

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: P315377

Luminaire Tested: **LDA2B15FL8027D010 PIN1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315377
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 PIN1MMS
Description: PORTFOLIO 2IN ADJ 1500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in
Adj PinHole, Black oculus, matte metallic silver finish
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1129.9 lumens
Efficiency: N/A
Efficacy: 80.1 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

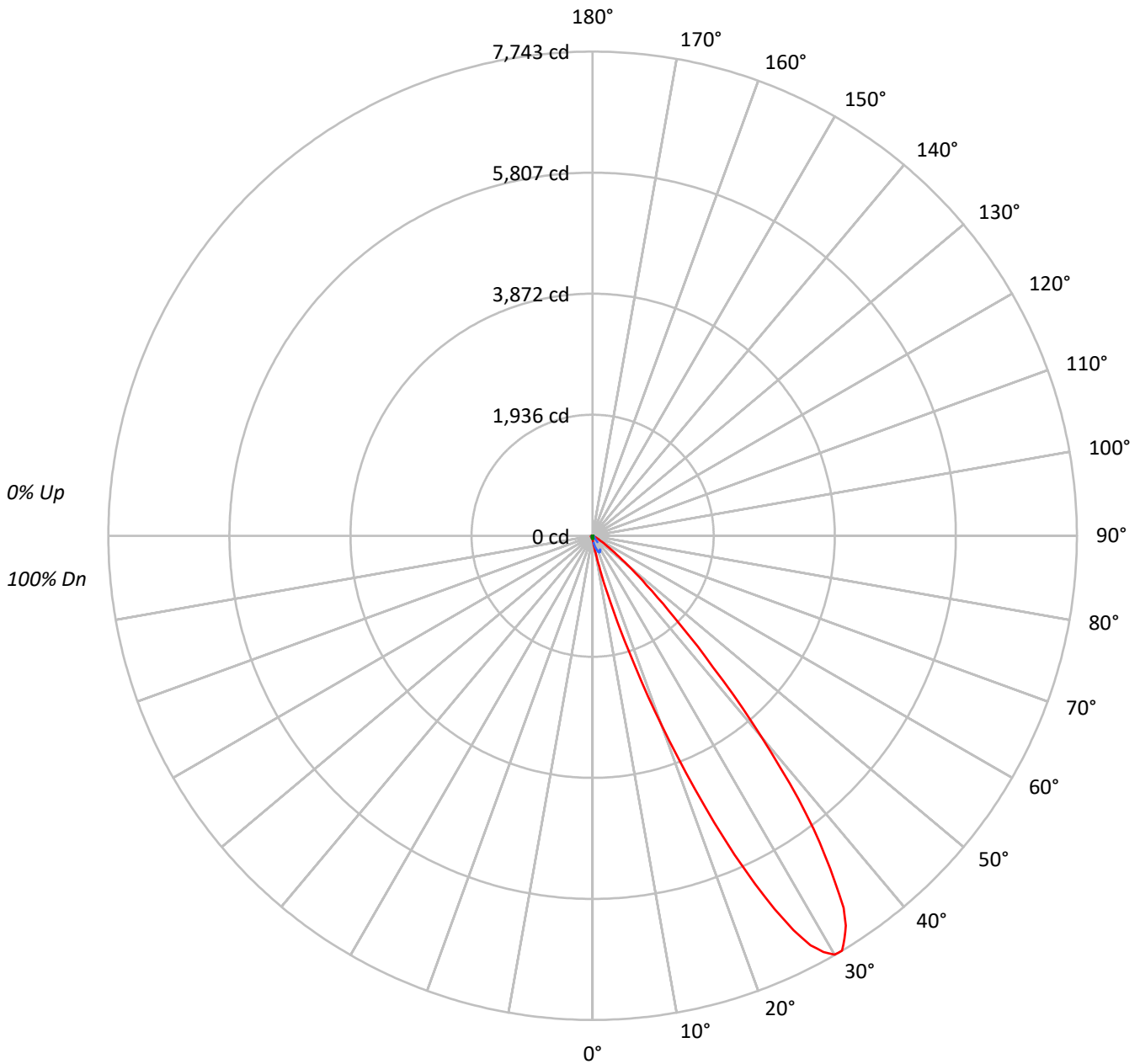
Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	23731	23731	23731
5°	53041	24515	19117
10°	141875	15280	5411
15°	558573	19716	12820
20°	1689844	12076	9975
25°	3344086	10343	8873
30°	4406344	6153	10824
35°	4065956	8974	13070
40°	2708245	7857	17904
45°	1277454	2861	7535
50°	563217	10438	23410
55°	229058	0	23912
60°	94923	6710	21412
65°	32454	7938	15877
70°	27407	15579	40101
75°	15440	23256	52992
80°	0	11649	23013
85°	15284	15284	76985



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.5	0.6
10°-20°	69.1	6.1
20°-30°	355.4	31.5
30°-40°	455.0	40.3
40°-50°	175.0	15.5
50°-60°	35.6	3.1
60°-70°	12.1	1.1
70°-80°	14.0	1.2
80°-90°	7.2	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°	431.0	38.1
0°-40°	886.1	78.4
0°-60°	1096.6	97.1
0°-90°	1129.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1129.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	48	48	48	48	48	
5°	107	88	50	36	39	16
15°	1094	213	39	23	25	419
25°	6143	278	19	15	16	2804
35°	6751	144	15	12	22	4035
45°	1831	36	4	3	11	1574
55°	266	7	0	5	28	276
65°	28	10	7	10	14	39
75°	8	15	12	20	28	11
85°	3	10	3	11	14	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°	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1	48.1
2.5°	71.1	61.7	64.4	54.9	60.3	61.7	50.8	67.1	60.3	63.0	54.9
5°	107.1	115.2	105.7	101.6	98.9	101.6	98.9	103.0	100.3	88.1	63.0
7.5°	178.9	163.3	163.3	157.9	161.9	160.6	153.8	157.9	148.4	107.1	72.5
10°	283.2	267.6	266.3	262.2	260.9	248.7	241.9	236.5	216.8	126.7	65.7
12.5°	554.9	541.4	531.9	508.2	491.9	482.4	446.5	427.6	371.3	188.4	84.0
15°	1093.6	1023.8	1041.5	964.9	908.7	871.4	796.8	731.1	596.3	212.8	81.3
17.5°	1935.2	1867.4	1822.0	1738.7	1624.2	1525.3	1378.2	1232.5	958.1	241.9	75.9
20°	3218.6	3111.5	3016.6	2873.7	2653.5	2463.1	2204.2	1925.7	1426.3	276.5	68.4
21°	3782.3	3699.7	3589.9	3401.5	3144.7	2889.9	2579.6	2244.2	1625.5	279.2	61.7
22°	4370.5	4316.9	4172.6	3956.5	3657.0	3353.4	2972.6	2604.0	1837.6	283.2	59.0
23°	4983.0	4926.8	4763.5	4516.2	4179.4	3812.1	3368.3	2931.3	2036.8	288.7	57.6
24°	5582.7	5520.3	5338.1	5061.6	4679.5	4257.3	3755.9	3249.1	2222.5	285.9	60.3
25°	6143.1	6056.3	5863.9	5557.6	5138.2	4664.5	4111.6	3523.5	2385.8	277.8	50.8
26°	6643.1	6544.2	6336.8	6002.8	5544.1	5031.1	4408.4	3778.3	2506.4	271.0	48.1
27°	7077.5	6952.8	6731.2	6380.9	5889.0	5322.5	4661.8	3977.5	2612.8	260.9	38.6
28°	7415.6	7272.6	7047.6	6677.7	6158.0	5549.5	4848.2	4102.1	2675.8	262.2	44.0
29°	7610.7	7501.0	7256.3	6868.8	6321.9	5680.3	4946.4	4171.3	2688.0	241.9	41.3
30°	7734.7	7612.1	7360.7	6955.5	6385.0	5710.1	4958.6	4158.4	2652.1	227.0	38.6
31°	7742.9	7614.8	7359.3	6939.9	6360.6	5660.6	4890.9	4081.8	2574.2	211.4	31.8
32°	7597.2	7498.2	7246.9	6813.9	6228.4	5524.4	4745.2	3952.4	2451.5	180.2	21.7
33°	7432.5	7312.6	7062.6	6625.5	6045.5	5338.1	4535.1	3778.3	2324.1	177.5	27.8
34°	7176.4	7032.1	6786.1	6355.8	5791.4	5072.5	4285.1	3545.8	2161.5	161.9	26.4
35°	6750.9	6673.6	6424.9	6000.1	5451.9	4754.0	3984.2	3290.4	1988.7	144.3	19.0
36°	6324.7	6229.8	5994.7	5584.0	5064.3	4374.5	3644.8	2999.0	1793.6	122.6	14.9
37°	5874.1	5750.1	5535.9	5134.1	4591.4	3996.4	3318.9	2721.2	1634.4	129.4	20.3
38°	5348.9	5307.6	5025.7	4651.7	4150.3	3588.5	2968.5	2428.5	1458.2	120.6	33.2
39°	4771.6	4743.8	4462.6	4121.8	3671.9	3155.6	2610.1	2124.9	1282.0	88.1	10.8
40°	4205.1	4125.9	3926.7	3617.0	3225.3	2761.2	2289.6	1866.1	1129.5	86.7	21.7
42.5°	2850.0	2875.0	2659.6	2438.0	2186.6	1871.5	1557.1	1279.3	790.1	64.4	13.6
45°	1830.9	1836.3	1740.1	1568.0	1403.3	1206.8	999.4	832.8	509.5	35.9	4.1
47.5°	1165.5	1162.7	1101.1	1002.2	894.4	779.2	649.8	544.1	330.0	27.8	12.2
50°	733.8	731.1	692.5	629.5	569.2	493.3	412.0	350.3	208.7	33.2	13.6
51°	596.3	600.3	567.8	504.1	457.4	384.9	328.6	279.2	163.3	23.0	12.2
52°	491.9	489.2	468.9	415.4	376.7	314.4	267.6	228.3	136.2	20.3	5.4
53°	395.7	397.1	376.7	335.4	298.1	251.4	214.1	177.5	97.6	14.9	4.1
54°	313.0	310.3	303.6	263.6	240.5	199.2	167.4	136.2	84.0	2.7	0.0
55°	266.3	262.2	252.7	218.2	195.1	164.7	133.5	116.5	72.5	6.8	0.0
57.5°	153.8	153.8	148.4	129.4	113.8	101.6	81.3	75.9	37.3	6.8	0.0
60°	96.2	84.0	93.5	80.0	63.0	56.2	46.8	42.7	31.8	12.2	2.7
61°	80.0	64.4	63.0	59.0	54.9	37.3	31.8	34.6	20.3	4.1	2.7
62°	57.6	50.8	54.9	46.8	41.3	29.1	26.4	25.1	12.2	5.4	6.8
63°	52.2	46.8	45.4	34.6	30.5	30.5	23.0	21.7	14.9	10.8	5.4



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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°	27.8	23.0	20.3	23.0	13.6	17.6	6.8	19.0	4.1	6.8	4.1
67.5°	21.7	13.6	12.2	14.9	9.5	6.8	9.5	12.2	4.1	6.8	9.5
70°	19.0	9.5	13.6	12.2	9.5	12.2	13.6	13.6	4.1	13.6	12.2
72.5°	19.0	12.2	6.8	5.4	5.4	5.4	5.4	5.4	8.1	19.0	14.9
75°	8.1	8.1	4.1	9.5	5.4	8.1	5.4	13.6	5.4	14.9	12.2
77.5°	5.4	6.8	0.0	6.8	0.0	0.0	4.1	9.5	4.1	10.8	13.6
80°	0.0	6.8	4.1	0.0	2.7	4.1	0.0	1.4	2.7	12.2	5.4
82.5°	2.7	4.1	5.4	2.7	2.7	0.0	0.0	0.0	0.0	8.1	6.8
85°	2.7	5.4	0.0	1.4	5.4	2.7	1.4	6.8	2.7	9.5	10.8
87.5°	0.0	2.7	2.7	0.0	4.1	0.0	4.1	2.7	0.0	8.1	4.1
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°	48.1	48.1	48.1	48.1	48.1
2.5°	41.3	37.3	31.8	40.0	33.2
5°	49.5	45.4	35.9	42.7	38.6
7.5°	50.8	42.7	37.3	34.6	38.6
10°	30.5	20.3	14.9	20.3	10.8
12.5°	50.8	35.9	33.2	37.3	41.3
15°	38.6	23.0	23.0	17.6	25.1
17.5°	21.7	17.6	16.3	21.7	25.1
20°	23.0	14.9	12.2	20.3	19.0
21°	20.3	5.4	16.3	16.3	19.0
22°	29.1	13.6	16.3	26.4	27.8
23°	19.0	14.9	12.2	16.3	21.7
24°	27.8	16.3	14.9	20.3	30.5
25°	19.0	14.9	14.9	19.0	16.3
26°	10.8	14.9	10.8	16.3	13.6
27°	8.1	13.6	8.1	12.2	16.3
28°	17.6	21.7	20.3	21.7	19.0
29°	19.0	23.0	19.0	29.1	21.7
30°	10.8	20.3	9.5	21.7	19.0
31°	10.8	14.9	6.8	21.7	19.0
32°	1.4	8.1	4.1	8.1	8.1
33°	8.1	9.5	10.8	17.6	13.6
34°	13.6	16.3	10.8	19.0	16.3
35°	14.9	8.1	12.2	20.3	21.7
36°	4.1	4.1	6.8	16.3	5.4
37°	8.1	23.0	16.3	27.8	16.3
38°	13.6	27.8	26.4	34.6	27.8
39°	2.7	8.1	9.5	19.0	19.0
40°	12.2	20.3	14.9	27.8	27.8
42.5°	9.5	14.9	10.8	23.0	19.0
45°	4.1	4.1	2.7	14.9	10.8
47.5°	6.8	6.8	12.2	19.0	33.2
50°	13.6	13.6	17.6	31.8	30.5
51°	8.1	6.8	9.5	21.7	27.8
52°	6.8	9.5	9.5	21.7	21.7
53°	2.7	0.0	0.0	16.3	13.6
54°	2.7	1.4	4.1	12.2	19.0
55°	0.0	6.8	5.4	25.1	27.8
57.5°	1.4	10.8	5.4	17.6	21.7
60°	6.8	8.1	14.9	17.6	21.7
61°	0.0	6.8	6.8	16.3	19.0
62°	0.0	5.4	12.2	14.9	19.0
63°	6.8	8.1	10.8	17.6	21.7



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	4.1	10.8	13.6	17.6	16.3
67.5°	8.1	9.5	8.1	23.0	27.8
70°	10.8	17.6	19.0	16.3	27.8
72.5°	6.8	9.5	13.6	25.1	27.8
75°	12.2	13.6	20.3	23.0	27.8
77.5°	9.5	13.6	13.6	14.9	27.8
80°	4.1	12.2	13.6	14.9	8.1
82.5°	5.4	8.1	5.4	14.9	10.8
85°	2.7	12.2	10.8	13.6	13.6
87.5°	4.1	6.8	6.8	12.2	8.1
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	30.5	31.8	30.5	21.7	16.3	14.9	10.8	19.0	5.4	5.4	0.0
65°	27.8	30.5	23.0	26.4	17.6	16.3	9.5	19.0	2.7	9.5	6.8





64°	4.1	6.8	6.8	12.2	19.0
65°	6.8	9.5	9.5	17.6	13.6



(END OF REPORT)