

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: P315318

Luminaire Tested: **LDA2B10FL8050D010 PINW1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315318  
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: LDA2B10FL8050D010 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: 939.6 lumens  
Efficiency: N/A  
Efficacy: 94.0 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

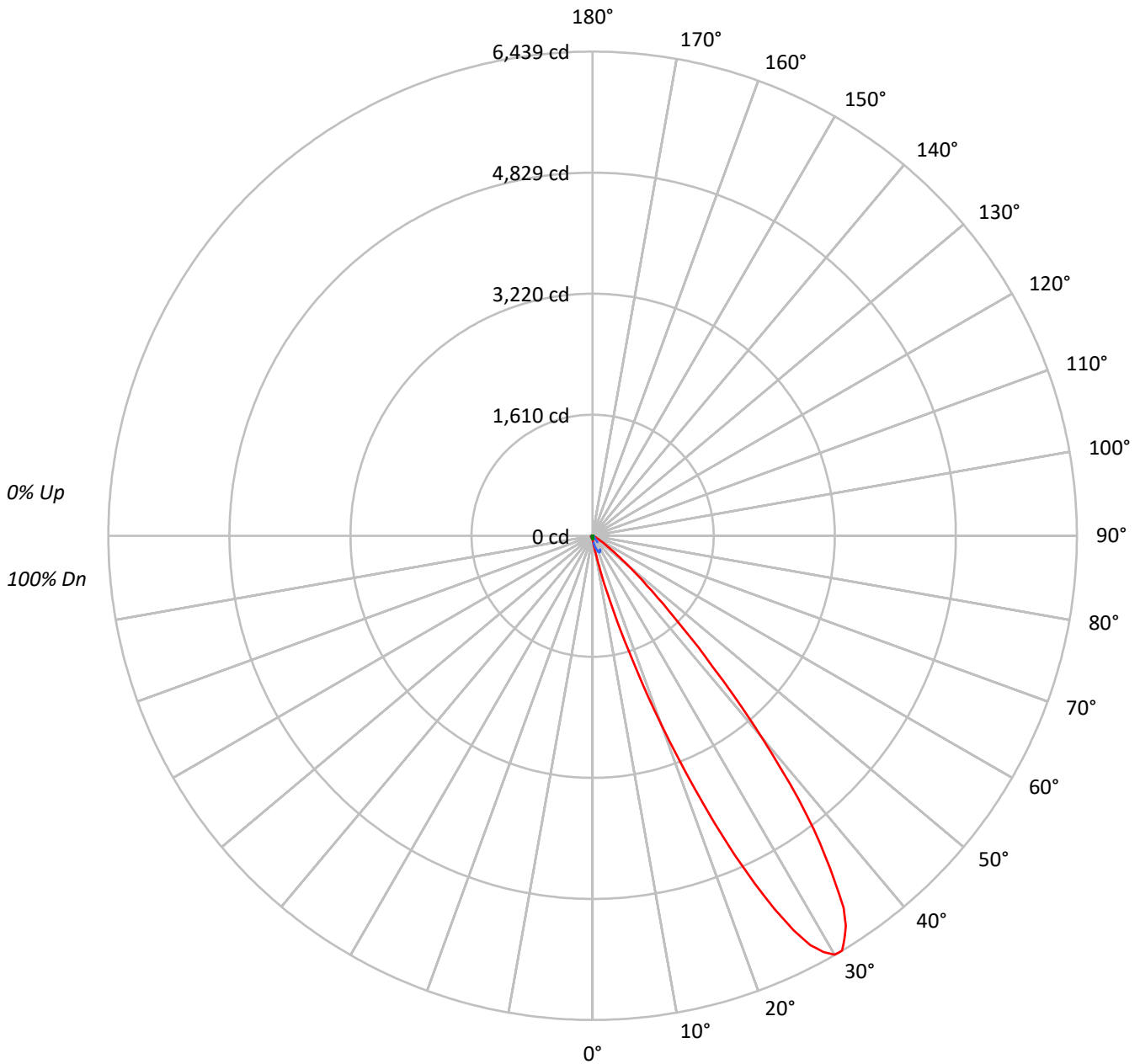
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	19734	19734	19734
5°	44077	20355	15897
10°	117979	12725	4509
15°	464541	16396	10624
20°	1405281	10080	8295
25°	2780941	8601	7349
30°	3664386	5127	9001
35°	3381280	7468	10841
40°	2252201	6505	14877
45°	1062347	2372	6279
50°	468426	8673	19495
55°	190523	0	19869
60°	78938	5526	17761
65°	26967	6537	13192
70°	22791	12982	33322
75°	12962	19253	44033
80°	0	9660	19320
85°	13020	13020	63966



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	5.4	0.6
10°-20°	57.5	6.1
20°-30°	295.5	31.5
30°-40°	378.4	40.3
40°-50°	145.5	15.5
50°-60°	29.6	3.1
60°-70°	10.0	1.1
70°-80°	11.7	1.2
80°-90°	6.0	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°	358.5	38.1
0°-40°	736.9	78.4
0°-60°	912.0	97.1
0°-90°	939.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	939.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	40	40	40	40	40	
5°	89	73	41	30	32	13
15°	910	177	32	19	21	349
25°	5109	231	16	12	14	2332
35°	5614	120	12	10	18	3355
45°	1523	30	3	2	9	1309
55°	222	6	0	4	23	229
65°	23	8	6	8	11	32
75°	7	12	10	17	23	9
85°	2	8	2	9	11	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°	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
2.5°	59.2	51.3	53.5	45.6	50.2	51.3	42.3	55.8	50.2	52.4	45.6
5°	89.0	95.8	87.9	84.5	82.3	84.5	82.3	85.7	83.4	73.3	52.4
7.5°	148.8	135.8	135.8	131.3	134.7	133.5	127.9	131.3	123.4	89.0	60.3
10°	235.5	222.6	221.5	218.1	216.9	206.8	201.2	196.7	180.3	105.4	54.7
12.5°	461.5	450.2	442.3	422.6	409.1	401.2	371.3	355.6	308.8	156.7	69.9
15°	909.5	851.4	866.1	802.4	755.6	724.7	662.7	608.0	495.9	176.9	67.6
17.5°	1609.3	1553.0	1515.2	1445.9	1350.7	1268.4	1146.1	1025.0	796.8	201.2	63.1
20°	2676.6	2587.6	2508.7	2389.8	2206.6	2048.3	1833.0	1601.4	1186.2	229.9	56.9
21°	3145.4	3076.7	2985.4	2828.7	2615.2	2403.3	2145.2	1866.3	1351.8	232.2	51.3
22°	3634.5	3590.0	3470.0	3290.2	3041.2	2788.7	2472.0	2165.5	1528.2	235.5	49.0
23°	4143.9	4097.2	3961.4	3755.7	3475.6	3170.2	2801.1	2437.7	1693.9	240.0	47.9
24°	4642.6	4590.8	4439.2	4209.3	3891.5	3540.4	3123.4	2702.0	1848.3	237.8	50.2
25°	5108.6	5036.5	4876.5	4621.8	4273.0	3879.1	3419.3	2930.2	1984.1	231.0	42.3
26°	5524.5	5442.2	5269.8	4992.0	4610.5	4183.9	3666.1	3142.0	2084.4	225.4	40.0
27°	5885.7	5782.0	5597.7	5306.4	4897.3	4426.2	3876.8	3307.7	2172.8	216.9	32.1
28°	6166.9	6048.0	5860.9	5553.2	5121.0	4615.0	4031.8	3411.4	2225.2	218.1	36.6
29°	6329.2	6237.9	6034.5	5712.1	5257.4	4723.8	4113.5	3468.9	2235.4	201.2	34.4
30°	6432.3	6330.3	6121.2	5784.3	5309.8	4748.6	4123.6	3458.2	2205.5	188.8	32.1
31°	6439.0	6332.5	6120.1	5771.3	5289.5	4707.4	4067.3	3394.5	2140.7	175.8	26.5
32°	6317.9	6235.6	6026.6	5666.5	5179.6	4594.2	3946.1	3286.9	2038.7	149.9	18.0
33°	6181.0	6081.2	5873.3	5509.8	5027.5	4439.2	3771.5	3142.0	1932.8	147.6	23.1
34°	5968.0	5847.9	5643.4	5285.6	4816.2	4218.3	3563.5	2948.8	1797.5	134.7	22.0
35°	5614.1	5549.9	5343.0	4989.7	4533.9	3953.5	3313.3	2736.3	1653.9	120.0	15.8
36°	5259.7	5180.8	4985.2	4643.8	4211.6	3637.9	3031.0	2494.0	1491.6	102.0	12.4
37°	4884.9	4781.8	4603.7	4269.6	3818.2	3323.5	2760.0	2263.0	1359.1	107.6	16.9
38°	4448.2	4413.8	4179.4	3868.4	3451.4	2984.3	2468.7	2019.6	1212.6	100.3	27.6
39°	3968.1	3945.0	3711.2	3427.7	3053.6	2624.2	2170.6	1767.1	1066.1	73.3	9.0
40°	3497.0	3431.1	3265.4	3007.9	2682.2	2296.2	1904.0	1551.9	939.3	72.1	18.0
42.5°	2370.1	2390.9	2211.7	2027.5	1818.4	1556.4	1294.9	1063.9	657.0	53.5	11.3
45°	1522.6	1527.1	1447.1	1303.9	1167.0	1003.6	831.2	692.5	423.7	29.9	3.4
47.5°	969.2	967.0	915.7	833.4	743.8	648.0	540.4	452.5	274.4	23.1	10.1
50°	610.3	608.0	575.9	523.5	473.3	410.2	342.6	291.3	173.6	27.6	11.3
51°	495.9	499.3	472.2	419.2	380.4	320.1	273.3	232.2	135.8	19.2	10.1
52°	409.1	406.8	389.9	345.4	313.3	261.5	222.6	189.9	113.3	16.9	4.5
53°	329.1	330.2	313.3	278.9	247.9	209.1	178.1	147.6	81.1	12.4	3.4
54°	260.3	258.1	252.4	219.2	200.0	165.7	139.2	113.3	69.9	2.3	0.0
55°	221.5	218.1	210.2	181.4	162.3	136.9	111.0	96.9	60.3	5.6	0.0
57.5°	127.9	127.9	123.4	107.6	94.7	84.5	67.6	63.1	31.0	5.6	0.0
60°	80.0	69.9	77.8	66.5	52.4	46.8	38.9	35.5	26.5	10.1	2.3
61°	66.5	53.5	52.4	49.0	45.6	31.0	26.5	28.7	16.9	3.4	2.3
62°	47.9	42.3	45.6	38.9	34.4	24.2	22.0	20.8	10.1	4.5	5.6
63°	43.4	38.9	37.8	28.7	25.4	25.4	19.2	18.0	12.4	9.0	4.5



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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°	23.1	19.2	16.9	19.2	11.3	14.7	5.6	15.8	3.4	5.6	3.4
67.5°	18.0	11.3	10.1	12.4	7.9	5.6	7.9	10.1	3.4	5.6	7.9
70°	15.8	7.9	11.3	10.1	7.9	10.1	11.3	11.3	3.4	11.3	10.1
72.5°	15.8	10.1	5.6	4.5	4.5	4.5	4.5	4.5	6.8	15.8	12.4
75°	6.8	6.8	3.4	7.9	4.5	6.8	4.5	11.3	4.5	12.4	10.1
77.5°	4.5	5.6	0.0	5.6	0.0	0.0	3.4	7.9	3.4	9.0	11.3
80°	0.0	5.6	3.4	0.0	2.3	3.4	0.0	1.1	2.3	10.1	4.5
82.5°	2.3	3.4	4.5	2.3	2.3	0.0	0.0	0.0	0.0	6.8	5.6
85°	2.3	4.5	0.0	1.1	4.5	2.3	1.1	5.6	2.3	7.9	9.0
87.5°	0.0	2.3	2.3	0.0	3.4	0.0	3.4	2.3	0.0	6.8	3.4
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°	40.0	40.0	40.0	40.0	40.0
2.5°	34.4	31.0	26.5	33.2	27.6
5°	41.1	37.8	29.9	35.5	32.1
7.5°	42.3	35.5	31.0	28.7	32.1
10°	25.4	16.9	12.4	16.9	9.0
12.5°	42.3	29.9	27.6	31.0	34.4
15°	32.1	19.2	19.2	14.7	20.8
17.5°	18.0	14.7	13.5	18.0	20.8
20°	19.2	12.4	10.1	16.9	15.8
21°	16.9	4.5	13.5	13.5	15.8
22°	24.2	11.3	13.5	22.0	23.1
23°	15.8	12.4	10.1	13.5	18.0
24°	23.1	13.5	12.4	16.9	25.4
25°	15.8	12.4	12.4	15.8	13.5
26°	9.0	12.4	9.0	13.5	11.3
27°	6.8	11.3	6.8	10.1	13.5
28°	14.7	18.0	16.9	18.0	15.8
29°	15.8	19.2	15.8	24.2	18.0
30°	9.0	16.9	7.9	18.0	15.8
31°	9.0	12.4	5.6	18.0	15.8
32°	1.1	6.8	3.4	6.8	6.8
33°	6.8	7.9	9.0	14.7	11.3
34°	11.3	13.5	9.0	15.8	13.5
35°	12.4	6.8	10.1	16.9	18.0
36°	3.4	3.4	5.6	13.5	4.5
37°	6.8	19.2	13.5	23.1	13.5
38°	11.3	23.1	22.0	28.7	23.1
39°	2.3	6.8	7.9	15.8	15.8
40°	10.1	16.9	12.4	23.1	23.1
42.5°	7.9	12.4	9.0	19.2	15.8
45°	3.4	3.4	2.3	12.4	9.0
47.5°	5.6	5.6	10.1	15.8	27.6
50°	11.3	11.3	14.7	26.5	25.4
51°	6.8	5.6	7.9	18.0	23.1
52°	5.6	7.9	7.9	18.0	18.0
53°	2.3	0.0	0.0	13.5	11.3
54°	2.3	1.1	3.4	10.1	15.8
55°	0.0	5.6	4.5	20.8	23.1
57.5°	1.1	9.0	4.5	14.7	18.0
60°	5.6	6.8	12.4	14.7	18.0
61°	0.0	5.6	5.6	13.5	15.8
62°	0.0	4.5	10.1	12.4	15.8
63°	5.6	6.8	9.0	14.7	18.0





TEST NUMBER: P315318

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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	3.4	9.0	11.3	14.7	13.5
67.5°	6.8	7.9	6.8	19.2	23.1
70°	9.0	14.7	15.8	13.5	23.1
72.5°	5.6	7.9	11.3	20.8	23.1
75°	10.1	11.3	16.9	19.2	23.1
77.5°	7.9	11.3	11.3	12.4	23.1
80°	3.4	10.1	11.3	12.4	6.8
82.5°	4.5	6.8	4.5	12.4	9.0
85°	2.3	10.1	9.0	11.3	11.3
87.5°	3.4	5.6	5.6	10.1	6.8
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	25.4	26.5	25.4	18.0	13.5	12.4	9.0	15.8	4.5	4.5	0.0
65°	23.1	25.4	19.2	22.0	14.7	13.5	7.9	15.8	2.3	7.9	5.6







64°	3.4	5.6	5.6	10.1	15.8
65°	5.6	7.9	7.9	14.7	11.3



(END OF REPORT)