

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: P315228

Luminaire Tested: **LDA2B05FL8040D010 PINW1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315228  
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: LDA2B05FL8040D010 PINW1MMS  
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, White oculus, matte metallic silver finish  
Light Source: -  
Ballast/Driver: -

**Summary**

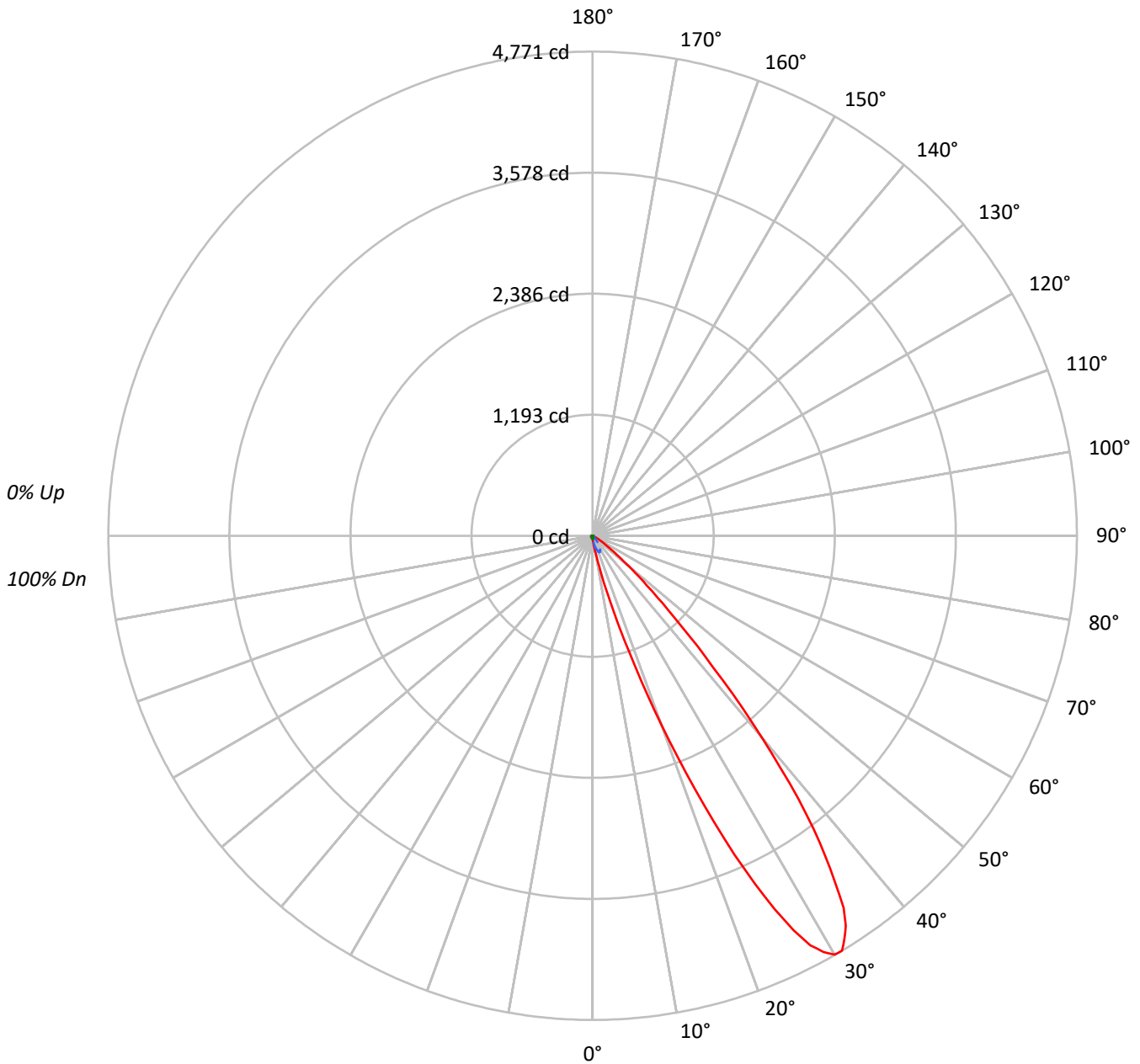
Lumens per Lamp: N/A  
Luminaire Lumens: 696.2 lumens  
Efficiency: N/A  
Efficacy: 99.5 lumens/watt  
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 7  
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



TEST NUMBER: P315228  
CATALOG NUMBER: LDA2B05FL8040D010 PINW1MMS

### Luminous Intensity Polar Plot





TEST NUMBER: P315228

CATALOG NUMBER: LDA2B05FL8040D010 PINW1MMS

**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°	14604	14604	14604
5°	32686	15105	11787
10°	87420	9418	3357
15°	344154	12156	7866
20°	1041176	7455	6143
25°	2060420	6369	5444
30°	2714948	3817	6665
35°	2505198	5541	8071
40°	1668703	4830	11013
45°	787097	1744	4675
50°	347002	6371	14430
55°	141151	0	14709
60°	58513	4144	13222
65°	19962	4903	9689
70°	16877	9665	24667
75°	9531	14297	32596
80°	0	7103	14206
85°	9623	9623	46984



TEST NUMBER: P315228

CATALOG NUMBER: LDA2B05FL8040D010 PINW1MMS

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	4.0	0.6
10°-20°	42.6	6.1
20°-30°	219.0	31.5
30°-40°	280.4	40.3
40°-50°	107.8	15.5
50°-60°	21.9	3.1
60°-70°	7.4	1.1
70°-80°	8.6	1.2
80°-90°	4.4	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°	265.6	38.2
0°-40°	546.0	78.4
0°-60°	675.7	97.1
0°-90°	696.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	696.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	30	30	30	30	30	
5°	66	54	30	22	24	10
15°	674	131	24	14	15	258
25°	3785	171	12	9	10	1728
35°	4160	89	9	8	13	2486
45°	1128	22	2	2	7	970
55°	164	4	0	3	17	170
65°	17	6	4	6	8	24
75°	5	9	8	12	17	7
85°	2	6	2	7	8	1
90°	0	0	0	0	0	



TEST NUMBER: P315228

CATALOG NUMBER: LDA2B05FL8040D010 PINW1MMS

**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6
2.5°	43.8	38.0	39.7	33.8	37.2	38.0	31.3	41.3	37.2	38.8	33.8
5°	66.0	71.0	65.1	62.6	61.0	62.6	61.0	63.5	61.8	54.3	38.8
7.5°	110.2	100.6	100.6	97.3	99.8	98.9	94.8	97.3	91.4	66.0	44.7
10°	174.5	164.9	164.1	161.6	160.7	153.2	149.0	145.7	133.6	78.1	40.5
12.5°	341.9	333.6	327.7	313.1	303.1	297.3	275.1	263.4	228.8	116.1	51.8
15°	673.8	630.8	641.7	594.5	559.9	536.9	491.0	450.5	367.4	131.1	50.1
17.5°	1192.4	1150.6	1122.6	1071.3	1000.7	939.8	849.2	759.4	590.3	149.0	46.8
20°	1983.1	1917.1	1858.7	1770.6	1634.9	1517.6	1358.1	1186.5	878.8	170.3	42.2
21°	2330.5	2279.5	2211.9	2095.8	1937.6	1780.6	1589.4	1382.7	1001.6	172.0	38.0
22°	2692.8	2659.9	2570.9	2437.8	2253.2	2066.2	1831.5	1604.4	1132.2	174.5	36.3
23°	3070.3	3035.6	2935.0	2782.6	2575.1	2348.8	2075.4	1806.1	1255.0	177.9	35.5
24°	3439.7	3401.3	3289.0	3118.7	2883.2	2623.1	2314.2	2001.9	1369.4	176.2	37.2
25°	3785.0	3731.6	3613.0	3424.3	3165.9	2874.0	2533.4	2171.0	1470.0	171.2	31.3
26°	4093.1	4032.2	3904.4	3698.6	3415.9	3099.9	2716.2	2328.0	1544.3	167.0	29.6
27°	4360.7	4283.9	4147.4	3931.5	3628.4	3279.4	2872.4	2450.7	1609.9	160.7	23.8
28°	4569.1	4481.0	4342.4	4114.4	3794.2	3419.3	2987.2	2527.5	1648.7	161.6	27.1
29°	4689.3	4621.7	4471.0	4232.1	3895.2	3499.9	3047.7	2570.1	1656.2	149.0	25.5
30°	4765.7	4690.1	4535.2	4285.6	3934.1	3518.2	3055.2	2562.2	1634.1	139.9	23.8
31°	4770.7	4691.8	4534.4	4276.0	3919.0	3487.8	3013.5	2515.0	1586.1	130.3	19.6
32°	4680.9	4620.0	4465.1	4198.3	3837.6	3403.8	2923.7	2435.2	1510.5	111.1	13.4
33°	4579.5	4505.6	4351.5	4082.3	3724.9	3289.0	2794.3	2328.0	1432.0	109.4	17.1
34°	4421.7	4332.8	4181.2	3916.1	3568.3	3125.4	2640.2	2184.7	1331.8	99.8	16.3
35°	4159.5	4111.9	3958.7	3696.9	3359.2	2929.1	2454.9	2027.4	1225.3	88.9	11.7
36°	3896.9	3838.4	3693.6	3440.6	3120.4	2695.3	2245.7	1847.8	1105.1	75.6	9.2
37°	3619.3	3542.9	3410.9	3163.4	2828.9	2462.4	2044.9	1676.7	1007.0	79.7	12.5
38°	3295.7	3270.2	3096.6	2866.1	2557.2	2211.1	1829.0	1496.3	898.4	74.3	20.5
39°	2940.0	2922.9	2749.6	2539.6	2262.4	1944.3	1608.2	1309.3	789.9	54.3	6.7
40°	2591.0	2542.1	2419.4	2228.6	1987.3	1701.3	1410.7	1149.8	696.0	53.4	13.4
42.5°	1756.0	1771.4	1638.7	1502.1	1347.3	1153.1	959.4	788.2	486.8	39.7	8.3
45°	1128.1	1131.4	1072.1	966.1	864.6	743.6	615.8	513.1	314.0	22.1	2.5
47.5°	718.1	716.4	678.4	617.5	551.1	480.1	400.4	335.2	203.3	17.1	7.5
50°	452.1	450.5	426.7	387.9	350.7	303.9	253.8	215.8	128.6	20.5	8.3
51°	367.4	369.9	349.9	310.6	281.8	237.1	202.5	172.0	100.6	14.2	7.5
52°	303.1	301.4	288.9	255.9	232.1	193.7	164.9	140.7	83.9	12.5	3.3
53°	243.8	244.7	232.1	206.7	183.7	154.9	131.9	109.4	60.1	9.2	2.5
54°	192.9	191.2	187.0	162.4	148.2	122.7	103.1	83.9	51.8	1.7	0.0
55°	164.1	161.6	155.7	134.4	120.2	101.5	82.2	71.8	44.7	4.2	0.0
57.5°	94.8	94.8	91.4	79.7	70.1	62.6	50.1	46.8	23.0	4.2	0.0
60°	59.3	51.8	57.6	49.3	38.8	34.7	28.8	26.3	19.6	7.5	1.7
61°	49.3	39.7	38.8	36.3	33.8	23.0	19.6	21.3	12.5	2.5	1.7
62°	35.5	31.3	33.8	28.8	25.5	18.0	16.3	15.4	7.5	3.3	4.2
63°	32.1	28.8	28.0	21.3	18.8	18.8	14.2	13.4	9.2	6.7	3.3



TEST NUMBER: P315228

CATALOG NUMBER: LDA2B05FL8040D010 PINW1MMS

**CANDELA DISTRIBUTION (continued):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
66°	17.1	14.2	12.5	14.2	8.3	10.9	4.2	11.7	2.5	4.2	2.5
67.5°	13.4	8.3	7.5	9.2	5.8	4.2	5.8	7.5	2.5	4.2	5.8
70°	11.7	5.8	8.3	7.5	5.8	7.5	8.3	8.3	2.5	8.3	7.5
72.5°	11.7	7.5	4.2	3.3	3.3	3.3	3.3	3.3	5.0	11.7	9.2
75°	5.0	5.0	2.5	5.8	3.3	5.0	3.3	8.3	3.3	9.2	7.5
77.5°	3.3	4.2	0.0	4.2	0.0	0.0	2.5	5.8	2.5	6.7	8.3
80°	0.0	4.2	2.5	0.0	1.7	2.5	0.0	0.8	1.7	7.5	3.3
82.5°	1.7	2.5	3.3	1.7	1.7	0.0	0.0	0.0	0.0	5.0	4.2
85°	1.7	3.3	0.0	0.8	3.3	1.7	0.8	4.2	1.7	5.8	6.7
87.5°	0.0	1.7	1.7	0.0	2.5	0.0	2.5	1.7	0.0	5.0	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P315228

CATALOG NUMBER: LDA2B05FL8040D010 PINW1MMS

**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
0°	29.6	29.6	29.6	29.6	29.6
2.5°	25.5	23.0	19.6	24.6	20.5
5°	30.5	28.0	22.1	26.3	23.8
7.5°	31.3	26.3	23.0	21.3	23.8
10°	18.8	12.5	9.2	12.5	6.7
12.5°	31.3	22.1	20.5	23.0	25.5
15°	23.8	14.2	14.2	10.9	15.4
17.5°	13.4	10.9	10.0	13.4	15.4
20°	14.2	9.2	7.5	12.5	11.7
21°	12.5	3.3	10.0	10.0	11.7
22°	18.0	8.3	10.0	16.3	17.1
23°	11.7	9.2	7.5	10.0	13.4
24°	17.1	10.0	9.2	12.5	18.8
25°	11.7	9.2	9.2	11.7	10.0
26°	6.7	9.2	6.7	10.0	8.3
27°	5.0	8.3	5.0	7.5	10.0
28°	10.9	13.4	12.5	13.4	11.7
29°	11.7	14.2	11.7	18.0	13.4
30°	6.7	12.5	5.8	13.4	11.7
31°	6.7	9.2	4.2	13.4	11.7
32°	0.8	5.0	2.5	5.0	5.0
33°	5.0	5.8	6.7	10.9	8.3
34°	8.3	10.0	6.7	11.7	10.0
35°	9.2	5.0	7.5	12.5	13.4
36°	2.5	2.5	4.2	10.0	3.3
37°	5.0	14.2	10.0	17.1	10.0
38°	8.3	17.1	16.3	21.3	17.1
39°	1.7	5.0	5.8	11.7	11.7
40°	7.5	12.5	9.2	17.1	17.1
42.5°	5.8	9.2	6.7	14.2	11.7
45°	2.5	2.5	1.7	9.2	6.7
47.5°	4.2	4.2	7.5	11.7	20.5
50°	8.3	8.3	10.9	19.6	18.8
51°	5.0	4.2	5.8	13.4	17.1
52°	4.2	5.8	5.8	13.4	13.4
53°	1.7	0.0	0.0	10.0	8.3
54°	1.7	0.8	2.5	7.5	11.7
55°	0.0	4.2	3.3	15.4	17.1
57.5°	0.8	6.7	3.3	10.9	13.4
60°	4.2	5.0	9.2	10.9	13.4
61°	0.0	4.2	4.2	10.0	11.7
62°	0.0	3.3	7.5	9.2	11.7
63°	4.2	5.0	6.7	10.9	13.4





TEST NUMBER: P315228

CATALOG NUMBER: LDA2B05FL8040D010 PINW1MMS

**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	2.5	6.7	8.3	10.9	10.0
67.5°	5.0	5.8	5.0	14.2	17.1
70°	6.7	10.9	11.7	10.0	17.1
72.5°	4.2	5.8	8.3	15.4	17.1
75°	7.5	8.3	12.5	14.2	17.1
77.5°	5.8	8.3	8.3	9.2	17.1
80°	2.5	7.5	8.3	9.2	5.0
82.5°	3.3	5.0	3.3	9.2	6.7
85°	1.7	7.5	6.7	8.3	8.3
87.5°	2.5	4.2	4.2	7.5	5.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	18.8	19.6	18.8	13.4	10.0	9.2	6.7	11.7	3.3	3.3	0.0
65°	17.1	18.8	14.2	16.3	10.9	10.0	5.8	11.7	1.7	5.8	4.2







64°	2.5	4.2	4.2	7.5	11.7
65°	4.2	5.8	5.8	10.9	8.3



(END OF REPORT)