

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: P966267

Luminaire Tested: **NAV-SB4B-827-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966267
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-SB4B-827-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 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: 15351.4 lumens
Efficiency: N/A
Efficacy: 104.4 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): 147
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



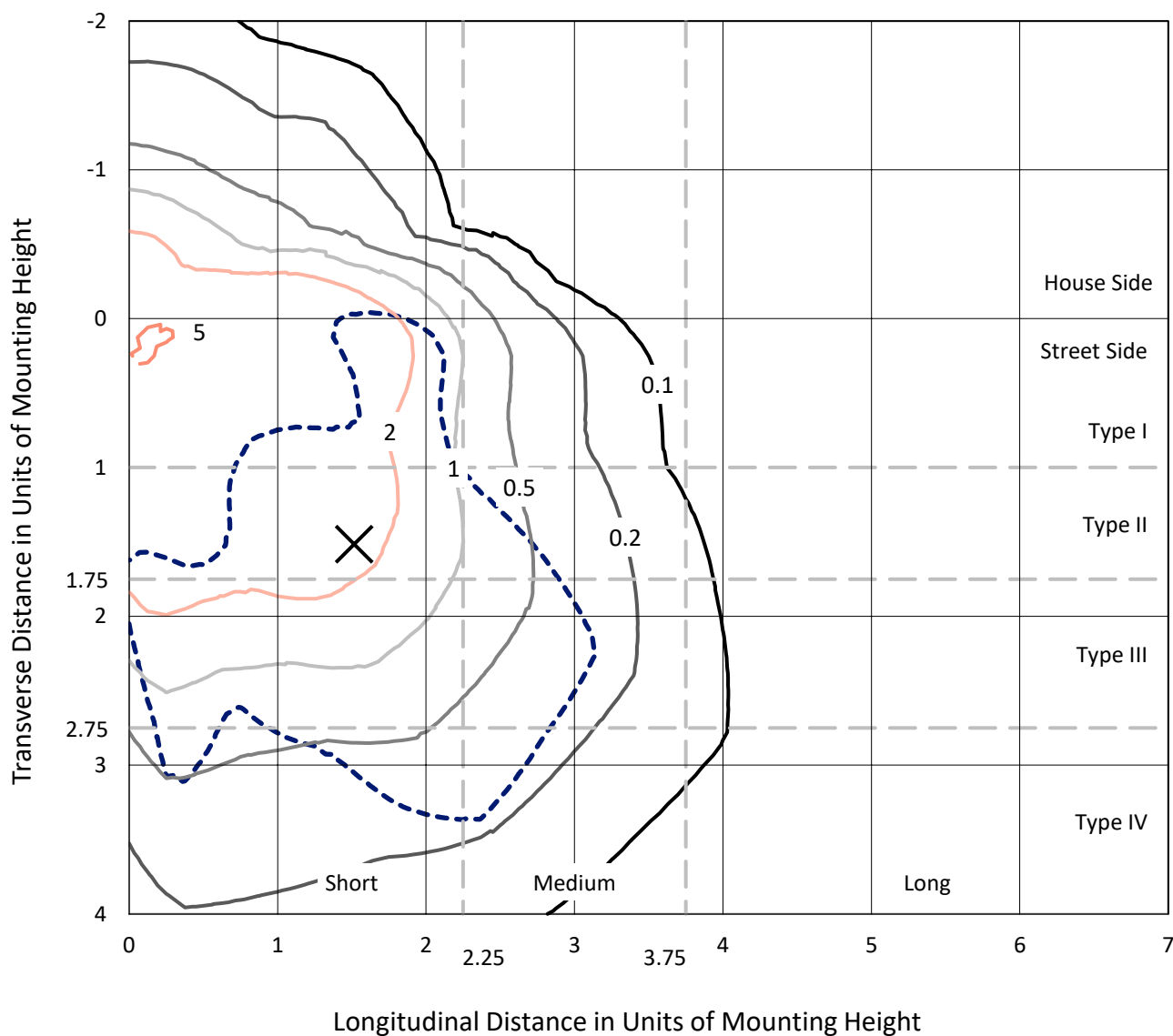
REPORT NUMBER: P966267

CATALOG NUMBER: NAV-SB4B-827-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

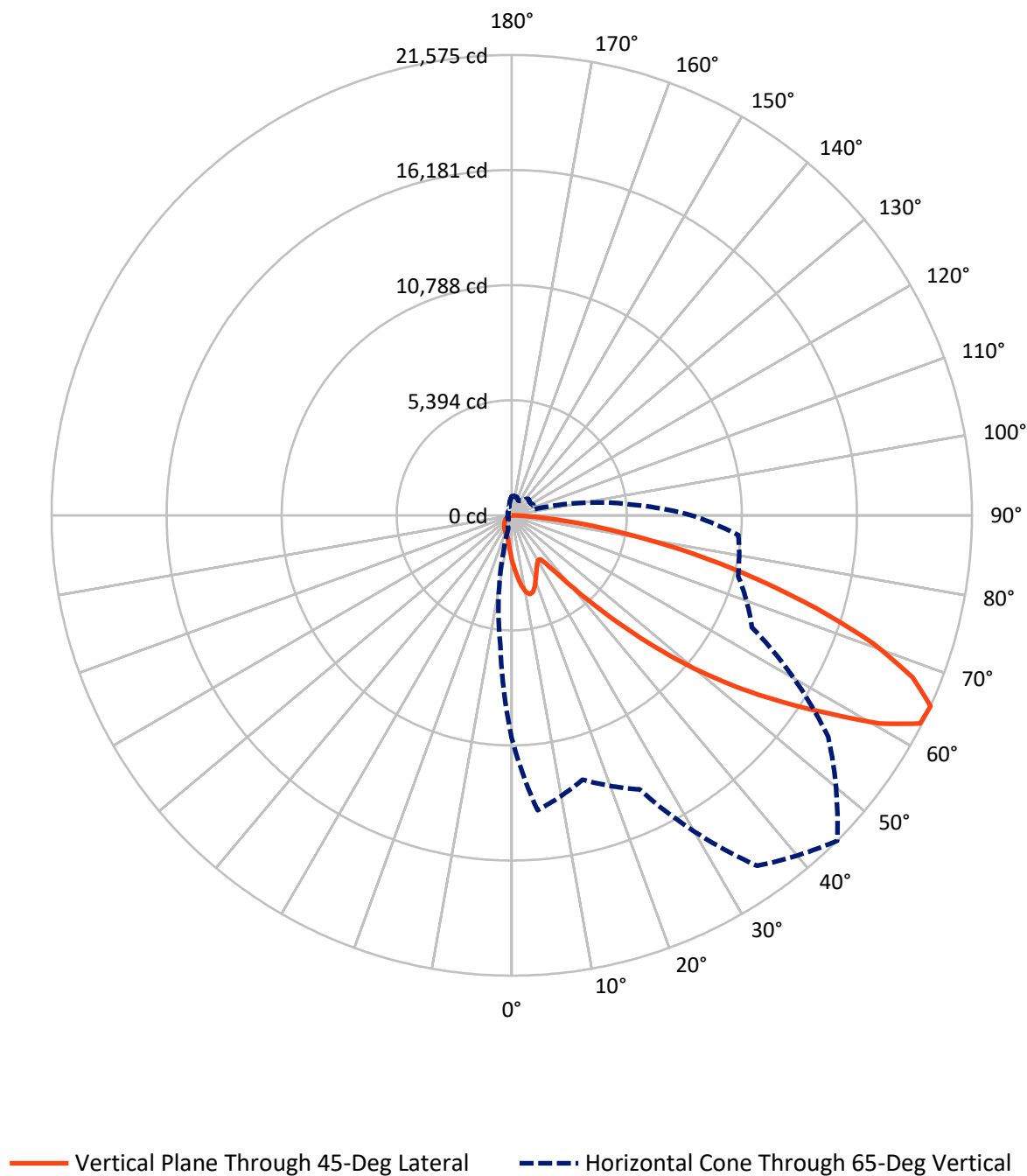


Based on 25 foot mounting height. Maximum calculated value = 5.6 fc

Type IV - Short - N/A

REPORT NUMBER: P966267
CATALOG NUMBER: NAV-SB4B-827-U-SLL-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P966267

CATALOG NUMBER: NAV-SB4B-827-U-SLL-HSS

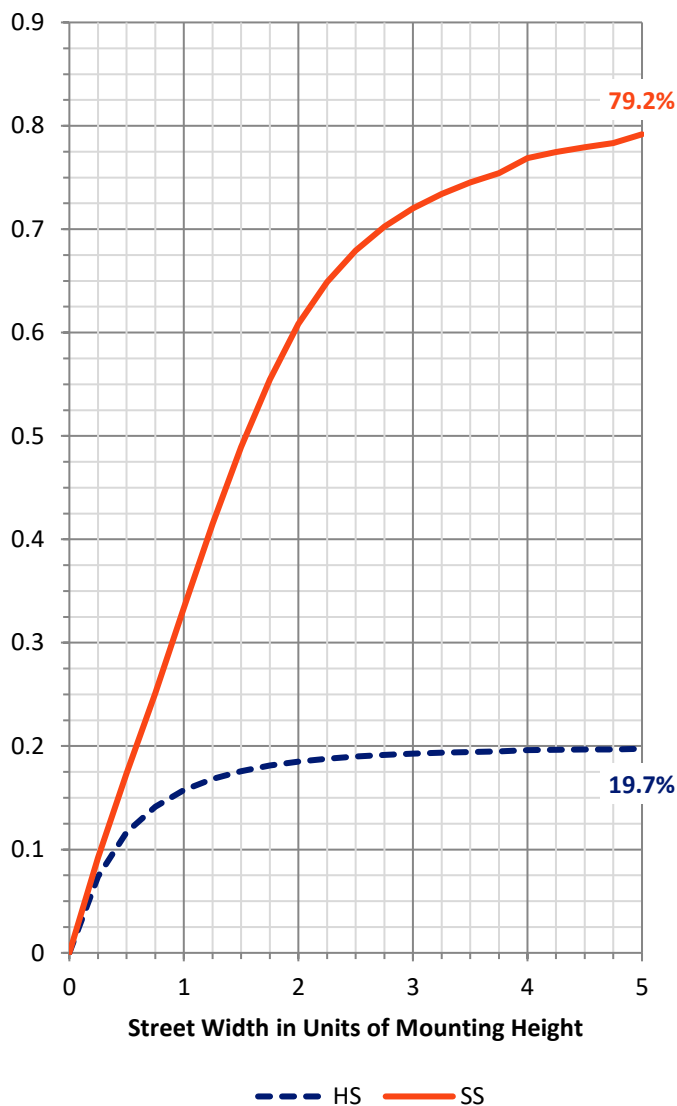
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3051.4	0.0	3051.4
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	12300.0	0.0	12300.0
	% Fixture	80.1	0.0	80.1
Total	Lumens	15351.4	0.0	15351.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.3	1.4
10°-20°	627.4	4.1
20°-30°	924.2	6.0
30°-40°	1187.4	7.7
40°-50°	1920.4	12.5
50°-60°	3367.5	21.9
60°-70°	4213.7	27.4
70°-80°	2462.3	16.0
80°-90°	439.3	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°	15351.4	100.0
0°-180°	15351.4	100.0

Coefficient of Utilization



REPORT NUMBER: P966267

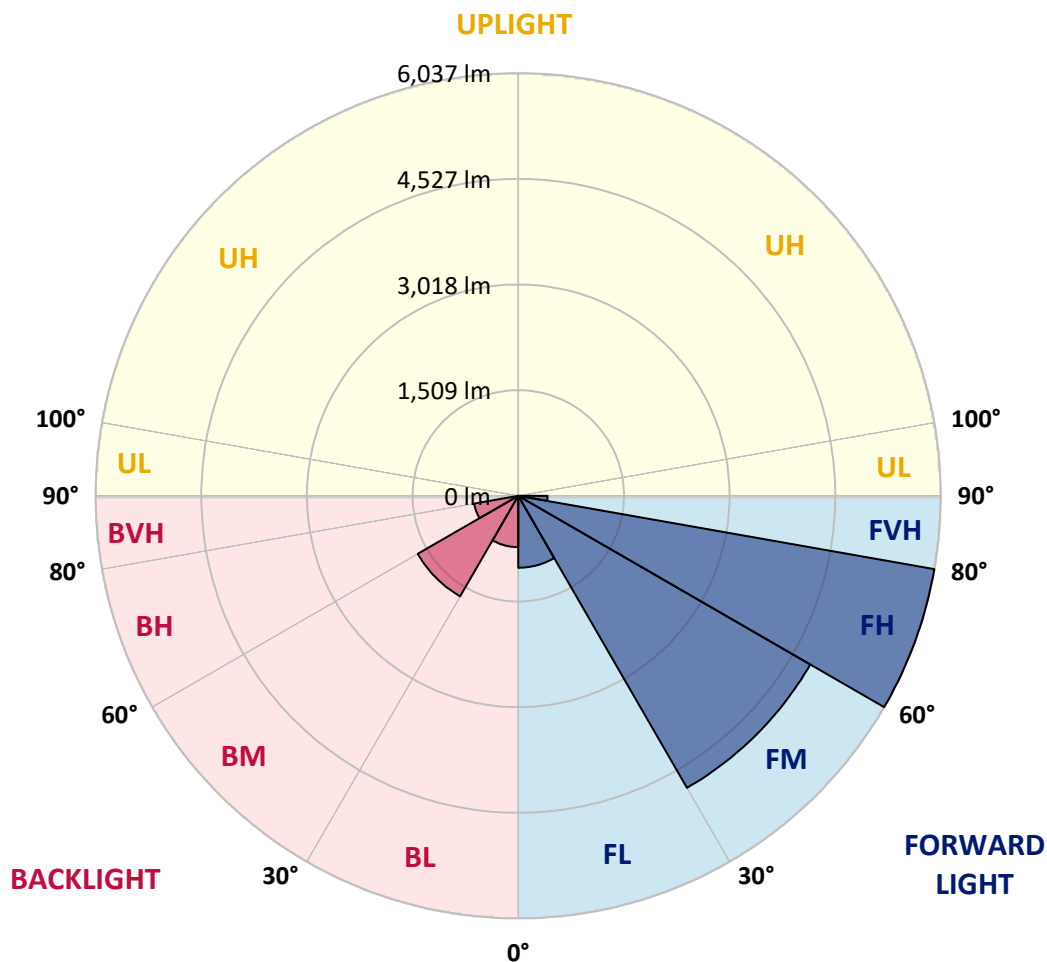
CATALOG NUMBER: NAV-SB4B-827-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1027.2	6.7			
FM	(30°-60°)	4817.5	31.4			
FH	(60°-80°)	6036.7	39.3			G3/7500
FVH	(80°-90°)	418.7	2.7			G3/500
BL	(0°-30°)	733.7	4.8	B2/1000		
BM	(30°-60°)	1657.8	10.8	B2/2500		
BH	(60°-80°)	639.3	4.2	B2/1000		G2/1000
BVH	(80°-90°)	20.6	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: P966267

CATALOG NUMBER: NAV-SB4B-827-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6
2.5°	2381.6	2399.6	2439.8	2460.9	2493.7	2495.9	2495.9	2467.3	2466.3	2408.0	2401.7
5°	2661.8	2704.2	2799.4	2897.7	2918.9	2924.1	2913.6	2856.5	2814.1	2701.0	2676.7
7.5°	2940.0	3021.4	3166.3	3297.4	3339.8	3339.8	3314.3	3221.3	3134.6	2970.7	2909.4
10°	3170.5	3273.1	3469.8	3616.8	3665.5	3654.9	3603.1	3485.7	3366.2	3167.4	3087.0
12.5°	3322.8	3438.1	3653.8	3772.3	3822.0	3794.6	3735.3	3621.0	3495.2	3285.8	3194.8
15°	3399.0	3519.5	3706.7	3769.1	3755.4	3726.8	3719.4	3664.4	3569.3	3373.6	3274.2
17.5°	3431.8	3543.8	3673.9	3634.9	3518.5	3496.3	3570.3	3640.1	3616.8	3449.7	3356.7
20°	3462.4	3556.5	3595.7	3422.3	3219.2	3199.1	3340.8	3539.6	3641.1	3520.6	3435.0
22.5°	3504.7	3562.9	3482.5	3198.0	2979.2	2932.6	3089.1	3388.4	3648.6	3610.5	3524.9
25°	3562.9	3578.8	3357.7	2985.5	2765.4	2719.0	2864.9	3220.2	3635.9	3707.7	3634.9
27.5°	3632.7	3599.9	3238.2	2807.8	2595.2	2551.8	2697.8	3058.4	3599.9	3805.1	3753.2
30°	3723.6	3627.4	3119.8	2670.3	2473.6	2441.9	2582.6	2918.9	3555.5	3928.8	3900.2
32.5°	3815.7	3639.1	3009.8	2590.0	2446.2	2457.7	2573.1	2843.8	3506.8	4047.2	4061.0
35°	3915.1	3676.1	2955.9	2669.3	2675.6	2777.1	2824.7	2913.6	3499.5	4208.0	4262.0
37.5°	4050.4	3758.6	3020.4	3063.7	3283.7	3494.1	3455.1	3255.2	3585.1	4448.1	4548.5
40°	4245.0	3903.4	3301.7	3735.3	4186.8	4528.4	4379.3	3875.9	3847.3	4793.9	4944.1
42.5°	4528.4	4133.9	3800.8	4555.9	5321.6	5884.2	5484.5	4676.5	4306.3	5287.8	5479.1
45°	4947.3	4507.3	4404.7	5422.0	6720.7	7606.9	6775.8	5530.0	4949.3	6035.4	6185.7
47.5°	5527.8	5056.1	4970.5	6334.7	8421.3	9567.7	8207.7	6321.0	5681.2	7055.0	7089.8
50°	6298.8	5795.3	5506.7	7333.1	10285.8	11566.4	9638.6	7084.6	6519.8	8300.8	8260.6
52.5°	7316.1	6826.5	6131.7	8283.8	12203.1	13522.9	11075.7	7755.0	7560.4	9746.4	9663.9
55°	8703.7	8377.9	6986.2	9191.2	14119.4	15491.0	12456.9	8387.5	8935.2	11463.9	10964.7
57.5°	10425.4	10658.1	8218.2	10243.4	15842.1	17519.4	13844.5	9271.5	10720.4	13384.3	11719.8
60°	11535.8	13690.0	10577.7	11799.1	17799.6	19813.2	15745.9	10953.0	12596.5	14072.8	11575.9
62.5°	11267.2	14654.5	13403.4	13785.2	19599.6	21481.0	17609.3	12641.9	12949.7	13058.7	10467.6
65°	10443.3	13876.1	12827.1	14171.2	20055.5	21575.1	18107.4	12424.1	10984.8	10661.2	8413.9
67.5°	9309.7	12952.9	11457.6	13147.5	19231.6	20259.5	17179.9	10990.0	8488.9	8000.4	6104.2
70°	8086.0	11931.3	10558.6	11999.0	17661.2	17966.8	15603.2	9666.1	6243.8	5403.1	3917.1
72.5°	6924.9	10867.5	9943.1	10821.9	15566.2	14933.7	13550.4	8495.3	4546.4	3897.0	2784.5
75°	5737.2	9298.0	9066.4	9423.8	12811.2	11763.2	11258.7	7033.8	3568.2	2819.5	1921.6
77.5°	4426.9	7265.4	7798.4	7546.7	9017.7	8737.5	8727.0	5285.6	2606.9	1881.4	1204.6
80°	3029.9	5063.6	6092.6	5323.7	5852.5	5709.8	6572.7	3546.0	1890.9	1132.6	670.5
82.5°	1780.9	3082.8	4240.8	2577.3	3236.1	3321.8	3914.0	1724.9	1112.5	261.2	146.0
85°	722.3	1217.3	1658.2	1008.9	1561.0	1316.6	1485.8	484.3	309.9	6.4	0.0
87.5°	181.9	389.2	272.9	113.2	180.8	166.0	131.1	59.2	12.7	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: P966267

CATALOG NUMBER: NAV-SB4B-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6
2.5°	2360.5	2336.2	2275.8	2215.5	2167.0	2101.4	2058.0	2006.1	1956.5	1912.0	1903.6
5°	2610.1	2529.7	2419.7	2319.2	2216.7	2117.2	2018.8	1915.2	1820.1	1761.9	1724.9
7.5°	2813.1	2671.4	2525.4	2397.5	2273.8	2157.4	2027.3	1901.5	1752.3	1673.0	1601.2
10°	2964.3	2778.2	2586.8	2439.8	2315.0	2201.8	2091.8	1964.9	1785.1	1685.7	1577.9
12.5°	3063.7	2842.7	2618.5	2450.4	2310.8	2223.0	2174.3	2124.6	1945.9	1829.5	1673.0
15°	3132.5	2888.1	2640.7	2426.1	2254.7	2190.2	2238.8	2295.9	2181.7	2047.4	1843.4
17.5°	3207.5	2947.4	2650.2	2360.5	2145.7	2118.3	2244.1	2376.4	2371.0	2237.8	2037.9
20°	3286.9	2999.3	2643.9	2254.7	2013.6	2037.9	2198.6	2352.0	2416.5	2344.6	2167.0
22.5°	3368.4	3049.0	2619.6	2117.2	1889.9	1966.0	2126.8	2261.0	2337.2	2315.0	2179.7
25°	3470.9	3118.8	2583.6	1969.1	1787.3	1893.0	2043.2	2152.1	2205.0	2204.0	2110.9
27.5°	3593.5	3211.8	2564.5	1849.6	1714.3	1810.6	1943.8	2041.1	2078.1	2078.1	2004.1
30°	3736.3	3321.8	2543.4	1771.4	1672.0	1724.9	1828.5	1923.7	1960.7	1960.7	1898.3
32.5°	3895.0	3427.5	2492.7	1723.8	1640.3	1641.3	1706.9	1793.6	1838.0	1844.4	1800.0
35°	4085.3	3540.7	2381.6	1685.7	1603.2	1559.8	1591.6	1663.6	1716.4	1730.2	1702.6
37.5°	4334.9	3679.2	2223.0	1629.6	1546.1	1474.3	1481.6	1536.6	1594.8	1615.9	1598.0
40°	4670.1	3842.1	2058.0	1549.3	1465.7	1380.1	1377.0	1417.2	1474.3	1497.5	1488.0
42.5°	5113.3	4037.8	1900.5	1472.1	1368.5	1280.7	1275.4	1307.2	1356.8	1381.2	1377.0
45°	5680.1	4277.8	1765.0	1411.8	1273.3	1186.5	1184.5	1210.9	1254.3	1279.6	1274.4
47.5°	6468.0	4517.9	1673.0	1380.1	1198.2	1109.4	1113.6	1136.8	1176.0	1194.0	1186.5
50°	7494.9	4590.9	1626.5	1380.1	1158.0	1040.7	1061.8	1080.9	1110.4	1121.0	1111.5
52.5°	8480.5	4349.7	1584.2	1388.6	1163.3	982.5	1028.0	1041.7	1067.0	1071.3	1057.6
55°	8963.8	3739.5	1526.0	1390.7	1196.1	932.7	1000.4	1025.8	1035.4	1034.3	1011.1
57.5°	8797.8	3023.5	1427.7	1382.2	1218.3	901.1	966.6	1015.3	1021.6	1012.1	968.7
60°	8215.1	2226.2	1352.6	1319.8	1209.8	891.5	914.8	992.0	1001.5	988.8	918.0
62.5°	7237.9	1545.1	1294.5	1182.3	1172.8	888.4	833.3	941.3	964.5	946.5	842.9
65°	5698.1	1091.4	1114.7	1036.4	1092.4	871.5	748.8	879.9	911.6	884.2	738.2
67.5°	3855.8	787.9	903.1	939.1	962.4	833.3	687.4	810.1	852.4	816.4	616.5
70°	2082.3	553.1	596.4	791.1	817.4	767.8	632.4	739.2	787.9	748.8	502.4
72.5°	1229.9	397.6	417.7	635.6	681.1	675.8	571.0	656.7	716.0	669.4	408.3
75°	677.9	268.7	298.3	461.0	553.1	521.4	490.7	556.3	616.5	571.0	315.2
77.5°	303.5	160.7	207.3	302.5	434.7	357.4	379.7	433.6	489.6	442.1	210.4
80°	117.4	89.9	137.5	165.0	316.2	197.7	244.3	319.4	359.6	321.5	127.9
82.5°	14.8	40.2	59.2	64.5	184.0	104.7	141.8	200.9	197.7	171.3	64.5
85°	0.0	7.4	8.5	4.2	79.3	38.0	46.5	65.6	61.3	46.5	5.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	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: P966267

CATALOG NUMBER: NAV-SB4B-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6
2.5°	1851.8	1813.7	1794.7	1778.8	1793.6	1802.1	1802.1	1838.0	1859.1	1867.7	1926.9
5°	1631.8	1561.0	1513.3	1484.8	1494.3	1504.9	1516.5	1562.0	1592.6	1612.7	1704.8
7.5°	1458.4	1350.5	1283.9	1249.0	1254.3	1261.7	1271.2	1315.6	1346.2	1372.7	1475.3
10°	1372.7	1220.4	1132.6	1090.3	1082.9	1078.7	1075.5	1102.0	1125.2	1146.4	1247.9
12.5°	1377.0	1164.4	1057.6	1005.7	983.5	958.2	938.1	942.3	957.0	983.5	1048.1
15°	1430.9	1146.4	1018.4	953.9	916.9	887.2	862.9	857.7	862.9	867.2	907.3
17.5°	1503.9	1144.3	984.6	904.3	866.1	841.8	819.6	812.2	813.2	818.6	829.1
20°	1562.0	1138.0	946.5	856.6	822.8	801.7	779.4	772.0	774.1	775.2	786.8
22.5°	1592.6	1128.4	904.3	809.0	780.4	759.3	739.2	738.2	738.2	744.6	753.0
25°	1592.6	1108.3	866.1	763.5	738.2	719.1	694.8	699.0	701.2	709.6	722.3
27.5°	1554.6	1070.2	835.5	724.5	698.0	679.0	656.7	662.0	665.2	674.8	690.5
30°	1505.9	1024.8	800.5	687.4	656.7	643.0	623.9	626.1	630.3	640.8	658.9
32.5°	1454.2	970.9	772.0	650.4	619.7	609.2	588.0	591.2	595.4	607.0	627.1
35°	1397.1	907.3	738.2	616.5	585.9	577.4	553.1	555.2	561.6	574.2	594.3
37.5°	1336.7	855.6	704.4	583.7	552.1	543.6	518.2	520.3	527.7	542.5	561.6
40°	1277.6	804.8	668.4	548.9	517.1	509.7	482.3	484.3	492.8	508.7	528.8
42.5°	1213.0	765.7	621.9	512.9	479.1	471.7	446.3	449.5	459.0	474.9	495.0
45°	1135.8	740.3	570.0	479.1	441.0	433.6	410.3	416.7	427.2	443.1	464.2
47.5°	1056.5	729.7	526.6	443.1	401.9	395.5	376.5	387.0	398.7	411.4	434.7
50°	980.3	716.0	482.3	409.3	368.1	361.7	349.0	362.7	374.3	386.0	408.3
52.5°	893.6	686.3	442.1	379.7	339.5	337.3	331.0	343.7	354.2	364.9	383.9
55°	803.7	638.8	407.1	353.2	315.2	317.2	314.1	324.6	333.1	342.7	359.6
57.5°	725.5	578.5	379.7	324.6	294.0	300.3	296.1	301.5	306.7	318.4	332.1
60°	646.2	506.6	349.0	290.8	272.9	280.2	268.7	267.5	269.7	272.9	298.3
62.5°	539.4	431.5	310.9	261.2	249.6	252.8	230.5	213.6	213.6	216.8	254.9
65°	433.6	361.7	268.7	227.3	217.8	215.8	184.0	160.7	158.7	168.1	200.9
67.5°	356.4	300.3	226.3	189.3	183.0	185.1	161.8	138.6	136.4	147.0	171.3
70°	295.1	242.2	180.8	146.0	152.3	161.8	138.6	116.3	113.2	122.7	146.0
72.5°	234.8	189.3	138.6	107.8	125.9	137.5	113.2	92.0	89.9	98.4	120.5
75°	172.4	135.4	94.1	78.3	97.3	107.8	82.5	65.6	62.4	69.8	92.0
77.5°	106.8	76.2	59.2	46.5	66.6	72.0	43.4	38.0	37.0	42.3	58.1
80°	49.7	32.8	28.6	15.9	24.3	28.6	17.9	20.1	21.1	25.4	36.0
82.5°	13.7	5.3	1.0	0.0	0.0	8.5	4.2	8.5	10.6	15.9	23.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	5.3	9.5	16.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.5
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: P966267

CATALOG NUMBER: NAV-SB4B-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6	2125.6
2.5°	1971.3	2013.6	2081.3	2151.1	2219.8	2289.6	2357.3	2381.6
5°	1788.3	1885.6	2020.0	2163.8	2311.8	2461.9	2599.5	2661.8
7.5°	1584.2	1723.8	1925.8	2151.1	2386.9	2622.8	2839.6	2940.0
10°	1366.3	1542.9	1773.6	2078.1	2416.5	2742.3	3040.5	3170.5
12.5°	1159.1	1344.2	1599.0	1963.9	2393.3	2811.0	3169.5	3322.8
15°	985.6	1149.5	1424.5	1828.5	2318.1	2815.2	3230.8	3399.0
17.5°	855.6	962.4	1246.8	1678.3	2219.8	2776.1	3252.0	3431.8
20°	791.1	820.6	1016.3	1485.8	2127.8	2739.1	3273.1	3462.4
22.5°	753.0	760.3	831.3	1237.4	2017.8	2727.4	3310.1	3504.7
25°	722.3	724.5	743.4	980.3	1849.6	2720.0	3367.2	3562.9
27.5°	691.7	691.7	702.2	790.0	1621.2	2688.3	3441.2	3632.7
30°	660.9	660.9	668.4	699.0	1353.7	2625.9	3530.1	3723.6
32.5°	629.2	629.2	635.6	657.8	1080.9	2547.6	3611.6	3815.7
35°	597.5	595.4	603.8	627.1	859.8	2448.2	3693.0	3915.1
37.5°	563.6	562.6	571.0	597.5	742.4	2333.0	3754.3	4050.4
40°	527.7	527.7	537.2	565.8	708.6	2188.1	3851.6	4245.0
42.5°	495.0	492.8	503.4	538.3	683.2	2049.5	4026.1	4528.4
45°	463.2	459.0	468.5	511.9	638.8	2000.9	4351.8	4947.3
47.5°	433.6	423.0	431.5	480.1	598.6	2182.8	4884.8	5527.8
50°	409.3	389.2	396.6	448.4	568.0	2577.3	5576.5	6298.8
52.5°	383.9	357.4	361.7	409.3	540.4	2952.7	6326.3	7316.1
55°	357.4	327.8	329.9	370.1	501.3	3008.8	7058.2	8703.7
57.5°	327.8	300.3	300.3	334.2	472.7	2607.9	7620.8	10425.4
60°	295.1	277.1	271.8	305.7	498.2	1840.2	7686.3	11535.8
62.5°	259.1	249.6	242.2	278.2	517.1	1090.3	7158.6	11267.2
65°	217.8	215.8	210.4	305.7	435.7	644.0	6145.5	10443.3
67.5°	183.0	179.8	179.8	320.4	331.0	405.1	4801.3	9309.7
70°	157.5	146.0	146.0	242.2	200.9	280.2	3352.5	8086.0
72.5°	132.2	119.5	111.0	193.5	150.2	205.2	2095.0	6924.9
75°	105.8	96.2	85.7	127.9	112.1	155.5	1217.3	5737.2
77.5°	76.2	72.0	60.3	94.1	81.4	112.1	724.5	4426.9
80°	39.2	40.2	38.0	53.9	55.0	76.2	412.5	3029.9
82.5°	23.3	17.9	20.1	26.4	31.8	43.4	155.5	1780.9
85°	14.8	9.5	9.5	12.7	15.9	16.9	47.6	722.3
87.5°	7.4	3.2	4.2	6.4	5.3	4.2	2.2	181.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)