

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: P273485

Luminaire Tested: **0.05-12W-840-90SYM-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273485
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-840-90SYM-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 90 DEGREE SYMMETRIC OPTIC.
V2 HIGH OUTPUT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2284.6 lumens
Efficiency: N/A
Efficacy: 64.7 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

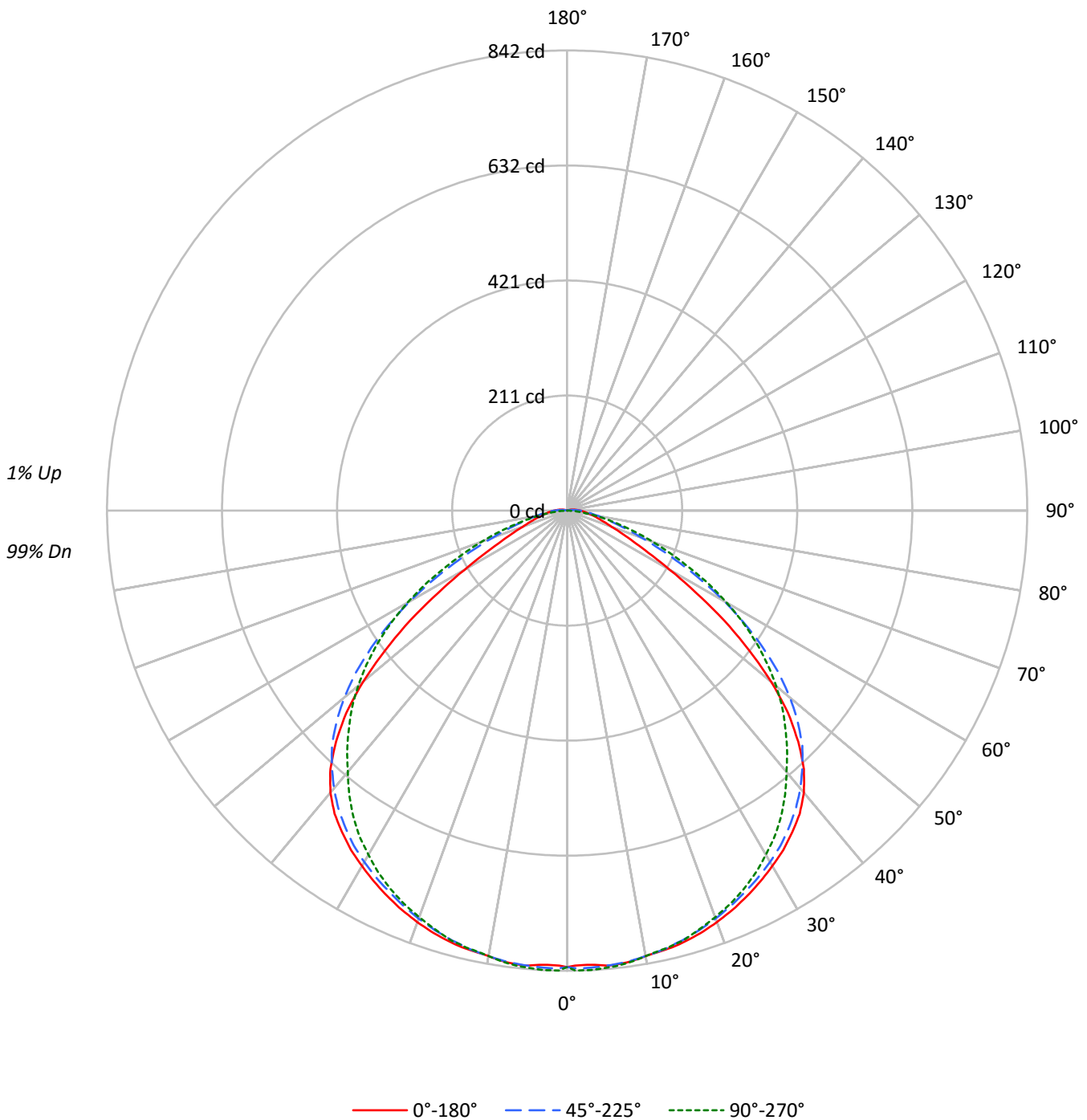
Input Watts (W): 35.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	18496	18496	18496
5°	18578	18578	18660
10°	18615	18615	18615
15°	18759	18662	18688
20°	18884	18722	18658
25°	19023	18815	18673
30°	19202	18987	18593
35°	19414	19127	18454
40°	19474	19182	18049
45°	18723	19055	17693
50°	16797	18330	17200
55°	13546	16882	16330
60°	9601	14716	14929
65°	6942	11915	12884
70°	5594	9400	10773
75°	5262	7751	8521
80°	5815	7370	6491
85°	8486	9299	4319



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	3.5
10°-20°	229.9	10.1
20°-30°	355.2	15.5
30°-40°	439.4	19.2
40°-50°	455.6	19.9
50°-60°	366.2	16.0
60°-70°	211.0	9.2
70°-80°	96.5	4.2
80°-90°	37.1	1.6
90°-100°	11.7	0.5
100°-110°	2.7	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°	664.5	29.1
0°-40°	1103.9	48.3
0°-60°	1925.7	84.3
0°-90°	2270.2	99.4
90°-120°	14.4	0.6
90°-150°	14.4	0.6
90°-180°	14.0	0.6
0°-180°	2284.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	835	835	835	835	835	
5°	836	835	836	832	840	80
15°	818	817	814	810	815	231
25°	779	776	770	761	764	359
35°	718	714	708	688	683	449
45°	598	604	608	581	565	456
55°	351	382	437	440	423	312
65°	132	155	227	265	246	138
75°	62	66	91	115	100	67
85°	33	34	37	34	17	30
90°	24	23	23	15	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°	835.3	835.3	835.3	835.3	835.3	835.3	835.3	835.3	835.3	835.3	835.3
1°	832.7	832.1	830.5	831.1	834.8	838.0	839.0	838.5	839.0	837.4	836.9
2°	832.1	831.6	830.0	831.6	834.8	837.4	839.0	838.5	838.5	838.0	837.4
3°	832.1	832.1	830.0	832.1	834.8	836.9	838.0	838.0	838.0	837.4	836.9
4°	833.7	833.7	831.1	832.7	834.2	836.4	837.4	836.9	837.4	836.9	836.4
5°	835.8	834.2	831.6	832.7	834.8	835.8	836.9	835.8	836.4	835.8	835.8
6°	835.8	834.8	832.1	832.1	834.2	834.2	835.3	834.8	835.8	834.8	834.8
7°	834.8	833.7	831.1	831.6	832.7	833.7	834.8	834.2	834.2	833.7	833.2
8°	833.2	831.6	828.9	828.9	831.6	832.7	833.7	833.2	833.2	832.1	832.1
9°	830.5	828.9	825.8	826.3	828.9	830.5	831.6	831.6	831.1	830.0	830.0
10°	827.9	826.3	824.2	824.7	826.8	828.4	829.5	830.0	829.5	827.9	827.4
11°	825.8	824.7	822.1	822.6	825.8	826.8	827.4	827.9	827.4	825.8	825.8
12°	824.2	823.1	819.9	820.5	823.1	824.7	824.7	825.2	825.2	823.1	823.1
13°	822.6	821.0	818.3	818.9	820.5	823.1	823.1	823.1	823.1	820.5	821.0
14°	821.0	818.9	816.8	816.2	817.8	820.5	820.5	819.9	819.9	816.8	818.3
15°	818.3	817.3	815.2	815.2	816.8	817.8	817.8	817.8	816.8	814.1	816.2
17.5°	810.9	809.3	807.7	806.7	808.8	809.9	809.3	809.3	807.7	805.1	807.2
20°	801.4	799.8	798.2	797.1	798.2	798.7	798.7	798.2	796.6	794.5	795.6
22.5°	790.8	789.2	787.6	786.0	787.1	788.7	787.1	787.1	785.5	782.8	783.4
25°	778.6	777.5	775.9	774.4	775.9	776.5	774.9	774.9	773.3	770.1	770.1
27.5°	765.3	765.3	763.2	761.6	763.8	763.8	761.6	762.7	759.5	756.9	757.4
30°	751.0	751.0	748.9	747.3	748.4	748.9	746.8	746.8	744.7	742.6	741.5
32.5°	736.2	736.2	734.1	731.4	732.0	733.0	730.4	729.3	727.2	726.7	726.1
35°	718.2	718.2	716.1	713.4	713.9	713.9	711.8	710.2	708.6	707.6	706.0
37.5°	699.1	698.6	696.4	693.8	693.8	694.9	692.2	690.1	688.0	687.4	686.4
40°	673.7	673.7	671.5	669.9	669.9	670.5	668.9	667.3	665.2	663.6	662.0
42.5°	641.3	641.9	639.2	638.7	640.8	642.4	642.9	641.9	639.7	637.1	637.1
45°	597.9	600.0	598.4	598.9	602.6	606.3	607.9	609.5	609.5	608.5	606.3
47.5°	548.0	547.0	547.5	550.7	554.9	562.3	567.1	571.4	574.0	572.4	572.4
50°	487.6	488.1	488.7	494.5	499.8	510.4	518.9	524.7	529.5	532.1	531.6
52.5°	419.2	423.0	424.5	432.0	438.9	451.0	463.2	472.8	481.8	488.1	489.2
55°	350.9	350.3	356.2	364.7	375.3	389.0	403.9	415.5	428.3	437.3	443.6
57.5°	278.8	282.0	286.7	296.3	308.5	327.0	342.4	357.2	371.5	384.8	394.3
60°	216.8	218.4	223.7	231.6	243.3	260.2	281.4	298.9	314.3	332.3	343.5
62.5°	167.5	169.1	174.4	180.7	191.9	204.6	222.1	239.6	258.6	278.8	292.0
65°	132.5	132.5	135.7	141.0	148.9	160.6	174.4	190.3	208.3	227.4	242.2
67.5°	106.0	106.5	109.2	111.8	117.7	126.7	137.3	149.5	165.4	182.9	197.7
70°	86.4	87.5	89.0	90.6	94.3	100.7	108.1	117.7	129.9	145.2	159.5
72.5°	72.6	72.6	73.7	74.7	77.4	81.6	87.5	93.8	103.9	115.0	126.7
75°	61.5	62.0	62.0	63.1	65.2	67.8	71.6	75.8	82.2	90.6	100.2
77.5°	53.0	52.5	53.5	53.5	55.1	56.7	59.4	62.0	67.3	72.1	78.4
80°	45.6	45.1	45.6	45.6	46.6	47.7	48.8	50.9	54.6	57.8	61.5
82.5°	38.7	38.7	38.7	39.2	39.2	39.8	41.3	42.4	44.0	46.1	48.2
85°	33.4	33.4	33.4	33.4	33.9	33.9	33.9	35.0	35.5	36.6	37.6
87.5°	28.6	28.6	28.6	28.1	27.6	28.6	28.6	28.6	29.2	29.2	29.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
90°	23.9	24.4	23.3	23.3	23.3	23.3	23.3	22.8	22.8	22.8	21.7
92.5°	20.1	20.1	19.6	19.6	19.6	19.1	18.6	18.6	17.5	17.5	16.4
95°	16.4	16.4	16.4	15.9	15.4	15.4	14.8	14.3	13.3	12.2	11.1
97.5°	13.3	13.3	12.7	12.2	12.2	12.2	11.1	10.6	10.1	9.0	7.4
100°	10.1	10.1	10.1	10.1	9.5	9.0	8.5	8.0	6.9	5.8	4.8
102.5°	8.0	8.0	8.0	7.4	6.9	6.4	5.8	5.3	4.2	3.2	2.1
105°	5.8	5.8	5.8	5.3	4.8	4.2	3.7	3.2	2.7	1.6	0.5
107.5°	3.7	3.7	3.7	3.2	3.2	2.7	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°	835.3	835.3	835.3	835.3	835.3	835.3	835.3	835.3
1°	833.2	831.6	832.7	832.1	834.8	840.1	841.1	841.7
2°	833.2	831.6	833.2	832.7	834.8	839.5	841.1	841.7
3°	832.7	832.1	833.2	832.7	834.2	839.0	841.1	841.7
4°	832.7	831.6	832.7	832.1	833.2	838.0	840.1	840.6
5°	832.1	831.1	832.1	831.6	832.1	837.4	839.0	839.5
6°	831.1	829.5	831.6	830.5	831.1	835.8	838.0	838.5
7°	830.0	827.9	830.0	829.5	829.5	833.7	835.8	836.4
8°	828.9	826.3	828.4	827.9	827.9	831.6	833.2	834.2
9°	826.8	823.1	826.3	825.8	825.8	828.9	830.5	831.1
10°	824.7	821.0	823.6	824.2	823.1	826.3	827.9	827.9
11°	822.6	818.3	821.5	821.5	821.0	824.2	825.8	824.7
12°	819.9	815.7	818.9	818.9	818.9	821.0	822.6	822.6
13°	816.8	813.6	816.2	815.7	816.2	818.9	820.5	820.5
14°	814.1	810.4	813.0	813.0	813.0	816.2	817.3	817.3
15°	811.5	807.7	809.3	809.9	810.4	813.6	814.6	815.2
17.5°	801.4	799.3	798.7	800.3	800.9	802.4	803.0	803.5
20°	791.3	787.6	788.1	788.1	788.7	791.8	791.3	791.8
22.5°	780.2	774.9	774.9	776.5	775.9	779.7	778.1	779.1
25°	766.9	761.6	760.0	762.7	762.2	764.8	764.3	764.3
27.5°	752.6	748.4	744.7	747.9	746.3	747.9	746.8	747.3
30°	738.3	730.9	728.8	729.8	728.2	729.8	728.2	727.2
32.5°	721.9	713.4	709.2	711.3	708.6	710.2	707.6	707.0
35°	702.8	694.9	688.0	687.4	685.8	684.8	683.2	682.7
37.5°	682.7	674.2	666.8	663.1	659.3	658.3	655.6	655.1
40°	658.8	650.3	640.3	636.5	631.2	629.7	625.4	624.4
42.5°	631.2	623.8	613.8	607.9	603.7	600.0	595.7	595.7
45°	601.6	593.1	583.0	578.2	574.0	570.3	565.5	565.0
47.5°	568.2	560.2	551.7	545.4	542.2	538.5	534.8	534.3
50°	530.5	524.7	518.4	512.0	507.8	503.0	498.7	499.3
52.5°	490.8	486.6	481.8	476.0	471.2	465.9	462.2	462.2
55°	447.3	446.3	442.6	437.3	432.0	426.7	423.0	423.0
57.5°	401.2	402.8	401.8	395.9	391.7	384.8	382.1	381.6
60°	353.5	358.3	358.3	353.5	349.3	342.4	338.7	337.1
62.5°	303.7	310.1	312.2	309.0	305.3	298.9	294.2	293.6
65°	254.4	262.4	266.6	263.9	259.7	252.3	248.0	245.9
67.5°	210.9	218.9	220.0	221.0	216.8	211.5	206.7	204.6
70°	171.7	178.6	181.8	181.3	178.1	172.8	168.0	166.4
72.5°	137.3	144.2	147.3	145.2	142.6	138.3	134.1	131.4
75°	108.7	113.4	116.1	114.0	110.8	106.0	103.9	99.6
77.5°	84.3	88.0	89.6	87.5	83.7	80.0	76.3	73.1
80°	65.7	67.8	68.4	64.7	61.0	57.2	53.0	50.9
82.5°	50.4	51.4	50.4	46.1	41.9	37.6	33.9	31.8
85°	38.7	38.2	36.0	31.8	27.0	22.8	18.6	17.0
87.5°	28.6	27.6	24.9	20.7	15.9	11.7	8.0	6.4



TEST NUMBER: P273485

CATALOG NUMBER: 0.05-12W-840-90SYM-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
90°	20.7	19.6	16.4	12.7	8.5	4.8	2.1	0.0
92.5°	14.8	12.7	10.1	6.9	3.7	1.1	0.0	0.0
95°	10.1	8.0	5.8	3.2	1.1	0.0	0.0	0.0
97.5°	5.8	4.2	2.7	0.5	0.0	0.0	0.0	0.0
100°	3.2	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)