

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: P969217

Luminaire Tested: **NAV-SB5D-722-U-T2-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P969217
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5D-722-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 2200K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31783.2 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G4

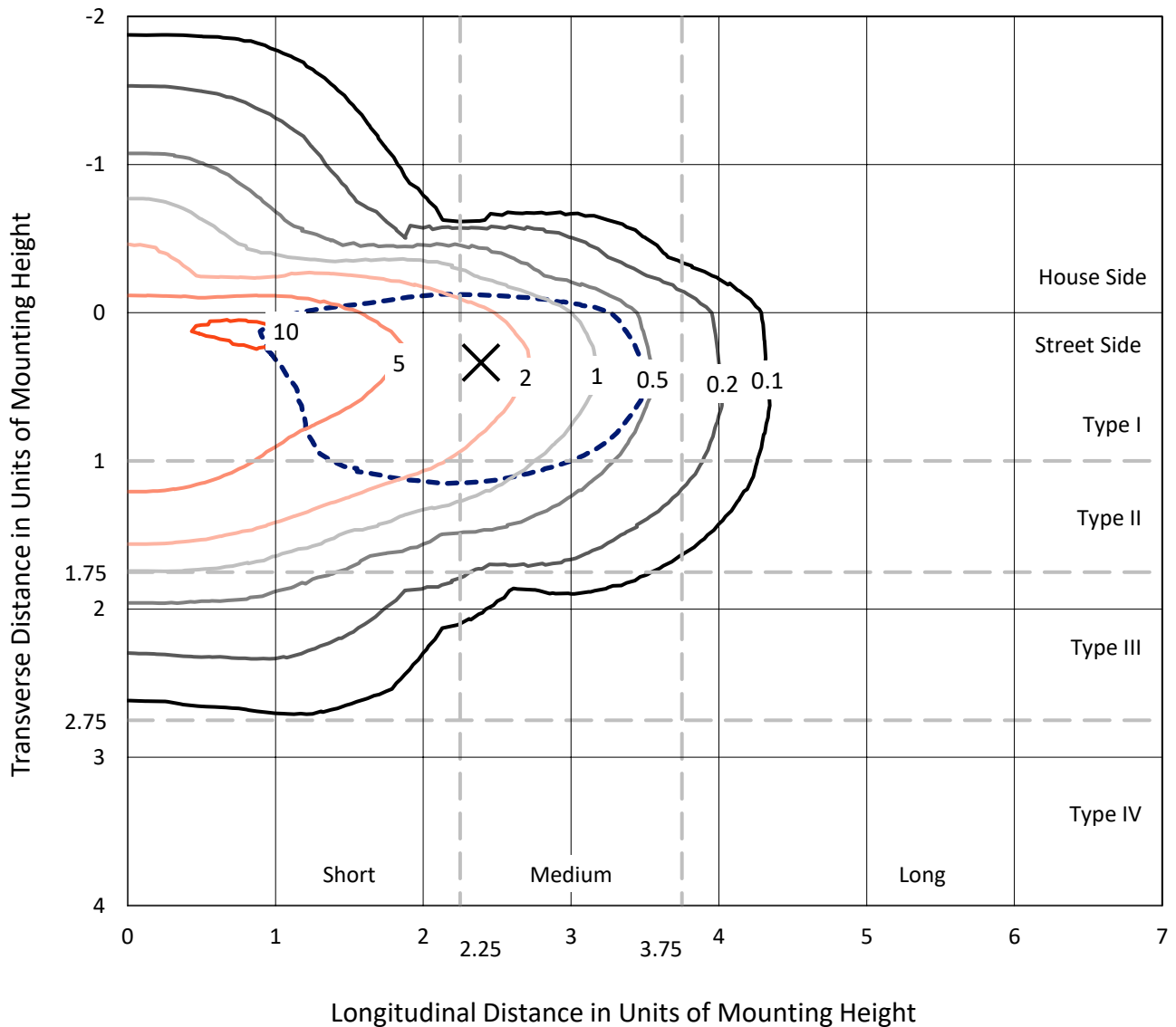
Input Watts (W): 364.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P969217
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Iso-Footcandle Lines of Horizontal Illumination

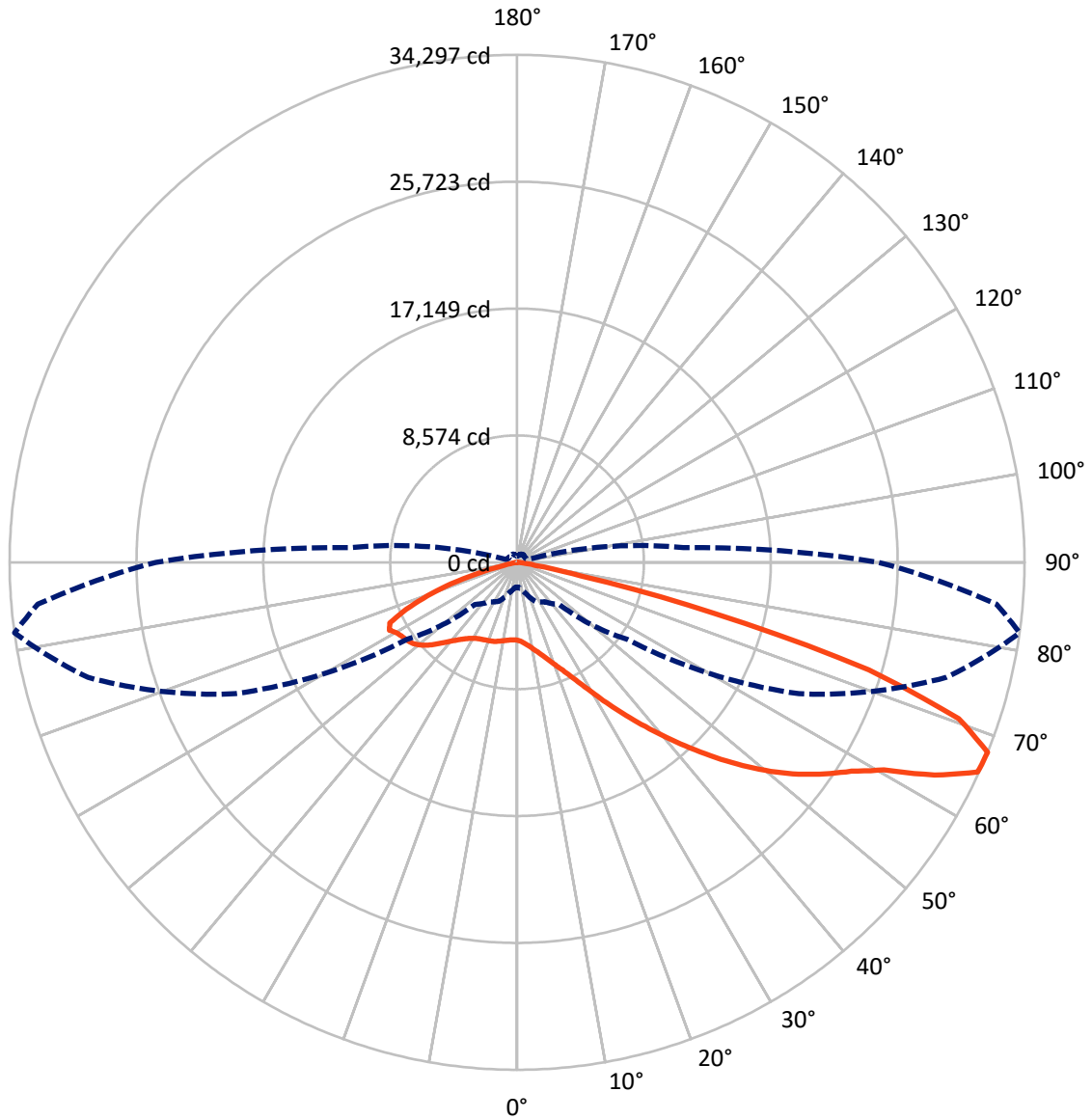
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.1 fc
 Type II - Medium - N/A

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CATALOG NUMBER: NAV-SB5D-722-U-T2-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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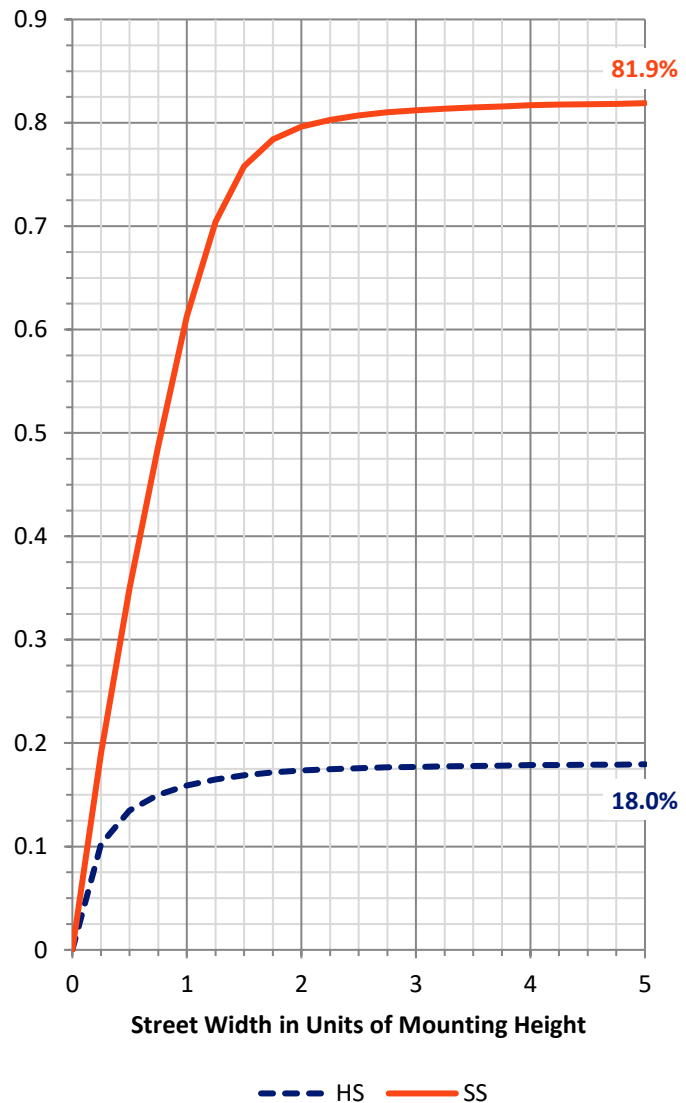
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5757.2 | 0.0 | 5757.2 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| Street Side | Lumens | 26026.0 | 0.0 | 26026.0 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| Total | Lumens | 31783.2 | 0.0 | 31783.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 469.1 | 1.5 |
| 10°-20° | 1219.0 | 3.8 |
| 20°-30° | 1952.5 | 6.1 |
| 30°-40° | 3452.6 | 10.9 |
| 40°-50° | 6049.3 | 19.0 |
| 50°-60° | 8068.0 | 25.4 |
| 60°-70° | 7510.9 | 23.6 |
| 70°-80° | 2882.7 | 9.1 |
| 80°-90° | 179.0 | 0.6 |
| 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° | 31783.2 | 100.0 |
| 0°-180° | 31783.2 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P969217

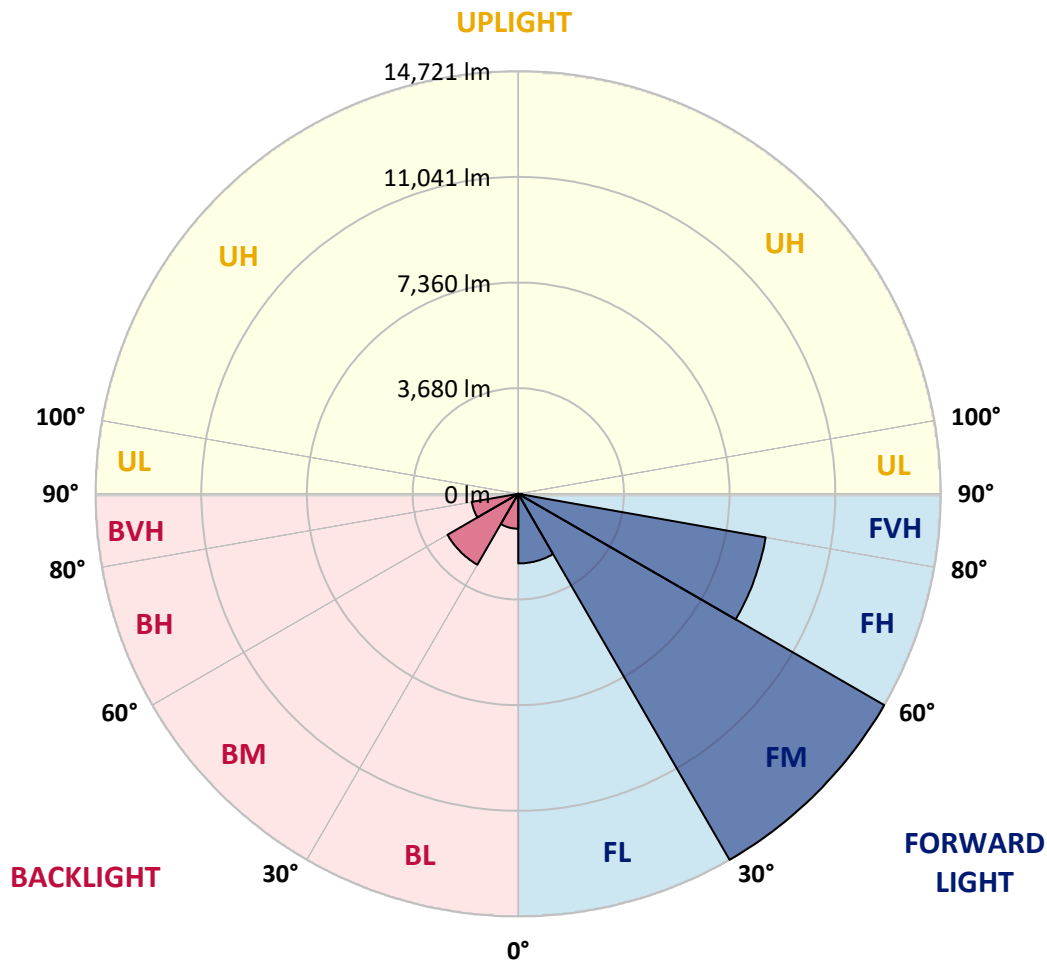
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 2424.7 | 7.6 | | | |
| FM (30°-60°) | 14720.7 | 46.3 | | | |
| FH (60°-80°) | 8750.4 | 27.5 | | | G4/12000 |
| FVH (80°-90°) | 130.2 | 0.4 | | | G2/225 |
| BL (0°-30°) | 1215.9 | 3.8 | B3/2500 | | |
| BM (30°-60°) | 2849.2 | 9.0 | B3/5000 | | |
| BH (60°-80°) | 1643.2 | 5.2 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 48.9 | 0.2 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type II Medium



REPORT NUMBER: P969217

CATALOG NUMBER: NAV-SB5D-722-U-T2-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 |
| 2.5° | 5565.1 | 5597.2 | 5578.9 | 5569.7 | 5553.8 | 5530.8 | 5512.6 | 5455.4 | 5395.8 | 5357.0 | 5343.2 |
| 5° | 5677.3 | 5709.4 | 5707.0 | 5716.2 | 5727.6 | 5734.5 | 5730.0 | 5665.9 | 5581.2 | 5514.8 | 5476.0 |
| 7.5° | 5581.2 | 5617.8 | 5647.5 | 5693.4 | 5773.4 | 5858.1 | 5899.3 | 5885.5 | 5798.5 | 5707.0 | 5659.0 |
| 10° | 5308.9 | 5347.7 | 5418.8 | 5526.3 | 5695.6 | 5878.7 | 6032.0 | 6103.0 | 6048.0 | 5947.4 | 5880.9 |
| 12.5° | 4810.0 | 4849.0 | 4988.5 | 5222.0 | 5505.7 | 5823.7 | 6116.7 | 6306.6 | 6320.4 | 6219.6 | 6141.8 |
| 15° | 4249.3 | 4288.3 | 4437.0 | 4730.0 | 5162.4 | 5672.8 | 6162.4 | 6521.7 | 6642.9 | 6556.0 | 6462.2 |
| 17.5° | 3901.6 | 3935.9 | 4048.0 | 4283.7 | 4734.5 | 5370.7 | 6146.4 | 6750.5 | 7027.4 | 6958.7 | 6846.6 |
| 20° | 3796.3 | 3826.0 | 3878.7 | 4043.4 | 4418.8 | 5057.1 | 6041.1 | 6965.6 | 7441.6 | 7402.7 | 7276.8 |
| 22.5° | 3908.4 | 3935.9 | 3951.9 | 4025.2 | 4260.8 | 4851.2 | 5908.4 | 7185.2 | 7922.1 | 7926.7 | 7773.4 |
| 25° | 4167.0 | 4194.5 | 4176.2 | 4222.0 | 4324.9 | 4787.2 | 5858.1 | 7443.9 | 8526.3 | 8576.6 | 8402.6 |
| 27.5° | 4592.6 | 4595.0 | 4551.4 | 4549.2 | 4565.1 | 4883.2 | 5910.7 | 7720.7 | 9288.2 | 9382.0 | 9167.0 |
| 30° | 5446.1 | 5411.9 | 5244.8 | 5064.0 | 4981.6 | 5171.5 | 6057.1 | 8048.0 | 10187.6 | 10354.7 | 10084.6 |
| 32.5° | 6761.9 | 6711.6 | 6405.0 | 5972.5 | 5537.7 | 5636.1 | 6320.4 | 8421.0 | 11167.0 | 11469.0 | 11139.5 |
| 35° | 8189.9 | 8176.1 | 7855.8 | 7212.7 | 6453.0 | 6297.4 | 6748.2 | 8910.6 | 12235.6 | 12716.2 | 12324.8 |
| 37.5° | 9517.1 | 9510.3 | 9327.2 | 8569.7 | 7645.3 | 7219.6 | 7434.7 | 9551.4 | 13379.7 | 14075.4 | 13613.1 |
| 40° | 10729.9 | 10750.5 | 10567.4 | 9890.1 | 8958.7 | 8402.6 | 8368.3 | 10343.2 | 14652.1 | 15555.9 | 15006.7 |
| 42.5° | 11778.0 | 11800.8 | 11615.5 | 11114.3 | 10256.3 | 9711.6 | 9514.8 | 11313.4 | 15894.6 | 17146.3 | 16496.5 |
| 45° | 12489.6 | 12631.5 | 12604.0 | 12203.5 | 11588.0 | 11022.7 | 10892.4 | 12530.8 | 17311.0 | 18832.8 | 18070.8 |
| 47.5° | 12690.9 | 12821.4 | 13027.3 | 13082.3 | 12707.0 | 12151.0 | 12306.6 | 13997.6 | 18743.6 | 20521.5 | 19654.3 |
| 50° | 12194.4 | 12315.7 | 12743.6 | 13313.4 | 13574.3 | 13402.6 | 13681.8 | 15569.6 | 20210.3 | 22205.8 | 21208.1 |
| 52.5° | 11215.0 | 11338.6 | 11878.6 | 12780.2 | 13844.3 | 14384.3 | 15061.7 | 17118.8 | 21631.4 | 23800.7 | 22679.5 |
| 55° | 9798.6 | 9929.0 | 10622.4 | 11642.9 | 13329.4 | 14789.3 | 16212.6 | 18665.8 | 22933.5 | 25235.5 | 24006.6 |
| 57.5° | 7871.8 | 7967.9 | 8688.7 | 10116.6 | 12034.2 | 14386.6 | 17061.6 | 20354.6 | 24160.0 | 26645.1 | 25322.4 |
| 60° | 5130.4 | 5215.1 | 6052.6 | 7645.3 | 9887.8 | 13041.1 | 17231.0 | 22237.8 | 25789.2 | 28478.0 | 27095.9 |
| 62.5° | 3411.9 | 3469.1 | 3965.6 | 5134.9 | 6963.3 | 10457.6 | 16240.1 | 23741.3 | 28178.3 | 31667.9 | 30137.0 |
| 65° | 2340.9 | 2398.2 | 2894.7 | 3709.4 | 4498.8 | 6917.5 | 13391.2 | 23542.1 | 30343.0 | 34201.1 | 32391.0 |
| 67.5° | 1670.4 | 1718.5 | 2139.6 | 2908.4 | 3256.2 | 4018.3 | 9077.7 | 20997.5 | 30031.8 | 34297.2 | 32512.3 |
| 70° | 1196.8 | 1224.3 | 1572.0 | 2265.5 | 2588.1 | 2414.2 | 5048.0 | 16059.4 | 26294.9 | 31670.2 | 30036.4 |
| 72.5° | 837.5 | 846.6 | 1091.5 | 1725.4 | 2084.6 | 1762.0 | 2402.7 | 10707.0 | 19887.7 | 24857.9 | 23285.8 |
| 75° | 567.5 | 578.9 | 734.5 | 1265.5 | 1672.8 | 1345.5 | 1272.3 | 5741.3 | 11675.0 | 13759.6 | 12334.0 |
| 77.5° | 347.8 | 352.4 | 473.7 | 865.0 | 1251.7 | 1025.2 | 819.2 | 2432.4 | 4517.1 | 4434.8 | 3780.3 |
| 80° | 196.8 | 196.8 | 302.1 | 537.7 | 853.5 | 661.3 | 574.4 | 1034.3 | 1430.2 | 1256.2 | 1107.5 |
| 82.5° | 109.9 | 112.1 | 219.7 | 334.0 | 565.2 | 391.3 | 315.8 | 478.3 | 617.9 | 546.9 | 476.0 |
| 85° | 45.7 | 50.3 | 135.0 | 157.8 | 270.0 | 194.5 | 128.1 | 201.4 | 228.8 | 203.7 | 148.7 |
| 87.5° | 4.6 | 6.9 | 41.2 | 29.7 | 32.1 | 38.9 | 18.3 | 38.9 | 32.1 | 32.1 | 22.9 |
| 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: P969217
 CATALOG NUMBER: NAV-SB5D-722-U-T2-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 | 5265.4 |
| 2.5° | 5299.8 | 5265.4 | 5178.4 | 5077.7 | 4945.0 | 4880.9 | 4794.0 | 4734.5 | 4684.1 | 4688.8 | 4642.9 |
| 5° | 5402.7 | 5315.8 | 5121.2 | 4878.7 | 4576.6 | 4361.5 | 4132.7 | 3974.7 | 3846.6 | 3819.2 | 3757.4 |
| 7.5° | 5544.5 | 5407.3 | 5066.3 | 4629.2 | 4119.0 | 3732.2 | 3386.7 | 3164.7 | 3006.8 | 2956.5 | 2906.2 |
| 10° | 5727.6 | 5528.5 | 4995.3 | 4315.8 | 3581.2 | 3089.2 | 2718.5 | 2544.6 | 2437.0 | 2400.4 | 2373.0 |
| 12.5° | 5940.5 | 5668.1 | 4901.5 | 3933.6 | 3027.4 | 2553.8 | 2318.0 | 2231.1 | 2196.8 | 2185.3 | 2178.4 |
| 15° | 6208.2 | 5842.1 | 4759.7 | 3480.5 | 2558.3 | 2226.5 | 2125.8 | 2114.4 | 2119.0 | 2114.4 | 2112.1 |
| 17.5° | 6526.3 | 6032.0 | 4528.6 | 3013.7 | 2242.5 | 2059.4 | 2022.8 | 2032.1 | 2043.4 | 2041.2 | 2036.6 |
| 20° | 6874.1 | 6219.6 | 4233.4 | 2599.5 | 2027.4 | 1940.5 | 1919.9 | 1929.0 | 1938.2 | 1933.7 | 1931.3 |
| 22.5° | 7269.9 | 6421.0 | 3906.2 | 2276.8 | 1883.2 | 1830.6 | 1807.8 | 1810.0 | 1810.0 | 1800.9 | 1796.3 |
| 25° | 7743.7 | 6642.9 | 3562.9 | 2048.1 | 1773.5 | 1732.2 | 1704.8 | 1695.7 | 1681.9 | 1654.5 | 1649.8 |
| 27.5° | 8308.9 | 6878.7 | 3233.4 | 1887.8 | 1686.5 | 1647.6 | 1615.5 | 1592.6 | 1558.3 | 1512.6 | 1508.0 |
| 30° | 8945.0 | 7164.6 | 2954.3 | 1787.2 | 1617.9 | 1578.9 | 1542.3 | 1508.0 | 1457.7 | 1400.5 | 1395.8 |
| 32.5° | 9693.3 | 7471.3 | 2750.6 | 1720.8 | 1556.1 | 1514.8 | 1471.4 | 1430.2 | 1375.2 | 1318.0 | 1320.4 |
| 35° | 10585.7 | 7842.1 | 2631.6 | 1675.1 | 1508.0 | 1453.0 | 1405.1 | 1359.3 | 1318.0 | 1267.7 | 1263.1 |
| 37.5° | 11553.7 | 8235.7 | 2595.0 | 1652.2 | 1476.0 | 1391.3 | 1336.4 | 1304.3 | 1299.8 | 1270.0 | 1267.7 |
| 40° | 12613.1 | 8702.5 | 2622.4 | 1638.5 | 1441.7 | 1331.8 | 1272.3 | 1265.5 | 1276.8 | 1224.3 | 1226.5 |
| 42.5° | 13734.4 | 9256.3 | 2668.2 | 1622.4 | 1393.6 | 1272.3 | 1215.1 | 1215.1 | 1205.9 | 1132.7 | 1132.7 |
| 45° | 14947.3 | 9894.6 | 2713.9 | 1583.5 | 1336.4 | 1212.8 | 1169.3 | 1153.3 | 1114.4 | 1043.4 | 1041.2 |
| 47.5° | 16169.2 | 10544.5 | 2748.2 | 1512.6 | 1267.7 | 1162.5 | 1123.6 | 1086.9 | 1029.7 | 965.7 | 963.4 |
| 50° | 17329.4 | 11128.0 | 2711.6 | 1407.3 | 1189.9 | 1114.4 | 1073.2 | 1022.8 | 961.0 | 917.6 | 910.7 |
| 52.5° | 18365.9 | 11633.7 | 2556.0 | 1283.7 | 1107.5 | 1064.1 | 1027.5 | 974.8 | 924.4 | 878.7 | 874.1 |
| 55° | 19267.5 | 12043.3 | 2281.4 | 1167.1 | 1034.3 | 1020.6 | 984.0 | 917.6 | 849.0 | 810.1 | 805.4 |
| 57.5° | 20132.5 | 12354.6 | 1938.2 | 1070.9 | 967.9 | 972.5 | 917.6 | 858.1 | 794.1 | 752.9 | 748.2 |
| 60° | 21283.6 | 12771.1 | 1590.4 | 981.6 | 897.0 | 910.7 | 851.3 | 807.8 | 727.6 | 675.1 | 668.2 |
| 62.5° | 23123.4 | 13418.7 | 1263.1 | 871.9 | 814.7 | 819.2 | 794.1 | 741.4 | 645.3 | 583.5 | 578.9 |
| 65° | 24583.3 | 13180.7 | 995.4 | 752.9 | 720.8 | 727.6 | 727.6 | 670.5 | 567.5 | 496.6 | 489.7 |
| 67.5° | 24418.6 | 11286.0 | 794.1 | 636.1 | 631.6 | 636.1 | 652.2 | 604.1 | 503.4 | 446.2 | 437.1 |
| 70° | 22494.0 | 8977.1 | 636.1 | 528.6 | 549.2 | 537.7 | 583.5 | 551.4 | 453.0 | 395.9 | 389.0 |
| 72.5° | 18354.6 | 6466.7 | 485.1 | 437.1 | 421.1 | 439.3 | 526.3 | 496.6 | 377.6 | 313.5 | 306.7 |
| 75° | 10725.3 | 3450.8 | 361.5 | 345.5 | 304.3 | 366.1 | 466.8 | 423.3 | 288.3 | 231.1 | 224.3 |
| 77.5° | 3492.0 | 1203.7 | 265.5 | 254.0 | 226.5 | 295.2 | 398.2 | 357.0 | 235.6 | 183.1 | 176.2 |
| 80° | 935.9 | 363.9 | 180.8 | 167.1 | 146.5 | 219.7 | 315.8 | 283.7 | 169.3 | 119.0 | 116.7 |
| 82.5° | 375.3 | 153.3 | 105.3 | 93.8 | 80.1 | 151.0 | 249.4 | 228.8 | 125.9 | 75.5 | 75.5 |
| 85° | 121.3 | 50.3 | 38.9 | 29.7 | 36.6 | 93.8 | 148.7 | 155.6 | 89.3 | 38.9 | 29.7 |
| 87.5° | 16.0 | 6.9 | 6.9 | 9.1 | 6.9 | 16.0 | 45.7 | 43.5 | 25.2 | 4.6 | 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)