

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: P315274

Luminaire Tested: **LDA2B05FL9727D010 PINW1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315274
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: LDA2B05FL9727D010 PINW1MW
Description: PORTFOLIO 2IN ADJ 500 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: 460.2 lumens
Efficiency: N/A
Efficacy: 65.7 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

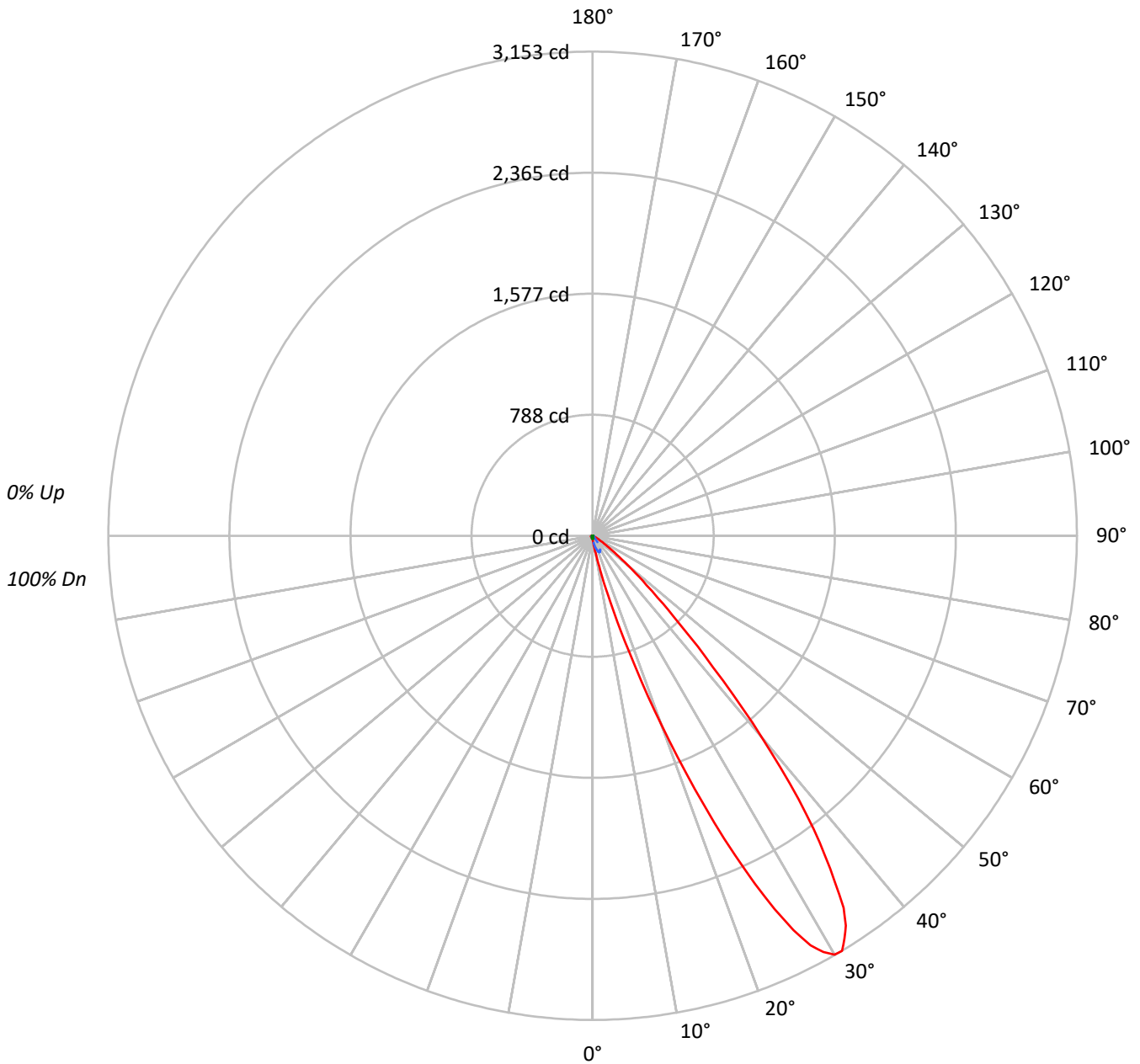
Input Watts (W): 7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P315274

CATALOG NUMBER: LDA2B05FL9727D010 PINW1MW

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°	9670	9670	9670
5°	21593	9954	7775
10°	57762	6212	2204
15°	227495	8019	5210
20°	688202	4935	4043
25°	1361891	4192	3593
30°	1794508	2507	4387
35°	1655858	3674	5300
40°	1102980	3220	7278
45°	520219	1186	3070
50°	229416	4221	9517
55°	93326	0	9720
60°	38680	2763	8683
65°	13192	3269	6421
70°	11107	6347	16300
75°	6290	9531	21540
80°	0	4830	9376
85°	6227	6227	31134



TEST NUMBER: P315274

CATALOG NUMBER: LDA2B05FL9727D010 PINW1MW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.7	0.6
10°-20°	28.2	6.1
20°-30°	144.7	31.4
30°-40°	185.3	40.3
40°-50°	71.3	15.5
50°-60°	14.5	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°	175.5	38.1
0°-40°	360.9	78.4
0°-60°	446.6	97.1
0°-90°	460.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	460.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	20	20	20	20	20	
5°	44	36	20	15	16	6
15°	445	87	16	9	10	171
25°	2502	113	8	6	7	1142
35°	2749	59	6	5	9	1643
45°	746	15	2	1	4	641
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: P315274

CATALOG NUMBER: LDA2B05FL9727D010 PINW1MW

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
2.5°	29.0	25.1	26.2	22.4	24.6	25.1	20.7	27.3	24.6	25.7	22.4
5°	43.6	46.9	43.0	41.4	40.3	41.4	40.3	41.9	40.8	35.9	25.7
7.5°	72.9	66.5	66.5	64.3	66.0	65.4	62.6	64.3	60.4	43.6	29.5
10°	115.3	109.0	108.5	106.8	106.2	101.3	98.5	96.3	88.3	51.6	26.8
12.5°	226.0	220.5	216.6	207.0	200.3	196.5	181.9	174.1	151.2	76.7	34.2
15°	445.4	417.0	424.1	393.0	370.1	354.9	324.5	297.8	242.8	86.6	33.1
17.5°	788.1	760.5	742.0	708.1	661.5	621.2	561.3	502.0	390.2	98.5	30.9
20°	1310.8	1267.2	1228.6	1170.3	1080.6	1003.1	897.7	784.3	580.9	112.6	27.9
21°	1540.4	1506.7	1462.0	1385.3	1280.7	1176.9	1050.6	914.0	662.0	113.7	25.1
22°	1779.9	1758.1	1699.3	1611.3	1489.3	1365.7	1210.6	1060.5	748.4	115.3	24.0
23°	2029.4	2006.5	1940.0	1839.2	1702.1	1552.5	1371.8	1193.8	829.5	117.6	23.5
24°	2273.6	2248.2	2174.0	2061.4	1905.7	1733.8	1529.6	1323.2	905.1	116.5	24.6
25°	2501.8	2466.5	2388.1	2263.4	2092.6	1899.7	1674.5	1435.0	971.6	113.1	20.7
26°	2705.5	2665.2	2580.7	2444.7	2257.9	2049.0	1795.4	1538.7	1020.8	110.4	19.6
27°	2882.4	2831.6	2741.3	2598.7	2398.3	2167.6	1898.6	1619.9	1064.1	106.2	15.7
28°	3020.1	2961.8	2870.2	2719.5	2507.9	2260.1	1974.5	1670.6	1089.7	106.8	17.9
29°	3099.5	3054.8	2955.2	2797.4	2574.7	2313.3	2014.5	1698.8	1094.7	98.5	16.8
30°	3150.0	3100.1	2997.7	2832.7	2600.3	2325.5	2019.4	1693.5	1080.1	92.4	15.7
31°	3153.3	3101.2	2997.1	2826.3	2590.4	2305.3	1991.8	1662.4	1048.4	86.1	13.0
32°	3094.0	3053.7	2951.3	2775.0	2536.6	2249.9	1932.5	1609.6	998.4	73.4	8.8
33°	3027.0	2978.1	2876.3	2698.3	2462.1	2174.0	1847.0	1538.7	946.5	72.3	11.3
34°	2922.6	2863.9	2763.7	2588.5	2358.6	2065.8	1745.1	1444.1	880.3	66.0	10.8
35°	2749.3	2717.9	2616.6	2443.6	2220.3	1936.1	1622.6	1340.0	809.9	58.8	7.7
36°	2575.8	2537.1	2441.4	2274.1	2062.5	1781.6	1484.4	1221.4	730.5	49.9	6.1
37°	2392.3	2341.8	2254.6	2090.9	1869.9	1627.6	1351.6	1108.2	665.6	52.7	8.3
38°	2178.4	2161.6	2046.8	1894.4	1690.2	1461.5	1209.0	989.0	593.9	49.1	13.5
39°	1943.3	1932.0	1817.4	1678.6	1495.4	1285.1	1063.0	865.4	522.1	35.9	4.4
40°	1712.6	1680.3	1599.2	1473.0	1313.5	1124.5	932.5	760.0	460.0	35.3	8.8
42.5°	1160.7	1170.9	1083.1	992.9	890.5	762.2	634.1	521.0	321.8	26.2	5.5
45°	745.6	747.8	708.7	638.6	571.5	491.5	407.0	339.1	207.5	14.6	1.7
47.5°	474.6	473.5	448.4	408.1	364.3	317.3	264.6	221.6	134.4	11.3	5.0
50°	298.9	297.8	282.0	256.4	231.8	200.9	167.8	142.7	85.0	13.5	5.5
51°	242.8	244.5	231.3	205.3	186.3	156.7	133.8	113.7	66.5	9.4	5.0
52°	200.3	199.2	191.0	169.2	153.4	128.0	109.0	93.0	55.5	8.3	2.2
53°	161.2	161.7	153.4	136.6	121.4	102.4	87.2	72.3	39.7	6.1	1.7
54°	127.5	126.4	123.6	107.3	98.0	81.1	68.2	55.5	34.2	1.1	0.0
55°	108.5	106.8	102.9	88.9	79.5	67.1	54.4	47.5	29.5	2.8	0.0
57.5°	62.6	62.6	60.4	52.7	46.4	41.4	33.1	30.9	15.2	2.8	0.0
60°	39.2	34.2	38.1	32.6	25.7	22.9	19.0	17.4	13.0	5.0	1.1
61°	32.6	26.2	25.7	24.0	22.4	15.2	13.0	14.1	8.3	1.7	1.1
62°	23.5	20.7	22.4	19.0	16.8	11.9	10.8	10.2	5.0	2.2	2.8
63°	21.2	19.0	18.5	14.1	12.4	12.4	9.4	8.8	6.1	4.4	2.2



TEST NUMBER: P315274

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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°	11.3	9.4	8.3	9.4	5.5	7.2	2.8	7.7	1.7	2.8	1.7
67.5°	8.8	5.5	5.0	6.1	3.9	2.8	3.9	5.0	1.7	2.8	3.9
70°	7.7	3.9	5.5	5.0	3.9	5.0	5.5	5.5	1.7	5.5	5.0
72.5°	7.7	5.0	2.8	2.2	2.2	2.2	2.2	2.2	3.3	7.7	6.1
75°	3.3	3.3	1.7	3.9	2.2	3.3	2.2	5.5	2.2	6.1	5.0
77.5°	2.2	2.8	0.0	2.8	0.0	0.0	1.7	3.9	1.7	4.4	5.5
80°	0.0	2.8	1.7	0.0	1.1	1.7	0.0	0.6	1.1	5.0	2.2
82.5°	1.1	1.7	2.2	1.1	1.1	0.0	0.0	0.0	0.0	3.3	2.8
85°	1.1	2.2	0.0	0.6	2.2	1.1	0.6	2.8	1.1	3.9	4.4
87.5°	0.0	1.1	1.1	0.0	1.7	0.0	1.7	1.1	0.0	3.3	1.7
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°	19.6	19.6	19.6	19.6	19.6
2.5°	16.8	15.2	13.0	16.3	13.5
5°	20.1	18.5	14.6	17.4	15.7
7.5°	20.7	17.4	15.2	14.1	15.7
10°	12.4	8.3	6.1	8.3	4.4
12.5°	20.7	14.6	13.5	15.2	16.8
15°	15.7	9.4	9.4	7.2	10.2
17.5°	8.8	7.2	6.6	8.8	10.2
20°	9.4	6.1	5.0	8.3	7.7
21°	8.3	2.2	6.6	6.6	7.7
22°	11.9	5.5	6.6	10.8	11.3
23°	7.7	6.1	5.0	6.6	8.8
24°	11.3	6.6	6.1	8.3	12.4
25°	7.7	6.1	6.1	7.7	6.6
26°	4.4	6.1	4.4	6.6	5.5
27°	3.3	5.5	3.3	5.0	6.6
28°	7.2	8.8	8.3	8.8	7.7
29°	7.7	9.4	7.7	11.9	8.8
30°	4.4	8.3	3.9	8.8	7.7
31°	4.4	6.1	2.8	8.8	7.7
32°	0.6	3.3	1.7	3.3	3.3
33°	3.3	3.9	4.4	7.2	5.5
34°	5.5	6.6	4.4	7.7	6.6
35°	6.1	3.3	5.0	8.3	8.8
36°	1.7	1.7	2.8	6.6	2.2
37°	3.3	9.4	6.6	11.3	6.6
38°	5.5	11.3	10.8	14.1	11.3
39°	1.1	3.3	3.9	7.7	7.7
40°	5.0	8.3	6.1	11.3	11.3
42.5°	3.9	6.1	4.4	9.4	7.7
45°	1.7	1.7	1.1	6.1	4.4
47.5°	2.8	2.8	5.0	7.7	13.5
50°	5.5	5.5	7.2	13.0	12.4
51°	3.3	2.8	3.9	8.8	11.3
52°	2.8	3.9	3.9	8.8	8.8
53°	1.1	0.0	0.0	6.6	5.5
54°	1.1	0.6	1.7	5.0	7.7
55°	0.0	2.8	2.2	10.2	11.3
57.5°	0.6	4.4	2.2	7.2	8.8
60°	2.8	3.3	6.1	7.2	8.8
61°	0.0	2.8	2.8	6.6	7.7
62°	0.0	2.2	5.0	6.1	7.7
63°	2.8	3.3	4.4	7.2	8.8



TEST NUMBER: P315274

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	1.7	4.4	5.5	7.2	6.6
67.5°	3.3	3.9	3.3	9.4	11.3
70°	4.4	7.2	7.7	6.6	11.3
72.5°	2.8	3.9	5.5	10.2	11.3
75°	5.0	5.5	8.3	9.4	11.3
77.5°	3.9	5.5	5.5	6.1	11.3
80°	1.7	5.0	5.5	6.1	3.3
82.5°	2.2	3.3	2.2	6.1	4.4
85°	1.1	5.0	4.4	5.5	5.5
87.5°	1.7	2.8	2.8	5.0	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°	12.4	13.0	12.4	8.8	6.6	6.1	4.4	7.7	2.2	2.2	0.0
65°	11.3	12.4	9.4	10.8	7.2	6.6	3.9	7.7	1.1	3.9	2.8





64°	1.7	2.8	2.8	5.0	7.7
65°	2.8	3.9	3.9	7.2	5.5



(END OF REPORT)