

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: P315370

Luminaire Tested: **LDA2B10FLD2WD010 PINW1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315370  
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: LDA2B10FLD2WD010 PINW1MW  
Description: PORTFOLIO 2IN ADJ 1000 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: 672.3 lumens  
Efficiency: N/A  
Efficacy: 67.2 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

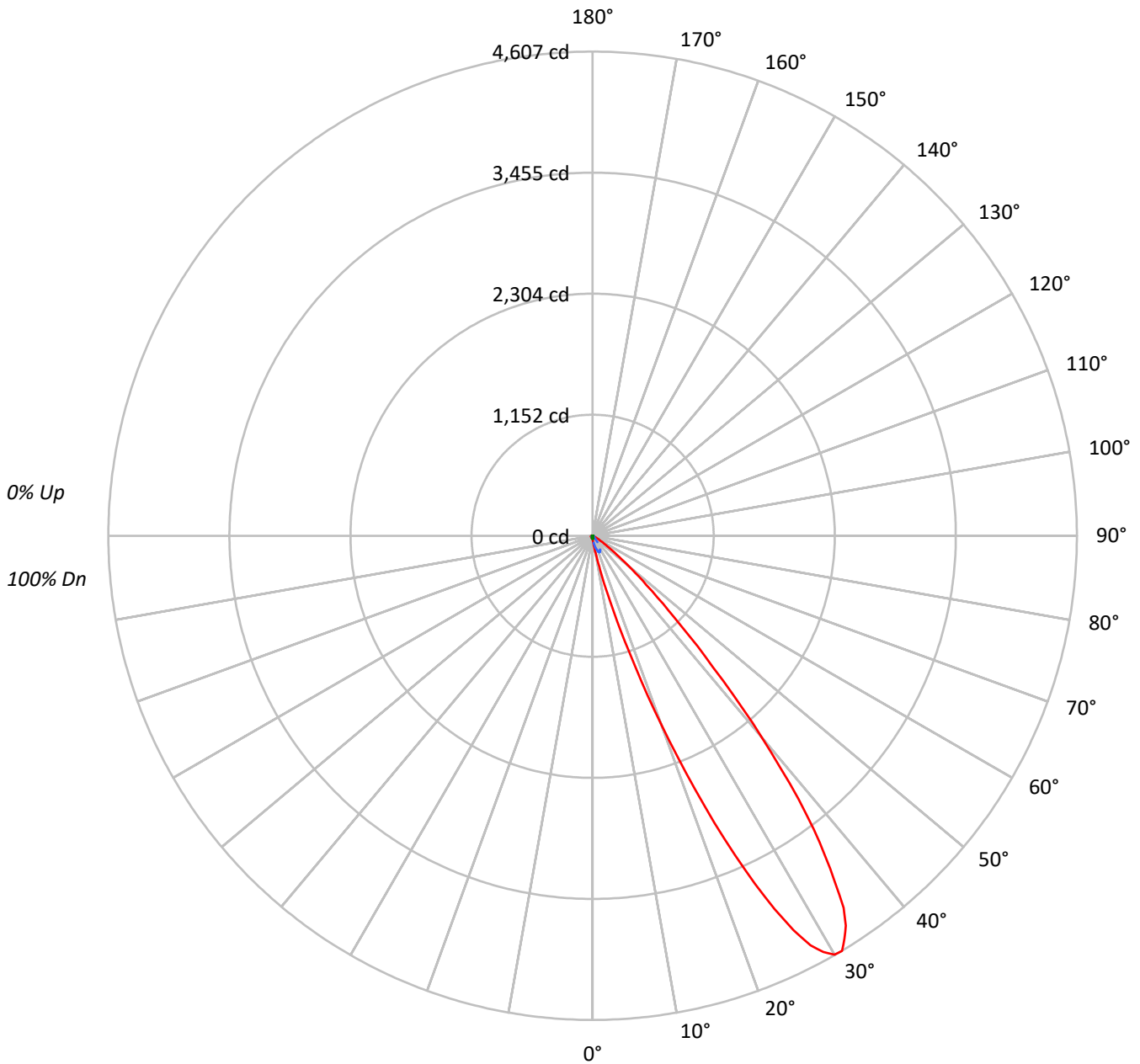
Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	14110	14110	14110
5°	31547	14560	11391
10°	84414	9068	3256
15°	332355	11748	7610
20°	1005527	7193	5933
25°	1989816	6151	5280
30°	2621919	3703	6437
35°	2419373	5360	7769
40°	1611512	4701	10627
45°	760095	1675	4535
50°	335182	6217	13892
55°	136334	0	14192
60°	56539	3947	12729
65°	19262	4670	9456
70°	16300	9376	23801
75°	9150	13915	31452
80°	0	6819	13638
85°	9057	9057	45852



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	3.9	0.6
10°-20°	41.1	6.1
20°-30°	211.5	31.5
30°-40°	270.8	40.3
40°-50°	104.1	15.5
50°-60°	21.2	3.1
60°-70°	7.2	1.1
70°-80°	8.3	1.2
80°-90°	4.3	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°	256.5	38.1
0°-40°	527.3	78.4
0°-60°	652.5	97.1
0°-90°	672.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	672.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	29	29	29	29	29	
5°	64	52	29	21	23	9
15°	651	127	23	14	15	250
25°	3655	165	11	9	10	1668
35°	4017	86	9	7	13	2401
45°	1089	21	2	2	6	936
55°	158	4	0	3	16	164
65°	16	6	4	6	8	23
75°	5	9	7	12	16	7
85°	2	6	2	6	8	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°	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6
2.5°	42.3	36.7	38.3	32.7	35.9	36.7	30.2	39.9	35.9	37.5	32.7
5°	63.7	68.5	62.9	60.5	58.9	60.5	58.9	61.3	59.7	52.4	37.5
7.5°	106.4	97.2	97.2	93.9	96.4	95.6	91.5	93.9	88.3	63.7	43.1
10°	168.5	159.3	158.5	156.0	155.2	148.0	143.9	140.7	129.0	75.4	39.1
12.5°	330.2	322.1	316.5	302.4	292.7	287.1	265.7	254.4	220.9	112.1	50.0
15°	650.7	609.2	619.7	574.1	540.7	518.5	474.2	435.0	354.8	126.6	48.4
17.5°	1151.5	1111.2	1084.2	1034.6	966.4	907.6	820.1	733.4	570.1	143.9	45.2
20°	1915.2	1851.4	1795.0	1709.9	1578.9	1465.6	1311.6	1145.9	848.7	164.5	40.7
21°	2250.6	2201.4	2136.1	2024.0	1871.2	1719.6	1534.9	1335.4	967.3	166.1	36.7
22°	2600.6	2568.7	2482.8	2354.2	2176.0	1995.4	1768.8	1549.5	1093.5	168.5	35.1
23°	2965.1	2931.6	2834.4	2687.3	2486.9	2268.3	2004.3	1744.2	1212.0	171.8	34.3
24°	3321.9	3284.8	3176.3	3011.8	2784.4	2533.2	2234.9	1933.3	1322.5	170.1	35.9
25°	3655.3	3603.7	3489.2	3307.0	3057.4	2775.6	2446.6	2096.6	1419.6	165.3	30.2
26°	3952.9	3894.0	3770.6	3571.9	3298.9	2993.7	2623.2	2248.2	1491.4	161.3	28.6
27°	4211.3	4137.1	4005.3	3796.8	3504.1	3167.1	2773.9	2366.7	1554.7	155.2	23.0
28°	4412.5	4327.4	4193.6	3973.4	3664.2	3302.1	2884.8	2440.9	1592.2	156.0	26.2
29°	4528.6	4463.3	4317.8	4087.1	3761.8	3379.9	2943.3	2482.0	1599.5	143.9	24.6
30°	4602.4	4529.4	4379.9	4138.7	3799.3	3397.7	2950.5	2474.4	1578.1	135.1	23.0
31°	4607.3	4531.0	4379.0	4129.5	3784.7	3368.2	2910.2	2428.8	1531.7	125.8	18.9
32°	4520.6	4461.7	4312.1	4054.5	3706.1	3287.2	2823.5	2351.8	1458.7	107.2	12.9
33°	4422.6	4351.2	4202.4	3942.4	3597.3	3176.3	2698.5	2248.2	1382.9	105.6	16.5
34°	4270.2	4184.3	4037.9	3781.9	3446.1	3018.3	2549.8	2109.9	1286.2	96.4	15.7
35°	4017.0	3971.0	3823.0	3570.2	3244.1	2828.8	2370.8	1957.9	1183.4	85.9	11.3
36°	3763.4	3706.9	3567.0	3322.7	3013.4	2603.0	2168.8	1784.5	1067.2	73.0	8.9
37°	3495.3	3421.5	3294.1	3055.0	2732.0	2378.0	1974.8	1619.2	972.5	77.0	12.1
38°	3182.8	3158.2	2990.5	2767.9	2469.5	2135.3	1766.4	1445.0	867.7	71.8	19.8
39°	2839.3	2822.7	2655.4	2452.6	2184.9	1877.7	1553.1	1264.4	762.8	52.4	6.5
40°	2502.2	2455.0	2336.5	2152.2	1919.2	1643.0	1362.4	1110.4	672.1	51.6	12.9
42.5°	1695.8	1710.7	1582.5	1450.7	1301.1	1113.6	926.5	761.2	470.1	38.3	8.1
45°	1089.4	1092.6	1035.4	933.0	835.0	718.1	594.7	495.5	303.2	21.4	2.4
47.5°	693.5	691.9	655.2	596.3	532.2	463.7	386.7	323.8	196.4	16.5	7.3
50°	436.7	435.0	412.1	374.6	338.7	293.5	245.1	208.4	124.2	19.8	8.1
51°	354.8	357.2	337.9	300.0	272.2	229.0	195.5	166.1	97.2	13.7	7.3
52°	292.7	291.1	279.0	247.2	224.2	187.1	159.3	135.9	81.0	12.1	3.2
53°	235.5	236.3	224.2	199.6	177.4	149.6	127.4	105.6	58.1	8.9	2.4
54°	186.3	184.7	180.6	156.8	143.1	118.5	99.6	81.0	50.0	1.6	0.0
55°	158.5	156.0	150.4	129.8	116.1	98.0	79.4	69.3	43.1	4.0	0.0
57.5°	91.5	91.5	88.3	77.0	67.7	60.5	48.4	45.2	22.2	4.0	0.0
60°	57.3	50.0	55.6	47.6	37.5	33.5	27.8	25.4	18.9	7.3	1.6
61°	47.6	38.3	37.5	35.1	32.7	22.2	18.9	20.6	12.1	2.4	1.6
62°	34.3	30.2	32.7	27.8	24.6	17.3	15.7	14.9	7.3	3.2	4.0
63°	31.0	27.8	27.0	20.6	18.1	18.1	13.7	12.9	8.9	6.5	3.2



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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°	16.5	13.7	12.1	13.7	8.1	10.5	4.0	11.3	2.4	4.0	2.4
67.5°	12.9	8.1	7.3	8.9	5.6	4.0	5.6	7.3	2.4	4.0	5.6
70°	11.3	5.6	8.1	7.3	5.6	7.3	8.1	8.1	2.4	8.1	7.3
72.5°	11.3	7.3	4.0	3.2	3.2	3.2	3.2	3.2	4.8	11.3	8.9
75°	4.8	4.8	2.4	5.6	3.2	4.8	3.2	8.1	3.2	8.9	7.3
77.5°	3.2	4.0	0.0	4.0	0.0	0.0	2.4	5.6	2.4	6.5	8.1
80°	0.0	4.0	2.4	0.0	1.6	2.4	0.0	0.8	1.6	7.3	3.2
82.5°	1.6	2.4	3.2	1.6	1.6	0.0	0.0	0.0	0.0	4.8	4.0
85°	1.6	3.2	0.0	0.8	3.2	1.6	0.8	4.0	1.6	5.6	6.5
87.5°	0.0	1.6	1.6	0.0	2.4	0.0	2.4	1.6	0.0	4.8	2.4
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°	28.6	28.6	28.6	28.6	28.6
2.5°	24.6	22.2	18.9	23.8	19.8
5°	29.4	27.0	21.4	25.4	23.0
7.5°	30.2	25.4	22.2	20.6	23.0
10°	18.1	12.1	8.9	12.1	6.5
12.5°	30.2	21.4	19.8	22.2	24.6
15°	23.0	13.7	13.7	10.5	14.9
17.5°	12.9	10.5	9.7	12.9	14.9
20°	13.7	8.9	7.3	12.1	11.3
21°	12.1	3.2	9.7	9.7	11.3
22°	17.3	8.1	9.7	15.7	16.5
23°	11.3	8.9	7.3	9.7	12.9
24°	16.5	9.7	8.9	12.1	18.1
25°	11.3	8.9	8.9	11.3	9.7
26°	6.5	8.9	6.5	9.7	8.1
27°	4.8	8.1	4.8	7.3	9.7
28°	10.5	12.9	12.1	12.9	11.3
29°	11.3	13.7	11.3	17.3	12.9
30°	6.5	12.1	5.6	12.9	11.3
31°	6.5	8.9	4.0	12.9	11.3
32°	0.8	4.8	2.4	4.8	4.8
33°	4.8	5.6	6.5	10.5	8.1
34°	8.1	9.7	6.5	11.3	9.7
35°	8.9	4.8	7.3	12.1	12.9
36°	2.4	2.4	4.0	9.7	3.2
37°	4.8	13.7	9.7	16.5	9.7
38°	8.1	16.5	15.7	20.6	16.5
39°	1.6	4.8	5.6	11.3	11.3
40°	7.3	12.1	8.9	16.5	16.5
42.5°	5.6	8.9	6.5	13.7	11.3
45°	2.4	2.4	1.6	8.9	6.5
47.5°	4.0	4.0	7.3	11.3	19.8
50°	8.1	8.1	10.5	18.9	18.1
51°	4.8	4.0	5.6	12.9	16.5
52°	4.0	5.6	5.6	12.9	12.9
53°	1.6	0.0	0.0	9.7	8.1
54°	1.6	0.8	2.4	7.3	11.3
55°	0.0	4.0	3.2	14.9	16.5
57.5°	0.8	6.5	3.2	10.5	12.9
60°	4.0	4.8	8.9	10.5	12.9
61°	0.0	4.0	4.0	9.7	11.3
62°	0.0	3.2	7.3	8.9	11.3
63°	4.0	4.8	6.5	10.5	12.9





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	2.4	6.5	8.1	10.5	9.7
67.5°	4.8	5.6	4.8	13.7	16.5
70°	6.5	10.5	11.3	9.7	16.5
72.5°	4.0	5.6	8.1	14.9	16.5
75°	7.3	8.1	12.1	13.7	16.5
77.5°	5.6	8.1	8.1	8.9	16.5
80°	2.4	7.3	8.1	8.9	4.8
82.5°	3.2	4.8	3.2	8.9	6.5
85°	1.6	7.3	6.5	8.1	8.1
87.5°	2.4	4.0	4.0	7.3	4.8
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	18.1	18.9	18.1	12.9	9.7	8.9	6.5	11.3	3.2	3.2	0.0
65°	16.5	18.1	13.7	15.7	10.5	9.7	5.6	11.3	1.6	5.6	4.0







64°	2.4	4.0	4.0	7.3	11.3
65°	4.0	5.6	5.6	10.5	8.1



(END OF REPORT)