

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: io LED

Report Number: P273459

Luminaire Tested: **0.05-09W-840-60-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P273459  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (ITL89169-GONIOPHOTOMETRY)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: 0.05-09W-840-60-STD-UNV-AN-3F0  
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 60 DEGREE OPTIC.  
VERY HIGH OUTPUT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

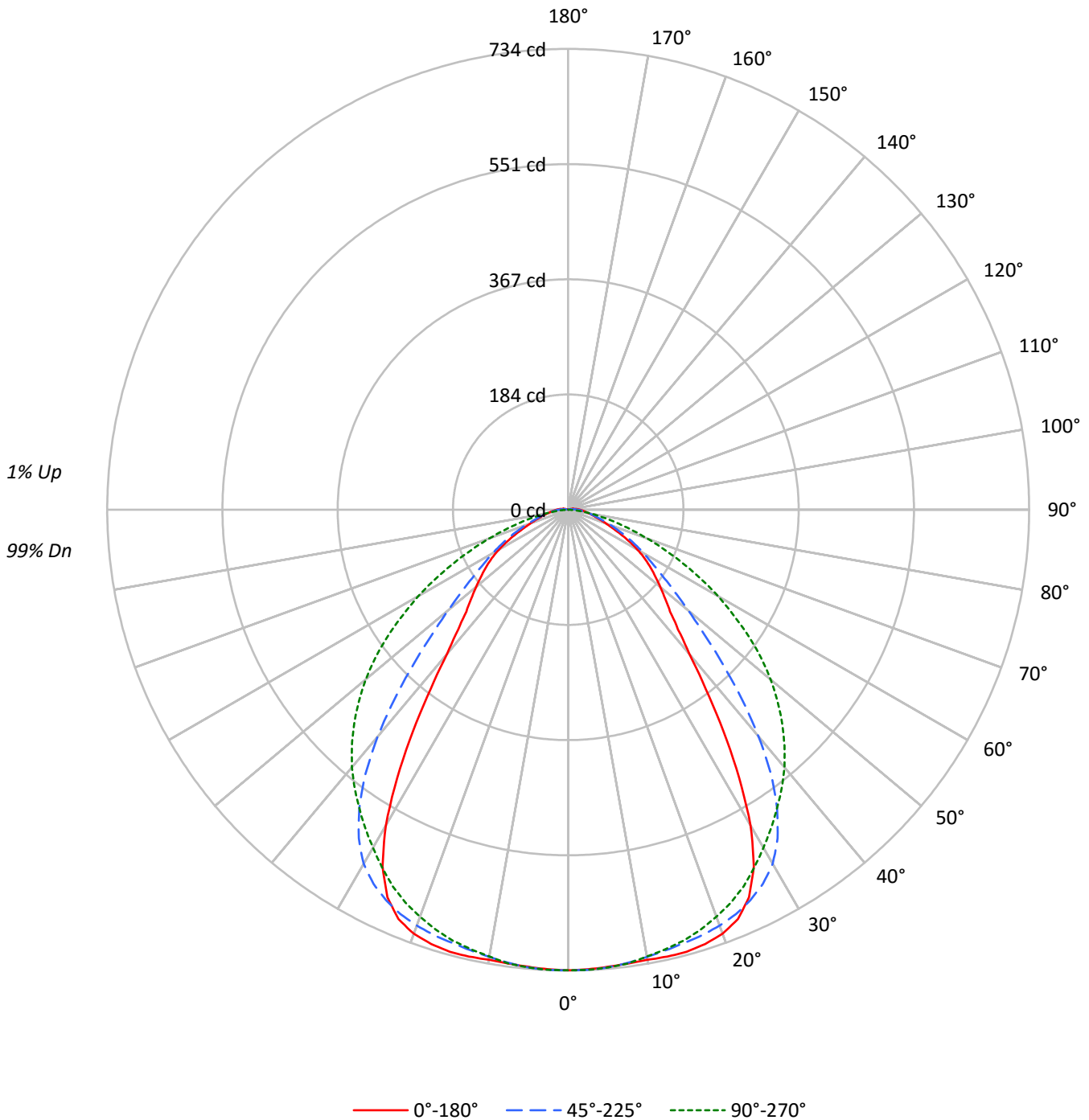
Lumens per Lamp: N/A  
Luminaire Lumens: 1619.1 lumens  
Efficiency: N/A  
Efficacy: 55.3 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.26  
Luminous Opening: Rectangular w/ Sides (W: 2.92' x L: 0.16' x H: 0.03')  
CIE Type: Direct

Input Watts (W): 29.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	110	106	102	99	107	104	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	82	79	76	74
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	64
4	86	75	68	62	84	74	67	61	72	65	60	69	64	59	67	62	59	56
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50
6	74	62	54	48	72	61	53	48	59	52	47	58	51	47	56	51	46	44
7	69	57	49	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	33
10	57	45	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	16768	16768	16768
5°	16535	16614	16775
10°	16430	16441	16743
15°	16536	16372	16773
20°	16515	16426	16732
25°	15971	16391	16611
30°	14026	16073	16325
35°	10809	14926	16084
40°	7876	12786	15862
45°	6385	10035	15443
50°	5712	7737	14809
55°	5182	6196	13796
60°	4563	5251	12412
65°	3681	4415	10651
70°	2954	3626	8689
75°	2497	2986	6718
80°	2289	2605	4748
85°	2306	2451	2641



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.6	4.3
10°-20°	202.5	12.5
20°-30°	309.9	19.1
30°-40°	334.7	20.7
40°-50°	278.4	17.2
50°-60°	205.6	12.7
60°-70°	124.6	7.7
70°-80°	59.5	3.7
80°-90°	23.9	1.5
90°-100°	8.2	0.5
100°-110°	2.0	0.1
110°-120°	0.1	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°-30°	582.0	35.9
0°-40°	916.7	56.6
0°-60°	1400.7	86.5
0°-90°	1608.8	99.4
90°-120°	10.3	0.6
90°-150°	10.3	0.6
90°-180°	10.0	0.6
0°-180°	1619.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	734	734	734	734	734	
5°	731	732	732	732	732	70
15°	729	723	714	708	710	206
25°	681	685	686	666	661	308
35°	431	481	580	589	580	269
45°	229	250	348	478	482	181
55°	160	161	182	314	351	143
65°	92	95	103	154	201	92
75°	45	46	49	62	79	49
85°	25	25	22	18	11	22
90°	18	18	15	8	0	10
95°	13	12	8	2	0	10
105°	5	4	1	0	0	5
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	733.6	733.6	733.6	733.6	733.6	733.6	733.6	733.6	733.6	733.6	733.6
2.5°	732.7	732.7	732.7	732.7	732.7	732.8	732.9	733.2	733.4	733.6	733.6
5°	730.8	731.0	731.2	731.5	731.6	731.7	731.7	731.7	731.7	731.7	731.7
7.5°	729.0	729.0	729.0	729.0	729.0	728.9	728.7	728.4	728.2	728.0	728.0
10°	728.0	727.7	727.2	726.8	726.4	725.9	725.3	724.6	724.1	723.4	723.2
12.5°	729.0	728.1	727.3	726.5	725.6	724.5	723.1	721.7	720.3	718.8	718.1
15°	729.0	727.8	726.5	725.3	724.1	722.4	720.4	718.2	716.2	714.2	712.7
17.5°	725.3	724.2	723.2	722.2	721.2	719.5	717.2	715.0	712.7	710.5	708.0
20°	718.8	717.8	716.7	715.7	714.7	713.1	711.1	709.0	706.9	704.9	701.4
22.5°	705.8	705.2	704.6	704.0	703.3	702.4	701.2	700.0	698.7	697.5	693.4
25°	680.9	681.9	682.9	683.9	684.9	685.6	685.8	686.0	686.2	686.4	681.7
27.5°	640.2	643.5	646.7	650.1	653.3	656.8	660.5	664.2	667.9	671.6	666.7
30°	580.9	587.3	593.7	600.1	606.5	614.3	623.5	632.8	642.0	651.3	646.7
32.5°	506.9	516.2	525.4	534.7	543.9	556.6	572.6	588.6	604.7	620.7	618.5
35°	431.1	441.5	452.1	462.5	473.0	489.5	512.2	534.8	557.5	580.0	582.2
37.5°	358.9	368.6	378.3	387.9	397.6	416.6	445.0	473.4	501.7	530.1	538.7
40°	299.7	308.1	316.6	325.0	333.4	352.5	382.3	412.2	442.0	471.8	488.1
42.5°	259.0	264.8	270.5	276.3	282.1	298.7	326.3	353.7	381.3	408.9	432.8
45°	229.4	232.9	236.4	239.9	243.4	256.5	279.4	302.2	325.0	347.8	378.4
47.5°	209.1	210.9	212.8	214.6	216.5	225.8	242.6	259.6	276.4	293.2	328.2
50°	191.5	192.3	193.2	194.0	194.8	201.1	213.0	225.0	236.9	248.8	284.8
52.5°	174.8	175.5	176.0	176.7	177.3	181.4	189.0	196.7	204.3	211.8	246.2
55°	160.0	160.0	160.0	160.0	160.0	162.5	167.4	172.3	177.3	182.2	212.9
57.5°	144.3	144.1	143.9	143.7	143.5	145.1	148.3	151.6	154.9	158.2	183.9
60°	127.7	127.5	127.3	127.0	126.8	128.0	130.7	133.4	136.1	138.8	158.9
62.5°	109.2	109.3	109.5	109.8	110.0	111.2	113.5	115.7	118.0	120.3	135.7
65°	91.6	92.2	92.8	93.4	94.1	95.3	97.1	99.0	100.8	102.7	114.2
67.5°	75.9	76.5	77.1	77.7	78.4	79.5	81.1	82.7	84.4	86.0	94.6
70°	63.8	64.2	64.7	65.0	65.5	66.4	67.8	69.3	70.7	72.2	78.4
72.5°	53.7	53.8	54.0	54.3	54.5	55.1	56.2	57.2	58.2	59.2	63.7
75°	45.3	45.5	45.7	46.0	46.2	46.5	47.2	47.8	48.4	49.0	51.9
77.5°	38.9	39.0	39.2	39.5	39.7	39.9	40.1	40.3	40.5	40.7	42.2
80°	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.3	33.7
82.5°	28.7	28.7	28.7	28.7	28.7	28.6	28.4	28.1	27.9	27.8	27.4
85°	25.0	25.0	25.0	25.0	25.0	24.7	24.1	23.4	22.8	22.2	21.4
87.5°	21.3	21.3	21.3	21.3	21.3	21.0	20.4	19.7	19.1	18.5	17.3
90°	18.5	18.3	18.1	17.9	17.7	17.3	16.7	16.0	15.4	14.8	13.3
92.5°	15.7	15.5	15.4	15.1	14.9	14.4	13.6	12.8	11.9	11.1	9.6
95°	13.0	12.8	12.6	12.3	12.1	11.7	10.8	10.0	9.2	8.3	6.8
97.5°	10.2	10.0	9.8	9.5	9.3	8.9	8.0	7.2	6.4	5.6	4.5
100°	8.3	8.1	8.0	7.7	7.5	7.0	6.2	5.4	4.5	3.7	2.9
102.5°	6.5	6.3	6.1	5.8	5.6	5.2	4.3	3.5	2.7	1.9	1.5
105°	4.6	4.4	4.3	4.0	3.8	3.4	2.8	2.1	1.6	0.9	0.7
107.5°	2.8	2.6	2.4	2.1	1.9	1.7	1.2	0.8	0.4	0.0	0.0
110°	1.9	1.7	1.5	1.2	1.0	0.8	0.6	0.4	0.2	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.9	0.7	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	733.6	733.6	733.6	733.6	733.6	733.6	733.6	733.6
2.5°	733.6	733.6	733.6	733.6	733.6	733.6	733.6	733.6
5°	731.7	731.7	731.7	731.7	731.7	731.7	731.7	731.7
7.5°	728.0	728.0	728.0	728.1	728.3	728.6	728.8	729.0
10°	723.0	722.8	722.6	722.5	722.5	722.5	722.5	722.5
12.5°	717.6	716.9	716.3	716.1	716.3	716.6	716.7	716.9
15°	711.3	709.8	708.4	708.0	708.6	709.3	709.8	710.5
17.5°	705.6	703.1	700.6	699.5	700.0	700.4	700.8	701.2
20°	697.9	694.5	690.9	689.3	689.5	689.7	689.9	690.1
22.5°	689.3	685.2	681.0	678.8	678.4	678.0	677.5	677.2
25°	677.0	672.3	667.5	664.8	663.9	663.1	662.3	661.4
27.5°	661.7	656.8	651.9	648.6	646.9	645.3	643.7	642.0
30°	642.2	637.7	633.1	629.9	627.8	625.7	623.7	621.7
32.5°	616.2	614.0	611.7	609.5	607.5	605.4	603.3	601.3
35°	584.6	586.8	589.1	589.1	586.8	584.6	582.2	580.0
37.5°	547.4	556.0	564.6	567.8	565.5	563.3	561.0	558.7
40°	504.3	520.5	536.7	543.9	541.8	539.7	537.7	535.6
42.5°	456.6	480.4	504.3	515.5	514.1	512.6	511.2	509.7
45°	409.1	439.7	470.3	485.3	484.5	483.6	482.8	482.0
47.5°	363.2	398.1	433.0	450.7	451.2	451.5	452.0	452.4
50°	320.8	356.8	392.8	411.8	414.2	416.4	418.7	420.9
52.5°	280.5	314.8	349.1	368.6	373.1	377.6	382.1	386.7
55°	243.5	274.1	304.7	323.5	330.3	337.0	343.9	350.6
57.5°	209.6	235.2	261.0	278.1	286.5	294.9	303.3	311.8
60°	179.1	199.2	219.3	234.6	244.9	255.1	265.4	275.7
62.5°	151.1	166.5	182.0	195.0	205.6	216.4	227.0	237.7
65°	125.7	137.2	148.8	159.7	169.9	180.2	190.5	200.7
67.5°	103.3	111.9	120.5	129.4	138.5	147.5	156.5	165.6
70°	84.5	90.7	96.9	103.6	111.0	118.4	125.8	133.2
72.5°	68.3	72.8	77.3	82.2	87.6	92.9	98.2	103.6
75°	54.8	57.6	60.5	63.8	67.5	71.2	74.9	78.6
77.5°	43.6	45.1	46.4	48.2	50.2	52.4	54.4	56.4
80°	34.1	34.5	35.0	35.4	36.1	36.7	37.3	37.9
82.5°	26.9	26.5	26.1	25.6	25.0	24.3	23.8	23.1
85°	20.5	19.7	18.9	17.7	16.0	14.4	12.8	11.1
87.5°	16.0	14.8	13.6	11.9	9.9	7.8	5.7	3.7
90°	11.9	10.5	9.1	7.4	5.6	3.7	1.9	0.0
92.5°	8.2	6.8	5.4	4.1	3.1	2.0	1.0	0.0
95°	5.5	4.0	2.6	1.7	1.2	0.8	0.4	0.0
97.5°	3.5	2.5	1.5	0.8	0.6	0.4	0.2	0.0
100°	2.0	1.2	0.4	0.0	0.0	0.0	0.0	0.0
102.5°	1.0	0.6	0.2	0.0	0.0	0.0	0.0	0.0
105°	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)