

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: P966701

Luminaire Tested: **NAV-SB4C-740-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966701
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-SB4C-740-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 615mA 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: 24840.9 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

Input Watts (W): 200.7
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



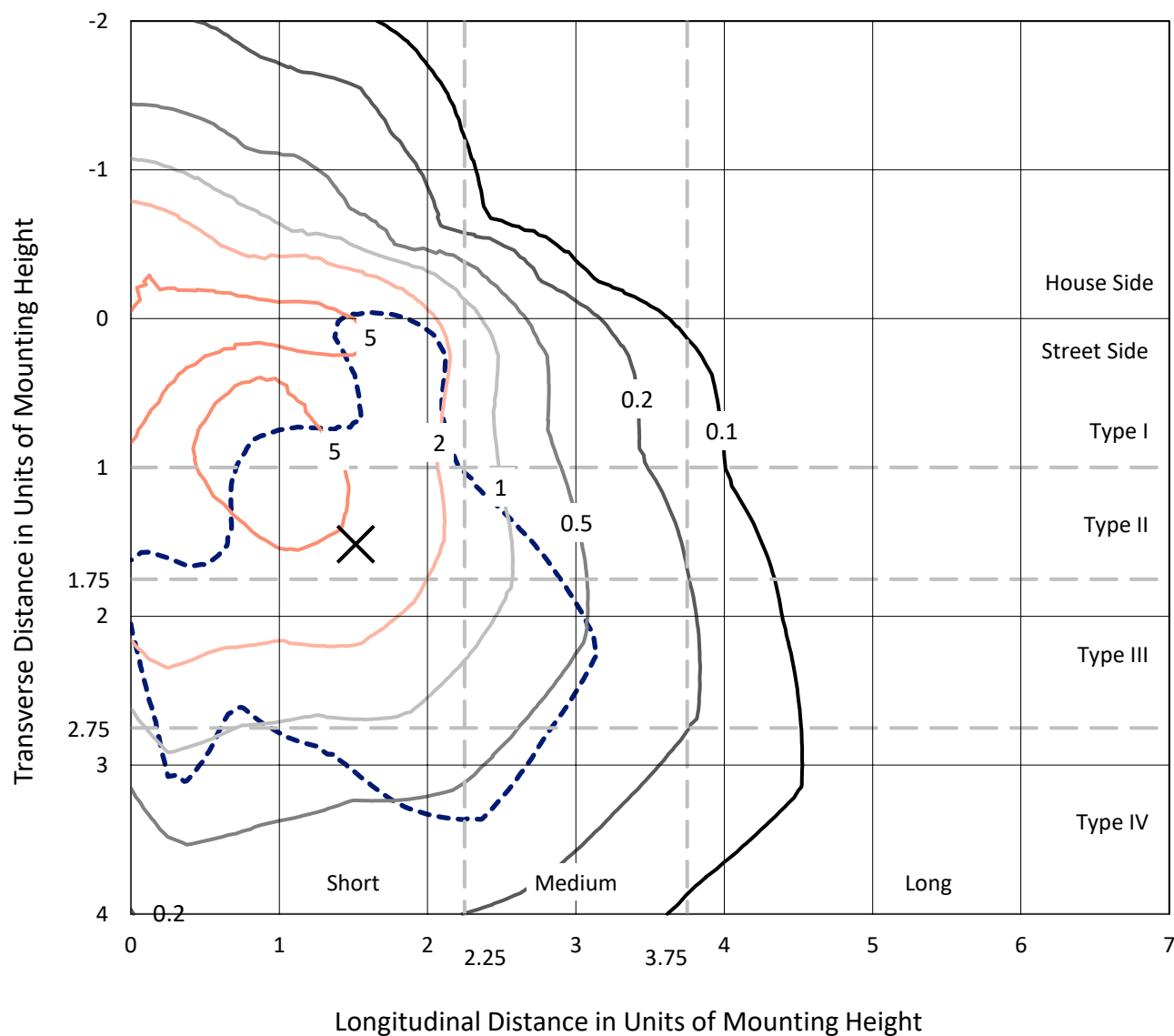
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

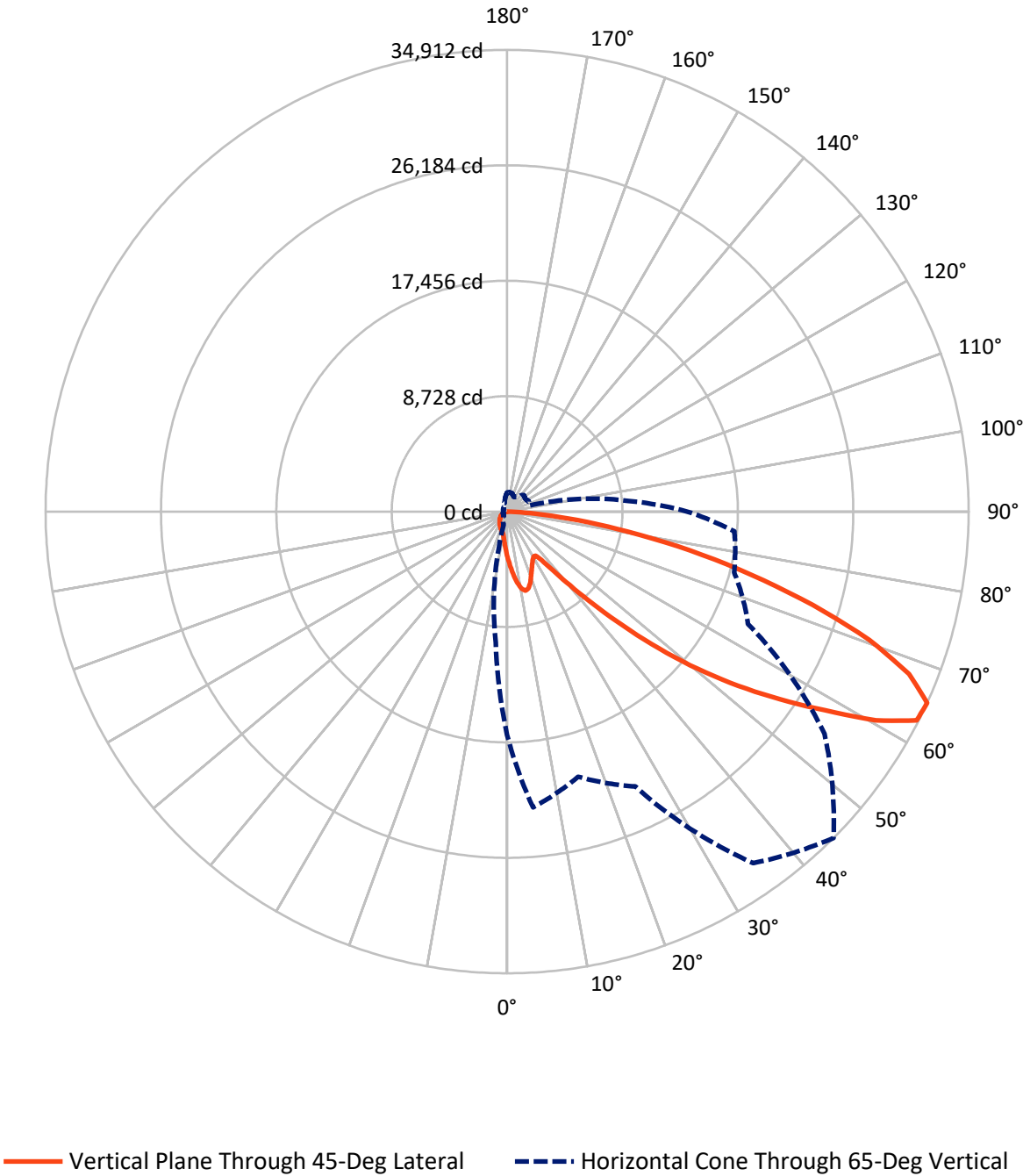


Based on 25 foot mounting height. Maximum calculated value = 9 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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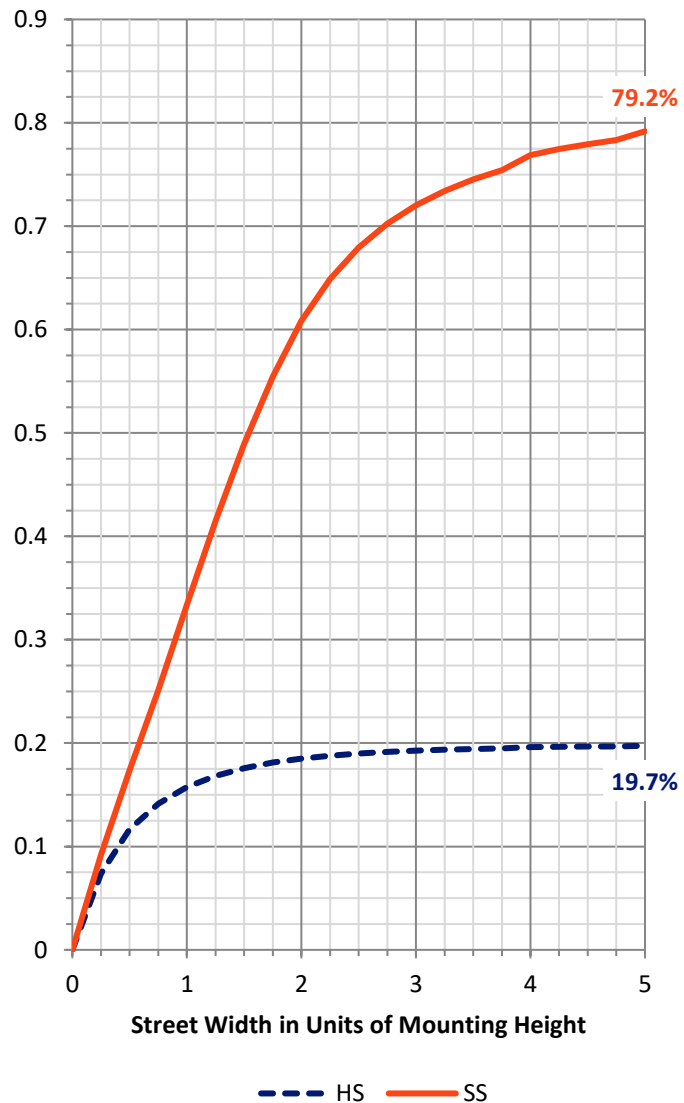
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4937.6	0.0	4937.6
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	19903.3	0.0	19903.3
	% Fixture	80.1	0.0	80.1
Total	Lumens	24840.9	0.0	24840.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.6	1.4
10°-20°	1015.2	4.1
20°-30°	1495.5	6.0
30°-40°	1921.4	7.7
40°-50°	3107.4	12.5
50°-60°	5449.1	21.9
60°-70°	6818.4	27.4
70°-80°	3984.3	16.0
80°-90°	710.9	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°	24840.9	100.0
0°-180°	24840.9	100.0

Coefficient of Utilization



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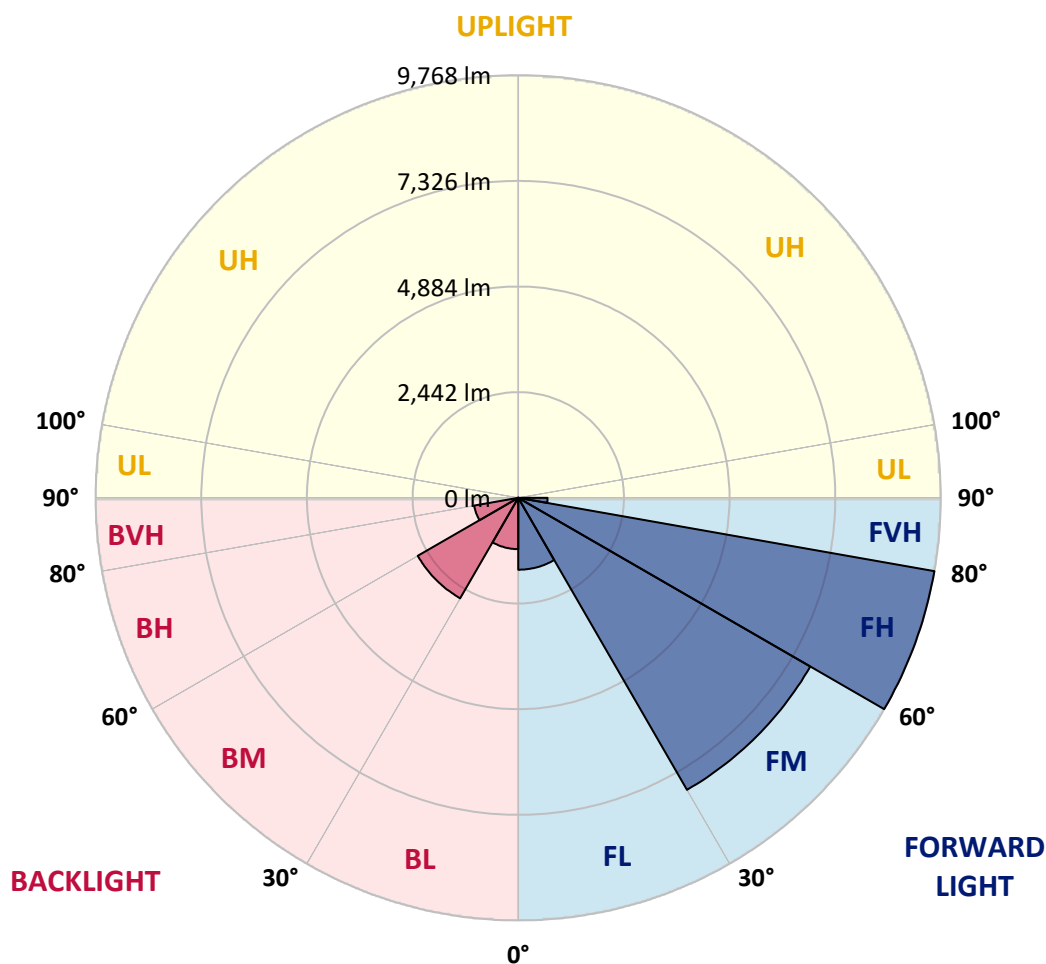
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1662.1	6.7			
FM	(30°-60°)	7795.4	31.4			
FH	(60°-80°)	9768.2	39.3			G4/12000
FVH	(80°-90°)	677.6	2.7			G4/750
BL	(0°-30°)	1187.2	4.8	B3/2500		
BM	(30°-60°)	2682.6	10.8	B3/5000		
BH	(60°-80°)	1034.5	4.2	B3/2500		G3/2500
BVH	(80°-90°)	33.3	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-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7
2.5°	3853.8	3882.9	3947.9	3982.1	4035.2	4038.6	4038.6	3992.4	3990.7	3896.5	3886.3
5°	4307.3	4375.7	4529.8	4688.9	4723.1	4731.7	4714.6	4622.1	4553.7	4370.6	4331.2
7.5°	4757.3	4889.1	5123.6	5335.7	5404.2	5404.2	5363.1	5212.5	5072.2	4806.9	4707.7
10°	5130.4	5296.4	5614.7	5852.5	5931.3	5914.1	5830.3	5640.4	5447.0	5125.3	4995.2
12.5°	5376.8	5563.4	5912.5	6104.1	6184.5	6140.1	6044.2	5859.4	5655.7	5317.0	5169.8
15°	5500.0	5695.1	5998.0	6099.0	6076.7	6030.6	6018.6	5929.6	5775.6	5458.9	5298.1
17.5°	5553.1	5734.5	5945.0	5881.7	5693.5	5657.5	5777.3	5890.3	5852.5	5582.2	5431.6
20°	5602.8	5755.1	5818.3	5537.7	5209.2	5176.7	5406.0	5727.6	5891.9	5696.8	5558.3
22.5°	5671.2	5765.3	5635.2	5174.9	4820.7	4745.3	4998.6	5482.9	5903.9	5842.3	5703.7
25°	5765.3	5790.9	5433.3	4830.9	4474.9	4399.7	4635.9	5210.8	5883.4	5999.7	5881.7
27.5°	5878.3	5825.2	5239.9	4543.4	4199.4	4129.3	4365.5	4949.0	5825.2	6157.2	6073.3
30°	6025.4	5869.7	5048.2	4321.0	4002.7	3951.4	4178.9	4723.1	5753.3	6357.4	6311.2
32.5°	6174.3	5888.5	4870.3	4190.9	3958.1	3977.0	4163.5	4601.6	5674.6	6549.0	6571.3
35°	6335.1	5948.4	4783.1	4319.2	4329.5	4493.8	4570.8	4714.6	5662.6	6809.2	6896.4
37.5°	6554.2	6081.8	4887.4	4957.6	5313.5	5654.1	5590.8	5267.3	5801.2	7197.7	7360.2
40°	6869.0	6316.4	5342.6	6044.2	6774.9	7327.7	7086.4	6271.9	6225.6	7757.2	8000.2
42.5°	7327.7	6689.4	6150.3	7372.2	8611.1	9521.5	8874.7	7567.3	6968.4	8556.4	8866.1
45°	8005.4	7293.5	7127.4	8773.7	10875.1	12309.2	10964.1	8948.2	8008.7	9766.3	10009.2
47.5°	8944.9	8181.7	8043.0	10250.5	13626.9	15481.9	13281.2	10228.3	9193.0	11415.9	11472.4
50°	10192.4	9377.8	8910.6	11866.0	16643.8	18716.2	15596.6	11463.8	10550.0	13431.8	13366.8
52.5°	11838.6	11046.3	9922.0	13404.4	19746.4	21882.1	17922.2	12548.8	12233.9	15771.2	15637.6
55°	14083.8	13556.8	11304.7	14872.7	22847.2	25066.8	20157.1	13572.1	14458.5	18550.2	17742.5
57.5°	16869.8	17246.2	13298.4	16575.4	25634.9	28349.0	22402.3	15002.7	17347.2	21657.9	18964.3
60°	18666.6	22152.5	17116.2	19092.7	28802.5	32060.8	25479.2	17723.7	20383.0	22771.9	18731.7
62.5°	18232.0	23713.2	21688.7	22306.5	31715.1	34759.5	28494.5	20456.6	20954.6	21130.9	16938.2
65°	16898.9	22453.6	20756.0	22931.1	32452.6	34911.8	29300.4	20104.0	17775.0	17251.4	13614.9
67.5°	15064.3	20959.7	18540.0	21274.6	31119.6	32782.9	27799.7	17783.5	13736.4	12945.9	9877.5
70°	13084.4	19306.6	17085.4	19416.2	28578.3	29072.9	25248.2	15641.1	10103.4	8742.9	6338.6
72.5°	11205.4	17585.1	16089.4	17511.5	25188.2	24165.0	21926.6	13746.7	7356.7	6306.0	4505.8
75°	9283.6	15045.6	14670.8	15249.2	20730.4	19034.6	18218.2	11381.7	5773.8	4562.3	3109.4
77.5°	7163.4	11756.4	12619.0	12211.6	14592.1	14138.5	14121.4	8553.0	4218.3	3044.4	1949.1
80°	4902.8	8193.5	9858.7	8614.6	9470.2	9239.1	10635.6	5738.0	3059.7	1832.8	1085.0
82.5°	2881.8	4988.4	6862.2	4170.4	5236.5	5375.1	6333.5	2791.1	1800.3	422.7	236.2
85°	1168.8	1969.6	2683.2	1632.5	2525.8	2130.6	2404.3	783.7	501.4	10.2	0.0
87.5°	294.4	629.8	441.5	183.1	292.6	268.7	212.2	95.8	20.5	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°	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7
2.5°	3819.6	3780.2	3682.6	3585.1	3506.4	3400.3	3330.1	3246.3	3165.8	3094.0	3080.3
5°	4223.4	4093.3	3915.4	3752.8	3586.9	3426.0	3266.8	3099.1	2945.1	2851.0	2791.1
7.5°	4552.0	4322.7	4086.6	3879.4	3679.2	3491.0	3280.5	3076.8	2835.6	2707.2	2590.9
10°	4796.7	4495.5	4185.8	3947.9	3746.0	3562.9	3384.9	3179.5	2888.7	2727.7	2553.3
12.5°	4957.6	4599.9	4237.1	3965.0	3739.1	3597.1	3518.4	3438.0	3148.8	2960.5	2707.2
15°	5068.8	4673.5	4273.0	3925.6	3648.5	3544.0	3622.8	3715.2	3530.4	3313.0	2982.7
17.5°	5190.3	4769.3	4288.5	3819.6	3472.2	3427.7	3631.4	3845.3	3836.7	3621.0	3297.6
20°	5318.6	4853.2	4278.1	3648.5	3258.3	3297.6	3557.8	3805.9	3910.3	3793.9	3506.4
22.5°	5450.4	4933.6	4238.8	3426.0	3058.1	3181.3	3441.3	3658.7	3781.9	3746.0	3526.9
25°	5616.4	5046.6	4180.7	3186.4	2892.0	3063.2	3306.1	3482.4	3568.0	3566.3	3415.7
27.5°	5814.9	5197.2	4149.8	2993.0	2774.0	2929.7	3145.3	3302.8	3362.6	3362.6	3242.9
30°	6046.0	5375.1	4115.6	2866.4	2705.5	2791.1	2958.8	3112.8	3172.7	3172.7	3071.7
32.5°	6302.6	5546.3	4033.5	2789.3	2654.2	2655.9	2762.0	2902.3	2974.2	2984.5	2912.6
35°	6610.6	5729.3	3853.8	2727.7	2594.3	2524.2	2575.5	2691.9	2777.4	2799.7	2755.2
37.5°	7014.5	5953.5	3597.1	2637.1	2501.9	2385.5	2397.5	2486.4	2580.6	2614.9	2585.8
40°	7557.0	6217.0	3330.1	2507.0	2371.8	2233.2	2228.0	2293.1	2385.5	2423.2	2407.7
42.5°	8274.0	6533.7	3075.2	2382.1	2214.4	2072.3	2063.8	2115.1	2195.5	2234.9	2228.0
45°	9191.3	6922.1	2856.2	2284.5	2060.4	1920.0	1916.6	1959.4	2029.6	2070.6	2062.1
47.5°	10466.2	7310.6	2707.2	2233.2	1938.9	1795.1	1802.0	1839.7	1902.9	1932.0	1920.0
50°	12127.8	7428.7	2631.9	2233.2	1873.8	1683.9	1718.1	1749.0	1796.8	1813.9	1798.6
52.5°	13722.7	7038.5	2563.5	2246.9	1882.4	1589.8	1663.4	1685.6	1726.7	1733.5	1711.2
55°	14504.8	6051.1	2469.3	2250.3	1935.4	1509.3	1618.9	1660.0	1675.4	1673.6	1636.0
57.5°	14236.1	4892.5	2310.2	2236.7	1971.4	1458.0	1564.1	1642.9	1653.1	1637.6	1567.5
60°	13293.2	3602.3	2188.7	2135.7	1957.7	1442.6	1480.3	1605.1	1620.6	1600.0	1485.4
62.5°	11712.0	2500.2	2094.6	1913.2	1897.8	1437.5	1348.5	1523.0	1560.7	1531.6	1363.9
65°	9220.4	1766.1	1803.7	1677.0	1767.7	1410.1	1211.6	1423.8	1475.1	1430.6	1194.4
67.5°	6239.3	1274.9	1461.4	1519.7	1557.3	1348.5	1112.3	1310.9	1379.2	1321.1	997.6
70°	3369.5	895.0	965.1	1280.0	1322.9	1242.4	1023.4	1196.2	1274.9	1211.6	812.8
72.5°	1990.2	643.4	676.0	1028.5	1102.1	1093.5	924.1	1062.7	1158.6	1083.2	660.5
75°	1097.0	434.7	482.6	746.1	895.0	843.7	794.1	900.2	997.6	924.1	509.9
77.5°	491.2	260.1	335.4	489.4	703.4	578.4	614.4	701.6	792.3	715.3	340.5
80°	189.9	145.4	222.4	266.9	511.7	320.0	395.3	516.8	581.8	520.2	207.0
82.5°	24.0	65.0	95.8	104.3	297.8	169.4	229.3	325.1	320.0	277.3	104.3
85°	0.0	12.0	13.7	6.9	128.3	61.6	75.3	106.1	99.2	75.3	8.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	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°	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7
2.5°	2996.5	2934.9	2904.0	2878.4	2902.3	2916.0	2916.0	2974.2	3008.4	3022.1	3117.9
5°	2640.5	2525.8	2448.8	2402.6	2418.1	2435.2	2454.0	2527.5	2577.2	2609.6	2758.6
7.5°	2359.9	2185.3	2077.5	2021.0	2029.6	2041.6	2057.0	2128.8	2178.4	2221.3	2387.2
10°	2221.3	1974.8	1832.8	1764.3	1752.3	1745.5	1740.3	1783.2	1820.8	1855.0	2019.4
12.5°	2228.0	1884.2	1711.2	1627.4	1591.5	1550.4	1517.9	1524.8	1548.7	1591.5	1695.9
15°	2315.4	1855.0	1648.0	1543.5	1483.7	1435.7	1396.4	1387.8	1396.4	1403.2	1468.3
17.5°	2433.5	1851.6	1593.2	1463.2	1401.6	1362.2	1326.2	1314.3	1316.0	1324.5	1341.6
20°	2527.5	1841.3	1531.6	1386.1	1331.4	1297.1	1261.2	1249.3	1252.7	1254.4	1273.2
22.5°	2577.2	1825.9	1463.2	1309.1	1262.9	1228.7	1196.2	1194.4	1194.4	1204.8	1218.4
25°	2577.2	1793.4	1401.6	1235.5	1194.4	1163.7	1124.3	1131.2	1134.6	1148.3	1168.8
27.5°	2515.6	1731.8	1351.9	1172.2	1129.4	1098.6	1062.7	1071.2	1076.4	1091.8	1117.5
30°	2436.8	1658.2	1295.4	1112.3	1062.7	1040.5	1009.6	1013.1	1019.9	1037.0	1066.1
32.5°	2353.0	1570.9	1249.3	1052.5	1002.8	985.7	951.5	956.6	963.5	982.3	1014.7
35°	2260.6	1468.3	1194.4	997.6	948.0	934.4	895.0	898.4	908.7	929.3	961.8
37.5°	2163.1	1384.5	1139.7	944.6	893.3	879.6	838.6	841.9	853.9	877.9	908.7
40°	2067.2	1302.3	1081.5	888.2	836.8	824.8	780.3	783.7	797.4	823.1	855.7
42.5°	1962.9	1238.9	1006.2	829.9	775.2	763.2	722.1	727.3	742.7	768.3	800.8
45°	1837.9	1197.9	922.4	775.2	713.6	701.6	664.0	674.2	691.4	717.0	751.2
47.5°	1709.6	1180.8	852.2	717.0	650.3	640.0	609.3	626.4	645.1	665.7	703.4
50°	1586.4	1158.6	780.3	662.3	595.5	585.3	564.7	587.0	605.8	624.6	660.5
52.5°	1446.1	1110.6	715.3	614.4	549.3	545.9	535.7	556.2	573.3	590.4	621.2
55°	1300.5	1033.6	658.9	571.5	509.9	513.4	508.3	525.3	539.0	554.4	581.8
57.5°	1173.9	936.0	614.4	525.3	475.7	486.0	479.2	487.7	496.3	515.1	537.3
60°	1045.6	819.7	564.7	470.6	441.5	453.5	434.7	433.0	436.3	441.5	482.6
62.5°	872.8	698.2	503.1	422.7	403.8	409.0	373.1	345.6	345.6	350.9	412.5
65°	701.6	585.3	434.7	368.0	352.5	349.1	297.8	260.1	256.7	272.1	325.1
67.5°	576.7	486.0	366.2	306.3	296.0	299.5	261.8	224.2	220.8	237.9	277.3
70°	477.4	391.9	292.6	236.2	246.4	261.8	224.2	188.2	183.1	198.5	236.2
72.5°	379.9	306.3	224.2	174.6	203.7	222.4	183.1	148.8	145.4	159.2	195.1
75°	278.9	219.0	152.3	126.6	157.4	174.6	133.5	106.1	101.0	113.0	148.8
77.5°	172.8	123.2	95.8	75.3	107.8	116.3	70.2	61.6	59.9	68.5	94.1
80°	80.5	53.1	46.2	25.6	39.4	46.2	29.1	32.5	34.2	41.1	58.2
82.5°	22.2	8.5	1.7	0.0	0.0	13.7	6.9	13.7	17.1	25.6	37.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	8.5	15.4	27.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	13.7
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: P966701

CATALOG NUMBER: NAV-SB4C-740-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7	3439.7
2.5°	3189.8	3258.3	3367.8	3480.7	3592.0	3705.0	3814.4	3853.8
5°	2893.8	3051.2	3268.5	3501.3	3740.8	3983.9	4206.3	4307.3
7.5°	2563.5	2789.3	3116.2	3480.7	3862.3	4244.0	4594.8	4757.3
10°	2210.9	2496.8	2869.8	3362.6	3910.3	4437.3	4919.9	5130.4
12.5°	1875.5	2175.0	2587.4	3177.8	3872.7	4548.5	5128.7	5376.8
15°	1594.9	1860.2	2305.1	2958.8	3751.1	4555.4	5227.9	5500.0
17.5°	1384.5	1557.3	2017.6	2715.8	3592.0	4492.1	5262.1	5553.1
20°	1280.0	1328.0	1644.5	2404.3	3443.1	4432.2	5296.4	5602.8
22.5°	1218.4	1230.4	1345.1	2002.2	3265.1	4413.3	5356.3	5671.2
25°	1168.8	1172.2	1203.0	1586.4	2993.0	4401.5	5448.7	5765.3
27.5°	1119.2	1119.2	1136.3	1278.3	2623.4	4350.1	5568.5	5878.3
30°	1069.6	1069.6	1081.5	1131.2	2190.4	4249.1	5712.2	6025.4
32.5°	1018.2	1018.2	1028.5	1064.5	1749.0	4122.4	5844.0	6174.3
35°	966.9	963.5	977.1	1014.7	1391.2	3961.6	5975.7	6335.1
37.5°	912.1	910.4	924.1	966.9	1201.3	3775.1	6075.1	6554.2
40°	853.9	853.9	869.3	915.5	1146.6	3540.7	6232.5	6869.0
42.5°	800.8	797.4	814.6	871.0	1105.5	3316.5	6514.8	7327.7
45°	749.6	742.7	758.1	828.3	1033.6	3237.8	7042.0	8005.4
47.5°	701.6	684.5	698.2	776.9	968.6	3532.0	7904.4	8944.9
50°	662.3	629.8	641.8	725.6	918.9	4170.4	9023.6	10192.4
52.5°	621.2	578.4	585.3	662.3	874.4	4777.9	10236.9	11838.6
55°	578.4	530.5	533.9	598.9	811.2	4868.5	11421.1	14083.8
57.5°	530.5	486.0	486.0	540.8	765.0	4220.0	12331.5	16869.8
60°	477.4	448.3	439.8	494.6	806.1	2977.6	12437.6	18666.6
62.5°	419.2	403.8	391.9	450.1	836.8	1764.3	11583.6	18232.0
65°	352.5	349.1	340.5	494.6	705.0	1042.1	9944.2	16898.9
67.5°	296.0	290.9	290.9	518.5	535.7	655.4	7769.2	15064.3
70°	255.0	236.2	236.2	391.9	325.1	453.5	5424.7	13084.4
72.5°	213.9	193.4	179.7	313.1	243.0	332.0	3390.1	11205.4
75°	171.2	155.7	138.6	207.0	181.4	251.5	1969.6	9283.6
77.5°	123.2	116.3	97.6	152.3	131.8	181.4	1172.2	7163.4
80°	63.3	65.0	61.6	87.2	89.0	123.2	667.4	4902.8
82.5°	37.6	29.1	32.5	42.7	51.4	70.2	251.5	2881.8
85°	24.0	15.4	15.4	20.5	25.6	27.4	77.0	1168.8
87.5°	12.0	5.1	6.9	10.2	8.5	6.9	3.4	294.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)