

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: P315435

Luminaire Tested: **LDA2B15FL9050D010 PIN1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315435
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: LDA2B15FL9050D010 PIN1MW
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

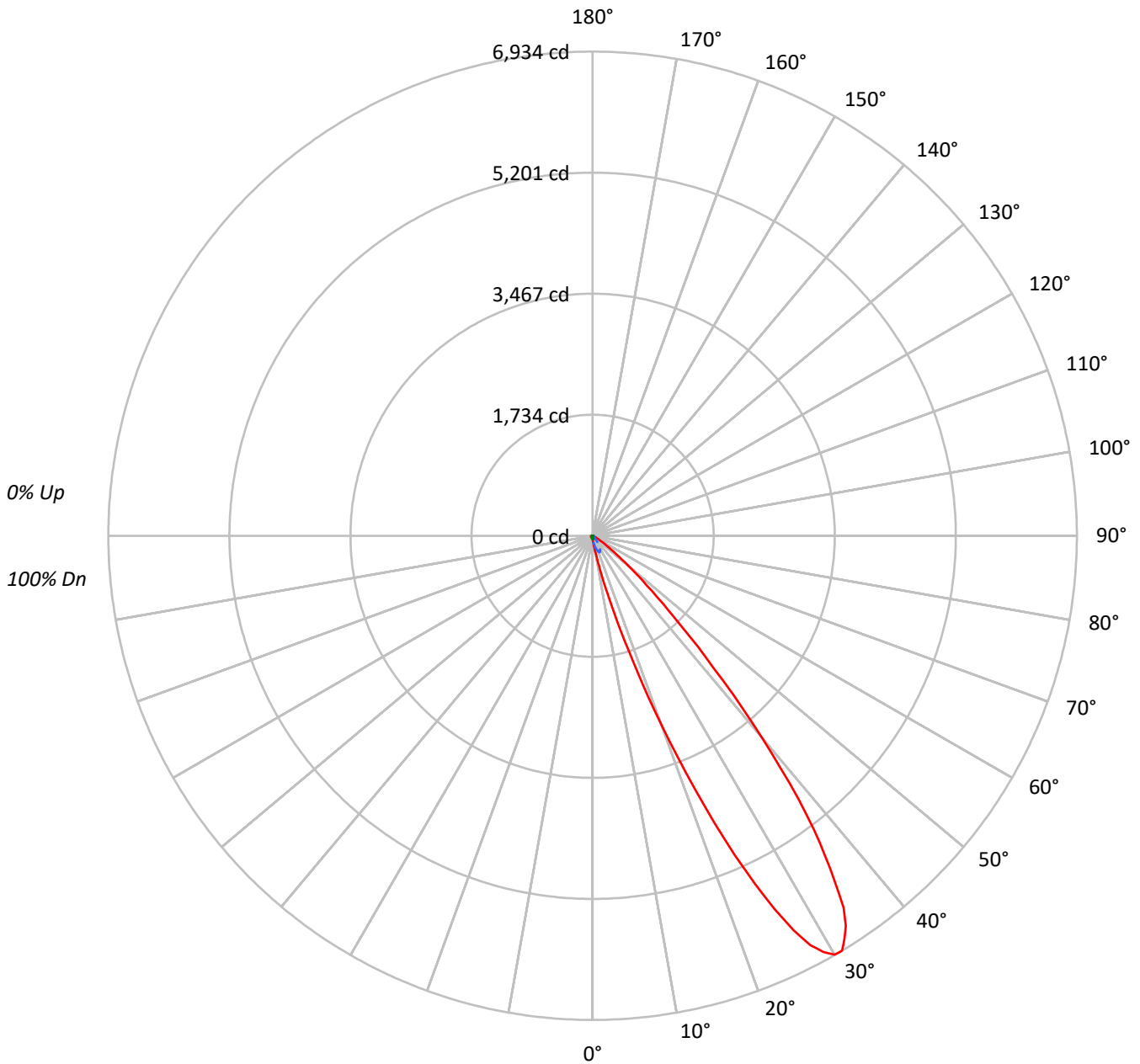
Lumens per Lamp: N/A
Luminaire Lumens: 1011.8 lumens
Efficiency: N/A
Efficacy: 71.8 lumens/watt
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (Ain): 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°	21264	21264	21264
5°	47494	21939	17136
10°	127047	13677	4859
15°	500244	17672	11492
20°	1513279	10816	8925
25°	2994712	9254	7948
30°	3946038	5526	9685
35°	3641165	8010	11684
40°	2425319	7020	16037
45°	1143980	2512	6768
50°	504424	9287	20954
55°	205146	0	21418
60°	85056	6019	19142
65°	29068	7121	14125
70°	24522	13992	35918
75°	13915	20778	47464
80°	0	10228	20740
85°	13586	13586	68494



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.9	0.6
10°-20°	61.9	6.1
20°-30°	318.2	31.5
30°-40°	407.5	40.3
40°-50°	156.7	15.5
50°-60°	31.9	3.1
60°-70°	10.8	1.1
70°-80°	12.5	1.2
80°-90°	6.4	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°	386.0	38.2
0°-40°	793.5	78.4
0°-60°	982.1	97.1
0°-90°	1011.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1011.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	43	43	43	43	43	
5°	96	79	44	32	35	14
15°	979	190	35	21	22	376
25°	5501	249	17	13	15	2511
35°	6046	129	13	11	19	3613
45°	1640	32	4	2	10	1409
55°	238	6	0	5	25	247
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	



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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°	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1
2.5°	63.7	55.2	57.6	49.2	54.0	55.2	45.5	60.1	54.0	56.4	49.2
5°	95.9	103.2	94.7	91.0	88.6	91.0	88.6	92.2	89.8	78.9	56.4
7.5°	160.2	146.2	146.2	141.4	145.0	143.8	137.7	141.4	132.9	95.9	64.9
10°	253.6	239.7	238.5	234.8	233.6	222.7	216.6	211.8	194.2	113.5	58.9
12.5°	497.0	484.8	476.3	455.1	440.5	432.0	399.9	382.9	332.5	168.7	75.2
15°	979.4	916.9	932.7	864.1	813.7	780.4	713.6	654.7	534.0	190.5	72.8
17.5°	1733.0	1672.4	1631.7	1557.1	1454.5	1365.9	1234.2	1103.8	858.0	216.6	68.0
20°	2882.3	2786.5	2701.5	2573.5	2376.3	2205.7	1973.9	1724.5	1277.3	247.6	61.3
21°	3387.2	3313.2	3214.9	3046.2	2816.2	2588.0	2310.1	2009.7	1455.7	250.0	55.2
22°	3913.9	3866.0	3736.7	3543.1	3274.9	3003.1	2662.1	2332.0	1645.7	253.6	52.8
23°	4462.5	4412.1	4265.9	4044.4	3742.8	3413.9	3016.4	2625.0	1824.1	258.5	51.6
24°	4999.5	4943.7	4780.4	4532.8	4190.6	3812.6	3363.5	2909.6	1990.3	256.1	54.0
25°	5501.3	5423.6	5251.3	4977.0	4601.4	4177.3	3682.1	3155.4	2136.6	248.8	45.5
26°	5949.1	5860.5	5674.9	5375.7	4964.9	4505.5	3947.9	3383.6	2244.6	242.7	43.1
27°	6338.1	6226.4	6028.0	5714.3	5273.8	4766.5	4174.8	3562.0	2339.8	233.6	34.6
28°	6640.9	6512.9	6311.4	5980.1	5514.7	4969.7	4341.7	3673.6	2396.3	234.8	39.4
29°	6815.7	6717.3	6498.3	6151.2	5661.5	5086.9	4429.7	3735.5	2407.2	216.6	37.0
30°	6926.7	6816.9	6591.7	6228.9	5717.9	5113.6	4440.6	3724.0	2375.0	203.3	34.6
31°	6934.0	6819.3	6590.5	6214.9	5696.1	5069.3	4379.9	3655.4	2305.3	189.3	28.5
32°	6803.5	6714.9	6489.8	6102.0	5577.8	4947.3	4249.5	3539.5	2195.4	161.4	19.4
33°	6656.1	6548.7	6324.7	5933.4	5413.9	4780.4	4061.4	3383.6	2081.3	159.0	24.9
34°	6426.7	6297.4	6077.2	5691.8	5186.4	4542.6	3837.4	3175.4	1935.7	145.0	23.7
35°	6045.6	5976.4	5753.7	5373.3	4882.4	4257.4	3568.0	2946.7	1781.0	129.2	17.0
36°	5663.9	5579.0	5368.4	5000.7	4535.3	3917.5	3264.0	2685.7	1606.2	109.8	13.3
37°	5260.4	5149.4	4957.6	4597.8	4111.7	3578.9	2972.1	2436.9	1463.6	115.9	18.2
38°	4790.1	4753.1	4500.7	4165.7	3716.7	3213.6	2658.4	2174.8	1305.8	108.0	29.7
39°	4273.1	4248.3	3996.4	3691.2	3288.3	2825.9	2337.4	1902.9	1148.1	78.9	9.7
40°	3765.8	3694.8	3516.4	3239.1	2888.4	2472.7	2050.4	1671.1	1011.5	77.7	19.4
42.5°	2552.2	2574.7	2381.7	2183.3	1958.2	1676.0	1394.4	1145.7	707.5	57.6	12.1
45°	1639.6	1644.4	1558.3	1404.2	1256.7	1080.7	895.0	745.8	456.3	32.2	3.6
47.5°	1043.7	1041.3	986.1	897.5	801.0	697.8	581.9	487.3	295.5	24.9	10.9
50°	657.2	654.7	620.2	563.7	509.7	441.8	368.9	313.7	186.9	29.7	12.1
51°	534.0	537.6	508.5	451.5	409.6	344.7	294.3	250.0	146.2	20.6	10.9
52°	440.5	438.1	419.9	372.0	337.4	281.6	239.7	204.5	122.0	18.2	4.9
53°	354.4	355.6	337.4	300.4	267.0	225.1	191.8	159.0	87.4	13.3	3.6
54°	280.3	277.9	271.8	236.0	215.4	178.4	149.9	122.0	75.2	2.4	0.0
55°	238.5	234.8	226.3	195.4	174.8	147.5	119.5	104.4	64.9	6.1	0.0
57.5°	137.7	137.7	132.9	115.9	101.9	91.0	72.8	68.0	33.4	6.1	0.0
60°	86.2	75.2	83.7	71.6	56.4	50.4	41.9	38.2	28.5	10.9	2.4
61°	71.6	57.6	56.4	52.8	49.2	33.4	28.5	30.9	18.2	3.6	2.4
62°	51.6	45.5	49.2	41.9	37.0	26.1	23.7	22.5	10.9	4.9	6.1
63°	46.7	41.9	40.7	30.9	27.3	27.3	20.6	19.4	13.3	9.7	4.9



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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°	24.9	20.6	18.2	20.6	12.1	15.8	6.1	17.0	3.6	6.1	3.6
67.5°	19.4	12.1	10.9	13.3	8.5	6.1	8.5	10.9	3.6	6.1	8.5
70°	17.0	8.5	12.1	10.9	8.5	10.9	12.1	12.1	3.6	12.1	10.9
72.5°	17.0	10.9	6.1	4.9	4.9	4.9	4.9	4.9	7.3	17.0	13.3
75°	7.3	7.3	3.6	8.5	4.9	7.3	4.9	12.1	4.9	13.3	10.9
77.5°	4.9	6.1	0.0	6.1	0.0	0.0	3.6	8.5	3.6	9.7	12.1
80°	0.0	6.1	3.6	0.0	2.4	3.6	0.0	1.2	2.4	10.9	4.9
82.5°	2.4	3.6	4.9	2.4	2.4	0.0	0.0	0.0	0.0	7.3	6.1
85°	2.4	4.9	0.0	1.2	4.9	2.4	1.2	6.1	2.4	8.5	9.7
87.5°	0.0	2.4	2.4	0.0	3.6	0.0	3.6	2.4	0.0	7.3	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



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	43.1	43.1	43.1	43.1	43.1
2.5°	37.0	33.4	28.5	35.8	29.7
5°	44.3	40.7	32.2	38.2	34.6
7.5°	45.5	38.2	33.4	30.9	34.6
10°	27.3	18.2	13.3	18.2	9.7
12.5°	45.5	32.2	29.7	33.4	37.0
15°	34.6	20.6	20.6	15.8	22.5
17.5°	19.4	15.8	14.6	19.4	22.5
20°	20.6	13.3	10.9	18.2	17.0
21°	18.2	4.9	14.6	14.6	17.0
22°	26.1	12.1	14.6	23.7	24.9
23°	17.0	13.3	10.9	14.6	19.4
24°	24.9	14.6	13.3	18.2	27.3
25°	17.0	13.3	13.3	17.0	14.6
26°	9.7	13.3	9.7	14.6	12.1
27°	7.3	12.1	7.3	10.9	14.6
28°	15.8	19.4	18.2	19.4	17.0
29°	17.0	20.6	17.0	26.1	19.4
30°	9.7	18.2	8.5	19.4	17.0
31°	9.7	13.3	6.1	19.4	17.0
32°	1.2	7.3	3.6	7.3	7.3
33°	7.3	8.5	9.7	15.8	12.1
34°	12.1	14.6	9.7	17.0	14.6
35°	13.3	7.3	10.9	18.2	19.4
36°	3.6	3.6	6.1	14.6	4.9
37°	7.3	20.6	14.6	24.9	14.6
38°	12.1	24.9	23.7	30.9	24.9
39°	2.4	7.3	8.5	17.0	17.0
40°	10.9	18.2	13.3	24.9	24.9
42.5°	8.5	13.3	9.7	20.6	17.0
45°	3.6	3.6	2.4	13.3	9.7
47.5°	6.1	6.1	10.9	17.0	29.7
50°	12.1	12.1	15.8	28.5	27.3
51°	7.3	6.1	8.5	19.4	24.9
52°	6.1	8.5	8.5	19.4	19.4
53°	2.4	0.0	0.0	14.6	12.1
54°	2.4	1.2	3.6	10.9	17.0
55°	0.0	6.1	4.9	22.5	24.9
57.5°	1.2	9.7	4.9	15.8	19.4
60°	6.1	7.3	13.3	15.8	19.4
61°	0.0	6.1	6.1	14.6	17.0
62°	0.0	4.9	10.9	13.3	17.0
63°	6.1	7.3	9.7	15.8	19.4



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	3.6	9.7	12.1	15.8	14.6
67.5°	7.3	8.5	7.3	20.6	24.9
70°	9.7	15.8	17.0	14.6	24.9
72.5°	6.1	8.5	12.1	22.5	24.9
75°	10.9	12.1	18.2	20.6	24.9
77.5°	8.5	12.1	12.1	13.3	24.9
80°	3.6	10.9	12.1	13.3	7.3
82.5°	4.9	7.3	4.9	13.3	9.7
85°	2.4	10.9	9.7	12.1	12.1
87.5°	3.6	6.1	6.1	10.9	7.3
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	27.3	28.5	27.3	19.4	14.6	13.3	9.7	17.0	4.9	4.9	0.0
65°	24.9	27.3	20.6	23.7	15.8	14.6	8.5	17.0	2.4	8.5	6.1





64°	3.6	6.1	6.1	10.9	17.0
65°	6.1	8.5	8.5	15.8	12.1



(END OF REPORT)