

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: P315373

Luminaire Tested: **LDA2B10FLD2WD010 PIN1MB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315373  
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: LDA2B10FLD2WD010 PIN1MB  
Description: PORTFOLIO 2IN ADJ 1000 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: 647.5 lumens  
Efficiency: N/A  
Efficacy: 64.8 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

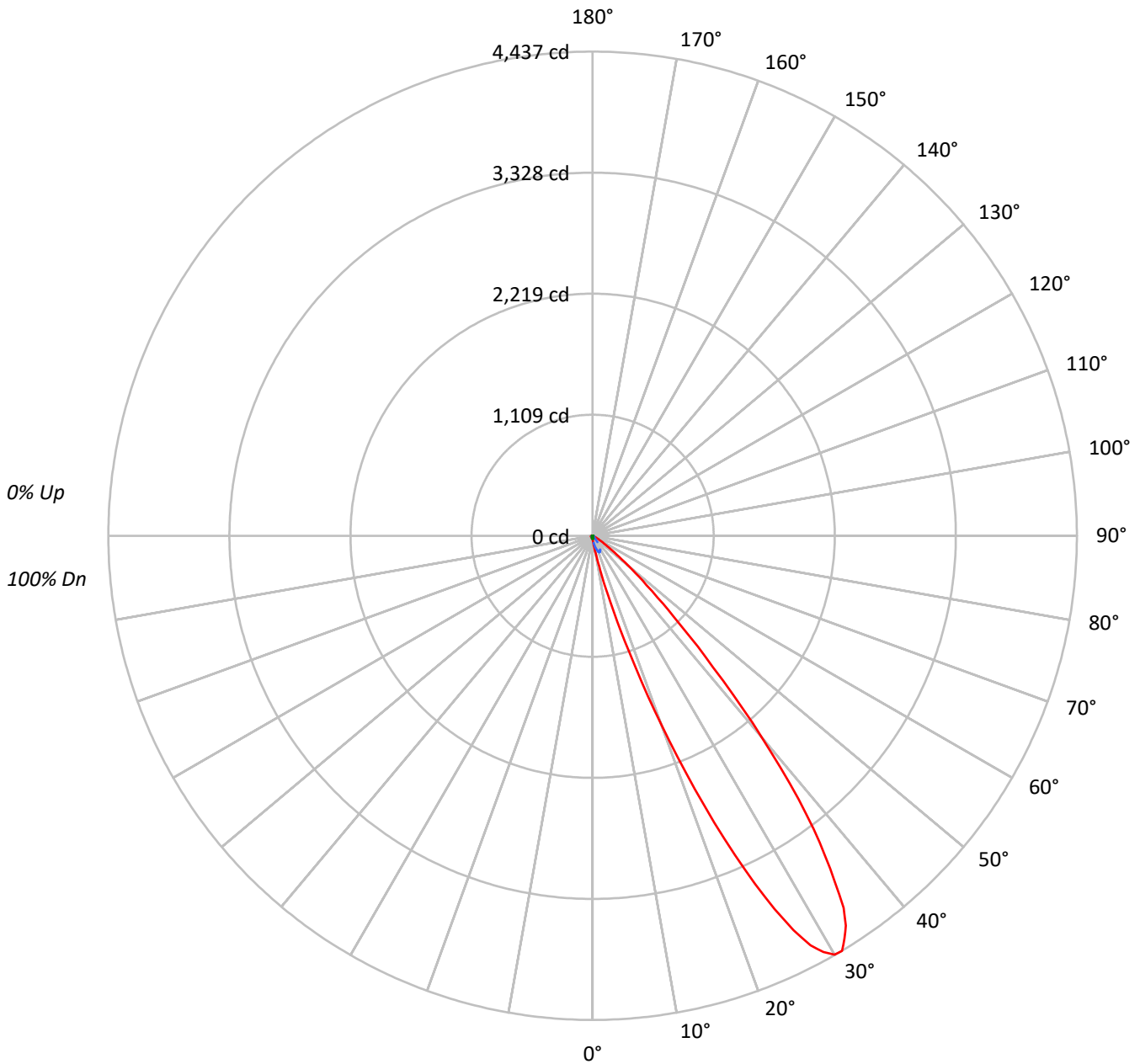
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	13617	13617	13617
5°	30408	14015	10945
10°	81308	8767	3106
15°	320148	11288	7355
20°	968460	6930	5723
25°	1916490	5934	5063
30°	2525300	3532	6210
35°	2330175	5119	7468
40°	1552132	4508	10240
45°	732116	1605	4326
50°	322825	5987	13432
55°	131259	0	13676
60°	54368	3848	12235
65°	18562	4553	9106
70°	15723	8943	22936
75°	8959	13343	30309
80°	0	6535	13353
85°	9057	9057	44153



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	3.7	0.6
10°-20°	39.6	6.1
20°-30°	203.7	31.5
30°-40°	260.8	40.3
40°-50°	100.3	15.5
50°-60°	20.4	3.1
60°-70°	6.9	1.1
70°-80°	8.0	1.2
80°-90°	4.1	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°	247.0	38.1
0°-40°	507.8	78.4
0°-60°	628.5	97.1
0°-90°	647.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	647.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	28	28	28	28	28	
5°	61	50	28	21	22	9
15°	627	122	22	13	14	240
25°	3521	159	11	8	9	1607
35°	3869	83	8	7	12	2312
45°	1049	21	2	2	6	902
55°	153	4	0	3	16	158
65°	16	5	4	5	8	22
75°	5	8	7	12	16	6
85°	2	5	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°	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
2.5°	40.8	35.3	36.9	31.5	34.6	35.3	29.1	38.4	34.6	36.1	31.5
5°	61.4	66.0	60.6	58.2	56.7	58.2	56.7	59.0	57.5	50.5	36.1
7.5°	102.5	93.6	93.6	90.5	92.8	92.0	88.2	90.5	85.0	61.4	41.6
10°	162.3	153.4	152.6	150.3	149.5	142.5	138.6	135.5	124.3	72.6	37.7
12.5°	318.0	310.3	304.8	291.2	281.9	276.5	255.9	245.0	212.8	108.0	48.2
15°	626.8	586.8	596.9	553.0	520.7	499.4	456.7	419.0	341.7	121.9	46.6
17.5°	1109.1	1070.2	1044.2	996.4	930.8	874.1	789.9	706.4	549.1	138.6	43.5
20°	1844.6	1783.2	1728.8	1646.9	1520.7	1411.6	1263.2	1103.6	817.4	158.4	39.2
21°	2167.6	2120.3	2057.4	1949.4	1802.2	1656.2	1478.4	1286.1	931.6	160.0	35.3
22°	2504.7	2474.0	2391.3	2267.4	2095.8	1921.8	1703.6	1492.3	1053.1	162.3	33.8
23°	2855.8	2823.5	2729.9	2588.2	2395.2	2184.7	1930.4	1679.9	1167.3	165.4	33.0
24°	3199.4	3163.7	3059.2	2900.8	2681.8	2439.9	2152.5	1862.0	1273.7	163.9	34.6
25°	3520.6	3470.9	3360.6	3185.1	2944.7	2673.2	2356.4	2019.3	1367.3	159.2	29.1
26°	3807.2	3750.5	3631.6	3440.2	3177.3	2883.3	2526.5	2165.3	1436.4	155.3	27.6
27°	4056.1	3984.6	3857.6	3656.9	3375.0	3050.3	2671.7	2279.5	1497.4	149.5	22.1
28°	4249.9	4167.9	4039.0	3827.0	3529.1	3180.4	2778.5	2350.9	1533.5	150.3	25.2
29°	4361.7	4298.8	4158.6	3936.5	3623.1	3255.4	2834.8	2390.5	1540.5	138.6	23.7
30°	4432.8	4362.5	4218.4	3986.2	3659.2	3272.4	2841.8	2383.2	1519.9	130.1	22.1
31°	4437.4	4364.0	4217.6	3977.3	3645.2	3244.1	2803.0	2339.3	1475.3	121.2	18.3
32°	4353.9	4297.2	4153.2	3905.0	3569.5	3166.0	2719.5	2265.1	1405.0	103.3	12.4
33°	4259.6	4190.8	4047.5	3797.1	3464.7	3059.2	2599.1	2165.3	1332.0	101.7	15.9
34°	4112.8	4030.1	3889.1	3642.5	3319.0	2907.0	2455.8	2032.1	1238.8	92.8	15.1
35°	3868.9	3824.6	3682.1	3438.6	3124.5	2724.5	2283.4	1885.7	1139.7	82.7	10.9
36°	3624.7	3570.3	3435.5	3200.2	2902.4	2507.0	2088.8	1718.7	1027.9	70.3	8.5
37°	3366.4	3295.4	3172.6	2942.4	2631.3	2290.4	1902.0	1559.5	936.6	74.2	11.6
38°	3065.5	3041.8	2880.2	2665.9	2378.5	2056.6	1701.3	1391.8	835.7	69.1	19.0
39°	2734.6	2718.7	2557.5	2362.2	2104.3	1808.4	1495.8	1217.8	734.7	50.5	6.2
40°	2410.0	2364.5	2250.4	2072.9	1848.4	1582.4	1312.2	1069.5	647.3	49.7	12.4
42.5°	1633.3	1647.7	1524.2	1397.2	1253.1	1072.6	892.4	733.2	452.8	36.9	7.8
45°	1049.3	1052.4	997.2	898.6	804.2	691.6	572.8	477.3	292.0	20.6	2.3
47.5°	667.9	666.4	631.0	574.3	512.6	446.6	372.4	311.8	189.1	15.9	7.0
50°	420.6	419.0	396.9	360.8	326.2	282.7	236.1	200.8	119.6	19.0	7.8
51°	341.7	344.1	325.4	288.9	262.1	220.6	188.3	160.0	93.6	13.2	7.0
52°	281.9	280.4	268.7	238.0	215.9	180.2	153.4	130.9	78.1	11.6	3.1
53°	226.8	227.6	215.9	192.2	170.9	144.1	122.7	101.7	55.9	8.5	2.3
54°	179.4	177.9	174.0	151.1	137.9	114.2	95.9	78.1	48.2	1.6	0.0
55°	152.6	150.3	144.8	125.0	111.8	94.4	76.5	66.8	41.6	3.9	0.0
57.5°	88.2	88.2	85.0	74.2	65.2	58.2	46.6	43.5	21.4	3.9	0.0
60°	55.1	48.2	53.6	45.8	36.1	32.2	26.8	24.5	18.3	7.0	1.6
61°	45.8	36.9	36.1	33.8	31.5	21.4	18.3	19.8	11.6	2.3	1.6
62°	33.0	29.1	31.5	26.8	23.7	16.7	15.1	14.4	7.0	3.1	3.9
63°	29.9	26.8	26.0	19.8	17.5	17.5	13.2	12.4	8.5	6.2	3.1



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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°	15.9	13.2	11.6	13.2	7.8	10.1	3.9	10.9	2.3	3.9	2.3
67.5°	12.4	7.8	7.0	8.5	5.4	3.9	5.4	7.0	2.3	3.9	5.4
70°	10.9	5.4	7.8	7.0	5.4	7.0	7.8	7.8	2.3	7.8	7.0
72.5°	10.9	7.0	3.9	3.1	3.1	3.1	3.1	3.1	4.7	10.9	8.5
75°	4.7	4.7	2.3	5.4	3.1	4.7	3.1	7.8	3.1	8.5	7.0
77.5°	3.1	3.9	0.0	3.9	0.0	0.0	2.3	5.4	2.3	6.2	7.8
80°	0.0	3.9	2.3	0.0	1.6	2.3	0.0	0.8	1.6	7.0	3.1
82.5°	1.6	2.3	3.1	1.6	1.6	0.0	0.0	0.0	0.0	4.7	3.9
85°	1.6	3.1	0.0	0.8	3.1	1.6	0.8	3.9	1.6	5.4	6.2
87.5°	0.0	1.6	1.6	0.0	2.3	0.0	2.3	1.6	0.0	4.7	2.3
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°	27.6	27.6	27.6	27.6	27.6
2.5°	23.7	21.4	18.3	22.9	19.0
5°	28.3	26.0	20.6	24.5	22.1
7.5°	29.1	24.5	21.4	19.8	22.1
10°	17.5	11.6	8.5	11.6	6.2
12.5°	29.1	20.6	19.0	21.4	23.7
15°	22.1	13.2	13.2	10.1	14.4
17.5°	12.4	10.1	9.3	12.4	14.4
20°	13.2	8.5	7.0	11.6	10.9
21°	11.6	3.1	9.3	9.3	10.9
22°	16.7	7.8	9.3	15.1	15.9
23°	10.9	8.5	7.0	9.3	12.4
24°	15.9	9.3	8.5	11.6	17.5
25°	10.9	8.5	8.5	10.9	9.3
26°	6.2	8.5	6.2	9.3	7.8
27°	4.7	7.8	4.7	7.0	9.3
28°	10.1	12.4	11.6	12.4	10.9
29°	10.9	13.2	10.9	16.7	12.4
30°	6.2	11.6	5.4	12.4	10.9
31°	6.2	8.5	3.9	12.4	10.9
32°	0.8	4.7	2.3	4.7	4.7
33°	4.7	5.4	6.2	10.1	7.8
34°	7.8	9.3	6.2	10.9	9.3
35°	8.5	4.7	7.0	11.6	12.4
36°	2.3	2.3	3.9	9.3	3.1
37°	4.7	13.2	9.3	15.9	9.3
38°	7.8	15.9	15.1	19.8	15.9
39°	1.6	4.7	5.4	10.9	10.9
40°	7.0	11.6	8.5	15.9	15.9
42.5°	5.4	8.5	6.2	13.2	10.9
45°	2.3	2.3	1.6	8.5	6.2
47.5°	3.9	3.9	7.0	10.9	19.0
50°	7.8	7.8	10.1	18.3	17.5
51°	4.7	3.9	5.4	12.4	15.9
52°	3.9	5.4	5.4	12.4	12.4
53°	1.6	0.0	0.0	9.3	7.8
54°	1.6	0.8	2.3	7.0	10.9
55°	0.0	3.9	3.1	14.4	15.9
57.5°	0.8	6.2	3.1	10.1	12.4
60°	3.9	4.7	8.5	10.1	12.4
61°	0.0	3.9	3.9	9.3	10.9
62°	0.0	3.1	7.0	8.5	10.9
63°	3.9	4.7	6.2	10.1	12.4





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	2.3	6.2	7.8	10.1	9.3
67.5°	4.7	5.4	4.7	13.2	15.9
70°	6.2	10.1	10.9	9.3	15.9
72.5°	3.9	5.4	7.8	14.4	15.9
75°	7.0	7.8	11.6	13.2	15.9
77.5°	5.4	7.8	7.8	8.5	15.9
80°	2.3	7.0	7.8	8.5	4.7
82.5°	3.1	4.7	3.1	8.5	6.2
85°	1.6	7.0	6.2	7.8	7.8
87.5°	2.3	3.9	3.9	7.0	4.7
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	17.5	18.3	17.5	12.4	9.3	8.5	6.2	10.9	3.1	3.1	0.0
65°	15.9	17.5	13.2	15.1	10.1	9.3	5.4	10.9	1.6	5.4	3.9







64°	2.3	3.9	3.9	7.0	10.9
65°	3.9	5.4	5.4	10.1	7.8



(END OF REPORT)