

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: P967910

Luminaire Tested: **NAV-SB5A-835-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967910
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-SB5A-835-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 80 CRI, 3500K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

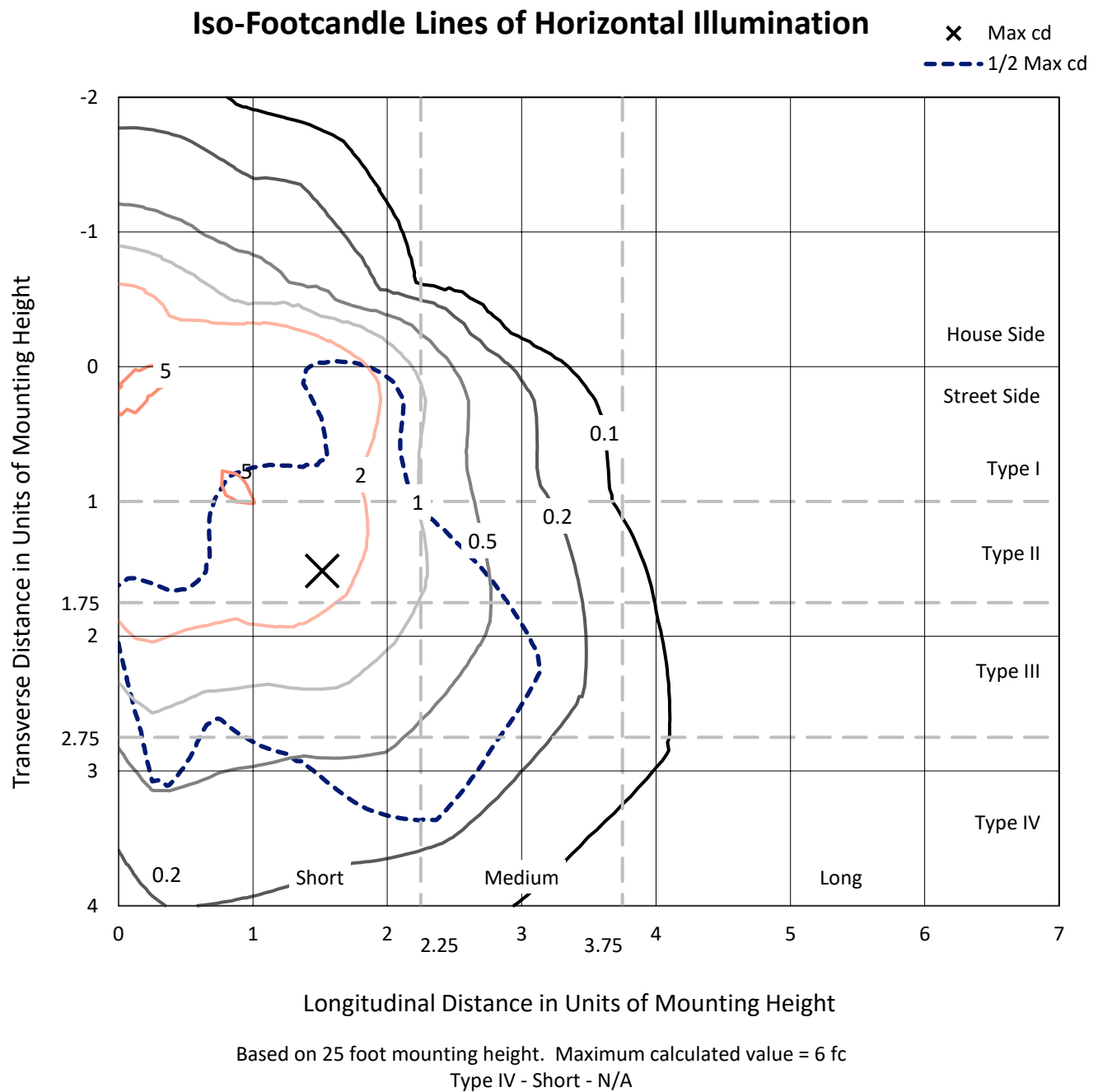
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16441 lumens
Efficiency: N/A
Efficacy: 116.0 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

Input Watts (W): 141.7
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

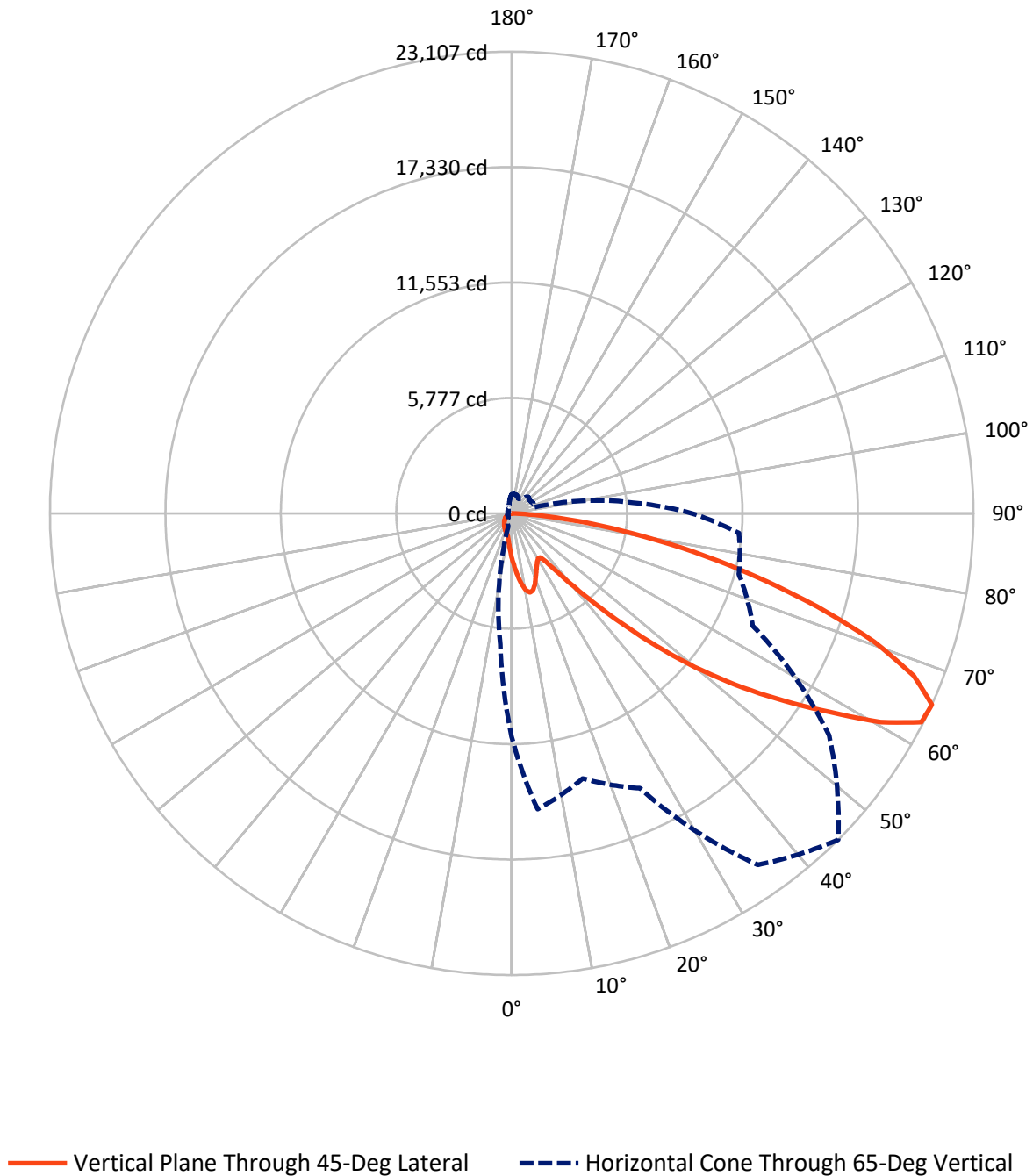


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Luminous Intensity Polar Plot



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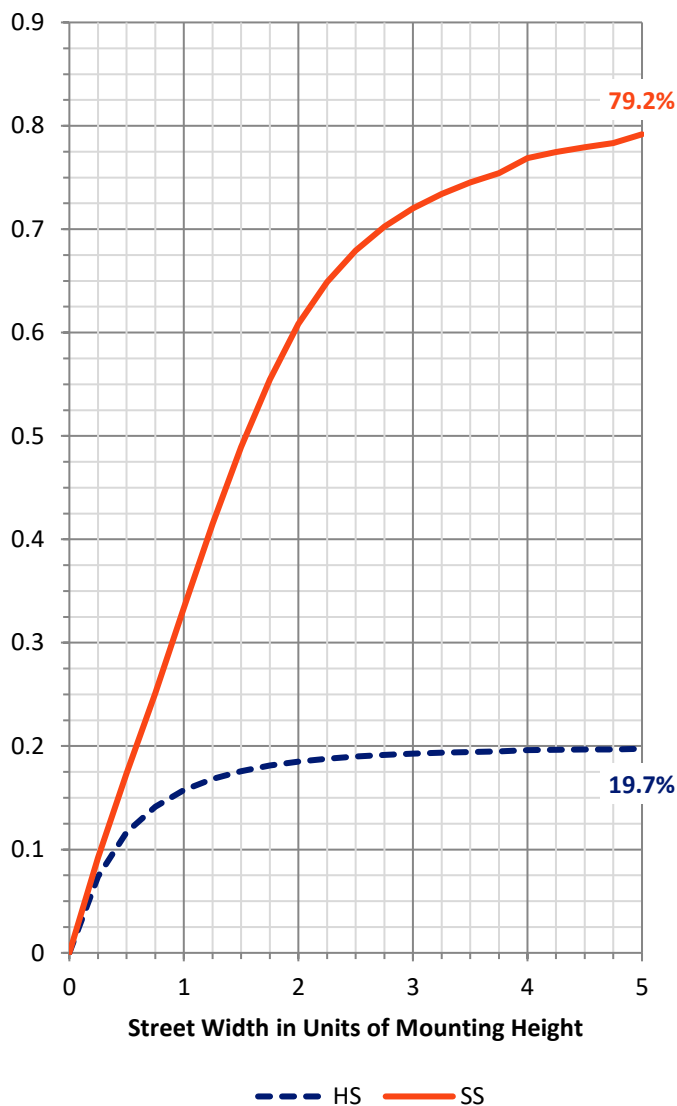
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3268.0	0.0	3268.0
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	13173.0	0.0	13173.0
	% Fixture	80.1	0.0	80.1
Total	Lumens	16441.0	0.0	16441.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.1	1.4
10°-20°	671.9	4.1
20°-30°	989.8	6.0
30°-40°	1271.7	7.7
40°-50°	2056.7	12.5
50°-60°	3606.5	21.9
60°-70°	4512.8	27.4
70°-80°	2637.0	16.0
80°-90°	470.5	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°	16441.0	100.0
0°-180°	16441.0	100.0

Coefficient of Utilization



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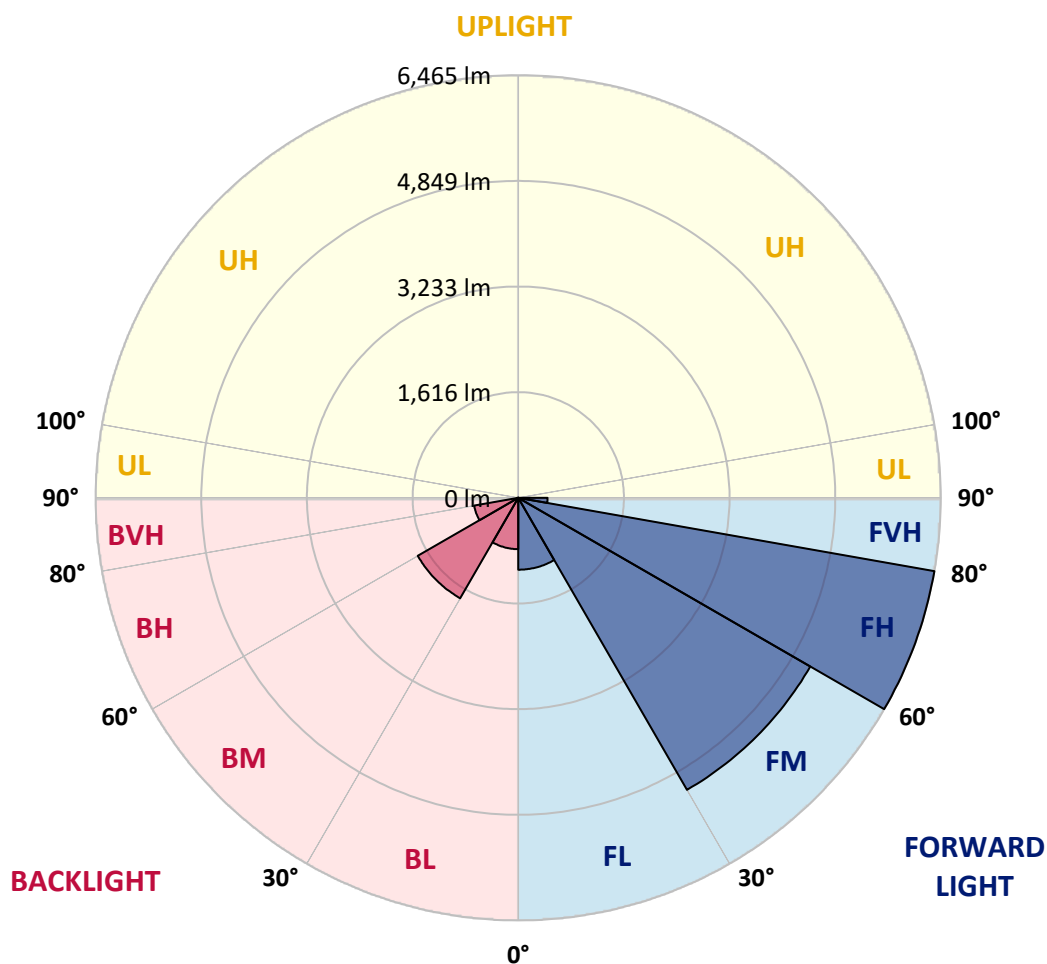
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1100.1	6.7			
FM	(30°-60°)	5159.4	31.4			
FH	(60°-80°)	6465.1	39.3			G3/7500
FVH	(80°-90°)	448.4	2.7			G3/500
BL	(0°-30°)	785.8	4.8	B2/1000		
BM	(30°-60°)	1775.5	10.8	B2/2500		
BH	(60°-80°)	684.7	4.2	B2/1000		G2/1000
BVH	(80°-90°)	22.0	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°	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5
2.5°	2550.6	2569.9	2612.9	2635.6	2670.7	2673.0	2673.0	2642.3	2641.2	2579.0	2572.1
5°	2850.8	2896.1	2998.0	3103.4	3126.0	3131.7	3120.3	3059.2	3013.9	2892.7	2866.6
7.5°	3148.7	3235.9	3391.0	3531.5	3576.8	3576.8	3549.6	3449.9	3357.1	3181.5	3115.8
10°	3395.6	3505.4	3716.1	3873.6	3925.6	3914.3	3858.8	3733.0	3605.1	3392.1	3306.1
12.5°	3558.7	3682.1	3913.1	4040.0	4093.2	4063.8	4000.4	3878.1	3743.3	3519.0	3421.7
15°	3640.2	3769.3	3969.8	4036.7	4021.9	3991.3	3983.4	3924.5	3822.5	3613.0	3506.5
17.5°	3675.3	3795.4	3934.7	3892.7	3768.2	3744.4	3823.7	3898.5	3873.6	3694.6	3594.9
20°	3708.1	3809.0	3850.9	3665.1	3447.7	3426.2	3578.0	3790.9	3899.6	3770.5	3678.7
22.5°	3753.4	3815.8	3729.7	3425.0	3190.6	3140.7	3308.4	3628.9	3907.5	3866.7	3775.0
25°	3815.8	3832.8	3596.0	3197.4	2961.7	2911.9	3068.2	3448.8	3894.0	3971.0	3892.7
27.5°	3890.5	3855.4	3468.1	3007.0	2779.4	2733.0	2889.3	3275.5	3855.4	4075.1	4019.6
30°	3988.0	3884.9	3341.2	2859.9	2649.2	2615.2	2765.9	3126.0	3807.9	4207.6	4177.1
32.5°	4086.5	3897.4	3223.4	2773.8	2619.7	2632.2	2755.6	3045.6	3755.7	4334.5	4349.3
35°	4193.0	3936.9	3165.6	2858.7	2865.5	2974.2	3025.2	3120.3	3747.8	4506.6	4564.4
37.5°	4337.9	4025.3	3234.7	3281.2	3516.8	3742.2	3700.2	3486.2	3839.5	4763.8	4871.4
40°	4546.3	4180.5	3536.0	4000.4	4484.0	4849.9	4690.2	4151.0	4120.4	5134.1	5294.9
42.5°	4849.9	4427.4	4070.6	4879.3	5699.3	6301.9	5873.8	5008.5	4612.0	5663.0	5868.0
45°	5298.3	4827.2	4717.4	5806.9	7197.8	8146.9	7256.7	5922.4	5300.6	6463.9	6624.7
47.5°	5920.2	5415.0	5323.2	6784.4	9019.0	10246.7	8790.2	6769.6	6084.4	7555.7	7593.0
50°	6745.8	6206.7	5897.5	7853.6	11015.8	12387.4	10322.7	7587.4	6982.6	8889.9	8846.9
52.5°	7835.4	7311.0	6566.9	8871.8	13069.3	14482.7	11861.8	8305.5	8097.1	10438.2	10349.8
55°	9321.5	8972.5	7482.1	9843.6	15121.5	16590.5	13341.1	8982.8	9569.4	12277.6	11742.9
57.5°	11165.3	11414.5	8801.6	10970.5	16966.5	18762.8	14827.0	9929.6	11481.3	14334.3	12551.6
60°	12354.5	14661.7	11328.4	12636.6	19063.1	21219.6	16863.5	11730.5	13490.5	15071.7	12397.6
62.5°	12066.8	15694.6	14354.7	14763.6	20990.8	23005.6	18859.2	13539.2	13868.9	13985.5	11210.6
65°	11184.6	14861.1	13737.5	15177.0	21478.9	23106.5	19392.6	13305.9	11764.4	11417.9	9011.1
67.5°	9970.4	13872.2	12270.7	14080.6	20596.6	21697.5	18399.3	11770.1	9091.4	8568.2	6537.4
70°	8659.9	12778.2	11308.0	12850.6	18914.6	19241.9	16710.6	10352.1	6687.0	5786.5	4195.2
72.5°	7416.4	11638.8	10648.8	11590.0	16670.9	15993.6	14512.2	9098.3	4869.1	4173.7	2982.1
75°	6144.5	9958.0	9709.9	10092.8	13720.4	12598.1	12057.8	7533.0	3821.4	3019.5	2058.0
77.5°	4741.1	7781.1	8351.9	8082.3	9657.8	9357.6	9346.4	5660.8	2791.9	2014.9	1290.1
80°	3244.9	5423.0	6524.9	5701.6	6267.9	6114.9	7039.2	3797.6	2025.1	1213.0	718.1
82.5°	1907.3	3301.5	4541.8	2760.2	3465.8	3557.6	4191.8	1847.3	1191.5	279.7	156.3
85°	773.6	1303.6	1775.9	1080.6	1671.8	1410.1	1591.3	518.8	331.9	6.8	0.0
87.5°	194.9	416.8	292.2	121.2	193.7	177.8	140.4	63.4	13.6	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°	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5
2.5°	2528.0	2501.9	2437.3	2372.9	2320.7	2250.5	2204.1	2148.6	2095.3	2047.7	2038.7
5°	2795.3	2709.2	2591.4	2483.8	2374.0	2267.5	2162.1	2051.1	1949.2	1886.9	1847.3
7.5°	3012.8	2861.0	2704.7	2567.6	2435.1	2310.6	2171.3	2036.5	1876.8	1791.8	1714.8
10°	3174.7	2975.4	2770.4	2612.9	2479.3	2358.1	2240.3	2104.4	1911.8	1805.4	1689.8
12.5°	3281.2	3044.5	2804.4	2624.3	2474.8	2380.8	2328.7	2275.4	2084.0	1959.4	1791.8
15°	3354.8	3093.1	2828.2	2598.2	2414.7	2345.6	2397.8	2458.9	2336.6	2192.8	1974.2
17.5°	3435.2	3156.6	2838.3	2528.0	2298.0	2268.6	2403.4	2545.0	2539.3	2396.7	2182.5
20°	3520.2	3212.0	2831.6	2414.7	2156.5	2182.5	2354.7	2518.9	2588.0	2511.0	2320.7
22.5°	3607.4	3265.3	2805.5	2267.5	2024.0	2105.6	2277.7	2421.6	2503.0	2479.3	2334.3
25°	3717.3	3340.1	2767.0	2108.9	1914.1	2027.3	2188.2	2304.9	2361.5	2360.4	2260.7
27.5°	3848.7	3439.7	2746.6	1980.9	1836.0	1939.0	2081.8	2185.9	2225.6	2225.6	2146.4
30°	4001.5	3557.6	2723.9	1897.2	1790.7	1847.3	1958.3	2060.2	2099.8	2099.8	2033.1
32.5°	4171.4	3670.8	2669.6	1846.1	1756.6	1757.8	1828.1	1921.0	1968.5	1975.3	1927.7
35°	4375.3	3792.0	2550.6	1805.4	1717.1	1670.6	1704.6	1781.6	1838.2	1853.0	1823.5
37.5°	4642.5	3940.4	2380.8	1745.4	1655.9	1578.9	1586.8	1645.6	1708.0	1730.6	1711.3
40°	5001.6	4114.8	2204.1	1659.3	1569.8	1478.0	1474.7	1517.7	1578.9	1603.8	1593.6
42.5°	5476.2	4324.3	2035.3	1576.6	1465.6	1371.6	1365.9	1399.9	1453.1	1479.2	1474.7
45°	6083.3	4581.4	1890.3	1512.1	1363.7	1270.8	1268.5	1296.8	1343.3	1370.4	1364.8
47.5°	6927.1	4838.5	1791.8	1478.0	1283.3	1188.1	1192.7	1217.6	1259.4	1278.7	1270.8
50°	8026.9	4916.7	1742.0	1478.0	1240.2	1114.5	1137.1	1157.5	1189.2	1200.6	1190.3
52.5°	9082.4	4658.4	1696.7	1487.1	1245.9	1052.2	1100.8	1115.6	1142.8	1147.4	1132.6
55°	9600.0	4004.9	1634.4	1489.4	1280.9	999.0	1071.4	1098.6	1108.8	1107.7	1082.8
57.5°	9422.2	3238.2	1529.0	1480.3	1304.7	965.0	1035.2	1087.3	1094.1	1083.9	1037.5
60°	8798.2	2384.1	1448.6	1413.5	1295.7	954.8	979.7	1062.4	1072.6	1059.0	983.1
62.5°	7751.6	1654.8	1386.3	1266.3	1256.0	951.4	892.5	1008.0	1032.9	1013.7	902.7
65°	6102.5	1168.8	1193.8	1110.0	1170.0	933.3	801.9	942.4	976.3	946.9	790.6
67.5°	4129.5	843.8	967.3	1005.7	1030.6	892.5	736.2	867.6	912.9	874.4	660.3
70°	2230.1	592.3	638.8	847.2	875.6	822.3	677.3	791.7	843.8	801.9	538.0
72.5°	1317.2	425.9	447.4	680.7	729.4	723.8	611.6	703.4	766.8	717.0	437.2
75°	726.0	287.7	319.4	493.8	592.3	558.4	525.5	595.7	660.3	611.6	337.5
77.5°	325.0	172.2	222.0	323.9	465.6	382.8	406.6	464.3	524.4	473.4	225.4
80°	125.8	96.2	147.2	176.7	338.7	211.8	261.7	342.0	385.1	344.3	137.0
82.5°	15.9	43.0	63.4	69.1	197.1	112.1	151.8	215.1	211.8	183.5	69.1
85°	0.0	7.9	9.0	4.5	85.0	40.8	49.8	70.2	65.7	49.8	5.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	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°	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5
2.5°	1983.2	1942.5	1922.1	1905.1	1921.0	1930.0	1930.0	1968.5	1991.2	2000.2	2063.6
5°	1747.6	1671.8	1620.7	1590.2	1600.3	1611.7	1624.2	1672.9	1705.7	1727.2	1825.7
7.5°	1561.9	1446.4	1375.0	1337.6	1343.3	1351.3	1361.4	1409.0	1441.9	1470.2	1580.0
10°	1470.2	1307.1	1213.0	1167.7	1159.8	1155.3	1151.9	1180.2	1205.1	1227.7	1336.5
12.5°	1474.7	1247.0	1132.6	1077.1	1053.3	1026.1	1004.6	1009.1	1025.0	1053.3	1122.4
15°	1532.4	1227.7	1090.7	1021.6	982.0	950.3	924.2	918.5	924.2	928.8	971.8
17.5°	1610.6	1225.5	1054.4	968.4	927.6	901.6	877.8	869.8	870.9	876.7	888.0
20°	1672.9	1218.7	1013.7	917.4	881.2	858.5	834.8	826.8	829.1	830.2	842.7
22.5°	1705.7	1208.5	968.4	866.4	835.9	813.2	791.7	790.6	790.6	797.3	806.5
25°	1705.7	1186.9	927.6	817.7	790.6	770.2	744.2	748.7	750.9	759.9	773.6
27.5°	1664.9	1146.2	894.7	775.8	747.5	727.1	703.4	709.0	712.4	722.6	739.6
30°	1612.8	1097.5	857.4	736.2	703.4	688.6	668.2	670.6	675.1	686.3	705.6
32.5°	1557.4	1039.8	826.8	696.6	663.7	652.4	629.8	633.1	637.7	650.2	671.7
35°	1496.2	971.8	790.6	660.3	627.5	618.4	592.3	594.6	601.4	615.0	636.5
37.5°	1431.6	916.2	754.3	625.2	591.2	582.2	554.9	557.3	565.2	581.1	601.4
40°	1368.2	861.9	715.9	587.8	553.8	545.9	516.5	518.8	527.8	544.8	566.3
42.5°	1299.1	820.0	665.9	549.3	513.1	505.1	478.0	481.3	491.6	508.5	530.0
45°	1216.5	792.8	610.5	513.1	472.3	464.3	439.4	446.3	457.6	474.6	497.2
47.5°	1131.5	781.5	564.1	474.6	430.4	423.6	403.2	414.5	427.0	440.5	465.6
50°	1049.9	766.8	516.5	438.3	394.1	387.3	373.7	388.5	401.0	413.4	437.2
52.5°	957.0	735.0	473.4	406.6	363.6	361.3	354.5	368.1	379.5	390.7	411.1
55°	860.8	684.1	436.0	378.3	337.5	339.8	336.4	347.7	356.8	367.0	385.1
57.5°	776.9	619.5	406.6	347.7	314.9	321.6	317.1	322.8	328.4	340.9	355.7
60°	692.0	542.5	373.7	311.5	292.2	300.1	287.7	286.6	288.8	292.2	319.4
62.5°	577.6	462.1	333.0	279.7	267.3	270.7	246.9	228.8	228.8	232.2	273.0
65°	464.3	387.3	287.7	243.5	233.3	231.0	197.1	172.2	169.8	180.1	215.1
67.5°	381.7	321.6	242.4	202.7	196.0	198.2	173.3	148.4	146.1	157.4	183.5
70°	316.0	259.3	193.7	156.3	163.1	173.3	148.4	124.5	121.2	131.4	156.3
72.5°	251.4	202.7	148.4	115.5	134.8	147.2	121.2	98.5	96.2	105.4	129.1
75°	184.6	144.9	100.8	83.8	104.2	115.5	88.4	70.2	66.8	74.7	98.5
77.5°	114.4	81.6	63.4	49.8	71.3	77.0	46.4	40.8	39.7	45.3	62.3
80°	53.2	35.2	30.5	17.0	26.0	30.5	19.3	21.5	22.7	27.2	38.5
82.5°	14.8	5.6	1.1	0.0	0.0	9.0	4.5	9.0	11.3	17.0	24.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	5.6	10.1	18.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	9.0
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: P967910

CATALOG NUMBER: NAV-SB5A-835-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5	2276.5
2.5°	2111.2	2156.5	2229.0	2303.7	2377.4	2452.1	2524.6	2550.6
5°	1915.2	2019.5	2163.3	2317.3	2475.9	2636.7	2784.0	2850.8
7.5°	1696.7	1846.1	2062.5	2303.7	2556.4	2808.9	3041.1	3148.7
10°	1463.3	1652.5	1899.4	2225.6	2588.0	2936.8	3256.2	3395.6
12.5°	1241.4	1439.5	1712.5	2103.3	2563.1	3010.5	3394.5	3558.7
15°	1055.5	1231.1	1525.6	1958.3	2482.7	3015.0	3460.1	3640.2
17.5°	916.2	1030.6	1335.4	1797.4	2377.4	2973.1	3482.7	3675.3
20°	847.2	878.9	1088.4	1591.3	2278.8	2933.4	3505.4	3708.1
22.5°	806.5	814.4	890.2	1325.1	2161.0	2921.0	3545.1	3753.4
25°	773.6	775.8	796.2	1049.9	1980.9	2913.0	3606.3	3815.8
27.5°	740.8	740.8	752.0	846.0	1736.2	2879.1	3685.5	3890.5
30°	707.9	707.9	715.9	748.7	1449.8	2812.3	3780.7	3988.0
32.5°	673.9	673.9	680.7	704.5	1157.5	2728.4	3867.8	4086.5
35°	639.9	637.7	646.7	671.7	920.9	2622.0	3955.1	4193.0
37.5°	603.7	602.6	611.6	639.9	795.1	2498.5	4020.8	4337.9
40°	565.2	565.2	575.3	606.0	758.8	2343.4	4125.0	4546.3
42.5°	530.0	527.8	539.2	576.5	731.6	2195.0	4311.9	4849.9
45°	496.1	491.6	501.7	548.2	684.1	2142.9	4660.7	5298.3
47.5°	464.3	453.0	462.1	514.2	641.0	2337.7	5231.5	5920.2
50°	438.3	416.8	424.8	480.2	608.2	2760.2	5972.3	6745.8
52.5°	411.1	382.8	387.3	438.3	578.7	3162.2	6775.2	7835.4
55°	382.8	351.1	353.4	396.4	536.9	3222.3	7559.1	9321.5
57.5°	351.1	321.6	321.6	357.9	506.2	2793.0	8161.6	11165.3
60°	316.0	296.7	291.1	327.3	533.4	1970.8	8231.9	12354.5
62.5°	277.5	267.3	259.3	297.9	553.8	1167.7	7666.7	12066.8
65°	233.3	231.0	225.4	327.3	466.7	689.7	6581.6	11184.6
67.5°	196.0	192.5	192.5	343.2	354.5	433.8	5142.0	9970.4
70°	168.7	156.3	156.3	259.3	215.1	300.1	3590.4	8659.9
72.5°	141.6	128.0	118.9	207.3	160.8	219.8	2243.7	7416.4
75°	113.3	103.1	91.7	137.0	120.0	166.5	1303.6	6144.5
77.5°	81.6	77.0	64.6	100.8	87.2	120.0	775.8	4741.1
80°	41.9	43.0	40.8	57.8	58.9	81.6	441.7	3244.9
82.5°	24.9	19.3	21.5	28.3	33.9	46.4	166.5	1907.3
85°	15.9	10.1	10.1	13.6	17.0	18.1	50.9	773.6
87.5°	7.9	3.4	4.5	6.8	5.6	4.5	2.3	194.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)