

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: P881536

Luminaire Tested: **NAV-SB1A-727-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P881536
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB1A-727-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(1) 70 CRI, 2700K, 350mA LIGHTSQUARE WITH 26 LEDS AND TYPE II OPTICS WITH
HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2971 lumens
Efficiency: N/A
Efficacy: 96.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G1

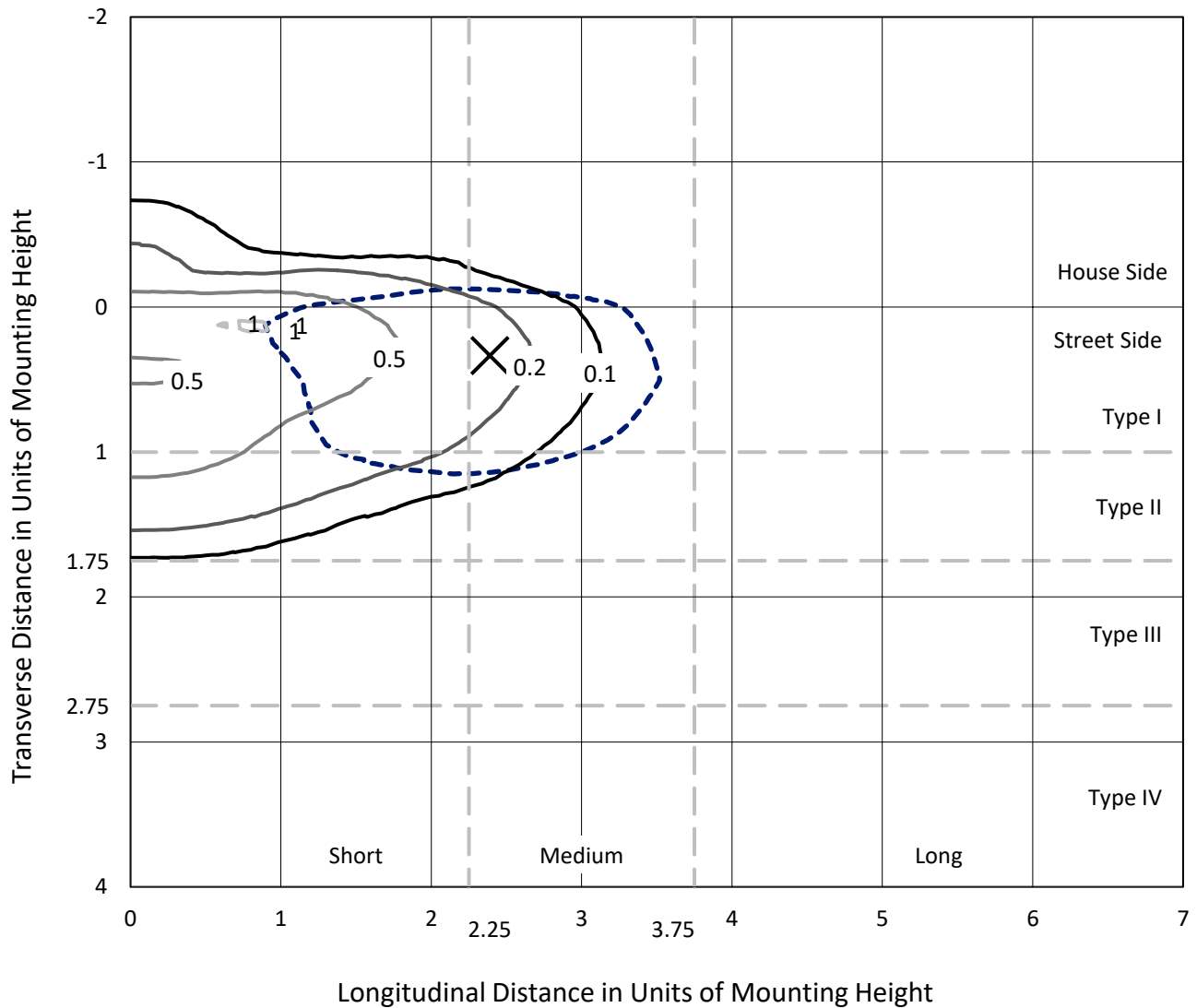
Input Watts (W): 30.9
Input Voltage (V): 120.0
Input Current (Ain): 0.263
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 6.356
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P881536
 CATALOG NUMBER: NAV-SB1A-727-U-T2-HSS

Iso-Footcandle Lines of Horizontal Illumination

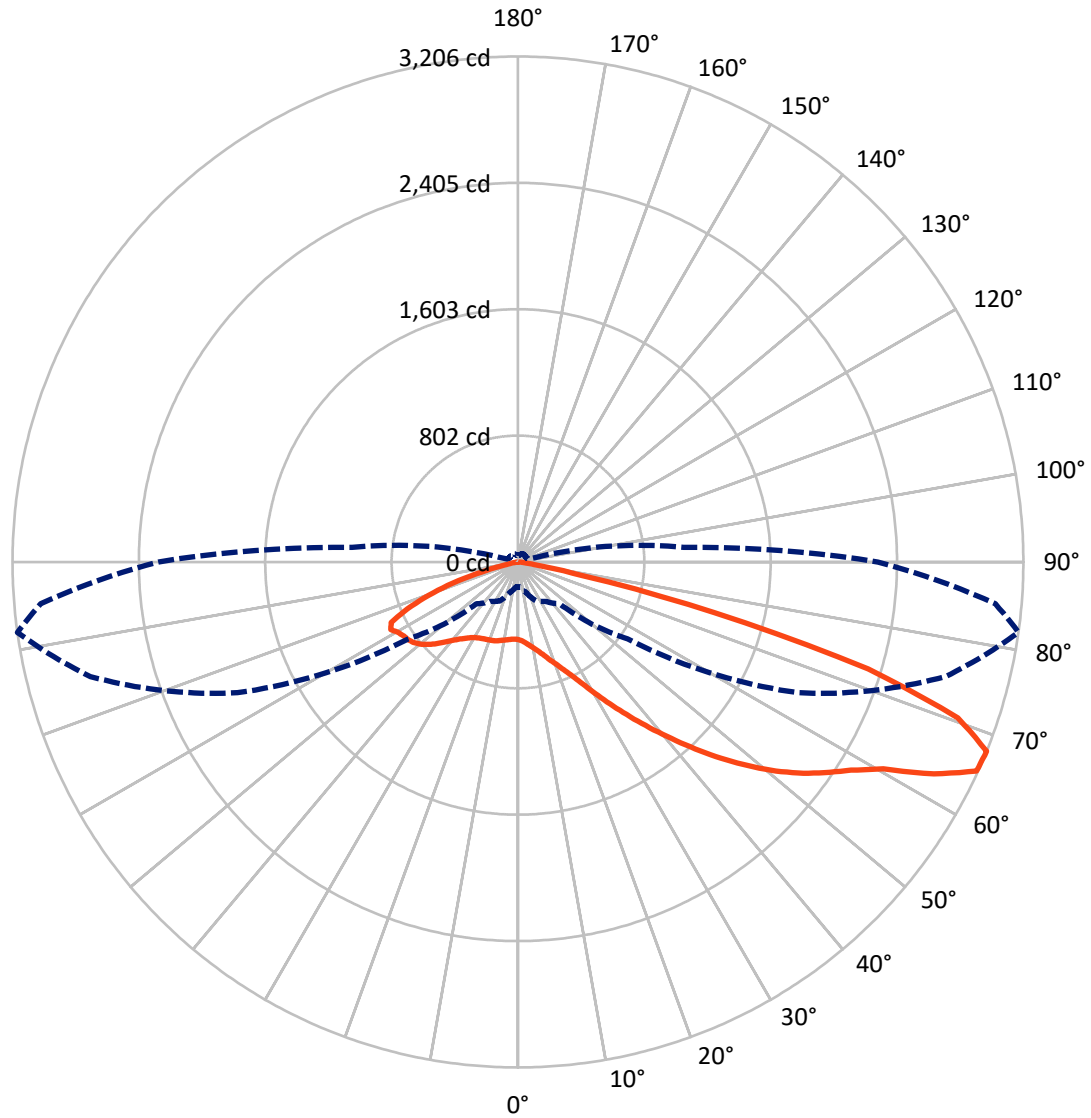
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc
 Type II - Medium - N/A

REPORT NUMBER: P881536
CATALOG NUMBER: NAV-SB1A-727-U-T2-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P881536
 CATALOG NUMBER: NAV-SB1A-727-U-T2-HSS

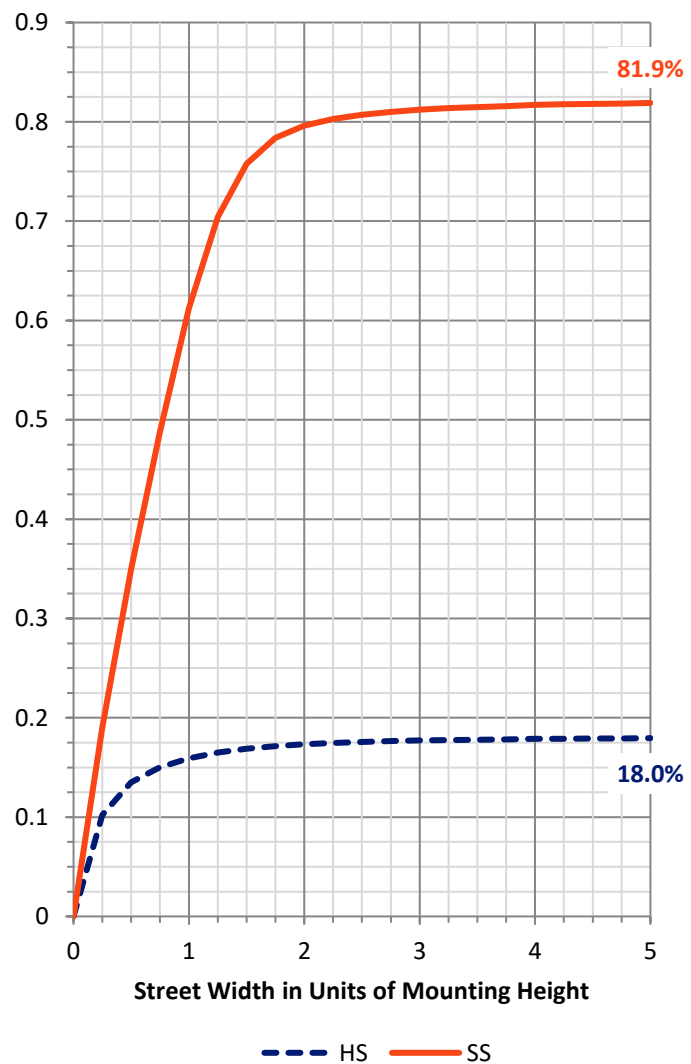
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 538.2 | 0.0 | 538.2 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| Street Side | Lumens | 2432.8 | 0.0 | 2432.8 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| Total | Lumens | 2971.0 | 0.0 | 2971.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 43.9 | 1.5 |
| 10°-20° | 113.9 | 3.8 |
| 20°-30° | 182.5 | 6.1 |
| 30°-40° | 322.7 | 10.9 |
| 40°-50° | 565.5 | 19.0 |
| 50°-60° | 754.2 | 25.4 |
| 60°-70° | 702.1 | 23.6 |
| 70°-80° | 269.5 | 9.1 |
| 80°-90° | 16.7 | 0.6 |
| 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° | 2971.0 | 100.0 |
| 0°-180° | 2971.0 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P881536

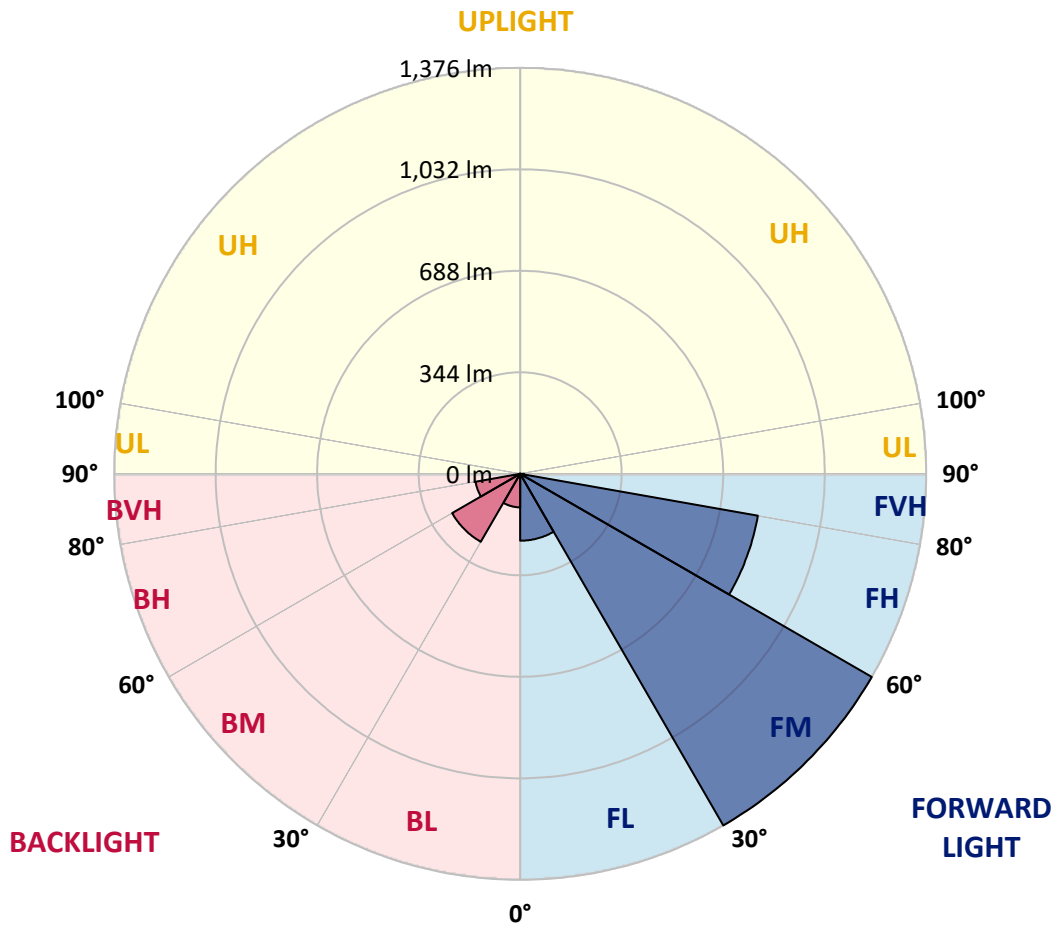
CATALOG NUMBER: NAV-SB1A-727-U-T2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 226.7 | 7.6 | | | |
| FM (30°-60°) | 1376.0 | 46.3 | | | |
| FH (60°-80°) | 818.0 | 27.5 | | | G1/1800 |
| FVH (80°-90°) | 12.2 | 0.4 | | | G1/100 |
| BL (0°-30°) | 113.7 | 3.8 | B1/500 | | |
| BM (30°-60°) | 266.3 | 9.0 | B1/1000 | | |
| BH (60°-80°) | 153.6 | 5.2 | B1/500 | | G1/500 |
| BVH (80°-90°) | 4.6 | 0.2 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type II Medium



REPORT NUMBER: P881536
 CATALOG NUMBER: NAV-SB1A-727-U-T2-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 |
| 2.5° | 520.2 | 523.2 | 521.5 | 520.6 | 519.1 | 517.0 | 515.3 | 509.9 | 504.4 | 500.8 | 499.5 |
| 5° | 530.7 | 533.7 | 533.5 | 534.3 | 535.4 | 536.0 | 535.6 | 529.6 | 521.7 | 515.5 | 511.9 |
| 7.5° | 521.7 | 525.1 | 527.9 | 532.2 | 539.7 | 547.6 | 551.4 | 550.2 | 542.0 | 533.5 | 529.0 |
| 10° | 496.3 | 499.9 | 506.5 | 516.6 | 532.4 | 549.5 | 563.9 | 570.5 | 565.3 | 555.9 | 549.7 |
| 12.5° | 449.6 | 453.3 | 466.3 | 488.1 | 514.7 | 544.4 | 571.8 | 589.5 | 590.8 | 581.4 | 574.1 |
| 15° | 397.2 | 400.9 | 414.8 | 442.1 | 482.6 | 530.3 | 576.0 | 609.6 | 621.0 | 612.8 | 604.1 |
| 17.5° | 364.7 | 367.9 | 378.4 | 400.4 | 442.6 | 502.0 | 574.5 | 631.0 | 656.9 | 650.5 | 640.0 |
| 20° | 354.9 | 357.6 | 362.6 | 378.0 | 413.0 | 472.7 | 564.7 | 651.1 | 695.6 | 692.0 | 680.2 |
| 22.5° | 365.3 | 367.9 | 369.4 | 376.3 | 398.3 | 453.5 | 552.3 | 671.7 | 740.5 | 741.0 | 726.6 |
| 25° | 389.5 | 392.1 | 390.4 | 394.7 | 404.3 | 447.5 | 547.6 | 695.8 | 797.0 | 801.7 | 785.5 |
| 27.5° | 429.3 | 429.5 | 425.5 | 425.2 | 426.7 | 456.5 | 552.5 | 721.7 | 868.2 | 877.0 | 856.9 |
| 30° | 509.1 | 505.9 | 490.3 | 473.4 | 465.7 | 483.4 | 566.2 | 752.3 | 952.3 | 967.9 | 942.7 |
| 32.5° | 632.1 | 627.4 | 598.7 | 558.3 | 517.6 | 526.8 | 590.8 | 787.2 | 1043.9 | 1072.1 | 1041.3 |
| 35° | 765.6 | 764.3 | 734.3 | 674.2 | 603.2 | 588.7 | 630.8 | 832.9 | 1143.7 | 1188.7 | 1152.1 |
| 37.5° | 889.6 | 889.0 | 871.9 | 801.1 | 714.7 | 674.9 | 695.0 | 892.8 | 1250.7 | 1315.7 | 1272.5 |
| 40° | 1003.0 | 1004.9 | 987.8 | 924.5 | 837.4 | 785.5 | 782.2 | 966.8 | 1369.6 | 1454.1 | 1402.8 |
| 42.5° | 1101.0 | 1103.1 | 1085.8 | 1038.9 | 958.7 | 907.8 | 889.4 | 1057.5 | 1485.8 | 1602.8 | 1542.0 |
| 45° | 1167.5 | 1180.8 | 1178.2 | 1140.8 | 1083.2 | 1030.4 | 1018.2 | 1171.3 | 1618.2 | 1760.4 | 1689.2 |
| 47.5° | 1186.3 | 1198.5 | 1217.8 | 1222.9 | 1187.8 | 1135.8 | 1150.4 | 1308.5 | 1752.1 | 1918.3 | 1837.2 |
| 50° | 1139.9 | 1151.2 | 1191.2 | 1244.5 | 1268.9 | 1252.8 | 1278.9 | 1455.4 | 1889.2 | 2075.7 | 1982.5 |
| 52.5° | 1048.3 | 1059.9 | 1110.4 | 1194.7 | 1294.1 | 1344.6 | 1407.9 | 1600.2 | 2022.0 | 2224.8 | 2120.0 |
| 55° | 915.9 | 928.1 | 992.9 | 1088.3 | 1246.0 | 1382.5 | 1515.5 | 1744.8 | 2143.8 | 2358.9 | 2244.1 |
| 57.5° | 735.8 | 744.8 | 812.2 | 945.7 | 1124.9 | 1344.8 | 1594.9 | 1902.7 | 2258.4 | 2490.7 | 2367.1 |
| 60° | 479.6 | 487.5 | 565.8 | 714.7 | 924.3 | 1219.0 | 1610.7 | 2078.7 | 2410.7 | 2662.0 | 2532.8 |
| 62.5° | 318.9 | 324.3 | 370.7 | 480.0 | 650.9 | 977.5 | 1518.1 | 2219.3 | 2634.0 | 2960.2 | 2817.1 |
| 65° | 218.8 | 224.2 | 270.6 | 346.7 | 420.5 | 646.6 | 1251.8 | 2200.6 | 2836.4 | 3197.0 | 3027.8 |
| 67.5° | 156.2 | 160.6 | 200.0 | 271.9 | 304.4 | 375.6 | 848.6 | 1962.8 | 2807.3 | 3206.0 | 3039.2 |
| 70° | 111.9 | 114.4 | 147.0 | 211.8 | 241.9 | 225.7 | 471.9 | 1501.2 | 2458.0 | 2960.4 | 2807.7 |
| 72.5° | 78.3 | 79.1 | 102.0 | 161.3 | 194.9 | 164.7 | 224.6 | 1000.9 | 1859.0 | 2323.6 | 2176.7 |
| 75° | 53.0 | 54.1 | 68.7 | 118.3 | 156.4 | 125.8 | 118.9 | 536.7 | 1091.3 | 1286.2 | 1152.9 |
| 77.5° | 32.5 | 32.9 | 44.3 | 80.9 | 117.0 | 95.8 | 76.6 | 227.4 | 422.2 | 414.5 | 353.4 |
| 80° | 18.4 | 18.4 | 28.2 | 50.3 | 79.8 | 61.8 | 53.7 | 96.7 | 133.7 | 117.4 | 103.5 |
| 82.5° | 10.3 | 10.5 | 20.5 | 31.2 | 52.8 | 36.6 | 29.5 | 44.7 | 57.8 | 51.1 | 44.5 |
| 85° | 4.3 | 4.7 | 12.6 | 14.8 | 25.2 | 18.2 | 12.0 | 18.8 | 21.4 | 19.0 | 13.9 |
| 87.5° | 0.4 | 0.6 | 3.9 | 2.8 | 3.0 | 3.6 | 1.7 | 3.6 | 3.0 | 3.0 | 2.1 |
| 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: P881536
 CATALOG NUMBER: NAV-SB1A-727-U-T2-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 | 492.2 |
| 2.5° | 495.4 | 492.2 | 484.1 | 474.7 | 462.2 | 456.3 | 448.1 | 442.6 | 437.9 | 438.3 | 434.0 |
| 5° | 505.0 | 496.9 | 478.7 | 456.0 | 427.8 | 407.7 | 386.3 | 371.6 | 359.6 | 357.0 | 351.2 |
| 7.5° | 518.3 | 505.5 | 473.6 | 432.7 | 385.0 | 348.9 | 316.6 | 295.8 | 281.1 | 276.4 | 271.7 |
| 10° | 535.4 | 516.8 | 467.0 | 403.4 | 334.8 | 288.8 | 254.1 | 237.9 | 227.8 | 224.4 | 221.8 |
| 12.5° | 555.3 | 529.8 | 458.2 | 367.7 | 283.0 | 238.7 | 216.7 | 208.6 | 205.3 | 204.3 | 203.6 |
| 15° | 580.3 | 546.1 | 444.9 | 325.3 | 239.1 | 208.1 | 198.7 | 197.6 | 198.1 | 197.6 | 197.4 |
| 17.5° | 610.1 | 563.9 | 423.3 | 281.7 | 209.6 | 192.5 | 189.1 | 189.9 | 191.0 | 190.8 | 190.4 |
| 20° | 642.6 | 581.4 | 395.7 | 243.0 | 189.5 | 181.4 | 179.5 | 180.3 | 181.2 | 180.7 | 180.5 |
| 22.5° | 679.6 | 600.2 | 365.1 | 212.8 | 176.0 | 171.1 | 169.0 | 169.2 | 169.2 | 168.3 | 167.9 |
| 25° | 723.9 | 621.0 | 333.0 | 191.4 | 165.8 | 161.9 | 159.4 | 158.5 | 157.2 | 154.7 | 154.2 |
| 27.5° | 776.7 | 643.0 | 302.2 | 176.5 | 157.6 | 154.0 | 151.0 | 148.9 | 145.7 | 141.4 | 141.0 |
| 30° | 836.2 | 669.7 | 276.2 | 167.1 | 151.2 | 147.6 | 144.2 | 141.0 | 136.3 | 130.9 | 130.5 |
| 32.5° | 906.1 | 698.4 | 257.1 | 160.9 | 145.5 | 141.6 | 137.5 | 133.7 | 128.6 | 123.2 | 123.4 |
| 35° | 989.5 | 733.1 | 246.0 | 156.6 | 141.0 | 135.8 | 131.3 | 127.1 | 123.2 | 118.5 | 118.1 |
| 37.5° | 1080.0 | 769.8 | 242.6 | 154.4 | 138.0 | 130.1 | 124.9 | 121.9 | 121.5 | 118.7 | 118.5 |
| 40° | 1179.0 | 813.5 | 245.1 | 153.2 | 134.8 | 124.5 | 118.9 | 118.3 | 119.4 | 114.4 | 114.7 |
| 42.5° | 1283.9 | 865.2 | 249.4 | 151.7 | 130.3 | 118.9 | 113.6 | 113.6 | 112.7 | 105.9 | 105.9 |
| 45° | 1397.2 | 924.9 | 253.7 | 148.0 | 124.9 | 113.4 | 109.3 | 107.8 | 104.2 | 97.5 | 97.3 |
| 47.5° | 1511.4 | 985.7 | 256.9 | 141.4 | 118.5 | 108.7 | 105.0 | 101.6 | 96.3 | 90.3 | 90.1 |
| 50° | 1619.9 | 1040.2 | 253.5 | 131.6 | 111.2 | 104.2 | 100.3 | 95.6 | 89.8 | 85.8 | 85.1 |
| 52.5° | 1716.8 | 1087.5 | 238.9 | 120.0 | 103.5 | 99.5 | 96.0 | 91.1 | 86.4 | 82.1 | 81.7 |
| 55° | 1801.1 | 1125.8 | 213.3 | 109.1 | 96.7 | 95.4 | 92.0 | 85.8 | 79.4 | 75.7 | 75.3 |
| 57.5° | 1881.9 | 1154.9 | 181.2 | 100.1 | 90.5 | 90.9 | 85.8 | 80.2 | 74.2 | 70.4 | 69.9 |
| 60° | 1989.5 | 1193.8 | 148.7 | 91.8 | 83.9 | 85.1 | 79.6 | 75.5 | 68.0 | 63.1 | 62.5 |
| 62.5° | 2161.5 | 1254.3 | 118.1 | 81.5 | 76.1 | 76.6 | 74.2 | 69.3 | 60.3 | 54.5 | 54.1 |
| 65° | 2298.0 | 1232.1 | 93.0 | 70.4 | 67.4 | 68.0 | 68.0 | 62.7 | 53.0 | 46.4 | 45.8 |
| 67.5° | 2282.6 | 1055.0 | 74.2 | 59.5 | 59.0 | 59.5 | 61.0 | 56.5 | 47.1 | 41.7 | 40.9 |
| 70° | 2102.7 | 839.1 | 59.5 | 49.4 | 51.3 | 50.3 | 54.5 | 51.6 | 42.4 | 37.0 | 36.4 |
| 72.5° | 1715.7 | 604.5 | 45.3 | 40.9 | 39.4 | 41.1 | 49.2 | 46.4 | 35.3 | 29.3 | 28.7 |
| 75° | 1002.6 | 322.6 | 33.8 | 32.3 | 28.4 | 34.2 | 43.6 | 39.6 | 27.0 | 21.6 | 21.0 |
| 77.5° | 326.4 | 112.5 | 24.8 | 23.7 | 21.2 | 27.6 | 37.2 | 33.4 | 22.0 | 17.1 | 16.5 |
| 80° | 87.5 | 34.0 | 16.9 | 15.6 | 13.7 | 20.5 | 29.5 | 26.5 | 15.8 | 11.1 | 10.9 |
| 82.5° | 35.1 | 14.3 | 9.8 | 8.8 | 7.5 | 14.1 | 23.3 | 21.4 | 11.8 | 7.1 | 7.1 |
| 85° | 11.3 | 4.7 | 3.6 | 2.8 | 3.4 | 8.8 | 13.9 | 14.5 | 8.3 | 3.6 | 2.8 |
| 87.5° | 1.5 | 0.6 | 0.6 | 0.9 | 0.6 | 1.5 | 4.3 | 4.1 | 2.4 | 0.4 | 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)