

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: P967395

Luminaire Tested: **NAV-SB4D-835-U-T3R-HSS**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P967395  
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-SB4D-835-U-T3R-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III  
ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 32280.3 lumens  
Efficiency: N/A  
Efficacy: 109.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B3 - U0 - G5

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

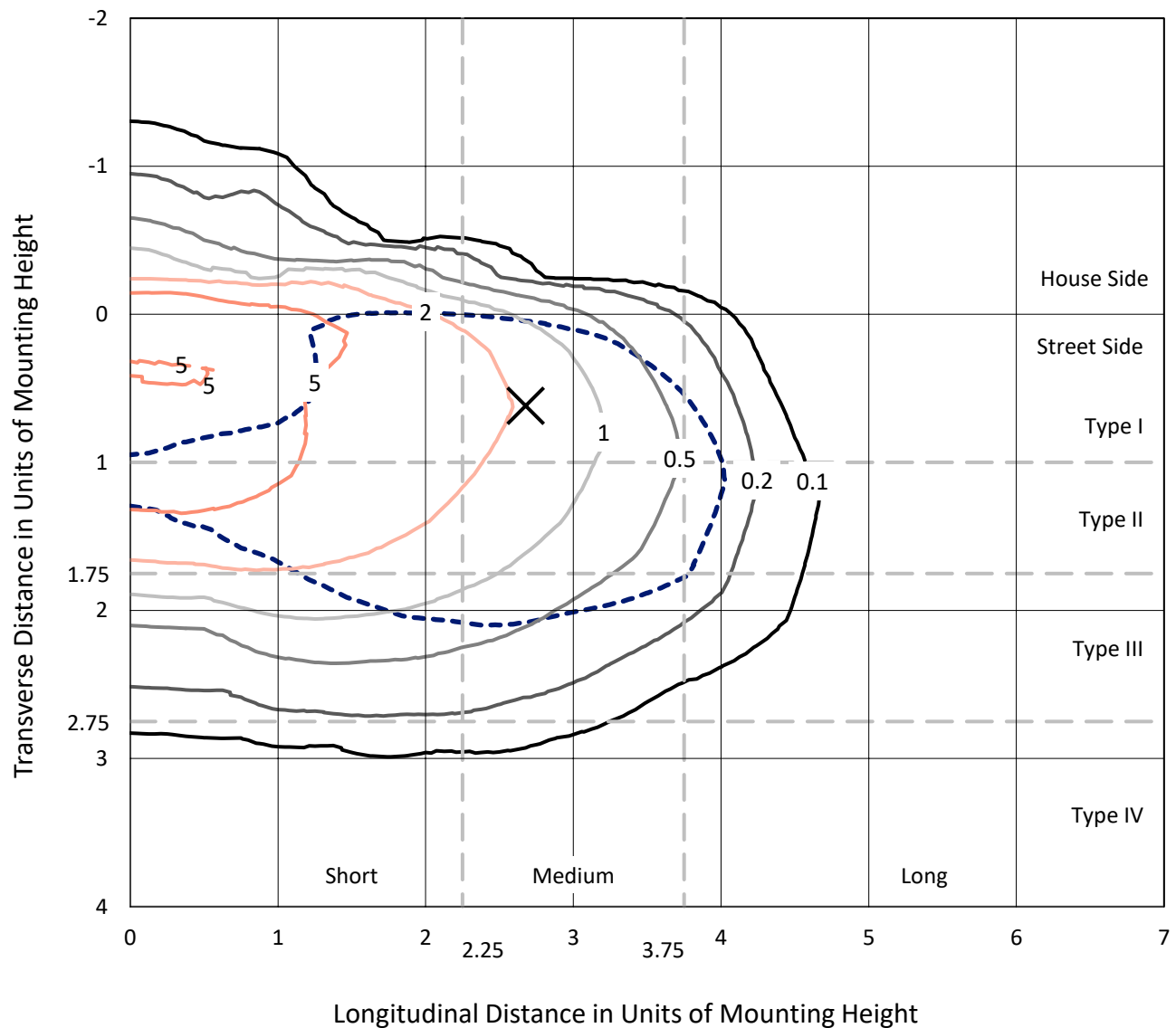


REPORT NUMBER: P967395

CATALOG NUMBER: NAV-SB4D-835-U-T3R-HSS

## Iso-Footcandle Lines of Horizontal Illumination

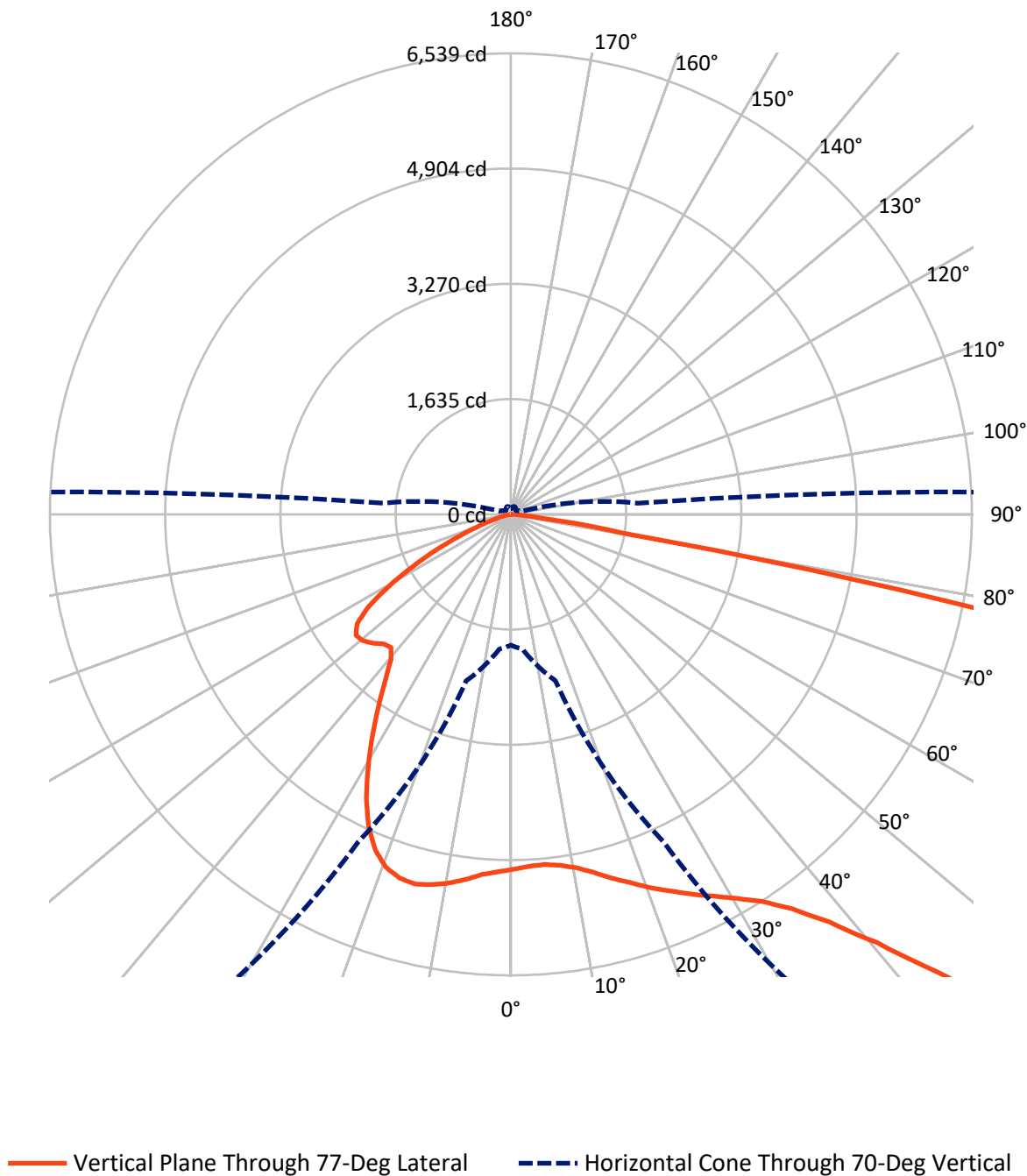
× Max cd  
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.5 fc  
Type III - Medium - N/A

REPORT NUMBER: P967395  
CATALOG NUMBER: NAV-SB4D-835-U-T3R-HSS

## Luminous Intensity Polar Plot



REPORT NUMBER: P967395

CATALOG NUMBER: NAV-SB4D-835-U-T3R-HSS

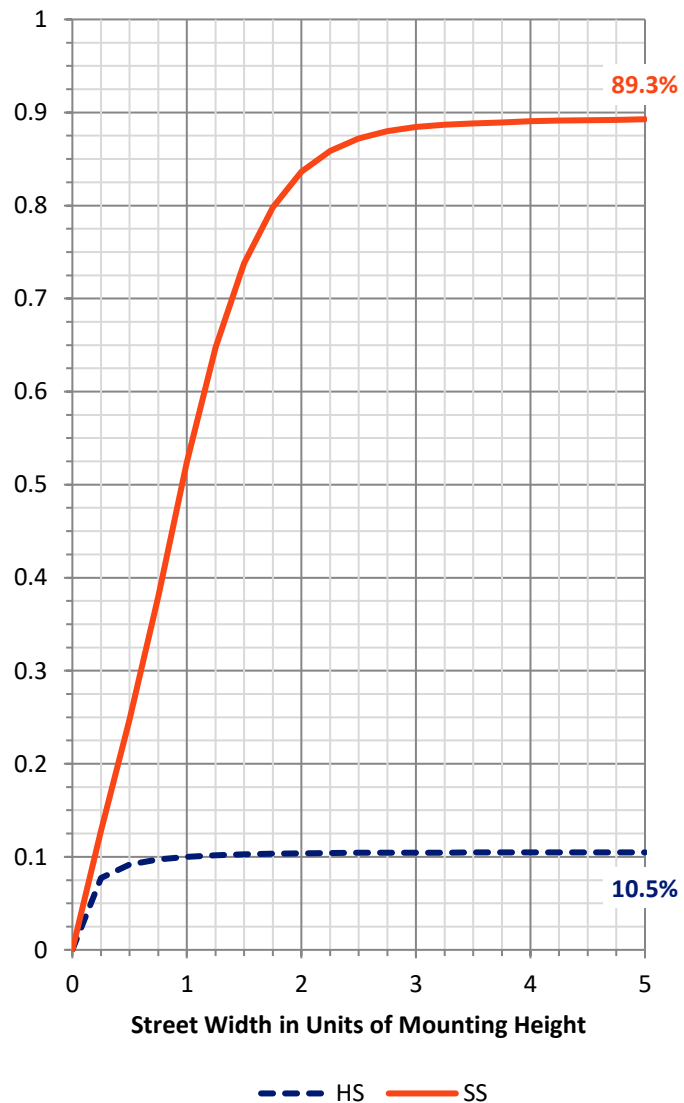
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3402.8   | 0.0    | 3402.8  |
|                    | % Fixture | 10.5     | 0.0    | 10.5    |
| <b>Street Side</b> | Lumens    | 28877.5  | 0.0    | 28877.5 |
|                    | % Fixture | 89.5     | 0.0    | 89.5    |
| <b>Total</b>       | Lumens    | 32280.3  | 0.0    | 32280.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 433.9   | 1.3       |
| 10°-20°   | 1030.1  | 3.2       |
| 20°-30°   | 1593.3  | 4.9       |
| 30°-40°   | 2891.2  | 9.0       |
| 40°-50°   | 5457.5  | 16.9      |
| 50°-60°   | 7885.7  | 24.4      |
| 60°-70°   | 8394.1  | 26.0      |
| 70°-80°   | 4448.3  | 13.8      |
| 80°-90°   | 146.1   | 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°    | 32280.3 | 100.0     |
| 0°-180°   | 32280.3 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P967395

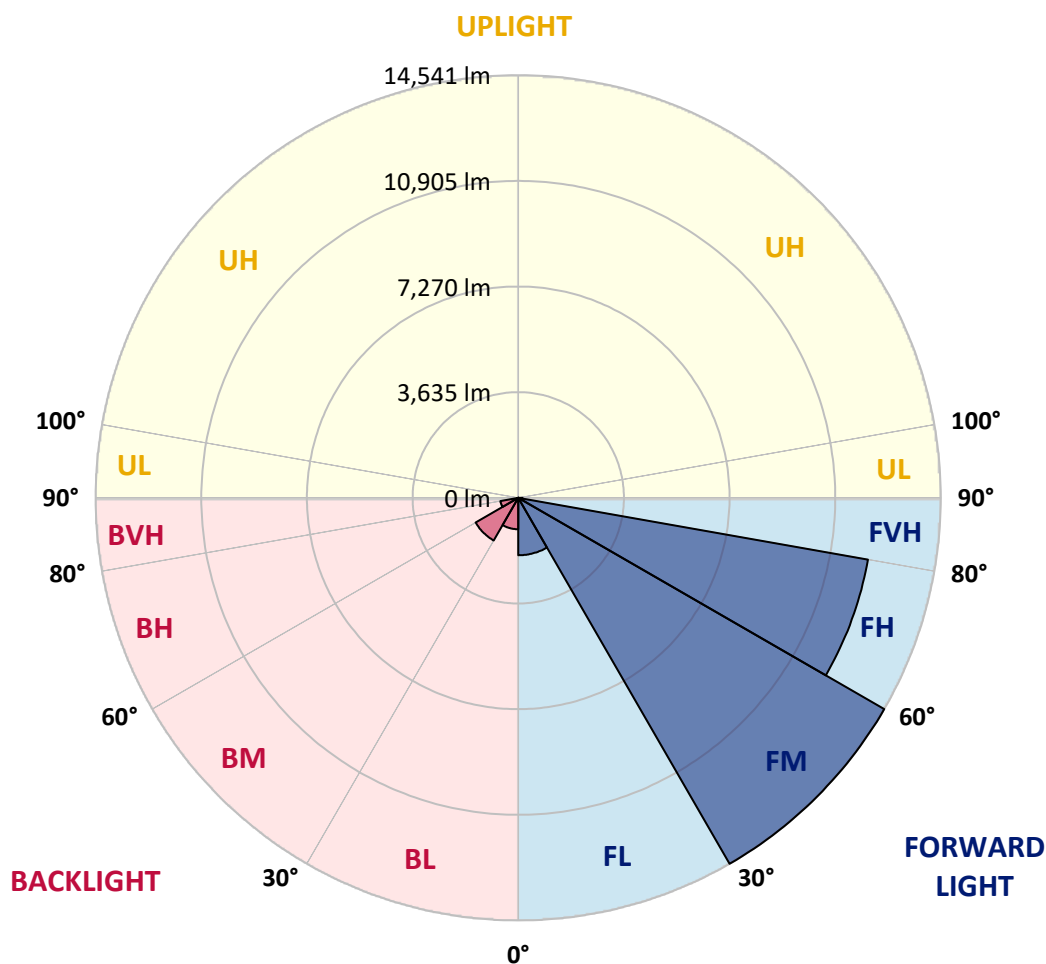
CATALOG NUMBER: NAV-SB4D-835-U-T3R-HSS

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1976.3  | 6.1       |                         |      |         |
| FM   | (30°-60°)   | 14540.5 | 45.0      |                         |      |         |
| FH   | (60°-80°)   | 12218.6 | 37.9      |                         |      | G5      |
| FVH  | (80°-90°)   | 142.1   | 0.4       |                         |      | G2/225  |
| BL   | (0°-30°)    | 1081.1  | 3.3       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 1693.9  | 5.2       | B2/2500                 |      |         |
| BH   | (60°-80°)   | 623.8   | 1.9       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 3.9     | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G5**

Type III Medium



REPORT NUMBER: P967395

CATALOG NUMBER: NAV-SB4D-835-U-T3R-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 77°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 5035.1  | 5035.1  | 5035.1  | 5035.1  | 5035.1  | 5035.1  | 5035.1  | 5035.1  | 5035.1  | 5035.1  | 5035.1  |
| 2.5°  | 4727.3  | 4770.1  | 4764.0  | 4792.6  | 4802.7  | 4843.5  | 4884.3  | 4939.4  | 5000.5  | 4998.4  | 5039.2  |
| 5°    | 4460.3  | 4503.1  | 4513.3  | 4552.0  | 4600.9  | 4664.2  | 4747.7  | 4857.8  | 4972.0  | 4990.3  | 5071.8  |
| 7.5°  | 4144.3  | 4189.2  | 4215.6  | 4293.1  | 4382.8  | 4513.3  | 4649.9  | 4810.9  | 5000.5  | 5027.0  | 5183.9  |
| 10°   | 3828.4  | 3869.1  | 3903.8  | 4013.8  | 4156.6  | 4350.2  | 4572.4  | 4804.8  | 5059.6  | 5098.3  | 5320.6  |
| 12.5° | 3632.6  | 3671.3  | 3710.1  | 3805.9  | 3983.3  | 4219.7  | 4521.5  | 4833.3  | 5157.5  | 5212.5  | 5506.1  |
| 15°   | 3563.3  | 3598.0  | 3628.6  | 3714.2  | 3879.3  | 4148.4  | 4511.2  | 4892.4  | 5281.8  | 5355.2  | 5730.3  |
| 17.5° | 3573.6  | 3591.9  | 3612.3  | 3677.5  | 3838.5  | 4115.8  | 4529.6  | 4994.4  | 5428.6  | 5493.8  | 5954.5  |
| 20°   | 3632.6  | 3642.8  | 3644.9  | 3689.7  | 3832.4  | 4111.7  | 4566.3  | 5092.2  | 5567.2  | 5654.8  | 6176.8  |
| 22.5° | 3708.0  | 3712.1  | 3708.0  | 3738.7  | 3871.1  | 4142.2  | 4615.2  | 5210.5  | 5722.2  | 5803.7  | 6400.9  |
| 25°   | 4060.7  | 3983.3  | 3885.5  | 3826.3  | 3936.4  | 4201.4  | 4688.6  | 5369.5  | 5891.3  | 5970.8  | 6619.0  |
| 27.5° | 5155.4  | 4933.2  | 4582.6  | 4189.2  | 4070.9  | 4287.0  | 4790.5  | 5530.5  | 6062.6  | 6133.9  | 6853.5  |
| 30°   | 6933.0  | 6641.5  | 6046.3  | 5159.5  | 4503.1  | 4466.4  | 4923.1  | 5691.5  | 6244.0  | 6321.5  | 7104.3  |
| 32.5° | 8714.7  | 8643.3  | 7956.4  | 6729.1  | 5475.4  | 4866.0  | 5143.1  | 5909.6  | 6484.6  | 6545.6  | 7442.6  |
| 35°   | 10516.7 | 10372.0 | 9809.4  | 8596.5  | 6973.8  | 5679.3  | 5510.1  | 6195.1  | 6800.5  | 6869.9  | 7936.0  |
| 37.5° | 11896.8 | 11809.1 | 11460.5 | 10461.7 | 8751.3  | 6935.0  | 6138.0  | 6637.4  | 7259.2  | 7336.6  | 8567.9  |
| 40°   | 13115.8 | 13075.1 | 12956.8 | 12298.4 | 10738.9 | 8578.1  | 7114.4  | 7322.4  | 7895.2  | 7986.9  | 9342.6  |
| 42.5° | 14074.0 | 14169.8 | 14237.0 | 14053.6 | 12787.7 | 10453.6 | 8427.2  | 8284.6  | 8782.0  | 8875.7  | 10329.2 |
| 45°   | 15054.5 | 15087.1 | 15358.2 | 15623.3 | 14822.1 | 12414.6 | 9907.2  | 9411.9  | 9884.8  | 10001.0 | 11511.6 |
| 47.5° | 15684.3 | 15814.8 | 16291.9 | 16758.6 | 16532.4 | 14359.3 | 11497.2 | 10743.0 | 11163.0 | 11381.1 | 12836.6 |
| 50°   | 15731.3 | 15977.9 | 16634.3 | 17447.8 | 17777.9 | 16210.3 | 13225.9 | 12259.7 | 12706.1 | 12946.7 | 14251.3 |
| 52.5° | 14950.5 | 15333.8 | 16351.0 | 17541.4 | 18450.6 | 17777.9 | 15013.7 | 13776.3 | 14349.2 | 14663.0 | 15719.0 |
| 55°   | 11462.6 | 11964.1 | 15284.8 | 17031.8 | 18477.2 | 18966.4 | 16754.6 | 15356.1 | 16179.7 | 16534.5 | 17305.0 |
| 57.5° | 9986.7  | 10239.4 | 12017.1 | 16147.1 | 17985.9 | 19445.5 | 18328.3 | 16860.6 | 18171.4 | 18611.7 | 18803.3 |
| 60°   | 8309.1  | 8641.3  | 10078.4 | 14699.7 | 17319.3 | 19492.3 | 19718.6 | 18801.3 | 20330.2 | 20825.5 | 20177.3 |
| 62.5° | 5646.7  | 6007.5  | 7436.5  | 12212.8 | 16408.1 | 19469.9 | 20858.1 | 20799.0 | 22729.5 | 23261.6 | 21341.3 |
| 65°   | 3498.1  | 3724.3  | 4666.2  | 9972.4  | 15134.0 | 19494.4 | 22050.7 | 23224.9 | 25261.3 | 25801.6 | 22242.3 |
| 67.5° | 2764.2  | 2868.2  | 3359.4  | 7656.6  | 12938.5 | 18943.9 | 23241.2 | 25506.0 | 27644.4 | 28072.5 | 22517.5 |
| 70°   | 1857.1  | 1920.3  | 2444.2  | 5133.0  | 9625.9  | 16404.0 | 23218.7 | 26651.6 | 28871.6 | 29085.6 | 21514.5 |
| 72.5° | 978.5   | 1027.5  | 1429.0  | 2376.9  | 5813.9  | 11660.3 | 19571.9 | 25281.7 | 27650.5 | 27328.4 | 18389.5 |
| 75°   | 489.2   | 570.8   | 962.2   | 1206.8  | 2483.0  | 6502.9  | 12153.6 | 19932.7 | 21763.2 | 20515.7 | 11799.0 |
| 77.5° | 371.0   | 448.4   | 795.0   | 795.0   | 864.4   | 2189.4  | 5147.2  | 10871.5 | 10027.5 | 8349.8  | 3463.5  |
| 80°   | 236.5   | 305.8   | 695.2   | 601.4   | 360.8   | 556.5   | 1341.3  | 3045.6  | 2130.3  | 1620.6  | 629.9   |
| 82.5° | 138.6   | 199.8   | 578.9   | 397.5   | 201.8   | 205.9   | 379.1   | 648.2   | 552.5   | 430.1   | 193.6   |
| 85°   | 55.0    | 130.5   | 397.5   | 156.9   | 79.5    | 50.9    | 114.2   | 138.6   | 114.2   | 85.6    | 48.9    |
| 87.5° | 0.0     | 30.5    | 69.3    | 0.0     | 6.1     | 4.1     | 8.2     | 10.1    | 10.1    | 8.2     | 16.3    |
| 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: P967395

CATALOG NUMBER: NAV-SB4D-835-U-T3R-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 5035.1  | 5035.1 | 5035.1 | 5035.1 | 5035.1 | 5035.1 | 5035.1 | 5035.1 | 5035.1 | 5035.1 | 5035.1 |
| 2.5°  | 5057.6  | 5061.7 | 5073.9 | 5075.9 | 5047.4 | 5010.7 | 4996.5 | 4990.3 | 4965.8 | 4963.8 | 4967.9 |
| 5°    | 5118.7  | 5137.1 | 5118.7 | 5065.8 | 4939.4 | 4761.9 | 4627.5 | 4517.4 | 4417.4 | 4386.9 | 4368.5 |
| 7.5°  | 5241.0  | 5259.4 | 5204.3 | 4996.5 | 4678.4 | 4325.7 | 4007.7 | 3783.5 | 3581.7 | 3506.2 | 3475.7 |
| 10°   | 5416.3  | 5440.8 | 5267.6 | 4847.6 | 4285.0 | 3718.3 | 3180.1 | 2800.9 | 2505.3 | 2385.1 | 2334.1 |
| 12.5° | 5636.5  | 5646.7 | 5302.2 | 4621.3 | 3773.3 | 2964.0 | 2201.6 | 1795.9 | 1533.0 | 1435.1 | 1404.6 |
| 15°   | 5879.1  | 5864.8 | 5306.2 | 4313.5 | 3076.1 | 2095.6 | 1437.2 | 1180.3 | 1074.3 | 1041.7 | 1041.7 |
| 17.5° | 6133.9  | 6074.8 | 5224.7 | 3869.1 | 2311.7 | 1433.1 | 1066.1 | 1005.0 | 986.7  | 978.5  | 976.4  |
| 20°   | 6384.6  | 6252.2 | 5075.9 | 3288.1 | 1659.4 | 1070.2 | 968.3  | 950.0  | 939.7  | 935.7  | 931.6  |
| 22.5° | 6613.0  | 6386.7 | 4821.1 | 2613.3 | 1204.8 | 945.9  | 915.3  | 899.0  | 880.7  | 872.5  | 870.4  |
| 25°   | 6835.2  | 6464.2 | 4462.3 | 1983.5 | 964.2  | 884.7  | 860.3  | 829.6  | 805.2  | 795.0  | 791.0  |
| 27.5° | 7051.3  | 6513.1 | 4013.8 | 1467.7 | 860.3  | 827.7  | 782.8  | 739.9  | 721.6  | 717.6  | 713.5  |
| 30°   | 7281.6  | 6529.4 | 3504.2 | 1094.7 | 797.0  | 756.2  | 691.1  | 642.2  | 631.9  | 634.0  | 634.0  |
| 32.5° | 7563.0  | 6553.8 | 2990.5 | 897.0  | 744.0  | 670.7  | 593.2  | 542.2  | 534.1  | 542.2  | 540.2  |
| 35°   | 7899.3  | 6602.7 | 2495.2 | 825.6  | 697.2  | 583.0  | 499.5  | 456.6  | 448.4  | 454.6  | 452.5  |
| 37.5° | 8355.9  | 6682.3 | 2032.4 | 811.3  | 658.5  | 509.6  | 419.9  | 385.3  | 385.3  | 387.3  | 385.3  |
| 40°   | 8963.4  | 6894.3 | 1618.6 | 801.1  | 638.1  | 454.6  | 354.8  | 340.4  | 346.6  | 350.7  | 350.7  |
| 42.5° | 9703.4  | 7344.8 | 1339.3 | 788.9  | 615.6  | 430.1  | 322.1  | 316.0  | 326.2  | 330.3  | 330.3  |
| 45°   | 10533.0 | 7915.6 | 1241.5 | 768.5  | 595.2  | 446.4  | 307.8  | 299.7  | 311.9  | 314.0  | 316.0  |
| 47.5° | 11391.2 | 8474.1 | 1229.2 | 746.1  | 574.8  | 470.9  | 303.7  | 285.4  | 299.7  | 301.7  | 303.7  |
| 50°   | 12259.7 | 8839.0 | 1241.5 | 711.5  | 542.2  | 470.9  | 305.8  | 271.1  | 283.3  | 289.5  | 291.5  |
| 52.5° | 13134.1 | 9006.2 | 1233.3 | 636.0  | 485.1  | 442.4  | 305.8  | 258.9  | 271.1  | 275.2  | 275.2  |
| 55°   | 13982.2 | 8973.6 | 1108.9 | 523.9  | 411.7  | 391.3  | 297.7  | 248.7  | 256.9  | 258.9  | 258.9  |
| 57.5° | 14652.9 | 8519.0 | 878.6  | 407.7  | 334.4  | 326.2  | 271.1  | 236.5  | 242.6  | 240.6  | 240.6  |
| 60°   | 15003.5 | 7520.1 | 627.9  | 314.0  | 263.0  | 256.9  | 238.5  | 220.2  | 224.3  | 214.0  | 212.0  |
| 62.5° | 15007.6 | 6199.1 | 419.9  | 248.7  | 209.9  | 203.9  | 203.9  | 197.7  | 193.6  | 173.2  | 167.2  |
| 65°   | 14687.5 | 4733.4 | 279.3  | 197.7  | 169.2  | 159.0  | 171.3  | 169.2  | 154.9  | 126.4  | 122.3  |
| 67.5° | 13961.8 | 3102.7 | 212.0  | 154.9  | 130.5  | 124.3  | 136.5  | 142.7  | 132.5  | 106.0  | 103.9  |
| 70°   | 12469.6 | 1806.2 | 175.3  | 120.2  | 97.9   | 91.7   | 110.1  | 122.3  | 110.1  | 85.6   | 81.6   |
| 72.5° | 10357.7 | 974.4  | 142.7  | 89.7   | 67.2   | 61.2   | 87.6   | 99.9   | 87.6   | 63.2   | 61.2   |
| 75°   | 6721.0  | 521.8  | 110.1  | 59.1   | 34.6   | 38.7   | 65.2   | 73.4   | 61.2   | 40.8   | 36.7   |
| 77.5° | 2256.6  | 230.3  | 69.3   | 28.5   | 16.3   | 16.3   | 38.7   | 44.9   | 28.5   | 14.2   | 12.2   |
| 80°   | 503.5   | 95.8   | 28.5   | 12.2   | 6.1    | 6.1    | 8.2    | 8.2    | 4.1    | 0.0    | 0.0    |
| 82.5° | 165.1   | 38.7   | 12.2   | 4.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 63.2    | 14.2   | 4.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 24.5    | 2.0    | 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)