

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: P963096

Luminaire Tested: **NAV-SB2D-827-U-AFL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963096
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-15)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-827-U-AFL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15465.2 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

Input Watts (W): 147.6
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

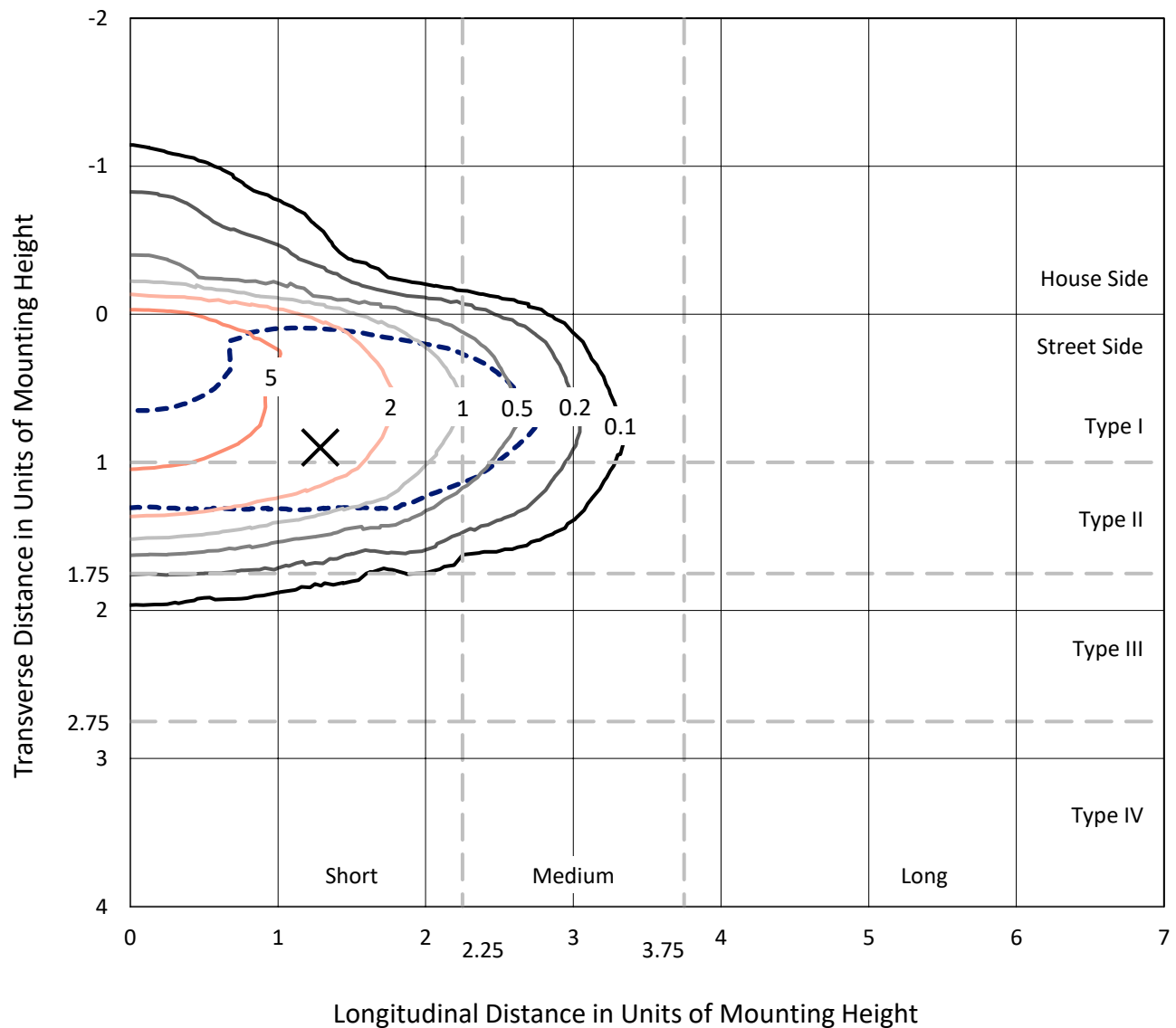


REPORT NUMBER: P963096

CATALOG NUMBER: NAV-SB2D-827-U-AFL-HSS

Iso-Footcandle Lines of Horizontal Illumination

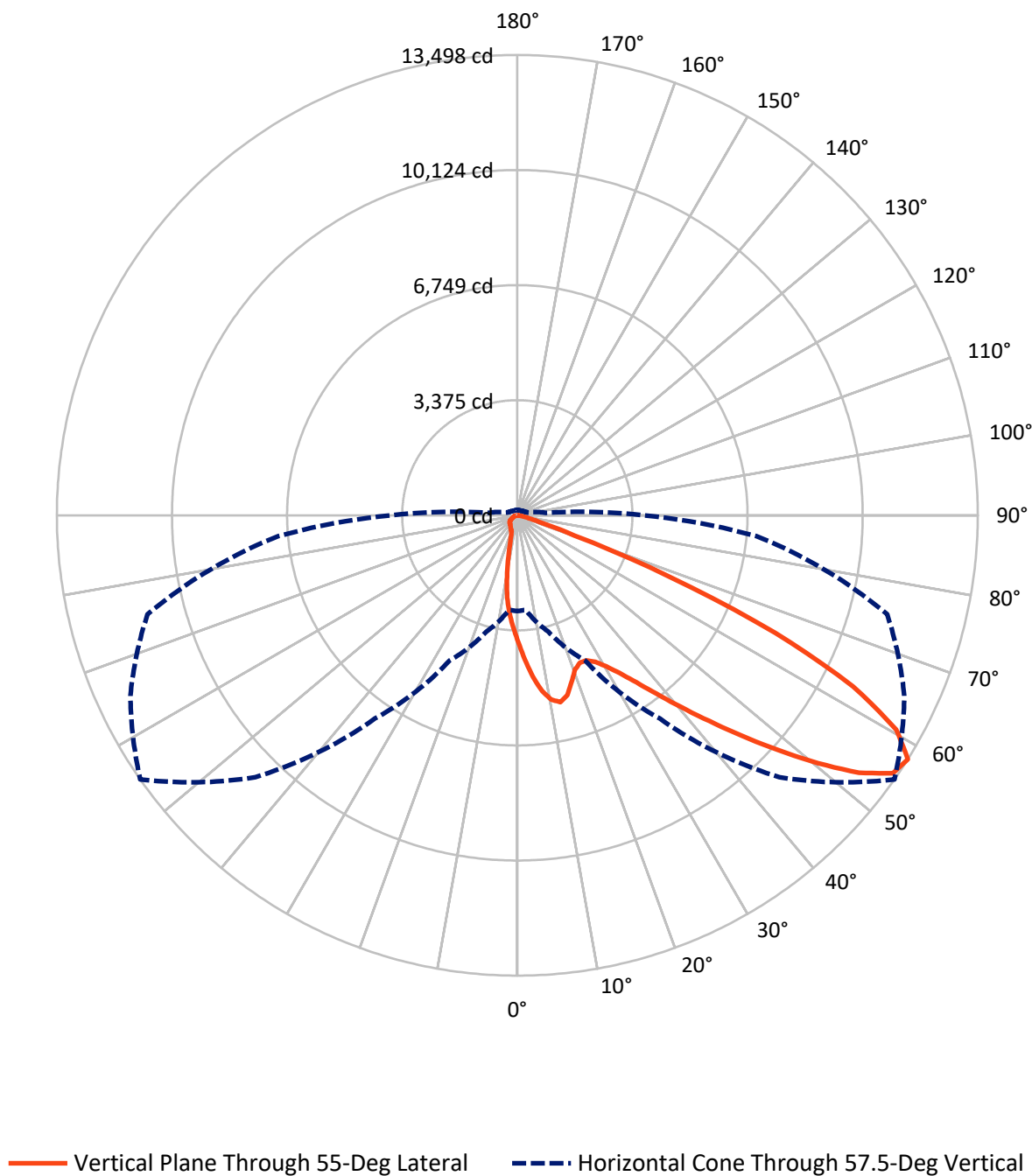
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.5 fc
Type II - Short - N/A

REPORT NUMBER: P963096
CATALOG NUMBER: NAV-SB2D-827-U-AFL-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P963096

CATALOG NUMBER: NAV-SB2D-827-U-AFL-HSS

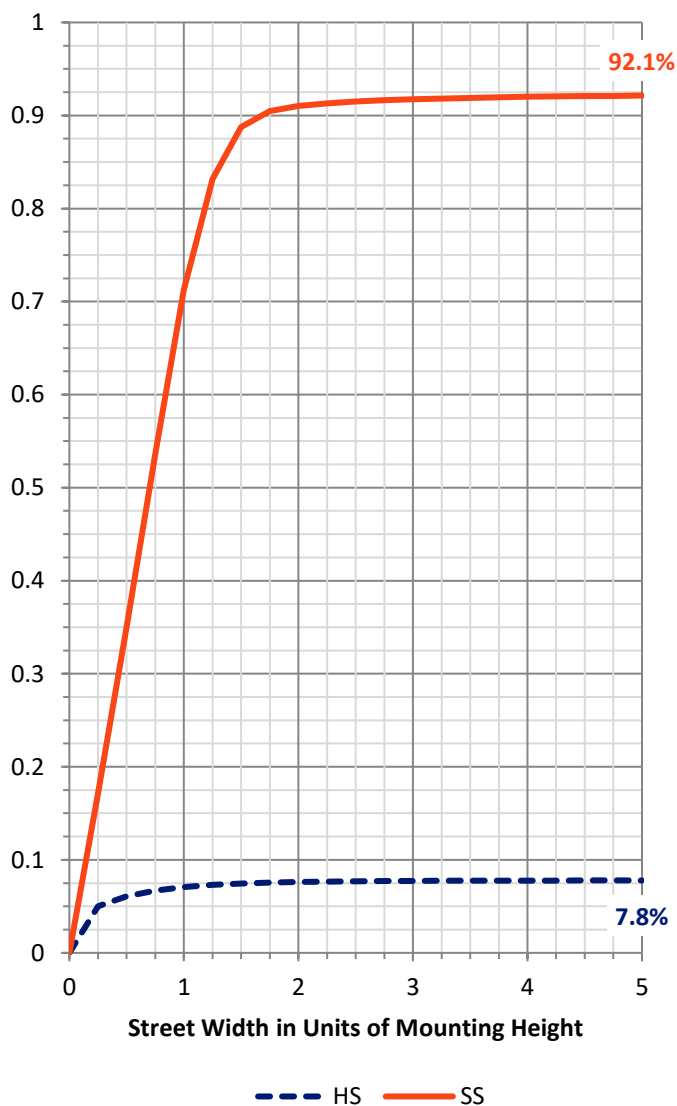
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1207.8	0.0	1207.8
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	14257.4	0.0	14257.4
	% Fixture	92.2	0.0	92.2
Total	Lumens	15465.2	0.0	15465.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.8	2.2
10°-20°	837.6	5.4
20°-30°	1340.1	8.7
30°-40°	2268.2	14.7
40°-50°	3724.0	24.1
50°-60°	4092.9	26.5
60°-70°	2347.7	15.2
70°-80°	479.7	3.1
80°-90°	28.3	0.2
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°	15465.2	100.0
0°-180°	15465.2	100.0

Coefficient of Utilization



REPORT NUMBER: P963096

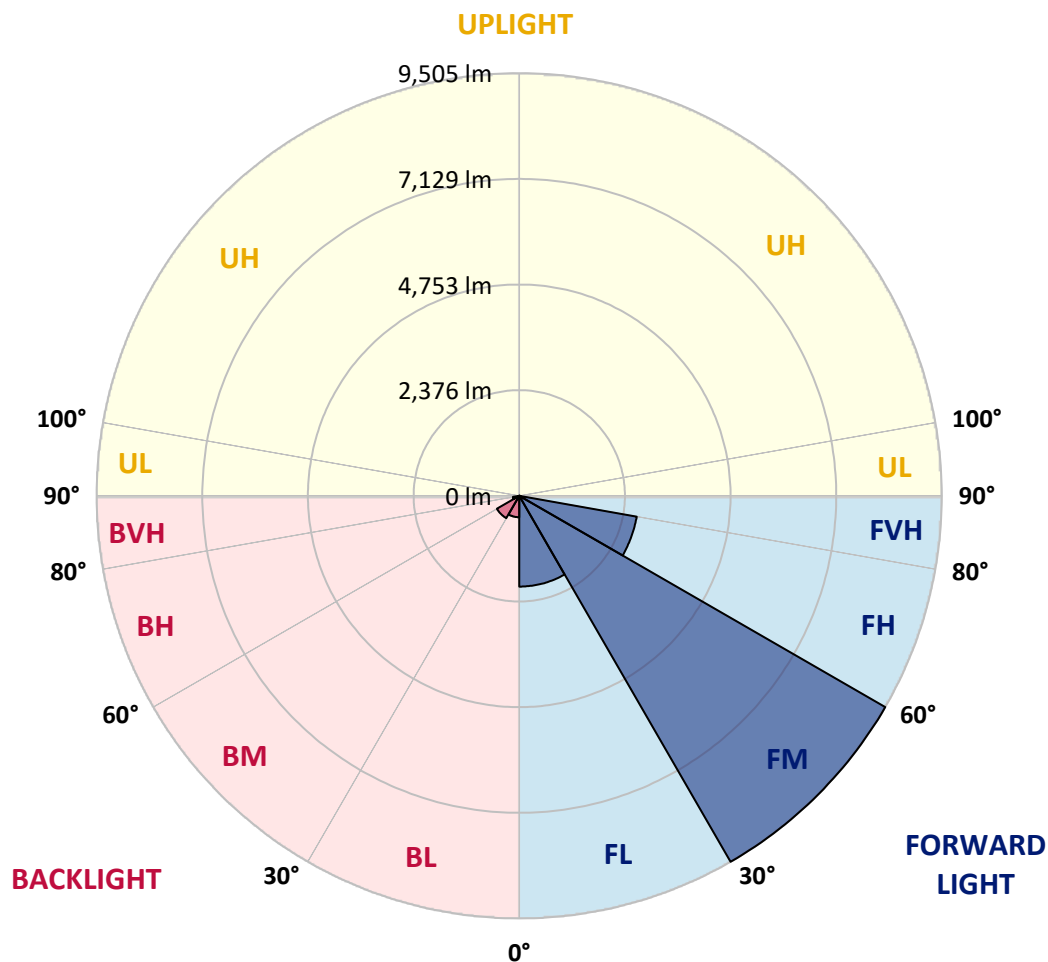
CATALOG NUMBER: NAV-SB2D-827-U-AFL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2042.3	13.2			
FM	(30°-60°)	9505.0	61.5			
FH	(60°-80°)	2683.7	17.4			G2/5000
FVH	(80°-90°)	26.4	0.2			G1/100
BL	(0°-30°)	482.2	3.1	B1/500		
BM	(30°-60°)	580.1	3.8	B1/1000		
BH	(60°-80°)	143.6	0.9	B1/500		G1/500
BVH	(80°-90°)	1.9	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short



REPORT NUMBER: P963096

CATALOG NUMBER: NAV-SB2D-827-U-AFL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3726.7	3726.7	3726.7	3726.7	3726.7	3726.7	3726.7	3726.7	3726.7	3726.7	3726.7
2.5°	4624.1	4566.0	4557.4	4545.9	4435.3	4352.4	4232.1	4100.5	3952.7	3802.0	3735.3
5°	5342.2	5296.4	5287.8	5234.4	5108.5	4967.4	4753.7	4483.9	4208.3	3884.0	3744.8
7.5°	5481.4	5472.8	5511.9	5510.0	5492.9	5381.2	5201.1	4879.6	4465.8	3985.2	3769.6
10°	4860.5	4882.5	4998.8	5100.9	5376.5	5536.7	5497.6	5232.5	4730.9	4100.5	3797.3
12.5°	4295.1	4269.3	4352.4	4467.7	4788.1	5264.9	5620.6	5527.2	5034.2	4231.2	3838.3
15°	3940.3	3929.8	3976.6	4030.0	4274.1	4754.8	5477.6	5766.5	5325.9	4385.7	3900.3
17.5°	3826.8	3818.3	3832.6	3845.9	4004.3	4376.1	5137.1	5913.3	5605.3	4562.1	3968.9
20°	3919.4	3907.9	3906.0	3895.5	3961.3	4215.0	4829.1	5923.9	5856.1	4722.3	4028.0
22.5°	4189.3	4175.8	4129.1	4087.2	4092.9	4236.9	4691.8	5818.9	6044.9	4872.0	4065.3
25°	4678.4	4656.5	4559.2	4418.1	4328.5	4389.5	4712.7	5680.7	6225.2	4989.3	4047.1
27.5°	5290.6	5262.0	5137.1	4927.4	4722.3	4648.0	4864.4	5585.3	6374.9	5079.0	4008.1
30°	5890.5	5853.3	5730.3	5567.2	5267.8	5033.2	5138.1	5627.2	6553.2	5172.5	3956.6
32.5°	6538.0	6502.7	6339.6	6137.5	5889.5	5573.8	5512.9	5832.4	6771.7	5303.0	3920.3
35°	7357.1	7301.8	7070.1	6794.5	6531.3	6211.8	6020.1	6186.1	7062.5	5502.4	3940.3
37.5°	8289.8	8215.4	7965.6	7585.1	7241.7	6884.1	6638.1	6672.4	7488.8	5769.4	4002.3
40°	9169.0	9101.3	8870.6	8512.0	8080.9	7647.0	7384.8	7308.6	8077.1	6094.5	4111.1
42.5°	9696.4	9635.3	9538.0	9386.4	9023.1	8580.7	8249.7	8084.8	8773.3	6483.6	4243.6
45°	9725.9	9672.5	9803.2	9979.6	9908.1	9613.4	9210.0	8907.8	9472.2	6848.8	4381.0
47.5°	9253.0	9216.7	9613.4	10229.4	10536.5	10660.5	10288.5	9662.1	10049.2	7111.1	4437.2
50°	7963.6	7950.3	8766.6	9897.6	10775.8	11577.9	11426.2	10363.9	10496.4	7246.5	4383.8
52.5°	6905.1	6856.5	7332.3	8835.3	10427.8	12060.4	12538.1	11052.4	10809.2	7272.3	4258.9
55°	5237.2	5194.4	5791.4	7057.7	9305.4	11888.8	13351.5	11762.9	11033.3	7206.5	4034.7
57.5°	2809.3	2782.7	3537.0	4697.5	7274.2	10858.8	13498.4	12514.3	11222.1	7032.0	3721.1
60°	1093.8	1089.1	1371.3	2279.2	4420.9	8834.3	12757.5	12965.3	11340.4	6817.4	3458.8
62.5°	661.8	676.1	721.9	1023.3	1953.0	5488.1	11049.5	12452.3	11419.5	6621.0	3242.3
65°	547.3	548.4	554.0	702.8	935.5	2296.3	8318.4	10764.4	11224.1	6271.0	2935.2
67.5°	469.1	477.8	499.7	557.9	659.9	1007.1	4789.1	8338.4	10034.9	5456.6	2456.5
70°	370.0	381.4	409.1	458.7	509.2	630.4	1769.9	5548.1	7666.1	4112.9	1857.6
72.5°	311.8	310.9	325.2	372.9	404.4	443.4	680.9	3108.8	4455.3	1963.5	919.3
75°	241.3	250.8	269.0	311.8	330.9	321.3	369.0	1135.8	1596.3	595.0	312.8
77.5°	188.8	196.5	212.7	254.6	273.7	228.0	212.7	406.2	513.0	213.6	141.1
80°	84.9	91.5	144.9	187.9	223.1	157.3	115.4	207.9	228.0	97.3	71.5
82.5°	15.3	25.7	84.9	99.2	114.4	102.0	60.1	107.7	111.6	39.1	24.8
85°	0.9	1.9	29.5	36.3	45.8	33.4	18.1	42.9	37.2	13.3	9.5
87.5°	0.0	0.0	0.0	0.9	0.9	4.8	5.7	7.6	5.7	4.8	3.8
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: P963096

CATALOG NUMBER: NAV-SB2D-827-U-AFL-HSS

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3726.7	3726.7	3726.7	3726.7	3726.7	3726.7	3726.7	3726.7	3726.7	3726.7
2.5°	3666.6	3531.2	3399.6	3291.9	3229.0	3122.1	3051.5	3040.1	3010.5	3036.4
5°	3596.1	3353.9	3108.8	2889.5	2709.2	2476.5	2303.0	2229.6	2165.6	2187.6
7.5°	3562.7	3180.3	2798.9	2424.1	2038.8	1667.0	1390.4	1275.0	1187.3	1199.7
10°	3517.9	3000.1	2402.2	1830.0	1314.0	946.9	756.2	685.6	646.6	647.5
12.5°	3483.6	2784.5	1941.6	1240.7	800.1	604.5	545.5	528.3	516.9	517.8
15°	3466.3	2530.9	1486.7	826.8	572.2	512.1	497.7	490.2	482.6	481.5
17.5°	3437.7	2248.6	1088.0	603.6	500.6	479.7	467.3	458.7	449.2	447.2
20°	3394.9	1928.2	795.3	510.1	469.1	452.9	435.8	424.4	412.9	411.0
22.5°	3315.8	1589.7	611.3	472.0	446.3	428.1	407.2	393.8	382.4	380.5
25°	3168.9	1272.1	515.0	448.2	426.3	404.4	381.4	363.4	352.8	351.0
27.5°	2983.0	999.4	467.3	426.3	400.6	380.5	354.8	337.5	328.0	326.2
30°	2763.6	769.6	439.6	401.5	370.0	352.8	329.9	315.6	310.0	310.0
32.5°	2527.0	615.1	428.1	376.7	343.3	324.2	306.1	300.4	298.5	297.6
35°	2304.9	534.0	422.4	356.7	319.5	301.3	293.8	294.7	298.5	298.5
37.5°	2107.5	508.3	419.6	342.3	298.5	282.3	287.0	295.6	291.8	291.8
40°	1929.2	511.2	417.7	331.9	281.4	271.8	281.4	274.6	265.1	264.1
42.5°	1792.8	534.9	413.9	323.3	270.8	264.1	260.3	249.9	248.9	250.8
45°	1693.6	556.0	412.9	319.5	259.4	247.0	242.2	231.8	250.8	255.5
47.5°	1576.3	556.0	412.9	306.1	240.4	235.5	228.0	216.5	235.5	240.4
50°	1424.7	520.7	396.7	290.9	225.1	222.2	208.8	194.5	190.8	193.6
52.5°	1233.1	456.7	355.7	269.9	209.8	204.1	187.9	177.3	174.6	174.6
55°	1014.6	382.4	300.4	239.3	193.6	183.1	171.7	166.9	164.0	162.2
57.5°	824.9	313.8	241.3	212.7	178.4	165.0	161.1	155.4	150.7	147.8
60°	677.1	247.0	199.3	188.8	163.1	150.7	149.8	142.1	129.7	127.8
62.5°	522.5	181.2	167.8	164.0	147.8	137.4	135.4	120.1	101.1	97.3
65°	369.0	141.1	135.4	144.0	131.6	122.1	117.3	94.4	74.4	71.5
67.5°	259.4	118.3	106.8	125.9	114.4	102.0	99.2	80.2	62.0	60.1
70°	185.0	96.4	87.7	107.7	91.5	89.7	83.9	66.7	50.5	48.6
72.5°	130.7	73.4	67.8	93.5	62.9	77.3	68.7	51.5	38.1	36.3
75°	96.4	52.5	47.7	54.3	45.8	58.2	48.6	34.3	23.9	22.9
77.5°	70.5	33.4	28.6	26.8	26.8	36.3	26.8	14.3	10.5	9.5
80°	49.6	15.3	13.3	11.5	10.5	8.6	3.8	1.9	0.9	0.9
82.5°	29.5	6.7	6.7	4.8	2.9	0.0	0.0	0.0	0.0	0.0
85°	6.7	2.9	2.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	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

(END OF REPORT)