

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: P315418

Luminaire Tested: **LDA2B15FL9030D010 PINW1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315418  
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: LDA2B15FL9030D010 PINW1MW  
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: 964.5 lumens  
Efficiency: N/A  
Efficacy: 68.4 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

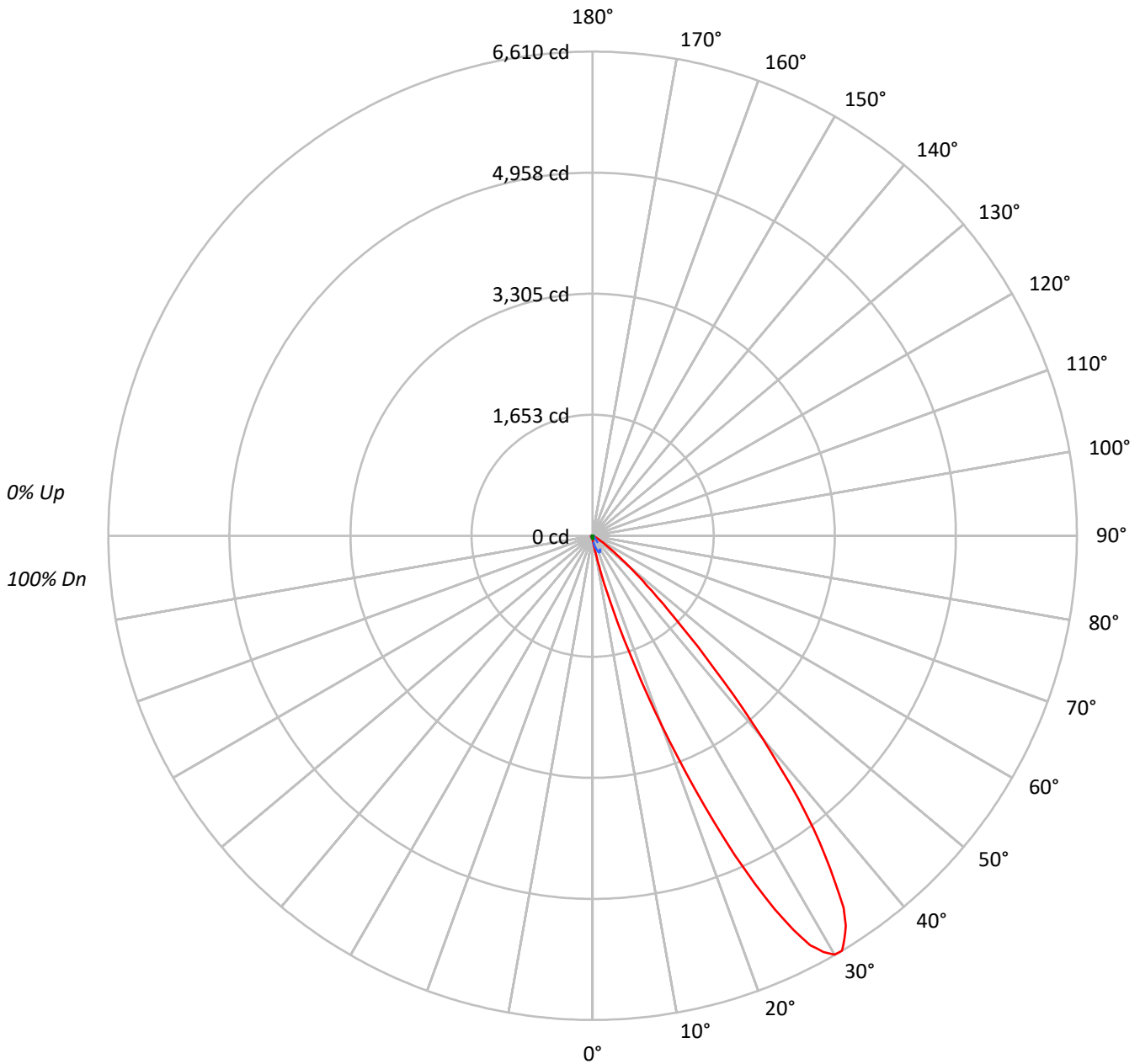
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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CATALOG NUMBER: LDA2B15FL9030D010 PINW1MW

### 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°	20277	20277	20277
5°	45266	20899	16343
10°	121135	13025	4659
15°	476851	16855	10930
20°	1442453	10343	8505
25°	2854593	8819	7567
30°	3761403	5298	9229
35°	3470779	7649	11142
40°	2311839	6698	15264
45°	1090465	2442	6489
50°	480784	8903	19956
55°	195512	0	20386
60°	81010	5723	18254
65°	27667	6771	13542
70°	23368	13415	34187
75°	13153	19825	45177
80°	0	9944	19604
85°	13020	13020	65664



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	5.6	0.6
10°-20°	59.0	6.1
20°-30°	303.4	31.5
30°-40°	388.4	40.3
40°-50°	149.4	15.5
50°-60°	30.4	3.1
60°-70°	10.3	1.1
70°-80°	12.0	1.2
80°-90°	6.1	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°	368.0	38.1
0°-40°	756.4	78.4
0°-60°	936.1	97.1
0°-90°	964.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	964.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	41	41	41	41	41	
5°	91	75	42	31	33	14
15°	934	182	33	20	21	358
25°	5244	237	16	13	14	2394
35°	5763	123	13	10	18	3444
45°	1563	31	4	2	9	1343
55°	227	6	0	5	24	235
65°	24	8	6	8	12	33
75°	7	13	10	17	24	9
85°	2	8	2	9	12	1
90°	0	0	0	0	0	



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CATALOG NUMBER: LDA2B15FL9030D010 PINW1MW

**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1
2.5°	60.7	52.6	54.9	46.9	51.5	52.6	43.4	57.3	51.5	53.8	46.9
5°	91.4	98.3	90.2	86.8	84.4	86.8	84.4	87.9	85.6	75.2	53.8
7.5°	152.7	139.4	139.4	134.8	138.2	137.1	131.3	134.8	126.7	91.4	61.9
10°	241.8	228.5	227.3	223.8	222.7	212.3	206.5	201.9	185.1	108.2	56.1
12.5°	473.7	462.1	454.1	433.8	419.9	411.8	381.2	365.0	317.0	160.8	71.7
15°	933.6	874.0	889.0	823.7	775.6	743.8	680.2	624.1	509.0	181.6	69.4
17.5°	1651.9	1594.1	1555.3	1484.2	1386.4	1302.0	1176.5	1052.1	817.9	206.5	64.8
20°	2747.4	2656.1	2575.1	2453.0	2265.1	2102.5	1881.6	1643.8	1217.6	236.0	58.4
21°	3228.7	3158.1	3064.4	2903.6	2684.4	2466.9	2202.0	1915.7	1387.6	238.3	52.6
22°	3730.7	3685.1	3561.9	3377.3	3121.7	2862.6	2537.5	2222.8	1568.6	241.8	50.3
23°	4253.6	4205.6	4066.2	3855.1	3567.6	3254.1	2875.3	2502.2	1738.7	246.4	49.2
24°	4765.5	4712.3	4556.7	4320.7	3994.5	3634.2	3206.1	2773.5	1897.2	244.1	51.5
25°	5243.9	5169.8	5005.6	4744.1	4386.1	3981.8	3509.8	3007.7	2036.6	237.1	43.4
26°	5670.7	5586.3	5409.3	5124.1	4732.6	4294.7	3763.1	3225.2	2139.5	231.4	41.1
27°	6041.5	5935.1	5745.9	5446.9	5027.0	4543.4	3979.5	3395.3	2230.4	222.7	33.0
28°	6330.1	6208.1	6016.0	5700.2	5256.6	4737.2	4138.5	3501.7	2284.1	223.8	37.6
29°	6496.7	6403.0	6194.2	5863.3	5396.6	4848.8	4222.4	3560.7	2294.6	206.5	35.3
30°	6602.6	6497.9	6283.3	5937.4	5450.4	4874.3	4232.8	3549.7	2263.9	193.8	33.0
31°	6609.5	6500.2	6282.1	5924.1	5429.5	4832.0	4175.0	3484.3	2197.4	180.5	27.2
32°	6485.1	6400.7	6186.1	5816.5	5316.7	4715.8	4050.6	3373.9	2092.7	153.9	18.5
33°	6344.6	6242.2	6028.8	5655.7	5160.6	4556.7	3871.3	3225.2	1983.9	151.5	23.7
34°	6125.9	6002.7	5792.8	5425.5	4943.7	4330.0	3657.9	3026.8	1845.1	138.2	22.6
35°	5762.7	5696.8	5484.5	5121.8	4653.9	4058.1	3401.1	2808.8	1697.6	123.2	16.2
36°	5398.9	5317.9	5117.2	4766.7	4323.0	3734.2	3111.3	2560.0	1531.1	104.7	12.7
37°	5014.2	4908.4	4725.6	4382.6	3919.3	3411.5	2833.1	2322.9	1395.1	110.5	17.4
38°	4566.0	4530.7	4290.1	3970.8	3542.8	3063.3	2534.0	2073.0	1244.7	103.0	28.3
39°	4073.2	4049.5	3809.4	3518.5	3134.4	2693.7	2228.0	1813.9	1094.4	75.2	9.3
40°	3589.6	3521.9	3351.9	3087.6	2753.2	2357.0	1954.4	1592.9	964.2	74.0	18.5
42.5°	2432.8	2454.2	2270.3	2081.1	1866.5	1597.6	1329.2	1092.0	674.4	54.9	11.6
45°	1562.9	1567.5	1485.4	1338.4	1197.9	1030.1	853.2	710.9	435.0	30.7	3.5
47.5°	994.9	992.6	939.9	855.5	763.5	665.2	554.7	464.5	281.7	23.7	10.4
50°	626.4	624.1	591.1	537.3	485.9	421.1	351.7	299.0	178.2	28.3	11.6
51°	509.0	512.5	484.7	430.3	390.4	328.5	280.5	238.3	139.4	19.7	10.4
52°	419.9	417.6	400.3	354.6	321.6	268.4	228.5	194.9	116.3	17.4	4.6
53°	337.8	338.9	321.6	286.3	254.5	214.6	182.8	151.5	83.3	12.7	3.5
54°	267.2	264.9	259.1	225.0	205.3	170.1	142.9	116.3	71.7	2.3	0.0
55°	227.3	223.8	215.7	186.2	166.6	140.6	113.9	99.5	61.9	5.8	0.0
57.5°	131.3	131.3	126.7	110.5	97.2	86.8	69.4	64.8	31.8	5.8	0.0
60°	82.1	71.7	79.8	68.3	53.8	48.0	39.9	36.4	27.2	10.4	2.3
61°	68.3	54.9	53.8	50.3	46.9	31.8	27.2	29.5	17.4	3.5	2.3
62°	49.2	43.4	46.9	39.9	35.3	24.9	22.6	21.4	10.4	4.6	5.8
63°	44.5	39.9	38.8	29.5	26.0	26.0	19.7	18.5	12.7	9.3	4.6



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**CANDELA DISTRIBUTION (continued):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
66°	23.7	19.7	17.4	19.7	11.6	15.0	5.8	16.2	3.5	5.8	3.5
67.5°	18.5	11.6	10.4	12.7	8.1	5.8	8.1	10.4	3.5	5.8	8.1
70°	16.2	8.1	11.6	10.4	8.1	10.4	11.6	11.6	3.5	11.6	10.4
72.5°	16.2	10.4	5.8	4.6	4.6	4.6	4.6	4.6	6.9	16.2	12.7
75°	6.9	6.9	3.5	8.1	4.6	6.9	4.6	11.6	4.6	12.7	10.4
77.5°	4.6	5.8	0.0	5.8	0.0	0.0	3.5	8.1	3.5	9.3	11.6
80°	0.0	5.8	3.5	0.0	2.3	3.5	0.0	1.2	2.3	10.4	4.6
82.5°	2.3	3.5	4.6	2.3	2.3	0.0	0.0	0.0	0.0	6.9	5.8
85°	2.3	4.6	0.0	1.2	4.6	2.3	1.2	5.8	2.3	8.1	9.3
87.5°	0.0	2.3	2.3	0.0	3.5	0.0	3.5	2.3	0.0	6.9	3.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
0°	41.1	41.1	41.1	41.1	41.1
2.5°	35.3	31.8	27.2	34.1	28.3
5°	42.2	38.8	30.7	36.4	33.0
7.5°	43.4	36.4	31.8	29.5	33.0
10°	26.0	17.4	12.7	17.4	9.3
12.5°	43.4	30.7	28.3	31.8	35.3
15°	33.0	19.7	19.7	15.0	21.4
17.5°	18.5	15.0	13.9	18.5	21.4
20°	19.7	12.7	10.4	17.4	16.2
21°	17.4	4.6	13.9	13.9	16.2
22°	24.9	11.6	13.9	22.6	23.7
23°	16.2	12.7	10.4	13.9	18.5
24°	23.7	13.9	12.7	17.4	26.0
25°	16.2	12.7	12.7	16.2	13.9
26°	9.3	12.7	9.3	13.9	11.6
27°	6.9	11.6	6.9	10.4	13.9
28°	15.0	18.5	17.4	18.5	16.2
29°	16.2	19.7	16.2	24.9	18.5
30°	9.3	17.4	8.1	18.5	16.2
31°	9.3	12.7	5.8	18.5	16.2
32°	1.2	6.9	3.5	6.9	6.9
33°	6.9	8.1	9.3	15.0	11.6
34°	11.6	13.9	9.3	16.2	13.9
35°	12.7	6.9	10.4	17.4	18.5
36°	3.5	3.5	5.8	13.9	4.6
37°	6.9	19.7	13.9	23.7	13.9
38°	11.6	23.7	22.6	29.5	23.7
39°	2.3	6.9	8.1	16.2	16.2
40°	10.4	17.4	12.7	23.7	23.7
42.5°	8.1	12.7	9.3	19.7	16.2
45°	3.5	3.5	2.3	12.7	9.3
47.5°	5.8	5.8	10.4	16.2	28.3
50°	11.6	11.6	15.0	27.2	26.0
51°	6.9	5.8	8.1	18.5	23.7
52°	5.8	8.1	8.1	18.5	18.5
53°	2.3	0.0	0.0	13.9	11.6
54°	2.3	1.2	3.5	10.4	16.2
55°	0.0	5.8	4.6	21.4	23.7
57.5°	1.2	9.3	4.6	15.0	18.5
60°	5.8	6.9	12.7	15.0	18.5
61°	0.0	5.8	5.8	13.9	16.2
62°	0.0	4.6	10.4	12.7	16.2
63°	5.8	6.9	9.3	15.0	18.5





TEST NUMBER: P315418

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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	3.5	9.3	11.6	15.0	13.9
67.5°	6.9	8.1	6.9	19.7	23.7
70°	9.3	15.0	16.2	13.9	23.7
72.5°	5.8	8.1	11.6	21.4	23.7
75°	10.4	11.6	17.4	19.7	23.7
77.5°	8.1	11.6	11.6	12.7	23.7
80°	3.5	10.4	11.6	12.7	6.9
82.5°	4.6	6.9	4.6	12.7	9.3
85°	2.3	10.4	9.3	11.6	11.6
87.5°	3.5	5.8	5.8	10.4	6.9
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	26.0	27.2	26.0	18.5	13.9	12.7	9.3	16.2	4.6	4.6	0.0
65°	23.7	26.0	19.7	22.6	15.0	13.9	8.1	16.2	2.3	8.1	5.8







64°	3.5	5.8	5.8	10.4	16.2
65°	5.8	8.1	8.1	15.0	11.6



(END OF REPORT)