

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: P270688

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270688  
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-06-D-UNV-SL4-7027-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 2700K, 1050mA 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: 25494.9 lumens  
Efficiency: N/A  
Efficacy: 76.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G4

Input Watts (W): 333  
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

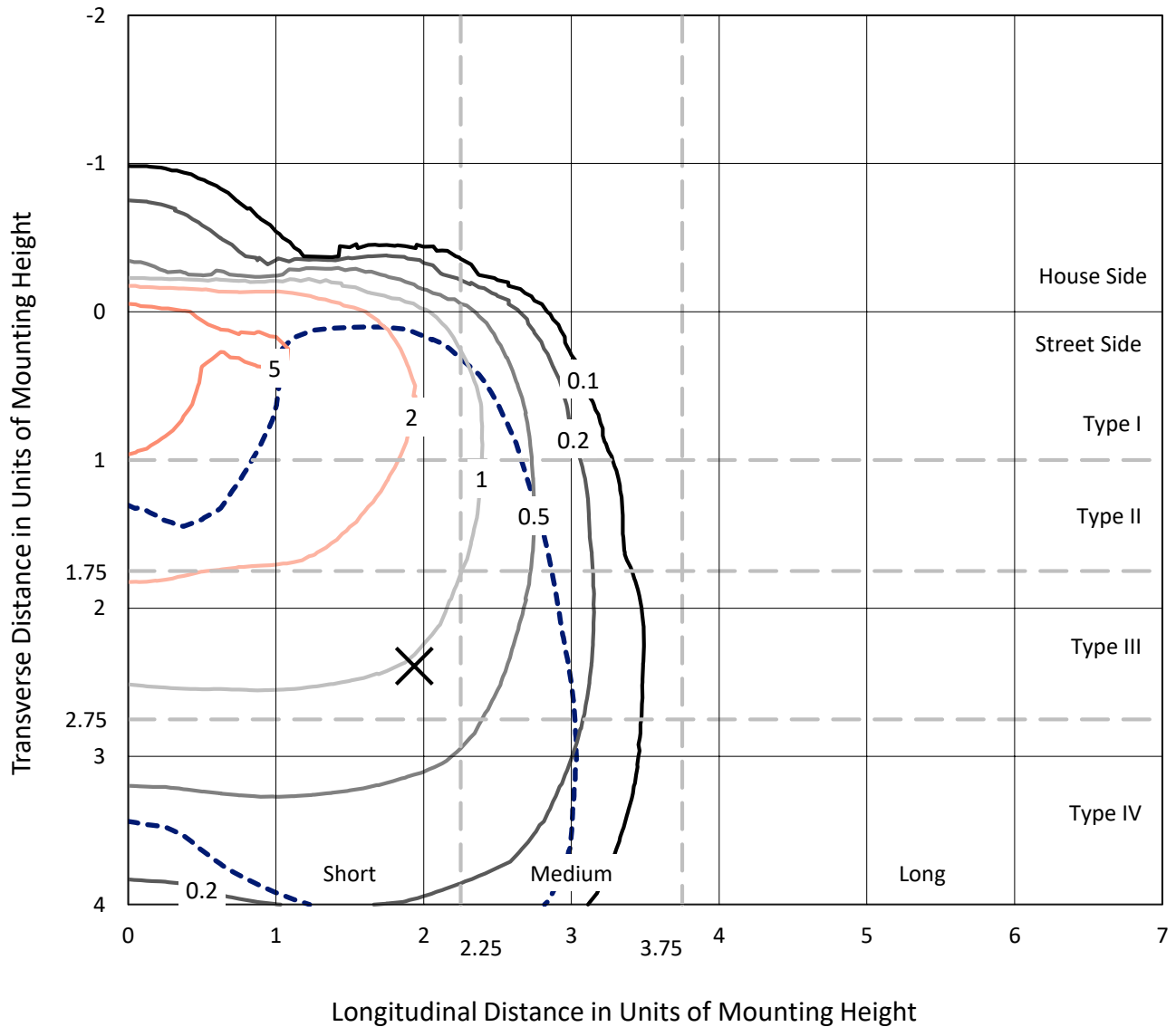


REPORT NUMBER: P270688

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-HSS

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

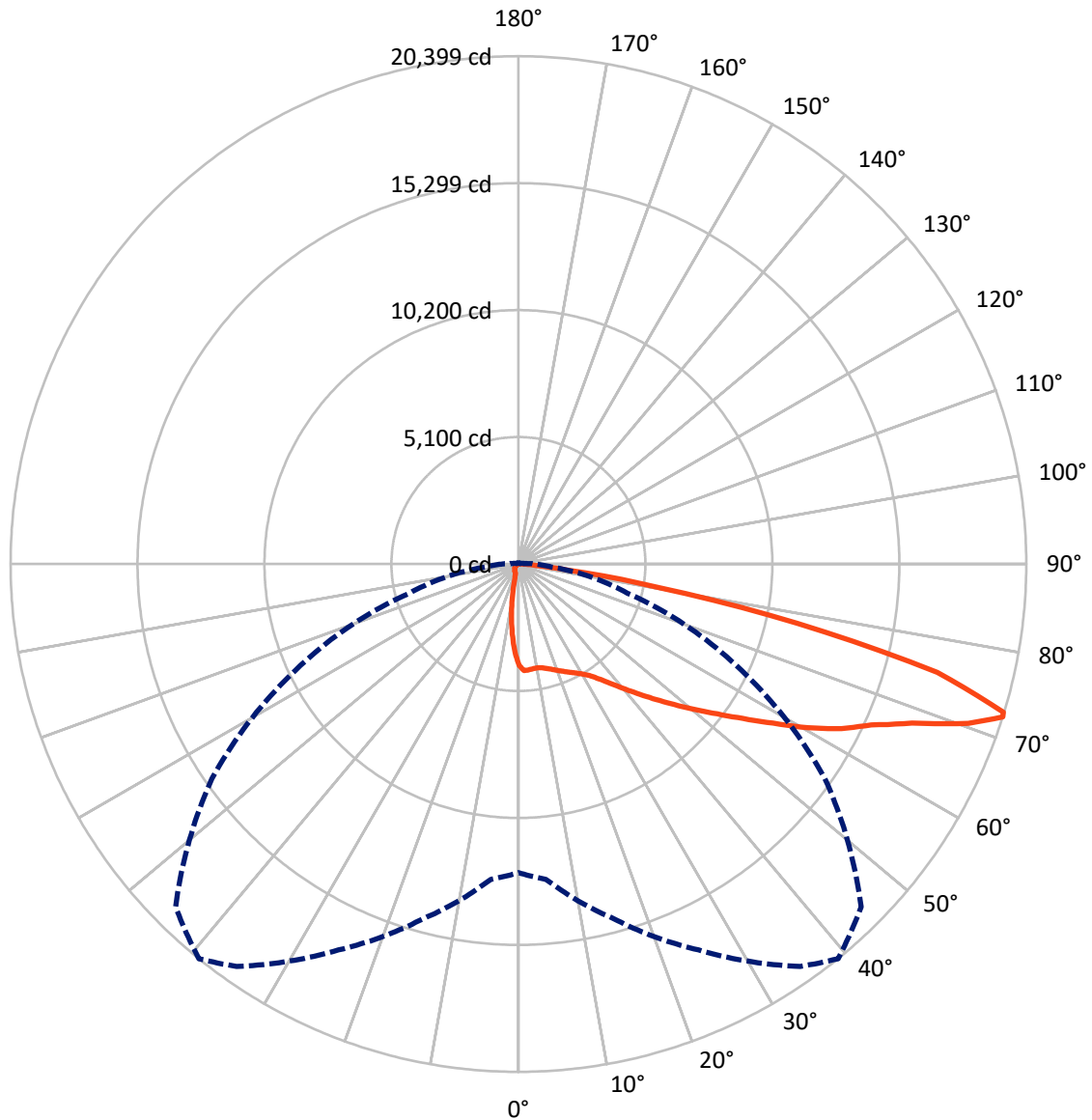


Based on 25 foot mounting height. Maximum calculated value = 6.9 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270688

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-HSS

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P270688

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-HSS

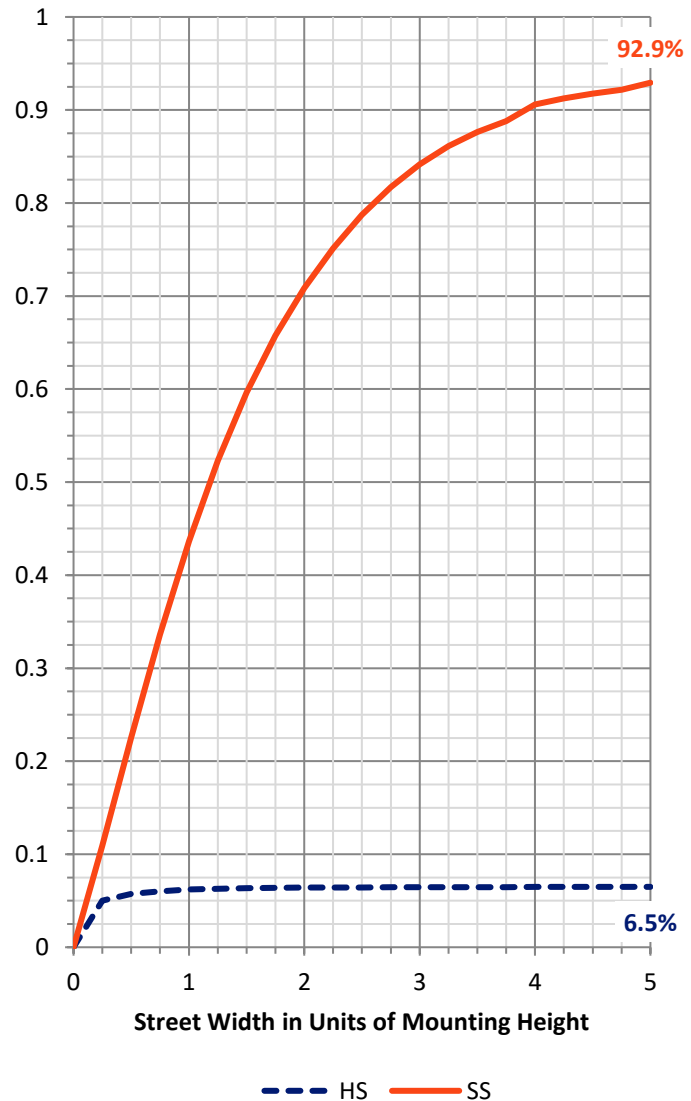
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1670.9	0.0	1670.9
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	23824.1	0.0	23824.1
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	25494.9	0.0	25494.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	331.9	1.3
10°-20°	803.6	3.2
20°-30°	1334.6	5.2
30°-40°	2127.0	8.3
40°-50°	3510.9	13.8
50°-60°	5302.1	20.8
60°-70°	6906.8	27.1
70°-80°	4667.0	18.3
80°-90°	511.1	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°	25494.9	100.0
0°-180°	25494.9	100.0

**Coefficient of Utilization**



REPORT NUMBER: P270688

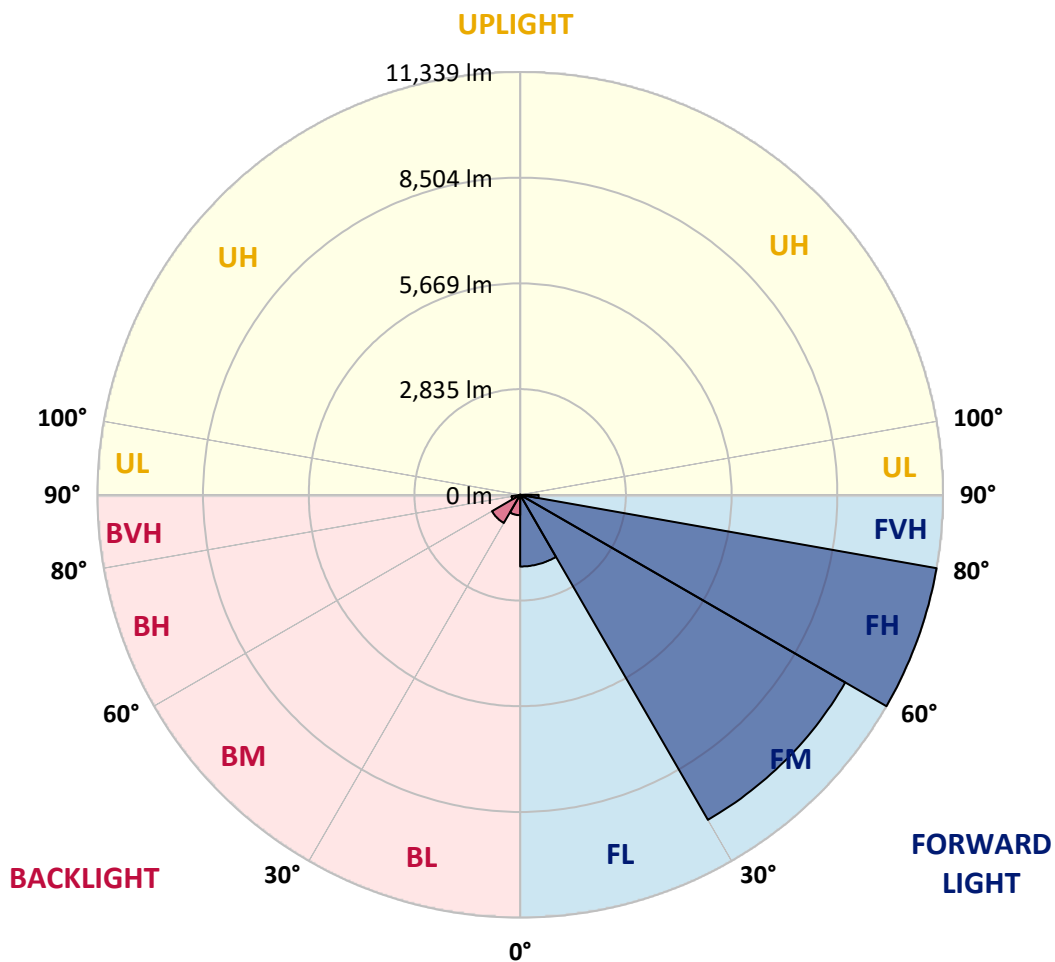
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-HSS

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1922.9	7.5			
FM	(30°-60°)	10065.7	39.5			
FH	(60°-80°)	11339.0	44.5			G4/12000
FVH	(80°-90°)	496.4	1.9			G3/500
BL	(0°-30°)	547.1	2.1	B2/1000		
BM	(30°-60°)	874.2	3.4	B1/1000		
BH	(60°-80°)	234.8	0.9	B1/500		G1/500
BVH	(80°-90°)	14.7	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-G4**

Type IV Short





REPORT NUMBER: P270688

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6
2.5°	4345.2	4353.1	4343.1	4325.2	4299.1	4283.1	4261.0	4213.0	4152.8	4100.7	4040.5
5°	4379.2	4383.3	4371.2	4337.1	4297.1	4275.0	4246.9	4194.8	4132.7	4060.6	3952.4
7.5°	4389.3	4387.3	4373.3	4331.2	4269.0	4241.0	4192.8	4128.7	4064.7	3998.4	3876.1
10°	4385.3	4385.3	4375.3	4335.2	4265.1	4238.9	4184.8	4116.8	4036.5	3970.4	3840.2
12.5°	4371.2	4379.2	4373.3	4351.2	4299.1	4279.0	4230.9	4162.8	4086.7	4018.5	3880.1
15°	4389.3	4401.3	4413.4	4405.3	4375.3	4357.1	4313.1	4243.0	4180.8	4108.7	3960.4
17.5°	4461.4	4487.6	4515.6	4517.5	4485.4	4453.3	4403.3	4331.2	4271.0	4204.8	4044.6
20°	4597.7	4617.7	4669.8	4679.9	4615.9	4569.7	4499.5	4415.3	4355.3	4299.1	4122.7
22.5°	4800.2	4822.2	4864.3	4850.3	4742.1	4688.0	4599.7	4503.6	4441.4	4409.3	4213.0
25°	5106.9	5112.9	5122.9	5060.7	4882.3	4822.2	4713.9	4605.7	4555.7	4551.6	4341.1
27.5°	5467.5	5475.6	5431.5	5293.3	5038.7	4960.5	4838.2	4740.0	4716.0	4746.0	4503.6
30°	5880.5	5882.5	5760.2	5535.7	5219.1	5132.8	5006.7	4898.4	4920.3	4994.5	4712.0
32.5°	6303.3	6283.3	6114.9	5822.4	5465.6	5361.4	5253.1	5145.0	5209.0	5359.4	5016.7
35°	6690.1	6682.1	6483.7	6143.0	5786.3	5694.0	5615.8	5501.6	5605.9	5850.4	5431.5
37.5°	7076.9	7071.0	6844.5	6489.7	6181.1	6114.9	6056.8	5968.6	6138.9	6497.7	5986.7
40°	7503.9	7493.8	7215.2	6874.5	6640.0	6604.0	6569.9	6531.8	6822.4	7321.5	6678.1
42.5°	8030.9	7986.9	7608.0	7293.3	7145.1	7155.1	7157.2	7195.2	7650.1	8301.5	7493.8
45°	8636.2	8538.1	8002.9	7742.4	7700.4	7760.4	7820.6	7978.8	8614.2	9430.0	8395.7
47.5°	9223.4	9065.2	8457.9	8225.4	8311.6	8435.9	8580.2	8888.8	9696.6	10610.4	9213.5
50°	9728.6	9566.2	8908.9	8716.4	8991.0	9175.4	9431.9	9899.0	10838.9	11608.5	9728.6
52.5°	10125.4	9997.1	9385.9	9257.7	9744.6	9997.1	10399.9	11013.3	11917.3	12265.9	10089.4
55°	10418.1	10354.0	9842.8	9860.9	10582.5	10947.1	11448.2	12141.8	12827.2	12777.0	10360.0
57.5°	10748.7	10698.6	10321.9	10572.3	11590.6	12061.5	12640.7	13197.9	13488.5	13187.8	10624.4
60°	11087.5	11103.5	10903.1	11434.2	12837.1	13358.2	13863.4	14001.6	14055.7	13604.8	10903.1
62.5°	11343.9	11412.2	11430.2	12364.1	14115.8	14560.7	14779.3	14681.1	14669.1	14163.9	10881.0
65°	11638.6	11817.1	12113.6	13384.3	15278.4	15571.0	15727.3	15869.5	15569.0	14330.3	9810.7
67.5°	12147.7	12428.3	13095.8	14634.9	16621.2	17054.1	17497.0	17346.7	15703.2	12640.7	7473.8
70°	12833.1	13175.9	14354.3	16268.5	18443.0	19168.6	19539.4	17228.5	13332.3	8734.5	3942.3
72°	12400.3	12710.8	14743.3	17102.2	19733.7	20399.3	19471.2	15027.7	9664.4	4527.5	1320.8
72.5°	11979.3	12300.0	14618.9	17092.2	19862.1	20371.1	19028.3	14160.0	8552.1	3523.4	910.0
75°	8311.6	8716.4	12532.6	15364.5	17936.0	17376.8	14558.8	8574.1	3098.6	605.3	300.7
77.5°	4297.1	4609.7	7602.0	10856.9	12500.5	11448.2	8604.1	3719.9	857.8	320.6	198.4
80°	2663.7	2818.0	3555.5	5349.2	6493.8	5680.1	3796.1	1503.1	549.1	190.4	158.3
82.5°	1378.9	1497.1	2238.8	2158.5	2399.1	1994.1	1400.9	1258.6	338.8	118.2	162.4
85°	452.9	481.0	1374.9	1435.0	1026.1	689.4	621.3	1200.6	98.3	76.1	138.2
87.5°	60.1	70.2	483.0	821.7	505.0	312.7	372.7	422.9	34.0	42.1	38.1
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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CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6	4080.6
2.5°	4000.4	3974.5	3892.3	3810.0	3715.8	3629.7	3561.5	3517.5	3537.4	3471.3	3481.4
5°	3886.2	3820.1	3639.8	3445.3	3234.8	3038.4	2882.1	2765.8	2743.9	2643.6	2647.7
7.5°	3775.9	3667.8	3375.1	3054.4	2705.8	2423.1	2166.6	1942.1	1861.9	1779.7	1731.7
10°	3715.8	3567.6	3152.7	2685.8	2194.6	1779.7	1419.1	1136.4	1018.1	932.0	890.0
12.5°	3734.0	3537.4	2986.3	2351.0	1705.6	1178.4	801.6	595.2	523.2	483.0	468.9
15°	3794.0	3543.5	2835.9	2024.3	1240.6	713.6	471.0	402.9	396.8	394.9	392.7
17.5°	3850.1	3549.6	2677.7	1683.6	829.8	454.9	378.7	372.7	372.7	372.7	372.7
20°	3908.3	3551.4	2503.2	1326.7	545.1	372.7	356.7	352.8	356.7	356.7	356.7
22.5°	3976.3	3565.6	2335.0	980.1	402.9	350.8	340.6	338.8	340.6	340.6	338.8
25°	4060.6	3595.6	2152.6	701.4	364.8	336.8	326.8	324.6	326.8	324.6	324.6
27.5°	4172.8	3635.7	1940.1	503.1	348.7	322.8	312.7	312.7	312.7	310.6	310.6
30°	4317.2	3683.8	1655.4	396.8	332.7	308.7	300.7	300.7	298.6	296.6	296.6
32.5°	4523.5	3761.9	1344.9	358.8	314.6	290.6	282.5	284.7	282.5	280.6	278.6
35°	4816.3	3884.2	1038.3	338.8	296.6	272.5	264.6	264.6	264.6	260.6	260.6
37.5°	5231.1	4070.6	777.7	318.7	278.6	254.5	244.5	244.5	242.5	238.5	240.4
40°	5744.1	4305.0	563.1	300.7	260.6	234.5	226.6	222.5	218.5	214.4	214.4
42.5°	6361.4	4533.6	422.9	282.5	242.5	218.5	208.4	204.5	196.4	192.3	190.4
45°	7053.0	4776.1	350.8	260.6	222.5	200.4	192.3	184.4	174.5	168.3	166.4
47.5°	7636.1	4924.4	312.7	238.5	202.4	182.4	174.5	162.4	150.3	146.3	146.3
50°	7986.9	4862.3	280.6	216.4	182.4	164.3	154.2	138.2	130.3	126.2	124.2
52.5°	8183.3	4678.0	254.5	198.4	164.3	144.3	130.3	116.2	112.3	108.2	108.2
55°	8317.5	4411.3	226.6	180.4	148.3	126.2	110.2	100.3	96.2	94.2	92.2
57.5°	8445.9	4086.7	200.4	164.3	132.3	112.3	94.2	90.2	82.1	80.2	80.2
60°	8484.0	3639.8	176.3	146.3	118.2	98.3	82.1	76.1	68.1	66.1	66.1
62.5°	7998.9	2896.1	156.3	124.2	104.3	84.3	72.1	64.0	56.1	56.1	56.1
65°	6684.2	1966.2	134.2	108.2	92.2	72.1	62.2	52.1	48.1	48.1	48.1
67.5°	4655.8	1096.3	114.3	92.2	78.2	60.1	52.1	44.0	42.1	44.0	44.0
70°	2098.4	434.9	96.2	76.1	64.0	50.1	44.0	38.1	42.1	42.1	42.1
72°	629.4	232.5	80.2	62.2	52.1	44.0	38.1	36.1	40.1	42.1	42.1
72.5°	466.9	208.4	76.1	60.1	52.1	42.1	36.1	36.1	40.1	42.1	42.1
75°	240.4	142.3	58.1	44.0	38.1	34.0	30.1	34.0	40.1	40.1	40.1
77.5°	188.5	116.2	48.1	34.0	32.1	30.1	28.0	32.1	36.1	36.1	36.1
80°	176.3	76.1	38.1	32.1	28.0	26.1	26.1	28.0	32.1	34.0	34.0
82.5°	178.4	62.2	34.0	30.1	26.1	24.1	24.1	26.1	30.1	32.1	32.1
85°	114.3	42.1	30.1	26.1	24.1	22.1	22.1	24.1	28.0	30.1	30.1
87.5°	38.1	32.1	26.1	24.1	20.0	20.0	20.0	20.0	24.1	26.1	28.0
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)