

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: P397436

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397436  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1801-511-6)  
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-PC-LA59-CD2-U  
Description:  
Light Source: -  
Ballast/Driver: -

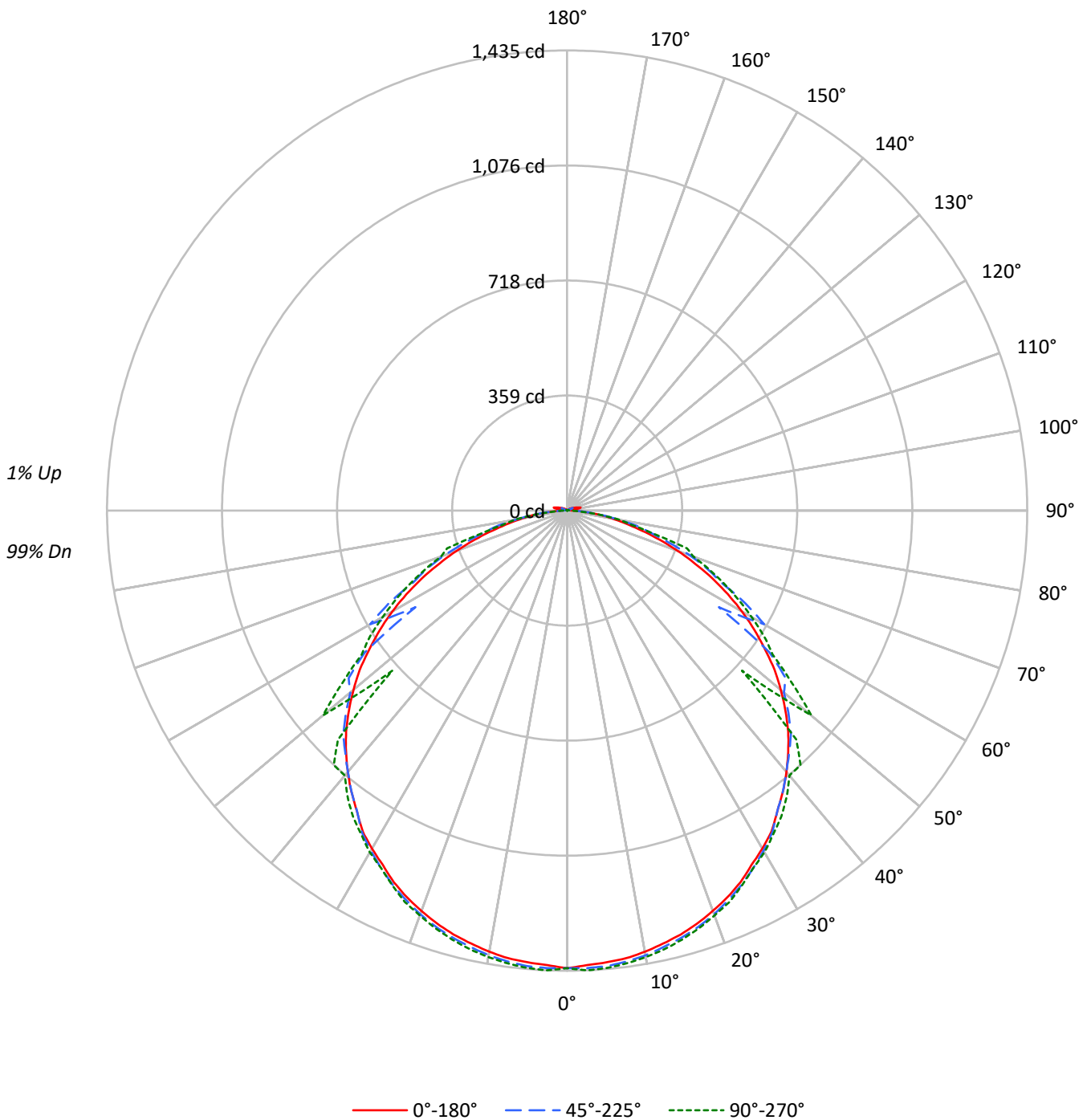
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4198.9 lumens  
Efficiency: N/A  
Efficacy: 25.3 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.28 / 1.4  
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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		101	101	101	99
1	108	104	99	95	106	101	97	94	97	94	91		93	90	88		89	87	85	83
2	99	90	83	78	96	88	82	77	85	79	75		81	77	73		78	74	71	69
3	90	79	71	64	87	77	70	64	74	68	62		71	66	61		69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53		63	57	52		61	56	51	49
5	75	62	53	47	73	61	53	46	59	52	46		57	50	45		55	49	45	42
6	70	56	47	41	68	55	47	40	53	46	40		51	45	40		50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		45	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	43	34	29	55	42	34	29	41	33	28		40	33	28		38	32	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	25	24

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

	0°	45°	90°
0°	6808	6808	6808
5°	6702	6685	6723
10°	6628	6536	6582
15°	6549	6386	6443
20°	6462	6237	6293
25°	6376	6075	6130
30°	6272	5902	5983
35°	6142	5671	5841
40°	6021	5482	5628
45°	5874	5336	5542
50°	5648	5057	5787
55°	5345	4733	4894
60°	4975	4732	4529
65°	4488	3898	4081
70°	3855	3368	3568
75°	3066	2592	2737
80°	2345	1845	1949
85°	1493	943	826



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.4	3.2
10°-20°	389.1	9.3
20°-30°	592.6	14.1
30°-40°	721.1	17.2
40°-50°	751.0	17.9
50°-60°	686.4	16.3
60°-70°	522.7	12.4
70°-80°	283.7	6.8
80°-90°	78.1	1.9
90°-100°	10.0	0.2
100°-110°	13.6	0.3
110°-120°	9.1	0.2
120°-130°	3.5	0.1
130°-140°	1.4	0.0
140°-150°	0.5	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1117.2	26.6
0°-40°	1838.3	43.8
0°-60°	3275.7	78.0
0°-90°	4160.3	99.1
90°-120°	32.7	0.8
90°-150°	38.1	0.9
90°-180°	39.0	0.9
0°-180°	4198.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1427	1427	1427	1427	1427	
5°	1414	1420	1426	1431	1432	135
15°	1368	1375	1379	1384	1385	386
25°	1279	1285	1287	1290	1290	589
35°	1143	1151	1143	1157	1165	717
45°	975	977	987	1034	1011	750
55°	753	755	771	823	782	673
65°	500	515	529	540	540	493
75°	241	268	271	276	276	259
85°	65	70	66	55	55	70
90°	13	18	17	16	15	9
95°	10	8	9	5	5	15
105°	37	48	5	5	4	38
115°	19	12	19	2	2	19
125°	9	6	2	1	1	8
135°	4	3	1	1	1	3
145°	1	1	1	1	0	1
155°	1	1	1	1	1	0
165°	1	1	1	1	1	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°	1426.9	1426.9	1426.9	1426.9	1426.9
2.5°	1418.8	1423.2	1428.0	1433.0	1435.0
5°	1414.0	1419.9	1426.0	1431.4	1431.9
7.5°	1408.1	1414.0	1418.2	1422.7	1424.1
10°	1396.9	1405.3	1408.1	1411.2	1413.7
12.5°	1383.2	1391.0	1393.6	1399.7	1401.1
15°	1368.4	1374.8	1378.7	1384.0	1384.9
17.5°	1350.2	1356.6	1361.1	1364.2	1366.1
20°	1328.3	1333.6	1339.2	1341.5	1343.4
22.5°	1305.6	1309.0	1314.3	1318.0	1321.3
25°	1278.8	1285.2	1287.4	1289.7	1289.7
27.5°	1245.7	1255.2	1256.9	1253.6	1256.4
30°	1217.2	1223.6	1224.7	1220.8	1230.6
32.5°	1186.9	1187.2	1190.6	1189.7	1196.2
35°	1143.0	1151.1	1142.7	1156.7	1164.8
37.5°	1105.4	1112.2	1105.2	1126.4	1125.0
40°	1064.0	1070.4	1063.4	1081.6	1078.6
42.5°	1020.6	1026.2	1024.5	1032.9	1076.9
45°	975.0	977.2	987.0	1033.8	1010.8
47.5°	923.4	925.4	935.8	919.0	739.2
50°	869.7	871.6	882.6	694.4	994.0
52.5°	815.4	812.6	858.5	933.8	884.0
55°	752.6	754.9	770.6	822.6	782.3
57.5°	692.4	697.5	561.1	723.8	727.7
60°	629.7	639.0	709.0	662.5	664.4
62.5°	564.8	580.4	626.9	601.4	603.4
65°	499.8	514.9	528.9	539.8	540.4
67.5°	430.6	453.9	471.8	467.6	479.1
70°	367.4	356.7	406.0	404.6	418.0
72.5°	301.8	327.9	333.5	289.5	392.3
75°	240.8	267.7	270.8	276.4	276.4
77.5°	186.5	202.2	225.4	214.5	206.6
80°	143.4	147.8	161.6	166.6	163.8
82.5°	106.7	100.5	111.4	116.2	105.3
85°	64.7	70.3	66.1	54.9	54.9
87.5°	26.6	33.6	29.7	27.2	24.1
90°	12.9	18.5	17.4	16.0	15.4
92.5°	13.4	12.9	9.2	6.4	5.0
95°	10.4	8.4	9.0	5.0	4.8
97.5°	19.6	6.2	6.2	4.5	3.6
100°	36.4	5.3	5.6	4.5	3.1
102.5°	43.4	7.8	5.6	4.5	4.5
105°	37.2	48.2	4.8	5.0	4.5
107.5°	31.6	21.8	3.6	4.5	5.0
110°	26.6	15.4	3.1	4.2	4.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	22.4	11.5	3.1	3.1	4.2
115°	19.3	12.0	19.0	2.5	2.5
117.5°	16.2	19.0	8.4	2.0	2.5
120°	13.2	10.9	5.0	2.5	1.7
122.5°	10.4	8.1	3.4	0.8	1.7
125°	8.7	6.4	2.5	0.6	0.8
127.5°	7.0	5.3	1.7	0.6	0.6
130°	5.6	5.0	1.1	0.6	0.6
132.5°	4.8	3.6	3.1	0.6	0.6
135°	3.6	2.8	1.1	0.6	0.6
137.5°	2.8	2.2	0.8	0.6	0.6
140°	2.2	1.7	0.6	0.6	0.3
142.5°	1.7	1.1	0.6	0.6	0.3
145°	1.1	0.6	0.6	0.6	0.3
147.5°	0.8	0.6	0.6	0.6	0.6
150°	0.6	0.6	0.6	0.6	0.6
152.5°	0.6	0.6	0.6	0.6	0.6
155°	0.6	0.6	0.6	0.6	0.6
157.5°	0.6	0.6	0.6	0.6	0.6
160°	0.6	0.6	0.6	0.6	0.6
162.5°	0.8	0.8	0.8	0.8	0.6
165°	0.8	0.8	0.8	0.8	0.8
167.5°	0.8	0.8	0.8	0.8	0.8
170°	0.8	0.8	0.8	0.8	0.8
172.5°	0.8	0.8	0.8	0.8	0.8
175°	0.8	0.8	0.8	0.8	0.8
177.5°	0.8	0.8	0.8	0.8	0.8
180°	0.8	0.8	0.8	0.8	0.8

(END OF REPORT)