

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: P273438

Luminaire Tested: **0.05-09W-827-5-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273438
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-827-5-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 5 DEGREE OPTIC.
VERY HIGH OUTPUT
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1448.7 lumens
Efficiency: N/A
Efficacy: 49.4 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

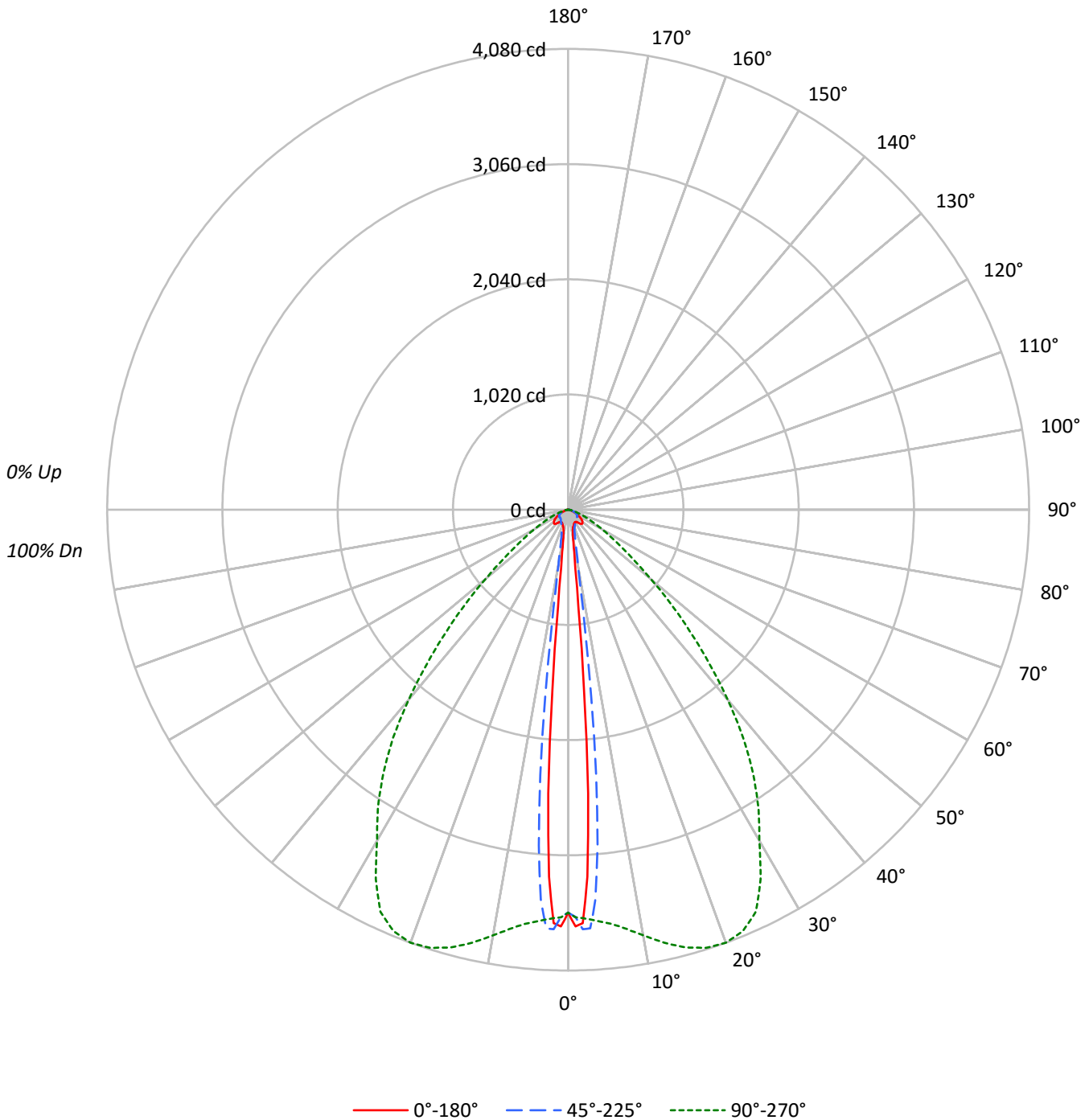
Input Watts (W): 29.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	63176	63176	63176
5°	28592	53056	65230
10°	4474	8861	68815
15°	3006	4068	73572
20°	2667	3122	76917
25°	2535	2781	76801
30°	2569	2610	69196
35°	2874	2461	61675
40°	3677	2405	50749
45°	4414	2503	38164
50°	4528	2764	26341
55°	4345	3085	17582
60°	3670	3150	12308
65°	2854	3110	8375
70°	2217	2895	5661
75°	1896	2512	3682
80°	1867	2244	2326
85°	2317	2480	1484



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.5	14.7
10°-20°	257.1	17.7
20°-30°	244.3	16.9
30°-40°	219.4	15.1
40°-50°	199.2	13.8
50°-60°	158.6	10.9
60°-70°	95.7	6.6
70°-80°	42.6	2.9
80°-90°	13.6	0.9
90°-100°	3.7	0.3
100°-110°	1.1	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°	714.8	49.3
0°-40°	934.1	64.5
0°-60°	1291.9	89.2
0°-90°	1443.9	99.7
90°-120°	4.8	0.3
90°-150°	4.8	0.3
90°-180°	5.0	0.3
0°-180°	1448.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3566	3566	3566	3566	3566	
5°	1608	2020	2984	3728	3668	106
15°	164	171	222	900	4012	48
25°	130	130	142	274	3929	60
35°	133	122	114	215	2852	86
45°	176	154	100	202	1523	132
55°	141	136	100	165	569	123
65°	68	75	74	98	200	69
75°	28	31	37	47	54	30
85°	11	12	12	13	7	11
90°	7	7	7	5	0	4
95°	5	5	4	1	0	4
105°	2	2	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°	3566.4	3566.4	3566.4	3566.4	3566.4	3566.4	3566.4	3566.4	3566.4	3566.4	3566.4
1°	3690.0	3628.8	3625.1	3626.3	3637.4	3643.9	3655.7	3674.5	3629.6	3605.1	3601.1
2°	3663.0	3678.5	3683.8	3693.2	3720.1	3725.8	3736.0	3742.6	3736.4	3716.9	3703.4
3°	3254.0	3320.5	3353.1	3381.3	3455.5	3491.0	3538.7	3586.0	3665.5	3711.2	3729.5
4°	2519.2	2603.2	2642.0	2690.1	2815.3	2890.7	3007.7	3132.5	3311.1	3460.8	3559.5
5°	1607.9	1690.2	1735.1	1805.6	1957.3	2082.5	2261.1	2453.2	2733.3	2983.7	3191.2
6°	866.5	928.5	961.9	1014.1	1132.0	1249.8	1447.2	1681.3	2006.3	2361.8	2692.5
7°	520.7	546.8	564.0	590.5	651.2	721.4	845.3	992.1	1299.6	1672.3	2088.2
8°	378.4	385.8	395.5	409.4	436.7	471.8	537.9	619.4	800.1	1073.7	1465.5
9°	297.3	303.0	309.5	319.3	336.8	358.4	389.8	440.4	533.8	694.4	970.9
10°	248.7	252.4	257.3	264.2	276.5	292.0	314.8	348.6	403.3	492.6	640.2
12.5°	186.8	187.2	188.4	192.1	198.2	205.9	220.2	235.3	261.8	299.3	353.5
15°	163.9	164.7	165.1	166.8	169.6	172.9	178.6	186.4	199.0	221.8	251.2
17.5°	152.5	152.9	152.9	154.5	156.6	158.6	160.7	165.6	172.1	183.9	201.4
20°	141.5	141.1	141.5	141.9	144.8	146.8	149.7	153.7	158.2	165.6	175.8
22.5°	135.0	134.6	134.6	134.6	135.4	136.2	138.2	141.5	147.2	154.1	162.7
25°	129.7	129.3	128.9	128.9	129.7	131.3	132.1	132.9	136.2	142.3	151.7
27.5°	125.2	125.6	124.8	124.0	124.4	125.2	126.4	128.9	130.1	132.9	140.7
30°	125.6	125.2	124.0	122.7	121.1	120.3	120.7	121.5	124.4	127.6	131.7
32.5°	127.2	126.4	124.8	123.1	121.9	119.9	117.0	116.2	117.0	121.1	125.6
35°	132.9	132.1	129.3	126.0	123.1	119.9	116.6	113.8	111.7	113.8	119.1
37.5°	145.2	143.5	139.9	134.6	128.4	122.7	117.0	111.7	108.9	107.7	110.9
40°	159.0	157.8	153.3	147.2	139.5	130.1	119.9	112.1	106.4	104.0	105.2
42.5°	170.9	170.0	166.0	159.4	150.9	140.7	127.6	115.8	106.8	101.1	100.7
45°	176.2	174.5	171.7	166.8	159.4	149.2	136.2	121.5	108.1	99.9	96.6
47.5°	172.1	171.3	169.2	166.0	160.7	153.3	141.5	127.2	111.7	99.9	93.4
50°	164.3	163.9	162.3	159.0	155.4	150.1	141.9	130.1	115.4	100.3	91.3
52.5°	154.1	153.7	153.3	150.5	147.2	143.1	136.6	127.6	115.4	101.5	89.7
55°	140.7	140.7	140.3	140.3	137.8	134.2	128.4	121.1	111.7	99.9	88.1
57.5°	123.6	124.4	124.0	124.8	125.6	123.6	119.1	113.4	105.6	95.0	84.8
60°	103.6	104.4	104.8	106.0	108.5	110.1	108.1	104.0	97.5	88.9	79.5
62.5°	85.2	86.0	86.4	88.1	89.7	93.0	94.6	93.4	88.9	82.0	73.4
65°	68.1	69.3	69.7	71.0	73.4	76.3	79.1	81.1	78.7	74.2	67.3
67.5°	54.2	54.2	55.5	57.1	59.1	62.0	64.8	67.7	68.1	65.7	60.4
70°	42.8	43.6	44.0	45.3	47.3	49.3	51.4	54.6	56.7	55.9	53.4
72.5°	34.3	35.1	35.5	36.3	37.5	39.6	41.2	43.2	45.7	46.5	45.3
75°	27.7	28.1	28.1	29.0	30.2	31.4	32.6	33.8	35.5	36.7	37.1
77.5°	22.8	22.8	22.8	22.8	24.1	24.5	25.7	26.5	27.3	29.0	30.2
80°	18.3	18.3	18.3	17.9	18.8	19.2	19.6	20.0	20.8	22.0	23.7
82.5°	14.3	14.3	14.3	14.3	14.7	15.1	15.1	15.1	15.9	16.3	17.9
85°	11.4	11.4	11.4	11.4	11.4	11.8	11.8	11.8	11.8	12.2	13.0
87.5°	9.0	9.0	9.0	9.0	9.4	9.4	9.4	9.4	9.4	9.4	9.4
90°	7.3	6.9	6.9	6.9	7.3	7.3	7.3	6.9	6.9	6.9	6.9
92.5°	5.7	5.7	5.7	5.7	5.7	6.5	5.7	5.7	5.7	5.7	4.9
95°	4.9	4.9	4.9	4.9	4.9	5.3	4.9	4.9	4.1	4.1	4.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
97.5°	4.1	4.1	4.1	4.1	4.1	4.5	4.1	4.1	3.3	3.3	2.4
100°	3.3	3.3	3.3	3.3	3.3	3.7	3.3	3.3	2.4	2.4	1.6
102.5°	2.4	2.4	2.4	2.4	2.4	3.3	2.4	2.4	1.6	1.6	0.8
105°	1.6	1.6	1.6	1.6	2.4	2.4	2.4	1.6	0.8	0.8	0.0
107.5°	1.2	1.6	1.6	1.6	1.6	1.6	1.6	0.8	0.8	0.0	0.0
110°	0.8	0.8	0.8	0.8	1.2	1.6	1.2	0.8	0.4	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°	3566.4	3566.4	3566.4	3566.4	3566.4	3566.4	3566.4	3566.4
1°	3599.4	3582.7	3575.4	3578.6	3578.2	3585.6	3598.2	3608.8
2°	3685.9	3654.1	3634.1	3619.4	3604.3	3599.4	3610.0	3617.8
3°	3734.0	3724.2	3707.1	3679.4	3648.4	3627.2	3628.4	3632.5
4°	3644.3	3714.8	3746.6	3733.6	3698.5	3662.6	3651.6	3648.8
5°	3392.3	3581.5	3700.2	3754.8	3742.6	3703.8	3675.3	3668.3
6°	2994.7	3323.8	3555.4	3712.8	3766.6	3743.0	3701.8	3688.7
7°	2497.2	2955.6	3322.1	3607.6	3760.5	3777.2	3732.8	3714.8
8°	1943.0	2518.8	3006.5	3440.8	3716.1	3807.0	3770.7	3750.7
9°	1391.3	2031.9	2635.0	3210.4	3630.4	3824.9	3813.5	3788.2
10°	955.0	1537.7	2219.9	2931.1	3501.6	3819.6	3856.7	3825.7
12.5°	448.6	665.5	1173.2	2077.6	3018.4	3689.1	3939.1	3926.9
15°	300.9	390.2	594.1	1205.0	2352.5	3396.8	3970.5	4011.7
17.5°	234.1	285.9	390.2	673.6	1625.8	2988.2	3910.2	4067.1
20°	194.9	233.7	303.0	460.8	1017.4	2485.4	3756.4	4080.2
22.5°	174.9	201.0	254.5	371.9	696.9	1974.0	3524.8	4038.6
25°	163.1	181.5	224.7	322.5	558.2	1495.3	3233.2	3929.3
27.5°	152.1	169.2	205.5	291.6	494.6	1121.0	2840.6	3687.9
30°	141.9	157.8	190.8	273.6	461.2	893.8	2414.8	3382.9
32.5°	132.5	148.0	180.6	263.0	444.5	783.3	2056.4	3135.0
35°	125.6	139.5	172.1	257.7	435.1	711.2	1713.9	2852.0
37.5°	119.9	132.5	165.1	253.6	426.1	651.6	1452.5	2544.5
40°	112.1	126.8	160.7	251.6	413.9	591.3	1231.1	2194.6
42.5°	105.6	119.9	156.6	251.2	396.8	534.2	1081.8	1850.5
45°	99.9	113.4	153.7	249.6	373.1	480.8	954.2	1523.4
47.5°	94.6	107.7	149.7	243.0	342.5	429.4	846.5	1225.0
50°	89.7	102.4	145.2	232.0	309.1	380.5	745.8	955.8
52.5°	86.0	96.6	139.5	216.5	272.4	336.4	645.5	735.6
55°	82.8	92.6	133.3	197.0	238.1	296.0	562.7	569.3
57.5°	78.7	87.7	126.0	174.5	207.1	256.9	478.3	443.7
60°	74.2	82.4	116.2	150.5	177.4	219.4	391.9	347.4
62.5°	68.5	76.7	104.8	126.4	148.8	182.7	303.0	264.2
65°	62.4	69.3	91.3	105.6	123.1	155.4	232.0	199.8
67.5°	56.3	62.4	78.3	89.3	101.9	129.7	172.5	150.1
70°	50.2	53.8	65.7	75.0	84.0	104.0	123.6	109.3
72.5°	43.6	45.7	53.4	62.0	66.9	80.3	87.3	77.5
75°	36.3	37.5	43.2	50.2	52.2	60.8	59.9	53.8
77.5°	30.2	30.2	33.4	38.7	40.4	43.2	39.6	35.9
80°	24.1	23.7	24.5	27.7	29.4	28.1	25.3	22.8
82.5°	18.8	18.8	18.3	19.2	19.2	17.5	15.1	13.9
85°	13.9	13.9	13.5	12.2	11.4	9.4	7.3	7.3
87.5°	10.2	10.2	9.0	7.3	6.1	4.1	2.4	2.4
90°	6.9	6.5	5.7	4.1	2.4	1.2	0.0	0.0
92.5°	4.9	4.1	3.3	2.4	0.8	0.0	0.0	0.0
95°	3.3	2.4	1.6	0.8	0.0	0.0	0.0	0.0



TEST NUMBER: P273438

CATALOG NUMBER: 0.05-09W-827-5-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
97.5°	2.4	1.6	0.8	0.0	0.0	0.0	0.0	0.0
100°	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.8	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)