

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: P963686

Luminaire Tested: **NAV-SB3A-835-U-AFL**

Issue Date: 1/21/2025

#### Test Information

Test Method: LM-79-08  
Report Number: P963686  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB3A-835-U-AFL  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(3) 80 CRI, 3500K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE  
FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: -

#### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 13013.4 lumens  
Efficiency: N/A  
Efficacy: 153.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
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



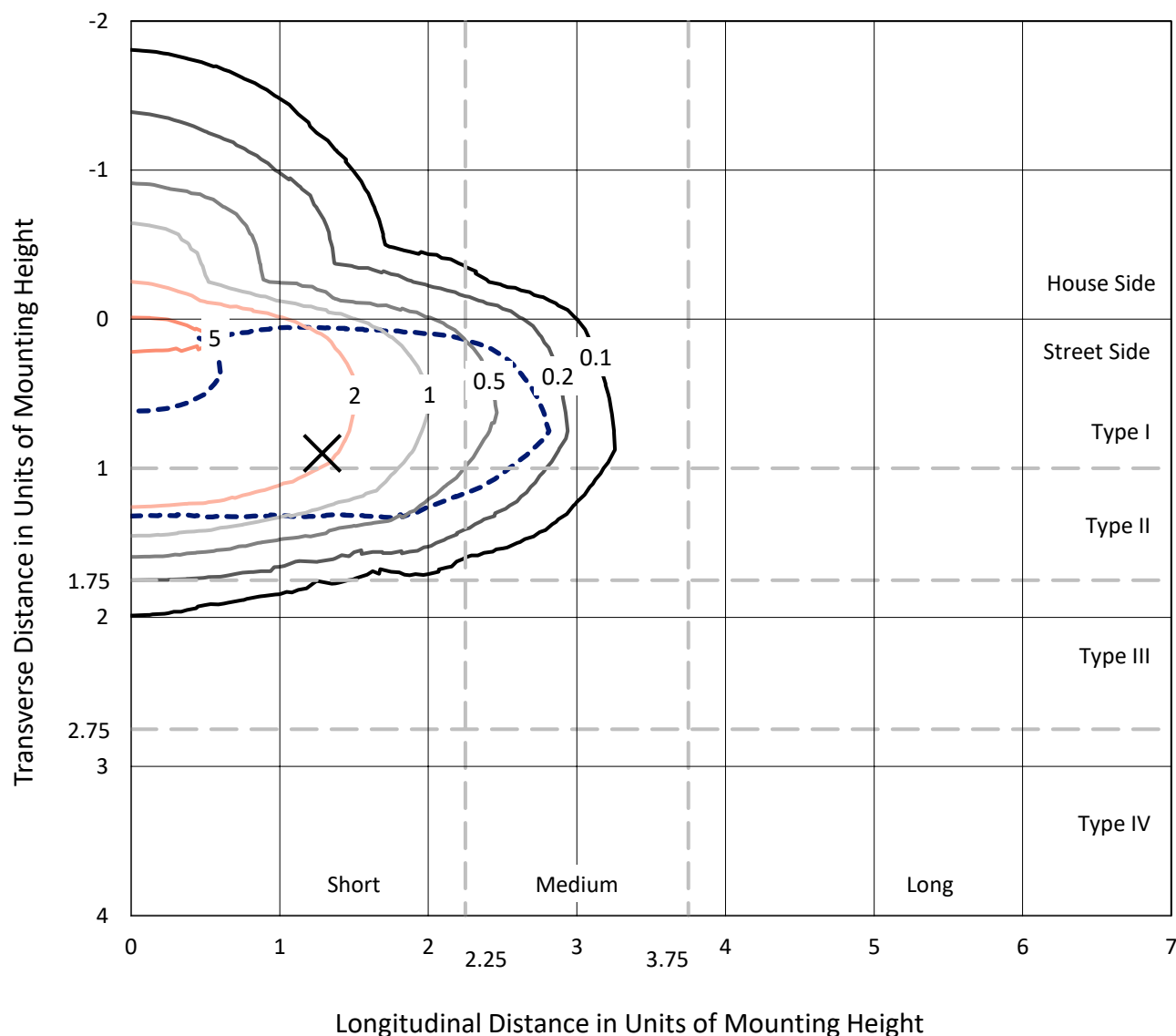
REPORT NUMBER: P963686

CATALOG NUMBER: NAV-SB3A-835-U-AFL

## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

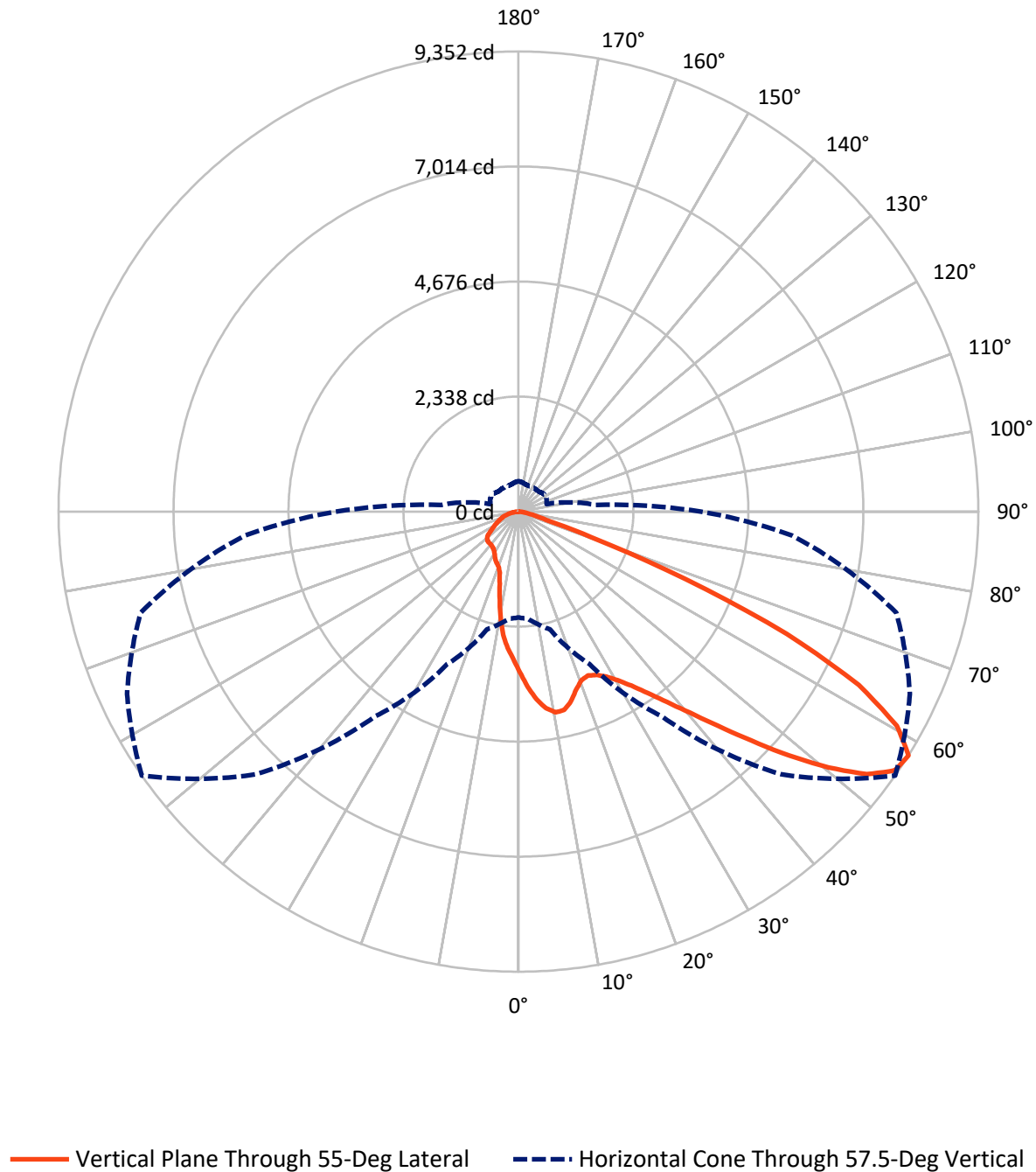


Based on 25 foot mounting height. Maximum calculated value = 6.3 fc

Type II - Short - N/A

REPORT NUMBER: P963686  
CATALOG NUMBER: NAV-SB3A-835-U-AFL

## Luminous Intensity Polar Plot



REPORT NUMBER: P963686

CATALOG NUMBER: NAV-SB3A-835-U-AFL

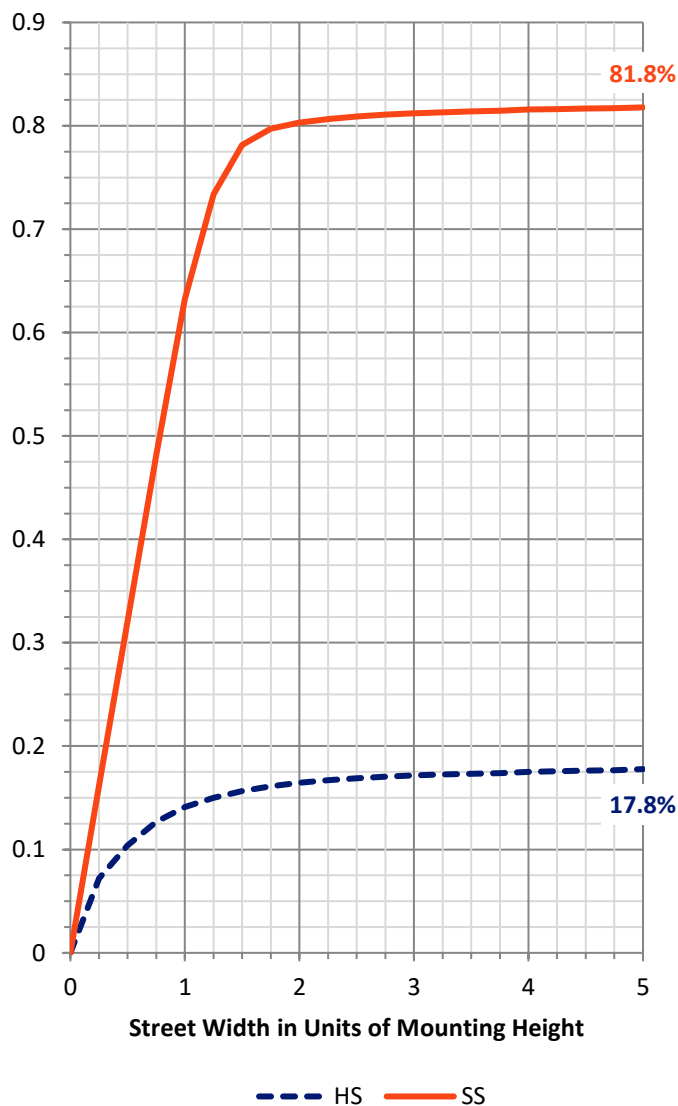
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2354.7   | 0.0    | 2354.7  |
|                    | % Fixture | 18.1     | 0.0    | 18.1    |
| <b>Street Side</b> | Lumens    | 10658.7  | 0.0    | 10658.7 |
|                    | % Fixture | 81.9     | 0.0    | 81.9    |
| <b>Total</b>       | Lumens    | 13013.4  | 0.0    | 13013.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 302.6   | 2.3       |
| 10°-20°   | 763.7   | 5.9       |
| 20°-30°   | 1218.7  | 9.4       |
| 30°-40°   | 1929.5  | 14.8      |
| 40°-50°   | 2953.2  | 22.7      |
| 50°-60°   | 3163.2  | 24.3      |
| 60°-70°   | 1990.0  | 15.3      |
| 70°-80°   | 588.5   | 4.5       |
| 80°-90°   | 104.1   | 0.8       |
| 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°    | 13013.4 | 100.0     |
| 0°-180°   | 13013.4 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P963686

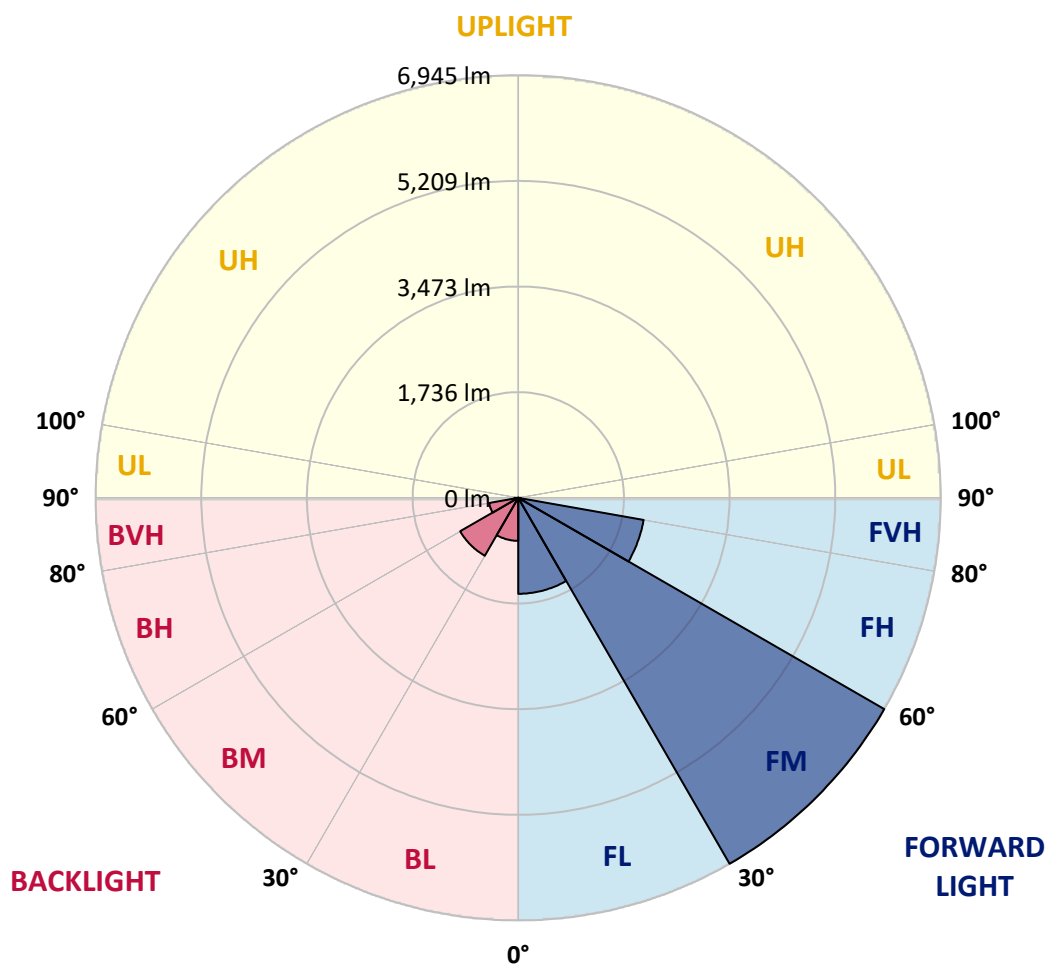
CATALOG NUMBER: NAV-SB3A-835-U-AFL

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1577.2 | 12.1      |                         |      |         |
| FM   | (30°-60°)   | 6945.4 | 53.4      |                         |      |         |
| FH   | (60°-80°)   | 2092.2 | 16.1      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 44.0   | 0.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 707.7  | 5.4       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 1100.6 | 8.5       | B2/2500                 |      |         |
| BH   | (60°-80°)   | 486.3  | 3.7       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 60.1   | 0.5       |                         |      | 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 II Short



REPORT NUMBER: P963686

CATALOG NUMBER: NAV-SB3A-835-U-AFL

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 |
| 2.5°  | 3741.0 | 3738.4 | 3753.1 | 3702.7 | 3668.4 | 3622.0 | 3560.7 | 3482.7 | 3398.7 | 3309.8 | 3271.5 |
| 5°    | 4078.1 | 4054.6 | 4070.1 | 4032.3 | 3994.7 | 3924.7 | 3833.9 | 3706.7 | 3551.3 | 3374.4 | 3280.2 |
| 7.5°  | 4025.0 | 4008.8 | 4048.5 | 4082.2 | 4110.4 | 4101.6 | 4035.0 | 3901.9 | 3701.4 | 3444.4 | 3307.8 |
| 10°   | 3596.4 | 3578.3 | 3634.1 | 3750.5 | 3921.3 | 4070.1 | 4150.7 | 4068.0 | 3854.7 | 3521.1 | 3334.7 |
| 12.5° | 3218.4 | 3209.6 | 3246.6 | 3340.8 | 3530.5 | 3815.8 | 4136.0 | 4213.4 | 4014.2 | 3611.9 | 3371.0 |
| 15°   | 3056.9 | 3046.1 | 3069.7 | 3117.4 | 3238.5 | 3504.3 | 4001.4 | 4312.9 | 4170.9 | 3716.9 | 3428.9 |
| 17.5° | 3021.3 | 3009.1 | 3019.2 | 3044.1 | 3122.1 | 3324.7 | 3798.2 | 4362.0 | 4334.4 | 3833.9 | 3477.3 |
| 20°   | 3087.2 | 3077.0 | 3078.4 | 3077.0 | 3131.6 | 3292.4 | 3657.0 | 4343.1 | 4477.0 | 3941.5 | 3524.5 |
| 22.5° | 3246.6 | 3229.8 | 3230.5 | 3194.8 | 3224.4 | 3348.9 | 3620.0 | 4292.7 | 4604.2 | 4035.7 | 3560.1 |
| 25°   | 3506.3 | 3476.0 | 3482.0 | 3391.2 | 3383.2 | 3475.4 | 3677.8 | 4253.6 | 4730.7 | 4111.1 | 3566.8 |
| 27.5° | 3861.5 | 3827.1 | 3809.0 | 3673.8 | 3609.2 | 3654.9 | 3795.6 | 4267.2 | 4850.4 | 4176.4 | 3550.0 |
| 30°   | 4305.5 | 4263.8 | 4226.8 | 4035.0 | 3918.0 | 3901.2 | 3978.5 | 4355.9 | 4991.6 | 4244.9 | 3521.1 |
| 32.5° | 4849.7 | 4801.3 | 4734.1 | 4479.8 | 4314.9 | 4226.8 | 4215.3 | 4514.0 | 5157.2 | 4332.4 | 3506.3 |
| 35°   | 5497.6 | 5434.3 | 5338.8 | 5009.8 | 4801.3 | 4621.0 | 4527.5 | 4742.1 | 5383.9 | 4464.3 | 3523.1 |
| 37.5° | 6165.0 | 6093.6 | 6006.2 | 5614.6 | 5358.3 | 5092.6 | 4908.2 | 5051.5 | 5686.0 | 4643.2 | 3567.5 |
| 40°   | 6780.5 | 6700.4 | 6619.0 | 6270.5 | 5995.4 | 5675.2 | 5374.5 | 5443.1 | 6055.3 | 4857.2 | 3642.8 |
| 42.5° | 7143.7 | 7084.6 | 7053.6 | 6865.2 | 6652.7 | 6327.7 | 5954.3 | 5907.3 | 6470.3 | 5103.4 | 3729.0 |
| 45°   | 7127.6 | 7103.4 | 7198.9 | 7277.0 | 7226.5 | 7046.2 | 6633.8 | 6420.6 | 6886.8 | 5316.6 | 3808.4 |
| 47.5° | 6746.9 | 6763.0 | 6976.3 | 7414.8 | 7608.0 | 7702.2 | 7407.5 | 6924.4 | 7248.7 | 5476.1 | 3844.0 |
| 50°   | 5710.8 | 5724.3 | 6218.1 | 7163.9 | 7706.2 | 8236.9 | 8175.1 | 7416.2 | 7529.2 | 5573.5 | 3836.0 |
| 52.5° | 4890.8 | 4899.5 | 5111.5 | 6419.9 | 7381.9 | 8506.1 | 8866.7 | 7879.7 | 7734.4 | 5600.5 | 3790.9 |
| 55°   | 3683.8 | 3714.2 | 3951.7 | 5036.7 | 6538.3 | 8292.8 | 9287.7 | 8357.3 | 7864.2 | 5603.2 | 3743.7 |
| 57.5° | 2152.1 | 2185.0 | 2478.3 | 3418.8 | 5081.8 | 7549.4 | 9351.7 | 8781.2 | 7952.4 | 5581.6 | 3715.5 |
| 60°   | 1054.2 | 1068.3 | 1196.1 | 1796.8 | 3133.6 | 6117.2 | 8837.7 | 8986.4 | 8001.5 | 5570.3 | 3714.2 |
| 62.5° | 710.4  | 708.4  | 713.8  | 886.6  | 1544.0 | 3930.1 | 7766.7 | 8627.1 | 7975.2 | 5526.5 | 3700.7 |
| 65°   | 610.8  | 603.4  | 583.2  | 622.3  | 799.9  | 1797.5 | 6000.8 | 7554.8 | 7775.4 | 5416.8 | 3608.5 |
| 67.5° | 528.1  | 528.8  | 529.4  | 517.3  | 571.1  | 829.4  | 3667.0 | 5950.9 | 7058.4 | 4897.4 | 3253.4 |
| 70°   | 437.3  | 443.3  | 446.0  | 446.0  | 465.6  | 544.3  | 1565.5 | 4078.8 | 5567.5 | 3840.0 | 2620.3 |
| 72.5° | 398.2  | 385.5  | 386.8  | 380.1  | 380.1  | 414.4  | 630.4  | 2312.2 | 3507.7 | 2160.2 | 1599.1 |
| 75°   | 324.9  | 333.0  | 334.4  | 329.6  | 314.2  | 316.2  | 374.0  | 970.1  | 1500.9 | 896.1  | 790.5  |
| 77.5° | 280.5  | 280.5  | 283.2  | 279.8  | 267.7  | 236.8  | 249.6  | 376.1  | 510.7  | 367.4  | 394.9  |
| 80°   | 225.4  | 224.7  | 236.2  | 242.8  | 224.1  | 174.9  | 159.4  | 207.9  | 226.7  | 161.4  | 205.2  |
| 82.5° | 109.7  | 116.3  | 162.2  | 185.0  | 170.3  | 126.5  | 97.6   | 129.1  | 121.1  | 71.3   | 92.1   |
| 85°   | 64.0   | 60.6   | 72.7   | 102.9  | 97.6   | 70.0   | 47.0   | 67.2   | 63.2   | 36.3   | 37.0   |
| 87.5° | 20.2   | 18.9   | 14.8   | 35.0   | 28.3   | 19.5   | 12.8   | 19.5   | 17.5   | 8.1    | 8.1    |
| 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: P963686

CATALOG NUMBER: NAV-SB3A-835-U-AFL

**CANDELA DISTRIBUTION (continued):**

|       | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 | 3260.7 |
| 2.5°  | 3223.7 | 3144.4 | 3065.7 | 2993.6 | 2950.0 | 2921.7 | 2893.5 | 2861.8 | 2849.7 | 2831.6 |
| 5°    | 3191.4 | 3038.1 | 2901.5 | 2783.8 | 2676.8 | 2592.7 | 2508.0 | 2439.3 | 2408.3 | 2429.2 |
| 7.5°  | 3172.6 | 2950.6 | 2740.0 | 2524.1 | 2316.2 | 2150.0 | 2005.4 | 1903.8 | 1858.1 | 1869.5 |
| 10°   | 3155.8 | 2851.8 | 2530.8 | 2189.7 | 1891.0 | 1685.2 | 1537.2 | 1459.8 | 1430.9 | 1436.9 |
| 12.5° | 3140.3 | 2740.7 | 2278.6 | 1829.8 | 1512.3 | 1376.4 | 1334.0 | 1334.7 | 1340.1 | 1344.1 |
| 15°   | 3137.6 | 2606.9 | 1996.7 | 1514.9 | 1307.8 | 1299.1 | 1344.8 | 1373.7 | 1389.2 | 1393.9 |
| 17.5° | 3133.6 | 2446.8 | 1709.4 | 1300.4 | 1258.0 | 1317.2 | 1359.6 | 1378.4 | 1390.5 | 1391.2 |
| 20°   | 3117.4 | 2243.5 | 1444.3 | 1198.1 | 1247.2 | 1298.4 | 1324.6 | 1339.4 | 1349.5 | 1352.9 |
| 22.5° | 3067.6 | 2017.5 | 1237.8 | 1152.4 | 1204.2 | 1245.3 | 1276.1 | 1293.0 | 1299.1 | 1303.1 |
| 25°   | 2978.1 | 1764.5 | 1095.2 | 1108.6 | 1144.3 | 1196.1 | 1221.0 | 1224.4 | 1222.3 | 1228.4 |
| 27.5° | 2861.1 | 1493.4 | 1006.4 | 1049.5 | 1095.2 | 1139.6 | 1153.0 | 1151.1 | 1147.0 | 1153.7 |
| 30°   | 2719.8 | 1250.0 | 949.9  | 982.9  | 1045.4 | 1085.8 | 1097.9 | 1093.2 | 1085.2 | 1092.5 |
| 32.5° | 2570.5 | 1050.8 | 903.4  | 936.4  | 1004.4 | 1044.1 | 1056.2 | 1051.4 | 1045.4 | 1051.4 |
| 35°   | 2431.3 | 911.5  | 860.4  | 905.5  | 972.1  | 1011.2 | 1026.6 | 1027.3 | 1027.3 | 1034.6 |
| 37.5° | 2303.5 | 830.1  | 824.8  | 886.0  | 949.9  | 984.9  | 1007.1 | 1008.4 | 979.5  | 981.5  |
| 40°   | 2185.0 | 795.8  | 808.6  | 873.2  | 928.3  | 962.0  | 963.4  | 888.0  | 834.9  | 833.5  |
| 42.5° | 2088.1 | 789.1  | 813.3  | 871.9  | 912.9  | 914.2  | 819.4  | 760.9  | 746.1  | 746.7  |
| 45°   | 1997.3 | 787.1  | 824.1  | 871.9  | 890.0  | 789.8  | 725.9  | 710.4  | 711.8  | 717.1  |
| 47.5° | 1895.7 | 779.0  | 826.2  | 859.8  | 824.1  | 702.3  | 683.5  | 676.8  | 674.0  | 675.4  |
| 50°   | 1784.7 | 750.1  | 800.5  | 835.6  | 711.0  | 664.6  | 641.1  | 639.1  | 642.5  | 644.5  |
| 52.5° | 1667.7 | 703.0  | 756.9  | 791.8  | 659.3  | 631.7  | 605.5  | 610.2  | 624.9  | 629.7  |
| 55°   | 1591.0 | 647.8  | 698.9  | 704.4  | 623.0  | 600.8  | 578.5  | 589.3  | 616.8  | 625.7  |
| 57.5° | 1570.8 | 589.3  | 633.0  | 627.0  | 576.6  | 573.8  | 560.4  | 569.8  | 604.8  | 617.6  |
| 60°   | 1564.8 | 536.8  | 568.5  | 563.8  | 531.5  | 544.3  | 540.9  | 545.6  | 557.7  | 561.7  |
| 62.5° | 1517.7 | 495.2  | 510.7  | 503.9  | 491.1  | 513.3  | 521.4  | 511.3  | 520.7  | 525.4  |
| 65°   | 1397.9 | 461.5  | 454.1  | 449.4  | 454.8  | 475.0  | 491.1  | 470.9  | 479.7  | 493.1  |
| 67.5° | 1200.2 | 415.7  | 395.5  | 401.0  | 417.8  | 428.6  | 449.4  | 426.5  | 433.9  | 456.7  |
| 70°   | 970.8  | 357.9  | 339.7  | 355.2  | 371.4  | 393.5  | 396.9  | 381.4  | 398.9  | 424.5  |
| 72.5° | 686.9  | 299.4  | 286.6  | 318.2  | 323.6  | 352.5  | 345.1  | 337.7  | 361.9  | 370.6  |
| 75°   | 476.3  | 241.5  | 234.1  | 258.3  | 277.9  | 302.7  | 297.4  | 306.1  | 357.2  | 361.2  |
| 77.5° | 301.3  | 187.7  | 183.0  | 198.4  | 225.4  | 253.0  | 261.7  | 361.2  | 610.2  | 634.4  |
| 80°   | 174.9  | 139.9  | 134.6  | 146.7  | 170.3  | 195.8  | 252.3  | 443.3  | 402.3  | 397.6  |
| 82.5° | 97.6   | 96.2   | 89.5   | 92.9   | 113.7  | 141.2  | 356.6  | 312.1  | 253.6  | 261.7  |
| 85°   | 45.7   | 56.5   | 48.5   | 46.4   | 64.0   | 165.5  | 238.1  | 178.2  | 118.4  | 115.7  |
| 87.5° | 12.1   | 10.8   | 10.8   | 12.1   | 27.0   | 142.6  | 94.8   | 76.1   | 45.1   | 43.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)