

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: P315342

Luminaire Tested: **LDA2B10FL9035D010 PINW1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315342  
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: LDA2B10FL9035D010 PINW1MMS  
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, White oculus, matte metallic silver finish  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 752.4 lumens  
Efficiency: N/A  
Efficacy: 75.2 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

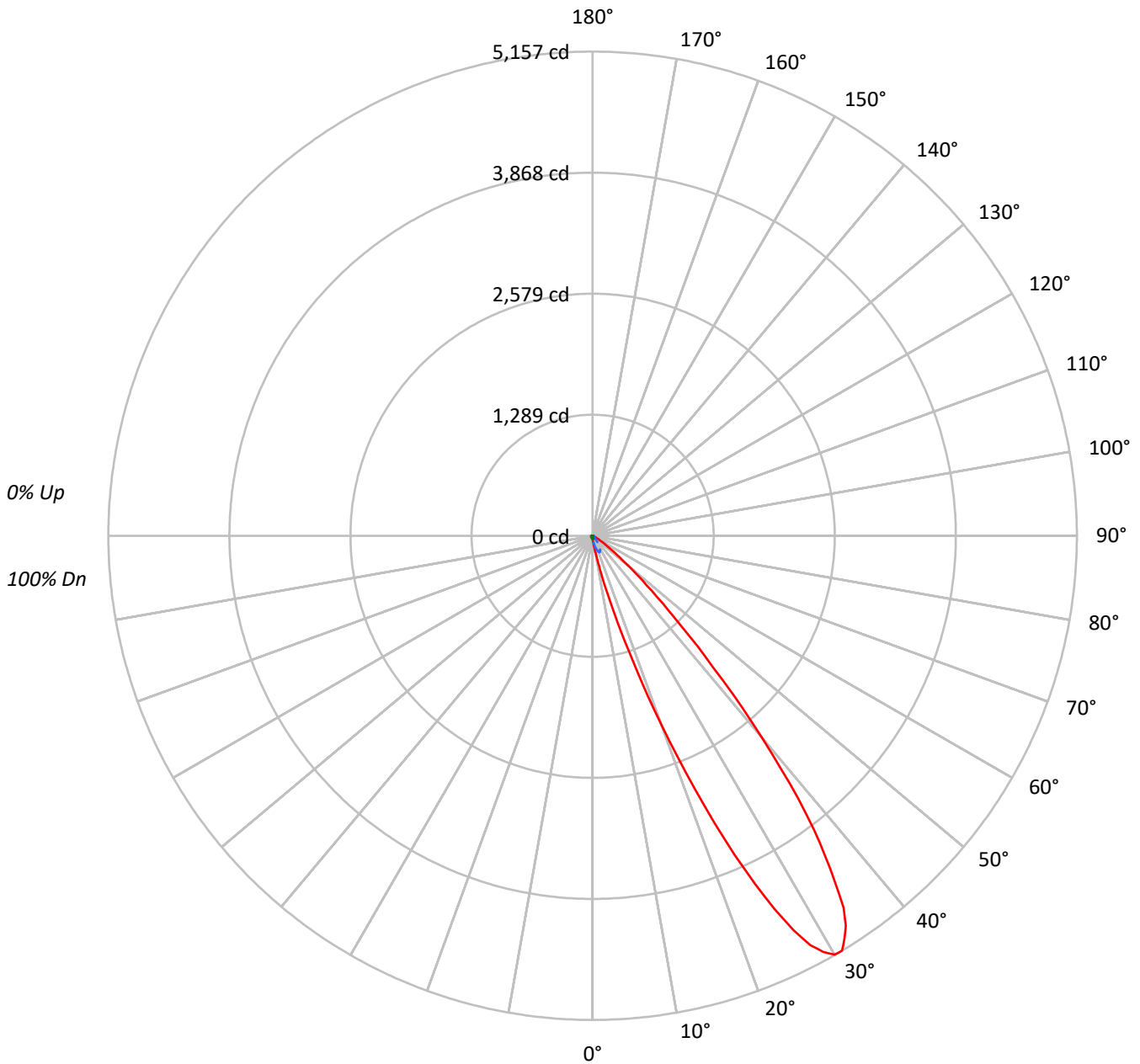
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	83	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°	15788	15788	15788
5°	35311	16294	12728
10°	94483	10170	3607
15°	372042	13127	8530
20°	1125443	8033	6615
25°	2227213	6859	5879
30°	2934733	4102	7178
35°	2707987	5963	8673
40°	1803757	5217	11915
45°	850798	1884	5024
50°	375094	6908	15581
55°	152591	0	15913
60°	63249	4440	14209
65°	21597	5253	10507
70°	18175	10386	26686
75°	10293	15440	35265
80°	0	7671	15342
85°	10189	10189	50946



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	4.4	0.6
10°-20°	46.0	6.1
20°-30°	236.7	31.5
30°-40°	303.1	40.3
40°-50°	116.5	15.5
50°-60°	23.7	3.1
60°-70°	8.0	1.1
70°-80°	9.3	1.2
80°-90°	4.8	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°	287.1	38.2
0°-40°	590.1	78.4
0°-60°	730.3	97.1
0°-90°	752.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	752.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	32	32	32	32	32	
5°	71	59	33	24	26	11
15°	728	142	26	15	17	279
25°	4091	185	13	10	11	1868
35°	4496	96	10	8	14	2687
45°	1219	24	3	2	7	1048
55°	177	4	0	4	18	184
65°	18	6	4	6	9	26
75°	5	10	8	14	18	7
85°	2	6	2	7	9	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°	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
2.5°	47.4	41.1	42.9	36.6	40.2	41.1	33.8	44.7	40.2	42.0	36.6
5°	71.3	76.7	70.4	67.7	65.9	67.7	65.9	68.6	66.8	58.7	42.0
7.5°	119.1	108.8	108.8	105.2	107.9	107.0	102.4	105.2	98.8	71.3	48.3
10°	188.6	178.3	177.4	174.6	173.7	165.6	161.1	157.5	144.4	84.4	43.8
12.5°	369.6	360.6	354.3	338.5	327.6	321.3	297.4	284.8	247.3	125.5	56.0
15°	728.4	681.9	693.6	642.6	605.2	580.4	530.7	486.9	397.1	141.7	54.2
17.5°	1288.9	1243.8	1213.5	1158.0	1081.7	1015.9	917.9	820.9	638.1	161.1	50.5
20°	2143.6	2072.3	2009.2	1913.9	1767.3	1640.4	1468.1	1282.6	950.0	184.1	45.6
21°	2519.1	2464.1	2390.9	2265.5	2094.4	1924.8	1718.1	1494.7	1082.6	185.9	41.1
22°	2910.8	2875.2	2779.1	2635.1	2435.6	2233.4	1979.8	1734.3	1223.9	188.6	39.3
23°	3318.8	3281.3	3172.6	3007.9	2783.6	2539.0	2243.4	1952.3	1356.6	192.3	38.4
24°	3718.2	3676.7	3555.3	3371.1	3116.6	2835.5	2501.5	2163.9	1480.2	190.4	40.2
25°	4091.4	4033.6	3905.5	3701.5	3422.1	3106.7	2738.4	2346.7	1589.0	185.0	33.8
26°	4424.5	4358.6	4220.5	3998.0	3692.5	3350.8	2936.1	2516.4	1669.3	180.5	32.0
27°	4713.7	4630.7	4483.1	4249.8	3922.2	3544.9	3104.9	2649.1	1740.2	173.7	25.7
28°	4938.9	4843.7	4693.9	4447.5	4101.3	3696.1	3229.0	2732.1	1782.2	174.6	29.3
29°	5068.9	4995.8	4832.9	4574.7	4210.6	3783.2	3294.4	2778.2	1790.3	161.1	27.5
30°	5151.5	5069.8	4902.4	4632.5	4252.5	3803.0	3302.6	2769.6	1766.4	151.2	25.7
31°	5156.9	5071.6	4901.5	4622.1	4236.3	3770.1	3257.4	2718.6	1714.5	140.8	21.2
32°	5059.9	4994.0	4826.6	4538.2	4148.3	3679.4	3160.4	2632.4	1632.8	120.0	14.4
33°	4950.2	4870.3	4703.8	4412.7	4026.4	3555.3	3020.5	2516.4	1547.9	118.2	18.5
34°	4779.6	4683.5	4519.7	4233.1	3857.2	3378.4	2854.0	2361.6	1439.6	107.9	17.6
35°	4496.2	4444.8	4279.1	3996.2	3631.1	3166.3	2653.6	2191.5	1324.5	96.1	12.6
36°	4212.4	4149.2	3992.6	3719.1	3373.0	2913.5	2427.5	1997.4	1194.6	81.7	9.9
37°	3912.2	3829.7	3687.1	3419.4	3058.0	2661.7	2210.4	1812.4	1088.5	86.2	13.5
38°	3562.5	3535.0	3347.2	3098.1	2764.2	2390.0	1977.1	1617.4	971.2	80.3	22.1
39°	3178.0	3159.5	2972.2	2745.2	2445.5	2101.7	1738.4	1415.3	853.8	58.7	7.2
40°	2800.7	2747.9	2615.2	2409.0	2148.1	1839.0	1524.9	1242.9	752.3	57.8	14.4
42.5°	1898.1	1914.8	1771.3	1623.7	1456.3	1246.5	1037.1	852.0	526.2	42.9	9.0
45°	1219.4	1223.0	1158.9	1044.3	934.6	803.8	665.7	554.6	339.4	23.9	2.7
47.5°	776.2	774.4	733.3	667.5	595.7	519.0	432.8	362.4	219.8	18.5	8.1
50°	488.7	486.9	461.2	419.2	379.1	328.5	274.4	233.3	139.0	22.1	9.0
51°	397.1	399.8	378.2	335.8	304.6	256.3	218.9	185.9	108.8	15.3	8.1
52°	327.6	325.8	312.3	276.6	250.9	209.4	178.3	152.1	90.7	13.5	3.6
53°	263.6	264.5	250.9	223.4	198.6	167.4	142.6	118.2	65.0	9.9	2.7
54°	208.5	206.7	202.2	175.6	160.2	132.7	111.5	90.7	56.0	1.8	0.0
55°	177.4	174.6	168.3	145.3	130.0	109.7	88.9	77.6	48.3	4.5	0.0
57.5°	102.4	102.4	98.8	86.2	75.8	67.7	54.2	50.5	24.8	4.5	0.0
60°	64.1	56.0	62.3	53.3	42.0	37.5	31.1	28.4	21.2	8.1	1.8
61°	53.3	42.9	42.0	39.3	36.6	24.8	21.2	23.0	13.5	2.7	1.8
62°	38.4	33.8	36.6	31.1	27.5	19.4	17.6	16.7	8.1	3.6	4.5
63°	34.7	31.1	30.2	23.0	20.3	20.3	15.3	14.4	9.9	7.2	3.6



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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°	18.5	15.3	13.5	15.3	9.0	11.7	4.5	12.6	2.7	4.5	2.7
67.5°	14.4	9.0	8.1	9.9	6.3	4.5	6.3	8.1	2.7	4.5	6.3
70°	12.6	6.3	9.0	8.1	6.3	8.1	9.0	9.0	2.7	9.0	8.1
72.5°	12.6	8.1	4.5	3.6	3.6	3.6	3.6	3.6	5.4	12.6	9.9
75°	5.4	5.4	2.7	6.3	3.6	5.4	3.6	9.0	3.6	9.9	8.1
77.5°	3.6	4.5	0.0	4.5	0.0	0.0	2.7	6.3	2.7	7.2	9.0
80°	0.0	4.5	2.7	0.0	1.8	2.7	0.0	0.9	1.8	8.1	3.6
82.5°	1.8	2.7	3.6	1.8	1.8	0.0	0.0	0.0	0.0	5.4	4.5
85°	1.8	3.6	0.0	0.9	3.6	1.8	0.9	4.5	1.8	6.3	7.2
87.5°	0.0	1.8	1.8	0.0	2.7	0.0	2.7	1.8	0.0	5.4	2.7
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°	32.0	32.0	32.0	32.0	32.0
2.5°	27.5	24.8	21.2	26.6	22.1
5°	32.9	30.2	23.9	28.4	25.7
7.5°	33.8	28.4	24.8	23.0	25.7
10°	20.3	13.5	9.9	13.5	7.2
12.5°	33.8	23.9	22.1	24.8	27.5
15°	25.7	15.3	15.3	11.7	16.7
17.5°	14.4	11.7	10.8	14.4	16.7
20°	15.3	9.9	8.1	13.5	12.6
21°	13.5	3.6	10.8	10.8	12.6
22°	19.4	9.0	10.8	17.6	18.5
23°	12.6	9.9	8.1	10.8	14.4
24°	18.5	10.8	9.9	13.5	20.3
25°	12.6	9.9	9.9	12.6	10.8
26°	7.2	9.9	7.2	10.8	9.0
27°	5.4	9.0	5.4	8.1	10.8
28°	11.7	14.4	13.5	14.4	12.6
29°	12.6	15.3	12.6	19.4	14.4
30°	7.2	13.5	6.3	14.4	12.6
31°	7.2	9.9	4.5	14.4	12.6
32°	0.9	5.4	2.7	5.4	5.4
33°	5.4	6.3	7.2	11.7	9.0
34°	9.0	10.8	7.2	12.6	10.8
35°	9.9	5.4	8.1	13.5	14.4
36°	2.7	2.7	4.5	10.8	3.6
37°	5.4	15.3	10.8	18.5	10.8
38°	9.0	18.5	17.6	23.0	18.5
39°	1.8	5.4	6.3	12.6	12.6
40°	8.1	13.5	9.9	18.5	18.5
42.5°	6.3	9.9	7.2	15.3	12.6
45°	2.7	2.7	1.8	9.9	7.2
47.5°	4.5	4.5	8.1	12.6	22.1
50°	9.0	9.0	11.7	21.2	20.3
51°	5.4	4.5	6.3	14.4	18.5
52°	4.5	6.3	6.3	14.4	14.4
53°	1.8	0.0	0.0	10.8	9.0
54°	1.8	0.9	2.7	8.1	12.6
55°	0.0	4.5	3.6	16.7	18.5
57.5°	0.9	7.2	3.6	11.7	14.4
60°	4.5	5.4	9.9	11.7	14.4
61°	0.0	4.5	4.5	10.8	12.6
62°	0.0	3.6	8.1	9.9	12.6
63°	4.5	5.4	7.2	11.7	14.4





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	2.7	7.2	9.0	11.7	10.8
67.5°	5.4	6.3	5.4	15.3	18.5
70°	7.2	11.7	12.6	10.8	18.5
72.5°	4.5	6.3	9.0	16.7	18.5
75°	8.1	9.0	13.5	15.3	18.5
77.5°	6.3	9.0	9.0	9.9	18.5
80°	2.7	8.1	9.0	9.9	5.4
82.5°	3.6	5.4	3.6	9.9	7.2
85°	1.8	8.1	7.2	9.0	9.0
87.5°	2.7	4.5	4.5	8.1	5.4
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	20.3	21.2	20.3	14.4	10.8	9.9	7.2	12.6	3.6	3.6	0.0
65°	18.5	20.3	15.3	17.6	11.7	10.8	6.3	12.6	1.8	6.3	4.5







64°	2.7	4.5	4.5	8.1	12.6
65°	4.5	6.3	6.3	11.7	9.0



(END OF REPORT)