

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: P397386

Luminaire Tested: **VRVT4LED-LD5-18-DRF-UNV-LG52-CD2-WL-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397386  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-367-9)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: VRVT4LED-LD5-18-DRF-UNV-LG52-CD2-WL-U  
Description:  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

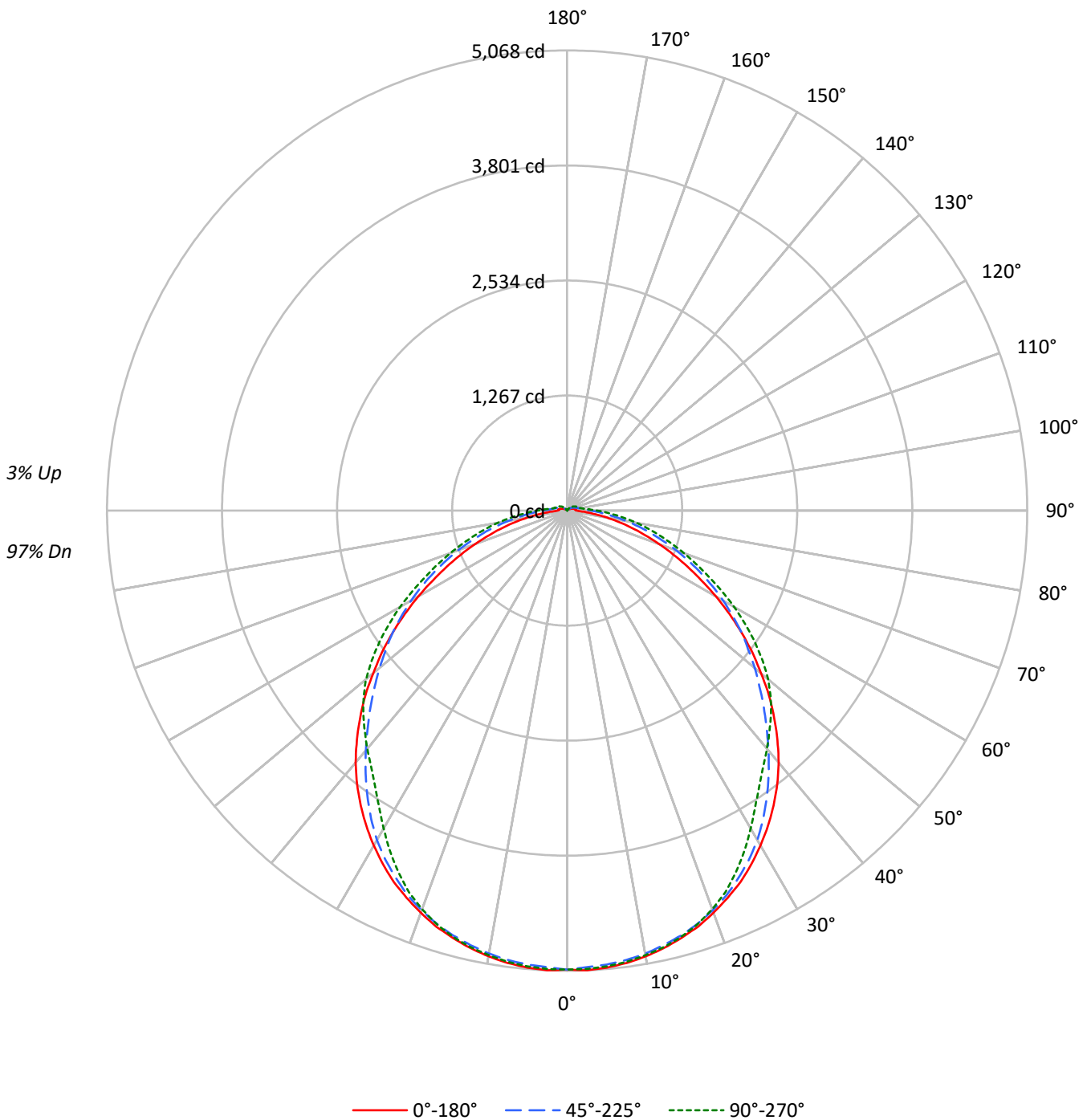
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14330.4 lumens  
Efficiency: N/A  
Efficacy: 45.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.19 / 1.32  
Luminous Opening: Rectangular w/ Sides (W: 1.04' x L: 4.12' x H: 0.25')  
CIE Type: Direct  
  
Input Watts (W): 317.3  
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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	97
1	108	103	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83	80
2	98	90	83	77	95	87	81	76	83	78	73	80	75	71	76	72	69	67
3	89	79	70	64	87	77	69	63	73	67	62	70	65	60	67	63	59	56
4	82	70	61	54	79	68	60	54	65	58	53	63	57	52	60	55	51	48
5	75	62	53	47	73	61	53	46	59	51	46	56	50	45	54	49	44	42
6	70	56	47	41	67	55	47	41	53	46	40	51	44	39	49	43	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	45	39	35	32
8	60	47	38	32	58	46	38	32	44	37	32	43	36	31	41	35	31	29
9	56	43	35	29	55	42	34	29	41	34	29	39	33	28	38	32	28	26
10	53	40	32	26	51	39	31	26	38	31	26	37	30	26	35	30	25	24

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

	0°	45°	90°
0°	12664	12664	12664
5°	12637	12389	12407
10°	12546	12147	12132
15°	12429	11886	11839
20°	12293	11592	11454
25°	12137	11228	10930
30°	11906	10792	10268
35°	11629	10214	9664
40°	11280	9569	9318
45°	10769	8948	9070
50°	10131	8391	8762
55°	9431	7861	8207
60°	8582	7268	7522
65°	7667	6619	6731
70°	6766	5896	6028
75°	5835	5134	5367
80°	4793	4301	4712
85°	3627	3547	3993



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	478.5	3.3
10°-20°	1369.9	9.6
20°-30°	2053.0	14.3
30°-40°	2399.1	16.7
40°-50°	2425.5	16.9
50°-60°	2140.8	14.9
60°-70°	1590.1	11.1
70°-80°	975.2	6.8
80°-90°	449.0	3.1
90°-100°	188.1	1.3
100°-110°	114.9	0.8
110°-120°	75.9	0.5
120°-130°	43.1	0.3
130°-140°	19.3	0.1
140°-150°	5.5	0.0
150°-160°	1.3	0.0
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	3901.4	27.2
0°-40°	6300.5	44.0
0°-60°	10866.7	75.8
0°-90°	13881.1	96.9
90°-120°	378.9	2.6
90°-150°	446.7	3.1
90°-180°	449.0	3.1
0°-180°	14330.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5055	5055	5055	5055	5055	
5°	5052	5040	5018	5034	5038	480
15°	4870	4860	4844	4859	4858	1375
25°	4515	4499	4465	4433	4397	2078
35°	3964	3951	3837	3717	3691	2478
45°	3224	3194	3062	3126	3174	2484
55°	2346	2310	2346	2501	2523	2096
65°	1462	1467	1626	1719	1720	1454
75°	739	797	951	1028	1051	788
85°	214	287	423	508	520	222
90°	104	166	265	322	329	60
95°	94	129	178	202	204	75
105°	74	86	114	127	130	78
115°	45	49	82	99	105	45
125°	23	19	49	70	78	21
135°	11	9	20	40	46	9
145°	6	4	3	14	18	4
155°	4	4	3	2	1	2
165°	5	4	3	2	1	1
175°	5	5	4	2	2	0
180°	4	4	4	4	4	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5055.3	5055.3	5055.3	5055.3	5055.3
2.5°	5068.1	5055.3	5033.7	5048.1	5052.1
5°	5052.1	5040.1	5018.5	5033.7	5037.7
7.5°	5024.9	5012.9	4992.1	5007.3	5012.9
10°	4984.9	4972.9	4954.5	4966.5	4971.3
12.5°	4934.5	4924.1	4903.3	4920.9	4923.3
15°	4870.5	4860.1	4844.1	4859.3	4858.5
17.5°	4802.5	4787.3	4772.1	4780.1	4776.9
20°	4712.9	4699.3	4684.9	4680.1	4672.1
22.5°	4617.7	4606.5	4586.5	4567.3	4550.5
25°	4515.3	4499.3	4464.9	4432.9	4396.9
27.5°	4392.1	4382.5	4335.3	4268.1	4226.5
30°	4260.1	4250.5	4188.9	4088.1	4041.7
32.5°	4117.7	4105.7	4019.3	3906.5	3856.9
35°	3964.1	3951.3	3836.9	3716.9	3691.3
37.5°	3800.9	3779.3	3647.3	3545.7	3547.3
40°	3624.9	3596.1	3448.1	3392.9	3423.3
42.5°	3428.1	3404.1	3252.9	3256.9	3298.5
45°	3224.1	3194.5	3062.5	3125.7	3174.5
47.5°	3016.1	2978.5	2874.5	2978.5	3040.1
50°	2787.2	2756.0	2698.4	2836.9	2891.3
52.5°	2572.0	2543.2	2514.4	2671.2	2712.0
55°	2346.4	2309.6	2346.4	2500.8	2523.2
57.5°	2120.8	2088.0	2160.8	2311.2	2324.8
60°	1892.8	1869.6	1984.8	2113.6	2125.6
62.5°	1668.0	1666.4	1804.0	1913.6	1919.2
65°	1461.6	1467.2	1625.6	1719.2	1720.0
67.5°	1264.8	1285.6	1444.8	1526.4	1537.6
70°	1077.6	1113.6	1275.2	1352.0	1365.6
72.5°	900.8	948.8	1102.4	1183.2	1202.4
75°	739.2	796.8	951.2	1028.0	1051.2
77.5°	585.6	650.4	800.8	883.2	912.8
80°	446.4	512.0	657.6	748.0	771.2
82.5°	313.6	391.2	533.6	625.6	644.0
85°	213.6	287.2	423.2	508.0	520.0
87.5°	135.2	213.6	336.0	405.6	416.0
90°	104.0	165.6	264.8	321.6	328.8
92.5°	97.6	142.4	213.6	250.4	257.6
95°	93.6	128.8	177.6	201.6	204.0
97.5°	90.4	116.8	156.0	171.2	171.2
100°	86.4	106.4	139.2	150.4	150.4
102.5°	81.6	96.0	125.6	136.8	139.2
105°	74.4	86.4	114.4	127.2	129.6
107.5°	67.2	76.8	105.6	119.2	122.4
110°	60.0	67.2	97.6	112.0	116.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	52.0	58.4	89.6	105.6	111.2
115°	44.8	48.8	81.6	99.2	104.8
117.5°	38.4	40.0	73.6	92.0	99.2
120°	32.8	32.0	65.6	85.6	92.8
122.5°	27.2	25.6	57.6	78.4	85.6
125°	23.2	19.2	48.8	70.4	78.4
127.5°	19.2	15.2	41.6	62.4	71.2
130°	16.0	12.8	33.6	55.2	63.2
132.5°	13.6	10.4	26.4	47.2	54.4
135°	11.2	8.8	20.0	40.0	46.4
137.5°	9.6	7.2	14.4	32.0	39.2
140°	8.0	6.4	8.8	24.8	31.2
142.5°	6.4	4.8	4.8	19.2	24.0
145°	5.6	4.0	3.2	13.6	17.6
147.5°	4.8	4.0	2.4	8.0	11.2
150°	4.0	3.2	2.4	3.2	6.4
152.5°	4.0	4.0	2.4	1.6	1.6
155°	4.0	4.0	3.2	1.6	0.8
157.5°	4.0	4.0	3.2	1.6	0.8
160°	4.0	4.0	3.2	1.6	0.8
162.5°	4.8	4.0	3.2	1.6	0.8
165°	4.8	4.0	3.2	1.6	0.8
167.5°	4.8	4.8	4.0	2.4	1.6
170°	4.8	4.8	4.0	2.4	1.6
172.5°	4.8	4.8	4.0	2.4	1.6
175°	4.8	4.8	4.0	2.4	2.4
177.5°	4.8	4.8	4.0	2.4	2.4
180°	4.0	4.0	4.0	4.0	4.0

(END OF REPORT)