

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: P397354

Luminaire Tested: **8VRVT2-LD5-9-DR-W-UNV-LR63-CD1-WL-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P397354
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 8VRVT2-LD5-9-DR-W-UNV-LR63-CD1-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1386.4 lumens
Efficiency: N/A
Efficacy: 8.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.6 / 1.58
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 8.33' x H: 0.17')
CIE Type: Semi-Direct

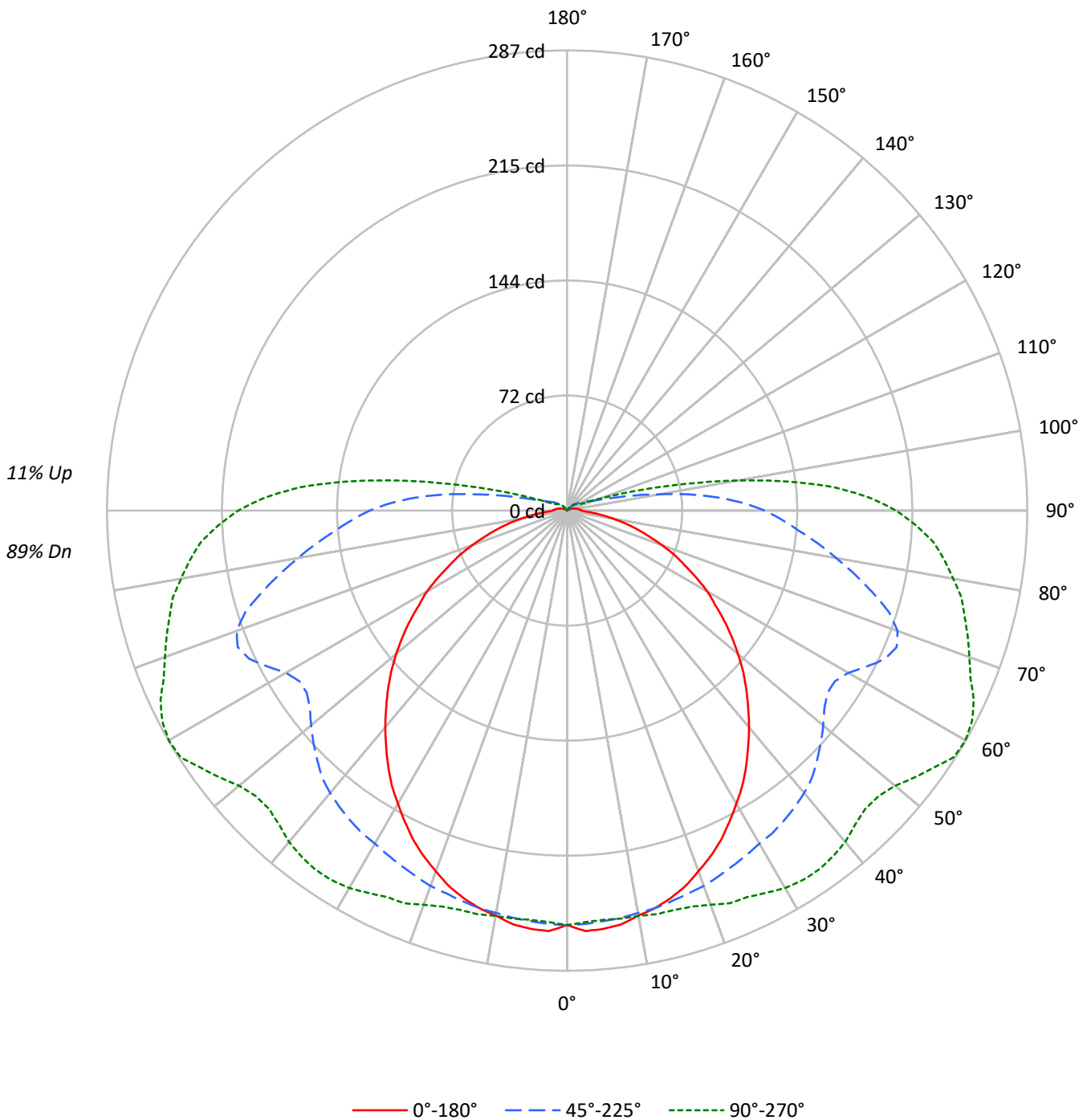
Input Watts (W): 170.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	101	94	88	82	97	91	85	80	84	80	75	78	75	71	73	70	67	64
2	90	79	70	63	86	76	68	61	71	64	58	66	60	55	61	56	52	49
3	81	68	58	50	77	65	56	49	61	53	47	56	50	44	52	47	42	39
4	73	59	49	41	70	57	48	40	53	45	38	49	42	37	46	40	35	32
5	67	52	42	35	64	51	41	34	47	39	32	44	37	31	41	35	30	27
6	62	47	37	30	59	45	36	29	42	34	28	39	32	27	37	30	26	23
7	57	42	32	26	54	41	32	25	38	30	24	36	29	23	33	27	22	20
8	53	38	29	23	51	37	28	22	35	27	21	33	26	21	31	24	20	18
9	49	35	26	20	47	34	25	20	32	24	19	30	23	18	28	22	18	16
10	46	32	24	18	44	31	23	18	29	22	17	28	21	17	26	20	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	668	668	668
5°	678	652	646
10°	670	640	636
15°	665	632	633
20°	653	628	641
25°	640	624	656
30°	623	625	680
35°	606	633	699
40°	585	641	711
45°	566	644	721
50°	546	646	768
55°	523	658	852
60°	504	730	939
65°	475	871	997
70°	450	982	1053
75°	424	1018	1142
80°	387	1049	1258
85°	384	1116	1415



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.6	1.8
10°-20°	71.7	5.2
20°-30°	113.7	8.2
30°-40°	147.3	10.6
40°-50°	166.7	12.0
50°-60°	181.1	13.1
60°-70°	193.6	14.0
70°-80°	184.3	13.3
80°-90°	151.4	10.9
90°-100°	99.6	7.2
100°-110°	34.6	2.5
110°-120°	10.2	0.7
120°-130°	5.1	0.4
130°-140°	2.2	0.2
140°-150°	0.4	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	210.1	15.2
0°-40°	357.3	25.8
0°-60°	705.1	50.9
0°-90°	1234.4	89.0
90°-120°	144.4	10.4
90°-150°	152.0	11.0
90°-180°	152.0	11.0
0°-180°	1386.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	258	258	258	258	258	
5°	262	260	257	257	256	25
15°	250	250	252	258	258	70
25°	227	231	244	261	266	104
35°	195	207	236	264	274	122
45°	158	178	220	252	263	122
55°	120	146	198	260	279	107
65°	81	116	219	271	280	81
75°	46	110	197	240	257	48
85°	16	80	145	207	230	16
90°	9	59	123	185	205	5
95°	8	42	94	146	167	6
105°	5	15	32	44	52	5
115°	3	7	13	12	10	3
125°	1	2	8	8	7	1
135°	0	0	3	5	5	0
145°	0	0	0	1	1	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°	22.5°	25°	30°	35°	40°	45°
0°	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5
2.5°	262.5	261.8	261.1	260.9	260.9	260.9	260.9	260.4	259.7	259.0	258.1
5°	261.8	261.3	260.6	260.2	260.2	260.2	260.2	259.7	259.0	258.1	257.1
7.5°	260.2	259.5	258.5	258.3	258.1	258.1	258.3	258.1	257.4	256.9	256.2
10°	256.4	256.2	255.5	255.3	255.7	256.0	256.0	256.0	255.7	255.3	254.8
12.5°	253.9	252.9	252.5	252.7	252.9	252.9	253.4	253.6	253.6	253.9	253.9
15°	250.1	249.2	249.0	249.7	249.9	250.4	250.4	250.8	251.1	251.8	252.2
17.5°	245.5	245.2	244.3	245.0	246.1	246.8	246.8	247.8	248.5	249.2	250.4
20°	239.4	239.1	238.7	239.6	241.0	241.7	242.9	244.3	245.2	247.8	249.2
22.5°	233.5	233.3	232.6	234.0	235.4	237.0	238.4	240.3	242.4	244.8	246.8
25°	226.8	226.5	226.3	228.6	230.3	231.4	233.1	235.9	238.4	241.7	244.5
27.5°	219.0	219.3	219.7	221.8	224.4	226.0	227.7	231.7	234.5	238.0	242.2
30°	211.1	211.1	212.5	214.6	218.3	220.0	222.1	226.8	229.6	234.9	239.8
32.5°	203.4	203.4	204.1	206.6	211.6	213.7	216.2	220.7	225.3	231.9	238.4
35°	194.7	194.7	196.1	199.6	204.5	206.9	209.7	215.3	221.1	228.6	235.9
37.5°	185.4	185.8	188.2	191.9	197.8	200.8	203.1	209.5	216.7	224.9	233.1
40°	176.5	177.0	179.8	184.0	190.3	193.1	196.1	204.1	211.6	220.4	230.0
42.5°	167.1	168.5	171.1	176.0	182.1	185.1	189.3	197.5	205.9	215.5	226.0
45°	158.0	159.2	162.0	167.6	174.4	178.1	182.6	191.2	200.6	210.1	220.4
47.5°	148.9	149.8	153.3	158.7	166.0	170.9	175.6	184.7	194.7	205.5	214.6
50°	139.1	140.3	143.8	149.6	157.8	162.7	167.4	177.4	187.7	198.5	208.5
52.5°	129.3	130.4	135.1	141.7	150.1	154.5	159.9	170.6	180.9	191.9	202.2
55°	119.5	120.8	125.8	131.6	141.0	146.3	151.2	162.7	173.9	185.6	198.2
57.5°	109.4	111.5	116.0	123.2	132.1	137.7	143.1	155.2	167.1	181.4	198.0
60°	101.0	101.7	106.1	113.8	123.7	129.3	135.6	148.0	162.9	181.2	202.4
62.5°	90.9	93.3	97.0	105.0	115.0	122.0	128.3	143.5	162.0	186.3	210.6
65°	81.1	83.5	88.1	96.8	108.5	115.5	123.0	141.9	165.7	194.0	218.8
67.5°	72.5	74.3	79.5	89.5	102.6	110.6	120.6	144.2	172.8	201.3	222.5
70°	62.9	65.2	71.3	82.8	98.9	108.7	121.1	149.4	178.6	203.4	219.3
72.5°	53.5	56.6	64.3	77.8	96.8	108.9	123.4	152.9	179.3	197.8	210.4
75°	45.6	48.2	57.7	73.6	96.3	109.9	124.8	151.5	172.0	185.4	197.1
77.5°	37.2	40.7	52.8	70.8	95.4	108.9	121.6	142.8	159.7	172.5	183.7
80°	29.0	34.1	47.5	67.1	90.9	101.2	111.5	129.5	145.2	158.3	170.4
82.5°	22.2	27.8	42.3	62.0	81.3	90.7	99.8	116.0	130.0	144.7	157.8
85°	15.9	22.2	36.9	54.0	70.6	79.5	86.7	101.9	115.5	130.7	145.2
87.5°	11.0	17.5	30.4	45.6	60.8	67.8	75.0	89.5	103.8	119.2	134.4
90°	8.9	14.3	25.5	39.0	52.6	59.1	66.4	80.2	93.5	108.2	123.2
92.5°	8.4	11.7	21.3	32.7	45.1	51.4	57.3	69.7	82.8	97.0	109.6
95°	7.7	9.3	17.1	26.7	36.9	42.3	47.5	58.4	69.9	82.8	94.2
97.5°	7.0	7.7	13.1	20.6	29.2	33.7	37.9	46.3	56.6	65.7	77.1
100°	6.3	6.5	9.8	15.9	22.2	26.0	29.2	36.7	43.5	50.7	58.2
102.5°	5.6	5.6	7.5	11.9	17.3	19.6	22.4	27.8	33.0	37.6	43.7
105°	5.1	5.1	6.1	8.9	12.9	15.0	17.1	21.3	25.2	28.5	31.8
107.5°	4.4	4.4	4.9	7.0	10.0	11.9	13.3	16.6	19.6	22.0	23.8
110°	3.7	3.7	3.7	5.6	8.2	9.6	11.2	13.8	15.9	17.5	18.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	3.0	3.0	3.0	4.7	6.8	8.0	9.3	11.5	13.3	14.5	15.4
115°	2.6	2.6	2.3	3.5	5.6	6.8	8.0	9.8	11.5	12.6	13.3
117.5°	2.1	2.1	1.9	2.6	4.4	5.6	6.5	8.4	10.0	11.2	11.7
120°	1.6	1.6	1.4	1.6	3.5	4.4	5.6	7.2	8.7	9.8	10.5
122.5°	1.2	1.2	1.2	1.2	2.3	3.3	4.2	5.8	7.5	8.7	9.3
125°	0.9	0.9	0.9	0.7	1.6	2.3	3.3	4.9	6.1	7.2	8.0
127.5°	0.7	0.7	0.7	0.7	0.7	1.4	2.1	3.7	4.9	6.1	6.8
130°	0.7	0.7	0.5	0.5	0.5	0.7	1.4	2.6	3.7	4.7	5.6
132.5°	0.5	0.5	0.5	0.2	0.2	0.2	0.7	1.6	2.8	3.7	4.4
135°	0.5	0.5	0.2	0.2	0.0	0.0	0.0	0.9	1.9	2.6	3.3
137.5°	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.2	0.9	1.6	2.3
140°	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.9	1.4
142.5°	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5
145°	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.2	0.2	0.2	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.5
2.5°	257.8	258.1	258.3	258.3	258.1	258.1	257.6	257.6	257.1	256.9
5°	256.9	257.4	257.6	257.6	257.4	257.4	257.1	256.9	256.4	256.2
7.5°	256.2	256.9	257.4	257.4	257.4	257.4	257.1	257.1	256.9	256.7
10°	255.3	256.0	256.7	257.6	257.8	257.8	257.6	257.4	256.9	256.7
12.5°	254.3	255.3	256.2	257.1	257.4	257.6	258.1	258.1	257.8	257.8
15°	253.4	255.0	256.4	257.6	257.8	258.5	258.8	259.0	258.5	257.8
17.5°	252.5	254.6	255.7	257.6	258.1	258.5	259.0	259.2	259.2	259.0
20°	251.5	254.1	256.2	258.1	258.5	259.2	260.2	260.9	261.6	261.6
22.5°	250.1	253.4	255.7	258.5	260.2	260.9	262.8	263.7	264.1	265.1
25°	248.3	251.8	256.4	259.7	260.9	262.3	265.1	266.5	266.5	266.0
27.5°	247.3	252.7	257.4	260.6	262.3	263.9	266.5	268.6	269.3	268.8
30°	246.1	252.0	257.4	261.6	263.5	265.6	268.1	271.4	271.9	271.9
32.5°	244.8	251.1	257.4	262.0	264.4	266.3	269.3	272.3	273.5	273.3
35°	243.3	250.4	256.4	261.6	264.1	266.5	270.0	272.3	273.3	273.5
37.5°	241.2	248.7	254.8	260.4	263.2	265.3	269.1	270.7	272.1	272.1
40°	238.2	245.9	252.7	258.1	260.2	262.3	265.8	267.7	268.8	269.8
42.5°	234.7	242.2	248.7	253.4	256.2	257.8	261.8	263.7	265.6	265.8
45°	229.3	237.5	243.8	249.7	252.2	253.9	258.3	261.3	263.0	263.0
47.5°	223.7	231.4	238.9	246.1	249.2	252.0	257.1	260.9	262.8	263.5
50°	217.4	227.0	235.9	245.2	249.2	252.7	258.8	263.0	265.3	267.0
52.5°	213.4	225.8	236.8	247.8	252.2	256.9	264.6	269.1	272.3	273.3
55°	213.0	227.9	241.5	254.6	259.7	264.1	272.3	277.2	279.8	279.3
57.5°	216.5	234.7	250.6	262.5	268.1	272.3	279.8	284.3	286.1	286.1
60°	224.2	243.6	259.0	269.5	274.0	277.9	283.3	286.4	287.3	286.8
62.5°	232.1	249.9	262.8	271.4	274.7	276.5	281.0	283.3	284.3	284.7
65°	238.4	252.9	261.8	268.1	270.7	272.6	276.1	278.9	279.3	279.8
67.5°	237.7	247.8	255.7	261.6	263.7	265.6	269.1	271.2	272.8	272.3
70°	231.2	239.1	246.6	252.7	255.0	257.6	261.8	265.1	265.8	267.0
72.5°	219.7	227.9	237.0	243.1	247.3	249.9	255.0	259.2	260.9	262.0
75°	207.8	217.4	226.5	235.6	240.1	244.3	250.4	253.4	257.4	256.7
77.5°	195.2	207.6	218.3	228.6	233.3	237.7	244.0	248.3	250.8	252.0
80°	184.4	197.5	209.5	220.4	224.9	230.0	236.6	241.0	243.8	244.5
82.5°	172.3	186.5	200.1	211.6	216.2	220.7	228.1	232.8	236.3	237.3
85°	160.4	175.6	189.6	202.0	206.9	211.8	219.7	224.9	228.1	229.6
87.5°	150.3	164.6	178.8	190.5	196.4	201.0	209.0	215.1	218.1	218.1
90°	137.9	152.4	166.7	178.4	184.9	188.2	196.1	201.7	205.5	205.2
92.5°	124.8	138.6	150.5	162.2	167.6	171.8	180.2	184.4	187.7	188.4
95°	107.1	119.5	131.8	141.7	145.9	152.4	158.7	164.1	166.2	167.1
97.5°	86.3	98.6	107.3	119.2	122.0	126.5	133.0	137.5	139.6	138.8
100°	66.2	74.3	81.1	88.6	93.0	95.8	101.5	105.9	108.2	108.0
102.5°	47.0	53.5	58.4	64.3	64.8	67.3	70.8	75.3	76.2	77.4
105°	34.8	37.4	41.1	43.2	44.2	47.2	47.9	49.8	50.0	52.4
107.5°	26.0	27.3	28.8	29.9	30.6	30.9	32.7	32.5	33.0	33.4
110°	19.6	20.3	21.3	20.8	21.7	21.0	21.5	21.3	21.5	21.5



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CATALOG NUMBER: 8VRVT2-LD5-9-DR-W-UNV-LR63-CD1-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	15.9	15.9	15.7	15.4	15.4	15.2	15.2	14.5	14.7	14.5
115°	13.6	13.3	12.9	12.4	12.4	11.9	11.7	11.0	10.8	10.5
117.5°	11.9	11.7	11.2	10.8	10.5	10.3	9.8	9.1	8.9	8.9
120°	10.8	10.5	10.3	9.8	9.6	9.3	8.7	8.4	8.0	8.0
122.5°	9.6	9.6	9.3	8.9	8.9	8.7	8.2	7.7	7.5	7.5
125°	8.4	8.7	8.4	8.2	8.2	8.0	7.7	7.2	7.0	7.0
127.5°	7.2	7.5	7.5	7.5	7.5	7.2	7.0	6.8	6.5	6.5
130°	6.1	6.5	6.5	6.5	6.8	6.5	6.5	6.3	6.1	6.1
132.5°	4.9	5.4	5.6	5.8	5.8	5.8	5.6	5.6	5.4	5.4
135°	3.7	4.2	4.7	4.7	4.9	4.9	4.9	4.9	4.7	4.7
137.5°	2.8	3.3	3.5	3.7	3.7	4.0	4.0	4.0	3.7	3.7
140°	1.9	2.3	2.6	2.8	2.8	3.0	3.0	3.0	2.8	2.8
142.5°	0.9	1.4	1.6	1.9	1.9	1.9	2.1	2.1	2.1	1.9
145°	0.2	0.5	0.7	0.9	0.9	0.9	1.2	1.2	1.2	0.9
147.5°	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2
150°	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
155°	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
160°	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
165°	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
170°	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
175°	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
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)