

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: P315294

Luminaire Tested: **LDA2B10FL8027D010 PINW1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315294  
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: LDA2B10FL8027D010 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: 881.7 lumens  
Efficiency: N/A  
Efficacy: 88.2 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

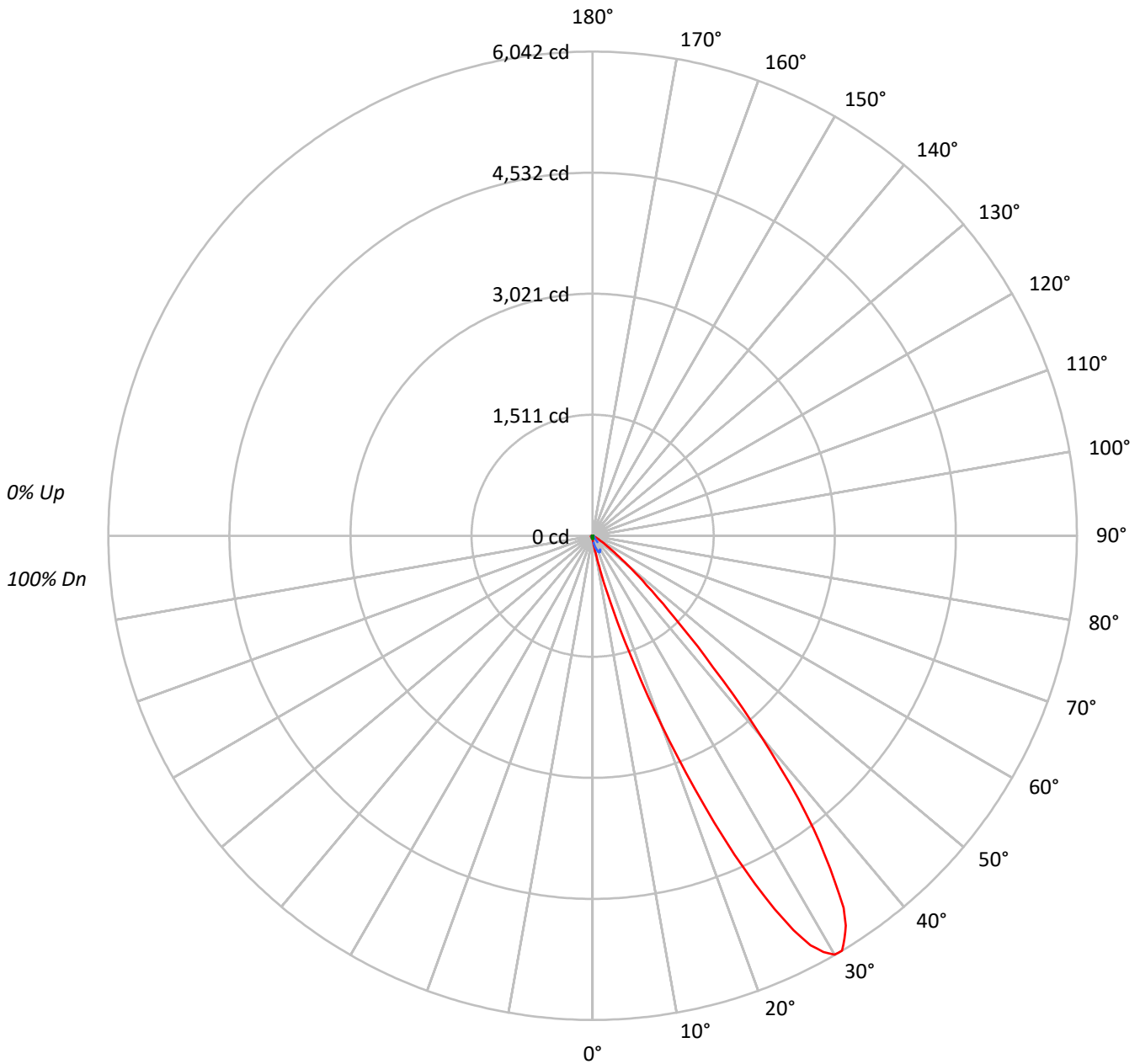
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	18501	18501	18501
5°	41353	19117	14907
10°	110715	11923	4258
15°	435887	15374	10011
20°	1318599	9450	7770
25°	2609411	8057	6913
30°	3438335	4842	8431
35°	3172649	6986	10179
40°	2113282	6118	13976
45°	996761	2233	5931
50°	439490	8136	18267
55°	178739	0	18665
60°	74103	5230	16676
65°	25332	6187	12374
70°	21349	12261	31302
75°	12009	18109	41365
80°	0	9092	17899
85°	11887	11887	60003



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	5.1	0.6
10°-20°	53.9	6.1
20°-30°	277.3	31.5
30°-40°	355.1	40.3
40°-50°	136.5	15.5
50°-60°	27.8	3.1
60°-70°	9.4	1.1
70°-80°	10.9	1.2
80°-90°	5.6	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°	336.3	38.1
0°-40°	691.4	78.4
0°-60°	855.7	97.1
0°-90°	881.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	881.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	38	38	38	38	38	
5°	84	69	39	28	30	12
15°	853	166	30	18	20	327
25°	4794	217	15	12	13	2188
35°	5268	113	12	10	17	3148
45°	1429	28	3	2	8	1228
55°	208	5	0	4	22	215
65°	22	7	5	7	11	30
75°	6	12	10	16	22	9
85°	2	7	2	8	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°	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5
2.5°	55.5	48.1	50.2	42.8	47.1	48.1	39.7	52.3	47.1	49.2	42.8
5°	83.5	89.9	82.5	79.3	77.2	79.3	77.2	80.4	78.3	68.7	49.2
7.5°	139.6	127.4	127.4	123.2	126.4	125.3	120.0	123.2	115.8	83.5	56.6
10°	221.0	208.8	207.8	204.6	203.6	194.0	188.8	184.5	169.2	98.9	51.3
12.5°	433.0	422.5	415.1	396.5	383.9	376.5	348.4	333.6	289.7	147.0	65.6
15°	853.4	798.9	812.7	752.9	709.0	679.9	621.8	570.5	465.3	166.0	63.4
17.5°	1510.1	1457.2	1421.8	1356.7	1267.4	1190.2	1075.4	961.8	747.6	188.8	59.2
20°	2511.5	2427.9	2353.9	2242.3	2070.5	1921.9	1720.0	1502.7	1113.0	215.7	53.4
21°	2951.4	2886.9	2801.2	2654.2	2453.8	2255.0	2012.9	1751.2	1268.4	217.8	48.1
22°	3410.3	3368.5	3255.9	3087.3	2853.6	2616.7	2319.5	2031.9	1433.9	221.0	46.0
23°	3888.3	3844.4	3717.0	3524.0	3261.2	2974.6	2628.3	2287.3	1589.4	225.2	44.9
24°	4356.2	4307.6	4165.3	3949.6	3651.4	3322.0	2930.8	2535.3	1734.2	223.1	47.1
25°	4793.5	4725.8	4575.6	4336.6	4009.4	3639.8	3208.3	2749.4	1861.7	216.8	39.7
26°	5183.7	5106.5	4944.7	4684.0	4326.1	3925.8	3439.9	2948.2	1955.8	211.5	37.5
27°	5522.6	5425.3	5252.4	4979.1	4595.2	4153.2	3637.7	3103.6	2038.8	203.6	30.1
28°	5786.4	5674.9	5499.3	5210.6	4805.1	4330.3	3783.1	3200.9	2088.0	204.6	34.4
29°	5938.7	5853.0	5662.2	5359.7	4933.1	4432.3	3859.7	3254.9	2097.5	188.8	32.3
30°	6035.5	5939.8	5743.6	5427.4	4982.2	4455.6	3869.3	3244.8	2069.5	177.1	30.1
31°	6041.8	5941.9	5742.5	5415.3	4963.2	4417.0	3816.4	3185.1	2008.6	165.0	24.9
32°	5928.1	5850.9	5654.8	5316.9	4860.1	4310.7	3702.7	3084.1	1912.9	140.6	16.9
33°	5799.6	5706.1	5511.0	5169.9	4717.3	4165.3	3538.8	2948.2	1813.5	138.5	21.7
34°	5599.8	5487.2	5295.2	4959.5	4519.1	3958.1	3343.7	2766.8	1686.7	126.4	20.6
35°	5267.7	5207.5	5013.4	4681.9	4254.2	3709.6	3108.9	2567.5	1551.8	112.6	14.8
36°	4935.2	4861.1	4677.7	4357.3	3951.7	3413.5	2844.0	2340.2	1399.5	95.7	11.6
37°	4583.6	4486.8	4319.7	4006.2	3582.7	3118.5	2589.7	2123.4	1275.3	101.0	15.9
38°	4173.8	4141.5	3921.6	3629.7	3238.5	2800.2	2316.4	1895.0	1137.8	94.1	25.9
39°	3723.3	3701.6	3482.2	3216.3	2865.2	2462.3	2036.7	1658.1	1000.4	68.7	8.5
40°	3281.3	3219.4	3064.0	2822.4	2516.8	2154.6	1786.6	1456.1	881.4	67.7	16.9
42.5°	2223.8	2243.4	2075.3	1902.4	1706.2	1460.4	1215.0	998.2	616.5	50.2	10.6
45°	1428.6	1432.9	1357.8	1223.5	1095.0	941.7	779.9	649.8	397.6	28.0	3.2
47.5°	909.4	907.3	859.2	782.0	697.9	608.0	507.1	424.6	257.5	21.7	9.5
50°	572.6	570.5	540.4	491.2	444.1	384.9	321.5	273.4	162.8	25.9	10.6
51°	465.3	468.5	443.1	393.4	356.9	300.3	256.4	217.8	127.4	18.0	9.5
52°	383.9	381.7	365.9	324.1	294.0	245.3	208.8	178.2	106.3	15.9	4.2
53°	308.8	309.8	294.0	261.7	232.6	196.2	167.1	138.5	76.1	11.6	3.2
54°	244.3	242.2	236.9	205.7	187.7	155.4	130.6	106.3	65.6	2.1	0.0
55°	207.8	204.6	197.2	170.3	152.3	128.5	104.2	90.9	56.6	5.3	0.0
57.5°	120.0	120.0	115.8	101.0	88.8	79.3	63.4	59.2	29.1	5.3	0.0
60°	75.1	65.6	73.0	62.4	49.2	43.9	36.5	33.3	24.9	9.5	2.1
61°	62.4	50.2	49.2	46.0	42.8	29.1	24.9	27.0	15.9	3.2	2.1
62°	44.9	39.7	42.8	36.5	32.3	22.7	20.6	19.6	9.5	4.2	5.3
63°	40.7	36.5	35.4	27.0	23.8	23.8	18.0	16.9	11.6	8.5	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°	21.7	18.0	15.9	18.0	10.6	13.7	5.3	14.8	3.2	5.3	3.2
67.5°	16.9	10.6	9.5	11.6	7.4	5.3	7.4	9.5	3.2	5.3	7.4
70°	14.8	7.4	10.6	9.5	7.4	9.5	10.6	10.6	3.2	10.6	9.5
72.5°	14.8	9.5	5.3	4.2	4.2	4.2	4.2	4.2	6.3	14.8	11.6
75°	6.3	6.3	3.2	7.4	4.2	6.3	4.2	10.6	4.2	11.6	9.5
77.5°	4.2	5.3	0.0	5.3	0.0	0.0	3.2	7.4	3.2	8.5	10.6
80°	0.0	5.3	3.2	0.0	2.1	3.2	0.0	1.1	2.1	9.5	4.2
82.5°	2.1	3.2	4.2	2.1	2.1	0.0	0.0	0.0	0.0	6.3	5.3
85°	2.1	4.2	0.0	1.1	4.2	2.1	1.1	5.3	2.1	7.4	8.5
87.5°	0.0	2.1	2.1	0.0	3.2	0.0	3.2	2.1	0.0	6.3	3.2
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°	37.5	37.5	37.5	37.5	37.5
2.5°	32.3	29.1	24.9	31.2	25.9
5°	38.6	35.4	28.0	33.3	30.1
7.5°	39.7	33.3	29.1	27.0	30.1
10°	23.8	15.9	11.6	15.9	8.5
12.5°	39.7	28.0	25.9	29.1	32.3
15°	30.1	18.0	18.0	13.7	19.6
17.5°	16.9	13.7	12.7	16.9	19.6
20°	18.0	11.6	9.5	15.9	14.8
21°	15.9	4.2	12.7	12.7	14.8
22°	22.7	10.6	12.7	20.6	21.7
23°	14.8	11.6	9.5	12.7	16.9
24°	21.7	12.7	11.6	15.9	23.8
25°	14.8	11.6	11.6	14.8	12.7
26°	8.5	11.6	8.5	12.7	10.6
27°	6.3	10.6	6.3	9.5	12.7
28°	13.7	16.9	15.9	16.9	14.8
29°	14.8	18.0	14.8	22.7	16.9
30°	8.5	15.9	7.4	16.9	14.8
31°	8.5	11.6	5.3	16.9	14.8
32°	1.1	6.3	3.2	6.3	6.3
33°	6.3	7.4	8.5	13.7	10.6
34°	10.6	12.7	8.5	14.8	12.7
35°	11.6	6.3	9.5	15.9	16.9
36°	3.2	3.2	5.3	12.7	4.2
37°	6.3	18.0	12.7	21.7	12.7
38°	10.6	21.7	20.6	27.0	21.7
39°	2.1	6.3	7.4	14.8	14.8
40°	9.5	15.9	11.6	21.7	21.7
42.5°	7.4	11.6	8.5	18.0	14.8
45°	3.2	3.2	2.1	11.6	8.5
47.5°	5.3	5.3	9.5	14.8	25.9
50°	10.6	10.6	13.7	24.9	23.8
51°	6.3	5.3	7.4	16.9	21.7
52°	5.3	7.4	7.4	16.9	16.9
53°	2.1	0.0	0.0	12.7	10.6
54°	2.1	1.1	3.2	9.5	14.8
55°	0.0	5.3	4.2	19.6	21.7
57.5°	1.1	8.5	4.2	13.7	16.9
60°	5.3	6.3	11.6	13.7	16.9
61°	0.0	5.3	5.3	12.7	14.8
62°	0.0	4.2	9.5	11.6	14.8
63°	5.3	6.3	8.5	13.7	16.9





TEST NUMBER: P315294

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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	3.2	8.5	10.6	13.7	12.7
67.5°	6.3	7.4	6.3	18.0	21.7
70°	8.5	13.7	14.8	12.7	21.7
72.5°	5.3	7.4	10.6	19.6	21.7
75°	9.5	10.6	15.9	18.0	21.7
77.5°	7.4	10.6	10.6	11.6	21.7
80°	3.2	9.5	10.6	11.6	6.3
82.5°	4.2	6.3	4.2	11.6	8.5
85°	2.1	9.5	8.5	10.6	10.6
87.5°	3.2	5.3	5.3	9.5	6.3
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	23.8	24.9	23.8	16.9	12.7	11.6	8.5	14.8	4.2	4.2	0.0
65°	21.7	23.8	18.0	20.6	13.7	12.7	7.4	14.8	2.1	7.4	5.3







64°	3.2	5.3	5.3	9.5	14.8
65°	5.3	7.4	7.4	13.7	10.6



(END OF REPORT)