

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: P315217

Luminaire Tested: **LDA2B05FL8030D010 PIN1MB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315217  
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: LDA2B05FL8030D010 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: 637.1 lumens  
Efficiency: N/A  
Efficacy: 91.0 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

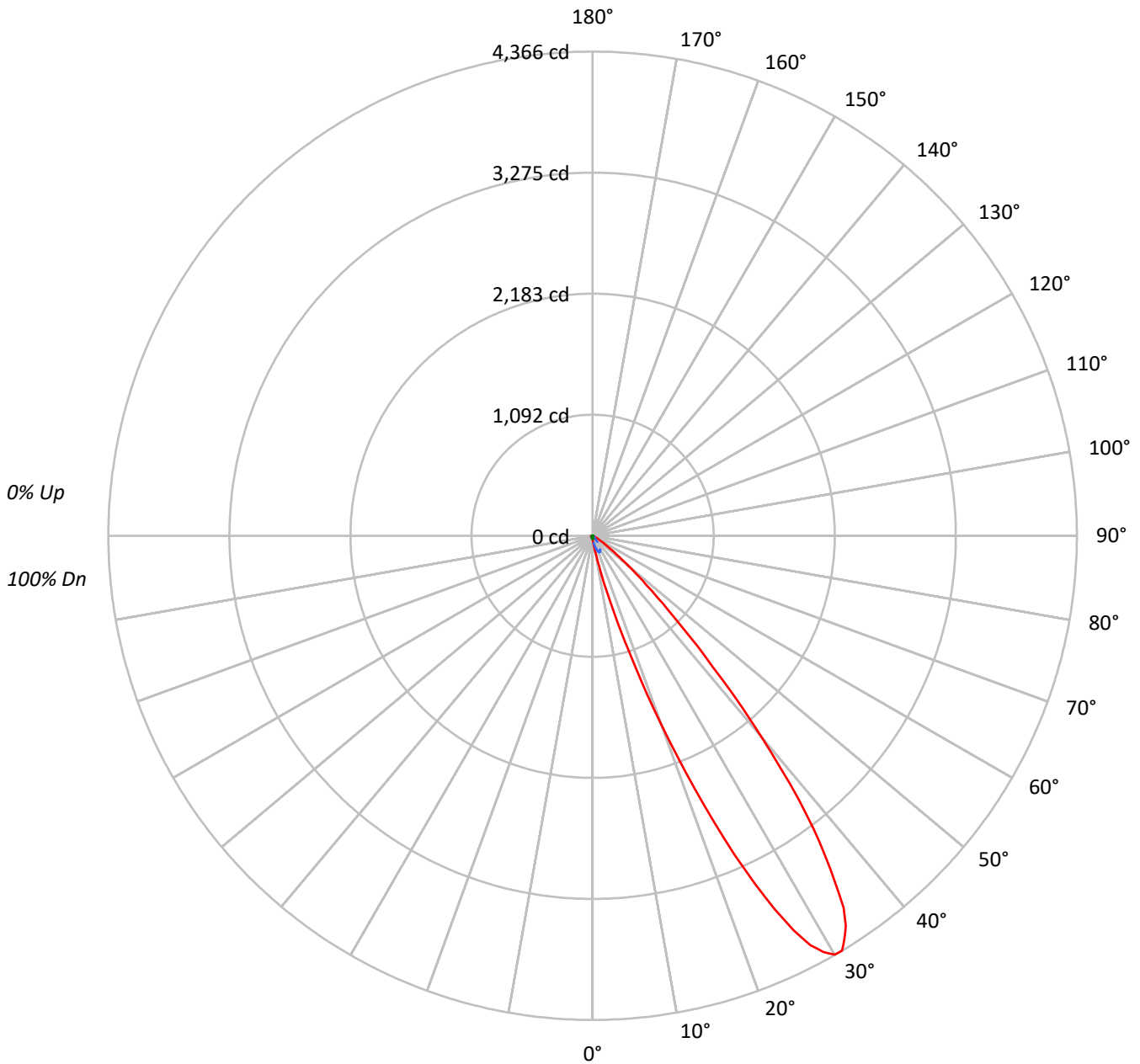
Input Watts (W): 7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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°	13370	13370	13370
5°	29913	13817	10796
10°	80005	8617	3056
15°	314989	11135	7202
20°	952815	6825	5618
25°	1885570	5825	5008
30°	2484568	3475	6096
35°	2292592	5059	7348
40°	1527079	4444	10111
45°	720255	1605	4256
50°	317606	5833	13202
55°	129195	0	13504
60°	53579	3750	12038
65°	18328	4436	8872
70°	15435	8799	22647
75°	8769	13153	29927
80°	0	6535	13069
85°	8491	8491	43021



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	3.7	0.6
10°-20°	39.0	6.1
20°-30°	200.4	31.5
30°-40°	256.6	40.3
40°-50°	98.7	15.5
50°-60°	20.1	3.1
60°-70°	6.8	1.1
70°-80°	7.9	1.2
80°-90°	4.0	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°	243.0	38.2
0°-40°	499.6	78.4
0°-60°	618.3	97.1
0°-90°	637.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	637.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	27	27	27	27	27	
5°	60	50	28	20	22	9
15°	617	120	22	13	14	236
25°	3464	157	11	8	9	1581
35°	3806	81	8	7	12	2275
45°	1032	20	2	2	6	887
55°	150	4	0	3	16	156
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°	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1
2.5°	40.1	34.8	36.3	30.9	34.0	34.8	28.7	37.8	34.0	35.5	30.9
5°	60.4	65.0	59.6	57.3	55.8	57.3	55.8	58.1	56.5	49.7	35.5
7.5°	100.9	92.1	92.1	89.0	91.3	90.5	86.7	89.0	83.7	60.4	40.9
10°	159.7	150.9	150.2	147.9	147.1	140.2	136.4	133.3	122.3	71.4	37.1
12.5°	312.9	305.3	299.9	286.5	277.4	272.0	251.8	241.1	209.4	106.2	47.4
15°	616.7	577.3	587.2	544.1	512.4	491.3	449.3	412.2	336.2	120.0	45.8
17.5°	1091.2	1053.0	1027.4	980.4	915.8	860.0	777.1	695.0	540.2	136.4	42.8
20°	1814.8	1754.4	1701.0	1620.3	1496.2	1388.8	1242.9	1085.8	804.2	155.9	38.6
21°	2132.7	2086.1	2024.2	1918.0	1773.2	1629.5	1454.5	1265.4	916.6	157.4	34.8
22°	2464.3	2434.1	2352.8	2230.9	2062.0	1890.8	1676.1	1468.3	1036.2	159.7	33.2
23°	2809.7	2778.0	2685.9	2546.5	2356.6	2149.5	1899.2	1652.8	1148.5	162.8	32.5
24°	3147.8	3112.7	3009.9	2854.0	2638.5	2400.5	2117.8	1832.0	1253.2	161.2	34.0
25°	3463.8	3414.9	3306.4	3133.7	2897.2	2630.1	2318.4	1986.7	1345.3	156.6	28.7
26°	3745.8	3690.0	3573.1	3384.7	3126.1	2836.8	2485.7	2130.4	1413.3	152.8	27.1
27°	3990.7	3920.4	3795.4	3597.9	3320.5	3001.1	2628.6	2242.7	1473.2	147.1	21.8
28°	4181.3	4100.7	3973.9	3765.3	3472.2	3129.1	2733.7	2313.0	1508.8	147.9	24.8
29°	4291.4	4229.5	4091.5	3873.0	3564.7	3202.9	2789.1	2352.0	1515.7	136.4	23.3
30°	4361.3	4292.1	4150.4	3921.9	3600.2	3219.7	2796.0	2344.7	1495.4	128.0	21.8
31°	4365.9	4293.7	4149.6	3913.1	3586.5	3191.8	2757.8	2301.6	1451.5	119.2	18.0
32°	4283.7	4227.9	4086.2	3842.1	3511.9	3115.0	2675.6	2228.6	1382.3	101.6	12.2
33°	4190.9	4123.3	3982.3	3735.8	3408.8	3009.9	2557.2	2130.4	1310.5	100.1	15.7
34°	4046.5	3965.1	3826.4	3583.8	3265.5	2860.1	2416.2	1999.3	1218.8	91.3	14.9
35°	3806.5	3763.0	3622.7	3383.2	3074.1	2680.6	2246.5	1855.3	1121.4	81.4	10.7
36°	3566.2	3512.7	3380.1	3148.6	2855.6	2466.6	2055.1	1691.0	1011.3	69.2	8.4
37°	3312.1	3242.2	3121.5	2894.9	2588.9	2253.4	1871.4	1534.4	921.5	73.0	11.5
38°	3016.0	2992.7	2833.8	2622.9	2340.2	2023.4	1673.8	1369.3	822.2	68.0	18.7
39°	2690.5	2674.8	2516.3	2324.1	2070.4	1779.3	1471.7	1198.2	722.9	49.7	6.1
40°	2371.1	2326.4	2214.1	2039.5	1818.6	1556.9	1291.0	1052.2	636.9	48.9	12.2
42.5°	1607.0	1621.1	1499.6	1374.7	1232.9	1055.3	878.0	721.3	445.5	36.3	7.6
45°	1032.3	1035.4	981.1	884.1	791.3	680.5	563.5	469.6	287.3	20.2	2.3
47.5°	657.2	655.6	620.9	565.1	504.3	439.4	366.4	306.8	186.1	15.7	6.9
50°	413.8	412.2	390.5	354.9	320.9	278.1	232.3	197.5	117.7	18.7	7.6
51°	336.2	338.5	320.2	284.3	257.9	217.0	185.3	157.4	92.1	13.0	6.9
52°	277.4	275.9	264.4	234.2	212.4	177.3	150.9	128.8	76.8	11.5	3.1
53°	223.1	223.9	212.4	189.1	168.1	141.7	120.7	100.1	55.0	8.4	2.3
54°	176.5	175.0	171.2	148.6	135.6	112.3	94.4	76.8	47.4	1.5	0.0
55°	150.2	147.9	142.5	123.0	110.0	92.8	75.3	65.7	40.9	3.8	0.0
57.5°	86.7	86.7	83.7	73.0	64.2	57.3	45.8	42.8	21.0	3.8	0.0
60°	54.3	47.4	52.7	45.1	35.5	31.7	26.4	24.1	18.0	6.9	1.5
61°	45.1	36.3	35.5	33.2	30.9	21.0	18.0	19.5	11.5	2.3	1.5
62°	32.5	28.7	30.9	26.4	23.3	16.4	14.9	14.1	6.9	3.1	3.8
63°	29.4	26.4	25.6	19.5	17.2	17.2	13.0	12.2	8.4	6.1	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°	15.7	13.0	11.5	13.0	7.6	9.9	3.8	10.7	2.3	3.8	2.3
67.5°	12.2	7.6	6.9	8.4	5.3	3.8	5.3	6.9	2.3	3.8	5.3
70°	10.7	5.3	7.6	6.9	5.3	6.9	7.6	7.6	2.3	7.6	6.9
72.5°	10.7	6.9	3.8	3.1	3.1	3.1	3.1	3.1	4.6	10.7	8.4
75°	4.6	4.6	2.3	5.3	3.1	4.6	3.1	7.6	3.1	8.4	6.9
77.5°	3.1	3.8	0.0	3.8	0.0	0.0	2.3	5.3	2.3	6.1	7.6
80°	0.0	3.8	2.3	0.0	1.5	2.3	0.0	0.8	1.5	6.9	3.1
82.5°	1.5	2.3	3.1	1.5	1.5	0.0	0.0	0.0	0.0	4.6	3.8
85°	1.5	3.1	0.0	0.8	3.1	1.5	0.8	3.8	1.5	5.3	6.1
87.5°	0.0	1.5	1.5	0.0	2.3	0.0	2.3	1.5	0.0	4.6	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°	27.1	27.1	27.1	27.1	27.1
2.5°	23.3	21.0	18.0	22.5	18.7
5°	27.9	25.6	20.2	24.1	21.8
7.5°	28.7	24.1	21.0	19.5	21.8
10°	17.2	11.5	8.4	11.5	6.1
12.5°	28.7	20.2	18.7	21.0	23.3
15°	21.8	13.0	13.0	9.9	14.1
17.5°	12.2	9.9	9.2	12.2	14.1
20°	13.0	8.4	6.9	11.5	10.7
21°	11.5	3.1	9.2	9.2	10.7
22°	16.4	7.6	9.2	14.9	15.7
23°	10.7	8.4	6.9	9.2	12.2
24°	15.7	9.2	8.4	11.5	17.2
25°	10.7	8.4	8.4	10.7	9.2
26°	6.1	8.4	6.1	9.2	7.6
27°	4.6	7.6	4.6	6.9	9.2
28°	9.9	12.2	11.5	12.2	10.7
29°	10.7	13.0	10.7	16.4	12.2
30°	6.1	11.5	5.3	12.2	10.7
31°	6.1	8.4	3.8	12.2	10.7
32°	0.8	4.6	2.3	4.6	4.6
33°	4.6	5.3	6.1	9.9	7.6
34°	7.6	9.2	6.1	10.7	9.2
35°	8.4	4.6	6.9	11.5	12.2
36°	2.3	2.3	3.8	9.2	3.1
37°	4.6	13.0	9.2	15.7	9.2
38°	7.6	15.7	14.9	19.5	15.7
39°	1.5	4.6	5.3	10.7	10.7
40°	6.9	11.5	8.4	15.7	15.7
42.5°	5.3	8.4	6.1	13.0	10.7
45°	2.3	2.3	1.5	8.4	6.1
47.5°	3.8	3.8	6.9	10.7	18.7
50°	7.6	7.6	9.9	18.0	17.2
51°	4.6	3.8	5.3	12.2	15.7
52°	3.8	5.3	5.3	12.2	12.2
53°	1.5	0.0	0.0	9.2	7.6
54°	1.5	0.8	2.3	6.9	10.7
55°	0.0	3.8	3.1	14.1	15.7
57.5°	0.8	6.1	3.1	9.9	12.2
60°	3.8	4.6	8.4	9.9	12.2
61°	0.0	3.8	3.8	9.2	10.7
62°	0.0	3.1	6.9	8.4	10.7
63°	3.8	4.6	6.1	9.9	12.2





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	2.3	6.1	7.6	9.9	9.2
67.5°	4.6	5.3	4.6	13.0	15.7
70°	6.1	9.9	10.7	9.2	15.7
72.5°	3.8	5.3	7.6	14.1	15.7
75°	6.9	7.6	11.5	13.0	15.7
77.5°	5.3	7.6	7.6	8.4	15.7
80°	2.3	6.9	7.6	8.4	4.6
82.5°	3.1	4.6	3.1	8.4	6.1
85°	1.5	6.9	6.1	7.6	7.6
87.5°	2.3	3.8	3.8	6.9	4.6
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	17.2	18.0	17.2	12.2	9.2	8.4	6.1	10.7	3.1	3.1	0.0
65°	15.7	17.2	13.0	14.9	9.9	9.2	5.3	10.7	1.5	5.3	3.8







64°	2.3	3.8	3.8	6.9	10.7
65°	3.8	5.3	5.3	9.9	7.6



(END OF REPORT)