

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: P967290

Luminaire Tested: **NAV-SB4D-760-U-SLL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967290
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-760-U-SLL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 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: 33753.3 lumens
Efficiency: N/A
Efficacy: 115.0 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

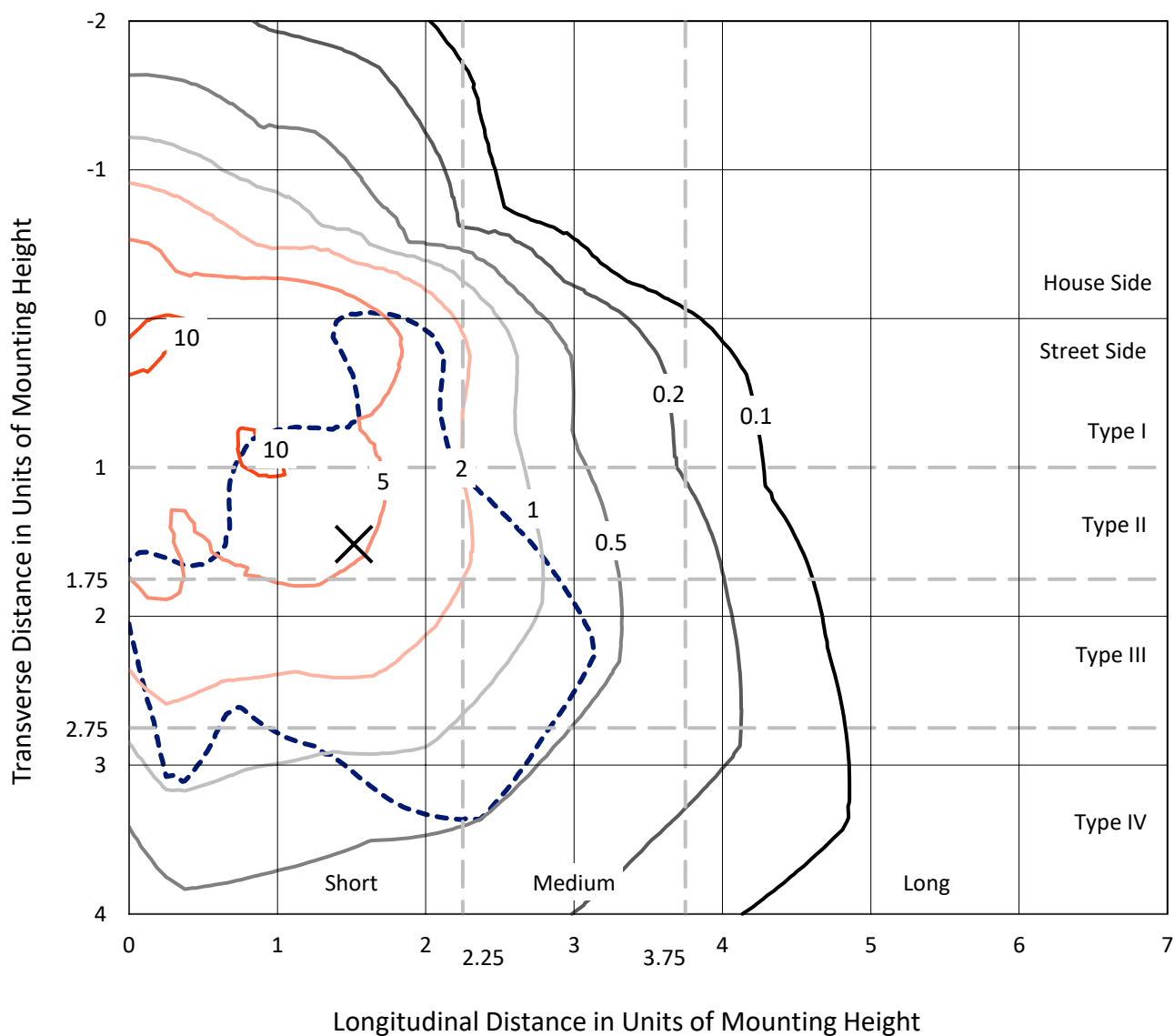


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

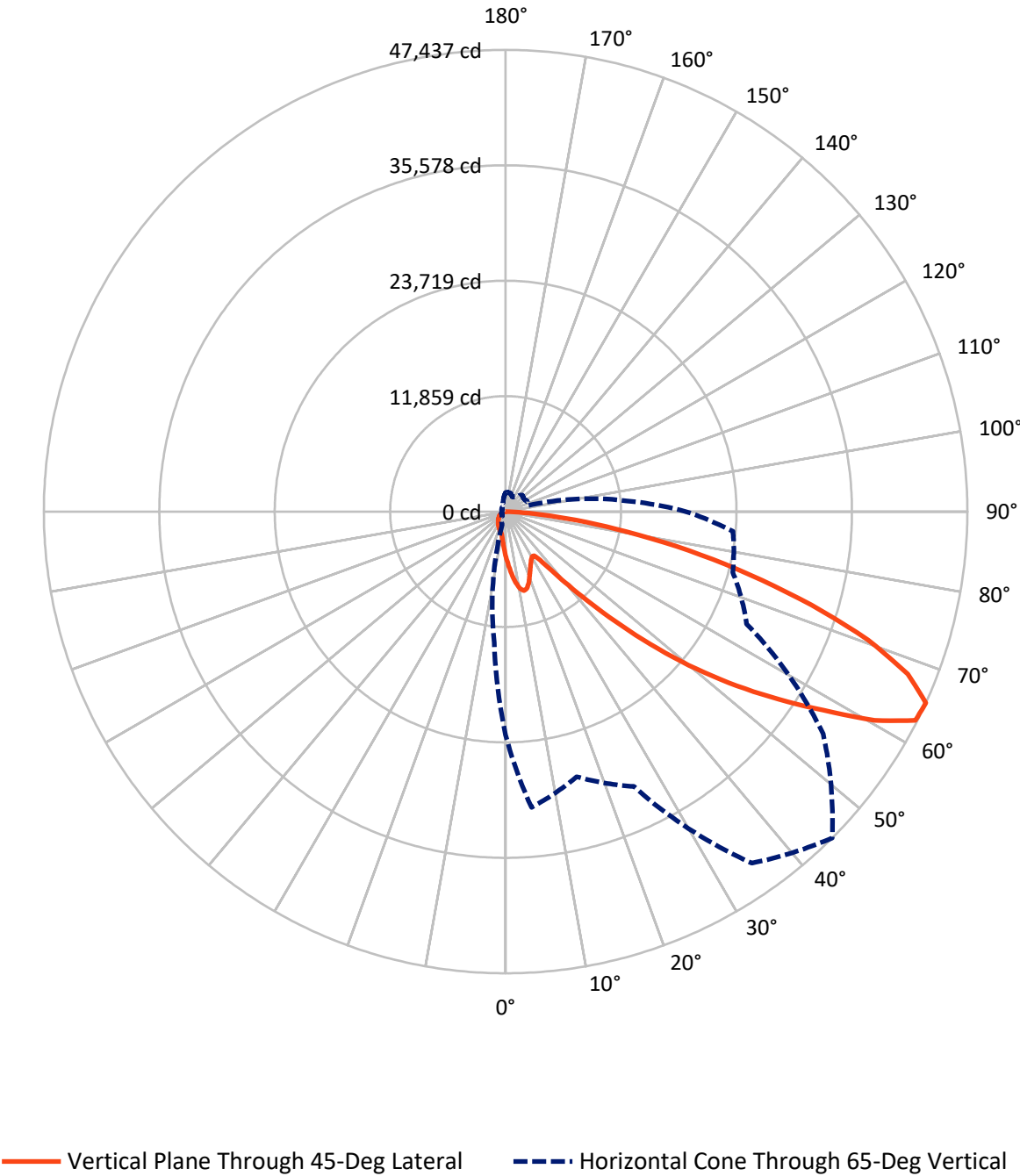


Based on 25 foot mounting height. Maximum calculated value = 12.3 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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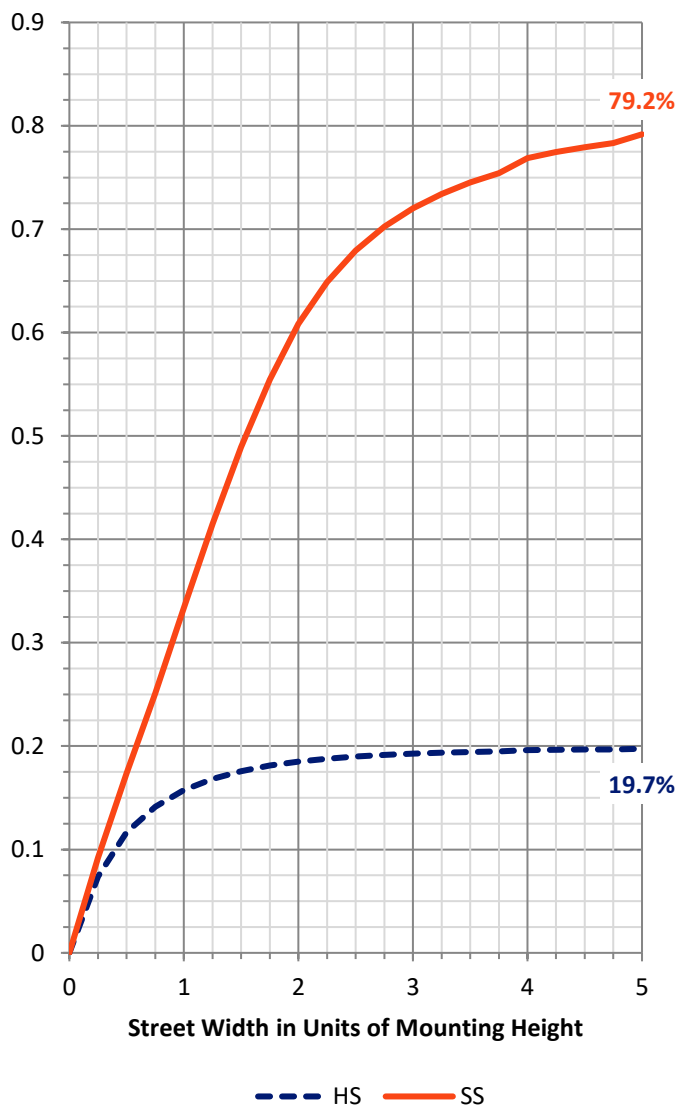
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6709.1	0.0	6709.1
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	27044.1	0.0	27044.1
	% Fixture	80.1	0.0	80.1
Total	Lumens	33753.3	0.0	33753.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	460.1	1.4
10°-20°	1379.4	4.1
20°-30°	2032.1	6.0
30°-40°	2610.7	7.7
40°-50°	4222.3	12.5
50°-60°	7404.2	21.9
60°-70°	9264.7	27.4
70°-80°	5413.8	16.0
80°-90°	965.9	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°	33753.3	100.0
0°-180°	33753.3	100.0

Coefficient of Utilization



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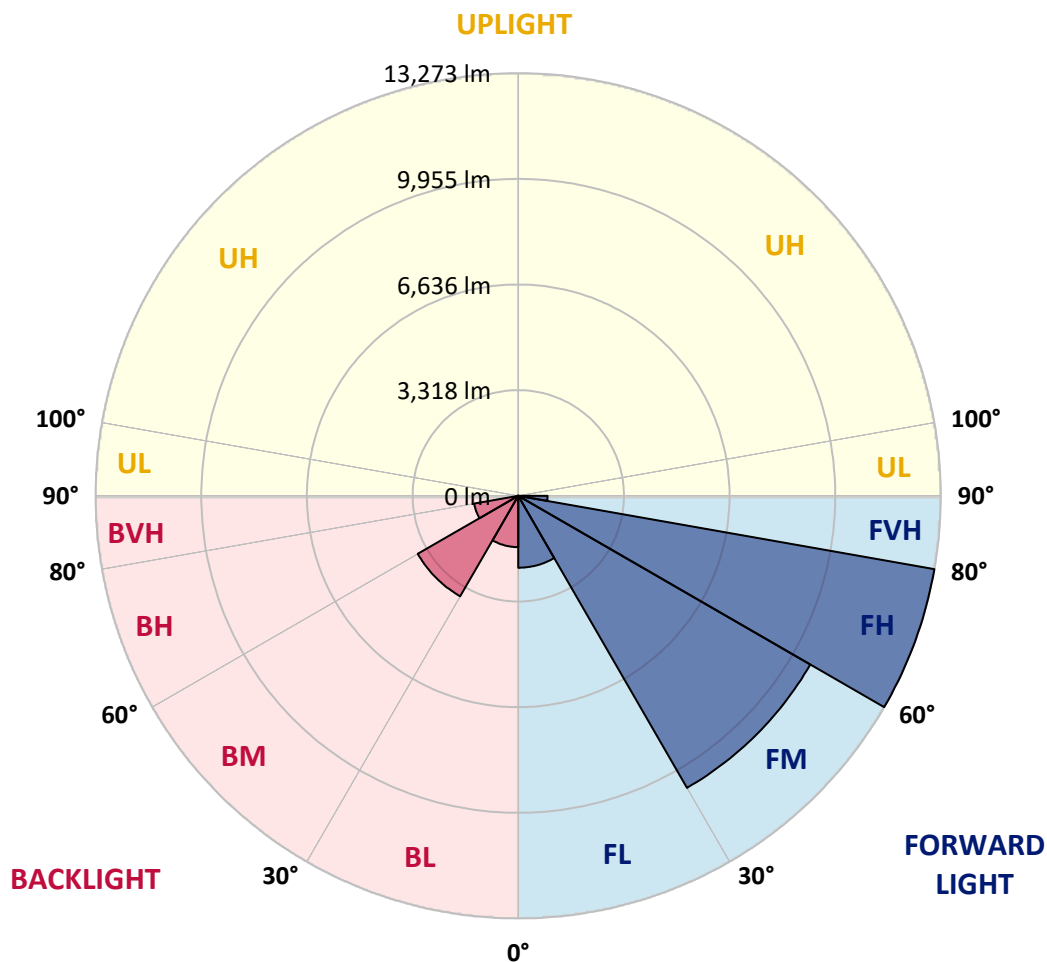
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2258.5	6.7			
FM	(30°-60°)	10592.2	31.4			
FH	(60°-80°)	13272.8	39.3			G5
FVH	(80°-90°)	920.6	2.7			G5
BL	(0°-30°)	1613.1	4.8	B3/2500		
BM	(30°-60°)	3645.0	10.8	B3/5000		
BH	(60°-80°)	1405.7	4.2	B3/2500		G3/2500
BVH	(80°-90°)	45.3	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8
2.5°	5236.4	5276.0	5364.3	5410.9	5482.9	5487.5	5487.5	5424.8	5422.5	5294.5	5280.6
5°	5852.6	5945.6	6154.9	6371.2	6417.7	6429.3	6406.0	6280.5	6187.5	5938.6	5885.2
7.5°	6464.2	6643.2	6961.8	7250.1	7343.1	7343.1	7287.3	7082.7	6892.0	6531.6	6396.7
10°	6971.1	7196.6	7629.2	7952.4	8059.3	8036.1	7922.1	7664.0	7401.2	6964.2	6787.3
12.5°	7305.9	7559.4	8033.7	8294.2	8403.5	8343.0	8212.8	7961.7	7684.9	7224.5	7024.5
15°	7473.4	7738.4	8150.0	8287.2	8257.0	8194.2	8177.9	8057.0	7847.7	7417.5	7199.0
17.5°	7545.4	7791.9	8077.9	7991.8	7736.1	7687.3	7850.1	8003.5	7952.4	7585.0	7380.3
20°	7612.9	7819.8	7905.8	7524.5	7078.0	7033.9	7345.5	7782.6	8005.9	7740.7	7552.4
22.5°	7705.8	7833.8	7657.1	7031.5	6550.3	6447.9	6792.1	7450.1	8022.1	7938.4	7750.0
25°	7833.8	7868.6	7382.7	6564.2	6080.5	5978.2	6299.1	7080.4	7994.2	8152.3	7991.8
27.5°	7987.2	7915.2	7119.9	6173.6	5706.2	5610.8	5931.7	6724.6	7915.2	8366.3	8252.3
30°	8187.2	7975.6	6859.5	5871.2	5438.8	5369.0	5678.3	6417.7	7817.5	8638.3	8575.5
32.5°	8389.5	8001.2	6617.6	5694.5	5378.3	5403.9	5657.3	6252.6	7710.6	8898.7	8929.0
35°	8608.1	8082.5	6499.0	5868.9	5882.9	6106.1	6210.8	6406.0	7694.3	9252.2	9370.8
37.5°	8905.7	8264.0	6640.9	6736.2	7219.9	7682.6	7596.6	7157.1	7882.6	9779.9	10000.9
40°	9333.5	8582.5	7259.5	8212.8	9205.6	9956.7	9628.8	8522.1	8459.2	10540.4	10870.5
42.5°	9956.7	9089.4	8356.9	10017.1	11700.7	12937.7	12058.7	10282.3	9468.4	11626.3	12047.1
45°	10877.5	9910.2	9684.6	11921.6	14776.9	16725.5	14897.9	12158.8	10882.1	13270.2	13600.3
47.5°	12154.0	11117.0	10928.7	13928.2	18515.9	21036.5	18046.3	13898.0	12491.3	15511.7	15588.4
50°	13849.2	12742.4	12107.6	16123.2	22615.4	25431.2	21192.3	15576.8	14335.1	18250.8	18162.5
52.5°	16086.0	15009.5	13481.8	18213.6	26831.0	29732.9	24352.3	17051.1	16623.1	21429.5	21248.1
55°	19136.8	18420.6	15360.5	20208.7	31044.4	34060.2	27389.1	18441.5	19646.0	25205.7	24108.2
57.5°	22922.3	23433.9	18069.5	22522.3	34832.2	38520.0	30439.8	20385.4	23571.0	29428.4	25768.4
60°	25363.8	30100.4	23257.1	25942.7	39136.2	43563.5	34620.6	24082.6	27696.0	30942.1	25452.2
62.5°	24773.2	32221.0	29470.2	30309.6	43093.8	47230.4	38717.6	27796.0	28472.7	28712.1	23015.2
65°	22961.8	30509.5	28202.9	31158.3	44096.0	47437.3	39812.8	27317.0	24152.4	23440.8	18499.6
67.5°	20469.1	28479.6	25191.7	28907.5	42284.6	44544.8	37773.6	24164.0	18664.7	17590.5	13421.4
70°	17778.8	26233.4	23215.2	26382.3	38831.6	39503.6	34306.6	21252.8	13728.2	11879.6	8612.7
72.5°	15225.8	23894.2	21861.9	23794.2	34225.3	32834.8	29793.4	18678.7	9996.2	8568.5	6122.3
75°	12614.5	20443.5	19934.3	20720.3	28168.0	25863.7	24754.6	15465.2	7845.4	6199.1	4224.9
77.5°	9733.5	15974.4	17146.4	16593.0	19827.4	19211.2	19187.9	11621.6	5731.7	4136.6	2648.5
80°	6661.8	11133.2	13395.7	11705.3	12868.0	12554.0	14451.4	7796.6	4157.5	2490.3	1474.2
82.5°	3915.7	6778.1	9324.2	5666.6	7115.2	7303.6	8605.7	3792.5	2446.2	574.3	320.9
85°	1588.1	2676.4	3646.0	2218.3	3432.1	2894.9	3267.0	1065.0	681.3	13.9	0.0
87.5°	400.0	855.7	599.9	248.8	397.6	365.1	288.3	130.2	27.9	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°	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8
2.5°	5190.0	5136.5	5003.9	4871.4	4764.4	4620.3	4525.0	4411.0	4301.7	4204.0	4185.5
5°	5738.7	5562.0	5320.2	5099.3	4873.7	4655.1	4438.9	4211.0	4001.7	3873.9	3792.5
7.5°	6185.2	5873.6	5552.7	5271.4	4999.2	4743.5	4457.5	4180.8	3853.0	3678.5	3520.5
10°	6517.7	6108.4	5687.5	5364.3	5089.9	4841.2	4599.4	4320.3	3925.0	3706.4	3469.3
12.5°	6736.2	6250.2	5757.3	5387.6	5080.6	4887.7	4780.7	4671.4	4278.5	4022.7	3678.5
15°	6887.4	6350.3	5806.1	5334.1	4957.4	4815.6	4922.6	5048.1	4797.0	4501.7	4053.0
17.5°	7052.5	6480.5	5827.0	5190.0	4718.0	4657.5	4934.1	5224.8	5213.3	4920.2	4480.8
20°	7226.9	6594.4	5813.1	4957.4	4427.3	4480.8	4834.2	5171.3	5313.2	5155.0	4764.4
22.5°	7405.9	6703.7	5759.7	4655.1	4155.2	4322.6	4676.0	4971.4	5138.8	5089.9	4792.3
25°	7631.4	6857.1	5680.5	4329.6	3929.6	4162.2	4492.4	4731.9	4848.1	4845.8	4641.2
27.5°	7901.2	7061.7	5638.7	4066.9	3769.2	3980.8	4273.8	4487.8	4569.1	4569.1	4406.4
30°	8215.1	7303.6	5592.2	3894.8	3676.3	3792.5	4020.4	4229.7	4311.0	4311.0	4173.8
32.5°	8563.9	7536.1	5480.6	3790.1	3606.5	3608.8	3752.9	3943.6	4041.3	4055.2	3957.5
35°	8982.4	7784.9	5236.4	3706.4	3525.1	3429.8	3499.5	3657.6	3773.8	3804.1	3743.6
37.5°	9531.2	8089.5	4887.7	3583.2	3399.5	3241.4	3257.7	3378.6	3506.4	3553.0	3513.5
40°	10268.2	8447.6	4525.0	3406.5	3222.8	3034.4	3027.4	3115.8	3241.4	3292.5	3271.6
42.5°	11242.6	8877.8	4178.5	3236.7	3008.9	2815.9	2804.3	2874.0	2983.3	3036.8	3027.4
45°	12488.9	9405.6	3880.9	3104.2	2799.6	2608.9	2604.3	2662.4	2757.8	2813.5	2801.9
47.5°	14221.2	9933.5	3678.5	3034.4	2634.5	2439.2	2448.5	2499.7	2585.7	2625.2	2608.9
50°	16479.0	10093.9	3576.2	3034.4	2546.1	2288.0	2334.5	2376.4	2441.5	2464.7	2443.8
52.5°	18646.2	9563.8	3483.3	3053.1	2557.8	2160.2	2260.1	2290.4	2346.1	2355.4	2325.2
55°	19708.8	8222.0	3355.3	3057.7	2629.8	2050.8	2199.6	2255.5	2276.4	2274.1	2222.9
57.5°	19343.7	6647.8	3139.1	3039.1	2678.7	1981.1	2125.2	2232.2	2246.2	2225.3	2130.0
60°	18062.6	4894.7	2974.0	2901.9	2660.1	1960.2	2011.4	2181.1	2202.0	2174.1	2018.3
62.5°	15913.9	3397.2	2846.1	2599.6	2578.7	1953.2	1832.3	2069.5	2120.6	2081.1	1853.2
65°	12528.5	2399.6	2450.8	2278.8	2402.0	1916.0	1646.3	1934.6	2004.4	1943.9	1623.0
67.5°	8477.9	1732.4	1985.7	2064.9	2116.0	1832.3	1511.4	1781.1	1874.1	1795.1	1355.7
70°	4578.4	1216.1	1311.5	1739.3	1797.4	1688.2	1390.5	1625.3	1732.4	1646.3	1104.5
72.5°	2704.3	874.3	918.5	1397.5	1497.4	1485.8	1255.6	1444.0	1574.2	1471.9	897.6
75°	1490.5	590.6	655.7	1013.8	1216.1	1146.4	1078.9	1223.0	1355.7	1255.6	692.9
77.5°	667.4	353.4	455.7	665.0	955.7	786.0	834.8	953.4	1076.6	971.9	462.7
80°	258.1	197.6	302.3	362.7	695.3	434.8	537.1	702.2	790.6	706.8	281.4
82.5°	32.6	88.4	130.2	141.9	404.6	230.2	311.6	441.8	434.8	376.7	141.9
85°	0.0	16.3	18.6	9.3	174.4	83.7	102.3	144.1	134.9	102.3	11.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	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°	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8
2.5°	4071.5	3987.8	3945.9	3911.1	3943.6	3962.2	3962.2	4041.3	4087.8	4106.4	4236.6
5°	3587.8	3432.1	3327.5	3264.6	3285.5	3308.8	3334.4	3434.4	3501.8	3546.0	3748.3
7.5°	3206.5	2969.3	2822.8	2746.1	2757.8	2774.1	2795.0	2892.7	2960.0	3018.2	3243.7
10°	3018.2	2683.3	2490.3	2397.4	2381.1	2371.7	2364.8	2422.9	2474.0	2520.6	2743.8
12.5°	3027.4	2560.1	2325.2	2211.3	2162.4	2106.7	2062.5	2071.8	2104.3	2162.4	2304.3
15°	3146.0	2520.6	2239.2	2097.4	2016.0	1950.9	1897.4	1885.8	1897.4	1906.7	1995.1
17.5°	3306.5	2516.0	2164.8	1988.1	1904.3	1850.9	1802.1	1785.8	1788.1	1799.7	1823.0
20°	3434.4	2501.9	2081.1	1883.4	1809.0	1762.5	1713.7	1697.4	1702.1	1704.4	1730.0
22.5°	3501.8	2481.0	1988.1	1778.8	1716.1	1669.5	1625.3	1623.0	1623.0	1636.9	1655.6
25°	3501.8	2436.8	1904.3	1678.8	1623.0	1581.2	1527.7	1537.0	1541.6	1560.3	1588.1
27.5°	3418.1	2353.2	1836.9	1592.7	1534.6	1492.8	1444.0	1455.6	1462.6	1483.5	1518.4
30°	3311.2	2253.2	1760.2	1511.4	1444.0	1413.8	1371.9	1376.6	1385.8	1409.1	1448.6
32.5°	3197.2	2134.6	1697.4	1430.0	1362.6	1339.4	1292.8	1299.8	1309.1	1334.7	1378.8
35°	3071.6	1995.1	1623.0	1355.7	1288.2	1269.6	1216.1	1220.8	1234.7	1262.6	1306.8
37.5°	2939.1	1881.1	1548.6	1283.5	1213.8	1195.1	1139.4	1144.0	1160.3	1192.9	1234.7
40°	2808.9	1769.6	1469.5	1206.8	1137.0	1120.7	1060.4	1065.0	1083.5	1118.5	1162.7
42.5°	2667.0	1683.5	1367.2	1127.7	1053.3	1037.1	981.2	988.2	1009.1	1044.1	1088.2
45°	2497.3	1627.7	1253.3	1053.3	969.6	953.4	902.2	916.1	939.4	974.3	1020.8
47.5°	2323.0	1604.4	1157.9	974.3	883.6	869.6	827.8	851.1	876.6	904.6	955.7
50°	2155.5	1574.2	1060.4	899.8	809.1	795.2	767.3	797.6	823.2	848.7	897.6
52.5°	1964.8	1509.1	971.9	834.8	746.4	741.8	727.9	755.7	779.0	802.2	844.1
55°	1767.2	1404.5	895.2	776.6	692.9	697.6	690.6	713.8	732.5	753.4	790.6
57.5°	1595.1	1271.9	834.8	713.8	646.5	660.4	651.1	662.7	674.3	699.9	730.1
60°	1420.8	1113.8	767.3	639.4	599.9	616.2	590.6	588.2	593.0	599.9	655.7
62.5°	1185.9	948.7	683.6	574.3	548.8	555.8	506.9	469.7	469.7	476.6	560.4
65°	953.4	795.2	590.6	499.9	479.0	474.4	404.6	353.4	348.8	369.7	441.8
67.5°	783.6	660.4	497.6	416.3	402.3	406.9	355.8	304.6	299.9	323.2	376.7
70°	648.7	532.5	397.6	320.9	334.9	355.8	304.6	255.7	248.8	269.7	320.9
72.5°	516.2	416.3	304.6	237.2	276.8	302.3	248.8	202.3	197.6	216.3	265.1
75°	379.0	297.7	206.9	172.1	213.9	237.2	181.3	144.1	137.1	153.4	202.3
77.5°	234.8	167.4	130.2	102.3	146.5	158.2	95.3	83.7	81.4	93.0	127.9
80°	109.3	72.1	62.8	34.8	53.5	62.8	39.6	44.2	46.5	55.8	79.0
82.5°	30.2	11.6	2.4	0.0	0.0	18.6	9.3	18.6	23.3	34.8	51.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	11.6	20.9	37.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	18.6
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: P967290

CATALOG NUMBER: NAV-SB4D-760-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8	4673.8
2.5°	4334.2	4427.3	4576.1	4729.6	4880.7	5034.2	5183.0	5236.4
5°	3932.0	4145.9	4441.2	4757.4	5083.0	5413.1	5715.5	5852.6
7.5°	3483.3	3790.1	4234.3	4729.6	5248.1	5766.6	6243.3	6464.2
10°	3004.2	3392.5	3899.4	4569.1	5313.2	6029.4	6685.0	6971.1
12.5°	2548.5	2955.4	3515.7	4318.0	5262.0	6180.5	6968.8	7305.9
15°	2167.2	2527.5	3132.1	4020.4	5096.9	6189.8	7103.7	7473.4
17.5°	1881.1	2116.0	2741.5	3690.2	4880.7	6103.8	7150.1	7545.4
20°	1739.3	1804.4	2234.6	3267.0	4678.4	6022.4	7196.6	7612.9
22.5°	1655.6	1671.9	1827.7	2720.6	4436.6	5996.8	7278.0	7705.8
25°	1588.1	1592.7	1634.7	2155.5	4066.9	5980.6	7403.6	7833.8
27.5°	1520.7	1520.7	1544.0	1737.0	3564.6	5910.8	7566.3	7987.2
30°	1453.2	1453.2	1469.5	1537.0	2976.3	5773.6	7761.7	8187.2
32.5°	1383.5	1383.5	1397.5	1446.3	2376.4	5601.5	7940.7	8389.5
35°	1313.7	1309.1	1327.7	1378.8	1890.4	5383.0	8119.7	8608.1
37.5°	1239.3	1237.1	1255.6	1313.7	1632.3	5129.5	8254.6	8905.7
40°	1160.3	1160.3	1181.2	1244.0	1557.9	4810.9	8468.6	9333.5
42.5°	1088.2	1083.5	1106.8	1183.6	1502.1	4506.3	8852.2	9956.7
45°	1018.4	1009.1	1030.1	1125.4	1404.5	4399.4	9568.4	10877.5
47.5°	953.4	930.1	948.7	1055.6	1316.1	4799.4	10740.4	12154.0
50°	899.8	855.7	872.0	985.9	1248.7	5666.6	12261.0	13849.2
52.5°	844.1	786.0	795.2	899.8	1188.2	6492.0	13909.7	16086.0
55°	786.0	720.8	725.5	813.8	1102.2	6615.4	15518.7	19136.8
57.5°	720.8	660.4	660.4	734.8	1039.4	5734.1	16755.7	22922.3
60°	648.7	609.3	597.6	672.0	1095.2	4045.9	16899.9	25363.8
62.5°	569.7	548.8	532.5	611.5	1137.0	2397.4	15739.6	24773.2
65°	479.0	474.4	462.7	672.0	958.0	1416.0	13512.0	22961.8
67.5°	402.3	395.3	395.3	704.6	727.9	890.5	10556.6	20469.1
70°	346.4	320.9	320.9	532.5	441.8	616.2	7371.0	17778.8
72.5°	290.7	262.7	244.2	425.5	330.2	451.1	4606.3	15225.8
75°	232.6	211.6	188.4	281.4	246.5	341.8	2676.4	12614.5
77.5°	167.4	158.2	132.5	206.9	179.1	246.5	1592.7	9733.5
80°	86.0	88.4	83.7	118.6	121.0	167.4	906.8	6661.8
82.5°	51.1	39.6	44.2	58.1	69.8	95.3	341.8	3915.7
85°	32.6	20.9	20.9	27.9	34.8	37.2	104.7	1588.1
87.5°	16.3	7.0	9.3	13.9	11.6	9.3	4.6	400.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)