

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: P963167

Luminaire Tested: **NAV-SB2D-835-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963167
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-9)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-835-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14766.1 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

Input Watts (W): 147.6
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

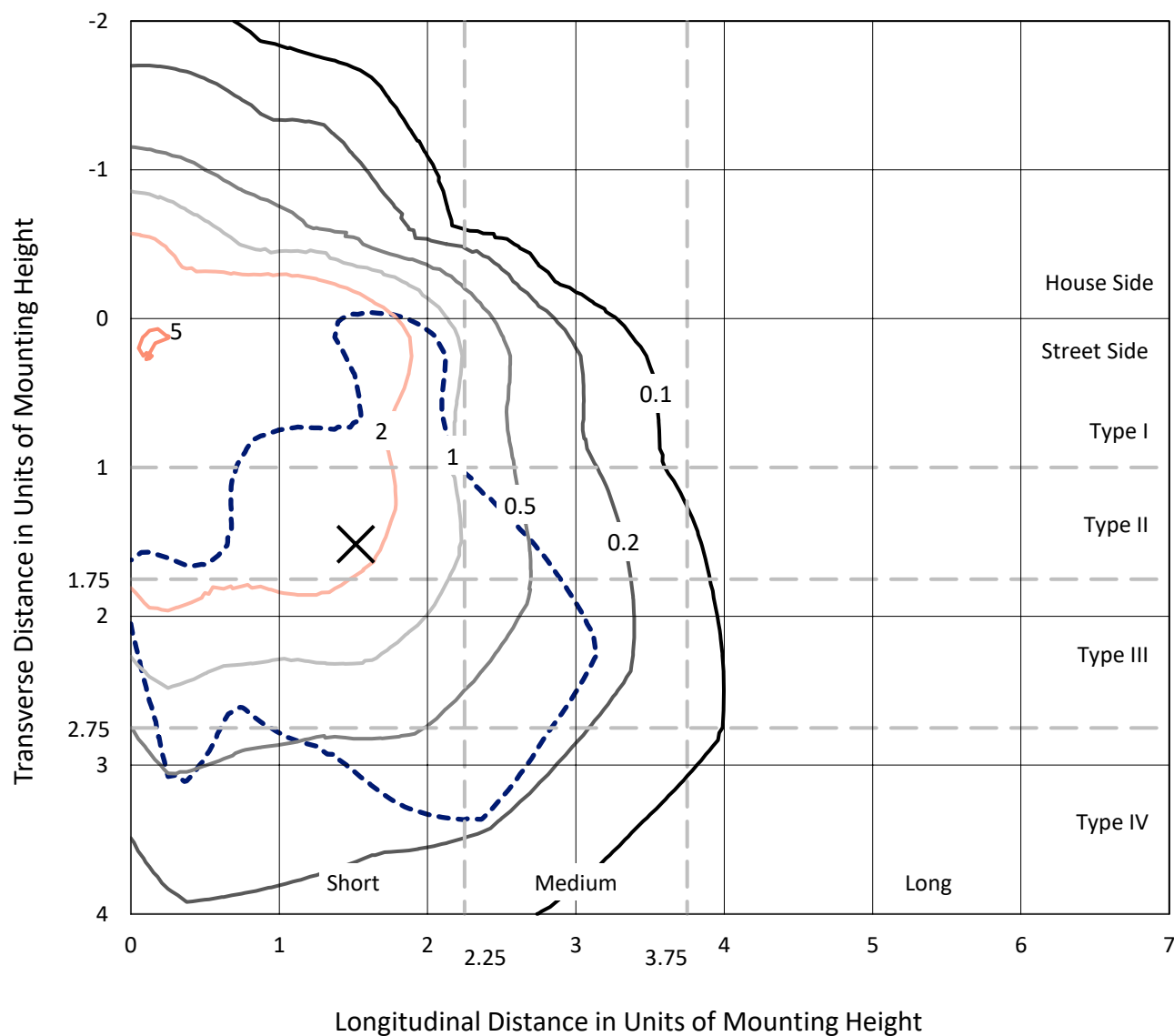


REPORT NUMBER: P963167

CATALOG NUMBER: NAV-SB2D-835-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

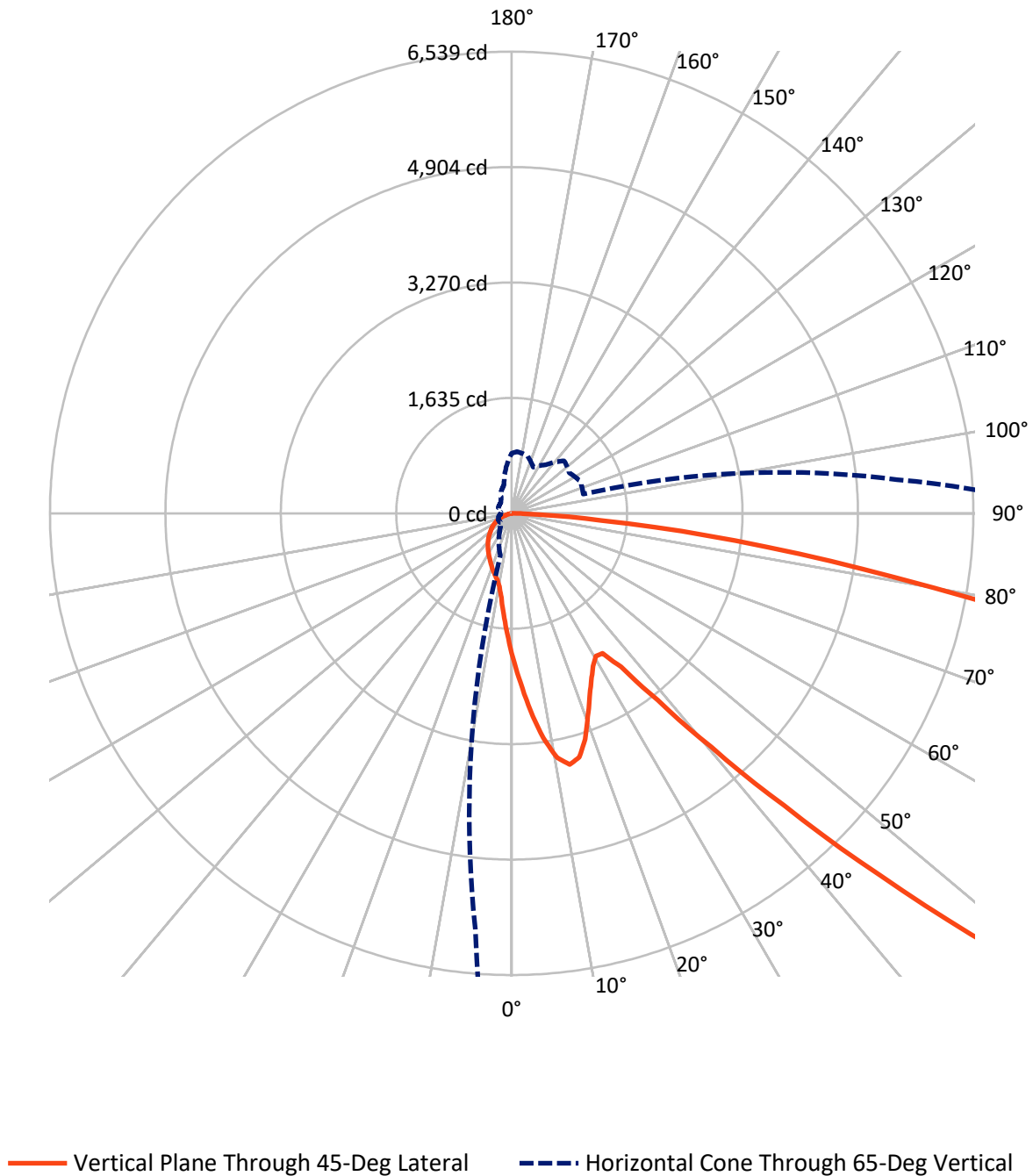
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
Type IV - Short - N/A

REPORT NUMBER: P963167
CATALOG NUMBER: NAV-SB2D-835-U-SLL-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P963167

CATALOG NUMBER: NAV-SB2D-835-U-SLL-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2935.0	0.0	2935.0
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	11831.1	0.0	11831.1
	% Fixture	80.1	0.0	80.1
Total	Lumens	14766.1	0.0	14766.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.3	1.4
10°-20°	603.4	4.1
20°-30°	889.0	6.0
30°-40°	1142.1	7.7
40°-50°	1847.1	12.5
50°-60°	3239.1	21.9
60°-70°	4053.0	27.4
70°-80°	2368.4	16.0
80°-90°	422.6	2.9
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°	14766.1	100.0
0°-180°	14766.1	100.0

Coefficient of Utilization



REPORT NUMBER: P963167

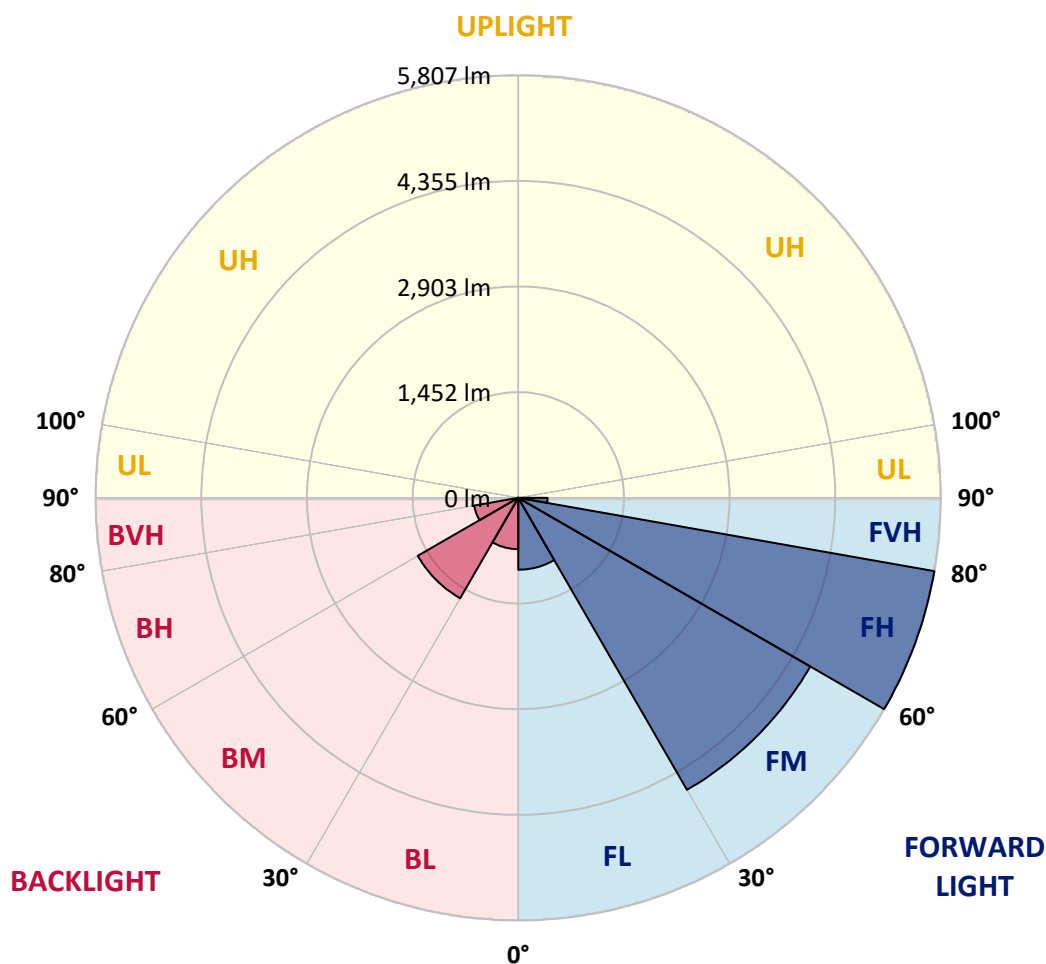
CATALOG NUMBER: NAV-SB2D-835-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	988.0	6.7			
FM	(30°-60°)	4633.8	31.4			
FH	(60°-80°)	5806.5	39.3			G3/7500
FVH	(80°-90°)	402.8	2.7			G3/500
BL	(0°-30°)	705.7	4.8	B2/1000		
BM	(30°-60°)	1594.6	10.8	B2/2500		
BH	(60°-80°)	614.9	4.2	B2/1000		G2/1000
BVH	(80°-90°)	19.8	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short



REPORT NUMBER: P963167

CATALOG NUMBER: NAV-SB2D-835-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7
2.5°	2290.8	2308.1	2346.7	2367.1	2398.6	2400.7	2400.7	2373.2	2372.2	2316.2	2310.1
5°	2560.3	2601.0	2692.6	2787.2	2807.6	2812.6	2802.5	2747.5	2706.8	2598.0	2574.6
7.5°	2827.9	2906.3	3045.6	3171.8	3212.5	3212.5	3188.1	3098.5	3015.0	2857.4	2798.5
10°	3049.7	3148.3	3337.5	3479.0	3525.7	3515.5	3465.7	3352.8	3237.9	3046.6	2969.3
12.5°	3196.2	3307.1	3514.5	3628.5	3676.3	3649.8	3592.8	3483.1	3362.0	3160.6	3073.1
15°	3269.3	3385.4	3565.4	3625.4	3612.2	3584.7	3577.7	3524.7	3433.1	3244.9	3149.3
17.5°	3300.9	3408.7	3533.9	3496.3	3384.3	3363.0	3434.2	3501.3	3479.0	3318.2	3228.7
20°	3330.4	3420.9	3458.6	3291.8	3096.4	3077.2	3213.5	3404.6	3502.3	3386.4	3304.0
22.5°	3371.1	3427.1	3349.7	3076.1	2865.6	2820.8	2971.4	3259.2	3509.5	3472.8	3390.4
25°	3427.1	3442.4	3229.7	2871.6	2660.1	2615.3	2755.7	3097.4	3497.2	3566.4	3496.3
27.5°	3494.2	3462.7	3114.8	2700.8	2496.3	2454.6	2595.0	2941.9	3462.7	3660.0	3610.2
30°	3581.7	3489.1	3000.8	2568.5	2379.3	2348.8	2484.1	2807.6	3419.9	3779.1	3751.6
32.5°	3670.2	3500.3	2895.0	2491.2	2352.9	2364.1	2475.0	2735.3	3373.2	3893.0	3906.2
35°	3765.7	3535.9	2843.1	2567.5	2573.6	2671.3	2717.1	2802.5	3366.0	4047.6	4099.5
37.5°	3896.0	3615.3	2905.3	2946.9	3158.5	3361.0	3323.3	3131.1	3448.4	4278.5	4375.1
40°	4083.2	3754.6	3175.8	3592.8	4027.2	4355.8	4212.3	3728.1	3700.7	4611.2	4755.6
42.5°	4355.8	3976.4	3656.0	4382.3	5118.7	5659.8	5275.4	4498.2	4142.1	5086.2	5270.2
45°	4758.7	4335.4	4236.7	5215.4	6464.5	7317.0	6517.5	5319.1	4760.6	5805.4	5949.8
47.5°	5317.1	4863.4	4781.0	6093.2	8100.3	9203.0	7894.8	6080.0	5464.6	6786.0	6819.5
50°	6058.7	5574.5	5296.7	7053.5	9893.6	11125.5	9271.0	6814.4	6271.3	7984.2	7945.6
52.5°	7037.2	6566.3	5898.0	7967.9	11737.9	13007.4	10653.4	7459.3	7272.2	9374.9	9295.5
55°	8371.8	8058.6	6719.8	8840.7	13581.0	14900.4	11981.9	8067.7	8594.6	11026.8	10546.6
57.5°	10027.9	10251.6	7904.9	9852.9	15238.2	16851.5	13316.6	8918.1	10311.7	12874.1	11272.9
60°	11095.9	13168.1	10174.4	11349.3	17121.1	19057.8	15145.6	10535.5	12116.2	13536.4	11134.7
62.5°	10837.6	14095.8	12892.4	13259.6	18852.4	20662.1	16937.9	12160.0	12456.0	12560.8	10068.6
65°	10045.2	13347.1	12338.0	13631.0	19290.8	20752.6	17417.1	11950.5	10566.0	10254.7	8093.1
67.5°	8954.7	12459.1	11020.7	12646.2	18498.4	19487.1	16524.9	10571.1	8165.4	7695.4	5871.5
70°	7777.8	11476.4	10156.1	11541.5	16987.8	17281.8	15008.3	9297.5	6005.8	5197.1	3767.8
72.5°	6660.9	10453.1	9564.1	10409.4	14972.7	14364.4	13033.8	8171.4	4373.1	3748.5	2678.3
75°	5518.5	8943.5	8720.7	9064.6	12322.8	11314.7	10829.4	6765.6	3432.1	2711.9	1848.3
77.5°	4258.2	6988.3	7501.1	7258.9	8674.0	8404.4	8394.2	5084.1	2507.5	1809.6	1158.7
80°	2914.4	4870.5	5860.2	5120.8	5629.4	5492.1	6322.1	3410.8	1818.9	1089.5	644.9
82.5°	1713.0	2965.2	4079.1	2479.0	3112.7	3195.1	3764.8	1659.1	1070.1	251.2	140.4
85°	694.7	1170.9	1595.0	970.5	1501.4	1266.5	1429.3	465.9	298.1	6.1	0.0
87.5°	175.0	374.3	262.4	108.9	173.9	159.7	126.2	57.0	12.2	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

REPORT NUMBER: P963167

CATALOG NUMBER: NAV-SB2D-835-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7
2.5°	2270.5	2247.1	2189.1	2131.1	2084.3	2021.2	1979.6	1929.7	1881.9	1839.2	1831.1
5°	2510.5	2433.2	2327.5	2230.8	2132.1	2036.5	1941.9	1842.2	1750.7	1694.7	1659.1
7.5°	2705.8	2569.6	2429.1	2306.0	2187.0	2075.1	1950.1	1829.0	1685.5	1609.2	1540.1
10°	2851.3	2672.3	2488.2	2346.7	2226.7	2117.9	2012.1	1890.0	1717.1	1621.4	1517.7
12.5°	2946.9	2734.3	2518.6	2356.9	2222.6	2138.3	2091.4	2043.6	1871.8	1759.8	1609.2
15°	3013.1	2778.1	2540.1	2333.5	2168.7	2106.7	2153.5	2208.5	2098.6	1969.3	1773.0
17.5°	3085.2	2835.0	2549.2	2270.5	2063.9	2037.5	2158.5	2285.8	2280.6	2152.5	1960.2
20°	3161.6	2884.9	2543.1	2168.7	1936.8	1960.2	2114.8	2262.3	2324.4	2255.2	2084.3
22.5°	3239.9	2932.7	2519.7	2036.5	1817.8	1891.0	2045.7	2174.8	2248.1	2226.7	2096.5
25°	3338.5	2999.9	2485.1	1894.1	1719.1	1820.8	1965.3	2070.1	2120.9	2119.9	2030.4
27.5°	3456.6	3089.4	2466.8	1779.1	1648.9	1741.5	1869.7	1963.3	1998.9	1998.9	1927.6
30°	3593.9	3195.1	2446.5	1703.9	1608.2	1659.1	1758.8	1850.3	1886.0	1886.0	1825.9
32.5°	3746.5	3296.8	2397.6	1658.0	1577.7	1578.7	1641.8	1725.2	1767.9	1774.1	1731.3
35°	3929.5	3405.7	2290.8	1621.4	1542.1	1500.4	1530.9	1600.1	1651.0	1664.2	1637.7
37.5°	4169.6	3538.9	2138.3	1567.5	1487.2	1418.0	1425.2	1478.0	1534.0	1554.3	1537.1
40°	4492.1	3695.6	1979.6	1490.2	1409.9	1327.5	1324.4	1363.0	1418.0	1440.4	1431.2
42.5°	4918.4	3883.8	1828.0	1416.0	1316.3	1231.8	1226.8	1257.3	1305.1	1328.5	1324.4
45°	5463.6	4114.8	1697.8	1358.0	1224.8	1141.3	1139.3	1164.7	1206.4	1230.8	1225.8
47.5°	6221.4	4345.6	1609.2	1327.5	1152.5	1067.1	1071.1	1093.6	1131.2	1148.4	1141.3
50°	7209.1	4415.8	1564.5	1327.5	1113.9	1000.9	1021.3	1039.7	1068.0	1078.3	1069.1
52.5°	8157.2	4183.8	1523.8	1335.7	1119.0	945.0	988.7	1001.9	1026.4	1030.4	1017.2
55°	8622.1	3596.9	1467.9	1337.6	1150.5	897.2	962.3	986.8	995.9	994.9	972.5
57.5°	8462.4	2908.2	1373.3	1329.5	1171.9	866.6	929.8	976.5	982.7	973.4	931.8
60°	7901.8	2141.3	1301.0	1269.5	1163.7	857.5	879.9	954.2	963.3	951.1	882.9
62.5°	6961.9	1486.1	1245.1	1137.2	1128.1	854.4	801.6	905.4	927.7	910.4	810.8
65°	5480.9	1049.8	1072.1	996.9	1050.8	838.2	720.2	846.3	876.9	850.4	710.0
67.5°	3708.9	757.9	868.7	903.3	925.7	801.6	661.2	779.2	819.9	785.4	593.1
70°	2003.0	532.0	573.7	760.9	786.3	738.5	608.3	711.0	757.9	720.2	483.2
72.5°	1183.1	382.5	401.8	611.3	655.1	650.1	549.3	631.7	688.7	643.9	392.7
75°	652.0	258.4	286.9	443.5	532.0	501.5	472.0	535.0	593.1	549.3	303.1
77.5°	291.9	154.6	199.4	290.9	418.1	343.8	365.2	417.1	471.0	425.2	202.4
80°	113.0	86.5	132.2	158.7	304.1	190.2	234.9	307.2	345.8	309.2	123.1
82.5°	14.2	38.6	57.0	62.0	177.0	100.7	136.3	193.3	190.2	164.8	62.0
85°	0.0	7.1	8.1	4.1	76.3	36.6	44.8	63.0	59.0	44.8	5.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	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

REPORT NUMBER: P963167

CATALOG NUMBER: NAV-SB2D-835-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7
2.5°	1781.1	1744.6	1726.2	1711.0	1725.2	1733.4	1733.4	1767.9	1788.3	1796.4	1853.4
5°	1569.6	1501.4	1455.7	1428.2	1437.4	1447.5	1458.7	1502.4	1532.0	1551.2	1639.8
7.5°	1402.8	1299.0	1234.9	1201.4	1206.4	1213.6	1222.7	1265.5	1295.0	1320.4	1419.0
10°	1320.4	1173.9	1089.5	1048.8	1041.6	1037.6	1034.5	1060.0	1082.3	1102.7	1200.4
12.5°	1324.4	1120.0	1017.2	967.4	946.1	921.6	902.3	906.3	920.6	946.1	1008.1
15°	1376.3	1102.7	979.6	917.6	881.9	853.4	830.0	825.0	830.0	834.1	872.8
17.5°	1446.5	1100.6	947.0	869.7	833.1	809.7	788.3	781.3	782.3	787.3	797.6
20°	1502.4	1094.5	910.4	824.0	791.4	771.1	749.7	742.6	744.7	745.6	756.9
22.5°	1532.0	1085.4	869.7	778.2	750.7	730.4	711.0	710.0	710.0	716.2	724.3
25°	1532.0	1066.1	833.1	734.4	710.0	691.7	668.3	672.4	674.4	682.5	694.7
27.5°	1495.4	1029.4	803.6	696.8	671.4	653.0	631.7	636.8	639.8	649.0	664.3
30°	1448.5	985.7	770.1	661.2	631.7	618.5	600.1	602.2	606.3	616.4	633.8
32.5°	1398.7	933.8	742.6	625.6	596.1	585.9	565.6	568.7	572.7	583.9	603.2
35°	1343.8	872.8	710.0	593.1	563.5	555.4	532.0	534.0	540.2	552.4	571.6
37.5°	1285.8	823.0	677.5	561.5	530.9	522.9	498.5	500.5	507.6	521.8	540.2
40°	1228.8	774.1	642.9	528.0	497.4	490.3	463.8	465.9	474.1	489.3	508.6
42.5°	1166.8	736.5	598.1	493.3	460.8	453.7	429.3	432.3	441.5	456.7	476.1
45°	1092.5	712.1	548.3	460.8	424.1	417.1	394.7	400.8	410.9	426.2	446.6
47.5°	1016.2	701.9	506.6	426.2	386.5	380.5	362.1	372.3	383.5	395.8	418.1
50°	943.0	688.7	463.8	393.7	354.0	347.9	335.7	348.9	360.1	371.3	392.7
52.5°	859.6	660.2	425.2	365.2	326.6	324.5	318.4	330.6	340.8	351.0	369.2
55°	773.1	614.4	391.7	339.8	303.1	305.1	302.1	312.3	320.4	329.5	345.8
57.5°	697.8	556.5	365.2	312.3	282.8	288.8	284.8	289.9	295.0	306.2	319.4
60°	621.6	487.3	335.7	279.7	262.4	269.6	258.4	257.4	259.4	262.4	286.9
62.5°	518.8	415.0	299.1	251.2	240.1	243.1	221.7	205.5	205.5	208.5	245.2
65°	417.1	347.9	258.4	218.7	209.5	207.6	177.0	154.6	152.6	161.7	193.3
67.5°	342.8	288.8	217.7	182.0	176.0	178.0	155.6	133.2	131.2	141.3	164.8
70°	283.8	233.0	173.9	140.4	146.5	155.6	133.2	111.9	108.9	118.0	140.4
72.5°	225.8	182.0	133.2	103.7	121.1	132.2	108.9	88.5	86.5	94.6	115.9
75°	165.8	130.2	90.5	75.2	93.6	103.7	79.3	63.0	60.1	67.1	88.5
77.5°	102.7	73.3	57.0	44.8	64.1	69.2	41.7	36.6	35.6	40.7	56.0
80°	47.8	31.6	27.5	15.3	23.4	27.5	17.3	19.4	20.3	24.4	34.5
82.5°	13.2	5.1	1.0	0.0	0.0	8.1	4.1	8.1	10.1	15.3	22.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	5.1	9.1	16.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	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: P963167

CATALOG NUMBER: NAV-SB2D-835-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7	2044.7
2.5°	1896.1	1936.8	2001.9	2069.1	2135.2	2202.3	2267.4	2290.8
5°	1720.2	1813.7	1942.9	2081.3	2223.6	2368.2	2500.4	2560.3
7.5°	1523.8	1658.0	1852.4	2069.1	2295.9	2522.7	2731.3	2827.9
10°	1314.3	1484.1	1705.9	1998.9	2324.4	2637.7	2924.5	3049.7
12.5°	1114.9	1292.9	1538.0	1889.0	2302.0	2703.8	3048.7	3196.2
15°	948.0	1105.8	1370.2	1758.8	2229.8	2707.8	3107.7	3269.3
17.5°	823.0	925.7	1199.4	1614.4	2135.2	2670.2	3128.0	3300.9
20°	760.9	789.4	977.5	1429.3	2046.7	2634.7	3148.3	3330.4
22.5°	724.3	731.4	799.5	1190.1	1940.8	2623.5	3184.0	3371.1
25°	694.7	696.8	715.1	943.0	1779.1	2616.3	3238.9	3427.1
27.5°	665.2	665.2	675.5	759.8	1559.4	2585.8	3310.0	3494.2
30°	635.8	635.8	642.9	672.4	1302.1	2525.8	3395.5	3581.7
32.5°	605.3	605.3	611.3	632.7	1039.7	2450.5	3473.8	3670.2
35°	574.7	572.7	580.9	603.2	827.0	2354.9	3552.1	3765.7
37.5°	542.2	541.2	549.3	574.7	714.1	2244.0	3611.2	3896.0
40°	507.6	507.6	516.8	544.2	681.5	2104.6	3704.8	4083.2
42.5°	476.1	474.1	484.2	517.7	657.1	1971.4	3872.7	4355.8
45°	445.6	441.5	450.6	492.3	614.4	1924.6	4185.9	4758.7
47.5°	417.1	406.9	415.0	461.9	575.7	2099.6	4698.6	5317.1
50°	393.7	374.3	381.5	431.3	546.2	2479.0	5363.8	6058.7
52.5°	369.2	343.8	347.9	393.7	519.8	2840.1	6085.1	7037.2
55°	343.8	315.4	317.3	356.0	482.2	2894.0	6789.0	8371.8
57.5°	315.4	288.8	288.8	321.4	454.7	2508.5	7330.2	10027.9
60°	283.8	266.5	261.5	294.0	479.1	1770.0	7393.2	11095.9
62.5°	249.2	240.1	233.0	267.5	497.4	1048.8	6885.6	10837.6
65°	209.5	207.6	202.4	294.0	419.1	619.5	5911.2	10045.2
67.5°	176.0	172.9	172.9	308.2	318.4	389.6	4618.2	8954.7
70°	151.6	140.4	140.4	233.0	193.3	269.6	3224.6	7777.8
72.5°	127.2	114.9	106.8	186.1	144.4	197.3	2015.2	6660.9
75°	101.7	92.6	82.4	123.1	107.8	149.5	1170.9	5518.5
77.5°	73.3	69.2	58.0	90.5	78.3	107.8	696.8	4258.2
80°	37.6	38.6	36.6	51.9	52.9	73.3	396.7	2914.4
82.5°	22.3	17.3	19.4	25.4	30.5	41.7	149.5	1713.0
85°	14.2	9.1	9.1	12.2	15.3	16.3	45.8	694.7
87.5°	7.1	3.1	4.1	6.1	5.1	4.1	2.0	175.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)