

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: P315412

Luminaire Tested: **LDA2B15FL9027D010 PINW1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315412
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: LDA2B15FL9027D010 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: 924.5 lumens
Efficiency: N/A
Efficacy: 65.6 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

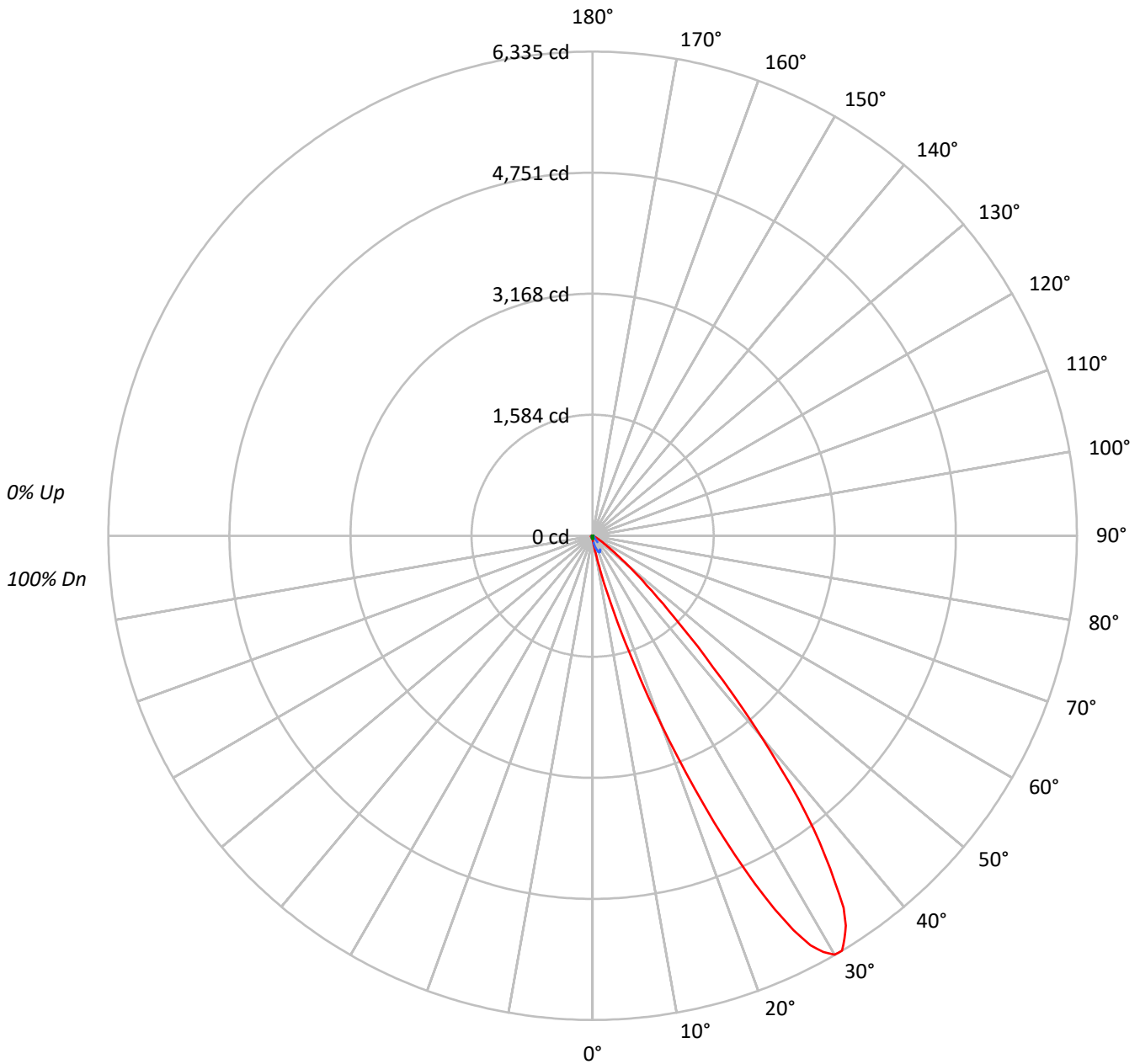
Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					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°	19438	19438	19438
5°	43384	20057	15650
10°	116075	12474	4459
15°	457033	16140	10471
20°	1382600	9870	8138
25°	2736139	8438	7240
30°	3605309	5070	8830
35°	3326773	7348	10660
40°	2215877	6440	14620
45°	1045183	2302	6210
50°	460828	8520	19112
55°	187427	0	19525
60°	77655	5427	17465
65°	26500	6421	12958
70°	22359	12838	32745
75°	12772	19062	43271
80°	0	9376	19036
85°	12454	12454	62834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.4	0.6
10°-20°	56.6	6.1
20°-30°	290.8	31.5
30°-40°	372.3	40.3
40°-50°	143.2	15.5
50°-60°	29.1	3.1
60°-70°	9.9	1.1
70°-80°	11.5	1.2
80°-90°	5.9	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°	352.7	38.1
0°-40°	725.0	78.4
0°-60°	897.3	97.1
0°-90°	924.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	924.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	39	39	39	39	39	
5°	88	72	40	29	32	13
15°	895	174	32	19	20	343
25°	5026	227	16	12	13	2294
35°	5524	118	12	10	18	3301
45°	1498	29	3	2	9	1288
55°	218	6	0	4	23	226
65°	23	8	6	8	11	32
75°	7	12	10	17	23	9
85°	2	8	2	9	11	1
90°	0	0	0	0	0	



TEST NUMBER: P315412

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
2.5°	58.2	50.5	52.7	44.9	49.3	50.5	41.6	54.9	49.3	51.6	44.9
5°	87.6	94.2	86.5	83.2	80.9	83.2	80.9	84.3	82.1	72.1	51.6
7.5°	146.4	133.6	133.6	129.2	132.5	131.4	125.9	129.2	121.4	87.6	59.3
10°	231.7	219.0	217.9	214.6	213.4	203.5	197.9	193.5	177.4	103.7	53.8
12.5°	454.1	443.0	435.2	415.8	402.5	394.7	365.4	349.8	303.8	154.1	68.7
15°	894.8	837.7	852.1	789.5	743.5	713.0	652.0	598.2	487.9	174.1	66.5
17.5°	1583.4	1527.9	1490.8	1422.6	1328.9	1248.0	1127.7	1008.5	783.9	197.9	62.1
20°	2633.4	2545.8	2468.2	2351.2	2171.1	2015.3	1803.5	1575.6	1167.0	226.2	56.0
21°	3094.7	3027.1	2937.2	2783.1	2573.0	2364.5	2110.6	1836.2	1330.0	228.4	50.5
22°	3575.9	3532.1	3414.0	3237.2	2992.1	2743.8	2432.2	2130.6	1503.6	231.7	48.2
23°	4077.1	4031.1	3897.5	3695.1	3419.6	3119.1	2756.0	2398.4	1666.5	236.2	47.1
24°	4567.8	4516.8	4367.6	4141.4	3828.7	3483.3	3073.1	2658.4	1818.5	234.0	49.3
25°	5026.3	4955.3	4797.8	4547.2	4204.1	3816.5	3364.1	2882.9	1952.1	227.3	41.6
26°	5435.4	5354.5	5184.8	4911.5	4536.2	4116.5	3607.0	3091.4	2050.8	221.8	39.4
27°	5790.8	5688.8	5507.5	5220.9	4818.4	4354.9	3814.3	3254.4	2137.8	213.4	31.6
28°	6067.4	5950.5	5766.4	5463.7	5038.5	4540.6	3966.8	3356.4	2189.4	214.6	36.0
29°	6227.1	6137.3	5937.1	5620.0	5172.6	4647.6	4047.2	3412.9	2199.3	197.9	33.8
30°	6328.6	6228.2	6022.5	5691.0	5224.2	4672.0	4057.2	3402.4	2169.9	185.7	31.6
31°	6335.2	6230.4	6021.4	5678.2	5204.2	4631.5	4001.7	3339.7	2106.2	173.0	26.1
32°	6216.0	6135.1	5929.4	5575.1	5096.1	4520.1	3882.5	3233.9	2005.8	147.5	17.7
33°	6081.3	5983.2	5778.6	5421.0	4946.4	4367.6	3710.6	3091.4	1901.6	145.3	22.7
34°	5871.7	5753.6	5552.4	5200.3	4738.5	4150.3	3506.1	2901.2	1768.6	132.5	21.6
35°	5523.6	5460.4	5256.9	4909.3	4460.8	3889.7	3259.9	2692.2	1627.2	118.1	15.5
36°	5174.8	5097.2	4904.8	4568.9	4143.6	3579.3	2982.2	2453.8	1467.5	100.3	12.2
37°	4806.2	4704.7	4529.5	4200.7	3756.7	3269.9	2715.5	2226.5	1337.2	105.9	16.6
38°	4376.5	4342.7	4112.0	3806.0	3395.7	2936.1	2428.9	1987.0	1193.1	98.7	27.2
39°	3904.1	3881.4	3651.3	3372.5	3004.3	2581.9	2135.6	1738.6	1048.9	72.1	8.9
40°	3440.6	3375.8	3212.8	2959.4	2639.0	2259.2	1873.3	1526.8	924.2	71.0	17.7
42.5°	2331.8	2352.3	2176.0	1994.8	1789.1	1531.3	1274.0	1046.7	646.4	52.7	11.1
45°	1498.0	1502.4	1423.7	1282.9	1148.2	987.4	817.8	681.4	416.9	29.4	3.3
47.5°	953.6	951.4	900.9	820.0	731.8	637.6	531.7	445.2	270.0	22.7	10.0
50°	600.4	598.2	566.6	515.0	465.7	403.6	337.1	286.6	170.8	27.2	11.1
51°	487.9	491.2	464.6	412.5	374.2	314.9	268.9	228.4	133.6	18.8	10.0
52°	402.5	400.3	383.6	339.9	308.3	257.2	219.0	186.8	111.4	16.6	4.4
53°	323.8	324.9	308.3	274.4	243.9	205.7	175.2	145.3	79.8	12.2	3.3
54°	256.1	253.9	248.4	215.7	196.8	163.0	136.9	111.4	68.7	2.2	0.0
55°	217.9	214.6	206.8	178.5	159.7	134.7	109.2	95.4	59.3	5.5	0.0
57.5°	125.9	125.9	121.4	105.9	93.1	83.2	66.5	62.1	30.5	5.5	0.0
60°	78.7	68.7	76.5	65.4	51.6	46.0	38.3	34.9	26.1	10.0	2.2
61°	65.4	52.7	51.6	48.2	44.9	30.5	26.1	28.3	16.6	3.3	2.2
62°	47.1	41.6	44.9	38.3	33.8	23.8	21.6	20.5	10.0	4.4	5.5
63°	42.7	38.3	37.1	28.3	24.9	24.9	18.8	17.7	12.2	8.9	4.4



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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°	22.7	18.8	16.6	18.8	11.1	14.4	5.5	15.5	3.3	5.5	3.3
67.5°	17.7	11.1	10.0	12.2	7.8	5.5	7.8	10.0	3.3	5.5	7.8
70°	15.5	7.8	11.1	10.0	7.8	10.0	11.1	11.1	3.3	11.1	10.0
72.5°	15.5	10.0	5.5	4.4	4.4	4.4	4.4	4.4	6.7	15.5	12.2
75°	6.7	6.7	3.3	7.8	4.4	6.7	4.4	11.1	4.4	12.2	10.0
77.5°	4.4	5.5	0.0	5.5	0.0	0.0	3.3	7.8	3.3	8.9	11.1
80°	0.0	5.5	3.3	0.0	2.2	3.3	0.0	1.1	2.2	10.0	4.4
82.5°	2.2	3.3	4.4	2.2	2.2	0.0	0.0	0.0	0.0	6.7	5.5
85°	2.2	4.4	0.0	1.1	4.4	2.2	1.1	5.5	2.2	7.8	8.9
87.5°	0.0	2.2	2.2	0.0	3.3	0.0	3.3	2.2	0.0	6.7	3.3
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: P315412

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	39.4	39.4	39.4	39.4	39.4
2.5°	33.8	30.5	26.1	32.7	27.2
5°	40.5	37.1	29.4	34.9	31.6
7.5°	41.6	34.9	30.5	28.3	31.6
10°	24.9	16.6	12.2	16.6	8.9
12.5°	41.6	29.4	27.2	30.5	33.8
15°	31.6	18.8	18.8	14.4	20.5
17.5°	17.7	14.4	13.3	17.7	20.5
20°	18.8	12.2	10.0	16.6	15.5
21°	16.6	4.4	13.3	13.3	15.5
22°	23.8	11.1	13.3	21.6	22.7
23°	15.5	12.2	10.0	13.3	17.7
24°	22.7	13.3	12.2	16.6	24.9
25°	15.5	12.2	12.2	15.5	13.3
26°	8.9	12.2	8.9	13.3	11.1
27°	6.7	11.1	6.7	10.0	13.3
28°	14.4	17.7	16.6	17.7	15.5
29°	15.5	18.8	15.5	23.8	17.7
30°	8.9	16.6	7.8	17.7	15.5
31°	8.9	12.2	5.5	17.7	15.5
32°	1.1	6.7	3.3	6.7	6.7
33°	6.7	7.8	8.9	14.4	11.1
34°	11.1	13.3	8.9	15.5	13.3
35°	12.2	6.7	10.0	16.6	17.7
36°	3.3	3.3	5.5	13.3	4.4
37°	6.7	18.8	13.3	22.7	13.3
38°	11.1	22.7	21.6	28.3	22.7
39°	2.2	6.7	7.8	15.5	15.5
40°	10.0	16.6	12.2	22.7	22.7
42.5°	7.8	12.2	8.9	18.8	15.5
45°	3.3	3.3	2.2	12.2	8.9
47.5°	5.5	5.5	10.0	15.5	27.2
50°	11.1	11.1	14.4	26.1	24.9
51°	6.7	5.5	7.8	17.7	22.7
52°	5.5	7.8	7.8	17.7	17.7
53°	2.2	0.0	0.0	13.3	11.1
54°	2.2	1.1	3.3	10.0	15.5
55°	0.0	5.5	4.4	20.5	22.7
57.5°	1.1	8.9	4.4	14.4	17.7
60°	5.5	6.7	12.2	14.4	17.7
61°	0.0	5.5	5.5	13.3	15.5
62°	0.0	4.4	10.0	12.2	15.5
63°	5.5	6.7	8.9	14.4	17.7



TEST NUMBER: P315412

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	3.3	8.9	11.1	14.4	13.3
67.5°	6.7	7.8	6.7	18.8	22.7
70°	8.9	14.4	15.5	13.3	22.7
72.5°	5.5	7.8	11.1	20.5	22.7
75°	10.0	11.1	16.6	18.8	22.7
77.5°	7.8	11.1	11.1	12.2	22.7
80°	3.3	10.0	11.1	12.2	6.7
82.5°	4.4	6.7	4.4	12.2	8.9
85°	2.2	10.0	8.9	11.1	11.1
87.5°	3.3	5.5	5.5	10.0	6.7
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	24.9	26.1	24.9	17.7	13.3	12.2	8.9	15.5	4.4	4.4	0.0
65°	22.7	24.9	18.8	21.6	14.4	13.3	7.8	15.5	2.2	7.8	5.5





64°	3.3	5.5	5.5	10.0	15.5
65°	5.5	7.8	7.8	14.4	11.1



(END OF REPORT)