

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: P966796

Luminaire Tested: **NAV-SB4C-827-U-SLR-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966796
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-SB4C-827-U-SLR-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 615mA LIGHTSQUARES WITH 26 LEDS EACH AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

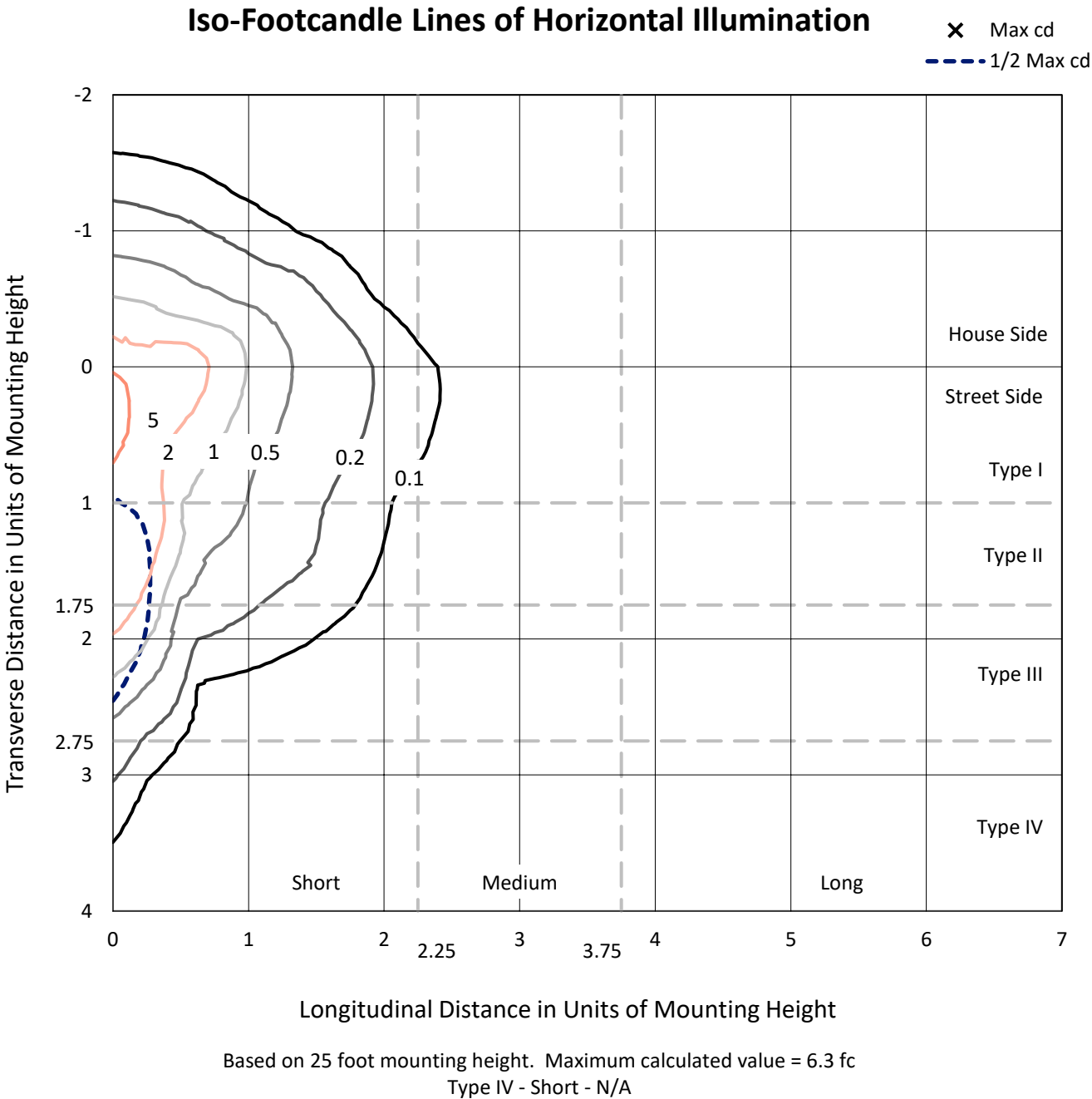
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20417 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

Input Watts (W): 200.7
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

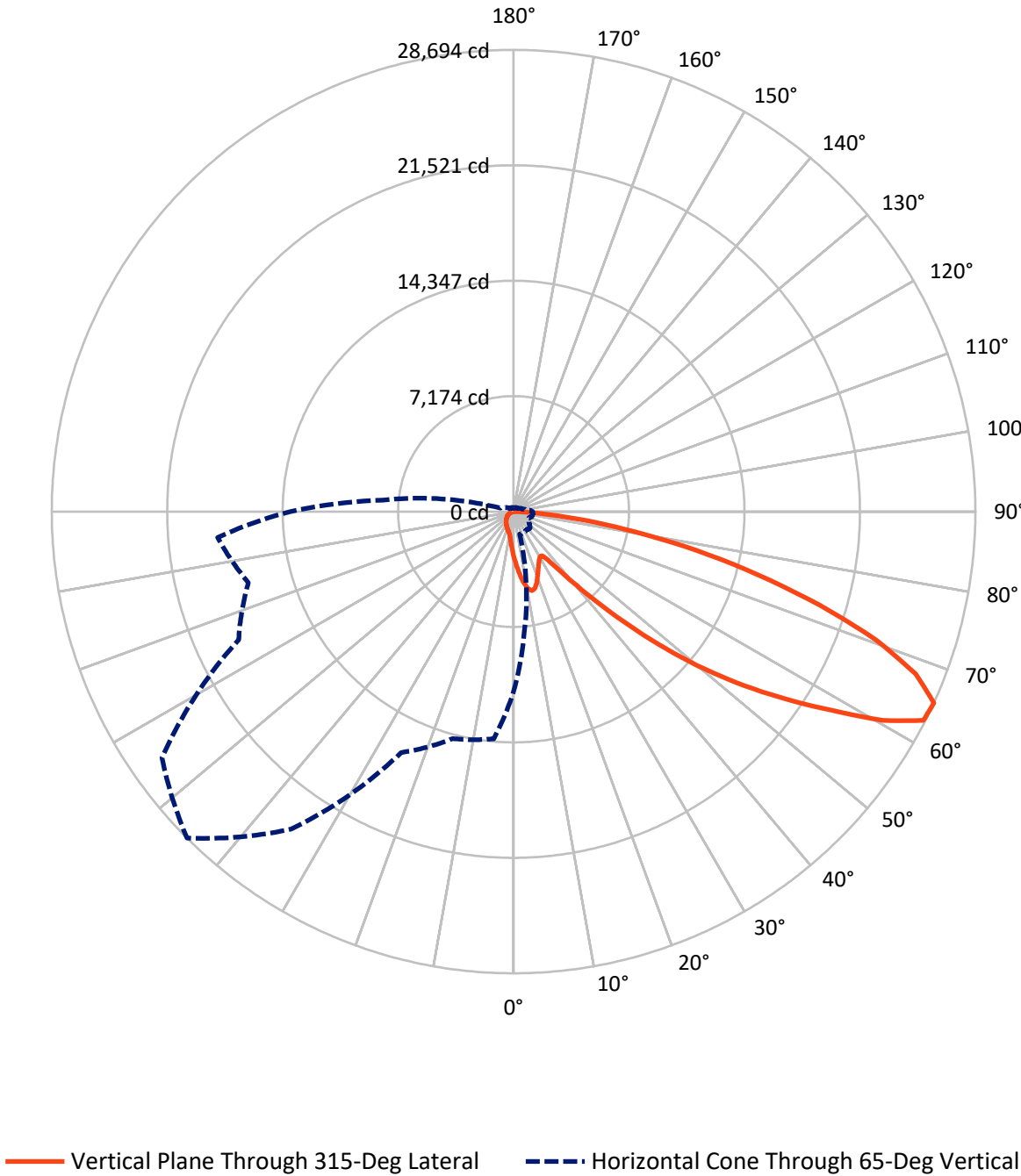


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Luminous Intensity Polar Plot



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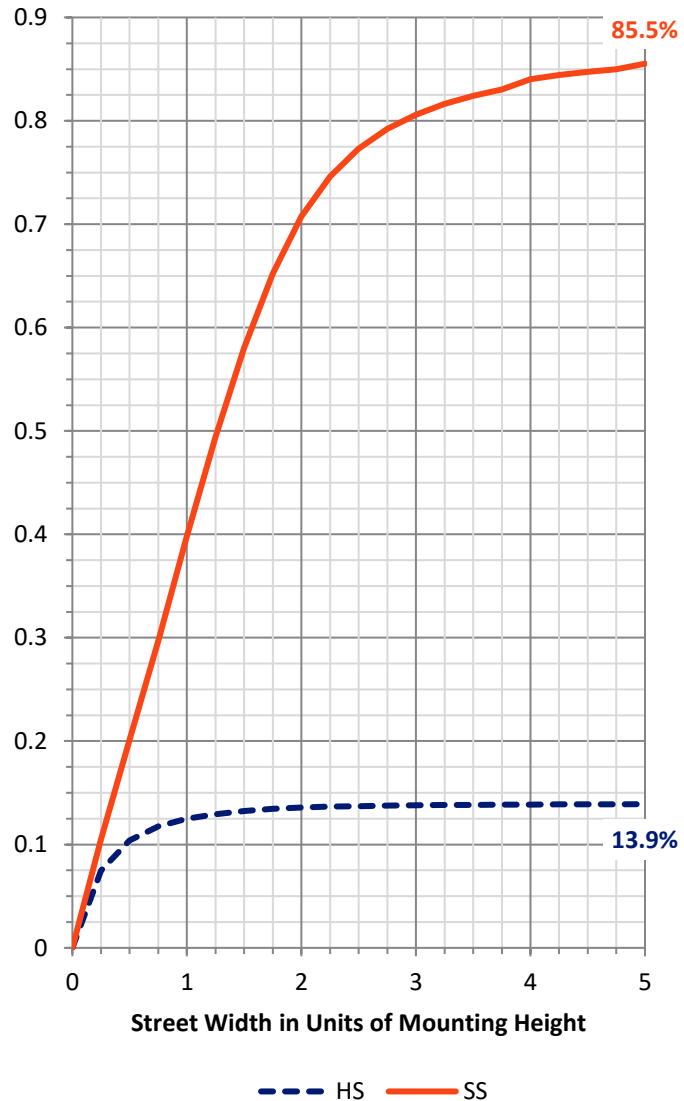
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2859.2	0.0	2859.2
	% Fixture	14.0	0.0	14.0
Street Side	Lumens	17557.7	0.0	17557.7
	% Fixture	86.0	0.0	86.0
Total	Lumens	20417.0	0.0	20417.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.3	1.4
10°-20°	834.4	4.1
20°-30°	1229.2	6.0
30°-40°	1579.2	7.7
40°-50°	2554.0	12.5
50°-60°	4478.7	21.9
60°-70°	5604.1	27.4
70°-80°	3274.8	16.0
80°-90°	584.3	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°	20417.0	100.0
0°-180°	20417.0	100.0

Coefficient of Utilization



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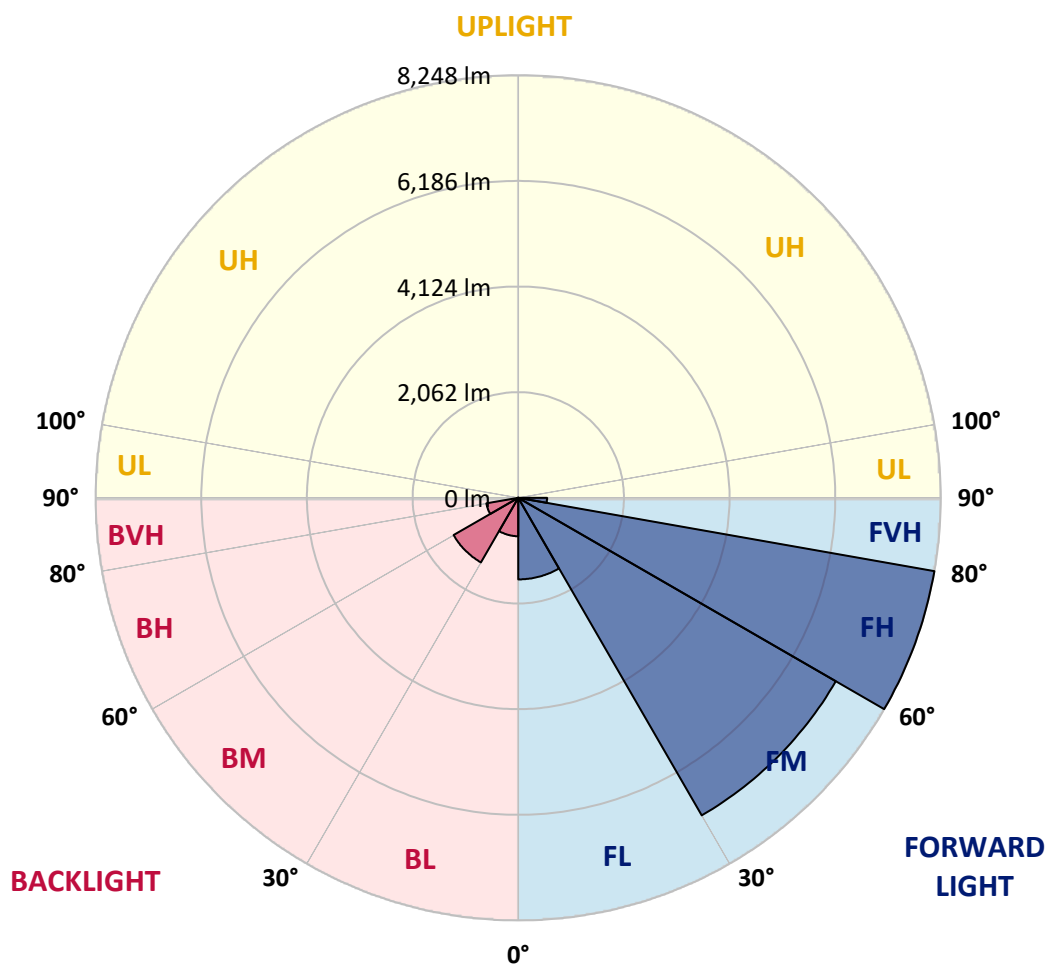
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1592.5	7.8			
FM	(30°-60°)	7155.9	35.0			
FH	(60°-80°)	8247.5	40.4			G4/12000
FVH	(80°-90°)	561.8	2.8			G4/750
BL	(0°-30°)	749.5	3.7	B2/1000		
BM	(30°-60°)	1456.0	7.1	B2/2500		
BH	(60°-80°)	631.3	3.1	B2/1000		G2/1000
BVH	(80°-90°)	22.4	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-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1
2.5°	3194.2	3139.4	3107.0	3026.8	2946.7	2882.0	2794.8	2737.1	2668.2	2602.1	2543.0
5°	3559.9	3471.3	3364.4	3218.1	3084.5	2948.1	2815.9	2685.1	2547.2	2420.6	2343.3
7.5°	3869.4	3741.4	3552.9	3358.7	3188.6	3024.1	2869.3	2696.3	2528.9	2330.6	2225.1
10°	4105.6	3942.5	3694.9	3440.3	3244.8	3078.9	2928.3	2782.1	2613.3	2374.2	2242.0
12.5°	4249.0	4074.7	3780.7	3482.5	3258.9	3073.3	2956.5	2891.8	2825.7	2588.0	2433.2
15°	4354.6	4166.1	3841.2	3512.1	3226.6	2998.7	2912.8	2977.6	3053.6	2901.7	2723.0
17.5°	4464.3	4265.9	3920.0	3524.8	3139.4	2853.8	2817.2	2984.6	3160.5	3153.4	2976.2
20°	4568.3	4371.4	3988.9	3516.3	2998.7	2678.0	2710.4	2924.1	3128.1	3213.9	3118.3
22.5°	4687.9	4479.8	4055.0	3484.0	2815.9	2513.4	2614.7	2828.5	3007.1	3108.4	3078.9
25°	4834.2	4616.2	4147.9	3436.1	2619.0	2377.0	2517.7	2717.4	2862.2	2932.6	2931.2
27.5°	4991.8	4779.4	4271.6	3410.8	2460.0	2280.0	2407.9	2585.2	2714.6	2763.8	2763.8
30°	5187.2	4969.2	4417.9	3382.7	2356.0	2223.7	2294.1	2431.9	2558.5	2607.7	2607.7
32.5°	5401.0	5180.2	4558.5	3315.2	2292.6	2181.5	2182.9	2270.1	2385.5	2444.5	2452.9
35°	5668.2	5433.4	4709.1	3167.5	2242.0	2132.3	2074.6	2116.8	2212.5	2282.8	2301.0
37.5°	6049.4	5765.3	4893.2	2956.5	2167.5	2056.4	1960.7	1970.6	2043.6	2121.0	2149.1
40°	6575.5	6211.2	5109.8	2737.1	2060.6	1949.4	1835.5	1831.3	1884.8	1960.7	1991.7
42.5°	7287.1	6800.5	5370.1	2527.5	1957.9	1820.0	1703.2	1696.3	1738.5	1804.5	1836.9
45°	8226.8	7554.4	5689.4	2347.5	1877.7	1693.4	1578.1	1575.3	1610.5	1668.1	1701.9
47.5°	9429.3	8602.2	6008.7	2225.1	1835.5	1593.6	1475.4	1481.0	1512.0	1564.0	1587.9
50°	10986.3	9968.0	6105.7	2163.3	1835.5	1540.2	1384.1	1412.1	1437.5	1476.8	1490.9
52.5°	12852.8	11278.9	5785.0	2107.0	1846.7	1547.1	1306.7	1367.1	1385.4	1419.2	1424.7
55°	14582.8	11921.7	4973.4	2029.6	1849.6	1590.8	1240.6	1330.6	1364.3	1377.0	1375.6
57.5°	15587.0	11700.8	4021.3	1898.8	1838.3	1620.3	1198.3	1285.6	1350.2	1358.7	1346.0
60°	15395.7	10925.8	2960.7	1799.0	1755.3	1609.0	1185.7	1216.7	1319.3	1332.0	1315.1
62.5°	13921.7	9626.2	2054.9	1721.6	1572.5	1559.8	1181.5	1108.3	1251.8	1282.8	1258.8
65°	11190.2	7578.3	1451.5	1482.5	1378.4	1452.9	1159.0	995.8	1170.2	1212.4	1175.9
67.5°	8118.4	5128.2	1047.9	1201.2	1249.0	1279.9	1108.3	914.2	1077.4	1133.6	1085.8
70°	5209.8	2769.4	735.6	793.2	1052.1	1087.2	1021.1	841.1	983.2	1047.9	995.8
72.5°	3703.3	1635.8	528.9	555.6	845.3	905.8	898.7	759.5	873.4	952.2	890.3
75°	2555.6	901.6	357.2	396.7	613.3	735.6	693.4	652.6	739.8	820.0	759.5
77.5°	1602.0	403.6	213.8	275.7	402.3	578.1	475.4	504.9	576.7	651.2	587.9
80°	891.7	156.1	119.5	182.9	219.5	420.6	263.0	324.9	424.8	478.3	427.6
82.5°	194.1	19.7	53.4	78.7	85.8	244.8	139.2	188.5	267.2	263.0	227.9
85°	0.0	0.0	9.8	11.3	5.6	105.5	50.6	61.9	87.2	81.6	61.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	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°	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1
2.5°	2531.8	2462.8	2412.1	2386.8	2365.8	2385.5	2396.7	2396.7	2444.5	2472.6	2483.9
5°	2294.1	2170.2	2076.0	2012.7	1974.8	1987.4	2001.5	2017.0	2077.5	2118.2	2144.9
7.5°	2129.4	1939.6	1796.1	1707.5	1661.1	1668.1	1677.9	1690.6	1749.7	1790.5	1825.6
10°	2098.5	1825.6	1623.1	1506.3	1450.1	1440.2	1434.7	1430.4	1465.5	1496.5	1524.7
12.5°	2225.1	1831.3	1548.6	1406.5	1337.6	1308.1	1274.3	1247.6	1253.2	1272.9	1308.1
15°	2451.6	1903.0	1524.7	1354.4	1268.6	1219.4	1180.1	1147.7	1140.7	1147.7	1153.3
17.5°	2710.4	2000.1	1521.8	1309.4	1202.5	1151.9	1119.6	1090.1	1080.2	1081.6	1088.7
20°	2882.0	2077.5	1513.4	1258.8	1139.3	1094.3	1066.1	1036.6	1026.7	1029.6	1030.9
22.5°	2898.8	2118.2	1500.7	1202.5	1075.9	1038.0	1009.8	983.2	981.7	981.7	990.1
25°	2807.4	2118.2	1474.1	1151.9	1015.5	981.7	956.4	924.0	929.7	932.5	943.8
27.5°	2665.3	2067.6	1423.4	1111.1	963.5	928.3	903.0	873.4	880.5	884.7	897.4
30°	2524.7	2002.8	1362.9	1064.8	914.2	873.4	855.2	829.8	832.6	838.2	852.4
32.5°	2393.9	1934.0	1291.2	1026.7	865.0	824.2	810.2	782.0	786.3	791.9	807.3
35°	2264.5	1858.0	1206.8	981.7	820.0	779.2	767.9	735.6	738.4	746.8	763.7
37.5°	2125.2	1777.9	1137.9	936.7	776.4	734.2	722.9	689.2	692.0	701.8	721.5
40°	1979.0	1699.0	1070.4	888.9	730.0	687.8	677.9	641.3	644.2	655.5	676.5
42.5°	1831.3	1613.2	1018.3	827.1	682.1	637.1	627.3	593.6	597.8	610.4	631.5
45°	1694.8	1510.6	984.5	758.1	637.1	586.5	576.7	545.7	554.2	568.3	589.4
47.5°	1578.1	1405.1	970.5	700.5	589.4	534.4	526.0	500.7	514.8	530.2	547.1
50°	1478.3	1303.8	952.2	641.3	544.3	489.4	481.0	464.1	482.5	497.9	513.4
52.5°	1406.5	1188.5	912.9	587.9	504.9	451.5	448.6	440.2	457.2	471.2	485.2
55°	1344.6	1069.0	849.5	541.5	469.8	419.1	422.0	417.7	431.8	443.0	455.7
57.5°	1288.3	964.8	769.4	504.9	431.8	391.0	399.4	393.8	400.9	407.8	423.3
60°	1220.9	859.4	673.7	464.1	386.8	362.8	372.7	357.2	355.9	358.6	362.8
62.5°	1121.0	717.3	573.9	413.5	347.4	331.9	336.2	306.6	284.1	284.1	288.3
65°	981.7	576.7	481.0	357.2	302.4	289.8	286.9	244.8	213.8	210.9	223.7
67.5°	820.0	474.0	399.4	301.0	251.7	243.3	246.1	215.1	184.3	181.4	195.5
70°	668.1	392.4	322.1	240.5	194.1	202.5	215.1	184.3	154.7	150.5	163.2
72.5°	542.9	312.2	251.7	184.3	143.5	167.4	182.9	150.5	122.4	119.5	130.8
75°	419.1	229.3	180.0	125.2	104.0	129.4	143.5	109.7	87.2	83.0	92.9
77.5°	279.9	142.1	101.3	78.7	61.9	88.6	95.6	57.7	50.6	49.2	56.3
80°	170.1	66.1	43.6	37.9	21.1	32.4	37.9	23.9	26.8	28.1	33.7
82.5°	85.8	18.2	7.1	1.4	0.0	0.0	11.3	5.6	11.3	14.0	21.1
85°	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	7.1	12.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6
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°	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1
2.5°	2562.7	2621.7	2678.0	2768.0	2860.9	2952.3	3045.1	3135.2	3167.5	3191.3	3244.8
5°	2267.3	2378.4	2507.9	2686.4	2877.7	3074.7	3274.4	3457.2	3540.2	3596.4	3723.0
7.5°	1962.1	2107.0	2292.6	2561.3	2860.9	3174.5	3488.2	3776.5	3910.1	4018.4	4211.1
10°	1659.7	1817.2	2052.2	2358.7	2763.8	3213.9	3647.1	4043.7	4216.7	4353.2	4614.8
12.5°	1393.9	1541.5	1787.7	2126.7	2611.9	3182.9	3738.5	4215.3	4419.3	4572.6	4859.5
15°	1206.8	1310.9	1528.9	1894.6	2431.9	3083.1	3744.1	4296.9	4520.6	4680.9	4929.8
17.5°	1102.7	1137.9	1279.9	1658.2	2232.1	2952.3	3692.2	4325.0	4564.1	4713.3	4886.3
20°	1046.4	1052.1	1091.4	1351.7	1976.2	2829.9	3642.8	4353.2	4604.9	4730.1	4782.1
22.5°	1001.4	1001.4	1011.3	1105.6	1645.6	2683.7	3627.4	4402.4	4661.2	4738.6	4631.7
25°	960.6	960.6	963.5	988.8	1303.8	2460.0	3617.5	4478.3	4738.6	4759.7	4465.7
27.5°	918.5	919.8	919.8	933.9	1050.6	2156.2	3575.4	4576.8	4831.3	4787.8	4306.7
30°	876.3	879.0	879.0	888.9	929.7	1800.3	3492.4	4694.9	4952.4	4824.4	4149.2
32.5°	834.0	836.9	836.9	845.3	874.8	1437.5	3388.3	4803.3	5074.7	4839.8	4002.9
35°	790.5	794.7	791.9	803.1	834.0	1143.5	3256.1	4911.6	5206.9	4889.0	3931.2
37.5°	746.8	749.7	748.2	759.5	794.7	987.4	3102.8	4993.1	5387.0	4998.7	4017.0
40°	703.3	701.8	701.8	714.5	752.5	942.4	2910.1	5122.5	5645.8	5191.4	4391.1
42.5°	658.3	658.3	655.5	669.5	716.0	908.6	2725.8	5354.6	6022.7	5498.1	5055.0
45°	617.5	616.0	610.4	623.1	680.8	849.5	2661.1	5787.8	6579.7	5994.6	5858.2
47.5°	578.1	576.7	562.6	573.9	638.6	796.1	2903.0	6496.7	7351.8	6724.5	6610.6
50°	542.9	544.3	517.6	527.5	596.3	755.3	3427.7	7416.6	8377.2	7707.7	7323.7
52.5°	510.6	510.6	475.4	481.0	544.3	718.7	3927.0	8413.8	9730.3	9079.0	8155.0
55°	478.3	475.4	436.0	438.8	492.3	666.7	4001.5	9387.1	11575.6	11142.5	9291.4
57.5°	441.7	436.0	399.4	399.4	444.4	628.7	3468.5	10135.4	13865.5	14174.8	10930.1
60°	396.7	392.4	368.5	361.5	406.5	662.5	2447.3	10222.5	15342.3	18207.4	14068.0
62.5°	339.0	344.6	331.9	322.1	369.9	687.8	1450.1	9520.7	14985.0	19490.1	17826.2
65°	267.2	289.8	286.9	279.9	406.5	579.5	856.6	8173.2	13889.4	18454.9	17059.6
67.5°	227.9	243.3	239.1	239.1	426.2	440.2	538.7	6385.5	12381.6	17227.0	15238.2
70°	194.1	209.6	194.1	194.1	322.1	267.2	372.7	4458.6	10754.2	15868.3	14042.7
72.5°	160.3	175.8	159.0	147.7	257.4	199.8	272.9	2786.4	9209.8	14453.3	13224.0
75°	122.4	140.6	128.0	113.9	170.1	149.1	206.7	1618.9	7630.3	12366.1	12058.1
77.5°	77.4	101.3	95.6	80.2	125.2	108.3	149.1	963.5	5887.7	9662.8	10371.7
80°	47.9	52.1	53.4	50.6	71.8	73.2	101.3	548.6	4029.7	6734.4	8102.9
82.5°	31.0	31.0	23.9	26.8	35.2	42.2	57.7	206.7	2368.6	4100.0	5640.2
85°	22.5	19.7	12.6	12.6	16.9	21.1	22.5	63.2	960.6	1618.9	2205.4
87.5°	11.3	9.8	4.2	5.6	8.4	7.1	5.6	2.8	241.9	517.6	362.8
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: P966796

CATALOG NUMBER: NAV-SB4C-827-U-SLR-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1	2827.1
2.5°	3272.9	3316.6	3319.4	3319.4	3281.4	3280.0	3202.6	3194.2
5°	3853.9	3882.0	3889.1	3874.9	3799.0	3742.8	3592.2	3559.9
7.5°	4385.6	4441.7	4441.7	4408.0	4284.3	4168.9	3950.9	3869.4
10°	4810.3	4875.0	4861.0	4792.0	4635.9	4476.9	4212.5	4105.6
12.5°	5017.1	5083.2	5046.6	4967.8	4816.0	4648.6	4370.1	4249.0
15°	5012.9	4994.5	4956.6	4946.8	4873.6	4747.0	4486.8	4354.6
17.5°	4834.2	4679.4	4649.9	4748.4	4841.3	4810.3	4588.1	4464.3
20°	4551.5	4281.4	4254.7	4443.2	4707.6	4842.6	4682.3	4568.3
22.5°	4253.3	3962.1	3900.2	4108.4	4506.5	4852.5	4801.8	4687.9
25°	3970.6	3678.0	3616.2	3810.2	4282.9	4835.6	4931.3	4834.2
27.5°	3734.3	3451.6	3393.9	3588.0	4067.6	4787.8	5060.6	4991.8
30°	3551.4	3289.8	3247.6	3434.7	3882.0	4728.7	5225.2	5187.2
32.5°	3444.5	3253.2	3268.7	3422.1	3782.1	4664.1	5382.8	5401.0
35°	3550.1	3558.5	3693.5	3756.8	3874.9	4654.1	5596.5	5668.2
37.5°	4074.7	4367.2	4647.1	4595.1	4329.3	4768.1	5915.8	6049.4
40°	4967.8	5568.4	6022.7	5824.4	5154.9	5116.9	6375.7	6575.5
42.5°	6059.3	7077.6	7825.9	7294.2	6219.6	5727.3	7032.6	7287.1
45°	7211.2	8938.4	10117.1	9011.6	7354.7	6582.4	8027.0	8226.8
47.5°	8425.0	11200.1	12724.8	10915.9	8406.7	7555.8	9382.8	9429.3
50°	9752.8	13679.8	15383.1	12819.0	9422.2	8671.2	11039.8	10986.3
52.5°	11017.2	16229.7	17985.2	14730.5	10314.0	10055.1	12962.5	12852.8
55°	12224.0	18778.4	20602.6	16567.4	11155.1	11883.6	15246.7	14582.8
57.5°	13623.5	21069.6	23300.3	18412.7	12331.0	14257.9	17800.9	15587.0
60°	15692.5	23673.1	26351.1	20941.6	14567.3	16753.0	18716.5	15395.7
62.5°	18334.0	26067.0	28569.2	23419.9	16813.5	17222.8	17367.7	13921.7
65°	18847.3	26673.2	28694.4	24082.4	16523.7	14609.5	14179.1	11190.2
67.5°	17485.8	25577.5	26944.6	22848.9	14616.5	11290.1	10640.3	8118.4
70°	15958.3	23488.8	23895.3	20751.7	12855.6	8304.0	7185.9	5209.8
72.5°	14392.8	20702.5	19861.4	18021.7	11298.6	6046.6	5183.0	3703.3
75°	12533.5	17038.6	15644.7	14973.8	9354.8	4745.5	3749.8	2555.6
77.5°	10036.9	11993.3	11620.6	11606.6	7029.8	3467.1	2502.2	1602.0
80°	7080.4	7783.6	7593.8	8741.5	4716.0	2514.8	1506.3	891.7
82.5°	3427.7	4304.0	4417.9	5205.6	2294.1	1479.7	347.4	194.1
85°	1341.8	2076.0	1751.1	1976.2	644.2	412.2	8.4	0.0
87.5°	150.5	240.5	220.8	174.5	78.7	16.9	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)