

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P315396

Luminaire Tested: **LDA2B15FL8040D010 PINW1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315396  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-15)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA2B15FL8040D010 PINW1MMS  
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, White oculus, matte metallic silver finish  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1258.4 lumens  
Efficiency: N/A  
Efficacy: 89.3 lumens/watt  
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

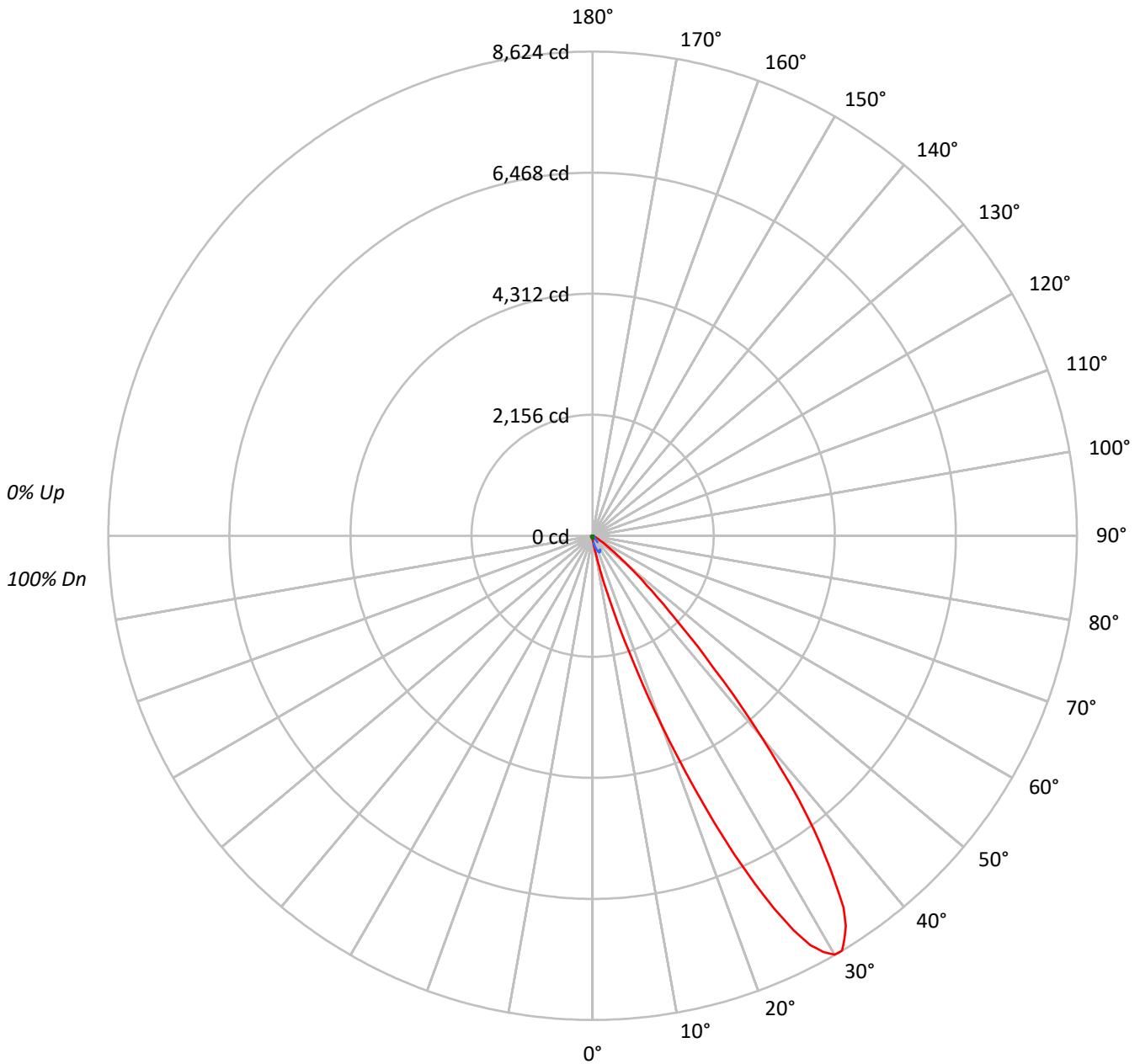
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P315396

CATALOG NUMBER: LDA2B15FL8040D010 PINW1MMS

### Luminous Intensity Polar Plot





TEST NUMBER: P315396

CATALOG NUMBER: LDA2B15FL8040D010 PINW1MMS

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	102	102	102	100																			
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80																			
3	97	89	82	77	95	87	82	77	85	80	75	82	78	74	80	76	73	71																			
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63																			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56																			
6	78	67	59	53	76	66	58	53	64	58	53	62	57	52	61	56	52	50																			
7	72	61	53	48	71	60	53	47	58	52	47	57	51	47	56	51	47	45																			
8	67	55	48	43	66	55	47	42	53	47	42	52	46	42	51	46	42	40																			
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36																			
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	26444	26444	26444
5°	59033	27288	21296
10°	158057	17033	6062
15°	622164	21963	14250
20°	1882108	13493	11078
25°	3724596	11486	9853
30°	4907780	6893	12020
35°	4528630	9998	14575
40°	3016481	8759	19901
45°	1422788	3140	8442
50°	627306	11590	26096
55°	255120	0	26579
60°	105777	7400	23879
65°	36072	8755	17628
70°	30437	17454	44573
75°	17346	25924	58902
80°	0	12785	25855
85°	16982	16982	85476



TEST NUMBER: P315396

CATALOG NUMBER: LDA2B15FL8040D010 PINW1MMS

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	7.3	0.6
10°-20°	77.0	6.1
20°-30°	395.8	31.5
30°-40°	506.8	40.3
40°-50°	194.9	15.5
50°-60°	39.6	3.1
60°-70°	13.4	1.1
70°-80°	15.6	1.2
80°-90°	8.0	0.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	480.1	38.1
0°-40°	986.9	78.4
0°-60°	1221.4	97.1
0°-90°	1258.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1258.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	54	54	54	54	54	
5°	119	98	55	40	43	18
15°	1218	237	43	26	28	467
25°	6842	309	21	17	18	3123
35°	7519	161	17	14	24	4494
45°	2039	40	4	3	12	1753
55°	297	8	0	6	31	307
65°	31	11	8	11	15	43
75°	9	17	14	23	31	12
85°	3	11	3	12	15	2
90°	0	0	0	0	0	



TEST NUMBER: P315396

CATALOG NUMBER: LDA2B15FL8040D010 PINW1MMS

**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6	53.6
2.5°	79.2	68.7	71.7	61.1	67.2	68.7	56.6	74.7	67.2	70.2	61.1
5°	119.2	128.3	117.7	113.2	110.2	113.2	110.2	114.7	111.7	98.1	70.2
7.5°	199.2	181.9	181.9	175.8	180.4	178.9	171.3	175.8	165.3	119.2	80.8
10°	315.5	298.1	296.6	292.1	290.6	277.0	269.4	263.4	241.5	141.1	73.2
12.5°	618.1	603.0	592.4	566.0	547.9	537.3	497.3	476.2	413.6	209.8	93.6
15°	1218.1	1140.4	1160.0	1074.7	1012.1	970.5	887.5	814.3	664.1	237.0	90.6
17.5°	2155.4	2080.0	2029.4	1936.6	1809.0	1698.8	1535.1	1372.8	1067.1	269.4	84.5
20°	3584.8	3465.6	3359.9	3200.7	2955.4	2743.3	2455.0	2144.9	1588.6	307.9	76.2
21°	4212.7	4120.7	3998.4	3788.6	3502.6	3218.8	2873.1	2499.6	1810.5	310.9	68.7
22°	4867.8	4808.2	4647.5	4406.7	4073.1	3735.0	3310.9	2900.3	2046.8	315.5	65.7
23°	5550.1	5487.4	5305.6	5030.1	4655.0	4246.0	3751.6	3264.8	2268.6	321.5	64.1
24°	6218.0	6148.6	5945.5	5637.6	5212.0	4741.8	4183.3	3618.8	2475.4	318.5	67.2
25°	6842.1	6745.5	6531.2	6190.1	5722.9	5195.4	4579.5	3924.4	2657.3	309.4	56.6
26°	7399.1	7288.9	7058.0	6685.9	6175.0	5603.7	4910.1	4208.2	2791.6	301.9	53.6
27°	7882.9	7744.0	7497.2	7107.0	6559.1	5928.2	5192.3	4430.1	2910.1	290.6	43.0
28°	8259.5	8100.2	7849.7	7437.6	6858.7	6181.0	5399.9	4569.0	2980.3	292.1	49.1
29°	8476.8	8354.5	8082.1	7650.4	7041.4	6326.7	5509.3	4645.9	2993.9	269.4	46.0
30°	8614.9	8478.3	8198.3	7747.0	7111.6	6359.9	5522.9	4631.6	2953.9	252.8	43.0
31°	8624.0	8481.3	8196.8	7729.7	7084.4	6304.8	5447.4	4546.3	2867.1	235.5	35.5
32°	8461.7	8351.5	8071.5	7589.3	6937.2	6153.1	5285.2	4402.2	2730.5	200.8	24.2
33°	8278.3	8144.7	7866.3	7379.5	6733.4	5945.5	5051.2	4208.2	2588.6	197.7	30.9
34°	7993.0	7832.3	7558.3	7079.1	6450.4	5649.7	4772.7	3949.4	2407.5	180.4	29.4
35°	7519.1	7433.1	7156.1	6682.9	6072.3	5295.0	4437.6	3664.8	2215.0	160.8	21.1
36°	7044.4	6938.7	6676.8	6219.5	5640.6	4872.4	4059.5	3340.3	1997.7	136.6	16.6
37°	6542.5	6404.4	6165.9	5718.4	5113.9	4451.2	3696.5	3030.9	1820.3	144.1	22.6
38°	5957.6	5911.6	5597.6	5181.0	4622.5	3996.9	3306.3	2704.9	1624.1	134.3	37.0
39°	5314.6	5283.7	4970.5	4590.9	4089.7	3514.6	2907.1	2366.7	1427.9	98.1	12.1
40°	4683.7	4595.4	4373.5	4028.6	3592.4	3075.4	2550.1	2078.4	1258.1	96.6	24.2
42.5°	3174.3	3202.2	2962.2	2715.4	2435.4	2084.5	1734.3	1424.9	880.0	71.7	15.1
45°	2039.2	2045.2	1938.1	1746.4	1563.0	1344.1	1113.2	927.5	567.5	40.0	4.5
47.5°	1298.1	1295.1	1226.4	1116.2	996.2	867.9	723.8	606.0	367.5	30.9	13.6
50°	817.3	814.3	771.3	701.1	633.9	549.4	458.9	390.2	232.4	37.0	15.1
51°	664.1	668.7	632.4	561.5	509.4	428.7	366.0	310.9	181.9	25.7	13.6
52°	547.9	544.9	522.3	462.6	419.6	350.2	298.1	254.3	151.7	22.6	6.0
53°	440.7	442.3	419.6	373.6	332.1	280.0	238.5	197.7	108.7	16.6	4.5
54°	348.7	345.7	338.1	293.6	267.9	221.9	186.4	151.7	93.6	3.0	0.0
55°	296.6	292.1	281.5	243.0	217.4	183.4	148.7	129.8	80.8	7.5	0.0
57.5°	171.3	171.3	165.3	144.1	126.8	113.2	90.6	84.5	41.5	7.5	0.0
60°	107.2	93.6	104.1	89.1	70.2	62.6	52.1	47.5	35.5	13.6	3.0
61°	89.1	71.7	70.2	65.7	61.1	41.5	35.5	38.5	22.6	4.5	3.0
62°	64.1	56.6	61.1	52.1	46.0	32.5	29.4	27.9	13.6	6.0	7.5
63°	58.1	52.1	50.6	38.5	34.0	34.0	25.7	24.2	16.6	12.1	6.0



TEST NUMBER: P315396

CATALOG NUMBER: LDA2B15FL8040D010 PINW1MMS

**CANDELA DISTRIBUTION (continued):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
66°	30.9	25.7	22.6	25.7	15.1	19.6	7.5	21.1	4.5	7.5	4.5
67.5°	24.2	15.1	13.6	16.6	10.6	7.5	10.6	13.6	4.5	7.5	10.6
70°	21.1	10.6	15.1	13.6	10.6	13.6	15.1	15.1	4.5	15.1	13.6
72.5°	21.1	13.6	7.5	6.0	6.0	6.0	6.0	6.0	9.1	21.1	16.6
75°	9.1	9.1	4.5	10.6	6.0	9.1	6.0	15.1	6.0	16.6	13.6
77.5°	6.0	7.5	0.0	7.5	0.0	0.0	4.5	10.6	4.5	12.1	15.1
80°	0.0	7.5	4.5	0.0	3.0	4.5	0.0	1.5	3.0	13.6	6.0
82.5°	3.0	4.5	6.0	3.0	3.0	0.0	0.0	0.0	0.0	9.1	7.5
85°	3.0	6.0	0.0	1.5	6.0	3.0	1.5	7.5	3.0	10.6	12.1
87.5°	0.0	3.0	3.0	0.0	4.5	0.0	4.5	3.0	0.0	9.1	4.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P315396

CATALOG NUMBER: LDA2B15FL8040D010 PINW1MMS

**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
0°	53.6	53.6	53.6	53.6	53.6
2.5°	46.0	41.5	35.5	44.5	37.0
5°	55.1	50.6	40.0	47.5	43.0
7.5°	56.6	47.5	41.5	38.5	43.0
10°	34.0	22.6	16.6	22.6	12.1
12.5°	56.6	40.0	37.0	41.5	46.0
15°	43.0	25.7	25.7	19.6	27.9
17.5°	24.2	19.6	18.1	24.2	27.9
20°	25.7	16.6	13.6	22.6	21.1
21°	22.6	6.0	18.1	18.1	21.1
22°	32.5	15.1	18.1	29.4	30.9
23°	21.1	16.6	13.6	18.1	24.2
24°	30.9	18.1	16.6	22.6	34.0
25°	21.1	16.6	16.6	21.1	18.1
26°	12.1	16.6	12.1	18.1	15.1
27°	9.1	15.1	9.1	13.6	18.1
28°	19.6	24.2	22.6	24.2	21.1
29°	21.1	25.7	21.1	32.5	24.2
30°	12.1	22.6	10.6	24.2	21.1
31°	12.1	16.6	7.5	24.2	21.1
32°	1.5	9.1	4.5	9.1	9.1
33°	9.1	10.6	12.1	19.6	15.1
34°	15.1	18.1	12.1	21.1	18.1
35°	16.6	9.1	13.6	22.6	24.2
36°	4.5	4.5	7.5	18.1	6.0
37°	9.1	25.7	18.1	30.9	18.1
38°	15.1	30.9	29.4	38.5	30.9
39°	3.0	9.1	10.6	21.1	21.1
40°	13.6	22.6	16.6	30.9	30.9
42.5°	10.6	16.6	12.1	25.7	21.1
45°	4.5	4.5	3.0	16.6	12.1
47.5°	7.5	7.5	13.6	21.1	37.0
50°	15.1	15.1	19.6	35.5	34.0
51°	9.1	7.5	10.6	24.2	30.9
52°	7.5	10.6	10.6	24.2	24.2
53°	3.0	0.0	0.0	18.1	15.1
54°	3.0	1.5	4.5	13.6	21.1
55°	0.0	7.5	6.0	27.9	30.9
57.5°	1.5	12.1	6.0	19.6	24.2
60°	7.5	9.1	16.6	19.6	24.2
61°	0.0	7.5	7.5	18.1	21.1
62°	0.0	6.0	13.6	16.6	21.1
63°	7.5	9.1	12.1	19.6	24.2





TEST NUMBER: P315396

CATALOG NUMBER: LDA2B15FL8040D010 PINW1MMS

**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	4.5	12.1	15.1	19.6	18.1
67.5°	9.1	10.6	9.1	25.7	30.9
70°	12.1	19.6	21.1	18.1	30.9
72.5°	7.5	10.6	15.1	27.9	30.9
75°	13.6	15.1	22.6	25.7	30.9
77.5°	10.6	15.1	15.1	16.6	30.9
80°	4.5	13.6	15.1	16.6	9.1
82.5°	6.0	9.1	6.0	16.6	12.1
85°	3.0	13.6	12.1	15.1	15.1
87.5°	4.5	7.5	7.5	13.6	9.1
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180°    - - 45°-225°    - - - - 90°-270°







64°	34.0	35.5	34.0	24.2	18.1	16.6	12.1	21.1	6.0	6.0	0.0
65°	30.9	34.0	25.7	29.4	19.6	18.1	10.6	21.1	3.0	10.6	7.5







64°	4.5	7.5	7.5	13.6	21.1
65°	7.5	10.6	10.6	19.6	15.1



(END OF REPORT)