

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: P273451

Luminaire Tested: **0.05-09W-835-10-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273451
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1708-246-2)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 0.05-09W-835-10-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 10 DEGREE OPTIC.
VERY HIGH OUTPUT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1686.7 lumens
Efficiency: N/A
Efficacy: 57.6 lumens/watt
Spacing Criteria (0/90/45): 0.12 / 0.93 / 0.2
Luminous Opening: Rectangular (W 2.92' x L: 0.21' x H: 0')
CIE Type: Direct

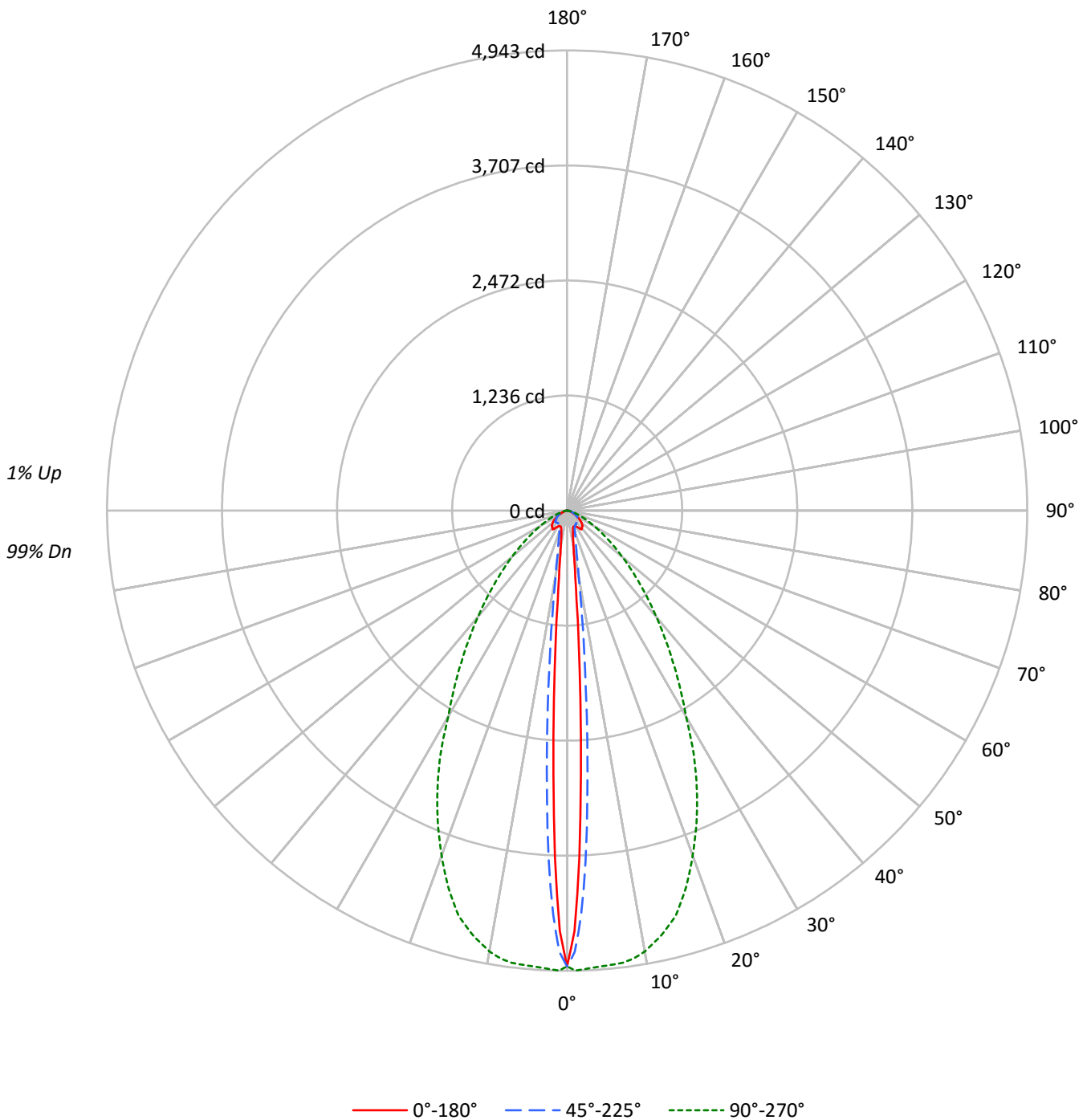
Input Watts (W): 29.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99								
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88								
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	82	80	78								
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	71	70								
4	90	80	73	68	88	79	72	67	76	71	66	74	69	65	72	68	64	63								
5	84	74	66	61	82	73	66	61	71	65	60	69	63	59	67	62	59	57								
6	79	68	61	55	77	67	60	55	66	59	55	64	58	54	62	58	54	52								
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48								
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45								
9	67	56	49	44	66	55	48	44	54	48	44	53	47	44	52	47	43	42								
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	86740	86740	86740
5°	24804	44108	87231
10°	7031	12773	86479
15°	4374	6496	82648
20°	3591	4583	74355
25°	3598	3802	64436
30°	4054	3637	52203
35°	5138	3648	42755
40°	5684	3901	34458
45°	5862	4454	27332
50°	5537	4363	21220
55°	4985	4342	16217
60°	3968	4127	12049
65°	3119	3839	8630
70°	2584	3455	6060
75°	2300	3073	4161
80°	2408	2918	2958
85°	3415	3679	1850



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.6	13.5
10°-20°	288.0	17.1
20°-30°	279.4	16.6
30°-40°	266.3	15.8
40°-50°	245.4	14.6
50°-60°	189.2	11.2
60°-70°	111.7	6.6
70°-80°	51.3	3.0
80°-90°	19.0	1.1
90°-100°	6.6	0.4
100°-110°	2.0	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°	795.0	47.1
0°-40°	1061.3	62.9
0°-60°	1495.9	88.7
0°-90°	1678.0	99.5
90°-120°	8.7	0.5
90°-150°	8.7	0.5
90°-180°	9.0	0.5
0°-180°	1686.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4897	4897	4897	4897	4897	
5°	1395	1672	2480	3924	4906	111
15°	238	257	354	1145	4507	70
25°	184	182	194	458	3297	87
35°	238	205	169	314	1977	147
45°	234	213	178	295	1091	176
55°	161	163	141	250	525	142
65°	74	81	92	145	206	76
75°	34	36	45	59	61	37
85°	17	17	18	18	9	15
90°	12	12	12	8	0	7
95°	9	8	8	3	0	6
105°	4	4	2	0	0	4
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°	4896.6	4896.6	4896.6	4896.6	4896.6	4896.6	4896.6	4896.6	4896.6	4896.6	4896.6
1°	4518.8	4556.9	4497.0	4611.3	4567.3	4602.2	4662.1	4701.6	4735.6	4739.2	4776.4
2°	3728.9	3831.4	3747.0	3912.5	3897.6	3970.1	4077.6	4166.0	4253.5	4339.7	4411.8
3°	2836.9	2951.6	2929.9	3044.6	3068.6	3172.9	3320.7	3457.7	3603.7	3775.1	3902.1
4°	2026.5	2113.2	2140.4	2200.2	2289.6	2374.8	2533.1	2702.7	2893.1	3099.9	3318.0
5°	1394.9	1466.5	1486.9	1537.7	1626.1	1718.6	1864.2	2037.9	2243.3	2480.5	2730.3
6°	970.0	1021.7	1039.3	1078.8	1144.6	1223.9	1344.5	1494.6	1685.1	1927.7	2185.7
7°	716.5	750.5	763.6	792.7	839.4	898.3	989.9	1109.2	1265.6	1482.8	1760.4
8°	566.8	578.2	587.7	609.5	643.5	685.2	752.8	842.5	964.1	1144.1	1379.9
9°	458.0	468.4	475.7	492.0	517.0	547.8	598.6	667.1	760.0	883.8	1067.5
10°	390.9	396.8	402.2	414.5	432.6	455.7	493.4	544.2	616.7	710.1	876.6
12.5°	292.0	291.1	295.7	303.4	315.2	328.3	348.3	376.4	414.9	466.2	559.6
15°	238.5	239.0	242.2	247.1	253.5	261.2	273.4	292.0	316.5	354.2	406.3
17.5°	205.9	206.3	208.1	211.3	215.9	222.7	231.7	243.1	260.3	286.1	322.0
20°	190.5	190.0	190.9	192.7	195.4	199.1	204.1	210.4	223.1	243.1	270.7
22.5°	184.6	184.6	184.6	184.1	184.6	185.5	188.6	193.6	200.4	212.2	232.2
25°	184.1	184.6	184.1	182.7	182.7	182.3	181.8	183.2	186.4	194.5	207.2
27.5°	188.2	187.7	186.4	184.1	182.3	180.9	180.0	179.6	180.0	183.2	191.8
30°	198.2	197.3	194.5	190.5	186.4	182.3	178.7	176.9	176.4	177.8	181.4
32.5°	213.1	211.8	208.6	201.8	196.4	189.1	182.7	175.9	172.3	172.3	174.6
35°	237.6	234.9	229.9	221.7	210.4	200.0	190.5	180.5	172.8	168.7	169.1
37.5°	255.3	254.4	252.1	244.4	233.5	219.0	202.2	186.8	176.4	167.3	163.7
40°	245.8	244.4	241.2	237.2	234.0	230.8	217.7	198.2	182.3	168.7	161.0
42.5°	238.1	237.2	234.0	227.2	222.7	217.7	213.1	207.2	190.0	172.8	161.0
45°	234.0	233.1	230.4	224.5	217.2	209.0	200.9	195.0	190.0	177.8	162.3
47.5°	215.9	215.4	214.5	213.1	210.4	205.9	194.5	184.1	175.5	173.2	164.6
50°	200.9	200.9	200.4	197.7	195.0	191.4	188.2	178.2	165.5	158.3	157.4
52.5°	184.1	184.1	184.1	183.2	181.4	177.3	173.2	168.2	159.6	147.4	142.4
55°	161.4	161.9	162.8	163.2	163.7	161.4	159.2	153.3	148.3	140.6	130.6
57.5°	136.5	136.9	138.8	140.1	141.9	142.8	143.3	140.6	135.1	129.2	122.4
60°	112.0	112.5	114.3	116.5	119.7	122.4	124.7	125.6	122.0	116.5	112.0
62.5°	91.1	91.1	93.4	95.2	98.4	101.6	105.7	107.9	107.5	104.8	100.2
65°	74.4	74.8	76.2	77.5	79.8	83.0	87.5	91.1	93.0	91.6	88.4
67.5°	60.8	61.2	62.1	63.5	64.8	67.6	71.2	75.7	78.5	78.9	77.5
70°	49.9	50.3	50.8	51.7	53.1	54.9	57.6	61.7	64.8	66.7	66.7
72.5°	41.3	41.3	41.7	42.6	43.5	44.9	47.2	49.4	52.6	55.3	56.2
75°	33.6	34.0	34.5	34.5	35.4	35.8	37.6	39.5	41.7	44.9	46.3
77.5°	28.1	28.1	28.1	28.1	29.0	29.5	30.4	31.7	33.6	35.8	37.6
80°	23.6	23.6	23.6	23.6	23.6	24.0	24.9	25.4	26.3	28.6	30.4
82.5°	20.0	20.0	20.0	20.0	20.0	20.4	20.4	20.9	21.8	22.7	24.0
85°	16.8	16.8	16.8	16.8	16.8	16.8	17.2	17.2	17.7	18.1	18.6
87.5°	14.1	14.1	14.1	14.1	14.1	14.1	14.5	14.5	14.5	14.5	15.0
90°	12.2	12.2	12.2	12.2	12.2	11.8	11.8	11.8	11.8	11.8	11.8
92.5°	10.4	10.4	10.4	10.4	10.4	10.0	10.0	9.5	9.5	9.5	9.5
95°	8.6	8.6	8.6	8.2	8.2	8.2	8.2	7.7	7.7	7.7	6.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
97.5°	6.8	6.8	6.8	6.8	6.8	6.8	6.3	6.3	5.9	5.9	5.0
100°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.0	4.5	4.1	4.1
102.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	3.6	3.6	3.2	2.3
105°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	2.7	2.7	1.8	1.4
107.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.8	1.4	0.9	0.0
110°	2.7	2.7	2.7	2.3	2.7	2.3	1.8	1.4	0.9	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°	4896.6	4896.6	4896.6	4896.6	4896.6	4896.6	4896.6	4896.6
1°	4761.9	4793.6	4814.9	4845.8	4851.7	4892.0	4925.6	4942.8
2°	4477.5	4579.6	4651.2	4736.5	4780.0	4853.0	4907.0	4931.0
3°	4070.3	4260.8	4405.9	4571.0	4676.6	4800.9	4883.9	4919.2
4°	3578.8	3862.6	4098.9	4356.5	4541.9	4736.0	4863.0	4911.1
5°	3061.8	3419.2	3746.1	4102.1	4381.0	4658.9	4840.3	4905.6
6°	2550.3	2963.9	3363.8	3812.8	4211.8	4566.4	4815.4	4900.2
7°	2093.2	2526.3	2975.7	3503.5	3982.8	4454.0	4779.1	4892.9
8°	1691.9	2119.5	2597.5	3183.3	3754.7	4323.4	4724.7	4874.8
9°	1365.4	1764.4	2250.1	2871.4	3512.6	4177.8	4664.8	4845.8
10°	1101.0	1457.4	1930.9	2573.0	3273.6	4025.0	4591.4	4807.7
12.5°	692.4	926.0	1304.2	1910.0	2707.7	3617.8	4376.9	4673.4
15°	487.5	634.4	902.4	1387.6	2176.6	3204.2	4129.7	4506.6
17.5°	377.3	475.2	653.4	1032.1	1757.6	2821.5	3847.2	4244.5
20°	309.7	380.9	512.9	805.4	1434.3	2478.7	3530.3	3944.3
22.5°	263.5	317.9	422.2	657.5	1196.2	2174.8	3217.4	3631.4
25°	229.0	273.4	357.8	559.1	1037.5	1916.4	2882.2	3296.7
27.5°	207.7	240.3	313.8	491.1	931.0	1679.2	2547.1	2944.8
30°	192.7	219.5	278.0	442.1	850.3	1450.2	2173.5	2552.1
32.5°	181.8	201.3	253.9	410.8	801.7	1271.1	1886.4	2256.5
35°	174.1	189.5	236.7	392.3	766.4	1118.3	1647.0	1977.1
37.5°	167.8	180.9	224.0	383.6	731.0	975.9	1433.9	1722.3
40°	161.4	173.7	216.3	380.0	682.9	840.7	1250.7	1490.1
42.5°	157.4	167.3	211.8	382.7	627.6	729.2	1082.9	1280.6
45°	155.5	161.4	207.2	382.3	564.6	627.6	930.5	1091.0
47.5°	154.6	156.4	203.6	376.4	495.6	545.1	805.8	922.4
50°	153.3	153.7	202.7	358.2	428.5	470.2	687.9	770.0
52.5°	145.1	150.6	201.8	335.1	362.8	407.7	587.7	640.3
55°	130.1	144.7	200.4	298.8	306.1	351.9	494.3	525.1
57.5°	117.9	132.0	195.4	259.8	258.9	302.9	409.9	425.4
60°	108.8	119.7	181.8	221.3	216.8	258.0	331.9	340.1
62.5°	99.3	109.7	161.9	185.0	182.3	214.0	262.6	263.0
65°	88.0	100.2	139.2	151.0	153.3	178.2	206.8	205.9
67.5°	77.5	88.4	116.5	122.0	128.3	145.1	160.5	156.9
70°	67.1	75.3	94.3	98.4	105.2	116.5	121.1	117.0
72.5°	57.1	63.0	74.4	78.5	83.9	89.8	89.8	85.3
75°	48.1	51.2	57.1	60.8	65.3	67.1	64.4	60.8
77.5°	39.5	41.3	43.5	45.8	48.5	47.2	44.9	42.6
80°	32.2	33.1	33.1	34.0	34.0	32.6	29.5	29.0
82.5°	25.8	26.8	25.4	24.0	22.7	20.4	18.6	17.2
85°	20.4	20.4	19.0	16.8	14.1	11.8	10.0	9.1
87.5°	15.4	15.4	13.6	11.3	8.2	5.9	4.1	3.6
90°	11.8	11.8	9.5	7.3	4.5	2.3	0.9	0.0
92.5°	9.1	8.2	6.3	4.1	1.8	0.9	0.0	0.0
95°	6.8	5.9	3.6	1.8	0.9	0.0	0.0	0.0



TEST NUMBER: P273451

CATALOG NUMBER: 0.05-09W-835-10-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
97.5°	4.5	3.6	1.8	0.9	0.0	0.0	0.0	0.0
100°	2.7	1.8	0.9	0.0	0.0	0.0	0.0	0.0
102.5°	1.4	0.9	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)