

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: P315250

Luminaire Tested: **LDA2B05FL9030D010 PINW1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315250  
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: LDA2B05FL9030D010 PINW1MW  
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, Black oculus, matte white finish  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 533.5 lumens  
Efficiency: N/A  
Efficacy: 76.2 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

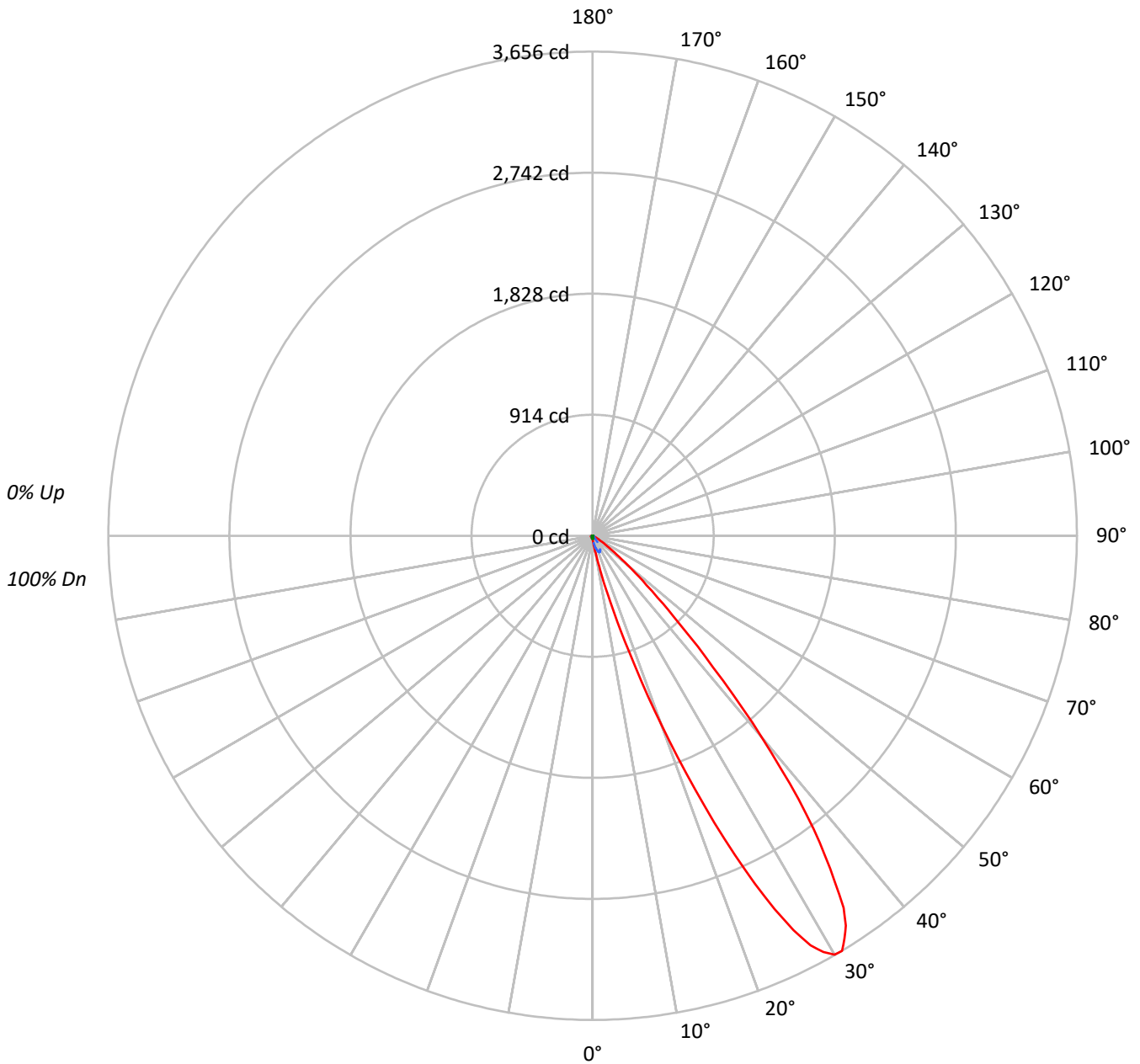
Input Watts (W): 7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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°	11199	11199	11199
5°	25059	11589	9013
10°	66980	7214	2555
15°	263759	9296	6027
20°	797985	5723	4725
25°	1579147	4899	4192
30°	2080775	2905	5127
35°	1920020	4216	6143
40°	1278866	3735	8437
45°	603248	1326	3558
50°	265951	4912	11052
55°	108121	0	11268
60°	44797	3158	10065
65°	15293	3736	7471
70°	12982	7357	18897
75°	7244	11056	24971
80°	0	5398	10796
85°	7359	7359	36228



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	3.1	0.6
10°-20°	32.6	6.1
20°-30°	167.8	31.5
30°-40°	214.9	40.3
40°-50°	82.6	15.5
50°-60°	16.8	3.1
60°-70°	5.7	1.1
70°-80°	6.6	1.2
80°-90°	3.4	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°	203.5	38.1
0°-40°	418.4	78.4
0°-60°	517.8	97.1
0°-90°	533.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	533.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	23	23	23	23	23	
5°	51	42	23	17	18	7
15°	516	100	18	11	12	198
25°	2901	131	9	7	8	1324
35°	3188	68	7	6	10	1905
45°	865	17	2	1	5	743
55°	126	3	0	3	13	130
65°	13	4	3	4	6	18
75°	4	7	6	10	13	5
85°	1	4	1	5	6	1
90°	0	0	0	0	0	



TEST NUMBER: P315250

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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°	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7
2.5°	33.6	29.1	30.4	25.9	28.5	29.1	24.0	31.7	28.5	29.8	25.9
5°	50.6	54.4	49.9	48.0	46.7	48.0	46.7	48.6	47.4	41.6	29.8
7.5°	84.5	77.1	77.1	74.6	76.5	75.8	72.6	74.6	70.1	50.6	34.2
10°	133.7	126.4	125.7	123.8	123.2	117.4	114.2	111.7	102.4	59.8	31.0
12.5°	262.1	255.7	251.2	240.0	232.3	227.8	210.9	201.9	175.3	89.0	39.7
15°	516.4	483.5	491.8	455.6	429.1	411.5	376.3	345.2	281.6	100.5	38.4
17.5°	913.8	881.8	860.4	821.0	767.0	720.3	650.8	582.0	452.4	114.2	35.8
20°	1519.9	1469.3	1424.5	1357.0	1253.0	1163.1	1040.9	909.4	673.5	130.5	32.3
21°	1786.1	1747.0	1695.2	1606.3	1485.0	1364.7	1218.1	1059.7	767.6	131.8	29.1
22°	2063.8	2038.5	1970.4	1868.3	1726.9	1583.5	1403.7	1229.7	867.8	133.7	27.8
23°	2353.1	2326.5	2249.4	2132.6	1973.6	1800.2	1590.6	1384.2	961.8	136.3	27.2
24°	2636.2	2606.8	2520.7	2390.2	2209.7	2010.4	1773.6	1534.3	1049.5	135.0	28.5
25°	2900.9	2859.9	2769.0	2624.4	2426.3	2202.7	1941.6	1663.9	1126.6	131.2	24.0
26°	3137.0	3090.3	2992.4	2834.6	2618.0	2375.8	2081.7	1784.2	1183.6	128.0	22.7
27°	3342.1	3283.2	3178.6	3013.2	2780.9	2513.4	2201.4	1878.2	1233.8	123.2	18.2
28°	3501.8	3434.3	3328.0	3153.3	2907.9	2620.6	2289.4	1937.1	1263.6	123.8	20.8
29°	3593.9	3542.1	3426.6	3243.6	2985.3	2682.3	2335.8	1969.7	1269.3	114.2	19.5
30°	3652.5	3594.6	3475.9	3284.5	3015.1	2696.4	2341.6	1963.7	1252.4	107.2	18.2
31°	3656.3	3595.8	3475.2	3277.2	3003.6	2673.0	2309.6	1927.5	1215.6	99.8	15.0
32°	3587.5	3540.8	3422.1	3217.6	2941.2	2608.7	2240.8	1866.4	1157.7	85.1	10.2
33°	3509.8	3453.1	3335.1	3128.7	2854.8	2520.7	2141.6	1784.2	1097.5	83.8	13.1
34°	3388.8	3320.7	3204.5	3001.3	2734.8	2395.3	2023.5	1674.4	1020.7	76.5	12.5
35°	3187.9	3151.4	3034.0	2833.3	2574.5	2244.9	1881.4	1553.8	939.1	68.2	9.0
36°	2986.6	2941.8	2830.8	2636.9	2391.5	2065.7	1721.1	1416.2	847.0	57.9	7.0
37°	2773.8	2715.3	2614.2	2424.4	2168.1	1887.2	1567.2	1285.0	771.8	61.1	9.6
38°	2525.9	2506.3	2373.2	2196.6	1959.8	1694.6	1401.8	1146.8	688.6	57.0	15.7
39°	2253.2	2240.1	2107.3	1946.4	1733.9	1490.1	1232.5	1003.4	605.4	41.6	5.1
40°	1985.7	1948.3	1854.2	1708.0	1523.1	1303.9	1081.2	881.2	533.4	41.0	10.2
42.5°	1345.8	1357.6	1255.9	1151.3	1032.5	883.8	735.3	604.1	373.1	30.4	6.4
45°	864.6	867.1	821.7	740.4	662.7	569.9	472.0	393.2	240.6	17.0	1.9
47.5°	550.4	549.1	520.0	473.2	422.4	368.0	306.9	256.9	155.8	13.1	5.8
50°	346.5	345.2	327.0	297.3	268.8	232.9	194.5	165.4	98.6	15.7	6.4
51°	281.6	283.5	268.1	238.1	216.0	181.7	155.2	131.8	77.1	10.9	5.8
52°	232.3	231.0	221.4	196.1	177.9	148.5	126.4	107.8	64.3	9.6	2.6
53°	186.9	187.5	177.9	158.4	140.8	118.7	101.1	83.8	46.1	7.0	1.9
54°	147.8	146.5	143.3	124.5	113.6	94.1	79.0	64.3	39.7	1.3	0.0
55°	125.7	123.8	119.3	103.0	92.2	77.8	63.0	55.0	34.2	3.2	0.0
57.5°	72.6	72.6	70.1	61.1	53.8	48.0	38.4	35.8	17.6	3.2	0.0
60°	45.4	39.7	44.2	37.8	29.8	26.6	22.1	20.2	15.0	5.8	1.3
61°	37.8	30.4	29.8	27.8	25.9	17.6	15.0	16.3	9.6	1.9	1.3
62°	27.2	24.0	25.9	22.1	19.5	13.8	12.5	11.8	5.8	2.6	3.2
63°	24.6	22.1	21.4	16.3	14.4	14.4	10.9	10.2	7.0	5.1	2.6



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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°	13.1	10.9	9.6	10.9	6.4	8.3	3.2	9.0	1.9	3.2	1.9
67.5°	10.2	6.4	5.8	7.0	4.5	3.2	4.5	5.8	1.9	3.2	4.5
70°	9.0	4.5	6.4	5.8	4.5	5.8	6.4	6.4	1.9	6.4	5.8
72.5°	9.0	5.8	3.2	2.6	2.6	2.6	2.6	2.6	3.8	9.0	7.0
75°	3.8	3.8	1.9	4.5	2.6	3.8	2.6	6.4	2.6	7.0	5.8
77.5°	2.6	3.2	0.0	3.2	0.0	0.0	1.9	4.5	1.9	5.1	6.4
80°	0.0	3.2	1.9	0.0	1.3	1.9	0.0	0.6	1.3	5.8	2.6
82.5°	1.3	1.9	2.6	1.3	1.3	0.0	0.0	0.0	0.0	3.8	3.2
85°	1.3	2.6	0.0	0.6	2.6	1.3	0.6	3.2	1.3	4.5	5.1
87.5°	0.0	1.3	1.3	0.0	1.9	0.0	1.9	1.3	0.0	3.8	1.9
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°	22.7	22.7	22.7	22.7	22.7
2.5°	19.5	17.6	15.0	18.9	15.7
5°	23.4	21.4	17.0	20.2	18.2
7.5°	24.0	20.2	17.6	16.3	18.2
10°	14.4	9.6	7.0	9.6	5.1
12.5°	24.0	17.0	15.7	17.6	19.5
15°	18.2	10.9	10.9	8.3	11.8
17.5°	10.2	8.3	7.7	10.2	11.8
20°	10.9	7.0	5.8	9.6	9.0
21°	9.6	2.6	7.7	7.7	9.0
22°	13.8	6.4	7.7	12.5	13.1
23°	9.0	7.0	5.8	7.7	10.2
24°	13.1	7.7	7.0	9.6	14.4
25°	9.0	7.0	7.0	9.0	7.7
26°	5.1	7.0	5.1	7.7	6.4
27°	3.8	6.4	3.8	5.8	7.7
28°	8.3	10.2	9.6	10.2	9.0
29°	9.0	10.9	9.0	13.8	10.2
30°	5.1	9.6	4.5	10.2	9.0
31°	5.1	7.0	3.2	10.2	9.0
32°	0.6	3.8	1.9	3.8	3.8
33°	3.8	4.5	5.1	8.3	6.4
34°	6.4	7.7	5.1	9.0	7.7
35°	7.0	3.8	5.8	9.6	10.2
36°	1.9	1.9	3.2	7.7	2.6
37°	3.8	10.9	7.7	13.1	7.7
38°	6.4	13.1	12.5	16.3	13.1
39°	1.3	3.8	4.5	9.0	9.0
40°	5.8	9.6	7.0	13.1	13.1
42.5°	4.5	7.0	5.1	10.9	9.0
45°	1.9	1.9	1.3	7.0	5.1
47.5°	3.2	3.2	5.8	9.0	15.7
50°	6.4	6.4	8.3	15.0	14.4
51°	3.8	3.2	4.5	10.2	13.1
52°	3.2	4.5	4.5	10.2	10.2
53°	1.3	0.0	0.0	7.7	6.4
54°	1.3	0.6	1.9	5.8	9.0
55°	0.0	3.2	2.6	11.8	13.1
57.5°	0.6	5.1	2.6	8.3	10.2
60°	3.2	3.8	7.0	8.3	10.2
61°	0.0	3.2	3.2	7.7	9.0
62°	0.0	2.6	5.8	7.0	9.0
63°	3.2	3.8	5.1	8.3	10.2





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	1.9	5.1	6.4	8.3	7.7
67.5°	3.8	4.5	3.8	10.9	13.1
70°	5.1	8.3	9.0	7.7	13.1
72.5°	3.2	4.5	6.4	11.8	13.1
75°	5.8	6.4	9.6	10.9	13.1
77.5°	4.5	6.4	6.4	7.0	13.1
80°	1.9	5.8	6.4	7.0	3.8
82.5°	2.6	3.8	2.6	7.0	5.1
85°	1.3	5.8	5.1	6.4	6.4
87.5°	1.9	3.2	3.2	5.8	3.8
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	14.4	15.0	14.4	10.2	7.7	7.0	5.1	9.0	2.6	2.6	0.0
65°	13.1	14.4	10.9	12.5	8.3	7.7	4.5	9.0	1.3	4.5	3.2







64°	1.9	3.2	3.2	5.8	9.0
65°	3.2	4.5	4.5	8.3	6.4



(END OF REPORT)