

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: P967321

Luminaire Tested: **NAV-SB4D-827-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967321
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-SB4D-827-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 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: 27742.6 lumens
Efficiency: N/A
Efficacy: 94.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

Input Watts (W): 293.6
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



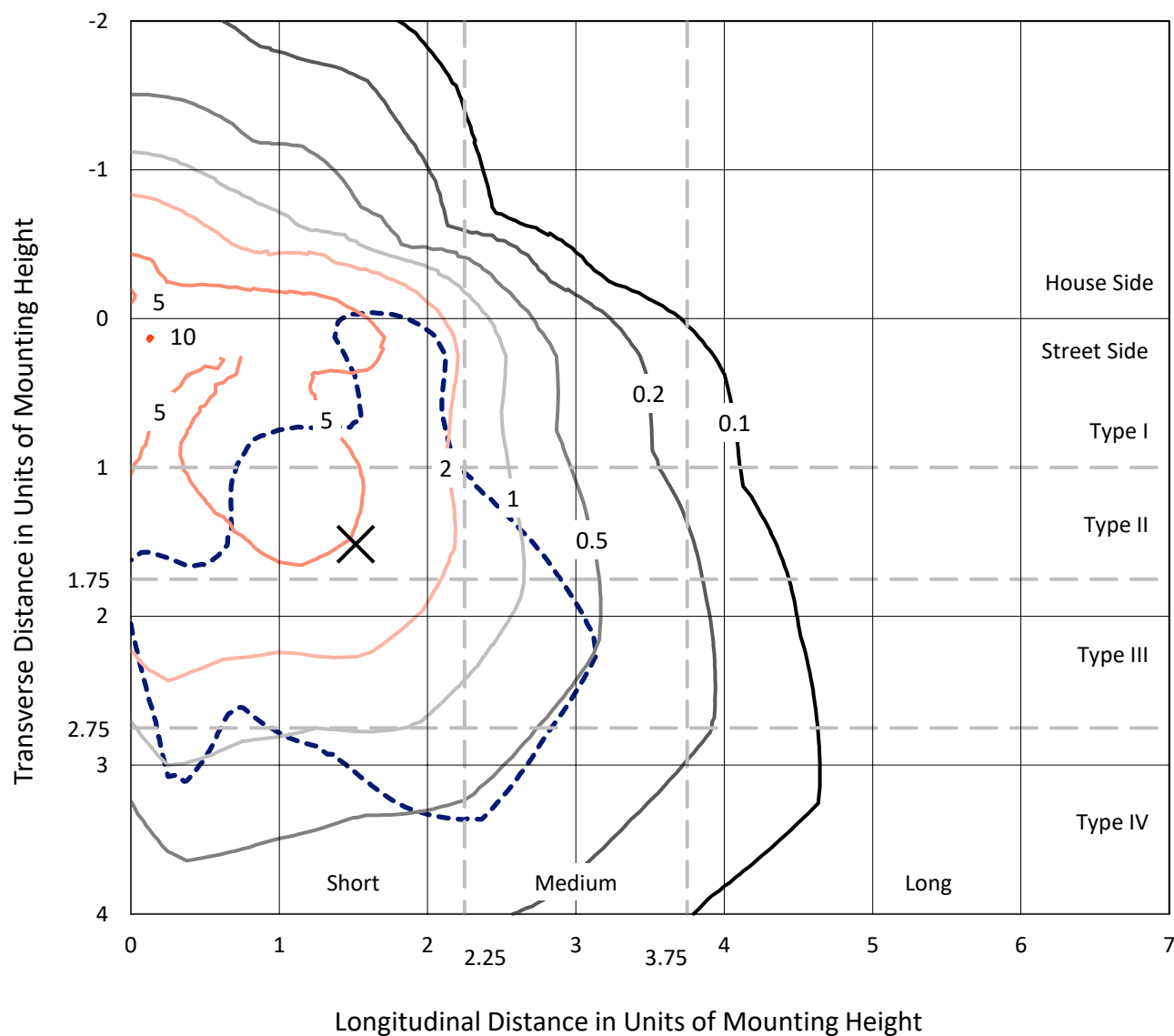
REPORT NUMBER: P967321

CATALOG NUMBER: NAV-SB4D-827-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

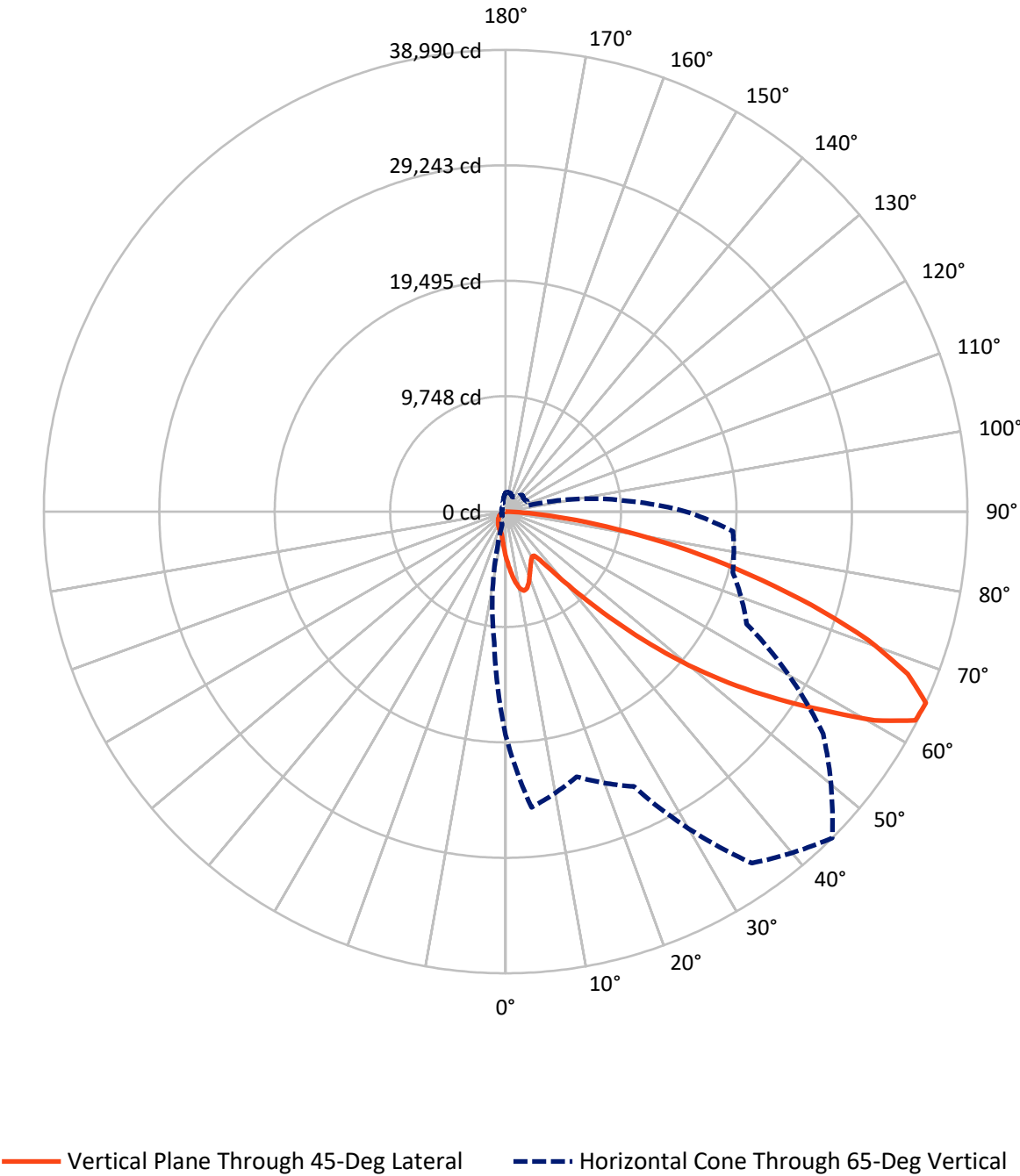


Based on 25 foot mounting height. Maximum calculated value = 10.1 fc

Type IV - Short - N/A

REPORT NUMBER: P967321
CATALOG NUMBER: NAV-SB4D-827-U-SLL-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P967321

CATALOG NUMBER: NAV-SB4D-827-U-SLL-HSS

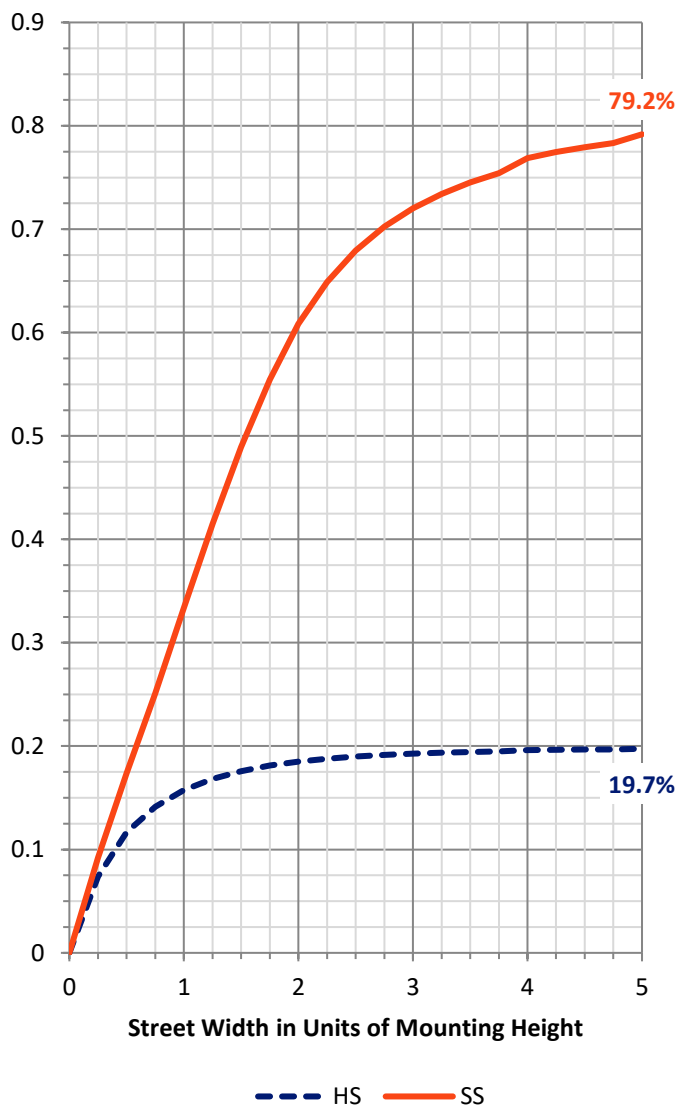
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5514.4	0.0	5514.4
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	22228.3	0.0	22228.3
	% Fixture	80.1	0.0	80.1
Total	Lumens	27742.6	0.0	27742.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	378.2	1.4
10°-20°	1133.7	4.1
20°-30°	1670.2	6.0
30°-40°	2145.8	7.7
40°-50°	3470.4	12.5
50°-60°	6085.7	21.9
60°-70°	7614.9	27.4
70°-80°	4449.8	16.0
80°-90°	793.9	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°	27742.6	100.0
0°-180°	27742.6	100.0

Coefficient of Utilization



REPORT NUMBER: P967321

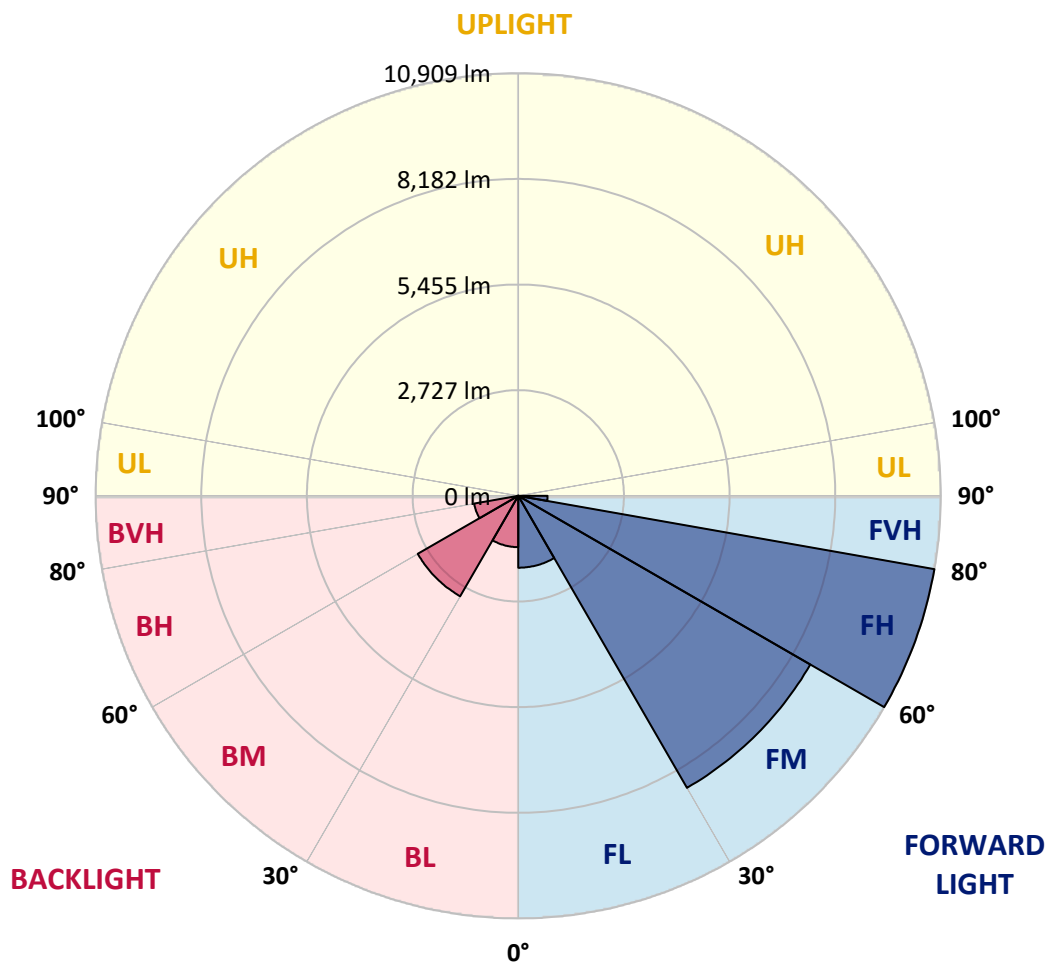
CATALOG NUMBER: NAV-SB4D-827-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1856.3	6.7			
FM	(30°-60°)	8706.0	31.4			
FH	(60°-80°)	10909.3	39.3			G4/12000
FVH	(80°-90°)	756.7	2.7			G5
BL	(0°-30°)	1325.9	4.8	B3/2500		
BM	(30°-60°)	2995.9	10.8	B3/5000		
BH	(60°-80°)	1155.4	4.2	B3/2500		G3/2500
BVH	(80°-90°)	37.2	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-G5

Type IV Short



REPORT NUMBER: P967321

CATALOG NUMBER: NAV-SB4D-827-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5
2.5°	4304.0	4336.5	4409.1	4447.3	4506.5	4510.4	4510.4	4458.8	4456.9	4351.7	4340.3
5°	4810.4	4886.9	5058.9	5236.6	5274.9	5284.4	5265.3	5162.1	5085.6	4881.2	4837.2
7.5°	5313.1	5460.3	5722.1	5959.0	6035.5	6035.5	5989.6	5821.5	5664.8	5368.5	5257.6
10°	5729.7	5915.1	6270.5	6536.2	6624.2	6605.0	6511.4	6299.2	6083.3	5724.0	5578.8
12.5°	6005.0	6213.2	6603.2	6817.2	6907.0	6857.4	6750.2	6543.9	6316.5	5938.0	5773.6
15°	6142.5	6360.4	6698.7	6811.4	6786.6	6735.0	6721.6	6622.2	6450.2	6096.7	5917.0
17.5°	6201.8	6404.4	6639.4	6568.7	6358.5	6318.4	6452.2	6578.2	6536.2	6234.3	6066.1
20°	6257.2	6427.3	6498.0	6184.5	5817.6	5781.3	6037.5	6396.7	6580.2	6362.3	6207.5
22.5°	6333.7	6438.7	6293.5	5779.4	5383.8	5299.7	5582.6	6123.5	6593.5	6524.7	6370.0
25°	6438.7	6467.4	6068.0	5395.3	4997.7	4913.6	5177.4	5819.5	6570.7	6700.6	6568.7
27.5°	6564.9	6505.7	5852.0	5074.2	4690.0	4611.7	4875.4	5527.1	6505.7	6876.4	6782.7
30°	6729.2	6555.4	5638.0	4825.7	4470.2	4412.9	4667.1	5274.9	6425.4	7100.1	7048.4
32.5°	6895.5	6576.4	5439.3	4680.5	4420.5	4441.5	4649.9	5139.1	6337.5	7314.1	7338.9
35°	7075.2	6643.2	5341.8	4823.9	4835.2	5018.7	5104.8	5265.3	6324.0	7604.6	7702.1
37.5°	7319.8	6792.4	5458.3	5536.6	5934.2	6314.5	6243.8	5882.6	6478.9	8038.5	8220.0
40°	7671.5	7054.2	5966.7	6750.2	7566.3	8183.7	7914.2	7004.4	6952.9	8663.4	8934.7
42.5°	8183.7	7470.8	6868.7	8233.3	9617.1	10633.8	9911.3	8451.2	7782.3	9555.9	9901.8
45°	8940.5	8145.5	7960.0	9798.6	12145.5	13747.1	12245.0	9993.5	8944.4	10907.1	11178.4
47.5°	9989.8	9137.4	8982.6	11447.9	15218.7	17290.4	14832.7	11423.1	10266.8	12749.5	12812.5
50°	11382.9	10473.2	9951.5	13252.1	18588.2	20902.5	17418.4	12803.0	11782.4	15000.9	14928.2
52.5°	13221.6	12336.7	11081.0	14970.2	22053.1	24438.3	20015.8	14014.7	13663.0	17613.4	17464.4
55°	15729.0	15140.4	12625.2	16610.0	25516.1	27994.9	22511.8	15157.6	16147.5	20717.2	19815.1
57.5°	18840.4	19260.9	14851.7	18511.7	28629.5	31660.6	25019.2	16755.3	19373.6	24187.8	21179.7
60°	20847.2	24740.2	19115.6	21323.0	32167.1	35805.9	28455.5	19794.1	22764.0	25432.1	20919.7
62.5°	20361.7	26483.2	24222.3	24912.2	35419.9	38819.8	31823.1	22846.2	23402.4	23599.2	18916.9
65°	18872.9	25076.6	23180.7	25609.8	36243.6	38990.0	32723.2	22452.5	19851.4	19266.6	15205.4
67.5°	16824.1	23408.1	20705.7	23759.8	34754.8	36612.5	31047.1	19861.0	15341.1	14458.0	11031.4
70°	14612.9	21561.9	19081.2	21684.3	31916.7	32469.0	28197.5	17468.2	11283.6	9764.3	7079.0
72.5°	12514.4	19639.3	17968.9	19557.1	28130.6	26987.7	24488.0	15352.4	8216.2	7042.7	5032.1
75°	10368.2	16803.1	16384.5	17030.5	23152.0	21258.1	20346.5	12711.2	6448.3	5095.2	3472.6
77.5°	8000.2	13129.8	14093.0	13638.1	16296.6	15790.1	15771.1	9552.1	4711.1	3400.0	2176.8
80°	5475.5	9150.7	11010.3	9620.9	10576.5	10318.5	11878.0	6408.2	3417.1	2046.8	1211.7
82.5°	3218.4	5571.1	7663.8	4657.5	5848.2	6003.0	7073.3	3117.1	2010.5	472.0	263.7
85°	1305.3	2199.8	2996.7	1823.3	2820.9	2379.4	2685.2	875.4	560.0	11.5	0.0
87.5°	328.7	703.4	493.1	204.5	326.8	300.0	237.0	107.0	23.0	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

REPORT NUMBER: P967321

CATALOG NUMBER: NAV-SB4D-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5
2.5°	4265.7	4221.8	4112.8	4004.0	3916.0	3797.5	3719.1	3625.5	3535.6	3455.4	3440.1
5°	4716.7	4571.5	4372.8	4191.2	4005.8	3826.2	3648.5	3461.1	3289.1	3184.1	3117.1
7.5°	5083.7	4827.6	4563.9	4332.7	4109.0	3898.8	3663.8	3436.3	3166.8	3023.4	2893.6
10°	5357.1	5020.7	4674.7	4409.1	4183.5	3979.0	3780.3	3551.0	3226.1	3046.4	2851.4
12.5°	5536.6	5137.2	4732.1	4428.2	4176.0	4017.3	3929.3	3839.5	3516.6	3306.3	3023.4
15°	5660.9	5219.4	4772.2	4384.2	4074.7	3958.0	4046.0	4149.2	3942.8	3700.0	3331.1
17.5°	5796.6	5326.4	4789.4	4265.7	3877.8	3828.1	4055.5	4294.4	4284.9	4044.0	3682.8
20°	5940.0	5420.1	4777.9	4074.7	3638.9	3682.8	3973.3	4250.5	4367.0	4237.0	3916.0
22.5°	6087.1	5509.9	4734.0	3826.2	3415.3	3552.9	3843.3	4086.1	4223.7	4183.5	3939.0
25°	6272.5	5636.1	4669.0	3558.6	3229.9	3421.0	3692.4	3889.3	3984.8	3982.9	3814.7
27.5°	6494.2	5804.3	4634.6	3342.6	3098.1	3271.9	3512.8	3688.6	3755.5	3755.5	3621.7
30°	6752.2	6003.0	4596.4	3201.2	3021.6	3117.1	3304.4	3476.4	3543.3	3543.3	3430.6
32.5°	7038.9	6194.2	4504.7	3115.2	2964.2	2966.1	3084.6	3241.4	3321.6	3333.1	3252.8
35°	7382.9	6398.7	4304.0	3046.4	2897.4	2819.0	2876.4	3006.3	3101.9	3126.7	3076.9
37.5°	7834.0	6649.0	4017.3	2945.1	2794.1	2664.2	2677.6	2776.9	2882.1	2920.3	2887.8
40°	8439.7	6943.4	3719.1	2799.9	2648.9	2494.1	2488.4	2561.0	2664.2	2706.2	2689.0
42.5°	9240.6	7296.9	3434.4	2660.4	2473.0	2314.4	2304.9	2362.2	2452.0	2496.0	2488.4
45°	10265.0	7730.8	3189.8	2551.4	2301.0	2144.3	2140.5	2188.3	2266.7	2312.5	2303.0
47.5°	11688.8	8164.5	3023.4	2494.1	2165.4	2004.8	2012.5	2054.5	2125.2	2157.7	2144.3
50°	13544.6	8296.5	2939.4	2494.1	2092.7	1880.6	1918.8	1953.2	2006.7	2025.8	2008.7
52.5°	15325.7	7860.7	2862.9	2509.4	2102.3	1775.5	1857.7	1882.5	1928.3	1936.0	1911.2
55°	16199.2	6757.9	2757.9	2513.2	2161.5	1685.6	1808.0	1853.8	1871.0	1869.1	1827.1
57.5°	15899.1	5464.1	2580.1	2497.9	2201.7	1628.3	1746.8	1834.7	1846.2	1829.0	1750.6
60°	14846.0	4023.0	2444.4	2385.2	2186.4	1611.1	1653.1	1792.7	1809.8	1787.0	1658.9
62.5°	13080.1	2792.2	2339.3	2136.7	2119.5	1605.4	1506.0	1701.0	1743.0	1710.5	1523.3
65°	10297.5	1972.3	2014.4	1873.0	1974.3	1574.8	1353.1	1590.1	1647.5	1597.8	1334.0
67.5°	6968.2	1423.8	1632.1	1697.1	1739.2	1506.0	1242.3	1464.0	1540.4	1475.4	1114.2
70°	3763.1	999.6	1077.9	1429.6	1477.3	1387.5	1142.9	1335.9	1423.8	1353.1	907.8
72.5°	2222.7	718.6	754.9	1148.6	1230.8	1221.3	1032.1	1186.8	1293.9	1209.8	737.7
75°	1225.1	485.4	538.9	833.3	999.6	942.2	886.8	1005.3	1114.2	1032.1	569.5
77.5°	548.5	290.5	374.6	546.6	785.5	646.0	686.1	783.6	884.9	798.9	380.3
80°	212.2	162.5	248.5	298.2	571.4	357.4	441.5	577.2	649.8	581.0	231.2
82.5°	26.8	72.7	107.0	116.5	332.5	189.2	256.1	363.2	357.4	309.7	116.5
85°	0.0	13.4	15.3	7.7	143.3	68.8	84.0	118.5	110.8	84.0	9.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	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

REPORT NUMBER: P967321

CATALOG NUMBER: NAV-SB4D-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5
2.5°	3346.5	3277.6	3243.3	3214.6	3241.4	3256.6	3256.6	3321.6	3359.8	3375.1	3482.1
5°	2948.9	2820.9	2734.9	2683.2	2700.5	2719.6	2740.6	2822.8	2878.2	2914.6	3080.8
7.5°	2635.5	2440.5	2320.2	2257.2	2266.7	2280.0	2297.2	2377.5	2432.9	2480.7	2666.1
10°	2480.7	2205.5	2046.8	1970.5	1957.0	1949.4	1943.7	1991.5	2033.5	2071.7	2255.2
12.5°	2488.4	2104.2	1911.2	1817.5	1777.4	1731.5	1695.2	1702.8	1729.6	1777.4	1894.0
15°	2585.9	2071.7	1840.5	1723.8	1657.0	1603.5	1559.5	1550.0	1559.5	1567.1	1639.8
17.5°	2717.7	2067.9	1779.3	1634.1	1565.3	1521.3	1481.1	1467.8	1469.7	1479.3	1498.3
20°	2822.8	2056.5	1710.5	1548.1	1486.9	1448.6	1408.6	1395.1	1399.0	1400.9	1421.9
22.5°	2878.2	2039.2	1634.1	1462.1	1410.4	1372.3	1335.9	1334.0	1334.0	1345.5	1360.8
25°	2878.2	2003.0	1565.3	1379.9	1334.0	1299.6	1255.6	1263.3	1267.1	1282.4	1305.3
27.5°	2809.4	1934.1	1509.8	1309.1	1261.4	1227.0	1186.8	1196.4	1202.1	1219.3	1248.0
30°	2721.5	1852.0	1446.8	1242.3	1186.8	1162.0	1127.6	1131.4	1139.1	1158.1	1190.6
32.5°	2627.9	1754.5	1395.1	1175.4	1119.9	1100.8	1062.6	1068.4	1075.9	1097.1	1133.3
35°	2524.7	1639.8	1334.0	1114.2	1058.8	1043.6	999.6	1003.4	1014.9	1037.8	1074.1
37.5°	2415.7	1546.1	1272.8	1054.9	997.6	982.4	936.4	940.3	953.7	980.4	1014.9
40°	2308.7	1454.4	1207.9	991.9	934.6	921.2	871.5	875.4	890.6	919.3	955.6
42.5°	2192.2	1383.6	1123.8	926.9	865.7	852.4	806.5	812.2	829.4	858.1	894.4
45°	2052.6	1337.8	1030.1	865.7	796.9	783.6	741.6	753.0	772.1	800.8	839.0
47.5°	1909.3	1318.7	951.8	800.8	726.2	714.7	680.4	699.5	720.5	743.4	785.5
50°	1771.7	1293.9	871.5	739.6	665.1	653.6	630.7	655.5	676.6	697.6	737.7
52.5°	1615.0	1240.4	798.9	686.1	613.5	609.7	598.2	621.2	640.2	659.4	693.7
55°	1452.5	1154.4	735.8	638.4	569.5	573.4	567.6	586.7	602.0	619.2	649.8
57.5°	1311.1	1045.4	686.1	586.7	531.3	542.7	535.2	544.7	554.2	575.2	600.1
60°	1167.7	915.4	630.7	525.6	493.1	506.5	485.4	483.5	487.4	493.1	538.9
62.5°	974.7	779.7	561.9	472.0	451.0	456.7	416.7	386.0	386.0	391.8	460.6
65°	783.6	653.6	485.4	410.9	393.7	389.9	332.5	290.5	286.7	303.9	363.2
67.5°	644.1	542.7	409.0	342.1	330.7	334.5	292.4	250.4	246.5	265.7	309.7
70°	533.2	437.7	326.8	263.7	275.2	292.4	250.4	210.2	204.5	221.7	263.7
72.5°	424.2	342.1	250.4	195.0	227.4	248.5	204.5	166.3	162.5	177.7	217.9
75°	311.5	244.7	170.0	141.4	175.8	195.0	149.0	118.5	112.7	126.2	166.3
77.5°	193.0	137.6	107.0	84.0	120.4	130.0	78.3	68.8	66.9	76.5	105.2
80°	89.8	59.2	51.6	28.7	44.0	51.6	32.5	36.3	38.2	45.8	65.0
82.5°	24.8	9.5	1.9	0.0	0.0	15.3	7.7	15.3	19.1	28.7	42.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	9.5	17.2	30.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	15.3
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: P967321

CATALOG NUMBER: NAV-SB4D-827-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5	3841.5
2.5°	3562.4	3638.9	3761.2	3887.3	4011.5	4137.7	4260.0	4304.0
5°	3231.8	3407.6	3650.3	3910.3	4177.8	4449.2	4697.7	4810.4
7.5°	2862.9	3115.2	3480.3	3887.3	4313.5	4739.7	5131.6	5313.1
10°	2469.2	2788.4	3205.1	3755.5	4367.0	4955.7	5494.6	5729.7
12.5°	2094.7	2429.1	2889.7	3549.1	4325.0	5079.9	5727.8	6005.0
15°	1781.2	2077.5	2574.4	3304.4	4189.3	5087.6	5838.6	6142.5
17.5°	1546.1	1739.2	2253.3	3033.1	4011.5	5016.9	5876.8	6201.8
20°	1429.6	1483.1	1836.6	2685.2	3845.3	4949.9	5915.1	6257.2
22.5°	1360.8	1374.1	1502.1	2236.0	3646.5	4928.9	5982.0	6333.7
25°	1305.3	1309.1	1343.6	1771.7	3342.6	4915.6	6085.2	6438.7
27.5°	1249.9	1249.9	1269.1	1427.6	2929.9	4858.2	6219.0	6564.9
30°	1194.5	1194.5	1207.9	1263.3	2446.3	4745.4	6379.5	6729.2
32.5°	1137.1	1137.1	1148.6	1188.8	1953.2	4604.0	6526.7	6895.5
35°	1079.8	1075.9	1091.3	1133.3	1553.8	4424.4	6673.9	7075.2
37.5°	1018.6	1016.7	1032.1	1079.8	1341.6	4216.0	6784.7	7319.8
40°	953.7	953.7	970.9	1022.4	1280.5	3954.2	6960.5	7671.5
42.5°	894.4	890.6	909.7	972.8	1234.6	3703.8	7275.9	8183.7
45°	837.1	829.4	846.6	925.0	1154.4	3616.0	7864.5	8940.5
47.5°	783.6	764.4	779.7	867.7	1081.7	3944.7	8827.7	9989.8
50°	739.6	703.4	716.7	810.4	1026.3	4657.5	10077.6	11382.9
52.5°	693.7	646.0	653.6	739.6	976.6	5336.0	11432.6	13221.6
55°	646.0	592.4	596.2	668.9	905.9	5437.3	12755.2	15729.0
57.5°	592.4	542.7	542.7	603.9	854.3	4713.0	13772.0	18840.4
60°	533.2	500.7	491.2	552.4	900.2	3325.4	13890.5	20847.2
62.5°	468.2	451.0	437.7	502.7	934.6	1970.5	12936.7	20361.7
65°	393.7	389.9	380.3	552.4	787.4	1163.9	11105.9	18872.9
67.5°	330.7	324.9	324.9	579.1	598.2	732.0	8676.7	16824.1
70°	284.7	263.7	263.7	437.7	363.2	506.5	6058.5	14612.9
72.5°	238.9	216.0	200.7	349.7	271.4	370.7	3786.0	12514.4
75°	191.2	173.9	154.8	231.2	202.5	281.0	2199.8	10368.2
77.5°	137.6	130.0	109.0	170.0	147.2	202.5	1309.1	8000.2
80°	70.7	72.7	68.8	97.5	99.4	137.6	745.4	5475.5
82.5°	42.0	32.5	36.3	47.8	57.3	78.3	281.0	3218.4
85°	26.8	17.2	17.2	23.0	28.7	30.5	86.0	1305.3
87.5°	13.4	5.7	7.7	11.5	9.5	7.7	3.8	328.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)