

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: P315235

Luminaire Tested: **LDA2B05FL8050D010 PIN1MB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315235  
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: LDA2B05FL8050D010 PIN1MB  
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, Black oculus black finish  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 666.2 lumens  
Efficiency: N/A  
Efficacy: 95.2 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

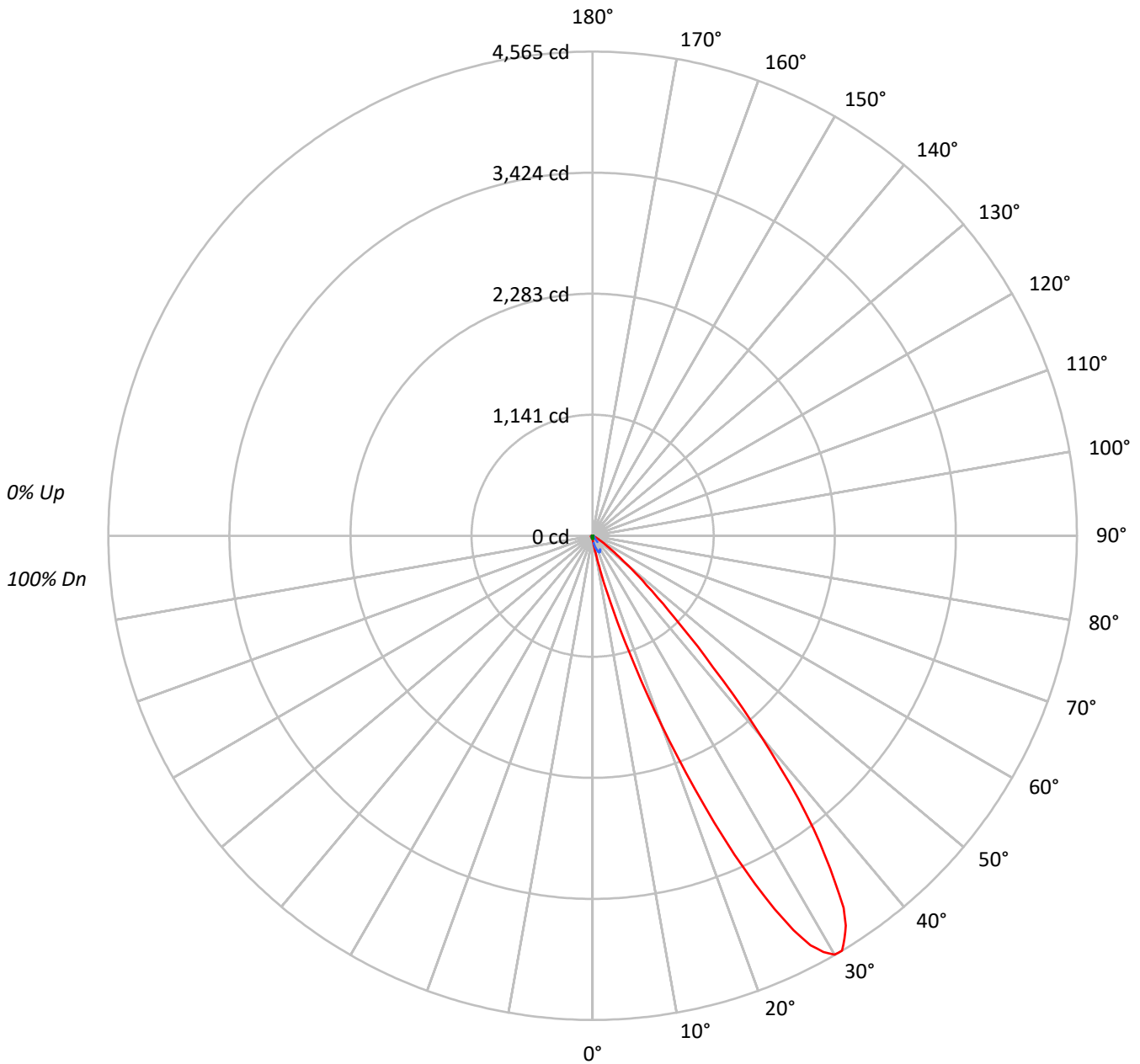
Input Watts (W): 7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20					
RC	80					70					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°	14011	14011	14011
5°	31250	14461	11292
10°	83662	9018	3206
15°	329342	11645	7559
20°	996234	7140	5880
25°	1971525	6097	5226
30°	2597821	3646	6380
35°	2397149	5300	7709
40°	1596699	4637	10562
45°	753118	1675	4465
50°	332036	6140	13816
55°	135044	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°	40.8	6.1
20°-30°	209.5	31.5
30°-40°	268.3	40.3
40°-50°	103.2	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°	254.1	38.1
0°-40°	522.4	78.4
0°-60°	646.6	97.1
0°-90°	666.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	666.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	28	28	28	28	28	
5°	63	52	29	21	23	9
15°	645	125	23	14	15	247
25°	3622	164	11	9	10	1653
35°	3980	85	9	7	13	2379
45°	1079	21	2	2	6	928
55°	157	4	0	3	16	163
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	



TEST NUMBER: P315235

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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°	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.4
2.5°	41.9	36.4	38.0	32.4	35.6	36.4	30.0	39.5	35.6	37.2	32.4
5°	63.1	67.9	62.3	59.9	58.3	59.9	58.3	60.7	59.1	51.9	37.2
7.5°	105.5	96.3	96.3	93.1	95.5	94.7	90.7	93.1	87.5	63.1	42.7
10°	167.0	157.8	157.0	154.6	153.8	146.6	142.6	139.4	127.8	74.7	38.7
12.5°	327.2	319.2	313.6	299.6	290.0	284.4	263.3	252.1	218.9	111.1	49.5
15°	644.8	603.6	614.0	568.9	535.7	513.7	469.8	431.0	351.5	125.4	47.9
17.5°	1140.9	1101.0	1074.2	1025.1	957.6	899.2	812.6	726.7	564.9	142.6	44.7
20°	1897.5	1834.4	1778.5	1694.2	1564.4	1452.1	1299.5	1135.3	840.9	163.0	40.3
21°	2229.9	2181.2	2116.5	2005.4	1854.0	1703.8	1520.8	1323.1	958.4	164.6	36.4
22°	2576.7	2545.1	2460.0	2332.6	2156.0	1977.0	1752.5	1535.2	1083.4	167.0	34.8
23°	2937.8	2904.6	2808.4	2662.6	2464.0	2247.5	1985.8	1728.2	1200.8	170.2	34.0
24°	3291.3	3254.6	3147.1	2984.1	2758.8	2510.0	2214.3	1915.5	1310.3	168.6	35.6
25°	3621.7	3570.6	3457.1	3276.6	3029.3	2750.0	2424.1	2077.3	1406.6	163.8	30.0
26°	3916.5	3858.2	3736.0	3539.0	3268.6	2966.2	2599.0	2227.5	1477.7	159.8	28.4
27°	4172.6	4099.1	3968.5	3761.9	3471.9	3137.9	2748.4	2345.0	1540.4	153.8	22.8
28°	4372.0	4287.7	4155.0	3936.9	3630.5	3271.8	2858.3	2418.5	1577.6	154.6	26.0
29°	4487.0	4422.3	4278.1	4049.6	3727.2	3348.9	2916.2	2459.2	1584.8	142.6	24.4
30°	4560.1	4487.8	4339.6	4100.7	3764.3	3366.5	2923.4	2451.6	1563.6	133.8	22.8
31°	4564.9	4489.4	4338.8	4091.5	3750.0	3337.3	2883.5	2406.5	1517.6	124.6	18.8
32°	4479.0	4420.7	4272.5	4017.2	3672.1	3257.0	2797.6	2330.2	1445.3	106.3	12.8
33°	4381.9	4311.2	4163.8	3906.2	3564.2	3147.1	2673.7	2227.5	1370.2	104.7	16.4
34°	4230.9	4145.8	4000.8	3747.2	3414.4	2990.5	2526.3	2090.5	1274.4	95.5	15.6
35°	3980.1	3934.5	3787.9	3537.4	3214.2	2802.8	2349.0	1939.9	1172.5	85.1	11.2
36°	3728.8	3672.9	3534.2	3292.1	2985.7	2579.1	2148.8	1768.1	1057.4	72.3	8.8
37°	3463.1	3390.0	3263.8	3026.9	2706.9	2356.2	1956.7	1604.3	963.6	76.3	12.0
38°	3153.5	3129.2	2963.0	2742.5	2446.8	2115.7	1750.1	1431.8	859.7	71.1	19.6
39°	2813.2	2796.8	2631.0	2430.1	2164.8	1860.4	1538.8	1252.8	755.8	51.9	6.4
40°	2479.2	2432.5	2315.0	2132.4	1901.5	1627.9	1349.9	1100.2	665.9	51.1	12.8
42.5°	1680.2	1695.0	1568.0	1437.3	1289.1	1103.4	918.0	754.2	465.8	38.0	8.0
45°	1079.4	1082.6	1025.9	924.4	827.3	711.5	589.2	491.0	300.4	21.2	2.4
47.5°	687.1	685.5	649.2	590.8	527.3	459.4	383.1	320.8	194.5	16.4	7.2
50°	432.6	431.0	408.3	371.1	335.6	290.8	242.9	206.5	123.0	19.6	8.0
51°	351.5	353.9	334.8	297.2	269.7	226.9	193.7	164.6	96.3	13.6	7.2
52°	290.0	288.4	276.4	244.9	222.1	185.4	157.8	134.6	80.3	12.0	3.2
53°	233.3	234.1	222.1	197.7	175.8	148.2	126.2	104.7	57.5	8.8	2.4
54°	184.6	183.0	179.0	155.4	141.8	117.4	98.7	80.3	49.5	1.6	0.0
55°	157.0	154.6	149.0	128.6	115.1	97.1	78.7	68.7	42.7	4.0	0.0
57.5°	90.7	90.7	87.5	76.3	67.1	59.9	47.9	44.7	22.0	4.0	0.0
60°	56.7	49.5	55.1	47.1	37.2	33.2	27.6	25.2	18.8	7.2	1.6
61°	47.1	38.0	37.2	34.8	32.4	22.0	18.8	20.4	12.0	2.4	1.6
62°	34.0	30.0	32.4	27.6	24.4	17.2	15.6	14.8	7.2	3.2	4.0
63°	30.8	27.6	26.8	20.4	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°	28.4	28.4	28.4	28.4	28.4
2.5°	24.4	22.0	18.8	23.6	19.6
5°	29.2	26.8	21.2	25.2	22.8
7.5°	30.0	25.2	22.0	20.4	22.8
10°	18.0	12.0	8.8	12.0	6.4
12.5°	30.0	21.2	19.6	22.0	24.4
15°	22.8	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	20.4	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)