

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: P315234

Luminaire Tested: **LDA2B05FL8050D010 PINW1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315234
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: LDA2B05FL8050D010 PINW1MMS
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, White oculus, matte metallic silver finish
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 691.6 lumens
Efficiency: N/A
Efficacy: 98.8 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

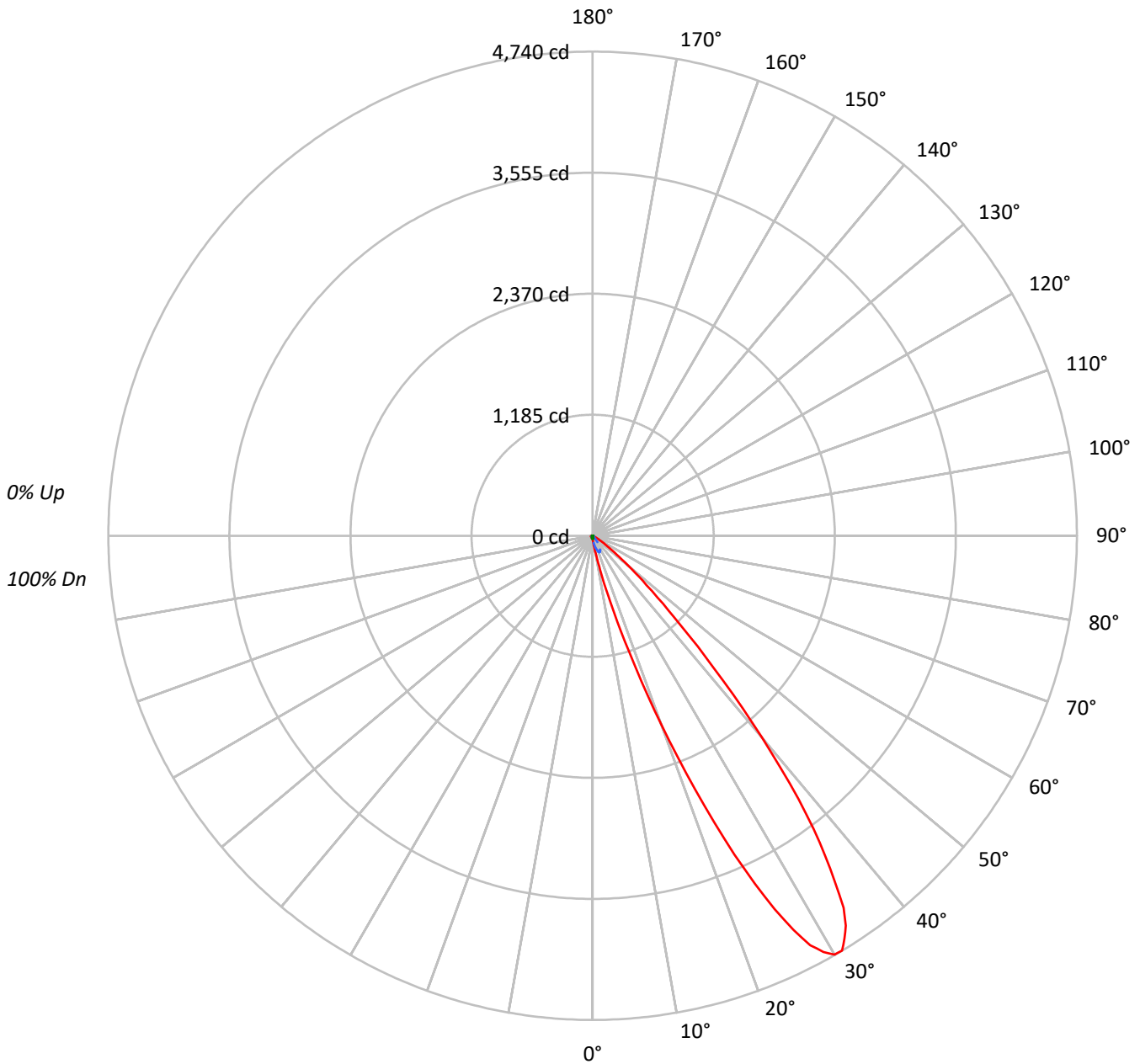
Input Watts (W): 7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	14505	14505	14505
5°	32439	15006	11688
10°	86869	9368	3306
15°	341907	12054	7815
20°	1034404	7403	6090
25°	2046974	6315	5444
30°	2697231	3760	6608
35°	2488876	5481	8010
40°	1657818	4830	10949
45°	781934	1744	4605
50°	344777	6371	14353
55°	140204	0	14623
60°	58118	4046	13123
65°	19846	4786	9689
70°	16733	9520	24522
75°	9531	14297	32405
80°	0	7103	14206
85°	9623	9623	46984



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	4.0	0.6
10°-20°	42.3	6.1
20°-30°	217.5	31.5
30°-40°	278.5	40.3
40°-50°	107.1	15.5
50°-60°	21.8	3.1
60°-70°	7.4	1.1
70°-80°	8.6	1.2
80°-90°	4.4	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°	263.9	38.1
0°-40°	542.4	78.4
0°-60°	671.3	97.1
0°-90°	691.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	691.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	29	29	29	29	29	
5°	66	54	30	22	24	10
15°	669	130	24	14	15	257
25°	3760	170	12	9	10	1716
35°	4132	88	9	8	13	2470
45°	1121	22	2	2	7	963
55°	163	4	0	3	17	169
65°	17	6	4	6	8	24
75°	5	9	8	12	17	7
85°	2	6	2	7	8	1
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°	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
2.5°	43.6	37.7	39.4	33.6	36.9	37.7	31.1	41.1	36.9	38.6	33.6
5°	65.5	70.5	64.7	62.2	60.6	62.2	60.6	63.0	61.4	53.9	38.6
7.5°	109.5	100.0	100.0	96.6	99.1	98.3	94.2	96.6	90.8	65.5	44.4
10°	173.4	163.8	163.0	160.5	159.7	152.2	148.1	144.8	132.7	77.6	40.2
12.5°	339.7	331.4	325.6	311.1	301.1	295.3	273.3	261.7	227.3	115.3	51.4
15°	669.4	626.7	637.5	590.6	556.2	533.4	487.8	447.5	365.0	130.2	49.8
17.5°	1184.6	1143.1	1115.3	1064.3	994.2	933.7	843.6	754.5	586.5	148.1	46.5
20°	1970.2	1904.6	1846.6	1759.1	1624.3	1507.7	1349.3	1178.8	873.1	169.2	41.9
21°	2315.3	2264.7	2197.5	2082.2	1925.0	1769.0	1579.0	1373.7	995.0	170.9	37.7
22°	2675.3	2642.5	2554.2	2421.9	2238.5	2052.7	1819.6	1594.0	1124.9	173.4	36.1
23°	3050.2	3015.8	2915.9	2764.5	2558.3	2333.5	2061.8	1794.3	1246.8	176.7	35.3
24°	3417.3	3379.2	3267.6	3098.4	2864.4	2606.0	2299.1	1988.8	1360.5	175.0	36.9
25°	3760.3	3707.2	3589.4	3402.0	3145.2	2855.3	2516.8	2156.8	1460.4	170.1	31.1
26°	4066.4	4005.9	3879.0	3674.5	3393.7	3079.7	2698.5	2312.8	1534.2	165.9	29.4
27°	4332.3	4256.0	4120.4	3905.9	3604.8	3258.0	2853.6	2434.7	1599.4	159.7	23.6
28°	4539.3	4451.8	4314.1	4087.6	3769.5	3397.0	2967.7	2511.0	1637.9	160.5	27.0
29°	4658.7	4591.5	4441.8	4204.6	3869.8	3477.0	3027.8	2553.3	1645.4	148.1	25.3
30°	4734.6	4659.6	4505.7	4257.6	3908.4	3495.3	3035.3	2545.5	1623.4	138.9	23.6
31°	4739.6	4661.2	4504.8	4248.1	3893.5	3465.0	2993.8	2498.6	1575.7	129.4	19.5
32°	4650.4	4589.9	4436.0	4171.0	3812.6	3381.6	2904.7	2419.4	1500.6	110.3	13.3
33°	4549.6	4476.2	4323.2	4055.6	3700.6	3267.6	2776.1	2312.8	1422.7	108.7	17.0
34°	4392.9	4304.5	4153.9	3890.6	3545.1	3105.0	2623.0	2170.5	1323.1	99.1	16.2
35°	4132.4	4085.1	3932.9	3672.8	3337.3	2910.0	2438.9	2014.1	1217.4	88.3	11.6
36°	3871.5	3813.4	3669.5	3418.1	3100.0	2677.8	2231.1	1835.8	1097.9	75.1	9.1
37°	3595.7	3519.8	3388.7	3142.7	2810.5	2446.3	2031.6	1665.7	1000.4	79.2	12.4
38°	3274.2	3248.9	3076.4	2847.4	2540.5	2196.6	1817.1	1486.5	892.6	73.8	20.3
39°	2920.8	2903.8	2731.7	2523.1	2247.7	1931.6	1597.7	1300.7	784.8	53.9	6.6
40°	2574.1	2525.6	2403.6	2214.1	1974.3	1690.2	1401.5	1142.3	691.4	53.1	13.3
42.5°	1744.5	1759.9	1628.0	1492.4	1338.5	1145.6	953.1	783.1	483.6	39.4	8.3
45°	1120.7	1124.0	1065.1	959.8	859.0	738.7	611.8	509.8	311.9	22.0	2.5
47.5°	713.4	711.8	674.0	613.4	547.5	477.0	397.8	333.1	202.0	17.0	7.5
50°	449.2	447.5	423.9	385.3	348.4	302.0	252.2	214.4	127.8	20.3	8.3
51°	365.0	367.5	347.6	308.6	280.0	235.6	201.2	170.9	100.0	14.1	7.5
52°	301.1	299.5	287.0	254.3	230.6	192.5	163.8	139.8	83.4	12.4	3.3
53°	242.2	243.1	230.6	205.3	182.5	153.9	131.1	108.7	59.7	9.1	2.5
54°	191.6	190.0	185.8	161.3	147.2	121.9	102.4	83.4	51.4	1.7	0.0
55°	163.0	160.5	154.7	133.6	119.5	100.8	81.7	71.3	44.4	4.1	0.0
57.5°	94.2	94.2	90.8	79.2	69.7	62.2	49.8	46.5	22.8	4.1	0.0
60°	58.9	51.4	57.2	48.9	38.6	34.4	28.6	26.1	19.5	7.5	1.7
61°	48.9	39.4	38.6	36.1	33.6	22.8	19.5	21.2	12.4	2.5	1.7
62°	35.3	31.1	33.6	28.6	25.3	17.8	16.2	15.3	7.5	3.3	4.1
63°	31.9	28.6	27.8	21.2	18.7	18.7	14.1	13.3	9.1	6.6	3.3



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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°	17.0	14.1	12.4	14.1	8.3	10.8	4.1	11.6	2.5	4.1	2.5
67.5°	13.3	8.3	7.5	9.1	5.8	4.1	5.8	7.5	2.5	4.1	5.8
70°	11.6	5.8	8.3	7.5	5.8	7.5	8.3	8.3	2.5	8.3	7.5
72.5°	11.6	7.5	4.1	3.3	3.3	3.3	3.3	3.3	5.0	11.6	9.1
75°	5.0	5.0	2.5	5.8	3.3	5.0	3.3	8.3	3.3	9.1	7.5
77.5°	3.3	4.1	0.0	4.1	0.0	0.0	2.5	5.8	2.5	6.6	8.3
80°	0.0	4.1	2.5	0.0	1.7	2.5	0.0	0.8	1.7	7.5	3.3
82.5°	1.7	2.5	3.3	1.7	1.7	0.0	0.0	0.0	0.0	5.0	4.1
85°	1.7	3.3	0.0	0.8	3.3	1.7	0.8	4.1	1.7	5.8	6.6
87.5°	0.0	1.7	1.7	0.0	2.5	0.0	2.5	1.7	0.0	5.0	2.5
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°	29.4	29.4	29.4	29.4	29.4
2.5°	25.3	22.8	19.5	24.5	20.3
5°	30.3	27.8	22.0	26.1	23.6
7.5°	31.1	26.1	22.8	21.2	23.6
10°	18.7	12.4	9.1	12.4	6.6
12.5°	31.1	22.0	20.3	22.8	25.3
15°	23.6	14.1	14.1	10.8	15.3
17.5°	13.3	10.8	10.0	13.3	15.3
20°	14.1	9.1	7.5	12.4	11.6
21°	12.4	3.3	10.0	10.0	11.6
22°	17.8	8.3	10.0	16.2	17.0
23°	11.6	9.1	7.5	10.0	13.3
24°	17.0	10.0	9.1	12.4	18.7
25°	11.6	9.1	9.1	11.6	10.0
26°	6.6	9.1	6.6	10.0	8.3
27°	5.0	8.3	5.0	7.5	10.0
28°	10.8	13.3	12.4	13.3	11.6
29°	11.6	14.1	11.6	17.8	13.3
30°	6.6	12.4	5.8	13.3	11.6
31°	6.6	9.1	4.1	13.3	11.6
32°	0.8	5.0	2.5	5.0	5.0
33°	5.0	5.8	6.6	10.8	8.3
34°	8.3	10.0	6.6	11.6	10.0
35°	9.1	5.0	7.5	12.4	13.3
36°	2.5	2.5	4.1	10.0	3.3
37°	5.0	14.1	10.0	17.0	10.0
38°	8.3	17.0	16.2	21.2	17.0
39°	1.7	5.0	5.8	11.6	11.6
40°	7.5	12.4	9.1	17.0	17.0
42.5°	5.8	9.1	6.6	14.1	11.6
45°	2.5	2.5	1.7	9.1	6.6
47.5°	4.1	4.1	7.5	11.6	20.3
50°	8.3	8.3	10.8	19.5	18.7
51°	5.0	4.1	5.8	13.3	17.0
52°	4.1	5.8	5.8	13.3	13.3
53°	1.7	0.0	0.0	10.0	8.3
54°	1.7	0.8	2.5	7.5	11.6
55°	0.0	4.1	3.3	15.3	17.0
57.5°	0.8	6.6	3.3	10.8	13.3
60°	4.1	5.0	9.1	10.8	13.3
61°	0.0	4.1	4.1	10.0	11.6
62°	0.0	3.3	7.5	9.1	11.6
63°	4.1	5.0	6.6	10.8	13.3



TEST NUMBER: P315234

CATALOG NUMBER: LDA2B05FL8050D010 PINW1MMS

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	2.5	6.6	8.3	10.8	10.0
67.5°	5.0	5.8	5.0	14.1	17.0
70°	6.6	10.8	11.6	10.0	17.0
72.5°	4.1	5.8	8.3	15.3	17.0
75°	7.5	8.3	12.4	14.1	17.0
77.5°	5.8	8.3	8.3	9.1	17.0
80°	2.5	7.5	8.3	9.1	5.0
82.5°	3.3	5.0	3.3	9.1	6.6
85°	1.7	7.5	6.6	8.3	8.3
87.5°	2.5	4.1	4.1	7.5	5.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	18.7	19.5	18.7	13.3	10.0	9.1	6.6	11.6	3.3	3.3	0.0
65°	17.0	18.7	14.1	16.2	10.8	10.0	5.8	11.6	1.7	5.8	4.1





64°	2.5	4.1	4.1	7.5	11.6
65°	4.1	5.8	5.8	10.8	8.3



(END OF REPORT)