

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: P966856

Luminaire Tested: **NAV-SB4C-835-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966856
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-835-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 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: 21778.2 lumens
Efficiency: N/A
Efficacy: 108.5 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



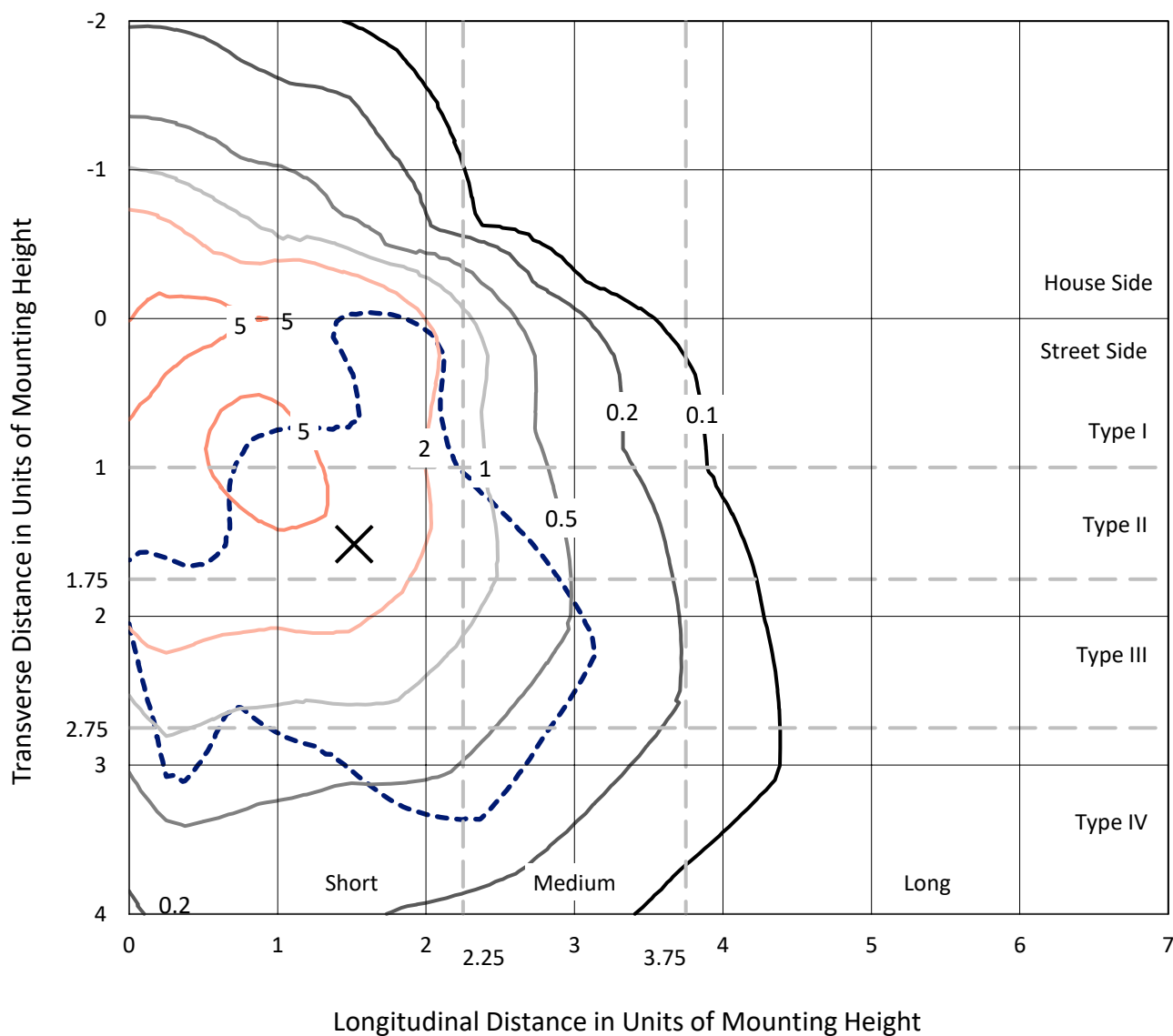
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

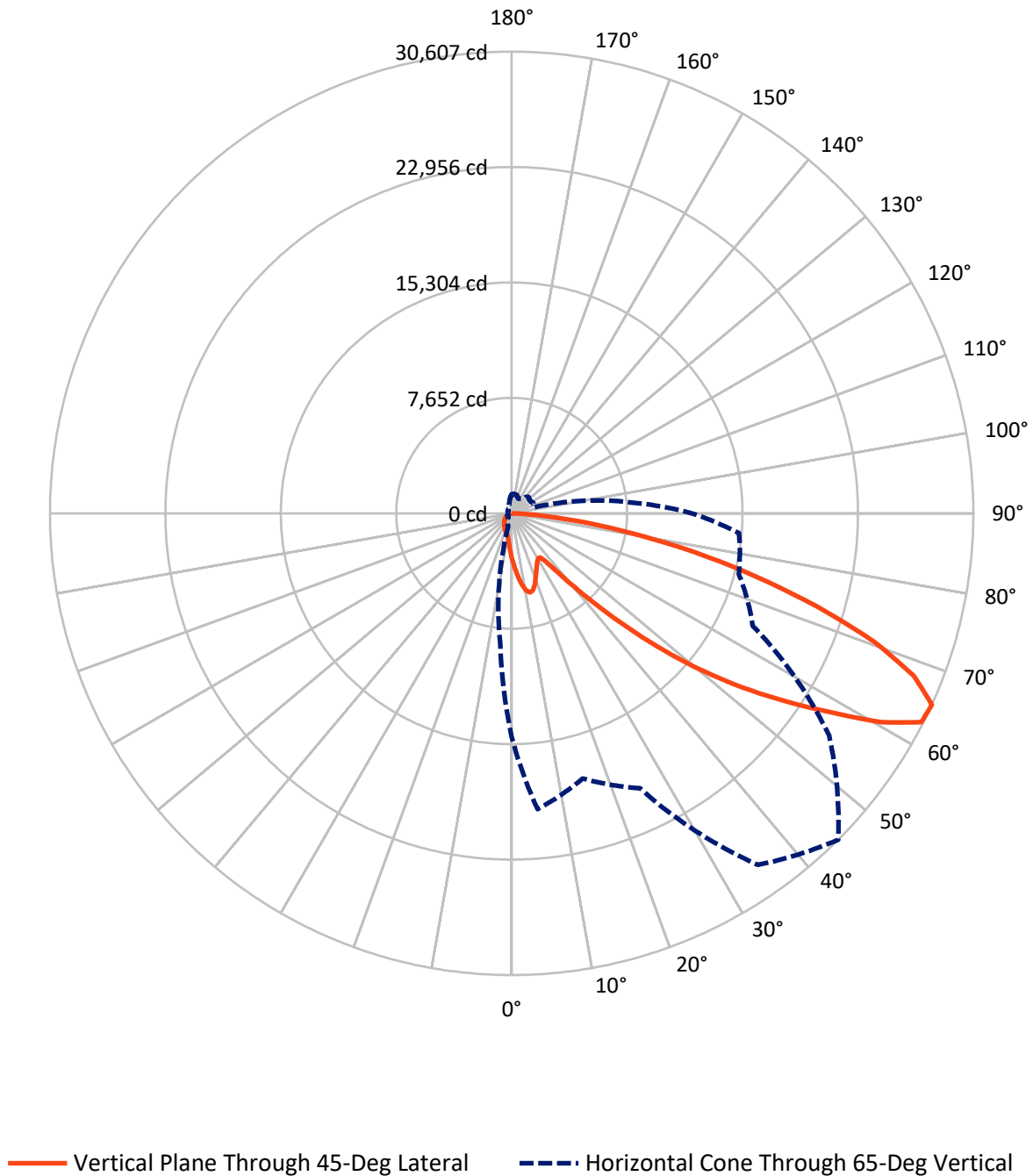


Based on 25 foot mounting height. Maximum calculated value = 7.9 fc

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	4328.8	0.0	4328.8
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	17449.3	0.0	17449.3
	% Fixture	80.1	0.0	80.1
Total	Lumens	21778.2	0.0	21778.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	296.9	1.4
10°-20°	890.0	4.1
20°-30°	1311.2	6.0
30°-40°	1684.5	7.7
40°-50°	2724.3	12.5
50°-60°	4777.3	21.9
60°-70°	5977.7	27.4
70°-80°	3493.1	16.0
80°-90°	623.2	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°	21778.2	100.0
0°-180°	21778.2	100.0

Coefficient of Utilization



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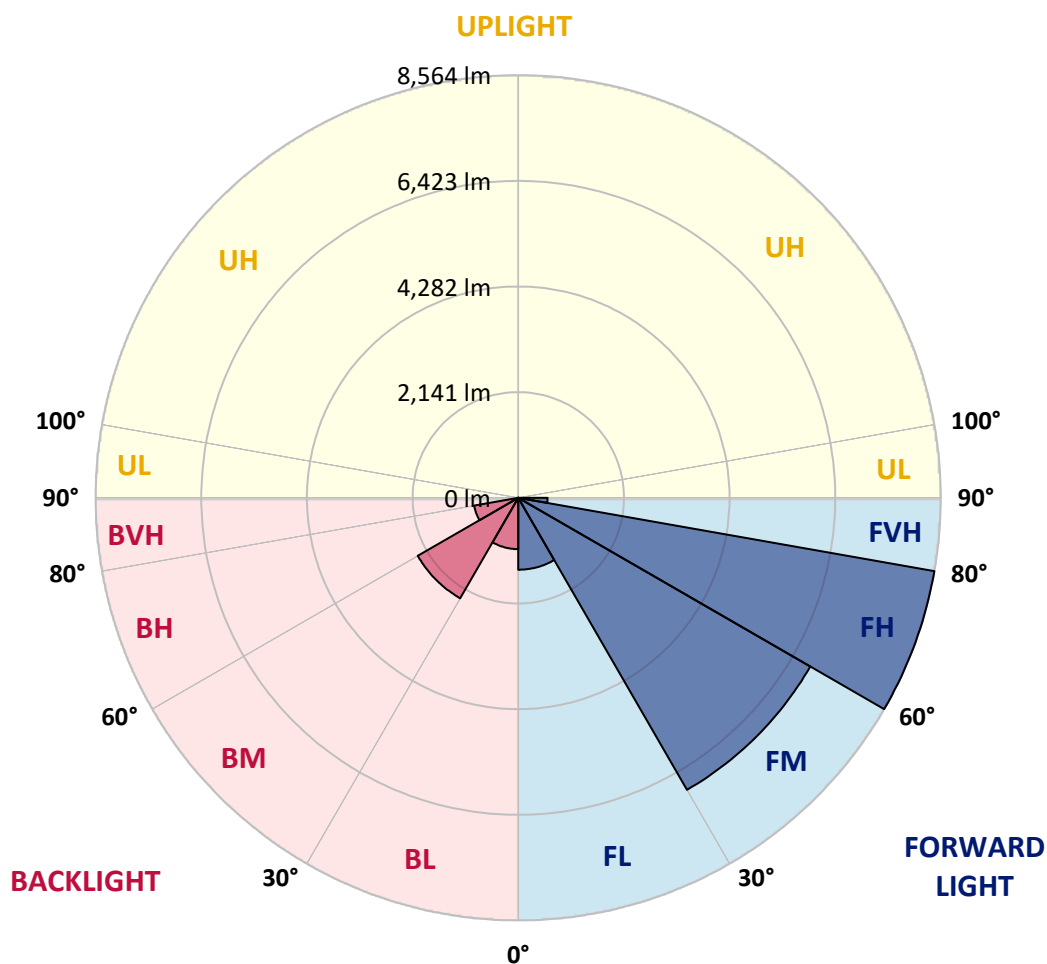
CATALOG NUMBER: NAV-SB4C-835-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1457.2	6.7			
FM	(30°-60°)	6834.3	31.4			
FH	(60°-80°)	8563.9	39.3			G4/12000
FVH	(80°-90°)	594.0	2.7			G4/750
BL	(0°-30°)	1040.8	4.8	B3/2500		
BM	(30°-60°)	2351.8	10.8	B2/2500		
BH	(60°-80°)	907.0	4.2	B2/1000		G2/1000
BVH	(80°-90°)	29.2	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°	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5
2.5°	3378.6	3404.1	3461.1	3491.2	3537.7	3540.7	3540.7	3500.2	3498.6	3416.1	3407.2
5°	3776.2	3836.3	3971.3	4110.8	4140.8	4148.3	4133.3	4052.2	3992.3	3831.8	3797.2
7.5°	4170.8	4286.3	4491.9	4677.9	4738.0	4738.0	4701.9	4569.9	4446.9	4214.3	4127.3
10°	4497.9	4643.4	4922.5	5130.9	5200.0	5185.0	5111.5	4944.9	4775.4	4493.4	4379.3
12.5°	4713.9	4877.5	5183.5	5351.5	5422.0	5383.0	5299.0	5137.0	4958.4	4661.4	4532.3
15°	4821.9	4993.0	5258.6	5347.0	5327.5	5287.1	5276.5	5198.5	5063.5	4785.9	4644.9
17.5°	4868.4	5027.4	5212.0	5156.5	4991.4	4960.0	5064.9	5164.0	5130.9	4894.0	4761.9
20°	4911.9	5045.5	5101.0	4854.9	4566.9	4538.4	4739.4	5021.5	5165.5	4994.4	4873.0
22.5°	4972.0	5054.5	4940.5	4536.9	4226.3	4160.3	4382.4	4806.9	5176.0	5122.0	5000.5
25°	5054.5	5076.9	4763.4	4235.3	3923.3	3857.3	4064.3	4568.4	5158.0	5260.0	5156.5
27.5°	5153.5	5107.0	4593.8	3983.3	3681.7	3620.2	3827.2	4338.8	5107.0	5398.1	5324.6
30°	5282.5	5146.0	4425.8	3788.2	3509.2	3464.2	3663.7	4140.8	5043.9	5573.5	5533.1
32.5°	5413.0	5162.5	4269.8	3674.2	3470.1	3486.6	3650.2	4034.3	4974.9	5741.6	5761.1
35°	5554.1	5215.0	4193.3	3786.8	3795.8	3939.8	4007.2	4133.3	4964.5	5969.6	6046.2
37.5°	5746.2	5332.0	4284.8	4346.3	4658.4	4957.0	4901.4	4617.9	5085.9	6310.2	6452.8
40°	6022.2	5537.6	4683.9	5299.0	5939.7	6424.2	6212.7	5498.5	5458.0	6800.8	7013.9
42.5°	6424.2	5864.6	5392.0	6463.2	7549.4	8347.6	7780.5	6634.3	6109.2	7501.5	7773.0
45°	7018.4	6394.3	6248.7	7692.0	9534.3	10791.6	9612.3	7845.0	7021.4	8562.1	8775.2
47.5°	7842.0	7172.8	7051.4	8986.7	11946.8	13573.2	11643.7	8967.2	8059.6	10008.4	10057.9
50°	8935.7	8221.6	7812.0	10403.0	14591.8	16408.6	13673.6	10050.4	9249.3	11775.8	11718.7
52.5°	10379.0	9684.4	8698.7	11751.7	17311.8	19184.2	15712.5	11001.6	10725.6	13826.6	13709.7
55°	12347.4	11885.3	9910.9	13039.0	20030.3	21976.2	17671.9	11898.8	12676.0	16263.2	15555.0
57.5°	14789.8	15119.9	11658.8	14531.8	22474.4	24853.8	19640.2	13153.0	15208.4	18987.6	16626.2
60°	16365.1	19421.2	15005.9	16738.8	25251.4	28108.0	22337.8	15538.5	17870.0	19964.3	16422.1
62.5°	15984.1	20789.5	19014.7	19556.3	27804.9	30473.9	24981.3	17934.4	18371.1	18525.5	14849.9
65°	14815.4	19685.3	18197.0	20103.8	28451.4	30607.4	25687.9	17625.4	15583.5	15124.4	11936.3
67.5°	13207.0	18375.6	16254.1	18651.6	27282.7	28741.0	24372.1	15591.0	12042.8	11349.7	8659.7
70°	11471.2	16926.2	14978.8	17022.3	25054.8	25488.4	22135.3	13712.7	8857.7	7664.9	5557.0
72.5°	9823.9	15416.9	14105.7	15352.4	22082.7	21185.6	19223.2	12051.8	6449.7	5528.5	3950.2
75°	8139.1	13190.5	12862.0	13369.1	18174.5	16687.7	15972.1	9978.4	5062.0	3999.8	2726.0
77.5°	6280.2	10307.0	11063.1	10706.0	12792.9	12395.4	12380.4	7498.5	3698.2	2669.0	1708.9
80°	4298.3	7183.4	8643.2	7552.4	8302.6	8100.1	9324.3	5030.5	2682.5	1606.8	951.2
82.5°	2526.5	4373.4	6016.1	3656.2	4590.9	4712.4	5552.5	2447.0	1578.3	370.5	207.0
85°	1024.7	1726.8	2352.5	1431.3	2214.4	1867.9	2107.9	687.2	439.6	9.0	0.0
87.5°	258.1	552.1	387.0	160.5	256.6	235.5	186.0	84.0	18.0	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5
2.5°	3348.7	3314.1	3228.6	3143.1	3074.1	2981.1	2919.6	2846.0	2775.5	2712.6	2700.6
5°	3702.7	3588.7	3432.6	3290.1	3144.6	3003.6	2864.1	2717.1	2582.0	2499.5	2447.0
7.5°	3990.7	3789.7	3582.7	3401.2	3225.6	3060.5	2876.0	2697.5	2485.9	2373.5	2271.4
10°	4205.3	3941.2	3669.7	3461.1	3284.1	3123.6	2967.6	2787.5	2532.5	2391.4	2238.4
12.5°	4346.3	4032.8	3714.7	3476.2	3278.2	3153.6	3084.6	3014.1	2760.5	2595.5	2373.5
15°	4443.9	4097.3	3746.2	3441.6	3198.6	3107.1	3176.1	3257.1	3095.1	2904.5	2615.0
17.5°	4550.4	4181.3	3759.7	3348.7	3044.0	3005.1	3183.6	3371.1	3363.6	3174.6	2891.0
20°	4662.9	4254.8	3750.7	3198.6	2856.6	2891.0	3119.1	3336.7	3428.1	3326.1	3074.1
22.5°	4778.4	4325.3	3716.2	3003.6	2681.0	2789.0	3017.1	3207.6	3315.7	3284.1	3092.1
25°	4924.0	4424.3	3665.2	2793.5	2535.4	2685.5	2898.6	3053.1	3128.1	3126.6	2994.5
27.5°	5097.9	4556.3	3638.2	2624.0	2432.0	2568.4	2757.6	2895.5	2948.1	2948.1	2843.0
30°	5300.5	4712.4	3608.2	2513.0	2372.0	2447.0	2594.0	2729.1	2781.5	2781.5	2693.0
32.5°	5525.6	4862.4	3536.1	2445.4	2327.0	2328.5	2421.5	2544.5	2607.5	2616.5	2553.5
35°	5795.7	5023.0	3378.6	2391.4	2274.5	2213.0	2258.0	2360.0	2435.0	2454.5	2415.5
37.5°	6149.7	5219.5	3153.6	2312.0	2193.4	2091.4	2101.9	2180.0	2262.5	2292.4	2266.9
40°	6625.3	5450.5	2919.6	2197.9	2079.4	1957.9	1953.3	2010.4	2091.4	2124.4	2110.9
42.5°	7253.9	5728.1	2696.1	2088.4	1941.4	1816.8	1809.3	1854.3	1924.8	1959.4	1953.3
45°	8058.0	6068.7	2504.0	2002.8	1806.4	1683.4	1680.3	1717.8	1779.3	1815.4	1807.9
47.5°	9175.8	6409.2	2373.5	1957.9	1699.9	1573.8	1579.8	1612.8	1668.3	1693.8	1683.4
50°	10632.5	6512.7	2307.5	1957.9	1642.8	1476.3	1506.3	1533.3	1575.3	1590.3	1576.8
52.5°	12030.8	6170.7	2247.4	1969.8	1650.4	1393.8	1458.3	1477.7	1513.8	1519.8	1500.3
55°	12716.5	5305.0	2164.9	1972.9	1696.8	1323.3	1419.3	1455.3	1468.8	1467.3	1434.3
57.5°	12480.9	4289.3	2025.4	1960.9	1728.4	1278.3	1371.2	1440.2	1449.2	1435.8	1374.2
60°	11654.2	3158.1	1918.9	1872.4	1716.4	1264.7	1297.8	1407.2	1420.8	1402.8	1302.3
62.5°	10267.9	2192.0	1836.4	1677.3	1663.8	1260.2	1182.2	1335.3	1368.3	1342.7	1195.8
65°	8083.6	1548.3	1581.3	1470.3	1549.8	1236.3	1062.2	1248.2	1293.2	1254.3	1047.2
67.5°	5470.0	1117.8	1281.2	1332.3	1365.3	1182.2	975.2	1149.2	1209.2	1158.2	874.6
70°	2954.0	784.6	846.1	1122.2	1159.7	1089.2	897.2	1048.7	1117.8	1062.2	712.7
72.5°	1744.9	564.1	592.7	901.7	966.2	958.7	810.2	931.7	1015.7	949.7	579.1
75°	961.7	381.1	423.1	654.2	784.6	739.6	696.2	789.1	874.6	810.2	447.1
77.5°	430.6	228.1	294.1	429.1	616.6	507.1	538.6	615.1	694.6	627.1	298.6
80°	166.6	127.5	195.1	234.0	448.5	280.5	346.6	453.0	510.1	456.1	181.5
82.5°	21.0	57.0	84.0	91.5	261.1	148.5	201.0	285.1	280.5	243.0	91.5
85°	0.0	10.5	12.0	6.0	112.5	54.0	66.0	93.0	87.0	66.0	7.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	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°	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5
2.5°	2627.0	2573.0	2546.0	2523.4	2544.5	2556.5	2556.5	2607.5	2637.5	2649.5	2733.6
5°	2315.0	2214.4	2146.9	2106.4	2119.9	2134.9	2151.4	2215.9	2259.4	2287.9	2418.5
7.5°	2068.9	1915.8	1821.3	1771.8	1779.3	1789.9	1803.4	1866.3	1909.9	1947.4	2092.9
10°	1947.4	1731.3	1606.8	1546.8	1536.3	1530.3	1525.8	1563.3	1596.3	1626.3	1770.4
12.5°	1953.3	1651.8	1500.3	1426.8	1395.2	1359.3	1330.8	1336.8	1357.7	1395.2	1486.8
15°	2029.9	1626.3	1444.7	1353.3	1300.7	1258.7	1224.3	1216.8	1224.3	1230.2	1287.3
17.5°	2133.4	1623.3	1396.8	1282.8	1228.8	1194.2	1162.8	1152.2	1153.7	1161.2	1176.2
20°	2215.9	1614.3	1342.7	1215.2	1167.3	1137.2	1105.7	1095.2	1098.2	1099.7	1116.2
22.5°	2259.4	1600.8	1282.8	1147.7	1107.2	1077.2	1048.7	1047.2	1047.2	1056.2	1068.3
25°	2259.4	1572.4	1228.8	1083.2	1047.2	1020.2	985.6	991.7	994.7	1006.7	1024.7
27.5°	2205.4	1518.3	1185.2	1027.7	990.1	963.2	931.7	939.2	943.7	957.1	979.7
30°	2136.4	1453.8	1135.7	975.2	931.7	912.1	885.2	888.2	894.2	909.2	934.7
32.5°	2062.9	1377.3	1095.2	922.7	879.1	864.2	834.1	838.7	844.7	861.2	889.7
35°	1981.8	1287.3	1047.2	874.6	831.2	819.2	784.6	787.6	796.6	814.7	843.2
37.5°	1896.4	1213.7	999.2	828.2	783.1	771.1	735.1	738.1	748.7	769.7	796.6
40°	1812.3	1141.7	948.2	778.7	733.6	723.1	684.1	687.2	699.2	721.6	750.1
42.5°	1720.9	1086.2	882.2	727.6	679.7	669.1	633.1	637.7	651.1	673.6	702.1
45°	1611.3	1050.2	808.6	679.7	625.7	615.1	582.1	591.1	606.1	628.6	658.7
47.5°	1498.8	1035.2	747.1	628.6	570.1	561.1	534.1	549.1	565.6	583.6	616.6
50°	1390.7	1015.7	684.1	580.7	522.1	513.1	495.1	514.6	531.1	547.6	579.1
52.5°	1267.7	973.6	627.1	538.6	481.5	478.6	469.6	487.6	502.6	517.6	544.6
55°	1140.2	906.2	577.6	501.1	447.1	450.1	445.6	460.6	472.6	486.1	510.1
57.5°	1029.2	820.6	538.6	460.6	417.1	426.1	420.0	427.6	435.1	451.6	471.1
60°	916.7	718.6	495.1	412.6	387.0	397.6	381.1	379.6	382.5	387.0	423.1
62.5°	765.2	612.1	441.1	370.5	354.0	358.5	327.1	303.1	303.1	307.6	361.6
65°	615.1	513.1	381.1	322.6	309.0	306.1	261.1	228.1	225.1	238.5	285.1
67.5°	505.6	426.1	321.0	268.5	259.5	262.5	229.5	196.5	193.5	208.6	243.0
70°	418.6	343.6	256.6	207.0	216.1	229.5	196.5	165.0	160.5	174.0	207.0
72.5°	333.0	268.5	196.5	153.0	178.6	195.1	160.5	130.5	127.5	139.5	171.1
75°	244.6	192.1	133.6	111.0	138.1	153.0	117.1	93.0	88.6	99.0	130.5
77.5°	151.5	108.0	84.0	66.0	94.5	102.0	61.5	54.0	52.5	60.0	82.5
80°	70.5	46.5	40.5	22.5	34.5	40.5	25.5	28.5	30.0	36.0	51.0
82.5°	19.5	7.5	1.5	0.0	0.0	12.0	6.0	12.0	15.0	22.5	33.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	7.5	13.5	24.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	12.0
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: P966856

CATALOG NUMBER: NAV-SB4C-835-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5	3015.5
2.5°	2796.5	2856.6	2952.6	3051.6	3149.1	3248.1	3344.2	3378.6
5°	2537.0	2675.0	2865.6	3069.6	3279.6	3492.7	3687.7	3776.2
7.5°	2247.4	2445.4	2732.0	3051.6	3386.2	3720.7	4028.2	4170.8
10°	1938.4	2188.9	2516.0	2948.1	3428.1	3890.3	4313.3	4497.9
12.5°	1644.3	1906.9	2268.4	2786.1	3395.1	3987.8	4496.4	4713.9
15°	1398.3	1630.8	2020.9	2594.0	3288.6	3993.8	4583.4	4821.9
17.5°	1213.7	1365.3	1768.8	2381.0	3149.1	3938.3	4613.4	4868.4
20°	1122.2	1164.2	1441.8	2107.9	3018.6	3885.8	4643.4	4911.9
22.5°	1068.3	1078.7	1179.3	1755.3	2862.5	3869.3	4695.9	4972.0
25°	1024.7	1027.7	1054.7	1390.7	2624.0	3858.7	4776.9	5054.5
27.5°	981.2	981.2	996.2	1120.7	2299.9	3813.7	4882.0	5153.5
30°	937.7	937.7	948.2	991.7	1920.3	3725.3	5007.9	5282.5
32.5°	892.7	892.7	901.7	933.2	1533.3	3614.2	5123.5	5413.0
35°	847.7	844.7	856.7	889.7	1219.8	3473.2	5239.0	5554.1
37.5°	799.7	798.2	810.2	847.7	1053.2	3309.6	5326.0	5746.2
40°	748.7	748.7	762.2	802.7	1005.2	3104.1	5464.1	6022.2
42.5°	702.1	699.2	714.1	763.6	969.1	2907.5	5711.6	6424.2
45°	657.1	651.1	664.6	726.1	906.2	2838.5	6173.7	7018.4
47.5°	615.1	600.1	612.1	681.1	849.2	3096.6	6929.8	7842.0
50°	580.7	552.1	562.6	636.1	805.6	3656.2	7911.1	8935.7
52.5°	544.6	507.1	513.1	580.7	766.6	4188.8	8974.7	10379.0
55°	507.1	465.0	468.1	525.1	711.1	4268.3	10012.9	12347.4
57.5°	465.0	426.1	426.1	474.1	670.7	3699.7	10811.1	14789.8
60°	418.6	393.1	385.6	433.6	706.6	2610.5	10904.1	16365.1
62.5°	367.6	354.0	343.6	394.6	733.6	1546.8	10155.5	15984.1
65°	309.0	306.1	298.6	433.6	618.1	913.7	8718.1	14815.4
67.5°	259.5	255.0	255.0	454.6	469.6	574.6	6811.3	13207.0
70°	223.6	207.0	207.0	343.6	285.1	397.6	4755.9	11471.2
72.5°	187.6	169.5	157.5	274.6	213.0	291.1	2972.1	9823.9
75°	150.1	136.5	121.6	181.5	159.1	220.6	1726.8	8139.1
77.5°	108.0	102.0	85.5	133.6	115.5	159.1	1027.7	6280.2
80°	55.6	57.0	54.0	76.5	78.0	108.0	585.1	4298.3
82.5°	33.0	25.5	28.5	37.5	45.0	61.5	220.6	2526.5
85°	21.0	13.5	13.5	18.0	22.5	24.0	67.5	1024.7
87.5°	10.5	4.5	6.0	9.0	7.5	6.0	3.0	258.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)