

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: P315239

Luminaire Tested: **LDA2B05FL9024D010 PIN1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315239
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: LDA2B05FL9024D010 PIN1MMS
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, Black oculus, matte metallic silver finish
Light Source: -
Ballast/Driver: -

Summary

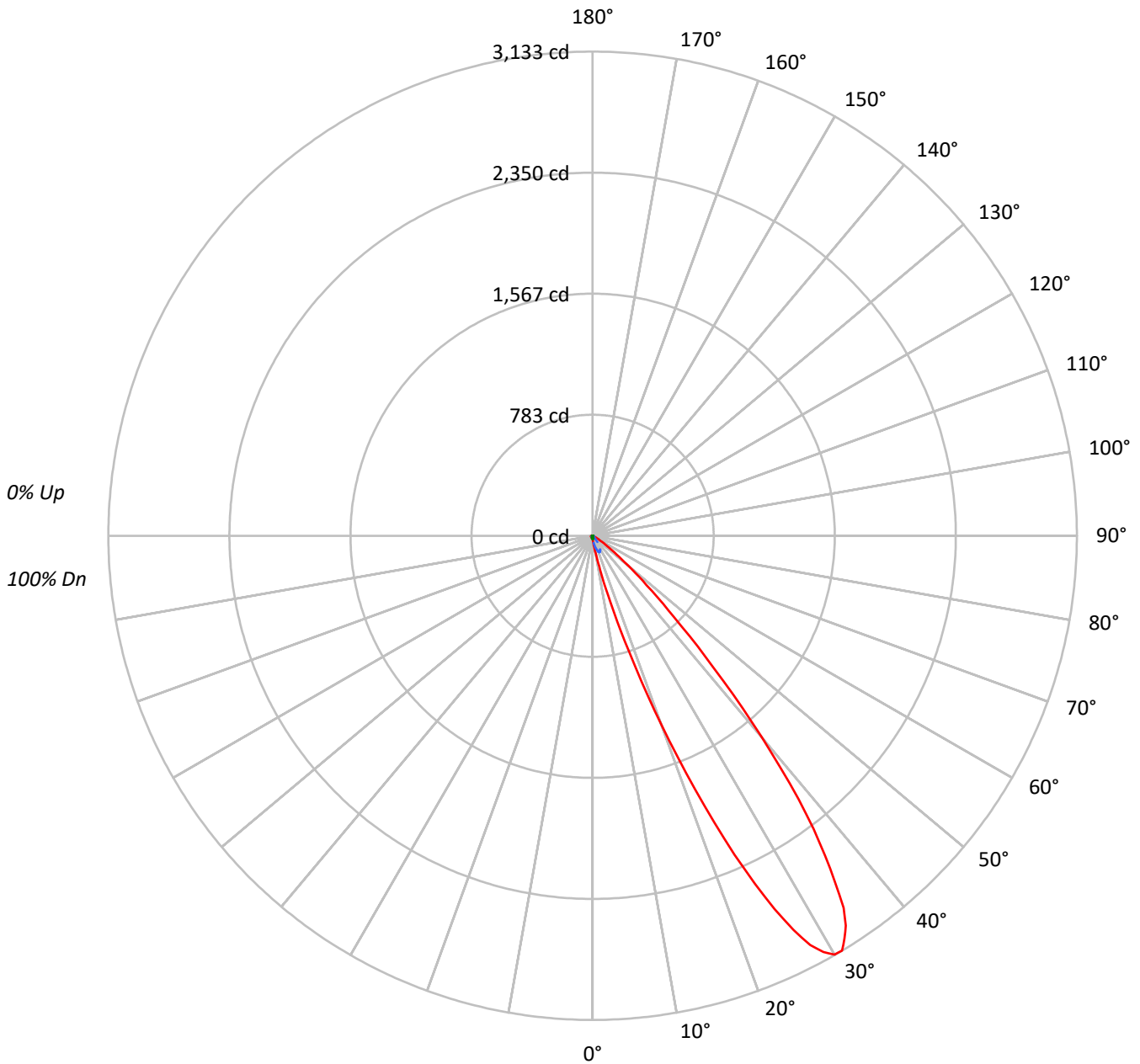
Lumens per Lamp: N/A
Luminaire Lumens: 457.1 lumens
Efficiency: N/A
Efficacy: 65.3 lumens/watt
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 7
Input Voltage (V): NR
Input Current (Ain): 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: P315239
CATALOG NUMBER: LDA2B05FL9024D010 PIN1MMS

Luminous Intensity Polar Plot





TEST NUMBER: P315239

CATALOG NUMBER: LDA2B05FL9024D010 PIN1MMS

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	83	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°	9621	9621	9621
5°	21444	9905	7726
10°	57411	6162	2204
15°	226014	7968	5159
20°	683687	4883	4043
25°	1352964	4192	3593
30°	1782773	2507	4387
35°	1645017	3614	5300
40°	1095702	3156	7213
45°	516800	1116	3070
50°	227881	4221	9441
55°	92638	0	9634
60°	38384	2664	8683
65°	13075	3152	6421
70°	11107	6347	16156
75°	6290	9340	21349
80°	0	4546	9376
85°	6227	6227	31134



TEST NUMBER: P315239

CATALOG NUMBER: LDA2B05FL9024D010 PIN1MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.6	0.6
10°-20°	28.0	6.1
20°-30°	143.8	31.5
30°-40°	184.1	40.3
40°-50°	70.8	15.5
50°-60°	14.4	3.1
60°-70°	4.9	1.1
70°-80°	5.7	1.2
80°-90°	2.9	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°	174.4	38.2
0°-40°	358.5	78.4
0°-60°	443.7	97.1
0°-90°	457.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	457.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	20	20	20	20	20	
5°	43	36	20	14	16	6
15°	442	86	16	9	10	170
25°	2485	112	8	6	7	1134
35°	2731	58	6	5	9	1632
45°	741	14	2	1	4	637
55°	108	3	0	2	11	112
65°	11	4	3	4	6	16
75°	3	6	5	8	11	4
85°	1	4	1	4	6	1
90°	0	0	0	0	0	



TEST NUMBER: P315239

CATALOG NUMBER: LDA2B05FL9024D010 PIN1MMS

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
2.5°	28.8	24.9	26.0	22.2	24.4	24.9	20.6	27.1	24.4	25.5	22.2
5°	43.3	46.6	42.8	41.1	40.0	41.1	40.0	41.7	40.6	35.6	25.5
7.5°	72.4	66.1	66.1	63.9	65.5	65.0	62.2	63.9	60.0	43.3	29.3
10°	114.6	108.3	107.7	106.1	105.5	100.6	97.9	95.7	87.7	51.3	26.6
12.5°	224.5	219.0	215.2	205.6	199.0	195.2	180.7	173.0	150.2	76.2	34.0
15°	442.5	414.2	421.4	390.4	367.6	352.5	322.4	295.8	241.2	86.1	32.9
17.5°	783.0	755.5	737.2	703.5	657.1	617.1	557.6	498.7	387.6	97.9	30.7
20°	1302.2	1258.9	1220.5	1162.6	1073.5	996.5	891.8	779.1	577.1	111.9	27.7
21°	1530.3	1496.8	1452.4	1376.2	1272.3	1169.2	1043.7	908.0	657.7	112.9	24.9
22°	1768.2	1746.6	1688.2	1600.7	1479.6	1356.7	1202.7	1053.5	743.5	114.6	23.9
23°	2016.1	1993.3	1927.2	1827.2	1690.9	1542.3	1362.8	1185.9	824.1	116.8	23.3
24°	2258.7	2233.5	2159.7	2047.9	1893.2	1722.4	1519.6	1314.5	899.2	115.7	24.4
25°	2485.4	2450.3	2372.4	2248.5	2078.8	1887.2	1663.5	1425.5	965.3	112.4	20.6
26°	2687.7	2647.7	2563.8	2428.6	2243.0	2035.5	1783.6	1528.6	1014.1	109.7	19.5
27°	2863.4	2813.0	2723.3	2581.6	2382.6	2153.4	1886.1	1609.2	1057.1	105.5	15.6
28°	3000.2	2942.4	2851.4	2701.7	2491.4	2245.2	1961.5	1659.7	1082.6	106.1	17.8
29°	3079.2	3034.8	2935.8	2779.0	2557.8	2298.1	2001.3	1687.6	1087.5	97.9	16.7
30°	3129.4	3079.7	2978.0	2814.1	2583.3	2310.2	2006.2	1682.4	1073.0	91.8	15.6
31°	3132.6	3080.8	2977.5	2807.8	2573.4	2290.2	1978.8	1651.4	1041.5	85.5	12.9
32°	3073.7	3033.7	2932.0	2756.8	2519.9	2235.1	1919.8	1599.1	991.9	72.9	8.8
33°	3007.1	2958.6	2857.4	2680.6	2445.9	2159.7	1834.8	1528.6	940.3	71.8	11.2
34°	2903.5	2845.1	2745.6	2571.5	2343.1	2052.2	1733.7	1434.6	874.5	65.5	10.7
35°	2731.3	2700.0	2599.4	2427.5	2205.8	1923.4	1612.0	1331.2	804.6	58.4	7.7
36°	2558.9	2520.5	2425.4	2259.2	2049.0	1769.9	1474.6	1213.4	725.7	49.6	6.0
37°	2376.6	2326.4	2239.8	2077.2	1857.6	1616.9	1342.8	1101.0	661.2	52.4	8.2
38°	2164.1	2147.4	2033.3	1882.0	1679.1	1451.9	1201.0	982.5	590.0	48.8	13.4
39°	1930.5	1919.3	1805.5	1667.6	1485.6	1276.7	1056.0	859.7	518.7	35.6	4.4
40°	1701.3	1669.3	1588.7	1463.4	1304.9	1117.1	926.3	755.0	457.0	35.1	8.8
42.5°	1153.0	1163.2	1076.0	986.4	884.7	757.2	630.0	517.6	319.7	26.0	5.5
45°	740.7	742.9	704.0	634.4	567.8	488.3	404.4	336.9	206.2	14.5	1.6
47.5°	471.5	470.4	445.5	405.5	361.9	315.3	262.9	220.1	133.5	11.2	4.9
50°	296.9	295.8	280.2	254.7	230.3	199.6	166.7	141.7	84.4	13.4	5.5
51°	241.2	242.9	229.7	204.0	185.0	155.7	133.0	112.9	66.1	9.3	4.9
52°	199.0	197.9	189.7	168.1	152.4	127.2	108.3	92.4	55.1	8.2	2.2
53°	160.1	160.6	152.4	135.7	120.6	101.7	86.6	71.8	39.5	6.0	1.6
54°	126.7	125.6	122.8	106.6	97.3	80.6	67.7	55.1	34.0	1.1	0.0
55°	107.7	106.1	102.3	88.3	79.0	66.6	54.0	47.2	29.3	2.7	0.0
57.5°	62.2	62.2	60.0	52.4	46.1	41.1	32.9	30.7	15.1	2.7	0.0
60°	38.9	34.0	37.8	32.3	25.5	22.8	18.9	17.3	12.9	4.9	1.1
61°	32.3	26.0	25.5	23.9	22.2	15.1	12.9	14.0	8.2	1.6	1.1
62°	23.3	20.6	22.2	18.9	16.7	11.8	10.7	10.1	4.9	2.2	2.7
63°	21.1	18.9	18.4	14.0	12.3	12.3	9.3	8.8	6.0	4.4	2.2



TEST NUMBER: P315239

CATALOG NUMBER: LDA2B05FL9024D010 PIN1MMS

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
66°	11.2	9.3	8.2	9.3	5.5	7.1	2.7	7.7	1.6	2.7	1.6
67.5°	8.8	5.5	4.9	6.0	3.8	2.7	3.8	4.9	1.6	2.7	3.8
70°	7.7	3.8	5.5	4.9	3.8	4.9	5.5	5.5	1.6	5.5	4.9
72.5°	7.7	4.9	2.7	2.2	2.2	2.2	2.2	2.2	3.3	7.7	6.0
75°	3.3	3.3	1.6	3.8	2.2	3.3	2.2	5.5	2.2	6.0	4.9
77.5°	2.2	2.7	0.0	2.7	0.0	0.0	1.6	3.8	1.6	4.4	5.5
80°	0.0	2.7	1.6	0.0	1.1	1.6	0.0	0.5	1.1	4.9	2.2
82.5°	1.1	1.6	2.2	1.1	1.1	0.0	0.0	0.0	0.0	3.3	2.7
85°	1.1	2.2	0.0	0.5	2.2	1.1	0.5	2.7	1.1	3.8	4.4
87.5°	0.0	1.1	1.1	0.0	1.6	0.0	1.6	1.1	0.0	3.3	1.6
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: P315239

CATALOG NUMBER: LDA2B05FL9024D010 PIN1MMS

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	19.5	19.5	19.5	19.5	19.5
2.5°	16.7	15.1	12.9	16.2	13.4
5°	20.0	18.4	14.5	17.3	15.6
7.5°	20.6	17.3	15.1	14.0	15.6
10°	12.3	8.2	6.0	8.2	4.4
12.5°	20.6	14.5	13.4	15.1	16.7
15°	15.6	9.3	9.3	7.1	10.1
17.5°	8.8	7.1	6.6	8.8	10.1
20°	9.3	6.0	4.9	8.2	7.7
21°	8.2	2.2	6.6	6.6	7.7
22°	11.8	5.5	6.6	10.7	11.2
23°	7.7	6.0	4.9	6.6	8.8
24°	11.2	6.6	6.0	8.2	12.3
25°	7.7	6.0	6.0	7.7	6.6
26°	4.4	6.0	4.4	6.6	5.5
27°	3.3	5.5	3.3	4.9	6.6
28°	7.1	8.8	8.2	8.8	7.7
29°	7.7	9.3	7.7	11.8	8.8
30°	4.4	8.2	3.8	8.8	7.7
31°	4.4	6.0	2.7	8.8	7.7
32°	0.5	3.3	1.6	3.3	3.3
33°	3.3	3.8	4.4	7.1	5.5
34°	5.5	6.6	4.4	7.7	6.6
35°	6.0	3.3	4.9	8.2	8.8
36°	1.6	1.6	2.7	6.6	2.2
37°	3.3	9.3	6.6	11.2	6.6
38°	5.5	11.2	10.7	14.0	11.2
39°	1.1	3.3	3.8	7.7	7.7
40°	4.9	8.2	6.0	11.2	11.2
42.5°	3.8	6.0	4.4	9.3	7.7
45°	1.6	1.6	1.1	6.0	4.4
47.5°	2.7	2.7	4.9	7.7	13.4
50°	5.5	5.5	7.1	12.9	12.3
51°	3.3	2.7	3.8	8.8	11.2
52°	2.7	3.8	3.8	8.8	8.8
53°	1.1	0.0	0.0	6.6	5.5
54°	1.1	0.5	1.6	4.9	7.7
55°	0.0	2.7	2.2	10.1	11.2
57.5°	0.5	4.4	2.2	7.1	8.8
60°	2.7	3.3	6.0	7.1	8.8
61°	0.0	2.7	2.7	6.6	7.7
62°	0.0	2.2	4.9	6.0	7.7
63°	2.7	3.3	4.4	7.1	8.8



TEST NUMBER: P315239

CATALOG NUMBER: LDA2B05FL9024D010 PIN1MMS

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	1.6	4.4	5.5	7.1	6.6
67.5°	3.3	3.8	3.3	9.3	11.2
70°	4.4	7.1	7.7	6.6	11.2
72.5°	2.7	3.8	5.5	10.1	11.2
75°	4.9	5.5	8.2	9.3	11.2
77.5°	3.8	5.5	5.5	6.0	11.2
80°	1.6	4.9	5.5	6.0	3.3
82.5°	2.2	3.3	2.2	6.0	4.4
85°	1.1	4.9	4.4	5.5	5.5
87.5°	1.6	2.7	2.7	4.9	3.3
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	12.3	12.9	12.3	8.8	6.6	6.0	4.4	7.7	2.2	2.2	0.0
65°	11.2	12.3	9.3	10.7	7.1	6.6	3.8	7.7	1.1	3.8	2.7





64°	1.6	2.7	2.7	4.9	7.7
65°	2.7	3.8	3.8	7.1	5.5



(END OF REPORT)