

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: P315438

Luminaire Tested: **LDA2B15FL9050D010 PINW1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315438  
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: LDA2B15FL9050D010 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: 1050.6 lumens  
Efficiency: N/A  
Efficacy: 74.5 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

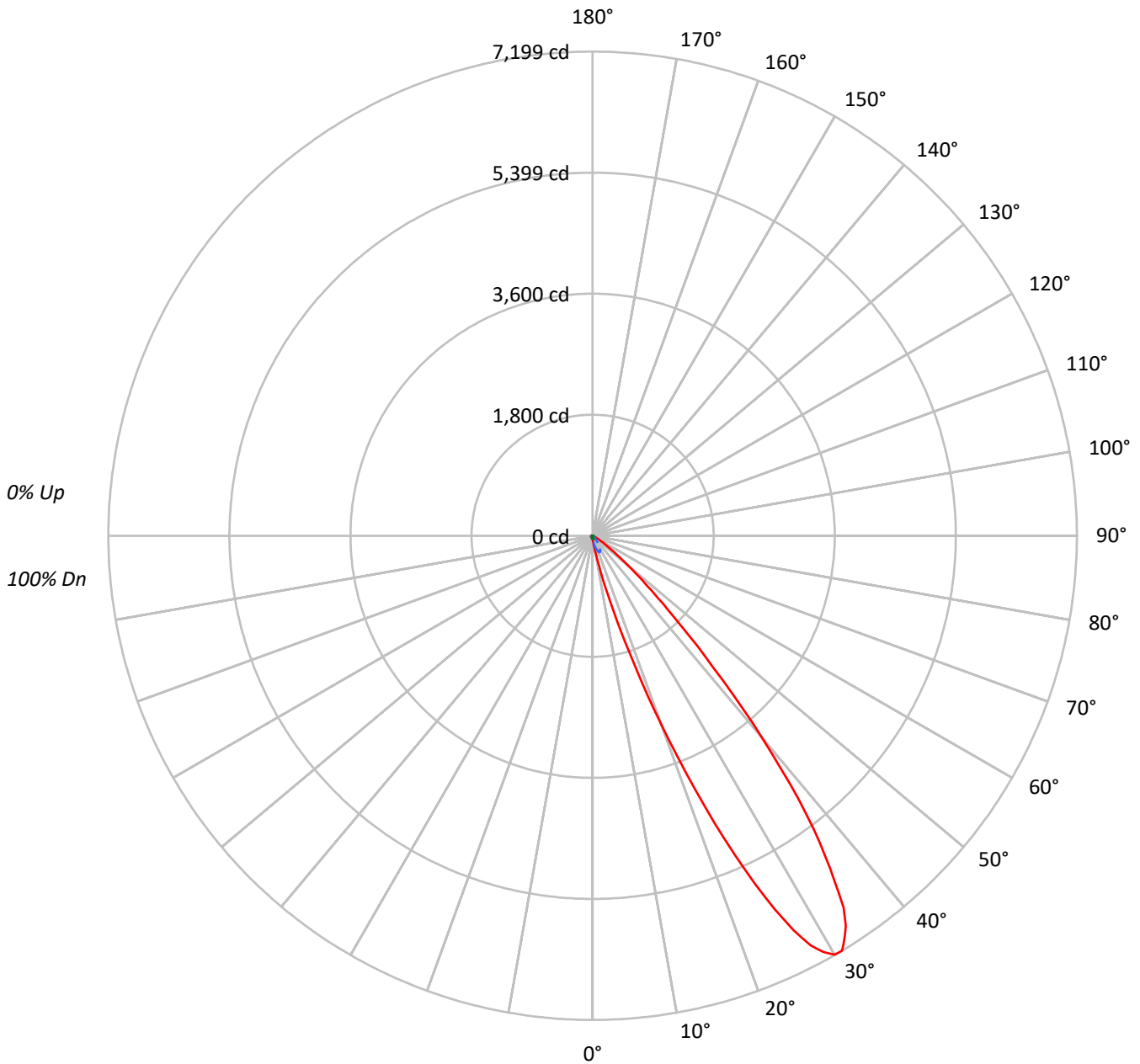
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### 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°	22053	22053	22053
5°	49277	22781	17779
10°	131956	14228	5060
15°	519398	18336	11901
20°	1571189	11236	9240
25°	3109356	9581	8220
30°	4097061	5754	10026
35°	3780534	8372	12166
40°	2518189	7278	16616
45°	1187727	2651	7047
50°	523689	9671	21798
55°	212973	0	22192
60°	88312	6216	19932
65°	30119	7355	14709
70°	25388	14569	37216
75°	14487	21540	49180
80°	0	10796	21593
85°	14152	14152	71325



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	6.1	0.6
10°-20°	64.3	6.1
20°-30°	330.4	31.5
30°-40°	423.1	40.3
40°-50°	162.7	15.5
50°-60°	33.1	3.1
60°-70°	11.2	1.1
70°-80°	13.0	1.2
80°-90°	6.7	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°	400.8	38.1
0°-40°	823.9	78.4
0°-60°	1019.7	97.1
0°-90°	1050.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1050.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	45	45	45	45	45	
5°	100	82	46	33	36	15
15°	1017	198	36	21	23	390
25°	5712	258	18	14	15	2607
35°	6277	134	14	11	20	3752
45°	1702	33	4	2	10	1463
55°	248	6	0	5	26	256
65°	26	9	6	9	13	36
75°	8	14	11	19	26	10
85°	2	9	2	10	13	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°	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7
2.5°	66.2	57.3	59.9	51.0	56.1	57.3	47.3	62.4	56.1	58.6	51.0
5°	99.5	107.1	98.3	94.5	92.0	94.5	92.0	95.8	93.2	81.9	58.6
7.5°	166.3	151.8	151.8	146.8	150.6	149.3	143.0	146.8	138.0	99.5	67.4
10°	263.4	248.9	247.6	243.8	242.6	231.2	224.9	219.9	201.6	117.8	61.1
12.5°	516.0	503.4	494.6	472.5	457.4	448.6	415.2	397.5	345.3	175.1	78.1
15°	1016.9	952.0	968.4	897.2	844.9	810.2	740.9	679.8	554.4	197.8	75.6
17.5°	1799.4	1736.4	1694.2	1616.7	1510.2	1418.2	1281.5	1146.0	890.9	224.9	70.6
20°	2992.6	2893.1	2804.9	2672.0	2467.2	2290.2	2049.5	1790.5	1326.2	257.1	63.6
21°	3516.8	3440.0	3337.9	3162.8	2924.0	2687.1	2398.5	2086.7	1511.4	259.6	57.3
22°	4063.7	4013.9	3879.7	3678.7	3400.3	3118.0	2763.9	2421.2	1708.6	263.4	54.8
23°	4633.2	4580.9	4429.1	4199.2	3886.0	3544.5	3131.9	2725.5	1893.9	268.4	53.6
24°	5190.8	5132.9	4963.4	4706.3	4351.0	3958.5	3492.3	3021.0	2066.5	265.9	56.1
25°	5711.9	5631.2	5452.3	5167.5	4777.5	4337.1	3823.0	3276.2	2218.3	258.3	47.3
26°	6176.8	6084.8	5892.0	5581.4	5154.9	4678.0	4099.0	3513.0	2330.5	252.0	44.7
27°	6580.7	6464.7	6258.7	5933.0	5475.6	4948.9	4334.6	3698.3	2429.4	242.6	35.9
28°	6895.0	6762.1	6552.9	6208.9	5725.7	5159.9	4507.9	3814.2	2488.0	243.8	41.0
29°	7076.5	6974.4	6747.0	6386.6	5878.2	5281.5	4599.2	3878.5	2499.3	224.9	38.4
30°	7191.8	7077.8	6844.0	6467.3	5936.8	5309.3	4610.6	3866.5	2465.9	211.1	35.9
31°	7199.4	7080.3	6842.8	6452.8	5914.1	5263.3	4547.6	3795.3	2393.5	196.6	29.6
32°	7063.9	6971.9	6738.2	6335.6	5791.2	5136.6	4412.1	3675.0	2279.4	167.6	20.2
33°	6910.8	6799.3	6566.8	6160.4	5621.1	4963.4	4216.8	3513.0	2161.0	165.1	25.8
34°	6672.6	6538.5	6309.8	5909.7	5384.9	4716.4	3984.3	3296.9	2009.8	150.6	24.6
35°	6277.0	6205.2	5973.9	5578.9	5069.2	4420.3	3704.6	3059.4	1849.1	134.2	17.6
36°	5880.7	5792.5	5573.9	5192.1	4708.8	4067.5	3388.9	2788.5	1667.7	114.0	13.9
37°	5461.7	5346.4	5147.3	4773.7	4269.1	3715.9	3085.9	2530.2	1519.6	120.3	18.9
38°	4973.5	4935.0	4672.9	4325.2	3858.9	3336.6	2760.2	2258.0	1355.8	112.1	30.9
39°	4436.7	4410.8	4149.4	3832.5	3414.1	2934.1	2426.9	1975.8	1192.0	81.9	10.1
40°	3910.0	3836.3	3651.0	3363.1	2998.9	2567.4	2128.9	1735.1	1050.3	80.6	20.2
42.5°	2649.9	2673.2	2472.9	2266.8	2033.1	1740.1	1447.8	1189.5	734.6	59.9	12.6
45°	1702.3	1707.4	1617.9	1457.9	1304.8	1122.1	929.3	774.3	473.8	33.4	3.8
47.5°	1083.7	1081.1	1023.8	931.8	831.6	724.5	604.2	505.9	306.8	25.8	11.3
50°	682.3	679.8	643.9	585.3	529.2	458.7	383.1	325.7	194.0	30.9	12.6
51°	554.4	558.2	528.0	468.7	425.3	357.9	305.6	259.6	151.8	21.4	11.3
52°	457.4	454.9	436.0	386.2	350.3	292.3	248.9	212.3	126.6	18.9	5.0
53°	367.9	369.2	350.3	311.9	277.2	233.7	199.1	165.1	90.7	13.9	3.8
54°	291.1	288.6	282.3	245.1	223.7	185.2	155.6	126.6	78.1	2.5	0.0
55°	247.6	243.8	235.0	202.9	181.4	153.1	124.1	108.4	67.4	6.3	0.0
57.5°	143.0	143.0	138.0	120.3	105.8	94.5	75.6	70.6	34.7	6.3	0.0
60°	89.5	78.1	86.9	74.3	58.6	52.3	43.5	39.7	29.6	11.3	2.5
61°	74.3	59.9	58.6	54.8	51.0	34.7	29.6	32.1	18.9	3.8	2.5
62°	53.6	47.3	51.0	43.5	38.4	27.1	24.6	23.3	11.3	5.0	6.3
63°	48.5	43.5	42.2	32.1	28.4	28.4	21.4	20.2	13.9	10.1	5.0



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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°	25.8	21.4	18.9	21.4	12.6	16.4	6.3	17.6	3.8	6.3	3.8
67.5°	20.2	12.6	11.3	13.9	8.8	6.3	8.8	11.3	3.8	6.3	8.8
70°	17.6	8.8	12.6	11.3	8.8	11.3	12.6	12.6	3.8	12.6	11.3
72.5°	17.6	11.3	6.3	5.0	5.0	5.0	5.0	5.0	7.6	17.6	13.9
75°	7.6	7.6	3.8	8.8	5.0	7.6	5.0	12.6	5.0	13.9	11.3
77.5°	5.0	6.3	0.0	6.3	0.0	0.0	3.8	8.8	3.8	10.1	12.6
80°	0.0	6.3	3.8	0.0	2.5	3.8	0.0	1.3	2.5	11.3	5.0
82.5°	2.5	3.8	5.0	2.5	2.5	0.0	0.0	0.0	0.0	7.6	6.3
85°	2.5	5.0	0.0	1.3	5.0	2.5	1.3	6.3	2.5	8.8	10.1
87.5°	0.0	2.5	2.5	0.0	3.8	0.0	3.8	2.5	0.0	7.6	3.8
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°	44.7	44.7	44.7	44.7	44.7
2.5°	38.4	34.7	29.6	37.2	30.9
5°	46.0	42.2	33.4	39.7	35.9
7.5°	47.3	39.7	34.7	32.1	35.9
10°	28.4	18.9	13.9	18.9	10.1
12.5°	47.3	33.4	30.9	34.7	38.4
15°	35.9	21.4	21.4	16.4	23.3
17.5°	20.2	16.4	15.1	20.2	23.3
20°	21.4	13.9	11.3	18.9	17.6
21°	18.9	5.0	15.1	15.1	17.6
22°	27.1	12.6	15.1	24.6	25.8
23°	17.6	13.9	11.3	15.1	20.2
24°	25.8	15.1	13.9	18.9	28.4
25°	17.6	13.9	13.9	17.6	15.1
26°	10.1	13.9	10.1	15.1	12.6
27°	7.6	12.6	7.6	11.3	15.1
28°	16.4	20.2	18.9	20.2	17.6
29°	17.6	21.4	17.6	27.1	20.2
30°	10.1	18.9	8.8	20.2	17.6
31°	10.1	13.9	6.3	20.2	17.6
32°	1.3	7.6	3.8	7.6	7.6
33°	7.6	8.8	10.1	16.4	12.6
34°	12.6	15.1	10.1	17.6	15.1
35°	13.9	7.6	11.3	18.9	20.2
36°	3.8	3.8	6.3	15.1	5.0
37°	7.6	21.4	15.1	25.8	15.1
38°	12.6	25.8	24.6	32.1	25.8
39°	2.5	7.6	8.8	17.6	17.6
40°	11.3	18.9	13.9	25.8	25.8
42.5°	8.8	13.9	10.1	21.4	17.6
45°	3.8	3.8	2.5	13.9	10.1
47.5°	6.3	6.3	11.3	17.6	30.9
50°	12.6	12.6	16.4	29.6	28.4
51°	7.6	6.3	8.8	20.2	25.8
52°	6.3	8.8	8.8	20.2	20.2
53°	2.5	0.0	0.0	15.1	12.6
54°	2.5	1.3	3.8	11.3	17.6
55°	0.0	6.3	5.0	23.3	25.8
57.5°	1.3	10.1	5.0	16.4	20.2
60°	6.3	7.6	13.9	16.4	20.2
61°	0.0	6.3	6.3	15.1	17.6
62°	0.0	5.0	11.3	13.9	17.6
63°	6.3	7.6	10.1	16.4	20.2





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	3.8	10.1	12.6	16.4	15.1
67.5°	7.6	8.8	7.6	21.4	25.8
70°	10.1	16.4	17.6	15.1	25.8
72.5°	6.3	8.8	12.6	23.3	25.8
75°	11.3	12.6	18.9	21.4	25.8
77.5°	8.8	12.6	12.6	13.9	25.8
80°	3.8	11.3	12.6	13.9	7.6
82.5°	5.0	7.6	5.0	13.9	10.1
85°	2.5	11.3	10.1	12.6	12.6
87.5°	3.8	6.3	6.3	11.3	7.6
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	28.4	29.6	28.4	20.2	15.1	13.9	10.1	17.6	5.0	5.0	0.0
65°	25.8	28.4	21.4	24.6	16.4	15.1	8.8	17.6	2.5	8.8	6.3







64°	3.8	6.3	6.3	11.3	17.6
65°	6.3	8.8	8.8	16.4	12.6



(END OF REPORT)