

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: P315282

Luminaire Tested: **LDA2B05FL9730D010 PINW1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315282
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: LDA2B05FL9730D010 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: 489.7 lumens
Efficiency: N/A
Efficacy: 70.0 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

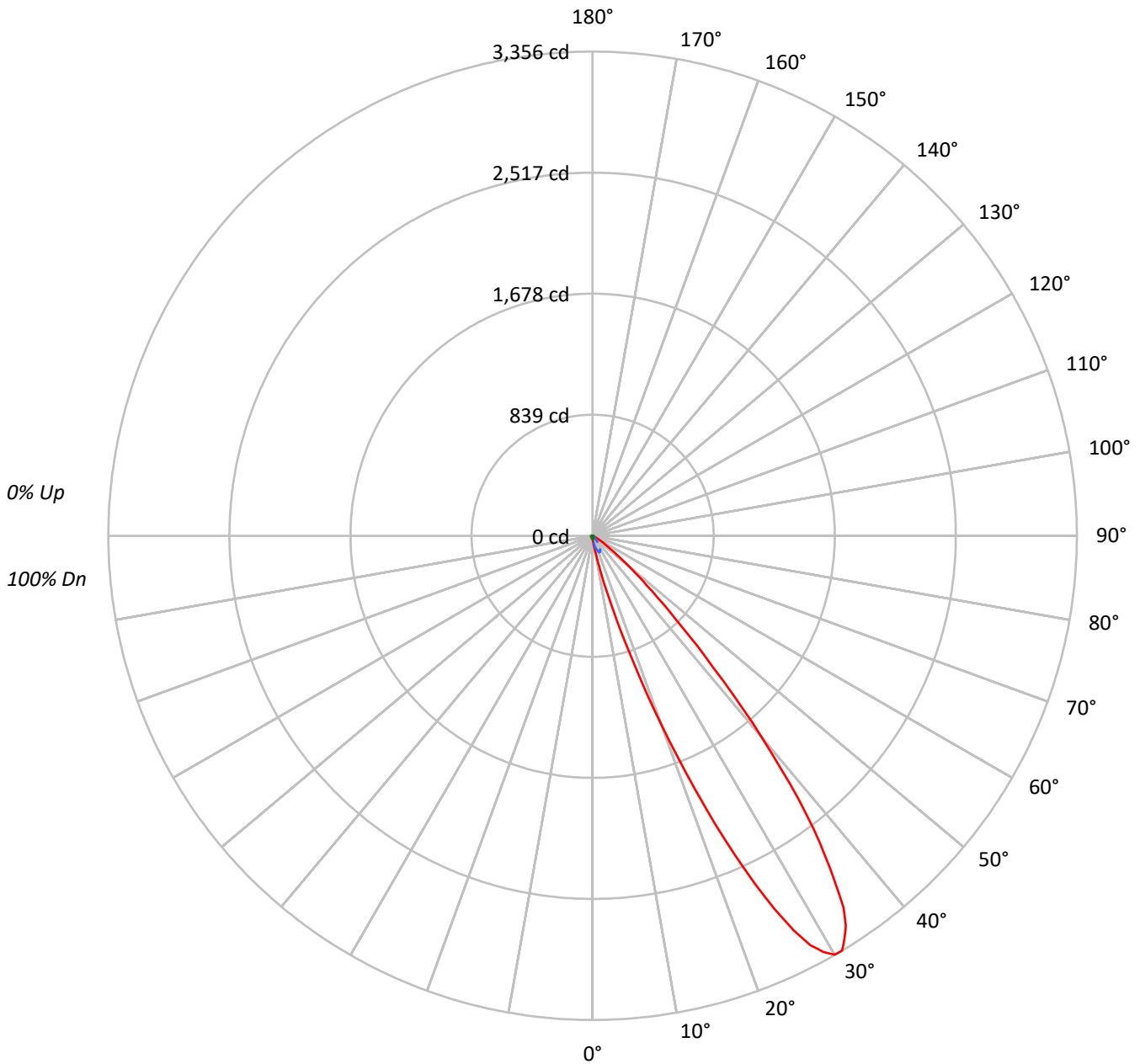
Input Watts (W): 7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P315282

CATALOG NUMBER: LDA2B05FL9730D010 PINW1MMS

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°	10311	10311	10311
5°	22979	10598	8271
10°	61519	6613	2355
15°	242103	8530	5567
20°	732462	5250	4305
25°	1449479	4464	3811
30°	1909869	2678	4671
35°	1762342	3915	5661
40°	1173888	3413	7728
45°	553710	1256	3279
50°	244153	4528	10131
55°	99261	0	10322
60°	41146	2861	9275
65°	14009	3385	6888
70°	11828	6780	17310
75°	6672	10103	22874
80°	0	5114	9944
85°	6793	6793	33398



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.8	0.6
10°-20°	30.0	6.1
20°-30°	154.0	31.5
30°-40°	197.2	40.3
40°-50°	75.8	15.5
50°-60°	15.4	3.1
60°-70°	5.2	1.1
70°-80°	6.1	1.2
80°-90°	3.1	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°	186.8	38.1
0°-40°	384.1	78.4
0°-60°	475.3	97.1
0°-90°	489.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	489.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	21	21	21	21	21	
5°	46	38	21	16	17	7
15°	474	92	17	10	11	182
25°	2663	120	8	6	7	1215
35°	2926	63	6	5	9	1749
45°	794	16	2	1	5	682
55°	115	3	0	2	12	120
65°	12	4	3	4	6	17
75°	4	6	5	9	12	5
85°	1	4	1	5	6	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°	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
2.5°	30.8	26.7	27.9	23.8	26.1	26.7	22.0	29.1	26.1	27.3	23.8
5°	46.4	49.9	45.8	44.1	42.9	44.1	42.9	44.6	43.5	38.2	27.3
7.5°	77.5	70.8	70.8	68.4	70.2	69.6	66.7	68.4	64.3	46.4	31.4
10°	122.8	116.0	115.4	113.7	113.1	107.8	104.8	102.5	94.0	54.9	28.5
12.5°	240.5	234.7	230.6	220.3	213.2	209.1	193.5	185.3	160.9	81.6	36.4
15°	474.0	443.8	451.4	418.2	393.8	377.7	345.4	316.9	258.5	92.2	35.2
17.5°	838.8	809.4	789.8	753.6	704.0	661.1	597.4	534.2	415.3	104.8	32.9
20°	1395.1	1348.7	1307.5	1245.6	1150.1	1067.6	955.4	834.7	618.2	119.8	29.7
21°	1639.4	1603.6	1556.0	1474.4	1363.0	1252.6	1118.1	972.7	704.6	121.0	26.7
22°	1894.3	1871.1	1808.6	1714.9	1585.1	1453.5	1288.4	1128.7	796.5	122.8	25.6
23°	2159.8	2135.5	2064.7	1957.5	1811.5	1652.3	1460.0	1270.5	882.9	125.1	25.0
24°	2419.8	2392.7	2313.7	2193.9	2028.3	1845.3	1628.0	1408.3	963.3	123.9	26.1
25°	2662.7	2625.1	2541.7	2408.9	2227.1	2021.8	1782.2	1527.2	1034.1	120.4	22.0
26°	2879.4	2836.5	2746.7	2601.9	2403.0	2180.7	1910.8	1637.7	1086.4	117.5	20.9
27°	3067.7	3013.6	2917.6	2765.7	2552.5	2307.0	2020.6	1724.0	1132.5	113.1	16.7
28°	3214.2	3152.2	3054.7	2894.4	2669.1	2405.4	2101.4	1778.0	1159.8	113.7	19.1
29°	3298.8	3251.2	3145.2	2977.2	2740.2	2462.1	2144.0	1808.0	1165.1	104.8	17.9
30°	3352.5	3299.4	3190.4	3014.8	2767.5	2475.0	2149.3	1802.4	1149.5	98.4	16.7
31°	3356.1	3300.6	3189.8	3008.0	2756.9	2453.5	2119.9	1769.2	1115.8	91.6	13.8
32°	3292.9	3250.0	3141.1	2953.4	2699.7	2394.5	2056.8	1713.1	1062.6	78.1	9.4
33°	3221.6	3169.6	3061.2	2871.8	2620.4	2313.7	1965.7	1637.7	1007.4	76.9	12.0
34°	3110.5	3048.0	2941.4	2754.9	2510.2	2198.6	1857.3	1536.9	936.9	70.2	11.5
35°	2926.1	2892.6	2784.8	2600.7	2363.1	2060.6	1726.9	1426.2	862.0	62.6	8.2
36°	2741.4	2700.2	2598.3	2420.4	2195.1	1896.1	1579.8	1299.9	777.4	53.2	6.5
37°	2546.1	2492.3	2399.5	2225.3	1990.1	1732.2	1438.5	1179.5	708.4	56.1	8.8
38°	2318.4	2300.5	2178.3	2016.2	1798.9	1555.4	1286.7	1052.6	632.0	52.3	14.4
39°	2068.2	2056.2	1934.3	1786.6	1591.5	1367.7	1131.3	921.0	555.7	38.2	4.7
40°	1822.7	1788.3	1702.0	1567.8	1398.0	1196.8	992.4	808.8	489.6	37.6	9.4
42.5°	1235.3	1246.2	1152.8	1056.7	947.8	811.2	674.9	554.5	342.5	27.9	5.9
45°	793.6	795.9	754.2	679.6	608.2	523.1	433.2	361.0	220.9	15.6	1.8
47.5°	505.2	504.0	477.3	434.4	387.7	337.8	281.7	235.8	143.0	12.0	5.3
50°	318.1	316.9	300.2	272.8	246.7	213.8	178.6	151.8	90.5	14.4	5.9
51°	258.5	260.2	246.1	218.5	198.2	166.8	142.4	121.0	70.8	10.0	5.3
52°	213.2	212.0	203.2	180.0	163.3	136.3	116.0	99.0	59.0	8.8	2.3
53°	171.5	172.1	163.3	145.4	129.2	109.0	92.8	76.9	42.3	6.5	1.8
54°	135.7	134.5	131.6	114.2	104.3	86.3	72.5	59.0	36.4	1.2	0.0
55°	115.4	113.7	109.5	94.6	84.6	71.4	57.9	50.5	31.4	2.9	0.0
57.5°	66.7	66.7	64.3	56.1	49.3	44.1	35.2	32.9	16.2	2.9	0.0
60°	41.7	36.4	40.5	34.7	27.3	24.4	20.3	18.5	13.8	5.3	1.2
61°	34.7	27.9	27.3	25.6	23.8	16.2	13.8	15.0	8.8	1.8	1.2
62°	25.0	22.0	23.8	20.3	17.9	12.6	11.5	10.9	5.3	2.3	2.9
63°	22.6	20.3	19.7	15.0	13.2	13.2	10.0	9.4	6.5	4.7	2.3



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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°	12.0	10.0	8.8	10.0	5.9	7.6	2.9	8.2	1.8	2.9	1.8
67.5°	9.4	5.9	5.3	6.5	4.1	2.9	4.1	5.3	1.8	2.9	4.1
70°	8.2	4.1	5.9	5.3	4.1	5.3	5.9	5.9	1.8	5.9	5.3
72.5°	8.2	5.3	2.9	2.3	2.3	2.3	2.3	2.3	3.5	8.2	6.5
75°	3.5	3.5	1.8	4.1	2.3	3.5	2.3	5.9	2.3	6.5	5.3
77.5°	2.3	2.9	0.0	2.9	0.0	0.0	1.8	4.1	1.8	4.7	5.9
80°	0.0	2.9	1.8	0.0	1.2	1.8	0.0	0.6	1.2	5.3	2.3
82.5°	1.2	1.8	2.3	1.2	1.2	0.0	0.0	0.0	0.0	3.5	2.9
85°	1.2	2.3	0.0	0.6	2.3	1.2	0.6	2.9	1.2	4.1	4.7
87.5°	0.0	1.2	1.2	0.0	1.8	0.0	1.8	1.2	0.0	3.5	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°	20.9	20.9	20.9	20.9	20.9
2.5°	17.9	16.2	13.8	17.3	14.4
5°	21.4	19.7	15.6	18.5	16.7
7.5°	22.0	18.5	16.2	15.0	16.7
10°	13.2	8.8	6.5	8.8	4.7
12.5°	22.0	15.6	14.4	16.2	17.9
15°	16.7	10.0	10.0	7.6	10.9
17.5°	9.4	7.6	7.0	9.4	10.9
20°	10.0	6.5	5.3	8.8	8.2
21°	8.8	2.3	7.0	7.0	8.2
22°	12.6	5.9	7.0	11.5	12.0
23°	8.2	6.5	5.3	7.0	9.4
24°	12.0	7.0	6.5	8.8	13.2
25°	8.2	6.5	6.5	8.2	7.0
26°	4.7	6.5	4.7	7.0	5.9
27°	3.5	5.9	3.5	5.3	7.0
28°	7.6	9.4	8.8	9.4	8.2
29°	8.2	10.0	8.2	12.6	9.4
30°	4.7	8.8	4.1	9.4	8.2
31°	4.7	6.5	2.9	9.4	8.2
32°	0.6	3.5	1.8	3.5	3.5
33°	3.5	4.1	4.7	7.6	5.9
34°	5.9	7.0	4.7	8.2	7.0
35°	6.5	3.5	5.3	8.8	9.4
36°	1.8	1.8	2.9	7.0	2.3
37°	3.5	10.0	7.0	12.0	7.0
38°	5.9	12.0	11.5	15.0	12.0
39°	1.2	3.5	4.1	8.2	8.2
40°	5.3	8.8	6.5	12.0	12.0
42.5°	4.1	6.5	4.7	10.0	8.2
45°	1.8	1.8	1.2	6.5	4.7
47.5°	2.9	2.9	5.3	8.2	14.4
50°	5.9	5.9	7.6	13.8	13.2
51°	3.5	2.9	4.1	9.4	12.0
52°	2.9	4.1	4.1	9.4	9.4
53°	1.2	0.0	0.0	7.0	5.9
54°	1.2	0.6	1.8	5.3	8.2
55°	0.0	2.9	2.3	10.9	12.0
57.5°	0.6	4.7	2.3	7.6	9.4
60°	2.9	3.5	6.5	7.6	9.4
61°	0.0	2.9	2.9	7.0	8.2
62°	0.0	2.3	5.3	6.5	8.2
63°	2.9	3.5	4.7	7.6	9.4



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	1.8	4.7	5.9	7.6	7.0
67.5°	3.5	4.1	3.5	10.0	12.0
70°	4.7	7.6	8.2	7.0	12.0
72.5°	2.9	4.1	5.9	10.9	12.0
75°	5.3	5.9	8.8	10.0	12.0
77.5°	4.1	5.9	5.9	6.5	12.0
80°	1.8	5.3	5.9	6.5	3.5
82.5°	2.3	3.5	2.3	6.5	4.7
85°	1.2	5.3	4.7	5.9	5.9
87.5°	1.8	2.9	2.9	5.3	3.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	13.2	13.8	13.2	9.4	7.0	6.5	4.7	8.2	2.3	2.3	0.0
65°	12.0	13.2	10.0	11.5	7.6	7.0	4.1	8.2	1.2	4.1	2.9





64°	1.8	2.9	2.9	5.3	8.2
65°	2.9	4.1	4.1	7.6	5.9



(END OF REPORT)