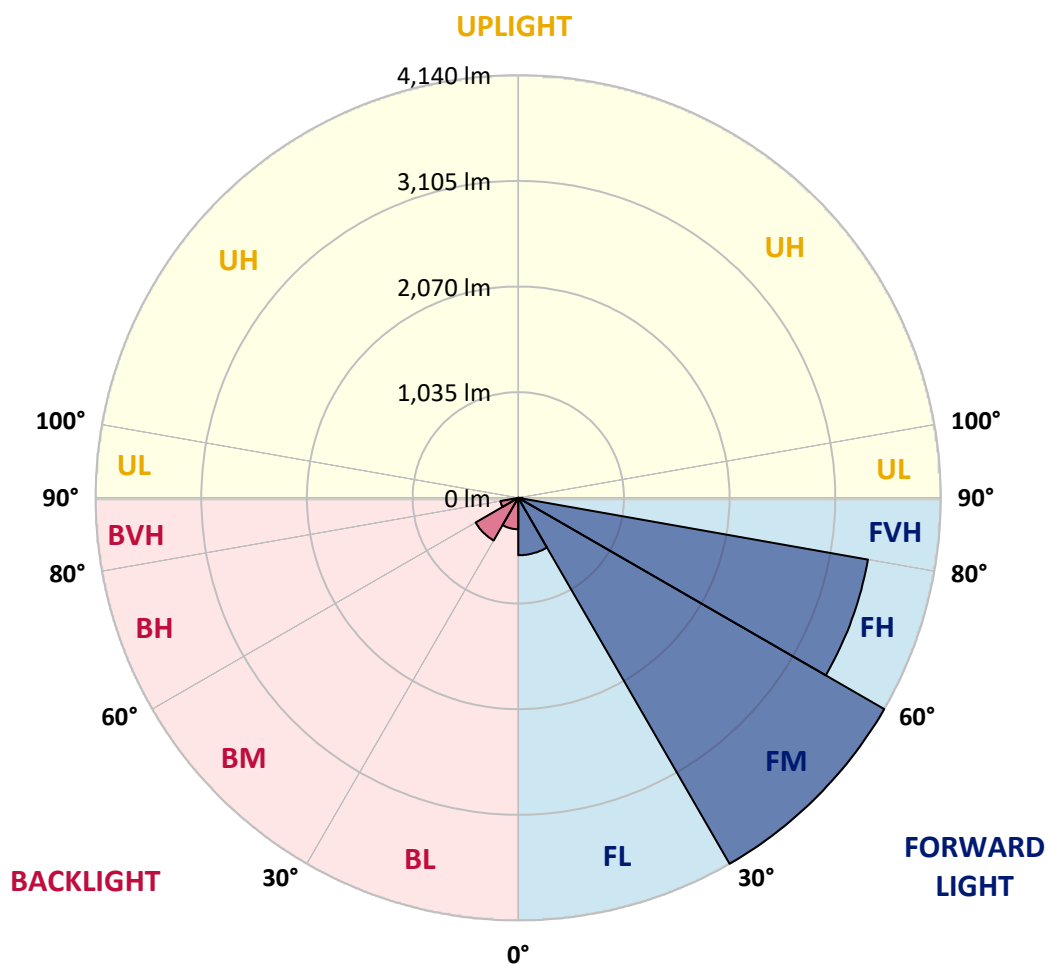
CATALOG NUMBER: NAV-SB1D-740-U-T3R-HSS

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 562.7  | 6.1       |                         |      |         |
| FM   | (30°-60°)   | 4139.7 | 45.0      |                         |      |         |
| FH   | (60°-80°)   | 3478.6 | 37.9      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 40.5   | 0.4       |                         |      | G1/100  |
| BL   | (0°-30°)    | 307.8  | 3.3       | B1/500                  |      |         |
| BM   | (30°-60°)   | 482.3  | 5.2       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 177.6  | 1.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 1.1    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type III Medium



REPORT NUMBER: P960916

CATALOG NUMBER: NAV-SB1D-740-U-T3R-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 77°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 |
| 2.5°  | 1345.8 | 1358.0 | 1356.3 | 1364.5 | 1367.4 | 1378.9 | 1390.5 | 1406.2 | 1423.6 | 1423.0 | 1434.7 |
| 5°    | 1269.9 | 1282.1 | 1284.9 | 1295.9 | 1309.8 | 1327.9 | 1351.7 | 1383.0 | 1415.5 | 1420.8 | 1443.9 |
| 7.5°  | 1179.9 | 1192.7 | 1200.2 | 1222.2 | 1247.7 | 1284.9 | 1323.8 | 1369.7 | 1423.6 | 1431.2 | 1475.9 |
| 10°   | 1089.9 | 1101.6 | 1111.4 | 1142.8 | 1183.4 | 1238.5 | 1301.8 | 1368.0 | 1440.4 | 1451.5 | 1514.7 |
| 12.5° | 1034.2 | 1045.2 | 1056.3 | 1083.5 | 1134.1 | 1201.4 | 1287.2 | 1376.1 | 1468.3 | 1484.0 | 1567.5 |
| 15°   | 1014.4 | 1024.4 | 1033.1 | 1057.4 | 1104.4 | 1181.0 | 1284.3 | 1392.9 | 1503.7 | 1524.6 | 1631.4 |
| 17.5° | 1017.4 | 1022.6 | 1028.4 | 1046.9 | 1092.9 | 1171.8 | 1289.6 | 1421.9 | 1545.5 | 1564.0 | 1695.2 |
| 20°   | 1034.2 | 1037.1 | 1037.7 | 1050.4 | 1091.1 | 1170.6 | 1300.0 | 1449.8 | 1585.0 | 1610.0 | 1758.5 |
| 22.5° | 1055.6 | 1056.9 | 1055.6 | 1064.4 | 1102.1 | 1179.3 | 1313.9 | 1483.4 | 1629.0 | 1652.3 | 1822.3 |
| 25°   | 1156.1 | 1134.1 | 1106.2 | 1089.4 | 1120.6 | 1196.2 | 1334.9 | 1528.7 | 1677.2 | 1699.9 | 1884.5 |
| 27.5° | 1467.7 | 1404.5 | 1304.6 | 1192.7 | 1159.0 | 1220.5 | 1363.9 | 1574.5 | 1726.0 | 1746.3 | 1951.2 |
| 30°   | 1973.8 | 1890.8 | 1721.4 | 1468.9 | 1282.1 | 1271.6 | 1401.6 | 1620.4 | 1777.7 | 1799.7 | 2022.5 |
| 32.5° | 2481.0 | 2460.7 | 2265.1 | 1915.8 | 1558.8 | 1385.3 | 1464.2 | 1682.4 | 1846.1 | 1863.6 | 2118.9 |
| 35°   | 2994.1 | 2952.9 | 2792.7 | 2447.4 | 1985.4 | 1616.9 | 1568.8 | 1763.7 | 1936.1 | 1955.8 | 2259.3 |
| 37.5° | 3387.0 | 3362.0 | 3262.8 | 2978.4 | 2491.5 | 1974.4 | 1747.5 | 1889.7 | 2066.7 | 2088.7 | 2439.3 |
| 40°   | 3734.1 | 3722.5 | 3688.8 | 3501.3 | 3057.4 | 2442.2 | 2025.5 | 2084.6 | 2247.7 | 2273.9 | 2659.8 |
| 42.5° | 4006.8 | 4034.1 | 4053.3 | 4001.0 | 3640.6 | 2976.1 | 2399.2 | 2358.6 | 2500.2 | 2526.9 | 2940.7 |
| 45°   | 4285.9 | 4295.3 | 4372.4 | 4447.9 | 4219.8 | 3534.4 | 2820.6 | 2679.6 | 2814.1 | 2847.2 | 3277.3 |
| 47.5° | 4465.3 | 4502.4 | 4638.2 | 4771.2 | 4706.7 | 4088.1 | 3273.2 | 3058.5 | 3178.1 | 3240.1 | 3654.5 |
| 50°   | 4478.6 | 4548.8 | 4735.8 | 4967.4 | 5061.3 | 4615.1 | 3765.4 | 3490.3 | 3617.4 | 3685.9 | 4057.4 |
| 52.5° | 4256.4 | 4365.5 | 4655.1 | 4994.0 | 5252.8 | 5061.3 | 4274.4 | 3922.1 | 4085.1 | 4174.5 | 4475.2 |
| 55°   | 3263.4 | 3406.2 | 4351.5 | 4849.0 | 5260.4 | 5399.7 | 4770.0 | 4371.8 | 4606.3 | 4707.3 | 4926.7 |
| 57.5° | 2843.2 | 2915.2 | 3421.2 | 4597.0 | 5120.6 | 5536.1 | 5218.1 | 4800.2 | 5173.4 | 5298.7 | 5353.3 |
| 60°   | 2365.6 | 2460.2 | 2869.3 | 4185.0 | 4930.8 | 5549.5 | 5613.8 | 5352.7 | 5788.0 | 5929.0 | 5744.4 |
| 62.5° | 1607.6 | 1710.3 | 2117.1 | 3477.0 | 4671.3 | 5543.1 | 5938.2 | 5921.4 | 6471.0 | 6622.5 | 6075.8 |
| 65°   | 995.9  | 1060.4 | 1328.5 | 2839.1 | 4308.6 | 5550.0 | 6277.8 | 6612.1 | 7191.9 | 7345.7 | 6332.3 |
| 67.5° | 787.0  | 816.6  | 956.4  | 2179.9 | 3683.5 | 5393.3 | 6616.7 | 7261.5 | 7870.3 | 7992.2 | 6410.7 |
| 70°   | 528.7  | 546.7  | 695.9  | 1461.3 | 2740.4 | 4670.2 | 6610.3 | 7587.7 | 8219.7 | 8280.7 | 6125.2 |
| 72.5° | 278.6  | 292.5  | 406.8  | 676.7  | 1655.2 | 3319.7 | 5572.1 | 7197.7 | 7872.0 | 7780.4 | 5235.5 |
| 75°   | 139.3  | 162.5  | 274.0  | 343.6  | 706.8  | 1851.4 | 3460.1 | 5674.8 | 6195.9 | 5840.8 | 3359.1 |
| 77.5° | 105.6  | 127.7  | 226.3  | 226.3  | 246.1  | 623.3  | 1465.4 | 3095.1 | 2854.8 | 2377.2 | 986.0  |
| 80°   | 67.3   | 87.0   | 197.9  | 171.2  | 102.7  | 158.5  | 381.9  | 867.0  | 606.5  | 461.4  | 179.4  |
| 82.5° | 39.5   | 56.9   | 164.8  | 113.2  | 57.5   | 58.6   | 107.9  | 184.6  | 157.2  | 122.5  | 55.1   |
| 85°   | 15.7   | 37.1   | 113.2  | 44.7   | 22.7   | 14.6   | 32.5   | 39.5   | 32.5   | 24.4   | 13.9   |
| 87.5° | 0.0    | 8.7    | 19.8   | 0.0    | 1.7    | 1.1    | 2.4    | 2.9    | 2.9    | 2.4    | 4.6    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

REPORT NUMBER: P960916

CATALOG NUMBER: NAV-SB1D-740-U-T3R-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 | 1433.5 |
| 2.5°  | 1439.9 | 1441.0 | 1444.5 | 1445.1 | 1436.9 | 1426.5 | 1422.5 | 1420.8 | 1413.8 | 1413.2 | 1414.3 |
| 5°    | 1457.2 | 1462.5 | 1457.2 | 1442.2 | 1406.2 | 1355.8 | 1317.4 | 1286.1 | 1257.7 | 1249.0 | 1243.7 |
| 7.5°  | 1492.1 | 1497.3 | 1481.6 | 1422.5 | 1331.9 | 1231.5 | 1141.0 | 1077.2 | 1019.7 | 998.2  | 989.5  |
| 10°   | 1542.0 | 1549.0 | 1499.7 | 1380.1 | 1220.0 | 1058.6 | 905.4  | 797.4  | 713.3  | 679.1  | 664.5  |
| 12.5° | 1604.7 | 1607.6 | 1509.5 | 1315.7 | 1074.3 | 843.9  | 626.8  | 511.3  | 436.4  | 408.6  | 399.9  |
| 15°   | 1673.7 | 1669.7 | 1510.6 | 1228.1 | 875.8  | 596.7  | 409.2  | 336.0  | 305.9  | 296.5  | 296.5  |
| 17.5° | 1746.3 | 1729.5 | 1487.5 | 1101.6 | 658.2  | 408.0  | 303.5  | 286.1  | 280.8  | 278.6  | 278.0  |
| 20°   | 1817.7 | 1780.0 | 1445.1 | 936.1  | 472.4  | 304.7  | 275.6  | 270.5  | 267.5  | 266.4  | 265.3  |
| 22.5° | 1882.7 | 1818.2 | 1372.6 | 744.0  | 343.0  | 269.3  | 260.6  | 255.9  | 250.7  | 248.4  | 247.8  |
| 25°   | 1946.0 | 1840.3 | 1270.4 | 564.7  | 274.5  | 251.8  | 244.9  | 236.2  | 229.3  | 226.3  | 225.2  |
| 27.5° | 2007.5 | 1854.2 | 1142.8 | 417.9  | 244.9  | 235.6  | 222.8  | 210.6  | 205.4  | 204.3  | 203.2  |
| 30°   | 2073.1 | 1858.9 | 997.6  | 311.7  | 226.9  | 215.4  | 196.7  | 182.9  | 179.9  | 180.5  | 180.5  |
| 32.5° | 2153.1 | 1865.9 | 851.4  | 255.3  | 211.9  | 191.0  | 168.9  | 154.4  | 152.0  | 154.4  | 153.8  |
| 35°   | 2249.0 | 1879.7 | 710.3  | 235.0  | 198.4  | 165.9  | 142.2  | 130.0  | 127.7  | 129.5  | 128.8  |
| 37.5° | 2378.9 | 1902.4 | 578.6  | 231.0  | 187.5  | 145.1  | 119.5  | 109.7  | 109.7  | 110.3  | 109.7  |
| 40°   | 2551.8 | 1962.8 | 460.8  | 228.1  | 181.6  | 129.5  | 101.0  | 97.0   | 98.7   | 99.8   | 99.8   |
| 42.5° | 2762.6 | 2091.0 | 381.3  | 224.6  | 175.3  | 122.5  | 91.7   | 90.0   | 92.9   | 94.0   | 94.0   |
| 45°   | 2998.7 | 2253.6 | 353.4  | 218.8  | 169.4  | 127.1  | 87.6   | 85.3   | 88.8   | 89.4   | 90.0   |
| 47.5° | 3243.1 | 2412.5 | 349.9  | 212.4  | 163.7  | 134.1  | 86.5   | 81.3   | 85.3   | 85.9   | 86.5   |
| 50°   | 3490.3 | 2516.5 | 353.4  | 202.5  | 154.4  | 134.1  | 87.0   | 77.2   | 80.7   | 82.4   | 83.0   |
| 52.5° | 3739.3 | 2564.0 | 351.2  | 181.1  | 138.2  | 126.0  | 87.0   | 73.7   | 77.2   | 78.3   | 78.3   |
| 55°   | 3980.7 | 2554.7 | 315.7  | 149.1  | 117.3  | 111.4  | 84.8   | 70.8   | 73.1   | 73.7   | 73.7   |
| 57.5° | 4171.6 | 2425.4 | 250.1  | 116.0  | 95.2   | 92.9   | 77.2   | 67.3   | 69.1   | 68.5   | 68.5   |
| 60°   | 4271.5 | 2140.9 | 178.8  | 89.4   | 74.8   | 73.1   | 67.9   | 62.7   | 63.9   | 61.0   | 60.4   |
| 62.5° | 4272.6 | 1764.8 | 119.5  | 70.8   | 59.8   | 58.0   | 58.0   | 56.3   | 55.1   | 49.3   | 47.6   |
| 65°   | 4181.5 | 1347.6 | 79.5   | 56.3   | 48.2   | 45.3   | 48.8   | 48.2   | 44.1   | 36.0   | 34.8   |
| 67.5° | 3975.0 | 883.3  | 60.4   | 44.1   | 37.1   | 35.4   | 38.8   | 40.6   | 37.7   | 30.1   | 29.6   |
| 70°   | 3550.1 | 514.2  | 49.9   | 34.2   | 27.9   | 26.1   | 31.4   | 34.8   | 31.4   | 24.4   | 23.2   |
| 72.5° | 2948.8 | 277.4  | 40.6   | 25.5   | 19.2   | 17.4   | 24.9   | 28.4   | 24.9   | 18.0   | 17.4   |
| 75°   | 1913.5 | 148.5  | 31.4   | 16.8   | 9.8    | 11.1   | 18.6   | 20.9   | 17.4   | 11.6   | 10.5   |
| 77.5° | 642.5  | 65.6   | 19.8   | 8.1    | 4.6    | 4.6    | 11.1   | 12.8   | 8.1    | 4.1    | 3.5    |
| 80°   | 143.4  | 27.3   | 8.1    | 3.5    | 1.7    | 1.7    | 2.4    | 2.4    | 1.1    | 0.0    | 0.0    |
| 82.5° | 47.0   | 11.1   | 3.5    | 1.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 18.0   | 4.1    | 1.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 7.0    | 0.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 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)