

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: P397235

Luminaire Tested: **4VRVT2-LD5-11-DR-UNV-LA59-CD1-WL-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P397235
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-11)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 4VRVT2-LD5-11-DR-UNV-LA59-CD1-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3012.0 lumens
Efficiency: N/A
Efficacy: 23.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.23 / 1.35
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 4.17' x H: 0.17')
CIE Type: Direct

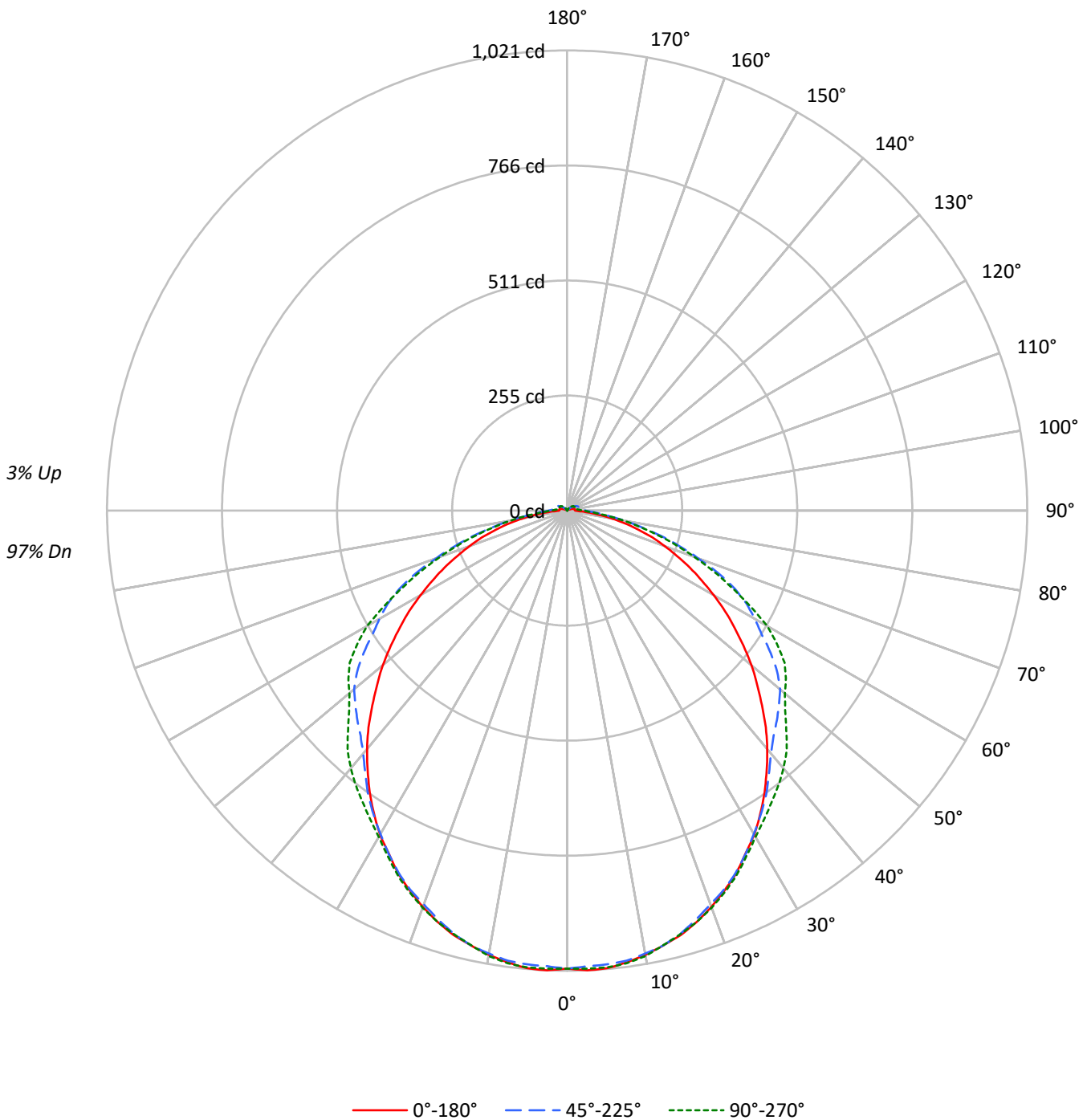
Input Watts (W): 126.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	89	82	76	95	87	81	75	83	77	73	79	75	71	76	72	69	66
3	89	78	70	63	86	76	68	62	73	66	61	70	64	59	67	62	58	56
4	81	69	60	53	79	67	59	53	65	57	52	62	56	51	59	54	50	47
5	75	62	52	46	72	60	52	45	58	50	45	55	49	44	53	48	43	41
6	69	55	46	40	67	54	46	39	52	45	39	50	43	38	48	42	38	36
7	64	50	41	35	62	49	41	35	47	40	34	46	39	34	44	38	33	31
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	40	34	30	28
9	55	42	34	28	54	41	33	28	40	33	28	39	32	27	37	31	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5251	5251	5251
5°	5268	5124	5127
10°	5213	5003	4972
15°	5160	4856	4777
20°	5071	4665	4597
25°	4969	4497	4399
30°	4842	4290	4182
35°	4684	4097	4042
40°	4507	3884	3935
45°	4294	3804	3766
50°	4097	3773	3628
55°	3864	3608	3594
60°	3629	3407	3357
65°	3387	3205	2862
70°	3133	2708	2366
75°	2835	2149	1833
80°	2440	1535	1307
85°	1847	1042	789



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.5	3.2
10°-20°	274.8	9.1
20°-30°	409.6	13.6
30°-40°	484.6	16.1
40°-50°	504.5	16.7
50°-60°	474.6	15.8
60°-70°	380.3	12.6
70°-80°	220.9	7.3
80°-90°	77.9	2.6
90°-100°	30.1	1.0
100°-110°	22.9	0.8
110°-120°	17.4	0.6
120°-130°	10.6	0.4
130°-140°	5.2	0.2
140°-150°	1.7	0.1
150°-160°	0.3	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	780.9	25.9
0°-40°	1265.5	42.0
0°-60°	2244.6	74.5
0°-90°	2923.7	97.1
90°-120°	70.4	2.3
90°-150°	87.9	2.9
90°-180°	88.0	2.9
0°-180°	3012.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	1019	1015	1011	1020	1017	97
15°	975	978	972	974	973	275
25°	888	891	886	893	892	408
35°	763	765	770	783	790	477
45°	611	617	658	690	687	472
55°	454	480	552	575	589	406
65°	301	376	411	407	402	298
75°	163	226	214	209	206	174
85°	45	69	71	68	64	48
90°	17	37	41	38	36	10
95°	18	27	31	27	24	14
105°	14	20	27	22	19	15
115°	7	13	23	21	18	8
125°	3	5	15	17	16	3
135°	1	1	7	11	12	1
145°	1	0	2	5	6	0
155°	0	0	0	0	1	0
165°	0	0	0	0	0	0
175°	1	1	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°	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1021.1	1017.4	1011.9	1019.3	1017.4
5°	1019.3	1014.9	1010.8	1019.6	1017.4
7.5°	1011.2	1010.5	1007.5	1014.9	1013.0
10°	1000.6	1002.8	998.0	1003.9	1003.5
12.5°	988.1	993.6	988.1	989.6	987.4
15°	975.0	978.3	972.0	973.9	972.8
17.5°	956.7	961.4	951.2	960.3	956.7
20°	935.8	940.6	929.9	940.2	937.6
22.5°	912.4	916.8	910.2	917.5	915.7
25°	887.9	890.8	886.0	892.6	891.5
27.5°	857.5	864.4	858.2	866.3	863.0
30°	830.4	833.0	828.6	838.5	835.9
32.5°	797.8	799.7	799.7	808.4	812.8
35°	763.4	765.3	769.7	782.8	790.5
37.5°	727.2	731.2	735.3	761.2	769.7
40°	690.6	693.5	703.4	741.1	746.6
42.5°	652.5	655.5	678.2	719.5	721.3
45°	611.2	617.4	658.0	690.2	687.3
47.5°	572.0	579.7	637.5	652.9	655.8
50°	534.0	542.8	617.0	622.9	630.6
52.5°	493.0	509.8	587.7	595.8	611.9
55°	453.5	480.2	551.5	575.3	588.9
57.5°	415.7	450.5	512.0	549.0	552.6
60°	375.5	425.3	480.5	512.0	512.4
62.5°	337.1	401.1	449.4	461.5	456.4
65°	300.8	376.2	410.6	407.0	401.5
67.5°	263.9	344.4	362.7	354.6	351.0
70°	230.2	310.0	309.3	302.3	300.1
72.5°	198.0	267.2	259.8	253.6	251.8
75°	163.2	226.2	213.7	209.0	206.1
77.5°	131.7	183.7	166.9	165.1	162.8
80°	100.6	140.2	128.8	129.2	127.0
82.5°	69.5	100.6	94.4	93.7	91.1
85°	45.4	69.2	70.6	68.1	64.0
87.5°	24.5	48.3	51.6	49.8	46.8
90°	17.2	37.3	40.6	38.4	35.9
92.5°	17.2	31.5	34.4	31.1	28.9
95°	17.6	27.4	30.7	26.7	24.5
97.5°	17.6	24.9	28.6	24.2	21.6
100°	16.8	23.4	27.8	23.0	20.5
102.5°	15.7	22.0	27.4	22.3	19.8
105°	14.3	20.5	27.1	22.3	19.0
107.5°	12.4	19.0	26.7	22.0	19.0
110°	10.6	17.2	26.0	22.0	18.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.2	15.4	24.9	21.6	18.7
115°	7.3	13.2	23.4	20.9	18.3
117.5°	5.9	11.0	21.6	20.1	17.9
120°	4.8	8.8	19.8	19.4	17.6
122.5°	3.7	6.6	17.6	18.3	16.8
125°	2.9	4.8	15.4	17.2	16.5
127.5°	2.2	3.3	13.2	16.1	15.4
130°	1.8	1.8	11.0	14.6	14.3
132.5°	1.5	1.5	9.2	13.2	13.6
135°	1.1	1.1	7.3	11.3	12.1
137.5°	1.1	0.7	5.5	9.9	10.6
140°	0.7	0.7	4.0	8.1	8.8
142.5°	0.7	0.7	2.5	6.6	7.3
145°	0.7	0.4	1.5	4.8	5.9
147.5°	0.7	0.4	0.7	3.3	4.4
150°	0.4	0.4	0.4	2.2	2.9
152.5°	0.4	0.4	0.4	1.1	1.5
155°	0.4	0.4	0.4	0.4	0.7
157.5°	0.4	0.4	0.4	0.4	0.0
160°	0.4	0.4	0.4	0.4	0.0
162.5°	0.4	0.4	0.4	0.4	0.0
165°	0.4	0.4	0.4	0.4	0.0
167.5°	0.7	0.4	0.4	0.4	0.0
170°	0.7	0.4	0.4	0.4	0.0
172.5°	0.7	0.7	0.4	0.4	0.0
175°	0.7	0.7	0.4	0.4	0.4
177.5°	0.7	0.7	0.4	0.4	0.4
180°	0.4	0.4	0.4	0.4	0.4

(END OF REPORT)