

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: P315245

Luminaire Tested: **LDA2B05FL9027D010 PIN1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315245  
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: LDA2B05FL9027D010 PIN1MMS  
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, Black oculus, matte metallic silver finish  
Light Source: -  
Ballast/Driver: -

**Summary**

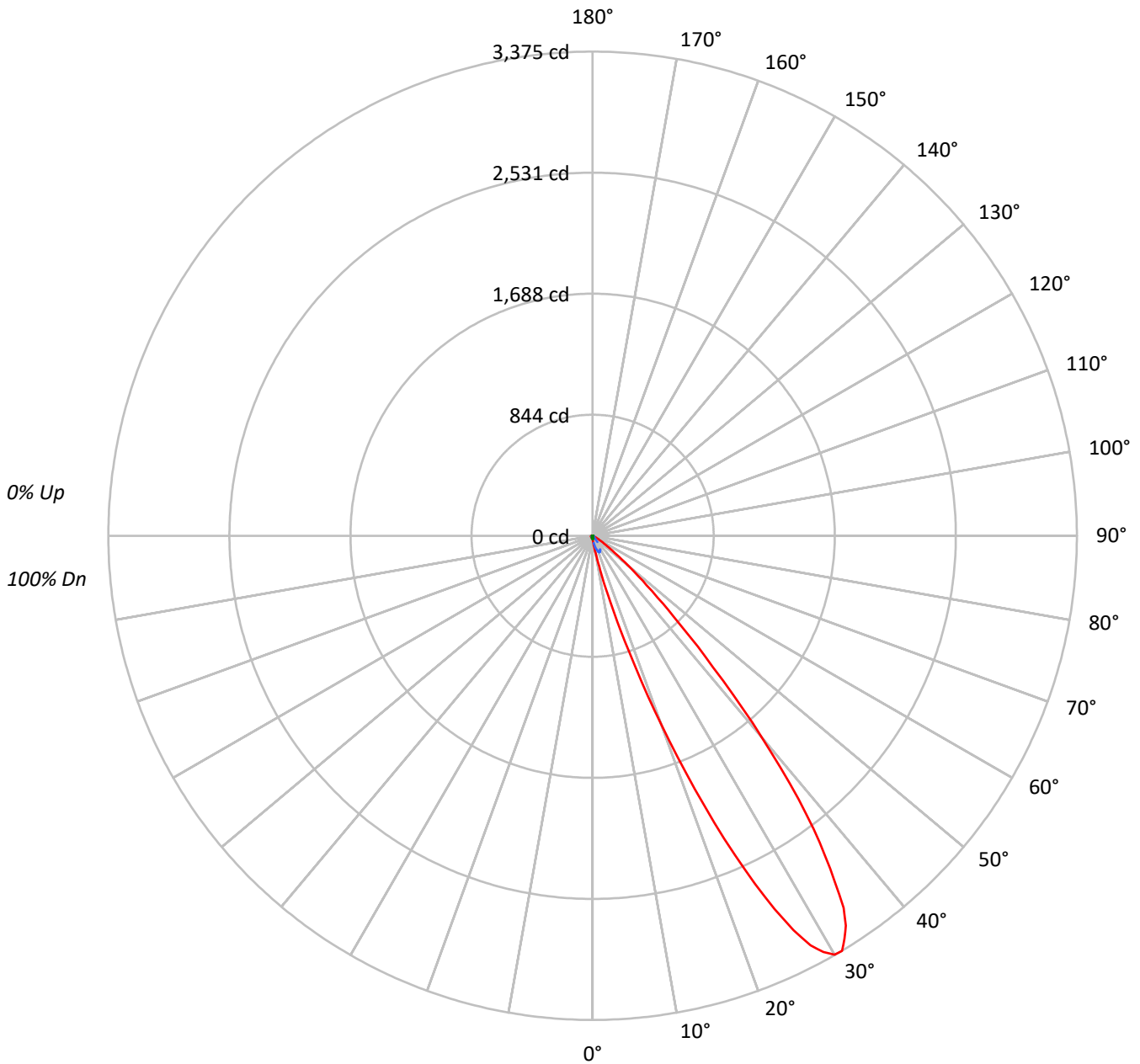
Lumens per Lamp: N/A  
Luminaire Lumens: 492.6 lumens  
Efficiency: N/A  
Efficacy: 70.4 lumens/watt  
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 7  
Input Voltage (V): NR  
Input Current (Ain): 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°	10361	10361	10361
5°	23128	10697	8320
10°	61870	6663	2355
15°	243533	8581	5567
20°	736662	5250	4358
25°	1457808	4518	3865
30°	1920921	2678	4728
35°	1772520	3915	5722
40°	1180651	3413	7793
45°	556849	1256	3279
50°	245534	4528	10208
55°	99863	0	10408
60°	41344	2960	9374
65°	14125	3502	6888
70°	11973	6780	17454
75°	6672	10103	23065
80°	0	5114	9944
85°	6793	6793	33398



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2.9	0.6
10°-20°	30.1	6.1
20°-30°	154.9	31.5
30°-40°	198.4	40.3
40°-50°	76.3	15.5
50°-60°	15.5	3.1
60°-70°	5.3	1.1
70°-80°	6.1	1.2
80°-90°	3.1	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°	187.9	38.1
0°-40°	386.3	78.4
0°-60°	478.1	97.1
0°-90°	492.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	492.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	21	21	21	21	21	
5°	47	38	22	16	17	7
15°	477	93	17	10	11	183
25°	2678	121	8	6	7	1222
35°	2943	63	6	5	10	1759
45°	798	16	2	1	5	686
55°	116	3	0	2	12	120
65°	12	4	3	4	6	17
75°	4	6	5	9	12	5
85°	1	4	1	5	6	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°	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
2.5°	31.0	26.9	28.1	23.9	26.3	26.9	22.2	29.2	26.3	27.5	23.9
5°	46.7	50.2	46.1	44.3	43.1	44.3	43.1	44.9	43.7	38.4	27.5
7.5°	78.0	71.2	71.2	68.8	70.6	70.0	67.1	68.8	64.7	46.7	31.6
10°	123.5	116.7	116.1	114.3	113.7	108.4	105.5	103.1	94.5	55.2	28.7
12.5°	241.9	236.0	231.9	221.5	214.5	210.3	194.7	186.4	161.9	82.1	36.6
15°	476.8	446.3	454.0	420.6	396.1	379.9	347.4	318.7	259.9	92.8	35.4
17.5°	843.6	814.1	794.3	758.0	708.0	664.9	600.8	537.3	417.7	105.5	33.1
20°	1403.1	1356.4	1315.1	1252.7	1156.7	1073.7	960.9	839.5	621.8	120.5	29.8
21°	1648.9	1612.8	1565.0	1482.8	1370.9	1259.8	1124.5	978.3	708.6	121.7	26.9
22°	1905.3	1881.9	1819.0	1724.8	1594.2	1461.9	1295.9	1135.2	801.1	123.5	25.7
23°	2172.3	2147.8	2076.6	1968.8	1822.0	1661.9	1468.4	1277.8	887.9	125.8	25.1
24°	2433.7	2406.5	2327.1	2206.6	2040.0	1855.9	1637.3	1416.4	968.9	124.7	26.3
25°	2678.0	2640.2	2556.3	2422.8	2239.9	2033.5	1792.4	1536.0	1040.1	121.1	22.2
26°	2896.0	2852.9	2762.5	2616.8	2416.9	2193.3	1921.8	1647.1	1092.6	118.2	21.0
27°	3085.3	3031.0	2934.4	2781.7	2567.2	2320.3	2032.3	1733.9	1139.0	113.7	16.8
28°	3232.7	3170.4	3072.3	2911.1	2684.5	2419.2	2113.5	1788.3	1166.5	114.3	19.2
29°	3317.8	3269.9	3163.3	2994.4	2756.0	2476.2	2156.3	1818.4	1171.8	105.5	18.0
30°	3371.9	3318.4	3208.8	3032.2	2783.4	2489.2	2161.7	1812.8	1156.1	99.0	16.8
31°	3375.4	3319.6	3208.2	3025.4	2772.8	2467.7	2132.1	1779.4	1122.2	92.2	13.9
32°	3311.9	3268.8	3159.2	2970.4	2715.2	2408.3	2068.6	1723.0	1068.7	78.6	9.5
33°	3240.1	3187.8	3078.8	2888.3	2635.5	2327.1	1977.0	1647.1	1013.2	77.4	12.1
34°	3128.5	3065.5	2958.3	2770.7	2524.7	2211.3	1868.0	1545.8	942.3	70.6	11.5
35°	2943.0	2909.3	2800.9	2615.7	2376.7	2072.4	1736.9	1434.4	867.0	62.9	8.3
36°	2757.2	2715.8	2613.3	2434.3	2207.7	1907.0	1588.9	1307.4	781.9	53.5	6.5
37°	2560.7	2506.7	2413.3	2238.2	2001.6	1742.2	1446.8	1186.3	712.5	56.4	8.9
38°	2331.8	2313.8	2190.9	2027.8	1809.3	1564.4	1294.1	1058.7	635.7	52.6	14.5
39°	2080.1	2068.0	1945.4	1796.8	1600.7	1375.6	1137.8	926.3	558.9	38.4	4.7
40°	1833.2	1798.6	1711.8	1576.8	1406.0	1203.7	998.1	813.5	492.4	37.8	9.5
42.5°	1242.4	1253.3	1159.4	1062.8	953.2	815.9	678.8	557.7	344.4	28.1	5.9
45°	798.1	800.5	758.6	683.5	611.7	526.1	435.7	363.0	222.1	15.7	1.8
47.5°	508.1	506.9	480.0	436.9	389.9	339.7	283.3	237.2	143.9	12.1	5.3
50°	319.9	318.7	301.9	274.4	248.1	215.0	179.6	152.7	91.0	14.5	5.9
51°	259.9	261.7	247.5	219.8	199.4	167.8	143.3	121.7	71.2	10.0	5.3
52°	214.5	213.3	204.4	181.1	164.2	137.1	116.7	99.5	59.4	8.9	2.4
53°	172.5	173.1	164.2	146.2	130.0	109.6	93.3	77.4	42.5	6.5	1.8
54°	136.5	135.3	132.3	114.9	104.9	86.8	73.0	59.4	36.6	1.2	0.0
55°	116.1	114.3	110.2	95.1	85.1	71.8	58.2	50.8	31.6	3.0	0.0
57.5°	67.1	67.1	64.7	56.4	49.6	44.3	35.4	33.1	16.2	3.0	0.0
60°	41.9	36.6	40.8	34.9	27.5	24.5	20.4	18.6	13.9	5.3	1.2
61°	34.9	28.1	27.5	25.7	23.9	16.2	13.9	15.1	8.9	1.8	1.2
62°	25.1	22.2	23.9	20.4	18.0	12.7	11.5	10.9	5.3	2.4	3.0
63°	22.7	20.4	19.8	15.1	13.3	13.3	10.0	9.5	6.5	4.7	2.4



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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°	12.1	10.0	8.9	10.0	5.9	7.7	3.0	8.3	1.8	3.0	1.8
67.5°	9.5	5.9	5.3	6.5	4.1	3.0	4.1	5.3	1.8	3.0	4.1
70°	8.3	4.1	5.9	5.3	4.1	5.3	5.9	5.9	1.8	5.9	5.3
72.5°	8.3	5.3	3.0	2.4	2.4	2.4	2.4	2.4	3.5	8.3	6.5
75°	3.5	3.5	1.8	4.1	2.4	3.5	2.4	5.9	2.4	6.5	5.3
77.5°	2.4	3.0	0.0	3.0	0.0	0.0	1.8	4.1	1.8	4.7	5.9
80°	0.0	3.0	1.8	0.0	1.2	1.8	0.0	0.6	1.2	5.3	2.4
82.5°	1.2	1.8	2.4	1.2	1.2	0.0	0.0	0.0	0.0	3.5	3.0
85°	1.2	2.4	0.0	0.6	2.4	1.2	0.6	3.0	1.2	4.1	4.7
87.5°	0.0	1.2	1.2	0.0	1.8	0.0	1.8	1.2	0.0	3.5	1.8
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°	21.0	21.0	21.0	21.0	21.0
2.5°	18.0	16.2	13.9	17.4	14.5
5°	21.6	19.8	15.7	18.6	16.8
7.5°	22.2	18.6	16.2	15.1	16.8
10°	13.3	8.9	6.5	8.9	4.7
12.5°	22.2	15.7	14.5	16.2	18.0
15°	16.8	10.0	10.0	7.7	10.9
17.5°	9.5	7.7	7.1	9.5	10.9
20°	10.0	6.5	5.3	8.9	8.3
21°	8.9	2.4	7.1	7.1	8.3
22°	12.7	5.9	7.1	11.5	12.1
23°	8.3	6.5	5.3	7.1	9.5
24°	12.1	7.1	6.5	8.9	13.3
25°	8.3	6.5	6.5	8.3	7.1
26°	4.7	6.5	4.7	7.1	5.9
27°	3.5	5.9	3.5	5.3	7.1
28°	7.7	9.5	8.9	9.5	8.3
29°	8.3	10.0	8.3	12.7	9.5
30°	4.7	8.9	4.1	9.5	8.3
31°	4.7	6.5	3.0	9.5	8.3
32°	0.6	3.5	1.8	3.5	3.5
33°	3.5	4.1	4.7	7.7	5.9
34°	5.9	7.1	4.7	8.3	7.1
35°	6.5	3.5	5.3	8.9	9.5
36°	1.8	1.8	3.0	7.1	2.4
37°	3.5	10.0	7.1	12.1	7.1
38°	5.9	12.1	11.5	15.1	12.1
39°	1.2	3.5	4.1	8.3	8.3
40°	5.3	8.9	6.5	12.1	12.1
42.5°	4.1	6.5	4.7	10.0	8.3
45°	1.8	1.8	1.2	6.5	4.7
47.5°	3.0	3.0	5.3	8.3	14.5
50°	5.9	5.9	7.7	13.9	13.3
51°	3.5	3.0	4.1	9.5	12.1
52°	3.0	4.1	4.1	9.5	9.5
53°	1.2	0.0	0.0	7.1	5.9
54°	1.2	0.6	1.8	5.3	8.3
55°	0.0	3.0	2.4	10.9	12.1
57.5°	0.6	4.7	2.4	7.7	9.5
60°	3.0	3.5	6.5	7.7	9.5
61°	0.0	3.0	3.0	7.1	8.3
62°	0.0	2.4	5.3	6.5	8.3
63°	3.0	3.5	4.7	7.7	9.5





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	1.8	4.7	5.9	7.7	7.1
67.5°	3.5	4.1	3.5	10.0	12.1
70°	4.7	7.7	8.3	7.1	12.1
72.5°	3.0	4.1	5.9	10.9	12.1
75°	5.3	5.9	8.9	10.0	12.1
77.5°	4.1	5.9	5.9	6.5	12.1
80°	1.8	5.3	5.9	6.5	3.5
82.5°	2.4	3.5	2.4	6.5	4.7
85°	1.2	5.3	4.7	5.9	5.9
87.5°	1.8	3.0	3.0	5.3	3.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	13.3	13.9	13.3	9.5	7.1	6.5	4.7	8.3	2.4	2.4	0.0
65°	12.1	13.3	10.0	11.5	7.7	7.1	4.1	8.3	1.2	4.1	3.0







64°	1.8	3.0	3.0	5.3	8.3
65°	3.0	4.1	4.1	7.7	5.9



(END OF REPORT)