

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: P315366

Luminaire Tested: **LDA2B10FL9730D010 PINW1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315366  
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: LDA2B10FL9730D010 PINW1MMS  
Description: PORTFOLIO 2IN ADJ 1000 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: 665.4 lumens  
Efficiency: N/A  
Efficacy: 66.5 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

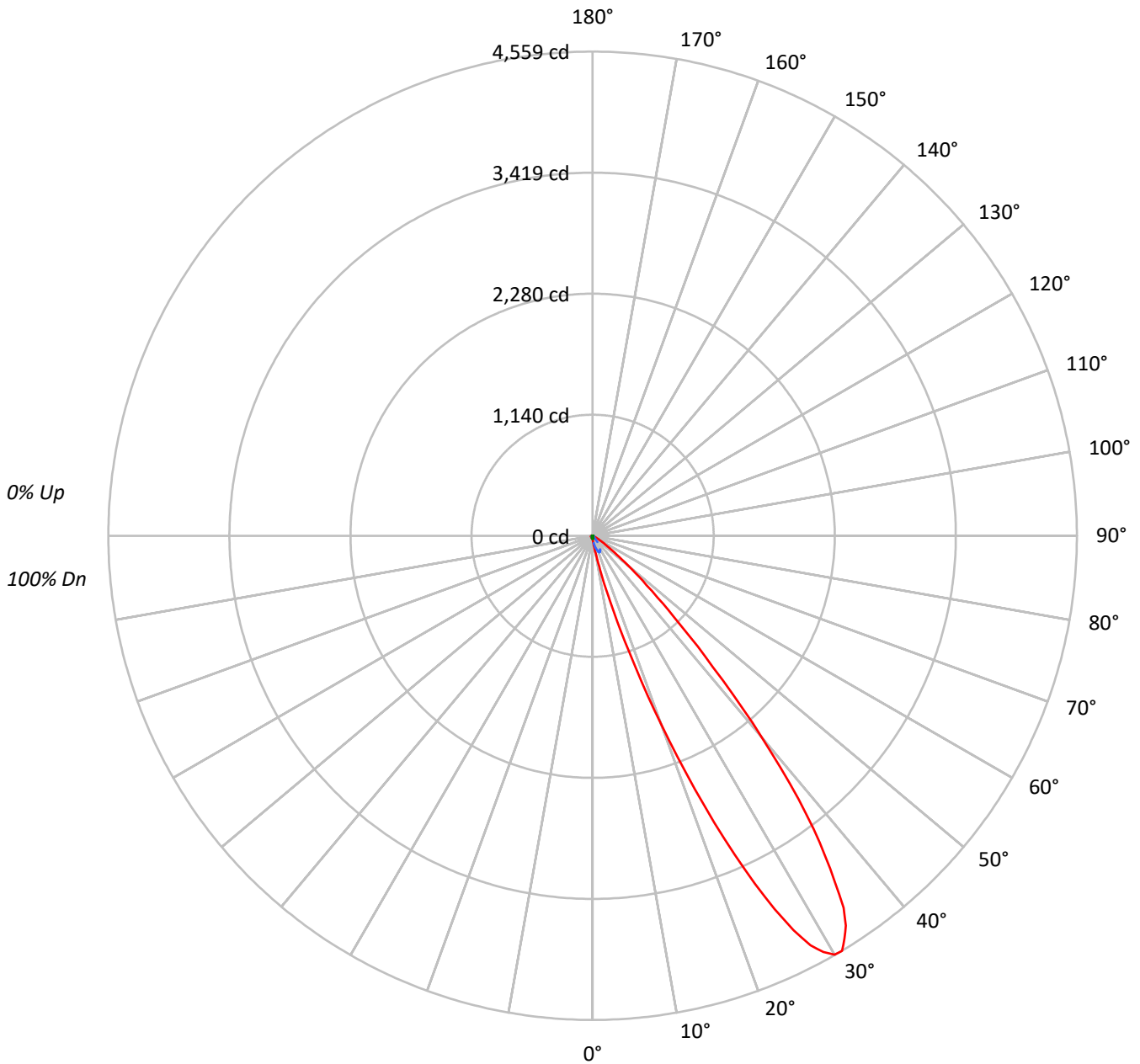
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	13962	13962	13962
5°	31201	14412	11242
10°	83562	9018	3206
15°	328933	11594	7559
20°	995079	7140	5880
25°	1969184	6097	5226
30°	2594688	3646	6380
35°	2394258	5300	7709
40°	1594767	4637	10562
45°	752211	1675	4465
50°	331652	6140	13816
55°	134872	0	14106
60°	55947	3947	12630
65°	19145	4670	9339
70°	16156	9232	23657
75°	9150	13725	31262
80°	0	6819	13638
85°	9057	9057	45286



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	3.9	0.6
10°-20°	40.7	6.1
20°-30°	209.3	31.4
30°-40°	268.0	40.3
40°-50°	103.0	15.5
50°-60°	21.0	3.1
60°-70°	7.1	1.1
70°-80°	8.3	1.2
80°-90°	4.2	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°	253.8	38.1
0°-40°	521.8	78.4
0°-60°	645.8	97.1
0°-90°	665.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	665.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	28	28	28	28	28	
5°	63	52	29	21	23	9
15°	644	125	23	14	15	247
25°	3617	164	11	9	10	1651
35°	3975	85	9	7	13	2376
45°	1078	21	2	2	6	927
55°	157	4	0	3	16	162
65°	16	6	4	6	8	23
75°	5	9	7	12	16	7
85°	2	6	2	6	8	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°	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3
2.5°	41.9	36.3	37.9	32.3	35.5	36.3	29.9	39.5	35.5	37.1	32.3
5°	63.0	67.8	62.2	59.9	58.3	59.9	58.3	60.6	59.1	51.9	37.1
7.5°	105.3	96.2	96.2	93.0	95.4	94.6	90.6	93.0	87.4	63.0	42.7
10°	166.8	157.6	156.8	154.4	153.6	146.4	142.4	139.3	127.7	74.6	38.7
12.5°	326.8	318.8	313.2	299.3	289.7	284.1	262.9	251.8	218.7	110.9	49.5
15°	644.0	602.9	613.3	568.2	535.1	513.1	469.2	430.5	351.1	125.3	47.9
17.5°	1139.6	1099.7	1072.9	1023.8	956.4	898.2	811.6	725.8	564.2	142.4	44.7
20°	1895.3	1832.2	1776.4	1692.2	1562.5	1450.4	1298.0	1134.0	839.9	162.8	40.3
21°	2227.2	2178.6	2113.9	2003.0	1851.8	1701.8	1519.0	1321.5	957.2	164.4	36.3
22°	2573.6	2542.1	2457.1	2329.8	2153.4	1974.7	1750.4	1533.4	1082.1	166.8	34.7
23°	2934.3	2901.2	2805.0	2659.4	2461.1	2244.8	1983.5	1726.1	1199.4	170.0	33.9
24°	3287.4	3250.7	3143.4	2980.6	2755.5	2506.9	2211.7	1913.2	1308.7	168.4	35.5
25°	3617.4	3566.3	3453.0	3272.6	3025.7	2746.7	2421.2	2074.8	1404.9	163.6	29.9
26°	3911.8	3853.6	3731.5	3534.8	3264.7	2962.6	2595.9	2224.9	1475.9	159.6	28.3
27°	4167.6	4094.2	3963.7	3757.4	3467.8	3134.2	2745.2	2342.2	1538.6	153.6	22.7
28°	4366.7	4282.5	4150.0	3932.2	3626.2	3267.8	2854.9	2415.6	1575.7	154.4	25.9
29°	4481.6	4417.0	4272.9	4044.7	3722.7	3344.9	2912.7	2456.3	1582.9	142.4	24.3
30°	4554.6	4482.4	4334.4	4095.8	3759.8	3362.4	2919.9	2448.7	1561.7	133.7	22.7
31°	4559.4	4484.0	4333.6	4086.6	3745.5	3333.3	2880.0	2403.6	1515.8	124.5	18.8
32°	4473.6	4415.4	4267.4	4012.4	3667.7	3253.1	2794.2	2327.4	1443.6	106.1	12.8
33°	4376.7	4306.1	4158.8	3901.5	3559.9	3143.4	2670.5	2224.9	1368.6	104.5	16.4
34°	4225.9	4140.9	3996.0	3742.7	3410.3	2987.0	2523.3	2088.0	1272.8	95.4	15.6
35°	3975.3	3929.8	3783.4	3533.2	3210.4	2799.4	2346.1	1937.6	1171.1	85.0	11.2
36°	3724.3	3668.5	3530.0	3288.2	2982.2	2576.0	2146.2	1766.0	1056.2	72.2	8.8
37°	3459.0	3386.0	3259.9	3023.3	2703.7	2353.3	1954.3	1602.4	962.4	76.2	12.0
38°	3149.7	3125.4	2959.4	2739.2	2443.9	2113.1	1748.0	1430.0	858.7	71.0	19.6
39°	2809.8	2793.4	2627.8	2427.1	2162.2	1858.2	1537.0	1251.3	754.9	51.9	6.4
40°	2476.2	2429.5	2312.2	2129.9	1899.3	1625.9	1348.2	1098.9	665.1	51.1	12.8
42.5°	1678.2	1693.0	1566.1	1435.6	1287.6	1102.1	916.9	753.3	465.2	37.9	8.0
45°	1078.1	1081.3	1024.6	923.3	826.3	710.6	588.5	490.4	300.1	21.1	2.4
47.5°	686.3	684.7	648.4	590.1	526.7	458.9	382.6	320.4	194.3	16.4	7.2
50°	432.1	430.5	407.8	370.7	335.2	290.5	242.6	206.3	122.9	19.6	8.0
51°	351.1	353.5	334.4	296.9	269.3	226.6	193.5	164.4	96.2	13.6	7.2
52°	289.7	288.1	276.1	244.6	221.8	185.1	157.6	134.5	80.2	12.0	3.2
53°	233.0	233.8	221.8	197.5	175.6	148.0	126.1	104.5	57.5	8.8	2.4
54°	184.3	182.7	178.8	155.2	141.6	117.3	98.6	80.2	49.5	1.6	0.0
55°	156.8	154.4	148.8	128.5	114.9	97.0	78.6	68.6	42.7	4.0	0.0
57.5°	90.6	90.6	87.4	76.2	67.0	59.9	47.9	44.7	21.9	4.0	0.0
60°	56.7	49.5	55.1	47.1	37.1	33.1	27.5	25.1	18.8	7.2	1.6
61°	47.1	37.9	37.1	34.7	32.3	21.9	18.8	20.3	12.0	2.4	1.6
62°	33.9	29.9	32.3	27.5	24.3	17.2	15.6	14.8	7.2	3.2	4.0
63°	30.7	27.5	26.7	20.3	18.0	18.0	13.6	12.8	8.8	6.4	3.2



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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°	16.4	13.6	12.0	13.6	8.0	10.4	4.0	11.2	2.4	4.0	2.4
67.5°	12.8	8.0	7.2	8.8	5.6	4.0	5.6	7.2	2.4	4.0	5.6
70°	11.2	5.6	8.0	7.2	5.6	7.2	8.0	8.0	2.4	8.0	7.2
72.5°	11.2	7.2	4.0	3.2	3.2	3.2	3.2	3.2	4.8	11.2	8.8
75°	4.8	4.8	2.4	5.6	3.2	4.8	3.2	8.0	3.2	8.8	7.2
77.5°	3.2	4.0	0.0	4.0	0.0	0.0	2.4	5.6	2.4	6.4	8.0
80°	0.0	4.0	2.4	0.0	1.6	2.4	0.0	0.8	1.6	7.2	3.2
82.5°	1.6	2.4	3.2	1.6	1.6	0.0	0.0	0.0	0.0	4.8	4.0
85°	1.6	3.2	0.0	0.8	3.2	1.6	0.8	4.0	1.6	5.6	6.4
87.5°	0.0	1.6	1.6	0.0	2.4	0.0	2.4	1.6	0.0	4.8	2.4
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°	28.3	28.3	28.3	28.3	28.3
2.5°	24.3	21.9	18.8	23.5	19.6
5°	29.1	26.7	21.1	25.1	22.7
7.5°	29.9	25.1	21.9	20.3	22.7
10°	18.0	12.0	8.8	12.0	6.4
12.5°	29.9	21.1	19.6	21.9	24.3
15°	22.7	13.6	13.6	10.4	14.8
17.5°	12.8	10.4	9.6	12.8	14.8
20°	13.6	8.8	7.2	12.0	11.2
21°	12.0	3.2	9.6	9.6	11.2
22°	17.2	8.0	9.6	15.6	16.4
23°	11.2	8.8	7.2	9.6	12.8
24°	16.4	9.6	8.8	12.0	18.0
25°	11.2	8.8	8.8	11.2	9.6
26°	6.4	8.8	6.4	9.6	8.0
27°	4.8	8.0	4.8	7.2	9.6
28°	10.4	12.8	12.0	12.8	11.2
29°	11.2	13.6	11.2	17.2	12.8
30°	6.4	12.0	5.6	12.8	11.2
31°	6.4	8.8	4.0	12.8	11.2
32°	0.8	4.8	2.4	4.8	4.8
33°	4.8	5.6	6.4	10.4	8.0
34°	8.0	9.6	6.4	11.2	9.6
35°	8.8	4.8	7.2	12.0	12.8
36°	2.4	2.4	4.0	9.6	3.2
37°	4.8	13.6	9.6	16.4	9.6
38°	8.0	16.4	15.6	20.3	16.4
39°	1.6	4.8	5.6	11.2	11.2
40°	7.2	12.0	8.8	16.4	16.4
42.5°	5.6	8.8	6.4	13.6	11.2
45°	2.4	2.4	1.6	8.8	6.4
47.5°	4.0	4.0	7.2	11.2	19.6
50°	8.0	8.0	10.4	18.8	18.0
51°	4.8	4.0	5.6	12.8	16.4
52°	4.0	5.6	5.6	12.8	12.8
53°	1.6	0.0	0.0	9.6	8.0
54°	1.6	0.8	2.4	7.2	11.2
55°	0.0	4.0	3.2	14.8	16.4
57.5°	0.8	6.4	3.2	10.4	12.8
60°	4.0	4.8	8.8	10.4	12.8
61°	0.0	4.0	4.0	9.6	11.2
62°	0.0	3.2	7.2	8.8	11.2
63°	4.0	4.8	6.4	10.4	12.8





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	2.4	6.4	8.0	10.4	9.6
67.5°	4.8	5.6	4.8	13.6	16.4
70°	6.4	10.4	11.2	9.6	16.4
72.5°	4.0	5.6	8.0	14.8	16.4
75°	7.2	8.0	12.0	13.6	16.4
77.5°	5.6	8.0	8.0	8.8	16.4
80°	2.4	7.2	8.0	8.8	4.8
82.5°	3.2	4.8	3.2	8.8	6.4
85°	1.6	7.2	6.4	8.0	8.0
87.5°	2.4	4.0	4.0	7.2	4.8
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	18.0	18.8	18.0	12.8	9.6	8.8	6.4	11.2	3.2	3.2	0.0
65°	16.4	18.0	13.6	15.6	10.4	9.6	5.6	11.2	1.6	5.6	4.0







64°	2.4	4.0	4.0	7.2	11.2
65°	4.0	5.6	5.6	10.4	8.0



(END OF REPORT)