

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: P397419

Luminaire Tested: **VRVT4S-LD5-12-DR-LG52-CD2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397419  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1801-511-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: VRVT4S-LD5-12-DR-LG52-CD2-U  
Description:  
Light Source: -  
Ballast/Driver: -

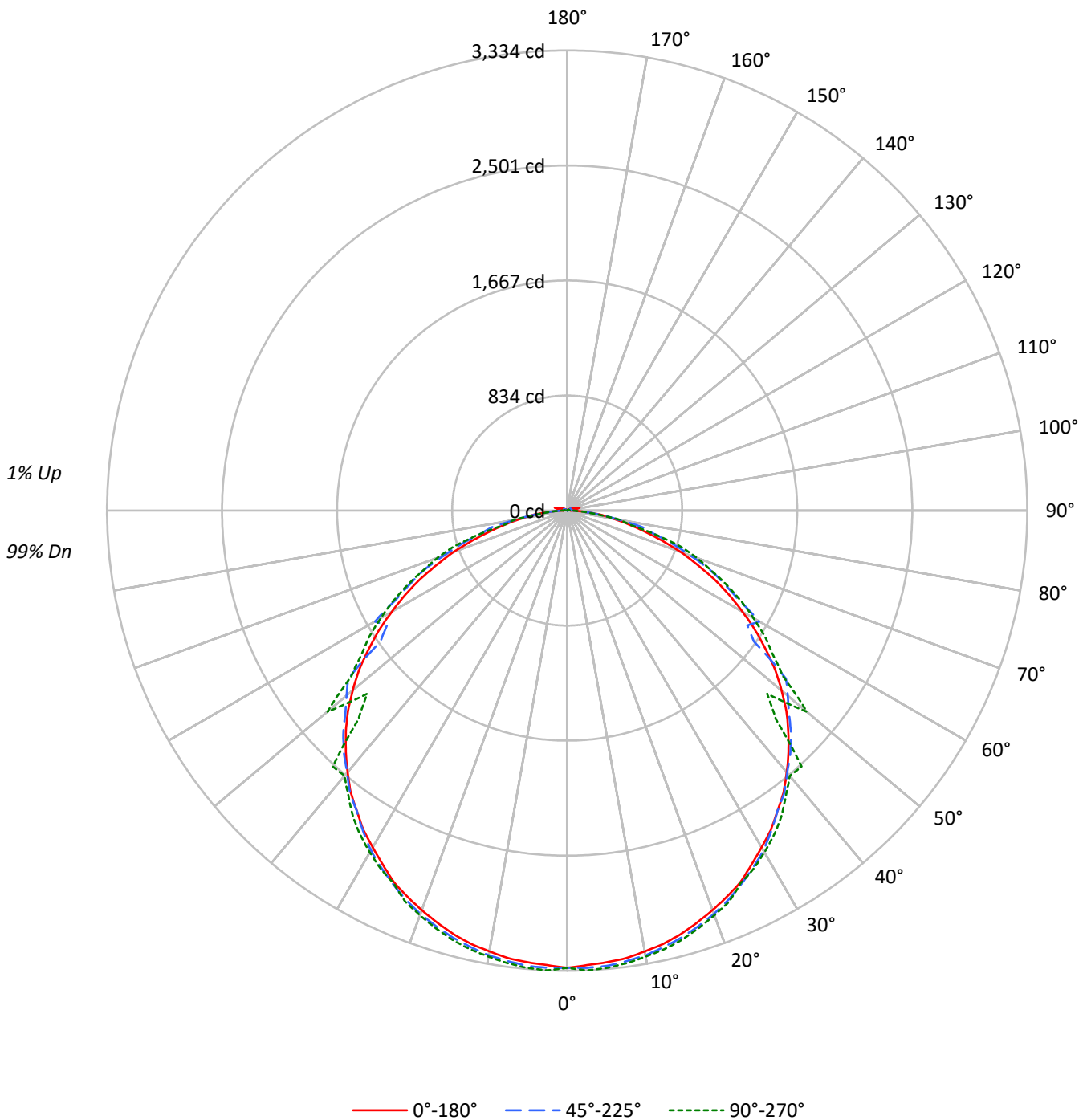
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9785.5 lumens  
Efficiency: N/A  
Efficacy: 49.0 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): 199.7  
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	84	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	51	46		57	50	45		55	49	45	42
6	70	56	47	41	68	55	47	40	53	46	40		51	45	39		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	31		43	36	31		42	35	31	29
9	56	42	34	29	54	42	34	29	41	33	28		39	33	28		38	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26		37	30	25		36	30	25	24

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

	0°	45°	90°
0°	15806	15806	15806
5°	15573	15524	15616
10°	15386	15189	15277
15°	15210	14832	14974
20°	14986	14481	14614
25°	14813	14088	14151
30°	14519	13705	13901
35°	14279	13188	13570
40°	14006	12782	13094
45°	13656	12402	11725
50°	13172	11954	13196
55°	12480	10142	11379
60°	11588	10729	10631
65°	10533	9243	9621
70°	9159	7846	8519
75°	7282	6202	6365
80°	5603	4246	4624
85°	3534	2022	2054



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	314.6	3.2
10°-20°	903.6	9.2
20°-30°	1375.4	14.1
30°-40°	1675.5	17.1
40°-50°	1749.9	17.9
50°-60°	1600.9	16.4
60°-70°	1222.7	12.5
70°-80°	666.6	6.8
80°-90°	180.1	1.8
90°-100°	27.6	0.3
100°-110°	33.5	0.3
110°-120°	20.2	0.2
120°-130°	9.6	0.1
130°-140°	3.3	0.0
140°-150°	1.0	0.0
150°-160°	0.5	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	2593.6	26.5
0°-40°	4269.1	43.6
0°-60°	7620.0	77.9
0°-90°	9689.3	99.0
90°-120°	81.2	0.8
90°-150°	95.0	1.0
90°-180°	96.0	1.0
0°-180°	9785.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3313	3313	3313	3313	3313	
5°	3286	3299	3312	3323	3326	312
15°	3178	3191	3202	3214	3219	897
25°	2971	2980	2986	2994	2977	1366
35°	2657	2672	2657	2692	2706	1664
45°	2267	2277	2294	2412	2139	1747
55°	1757	1768	1651	1831	1819	1571
65°	1173	1208	1254	1258	1274	1157
75°	572	616	648	647	643	619
85°	153	154	142	138	136	167
90°	26	44	42	41	40	20
95°	25	23	24	20	20	29
105°	80	106	14	15	15	80
115°	40	20	26	9	10	40
125°	18	15	7	4	5	17
135°	8	6	3	2	2	7
145°	3	2	1	1	1	2
155°	1	1	1	1	1	0
165°	2	2	2	2	1	1
175°	2	2	2	2	2	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3312.6	3312.6	3312.6	3312.6	3312.6
2.5°	3297.0	3305.3	3315.8	3330.3	3334.5
5°	3285.5	3299.0	3311.5	3323.0	3326.2
7.5°	3271.0	3287.6	3292.8	3307.4	3307.4
10°	3242.8	3261.5	3272.0	3281.4	3281.4
12.5°	3215.8	3229.3	3238.6	3250.1	3255.3
15°	3178.2	3190.7	3202.2	3213.6	3218.9
17.5°	3130.3	3150.1	3157.4	3166.8	3171.0
20°	3080.3	3099.0	3109.4	3117.8	3119.9
22.5°	3027.2	3041.8	3052.2	3055.3	3066.7
25°	2971.0	2980.3	2985.5	2993.8	2977.2
27.5°	2891.8	2909.4	2916.7	2909.4	2926.2
30°	2817.8	2835.5	2843.8	2845.9	2859.4
32.5°	2744.9	2757.4	2753.2	2768.8	2788.6
35°	2657.4	2671.9	2657.4	2691.8	2706.3
37.5°	2575.0	2582.4	2583.4	2617.8	2603.2
40°	2475.0	2484.5	2479.3	2501.1	2509.4
42.5°	2374.0	2382.4	2391.8	2408.4	2514.6
45°	2266.7	2277.1	2293.8	2411.5	2138.6
47.5°	2155.3	2157.4	2179.2	1999.0	1964.6
50°	2028.2	2027.1	2086.6	1898.0	2266.7
52.5°	1901.1	1900.1	1999.0	2088.6	1971.9
55°	1757.4	1767.8	1651.1	1831.3	1818.8
57.5°	1617.8	1627.1	1548.0	1673.0	1700.1
60°	1466.7	1503.2	1607.4	1558.4	1559.4
62.5°	1323.0	1355.3	1401.1	1416.7	1423.0
65°	1173.0	1208.4	1254.2	1258.4	1274.0
67.5°	1013.6	1064.6	1119.8	1112.6	1127.1
70°	873.0	810.5	945.8	952.1	997.9
72.5°	714.6	789.6	800.0	666.7	858.3
75°	571.9	615.7	647.9	646.9	642.7
77.5°	453.1	482.3	560.4	504.2	456.2
80°	342.7	351.0	371.9	369.8	388.6
82.5°	258.3	245.8	253.1	250.0	220.8
85°	153.1	154.2	141.7	137.5	136.5
87.5°	63.5	70.8	68.7	65.6	70.8
90°	26.1	43.8	41.7	40.6	39.6
92.5°	29.2	31.3	29.2	25.0	21.8
95°	25.0	22.9	23.9	19.8	19.8
97.5°	34.4	18.7	18.7	16.6	15.6
100°	68.7	16.6	17.7	14.6	14.6
102.5°	91.7	17.7	15.6	14.6	15.6
105°	80.2	106.2	13.5	14.6	14.6
107.5°	67.7	62.5	12.5	13.5	14.6
110°	57.3	38.6	10.4	12.5	13.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	46.9	27.1	9.4	10.4	12.5
115°	39.6	19.8	26.1	9.4	10.4
117.5°	33.4	20.8	28.2	8.3	9.4
120°	27.1	42.7	14.6	7.3	7.3
122.5°	21.8	19.8	10.4	5.2	6.2
125°	17.7	14.6	7.3	4.2	5.2
127.5°	14.6	11.4	5.2	3.1	4.2
130°	12.5	10.4	3.1	3.1	3.1
132.5°	10.4	8.3	3.1	2.1	3.1
135°	8.3	6.2	3.1	2.1	2.1
137.5°	6.2	5.2	2.1	2.1	2.1
140°	5.2	3.1	1.0	1.0	1.0
142.5°	4.2	3.1	1.0	1.0	1.0
145°	3.1	2.1	1.0	1.0	1.0
147.5°	2.1	1.0	1.0	1.0	1.0
150°	1.0	1.0	1.0	1.0	1.0
152.5°	1.0	1.0	1.0	1.0	1.0
155°	1.0	1.0	1.0	1.0	1.0
157.5°	1.0	1.0	1.0	1.0	1.0
160°	1.0	1.0	1.0	1.0	1.0
162.5°	2.1	2.1	2.1	2.1	1.0
165°	2.1	2.1	2.1	2.1	1.0
167.5°	2.1	2.1	2.1	2.1	1.0
170°	2.1	2.1	2.1	2.1	1.0
172.5°	2.1	2.1	2.1	2.1	2.1
175°	2.1	2.1	2.1	2.1	2.1
177.5°	2.1	2.1	2.1	2.1	2.1
180°	2.1	2.1	2.1	2.1	2.1

(END OF REPORT)