

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: P397434

Luminaire Tested: **VRVT4S-LD5-15-DRF-LG52-CD2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397434  
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-LD5-15-DRF-LG52-CD2-U  
Description:  
Light Source: -  
Ballast/Driver: -

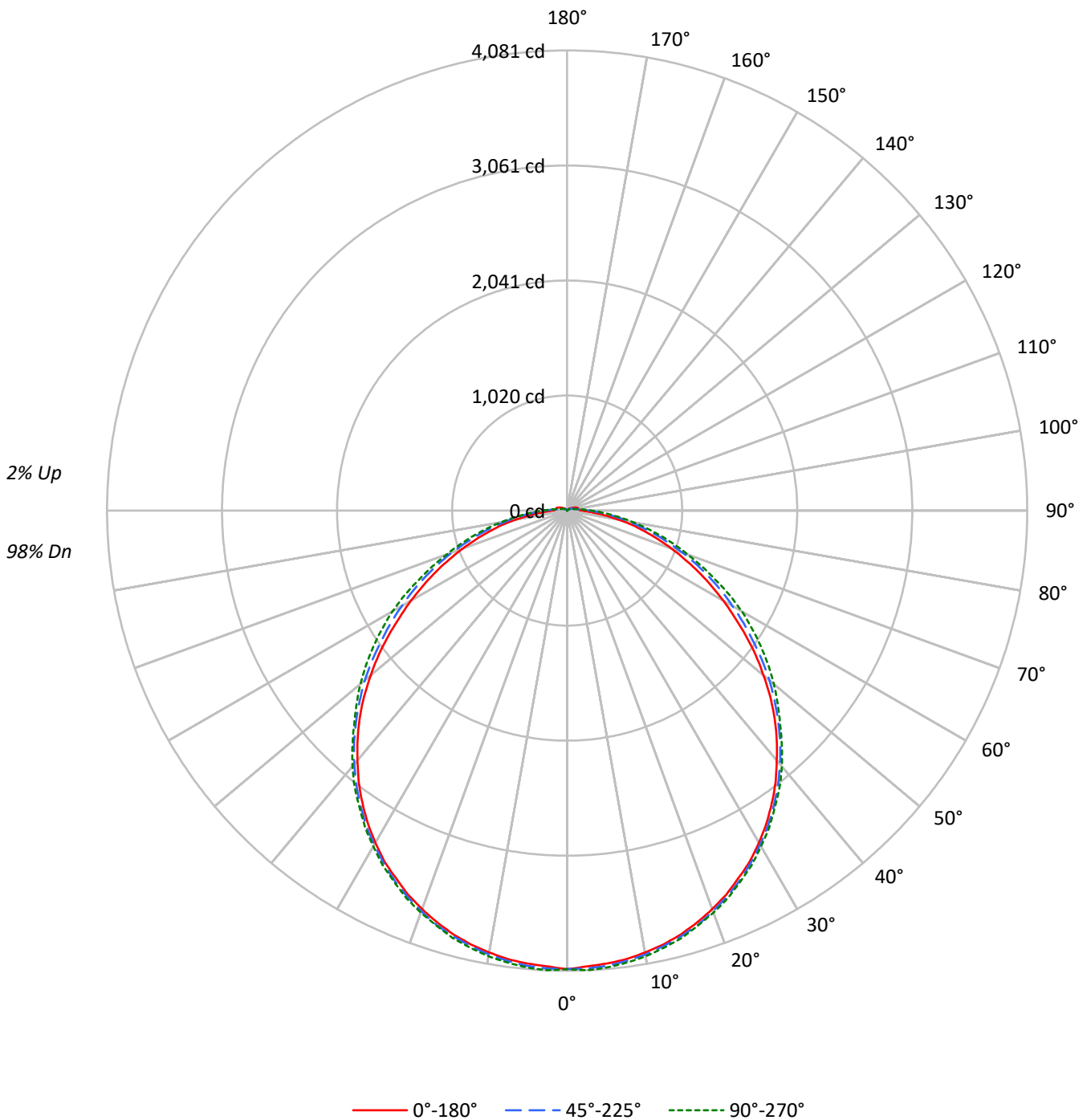
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11856.7 lumens  
Efficiency: N/A  
Efficacy: 46.0 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): 257.8  
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	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°	19402	19402	19402
5°	19114	18998	19098
10°	18879	18556	18685
15°	18626	18100	18257
20°	18300	17611	17773
25°	17928	17085	17262
30°	17530	16493	16719
35°	17009	15857	16102
40°	16369	15140	15457
45°	15683	14312	14639
50°	14770	13424	13934
55°	13737	12348	13108
60°	12646	11304	12199
65°	11528	10222	10940
70°	10340	9000	9704
75°	9076	7666	8462
80°	7560	6292	7111
85°	5614	4887	5597



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	385.0	3.2
10°-20°	1102.1	9.3
20°-30°	1666.7	14.1
30°-40°	1996.4	16.8
40°-50°	2039.1	17.2
50°-60°	1805.3	15.2
60°-70°	1368.4	11.5
70°-80°	843.5	7.1
80°-90°	373.2	3.1
90°-100°	134.1	1.1
100°-110°	71.9	0.6
110°-120°	42.9	0.4
120°-130°	19.8	0.2
130°-140°	6.1	0.1
140°-150°	1.2	0.0
150°-160°	0.5	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	3153.8	26.6
0°-40°	5150.2	43.4
0°-60°	8994.6	75.9
0°-90°	11579.7	97.7
90°-120°	248.8	2.1
90°-150°	275.9	2.3
90°-180°	277.0	2.3
0°-180°	11856.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4066	4066	4066	4066	4066	
5°	4033	4041	4053	4064	4068	383
15°	3892	3895	3908	3917	3925	1098
25°	3596	3606	3621	3632	3632	1658
35°	3166	3176	3195	3218	3211	1979
45°	2603	2618	2647	2678	2670	2003
55°	1934	1973	2010	2074	2095	1731
65°	1284	1318	1387	1441	1449	1273
75°	713	746	801	843	854	759
85°	243	291	342	372	372	248
90°	128	161	198	216	215	73
95°	105	105	115	126	126	85
105°	94	80	59	54	55	98
115°	62	50	39	34	35	62
125°	33	26	18	16	19	30
135°	14	12	4	4	6	12
145°	5	3	1	0	0	3
155°	2	2	2	1	0	1
165°	2	2	2	1	1	1
175°	2	2	2	2	1	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4066.2	4066.2	4066.2	4066.2	4066.2
2.5°	4046.2	4051.0	4063.8	4076.6	4080.6
5°	4032.6	4040.6	4052.6	4063.8	4067.8
7.5°	4012.6	4019.0	4029.4	4040.6	4043.8
10°	3979.0	3986.2	3997.4	4007.8	4013.4
12.5°	3941.4	3944.6	3955.0	3967.0	3970.2
15°	3891.8	3895.0	3907.8	3916.6	3924.6
17.5°	3830.2	3833.4	3852.6	3856.6	3857.4
20°	3761.4	3766.2	3781.4	3788.6	3794.2
22.5°	3686.2	3692.6	3704.6	3713.4	3721.4
25°	3595.8	3606.2	3620.6	3631.8	3631.8
27.5°	3508.6	3510.2	3523.8	3535.8	3543.8
30°	3402.2	3403.8	3422.2	3435.8	3439.0
32.5°	3289.5	3295.9	3315.1	3329.5	3333.5
35°	3165.5	3175.9	3195.1	3217.5	3211.1
37.5°	3036.7	3042.3	3069.5	3087.9	3095.1
40°	2892.7	2908.7	2936.7	2956.7	2962.3
42.5°	2751.9	2766.3	2796.7	2815.9	2818.3
45°	2603.1	2617.5	2647.1	2677.5	2670.3
47.5°	2442.3	2464.7	2494.3	2526.3	2531.9
50°	2274.3	2307.1	2343.1	2369.5	2393.5
52.5°	2109.5	2135.9	2177.5	2224.7	2247.1
55°	1934.3	1972.7	2010.3	2073.5	2095.1
57.5°	1760.7	1807.1	1853.5	1923.1	1942.3
60°	1600.7	1637.5	1693.5	1761.5	1789.5
62.5°	1437.5	1479.9	1542.3	1604.7	1623.9
65°	1283.9	1317.5	1387.1	1440.7	1448.7
67.5°	1129.5	1169.5	1235.1	1291.1	1294.3
70°	985.6	1021.6	1084.8	1131.9	1136.7
72.5°	846.4	883.2	936.8	984.8	994.4
75°	712.8	746.4	800.8	843.2	854.4
77.5°	594.4	619.2	667.2	715.2	719.2
80°	462.4	491.2	551.2	591.2	597.6
82.5°	352.0	386.4	440.0	476.0	477.6
85°	243.2	291.2	342.4	372.0	372.0
87.5°	168.0	218.4	264.0	284.0	286.4
90°	128.0	160.8	198.4	216.0	215.2
92.5°	111.2	126.4	150.4	164.8	162.4
95°	104.8	104.8	115.2	126.4	125.6
97.5°	101.6	95.2	91.2	98.4	97.6
100°	100.8	89.6	75.2	78.4	79.2
102.5°	98.4	84.8	65.6	64.8	65.6
105°	93.6	80.0	59.2	54.4	55.2
107.5°	87.2	73.6	54.4	48.0	48.8
110°	79.2	65.6	49.6	43.2	43.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	71.2	57.6	44.8	38.4	39.2
115°	61.6	49.6	39.2	33.6	35.2
117.5°	53.6	43.2	34.4	28.8	31.2
120°	45.6	37.6	28.0	24.0	27.2
122.5°	38.4	32.0	22.4	20.0	23.2
125°	32.8	26.4	17.6	16.0	19.2
127.5°	27.2	22.4	12.8	12.8	15.2
130°	22.4	18.4	8.0	9.6	12.0
132.5°	18.4	15.2	5.6	6.4	8.8
135°	14.4	12.0	4.0	4.0	6.4
137.5°	12.0	8.8	2.4	1.6	3.2
140°	8.8	6.4	1.6	0.0	0.8
142.5°	7.2	4.8	0.8	0.0	0.0
145°	4.8	3.2	0.8	0.0	0.0
147.5°	3.2	1.6	0.8	0.8	0.0
150°	1.6	1.6	0.8	0.8	0.0
152.5°	1.6	1.6	0.8	0.8	0.0
155°	1.6	1.6	1.6	0.8	0.0
157.5°	1.6	1.6	1.6	0.8	0.0
160°	1.6	1.6	1.6	0.8	0.8
162.5°	2.4	2.4	1.6	0.8	0.8
165°	2.4	2.4	1.6	0.8	0.8
167.5°	2.4	2.4	1.6	1.6	0.8
170°	2.4	2.4	1.6	0.8	0.8
172.5°	2.4	2.4	1.6	1.6	0.8
175°	2.4	2.4	2.4	1.6	0.8
177.5°	2.4	2.4	2.4	1.6	0.8
180°	2.4	2.4	2.4	2.4	2.4

(END OF REPORT)