

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: P397423

Luminaire Tested: **VRVT4S-LD5-12-DRF-LR63-CD2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397423  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1801-511-5)  
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-DRF-LR63-CD2-U  
Description:  
Light Source: -  
Ballast/Driver: -

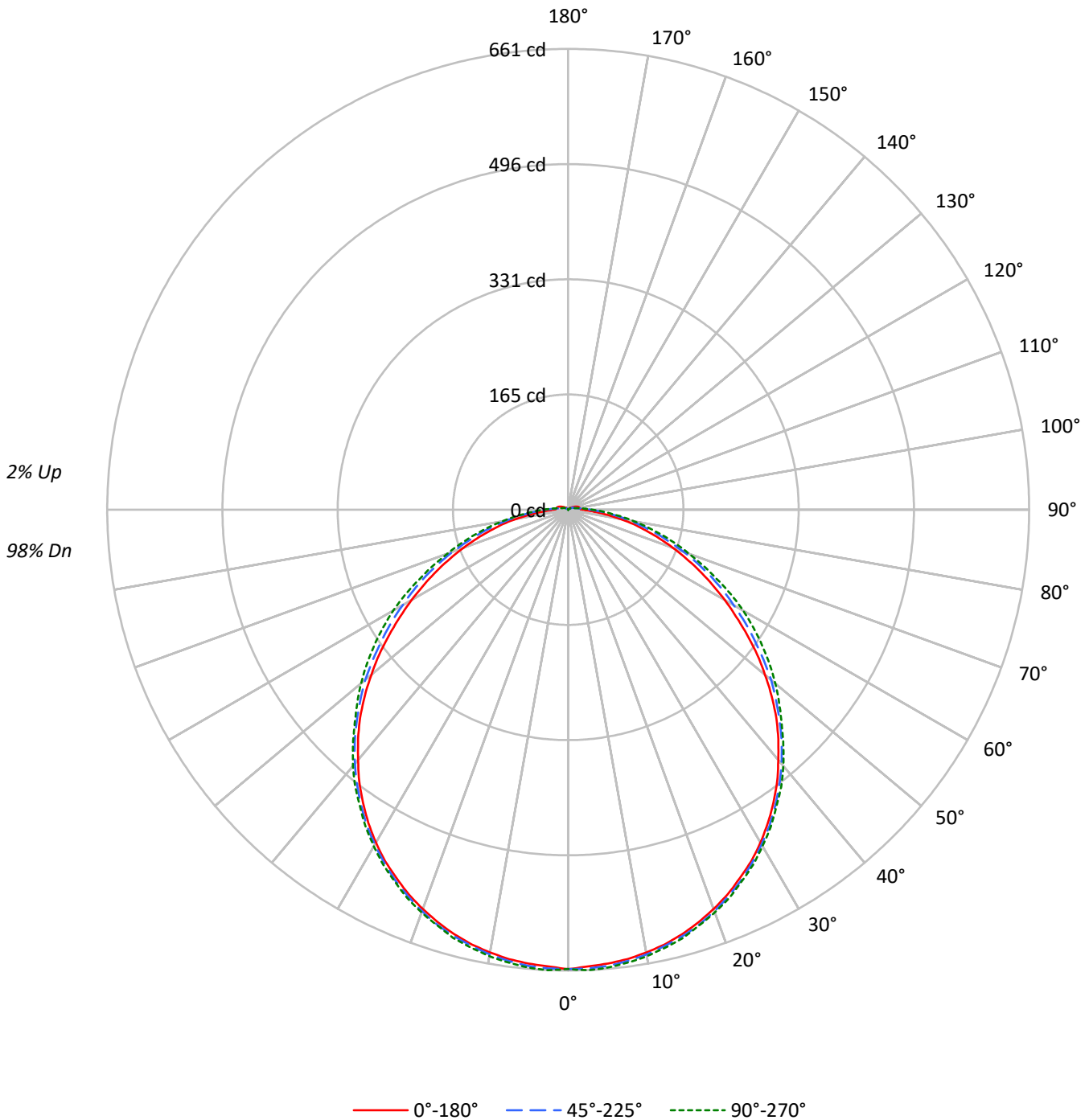
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1921.3 lumens  
Efficiency: N/A  
Efficacy: 9.6 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.26 / 1.36  
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 (A<sub>in</sub>): 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	110	110	110	105	105	105	100	100	100	98
1	108	103	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83	81
2	98	89	82	77	95	87	81	75	83	78	73	80	75	71	76	73	69	67
3	89	78	70	64	86	77	69	63	73	67	61	70	65	60	67	63	59	56
4	82	69	61	54	79	68	60	53	65	58	52	63	56	51	60	55	50	48
5	75	62	53	46	73	61	52	46	58	51	45	56	50	45	54	48	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	49	43	39	36
7	64	51	42	36	62	50	41	36	48	41	35	46	40	35	45	39	34	32
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	41	35	31	29
9	56	42	34	29	54	42	34	29	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	3144	3144	3144
5°	3098	3079	3095
10°	3059	3007	3028
15°	3018	2933	2959
20°	2965	2854	2880
25°	2905	2769	2797
30°	2841	2672	2709
35°	2756	2569	2609
40°	2652	2453	2505
45°	2541	2319	2372
50°	2393	2175	2258
55°	2226	2001	2124
60°	2049	1832	1977
65°	1868	1657	1773
70°	1675	1458	1572
75°	1471	1243	1371
80°	1225	1019	1152
85°	909	792	907



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.4	3.2
10°-20°	178.6	9.3
20°-30°	270.1	14.1
30°-40°	323.5	16.8
40°-50°	330.4	17.2
50°-60°	292.5	15.2
60°-70°	221.7	11.5
70°-80°	136.7	7.1
80°-90°	60.5	3.1
90°-100°	21.7	1.1
100°-110°	11.6	0.6
110°-120°	6.9	0.4
120°-130°	3.2	0.2
130°-140°	1.0	0.1
140°-150°	0.2	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	511.1	26.6
0°-40°	834.6	43.4
0°-60°	1457.5	75.9
0°-90°	1876.4	97.7
90°-120°	40.3	2.1
90°-150°	44.7	2.3
90°-180°	45.0	2.3
0°-180°	1921.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	659	659	659	659	659	
5°	654	655	657	658	659	62
15°	631	631	633	635	636	178
25°	583	584	587	588	588	269
35°	513	515	518	521	520	321
45°	422	424	429	434	433	325
55°	313	320	326	336	340	280
65°	208	214	225	234	235	206
75°	116	121	130	137	138	123
85°	39	47	56	60	60	40
90°	21	26	32	35	35	12
95°	17	17	19	20	20	14
105°	15	13	10	9	9	16
115°	10	8	6	5	6	10
125°	5	4	3	3	3	5
135°	2	2	1	1	1	2
145°	1	0	0	0	0	1
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°	22.5°	45°	67.5°	90°
0°	658.9	658.9	658.9	658.9	658.9
2.5°	655.7	656.4	658.5	660.6	661.2
5°	653.5	654.8	656.7	658.5	659.2
7.5°	650.2	651.2	652.9	654.8	655.3
10°	644.8	645.9	647.7	649.4	650.3
12.5°	638.7	639.2	640.9	642.8	643.3
15°	630.6	631.2	633.2	634.7	636.0
17.5°	620.7	621.2	624.3	624.9	625.1
20°	609.5	610.3	612.8	613.9	614.8
22.5°	597.3	598.4	600.3	601.7	603.0
25°	582.7	584.4	586.7	588.5	588.5
27.5°	568.5	568.8	571.0	573.0	574.3
30°	551.3	551.6	554.5	556.8	557.3
32.5°	533.0	534.1	537.2	539.5	540.2
35°	512.9	514.6	517.7	521.4	520.3
37.5°	492.1	493.0	497.4	500.4	501.5
40°	468.7	471.3	475.9	479.1	480.0
42.5°	445.9	448.3	453.2	456.3	456.7
45°	421.8	424.1	428.9	433.9	432.7
47.5°	395.8	399.4	404.2	409.4	410.3
50°	368.5	373.8	379.7	384.0	387.8
52.5°	341.8	346.1	352.8	360.5	364.1
55°	313.4	319.7	325.8	336.0	339.5
57.5°	285.3	292.8	300.4	311.6	314.7
60°	259.4	265.3	274.4	285.4	290.0
62.5°	232.9	239.8	249.9	260.0	263.2
65°	208.0	213.5	224.8	233.5	234.8
67.5°	183.0	189.5	200.1	209.2	209.7
70°	159.7	165.5	175.8	183.4	184.2
72.5°	137.2	143.1	151.8	159.6	161.1
75°	115.5	120.9	129.8	136.6	138.4
77.5°	96.3	100.3	108.1	115.9	116.5
80°	74.9	79.6	89.3	95.8	96.8
82.5°	57.0	62.6	71.3	77.1	77.4
85°	39.4	47.2	55.5	60.3	60.3
87.5°	27.2	35.4	42.8	46.0	46.4
90°	20.7	26.0	32.1	35.0	34.9
92.5°	18.0	20.5	24.4	26.7	26.3
95°	17.0	17.0	18.7	20.5	20.4
97.5°	16.5	15.4	14.8	16.0	15.8
100°	16.3	14.5	12.2	12.7	12.8
102.5°	16.0	13.7	10.6	10.5	10.6
105°	15.2	13.0	9.6	8.8	8.9
107.5°	14.1	11.9	8.8	7.8	7.9
110°	12.8	10.6	8.0	7.0	7.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	11.5	9.3	7.3	6.2	6.4
115°	10.0	8.0	6.4	5.4	5.7
117.5°	8.7	7.0	5.6	4.7	5.1
120°	7.4	6.1	4.5	3.9	4.4
122.5°	6.2	5.2	3.6	3.2	3.8
125°	5.3	4.3	2.8	2.6	3.1
127.5°	4.4	3.6	2.1	2.1	2.5
130°	3.6	3.0	1.3	1.6	2.0
132.5°	3.0	2.5	0.9	1.0	1.4
135°	2.3	2.0	0.7	0.7	1.0
137.5°	2.0	1.4	0.4	0.3	0.5
140°	1.4	1.0	0.3	0.0	0.1
142.5°	1.2	0.8	0.1	0.0	0.0
145°	0.8	0.5	0.1	0.0	0.0
147.5°	0.5	0.3	0.1	0.1	0.0
150°	0.3	0.3	0.1	0.1	0.0
152.5°	0.3	0.3	0.1	0.1	0.0
155°	0.3	0.3	0.3	0.1	0.0
157.5°	0.3	0.3	0.3	0.1	0.0
160°	0.3	0.3	0.3	0.1	0.1
162.5°	0.4	0.4	0.3	0.1	0.1
165°	0.4	0.4	0.3	0.1	0.1
167.5°	0.4	0.4	0.3	0.3	0.1
170°	0.4	0.4	0.3	0.1	0.1
172.5°	0.4	0.4	0.3	0.3	0.1
175°	0.4	0.4	0.4	0.3	0.1
177.5°	0.4	0.4	0.4	0.3	0.1
180°	0.4	0.4	0.4	0.4	0.4

(END OF REPORT)