

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: P315306

Luminaire Tested: **LDA2B10FL8035D010 PINW1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315306
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: LDA2B10FL8035D010 PINW1MMS
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, White oculus, matte metallic silver finish
Light Source: -
Ballast/Driver: -

Summary

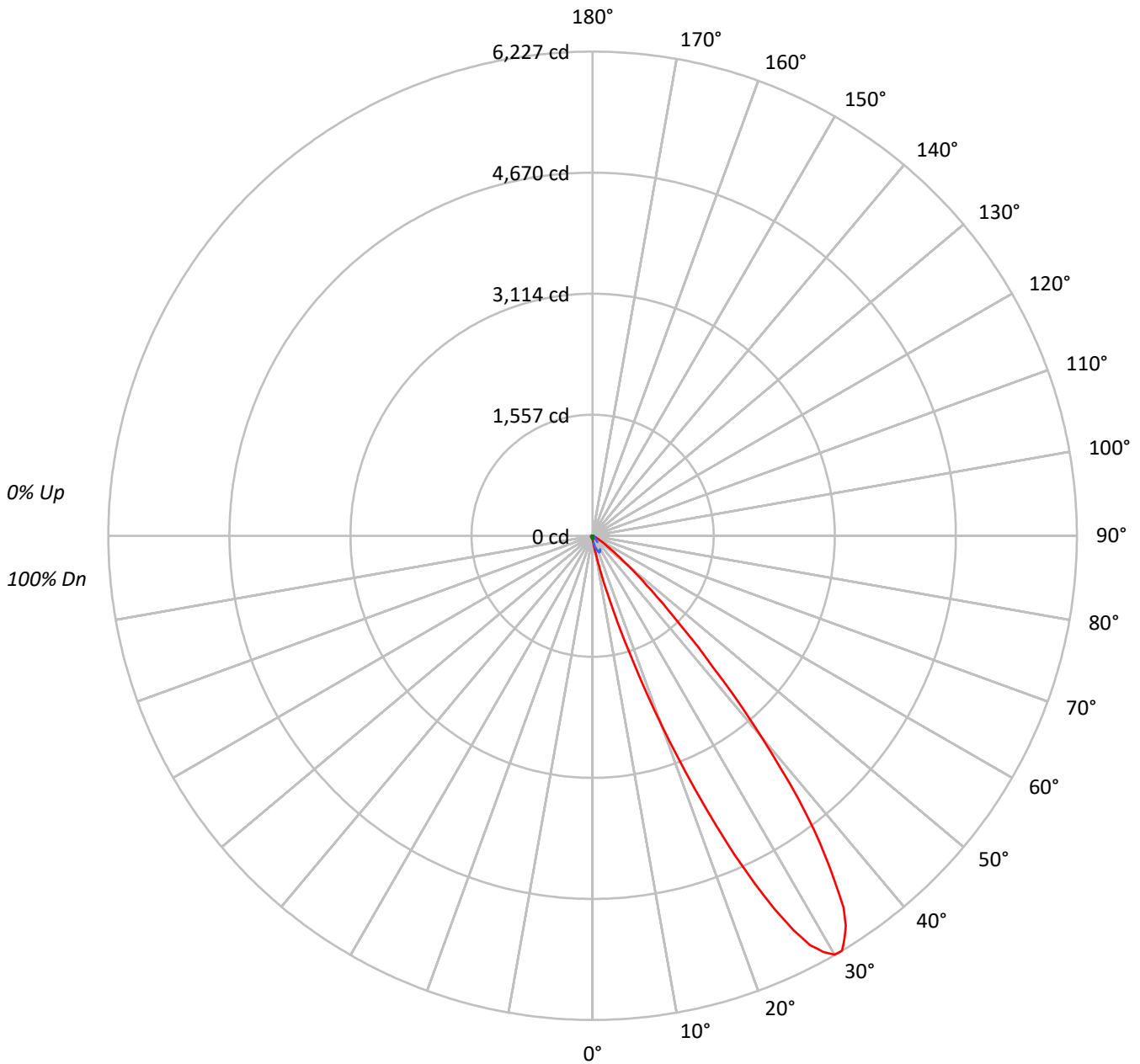
Lumens per Lamp: N/A
Luminaire Lumens: 908.6 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

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



TEST NUMBER: P315306
CATALOG NUMBER: LDA2B10FL8035D010 PINW1MMS

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°	19093	19093	19093
5°	42641	19711	15402
10°	114122	12274	4358
15°	449218	15885	10317
20°	1358921	9713	8033
25°	2689215	8329	7131
30°	3543498	4956	8716
35°	3269737	7227	10480
40°	2177944	6312	14362
45°	1027252	2302	6070
50°	452922	8366	18805
55°	184158	0	19181
60°	76372	5328	17169
65°	26033	6304	12725
70°	22070	12550	32168
75°	12390	18681	42508
80°	0	9376	18468
85°	12454	12454	61702



TEST NUMBER: P315306

CATALOG NUMBER: LDA2B10FL8035D010 PINW1MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.3	0.6
10°-20°	55.6	6.1
20°-30°	285.8	31.5
30°-40°	365.9	40.3
40°-50°	140.7	15.5
50°-60°	28.6	3.1
60°-70°	9.7	1.1
70°-80°	11.3	1.2
80°-90°	5.8	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°	346.6	38.2
0°-40°	712.6	78.4
0°-60°	881.9	97.1
0°-90°	908.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	908.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	39	39	39	39	39	
5°	86	71	40	29	31	13
15°	880	171	31	18	20	337
25°	4940	223	15	12	13	2255
35°	5429	116	12	10	17	3245
45°	1472	29	3	2	9	1265
55°	214	5	0	4	22	222
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	



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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°	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7
2.5°	57.2	49.6	51.8	44.1	48.5	49.6	40.9	53.9	48.5	50.7	44.1
5°	86.1	92.6	85.0	81.7	79.6	81.7	79.6	82.8	80.6	70.8	50.7
7.5°	143.9	131.3	131.3	127.0	130.2	129.1	123.7	127.0	119.3	86.1	58.3
10°	227.8	215.2	214.1	210.9	209.8	200.0	194.5	190.2	174.4	101.9	52.9
12.5°	446.3	435.4	427.8	408.7	395.6	388.0	359.1	343.8	298.6	151.5	67.6
15°	879.5	823.4	837.5	775.9	730.7	700.7	640.8	588.0	479.5	171.1	65.4
17.5°	1556.2	1501.8	1465.2	1398.2	1306.1	1226.6	1108.3	991.2	770.5	194.5	61.0
20°	2588.3	2502.2	2425.9	2310.9	2133.8	1980.7	1772.6	1548.6	1147.0	222.3	55.0
21°	3041.7	2975.2	2886.9	2735.4	2528.9	2324.0	2074.5	1804.7	1307.2	224.5	49.6
22°	3514.6	3471.6	3355.5	3181.7	2940.9	2696.7	2390.5	2094.1	1477.8	227.8	47.4
23°	4007.2	3962.0	3830.7	3631.8	3361.0	3065.6	2708.7	2357.3	1638.0	232.1	46.3
24°	4489.5	4439.3	4292.8	4070.4	3763.1	3423.6	3020.4	2612.8	1787.3	229.9	48.5
25°	4940.1	4870.4	4715.6	4469.3	4132.0	3751.1	3306.5	2833.5	1918.6	223.4	40.9
26°	5342.2	5262.7	5095.9	4827.3	4458.4	4045.9	3545.1	3038.4	2015.6	218.0	38.7
27°	5691.5	5591.3	5413.1	5131.4	4735.8	4280.2	3748.9	3198.6	2101.2	209.8	31.1
28°	5963.4	5848.5	5667.6	5370.0	4952.1	4462.8	3898.8	3298.9	2151.8	210.9	35.4
29°	6120.4	6032.1	5835.4	5523.7	5084.0	4567.9	3977.8	3354.4	2161.6	194.5	33.2
30°	6220.1	6121.5	5919.3	5593.4	5134.6	4591.9	3987.6	3344.1	2132.8	182.5	31.1
31°	6226.6	6123.6	5918.2	5580.9	5115.0	4552.1	3933.1	3282.5	2070.1	170.0	25.6
32°	6109.5	6029.9	5827.8	5479.6	5008.8	4442.6	3816.0	3178.4	1971.5	144.9	17.4
33°	5977.1	5880.6	5679.5	5328.1	4861.6	4292.8	3647.0	3038.4	1869.0	142.8	22.3
34°	5771.1	5655.0	5457.2	5111.2	4657.3	4079.2	3446.0	2851.5	1738.2	130.2	21.3
35°	5428.9	5366.8	5166.8	4825.1	4384.3	3823.1	3204.0	2646.1	1599.3	116.1	15.3
36°	5086.1	5009.9	4820.8	4490.6	4072.6	3517.9	2931.0	2411.7	1442.4	98.6	12.0
37°	4723.8	4624.1	4451.9	4128.7	3692.3	3213.8	2668.9	2188.3	1314.3	104.1	16.3
38°	4301.5	4268.2	4041.6	3740.8	3337.5	2885.8	2387.2	1952.9	1172.6	97.0	26.7
39°	3837.2	3814.9	3588.7	3314.7	2952.8	2537.6	2099.0	1708.8	1031.0	70.8	8.7
40°	3381.7	3317.9	3157.7	2908.7	2593.7	2220.5	1841.2	1500.7	908.4	69.7	17.4
42.5°	2291.9	2312.0	2138.8	1960.6	1758.4	1505.0	1252.2	1028.8	635.4	51.8	10.9
45°	1472.3	1476.7	1399.3	1260.9	1128.5	970.5	803.7	669.7	409.8	28.9	3.3
47.5°	937.2	935.1	885.5	805.9	719.3	626.6	522.6	437.6	265.4	22.3	9.8
50°	590.1	588.0	556.9	506.2	457.7	396.7	331.3	281.7	167.8	26.7	10.9
51°	479.5	482.8	456.6	405.4	367.8	309.5	264.3	224.5	131.3	18.5	9.8
52°	395.6	393.4	377.1	334.0	303.0	252.8	215.2	183.6	109.5	16.3	4.4
53°	318.2	319.3	303.0	269.7	239.8	202.2	172.2	142.8	78.5	12.0	3.3
54°	251.7	249.6	244.1	212.0	193.4	160.2	134.6	109.5	67.6	2.2	0.0
55°	214.1	210.9	203.2	175.5	156.9	132.4	107.3	93.7	58.3	5.4	0.0
57.5°	123.7	123.7	119.3	104.1	91.5	81.7	65.4	61.0	30.0	5.4	0.0
60°	77.4	67.6	75.2	64.3	50.7	45.2	37.6	34.3	25.6	9.8	2.2
61°	64.3	51.8	50.7	47.4	44.1	30.0	25.6	27.8	16.3	3.3	2.2
62°	46.3	40.9	44.1	37.6	33.2	23.4	21.3	20.2	9.8	4.4	5.4
63°	42.0	37.6	36.5	27.8	24.5	24.5	18.5	17.4	12.0	8.7	4.4



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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°	22.3	18.5	16.3	18.5	10.9	14.2	5.4	15.3	3.3	5.4	3.3
67.5°	17.4	10.9	9.8	12.0	7.6	5.4	7.6	9.8	3.3	5.4	7.6
70°	15.3	7.6	10.9	9.8	7.6	9.8	10.9	10.9	3.3	10.9	9.8
72.5°	15.3	9.8	5.4	4.4	4.4	4.4	4.4	4.4	6.5	15.3	12.0
75°	6.5	6.5	3.3	7.6	4.4	6.5	4.4	10.9	4.4	12.0	9.8
77.5°	4.4	5.4	0.0	5.4	0.0	0.0	3.3	7.6	3.3	8.7	10.9
80°	0.0	5.4	3.3	0.0	2.2	3.3	0.0	1.1	2.2	9.8	4.4
82.5°	2.2	3.3	4.4	2.2	2.2	0.0	0.0	0.0	0.0	6.5	5.4
85°	2.2	4.4	0.0	1.1	4.4	2.2	1.1	5.4	2.2	7.6	8.7
87.5°	0.0	2.2	2.2	0.0	3.3	0.0	3.3	2.2	0.0	6.5	3.3
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°	38.7	38.7	38.7	38.7	38.7
2.5°	33.2	30.0	25.6	32.1	26.7
5°	39.8	36.5	28.9	34.3	31.1
7.5°	40.9	34.3	30.0	27.8	31.1
10°	24.5	16.3	12.0	16.3	8.7
12.5°	40.9	28.9	26.7	30.0	33.2
15°	31.1	18.5	18.5	14.2	20.2
17.5°	17.4	14.2	13.1	17.4	20.2
20°	18.5	12.0	9.8	16.3	15.3
21°	16.3	4.4	13.1	13.1	15.3
22°	23.4	10.9	13.1	21.3	22.3
23°	15.3	12.0	9.8	13.1	17.4
24°	22.3	13.1	12.0	16.3	24.5
25°	15.3	12.0	12.0	15.3	13.1
26°	8.7	12.0	8.7	13.1	10.9
27°	6.5	10.9	6.5	9.8	13.1
28°	14.2	17.4	16.3	17.4	15.3
29°	15.3	18.5	15.3	23.4	17.4
30°	8.7	16.3	7.6	17.4	15.3
31°	8.7	12.0	5.4	17.4	15.3
32°	1.1	6.5	3.3	6.5	6.5
33°	6.5	7.6	8.7	14.2	10.9
34°	10.9	13.1	8.7	15.3	13.1
35°	12.0	6.5	9.8	16.3	17.4
36°	3.3	3.3	5.4	13.1	4.4
37°	6.5	18.5	13.1	22.3	13.1
38°	10.9	22.3	21.3	27.8	22.3
39°	2.2	6.5	7.6	15.3	15.3
40°	9.8	16.3	12.0	22.3	22.3
42.5°	7.6	12.0	8.7	18.5	15.3
45°	3.3	3.3	2.2	12.0	8.7
47.5°	5.4	5.4	9.8	15.3	26.7
50°	10.9	10.9	14.2	25.6	24.5
51°	6.5	5.4	7.6	17.4	22.3
52°	5.4	7.6	7.6	17.4	17.4
53°	2.2	0.0	0.0	13.1	10.9
54°	2.2	1.1	3.3	9.8	15.3
55°	0.0	5.4	4.4	20.2	22.3
57.5°	1.1	8.7	4.4	14.2	17.4
60°	5.4	6.5	12.0	14.2	17.4
61°	0.0	5.4	5.4	13.1	15.3
62°	0.0	4.4	9.8	12.0	15.3
63°	5.4	6.5	8.7	14.2	17.4



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	3.3	8.7	10.9	14.2	13.1
67.5°	6.5	7.6	6.5	18.5	22.3
70°	8.7	14.2	15.3	13.1	22.3
72.5°	5.4	7.6	10.9	20.2	22.3
75°	9.8	10.9	16.3	18.5	22.3
77.5°	7.6	10.9	10.9	12.0	22.3
80°	3.3	9.8	10.9	12.0	6.5
82.5°	4.4	6.5	4.4	12.0	8.7
85°	2.2	9.8	8.7	10.9	10.9
87.5°	3.3	5.4	5.4	9.8	6.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	24.5	25.6	24.5	17.4	13.1	12.0	8.7	15.3	4.4	4.4	0.0
65°	22.3	24.5	18.5	21.3	14.2	13.1	7.6	15.3	2.2	7.6	5.4





64°	3.3	5.4	5.4	9.8	15.3
65°	5.4	7.6	7.6	14.2	10.9



(END OF REPORT)