

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: P965261

Luminaire Tested: **NAV-SB3D-830-U-T4W-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P965261  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB3D-830-U-T4W-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(3) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE  
OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 21660.3 lumens  
Efficiency: N/A  
Efficacy: 99.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G4

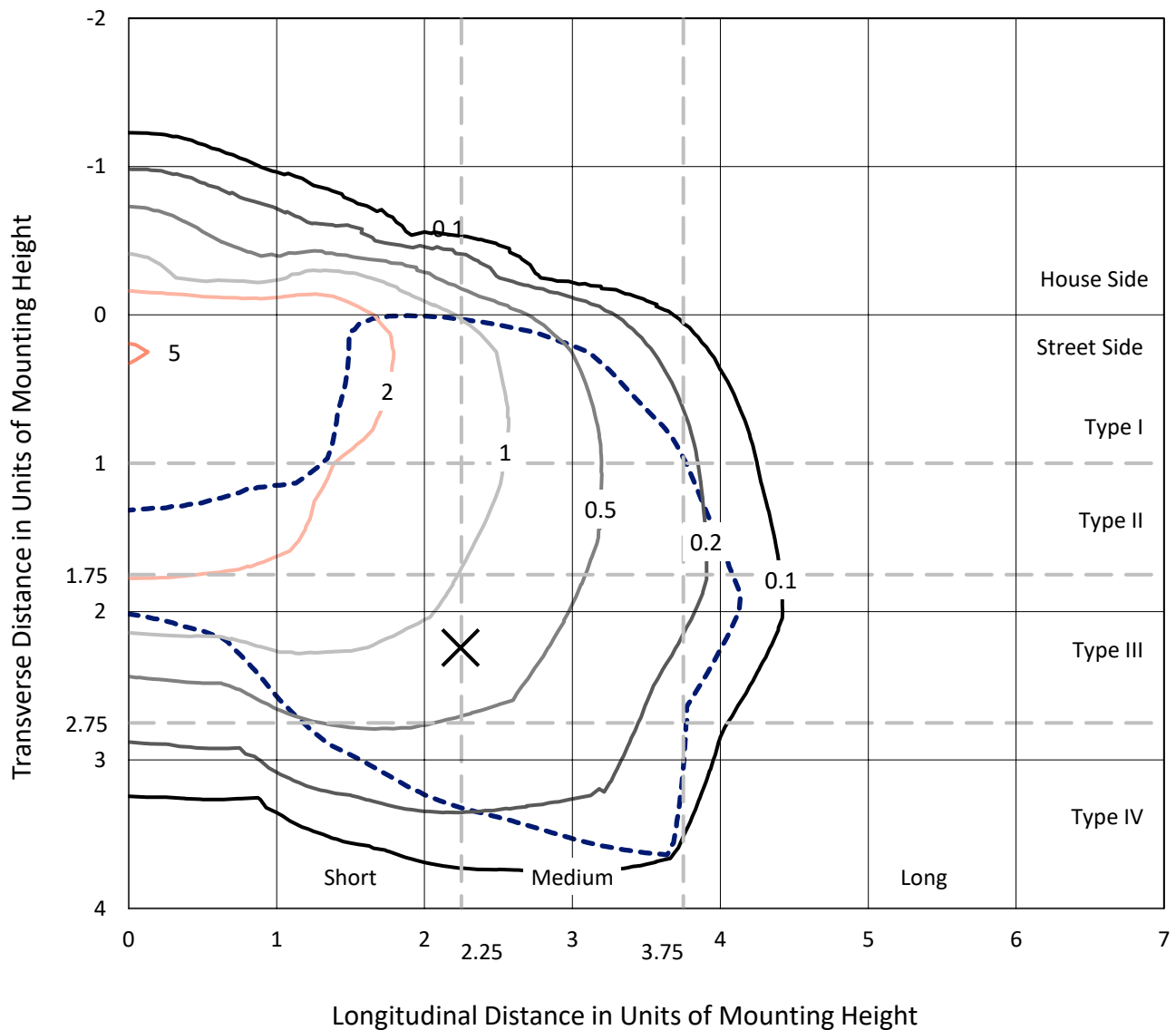
Input Watts (W): 218.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P965261  
CATALOG NUMBER: NAV-SB3D-830-U-T4W-HSS

## Iso-Footcandle Lines of Horizontal Illumination

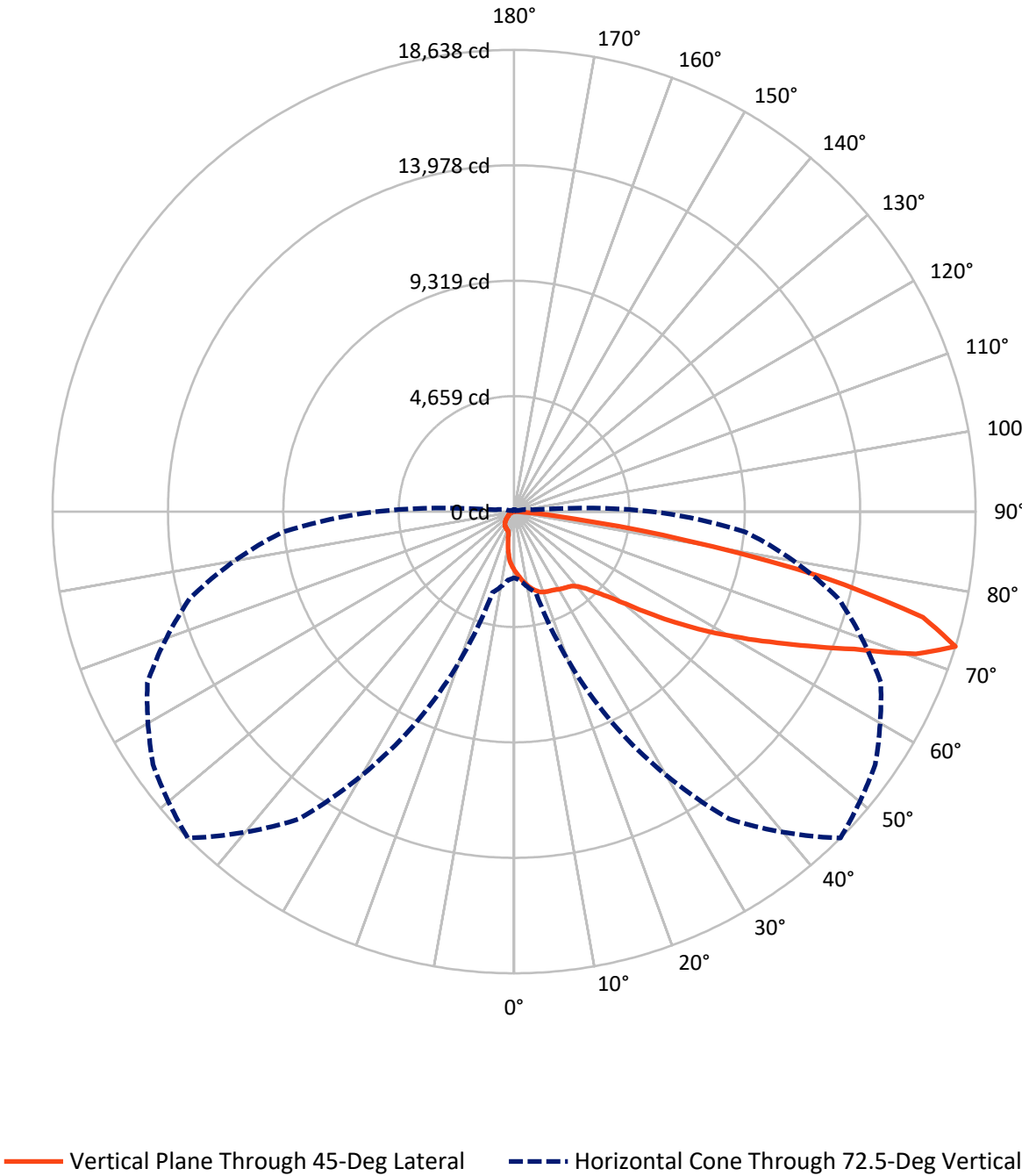
× Max cd  
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.2 fc  
Type IV - Short - N/A

REPORT NUMBER: P965261  
CATALOG NUMBER: NAV-SB3D-830-U-T4W-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P965261

CATALOG NUMBER: NAV-SB3D-830-U-T4W-HSS

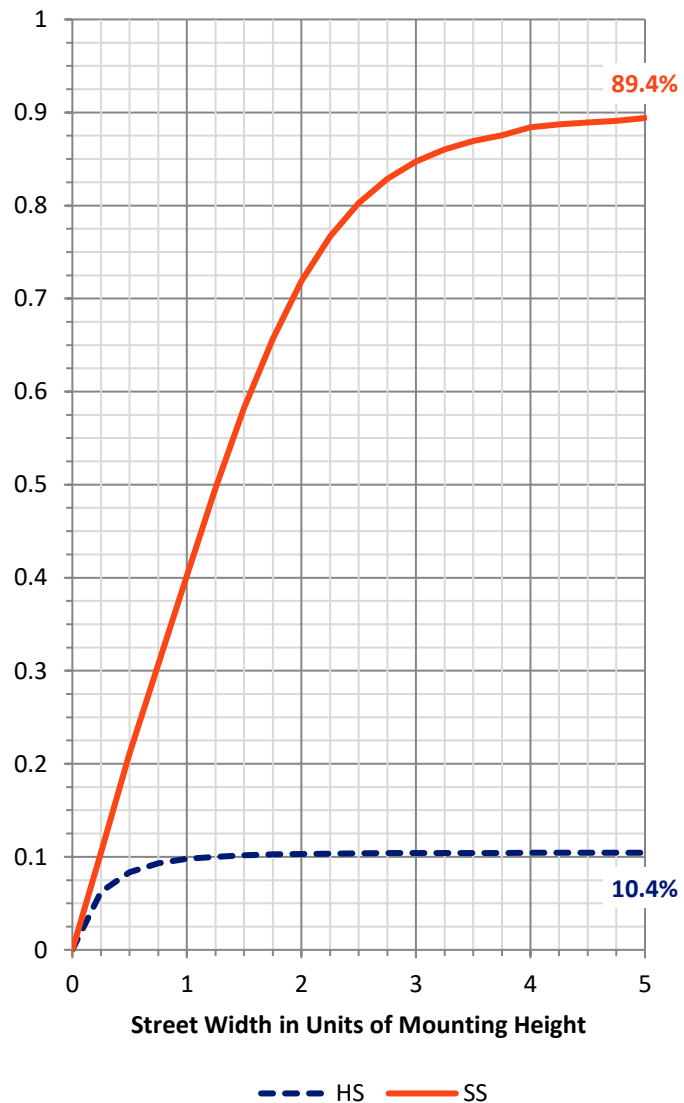
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2275.9   | 0.0    | 2275.9  |
|                    | % Fixture | 10.5     | 0.0    | 10.5    |
| <b>Street Side</b> | Lumens    | 19384.4  | 0.0    | 19384.4 |
|                    | % Fixture | 89.5     | 0.0    | 89.5    |
| <b>Total</b>       | Lumens    | 21660.3  | 0.0    | 21660.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 223.6   | 1.0       |
| 10°-20°   | 653.4   | 3.0       |
| 20°-30°   | 1073.0  | 5.0       |
| 30°-40°   | 1521.8  | 7.0       |
| 40°-50°   | 2515.4  | 11.6      |
| 50°-60°   | 4518.6  | 20.9      |
| 60°-70°   | 6274.3  | 29.0      |
| 70°-80°   | 4551.2  | 21.0      |
| 80°-90°   | 329.0   | 1.5       |
| 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°    | 21660.3 | 100.0     |
| 0°-180°   | 21660.3 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P965261

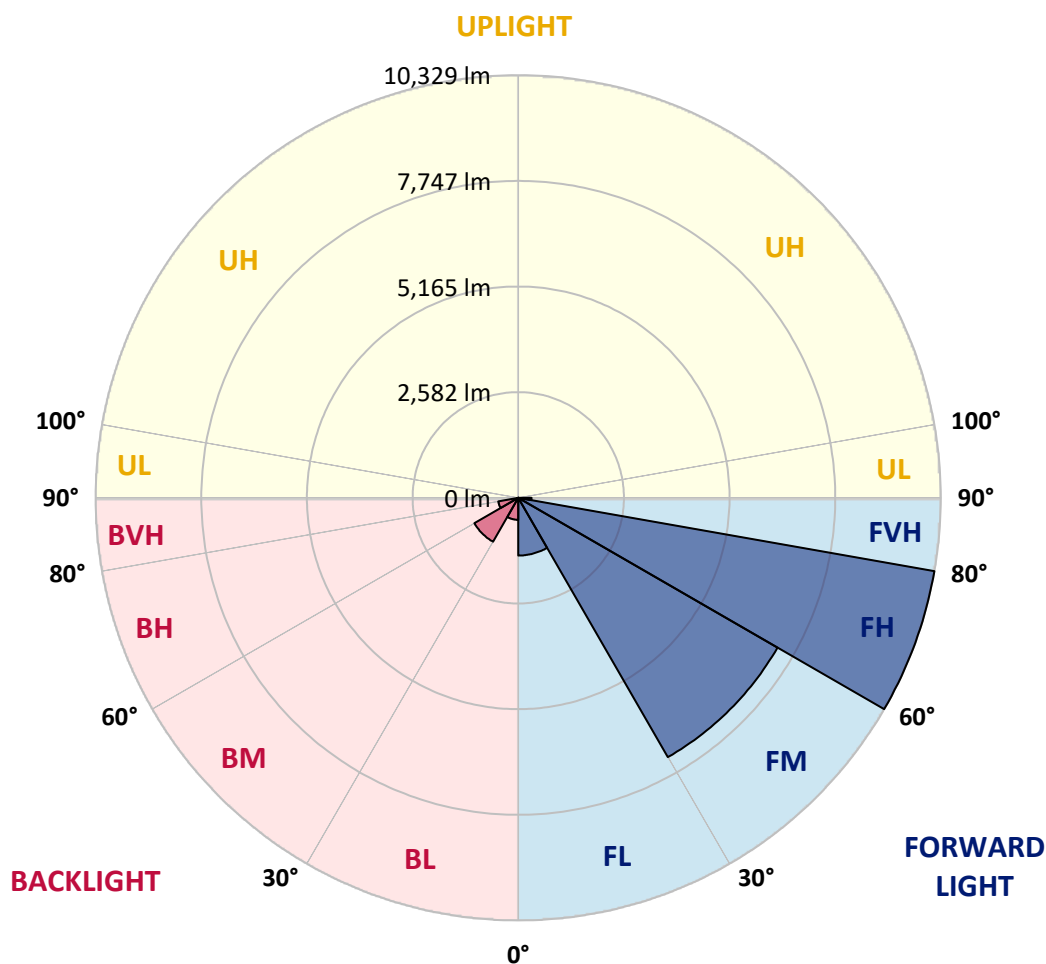
CATALOG NUMBER: NAV-SB3D-830-U-T4W-HSS

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 1411.0  | 6.5       |                         |      |          |
| FM   | (30°-60°)   | 7318.0  | 33.8      |                         |      |          |
| FH   | (60°-80°)   | 10329.2 | 47.7      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 326.3   | 1.5       |                         |      | G3/500   |
| BL   | (0°-30°)    | 539.1   | 2.5       | B2/1000                 |      |          |
| BM   | (30°-60°)   | 1237.8  | 5.7       | B2/2500                 |      |          |
| BH   | (60°-80°)   | 496.3   | 2.3       | B1/500                  |      | G1/500   |
| BVH  | (80°-90°)   | 2.8     | 0.0       |                         |      | G0/10    |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B2-U0-G4**

Type IV Short



REPORT NUMBER: P965261

CATALOG NUMBER: NAV-SB3D-830-U-T4W-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 46°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2373.0  | 2373.0  | 2373.0  | 2373.0  | 2373.0  | 2373.0  | 2373.0  | 2373.0  | 2373.0  | 2373.0  | 2373.0  |
| 2.5°  | 2591.7  | 2596.2  | 2593.2  | 2575.5  | 2545.9  | 2529.7  | 2520.8  | 2491.2  | 2472.0  | 2438.0  | 2402.5  |
| 5°    | 2829.8  | 2847.6  | 2837.2  | 2801.7  | 2745.5  | 2705.6  | 2693.8  | 2633.1  | 2578.4  | 2514.8  | 2440.9  |
| 7.5°  | 3082.6  | 3091.5  | 3072.2  | 3026.4  | 2951.0  | 2883.0  | 2872.7  | 2788.4  | 2701.2  | 2603.6  | 2503.0  |
| 10°   | 3301.4  | 3311.8  | 3282.2  | 3215.6  | 3129.9  | 3045.6  | 3030.8  | 2937.8  | 2834.2  | 2714.5  | 2585.9  |
| 12.5° | 3484.7  | 3495.0  | 3456.6  | 3376.8  | 3282.2  | 3194.9  | 3180.2  | 3082.6  | 2968.7  | 2835.7  | 2676.0  |
| 15°   | 3623.7  | 3643.0  | 3591.2  | 3505.4  | 3403.4  | 3316.2  | 3308.8  | 3212.7  | 3101.9  | 2953.9  | 2783.9  |
| 17.5° | 3705.1  | 3724.2  | 3675.4  | 3571.9  | 3484.7  | 3410.8  | 3402.0  | 3322.1  | 3218.6  | 3076.6  | 2889.0  |
| 20°   | 3718.3  | 3736.1  | 3684.4  | 3594.2  | 3521.7  | 3462.6  | 3458.1  | 3400.4  | 3325.1  | 3189.1  | 3002.7  |
| 22.5° | 3678.4  | 3700.6  | 3653.3  | 3580.8  | 3530.6  | 3499.6  | 3493.6  | 3461.1  | 3418.2  | 3302.9  | 3109.2  |
| 25°   | 3637.0  | 3654.7  | 3619.3  | 3555.7  | 3529.1  | 3526.1  | 3530.6  | 3524.7  | 3515.7  | 3418.2  | 3233.4  |
| 27.5° | 3634.0  | 3653.3  | 3613.3  | 3552.8  | 3538.0  | 3569.0  | 3573.5  | 3601.5  | 3608.9  | 3523.1  | 3353.2  |
| 30°   | 3659.1  | 3672.5  | 3634.0  | 3570.5  | 3563.1  | 3634.0  | 3635.6  | 3685.8  | 3697.6  | 3611.9  | 3471.5  |
| 32.5° | 3713.9  | 3728.6  | 3690.2  | 3597.1  | 3586.8  | 3685.8  | 3690.2  | 3756.7  | 3776.0  | 3706.5  | 3595.6  |
| 35°   | 3842.5  | 3860.3  | 3815.9  | 3671.0  | 3634.0  | 3734.6  | 3747.9  | 3826.2  | 3864.7  | 3807.1  | 3724.2  |
| 37.5° | 4163.3  | 4111.6  | 4051.0  | 3820.4  | 3742.0  | 3811.5  | 3833.6  | 3925.3  | 3993.3  | 3926.8  | 3878.0  |
| 40°   | 4960.3  | 4797.6  | 4608.4  | 4074.7  | 3931.2  | 3975.6  | 3993.3  | 4085.0  | 4178.1  | 4113.1  | 4089.4  |
| 42.5° | 6156.4  | 5964.2  | 5659.5  | 4660.2  | 4216.5  | 4238.8  | 4252.0  | 4331.9  | 4463.5  | 4411.7  | 4417.6  |
| 45°   | 7222.3  | 7152.8  | 6842.3  | 5659.5  | 4750.3  | 4640.9  | 4657.2  | 4698.6  | 4892.2  | 4873.1  | 4911.5  |
| 47.5° | 8041.3  | 8001.5  | 7761.9  | 6806.8  | 5652.2  | 5133.2  | 5179.0  | 5198.3  | 5477.7  | 5545.8  | 5649.2  |
| 50°   | 8671.2  | 8656.4  | 8442.0  | 7827.0  | 6830.5  | 5859.1  | 5875.4  | 5834.0  | 6252.4  | 6421.0  | 6617.6  |
| 52.5° | 9265.5  | 9315.8  | 9157.6  | 8774.7  | 8088.7  | 6809.8  | 6806.8  | 6611.7  | 7176.4  | 7430.7  | 7766.3  |
| 55°   | 9802.2  | 9819.9  | 9836.2  | 9741.6  | 9354.3  | 7892.0  | 7863.9  | 7544.6  | 8248.4  | 8511.5  | 8875.2  |
| 57.5° | 10306.4 | 10313.8 | 10458.7 | 10652.3 | 10671.6 | 9054.1  | 9002.4  | 8619.4  | 9419.2  | 9607.0  | 9830.3  |
| 60°   | 10644.9 | 10679.0 | 10984.9 | 11523.2 | 11758.2 | 10253.2 | 10225.1 | 9834.8  | 10610.9 | 10698.1 | 10656.7 |
| 62.5° | 10157.0 | 10364.0 | 11135.8 | 12203.2 | 12784.3 | 11582.3 | 11569.0 | 11202.3 | 11864.7 | 11793.6 | 11438.9 |
| 65°   | 8221.7  | 8572.1  | 9929.4  | 12663.1 | 13791.1 | 13066.7 | 13085.9 | 12695.5 | 13152.4 | 12921.8 | 12074.6 |
| 67.5° | 5751.2  | 6120.8  | 7726.4  | 12700.0 | 14916.2 | 14809.7 | 14920.6 | 14308.6 | 14519.9 | 14002.5 | 12225.4 |
| 70°   | 3977.1  | 4167.8  | 5213.0  | 11904.6 | 15792.9 | 17210.8 | 17207.8 | 16289.7 | 15880.1 | 14494.8 | 11456.6 |
| 72.5° | 2674.5  | 2773.5  | 3385.7  | 9444.5  | 15148.4 | 18637.5 | 18551.8 | 17803.6 | 16338.5 | 13556.0 | 9360.1  |
| 75°   | 1128.1  | 1200.5  | 1567.1  | 5307.7  | 11984.4 | 17051.1 | 16819.0 | 15733.7 | 14517.0 | 10674.5 | 5839.9  |
| 77.5° | 357.8   | 388.9   | 618.0   | 1899.8  | 6601.3  | 12816.8 | 12571.3 | 9825.9  | 9729.7  | 5355.0  | 2134.9  |
| 80°   | 170.0   | 198.1   | 347.5   | 762.9   | 2597.7  | 6970.9  | 6937.0  | 4457.5  | 4185.5  | 1446.0  | 428.8   |
| 82.5° | 73.9    | 87.2    | 192.2   | 408.1   | 1162.0  | 2486.8  | 2537.1  | 1516.9  | 1255.2  | 548.5   | 131.6   |
| 85°   | 23.7    | 31.1    | 88.7    | 187.8   | 490.9   | 618.0   | 610.6   | 360.7   | 505.6   | 298.7   | 45.8    |
| 87.5° | 0.0     | 0.0     | 29.5    | 42.8    | 50.2    | 35.5    | 39.9    | 31.1    | 140.4   | 82.8    | 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: P965261

CATALOG NUMBER: NAV-SB3D-830-U-T4W-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2373.0 | 2373.0 | 2373.0 | 2373.0 | 2373.0 | 2373.0 | 2373.0 | 2373.0 | 2373.0 | 2373.0 | 2373.0 |
| 2.5°  | 2384.8 | 2361.1 | 2319.7 | 2281.2 | 2247.3 | 2213.3 | 2192.6 | 2163.0 | 2160.0 | 2160.0 | 2167.5 |
| 5°    | 2401.1 | 2362.6 | 2288.6 | 2210.3 | 2120.1 | 2034.3 | 1948.6 | 1865.8 | 1839.2 | 1820.0 | 1828.9 |
| 7.5°  | 2448.3 | 2387.7 | 2270.9 | 2121.5 | 1950.1 | 1762.3 | 1630.8 | 1488.8 | 1434.1 | 1404.6 | 1409.0 |
| 10°   | 2516.4 | 2433.6 | 2256.1 | 1994.4 | 1716.5 | 1460.7 | 1272.9 | 1119.2 | 1060.1 | 1034.9 | 1034.9 |
| 12.5° | 2591.7 | 2489.7 | 2229.5 | 1836.3 | 1460.7 | 1154.7 | 971.4  | 900.4  | 891.5  | 891.5  | 891.5  |
| 15°   | 2681.9 | 2557.8 | 2183.7 | 1649.9 | 1193.1 | 913.7  | 848.6  | 851.6  | 860.5  | 866.3  | 866.3  |
| 17.5° | 2775.1 | 2630.1 | 2111.3 | 1441.5 | 956.5  | 822.0  | 823.5  | 827.9  | 835.4  | 841.2  | 841.2  |
| 20°   | 2875.6 | 2702.6 | 2015.2 | 1219.8 | 820.5  | 795.4  | 799.8  | 804.3  | 810.2  | 813.1  | 814.7  |
| 22.5° | 2983.6 | 2770.7 | 1901.3 | 1002.3 | 774.7  | 773.3  | 774.7  | 779.1  | 786.6  | 786.6  | 789.5  |
| 25°   | 3098.9 | 2846.0 | 1771.2 | 844.2  | 751.0  | 751.0  | 754.0  | 757.0  | 762.9  | 762.9  | 764.3  |
| 27.5° | 3217.2 | 2915.5 | 1633.7 | 761.4  | 730.3  | 728.9  | 728.9  | 733.3  | 736.3  | 737.8  | 739.2  |
| 30°   | 3347.2 | 2996.8 | 1496.2 | 743.6  | 714.1  | 706.7  | 702.2  | 705.2  | 708.2  | 709.7  | 712.6  |
| 32.5° | 3480.3 | 3075.2 | 1373.5 | 751.0  | 697.8  | 684.5  | 669.7  | 666.8  | 666.8  | 672.7  | 677.1  |
| 35°   | 3628.2 | 3161.0 | 1278.9 | 776.2  | 689.0  | 652.0  | 628.3  | 615.0  | 616.5  | 625.4  | 629.9  |
| 37.5° | 3805.5 | 3264.4 | 1209.4 | 798.4  | 683.1  | 615.0  | 576.6  | 560.4  | 550.0  | 560.4  | 557.4  |
| 40°   | 4037.7 | 3416.7 | 1159.1 | 816.1  | 675.7  | 572.2  | 520.4  | 493.8  | 474.6  | 480.5  | 477.5  |
| 42.5° | 4379.2 | 3656.3 | 1139.9 | 817.5  | 659.4  | 521.9  | 462.8  | 427.3  | 399.1  | 400.7  | 394.7  |
| 45°   | 4858.2 | 4034.7 | 1238.9 | 798.4  | 623.9  | 467.2  | 402.1  | 354.9  | 337.1  | 332.6  | 326.8  |
| 47.5° | 5514.7 | 4586.2 | 1468.1 | 758.5  | 572.2  | 414.0  | 343.0  | 303.1  | 289.8  | 282.4  | 278.0  |
| 50°   | 6394.4 | 5294.3 | 1722.4 | 714.1  | 520.4  | 363.7  | 294.2  | 269.1  | 260.2  | 252.9  | 251.3  |
| 52.5° | 7414.4 | 6012.9 | 1930.9 | 669.7  | 468.6  | 319.4  | 263.1  | 248.4  | 241.0  | 235.0  | 233.6  |
| 55°   | 8350.4 | 6508.2 | 1919.0 | 622.5  | 418.4  | 283.8  | 241.0  | 232.2  | 223.2  | 217.3  | 214.3  |
| 57.5° | 8932.9 | 6577.6 | 1582.0 | 570.7  | 360.7  | 255.7  | 220.3  | 214.3  | 204.1  | 196.6  | 195.2  |
| 60°   | 9200.5 | 6181.5 | 1108.8 | 502.7  | 303.1  | 229.2  | 198.1  | 195.2  | 181.8  | 171.5  | 168.5  |
| 62.5° | 9249.3 | 5445.2 | 739.2  | 418.4  | 252.9  | 204.1  | 175.9  | 171.5  | 153.8  | 136.0  | 127.1  |
| 65°   | 9051.2 | 4392.5 | 511.6  | 326.8  | 215.9  | 177.4  | 150.8  | 142.0  | 122.7  | 105.0  | 99.0   |
| 67.5° | 8424.3 | 3084.1 | 356.3  | 235.0  | 183.4  | 140.4  | 119.7  | 116.7  | 102.0  | 87.2   | 82.8   |
| 70°   | 7275.6 | 1757.9 | 238.0  | 175.9  | 144.9  | 96.1   | 94.6   | 97.6   | 82.8   | 70.9   | 65.1   |
| 72.5° | 5578.3 | 804.3  | 147.8  | 128.6  | 99.0   | 65.1   | 75.4   | 76.9   | 63.6   | 53.2   | 47.4   |
| 75°   | 3283.7 | 344.5  | 93.2   | 82.8   | 50.2   | 42.8   | 54.7   | 56.2   | 42.8   | 34.0   | 29.5   |
| 77.5° | 1117.8 | 130.1  | 59.1   | 48.8   | 25.1   | 23.7   | 35.5   | 35.5   | 23.7   | 13.3   | 10.4   |
| 80°   | 254.3  | 48.8   | 29.5   | 19.3   | 11.8   | 10.4   | 11.8   | 10.4   | 5.9    | 1.4    | 0.0    |
| 82.5° | 72.5   | 19.3   | 11.8   | 7.4    | 4.4    | 4.4    | 1.4    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 20.7   | 8.9    | 3.0    | 3.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 8.9    | 1.4    | 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)