

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: P397410

Luminaire Tested: **VRVT4LED-LD5-9-DR-UNV-LG52-CD1-WL-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397410  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-367-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: VRVT4LED-LD5-9-DR-UNV-LG52-CD1-WL-U  
Description:  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

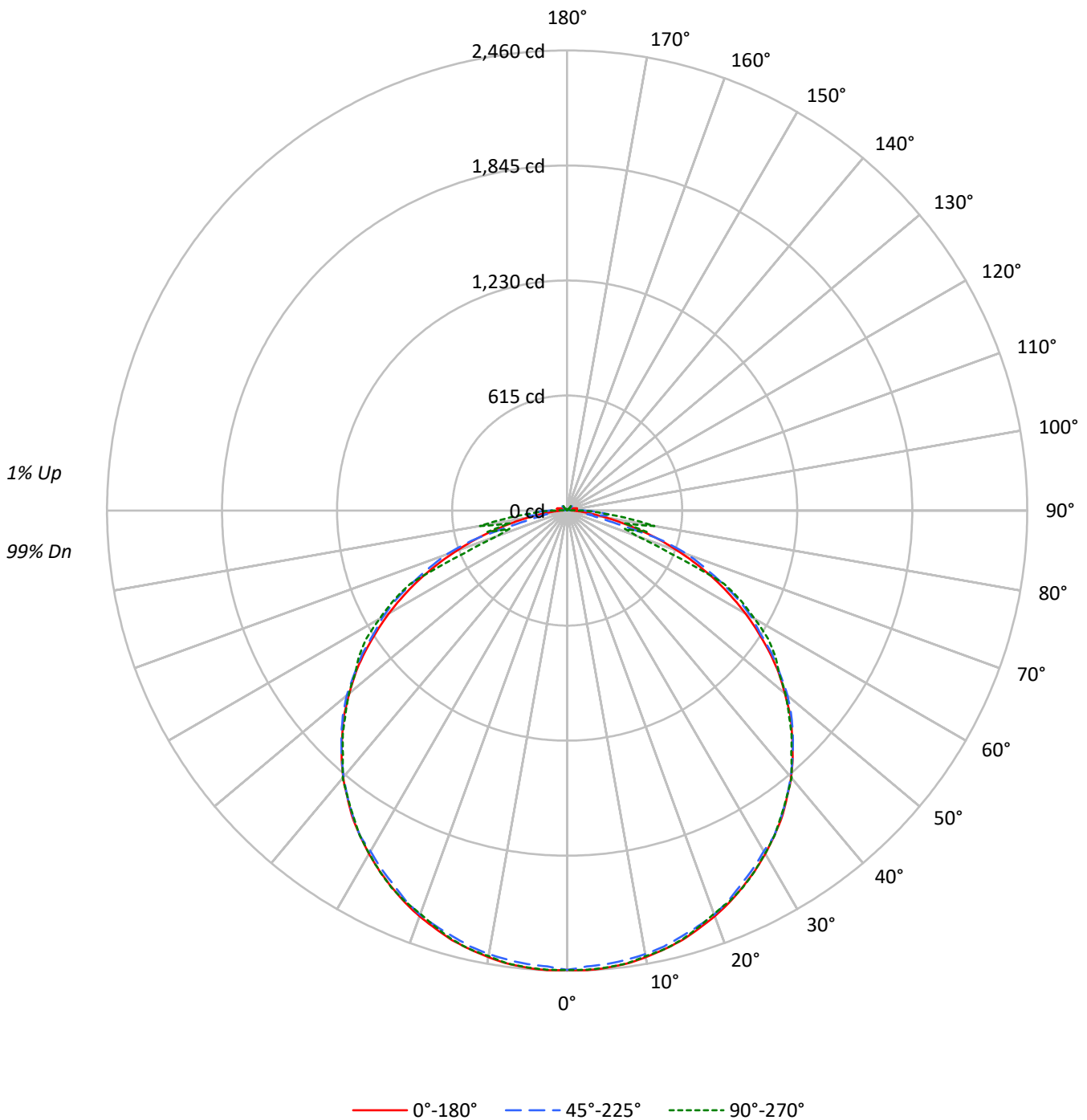
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7201.5 lumens  
Efficiency: N/A  
Efficacy: 47.0 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): 153.3  
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	106	106	106	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	90	84	78	96	88	82	77	85	79	75	81	77	73	78	74	71	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	64	60	58
4	82	70	62	55	80	69	61	54	66	59	54	64	58	53	61	56	52	50
5	76	63	54	47	73	62	53	47	59	52	46	57	51	46	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	44	37	32	43	36	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	6152	6152	6152
5°	6137	6009	6037
10°	6102	5903	5901
15°	6067	5784	5785
20°	6019	5689	5623
25°	5969	5540	5526
30°	5920	5418	5377
35°	5872	5313	5221
40°	5798	5161	5080
45°	5681	4988	4847
50°	5521	4781	4618
55°	5309	4478	4418
60°	4994	4165	4096
65°	4565	3697	3622
70°	3943	3163	1741
75°	3138	1498	2251
80°	2216	717	2894
85°	1386	1864	1560



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	232.7	3.2
10°-20°	669.4	9.3
20°-30°	1022.3	14.2
30°-40°	1250.4	17.4
40°-50°	1312.3	18.2
50°-60°	1196.3	16.6
60°-70°	874.8	12.1
70°-80°	384.6	5.3
80°-90°	176.8	2.5
90°-100°	31.8	0.4
100°-110°	16.8	0.2
110°-120°	12.1	0.2
120°-130°	7.4	0.1
130°-140°	9.2	0.1
140°-150°	2.9	0.0
150°-160°	0.9	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	1924.3	26.7
0°-40°	3174.7	44.1
0°-60°	5683.4	78.9
0°-90°	7119.6	98.9
90°-120°	60.7	0.8
90°-150°	80.2	1.1
90°-180°	82.0	1.1
0°-180°	7201.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2456	2456	2456	2456	2456	
5°	2453	2450	2434	2451	2451	233
15°	2377	2374	2357	2381	2374	671
25°	2221	2218	2203	2224	2223	1024
35°	2002	2002	1996	1998	1994	1251
45°	1701	1702	1707	1702	1697	1312
55°	1321	1338	1337	1358	1358	1178
65°	870	882	908	944	926	858
75°	398	415	278	194	441	429
85°	82	58	222	241	203	94
90°	24	63	94	83	70	17
95°	38	21	16	14	13	35
105°	48	15	11	10	9	50
115°	22	17	9	7	7	23
125°	10	9	8	6	6	10
135°	5	3	8	16	8	4
145°	2	2	2	9	6	2
155°	2	2	2	2	1	1
165°	2	2	2	2	2	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°	2455.8	2455.8	2455.8	2455.8	2455.8
2.5°	2459.8	2456.6	2439.0	2455.8	2456.6
5°	2453.4	2450.2	2434.2	2451.0	2451.0
7.5°	2443.0	2438.2	2422.2	2442.2	2442.2
10°	2424.6	2423.0	2407.8	2421.4	2418.2
12.5°	2402.2	2399.0	2387.0	2400.6	2402.2
15°	2377.4	2374.2	2357.4	2381.4	2374.2
17.5°	2343.0	2345.4	2329.4	2345.4	2335.0
20°	2307.8	2310.2	2299.0	2294.2	2293.4
22.5°	2267.8	2266.2	2256.6	2254.2	2262.2
25°	2220.6	2218.2	2203.0	2223.8	2223.0
27.5°	2171.8	2171.0	2155.8	2181.4	2172.6
30°	2118.2	2118.2	2103.0	2124.6	2116.6
32.5°	2061.5	2064.7	2060.7	2064.7	2061.5
35°	2001.5	2002.3	1995.9	1997.5	1994.3
37.5°	1931.1	1935.9	1929.5	1931.9	1927.9
40°	1863.1	1860.7	1859.9	1863.9	1866.3
42.5°	1784.7	1769.5	1783.9	1787.1	1773.5
45°	1700.7	1701.5	1707.1	1702.3	1696.7
47.5°	1618.3	1615.1	1626.3	1615.9	1606.3
50°	1519.1	1542.3	1537.5	1519.9	1523.9
52.5°	1426.3	1443.9	1434.3	1438.3	1427.1
55°	1320.7	1337.5	1336.7	1358.3	1358.3
57.5°	1211.1	1228.7	1224.7	1253.5	1272.7
60°	1101.5	1119.1	1137.5	1155.9	1157.5
62.5°	985.5	1003.1	1031.9	1047.9	1051.1
65°	870.3	881.5	907.9	943.9	925.5
67.5°	750.3	758.3	795.1	800.7	595.2
70°	628.0	638.4	684.0	422.4	394.4
72.5°	516.8	520.8	537.6	352.8	323.2
75°	397.6	415.2	277.6	193.6	440.8
77.5°	296.0	309.6	160.0	320.0	312.0
80°	206.4	222.4	109.6	285.6	473.6
82.5°	134.4	104.0	207.2	322.4	335.2
85°	81.6	57.6	222.4	240.8	203.2
87.5°	50.4	44.0	149.6	152.8	141.6
90°	24.0	63.2	93.6	83.2	70.4
92.5°	22.4	44.8	41.6	33.6	31.2
95°	38.4	20.8	16.0	13.6	12.8
97.5°	53.6	13.6	11.2	9.6	9.6
100°	54.4	12.8	11.2	9.6	8.8
102.5°	54.4	13.6	11.2	9.6	8.8
105°	48.0	15.2	11.2	9.6	8.8
107.5°	40.8	16.8	10.4	9.6	8.8
110°	34.4	19.2	10.4	8.8	8.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	27.2	18.4	9.6	8.0	8.0
115°	22.4	16.8	8.8	7.2	7.2
117.5°	18.4	15.2	8.8	7.2	6.4
120°	15.2	13.6	8.8	6.4	6.4
122.5°	12.8	12.0	8.8	5.6	5.6
125°	10.4	8.8	8.0	5.6	5.6
127.5°	8.8	6.4	9.6	5.6	4.8
130°	7.2	5.6	16.8	5.6	5.6
132.5°	5.6	4.0	34.4	7.2	5.6
135°	4.8	3.2	8.0	16.0	8.0
137.5°	4.0	3.2	5.6	49.6	22.4
140°	3.2	2.4	5.6	8.0	31.2
142.5°	2.4	2.4	4.0	5.6	5.6
145°	2.4	2.4	1.6	8.8	6.4
147.5°	2.4	1.6	1.6	9.6	10.4
150°	1.6	1.6	1.6	3.2	5.6
152.5°	1.6	1.6	1.6	1.6	1.6
155°	1.6	2.4	2.4	1.6	0.8
157.5°	1.6	2.4	2.4	1.6	0.8
160°	2.4	2.4	2.4	1.6	0.8
162.5°	2.4	2.4	2.4	1.6	1.6
165°	2.4	2.4	2.4	1.6	1.6
167.5°	2.4	2.4	2.4	1.6	1.6
170°	2.4	2.4	2.4	1.6	1.6
172.5°	2.4	2.4	2.4	1.6	1.6
175°	2.4	2.4	2.4	2.4	1.6
177.5°	2.4	2.4	2.4	2.4	1.6
180°	2.4	2.4	2.4	2.4	2.4

(END OF REPORT)