

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: P273450

Luminaire Tested: **0.05-09W-835-5-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273450
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1708-246-1)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 0.05-09W-835-5-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 5 DEGREE OPTIC.
VERY HIGH OUTPUT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1611.4 lumens
Efficiency: N/A
Efficacy: 55.0 lumens/watt
Spacing Criteria (0/90/45): 0.17 / 1.31 / 0.22
Luminous Opening: Rectangular (W 2.92' x L: 0.21' x H: 0')
CIE Type: Direct

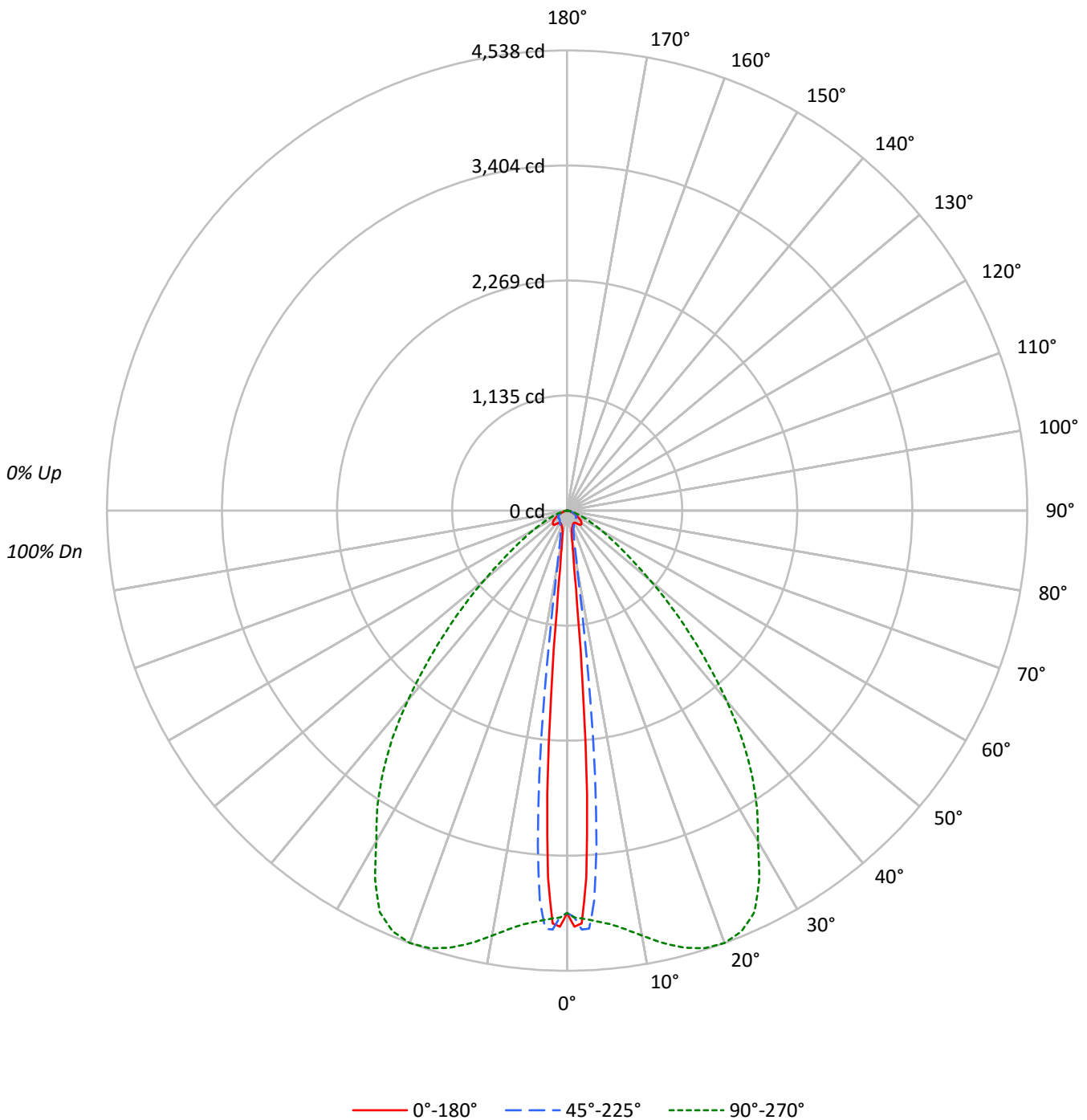
Input Watts (W): 29.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	100
1	111	108	104	101	109	105	102	100	101	99	96	97	95	93	94	92	91	89
2	104	97	92	87	101	95	91	86	92	88	84	89	85	82	86	83	81	79
3	97	88	82	77	94	87	81	76	84	79	75	81	77	74	79	75	72	70
4	91	81	74	69	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	63	60	58
6	80	69	62	57	78	68	61	56	67	61	56	65	60	56	64	59	55	53
7	76	64	57	52	74	64	57	52	62	56	52	61	56	51	60	55	51	49
8	72	60	53	49	70	60	53	48	59	53	48	57	52	48	56	51	48	46
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43
10	65	54	47	43	64	53	47	43	52	47	43	52	46	42	51	46	42	41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	70271	70271	70271
5°	31801	59015	72556
10°	4977	9855	76545
15°	3343	4524	81833
20°	2967	3471	85554
25°	2818	3094	85426
30°	2858	2905	76967
35°	3198	2736	68602
40°	4091	2675	56449
45°	4908	2783	42450
50°	5038	3076	29300
55°	4833	3431	19556
60°	4081	3504	13690
65°	3173	3458	9314
70°	2465	3216	6298
75°	2108	2792	4100
80°	2081	2499	2591
85°	2581	2764	1667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.5	14.7
10°-20°	285.9	17.7
20°-30°	271.7	16.9
30°-40°	244.0	15.1
40°-50°	221.6	13.8
50°-60°	176.4	10.9
60°-70°	106.4	6.6
70°-80°	47.4	2.9
80°-90°	15.2	0.9
90°-100°	4.1	0.3
100°-110°	1.2	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°	795.1	49.3
0°-40°	1039.0	64.5
0°-60°	1437.0	89.2
0°-90°	1606.0	99.7
90°-120°	5.4	0.3
90°-150°	5.4	0.3
90°-180°	5.0	0.3
0°-180°	1611.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3967	3967	3967	3967	3967	
5°	1788	2247	3319	4146	4080	118
15°	182	190	247	1001	4462	54
25°	144	145	158	304	4371	67
35°	148	135	126	239	3172	96
45°	196	172	111	224	1694	147
55°	156	151	111	184	633	137
65°	76	83	82	110	222	77
75°	31	34	41	52	60	34
85°	13	13	14	14	8	12
90°	8	8	8	5	0	4
95°	5	6	4	1	0	4
105°	2	3	1	0	0	2
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°	3966.9	3966.9	3966.9	3966.9	3966.9	3966.9	3966.9	3966.9	3966.9	3966.9	3966.9
1°	4104.3	4036.3	4032.2	4033.6	4045.8	4053.1	4066.2	4087.1	4037.2	4010.0	4005.5
2°	4074.4	4091.6	4097.5	4108.0	4137.9	4144.2	4155.6	4162.8	4156.0	4134.3	4119.3
3°	3619.5	3693.4	3729.7	3761.0	3843.5	3883.0	3936.1	3988.7	4077.1	4127.9	4148.3
4°	2802.1	2895.6	2938.7	2992.2	3131.4	3215.3	3345.5	3484.3	3683.0	3849.4	3959.2
5°	1788.4	1880.0	1929.9	2008.4	2177.1	2316.4	2515.0	2728.7	3040.3	3318.8	3549.6
6°	963.8	1032.8	1070.0	1128.0	1259.1	1390.2	1609.7	1870.1	2231.6	2627.1	2994.9
7°	579.2	608.2	627.3	656.8	724.3	802.4	940.2	1103.5	1445.5	1860.1	2322.7
8°	420.9	429.1	440.0	455.4	485.8	524.8	598.3	689.0	889.9	1194.2	1630.1
9°	330.7	337.0	344.3	355.1	374.6	398.7	433.6	489.9	593.7	772.4	1079.9
10°	276.7	280.8	286.2	293.9	307.5	324.8	350.2	387.8	448.6	547.9	712.1
12.5°	207.7	208.2	209.5	213.6	220.4	229.1	244.9	261.7	291.2	332.9	393.2
15°	182.3	183.2	183.7	185.5	188.7	192.3	198.7	207.3	221.3	246.7	279.4
17.5°	169.6	170.1	170.1	171.9	174.2	176.4	178.7	184.1	191.4	204.6	224.1
20°	157.4	156.9	157.4	157.8	161.0	163.3	166.5	171.0	176.0	184.1	195.5
22.5°	150.1	149.7	149.7	149.7	150.6	151.5	153.8	157.4	163.7	171.4	181.0
25°	144.2	143.8	143.3	143.3	144.2	146.0	147.0	147.9	151.5	158.3	168.7
27.5°	139.2	139.7	138.8	137.9	138.3	139.2	140.6	143.3	144.7	147.9	156.5
30°	139.7	139.2	137.9	136.5	134.7	133.8	134.3	135.2	138.3	142.0	146.5
32.5°	141.5	140.6	138.8	137.0	135.6	133.3	130.2	129.3	130.2	134.7	139.7
35°	147.9	147.0	143.8	140.2	137.0	133.3	129.7	126.5	124.3	126.5	132.4
37.5°	161.5	159.7	155.6	149.7	142.9	136.5	130.2	124.3	121.1	119.7	123.4
40°	176.9	175.5	170.5	163.7	155.1	144.7	133.3	124.7	118.4	115.7	117.0
42.5°	190.0	189.1	184.6	177.3	167.8	156.5	142.0	128.8	118.8	112.5	112.0
45°	195.9	194.1	191.0	185.5	177.3	166.0	151.5	135.2	120.2	111.1	107.5
47.5°	191.4	190.5	188.2	184.6	178.7	170.5	157.4	141.5	124.3	111.1	103.9
50°	182.8	182.3	180.5	176.9	172.8	166.9	157.8	144.7	128.4	111.6	101.6
52.5°	171.4	171.0	170.5	167.4	163.7	159.2	151.9	142.0	128.4	112.9	99.8
55°	156.5	156.5	156.0	156.0	153.3	149.2	142.9	134.7	124.3	111.1	98.0
57.5°	137.4	138.3	137.9	138.8	139.7	137.4	132.4	126.1	117.5	105.7	94.3
60°	115.2	116.1	116.6	117.9	120.6	122.5	120.2	115.7	108.4	98.9	88.4
62.5°	94.8	95.7	96.2	98.0	99.8	103.4	105.2	103.9	98.9	91.2	81.6
65°	75.7	77.1	77.6	78.9	81.6	84.8	88.0	90.3	87.5	82.5	74.8
67.5°	60.3	60.3	61.7	63.5	65.8	68.9	72.1	75.3	75.7	73.0	67.1
70°	47.6	48.5	49.0	50.3	52.6	54.9	57.1	60.8	63.0	62.1	59.4
72.5°	38.1	39.0	39.5	40.4	41.7	44.0	45.8	48.1	50.8	51.7	50.3
75°	30.8	31.3	31.3	32.2	33.6	34.9	36.3	37.6	39.5	40.8	41.3
77.5°	25.4	25.4	25.4	25.4	26.8	27.2	28.6	29.5	30.4	32.2	33.6
80°	20.4	20.4	20.4	20.0	20.9	21.3	21.8	22.2	23.1	24.5	26.3
82.5°	15.9	15.9	15.9	15.9	16.3	16.8	16.8	16.8	17.7	18.1	20.0
85°	12.7	12.7	12.7	12.7	12.7	13.2	13.2	13.2	13.2	13.6	14.5
87.5°	10.0	10.0	10.0	10.0	10.4	10.4	10.4	10.4	10.4	10.4	10.4
90°	8.2	7.7	7.7	7.7	8.2	8.2	8.2	7.7	7.7	7.7	7.7
92.5°	6.3	6.3	6.3	6.3	6.3	7.3	6.3	6.3	6.3	6.3	5.4
95°	5.4	5.4	5.4	5.4	5.4	5.9	5.4	5.4	4.5	4.5	4.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
97.5°	4.5	4.5	4.5	4.5	4.5	5.0	4.5	4.5	3.6	3.6	2.7
100°	3.6	3.6	3.6	3.6	3.6	4.1	3.6	3.6	2.7	2.7	1.8
102.5°	2.7	2.7	2.7	2.7	2.7	3.6	2.7	2.7	1.8	1.8	0.9
105°	1.8	1.8	1.8	1.8	2.7	2.7	2.7	1.8	0.9	0.9	0.0
107.5°	1.4	1.8	1.8	1.8	1.8	1.8	1.8	0.9	0.9	0.0	0.0
110°	0.9	0.9	0.9	0.9	1.4	1.8	1.4	0.9	0.5	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°	3966.9	3966.9	3966.9	3966.9	3966.9	3966.9	3966.9	3966.9
1°	4003.6	3985.0	3976.9	3980.5	3980.1	3988.2	4002.3	4014.1
2°	4099.8	4064.4	4042.2	4025.9	4009.1	4003.6	4015.4	4024.1
3°	4153.3	4142.4	4123.4	4092.5	4058.1	4034.5	4035.8	4040.4
4°	4053.5	4132.0	4167.4	4152.9	4113.9	4073.9	4061.7	4058.5
5°	3773.2	3983.7	4115.7	4176.5	4162.8	4119.8	4088.0	4080.3
6°	3331.0	3697.0	3954.7	4129.7	4189.6	4163.3	4117.5	4103.0
7°	2777.6	3287.5	3695.2	4012.7	4182.8	4201.4	4152.0	4132.0
8°	2161.3	2801.7	3344.2	3827.2	4133.4	4234.5	4194.1	4171.9
9°	1547.6	2260.1	2931.0	3570.9	4038.1	4254.5	4241.8	4213.6
10°	1062.3	1710.4	2469.2	3260.2	3894.8	4248.6	4289.8	4255.4
12.5°	498.9	740.2	1304.9	2310.9	3357.3	4103.4	4381.5	4367.9
15°	334.7	434.1	660.8	1340.3	2616.6	3778.2	4416.4	4462.2
17.5°	260.3	318.0	434.1	749.3	1808.4	3323.7	4349.3	4523.9
20°	216.8	259.9	337.0	512.5	1131.7	2764.5	4178.3	4538.4
22.5°	194.6	223.6	283.0	413.7	775.1	2195.7	3920.6	4492.1
25°	181.4	201.8	249.9	358.8	620.9	1663.2	3596.3	4370.6
27.5°	169.2	188.2	228.6	324.3	550.2	1246.9	3159.6	4102.1
30°	157.8	175.5	212.3	304.3	513.0	994.2	2686.0	3762.8
32.5°	147.4	164.6	200.9	292.6	494.4	871.3	2287.3	3487.0
35°	139.7	155.1	191.4	286.7	484.0	791.0	1906.3	3172.3
37.5°	133.3	147.4	183.7	282.1	474.0	724.8	1615.6	2830.3
40°	124.7	141.1	178.7	279.9	460.4	657.7	1369.3	2441.1
42.5°	117.5	133.3	174.2	279.4	441.3	594.2	1203.3	2058.3
45°	111.1	126.1	171.0	277.6	415.0	534.8	1061.3	1694.5
47.5°	105.2	119.7	166.5	270.3	381.0	477.6	941.6	1362.5
50°	99.8	113.8	161.5	258.1	343.8	423.2	829.6	1063.2
52.5°	95.7	107.5	155.1	240.8	303.0	374.2	718.0	818.2
55°	92.1	103.0	148.3	219.1	264.9	329.3	625.9	633.2
57.5°	87.5	97.5	140.2	194.1	230.4	285.7	532.0	493.5
60°	82.5	91.6	129.3	167.4	197.3	244.0	435.9	386.4
62.5°	76.2	85.3	116.6	140.6	165.6	203.2	337.0	293.9
65°	69.4	77.1	101.6	117.5	137.0	172.8	258.1	222.2
67.5°	62.6	69.4	87.1	99.3	113.4	144.2	191.9	166.9
70°	55.8	59.9	73.0	83.5	93.4	115.7	137.4	121.6
72.5°	48.5	50.8	59.4	68.9	74.4	89.4	97.1	86.2
75°	40.4	41.7	48.1	55.8	58.1	67.6	66.7	59.9
77.5°	33.6	33.6	37.2	43.1	44.9	48.1	44.0	39.9
80°	26.8	26.3	27.2	30.8	32.7	31.3	28.1	25.4
82.5°	20.9	20.9	20.4	21.3	21.3	19.5	16.8	15.4
85°	15.4	15.4	15.0	13.6	12.7	10.4	8.2	8.2
87.5°	11.3	11.3	10.0	8.2	6.8	4.5	2.7	2.7
90°	7.7	7.3	6.3	4.5	2.7	1.4	0.0	0.0
92.5°	5.4	4.5	3.6	2.7	0.9	0.0	0.0	0.0
95°	3.6	2.7	1.8	0.9	0.0	0.0	0.0	0.0



TEST NUMBER: P273450

CATALOG NUMBER: 0.05-09W-835-5-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
97.5°	2.7	1.8	0.9	0.0	0.0	0.0	0.0	0.0
100°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	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)