

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: P315406

Luminaire Tested: **LDA2B15FL9024D010 PINW1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315406
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: LDA2B15FL9024D010 PINW1MW
Description: PORTFOLIO 2IN ADJ 1500 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: 858.0 lumens
Efficiency: N/A
Efficacy: 60.8 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

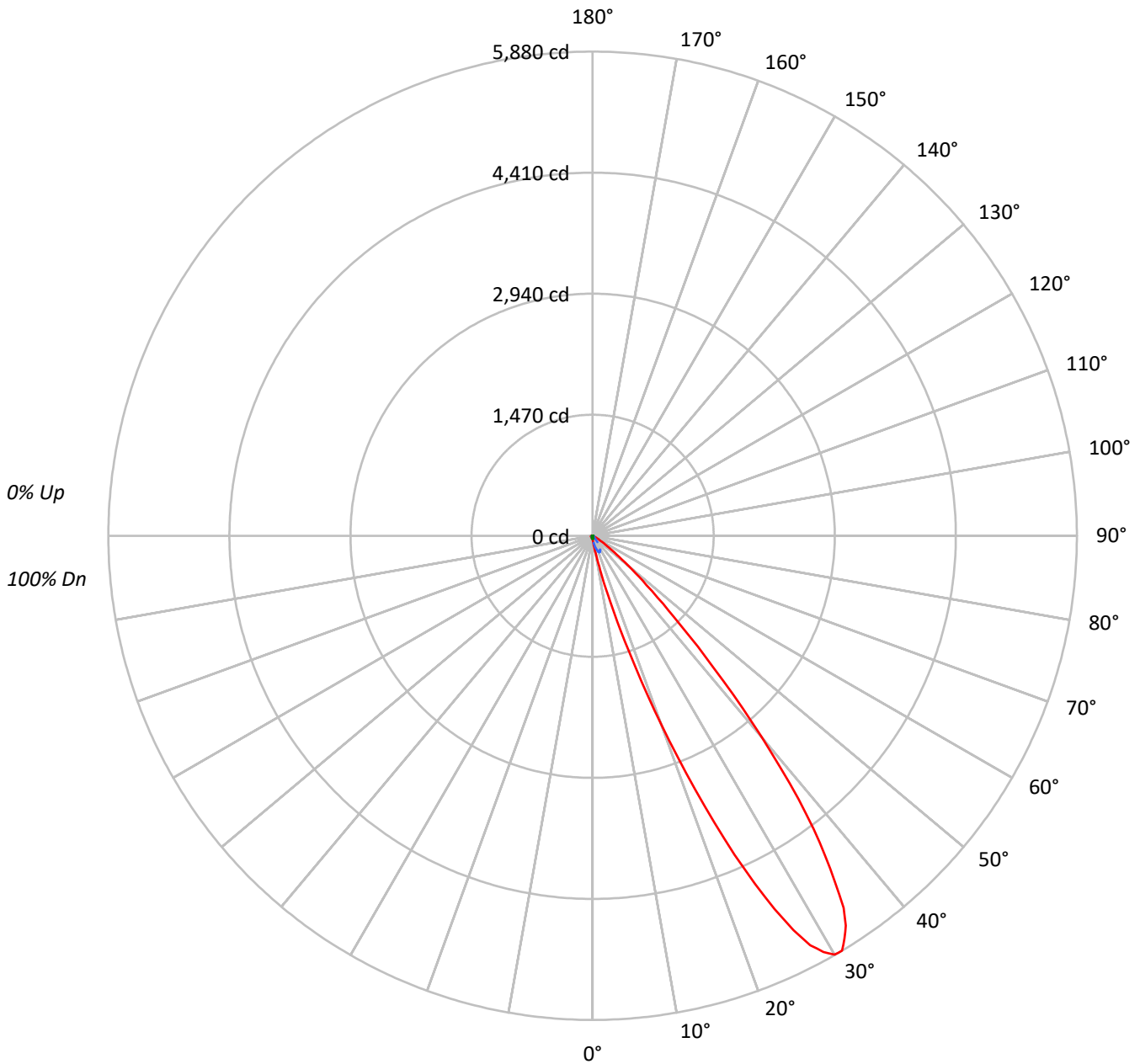
Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P315406

CATALOG NUMBER: LDA2B15FL9024D010 PINW1MW

Luminous Intensity Polar Plot





TEST NUMBER: P315406

CATALOG NUMBER: LDA2B15FL9024D010 PINW1MW

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°	18008	18008	18008
5°	40264	18621	14511
10°	107759	11623	4108
15°	424191	14965	9705
20°	1283160	9188	7560
25°	2539352	7839	6696
30°	3345989	4671	8203
35°	3087486	6806	9938
40°	2056542	5990	13589
45°	970039	2163	5721
50°	427670	7906	17807
55°	173922	0	18149
60°	72129	5032	16281
65°	24632	5954	12024
70°	20772	11828	30437
75°	11818	17728	40221
80°	0	8808	17615
85°	11887	11887	58305



TEST NUMBER: P315406

CATALOG NUMBER: LDA2B15FL9024D010 PINW1MW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.0	0.6
10°-20°	52.5	6.1
20°-30°	269.8	31.5
30°-40°	345.5	40.3
40°-50°	132.9	15.5
50°-60°	27.0	3.1
60°-70°	9.2	1.1
70°-80°	10.6	1.2
80°-90°	5.4	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°	327.3	38.1
0°-40°	672.9	78.4
0°-60°	832.7	97.1
0°-90°	858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	858.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	36	36	36	36	36	
5°	81	67	38	27	29	12
15°	830	162	29	18	19	318
25°	4665	211	14	11	12	2129
35°	5126	110	11	9	16	3064
45°	1390	27	3	2	8	1195
55°	202	5	0	4	21	209
65°	21	7	5	7	10	30
75°	6	11	9	15	21	8
85°	2	7	2	8	10	1
90°	0	0	0	0	0	



TEST NUMBER: P315406

CATALOG NUMBER: LDA2B15FL9024D010 PINW1MW

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5
2.5°	54.0	46.8	48.9	41.7	45.8	46.8	38.6	50.9	45.8	47.9	41.7
5°	81.3	87.5	80.3	77.2	75.1	77.2	75.1	78.2	76.2	66.9	47.9
7.5°	135.8	124.0	124.0	119.9	123.0	121.9	116.8	119.9	112.7	81.3	55.1
10°	215.1	203.2	202.2	199.1	198.1	188.8	183.7	179.6	164.7	96.2	49.9
12.5°	421.4	411.1	403.9	385.9	373.6	366.3	339.1	324.7	282.0	143.0	63.8
15°	830.5	777.5	790.8	732.7	690.0	661.7	605.1	555.2	452.8	161.6	61.7
17.5°	1469.5	1418.1	1383.6	1320.3	1233.3	1158.2	1046.6	935.9	727.6	183.7	57.6
20°	2444.0	2362.7	2290.7	2182.1	2014.9	1870.3	1673.8	1462.3	1083.1	209.9	52.0
21°	2872.1	2809.4	2726.0	2583.0	2388.0	2194.5	1958.8	1704.1	1234.4	212.0	46.8
22°	3318.7	3278.1	3168.5	3004.4	2776.9	2546.4	2257.3	1977.4	1395.4	215.1	44.8
23°	3783.9	3741.2	3617.2	3429.4	3173.6	2894.8	2557.7	2225.9	1546.7	219.2	43.7
24°	4239.2	4191.9	4053.5	3843.6	3553.4	3232.8	2852.1	2467.2	1687.7	217.1	45.8
25°	4664.8	4598.9	4452.8	4220.2	3901.7	3542.1	3122.2	2675.6	1811.7	211.0	38.6
26°	5044.5	4969.4	4811.9	4558.3	4209.9	3820.4	3347.6	2869.0	1903.3	205.8	36.5
27°	5374.3	5279.6	5111.4	4845.4	4471.8	4041.7	3540.0	3020.3	1984.0	198.1	29.3
28°	5631.1	5522.5	5351.7	5070.7	4676.1	4214.0	3681.5	3115.0	2031.9	199.1	33.4
29°	5779.2	5695.9	5510.1	5215.8	4800.6	4313.3	3756.1	3167.5	2041.2	183.7	31.4
30°	5873.4	5780.3	5589.4	5281.7	4848.5	4336.0	3765.4	3157.7	2013.9	172.4	29.3
31°	5879.6	5782.3	5588.4	5269.9	4829.9	4298.4	3713.9	3099.6	1954.7	160.5	24.2
32°	5769.0	5693.8	5502.9	5174.2	4729.6	4195.0	3603.3	3001.3	1861.6	136.9	16.5
33°	5643.9	5552.9	5363.0	5031.1	4590.7	4053.5	3443.8	2869.0	1764.9	134.8	21.1
34°	5449.4	5339.8	5153.1	4826.3	4397.7	3851.8	3253.9	2692.6	1641.4	123.0	20.1
35°	5126.3	5067.6	4878.8	4556.2	4139.9	3610.0	3025.5	2498.6	1510.2	109.6	14.4
36°	4802.7	4730.6	4552.1	4240.3	3845.6	3321.8	2767.7	2277.3	1362.0	93.1	11.3
37°	4460.5	4366.3	4203.7	3898.6	3486.5	3034.7	2520.2	2066.4	1241.1	98.3	15.4
38°	4061.7	4030.3	3816.3	3532.3	3151.5	2725.0	2254.2	1844.1	1107.3	91.6	25.2
39°	3623.3	3602.3	3388.7	3129.9	2788.3	2396.2	1982.0	1613.6	973.5	66.9	8.2
40°	3193.2	3133.0	2981.7	2746.6	2449.2	2096.7	1738.6	1417.0	857.7	65.9	16.5
42.5°	2164.1	2183.2	2019.5	1851.3	1660.4	1421.1	1182.4	971.4	599.9	48.9	10.3
45°	1390.3	1394.4	1321.3	1190.6	1065.6	916.4	758.9	632.4	386.9	27.3	3.1
47.5°	885.0	882.9	836.1	761.0	679.2	591.7	493.4	413.2	250.6	21.1	9.3
50°	557.2	555.2	525.9	478.0	432.2	374.6	312.8	266.0	158.5	25.2	10.3
51°	452.8	455.9	431.2	382.8	347.3	292.3	249.5	212.0	124.0	17.5	9.3
52°	373.6	371.5	356.1	315.4	286.1	238.7	203.2	173.4	103.4	15.4	4.1
53°	300.5	301.5	286.1	254.7	226.4	190.9	162.6	134.8	74.1	11.3	3.1
54°	237.7	235.7	230.5	200.2	182.7	151.3	127.1	103.4	63.8	2.1	0.0
55°	202.2	199.1	191.9	165.7	148.2	125.0	101.4	88.5	55.1	5.1	0.0
57.5°	116.8	116.8	112.7	98.3	86.4	77.2	61.7	57.6	28.3	5.1	0.0
60°	73.1	63.8	71.0	60.7	47.9	42.7	35.5	32.4	24.2	9.3	2.1
61°	60.7	48.9	47.9	44.8	41.7	28.3	24.2	26.2	15.4	3.1	2.1
62°	43.7	38.6	41.7	35.5	31.4	22.1	20.1	19.0	9.3	4.1	5.1
63°	39.6	35.5	34.5	26.2	23.2	23.2	17.5	16.5	11.3	8.2	4.1



TEST NUMBER: P315406

CATALOG NUMBER: LDA2B15FL9024D010 PINW1MW

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
66°	21.1	17.5	15.4	17.5	10.3	13.4	5.1	14.4	3.1	5.1	3.1
67.5°	16.5	10.3	9.3	11.3	7.2	5.1	7.2	9.3	3.1	5.1	7.2
70°	14.4	7.2	10.3	9.3	7.2	9.3	10.3	10.3	3.1	10.3	9.3
72.5°	14.4	9.3	5.1	4.1	4.1	4.1	4.1	4.1	6.2	14.4	11.3
75°	6.2	6.2	3.1	7.2	4.1	6.2	4.1	10.3	4.1	11.3	9.3
77.5°	4.1	5.1	0.0	5.1	0.0	0.0	3.1	7.2	3.1	8.2	10.3
80°	0.0	5.1	3.1	0.0	2.1	3.1	0.0	1.0	2.1	9.3	4.1
82.5°	2.1	3.1	4.1	2.1	2.1	0.0	0.0	0.0	0.0	6.2	5.1
85°	2.1	4.1	0.0	1.0	4.1	2.1	1.0	5.1	2.1	7.2	8.2
87.5°	0.0	2.1	2.1	0.0	3.1	0.0	3.1	2.1	0.0	6.2	3.1
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: P315406

CATALOG NUMBER: LDA2B15FL9024D010 PINW1MW

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	36.5	36.5	36.5	36.5	36.5
2.5°	31.4	28.3	24.2	30.4	25.2
5°	37.6	34.5	27.3	32.4	29.3
7.5°	38.6	32.4	28.3	26.2	29.3
10°	23.2	15.4	11.3	15.4	8.2
12.5°	38.6	27.3	25.2	28.3	31.4
15°	29.3	17.5	17.5	13.4	19.0
17.5°	16.5	13.4	12.3	16.5	19.0
20°	17.5	11.3	9.3	15.4	14.4
21°	15.4	4.1	12.3	12.3	14.4
22°	22.1	10.3	12.3	20.1	21.1
23°	14.4	11.3	9.3	12.3	16.5
24°	21.1	12.3	11.3	15.4	23.2
25°	14.4	11.3	11.3	14.4	12.3
26°	8.2	11.3	8.2	12.3	10.3
27°	6.2	10.3	6.2	9.3	12.3
28°	13.4	16.5	15.4	16.5	14.4
29°	14.4	17.5	14.4	22.1	16.5
30°	8.2	15.4	7.2	16.5	14.4
31°	8.2	11.3	5.1	16.5	14.4
32°	1.0	6.2	3.1	6.2	6.2
33°	6.2	7.2	8.2	13.4	10.3
34°	10.3	12.3	8.2	14.4	12.3
35°	11.3	6.2	9.3	15.4	16.5
36°	3.1	3.1	5.1	12.3	4.1
37°	6.2	17.5	12.3	21.1	12.3
38°	10.3	21.1	20.1	26.2	21.1
39°	2.1	6.2	7.2	14.4	14.4
40°	9.3	15.4	11.3	21.1	21.1
42.5°	7.2	11.3	8.2	17.5	14.4
45°	3.1	3.1	2.1	11.3	8.2
47.5°	5.1	5.1	9.3	14.4	25.2
50°	10.3	10.3	13.4	24.2	23.2
51°	6.2	5.1	7.2	16.5	21.1
52°	5.1	7.2	7.2	16.5	16.5
53°	2.1	0.0	0.0	12.3	10.3
54°	2.1	1.0	3.1	9.3	14.4
55°	0.0	5.1	4.1	19.0	21.1
57.5°	1.0	8.2	4.1	13.4	16.5
60°	5.1	6.2	11.3	13.4	16.5
61°	0.0	5.1	5.1	12.3	14.4
62°	0.0	4.1	9.3	11.3	14.4
63°	5.1	6.2	8.2	13.4	16.5



TEST NUMBER: P315406

CATALOG NUMBER: LDA2B15FL9024D010 PINW1MW

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	3.1	8.2	10.3	13.4	12.3
67.5°	6.2	7.2	6.2	17.5	21.1
70°	8.2	13.4	14.4	12.3	21.1
72.5°	5.1	7.2	10.3	19.0	21.1
75°	9.3	10.3	15.4	17.5	21.1
77.5°	7.2	10.3	10.3	11.3	21.1
80°	3.1	9.3	10.3	11.3	6.2
82.5°	4.1	6.2	4.1	11.3	8.2
85°	2.1	9.3	8.2	10.3	10.3
87.5°	3.1	5.1	5.1	9.3	6.2
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	23.2	24.2	23.2	16.5	12.3	11.3	8.2	14.4	4.1	4.1	0.0
65°	21.1	23.2	17.5	20.1	13.4	12.3	7.2	14.4	2.1	7.2	5.1





64°	3.1	5.1	5.1	9.3	14.4
65°	5.1	7.2	7.2	13.4	10.3



(END OF REPORT)