

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: P273480

Luminaire Tested: **0.05-12W-840-5-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P273480  
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-840-5-STD-UNV-AN-3F0  
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 5 DEGREE OPTIC.  
V2 HIGH OUTPUT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

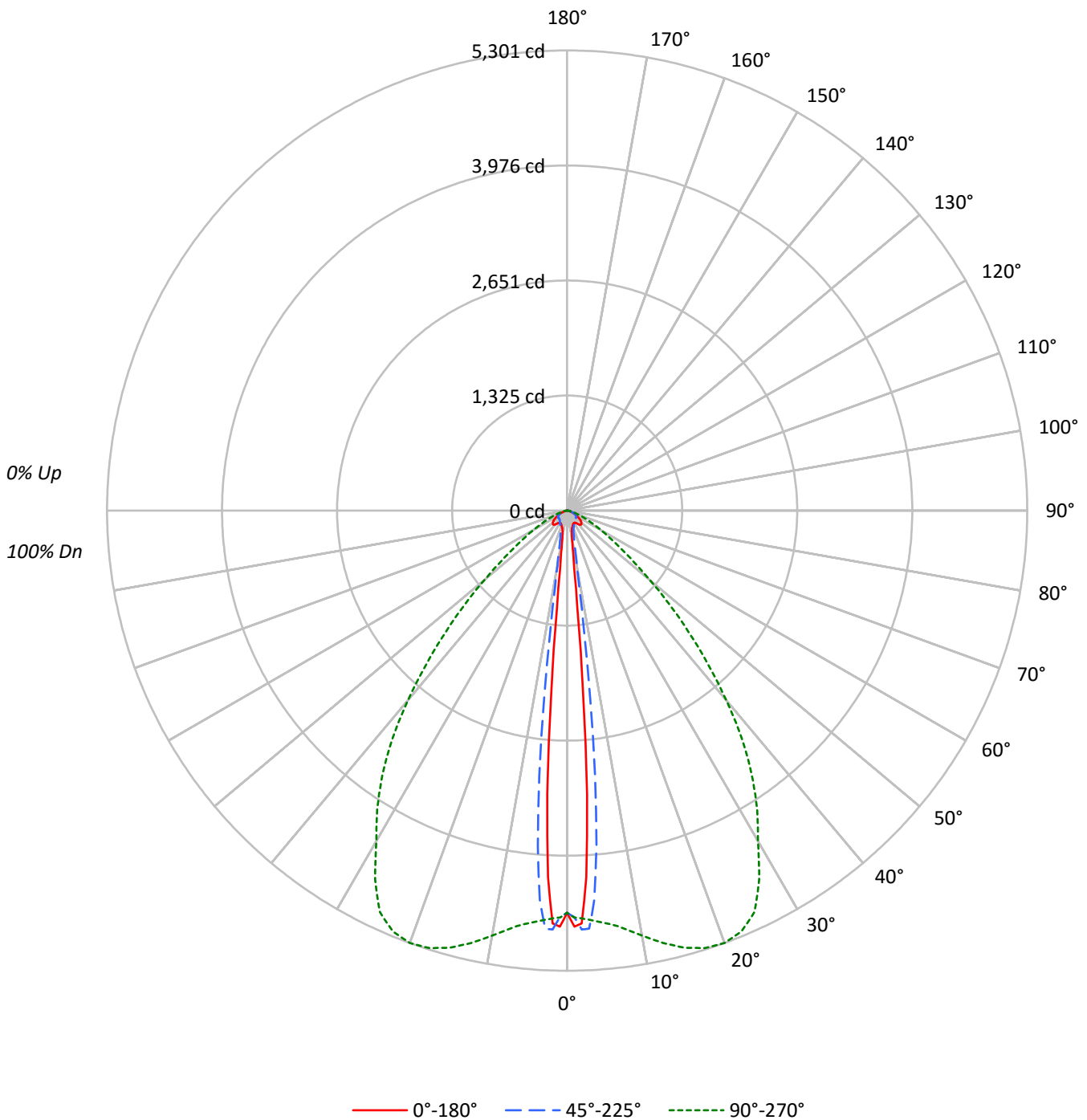
Lumens per Lamp: N/A  
Luminaire Lumens: 1882.1 lumens  
Efficiency: N/A  
Efficacy: 53.0 lumens/watt  
Spacing Criteria (0/90/45): 0.17 / 1.31 / 0.22  
Luminous Opening: Rectangular (W 2.92' x L: 0.21' x H: 0')  
CIE Type: Direct

Input Watts (W): 35.5  
Input Voltage (V): 120  
Input Current (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	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°	82076	82076	82076
5°	37143	68927	84744
10°	5814	11510	89402
15°	3906	5285	95581
20°	3465	4055	99927
25°	3293	3614	99777
30°	3338	3391	89897
35°	3735	3196	80124
40°	4778	3124	65932
45°	5734	3252	49583
50°	5884	3591	34222
55°	5646	4009	22839
60°	4769	4092	15993
65°	3710	4041	10881
70°	2880	3760	7355
75°	2464	3265	4784
80°	2428	2918	3030
85°	3008	3232	1931



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	277.3	14.7
10°-20°	334.0	17.7
20°-30°	317.3	16.9
30°-40°	285.0	15.1
40°-50°	258.8	13.8
50°-60°	206.0	10.9
60°-70°	124.3	6.6
70°-80°	55.4	2.9
80°-90°	17.7	0.9
90°-100°	4.8	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°	928.6	49.3
0°-40°	1213.6	64.5
0°-60°	1678.4	89.2
0°-90°	1875.8	99.7
90°-120°	6.3	0.3
90°-150°	6.3	0.3
90°-180°	6.0	0.3
0°-180°	1882.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4633	4633	4633	4633	4633	
5°	2089	2624	3876	4842	4766	138
15°	213	222	288	1169	5212	63
25°	168	170	185	355	5105	78
35°	173	158	148	279	3705	112
45°	229	200	130	262	1979	171
55°	183	177	130	215	740	160
65°	88	97	96	128	260	90
75°	36	40	48	61	70	40
85°	15	15	16	17	10	14
90°	10	10	9	6	0	5
95°	6	7	5	2	0	5
105°	2	3	1	0	0	3
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: P273480

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4633.3	4633.3	4633.3	4633.3	4633.3	4633.3	4633.3	4633.3	4633.3	4633.3	4633.3
1°	4793.8	4714.3	4709.6	4711.1	4725.4	4733.9	4749.3	4773.7	4715.4	4683.6	4678.3
2°	4758.8	4778.9	4785.8	4798.0	4833.0	4840.4	4853.6	4862.1	4854.2	4828.7	4811.3
3°	4227.5	4313.8	4356.2	4392.8	4489.2	4535.3	4597.2	4658.7	4762.0	4821.3	4845.2
4°	3272.8	3382.0	3432.3	3494.8	3657.5	3755.5	3907.5	4069.6	4301.6	4496.1	4624.3
5°	2088.8	2195.8	2254.1	2345.8	2542.8	2705.5	2937.5	3187.0	3551.0	3876.2	4145.9
6°	1125.7	1206.3	1249.7	1317.5	1470.6	1623.7	1880.1	2184.2	2606.4	3068.4	3498.0
7°	676.5	710.4	732.7	767.1	846.0	937.1	1098.2	1288.9	1688.3	2172.5	2712.9
8°	491.6	501.2	513.9	531.9	567.4	612.9	698.8	804.7	1039.4	1394.9	1904.0
9°	386.2	393.6	402.1	414.8	437.6	465.7	506.4	572.1	693.5	902.2	1261.4
10°	323.2	327.9	334.3	343.3	359.2	379.3	409.0	452.9	523.9	639.9	831.7
12.5°	242.6	243.2	244.7	249.5	257.5	267.5	286.1	305.7	340.1	388.8	459.3
15°	213.0	214.0	214.6	216.7	220.4	224.6	232.0	242.1	258.5	288.2	326.3
17.5°	198.1	198.7	198.7	200.8	203.4	206.1	208.7	215.1	223.6	238.9	261.7
20°	183.8	183.3	183.8	184.4	188.1	190.7	194.4	199.7	205.5	215.1	228.3
22.5°	175.3	174.8	174.8	174.8	175.9	176.9	179.6	183.8	191.2	200.2	211.4
25°	168.5	167.9	167.4	167.4	168.5	170.6	171.6	172.7	176.9	184.9	197.1
27.5°	162.6	163.2	162.1	161.0	161.6	162.6	164.2	167.4	169.0	172.7	182.8
30°	163.2	162.6	161.0	159.5	157.3	156.3	156.8	157.9	161.6	165.8	171.1
32.5°	165.3	164.2	162.1	160.0	158.4	155.7	152.0	151.0	152.0	157.3	163.2
35°	172.7	171.6	167.9	163.7	160.0	155.7	151.5	147.8	145.2	147.8	154.7
37.5°	188.6	186.5	181.7	174.8	166.9	159.5	152.0	145.2	141.4	139.9	144.1
40°	206.6	205.0	199.2	191.2	181.2	169.0	155.7	145.7	138.3	135.1	136.7
42.5°	222.0	220.9	215.6	207.1	196.0	182.8	165.8	150.5	138.8	131.4	130.9
45°	228.9	226.7	223.0	216.7	207.1	193.9	176.9	157.9	140.4	129.8	125.6
47.5°	223.6	222.5	219.8	215.6	208.7	199.2	183.8	165.3	145.2	129.8	121.3
50°	213.5	213.0	210.8	206.6	201.8	195.0	184.4	169.0	149.9	130.3	118.7
52.5°	200.2	199.7	199.2	195.5	191.2	185.9	177.5	165.8	149.9	131.9	116.5
55°	182.8	182.8	182.2	182.2	179.1	174.3	166.9	157.3	145.2	129.8	114.4
57.5°	160.5	161.6	161.0	162.1	163.2	160.5	154.7	147.3	137.2	123.4	110.2
60°	134.6	135.6	136.1	137.7	140.9	143.0	140.4	135.1	126.6	115.5	103.3
62.5°	110.7	111.8	112.3	114.4	116.5	120.8	122.9	121.3	115.5	106.5	95.4
65°	88.5	90.1	90.6	92.2	95.4	99.1	102.8	105.4	102.2	96.4	87.4
67.5°	70.5	70.5	72.0	74.2	76.8	80.5	84.2	87.9	88.5	85.3	78.4
70°	55.6	56.7	57.2	58.8	61.5	64.1	66.7	71.0	73.6	72.6	69.4
72.5°	44.5	45.6	46.1	47.1	48.7	51.4	53.5	56.2	59.3	60.4	58.8
75°	36.0	36.6	36.6	37.6	39.2	40.8	42.4	44.0	46.1	47.7	48.2
77.5°	29.7	29.7	29.7	29.7	31.3	31.8	33.4	34.4	35.5	37.6	39.2
80°	23.8	23.8	23.8	23.3	24.4	24.9	25.4	26.0	27.0	28.6	30.7
82.5°	18.5	18.5	18.5	18.5	19.1	19.6	19.6	19.6	20.7	21.2	23.3
85°	14.8	14.8	14.8	14.8	14.8	15.4	15.4	15.4	15.4	15.9	17.0
87.5°	11.7	11.7	11.7	11.7	12.2	12.2	12.2	12.2	12.2	12.2	12.2
90°	9.5	9.0	9.0	9.0	9.5	9.5	9.5	9.0	9.0	9.0	9.0
92.5°	7.4	7.4	7.4	7.4	7.4	8.5	7.4	7.4	7.4	7.4	6.4
95°	6.4	6.4	6.4	6.4	6.4	6.9	6.4	6.4	5.3	5.3	5.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
97.5°	5.3	5.3	5.3	5.3	5.3	5.8	5.3	5.3	4.2	4.2	3.2
100°	4.2	4.2	4.2	4.2	4.2	4.8	4.2	4.2	3.2	3.2	2.1
102.5°	3.2	3.2	3.2	3.2	3.2	4.2	3.2	3.2	2.1	2.1	1.1
105°	2.1	2.1	2.1	2.1	3.2	3.2	3.2	2.1	1.1	1.1	0.0
107.5°	1.6	2.1	2.1	2.1	2.1	2.1	2.1	1.1	1.1	0.0	0.0
110°	1.1	1.1	1.1	1.1	1.6	2.1	1.6	1.1	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°	4633.3	4633.3	4633.3	4633.3	4633.3	4633.3	4633.3	4633.3
1°	4676.2	4654.5	4644.9	4649.2	4648.6	4658.2	4674.6	4688.4
2°	4788.5	4747.2	4721.2	4702.1	4682.5	4676.2	4689.9	4700.0
3°	4851.0	4838.3	4816.0	4780.0	4739.7	4712.2	4713.8	4719.1
4°	4734.4	4826.1	4867.4	4850.5	4804.9	4758.3	4744.0	4740.3
5°	4407.1	4652.9	4807.0	4878.0	4862.1	4811.8	4774.7	4765.7
6°	3890.5	4318.1	4619.0	4823.4	4893.4	4862.7	4809.1	4792.2
7°	3244.2	3839.7	4315.9	4686.8	4885.4	4907.2	4849.4	4826.1
8°	2524.3	3272.3	3905.9	4470.1	4827.7	4945.8	4898.7	4872.7
9°	1807.5	2639.8	3423.3	4170.8	4716.4	4969.1	4954.3	4921.5
10°	1240.7	1997.7	2884.0	3807.9	4549.0	4962.2	5010.5	4970.2
12.5°	582.7	864.6	1524.1	2699.1	3921.3	4792.7	5117.5	5101.6
15°	391.0	507.0	771.9	1565.4	3056.2	4412.9	5158.3	5211.8
17.5°	304.1	371.4	507.0	875.2	2112.1	3882.1	5079.9	5283.8
20°	253.2	303.6	393.6	598.6	1321.7	3228.9	4880.1	5300.8
22.5°	227.3	261.2	330.6	483.1	905.4	2564.6	4579.2	5246.7
25°	211.9	235.7	291.9	419.0	725.2	1942.6	4200.5	5104.8
27.5°	197.6	219.8	267.0	378.8	642.6	1456.3	3690.3	4791.1
30°	184.4	205.0	247.9	355.5	599.2	1161.2	3137.2	4394.9
32.5°	172.2	192.3	234.7	341.7	577.4	1017.7	2671.6	4072.8
35°	163.2	181.2	223.6	334.8	565.3	923.9	2226.6	3705.1
37.5°	155.7	172.2	214.6	329.5	553.6	846.6	1887.0	3305.7
40°	145.7	164.8	208.7	326.9	537.7	768.1	1599.3	2851.2
42.5°	137.2	155.7	203.4	326.3	515.5	694.0	1405.4	2404.0
45°	129.8	147.3	199.7	324.2	484.7	624.6	1239.6	1979.2
47.5°	122.9	139.9	194.4	315.7	445.0	557.8	1099.8	1591.4
50°	116.5	133.0	188.6	301.4	401.6	494.3	968.9	1241.8
52.5°	111.8	125.6	181.2	281.3	353.9	437.1	838.6	955.7
55°	107.5	120.3	173.2	255.9	309.4	384.6	731.1	739.5
57.5°	102.2	113.9	163.7	226.7	269.1	333.7	621.4	576.4
60°	96.4	107.0	151.0	195.5	230.4	285.0	509.1	451.4
62.5°	89.0	99.6	136.1	164.2	193.4	237.3	393.6	343.3
65°	81.1	90.1	118.7	137.2	160.0	201.8	301.4	259.6
67.5°	73.1	81.1	101.7	116.0	132.4	168.5	224.1	195.0
70°	65.2	69.9	85.3	97.5	109.1	135.1	160.5	142.0
72.5°	56.7	59.3	69.4	80.5	86.9	104.4	113.4	100.7
75°	47.1	48.7	56.2	65.2	67.8	78.9	77.9	69.9
77.5°	39.2	39.2	43.4	50.3	52.4	56.2	51.4	46.6
80°	31.3	30.7	31.8	36.0	38.1	36.6	32.8	29.7
82.5°	24.4	24.4	23.8	24.9	24.9	22.8	19.6	18.0
85°	18.0	18.0	17.5	15.9	14.8	12.2	9.5	9.5
87.5°	13.2	13.2	11.7	9.5	7.9	5.3	3.2	3.2
90°	9.0	8.5	7.4	5.3	3.2	1.6	0.0	0.0
92.5°	6.4	5.3	4.2	3.2	1.1	0.0	0.0	0.0
95°	4.2	3.2	2.1	1.1	0.0	0.0	0.0	0.0





TEST NUMBER: P273480

CATALOG NUMBER: 0.05-12W-840-5-STD-UNV-AN-3F0

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
97.5°	3.2	2.1	1.1	0.0	0.0	0.0	0.0	0.0
100°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.1	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)