

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: P315214

Luminaire Tested: **LDA2B05FL8030D010 PINW1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315214  
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 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: 661.5 lumens  
Efficiency: N/A  
Efficacy: 94.5 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

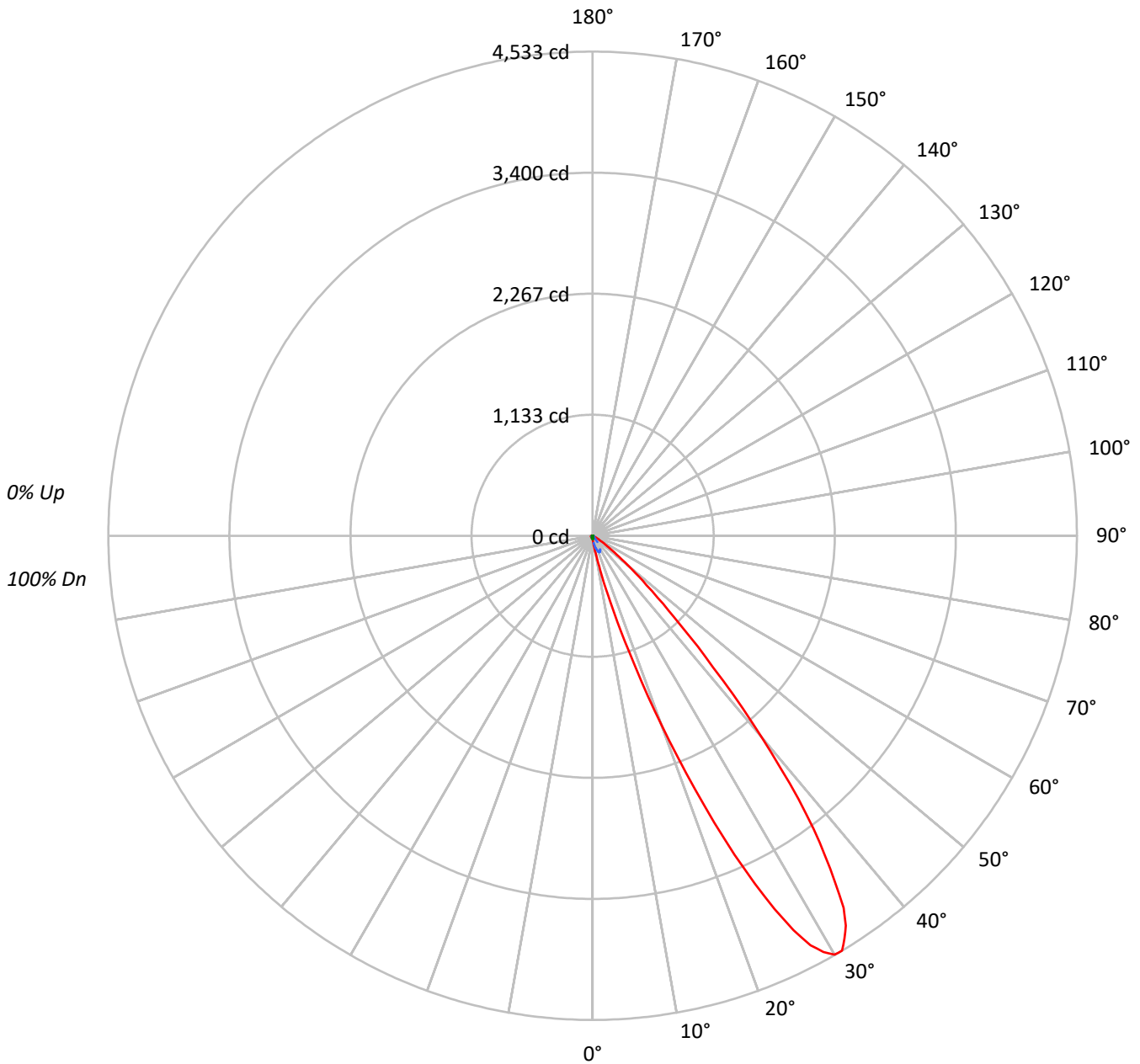
Input Watts (W): 7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	13913	13913	13913
5°	31052	14362	11193
10°	83061	8967	3156
15°	327043	11543	7508
20°	989304	7088	5828
25°	1957752	6042	5171
30°	2579648	3589	6324
35°	2380345	5240	7649
40°	1585493	4573	10498
45°	747885	1675	4396
50°	329733	6064	13739
55°	134097	0	14020
60°	55553	3947	12531
65°	19029	4670	9222
70°	16012	9088	23513
75°	9150	13534	31071
80°	0	6819	13638
85°	9057	9057	44719



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	3.8	0.6
10°-20°	40.5	6.1
20°-30°	208.0	31.5
30°-40°	266.4	40.3
40°-50°	102.4	15.5
50°-60°	20.8	3.1
60°-70°	7.1	1.1
70°-80°	8.2	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°	252.3	38.1
0°-40°	518.7	78.4
0°-60°	642.0	97.1
0°-90°	661.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	661.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	28	28	28	28	28	
5°	63	52	29	21	23	9
15°	640	125	23	14	15	246
25°	3596	163	11	9	10	1642
35°	3952	84	9	7	13	2362
45°	1072	21	2	2	6	921
55°	156	4	0	3	16	161
65°	16	6	4	6	8	23
75°	5	9	7	12	16	6
85°	2	6	2	6	8	1
90°	0	0	0	0	0	



TEST NUMBER: P315214

CATALOG NUMBER: LDA2B05FL8030D010 PINW1MW

**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2
2.5°	41.7	36.1	37.7	32.1	35.3	36.1	29.8	39.3	35.3	36.9	32.1
5°	62.7	67.4	61.9	59.5	57.9	59.5	57.9	60.3	58.7	51.6	36.9
7.5°	104.7	95.6	95.6	92.4	94.8	94.0	90.0	92.4	86.9	62.7	42.4
10°	165.8	156.7	155.9	153.5	152.7	145.6	141.6	138.4	126.9	74.2	38.5
12.5°	324.9	317.0	311.4	297.5	288.0	282.4	261.4	250.3	217.4	110.3	49.2
15°	640.3	599.4	609.7	564.9	532.0	510.1	466.5	428.0	349.1	124.6	47.6
17.5°	1132.9	1093.3	1066.7	1017.9	950.9	892.9	806.9	721.6	560.9	141.6	44.4
20°	1884.3	1821.6	1766.1	1682.4	1553.4	1442.0	1290.4	1127.4	835.0	161.8	40.1
21°	2214.3	2165.9	2101.7	1991.4	1841.0	1691.9	1510.2	1313.8	951.7	163.4	36.1
22°	2558.6	2527.3	2442.8	2316.3	2140.9	1963.2	1740.3	1524.5	1075.8	165.8	34.5
23°	2917.2	2884.3	2788.7	2643.9	2446.8	2231.8	1971.9	1716.1	1192.4	169.0	33.7
24°	3268.3	3231.8	3125.1	2963.3	2739.5	2492.4	2198.8	1902.1	1301.1	167.4	35.3
25°	3596.4	3545.6	3432.9	3253.6	3008.1	2730.8	2407.1	2062.8	1396.7	162.6	29.8
26°	3889.1	3831.2	3709.8	3514.3	3245.7	2945.4	2580.9	2211.9	1467.3	158.7	28.2
27°	4143.4	4070.4	3940.7	3735.6	3447.6	3116.0	2729.2	2328.6	1529.6	152.7	22.6
28°	4341.4	4257.7	4126.0	3909.4	3605.1	3248.9	2838.3	2401.5	1566.5	153.5	25.8
29°	4455.6	4391.3	4248.1	4021.2	3701.1	3325.4	2895.8	2442.0	1573.7	141.6	24.2
30°	4528.2	4456.4	4309.2	4072.0	3738.0	3342.9	2903.0	2434.5	1552.6	132.9	22.6
31°	4533.0	4458.0	4308.4	4062.9	3723.7	3313.9	2863.3	2389.6	1507.0	123.8	18.6
32°	4447.7	4389.7	4242.6	3989.1	3646.4	3234.2	2778.0	2313.9	1435.2	105.5	12.7
33°	4351.3	4281.1	4134.7	3878.8	3539.2	3125.1	2655.0	2211.9	1360.6	103.9	16.3
34°	4201.3	4116.8	3972.8	3720.9	3390.5	2969.6	2508.7	2075.9	1265.4	94.8	15.5
35°	3952.2	3907.0	3761.4	3512.7	3191.8	2783.2	2332.5	1926.3	1164.3	84.5	11.1
36°	3702.7	3647.1	3509.5	3269.1	2964.8	2561.0	2133.8	1755.7	1050.0	71.8	8.7
37°	3438.9	3366.3	3240.9	3005.7	2688.0	2339.7	1943.0	1593.1	956.8	75.8	11.9
38°	3131.5	3107.3	2942.2	2723.3	2429.7	2100.9	1737.9	1421.7	853.7	70.6	19.4
39°	2793.5	2777.2	2612.6	2413.1	2149.7	1847.4	1528.0	1244.0	750.5	51.6	6.3
40°	2461.8	2415.4	2298.8	2117.5	1888.2	1616.5	1340.4	1092.5	661.3	50.8	12.7
42.5°	1668.5	1683.1	1557.0	1427.3	1280.1	1095.7	911.6	748.9	462.5	37.7	7.9
45°	1071.9	1075.0	1018.7	917.9	821.5	706.5	585.1	487.5	298.3	21.0	2.4
47.5°	682.3	680.7	644.6	586.7	523.6	456.2	380.4	318.5	193.2	16.3	7.1
50°	429.6	428.0	405.4	368.5	333.2	288.8	241.2	205.1	122.2	19.4	7.9
51°	349.1	351.5	332.4	295.1	267.8	225.3	192.4	163.4	95.6	13.5	7.1
52°	288.0	286.4	274.5	243.2	220.6	184.1	156.7	133.7	79.7	11.9	3.2
53°	231.7	232.5	220.6	196.4	174.5	147.2	125.4	103.9	57.1	8.7	2.4
54°	183.3	181.7	177.7	154.3	140.8	116.6	98.0	79.7	49.2	1.6	0.0
55°	155.9	153.5	148.0	127.7	114.2	96.4	78.1	68.2	42.4	4.0	0.0
57.5°	90.0	90.0	86.9	75.8	66.6	59.5	47.6	44.4	21.8	4.0	0.0
60°	56.3	49.2	54.7	46.8	36.9	32.9	27.4	25.0	18.6	7.1	1.6
61°	46.8	37.7	36.9	34.5	32.1	21.8	18.6	20.2	11.9	2.4	1.6
62°	33.7	29.8	32.1	27.4	24.2	17.1	15.5	14.7	7.1	3.2	4.0
63°	30.5	27.4	26.6	20.2	17.9	17.9	13.5	12.7	8.7	6.3	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°	16.3	13.5	11.9	13.5	7.9	10.3	4.0	11.1	2.4	4.0	2.4
67.5°	12.7	7.9	7.1	8.7	5.6	4.0	5.6	7.1	2.4	4.0	5.6
70°	11.1	5.6	7.9	7.1	5.6	7.1	7.9	7.9	2.4	7.9	7.1
72.5°	11.1	7.1	4.0	3.2	3.2	3.2	3.2	3.2	4.8	11.1	8.7
75°	4.8	4.8	2.4	5.6	3.2	4.8	3.2	7.9	3.2	8.7	7.1
77.5°	3.2	4.0	0.0	4.0	0.0	0.0	2.4	5.6	2.4	6.3	7.9
80°	0.0	4.0	2.4	0.0	1.6	2.4	0.0	0.8	1.6	7.1	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	6.3
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°	28.2	28.2	28.2	28.2	28.2
2.5°	24.2	21.8	18.6	23.4	19.4
5°	29.0	26.6	21.0	25.0	22.6
7.5°	29.8	25.0	21.8	20.2	22.6
10°	17.9	11.9	8.7	11.9	6.3
12.5°	29.8	21.0	19.4	21.8	24.2
15°	22.6	13.5	13.5	10.3	14.7
17.5°	12.7	10.3	9.5	12.7	14.7
20°	13.5	8.7	7.1	11.9	11.1
21°	11.9	3.2	9.5	9.5	11.1
22°	17.1	7.9	9.5	15.5	16.3
23°	11.1	8.7	7.1	9.5	12.7
24°	16.3	9.5	8.7	11.9	17.9
25°	11.1	8.7	8.7	11.1	9.5
26°	6.3	8.7	6.3	9.5	7.9
27°	4.8	7.9	4.8	7.1	9.5
28°	10.3	12.7	11.9	12.7	11.1
29°	11.1	13.5	11.1	17.1	12.7
30°	6.3	11.9	5.6	12.7	11.1
31°	6.3	8.7	4.0	12.7	11.1
32°	0.8	4.8	2.4	4.8	4.8
33°	4.8	5.6	6.3	10.3	7.9
34°	7.9	9.5	6.3	11.1	9.5
35°	8.7	4.8	7.1	11.9	12.7
36°	2.4	2.4	4.0	9.5	3.2
37°	4.8	13.5	9.5	16.3	9.5
38°	7.9	16.3	15.5	20.2	16.3
39°	1.6	4.8	5.6	11.1	11.1
40°	7.1	11.9	8.7	16.3	16.3
42.5°	5.6	8.7	6.3	13.5	11.1
45°	2.4	2.4	1.6	8.7	6.3
47.5°	4.0	4.0	7.1	11.1	19.4
50°	7.9	7.9	10.3	18.6	17.9
51°	4.8	4.0	5.6	12.7	16.3
52°	4.0	5.6	5.6	12.7	12.7
53°	1.6	0.0	0.0	9.5	7.9
54°	1.6	0.8	2.4	7.1	11.1
55°	0.0	4.0	3.2	14.7	16.3
57.5°	0.8	6.3	3.2	10.3	12.7
60°	4.0	4.8	8.7	10.3	12.7
61°	0.0	4.0	4.0	9.5	11.1
62°	0.0	3.2	7.1	8.7	11.1
63°	4.0	4.8	6.3	10.3	12.7





TEST NUMBER: P315214

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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	2.4	6.3	7.9	10.3	9.5
67.5°	4.8	5.6	4.8	13.5	16.3
70°	6.3	10.3	11.1	9.5	16.3
72.5°	4.0	5.6	7.9	14.7	16.3
75°	7.1	7.9	11.9	13.5	16.3
77.5°	5.6	7.9	7.9	8.7	16.3
80°	2.4	7.1	7.9	8.7	4.8
82.5°	3.2	4.8	3.2	8.7	6.3
85°	1.6	7.1	6.3	7.9	7.9
87.5°	2.4	4.0	4.0	7.1	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°	17.9	18.6	17.9	12.7	9.5	8.7	6.3	11.1	3.2	3.2	0.0
65°	16.3	17.9	13.5	15.5	10.3	9.5	5.6	11.1	1.6	5.6	4.0







64°	2.4	4.0	4.0	7.1	11.1
65°	4.0	5.6	5.6	10.3	7.9



(END OF REPORT)