

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: P963074

Luminaire Tested: **NAV-SB2D-760-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963074
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-SB2D-760-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 5700K, 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: 16842.8 lumens
Efficiency: N/A
Efficacy: 114.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

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



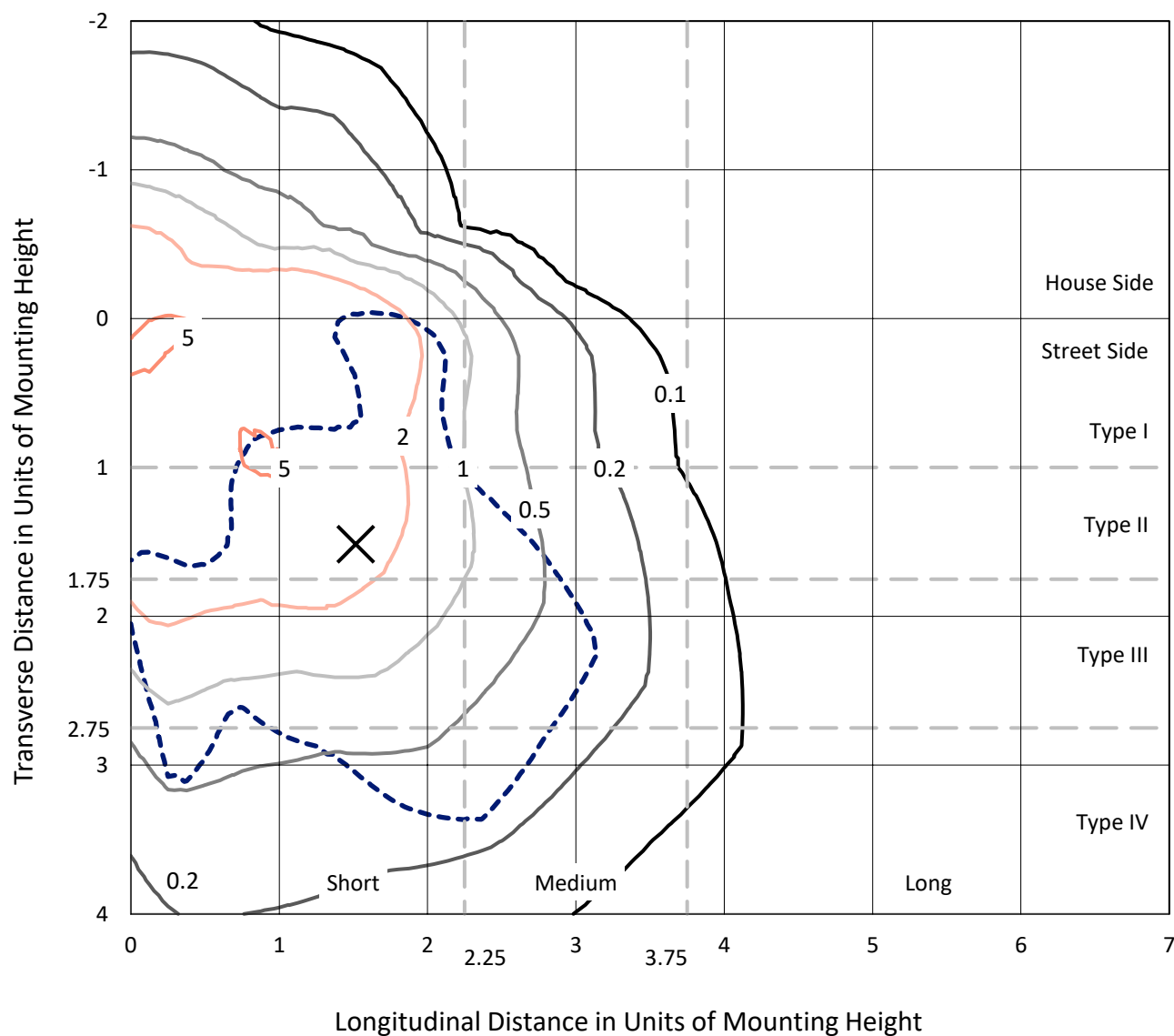
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

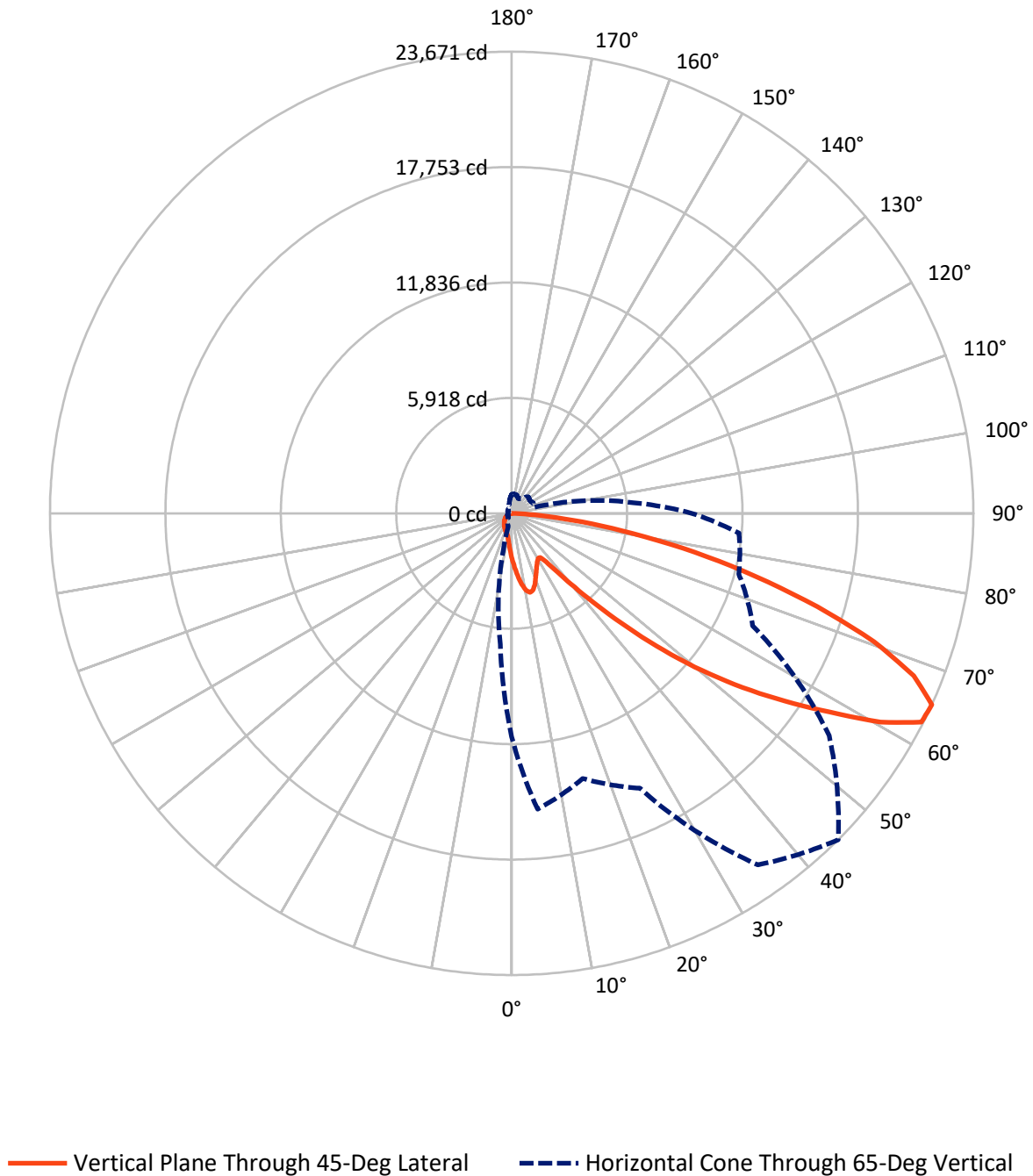


Based on 25 foot mounting height. Maximum calculated value = 6.1 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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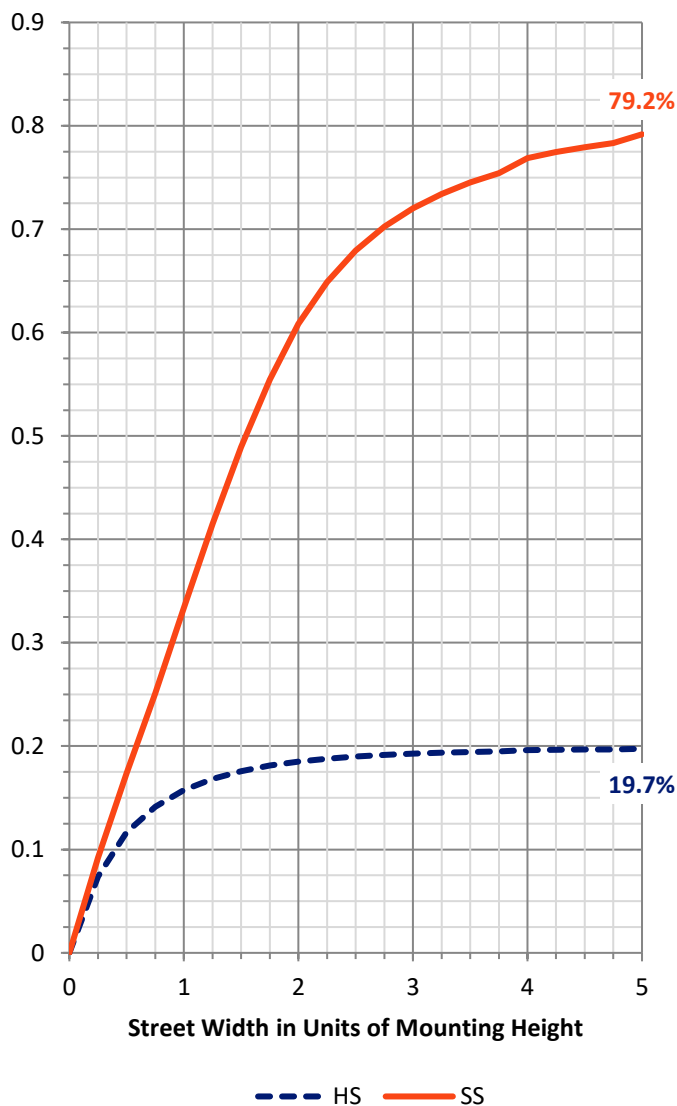
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3347.8	0.0	3347.8
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	13495.0	0.0	13495.0
	% Fixture	80.1	0.0	80.1
Total	Lumens	16842.8	0.0	16842.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.6	1.4
10°-20°	688.3	4.1
20°-30°	1014.0	6.0
30°-40°	1302.7	7.7
40°-50°	2106.9	12.5
50°-60°	3694.7	21.9
60°-70°	4623.0	27.4
70°-80°	2701.5	16.0
80°-90°	482.0	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°	16842.8	100.0
0°-180°	16842.8	100.0

Coefficient of Utilization



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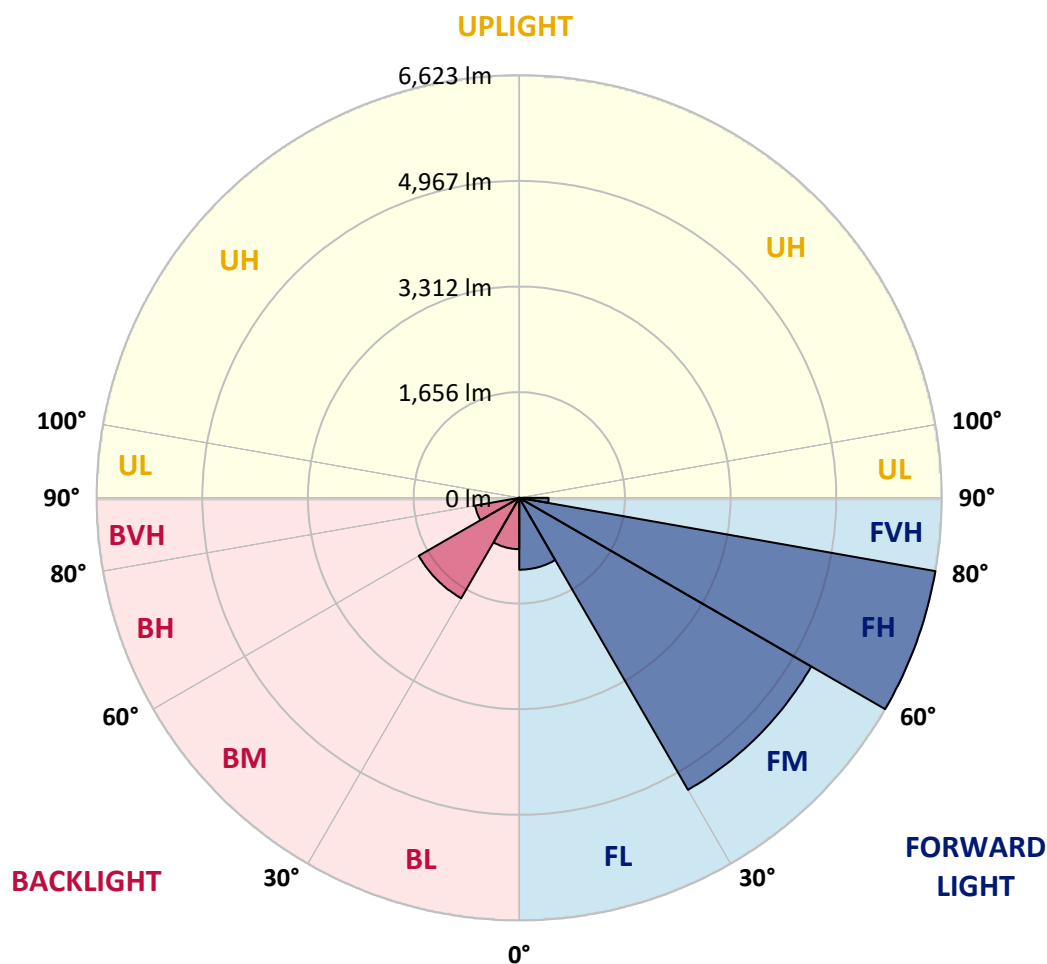
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1127.0	6.7			
FM	(30°-60°)	5285.5	31.4			
FH	(60°-80°)	6623.1	39.3			G3/7500
FVH	(80°-90°)	459.4	2.7			G3/500
BL	(0°-30°)	805.0	4.8	B2/1000		
BM	(30°-60°)	1818.9	10.8	B2/2500		
BH	(60°-80°)	701.4	4.2	B2/1000		G2/1000
BVH	(80°-90°)	22.6	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



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2
2.5°	2612.9	2632.7	2676.8	2700.0	2735.9	2738.3	2738.3	2706.9	2705.8	2641.9	2635.1
5°	2920.4	2966.9	3071.3	3179.2	3202.4	3208.2	3196.6	3133.9	3087.5	2963.4	2936.7
7.5°	3225.6	3315.0	3473.9	3617.8	3664.2	3664.2	3636.4	3534.3	3439.1	3259.3	3192.0
10°	3478.5	3591.1	3807.0	3968.2	4021.6	4010.0	3953.1	3824.3	3693.2	3475.1	3386.9
12.5°	3645.6	3772.1	4008.8	4138.7	4193.3	4163.1	4098.2	3972.8	3834.7	3605.0	3505.3
15°	3729.2	3861.5	4066.8	4135.3	4120.2	4088.8	4080.7	4020.5	3916.0	3701.4	3592.3
17.5°	3765.1	3888.1	4030.8	3988.0	3860.3	3836.0	3917.1	3993.7	3968.2	3784.9	3682.7
20°	3798.8	3902.1	3945.0	3754.7	3531.9	3509.9	3665.4	3883.5	3994.9	3862.6	3768.6
22.5°	3845.2	3909.0	3820.9	3508.7	3268.5	3217.5	3389.3	3717.6	4003.0	3961.2	3867.2
25°	3909.0	3926.5	3684.0	3275.5	3034.2	2983.2	3143.3	3533.1	3989.1	4068.0	3988.0
27.5°	3985.6	3949.6	3552.9	3080.5	2847.3	2799.8	2959.9	3355.5	3949.6	4174.7	4117.8
30°	4085.3	3979.8	3422.9	2929.8	2713.9	2679.1	2833.4	3202.4	3900.9	4310.5	4279.2
32.5°	4186.3	3992.6	3302.2	2841.6	2683.8	2696.6	2823.0	3120.0	3847.5	4440.4	4455.6
35°	4295.4	4033.2	3243.0	2928.6	2935.5	3046.9	3099.2	3196.6	3839.4	4616.8	4675.9
37.5°	4443.9	4123.7	3313.8	3361.4	3602.7	3833.6	3790.7	3571.4	3933.4	4880.2	4990.4
40°	4657.4	4282.7	3622.5	4098.2	4593.6	4968.4	4804.8	4252.5	4221.2	5259.6	5424.4
42.5°	4968.4	4535.6	4170.1	4998.5	5838.6	6455.9	6017.3	5130.8	4724.7	5801.5	6011.5
45°	5427.9	4945.2	4832.7	5948.8	7373.6	8346.0	7434.0	6067.2	5430.1	6621.8	6786.5
47.5°	6064.8	5547.4	5453.4	6950.1	9239.5	10497.1	9005.0	6935.0	6233.1	7740.3	7778.6
50°	6910.8	6358.4	6041.7	8045.4	11285.0	12690.1	10574.9	7772.8	7153.2	9107.1	9063.0
52.5°	8026.9	7489.7	6727.4	9088.6	13388.7	14836.7	12151.8	8508.4	8294.9	10693.2	10602.8
55°	9549.2	9191.8	7664.8	10084.2	15491.0	16995.9	13667.0	9202.2	9803.3	12577.6	12029.9
57.5°	11438.2	11693.4	9016.6	11238.6	17381.2	19221.4	15189.4	10172.3	11761.9	14684.7	12858.3
60°	12656.5	15020.0	11605.3	12945.3	19528.9	21738.1	17275.6	12017.2	13820.3	15440.0	12700.6
62.5°	12361.8	16078.1	14705.6	15124.4	21503.7	23567.8	19320.0	13870.1	14207.8	14327.3	11484.6
65°	11457.9	15224.2	14073.1	15547.9	22003.8	23671.1	19866.6	13631.2	12051.9	11696.9	9231.3
67.5°	10214.0	14211.3	12570.6	14424.7	21099.9	22227.7	18848.9	12057.8	9313.7	8777.6	6697.2
70°	8871.6	13090.4	11584.3	13164.7	19376.9	19712.2	17118.9	10605.1	6850.4	5928.0	4297.7
72.5°	7597.6	11923.2	10909.1	11873.3	17078.3	16384.5	14866.8	9320.6	4988.1	4275.7	3055.0
75°	6294.6	10201.3	9947.2	10339.4	14055.8	12906.0	12352.5	7717.1	3914.8	3093.3	2108.2
77.5°	4857.0	7971.2	8556.0	8279.8	9893.8	9586.3	9574.7	5799.1	2860.2	2064.1	1321.5
80°	3324.3	5555.5	6684.4	5841.0	6421.1	6264.4	7211.2	3890.5	2074.6	1242.7	735.6
82.5°	1954.0	3382.3	4652.8	2827.7	3550.5	3644.5	4294.2	1892.5	1220.7	286.6	160.1
85°	792.5	1335.5	1819.4	1106.9	1712.6	1444.5	1630.3	531.5	340.0	7.0	0.0
87.5°	199.6	427.0	299.4	124.1	198.4	182.1	143.9	65.0	13.9	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2
2.5°	2589.8	2563.1	2496.9	2430.8	2377.5	2305.5	2258.0	2201.1	2146.6	2097.8	2088.5
5°	2863.6	2775.4	2654.7	2544.6	2432.0	2323.0	2215.0	2101.2	1996.9	1933.0	1892.5
7.5°	3086.4	2930.9	2770.8	2630.4	2494.6	2367.0	2224.2	2086.2	1922.6	1835.6	1756.6
10°	3252.3	3048.0	2838.1	2676.8	2539.8	2415.7	2295.1	2155.8	1958.6	1849.5	1731.1
12.5°	3361.4	3118.9	2872.9	2688.4	2535.2	2438.9	2385.6	2331.1	2135.0	2007.3	1835.6
15°	3436.8	3168.8	2897.3	2661.7	2473.7	2403.0	2456.3	2519.0	2393.7	2246.3	2022.4
17.5°	3519.1	3233.8	2907.7	2589.8	2354.2	2324.1	2462.2	2607.2	2601.3	2455.2	2235.9
20°	3606.2	3290.6	2900.7	2473.7	2209.2	2235.9	2412.2	2580.5	2651.3	2572.3	2377.5
22.5°	3695.5	3345.1	2874.0	2323.0	2073.5	2157.0	2333.3	2480.7	2564.2	2539.8	2391.3
25°	3808.1	3421.7	2834.6	2160.5	1960.9	2077.0	2241.7	2361.2	2419.2	2418.1	2316.0
27.5°	3942.7	3523.8	2813.7	2029.4	1880.9	1986.4	2132.6	2239.3	2280.0	2280.0	2198.7
30°	4099.3	3644.5	2790.5	1943.5	1834.4	1892.5	2006.1	2110.6	2151.2	2151.2	2082.7
32.5°	4273.3	3760.5	2734.8	1891.2	1799.6	1800.8	1872.7	1967.9	2016.6	2023.6	1974.9
35°	4482.2	3884.6	2612.9	1849.5	1759.0	1711.4	1746.2	1825.1	1883.1	1898.2	1868.1
37.5°	4756.0	4036.7	2438.9	1788.0	1696.4	1617.4	1625.5	1685.9	1749.7	1772.9	1753.2
40°	5123.9	4215.3	2258.0	1699.9	1608.1	1514.2	1510.7	1554.8	1617.4	1643.0	1632.5
42.5°	5610.0	4429.9	2085.1	1615.1	1501.4	1405.1	1399.3	1434.1	1488.6	1515.4	1510.7
45°	6231.9	4693.4	1936.5	1549.0	1397.0	1301.9	1299.5	1328.5	1376.1	1403.9	1398.2
47.5°	7096.4	4956.8	1835.6	1514.2	1314.6	1217.2	1221.8	1247.3	1290.3	1309.9	1301.9
50°	8223.0	5036.8	1784.5	1514.2	1270.5	1141.7	1164.9	1185.8	1218.3	1229.9	1219.4
52.5°	9304.4	4772.3	1738.1	1523.5	1276.3	1077.9	1127.8	1142.9	1170.8	1175.4	1160.3
55°	9834.7	4102.8	1674.3	1525.8	1312.3	1023.4	1097.7	1125.4	1135.9	1134.8	1109.3
57.5°	9652.5	3317.3	1566.4	1516.5	1336.7	988.6	1060.5	1113.9	1120.8	1110.4	1062.8
60°	9013.1	2442.4	1484.0	1448.0	1327.4	978.2	1003.7	1088.3	1098.8	1084.9	1007.2
62.5°	7941.1	1695.1	1420.2	1297.2	1286.8	974.7	914.3	1032.7	1058.2	1038.4	924.8
65°	6251.7	1197.4	1222.9	1137.1	1198.5	956.1	821.5	965.3	1000.2	970.0	809.9
67.5°	4230.4	864.4	990.9	1030.3	1055.9	914.3	754.2	888.8	935.2	895.7	676.5
70°	2284.6	606.8	654.4	867.9	896.9	842.3	693.8	811.1	864.4	821.5	551.1
72.5°	1349.4	436.2	458.3	697.3	747.2	741.4	626.6	720.6	785.6	734.5	447.8
75°	743.7	294.7	327.2	505.8	606.8	572.1	538.3	610.3	676.5	626.6	345.7
77.5°	333.0	176.4	227.4	331.9	476.8	392.2	416.6	475.7	537.2	485.0	230.9
80°	128.8	98.6	150.9	181.0	347.0	217.0	268.0	350.4	394.5	352.7	140.4
82.5°	16.2	44.1	65.0	70.8	201.9	114.9	155.5	220.5	217.0	188.0	70.8
85°	0.0	8.1	9.3	4.6	87.0	41.8	51.0	72.0	67.3	51.0	5.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	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°	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2
2.5°	2031.7	1989.9	1969.0	1951.6	1967.9	1977.1	1977.1	2016.6	2039.7	2049.1	2114.1
5°	1790.4	1712.6	1660.4	1629.0	1639.5	1651.1	1663.9	1713.8	1747.4	1769.5	1870.4
7.5°	1600.0	1481.7	1408.6	1370.3	1376.1	1384.3	1394.7	1443.4	1477.0	1506.0	1618.6
10°	1506.0	1339.0	1242.7	1196.3	1188.2	1183.5	1180.0	1209.0	1234.5	1257.8	1369.2
12.5°	1510.7	1277.5	1160.3	1103.4	1079.1	1051.2	1029.2	1033.8	1050.1	1079.1	1149.8
15°	1569.9	1257.8	1117.4	1046.6	1005.9	973.4	946.8	941.0	946.8	951.4	995.6
17.5°	1649.9	1255.4	1080.2	992.1	950.3	923.6	899.2	891.1	892.3	898.1	909.7
20°	1713.8	1248.4	1038.4	939.8	902.7	879.6	855.2	847.1	849.3	850.5	863.3
22.5°	1747.4	1238.0	992.1	887.6	856.3	833.1	811.1	809.9	809.9	816.8	826.2
25°	1747.4	1216.0	950.3	837.7	809.9	789.0	762.3	766.9	769.3	778.6	792.5
27.5°	1705.6	1174.2	916.7	794.8	765.8	744.9	720.6	726.3	729.8	740.3	757.7
30°	1652.3	1124.3	878.3	754.2	720.6	705.5	684.6	686.9	691.6	703.2	722.8
32.5°	1595.4	1065.2	847.1	713.6	679.9	668.3	645.1	648.6	653.2	666.0	688.1
35°	1532.8	995.6	809.9	676.5	642.8	633.6	606.8	609.2	616.1	630.1	652.1
37.5°	1466.6	938.7	772.7	640.5	605.7	596.3	568.6	570.8	579.0	595.2	616.1
40°	1401.6	882.9	733.3	602.2	567.3	559.2	529.1	531.5	540.7	558.1	580.2
42.5°	1330.9	840.1	682.2	562.7	525.6	517.5	489.6	493.1	503.6	521.0	543.0
45°	1246.2	812.2	625.4	525.6	483.8	475.7	450.2	457.2	468.7	486.2	509.3
47.5°	1159.2	800.6	577.8	486.2	441.0	434.0	413.1	424.7	437.5	451.3	476.8
50°	1075.6	785.6	529.1	449.1	403.7	396.8	382.9	398.0	410.7	423.5	447.8
52.5°	980.4	753.1	485.0	416.6	372.5	370.1	363.2	377.1	388.7	400.3	421.2
55°	881.8	700.8	446.7	387.6	345.7	348.1	344.6	356.2	365.5	376.0	394.5
57.5°	795.9	634.7	416.6	356.2	322.6	329.5	324.9	330.7	336.5	349.2	364.3
60°	708.9	555.8	382.9	319.1	299.4	307.5	294.7	293.6	295.9	299.4	327.2
62.5°	591.7	473.4	341.1	286.6	273.9	277.3	253.0	234.4	234.4	237.9	279.6
65°	475.7	396.8	294.7	249.5	239.0	236.7	201.9	176.4	174.0	184.5	220.5
67.5°	391.0	329.5	248.3	207.7	200.7	203.1	177.5	152.0	149.6	161.2	188.0
70°	323.7	265.7	198.4	160.1	167.1	177.5	152.0	127.6	124.1	134.6	160.1
72.5°	257.6	207.7	152.0	118.4	138.1	150.9	124.1	101.0	98.6	107.9	132.2
75°	189.1	148.5	103.2	85.9	106.7	118.4	90.5	72.0	68.5	76.6	101.0
77.5°	117.2	83.5	65.0	51.0	73.1	78.9	47.6	41.8	40.6	46.4	63.9
80°	54.5	36.0	31.4	17.4	26.6	31.4	19.7	22.0	23.2	27.9	39.5
82.5°	15.1	5.8	1.1	0.0	0.0	9.3	4.6	9.3	11.6	17.4	25.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	5.8	10.5	18.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	9.3
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: P963074

CATALOG NUMBER: NAV-SB2D-760-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2	2332.2
2.5°	2162.8	2209.2	2283.5	2360.1	2435.5	2512.1	2586.3	2612.9
5°	1962.1	2068.8	2216.2	2374.0	2536.4	2701.2	2852.0	2920.4
7.5°	1738.1	1891.2	2112.9	2360.1	2618.8	2877.5	3115.4	3225.6
10°	1499.1	1692.9	1945.9	2280.0	2651.3	3008.7	3335.9	3478.5
12.5°	1271.7	1474.8	1754.4	2154.7	2625.7	3084.0	3477.4	3645.6
15°	1081.4	1261.3	1562.9	2006.1	2543.3	3088.7	3544.7	3729.2
17.5°	938.7	1055.9	1368.0	1841.4	2435.5	3045.8	3567.9	3765.1
20°	867.9	900.4	1115.0	1630.3	2334.5	3005.2	3591.1	3798.8
22.5°	826.2	834.2	911.9	1357.5	2213.8	2992.4	3631.7	3845.2
25°	792.5	794.8	815.7	1075.6	2029.4	2984.3	3694.4	3909.0
27.5°	758.8	758.8	770.4	866.7	1778.7	2949.4	3775.6	3985.6
30°	725.2	725.2	733.3	766.9	1485.2	2881.0	3873.1	4085.3
32.5°	690.3	690.3	697.3	721.7	1185.8	2795.2	3962.4	4186.3
35°	655.6	653.2	662.6	688.1	943.3	2686.1	4051.7	4295.4
37.5°	618.5	617.3	626.6	655.6	814.6	2559.6	4119.1	4443.9
40°	579.0	579.0	589.5	620.7	777.4	2400.7	4225.8	4657.4
42.5°	543.0	540.7	552.3	590.6	749.6	2248.6	4417.2	4968.4
45°	508.2	503.6	514.0	561.6	700.8	2195.2	4774.7	5427.9
47.5°	475.7	464.1	473.4	526.7	656.7	2394.8	5359.4	6064.8
50°	449.1	427.0	435.1	492.0	623.1	2827.7	6118.2	6910.8
52.5°	421.2	392.2	396.8	449.1	592.9	3239.5	6940.9	8026.9
55°	392.2	359.7	362.0	406.1	550.0	3301.0	7743.8	9549.2
57.5°	359.7	329.5	329.5	366.6	518.6	2861.3	8361.0	11438.2
60°	323.7	304.0	298.2	335.3	546.5	2018.9	8433.0	12656.5
62.5°	284.2	273.9	265.7	305.1	567.3	1196.3	7854.1	12361.8
65°	239.0	236.7	230.9	335.3	478.1	706.6	6742.4	11457.9
67.5°	200.7	197.2	197.2	351.6	363.2	444.4	5267.7	10214.0
70°	172.9	160.1	160.1	265.7	220.5	307.5	3678.1	8871.6
72.5°	145.0	131.1	121.9	212.4	164.7	225.1	2298.6	7597.6
75°	116.0	105.6	94.0	140.4	123.0	170.6	1335.5	6294.6
77.5°	83.5	78.9	66.1	103.2	89.4	123.0	794.8	4857.0
80°	42.9	44.1	41.8	59.1	60.4	83.5	452.5	3324.3
82.5°	25.5	19.7	22.0	29.0	34.8	47.6	170.6	1954.0
85°	16.2	10.5	10.5	13.9	17.4	18.6	52.2	792.5
87.5°	8.1	3.5	4.6	7.0	5.8	4.6	2.4	199.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)