

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: P397400

Luminaire Tested: **VRVT4LED-LD5-30-DR-UNV-LA59-CD3-WL-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397400  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-367-14)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: VRVT4LED-LD5-30-DR-UNV-LA59-CD3-WL-U  
Description:  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

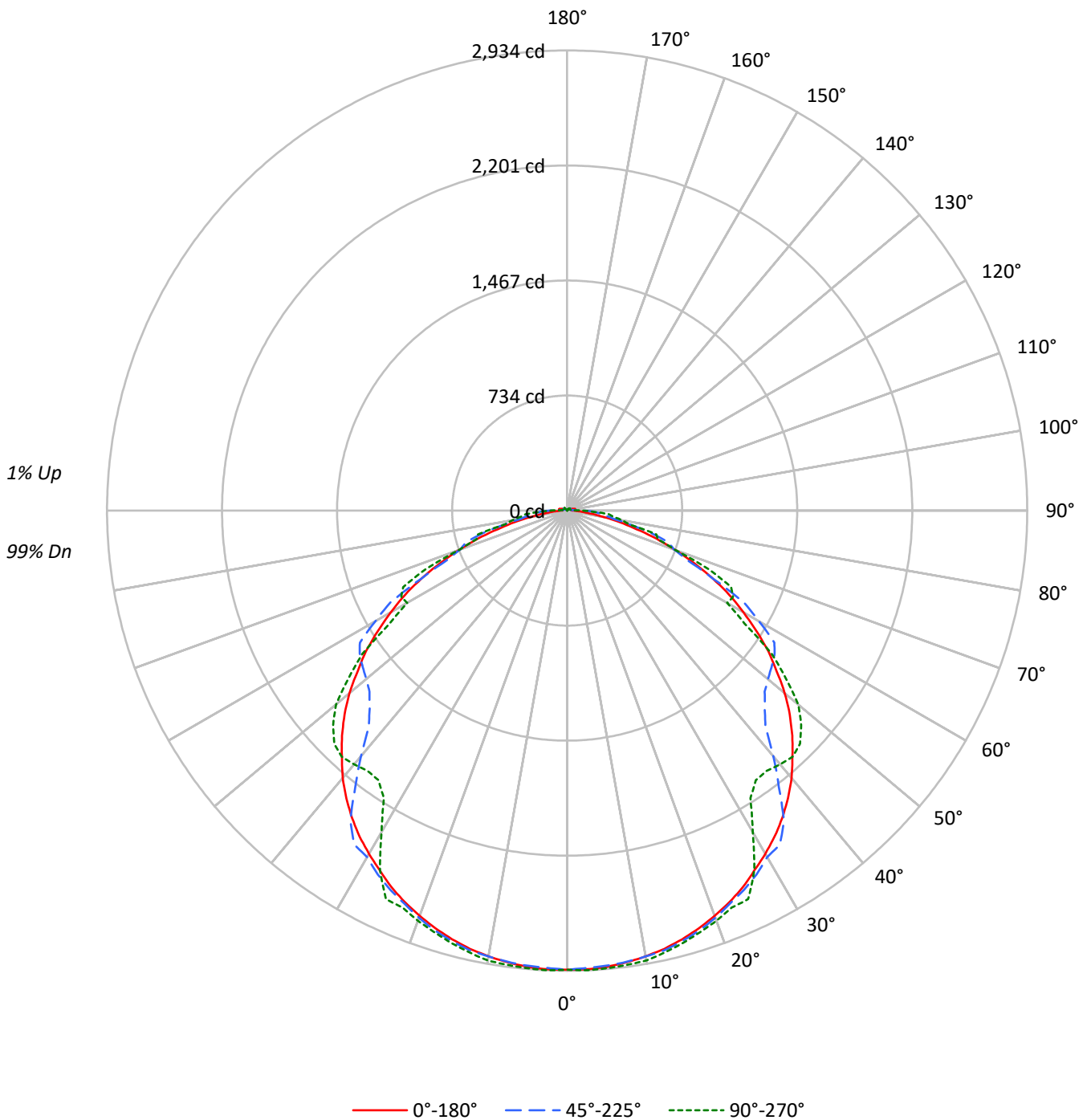
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8553.4 lumens  
Efficiency: N/A  
Efficacy: 24.1 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 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): 355.6  
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	105	105	105	101	101	101	99
1	108	103	99	95	105	101	97	94	97	93	90	92	90	87	89	86	84	82
2	98	90	83	78	96	88	82	76	84	79	74	81	76	73	78	74	71	68
3	90	79	71	64	87	77	70	64	74	68	62	71	66	61	69	64	60	58
4	82	70	61	55	80	69	60	54	66	59	53	63	57	52	61	56	51	49
5	75	63	54	47	73	61	53	47	59	52	46	57	50	45	55	49	45	42
6	70	56	47	41	68	55	47	41	53	46	40	51	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	45	39	35	33
8	60	47	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	38	32	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°	7333	7333	7333
5°	7304	7191	7213
10°	7263	7078	7110
15°	7223	6971	6955
20°	7173	6837	6823
25°	7124	6708	6793
30°	7062	6573	6012
35°	7015	6414	5494
40°	6927	5675	5750
45°	6780	5205	6001
50°	6583	5197	5832
55°	6297	5406	5184
60°	5886	5173	4167
65°	5370	4176	4514
70°	4604	3350	3217
75°	3625	3009	3011
80°	2592	1958	2149
85°	1650	1767	2045



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	278.0	3.2
10°-20°	802.8	9.4
20°-30°	1228.0	14.4
30°-40°	1436.5	16.8
40°-50°	1526.2	17.8
50°-60°	1406.0	16.4
60°-70°	1005.3	11.8
70°-80°	544.8	6.4
80°-90°	204.9	2.4
90°-100°	47.5	0.6
100°-110°	28.4	0.3
110°-120°	18.6	0.2
120°-130°	14.1	0.2
130°-140°	8.2	0.1
140°-150°	2.5	0.0
150°-160°	0.9	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	2308.8	27.0
0°-40°	3745.3	43.8
0°-60°	6677.5	78.1
0°-90°	8432.4	98.6
90°-120°	94.5	1.1
90°-150°	119.3	1.4
90°-180°	121.0	1.4
0°-180°	8553.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2927	2927	2927	2927	2927	
5°	2920	2920	2913	2923	2928	278
15°	2830	2837	2841	2853	2854	799
25°	2650	2658	2668	2696	2733	1221
35°	2391	2394	2410	2092	2098	1495
45°	2030	2039	1781	2013	2101	1564
55°	1567	1514	1614	1655	1594	1395
65°	1024	927	1026	1081	1154	1009
75°	459	479	558	533	590	497
85°	97	132	211	235	266	109
90°	31	78	112	99	102	20
95°	39	37	29	32	32	35
105°	43	33	23	22	21	45
115°	21	21	18	16	16	21
125°	10	9	18	20	16	9
135°	5	4	11	12	25	4
145°	2	2	2	4	5	2
155°	2	2	2	1	1	1
165°	2	2	2	2	1	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°	2927.1	2927.1	2927.1	2927.1	2927.1
2.5°	2927.7	2928.0	2918.5	2927.7	2933.6
5°	2919.9	2920.4	2912.9	2922.9	2928.5
7.5°	2905.3	2909.2	2902.2	2915.9	2921.3
10°	2885.7	2888.8	2886.8	2907.5	2913.4
12.5°	2861.9	2864.1	2871.1	2880.9	2885.1
15°	2830.3	2836.7	2841.2	2852.9	2854.3
17.5°	2792.7	2802.8	2806.5	2814.0	2818.2
20°	2749.9	2761.7	2763.1	2776.8	2783.2
22.5°	2702.6	2712.7	2713.2	2732.5	2740.1
25°	2650.2	2657.8	2667.6	2696.4	2732.8
27.5°	2586.4	2597.3	2615.5	2641.8	2585.8
30°	2526.7	2537.1	2551.1	2461.5	2366.3
32.5°	2463.5	2467.4	2525.6	2277.0	2174.5
35°	2391.2	2394.3	2409.7	2092.5	2098.3
37.5°	2312.8	2308.9	2217.3	2029.5	2090.8
40°	2226.0	2228.3	2044.9	2009.3	2112.6
42.5°	2126.1	2136.1	1870.1	2027.8	2128.6
45°	2029.7	2039.3	1781.4	2012.9	2100.6
47.5°	1925.3	1946.0	1708.6	2018.8	2023.9
50°	1811.3	1859.2	1671.3	1914.1	1924.5
52.5°	1684.8	1711.7	1641.9	1796.5	1758.7
55°	1566.6	1514.0	1613.7	1655.1	1593.8
57.5°	1433.1	1328.3	1566.9	1465.0	1342.1
60°	1298.1	1169.9	1412.6	1225.0	1177.4
62.5°	1167.1	1041.1	1271.2	1059.8	1192.5
65°	1023.7	927.1	1025.7	1080.8	1153.6
67.5°	874.7	811.4	832.4	1021.7	975.8
70°	733.3	690.2	724.6	789.9	728.8
72.5°	596.1	587.4	676.5	642.3	606.2
75°	459.2	478.8	557.5	533.4	589.7
77.5°	343.8	371.0	408.5	457.2	404.3
80°	241.4	279.4	299.3	295.1	351.7
82.5°	153.2	184.5	245.8	270.8	297.9
85°	97.2	132.4	210.8	234.6	266.3
87.5°	59.9	108.1	167.4	175.6	157.4
90°	31.4	77.8	111.7	98.6	102.2
92.5°	26.6	58.2	58.2	49.6	45.6
95°	38.6	36.7	29.4	31.6	31.6
97.5°	51.2	28.6	26.0	29.7	31.1
100°	52.1	28.6	24.4	24.6	24.9
102.5°	49.0	32.8	23.0	22.1	21.3
105°	43.1	32.8	23.0	21.6	21.0
107.5°	36.4	30.0	21.6	21.8	21.8
110°	30.2	26.3	21.0	19.6	19.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	24.9	23.2	19.9	17.9	18.2
115°	20.7	20.7	17.9	16.2	16.2
117.5°	17.1	18.2	18.5	14.6	14.6
120°	14.0	14.8	19.6	13.4	13.7
122.5°	11.8	11.5	23.8	17.9	13.2
125°	9.8	8.7	18.5	19.6	16.0
127.5°	8.1	6.7	23.0	24.4	22.4
130°	6.7	5.6	12.3	18.5	21.8
132.5°	5.6	4.5	12.0	28.3	18.8
135°	4.8	3.9	10.9	11.5	24.9
137.5°	3.9	3.1	5.3	12.3	9.8
140°	3.4	2.8	3.9	15.4	15.4
142.5°	2.8	2.5	2.8	5.6	9.5
145°	2.5	2.2	2.2	4.5	4.8
147.5°	2.2	2.0	2.0	4.2	4.2
150°	2.0	2.0	2.0	2.8	3.6
152.5°	2.0	2.0	2.0	1.7	1.7
155°	2.0	2.0	2.0	1.4	0.8
157.5°	2.0	2.0	2.2	1.7	0.8
160°	2.2	2.2	2.2	1.7	1.1
162.5°	2.2	2.2	2.2	1.7	1.1
165°	2.2	2.2	2.5	2.0	1.1
167.5°	2.2	2.5	2.5	2.0	1.4
170°	2.2	2.5	2.5	2.0	1.4
172.5°	2.2	2.5	2.5	2.0	1.4
175°	2.5	2.5	2.5	2.2	1.7
177.5°	2.5	2.5	2.5	2.2	1.7
180°	2.2	2.2	2.2	2.2	2.2

(END OF REPORT)