

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: P273457

Luminaire Tested: **0.05-09W-840-10-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P273457
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-840-10-STD-UNV-AN-3F0
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 10 DEGREE OPTIC.
VERY HIGH OUTPUT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1719.1 lumens
Efficiency: N/A
Efficacy: 58.7 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

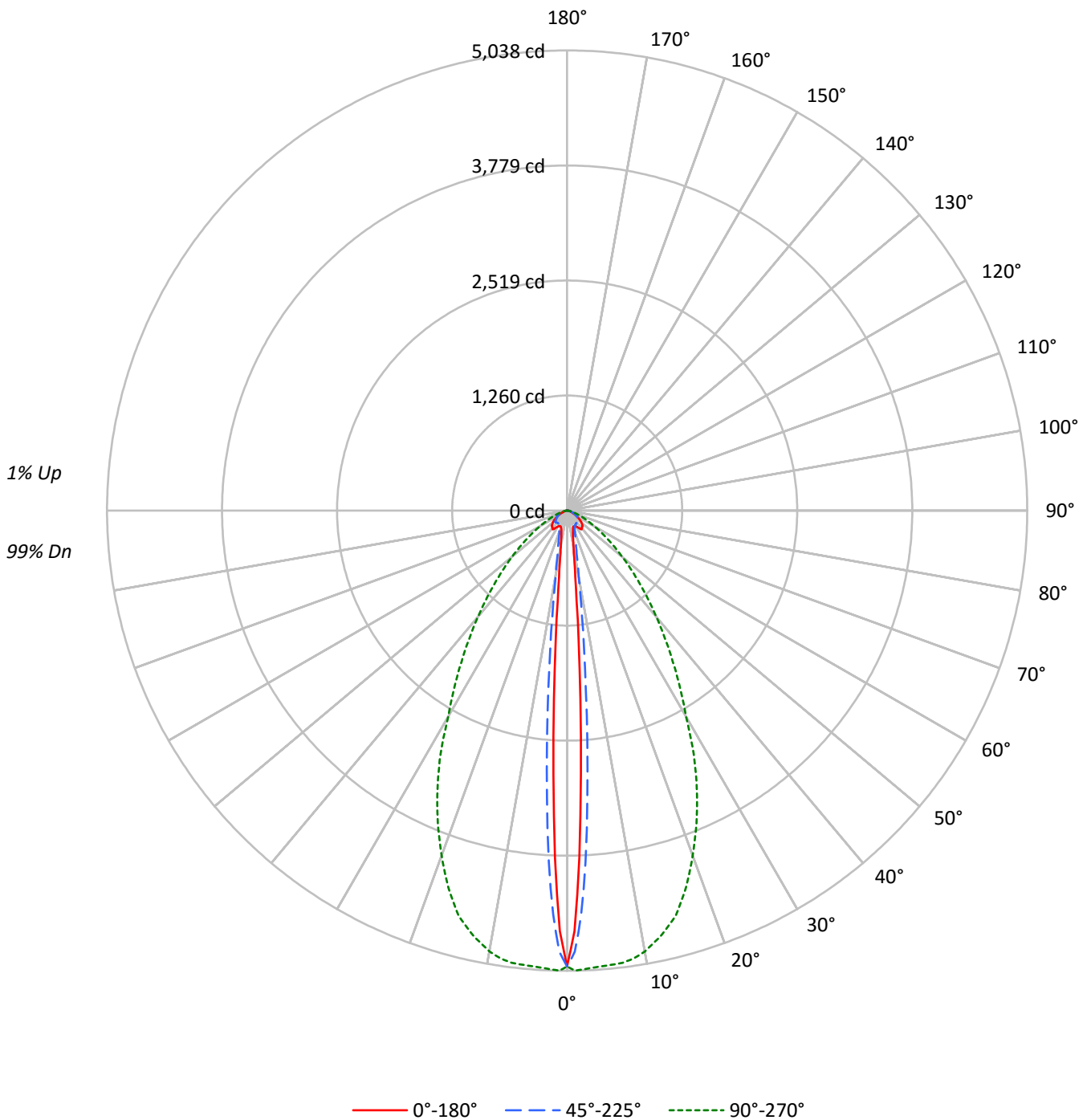
Input Watts (W): 29.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	88407	88407	88407
5°	25281	44957	88910
10°	7166	13019	88141
15°	4458	6620	84236
20°	3659	4669	75784
25°	3667	3876	65675
30°	4132	3706	53207
35°	5238	3717	43577
40°	5793	3975	35121
45°	5975	4539	27858
50°	5641	4445	21628
55°	5080	4426	16529
60°	4046	4209	12280
65°	3177	3915	8794
70°	2631	3517	6174
75°	2341	3135	4237
80°	2448	2969	3020
85°	3476	3760	1870



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.0	13.5
10°-20°	293.5	17.1
20°-30°	284.8	16.6
30°-40°	271.4	15.8
40°-50°	250.2	14.6
50°-60°	192.9	11.2
60°-70°	113.8	6.6
70°-80°	52.3	3.0
80°-90°	19.4	1.1
90°-100°	6.7	0.4
100°-110°	2.1	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°	810.3	47.1
0°-40°	1081.7	62.9
0°-60°	1524.7	88.7
0°-90°	1710.2	99.5
90°-120°	8.9	0.5
90°-150°	8.9	0.5
90°-180°	9.0	0.5
0°-180°	1719.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4991	4991	4991	4991	4991	
5°	1422	1705	2528	4000	5000	113
15°	243	262	361	1167	4593	71
25°	188	186	198	467	3360	89
35°	242	209	172	321	2015	149
45°	238	217	181	300	1112	179
55°	164	166	143	254	535	145
65°	76	83	93	148	210	77
75°	34	36	46	60	62	38
85°	17	17	18	18	9	15
90°	12	12	12	9	0	7
95°	9	8	8	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



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4990.7	4990.7	4990.7	4990.7	4990.7	4990.7	4990.7	4990.7	4990.7	4990.7	4990.7
1°	4605.7	4644.5	4583.5	4700.0	4655.2	4690.8	4751.8	4792.0	4826.6	4830.3	4868.2
2°	3800.6	3905.0	3819.1	3987.8	3972.5	4046.5	4156.0	4246.1	4335.3	4423.1	4496.6
3°	2891.5	3008.4	2986.2	3103.1	3127.6	3233.9	3384.6	3524.2	3673.0	3847.7	3977.1
4°	2065.5	2153.8	2181.5	2242.5	2333.6	2420.5	2581.8	2754.6	2948.8	3159.5	3381.8
5°	1421.7	1494.7	1515.5	1567.3	1657.4	1751.7	1900.1	2077.1	2286.4	2528.2	2782.8
6°	988.6	1041.3	1059.3	1099.5	1166.6	1247.4	1370.4	1523.4	1717.5	1964.8	2227.8
7°	730.3	764.9	778.3	807.9	855.5	915.6	1009.0	1130.5	1290.0	1511.4	1794.2
8°	577.7	589.3	599.0	621.2	655.8	698.4	767.2	858.7	982.6	1166.1	1406.4
9°	466.8	477.4	484.8	501.5	526.9	558.3	610.1	679.9	774.6	900.8	1088.0
10°	398.4	404.4	410.0	422.4	440.9	464.5	502.9	554.6	628.6	723.8	893.4
12.5°	297.6	296.7	301.3	309.2	321.2	334.6	355.0	383.6	422.9	475.1	570.3
15°	243.1	243.6	246.8	251.9	258.4	266.2	278.7	297.6	322.6	361.0	414.1
17.5°	209.8	210.3	212.1	215.4	220.0	226.9	236.2	247.7	265.3	291.6	328.2
20°	194.1	193.7	194.6	196.4	199.2	202.9	208.0	214.5	227.4	247.7	275.9
22.5°	188.1	188.1	188.1	187.6	188.1	189.0	192.3	197.4	204.3	216.3	236.6
25°	187.6	188.1	187.6	186.3	186.3	185.8	185.3	186.7	190.0	198.3	211.2
27.5°	191.8	191.3	190.0	187.6	185.8	184.4	183.5	183.0	183.5	186.7	195.5
30°	202.0	201.1	198.3	194.1	190.0	185.8	182.1	180.3	179.8	181.2	184.9
32.5°	217.2	215.8	212.6	205.7	200.1	192.7	186.3	179.3	175.6	175.6	177.9
35°	242.2	239.4	234.3	226.0	214.5	203.8	194.1	184.0	176.1	171.9	172.4
37.5°	260.2	259.3	257.0	249.1	238.0	223.2	206.1	190.4	179.8	170.5	166.9
40°	250.5	249.1	245.9	241.7	238.5	235.3	221.9	202.0	185.8	171.9	164.1
42.5°	242.6	241.7	238.5	231.6	226.9	221.9	217.2	211.2	193.7	176.1	164.1
45°	238.5	237.6	234.8	228.8	221.4	213.1	204.7	198.7	193.7	181.2	165.5
47.5°	220.0	219.5	218.6	217.2	214.5	209.8	198.3	187.6	178.9	176.6	167.8
50°	204.7	204.7	204.3	201.5	198.7	195.0	191.8	181.6	168.7	161.3	160.4
52.5°	187.6	187.6	187.6	186.7	184.9	180.7	176.6	171.5	162.7	150.2	145.1
55°	164.5	165.0	165.9	166.4	166.9	164.5	162.2	156.2	151.1	143.3	133.1
57.5°	139.1	139.6	141.4	142.8	144.7	145.6	146.1	143.3	137.7	131.7	124.8
60°	114.2	114.6	116.5	118.8	122.0	124.8	127.1	128.0	124.3	118.8	114.2
62.5°	92.9	92.9	95.2	97.1	100.3	103.5	107.7	110.0	109.5	106.8	102.1
65°	75.8	76.3	77.6	79.0	81.3	84.6	89.2	92.9	94.7	93.4	90.1
67.5°	61.9	62.4	63.3	64.7	66.1	68.9	72.6	77.2	80.0	80.4	79.0
70°	50.8	51.3	51.8	52.7	54.1	55.9	58.7	62.9	66.1	67.9	67.9
72.5°	42.1	42.1	42.5	43.4	44.4	45.8	48.1	50.4	53.6	56.4	57.3
75°	34.2	34.7	35.1	35.1	36.1	36.5	38.4	40.2	42.5	45.8	47.1
77.5°	28.7	28.7	28.7	28.7	29.6	30.0	31.0	32.4	34.2	36.5	38.4
80°	24.0	24.0	24.0	24.0	24.0	24.5	25.4	25.9	26.8	29.1	31.0
82.5°	20.3	20.3	20.3	20.3	20.3	20.8	20.8	21.3	22.2	23.1	24.5
85°	17.1	17.1	17.1	17.1	17.1	17.1	17.6	17.6	18.0	18.5	18.9
87.5°	14.3	14.3	14.3	14.3	14.3	14.3	14.8	14.8	14.8	14.8	15.3
90°	12.5	12.5	12.5	12.5	12.5	12.0	12.0	12.0	12.0	12.0	12.0
92.5°	10.6	10.6	10.6	10.6	10.6	10.2	10.2	9.7	9.7	9.7	9.7
95°	8.8	8.8	8.8	8.3	8.3	8.3	8.3	7.9	7.9	7.9	6.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
97.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.5	6.5	6.0	6.0	5.1
100°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.1	4.6	4.2	4.2
102.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	3.7	3.7	3.2	2.3
105°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	2.8	2.8	1.8	1.4
107.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.8	1.4	0.9	0.0
110°	2.8	2.8	2.8	2.3	2.8	2.3	1.8	1.4	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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	4990.7	4990.7	4990.7	4990.7	4990.7	4990.7	4990.7	4990.7
1°	4853.4	4885.8	4907.5	4938.9	4945.0	4986.1	5020.3	5037.9
2°	4563.7	4667.6	4740.7	4827.6	4871.9	4946.3	5001.3	5025.8
3°	4148.6	4342.7	4490.6	4658.9	4766.6	4893.2	4977.8	5013.8
4°	3647.6	3936.9	4177.7	4440.2	4629.3	4827.1	4956.5	5005.5
5°	3120.7	3484.9	3818.1	4181.0	4465.2	4748.5	4933.4	5000.0
6°	2599.3	3020.9	3428.5	3886.1	4292.8	4654.2	4908.0	4994.4
7°	2133.5	2574.9	3032.9	3570.9	4059.4	4539.6	4871.0	4987.0
8°	1724.4	2160.3	2647.4	3244.6	3826.9	4406.5	4815.5	4968.5
9°	1391.7	1798.4	2293.4	2926.6	3580.1	4258.1	4754.5	4938.9
10°	1122.2	1485.5	1968.0	2622.5	3336.5	4102.4	4679.7	4900.1
12.5°	705.8	943.8	1329.3	1946.7	2759.7	3687.3	4461.0	4763.3
15°	496.9	646.6	919.8	1414.3	2218.5	3265.8	4209.2	4593.2
17.5°	384.5	484.4	666.0	1051.9	1791.4	2875.7	3921.2	4326.1
20°	315.7	388.2	522.7	820.8	1461.9	2526.3	3598.1	4020.1
22.5°	268.5	324.0	430.3	670.2	1219.3	2216.7	3279.2	3701.2
25°	233.4	278.7	364.7	569.9	1057.5	1953.2	2937.7	3360.1
27.5°	211.7	245.0	319.8	500.6	948.9	1711.5	2596.1	3001.5
30°	196.4	223.7	283.3	450.6	866.6	1478.1	2215.3	2601.2
32.5°	185.3	205.2	258.8	418.7	817.1	1295.5	1922.7	2299.9
35°	177.5	193.2	241.3	399.8	781.1	1139.8	1678.7	2015.1
37.5°	171.0	184.4	228.3	391.0	745.0	994.6	1461.4	1755.4
40°	164.5	177.0	220.5	387.3	696.1	856.9	1274.7	1518.8
42.5°	160.4	170.5	215.8	390.1	639.7	743.2	1103.7	1305.2
45°	158.5	164.5	211.2	389.6	575.4	639.7	948.4	1112.0
47.5°	157.6	159.5	207.5	383.6	505.2	555.6	821.3	940.1
50°	156.2	156.7	206.6	365.1	436.8	479.3	701.1	784.8
52.5°	147.9	153.4	205.7	341.6	369.8	415.5	599.0	652.6
55°	132.6	147.4	204.3	304.6	312.0	358.7	503.8	535.2
57.5°	120.2	134.5	199.2	264.8	263.9	308.7	417.8	433.5
60°	110.9	122.0	185.3	225.5	220.9	263.0	338.3	346.6
62.5°	101.2	111.8	165.0	188.6	185.8	218.2	267.6	268.1
65°	89.7	102.1	141.9	153.9	156.2	181.6	210.8	209.8
67.5°	79.0	90.1	118.8	124.3	130.8	147.9	163.6	159.9
70°	68.4	76.7	96.1	100.3	107.2	118.8	123.4	119.2
72.5°	58.2	64.2	75.8	80.0	85.5	91.5	91.5	86.9
75°	49.0	52.2	58.2	61.9	66.6	68.4	65.6	61.9
77.5°	40.2	42.1	44.4	46.7	49.5	48.1	45.8	43.4
80°	32.8	33.7	33.7	34.7	34.7	33.3	30.0	29.6
82.5°	26.3	27.3	25.9	24.5	23.1	20.8	18.9	17.6
85°	20.8	20.8	19.4	17.1	14.3	12.0	10.2	9.2
87.5°	15.7	15.7	13.9	11.6	8.3	6.0	4.2	3.7
90°	12.0	12.0	9.7	7.4	4.6	2.3	0.9	0.0
92.5°	9.2	8.3	6.5	4.2	1.8	0.9	0.0	0.0
95°	6.9	6.0	3.7	1.8	0.9	0.0	0.0	0.0



TEST NUMBER: P273457

CATALOG NUMBER: 0.05-09W-840-10-STD-UNV-AN-3F0

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
97.5°	4.6	3.7	1.8	0.9	0.0	0.0	0.0	0.0
100°	2.8	1.8	0.9	0.0	0.0	0.0	0.0	0.0
102.5°	1.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.5	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)