

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: P966050

Luminaire Tested: **NAV-SB4B-722-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966050
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-SB4B-722-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 2200K, 450mA 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: 14583.7 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

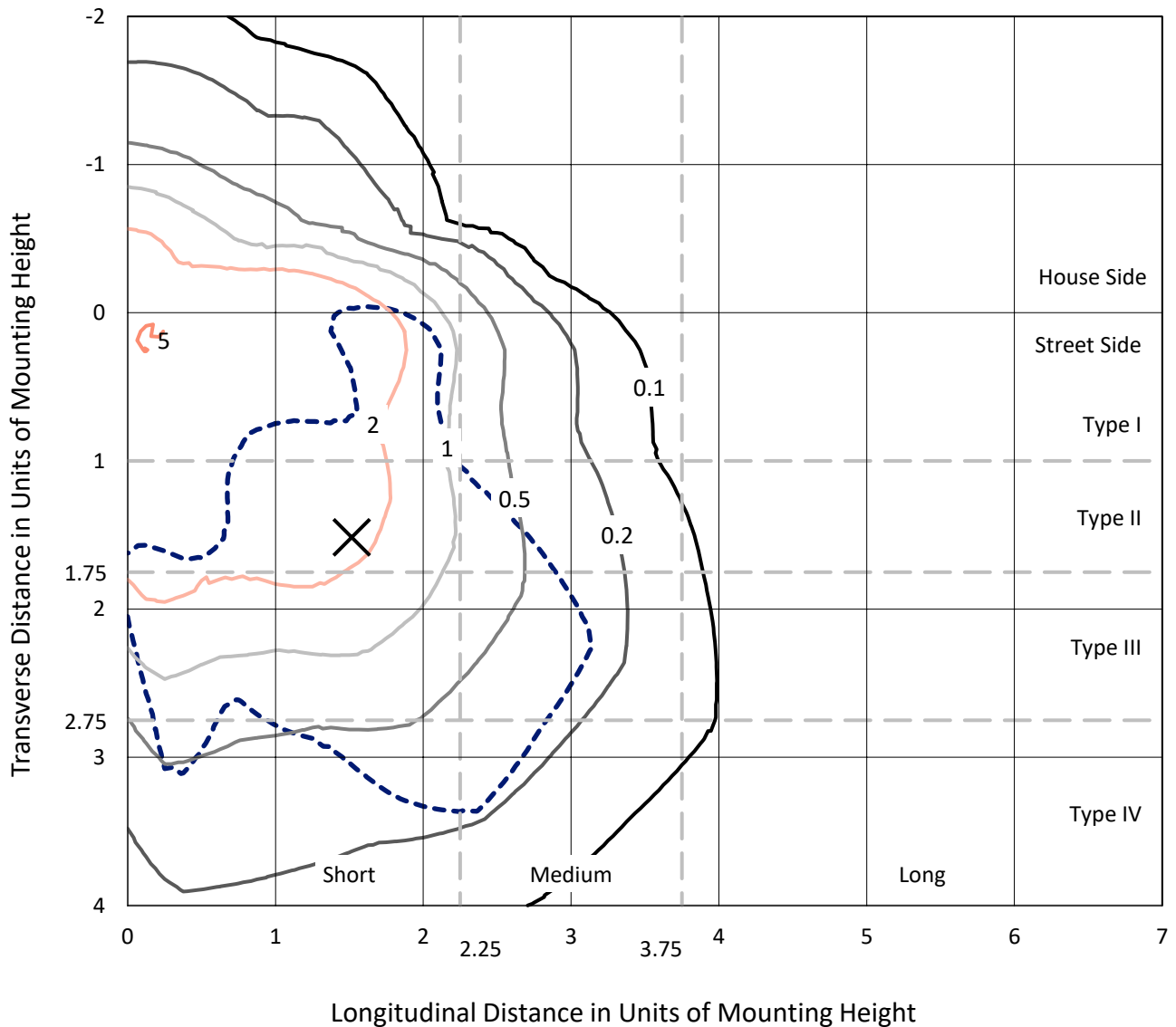
Input Watts (W): 147
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

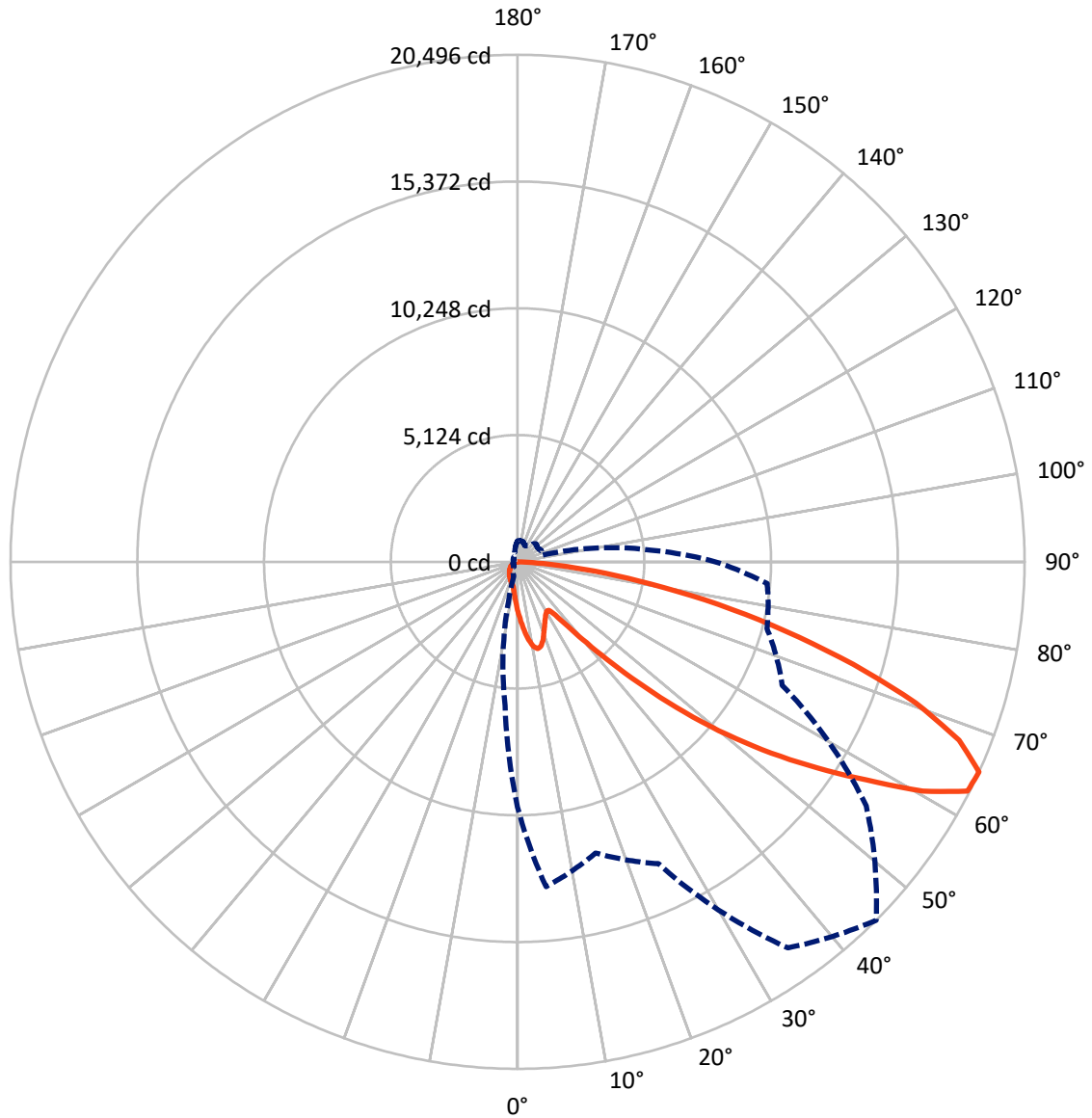
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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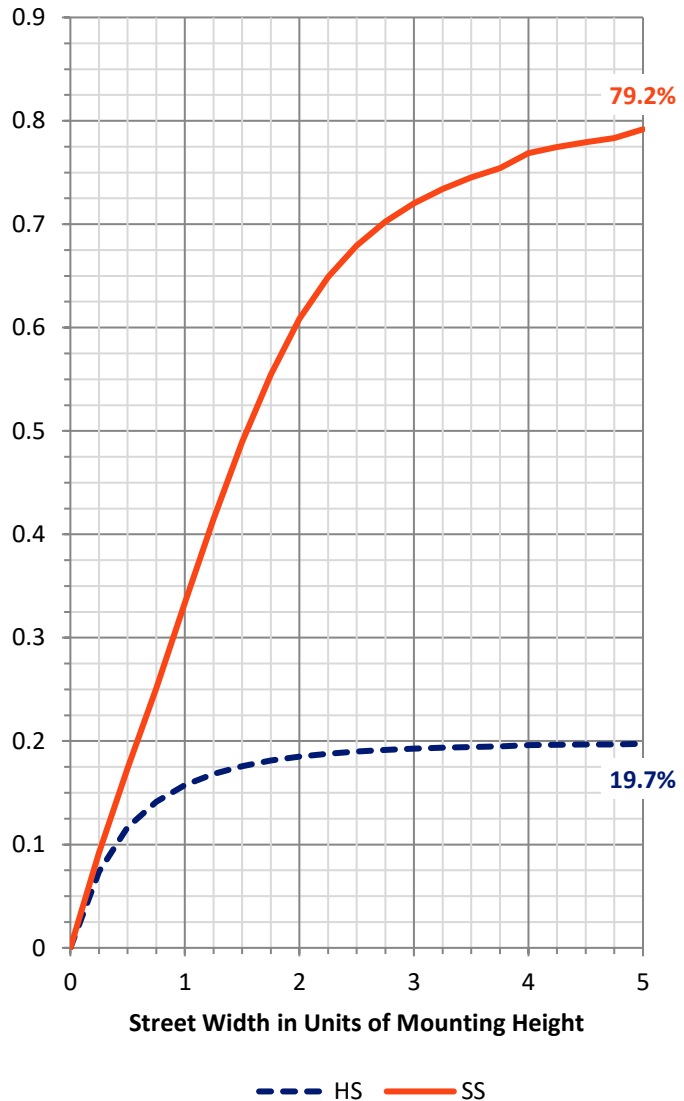
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2898.8	0.0	2898.8
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	11684.9	0.0	11684.9
	% Fixture	80.1	0.0	80.1
Total	Lumens	14583.7	0.0	14583.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.8	1.4
10°-20°	596.0	4.1
20°-30°	878.0	6.0
30°-40°	1128.0	7.7
40°-50°	1824.3	12.5
50°-60°	3199.1	21.9
60°-70°	4003.0	27.4
70°-80°	2339.2	16.0
80°-90°	417.3	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°	14583.7	100.0
0°-180°	14583.7	100.0

Coefficient of Utilization



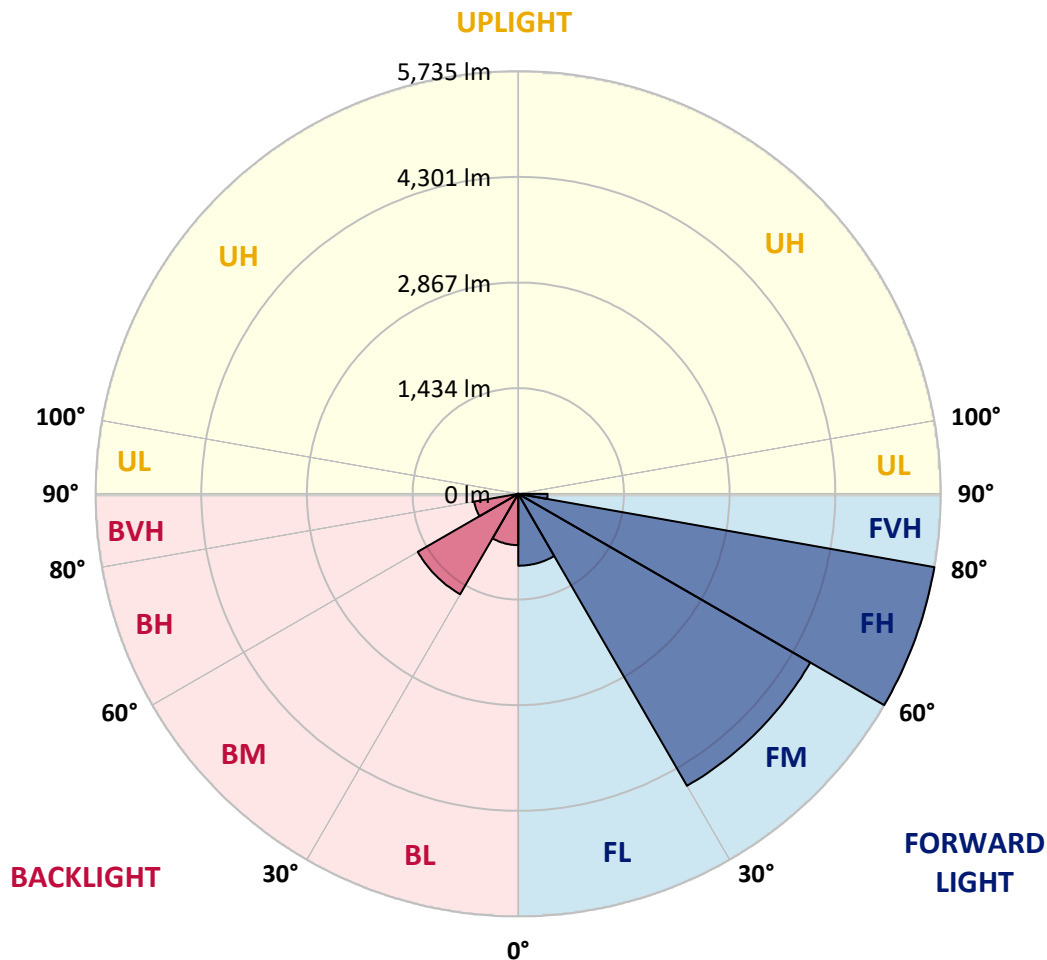
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	975.8	6.7			
FM (30°-60°)	4576.5	31.4			
FH (60°-80°)	5734.8	39.3			G3/7500
FVH (80°-90°)	397.8	2.7			G3/500
BL (0°-30°)	697.0	4.8	B2/1000		
BM (30°-60°)	1574.9	10.8	B2/2500		
BH (60°-80°)	607.4	4.2	B2/1000		G2/1000
BVH (80°-90°)	19.6	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°	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4
2.5°	2262.5	2279.6	2317.7	2337.8	2369.0	2371.0	2371.0	2343.9	2342.8	2287.6	2281.5
5°	2528.8	2569.0	2659.4	2752.7	2772.8	2777.9	2767.8	2713.6	2673.4	2565.9	2542.8
7.5°	2792.9	2870.3	3008.0	3132.5	3172.7	3172.7	3148.6	3060.2	2977.8	2822.1	2763.8
10°	3012.0	3109.4	3296.3	3435.9	3482.1	3472.1	3422.9	3311.4	3197.9	3009.0	2932.6
12.5°	3156.7	3266.2	3471.2	3583.6	3630.9	3604.7	3548.4	3440.0	3320.4	3121.5	3035.1
15°	3229.0	3343.6	3521.4	3580.6	3567.6	3540.5	3533.4	3481.2	3390.7	3204.9	3110.5
17.5°	3260.1	3366.6	3490.2	3453.0	3342.5	3321.4	3391.7	3458.0	3435.9	3277.2	3188.8
20°	3289.2	3378.7	3415.8	3251.1	3058.2	3039.1	3173.7	3362.6	3459.1	3344.6	3263.2
22.5°	3329.5	3384.8	3308.4	3038.1	2830.1	2786.0	2934.6	3218.9	3466.1	3430.0	3348.6
25°	3384.8	3399.8	3189.8	2836.2	2627.2	2583.0	2721.7	3059.2	3454.0	3522.3	3453.0
27.5°	3451.1	3419.9	3076.3	2667.4	2465.4	2424.2	2562.9	2905.5	3419.9	3614.8	3565.6
30°	3537.4	3446.0	2963.8	2536.8	2349.9	2319.8	2453.4	2772.8	3377.7	3732.3	3705.2
32.5°	3624.8	3457.0	2859.2	2460.4	2323.8	2334.8	2444.3	2701.6	3331.5	3844.9	3857.9
35°	3719.3	3492.2	2808.0	2535.7	2541.8	2638.2	2683.4	2767.8	3324.5	3997.6	4048.7
37.5°	3847.8	3570.6	2869.3	2910.5	3119.5	3319.5	3282.3	3092.3	3405.8	4225.7	4321.1
40°	4032.8	3708.2	3136.6	3548.4	3977.5	4301.9	4160.3	3682.1	3654.9	4554.2	4696.9
42.5°	4301.9	3927.2	3610.8	4328.1	5055.5	5589.9	5210.2	4442.7	4091.0	5023.3	5205.2
45°	4699.8	4281.8	4184.5	5150.9	6384.6	7226.6	6436.9	5253.4	4701.9	5733.6	5876.3
47.5°	5251.4	4803.3	4722.0	6018.0	8000.1	9089.2	7797.2	6004.9	5397.0	6702.2	6735.3
50°	5983.7	5505.6	5231.3	6966.3	9771.3	10988.0	9156.5	6730.3	6193.8	7885.6	7847.4
52.5°	6950.3	6485.1	5825.1	7869.5	11592.9	12846.6	10521.8	7367.2	7182.4	9259.0	9180.6
55°	8268.4	7958.9	6636.8	8731.6	13413.3	14716.3	11833.9	7968.0	8488.4	10890.5	10416.4
57.5°	9904.0	10125.1	7807.2	9731.1	15049.9	16643.2	13152.1	8807.9	10184.3	12715.0	11133.7
60°	10958.9	13005.4	10048.7	11209.1	16909.5	18822.4	14958.4	10405.3	11966.6	13369.1	10997.0
62.5°	10703.7	13921.7	12733.2	13095.8	18619.4	20406.7	16728.7	12009.7	12302.2	12405.6	9944.1
65°	9921.1	13182.2	12185.6	13462.6	19052.5	20496.2	17201.9	11802.8	10435.4	10128.0	7993.2
67.5°	8844.1	12305.1	10884.6	12490.0	18269.8	19246.3	16320.8	10440.4	8064.4	7600.3	5798.9
70°	7681.7	11334.7	10030.5	11398.9	16777.9	17068.2	14822.8	9182.7	5931.6	5132.8	3721.3
72.5°	6578.6	10323.9	9445.9	10280.8	14787.7	14186.8	12872.8	8070.4	4319.0	3702.2	2645.3
75°	5450.3	8833.0	8613.0	8952.6	12170.5	11174.9	10695.7	6682.0	3389.8	2678.4	1825.5
77.5°	4205.6	6902.0	7408.4	7169.3	8566.7	8300.6	8290.5	5021.3	2476.5	1787.3	1144.3
80°	2878.4	4810.3	5787.9	5057.5	5559.8	5424.2	6244.0	3368.7	1796.3	1076.0	636.9
82.5°	1691.9	2928.6	4028.7	2448.4	3074.3	3155.7	3718.3	1638.6	1056.9	248.2	138.7
85°	686.1	1156.4	1575.3	958.5	1482.9	1250.8	1411.5	460.1	294.4	6.0	0.0
87.5°	172.8	369.7	259.2	107.5	171.8	157.7	124.5	56.3	12.1	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°	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4
2.5°	2242.4	2219.3	2162.0	2104.7	2058.5	1996.3	1955.1	1905.9	1858.6	1816.4	1808.4
5°	2479.5	2403.1	2298.7	2203.2	2105.8	2011.4	1917.9	1819.5	1729.1	1673.7	1638.6
7.5°	2672.4	2537.8	2399.1	2277.5	2160.0	2049.5	1926.0	1806.4	1664.7	1589.4	1521.1
10°	2816.1	2639.3	2457.4	2317.7	2199.2	2091.7	1987.3	1866.6	1695.9	1601.5	1499.0
12.5°	2910.5	2700.6	2487.6	2327.8	2195.2	2111.8	2065.6	2018.3	1848.6	1738.1	1589.4
15°	2975.8	2743.7	2508.7	2304.7	2141.9	2080.6	2126.9	2181.1	2072.7	1945.0	1751.1
17.5°	3047.1	2800.0	2517.7	2242.4	2038.4	2012.4	2131.9	2257.5	2252.4	2125.8	1936.0
20°	3122.5	2849.2	2511.7	2141.9	1912.9	1936.0	2088.7	2234.4	2295.7	2227.3	2058.5
22.5°	3199.8	2896.4	2488.6	2011.4	1795.3	1867.7	2020.4	2148.0	2220.4	2199.2	2070.6
25°	3297.3	2962.8	2454.4	1870.7	1697.9	1798.4	1941.0	2044.5	2094.7	2093.8	2005.3
27.5°	3413.9	3051.1	2436.3	1757.2	1628.5	1720.0	1846.5	1939.0	1974.2	1974.2	1903.8
30°	3549.5	3155.7	2416.2	1682.8	1588.3	1638.6	1737.1	1827.5	1862.6	1862.6	1803.4
32.5°	3700.1	3256.1	2368.0	1637.6	1558.2	1559.2	1621.6	1704.0	1746.1	1752.1	1709.9
35°	3881.1	3363.6	2262.5	1601.5	1523.0	1481.8	1512.0	1580.3	1630.6	1643.6	1617.6
37.5°	4118.1	3495.2	2111.8	1548.2	1468.8	1400.5	1407.5	1459.8	1515.1	1535.1	1518.0
40°	4436.6	3649.9	1955.1	1471.8	1392.5	1311.1	1308.1	1346.2	1400.5	1422.6	1413.6
42.5°	4857.6	3835.9	1805.3	1398.5	1300.0	1216.7	1211.7	1241.8	1288.9	1312.1	1308.1
45°	5396.0	4063.8	1676.8	1341.2	1209.6	1127.2	1125.2	1150.4	1191.6	1215.6	1210.6
47.5°	6144.6	4291.9	1589.4	1311.1	1138.3	1053.9	1057.9	1080.0	1117.1	1134.3	1127.2
50°	7120.1	4361.3	1545.2	1311.1	1100.1	988.6	1008.7	1026.7	1054.9	1065.0	1055.9
52.5°	8056.4	4132.2	1505.0	1319.2	1105.2	933.4	976.5	989.6	1013.7	1017.7	1004.7
55°	8515.5	3552.4	1449.8	1321.1	1136.3	886.1	950.4	974.6	983.6	982.6	960.4
57.5°	8357.8	2872.4	1356.3	1313.1	1157.3	856.0	918.3	964.5	970.5	961.4	920.2
60°	7804.2	2114.8	1284.9	1253.8	1149.3	847.0	869.0	942.4	951.4	939.4	872.1
62.5°	6875.9	1467.8	1229.7	1123.2	1114.2	843.9	791.7	894.1	916.2	899.1	800.7
65°	5413.1	1036.8	1058.9	984.6	1037.8	827.9	711.3	835.9	866.0	839.9	701.3
67.5°	3663.0	748.5	858.0	892.2	914.2	791.7	653.0	769.6	809.7	775.6	585.7
70°	1978.1	525.4	566.6	751.5	776.6	729.4	600.8	702.2	748.5	711.3	477.2
72.5°	1168.4	377.7	396.9	603.8	647.0	642.0	542.5	623.9	680.2	635.9	387.8
75°	644.0	255.2	283.3	438.1	525.4	495.3	466.2	528.5	585.7	542.5	299.4
77.5°	288.3	152.7	196.9	287.3	412.9	339.6	360.7	411.9	465.1	419.9	200.0
80°	111.5	85.4	130.6	156.7	300.4	187.9	232.1	303.4	341.6	305.4	121.6
82.5°	14.0	38.1	56.3	61.3	174.8	99.4	134.6	190.9	187.9	162.8	61.3
85°	0.0	7.1	8.0	4.0	75.3	36.2	44.2	62.3	58.2	44.2	5.0
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°	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4
2.5°	1759.2	1723.0	1704.9	1689.8	1704.0	1712.0	1712.0	1746.1	1766.2	1774.3	1830.5
5°	1550.2	1482.9	1437.7	1410.5	1419.6	1429.7	1440.7	1483.9	1513.0	1532.1	1619.5
7.5°	1385.4	1283.0	1219.6	1186.5	1191.6	1198.5	1207.7	1249.8	1278.9	1304.0	1401.5
10°	1304.0	1159.4	1076.0	1035.8	1028.8	1024.8	1021.7	1046.8	1069.0	1089.1	1185.5
12.5°	1308.1	1106.2	1004.7	955.4	934.3	910.2	891.1	895.1	909.2	934.3	995.6
15°	1359.4	1089.1	967.5	906.2	871.0	843.0	819.8	814.8	819.8	823.8	862.0
17.5°	1428.6	1087.0	935.3	859.0	822.9	799.7	778.6	771.6	772.5	777.6	787.6
20°	1483.9	1081.1	899.1	813.7	781.7	761.6	740.5	733.4	735.4	736.5	747.4
22.5°	1513.0	1071.9	859.0	768.5	741.5	721.4	702.2	701.3	701.3	707.2	715.3
25°	1513.0	1052.9	822.9	725.4	701.3	683.2	660.1	664.1	666.0	674.1	686.1
27.5°	1476.8	1016.7	793.7	688.2	663.1	645.0	623.9	628.9	631.9	640.9	656.0
30°	1430.6	973.5	760.6	653.0	623.9	610.8	592.8	594.8	598.8	608.8	625.9
32.5°	1381.4	922.3	733.4	617.9	588.8	578.7	558.6	561.6	565.6	576.7	595.7
35°	1327.2	862.0	701.3	585.7	556.6	548.6	525.4	527.5	533.5	545.5	564.7
37.5°	1269.9	812.7	669.1	554.5	524.4	516.4	492.3	494.3	501.3	515.4	533.5
40°	1213.6	764.5	635.0	521.4	491.3	484.2	458.2	460.1	468.2	483.3	502.4
42.5°	1152.3	727.3	590.7	487.3	455.1	448.1	423.9	427.0	436.0	451.1	470.2
45°	1079.0	703.3	541.5	455.1	418.9	411.9	389.8	395.9	405.9	421.0	441.1
47.5°	1003.7	693.2	500.3	421.0	381.8	375.8	357.6	367.7	378.7	390.8	412.9
50°	931.3	680.2	458.2	388.8	349.6	343.6	331.6	344.6	355.7	366.7	387.8
52.5°	848.9	652.0	419.9	360.7	322.5	320.5	314.5	326.6	336.6	346.7	364.7
55°	763.5	606.8	386.8	335.6	299.4	301.3	298.4	308.4	316.5	325.5	341.6
57.5°	689.2	549.5	360.7	308.4	279.3	285.4	281.3	286.3	291.3	302.4	315.5
60°	613.9	481.2	331.6	276.2	259.2	266.2	255.2	254.2	256.1	259.2	283.3
62.5°	512.4	409.9	295.4	248.2	237.1	240.2	219.0	203.0	203.0	205.9	242.1
65°	411.9	343.6	255.2	216.0	206.9	205.0	174.8	152.7	150.7	159.7	190.9
67.5°	338.6	285.4	215.0	179.8	173.8	175.8	153.8	131.6	129.6	139.6	162.8
70°	280.3	230.1	171.8	138.7	144.6	153.8	131.6	110.5	107.5	116.5	138.7
72.5°	223.0	179.8	131.6	102.5	119.5	130.6	107.5	87.4	85.4	93.5	114.5
75°	163.8	128.6	89.4	74.3	92.5	102.5	78.4	62.3	59.2	66.3	87.4
77.5°	101.5	72.4	56.3	44.2	63.3	68.4	41.2	36.2	35.2	40.2	55.2
80°	47.3	31.2	27.2	15.1	23.1	27.2	17.1	19.1	20.1	24.1	34.1
82.5°	13.0	5.0	1.0	0.0	0.0	8.0	4.0	8.0	10.0	15.1	22.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	5.0	9.0	16.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	8.0
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: P966050
 CATALOG NUMBER: NAV-SB4B-722-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4	2019.4
2.5°	1872.7	1912.9	1977.2	2043.4	2108.8	2175.0	2239.4	2262.5
5°	1698.9	1791.3	1918.9	2055.5	2196.2	2338.8	2469.4	2528.8
7.5°	1505.0	1637.6	1829.5	2043.4	2267.5	2491.6	2697.5	2792.9
10°	1298.1	1465.9	1684.8	1974.2	2295.7	2605.1	2888.4	3012.0
12.5°	1101.2	1276.9	1519.0	1865.7	2273.6	2670.4	3010.9	3156.7
15°	936.3	1092.0	1353.3	1737.1	2202.2	2674.4	3069.3	3229.0
17.5°	812.7	914.2	1184.5	1594.4	2108.8	2637.2	3089.4	3260.1
20°	751.5	779.6	965.4	1411.5	2021.4	2602.1	3109.4	3289.2
22.5°	715.3	722.3	789.7	1175.5	1916.9	2591.0	3144.6	3329.5
25°	686.1	688.2	706.3	931.3	1757.2	2584.0	3198.8	3384.8
27.5°	657.0	657.0	667.1	750.5	1540.2	2553.9	3269.1	3451.1
30°	627.9	627.9	635.0	664.1	1286.0	2494.5	3353.6	3537.4
32.5°	597.8	597.8	603.8	624.9	1026.7	2420.2	3430.9	3624.8
35°	567.6	565.6	573.7	595.7	816.8	2325.8	3508.3	3719.3
37.5°	535.5	534.4	542.5	567.6	705.3	2216.3	3566.6	3847.8
40°	501.3	501.3	510.3	537.5	673.1	2078.7	3658.9	4032.8
42.5°	470.2	468.2	478.3	511.4	649.0	1947.1	3824.8	4301.9
45°	440.0	436.0	445.1	486.3	606.8	1900.9	4134.2	4699.8
47.5°	411.9	401.9	409.9	456.1	568.7	2073.7	4640.6	5251.4
50°	388.8	369.7	376.8	426.0	539.5	2448.4	5297.6	5983.7
52.5°	364.7	339.6	343.6	388.8	513.4	2805.0	6009.9	6950.3
55°	339.6	311.4	313.4	351.7	476.2	2858.3	6705.1	8268.4
57.5°	311.4	285.4	285.4	317.4	449.1	2477.5	7239.6	9904.0
60°	280.3	263.2	258.2	290.4	473.2	1748.1	7301.9	10958.9
62.5°	246.1	237.1	230.1	264.2	491.3	1035.8	6800.6	10703.7
65°	206.9	205.0	200.0	290.4	413.9	611.8	5838.1	9921.1
67.5°	173.8	170.8	170.8	304.4	314.5	384.8	4561.1	8844.1
70°	149.6	138.7	138.7	230.1	190.9	266.2	3184.8	7681.7
72.5°	125.6	113.6	105.5	183.9	142.7	195.0	1990.2	6578.6
75°	100.4	91.4	81.4	121.6	106.5	147.7	1156.4	5450.3
77.5°	72.4	68.4	57.3	89.4	77.4	106.5	688.2	4205.6
80°	37.2	38.1	36.2	51.2	52.3	72.4	391.9	2878.4
82.5°	22.1	17.1	19.1	25.1	30.1	41.2	147.7	1691.9
85°	14.0	9.0	9.0	12.1	15.1	16.1	45.2	686.1
87.5°	7.1	3.0	4.0	6.0	5.0	4.0	2.0	172.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)