

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: P963663

Luminaire Tested: **NAV-SB3A-830-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963663
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-SB3A-830-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 80 CRI, 3000K, 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: 9460.7 lumens
Efficiency: N/A
Efficacy: 111.7 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): 84.7
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



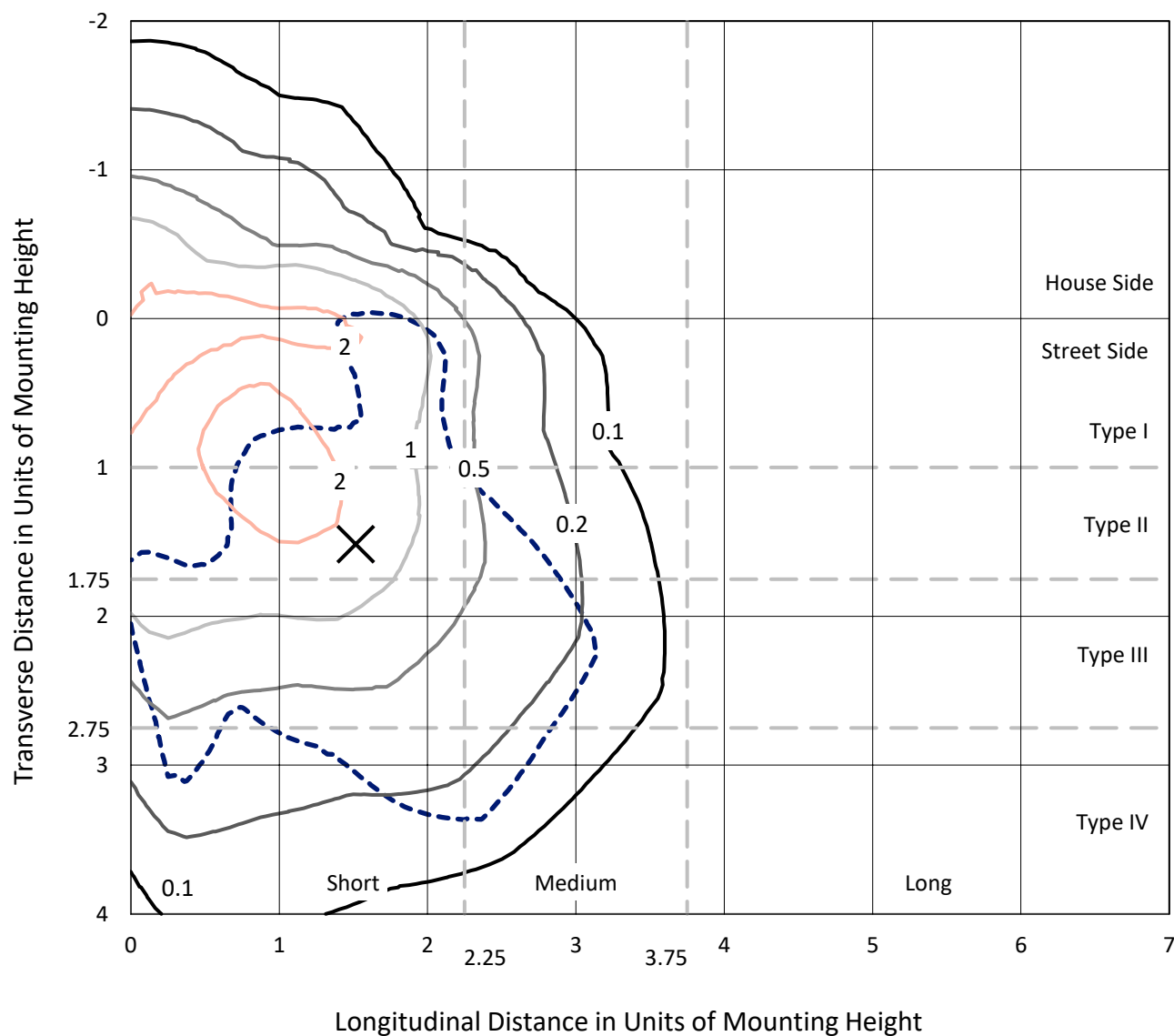
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

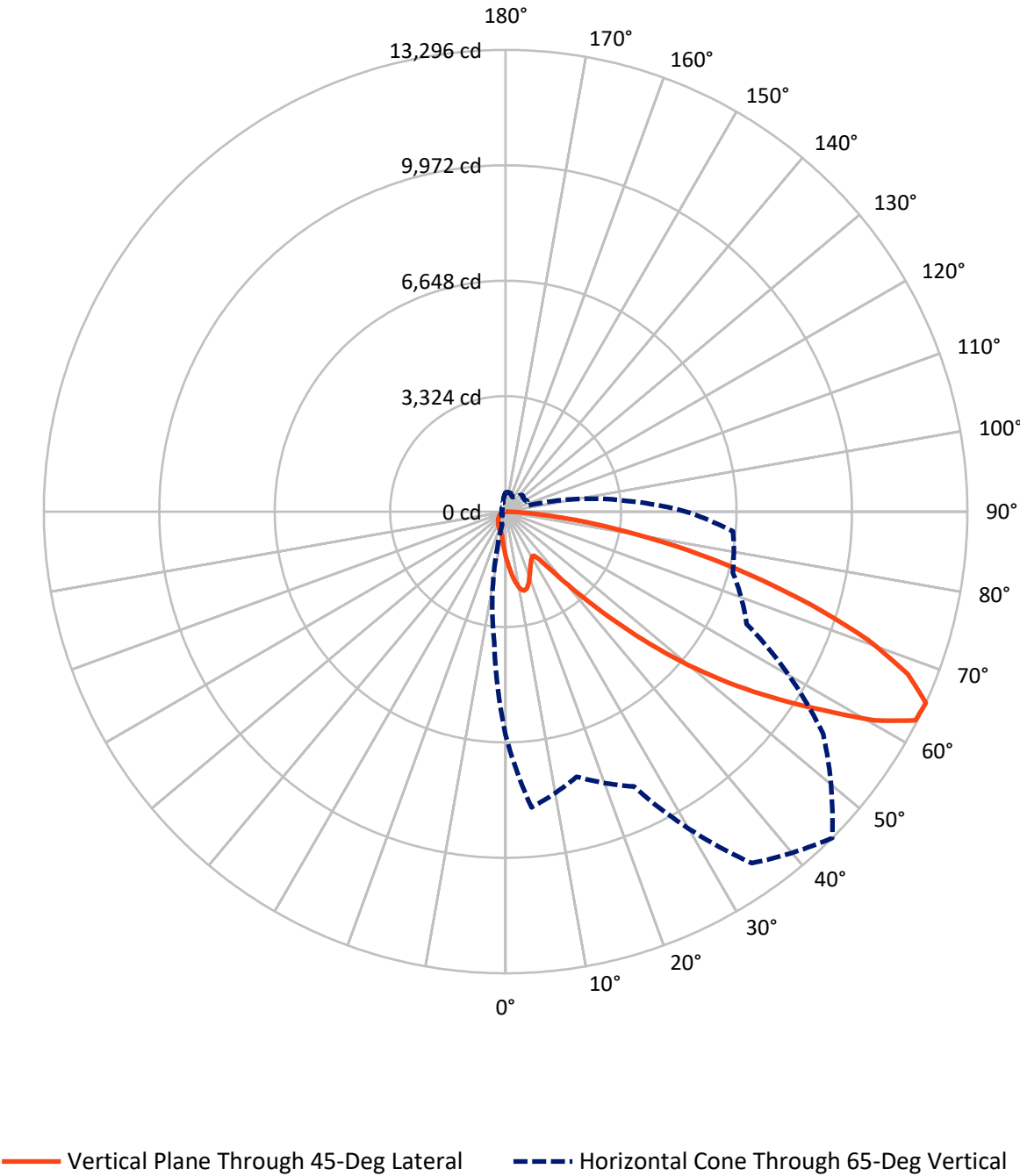


Based on 25 foot mounting height. Maximum calculated value = 3.4 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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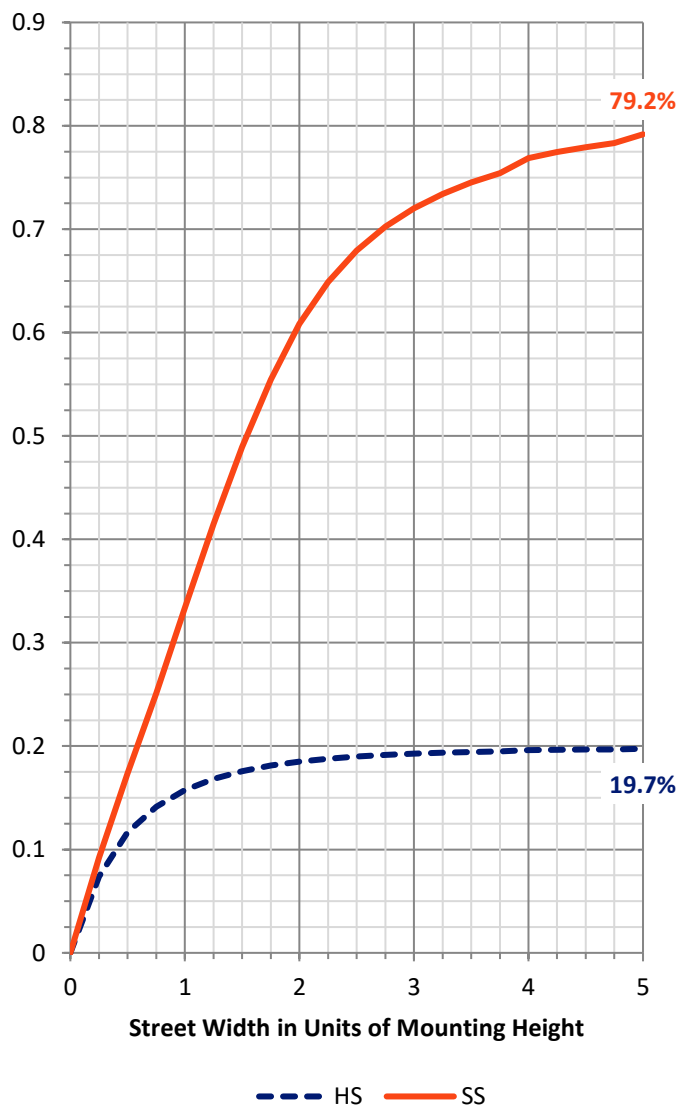
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1880.5	0.0	1880.5
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	7580.2	0.0	7580.2
	% Fixture	80.1	0.0	80.1
Total	Lumens	9460.7	0.0	9460.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.0	1.4
10°-20°	386.6	4.1
20°-30°	569.6	6.0
30°-40°	731.8	7.7
40°-50°	1183.5	12.5
50°-60°	2075.3	21.9
60°-70°	2596.8	27.4
70°-80°	1517.5	16.0
80°-90°	270.7	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°	9460.7	100.0
0°-180°	9460.7	100.0

Coefficient of Utilization



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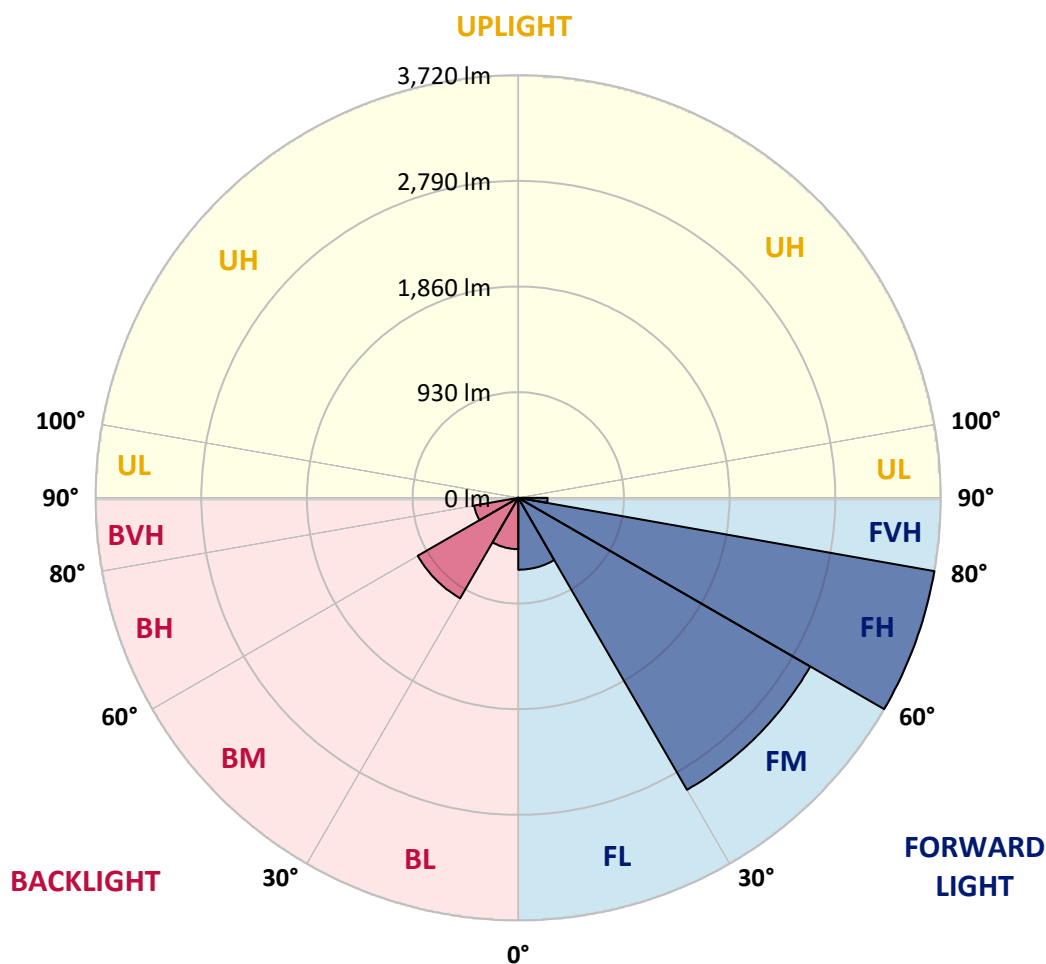
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	633.0	6.7			
FM	(30°-60°)	2968.9	31.4			
FH	(60°-80°)	3720.3	39.3			G2/5000
FVH	(80°-90°)	258.0	2.7			G3/500
BL	(0°-30°)	452.2	4.8	B1/500		
BM	(30°-60°)	1021.7	10.8	B2/2500		
BH	(60°-80°)	394.0	4.2	B1/500		G1/500
BVH	(80°-90°)	12.7	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°	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1
2.5°	1467.7	1478.8	1503.6	1516.6	1536.8	1538.1	1538.1	1520.5	1519.9	1484.0	1480.1
5°	1640.4	1666.5	1725.2	1785.8	1798.8	1802.1	1795.6	1760.3	1734.3	1664.6	1649.5
7.5°	1811.9	1862.0	1951.3	2032.2	2058.2	2058.2	2042.6	1985.2	1931.8	1830.8	1792.9
10°	1954.0	2017.2	2138.4	2229.0	2259.0	2252.4	2220.5	2148.2	2074.5	1952.0	1902.4
12.5°	2047.7	2118.9	2251.8	2324.8	2355.4	2338.4	2301.9	2231.6	2154.0	2025.0	1968.9
15°	2094.7	2169.0	2284.4	2322.9	2314.3	2296.7	2292.2	2258.3	2199.6	2079.1	2017.8
17.5°	2114.9	2184.0	2264.1	2240.0	2168.4	2154.7	2200.3	2243.3	2229.0	2126.0	2068.7
20°	2133.8	2191.9	2215.9	2109.0	1983.9	1971.5	2058.9	2181.4	2243.9	2169.6	2116.8
22.5°	2159.9	2195.8	2146.2	1970.9	1836.0	1807.3	1903.7	2088.2	2248.5	2225.1	2172.3
25°	2195.8	2205.5	2069.3	1839.9	1704.3	1675.7	1765.6	1984.6	2240.8	2285.0	2240.0
27.5°	2238.7	2218.5	1995.7	1730.4	1599.4	1572.7	1662.7	1884.9	2218.5	2345.0	2313.0
30°	2294.8	2235.5	1922.7	1645.6	1524.5	1504.9	1591.5	1798.8	2191.1	2421.3	2403.6
32.5°	2351.5	2242.7	1854.8	1596.1	1507.5	1514.6	1585.7	1752.5	2161.2	2494.2	2502.7
35°	2412.7	2265.5	1821.6	1645.0	1648.9	1711.4	1740.9	1795.6	2156.6	2593.2	2626.6
37.5°	2496.2	2316.3	1861.4	1888.2	2023.7	2153.4	2129.2	2006.0	2209.4	2741.3	2803.2
40°	2616.1	2405.6	2034.7	2301.9	2580.2	2790.8	2698.9	2388.7	2371.0	2954.4	3046.9
42.5°	2790.8	2547.6	2342.3	2807.7	3279.6	3626.3	3379.9	2882.0	2653.9	3258.8	3376.7
45°	3048.9	2777.7	2714.5	3341.5	4141.8	4688.0	4175.7	3408.0	3050.2	3719.5	3812.1
47.5°	3406.7	3116.0	3063.2	3903.9	5189.9	5896.3	5058.2	3895.5	3501.2	4347.8	4369.3
50°	3881.8	3571.6	3393.7	4519.2	6338.9	7128.2	5940.0	4366.1	4018.0	5115.6	5090.8
52.5°	4508.8	4207.0	3778.9	5105.1	7520.5	8333.9	6825.8	4779.3	4659.3	6006.5	5955.7
55°	5363.9	5163.1	4305.4	5664.4	8701.4	9546.7	7676.9	5169.0	5506.6	7064.9	6757.3
57.5°	6424.9	6568.3	5064.7	6312.8	9763.1	10796.8	8532.0	5713.9	6606.7	8248.5	7222.7
60°	7109.3	8436.9	6518.8	7271.6	10969.6	12210.5	9703.9	6750.1	7762.9	8672.8	7134.0
62.5°	6943.8	9031.3	8260.3	8495.5	12078.8	13238.3	10852.2	7791.0	7980.6	8047.8	6450.9
65°	6436.0	8551.6	7905.0	8733.4	12359.8	13296.3	11159.2	7656.7	6769.7	6570.2	5185.3
67.5°	5737.3	7982.6	7061.0	8102.5	11852.0	12485.5	10587.6	6773.0	5231.6	4930.5	3761.9
70°	4983.2	7353.0	6507.0	7394.8	10884.2	11072.6	9615.8	5957.0	3848.0	3329.8	2414.1
72.5°	4267.6	6697.4	6127.8	6669.4	9593.1	9203.3	8350.9	5235.5	2801.8	2401.7	1716.1
75°	3535.7	5730.2	5587.4	5807.8	7895.3	7249.4	6938.5	4334.7	2199.0	1737.6	1184.2
77.5°	2728.2	4477.5	4806.0	4650.8	5557.4	5384.7	5378.2	3257.4	1606.6	1159.5	742.3
80°	1867.2	3120.6	3754.7	3280.9	3606.8	3518.8	4050.6	2185.3	1165.3	698.0	413.2
82.5°	1097.6	1899.8	2613.5	1588.3	1994.3	2047.1	2412.1	1063.0	685.6	161.0	89.9
85°	445.2	750.2	1021.9	621.8	962.0	811.4	915.7	298.5	191.0	3.9	0.0
87.5°	112.1	239.8	168.1	69.7	111.4	102.3	80.8	36.5	7.8	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°	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1
2.5°	1454.7	1439.7	1402.6	1365.4	1335.5	1295.0	1268.3	1236.4	1205.7	1178.3	1173.1
5°	1608.5	1559.0	1491.2	1429.3	1366.0	1304.8	1244.1	1180.3	1121.7	1085.8	1063.0
7.5°	1733.7	1646.4	1556.4	1477.5	1401.3	1329.5	1249.4	1171.9	1079.9	1031.0	986.8
10°	1826.9	1712.2	1594.2	1503.6	1426.7	1356.9	1289.1	1210.9	1100.1	1038.8	972.4
12.5°	1888.2	1751.9	1613.8	1510.1	1424.0	1370.0	1340.0	1309.3	1199.2	1127.5	1031.0
15°	1930.5	1779.9	1627.4	1495.1	1389.5	1349.7	1379.8	1414.9	1344.6	1261.8	1136.0
17.5°	1976.7	1816.4	1633.2	1454.7	1322.4	1305.4	1383.0	1464.5	1461.2	1379.1	1255.9
20°	2025.6	1848.4	1629.3	1389.5	1241.0	1255.9	1354.9	1449.5	1489.2	1444.9	1335.5
22.5°	2075.8	1879.0	1614.4	1304.8	1164.7	1211.6	1310.7	1393.4	1440.3	1426.7	1343.3
25°	2139.1	1922.0	1592.2	1213.6	1101.5	1166.7	1259.2	1326.4	1358.8	1358.2	1300.9
27.5°	2214.6	1979.4	1580.4	1139.9	1056.5	1115.8	1197.9	1257.9	1280.6	1280.6	1235.0
30°	2302.7	2047.1	1567.4	1091.6	1030.4	1063.0	1126.9	1185.5	1208.4	1208.4	1169.9
32.5°	2400.3	2112.3	1536.2	1062.3	1010.9	1011.5	1052.0	1105.4	1132.7	1136.6	1109.3
35°	2517.7	2182.0	1467.7	1038.8	988.0	961.3	980.9	1025.2	1057.8	1066.3	1049.3
37.5°	2671.6	2267.4	1370.0	1004.3	952.8	908.6	913.1	947.0	982.9	995.9	984.8
40°	2878.1	2367.8	1268.3	954.8	903.3	850.5	848.6	873.3	908.6	922.9	917.0
42.5°	3151.2	2488.4	1171.2	907.2	843.4	789.2	786.0	805.5	836.2	851.2	848.6
45°	3500.6	2636.3	1087.7	870.1	784.7	731.2	730.0	746.2	773.0	788.6	785.4
47.5°	3986.1	2784.3	1031.0	850.5	738.4	683.7	686.3	700.6	724.8	735.8	731.2
50°	4619.0	2829.2	1002.3	850.5	713.7	641.3	654.4	666.0	684.3	690.8	685.0
52.5°	5226.4	2680.7	976.3	855.8	716.9	605.5	633.4	642.0	657.6	660.2	651.8
55°	5524.2	2304.6	940.4	857.0	737.1	574.8	616.5	632.2	638.1	637.4	623.1
57.5°	5421.8	1863.3	879.9	851.9	750.8	555.2	595.7	625.7	629.6	623.7	597.0
60°	5062.8	1372.0	833.6	813.3	745.6	549.4	563.8	611.3	617.3	609.4	565.7
62.5°	4460.6	952.2	797.8	728.7	722.8	547.5	513.6	580.0	594.4	583.3	519.5
65°	3511.6	672.6	687.0	638.7	673.2	537.0	461.5	542.2	561.8	544.9	454.9
67.5°	2376.3	485.5	556.6	578.7	593.1	513.6	423.6	499.3	525.3	503.2	380.0
70°	1283.3	340.8	367.6	487.5	503.8	473.1	389.7	455.6	485.5	461.5	309.5
72.5°	758.0	245.1	257.5	391.7	419.7	416.5	352.0	404.8	441.3	412.6	251.5
75°	417.8	165.5	183.8	284.1	340.8	321.3	302.4	342.9	380.0	352.0	194.2
77.5°	187.1	99.0	127.7	186.4	267.8	220.3	234.0	267.2	301.8	272.4	129.7
80°	72.4	55.4	84.8	101.7	194.9	121.9	150.6	196.8	221.6	198.1	78.8
82.5°	9.1	24.8	36.5	39.8	113.4	64.5	87.3	123.8	121.9	105.6	39.8
85°	0.0	4.6	5.2	2.6	48.9	23.5	28.7	40.4	37.8	28.7	3.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1
2.5°	1141.2	1117.8	1106.0	1096.2	1105.4	1110.6	1110.6	1132.7	1145.7	1151.0	1187.5
5°	1005.6	962.0	932.6	915.0	921.0	927.4	934.6	962.7	981.5	993.9	1050.6
7.5°	898.7	832.3	791.2	769.7	773.0	777.6	783.4	810.8	829.6	845.9	909.2
10°	845.9	752.1	698.0	672.0	667.4	664.8	662.9	679.2	693.4	706.5	769.1
12.5°	848.6	717.6	651.8	619.8	606.1	590.5	578.1	580.7	589.8	606.1	645.9
15°	881.8	706.5	627.6	587.8	565.1	546.8	531.9	528.6	531.9	534.4	559.2
17.5°	926.8	705.2	606.8	557.3	533.8	518.8	505.1	500.5	501.2	504.4	511.0
20°	962.7	701.3	583.3	527.9	507.1	494.0	480.3	475.8	477.0	477.8	484.9
22.5°	981.5	695.5	557.3	498.6	481.0	467.9	455.6	454.9	454.9	458.8	464.0
25°	981.5	683.1	533.8	470.6	454.9	443.2	428.2	430.8	432.1	437.4	445.2
27.5°	958.1	659.6	514.9	446.5	430.2	418.4	404.8	408.0	410.0	415.8	425.6
30°	928.1	631.5	493.3	423.6	404.8	396.3	384.6	385.8	388.5	394.9	406.0
32.5°	896.2	598.3	475.8	400.8	381.9	375.4	362.3	364.3	367.0	374.1	386.5
35°	861.0	559.2	454.9	380.0	361.1	355.9	340.8	342.1	346.0	353.9	366.2
37.5°	823.8	527.3	434.1	359.8	340.2	335.0	319.4	320.6	325.2	334.4	346.0
40°	787.3	496.0	411.9	338.2	318.7	314.2	297.1	298.5	303.7	313.4	325.8
42.5°	747.5	471.9	383.2	316.1	295.2	290.7	275.0	277.0	282.9	292.6	305.0
45°	700.0	456.2	351.3	295.2	271.7	267.2	252.9	256.8	263.3	273.1	286.1
47.5°	651.1	449.7	324.6	273.1	247.6	243.7	232.1	238.5	245.7	253.5	267.8
50°	604.1	441.3	297.1	252.3	226.8	222.9	215.0	223.6	230.7	237.9	251.5
52.5°	550.7	423.0	272.4	234.0	209.2	207.9	204.0	211.9	218.3	224.9	236.6
55°	495.3	393.7	250.9	217.7	194.2	195.6	193.5	200.1	205.3	211.2	221.6
57.5°	447.1	356.5	234.0	200.1	181.2	185.1	182.4	185.7	189.0	196.2	204.7
60°	398.2	312.2	215.0	179.3	168.1	172.7	165.5	164.9	166.2	168.1	183.8
62.5°	332.4	265.9	191.6	161.0	153.9	155.8	142.1	131.6	131.6	133.6	157.0
65°	267.2	222.9	165.5	140.1	134.3	132.9	113.4	99.0	97.8	103.6	123.8
67.5°	219.7	185.1	139.5	116.6	112.7	114.1	99.7	85.4	84.0	90.6	105.6
70°	181.8	149.2	111.4	89.9	93.9	99.7	85.4	71.6	69.7	75.6	89.9
72.5°	144.7	116.6	85.4	66.5	77.6	84.8	69.7	56.7	55.4	60.6	74.3
75°	106.2	83.4	58.0	48.3	60.0	66.5	50.8	40.4	38.4	43.0	56.7
77.5°	65.8	46.9	36.5	28.7	41.1	44.3	26.8	23.5	22.9	26.0	35.9
80°	30.6	20.2	17.6	9.7	15.0	17.6	11.1	12.4	13.0	15.7	22.1
82.5°	8.5	3.3	0.6	0.0	0.0	5.2	2.6	5.2	6.6	9.7	14.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	3.3	5.8	10.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	5.2
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: P963663

CATALOG NUMBER: NAV-SB3A-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1	1310.1
2.5°	1214.8	1241.0	1282.7	1325.6	1368.1	1411.0	1452.7	1467.7
5°	1102.1	1162.0	1244.9	1333.5	1424.7	1517.3	1602.0	1640.4
7.5°	976.3	1062.3	1186.8	1325.6	1471.0	1616.3	1750.0	1811.9
10°	842.0	950.9	1093.0	1280.6	1489.2	1690.0	1873.8	1954.0
12.5°	714.3	828.4	985.4	1210.3	1474.9	1732.4	1953.2	2047.7
15°	607.4	708.5	877.9	1126.9	1428.6	1734.9	1991.1	2094.7
17.5°	527.3	593.1	768.4	1034.3	1368.1	1710.8	2004.1	2114.9
20°	487.5	505.7	626.4	915.7	1311.3	1688.1	2017.2	2133.8
22.5°	464.0	468.6	512.3	762.5	1243.5	1680.9	2040.0	2159.9
25°	445.2	446.5	458.2	604.1	1139.9	1676.3	2075.1	2195.8
27.5°	426.2	426.2	432.8	486.9	999.2	1656.7	2120.8	2238.7
30°	407.3	407.3	411.9	430.8	834.2	1618.3	2175.6	2294.8
32.5°	387.8	387.8	391.7	405.4	666.0	1570.1	2225.7	2351.5
35°	368.3	367.0	372.2	386.5	529.8	1508.8	2275.9	2412.7
37.5°	347.4	346.8	352.0	368.3	457.6	1437.8	2313.7	2496.2
40°	325.2	325.2	331.1	348.7	436.6	1348.5	2373.7	2616.1
42.5°	305.0	303.7	310.3	331.7	421.1	1263.1	2481.2	2790.8
45°	285.5	282.9	288.7	315.5	393.7	1233.1	2681.9	3048.9
47.5°	267.2	260.7	265.9	295.9	368.9	1345.2	3010.4	3406.7
50°	252.3	239.8	244.4	276.3	350.0	1588.3	3436.6	3881.8
52.5°	236.6	220.3	222.9	252.3	333.0	1819.7	3898.8	4508.8
55°	220.3	202.0	203.4	228.1	308.9	1854.2	4349.8	5363.9
57.5°	202.0	185.1	185.1	205.9	291.3	1607.2	4696.4	6424.9
60°	181.8	170.8	167.5	188.4	307.0	1134.1	4736.9	7109.3
62.5°	159.7	153.9	149.2	171.4	318.7	672.0	4411.7	6943.8
65°	134.3	132.9	129.7	188.4	268.5	396.9	3787.3	6436.0
67.5°	112.7	110.8	110.8	197.5	204.0	249.6	2959.0	5737.3
70°	97.1	89.9	89.9	149.2	123.8	172.7	2066.0	4983.2
72.5°	81.5	73.7	68.5	119.3	92.6	126.5	1291.1	4267.6
75°	65.2	59.3	52.8	78.8	69.1	95.8	750.2	3535.7
77.5°	46.9	44.3	37.1	58.0	50.2	69.1	446.5	2728.2
80°	24.1	24.8	23.5	33.2	33.9	46.9	254.2	1867.2
82.5°	14.3	11.1	12.4	16.3	19.6	26.8	95.8	1097.6
85°	9.1	5.8	5.8	7.8	9.7	10.5	29.3	445.2
87.5°	4.6	1.9	2.6	3.9	3.3	2.6	1.3	112.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)