

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: P965213

Luminaire Tested: **NAV-SB3D-827-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965213
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-827-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 80 CRI, 2700K, 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: 20768.5 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - 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



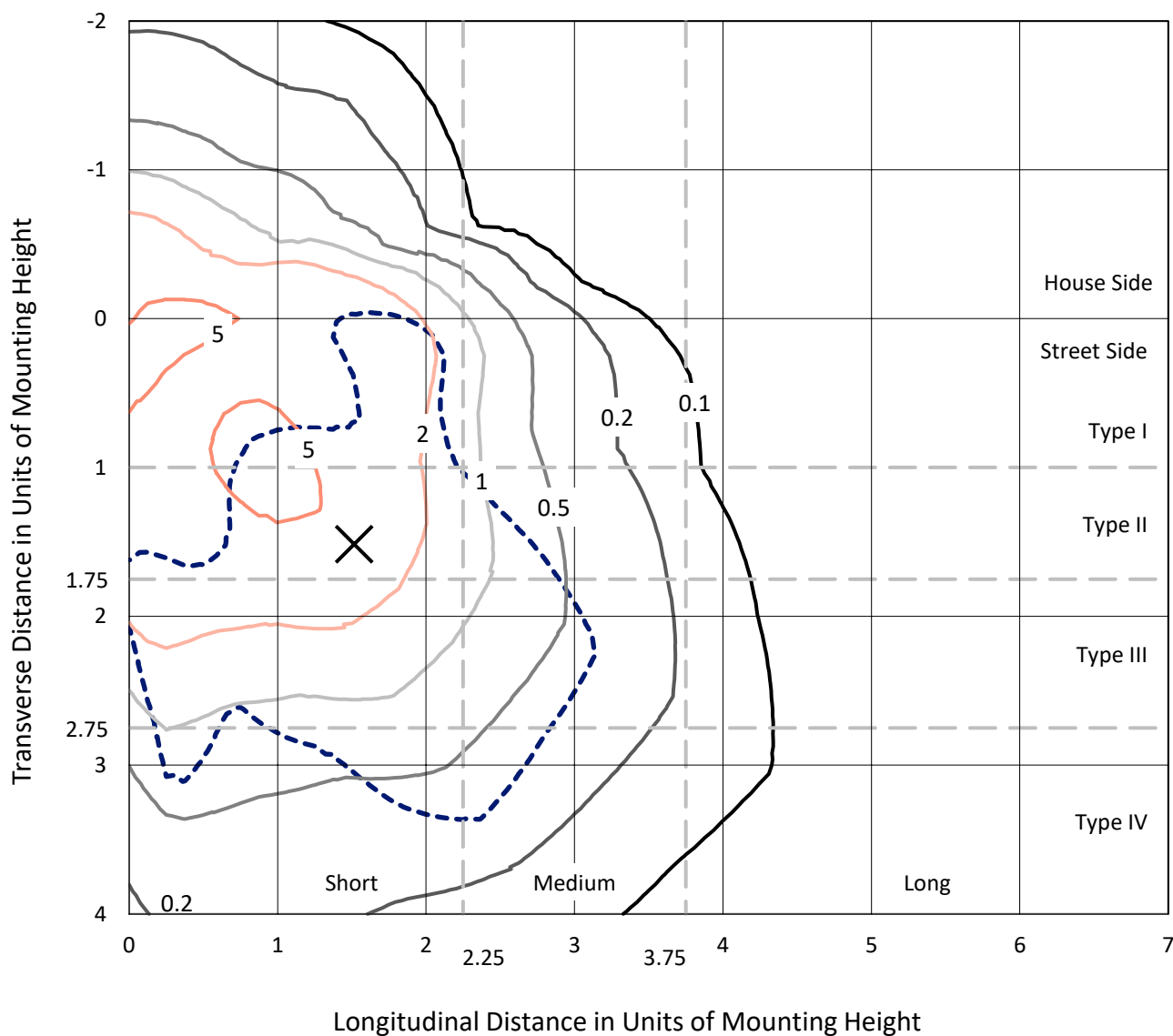
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

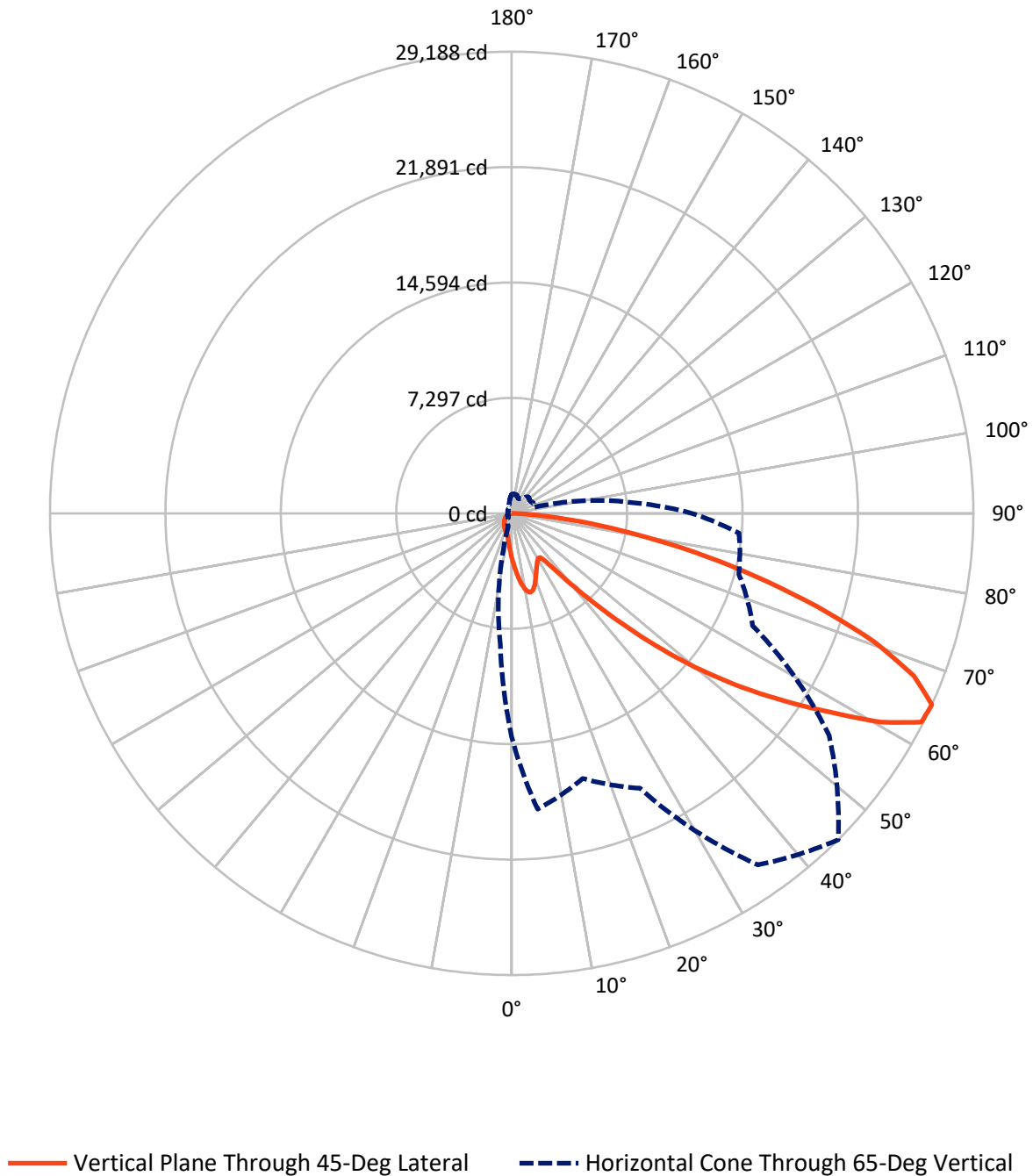


Based on 25 foot mounting height. Maximum calculated value = 7.6 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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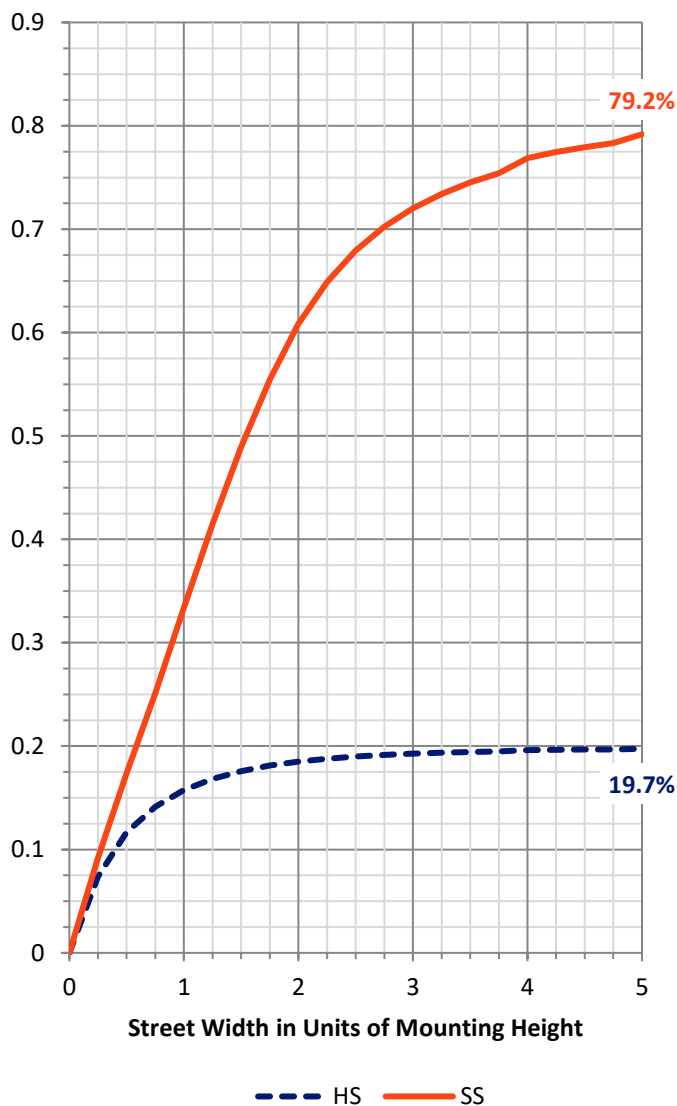
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4128.1	0.0	4128.1
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	16640.4	0.0	16640.4
	% Fixture	80.1	0.0	80.1
Total	Lumens	20768.5	0.0	20768.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	283.1	1.4
10°-20°	848.7	4.1
20°-30°	1250.4	6.0
30°-40°	1606.4	7.7
40°-50°	2598.0	12.5
50°-60°	4555.8	21.9
60°-70°	5700.6	27.4
70°-80°	3331.2	16.0
80°-90°	594.3	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°	20768.5	100.0
0°-180°	20768.5	100.0

Coefficient of Utilization



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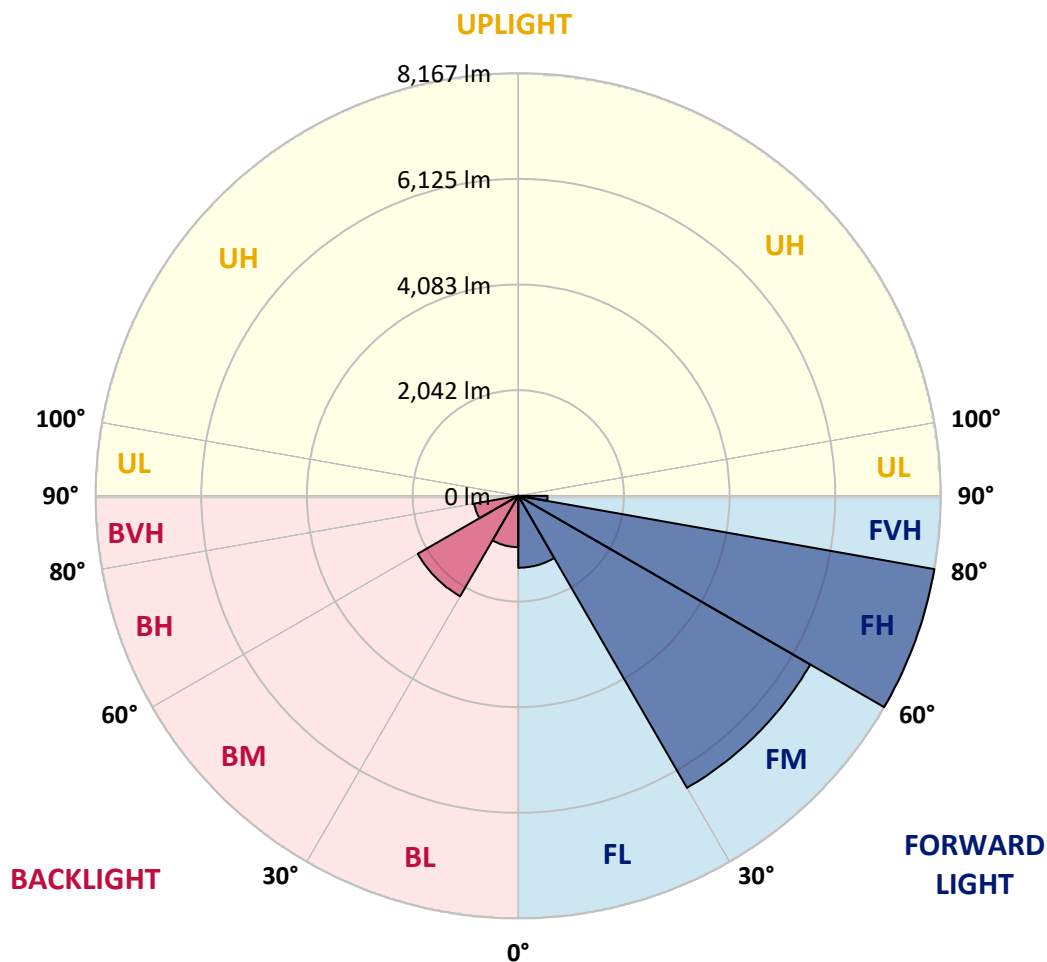
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1389.7	6.7			
FM	(30°-60°)	6517.4	31.4			
FH	(60°-80°)	8166.8	39.3			G4/12000
FVH	(80°-90°)	566.5	2.7			G4/750
BL	(0°-30°)	992.6	4.8	B2/1000		
BM	(30°-60°)	2242.8	10.8	B2/2500		
BH	(60°-80°)	864.9	4.2	B2/1000		G2/1000
BVH	(80°-90°)	27.9	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-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7
2.5°	3222.0	3246.4	3300.7	3329.3	3373.7	3376.6	3376.6	3337.9	3336.5	3257.8	3249.2
5°	3601.1	3658.4	3787.2	3920.2	3948.8	3956.0	3941.6	3864.5	3807.2	3654.1	3621.2
7.5°	3977.4	4087.6	4283.6	4461.0	4518.3	4518.3	4484.0	4358.0	4240.7	4018.9	3936.0
10°	4289.3	4428.1	4694.3	4893.1	4959.0	4944.6	4874.5	4715.7	4554.1	4285.0	4176.4
12.5°	4495.3	4651.3	4943.2	5103.5	5170.7	5133.5	5053.4	4898.9	4728.6	4445.3	4322.2
15°	4598.4	4761.5	5014.7	5099.2	5080.5	5041.9	5031.9	4957.5	4828.8	4564.0	4429.5
17.5°	4642.7	4794.4	4970.3	4917.4	4760.1	4730.0	4830.2	4924.6	4893.1	4667.0	4541.2
20°	4684.2	4811.6	4864.5	4629.8	4355.1	4328.0	4519.7	4788.7	4926.0	4763.0	4647.0
22.5°	4741.4	4820.2	4711.4	4326.5	4030.4	3967.5	4179.1	4584.1	4936.0	4884.5	4768.6
25°	4820.2	4841.6	4542.6	4039.0	3741.4	3678.4	3875.8	4356.6	4918.9	5016.1	4917.4
27.5°	4914.6	4870.2	4381.0	3798.6	3511.0	3452.4	3649.8	4137.7	4870.2	5147.8	5077.6
30°	5037.7	4907.4	4220.6	3612.6	3346.5	3303.6	3493.8	3948.8	4810.1	5315.1	5276.6
32.5°	5162.1	4923.2	4071.9	3503.9	3309.3	3325.0	3481.0	3847.2	4744.3	5475.4	5494.0
35°	5296.6	4973.2	3998.9	3611.2	3619.8	3757.1	3821.5	3941.6	4734.3	5692.8	5765.8
37.5°	5479.8	5084.8	4086.2	4144.8	4442.5	4727.2	4674.2	4403.8	4850.2	6017.7	6153.6
40°	5743.0	5280.8	4466.7	5053.4	5664.3	6126.4	5924.7	5243.7	5205.1	6485.5	6688.7
42.5°	6126.4	5592.7	5142.0	6163.6	7199.5	7960.7	7419.8	6326.7	5826.0	7153.7	7412.6
45°	6692.9	6097.8	5959.0	7335.4	9092.4	10291.3	9166.7	7481.3	6695.8	8165.3	8368.4
47.5°	7478.5	6840.3	6724.4	8570.1	11393.0	12943.9	11103.9	8551.5	7686.0	9544.4	9591.6
50°	8521.4	7840.4	7449.8	9920.8	13915.3	15648.0	13039.7	9584.5	8820.5	11229.8	11175.5
52.5°	9897.8	9235.4	8295.4	11206.9	16509.3	18294.8	14984.1	10491.6	10228.4	13185.7	13074.1
55°	11775.0	11334.2	9451.4	12434.5	19101.8	20957.5	16852.6	11347.2	12088.3	15509.2	14833.9
57.5°	14104.2	14419.0	11118.3	13858.1	21432.4	23701.6	18729.7	12543.2	14503.3	18107.4	15855.4
60°	15606.4	18520.9	14310.2	15962.7	24080.7	26804.9	21302.3	14818.1	17041.5	19038.8	15660.9
62.5°	15243.1	19825.8	18133.2	18649.7	26515.8	29061.1	23823.2	17103.0	17519.4	17666.7	14161.4
65°	14128.5	18772.7	17353.4	19171.9	27132.5	29188.4	24497.1	16808.3	14861.1	14423.3	11382.9
67.5°	12594.8	17523.6	15500.6	17786.9	26018.0	27408.6	23242.3	14868.2	11484.5	10823.5	8258.2
70°	10939.4	16141.6	14284.5	16233.1	23893.3	24306.7	21109.1	13076.9	8447.0	7309.6	5299.5
72.5°	9368.5	14702.3	13451.8	14640.7	21059.0	20203.5	18332.0	11493.1	6150.7	5272.3	3767.1
75°	7761.7	12579.0	12265.7	12749.3	17331.9	15914.0	15231.6	9515.8	4827.3	3814.3	2599.6
77.5°	5989.1	9829.1	10550.2	10209.7	12199.9	11820.7	11806.5	7150.8	3526.7	2545.3	1629.6
80°	4099.1	6850.4	8242.4	7202.4	7917.7	7724.5	8892.0	4797.3	2558.2	1532.3	907.1
82.5°	2409.4	4170.6	5737.2	3486.7	4378.1	4493.9	5295.2	2333.5	1505.1	353.4	197.4
85°	977.2	1646.8	2243.4	1364.9	2111.8	1781.2	2010.2	655.3	419.2	8.6	0.0
87.5°	246.1	526.5	369.1	153.1	244.7	224.6	177.4	80.2	17.2	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7
2.5°	3193.4	3160.5	3078.9	2997.4	2931.6	2842.8	2784.2	2714.1	2646.9	2586.8	2575.3
5°	3531.0	3422.3	3273.5	3137.6	2998.8	2864.4	2731.3	2591.1	2462.3	2383.6	2333.5
7.5°	3805.7	3614.0	3416.6	3243.5	3076.1	2918.7	2742.7	2572.4	2370.7	2263.4	2166.1
10°	4010.3	3758.6	3499.6	3300.7	3131.9	2978.8	2830.0	2658.3	2415.1	2280.6	2134.7
12.5°	4144.8	3845.8	3542.5	3315.1	3126.1	3007.5	2941.5	2874.3	2632.5	2475.2	2263.4
15°	4237.9	3907.3	3572.5	3282.2	3050.3	2963.1	3028.9	3106.2	2951.6	2769.9	2493.7
17.5°	4339.4	3987.5	3585.4	3193.4	2903.0	2865.8	3036.0	3214.9	3207.7	3027.4	2757.0
20°	4446.8	4057.6	3576.8	3050.3	2724.1	2757.0	2974.5	3181.9	3269.2	3172.0	2931.6
22.5°	4556.9	4124.8	3543.9	2864.4	2556.8	2659.8	2877.2	3058.9	3161.9	3131.9	2948.7
25°	4695.6	4219.2	3495.2	2664.1	2418.0	2561.1	2764.2	2911.5	2983.1	2981.6	2855.8
27.5°	4861.7	4345.2	3469.5	2502.3	2319.3	2449.4	2629.7	2761.4	2811.4	2811.4	2711.2
30°	5054.8	4493.9	3440.9	2396.4	2262.0	2333.5	2473.7	2602.5	2652.6	2652.6	2568.1
32.5°	5269.4	4637.0	3372.2	2332.1	2219.0	2220.5	2309.2	2426.5	2486.6	2495.2	2435.1
35°	5526.9	4790.1	3222.0	2280.6	2169.0	2110.4	2153.2	2250.6	2322.0	2340.7	2303.5
37.5°	5864.5	4977.5	3007.5	2204.8	2091.7	1994.4	2004.5	2078.9	2157.5	2186.1	2161.8
40°	6318.1	5197.9	2784.2	2096.0	1983.0	1867.1	1862.8	1917.2	1994.4	2025.9	2013.0
42.5°	6917.6	5462.5	2571.0	1991.6	1851.4	1732.7	1725.5	1768.4	1835.7	1868.6	1862.8
45°	7684.5	5787.4	2387.9	1910.0	1722.6	1605.3	1602.4	1638.2	1696.9	1731.2	1724.0
47.5°	8750.4	6112.1	2263.4	1867.1	1621.0	1500.8	1506.5	1538.0	1591.0	1615.3	1605.3
50°	10139.6	6210.8	2200.5	1867.1	1566.6	1407.8	1436.4	1462.2	1502.2	1516.6	1503.7
52.5°	11473.0	5884.6	2143.3	1878.5	1573.8	1329.1	1390.7	1409.3	1443.6	1449.4	1430.7
55°	12126.9	5059.1	2064.6	1881.4	1618.2	1261.9	1353.5	1387.8	1400.7	1399.2	1367.8
57.5°	11902.3	4090.5	1931.5	1870.0	1648.2	1219.0	1307.7	1373.5	1382.1	1369.2	1310.6
60°	11114.0	3011.7	1829.9	1785.6	1636.7	1206.1	1237.6	1342.0	1354.9	1337.7	1241.9
62.5°	9791.9	2090.3	1751.2	1599.5	1586.7	1201.8	1127.4	1273.4	1304.8	1280.5	1140.3
65°	7708.8	1476.5	1508.0	1402.1	1477.9	1179.0	1013.0	1190.3	1233.3	1196.1	998.7
67.5°	5216.4	1065.9	1221.8	1270.5	1302.0	1127.4	930.0	1095.9	1153.1	1104.5	834.1
70°	2817.1	748.2	807.0	1070.2	1106.0	1038.7	855.6	1000.1	1065.9	1013.0	679.6
72.5°	1664.0	537.9	565.2	859.9	921.4	914.2	772.6	888.5	968.6	905.7	552.3
75°	917.1	363.4	403.4	623.8	748.2	705.3	663.9	752.6	834.1	772.6	426.4
77.5°	410.6	217.5	280.4	409.2	588.0	483.6	513.6	586.6	662.5	598.1	284.7
80°	158.8	121.6	186.0	223.2	427.8	267.5	330.5	432.0	486.5	434.9	173.1
82.5°	20.0	54.3	80.2	87.2	249.0	141.7	191.7	271.8	267.5	231.8	87.2
85°	0.0	10.0	11.5	5.7	107.3	51.6	62.9	88.7	83.0	62.9	7.2
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°	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7
2.5°	2505.2	2453.7	2427.9	2406.5	2426.5	2438.0	2438.0	2486.6	2515.2	2526.7	2606.8
5°	2207.6	2111.8	2047.3	2008.8	2021.6	2036.0	2051.6	2113.2	2154.7	2181.9	2306.4
7.5°	1973.0	1827.1	1736.9	1689.7	1696.9	1706.8	1719.7	1779.8	1821.3	1857.1	1995.9
10°	1857.1	1651.1	1532.3	1475.1	1465.0	1459.4	1455.1	1490.9	1522.3	1550.9	1688.3
12.5°	1862.8	1575.2	1430.7	1360.6	1330.6	1296.2	1269.1	1274.8	1294.8	1330.6	1417.9
15°	1935.8	1550.9	1377.8	1290.5	1240.5	1200.4	1167.5	1160.3	1167.5	1173.2	1227.5
17.5°	2034.5	1548.1	1332.0	1223.2	1171.8	1138.9	1108.8	1098.8	1100.2	1107.4	1121.7
20°	2113.2	1539.4	1280.5	1158.9	1113.1	1084.4	1054.4	1044.5	1047.3	1048.8	1064.5
22.5°	2154.7	1526.6	1223.2	1094.5	1055.9	1027.3	1000.1	998.7	998.7	1007.3	1018.6
25°	2154.7	1499.4	1171.8	1033.0	998.7	972.9	940.0	945.8	948.5	960.0	977.2
27.5°	2103.2	1447.9	1130.3	980.1	944.3	918.5	888.5	895.6	900.0	912.8	934.3
30°	2037.4	1386.4	1083.1	930.0	888.5	869.9	844.1	847.0	852.7	867.0	891.3
32.5°	1967.3	1313.4	1044.5	879.9	838.4	824.1	795.5	799.8	805.5	821.2	848.4
35°	1890.0	1227.5	998.7	834.1	792.6	781.2	748.2	751.1	759.7	776.8	804.1
37.5°	1808.4	1157.4	952.8	789.8	746.8	735.4	701.1	704.0	713.9	734.0	759.7
40°	1728.4	1088.8	904.3	742.5	699.7	689.6	652.4	655.3	666.8	688.2	715.3
42.5°	1641.0	1035.9	841.3	693.9	648.1	638.1	603.7	608.0	620.9	642.4	669.6
45°	1536.6	1001.5	771.2	648.1	596.7	586.6	555.1	563.8	578.0	599.5	628.1
47.5°	1429.3	987.2	712.5	599.5	543.7	535.0	509.3	523.7	539.4	556.6	588.0
50°	1326.2	968.6	652.4	553.7	497.9	489.3	472.1	490.8	506.5	522.2	552.3
52.5°	1209.0	928.5	598.1	513.6	459.3	456.4	447.8	464.9	479.3	493.6	519.4
55°	1087.3	864.2	550.8	477.9	426.4	429.3	425.0	439.2	450.7	463.6	486.5
57.5°	981.4	782.6	513.6	439.2	397.7	406.3	400.6	407.7	414.9	430.6	449.3
60°	874.2	685.3	472.1	393.5	369.1	379.1	363.4	361.9	364.8	369.1	403.4
62.5°	729.7	583.7	420.7	353.4	337.6	341.9	311.9	289.0	289.0	293.3	344.8
65°	586.6	489.3	363.4	307.6	294.7	291.9	249.0	217.5	214.6	227.4	271.8
67.5°	482.2	406.3	306.2	256.1	247.5	250.4	218.9	187.5	184.6	198.8	231.8
70°	399.1	327.6	244.7	197.4	206.0	218.9	187.5	157.3	153.1	165.9	197.4
72.5°	317.6	256.1	187.5	146.0	170.3	186.0	153.1	124.4	121.6	133.0	163.1
75°	233.2	183.2	127.3	105.9	131.6	146.0	111.6	88.7	84.5	94.4	124.4
77.5°	144.5	103.0	80.2	62.9	90.1	97.3	58.6	51.6	50.1	57.2	78.7
80°	67.2	44.4	38.6	21.4	32.9	38.6	24.3	27.2	28.6	34.3	48.7
82.5°	18.6	7.2	1.4	0.0	0.0	11.5	5.7	11.5	14.3	21.4	31.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	7.2	12.9	22.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	11.5
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: P965213

CATALOG NUMBER: NAV-SB3D-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7	2875.7
2.5°	2666.8	2724.1	2815.7	2910.1	3003.1	3097.5	3189.1	3222.0
5°	2419.4	2551.0	2732.8	2927.3	3127.6	3330.7	3516.8	3601.1
7.5°	2143.3	2332.1	2605.3	2910.1	3229.2	3548.2	3841.5	3977.4
10°	1848.5	2087.4	2399.3	2811.4	3269.2	3709.9	4113.3	4289.3
12.5°	1568.0	1818.5	2163.3	2656.9	3237.8	3802.9	4287.9	4495.3
15°	1333.4	1555.2	1927.2	2473.7	3136.2	3808.6	4370.9	4598.4
17.5°	1157.4	1302.0	1686.8	2270.6	3003.1	3755.7	4399.5	4642.7
20°	1070.2	1110.3	1374.9	2010.2	2878.6	3705.6	4428.1	4684.2
22.5°	1018.6	1028.7	1124.5	1673.9	2729.9	3689.9	4478.2	4741.4
25°	977.2	980.1	1005.8	1326.2	2502.3	3679.9	4555.5	4820.2
27.5°	935.7	935.7	950.0	1068.8	2193.3	3636.9	4655.7	4914.6
30°	894.2	894.2	904.3	945.8	1831.4	3552.5	4775.8	5037.7
32.5°	851.3	851.3	859.9	889.9	1462.2	3446.7	4886.0	5162.1
35°	808.3	805.5	816.9	848.4	1163.2	3312.2	4996.2	5296.6
37.5°	762.6	761.2	772.6	808.3	1004.4	3156.2	5079.1	5479.8
40°	713.9	713.9	726.8	765.5	958.6	2960.2	5210.7	5743.0
42.5°	669.6	666.8	681.0	728.3	924.2	2772.7	5446.8	6126.4
45°	626.7	620.9	633.9	692.5	864.2	2706.9	5887.5	6692.9
47.5°	586.6	572.3	583.7	649.5	809.7	2953.0	6608.6	7478.5
50°	553.7	526.5	536.5	606.6	768.3	3486.7	7544.3	8521.4
52.5°	519.4	483.6	489.3	553.7	731.1	3994.6	8558.6	9897.8
55°	483.6	443.5	446.4	500.7	678.1	4070.5	9548.7	11775.0
57.5°	443.5	406.3	406.3	452.1	639.5	3528.2	10309.9	14104.2
60°	399.1	374.8	367.7	413.5	673.8	2489.5	10398.6	15606.4
62.5°	350.5	337.6	327.6	376.3	699.7	1475.1	9684.6	15243.1
65°	294.7	291.9	284.7	413.5	589.5	871.4	8314.0	14128.5
67.5°	247.5	243.2	243.2	433.5	447.8	548.0	6495.5	12594.8
70°	213.2	197.4	197.4	327.6	271.8	379.1	4535.4	10939.4
72.5°	178.9	161.6	150.3	261.8	203.2	277.6	2834.3	9368.5
75°	143.1	130.2	115.9	173.1	151.7	210.3	1646.8	7761.7
77.5°	103.0	97.3	81.6	127.3	110.2	151.7	980.1	5989.1
80°	52.9	54.3	51.6	73.0	74.4	103.0	558.0	4099.1
82.5°	31.5	24.3	27.2	35.8	42.9	58.6	210.3	2409.4
85°	20.0	12.9	12.9	17.2	21.4	22.9	64.4	977.2
87.5°	10.0	4.3	5.7	8.6	7.2	5.7	2.9	246.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)