

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: P962981

Luminaire Tested: **NAV-SB2D-735-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P962981
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-SB2D-735-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 3500K, 900mA 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: 15919.3 lumens
Efficiency: N/A
Efficacy: 107.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

Input Watts (W): 147.6
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



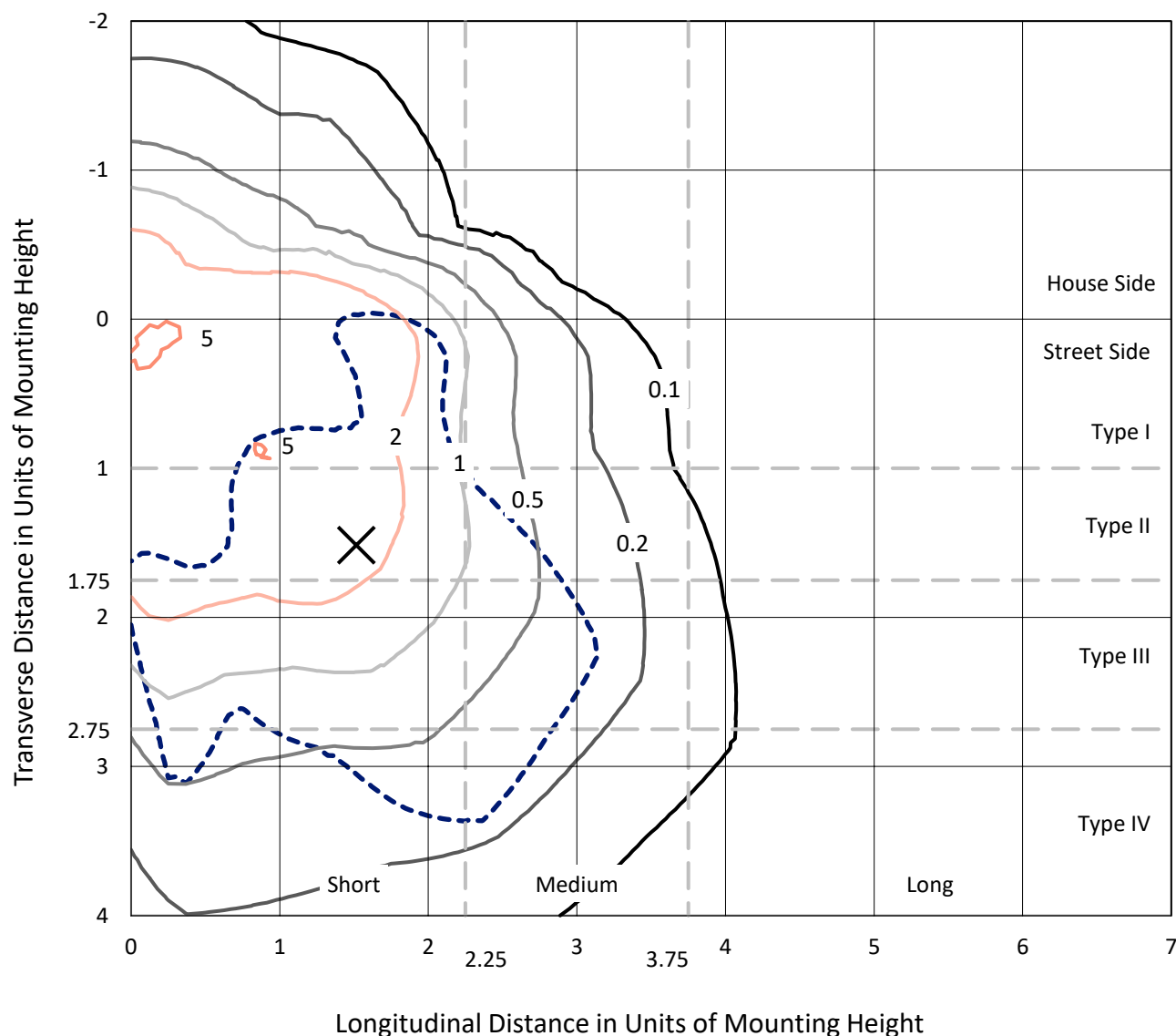
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

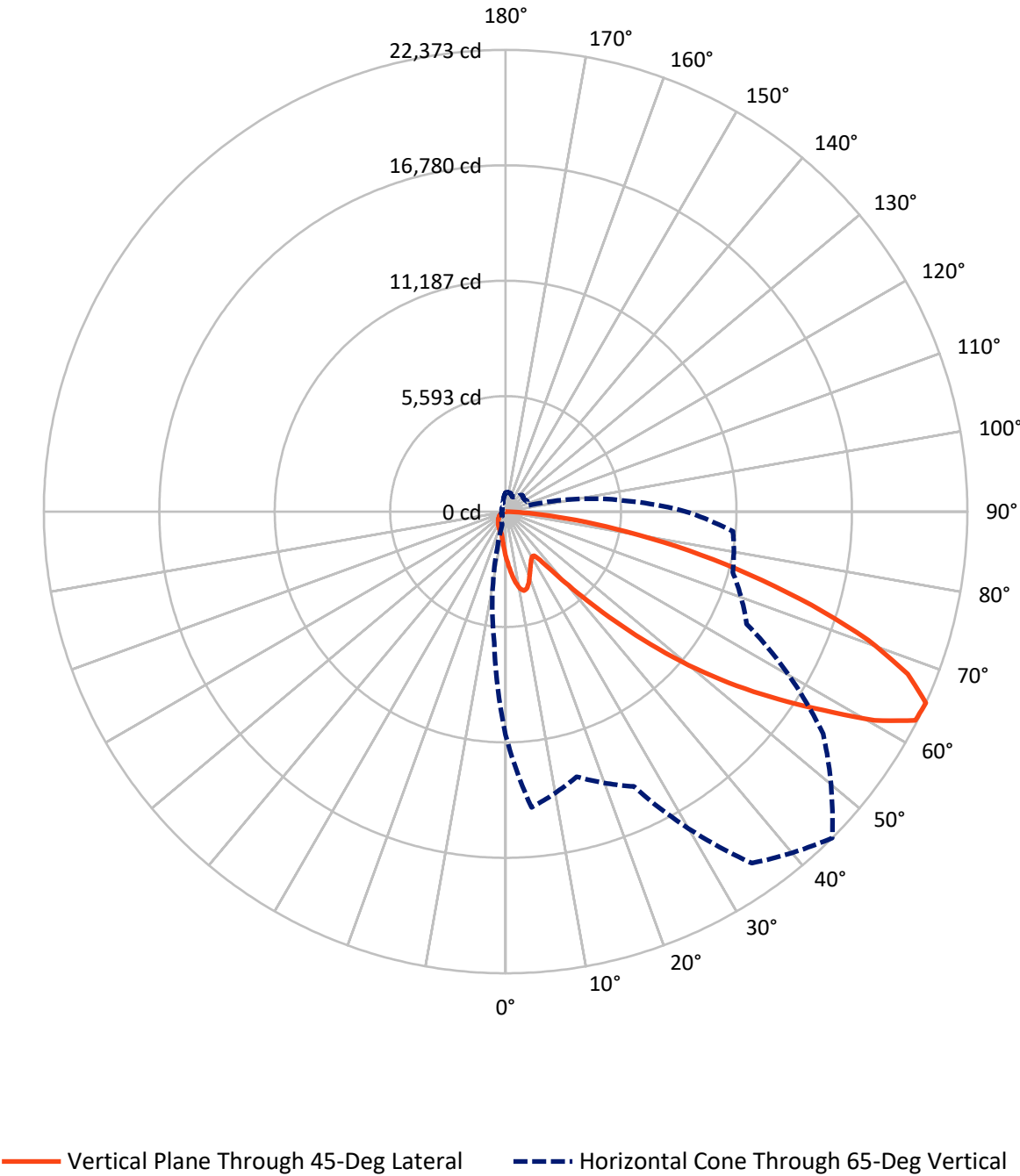


Based on 25 foot mounting height. Maximum calculated value = 5.8 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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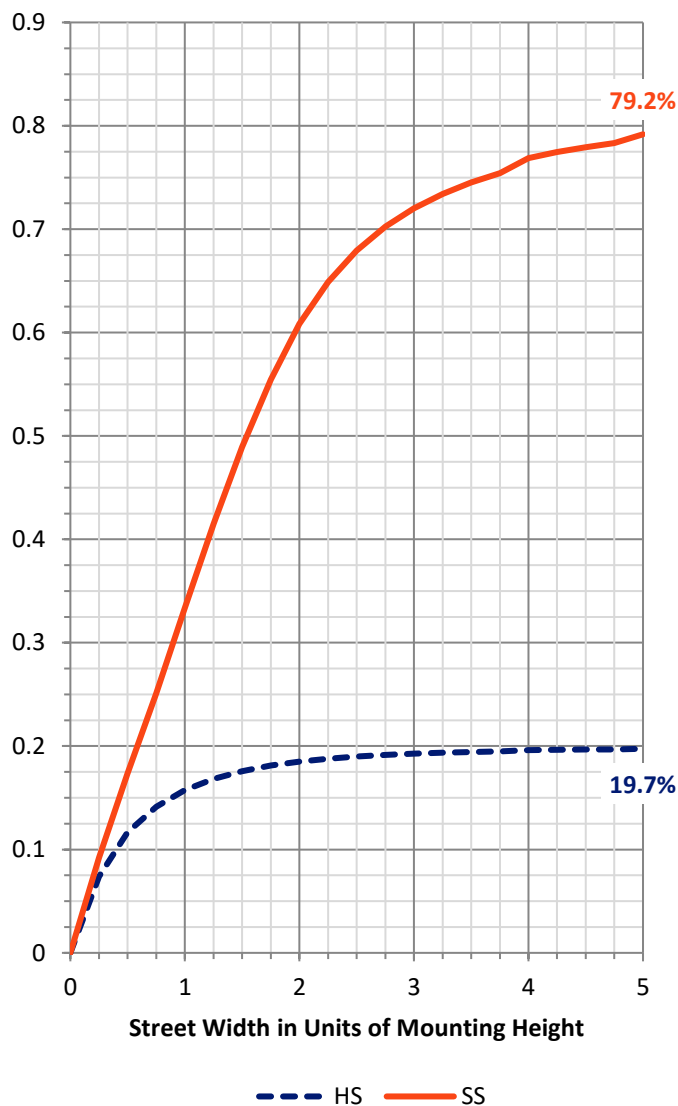
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3164.3	0.0	3164.3
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	12755.0	0.0	12755.0
	% Fixture	80.1	0.0	80.1
Total	Lumens	15919.3	0.0	15919.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.0	1.4
10°-20°	650.6	4.1
20°-30°	958.4	6.0
30°-40°	1231.3	7.7
40°-50°	1991.4	12.5
50°-60°	3492.1	21.9
60°-70°	4369.6	27.4
70°-80°	2553.4	16.0
80°-90°	455.6	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°	15919.3	100.0
0°-180°	15919.3	100.0

Coefficient of Utilization



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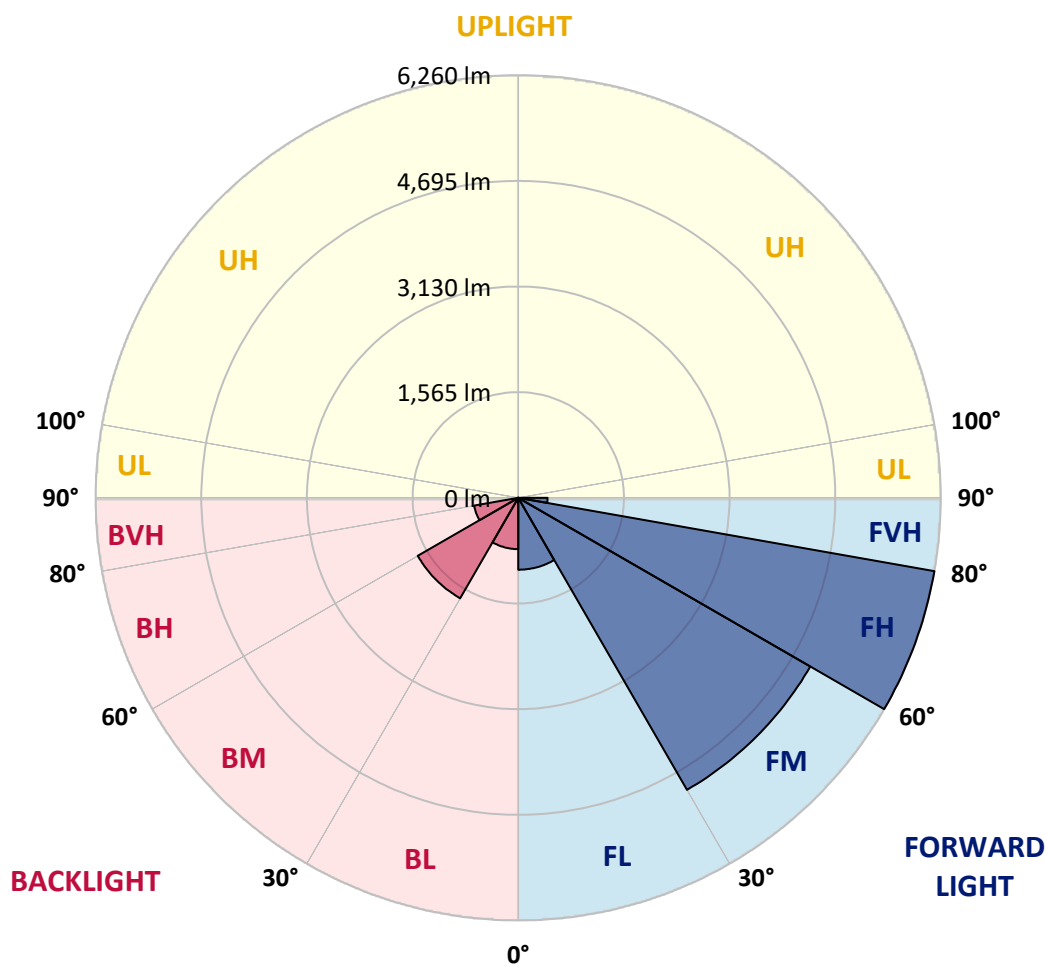
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1065.2	6.7			
FM	(30°-60°)	4995.7	31.4			
FH	(60°-80°)	6260.0	39.3			G3/7500
FVH	(80°-90°)	434.2	2.7			G3/500
BL	(0°-30°)	760.8	4.8	B2/1000		
BM	(30°-60°)	1719.1	10.8	B2/2500		
BH	(60°-80°)	663.0	4.2	B2/1000		G2/1000
BVH	(80°-90°)	21.3	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3
2.5°	2469.7	2488.4	2530.0	2551.9	2586.0	2588.1	2588.1	2558.5	2557.5	2497.1	2490.5
5°	2760.3	2804.2	2902.9	3004.9	3026.8	3032.3	3021.3	2962.1	2918.3	2800.9	2775.7
7.5°	3048.8	3133.2	3283.5	3419.4	3463.3	3463.3	3436.9	3340.5	3250.6	3080.5	3017.0
10°	3287.8	3394.2	3598.2	3750.6	3801.1	3790.1	3736.3	3614.7	3490.7	3284.5	3201.2
12.5°	3445.7	3565.3	3789.0	3911.8	3963.4	3934.9	3873.5	3755.0	3624.5	3407.4	3313.0
15°	3524.7	3649.7	3843.9	3908.5	3894.3	3864.7	3857.0	3800.0	3701.3	3498.4	3395.3
17.5°	3558.7	3674.9	3809.8	3769.2	3648.6	3625.6	3702.4	3774.8	3750.6	3577.4	3480.8
20°	3590.5	3688.2	3728.6	3548.9	3338.2	3317.4	3464.4	3670.5	3775.8	3650.8	3562.0
22.5°	3634.3	3694.7	3611.4	3316.3	3089.4	3041.1	3203.3	3513.7	3783.5	3744.0	3655.3
25°	3694.7	3711.1	3481.9	3095.9	2867.8	2819.6	2970.9	3339.3	3770.4	3845.0	3769.2
27.5°	3767.1	3733.0	3358.0	2911.6	2691.2	2646.2	2797.6	3171.6	3733.0	3945.8	3892.1
30°	3861.4	3761.5	3235.2	2769.1	2565.2	2532.3	2678.1	3026.8	3687.0	4074.2	4044.5
32.5°	3956.8	3773.6	3121.1	2685.7	2536.6	2548.7	2668.2	2948.9	3636.6	4197.0	4211.2
35°	4059.9	3812.1	3065.2	2768.0	2774.6	2879.8	2929.2	3021.3	3628.9	4363.6	4419.6
37.5°	4200.2	3897.6	3132.1	3177.1	3405.2	3623.4	3582.8	3375.5	3717.7	4612.6	4716.7
40°	4402.1	4047.8	3423.8	3873.5	4341.7	4695.9	4541.4	4019.3	3989.7	4971.2	5126.9
42.5°	4695.9	4286.9	3941.4	4724.4	5518.5	6101.9	5687.3	4849.5	4465.6	5483.3	5681.9
45°	5130.2	4674.0	4567.6	5622.6	6969.4	7888.4	7026.4	5734.5	5132.4	6258.8	6414.4
47.5°	5732.3	5243.2	5154.3	6569.0	8732.8	9921.6	8511.3	6554.8	5891.3	7315.9	7352.1
50°	6531.8	6009.8	5710.4	7604.4	10666.3	11994.3	9995.1	7346.6	6761.0	8607.7	8566.1
52.5°	7586.7	7079.1	6358.5	8590.2	12654.4	14023.1	11485.4	8041.9	7840.1	10106.9	10021.4
55°	9025.6	8687.8	7244.6	9531.2	14641.7	16064.0	12917.7	8697.7	9265.8	11887.9	11370.3
57.5°	10811.0	11052.3	8522.3	10622.4	16428.2	18167.5	14356.6	9614.5	11116.9	13879.5	12153.3
60°	11962.5	14196.5	10968.9	12235.5	18458.1	20546.1	16328.4	11358.2	13062.5	14593.4	12004.2
62.5°	11684.0	15196.5	13899.2	14295.2	20324.6	22275.6	18260.7	13109.6	13428.7	13541.7	10854.9
65°	10829.6	14389.5	13301.5	14695.4	20797.2	22373.2	18777.2	12883.7	11391.1	11055.5	8725.1
67.5°	9654.0	13432.0	11881.4	13633.8	19943.0	21008.9	17815.4	11396.6	8803.0	8296.3	6330.0
70°	8385.1	12372.7	10949.2	12442.9	18314.4	18631.3	16180.3	10023.6	6474.7	5602.9	4062.1
72.5°	7181.0	11269.4	10310.9	11222.2	16141.9	15486.1	14051.6	8809.6	4714.6	4041.3	2887.5
75°	5949.4	9642.0	9401.8	9772.5	13285.1	12198.3	11675.2	7294.0	3700.1	2923.7	1992.7
77.5°	4590.7	7534.2	8086.8	7825.9	9351.3	9060.7	9049.7	5481.2	2703.3	1951.0	1249.1
80°	3141.9	5250.9	6317.9	5520.6	6069.0	5920.9	6815.8	3677.2	1960.8	1174.5	695.3
82.5°	1846.8	3196.8	4397.7	2672.6	3355.8	3444.6	4058.8	1788.6	1153.7	270.9	151.3
85°	749.1	1262.3	1719.5	1046.2	1618.7	1365.4	1540.8	502.2	321.3	6.6	0.0
87.5°	188.6	403.5	282.9	117.4	187.6	172.2	136.0	61.4	13.1	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°	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3
2.5°	2447.8	2422.6	2360.1	2297.5	2247.1	2179.0	2134.2	2080.3	2028.9	1982.8	1974.0
5°	2706.6	2623.3	2509.2	2405.0	2298.7	2195.5	2093.6	1986.0	1887.3	1827.1	1788.6
7.5°	2917.1	2770.2	2618.9	2486.1	2357.8	2237.2	2102.3	1971.8	1817.2	1734.9	1660.4
10°	3074.0	2881.0	2682.4	2530.0	2400.7	2283.3	2169.2	2037.6	1851.2	1748.1	1636.2
12.5°	3177.1	2947.9	2715.3	2541.0	2396.2	2305.2	2254.8	2203.2	2017.9	1897.3	1734.9
15°	3248.3	2995.0	2738.4	2515.8	2338.1	2271.2	2321.6	2380.9	2262.5	2123.2	1911.5
17.5°	3326.2	3056.4	2748.2	2447.8	2225.2	2196.7	2327.2	2464.2	2458.8	2320.6	2113.2
20°	3408.4	3110.2	2741.7	2338.1	2088.0	2113.2	2280.0	2439.0	2505.9	2431.3	2247.1
22.5°	3492.9	3161.7	2716.5	2195.5	1959.8	2038.7	2205.4	2344.7	2423.6	2400.7	2260.2
25°	3599.3	3234.1	2679.1	2042.0	1853.4	1963.1	2118.8	2231.7	2286.6	2285.4	2189.0
27.5°	3726.5	3330.6	2659.5	1918.1	1777.7	1877.5	2015.7	2116.6	2155.0	2155.0	2078.2
30°	3874.5	3444.6	2637.5	1836.9	1733.8	1788.6	1896.1	1994.9	2033.2	2033.2	1968.5
32.5°	4039.0	3554.3	2584.8	1787.6	1701.0	1702.0	1770.1	1860.0	1906.0	1912.5	1866.5
35°	4236.4	3671.7	2469.7	1748.1	1662.6	1617.6	1650.5	1725.1	1779.9	1794.2	1765.7
37.5°	4495.2	3815.4	2305.2	1690.0	1603.3	1528.8	1536.5	1593.5	1653.7	1675.7	1657.1
40°	4842.9	3984.2	2134.2	1606.6	1520.0	1431.2	1427.8	1469.5	1528.8	1552.9	1543.0
42.5°	5302.4	4187.1	1970.8	1526.5	1419.1	1328.1	1322.6	1355.5	1407.0	1432.2	1427.8
45°	5890.3	4436.0	1830.3	1464.0	1320.4	1230.5	1228.3	1255.7	1300.6	1327.0	1321.5
47.5°	6707.3	4685.0	1734.9	1431.2	1242.5	1150.4	1154.8	1179.0	1219.5	1238.1	1230.5
50°	7772.1	4760.6	1686.6	1431.2	1200.9	1079.1	1101.1	1120.8	1151.5	1162.5	1152.6
52.5°	8794.2	4510.6	1642.8	1439.9	1206.3	1018.8	1066.0	1080.2	1106.6	1110.9	1096.6
55°	9295.4	3877.9	1582.5	1442.1	1240.4	967.3	1037.4	1063.7	1073.7	1072.6	1048.4
57.5°	9123.2	3135.4	1480.5	1433.4	1263.4	934.4	1002.3	1052.8	1059.3	1049.5	1004.6
60°	8519.0	2308.5	1402.6	1368.7	1254.6	924.4	948.6	1028.7	1038.5	1025.4	951.9
62.5°	7505.7	1602.3	1342.3	1226.1	1216.2	921.2	864.2	976.0	1000.2	981.5	874.0
65°	5908.8	1131.8	1155.9	1074.7	1132.8	903.6	776.4	912.5	945.4	916.9	765.5
67.5°	3998.4	817.0	936.5	973.9	997.9	864.2	712.9	840.1	884.0	846.6	639.4
70°	2159.4	573.6	618.5	820.3	847.8	796.2	655.8	766.6	817.0	776.4	520.9
72.5°	1275.4	412.4	433.2	659.1	706.2	700.8	592.2	681.0	742.4	694.2	423.3
75°	702.9	278.6	309.2	478.2	573.6	540.7	508.8	576.9	639.4	592.2	326.8
77.5°	314.8	166.7	214.9	313.6	450.7	370.6	393.7	449.7	507.8	458.4	218.2
80°	121.8	93.2	142.6	171.1	327.9	205.1	253.4	331.2	372.9	333.4	132.7
82.5°	15.4	41.7	61.4	66.9	190.9	108.5	147.0	208.4	205.1	177.6	66.9
85°	0.0	7.7	8.8	4.4	82.2	39.5	48.3	68.0	63.7	48.3	5.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	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°	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3
2.5°	1920.2	1880.8	1861.1	1844.6	1860.0	1868.7	1868.7	1906.0	1927.9	1936.7	1998.1
5°	1692.2	1618.7	1569.4	1539.8	1549.6	1560.6	1572.7	1619.8	1651.6	1672.4	1767.8
7.5°	1512.3	1400.5	1331.4	1295.2	1300.6	1308.3	1318.1	1364.3	1396.0	1423.5	1529.8
10°	1423.5	1265.6	1174.5	1130.7	1123.0	1118.6	1115.3	1142.8	1166.9	1188.8	1294.1
12.5°	1427.8	1207.4	1096.6	1042.9	1019.9	993.6	972.7	977.1	992.5	1019.9	1086.8
15°	1483.8	1188.8	1056.1	989.2	950.8	920.1	894.9	889.4	894.9	899.2	941.0
17.5°	1559.4	1186.6	1021.0	937.7	898.2	873.0	849.9	842.2	843.4	848.8	859.8
20°	1619.8	1180.0	981.5	888.3	853.2	831.3	808.2	800.5	802.8	803.9	815.9
22.5°	1651.6	1170.1	937.7	839.0	809.3	787.4	766.6	765.5	765.5	772.0	780.8
25°	1651.6	1149.3	898.2	791.8	765.5	745.7	720.5	724.9	727.1	735.8	749.1
27.5°	1612.1	1109.9	866.3	751.2	723.8	704.1	681.0	686.5	689.8	699.7	716.2
30°	1561.7	1062.7	830.1	712.9	681.0	666.8	647.1	649.2	653.6	664.6	683.3
32.5°	1507.9	1006.8	800.5	674.4	642.7	631.7	609.8	613.1	617.5	629.5	650.4
35°	1448.7	941.0	765.5	639.4	607.5	598.8	573.6	575.7	582.3	595.5	616.3
37.5°	1386.2	887.2	730.4	605.4	572.5	563.6	537.4	539.6	547.2	562.6	582.3
40°	1324.8	834.6	693.1	569.2	536.3	528.6	500.1	502.2	511.1	527.5	548.4
42.5°	1257.9	794.0	644.8	531.9	496.8	489.1	462.8	466.1	475.9	492.4	513.2
45°	1177.8	767.6	591.1	496.8	457.4	449.7	425.5	432.0	443.0	459.5	481.4
47.5°	1095.6	756.7	546.1	459.5	416.8	410.2	390.4	401.4	413.5	426.6	450.7
50°	1016.6	742.4	500.1	424.5	381.6	375.0	361.9	376.2	388.3	400.3	423.3
52.5°	926.7	711.8	458.4	393.7	352.0	349.8	343.3	356.4	367.4	378.3	398.1
55°	833.4	662.4	422.2	366.3	326.8	329.0	325.7	336.7	345.4	355.4	372.9
57.5°	752.3	599.8	393.7	336.7	304.8	311.5	307.1	312.5	318.1	330.0	344.4
60°	670.0	525.3	361.9	301.6	282.9	290.6	278.6	277.5	279.6	282.9	309.2
62.5°	559.3	447.4	322.5	270.9	258.8	262.1	239.0	221.5	221.5	224.8	264.3
65°	449.7	375.0	278.6	235.7	225.9	223.8	190.9	166.7	164.5	174.4	208.4
67.5°	369.6	311.5	234.7	196.3	189.7	191.9	167.8	143.7	141.4	152.4	177.6
70°	306.0	251.1	187.6	151.3	158.0	167.8	143.7	120.6	117.4	127.2	151.3
72.5°	243.4	196.3	143.7	111.8	130.5	142.6	117.4	95.4	93.2	102.0	125.0
75°	178.8	140.4	97.6	81.2	100.9	111.8	85.6	68.0	64.7	72.4	95.4
77.5°	110.8	78.9	61.4	48.3	69.1	74.6	45.0	39.5	38.3	43.9	60.3
80°	51.6	34.0	29.6	16.4	25.2	29.6	18.7	20.8	21.9	26.3	37.3
82.5°	14.2	5.4	1.1	0.0	0.0	8.8	4.4	8.8	11.0	16.4	24.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	5.4	9.8	17.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.8
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: P962981

CATALOG NUMBER: NAV-SB2D-735-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3	2204.3
2.5°	2044.2	2088.0	2158.2	2230.6	2301.9	2374.3	2444.5	2469.7
5°	1854.4	1955.4	2094.7	2243.8	2397.4	2553.1	2695.6	2760.3
7.5°	1642.8	1787.6	1997.0	2230.6	2475.2	2719.7	2944.5	3048.8
10°	1416.9	1600.0	1839.2	2155.0	2505.9	2843.7	3152.9	3287.8
12.5°	1201.9	1393.9	1658.1	2036.5	2481.7	2915.0	3286.8	3445.7
15°	1022.1	1192.1	1477.2	1896.1	2403.9	2919.3	3350.3	3524.7
17.5°	887.2	997.9	1292.9	1740.4	2301.9	2878.7	3372.2	3558.7
20°	820.3	851.1	1053.9	1540.8	2206.5	2840.4	3394.2	3590.5
22.5°	780.8	788.5	862.0	1283.1	2092.4	2828.3	3432.6	3634.3
25°	749.1	751.2	771.0	1016.6	1918.1	2820.6	3491.8	3694.7
27.5°	717.2	717.2	728.2	819.2	1681.2	2787.7	3568.5	3767.1
30°	685.4	685.4	693.1	724.9	1403.7	2723.0	3660.7	3861.4
32.5°	652.5	652.5	659.1	682.1	1120.8	2641.8	3745.1	3956.8
35°	619.6	617.5	626.2	650.4	891.5	2538.8	3829.6	4059.9
37.5°	584.6	583.4	592.2	619.6	769.9	2419.3	3893.2	4200.2
40°	547.2	547.2	557.1	586.7	734.7	2269.0	3994.1	4402.1
42.5°	513.2	511.1	522.0	558.2	708.5	2125.3	4175.0	4695.9
45°	480.3	475.9	485.8	530.7	662.4	2074.9	4512.8	5130.2
47.5°	449.7	438.7	447.4	497.8	620.7	2263.5	5065.5	5732.3
50°	424.5	403.5	411.2	464.9	588.9	2672.6	5782.7	6531.8
52.5°	398.1	370.6	375.0	424.5	560.4	3061.9	6560.3	7586.7
55°	370.6	340.0	342.1	383.9	519.8	3120.0	7319.2	9025.6
57.5°	340.0	311.5	311.5	346.6	490.3	2704.4	7902.6	10811.0
60°	306.0	287.3	281.9	316.9	516.5	1908.2	7970.6	11962.5
62.5°	268.7	258.8	251.1	288.4	536.3	1130.7	7423.4	11684.0
65°	225.9	223.8	218.2	316.9	451.8	667.9	6372.7	10829.6
67.5°	189.7	186.4	186.4	332.3	343.3	420.0	4978.9	9654.0
70°	163.4	151.3	151.3	251.1	208.4	290.6	3476.5	8385.1
72.5°	137.0	123.9	115.1	200.7	155.7	212.8	2172.5	7181.0
75°	109.7	99.8	88.9	132.7	116.2	161.2	1262.3	5949.4
77.5°	78.9	74.6	62.5	97.6	84.5	116.2	751.2	4590.7
80°	40.6	41.7	39.5	56.0	57.0	78.9	427.7	3141.9
82.5°	24.1	18.7	20.8	27.4	32.9	45.0	161.2	1846.8
85°	15.4	9.8	9.8	13.1	16.4	17.5	49.3	749.1
87.5°	7.7	3.3	4.4	6.6	5.4	4.4	2.2	188.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)