

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: McGRAW-EDISON

Report Number: P301977

Luminaire Tested: **GLNA-AF-10-LED-E1-SL4-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301977  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-10-LED-E1-SL4-600-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(10) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 28621.1 lumens  
Efficiency: N/A  
Efficacy: 88.6 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G5  
  
Input Watts (W): 323  
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

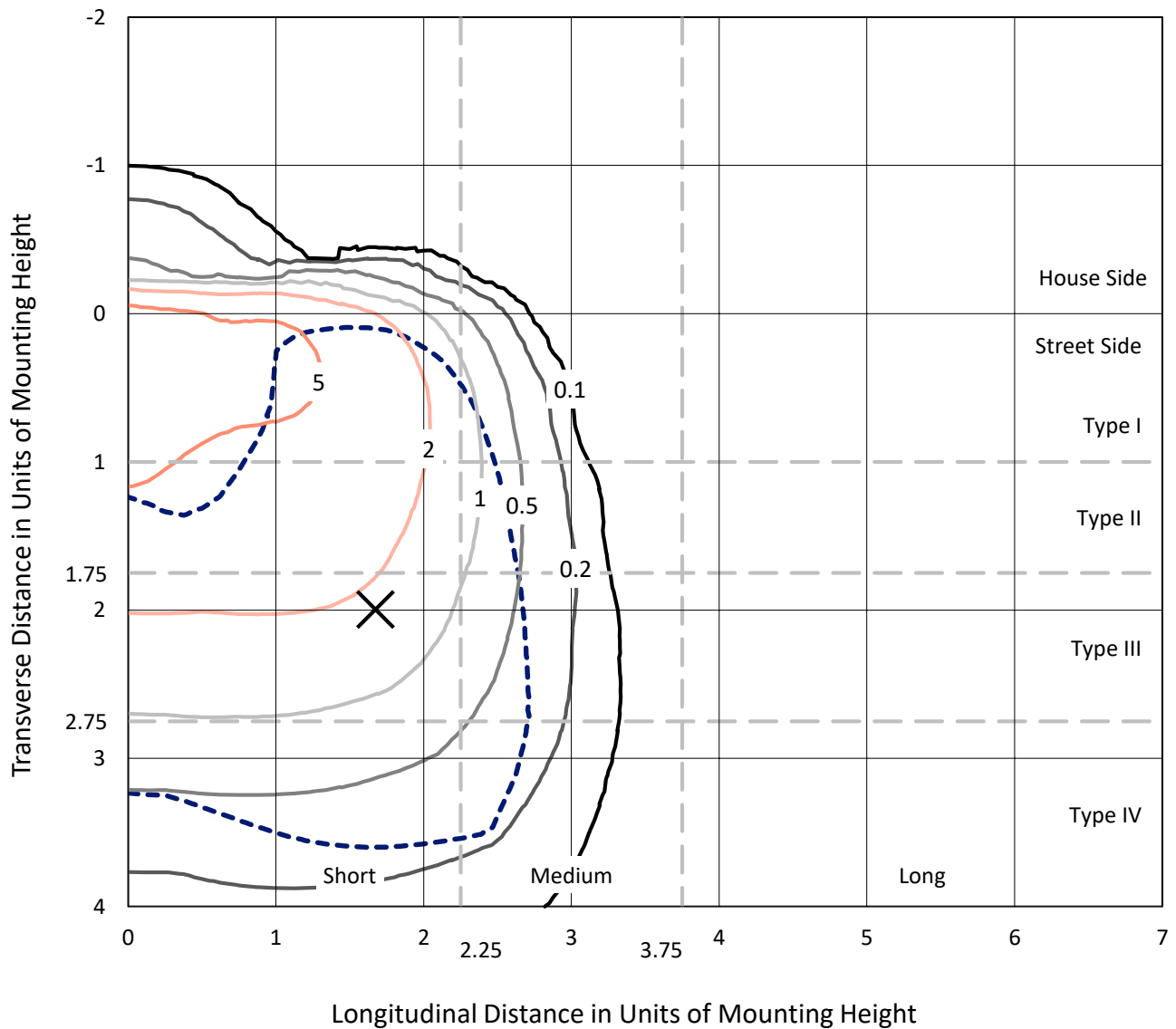


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

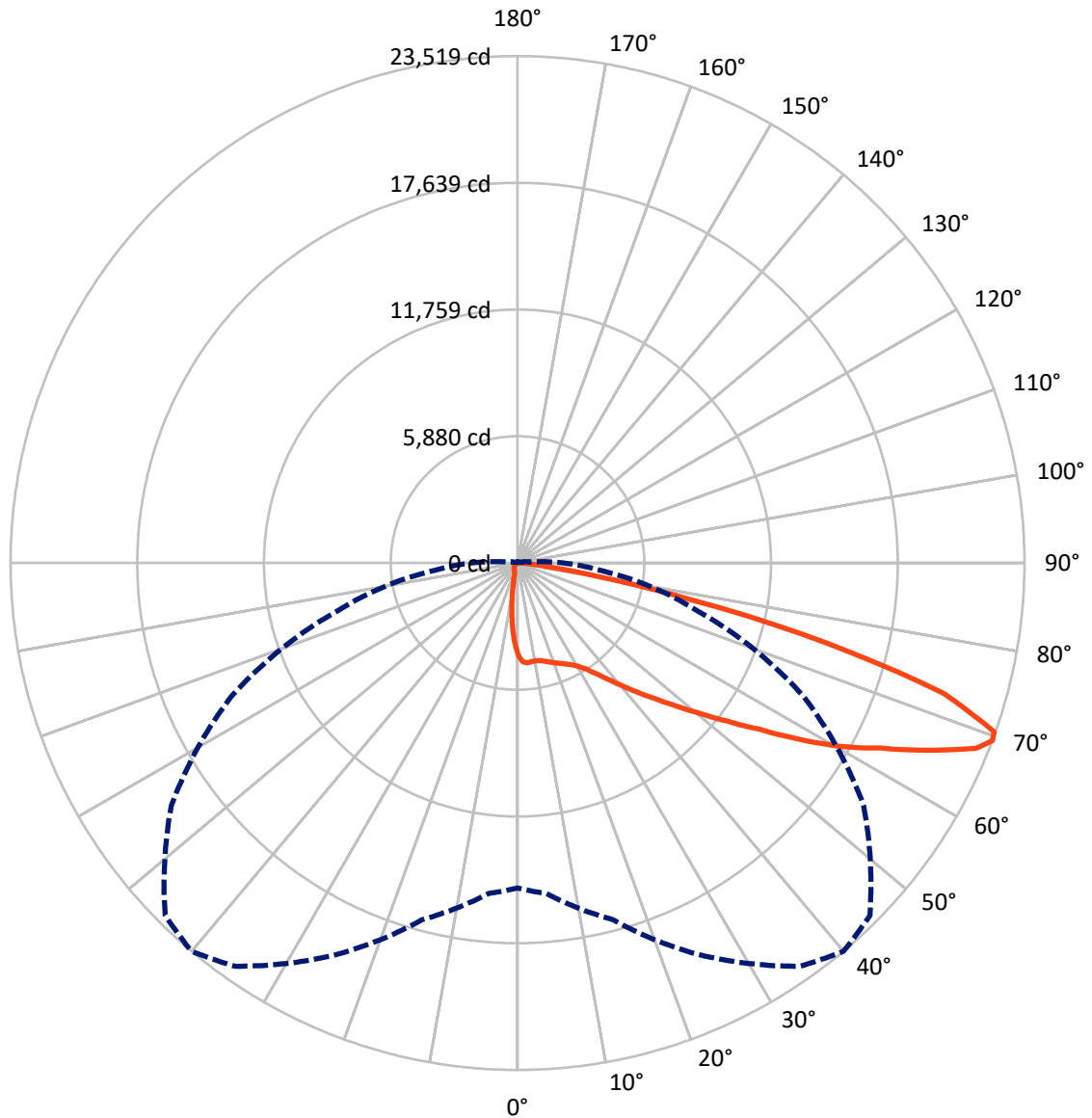


Based on 25 foot mounting height. Maximum calculated value = 7.5 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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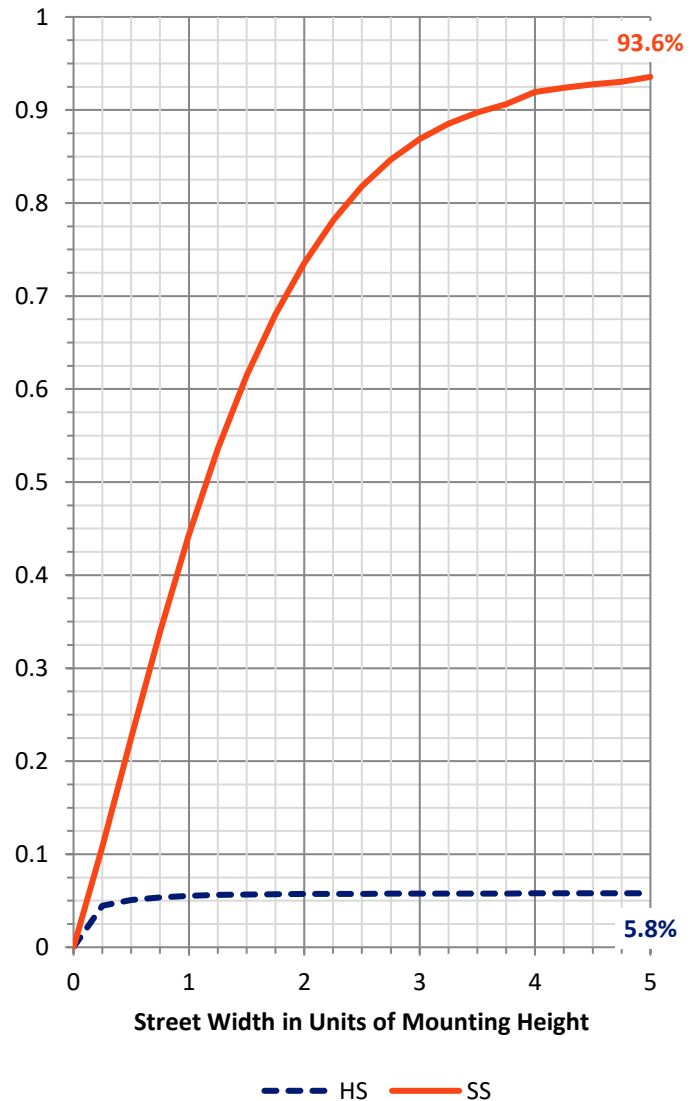
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1674.5	0.0	1674.5
	% Fixture	5.9	0.0	5.9
<b>Street Side</b>	Lumens	26946.6	0.0	26946.6
	% Fixture	94.1	0.0	94.1
<b>Total</b>	Lumens	28621.1	0.0	28621.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	346.7	1.2
10°-20°	852.6	3.0
20°-30°	1436.1	5.0
30°-40°	2351.0	8.2
40°-50°	4070.6	14.2
50°-60°	6411.6	22.4
60°-70°	8373.3	29.3
70°-80°	4312.6	15.1
80°-90°	466.5	1.6
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°	28621.1	100.0
0°-180°	28621.1	100.0

**Coefficient of Utilization**



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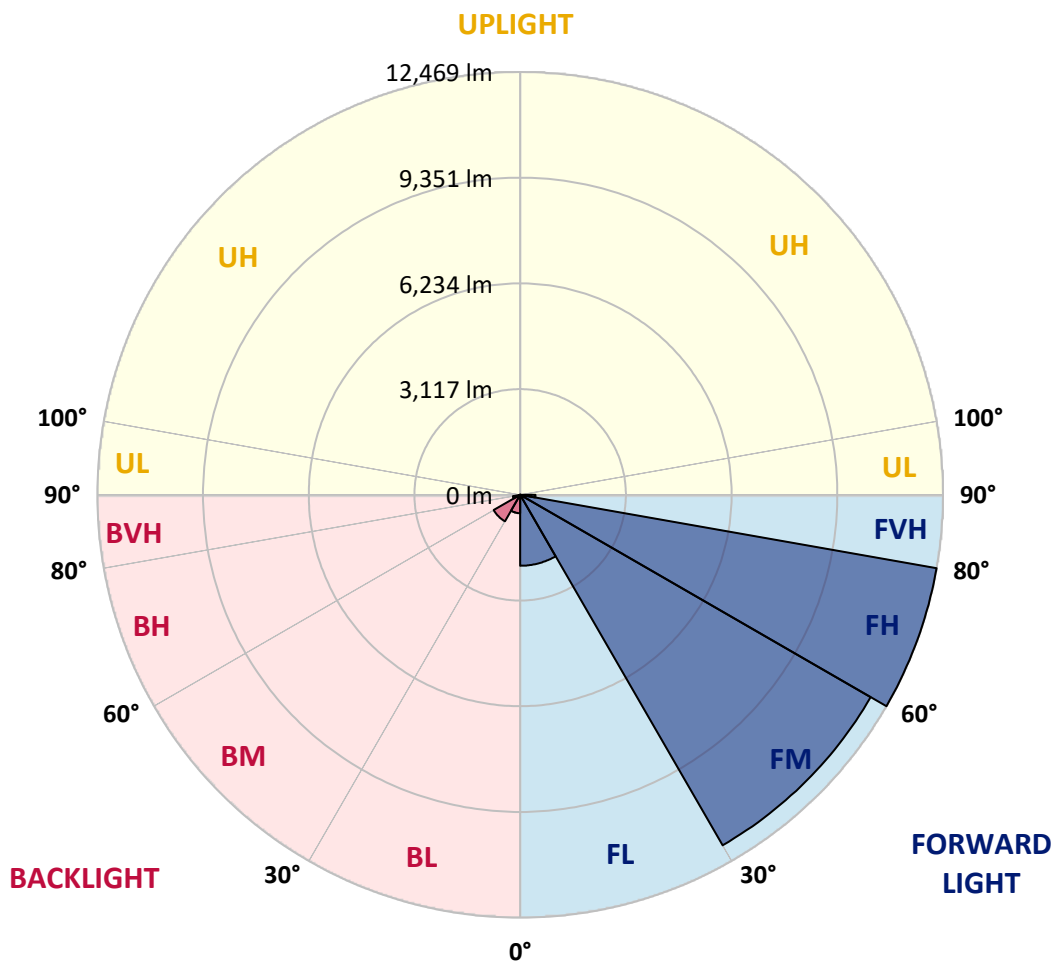
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2093.0	7.3			
FM	(30°-60°)	11933.2	41.7			
FH	(60°-80°)	12468.5	43.6			G5
FVH	(80°-90°)	451.9	1.6			G3/500
BL	(0°-30°)	542.4	1.9	B2/1000		
BM	(30°-60°)	900.0	3.1	B1/1000		
BH	(60°-80°)	217.4	0.8	B1/500		G1/500
BVH	(80°-90°)	14.6	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°	40°	45°	55°	65°	75°	85°
0°	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1
2.5°	4695.2	4669.7	4654.3	4633.9	4608.3	4586.2	4577.7	4514.6	4455.0	4373.2	4279.5
5°	4782.1	4773.6	4746.3	4719.1	4688.4	4654.3	4635.6	4560.6	4475.5	4356.2	4192.7
7.5°	4790.6	4780.4	4746.3	4708.9	4666.3	4625.4	4593.0	4518.1	4439.7	4318.7	4119.4
10°	4777.0	4765.1	4739.5	4698.6	4645.8	4606.6	4574.3	4502.7	4436.3	4327.2	4105.8
12.5°	4761.7	4749.7	4737.8	4717.4	4671.4	4644.1	4616.9	4548.7	4489.1	4397.1	4155.2
15°	4777.0	4770.2	4783.8	4775.3	4749.7	4725.9	4698.6	4637.3	4582.8	4506.1	4245.5
17.5°	4841.7	4841.7	4884.3	4889.4	4865.6	4831.5	4792.3	4731.0	4685.0	4620.3	4352.8
20°	4993.4	4988.3	5042.8	5053.0	4995.1	4942.3	4884.3	4809.4	4773.6	4732.7	4458.4
22.5°	5254.0	5230.2	5262.5	5252.3	5138.2	5056.4	4984.9	4892.9	4874.1	4855.4	4576.0
25°	5593.1	5579.4	5601.6	5501.1	5300.0	5189.3	5104.1	5000.2	5000.2	5018.9	4708.9
27.5°	6085.4	6034.3	5959.3	5782.2	5480.6	5339.2	5247.2	5136.5	5165.4	5235.3	4884.3
30°	6589.7	6533.5	6361.4	6088.8	5700.4	5552.2	5444.8	5329.0	5397.1	5524.9	5119.4
32.5°	7087.1	7024.1	6780.5	6436.4	6015.6	5867.3	5763.4	5635.6	5749.8	5964.4	5463.6
35°	7569.3	7513.1	7232.0	6826.5	6434.6	6312.0	6216.6	6105.8	6252.4	6552.2	5949.1
37.5°	8111.0	8049.7	7707.3	7267.7	6944.0	6855.4	6785.6	6674.9	6930.4	7369.9	6625.5
40°	8777.2	8673.2	8211.5	7773.7	7533.5	7490.9	7443.2	7427.9	7824.8	8433.0	7526.7
42.5°	9540.4	9370.0	8739.7	8306.9	8180.9	8211.5	8199.6	8267.8	8944.1	9755.0	8623.8
45°	10303.6	10083.8	9327.4	8876.0	8893.0	9000.3	9066.8	9339.4	10346.2	11271.3	9804.4
47.5°	10951.0	10734.6	9891.3	9491.0	9695.4	9906.7	10087.3	10603.5	11787.5	12763.7	10722.7
50°	11504.7	11300.2	10489.3	10167.3	10627.3	10968.0	11261.1	12026.0	13337.8	13900.0	11366.7
52.5°	11957.8	11821.6	11109.4	10942.5	11692.1	12191.2	12620.6	13537.1	14710.9	14823.4	11867.6
55°	12399.1	12302.0	11775.6	11864.1	12942.6	13622.3	14165.8	15140.2	15893.3	15593.4	12348.0
57.5°	12906.8	12818.2	12535.4	13032.8	14586.6	15441.8	16034.7	16561.1	16934.2	16380.5	12801.2
60°	13424.7	13373.6	13380.4	14331.0	16474.2	17295.4	17622.5	17758.7	17956.4	17121.6	12826.7
62.5°	13918.7	14015.8	14346.4	15775.7	18281.8	18912.1	19077.4	19211.9	18980.3	17239.1	11850.5
65°	14755.2	14913.7	15702.5	17709.3	20269.9	20944.6	21114.9	20653.2	19142.1	15719.5	9639.2
67.5°	15164.1	15453.7	16860.9	19511.8	22198.4	22948.0	22885.0	20746.9	17177.8	11986.8	6185.9
69°	15078.9	15387.3	17128.4	20063.8	22839.0	23518.8	23118.4	19600.4	14634.3	8683.5	3797.4
70°	14741.6	15053.4	16990.4	20043.3	22920.8	23459.1	22685.7	18184.7	12373.5	6349.5	2374.9
72.5°	12310.5	12579.7	15084.0	18116.5	21114.9	20677.1	18978.6	12598.4	6029.2	1729.2	534.9
75°	7577.8	7727.7	10823.2	13647.9	15947.8	14823.4	12644.4	6267.7	1797.3	488.9	296.4
77.5°	4003.6	4071.7	5925.3	8044.6	10109.4	8364.9	6480.6	2444.7	828.0	306.7	214.7
80°	2366.4	2417.5	3190.9	3678.2	4374.9	3654.3	2591.2	1500.9	592.9	192.5	190.8
82.5°	1354.4	1386.8	2313.5	2044.4	1724.1	1471.9	1289.7	1422.5	356.1	129.5	197.6
85°	497.5	504.3	1301.6	1555.4	1025.6	609.9	640.6	1178.9	95.4	81.8	155.0
87.5°	231.7	226.6	669.5	952.3	599.7	386.7	499.2	259.0	37.5	52.8	42.6
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1	4276.1
2.5°	4225.0	4162.0	4047.8	3930.3	3811.0	3719.0	3628.8	3557.2	3533.3	3489.1	3492.5
5°	4095.6	3979.7	3741.2	3499.3	3247.1	3039.3	2843.4	2684.9	2608.3	2529.9	2529.9
7.5°	3983.1	3814.5	3441.4	3047.8	2640.6	2298.2	1989.9	1758.2	1630.4	1528.2	1526.5
10°	3940.5	3712.2	3190.9	2627.0	2059.7	1592.9	1226.6	991.5	870.6	792.2	788.8
12.5°	3959.3	3676.5	2998.4	2238.6	1526.5	1023.9	710.4	558.8	507.7	483.8	483.8
15°	4013.8	3666.2	2805.9	1858.7	1078.4	640.6	471.9	431.0	427.6	427.6	427.6
17.5°	4080.2	3669.6	2608.3	1489.0	734.3	458.3	407.2	402.1	405.5	405.5	405.5
20°	4148.4	3671.3	2395.3	1146.5	517.9	398.7	383.3	381.6	385.0	385.0	386.7
22.5°	4231.8	3679.9	2182.4	856.9	427.6	376.5	364.6	364.6	366.3	366.3	364.6
25°	4327.2	3696.9	1960.9	635.5	390.1	361.2	350.9	349.2	350.9	349.2	347.5
27.5°	4446.5	3720.7	1713.9	497.5	373.1	345.8	337.3	337.3	335.6	333.9	332.2
30°	4596.4	3748.0	1436.2	422.5	356.1	332.2	323.7	322.0	320.3	316.9	316.9
32.5°	4824.7	3807.6	1161.9	383.3	337.3	313.5	306.7	306.7	303.2	299.8	298.1
35°	5175.7	3925.2	916.6	359.5	316.9	293.0	284.5	284.5	281.1	279.4	277.7
37.5°	5661.2	4104.1	712.1	337.3	296.4	270.9	262.4	260.7	257.2	253.8	252.1
40°	6306.9	4325.5	560.5	316.9	276.0	248.7	241.9	238.5	231.7	226.6	226.6
42.5°	7117.8	4577.7	454.9	294.7	252.1	228.3	223.2	218.1	206.1	201.0	199.3
45°	7966.2	4804.3	385.0	269.2	228.3	207.8	204.4	195.9	180.6	175.5	175.5
47.5°	8577.8	4857.1	339.0	245.3	206.1	185.7	184.0	168.7	155.0	151.6	149.9
50°	8959.4	4753.2	301.5	221.5	185.7	165.3	160.1	141.4	132.9	129.5	127.8
52.5°	9216.7	4567.5	270.9	201.0	167.0	146.5	134.6	121.0	114.1	110.7	110.7
55°	9422.8	4305.1	240.2	182.3	151.6	131.2	114.1	103.9	97.1	93.7	93.7
57.5°	9480.8	3949.0	209.5	167.0	136.3	115.8	97.1	90.3	81.8	80.1	80.1
60°	9060.0	3306.8	185.7	148.2	122.7	100.5	85.2	76.7	68.1	66.4	64.7
62.5°	7950.9	2558.9	163.5	131.2	107.3	86.9	73.3	63.0	56.2	56.2	56.2
65°	6065.0	1715.6	143.1	114.1	93.7	73.3	63.0	51.1	47.7	47.7	49.4
67.5°	3630.5	933.6	122.7	97.1	80.1	61.3	52.8	44.3	42.6	44.3	44.3
69°	2127.8	548.6	110.7	86.9	69.8	54.5	46.0	39.2	42.6	44.3	44.3
70°	1313.5	369.7	102.2	78.4	63.0	49.4	42.6	37.5	40.9	42.6	42.6
72.5°	366.3	190.8	81.8	61.3	51.1	40.9	34.1	34.1	39.2	40.9	40.9
75°	238.5	141.4	63.0	46.0	39.2	32.4	29.0	32.4	37.5	39.2	39.2
77.5°	197.6	115.8	51.1	37.5	32.4	30.7	27.3	29.0	34.1	35.8	35.8
80°	180.6	81.8	40.9	34.1	29.0	27.3	25.6	23.9	30.7	32.4	32.4
82.5°	172.1	64.7	35.8	30.7	27.3	23.9	22.1	23.9	27.3	29.0	30.7
85°	107.3	42.6	32.4	29.0	23.9	22.1	22.1	22.1	25.6	27.3	27.3
87.5°	39.2	34.1	29.0	23.9	20.4	20.4	20.4	20.4	22.1	25.6	25.6
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)