

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: P273444

Luminaire Tested: **0.05-09W-830-5-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273444
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-830-5-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 5 DEGREE OPTIC.
VERY HIGH OUTPUT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1549.4 lumens
Efficiency: N/A
Efficacy: 52.9 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

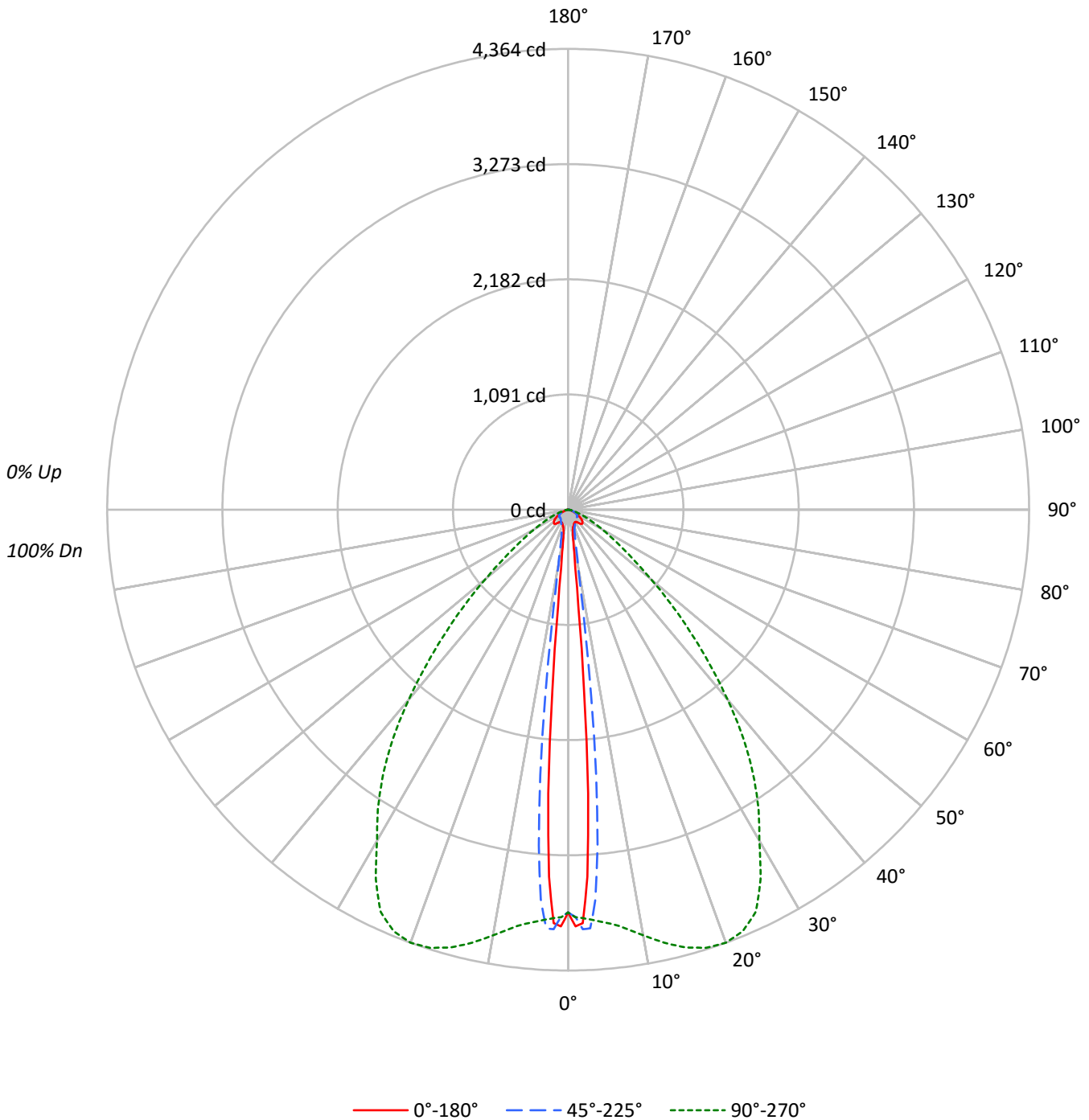
Input Watts (W): 29.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	67568	67568	67568
5°	30578	56744	69766
10°	4785	9476	73600
15°	3215	4352	78686
20°	2852	3339	82263
25°	2711	2975	82141
30°	2747	2792	74007
35°	3075	2632	65961
40°	3933	2571	54278
45°	4720	2678	40820
50°	4845	2957	28173
55°	4648	3302	18802
60°	3926	3369	13165
65°	3051	3328	8957
70°	2372	3092	6055
75°	2033	2690	3942
80°	1999	2408	2489
85°	2480	2663	1606



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.3	14.7
10°-20°	274.9	17.7
20°-30°	261.2	16.9
30°-40°	234.6	15.1
40°-50°	213.1	13.8
50°-60°	169.6	10.9
60°-70°	102.3	6.6
70°-80°	45.6	2.9
80°-90°	14.6	0.9
90°-100°	4.0	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°	764.5	49.3
0°-40°	999.1	64.5
0°-60°	1381.7	89.2
0°-90°	1544.3	99.7
90°-120°	5.2	0.3
90°-150°	5.2	0.3
90°-180°	5.0	0.3
0°-180°	1549.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3814	3814	3814	3814	3814	
5°	1720	2160	3191	3987	3923	113
15°	175	183	237	962	4291	52
25°	139	140	152	293	4202	65
35°	142	130	122	230	3050	92
45°	188	165	107	216	1629	141
55°	150	145	107	177	609	132
65°	73	80	79	105	214	74
75°	30	33	39	50	58	33
85°	12	12	13	14	8	11
90°	8	8	7	5	0	4
95°	5	5	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°	3814.3	3814.3	3814.3	3814.3	3814.3	3814.3	3814.3	3814.3	3814.3	3814.3	3814.3
1°	3946.5	3881.1	3877.1	3878.4	3890.2	3897.2	3909.8	3929.9	3881.9	3855.8	3851.4
2°	3917.7	3934.3	3939.9	3950.0	3978.7	3984.9	3995.8	4002.7	3996.2	3975.3	3960.9
3°	3480.3	3551.3	3586.2	3616.3	3695.7	3733.6	3784.7	3835.3	3920.3	3969.2	3988.8
4°	2694.4	2784.2	2825.6	2877.1	3011.0	3091.7	3216.8	3350.3	3541.3	3701.4	3806.9
5°	1719.6	1807.7	1855.7	1931.2	2093.4	2227.3	2418.3	2623.7	2923.3	3191.1	3413.1
6°	926.8	993.1	1028.8	1084.6	1210.7	1336.7	1547.8	1798.1	2145.7	2526.0	2879.7
7°	556.9	584.8	603.2	631.5	696.5	771.5	904.1	1061.1	1389.9	1788.5	2233.4
8°	404.7	412.6	423.0	437.9	467.1	504.6	575.2	662.5	855.7	1148.3	1567.4
9°	317.9	324.0	331.0	341.5	360.2	383.4	416.9	471.0	570.9	742.7	1038.4
10°	266.0	270.0	275.2	282.6	295.7	312.3	336.7	372.9	431.3	526.8	684.7
12.5°	199.7	200.2	201.5	205.4	212.0	220.2	235.5	251.6	280.0	320.1	378.1
15°	175.3	176.2	176.6	178.4	181.4	184.9	191.0	199.3	212.8	237.3	268.7
17.5°	163.1	163.5	163.5	165.3	167.5	169.7	171.8	177.1	184.0	196.7	215.4
20°	151.3	150.9	151.3	151.8	154.8	157.0	160.1	164.4	169.2	177.1	188.0
22.5°	144.4	143.9	143.9	143.9	144.8	145.7	147.8	151.3	157.4	164.9	174.0
25°	138.7	138.3	137.8	137.8	138.7	140.4	141.3	142.2	145.7	152.2	162.2
27.5°	133.9	134.3	133.5	132.6	133.0	133.9	135.2	137.8	139.1	142.2	150.5
30°	134.3	133.9	132.6	131.3	129.5	128.7	129.1	130.0	133.0	136.5	140.9
32.5°	136.1	135.2	133.5	131.7	130.4	128.2	125.2	124.3	125.2	129.5	134.3
35°	142.2	141.3	138.3	134.8	131.7	128.2	124.7	121.7	119.5	121.7	127.3
37.5°	155.3	153.5	149.6	143.9	137.4	131.3	125.2	119.5	116.4	115.1	118.6
40°	170.1	168.8	164.0	157.4	149.2	139.1	128.2	119.9	113.8	111.2	112.5
42.5°	182.7	181.9	177.5	170.5	161.4	150.5	136.5	123.9	114.3	108.2	107.7
45°	188.4	186.7	183.6	178.4	170.5	159.6	145.7	130.0	115.6	106.9	103.4
47.5°	184.0	183.2	181.0	177.5	171.8	164.0	151.3	136.1	119.5	106.9	99.9
50°	175.8	175.3	173.6	170.1	166.2	160.5	151.8	139.1	123.4	107.3	97.7
52.5°	164.9	164.4	164.0	160.9	157.4	153.1	146.1	136.5	123.4	108.6	95.9
55°	150.5	150.5	150.0	150.0	147.4	143.5	137.4	129.5	119.5	106.9	94.2
57.5°	132.1	133.0	132.6	133.5	134.3	132.1	127.3	121.2	113.0	101.6	90.7
60°	110.8	111.6	112.1	113.4	116.0	117.8	115.6	111.2	104.2	95.1	85.0
62.5°	91.1	92.0	92.5	94.2	95.9	99.4	101.2	99.9	95.1	87.7	78.5
65°	72.8	74.1	74.6	75.9	78.5	81.6	84.6	86.8	84.2	79.4	72.0
67.5°	58.0	58.0	59.3	61.1	63.2	66.3	69.3	72.4	72.8	70.2	64.5
70°	45.8	46.7	47.1	48.4	50.6	52.8	55.0	58.4	60.6	59.7	57.1
72.5°	36.6	37.5	37.9	38.8	40.1	42.3	44.0	46.2	48.8	49.7	48.4
75°	29.7	30.1	30.1	31.0	32.3	33.6	34.9	36.2	37.9	39.3	39.7
77.5°	24.4	24.4	24.4	24.4	25.7	26.2	27.5	28.3	29.2	31.0	32.3
80°	19.6	19.6	19.6	19.2	20.1	20.5	20.9	21.4	22.2	23.6	25.3
82.5°	15.3	15.3	15.3	15.3	15.7	16.1	16.1	16.1	17.0	17.4	19.2
85°	12.2	12.2	12.2	12.2	12.2	12.6	12.6	12.6	12.6	13.1	14.0
87.5°	9.6	9.6	9.6	9.6	10.0	10.0	10.0	10.0	10.0	10.0	10.0
90°	7.9	7.4	7.4	7.4	7.9	7.9	7.9	7.4	7.4	7.4	7.4
92.5°	6.1	6.1	6.1	6.1	6.1	7.0	6.1	6.1	6.1	6.1	5.2
95°	5.2	5.2	5.2	5.2	5.2	5.7	5.2	5.2	4.4	4.4	4.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
97.5°	4.4	4.4	4.4	4.4	4.4	4.8	4.4	4.4	3.5	3.5	2.6
100°	3.5	3.5	3.5	3.5	3.5	3.9	3.5	3.5	2.6	2.6	1.7
102.5°	2.6	2.6	2.6	2.6	2.6	3.5	2.6	2.6	1.7	1.7	0.9
105°	1.7	1.7	1.7	1.7	2.6	2.6	2.6	1.7	0.9	0.9	0.0
107.5°	1.3	1.7	1.7	1.7	1.7	1.7	1.7	0.9	0.9	0.0	0.0
110°	0.9	0.9	0.9	0.9	1.3	1.7	1.3	0.9	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°	3814.3	3814.3	3814.3	3814.3	3814.3	3814.3	3814.3	3814.3
1°	3849.7	3831.8	3823.9	3827.4	3827.0	3834.8	3848.3	3859.7
2°	3942.1	3908.1	3886.7	3871.0	3854.9	3849.7	3861.0	3869.3
3°	3993.6	3983.1	3964.8	3935.1	3902.0	3879.3	3880.6	3885.0
4°	3897.6	3973.1	4007.1	3993.1	3955.6	3917.3	3905.5	3902.4
5°	3628.1	3830.5	3957.4	4015.8	4002.7	3961.3	3930.8	3923.4
6°	3202.9	3554.8	3802.6	3970.9	4028.5	4003.2	3959.1	3945.2
7°	2670.8	3161.0	3553.1	3858.4	4021.9	4039.8	3992.3	3973.1
8°	2078.1	2693.9	3215.5	3680.0	3974.4	4071.6	4032.8	4011.5
9°	1488.1	2173.2	2818.2	3433.6	3882.8	4090.8	4078.6	4051.6
10°	1021.4	1644.6	2374.3	3134.9	3745.0	4085.2	4124.9	4091.7
12.5°	479.7	711.8	1254.7	2222.0	3228.2	3945.6	4212.9	4199.9
15°	321.9	417.4	635.4	1288.7	2516.0	3632.9	4246.5	4290.6
17.5°	250.3	305.7	417.4	720.5	1738.8	3195.9	4182.0	4349.9
20°	208.5	249.9	324.0	492.8	1088.1	2658.2	4017.6	4363.8
22.5°	187.1	215.0	272.1	397.7	745.3	2111.3	3769.8	4319.4
25°	174.4	194.1	240.3	345.0	597.1	1599.3	3458.0	4202.5
27.5°	162.7	181.0	219.8	311.8	529.0	1198.9	3038.0	3944.3
30°	151.8	168.8	204.1	292.6	493.3	956.0	2582.7	3618.1
32.5°	141.7	158.3	193.2	281.3	475.4	837.8	2199.4	3352.9
35°	134.3	149.2	184.0	275.6	465.3	760.6	1833.0	3050.2
37.5°	128.2	141.7	176.6	271.3	455.7	696.9	1553.5	2721.4
40°	119.9	135.6	171.8	269.1	442.7	632.4	1316.7	2347.2
42.5°	113.0	128.2	167.5	268.7	424.3	571.3	1157.0	1979.1
45°	106.9	121.2	164.4	266.9	399.1	514.2	1020.5	1629.4
47.5°	101.2	115.1	160.1	259.9	366.3	459.2	905.4	1310.1
50°	95.9	109.5	155.3	248.2	330.6	406.9	797.7	1022.3
52.5°	92.0	103.4	149.2	231.6	291.3	359.8	690.4	786.8
55°	88.5	99.0	142.6	210.6	254.7	316.6	601.8	608.8
57.5°	84.2	93.8	134.8	186.7	221.6	274.8	511.6	474.5
60°	79.4	88.1	124.3	160.9	189.7	234.6	419.1	371.6
62.5°	73.3	82.0	112.1	135.2	159.2	195.4	324.0	282.6
65°	66.7	74.1	97.7	113.0	131.7	166.2	248.2	213.7
67.5°	60.2	66.7	83.7	95.5	109.0	138.7	184.5	160.5
70°	53.6	57.6	70.2	80.2	89.8	111.2	132.1	116.9
72.5°	46.7	48.8	57.1	66.3	71.5	85.9	93.3	82.9
75°	38.8	40.1	46.2	53.6	55.8	65.0	64.1	57.6
77.5°	32.3	32.3	35.8	41.4	43.2	46.2	42.3	38.4
80°	25.7	25.3	26.2	29.7	31.4	30.1	27.0	24.4
82.5°	20.1	20.1	19.6	20.5	20.5	18.8	16.1	14.8
85°	14.8	14.8	14.4	13.1	12.2	10.0	7.9	7.9
87.5°	10.9	10.9	9.6	7.9	6.5	4.4	2.6	2.6
90°	7.4	7.0	6.1	4.4	2.6	1.3	0.0	0.0
92.5°	5.2	4.4	3.5	2.6	0.9	0.0	0.0	0.0
95°	3.5	2.6	1.7	0.9	0.0	0.0	0.0	0.0



TEST NUMBER: P273444

CATALOG NUMBER: 0.05-09W-830-5-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
97.5°	2.6	1.7	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)