

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: P315448

Luminaire Tested: **LDA2B15FL9730D010 PINW1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315448  
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: LDA2B15FL9730D010 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: 885.3 lumens  
Efficiency: N/A  
Efficacy: 62.8 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

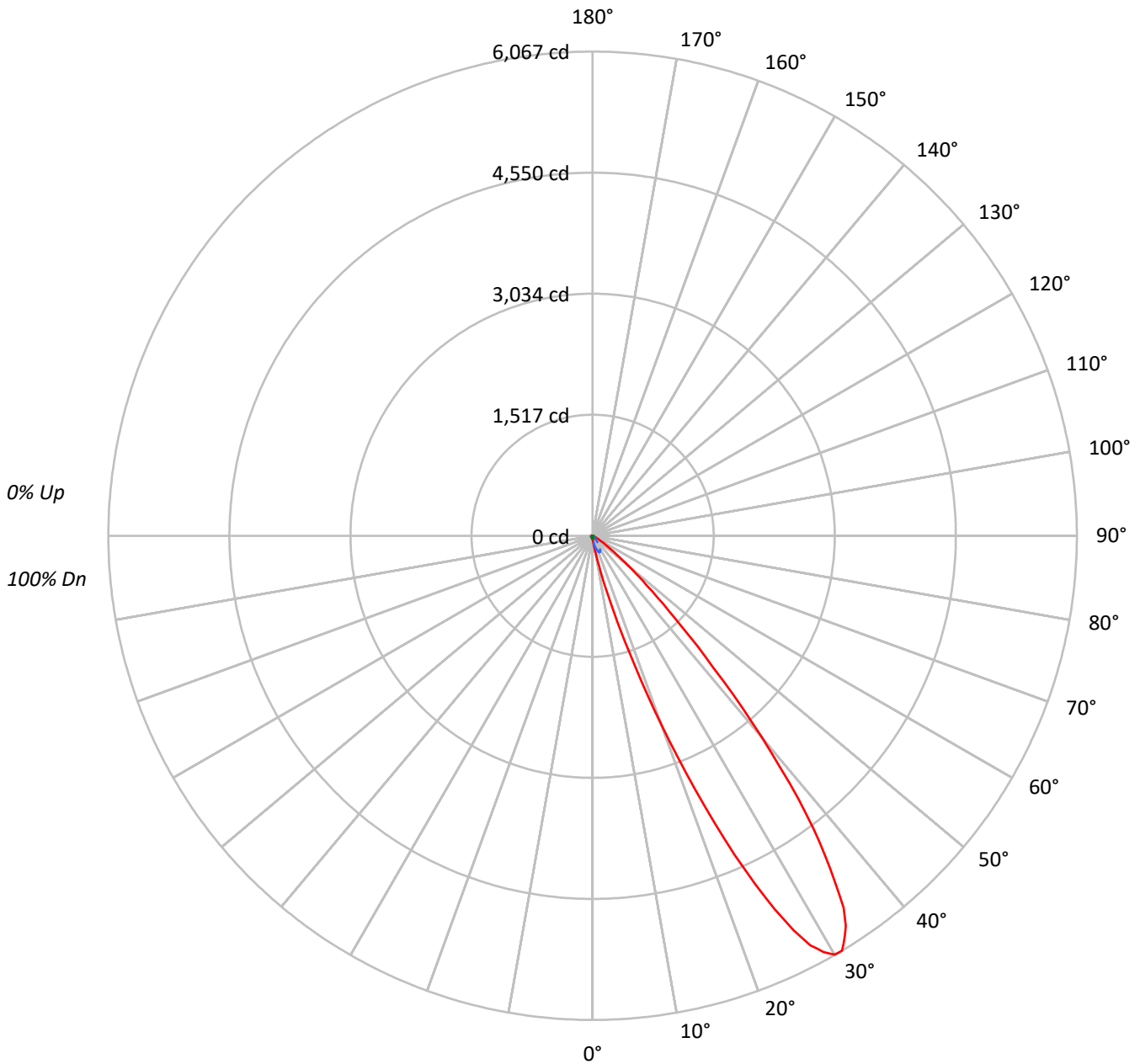
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P315448

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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°	18600	18600	18600
5°	41551	19216	15006
10°	111166	11973	4258
15°	437675	15476	10011
20°	1324007	9503	7823
25°	2620190	8111	6913
30°	3452520	4842	8488
35°	3185779	7047	10239
40°	2121977	6183	14040
45°	1000878	2233	5931
50°	441332	8136	18344
55°	179427	0	18751
60°	74399	5230	16774
65°	25449	6187	12374
70°	21493	12261	31446
75°	12200	18300	41555
80°	0	9092	18183
85°	11887	11887	60003



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	5.1	0.6
10°-20°	54.2	6.1
20°-30°	278.4	31.5
30°-40°	356.5	40.3
40°-50°	137.1	15.5
50°-60°	27.9	3.1
60°-70°	9.5	1.1
70°-80°	11.0	1.2
80°-90°	5.6	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°	337.7	38.1
0°-40°	694.3	78.4
0°-60°	859.3	97.1
0°-90°	885.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	885.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	38	38	38	38	38	
5°	84	69	39	28	30	12
15°	857	167	30	18	20	329
25°	4813	218	15	12	13	2197
35°	5290	113	12	10	17	3161
45°	1434	28	3	2	8	1233
55°	209	5	0	4	22	216
65°	22	7	5	7	11	31
75°	6	12	10	16	22	9
85°	2	7	2	8	11	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7
2.5°	55.7	48.3	50.4	43.0	47.3	48.3	39.8	52.6	47.3	49.4	43.0
5°	83.9	90.3	82.8	79.6	77.5	79.6	77.5	80.7	78.6	69.0	49.4
7.5°	140.2	128.0	128.0	123.7	126.9	125.8	120.5	123.7	116.3	83.9	56.8
10°	221.9	209.7	208.6	205.5	204.4	194.8	189.5	185.3	169.9	99.3	51.5
12.5°	434.8	424.2	416.8	398.2	385.4	378.0	349.9	335.0	290.9	147.6	65.8
15°	856.9	802.2	816.0	756.0	712.0	682.8	624.4	572.9	467.2	166.7	63.7
17.5°	1516.3	1463.2	1427.6	1362.3	1272.6	1195.1	1079.9	965.7	750.7	189.5	59.5
20°	2521.8	2438.0	2363.6	2251.6	2079.1	1929.9	1727.1	1508.9	1117.6	216.6	53.6
21°	2963.6	2898.8	2812.8	2665.2	2464.0	2264.3	2021.2	1758.4	1273.7	218.7	48.3
22°	3424.4	3382.4	3269.4	3100.0	2865.3	2627.5	2329.1	2040.3	1439.8	221.9	46.2
23°	3904.3	3860.3	3732.3	3538.5	3274.7	2986.9	2639.2	2296.7	1595.9	226.2	45.1
24°	4374.2	4325.4	4182.5	3965.9	3666.5	3335.7	2942.9	2545.7	1741.4	224.0	47.3
25°	4813.3	4745.3	4594.5	4354.6	4025.9	3654.8	3221.6	2760.7	1869.3	217.7	39.8
26°	5205.1	5127.6	4965.1	4703.4	4343.9	3942.0	3454.1	2960.4	1963.8	212.4	37.7
27°	5545.4	5447.7	5274.1	4999.6	4614.2	4170.3	3652.7	3116.5	2047.2	204.4	30.3
28°	5810.3	5698.3	5522.0	5232.2	4824.9	4348.2	3798.7	3214.1	2096.6	205.5	34.5
29°	5963.2	5877.2	5685.6	5381.9	4953.4	4450.6	3875.7	3268.3	2106.1	189.5	32.4
30°	6060.4	5964.3	5767.3	5449.8	5002.8	4474.0	3885.2	3258.2	2078.0	177.9	30.3
31°	6066.7	5966.4	5766.2	5437.6	4983.7	4435.2	3832.1	3198.2	2016.9	165.6	25.0
32°	5952.6	5875.1	5678.1	5338.9	4880.2	4328.5	3718.0	3096.8	1920.8	141.2	17.0
33°	5823.6	5729.6	5533.7	5191.3	4736.8	4182.5	3553.4	2960.4	1821.0	139.1	21.8
34°	5622.9	5509.8	5317.1	4980.0	4537.7	3974.4	3357.5	2778.3	1693.6	126.9	20.7
35°	5289.5	5229.0	5034.1	4701.2	4271.7	3724.9	3121.8	2578.1	1558.2	113.1	14.9
36°	4955.5	4881.2	4697.0	4375.3	3968.0	3427.6	2855.8	2349.8	1405.3	96.1	11.7
37°	4602.5	4505.3	4337.6	4022.7	3597.5	3131.3	2600.4	2132.1	1280.6	101.4	15.9
38°	4191.0	4158.6	3937.8	3644.7	3251.8	2811.7	2325.9	1902.8	1142.5	94.5	26.0
39°	3738.7	3716.9	3496.6	3229.5	2877.0	2472.5	2045.1	1664.9	1004.5	69.0	8.5
40°	3294.8	3232.7	3076.6	2834.0	2527.1	2163.5	1794.0	1462.1	885.0	68.0	17.0
42.5°	2233.0	2252.7	2083.8	1910.2	1713.3	1466.4	1220.0	1002.4	619.0	50.4	10.6
45°	1434.5	1438.8	1363.4	1228.5	1099.5	945.6	783.1	652.5	399.2	28.1	3.2
47.5°	913.2	911.0	862.7	785.2	700.8	610.6	509.1	426.3	258.6	21.8	9.6
50°	575.0	572.9	542.6	493.2	446.0	386.5	322.8	274.5	163.5	26.0	10.6
51°	467.2	470.4	444.9	395.0	358.4	301.6	257.5	218.7	128.0	18.1	9.6
52°	385.4	383.3	367.4	325.4	295.2	246.3	209.7	178.9	106.7	15.9	4.2
53°	310.1	311.1	295.2	262.8	233.6	197.0	167.8	139.1	76.5	11.7	3.2
54°	245.3	243.2	237.8	206.5	188.5	156.1	131.1	106.7	65.8	2.1	0.0
55°	208.6	205.5	198.0	171.0	152.9	129.0	104.6	91.3	56.8	5.3	0.0
57.5°	120.5	120.5	116.3	101.4	89.2	79.6	63.7	59.5	29.2	5.3	0.0
60°	75.4	65.8	73.3	62.6	49.4	44.1	36.6	33.4	25.0	9.6	2.1
61°	62.6	50.4	49.4	46.2	43.0	29.2	25.0	27.1	15.9	3.2	2.1
62°	45.1	39.8	43.0	36.6	32.4	22.8	20.7	19.6	9.6	4.2	5.3
63°	40.9	36.6	35.6	27.1	23.9	23.9	18.1	17.0	11.7	8.5	4.2



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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°	21.8	18.1	15.9	18.1	10.6	13.8	5.3	14.9	3.2	5.3	3.2
67.5°	17.0	10.6	9.6	11.7	7.4	5.3	7.4	9.6	3.2	5.3	7.4
70°	14.9	7.4	10.6	9.6	7.4	9.6	10.6	10.6	3.2	10.6	9.6
72.5°	14.9	9.6	5.3	4.2	4.2	4.2	4.2	4.2	6.4	14.9	11.7
75°	6.4	6.4	3.2	7.4	4.2	6.4	4.2	10.6	4.2	11.7	9.6
77.5°	4.2	5.3	0.0	5.3	0.0	0.0	3.2	7.4	3.2	8.5	10.6
80°	0.0	5.3	3.2	0.0	2.1	3.2	0.0	1.1	2.1	9.6	4.2
82.5°	2.1	3.2	4.2	2.1	2.1	0.0	0.0	0.0	0.0	6.4	5.3
85°	2.1	4.2	0.0	1.1	4.2	2.1	1.1	5.3	2.1	7.4	8.5
87.5°	0.0	2.1	2.1	0.0	3.2	0.0	3.2	2.1	0.0	6.4	3.2
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: P315448

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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
0°	37.7	37.7	37.7	37.7	37.7
2.5°	32.4	29.2	25.0	31.3	26.0
5°	38.8	35.6	28.1	33.4	30.3
7.5°	39.8	33.4	29.2	27.1	30.3
10°	23.9	15.9	11.7	15.9	8.5
12.5°	39.8	28.1	26.0	29.2	32.4
15°	30.3	18.1	18.1	13.8	19.6
17.5°	17.0	13.8	12.7	17.0	19.6
20°	18.1	11.7	9.6	15.9	14.9
21°	15.9	4.2	12.7	12.7	14.9
22°	22.8	10.6	12.7	20.7	21.8
23°	14.9	11.7	9.6	12.7	17.0
24°	21.8	12.7	11.7	15.9	23.9
25°	14.9	11.7	11.7	14.9	12.7
26°	8.5	11.7	8.5	12.7	10.6
27°	6.4	10.6	6.4	9.6	12.7
28°	13.8	17.0	15.9	17.0	14.9
29°	14.9	18.1	14.9	22.8	17.0
30°	8.5	15.9	7.4	17.0	14.9
31°	8.5	11.7	5.3	17.0	14.9
32°	1.1	6.4	3.2	6.4	6.4
33°	6.4	7.4	8.5	13.8	10.6
34°	10.6	12.7	8.5	14.9	12.7
35°	11.7	6.4	9.6	15.9	17.0
36°	3.2	3.2	5.3	12.7	4.2
37°	6.4	18.1	12.7	21.8	12.7
38°	10.6	21.8	20.7	27.1	21.8
39°	2.1	6.4	7.4	14.9	14.9
40°	9.6	15.9	11.7	21.8	21.8
42.5°	7.4	11.7	8.5	18.1	14.9
45°	3.2	3.2	2.1	11.7	8.5
47.5°	5.3	5.3	9.6	14.9	26.0
50°	10.6	10.6	13.8	25.0	23.9
51°	6.4	5.3	7.4	17.0	21.8
52°	5.3	7.4	7.4	17.0	17.0
53°	2.1	0.0	0.0	12.7	10.6
54°	2.1	1.1	3.2	9.6	14.9
55°	0.0	5.3	4.2	19.6	21.8
57.5°	1.1	8.5	4.2	13.8	17.0
60°	5.3	6.4	11.7	13.8	17.0
61°	0.0	5.3	5.3	12.7	14.9
62°	0.0	4.2	9.6	11.7	14.9
63°	5.3	6.4	8.5	13.8	17.0





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	3.2	8.5	10.6	13.8	12.7
67.5°	6.4	7.4	6.4	18.1	21.8
70°	8.5	13.8	14.9	12.7	21.8
72.5°	5.3	7.4	10.6	19.6	21.8
75°	9.6	10.6	15.9	18.1	21.8
77.5°	7.4	10.6	10.6	11.7	21.8
80°	3.2	9.6	10.6	11.7	6.4
82.5°	4.2	6.4	4.2	11.7	8.5
85°	2.1	9.6	8.5	10.6	10.6
87.5°	3.2	5.3	5.3	9.6	6.4
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	23.9	25.0	23.9	17.0	12.7	11.7	8.5	14.9	4.2	4.2	0.0
65°	21.8	23.9	18.1	20.7	13.8	12.7	7.4	14.9	2.1	7.4	5.3







64°	3.2	5.3	5.3	9.6	14.9
65°	5.3	7.4	7.4	13.8	10.6



(END OF REPORT)