

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: P315441

Luminaire Tested: **LDA2B15FL9727D010 PIN1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315441  
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: LDA2B15FL9727D010 PIN1MW  
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in  
Adj PinHole, Black oculus, matte white finish  
Light Source: -  
Ballast/Driver: -

**Summary**

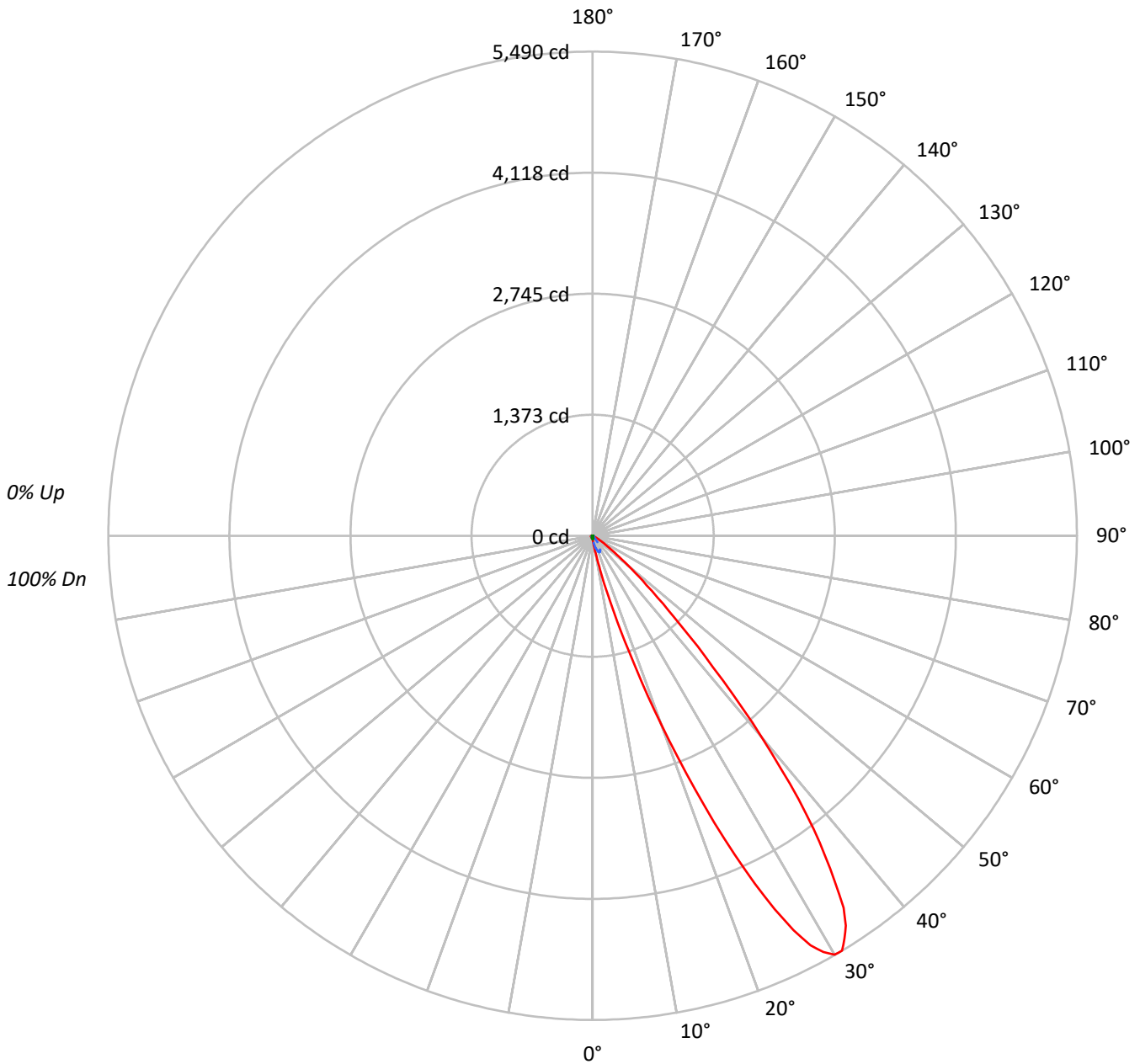
Lumens per Lamp: N/A  
Luminaire Lumens: 801.1 lumens  
Efficiency: N/A  
Efficacy: 56.8 lumens/watt  
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

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: P315441  
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### Luminous Intensity Polar Plot





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**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°	16824	16824	16824
5°	37589	17383	13570
10°	100595	10821	3857
15°	396099	13995	9092
20°	1198211	8558	7088
25°	2371143	7349	6260
30°	3124381	4387	7691
35°	2883011	6384	9275
40°	1920328	5539	12688
45°	905779	2023	5372
50°	399348	7368	16579
55°	162396	0	16945
60°	67295	4736	15196
65°	22998	5603	11207
70°	19474	11107	28417
75°	11056	16393	37552
80°	0	8239	16479
85°	10755	10755	54343



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CATALOG NUMBER: LDA2B15FL9727D010 PIN1MW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	4.6	0.6
10°-20°	49.0	6.1
20°-30°	252.0	31.5
30°-40°	322.7	40.3
40°-50°	124.1	15.5
50°-60°	25.2	3.1
60°-70°	8.6	1.1
70°-80°	9.9	1.2
80°-90°	5.1	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°	305.6	38.1
0°-40°	628.3	78.4
0°-60°	777.6	97.1
0°-90°	801.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	801.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	34	34	34	34	34	
5°	76	62	35	26	27	11
15°	776	151	27	16	18	297
25°	4356	197	14	11	12	1988
35°	4787	102	11	9	15	2861
45°	1298	26	3	2	8	1116
55°	189	5	0	4	20	196
65°	20	7	5	7	10	28
75°	6	11	9	14	20	8
85°	2	7	2	8	10	1
90°	0	0	0	0	0	



TEST NUMBER: P315441

CATALOG NUMBER: LDA2B15FL9727D010 PIN1MW

**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1
2.5°	50.4	43.7	45.6	38.9	42.8	43.7	36.0	47.6	42.8	44.7	38.9
5°	75.9	81.7	75.0	72.1	70.1	72.1	70.1	73.0	71.1	62.5	44.7
7.5°	126.8	115.8	115.8	111.9	114.8	113.9	109.1	111.9	105.2	75.9	51.4
10°	200.8	189.8	188.8	185.9	185.0	176.3	171.5	167.7	153.7	89.8	46.6
12.5°	393.5	383.9	377.2	360.3	348.8	342.1	316.6	303.2	263.3	133.6	59.6
15°	775.5	726.0	738.5	684.2	644.3	617.9	565.0	518.4	422.8	150.9	57.7
17.5°	1372.2	1324.1	1291.9	1232.8	1151.6	1081.5	977.2	873.9	679.4	171.5	53.8
20°	2282.2	2206.2	2139.0	2037.6	1881.5	1746.5	1562.9	1365.5	1011.4	196.0	48.5
21°	2681.9	2623.3	2545.4	2411.9	2229.8	2049.1	1829.1	1591.3	1152.6	197.9	43.7
22°	3098.9	3061.0	2958.6	2805.4	2593.0	2377.8	2107.8	1846.4	1303.0	200.8	41.8
23°	3533.3	3493.4	3377.6	3202.2	2963.4	2703.0	2388.3	2078.4	1444.2	204.7	40.8
24°	3958.5	3914.3	3785.0	3589.0	3318.0	3018.7	2663.2	2303.8	1575.9	202.8	42.8
25°	4355.8	4294.3	4157.9	3940.7	3643.3	3307.4	2915.4	2498.4	1691.7	197.0	36.0
26°	4710.4	4640.2	4493.2	4256.3	3931.1	3567.4	3125.8	2679.0	1777.2	192.2	34.1
27°	5018.3	4929.9	4772.8	4524.4	4175.6	3774.0	3305.5	2820.3	1852.6	185.0	27.4
28°	5258.1	5156.7	4997.2	4734.9	4366.4	3934.9	3437.7	2908.7	1897.3	185.9	31.2
29°	5396.5	5318.6	5145.2	4870.4	4482.6	4027.6	3507.3	2957.7	1906.0	171.5	29.3
30°	5484.4	5397.4	5219.2	4931.9	4527.3	4048.8	3516.0	2948.5	1880.5	161.0	27.4
31°	5490.2	5399.3	5218.2	4920.8	4510.0	4013.7	3467.9	2894.3	1825.2	149.9	22.6
32°	5386.9	5316.7	5138.5	4831.4	4416.3	3917.1	3364.6	2802.5	1738.3	127.8	15.4
33°	5270.1	5185.1	5007.8	4697.9	4286.6	3785.0	3215.7	2679.0	1648.0	125.9	19.7
34°	5088.5	4986.2	4811.8	4506.7	4106.4	3596.7	3038.4	2514.2	1532.6	114.8	18.7
35°	4786.8	4732.0	4555.7	4254.4	3865.7	3370.9	2825.1	2333.1	1410.1	102.3	13.5
36°	4484.6	4417.3	4250.6	3959.4	3590.9	3101.8	2584.4	2126.5	1271.8	87.0	10.6
37°	4165.1	4077.1	3925.3	3640.4	3255.6	2833.7	2353.3	1929.5	1158.9	91.8	14.4
38°	3792.7	3763.4	3563.5	3298.3	2942.8	2544.5	2104.9	1721.9	1033.9	85.5	23.5
39°	3383.4	3363.7	3164.3	2922.6	2603.6	2237.5	1850.7	1506.7	909.0	62.5	7.7
40°	2981.7	2925.5	2784.2	2564.7	2287.0	1957.9	1623.5	1323.2	800.9	61.5	15.4
42.5°	2020.8	2038.6	1885.8	1728.7	1550.4	1327.0	1104.1	907.1	560.2	45.6	9.6
45°	1298.2	1302.0	1233.8	1111.8	995.0	855.7	708.7	590.5	361.3	25.5	2.9
47.5°	826.4	824.5	780.7	710.6	634.2	552.5	460.8	385.8	234.0	19.7	8.6
50°	520.3	518.4	491.0	446.3	403.6	349.8	292.1	248.4	148.0	23.5	9.6
51°	422.8	425.7	402.6	357.5	324.3	272.9	233.0	197.9	115.8	16.3	8.6
52°	348.8	346.9	332.5	294.5	267.1	222.9	189.8	161.9	96.6	14.4	3.8
53°	280.6	281.5	267.1	237.8	211.4	178.2	151.8	125.9	69.2	10.6	2.9
54°	222.0	220.0	215.2	186.9	170.6	141.3	118.7	96.6	59.6	1.9	0.0
55°	188.8	185.9	179.2	154.7	138.4	116.8	94.6	82.6	51.4	4.8	0.0
57.5°	109.1	109.1	105.2	91.8	80.7	72.1	57.7	53.8	26.4	4.8	0.0
60°	68.2	59.6	66.3	56.7	44.7	39.9	33.2	30.3	22.6	8.6	1.9
61°	56.7	45.6	44.7	41.8	38.9	26.4	22.6	24.5	14.4	2.9	1.9
62°	40.8	36.0	38.9	33.2	29.3	20.7	18.7	17.8	8.6	3.8	4.8
63°	37.0	33.2	32.2	24.5	21.6	21.6	16.3	15.4	10.6	7.7	3.8



TEST NUMBER: P315441

CATALOG NUMBER: LDA2B15FL9727D010 PIN1MW

**CANDELA DISTRIBUTION (continued):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
66°	19.7	16.3	14.4	16.3	9.6	12.5	4.8	13.5	2.9	4.8	2.9
67.5°	15.4	9.6	8.6	10.6	6.7	4.8	6.7	8.6	2.9	4.8	6.7
70°	13.5	6.7	9.6	8.6	6.7	8.6	9.6	9.6	2.9	9.6	8.6
72.5°	13.5	8.6	4.8	3.8	3.8	3.8	3.8	3.8	5.8	13.5	10.6
75°	5.8	5.8	2.9	6.7	3.8	5.8	3.8	9.6	3.8	10.6	8.6
77.5°	3.8	4.8	0.0	4.8	0.0	0.0	2.9	6.7	2.9	7.7	9.6
80°	0.0	4.8	2.9	0.0	1.9	2.9	0.0	1.0	1.9	8.6	3.8
82.5°	1.9	2.9	3.8	1.9	1.9	0.0	0.0	0.0	0.0	5.8	4.8
85°	1.9	3.8	0.0	1.0	3.8	1.9	1.0	4.8	1.9	6.7	7.7
87.5°	0.0	1.9	1.9	0.0	2.9	0.0	2.9	1.9	0.0	5.8	2.9
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: P315441

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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
0°	34.1	34.1	34.1	34.1	34.1
2.5°	29.3	26.4	22.6	28.3	23.5
5°	35.1	32.2	25.5	30.3	27.4
7.5°	36.0	30.3	26.4	24.5	27.4
10°	21.6	14.4	10.6	14.4	7.7
12.5°	36.0	25.5	23.5	26.4	29.3
15°	27.4	16.3	16.3	12.5	17.8
17.5°	15.4	12.5	11.5	15.4	17.8
20°	16.3	10.6	8.6	14.4	13.5
21°	14.4	3.8	11.5	11.5	13.5
22°	20.7	9.6	11.5	18.7	19.7
23°	13.5	10.6	8.6	11.5	15.4
24°	19.7	11.5	10.6	14.4	21.6
25°	13.5	10.6	10.6	13.5	11.5
26°	7.7	10.6	7.7	11.5	9.6
27°	5.8	9.6	5.8	8.6	11.5
28°	12.5	15.4	14.4	15.4	13.5
29°	13.5	16.3	13.5	20.7	15.4
30°	7.7	14.4	6.7	15.4	13.5
31°	7.7	10.6	4.8	15.4	13.5
32°	1.0	5.8	2.9	5.8	5.8
33°	5.8	6.7	7.7	12.5	9.6
34°	9.6	11.5	7.7	13.5	11.5
35°	10.6	5.8	8.6	14.4	15.4
36°	2.9	2.9	4.8	11.5	3.8
37°	5.8	16.3	11.5	19.7	11.5
38°	9.6	19.7	18.7	24.5	19.7
39°	1.9	5.8	6.7	13.5	13.5
40°	8.6	14.4	10.6	19.7	19.7
42.5°	6.7	10.6	7.7	16.3	13.5
45°	2.9	2.9	1.9	10.6	7.7
47.5°	4.8	4.8	8.6	13.5	23.5
50°	9.6	9.6	12.5	22.6	21.6
51°	5.8	4.8	6.7	15.4	19.7
52°	4.8	6.7	6.7	15.4	15.4
53°	1.9	0.0	0.0	11.5	9.6
54°	1.9	1.0	2.9	8.6	13.5
55°	0.0	4.8	3.8	17.8	19.7
57.5°	1.0	7.7	3.8	12.5	15.4
60°	4.8	5.8	10.6	12.5	15.4
61°	0.0	4.8	4.8	11.5	13.5
62°	0.0	3.8	8.6	10.6	13.5
63°	4.8	5.8	7.7	12.5	15.4





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	2.9	7.7	9.6	12.5	11.5
67.5°	5.8	6.7	5.8	16.3	19.7
70°	7.7	12.5	13.5	11.5	19.7
72.5°	4.8	6.7	9.6	17.8	19.7
75°	8.6	9.6	14.4	16.3	19.7
77.5°	6.7	9.6	9.6	10.6	19.7
80°	2.9	8.6	9.6	10.6	5.8
82.5°	3.8	5.8	3.8	10.6	7.7
85°	1.9	8.6	7.7	9.6	9.6
87.5°	2.9	4.8	4.8	8.6	5.8
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	21.6	22.6	21.6	15.4	11.5	10.6	7.7	13.5	3.8	3.8	0.0
65°	19.7	21.6	16.3	18.7	12.5	11.5	6.7	13.5	1.9	6.7	4.8







64°	2.9	4.8	4.8	8.6	13.5
65°	4.8	6.7	6.7	12.5	9.6



(END OF REPORT)