

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: P273474

Luminaire Tested: **0.05-12W-835-5-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273474
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: 0.05-12W-835-5-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 5 DEGREE OPTIC.
V2 HIGH OUTPUT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1846.6 lumens
Efficiency: N/A
Efficacy: 52.0 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

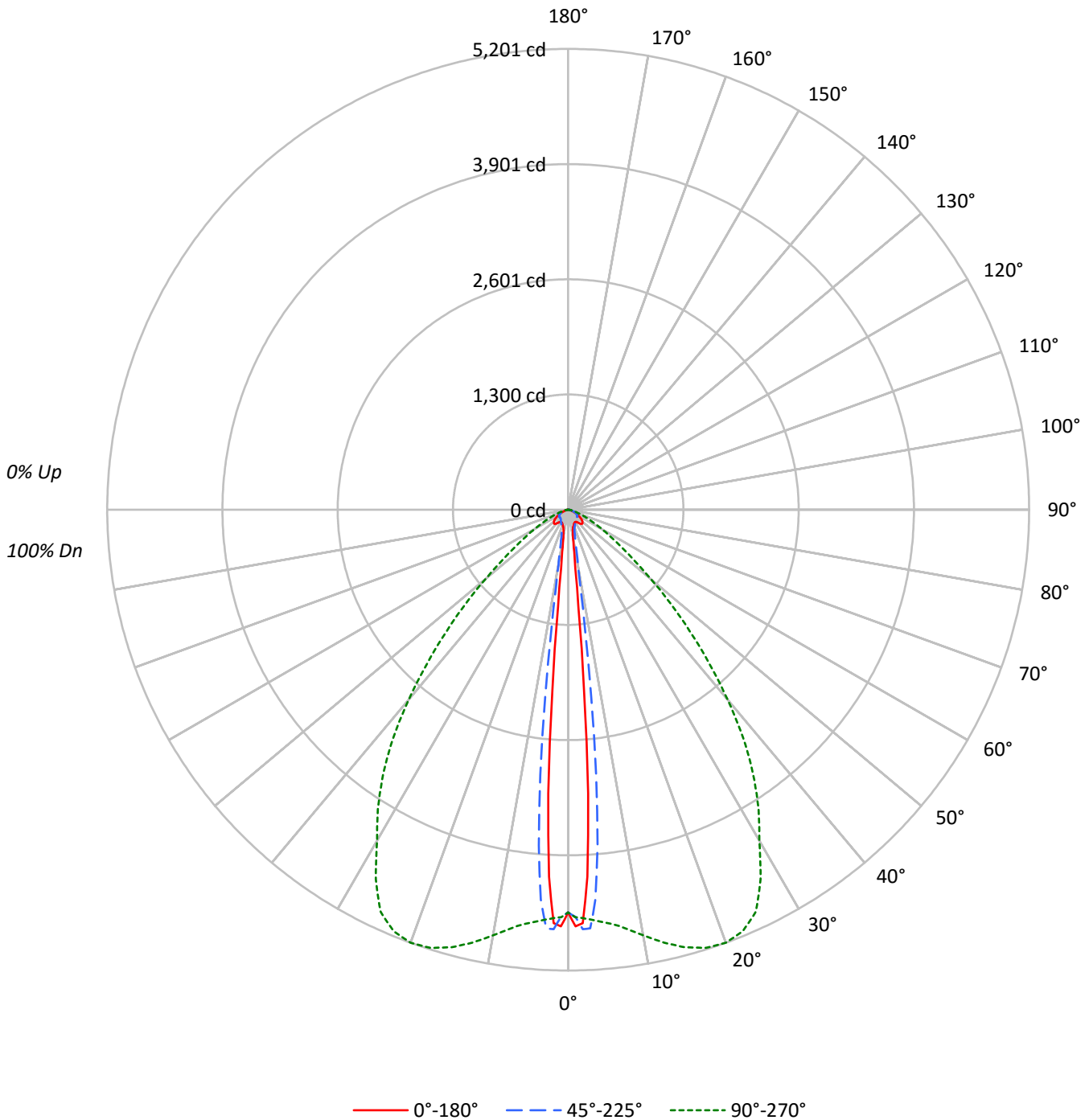
Input Watts (W): 35.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	80526	80526	80526
5°	36442	67627	83145
10°	5704	11294	87715
15°	3831	5186	93776
20°	3401	3978	98040
25°	3231	3546	97892
30°	3275	3328	88201
35°	3663	3136	78612
40°	4687	3064	64688
45°	5624	3189	48646
50°	5774	3525	33575
55°	5538	3932	22409
60°	4677	4014	15688
65°	3638	3965	10676
70°	2828	3688	7215
75°	2416	3203	4695
80°	2387	2867	2969
85°	2967	3171	1911



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	272.1	14.7
10°-20°	327.7	17.7
20°-30°	311.3	16.9
30°-40°	279.6	15.1
40°-50°	253.9	13.8
50°-60°	202.1	10.9
60°-70°	121.9	6.6
70°-80°	54.3	2.9
80°-90°	17.4	0.9
90°-100°	4.7	0.3
100°-110°	1.4	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°	911.1	49.3
0°-40°	1190.7	64.5
0°-60°	1646.7	89.2
0°-90°	1840.4	99.7
90°-120°	6.2	0.3
90°-150°	6.2	0.3
90°-180°	6.0	0.3
0°-180°	1846.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4546	4546	4546	4546	4546	
5°	2049	2575	3803	4751	4676	135
15°	209	218	283	1147	5113	61
25°	165	166	181	349	5008	77
35°	169	155	145	274	3635	110
45°	224	197	127	257	1942	168
55°	179	173	127	210	726	157
65°	87	95	95	126	255	88
75°	35	39	47	60	69	39
85°	15	15	16	16	9	14
90°	9	9	9	6	0	5
95°	6	6	5	2	0	5
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°	4545.8	4545.8	4545.8	4545.8	4545.8	4545.8	4545.8	4545.8	4545.8	4545.8	4545.8
1°	4703.3	4625.4	4620.7	4622.3	4636.3	4644.6	4659.7	4683.6	4626.4	4595.2	4590.0
2°	4669.0	4688.8	4695.5	4707.5	4741.8	4749.1	4762.1	4770.4	4762.6	4737.6	4720.5
3°	4147.7	4232.4	4274.0	4309.9	4404.5	4449.7	4510.5	4570.8	4672.1	4730.4	4753.8
4°	3211.1	3318.2	3367.5	3428.9	3588.4	3684.6	3833.8	3992.8	4220.5	4411.2	4537.0
5°	2049.4	2154.4	2211.6	2301.5	2494.9	2654.4	2882.1	3126.9	3484.0	3803.1	4067.7
6°	1104.5	1183.5	1226.1	1292.7	1442.9	1593.1	1844.6	2143.0	2557.2	3010.5	3432.0
7°	663.7	697.0	718.8	752.6	830.1	919.5	1077.5	1264.6	1656.5	2131.5	2661.7
8°	482.3	491.7	504.2	521.8	556.7	601.4	685.6	789.5	1019.8	1368.5	1868.0
9°	378.9	386.2	394.5	407.0	429.3	456.9	496.9	561.3	680.4	885.2	1237.6
10°	317.1	321.7	328.0	336.8	352.4	372.2	401.3	444.4	514.0	627.9	816.0
12.5°	238.1	238.6	240.1	244.8	252.6	262.5	280.7	299.9	333.7	381.5	450.6
15°	208.9	210.0	210.5	212.6	216.2	220.4	227.7	237.5	253.6	282.8	320.2
17.5°	194.4	194.9	194.9	197.0	199.6	202.2	204.8	211.0	219.3	234.4	256.8
20°	180.4	179.8	180.4	180.9	184.5	187.1	190.8	196.0	201.7	211.0	224.0
22.5°	172.0	171.5	171.5	171.5	172.6	173.6	176.2	180.4	187.6	196.5	207.4
25°	165.3	164.8	164.2	164.2	165.3	167.4	168.4	169.4	173.6	181.4	193.4
27.5°	159.6	160.1	159.0	158.0	158.5	159.6	161.1	164.2	165.8	169.4	179.3
30°	160.1	159.6	158.0	156.4	154.4	153.3	153.8	154.9	158.5	162.7	167.9
32.5°	162.2	161.1	159.0	157.0	155.4	152.8	149.2	148.1	149.2	154.4	160.1
35°	169.4	168.4	164.8	160.6	157.0	152.8	148.7	145.0	142.4	145.0	151.8
37.5°	185.0	183.0	178.3	171.5	163.7	156.4	149.2	142.4	138.8	137.2	141.4
40°	202.7	201.1	195.4	187.6	177.8	165.8	152.8	142.9	135.7	132.5	134.1
42.5°	217.8	216.7	211.5	203.2	192.3	179.3	162.7	147.6	136.2	128.9	128.4
45°	224.5	222.5	218.8	212.6	203.2	190.2	173.6	154.9	137.7	127.3	123.2
47.5°	219.3	218.3	215.7	211.5	204.8	195.4	180.4	162.2	142.4	127.3	119.0
50°	209.5	208.9	206.9	202.7	198.0	191.3	180.9	165.8	147.1	127.9	116.4
52.5°	196.5	196.0	195.4	191.8	187.6	182.4	174.1	162.7	147.1	129.4	114.3
55°	179.3	179.3	178.8	178.8	175.7	171.0	163.7	154.4	142.4	127.3	112.3
57.5°	157.5	158.5	158.0	159.0	160.1	157.5	151.8	144.5	134.6	121.1	108.1
60°	132.0	133.1	133.6	135.1	138.3	140.3	137.7	132.5	124.2	113.3	101.4
62.5°	108.6	109.7	110.2	112.3	114.3	118.5	120.6	119.0	113.3	104.5	93.6
65°	86.8	88.4	88.9	90.4	93.6	97.2	100.8	103.4	100.3	94.6	85.8
67.5°	69.1	69.1	70.7	72.8	75.4	79.0	82.6	86.3	86.8	83.7	76.9
70°	54.6	55.6	56.1	57.7	60.3	62.9	65.5	69.6	72.2	71.2	68.1
72.5°	43.7	44.7	45.2	46.3	47.8	50.4	52.5	55.1	58.2	59.3	57.7
75°	35.3	35.9	35.9	36.9	38.5	40.0	41.6	43.1	45.2	46.8	47.3
77.5°	29.1	29.1	29.1	29.1	30.7	31.2	32.7	33.8	34.8	36.9	38.5
80°	23.4	23.4	23.4	22.9	23.9	24.4	24.9	25.5	26.5	28.1	30.1
82.5°	18.2	18.2	18.2	18.2	18.7	19.2	19.2	19.2	20.3	20.8	22.9
85°	14.6	14.6	14.6	14.6	14.6	15.1	15.1	15.1	15.1	15.6	16.6
87.5°	11.4	11.4	11.4	11.4	12.0	12.0	12.0	12.0	12.0	12.0	12.0
90°	9.4	8.8	8.8	8.8	9.4	9.4	9.4	8.8	8.8	8.8	8.8
92.5°	7.3	7.3	7.3	7.3	7.3	8.3	7.3	7.3	7.3	7.3	6.2
95°	6.2	6.2	6.2	6.2	6.2	6.8	6.2	6.2	5.2	5.2	5.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
97.5°	5.2	5.2	5.2	5.2	5.2	5.7	5.2	5.2	4.2	4.2	3.1
100°	4.2	4.2	4.2	4.2	4.2	4.7	4.2	4.2	3.1	3.1	2.1
102.5°	3.1	3.1	3.1	3.1	3.1	4.2	3.1	3.1	2.1	2.1	1.0
105°	2.1	2.1	2.1	2.1	3.1	3.1	3.1	2.1	1.0	1.0	0.0
107.5°	1.6	2.1	2.1	2.1	2.1	2.1	2.1	1.0	1.0	0.0	0.0
110°	1.0	1.0	1.0	1.0	1.6	2.1	1.6	1.0	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°	4545.8	4545.8	4545.8	4545.8	4545.8	4545.8	4545.8	4545.8
1°	4587.9	4566.6	4557.3	4561.4	4560.9	4570.3	4586.4	4599.9
2°	4698.1	4657.6	4632.1	4613.4	4594.2	4587.9	4601.5	4611.3
3°	4759.5	4747.0	4725.2	4689.8	4650.3	4623.3	4624.8	4630.0
4°	4645.1	4735.0	4775.6	4758.9	4714.2	4668.5	4654.5	4650.8
5°	4323.9	4565.1	4716.3	4786.0	4770.4	4721.0	4684.6	4675.8
6°	3817.1	4236.6	4531.8	4732.4	4801.0	4770.9	4718.4	4701.8
7°	3183.0	3767.2	4234.5	4598.3	4793.3	4814.6	4757.9	4735.0
8°	2476.7	3210.6	3832.2	4385.8	4736.6	4852.5	4806.2	4780.8
9°	1773.4	2590.0	3358.7	4092.1	4627.4	4875.4	4860.8	4828.6
10°	1217.3	1960.0	2829.6	3736.1	4463.2	4868.6	4915.9	4876.4
12.5°	571.7	848.3	1495.4	2648.2	3847.3	4702.3	5020.9	5005.3
15°	383.6	497.4	757.3	1535.9	2998.5	4329.6	5060.9	5113.4
17.5°	298.3	364.4	497.4	858.6	2072.3	3808.8	4984.0	5184.1
20°	248.4	297.8	386.2	587.3	1296.8	3168.0	4788.1	5200.7
22.5°	223.0	256.2	324.3	474.0	888.3	2516.2	4492.8	5147.7
25°	207.9	231.3	286.4	411.1	711.6	1906.0	4121.2	5008.4
27.5°	193.9	215.7	262.0	371.6	630.5	1428.8	3620.7	4700.7
30°	180.9	201.1	243.2	348.8	587.9	1139.3	3078.0	4312.0
32.5°	168.9	188.7	230.3	335.2	566.5	998.5	2621.2	3995.9
35°	160.1	177.8	219.3	328.5	554.6	906.5	2184.6	3635.2
37.5°	152.8	168.9	210.5	323.3	543.2	830.6	1851.4	3243.3
40°	142.9	161.6	204.8	320.7	527.6	753.7	1569.2	2797.4
42.5°	134.6	152.8	199.6	320.2	505.7	680.9	1378.9	2358.7
45°	127.3	144.5	196.0	318.1	475.6	612.8	1216.2	1941.8
47.5°	120.6	137.2	190.8	309.8	436.6	547.3	1079.0	1561.4
50°	114.3	130.5	185.0	295.7	394.0	484.9	950.6	1218.3
52.5°	109.7	123.2	177.8	276.0	347.2	428.8	822.8	937.7
55°	105.5	118.0	170.0	251.0	303.5	377.3	717.3	725.6
57.5°	100.3	111.7	160.6	222.5	264.0	327.5	609.7	565.5
60°	94.6	105.0	148.1	191.8	226.1	279.6	499.5	442.8
62.5°	87.3	97.7	133.6	161.1	189.7	232.9	386.2	336.8
65°	79.5	88.4	116.4	134.6	157.0	198.0	295.7	254.7
67.5°	71.7	79.5	99.8	113.8	129.9	165.3	219.9	191.3
70°	63.9	68.6	83.7	95.6	107.1	132.5	157.5	139.3
72.5°	55.6	58.2	68.1	79.0	85.2	102.4	111.2	98.8
75°	46.3	47.8	55.1	63.9	66.5	77.4	76.4	68.6
77.5°	38.5	38.5	42.6	49.4	51.5	55.1	50.4	45.7
80°	30.7	30.1	31.2	35.3	37.4	35.9	32.2	29.1
82.5°	23.9	23.9	23.4	24.4	24.4	22.3	19.2	17.7
85°	17.7	17.7	17.2	15.6	14.6	12.0	9.4	9.4
87.5°	13.0	13.0	11.4	9.4	7.8	5.2	3.1	3.1
90°	8.8	8.3	7.3	5.2	3.1	1.6	0.0	0.0
92.5°	6.2	5.2	4.2	3.1	1.0	0.0	0.0	0.0
95°	4.2	3.1	2.1	1.0	0.0	0.0	0.0	0.0



TEST NUMBER: P273474

CATALOG NUMBER: 0.05-12W-835-5-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
97.5°	3.1	2.1	1.0	0.0	0.0	0.0	0.0	0.0
100°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.0	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)