

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: P273443

Luminaire Tested: **0.05-09W-827-90SYM-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273443
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: 0.05-09W-827-90SYM-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 90 DEGREE SYMMETRIC OPTIC.
VERY HIGH OUTPUT
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1758.5 lumens
Efficiency: N/A
Efficacy: 60.0 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

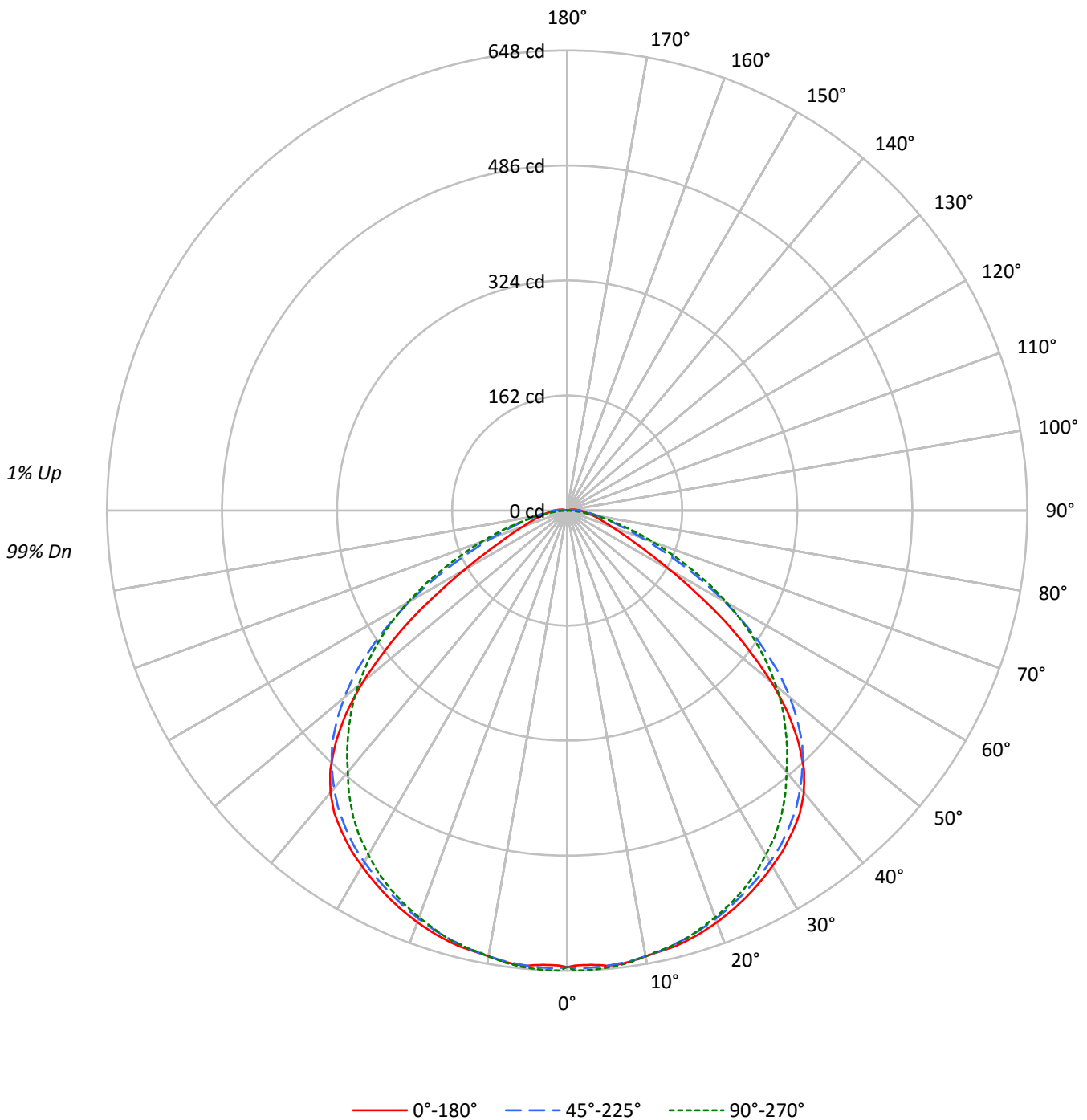
Input Watts (W): 29.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	14238	14238	14238
5°	14301	14301	14363
10°	14329	14329	14329
15°	14440	14364	14385
20°	14537	14412	14362
25°	14642	14483	14373
30°	14781	14615	14311
35°	14943	14721	14205
40°	14987	14765	13892
45°	14411	14668	13619
50°	12928	14110	13238
55°	10427	12994	12570
60°	7391	11328	11492
65°	5344	9169	9918
70°	4305	7238	8293
75°	4047	5972	6562
80°	4476	5674	4999
85°	6529	7165	3328



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.1	3.5
10°-20°	177.0	10.1
20°-30°	273.4	15.5
30°-40°	338.2	19.2
40°-50°	350.7	19.9
50°-60°	281.9	16.0
60°-70°	162.4	9.2
70°-80°	74.3	4.2
80°-90°	28.5	1.6
90°-100°	9.0	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°	511.5	29.1
0°-40°	849.7	48.3
0°-60°	1482.2	84.3
0°-90°	1747.4	99.4
90°-120°	11.1	0.6
90°-150°	11.1	0.6
90°-180°	11.0	0.6
0°-180°	1758.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	643	643	643	643	643	
5°	643	643	643	640	646	61
15°	630	629	627	623	628	178
25°	599	598	593	586	588	277
35°	553	550	545	529	526	346
45°	460	465	468	447	435	351
55°	270	294	337	339	326	240
65°	102	119	175	204	189	106
75°	47	51	70	88	77	51
85°	26	26	28	26	13	23
90°	18	18	18	11	0	10
95°	13	12	9	3	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°	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0
1°	640.9	640.5	639.3	639.7	642.6	645.0	645.8	645.4	645.8	644.6	644.2
2°	640.5	640.1	638.9	640.1	642.6	644.6	645.8	645.4	645.4	645.0	644.6
3°	640.5	640.5	638.9	640.5	642.6	644.2	645.0	645.0	645.0	644.6	644.2
4°	641.7	641.7	639.7	640.9	642.2	643.8	644.6	644.2	644.6	644.2	643.8
5°	643.4	642.2	640.1	640.9	642.6	643.4	644.2	643.4	643.8	643.4	643.4
6°	643.4	642.6	640.5	640.5	642.2	642.2	643.0	642.6	643.4	642.6	642.6
7°	642.6	641.7	639.7	640.1	640.9	641.7	642.6	642.2	642.2	641.7	641.3
8°	641.3	640.1	638.1	638.1	640.1	640.9	641.7	641.3	641.3	640.5	640.5
9°	639.3	638.1	635.6	636.0	638.1	639.3	640.1	640.1	639.7	638.9	638.9
10°	637.3	636.0	634.4	634.8	636.4	637.7	638.5	638.9	638.5	637.3	636.8
11°	635.6	634.8	632.8	633.2	635.6	636.4	636.8	637.3	636.8	635.6	635.6
12°	634.4	633.6	631.1	631.5	633.6	634.8	634.8	635.2	635.2	633.6	633.6
13°	633.2	632.0	629.9	630.3	631.5	633.6	633.6	633.6	633.6	631.5	632.0
14°	632.0	630.3	628.7	628.3	629.5	631.5	631.5	631.1	631.1	628.7	629.9
15°	629.9	629.1	627.5	627.5	628.7	629.5	629.5	629.5	628.7	626.6	628.3
17.5°	624.2	623.0	621.8	620.9	622.6	623.4	623.0	623.0	621.8	619.7	621.3
20°	616.9	615.6	614.4	613.6	614.4	614.8	614.8	614.4	613.2	611.6	612.4
22.5°	608.7	607.5	606.2	605.0	605.8	607.1	605.8	605.8	604.6	602.6	603.0
25°	599.3	598.5	597.3	596.0	597.3	597.7	596.5	596.5	595.2	592.8	592.8
27.5°	589.1	589.1	587.5	586.3	587.9	587.9	586.3	587.1	584.6	582.6	583.0
30°	578.1	578.1	576.5	575.2	576.1	576.5	574.8	574.8	573.2	571.6	570.8
32.5°	566.7	566.7	565.0	563.0	563.4	564.2	562.2	561.4	559.7	559.3	558.9
35°	552.8	552.8	551.2	549.1	549.5	549.5	547.9	546.7	545.5	544.6	543.4
37.5°	538.1	537.7	536.1	534.0	534.0	534.9	532.8	531.2	529.6	529.1	528.3
40°	518.5	518.5	516.9	515.7	515.7	516.1	514.9	513.6	512.0	510.8	509.6
42.5°	493.6	494.1	492.0	491.6	493.2	494.5	494.9	494.1	492.4	490.4	490.4
45°	460.2	461.8	460.6	461.0	463.9	466.7	467.9	469.2	469.2	468.4	466.7
47.5°	421.8	421.0	421.4	423.9	427.1	432.9	436.5	439.8	441.8	440.6	440.6
50°	375.3	375.7	376.2	380.6	384.7	392.9	399.4	403.9	407.6	409.6	409.2
52.5°	322.7	325.6	326.8	332.5	337.8	347.2	356.6	363.9	370.8	375.7	376.6
55°	270.1	269.7	274.2	280.7	288.8	299.5	310.9	319.9	329.6	336.6	341.5
57.5°	214.6	217.0	220.7	228.1	237.4	251.7	263.6	275.0	286.0	296.2	303.5
60°	166.9	168.1	172.2	178.3	187.3	200.3	216.6	230.1	241.9	255.8	264.4
62.5°	128.9	130.1	134.2	139.1	147.7	157.5	170.9	184.4	199.1	214.6	224.8
65°	102.0	102.0	104.4	108.5	114.6	123.6	134.2	146.5	160.3	175.0	186.4
67.5°	81.6	82.0	84.0	86.1	90.6	97.5	105.7	115.0	127.3	140.8	152.2
70°	66.5	67.3	68.5	69.8	72.6	77.5	83.2	90.6	100.0	111.8	122.8
72.5°	55.9	55.9	56.7	57.5	59.6	62.8	67.3	72.2	80.0	88.5	97.5
75°	47.3	47.7	47.7	48.5	50.2	52.2	55.1	58.3	63.2	69.8	77.1
77.5°	40.8	40.4	41.2	41.2	42.4	43.7	45.7	47.7	51.8	55.5	60.4
80°	35.1	34.7	35.1	35.1	35.9	36.7	37.5	39.2	42.0	44.5	47.3
82.5°	29.8	29.8	29.8	30.2	30.2	30.6	31.8	32.6	33.9	35.5	37.1
85°	25.7	25.7	25.7	25.7	26.1	26.1	26.1	26.9	27.3	28.2	29.0
87.5°	22.0	22.0	22.0	21.6	21.2	22.0	22.0	22.0	22.4	22.4	22.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
90°	18.4	18.8	18.0	18.0	18.0	18.0	18.0	17.5	17.5	17.5	16.7
92.5°	15.5	15.5	15.1	15.1	15.1	14.7	14.3	14.3	13.5	13.5	12.6
95°	12.6	12.6	12.6	12.2	11.8	11.8	11.4	11.0	10.2	9.4	8.6
97.5°	10.2	10.2	9.8	9.4	9.4	9.4	8.6	8.2	7.8	6.9	5.7
100°	7.8	7.8	7.8	7.8	7.3	6.9	6.5	6.1	5.3	4.5	3.7
102.5°	6.1	6.1	6.1	5.7	5.3	4.9	4.5	4.1	3.3	2.4	1.6
105°	4.5	4.5	4.5	4.1	3.7	3.3	2.9	2.4	2.0	1.2	0.4
107.5°	2.9	2.9	2.9	2.4	2.4	2.0	1.6	1.2	0.4	0.4	0.0
110°	1.6	1.6	1.6	1.2	1.2	1.2	0.4	0.4	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°	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0
1°	641.3	640.1	640.9	640.5	642.6	646.6	647.5	647.9
2°	641.3	640.1	641.3	640.9	642.6	646.2	647.5	647.9
3°	640.9	640.5	641.3	640.9	642.2	645.8	647.5	647.9
4°	640.9	640.1	640.9	640.5	641.3	645.0	646.6	647.0
5°	640.5	639.7	640.5	640.1	640.5	644.6	645.8	646.2
6°	639.7	638.5	640.1	639.3	639.7	643.4	645.0	645.4
7°	638.9	637.3	638.9	638.5	638.5	641.7	643.4	643.8
8°	638.1	636.0	637.7	637.3	637.3	640.1	641.3	642.2
9°	636.4	633.6	636.0	635.6	635.6	638.1	639.3	639.7
10°	634.8	632.0	634.0	634.4	633.6	636.0	637.3	637.3
11°	633.2	629.9	632.4	632.4	632.0	634.4	635.6	634.8
12°	631.1	627.9	630.3	630.3	630.3	632.0	633.2	633.2
13°	628.7	626.2	628.3	627.9	628.3	630.3	631.5	631.5
14°	626.6	623.8	625.8	625.8	625.8	628.3	629.1	629.1
15°	624.6	621.8	623.0	623.4	623.8	626.2	627.1	627.5
17.5°	616.9	615.2	614.8	616.0	616.4	617.7	618.1	618.5
20°	609.1	606.2	606.7	606.7	607.1	609.5	609.1	609.5
22.5°	600.5	596.5	596.5	597.7	597.3	600.1	598.9	599.7
25°	590.3	586.3	585.0	587.1	586.7	588.7	588.3	588.3
27.5°	579.3	576.1	573.2	575.7	574.4	575.7	574.8	575.2
30°	568.3	562.6	561.0	561.8	560.6	561.8	560.6	559.7
32.5°	555.7	549.1	545.9	547.5	545.5	546.7	544.6	544.2
35°	541.0	534.9	529.6	529.1	527.9	527.1	525.9	525.5
37.5°	525.5	518.9	513.2	510.4	507.5	506.7	504.7	504.3
40°	507.1	500.6	492.8	490.0	485.9	484.7	481.4	480.6
42.5°	485.9	480.2	472.4	467.9	464.7	461.8	458.6	458.6
45°	463.1	456.5	448.8	445.1	441.8	439.0	435.3	434.9
47.5°	437.3	431.2	424.7	419.8	417.4	414.5	411.6	411.2
50°	408.4	403.9	399.0	394.1	390.8	387.2	383.9	384.3
52.5°	377.8	374.5	370.8	366.4	362.7	358.6	355.8	355.8
55°	344.3	343.5	340.7	336.6	332.5	328.4	325.6	325.6
57.5°	308.8	310.1	309.2	304.8	301.5	296.2	294.1	293.7
60°	272.1	275.8	275.8	272.1	268.9	263.6	260.7	259.5
62.5°	233.8	238.7	240.3	237.8	235.0	230.1	226.4	226.0
65°	195.8	201.9	205.2	203.2	199.9	194.2	190.9	189.3
67.5°	162.4	168.5	169.3	170.1	166.9	162.8	159.1	157.5
70°	132.2	137.5	139.9	139.5	137.1	133.0	129.3	128.1
72.5°	105.7	111.0	113.4	111.8	109.7	106.5	103.2	101.2
75°	83.6	87.3	89.3	87.7	85.3	81.6	80.0	76.7
77.5°	64.9	67.7	68.9	67.3	64.5	61.6	58.7	56.3
80°	50.6	52.2	52.6	49.8	46.9	44.1	40.8	39.2
82.5°	38.8	39.6	38.8	35.5	32.2	29.0	26.1	24.5
85°	29.8	29.4	27.7	24.5	20.8	17.5	14.3	13.1
87.5°	22.0	21.2	19.2	15.9	12.2	9.0	6.1	4.9



TEST NUMBER: P273443

CATALOG NUMBER: 0.05-09W-827-90SYM-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
90°	15.9	15.1	12.6	9.8	6.5	3.7	1.6	0.0
92.5°	11.4	9.8	7.8	5.3	2.9	0.8	0.0	0.0
95°	7.8	6.1	4.5	2.4	0.8	0.0	0.0	0.0
97.5°	4.5	3.3	2.0	0.4	0.0	0.0	0.0	0.0
100°	2.4	1.2	0.4	0.0	0.0	0.0	0.0	0.0
102.5°	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.4	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)