

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: P270527

Luminaire Tested: **NAV-AF-04-D-UNV-SL4-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270527
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-04-D-UNV-SL4-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18942.6 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G4

Input Watts (W): 258
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

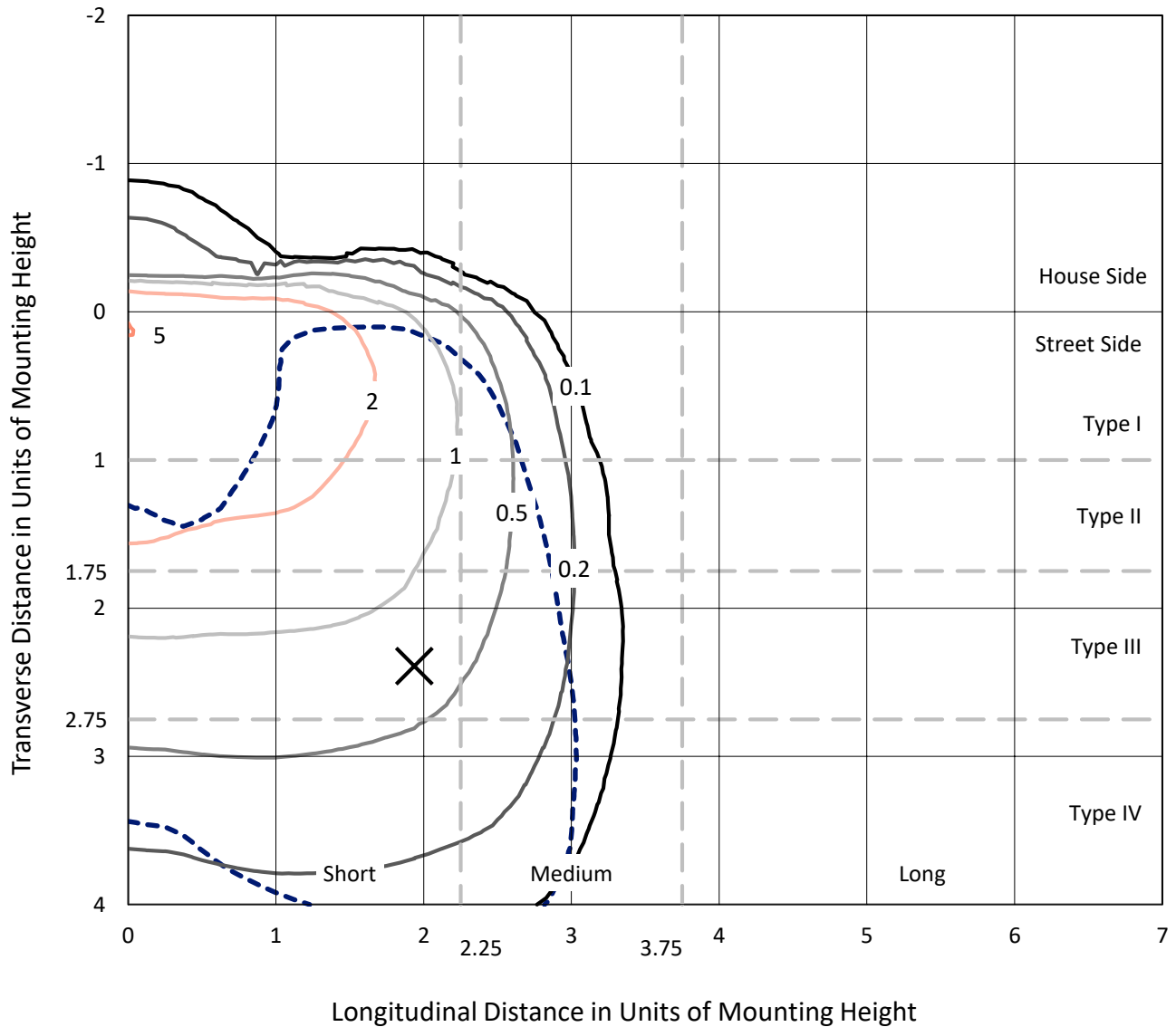


REPORT NUMBER: P270527

CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-1200-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

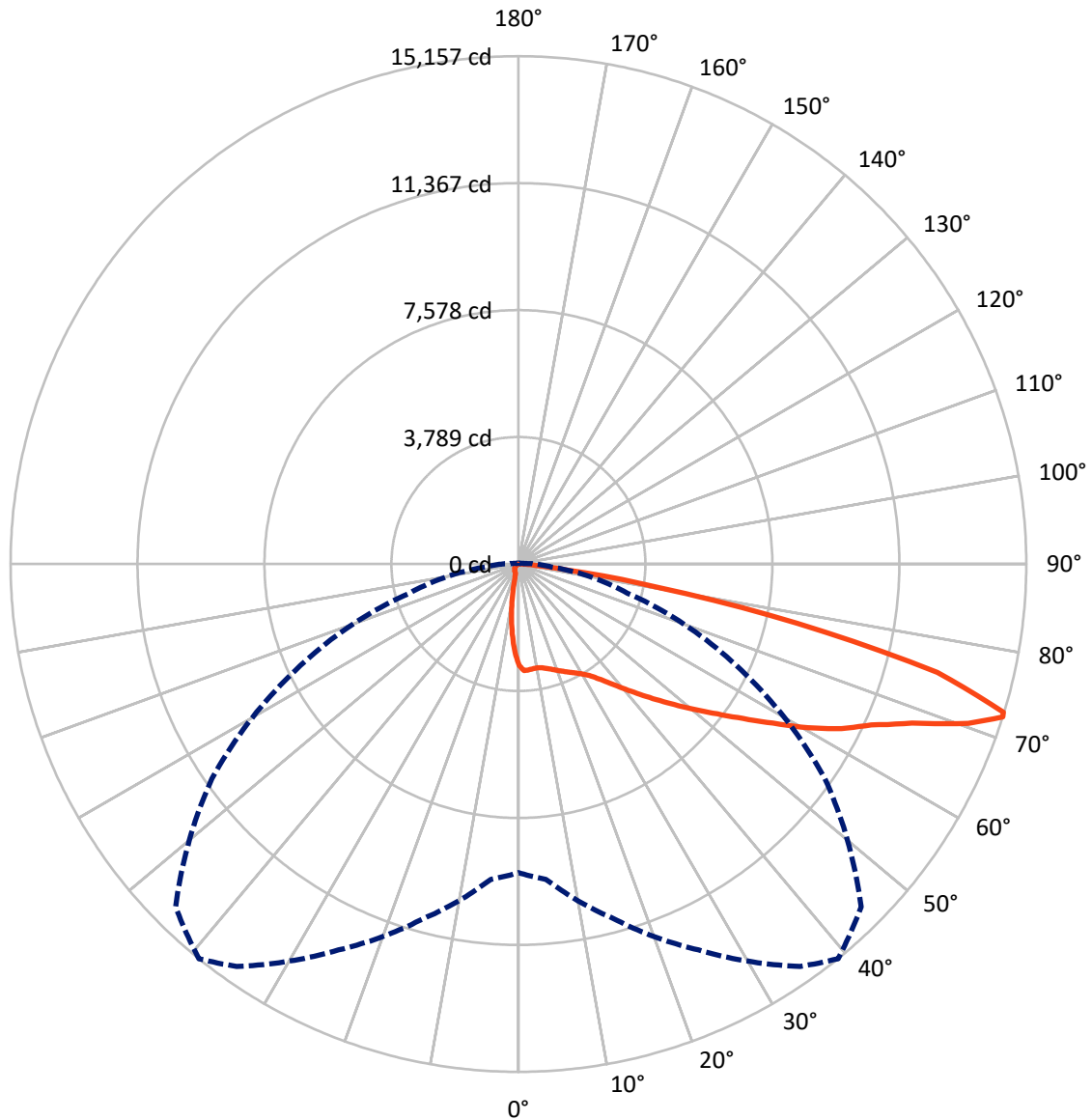


Based on 25 foot mounting height. Maximum calculated value = 5.1 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270527

CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-1200-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P270527

CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-1200-HSS

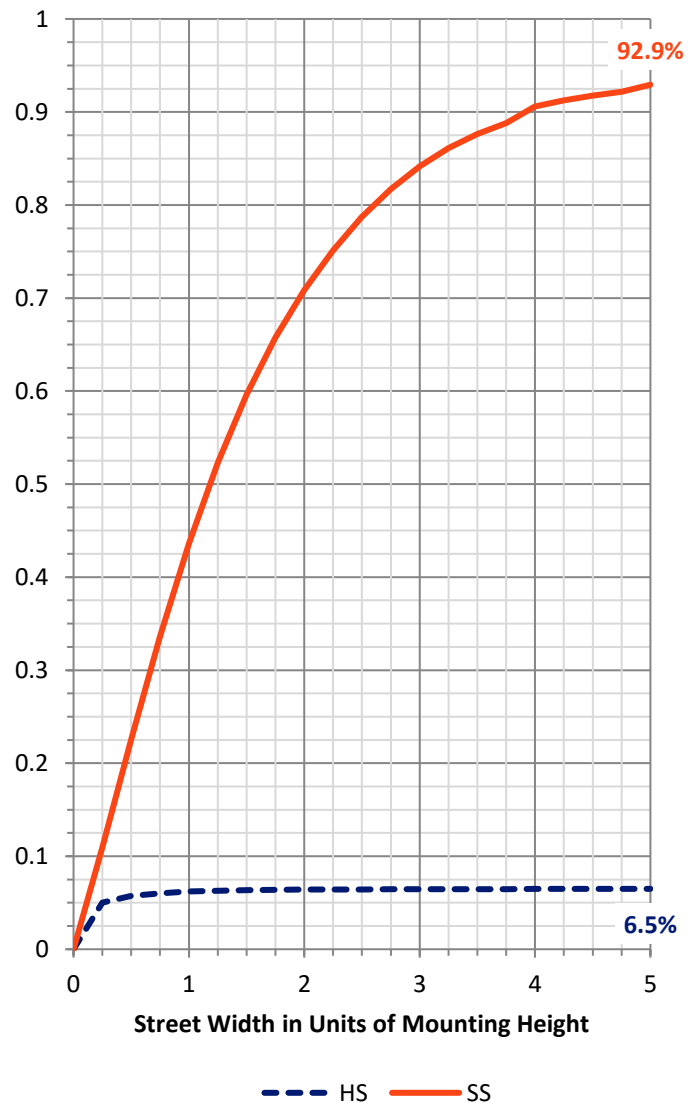
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1241.5	0.0	1241.5
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	17701.1	0.0	17701.1
	% Fixture	93.4	0.0	93.4
Total	Lumens	18942.6	0.0	18942.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	246.6	1.3
10°-20°	597.0	3.2
20°-30°	991.6	5.2
30°-40°	1580.3	8.3
40°-50°	2608.6	13.8
50°-60°	3939.4	20.8
60°-70°	5131.7	27.1
70°-80°	3467.6	18.3
80°-90°	379.8	2.0
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°	18942.6	100.0
0°-180°	18942.6	100.0



REPORT NUMBER: P270527

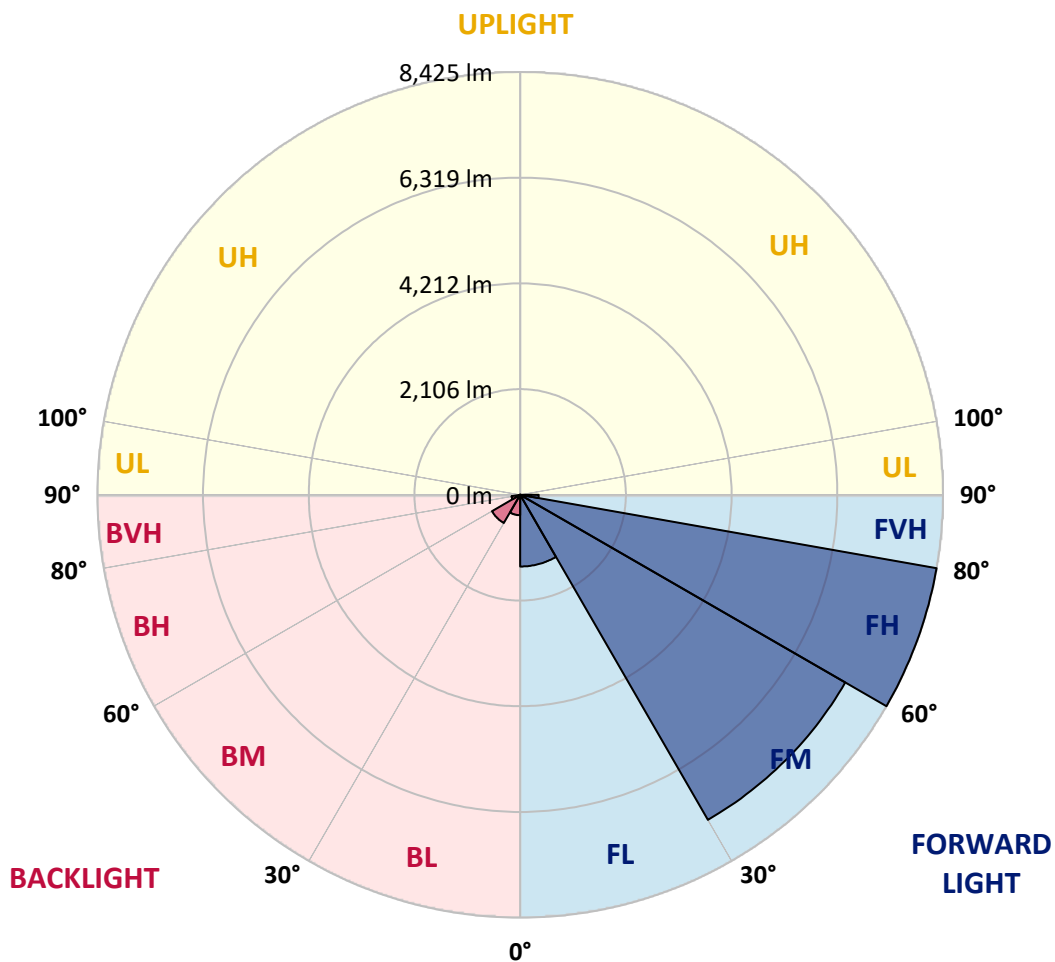
CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-1200-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1428.7	7.5			
FM	(30°-60°)	7478.8	39.5			
FH	(60°-80°)	8424.8	44.5			G4/12000
FVH	(80°-90°)	368.8	1.9			G3/500
BL	(0°-30°)	406.5	2.1	B1/500		
BM	(30°-60°)	649.5	3.4	B1/1000		
BH	(60°-80°)	174.5	0.9	B1/500		G1/500
BVH	(80°-90°)	10.9	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G4

Type IV Short





REPORT NUMBER: P270527

CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-1200-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9
2.5°	3228.5	3234.3	3226.9	3213.5	3194.3	3182.2	3165.8	3130.1	3085.5	3046.8	3002.0
5°	3253.8	3256.7	3247.8	3222.5	3192.8	3176.3	3155.4	3116.8	3070.5	3017.0	2936.6
7.5°	3261.1	3259.7	3249.3	3218.0	3171.8	3151.1	3115.3	3067.6	3020.0	2970.9	2880.0
10°	3258.2	3258.2	3250.7	3221.1	3169.0	3149.5	3109.4	3058.6	2999.1	2949.9	2853.1
12.5°	3247.8	3253.8	3249.3	3232.9	3194.3	3179.3	3143.6	3093.0	3036.4	2985.7	2883.0
15°	3261.1	3270.1	3279.2	3273.2	3250.7	3237.4	3204.7	3152.5	3106.3	3052.7	2942.6
17.5°	3314.8	3334.1	3355.0	3356.4	3332.7	3308.8	3271.6	3218.0	3173.4	3124.2	3005.1
20°	3416.1	3430.9	3469.8	3477.1	3429.5	3395.2	3343.1	3280.6	3236.0	3194.3	3063.2
22.5°	3566.5	3582.9	3614.2	3603.7	3523.3	3483.1	3417.6	3346.0	3300.0	3276.1	3130.1
25°	3794.4	3798.8	3806.3	3760.0	3627.5	3582.9	3502.4	3422.1	3384.9	3381.8	3225.5
27.5°	4062.3	4068.3	4035.5	3932.8	3743.6	3685.7	3594.7	3521.9	3504.0	3526.2	3346.0
30°	4369.1	4370.7	4279.7	4113.0	3877.8	3813.7	3719.9	3639.5	3655.8	3710.9	3501.0
32.5°	4683.4	4668.4	4543.4	4326.0	4060.9	3983.4	3903.0	3822.6	3870.3	3981.9	3727.2
35°	4970.7	4964.8	4817.4	4564.2	4299.2	4230.7	4172.5	4087.6	4165.1	4346.8	4035.5
37.5°	5258.1	5253.6	5085.5	4821.8	4592.6	4543.4	4500.1	4434.7	4561.2	4827.9	4448.0
40°	5575.3	5567.9	5360.8	5107.8	4933.5	4906.7	4881.4	4853.2	5069.0	5439.9	4961.8
42.5°	5967.0	5934.3	5652.8	5418.9	5308.8	5316.2	5317.6	5346.1	5684.0	6168.0	5567.9
45°	6416.8	6343.7	5946.2	5752.6	5721.2	5766.0	5810.5	5928.3	6400.3	7006.4	6238.0
47.5°	6853.0	6735.4	6284.2	6111.3	6175.5	6267.7	6375.0	6604.2	7204.4	7883.4	6845.5
50°	7228.3	7107.7	6619.3	6476.3	6680.2	6817.2	7007.9	7354.9	8053.2	8625.0	7228.3
52.5°	7523.1	7427.8	6973.6	6878.3	7240.2	7427.8	7727.1	8182.8	8854.5	9113.6	7496.4
55°	7740.5	7692.8	7313.1	7326.5	7862.7	8133.7	8506.0	9021.1	9530.5	9493.3	7697.3
57.5°	7986.2	7949.0	7669.1	7855.1	8611.7	8961.6	9392.0	9806.0	10021.9	9798.5	7893.9
60°	8237.8	8249.9	8100.9	8495.5	9537.9	9925.2	10300.3	10403.1	10443.3	10108.3	8100.9
62.5°	8428.4	8479.1	8492.5	9186.4	10488.0	10818.6	10980.9	10907.8	10899.0	10523.7	8084.6
65°	8647.4	8779.9	9000.4	9944.4	11351.7	11569.1	11685.2	11791.1	11567.7	10647.3	7289.3
67.5°	9025.7	9234.1	9730.0	10873.7	12349.4	12671.1	13000.2	12888.5	11667.4	9392.0	5553.1
70°	9535.0	9789.5	10665.1	12087.4	13703.0	14242.1	14517.6	12800.6	9905.7	6489.6	2929.2
72°	9213.2	9444.2	10954.1	12706.9	14662.0	15156.5	14466.9	11165.6	7180.6	3364.0	981.4
72.5°	8900.5	9138.8	10861.8	12699.3	14757.4	15135.6	14137.9	10520.8	6354.2	2617.9	676.1
75°	6175.5	6476.3	9311.7	11415.8	13326.3	12910.8	10817.1	6370.5	2302.1	449.7	223.4
77.5°	3192.8	3425.0	5648.4	8066.7	9287.8	8506.0	6392.9	2763.8	637.3	238.3	147.4
80°	1979.1	2093.7	2641.7	3974.6	4824.7	4220.1	2820.4	1116.9	408.0	141.5	117.7
82.5°	1024.5	1112.5	1663.4	1603.8	1782.4	1481.7	1040.9	935.1	251.6	87.9	120.6
85°	336.5	357.3	1021.6	1066.2	762.4	512.3	461.5	891.9	72.9	56.7	102.8
87.5°	44.6	52.1	359.0	610.6	375.2	232.3	276.9	314.1	25.3	31.4	28.2
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: P270527

CATALOG NUMBER: NAV-AF-04-D-UNV-SL4-7027-1200-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9	3031.9
2.5°	2972.3	2953.0	2892.0	2830.9	2760.9	2696.8	2646.1	2613.3	2628.4	2579.3	2586.6
5°	2887.4	2838.3	2704.3	2559.8	2403.4	2257.5	2141.4	2055.1	2038.7	1964.1	1967.2
7.5°	2805.5	2725.1	2507.7	2269.5	2010.3	1800.4	1609.8	1442.9	1383.4	1322.3	1286.6
10°	2760.9	2650.7	2342.4	1995.4	1630.7	1322.3	1054.3	844.3	756.6	692.5	661.2
12.5°	2774.2	2628.4	2218.9	1746.8	1267.2	875.6	595.7	442.2	388.6	359.0	348.5
15°	2818.9	2632.8	2107.2	1504.0	921.8	530.1	350.0	299.3	294.9	293.3	291.9
17.5°	2860.7	2637.2	1989.4	1250.9	616.4	338.0	281.4	276.9	276.9	276.9	276.9
20°	2903.9	2638.7	1859.9	985.8	405.0	276.9	265.1	262.0	265.1	265.1	265.1
22.5°	2954.4	2649.2	1734.8	728.2	299.3	260.6	253.1	251.6	253.1	253.1	251.6
25°	3017.0	2671.5	1599.3	521.1	271.0	250.2	242.7	241.3	242.7	241.3	241.3
27.5°	3100.4	2701.4	1441.5	373.8	259.2	239.8	232.3	232.3	232.3	230.9	230.9
30°	3207.6	2737.0	1230.0	294.9	247.3	229.3	223.4	223.4	221.9	220.4	220.4
32.5°	3361.0	2795.0	999.3	266.5	233.7	216.0	209.9	211.5	209.9	208.4	207.0
35°	3578.4	2886.0	771.4	251.6	220.4	202.5	196.5	196.5	196.5	193.6	193.6
37.5°	3886.6	3024.5	577.8	236.8	207.0	189.2	181.6	181.6	180.2	177.2	178.8
40°	4267.8	3198.7	418.4	223.4	193.6	174.2	168.3	165.3	162.4	159.3	159.3
42.5°	4726.5	3368.5	314.1	209.9	180.2	162.4	154.9	152.0	146.0	143.0	141.5
45°	5240.3	3548.7	260.6	193.6	165.3	148.8	143.0	137.0	129.5	125.0	123.5
47.5°	5673.6	3658.7	232.3	177.2	150.3	135.6	129.5	120.6	111.7	108.8	108.8
50°	5934.3	3612.7	208.4	160.8	135.6	122.1	114.7	102.8	96.7	93.9	92.3
52.5°	6080.2	3475.6	189.2	147.4	122.1	107.2	96.7	86.3	83.5	80.4	80.4
55°	6179.9	3277.6	168.3	134.0	110.2	93.9	81.8	74.5	71.4	70.0	68.5
57.5°	6275.2	3036.4	148.8	122.1	98.3	83.5	70.0	67.1	61.1	59.6	59.6
60°	6303.5	2704.3	131.1	108.8	87.9	72.9	61.1	56.7	50.7	49.1	49.1
62.5°	5943.1	2151.8	116.2	92.3	77.4	62.5	53.5	47.7	41.7	41.7	41.7
65°	4966.3	1460.9	99.8	80.4	68.5	53.5	46.2	38.6	35.8	35.8	35.8
67.5°	3459.3	814.6	84.9	68.5	58.1	44.6	38.6	32.8	31.4	32.8	32.8
70°	1559.1	323.1	71.4	56.7	47.7	37.2	32.8	28.2	31.4	31.4	31.4
72°	467.6	172.7	59.6	46.2	38.6	32.8	28.2	26.8	29.7	31.4	31.4
72.5°	346.9	154.9	56.7	44.6	38.6	31.4	26.8	26.8	29.7	31.4	31.4
75°	178.8	105.7	43.2	32.8	28.2	25.3	22.4	25.3	29.7	29.7	29.7
77.5°	140.0	86.3	35.8	25.3	23.9	22.4	20.8	23.9	26.8	26.8	26.8
80°	131.1	56.7	28.2	23.9	20.8	19.4	19.4	20.8	23.9	25.3	25.3
82.5°	132.5	46.2	25.3	22.4	19.4	17.8	17.8	19.4	22.4	23.9	23.9
85°	84.9	31.4	22.4	19.4	17.8	16.3	16.3	17.8	20.8	22.4	22.4
87.5°	28.2	23.9	19.4	17.8	14.9	14.9	14.9	14.9	17.8	19.4	20.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)