

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: P315426

Luminaire Tested: **LDA2B15FL9035D010 PINW1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315426  
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: LDA2B15FL9035D010 PINW1MMS  
Description: PORTFOLIO 2IN ADJ 1500 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: 1001.3 lumens  
Efficiency: N/A  
Efficacy: 71.0 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

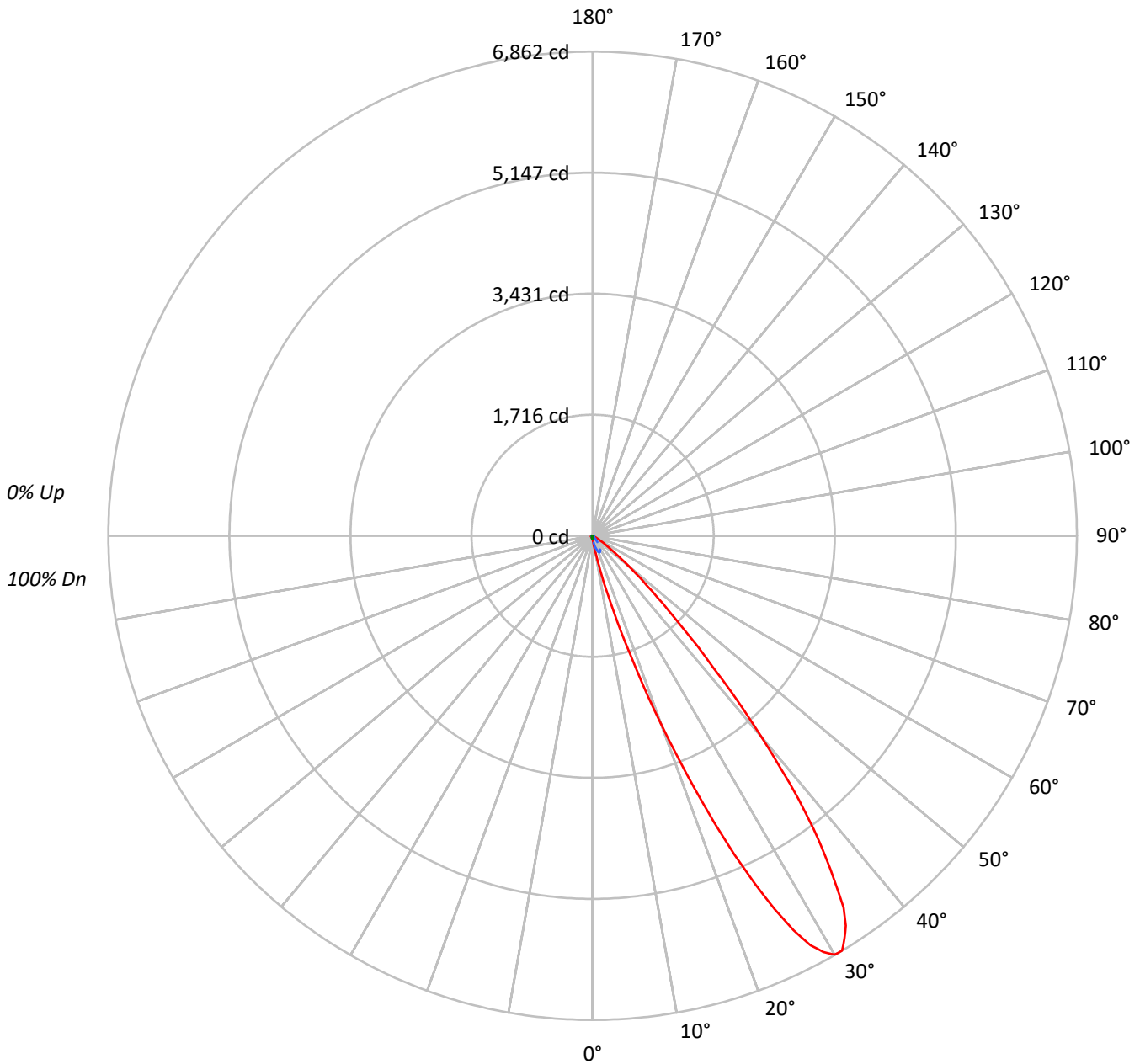
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P315426

CATALOG NUMBER: LDA2B15FL9035D010 PINW1MMS

### Luminous Intensity Polar Plot





TEST NUMBER: P315426

CATALOG NUMBER: LDA2B15FL9035D010 PINW1MMS

**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°	21017	21017	21017
5°	46999	21692	16937
10°	125744	13526	4809
15°	495034	17468	11339
20°	1497528	10711	8820
25°	2963520	9145	7839
30°	3904907	5469	9571
35°	3603221	7950	11564
40°	2400072	6956	15843
45°	1132049	2512	6698
50°	499128	9210	20723
55°	202995	0	21160
60°	84168	5920	18945
65°	28718	7004	14009
70°	24234	13848	35485
75°	13725	20587	46893
80°	0	10228	20456
85°	13586	13586	67928



TEST NUMBER: P315426

CATALOG NUMBER: LDA2B15FL9035D010 PINW1MMS

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	5.8	0.6
10°-20°	61.3	6.1
20°-30°	314.9	31.5
30°-40°	403.3	40.3
40°-50°	155.1	15.5
50°-60°	31.5	3.1
60°-70°	10.7	1.1
70°-80°	12.4	1.2
80°-90°	6.3	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°	382.0	38.2
0°-40°	785.2	78.4
0°-60°	971.8	97.1
0°-90°	1001.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1001.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	43	43	43	43	43	
5°	95	78	44	32	34	14
15°	969	189	34	20	22	372
25°	5444	246	17	13	14	2485
35°	5983	128	13	11	19	3576
45°	1622	32	4	2	10	1395
55°	236	6	0	5	25	244
65°	25	8	6	8	12	35
75°	7	13	11	18	25	10
85°	2	8	2	10	12	1
90°	0	0	0	0	0	



TEST NUMBER: P315426

CATALOG NUMBER: LDA2B15FL9035D010 PINW1MMS

**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.6
2.5°	63.1	54.6	57.0	48.6	53.4	54.6	45.0	59.4	53.4	55.8	48.6
5°	94.9	102.1	93.7	90.1	87.7	90.1	87.7	91.3	88.9	78.1	55.8
7.5°	158.5	144.7	144.7	139.9	143.5	142.3	136.3	139.9	131.5	94.9	64.3
10°	251.0	237.2	236.0	232.4	231.2	220.4	214.4	209.6	192.2	112.3	58.2
12.5°	491.8	479.8	471.4	450.4	436.0	427.5	395.7	378.9	329.1	166.9	74.5
15°	969.2	907.3	922.9	855.1	805.3	772.2	706.2	647.9	528.4	188.6	72.1
17.5°	1715.0	1654.9	1614.7	1540.8	1439.4	1351.7	1221.4	1092.3	849.1	214.4	67.3
20°	2852.3	2757.4	2673.4	2546.7	2351.5	2182.8	1953.4	1706.6	1264.0	245.0	60.6
21°	3351.9	3278.7	3181.4	3014.4	2786.9	2561.1	2286.0	1988.8	1440.6	247.4	54.6
22°	3873.1	3825.7	3697.8	3506.2	3240.8	2971.8	2634.3	2307.7	1628.5	251.0	52.2
23°	4416.0	4366.1	4221.4	4002.2	3703.8	3378.3	2985.0	2597.7	1805.1	255.8	51.0
24°	4947.4	4892.2	4730.6	4485.6	4147.0	3772.9	3328.5	2879.3	1969.6	253.4	53.4
25°	5444.0	5367.1	5196.6	4925.2	4553.5	4133.7	3643.7	3122.5	2114.3	246.2	45.0
26°	5887.2	5799.5	5615.7	5319.7	4913.2	4458.6	3906.8	3348.3	2221.2	240.2	42.6
27°	6272.1	6161.6	5965.2	5654.8	5218.8	4716.8	4131.3	3524.9	2315.5	231.2	34.2
28°	6571.7	6445.0	6245.7	5917.8	5457.2	4918.0	4296.5	3635.3	2371.3	232.4	39.0
29°	6744.7	6647.4	6430.6	6087.1	5602.5	5033.9	4383.5	3696.6	2382.1	214.4	36.6
30°	6854.5	6745.9	6523.1	6164.0	5658.4	5060.3	4394.4	3685.2	2350.3	201.2	34.2
31°	6861.7	6748.3	6521.9	6150.2	5636.8	5016.5	4334.3	3617.3	2281.2	187.4	28.2
32°	6732.6	6645.0	6422.2	6038.5	5519.7	4895.8	4205.2	3502.6	2172.6	159.7	19.2
33°	6586.7	6480.4	6258.9	5871.5	5357.5	4730.6	4019.1	3348.3	2059.7	157.3	24.6
34°	6359.7	6231.8	6013.9	5632.6	5132.4	4495.2	3797.5	3142.3	1915.5	143.5	23.4
35°	5982.6	5914.2	5693.8	5317.3	4831.5	4213.0	3530.9	2916.0	1762.4	127.9	16.8
36°	5604.9	5520.9	5312.5	4948.6	4488.0	3876.7	3230.0	2657.7	1589.5	108.7	13.2
37°	5205.6	5095.7	4906.0	4549.9	4068.9	3541.7	2941.2	2411.6	1448.4	114.7	18.0
38°	4740.2	4703.6	4453.8	4122.3	3678.0	3180.2	2630.7	2152.1	1292.2	106.9	29.4
39°	4228.6	4204.0	3954.8	3652.8	3254.0	2796.5	2313.1	1883.1	1136.1	78.1	9.6
40°	3726.6	3656.4	3479.8	3205.4	2858.3	2447.0	2029.0	1653.7	1001.0	76.9	19.2
42.5°	2525.6	2547.9	2356.9	2160.5	1937.8	1658.5	1379.9	1133.7	700.2	57.0	12.0
45°	1622.5	1627.3	1542.0	1389.5	1243.6	1069.5	885.7	738.0	451.6	31.8	3.6
47.5°	1032.8	1030.4	975.8	888.1	792.6	690.6	575.9	482.2	292.4	24.6	10.8
50°	650.3	647.9	613.7	557.9	504.4	437.2	365.1	310.5	184.9	29.4	12.0
51°	528.4	532.0	503.2	446.8	405.3	341.1	291.2	247.4	144.7	20.4	10.8
52°	436.0	433.6	415.5	368.1	333.9	278.6	237.2	202.4	120.7	18.0	4.8
53°	350.7	351.9	333.9	297.2	264.2	222.8	189.8	157.3	86.5	13.2	3.6
54°	277.4	275.0	269.0	233.6	213.2	176.5	148.3	120.7	74.5	2.4	0.0
55°	236.0	232.4	224.0	193.4	172.9	145.9	118.3	103.3	64.3	6.0	0.0
57.5°	136.3	136.3	131.5	114.7	100.9	90.1	72.1	67.3	33.0	6.0	0.0
60°	85.3	74.5	82.9	70.9	55.8	49.8	41.4	37.8	28.2	10.8	2.4
61°	70.9	57.0	55.8	52.2	48.6	33.0	28.2	30.6	18.0	3.6	2.4
62°	51.0	45.0	48.6	41.4	36.6	25.8	23.4	22.2	10.8	4.8	6.0
63°	46.2	41.4	40.2	30.6	27.0	27.0	20.4	19.2	13.2	9.6	4.8



TEST NUMBER: P315426

CATALOG NUMBER: LDA2B15FL9035D010 PINW1MMS

**CANDELA DISTRIBUTION (continued):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
66°	24.6	20.4	18.0	20.4	12.0	15.6	6.0	16.8	3.6	6.0	3.6
67.5°	19.2	12.0	10.8	13.2	8.4	6.0	8.4	10.8	3.6	6.0	8.4
70°	16.8	8.4	12.0	10.8	8.4	10.8	12.0	12.0	3.6	12.0	10.8
72.5°	16.8	10.8	6.0	4.8	4.8	4.8	4.8	4.8	7.2	16.8	13.2
75°	7.2	7.2	3.6	8.4	4.8	7.2	4.8	12.0	4.8	13.2	10.8
77.5°	4.8	6.0	0.0	6.0	0.0	0.0	3.6	8.4	3.6	9.6	12.0
80°	0.0	6.0	3.6	0.0	2.4	3.6	0.0	1.2	2.4	10.8	4.8
82.5°	2.4	3.6	4.8	2.4	2.4	0.0	0.0	0.0	0.0	7.2	6.0
85°	2.4	4.8	0.0	1.2	4.8	2.4	1.2	6.0	2.4	8.4	9.6
87.5°	0.0	2.4	2.4	0.0	3.6	0.0	3.6	2.4	0.0	7.2	3.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P315426

CATALOG NUMBER: LDA2B15FL9035D010 PINW1MMS

**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
0°	42.6	42.6	42.6	42.6	42.6
2.5°	36.6	33.0	28.2	35.4	29.4
5°	43.8	40.2	31.8	37.8	34.2
7.5°	45.0	37.8	33.0	30.6	34.2
10°	27.0	18.0	13.2	18.0	9.6
12.5°	45.0	31.8	29.4	33.0	36.6
15°	34.2	20.4	20.4	15.6	22.2
17.5°	19.2	15.6	14.4	19.2	22.2
20°	20.4	13.2	10.8	18.0	16.8
21°	18.0	4.8	14.4	14.4	16.8
22°	25.8	12.0	14.4	23.4	24.6
23°	16.8	13.2	10.8	14.4	19.2
24°	24.6	14.4	13.2	18.0	27.0
25°	16.8	13.2	13.2	16.8	14.4
26°	9.6	13.2	9.6	14.4	12.0
27°	7.2	12.0	7.2	10.8	14.4
28°	15.6	19.2	18.0	19.2	16.8
29°	16.8	20.4	16.8	25.8	19.2
30°	9.6	18.0	8.4	19.2	16.8
31°	9.6	13.2	6.0	19.2	16.8
32°	1.2	7.2	3.6	7.2	7.2
33°	7.2	8.4	9.6	15.6	12.0
34°	12.0	14.4	9.6	16.8	14.4
35°	13.2	7.2	10.8	18.0	19.2
36°	3.6	3.6	6.0	14.4	4.8
37°	7.2	20.4	14.4	24.6	14.4
38°	12.0	24.6	23.4	30.6	24.6
39°	2.4	7.2	8.4	16.8	16.8
40°	10.8	18.0	13.2	24.6	24.6
42.5°	8.4	13.2	9.6	20.4	16.8
45°	3.6	3.6	2.4	13.2	9.6
47.5°	6.0	6.0	10.8	16.8	29.4
50°	12.0	12.0	15.6	28.2	27.0
51°	7.2	6.0	8.4	19.2	24.6
52°	6.0	8.4	8.4	19.2	19.2
53°	2.4	0.0	0.0	14.4	12.0
54°	2.4	1.2	3.6	10.8	16.8
55°	0.0	6.0	4.8	22.2	24.6
57.5°	1.2	9.6	4.8	15.6	19.2
60°	6.0	7.2	13.2	15.6	19.2
61°	0.0	6.0	6.0	14.4	16.8
62°	0.0	4.8	10.8	13.2	16.8
63°	6.0	7.2	9.6	15.6	19.2





TEST NUMBER: P315426

CATALOG NUMBER: LDA2B15FL9035D010 PINW1MMS

**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	3.6	9.6	12.0	15.6	14.4
67.5°	7.2	8.4	7.2	20.4	24.6
70°	9.6	15.6	16.8	14.4	24.6
72.5°	6.0	8.4	12.0	22.2	24.6
75°	10.8	12.0	18.0	20.4	24.6
77.5°	8.4	12.0	12.0	13.2	24.6
80°	3.6	10.8	12.0	13.2	7.2
82.5°	4.8	7.2	4.8	13.2	9.6
85°	2.4	10.8	9.6	12.0	12.0
87.5°	3.6	6.0	6.0	10.8	7.2
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	27.0	28.2	27.0	19.2	14.4	13.2	9.6	16.8	4.8	4.8	0.0
65°	24.6	27.0	20.4	23.4	15.6	14.4	8.4	16.8	2.4	8.4	6.0







64°	3.6	6.0	6.0	10.8	16.8
65°	6.0	8.4	8.4	15.6	12.0



(END OF REPORT)