

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: P966825

Luminaire Tested: **NAV-SB4C-830-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966825
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-830-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 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: 21097.6 lumens
Efficiency: N/A
Efficacy: 105.1 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

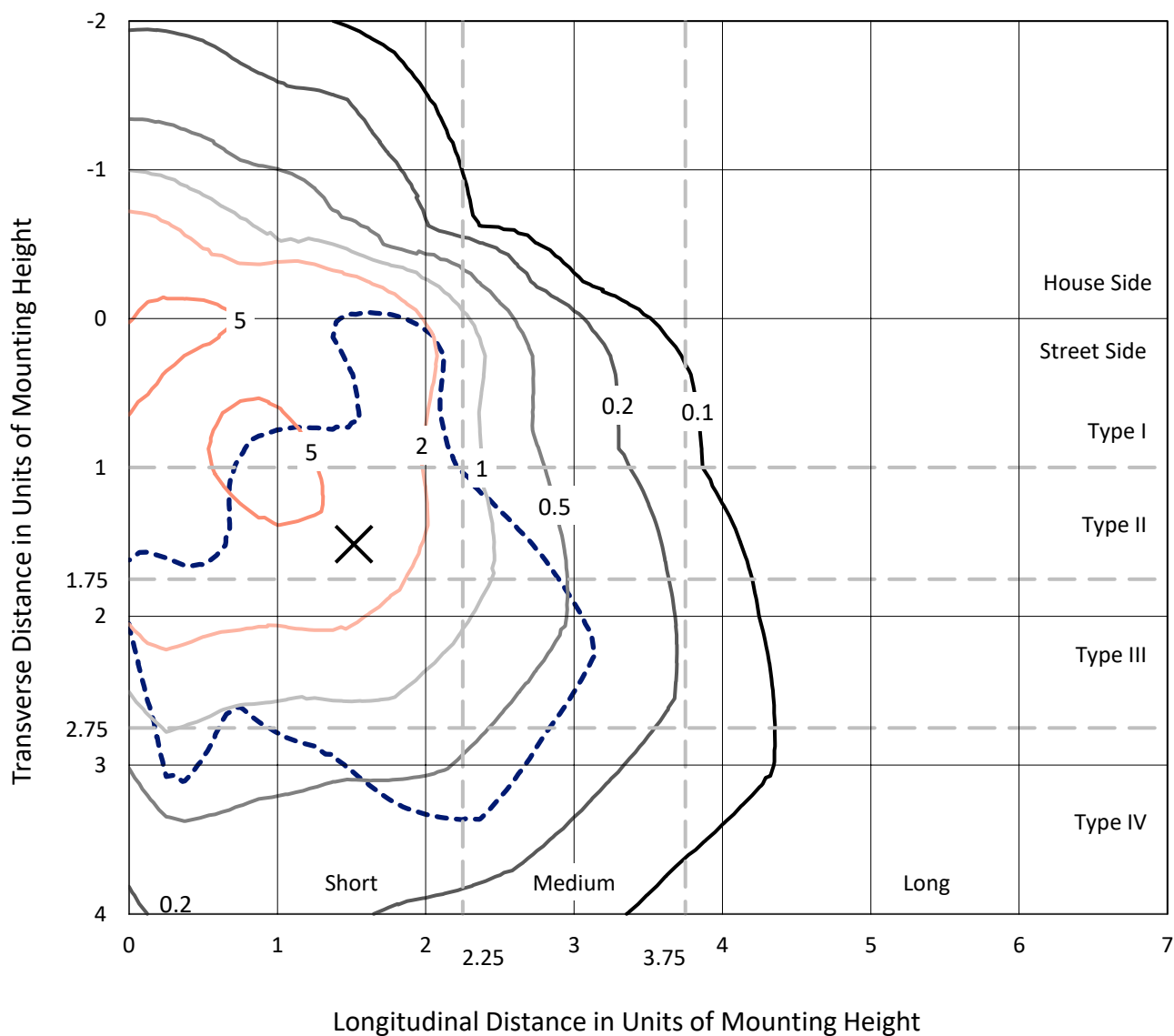


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

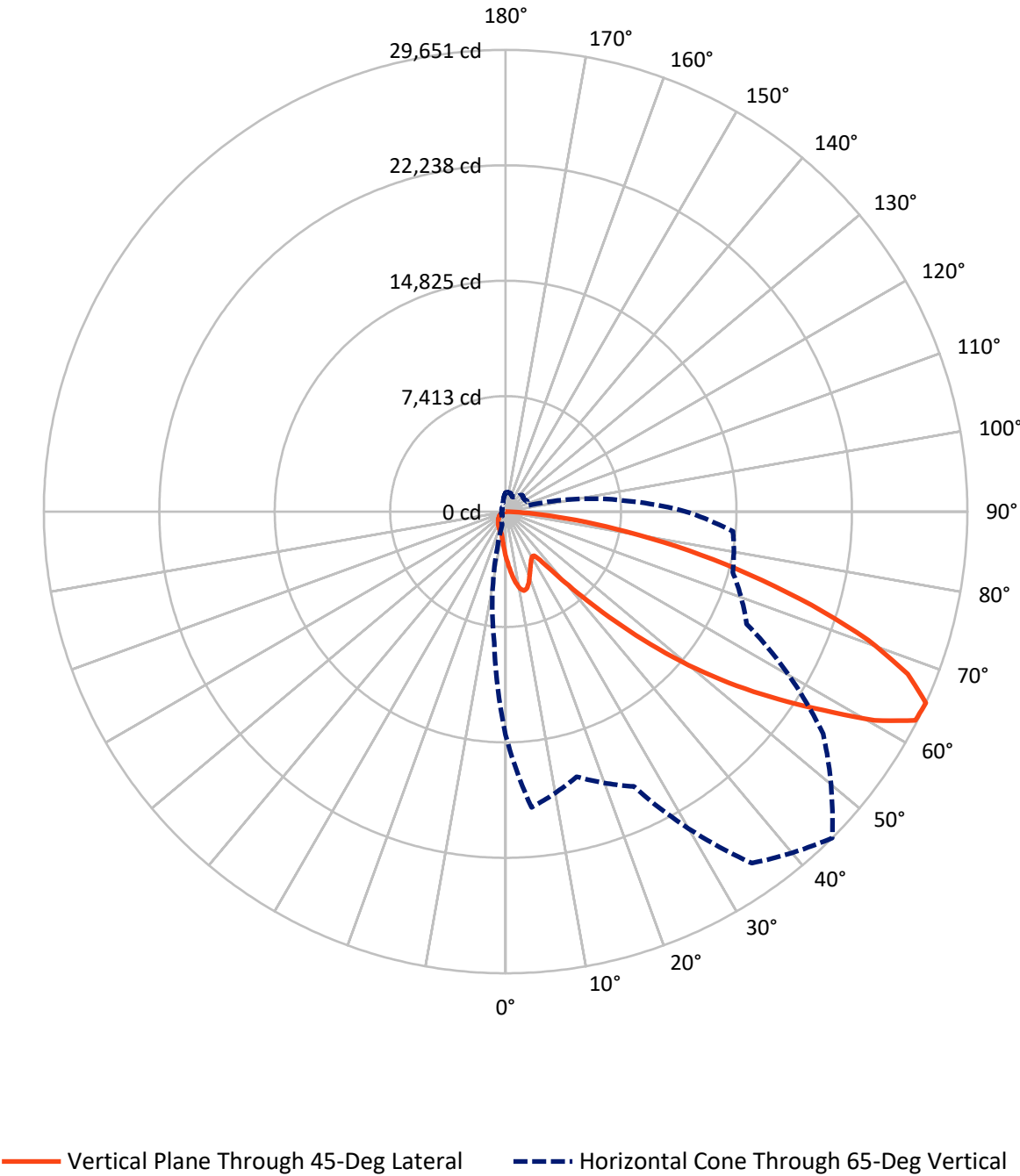


Based on 25 foot mounting height. Maximum calculated value = 7.7 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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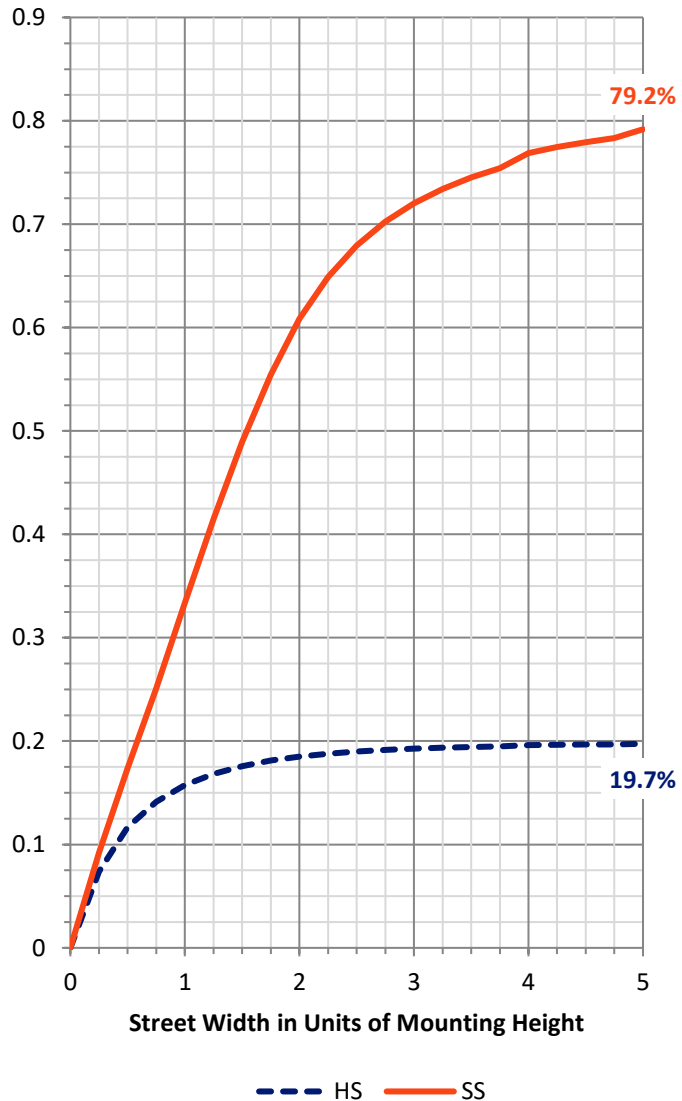
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4193.5	0.0	4193.5
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	16904.0	0.0	16904.0
	% Fixture	80.1	0.0	80.1
Total	Lumens	21097.6	0.0	21097.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	287.6	1.4
10°-20°	862.2	4.1
20°-30°	1270.2	6.0
30°-40°	1631.8	7.7
40°-50°	2639.2	12.5
50°-60°	4628.0	21.9
60°-70°	5790.9	27.4
70°-80°	3383.9	16.0
80°-90°	603.7	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°	21097.6	100.0
0°-180°	21097.6	100.0

Coefficient of Utilization



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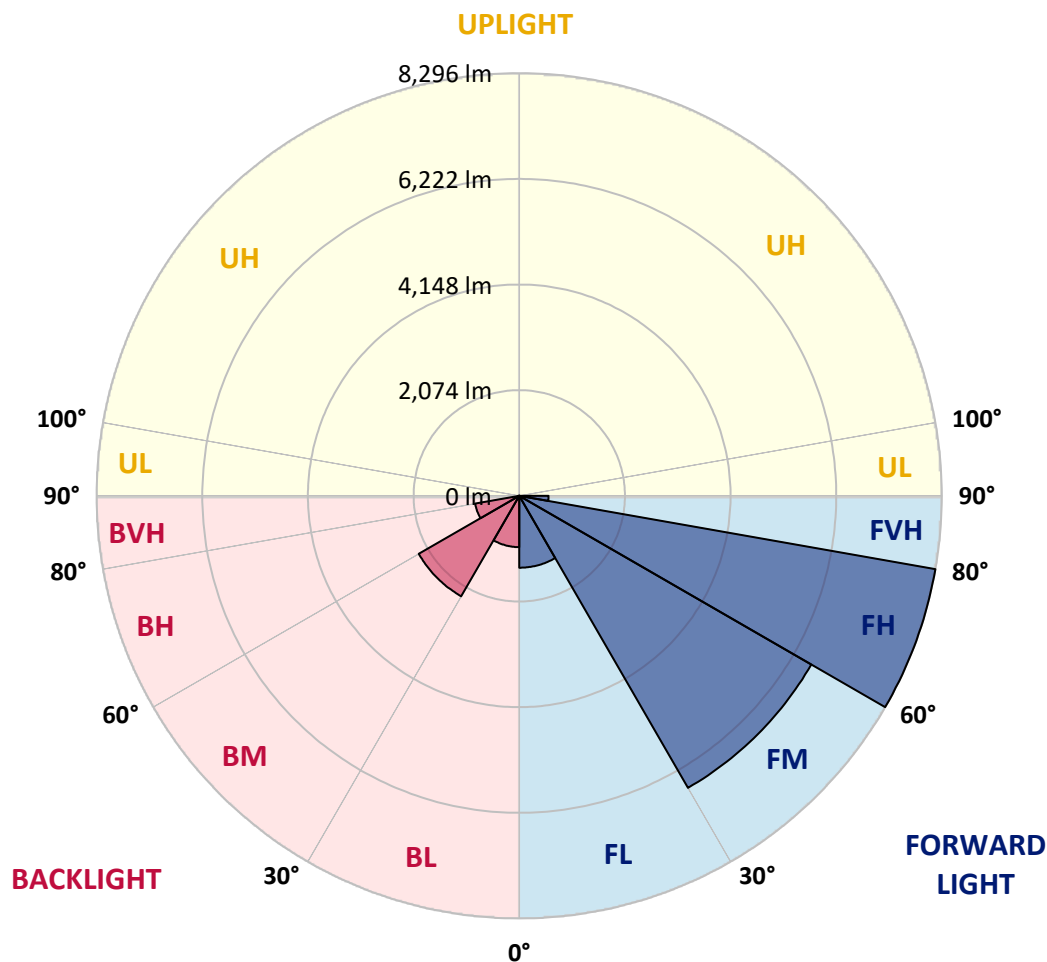
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1411.7	6.7			
FM	(30°-60°)	6620.7	31.4			
FH	(60°-80°)	8296.2	39.3			G4/12000
FVH	(80°-90°)	575.5	2.7			G4/750
BL	(0°-30°)	1008.3	4.8	B3/2500		
BM	(30°-60°)	2278.3	10.8	B2/2500		
BH	(60°-80°)	878.6	4.2	B2/1000		G2/1000
BVH	(80°-90°)	28.3	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°	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4
2.5°	3273.0	3297.7	3353.0	3382.1	3427.1	3430.1	3430.1	3390.8	3389.4	3309.4	3300.7
5°	3658.2	3716.3	3847.1	3982.3	4011.4	4018.6	4004.2	3925.6	3867.5	3712.0	3678.5
7.5°	4040.4	4152.4	4351.5	4531.7	4589.8	4589.8	4555.0	4427.1	4307.9	4082.6	3998.3
10°	4357.3	4498.3	4768.6	4970.6	5037.5	5022.9	4951.8	4790.4	4626.1	4353.0	4242.5
12.5°	4566.6	4725.0	5021.5	5184.2	5252.6	5214.8	5133.4	4976.5	4803.5	4515.7	4390.7
15°	4671.2	4836.9	5094.1	5179.9	5161.1	5121.8	5111.6	5036.0	4905.2	4636.4	4499.8
17.5°	4716.3	4870.4	5049.2	4995.3	4835.4	4805.0	4906.7	5002.6	4970.6	4741.0	4613.1
20°	4758.5	4887.8	4941.5	4703.2	4424.2	4396.5	4591.3	4864.5	5004.0	4838.4	4720.6
22.5°	4816.6	4896.5	4786.0	4395.1	4094.3	4030.3	4245.3	4656.7	5014.2	4961.9	4844.2
25°	4896.5	4918.4	4614.5	4103.0	3800.6	3736.7	3937.2	4425.6	4996.8	5095.6	4995.3
27.5°	4992.5	4947.4	4450.3	3858.8	3566.7	3507.0	3707.6	4203.2	4947.4	5229.3	5158.1
30°	5117.4	4985.2	4287.6	3669.8	3399.5	3356.0	3549.2	4011.4	4886.4	5399.4	5360.1
32.5°	5243.9	5001.2	4136.4	3559.4	3361.7	3377.7	3536.1	3908.2	4819.4	5562.2	5581.0
35°	5380.5	5052.0	4062.3	3668.4	3677.1	3816.6	3882.1	4004.2	4809.3	5783.0	5857.3
37.5°	5566.6	5165.4	4150.9	4210.5	4512.8	4802.0	4748.3	4473.6	4927.1	6113.0	6251.1
40°	5834.0	5364.5	4537.6	5133.4	5754.0	6223.5	6018.5	5326.7	5287.5	6588.3	6794.6
42.5°	6223.5	5681.4	5223.5	6261.2	7313.5	8086.7	7537.3	6427.0	5918.2	7267.0	7530.1
45°	6799.0	6194.4	6053.4	7451.5	9236.4	10454.3	9311.9	7599.9	6801.9	8294.6	8500.9
47.5°	7596.9	6948.7	6831.0	8705.8	11573.5	13148.9	11279.8	8687.0	7807.6	9695.7	9743.6
50°	8656.4	7964.7	7567.9	10077.9	14135.8	15895.9	13246.3	9736.4	8960.2	11407.7	11352.5
52.5°	10054.6	9381.7	8426.8	11384.5	16770.8	18584.7	15221.5	10657.8	10390.4	13394.6	13281.2
55°	11961.5	11513.8	9601.2	12631.5	19404.4	21289.5	17119.7	11526.9	12279.8	15754.9	15068.8
57.5°	14327.7	14647.4	11294.4	14077.7	21771.9	24077.0	19026.5	12742.0	14733.1	18394.2	16106.6
60°	15853.7	18814.3	14537.0	16215.6	24462.2	27229.5	21639.7	15052.8	17311.4	19340.4	15908.9
62.5°	15484.6	20139.8	18420.4	18945.1	26935.9	29521.5	24200.6	17374.0	17796.9	17946.6	14385.8
65°	14352.4	19070.1	17628.4	19475.6	27562.4	29650.9	24885.2	17074.6	15096.5	14651.8	11563.2
67.5°	12794.3	17801.3	15746.2	18068.7	26430.1	27842.8	23610.6	15103.8	11666.4	10995.0	8389.0
70°	11112.7	16397.3	14510.7	16490.3	24271.8	24691.8	21443.5	13284.1	8580.9	7425.4	5383.4
72.5°	9516.9	14935.2	13664.9	14872.6	21392.7	20523.5	18622.4	11675.2	6248.2	5355.8	3826.8
75°	7884.7	12778.3	12460.0	12951.3	17606.5	16166.2	15472.9	9666.6	4903.8	3874.8	2640.8
77.5°	6084.0	9984.8	10717.4	10371.5	12393.2	12008.0	11993.5	7264.1	3582.7	2585.6	1655.4
80°	4164.0	6958.9	8373.0	7316.4	8043.2	7846.9	9032.9	4873.3	2598.7	1556.6	921.5
82.5°	2447.5	4236.6	5828.2	3542.0	4447.4	4565.1	5379.0	2370.5	1529.0	359.0	200.6
85°	992.7	1672.9	2279.0	1386.5	2145.2	1809.5	2042.0	665.6	425.9	8.7	0.0
87.5°	250.0	534.8	374.9	155.5	248.6	228.2	180.2	81.4	17.4	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4
2.5°	3244.0	3210.6	3127.7	3044.9	2978.0	2887.9	2828.3	2757.1	2688.8	2627.8	2616.1
5°	3587.0	3476.5	3325.4	3187.3	3046.3	2909.7	2774.6	2632.1	2501.3	2421.4	2370.5
7.5°	3866.1	3671.3	3470.8	3294.9	3124.8	2964.9	2786.2	2613.2	2408.2	2299.3	2200.5
10°	4073.9	3818.1	3555.0	3353.0	3181.5	3026.0	2874.8	2700.5	2453.3	2316.7	2168.5
12.5°	4210.5	3906.8	3598.7	3367.5	3175.7	3055.0	2988.2	2919.9	2674.2	2514.4	2299.3
15°	4305.0	3969.2	3629.1	3334.1	3098.7	3010.0	3076.8	3155.4	2998.3	2813.8	2533.3
17.5°	4408.2	4050.6	3642.2	3244.0	2948.9	2911.2	3084.1	3265.8	3258.6	3075.4	2800.7
20°	4517.2	4121.8	3633.5	3098.7	2767.3	2800.7	3021.6	3232.3	3321.0	3222.2	2978.0
22.5°	4629.1	4190.2	3600.1	2909.7	2597.2	2701.9	2922.8	3107.4	3212.0	3181.5	2995.5
25°	4770.0	4286.0	3550.7	2706.2	2456.2	2601.6	2808.0	2957.6	3030.3	3028.9	2901.0
27.5°	4938.7	4414.0	3524.5	2542.0	2356.0	2488.2	2671.4	2805.1	2856.0	2856.0	2754.2
30°	5134.8	4565.1	3495.5	2434.5	2297.8	2370.5	2512.9	2643.8	2694.6	2694.6	2608.8
32.5°	5352.9	4710.5	3425.7	2369.1	2254.2	2255.7	2345.8	2464.9	2526.0	2534.7	2473.7
35°	5614.5	4866.0	3273.0	2316.7	2203.3	2143.8	2187.4	2286.2	2358.8	2377.8	2340.0
37.5°	5957.5	5056.4	3055.0	2239.7	2124.8	2026.0	2036.3	2111.8	2191.8	2220.8	2196.1
40°	6418.2	5280.2	2828.3	2129.2	2014.4	1896.7	1892.4	1947.6	2026.0	2058.0	2045.0
42.5°	7027.2	5549.0	2611.8	2023.1	1880.7	1760.0	1752.9	1796.4	1864.7	1898.1	1892.4
45°	7806.2	5879.0	2425.8	1940.3	1749.9	1630.7	1627.8	1664.2	1723.7	1758.6	1751.3
47.5°	8889.0	6208.9	2299.3	1896.7	1646.7	1524.6	1530.4	1562.4	1616.2	1640.9	1630.7
50°	10300.2	6309.2	2235.3	1896.7	1591.5	1430.2	1459.2	1485.3	1526.1	1540.6	1527.6
52.5°	11654.9	5977.8	2177.2	1908.3	1598.7	1350.2	1412.8	1431.6	1466.5	1472.3	1453.4
55°	12319.1	5139.2	2097.3	1911.2	1643.8	1281.9	1374.9	1409.8	1422.9	1421.5	1389.5
57.5°	12090.9	4155.2	1962.1	1899.6	1674.3	1238.3	1328.4	1395.2	1403.9	1390.9	1331.3
60°	11290.1	3059.4	1858.9	1813.8	1662.7	1225.2	1257.2	1363.2	1376.4	1358.9	1261.6
62.5°	9947.1	2123.4	1779.0	1624.9	1611.8	1220.9	1145.2	1293.6	1325.5	1300.8	1158.4
65°	7830.9	1499.9	1531.9	1424.3	1501.3	1197.6	1029.0	1209.2	1252.9	1215.0	1014.4
67.5°	5299.1	1082.8	1241.2	1290.6	1322.6	1145.2	944.7	1113.4	1171.5	1122.1	847.4
70°	2861.8	760.1	819.7	1087.1	1123.5	1055.1	869.1	1015.9	1082.8	1029.0	690.3
72.5°	1690.3	546.5	574.1	873.5	936.0	928.8	784.8	902.5	984.0	920.0	561.0
75°	931.6	369.2	409.9	633.7	760.1	716.6	674.3	764.4	847.4	784.8	433.2
77.5°	417.2	220.9	284.8	415.6	597.4	491.3	521.7	595.9	672.9	607.5	289.3
80°	161.3	123.5	188.9	226.7	434.6	271.8	335.7	438.9	494.2	441.9	175.9
82.5°	20.4	55.2	81.4	88.7	252.9	143.9	194.7	276.1	271.8	235.4	88.7
85°	0.0	10.1	11.6	5.8	109.0	52.3	64.0	90.1	84.3	64.0	7.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	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°	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4
2.5°	2544.9	2492.6	2466.5	2444.6	2464.9	2476.6	2476.6	2526.0	2555.1	2566.7	2648.1
5°	2242.6	2145.2	2079.8	2040.6	2053.7	2068.1	2084.1	2146.7	2188.8	2216.5	2342.8
7.5°	2004.3	1856.0	1764.4	1716.5	1723.7	1733.9	1747.0	1808.0	1850.2	1886.5	2027.4
10°	1886.5	1677.2	1556.6	1498.4	1488.3	1482.5	1478.2	1514.4	1546.4	1575.5	1715.0
12.5°	1892.4	1600.2	1453.4	1382.2	1351.7	1316.8	1289.1	1295.0	1315.3	1351.7	1440.3
15°	1966.5	1575.5	1399.6	1311.0	1260.1	1219.4	1186.0	1178.8	1186.0	1191.8	1247.0
17.5°	2066.7	1572.6	1353.1	1242.7	1190.3	1156.9	1126.4	1116.2	1117.7	1124.9	1139.5
20°	2146.7	1563.8	1300.8	1177.2	1130.8	1101.7	1071.1	1061.0	1063.8	1065.4	1081.4
22.5°	2188.8	1550.8	1242.7	1111.8	1072.6	1043.6	1015.9	1014.4	1014.4	1023.2	1034.8
25°	2188.8	1523.1	1190.3	1049.4	1014.4	988.3	954.9	960.7	963.6	975.2	992.7
27.5°	2136.5	1470.9	1148.2	995.6	959.2	933.1	902.5	909.8	914.2	927.3	949.0
30°	2069.7	1408.4	1100.2	944.7	902.5	883.7	857.5	860.4	866.2	880.8	905.5
32.5°	1998.4	1334.2	1061.0	893.8	851.7	837.1	808.1	812.4	818.3	834.2	861.8
35°	1919.9	1247.0	1014.4	847.4	805.1	793.6	760.1	763.0	771.7	789.1	816.8
37.5°	1837.1	1175.8	968.0	802.3	758.7	747.0	712.2	715.0	725.3	745.6	771.7
40°	1755.7	1106.1	918.5	754.3	710.7	700.6	662.8	665.6	677.3	699.0	726.7
42.5°	1667.1	1052.3	854.6	704.9	658.4	648.2	613.4	617.7	630.8	652.6	680.2
45°	1561.0	1017.4	783.4	658.4	606.1	595.9	564.0	572.7	587.2	609.0	638.1
47.5°	1451.9	1002.9	723.8	609.0	552.3	543.6	517.4	532.0	548.0	565.4	597.4
50°	1347.3	984.0	662.8	562.4	505.7	497.0	479.6	498.6	514.6	530.5	561.0
52.5°	1228.2	943.3	607.5	521.7	466.6	463.6	454.9	472.3	486.9	501.4	527.6
55°	1104.5	877.8	559.5	485.4	433.2	436.0	431.6	446.2	457.9	470.9	494.2
57.5°	997.0	795.0	521.7	446.2	404.1	412.8	406.9	414.2	421.5	437.5	456.3
60°	888.1	696.2	479.6	399.6	374.9	385.2	369.2	367.7	370.6	374.9	409.9
62.5°	741.3	593.0	427.3	359.0	343.0	347.4	316.8	293.6	293.6	298.0	350.2
65°	595.9	497.0	369.2	312.5	299.4	296.5	252.9	220.9	218.0	231.1	276.1
67.5°	489.8	412.8	311.0	260.1	251.4	254.3	222.3	190.4	187.5	202.0	235.4
70°	405.5	332.8	248.6	200.6	209.3	222.3	190.4	159.9	155.5	168.6	200.6
72.5°	322.7	260.1	190.4	148.2	172.9	188.9	155.5	126.5	123.5	135.2	165.6
75°	236.9	186.0	129.4	107.5	133.8	148.2	113.4	90.1	85.8	95.9	126.5
77.5°	146.8	104.7	81.4	64.0	91.5	98.8	59.6	52.3	50.8	58.1	79.9
80°	68.3	45.1	39.3	21.8	33.4	39.3	24.7	27.6	29.1	34.8	49.4
82.5°	18.9	7.3	1.4	0.0	0.0	11.6	5.8	11.6	14.6	21.8	32.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	7.3	13.1	23.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	11.6
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: P966825

CATALOG NUMBER: NAV-SB4C-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4	2921.4
2.5°	2709.2	2767.3	2860.3	2956.2	3050.7	3146.6	3239.6	3273.0
5°	2457.7	2591.4	2776.0	2973.6	3177.1	3383.5	3572.4	3658.2
7.5°	2177.2	2369.1	2646.7	2956.2	3280.3	3604.4	3902.4	4040.4
10°	1877.8	2120.5	2437.3	2856.0	3321.0	3768.7	4178.5	4357.3
12.5°	1593.0	1847.3	2197.5	2698.9	3289.0	3863.1	4355.8	4566.6
15°	1354.5	1579.8	1957.7	2512.9	3185.9	3869.0	4440.1	4671.2
17.5°	1175.8	1322.6	1713.6	2306.6	3050.7	3815.2	4469.2	4716.3
20°	1087.1	1127.8	1396.8	2042.0	2924.2	3764.3	4498.3	4758.5
22.5°	1034.8	1045.0	1142.4	1700.5	2773.1	3748.3	4549.2	4816.6
25°	992.7	995.6	1021.7	1347.3	2542.0	3738.2	4627.7	4896.5
27.5°	950.5	950.5	965.0	1085.7	2228.0	3694.5	4729.3	4992.5
30°	908.4	908.4	918.5	960.7	1860.4	3608.8	4851.4	5117.4
32.5°	864.8	864.8	873.5	904.0	1485.3	3501.3	4963.4	5243.9
35°	821.1	818.3	829.9	861.8	1181.6	3364.7	5075.3	5380.5
37.5°	774.7	773.3	784.8	821.1	1020.3	3206.2	5159.5	5566.6
40°	725.3	725.3	738.3	777.6	973.7	3007.0	5293.3	5834.0
42.5°	680.2	677.3	691.8	739.7	938.9	2816.7	5533.1	6223.5
45°	636.6	630.8	643.9	703.5	877.8	2749.9	5980.8	6799.0
47.5°	595.9	581.4	593.0	659.9	822.7	2999.9	6713.2	7596.9
50°	562.4	534.8	545.0	616.2	780.4	3542.0	7663.8	8656.4
52.5°	527.6	491.3	497.0	562.4	742.7	4057.9	8694.3	10054.6
55°	491.3	450.6	453.5	508.7	688.9	4135.0	9700.0	11961.5
57.5°	450.6	412.8	412.8	459.3	649.6	3584.1	10473.2	14327.7
60°	405.5	380.8	373.5	420.0	684.6	2528.9	10563.3	15853.7
62.5°	356.1	343.0	332.8	382.2	710.7	1498.4	9838.1	15484.6
65°	299.4	296.5	289.3	420.0	598.8	885.1	8445.7	14352.4
67.5°	251.4	247.1	247.1	440.3	454.9	556.7	6598.4	12794.3
70°	216.6	200.6	200.6	332.8	276.1	385.2	4607.3	11112.7
72.5°	181.6	164.2	152.6	266.0	206.3	282.0	2879.2	9516.9
75°	145.3	132.2	117.8	175.9	154.1	213.6	1672.9	7884.7
77.5°	104.7	98.8	82.8	129.4	111.9	154.1	995.6	6084.0
80°	53.8	55.2	52.3	74.1	75.5	104.7	566.8	4164.0
82.5°	32.0	24.7	27.6	36.3	43.6	59.6	213.6	2447.5
85°	20.4	13.1	13.1	17.4	21.8	23.3	65.4	992.7
87.5°	10.1	4.4	5.8	8.7	7.3	5.8	2.9	250.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)