

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: P964159

Luminaire Tested: **NAV-SB3B-827-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P964159
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-SB3B-827-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 80 CRI, 2700K, 450mA 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: 11492.3 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

Input Watts (W): 109.2
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

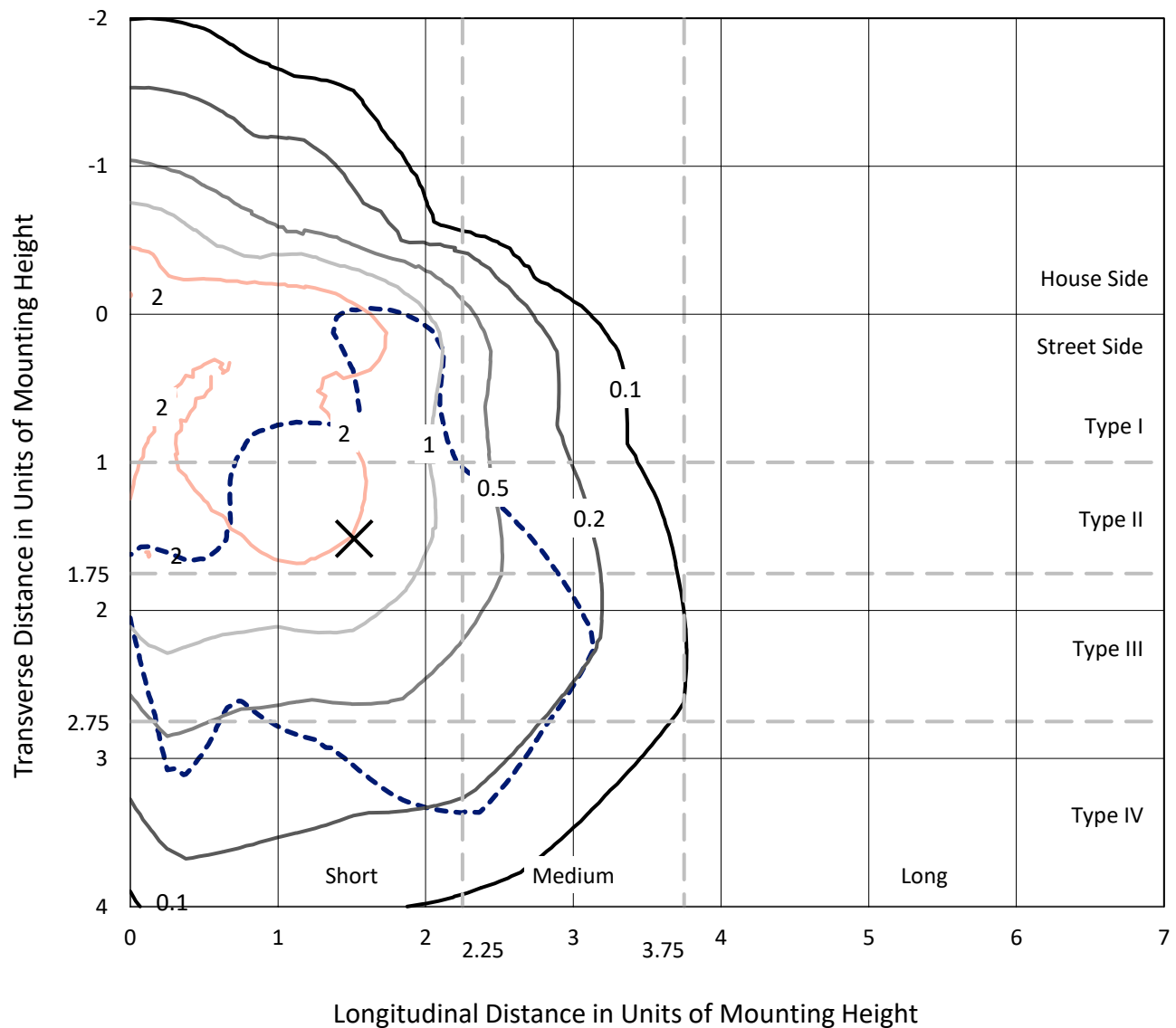


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Iso-Footcandle Lines of Horizontal Illumination

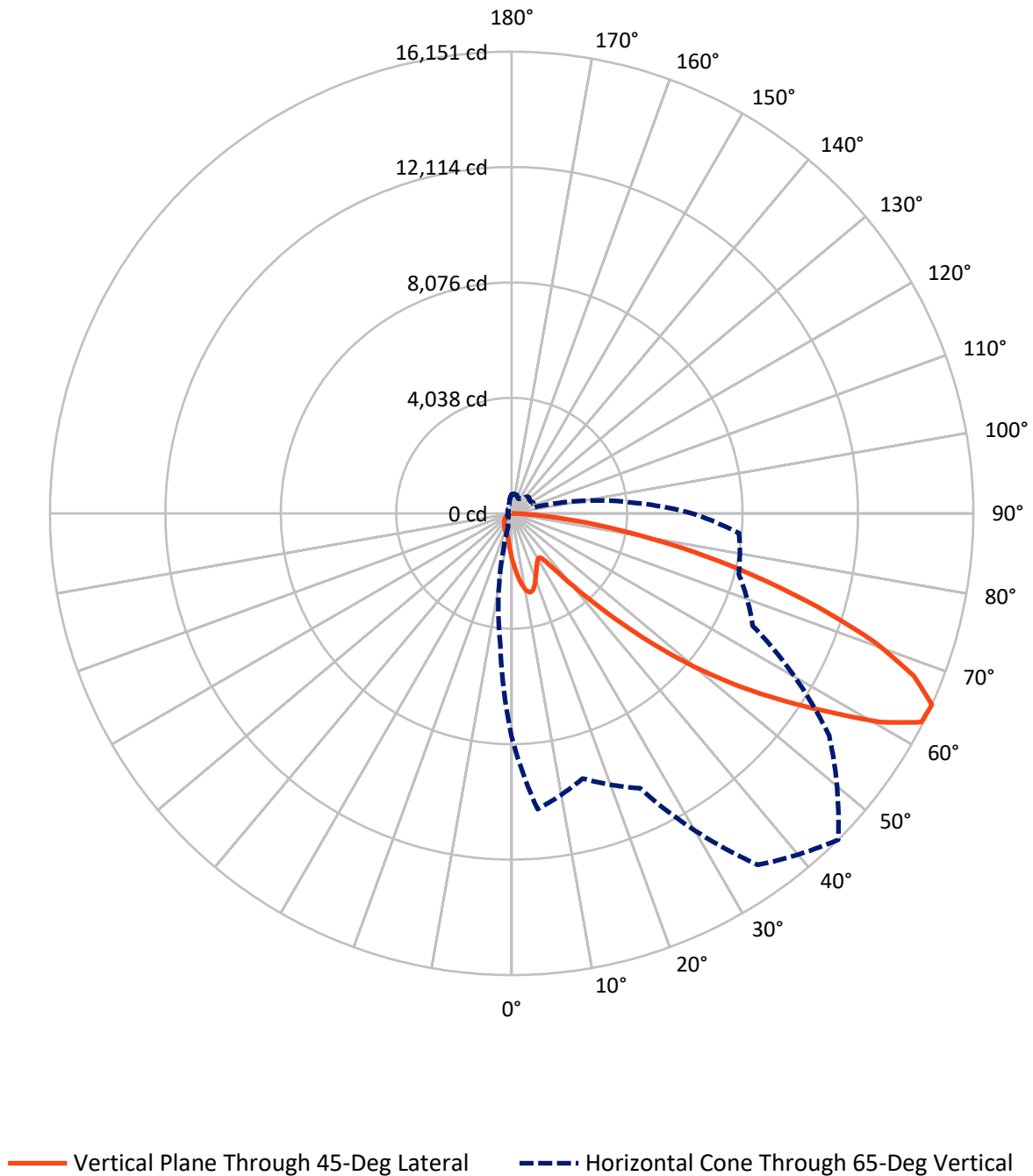
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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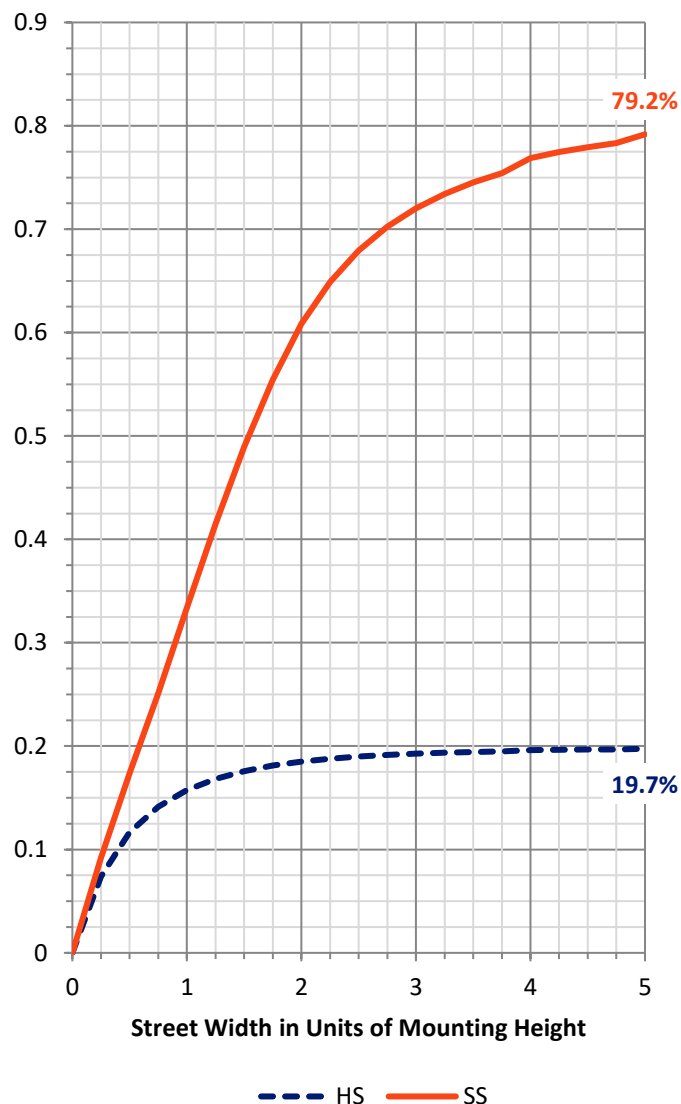
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2284.3	0.0	2284.3
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	9208.0	0.0	9208.0
	% Fixture	80.1	0.0	80.1
Total	Lumens	11492.3	0.0	11492.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.7	1.4
10°-20°	469.7	4.1
20°-30°	691.9	6.0
30°-40°	888.9	7.7
40°-50°	1437.6	12.5
50°-60°	2521.0	21.9
60°-70°	3154.4	27.4
70°-80°	1843.3	16.0
80°-90°	328.9	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°	11492.3	100.0
0°-180°	11492.3	100.0

Coefficient of Utilization



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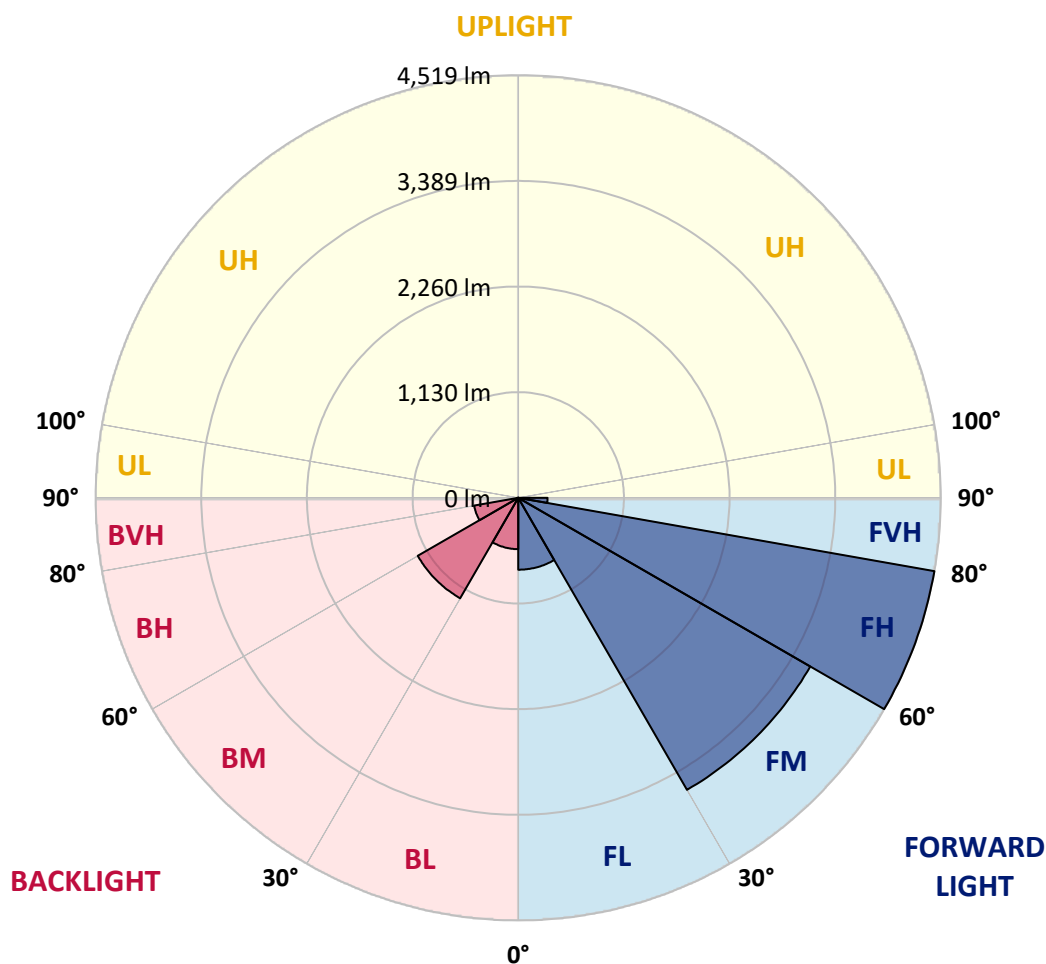
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	769.0	6.7			
FM	(30°-60°)	3606.4	31.4			
FH	(60°-80°)	4519.1	39.3			G2/5000
FVH	(80°-90°)	313.5	2.7			G3/500
BL	(0°-30°)	549.2	4.8	B2/1000		
BM	(30°-60°)	1241.1	10.8	B2/2500		
BH	(60°-80°)	478.6	4.2	B1/500		G1/500
BVH	(80°-90°)	15.4	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



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3
2.5°	1782.9	1796.4	1826.4	1842.3	1866.8	1868.4	1868.4	1847.0	1846.2	1802.7	1798.0
5°	1992.7	2024.4	2095.6	2169.2	2185.1	2189.1	2181.1	2138.4	2106.7	2022.0	2003.8
7.5°	2200.9	2261.9	2370.3	2468.5	2500.2	2500.2	2481.2	2411.5	2346.6	2223.8	2177.9
10°	2373.5	2450.3	2597.6	2707.6	2744.0	2736.1	2697.3	2609.4	2520.0	2371.1	2311.0
12.5°	2487.5	2573.8	2735.3	2824.0	2861.2	2840.6	2796.3	2710.8	2616.5	2459.8	2391.7
15°	2544.6	2634.8	2774.9	2821.6	2811.4	2789.9	2784.4	2743.2	2672.0	2525.5	2451.1
17.5°	2569.1	2653.0	2750.4	2721.1	2633.9	2617.3	2672.8	2725.1	2707.6	2582.5	2512.9
20°	2592.0	2662.4	2691.8	2562.0	2410.0	2394.9	2501.0	2649.8	2725.8	2635.6	2571.4
22.5°	2623.7	2667.3	2607.1	2394.1	2230.2	2195.3	2312.6	2536.6	2731.3	2702.8	2638.8
25°	2667.3	2679.1	2513.6	2235.0	2070.3	2035.4	2144.7	2410.7	2721.9	2775.7	2721.1
27.5°	2719.5	2694.9	2424.2	2102.0	1942.8	1910.4	2019.7	2289.6	2694.9	2848.6	2809.7
30°	2787.6	2715.5	2335.5	1999.1	1851.8	1828.0	1933.4	2185.1	2661.7	2941.1	2919.8
32.5°	2856.5	2724.2	2253.2	1938.9	1831.2	1839.9	1926.2	2128.9	2625.2	3029.8	3040.1
35°	2930.9	2751.9	2212.8	1998.2	2003.0	2079.0	2114.7	2181.1	2619.7	3150.1	3190.5
37.5°	3032.3	2813.7	2261.0	2293.5	2458.3	2615.8	2586.5	2436.8	2683.9	3329.9	3405.0
40°	3177.9	2922.2	2471.7	2796.3	3134.3	3390.1	3278.5	2901.6	2880.2	3588.7	3701.2
42.5°	3390.1	3094.8	2845.4	3410.7	3983.9	4405.0	4105.7	3500.9	3223.8	3958.4	4101.8
45°	3703.5	3374.2	3297.4	4059.0	5031.2	5694.7	5072.4	4139.8	3705.2	4518.2	4630.6
47.5°	4138.2	3785.1	3721.0	4742.3	6304.3	7162.5	6144.4	4732.0	4253.0	5281.4	5307.6
50°	4715.4	4338.5	4122.3	5489.6	7700.1	8658.8	7215.6	5303.6	4880.8	6214.1	6183.9
52.5°	5477.0	5110.4	4590.3	6201.4	9135.4	10123.4	8291.4	5805.5	5659.8	7296.3	7234.6
55°	6515.7	6271.9	5230.0	6880.6	10570.0	11596.8	9325.4	6278.9	6689.0	8582.0	8208.3
57.5°	7804.6	7978.7	6152.3	7668.4	11859.7	13115.3	10364.2	6940.8	8025.4	10019.8	8773.6
60°	8635.8	10248.6	7918.5	8833.0	13325.1	14832.5	11787.6	8199.6	9429.9	10535.2	8666.0
62.5°	8434.7	10970.6	10034.0	10319.8	14672.6	16081.0	13182.6	9463.9	9694.3	9775.9	7836.2
65°	7818.0	10387.9	9602.5	10608.7	15013.8	16151.4	13555.5	9300.8	8223.4	7981.2	6298.7
67.5°	6969.3	9696.7	8577.3	9842.4	14397.0	15166.6	12861.2	8227.4	6355.0	5989.2	4569.7
70°	6053.3	8932.0	7904.3	8982.6	13221.4	13450.2	11680.7	7236.1	4674.2	4044.8	2932.4
72.5°	5184.0	8135.5	7443.6	8101.5	11653.0	11179.6	10144.0	6359.7	3403.5	2917.5	2084.5
75°	4295.0	6960.7	6787.2	7054.9	9590.6	8806.1	8428.5	5265.6	2671.1	2110.7	1438.5
77.5°	3314.0	5439.0	5838.0	5649.6	6750.9	6541.0	6533.1	3956.9	1951.5	1408.5	901.8
80°	2268.2	3790.7	4560.9	3985.4	4381.3	4274.4	4920.4	2654.5	1415.5	847.9	501.9
82.5°	1333.2	2307.8	3174.7	1929.4	2422.6	2486.8	2930.1	1291.3	832.9	195.6	109.3
85°	540.7	911.2	1241.4	755.3	1168.5	985.6	1112.3	362.6	232.0	4.7	0.0
87.5°	136.2	291.3	204.3	84.7	135.4	124.3	98.2	44.4	9.5	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

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3
2.5°	1767.1	1748.9	1703.8	1658.7	1622.2	1573.1	1540.7	1501.8	1464.6	1431.4	1425.1
5°	1954.0	1893.8	1811.4	1736.2	1659.4	1585.0	1511.4	1433.8	1362.5	1319.0	1291.3
7.5°	2106.0	1999.9	1890.6	1794.8	1702.1	1615.1	1517.7	1423.5	1311.8	1252.4	1198.6
10°	2219.1	2079.8	1936.5	1826.4	1733.1	1648.3	1566.0	1471.0	1336.4	1262.0	1181.2
12.5°	2293.5	2128.1	1960.2	1834.3	1729.9	1664.2	1627.7	1590.5	1456.7	1369.6	1252.4
15°	2345.0	2162.1	1976.9	1816.2	1687.9	1639.6	1676.0	1718.8	1633.2	1532.7	1380.0
17.5°	2401.3	2206.5	1984.0	1767.1	1606.4	1585.8	1680.0	1779.0	1775.0	1675.3	1525.6
20°	2460.6	2245.3	1979.3	1687.9	1507.4	1525.6	1645.9	1760.7	1809.0	1755.2	1622.2
22.5°	2521.6	2282.5	1961.0	1585.0	1414.8	1471.8	1592.1	1692.7	1749.7	1733.1	1631.7
25°	2598.4	2334.7	1934.1	1474.2	1337.9	1417.2	1529.6	1611.1	1650.7	1649.9	1580.2
27.5°	2690.2	2404.3	1919.8	1384.7	1283.3	1355.4	1455.2	1528.0	1555.6	1555.6	1500.3
30°	2797.1	2486.8	1904.0	1326.1	1251.6	1291.3	1368.9	1440.1	1467.8	1467.8	1421.1
32.5°	2915.8	2565.9	1866.0	1290.5	1227.9	1228.7	1277.8	1342.7	1376.0	1380.7	1347.5
35°	3058.3	2650.6	1782.9	1262.0	1200.2	1167.8	1191.5	1245.4	1284.9	1295.2	1274.6
37.5°	3245.1	2754.3	1664.2	1220.1	1157.4	1103.6	1109.2	1150.4	1193.9	1209.7	1196.3
40°	3496.2	2876.3	1540.7	1159.9	1097.3	1033.2	1030.8	1060.9	1103.6	1121.0	1114.0
42.5°	3827.9	3022.7	1422.7	1102.1	1024.5	958.8	954.8	978.6	1015.8	1033.9	1030.8
45°	4252.2	3202.4	1321.3	1056.9	953.2	888.3	886.7	906.5	939.0	958.0	954.0
47.5°	4842.0	3382.1	1252.4	1033.2	897.0	830.5	833.6	851.1	880.4	893.8	888.3
50°	5610.7	3436.7	1217.6	1033.2	866.9	779.0	794.9	809.1	831.3	839.2	832.1
52.5°	6348.6	3256.2	1185.9	1039.5	870.8	735.5	769.6	779.8	798.8	802.0	791.7
55°	6710.5	2799.5	1142.5	1041.1	895.4	698.2	749.0	767.9	775.1	774.3	756.9
57.5°	6586.1	2263.5	1068.8	1034.7	912.0	674.6	723.6	760.0	764.8	757.7	725.2
60°	6149.9	1666.5	1012.6	988.0	905.7	667.4	684.8	742.6	749.8	740.3	687.2
62.5°	5418.4	1156.7	969.0	885.1	878.0	665.0	623.8	704.6	722.0	708.6	631.0
65°	4265.6	817.0	834.5	775.8	817.8	652.3	560.6	658.7	682.4	661.8	552.6
67.5°	2886.5	589.8	676.1	703.0	720.5	623.8	514.7	606.5	638.1	611.2	461.6
70°	1558.8	414.1	446.5	592.1	612.0	574.8	473.4	553.4	589.8	560.6	376.1
72.5°	920.8	297.7	312.7	475.8	509.8	505.9	427.5	491.7	536.0	501.1	305.6
75°	507.5	201.1	223.2	345.2	414.1	390.3	367.4	416.5	461.6	427.5	236.0
77.5°	227.2	120.3	155.2	226.4	325.4	267.6	284.2	324.6	366.5	331.0	157.5
80°	87.8	67.3	102.9	123.5	236.7	148.0	182.9	239.1	269.2	240.7	95.8
82.5°	11.1	30.1	44.4	48.3	137.8	78.4	106.1	150.5	148.0	128.2	48.3
85°	0.0	5.5	6.4	3.2	59.3	28.5	34.8	49.1	45.9	34.8	4.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	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

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CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3
2.5°	1386.3	1357.7	1343.5	1331.7	1342.7	1349.1	1349.1	1376.0	1391.8	1398.1	1442.5
5°	1221.6	1168.5	1132.9	1111.5	1118.7	1126.6	1135.3	1169.3	1192.3	1207.3	1276.2
7.5°	1091.7	1011.0	961.1	935.0	939.0	944.5	951.6	984.9	1007.9	1027.7	1104.4
10°	1027.7	913.6	847.9	816.2	810.7	807.5	805.1	824.9	842.3	858.2	934.2
12.5°	1030.8	871.7	791.7	752.9	736.3	717.3	702.2	705.4	716.5	736.3	784.5
15°	1071.1	858.2	762.4	714.1	686.4	664.2	646.1	642.1	646.1	649.2	679.3
17.5°	1125.8	856.6	737.1	676.9	648.4	630.2	613.6	608.0	608.8	612.7	620.7
20°	1169.3	851.9	708.6	641.2	615.9	600.1	583.5	577.9	579.5	580.4	589.1
22.5°	1192.3	844.7	676.9	605.7	584.2	568.5	553.4	552.6	552.6	557.4	563.6
25°	1192.3	829.7	648.4	571.6	552.6	538.3	520.2	523.3	524.9	531.3	540.7
27.5°	1163.8	801.2	625.5	542.3	522.5	508.3	491.7	495.6	497.9	505.1	517.0
30°	1127.4	767.1	599.3	514.7	491.7	481.3	467.1	468.7	471.8	479.8	493.2
32.5°	1088.6	726.8	577.9	486.9	463.9	456.0	440.1	442.6	445.8	454.5	469.4
35°	1045.8	679.3	552.6	461.6	438.6	432.2	414.1	415.6	420.4	429.9	445.0
37.5°	1000.7	640.5	527.3	437.1	413.3	406.9	388.0	389.5	395.0	406.1	420.4
40°	956.3	602.5	500.4	410.9	387.1	381.6	361.0	362.6	368.9	380.8	395.9
42.5°	908.0	573.2	465.6	384.0	358.6	353.1	334.0	336.5	343.6	355.5	370.5
45°	850.2	554.2	426.7	358.6	330.2	324.6	307.2	311.9	319.8	331.7	347.6
47.5°	790.9	546.2	394.3	331.7	300.8	296.1	281.9	289.8	298.5	308.0	325.4
50°	733.9	536.0	361.0	306.4	275.5	270.8	261.3	271.5	280.2	288.9	305.6
52.5°	669.0	513.8	331.0	284.2	254.1	252.6	247.8	257.3	265.3	273.2	287.4
55°	601.7	478.2	304.8	264.4	236.0	237.5	235.1	243.0	249.4	256.6	269.2
57.5°	543.1	433.1	284.2	243.0	220.1	224.9	221.7	225.6	229.6	238.3	248.6
60°	483.7	379.2	261.3	217.7	204.3	209.8	201.1	200.3	201.9	204.3	223.2
62.5°	403.7	323.0	232.8	195.6	186.9	189.2	172.6	159.9	159.9	162.3	190.8
65°	324.6	270.8	201.1	170.3	163.1	161.5	137.8	120.3	118.8	125.9	150.5
67.5°	266.8	224.9	169.4	141.8	136.9	138.6	121.2	103.7	102.1	110.1	128.2
70°	220.9	181.3	135.4	109.3	114.0	121.2	103.7	87.1	84.7	91.8	109.3
72.5°	175.8	141.8	103.7	80.8	94.2	102.9	84.7	68.9	67.3	73.6	90.3
75°	129.0	101.4	70.4	58.6	72.9	80.8	61.7	49.1	46.7	52.3	68.9
77.5°	79.9	57.0	44.4	34.8	49.9	53.8	32.5	28.5	27.7	31.7	43.6
80°	37.2	24.5	21.4	11.9	18.2	21.4	13.4	15.1	15.8	19.0	27.0
82.5°	10.2	4.0	0.8	0.0	0.0	6.4	3.2	6.4	7.9	11.9	17.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	4.0	7.2	12.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	6.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CATALOG NUMBER: NAV-SB3B-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3	1591.3
2.5°	1475.7	1507.4	1558.1	1610.3	1661.7	1714.0	1764.7	1782.9
5°	1338.8	1411.6	1512.2	1619.8	1730.6	1843.1	1946.0	1992.7
7.5°	1185.9	1290.5	1441.7	1610.3	1786.9	1963.4	2125.7	2200.9
10°	1022.8	1155.1	1327.7	1555.6	1809.0	2052.9	2276.1	2373.5
12.5°	867.7	1006.2	1197.1	1470.2	1791.6	2104.3	2372.8	2487.5
15°	737.9	860.6	1066.4	1368.9	1735.4	2107.5	2418.7	2544.6
17.5°	640.5	720.5	933.4	1256.4	1661.7	2078.2	2434.5	2569.1
20°	592.1	614.4	760.9	1112.3	1592.8	2050.5	2450.3	2592.0
22.5°	563.6	569.2	622.3	926.3	1510.5	2041.8	2478.0	2623.7
25°	540.7	542.3	556.6	733.9	1384.7	2036.3	2520.8	2667.3
27.5°	517.7	517.7	525.7	591.4	1213.7	2012.5	2576.2	2719.5
30°	494.8	494.8	500.4	523.3	1013.4	1965.7	2642.7	2787.6
32.5°	471.1	471.1	475.8	492.4	809.1	1907.2	2703.6	2856.5
35°	447.3	445.8	452.0	469.4	643.7	1832.8	2764.6	2930.9
37.5°	422.0	421.2	427.5	447.3	555.8	1746.5	2810.5	3032.3
40°	395.0	395.0	402.2	423.5	530.4	1638.1	2883.3	3177.9
42.5°	370.5	368.9	376.9	402.9	511.5	1534.3	3014.0	3390.1
45°	346.8	343.6	350.8	383.1	478.2	1497.9	3257.9	3703.5
47.5°	324.6	316.7	323.0	359.5	448.1	1634.1	3656.9	4138.2
50°	306.4	291.3	296.8	335.7	425.2	1929.4	4174.6	4715.4
52.5°	287.4	267.6	270.8	306.4	404.6	2210.4	4735.9	5477.0
55°	267.6	245.4	247.0	277.1	375.3	2252.3	5283.8	6515.7
57.5°	245.4	224.9	224.9	250.2	353.9	1952.3	5704.9	7804.6
60°	220.9	207.5	203.5	228.8	372.9	1377.6	5754.0	8635.8
62.5°	193.9	186.9	181.3	208.2	387.1	816.2	5359.0	8434.7
65°	163.1	161.5	157.5	228.8	326.2	482.2	4600.6	7818.0
67.5°	136.9	134.6	134.6	239.8	247.8	303.2	3594.3	6969.3
70°	118.0	109.3	109.3	181.3	150.5	209.8	2509.7	6053.3
72.5°	98.9	89.5	83.1	144.8	112.4	153.5	1568.4	5184.0
75°	79.1	72.1	64.2	95.8	83.9	116.3	911.2	4295.0
77.5°	57.0	53.8	45.1	70.4	61.0	83.9	542.3	3314.0
80°	29.3	30.1	28.5	40.4	41.2	57.0	308.7	2268.2
82.5°	17.4	13.4	15.1	19.8	23.8	32.5	116.3	1333.2
85°	11.1	7.2	7.2	9.5	11.9	12.7	35.7	540.7
87.5°	5.5	2.4	3.2	4.7	4.0	3.2	1.5	136.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)