

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: P315270

Luminaire Tested: **LDA2B05FL9050D010 PINW1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315270
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: LDA2B05FL9050D010 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: 581.3 lumens
Efficiency: N/A
Efficacy: 83.0 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

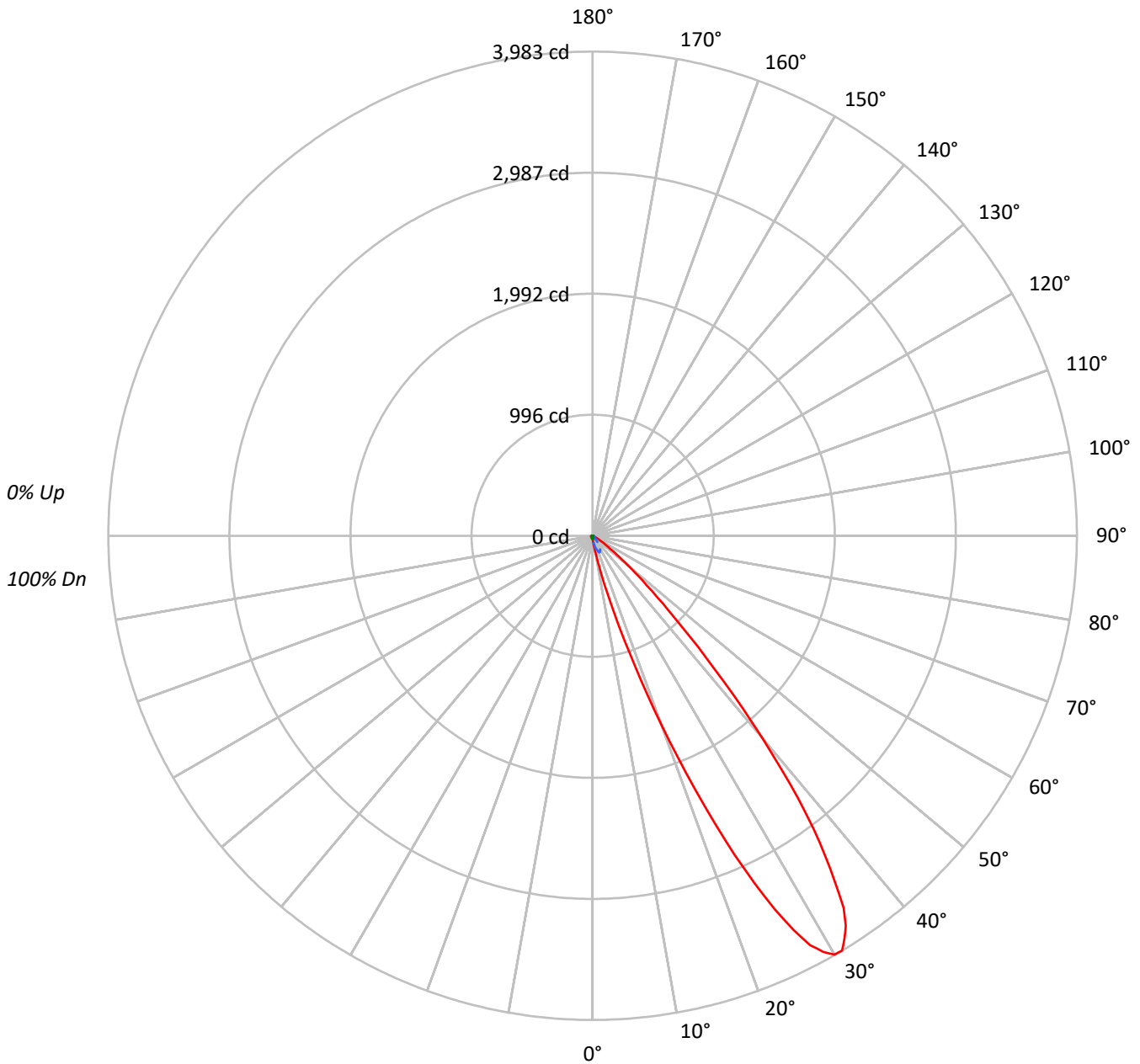
Input Watts (W): 7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	81	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°	12186	12186	12186
5°	27288	12579	9855
10°	72992	7865	2805
15°	287306	10164	6589
20°	869178	6195	5145
25°	1720029	5335	4573
30°	2266435	3190	5583
35°	2091369	4638	6746
40°	1393054	4057	9210
45°	657042	1465	3907
50°	289744	5373	12050
55°	117841	0	12300
60°	48843	3454	11051
65°	16694	4086	8172
70°	14136	8078	20628
75°	8006	12009	27259
80°	0	5966	11933
85°	7925	7925	39625



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.4	0.6
10°-20°	35.6	6.1
20°-30°	182.8	31.4
30°-40°	234.1	40.3
40°-50°	90.0	15.5
50°-60°	18.3	3.1
60°-70°	6.2	1.1
70°-80°	7.2	1.2
80°-90°	3.7	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°	221.7	38.1
0°-40°	455.8	78.4
0°-60°	564.1	97.0
0°-90°	581.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	581.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	25	25	25	25	25	
5°	55	45	25	18	20	8
15°	562	109	20	12	13	216
25°	3160	143	10	8	8	1442
35°	3472	74	8	6	11	2075
45°	942	18	2	1	6	809
55°	137	4	0	3	14	142
65°	14	5	4	5	7	20
75°	4	8	6	10	14	6
85°	1	5	1	6	7	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°	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7
2.5°	36.6	31.7	33.1	28.2	31.0	31.7	26.1	34.5	31.0	32.4	28.2
5°	55.1	59.2	54.4	52.3	50.9	52.3	50.9	53.0	51.6	45.3	32.4
7.5°	92.0	84.0	84.0	81.2	83.3	82.6	79.1	81.2	76.3	55.1	37.3
10°	145.7	137.7	137.0	134.9	134.2	127.9	124.4	121.6	111.5	65.2	33.8
12.5°	285.4	278.5	273.6	261.4	253.0	248.2	229.7	219.9	191.0	96.9	43.2
15°	562.5	526.6	535.7	496.3	467.4	448.2	409.9	376.1	306.7	109.4	41.8
17.5°	995.4	960.5	937.2	894.3	835.4	784.5	708.9	634.0	492.8	124.4	39.0
20°	1655.5	1600.4	1551.6	1478.1	1364.8	1266.9	1133.8	990.5	733.6	142.2	35.2
21°	1945.5	1903.0	1846.5	1749.6	1617.5	1486.5	1326.8	1154.3	836.1	143.6	31.7
22°	2248.0	2220.5	2146.2	2035.1	1881.0	1724.9	1529.0	1339.4	945.2	145.7	30.3
23°	2563.1	2534.1	2450.1	2322.9	2149.7	1960.8	1732.5	1507.7	1047.7	148.5	29.6
24°	2871.5	2839.5	2745.7	2603.5	2406.9	2189.8	1931.9	1671.2	1143.2	147.1	31.0
25°	3159.7	3115.1	3016.2	2858.6	2642.9	2399.3	2114.9	1812.3	1227.2	142.9	26.1
26°	3417.0	3366.1	3259.4	3087.6	2851.7	2587.8	2267.5	1943.4	1289.2	139.4	24.7
27°	3640.4	3576.2	3462.3	3282.1	3029.1	2737.7	2397.9	2045.9	1343.9	134.2	19.9
28°	3814.3	3740.7	3625.0	3434.7	3167.4	2854.4	2493.7	2110.0	1376.3	134.9	22.7
29°	3914.7	3858.2	3732.4	3533.0	3251.8	2921.7	2544.2	2145.5	1382.6	124.4	21.3
30°	3978.4	3915.4	3786.1	3577.6	3284.2	2937.0	2550.5	2138.9	1364.1	116.8	19.9
31°	3982.6	3916.7	3785.4	3569.6	3271.6	2911.6	2515.7	2099.5	1324.1	108.7	16.4
32°	3907.7	3856.8	3727.5	3504.8	3203.7	2841.5	2440.7	2033.0	1261.0	92.7	11.2
33°	3823.0	3761.3	3632.7	3407.9	3109.6	2745.7	2332.7	1943.4	1195.4	91.3	14.3
34°	3691.3	3617.0	3490.5	3269.2	2978.9	2609.1	2204.1	1823.8	1111.8	83.3	13.6
35°	3472.4	3432.6	3304.7	3086.2	2804.3	2445.3	2049.3	1692.4	1022.9	74.2	9.8
36°	3253.2	3204.4	3083.4	2872.2	2604.9	2250.1	1874.7	1542.6	922.6	63.1	7.7
37°	3021.4	2957.6	2847.5	2640.8	2361.6	2055.6	1707.1	1399.7	840.6	66.6	10.5
38°	2751.3	2730.0	2585.0	2392.6	2134.7	1845.8	1526.9	1249.1	750.0	62.0	17.1
39°	2454.3	2440.0	2295.4	2120.1	1888.7	1623.1	1342.5	1093.0	659.4	45.3	5.6
40°	2163.0	2122.2	2019.7	1860.4	1659.0	1420.2	1177.7	959.8	581.0	44.6	11.2
42.5°	1465.9	1478.8	1368.0	1254.0	1124.7	962.6	800.9	658.0	406.4	33.1	7.0
45°	941.7	944.5	895.0	806.5	721.8	620.7	514.1	428.3	262.1	18.5	2.1
47.5°	599.5	598.1	566.4	515.5	460.1	400.8	334.2	279.9	169.7	14.3	6.3
50°	377.5	376.1	356.2	323.8	292.8	253.7	211.9	180.2	107.3	17.1	7.0
51°	306.7	308.8	292.1	259.3	235.3	198.0	169.0	143.6	84.0	11.8	6.3
52°	253.0	251.6	241.2	213.6	193.8	161.7	137.7	117.5	70.1	10.5	2.8
53°	203.5	204.2	193.8	172.5	153.4	129.3	110.1	91.3	50.2	7.7	2.1
54°	161.0	159.6	156.1	135.6	123.7	102.5	86.1	70.1	43.2	1.4	0.0
55°	137.0	134.9	130.0	112.2	100.4	84.7	68.7	59.9	37.3	3.5	0.0
57.5°	79.1	79.1	76.3	66.6	58.6	52.3	41.8	39.0	19.2	3.5	0.0
60°	49.5	43.2	48.1	41.1	32.4	28.9	24.0	22.0	16.4	6.3	1.4
61°	41.1	33.1	32.4	30.3	28.2	19.2	16.4	17.8	10.5	2.1	1.4
62°	29.6	26.1	28.2	24.0	21.3	15.0	13.6	12.9	6.3	2.8	3.5
63°	26.8	24.0	23.4	17.8	15.7	15.7	11.8	11.2	7.7	5.6	2.8



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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°	14.3	11.8	10.5	11.8	7.0	9.1	3.5	9.8	2.1	3.5	2.1
67.5°	11.2	7.0	6.3	7.7	4.9	3.5	4.9	6.3	2.1	3.5	4.9
70°	9.8	4.9	7.0	6.3	4.9	6.3	7.0	7.0	2.1	7.0	6.3
72.5°	9.8	6.3	3.5	2.8	2.8	2.8	2.8	2.8	4.2	9.8	7.7
75°	4.2	4.2	2.1	4.9	2.8	4.2	2.8	7.0	2.8	7.7	6.3
77.5°	2.8	3.5	0.0	3.5	0.0	0.0	2.1	4.9	2.1	5.6	7.0
80°	0.0	3.5	2.1	0.0	1.4	2.1	0.0	0.7	1.4	6.3	2.8
82.5°	1.4	2.1	2.8	1.4	1.4	0.0	0.0	0.0	0.0	4.2	3.5
85°	1.4	2.8	0.0	0.7	2.8	1.4	0.7	3.5	1.4	4.9	5.6
87.5°	0.0	1.4	1.4	0.0	2.1	0.0	2.1	1.4	0.0	4.2	2.1
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°	24.7	24.7	24.7	24.7	24.7
2.5°	21.3	19.2	16.4	20.6	17.1
5°	25.4	23.4	18.5	22.0	19.9
7.5°	26.1	22.0	19.2	17.8	19.9
10°	15.7	10.5	7.7	10.5	5.6
12.5°	26.1	18.5	17.1	19.2	21.3
15°	19.9	11.8	11.8	9.1	12.9
17.5°	11.2	9.1	8.4	11.2	12.9
20°	11.8	7.7	6.3	10.5	9.8
21°	10.5	2.8	8.4	8.4	9.8
22°	15.0	7.0	8.4	13.6	14.3
23°	9.8	7.7	6.3	8.4	11.2
24°	14.3	8.4	7.7	10.5	15.7
25°	9.8	7.7	7.7	9.8	8.4
26°	5.6	7.7	5.6	8.4	7.0
27°	4.2	7.0	4.2	6.3	8.4
28°	9.1	11.2	10.5	11.2	9.8
29°	9.8	11.8	9.8	15.0	11.2
30°	5.6	10.5	4.9	11.2	9.8
31°	5.6	7.7	3.5	11.2	9.8
32°	0.7	4.2	2.1	4.2	4.2
33°	4.2	4.9	5.6	9.1	7.0
34°	7.0	8.4	5.6	9.8	8.4
35°	7.7	4.2	6.3	10.5	11.2
36°	2.1	2.1	3.5	8.4	2.8
37°	4.2	11.8	8.4	14.3	8.4
38°	7.0	14.3	13.6	17.8	14.3
39°	1.4	4.2	4.9	9.8	9.8
40°	6.3	10.5	7.7	14.3	14.3
42.5°	4.9	7.7	5.6	11.8	9.8
45°	2.1	2.1	1.4	7.7	5.6
47.5°	3.5	3.5	6.3	9.8	17.1
50°	7.0	7.0	9.1	16.4	15.7
51°	4.2	3.5	4.9	11.2	14.3
52°	3.5	4.9	4.9	11.2	11.2
53°	1.4	0.0	0.0	8.4	7.0
54°	1.4	0.7	2.1	6.3	9.8
55°	0.0	3.5	2.8	12.9	14.3
57.5°	0.7	5.6	2.8	9.1	11.2
60°	3.5	4.2	7.7	9.1	11.2
61°	0.0	3.5	3.5	8.4	9.8
62°	0.0	2.8	6.3	7.7	9.8
63°	3.5	4.2	5.6	9.1	11.2



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	2.1	5.6	7.0	9.1	8.4
67.5°	4.2	4.9	4.2	11.8	14.3
70°	5.6	9.1	9.8	8.4	14.3
72.5°	3.5	4.9	7.0	12.9	14.3
75°	6.3	7.0	10.5	11.8	14.3
77.5°	4.9	7.0	7.0	7.7	14.3
80°	2.1	6.3	7.0	7.7	4.2
82.5°	2.8	4.2	2.8	7.7	5.6
85°	1.4	6.3	5.6	7.0	7.0
87.5°	2.1	3.5	3.5	6.3	4.2
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	15.7	16.4	15.7	11.2	8.4	7.7	5.6	9.8	2.8	2.8	0.0
65°	14.3	15.7	11.8	13.6	9.1	8.4	4.9	9.8	1.4	4.9	3.5





64°	2.1	3.5	3.5	6.3	9.8
65°	3.5	4.9	4.9	9.1	7.0



(END OF REPORT)