

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: P397413

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397413  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-367-2)  
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-DRF-UNV-LG52-CD1-WL-U  
Description:  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

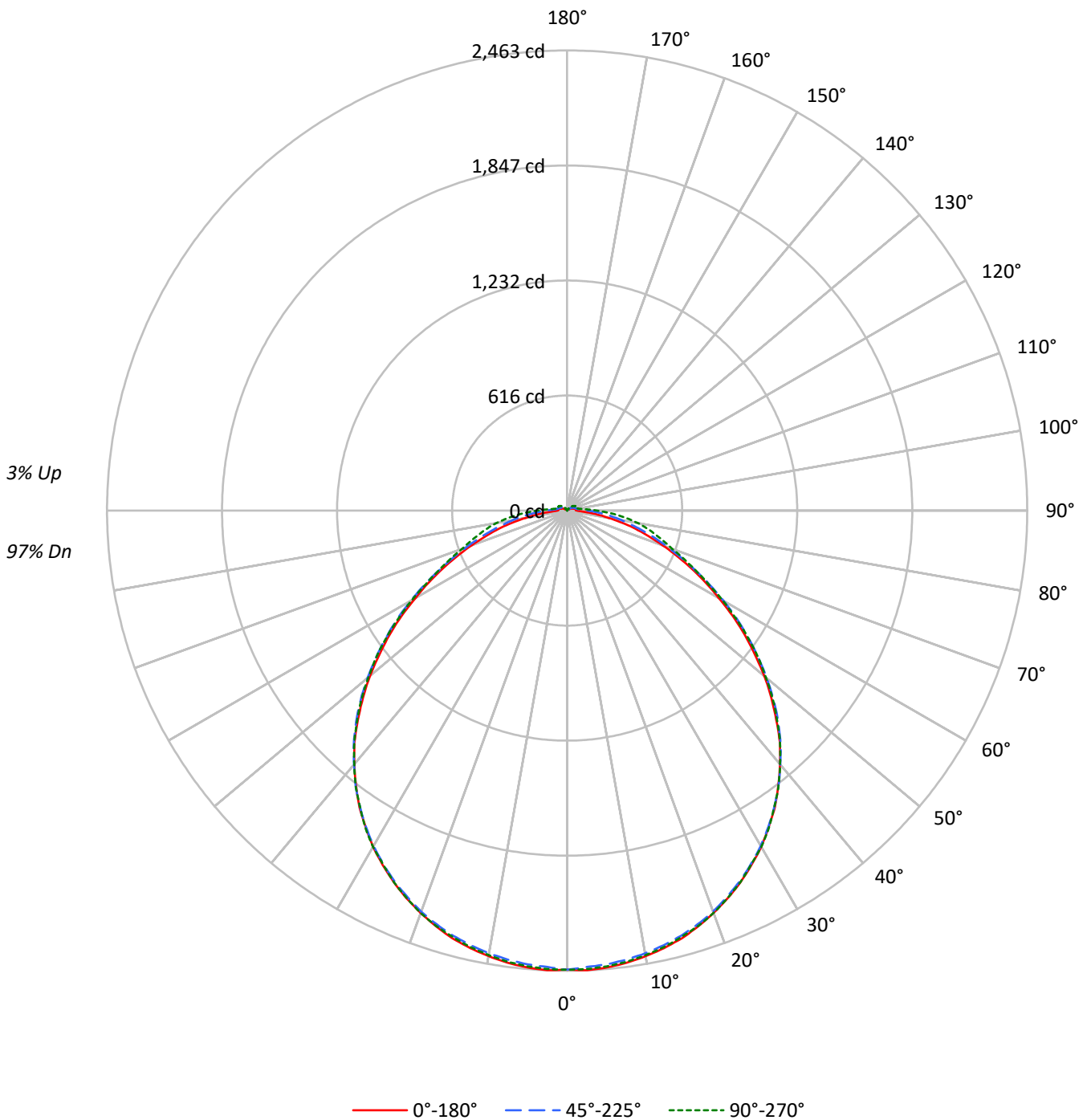
Lumens per Lamp: N/A  
Luminaire Lumens: 7019.3 lumens  
Efficiency: N/A  
Efficacy: 45.9 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.26 / 1.36  
Luminous Opening: Rectangular w/ Sides (W: 1.04' x L: 4.12' x H: 0.25')  
CIE Type: Direct

Input Watts (W): 152.8  
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	110	110	110	104	104	104	99	99	99	97
1	108	103	99	95	105	100	96	93	96	92	89	91	89	86	87	85	83	81
2	98	90	83	77	95	88	81	76	84	78	74	80	76	72	77	73	70	67
3	90	79	71	64	87	77	70	64	74	67	62	71	65	61	68	63	59	57
4	82	70	61	55	80	69	60	54	66	59	53	63	57	52	61	55	51	49
5	76	63	54	47	73	61	53	47	59	52	46	57	50	45	55	49	45	42
6	70	57	48	41	68	55	47	41	53	46	40	51	45	40	50	44	39	37
7	65	51	43	36	63	50	42	36	49	41	36	47	40	35	45	39	35	33
8	60	47	38	33	59	46	38	32	44	37	32	43	36	32	42	36	31	29
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	38	33	28	26
10	53	40	32	27	51	39	32	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	6155	6155	6155
5°	6140	6018	6030
10°	6095	5901	5897
15°	6049	5781	5758
20°	5978	5651	5619
25°	5901	5503	5455
30°	5808	5340	5280
35°	5687	5150	5063
40°	5515	4925	4827
45°	5288	4667	4543
50°	5009	4338	4208
55°	4669	3959	3833
60°	4251	3539	3398
65°	3849	3082	2972
70°	3422	2654	2639
75°	2997	2270	2484
80°	2439	1932	2344
85°	1827	1594	2040



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	232.6	3.3
10°-20°	667.1	9.5
20°-30°	1010.5	14.4
30°-40°	1211.1	17.3
40°-50°	1228.0	17.5
50°-60°	1052.0	15.0
60°-70°	749.9	10.7
70°-80°	455.5	6.5
80°-90°	211.8	3.0
90°-100°	77.6	1.1
100°-110°	48.5	0.7
110°-120°	36.8	0.5
120°-130°	23.3	0.3
130°-140°	10.8	0.2
140°-150°	2.9	0.0
150°-160°	0.4	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	1910.2	27.2
0°-40°	3121.3	44.5
0°-60°	5401.3	77.0
0°-90°	6818.5	97.1
90°-120°	162.8	2.3
90°-150°	199.8	2.8
90°-180°	201.0	2.9
0°-180°	7019.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2457	2457	2457	2457	2457	
5°	2455	2449	2438	2450	2448	233
15°	2370	2365	2356	2368	2363	668
25°	2195	2193	2188	2199	2195	1011
35°	1939	1940	1935	1941	1934	1210
45°	1583	1595	1597	1596	1590	1221
55°	1162	1175	1182	1186	1178	1036
65°	734	748	757	760	759	729
75°	380	390	421	467	486	403
85°	108	125	190	252	266	114
90°	51	59	110	151	159	30
95°	47	45	67	85	89	38
105°	40	35	47	52	52	42
115°	25	23	39	48	51	25
125°	13	10	26	39	43	12
135°	6	5	10	22	27	5
145°	2	2	1	7	10	2
155°	2	2	1	0	0	1
165°	2	2	2	1	1	1
175°	2	2	2	1	1	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2457.1	2457.1	2457.1	2457.1	2457.1
2.5°	2462.7	2457.1	2445.0	2457.1	2456.3
5°	2454.7	2449.1	2437.8	2449.9	2448.3
7.5°	2441.8	2436.2	2424.2	2437.0	2435.4
10°	2421.8	2419.4	2406.6	2418.6	2416.2
12.5°	2398.5	2394.5	2383.3	2395.3	2392.9
15°	2370.4	2364.8	2356.0	2368.0	2363.2
17.5°	2333.5	2331.1	2322.2	2334.3	2331.1
20°	2291.8	2288.6	2283.8	2293.4	2291.8
22.5°	2246.0	2243.6	2237.2	2250.0	2244.4
25°	2195.4	2193.0	2188.2	2198.6	2194.6
27.5°	2138.4	2138.4	2132.0	2141.7	2134.4
30°	2078.2	2076.6	2072.6	2079.8	2078.2
32.5°	2008.4	2014.8	2005.2	2011.6	2011.6
35°	1938.6	1940.2	1934.6	1941.0	1933.8
37.5°	1856.6	1861.5	1859.1	1863.1	1859.1
40°	1772.4	1778.8	1774.8	1776.4	1773.2
42.5°	1685.7	1692.2	1691.4	1690.5	1687.3
45°	1583.0	1595.0	1597.4	1595.8	1590.2
47.5°	1481.8	1497.8	1499.4	1501.8	1493.8
50°	1378.2	1388.7	1395.1	1395.9	1388.7
52.5°	1265.9	1282.7	1289.2	1292.4	1287.5
55°	1161.5	1175.2	1181.6	1185.6	1178.4
57.5°	1050.7	1060.4	1076.5	1077.3	1069.2
60°	937.6	955.2	966.5	965.7	960.1
62.5°	836.4	846.9	860.5	859.7	854.1
65°	733.7	748.2	757.0	760.2	759.4
67.5°	635.8	649.4	661.4	671.8	675.9
70°	545.0	555.4	573.9	592.4	598.0
72.5°	457.5	470.4	495.3	525.8	539.4
75°	379.7	390.1	420.6	467.2	486.5
77.5°	303.4	312.2	354.8	415.8	436.6
80°	227.2	243.2	295.4	363.6	383.7
82.5°	163.8	178.2	241.6	307.4	326.7
85°	107.6	125.2	190.2	252.1	265.7
87.5°	68.2	83.5	146.1	199.0	209.5
90°	50.6	58.6	110.0	150.9	159.0
92.5°	47.4	49.0	82.6	114.0	118.8
95°	46.6	45.0	67.4	85.1	89.1
97.5°	45.8	41.8	58.6	69.0	70.6
100°	45.0	39.4	53.8	60.2	60.2
102.5°	43.4	37.0	49.8	55.4	55.4
105°	40.2	35.3	47.4	52.2	52.2
107.5°	37.0	32.9	45.0	51.4	51.4
110°	32.9	30.5	43.4	50.6	51.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	28.9	27.3	41.0	49.8	51.4
115°	24.9	23.3	38.6	48.2	50.6
117.5°	21.7	20.1	36.2	46.6	49.8
120°	18.5	16.1	32.9	45.0	49.0
122.5°	15.3	12.9	29.7	41.8	46.6
125°	12.9	10.4	25.7	39.4	43.4
127.5°	11.2	8.0	21.7	35.3	40.2
130°	8.8	7.2	17.7	31.3	36.2
132.5°	7.2	5.6	14.5	27.3	32.1
135°	6.4	4.8	10.4	22.5	27.3
137.5°	4.8	4.0	7.2	18.5	23.3
140°	4.0	3.2	4.0	14.5	18.5
142.5°	3.2	2.4	2.4	10.4	14.5
145°	2.4	2.4	0.8	7.2	10.4
147.5°	2.4	1.6	0.8	4.0	6.4
150°	1.6	1.6	0.8	1.6	3.2
152.5°	1.6	1.6	0.8	0.0	0.8
155°	1.6	1.6	0.8	0.0	0.0
157.5°	1.6	1.6	0.8	0.0	0.0
160°	1.6	1.6	0.8	0.0	0.0
162.5°	2.4	1.6	0.8	0.8	0.0
165°	2.4	1.6	1.6	0.8	0.8
167.5°	2.4	2.4	1.6	0.8	0.8
170°	2.4	1.6	1.6	0.8	0.8
172.5°	2.4	1.6	1.6	0.8	0.8
175°	2.4	2.4	1.6	0.8	0.8
177.5°	2.4	2.4	1.6	0.8	0.8
180°	1.6	1.6	1.6	1.6	1.6

(END OF REPORT)