

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: P967206

Luminaire Tested: **NAV-SB4D-735-U-T2U**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P967206  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4D-735-U-T2U  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 70 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 42363.3 lumens  
Efficiency: N/A  
Efficacy: 144.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B4 - U0 - G4

Input Watts (W): 293.6  
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



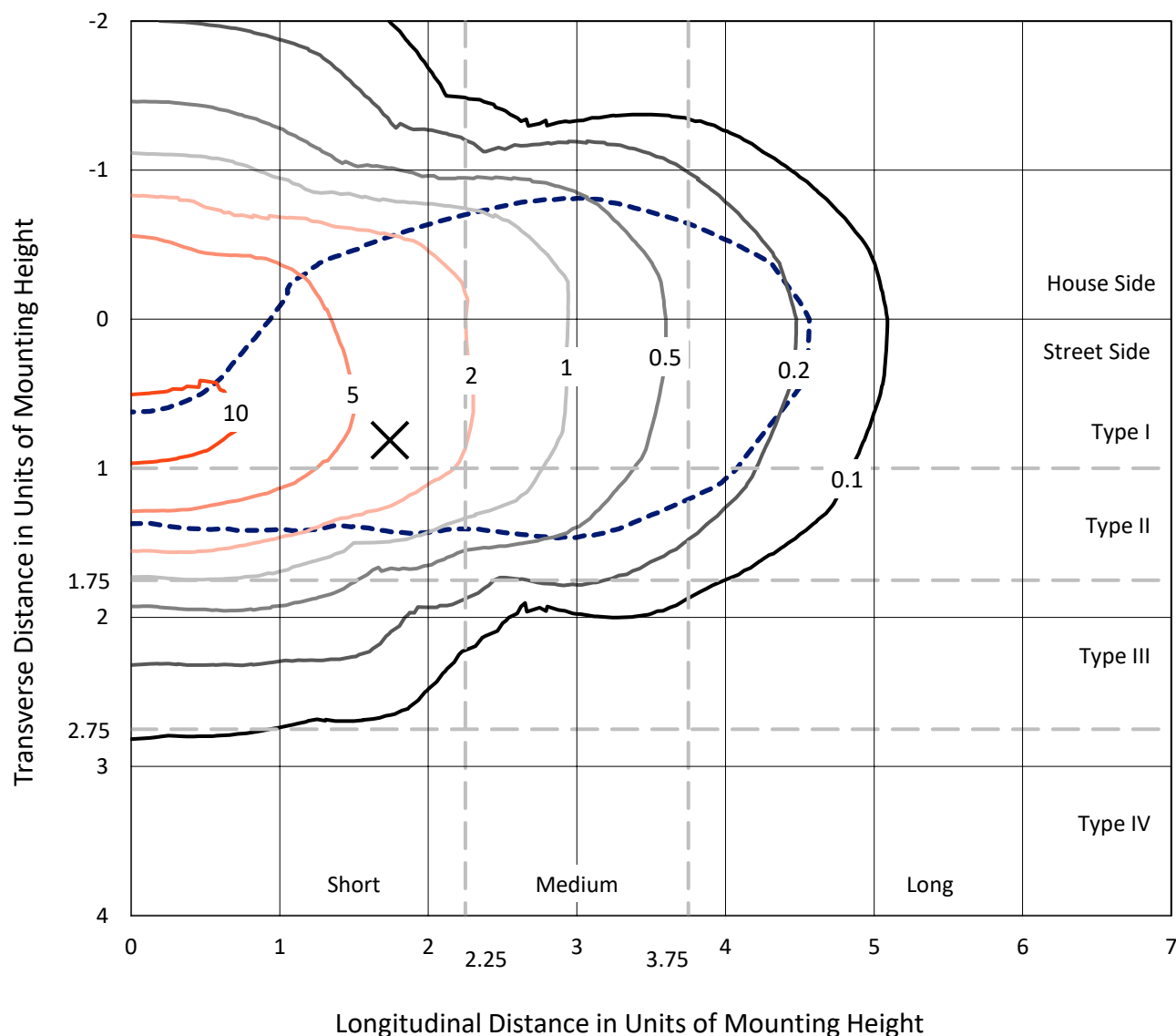
REPORT NUMBER: P967206

CATALOG NUMBER: NAV-SB4D-735-U-T2U

## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

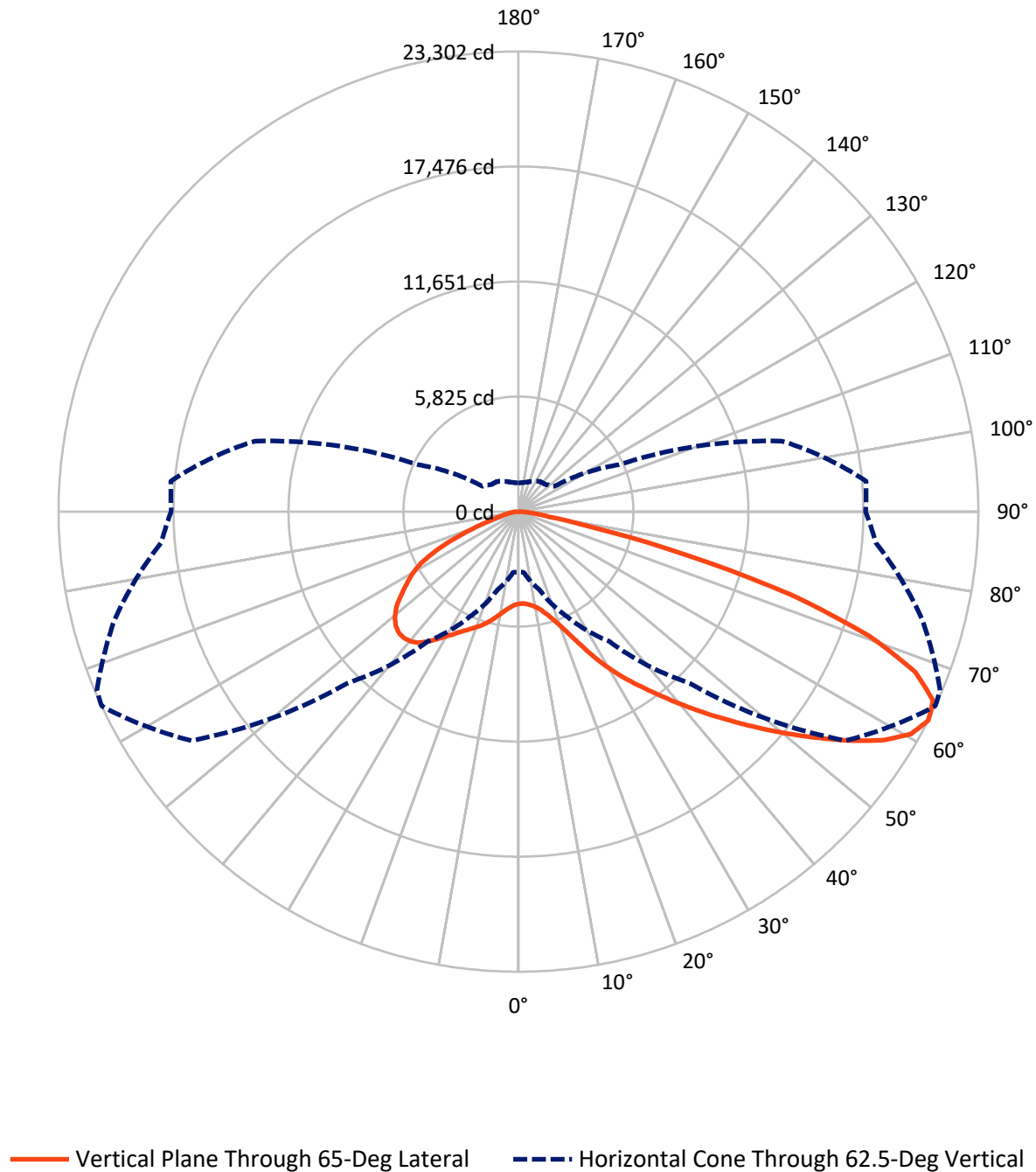


Based on 25 foot mounting height. Maximum calculated value = 11.9 fc

Type II - Short - N/A

REPORT NUMBER: P967206  
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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 13368.0  | 0.0    | 13368.0 |
|                    | % Fixture | 31.6     | 0.0    | 31.6    |
| <b>Street Side</b> | Lumens    | 28995.2  | 0.0    | 28995.2 |
|                    | % Fixture | 68.4     | 0.0    | 68.4    |
| <b>Total</b>       | Lumens    | 42363.3  | 0.0    | 42363.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 465.4   | 1.1       |
| 10°-20°   | 1578.3  | 3.7       |
| 20°-30°   | 3200.1  | 7.6       |
| 30°-40°   | 5537.8  | 13.1      |
| 40°-50°   | 8380.3  | 19.8      |
| 50°-60°   | 9825.4  | 23.2      |
| 60°-70°   | 8237.4  | 19.4      |
| 70°-80°   | 4547.7  | 10.7      |
| 80°-90°   | 590.7   | 1.4       |
| 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°    | 42363.3 | 100.0     |
| 0°-180°   | 42363.3 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P967206

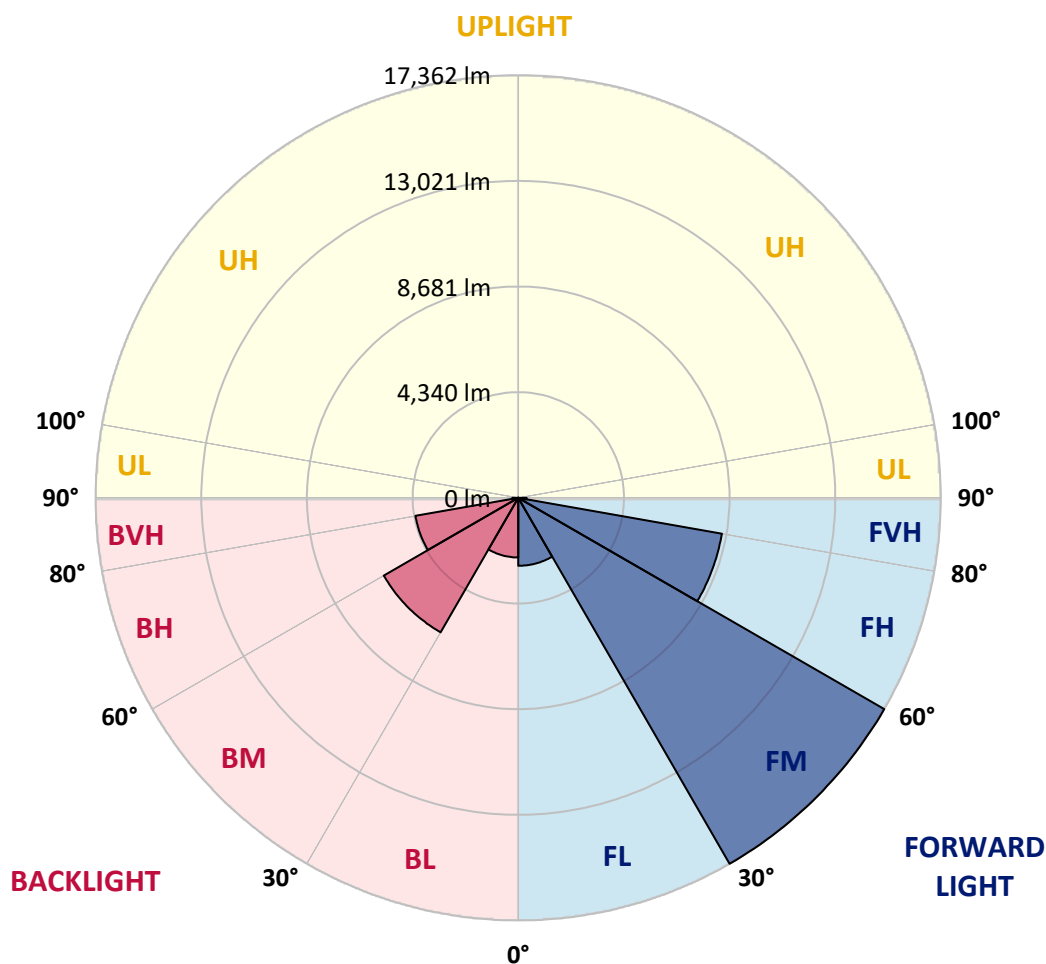
CATALOG NUMBER: NAV-SB4D-735-U-T2U

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 2792.3  | 6.6       |                         |      |          |
| FM   | (30°-60°)   | 17361.8 | 41.0      |                         |      |          |
| FH   | (60°-80°)   | 8496.8  | 20.1      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 344.3   | 0.8       |                         |      | G3/500   |
| BL   | (0°-30°)    | 2451.5  | 5.8       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 6381.7  | 15.1      | B4/8500                 |      |          |
| BH   | (60°-80°)   | 4288.3  | 10.1      | B4/5000                 |      | G4/5000  |
| BVH  | (80°-90°)   | 246.4   | 0.6       |                         |      | G3/500   |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B4-U0-G4**

Type II Short



REPORT NUMBER: P967206

CATALOG NUMBER: NAV-SB4D-735-U-T2U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 67°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4668.3  | 4668.3  | 4668.3  | 4668.3  | 4668.3  | 4668.3  | 4668.3  | 4668.3  | 4668.3  | 4668.3  | 4668.3  |
| 2.5°  | 4637.5  | 4624.3  | 4635.3  | 4635.3  | 4639.7  | 4637.5  | 4652.9  | 4657.3  | 4663.9  | 4677.1  | 4677.1  |
| 5°    | 4591.3  | 4589.1  | 4608.9  | 4626.4  | 4644.1  | 4659.4  | 4679.2  | 4707.8  | 4712.2  | 4727.6  | 4747.4  |
| 7.5°  | 4575.9  | 4562.8  | 4593.5  | 4615.5  | 4657.3  | 4694.6  | 4747.4  | 4795.8  | 4815.6  | 4822.1  | 4859.4  |
| 10°   | 4694.6  | 4672.7  | 4701.3  | 4714.4  | 4749.5  | 4787.0  | 4848.5  | 4925.4  | 4947.4  | 4973.7  | 5015.5  |
| 12.5° | 4896.8  | 4872.6  | 4914.4  | 4934.1  | 4967.2  | 5000.2  | 5041.9  | 5116.6  | 5127.6  | 5175.9  | 5215.5  |
| 15°   | 5173.8  | 5145.2  | 5171.5  | 5195.7  | 5250.7  | 5281.4  | 5323.2  | 5395.7  | 5395.7  | 5433.1  | 5461.7  |
| 17.5° | 5549.6  | 5512.2  | 5532.0  | 5540.8  | 5576.0  | 5622.1  | 5692.4  | 5756.2  | 5789.2  | 5776.0  | 5736.4  |
| 20°   | 6110.0  | 6063.9  | 6063.9  | 6019.9  | 6006.7  | 6044.1  | 6136.4  | 6224.3  | 6259.5  | 6191.4  | 6094.6  |
| 22.5° | 6951.9  | 6885.8  | 6848.5  | 6699.1  | 6639.7  | 6644.2  | 6736.4  | 6844.1  | 6872.7  | 6751.8  | 6534.3  |
| 25°   | 8022.2  | 7918.8  | 7868.3  | 7648.6  | 7514.5  | 7397.9  | 7470.5  | 7609.0  | 7648.6  | 7499.1  | 7147.4  |
| 27.5° | 9092.6  | 9099.1  | 9050.8  | 8787.0  | 8565.0  | 8351.8  | 8314.5  | 8459.5  | 8501.3  | 8332.1  | 7896.9  |
| 30°   | 10593.7 | 10437.6 | 10345.3 | 10028.8 | 9712.3  | 9413.4  | 9259.5  | 9318.9  | 9329.9  | 9127.7  | 8622.2  |
| 32.5° | 11888.2 | 11848.7 | 11650.9 | 11373.9 | 10967.3 | 10499.2 | 10242.0 | 10147.5 | 10129.9 | 9842.0  | 9242.0  |
| 35°   | 13362.9 | 13341.0 | 13132.2 | 12802.6 | 12362.9 | 11712.4 | 11248.7 | 10978.3 | 10956.3 | 10551.9 | 9855.2  |
| 37.5° | 14861.9 | 14861.9 | 14657.5 | 14297.0 | 13842.1 | 13028.9 | 12323.4 | 11894.8 | 11824.5 | 11296.9 | 10479.4 |
| 40°   | 16057.5 | 15985.0 | 16022.4 | 15870.7 | 15349.8 | 14486.1 | 13516.8 | 12894.8 | 12800.3 | 12167.4 | 11143.1 |
| 42.5° | 16736.7 | 16712.5 | 16936.7 | 17105.9 | 16892.7 | 16202.6 | 14831.1 | 13978.3 | 13846.5 | 13125.6 | 11907.9 |
| 45°   | 16888.3 | 16862.0 | 17261.9 | 17881.7 | 18180.6 | 17897.1 | 16259.8 | 15119.1 | 14958.6 | 14127.8 | 12727.8 |
| 47.5° | 16538.9 | 16486.1 | 17072.9 | 18051.0 | 19009.2 | 19508.2 | 17807.0 | 16356.4 | 16123.5 | 15103.7 | 13569.6 |
| 50°   | 15488.3 | 15437.7 | 16325.7 | 17624.6 | 19288.3 | 20602.7 | 19486.2 | 17668.5 | 17312.6 | 16149.8 | 14420.1 |
| 52.5° | 13204.8 | 13228.9 | 14620.2 | 16404.8 | 18921.3 | 21284.0 | 20932.3 | 19051.1 | 18622.4 | 17220.2 | 15218.0 |
| 55°   | 10286.0 | 10338.8 | 12048.7 | 14013.5 | 17453.2 | 21180.7 | 21919.2 | 20475.2 | 20048.8 | 18226.9 | 16042.2 |
| 57.5° | 7365.0  | 7598.0  | 9200.2  | 11145.3 | 14633.3 | 19543.4 | 22134.6 | 21829.1 | 21415.9 | 19325.8 | 16848.7 |
| 60°   | 4773.7  | 4815.6  | 6463.9  | 8424.4  | 11143.1 | 16633.4 | 21697.2 | 22855.6 | 22532.4 | 20446.7 | 17523.5 |
| 62.5° | 3059.4  | 3088.0  | 4092.4  | 5892.4  | 8020.0  | 12305.8 | 20224.7 | 23301.6 | 23202.7 | 21187.4 | 18171.9 |
| 65°   | 2248.4  | 2226.4  | 2749.6  | 3894.6  | 5402.4  | 7589.2  | 17365.2 | 23086.3 | 23281.8 | 21651.1 | 18708.2 |
| 67.5° | 1877.0  | 1846.2  | 2103.3  | 2696.8  | 3980.3  | 4310.0  | 12848.7 | 21686.2 | 22402.7 | 21598.3 | 19101.6 |
| 70°   | 1709.9  | 1683.6  | 1839.6  | 2002.2  | 3105.5  | 2885.8  | 6477.1  | 18853.2 | 19956.5 | 20998.4 | 19037.8 |
| 72.5° | 1448.4  | 1402.2  | 1615.4  | 1778.1  | 2415.4  | 2213.3  | 2677.0  | 14481.7 | 15826.7 | 19075.1 | 18141.1 |
| 75°   | 1123.1  | 1092.3  | 1274.8  | 1564.9  | 1815.5  | 1727.5  | 1692.4  | 8793.6  | 10261.8 | 14752.0 | 15870.7 |
| 77.5° | 890.1   | 848.4   | 1015.4  | 1219.9  | 1633.0  | 1303.3  | 1233.0  | 3786.9  | 5241.8  | 9417.8  | 11875.0 |
| 80°   | 670.3   | 632.9   | 771.4   | 964.8   | 1255.0  | 982.5   | 797.9   | 1545.1  | 1975.9  | 4771.6  | 5971.5  |
| 82.5° | 476.9   | 443.9   | 538.4   | 707.7   | 844.0   | 881.3   | 490.2   | 865.9   | 973.6   | 1839.6  | 1334.1  |
| 85°   | 305.6   | 285.8   | 360.5   | 443.9   | 536.3   | 567.0   | 298.9   | 452.7   | 496.7   | 758.3   | 556.1   |
| 87.5° | 167.1   | 136.2   | 193.4   | 206.6   | 248.4   | 226.4   | 142.9   | 164.8   | 178.0   | 274.7   | 235.1   |
| 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: P967206

CATALOG NUMBER: NAV-SB4D-735-U-T2U

**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°     | 105°    | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 4668.3  | 4668.3  | 4668.3  | 4668.3 | 4668.3 | 4668.3 | 4668.3 | 4668.3 | 4668.3 | 4668.3 | 4668.3 |
| 2.5°  | 4685.8  | 4692.4  | 4714.4  | 4720.9 | 4736.4 | 4756.2 | 4769.3 | 4782.5 | 4782.5 | 4795.8 | 4795.8 |
| 5°    | 4749.5  | 4764.9  | 4811.1  | 4835.2 | 4874.8 | 4914.4 | 4938.6 | 4967.2 | 4984.8 | 4993.5 | 4997.9 |
| 7.5°  | 4872.6  | 4896.8  | 4962.7  | 5004.6 | 5072.6 | 5127.6 | 5165.0 | 5204.5 | 5213.4 | 5237.4 | 5228.7 |
| 10°   | 5039.7  | 5068.2  | 5142.9  | 5222.1 | 5303.5 | 5371.5 | 5406.8 | 5435.3 | 5446.3 | 5450.6 | 5439.7 |
| 12.5° | 5230.9  | 5272.7  | 5369.4  | 5466.0 | 5551.8 | 5611.2 | 5619.9 | 5613.3 | 5582.6 | 5556.2 | 5556.2 |
| 15°   | 5466.0  | 5503.4  | 5611.2  | 5716.6 | 5800.2 | 5811.1 | 5756.2 | 5721.0 | 5683.6 | 5677.1 | 5677.1 |
| 17.5° | 5747.4  | 5767.2  | 5866.1  | 5969.4 | 5976.0 | 5938.6 | 5857.3 | 5824.4 | 5789.2 | 5765.0 | 5767.2 |
| 20°   | 6074.9  | 6068.3  | 6138.6  | 6182.6 | 6136.4 | 6022.1 | 5899.1 | 5844.1 | 5809.0 | 5780.4 | 5782.5 |
| 22.5° | 6466.1  | 6415.6  | 6406.8  | 6395.8 | 6272.7 | 6033.2 | 5866.1 | 5795.8 | 5740.8 | 5701.3 | 5714.4 |
| 25°   | 7035.3  | 6841.9  | 6707.9  | 6633.1 | 6356.2 | 5973.8 | 5760.6 | 5604.5 | 5501.3 | 5433.1 | 5459.5 |
| 27.5° | 7747.5  | 7422.1  | 7083.7  | 6901.2 | 6356.2 | 5852.9 | 5505.6 | 5252.9 | 5083.7 | 5013.3 | 5048.4 |
| 30°   | 8426.6  | 8085.9  | 7587.0  | 7224.3 | 6340.9 | 5655.1 | 5094.7 | 4743.0 | 4545.2 | 4474.8 | 4516.6 |
| 32.5° | 9006.8  | 8635.4  | 8121.1  | 7578.2 | 6303.4 | 5334.2 | 4584.7 | 4195.7 | 4004.5 | 3920.9 | 3962.8 |
| 35°   | 9545.3  | 9149.7  | 8657.4  | 7967.2 | 6204.5 | 4863.8 | 4024.3 | 3727.5 | 3514.4 | 3380.3 | 3424.2 |
| 37.5° | 10097.0 | 9626.6  | 9165.0  | 8318.9 | 6026.5 | 4314.4 | 3593.4 | 3340.8 | 3090.2 | 2910.0 | 2958.4 |
| 40°   | 10697.0 | 10134.3 | 9708.0  | 8527.7 | 5734.2 | 3791.3 | 3259.4 | 3028.7 | 2762.7 | 2571.5 | 2608.8 |
| 42.5° | 11398.1 | 10743.1 | 10312.3 | 8635.4 | 5334.2 | 3419.9 | 3041.8 | 2815.5 | 2564.9 | 2408.9 | 2439.6 |
| 45°   | 12130.0 | 11413.5 | 10864.0 | 8633.2 | 4888.0 | 3246.3 | 2971.5 | 2747.3 | 2470.4 | 2307.8 | 2334.1 |
| 47.5° | 12897.1 | 12114.6 | 11340.9 | 8492.5 | 4501.2 | 3270.4 | 2931.9 | 2600.0 | 2294.6 | 2136.3 | 2158.3 |
| 50°   | 13666.2 | 12881.6 | 11802.5 | 8228.8 | 4336.4 | 3217.7 | 2784.7 | 2393.5 | 2033.0 | 1890.2 | 1898.9 |
| 52.5° | 14428.9 | 13697.1 | 12200.3 | 7852.9 | 4169.3 | 3022.0 | 2595.7 | 2125.3 | 1925.4 | 1826.4 | 1826.4 |
| 55°   | 15195.9 | 14503.6 | 12633.2 | 7305.7 | 3751.7 | 2793.4 | 2279.2 | 2024.3 | 1839.6 | 1749.5 | 1740.7 |
| 57.5° | 15965.2 | 15435.6 | 13044.3 | 6758.4 | 3226.5 | 2512.2 | 2105.6 | 1901.2 | 1753.9 | 1677.0 | 1663.8 |
| 60°   | 16765.2 | 16501.5 | 13468.5 | 6255.1 | 2707.7 | 2151.7 | 1978.0 | 1802.3 | 1652.8 | 1567.1 | 1560.5 |
| 62.5° | 17589.4 | 17675.2 | 13800.3 | 5606.7 | 2230.8 | 1931.9 | 1863.8 | 1683.6 | 1538.5 | 1457.1 | 1455.0 |
| 65°   | 18420.3 | 18807.0 | 14017.9 | 4707.8 | 1808.8 | 1723.1 | 1740.7 | 1553.9 | 1406.6 | 1336.3 | 1334.1 |
| 67.5° | 19046.7 | 19622.5 | 13956.4 | 3562.7 | 1483.6 | 1525.3 | 1586.8 | 1417.6 | 1279.2 | 1224.2 | 1226.4 |
| 70°   | 19117.0 | 19525.7 | 13349.8 | 2439.6 | 1241.8 | 1331.9 | 1415.4 | 1283.5 | 1140.7 | 1101.2 | 1103.3 |
| 72.5° | 18180.6 | 18207.1 | 11659.6 | 1593.5 | 1050.6 | 1169.2 | 1235.2 | 1147.3 | 1008.8 | 969.2  | 967.1  |
| 75°   | 15725.7 | 15057.6 | 8560.7  | 1050.6 | 879.1  | 1004.4 | 1066.0 | 1004.4 | 870.3  | 879.1  | 848.4  |
| 77.5° | 11914.6 | 10664.0 | 5198.0  | 747.2  | 734.1  | 844.0  | 927.5  | 883.6  | 769.3  | 863.8  | 760.4  |
| 80°   | 6138.6  | 5769.4  | 2318.8  | 558.2  | 580.3  | 674.8  | 762.7  | 705.5  | 608.8  | 580.3  | 529.7  |
| 82.5° | 1406.6  | 1635.2  | 914.3   | 400.1  | 419.8  | 485.7  | 582.4  | 529.7  | 437.4  | 369.2  | 364.8  |
| 85°   | 492.3   | 538.4   | 404.4   | 250.5  | 246.2  | 303.3  | 395.6  | 353.8  | 296.7  | 237.4  | 250.5  |
| 87.5° | 156.0   | 204.4   | 151.7   | 101.1  | 105.5  | 136.2  | 182.4  | 167.1  | 138.5  | 90.1   | 94.5   |
| 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)