

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: P315376

Luminaire Tested: **LDA2B15FL8027D010 PINW1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315376
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: LDA2B15FL8027D010 PINW1MW
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in
Adj PinHole, Black oculus, matte white finish
Light Source: -
Ballast/Driver: -

Summary

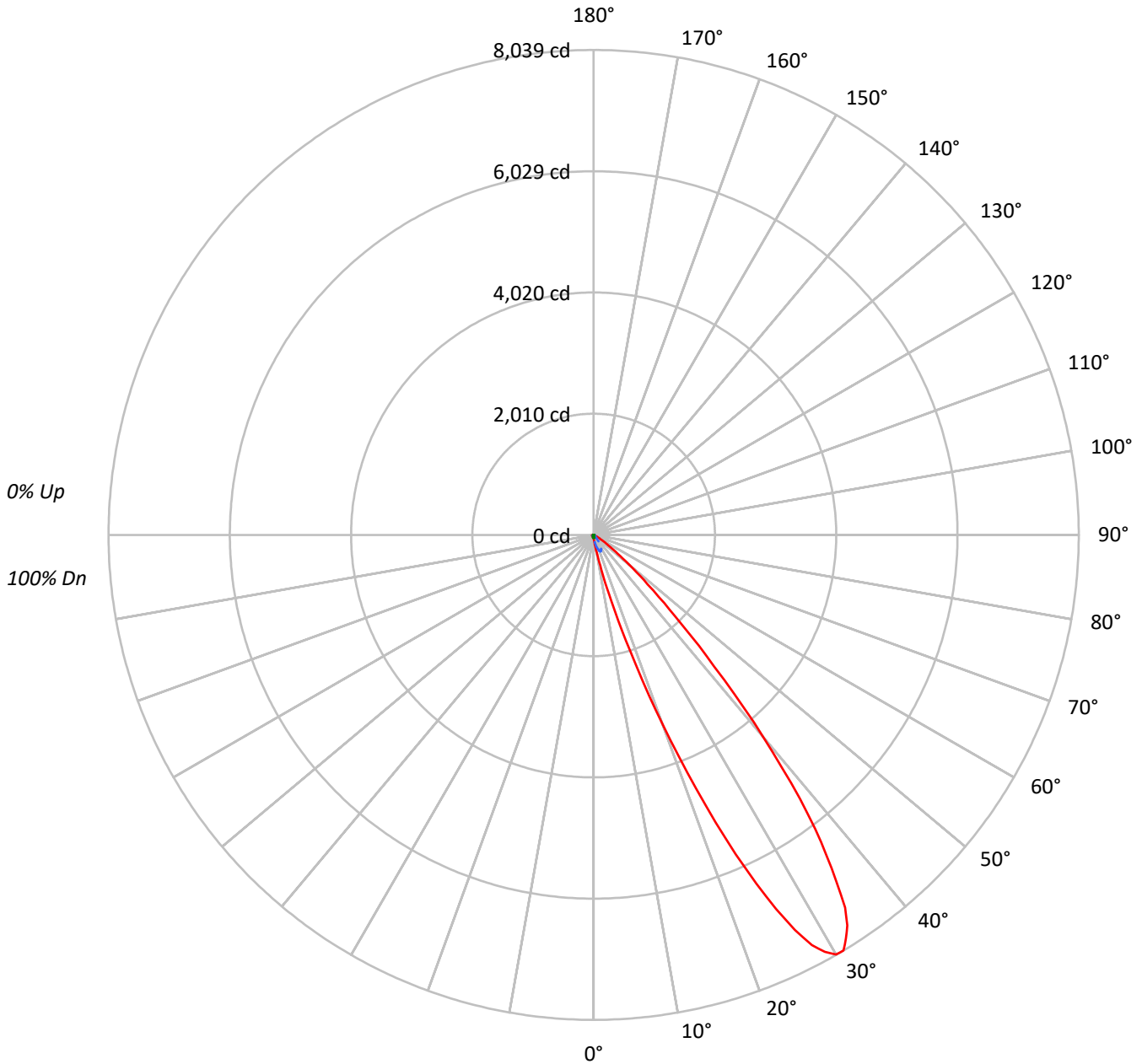
Lumens per Lamp: N/A
Luminaire Lumens: 1173.1 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (A_{in}): 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°	24668	24668	24668
5°	55071	25456	19859
10°	147336	15881	5661
15°	579974	20482	13280
20°	1754475	12548	10343
25°	3472066	10724	9200
30°	4574970	6437	11223
35°	4221526	9335	13551
40°	2811935	8179	18548
45°	1326294	2930	7884
50°	584785	10822	24331
55°	237831	0	24772
60°	98574	6907	22201
65°	33621	8172	16460
70°	28417	16300	41544
75°	16012	24209	54899
80°	0	11933	23866
85°	15850	15850	79816



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.8	0.6
10°-20°	71.8	6.1
20°-30°	369.0	31.5
30°-40°	472.5	40.3
40°-50°	181.7	15.5
50°-60°	36.9	3.1
60°-70°	12.5	1.1
70°-80°	14.6	1.2
80°-90°	7.4	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°	447.5	38.2
0°-40°	920.0	78.4
0°-60°	1138.6	97.1
0°-90°	1173.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1173.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	50	50	50	50	50	
5°	111	92	51	37	40	16
15°	1136	221	40	24	26	435
25°	6378	288	20	16	17	2911
35°	7009	150	16	13	22	4189
45°	1901	37	4	3	11	1634
55°	276	7	0	6	29	286
65°	29	10	7	10	14	41
75°	8	16	13	21	29	11
85°	3	10	3	11	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°	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
2.5°	73.9	64.0	66.8	57.0	62.6	64.0	52.8	69.6	62.6	65.4	57.0
5°	111.2	119.6	109.7	105.5	102.7	105.5	102.7	106.9	104.1	91.5	65.4
7.5°	185.7	169.5	169.5	163.9	168.1	166.7	159.7	163.9	154.1	111.2	75.3
10°	294.1	277.9	276.5	272.3	270.9	258.2	251.2	245.5	225.1	131.6	68.2
12.5°	576.2	562.1	552.3	527.6	510.8	500.9	463.6	443.9	385.5	195.6	87.2
15°	1135.5	1063.0	1081.3	1001.8	943.4	904.7	827.3	759.1	619.1	220.9	84.4
17.5°	2009.3	1938.9	1891.8	1805.2	1686.4	1583.6	1431.0	1279.7	994.8	251.2	78.8
20°	3341.7	3230.6	3132.1	2983.7	2755.0	2557.3	2288.6	1999.4	1480.9	287.0	71.1
21°	3927.1	3841.2	3727.3	3531.7	3265.1	3000.5	2678.3	2330.1	1687.8	289.9	64.0
22°	4537.7	4482.2	4332.3	4107.9	3796.9	3481.7	3086.4	2703.6	1908.0	294.1	61.2
23°	5173.7	5115.3	4945.8	4689.0	4339.3	3958.0	3497.2	3043.5	2114.8	299.7	59.8
24°	5796.3	5731.6	5542.4	5255.3	4858.5	4420.3	3899.6	3373.4	2307.6	296.9	62.6
25°	6378.2	6288.1	6088.3	5770.3	5334.8	4843.1	4269.0	3658.3	2477.1	288.4	52.8
26°	6897.4	6794.6	6579.4	6232.5	5756.2	5223.7	4577.1	3922.9	2602.3	281.4	50.0
27°	7348.3	7218.9	6988.8	6625.1	6114.3	5526.2	4840.3	4129.7	2712.8	270.9	40.1
28°	7699.4	7550.9	7317.4	6933.2	6393.6	5761.9	5033.7	4259.1	2778.2	272.3	45.7
29°	7902.0	7788.0	7534.1	7131.6	6563.9	5897.7	5135.7	4330.9	2790.9	251.2	42.9
30°	8030.7	7903.4	7642.4	7221.7	6629.3	5928.6	5148.4	4317.5	2753.6	235.7	40.1
31°	8039.2	7906.2	7641.0	7205.5	6604.0	5877.3	5078.0	4238.0	2672.7	219.5	33.1
32°	7887.9	7785.2	7524.2	7074.7	6466.8	5735.8	4926.8	4103.7	2545.4	187.1	22.5
33°	7717.0	7592.4	7332.8	6879.1	6276.9	5542.4	4708.7	3922.9	2413.1	184.3	28.8
34°	7451.0	7301.2	7045.8	6599.1	6013.0	5266.6	4449.1	3681.5	2244.2	168.1	27.4
35°	7009.2	6929.0	6670.8	6229.7	5660.6	4935.9	4136.7	3416.3	2064.8	149.9	19.7
36°	6566.7	6468.2	6224.1	5797.8	5258.1	4542.0	3784.3	3113.8	1862.2	127.3	15.5
37°	6098.9	5970.1	5747.8	5330.6	4767.1	4149.4	3445.9	2825.4	1696.9	134.4	21.1
38°	5553.6	5510.7	5218.0	4829.7	4309.1	3725.9	3082.1	2521.4	1514.0	125.2	34.5
39°	4954.2	4925.4	4633.4	4279.5	3812.4	3276.3	2710.0	2206.3	1331.1	91.5	11.3
40°	4366.1	4283.8	4076.9	3755.4	3348.8	2866.9	2377.2	1937.5	1172.8	90.1	22.5
42.5°	2959.0	2985.1	2761.3	2531.3	2270.3	1943.1	1616.7	1328.3	820.3	66.8	14.1
45°	1900.9	1906.6	1806.7	1628.0	1457.0	1253.0	1037.7	864.6	529.1	37.3	4.2
47.5°	1210.1	1207.2	1143.2	1040.5	928.7	809.1	674.7	564.9	342.6	28.8	12.7
50°	761.9	759.1	719.0	653.6	591.0	512.2	427.7	363.7	216.7	34.5	14.1
51°	619.1	623.3	589.6	523.4	474.9	399.6	341.2	289.9	169.5	23.9	12.7
52°	510.8	507.9	486.8	431.3	391.2	326.4	277.9	237.1	141.4	21.1	5.6
53°	410.9	412.3	391.2	348.2	309.6	261.0	222.3	184.3	101.3	15.5	4.2
54°	325.0	322.2	315.2	273.7	249.8	206.8	173.8	141.4	87.2	2.8	0.0
55°	276.5	272.3	262.4	226.5	202.6	171.0	138.6	121.0	75.3	7.0	0.0
57.5°	159.7	159.7	154.1	134.4	118.2	105.5	84.4	78.8	38.7	7.0	0.0
60°	99.9	87.2	97.1	83.0	65.4	58.4	48.5	44.3	33.1	12.7	2.8
61°	83.0	66.8	65.4	61.2	57.0	38.7	33.1	35.9	21.1	4.2	2.8
62°	59.8	52.8	57.0	48.5	42.9	30.3	27.4	26.0	12.7	5.6	7.0
63°	54.2	48.5	47.1	35.9	31.7	31.7	23.9	22.5	15.5	11.3	5.6



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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°	28.8	23.9	21.1	23.9	14.1	18.3	7.0	19.7	4.2	7.0	4.2
67.5°	22.5	14.1	12.7	15.5	9.8	7.0	9.8	12.7	4.2	7.0	9.8
70°	19.7	9.8	14.1	12.7	9.8	12.7	14.1	14.1	4.2	14.1	12.7
72.5°	19.7	12.7	7.0	5.6	5.6	5.6	5.6	5.6	8.4	19.7	15.5
75°	8.4	8.4	4.2	9.8	5.6	8.4	5.6	14.1	5.6	15.5	12.7
77.5°	5.6	7.0	0.0	7.0	0.0	0.0	4.2	9.8	4.2	11.3	14.1
80°	0.0	7.0	4.2	0.0	2.8	4.2	0.0	1.4	2.8	12.7	5.6
82.5°	2.8	4.2	5.6	2.8	2.8	0.0	0.0	0.0	0.0	8.4	7.0
85°	2.8	5.6	0.0	1.4	5.6	2.8	1.4	7.0	2.8	9.8	11.3
87.5°	0.0	2.8	2.8	0.0	4.2	0.0	4.2	2.8	0.0	8.4	4.2
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°	50.0	50.0	50.0	50.0	50.0
2.5°	42.9	38.7	33.1	41.5	34.5
5°	51.4	47.1	37.3	44.3	40.1
7.5°	52.8	44.3	38.7	35.9	40.1
10°	31.7	21.1	15.5	21.1	11.3
12.5°	52.8	37.3	34.5	38.7	42.9
15°	40.1	23.9	23.9	18.3	26.0
17.5°	22.5	18.3	16.9	22.5	26.0
20°	23.9	15.5	12.7	21.1	19.7
21°	21.1	5.6	16.9	16.9	19.7
22°	30.3	14.1	16.9	27.4	28.8
23°	19.7	15.5	12.7	16.9	22.5
24°	28.8	16.9	15.5	21.1	31.7
25°	19.7	15.5	15.5	19.7	16.9
26°	11.3	15.5	11.3	16.9	14.1
27°	8.4	14.1	8.4	12.7	16.9
28°	18.3	22.5	21.1	22.5	19.7
29°	19.7	23.9	19.7	30.3	22.5
30°	11.3	21.1	9.8	22.5	19.7
31°	11.3	15.5	7.0	22.5	19.7
32°	1.4	8.4	4.2	8.4	8.4
33°	8.4	9.8	11.3	18.3	14.1
34°	14.1	16.9	11.3	19.7	16.9
35°	15.5	8.4	12.7	21.1	22.5
36°	4.2	4.2	7.0	16.9	5.6
37°	8.4	23.9	16.9	28.8	16.9
38°	14.1	28.8	27.4	35.9	28.8
39°	2.8	8.4	9.8	19.7	19.7
40°	12.7	21.1	15.5	28.8	28.8
42.5°	9.8	15.5	11.3	23.9	19.7
45°	4.2	4.2	2.8	15.5	11.3
47.5°	7.0	7.0	12.7	19.7	34.5
50°	14.1	14.1	18.3	33.1	31.7
51°	8.4	7.0	9.8	22.5	28.8
52°	7.0	9.8	9.8	22.5	22.5
53°	2.8	0.0	0.0	16.9	14.1
54°	2.8	1.4	4.2	12.7	19.7
55°	0.0	7.0	5.6	26.0	28.8
57.5°	1.4	11.3	5.6	18.3	22.5
60°	7.0	8.4	15.5	18.3	22.5
61°	0.0	7.0	7.0	16.9	19.7
62°	0.0	5.6	12.7	15.5	19.7
63°	7.0	8.4	11.3	18.3	22.5



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	4.2	11.3	14.1	18.3	16.9
67.5°	8.4	9.8	8.4	23.9	28.8
70°	11.3	18.3	19.7	16.9	28.8
72.5°	7.0	9.8	14.1	26.0	28.8
75°	12.7	14.1	21.1	23.9	28.8
77.5°	9.8	14.1	14.1	15.5	28.8
80°	4.2	12.7	14.1	15.5	8.4
82.5°	5.6	8.4	5.6	15.5	11.3
85°	2.8	12.7	11.3	14.1	14.1
87.5°	4.2	7.0	7.0	12.7	8.4
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	31.7	33.1	31.7	22.5	16.9	15.5	11.3	19.7	5.6	5.6	0.0
65°	28.8	31.7	23.9	27.4	18.3	16.9	9.8	19.7	2.8	9.8	7.0





64°	4.2	7.0	7.0	12.7	19.7
65°	7.0	9.8	9.8	18.3	14.1



(END OF REPORT)