

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: P315456

Luminaire Tested: **LDA2B15FLD2WD010 PINW1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315456  
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: LDA2B15FLD2WD010 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: 894.6 lumens  
Efficiency: N/A  
Efficacy: 63.4 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

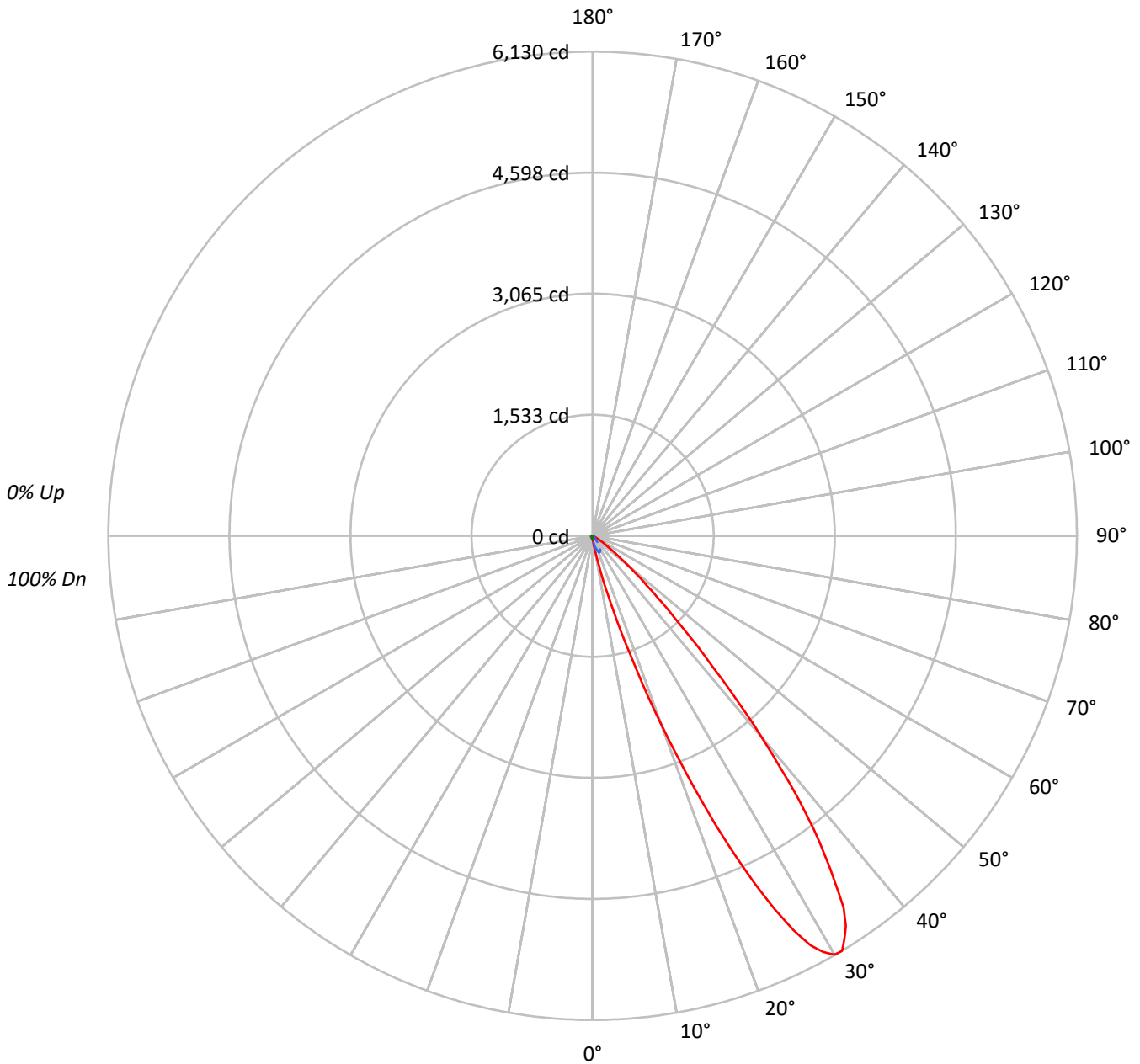
Input Watts (W): 14.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	18797	18797	18797
5°	41997	19414	15155
10°	112318	12073	4308
15°	442272	15629	10113
20°	1337920	9555	7875
25°	2647626	8165	7022
30°	3488695	4899	8545
35°	3219205	7107	10359
40°	2144260	6247	14169
45°	1011413	2233	6000
50°	445938	8213	18498
55°	181320	0	18923
60°	75188	5328	16972
65°	25683	6304	12491
70°	21637	12405	31735
75°	12200	18490	41936
80°	0	9092	18183
85°	11887	11887	60569



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	5.2	0.6
10°-20°	54.7	6.1
20°-30°	281.4	31.5
30°-40°	360.3	40.3
40°-50°	138.5	15.5
50°-60°	28.2	3.1
60°-70°	9.6	1.1
70°-80°	11.1	1.2
80°-90°	5.7	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°	341.3	38.1
0°-40°	701.6	78.4
0°-60°	868.3	97.1
0°-90°	894.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	894.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	38	38	38	38	38	
5°	85	70	39	28	31	13
15°	866	168	31	18	20	332
25°	4864	220	15	12	13	2220
35°	5345	114	12	10	17	3195
45°	1450	28	3	2	9	1246
55°	211	5	0	4	22	218
65°	22	8	5	8	11	31
75°	6	12	10	16	22	9
85°	2	8	2	9	11	1
90°	0	0	0	0	0	



TEST NUMBER: P315456

CATALOG NUMBER: LDA2B15FLD2WD010 PINW1MMS

**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1
2.5°	56.3	48.8	51.0	43.5	47.7	48.8	40.2	53.1	47.7	49.9	43.5
5°	84.8	91.2	83.7	80.5	78.3	80.5	78.3	81.5	79.4	69.7	49.9
7.5°	141.6	129.3	129.3	125.0	128.2	127.1	121.8	125.0	117.5	84.8	57.4
10°	224.2	211.9	210.8	207.6	206.5	196.9	191.5	187.2	171.7	100.3	52.0
12.5°	439.4	428.6	421.1	402.4	389.5	382.0	353.5	338.5	294.0	149.1	66.5
15°	865.9	810.6	824.6	764.0	719.4	689.9	630.9	578.9	472.1	168.5	64.4
17.5°	1532.2	1478.5	1442.6	1376.6	1285.9	1207.6	1091.2	975.9	758.6	191.5	60.1
20°	2548.3	2463.5	2388.4	2275.2	2100.9	1950.1	1745.2	1524.7	1129.3	218.9	54.2
21°	2994.6	2929.2	2842.3	2693.1	2489.8	2288.1	2042.4	1776.8	1287.0	221.0	48.8
22°	3460.3	3417.9	3303.7	3132.5	2895.4	2655.0	2353.5	2061.7	1454.9	224.2	46.7
23°	3945.3	3900.8	3771.5	3575.7	3309.0	3018.2	2666.9	2320.8	1612.7	228.5	45.6
24°	4420.1	4370.7	4226.4	4007.5	3704.9	3370.7	2973.7	2572.4	1759.7	226.4	47.7
25°	4863.7	4795.1	4642.7	4400.2	4068.1	3693.1	3255.4	2789.7	1889.0	220.0	40.2
26°	5259.7	5181.3	5017.2	4752.7	4389.5	3983.4	3490.4	2991.4	1984.4	214.6	38.1
27°	5603.6	5504.8	5329.4	5052.0	4662.6	4214.1	3691.0	3149.1	2068.7	206.5	30.6
28°	5871.3	5758.1	5579.9	5287.0	4875.5	4393.8	3838.5	3247.9	2118.6	207.6	34.9
29°	6025.8	5938.9	5745.2	5438.3	5005.4	4497.3	3916.3	3302.6	2128.2	191.5	32.7
30°	6123.9	6026.8	5827.8	5507.0	5055.3	4520.9	3926.0	3292.4	2099.8	179.7	30.6
31°	6130.4	6029.0	5826.7	5494.6	5036.0	4481.8	3872.3	3231.8	2038.1	167.4	25.2
32°	6015.0	5936.7	5737.7	5394.9	4931.3	4373.9	3757.0	3129.3	1941.0	142.7	17.2
33°	5884.7	5789.7	5591.8	5245.7	4786.5	4226.4	3590.7	2991.4	1840.1	140.6	22.0
34°	5681.9	5567.6	5372.9	5032.2	4585.3	4016.1	3392.7	2807.4	1711.4	128.2	20.9
35°	5345.0	5283.8	5086.9	4750.5	4316.5	3764.0	3154.5	2605.2	1574.6	114.3	15.0
36°	5007.5	4932.4	4746.3	4421.1	4009.7	3463.5	2885.7	2374.5	1420.1	97.1	11.8
37°	4650.8	4552.6	4383.1	4064.9	3635.2	3164.2	2627.7	2154.5	1294.0	102.5	16.1
38°	4235.0	4202.3	3979.1	3682.9	3286.0	2841.2	2350.3	1922.8	1154.5	95.5	26.3
39°	3777.9	3755.9	3533.3	3263.4	2907.2	2498.4	2066.5	1682.4	1015.0	69.7	8.6
40°	3329.4	3266.6	3108.9	2863.7	2553.7	2186.2	1812.8	1477.5	894.3	68.7	17.2
42.5°	2256.4	2276.3	2105.7	1930.3	1731.2	1481.8	1232.8	1012.9	625.5	51.0	10.7
45°	1449.6	1453.9	1377.7	1241.4	1111.1	955.5	791.3	659.3	403.4	28.4	3.2
47.5°	922.7	920.6	871.8	793.5	708.2	617.0	514.5	430.8	261.3	22.0	9.7
50°	581.0	578.9	548.3	498.4	450.6	390.6	326.2	277.4	165.2	26.3	10.7
51°	472.1	475.3	449.6	399.1	362.1	304.7	260.2	221.0	129.3	18.2	9.7
52°	389.5	387.3	371.2	328.9	298.3	248.9	211.9	180.8	107.8	16.1	4.3
53°	313.3	314.4	298.3	265.6	236.1	199.0	169.5	140.6	77.3	11.8	3.2
54°	247.9	245.7	240.3	208.7	190.5	157.7	132.5	107.8	66.5	2.1	0.0
55°	210.8	207.6	200.1	172.7	154.5	130.4	105.7	92.3	57.4	5.4	0.0
57.5°	121.8	121.8	117.5	102.5	90.1	80.5	64.4	60.1	29.5	5.4	0.0
60°	76.2	66.5	74.0	63.3	49.9	44.5	37.0	33.8	25.2	9.7	2.1
61°	63.3	51.0	49.9	46.7	43.5	29.5	25.2	27.4	16.1	3.2	2.1
62°	45.6	40.2	43.5	37.0	32.7	23.1	20.9	19.8	9.7	4.3	5.4
63°	41.3	37.0	35.9	27.4	24.1	24.1	18.2	17.2	11.8	8.6	4.3



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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°	22.0	18.2	16.1	18.2	10.7	13.9	5.4	15.0	3.2	5.4	3.2
67.5°	17.2	10.7	9.7	11.8	7.5	5.4	7.5	9.7	3.2	5.4	7.5
70°	15.0	7.5	10.7	9.7	7.5	9.7	10.7	10.7	3.2	10.7	9.7
72.5°	15.0	9.7	5.4	4.3	4.3	4.3	4.3	4.3	6.4	15.0	11.8
75°	6.4	6.4	3.2	7.5	4.3	6.4	4.3	10.7	4.3	11.8	9.7
77.5°	4.3	5.4	0.0	5.4	0.0	0.0	3.2	7.5	3.2	8.6	10.7
80°	0.0	5.4	3.2	0.0	2.1	3.2	0.0	1.1	2.1	9.7	4.3
82.5°	2.1	3.2	4.3	2.1	2.1	0.0	0.0	0.0	0.0	6.4	5.4
85°	2.1	4.3	0.0	1.1	4.3	2.1	1.1	5.4	2.1	7.5	8.6
87.5°	0.0	2.1	2.1	0.0	3.2	0.0	3.2	2.1	0.0	6.4	3.2
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: P315456

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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
0°	38.1	38.1	38.1	38.1	38.1
2.5°	32.7	29.5	25.2	31.7	26.3
5°	39.2	35.9	28.4	33.8	30.6
7.5°	40.2	33.8	29.5	27.4	30.6
10°	24.1	16.1	11.8	16.1	8.6
12.5°	40.2	28.4	26.3	29.5	32.7
15°	30.6	18.2	18.2	13.9	19.8
17.5°	17.2	13.9	12.9	17.2	19.8
20°	18.2	11.8	9.7	16.1	15.0
21°	16.1	4.3	12.9	12.9	15.0
22°	23.1	10.7	12.9	20.9	22.0
23°	15.0	11.8	9.7	12.9	17.2
24°	22.0	12.9	11.8	16.1	24.1
25°	15.0	11.8	11.8	15.0	12.9
26°	8.6	11.8	8.6	12.9	10.7
27°	6.4	10.7	6.4	9.7	12.9
28°	13.9	17.2	16.1	17.2	15.0
29°	15.0	18.2	15.0	23.1	17.2
30°	8.6	16.1	7.5	17.2	15.0
31°	8.6	11.8	5.4	17.2	15.0
32°	1.1	6.4	3.2	6.4	6.4
33°	6.4	7.5	8.6	13.9	10.7
34°	10.7	12.9	8.6	15.0	12.9
35°	11.8	6.4	9.7	16.1	17.2
36°	3.2	3.2	5.4	12.9	4.3
37°	6.4	18.2	12.9	22.0	12.9
38°	10.7	22.0	20.9	27.4	22.0
39°	2.1	6.4	7.5	15.0	15.0
40°	9.7	16.1	11.8	22.0	22.0
42.5°	7.5	11.8	8.6	18.2	15.0
45°	3.2	3.2	2.1	11.8	8.6
47.5°	5.4	5.4	9.7	15.0	26.3
50°	10.7	10.7	13.9	25.2	24.1
51°	6.4	5.4	7.5	17.2	22.0
52°	5.4	7.5	7.5	17.2	17.2
53°	2.1	0.0	0.0	12.9	10.7
54°	2.1	1.1	3.2	9.7	15.0
55°	0.0	5.4	4.3	19.8	22.0
57.5°	1.1	8.6	4.3	13.9	17.2
60°	5.4	6.4	11.8	13.9	17.2
61°	0.0	5.4	5.4	12.9	15.0
62°	0.0	4.3	9.7	11.8	15.0
63°	5.4	6.4	8.6	13.9	17.2





TEST NUMBER: P315456

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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	3.2	8.6	10.7	13.9	12.9
67.5°	6.4	7.5	6.4	18.2	22.0
70°	8.6	13.9	15.0	12.9	22.0
72.5°	5.4	7.5	10.7	19.8	22.0
75°	9.7	10.7	16.1	18.2	22.0
77.5°	7.5	10.7	10.7	11.8	22.0
80°	3.2	9.7	10.7	11.8	6.4
82.5°	4.3	6.4	4.3	11.8	8.6
85°	2.1	9.7	8.6	10.7	10.7
87.5°	3.2	5.4	5.4	9.7	6.4
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	24.1	25.2	24.1	17.2	12.9	11.8	8.6	15.0	4.3	4.3	0.0
65°	22.0	24.1	18.2	20.9	13.9	12.9	7.5	15.0	2.1	7.5	5.4







64°	3.2	5.4	5.4	9.7	15.0
65°	5.4	7.5	7.5	13.9	10.7



(END OF REPORT)