

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: P315444

Luminaire Tested: **LDA2B15FL9727D010 PINW1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315444  
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: LDA2B15FL9727D010 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: 831.9 lumens  
Efficiency: N/A  
Efficacy: 59.0 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

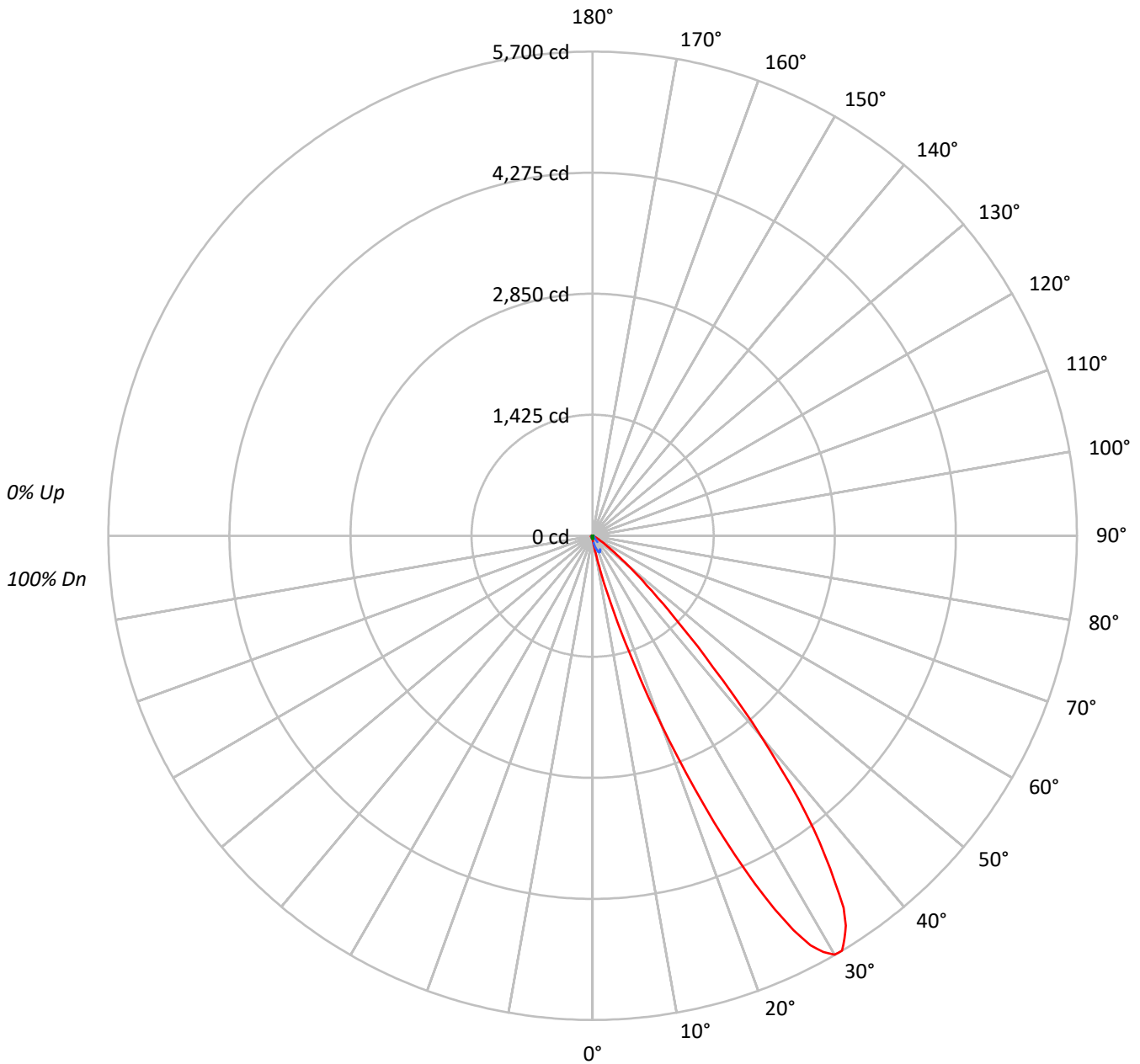
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20					20					20					20					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	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°	17465	17465	17465
5°	39025	18027	14065
10°	104453	11222	4008
15°	411217	14506	9449
20°	1244046	8925	7350
25°	2461888	7621	6532
30°	3243958	4557	7976
35°	2993349	6625	9637
40°	1993813	5796	13203
45°	940455	2093	5582
50°	414622	7675	17193
55°	168589	0	17633
60°	69860	4934	15788
65°	23932	5837	11674
70°	20195	11540	29571
75°	11437	17156	39077
80°	0	8523	17047
85°	11321	11321	56607



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	4.8	0.6
10°-20°	50.9	6.1
20°-30°	261.6	31.4
30°-40°	335.0	40.3
40°-50°	128.8	15.5
50°-60°	26.2	3.1
60°-70°	8.9	1.1
70°-80°	10.3	1.2
80°-90°	5.3	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°	317.3	38.1
0°-40°	652.4	78.4
0°-60°	807.4	97.1
0°-90°	831.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	831.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	35	35	35	35	35	
5°	79	65	36	26	28	12
15°	805	157	28	17	18	309
25°	4522	204	14	11	12	2064
35°	4970	106	11	9	16	2970
45°	1348	26	3	2	8	1159
55°	196	5	0	4	20	203
65°	20	7	5	7	10	29
75°	6	11	9	15	20	8
85°	2	7	2	8	10	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°	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4
2.5°	52.4	45.4	47.4	40.4	44.4	45.4	37.4	49.4	44.4	46.4	40.4
5°	78.8	84.8	77.8	74.8	72.8	74.8	72.8	75.8	73.8	64.8	46.4
7.5°	131.7	120.2	120.2	116.2	119.2	118.2	113.2	116.2	109.2	78.8	53.4
10°	208.5	197.0	196.0	193.1	192.1	183.1	178.1	174.1	159.6	93.3	48.4
12.5°	408.6	398.6	391.6	374.1	362.2	355.2	328.7	314.8	273.4	138.7	61.9
15°	805.1	753.8	766.7	710.4	668.9	641.5	586.6	538.3	439.0	156.6	59.9
17.5°	1424.7	1374.8	1341.4	1280.0	1195.7	1122.9	1014.6	907.4	705.4	178.1	55.9
20°	2369.5	2290.7	2220.8	2115.6	1953.5	1813.3	1622.7	1417.7	1050.1	203.5	50.4
21°	2784.5	2723.7	2642.9	2504.2	2315.1	2127.6	1899.1	1652.2	1196.7	205.5	45.4
22°	3217.5	3178.1	3071.9	2912.7	2692.3	2468.8	2188.4	1917.1	1352.9	208.5	43.4
23°	3668.5	3627.1	3506.9	3324.8	3076.9	2806.5	2479.7	2158.0	1499.5	212.5	42.4
24°	4110.0	4064.1	3929.9	3726.4	3445.0	3134.2	2765.1	2391.9	1636.2	210.5	44.4
25°	4522.5	4458.7	4317.0	4091.5	3782.7	3434.0	3027.0	2594.0	1756.4	204.5	37.4
26°	4890.6	4817.8	4665.2	4419.2	4081.5	3703.9	3245.5	2781.5	1845.2	199.5	35.4
27°	5210.4	5118.6	4955.5	4697.6	4335.4	3918.4	3432.0	2928.2	1923.5	192.1	28.4
28°	5459.3	5354.1	5188.5	4916.1	4533.5	4085.5	3569.2	3020.0	1969.9	193.1	32.4
29°	5603.0	5522.2	5342.1	5056.8	4654.2	4181.8	3641.5	3070.9	1978.9	178.1	30.4
30°	5694.3	5604.0	5418.9	5120.6	4700.6	4203.7	3650.5	3061.4	1952.5	167.1	28.4
31°	5700.3	5606.0	5417.9	5109.1	4682.6	4167.3	3600.6	3005.0	1895.1	155.6	23.4
32°	5593.0	5520.2	5335.1	5016.4	4585.4	4067.1	3493.4	2909.7	1804.8	132.7	16.0
33°	5471.8	5383.5	5199.4	4877.7	4450.7	3929.9	3338.8	2781.5	1711.0	130.7	20.5
34°	5283.2	5177.0	4995.9	4679.1	4263.6	3734.3	3154.7	2610.4	1591.3	119.2	19.5
35°	4970.0	4913.1	4730.0	4417.2	4013.7	3499.9	2933.2	2422.4	1464.1	106.3	14.0
36°	4656.2	4586.4	4413.3	4111.0	3728.3	3220.5	2683.3	2207.9	1320.4	90.3	11.0
37°	4324.5	4233.2	4075.5	3779.7	3380.2	2942.2	2443.3	2003.4	1203.2	95.3	15.0
38°	3937.9	3907.4	3699.9	3424.6	3055.4	2641.9	2185.4	1787.9	1073.5	88.8	24.4
39°	3512.8	3492.4	3285.4	3034.5	2703.2	2323.1	1921.5	1564.4	943.8	64.8	8.0
40°	3095.8	3037.4	2890.8	2662.8	2374.5	2032.8	1685.6	1373.8	831.6	63.9	16.0
42.5°	2098.1	2116.6	1958.0	1794.8	1609.8	1377.8	1146.3	941.8	581.6	47.4	10.0
45°	1347.9	1351.9	1281.0	1154.3	1033.1	888.4	735.8	613.1	375.1	26.4	3.0
47.5°	858.0	856.0	810.6	737.8	658.5	573.7	478.4	400.6	242.9	20.5	9.0
50°	540.2	538.3	509.8	463.4	419.0	363.2	303.3	257.9	153.6	24.4	10.0
51°	439.0	442.0	418.0	371.1	336.7	283.3	241.9	205.5	120.2	17.0	9.0
52°	362.2	360.2	345.2	305.8	277.4	231.5	197.0	168.1	100.3	15.0	4.0
53°	291.3	292.3	277.4	246.9	219.5	185.1	157.6	130.7	71.8	11.0	3.0
54°	230.5	228.5	223.5	194.0	177.1	146.7	123.2	100.3	61.9	2.0	0.0
55°	196.0	193.1	186.1	160.6	143.7	121.2	98.3	85.8	53.4	5.0	0.0
57.5°	113.2	113.2	109.2	95.3	83.8	74.8	59.9	55.9	27.4	5.0	0.0
60°	70.8	61.9	68.8	58.9	46.4	41.4	34.4	31.4	23.4	9.0	2.0
61°	58.9	47.4	46.4	43.4	40.4	27.4	23.4	25.4	15.0	3.0	2.0
62°	42.4	37.4	40.4	34.4	30.4	21.5	19.5	18.5	9.0	4.0	5.0
63°	38.4	34.4	33.4	25.4	22.4	22.4	17.0	16.0	11.0	8.0	4.0



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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°	20.5	17.0	15.0	17.0	10.0	13.0	5.0	14.0	3.0	5.0	3.0
67.5°	16.0	10.0	9.0	11.0	7.0	5.0	7.0	9.0	3.0	5.0	7.0
70°	14.0	7.0	10.0	9.0	7.0	9.0	10.0	10.0	3.0	10.0	9.0
72.5°	14.0	9.0	5.0	4.0	4.0	4.0	4.0	4.0	6.0	14.0	11.0
75°	6.0	6.0	3.0	7.0	4.0	6.0	4.0	10.0	4.0	11.0	9.0
77.5°	4.0	5.0	0.0	5.0	0.0	0.0	3.0	7.0	3.0	8.0	10.0
80°	0.0	5.0	3.0	0.0	2.0	3.0	0.0	1.0	2.0	9.0	4.0
82.5°	2.0	3.0	4.0	2.0	2.0	0.0	0.0	0.0	0.0	6.0	5.0
85°	2.0	4.0	0.0	1.0	4.0	2.0	1.0	5.0	2.0	7.0	8.0
87.5°	0.0	2.0	2.0	0.0	3.0	0.0	3.0	2.0	0.0	6.0	3.0
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°	35.4	35.4	35.4	35.4	35.4
2.5°	30.4	27.4	23.4	29.4	24.4
5°	36.4	33.4	26.4	31.4	28.4
7.5°	37.4	31.4	27.4	25.4	28.4
10°	22.4	15.0	11.0	15.0	8.0
12.5°	37.4	26.4	24.4	27.4	30.4
15°	28.4	17.0	17.0	13.0	18.5
17.5°	16.0	13.0	12.0	16.0	18.5
20°	17.0	11.0	9.0	15.0	14.0
21°	15.0	4.0	12.0	12.0	14.0
22°	21.5	10.0	12.0	19.5	20.5
23°	14.0	11.0	9.0	12.0	16.0
24°	20.5	12.0	11.0	15.0	22.4
25°	14.0	11.0	11.0	14.0	12.0
26°	8.0	11.0	8.0	12.0	10.0
27°	6.0	10.0	6.0	9.0	12.0
28°	13.0	16.0	15.0	16.0	14.0
29°	14.0	17.0	14.0	21.5	16.0
30°	8.0	15.0	7.0	16.0	14.0
31°	8.0	11.0	5.0	16.0	14.0
32°	1.0	6.0	3.0	6.0	6.0
33°	6.0	7.0	8.0	13.0	10.0
34°	10.0	12.0	8.0	14.0	12.0
35°	11.0	6.0	9.0	15.0	16.0
36°	3.0	3.0	5.0	12.0	4.0
37°	6.0	17.0	12.0	20.5	12.0
38°	10.0	20.5	19.5	25.4	20.5
39°	2.0	6.0	7.0	14.0	14.0
40°	9.0	15.0	11.0	20.5	20.5
42.5°	7.0	11.0	8.0	17.0	14.0
45°	3.0	3.0	2.0	11.0	8.0
47.5°	5.0	5.0	9.0	14.0	24.4
50°	10.0	10.0	13.0	23.4	22.4
51°	6.0	5.0	7.0	16.0	20.5
52°	5.0	7.0	7.0	16.0	16.0
53°	2.0	0.0	0.0	12.0	10.0
54°	2.0	1.0	3.0	9.0	14.0
55°	0.0	5.0	4.0	18.5	20.5
57.5°	1.0	8.0	4.0	13.0	16.0
60°	5.0	6.0	11.0	13.0	16.0
61°	0.0	5.0	5.0	12.0	14.0
62°	0.0	4.0	9.0	11.0	14.0
63°	5.0	6.0	8.0	13.0	16.0





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	3.0	8.0	10.0	13.0	12.0
67.5°	6.0	7.0	6.0	17.0	20.5
70°	8.0	13.0	14.0	12.0	20.5
72.5°	5.0	7.0	10.0	18.5	20.5
75°	9.0	10.0	15.0	17.0	20.5
77.5°	7.0	10.0	10.0	11.0	20.5
80°	3.0	9.0	10.0	11.0	6.0
82.5°	4.0	6.0	4.0	11.0	8.0
85°	2.0	9.0	8.0	10.0	10.0
87.5°	3.0	5.0	5.0	9.0	6.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	22.4	23.4	22.4	16.0	12.0	11.0	8.0	14.0	4.0	4.0	0.0
65°	20.5	22.4	17.0	19.5	13.0	12.0	7.0	14.0	2.0	7.0	5.0







64°	3.0	5.0	5.0	9.0	14.0
65°	5.0	7.0	7.0	13.0	10.0



(END OF REPORT)