

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: P315249

Luminaire Tested: **LDA2B05FL9030D010 PIN1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315249
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: LDA2B05FL9030D010 PIN1MW
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: 513.9 lumens
Efficiency: N/A
Efficacy: 73.4 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

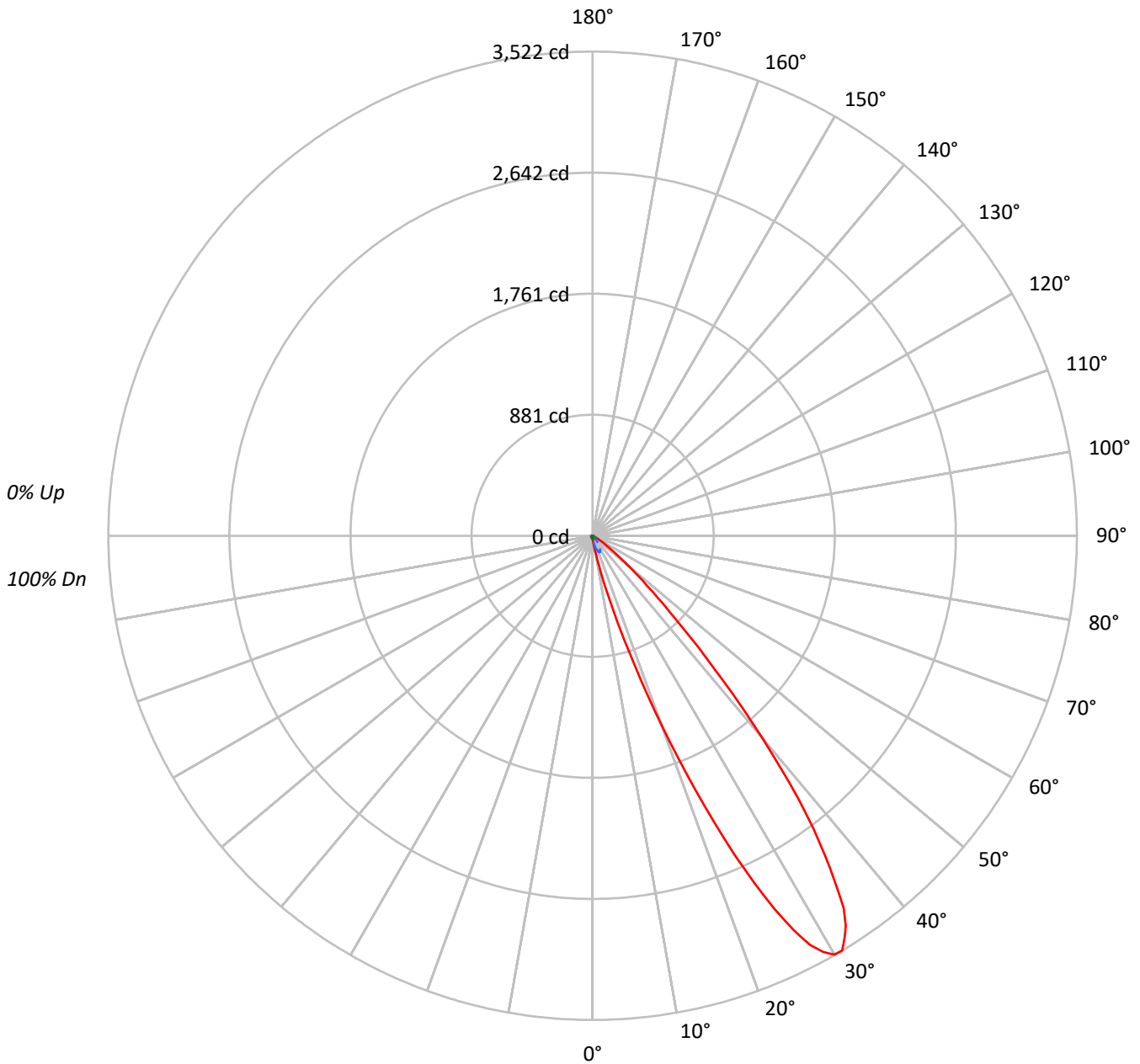
Input Watts (W): 7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	10805	10805	10805
5°	24118	11143	8716
10°	64525	6964	2455
15°	254055	8989	5823
20°	768531	5513	4515
25°	1520900	4682	4028
30°	2004038	2791	4899
35°	1849251	4096	5963
40°	1231723	3542	8115
45°	580991	1256	3419
50°	256203	4759	10669
55°	104164	0	10838
60°	43218	3059	9769
65°	14709	3619	7238
70°	12405	7068	18175
75°	7053	10484	24018
80°	0	5114	10512
85°	6793	6793	35096



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.0	0.6
10°-20°	31.4	6.1
20°-30°	161.6	31.5
30°-40°	207.0	40.3
40°-50°	79.6	15.5
50°-60°	16.2	3.1
60°-70°	5.5	1.1
70°-80°	6.4	1.2
80°-90°	3.3	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°	196.0	38.2
0°-40°	403.0	78.4
0°-60°	498.7	97.1
0°-90°	513.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	513.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	22	22	22	22	22	
5°	49	40	22	16	18	7
15°	497	97	18	10	11	191
25°	2794	126	9	7	7	1275
35°	3070	66	7	6	10	1835
45°	833	16	2	1	5	716
55°	121	3	0	2	13	125
65°	13	4	3	4	6	18
75°	4	7	6	9	13	5
85°	1	4	1	5	6	1
90°	0	0	0	0	0	



TEST NUMBER: P315249

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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°	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9
2.5°	32.4	28.0	29.3	25.0	27.4	28.0	23.1	30.5	27.4	28.7	25.0
5°	48.7	52.4	48.1	46.2	45.0	46.2	45.0	46.8	45.6	40.1	28.7
7.5°	81.4	74.3	74.3	71.8	73.7	73.0	70.0	71.8	67.5	48.7	33.0
10°	128.8	121.7	121.1	119.3	118.6	113.1	110.0	107.6	98.6	57.6	29.9
12.5°	252.4	246.2	241.9	231.1	223.7	219.4	203.1	194.5	168.9	85.7	38.2
15°	497.4	465.7	473.7	438.8	413.3	396.3	362.4	332.5	271.2	96.8	37.0
17.5°	880.2	849.3	828.7	790.8	738.7	693.7	626.8	560.6	435.8	110.0	34.5
20°	1463.8	1415.2	1372.0	1307.0	1206.8	1120.2	1002.5	875.8	648.7	125.7	31.1
21°	1720.2	1682.6	1632.7	1547.1	1430.3	1314.4	1173.2	1020.7	739.3	127.0	28.0
22°	1987.7	1963.4	1897.8	1799.4	1663.2	1525.2	1352.0	1184.3	835.8	128.8	26.8
23°	2266.3	2240.8	2166.5	2054.0	1900.8	1733.8	1531.9	1333.2	926.4	131.3	26.2
24°	2539.1	2510.7	2427.8	2302.1	2128.3	1936.3	1708.2	1477.7	1010.8	130.1	27.4
25°	2793.9	2754.5	2667.0	2527.7	2336.9	2121.5	1870.0	1602.5	1085.1	126.4	23.1
26°	3021.4	2976.4	2882.1	2730.1	2521.5	2288.2	2005.0	1718.4	1139.9	123.3	21.9
27°	3218.9	3162.2	3061.4	2902.1	2678.4	2420.7	2120.3	1809.0	1188.3	118.6	17.6
28°	3372.7	3307.7	3205.4	3037.1	2800.7	2524.0	2205.0	1865.7	1217.0	119.3	20.0
29°	3461.4	3411.5	3300.3	3124.0	2875.3	2583.5	2249.7	1897.1	1222.5	110.0	18.8
30°	3517.8	3462.1	3347.7	3163.4	2904.0	2597.0	2255.2	1891.3	1206.2	103.2	17.6
31°	3521.5	3463.3	3347.1	3156.4	2892.9	2574.5	2224.4	1856.5	1170.8	96.2	14.5
32°	3455.3	3410.3	3296.0	3099.0	2832.8	2512.6	2158.2	1797.6	1115.0	82.0	9.9
33°	3380.4	3325.8	3212.1	3013.4	2749.6	2427.8	2062.6	1718.4	1057.0	80.7	12.6
34°	3263.9	3198.3	3086.4	2890.7	2634.0	2307.0	1948.9	1612.7	983.1	73.7	12.0
35°	3070.4	3035.2	2922.1	2728.9	2479.6	2162.2	1812.1	1496.5	904.5	65.6	8.6
36°	2876.5	2833.4	2726.4	2539.7	2303.3	1989.6	1657.7	1364.0	815.7	55.8	6.8
37°	2671.6	2615.2	2517.8	2335.1	2088.2	1817.6	1509.5	1237.6	743.3	58.9	9.2
38°	2432.8	2414.0	2285.8	2115.6	1887.6	1632.1	1350.1	1104.5	663.2	54.9	15.1
39°	2170.2	2157.5	2029.7	1874.6	1670.0	1435.2	1187.1	966.4	583.1	40.1	4.9
40°	1912.5	1876.5	1785.9	1645.1	1466.9	1255.8	1041.3	848.7	513.7	39.4	9.9
42.5°	1296.2	1307.6	1209.6	1108.8	994.5	851.2	708.2	581.8	359.3	29.3	6.2
45°	832.7	835.2	791.4	713.1	638.2	548.9	454.6	378.7	231.7	16.3	1.8
47.5°	530.1	528.8	500.8	455.8	406.8	354.4	295.5	247.5	150.1	12.6	5.5
50°	333.8	332.5	315.0	286.3	258.9	224.4	187.4	159.3	94.9	15.1	6.2
51°	271.2	273.0	258.3	229.3	208.0	175.0	149.5	127.0	74.3	10.5	5.5
52°	223.7	222.5	213.3	188.9	171.3	143.0	121.7	103.9	61.9	9.2	2.5
53°	180.0	180.6	171.3	152.5	135.6	114.3	97.4	80.7	44.4	6.8	1.8
54°	142.4	141.1	138.1	119.9	109.4	90.6	76.1	61.9	38.2	1.2	0.0
55°	121.1	119.3	115.0	99.2	88.8	74.9	60.7	53.0	33.0	3.1	0.0
57.5°	70.0	70.0	67.5	58.9	51.8	46.2	37.0	34.5	16.9	3.1	0.0
60°	43.8	38.2	42.5	36.4	28.7	25.6	21.3	19.4	14.5	5.5	1.2
61°	36.4	29.3	28.7	26.8	25.0	16.9	14.5	15.7	9.2	1.8	1.2
62°	26.2	23.1	25.0	21.3	18.8	13.3	12.0	11.4	5.5	2.5	3.1
63°	23.7	21.3	20.6	15.7	13.9	13.9	10.5	9.9	6.8	4.9	2.5



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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°	12.6	10.5	9.2	10.5	6.2	8.0	3.1	8.6	1.8	3.1	1.8
67.5°	9.9	6.2	5.5	6.8	4.3	3.1	4.3	5.5	1.8	3.1	4.3
70°	8.6	4.3	6.2	5.5	4.3	5.5	6.2	6.2	1.8	6.2	5.5
72.5°	8.6	5.5	3.1	2.5	2.5	2.5	2.5	2.5	3.7	8.6	6.8
75°	3.7	3.7	1.8	4.3	2.5	3.7	2.5	6.2	2.5	6.8	5.5
77.5°	2.5	3.1	0.0	3.1	0.0	0.0	1.8	4.3	1.8	4.9	6.2
80°	0.0	3.1	1.8	0.0	1.2	1.8	0.0	0.6	1.2	5.5	2.5
82.5°	1.2	1.8	2.5	1.2	1.2	0.0	0.0	0.0	0.0	3.7	3.1
85°	1.2	2.5	0.0	0.6	2.5	1.2	0.6	3.1	1.2	4.3	4.9
87.5°	0.0	1.2	1.2	0.0	1.8	0.0	1.8	1.2	0.0	3.7	1.8
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°	21.9	21.9	21.9	21.9	21.9
2.5°	18.8	16.9	14.5	18.2	15.1
5°	22.5	20.6	16.3	19.4	17.6
7.5°	23.1	19.4	16.9	15.7	17.6
10°	13.9	9.2	6.8	9.2	4.9
12.5°	23.1	16.3	15.1	16.9	18.8
15°	17.6	10.5	10.5	8.0	11.4
17.5°	9.9	8.0	7.4	9.9	11.4
20°	10.5	6.8	5.5	9.2	8.6
21°	9.2	2.5	7.4	7.4	8.6
22°	13.3	6.2	7.4	12.0	12.6
23°	8.6	6.8	5.5	7.4	9.9
24°	12.6	7.4	6.8	9.2	13.9
25°	8.6	6.8	6.8	8.6	7.4
26°	4.9	6.8	4.9	7.4	6.2
27°	3.7	6.2	3.7	5.5	7.4
28°	8.0	9.9	9.2	9.9	8.6
29°	8.6	10.5	8.6	13.3	9.9
30°	4.9	9.2	4.3	9.9	8.6
31°	4.9	6.8	3.1	9.9	8.6
32°	0.6	3.7	1.8	3.7	3.7
33°	3.7	4.3	4.9	8.0	6.2
34°	6.2	7.4	4.9	8.6	7.4
35°	6.8	3.7	5.5	9.2	9.9
36°	1.8	1.8	3.1	7.4	2.5
37°	3.7	10.5	7.4	12.6	7.4
38°	6.2	12.6	12.0	15.7	12.6
39°	1.2	3.7	4.3	8.6	8.6
40°	5.5	9.2	6.8	12.6	12.6
42.5°	4.3	6.8	4.9	10.5	8.6
45°	1.8	1.8	1.2	6.8	4.9
47.5°	3.1	3.1	5.5	8.6	15.1
50°	6.2	6.2	8.0	14.5	13.9
51°	3.7	3.1	4.3	9.9	12.6
52°	3.1	4.3	4.3	9.9	9.9
53°	1.2	0.0	0.0	7.4	6.2
54°	1.2	0.6	1.8	5.5	8.6
55°	0.0	3.1	2.5	11.4	12.6
57.5°	0.6	4.9	2.5	8.0	9.9
60°	3.1	3.7	6.8	8.0	9.9
61°	0.0	3.1	3.1	7.4	8.6
62°	0.0	2.5	5.5	6.8	8.6
63°	3.1	3.7	4.9	8.0	9.9



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	1.8	4.9	6.2	8.0	7.4
67.5°	3.7	4.3	3.7	10.5	12.6
70°	4.9	8.0	8.6	7.4	12.6
72.5°	3.1	4.3	6.2	11.4	12.6
75°	5.5	6.2	9.2	10.5	12.6
77.5°	4.3	6.2	6.2	6.8	12.6
80°	1.8	5.5	6.2	6.8	3.7
82.5°	2.5	3.7	2.5	6.8	4.9
85°	1.2	5.5	4.9	6.2	6.2
87.5°	1.8	3.1	3.1	5.5	3.7
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	13.9	14.5	13.9	9.9	7.4	6.8	4.9	8.6	2.5	2.5	0.0
65°	12.6	13.9	10.5	12.0	8.0	7.4	4.3	8.6	1.2	4.3	3.1





64°	1.8	3.1	3.1	5.5	8.6
65°	3.1	4.3	4.3	8.0	6.2



(END OF REPORT)