

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: P273456

Luminaire Tested: **0.05-09W-840-5-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273456
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-840-5-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 5 DEGREE OPTIC.
VERY HIGH OUTPUT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1642.4 lumens
Efficiency: N/A
Efficacy: 56.1 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

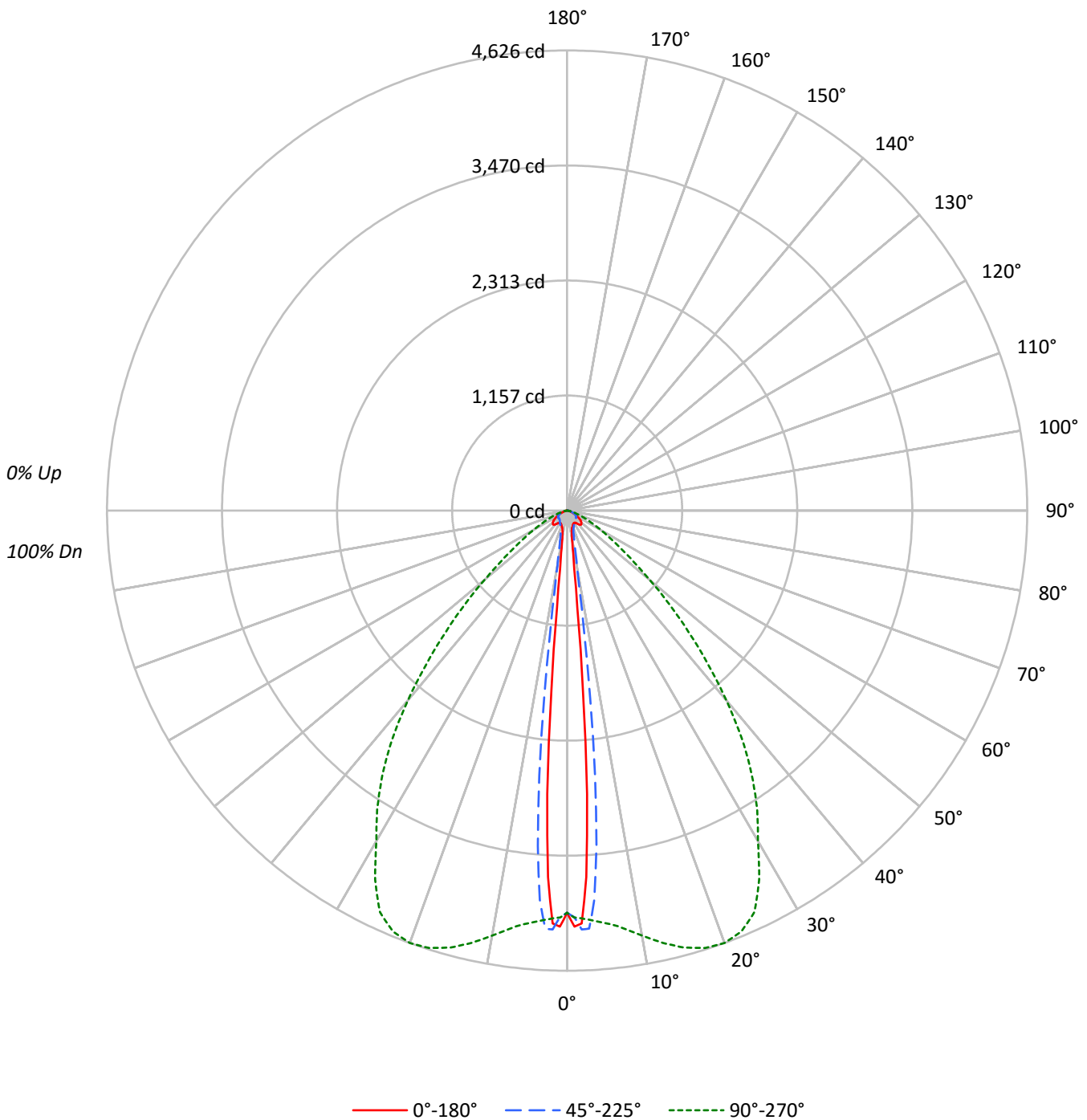
Input Watts (W): 29.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	71623	71623	71623
5°	32413	60149	73952
10°	5073	10044	78016
15°	3407	4612	83407
20°	3024	3538	87200
25°	2873	3153	87068
30°	2913	2960	78448
35°	3259	2790	69921
40°	4169	2726	57534
45°	5003	2838	43267
50°	5134	3133	29863
55°	4926	3499	19933
60°	4159	3571	13955
65°	3236	3525	9494
70°	2512	3279	6417
75°	2149	2847	4175
80°	2122	2550	2642
85°	2622	2825	1687



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.0	14.7
10°-20°	291.4	17.7
20°-30°	276.9	16.9
30°-40°	248.7	15.1
40°-50°	225.9	13.8
50°-60°	179.8	10.9
60°-70°	108.5	6.6
70°-80°	48.3	2.9
80°-90°	15.5	0.9
90°-100°	4.2	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°	810.4	49.3
0°-40°	1059.0	64.5
0°-60°	1464.7	89.2
0°-90°	1636.9	99.7
90°-120°	5.5	0.3
90°-150°	5.5	0.3
90°-180°	5.0	0.3
0°-180°	1642.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4043	4043	4043	4043	4043	
5°	1823	2290	3383	4226	4159	120
15°	186	194	252	1020	4548	55
25°	147	148	161	310	4455	68
35°	151	138	129	244	3233	98
45°	200	175	113	229	1727	149
55°	160	154	113	187	645	140
65°	77	85	84	112	226	79
75°	31	35	42	53	61	34
85°	13	13	14	15	8	12
90°	8	8	8	6	0	5
95°	6	6	5	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°	4043.2	4043.2	4043.2	4043.2	4043.2	4043.2	4043.2	4043.2	4043.2	4043.2	4043.2
1°	4183.3	4113.9	4109.8	4111.1	4123.6	4131.0	4144.4	4165.7	4114.8	4087.1	4082.5
2°	4152.8	4170.3	4176.3	4187.0	4217.5	4223.9	4235.5	4242.9	4236.0	4213.8	4198.5
3°	3689.1	3764.4	3801.4	3833.3	3917.4	3957.7	4011.8	4065.4	4155.5	4207.3	4228.1
4°	2856.0	2951.3	2995.2	3049.7	3191.7	3277.2	3409.9	3551.3	3753.8	3923.5	4035.3
5°	1822.8	1916.2	1967.0	2047.0	2219.0	2360.9	2563.4	2781.1	3098.7	3382.6	3617.9
6°	982.4	1052.6	1090.5	1149.7	1283.3	1416.9	1640.7	1906.0	2274.5	2677.6	3052.5
7°	590.3	619.9	639.3	669.4	738.3	817.8	958.3	1124.8	1473.3	1895.9	2367.4
8°	429.0	437.3	448.4	464.1	495.1	534.9	609.8	702.2	907.0	1217.2	1661.5
9°	337.0	343.5	350.9	362.0	381.9	406.4	441.9	499.3	605.1	787.3	1100.7
10°	282.0	286.2	291.7	299.6	313.4	331.0	356.9	395.3	457.2	558.4	725.8
12.5°	211.7	212.2	213.6	217.7	224.7	233.5	249.6	266.7	296.8	339.3	400.8
15°	185.8	186.8	187.2	189.1	192.3	196.0	202.5	211.3	225.6	251.5	284.8
17.5°	172.9	173.4	173.4	175.2	177.5	179.8	182.1	187.7	195.1	208.5	228.4
20°	160.4	160.0	160.4	160.9	164.1	166.4	169.7	174.3	179.4	187.7	199.2
22.5°	153.0	152.6	152.6	152.6	153.5	154.4	156.7	160.4	166.9	174.7	184.5
25°	147.0	146.5	146.1	146.1	147.0	148.9	149.8	150.7	154.4	161.3	172.0
27.5°	141.9	142.4	141.5	140.5	141.0	141.9	143.3	146.1	147.5	150.7	159.5
30°	142.4	141.9	140.5	139.1	137.3	136.4	136.8	137.8	141.0	144.7	149.3
32.5°	144.2	143.3	141.5	139.6	138.2	135.9	132.7	131.8	132.7	137.3	142.4
35°	150.7	149.8	146.5	142.8	139.6	135.9	132.2	129.0	126.7	129.0	135.0
37.5°	164.6	162.7	158.6	152.6	145.6	139.1	132.7	126.7	123.4	122.0	125.7
40°	180.3	178.9	173.8	166.9	158.1	147.5	135.9	127.1	120.7	117.9	119.3
42.5°	193.7	192.8	188.2	180.8	171.0	159.5	144.7	131.3	121.1	114.6	114.2
45°	199.7	197.9	194.6	189.1	180.8	169.2	154.4	137.8	122.5	113.3	109.6
47.5°	195.1	194.2	191.9	188.2	182.1	173.8	160.4	144.2	126.7	113.3	105.9
50°	186.3	185.8	184.0	180.3	176.1	170.1	160.9	147.5	130.8	113.7	103.6
52.5°	174.7	174.3	173.8	170.6	166.9	162.3	154.9	144.7	130.8	115.1	101.7
55°	159.5	159.5	159.0	159.0	156.3	152.1	145.6	137.3	126.7	113.3	99.9
57.5°	140.1	141.0	140.5	141.5	142.4	140.1	135.0	128.5	119.7	107.7	96.2
60°	117.4	118.3	118.8	120.2	123.0	124.8	122.5	117.9	110.5	100.8	90.1
62.5°	96.6	97.5	98.0	99.9	101.7	105.4	107.3	105.9	100.8	92.9	83.2
65°	77.2	78.6	79.1	80.4	83.2	86.4	89.7	92.0	89.2	84.1	76.3
67.5°	61.5	61.5	62.9	64.7	67.0	70.3	73.5	76.7	77.2	74.4	68.4
70°	48.5	49.5	49.9	51.3	53.6	55.9	58.2	61.9	64.3	63.3	60.6
72.5°	38.8	39.8	40.2	41.1	42.5	44.8	46.7	49.0	51.8	52.7	51.3
75°	31.4	31.9	31.9	32.8	34.2	35.6	37.0	38.4	40.2	41.6	42.1
77.5°	25.9	25.9	25.9	25.9	27.3	27.7	29.1	30.0	31.0	32.8	34.2
80°	20.8	20.8	20.8	20.3	21.3	21.7	22.2	22.7	23.6	25.0	26.8
82.5°	16.2	16.2	16.2	16.2	16.6	17.1	17.1	17.1	18.0	18.5	20.3
85°	12.9	12.9	12.9	12.9	12.9	13.4	13.4	13.4	13.4	13.9	14.8
87.5°	10.2	10.2	10.2	10.2	10.6	10.6	10.6	10.6	10.6	10.6	10.6
90°	8.3	7.9	7.9	7.9	8.3	8.3	8.3	7.9	7.9	7.9	7.9
92.5°	6.5	6.5	6.5	6.5	6.5	7.4	6.5	6.5	6.5	6.5	5.5
95°	5.5	5.5	5.5	5.5	5.5	6.0	5.5	5.5	4.6	4.6	4.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
97.5°	4.6	4.6	4.6	4.6	4.6	5.1	4.6	4.6	3.7	3.7	2.8
100°	3.7	3.7	3.7	3.7	3.7	4.2	3.7	3.7	2.8	2.8	1.8
102.5°	2.8	2.8	2.8	2.8	2.8	3.7	2.8	2.8	1.8	1.8	0.9
105°	1.8	1.8	1.8	1.8	2.8	2.8	2.8	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°	4043.2	4043.2	4043.2	4043.2	4043.2	4043.2	4043.2	4043.2
1°	4080.6	4061.7	4053.4	4057.1	4056.6	4064.9	4079.2	4091.3
2°	4178.6	4142.6	4119.9	4103.3	4086.2	4080.6	4092.7	4101.4
3°	4233.2	4222.1	4202.7	4171.2	4136.1	4112.1	4113.5	4118.1
4°	4131.5	4211.5	4247.5	4232.7	4193.0	4152.3	4139.8	4136.6
5°	3845.8	4060.3	4194.8	4256.8	4242.9	4199.0	4166.6	4158.8
6°	3395.1	3768.1	4030.7	4209.2	4270.2	4243.4	4196.7	4181.9
7°	2831.1	3350.7	3766.3	4089.9	4263.2	4282.2	4231.8	4211.5
8°	2202.8	2855.6	3408.5	3900.8	4212.9	4315.9	4274.8	4252.1
9°	1577.3	2303.6	2987.3	3639.6	4115.8	4336.3	4323.3	4294.7
10°	1082.7	1743.3	2516.7	3322.9	3969.7	4330.3	4372.3	4337.2
12.5°	508.5	754.5	1330.0	2355.4	3421.9	4182.3	4465.7	4451.9
15°	341.2	442.4	673.6	1366.1	2667.0	3850.9	4501.3	4548.0
17.5°	265.4	324.1	442.4	763.7	1843.2	3387.7	4432.9	4610.9
20°	221.0	264.9	343.5	522.4	1153.4	2817.7	4258.6	4625.7
22.5°	198.3	227.9	288.5	421.6	790.1	2237.9	3996.0	4578.5
25°	184.9	205.7	254.7	365.7	632.9	1695.2	3665.5	4454.6
27.5°	172.4	191.9	233.0	330.5	560.8	1270.8	3220.3	4181.0
30°	160.9	178.9	216.4	310.2	522.9	1013.3	2737.7	3835.2
32.5°	150.2	167.8	204.8	298.2	503.9	888.1	2331.3	3554.1
35°	142.4	158.1	195.1	292.2	493.3	806.2	1943.0	3233.3
37.5°	135.9	150.2	187.2	287.5	483.1	738.7	1646.7	2884.7
40°	127.1	143.8	182.1	285.2	469.2	670.3	1395.7	2488.0
42.5°	119.7	135.9	177.5	284.8	449.8	605.6	1226.5	2097.9
45°	113.3	128.5	174.3	282.9	423.0	545.0	1081.8	1727.1
47.5°	107.3	122.0	169.7	275.5	388.3	486.8	959.7	1388.7
50°	101.7	116.0	164.6	263.0	350.4	431.3	845.5	1083.6
52.5°	97.5	109.6	158.1	245.5	308.8	381.4	731.8	834.0
55°	93.8	104.9	151.2	223.3	270.0	335.6	638.0	645.4
57.5°	89.2	99.4	142.8	197.9	234.8	291.2	542.3	503.0
60°	84.1	93.4	131.8	170.6	201.1	248.7	444.3	393.9
62.5°	77.7	86.9	118.8	143.3	168.7	207.1	343.5	299.6
65°	70.7	78.6	103.6	119.7	139.6	176.1	263.0	226.5
67.5°	63.8	70.7	88.8	101.2	115.6	147.0	195.5	170.1
70°	56.9	61.0	74.4	85.1	95.2	117.9	140.1	123.9
72.5°	49.5	51.8	60.6	70.3	75.8	91.1	98.9	87.8
75°	41.1	42.5	49.0	56.9	59.2	68.9	68.0	61.0
77.5°	34.2	34.2	37.9	43.9	45.8	49.0	44.8	40.7
80°	27.3	26.8	27.7	31.4	33.3	31.9	28.7	25.9
82.5°	21.3	21.3	20.8	21.7	21.7	19.9	17.1	15.7
85°	15.7	15.7	15.3	13.9	12.9	10.6	8.3	8.3
87.5°	11.6	11.6	10.2	8.3	6.9	4.6	2.8	2.8
90°	7.9	7.4	6.5	4.6	2.8	1.4	0.0	0.0
92.5°	5.5	4.6	3.7	2.8	0.9	0.0	0.0	0.0
95°	3.7	2.8	1.8	0.9	0.0	0.0	0.0	0.0



TEST NUMBER: P273456

CATALOG NUMBER: 0.05-09W-840-5-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
97.5°	2.8	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)