

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: P197184

Luminaire Tested: **NAV-AF-06-D-UNV-SLL-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197184
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24264)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SLL-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28479 lumens
Efficiency: N/A
Efficacy: 74.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 382
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: 25 FT

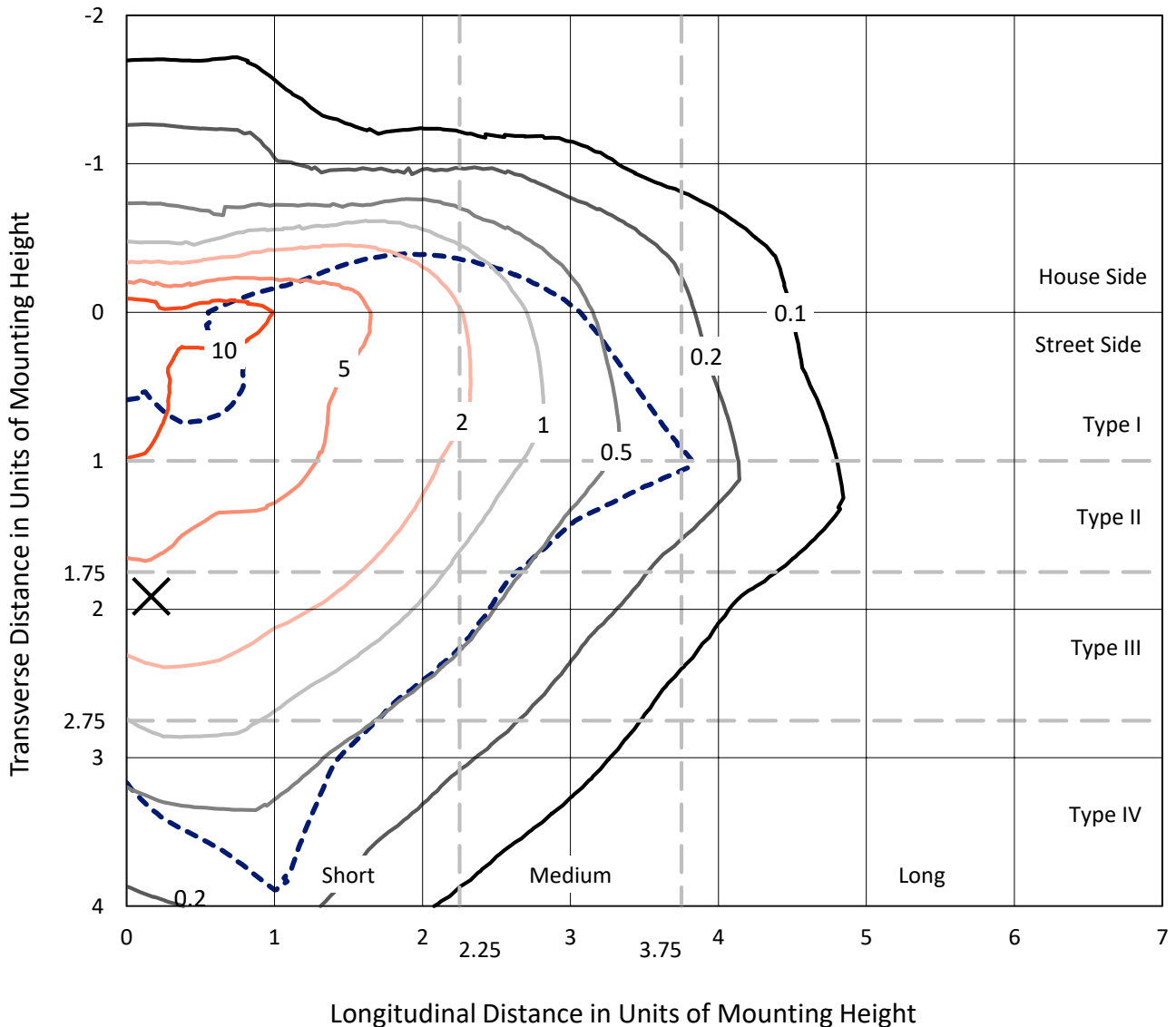


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Iso-Footcandle Lines of Horizontal Illumination

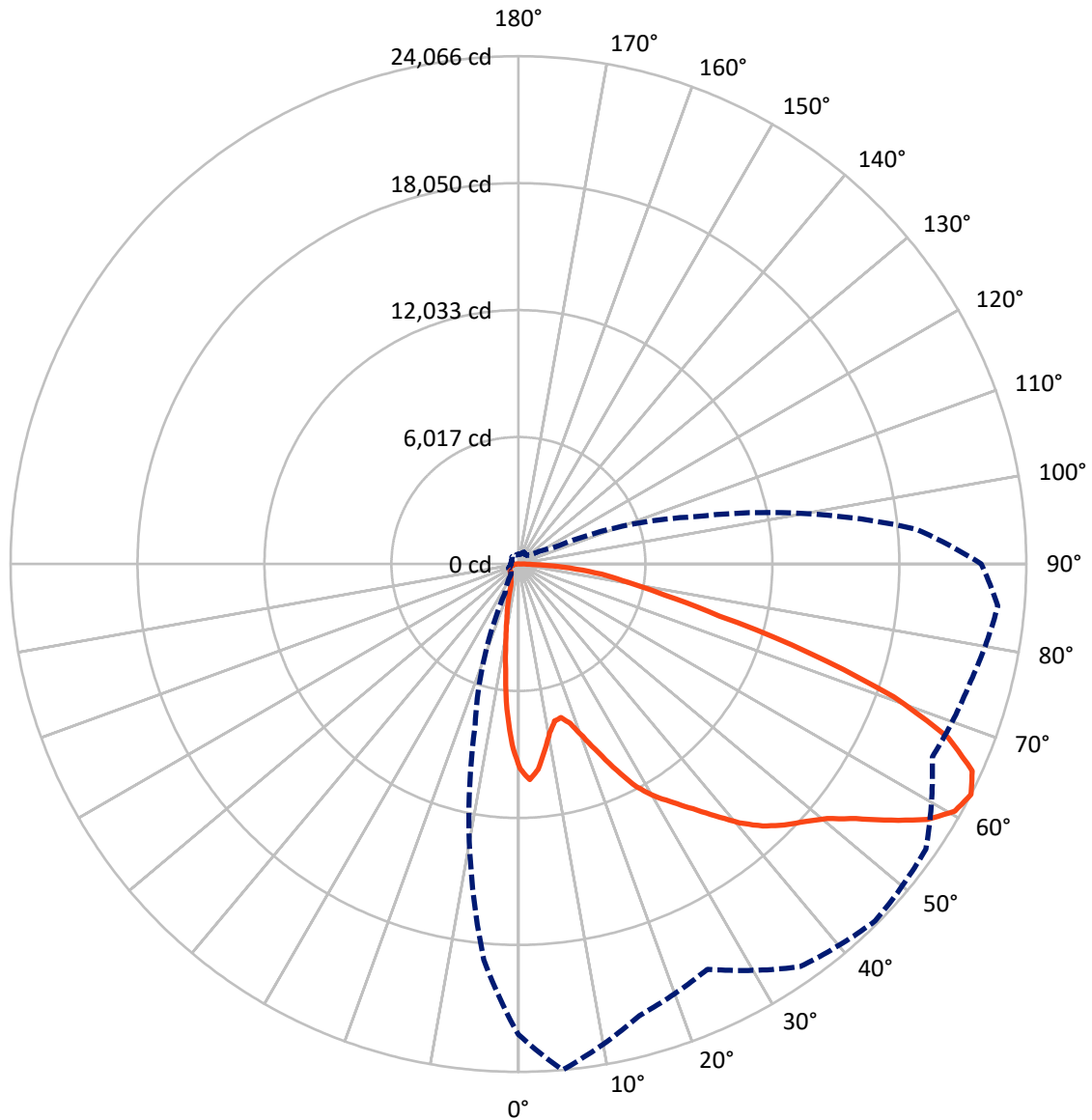
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 17.8 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5045.1	0.0	5045.1
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	23433.9	0.0	23433.9
	% Fixture	82.3	0.0	82.3
Total	Lumens	28479.0	0.0	28479.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	706.1	2.5
10°-20°	1289.7	4.5
20°-30°	1854.9	6.5
30°-40°	2840.9	10.0
40°-50°	4153.5	14.6
50°-60°	6043.4	21.2
60°-70°	7002.1	24.6
70°-80°	3650.1	12.8
80°-90°	938.3	3.3
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°	28479.0	100.0
0°-180°	28479.0	100.0



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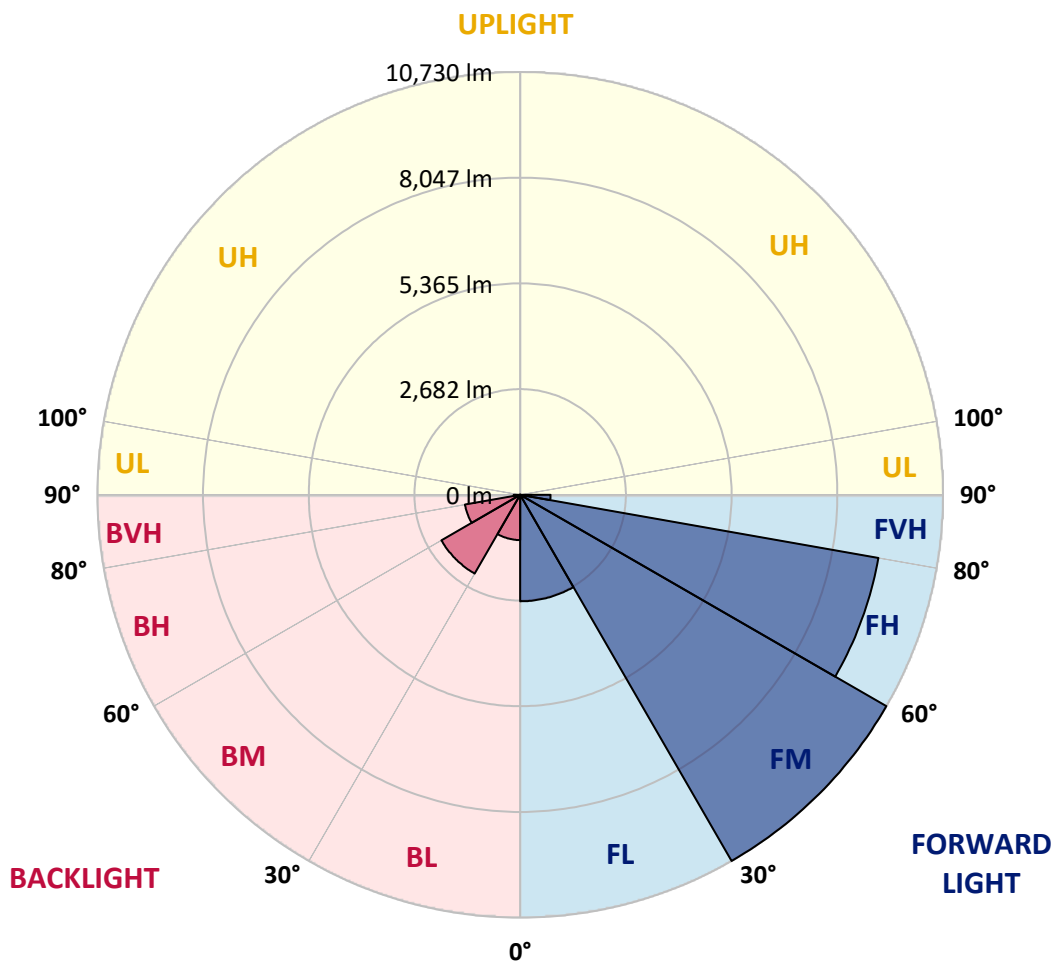
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2702.8	9.5			
FM	(30°-60°)	10729.6	37.7			
FH	(60°-80°)	9229.6	32.4			G4/12000
FVH	(80°-90°)	771.9	2.7			G5
BL	(0°-30°)	1147.8	4.0	B3/2500		
BM	(30°-60°)	2308.3	8.1	B2/2500		
BH	(60°-80°)	1422.6	5.0	B3/2500		G3/2500
BVH	(80°-90°)	166.4	0.6			G2/225
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°	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1
2.5°	10022.9	10235.6	10479.3	10797.2	11014.1	11100.8	11173.1	11051.2	10933.5	10712.6	10634.1
5°	9362.2	9771.0	10442.1	11080.1	11641.8	11963.9	12063.0	11837.9	11437.4	10859.2	10553.6
7.5°	8381.3	8920.3	9863.9	10803.4	11608.7	12145.6	12184.8	11738.8	10950.1	10002.3	9506.7
10°	7524.4	8133.6	9225.9	10276.9	11129.7	11679.0	11571.6	10945.9	9994.0	8916.1	8356.6
12.5°	7026.8	7635.9	8748.9	9816.4	10619.7	10828.2	10609.3	10082.8	9180.4	8100.5	7536.8
15°	6921.5	7549.2	8579.6	9479.9	9977.5	9843.3	9626.5	9360.1	8717.9	7834.1	7289.0
17.5°	7239.5	7941.5	8804.6	9298.1	9277.5	8955.4	8773.7	8825.3	8715.9	8123.2	7553.3
20°	7894.0	8724.1	9376.6	9248.6	8720.0	8267.8	8162.5	8567.2	9073.1	8848.0	8222.3
22.5°	8755.1	9700.8	10157.1	9391.1	8428.8	7941.5	7920.9	8552.7	9723.5	9944.5	9182.5
25°	9727.6	10830.3	10943.9	9643.0	8397.9	7912.6	7894.0	8775.7	10506.1	11030.6	10258.3
27.5°	10917.0	11970.1	11600.5	9979.6	8534.1	7997.3	8009.7	9155.7	11321.7	12104.3	11470.4
30°	11813.2	12779.5	12005.2	10309.9	8753.0	8145.9	8176.9	9566.6	11761.5	12849.7	12438.8
32.5°	12651.5	13471.3	12393.4	10636.2	9073.1	8366.9	8474.3	10078.7	12290.2	13489.9	13353.6
35°	13578.6	14245.6	12825.0	10985.2	9531.5	8755.1	8910.0	10566.0	12814.6	14130.0	14260.1
37.5°	14629.7	15131.4	13293.7	11478.7	10192.2	9473.7	9560.4	11063.6	13180.1	14838.2	15232.6
40°	15724.0	16124.6	13805.8	12137.4	11152.4	10444.2	10485.5	11701.7	13467.1	15571.2	16176.3
42.5°	16663.6	16975.4	14319.9	12955.0	12255.1	11433.2	11468.3	12389.3	13741.8	16203.1	16932.0
45°	17415.2	17644.4	14805.2	13816.1	13432.0	12668.0	12659.8	13089.3	14109.3	16735.8	17512.2
47.5°	18115.2	18237.0	15346.2	14654.4	14652.4	14258.0	13962.7	13915.2	14598.7	17183.9	18018.1
50°	18916.4	18961.8	16060.6	15501.0	16143.2	16081.3	15536.1	14964.2	15232.6	17687.7	18548.8
52.5°	20031.4	20033.5	16946.5	16327.0	17788.9	17985.1	17351.2	16151.5	16170.1	18668.6	19465.6
55°	21342.6	21433.4	18100.7	17316.1	19511.0	19845.5	19248.8	17561.8	17516.4	20250.3	20952.3
57.5°	22356.4	22837.6	19445.0	18552.9	21119.6	21555.3	21074.1	19023.7	19170.3	21881.5	22178.9
60°	22641.4	23766.8	20785.1	19940.5	22480.3	23134.9	22645.5	20603.4	20789.2	22940.8	22532.0
62.5°	22300.7	24066.2	22150.0	21183.6	23287.7	23915.4	23564.4	21637.9	22108.7	22804.5	21935.2
65°	21291.0	23632.5	23335.2	21712.2	22823.1	23046.1	22953.2	21691.5	22825.2	21516.0	20285.4
67.5°	18932.9	21960.0	22806.6	20582.7	20652.9	20413.4	20291.6	20217.2	22019.9	19436.7	17683.6
70°	15397.8	18868.9	20285.4	17225.2	16704.9	16473.6	16073.0	17064.2	19791.9	16560.3	14553.3
72.5°	11860.7	14435.6	16638.8	13058.3	11976.3	12054.8	11600.5	13048.0	16395.1	12802.2	11111.1
75°	8422.6	9843.3	13281.3	9382.8	7949.8	7945.7	7910.5	9391.1	12936.5	9188.7	8129.4
77.5°	6070.7	7086.7	10404.9	6279.3	5641.2	5713.5	5597.9	6382.5	10084.9	6609.7	6023.3
80°	4842.1	5246.9	6725.3	4187.6	4200.0	4369.3	4344.5	4365.2	6634.5	4786.4	4503.5
82.5°	3479.3	3983.2	5141.5	3208.8	2777.3	2956.9	2992.0	3237.7	4681.1	3384.3	2969.3
85°	1784.1	2428.3	4730.6	2779.3	1736.6	1439.2	1656.0	2554.3	4065.7	2027.7	1447.5
87.5°	346.9	673.2	3466.9	1544.5	780.5	394.4	650.4	1082.0	2364.3	367.5	179.6
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°	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1
2.5°	10499.9	10235.6	9987.8	9731.8	9533.5	9292.0	9054.5	8848.0	8647.7	8515.6	8556.9
5°	10243.9	9599.6	9021.5	8484.6	8170.7	7792.9	7456.3	7173.4	6954.5	6814.1	6898.8
7.5°	9077.2	8205.8	7443.9	6735.6	6289.6	5800.2	5407.9	5131.2	4961.9	4866.9	5005.3
10°	7883.7	6905.0	6050.1	5312.9	4873.1	4458.1	4102.9	3809.7	3582.6	3475.2	3530.9
12.5°	7028.8	5940.7	5044.5	4548.9	4171.1	3799.4	3431.8	3089.1	2800.0	2667.8	2641.0
15°	6708.8	5422.4	4507.6	3954.2	3578.4	3173.7	2777.3	2409.7	2135.1	2021.5	1996.7
17.5°	6849.2	5310.9	4189.6	3535.1	2989.9	2498.5	2052.5	1705.6	1503.2	1439.2	1445.4
20°	7342.7	5352.2	3933.6	3103.5	2430.4	1848.1	1402.1	1162.5	1075.8	1061.3	1077.9
22.5°	8020.0	5521.5	3747.8	2731.8	1936.9	1344.2	1042.8	929.2	906.5	904.4	920.9
25°	8914.1	5851.9	3623.9	2401.5	1530.1	1065.5	908.5	844.5	826.0	830.1	846.6
27.5°	9967.2	6271.0	3543.3	2116.5	1257.5	949.8	848.7	792.9	774.3	778.5	790.8
30°	10929.4	6638.6	3423.6	1901.8	1129.5	908.5	815.6	759.9	735.1	735.1	743.4
32.5°	11790.5	6956.6	3283.2	1740.7	1011.8	815.6	739.2	695.9	677.3	683.5	687.6
35°	12554.5	7123.8	3173.7	1645.7	916.8	751.6	675.2	629.8	605.0	609.1	615.3
37.5°	13306.1	7187.8	3101.4	1594.1	848.7	712.4	642.2	605.0	578.2	574.0	572.0
40°	14020.5	7173.4	3033.3	1579.6	803.2	683.5	621.5	588.5	561.6	555.5	553.4
42.5°	14637.9	7125.9	2969.3	1540.4	772.3	662.8	605.0	576.1	549.3	541.0	536.9
45°	15201.6	7097.0	2899.1	1468.1	788.8	654.6	596.7	565.8	541.0	530.7	526.5
47.5°	15827.3	7200.2	2820.6	1389.7	784.7	656.6	596.7	561.6	536.9	526.5	522.4
50°	16572.7	7549.2	2723.6	1282.3	747.5	702.1	594.7	555.5	532.7	526.5	518.3
52.5°	17625.8	8115.0	2589.4	1143.9	718.6	749.6	592.6	545.1	526.5	516.2	505.9
55°	19069.2	8680.7	2415.9	997.3	673.2	716.5	596.7	532.7	512.1	501.8	489.4
57.5°	20252.3	9110.2	2197.0	875.5	631.9	677.3	590.6	518.3	495.6	485.2	474.9
60°	20175.9	9151.5	1988.5	797.0	607.1	609.1	605.0	508.0	481.1	472.9	464.6
62.5°	18926.7	8641.5	1794.4	757.8	588.5	555.5	617.4	495.6	466.7	458.4	452.2
65°	16847.3	7454.2	1691.1	757.8	572.0	526.5	538.9	479.1	452.2	443.9	439.8
67.5°	14210.5	5990.2	1594.1	774.3	549.3	505.9	489.4	462.5	437.8	429.5	425.4
70°	11389.9	4714.1	1525.9	766.1	528.6	483.2	462.5	439.8	415.0	413.0	408.8
72.5°	8934.7	3787.0	1495.0	766.1	497.6	456.3	435.7	419.2	394.4	392.3	386.1
75°	7158.9	2843.3	1366.9	751.6	466.7	421.2	402.7	388.2	363.4	365.5	361.4
77.5°	5544.2	2011.2	1141.9	677.3	427.4	382.0	367.5	357.2	328.3	330.4	330.4
80°	4336.2	1309.1	885.8	561.6	382.0	336.6	326.3	318.0	287.0	291.1	291.1
82.5°	2971.4	778.5	642.2	452.2	328.3	287.0	285.0	272.6	239.5	241.6	245.7
85°	1623.0	512.1	427.4	334.5	258.1	233.3	229.2	223.0	192.0	192.0	194.1
87.5°	299.4	274.6	251.9	220.9	173.4	167.3	161.1	167.3	144.5	140.4	140.4
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°	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1
2.5°	8459.8	8317.3	8218.2	8131.5	7922.9	7937.4	7966.3	8007.6	7877.5	7945.7	8030.3
5°	6814.1	6696.4	6607.6	6469.3	6178.1	6074.9	6008.8	5979.9	5785.8	5827.1	5917.9
7.5°	5023.8	5021.8	4990.8	4835.9	4484.9	4272.2	4131.8	4088.5	3968.7	4014.1	4152.5
10°	3537.1	3574.3	3559.9	3421.5	3107.6	2954.8	2923.9	3010.6	3012.7	3101.4	3338.9
12.5°	2556.3	2535.7	2517.1	2403.5	2168.1	2143.3	2213.5	2333.3	2362.2	2457.2	2705.0
15°	1907.9	1858.4	1848.1	1759.3	1604.4	1627.1	1678.7	1740.7	1742.8	1808.8	2013.3
17.5°	1431.0	1431.0	1447.5	1389.7	1278.2	1267.8	1241.0	1224.5	1199.7	1226.5	1338.0
20°	1110.9	1162.5	1203.8	1170.8	1069.6	1020.0	968.4	935.4	916.8	918.9	951.9
22.5°	951.9	993.2	1046.9	1030.4	945.7	881.7	848.7	826.0	811.5	811.5	830.1
25°	871.4	898.2	947.8	939.5	867.2	815.6	788.8	766.1	749.6	747.5	766.1
27.5°	807.4	823.9	856.9	852.8	778.5	745.4	728.9	714.4	704.1	702.1	720.6
30°	749.6	757.8	774.3	768.1	712.4	679.3	673.2	667.0	660.8	662.8	689.7
32.5°	697.9	704.1	714.4	706.2	652.5	623.6	613.3	605.0	598.8	605.0	636.0
35°	640.1	658.7	671.1	667.0	609.1	574.0	551.3	530.7	522.4	528.6	563.7
37.5°	590.6	621.5	638.0	633.9	574.0	532.7	503.8	499.7	499.7	508.0	543.1
40°	572.0	594.7	609.1	602.9	543.1	501.8	485.2	479.1	481.1	489.4	526.5
42.5°	555.5	576.1	580.2	567.8	508.0	481.1	470.8	462.5	466.7	477.0	514.2
45°	541.0	557.5	555.5	536.9	479.1	460.5	460.5	454.3	456.3	464.6	503.8
47.5°	530.7	538.9	534.8	516.2	458.4	443.9	450.1	450.1	454.3	460.5	499.7
50°	514.2	520.3	516.2	499.7	441.9	429.5	435.7	443.9	448.1	454.3	489.4
52.5°	497.6	501.8	499.7	483.2	425.4	417.1	417.1	425.4	433.6	441.9	472.9
55°	481.1	485.2	487.3	474.9	413.0	404.7	402.7	402.7	410.9	423.3	456.3
57.5°	468.7	468.7	472.9	464.6	400.6	390.3	379.9	382.0	392.3	402.7	435.7
60°	454.3	456.3	462.5	454.3	384.1	367.5	359.3	369.6	373.7	384.1	419.2
62.5°	441.9	441.9	446.0	439.8	369.6	353.1	346.9	357.2	357.2	367.5	402.7
65°	431.6	429.5	429.5	427.4	355.2	338.6	334.5	338.6	340.7	351.0	386.1
67.5°	423.3	413.0	413.0	417.1	340.7	324.2	322.1	322.1	324.2	336.6	367.5
70°	404.7	396.5	394.4	408.8	326.3	305.6	305.6	301.5	305.6	311.8	344.8
72.5°	384.1	377.9	375.8	396.5	311.8	285.0	280.8	278.8	280.8	287.0	318.0
75°	357.2	353.1	357.2	388.2	297.3	262.2	256.0	254.0	254.0	256.0	289.1
77.5°	326.3	322.1	353.1	361.4	289.1	235.4	229.2	225.1	220.9	220.9	258.1
80°	289.1	287.0	340.7	305.6	276.7	206.5	196.2	190.0	185.8	183.8	220.9
82.5°	251.9	247.8	291.1	239.5	229.2	169.3	154.9	142.5	136.3	136.3	169.3
85°	206.5	204.4	229.2	175.5	159.0	123.9	103.2	92.9	84.7	84.7	109.4
87.5°	150.7	146.6	142.5	105.3	80.5	55.8	39.2	37.2	33.0	31.0	45.4
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: P197184

CATALOG NUMBER: NAV-AF-06-D-UNV-SLL-8030-1200

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1	9709.1
2.5°	8156.3	8327.7	8651.8	8918.2	9273.4	9558.3	9882.5	10022.9
5°	6085.2	6355.7	6851.3	7274.6	7861.0	8404.1	9023.5	9362.2
7.5°	4365.2	4765.7	5141.5	5670.2	6403.2	7132.1	7933.3	8381.3
10°	3611.5	3979.0	4301.1	4676.9	5242.7	6062.5	7018.5	7524.4
12.5°	2992.0	3388.5	3729.2	4131.8	4606.7	5348.0	6438.3	7026.8
15°	2294.1	2725.6	3134.5	3619.7	4202.0	5048.6	6264.8	6921.5
17.5°	1571.4	2033.9	2537.7	3130.4	3832.4	4922.7	6430.0	7239.5
20°	1067.5	1406.2	1953.4	2655.4	3500.0	4862.8	6793.5	7894.0
22.5°	877.6	1030.4	1441.3	2209.4	3227.4	4928.9	7384.0	8755.1
25°	805.3	887.9	1121.2	1817.1	3018.9	5104.4	8183.1	9727.6
27.5°	759.9	830.1	982.9	1536.3	2826.8	5343.9	9155.7	10917.0
30°	733.0	799.1	927.1	1391.7	2651.3	5550.4	9991.9	11813.2
32.5°	673.2	722.7	828.0	1309.1	2525.3	5717.6	10729.1	12651.5
35°	600.9	660.8	747.5	1255.4	2521.2	5796.1	11422.9	13578.6
37.5°	574.0	631.9	695.9	1226.5	2546.0	5862.2	12271.6	14629.7
40°	557.5	609.1	660.8	1222.4	2566.6	5913.8	13101.7	15724.0
42.5°	543.1	594.7	654.6	1193.5	2558.4	5984.0	13836.8	16663.6
45°	538.9	590.6	669.0	1150.1	2556.3	6093.5	14421.1	17415.2
47.5°	534.8	613.3	664.9	1102.6	2548.1	6324.7	15079.8	18115.2
50°	530.7	654.6	636.0	1036.6	2486.1	6719.1	15965.6	18916.4
52.5°	528.6	660.8	605.0	945.7	2374.6	7303.5	17262.4	20031.4
55°	520.3	627.7	551.3	826.0	2213.5	7933.3	18652.0	21342.6
57.5°	501.8	559.6	520.3	708.3	1982.3	8373.1	19678.3	22356.4
60°	547.2	481.1	499.7	648.4	1705.6	8451.5	19723.7	22641.4
62.5°	522.4	437.8	479.1	627.7	1511.5	7939.5	18821.4	22300.7
65°	417.1	415.0	460.5	648.4	1482.6	6793.5	17297.5	21291.0
67.5°	379.9	398.5	441.9	673.2	1501.2	5352.2	15055.0	18932.9
70°	355.2	377.9	417.1	695.9	1534.2	4216.5	12120.8	15397.8
72.5°	330.4	349.0	392.3	718.6	1511.5	3326.5	9700.8	11860.7
75°	299.4	315.9	357.2	658.7	1296.7	2444.8	7708.2	8422.6
77.5°	264.3	278.8	313.9	520.3	974.6	1701.5	5773.4	6070.7
80°	227.1	233.3	260.2	379.9	636.0	1018.0	4394.1	4842.1
82.5°	179.6	181.7	198.2	278.8	396.5	650.4	3047.8	3479.3
85°	115.6	119.8	128.0	196.2	266.4	417.1	1556.9	1784.1
87.5°	39.2	45.4	45.4	95.0	130.1	231.3	477.0	346.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)