

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: P273441

Luminaire Tested: **0.05-09W-827-60-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273441
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (ITL89169-GONIOPHOTOMETRY)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 0.05-09W-827-60-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 60 DEGREE OPTIC.
VERY HIGH OUTPUT
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1428.1 lumens
Efficiency: N/A
Efficacy: 48.7 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.26
Luminous Opening: Rectangular w/ Sides (W: 2.92' x L: 0.16' x H: 0.03')
CIE Type: Direct

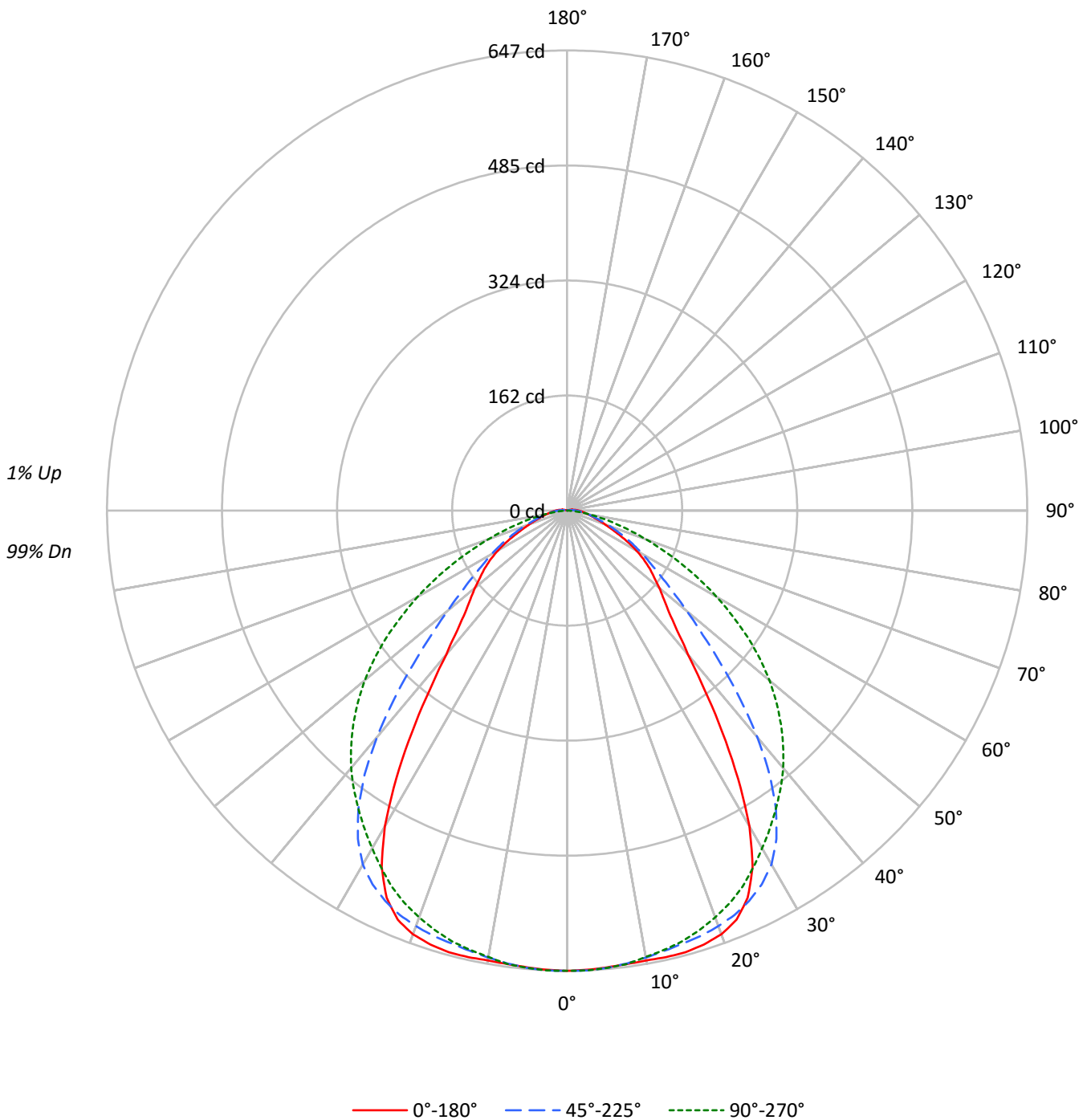
Input Watts (W): 29.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P273441

CATALOG NUMBER: 0.05-09W-827-60-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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99				
1	110	106	102	99	107	104	100	97	99	96	94	95	93	91	92	90	88	86				
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	82	79	76	74				
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	64				
4	86	75	68	62	84	74	67	61	72	65	60	69	64	59	67	62	59	56				
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50				
6	74	62	54	48	72	61	53	48	59	52	47	58	51	47	56	51	46	44				
7	69	57	49	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40				
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36				
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	33				
10	57	45	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14791	14791	14791
5°	14584	14654	14797
10°	14493	14502	14768
15°	14585	14440	14795
20°	14566	14490	14758
25°	14088	14459	14652
30°	12372	14178	14397
35°	9532	13166	14187
40°	6949	11279	13994
45°	5634	8852	13620
50°	5038	6826	13064
55°	4573	5465	12171
60°	4023	4630	10948
65°	3247	3895	9398
70°	2607	3194	7665
75°	2205	2633	5931
80°	2021	2300	4197
85°	2029	2164	2332



TEST NUMBER: P273441

CATALOG NUMBER: 0.05-09W-827-60-STD-UNV-AN-3F0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.4	4.3
10°-20°	178.6	12.5
20°-30°	273.4	19.1
30°-40°	295.2	20.7
40°-50°	245.6	17.2
50°-60°	181.4	12.7
60°-70°	109.9	7.7
70°-80°	52.5	3.7
80°-90°	21.1	1.5
90°-100°	7.3	0.5
100°-110°	1.7	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°	513.4	35.9
0°-40°	808.6	56.6
0°-60°	1235.6	86.5
0°-90°	1419.1	99.4
90°-120°	9.1	0.6
90°-150°	9.1	0.6
90°-180°	9.0	0.6
0°-180°	1428.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	647	647	647	647	647	
5°	645	645	645	645	645	61
15°	643	638	630	625	627	182
25°	601	604	606	588	583	272
35°	380	424	512	520	512	238
45°	202	220	307	421	425	160
55°	141	142	161	277	309	126
65°	81	84	91	136	177	81
75°	40	41	43	55	69	43
85°	22	22	20	16	10	19
90°	16	15	13	7	0	9
95°	11	10	7	2	0	8
105°	4	3	1	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: P273441

CATALOG NUMBER: 0.05-09W-827-60-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	647.1	647.1	647.1	647.1	647.1	647.1	647.1	647.1	647.1	647.1	647.1
2.5°	646.3	646.3	646.3	646.3	646.3	646.3	646.5	646.8	646.9	647.1	647.1
5°	644.6	644.8	645.0	645.2	645.4	645.4	645.4	645.4	645.4	645.4	645.4
7.5°	643.0	643.0	643.0	643.0	643.0	642.9	642.8	642.5	642.3	642.2	642.2
10°	642.2	641.9	641.4	641.1	640.7	640.3	639.7	639.2	638.7	638.1	637.9
12.5°	643.0	642.3	641.5	640.8	640.1	639.1	637.9	636.6	635.3	634.0	633.5
15°	643.0	641.9	640.8	639.7	638.7	637.2	635.4	633.5	631.7	629.9	628.6
17.5°	639.7	638.8	637.9	637.0	636.1	634.7	632.6	630.7	628.6	626.7	624.5
20°	634.0	633.1	632.2	631.3	630.4	629.0	627.2	625.4	623.6	621.8	618.7
22.5°	622.6	622.0	621.5	621.0	620.4	619.6	618.5	617.5	616.3	615.3	611.7
25°	600.6	601.5	602.4	603.3	604.2	604.7	604.9	605.1	605.3	605.5	601.3
27.5°	564.7	567.6	570.5	573.4	576.2	579.4	582.6	585.9	589.1	592.4	588.1
30°	512.4	518.1	523.7	529.3	535.0	541.8	550.0	558.1	566.3	574.5	570.5
32.5°	447.2	455.3	463.5	471.6	479.8	491.0	505.1	519.2	533.4	547.5	545.6
35°	380.2	389.5	398.8	408.0	417.2	431.8	451.8	471.7	491.7	511.6	513.6
37.5°	316.6	325.1	333.7	342.1	350.7	367.4	392.5	417.5	442.5	467.6	475.1
40°	264.4	271.8	279.2	286.7	294.1	311.0	337.2	363.6	389.9	416.2	430.5
42.5°	228.5	233.5	238.6	243.7	248.8	263.5	287.8	312.0	336.3	360.7	381.7
45°	202.4	205.5	208.6	211.6	214.7	226.3	246.4	266.6	286.7	306.8	333.8
47.5°	184.4	186.0	187.7	189.3	190.9	199.2	214.0	229.0	243.8	258.7	289.5
50°	168.9	169.6	170.4	171.1	171.8	177.4	187.9	198.4	209.0	219.5	251.2
52.5°	154.2	154.8	155.3	155.9	156.4	160.0	166.7	173.5	180.2	186.9	217.1
55°	141.2	141.2	141.2	141.2	141.2	143.4	147.7	152.0	156.4	160.7	187.8
57.5°	127.3	127.1	127.0	126.7	126.6	127.9	130.8	133.7	136.6	139.5	162.2
60°	112.6	112.4	112.3	112.0	111.9	112.9	115.3	117.7	120.0	122.4	140.2
62.5°	96.3	96.4	96.6	96.9	97.0	98.1	100.1	102.1	104.1	106.1	119.7
65°	80.8	81.4	81.8	82.4	83.0	84.0	85.7	87.3	88.9	90.6	100.7
67.5°	66.9	67.5	68.0	68.5	69.1	70.1	71.6	72.9	74.4	75.9	83.5
70°	56.3	56.6	57.0	57.4	57.8	58.6	59.8	61.1	62.3	63.6	69.1
72.5°	47.3	47.5	47.7	47.9	48.1	48.6	49.5	50.4	51.3	52.2	56.2
75°	40.0	40.1	40.3	40.6	40.7	41.0	41.6	42.2	42.7	43.2	45.8
77.5°	34.3	34.4	34.6	34.8	35.0	35.2	35.3	35.6	35.7	35.9	37.2
80°	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.7
82.5°	25.3	25.3	25.3	25.3	25.3	25.2	25.1	24.8	24.6	24.5	24.2
85°	22.0	22.0	22.0	22.0	22.0	21.8	21.2	20.6	20.2	19.6	18.8
87.5°	18.8	18.8	18.8	18.8	18.8	18.5	18.0	17.4	16.9	16.3	15.3
90°	16.3	16.2	16.0	15.7	15.6	15.3	14.7	14.1	13.6	13.1	11.8
92.5°	13.9	13.7	13.5	13.3	13.1	12.7	12.0	11.3	10.5	9.8	8.5
95°	11.4	11.3	11.1	10.9	10.7	10.3	9.5	8.8	8.1	7.3	6.0
97.5°	9.0	8.8	8.6	8.4	8.2	7.8	7.1	6.4	5.6	4.9	4.0
100°	7.3	7.2	7.0	6.8	6.6	6.2	5.5	4.7	4.0	3.3	2.5
102.5°	5.7	5.5	5.4	5.1	5.0	4.6	3.8	3.1	2.4	1.6	1.3
105°	4.1	3.9	3.8	3.5	3.3	3.0	2.4	1.9	1.4	0.8	0.7
107.5°	2.4	2.3	2.1	1.9	1.7	1.5	1.1	0.7	0.3	0.0	0.0
110°	1.6	1.5	1.3	1.1	0.9	0.7	0.6	0.3	0.2	0.0	0.0



TEST NUMBER: P273441

CATALOG NUMBER: 0.05-09W-827-60-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.8	0.7	0.5	0.2	0.1	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: P273441

CATALOG NUMBER: 0.05-09W-827-60-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	647.1	647.1	647.1	647.1	647.1	647.1	647.1	647.1
2.5°	647.1	647.1	647.1	647.1	647.1	647.1	647.1	647.1
5°	645.4	645.4	645.4	645.4	645.4	645.4	645.4	645.4
7.5°	642.2	642.2	642.2	642.3	642.4	642.7	642.8	643.0
10°	637.8	637.5	637.4	637.3	637.3	637.3	637.3	637.3
12.5°	633.0	632.4	631.8	631.7	631.8	632.1	632.2	632.4
15°	627.4	626.1	624.9	624.5	625.0	625.6	626.1	626.7
17.5°	622.4	620.1	617.9	617.0	617.5	617.8	618.2	618.5
20°	615.6	612.6	609.5	608.0	608.2	608.4	608.6	608.7
22.5°	608.0	604.4	600.7	598.8	598.4	598.0	597.6	597.3
25°	597.1	593.0	588.8	586.4	585.6	584.9	584.2	583.4
27.5°	583.7	579.4	575.0	572.1	570.6	569.2	567.8	566.3
30°	566.5	562.5	558.5	555.6	553.8	551.9	550.1	548.3
32.5°	543.5	541.6	539.5	537.7	535.9	534.0	532.2	530.4
35°	515.6	517.6	519.6	519.6	517.6	515.6	513.6	511.6
37.5°	482.8	490.4	498.0	500.9	498.8	496.9	494.8	492.9
40°	444.8	459.2	473.4	479.7	477.9	476.0	474.3	472.5
42.5°	402.8	423.7	444.8	454.7	453.4	452.1	450.9	449.6
45°	360.8	387.8	414.8	428.1	427.3	426.6	425.9	425.1
47.5°	320.4	351.1	382.0	397.5	398.0	398.3	398.7	399.0
50°	283.0	314.7	346.5	363.3	365.3	367.3	369.3	371.3
52.5°	247.4	277.7	308.0	325.1	329.1	333.1	337.1	341.1
55°	214.8	241.8	268.8	285.4	291.3	297.3	303.3	309.3
57.5°	184.9	207.5	230.2	245.3	252.7	260.1	267.6	275.0
60°	158.0	175.7	193.5	206.9	216.0	225.0	234.1	243.2
62.5°	133.3	146.9	160.5	172.0	181.4	190.9	200.2	209.7
65°	110.9	121.0	131.2	140.8	149.9	159.0	168.0	177.1
67.5°	91.1	98.7	106.3	114.2	122.2	130.1	138.1	146.1
70°	74.5	80.0	85.4	91.4	97.9	104.4	111.0	117.5
72.5°	60.2	64.2	68.2	72.5	77.3	81.9	86.7	91.4
75°	48.3	50.8	53.4	56.3	59.6	62.8	66.1	69.4
77.5°	38.4	39.7	41.0	42.5	44.3	46.2	48.0	49.8
80°	30.1	30.4	30.8	31.3	31.8	32.4	32.9	33.5
82.5°	23.7	23.4	23.0	22.6	22.0	21.5	21.0	20.4
85°	18.1	17.4	16.6	15.6	14.1	12.7	11.3	9.8
87.5°	14.1	13.1	12.0	10.5	8.7	6.9	5.1	3.3
90°	10.5	9.2	8.0	6.5	4.9	3.3	1.6	0.0
92.5°	7.3	6.0	4.7	3.6	2.7	1.8	0.9	0.0
95°	4.8	3.5	2.3	1.5	1.1	0.7	0.3	0.0
97.5°	3.1	2.2	1.3	0.7	0.6	0.3	0.2	0.0
100°	1.8	1.1	0.3	0.0	0.0	0.0	0.0	0.0
102.5°	0.9	0.6	0.2	0.0	0.0	0.0	0.0	0.0
105°	0.5	0.2	0.1	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



TEST NUMBER: P273441

CATALOG NUMBER: 0.05-09W-827-60-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
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)