

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: P397364

Luminaire Tested: **VRVT4LED-LD5-12-DR-UNV-LA59-CD1-WL-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397364  
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-LD5-12-DR-UNV-LA59-CD1-WL-U  
Description:  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

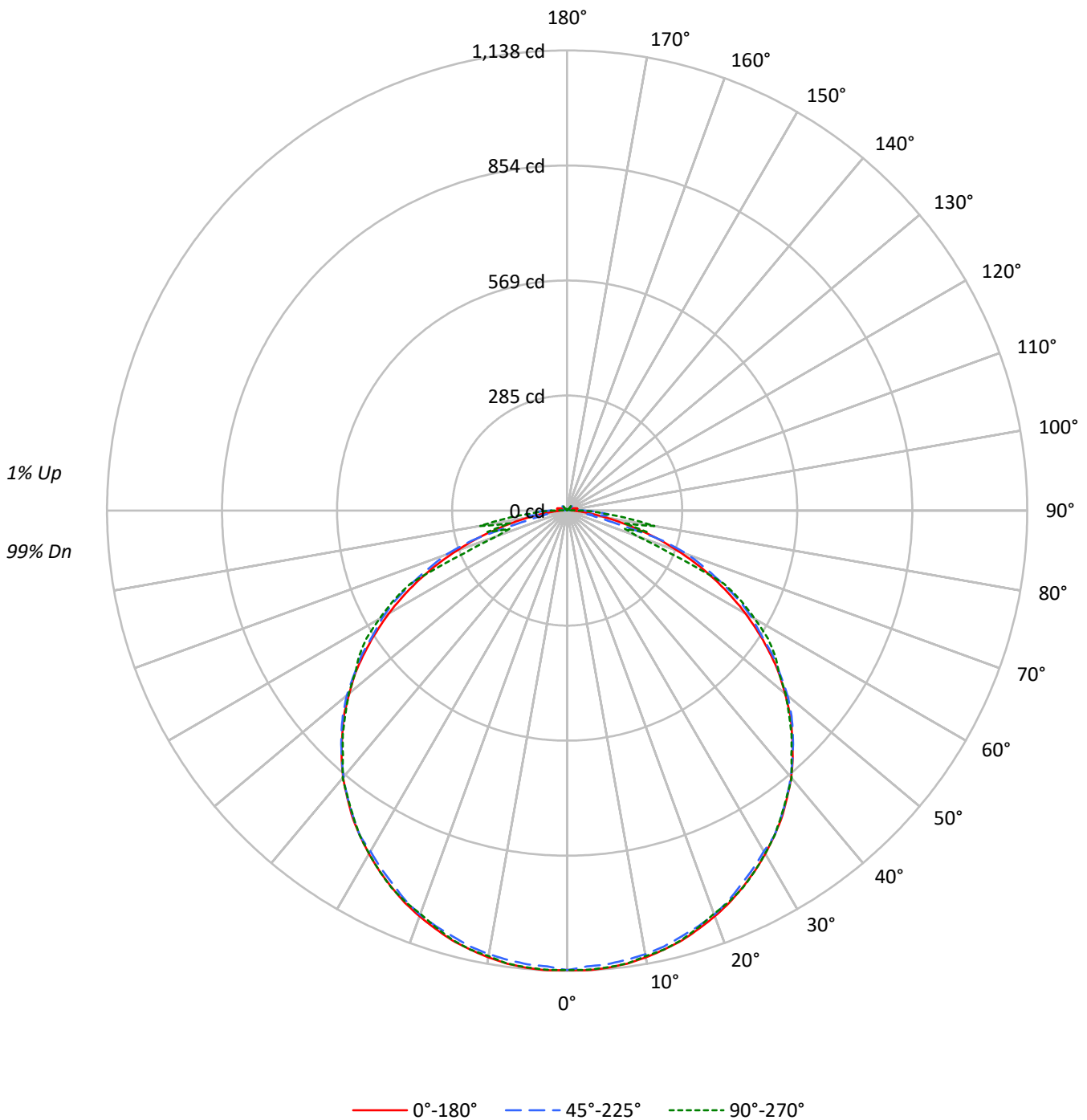
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3332.0 lumens  
Efficiency: N/A  
Efficacy: 23.5 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): 141.6  
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°	2846	2846	2846
5°	2839	2781	2793
10°	2823	2732	2731
15°	2807	2676	2677
20°	2785	2632	2601
25°	2762	2563	2557
30°	2739	2507	2488
35°	2717	2458	2416
40°	2682	2388	2350
45°	2628	2308	2243
50°	2555	2212	2137
55°	2456	2072	2044
60°	2311	1927	1895
65°	2112	1710	1676
70°	1825	1463	806
75°	1452	693	1041
80°	1025	332	1339
85°	640	862	722



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.7	3.2
10°-20°	309.7	9.3
20°-30°	473.0	14.2
30°-40°	578.5	17.4
40°-50°	607.2	18.2
50°-60°	553.5	16.6
60°-70°	404.8	12.1
70°-80°	177.9	5.3
80°-90°	81.8	2.5
90°-100°	14.7	0.4
100°-110°	7.8	0.2
110°-120°	5.6	0.2
120°-130°	3.4	0.1
130°-140°	4.2	0.1
140°-150°	1.4	0.0
150°-160°	0.4	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	890.4	26.7
0°-40°	1468.9	44.1
0°-60°	2629.6	78.9
0°-90°	3294.1	98.9
90°-120°	28.1	0.8
90°-150°	37.1	1.1
90°-180°	38.0	1.1
0°-180°	3332.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1136	1136	1136	1136	1136	
5°	1135	1134	1126	1134	1134	108
15°	1100	1098	1091	1102	1098	310
25°	1028	1026	1019	1029	1029	474
35°	926	926	923	924	923	579
45°	787	787	790	788	785	607
55°	611	619	618	628	628	545
65°	403	408	420	437	428	397
75°	184	192	128	90	204	198
85°	38	27	103	111	94	43
90°	11	29	43	38	33	8
95°	18	10	7	6	6	16
105°	22	7	5	4	4	23
115°	10	8	4	3	3	11
125°	5	4	4	3	3	5
135°	2	2	4	7	4	2
145°	1	1	1	4	3	1
155°	1	1	1	1	0	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°	1136.3	1136.3	1136.3	1136.3	1136.3
2.5°	1138.1	1136.6	1128.5	1136.3	1136.6
5°	1135.1	1133.7	1126.3	1134.1	1134.1
7.5°	1130.3	1128.1	1120.7	1130.0	1130.0
10°	1121.8	1121.1	1114.1	1120.3	1118.9
12.5°	1111.5	1110.0	1104.4	1110.7	1111.5
15°	1100.0	1098.5	1090.7	1101.9	1098.5
17.5°	1084.1	1085.2	1077.8	1085.2	1080.4
20°	1067.8	1068.9	1063.7	1061.5	1061.1
22.5°	1049.3	1048.5	1044.1	1043.0	1046.7
25°	1027.5	1026.3	1019.3	1028.9	1028.6
27.5°	1004.9	1004.5	997.5	1009.3	1005.3
30°	980.1	980.1	973.1	983.0	979.3
32.5°	953.8	955.3	953.4	955.3	953.8
35°	926.0	926.4	923.4	924.2	922.7
37.5°	893.5	895.7	892.7	893.8	892.0
40°	862.0	860.9	860.5	862.4	863.5
42.5°	825.7	818.7	825.4	826.8	820.5
45°	786.9	787.2	789.8	787.6	785.0
47.5°	748.7	747.3	752.4	747.6	743.2
50°	702.9	713.6	711.4	703.2	705.1
52.5°	659.9	668.1	663.6	665.5	660.3
55°	611.1	618.8	618.5	628.5	628.5
57.5°	560.4	568.5	566.7	580.0	588.9
60°	509.7	517.8	526.3	534.8	535.6
62.5°	456.0	464.1	477.5	484.8	486.3
65°	402.7	407.9	420.1	436.7	428.2
67.5°	347.2	350.9	367.9	370.5	275.4
70°	290.6	295.3	316.5	195.4	182.5
72.5°	239.1	240.9	248.7	163.2	149.5
75°	184.0	192.1	128.4	89.6	203.9
77.5°	136.9	143.2	74.0	148.0	144.3
80°	95.5	102.9	50.7	132.1	219.1
82.5°	62.2	48.1	95.9	149.2	155.1
85°	37.7	26.7	102.9	111.4	94.0
87.5°	23.3	20.4	69.2	70.7	65.5
90°	11.1	29.2	43.3	38.5	32.6
92.5°	10.4	20.7	19.2	15.5	14.4
95°	17.8	9.6	7.4	6.3	5.9
97.5°	24.8	6.3	5.2	4.5	4.5
100°	25.2	5.9	5.2	4.5	4.1
102.5°	25.2	6.3	5.2	4.5	4.1
105°	22.2	7.0	5.2	4.5	4.1
107.5°	18.9	7.8	4.8	4.5	4.1
110°	15.9	8.9	4.8	4.1	4.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	12.6	8.5	4.5	3.7	3.7
115°	10.4	7.8	4.1	3.3	3.3
117.5°	8.5	7.0	4.1	3.3	3.0
120°	7.0	6.3	4.1	3.0	3.0
122.5°	5.9	5.5	4.1	2.6	2.6
125°	4.8	4.1	3.7	2.6	2.6
127.5°	4.1	3.0	4.5	2.6	2.2
130°	3.3	2.6	7.8	2.6	2.6
132.5°	2.6	1.8	15.9	3.3	2.6
135°	2.2	1.5	3.7	7.4	3.7
137.5°	1.8	1.5	2.6	23.0	10.4
140°	1.5	1.1	2.6	3.7	14.4
142.5°	1.1	1.1	1.8	2.6	2.6
145°	1.1	1.1	0.7	4.1	3.0
147.5°	1.1	0.7	0.7	4.5	4.8
150°	0.7	0.7	0.7	1.5	2.6
152.5°	0.7	0.7	0.7	0.7	0.7
155°	0.7	1.1	1.1	0.7	0.4
157.5°	0.7	1.1	1.1	0.7	0.4
160°	1.1	1.1	1.1	0.7	0.4
162.5°	1.1	1.1	1.1	0.7	0.7
165°	1.1	1.1	1.1	0.7	0.7
167.5°	1.1	1.1	1.1	0.7	0.7
170°	1.1	1.1	1.1	0.7	0.7
172.5°	1.1	1.1	1.1	0.7	0.7
175°	1.1	1.1	1.1	1.1	0.7
177.5°	1.1	1.1	1.1	1.1	0.7
180°	1.1	1.1	1.1	1.1	1.1

(END OF REPORT)