

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: P966290

Luminaire Tested: **NAV-SB4B-830-U-AFL**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966290
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-14)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-830-U-AFL
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS
Light Source: -
Ballast/Driver: -

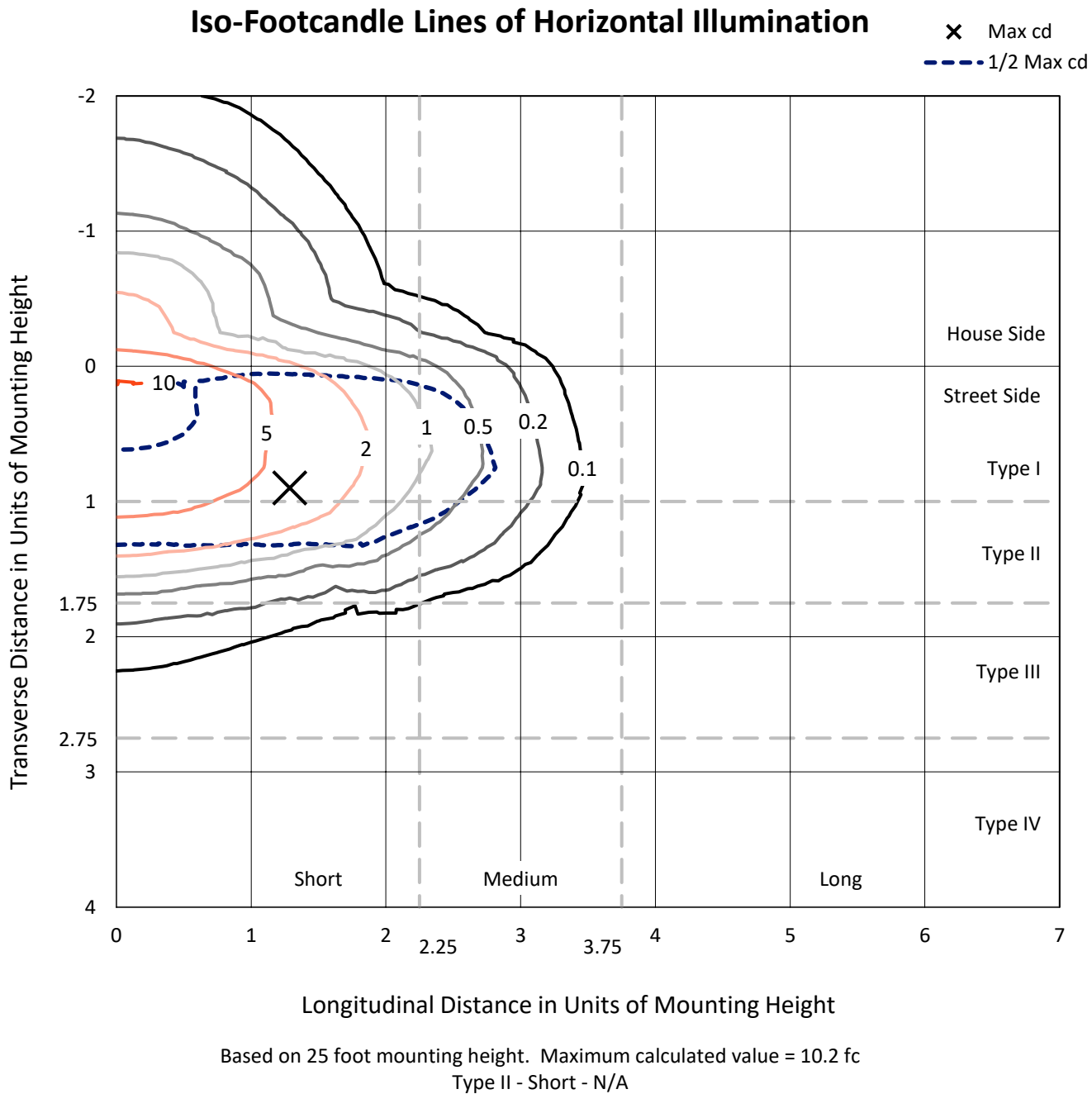
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21139.6 lumens
Efficiency: N/A
Efficacy: 143.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G2

Input Watts (W): 147
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

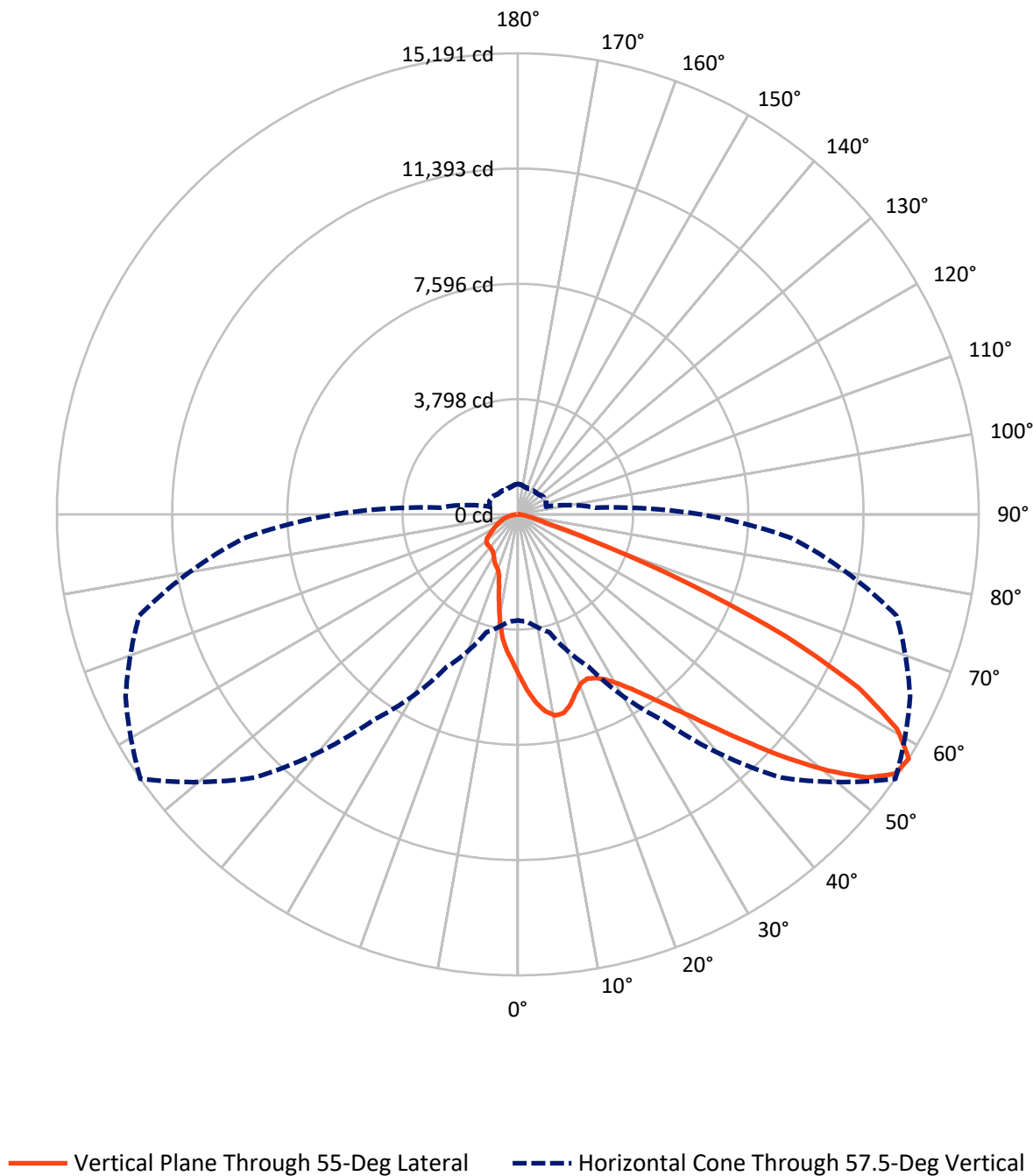


REPORT NUMBER: P966290
CATALOG NUMBER: NAV-SB4B-830-U-AFL



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Luminous Intensity Polar Plot



REPORT NUMBER: P966290

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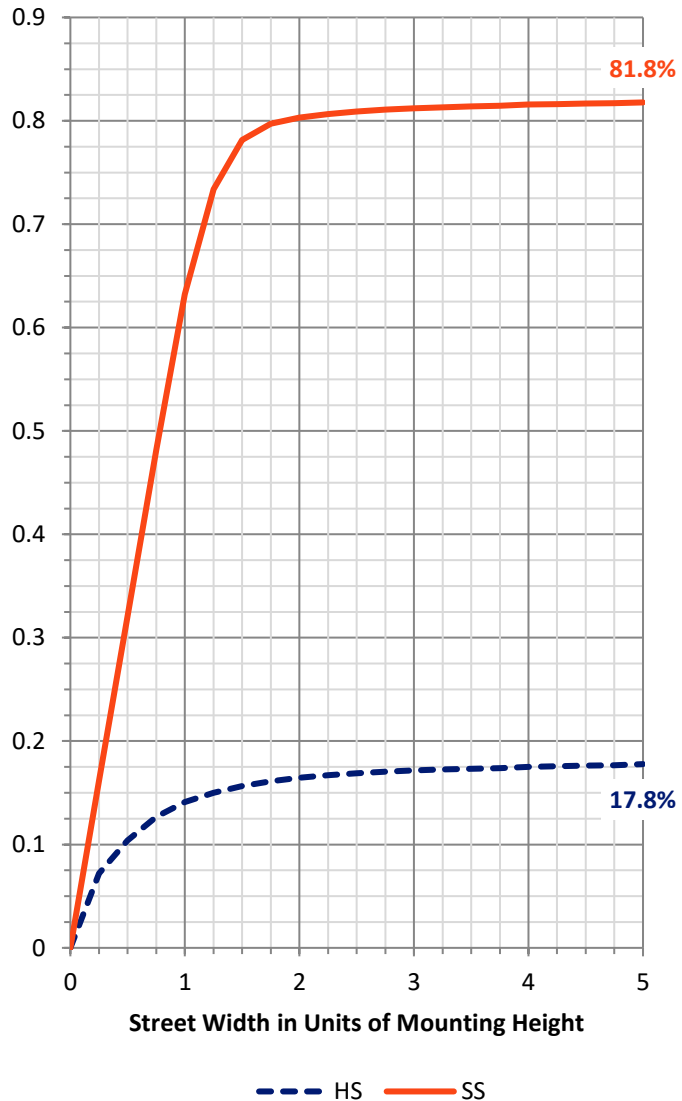
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3825.1	0.0	3825.1
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	17314.5	0.0	17314.5
	% Fixture	81.9	0.0	81.9
Total	Lumens	21139.6	0.0	21139.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	491.5	2.3
10°-20°	1240.6	5.9
20°-30°	1979.7	9.4
30°-40°	3134.3	14.8
40°-50°	4797.4	22.7
50°-60°	5138.5	24.3
60°-70°	3232.6	15.3
70°-80°	955.9	4.5
80°-90°	169.0	0.8
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°	21139.6	100.0
0°-180°	21139.6	100.0

Coefficient of Utilization



REPORT NUMBER: P966290

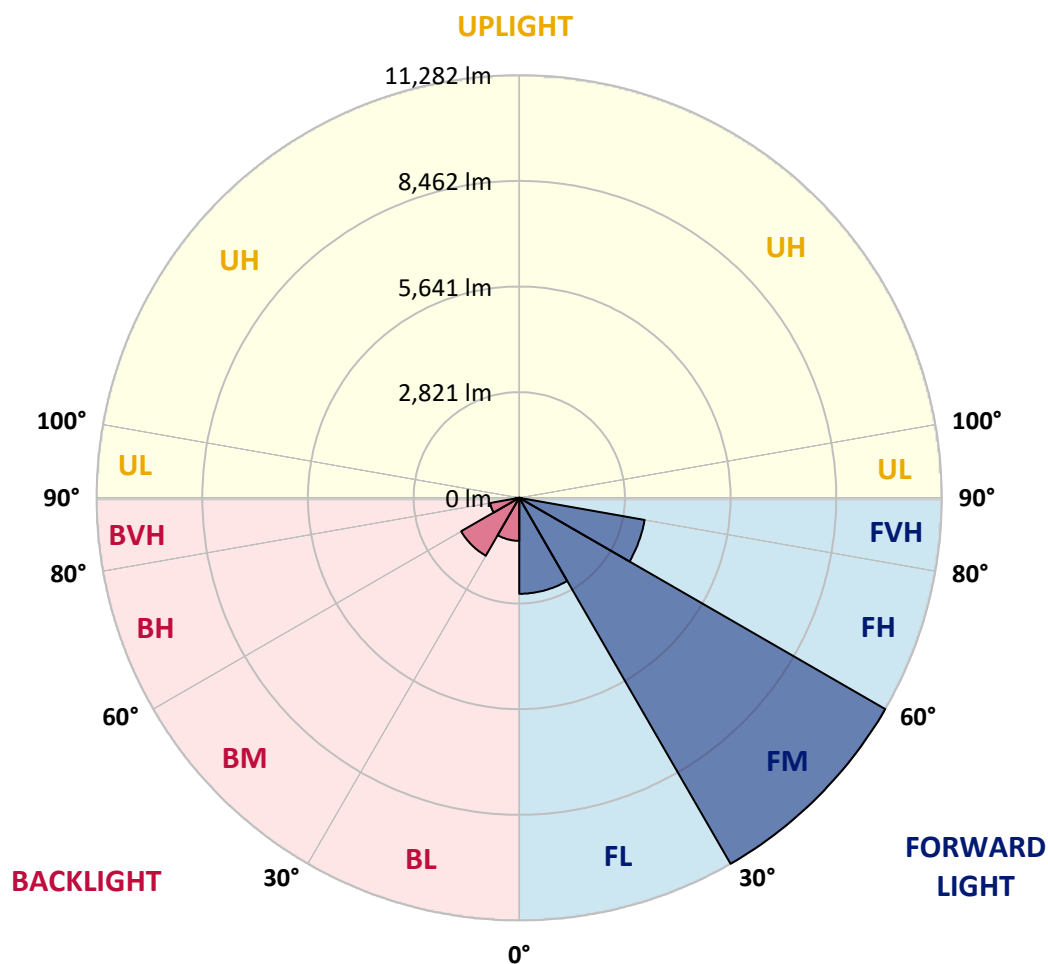
CATALOG NUMBER: NAV-SB4B-830-U-AFL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2562.1	12.1			
FM	(30°-60°)	11282.4	53.4			
FH	(60°-80°)	3398.6	16.1			G2/5000
FVH	(80°-90°)	71.4	0.3			G1/100
BL	(0°-30°)	1149.7	5.4	B3/2500		
BM	(30°-60°)	1787.8	8.5	B2/2500		
BH	(60°-80°)	790.0	3.7	B2/1000		G2/1000
BVH	(80°-90°)	97.6	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type II Short



REPORT NUMBER: P966290

CATALOG NUMBER: NAV-SB4B-830-U-AFL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5296.9	5296.9	5296.9	5296.9	5296.9	5296.9	5296.9	5296.9	5296.9	5296.9	5296.9
2.5°	6077.1	6072.8	6096.8	6014.9	5959.1	5883.7	5784.3	5657.5	5521.0	5376.6	5314.4
5°	6624.7	6586.4	6611.6	6550.4	6489.2	6375.5	6228.0	6021.5	5769.0	5481.6	5328.6
7.5°	6538.4	6512.1	6576.6	6631.2	6677.2	6662.9	6554.8	6338.4	6012.6	5595.3	5373.4
10°	5842.2	5812.7	5903.4	6092.5	6370.1	6611.6	6742.7	6608.3	6261.8	5719.8	5417.1
12.5°	5228.0	5213.9	5273.9	5427.0	5735.1	6198.5	6718.7	6844.3	6520.8	5867.3	5476.2
15°	4965.8	4948.3	4986.5	5064.1	5260.8	5692.5	6500.1	7006.1	6775.5	6037.9	5570.1
17.5°	4907.8	4888.2	4904.6	4945.0	5071.8	5400.7	6170.1	7085.8	7041.0	6228.0	5648.8
20°	5014.9	4998.5	5000.8	4998.5	5087.1	5348.2	5940.6	7055.3	7272.7	6402.9	5725.2
22.5°	5273.9	5246.7	5247.7	5189.8	5237.9	5440.1	5880.4	6973.3	7479.2	6555.8	5783.2
25°	5695.8	5646.6	5656.5	5508.9	5495.7	5645.5	5974.4	6909.9	7684.7	6678.2	5794.1
27.5°	6272.8	6217.0	6187.5	5967.9	5863.0	5937.3	6165.7	6931.8	7879.3	6784.3	5766.9
30°	6994.1	6926.3	6866.2	6554.8	6364.5	6337.3	6462.9	7076.0	8108.7	6895.7	5719.8
32.5°	7878.2	7799.4	7690.2	7277.1	7009.4	6866.2	6847.6	7332.8	8377.5	7037.8	5695.8
35°	8930.5	8827.8	8672.6	8138.2	7799.4	7506.6	7354.7	7703.3	8745.8	7252.0	5723.1
37.5°	10014.6	9898.7	9756.7	9120.7	8704.3	8272.7	7973.2	8205.9	9236.5	7542.7	5795.2
40°	11014.5	10884.5	10752.2	10186.1	9739.2	9219.1	8730.5	8842.0	9836.5	7890.1	5917.6
42.5°	11604.6	11508.5	11458.2	11152.2	10806.9	10279.1	9672.5	9596.0	10510.8	8290.1	6057.5
45°	11578.4	11539.0	11694.2	11821.0	11739.1	11446.2	10776.3	10429.9	11187.2	8636.5	6186.5
47.5°	10959.9	10986.2	11332.5	12045.1	12358.7	12511.7	12033.1	11248.3	11775.1	8895.6	6244.4
50°	9277.0	9298.8	10101.0	11637.4	12518.2	13380.5	13279.9	12047.2	12230.8	9054.0	6231.3
52.5°	7944.8	7959.0	8303.2	10428.8	11991.5	13817.6	14403.4	12800.2	12564.1	9097.7	6158.0
55°	5984.3	6033.5	6419.3	8182.0	10621.2	13471.2	15087.5	13576.1	12775.1	9102.1	6081.5
57.5°	3496.0	3549.5	4026.0	5553.8	8255.1	12263.6	15191.3	14264.6	12918.2	9067.2	6035.6
60°	1712.5	1735.4	1943.0	2918.9	5090.4	9937.0	14356.4	14597.8	12998.0	9048.6	6033.5
62.5°	1154.0	1150.8	1159.5	1440.3	2508.1	6384.2	12616.6	14014.3	12955.4	8977.6	6011.6
65°	992.3	980.3	947.5	1010.9	1299.4	2920.0	9748.0	12272.3	12630.8	8799.4	5861.9
67.5°	857.8	859.0	860.1	840.4	927.8	1347.5	5957.0	9667.1	11465.9	7955.7	5284.9
70°	710.3	720.2	724.6	724.6	756.2	884.1	2543.0	6625.8	9044.2	6237.8	4256.5
72.5°	647.0	626.2	628.3	617.5	617.5	673.2	1024.0	3756.0	5698.0	3509.1	2597.7
75°	527.9	541.0	543.1	535.5	510.3	513.6	607.6	1575.8	2438.1	1455.6	1284.0
77.5°	455.7	455.7	460.1	454.6	434.9	384.7	405.4	610.9	829.4	596.7	641.4
80°	366.1	365.0	383.6	394.5	363.9	284.1	259.0	337.6	368.3	262.3	333.3
82.5°	178.1	189.0	263.3	300.5	276.4	205.4	158.5	209.8	196.7	115.8	149.8
85°	103.8	98.4	118.0	167.2	158.5	113.7	76.5	109.3	102.7	59.0	60.1
87.5°	32.8	30.6	24.1	56.8	45.9	31.7	20.8	31.7	28.4	13.1	13.1
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: P966290

CATALOG NUMBER: NAV-SB4B-830-U-AFL

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5296.9	5296.9	5296.9	5296.9	5296.9	5296.9	5296.9	5296.9	5296.9	5296.9
2.5°	5236.8	5107.9	4980.0	4863.0	4792.0	4746.2	4700.2	4648.9	4629.2	4599.7
5°	5184.3	4935.2	4713.4	4522.1	4348.4	4211.7	4074.1	3962.5	3912.3	3946.1
7.5°	5153.7	4793.1	4451.1	4100.3	3762.6	3492.7	3257.7	3092.6	3018.3	3037.0
10°	5126.4	4632.5	4111.2	3557.2	3071.9	2737.5	2497.1	2371.4	2324.4	2334.2
12.5°	5101.3	4452.2	3701.4	2972.5	2456.6	2235.9	2167.1	2168.2	2176.9	2183.5
15°	5096.9	4234.7	3243.5	2461.0	2124.4	2110.3	2184.6	2231.5	2256.6	2264.3
17.5°	5090.4	3974.5	2776.8	2112.4	2043.5	2139.8	2208.6	2239.2	2258.9	2259.9
20°	5064.1	3644.6	2346.3	1946.3	2026.1	2109.1	2151.8	2175.8	2192.2	2197.7
22.5°	4983.2	3277.3	2010.7	1872.0	1956.1	2022.8	2073.1	2100.4	2110.3	2116.8
25°	4837.9	2866.5	1779.1	1800.9	1858.8	1943.0	1983.5	1988.9	1985.6	1995.5
27.5°	4647.8	2426.1	1634.9	1704.8	1779.1	1851.3	1873.1	1869.8	1863.2	1874.2
30°	4418.3	2030.4	1543.0	1596.6	1698.2	1763.8	1783.5	1775.8	1762.7	1774.8
32.5°	4175.6	1707.0	1467.7	1521.2	1631.6	1696.1	1715.7	1708.1	1698.2	1708.1
35°	3949.4	1480.8	1397.7	1471.0	1579.1	1642.5	1667.7	1668.7	1668.7	1680.8
37.5°	3741.9	1348.5	1339.8	1439.2	1543.0	1599.9	1635.9	1638.2	1591.1	1594.4
40°	3549.5	1292.8	1313.5	1418.5	1508.1	1562.7	1564.9	1442.5	1356.2	1354.0
42.5°	3392.1	1281.9	1321.2	1416.3	1483.0	1485.1	1331.1	1235.9	1212.0	1213.0
45°	3244.5	1278.6	1338.8	1416.3	1445.8	1283.0	1179.2	1154.0	1156.2	1164.9
47.5°	3079.6	1265.5	1342.0	1396.7	1338.8	1140.9	1110.3	1099.4	1095.0	1097.2
50°	2899.2	1218.5	1300.4	1357.3	1155.1	1079.7	1041.5	1038.2	1043.7	1046.9
52.5°	2709.1	1142.0	1229.4	1286.3	1070.9	1026.1	983.5	991.2	1015.3	1022.8
55°	2584.5	1052.4	1135.4	1144.2	1012.0	975.9	939.8	957.4	1002.1	1016.3
57.5°	2551.7	957.4	1028.4	1018.5	936.5	932.1	910.3	925.6	982.5	1003.2
60°	2541.9	872.1	923.4	915.7	863.4	884.1	878.6	886.3	906.0	912.5
62.5°	2465.4	804.3	829.4	818.6	797.8	833.8	847.0	830.6	845.8	853.5
65°	2270.9	749.7	737.7	730.0	738.7	771.5	797.8	765.0	779.2	801.0
67.5°	1949.5	675.4	642.6	651.3	678.7	696.1	730.0	692.8	704.9	742.0
70°	1577.0	581.4	551.9	577.0	603.2	639.3	644.7	619.6	648.0	689.6
72.5°	1115.8	486.3	465.6	516.9	525.6	572.7	560.6	548.6	587.9	602.2
75°	773.7	392.4	380.3	419.6	451.3	491.8	483.0	497.2	580.3	586.8
77.5°	489.5	304.9	297.2	322.4	366.1	410.9	425.1	586.8	991.2	1030.5
80°	284.1	227.3	218.5	238.2	276.4	318.1	409.8	720.2	653.5	645.9
82.5°	158.5	156.3	145.3	150.8	184.7	229.5	579.2	507.1	411.9	425.1
85°	74.3	91.8	78.7	75.4	103.8	268.9	386.8	289.6	192.3	188.0
87.5°	19.7	17.5	17.5	19.7	43.7	231.6	154.1	123.5	73.2	71.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)