

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: P273453

Luminaire Tested: **0.05-09W-835-60-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P273453  
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-835-60-STD-UNV-AN-3F0  
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 60 DEGREE OPTIC.  
VERY HIGH OUTPUT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1588.5 lumens  
Efficiency: N/A  
Efficacy: 54.2 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

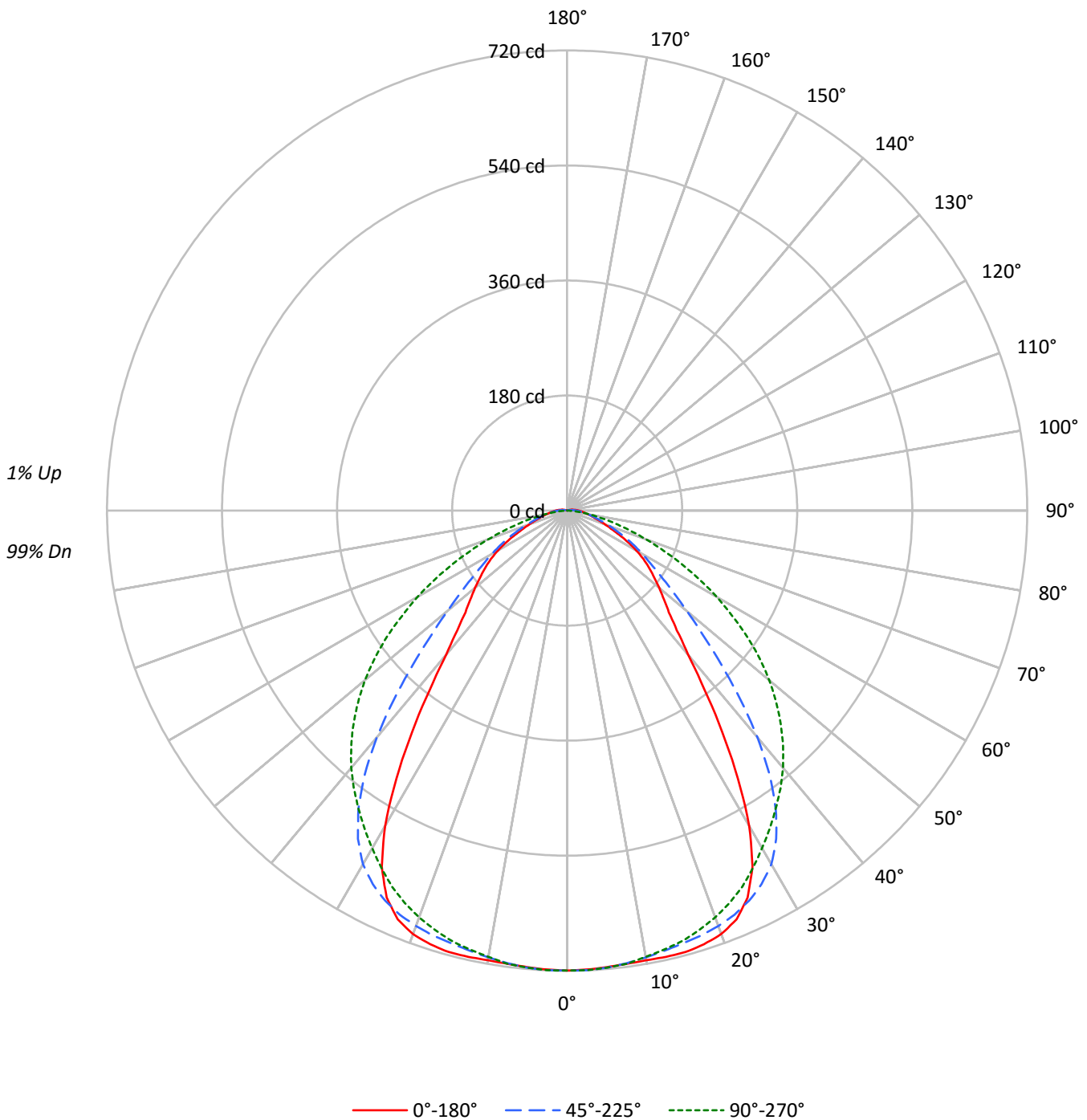
Input Watts (W): 29.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	16450	16450	16450
5°	16222	16300	16459
10°	16120	16132	16428
15°	16223	16063	16456
20°	16202	16117	16417
25°	15669	16083	16298
30°	13763	15769	16015
35°	10605	14646	15781
40°	7729	12545	15563
45°	6266	9847	15151
50°	5604	7594	14531
55°	5085	6080	13536
60°	4477	5148	12177
65°	3613	4329	10455
70°	2899	3556	8526
75°	2453	2931	6589
80°	2248	2558	4661
85°	2260	2406	2594



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.3	4.3
10°-20°	198.7	12.5
20°-30°	304.1	19.1
30°-40°	328.4	20.7
40°-50°	273.2	17.2
50°-60°	201.7	12.7
60°-70°	122.3	7.7
70°-80°	58.4	3.7
80°-90°	23.4	1.5
90°-100°	8.1	0.5
100°-110°	1.9	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°	571.0	35.9
0°-40°	899.4	56.6
0°-60°	1374.3	86.5
0°-90°	1578.4	99.4
90°-120°	10.1	0.6
90°-150°	10.1	0.6
90°-180°	10.0	0.6
0°-180°	1588.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	720	720	720	720	720	
5°	717	718	718	718	718	68
15°	715	710	701	695	697	202
25°	668	672	674	654	649	302
35°	423	472	569	578	569	264
45°	225	245	341	469	473	178
55°	157	158	179	308	344	140
65°	90	93	101	151	197	90
75°	44	46	48	61	77	48
85°	24	24	22	18	11	22
90°	18	17	14	8	0	10
95°	13	12	8	2	0	9
105°	4	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°	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7
2.5°	718.8	718.8	718.8	718.8	718.8	718.9	719.1	719.4	719.6	719.7	719.7
5°	717.0	717.2	717.4	717.7	717.8	717.9	717.9	717.9	717.9	717.9	717.9
7.5°	715.2	715.2	715.2	715.2	715.2	715.1	714.9	714.7	714.5	714.3	714.3
10°	714.3	713.9	713.5	713.1	712.7	712.2	711.6	710.9	710.4	709.8	709.6
12.5°	715.2	714.4	713.6	712.8	711.9	710.8	709.5	708.0	706.7	705.2	704.6
15°	715.2	714.0	712.8	711.6	710.4	708.8	706.8	704.7	702.7	700.7	699.2
17.5°	711.6	710.6	709.6	708.6	707.6	705.9	703.7	701.5	699.2	697.1	694.6
20°	705.2	704.2	703.2	702.2	701.2	699.7	697.7	695.6	693.6	691.6	688.2
22.5°	692.5	691.9	691.3	690.7	690.1	689.2	688.0	686.8	685.5	684.3	680.4
25°	668.0	669.0	670.0	671.0	672.0	672.6	672.8	673.1	673.3	673.5	668.8
27.5°	628.1	631.3	634.5	637.8	641.0	644.4	648.0	651.7	655.3	658.9	654.1
30°	570.0	576.2	582.5	588.8	595.0	602.7	611.7	620.8	629.9	639.0	634.5
32.5°	497.4	506.5	515.5	524.6	533.7	546.1	561.8	577.5	593.3	609.0	606.8
35°	423.0	433.2	443.6	453.8	464.1	480.3	502.5	524.7	546.9	569.1	571.3
37.5°	352.2	361.6	371.1	380.6	390.1	408.7	436.6	464.4	492.2	520.1	528.5
40°	294.1	302.3	310.6	318.8	327.1	345.9	375.1	404.4	433.7	462.9	478.9
42.5°	254.1	259.8	265.4	271.1	276.7	293.1	320.1	347.1	374.1	401.2	424.6
45°	225.1	228.5	232.0	235.3	238.8	251.7	274.1	296.5	318.8	341.3	371.3
47.5°	205.1	206.9	208.8	210.6	212.4	221.6	238.1	254.7	271.2	287.7	322.0
50°	187.9	188.7	189.5	190.3	191.1	197.3	209.0	220.7	232.4	244.2	279.5
52.5°	171.5	172.2	172.7	173.4	174.0	178.0	185.4	193.0	200.4	207.8	241.5
55°	157.0	157.0	157.0	157.0	157.0	159.5	164.3	169.1	174.0	178.8	208.8
57.5°	141.6	141.4	141.2	141.0	140.8	142.3	145.5	148.8	151.9	155.2	180.4
60°	125.3	125.1	124.9	124.6	124.4	125.6	128.2	130.9	133.5	136.1	155.9
62.5°	107.1	107.3	107.5	107.7	107.9	109.1	111.4	113.5	115.8	118.0	133.1
65°	89.9	90.5	91.0	91.7	92.3	93.5	95.3	97.1	98.9	100.7	112.0
67.5°	74.4	75.1	75.6	76.2	76.9	78.0	79.6	81.1	82.8	84.4	92.8
70°	62.6	63.0	63.4	63.8	64.3	65.2	66.5	68.0	69.3	70.8	76.9
72.5°	52.6	52.8	53.0	53.3	53.5	54.1	55.1	56.1	57.1	58.1	62.5
75°	44.5	44.7	44.8	45.1	45.3	45.7	46.3	46.9	47.5	48.1	50.9
77.5°	38.1	38.3	38.5	38.8	38.9	39.1	39.3	39.6	39.8	39.9	41.4
80°	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	33.0
82.5°	28.1	28.1	28.1	28.1	28.1	28.0	27.9	27.6	27.4	27.2	26.9
85°	24.5	24.5	24.5	24.5	24.5	24.2	23.6	23.0	22.4	21.8	21.0
87.5°	20.9	20.9	20.9	20.9	20.9	20.6	20.0	19.3	18.8	18.2	17.0
90°	18.2	18.0	17.8	17.5	17.3	17.0	16.3	15.7	15.2	14.5	13.1
92.5°	15.4	15.2	15.1	14.8	14.6	14.2	13.3	12.5	11.7	10.9	9.4
95°	12.7	12.5	12.3	12.1	11.9	11.4	10.6	9.8	9.0	8.2	6.7
97.5°	10.0	9.8	9.6	9.3	9.2	8.7	7.9	7.1	6.3	5.4	4.4
100°	8.2	8.0	7.8	7.5	7.4	6.9	6.1	5.3	4.4	3.6	2.8
102.5°	6.4	6.2	6.0	5.7	5.5	5.1	4.3	3.4	2.6	1.8	1.5
105°	4.5	4.4	4.2	3.9	3.7	3.4	2.7	2.1	1.5	0.9	0.7
107.5°	2.7	2.5	2.4	2.1	1.9	1.6	1.2	0.8	0.4	0.0	0.0
110°	1.8	1.6	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	0.5	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°	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7
2.5°	719.7	719.7	719.7	719.7	719.7	719.7	719.7	719.7
5°	717.9	717.9	717.9	717.9	717.9	717.9	717.9	717.9
7.5°	714.3	714.3	714.3	714.4	714.6	714.8	715.0	715.2
10°	709.4	709.1	708.9	708.9	708.9	708.9	708.9	708.9
12.5°	704.0	703.4	702.8	702.6	702.8	703.0	703.2	703.4
15°	697.9	696.4	695.1	694.6	695.2	695.9	696.4	697.1
17.5°	692.2	689.8	687.3	686.3	686.8	687.2	687.6	688.0
20°	684.7	681.4	677.9	676.3	676.5	676.7	676.9	677.1
22.5°	676.3	672.3	668.2	666.0	665.6	665.2	664.7	664.4
25°	664.2	659.6	654.9	652.2	651.4	650.6	649.8	648.9
27.5°	649.2	644.4	639.6	636.3	634.7	633.2	631.5	629.9
30°	630.1	625.6	621.2	618.0	616.0	613.9	611.9	609.9
32.5°	604.6	602.4	600.1	598.0	596.0	593.9	592.0	590.0
35°	573.5	575.7	578.0	578.0	575.7	573.5	571.3	569.1
37.5°	537.0	545.5	553.9	557.1	554.8	552.7	550.4	548.2
40°	494.7	510.7	526.6	533.6	531.6	529.5	527.5	525.5
42.5°	448.0	471.3	494.7	505.7	504.4	502.9	501.6	500.1
45°	401.4	431.4	461.4	476.1	475.3	474.5	473.7	472.9
47.5°	356.3	390.5	424.9	442.2	442.6	443.0	443.5	443.8
50°	314.8	350.1	385.4	404.1	406.3	408.5	410.8	413.0
52.5°	275.2	308.9	342.5	361.6	366.0	370.5	374.9	379.4
55°	238.9	268.9	299.0	317.4	324.0	330.6	337.4	344.0
57.5°	205.7	230.8	256.0	272.8	281.1	289.3	297.6	305.9
60°	175.7	195.4	215.2	230.2	240.2	250.3	260.4	270.5
62.5°	148.2	163.4	178.5	191.3	201.8	212.3	222.7	233.3
65°	123.3	134.6	145.9	156.7	166.7	176.8	186.9	197.0
67.5°	101.4	109.8	118.3	127.0	135.9	144.7	153.6	162.5
70°	82.9	88.9	95.0	101.7	108.9	116.2	123.4	130.7
72.5°	67.0	71.4	75.9	80.7	86.0	91.1	96.4	101.7
75°	53.7	56.5	59.4	62.6	66.3	69.9	73.5	77.1
77.5°	42.7	44.2	45.6	47.3	49.3	51.4	53.4	55.4
80°	33.5	33.9	34.3	34.8	35.4	36.0	36.6	37.2
82.5°	26.4	26.0	25.6	25.1	24.5	23.9	23.3	22.7
85°	20.1	19.3	18.5	17.3	15.7	14.2	12.5	10.9
87.5°	15.7	14.5	13.3	11.7	9.7	7.6	5.6	3.6
90°	11.7	10.3	8.9	7.3	5.4	3.6	1.8	0.0
92.5°	8.1	6.6	5.3	4.0	3.0	2.0	1.0	0.0
95°	5.4	3.9	2.5	1.6	1.2	0.8	0.4	0.0
97.5°	3.4	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°	0.5	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)