

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: P315395

Luminaire Tested: **LDA2B15FL8040D010 PIN1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315395  
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: LDA2B15FL8040D010 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: 1212.1 lumens  
Efficiency: N/A  
Efficacy: 86.0 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

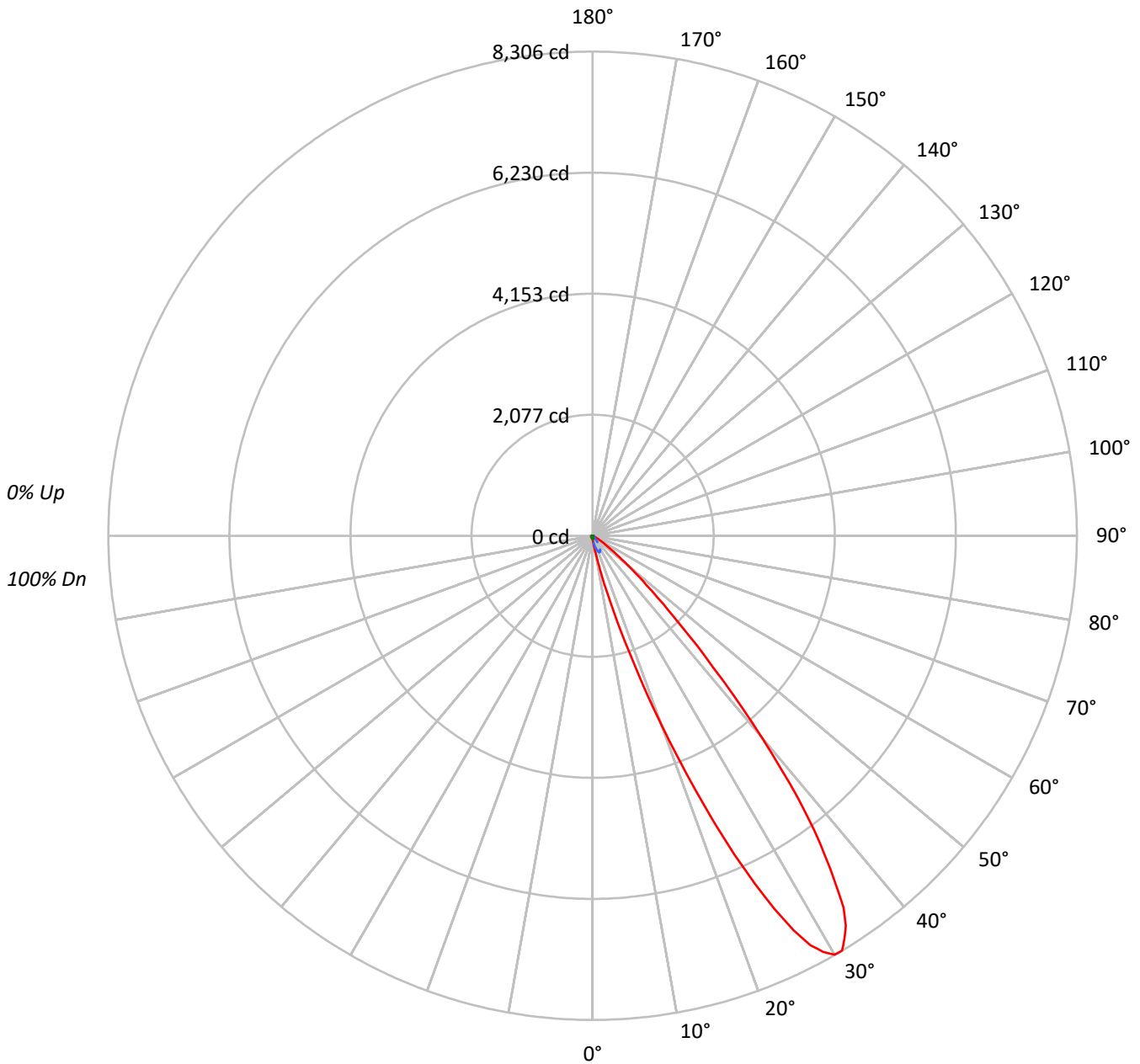
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	25457	25457	25457
5°	56854	26298	20503
10°	152196	16382	5811
15°	599230	21146	13740
20°	1812753	12968	10711
25°	3587308	11105	9472
30°	4726905	6608	11622
35°	4361677	9637	14033
40°	2905256	8437	19192
45°	1370320	3070	8094
50°	604203	11129	25098
55°	245745	0	25632
60°	101830	7203	22991
65°	34788	8522	16927
70°	29427	16733	42986
75°	16584	24971	56805
80°	0	12501	24718
85°	16416	16416	82080



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	7.0	0.6
10°-20°	74.2	6.1
20°-30°	381.2	31.5
30°-40°	488.1	40.3
40°-50°	187.7	15.5
50°-60°	38.2	3.1
60°-70°	13.0	1.1
70°-80°	15.0	1.2
80°-90°	7.7	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°	462.4	38.1
0°-40°	950.5	78.4
0°-60°	1176.4	97.1
0°-90°	1212.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1212.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	52	52	52	52	52	
5°	115	94	53	38	41	17
15°	1173	228	41	25	27	450
25°	6590	298	20	16	17	3008
35°	7242	155	16	13	23	4328
45°	1964	38	4	3	12	1688
55°	286	7	0	6	30	296
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°	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6	51.6
2.5°	76.3	66.1	69.1	58.9	64.7	66.1	54.5	72.0	64.7	67.6	58.9
5°	114.8	123.6	113.4	109.0	106.1	109.0	106.1	110.5	107.6	94.5	67.6
7.5°	191.9	175.2	175.2	169.4	173.7	172.3	165.0	169.4	159.2	114.8	77.8
10°	303.8	287.1	285.7	281.3	279.8	266.8	259.5	253.7	232.6	135.9	70.5
12.5°	595.3	580.8	570.6	545.2	527.7	517.5	479.0	458.7	398.3	202.1	90.1
15°	1173.2	1098.3	1117.2	1035.1	974.7	934.8	854.8	784.3	639.7	228.2	87.2
17.5°	2076.0	2003.3	1954.6	1865.2	1742.3	1636.2	1478.5	1322.2	1027.8	259.5	81.4
20°	3452.7	3337.8	3236.1	3082.7	2846.5	2642.2	2364.6	2065.8	1530.1	296.6	73.4
21°	4057.5	3968.8	3851.0	3649.0	3373.5	3100.2	2767.2	2407.4	1743.8	299.5	66.1
22°	4688.4	4631.0	4476.1	4244.3	3923.0	3597.3	3188.8	2793.4	1971.3	303.8	63.2
23°	5345.5	5285.2	5110.0	4844.7	4483.4	4089.4	3613.3	3144.5	2185.0	309.7	61.8
24°	5988.8	5921.9	5726.4	5429.8	5019.9	4567.0	4029.1	3485.4	2384.2	306.7	64.7
25°	6589.9	6496.9	6290.4	5961.9	5512.0	5003.9	4410.7	3779.8	2559.4	298.0	54.5
26°	7126.4	7020.2	6797.8	6439.5	5947.4	5397.1	4729.1	4053.1	2688.7	290.8	51.6
27°	7592.3	7458.5	7220.9	6845.1	6317.3	5709.7	5001.0	4266.8	2802.9	279.8	41.4
28°	7955.0	7801.6	7560.3	7163.4	6605.9	5953.2	5200.8	4400.5	2870.5	281.3	47.2
29°	8164.3	8046.6	7784.2	7368.4	6781.8	6093.5	5306.2	4474.7	2883.5	259.5	44.3
30°	8297.4	8165.8	7896.1	7461.5	6849.4	6125.4	5319.3	4460.9	2845.0	243.5	41.4
31°	8306.1	8168.7	7894.7	7444.7	6823.2	6072.4	5246.6	4378.7	2761.4	226.8	34.2
32°	8149.8	8043.7	7774.0	7309.5	6681.5	5926.3	5090.4	4239.9	2629.9	193.4	23.3
33°	7973.2	7844.5	7576.3	7107.5	6485.2	5726.4	4865.0	4053.1	2493.2	190.4	29.8
34°	7698.4	7543.6	7279.7	6818.2	6212.7	5441.4	4596.8	3803.8	2318.8	173.7	28.3
35°	7241.9	7159.1	6892.3	6436.5	5848.5	5099.8	4274.1	3529.7	2133.4	154.8	20.4
36°	6784.7	6683.0	6430.7	5990.2	5432.7	4692.8	3909.9	3217.2	1924.1	131.6	16.0
37°	6301.3	6168.3	5938.6	5507.6	4925.4	4287.2	3560.3	2919.2	1753.2	138.8	21.8
38°	5738.0	5693.7	5391.3	4990.1	4452.2	3849.6	3184.5	2605.1	1564.3	129.4	35.6
39°	5118.7	5088.9	4787.3	4421.6	3939.0	3385.1	2800.0	2279.5	1375.3	94.5	11.6
40°	4511.0	4426.0	4212.3	3880.1	3460.0	2962.0	2456.1	2001.8	1211.7	93.0	23.3
42.5°	3057.3	3084.2	2853.0	2615.3	2345.7	2007.7	1670.4	1372.4	847.5	69.1	14.5
45°	1964.0	1969.9	1866.6	1682.0	1505.4	1294.6	1072.2	893.3	546.6	38.5	4.4
47.5°	1250.2	1247.3	1181.2	1075.1	959.5	835.9	697.1	583.7	354.0	29.8	13.1
50°	787.2	784.3	742.9	675.3	610.6	529.2	441.9	375.8	223.9	35.6	14.5
51°	639.7	644.0	609.1	540.8	490.6	412.9	352.5	299.5	175.2	24.7	13.1
52°	527.7	524.8	503.0	445.6	404.1	337.3	287.1	245.0	146.1	21.8	5.8
53°	424.5	426.0	404.1	359.8	319.8	269.7	229.7	190.4	104.7	16.0	4.4
54°	335.8	332.9	325.6	282.8	258.0	213.7	179.5	146.1	90.1	2.9	0.0
55°	285.7	281.3	271.1	234.1	209.3	176.6	143.2	125.0	77.8	7.3	0.0
57.5°	165.0	165.0	159.2	138.8	122.1	109.0	87.2	81.4	40.0	7.3	0.0
60°	103.2	90.1	100.3	85.8	67.6	60.3	50.2	45.8	34.2	13.1	2.9
61°	85.8	69.1	67.6	63.2	58.9	40.0	34.2	37.1	21.8	4.4	2.9
62°	61.8	54.5	58.9	50.2	44.3	31.3	28.3	26.9	13.1	5.8	7.3
63°	56.0	50.2	48.7	37.1	32.7	32.7	24.7	23.3	16.0	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°	29.8	24.7	21.8	24.7	14.5	18.9	7.3	20.4	4.4	7.3	4.4
67.5°	23.3	14.5	13.1	16.0	10.2	7.3	10.2	13.1	4.4	7.3	10.2
70°	20.4	10.2	14.5	13.1	10.2	13.1	14.5	14.5	4.4	14.5	13.1
72.5°	20.4	13.1	7.3	5.8	5.8	5.8	5.8	5.8	8.7	20.4	16.0
75°	8.7	8.7	4.4	10.2	5.8	8.7	5.8	14.5	5.8	16.0	13.1
77.5°	5.8	7.3	0.0	7.3	0.0	0.0	4.4	10.2	4.4	11.6	14.5
80°	0.0	7.3	4.4	0.0	2.9	4.4	0.0	1.5	2.9	13.1	5.8
82.5°	2.9	4.4	5.8	2.9	2.9	0.0	0.0	0.0	0.0	8.7	7.3
85°	2.9	5.8	0.0	1.5	5.8	2.9	1.5	7.3	2.9	10.2	11.6
87.5°	0.0	2.9	2.9	0.0	4.4	0.0	4.4	2.9	0.0	8.7	4.4
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°	51.6	51.6	51.6	51.6	51.6
2.5°	44.3	40.0	34.2	42.9	35.6
5°	53.1	48.7	38.5	45.8	41.4
7.5°	54.5	45.8	40.0	37.1	41.4
10°	32.7	21.8	16.0	21.8	11.6
12.5°	54.5	38.5	35.6	40.0	44.3
15°	41.4	24.7	24.7	18.9	26.9
17.5°	23.3	18.9	17.4	23.3	26.9
20°	24.7	16.0	13.1	21.8	20.4
21°	21.8	5.8	17.4	17.4	20.4
22°	31.3	14.5	17.4	28.3	29.8
23°	20.4	16.0	13.1	17.4	23.3
24°	29.8	17.4	16.0	21.8	32.7
25°	20.4	16.0	16.0	20.4	17.4
26°	11.6	16.0	11.6	17.4	14.5
27°	8.7	14.5	8.7	13.1	17.4
28°	18.9	23.3	21.8	23.3	20.4
29°	20.4	24.7	20.4	31.3	23.3
30°	11.6	21.8	10.2	23.3	20.4
31°	11.6	16.0	7.3	23.3	20.4
32°	1.5	8.7	4.4	8.7	8.7
33°	8.7	10.2	11.6	18.9	14.5
34°	14.5	17.4	11.6	20.4	17.4
35°	16.0	8.7	13.1	21.8	23.3
36°	4.4	4.4	7.3	17.4	5.8
37°	8.7	24.7	17.4	29.8	17.4
38°	14.5	29.8	28.3	37.1	29.8
39°	2.9	8.7	10.2	20.4	20.4
40°	13.1	21.8	16.0	29.8	29.8
42.5°	10.2	16.0	11.6	24.7	20.4
45°	4.4	4.4	2.9	16.0	11.6
47.5°	7.3	7.3	13.1	20.4	35.6
50°	14.5	14.5	18.9	34.2	32.7
51°	8.7	7.3	10.2	23.3	29.8
52°	7.3	10.2	10.2	23.3	23.3
53°	2.9	0.0	0.0	17.4	14.5
54°	2.9	1.5	4.4	13.1	20.4
55°	0.0	7.3	5.8	26.9	29.8
57.5°	1.5	11.6	5.8	18.9	23.3
60°	7.3	8.7	16.0	18.9	23.3
61°	0.0	7.3	7.3	17.4	20.4
62°	0.0	5.8	13.1	16.0	20.4
63°	7.3	8.7	11.6	18.9	23.3





TEST NUMBER: P315395

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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	4.4	11.6	14.5	18.9	17.4
67.5°	8.7	10.2	8.7	24.7	29.8
70°	11.6	18.9	20.4	17.4	29.8
72.5°	7.3	10.2	14.5	26.9	29.8
75°	13.1	14.5	21.8	24.7	29.8
77.5°	10.2	14.5	14.5	16.0	29.8
80°	4.4	13.1	14.5	16.0	8.7
82.5°	5.8	8.7	5.8	16.0	11.6
85°	2.9	13.1	11.6	14.5	14.5
87.5°	4.4	7.3	7.3	13.1	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°	32.7	34.2	32.7	23.3	17.4	16.0	11.6	20.4	5.8	5.8	0.0
65°	29.8	32.7	24.7	28.3	18.9	17.4	10.2	20.4	2.9	10.2	7.3







64°	4.4	7.3	7.3	13.1	20.4
65°	7.3	10.2	10.2	18.9	14.5



(END OF REPORT)