

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: P397439

Luminaire Tested: **VRVT4S-LD5-15-PCF-LA59-CD2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397439  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1801-511-7)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: VRVT4S-LD5-15-PCF-LA59-CD2-U  
Description:  
Light Source: -  
Ballast/Driver: -

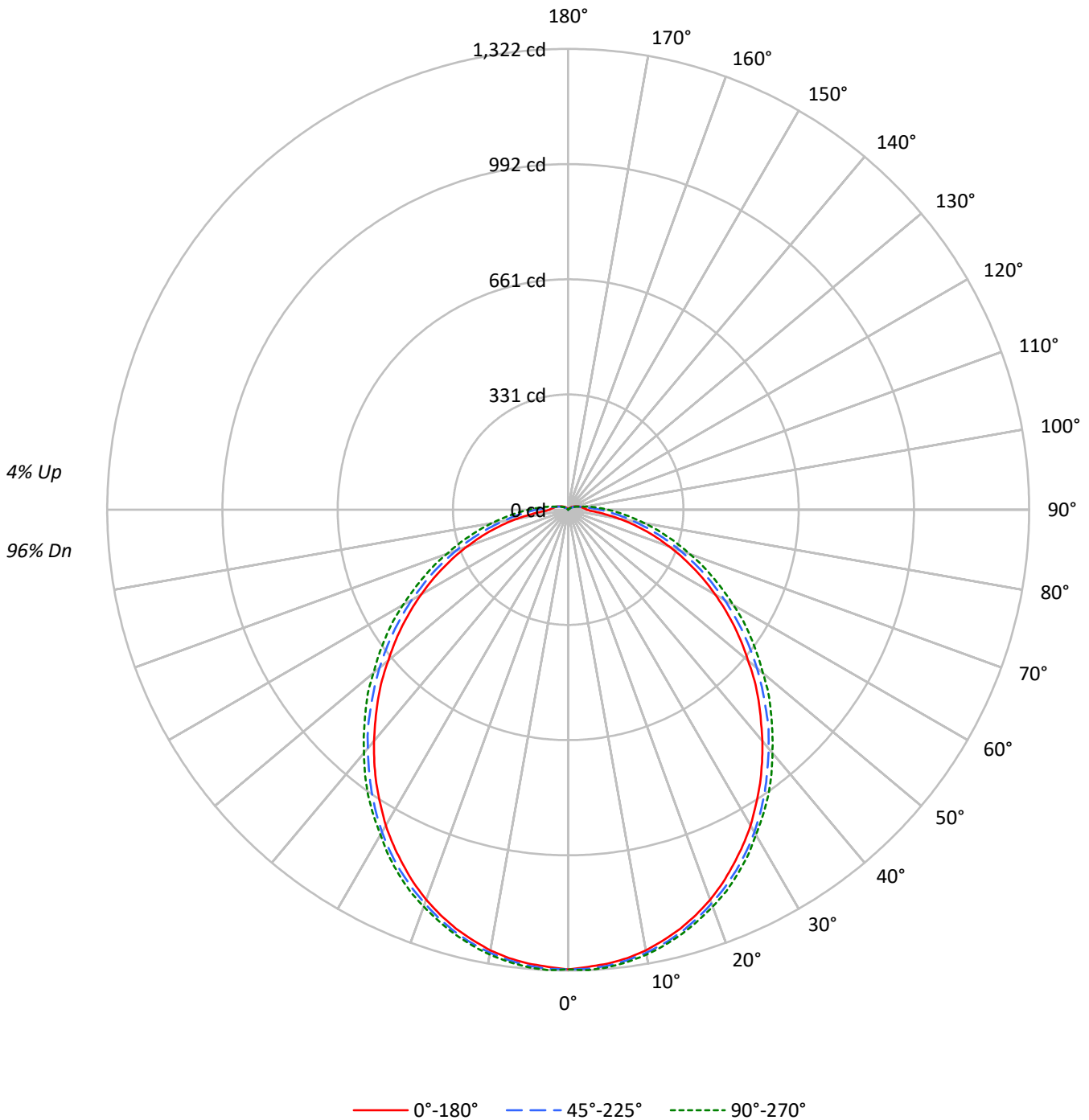
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3763.0 lumens  
Efficiency: N/A  
Efficacy: 22.7 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.22 / 1.32  
Luminous Opening: Rectangular w/ Sides (W: 1.08' x L: 2.08' x H: 0.25')  
CIE Type: Direct  
  
Input Watts (W): 165.7  
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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	96
1	107	102	97	93	104	99	95	91	94	91	88	90	87	85	86	83	81	79
2	97	89	82	76	94	87	80	75	82	77	72	79	74	70	75	71	68	66
3	89	78	70	63	86	76	68	62	73	66	61	69	64	59	66	62	58	55
4	81	69	60	53	79	67	59	53	65	57	52	62	56	51	59	54	50	47
5	75	62	53	46	72	60	52	46	58	50	45	56	49	44	53	48	43	41
6	69	56	47	40	67	55	46	40	52	45	39	50	44	39	48	43	38	36
7	64	51	42	36	62	50	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	32	44	36	31	42	36	31	41	35	30	28
9	56	42	34	29	54	42	34	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	26	51	38	31	26	37	30	26	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	6293	6293	6293
5°	6195	6156	6186
10°	6091	5991	6034
15°	5954	5807	5862
20°	5792	5598	5675
25°	5595	5383	5477
30°	5390	5148	5236
35°	5153	4883	5015
40°	4902	4609	4754
45°	4652	4326	4508
50°	4371	4051	4243
55°	4122	3756	4001
60°	3847	3458	3724
65°	3558	3151	3447
70°	3231	2827	3160
75°	2866	2493	2898
80°	2413	2177	2639
85°	1900	1898	2435



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	124.6	3.3
10°-20°	353.1	9.4
20°-30°	524.5	13.9
30°-40°	613.9	16.3
40°-50°	616.9	16.4
50°-60°	546.9	14.5
60°-70°	424.3	11.3
70°-80°	276.8	7.4
80°-90°	144.6	3.8
90°-100°	69.2	1.8
100°-110°	36.0	1.0
110°-120°	19.6	0.5
120°-130°	9.2	0.2
130°-140°	2.8	0.1
140°-150°	0.4	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	1002.2	26.6
0°-40°	1616.1	42.9
0°-60°	2779.9	73.9
0°-90°	3625.6	96.3
90°-120°	124.7	3.3
90°-150°	137.2	3.6
90°-180°	137.0	3.6
0°-180°	3763.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1319	1319	1319	1319	1319	
5°	1307	1309	1313	1316	1318	124
15°	1244	1247	1254	1258	1260	351
25°	1122	1129	1141	1150	1152	517
35°	959	969	984	996	1000	599
45°	772	783	800	816	822	595
55°	580	591	612	632	640	519
65°	396	407	428	450	456	393
75°	225	236	260	284	293	239
85°	82	105	133	156	162	82
90°	53	69	91	108	113	30
95°	46	49	61	74	77	36
105°	34	32	33	34	35	36
115°	23	19	19	18	20	23
125°	14	12	8	8	10	13
135°	7	6	1	2	3	6
145°	2	1	0	0	0	1
155°	1	1	0	0	0	0
165°	1	1	0	0	0	0
175°	1	1	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1318.8	1318.8	1318.8	1318.8	1318.8
2.5°	1312.6	1314.3	1317.9	1321.6	1322.1
5°	1307.0	1308.7	1313.2	1316.3	1317.7
7.5°	1297.5	1299.2	1303.4	1307.6	1308.1
10°	1283.8	1286.0	1290.5	1295.3	1296.1
12.5°	1265.0	1268.7	1274.3	1278.5	1279.6
15°	1244.0	1247.1	1253.8	1258.0	1260.0
17.5°	1218.8	1222.7	1229.7	1234.8	1237.0
20°	1190.5	1194.5	1202.0	1210.7	1211.5
22.5°	1158.6	1164.8	1172.9	1181.3	1184.7
25°	1122.2	1129.2	1140.7	1149.7	1152.2
27.5°	1085.3	1092.0	1106.0	1115.2	1117.2
30°	1046.1	1053.3	1068.2	1075.5	1076.9
32.5°	1002.4	1010.8	1026.7	1036.8	1039.3
35°	959.0	968.8	983.9	995.9	1000.1
37.5°	913.1	924.0	938.5	953.9	957.3
40°	866.3	877.8	894.0	908.3	911.1
42.5°	817.6	830.2	850.3	861.8	867.1
45°	772.2	782.6	800.2	815.6	822.3
47.5°	724.3	734.7	753.2	771.4	778.9
50°	673.1	687.1	707.0	724.6	728.8
52.5°	627.7	641.2	658.5	678.1	684.6
55°	580.4	591.1	611.5	632.2	639.5
57.5°	533.4	544.9	563.6	584.6	595.5
60°	486.9	497.8	518.0	539.8	546.3
62.5°	441.8	453.0	471.2	495.0	501.5
65°	396.2	407.1	427.6	450.5	456.4
67.5°	352.0	362.3	383.3	407.7	415.0
70°	308.0	321.4	340.8	363.4	370.2
72.5°	266.6	278.3	300.4	323.4	331.2
75°	225.1	235.8	260.4	284.5	292.6
77.5°	186.2	199.9	224.0	250.3	256.8
80°	147.6	162.1	190.7	215.9	221.8
82.5°	112.6	131.3	160.4	185.4	189.0
85°	82.3	105.3	133.0	156.2	161.8
87.5°	61.9	84.3	111.4	130.8	135.8
90°	53.2	68.6	91.0	108.4	112.6
92.5°	49.6	57.1	74.8	90.2	93.0
95°	46.2	49.3	61.3	73.9	77.0
97.5°	42.8	44.0	51.5	60.5	63.0
100°	39.8	40.0	43.4	49.8	51.5
102.5°	36.7	35.8	37.2	40.6	42.0
105°	33.9	32.2	33.0	33.6	35.3
107.5°	31.1	28.6	29.1	28.6	29.4
110°	28.3	24.9	25.5	24.6	25.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	25.5	21.8	22.4	21.3	22.4
115°	23.0	19.0	19.3	18.2	19.6
117.5°	20.7	17.1	16.2	15.4	17.1
120°	18.2	14.8	13.4	12.9	14.8
122.5°	16.2	13.2	10.6	10.6	12.6
125°	14.0	11.5	8.1	8.4	10.4
127.5°	12.3	9.8	5.9	6.7	8.4
130°	10.6	8.4	3.6	5.0	6.7
132.5°	8.7	6.7	2.2	3.4	4.8
135°	7.3	5.6	1.4	1.7	3.1
137.5°	5.9	4.2	0.6	0.3	1.4
140°	4.5	3.1	0.3	0.0	0.0
142.5°	3.1	2.0	0.0	0.0	0.0
145°	2.0	1.1	0.0	0.0	0.0
147.5°	1.1	0.6	0.0	0.0	0.0
150°	0.6	0.3	0.0	0.0	0.0
152.5°	0.6	0.3	0.0	0.0	0.0
155°	0.6	0.6	0.0	0.0	0.0
157.5°	0.6	0.6	0.3	0.0	0.0
160°	0.6	0.6	0.3	0.0	0.0
162.5°	0.6	0.6	0.3	0.0	0.0
165°	0.6	0.6	0.3	0.0	0.0
167.5°	0.6	0.6	0.3	0.0	0.0
170°	0.6	0.6	0.3	0.0	0.0
172.5°	0.6	0.6	0.3	0.0	0.0
175°	0.8	0.6	0.3	0.0	0.0
177.5°	0.8	0.6	0.3	0.0	0.0
180°	0.3	0.3	0.3	0.3	0.3

(END OF REPORT)