

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: P273445

Luminaire Tested: **0.05-09W-830-10-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273445
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-830-10-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 10 DEGREE OPTIC.
VERY HIGH OUTPUT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1621.8 lumens
Efficiency: N/A
Efficacy: 55.4 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

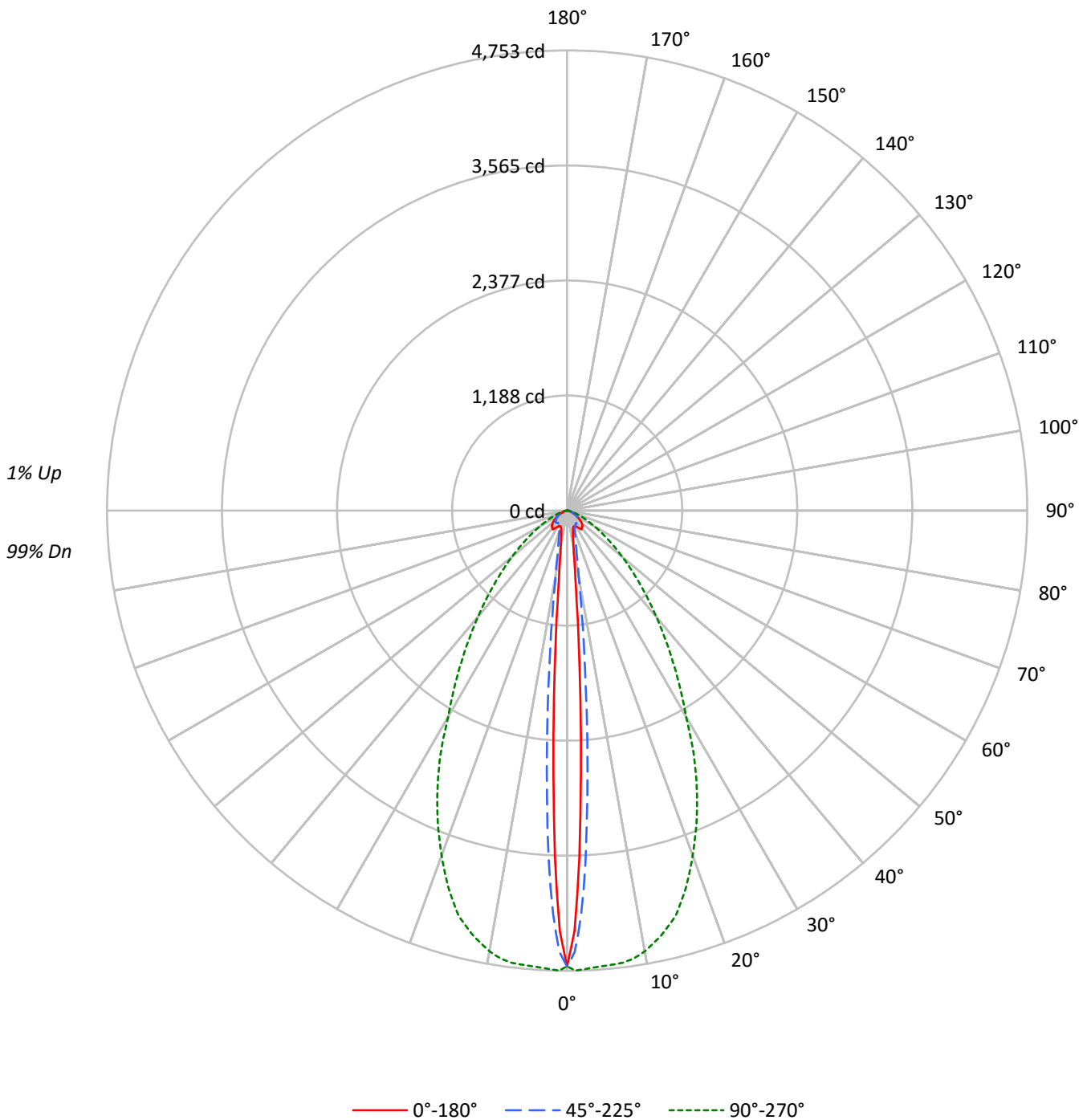
Input Watts (W): 29.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P273445

CATALOG NUMBER: 0.05-09W-830-10-STD-UNV-AN-3F0

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°	83403	83403	83403
5°	23849	42412	83876
10°	6762	12282	83153
15°	4207	6245	79468
20°	3452	4406	71495
25°	3460	3657	61958
30°	3897	3496	50196
35°	4941	3508	41112
40°	5464	3751	33133
45°	5637	4281	26282
50°	5324	4194	20404
55°	4793	4176	15593
60°	3816	3972	11585
65°	2997	3693	8299
70°	2486	3320	5827
75°	2211	2957	3997
80°	2316	2805	2846
85°	3272	3537	1768



TEST NUMBER: P273445

CATALOG NUMBER: 0.05-09W-830-10-STD-UNV-AN-3F0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.9	13.5
10°-20°	276.9	17.1
20°-30°	268.7	16.6
30°-40°	256.1	15.8
40°-50°	236.0	14.6
50°-60°	181.9	11.2
60°-70°	107.4	6.6
70°-80°	49.3	3.0
80°-90°	18.3	1.1
90°-100°	6.3	0.4
100°-110°	1.9	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°	764.4	47.1
0°-40°	1020.5	62.9
0°-60°	1438.4	88.7
0°-90°	1613.4	99.5
90°-120°	8.4	0.5
90°-150°	8.4	0.5
90°-180°	8.0	0.5
0°-180°	1621.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4708	4708	4708	4708	4708	
5°	1341	1608	2385	3773	4717	107
15°	229	247	340	1101	4333	67
25°	177	176	187	441	3170	84
35°	228	197	162	302	1901	141
45°	225	205	171	283	1049	169
55°	155	156	135	240	505	137
65°	72	78	88	140	198	73
75°	32	34	43	57	58	35
85°	16	16	17	17	9	15
90°	12	12	11	8	0	6
95°	8	8	7	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



TEST NUMBER: P273445

CATALOG NUMBER: 0.05-09W-830-10-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4708.2	4708.2	4708.2	4708.2	4708.2	4708.2	4708.2	4708.2	4708.2	4708.2	4708.2
1°	4345.0	4381.6	4324.1	4434.0	4391.7	4425.2	4482.8	4520.7	4553.4	4556.9	4592.7
2°	3585.5	3684.0	3602.9	3762.0	3747.7	3817.4	3920.8	4005.8	4089.9	4172.8	4242.1
3°	2727.8	2838.1	2817.2	2927.5	2950.6	3050.9	3193.0	3324.7	3465.1	3629.9	3752.0
4°	1948.6	2031.9	2058.0	2115.6	2201.5	2283.5	2435.6	2598.7	2781.9	2980.7	3190.4
5°	1341.2	1410.1	1429.7	1478.6	1563.6	1652.5	1792.5	1959.5	2157.0	2385.1	2625.3
6°	932.7	982.4	999.4	1037.3	1100.5	1176.8	1292.8	1437.1	1620.3	1853.6	2101.7
7°	688.9	721.6	734.3	762.2	807.1	863.8	951.8	1066.5	1217.0	1425.8	1692.7
8°	545.0	555.9	565.1	586.0	618.7	658.8	723.8	810.1	927.0	1100.1	1326.8
9°	440.4	450.4	457.4	473.1	497.1	526.7	575.6	641.4	730.8	849.8	1026.4
10°	375.9	381.5	386.8	398.5	416.0	438.2	474.4	523.2	593.0	682.8	842.8
12.5°	280.8	279.9	284.3	291.7	303.0	315.7	334.9	361.9	399.0	448.2	538.1
15°	229.4	229.8	232.8	237.6	243.7	251.2	262.9	280.8	304.3	340.5	390.7
17.5°	198.0	198.4	200.1	203.2	207.5	214.1	222.8	233.7	250.3	275.1	309.6
20°	183.1	182.7	183.6	185.3	187.9	191.4	196.2	202.3	214.5	233.7	260.3
22.5°	177.5	177.5	177.5	177.0	177.5	178.3	181.4	186.2	192.7	204.1	223.2
25°	177.0	177.5	177.0	175.7	175.7	175.3	174.8	176.2	179.2	187.1	199.3
27.5°	181.0	180.5	179.2	177.0	175.3	174.0	173.1	172.7	173.1	176.2	184.4
30°	190.5	189.7	187.1	183.1	179.2	175.3	171.8	170.1	169.6	170.9	174.4
32.5°	204.9	203.6	200.6	194.0	188.8	181.8	175.7	169.2	165.7	165.7	167.9
35°	228.5	225.9	221.1	213.2	202.3	192.3	183.1	173.5	166.1	162.2	162.6
37.5°	245.5	244.6	242.4	235.0	224.6	210.6	194.5	179.6	169.6	160.9	157.4
40°	236.3	235.0	232.0	228.0	225.0	221.9	209.3	190.5	175.3	162.2	154.8
42.5°	228.9	228.0	225.0	218.4	214.1	209.3	204.9	199.3	182.7	166.1	154.8
45°	225.0	224.1	221.5	215.8	208.9	201.0	193.2	187.5	182.7	170.9	156.1
47.5°	207.5	207.1	206.2	204.9	202.3	198.0	187.1	177.0	168.7	166.6	158.3
50°	193.2	193.2	192.7	190.1	187.5	184.0	181.0	171.4	159.1	152.2	151.3
52.5°	177.0	177.0	177.0	176.2	174.4	170.5	166.6	161.8	153.5	141.7	136.9
55°	155.2	155.7	156.5	157.0	157.4	155.2	153.0	147.4	142.6	135.2	125.6
57.5°	131.2	131.7	133.4	134.7	136.5	137.3	137.8	135.2	129.9	124.3	117.7
60°	107.7	108.1	109.9	112.1	115.1	117.7	119.9	120.8	117.3	112.1	107.7
62.5°	87.6	87.6	89.8	91.6	94.6	97.7	101.6	103.8	103.3	100.7	96.4
65°	71.5	71.9	73.3	74.6	76.7	79.8	84.2	87.6	89.4	88.1	85.0
67.5°	58.4	58.9	59.7	61.0	62.4	65.0	68.5	72.8	75.4	75.9	74.6
70°	48.0	48.4	48.8	49.7	51.0	52.8	55.4	59.3	62.4	64.1	64.1
72.5°	39.7	39.7	40.1	41.0	41.9	43.2	45.3	47.5	50.6	53.2	54.1
75°	32.3	32.7	33.1	33.1	34.0	34.4	36.2	37.9	40.1	43.2	44.5
77.5°	27.0	27.0	27.0	27.0	27.9	28.3	29.2	30.5	32.3	34.4	36.2
80°	22.7	22.7	22.7	22.7	22.7	23.1	24.0	24.4	25.3	27.5	29.2
82.5°	19.2	19.2	19.2	19.2	19.2	19.6	19.6	20.1	20.9	21.8	23.1
85°	16.1	16.1	16.1	16.1	16.1	16.1	16.6	16.6	17.0	17.4	17.9
87.5°	13.5	13.5	13.5	13.5	13.5	13.5	14.0	14.0	14.0	14.0	14.4
90°	11.8	11.8	11.8	11.8	11.8	11.3	11.3	11.3	11.3	11.3	11.3
92.5°	10.0	10.0	10.0	10.0	10.0	9.6	9.6	9.2	9.2	9.2	9.2
95°	8.3	8.3	8.3	7.8	7.8	7.8	7.8	7.4	7.4	7.4	6.5



TEST NUMBER: P273445

CATALOG NUMBER: 0.05-09W-830-10-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
97.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.1	6.1	5.7	5.7	4.8
100°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	4.8	4.4	3.9	3.9
102.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	3.5	3.5	3.1	2.2
105°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	2.6	2.6	1.7	1.3
107.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	1.7	1.3	0.9	0.0
110°	2.6	2.6	2.6	2.2	2.6	2.2	1.7	1.3	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



TEST NUMBER: P273445

CATALOG NUMBER: 0.05-09W-830-10-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	4708.2	4708.2	4708.2	4708.2	4708.2	4708.2	4708.2	4708.2
1°	4578.7	4609.2	4629.7	4659.4	4665.1	4703.9	4736.1	4752.7
2°	4305.3	4403.4	4472.3	4554.3	4596.2	4666.4	4718.3	4741.4
3°	3913.8	4096.9	4236.4	4395.2	4496.7	4616.2	4696.0	4730.0
4°	3441.1	3714.1	3941.2	4188.9	4367.2	4553.9	4676.0	4722.2
5°	2944.1	3287.6	3602.0	3944.3	4212.5	4479.7	4654.2	4716.9
6°	2452.2	2849.9	3234.4	3666.1	4049.8	4390.8	4630.2	4711.7
7°	2012.7	2429.1	2861.2	3368.7	3829.6	4282.7	4595.3	4704.7
8°	1626.8	2038.0	2497.6	3060.9	3610.3	4157.1	4543.0	4687.3
9°	1312.9	1696.6	2163.6	2760.9	3377.5	4017.1	4485.4	4659.4
10°	1058.7	1401.4	1856.6	2474.0	3147.7	3870.2	4414.8	4622.8
12.5°	665.8	890.4	1254.0	1836.5	2603.5	3478.6	4208.5	4493.7
15°	468.7	610.0	867.7	1334.2	2092.9	3081.0	3970.9	4333.2
17.5°	362.8	457.0	628.3	992.4	1690.0	2713.0	3699.3	4081.2
20°	297.8	366.3	493.1	774.4	1379.2	2383.3	3394.5	3792.6
22.5°	253.3	305.7	405.9	632.2	1150.2	2091.2	3093.6	3491.7
25°	220.2	262.9	344.0	537.6	997.6	1842.7	2771.4	3169.9
27.5°	199.7	231.1	301.7	472.2	895.2	1614.6	2449.2	2831.6
30°	185.3	211.0	267.3	425.1	817.6	1394.4	2089.9	2454.0
32.5°	174.8	193.6	244.2	395.0	770.9	1222.2	1813.9	2169.7
35°	167.4	182.3	227.6	377.2	736.9	1075.2	1583.7	1901.1
37.5°	161.3	174.0	215.4	368.9	702.9	938.3	1378.7	1656.0
40°	155.2	167.0	208.0	365.4	656.7	808.4	1202.6	1432.8
42.5°	151.3	160.9	203.6	368.0	603.5	701.1	1041.2	1231.3
45°	149.6	155.2	199.3	367.6	542.9	603.5	894.7	1049.1
47.5°	148.7	150.4	195.8	361.9	476.6	524.1	774.8	886.9
50°	147.4	147.8	194.9	344.5	412.0	452.2	661.5	740.4
52.5°	139.5	144.8	194.0	322.2	348.8	392.0	565.1	615.7
55°	125.1	139.1	192.7	287.3	294.3	338.4	475.3	504.9
57.5°	113.4	126.9	187.9	249.8	249.0	291.3	394.2	409.0
60°	104.6	115.1	174.8	212.8	208.4	248.1	319.2	327.0
62.5°	95.5	105.5	155.7	177.9	175.3	205.8	252.5	252.9
65°	84.6	96.4	133.9	145.2	147.4	171.4	198.8	198.0
67.5°	74.6	85.0	112.1	117.3	123.4	139.5	154.4	150.9
70°	64.5	72.4	90.7	94.6	101.2	112.1	116.4	112.5
72.5°	54.9	60.6	71.5	75.4	80.7	86.3	86.3	82.0
75°	46.2	49.3	54.9	58.4	62.8	64.5	61.9	58.4
77.5°	37.9	39.7	41.9	44.0	46.7	45.3	43.2	41.0
80°	31.0	31.8	31.8	32.7	32.7	31.4	28.3	27.9
82.5°	24.9	25.7	24.4	23.1	21.8	19.6	17.9	16.6
85°	19.6	19.6	18.3	16.1	13.5	11.3	9.6	8.7
87.5°	14.8	14.8	13.1	10.9	7.8	5.7	3.9	3.5
90°	11.3	11.3	9.2	7.0	4.4	2.2	0.9	0.0
92.5°	8.7	7.8	6.1	3.9	1.7	0.9	0.0	0.0
95°	6.5	5.7	3.5	1.7	0.9	0.0	0.0	0.0



TEST NUMBER: P273445

CATALOG NUMBER: 0.05-09W-830-10-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
97.5°	4.4	3.5	1.7	0.9	0.0	0.0	0.0	0.0
100°	2.6	1.7	0.9	0.0	0.0	0.0	0.0	0.0
102.5°	1.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.4	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)