

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: P270687

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7027-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270687  
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-SL4-7027-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 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: 27967.3 lumens  
Efficiency: N/A  
Efficacy: 73.2 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 - 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

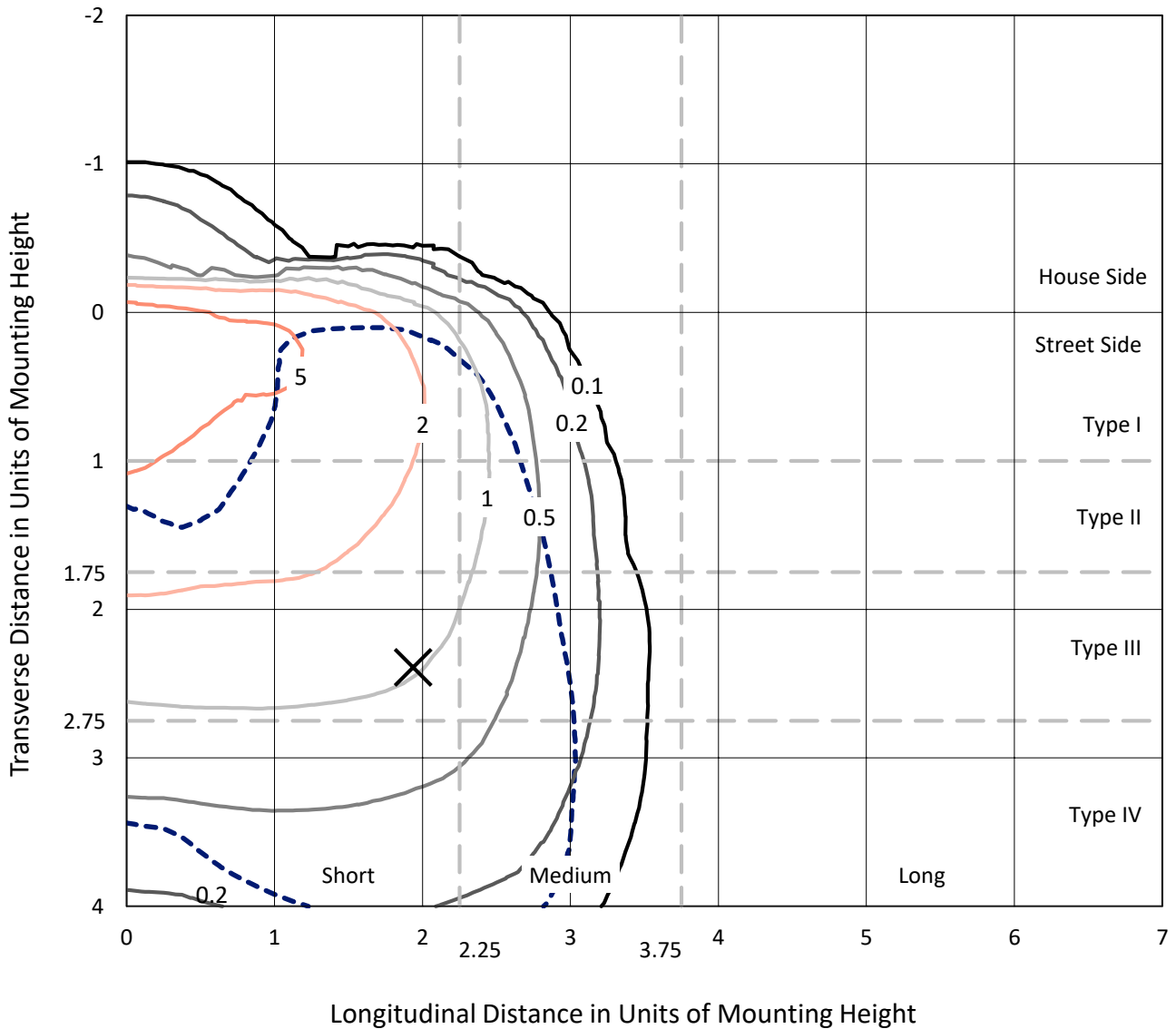


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

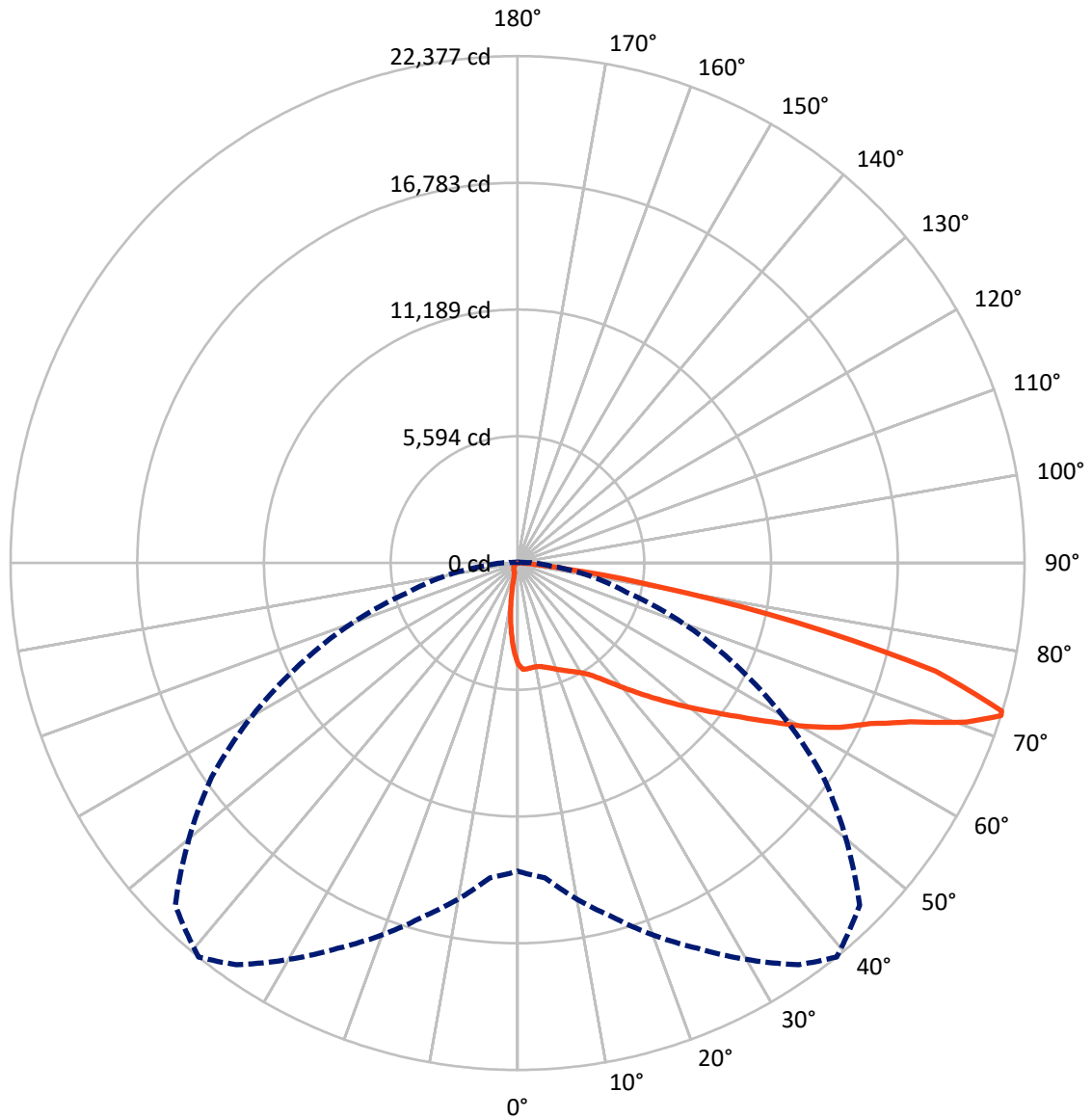


Based on 25 foot mounting height. Maximum calculated value = 7.5 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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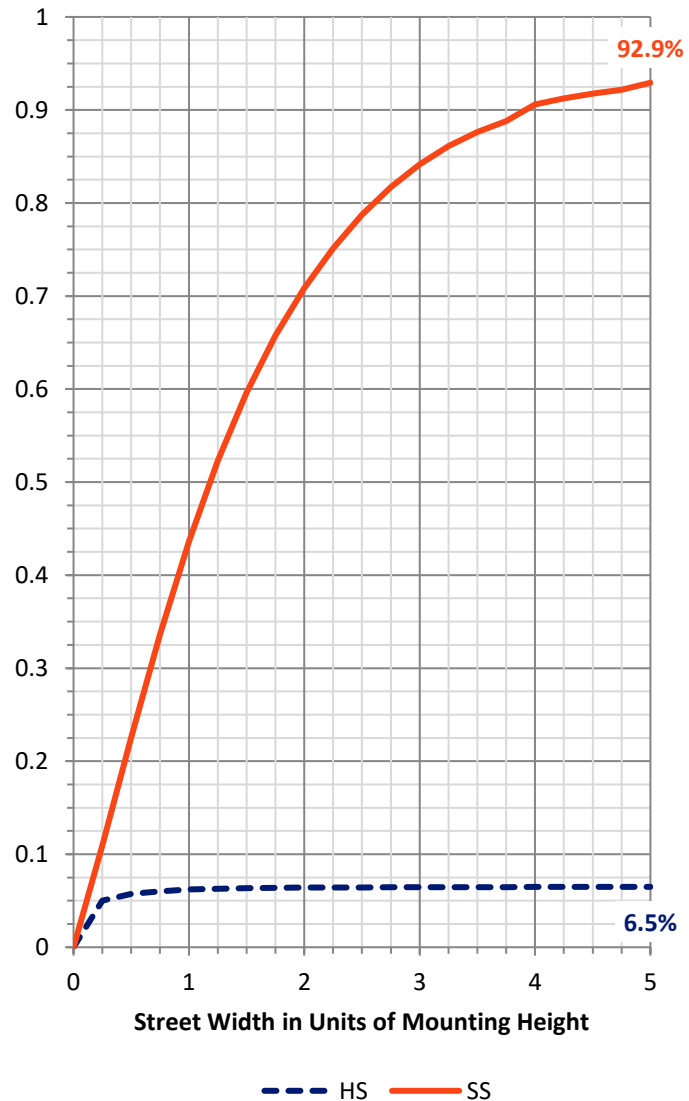
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1832.9	0.0	1832.9
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	26134.4	0.0	26134.4
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	27967.3	0.0	27967.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	364.1	1.3
10°-20°	881.5	3.2
20°-30°	1464.0	5.2
30°-40°	2333.3	8.3
40°-50°	3851.3	13.8
50°-60°	5816.2	20.8
60°-70°	7576.6	27.1
70°-80°	5119.6	18.3
80°-90°	560.7	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°	27967.3	100.0
0°-180°	27967.3	100.0

**Coefficient of Utilization**



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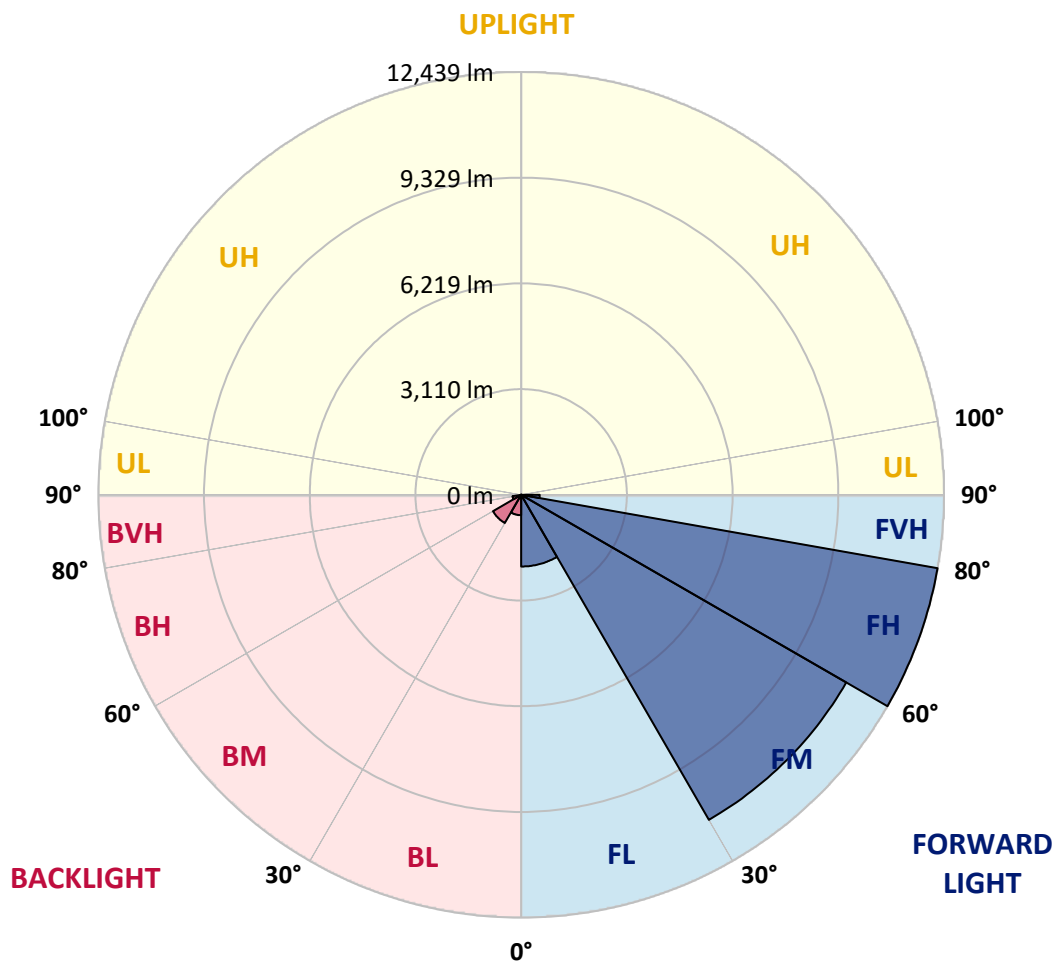
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2109.4	7.5			
FM	(30°-60°)	11041.8	39.5			
FH	(60°-80°)	12438.6	44.5			G5
FVH	(80°-90°)	544.6	1.9			G4/750
BL	(0°-30°)	600.2	2.1	B2/1000		
BM	(30°-60°)	959.0	3.4	B1/1000		
BH	(60°-80°)	257.6	0.9	B1/500		G1/500
BVH	(80°-90°)	16.1	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-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3
2.5°	4766.5	4775.4	4764.4	4744.6	4716.0	4698.4	4674.2	4621.5	4555.6	4498.4	4432.3
5°	4804.0	4808.4	4795.2	4757.8	4713.8	4689.6	4658.8	4601.7	4533.6	4454.3	4335.6
7.5°	4814.9	4812.7	4797.4	4751.1	4683.0	4652.2	4599.5	4529.2	4458.7	4386.2	4252.0
10°	4810.6	4810.6	4799.6	4755.5	4678.6	4650.0	4590.7	4515.9	4427.9	4355.4	4212.5
12.5°	4795.2	4804.0	4797.4	4773.1	4716.0	4694.1	4641.3	4566.5	4482.9	4408.3	4256.4
15°	4814.9	4828.1	4841.3	4832.5	4799.6	4779.7	4731.5	4654.5	4586.2	4507.2	4344.5
17.5°	4894.1	4922.6	4953.4	4955.6	4920.5	4885.3	4830.4	4751.1	4685.2	4612.6	4436.8
20°	5043.7	5065.6	5122.8	5133.8	5063.3	5012.8	4935.8	4843.5	4777.5	4716.0	4522.5
22.5°	5265.7	5289.8	5336.0	5320.7	5201.8	5142.5	5045.8	4940.3	4872.0	4837.0	4621.5
25°	5602.0	5608.7	5619.6	5551.4	5355.8	5289.8	5171.2	5052.3	4997.5	4993.0	4762.2
27.5°	5997.8	6006.5	5958.2	5806.6	5527.4	5441.6	5307.5	5199.7	5173.2	5206.2	4940.3
30°	6450.6	6452.9	6318.8	6072.5	5725.2	5630.7	5492.1	5373.4	5397.6	5478.9	5168.8
32.5°	6914.7	6892.6	6708.0	6386.9	5995.6	5881.3	5762.5	5643.8	5714.2	5879.0	5503.0
35°	7339.0	7330.1	7112.5	6738.7	6347.3	6246.3	6160.4	6035.2	6149.4	6417.8	5958.2
37.5°	7763.2	7756.7	7508.3	7119.1	6780.4	6708.0	6644.1	6547.4	6734.4	7127.8	6567.1
40°	8231.6	8220.6	7915.0	7541.2	7283.9	7244.4	7207.0	7165.2	7484.0	8031.4	7325.8
42.5°	8809.8	8761.3	8346.0	8000.8	7838.0	7849.0	7851.1	7893.0	8392.1	9106.6	8220.6
45°	9473.7	9366.1	8779.0	8493.1	8447.0	8513.0	8579.0	8752.6	9449.6	10344.4	9210.0
47.5°	10118.0	9944.2	9278.1	9023.0	9117.5	9253.9	9412.3	9750.8	10636.8	11639.3	10107.0
50°	10672.0	10493.9	9772.8	9561.6	9862.9	10065.1	10346.6	10858.9	11890.1	12734.4	10672.0
52.5°	11107.4	10966.6	10296.1	10155.2	10689.7	10966.6	11408.6	12081.3	13072.9	13455.4	11067.7
55°	11428.3	11358.0	10797.3	10817.1	11608.5	12008.7	12558.5	13319.1	14071.1	14016.1	11364.5
57.5°	11791.2	11736.1	11322.7	11597.6	12714.5	13231.1	13866.5	14477.8	14796.6	14466.8	11654.8
60°	12162.6	12180.3	11960.5	12543.0	14082.0	14653.7	15207.8	15359.4	15418.8	14924.1	11960.5
62.5°	12444.1	12518.8	12538.6	13563.1	15484.8	15972.9	16212.5	16104.8	16091.6	15537.5	11936.1
65°	12767.3	12962.9	13288.4	14682.3	16759.9	17080.9	17252.4	17408.6	17078.8	15720.0	10762.1
67.5°	13325.6	13633.5	14365.7	16054.1	18233.0	18707.9	19193.7	19028.8	17226.1	13866.5	8198.7
70°	14077.7	14453.5	15746.4	17846.1	20231.4	21027.4	21434.2	18899.3	14625.0	9581.5	4324.6
72°	13602.8	13943.5	16172.9	18760.7	21647.4	22377.4	21359.4	16485.1	10601.6	4966.5	1448.8
72.5°	13141.0	13492.8	16036.6	18749.7	21788.1	22346.5	20873.5	15533.1	9381.4	3865.1	998.1
75°	9117.5	9561.6	13747.8	16854.4	19675.2	19061.9	15970.6	9405.7	3399.0	663.9	329.8
77.5°	4713.8	5056.7	8339.2	11909.8	13712.6	12558.5	9438.6	4080.6	941.1	351.7	217.7
80°	2921.9	3091.2	3900.4	5868.1	7123.5	6230.9	4164.2	1649.0	602.5	208.9	173.7
82.5°	1512.7	1642.3	2455.8	2367.9	2631.8	2187.6	1536.8	1380.8	371.5	129.7	178.0
85°	496.9	527.7	1508.3	1574.2	1125.7	756.4	681.5	1316.9	107.7	83.5	151.8
87.5°	65.9	77.0	529.9	901.4	554.1	343.1	409.0	464.0	37.4	46.2	41.9
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3	4476.3
2.5°	4388.4	4359.8	4269.6	4179.5	4076.1	3981.6	3906.9	3858.5	3880.5	3807.9	3819.0
5°	4263.0	4190.6	3992.6	3779.3	3548.6	3333.2	3161.6	3034.0	3010.0	2900.0	2904.3
7.5°	4142.2	4023.5	3702.5	3350.7	2968.1	2658.2	2376.6	2130.4	2042.4	1952.3	1899.6
10°	4076.1	3913.5	3458.5	2946.1	2407.5	1952.3	1556.7	1246.6	1117.0	1022.4	976.2
12.5°	4096.0	3880.5	3275.8	2578.9	1871.0	1292.8	879.4	653.0	573.8	529.9	514.5
15°	4161.9	3887.1	3111.0	2220.6	1360.9	782.8	516.6	442.0	435.3	433.2	430.9
17.5°	4223.6	3893.8	2937.4	1846.8	910.3	499.1	415.6	409.0	409.0	409.0	409.0
20°	4287.3	3895.9	2746.1	1455.4	598.0	409.0	391.3	387.0	391.3	391.3	391.3
22.5°	4362.0	3911.3	2561.3	1075.1	442.0	384.7	373.8	371.5	373.8	373.8	371.5
25°	4454.3	3944.3	2361.3	769.5	400.1	369.4	358.3	356.2	358.3	356.2	356.2
27.5°	4577.6	3988.3	2128.3	551.9	382.6	354.0	343.1	343.1	343.1	340.7	340.7
30°	4735.8	4041.0	1816.1	435.3	365.0	338.7	329.8	329.8	327.6	325.4	325.4
32.5°	4962.2	4126.8	1475.2	393.5	345.2	318.8	310.1	312.3	310.1	307.8	305.7
35°	5283.2	4260.9	1139.0	371.5	325.4	299.0	290.2	290.2	290.2	285.8	285.8
37.5°	5738.4	4465.4	853.1	349.6	305.7	279.3	268.2	268.2	266.1	261.6	263.8
40°	6301.3	4722.6	617.9	329.8	285.8	257.3	248.4	244.0	239.7	235.3	235.3
42.5°	6978.4	4973.2	464.0	310.1	266.1	239.7	228.7	224.2	215.5	211.0	208.9
45°	7736.9	5239.3	384.7	285.8	244.0	219.8	211.0	202.3	191.2	184.7	182.4
47.5°	8376.6	5402.0	343.1	261.6	222.1	200.1	191.2	178.0	164.8	160.4	160.4
50°	8761.3	5333.7	307.8	237.4	200.1	180.3	169.3	151.8	142.9	138.5	136.4
52.5°	8976.9	5131.6	279.3	217.7	180.3	158.3	142.9	127.5	123.1	118.8	118.8
55°	9124.2	4839.1	248.4	197.8	162.8	138.5	120.9	110.0	105.6	103.3	101.1
57.5°	9264.8	4482.9	219.8	180.3	145.0	123.1	103.3	99.0	90.1	87.9	87.9
60°	9306.7	3992.6	193.4	160.4	129.7	107.7	90.1	83.5	74.7	72.6	72.6
62.5°	8774.6	3176.9	171.4	136.4	114.4	92.3	79.1	70.3	61.5	61.5	61.5
65°	7332.3	2156.8	147.3	118.8	101.1	79.1	68.1	57.1	52.8	52.8	52.8
67.5°	5107.4	1202.7	125.4	101.1	85.8	65.9	57.1	48.4	46.2	48.4	48.4
70°	2301.9	477.1	105.6	83.5	70.3	54.9	48.4	41.9	46.2	46.2	46.2
72°	690.3	254.9	87.9	68.1	57.1	48.4	41.9	39.5	43.9	46.2	46.2
72.5°	512.3	228.7	83.5	65.9	57.1	46.2	39.5	39.5	43.9	46.2	46.2
75°	263.8	156.0	63.8	48.4	41.9	37.4	33.0	37.4	43.9	43.9	43.9
77.5°	206.7	127.5	52.8	37.4	35.2	33.0	30.8	35.2	39.5	39.5	39.5
80°	193.4	83.5	41.9	35.2	30.8	28.6	28.6	30.8	35.2	37.4	37.4
82.5°	195.7	68.1	37.4	33.0	28.6	26.4	26.4	28.6	33.0	35.2	35.2
85°	125.4	46.2	33.0	28.6	26.4	24.2	24.2	26.4	30.8	33.0	33.0
87.5°	41.9	35.2	28.6	26.4	22.0	22.0	22.0	22.0	26.4	28.6	30.8
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)