

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: P965740

Luminaire Tested: **NAV-SB4A-827-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965740
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-SB4A-827-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 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: 12229.3 lumens
Efficiency: N/A
Efficacy: 107.3 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): 114
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



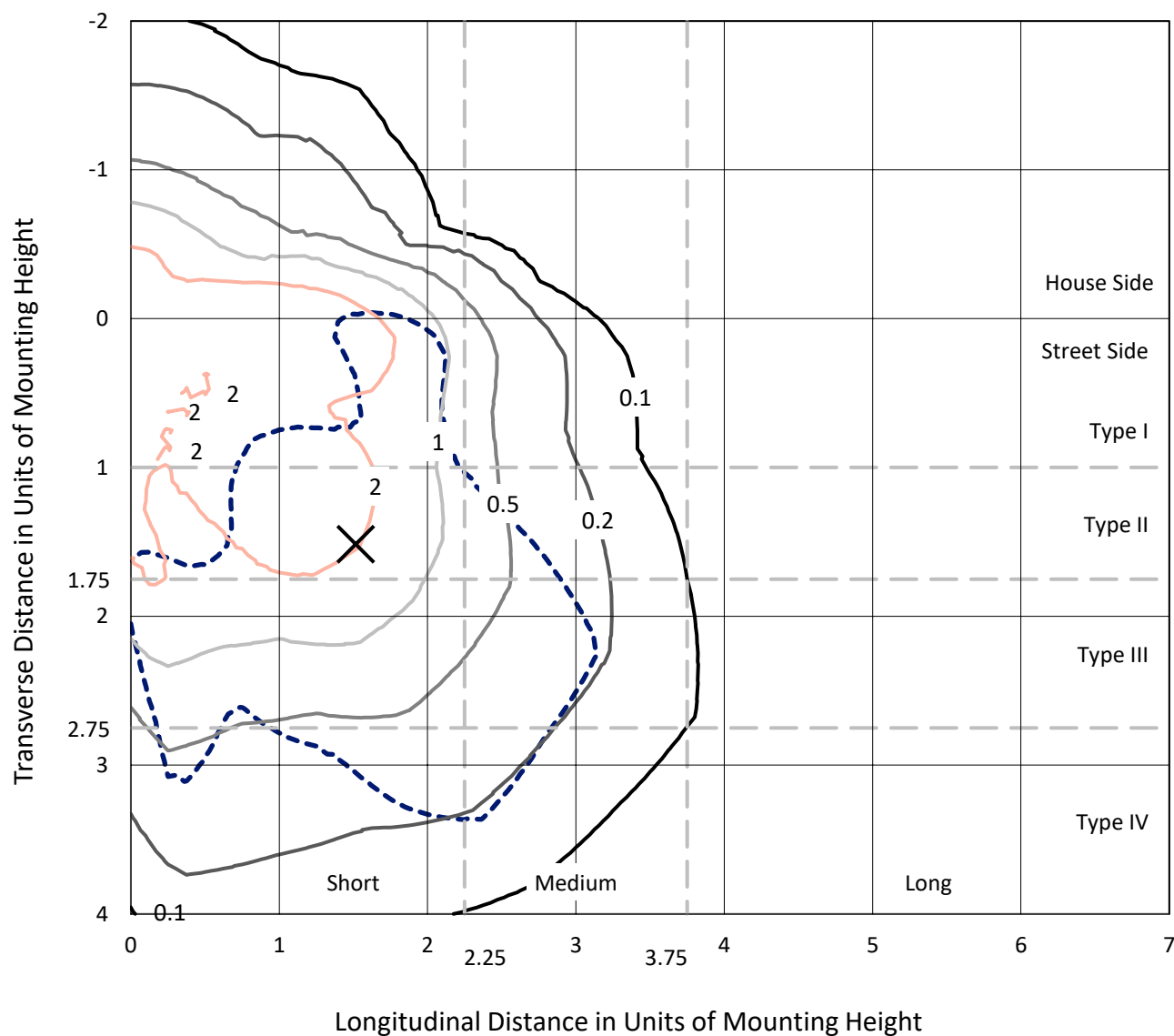
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

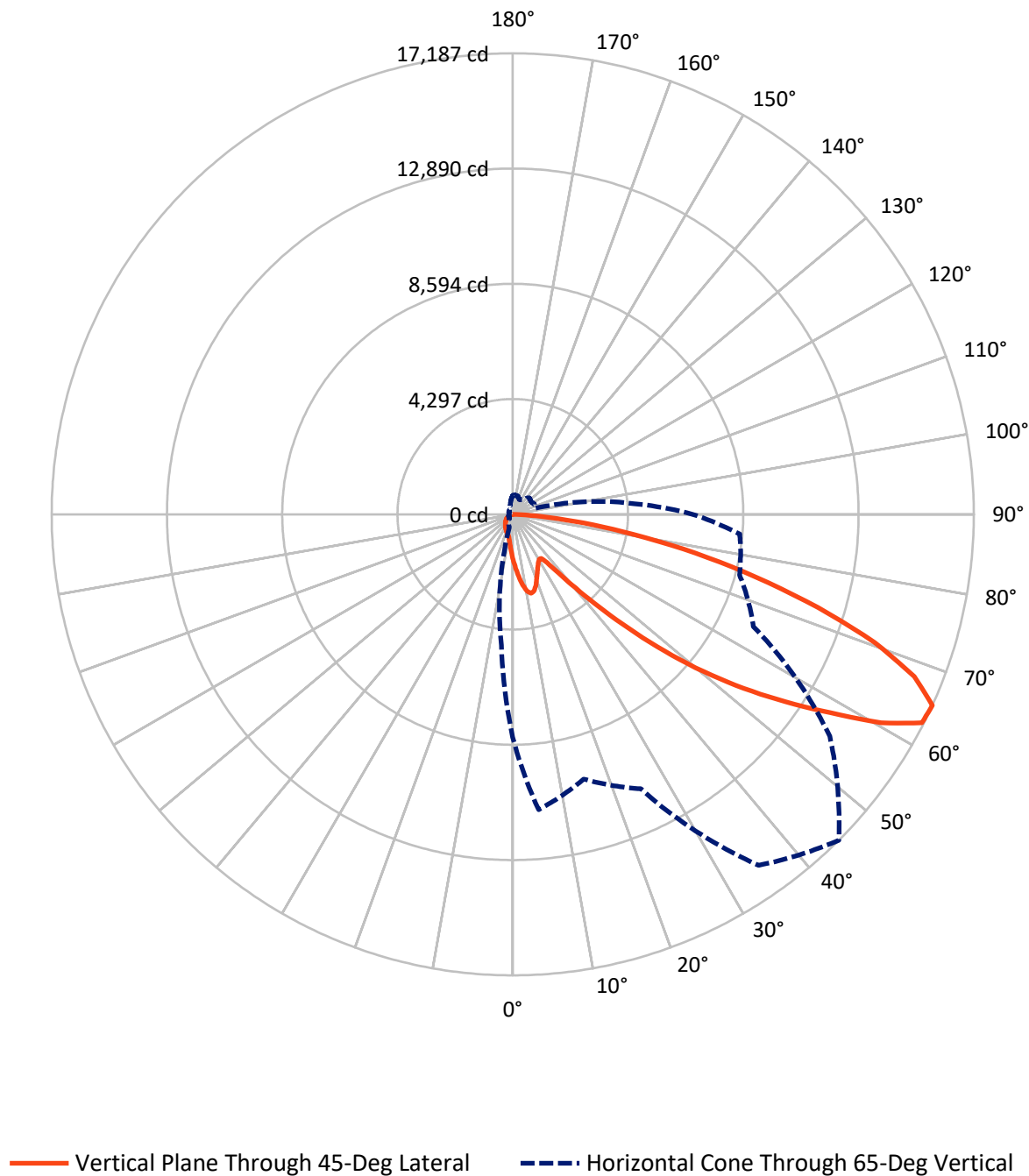


Based on 25 foot mounting height. Maximum calculated value = 4.5 fc

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	2430.8	0.0	2430.8
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	9798.5	0.0	9798.5
	% Fixture	80.1	0.0	80.1
Total	Lumens	12229.3	0.0	12229.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.7	1.4
10°-20°	499.8	4.1
20°-30°	736.3	6.0
30°-40°	945.9	7.7
40°-50°	1529.8	12.5
50°-60°	2682.6	21.9
60°-70°	3356.7	27.4
70°-80°	1961.5	16.0
80°-90°	350.0	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°	12229.3	100.0
0°-180°	12229.3	100.0

Coefficient of Utilization



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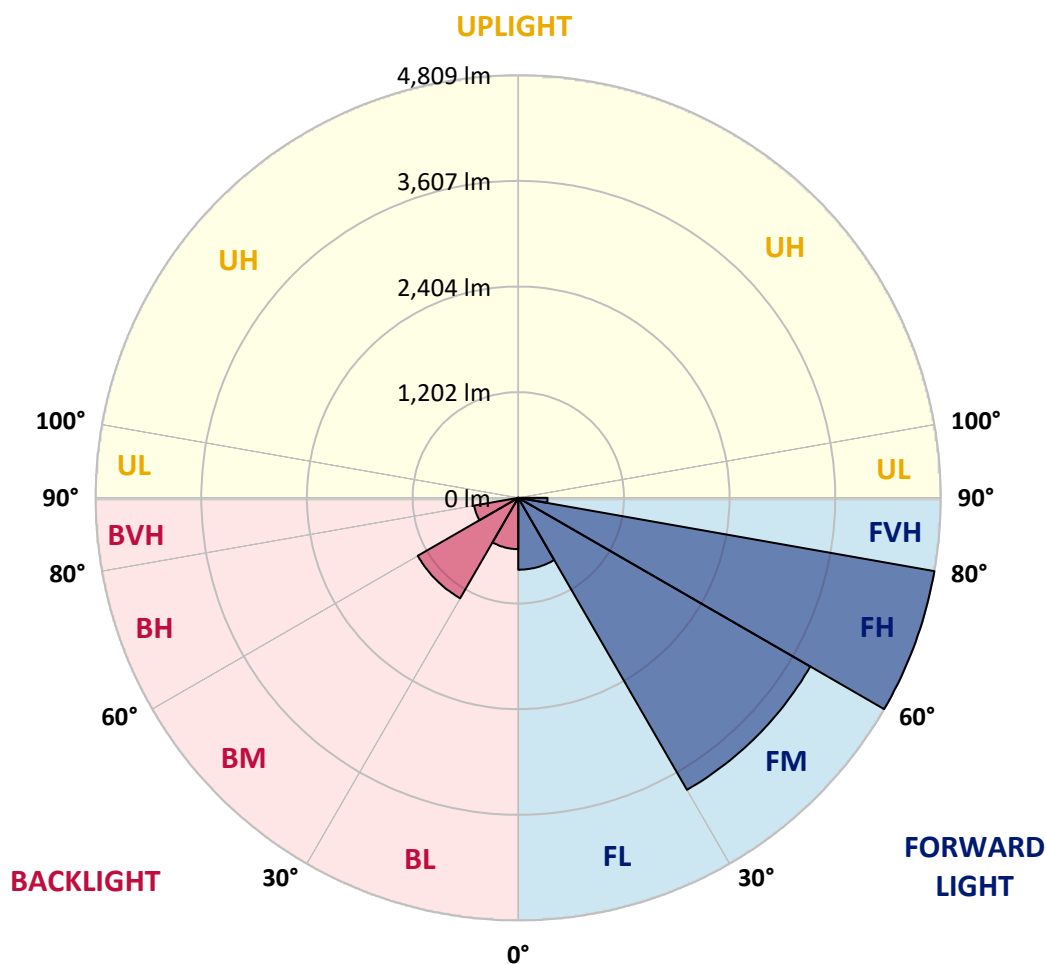
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	818.3	6.7			
FM	(30°-60°)	3837.7	31.4			
FH	(60°-80°)	4808.9	39.3			G2/5000
FVH	(80°-90°)	333.6	2.7			G3/500
BL	(0°-30°)	584.5	4.8	B2/1000		
BM	(30°-60°)	1320.6	10.8	B2/2500		
BH	(60°-80°)	509.3	4.2	B2/1000		G2/1000
BVH	(80°-90°)	16.4	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°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4
2.5°	1897.3	1911.5	1943.6	1960.4	1986.6	1988.2	1988.2	1965.4	1964.6	1918.3	1913.3
5°	2120.5	2154.2	2230.0	2308.4	2325.2	2329.4	2321.0	2275.5	2241.8	2151.7	2132.3
7.5°	2342.0	2406.9	2522.3	2626.9	2660.5	2660.5	2640.3	2566.2	2497.1	2366.5	2317.6
10°	2525.7	2607.4	2764.1	2881.3	2920.0	2911.6	2870.3	2776.8	2681.6	2523.2	2459.2
12.5°	2647.1	2738.9	2910.7	3005.1	3044.7	3022.8	2975.6	2884.7	2784.3	2617.5	2545.1
15°	2707.7	2803.8	2952.8	3002.5	2991.6	2968.9	2963.0	2919.2	2843.4	2687.4	2608.3
17.5°	2733.8	2823.2	2926.8	2895.5	2802.9	2785.2	2844.2	2899.8	2881.3	2748.1	2674.0
20°	2758.3	2833.2	2864.4	2726.2	2564.4	2548.5	2661.3	2819.8	2900.6	2804.6	2736.3
22.5°	2791.9	2838.3	2774.3	2547.6	2373.3	2336.2	2460.8	2699.2	2906.5	2876.1	2808.0
25°	2838.3	2850.9	2674.8	2378.3	2203.0	2166.0	2282.3	2565.4	2896.4	2953.7	2895.5
27.5°	2893.9	2867.7	2579.6	2236.8	2067.4	2032.9	2149.1	2436.4	2867.7	3031.2	2989.9
30°	2966.4	2889.7	2485.3	2127.3	1970.6	1945.2	2057.3	2325.2	2832.4	3129.7	3107.0
32.5°	3039.6	2898.9	2397.7	2063.2	1948.6	1957.9	2049.7	2265.4	2793.6	3224.1	3235.1
35°	3118.9	2928.4	2354.7	2126.4	2131.5	2212.4	2250.3	2321.0	2787.7	3352.2	3395.1
37.5°	3226.7	2994.1	2406.1	2440.6	2615.9	2783.5	2752.3	2593.1	2856.0	3543.4	3623.5
40°	3381.7	3109.5	2630.1	2975.6	3335.4	3607.5	3488.7	3087.6	3064.9	3818.9	3938.6
42.5°	3607.5	3293.2	3027.8	3629.3	4239.3	4687.5	4369.1	3725.4	3430.6	4212.3	4364.9
45°	3941.0	3590.6	3508.9	4319.3	5353.9	6059.9	5397.6	4405.2	3942.8	4808.0	4927.6
47.5°	4403.6	4027.8	3959.6	5046.4	6708.6	7621.8	6538.4	5035.4	4525.8	5620.1	5648.0
50°	5017.8	4616.7	4386.7	5841.7	8193.8	9214.1	7678.3	5643.8	5193.8	6612.6	6580.5
52.5°	5828.3	5438.1	4884.6	6599.1	9721.2	10772.6	8823.2	6177.8	6022.8	7764.2	7698.5
55°	6933.5	6674.1	5565.3	7321.9	11247.8	12340.5	9923.4	6681.7	7118.0	9132.3	8734.7
57.5°	8305.1	8490.4	6546.9	8160.1	12620.2	13956.3	11028.8	7385.9	8540.1	10662.3	9336.2
60°	9189.6	10905.8	8426.4	9399.5	14179.6	15783.7	12543.5	8725.4	10034.6	11210.7	9221.7
62.5°	8975.6	11674.1	10677.4	10981.5	15613.5	17112.3	14027.9	10070.8	10316.0	10402.8	8338.8
65°	8319.4	11054.0	10218.3	11289.0	15976.6	17187.2	14424.7	9897.3	8750.7	8492.9	6702.7
67.5°	7416.3	10318.6	9127.3	10473.6	15320.3	16139.1	13685.9	8754.9	6762.5	6373.2	4862.7
70°	6441.5	9504.7	8411.3	9558.6	14069.3	14312.7	12429.8	7700.2	4973.9	4304.2	3120.5
72.5°	5516.4	8657.3	7920.9	8621.0	12400.3	11896.6	10794.6	6767.6	3621.7	3104.5	2218.2
75°	4570.4	7407.0	7222.5	7507.2	10205.7	9370.8	8969.0	5603.3	2842.5	2246.0	1530.7
77.5°	3526.6	5787.8	6212.3	6011.8	7183.7	6960.5	6952.1	4210.7	2076.6	1498.8	959.6
80°	2413.7	4033.8	4853.5	4241.0	4662.2	4548.5	5235.9	2824.8	1506.3	902.3	534.1
82.5°	1418.7	2455.8	3378.3	2053.1	2578.0	2646.2	3117.9	1374.1	886.3	208.1	116.2
85°	575.4	969.6	1321.0	803.7	1243.5	1048.9	1183.7	385.8	246.8	5.0	0.0
87.5°	144.9	310.1	217.4	90.1	144.0	132.2	104.4	47.2	10.1	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4
2.5°	1880.4	1861.0	1813.0	1764.9	1726.2	1674.0	1639.5	1598.2	1558.6	1523.1	1516.5
5°	2079.2	2015.2	1927.6	1847.6	1765.8	1686.6	1608.2	1525.7	1449.9	1403.5	1374.1
7.5°	2241.0	2128.1	2011.8	1909.9	1811.3	1718.6	1615.0	1514.7	1395.9	1332.8	1275.5
10°	2361.4	2213.2	2060.7	1943.6	1844.2	1754.0	1666.4	1565.3	1422.1	1342.9	1257.0
12.5°	2440.6	2264.5	2086.0	1952.0	1840.8	1770.9	1732.1	1692.5	1550.1	1457.4	1332.8
15°	2495.4	2300.8	2103.6	1932.6	1796.1	1744.8	1783.5	1829.0	1738.0	1631.0	1468.4
17.5°	2555.2	2348.0	2111.2	1880.4	1709.4	1687.5	1787.7	1893.1	1888.8	1782.7	1623.4
20°	2618.4	2389.3	2106.2	1796.1	1604.0	1623.4	1751.5	1873.7	1925.1	1867.8	1726.2
22.5°	2683.2	2428.8	2086.8	1686.6	1505.5	1566.2	1694.2	1801.2	1861.8	1844.2	1736.4
25°	2764.9	2484.4	2058.2	1568.7	1423.7	1508.0	1627.7	1714.4	1756.5	1755.7	1681.6
27.5°	2862.7	2558.6	2043.0	1473.4	1365.6	1442.3	1548.5	1626.0	1655.5	1655.5	1596.4
30°	2976.4	2646.2	2026.1	1411.1	1332.0	1374.1	1456.6	1532.5	1561.9	1561.9	1512.2
32.5°	3102.8	2730.4	1985.7	1373.2	1306.7	1307.5	1359.8	1428.8	1464.2	1469.2	1433.9
35°	3254.5	2820.6	1897.3	1342.9	1277.1	1242.6	1267.9	1325.2	1367.4	1378.3	1356.4
37.5°	3453.3	2931.0	1770.9	1298.3	1231.6	1174.4	1180.3	1224.2	1270.5	1287.3	1272.9
40°	3720.3	3060.6	1639.5	1234.2	1167.7	1099.4	1096.9	1128.9	1174.4	1192.9	1185.3
42.5°	4073.3	3216.6	1513.9	1172.7	1090.2	1020.2	1016.0	1041.3	1080.9	1100.2	1096.9
45°	4524.9	3407.8	1406.1	1124.7	1014.3	945.3	943.6	964.6	999.2	1019.4	1015.2
47.5°	5152.6	3599.0	1332.8	1099.4	954.5	883.8	887.1	905.7	936.8	951.1	945.3
50°	5970.6	3657.2	1295.7	1099.4	922.5	829.0	845.8	861.0	884.6	893.0	885.4
52.5°	6755.8	3465.1	1262.0	1106.2	926.7	782.7	818.9	829.8	850.0	853.4	842.4
55°	7140.8	2979.0	1215.6	1107.8	952.8	743.0	796.9	817.2	824.8	823.9	805.4
57.5°	7008.5	2408.6	1137.3	1101.2	970.6	717.8	770.0	808.7	813.8	806.3	771.7
60°	6544.3	1773.4	1077.5	1051.4	963.8	710.2	728.8	790.3	797.9	787.7	731.2
62.5°	5765.8	1230.8	1031.1	941.9	934.3	707.7	663.9	749.8	768.3	754.0	671.5
65°	4539.2	869.4	888.0	825.6	870.2	694.2	596.4	700.9	726.2	704.3	588.0
67.5°	3071.6	627.6	719.4	748.1	766.6	663.9	547.6	645.3	679.1	650.4	491.2
70°	1658.9	440.6	475.2	630.2	651.2	611.6	503.8	588.9	627.6	596.4	400.2
72.5°	979.8	316.7	332.8	506.4	542.5	538.3	454.9	523.2	570.3	533.3	325.2
75°	540.1	214.0	237.6	367.4	440.6	415.3	390.9	443.1	491.2	454.9	251.0
77.5°	241.8	128.0	165.1	241.0	346.2	284.7	302.5	345.4	390.0	352.2	167.7
80°	93.5	71.6	109.5	131.4	251.9	157.5	194.6	254.4	286.5	256.1	102.0
82.5°	11.8	32.0	47.2	51.4	146.6	83.4	112.9	160.1	157.5	136.5	51.4
85°	0.0	5.9	6.8	3.4	63.1	30.3	37.1	52.3	48.9	37.1	4.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4
2.5°	1475.2	1444.8	1429.7	1417.1	1428.8	1435.6	1435.6	1464.2	1481.0	1487.8	1534.9
5°	1299.9	1243.5	1205.6	1182.8	1190.4	1198.8	1208.1	1244.4	1268.7	1284.7	1358.0
7.5°	1161.7	1075.8	1022.7	995.0	999.2	1005.1	1012.6	1048.1	1072.5	1093.6	1175.3
10°	1093.6	972.2	902.3	868.6	862.6	859.4	856.8	877.8	896.4	913.3	994.1
12.5°	1096.9	927.5	842.4	801.1	783.5	763.3	747.2	750.6	762.4	783.5	834.9
15°	1139.9	913.3	811.3	759.9	730.4	706.8	687.5	683.3	687.5	690.8	722.8
17.5°	1198.0	911.5	784.3	720.3	690.0	670.6	652.9	647.0	647.9	652.1	660.5
20°	1244.4	906.5	754.0	682.4	655.5	638.6	620.9	615.0	616.6	617.6	626.8
22.5°	1268.7	898.9	720.3	644.5	621.8	604.9	588.9	588.0	588.0	593.1	599.8
25°	1268.7	882.9	690.0	608.2	588.0	572.9	553.5	556.9	558.5	565.3	575.4
27.5°	1238.4	852.6	665.5	577.1	556.1	540.9	523.2	527.4	529.9	537.5	550.1
30°	1199.7	816.3	637.8	547.6	523.2	512.2	497.0	498.8	502.1	510.6	524.9
32.5°	1158.4	773.4	615.0	518.1	493.6	485.2	468.4	471.0	474.3	483.6	499.6
35°	1112.9	722.8	588.0	491.2	466.7	460.0	440.6	442.3	447.3	457.5	473.4
37.5°	1064.9	681.5	561.1	465.0	439.7	433.1	412.8	414.5	420.4	432.1	447.3
40°	1017.7	641.1	532.5	437.3	411.9	406.1	384.2	385.8	392.6	405.2	421.3
42.5°	966.3	610.0	495.4	408.6	381.6	375.8	355.6	358.0	365.6	378.2	394.3
45°	904.8	589.7	454.1	381.6	351.3	345.4	326.9	331.9	340.4	353.0	369.8
47.5°	841.6	581.3	419.5	353.0	320.1	315.1	299.9	308.3	317.6	327.7	346.2
50°	780.9	570.3	384.2	326.1	293.2	288.1	278.0	288.9	298.3	307.5	325.2
52.5°	711.9	546.7	352.2	302.5	270.4	268.8	263.7	273.8	282.2	290.7	305.9
55°	640.3	508.8	324.3	281.4	251.0	252.8	250.2	258.6	265.4	273.0	286.5
57.5°	577.9	460.8	302.5	258.6	234.2	239.2	235.9	240.1	244.4	253.6	264.6
60°	514.8	403.5	278.0	231.6	217.4	223.2	214.0	213.1	214.8	217.4	237.6
62.5°	429.7	343.7	247.6	208.1	198.8	201.3	183.7	170.1	170.1	172.7	203.1
65°	345.4	288.1	214.0	181.1	173.5	171.9	146.6	128.0	126.4	134.0	160.1
67.5°	283.9	239.2	180.3	150.8	145.8	147.4	128.9	110.4	108.6	117.1	136.5
70°	235.0	192.9	144.0	116.2	121.4	128.9	110.4	92.7	90.1	97.7	116.2
72.5°	187.1	150.8	110.4	85.9	100.2	109.5	90.1	73.3	71.6	78.3	96.0
75°	137.4	107.8	75.0	62.3	77.5	85.9	65.7	52.3	49.7	55.6	73.3
77.5°	85.1	60.7	47.2	37.1	53.1	57.3	34.5	30.3	29.5	33.7	46.3
80°	39.6	26.1	22.8	12.6	19.4	22.8	14.3	16.0	16.8	20.2	28.6
82.5°	11.0	4.2	0.8	0.0	0.0	6.8	3.4	6.8	8.4	12.6	18.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	4.2	7.6	13.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	6.8
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-SB4A-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4
2.5°	1570.4	1604.0	1657.9	1713.6	1768.3	1824.0	1877.9	1897.3
5°	1424.6	1502.1	1609.1	1723.7	1841.6	1961.2	2070.8	2120.5
7.5°	1262.0	1373.2	1534.1	1713.6	1901.5	2089.4	2262.1	2342.0
10°	1088.4	1229.2	1412.9	1655.5	1925.1	2184.5	2422.1	2525.7
12.5°	923.3	1070.8	1273.8	1564.5	1906.5	2239.3	2524.9	2647.1
15°	785.2	915.7	1134.8	1456.6	1846.7	2242.7	2573.8	2707.7
17.5°	681.5	766.6	993.2	1337.0	1768.3	2211.4	2590.6	2733.8
20°	630.2	653.7	809.6	1183.7	1695.0	2182.0	2607.4	2758.3
22.5°	599.8	605.8	662.2	985.6	1607.4	2172.7	2636.9	2791.9
25°	575.4	577.1	592.2	780.9	1473.4	2166.8	2682.4	2838.3
27.5°	550.9	550.9	559.4	629.3	1291.5	2141.5	2741.4	2893.9
30°	526.5	526.5	532.5	556.9	1078.4	2091.8	2812.2	2966.4
32.5°	501.2	501.2	506.4	524.0	861.0	2029.5	2877.1	3039.6
35°	476.0	474.3	481.0	499.6	684.9	1950.3	2941.9	3118.9
37.5°	449.1	448.2	454.9	476.0	591.4	1858.5	2990.7	3226.7
40°	420.4	420.4	427.9	450.7	564.5	1743.1	3068.2	3381.7
42.5°	394.3	392.6	401.0	428.9	544.3	1632.7	3207.3	3607.5
45°	369.0	365.6	373.2	407.7	508.8	1594.0	3466.8	3941.0
47.5°	345.4	337.0	343.7	382.5	476.8	1738.8	3891.4	4403.6
50°	326.1	310.1	315.9	357.2	452.4	2053.1	4442.3	5017.8
52.5°	305.9	284.7	288.1	326.1	430.5	2352.2	5039.6	5828.3
55°	284.7	261.2	262.8	294.9	399.3	2396.9	5622.6	6933.5
57.5°	261.2	239.2	239.2	266.2	376.6	2077.6	6070.9	8305.1
60°	235.0	220.7	216.5	243.4	396.8	1465.9	6123.0	9189.6
62.5°	206.4	198.8	192.9	221.6	411.9	868.6	5702.7	8975.6
65°	173.5	171.9	167.7	243.4	347.1	513.1	4895.6	8319.4
67.5°	145.8	143.2	143.2	255.2	263.7	322.7	3824.8	7416.3
70°	125.6	116.2	116.2	192.9	160.1	223.2	2670.6	6441.5
72.5°	105.3	95.2	88.5	154.2	119.6	163.5	1668.9	5516.4
75°	84.3	76.7	68.3	102.0	89.3	123.8	969.6	4570.4
77.5°	60.7	57.3	48.0	75.0	64.9	89.3	577.1	3526.6
80°	31.2	32.0	30.3	42.9	43.8	60.7	328.5	2413.7
82.5°	18.6	14.3	16.0	21.0	25.3	34.5	123.8	1418.7
85°	11.8	7.6	7.6	10.1	12.6	13.5	37.9	575.4
87.5°	5.9	2.6	3.4	5.0	4.2	3.4	1.6	144.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)