

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: P966298

Luminaire Tested: **NAV-SB4B-830-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966298
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-SB4B-830-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 450mA 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: 15862.9 lumens
Efficiency: N/A
Efficacy: 107.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

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

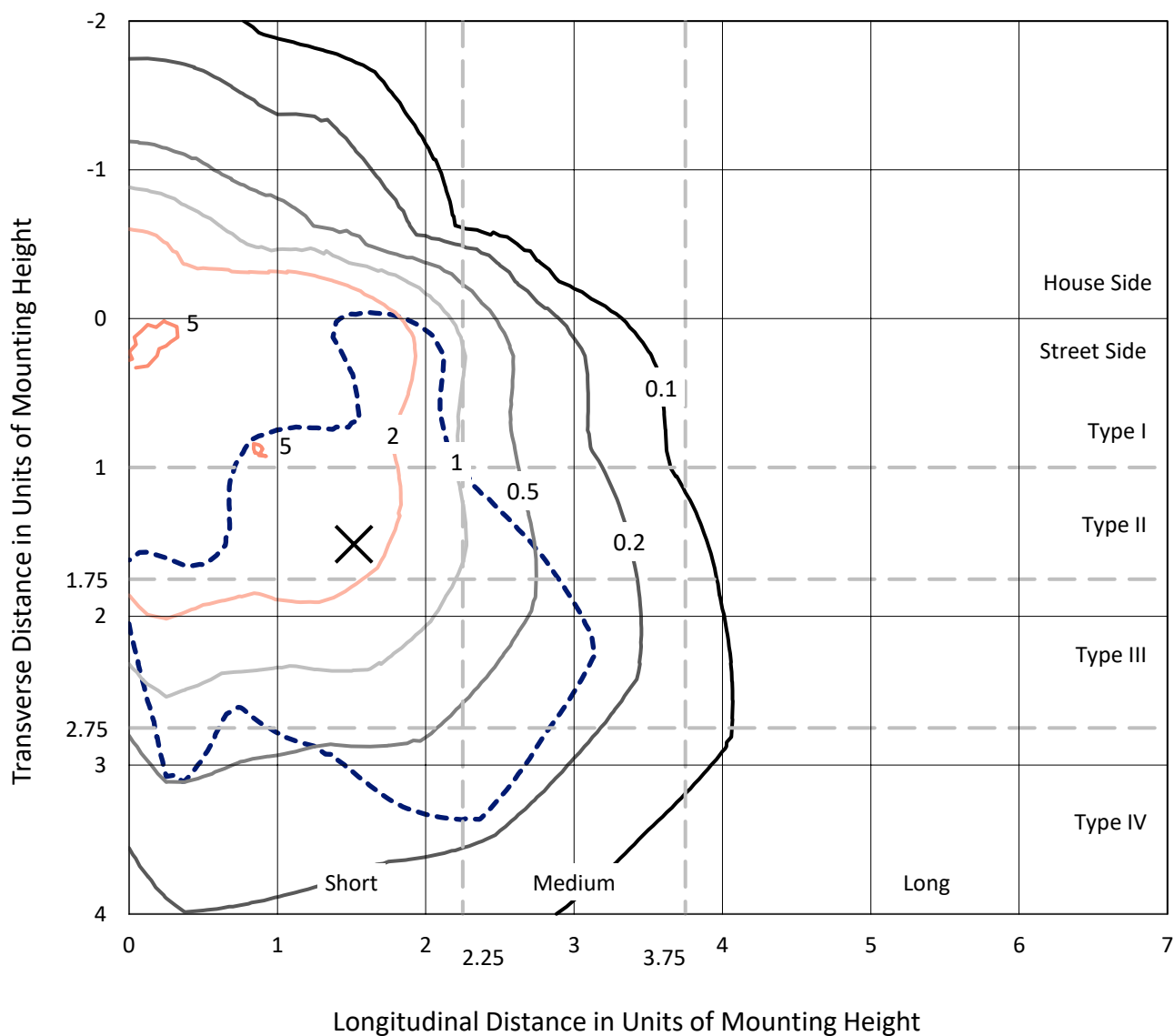


REPORT NUMBER: P966298

CATALOG NUMBER: NAV-SB4B-830-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

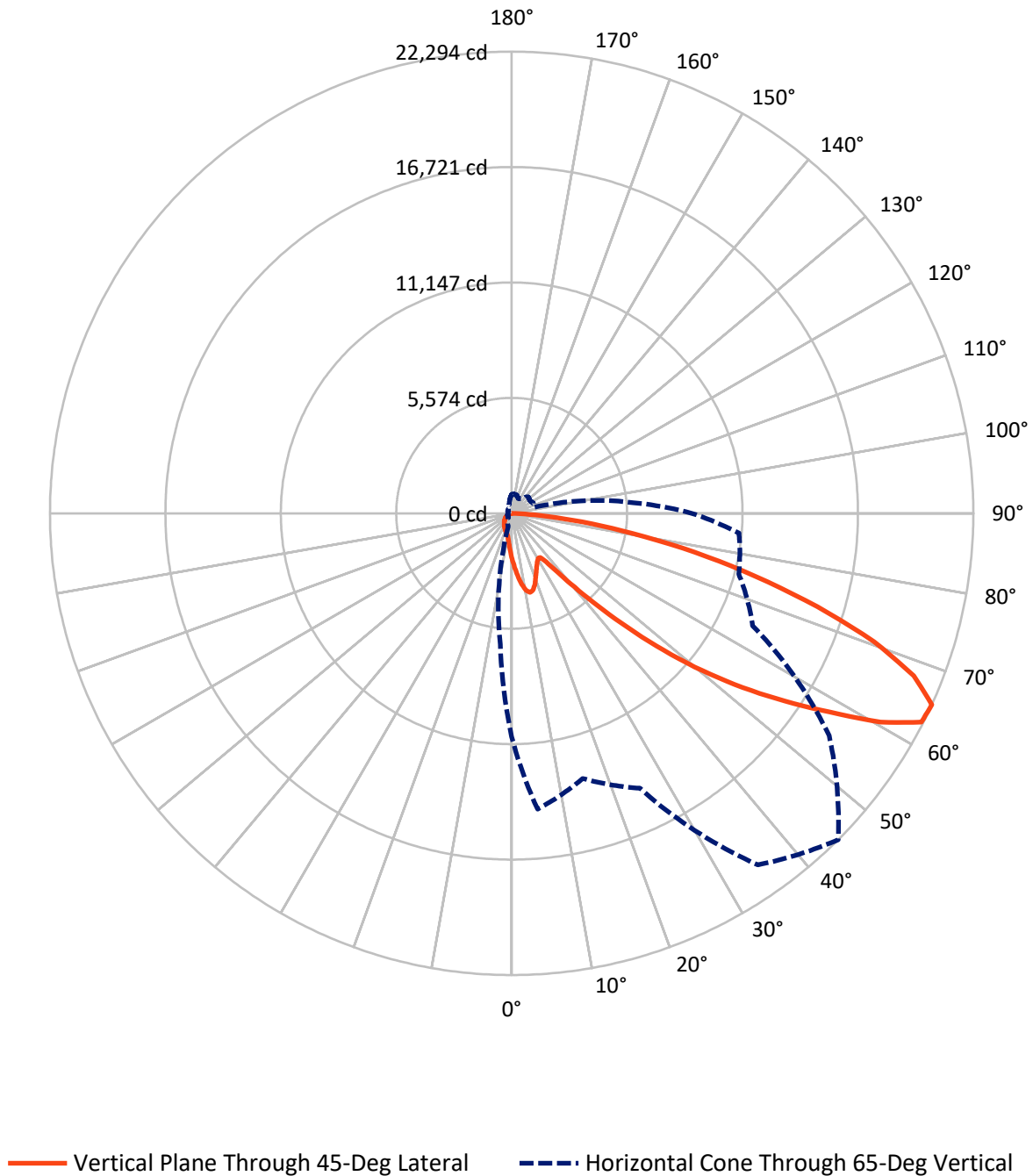


Based on 25 foot mounting height. Maximum calculated value = 5.8 fc

Type IV - Short - N/A

REPORT NUMBER: P966298
CATALOG NUMBER: NAV-SB4B-830-U-SLL-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P966298

CATALOG NUMBER: NAV-SB4B-830-U-SLL-HSS

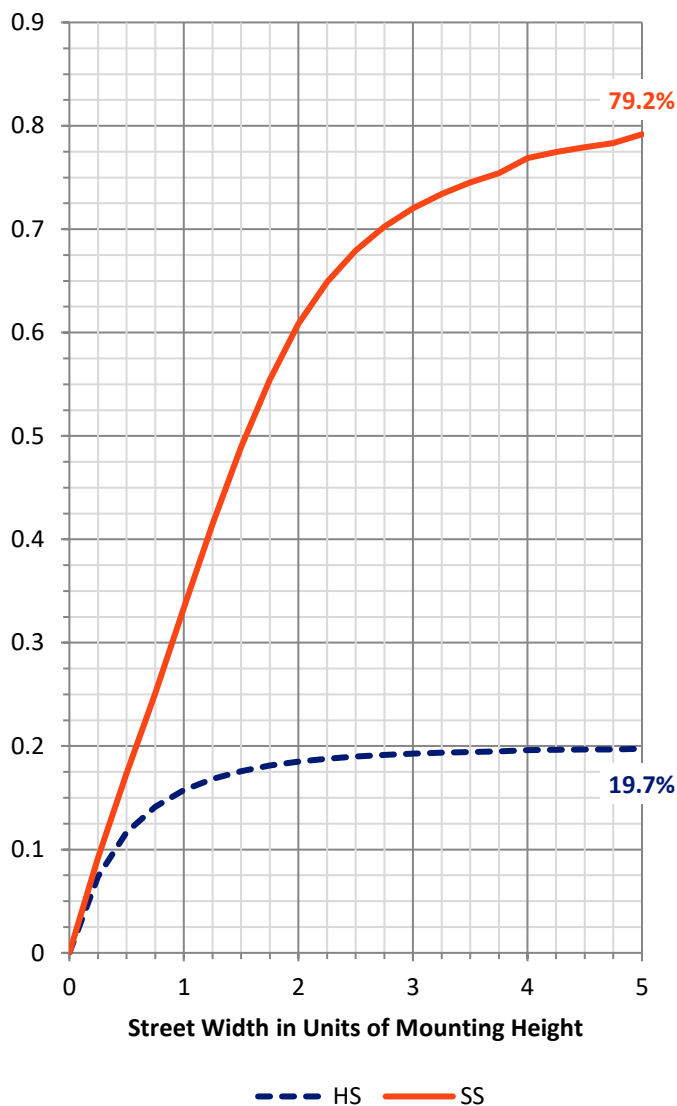
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3153.1	0.0	3153.1
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	12709.9	0.0	12709.9
	% Fixture	80.1	0.0	80.1
Total	Lumens	15862.9	0.0	15862.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.3	1.4
10°-20°	648.3	4.1
20°-30°	955.0	6.0
30°-40°	1226.9	7.7
40°-50°	1984.3	12.5
50°-60°	3479.7	21.9
60°-70°	4354.1	27.4
70°-80°	2544.3	16.0
80°-90°	454.0	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°	15862.9	100.0
0°-180°	15862.9	100.0

Coefficient of Utilization



REPORT NUMBER: P966298

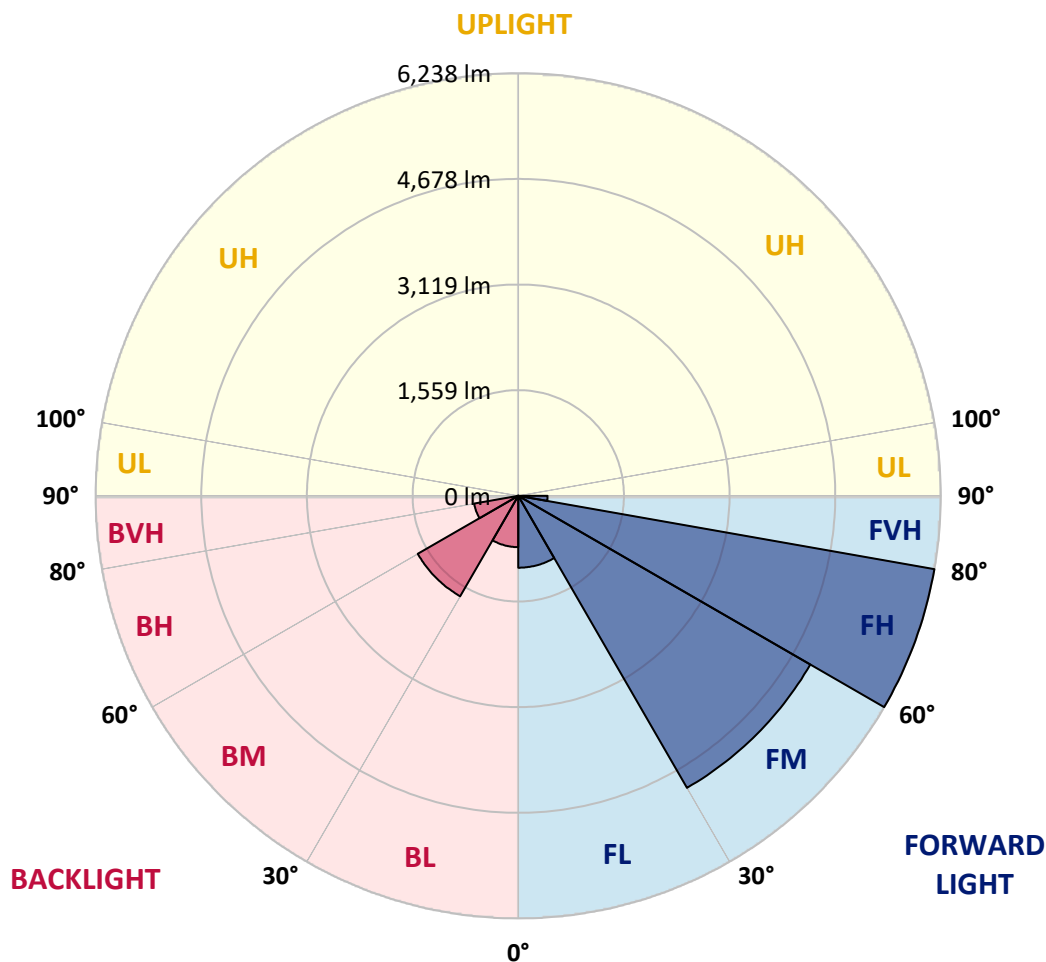
CATALOG NUMBER: NAV-SB4B-830-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1061.4	6.7			
FM	(30°-60°)	4978.0	31.4			
FH	(60°-80°)	6237.8	39.3			G3/7500
FVH	(80°-90°)	432.7	2.7			G3/500
BL	(0°-30°)	758.1	4.8	B2/1000		
BM	(30°-60°)	1713.0	10.8	B2/2500		
BH	(60°-80°)	660.6	4.2	B2/1000		G2/1000
BVH	(80°-90°)	21.3	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-G3

Type IV Short



REPORT NUMBER: P966298

CATALOG NUMBER: NAV-SB4B-830-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5
2.5°	2460.9	2479.6	2521.1	2542.9	2576.7	2579.0	2579.0	2549.5	2548.4	2488.3	2481.7
5°	2750.6	2794.3	2892.7	2994.2	3016.1	3021.6	3010.6	2951.6	2907.9	2791.0	2765.9
7.5°	3038.0	3122.0	3271.8	3407.3	3451.1	3451.1	3424.8	3328.6	3239.0	3069.7	3006.2
10°	3276.2	3382.2	3585.4	3737.4	3787.6	3776.7	3723.1	3601.8	3478.3	3272.9	3189.8
12.5°	3433.5	3552.6	3775.6	3898.0	3949.3	3920.9	3859.7	3741.7	3611.7	3395.3	3301.3
15°	3512.3	3636.8	3830.2	3894.7	3880.4	3851.0	3843.3	3786.6	3688.2	3486.0	3383.3
17.5°	3546.1	3661.9	3796.4	3755.9	3635.7	3612.7	3689.3	3761.3	3737.4	3564.6	3468.5
20°	3577.8	3675.0	3715.5	3536.2	3326.4	3305.7	3452.1	3657.6	3762.5	3637.9	3549.4
22.5°	3621.5	3681.6	3598.6	3304.6	3078.4	3030.3	3192.1	3501.3	3770.2	3730.8	3642.2
25°	3681.6	3698.0	3469.6	3084.9	2857.6	2809.5	2960.4	3327.6	3757.0	3831.3	3755.9
27.5°	3753.8	3719.8	3346.1	2901.4	2681.7	2636.9	2787.7	3160.4	3719.8	3931.9	3878.3
30°	3847.7	3748.2	3223.7	2759.3	2556.0	2523.2	2668.6	3016.1	3673.9	4059.7	4030.2
32.5°	3942.8	3760.3	3110.1	2676.3	2527.6	2539.6	2658.7	2938.5	3623.7	4182.1	4196.3
35°	4045.5	3798.5	3054.3	2758.2	2764.7	2869.7	2918.8	3010.6	3616.0	4348.3	4403.9
37.5°	4185.4	3883.7	3121.0	3165.8	3393.1	3610.6	3570.2	3363.6	3704.6	4596.3	4700.0
40°	4386.5	4033.5	3411.7	3859.7	4326.3	4679.3	4525.3	4005.1	3975.6	4953.6	5108.8
42.5°	4679.3	4271.7	3927.5	4707.7	5498.9	6080.3	5667.2	4832.3	4449.8	5464.0	5661.7
45°	5112.1	4657.5	4551.5	5602.8	6944.7	7860.4	7001.5	5714.2	5114.2	6236.5	6391.7
47.5°	5712.0	5224.6	5136.1	6545.8	8701.8	9886.4	8481.2	6531.6	5870.5	7290.0	7326.1
50°	6508.6	5988.5	5690.2	7577.4	10628.4	11951.8	9959.7	7320.6	6737.0	8577.3	8535.8
52.5°	7559.9	7053.9	6335.9	8559.8	12609.7	13973.5	11444.7	8013.4	7812.3	10071.1	9985.9
55°	8993.7	8657.0	7219.0	9497.4	14589.8	16007.1	12871.9	8666.9	9233.0	11845.8	11330.0
57.5°	10772.7	11013.1	8492.0	10584.8	16370.0	18103.1	14305.7	9580.5	11077.6	13830.3	12110.3
60°	11920.1	14146.1	10930.1	12192.3	18392.7	20473.4	16270.5	11318.0	13016.2	14541.8	11961.6
62.5°	11642.6	15142.7	13850.0	14244.5	20252.7	22196.7	18196.0	13063.2	13381.2	13493.7	10816.4
65°	10791.3	14338.5	13254.4	14643.4	20723.7	22294.0	18710.8	12838.1	11350.7	11016.4	8694.3
67.5°	9619.8	13384.4	11839.3	13585.6	19872.4	20934.5	17752.4	11356.3	8771.8	8266.9	6307.5
70°	8355.5	12328.8	10910.4	12398.8	18249.5	18565.4	16123.0	9988.1	6451.9	5583.1	4047.7
72.5°	7155.6	11229.5	10274.4	11182.5	16084.7	15431.3	14001.9	8778.4	4697.9	4026.9	2877.3
75°	5928.4	9607.8	9368.5	9737.8	13238.1	12155.1	11633.9	7268.2	3687.0	2913.4	1985.6
77.5°	4574.4	7507.4	8058.2	7798.1	9318.2	9028.6	9017.6	5461.7	2693.7	1944.1	1244.7
80°	3130.9	5232.3	6295.5	5501.1	6047.5	5900.0	6791.6	3664.1	1953.9	1170.3	692.8
82.5°	1840.3	3185.5	4382.1	2663.2	3344.0	3432.4	4044.4	1782.4	1149.6	269.9	150.8
85°	746.4	1257.8	1713.5	1042.5	1612.9	1360.5	1535.3	500.5	320.2	6.6	0.0
87.5°	188.0	402.1	282.0	117.0	186.9	171.6	135.5	61.2	13.1	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

REPORT NUMBER: P966298

CATALOG NUMBER: NAV-SB4B-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5
2.5°	2439.1	2414.0	2351.7	2289.4	2239.1	2171.4	2126.6	2073.1	2021.6	1975.8	1967.0
5°	2697.0	2614.0	2500.3	2396.4	2290.5	2187.8	2086.2	1979.1	1880.7	1820.6	1782.4
7.5°	2906.8	2760.4	2609.5	2477.3	2349.5	2229.3	2094.9	1964.8	1810.8	1728.8	1654.5
10°	3063.1	2870.7	2673.0	2521.1	2392.1	2275.2	2161.5	2030.4	1844.6	1741.9	1630.5
12.5°	3165.8	2937.4	2705.7	2532.0	2387.7	2297.0	2246.8	2195.4	2010.7	1890.5	1728.8
15°	3236.8	2984.4	2728.7	2506.8	2329.8	2263.2	2313.4	2372.5	2254.4	2115.6	1904.8
17.5°	3314.4	3045.6	2738.5	2439.1	2217.3	2188.9	2318.9	2455.5	2450.1	2312.3	2105.8
20°	3396.3	3099.2	2731.9	2329.8	2080.6	2105.8	2271.9	2430.4	2497.0	2422.7	2239.1
22.5°	3480.5	3150.5	2706.8	2187.8	1952.8	2031.4	2197.6	2336.4	2415.1	2392.1	2252.2
25°	3586.6	3222.6	2669.7	2034.7	1846.8	1956.1	2111.3	2223.8	2278.5	2277.3	2181.2
27.5°	3713.3	3318.8	2650.0	1911.3	1771.4	1870.8	2008.6	2109.0	2147.4	2147.4	2070.8
30°	3860.9	3432.4	2628.2	1830.4	1727.7	1782.4	1889.4	1987.8	2026.0	2026.0	1961.5
32.5°	4024.8	3541.7	2575.7	1781.2	1694.9	1696.0	1763.7	1853.4	1899.2	1905.8	1860.0
35°	4221.5	3658.6	2460.9	1741.9	1656.7	1611.8	1644.6	1718.9	1773.6	1787.8	1759.4
37.5°	4479.4	3801.8	2297.0	1684.0	1597.7	1523.4	1531.0	1587.8	1647.9	1669.8	1651.2
40°	4825.8	3970.1	2126.6	1600.9	1514.6	1426.1	1422.8	1464.3	1523.4	1547.3	1537.6
42.5°	5283.7	4172.3	1963.7	1521.2	1414.1	1323.4	1317.9	1350.6	1402.1	1427.2	1422.8
45°	5869.4	4420.3	1823.9	1458.9	1315.7	1226.1	1224.0	1251.2	1296.0	1322.2	1316.8
47.5°	6683.5	4668.4	1728.8	1426.1	1238.1	1146.4	1150.7	1174.8	1215.1	1233.8	1226.1
50°	7744.6	4743.8	1680.7	1426.1	1196.6	1075.3	1097.2	1116.8	1147.4	1158.4	1148.5
52.5°	8763.0	4494.6	1637.0	1434.8	1202.0	1015.2	1062.2	1076.4	1102.6	1107.0	1092.8
55°	9262.5	3864.1	1576.9	1437.0	1235.9	963.8	1033.8	1060.1	1069.8	1068.8	1044.7
57.5°	9090.9	3124.3	1475.3	1428.2	1258.9	931.0	998.8	1049.1	1055.6	1045.8	1001.0
60°	8488.7	2300.3	1397.7	1363.8	1250.2	921.3	945.3	1025.0	1034.8	1021.7	948.5
62.5°	7479.0	1596.5	1337.5	1221.7	1211.9	918.0	861.1	972.6	996.6	978.1	870.9
65°	5887.9	1127.8	1151.8	1070.9	1128.8	900.5	773.7	909.2	942.0	913.6	762.8
67.5°	3984.3	814.2	933.3	970.4	994.5	861.1	710.3	837.1	880.8	843.7	637.1
70°	2151.7	571.5	616.3	817.4	844.7	793.3	653.4	763.8	814.2	773.7	519.1
72.5°	1270.9	410.9	431.6	656.7	703.8	698.3	590.1	678.7	739.8	691.8	421.8
75°	700.5	277.6	308.1	476.4	571.5	538.7	507.1	574.8	637.1	590.1	325.6
77.5°	313.6	166.2	214.2	312.5	449.2	369.4	392.3	448.0	505.9	456.7	217.5
80°	121.3	92.9	142.1	170.5	326.8	204.4	252.5	330.0	371.6	332.2	132.2
82.5°	15.3	41.5	61.2	66.6	190.1	108.1	146.5	207.7	204.4	177.0	66.6
85°	0.0	7.7	8.7	4.4	82.0	39.4	48.1	67.8	63.3	48.1	5.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	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

REPORT NUMBER: P966298

CATALOG NUMBER: NAV-SB4B-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5
2.5°	1913.5	1874.1	1854.4	1838.0	1853.4	1862.1	1862.1	1899.2	1921.2	1929.9	1991.1
5°	1686.1	1612.9	1563.7	1534.3	1544.1	1555.0	1567.0	1614.1	1645.7	1666.5	1761.6
7.5°	1507.0	1395.5	1326.7	1290.6	1296.0	1303.7	1313.5	1359.5	1391.1	1418.4	1524.5
10°	1418.4	1261.1	1170.3	1126.7	1119.0	1114.7	1111.4	1138.7	1162.8	1184.6	1289.4
12.5°	1422.8	1203.1	1092.8	1039.2	1016.3	990.0	969.3	973.6	989.0	1016.3	1082.9
15°	1478.6	1184.6	1052.4	985.7	947.4	916.9	891.7	886.2	891.7	896.1	937.6
17.5°	1553.9	1182.4	1017.4	934.3	895.0	869.8	847.0	839.3	840.4	845.8	856.7
20°	1614.1	1175.9	978.1	885.2	850.2	828.3	805.3	797.8	799.9	801.0	813.0
22.5°	1645.7	1166.0	934.3	836.0	806.5	784.6	763.8	762.8	762.8	769.4	778.1
25°	1645.7	1145.2	895.0	788.9	762.8	743.1	718.0	722.3	724.5	733.3	746.4
27.5°	1606.4	1105.9	863.3	748.6	721.2	701.6	678.7	684.1	687.4	697.2	713.6
30°	1556.2	1058.9	827.3	710.3	678.7	664.4	644.7	647.0	651.3	662.3	680.8
32.5°	1502.5	1003.2	797.8	672.1	640.4	629.5	607.6	610.9	615.2	627.3	648.0
35°	1443.6	937.6	762.8	637.1	605.4	596.7	571.5	573.7	580.3	593.4	614.2
37.5°	1381.3	884.1	727.7	603.2	570.4	561.7	535.5	537.6	545.3	560.6	580.3
40°	1320.1	831.6	690.6	567.1	534.3	526.7	498.4	500.5	509.2	525.6	546.4
42.5°	1253.5	791.2	642.6	530.0	495.1	487.4	461.1	464.4	474.3	490.7	511.5
45°	1173.6	765.0	589.0	495.1	455.7	448.0	424.0	430.6	441.5	457.9	479.7
47.5°	1091.7	754.0	544.2	457.9	415.2	408.7	389.0	400.0	411.9	425.1	449.2
50°	1013.0	739.8	498.4	422.9	380.3	373.7	360.6	374.8	386.8	398.8	421.8
52.5°	923.4	709.2	456.7	392.3	350.8	348.6	342.0	355.2	366.1	377.0	396.7
55°	830.6	660.0	420.8	365.0	325.6	327.8	324.5	335.5	344.2	354.0	371.6
57.5°	749.7	597.8	392.3	335.5	303.8	310.4	306.0	311.4	316.9	328.9	343.2
60°	667.7	523.5	360.6	300.5	282.0	289.6	277.6	276.4	278.7	282.0	308.1
62.5°	557.3	445.9	321.2	269.9	257.9	261.2	238.2	220.8	220.8	224.1	263.3
65°	448.0	373.7	277.6	234.9	225.1	222.9	190.1	166.2	163.9	173.7	207.7
67.5°	368.3	310.4	233.9	195.6	189.0	191.3	167.2	143.2	140.9	151.9	177.0
70°	304.9	250.2	186.9	150.8	157.3	167.2	143.2	120.2	117.0	126.8	150.8
72.5°	242.6	195.6	143.2	111.4	130.1	142.1	117.0	95.1	92.9	101.7	124.5
75°	178.1	139.9	97.3	80.9	100.6	111.4	85.3	67.8	64.5	72.2	95.1
77.5°	110.4	78.7	61.2	48.1	68.9	74.3	44.8	39.4	38.2	43.7	60.1
80°	51.4	33.9	29.5	16.4	25.1	29.5	18.6	20.8	21.8	26.2	37.1
82.5°	14.2	5.4	1.1	0.0	0.0	8.7	4.4	8.7	11.0	16.4	24.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	5.4	9.8	17.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	8.7
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: P966298

CATALOG NUMBER: NAV-SB4B-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5	2196.5
2.5°	2037.0	2080.6	2150.7	2222.7	2293.7	2365.9	2435.8	2460.9
5°	1847.9	1948.4	2087.2	2235.8	2388.9	2544.0	2686.1	2750.6
7.5°	1637.0	1781.2	1989.9	2222.7	2466.5	2710.1	2934.2	3038.0
10°	1411.8	1594.4	1832.6	2147.4	2497.0	2833.6	3141.7	3276.2
12.5°	1197.7	1389.0	1652.3	2029.3	2473.0	2904.6	3275.1	3433.5
15°	1018.4	1187.9	1472.0	1889.4	2395.4	2909.1	3338.4	3512.3
17.5°	884.1	994.5	1288.4	1734.3	2293.7	2868.6	3360.4	3546.1
20°	817.4	848.0	1050.2	1535.3	2198.7	2830.3	3382.2	3577.8
22.5°	778.1	785.8	859.0	1278.6	2085.1	2818.3	3420.4	3621.5
25°	746.4	748.6	768.2	1013.0	1911.3	2810.7	3479.5	3681.6
27.5°	714.7	714.7	725.6	816.3	1675.3	2777.9	3555.9	3753.8
30°	683.0	683.0	690.6	722.3	1398.8	2713.4	3647.8	3847.7
32.5°	650.3	650.3	656.7	679.7	1116.8	2632.5	3731.9	3942.8
35°	617.5	615.2	624.0	648.0	888.5	2529.8	3816.0	4045.5
37.5°	582.4	581.4	590.1	617.5	767.1	2410.7	3879.4	4185.4
40°	545.3	545.3	555.1	584.7	732.2	2260.9	3980.0	4386.5
42.5°	511.5	509.2	520.2	556.3	705.9	2117.9	4160.3	4679.3
45°	478.7	474.3	484.1	528.9	660.0	2067.5	4496.8	5112.1
47.5°	448.0	437.2	445.9	496.1	618.5	2255.5	5047.6	5712.0
50°	422.9	402.1	409.8	463.3	586.8	2663.2	5762.2	6508.6
52.5°	396.7	369.4	373.7	422.9	558.4	3051.0	6537.0	7559.9
55°	369.4	338.8	340.9	382.4	517.9	3109.0	7293.3	8993.7
57.5°	338.8	310.4	310.4	345.3	488.5	2694.8	7874.7	10772.7
60°	304.9	286.3	280.8	315.8	514.7	1901.5	7942.4	11920.1
62.5°	267.7	257.9	250.2	287.4	534.3	1126.7	7397.1	11642.6
65°	225.1	222.9	217.5	315.8	450.2	665.5	6350.2	10791.3
67.5°	189.0	185.7	185.7	331.1	342.0	418.5	4961.3	9619.8
70°	162.9	150.8	150.8	250.2	207.7	289.6	3464.1	8355.5
72.5°	136.6	123.5	114.7	200.0	155.2	212.0	2164.8	7155.6
75°	109.3	99.4	88.6	132.2	115.8	160.6	1257.8	5928.4
77.5°	78.7	74.3	62.3	97.3	84.2	115.8	748.6	4574.4
80°	40.4	41.5	39.4	55.8	56.8	78.7	426.2	3130.9
82.5°	24.1	18.6	20.8	27.4	32.8	44.8	160.6	1840.3
85°	15.3	9.8	9.8	13.1	16.4	17.5	49.2	746.4
87.5°	7.7	3.3	4.4	6.6	5.4	4.4	2.2	188.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)