

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: P884511

Luminaire Tested: **NAV-SB5B-835-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884511
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5B-835-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 80 CRI, 3500K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23829 lumens
Efficiency: N/A
Efficacy: 130.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

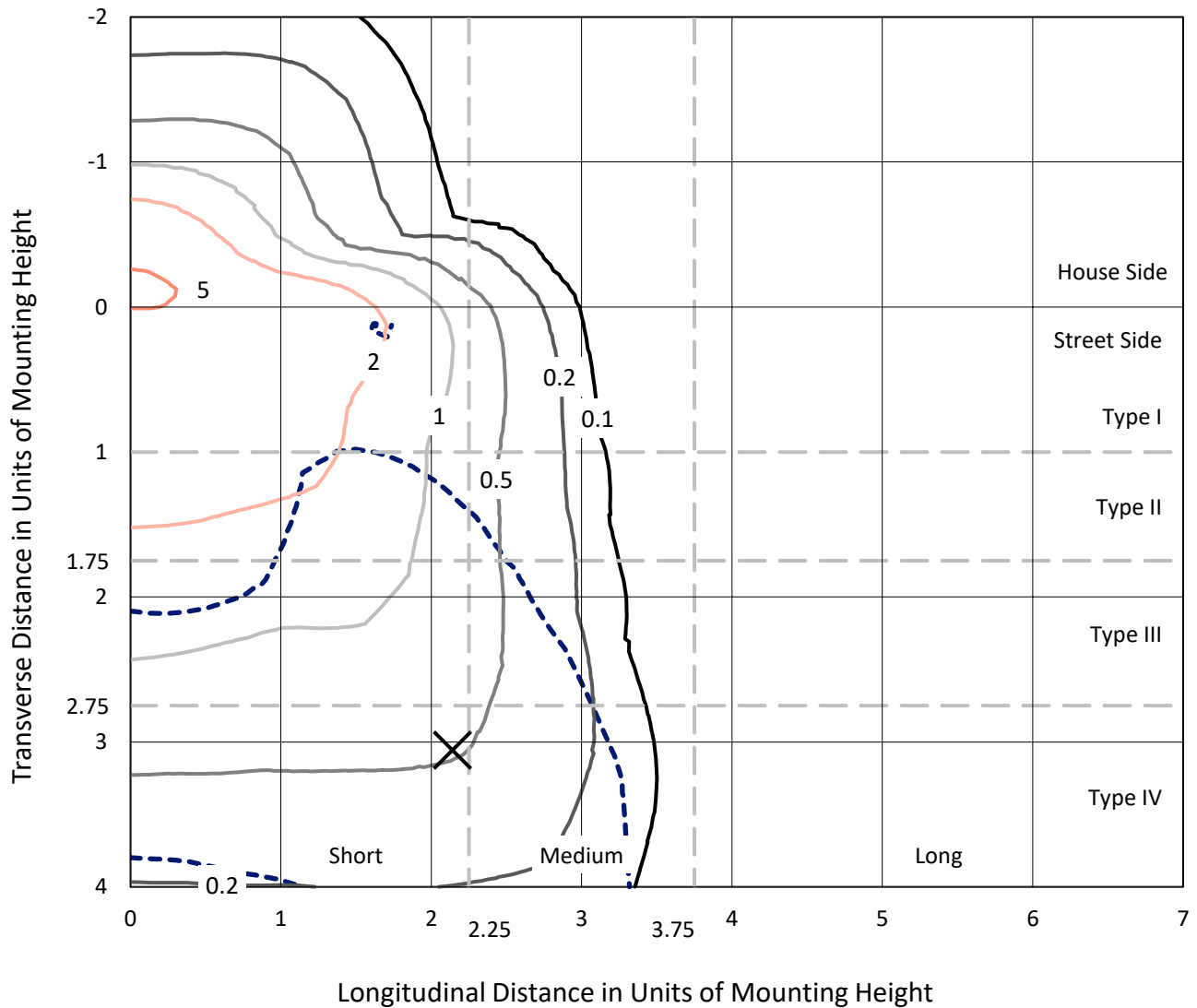
Input Watts (W): 182.7
Input Voltage (V): 120.0
Input Current (Ain): 1.547
Voltage Rise (V): NR
Power Factor: 0.992
Total Harmonic Distortion (THDi): 11.125
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P884511
 CATALOG NUMBER: NAV-SB5B-835-U-T4FT

Iso-Footcandle Lines of Horizontal Illumination

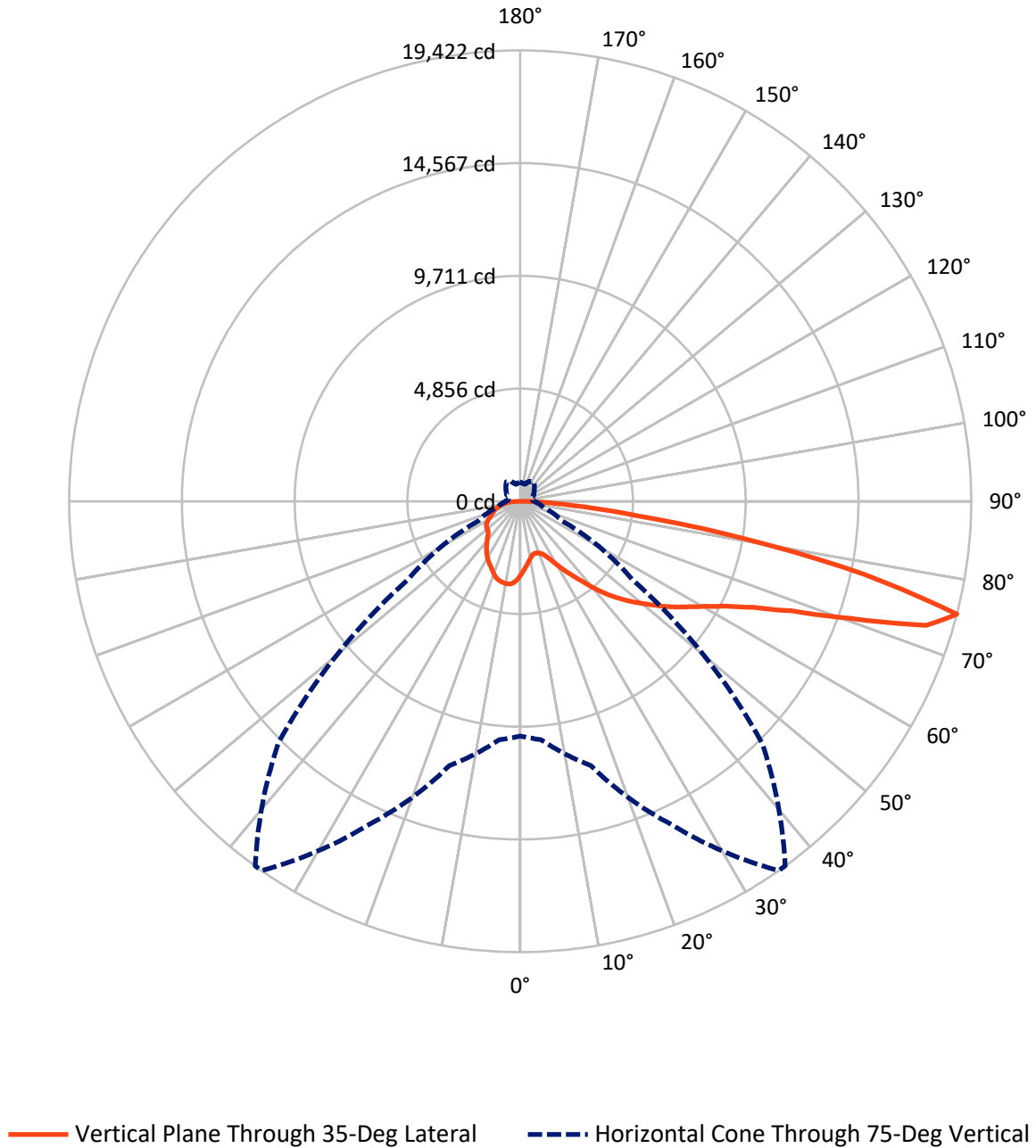
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.6 fc
 Type IV - Short - N/A

REPORT NUMBER: P884511
CATALOG NUMBER: NAV-SB5B-835-U-T4FT

Luminous Intensity Polar Plot



REPORT NUMBER: P884511
 CATALOG NUMBER: NAV-SB5B-835-U-T4FT

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5670.7 | 0.0 | 5670.7 |
| | % Fixture | 23.8 | 0.0 | 23.8 |
| Street Side | Lumens | 18158.3 | 0.0 | 18158.3 |
| | % Fixture | 76.2 | 0.0 | 76.2 |
| Total | Lumens | 23829.0 | 0.0 | 23829.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 300.6 | 1.3 |
| 10°-20° | 867.2 | 3.6 |
| 20°-30° | 1456.2 | 6.1 |
| 30°-40° | 2263.2 | 9.5 |
| 40°-50° | 3359.2 | 14.1 |
| 50°-60° | 4637.6 | 19.5 |
| 60°-70° | 5626.4 | 23.6 |
| 70°-80° | 4649.8 | 19.5 |
| 80°-90° | 668.8 | 2.8 |
| 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° | 23829.0 | 100.0 |
| 0°-180° | 23829.0 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P884511

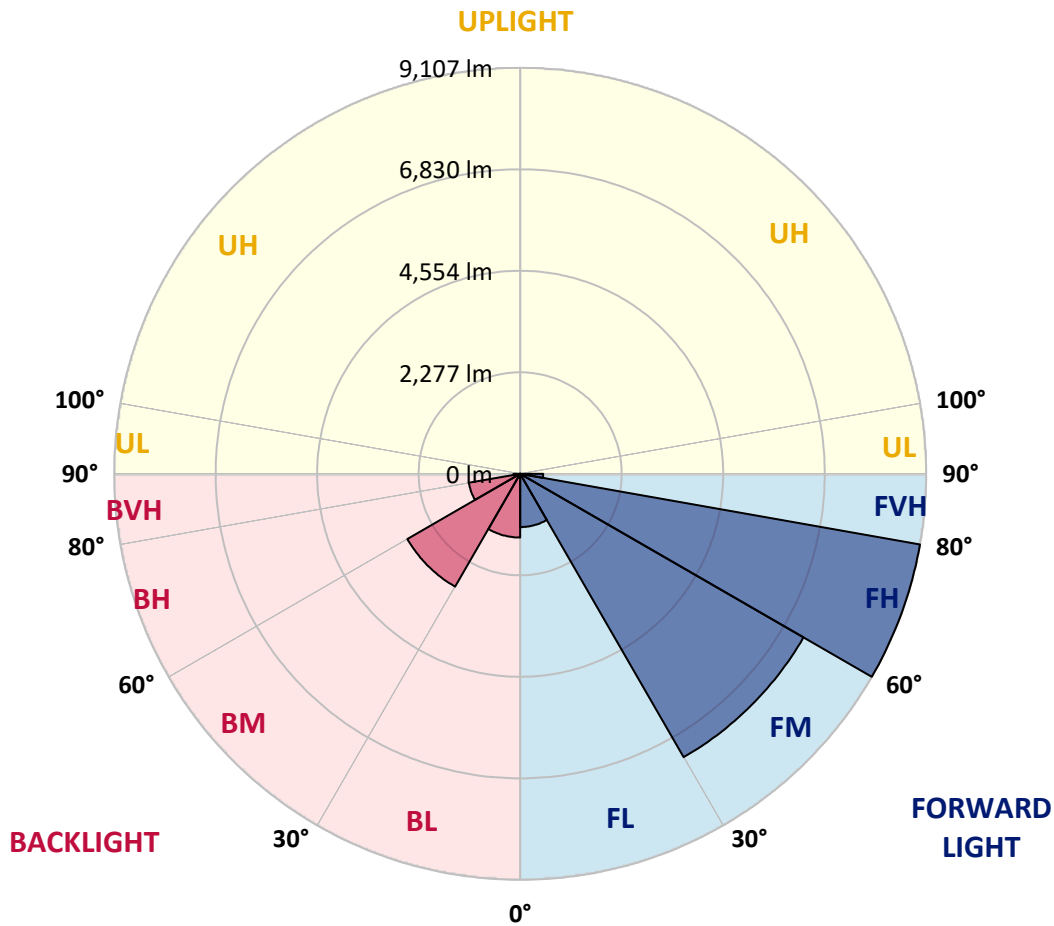
CATALOG NUMBER: NAV-SB5B-835-U-T4FT

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1195.0 | 5.0 | | | |
| FM (30°-60°) | 7338.0 | 30.8 | | | |
| FH (60°-80°) | 9107.1 | 38.2 | | | G4/12000 |
| FVH (80°-90°) | 518.2 | 2.2 | | | G4/750 |
| BL (0°-30°) | 1429.1 | 6.0 | B3/2500 | | |
| BM (30°-60°) | 2921.9 | 12.3 | B3/5000 | | |
| BH (60°-80°) | 1169.1 | 4.9 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 150.6 | 0.6 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type IV Short



REPORT NUMBER: P884511

CATALOG NUMBER: NAV-SB5B-835-U-T4FT

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| 0° | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 |
| 2.5° | 2928.0 | 2946.1 | 2953.8 | 2949.9 | 2969.3 | 2966.7 | 2993.7 | 3027.2 | 3073.6 | 3118.7 | 3184.4 |
| 5° | 2702.6 | 2721.9 | 2738.7 | 2754.1 | 2791.5 | 2803.1 | 2845.6 | 2910.0 | 2995.0 | 3081.3 | 3189.5 |
| 7.5° | 2492.6 | 2509.4 | 2535.1 | 2563.5 | 2626.6 | 2638.2 | 2709.1 | 2809.5 | 2928.0 | 3054.3 | 3203.7 |
| 10° | 2321.3 | 2338.1 | 2365.1 | 2397.3 | 2475.9 | 2490.1 | 2580.2 | 2714.2 | 2868.8 | 3028.5 | 3219.2 |
| 12.5° | 2247.9 | 2253.0 | 2268.5 | 2300.7 | 2369.0 | 2378.0 | 2477.2 | 2630.5 | 2810.8 | 3009.2 | 3242.4 |
| 15° | 2244.0 | 2254.3 | 2255.6 | 2272.4 | 2329.0 | 2332.9 | 2424.4 | 2576.4 | 2774.7 | 3005.3 | 3277.1 |
| 17.5° | 2282.7 | 2290.4 | 2278.8 | 2289.1 | 2336.8 | 2343.2 | 2415.3 | 2550.6 | 2763.2 | 3022.1 | 3336.4 |
| 20° | 2385.7 | 2392.2 | 2357.4 | 2343.2 | 2378.0 | 2383.1 | 2454.0 | 2567.4 | 2774.7 | 3056.9 | 3417.6 |
| 22.5° | 2604.7 | 2608.6 | 2523.6 | 2465.6 | 2468.2 | 2470.7 | 2532.6 | 2635.6 | 2819.8 | 3120.0 | 3520.6 |
| 25° | 2946.1 | 2943.5 | 2808.2 | 2696.2 | 2631.8 | 2617.6 | 2658.8 | 2746.4 | 2895.8 | 3203.7 | 3653.3 |
| 27.5° | 3345.4 | 3326.1 | 3190.8 | 3023.4 | 2883.0 | 2862.3 | 2853.3 | 2890.7 | 3004.0 | 3314.5 | 3815.6 |
| 30° | 3796.3 | 3778.2 | 3632.7 | 3413.7 | 3219.2 | 3185.7 | 3100.7 | 3081.3 | 3165.1 | 3465.2 | 4041.0 |
| 32.5° | 4290.9 | 4279.3 | 4105.4 | 3840.1 | 3579.9 | 3541.2 | 3398.2 | 3346.7 | 3412.4 | 3693.2 | 4355.4 |
| 35° | 4705.7 | 4695.4 | 4551.2 | 4278.1 | 3959.9 | 3912.2 | 3766.7 | 3708.7 | 3742.2 | 3985.6 | 4766.3 |
| 37.5° | 5080.6 | 5075.4 | 4951.8 | 4736.7 | 4408.2 | 4350.2 | 4186.6 | 4167.3 | 4160.8 | 4370.8 | 5264.8 |
| 40° | 5428.4 | 5415.5 | 5286.7 | 5173.4 | 4929.9 | 4877.1 | 4732.8 | 4716.0 | 4667.1 | 4844.9 | 5829.0 |
| 42.5° | 5813.6 | 5780.1 | 5593.3 | 5540.5 | 5474.8 | 5431.0 | 5344.7 | 5347.3 | 5239.0 | 5379.5 | 6426.8 |
| 45° | 6127.9 | 6108.6 | 5916.6 | 5885.7 | 5956.6 | 5938.5 | 6013.2 | 6032.6 | 5822.6 | 5939.8 | 7047.7 |
| 47.5° | 6465.4 | 6447.4 | 6285.1 | 6263.2 | 6455.1 | 6460.2 | 6724.3 | 6730.8 | 6392.0 | 6522.1 | 7669.9 |
| 50° | 6881.5 | 6855.7 | 6694.7 | 6721.7 | 6936.9 | 6956.2 | 7439.3 | 7395.5 | 6916.3 | 7113.4 | 8286.9 |
| 52.5° | 7155.9 | 7171.3 | 7136.5 | 7180.3 | 7474.0 | 7492.1 | 8142.6 | 8030.5 | 7435.4 | 7696.9 | 8892.3 |
| 55° | 7358.1 | 7389.0 | 7497.2 | 7597.7 | 8040.8 | 8058.9 | 8806.0 | 8634.7 | 7865.7 | 8237.9 | 9461.7 |
| 57.5° | 7618.3 | 7574.5 | 7776.8 | 7972.6 | 8579.3 | 8627.0 | 9451.4 | 9217.0 | 8247.0 | 8704.3 | 9852.0 |
| 60° | 7991.9 | 7961.0 | 8118.1 | 8408.0 | 9182.2 | 9258.2 | 10134.1 | 9741.3 | 8526.5 | 9074.0 | 9928.0 |
| 62.5° | 8749.4 | 8672.1 | 8696.5 | 8952.9 | 9942.2 | 10042.7 | 10904.5 | 10198.6 | 8665.6 | 9218.3 | 9521.0 |
| 65° | 9881.7 | 9749.0 | 9625.3 | 9803.1 | 11012.7 | 11111.9 | 11774.0 | 10558.0 | 8614.1 | 8938.7 | 8440.2 |
| 67.5° | 11307.7 | 11176.3 | 11024.3 | 11191.7 | 12589.4 | 12668.0 | 12847.1 | 10760.2 | 8208.3 | 7861.8 | 6529.8 |
| 70° | 12483.8 | 12434.8 | 12616.5 | 13305.7 | 15107.8 | 15110.4 | 14222.8 | 10592.7 | 7096.6 | 5574.0 | 3778.2 |
| 72.5° | 12327.9 | 12298.3 | 13255.4 | 15386.1 | 18281.9 | 18213.6 | 15525.2 | 9325.2 | 4780.5 | 2514.5 | 1415.7 |
| 75° | 10113.5 | 10305.5 | 11788.2 | 15348.7 | 19422.0 | 19412.9 | 14727.8 | 5928.2 | 1977.4 | 1042.1 | 731.7 |
| 77.5° | 5423.3 | 5727.3 | 7653.1 | 11332.2 | 15161.9 | 15389.9 | 10354.4 | 2074.0 | 848.9 | 667.3 | 506.3 |
| 80° | 1768.7 | 2034.0 | 3050.4 | 5769.8 | 9852.0 | 9809.5 | 4437.8 | 814.1 | 581.0 | 472.8 | 350.4 |
| 82.5° | 751.0 | 781.9 | 1362.9 | 2724.5 | 5056.1 | 4977.5 | 1413.1 | 467.6 | 408.4 | 323.3 | 216.4 |
| 85° | 293.7 | 328.5 | 601.6 | 1259.8 | 2189.9 | 2142.3 | 510.1 | 231.9 | 261.5 | 211.3 | 128.8 |
| 87.5° | 96.6 | 117.2 | 215.1 | 431.5 | 681.4 | 657.0 | 125.0 | 79.9 | 113.4 | 96.6 | 46.4 |
| 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: P884511

CATALOG NUMBER: NAV-SB5B-835-U-T4FT

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 | 3175.4 |
| 2.5° | 3202.4 | 3223.0 | 3247.5 | 3283.6 | 3314.5 | 3340.3 | 3367.3 | 3384.1 | 3390.5 | 3409.8 | 3408.5 |
| 5° | 3225.6 | 3270.7 | 3331.2 | 3390.5 | 3448.5 | 3483.3 | 3514.2 | 3529.6 | 3543.8 | 3554.1 | 3556.7 |
| 7.5° | 3264.3 | 3322.2 | 3417.6 | 3494.8 | 3543.8 | 3572.1 | 3592.7 | 3587.6 | 3592.7 | 3595.3 | 3599.2 |
| 10° | 3297.8 | 3378.9 | 3492.3 | 3565.7 | 3603.1 | 3604.3 | 3599.2 | 3581.2 | 3572.1 | 3573.4 | 3576.0 |
| 12.5° | 3337.7 | 3427.9 | 3550.2 | 3612.1 | 3622.4 | 3594.0 | 3572.1 | 3541.2 | 3529.6 | 3524.5 | 3521.9 |
| 15° | 3391.8 | 3494.8 | 3613.4 | 3636.5 | 3610.8 | 3574.7 | 3537.4 | 3487.1 | 3461.4 | 3440.7 | 3447.2 |
| 17.5° | 3457.5 | 3570.8 | 3662.3 | 3645.6 | 3590.2 | 3530.9 | 3470.4 | 3394.4 | 3341.6 | 3319.7 | 3320.9 |
| 20° | 3548.9 | 3650.7 | 3699.7 | 3626.2 | 3542.5 | 3452.3 | 3349.3 | 3256.5 | 3207.6 | 3185.7 | 3183.1 |
| 22.5° | 3659.7 | 3757.6 | 3735.7 | 3592.7 | 3474.2 | 3330.0 | 3201.1 | 3132.9 | 3108.4 | 3092.9 | 3095.5 |
| 25° | 3792.4 | 3876.1 | 3761.5 | 3543.8 | 3362.2 | 3167.6 | 3068.5 | 3046.6 | 3035.0 | 3023.4 | 3023.4 |
| 27.5° | 3965.0 | 4010.1 | 3780.8 | 3471.7 | 3187.0 | 2995.0 | 2959.0 | 2962.8 | 2959.0 | 2939.6 | 2943.5 |
| 30° | 4193.0 | 4184.0 | 3798.9 | 3354.4 | 2986.0 | 2839.2 | 2841.7 | 2858.5 | 2861.1 | 2848.2 | 2854.6 |
| 32.5° | 4493.2 | 4401.7 | 3807.9 | 3202.4 | 2794.1 | 2702.6 | 2705.2 | 2723.2 | 2736.1 | 2714.2 | 2724.5 |
| 35° | 4856.5 | 4655.5 | 3793.7 | 3011.8 | 2645.9 | 2572.5 | 2553.2 | 2558.3 | 2562.2 | 2541.6 | 2555.8 |
| 37.5° | 5280.3 | 4940.2 | 3730.6 | 2800.5 | 2523.6 | 2445.0 | 2403.8 | 2369.0 | 2348.4 | 2329.0 | 2341.9 |
| 40° | 5745.3 | 5250.6 | 3614.6 | 2594.4 | 2387.0 | 2309.7 | 2247.9 | 2182.2 | 2112.6 | 2086.9 | 2098.5 |
| 42.5° | 6232.2 | 5570.1 | 3474.2 | 2397.3 | 2229.8 | 2166.7 | 2101.0 | 2005.7 | 1901.4 | 1848.5 | 1855.0 |
| 45° | 6737.2 | 5897.3 | 3336.4 | 2202.8 | 2068.8 | 2041.8 | 1965.8 | 1851.1 | 1737.8 | 1670.8 | 1665.6 |
| 47.5° | 7231.9 | 6206.5 | 3134.2 | 2007.0 | 1918.1 | 1947.7 | 1888.5 | 1782.8 | 1656.6 | 1551.0 | 1539.4 |
| 50° | 7704.6 | 6496.3 | 2803.1 | 1808.6 | 1795.7 | 1919.4 | 1862.7 | 1710.7 | 1566.4 | 1431.2 | 1419.6 |
| 52.5° | 8173.5 | 6730.8 | 2379.3 | 1628.3 | 1730.0 | 1911.7 | 1829.2 | 1661.8 | 1485.3 | 1343.6 | 1328.1 |
| 55° | 8571.6 | 6851.9 | 1970.9 | 1473.7 | 1634.7 | 1846.0 | 1789.3 | 1603.8 | 1370.6 | 1219.9 | 1207.0 |
| 57.5° | 8798.3 | 6754.0 | 1630.8 | 1321.7 | 1503.3 | 1737.8 | 1721.0 | 1480.1 | 1234.1 | 1118.1 | 1102.7 |
| 60° | 8700.4 | 6357.2 | 1352.6 | 1189.0 | 1378.4 | 1620.5 | 1602.5 | 1357.7 | 1129.7 | 1020.2 | 1004.8 |
| 62.5° | 8160.7 | 5601.0 | 1132.3 | 1073.1 | 1265.0 | 1500.7 | 1484.0 | 1263.7 | 1049.9 | 944.2 | 927.5 |
| 65° | 7073.4 | 4556.3 | 961.0 | 976.4 | 1150.3 | 1356.5 | 1380.9 | 1185.1 | 986.7 | 883.7 | 866.9 |
| 67.5° | 5394.9 | 3300.3 | 827.0 | 892.7 | 1038.3 | 1214.8 | 1285.6 | 1128.4 | 933.9 | 836.0 | 820.6 |
| 70° | 3074.9 | 1874.3 | 713.7 | 811.6 | 939.1 | 1083.4 | 1212.2 | 1083.4 | 877.3 | 796.1 | 785.8 |
| 72.5° | 1165.8 | 860.5 | 617.0 | 730.4 | 843.8 | 972.6 | 1131.0 | 1012.5 | 811.6 | 751.0 | 740.7 |
| 75° | 622.2 | 524.3 | 519.1 | 635.1 | 734.3 | 864.4 | 1029.3 | 943.0 | 762.6 | 793.5 | 819.3 |
| 77.5° | 423.8 | 371.0 | 434.1 | 543.6 | 614.5 | 744.6 | 921.1 | 837.3 | 660.8 | 658.3 | 606.7 |
| 80° | 293.7 | 262.8 | 353.0 | 438.0 | 475.3 | 626.1 | 803.8 | 718.8 | 538.5 | 502.4 | 480.5 |
| 82.5° | 176.5 | 171.3 | 264.1 | 327.2 | 336.2 | 483.1 | 666.0 | 602.9 | 440.6 | 383.9 | 386.5 |
| 85° | 96.6 | 101.8 | 168.8 | 191.9 | 195.8 | 337.5 | 521.7 | 466.3 | 338.8 | 284.7 | 287.3 |
| 87.5° | 27.1 | 34.8 | 61.8 | 76.0 | 94.0 | 175.2 | 310.5 | 277.0 | 170.0 | 118.5 | 118.5 |
| 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)