

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: P967383

Luminaire Tested: **NAV-SB4D-835-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967383
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-SB4D-835-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 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: 29591.7 lumens
Efficiency: N/A
Efficacy: 100.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

Input Watts (W): 293.6
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



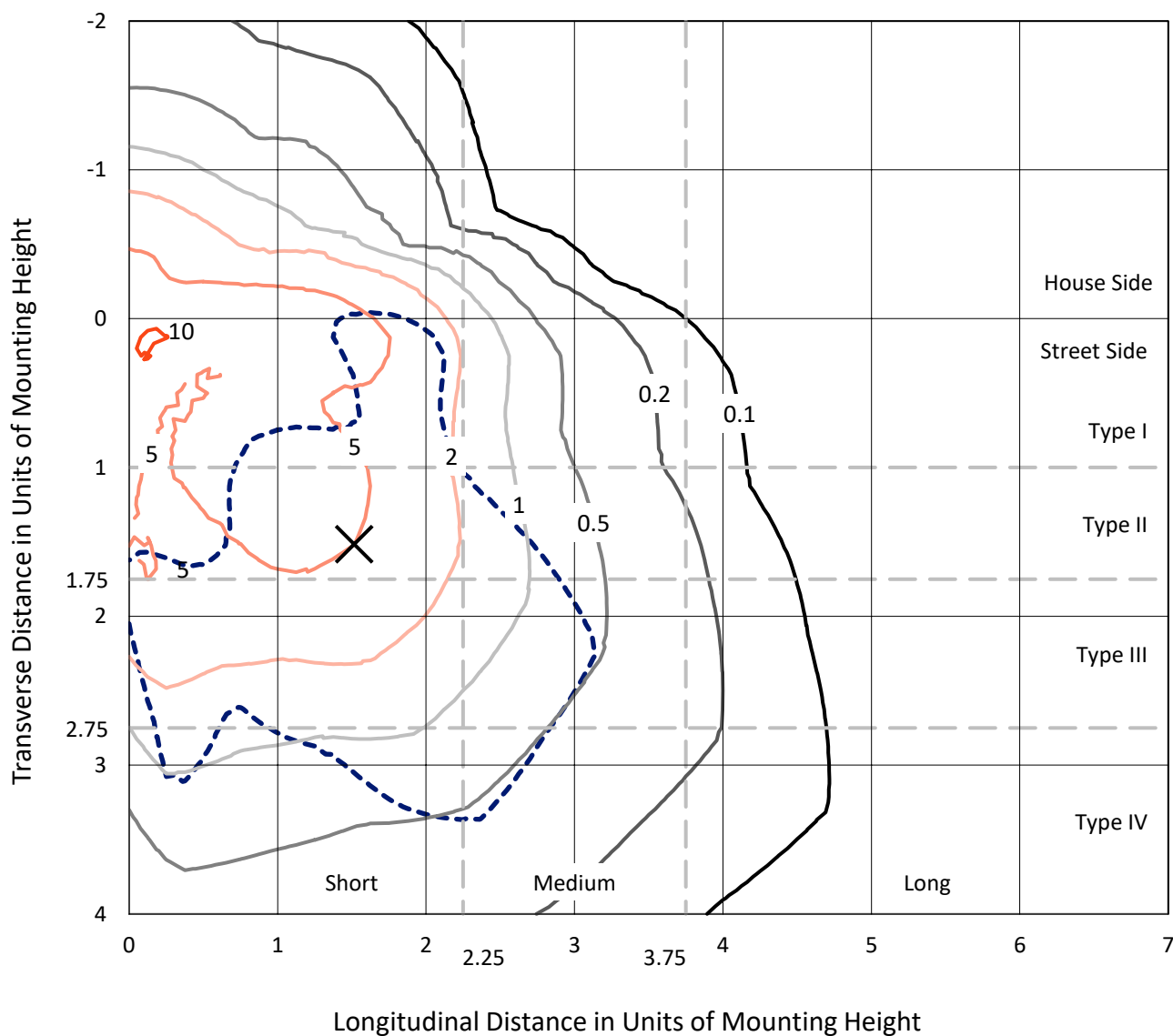
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

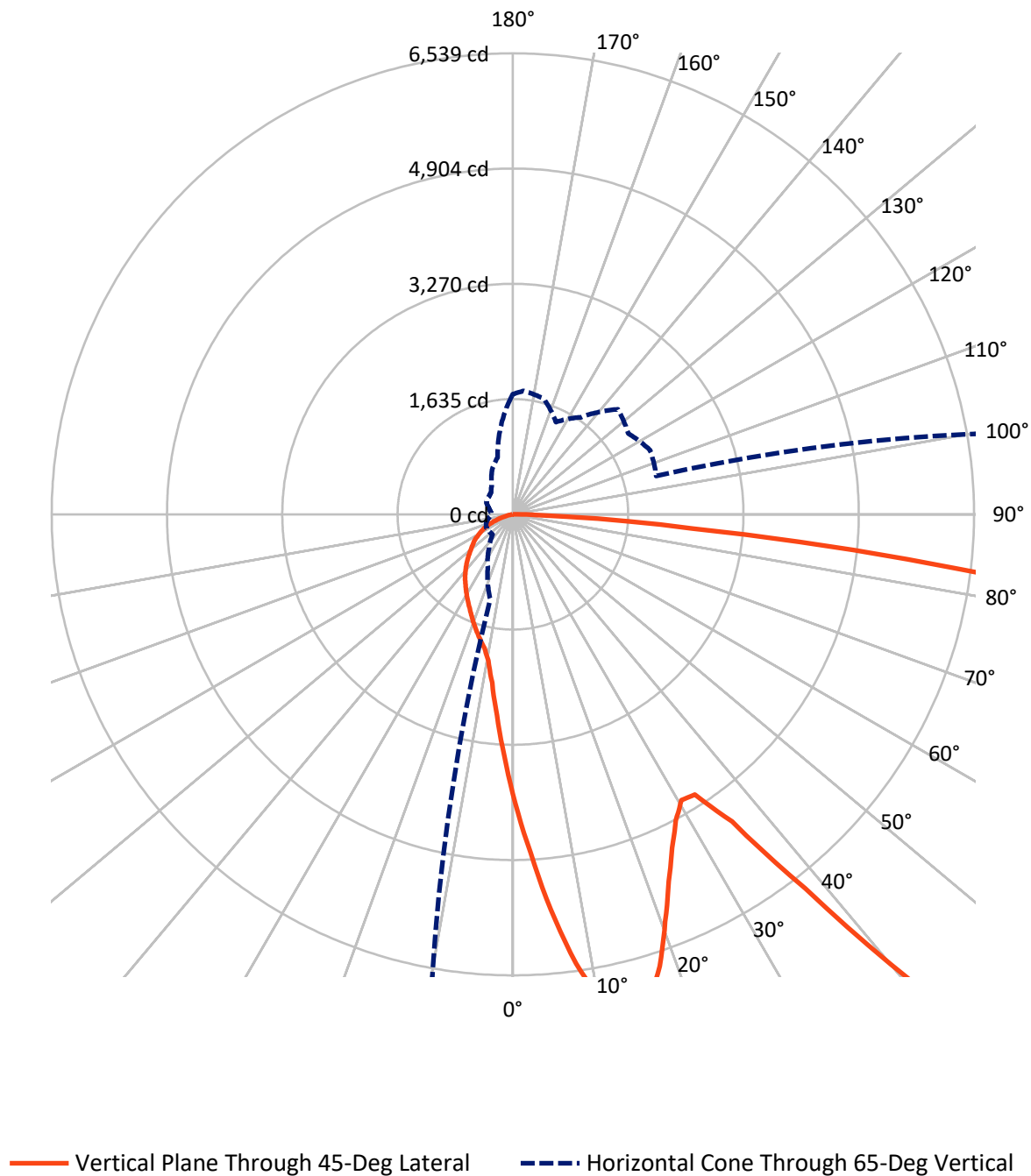


Based on 25 foot mounting height. Maximum calculated value = 10.8 fc

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	5881.9	0.0	5881.9
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	23709.8	0.0	23709.8
	% Fixture	80.1	0.0	80.1
Total	Lumens	29591.7	0.0	29591.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	403.4	1.4
10°-20°	1209.3	4.1
20°-30°	1781.6	6.0
30°-40°	2288.8	7.7
40°-50°	3701.7	12.5
50°-60°	6491.3	21.9
60°-70°	8122.4	27.4
70°-80°	4746.4	16.0
80°-90°	846.8	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°	29591.7	100.0
0°-180°	29591.7	100.0

Coefficient of Utilization



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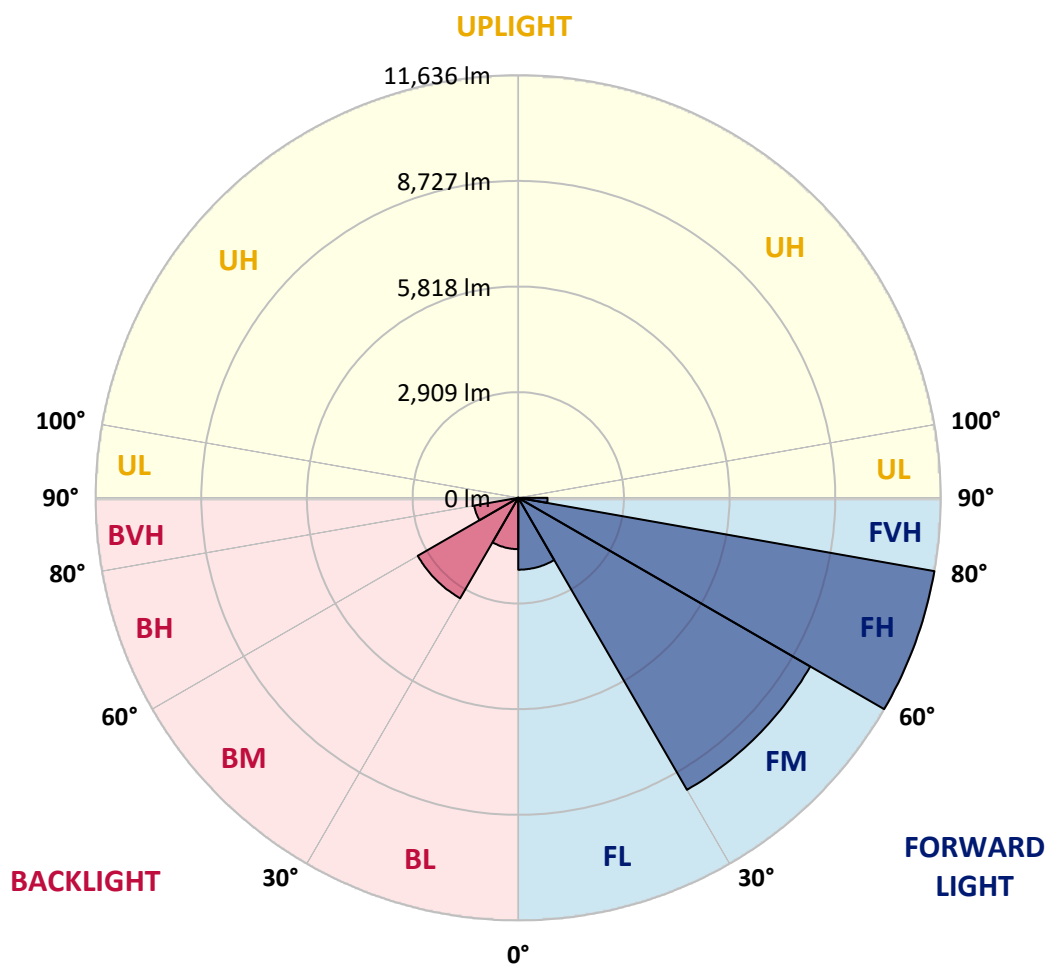
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1980.0	6.7			
FM	(30°-60°)	9286.2	31.4			
FH	(60°-80°)	11636.4	39.3			G4/12000
FVH	(80°-90°)	807.1	2.7			G5
BL	(0°-30°)	1414.3	4.8	B3/2500		
BM	(30°-60°)	3195.6	10.8	B3/5000		
BH	(60°-80°)	1232.4	4.2	B3/2500		G3/2500
BVH	(80°-90°)	39.7	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5
2.5°	4590.9	4625.5	4703.0	4743.7	4806.9	4811.0	4811.0	4756.0	4754.0	4641.8	4629.6
5°	5131.0	5212.6	5396.1	5585.6	5626.4	5636.6	5616.3	5506.2	5424.6	5206.5	5159.6
7.5°	5667.2	5824.2	6103.5	6356.2	6437.8	6437.8	6388.8	6209.4	6042.3	5726.4	5608.1
10°	6111.6	6309.4	6688.5	6971.8	7065.6	7045.2	6945.4	6719.1	6488.8	6105.5	5950.5
12.5°	6405.1	6627.3	7043.2	7271.6	7367.4	7314.4	7200.2	6980.0	6737.4	6333.8	6158.5
15°	6551.9	6784.4	7145.2	7265.4	7239.0	7183.9	7169.7	7063.6	6880.1	6503.0	6311.4
17.5°	6615.1	6831.2	7081.9	7006.5	6782.3	6739.5	6882.2	7016.7	6971.8	6649.8	6470.4
20°	6674.3	6855.7	6931.2	6596.8	6205.3	6166.6	6439.9	6823.1	7018.8	6786.4	6621.3
22.5°	6755.8	6867.9	6713.0	6164.7	5742.7	5653.0	5954.6	6531.5	7033.0	6959.6	6794.5
25°	6867.9	6898.5	6472.5	5754.9	5330.8	5241.1	5522.5	6207.4	7008.5	7147.2	7006.5
27.5°	7002.5	6939.2	6242.0	5412.4	5002.6	4919.1	5200.3	5895.5	6939.2	7334.8	7234.9
30°	7177.8	6992.2	6013.8	5147.3	4768.2	4707.0	4978.2	5626.4	6853.7	7573.2	7518.2
32.5°	7355.1	7014.7	5801.7	4992.5	4715.2	4737.7	4959.9	5481.7	6759.9	7801.6	7828.1
35°	7546.8	7086.0	5697.8	5145.3	5157.6	5353.3	5445.0	5616.3	6745.6	8111.4	8215.4
37.5°	7807.7	7245.0	5822.1	5905.7	6329.8	6735.4	6659.9	6274.7	6910.8	8574.2	8767.8
40°	8182.8	7524.3	6364.4	7200.2	8070.6	8729.1	8441.7	7471.3	7416.3	9240.8	9530.2
42.5°	8729.1	7968.8	7326.6	8782.1	10258.0	11342.5	10572.0	9014.6	8301.1	10192.8	10561.8
45°	9536.4	8688.3	8490.6	10451.7	12955.1	14663.3	13061.1	10659.7	9540.5	11634.1	11923.5
47.5°	10655.6	9746.4	9581.3	12211.0	16233.0	18442.8	15821.3	12184.5	10951.2	13599.3	13666.5
50°	12141.6	11171.4	10614.8	14135.4	19827.1	22295.8	18579.5	13656.3	12567.7	16000.7	15923.2
52.5°	14102.8	13159.0	11819.6	15968.1	23522.9	26067.1	21349.8	14948.8	14573.7	18787.4	18628.4
55°	16777.4	16149.5	13466.8	17717.1	27216.8	29860.8	24012.3	16167.8	17223.8	22098.0	21135.8
57.5°	20096.1	20544.6	15841.7	19745.5	30537.6	33770.8	26686.8	17872.1	20664.9	25800.1	22591.3
60°	22236.7	26389.2	20389.7	22744.2	34311.1	38192.4	30352.2	21113.4	24281.3	27127.1	22314.1
62.5°	21718.8	28248.4	25836.8	26572.6	37780.7	41407.2	33944.1	24369.0	24962.2	25172.2	20177.7
65°	20130.8	26748.0	24725.8	27316.8	38659.3	41588.8	34904.2	23949.0	21174.6	20550.7	16218.8
67.5°	17945.5	24968.3	22085.8	25343.4	37071.3	39052.7	33116.4	21184.7	16363.5	15421.7	11766.6
70°	15586.9	22999.1	20353.0	23129.5	34044.0	34633.1	30077.0	18632.4	12035.7	10415.0	7550.9
72.5°	13348.5	20948.2	19166.6	20860.6	30005.6	28786.5	26120.1	16375.8	8763.8	7512.1	5367.5
75°	11059.2	17923.0	17476.6	18165.7	24695.1	22674.9	21702.5	13558.5	6878.2	5434.9	3704.0
77.5°	8533.4	14004.9	15032.3	14547.2	17382.9	16842.6	16822.2	10188.7	5025.1	3626.6	2321.9
80°	5840.4	9760.7	11744.1	10262.1	11281.4	11006.2	12669.6	6835.3	3644.9	2183.2	1292.4
82.5°	3432.9	5942.4	8174.7	4968.0	6238.0	6403.2	7544.7	3324.9	2144.6	503.5	281.4
85°	1392.4	2346.4	3196.5	1944.8	3008.9	2538.0	2864.2	933.7	597.3	12.2	0.0
87.5°	350.7	750.2	525.9	218.1	348.6	320.0	252.8	114.2	24.5	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°	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5
2.5°	4550.1	4503.2	4387.0	4270.8	4177.0	4050.6	3967.1	3867.1	3771.4	3685.7	3669.4
5°	5031.2	4876.2	4664.3	4470.5	4272.8	4081.2	3891.6	3691.8	3508.4	3396.2	3324.9
7.5°	5422.6	5149.4	4868.1	4621.4	4382.9	4158.6	3907.9	3665.3	3377.9	3225.0	3086.4
10°	5714.1	5355.3	4986.3	4703.0	4462.4	4244.3	4032.2	3787.7	3441.1	3249.5	3041.6
12.5°	5905.7	5479.6	5047.5	4723.3	4454.2	4285.0	4191.3	4095.5	3751.0	3526.7	3225.0
15°	6038.2	5567.3	5090.3	4676.5	4346.2	4221.9	4315.7	4425.7	4205.6	3946.7	3553.3
17.5°	6183.0	5681.5	5108.6	4550.1	4136.3	4083.2	4325.8	4580.6	4570.5	4313.6	3928.3
20°	6335.8	5781.4	5096.4	4346.2	3881.5	3928.3	4238.2	4533.8	4658.1	4519.5	4177.0
22.5°	6492.9	5877.1	5049.6	4081.2	3643.0	3789.7	4099.6	4358.4	4505.2	4462.4	4201.5
25°	6690.6	6011.7	4980.2	3795.8	3445.1	3649.0	3938.5	4148.5	4250.4	4248.3	4068.9
27.5°	6927.1	6191.1	4943.5	3565.5	3304.5	3490.0	3746.9	3934.5	4005.8	4005.8	3863.1
30°	7202.3	6403.2	4902.8	3414.6	3223.0	3324.9	3524.7	3708.1	3779.5	3779.5	3659.2
32.5°	7508.0	6606.9	4804.9	3322.8	3161.8	3163.9	3290.2	3457.4	3543.0	3555.2	3469.6
35°	7875.0	6825.1	4590.9	3249.5	3090.5	3006.8	3068.0	3206.6	3308.6	3335.0	3282.0
37.5°	8356.1	7092.2	4285.0	3141.4	2980.4	2841.7	2856.1	2962.0	3074.2	3114.9	3080.2
40°	9002.3	7406.1	3967.1	2986.5	2825.4	2660.3	2654.2	2731.6	2841.7	2886.6	2868.3
42.5°	9856.4	7783.2	3663.2	2837.7	2637.9	2468.7	2458.5	2519.7	2615.5	2662.3	2654.2
45°	10949.2	8246.0	3402.4	2721.5	2454.5	2287.3	2283.2	2334.1	2417.8	2466.7	2456.5
47.5°	12467.9	8708.7	3225.0	2660.3	2309.7	2138.5	2146.7	2191.4	2266.9	2301.5	2287.3
50°	14447.3	8849.4	3135.3	2660.3	2232.2	2005.9	2046.7	2083.4	2140.5	2160.9	2142.6
52.5°	16347.2	8384.6	3053.8	2676.6	2242.4	1893.8	1981.5	2008.0	2056.9	2065.1	2038.5
55°	17278.8	7208.3	2941.6	2680.7	2305.6	1798.1	1928.4	1977.4	1995.8	1993.7	1948.8
57.5°	16958.8	5828.3	2752.0	2664.4	2348.4	1736.9	1863.2	1957.0	1969.2	1950.9	1867.3
60°	15835.5	4291.2	2607.3	2544.2	2332.1	1718.5	1763.3	1912.1	1930.5	1906.1	1769.5
62.5°	13951.9	2978.3	2495.2	2279.1	2260.7	1712.4	1606.4	1814.4	1859.1	1824.5	1624.7
65°	10983.8	2103.8	2148.6	1997.8	2105.9	1679.8	1443.3	1696.1	1757.3	1704.3	1422.9
67.5°	7432.6	1518.7	1741.0	1810.3	1855.0	1606.4	1325.0	1561.6	1643.1	1573.8	1188.5
70°	4013.9	1066.2	1149.7	1524.9	1575.8	1480.0	1219.0	1425.0	1518.7	1443.3	968.3
72.5°	2370.8	766.5	805.2	1225.2	1312.8	1302.7	1100.8	1266.0	1380.1	1290.4	786.9
75°	1306.7	517.8	574.9	888.8	1066.2	1005.0	945.9	1072.3	1188.5	1100.8	607.5
77.5°	585.1	309.9	399.5	583.0	837.8	689.0	731.8	835.8	943.8	852.1	405.7
80°	226.3	173.3	265.0	318.1	609.6	381.2	470.9	615.6	693.1	619.7	246.6
82.5°	28.5	77.5	114.2	124.3	354.8	201.8	273.2	387.3	381.2	330.3	124.3
85°	0.0	14.2	16.3	8.2	152.9	73.4	89.7	126.4	118.3	89.7	10.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	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°	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5
2.5°	3569.6	3496.2	3459.5	3428.8	3457.4	3473.7	3473.7	3543.0	3583.8	3600.1	3714.3
5°	3145.5	3008.9	2917.1	2862.1	2880.5	2900.9	2923.3	3010.9	3070.1	3108.8	3286.2
7.5°	2811.2	2603.3	2474.9	2407.5	2417.8	2432.0	2450.4	2536.0	2595.1	2646.0	2843.8
10°	2646.0	2352.5	2183.2	2101.8	2087.5	2079.3	2073.3	2124.2	2169.0	2209.8	2405.5
12.5°	2654.2	2244.4	2038.5	1938.7	1895.8	1846.9	1808.2	1816.4	1844.9	1895.8	2020.2
15°	2758.2	2209.8	1963.2	1838.7	1767.4	1710.3	1663.5	1653.3	1663.5	1671.6	1749.1
17.5°	2898.8	2205.7	1897.9	1743.0	1669.6	1622.7	1579.9	1565.6	1567.6	1577.9	1598.3
20°	3010.9	2193.5	1824.5	1651.3	1586.0	1545.2	1502.4	1488.2	1492.2	1494.2	1516.7
22.5°	3070.1	2175.2	1743.0	1559.5	1504.5	1463.7	1425.0	1422.9	1422.9	1435.1	1451.5
25°	3070.1	2136.4	1669.6	1471.8	1422.9	1386.2	1339.4	1347.5	1351.6	1367.9	1392.4
27.5°	2996.7	2063.0	1610.5	1396.5	1345.4	1308.7	1266.0	1276.1	1282.3	1300.6	1331.2
30°	2902.9	1975.4	1543.2	1325.0	1266.0	1239.4	1202.7	1206.8	1214.9	1235.3	1270.0
32.5°	2803.1	1871.4	1488.2	1253.7	1194.6	1174.2	1133.4	1139.6	1147.7	1170.1	1208.9
35°	2693.0	1749.1	1422.9	1188.5	1129.3	1113.0	1066.2	1070.2	1082.5	1106.9	1145.6
37.5°	2576.7	1649.2	1357.7	1125.2	1064.2	1047.9	998.9	1003.0	1017.2	1045.8	1082.5
40°	2462.6	1551.3	1288.3	1058.0	996.8	982.6	929.6	933.7	950.0	980.5	1019.3
42.5°	2338.2	1475.9	1198.6	988.7	923.4	909.2	860.3	866.4	884.8	915.3	954.1
45°	2189.4	1427.0	1098.8	923.4	850.0	835.8	791.0	803.2	823.6	854.1	894.9
47.5°	2036.6	1406.6	1015.2	854.1	774.7	762.4	725.7	746.1	768.5	793.0	837.8
50°	1889.8	1380.1	929.6	788.9	709.4	697.2	672.7	699.3	721.6	744.0	786.9
52.5°	1722.6	1323.1	852.1	731.8	654.4	650.3	638.1	662.6	683.0	703.4	739.9
55°	1549.3	1231.3	784.8	680.9	607.5	611.6	605.5	625.9	642.2	660.5	693.1
57.5°	1398.4	1115.1	731.8	625.9	566.7	578.9	570.8	581.0	591.2	613.6	640.1
60°	1245.6	976.5	672.7	560.6	525.9	540.2	517.8	515.8	519.9	525.9	574.9
62.5°	1039.7	831.7	599.3	503.5	481.1	487.2	444.4	411.7	411.7	417.9	491.3
65°	835.8	697.2	517.8	438.3	419.9	415.8	354.8	309.9	305.8	324.1	387.3
67.5°	687.0	578.9	436.2	364.9	352.7	356.7	311.9	267.0	263.0	283.3	330.3
70°	568.8	466.8	348.6	281.4	293.6	311.9	267.0	224.3	218.1	236.5	281.4
72.5°	452.5	364.9	267.0	208.0	242.6	265.0	218.1	177.3	173.3	189.6	232.4
75°	332.3	261.0	181.4	150.9	187.6	208.0	159.0	126.4	120.2	134.6	177.3
77.5°	205.9	146.8	114.2	89.7	128.4	138.6	83.5	73.4	71.3	81.6	112.1
80°	95.8	63.2	55.0	30.5	46.8	55.0	34.6	38.7	40.8	48.9	69.3
82.5°	26.5	10.1	2.0	0.0	0.0	16.3	8.2	16.3	20.4	30.5	44.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	10.1	18.3	32.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	16.3
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: P967383

CATALOG NUMBER: NAV-SB4D-835-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5	4097.5
2.5°	3799.9	3881.5	4011.8	4146.4	4279.0	4413.4	4543.9	4590.9
5°	3447.2	3634.8	3893.7	4170.9	4456.3	4745.8	5010.8	5131.0
7.5°	3053.8	3322.8	3712.2	4146.4	4601.0	5055.6	5473.5	5667.2
10°	2633.8	2974.2	3418.7	4005.8	4658.1	5286.0	5860.8	6111.6
12.5°	2234.3	2591.0	3082.3	3785.6	4613.2	5418.5	6109.6	6405.1
15°	1899.9	2215.9	2746.0	3524.7	4468.5	5426.7	6227.8	6551.9
17.5°	1649.2	1855.0	2403.4	3235.2	4279.0	5351.2	6268.6	6615.1
20°	1524.9	1581.9	1959.1	2864.2	4101.5	5279.9	6309.4	6674.3
22.5°	1451.5	1465.7	1602.3	2385.1	3889.6	5257.4	6380.7	6755.8
25°	1392.4	1396.5	1433.2	1889.8	3565.5	5243.2	6490.8	6867.9
27.5°	1333.2	1333.2	1353.6	1522.8	3125.1	5182.0	6633.5	7002.5
30°	1274.1	1274.1	1288.3	1347.5	2609.3	5061.8	6804.8	7177.8
32.5°	1213.0	1213.0	1225.2	1268.0	2083.4	4910.9	6961.7	7355.1
35°	1151.8	1147.7	1164.0	1208.9	1657.3	4719.3	7118.6	7546.8
37.5°	1086.6	1084.6	1100.8	1151.8	1431.1	4497.1	7236.9	7807.7
40°	1017.2	1017.2	1035.6	1090.6	1365.8	4217.8	7424.5	8182.8
42.5°	954.1	950.0	970.4	1037.6	1316.9	3950.8	7760.8	8729.1
45°	892.9	884.8	903.1	986.7	1231.3	3857.0	8388.7	9536.4
47.5°	835.8	815.4	831.7	925.5	1153.8	4207.6	9416.2	10655.6
50°	788.9	750.2	764.4	864.4	1094.7	4968.0	10749.4	12141.6
52.5°	739.9	689.0	697.2	788.9	1041.7	5691.6	12194.6	14102.8
55°	689.0	631.9	636.0	713.5	966.3	5799.8	13605.3	16777.4
57.5°	631.9	578.9	578.9	644.2	911.2	5027.1	14689.9	20096.1
60°	568.8	534.1	523.9	589.2	960.1	3547.1	14816.3	22236.7
62.5°	499.5	481.1	466.8	536.2	996.8	2101.8	13799.1	21718.8
65°	419.9	415.8	405.7	589.2	839.9	1241.5	11846.1	20130.8
67.5°	352.7	346.6	346.6	617.7	638.1	780.7	9255.0	17945.5
70°	303.7	281.4	281.4	466.8	387.3	540.2	6462.2	15586.9
72.5°	254.8	230.3	214.0	373.1	289.5	395.4	4038.4	13348.5
75°	203.9	185.5	165.1	246.6	216.1	299.7	2346.4	11059.2
77.5°	146.8	138.6	116.2	181.4	156.9	216.1	1396.5	8533.4
80°	75.4	77.5	73.4	103.9	106.0	146.8	795.0	5840.4
82.5°	44.9	34.6	38.7	50.9	61.2	83.5	299.7	3432.9
85°	28.5	18.3	18.3	24.5	30.5	32.6	91.7	1392.4
87.5°	14.2	6.1	8.2	12.2	10.1	8.2	4.1	350.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)