

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: P965275

Luminaire Tested: **NAV-SB3D-835-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965275
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-SB3D-835-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 80 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: 22153.3 lumens
Efficiency: N/A
Efficacy: 101.6 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): 218.1
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

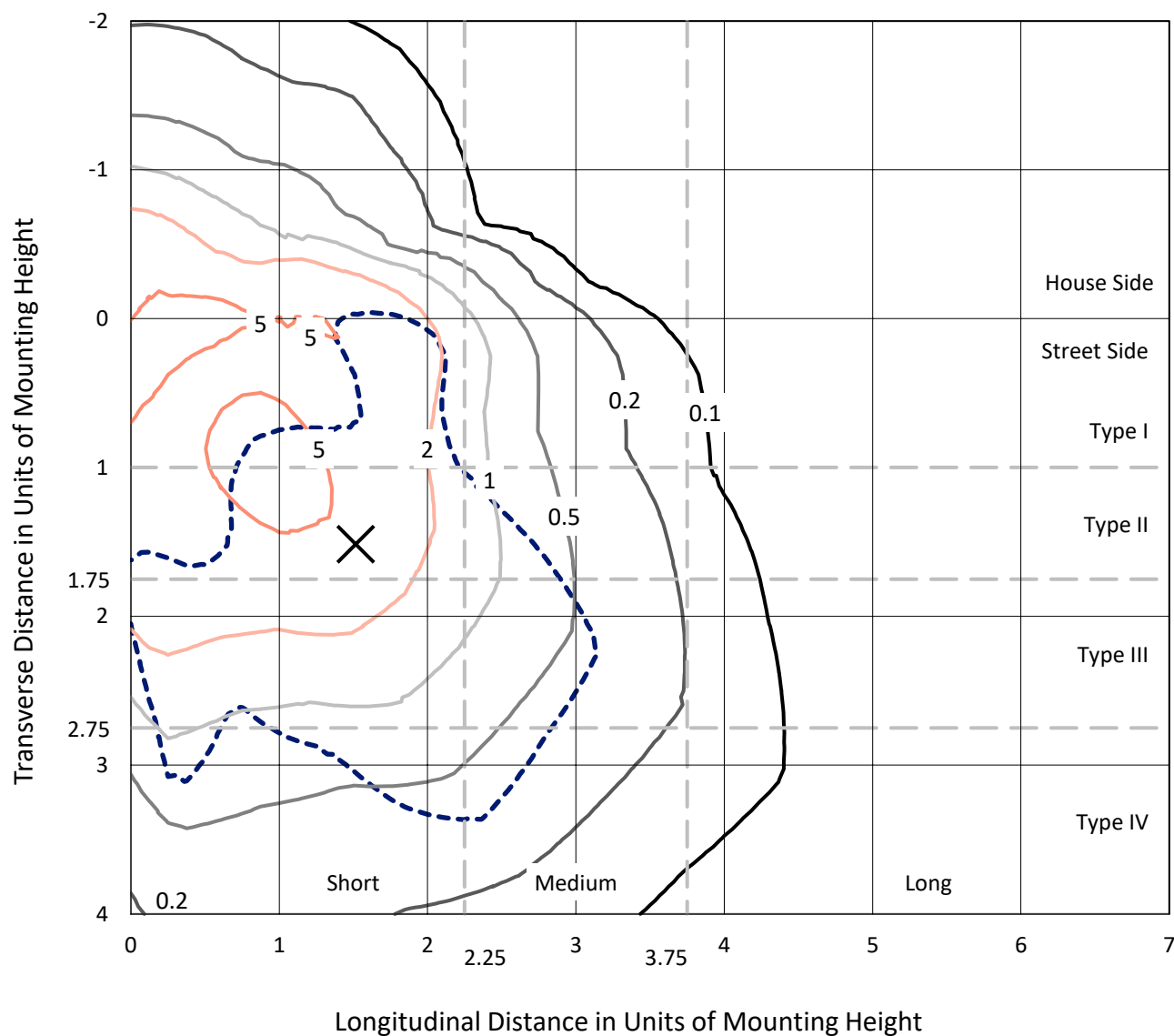


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Iso-Footcandle Lines of Horizontal Illumination

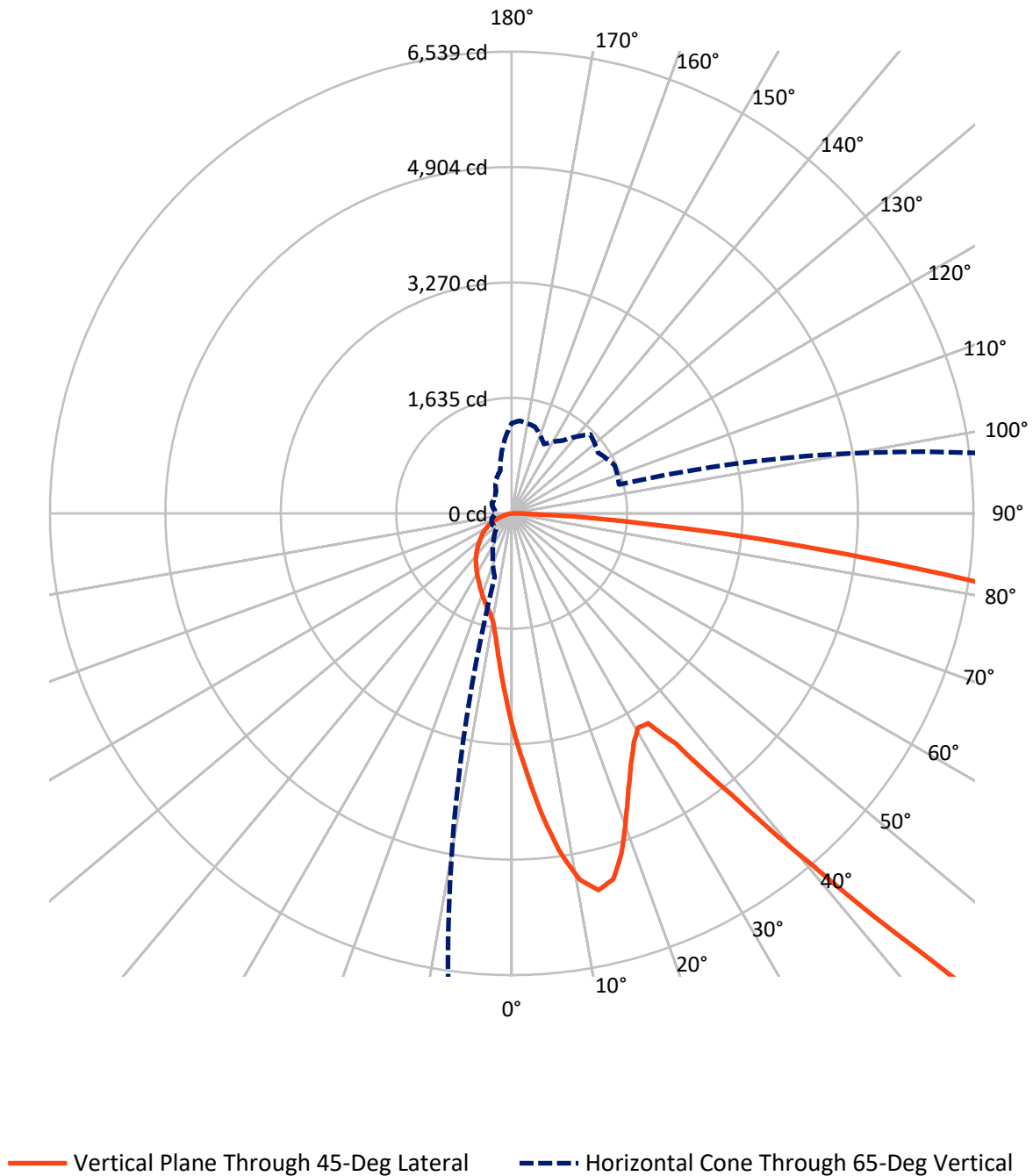
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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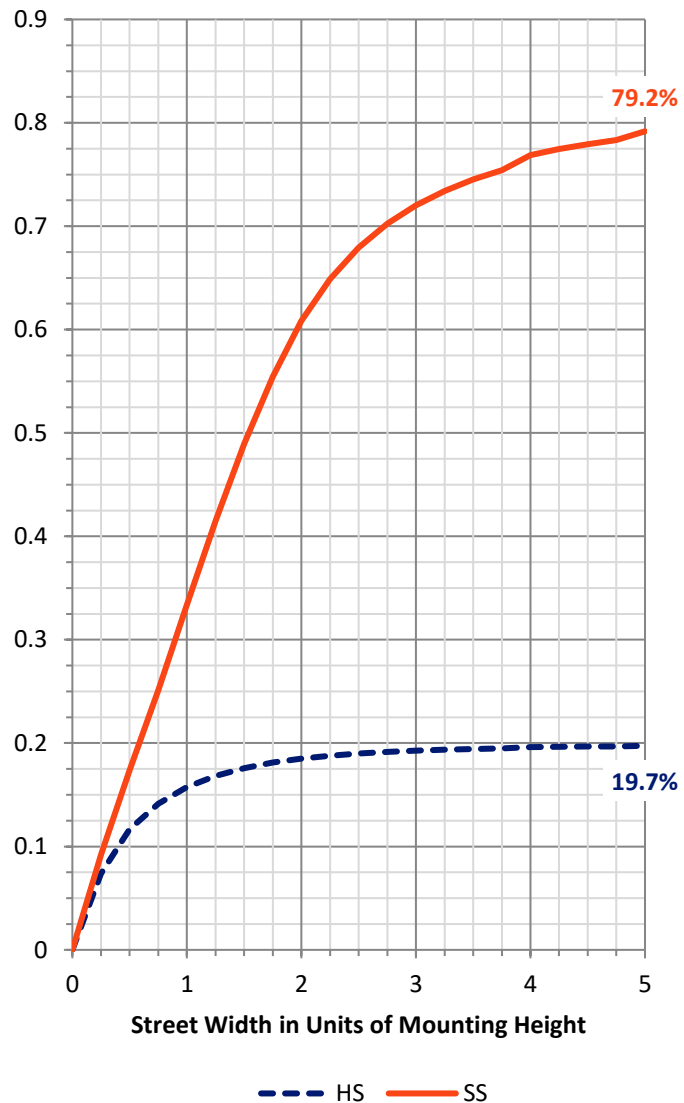
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4403.4	0.0	4403.4
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	17749.9	0.0	17749.9
	% Fixture	80.1	0.0	80.1
Total	Lumens	22153.3	0.0	22153.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	302.0	1.4
10°-20°	905.3	4.1
20°-30°	1333.7	6.0
30°-40°	1713.5	7.7
40°-50°	2771.2	12.5
50°-60°	4859.6	21.9
60°-70°	6080.7	27.4
70°-80°	3553.3	16.0
80°-90°	634.0	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°	22153.3	100.0
0°-180°	22153.3	100.0

Coefficient of Utilization



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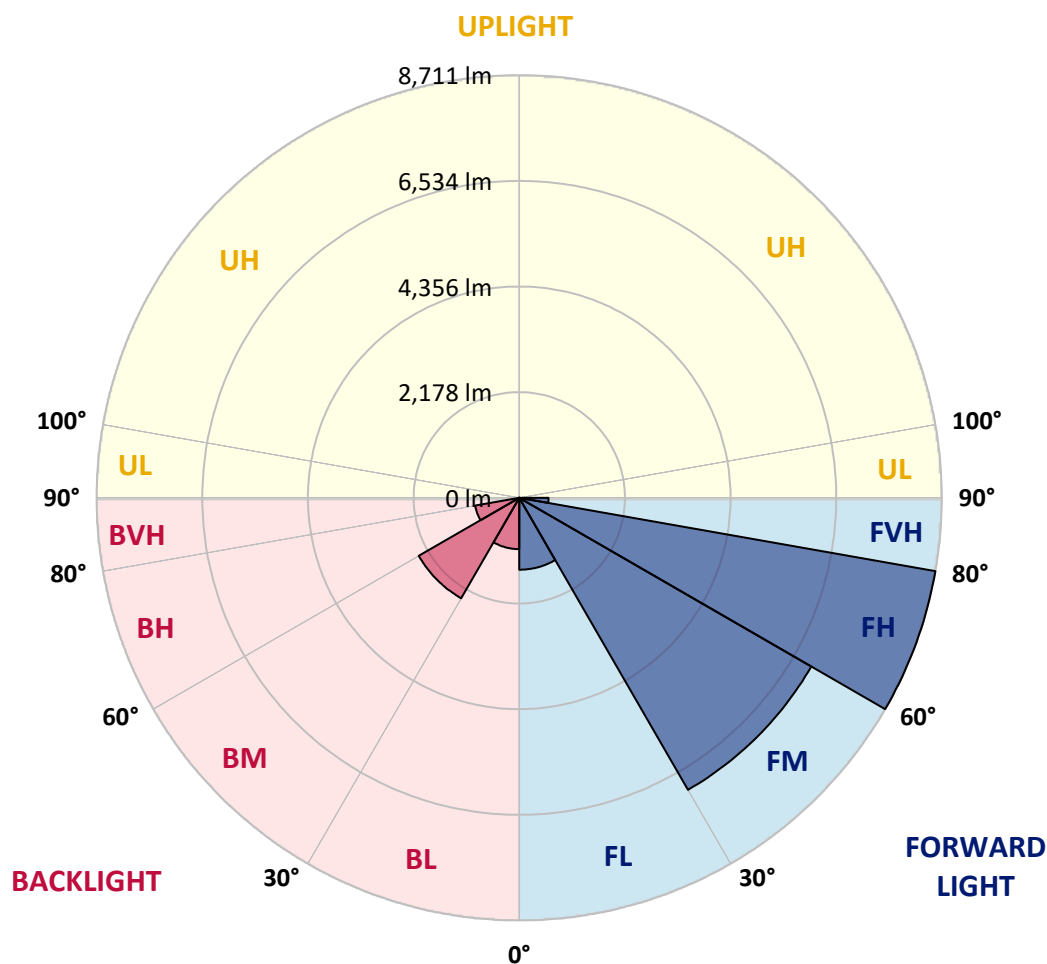
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1482.3	6.7			
FM	(30°-60°)	6952.0	31.4			
FH	(60°-80°)	8711.4	39.3			G4/12000
FVH	(80°-90°)	604.2	2.7			G4/750
BL	(0°-30°)	1058.8	4.8	B3/2500		
BM	(30°-60°)	2392.3	10.8	B2/2500		
BH	(60°-80°)	922.6	4.2	B2/1000		G2/1000
BVH	(80°-90°)	29.7	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5
2.5°	3436.8	3462.8	3520.8	3551.3	3598.6	3601.6	3601.6	3560.4	3558.9	3475.0	3465.8
5°	3841.3	3902.3	4039.6	4181.6	4212.1	4219.7	4204.4	4122.0	4061.0	3897.8	3862.6
7.5°	4242.7	4360.1	4569.2	4758.5	4819.5	4819.5	4782.9	4648.6	4523.4	4286.9	4198.4
10°	4575.4	4723.4	5007.2	5219.4	5289.6	5274.3	5199.5	5030.1	4857.7	4570.8	4454.8
12.5°	4795.2	4961.4	5272.8	5443.7	5515.4	5475.8	5390.3	5225.4	5043.8	4741.6	4610.4
15°	4905.0	5079.0	5349.1	5439.2	5419.3	5378.1	5367.4	5288.1	5150.7	4868.3	4724.9
17.5°	4952.3	5114.0	5301.8	5245.3	5077.4	5045.4	5152.3	5252.9	5219.4	4978.2	4843.9
20°	4996.6	5132.4	5188.9	4938.6	4645.5	4616.6	4821.1	5108.0	5254.5	5080.5	4956.9
22.5°	5057.6	5141.5	5025.6	4615.1	4299.2	4231.9	4457.8	4889.8	5265.1	5210.2	5086.6
25°	5141.5	5164.5	4845.5	4308.3	3990.8	3923.7	4134.3	4647.0	5246.9	5350.6	5245.3
27.5°	5242.3	5194.9	4673.0	4051.9	3745.1	3682.5	3893.2	4413.5	5194.9	5491.0	5416.2
30°	5373.6	5234.7	4502.1	3853.5	3569.7	3523.8	3726.8	4212.1	5130.8	5669.6	5628.4
32.5°	5506.3	5251.4	4343.3	3737.5	3529.9	3546.7	3713.1	4103.8	5060.6	5840.6	5860.3
35°	5649.7	5304.9	4265.5	3852.0	3861.1	4007.6	4076.3	4204.4	5050.0	6072.5	6150.3
37.5°	5845.1	5423.9	4358.6	4421.2	4738.7	5042.4	4985.9	4697.5	5173.6	6419.0	6563.9
40°	6125.9	5633.0	4764.6	5390.3	6042.0	6534.9	6319.7	5593.3	5552.1	6917.9	7134.7
42.5°	6534.9	5965.6	5484.9	6574.6	7679.5	8491.4	7914.5	6748.6	6214.4	7630.6	7906.8
45°	7139.2	6504.3	6356.3	7824.4	9698.6	10977.4	9777.9	7980.1	7142.3	8709.6	8926.3
47.5°	7977.1	7296.5	7172.8	9141.6	12152.6	13807.0	11844.3	9121.7	8198.4	10180.8	10231.2
50°	9089.6	8363.2	7946.6	10582.2	14843.1	16691.3	13909.1	10223.6	9408.6	11978.7	11920.6
52.5°	10557.8	9851.2	8848.5	11954.2	17610.0	19514.7	15983.2	11191.2	10910.3	14064.8	13945.8
55°	12560.0	12090.0	10081.6	13263.6	20375.4	22354.8	17976.3	12103.7	12894.3	16543.3	15822.9
57.5°	15044.6	15380.3	11859.6	14782.1	22861.5	25281.9	19978.6	13379.6	15470.4	19314.7	16912.6
60°	16647.0	19755.7	15264.4	17027.1	25686.3	28592.1	22722.6	15806.1	18177.8	20308.2	16705.0
62.5°	16259.4	21147.6	19342.2	19893.1	28283.8	30998.8	25411.6	18243.4	18687.5	18844.7	15105.6
65°	15070.6	20024.4	18510.5	20450.2	28941.6	31134.7	26130.4	17929.0	15851.9	15384.9	12141.9
67.5°	13434.6	18692.1	16534.2	18972.9	27752.7	29236.1	24792.0	15859.6	12250.3	11545.2	8808.8
70°	11668.8	17217.8	15236.9	17315.5	25486.4	25927.5	22516.6	13948.8	9010.3	7797.0	5652.8
72.5°	9993.1	15682.5	14348.7	15616.9	22463.2	21550.5	19554.3	12259.4	6560.8	5623.8	4018.3
75°	8279.2	13417.8	13083.5	13599.4	18487.6	16975.1	16247.2	10150.3	5149.2	4068.6	2772.9
77.5°	6388.4	10484.5	11253.7	10890.5	13013.3	12608.9	12593.7	7627.6	3762.0	2715.0	1738.3
80°	4372.3	7307.1	8792.0	7682.6	8445.6	8239.6	9484.9	5117.1	2728.8	1634.5	967.6
82.5°	2570.0	4448.7	6119.8	3719.2	4670.0	4793.6	5648.3	2489.1	1605.5	377.0	210.6
85°	1042.3	1756.5	2393.0	1455.9	2252.5	1900.0	2144.2	698.9	447.2	9.1	0.0
87.5°	262.5	561.6	393.7	163.3	261.0	239.6	189.2	85.5	18.3	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5
2.5°	3406.3	3371.2	3284.2	3197.3	3127.1	3032.5	2969.8	2895.1	2823.4	2759.2	2747.0
5°	3766.5	3650.5	3491.8	3346.8	3198.8	3055.3	2913.4	2763.8	2626.5	2542.5	2489.1
7.5°	4059.5	3855.0	3644.4	3459.8	3281.2	3113.3	2925.6	2744.0	2528.8	2414.4	2310.6
10°	4277.7	4009.2	3732.9	3520.8	3340.7	3177.4	3018.7	2835.6	2576.1	2432.6	2277.0
12.5°	4421.2	4102.3	3778.7	3536.0	3334.6	3207.9	3137.7	3066.0	2808.1	2640.2	2414.4
15°	4520.5	4167.9	3810.7	3501.0	3253.8	3160.6	3230.8	3313.2	3148.4	2954.6	2660.1
17.5°	4628.8	4253.3	3824.5	3406.3	3096.5	3056.9	3238.5	3429.2	3421.6	3229.3	2940.8
20°	4743.2	4328.1	3815.4	3253.8	2905.8	2940.8	3172.8	3394.1	3487.3	3383.4	3127.1
22.5°	4860.8	4399.8	3780.2	3055.3	2727.2	2837.1	3069.1	3262.9	3372.8	3340.7	3145.3
25°	5008.8	4500.6	3728.3	2841.7	2579.2	2731.7	2948.5	3105.6	3182.0	3180.5	3046.2
27.5°	5185.8	4634.8	3700.9	2669.2	2473.8	2612.7	2805.0	2945.4	2998.8	2998.8	2892.0
30°	5391.8	4793.6	3670.3	2556.2	2412.8	2489.1	2638.7	2776.0	2829.4	2829.4	2739.4
32.5°	5620.8	4946.2	3597.1	2487.6	2367.0	2368.6	2463.2	2588.3	2652.4	2661.6	2597.5
35°	5895.5	5109.5	3436.8	2432.6	2313.6	2251.0	2296.8	2400.7	2476.9	2496.8	2457.0
37.5°	6255.6	5309.4	3207.9	2351.8	2231.2	2127.4	2138.1	2217.5	2301.4	2332.0	2305.9
40°	6739.4	5544.4	2969.8	2235.8	2115.2	1991.6	1987.1	2045.0	2127.4	2161.0	2147.3
42.5°	7378.9	5826.8	2742.5	2124.4	1974.8	1848.2	1840.5	1886.3	1958.1	1993.1	1987.1
45°	8196.8	6173.2	2547.1	2037.4	1837.4	1712.4	1709.3	1747.4	1809.9	1846.6	1839.0
47.5°	9333.9	6519.6	2414.4	1991.6	1729.1	1600.9	1607.0	1640.6	1697.1	1723.0	1712.4
50°	10815.7	6625.0	2347.1	1991.6	1671.2	1501.7	1532.3	1559.7	1602.5	1617.7	1603.9
52.5°	12238.1	6277.0	2286.2	2003.8	1678.7	1417.8	1483.4	1503.3	1539.9	1546.0	1526.1
55°	12935.5	5396.4	2202.2	2006.8	1726.1	1346.0	1443.7	1480.3	1494.0	1492.6	1459.0
57.5°	12695.9	4363.2	2060.2	1994.6	1758.1	1300.3	1394.9	1465.1	1474.3	1460.5	1397.9
60°	11855.0	3212.6	1951.9	1904.7	1745.9	1286.6	1320.1	1431.5	1445.2	1426.9	1324.7
62.5°	10444.9	2229.7	1868.0	1706.2	1692.5	1282.0	1202.6	1358.2	1391.8	1365.9	1216.4
65°	8222.8	1575.0	1608.5	1495.6	1576.4	1257.6	1080.5	1269.8	1315.5	1275.8	1065.3
67.5°	5564.3	1136.9	1303.3	1355.3	1388.8	1202.6	992.0	1169.0	1230.1	1178.1	889.7
70°	3005.0	798.2	860.7	1141.5	1179.7	1107.9	912.7	1066.7	1136.9	1080.5	724.9
72.5°	1774.9	573.8	602.8	917.2	982.9	975.2	824.1	947.7	1033.2	966.1	589.1
75°	978.3	387.7	430.4	665.4	798.2	752.3	708.2	802.8	889.7	824.1	454.8
77.5°	438.0	232.0	299.1	436.4	627.2	515.9	547.9	625.8	706.6	638.0	303.7
80°	169.4	129.8	198.4	238.1	456.3	285.4	352.5	460.9	518.9	463.9	184.7
82.5°	21.3	58.0	85.5	93.1	265.6	151.1	204.5	290.0	285.4	247.2	93.1
85°	0.0	10.7	12.2	6.1	114.5	54.9	67.1	94.6	88.6	67.1	7.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5
2.5°	2672.3	2617.3	2589.9	2566.9	2588.3	2600.5	2600.5	2652.4	2682.9	2695.1	2780.6
5°	2354.8	2252.5	2183.9	2142.7	2156.4	2171.7	2188.5	2254.1	2298.4	2327.4	2460.1
7.5°	2104.5	1948.8	1852.7	1802.4	1809.9	1820.7	1834.4	1898.5	1942.8	1980.9	2128.9
10°	1980.9	1761.2	1634.5	1573.5	1562.7	1556.7	1552.1	1590.2	1623.8	1654.4	1800.8
12.5°	1987.1	1680.3	1526.1	1451.4	1419.3	1382.7	1353.7	1359.8	1381.2	1419.3	1512.4
15°	2064.9	1654.4	1469.6	1376.6	1323.2	1280.4	1245.4	1237.7	1245.4	1251.4	1309.4
17.5°	2170.1	1651.3	1420.9	1304.8	1249.9	1214.8	1182.7	1172.1	1173.6	1181.2	1196.5
20°	2254.1	1642.2	1365.9	1236.1	1187.4	1156.8	1124.7	1114.1	1117.1	1118.7	1135.4
22.5°	2298.4	1628.4	1304.8	1167.5	1126.3	1095.7	1066.7	1065.3	1065.3	1074.4	1086.6
25°	2298.4	1599.4	1249.9	1101.9	1065.3	1037.8	1002.7	1008.8	1011.8	1024.1	1042.3
27.5°	2243.4	1544.5	1205.6	1045.4	1007.3	979.8	947.7	955.4	959.9	973.6	996.6
30°	2173.2	1478.9	1155.3	992.0	947.7	927.9	900.5	903.4	909.6	924.9	950.8
32.5°	2098.5	1401.0	1114.1	938.6	894.3	879.0	848.5	853.1	859.3	876.0	905.0
35°	2016.1	1309.4	1065.3	889.7	845.5	833.2	798.2	801.2	810.4	828.7	857.7
37.5°	1929.0	1234.6	1016.4	842.4	796.6	784.4	747.8	750.8	761.6	782.9	810.4
40°	1843.6	1161.4	964.5	792.0	746.3	735.6	695.9	698.9	711.1	734.1	763.1
42.5°	1750.5	1104.9	897.4	740.2	691.4	680.7	644.0	648.6	662.4	685.2	714.2
45°	1639.1	1068.3	822.6	691.4	636.4	625.8	592.1	601.3	616.5	639.5	669.9
47.5°	1524.6	1053.0	760.0	639.5	579.9	570.8	543.4	558.5	575.3	593.7	627.2
50°	1414.7	1033.2	695.9	590.6	531.1	521.9	503.6	523.5	540.3	557.1	589.1
52.5°	1289.6	990.5	638.0	547.9	489.8	486.9	477.6	496.0	511.3	526.5	554.0
55°	1159.9	921.8	587.5	509.7	454.8	457.9	453.3	468.5	480.7	494.5	518.9
57.5°	1046.9	834.8	547.9	468.5	424.2	433.5	427.3	434.9	442.6	459.4	479.2
60°	932.4	731.0	503.6	419.7	393.7	404.5	387.7	386.1	389.2	393.7	430.4
62.5°	778.3	622.7	448.6	377.0	360.2	364.7	332.7	308.3	308.3	312.8	367.8
65°	625.8	521.9	387.7	328.1	314.4	311.3	265.6	232.0	228.9	242.6	290.0
67.5°	514.3	433.5	326.6	273.2	264.0	267.1	233.5	199.9	196.9	212.2	247.2
70°	425.8	349.5	261.0	210.6	219.8	233.5	199.9	167.9	163.3	177.0	210.6
72.5°	338.8	273.2	199.9	155.7	181.6	198.4	163.3	132.7	129.8	142.0	173.9
75°	248.8	195.4	135.8	113.0	140.4	155.7	119.0	94.6	90.0	100.8	132.7
77.5°	154.2	109.9	85.5	67.1	96.1	103.7	62.5	54.9	53.4	61.1	83.9
80°	71.8	47.4	41.2	22.9	35.1	41.2	25.9	29.0	30.5	36.6	51.9
82.5°	19.9	7.6	1.5	0.0	0.0	12.2	6.1	12.2	15.3	22.9	33.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	7.6	13.7	24.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1	12.2
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: P965275

CATALOG NUMBER: NAV-SB3D-835-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5	3067.5
2.5°	2844.7	2905.8	3003.5	3104.1	3203.3	3304.1	3401.8	3436.8
5°	2580.6	2721.1	2914.9	3122.5	3336.2	3552.9	3751.2	3841.3
7.5°	2286.2	2487.6	2779.1	3104.1	3444.5	3784.8	4097.6	4242.7
10°	1971.8	2226.6	2559.3	2998.8	3487.3	3957.2	4387.6	4575.4
12.5°	1672.6	1939.7	2307.5	2834.0	3453.6	4056.4	4573.9	4795.2
15°	1422.4	1658.9	2055.7	2638.7	3345.3	4062.6	4662.3	4905.0
17.5°	1234.6	1388.8	1799.3	2422.0	3203.3	4006.1	4692.9	4952.3
20°	1141.5	1184.3	1466.6	2144.2	3070.6	3952.7	4723.4	4996.6
22.5°	1086.6	1097.3	1199.6	1785.6	2911.8	3935.9	4776.8	5057.6
25°	1042.3	1045.4	1072.9	1414.7	2669.2	3925.2	4859.2	5141.5
27.5°	998.0	998.0	1013.3	1140.0	2339.6	3879.4	4966.0	5242.3
30°	953.9	953.9	964.5	1008.8	1953.4	3789.4	5094.2	5373.6
32.5°	908.0	908.0	917.2	949.3	1559.7	3676.5	5211.7	5506.3
35°	862.2	859.3	871.5	905.0	1240.8	3533.0	5329.3	5649.7
37.5°	813.4	811.9	824.1	862.2	1071.3	3366.6	5417.7	5845.1
40°	761.6	761.6	775.3	816.5	1022.5	3157.6	5558.2	6125.9
42.5°	714.2	711.1	726.4	776.8	985.8	2957.6	5810.0	6534.9
45°	668.4	662.4	676.1	738.6	921.8	2887.4	6280.1	7139.2
47.5°	625.8	610.5	622.7	692.9	863.8	3149.9	7049.2	7977.1
50°	590.6	561.6	572.3	647.1	819.5	3719.2	8047.3	9089.6
52.5°	554.0	515.9	521.9	590.6	779.8	4260.9	9129.4	10557.8
55°	515.9	473.1	476.1	534.1	723.3	4341.8	10185.4	12560.0
57.5°	473.1	433.5	433.5	482.3	682.1	3763.5	10997.3	15044.6
60°	425.8	399.9	392.2	441.1	718.8	2655.5	11091.9	16647.0
62.5°	373.9	360.2	349.5	401.4	746.3	1573.5	10330.4	16259.4
65°	314.4	311.3	303.7	441.1	628.7	929.4	8868.4	15070.6
67.5°	264.0	259.4	259.4	462.4	477.6	584.6	6928.7	13434.6
70°	227.3	210.6	210.6	349.5	290.0	404.5	4837.8	11668.8
72.5°	190.8	172.4	160.2	279.3	216.7	296.0	3023.2	9993.1
75°	152.6	138.9	123.6	184.7	161.7	224.4	1756.5	8279.2
77.5°	109.9	103.7	87.0	135.8	117.5	161.7	1045.4	6388.4
80°	56.5	58.0	54.9	77.8	79.3	109.9	595.2	4372.3
82.5°	33.6	25.9	29.0	38.1	45.8	62.5	224.4	2570.0
85°	21.3	13.7	13.7	18.3	22.9	24.4	68.7	1042.3
87.5°	10.7	4.6	6.1	9.1	7.6	6.1	3.1	262.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)