

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: P273413

Luminaire Tested: **0.05-03W-840-90SYM-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273413
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1708-246-4)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 0.05-03W-840-90SYM-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 90 DEGREE SYMMETRIC OPTIC.
STANDARD OUTPUT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 879.2 lumens
Efficiency: N/A
Efficacy: 54.9 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.29 / 1.43
Luminous Opening: Rectangular (W 2.92' x L: 0.17' x H: 0')
CIE Type: Direct

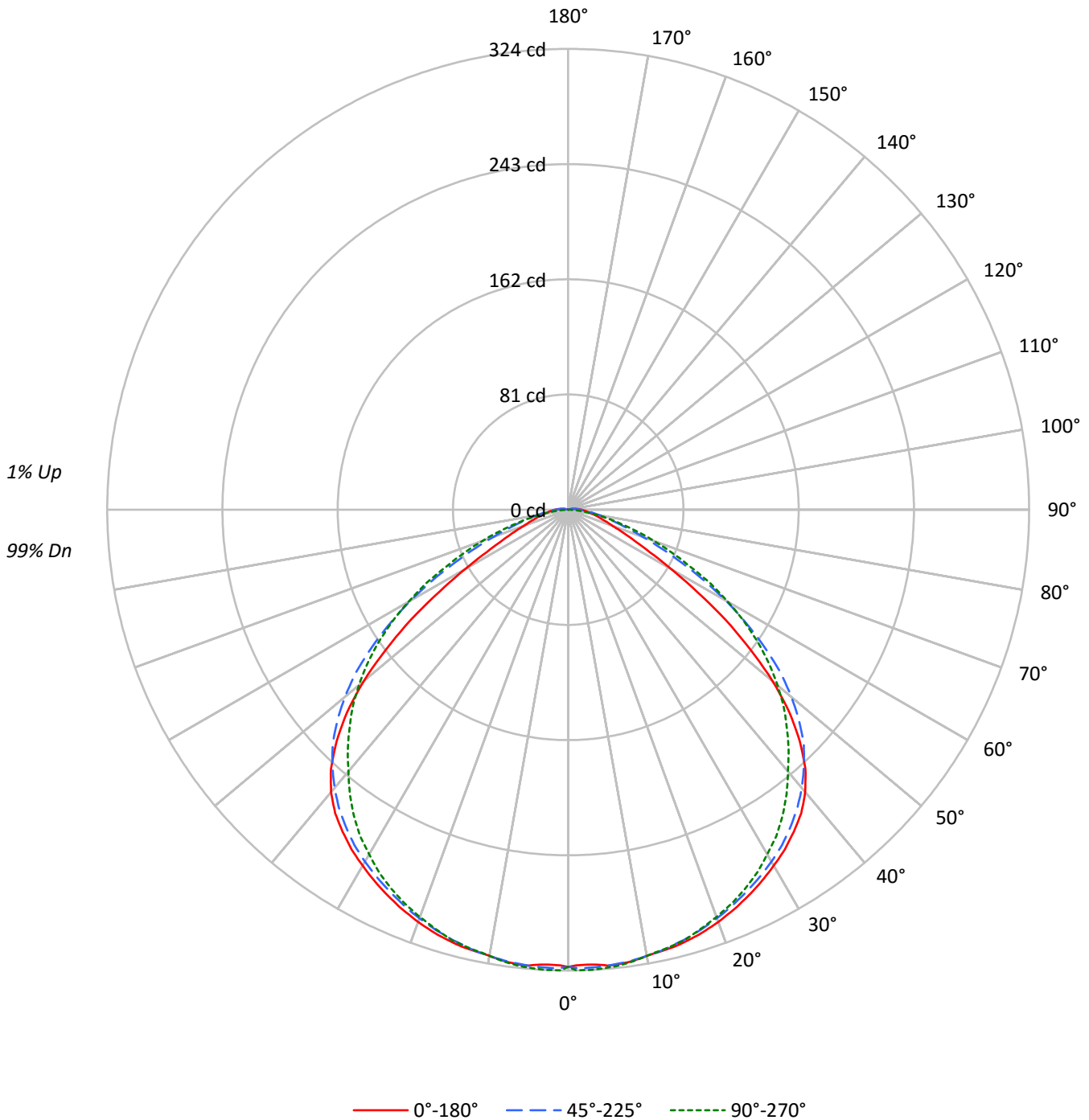
Input Watts (W): 16
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	86	81	98	90	85	80	87	82	78	84	79	76	80	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	63	61
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53
5	78	65	56	50	75	64	56	50	62	55	49	60	53	49	58	52	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	42	40
7	66	53	45	39	65	52	44	39	51	44	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	34	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	30	29
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7119	7119	7119
5°	7151	7151	7182
10°	7164	7164	7164
15°	7219	7182	7191
20°	7267	7203	7180
25°	7320	7242	7185
30°	7389	7307	7154
35°	7471	7361	7101
40°	7492	7382	6946
45°	7206	7334	6808
50°	6466	7055	6617
55°	5212	6497	6285
60°	3693	5664	5744
65°	2672	4585	4957
70°	2149	3619	4143
75°	2028	2986	3277
80°	2232	2831	2499
85°	3252	3582	1651



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.6	3.5
10°-20°	88.5	10.1
20°-30°	136.7	15.5
30°-40°	169.1	19.2
40°-50°	175.3	19.9
50°-60°	140.9	16.0
60°-70°	81.2	9.2
70°-80°	37.1	4.2
80°-90°	14.3	1.6
90°-100°	4.5	0.5
100°-110°	1.0	0.1
110°-120°	0.0	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°	255.7	29.1
0°-40°	424.8	48.3
0°-60°	741.1	84.3
0°-90°	873.6	99.4
90°-120°	5.5	0.6
90°-150°	5.5	0.6
90°-180°	6.0	0.7
0°-180°	879.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	322	322	322	322	322	
5°	322	321	322	320	323	31
15°	315	314	313	312	314	89
25°	300	299	296	293	294	138
35°	276	275	272	265	263	173
45°	230	233	234	223	217	176
55°	135	147	168	169	163	120
65°	51	60	88	102	95	53
75°	24	26	35	44	38	26
85°	13	13	14	13	6	11
90°	9	9	9	6	0	5
95°	6	6	5	2	0	5
105°	2	2	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°	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5
1°	320.4	320.2	319.6	319.8	321.2	322.5	322.9	322.7	322.9	322.3	322.1
2°	320.2	320.0	319.4	320.0	321.2	322.3	322.9	322.7	322.7	322.5	322.3
3°	320.2	320.2	319.4	320.2	321.2	322.1	322.5	322.5	322.5	322.3	322.1
4°	320.8	320.8	319.8	320.4	321.0	321.9	322.3	322.1	322.3	322.1	321.9
5°	321.7	321.0	320.0	320.4	321.2	321.7	322.1	321.7	321.9	321.7	321.7
6°	321.7	321.2	320.2	320.2	321.0	321.0	321.5	321.2	321.7	321.2	321.2
7°	321.2	320.8	319.8	320.0	320.4	320.8	321.2	321.0	321.0	320.8	320.6
8°	320.6	320.0	319.0	319.0	320.0	320.4	320.8	320.6	320.6	320.2	320.2
9°	319.6	319.0	317.8	318.0	319.0	319.6	320.0	320.0	319.8	319.4	319.4
10°	318.6	318.0	317.2	317.4	318.2	318.8	319.2	319.4	319.2	318.6	318.4
11°	317.8	317.4	316.4	316.6	317.8	318.2	318.4	318.6	318.4	317.8	317.8
12°	317.2	316.8	315.5	315.7	316.8	317.4	317.4	317.6	317.6	316.8	316.8
13°	316.6	315.9	314.9	315.1	315.7	316.8	316.8	316.8	316.8	315.7	315.9
14°	315.9	315.1	314.3	314.1	314.7	315.7	315.7	315.5	315.5	314.3	314.9
15°	314.9	314.5	313.7	313.7	314.3	314.7	314.7	314.7	314.3	313.3	314.1
17.5°	312.1	311.5	310.8	310.4	311.3	311.7	311.5	311.5	310.8	309.8	310.6
20°	308.4	307.8	307.2	306.8	307.2	307.4	307.4	307.2	306.6	305.7	306.2
22.5°	304.3	303.7	303.1	302.5	302.9	303.5	302.9	302.9	302.3	301.3	301.5
25°	299.6	299.2	298.6	298.0	298.6	298.8	298.2	298.2	297.6	296.4	296.4
27.5°	294.5	294.5	293.7	293.1	293.9	293.9	293.1	293.5	292.3	291.3	291.5
30°	289.0	289.0	288.2	287.6	288.0	288.2	287.4	287.4	286.6	285.8	285.4
32.5°	283.3	283.3	282.5	281.5	281.7	282.1	281.1	280.7	279.8	279.6	279.4
35°	276.4	276.4	275.6	274.5	274.7	274.7	273.9	273.3	272.7	272.3	271.7
37.5°	269.0	268.8	268.0	267.0	267.0	267.4	266.4	265.6	264.8	264.5	264.1
40°	259.2	259.2	258.4	257.8	257.8	258.0	257.4	256.8	256.0	255.4	254.8
42.5°	246.8	247.0	246.0	245.8	246.6	247.2	247.4	247.0	246.2	245.2	245.2
45°	230.1	230.9	230.3	230.5	231.9	233.3	234.0	234.6	234.6	234.2	233.3
47.5°	210.9	210.5	210.7	211.9	213.6	216.4	218.2	219.9	220.9	220.3	220.3
50°	187.7	187.9	188.1	190.3	192.3	196.4	199.7	201.9	203.8	204.8	204.6
52.5°	161.3	162.8	163.4	166.2	168.9	173.6	178.3	181.9	185.4	187.9	188.3
55°	135.0	134.8	137.1	140.3	144.4	149.7	155.4	159.9	164.8	168.3	170.7
57.5°	107.3	108.5	110.3	114.0	118.7	125.8	131.8	137.5	143.0	148.1	151.8
60°	83.4	84.0	86.1	89.1	93.6	100.1	108.3	115.0	121.0	127.9	132.2
62.5°	64.5	65.1	67.1	69.6	73.8	78.7	85.5	92.2	99.5	107.3	112.4
65°	51.0	51.0	52.2	54.3	57.3	61.8	67.1	73.2	80.2	87.5	93.2
67.5°	40.8	41.0	42.0	43.0	45.3	48.7	52.8	57.5	63.6	70.4	76.1
70°	33.2	33.7	34.3	34.9	36.3	38.8	41.6	45.3	50.0	55.9	61.4
72.5°	27.9	27.9	28.4	28.8	29.8	31.4	33.7	36.1	40.0	44.3	48.7
75°	23.7	23.9	23.9	24.3	25.1	26.1	27.5	29.2	31.6	34.9	38.5
77.5°	20.4	20.2	20.6	20.6	21.2	21.8	22.8	23.9	25.9	27.7	30.2
80°	17.5	17.3	17.5	17.5	17.9	18.4	18.8	19.6	21.0	22.2	23.7
82.5°	14.9	14.9	14.9	15.1	15.1	15.3	15.9	16.3	16.9	17.7	18.6
85°	12.8	12.8	12.8	12.8	13.1	13.1	13.1	13.5	13.7	14.1	14.5
87.5°	11.0	11.0	11.0	10.8	10.6	11.0	11.0	11.0	11.2	11.2	11.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
90°	9.2	9.4	9.0	9.0	9.0	9.0	9.0	8.8	8.8	8.8	8.4
92.5°	7.8	7.8	7.5	7.5	7.5	7.3	7.1	7.1	6.7	6.7	6.3
95°	6.3	6.3	6.3	6.1	5.9	5.9	5.7	5.5	5.1	4.7	4.3
97.5°	5.1	5.1	4.9	4.7	4.7	4.7	4.3	4.1	3.9	3.5	2.9
100°	3.9	3.9	3.9	3.9	3.7	3.5	3.3	3.1	2.7	2.2	1.8
102.5°	3.1	3.1	3.1	2.9	2.7	2.4	2.2	2.0	1.6	1.2	0.8
105°	2.2	2.2	2.2	2.0	1.8	1.6	1.4	1.2	1.0	0.6	0.2
107.5°	1.4	1.4	1.4	1.2	1.2	1.0	0.8	0.6	0.2	0.2	0.0
110°	0.8	0.8	0.8	0.6	0.6	0.6	0.2	0.2	0.0	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°	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5
1°	320.6	320.0	320.4	320.2	321.2	323.3	323.7	323.9
2°	320.6	320.0	320.6	320.4	321.2	323.1	323.7	323.9
3°	320.4	320.2	320.6	320.4	321.0	322.9	323.7	323.9
4°	320.4	320.0	320.4	320.2	320.6	322.5	323.3	323.5
5°	320.2	319.8	320.2	320.0	320.2	322.3	322.9	323.1
6°	319.8	319.2	320.0	319.6	319.8	321.7	322.5	322.7
7°	319.4	318.6	319.4	319.2	319.2	320.8	321.7	321.9
8°	319.0	318.0	318.8	318.6	318.6	320.0	320.6	321.0
9°	318.2	316.8	318.0	317.8	317.8	319.0	319.6	319.8
10°	317.4	315.9	317.0	317.2	316.8	318.0	318.6	318.6
11°	316.6	314.9	316.2	316.2	315.9	317.2	317.8	317.4
12°	315.5	313.9	315.1	315.1	315.1	315.9	316.6	316.6
13°	314.3	313.1	314.1	313.9	314.1	315.1	315.7	315.7
14°	313.3	311.9	312.9	312.9	312.9	314.1	314.5	314.5
15°	312.3	310.8	311.5	311.7	311.9	313.1	313.5	313.7
17.5°	308.4	307.6	307.4	308.0	308.2	308.8	309.0	309.2
20°	304.5	303.1	303.3	303.3	303.5	304.7	304.5	304.7
22.5°	300.2	298.2	298.2	298.8	298.6	300.0	299.4	299.8
25°	295.1	293.1	292.5	293.5	293.3	294.3	294.1	294.1
27.5°	289.6	288.0	286.6	287.8	287.2	287.8	287.4	287.6
30°	284.1	281.3	280.5	280.9	280.3	280.9	280.3	279.8
32.5°	277.8	274.5	272.9	273.7	272.7	273.3	272.3	272.1
35°	270.5	267.4	264.8	264.5	263.9	263.5	262.9	262.7
37.5°	262.7	259.4	256.6	255.2	253.7	253.3	252.3	252.1
40°	253.5	250.3	246.4	245.0	242.9	242.3	240.7	240.3
42.5°	242.9	240.1	236.2	234.0	232.3	230.9	229.3	229.3
45°	231.5	228.2	224.4	222.5	220.9	219.5	217.6	217.4
47.5°	218.7	215.6	212.3	209.9	208.7	207.2	205.8	205.6
50°	204.2	201.9	199.5	197.0	195.4	193.6	191.9	192.1
52.5°	188.9	187.2	185.4	183.2	181.3	179.3	177.9	177.9
55°	172.1	171.7	170.3	168.3	166.2	164.2	162.8	162.8
57.5°	154.4	155.0	154.6	152.4	150.7	148.1	147.1	146.9
60°	136.0	137.9	137.9	136.0	134.4	131.8	130.3	129.7
62.5°	116.9	119.3	120.1	118.9	117.5	115.0	113.2	113.0
65°	97.9	101.0	102.6	101.6	99.9	97.1	95.5	94.6
67.5°	81.2	84.2	84.6	85.1	83.4	81.4	79.5	78.7
70°	66.1	68.7	70.0	69.8	68.5	66.5	64.7	64.0
72.5°	52.8	55.5	56.7	55.9	54.9	53.2	51.6	50.6
75°	41.8	43.6	44.7	43.9	42.6	40.8	40.0	38.3
77.5°	32.4	33.9	34.5	33.7	32.2	30.8	29.4	28.1
80°	25.3	26.1	26.3	24.9	23.5	22.0	20.4	19.6
82.5°	19.4	19.8	19.4	17.7	16.1	14.5	13.1	12.2
85°	14.9	14.7	13.9	12.2	10.4	8.8	7.1	6.5
87.5°	11.0	10.6	9.6	8.0	6.1	4.5	3.1	2.4



TEST NUMBER: P273413

CATALOG NUMBER: 0.05-03W-840-90SYM-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
90°	8.0	7.5	6.3	4.9	3.3	1.8	0.8	0.0
92.5°	5.7	4.9	3.9	2.7	1.4	0.4	0.0	0.0
95°	3.9	3.1	2.2	1.2	0.4	0.0	0.0	0.0
97.5°	2.2	1.6	1.0	0.2	0.0	0.0	0.0	0.0
100°	1.2	0.6	0.2	0.0	0.0	0.0	0.0	0.0
102.5°	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.2	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)