

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: P315389

Luminaire Tested: **LDA2B15FL8035D010 PIN1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315389
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: LDA2B15FL8035D010 PIN1MMS
Description: PORTFOLIO 2IN ADJ 1500 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: 1164.5 lumens
Efficiency: N/A
Efficacy: 82.6 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

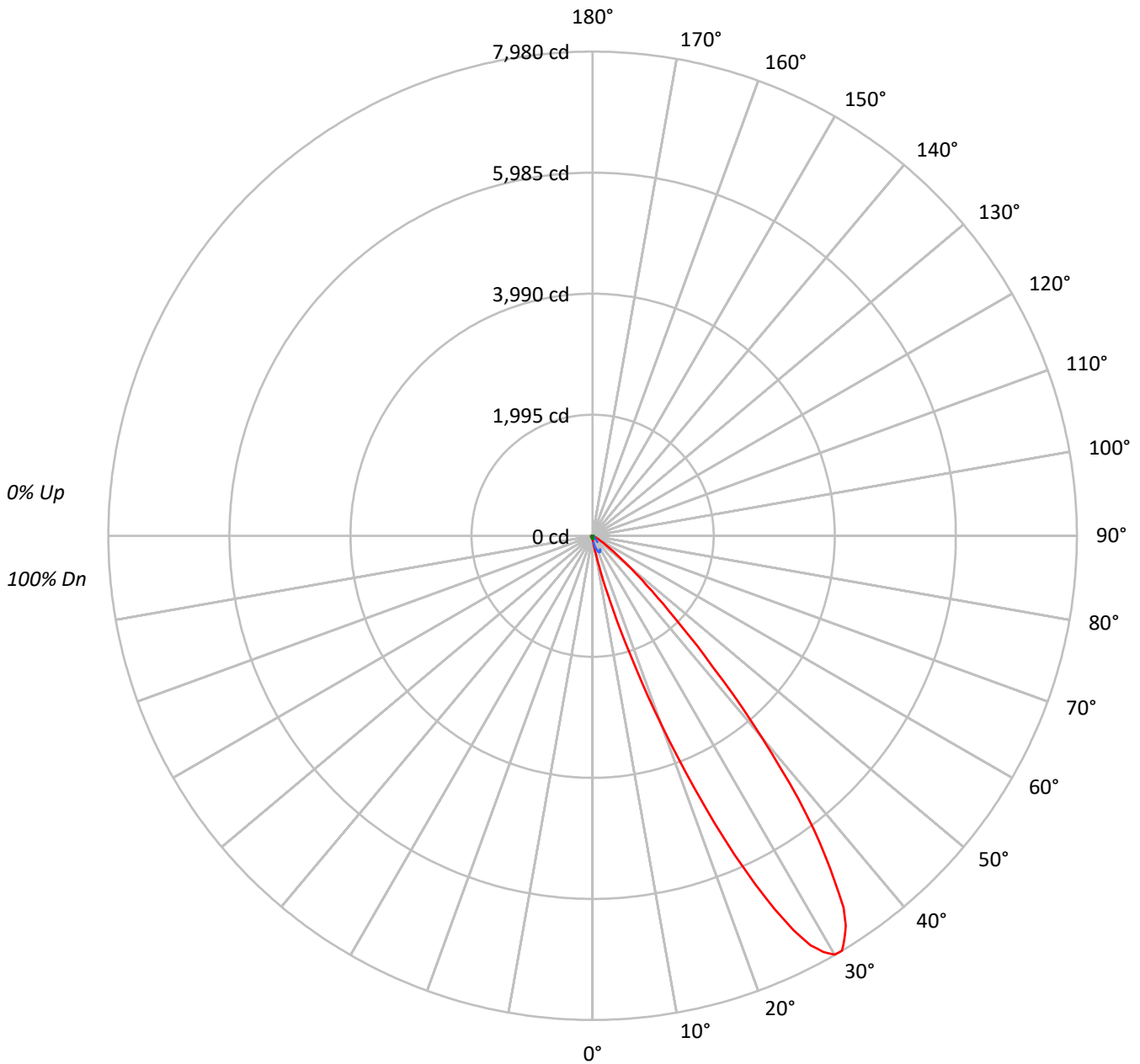
Input Watts (W): 14.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	24471	24471	24471
5°	54626	25258	19711
10°	146234	15731	5611
15°	575684	20328	13178
20°	1741507	12443	10290
25°	3446372	10670	9145
30°	4541131	6380	11166
35°	4190327	9275	13431
40°	2791132	8115	18419
45°	1316526	2930	7814
50°	580486	10745	24101
55°	236025	0	24600
60°	97883	6907	22004
65°	33387	8172	16344
70°	28273	16156	41255
75°	16012	24018	54517
80°	0	11933	23866
85°	15850	15850	79250



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.7	0.6
10°-20°	71.2	6.1
20°-30°	366.2	31.5
30°-40°	469.0	40.3
40°-50°	180.3	15.5
50°-60°	36.7	3.1
60°-70°	12.5	1.1
70°-80°	14.5	1.2
80°-90°	7.4	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°	444.2	38.1
0°-40°	913.2	78.4
0°-60°	1130.2	97.1
0°-90°	1164.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1164.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	50	50	50	50	50	
5°	110	91	51	37	40	16
15°	1127	219	40	24	26	432
25°	6331	286	20	15	17	2890
35°	6957	149	15	13	22	4158
45°	1887	37	4	3	11	1622
55°	274	7	0	6	29	284
65°	29	10	7	10	14	40
75°	8	15	13	21	29	11
85°	3	10	3	11	14	2
90°	0	0	0	0	0	



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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°	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6	49.6
2.5°	73.3	63.5	66.3	56.6	62.2	63.5	52.4	69.1	62.2	64.9	56.6
5°	110.3	118.7	108.9	104.7	102.0	104.7	102.0	106.1	103.4	90.8	64.9
7.5°	184.4	168.3	168.3	162.7	166.9	165.5	158.5	162.7	152.9	110.3	74.7
10°	291.9	275.8	274.4	270.3	268.9	256.3	249.3	243.7	223.5	130.6	67.7
12.5°	571.9	558.0	548.2	523.7	507.0	497.2	460.2	440.6	382.7	194.1	86.6
15°	1127.1	1055.2	1073.3	994.4	936.4	898.0	821.2	753.5	614.5	219.3	83.8
17.5°	1994.4	1924.6	1877.8	1791.9	1673.9	1571.9	1420.4	1270.2	987.4	249.3	78.2
20°	3317.0	3206.7	3108.9	2961.6	2734.6	2538.4	2271.6	1984.6	1470.0	284.9	70.5
21°	3898.0	3812.8	3699.7	3505.6	3240.9	2978.3	2658.5	2312.8	1675.3	287.7	63.5
22°	4504.2	4449.0	4300.3	4077.5	3768.8	3456.0	3063.5	2683.6	1893.8	291.9	60.8
23°	5135.5	5077.5	4909.2	4654.3	4307.2	3928.8	3471.4	3020.9	2099.2	297.5	59.4
24°	5753.5	5689.2	5501.4	5216.5	4822.6	4387.5	3870.8	3348.4	2290.5	294.7	62.2
25°	6331.0	6241.6	6043.3	5727.6	5295.4	4807.2	4237.4	3631.3	2458.8	286.3	52.4
26°	6846.3	6744.4	6530.7	6186.4	5713.7	5185.0	4543.3	3893.8	2583.1	279.3	49.6
27°	7294.0	7165.5	6937.1	6576.1	6069.1	5485.3	4804.4	4099.1	2692.7	268.9	39.8
28°	7642.4	7495.1	7263.2	6882.0	6346.3	5719.2	4996.5	4227.6	2757.7	270.3	45.4
29°	7843.5	7730.4	7478.3	7078.9	6515.3	5854.0	5097.7	4298.9	2770.2	249.3	42.6
30°	7971.3	7844.9	7585.9	7168.3	6580.3	5884.7	5110.3	4285.6	2733.2	233.9	39.8
31°	7979.7	7847.7	7584.5	7152.2	6555.1	5833.8	5040.5	4206.7	2652.9	217.9	32.8
32°	7829.6	7727.6	7468.5	7022.3	6419.0	5693.4	4890.3	4073.3	2526.5	185.8	22.3
33°	7659.9	7536.3	7278.6	6828.2	6230.4	5501.4	4673.9	3893.8	2395.2	183.0	28.6
34°	7395.9	7247.2	6993.7	6550.2	5968.5	5227.6	4416.2	3654.3	2227.6	166.9	27.2
35°	6957.4	6877.8	6621.5	6183.6	5618.7	4899.4	4106.1	3391.0	2049.6	148.7	19.6
36°	6518.1	6420.4	6178.0	5754.9	5219.2	4508.4	3756.3	3090.8	1848.5	126.4	15.4
37°	6053.7	5925.9	5705.3	5291.2	4731.8	4118.7	3420.4	2804.5	1684.3	133.4	20.9
38°	5512.5	5469.9	5179.4	4794.0	4277.2	3698.3	3059.3	2502.8	1502.8	124.3	34.2
39°	4917.6	4888.9	4599.1	4247.9	3784.2	3252.1	2689.9	2189.9	1321.2	90.8	11.2
40°	4333.8	4252.1	4046.8	3727.6	3324.0	2845.7	2359.6	1923.2	1164.1	89.4	22.3
42.5°	2937.1	2963.0	2740.9	2512.6	2253.5	1928.8	1604.7	1318.4	814.2	66.3	14.0
45°	1886.9	1892.4	1793.3	1615.9	1446.2	1243.7	1030.0	858.2	525.1	37.0	4.2
47.5°	1201.1	1198.3	1134.8	1032.8	921.8	803.1	669.7	560.8	340.1	28.6	12.6
50°	756.3	753.5	713.7	648.7	586.6	508.4	424.6	361.0	215.1	34.2	14.0
51°	614.5	618.7	585.2	519.6	471.4	396.6	338.7	287.7	168.3	23.7	12.6
52°	507.0	504.2	483.2	428.1	388.3	324.0	275.8	235.3	140.4	20.9	5.6
53°	407.8	409.2	388.3	345.7	307.3	259.1	220.7	183.0	100.6	15.4	4.2
54°	322.6	319.8	312.8	271.6	247.9	205.3	172.5	140.4	86.6	2.8	0.0
55°	274.4	270.3	260.5	224.9	201.1	169.7	137.6	120.1	74.7	7.0	0.0
57.5°	158.5	158.5	152.9	133.4	117.3	104.7	83.8	78.2	38.4	7.0	0.0
60°	99.2	86.6	96.4	82.4	64.9	58.0	48.2	44.0	32.8	12.6	2.8
61°	82.4	66.3	64.9	60.8	56.6	38.4	32.8	35.6	20.9	4.2	2.8
62°	59.4	52.4	56.6	48.2	42.6	30.0	27.2	25.8	12.6	5.6	7.0
63°	53.8	48.2	46.8	35.6	31.4	31.4	23.7	22.3	15.4	11.2	5.6



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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°	28.6	23.7	20.9	23.7	14.0	18.2	7.0	19.6	4.2	7.0	4.2
67.5°	22.3	14.0	12.6	15.4	9.8	7.0	9.8	12.6	4.2	7.0	9.8
70°	19.6	9.8	14.0	12.6	9.8	12.6	14.0	14.0	4.2	14.0	12.6
72.5°	19.6	12.6	7.0	5.6	5.6	5.6	5.6	5.6	8.4	19.6	15.4
75°	8.4	8.4	4.2	9.8	5.6	8.4	5.6	14.0	5.6	15.4	12.6
77.5°	5.6	7.0	0.0	7.0	0.0	0.0	4.2	9.8	4.2	11.2	14.0
80°	0.0	7.0	4.2	0.0	2.8	4.2	0.0	1.4	2.8	12.6	5.6
82.5°	2.8	4.2	5.6	2.8	2.8	0.0	0.0	0.0	0.0	8.4	7.0
85°	2.8	5.6	0.0	1.4	5.6	2.8	1.4	7.0	2.8	9.8	11.2
87.5°	0.0	2.8	2.8	0.0	4.2	0.0	4.2	2.8	0.0	8.4	4.2
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°	49.6	49.6	49.6	49.6	49.6
2.5°	42.6	38.4	32.8	41.2	34.2
5°	51.0	46.8	37.0	44.0	39.8
7.5°	52.4	44.0	38.4	35.6	39.8
10°	31.4	20.9	15.4	20.9	11.2
12.5°	52.4	37.0	34.2	38.4	42.6
15°	39.8	23.7	23.7	18.2	25.8
17.5°	22.3	18.2	16.8	22.3	25.8
20°	23.7	15.4	12.6	20.9	19.6
21°	20.9	5.6	16.8	16.8	19.6
22°	30.0	14.0	16.8	27.2	28.6
23°	19.6	15.4	12.6	16.8	22.3
24°	28.6	16.8	15.4	20.9	31.4
25°	19.6	15.4	15.4	19.6	16.8
26°	11.2	15.4	11.2	16.8	14.0
27°	8.4	14.0	8.4	12.6	16.8
28°	18.2	22.3	20.9	22.3	19.6
29°	19.6	23.7	19.6	30.0	22.3
30°	11.2	20.9	9.8	22.3	19.6
31°	11.2	15.4	7.0	22.3	19.6
32°	1.4	8.4	4.2	8.4	8.4
33°	8.4	9.8	11.2	18.2	14.0
34°	14.0	16.8	11.2	19.6	16.8
35°	15.4	8.4	12.6	20.9	22.3
36°	4.2	4.2	7.0	16.8	5.6
37°	8.4	23.7	16.8	28.6	16.8
38°	14.0	28.6	27.2	35.6	28.6
39°	2.8	8.4	9.8	19.6	19.6
40°	12.6	20.9	15.4	28.6	28.6
42.5°	9.8	15.4	11.2	23.7	19.6
45°	4.2	4.2	2.8	15.4	11.2
47.5°	7.0	7.0	12.6	19.6	34.2
50°	14.0	14.0	18.2	32.8	31.4
51°	8.4	7.0	9.8	22.3	28.6
52°	7.0	9.8	9.8	22.3	22.3
53°	2.8	0.0	0.0	16.8	14.0
54°	2.8	1.4	4.2	12.6	19.6
55°	0.0	7.0	5.6	25.8	28.6
57.5°	1.4	11.2	5.6	18.2	22.3
60°	7.0	8.4	15.4	18.2	22.3
61°	0.0	7.0	7.0	16.8	19.6
62°	0.0	5.6	12.6	15.4	19.6
63°	7.0	8.4	11.2	18.2	22.3



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	4.2	11.2	14.0	18.2	16.8
67.5°	8.4	9.8	8.4	23.7	28.6
70°	11.2	18.2	19.6	16.8	28.6
72.5°	7.0	9.8	14.0	25.8	28.6
75°	12.6	14.0	20.9	23.7	28.6
77.5°	9.8	14.0	14.0	15.4	28.6
80°	4.2	12.6	14.0	15.4	8.4
82.5°	5.6	8.4	5.6	15.4	11.2
85°	2.8	12.6	11.2	14.0	14.0
87.5°	4.2	7.0	7.0	12.6	8.4
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	31.4	32.8	31.4	22.3	16.8	15.4	11.2	19.6	5.6	5.6	0.0
65°	28.6	31.4	23.7	27.2	18.2	16.8	9.8	19.6	2.8	9.8	7.0





64°	4.2	7.0	7.0	12.6	19.6
65°	7.0	9.8	9.8	18.2	14.0



(END OF REPORT)