

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: P963614

Luminaire Tested: **NAV-SB3A-760-U-T3R**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P963614  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB3A-760-U-T3R  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(3) 70 CRI, 5700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 14983.4 lumens  
Efficiency: N/A  
Efficacy: 176.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - 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

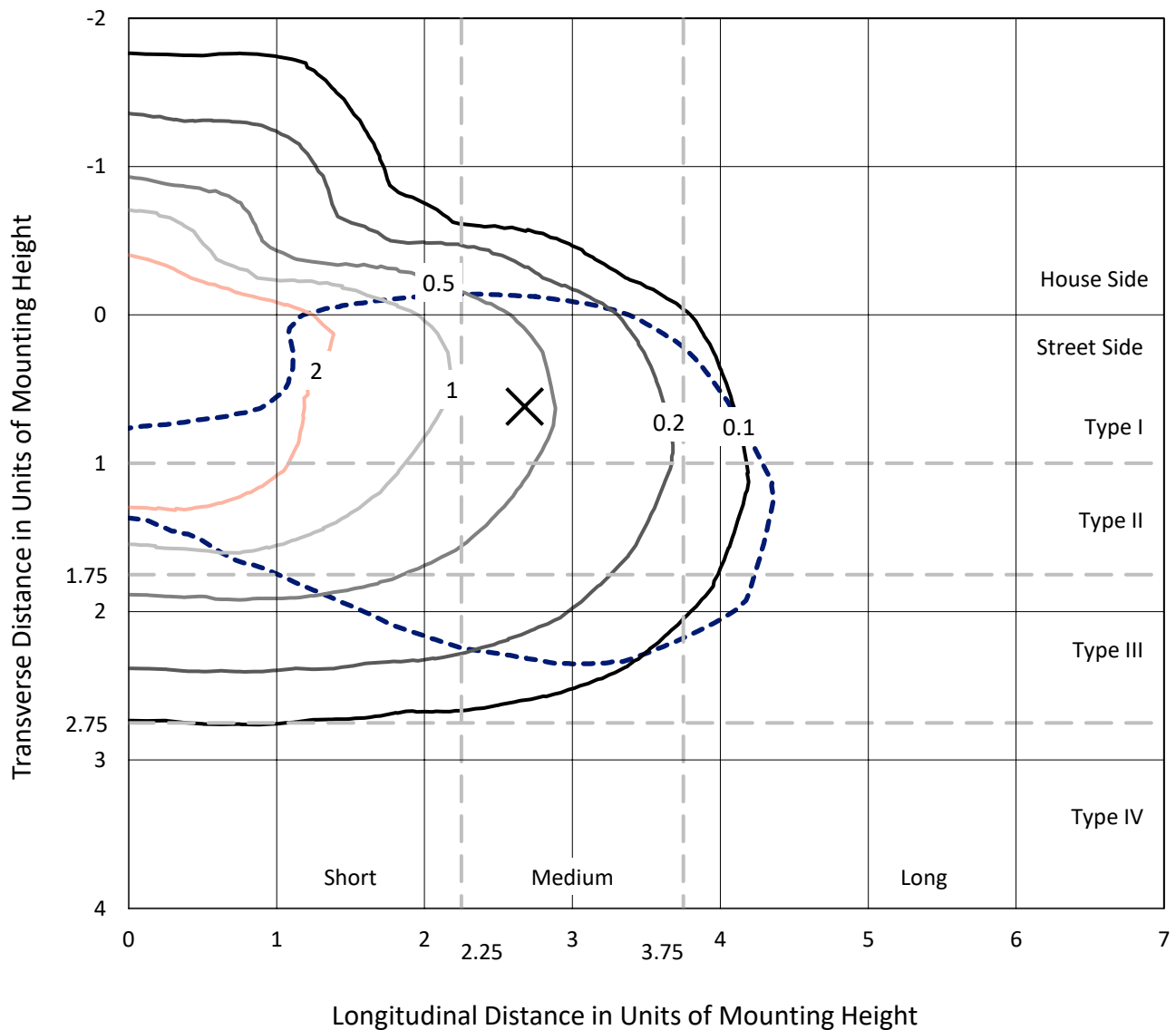


REPORT NUMBER: P963614

CATALOG NUMBER: NAV-SB3A-760-U-T3R

## Iso-Footcandle Lines of Horizontal Illumination

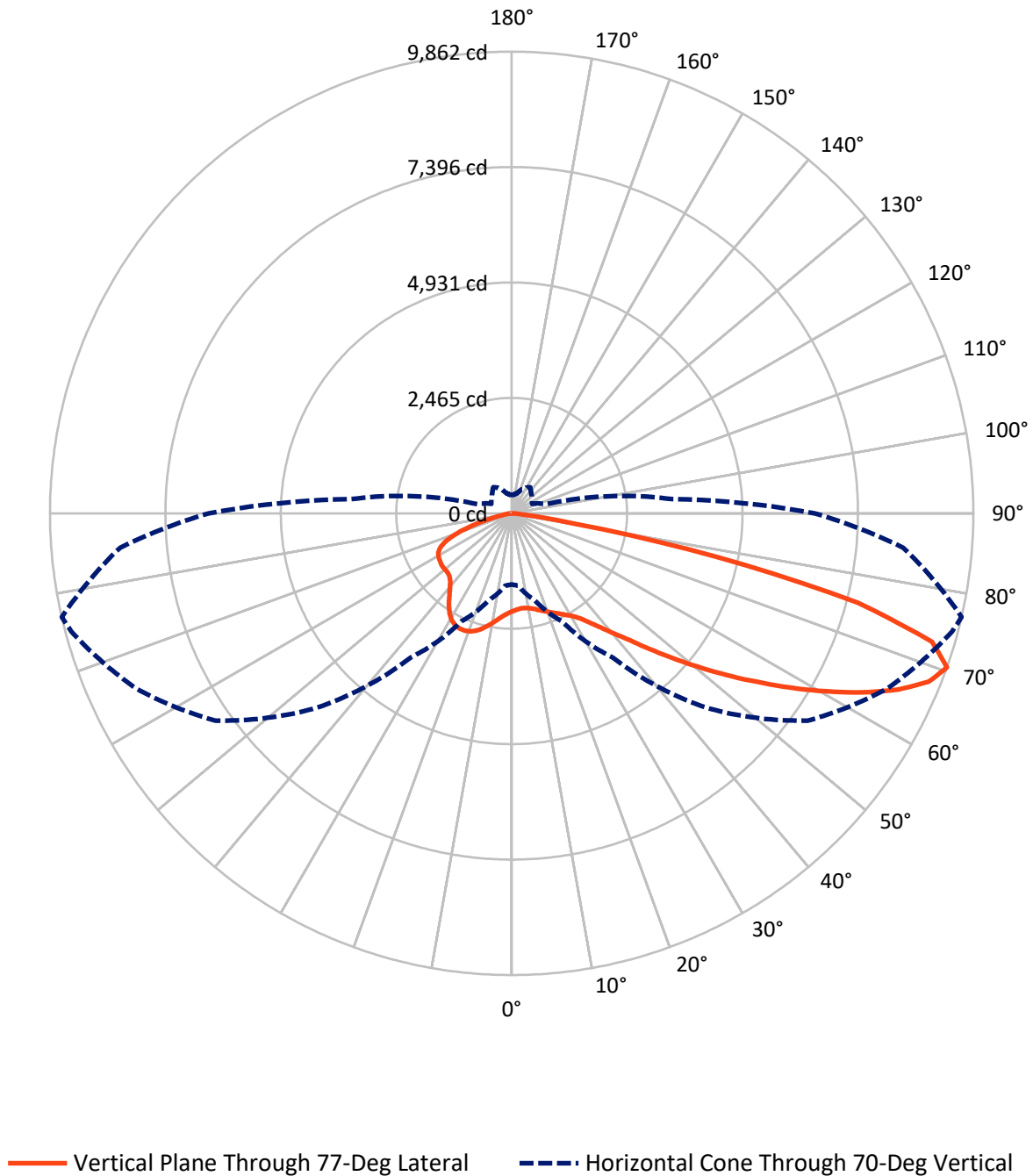
× Max cd  
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 fc  
Type III - Medium - N/A

REPORT NUMBER: P963614  
CATALOG NUMBER: NAV-SB3A-760-U-T3R

## Luminous Intensity Polar Plot



REPORT NUMBER: P963614

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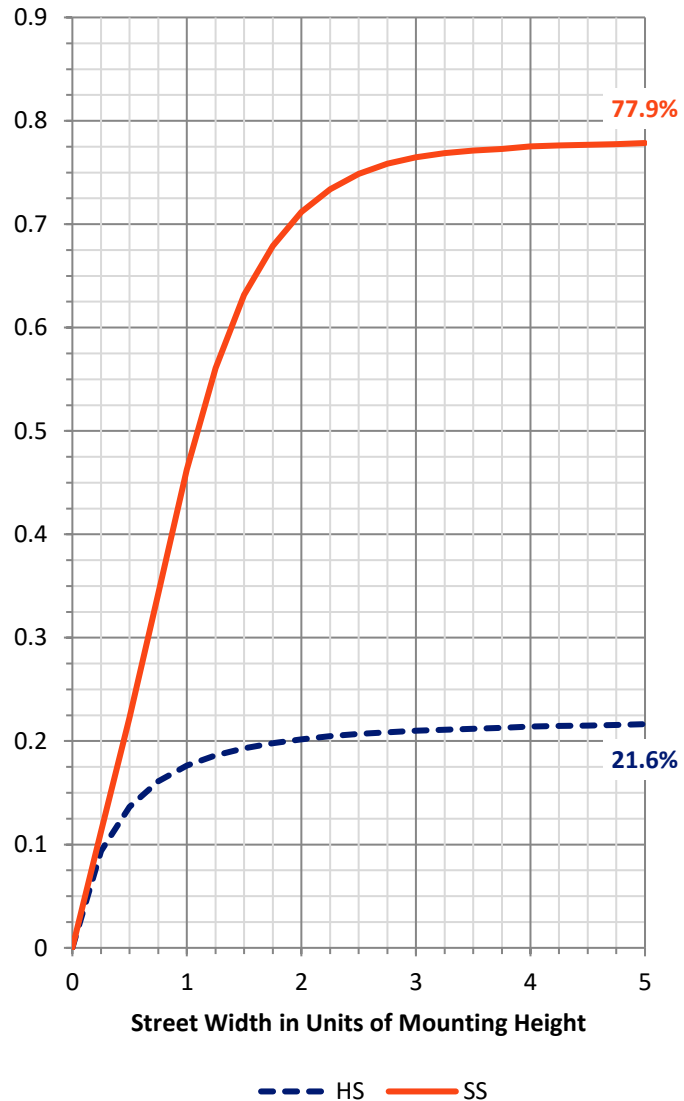
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3281.1   | 0.0    | 3281.1  |
|                    | % Fixture | 21.9     | 0.0    | 21.9    |
| <b>Street Side</b> | Lumens    | 11702.3  | 0.0    | 11702.3 |
|                    | % Fixture | 78.1     | 0.0    | 78.1    |
| <b>Total</b>       | Lumens    | 14983.4  | 0.0    | 14983.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 199.4   | 1.3       |
| 10°-20°   | 575.4   | 3.8       |
| 20°-30°   | 984.0   | 6.6       |
| 30°-40°   | 1582.3  | 10.6      |
| 40°-50°   | 2470.4  | 16.5      |
| 50°-60°   | 3299.9  | 22.0      |
| 60°-70°   | 3517.2  | 23.5      |
| 70°-80°   | 2165.2  | 14.5      |
| 80°-90°   | 189.7   | 1.3       |
| 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°    | 14983.4 | 100.0     |
| 0°-180°   | 14983.4 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P963614

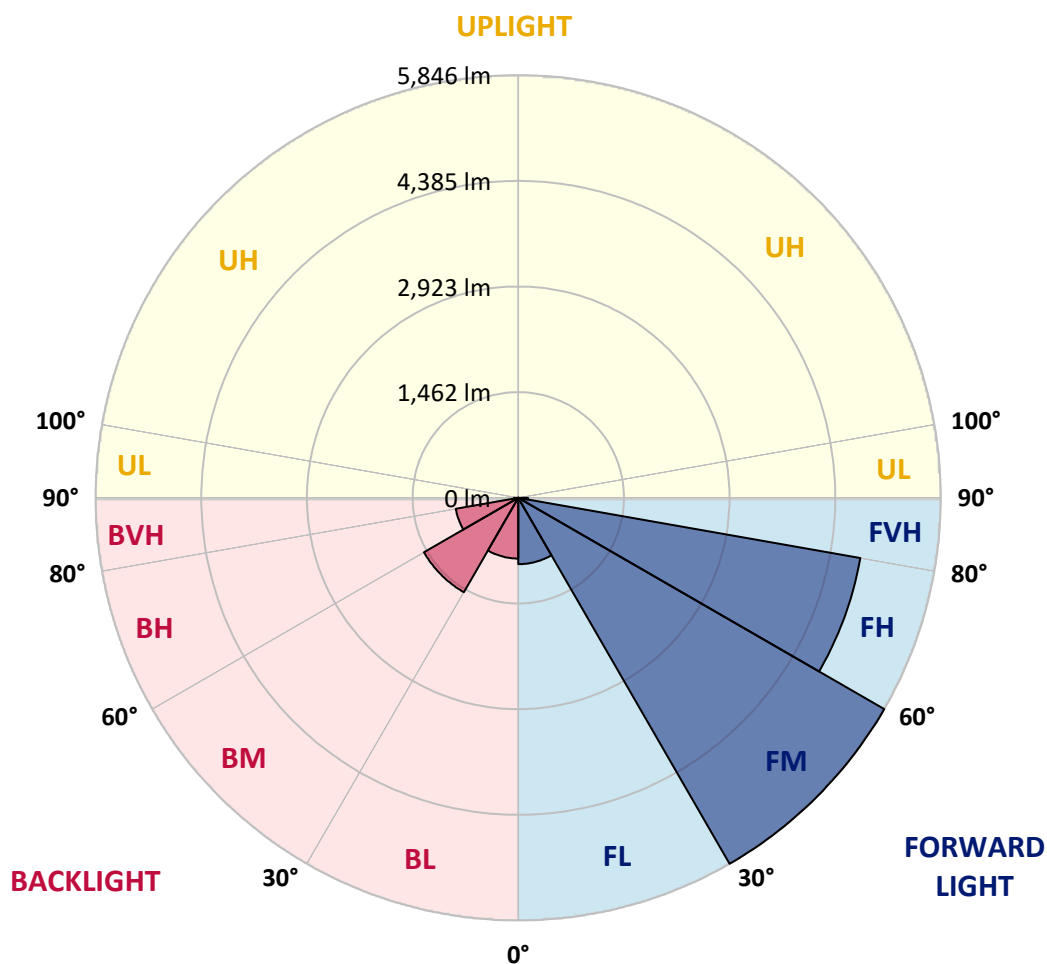
CATALOG NUMBER: NAV-SB3A-760-U-T3R

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 918.0  | 6.1       |                         |      |         |
| FM   | (30°-60°)   | 5846.2 | 39.0      |                         |      |         |
| FH   | (60°-80°)   | 4805.4 | 32.1      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 132.7  | 0.9       |                         |      | G2/225  |
| BL   | (0°-30°)    | 840.7  | 5.6       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 1506.4 | 10.1      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 876.9  | 5.9       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 57.1   | 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-G2**

Type III Medium



REPORT NUMBER: P963614

CATALOG NUMBER: NAV-SB3A-760-U-T3R

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 77°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 |
| 2.5°  | 1926.9 | 1926.1 | 1936.1 | 1939.2 | 1957.5 | 1970.7 | 1995.2 | 2021.3 | 2055.0 | 2058.8 | 2079.6 |
| 5°    | 1815.6 | 1815.6 | 1827.2 | 1839.4 | 1863.1 | 1889.3 | 1926.9 | 1972.2 | 2030.4 | 2039.6 | 2091.1 |
| 7.5°  | 1721.2 | 1727.3 | 1737.4 | 1761.2 | 1788.7 | 1826.3 | 1884.0 | 1948.3 | 2025.1 | 2039.6 | 2122.6 |
| 10°   | 1645.2 | 1652.2 | 1664.4 | 1683.7 | 1725.1 | 1777.2 | 1852.5 | 1935.3 | 2038.1 | 2061.2 | 2168.6 |
| 12.5° | 1621.4 | 1628.4 | 1635.3 | 1649.8 | 1688.2 | 1749.6 | 1839.4 | 1941.5 | 2069.6 | 2092.6 | 2231.5 |
| 15°   | 1676.7 | 1685.2 | 1679.8 | 1676.0 | 1695.9 | 1751.9 | 1845.5 | 1963.7 | 2108.7 | 2141.7 | 2309.0 |
| 17.5° | 1804.1 | 1807.2 | 1794.9 | 1758.8 | 1755.7 | 1785.7 | 1874.7 | 1994.4 | 2157.8 | 2193.9 | 2387.3 |
| 20°   | 2009.7 | 2004.4 | 1979.1 | 1907.7 | 1867.0 | 1860.9 | 1924.5 | 2040.5 | 2208.5 | 2246.9 | 2471.7 |
| 22.5° | 2289.0 | 2283.0 | 2232.2 | 2119.5 | 2029.0 | 1969.1 | 1996.7 | 2100.3 | 2265.2 | 2308.3 | 2553.8 |
| 25°   | 2637.4 | 2629.0 | 2554.6 | 2401.2 | 2260.6 | 2112.6 | 2094.9 | 2179.4 | 2335.2 | 2375.0 | 2639.8 |
| 27.5° | 3044.1 | 3037.3 | 2956.7 | 2754.1 | 2551.5 | 2309.0 | 2217.0 | 2272.2 | 2408.0 | 2453.3 | 2736.4 |
| 30°   | 3481.6 | 3501.5 | 3358.8 | 3140.9 | 2884.6 | 2565.4 | 2381.2 | 2386.5 | 2502.4 | 2543.1 | 2853.9 |
| 32.5° | 3995.8 | 4030.3 | 3858.4 | 3582.1 | 3232.1 | 2843.9 | 2588.3 | 2546.1 | 2639.8 | 2673.5 | 3002.0 |
| 35°   | 4505.3 | 4544.4 | 4401.7 | 4096.2 | 3693.4 | 3172.4 | 2804.7 | 2729.6 | 2822.4 | 2859.2 | 3198.4 |
| 37.5° | 4945.7 | 4997.9 | 4924.2 | 4658.7 | 4186.8 | 3568.3 | 3087.2 | 2945.1 | 3047.2 | 3093.2 | 3462.3 |
| 40°   | 5293.3 | 5373.2 | 5367.8 | 5202.1 | 4768.5 | 4048.6 | 3445.5 | 3211.4 | 3326.5 | 3376.5 | 3782.4 |
| 42.5° | 5575.7 | 5644.8 | 5704.6 | 5696.2 | 5375.4 | 4594.3 | 3866.8 | 3557.6 | 3645.0 | 3702.6 | 4142.3 |
| 45°   | 5770.6 | 5844.3 | 5973.3 | 6112.2 | 5959.5 | 5178.2 | 4349.5 | 3968.1 | 4047.9 | 4134.6 | 4571.3 |
| 47.5° | 5944.9 | 6028.5 | 6195.8 | 6416.0 | 6455.1 | 5764.5 | 4878.2 | 4446.1 | 4519.0 | 4608.8 | 5001.8 |
| 50°   | 5960.2 | 6032.3 | 6291.7 | 6604.1 | 6807.3 | 6327.7 | 5446.0 | 4982.5 | 5050.9 | 5146.7 | 5462.9 |
| 52.5° | 5589.5 | 5703.1 | 6155.8 | 6598.6 | 6969.3 | 6798.9 | 6010.1 | 5540.4 | 5617.2 | 5732.3 | 5940.3 |
| 55°   | 4338.7 | 4505.3 | 5757.6 | 6393.0 | 6911.8 | 7103.6 | 6546.5 | 6133.6 | 6231.9 | 6352.3 | 6420.6 |
| 57.5° | 3737.2 | 3810.0 | 4570.5 | 6018.5 | 6649.3 | 7182.6 | 6999.2 | 6732.9 | 6891.0 | 7023.0 | 6928.6 |
| 60°   | 3358.8 | 3419.4 | 3869.1 | 5436.1 | 6304.0 | 7057.5 | 7349.1 | 7291.5 | 7564.8 | 7722.0 | 7448.2 |
| 62.5° | 2953.6 | 3011.1 | 3420.2 | 4539.0 | 5862.0 | 6849.6 | 7570.1 | 7807.2 | 8255.5 | 8427.3 | 7937.7 |
| 65°   | 2551.5 | 2600.6 | 2992.8 | 3813.8 | 5300.3 | 6641.6 | 7684.5 | 8253.1 | 8894.6 | 9072.7 | 8344.4 |
| 67.5° | 2103.4 | 2144.1 | 2514.7 | 3217.6 | 4617.3 | 6356.9 | 7741.3 | 8603.8 | 9451.0 | 9603.7 | 8545.5 |
| 70°   | 1517.8 | 1549.3 | 1932.2 | 2544.6 | 3760.1 | 5867.3 | 7718.2 | 8852.4 | 9739.6 | 9861.5 | 8393.5 |
| 72.5° | 717.5  | 745.9  | 1195.6 | 1652.2 | 2655.9 | 4914.3 | 7252.5 | 8655.2 | 9446.4 | 9385.7 | 7463.4 |
| 75°   | 382.9  | 407.4  | 686.7  | 906.3  | 1402.7 | 3368.8 | 5934.9 | 7455.8 | 7932.4 | 7637.7 | 5515.9 |
| 77.5° | 259.3  | 278.6  | 425.2  | 544.1  | 640.7  | 1599.2 | 3814.6 | 5162.1 | 4966.4 | 4480.0 | 2762.6 |
| 80°   | 205.6  | 225.6  | 348.4  | 368.4  | 310.1  | 577.8  | 1576.1 | 2389.6 | 1716.6 | 1372.8 | 785.8  |
| 82.5° | 158.1  | 180.3  | 293.2  | 267.0  | 168.8  | 237.1  | 458.9  | 755.8  | 439.7  | 334.6  | 190.3  |
| 85°   | 96.7   | 120.4  | 230.2  | 170.4  | 95.1   | 108.2  | 155.8  | 210.2  | 134.3  | 112.0  | 68.3   |
| 87.5° | 49.1   | 69.1   | 116.6  | 62.1   | 42.9   | 25.3   | 41.4   | 41.4   | 35.3   | 30.6   | 17.6   |
| 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: P963614

CATALOG NUMBER: NAV-SB3A-760-U-T3R

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 | 2090.3 |
| 2.5°  | 2098.0 | 2113.3 | 2139.5 | 2164.0 | 2183.1 | 2201.6 | 2220.0 | 2230.0 | 2233.1 | 2245.4 | 2252.2 |
| 5°    | 2122.6 | 2151.0 | 2201.6 | 2249.2 | 2279.1 | 2297.5 | 2310.6 | 2318.2 | 2319.8 | 2323.6 | 2329.7 |
| 7.5°  | 2167.9 | 2213.1 | 2283.7 | 2331.3 | 2353.5 | 2352.0 | 2346.6 | 2327.5 | 2319.8 | 2312.9 | 2314.4 |
| 10°   | 2231.5 | 2291.4 | 2378.1 | 2411.1 | 2397.3 | 2360.5 | 2312.9 | 2256.8 | 2230.7 | 2205.4 | 2197.8 |
| 12.5° | 2310.6 | 2386.5 | 2471.7 | 2470.1 | 2401.9 | 2307.5 | 2197.0 | 2111.1 | 2056.6 | 2017.4 | 2008.2 |
| 15°   | 2406.5 | 2493.9 | 2559.2 | 2507.0 | 2357.4 | 2187.8 | 2025.9 | 1913.9 | 1864.7 | 1821.7 | 1817.1 |
| 17.5° | 2505.5 | 2599.1 | 2629.0 | 2495.5 | 2245.4 | 2010.5 | 1827.2 | 1738.9 | 1690.5 | 1667.5 | 1674.4 |
| 20°   | 2602.2 | 2695.0 | 2670.4 | 2429.6 | 2075.0 | 1809.4 | 1646.0 | 1597.7 | 1587.7 | 1593.1 | 1590.8 |
| 22.5° | 2704.3 | 2787.1 | 2678.9 | 2302.1 | 1857.8 | 1603.8 | 1514.0 | 1515.6 | 1537.8 | 1553.9 | 1557.8 |
| 25°   | 2808.6 | 2864.6 | 2656.7 | 2118.0 | 1624.5 | 1452.6 | 1430.4 | 1455.0 | 1498.7 | 1530.1 | 1538.6 |
| 27.5° | 2909.2 | 2933.7 | 2608.3 | 1890.0 | 1424.2 | 1344.4 | 1348.3 | 1398.9 | 1464.9 | 1508.7 | 1519.4 |
| 30°   | 3022.7 | 2995.0 | 2515.5 | 1633.7 | 1285.4 | 1251.6 | 1283.8 | 1343.0 | 1408.9 | 1448.0 | 1457.2 |
| 32.5° | 3150.8 | 3048.0 | 2368.2 | 1396.7 | 1187.2 | 1177.1 | 1230.1 | 1268.4 | 1297.6 | 1309.1 | 1315.3 |
| 35°   | 3310.4 | 3122.5 | 2179.4 | 1230.1 | 1098.9 | 1122.7 | 1173.3 | 1154.1 | 1142.7 | 1136.5 | 1142.7 |
| 37.5° | 3517.6 | 3223.0 | 1958.4 | 1121.9 | 1027.6 | 1083.5 | 1104.2 | 1044.4 | 999.2  | 976.8  | 982.3  |
| 40°   | 3767.1 | 3370.3 | 1745.8 | 1038.2 | 982.3  | 1049.8 | 1013.7 | 941.6  | 884.1  | 852.6  | 854.8  |
| 42.5° | 4044.0 | 3524.6 | 1567.0 | 975.3  | 956.9  | 1022.1 | 946.9  | 861.0  | 768.1  | 758.2  | 768.1  |
| 45°   | 4334.9 | 3683.4 | 1444.9 | 927.0  | 944.6  | 998.4  | 908.6  | 769.7  | 703.7  | 744.4  | 765.9  |
| 47.5° | 4625.7 | 3829.2 | 1371.3 | 890.9  | 938.5  | 971.5  | 874.8  | 719.0  | 672.2  | 731.3  | 758.9  |
| 50°   | 4949.5 | 3959.7 | 1338.3 | 864.8  | 931.6  | 960.7  | 824.2  | 706.0  | 639.2  | 678.3  | 707.6  |
| 52.5° | 5271.1 | 4060.9 | 1313.7 | 838.8  | 921.6  | 952.3  | 799.6  | 690.6  | 599.3  | 601.6  | 617.8  |
| 55°   | 5591.9 | 4127.0 | 1286.9 | 804.2  | 899.3  | 933.9  | 797.3  | 673.7  | 569.4  | 558.6  | 566.3  |
| 57.5° | 5934.1 | 4164.6 | 1253.9 | 765.9  | 861.0  | 887.0  | 795.0  | 660.7  | 560.2  | 542.5  | 544.8  |
| 60°   | 6282.5 | 4219.8 | 1210.9 | 719.0  | 809.5  | 831.1  | 789.7  | 656.1  | 554.8  | 524.9  | 527.2  |
| 62.5° | 6594.8 | 4239.0 | 1159.5 | 674.6  | 743.5  | 775.8  | 778.1  | 652.3  | 540.3  | 488.8  | 488.8  |
| 65°   | 6799.7 | 4156.1 | 1069.7 | 623.9  | 672.2  | 719.0  | 755.8  | 639.2  | 514.1  | 462.7  | 462.7  |
| 67.5° | 6791.2 | 3919.7 | 929.3  | 558.6  | 603.1  | 656.1  | 723.6  | 616.9  | 482.7  | 430.5  | 432.8  |
| 70°   | 6475.1 | 3453.2 | 751.2  | 482.7  | 527.2  | 588.6  | 682.2  | 583.9  | 445.1  | 395.2  | 399.9  |
| 72.5° | 5553.4 | 2702.7 | 545.6  | 393.7  | 438.9  | 518.8  | 628.5  | 544.1  | 406.7  | 363.8  | 361.4  |
| 75°   | 3967.4 | 1710.5 | 369.9  | 302.4  | 341.5  | 439.7  | 561.7  | 497.2  | 371.5  | 365.3  | 344.5  |
| 77.5° | 2026.6 | 817.2  | 244.8  | 221.0  | 237.9  | 346.9  | 471.9  | 444.3  | 376.8  | 301.6  | 268.5  |
| 80°   | 659.2  | 301.6  | 154.3  | 150.4  | 158.1  | 230.9  | 365.3  | 364.5  | 285.5  | 204.9  | 181.1  |
| 82.5° | 210.2  | 129.7  | 100.6  | 96.7   | 92.9   | 145.0  | 254.8  | 288.5  | 192.6  | 129.7  | 128.9  |
| 85°   | 83.6   | 77.5   | 59.0   | 54.5   | 39.2   | 68.3   | 133.6  | 191.9  | 143.5  | 93.6   | 95.9   |
| 87.5° | 30.6   | 30.6   | 16.1   | 11.5   | 8.4    | 23.1   | 36.1   | 57.5   | 82.1   | 48.4   | 47.6   |
| 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)