

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: P397448

Luminaire Tested: **VRVT4S-LD5-18-PC-LA59-CD2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P397448  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1801-511-6)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: VRVT4S-LD5-18-PC-LA59-CD2-U  
Description:  
Light Source: -  
Ballast/Driver: -

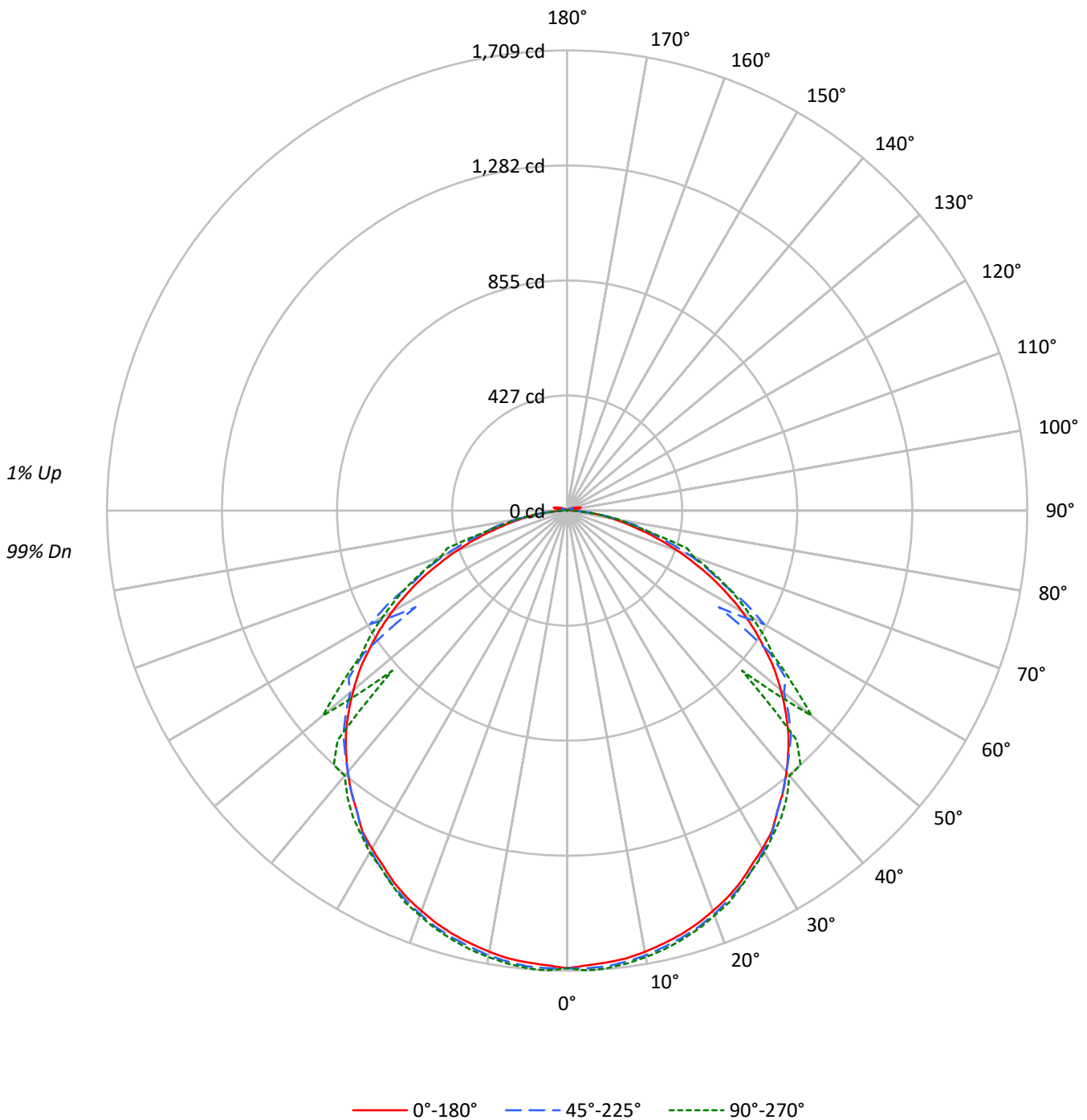
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5002.0 lumens  
Efficiency: N/A  
Efficacy: 23.8 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.28 / 1.4  
Luminous Opening: Rectangular w/ Sides (W: 1.08' x L: 2.08' x H: 0.25')  
CIE Type: Direct  
  
Input Watts (W): 210.4  
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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99				
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83				
2	99	90	83	78	96	88	82	77	85	79	75	81	77	73	78	74	71	69				
3	90	79	71	64	87	77	70	64	74	68	62	71	66	61	69	64	60	58				
4	82	70	61	54	80	69	60	54	66	59	53	63	57	52	61	56	51	49				
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	42				
6	70	56	47	41	68	55	47	40	53	46	40	51	45	40	50	44	39	37				
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	45	39	35	33				
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29				
9	56	43	34	29	55	42	34	29	41	33	28	40	33	28	38	32	28	26				
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24				

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

	0°	45°	90°
0°	8111	8111	8111
5°	7984	7964	8009
10°	7896	7787	7840
15°	7801	7607	7674
20°	7699	7430	7496
25°	7595	7237	7302
30°	7471	7031	7127
35°	7316	6755	6958
40°	7173	6531	6704
45°	6997	6356	6601
50°	6728	6023	6893
55°	6367	5638	5830
60°	5926	5637	5396
65°	5346	4643	4861
70°	4591	4012	4251
75°	3653	3087	3260
80°	2792	2198	2322
85°	1780	1123	984



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.3	3.2
10°-20°	463.6	9.3
20°-30°	706.0	14.1
30°-40°	859.0	17.2
40°-50°	894.7	17.9
50°-60°	817.7	16.3
60°-70°	622.7	12.4
70°-80°	338.0	6.8
80°-90°	93.1	1.9
90°-100°	11.9	0.2
100°-110°	16.2	0.3
110°-120°	10.8	0.2
120°-130°	4.2	0.1
130°-140°	1.7	0.0
140°-150°	0.5	0.0
150°-160°	0.3	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	1330.9	26.6
0°-40°	2189.8	43.8
0°-60°	3902.2	78.0
0°-90°	4955.9	99.1
90°-120°	38.9	0.8
90°-150°	45.3	0.9
90°-180°	46.0	0.9
0°-180°	5002.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1700	1700	1700	1700	1700	
5°	1684	1691	1699	1705	1706	160
15°	1630	1638	1642	1649	1650	460
25°	1523	1531	1534	1536	1536	702
35°	1362	1371	1361	1378	1388	854
45°	1161	1164	1176	1232	1204	894
55°	897	899	918	980	932	802
65°	595	613	630	643	644	587
75°	287	319	322	329	329	309
85°	77	84	79	65	65	83
90°	15	22	21	19	18	11
95°	12	10	11	6	6	18
105°	44	57	6	6	5	45
115°	23	14	23	3	3	23
125°	10	8	3	1	1	10
135°	4	3	1	1	1	4
145°	1	1	1	1	0	1
155°	1	1	1	1	1	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°	1699.8	1699.8	1699.8	1699.8	1699.8
2.5°	1690.1	1695.4	1701.1	1707.1	1709.4
5°	1684.4	1691.4	1698.8	1705.1	1705.8
7.5°	1677.4	1684.4	1689.4	1694.8	1696.4
10°	1664.1	1674.1	1677.4	1681.1	1684.1
12.5°	1647.7	1657.1	1660.1	1667.4	1669.1
15°	1630.0	1637.7	1642.4	1648.7	1649.7
17.5°	1608.4	1616.0	1621.4	1625.1	1627.4
20°	1582.4	1588.7	1595.4	1598.0	1600.4
22.5°	1555.3	1559.3	1565.7	1570.0	1574.0
25°	1523.3	1531.0	1533.7	1536.3	1536.3
27.5°	1484.0	1495.3	1497.3	1493.3	1496.6
30°	1450.0	1457.6	1458.9	1454.3	1465.9
32.5°	1413.9	1414.3	1418.3	1417.2	1424.9
35°	1361.6	1371.2	1361.2	1377.9	1387.6
37.5°	1316.8	1324.8	1316.5	1341.9	1340.2
40°	1267.5	1275.1	1266.8	1288.5	1284.8
42.5°	1215.8	1222.5	1220.5	1230.5	1282.8
45°	1161.4	1164.1	1175.7	1231.5	1204.1
47.5°	1100.0	1102.4	1114.7	1094.7	880.6
50°	1036.0	1038.4	1051.3	827.2	1184.1
52.5°	971.3	968.0	1022.7	1112.4	1053.0
55°	896.6	899.2	917.9	980.0	931.9
57.5°	824.9	830.9	668.4	862.2	866.9
60°	750.1	761.2	844.5	789.2	791.5
62.5°	672.8	691.5	746.8	716.5	718.8
65°	595.4	613.4	630.1	643.1	643.7
67.5°	513.0	540.7	562.0	557.0	570.7
70°	437.6	424.9	483.6	482.0	498.0
72.5°	359.6	390.6	397.3	344.9	467.3
75°	286.9	318.9	322.5	329.2	329.2
77.5°	222.2	240.8	268.5	255.5	246.1
80°	170.8	176.1	192.5	198.5	195.1
82.5°	127.1	119.8	132.7	138.4	125.4
85°	77.1	83.7	78.7	65.4	65.4
87.5°	31.7	40.0	35.4	32.4	28.7
90°	15.3	22.0	20.7	19.0	18.3
92.5°	16.0	15.3	11.0	7.7	6.0
95°	12.3	10.0	10.7	6.0	5.7
97.5°	23.4	7.3	7.3	5.3	4.3
100°	43.4	6.3	6.7	5.3	3.7
102.5°	51.7	9.4	6.7	5.3	5.3
105°	44.4	57.4	5.7	6.0	5.3
107.5°	37.7	26.0	4.3	5.3	6.0
110°	31.7	18.3	3.7	5.0	5.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	26.7	13.7	3.7	3.7	5.0
115°	23.0	14.3	22.7	3.0	3.0
117.5°	19.3	22.7	10.0	2.3	3.0
120°	15.7	13.0	6.0	3.0	2.0
122.5°	12.3	9.7	4.0	1.0	2.0
125°	10.3	7.7	3.0	0.7	1.0
127.5°	8.3	6.3	2.0	0.7	0.7
130°	6.7	6.0	1.3	0.7	0.7
132.5°	5.7	4.3	3.7	0.7	0.7
135°	4.3	3.3	1.3	0.7	0.7
137.5°	3.3	2.7	1.0	0.7	0.7
140°	2.7	2.0	0.7	0.7	0.3
142.5°	2.0	1.3	0.7	0.7	0.3
145°	1.3	0.7	0.7	0.7	0.3
147.5°	1.0	0.7	0.7	0.7	0.7
150°	0.7	0.7	0.7	0.7	0.7
152.5°	0.7	0.7	0.7	0.7	0.7
155°	0.7	0.7	0.7	0.7	0.7
157.5°	0.7	0.7	0.7	0.7	0.7
160°	0.7	0.7	0.7	0.7	0.7
162.5°	1.0	1.0	1.0	1.0	0.7
165°	1.0	1.0	1.0	1.0	1.0
167.5°	1.0	1.0	1.0	1.0	1.0
170°	1.0	1.0	1.0	1.0	1.0
172.5°	1.0	1.0	1.0	1.0	1.0
175°	1.0	1.0	1.0	1.0	1.0
177.5°	1.0	1.0	1.0	1.0	1.0
180°	1.0	1.0	1.0	1.0	1.0

(END OF REPORT)