

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: P963640

Luminaire Tested: **NAV-SB3A-827-U-T2U-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P963640  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB3A-827-U-T2U-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(3) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II U  
OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 9167.6 lumens  
Efficiency: N/A  
Efficacy: 108.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

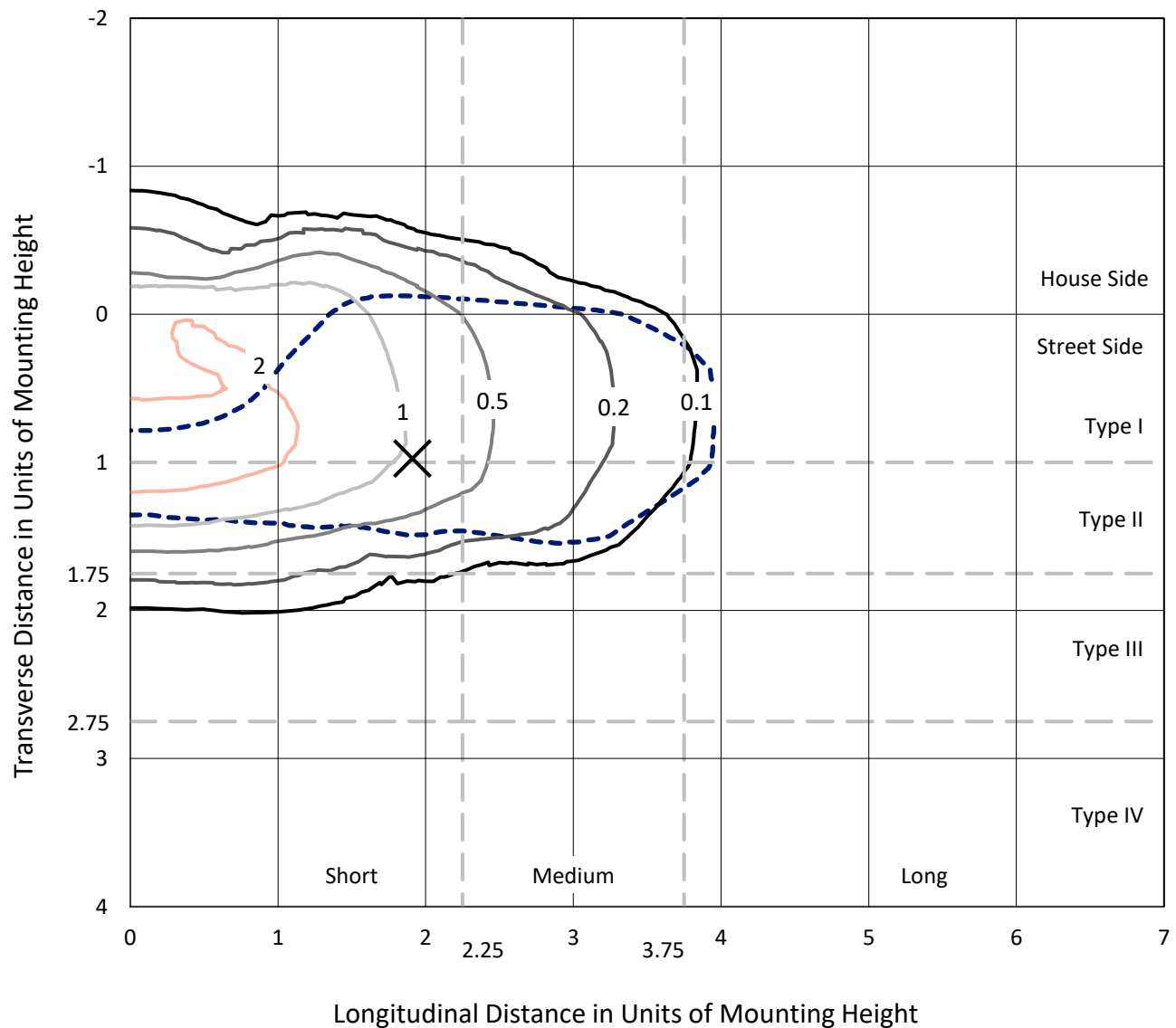
Input Watts (W): 84.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P963640  
 CATALOG NUMBER: NAV-SB3A-827-U-T2U-HSS

## Iso-Footcandle Lines of Horizontal Illumination

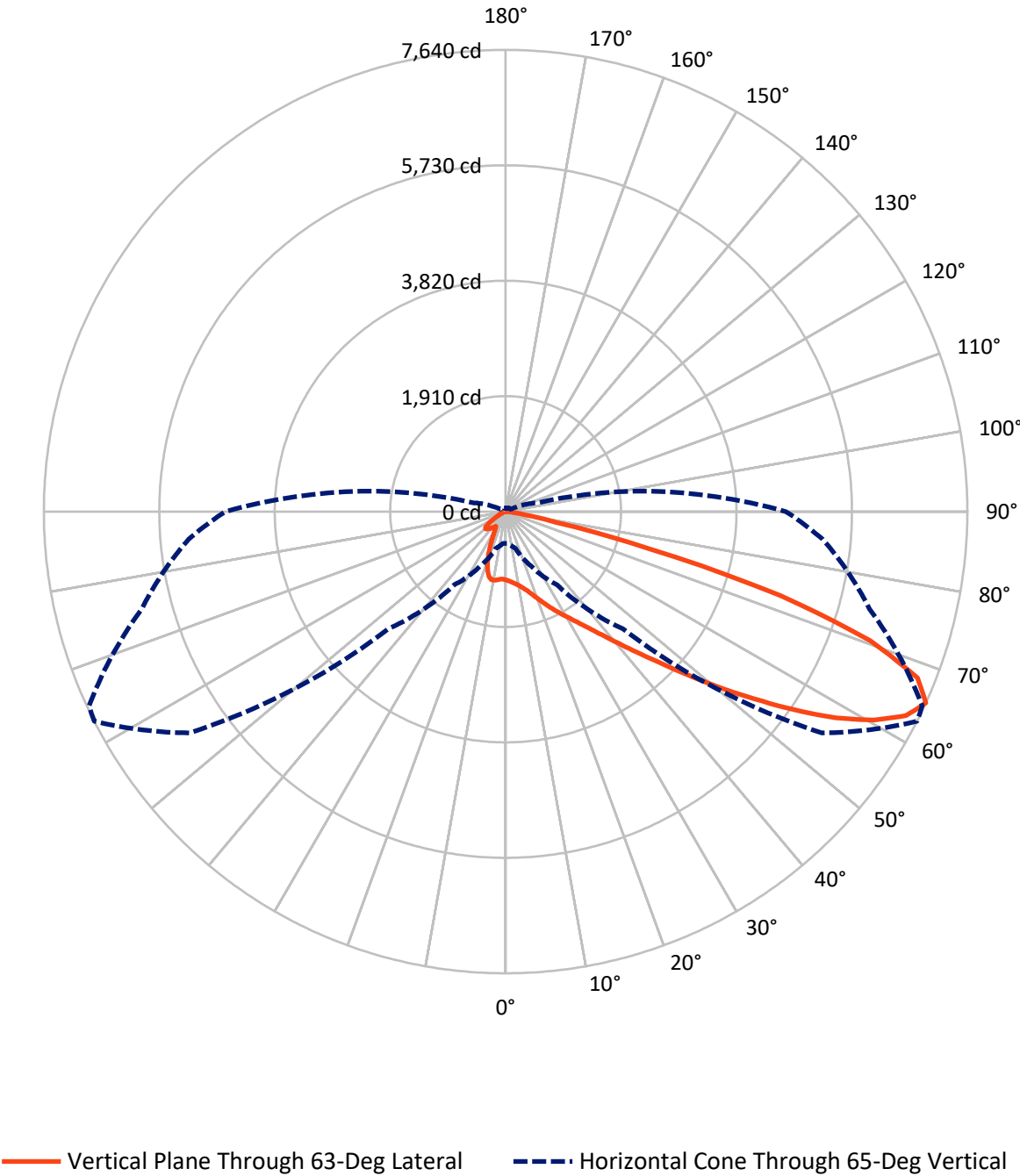
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc  
 Type II - Short - N/A

REPORT NUMBER: P963640  
CATALOG NUMBER: NAV-SB3A-827-U-T2U-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P963640

CATALOG NUMBER: NAV-SB3A-827-U-T2U-HSS

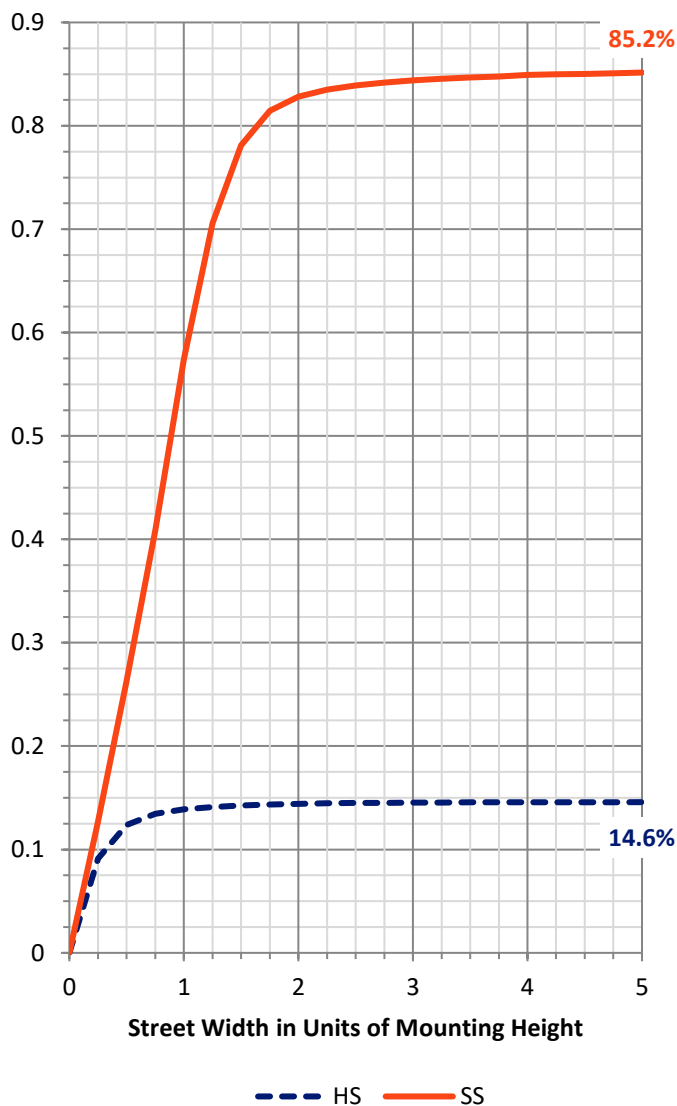
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1347.5   | 0.0    | 1347.5 |
|                    | % Fixture | 14.7     | 0.0    | 14.7   |
| <b>Street Side</b> | Lumens    | 7820.0   | 0.0    | 7820.0 |
|                    | % Fixture | 85.3     | 0.0    | 85.3   |
| <b>Total</b>       | Lumens    | 9167.6   | 0.0    | 9167.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 106.6  | 1.2       |
| 10°-20°   | 295.8  | 3.2       |
| 20°-30°   | 515.0  | 5.6       |
| 30°-40°   | 928.3  | 10.1      |
| 40°-50°   | 1841.1 | 20.1      |
| 50°-60°   | 2507.9 | 27.4      |
| 60°-70°   | 2001.8 | 21.8      |
| 70°-80°   | 905.9  | 9.9       |
| 80°-90°   | 65.1   | 0.7       |
| 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°    | 9167.6 | 100.0     |
| 0°-180°   | 9167.6 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P963640

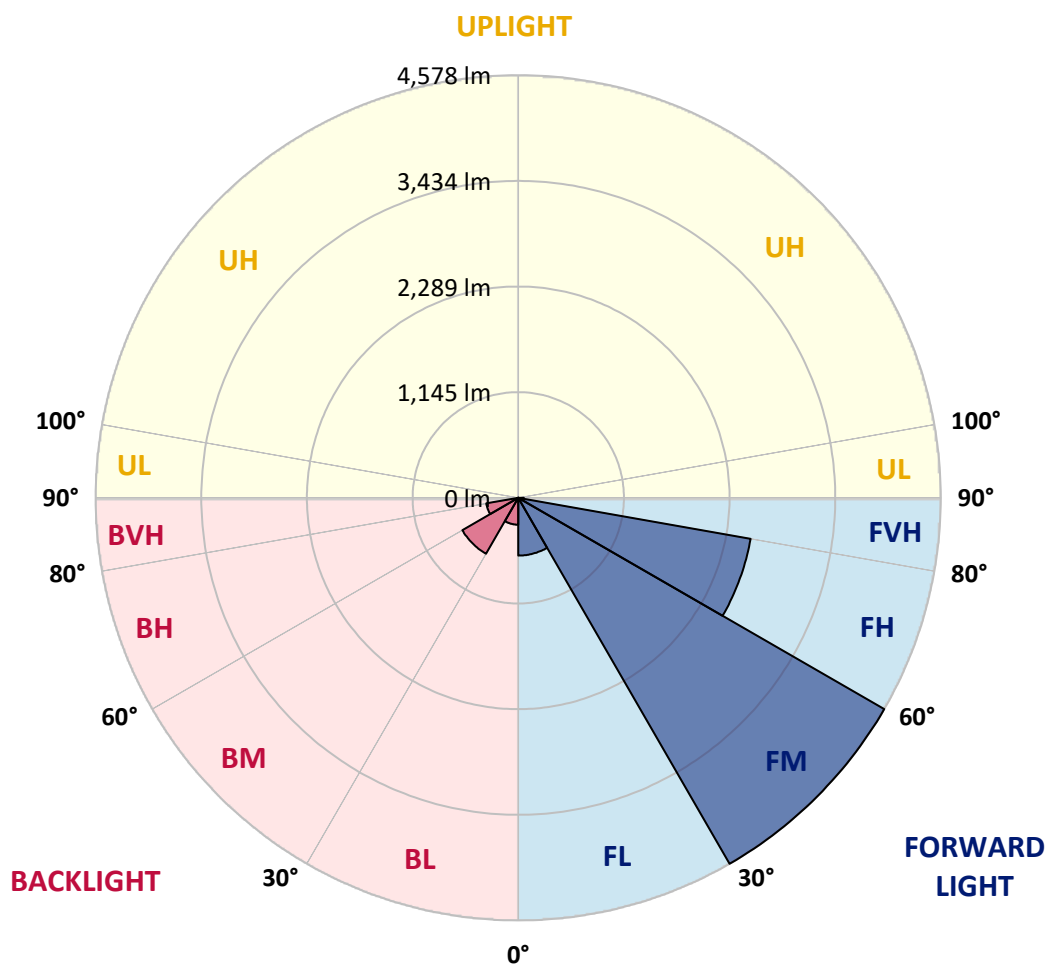
CATALOG NUMBER: NAV-SB3A-827-U-T2U-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 625.8  | 6.8       |                         |      |         |
| FM   | (30°-60°)   | 4578.1 | 49.9      |                         |      |         |
| FH   | (60°-80°)   | 2555.9 | 27.9      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 60.3   | 0.7       |                         |      | G1/100  |
| BL   | (0°-30°)    | 291.6  | 3.2       | B1/500                  |      |         |
| BM   | (30°-60°)   | 699.3  | 7.6       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 351.8  | 3.8       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 4.8    | 0.1       |                         |      | 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 II Short



REPORT NUMBER: P963640

CATALOG NUMBER: NAV-SB3A-827-U-T2U-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 63°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 |
| 2.5°  | 1157.9 | 1154.8 | 1159.2 | 1157.3 | 1156.1 | 1153.5 | 1152.3 | 1151.0 | 1148.5 | 1146.6 | 1139.0 |
| 5°    | 1161.1 | 1159.2 | 1163.6 | 1167.4 | 1171.2 | 1175.0 | 1176.9 | 1179.4 | 1176.9 | 1171.8 | 1164.3 |
| 7.5°  | 1134.6 | 1133.3 | 1142.8 | 1154.1 | 1171.2 | 1185.7 | 1201.5 | 1210.3 | 1210.9 | 1209.0 | 1200.8 |
| 10°   | 1132.7 | 1129.6 | 1139.0 | 1152.9 | 1175.0 | 1200.8 | 1228.6 | 1247.5 | 1250.0 | 1258.2 | 1249.4 |
| 12.5° | 1162.4 | 1159.2 | 1172.5 | 1187.6 | 1210.3 | 1237.4 | 1271.5 | 1298.0 | 1301.8 | 1313.1 | 1306.8 |
| 15°   | 1212.2 | 1207.8 | 1222.9 | 1242.5 | 1271.5 | 1302.4 | 1338.3 | 1362.3 | 1365.4 | 1379.3 | 1368.0 |
| 17.5° | 1270.2 | 1265.8 | 1283.4 | 1304.3 | 1335.8 | 1378.0 | 1419.7 | 1446.2 | 1450.0 | 1458.8 | 1438.0 |
| 20°   | 1344.6 | 1339.0 | 1352.8 | 1371.8 | 1405.2 | 1455.6 | 1505.4 | 1543.3 | 1542.6 | 1542.6 | 1508.6 |
| 22.5° | 1431.0 | 1422.2 | 1434.2 | 1449.4 | 1480.8 | 1542.0 | 1608.2 | 1653.0 | 1653.0 | 1635.4 | 1579.2 |
| 25°   | 1523.8 | 1514.9 | 1528.2 | 1542.0 | 1569.8 | 1639.2 | 1716.8 | 1772.2 | 1774.8 | 1744.4 | 1655.0 |
| 27.5° | 1639.8 | 1628.4 | 1638.6 | 1655.0 | 1671.4 | 1742.0 | 1834.0 | 1898.4 | 1899.6 | 1853.0 | 1726.8 |
| 30°   | 1863.0 | 1830.9 | 1799.4 | 1781.7 | 1789.2 | 1859.2 | 1957.6 | 2028.9 | 2035.2 | 1970.9 | 1805.0 |
| 32.5° | 2271.7 | 2265.5 | 2154.4 | 2009.4 | 1933.7 | 1985.4 | 2095.8 | 2181.5 | 2185.3 | 2102.7 | 1906.6 |
| 35°   | 2906.8 | 2899.3 | 2720.8 | 2444.5 | 2197.9 | 2154.4 | 2263.5 | 2365.1 | 2362.5 | 2269.2 | 2038.4 |
| 37.5° | 3664.9 | 3658.0 | 3422.8 | 3053.2 | 2653.9 | 2409.9 | 2479.9 | 2586.5 | 2602.3 | 2479.9 | 2208.7 |
| 40°   | 4312.7 | 4286.8 | 4137.9 | 3781.6 | 3259.4 | 2833.7 | 2787.7 | 2858.3 | 2874.7 | 2729.6 | 2425.0 |
| 42.5° | 4803.4 | 4781.2 | 4705.6 | 4482.9 | 3992.3 | 3460.6 | 3150.3 | 3177.4 | 3195.7 | 3021.6 | 2673.5 |
| 45°   | 5057.5 | 5052.4 | 5082.7 | 5061.9 | 4739.0 | 4230.1 | 3668.7 | 3555.8 | 3562.8 | 3345.2 | 2955.4 |
| 47.5° | 5093.4 | 5090.9 | 5229.0 | 5424.5 | 5381.0 | 5097.8 | 4334.1 | 4027.5 | 4002.9 | 3710.3 | 3262.0 |
| 50°   | 4881.6 | 4876.4 | 5141.4 | 5507.8 | 5809.9 | 5826.9 | 5089.6 | 4559.2 | 4505.0 | 4088.1 | 3581.7 |
| 52.5° | 4204.8 | 4203.5 | 4638.7 | 5248.6 | 5960.7 | 6465.2 | 5836.3 | 5143.2 | 5052.4 | 4488.0 | 3919.7 |
| 55°   | 3235.4 | 3258.8 | 3757.6 | 4478.5 | 5685.7 | 6772.4 | 6506.8 | 5791.7 | 5652.3 | 4890.4 | 4231.3 |
| 57.5° | 2291.9 | 2325.9 | 2819.2 | 3461.2 | 4833.0 | 6590.6 | 6960.3 | 6441.2 | 6291.1 | 5291.5 | 4547.3 |
| 60°   | 1231.1 | 1261.4 | 1755.2 | 2521.5 | 3595.6 | 5913.3 | 7199.3 | 7005.1 | 6863.2 | 5672.5 | 4832.4 |
| 62.5° | 733.5  | 743.5  | 947.9  | 1627.8 | 2431.9 | 4517.6 | 7097.8 | 7434.5 | 7317.9 | 5992.2 | 5080.2 |
| 65°   | 526.6  | 528.5  | 631.3  | 993.9  | 1476.4 | 2744.7 | 6385.7 | 7640.1 | 7604.2 | 6233.1 | 5263.7 |
| 67.5° | 443.4  | 442.1  | 485.0  | 660.3  | 1005.9 | 1374.9 | 4894.2 | 7349.5 | 7502.1 | 6385.7 | 5367.8 |
| 70°   | 380.3  | 382.2  | 432.7  | 483.7  | 756.2  | 778.3  | 2433.1 | 6399.0 | 6724.4 | 6426.1 | 5361.5 |
| 72.5° | 283.2  | 289.5  | 336.2  | 440.9  | 570.8  | 535.5  | 840.1  | 4744.6 | 5333.1 | 6054.6 | 5083.4 |
| 75°   | 200.0  | 203.1  | 236.5  | 370.8  | 425.7  | 389.8  | 428.9  | 2452.7 | 3207.0 | 4641.9 | 4160.7 |
| 77.5° | 153.9  | 159.6  | 179.1  | 259.2  | 419.4  | 273.7  | 262.4  | 848.9  | 1304.3 | 2804.0 | 2852.6 |
| 80°   | 83.2   | 93.4   | 129.3  | 187.3  | 294.5  | 193.6  | 130.0  | 338.0  | 442.1  | 1311.2 | 1099.9 |
| 82.5° | 42.8   | 48.0   | 90.2   | 135.0  | 167.8  | 169.0  | 64.4   | 140.6  | 182.2  | 404.9  | 150.8  |
| 85°   | 17.0   | 20.8   | 60.6   | 74.4   | 86.4   | 83.2   | 29.0   | 56.8   | 65.6   | 112.2  | 46.0   |
| 87.5° | 3.8    | 6.4    | 22.0   | 17.0   | 16.4   | 17.6   | 7.0    | 13.2   | 12.6   | 13.2   | 8.2    |
| 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: P963640

CATALOG NUMBER: NAV-SB3A-827-U-T2U-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 | 1131.5 |
| 2.5°  | 1138.4 | 1135.9 | 1128.9 | 1121.4 | 1112.5 | 1107.5 | 1104.3 | 1103.7 | 1099.3 | 1096.1 | 1099.3 |
| 5°    | 1157.3 | 1154.8 | 1141.5 | 1125.8 | 1108.7 | 1095.5 | 1082.9 | 1071.5 | 1055.1 | 1052.0 | 1050.7 |
| 7.5°  | 1195.1 | 1188.2 | 1166.8 | 1145.3 | 1113.1 | 1074.7 | 1028.0 | 974.4  | 926.5  | 911.9  | 905.1  |
| 10°   | 1241.8 | 1232.4 | 1205.2 | 1167.4 | 1096.1 | 991.5  | 878.5  | 773.9  | 690.6  | 667.3  | 658.5  |
| 12.5° | 1294.8 | 1286.6 | 1250.7 | 1180.7 | 1024.9 | 835.1  | 662.3  | 532.3  | 451.6  | 431.4  | 425.7  |
| 15°   | 1357.9 | 1345.9 | 1296.1 | 1160.5 | 897.5  | 634.5  | 454.7  | 377.8  | 348.8  | 345.0  | 341.2  |
| 17.5° | 1424.7 | 1405.2 | 1336.4 | 1087.9 | 725.9  | 450.9  | 351.3  | 329.2  | 316.6  | 312.8  | 310.9  |
| 20°   | 1485.9 | 1460.6 | 1360.4 | 978.2  | 542.4  | 351.3  | 314.7  | 300.2  | 288.8  | 284.4  | 281.9  |
| 22.5° | 1547.0 | 1511.2 | 1360.4 | 828.7  | 406.8  | 311.6  | 288.8  | 275.6  | 262.4  | 256.7  | 253.6  |
| 25°   | 1610.8 | 1562.8 | 1336.4 | 662.3  | 327.3  | 285.7  | 264.2  | 249.8  | 238.4  | 231.4  | 229.0  |
| 27.5° | 1672.6 | 1606.4 | 1281.6 | 504.5  | 291.4  | 263.0  | 241.6  | 227.7  | 217.0  | 211.9  | 211.9  |
| 30°   | 1731.2 | 1649.2 | 1204.6 | 382.8  | 268.0  | 240.9  | 220.8  | 208.8  | 198.0  | 193.0  | 193.6  |
| 32.5° | 1810.7 | 1703.4 | 1122.6 | 314.1  | 247.8  | 220.1  | 201.8  | 190.4  | 181.0  | 177.2  | 177.2  |
| 35°   | 1921.1 | 1783.6 | 1052.0 | 308.4  | 230.8  | 203.1  | 184.8  | 174.0  | 164.6  | 161.4  | 161.4  |
| 37.5° | 2077.5 | 1912.9 | 1014.7 | 346.2  | 217.0  | 188.0  | 170.9  | 159.6  | 150.8  | 148.2  | 147.6  |
| 40°   | 2270.5 | 2088.2 | 1034.9 | 384.1  | 207.5  | 174.7  | 158.3  | 147.0  | 139.4  | 136.2  | 135.6  |
| 42.5° | 2499.5 | 2304.5 | 1146.6 | 413.1  | 201.2  | 163.4  | 146.4  | 133.7  | 128.6  | 127.4  | 127.4  |
| 45°   | 2762.4 | 2542.3 | 1317.5 | 444.0  | 191.1  | 152.6  | 134.4  | 124.8  | 121.1  | 120.4  | 119.8  |
| 47.5° | 3061.4 | 2803.4 | 1515.6 | 482.5  | 181.0  | 142.6  | 124.8  | 118.6  | 115.4  | 114.2  | 114.2  |
| 50°   | 3357.8 | 3066.4 | 1719.2 | 503.9  | 172.8  | 133.0  | 117.3  | 112.2  | 109.8  | 109.1  | 109.1  |
| 52.5° | 3668.1 | 3337.0 | 1883.8 | 483.7  | 165.8  | 125.5  | 111.0  | 107.2  | 104.7  | 104.0  | 104.0  |
| 55°   | 3963.9 | 3555.8 | 1912.2 | 410.6  | 152.0  | 118.0  | 104.0  | 102.2  | 99.0   | 99.0   | 98.4   |
| 57.5° | 4218.7 | 3665.6 | 1711.6 | 301.5  | 138.2  | 106.6  | 97.2   | 95.2   | 92.7   | 92.0   | 91.4   |
| 60°   | 4452.7 | 3634.0 | 1321.3 | 203.1  | 123.0  | 95.2   | 88.3   | 87.0   | 84.6   | 81.4   | 80.8   |
| 62.5° | 4584.5 | 3495.2 | 903.7  | 132.4  | 107.8  | 83.2   | 78.2   | 77.6   | 71.9   | 65.6   | 64.4   |
| 65°   | 4634.3 | 3210.2 | 563.9  | 96.5   | 90.2   | 71.2   | 67.4   | 66.2   | 58.0   | 51.0   | 50.4   |
| 67.5° | 4590.8 | 2741.0 | 284.4  | 76.4   | 71.2   | 59.2   | 55.5   | 55.5   | 49.8   | 43.6   | 42.8   |
| 70°   | 4416.7 | 2054.8 | 119.8  | 61.2   | 54.8   | 45.4   | 45.4   | 48.0   | 42.2   | 35.4   | 34.6   |
| 72.5° | 4038.9 | 1382.5 | 63.7   | 46.6   | 41.0   | 32.2   | 37.2   | 39.1   | 33.4   | 26.4   | 26.4   |
| 75°   | 3210.8 | 843.3  | 44.2   | 34.6   | 25.8   | 22.8   | 28.4   | 29.6   | 22.8   | 17.6   | 17.0   |
| 77.5° | 2196.1 | 484.4  | 29.6   | 22.0   | 16.4   | 13.2   | 19.6   | 18.2   | 12.0   | 8.2    | 8.8    |
| 80°   | 964.3  | 201.8  | 17.0   | 10.0   | 6.4    | 5.0    | 7.0    | 5.0    | 3.8    | 2.6    | 2.6    |
| 82.5° | 112.9  | 47.3   | 6.4    | 3.8    | 2.6    | 1.2    | 0.6    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 23.4   | 5.6    | 3.2    | 1.2    | 0.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 4.4    | 1.2    | 0.6    | 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)