

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: P273479

Luminaire Tested: **0.05-12W-835-90SYM-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P273479  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1708-246-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: 0.05-12W-835-90SYM-STD-UNV-AN-3F0  
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 90 DEGREE SYMMETRIC OPTIC.  
V2 HIGH OUTPUT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2241.5 lumens  
Efficiency: N/A  
Efficacy: 63.5 lumens/watt  
Spacing Criteria (0/90/45): 1.34 / 1.29 / 1.43  
Luminous Opening: Rectangular (W 2.92' x L: 0.17' x H: 0')  
CIE Type: Direct

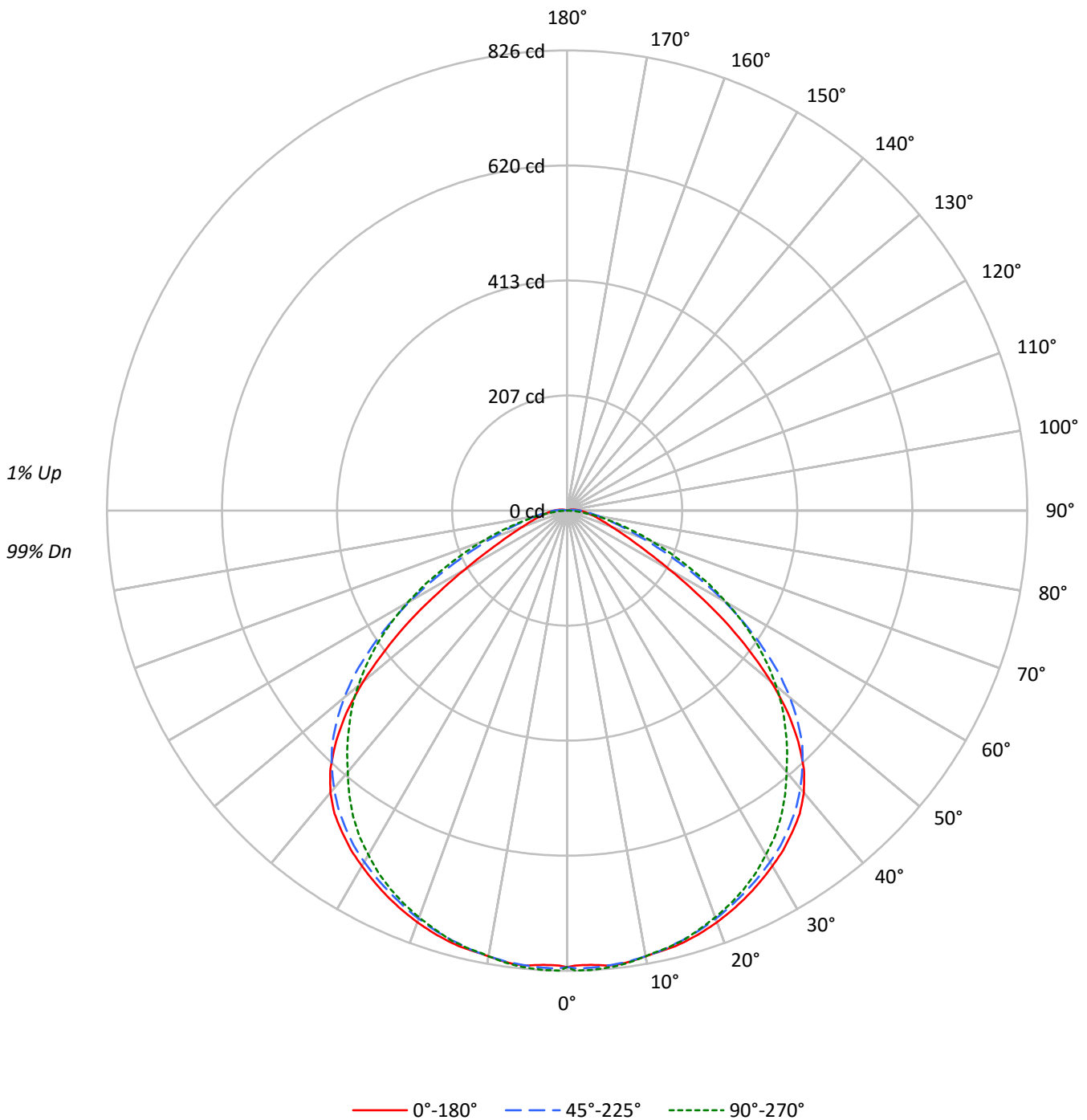
Input Watts (W): 35.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	86	81	98	90	85	80	87	82	78	84	79	76	80	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	63	61
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53
5	78	65	56	50	75	64	56	50	62	55	49	60	53	49	58	52	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	42	40
7	66	53	45	39	65	52	44	39	51	44	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	34	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	30	29
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

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

	0°	45°	90°
0°	18146	18146	18146
5°	18229	18229	18309
10°	18264	18264	18264
15°	18406	18309	18335
20°	18528	18368	18307
25°	18664	18461	18322
30°	18841	18627	18243
35°	19046	18765	18106
40°	19104	18820	17707
45°	18369	18695	17358
50°	16480	17985	16876
55°	13292	16562	16021
60°	9420	14442	14645
65°	6811	11689	12643
70°	5490	9226	10572
75°	5159	7606	8367
80°	5700	7230	6363
85°	8333	9121	4217



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.9	3.5
10°-20°	225.6	10.1
20°-30°	348.5	15.5
30°-40°	431.1	19.2
40°-50°	447.0	19.9
50°-60°	359.3	16.0
60°-70°	207.0	9.2
70°-80°	94.7	4.2
80°-90°	36.4	1.6
90°-100°	11.4	0.5
100°-110°	2.6	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°	652.0	29.1
0°-40°	1083.0	48.3
0°-60°	1889.3	84.3
0°-90°	2227.4	99.4
90°-120°	14.1	0.6
90°-150°	14.1	0.6
90°-180°	14.0	0.6
0°-180°	2241.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	820	820	820	820	820	
5°	820	820	820	816	824	78
15°	803	802	799	794	800	227
25°	764	762	756	747	750	353
35°	705	700	694	675	670	441
45°	587	593	597	570	554	448
55°	344	375	429	432	415	306
65°	130	152	223	260	241	135
75°	60	65	89	113	98	66
85°	33	33	36	33	17	29
90°	23	23	22	14	0	13
95°	16	15	12	4	0	12
105°	6	4	2	0	0	6
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°	819.5	819.5	819.5	819.5	819.5	819.5	819.5	819.5	819.5	819.5	819.5
1°	816.9	816.4	814.9	815.4	819.0	822.1	823.2	822.7	823.2	821.6	821.1
2°	816.4	815.9	814.3	815.9	819.0	821.6	823.2	822.7	822.7	822.1	821.6
3°	816.4	816.4	814.3	816.4	819.0	821.1	822.1	822.1	822.1	821.6	821.1
4°	818.0	818.0	815.4	816.9	818.5	820.6	821.6	821.1	821.6	821.1	820.6
5°	820.1	818.5	815.9	816.9	819.0	820.1	821.1	820.1	820.6	820.1	820.1
6°	820.1	819.0	816.4	816.4	818.5	818.5	819.5	819.0	820.1	819.0	819.0
7°	819.0	818.0	815.4	815.9	816.9	818.0	819.0	818.5	818.5	818.0	817.5
8°	817.5	815.9	813.3	813.3	815.9	816.9	818.0	817.5	817.5	816.4	816.4
9°	814.9	813.3	810.2	810.7	813.3	814.9	815.9	815.9	815.4	814.3	814.3
10°	812.3	810.7	808.6	809.1	811.2	812.8	813.8	814.3	813.8	812.3	811.7
11°	810.2	809.1	806.5	807.1	810.2	811.2	811.7	812.3	811.7	810.2	810.2
12°	808.6	807.6	804.5	805.0	807.6	809.1	809.1	809.7	809.7	807.6	807.6
13°	807.1	805.5	802.9	803.4	805.0	807.6	807.6	807.6	807.6	805.0	805.5
14°	805.5	803.4	801.3	800.8	802.4	805.0	805.0	804.5	804.5	801.3	802.9
15°	802.9	801.9	799.8	799.8	801.3	802.4	802.4	802.4	801.3	798.7	800.8
17.5°	795.6	794.1	792.5	791.5	793.5	794.6	794.1	794.1	792.5	789.9	792.0
20°	786.3	784.7	783.1	782.1	783.1	783.7	783.7	783.1	781.6	779.5	780.5
22.5°	775.9	774.3	772.7	771.2	772.2	773.8	772.2	772.2	770.7	768.1	768.6
25°	763.9	762.9	761.3	759.7	761.3	761.8	760.3	760.3	758.7	755.6	755.6
27.5°	750.9	750.9	748.8	747.3	749.3	749.3	747.3	748.3	745.2	742.6	743.1
30°	736.9	736.9	734.8	733.2	734.3	734.8	732.7	732.7	730.6	728.5	727.5
32.5°	722.3	722.3	720.2	717.6	718.1	719.2	716.6	715.5	713.5	712.9	712.4
35°	704.6	704.6	702.5	699.9	700.5	700.5	698.4	696.8	695.3	694.2	692.7
37.5°	685.9	685.4	683.3	680.7	680.7	681.7	679.1	677.1	675.0	674.5	673.4
40°	660.9	660.9	658.9	657.3	657.3	657.8	656.3	654.7	652.6	651.1	649.5
42.5°	629.2	629.7	627.1	626.6	628.7	630.3	630.8	629.7	627.7	625.1	625.1
45°	586.6	588.7	587.1	587.6	591.3	594.9	596.5	598.0	598.0	597.0	594.9
47.5°	537.7	536.7	537.2	540.3	544.5	551.7	556.4	560.6	563.2	561.6	561.6
50°	478.4	478.9	479.5	485.2	490.4	500.8	509.1	514.8	519.5	522.1	521.6
52.5°	411.3	415.0	416.5	423.8	430.6	442.5	454.5	463.9	472.7	478.9	480.0
55°	344.3	343.7	349.5	357.8	368.2	381.7	396.3	407.7	420.2	429.0	435.3
57.5°	273.5	276.6	281.3	290.7	302.6	320.9	335.9	350.5	364.5	377.5	386.9
60°	212.7	214.2	219.4	227.2	238.7	255.3	276.1	293.3	308.4	326.1	337.0
62.5°	164.3	165.9	171.1	177.3	188.2	200.7	217.9	235.0	253.8	273.5	286.5
65°	130.0	130.0	133.1	138.3	146.1	157.6	171.1	186.7	204.4	223.1	237.6
67.5°	104.0	104.5	107.1	109.7	115.4	124.3	134.7	146.6	162.2	179.4	194.0
70°	84.8	85.8	87.4	88.9	92.6	98.8	106.1	115.4	127.4	142.5	156.5
72.5°	71.2	71.2	72.3	73.3	75.9	80.1	85.8	92.0	101.9	112.8	124.3
75°	60.3	60.8	60.8	61.9	64.0	66.6	70.2	74.4	80.6	88.9	98.3
77.5°	52.0	51.5	52.5	52.5	54.1	55.6	58.2	60.8	66.0	70.7	77.0
80°	44.7	44.2	44.7	44.7	45.8	46.8	47.8	49.9	53.6	56.7	60.3
82.5°	38.0	38.0	38.0	38.5	38.5	39.0	40.6	41.6	43.2	45.2	47.3
85°	32.8	32.8	32.8	32.8	33.3	33.3	33.3	34.3	34.8	35.9	36.9
87.5°	28.1	28.1	28.1	27.6	27.0	28.1	28.1	28.1	28.6	28.6	28.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
90°	23.4	23.9	22.9	22.9	22.9	22.9	22.9	22.4	22.4	22.4	21.3
92.5°	19.8	19.8	19.2	19.2	19.2	18.7	18.2	18.2	17.2	17.2	16.1
95°	16.1	16.1	16.1	15.6	15.1	15.1	14.6	14.0	13.0	12.0	10.9
97.5°	13.0	13.0	12.5	12.0	12.0	12.0	10.9	10.4	9.9	8.8	7.3
100°	9.9	9.9	9.9	9.9	9.4	8.8	8.3	7.8	6.8	5.7	4.7
102.5°	7.8	7.8	7.8	7.3	6.8	6.2	5.7	5.2	4.2	3.1	2.1
105°	5.7	5.7	5.7	5.2	4.7	4.2	3.6	3.1	2.6	1.6	0.5
107.5°	3.6	3.6	3.6	3.1	3.1	2.6	2.1	1.6	0.5	0.5	0.0
110°	2.1	2.1	2.1	1.6	1.6	1.6	0.5	0.5	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	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	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°	819.5	819.5	819.5	819.5	819.5	819.5	819.5	819.5
1°	817.5	815.9	816.9	816.4	819.0	824.2	825.3	825.8
2°	817.5	815.9	817.5	816.9	819.0	823.7	825.3	825.8
3°	816.9	816.4	817.5	816.9	818.5	823.2	825.3	825.8
4°	816.9	815.9	816.9	816.4	817.5	822.1	824.2	824.7
5°	816.4	815.4	816.4	815.9	816.4	821.6	823.2	823.7
6°	815.4	813.8	815.9	814.9	815.4	820.1	822.1	822.7
7°	814.3	812.3	814.3	813.8	813.8	818.0	820.1	820.6
8°	813.3	810.7	812.8	812.3	812.3	815.9	817.5	818.5
9°	811.2	807.6	810.7	810.2	810.2	813.3	814.9	815.4
10°	809.1	805.5	808.1	808.6	807.6	810.7	812.3	812.3
11°	807.1	802.9	806.0	806.0	805.5	808.6	810.2	809.1
12°	804.5	800.3	803.4	803.4	803.4	805.5	807.1	807.1
13°	801.3	798.2	800.8	800.3	800.8	803.4	805.0	805.0
14°	798.7	795.1	797.7	797.7	797.7	800.8	801.9	801.9
15°	796.1	792.5	794.1	794.6	795.1	798.2	799.3	799.8
17.5°	786.3	784.2	783.7	785.2	785.7	787.3	787.8	788.3
20°	776.4	772.7	773.3	773.3	773.8	776.9	776.4	776.9
22.5°	765.5	760.3	760.3	761.8	761.3	764.9	763.4	764.4
25°	752.5	747.3	745.7	748.3	747.8	750.4	749.9	749.9
27.5°	738.4	734.3	730.6	733.7	732.2	733.7	732.7	733.2
30°	724.4	717.1	715.0	716.1	714.5	716.1	714.5	713.5
32.5°	708.3	699.9	695.8	697.9	695.3	696.8	694.2	693.7
35°	689.5	681.7	675.0	674.5	672.9	671.9	670.3	669.8
37.5°	669.8	661.5	654.2	650.5	646.9	645.9	643.3	642.7
40°	646.4	638.1	628.2	624.5	619.3	617.8	613.6	612.6
42.5°	619.3	612.1	602.2	596.5	592.3	588.7	584.5	584.5
45°	590.2	581.9	572.0	567.3	563.2	559.5	554.9	554.3
47.5°	557.5	549.7	541.3	535.1	532.0	528.3	524.7	524.2
50°	520.5	514.8	508.6	502.3	498.2	493.5	489.3	489.9
52.5°	481.5	477.4	472.7	467.0	462.3	457.1	453.5	453.5
55°	438.9	437.9	434.2	429.0	423.8	418.6	415.0	415.0
57.5°	393.7	395.2	394.2	388.5	384.3	377.5	374.9	374.4
60°	346.9	351.5	351.5	346.9	342.7	335.9	332.3	330.7
62.5°	298.0	304.2	306.3	303.2	299.5	293.3	288.6	288.1
65°	249.6	257.4	261.6	259.0	254.8	247.5	243.4	241.3
67.5°	207.0	214.8	215.8	216.8	212.7	207.5	202.8	200.7
70°	168.5	175.2	178.4	177.8	174.7	169.5	164.8	163.3
72.5°	134.7	141.4	144.6	142.5	139.9	135.7	131.6	129.0
75°	106.6	111.3	113.9	111.8	108.7	104.0	101.9	97.8
77.5°	82.7	86.3	87.9	85.8	82.2	78.5	74.9	71.8
80°	64.5	66.6	67.1	63.4	59.8	56.2	52.0	49.9
82.5°	49.4	50.4	49.4	45.2	41.1	36.9	33.3	31.2
85°	38.0	37.4	35.4	31.2	26.5	22.4	18.2	16.6
87.5°	28.1	27.0	24.4	20.3	15.6	11.4	7.8	6.2





TEST NUMBER: P273479

CATALOG NUMBER: 0.05-12W-835-90SYM-STD-UNV-AN-3F0

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
90°	20.3	19.2	16.1	12.5	8.3	4.7	2.1	0.0
92.5°	14.6	12.5	9.9	6.8	3.6	1.0	0.0	0.0
95°	9.9	7.8	5.7	3.1	1.0	0.0	0.0	0.0
97.5°	5.7	4.2	2.6	0.5	0.0	0.0	0.0	0.0
100°	3.1	1.6	0.5	0.0	0.0	0.0	0.0	0.0
102.5°	1.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.5	0.0	0.0	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
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)