

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: P315401

Luminaire Tested: **LDA2B15FL8050D010 PIN1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315401  
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: LDA2B15FL8050D010 PIN1MMS  
Description: PORTFOLIO 2IN ADJ 1500 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: 1204.2 lumens  
Efficiency: N/A  
Efficacy: 85.4 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

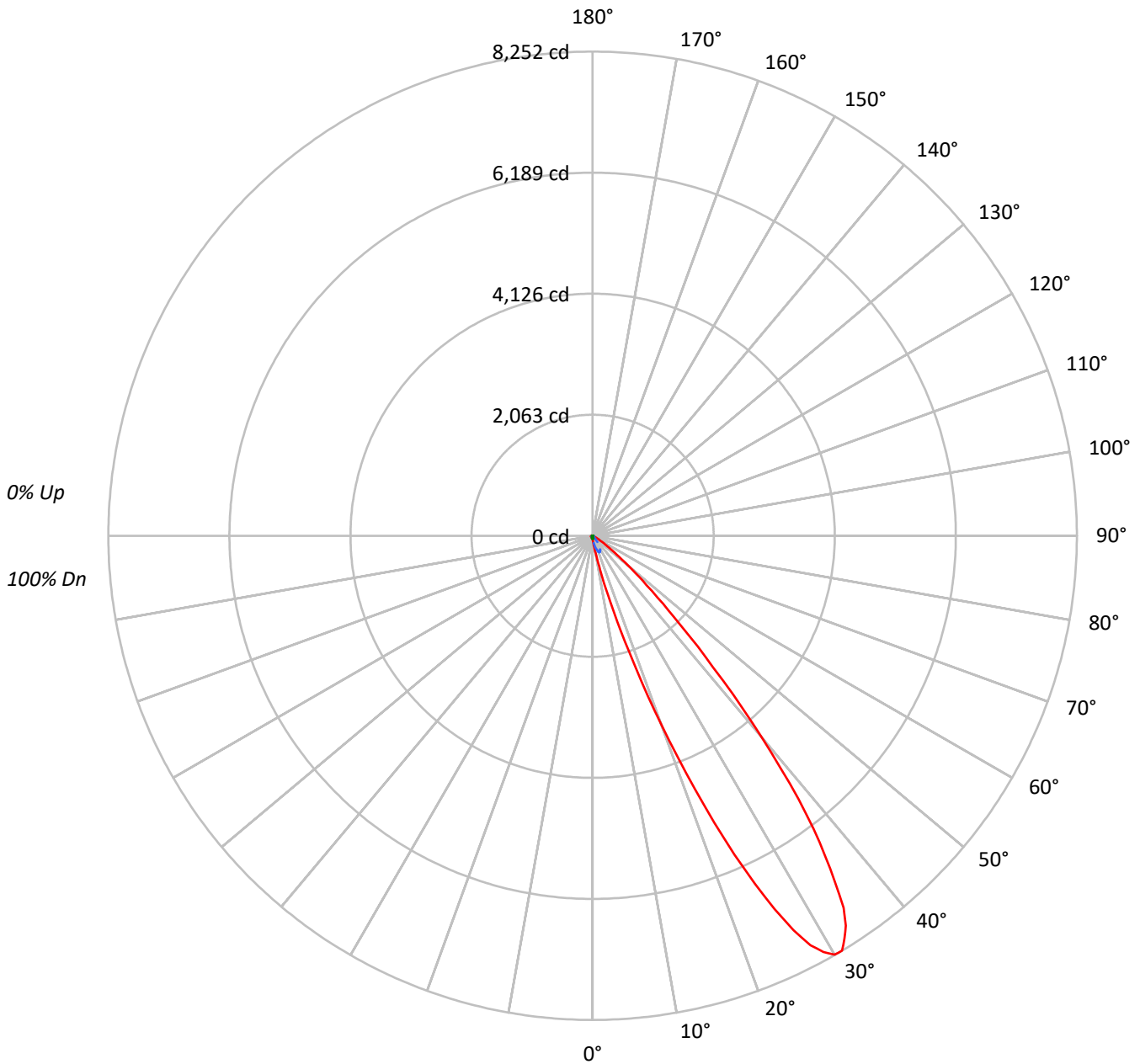
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20					20					20					20					20					
RC	80					70					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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90					90			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80					80			
3	97	89	82	77	95	87	82	77	85	80	75	82	78	74	80	76	73	71					71			
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63					63			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	59	53	76	66	58	53	64	58	53	62	57	52	61	56	52	50					50			
7	72	61	53	48	71	60	53	47	58	52	47	57	51	47	56	51	47	45					45			
8	67	55	48	43	66	55	47	42	53	47	42	52	46	42	51	46	42	40					40			
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36					36			
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32					32			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	25309	25309	25309
5°	56508	26099	20404
10°	151244	16282	5811
15°	595297	21044	13637
20°	1800940	12916	10605
25°	3563954	10996	9418
30°	4696085	6608	11508
35°	4333249	9576	13913
40°	2886321	8372	19064
45°	1361389	3000	8094
50°	600289	11052	24945
55°	244111	0	25460
60°	101139	7104	22793
65°	34555	8405	16810
70°	29138	16733	42698
75°	16584	24781	56424
80°	0	12217	24718
85°	16416	16416	81514



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	7.0	0.6
10°-20°	73.7	6.1
20°-30°	378.7	31.5
30°-40°	485.0	40.3
40°-50°	186.5	15.5
50°-60°	37.9	3.1
60°-70°	12.9	1.1
70°-80°	14.9	1.2
80°-90°	7.6	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°	459.4	38.1
0°-40°	944.4	78.4
0°-60°	1168.7	97.1
0°-90°	1204.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1204.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	51	51	51	51	51	
5°	114	94	53	38	41	17
15°	1166	227	41	25	27	447
25°	6547	296	20	16	17	2988
35°	7195	154	16	13	23	4300
45°	1951	38	4	3	12	1677
55°	284	7	0	6	30	294
65°	30	10	7	10	14	42
75°	9	16	13	22	30	12
85°	3	10	3	12	14	2
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°	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
2.5°	75.8	65.7	68.6	58.5	64.3	65.7	54.2	71.5	64.3	67.2	58.5
5°	114.1	122.8	112.7	108.3	105.4	108.3	105.4	109.8	106.9	93.9	67.2
7.5°	190.6	174.0	174.0	168.3	172.6	171.1	163.9	168.3	158.1	114.1	77.3
10°	301.9	285.2	283.8	279.5	278.0	265.0	257.8	252.0	231.1	135.0	70.0
12.5°	591.4	577.0	566.9	541.6	524.3	514.2	475.9	455.7	395.7	200.8	89.5
15°	1165.5	1091.2	1109.9	1028.3	968.4	928.7	849.2	779.2	635.5	226.8	86.7
17.5°	2062.4	1990.2	1941.8	1853.0	1731.0	1625.5	1468.8	1313.6	1021.1	257.8	80.9
20°	3430.2	3316.1	3215.0	3062.6	2827.9	2625.0	2349.1	2052.3	1520.1	294.6	72.9
21°	4031.0	3942.9	3825.9	3625.2	3351.5	3079.9	2749.2	2391.7	1732.4	297.5	65.7
22°	4657.8	4600.8	4447.0	4216.6	3897.4	3573.9	3168.0	2775.2	1958.5	301.9	62.8
23°	5310.6	5250.7	5076.7	4813.1	4454.2	4062.8	3589.8	3124.0	2170.8	307.6	61.4
24°	5949.7	5883.3	5689.0	5394.4	4987.1	4537.2	4002.8	3462.7	2368.6	304.7	64.3
25°	6547.0	6454.5	6249.4	5923.0	5476.0	4971.2	4382.0	3755.1	2542.7	296.1	54.2
26°	7079.9	6974.5	6753.5	6397.5	5908.6	5361.9	4698.3	4026.7	2671.2	288.9	51.3
27°	7542.8	7409.9	7173.8	6800.4	6276.2	5672.4	4968.3	4239.0	2784.6	278.0	41.2
28°	7903.1	7750.8	7511.0	7116.7	6562.8	5914.4	5166.9	4371.9	2851.7	279.5	46.9
29°	8111.1	7994.1	7733.4	7320.4	6737.6	6053.7	5271.7	4445.5	2864.7	257.8	44.1
30°	8243.3	8112.6	7844.6	7412.8	6804.8	6085.5	5284.6	4431.8	2826.5	241.9	41.2
31°	8251.9	8115.5	7843.2	7396.2	6778.8	6032.8	5212.4	4350.2	2743.4	225.3	33.9
32°	8096.7	7991.2	7723.3	7261.9	6637.9	5887.6	5057.2	4212.3	2612.7	192.1	23.1
33°	7921.2	7793.4	7526.9	7061.1	6443.0	5689.0	4833.3	4026.7	2477.0	189.2	29.6
34°	7648.2	7494.4	7232.3	6773.7	6172.2	5406.0	4566.8	3779.0	2303.6	172.6	28.2
35°	7194.7	7112.4	6847.4	6394.6	5810.4	5066.6	4246.2	3506.7	2119.5	153.8	20.2
36°	6740.5	6639.4	6388.8	5951.2	5397.3	4662.2	3884.4	3196.2	1911.5	130.7	15.9
37°	6260.3	6128.1	5899.9	5471.7	4893.2	4259.2	3537.1	2900.1	1741.8	137.9	21.7
38°	5700.6	5656.6	5356.1	4957.5	4423.1	3824.5	3163.7	2588.2	1554.1	128.5	35.4
39°	5085.3	5055.7	4756.0	4392.8	3913.3	3363.0	2781.7	2264.6	1366.3	93.9	11.6
40°	4481.6	4397.1	4184.8	3854.8	3437.4	2942.7	2440.1	1988.8	1203.8	92.4	23.1
42.5°	3037.3	3064.1	2834.4	2598.3	2330.4	1994.6	1659.5	1363.4	842.0	68.6	14.4
45°	1951.2	1957.0	1854.5	1671.0	1495.6	1286.1	1065.2	887.5	543.1	38.3	4.3
47.5°	1242.1	1239.2	1173.5	1068.1	953.2	830.5	692.5	579.9	351.7	29.6	13.0
50°	782.1	779.2	738.0	670.9	606.6	525.7	439.1	373.3	222.4	35.4	14.4
51°	635.5	639.8	605.2	537.3	487.4	410.2	350.2	297.5	174.0	24.6	13.0
52°	524.3	521.4	499.7	442.7	401.5	335.1	285.2	243.4	145.2	21.7	5.8
53°	421.7	423.2	401.5	357.5	317.7	267.9	228.2	189.2	104.0	15.9	4.3
54°	333.6	330.7	323.5	280.9	256.4	212.3	178.4	145.2	89.5	2.9	0.0
55°	283.8	279.5	269.4	232.5	208.0	175.5	142.3	124.2	77.3	7.2	0.0
57.5°	163.9	163.9	158.1	137.9	121.3	108.3	86.7	80.9	39.7	7.2	0.0
60°	102.5	89.5	99.7	85.2	67.2	59.9	49.8	45.5	33.9	13.0	2.9
61°	85.2	68.6	67.2	62.8	58.5	39.7	33.9	36.8	21.7	4.3	2.9
62°	61.4	54.2	58.5	49.8	44.1	31.1	28.2	26.7	13.0	5.8	7.2
63°	55.6	49.8	48.4	36.8	32.5	32.5	24.6	23.1	15.9	11.6	5.8



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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°	29.6	24.6	21.7	24.6	14.4	18.8	7.2	20.2	4.3	7.2	4.3
67.5°	23.1	14.4	13.0	15.9	10.1	7.2	10.1	13.0	4.3	7.2	10.1
70°	20.2	10.1	14.4	13.0	10.1	13.0	14.4	14.4	4.3	14.4	13.0
72.5°	20.2	13.0	7.2	5.8	5.8	5.8	5.8	5.8	8.7	20.2	15.9
75°	8.7	8.7	4.3	10.1	5.8	8.7	5.8	14.4	5.8	15.9	13.0
77.5°	5.8	7.2	0.0	7.2	0.0	0.0	4.3	10.1	4.3	11.6	14.4
80°	0.0	7.2	4.3	0.0	2.9	4.3	0.0	1.4	2.9	13.0	5.8
82.5°	2.9	4.3	5.8	2.9	2.9	0.0	0.0	0.0	0.0	8.7	7.2
85°	2.9	5.8	0.0	1.4	5.8	2.9	1.4	7.2	2.9	10.1	11.6
87.5°	0.0	2.9	2.9	0.0	4.3	0.0	4.3	2.9	0.0	8.7	4.3
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°	51.3	51.3	51.3	51.3	51.3
2.5°	44.1	39.7	33.9	42.6	35.4
5°	52.7	48.4	38.3	45.5	41.2
7.5°	54.2	45.5	39.7	36.8	41.2
10°	32.5	21.7	15.9	21.7	11.6
12.5°	54.2	38.3	35.4	39.7	44.1
15°	41.2	24.6	24.6	18.8	26.7
17.5°	23.1	18.8	17.3	23.1	26.7
20°	24.6	15.9	13.0	21.7	20.2
21°	21.7	5.8	17.3	17.3	20.2
22°	31.1	14.4	17.3	28.2	29.6
23°	20.2	15.9	13.0	17.3	23.1
24°	29.6	17.3	15.9	21.7	32.5
25°	20.2	15.9	15.9	20.2	17.3
26°	11.6	15.9	11.6	17.3	14.4
27°	8.7	14.4	8.7	13.0	17.3
28°	18.8	23.1	21.7	23.1	20.2
29°	20.2	24.6	20.2	31.1	23.1
30°	11.6	21.7	10.1	23.1	20.2
31°	11.6	15.9	7.2	23.1	20.2
32°	1.4	8.7	4.3	8.7	8.7
33°	8.7	10.1	11.6	18.8	14.4
34°	14.4	17.3	11.6	20.2	17.3
35°	15.9	8.7	13.0	21.7	23.1
36°	4.3	4.3	7.2	17.3	5.8
37°	8.7	24.6	17.3	29.6	17.3
38°	14.4	29.6	28.2	36.8	29.6
39°	2.9	8.7	10.1	20.2	20.2
40°	13.0	21.7	15.9	29.6	29.6
42.5°	10.1	15.9	11.6	24.6	20.2
45°	4.3	4.3	2.9	15.9	11.6
47.5°	7.2	7.2	13.0	20.2	35.4
50°	14.4	14.4	18.8	33.9	32.5
51°	8.7	7.2	10.1	23.1	29.6
52°	7.2	10.1	10.1	23.1	23.1
53°	2.9	0.0	0.0	17.3	14.4
54°	2.9	1.4	4.3	13.0	20.2
55°	0.0	7.2	5.8	26.7	29.6
57.5°	1.4	11.6	5.8	18.8	23.1
60°	7.2	8.7	15.9	18.8	23.1
61°	0.0	7.2	7.2	17.3	20.2
62°	0.0	5.8	13.0	15.9	20.2
63°	7.2	8.7	11.6	18.8	23.1





TEST NUMBER: P315401

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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	4.3	11.6	14.4	18.8	17.3
67.5°	8.7	10.1	8.7	24.6	29.6
70°	11.6	18.8	20.2	17.3	29.6
72.5°	7.2	10.1	14.4	26.7	29.6
75°	13.0	14.4	21.7	24.6	29.6
77.5°	10.1	14.4	14.4	15.9	29.6
80°	4.3	13.0	14.4	15.9	8.7
82.5°	5.8	8.7	5.8	15.9	11.6
85°	2.9	13.0	11.6	14.4	14.4
87.5°	4.3	7.2	7.2	13.0	8.7
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	32.5	33.9	32.5	23.1	17.3	15.9	11.6	20.2	5.8	5.8	0.0
65°	29.6	32.5	24.6	28.2	18.8	17.3	10.1	20.2	2.9	10.1	7.2







64°	4.3	7.2	7.2	13.0	20.2
65°	7.2	10.1	10.1	18.8	14.4



(END OF REPORT)