

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: P315299

Luminaire Tested: **LDA2B10FL8030D010 PIN1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315299
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: LDA2B10FL8030D010 PIN1MMS
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in
Adj PinHole, Black oculus, matte metallic silver finish
Light Source: -
Ballast/Driver: -

Summary

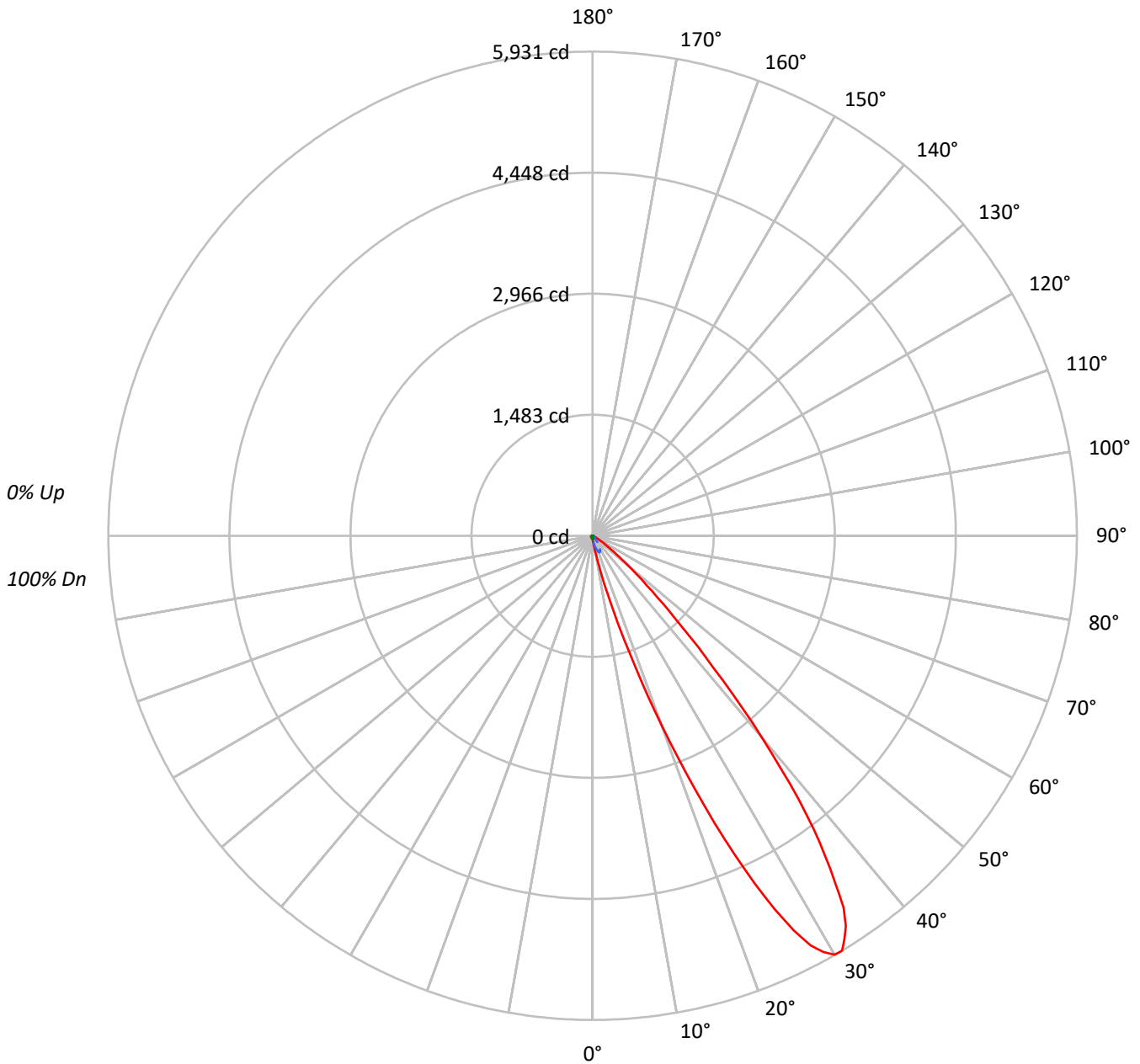
Lumens per Lamp: N/A
Luminaire Lumens: 865.5 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 10
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°	18205	18205	18205
5°	40610	18770	14659
10°	108711	11723	4158
15°	427920	15119	9807
20°	1294448	9240	7613
25°	2561670	7893	6805
30°	3375441	4728	8260
35°	3114649	6866	9998
40°	2074640	5990	13718
45°	978551	2163	5791
50°	431431	7982	17960
55°	175471	0	18321
60°	72722	5131	16380
65°	24865	6070	12141
70°	20916	11973	30725
75°	11818	17728	40602
80°	0	8808	17615
85°	11887	11887	58871



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.0	0.6
10°-20°	53.0	6.1
20°-30°	272.2	31.5
30°-40°	348.6	40.3
40°-50°	134.0	15.5
50°-60°	27.2	3.1
60°-70°	9.2	1.1
70°-80°	10.7	1.2
80°-90°	5.5	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°	330.2	38.1
0°-40°	678.8	78.4
0°-60°	840.1	97.1
0°-90°	865.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	865.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	37	37	37	37	37	
5°	82	68	38	28	30	12
15°	838	163	30	18	19	321
25°	4706	213	14	11	12	2148
35°	5171	111	11	9	17	3091
45°	1402	28	3	2	8	1205
55°	204	5	0	4	21	211
65°	21	7	5	7	10	30
75°	6	11	9	16	21	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°	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9	36.9
2.5°	54.5	47.2	49.3	42.0	46.2	47.2	38.9	51.4	46.2	48.3	42.0
5°	82.0	88.2	81.0	77.9	75.8	77.9	75.8	78.9	76.8	67.5	48.3
7.5°	137.0	125.1	125.1	120.9	124.1	123.0	117.8	120.9	113.7	82.0	55.5
10°	217.0	205.0	204.0	200.9	199.8	190.5	185.3	181.2	166.1	97.1	50.3
12.5°	425.1	414.7	407.5	389.3	376.8	369.6	342.1	327.5	284.4	144.3	64.4
15°	837.8	784.3	797.8	739.1	696.1	667.5	610.4	560.1	456.8	163.0	62.3
17.5°	1482.4	1430.5	1395.8	1331.9	1244.2	1168.4	1055.8	944.2	734.0	185.3	58.1
20°	2465.5	2383.5	2310.9	2201.3	2032.6	1886.8	1688.5	1475.2	1092.6	211.8	52.4
21°	2897.4	2834.1	2750.0	2605.7	2409.0	2213.8	1976.1	1719.1	1245.2	213.9	47.2
22°	3347.9	3306.9	3196.4	3030.8	2801.4	2568.8	2277.1	1994.7	1407.7	217.0	45.2
23°	3817.2	3774.1	3649.0	3459.5	3201.6	2920.2	2580.2	2245.5	1560.3	221.1	44.1
24°	4276.5	4228.8	4089.2	3877.4	3584.6	3261.3	2877.1	2488.9	1702.5	219.0	46.2
25°	4705.8	4639.4	4491.9	4257.3	3936.0	3573.2	3149.7	2699.1	1827.6	212.8	38.9
26°	5088.9	5013.1	4854.2	4598.3	4246.9	3854.0	3377.0	2894.3	1920.0	207.6	36.9
27°	5421.6	5326.1	5156.3	4888.0	4511.1	4077.2	3571.1	3046.9	2001.5	199.8	29.6
28°	5680.6	5571.1	5398.7	5115.3	4717.2	4251.1	3713.9	3142.4	2049.8	200.9	33.7
29°	5830.1	5746.0	5558.6	5261.7	4842.8	4351.3	3789.1	3195.3	2059.1	185.3	31.7
30°	5925.1	5831.1	5638.5	5328.1	4891.1	4374.1	3798.5	3185.5	2031.6	173.9	29.6
31°	5931.3	5833.2	5637.5	5316.2	4872.4	4336.2	3746.6	3126.8	1971.9	161.9	24.4
32°	5819.7	5743.9	5551.3	5219.7	4771.2	4231.9	3635.0	3027.7	1878.0	138.1	16.6
33°	5693.6	5601.7	5410.2	5075.4	4631.0	4089.2	3474.1	2894.3	1780.4	136.0	21.3
34°	5497.4	5386.8	5198.4	4868.8	4436.4	3885.7	3282.5	2716.2	1655.8	124.1	20.2
35°	5171.4	5112.2	4921.7	4596.3	4176.4	3641.7	3052.1	2520.6	1523.4	110.6	14.5
36°	4844.9	4772.2	4592.1	4277.6	3879.5	3351.0	2792.0	2297.4	1374.0	93.9	11.4
37°	4499.7	4404.7	4240.7	3932.9	3517.1	3061.4	2542.4	2084.5	1252.0	99.1	15.6
38°	4097.5	4065.8	3849.9	3563.3	3179.2	2748.9	2274.0	1860.3	1117.0	92.4	25.4
39°	3655.2	3633.9	3418.5	3157.4	2812.8	2417.3	1999.4	1627.8	982.1	67.5	8.3
40°	3221.3	3160.6	3007.9	2770.7	2470.7	2115.2	1753.9	1429.5	865.3	66.4	16.6
42.5°	2183.2	2202.4	2037.3	1867.6	1675.0	1433.6	1192.8	980.0	605.2	49.3	10.4
45°	1402.5	1406.7	1332.9	1201.1	1075.0	924.4	765.6	637.9	390.3	27.5	3.1
47.5°	892.8	890.7	843.5	767.7	685.2	596.9	497.8	416.8	252.8	21.3	9.3
50°	562.1	560.1	530.5	482.2	436.0	377.9	315.6	268.4	159.9	25.4	10.4
51°	456.8	459.9	435.0	386.2	350.4	294.8	251.7	213.9	125.1	17.6	9.3
52°	376.8	374.8	359.2	318.2	288.6	240.8	205.0	174.9	104.3	15.6	4.2
53°	303.1	304.2	288.6	256.9	228.4	192.6	164.0	136.0	74.7	11.4	3.1
54°	239.8	237.7	232.5	201.9	184.3	152.6	128.2	104.3	64.4	2.1	0.0
55°	204.0	200.9	193.6	167.1	149.5	126.1	102.3	89.3	55.5	5.2	0.0
57.5°	117.8	117.8	113.7	99.1	87.2	77.9	62.3	58.1	28.5	5.2	0.0
60°	73.7	64.4	71.6	61.2	48.3	43.1	35.8	32.7	24.4	9.3	2.1
61°	61.2	49.3	48.3	45.2	42.0	28.5	24.4	26.5	15.6	3.1	2.1
62°	44.1	38.9	42.0	35.8	31.7	22.3	20.2	19.2	9.3	4.2	5.2
63°	40.0	35.8	34.8	26.5	23.4	23.4	17.6	16.6	11.4	8.3	4.2



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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°	21.3	17.6	15.6	17.6	10.4	13.5	5.2	14.5	3.1	5.2	3.1
67.5°	16.6	10.4	9.3	11.4	7.3	5.2	7.3	9.3	3.1	5.2	7.3
70°	14.5	7.3	10.4	9.3	7.3	9.3	10.4	10.4	3.1	10.4	9.3
72.5°	14.5	9.3	5.2	4.2	4.2	4.2	4.2	4.2	6.2	14.5	11.4
75°	6.2	6.2	3.1	7.3	4.2	6.2	4.2	10.4	4.2	11.4	9.3
77.5°	4.2	5.2	0.0	5.2	0.0	0.0	3.1	7.3	3.1	8.3	10.4
80°	0.0	5.2	3.1	0.0	2.1	3.1	0.0	1.0	2.1	9.3	4.2
82.5°	2.1	3.1	4.2	2.1	2.1	0.0	0.0	0.0	0.0	6.2	5.2
85°	2.1	4.2	0.0	1.0	4.2	2.1	1.0	5.2	2.1	7.3	8.3
87.5°	0.0	2.1	2.1	0.0	3.1	0.0	3.1	2.1	0.0	6.2	3.1
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°	36.9	36.9	36.9	36.9	36.9
2.5°	31.7	28.5	24.4	30.6	25.4
5°	37.9	34.8	27.5	32.7	29.6
7.5°	38.9	32.7	28.5	26.5	29.6
10°	23.4	15.6	11.4	15.6	8.3
12.5°	38.9	27.5	25.4	28.5	31.7
15°	29.6	17.6	17.6	13.5	19.2
17.5°	16.6	13.5	12.5	16.6	19.2
20°	17.6	11.4	9.3	15.6	14.5
21°	15.6	4.2	12.5	12.5	14.5
22°	22.3	10.4	12.5	20.2	21.3
23°	14.5	11.4	9.3	12.5	16.6
24°	21.3	12.5	11.4	15.6	23.4
25°	14.5	11.4	11.4	14.5	12.5
26°	8.3	11.4	8.3	12.5	10.4
27°	6.2	10.4	6.2	9.3	12.5
28°	13.5	16.6	15.6	16.6	14.5
29°	14.5	17.6	14.5	22.3	16.6
30°	8.3	15.6	7.3	16.6	14.5
31°	8.3	11.4	5.2	16.6	14.5
32°	1.0	6.2	3.1	6.2	6.2
33°	6.2	7.3	8.3	13.5	10.4
34°	10.4	12.5	8.3	14.5	12.5
35°	11.4	6.2	9.3	15.6	16.6
36°	3.1	3.1	5.2	12.5	4.2
37°	6.2	17.6	12.5	21.3	12.5
38°	10.4	21.3	20.2	26.5	21.3
39°	2.1	6.2	7.3	14.5	14.5
40°	9.3	15.6	11.4	21.3	21.3
42.5°	7.3	11.4	8.3	17.6	14.5
45°	3.1	3.1	2.1	11.4	8.3
47.5°	5.2	5.2	9.3	14.5	25.4
50°	10.4	10.4	13.5	24.4	23.4
51°	6.2	5.2	7.3	16.6	21.3
52°	5.2	7.3	7.3	16.6	16.6
53°	2.1	0.0	0.0	12.5	10.4
54°	2.1	1.0	3.1	9.3	14.5
55°	0.0	5.2	4.2	19.2	21.3
57.5°	1.0	8.3	4.2	13.5	16.6
60°	5.2	6.2	11.4	13.5	16.6
61°	0.0	5.2	5.2	12.5	14.5
62°	0.0	4.2	9.3	11.4	14.5
63°	5.2	6.2	8.3	13.5	16.6



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	3.1	8.3	10.4	13.5	12.5
67.5°	6.2	7.3	6.2	17.6	21.3
70°	8.3	13.5	14.5	12.5	21.3
72.5°	5.2	7.3	10.4	19.2	21.3
75°	9.3	10.4	15.6	17.6	21.3
77.5°	7.3	10.4	10.4	11.4	21.3
80°	3.1	9.3	10.4	11.4	6.2
82.5°	4.2	6.2	4.2	11.4	8.3
85°	2.1	9.3	8.3	10.4	10.4
87.5°	3.1	5.2	5.2	9.3	6.2
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	23.4	24.4	23.4	16.6	12.5	11.4	8.3	14.5	4.2	4.2	0.0
65°	21.3	23.4	17.6	20.2	13.5	12.5	7.3	14.5	2.1	7.3	5.2





64°	3.1	5.2	5.2	9.3	14.5
65°	5.2	7.3	7.3	13.5	10.4



(END OF REPORT)