

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: P397370

Luminaire Tested: **VRVT4LED-LD5-12-PC-UNV-LA59-CD1-WL-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397370  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-367-3)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: VRVT4LED-LD5-12-PC-UNV-LA59-CD1-WL-U  
Description:  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

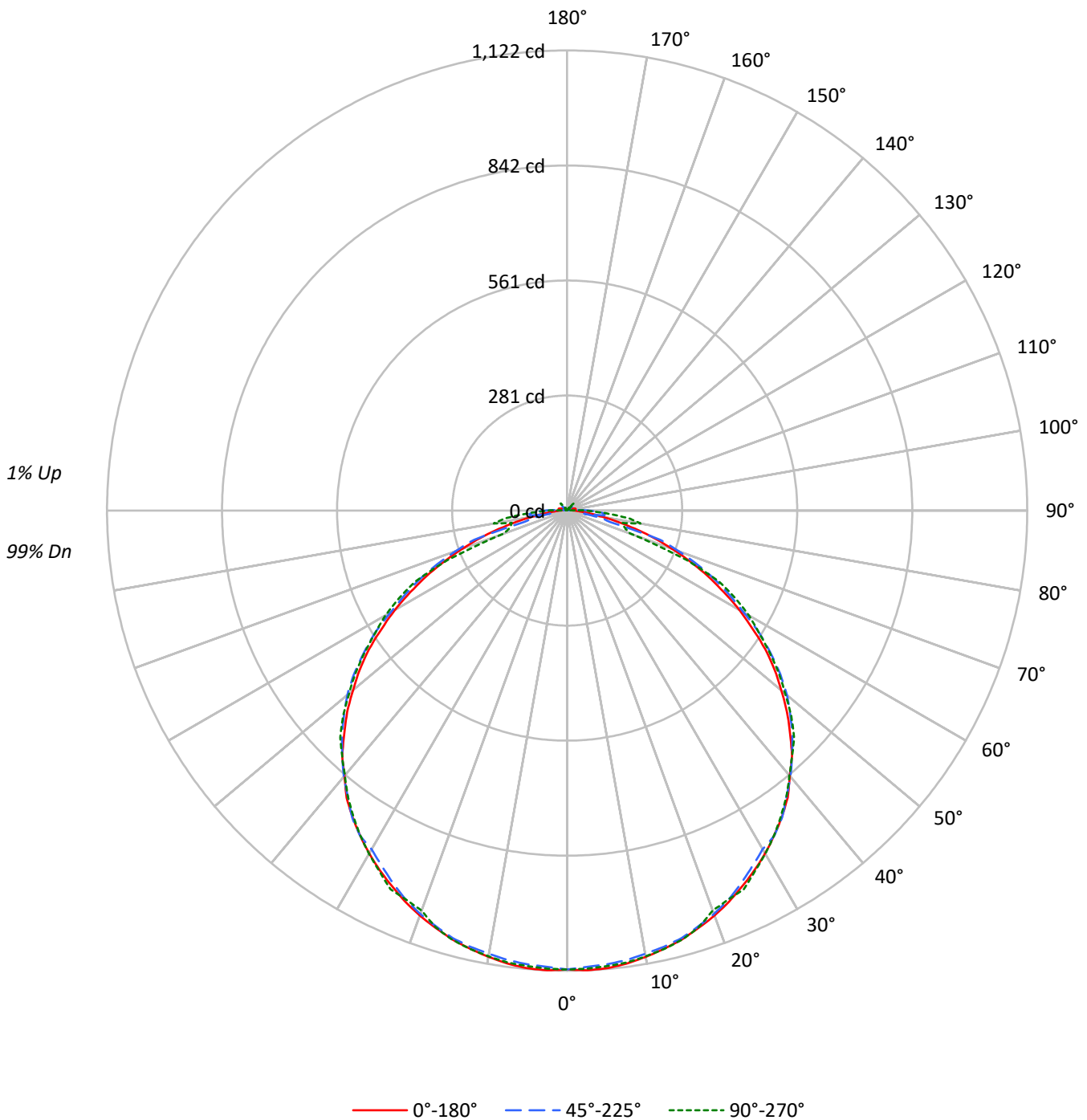
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3250.2 lumens  
Efficiency: N/A  
Efficacy: 23.0 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.28 / 1.4  
Luminous Opening: Rectangular w/ Sides (W: 1.04' x L: 4.12' x H: 0.25')  
CIE Type: Direct  
  
Input Watts (W): 141.6  
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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101	99
1	108	104	99	96	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	91	84	78	96	89	82	77	85	80	75	81	77	73	78	75	71	69
3	90	80	72	65	88	78	70	64	75	68	63	72	66	62	69	65	61	58
4	83	71	62	55	80	69	61	55	66	59	54	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	60	52	46	57	51	46	55	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	50	44	40	38
7	65	51	43	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2803	2803	2803
5°	2802	2742	2746
10°	2781	2691	2693
15°	2763	2647	2639
20°	2741	2590	2544
25°	2717	2523	2532
30°	2698	2457	2454
35°	2677	2433	2380
40°	2628	2351	2294
45°	2567	2270	2236
50°	2478	2176	2103
55°	2372	2029	1959
60°	2202	1821	1810
65°	1986	1614	1595
70°	1701	1333	722
75°	1347	592	728
80°	942	273	1108
85°	628	773	847



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.0	3.3
10°-20°	305.0	9.4
20°-30°	465.3	14.3
30°-40°	569.8	17.5
40°-50°	596.8	18.4
50°-60°	536.6	16.5
60°-70°	383.4	11.8
70°-80°	162.6	5.0
80°-90°	82.7	2.5
90°-100°	17.3	0.5
100°-110°	7.5	0.2
110°-120°	5.3	0.2
120°-130°	3.6	0.1
130°-140°	5.6	0.2
140°-150°	1.9	0.1
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	876.3	27.0
0°-40°	1446.1	44.5
0°-60°	2579.5	79.4
0°-90°	3208.3	98.7
90°-120°	30.1	0.9
90°-150°	41.3	1.3
90°-180°	42.0	1.3
0°-180°	3250.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1119	1119	1119	1119	1119	
5°	1120	1115	1111	1116	1115	106
15°	1083	1080	1079	1084	1083	305
25°	1011	1013	1003	1013	1019	466
35°	912	913	914	912	909	570
45°	768	771	777	776	782	593
55°	590	597	606	605	602	525
65°	379	385	396	409	408	374
75°	171	174	110	71	142	184
85°	37	27	92	118	110	41
90°	15	23	53	45	47	9
95°	15	14	11	7	6	14
105°	19	8	5	4	4	20
115°	11	8	4	3	2	11
125°	5	4	4	2	2	5
135°	3	2	6	22	9	2
145°	1	1	1	7	5	1
155°	1	1	1	0	0	0
165°	1	1	1	1	0	0
175°	1	1	1	1	1	0
180°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1118.9	1118.9	1118.9	1118.9	1118.9
2.5°	1121.9	1118.5	1113.4	1118.2	1117.8
5°	1120.0	1115.2	1110.8	1115.9	1114.8
7.5°	1114.1	1108.9	1105.2	1110.8	1111.5
10°	1104.9	1101.9	1097.4	1104.1	1103.4
12.5°	1094.1	1093.0	1089.3	1094.5	1094.5
15°	1082.6	1080.0	1078.9	1083.7	1083.0
17.5°	1066.7	1066.7	1063.0	1069.7	1065.6
20°	1050.8	1049.3	1046.7	1043.0	1037.8
22.5°	1031.9	1032.3	1027.5	1019.7	1026.4
25°	1010.8	1013.0	1003.4	1012.7	1018.6
27.5°	989.0	990.5	977.5	995.3	991.6
30°	965.3	964.9	953.5	966.4	966.1
32.5°	939.4	941.6	939.8	939.8	939.0
35°	912.4	913.1	913.9	912.0	909.0
37.5°	883.1	880.5	878.7	880.5	878.7
40°	844.6	848.0	847.2	848.3	842.8
42.5°	811.7	803.9	811.0	812.1	812.1
45°	768.4	770.6	776.9	776.5	782.5
47.5°	727.3	726.9	737.7	742.8	741.0
50°	681.8	694.0	699.9	698.4	694.0
52.5°	637.7	648.1	654.8	653.7	650.0
55°	590.0	596.7	605.5	604.8	602.2
57.5°	535.9	549.6	555.6	557.8	554.8
60°	485.6	492.6	497.4	506.4	511.5
62.5°	430.8	440.1	446.4	460.4	461.6
65°	378.6	385.3	396.4	409.4	407.5
67.5°	324.6	331.6	343.8	357.9	316.1
70°	270.9	276.5	288.3	170.6	163.6
72.5°	222.1	221.0	238.4	144.7	149.5
75°	170.6	174.0	109.6	71.1	142.5
77.5°	125.1	131.4	85.1	141.0	138.4
80°	87.7	95.1	41.8	131.0	181.4
82.5°	58.1	47.7	91.4	155.8	155.5
85°	37.0	26.7	92.2	117.7	110.3
87.5°	24.8	20.4	79.6	77.7	70.7
90°	15.2	23.0	53.3	44.8	46.6
92.5°	11.8	24.1	28.1	21.8	19.6
95°	14.8	14.4	11.1	7.4	6.3
97.5°	19.6	7.8	5.9	4.8	4.1
100°	21.1	7.0	5.2	4.1	3.7
102.5°	21.1	7.8	5.2	4.1	3.7
105°	19.2	8.5	4.8	4.1	3.7
107.5°	17.0	8.9	4.8	3.7	3.3
110°	14.8	9.2	4.5	3.3	3.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	12.6	8.9	4.1	3.0	2.6
115°	10.7	8.1	4.1	2.6	2.2
117.5°	8.9	7.4	3.7	2.2	2.2
120°	7.4	6.7	3.7	2.2	1.8
122.5°	6.3	5.9	3.7	1.8	1.8
125°	5.2	4.5	4.1	1.8	1.8
127.5°	4.5	3.3	6.7	2.2	1.8
130°	3.7	2.6	14.8	3.0	2.2
132.5°	3.0	2.2	13.0	5.9	3.3
135°	2.6	1.8	6.3	21.8	8.9
137.5°	1.8	1.5	3.7	15.5	23.7
140°	1.5	1.1	4.1	8.9	14.1
142.5°	1.5	1.1	2.2	4.1	5.9
145°	1.1	1.1	0.7	6.7	4.8
147.5°	1.1	0.7	0.7	4.8	8.1
150°	0.7	0.7	0.7	1.5	3.7
152.5°	0.7	0.7	0.7	0.4	0.7
155°	0.7	0.7	0.7	0.4	0.4
157.5°	0.7	0.7	1.1	0.4	0.4
160°	0.7	1.1	1.1	0.4	0.4
162.5°	0.7	1.1	1.1	0.4	0.4
165°	1.1	1.1	1.1	0.7	0.4
167.5°	1.1	1.1	1.1	0.7	0.4
170°	1.1	1.1	1.1	0.7	0.4
172.5°	1.1	1.1	1.1	0.7	0.7
175°	1.1	1.1	1.1	0.7	0.7
177.5°	1.1	1.1	1.1	0.7	0.7
180°	0.7	0.7	0.7	0.7	0.7

(END OF REPORT)