

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: P299995

Luminaire Tested: **GLNA-AF-09-LED-E1-SL3-7027-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299995  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194479)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLNA-AF-09-LED-E1-SL3-7027-800-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 28986.8 lumens  
Efficiency: N/A  
Efficacy: 77.5 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G4

Input Watts (W): 374  
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

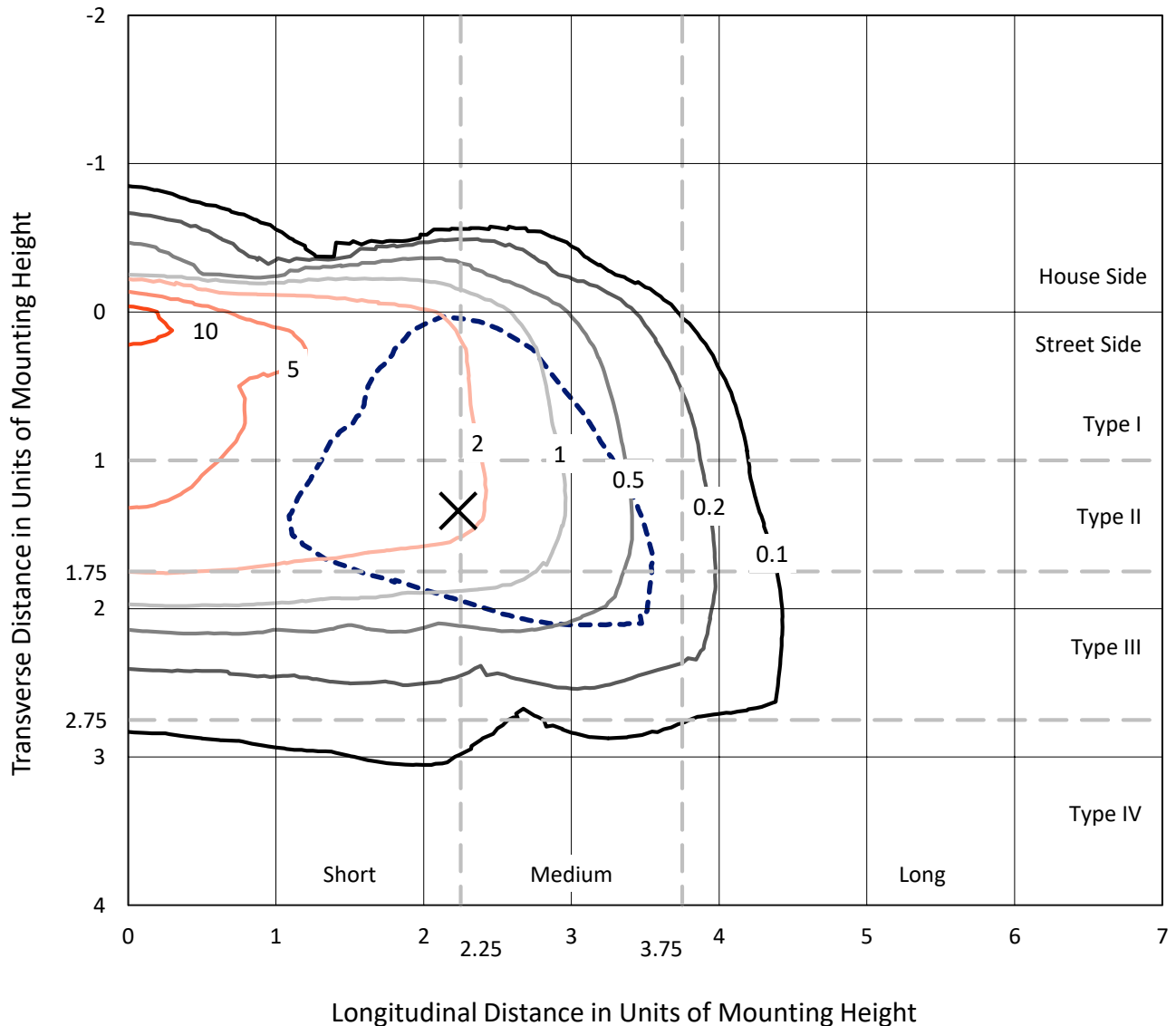


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

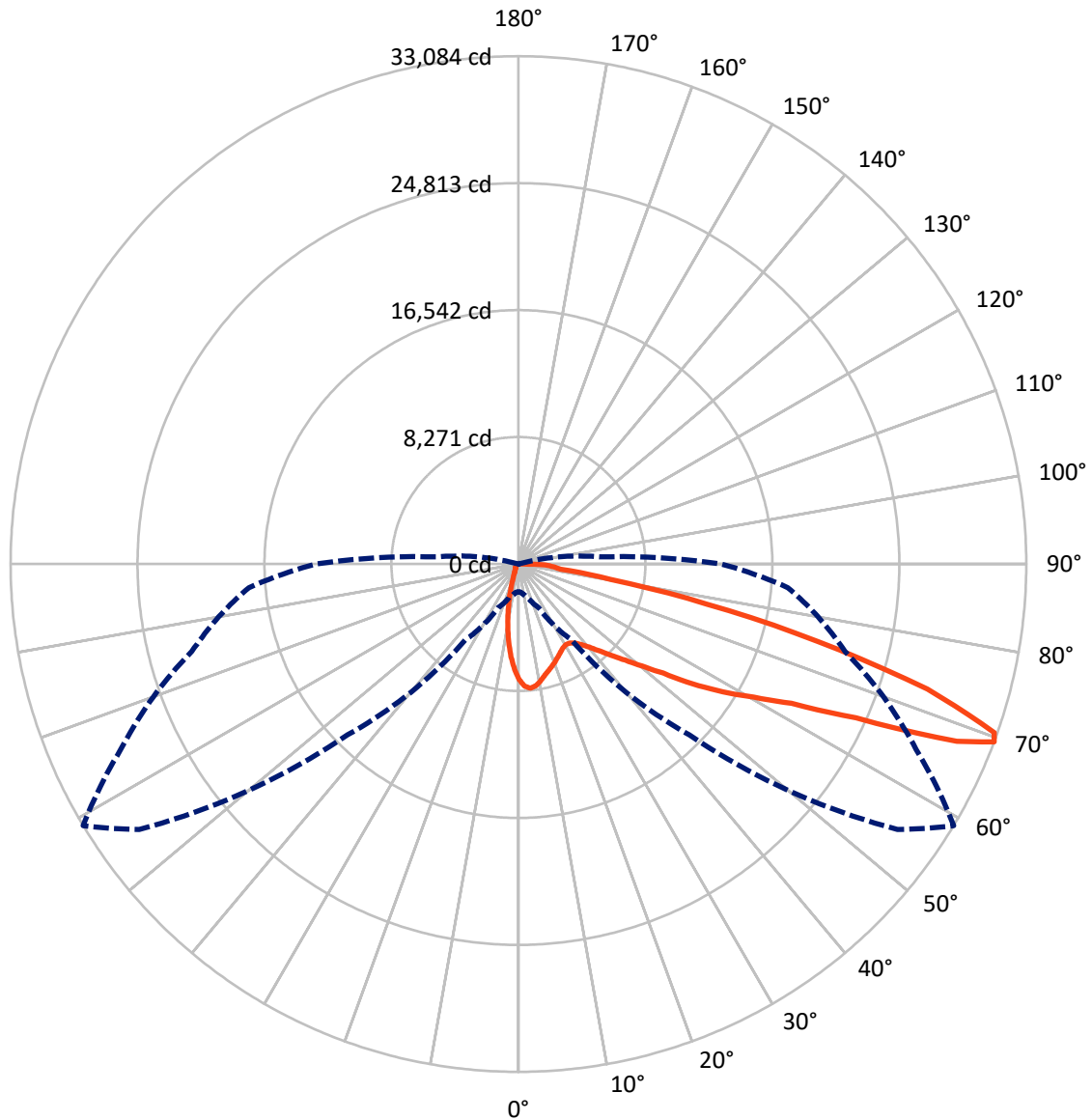


Based on 25 foot mounting height. Maximum calculated value = 12.1 fc  
 Type III - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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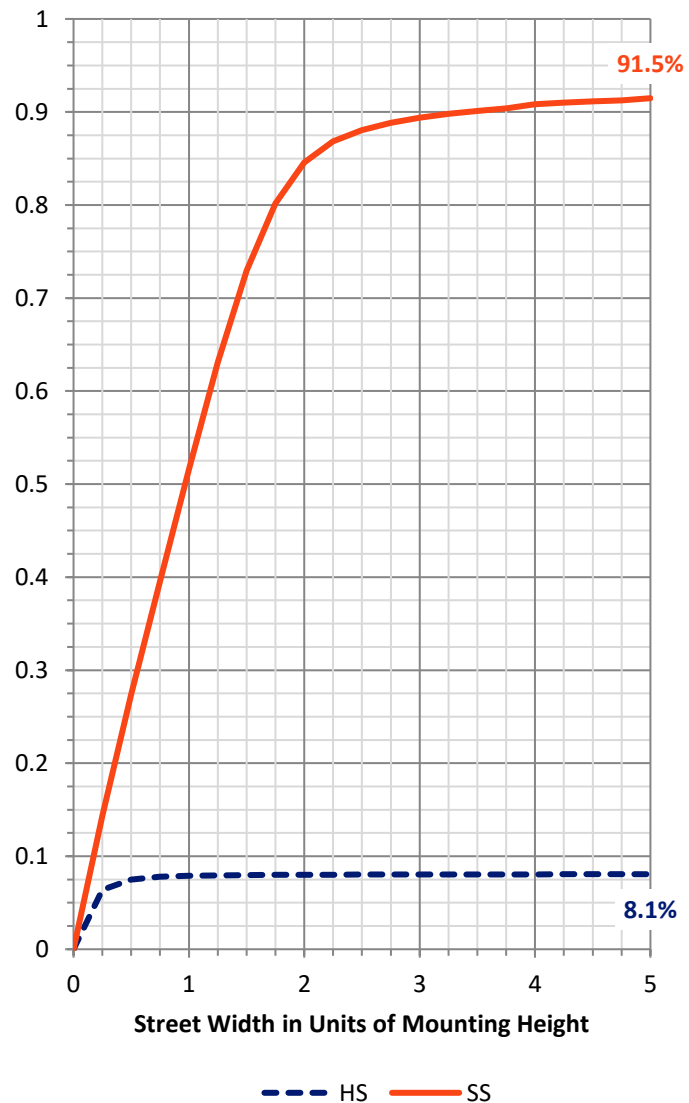
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2360.6	0.0	2360.6
	% Fixture	8.1	0.0	8.1
<b>Street Side</b>	Lumens	26626.2	0.0	26626.2
	% Fixture	91.9	0.0	91.9
<b>Total</b>	Lumens	28986.8	0.0	28986.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	612.4	2.1
10°-20°	1265.4	4.4
20°-30°	1702.8	5.9
30°-40°	2472.3	8.5
40°-50°	4116.6	14.2
50°-60°	6421.9	22.2
60°-70°	7946.6	27.4
70°-80°	4027.3	13.9
80°-90°	421.4	1.5
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°	28986.8	100.0
0°-180°	28986.8	100.0



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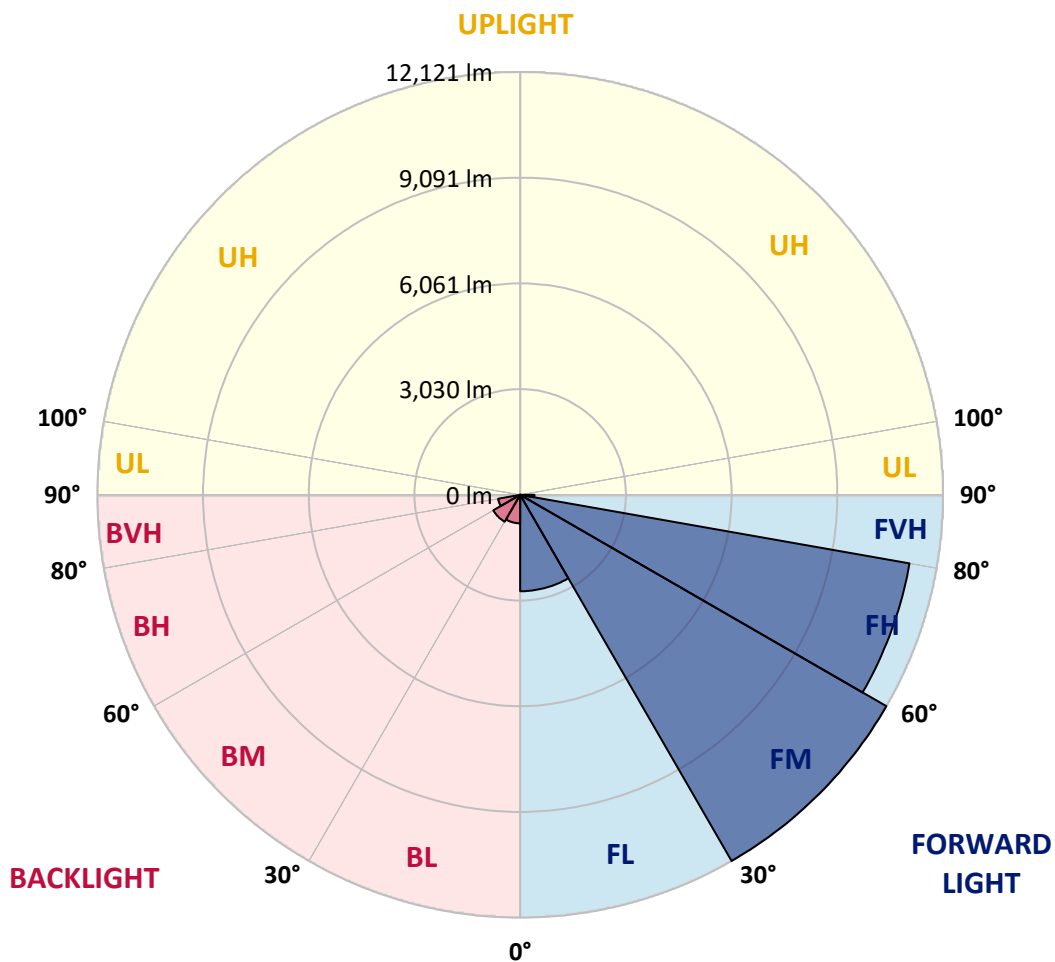
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2763.6	9.5			
FM	(30°-60°)	12121.4	41.8			
FH	(60°-80°)	11332.8	39.1			G4/12000
FVH	(80°-90°)	408.4	1.4			G3/500
BL	(0°-30°)	817.1	2.8	B2/1000		
BM	(30°-60°)	889.5	3.1	B1/1000		
BH	(60°-80°)	641.1	2.2	B2/1000		G2/1000
BVH	(80°-90°)	13.0	0.0			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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7
2.5°	8269.2	8266.3	8230.0	8213.7	8183.9	8121.9	8025.1	7974.5	7892.6	7749.7	7558.1
5°	8193.8	8233.5	8254.4	8256.3	8277.7	8254.4	8167.5	8125.3	8012.2	7782.4	7438.5
7.5°	7682.7	7697.1	7758.1	7810.2	7911.9	8008.7	8040.0	8021.6	7954.6	7709.0	7251.4
10°	7135.3	7149.7	7222.1	7290.6	7428.6	7577.5	7734.8	7768.0	7795.8	7603.8	7071.3
12.5°	6662.8	6677.7	6751.7	6841.5	7002.3	7185.9	7430.1	7484.2	7607.2	7504.0	6926.9
15°	6256.4	6262.9	6335.3	6446.5	6638.5	6874.2	7151.7	7238.5	7427.1	7433.5	6800.8
17.5°	5910.5	5926.9	5971.5	6077.7	6287.7	6579.5	6902.5	7027.1	7247.9	7374.5	6677.7
20°	5699.1	5715.5	5714.0	5773.0	5961.6	6272.8	6653.4	6802.3	7071.3	7313.9	6568.1
22.5°	5658.4	5658.4	5615.7	5607.3	5718.9	5979.5	6394.4	6576.0	6912.0	7287.6	6491.1
25°	5804.3	5797.4	5691.2	5604.3	5609.3	5764.6	6143.3	6359.6	6778.0	7305.5	6449.9
27.5°	6112.5	6104.0	5969.6	5804.3	5671.3	5669.8	5953.2	6185.9	6671.3	7390.9	6466.3
30°	6538.3	6535.3	6389.4	6181.0	5940.3	5718.9	5887.7	6099.1	6602.3	7544.7	6504.0
32.5°	7003.8	6998.8	6889.1	6669.8	6364.6	5940.3	5956.7	6133.8	6622.1	7749.7	6595.8
35°	7497.6	7489.1	7441.5	7249.9	6913.9	6348.2	6183.0	6320.4	6746.7	8056.3	6776.0
37.5°	8031.5	8040.0	8074.2	7890.6	7538.2	6920.4	6561.6	6654.9	6997.3	8472.7	7069.3
40°	8820.1	8818.6	8830.0	8588.8	8249.9	7620.1	7090.6	7120.4	7417.2	9025.1	7515.4
42.5°	10250.8	10151.1	9847.9	9356.1	9015.1	8420.1	7758.1	7726.8	7930.3	9708.4	8139.7
45°	12173.8	11960.5	11173.9	10231.5	9795.3	9321.8	8578.9	8479.2	8608.7	10529.7	8910.4
47.5°	13827.4	13606.1	12493.4	11142.6	10623.0	10177.4	9541.2	9361.0	9403.7	11449.3	9887.1
50°	14389.7	14281.5	13309.8	11936.1	11424.5	11254.3	10657.8	10437.9	10377.4	12512.8	11019.5
52.5°	14194.6	14186.7	13539.1	12450.8	12159.0	12368.9	12062.2	11808.1	11585.3	13634.4	12171.9
55°	13881.5	13922.7	13632.4	12901.4	12891.4	13386.7	13983.2	13771.8	13126.2	14852.2	13165.4
57.5°	13018.0	13193.2	13580.3	13754.0	14156.9	14663.6	15583.2	15707.7	14944.0	15784.7	13989.7
60°	10562.5	10947.6	12213.1	13876.5	15788.1	17050.1	17514.1	17620.3	16435.3	16559.8	15102.8
62.5°	7497.6	7890.6	9495.5	12309.8	15812.5	20185.5	20390.5	19972.6	18077.9	17709.2	17022.3
65°	3979.5	4283.3	5594.4	8885.6	13709.8	20913.6	25421.1	24175.5	20975.6	19969.2	19502.2
67.5°	2035.7	2127.5	2649.1	4348.8	9425.0	18576.1	29930.2	30807.1	25970.0	22211.8	19382.6
69°	1801.4	1855.5	2201.4	3143.8	6035.1	15734.0	30150.0	33083.9	28584.8	22024.7	17613.9
70°	1743.9	1791.5	2106.1	2845.6	4717.5	13194.7	29308.8	32883.9	29253.3	21313.5	16292.8
72.5°	1480.4	1521.0	1875.4	2514.6	3834.1	6549.7	23808.3	27865.2	26250.4	17754.8	11793.2
75°	990.0	1124.5	1799.9	2357.3	3566.6	3721.0	15696.3	20136.4	18705.7	11975.3	6143.3
77.5°	237.7	255.6	508.2	1875.4	3261.9	3274.8	8072.7	12517.8	10210.1	4268.4	1452.1
80°	128.0	123.1	142.4	372.2	3037.1	3073.4	3634.1	6076.3	3645.6	708.2	478.4
82.5°	90.3	85.4	91.8	155.8	955.8	2799.4	2629.2	2750.3	1511.1	272.0	214.9
85°	32.8	31.3	50.6	140.9	299.7	1609.4	2701.2	2268.4	1224.3	124.6	157.3
87.5°	11.4	9.9	19.9	76.9	91.8	685.3	1667.0	1714.6	481.9	75.4	73.9
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°	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7	7544.7
2.5°	7477.7	7376.0	7189.4	6997.3	6820.2	6607.3	6500.6	6395.8	6351.7	6335.3	6258.4
5°	7261.3	7089.1	6692.6	6294.1	5926.9	5536.8	5279.8	5073.3	4951.7	4892.7	4799.4
7.5°	6984.4	6702.5	6100.6	5486.2	4914.0	4350.2	3932.4	3610.8	3389.5	3283.3	3186.5
10°	6715.4	6340.3	5484.7	4647.0	3869.9	3122.5	2545.3	2127.5	1860.5	1737.4	1659.0
12.5°	6474.8	5987.9	4889.7	3829.2	2853.5	1978.6	1391.5	1059.0	893.3	835.7	807.9
15°	6259.9	5663.4	4327.4	3052.0	1932.5	1131.0	760.8	647.6	621.3	621.3	617.8
17.5°	6056.4	5345.3	3784.5	2322.5	1212.9	691.8	578.6	563.8	563.8	570.2	570.2
20°	5861.4	5042.0	3260.0	1667.0	763.8	548.9	523.1	519.6	523.1	531.0	531.0
22.5°	5694.1	4766.6	2770.1	1143.9	567.2	494.8	481.9	476.9	478.4	483.4	486.8
25°	5569.6	4533.9	2308.1	775.2	488.3	450.6	436.2	427.8	421.3	421.3	424.3
27.5°	5491.2	4337.3	1860.5	563.8	439.2	409.9	386.6	373.7	358.8	350.9	353.8
30°	5433.6	4150.3	1440.7	460.5	393.5	363.8	334.5	313.1	291.8	281.9	285.4
32.5°	5412.3	3999.4	1076.9	406.4	352.3	319.6	283.4	255.6	232.7	224.3	226.3
35°	5469.8	3879.8	788.6	367.2	319.6	278.4	237.7	206.4	188.6	183.6	185.1
37.5°	5620.7	3815.8	590.1	334.5	290.3	244.2	198.5	168.7	157.3	157.3	158.8
40°	5905.5	3814.3	473.9	311.7	264.0	211.4	163.8	142.4	136.0	139.5	140.9
42.5°	6321.9	3901.1	412.9	290.3	241.2	180.1	136.0	121.1	119.6	123.1	124.6
45°	6890.6	4059.9	380.1	272.0	216.4	150.9	114.6	104.7	104.7	109.7	111.7
47.5°	7587.4	4292.7	352.3	254.1	191.6	126.1	98.3	91.8	93.3	98.3	99.7
50°	8426.6	4586.5	324.6	234.2	173.7	104.7	85.4	80.4	81.9	88.3	90.3
52.5°	9382.4	4981.5	301.7	216.4	150.9	86.8	72.0	69.0	72.0	78.9	80.4
55°	10201.7	5335.3	273.9	201.5	121.1	72.0	59.1	59.1	62.5	70.5	72.0
57.5°	10990.3	5705.5	249.1	173.7	95.3	57.6	49.1	50.6	55.6	64.0	65.5
60°	12147.5	6333.3	219.8	145.9	72.0	45.7	41.2	42.7	49.1	57.6	59.1
62.5°	14112.8	7289.1	190.1	121.1	55.6	36.2	32.8	36.2	44.2	54.1	55.6
65°	15886.4	7677.7	155.8	101.7	42.7	27.8	27.8	32.8	42.7	52.6	54.1
67.5°	14897.8	6462.8	121.1	80.4	32.8	21.3	22.8	31.3	41.2	52.6	54.1
69°	13175.3	5284.7	103.2	64.0	27.8	19.9	21.3	31.3	41.2	50.6	52.6
70°	11832.9	4461.9	91.8	54.1	24.8	19.9	21.3	29.3	41.2	50.6	52.6
72.5°	7925.3	2409.4	73.9	39.2	22.8	17.9	17.9	29.3	39.2	49.1	50.6
75°	3405.9	665.5	59.1	27.8	19.9	16.4	16.4	27.8	37.7	47.6	50.6
77.5°	622.8	168.7	47.6	24.8	19.9	16.4	14.9	26.3	36.2	45.7	47.6
80°	247.6	83.4	37.7	21.3	17.9	14.9	12.9	24.8	34.2	44.2	45.7
82.5°	149.4	47.6	31.3	19.9	17.9	12.9	11.4	21.3	32.8	42.7	44.2
85°	121.1	32.8	24.8	19.9	16.4	12.9	9.9	19.9	29.3	41.2	42.7
87.5°	59.1	22.8	22.8	17.9	16.4	12.9	9.9	17.9	27.8	39.2	41.2
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)