

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: P315269

Luminaire Tested: **LDA2B05FL9050D010 PIN1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315269
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: LDA2B05FL9050D010 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

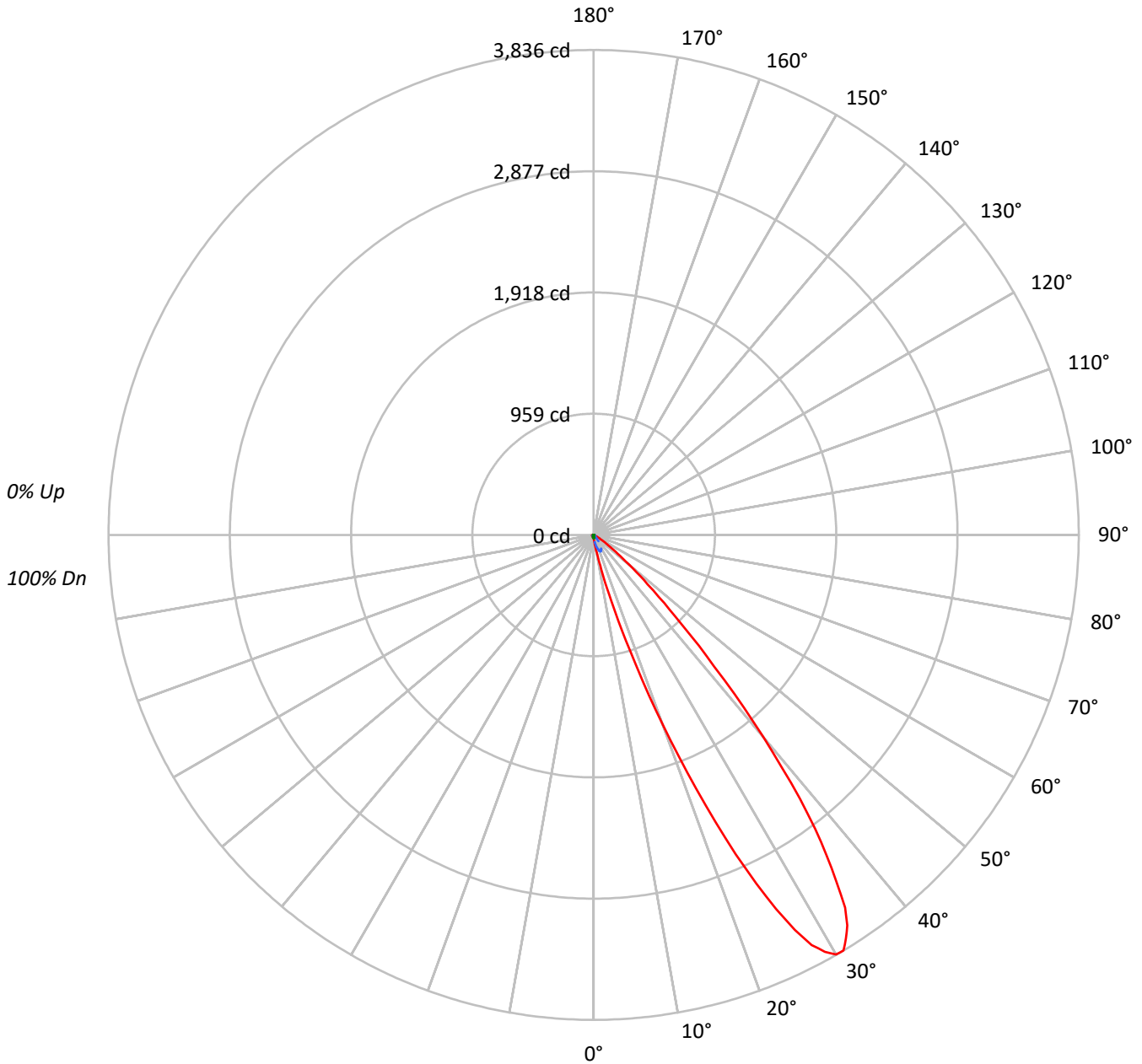
Lumens per Lamp: N/A
Luminaire Lumens: 559.7 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

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: P315269
CATALOG NUMBER: LDA2B05FL9050D010 PIN1MMS

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°	11742	11742	11742
5°	26248	12134	9459
10°	70286	7565	2705
15°	276733	9756	6333
20°	837152	5985	4935
25°	1656664	5117	4409
30°	2182919	3076	5355
35°	2014277	4457	6444
40°	1341660	3864	8888
45°	632831	1395	3768
50°	278999	5142	11590
55°	113454	0	11870
60°	47067	3355	10558
65°	16110	3969	7822
70°	13559	7789	19906
75°	7625	11437	26306
80°	0	5682	11365
85°	7359	7359	37927



TEST NUMBER: P315269

CATALOG NUMBER: LDA2B05FL9050D010 PIN1MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.2	0.6
10°-20°	34.2	6.1
20°-30°	176.0	31.5
30°-40°	225.4	40.3
40°-50°	86.7	15.5
50°-60°	17.6	3.1
60°-70°	6.0	1.1
70°-80°	6.9	1.2
80°-90°	3.5	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°	213.5	38.1
0°-40°	439.0	78.4
0°-60°	543.3	97.1
0°-90°	559.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	559.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	24	24	24	24	24	
5°	53	44	24	18	19	8
15°	542	105	19	11	12	208
25°	3043	138	9	7	8	1389
35°	3344	72	7	6	11	1999
45°	907	18	2	1	5	780
55°	132	3	0	3	14	137
65°	14	5	3	5	7	19
75°	4	7	6	10	14	5
85°	1	5	1	5	7	1
90°	0	0	0	0	0	



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CATALOG NUMBER: LDA2B05FL9050D010 PIN1MMS

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
2.5°	35.2	30.5	31.9	27.2	29.9	30.5	25.2	33.2	29.9	31.2	27.2
5°	53.0	57.1	52.4	50.4	49.0	50.4	49.0	51.0	49.7	43.6	31.2
7.5°	88.6	80.9	80.9	78.2	80.2	79.6	76.2	78.2	73.5	53.0	35.9
10°	140.3	132.6	131.9	129.9	129.2	123.2	119.8	117.2	107.4	62.8	32.6
12.5°	274.9	268.2	263.5	251.8	243.7	239.0	221.2	211.8	184.0	93.3	41.6
15°	541.8	507.2	515.9	478.0	450.1	431.7	394.8	362.2	295.4	105.4	40.3
17.5°	958.7	925.1	902.6	861.4	804.6	755.6	682.8	610.6	474.7	119.8	37.6
20°	1594.5	1541.4	1494.4	1423.6	1314.5	1220.2	1092.0	954.0	706.6	137.0	33.9
21°	1873.8	1832.8	1778.4	1685.1	1557.9	1431.7	1277.9	1111.8	805.3	138.3	30.5
22°	2165.1	2138.6	2067.1	1960.0	1811.7	1661.3	1472.6	1290.0	910.4	140.3	29.2
23°	2468.6	2440.7	2359.8	2237.3	2070.5	1888.5	1668.7	1452.2	1009.1	143.0	28.5
24°	2765.7	2734.8	2644.5	2507.5	2318.2	2109.1	1860.7	1609.6	1101.0	141.7	29.9
25°	3043.3	3000.3	2905.0	2753.2	2545.5	2310.8	2036.9	1745.5	1181.9	137.6	25.2
26°	3291.0	3242.0	3139.3	2973.8	2746.5	2492.4	2183.9	1871.8	1241.7	134.3	23.8
27°	3506.2	3444.4	3334.6	3161.1	2917.4	2636.8	2309.5	1970.4	1294.4	129.2	19.1
28°	3673.7	3602.9	3491.4	3308.1	3050.7	2749.2	2401.8	2032.2	1325.6	129.9	21.8
29°	3770.4	3716.0	3594.8	3402.8	3131.9	2814.0	2450.5	2066.4	1331.6	119.8	20.5
30°	3831.8	3771.0	3646.5	3445.8	3163.1	2828.8	2456.5	2060.1	1313.9	112.5	19.1
31°	3835.8	3772.4	3645.8	3438.0	3151.0	2804.3	2422.9	2022.1	1275.2	104.7	15.8
32°	3763.6	3714.6	3590.1	3375.6	3085.6	2736.8	2350.8	1958.0	1214.5	89.3	10.7
33°	3682.1	3622.7	3498.8	3282.3	2994.9	2644.5	2246.7	1871.8	1151.4	87.9	13.8
34°	3555.2	3483.7	3361.8	3148.7	2869.1	2512.9	2122.8	1756.6	1070.8	80.2	13.1
35°	3344.4	3306.1	3182.9	2972.4	2700.9	2355.1	1973.8	1630.1	985.2	71.5	9.4
36°	3133.2	3086.2	2969.8	2766.3	2508.9	2167.2	1805.6	1485.7	888.5	60.8	7.4
37°	2910.0	2848.6	2742.5	2543.4	2274.6	1979.8	1644.2	1348.1	809.7	64.1	10.1
38°	2649.9	2629.4	2489.7	2304.4	2056.0	1777.8	1470.6	1203.1	722.4	59.8	16.4
39°	2363.9	2350.1	2210.8	2041.9	1819.1	1563.3	1293.0	1052.7	635.1	43.6	5.4
40°	2083.2	2044.0	1945.3	1791.9	1597.8	1367.9	1134.3	924.5	559.6	43.0	10.7
42.5°	1411.9	1424.3	1317.5	1207.8	1083.2	927.1	771.4	633.8	391.4	31.9	6.7
45°	907.0	909.7	862.0	776.8	695.2	597.8	495.1	412.6	252.4	17.8	2.0
47.5°	577.4	576.0	545.5	496.5	443.1	386.0	321.9	269.6	163.5	13.8	6.0
50°	363.5	362.2	343.1	311.8	282.0	244.4	204.1	173.5	103.4	16.4	6.7
51°	295.4	297.4	281.3	249.7	226.6	190.7	162.8	138.3	80.9	11.4	6.0
52°	243.7	242.4	232.3	205.8	186.6	155.8	132.6	113.1	67.5	10.1	2.7
53°	196.0	196.7	186.6	166.2	147.7	124.5	106.1	87.9	48.3	7.4	2.0
54°	155.1	153.7	150.4	130.6	119.2	98.7	82.9	67.5	41.6	1.3	0.0
55°	131.9	129.9	125.2	108.1	96.7	81.6	66.1	57.7	35.9	3.4	0.0
57.5°	76.2	76.2	73.5	64.1	56.4	50.4	40.3	37.6	18.5	3.4	0.0
60°	47.7	41.6	46.3	39.6	31.2	27.9	23.2	21.1	15.8	6.0	1.3
61°	39.6	31.9	31.2	29.2	27.2	18.5	15.8	17.1	10.1	2.0	1.3
62°	28.5	25.2	27.2	23.2	20.5	14.4	13.1	12.4	6.0	2.7	3.4
63°	25.8	23.2	22.5	17.1	15.1	15.1	11.4	10.7	7.4	5.4	2.7



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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°	13.8	11.4	10.1	11.4	6.7	8.7	3.4	9.4	2.0	3.4	2.0
67.5°	10.7	6.7	6.0	7.4	4.7	3.4	4.7	6.0	2.0	3.4	4.7
70°	9.4	4.7	6.7	6.0	4.7	6.0	6.7	6.7	2.0	6.7	6.0
72.5°	9.4	6.0	3.4	2.7	2.7	2.7	2.7	2.7	4.0	9.4	7.4
75°	4.0	4.0	2.0	4.7	2.7	4.0	2.7	6.7	2.7	7.4	6.0
77.5°	2.7	3.4	0.0	3.4	0.0	0.0	2.0	4.7	2.0	5.4	6.7
80°	0.0	3.4	2.0	0.0	1.3	2.0	0.0	0.7	1.3	6.0	2.7
82.5°	1.3	2.0	2.7	1.3	1.3	0.0	0.0	0.0	0.0	4.0	3.4
85°	1.3	2.7	0.0	0.7	2.7	1.3	0.7	3.4	1.3	4.7	5.4
87.5°	0.0	1.3	1.3	0.0	2.0	0.0	2.0	1.3	0.0	4.0	2.0
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°	23.8	23.8	23.8	23.8	23.8
2.5°	20.5	18.5	15.8	19.8	16.4
5°	24.5	22.5	17.8	21.1	19.1
7.5°	25.2	21.1	18.5	17.1	19.1
10°	15.1	10.1	7.4	10.1	5.4
12.5°	25.2	17.8	16.4	18.5	20.5
15°	19.1	11.4	11.4	8.7	12.4
17.5°	10.7	8.7	8.1	10.7	12.4
20°	11.4	7.4	6.0	10.1	9.4
21°	10.1	2.7	8.1	8.1	9.4
22°	14.4	6.7	8.1	13.1	13.8
23°	9.4	7.4	6.0	8.1	10.7
24°	13.8	8.1	7.4	10.1	15.1
25°	9.4	7.4	7.4	9.4	8.1
26°	5.4	7.4	5.4	8.1	6.7
27°	4.0	6.7	4.0	6.0	8.1
28°	8.7	10.7	10.1	10.7	9.4
29°	9.4	11.4	9.4	14.4	10.7
30°	5.4	10.1	4.7	10.7	9.4
31°	5.4	7.4	3.4	10.7	9.4
32°	0.7	4.0	2.0	4.0	4.0
33°	4.0	4.7	5.4	8.7	6.7
34°	6.7	8.1	5.4	9.4	8.1
35°	7.4	4.0	6.0	10.1	10.7
36°	2.0	2.0	3.4	8.1	2.7
37°	4.0	11.4	8.1	13.8	8.1
38°	6.7	13.8	13.1	17.1	13.8
39°	1.3	4.0	4.7	9.4	9.4
40°	6.0	10.1	7.4	13.8	13.8
42.5°	4.7	7.4	5.4	11.4	9.4
45°	2.0	2.0	1.3	7.4	5.4
47.5°	3.4	3.4	6.0	9.4	16.4
50°	6.7	6.7	8.7	15.8	15.1
51°	4.0	3.4	4.7	10.7	13.8
52°	3.4	4.7	4.7	10.7	10.7
53°	1.3	0.0	0.0	8.1	6.7
54°	1.3	0.7	2.0	6.0	9.4
55°	0.0	3.4	2.7	12.4	13.8
57.5°	0.7	5.4	2.7	8.7	10.7
60°	3.4	4.0	7.4	8.7	10.7
61°	0.0	3.4	3.4	8.1	9.4
62°	0.0	2.7	6.0	7.4	9.4
63°	3.4	4.0	5.4	8.7	10.7



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	2.0	5.4	6.7	8.7	8.1
67.5°	4.0	4.7	4.0	11.4	13.8
70°	5.4	8.7	9.4	8.1	13.8
72.5°	3.4	4.7	6.7	12.4	13.8
75°	6.0	6.7	10.1	11.4	13.8
77.5°	4.7	6.7	6.7	7.4	13.8
80°	2.0	6.0	6.7	7.4	4.0
82.5°	2.7	4.0	2.7	7.4	5.4
85°	1.3	6.0	5.4	6.7	6.7
87.5°	2.0	3.4	3.4	6.0	4.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	15.1	15.8	15.1	10.7	8.1	7.4	5.4	9.4	2.7	2.7	0.0
65°	13.8	15.1	11.4	13.1	8.7	8.1	4.7	9.4	1.3	4.7	3.4





64°	2.0	3.4	3.4	6.0	9.4
65°	3.4	4.7	4.7	8.7	6.7



(END OF REPORT)