

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: P397459

Luminaire Tested: **VRVT4S-LD5-9-DRF-LR63-CD1-U**

Issue Date: 3/3/2020



**Test Information**

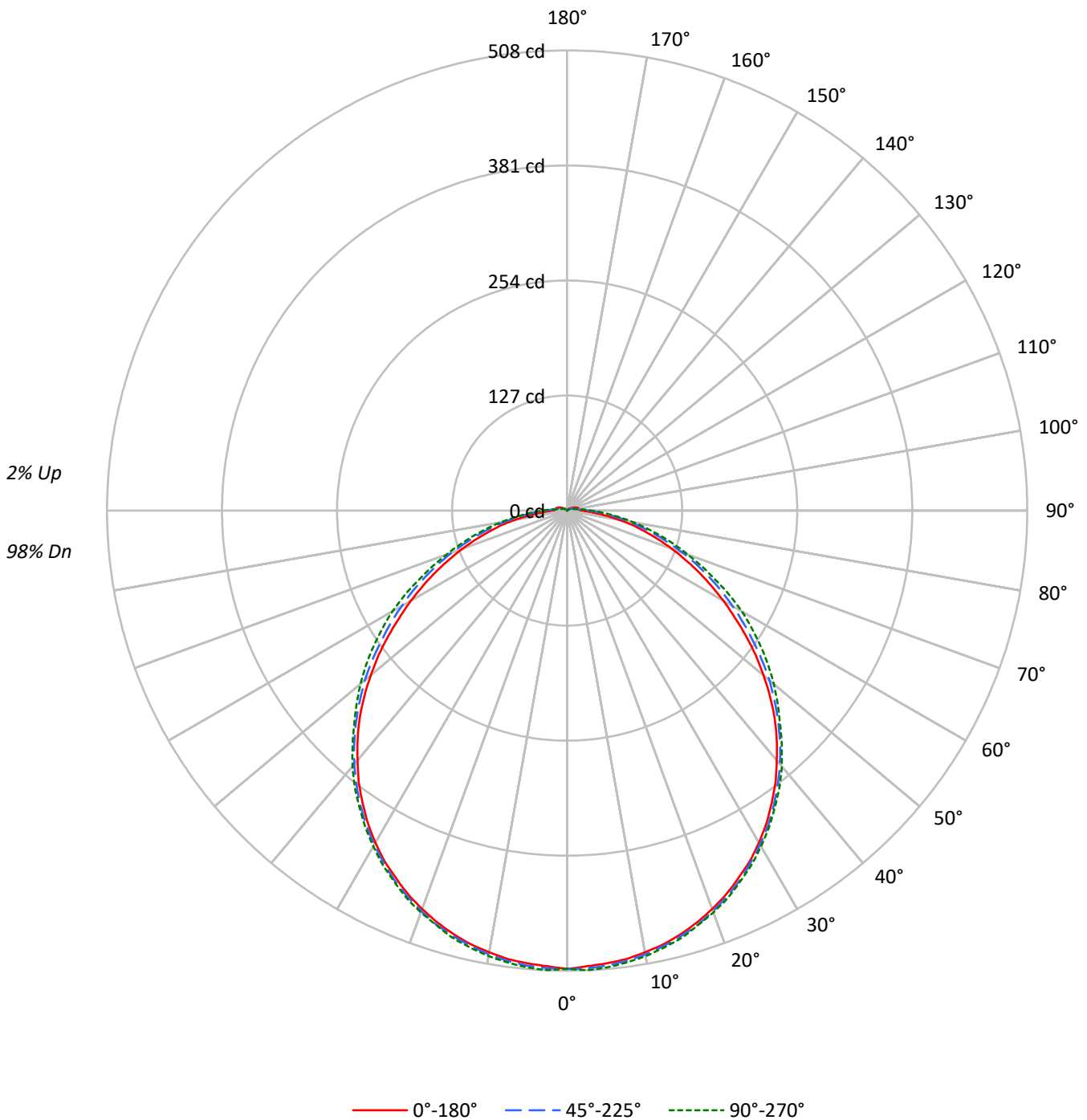
Test Method: LM-79-08  
Report Number: P397459  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1801-511-5)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: VRVT4S-LD5-9-DRF-LR63-CD1-U  
Description:  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1475.6 lumens  
Efficiency: N/A  
Efficacy: 10.1 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): 146.4  
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

TEST NUMBER: P397459  
CATALOG NUMBER: VRVT4S-LD5-9-DRF-LR63-CD1-U

### 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	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°	2414	2414	2414
5°	2378	2364	2377
10°	2350	2309	2325
15°	2318	2252	2272
20°	2277	2192	2212
25°	2231	2126	2148
30°	2182	2053	2081
35°	2117	1973	2004
40°	2037	1884	1923
45°	1951	1781	1822
50°	1838	1671	1734
55°	1709	1537	1631
60°	1574	1407	1518
65°	1435	1272	1362
70°	1287	1120	1208
75°	1129	953	1053
80°	940	783	885
85°	699	608	697



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.9	3.2
10°-20°	137.2	9.3
20°-30°	207.4	14.1
30°-40°	248.4	16.8
40°-50°	253.8	17.2
50°-60°	224.7	15.2
60°-70°	170.3	11.5
70°-80°	105.0	7.1
80°-90°	46.4	3.1
90°-100°	16.7	1.1
100°-110°	9.0	0.6
110°-120°	5.4	0.4
120°-130°	2.5	0.2
130°-140°	0.8	0.1
140°-150°	0.1	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	392.5	26.6
0°-40°	640.9	43.4
0°-60°	1119.3	75.9
0°-90°	1441.0	97.7
90°-120°	31.0	2.1
90°-150°	34.4	2.3
90°-180°	35.0	2.4
0°-180°	1475.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	506	506	506	506	506	
5°	502	503	504	506	506	48
15°	484	485	486	487	488	137
25°	448	449	451	452	452	206
35°	394	395	398	400	400	246
45°	324	326	329	333	332	249
55°	241	246	250	258	261	215
65°	160	164	173	179	180	158
75°	89	93	100	105	106	94
85°	30	36	43	46	46	31
90°	16	20	25	27	27	9
95°	13	13	14	16	16	11
105°	12	10	7	7	7	12
115°	8	6	5	4	4	8
125°	4	3	2	2	2	4
135°	2	2	0	0	1	1
145°	1	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	506.0	506.0	506.0	506.0	506.0
2.5°	503.5	504.1	505.7	507.3	507.8
5°	501.8	502.8	504.3	505.7	506.2
7.5°	499.4	500.1	501.4	502.8	503.2
10°	495.2	496.1	497.5	498.8	499.5
12.5°	490.5	490.9	492.2	493.7	494.1
15°	484.3	484.7	486.3	487.4	488.4
17.5°	476.7	477.1	479.4	479.9	480.0
20°	468.1	468.7	470.6	471.5	472.2
22.5°	458.7	459.5	461.0	462.1	463.1
25°	447.5	448.8	450.6	452.0	452.0
27.5°	436.6	436.8	438.5	440.0	441.0
30°	423.4	423.6	425.9	427.6	428.0
32.5°	409.4	410.2	412.5	414.3	414.8
35°	393.9	395.2	397.6	400.4	399.6
37.5°	377.9	378.6	382.0	384.3	385.2
40°	360.0	362.0	365.5	368.0	368.6
42.5°	342.5	344.3	348.0	350.4	350.7
45°	323.9	325.7	329.4	333.2	332.3
47.5°	303.9	306.7	310.4	314.4	315.1
50°	283.0	287.1	291.6	294.9	297.9
52.5°	262.5	265.8	271.0	276.8	279.6
55°	240.7	245.5	250.2	258.0	260.7
57.5°	219.1	224.9	230.7	239.3	241.7
60°	199.2	203.8	210.8	219.2	222.7
62.5°	178.9	184.2	191.9	199.7	202.1
65°	159.8	164.0	172.6	179.3	180.3
67.5°	140.6	145.6	153.7	160.7	161.1
70°	122.7	127.1	135.0	140.9	141.5
72.5°	105.3	109.9	116.6	122.5	123.7
75°	88.7	92.9	99.6	104.9	106.3
77.5°	74.0	77.1	83.0	89.0	89.5
80°	57.5	61.1	68.6	73.6	74.4
82.5°	43.8	48.1	54.8	59.2	59.4
85°	30.3	36.2	42.6	46.3	46.3
87.5°	20.9	27.2	32.8	35.3	35.6
90°	15.9	20.0	24.7	26.9	26.8
92.5°	13.8	15.7	18.7	20.5	20.2
95°	13.0	13.0	14.3	15.7	15.6
97.5°	12.6	11.8	11.3	12.2	12.1
100°	12.5	11.2	9.4	9.8	9.9
102.5°	12.2	10.6	8.2	8.1	8.2
105°	11.6	10.0	7.4	6.8	6.9
107.5°	10.8	9.2	6.8	6.0	6.1
110°	9.9	8.2	6.2	5.4	5.4



TEST NUMBER: P397459

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	8.9	7.2	5.6	4.8	4.9
115°	7.7	6.2	4.9	4.2	4.4
117.5°	6.7	5.4	4.3	3.6	3.9
120°	5.7	4.7	3.5	3.0	3.4
122.5°	4.8	4.0	2.8	2.5	2.9
125°	4.1	3.3	2.2	2.0	2.4
127.5°	3.4	2.8	1.6	1.6	1.9
130°	2.8	2.3	1.0	1.2	1.5
132.5°	2.3	1.9	0.7	0.8	1.1
135°	1.8	1.5	0.5	0.5	0.8
137.5°	1.5	1.1	0.3	0.2	0.4
140°	1.1	0.8	0.2	0.0	0.1
142.5°	0.9	0.6	0.1	0.0	0.0
145°	0.6	0.4	0.1	0.0	0.0
147.5°	0.4	0.2	0.1	0.1	0.0
150°	0.2	0.2	0.1	0.1	0.0
152.5°	0.2	0.2	0.1	0.1	0.0
155°	0.2	0.2	0.2	0.1	0.0
157.5°	0.2	0.2	0.2	0.1	0.0
160°	0.2	0.2	0.2	0.1	0.1
162.5°	0.3	0.3	0.2	0.1	0.1
165°	0.3	0.3	0.2	0.1	0.1
167.5°	0.3	0.3	0.2	0.2	0.1
170°	0.3	0.3	0.2	0.1	0.1
172.5°	0.3	0.3	0.2	0.2	0.1
175°	0.3	0.3	0.3	0.2	0.1
177.5°	0.3	0.3	0.3	0.2	0.1
180°	0.3	0.3	0.3	0.3	0.3

(END OF REPORT)