

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: P965802

Luminaire Tested: **NAV-SB4A-835-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965802
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-835-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 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: 13044.1 lumens
Efficiency: N/A
Efficacy: 114.4 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): 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



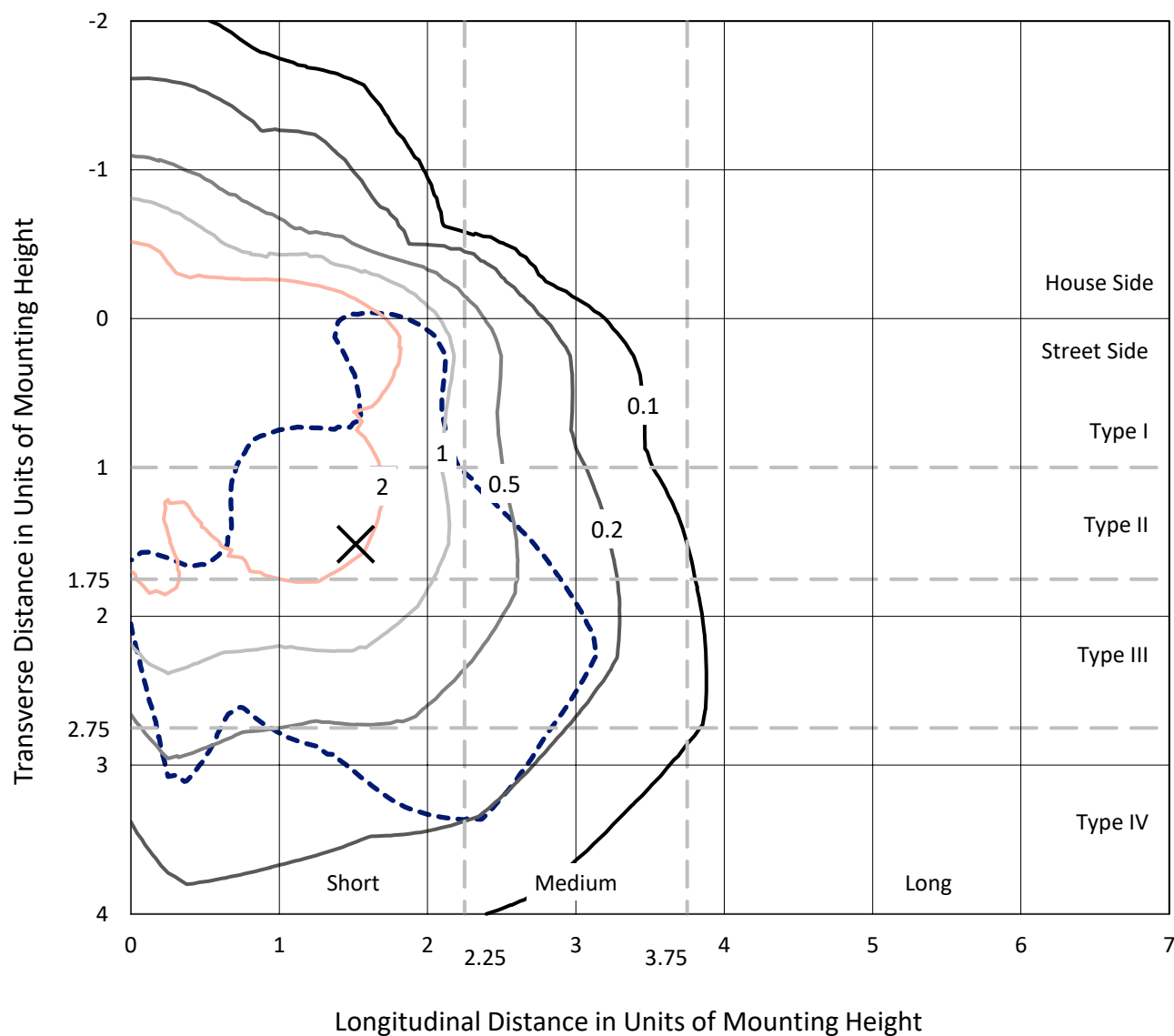
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

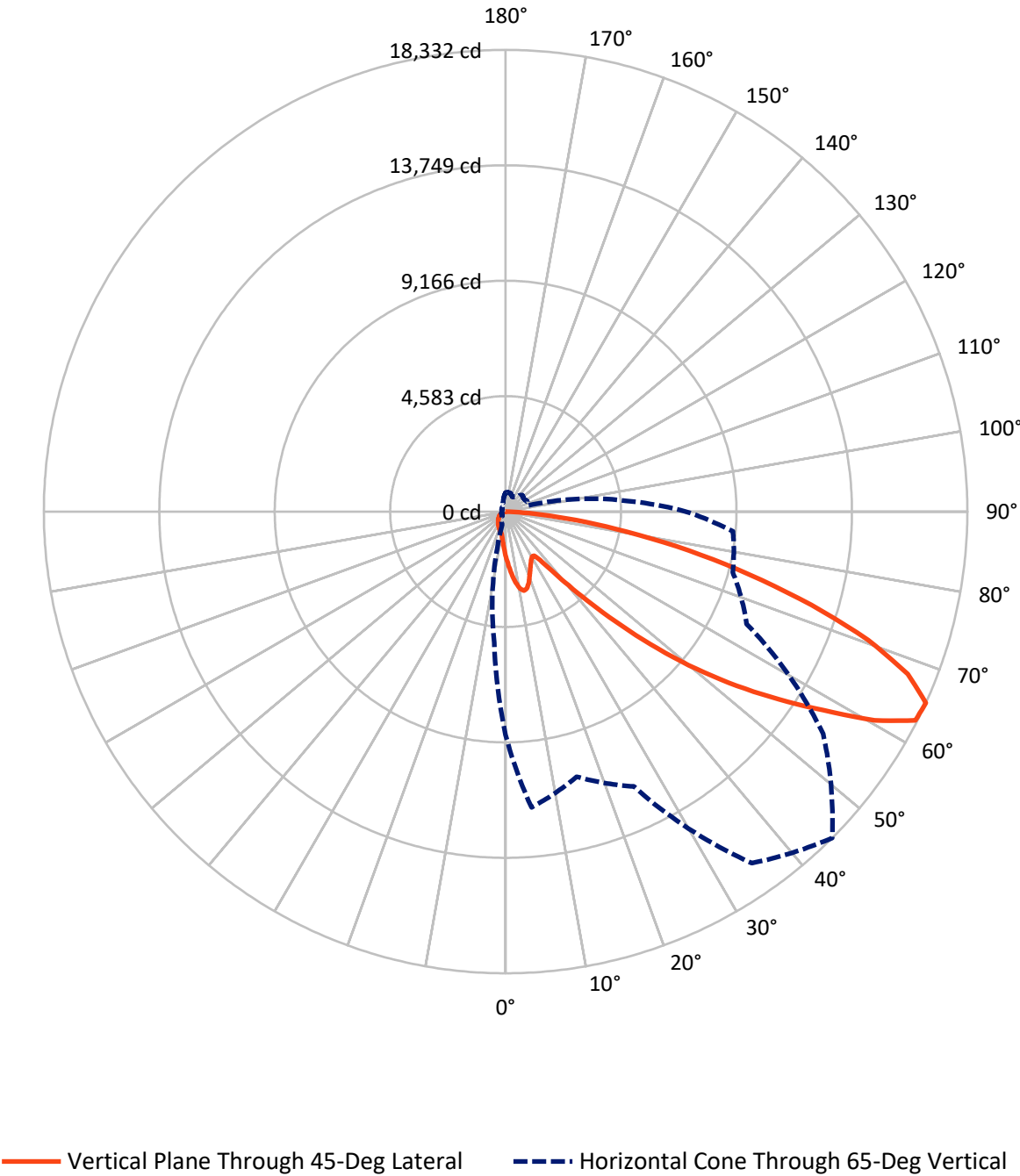


Based on 25 foot mounting height. Maximum calculated value = 4.7 fc

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	2592.8	0.0	2592.8
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	10451.4	0.0	10451.4
	% Fixture	80.1	0.0	80.1
Total	Lumens	13044.1	0.0	13044.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.8	1.4
10°-20°	533.1	4.1
20°-30°	785.3	6.0
30°-40°	1008.9	7.7
40°-50°	1631.7	12.5
50°-60°	2861.4	21.9
60°-70°	3580.4	27.4
70°-80°	2092.2	16.0
80°-90°	373.3	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°	13044.1	100.0
0°-180°	13044.1	100.0

Coefficient of Utilization



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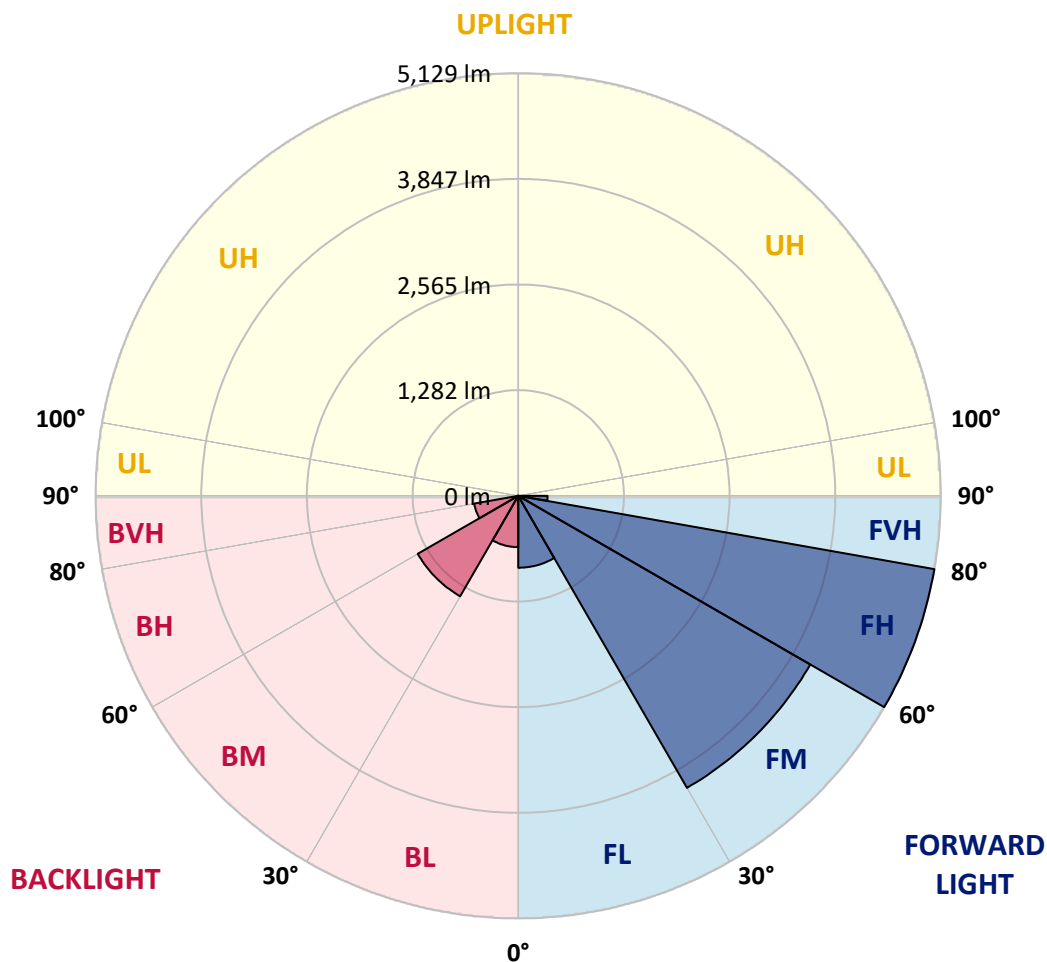
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	872.8	6.7			
FM	(30°-60°)	4093.4	31.4			
FH	(60°-80°)	5129.4	39.3			G3/7500
FVH	(80°-90°)	355.8	2.7			G3/500
BL	(0°-30°)	623.4	4.8	B2/1000		
BM	(30°-60°)	1408.6	10.8	B2/2500		
BH	(60°-80°)	543.2	4.2	B2/1000		G2/1000
BVH	(80°-90°)	17.5	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°	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2
2.5°	2023.7	2038.9	2073.1	2091.1	2118.9	2120.7	2120.7	2096.4	2095.5	2046.1	2040.8
5°	2261.8	2297.7	2378.6	2462.2	2480.2	2484.6	2475.7	2427.1	2391.2	2295.1	2274.4
7.5°	2498.1	2567.3	2690.4	2801.8	2837.8	2837.8	2816.2	2737.2	2663.5	2524.2	2472.1
10°	2694.0	2781.2	2948.3	3073.3	3114.6	3105.5	3061.6	2961.8	2860.3	2691.3	2623.1
12.5°	2823.5	2921.4	3104.7	3205.3	3247.6	3224.2	3173.9	3076.8	2969.9	2792.0	2714.7
15°	2888.1	2990.5	3149.6	3202.6	3190.9	3166.7	3160.4	3113.6	3032.8	2866.5	2782.1
17.5°	2916.0	3011.2	3121.7	3088.5	2989.6	2970.8	3033.7	3093.0	3073.3	2931.3	2852.2
20°	2942.1	3022.0	3055.2	2907.9	2735.3	2718.3	2838.7	3007.7	3093.9	2991.5	2918.7
22.5°	2977.9	3027.4	2959.1	2717.4	2531.3	2491.9	2624.8	2879.1	3100.2	3067.8	2995.0
25°	3027.4	3040.9	2853.1	2536.8	2349.8	2310.4	2434.3	2736.2	3089.5	3150.5	3088.5
27.5°	3086.7	3058.8	2751.5	2385.8	2205.2	2168.3	2292.3	2598.8	3058.8	3233.2	3189.2
30°	3164.0	3082.2	2650.9	2268.9	2101.9	2074.9	2194.4	2480.2	3021.1	3338.3	3314.0
32.5°	3242.2	3092.1	2557.5	2200.7	2078.5	2088.3	2186.3	2416.3	2979.8	3439.0	3450.7
35°	3326.6	3123.6	2511.6	2268.1	2273.4	2359.8	2400.1	2475.7	2973.5	3575.5	3621.4
37.5°	3441.6	3193.7	2566.4	2603.3	2790.2	2969.0	2935.7	2765.9	3046.3	3779.6	3864.9
40°	3607.0	3316.8	2805.4	3173.9	3557.6	3847.8	3721.2	3293.4	3269.1	4073.3	4201.0
42.5°	3847.8	3512.7	3229.6	3871.2	4521.8	4999.8	4660.2	3973.6	3659.1	4493.0	4655.7
45°	4203.6	3829.8	3742.7	4607.2	5710.7	6463.6	5757.3	4698.8	4205.5	5128.4	5256.0
47.5°	4697.1	4296.2	4223.4	5382.7	7155.6	8129.7	6974.1	5371.0	4827.3	5994.6	6024.2
50°	5352.1	4924.4	4679.0	6231.0	8739.9	9828.0	8189.9	6019.7	5539.9	7053.1	7019.0
52.5°	6216.5	5800.5	5210.1	7038.8	10369.0	11490.5	9411.1	6589.5	6424.1	8281.6	8211.5
55°	7395.5	7118.7	5936.2	7809.8	11997.3	13162.7	10584.7	7126.8	7592.3	9740.9	9316.7
57.5°	8858.5	9056.2	6983.0	8703.9	13461.1	14886.3	11763.6	7878.0	9109.2	11372.8	9958.4
60°	9802.0	11632.4	8987.8	10025.7	15124.4	16835.4	13379.3	9306.9	10703.3	11957.8	9836.1
62.5°	9573.7	12452.0	11388.9	11713.3	16653.9	18252.5	14962.6	10741.9	11003.5	11095.9	8894.4
65°	8873.7	11790.6	10899.2	12041.3	17041.1	18332.4	15386.0	10556.8	9333.9	9058.8	7149.3
67.5°	7910.4	11006.1	9735.4	11171.5	16341.2	17214.6	14597.8	9338.3	7213.1	6797.9	5186.7
70°	6870.8	10138.1	8971.7	10195.6	15006.7	15266.5	13258.1	8213.2	5305.4	4591.0	3328.5
72.5°	5884.1	9234.1	8448.7	9195.5	13226.6	12689.2	11513.8	7218.5	3863.1	3311.4	2366.0
75°	4874.9	7900.5	7703.8	8007.5	10885.7	9995.2	9566.5	5976.7	3031.8	2395.7	1632.7
77.5°	3761.5	6173.4	6626.3	6412.4	7662.4	7424.3	7415.3	4491.2	2215.0	1598.6	1023.5
80°	2574.5	4302.5	5176.9	4523.5	4972.9	4851.5	5584.8	3013.0	1606.7	962.4	569.7
82.5°	1513.2	2619.4	3603.4	2189.9	2749.8	2822.5	3325.7	1465.6	945.4	221.9	124.0
85°	613.8	1034.3	1409.0	857.3	1326.4	1118.8	1262.5	411.5	263.3	5.4	0.0
87.5°	154.6	330.7	231.9	96.1	153.6	141.0	111.4	50.3	10.8	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°	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2
2.5°	2005.7	1985.0	1933.8	1882.6	1841.2	1785.6	1748.6	1704.7	1662.4	1624.7	1617.4
5°	2217.8	2149.4	2056.0	1970.7	1883.4	1799.0	1715.4	1627.4	1546.5	1497.1	1465.6
7.5°	2390.3	2269.9	2145.8	2037.2	1932.0	1833.1	1722.6	1615.7	1489.0	1421.6	1360.5
10°	2518.8	2360.7	2198.0	2073.1	1967.1	1870.9	1777.5	1669.6	1516.9	1432.3	1340.7
12.5°	2603.3	2415.4	2225.0	2082.1	1963.5	1888.9	1847.6	1805.3	1653.4	1554.6	1421.6
15°	2661.7	2454.1	2243.8	2061.4	1915.8	1861.0	1902.3	1950.9	1853.8	1739.7	1566.3
17.5°	2725.5	2504.4	2251.9	2005.7	1823.3	1799.9	1906.8	2019.1	2014.6	1901.5	1731.6
20°	2792.8	2548.5	2246.5	1915.8	1710.9	1731.6	1868.2	1998.5	2053.3	1992.2	1841.2
22.5°	2862.1	2590.7	2225.9	1799.0	1605.8	1670.5	1807.1	1921.3	1985.9	1967.1	1852.1
25°	2949.2	2650.0	2195.2	1673.2	1518.6	1608.5	1736.1	1828.7	1873.6	1872.7	1793.6
27.5°	3053.5	2729.1	2179.1	1571.6	1456.6	1538.4	1651.7	1734.3	1765.8	1765.8	1702.8
30°	3174.7	2822.5	2161.1	1505.2	1420.6	1465.6	1553.7	1634.6	1666.0	1666.0	1613.0
32.5°	3309.5	2912.3	2118.1	1464.7	1393.7	1394.6	1450.4	1524.1	1561.8	1567.1	1529.4
35°	3471.3	3008.6	2023.7	1432.3	1362.3	1325.4	1352.4	1413.5	1458.5	1470.2	1446.8
37.5°	3683.3	3126.2	1888.9	1384.8	1313.7	1252.7	1258.9	1305.6	1355.0	1373.1	1357.8
40°	3968.3	3264.6	1748.6	1316.4	1245.5	1172.7	1169.9	1204.2	1252.7	1272.4	1264.3
42.5°	4344.8	3430.9	1614.8	1250.9	1162.8	1088.2	1083.7	1110.7	1152.9	1173.6	1169.9
45°	4826.4	3634.9	1499.8	1199.7	1081.9	1008.2	1006.4	1028.9	1065.8	1087.3	1082.8
47.5°	5495.8	3838.8	1421.6	1172.7	1018.1	942.6	946.3	966.0	999.3	1014.5	1008.2
50°	6368.4	3900.8	1382.0	1172.7	984.0	884.3	902.2	918.4	943.5	952.5	944.4
52.5°	7206.0	3695.9	1346.1	1179.9	988.5	834.8	873.4	885.1	906.7	910.3	898.6
55°	7616.6	3177.5	1296.7	1181.6	1016.3	792.5	850.0	871.7	879.8	878.8	859.1
57.5°	7475.5	2569.2	1213.1	1174.4	1035.1	765.6	821.3	862.6	868.1	860.0	823.1
60°	6980.4	1891.5	1149.3	1121.5	1028.0	757.5	777.3	842.9	851.0	840.2	780.0
62.5°	6150.1	1312.8	1099.9	1004.6	996.5	754.8	708.1	799.8	819.5	804.2	716.2
65°	4841.7	927.3	947.1	880.7	928.2	740.5	636.2	747.6	774.6	751.2	627.2
67.5°	3276.3	669.4	767.4	798.0	817.7	708.1	584.0	688.3	724.3	693.7	523.9
70°	1769.4	470.0	506.9	672.2	694.6	652.4	537.4	628.1	669.4	636.2	426.8
72.5°	1045.1	337.8	355.0	540.1	578.7	574.2	485.2	558.0	608.3	568.8	346.9
75°	576.0	228.3	253.4	391.8	470.0	443.0	417.0	472.6	523.9	485.2	267.8
77.5°	257.9	136.6	176.1	257.0	369.3	303.7	322.6	368.4	416.0	375.7	178.9
80°	99.7	76.4	116.8	140.2	268.7	168.0	207.6	271.4	305.6	273.2	108.8
82.5°	12.6	34.1	50.3	54.8	156.3	89.0	120.4	170.8	168.0	145.5	54.8
85°	0.0	6.3	7.2	3.6	67.4	32.4	39.6	55.8	52.1	39.6	4.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	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°	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2
2.5°	1573.5	1541.1	1524.9	1511.5	1524.1	1531.2	1531.2	1561.8	1579.7	1586.9	1637.2
5°	1386.5	1326.4	1285.9	1261.7	1269.8	1278.7	1288.6	1327.3	1353.3	1370.3	1448.5
7.5°	1239.2	1147.5	1090.9	1061.3	1065.8	1072.0	1080.1	1117.9	1143.9	1166.3	1253.6
10°	1166.3	1037.0	962.4	926.5	920.1	916.6	913.9	936.3	956.1	974.1	1060.4
12.5°	1169.9	989.3	898.6	854.5	835.7	814.2	797.0	800.6	813.2	835.7	890.5
15°	1215.9	974.1	865.4	810.6	779.1	753.9	733.3	728.8	733.3	736.9	771.0
17.5°	1277.9	972.3	836.6	768.3	735.9	715.2	696.4	690.1	691.1	695.6	704.5
20°	1327.3	966.9	804.2	727.9	699.2	681.1	662.3	656.0	657.7	658.7	668.6
22.5°	1353.3	958.8	768.3	687.5	663.2	645.2	628.1	627.2	627.2	632.6	639.8
25°	1353.3	941.8	735.9	648.8	627.2	611.0	590.4	594.0	595.7	603.0	613.8
27.5°	1320.9	909.4	709.9	615.5	593.1	576.9	558.0	562.5	565.2	573.3	586.8
30°	1279.6	870.7	680.3	584.0	558.0	546.3	530.1	532.0	535.6	544.6	559.9
32.5°	1235.5	824.9	656.0	552.7	526.5	517.6	499.6	502.4	505.9	515.8	532.9
35°	1187.1	771.0	627.2	523.9	497.8	490.7	470.0	471.8	477.1	487.9	505.0
37.5°	1135.8	726.9	598.5	496.0	469.0	461.9	440.3	442.1	448.4	460.9	477.1
40°	1085.5	683.9	568.0	466.4	439.4	433.2	409.8	411.5	418.7	432.2	449.3
42.5°	1030.7	650.6	528.4	435.8	407.0	400.8	379.2	381.9	390.0	403.4	420.6
45°	965.1	629.0	484.3	407.0	374.7	368.4	348.7	354.0	363.1	376.5	394.5
47.5°	897.7	620.0	447.5	376.5	341.4	336.1	319.9	328.9	338.8	349.5	369.3
50°	833.0	608.3	409.8	347.8	312.7	307.3	296.5	308.2	318.1	328.0	346.9
52.5°	759.3	583.2	375.7	322.6	288.4	286.7	281.3	292.0	301.0	310.1	326.2
55°	683.0	542.7	345.9	300.1	267.8	269.6	266.9	275.8	283.1	291.1	305.6
57.5°	616.4	491.5	322.6	275.8	249.8	255.2	251.6	256.1	260.6	270.5	282.2
60°	549.1	430.4	296.5	247.1	231.9	238.1	228.3	227.3	229.2	231.9	253.4
62.5°	458.3	366.6	264.1	221.9	212.1	214.7	195.9	181.5	181.5	184.2	216.6
65°	368.4	307.3	228.3	193.2	185.1	183.3	156.3	136.6	134.8	142.9	170.8
67.5°	302.8	255.2	192.3	160.8	155.5	157.2	137.5	117.7	115.9	124.9	145.5
70°	250.7	205.8	153.6	124.0	129.4	137.5	117.7	98.8	96.1	104.2	124.0
72.5°	199.5	160.8	117.7	91.6	106.9	116.8	96.1	78.2	76.4	83.5	102.4
75°	146.5	115.0	79.9	66.5	82.7	91.6	70.1	55.8	53.0	59.3	78.2
77.5°	90.7	64.7	50.3	39.6	56.6	61.1	36.8	32.4	31.5	36.0	49.4
80°	42.2	27.9	24.3	13.5	20.7	24.3	15.3	17.1	17.9	21.5	30.5
82.5°	11.7	4.5	0.9	0.0	0.0	7.2	3.6	7.2	9.0	13.5	19.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	4.5	8.1	14.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	7.2
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-835-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2	1806.2
2.5°	1675.0	1710.9	1768.4	1827.8	1886.2	1945.4	2003.0	2023.7
5°	1519.6	1602.2	1716.4	1838.5	1964.3	2091.9	2208.8	2261.8
7.5°	1346.1	1464.7	1636.3	1827.8	2028.2	2228.6	2412.7	2498.1
10°	1161.0	1311.1	1507.0	1765.8	2053.3	2330.1	2583.5	2694.0
12.5°	984.9	1142.2	1358.7	1668.7	2033.5	2388.5	2693.1	2823.5
15°	837.5	976.8	1210.4	1553.7	1969.7	2392.0	2745.3	2888.1
17.5°	726.9	817.7	1059.4	1426.1	1886.2	2358.8	2763.2	2916.0
20°	672.2	697.3	863.6	1262.5	1808.0	2327.4	2781.2	2942.1
22.5°	639.8	646.1	706.3	1051.3	1714.5	2317.5	2812.6	2977.9
25°	613.8	615.5	631.7	833.0	1571.6	2311.2	2861.2	3027.4
27.5°	587.7	587.7	596.7	671.3	1377.6	2284.2	2924.0	3086.7
30°	561.6	561.6	568.0	594.0	1150.3	2231.2	2999.6	3164.0
32.5°	534.6	534.6	540.1	558.9	918.4	2164.7	3068.7	3242.2
35°	507.7	505.9	513.1	532.9	730.5	2080.2	3137.9	3326.6
37.5°	479.0	478.1	485.2	507.7	630.8	1982.4	3190.0	3441.6
40°	448.4	448.4	456.5	480.7	602.1	1859.2	3272.7	3607.0
42.5°	420.6	418.7	427.7	457.4	580.5	1741.5	3421.0	3847.8
45°	393.6	390.0	398.1	434.9	542.7	1700.2	3697.8	4203.6
47.5°	368.4	359.5	366.6	408.0	508.6	1854.7	4150.6	4697.1
50°	347.8	330.7	337.0	381.0	482.6	2189.9	4738.4	5352.1
52.5°	326.2	303.7	307.3	347.8	459.2	2508.9	5375.5	6216.5
55°	303.7	278.6	280.3	314.5	426.0	2556.6	5997.3	7395.5
57.5°	278.6	255.2	255.2	283.9	401.7	2215.9	6475.3	8858.5
60°	250.7	235.4	230.9	259.7	423.2	1563.5	6531.1	9802.0
62.5°	220.2	212.1	205.8	236.4	439.4	926.5	6082.7	9573.7
65°	185.1	183.3	178.9	259.7	370.2	547.2	5221.8	8873.7
67.5°	155.5	152.7	152.7	272.2	281.3	344.2	4079.7	7910.4
70°	133.9	124.0	124.0	205.8	170.8	238.1	2848.6	6870.8
72.5°	112.3	101.6	94.4	164.4	127.6	174.4	1780.1	5884.1
75°	89.9	81.8	72.8	108.8	95.2	132.1	1034.3	4874.9
77.5°	64.7	61.1	51.2	79.9	69.2	95.2	615.5	3761.5
80°	33.2	34.1	32.4	45.8	46.7	64.7	350.4	2574.5
82.5°	19.8	15.3	17.1	22.4	27.0	36.8	132.1	1513.2
85°	12.6	8.1	8.1	10.8	13.5	14.3	40.5	613.8
87.5°	6.3	2.7	3.6	5.4	4.5	3.6	1.8	154.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)