

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: P315223

Luminaire Tested: **LDA2B05FL8035D010 PIN1MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315223
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: LDA2B05FL8035D010 PIN1MB
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, Black oculus black finish
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 644.2 lumens
Efficiency: N/A
Efficacy: 92.0 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

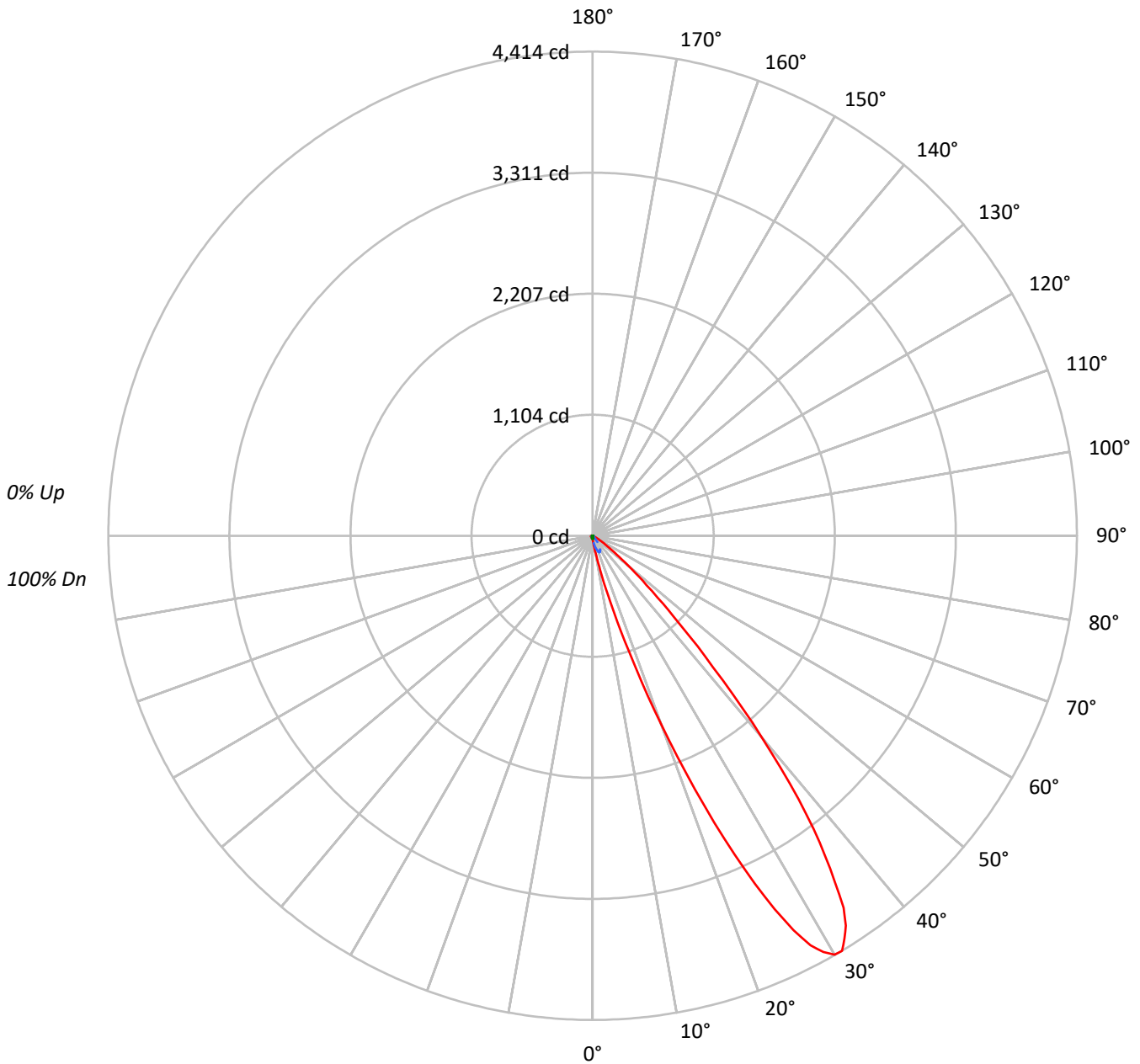
Input Watts (W): 7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P315223

CATALOG NUMBER: LDA2B05FL8035D010 PIN1MB

Luminous Intensity Polar Plot





TEST NUMBER: P315223

CATALOG NUMBER: LDA2B05FL8035D010 PIN1MB

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°	13518	13518	13518
5°	30210	13966	10895
10°	80907	8717	3106
15°	318462	11237	7304
20°	963368	6878	5670
25°	1906473	5879	5063
30°	2512140	3532	6153
35°	2318069	5119	7468
40°	1544017	4508	10176
45°	728279	1605	4326
50°	321137	5910	13355
55°	130571	0	13590
60°	54171	3848	12235
65°	18445	4553	8989
70°	15579	8943	22791
75°	8769	13343	30118
80°	0	6535	13069
85°	8491	8491	43587



TEST NUMBER: P315223

CATALOG NUMBER: LDA2B05FL8035D010 PIN1MB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.7	0.6
10°-20°	39.4	6.1
20°-30°	202.6	31.5
30°-40°	259.4	40.3
40°-50°	99.8	15.5
50°-60°	20.3	3.1
60°-70°	6.9	1.1
70°-80°	8.0	1.2
80°-90°	4.1	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°	245.7	38.1
0°-40°	505.2	78.4
0°-60°	625.2	97.1
0°-90°	644.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	644.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	27	27	27	27	27	
5°	61	50	28	20	22	9
15°	624	121	22	13	14	239
25°	3502	158	11	8	9	1599
35°	3849	82	8	7	12	2300
45°	1044	20	2	2	6	897
55°	152	4	0	3	16	157
65°	16	5	4	5	8	22
75°	5	8	7	12	16	6
85°	2	5	2	6	8	1
90°	0	0	0	0	0	



TEST NUMBER: P315223

CATALOG NUMBER: LDA2B05FL8035D010 PIN1MB

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4
2.5°	40.6	35.2	36.7	31.3	34.4	35.2	29.0	38.2	34.4	35.9	31.3
5°	61.0	65.7	60.3	57.9	56.4	57.9	56.4	58.7	57.2	50.2	35.9
7.5°	102.0	93.1	93.1	90.0	92.3	91.6	87.7	90.0	84.6	61.0	41.3
10°	161.5	152.6	151.8	149.5	148.7	141.8	137.9	134.8	123.6	72.2	37.5
12.5°	316.4	308.7	303.2	289.7	280.5	275.0	254.6	243.8	211.7	107.4	47.9
15°	623.5	583.7	593.8	550.1	518.0	496.8	454.3	416.8	339.9	121.3	46.4
17.5°	1103.3	1064.7	1038.8	991.3	926.0	869.6	785.7	702.7	546.2	137.9	43.3
20°	1834.9	1773.9	1719.8	1638.3	1512.8	1404.2	1256.7	1097.9	813.2	157.6	39.0
21°	2156.4	2109.2	2046.6	1939.3	1792.8	1647.6	1470.7	1279.4	926.7	159.2	35.2
22°	2491.7	2461.1	2378.9	2255.6	2084.9	1911.8	1694.7	1484.6	1047.7	161.5	33.6
23°	2840.9	2808.8	2715.7	2574.7	2382.7	2173.4	1920.3	1671.2	1161.2	164.6	32.8
24°	3182.8	3147.2	3043.3	2885.7	2667.8	2427.2	2141.3	1852.3	1267.1	163.0	34.4
25°	3502.2	3452.8	3343.1	3168.5	2929.4	2659.3	2344.1	2008.8	1360.2	158.4	29.0
26°	3787.3	3730.9	3612.7	3422.3	3160.7	2868.3	2513.3	2154.0	1428.9	154.5	27.4
27°	4035.0	3963.9	3837.6	3637.8	3357.4	3034.4	2657.8	2267.6	1489.6	148.7	22.0
28°	4227.7	4146.2	4018.0	3807.0	3510.7	3163.8	2764.0	2338.7	1525.5	149.5	25.1
29°	4339.0	4276.4	4136.9	3916.0	3604.2	3238.4	2820.0	2378.1	1532.5	137.9	23.6
30°	4409.7	4339.8	4196.4	3965.4	3640.2	3255.4	2827.0	2370.8	1512.0	129.4	22.0
31°	4414.3	4341.3	4195.7	3956.5	3626.2	3227.2	2788.4	2327.1	1467.6	120.5	18.2
32°	4331.3	4274.9	4131.5	3884.7	3550.9	3149.5	2705.3	2253.3	1397.7	102.8	12.4
33°	4237.4	4169.0	4026.5	3777.3	3446.6	3043.3	2585.5	2154.0	1325.0	101.2	15.8
34°	4091.4	4009.1	3868.8	3623.5	3301.7	2891.9	2443.0	2021.5	1232.3	92.3	15.1
35°	3848.8	3804.7	3662.9	3420.7	3108.2	2710.3	2271.5	1875.9	1133.8	82.3	10.8
36°	3605.8	3551.7	3417.6	3183.5	2887.2	2494.0	2077.9	1709.8	1022.5	69.9	8.5
37°	3348.9	3278.2	3156.1	2927.0	2617.6	2278.4	1892.1	1551.4	931.8	73.8	11.6
38°	3049.5	3025.9	2865.2	2652.0	2366.1	2045.9	1692.4	1384.5	831.3	68.8	18.9
39°	2720.4	2704.5	2544.2	2349.9	2093.4	1799.0	1488.0	1211.5	730.9	50.2	6.2
40°	2397.4	2352.2	2238.6	2062.1	1838.8	1574.2	1305.3	1063.9	644.0	49.4	12.4
42.5°	1624.8	1639.1	1516.2	1389.9	1246.6	1067.0	887.7	729.3	450.4	36.7	7.7
45°	1043.8	1046.9	992.0	893.9	800.0	688.0	569.8	474.8	290.5	20.5	2.3
47.5°	664.4	662.9	627.7	571.3	509.9	444.3	370.5	310.2	188.1	15.8	7.0
50°	418.4	416.8	394.8	358.9	324.5	281.2	234.9	199.7	119.0	18.9	7.7
51°	339.9	342.3	323.7	287.4	260.8	219.4	187.4	159.2	93.1	13.1	7.0
52°	280.5	278.9	267.3	236.8	214.8	179.2	152.6	130.2	77.6	11.6	3.1
53°	225.6	226.4	214.8	191.2	170.0	143.3	122.1	101.2	55.6	8.5	2.3
54°	178.5	176.9	173.1	150.3	137.1	113.6	95.4	77.6	47.9	1.5	0.0
55°	151.8	149.5	144.1	124.4	111.3	93.9	76.1	66.4	41.3	3.9	0.0
57.5°	87.7	87.7	84.6	73.8	64.9	57.9	46.4	43.3	21.2	3.9	0.0
60°	54.9	47.9	53.3	45.6	35.9	32.1	26.7	24.3	18.2	7.0	1.5
61°	45.6	36.7	35.9	33.6	31.3	21.2	18.2	19.7	11.6	2.3	1.5
62°	32.8	29.0	31.3	26.7	23.6	16.6	15.1	14.3	7.0	3.1	3.9
63°	29.7	26.7	25.9	19.7	17.4	17.4	13.1	12.4	8.5	6.2	3.1



TEST NUMBER: P315223

CATALOG NUMBER: LDA2B05FL8035D010 PIN1MB

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
66°	15.8	13.1	11.6	13.1	7.7	10.0	3.9	10.8	2.3	3.9	2.3
67.5°	12.4	7.7	7.0	8.5	5.4	3.9	5.4	7.0	2.3	3.9	5.4
70°	10.8	5.4	7.7	7.0	5.4	7.0	7.7	7.7	2.3	7.7	7.0
72.5°	10.8	7.0	3.9	3.1	3.1	3.1	3.1	3.1	4.6	10.8	8.5
75°	4.6	4.6	2.3	5.4	3.1	4.6	3.1	7.7	3.1	8.5	7.0
77.5°	3.1	3.9	0.0	3.9	0.0	0.0	2.3	5.4	2.3	6.2	7.7
80°	0.0	3.9	2.3	0.0	1.5	2.3	0.0	0.8	1.5	7.0	3.1
82.5°	1.5	2.3	3.1	1.5	1.5	0.0	0.0	0.0	0.0	4.6	3.9
85°	1.5	3.1	0.0	0.8	3.1	1.5	0.8	3.9	1.5	5.4	6.2
87.5°	0.0	1.5	1.5	0.0	2.3	0.0	2.3	1.5	0.0	4.6	2.3
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: P315223

CATALOG NUMBER: LDA2B05FL8035D010 PIN1MB

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	27.4	27.4	27.4	27.4	27.4
2.5°	23.6	21.2	18.2	22.8	18.9
5°	28.2	25.9	20.5	24.3	22.0
7.5°	29.0	24.3	21.2	19.7	22.0
10°	17.4	11.6	8.5	11.6	6.2
12.5°	29.0	20.5	18.9	21.2	23.6
15°	22.0	13.1	13.1	10.0	14.3
17.5°	12.4	10.0	9.3	12.4	14.3
20°	13.1	8.5	7.0	11.6	10.8
21°	11.6	3.1	9.3	9.3	10.8
22°	16.6	7.7	9.3	15.1	15.8
23°	10.8	8.5	7.0	9.3	12.4
24°	15.8	9.3	8.5	11.6	17.4
25°	10.8	8.5	8.5	10.8	9.3
26°	6.2	8.5	6.2	9.3	7.7
27°	4.6	7.7	4.6	7.0	9.3
28°	10.0	12.4	11.6	12.4	10.8
29°	10.8	13.1	10.8	16.6	12.4
30°	6.2	11.6	5.4	12.4	10.8
31°	6.2	8.5	3.9	12.4	10.8
32°	0.8	4.6	2.3	4.6	4.6
33°	4.6	5.4	6.2	10.0	7.7
34°	7.7	9.3	6.2	10.8	9.3
35°	8.5	4.6	7.0	11.6	12.4
36°	2.3	2.3	3.9	9.3	3.1
37°	4.6	13.1	9.3	15.8	9.3
38°	7.7	15.8	15.1	19.7	15.8
39°	1.5	4.6	5.4	10.8	10.8
40°	7.0	11.6	8.5	15.8	15.8
42.5°	5.4	8.5	6.2	13.1	10.8
45°	2.3	2.3	1.5	8.5	6.2
47.5°	3.9	3.9	7.0	10.8	18.9
50°	7.7	7.7	10.0	18.2	17.4
51°	4.6	3.9	5.4	12.4	15.8
52°	3.9	5.4	5.4	12.4	12.4
53°	1.5	0.0	0.0	9.3	7.7
54°	1.5	0.8	2.3	7.0	10.8
55°	0.0	3.9	3.1	14.3	15.8
57.5°	0.8	6.2	3.1	10.0	12.4
60°	3.9	4.6	8.5	10.0	12.4
61°	0.0	3.9	3.9	9.3	10.8
62°	0.0	3.1	7.0	8.5	10.8
63°	3.9	4.6	6.2	10.0	12.4



TEST NUMBER: P315223

CATALOG NUMBER: LDA2B05FL8035D010 PIN1MB

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	2.3	6.2	7.7	10.0	9.3
67.5°	4.6	5.4	4.6	13.1	15.8
70°	6.2	10.0	10.8	9.3	15.8
72.5°	3.9	5.4	7.7	14.3	15.8
75°	7.0	7.7	11.6	13.1	15.8
77.5°	5.4	7.7	7.7	8.5	15.8
80°	2.3	7.0	7.7	8.5	4.6
82.5°	3.1	4.6	3.1	8.5	6.2
85°	1.5	7.0	6.2	7.7	7.7
87.5°	2.3	3.9	3.9	7.0	4.6
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	17.4	18.2	17.4	12.4	9.3	8.5	6.2	10.8	3.1	3.1	0.0
65°	15.8	17.4	13.1	15.1	10.0	9.3	5.4	10.8	1.5	5.4	3.9





64°	2.3	3.9	3.9	7.0	10.8
65°	3.9	5.4	5.4	10.0	7.7



(END OF REPORT)