

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: P960499

Luminaire Tested: **NAV-SB1C-830-U-SL4-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P960499  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB1C-830-U-SL4-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 26 LEDS AND TYPE IV SPILL LIGHT  
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 4816.5 lumens  
Efficiency: N/A  
Efficacy: 88.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

Input Watts (W): 54.4  
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



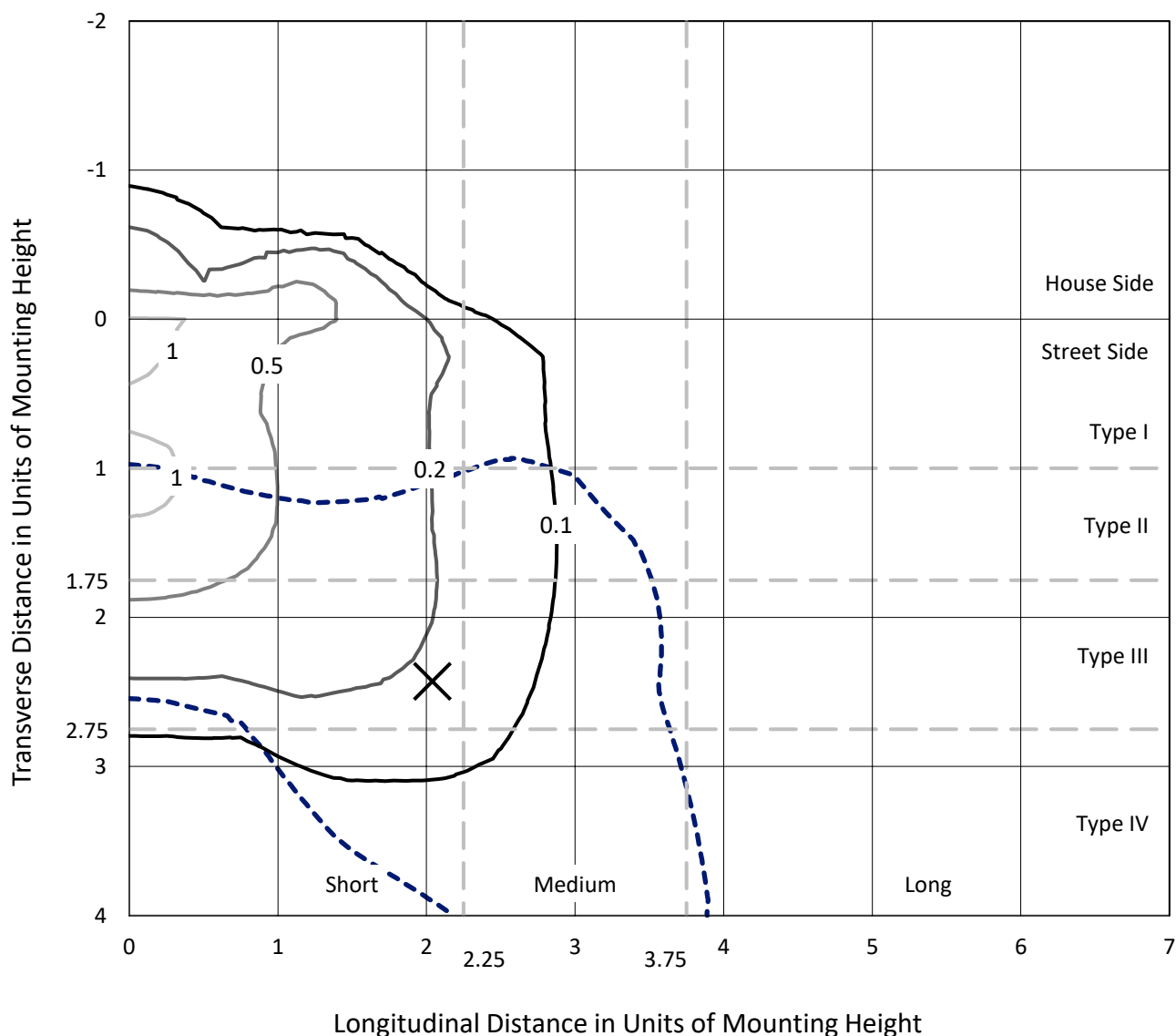
REPORT NUMBER: P960499

CATALOG NUMBER: NAV-SB1C-830-U-SL4-HSS

## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

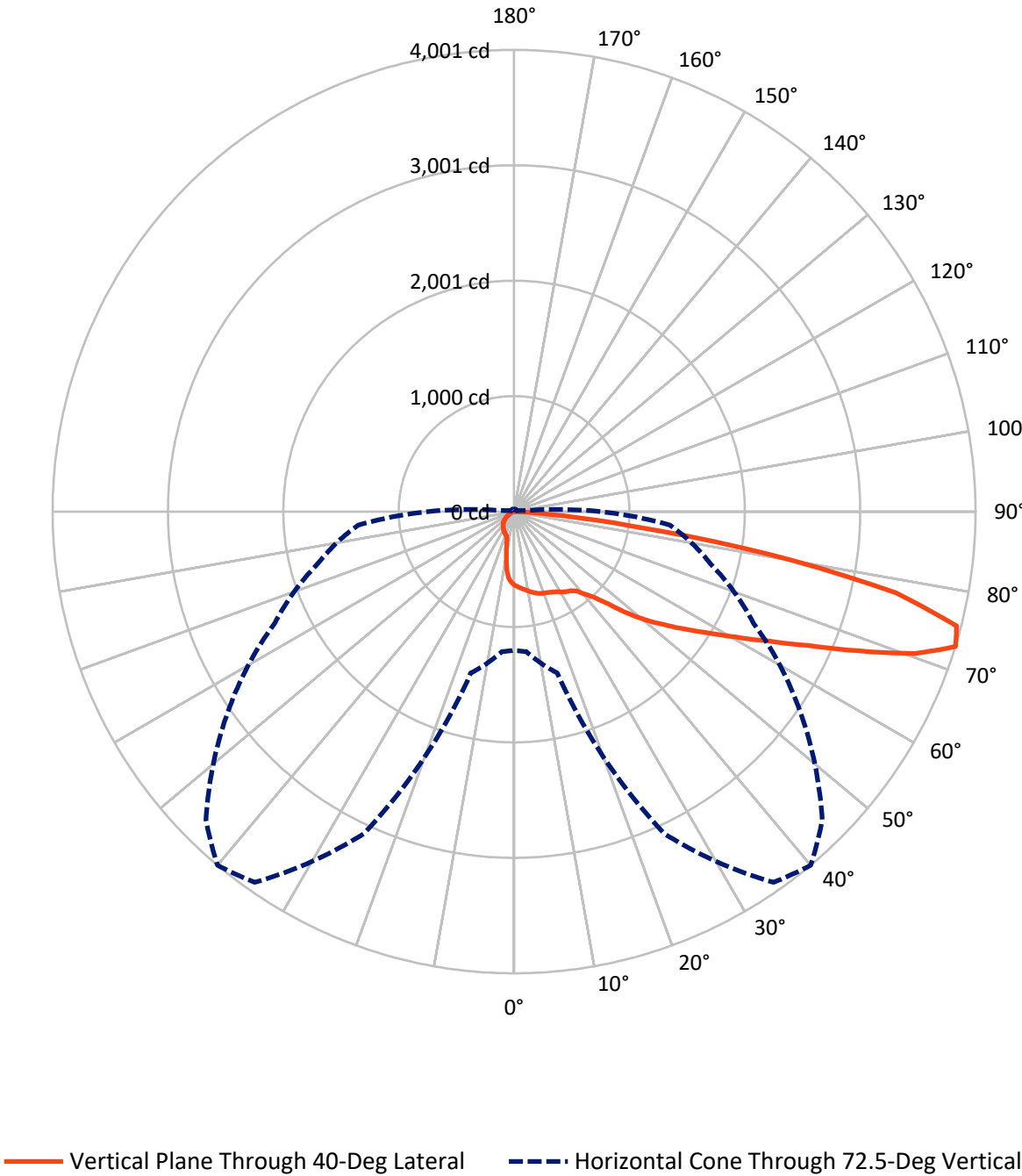


Based on 25 foot mounting height. Maximum calculated value = 1.2 fc

Type IV - Short - N/A

REPORT NUMBER: P960499  
CATALOG NUMBER: NAV-SB1C-830-U-SL4-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P960499

CATALOG NUMBER: NAV-SB1C-830-U-SL4-HSS

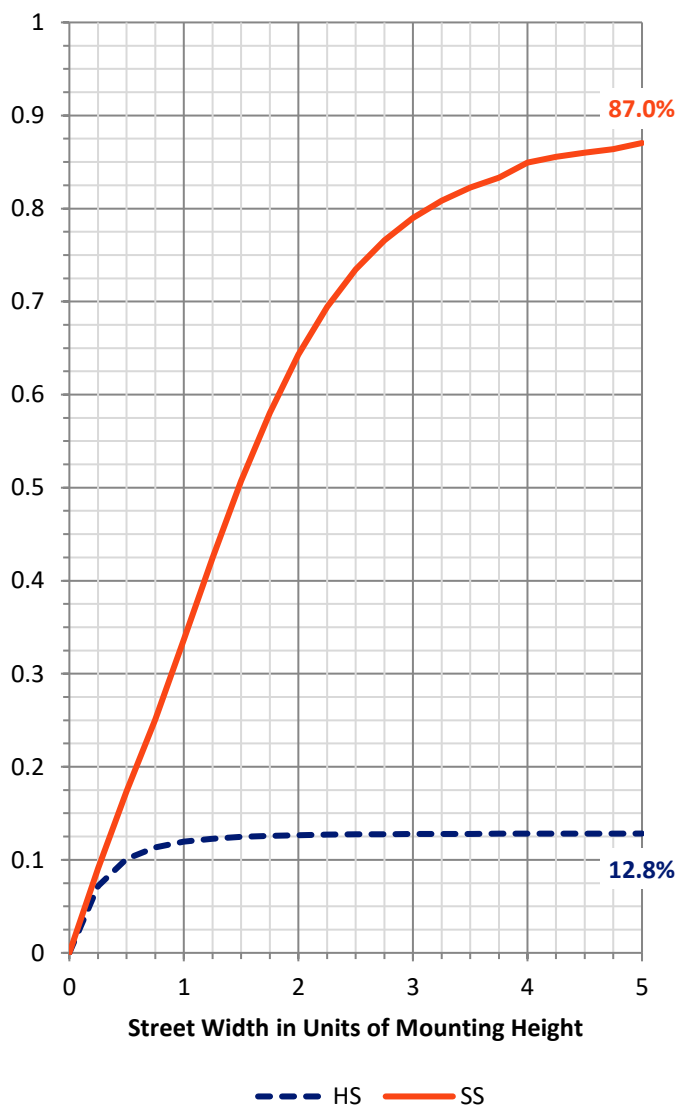
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 622.0    | 0.0    | 622.0  |
|                    | % Fixture | 12.9     | 0.0    | 12.9   |
| <b>Street Side</b> | Lumens    | 4194.5   | 0.0    | 4194.5 |
|                    | % Fixture | 87.1     | 0.0    | 87.1   |
| <b>Total</b>       | Lumens    | 4816.5   | 0.0    | 4816.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 58.2   | 1.2       |
| 10°-20°   | 158.2  | 3.3       |
| 20°-30°   | 255.9  | 5.3       |
| 30°-40°   | 377.8  | 7.8       |
| 40°-50°   | 635.9  | 13.2      |
| 50°-60°   | 987.4  | 20.5      |
| 60°-70°   | 1235.5 | 25.7      |
| 70°-80°   | 1011.5 | 21.0      |
| 80°-90°   | 95.9   | 2.0       |
| 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°    | 4816.5 | 100.0     |
| 0°-180°   | 4816.5 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P960499

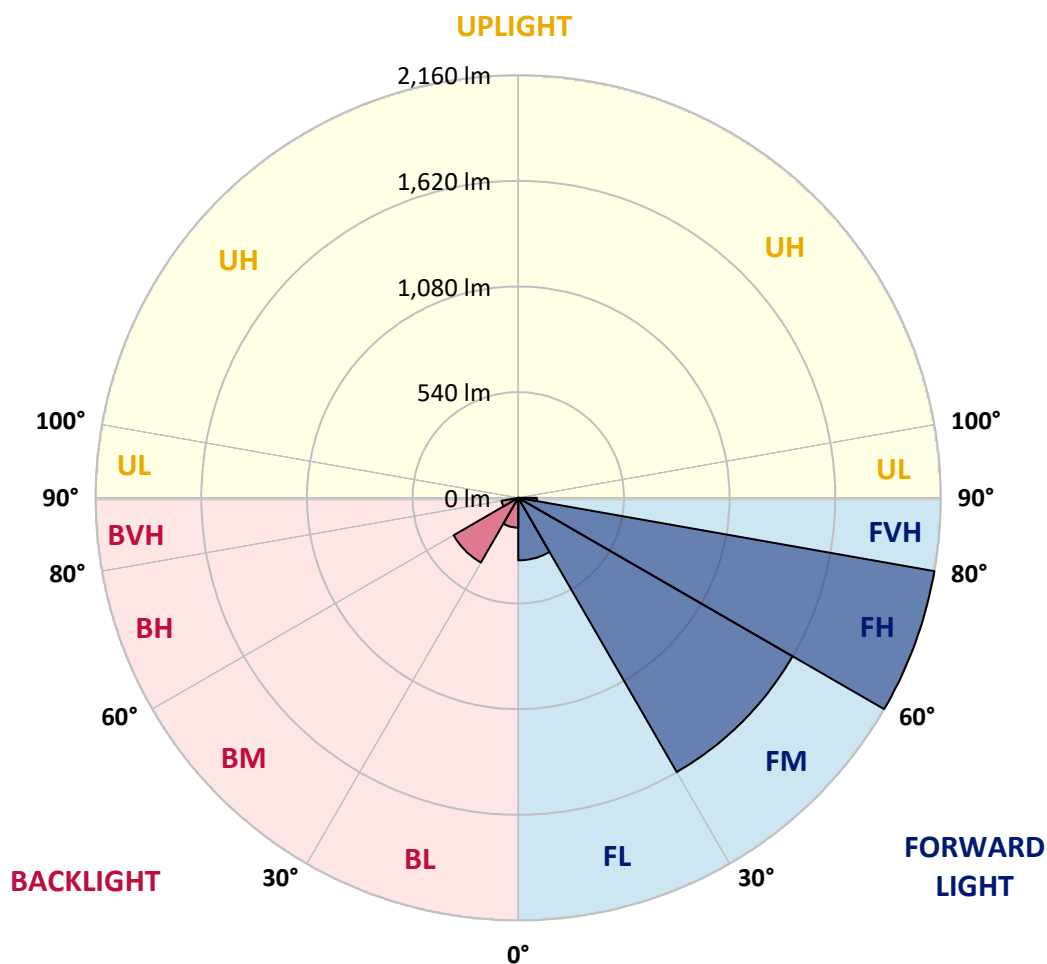
CATALOG NUMBER: NAV-SB1C-830-U-SL4-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 319.7  | 6.6       |                         |      |         |
| FM   | (30°-60°)   | 1619.2 | 33.6      |                         |      |         |
| FH   | (60°-80°)   | 2160.4 | 44.9      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 95.2   | 2.0       |                         |      | G1/100  |
| BL   | (0°-30°)    | 152.7  | 3.2       | B1/500                  |      |         |
| BM   | (30°-60°)   | 382.0  | 7.9       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 86.7   | 1.8       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 0.7    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type IV Short



REPORT NUMBER: P960499

CATALOG NUMBER: NAV-SB1C-830-U-SL4-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 40°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 637.8  | 637.8  | 637.8  | 637.8  | 637.8  | 637.8  | 637.8  | 637.8  | 637.8  | 637.8  | 637.8  |
| 2.5°  | 656.9  | 659.5  | 658.0  | 655.2  | 654.5  | 653.0  | 651.2  | 650.5  | 647.9  | 645.8  | 643.2  |
| 5°    | 675.5  | 678.0  | 676.2  | 672.2  | 670.3  | 668.6  | 666.0  | 663.9  | 658.8  | 654.1  | 648.2  |
| 7.5°  | 695.8  | 697.9  | 695.8  | 689.9  | 687.1  | 684.9  | 681.3  | 678.0  | 672.2  | 665.3  | 658.0  |
| 10°   | 718.3  | 720.1  | 716.8  | 709.2  | 704.5  | 701.2  | 697.9  | 694.3  | 688.9  | 681.3  | 672.6  |
| 12.5° | 739.3  | 741.5  | 736.5  | 727.3  | 721.9  | 718.6  | 715.0  | 712.1  | 706.6  | 699.5  | 690.3  |
| 15°   | 758.5  | 761.8  | 753.1  | 743.3  | 737.2  | 734.6  | 730.9  | 729.2  | 725.5  | 720.5  | 712.1  |
| 17.5° | 773.1  | 775.2  | 766.2  | 754.5  | 747.6  | 745.9  | 743.3  | 744.4  | 743.6  | 741.2  | 735.6  |
| 20°   | 785.4  | 786.8  | 774.9  | 760.8  | 753.1  | 753.5  | 752.8  | 756.3  | 757.8  | 757.8  | 757.5  |
| 22.5° | 800.6  | 800.9  | 785.8  | 767.9  | 758.9  | 761.5  | 762.5  | 766.5  | 769.5  | 772.3  | 778.9  |
| 25°   | 820.6  | 819.9  | 801.8  | 777.4  | 769.5  | 773.1  | 775.6  | 777.1  | 780.3  | 785.0  | 799.9  |
| 27.5° | 850.3  | 848.2  | 824.9  | 792.6  | 783.2  | 786.5  | 791.2  | 790.5  | 789.0  | 792.6  | 817.6  |
| 30°   | 888.1  | 885.2  | 854.3  | 814.1  | 805.3  | 808.2  | 809.6  | 803.2  | 792.6  | 795.9  | 833.2  |
| 32.5° | 947.9  | 942.8  | 900.1  | 837.9  | 824.6  | 827.8  | 826.0  | 812.6  | 797.0  | 800.2  | 848.9  |
| 35°   | 1052.1 | 1039.7 | 979.1  | 888.1  | 846.3  | 842.7  | 838.3  | 825.3  | 806.1  | 802.8  | 861.9  |
| 37.5° | 1273.3 | 1251.5 | 1148.1 | 985.6  | 895.6  | 872.1  | 858.6  | 845.6  | 815.9  | 802.8  | 876.8  |
| 40°   | 1522.8 | 1500.8 | 1381.4 | 1148.9 | 977.6  | 937.8  | 905.8  | 869.5  | 826.0  | 807.5  | 900.1  |
| 42.5° | 1783.4 | 1759.0 | 1636.4 | 1351.3 | 1094.8 | 1012.8 | 953.4  | 888.8  | 842.7  | 822.0  | 930.9  |
| 45°   | 2074.3 | 2043.8 | 1883.4 | 1562.4 | 1265.0 | 1137.6 | 1029.9 | 928.3  | 871.8  | 847.8  | 972.9  |
| 47.5° | 2381.2 | 2341.6 | 2129.7 | 1767.4 | 1448.1 | 1310.3 | 1169.9 | 999.1  | 914.5  | 886.2  | 1029.9 |
| 50°   | 2653.2 | 2614.1 | 2384.0 | 1981.7 | 1619.4 | 1474.7 | 1329.5 | 1097.0 | 978.8  | 940.6  | 1106.4 |
| 52.5° | 2848.8 | 2819.1 | 2615.5 | 2203.0 | 1797.5 | 1628.8 | 1474.3 | 1210.9 | 1060.0 | 1010.3 | 1196.8 |
| 55°   | 2979.8 | 2952.5 | 2779.5 | 2412.7 | 2004.6 | 1798.6 | 1616.8 | 1334.7 | 1157.9 | 1093.8 | 1296.5 |
| 57.5° | 3059.2 | 3043.6 | 2898.1 | 2599.9 | 2210.0 | 1984.3 | 1780.1 | 1470.7 | 1273.3 | 1192.1 | 1407.9 |
| 60°   | 3087.5 | 3074.8 | 2971.8 | 2778.4 | 2458.1 | 2207.4 | 1972.0 | 1624.1 | 1413.4 | 1303.8 | 1522.1 |
| 62.5° | 3012.1 | 3014.5 | 3024.8 | 2989.9 | 2719.6 | 2468.6 | 2202.0 | 1808.4 | 1568.6 | 1430.4 | 1629.5 |
| 65°   | 2656.9 | 2677.9 | 2870.9 | 3224.2 | 3066.1 | 2795.8 | 2494.7 | 2033.3 | 1746.4 | 1574.4 | 1714.8 |
| 67.5° | 2199.9 | 2230.3 | 2470.5 | 3361.4 | 3435.4 | 3220.7 | 2902.5 | 2319.9 | 1958.2 | 1721.0 | 1747.1 |
| 70°   | 1684.0 | 1716.6 | 2007.6 | 3332.7 | 3781.1 | 3685.0 | 3406.7 | 2684.5 | 2177.7 | 1822.6 | 1664.7 |
| 72.5° | 1201.8 | 1218.5 | 1447.8 | 3077.7 | 3923.0 | 4001.3 | 3778.2 | 3029.8 | 2289.7 | 1766.3 | 1357.8 |
| 75°   | 844.5  | 841.6  | 993.6  | 2478.4 | 3702.0 | 3962.9 | 3648.0 | 2842.9 | 2072.1 | 1403.2 | 837.2  |
| 77.5° | 367.9  | 368.6  | 496.3  | 1505.1 | 2954.8 | 3384.6 | 3032.4 | 1780.8 | 1444.5 | 743.6  | 353.3  |
| 80°   | 95.4   | 98.3   | 182.1  | 599.3  | 1779.0 | 2233.9 | 1849.4 | 782.9  | 667.5  | 181.4  | 67.4   |
| 82.5° | 33.7   | 35.9   | 83.8   | 188.3  | 656.2  | 1024.5 | 823.5  | 250.3  | 174.1  | 51.9   | 18.1   |
| 85°   | 9.8    | 11.6   | 45.0   | 57.7   | 135.7  | 289.5  | 199.9  | 48.6   | 42.8   | 26.9   | 4.7    |
| 87.5° | 0.0    | 1.4    | 9.0    | 8.0    | 8.0    | 5.4    | 10.1   | 5.4    | 6.9    | 3.3    | 1.4    |
| 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: P960499

CATALOG NUMBER: NAV-SB1C-830-U-SL4-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 637.8  | 637.8  | 637.8  | 637.8 | 637.8 | 637.8 | 637.8 | 637.8 | 637.8 | 637.8 | 637.8 |
| 2.5°  | 641.0  | 638.5  | 633.0  | 627.2 | 621.8 | 616.7 | 615.2 | 609.8 | 607.3 | 607.6 | 607.3 |
| 5°    | 644.3  | 639.6  | 629.0  | 616.3 | 603.3 | 588.5 | 576.0 | 558.6 | 543.8 | 542.0 | 540.9 |
| 7.5°  | 653.0  | 645.3  | 628.3  | 603.6 | 571.0 | 530.0 | 491.9 | 454.2 | 432.8 | 421.2 | 420.5 |
| 10°   | 666.4  | 656.2  | 630.2  | 582.9 | 513.6 | 440.4 | 382.7 | 335.2 | 310.9 | 299.6 | 297.5 |
| 12.5° | 682.3  | 671.1  | 633.0  | 547.8 | 439.6 | 343.6 | 281.2 | 252.2 | 247.0 | 246.3 | 246.0 |
| 15°   | 704.9  | 692.5  | 636.3  | 500.3 | 359.5 | 261.6 | 232.9 | 233.3 | 237.3 | 239.4 | 239.0 |
| 17.5° | 729.9  | 717.5  | 631.6  | 442.2 | 280.4 | 223.4 | 222.7 | 226.0 | 231.9 | 234.0 | 233.6 |
| 20°   | 755.3  | 743.6  | 614.9  | 374.0 | 226.7 | 212.9 | 215.9 | 219.5 | 225.3 | 228.2 | 228.2 |
| 22.5° | 781.4  | 771.2  | 588.5  | 301.5 | 204.6 | 205.3 | 209.0 | 212.6 | 219.1 | 222.4 | 222.4 |
| 25°   | 809.3  | 800.6  | 553.2  | 241.6 | 195.2 | 197.3 | 202.0 | 206.4 | 213.3 | 217.3 | 217.3 |
| 27.5° | 837.6  | 831.1  | 513.3  | 201.7 | 186.4 | 189.0 | 194.4 | 200.3 | 207.2 | 211.9 | 212.2 |
| 30°   | 868.5  | 864.8  | 481.3  | 186.9 | 178.1 | 180.3 | 186.4 | 193.0 | 200.6 | 206.4 | 207.2 |
| 32.5° | 900.1  | 899.3  | 465.8  | 197.7 | 170.5 | 172.0 | 177.4 | 183.9 | 193.3 | 200.6 | 201.3 |
| 35°   | 931.2  | 932.6  | 456.7  | 228.6 | 168.0 | 164.0 | 167.6 | 173.4 | 184.6 | 193.7 | 195.2 |
| 37.5° | 971.1  | 974.8  | 456.3  | 261.9 | 174.1 | 156.0 | 158.6 | 162.6 | 172.3 | 182.9 | 184.6 |
| 40°   | 1030.6 | 1049.8 | 479.6  | 290.6 | 185.0 | 148.7 | 149.4 | 150.2 | 155.3 | 164.0 | 166.9 |
| 42.5° | 1109.7 | 1165.9 | 563.3  | 310.2 | 189.3 | 142.2 | 139.7 | 135.7 | 135.0 | 139.7 | 142.2 |
| 45°   | 1208.0 | 1306.4 | 710.6  | 321.0 | 185.0 | 135.0 | 128.0 | 117.6 | 113.6 | 116.8 | 116.8 |
| 47.5° | 1323.7 | 1460.1 | 885.2  | 323.6 | 177.7 | 125.9 | 113.6 | 99.7  | 96.5  | 97.6  | 97.2  |
| 50°   | 1436.5 | 1575.5 | 1038.6 | 302.6 | 165.7 | 114.3 | 97.6  | 86.0  | 83.8  | 84.2  | 84.2  |
| 52.5° | 1536.3 | 1615.0 | 1082.1 | 252.9 | 149.9 | 100.1 | 83.8  | 75.8  | 74.4  | 74.4  | 74.0  |
| 55°   | 1602.4 | 1572.2 | 964.9  | 193.3 | 129.9 | 85.6  | 71.9  | 67.9  | 67.1  | 66.7  | 66.0  |
| 57.5° | 1616.1 | 1432.9 | 728.8  | 139.7 | 101.6 | 72.2  | 63.9  | 61.7  | 60.3  | 58.7  | 58.0  |
| 60°   | 1566.8 | 1200.8 | 464.0  | 97.6  | 76.2  | 61.7  | 56.6  | 55.1  | 52.3  | 49.3  | 48.3  |
| 62.5° | 1460.1 | 906.9  | 256.9  | 67.9  | 61.3  | 52.6  | 50.0  | 48.3  | 42.8  | 38.1  | 36.6  |
| 65°   | 1316.8 | 602.9  | 113.6  | 53.0  | 50.0  | 44.3  | 42.8  | 40.3  | 33.7  | 28.3  | 27.2  |
| 67.5° | 1172.8 | 347.2  | 51.1   | 42.4  | 40.3  | 36.3  | 35.2  | 33.4  | 28.7  | 23.6  | 22.9  |
| 70°   | 1008.5 | 175.9  | 35.2   | 33.7  | 31.2  | 27.6  | 28.7  | 28.3  | 23.6  | 19.3  | 18.4  |
| 72.5° | 750.9  | 87.4   | 26.4   | 25.4  | 22.4  | 19.6  | 23.6  | 23.3  | 18.4  | 14.6  | 13.7  |
| 75°   | 425.2  | 43.2   | 19.3   | 17.7  | 13.4  | 14.6  | 18.9  | 17.7  | 12.7  | 9.4   | 8.7   |
| 77.5° | 168.7  | 22.1   | 12.7   | 10.9  | 8.0   | 9.8   | 13.7  | 12.0  | 6.6   | 4.0   | 3.6   |
| 80°   | 38.8   | 10.9   | 6.6    | 4.7   | 3.6   | 5.8   | 7.3   | 4.3   | 1.8   | 0.4   | 0.0   |
| 82.5° | 10.9   | 4.7    | 2.2    | 1.8   | 1.8   | 2.2   | 1.8   | 0.7   | 0.0   | 0.0   | 0.0   |
| 85°   | 3.6    | 2.2    | 0.7    | 0.4   | 0.4   | 0.4   | 0.4   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5° | 1.4    | 0.7    | 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)