

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: P965647

Luminaire Tested: **NAV-SB4A-740-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965647
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-740-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 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: 14878.8 lumens
Efficiency: N/A
Efficacy: 130.5 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

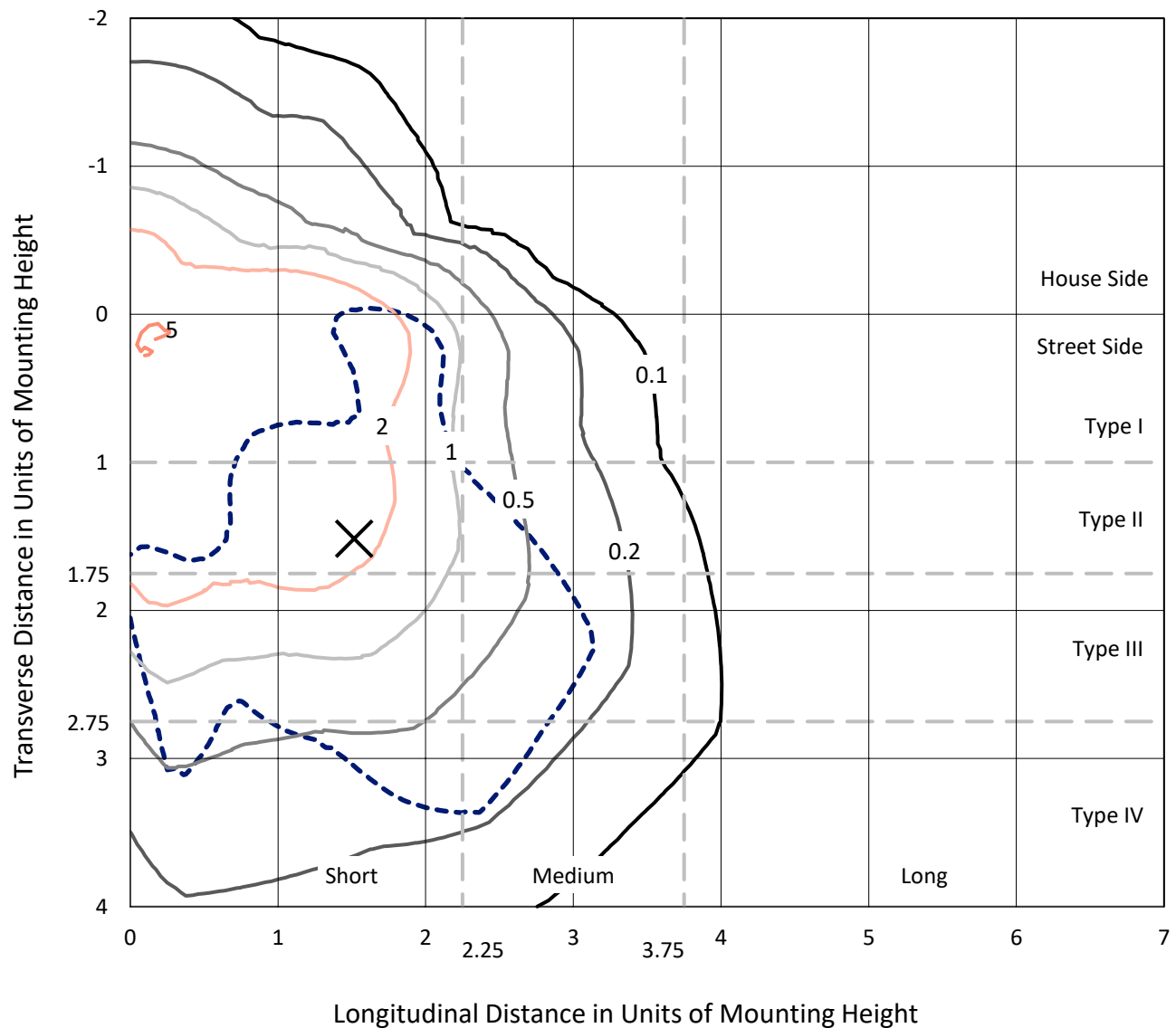


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Iso-Footcandle Lines of Horizontal Illumination

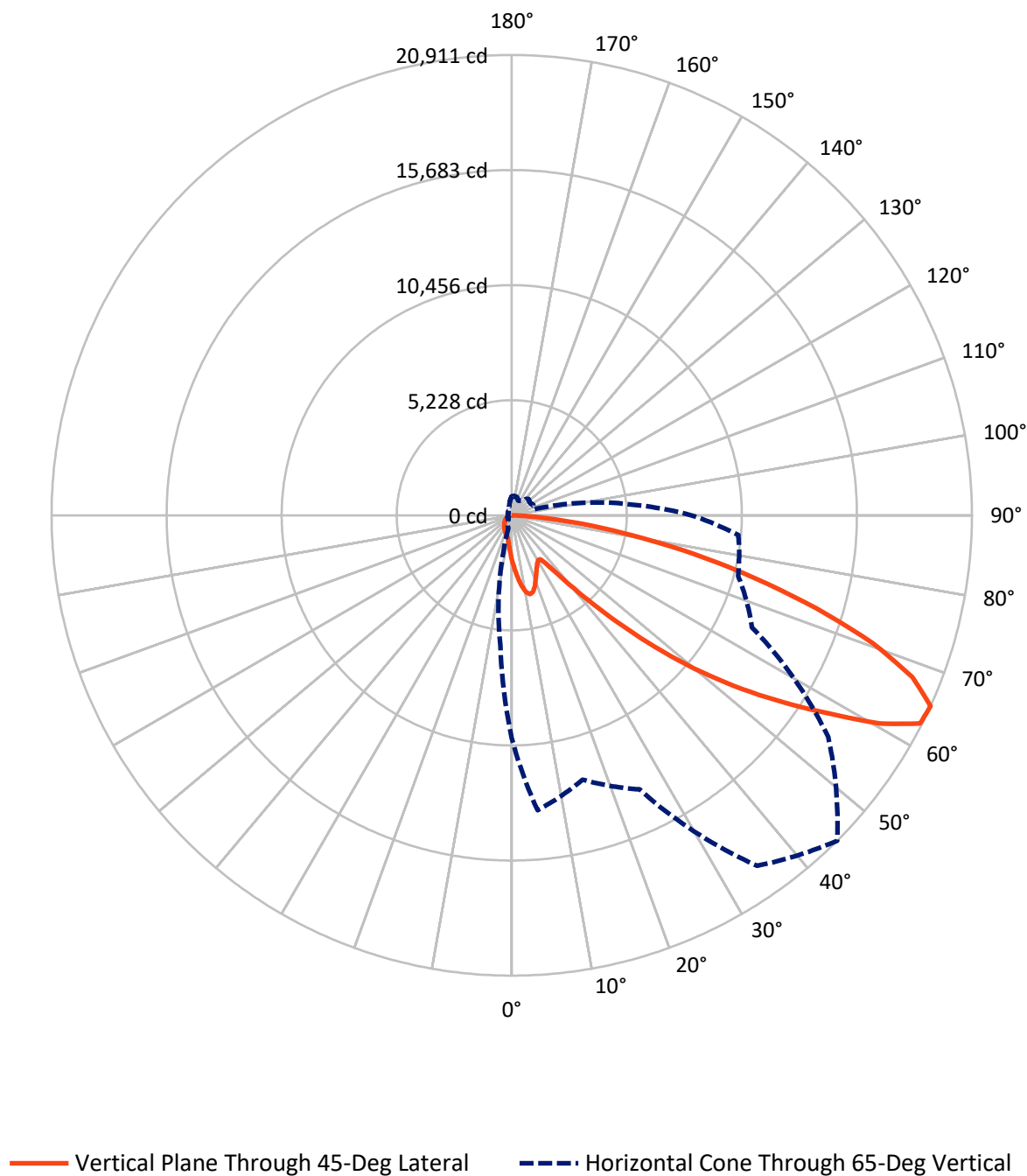
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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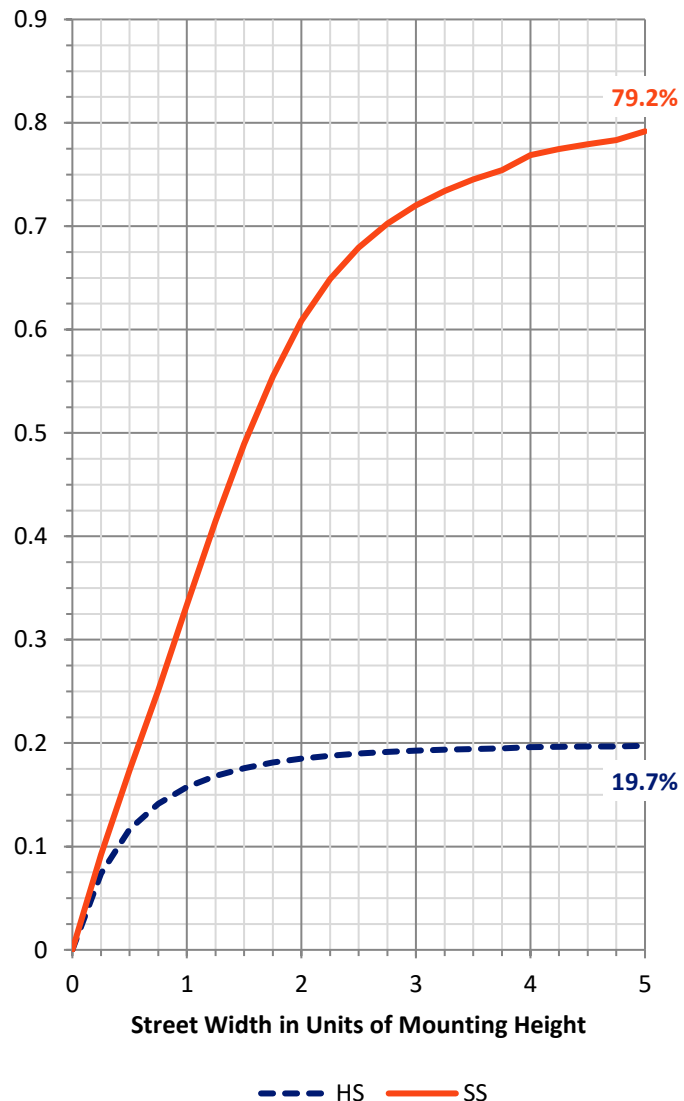
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2957.4	0.0	2957.4
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	11921.4	0.0	11921.4
	% Fixture	80.1	0.0	80.1
Total	Lumens	14878.8	0.0	14878.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.8	1.4
10°-20°	608.0	4.1
20°-30°	895.8	6.0
30°-40°	1150.8	7.7
40°-50°	1861.2	12.5
50°-60°	3263.9	21.9
60°-70°	4084.0	27.4
70°-80°	2386.5	16.0
80°-90°	425.8	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°	14878.8	100.0
0°-180°	14878.8	100.0

Coefficient of Utilization



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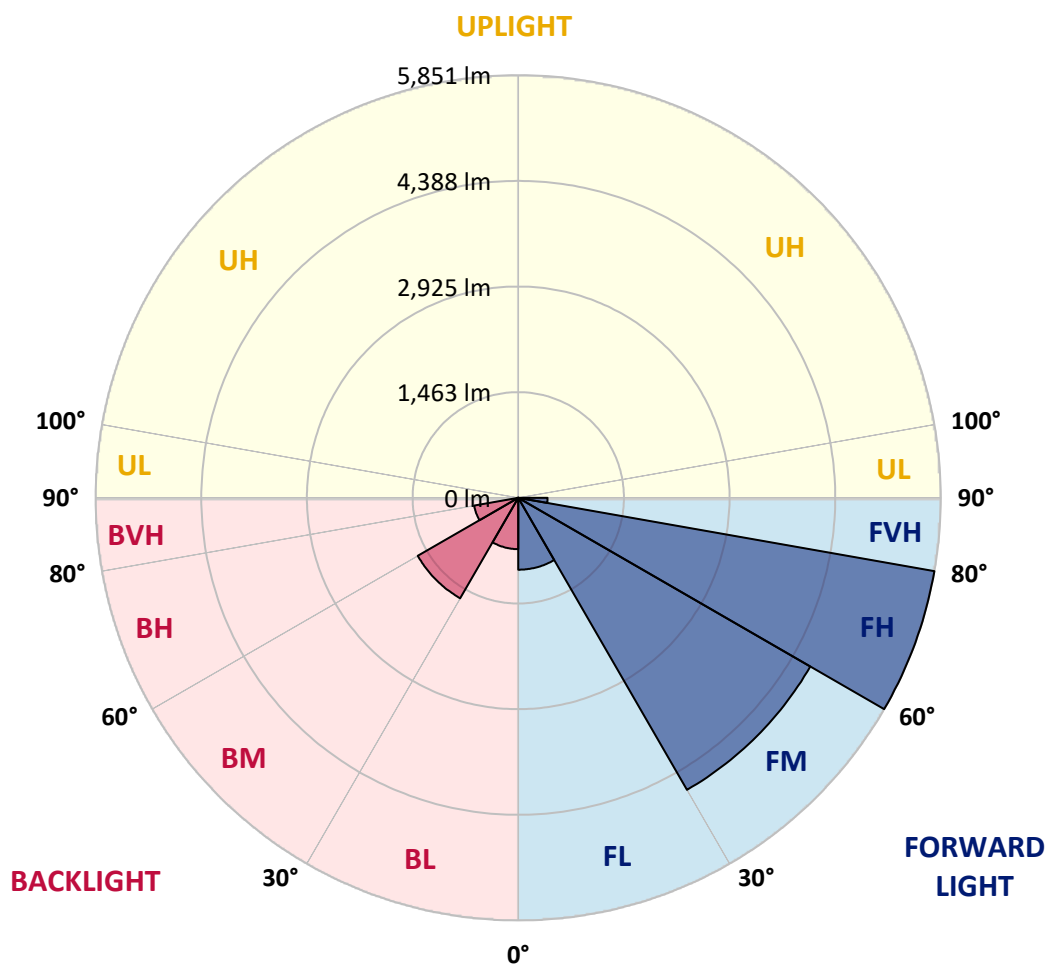
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	995.6	6.7			
FM	(30°-60°)	4669.2	31.4			
FH	(60°-80°)	5850.8	39.3			G3/7500
FVH	(80°-90°)	405.8	2.7			G3/500
BL	(0°-30°)	711.1	4.8	B2/1000		
BM	(30°-60°)	1606.8	10.8	B2/2500		
BH	(60°-80°)	619.6	4.2	B2/1000		G2/1000
BVH	(80°-90°)	20.0	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°	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2
2.5°	2308.3	2325.7	2364.7	2385.2	2417.0	2419.0	2419.0	2391.3	2390.3	2333.9	2327.8
5°	2579.9	2620.9	2713.2	2808.5	2829.0	2834.1	2823.9	2768.5	2727.5	2617.8	2594.3
7.5°	2849.5	2928.4	3068.8	3196.0	3237.0	3237.0	3212.4	3122.1	3038.1	2879.2	2819.8
10°	3073.0	3172.4	3363.0	3505.5	3552.6	3542.4	3492.2	3378.4	3262.6	3069.9	2992.0
12.5°	3220.5	3332.3	3541.4	3656.2	3704.3	3677.7	3620.3	3509.6	3387.6	3184.7	3096.5
15°	3294.4	3411.2	3592.6	3653.1	3639.8	3612.1	3604.9	3551.6	3459.4	3269.7	3173.4
17.5°	3326.1	3434.8	3560.8	3522.9	3410.2	3388.6	3460.4	3528.0	3505.5	3343.6	3253.4
20°	3355.8	3447.1	3485.0	3316.9	3120.1	3100.6	3238.0	3430.7	3529.1	3412.2	3329.2
22.5°	3396.8	3453.2	3375.3	3099.6	2887.4	2842.3	2994.0	3284.1	3536.2	3499.4	3416.3
25°	3453.2	3468.6	3254.4	2893.6	2680.4	2635.3	2776.7	3121.1	3524.0	3593.6	3522.9
27.5°	3520.9	3489.1	3138.5	2721.4	2515.4	2473.3	2614.8	2964.3	3489.1	3688.0	3637.7
30°	3609.0	3515.7	3023.7	2588.1	2397.5	2366.7	2503.0	2829.0	3446.0	3807.9	3780.2
32.5°	3698.2	3527.0	2917.1	2510.2	2370.8	2382.1	2493.8	2756.2	3398.9	3922.7	3936.0
35°	3794.6	3562.9	2864.9	2587.1	2593.2	2691.6	2737.8	2823.9	3391.7	4078.5	4130.8
37.5°	3925.7	3642.8	2927.4	2969.4	3182.6	3386.6	3348.7	3155.0	3474.7	4311.2	4408.5
40°	4114.3	3783.3	3200.0	3620.3	4058.0	4389.0	4244.5	3756.6	3729.0	4646.3	4791.9
42.5°	4389.0	4006.7	3683.8	4415.7	5157.8	5703.1	5315.6	4532.5	4173.8	5125.0	5310.5
45°	4795.0	4368.5	4269.1	5255.2	6513.9	7372.8	6567.2	5359.7	4797.0	5849.7	5995.2
47.5°	5357.7	4900.5	4817.5	6139.7	8162.1	9273.2	7955.0	6126.4	5506.3	6837.8	6871.6
50°	6104.9	5617.0	5337.2	7107.4	9969.2	11210.4	9341.8	6866.5	6319.1	8045.2	8006.3
52.5°	7091.0	6616.4	5943.0	8028.8	11827.5	13106.7	10734.8	7516.3	7327.7	9446.4	9366.4
55°	8435.8	8120.0	6771.2	8908.3	13684.8	15014.2	12073.5	8129.3	8660.2	11111.0	10627.2
57.5°	10104.4	10329.9	7965.3	9928.2	15354.5	16980.1	13418.3	8986.2	10390.4	12972.4	11359.0
60°	11180.7	13268.6	10252.0	11435.9	17251.8	19203.4	15261.2	10615.9	12208.8	13639.7	11219.6
62.5°	10920.3	14203.4	12990.8	13360.9	18996.3	20819.8	17067.3	12252.8	12551.1	12656.7	10145.4
65°	10121.9	13449.0	12432.2	13735.0	19438.1	20911.0	17550.0	12041.7	10646.7	10333.0	8154.9
67.5°	9023.1	12554.2	11104.8	12742.8	18639.6	19635.9	16651.1	10651.8	8227.7	7754.1	5916.3
70°	7837.2	11564.0	10233.6	11629.6	17117.5	17413.7	15122.8	9368.5	6051.6	5236.7	3796.6
72.5°	6711.7	10532.9	9637.0	10488.8	15087.0	14474.0	13133.3	8233.8	4406.5	3777.1	2698.8
75°	5560.6	9011.8	8787.3	9133.8	12416.8	11401.1	10912.2	6817.3	3458.4	2732.6	1862.4
77.5°	4290.6	7041.7	7558.4	7314.4	8740.2	8468.6	8458.3	5123.0	2526.6	1823.5	1167.5
80°	2936.6	4907.7	5905.0	5159.8	5672.3	5534.0	6370.4	3436.8	1832.7	1097.8	649.8
82.5°	1726.1	2987.9	4110.2	2497.9	3136.5	3219.5	3793.5	1671.8	1078.3	253.2	141.4
85°	700.1	1179.8	1607.2	977.8	1512.9	1276.1	1440.1	469.4	300.3	6.1	0.0
87.5°	176.3	377.2	264.4	109.7	175.3	160.9	127.1	57.4	12.3	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2
2.5°	2287.8	2264.2	2205.8	2147.4	2100.2	2036.7	1994.6	1944.4	1896.2	1853.2	1845.0
5°	2529.7	2451.8	2345.2	2247.8	2148.4	2052.0	1956.7	1856.3	1764.0	1707.6	1671.8
7.5°	2726.5	2589.1	2447.7	2323.7	2203.8	2091.0	1964.9	1843.0	1698.4	1621.6	1551.8
10°	2873.1	2692.7	2507.1	2364.7	2243.7	2134.0	2027.4	1904.4	1730.2	1633.8	1529.3
12.5°	2969.4	2755.2	2537.9	2374.9	2239.6	2154.5	2107.4	2059.2	1886.0	1773.2	1621.6
15°	3036.0	2799.3	2559.4	2351.4	2185.3	2122.8	2169.9	2225.3	2114.6	1984.4	1786.6
17.5°	3108.8	2856.7	2568.6	2287.8	2079.7	2053.1	2175.0	2303.2	2298.0	2168.9	1975.2
20°	3185.7	2906.9	2562.5	2185.3	1951.6	1975.2	2131.0	2279.6	2342.1	2272.4	2100.2
22.5°	3264.6	2955.1	2538.9	2052.0	1831.7	1905.5	2061.3	2191.4	2265.2	2243.7	2112.5
25°	3364.0	3022.7	2504.1	1908.5	1732.2	1834.7	1980.3	2085.9	2137.1	2136.1	2045.9
27.5°	3483.0	3112.9	2485.6	1792.7	1661.5	1754.8	1884.0	1978.2	2014.1	2014.1	1942.4
30°	3621.3	3219.5	2465.1	1716.9	1620.5	1671.8	1772.2	1864.5	1900.4	1900.4	1839.9
32.5°	3775.1	3322.0	2415.9	1670.7	1589.8	1590.8	1654.4	1738.4	1781.4	1787.6	1744.6
35°	3959.6	3431.7	2308.3	1633.8	1553.9	1511.9	1542.6	1612.3	1663.6	1676.9	1650.2
37.5°	4201.5	3566.0	2154.5	1579.5	1498.6	1428.8	1436.0	1489.3	1545.7	1566.2	1548.8
40°	4526.4	3723.8	1994.6	1501.6	1420.6	1337.6	1334.6	1373.5	1428.8	1451.4	1442.2
42.5°	4955.9	3913.4	1841.9	1426.8	1326.4	1241.3	1236.1	1266.9	1315.1	1338.6	1334.6
45°	5505.3	4146.1	1710.7	1368.4	1234.1	1150.0	1148.0	1173.6	1215.6	1240.2	1235.1
47.5°	6268.9	4378.8	1621.6	1337.6	1161.3	1075.2	1079.3	1101.9	1139.8	1157.2	1150.0
50°	7264.2	4449.5	1576.4	1337.6	1122.4	1008.6	1029.1	1047.6	1076.2	1086.5	1077.3
52.5°	8219.5	4215.8	1535.4	1345.8	1127.5	952.2	996.3	1009.6	1034.2	1038.3	1025.0
55°	8687.9	3624.4	1479.1	1347.9	1159.3	904.0	969.6	994.2	1003.5	1002.4	979.9
57.5°	8527.0	2930.5	1383.7	1339.7	1180.8	873.3	936.8	984.0	990.1	980.9	938.9
60°	7962.2	2157.6	1311.0	1279.2	1172.6	864.1	886.6	961.4	970.7	958.4	889.7
62.5°	7015.1	1497.5	1254.6	1145.9	1136.7	861.0	807.7	912.2	934.8	917.4	816.9
65°	5522.7	1057.8	1080.4	1004.5	1058.8	844.6	725.7	852.8	883.6	856.9	715.4
67.5°	3737.2	763.6	875.4	910.2	932.7	807.7	666.2	785.2	826.2	791.3	597.6
70°	2018.2	536.1	578.1	766.7	792.3	744.2	612.9	716.5	763.6	725.7	486.9
72.5°	1192.1	385.4	404.9	616.0	660.1	655.0	553.5	636.5	693.9	648.8	395.6
75°	657.0	260.3	289.0	446.9	536.1	505.3	475.6	539.2	597.6	553.5	305.4
77.5°	294.2	155.8	200.9	293.2	421.3	346.4	368.0	420.2	474.6	428.4	204.0
80°	113.8	87.1	133.2	159.9	306.5	191.7	236.8	309.5	348.5	311.6	124.0
82.5°	14.3	38.9	57.4	62.5	178.4	101.5	137.4	194.7	191.7	166.0	62.5
85°	0.0	7.2	8.2	4.1	76.9	36.9	45.1	63.6	59.4	45.1	5.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	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°	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2
2.5°	1794.8	1757.9	1739.4	1724.0	1738.4	1746.6	1746.6	1781.4	1802.0	1810.2	1867.5
5°	1581.6	1512.9	1466.8	1439.1	1448.3	1458.6	1469.8	1513.9	1543.6	1563.1	1652.3
7.5°	1413.5	1308.9	1244.4	1210.5	1215.6	1222.8	1232.0	1275.1	1304.8	1330.4	1429.9
10°	1330.4	1182.8	1097.8	1056.8	1049.6	1045.5	1042.4	1068.0	1090.6	1111.1	1209.5
12.5°	1334.6	1128.5	1025.0	974.8	953.2	928.6	909.2	913.3	927.6	953.2	1015.8
15°	1386.8	1111.1	987.1	924.6	888.7	860.0	836.4	831.3	836.4	840.5	879.4
17.5°	1457.6	1109.0	954.3	876.4	839.5	815.9	794.4	787.2	788.2	793.3	803.6
20°	1513.9	1102.9	917.4	830.2	797.4	776.9	755.4	748.2	750.3	751.3	762.6
22.5°	1543.6	1093.7	876.4	784.1	756.4	735.9	716.5	715.4	715.4	721.6	729.8
25°	1543.6	1074.2	839.5	740.0	715.4	697.0	673.4	677.5	679.6	687.8	700.1
27.5°	1506.7	1037.3	809.7	702.1	676.5	658.0	636.5	641.6	644.7	653.9	669.3
30°	1459.6	993.2	775.9	666.2	636.5	623.2	604.8	606.8	610.9	621.2	638.6
32.5°	1409.4	941.0	748.2	630.4	600.6	590.4	569.9	573.0	577.1	588.3	607.8
35°	1354.0	879.4	715.4	597.6	567.8	559.6	536.1	538.1	544.3	556.6	576.0
37.5°	1295.6	829.2	682.6	565.8	535.0	526.8	502.2	504.3	511.5	525.8	544.3
40°	1238.2	780.0	647.8	532.0	501.2	494.0	467.4	469.4	477.6	493.0	512.5
42.5°	1175.7	742.1	602.7	497.1	464.3	457.2	432.6	435.6	444.8	460.2	479.7
45°	1100.8	717.5	552.5	464.3	427.4	420.2	397.7	403.8	414.1	429.5	450.0
47.5°	1024.0	707.2	510.4	429.5	389.5	383.3	364.9	375.2	386.4	398.7	421.3
50°	950.2	693.9	467.4	396.7	356.7	350.5	338.2	351.6	362.8	374.1	395.6
52.5°	866.1	665.2	428.4	368.0	329.0	327.0	320.8	333.1	343.4	353.6	372.1
55°	779.0	619.1	394.6	342.3	305.4	307.5	304.4	314.7	322.9	332.1	348.5
57.5°	703.2	560.7	368.0	314.7	285.0	291.1	287.0	292.1	297.2	308.5	321.8
60°	626.3	491.0	338.2	281.9	264.4	271.6	260.3	259.3	261.4	264.4	289.0
62.5°	522.8	418.2	301.3	253.2	241.9	245.0	223.4	207.0	207.0	210.1	247.0
65°	420.2	350.5	260.3	220.4	211.2	209.1	178.4	155.8	153.8	163.0	194.7
67.5°	345.4	291.1	219.4	183.5	177.3	179.4	156.8	134.3	132.2	142.5	166.0
70°	286.0	234.7	175.3	141.4	147.6	156.8	134.3	112.7	109.7	118.9	141.4
72.5°	227.6	183.5	134.3	104.6	122.0	133.2	109.7	89.2	87.1	95.3	116.8
75°	167.1	131.2	91.2	75.8	94.3	104.6	79.9	63.6	60.5	67.6	89.2
77.5°	103.5	73.8	57.4	45.1	64.6	69.7	42.0	36.9	35.9	41.0	56.4
80°	48.2	31.8	27.7	15.4	23.6	27.7	17.4	19.5	20.5	24.6	34.8
82.5°	13.3	5.1	1.0	0.0	0.0	8.2	4.1	8.2	10.2	15.4	22.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	5.1	9.2	16.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	8.2
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: P965647

CATALOG NUMBER: NAV-SB4A-740-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2	2060.2
2.5°	1910.6	1951.6	2017.2	2084.8	2151.5	2219.1	2284.7	2308.3
5°	1733.3	1827.6	1957.7	2097.1	2240.6	2386.2	2519.4	2579.9
7.5°	1535.4	1670.7	1866.5	2084.8	2313.4	2542.0	2752.1	2849.5
10°	1324.3	1495.5	1718.9	2014.1	2342.1	2657.8	2946.9	3073.0
12.5°	1123.4	1302.8	1549.8	1903.4	2319.6	2724.4	3071.9	3220.5
15°	955.3	1114.2	1380.7	1772.2	2246.8	2728.5	3131.4	3294.4
17.5°	829.2	932.7	1208.5	1626.7	2151.5	2690.6	3151.9	3326.1
20°	766.7	795.4	985.0	1440.1	2062.3	2654.7	3172.4	3355.8
22.5°	729.8	737.0	805.6	1199.2	1955.7	2643.5	3208.2	3396.8
25°	700.1	702.1	720.6	950.2	1792.7	2636.3	3263.6	3453.2
27.5°	670.3	670.3	680.6	765.7	1571.3	2605.5	3335.4	3520.9
30°	640.6	640.6	647.8	677.5	1312.0	2545.1	3421.4	3609.0
32.5°	609.9	609.9	616.0	637.6	1047.6	2469.2	3500.4	3698.2
35°	579.1	577.1	585.3	607.8	833.3	2372.9	3579.3	3794.6
37.5°	546.3	545.3	553.5	579.1	719.6	2261.1	3638.7	3925.7
40°	511.5	511.5	520.7	548.4	686.7	2120.7	3733.0	4114.3
42.5°	479.7	477.6	487.9	521.7	662.2	1986.4	3902.2	4389.0
45°	449.0	444.8	454.1	496.1	619.1	1939.3	4217.9	4795.0
47.5°	420.2	410.0	418.2	465.4	580.2	2115.6	4734.5	5357.7
50°	396.7	377.2	384.4	434.6	550.4	2497.9	5404.8	6104.9
52.5°	372.1	346.4	350.5	396.7	523.8	2861.8	6131.5	7091.0
55°	346.4	317.8	319.8	358.7	485.8	2916.1	6840.8	8435.8
57.5°	317.8	291.1	291.1	323.9	458.2	2527.6	7386.2	10104.4
60°	286.0	268.5	263.4	296.2	482.8	1783.5	7449.7	11180.7
62.5°	251.1	241.9	234.7	269.6	501.2	1056.8	6938.2	10920.3
65°	211.2	209.1	204.0	296.2	422.3	624.2	5956.3	10121.9
67.5°	177.3	174.2	174.2	310.6	320.8	392.6	4653.5	9023.1
70°	152.7	141.4	141.4	234.7	194.7	271.6	3249.2	7837.2
72.5°	128.1	115.8	107.6	187.6	145.5	198.8	2030.5	6711.7
75°	102.5	93.3	83.0	124.0	108.6	150.7	1179.8	5560.6
77.5°	73.8	69.7	58.4	91.2	78.9	108.6	702.1	4290.6
80°	37.9	38.9	36.9	52.3	53.3	73.8	399.7	2936.6
82.5°	22.5	17.4	19.5	25.6	30.7	42.0	150.7	1726.1
85°	14.3	9.2	9.2	12.3	15.4	16.4	46.1	700.1
87.5°	7.2	3.1	4.1	6.1	5.1	4.1	2.0	176.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)