

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: P315298

Luminaire Tested: **LDA2B10FL8030D010 PINW1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315298  
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: LDA2B10FL8030D010 PINW1MW  
Description: PORTFOLIO 2IN ADJ 1000 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: 898.7 lumens  
Efficiency: N/A  
Efficacy: 89.9 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

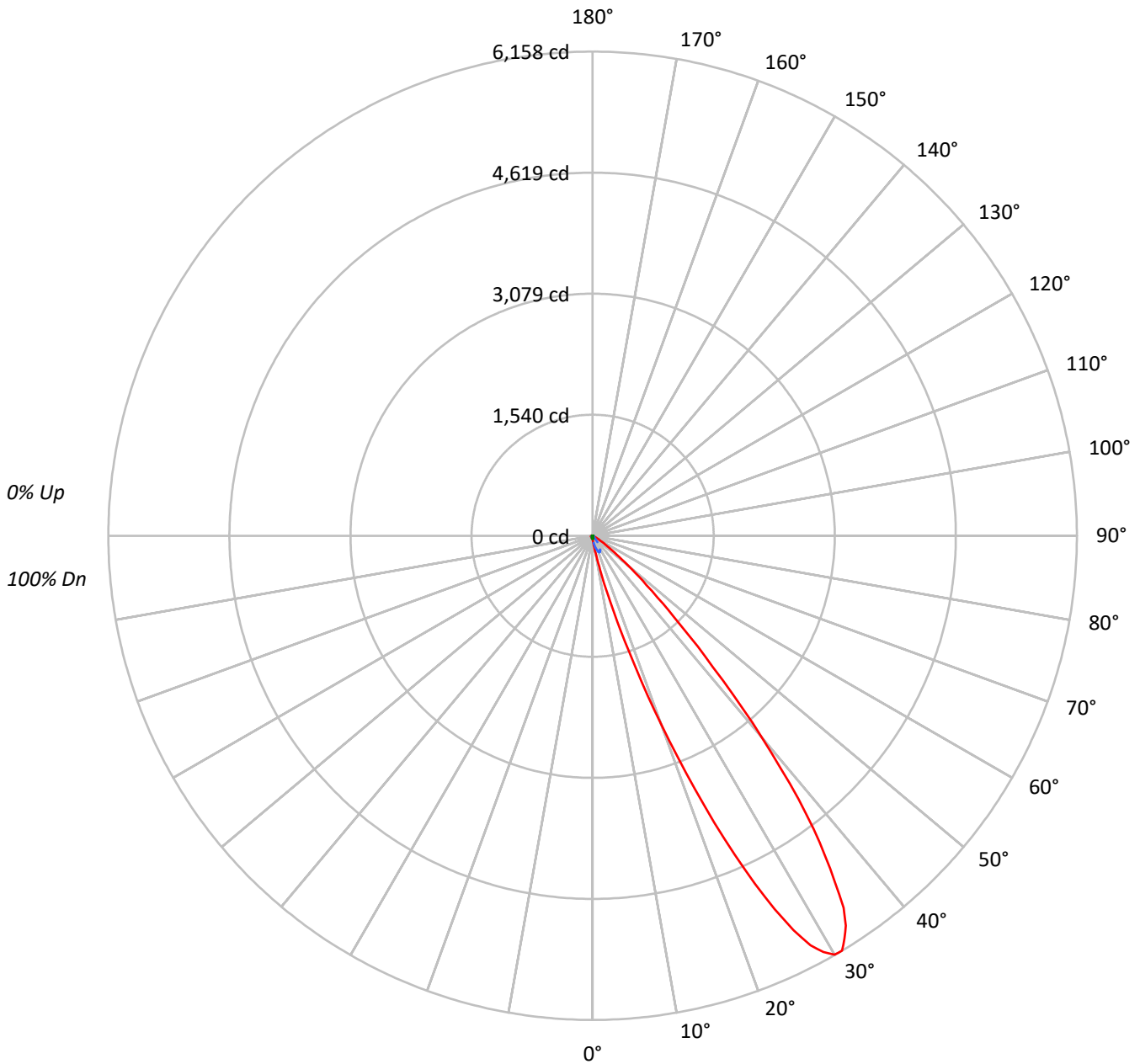
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	18896	18896	18896
5°	42195	19463	15204
10°	112869	12174	4308
15°	444264	15681	10164
20°	1344011	9608	7928
25°	2659711	8220	7022
30°	3504589	4899	8602
35°	3233841	7167	10359
40°	2154050	6247	14233
45°	1016018	2233	6000
50°	448010	8289	18651
55°	182180	0	19009
60°	75484	5328	16972
65°	25799	6304	12608
70°	21782	12405	31879
75°	12390	18490	42127
80°	0	9092	18468
85°	12454	12454	61135



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	5.2	0.6
10°-20°	55.0	6.1
20°-30°	282.6	31.5
30°-40°	361.9	40.3
40°-50°	139.2	15.5
50°-60°	28.3	3.1
60°-70°	9.6	1.1
70°-80°	11.1	1.2
80°-90°	5.7	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°	342.8	38.1
0°-40°	704.8	78.4
0°-60°	872.2	97.1
0°-90°	898.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	898.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	38	38	38	38	38	
5°	85	70	39	29	31	13
15°	870	169	31	18	20	334
25°	4886	221	15	12	13	2230
35°	5369	115	12	10	17	3209
45°	1456	29	3	2	9	1252
55°	212	5	0	4	22	219
65°	22	8	5	8	11	31
75°	6	12	10	16	22	9
85°	2	8	2	9	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°	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3
2.5°	56.6	49.0	51.2	43.7	48.0	49.0	40.4	53.4	48.0	50.1	43.7
5°	85.2	91.6	84.1	80.8	78.7	80.8	78.7	81.9	79.8	70.1	50.1
7.5°	142.3	129.9	129.9	125.6	128.8	127.7	122.3	125.6	118.0	85.2	57.7
10°	225.3	212.9	211.8	208.6	207.5	197.8	192.4	188.1	172.5	100.8	52.3
12.5°	441.4	430.6	423.1	404.2	391.3	383.7	355.2	340.1	295.3	149.8	66.8
15°	869.8	814.3	828.3	767.4	722.7	693.1	633.8	581.5	474.3	169.2	64.7
17.5°	1539.2	1485.3	1449.2	1382.9	1291.8	1213.1	1096.2	980.3	762.0	192.4	60.4
20°	2559.9	2474.7	2399.3	2285.6	2110.4	1959.0	1753.1	1531.6	1134.4	219.9	54.4
21°	3008.3	2942.5	2855.2	2705.4	2501.1	2298.5	2051.7	1784.9	1292.9	222.0	49.0
22°	3476.1	3433.5	3318.7	3146.8	2908.6	2667.1	2364.3	2071.1	1461.6	225.3	46.9
23°	3963.3	3918.5	3788.6	3591.9	3324.1	3032.0	2679.0	2331.4	1620.0	229.6	45.8
24°	4440.2	4390.6	4245.6	4025.8	3721.8	3386.1	2987.3	2584.1	1767.7	227.4	48.0
25°	4885.9	4816.9	4663.9	4420.3	4086.7	3710.0	3270.2	2802.4	1897.6	221.0	40.4
26°	5283.6	5204.9	5040.0	4774.3	4409.5	4001.5	3506.2	3005.0	1993.5	215.6	38.3
27°	5629.1	5529.9	5353.7	5075.1	4683.8	4233.3	3707.8	3163.5	2078.1	207.5	30.7
28°	5898.0	5784.3	5605.4	5311.1	4897.7	4413.8	3856.0	3262.7	2128.2	208.6	35.0
29°	6053.2	5965.9	5771.3	5463.1	5028.2	4517.8	3934.2	3317.6	2137.9	192.4	32.9
30°	6151.8	6054.3	5854.3	5532.1	5078.3	4541.5	3943.9	3307.4	2109.4	180.5	30.7
31°	6158.3	6056.4	5853.3	5519.7	5058.9	4502.2	3890.0	3246.5	2047.4	168.1	25.3
32°	6042.4	5963.7	5763.8	5419.4	4953.8	4393.9	3774.1	3143.5	1949.8	143.4	17.2
33°	5911.5	5816.1	5617.2	5269.6	4808.3	4245.6	3607.0	3005.0	1848.5	141.2	22.1
34°	5707.8	5593.0	5397.3	5055.1	4606.2	4034.4	3408.2	2820.2	1719.2	128.8	21.0
35°	5369.3	5307.9	5110.1	4772.2	4336.2	3781.1	3168.9	2617.0	1581.7	114.8	15.1
36°	5030.3	4954.9	4767.9	4441.3	4027.9	3479.3	2898.9	2385.3	1426.5	97.5	11.9
37°	4671.9	4573.3	4403.0	4083.4	3651.8	3178.6	2639.7	2164.3	1299.9	102.9	16.2
38°	4254.3	4221.4	3997.2	3699.7	3300.9	2854.1	2361.0	1931.5	1159.8	95.9	26.4
39°	3795.1	3773.0	3549.4	3278.3	2920.4	2509.8	2075.9	1690.1	1019.6	70.1	8.6
40°	3344.6	3281.5	3123.1	2876.8	2565.3	2196.1	1821.0	1484.2	898.4	69.0	17.2
42.5°	2266.7	2286.7	2115.3	1939.1	1739.1	1488.5	1238.4	1017.5	628.4	51.2	10.8
45°	1456.2	1460.5	1384.0	1247.1	1116.1	959.8	794.9	662.3	405.3	28.6	3.2
47.5°	927.0	924.8	875.8	797.1	711.4	619.8	516.8	432.8	262.5	22.1	9.7
50°	583.7	581.5	550.8	500.7	452.7	392.3	327.7	278.6	166.0	26.4	10.8
51°	474.3	477.5	451.6	401.0	363.8	306.1	261.4	222.0	129.9	18.3	9.7
52°	391.3	389.1	372.9	330.4	299.6	250.1	212.9	181.6	108.3	16.2	4.3
53°	314.7	315.8	299.6	266.8	237.1	199.9	170.3	141.2	77.6	11.9	3.2
54°	249.0	246.8	241.4	209.6	191.3	158.4	133.1	108.3	66.8	2.2	0.0
55°	211.8	208.6	201.0	173.5	155.2	131.0	106.2	92.7	57.7	5.4	0.0
57.5°	122.3	122.3	118.0	102.9	90.5	80.8	64.7	60.4	29.6	5.4	0.0
60°	76.5	66.8	74.4	63.6	50.1	44.7	37.2	34.0	25.3	9.7	2.2
61°	63.6	51.2	50.1	46.9	43.7	29.6	25.3	27.5	16.2	3.2	2.2
62°	45.8	40.4	43.7	37.2	32.9	23.2	21.0	19.9	9.7	4.3	5.4
63°	41.5	37.2	36.1	27.5	24.3	24.3	18.3	17.2	11.9	8.6	4.3



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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°	22.1	18.3	16.2	18.3	10.8	14.0	5.4	15.1	3.2	5.4	3.2
67.5°	17.2	10.8	9.7	11.9	7.5	5.4	7.5	9.7	3.2	5.4	7.5
70°	15.1	7.5	10.8	9.7	7.5	9.7	10.8	10.8	3.2	10.8	9.7
72.5°	15.1	9.7	5.4	4.3	4.3	4.3	4.3	4.3	6.5	15.1	11.9
75°	6.5	6.5	3.2	7.5	4.3	6.5	4.3	10.8	4.3	11.9	9.7
77.5°	4.3	5.4	0.0	5.4	0.0	0.0	3.2	7.5	3.2	8.6	10.8
80°	0.0	5.4	3.2	0.0	2.2	3.2	0.0	1.1	2.2	9.7	4.3
82.5°	2.2	3.2	4.3	2.2	2.2	0.0	0.0	0.0	0.0	6.5	5.4
85°	2.2	4.3	0.0	1.1	4.3	2.2	1.1	5.4	2.2	7.5	8.6
87.5°	0.0	2.2	2.2	0.0	3.2	0.0	3.2	2.2	0.0	6.5	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



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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
0°	38.3	38.3	38.3	38.3	38.3
2.5°	32.9	29.6	25.3	31.8	26.4
5°	39.3	36.1	28.6	34.0	30.7
7.5°	40.4	34.0	29.6	27.5	30.7
10°	24.3	16.2	11.9	16.2	8.6
12.5°	40.4	28.6	26.4	29.6	32.9
15°	30.7	18.3	18.3	14.0	19.9
17.5°	17.2	14.0	12.9	17.2	19.9
20°	18.3	11.9	9.7	16.2	15.1
21°	16.2	4.3	12.9	12.9	15.1
22°	23.2	10.8	12.9	21.0	22.1
23°	15.1	11.9	9.7	12.9	17.2
24°	22.1	12.9	11.9	16.2	24.3
25°	15.1	11.9	11.9	15.1	12.9
26°	8.6	11.9	8.6	12.9	10.8
27°	6.5	10.8	6.5	9.7	12.9
28°	14.0	17.2	16.2	17.2	15.1
29°	15.1	18.3	15.1	23.2	17.2
30°	8.6	16.2	7.5	17.2	15.1
31°	8.6	11.9	5.4	17.2	15.1
32°	1.1	6.5	3.2	6.5	6.5
33°	6.5	7.5	8.6	14.0	10.8
34°	10.8	12.9	8.6	15.1	12.9
35°	11.9	6.5	9.7	16.2	17.2
36°	3.2	3.2	5.4	12.9	4.3
37°	6.5	18.3	12.9	22.1	12.9
38°	10.8	22.1	21.0	27.5	22.1
39°	2.2	6.5	7.5	15.1	15.1
40°	9.7	16.2	11.9	22.1	22.1
42.5°	7.5	11.9	8.6	18.3	15.1
45°	3.2	3.2	2.2	11.9	8.6
47.5°	5.4	5.4	9.7	15.1	26.4
50°	10.8	10.8	14.0	25.3	24.3
51°	6.5	5.4	7.5	17.2	22.1
52°	5.4	7.5	7.5	17.2	17.2
53°	2.2	0.0	0.0	12.9	10.8
54°	2.2	1.1	3.2	9.7	15.1
55°	0.0	5.4	4.3	19.9	22.1
57.5°	1.1	8.6	4.3	14.0	17.2
60°	5.4	6.5	11.9	14.0	17.2
61°	0.0	5.4	5.4	12.9	15.1
62°	0.0	4.3	9.7	11.9	15.1
63°	5.4	6.5	8.6	14.0	17.2





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	3.2	8.6	10.8	14.0	12.9
67.5°	6.5	7.5	6.5	18.3	22.1
70°	8.6	14.0	15.1	12.9	22.1
72.5°	5.4	7.5	10.8	19.9	22.1
75°	9.7	10.8	16.2	18.3	22.1
77.5°	7.5	10.8	10.8	11.9	22.1
80°	3.2	9.7	10.8	11.9	6.5
82.5°	4.3	6.5	4.3	11.9	8.6
85°	2.2	9.7	8.6	10.8	10.8
87.5°	3.2	5.4	5.4	9.7	6.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	24.3	25.3	24.3	17.2	12.9	11.9	8.6	15.1	4.3	4.3	0.0
65°	22.1	24.3	18.3	21.0	14.0	12.9	7.5	15.1	2.2	7.5	5.4







64°	3.2	5.4	5.4	9.7	15.1
65°	5.4	7.5	7.5	14.0	10.8



(END OF REPORT)