

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: P315281

Luminaire Tested: **LDA2B05FL9730D010 PIN1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315281
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 PIN1MMS
Description: PORTFOLIO 2IN ADJ 500 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: 471.7 lumens
Efficiency: N/A
Efficacy: 67.4 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

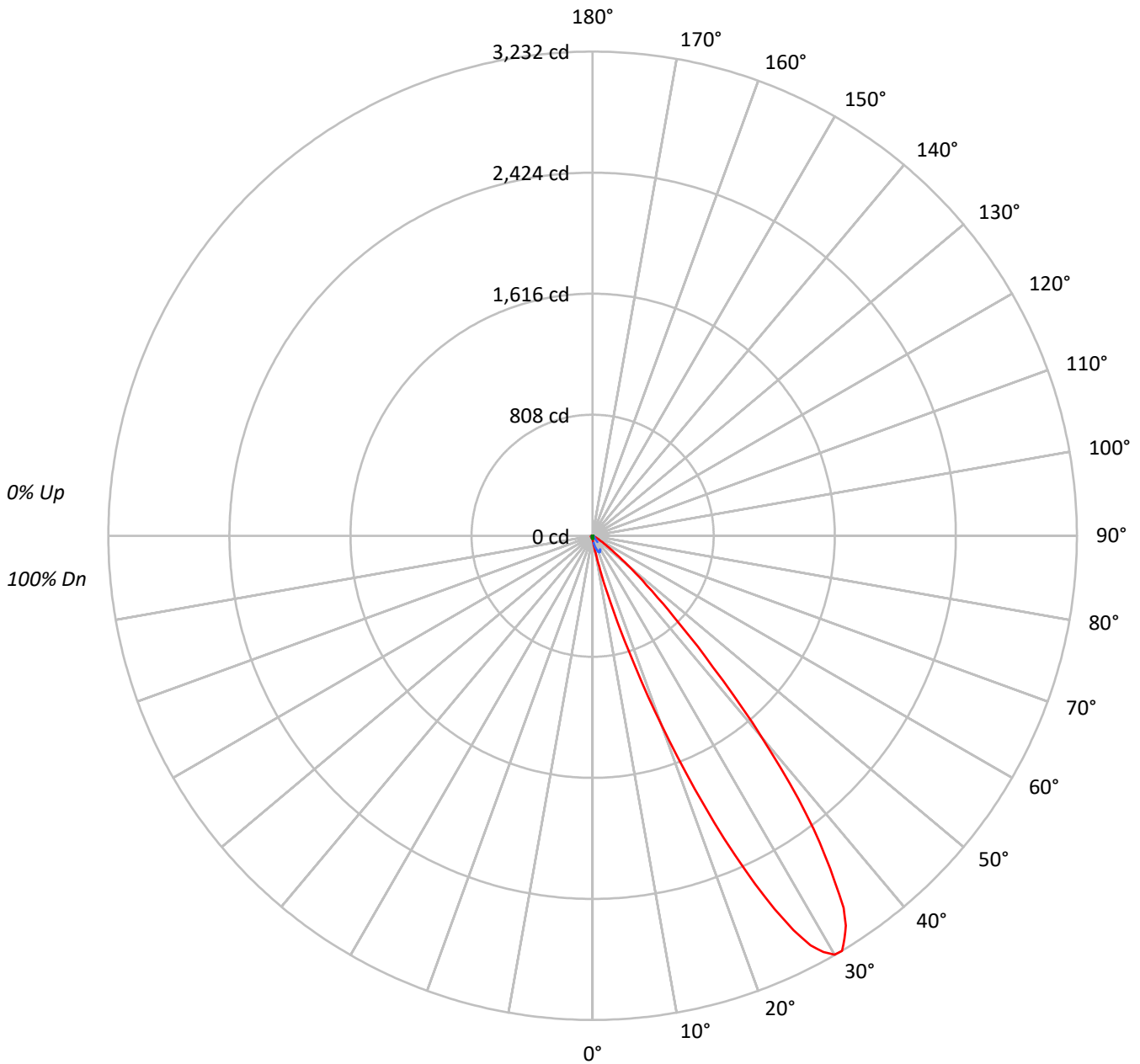
Input Watts (W): 7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	9917	9917	9917
5°	22138	10202	7973
10°	59215	6362	2254
15°	233216	8223	5363
20°	705423	5040	4148
25°	1396023	4300	3702
30°	1839513	2564	4501
35°	1697355	3734	5481
40°	1130609	3285	7471
45°	533267	1186	3140
50°	235096	4375	9748
55°	95649	0	9978
60°	39666	2763	8979
65°	13542	3269	6654
70°	11396	6491	16733
75°	6481	9722	22112
80°	0	4830	9660
85°	6227	6227	32266



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.7	0.6
10°-20°	28.9	6.1
20°-30°	148.4	31.4
30°-40°	190.0	40.3
40°-50°	73.0	15.5
50°-60°	14.9	3.1
60°-70°	5.0	1.1
70°-80°	5.9	1.2
80°-90°	3.0	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°	179.9	38.1
0°-40°	369.9	78.4
0°-60°	457.8	97.1
0°-90°	471.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	471.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	20	20	20	20	20	
5°	45	37	21	15	16	7
15°	457	89	16	10	10	175
25°	2564	116	8	6	7	1171
35°	2818	60	6	5	9	1684
45°	764	15	2	1	4	657
55°	111	3	0	2	12	115
65°	12	4	3	4	6	16
75°	3	6	5	8	12	5
85°	1	4	1	4	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°	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1
2.5°	29.7	25.7	26.9	22.9	25.2	25.7	21.2	28.0	25.2	26.3	22.9
5°	44.7	48.1	44.1	42.4	41.3	42.4	41.3	43.0	41.9	36.8	26.3
7.5°	74.7	68.2	68.2	65.9	67.6	67.0	64.2	65.9	61.9	44.7	30.3
10°	118.2	111.7	111.2	109.5	108.9	103.8	101.0	98.7	90.5	52.9	27.4
12.5°	231.7	226.0	222.1	212.2	205.4	201.4	186.4	178.5	155.0	78.6	35.1
15°	456.6	427.4	434.8	402.8	379.3	363.8	332.7	305.2	248.9	88.8	33.9
17.5°	807.9	779.6	760.6	725.8	678.0	636.7	575.4	514.5	400.0	101.0	31.7
20°	1343.6	1298.9	1259.3	1199.7	1107.7	1028.2	920.2	803.9	595.4	115.4	28.6
21°	1579.0	1544.5	1498.6	1420.0	1312.8	1206.4	1076.9	936.9	678.6	116.5	25.7
22°	1824.5	1802.2	1741.9	1651.7	1526.7	1399.9	1241.0	1087.1	767.1	118.2	24.6
23°	2080.2	2056.8	1988.6	1885.3	1744.7	1591.4	1406.2	1223.7	850.3	120.5	24.0
24°	2330.6	2304.5	2228.5	2113.0	1953.5	1777.3	1568.0	1356.4	927.8	119.4	25.2
25°	2564.5	2528.3	2448.0	2320.1	2145.0	1947.3	1716.5	1470.9	996.0	116.0	21.2
26°	2773.3	2732.0	2645.4	2506.0	2314.4	2100.3	1840.4	1577.3	1046.3	113.1	20.1
27°	2954.6	2902.5	2810.0	2663.8	2458.4	2222.0	1946.2	1660.5	1090.7	108.9	16.1
28°	3095.7	3036.1	2942.1	2787.7	2570.7	2316.7	2023.9	1712.5	1117.1	109.5	18.4
29°	3177.2	3131.4	3029.3	2867.5	2639.2	2371.3	2065.0	1741.4	1122.1	101.0	17.3
30°	3229.0	3177.8	3072.8	2903.7	2665.5	2383.8	2070.0	1736.0	1107.2	94.8	16.1
31°	3232.4	3178.9	3072.3	2897.2	2655.3	2363.1	2041.8	1704.0	1074.6	88.3	13.3
32°	3171.5	3130.2	3025.3	2844.5	2600.1	2306.2	1980.9	1650.0	1023.4	75.2	9.1
33°	3102.8	3052.7	2948.4	2765.9	2523.8	2228.5	1893.3	1577.3	970.2	74.1	11.6
34°	2995.9	2935.6	2833.0	2653.3	2417.7	2117.6	1788.9	1480.3	902.4	67.6	11.0
35°	2818.2	2786.0	2682.2	2504.8	2276.0	1984.6	1663.3	1373.6	830.2	60.3	7.9
36°	2640.3	2600.7	2502.6	2331.1	2114.2	1826.2	1521.6	1252.0	748.8	51.2	6.2
37°	2452.2	2400.4	2311.1	2143.3	1916.7	1668.4	1385.5	1136.0	682.3	54.0	8.5
38°	2233.0	2215.7	2098.1	1941.9	1732.6	1498.1	1239.3	1013.8	608.7	50.4	13.9
39°	1992.0	1980.4	1863.0	1720.7	1532.9	1317.3	1089.6	887.1	535.2	36.8	4.5
40°	1755.5	1722.4	1639.2	1510.0	1346.5	1152.7	955.8	779.0	471.5	36.2	9.1
42.5°	1189.8	1200.2	1110.3	1017.8	912.8	781.3	650.0	534.1	329.8	26.9	5.7
45°	764.3	766.6	726.4	654.6	585.8	503.8	417.2	347.6	212.7	15.0	1.7
47.5°	486.5	485.4	459.7	418.4	373.4	325.3	271.3	227.1	137.8	11.6	5.1
50°	306.3	305.2	289.1	262.8	237.6	205.9	172.0	146.2	87.1	13.9	5.7
51°	248.9	250.6	237.0	210.5	190.9	160.7	137.2	116.5	68.2	9.6	5.1
52°	205.4	204.2	195.7	173.4	157.3	131.3	111.7	95.3	56.9	8.5	2.3
53°	165.2	165.8	157.3	140.0	124.5	104.9	89.4	74.1	40.7	6.2	1.7
54°	130.7	129.6	126.7	110.0	100.4	83.2	69.9	56.9	35.1	1.1	0.0
55°	111.2	109.5	105.5	91.1	81.5	68.7	55.7	48.7	30.3	2.8	0.0
57.5°	64.2	64.2	61.9	54.0	47.5	42.4	33.9	31.7	15.6	2.8	0.0
60°	40.2	35.1	39.0	33.4	26.3	23.5	19.5	17.8	13.3	5.1	1.1
61°	33.4	26.9	26.3	24.6	22.9	15.6	13.3	14.4	8.5	1.7	1.1
62°	24.0	21.2	22.9	19.5	17.3	12.2	11.0	10.5	5.1	2.3	2.8
63°	21.8	19.5	19.0	14.4	12.7	12.7	9.6	9.1	6.2	4.5	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°	11.6	9.6	8.5	9.6	5.7	7.4	2.8	7.9	1.7	2.8	1.7
67.5°	9.1	5.7	5.1	6.2	4.0	2.8	4.0	5.1	1.7	2.8	4.0
70°	7.9	4.0	5.7	5.1	4.0	5.1	5.7	5.7	1.7	5.7	5.1
72.5°	7.9	5.1	2.8	2.3	2.3	2.3	2.3	2.3	3.4	7.9	6.2
75°	3.4	3.4	1.7	4.0	2.3	3.4	2.3	5.7	2.3	6.2	5.1
77.5°	2.3	2.8	0.0	2.8	0.0	0.0	1.7	4.0	1.7	4.5	5.7
80°	0.0	2.8	1.7	0.0	1.1	1.7	0.0	0.6	1.1	5.1	2.3
82.5°	1.1	1.7	2.3	1.1	1.1	0.0	0.0	0.0	0.0	3.4	2.8
85°	1.1	2.3	0.0	0.6	2.3	1.1	0.6	2.8	1.1	4.0	4.5
87.5°	0.0	1.1	1.1	0.0	1.7	0.0	1.7	1.1	0.0	3.4	1.7
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°	20.1	20.1	20.1	20.1	20.1
2.5°	17.3	15.6	13.3	16.7	13.9
5°	20.6	19.0	15.0	17.8	16.1
7.5°	21.2	17.8	15.6	14.4	16.1
10°	12.7	8.5	6.2	8.5	4.5
12.5°	21.2	15.0	13.9	15.6	17.3
15°	16.1	9.6	9.6	7.4	10.5
17.5°	9.1	7.4	6.8	9.1	10.5
20°	9.6	6.2	5.1	8.5	7.9
21°	8.5	2.3	6.8	6.8	7.9
22°	12.2	5.7	6.8	11.0	11.6
23°	7.9	6.2	5.1	6.8	9.1
24°	11.6	6.8	6.2	8.5	12.7
25°	7.9	6.2	6.2	7.9	6.8
26°	4.5	6.2	4.5	6.8	5.7
27°	3.4	5.7	3.4	5.1	6.8
28°	7.4	9.1	8.5	9.1	7.9
29°	7.9	9.6	7.9	12.2	9.1
30°	4.5	8.5	4.0	9.1	7.9
31°	4.5	6.2	2.8	9.1	7.9
32°	0.6	3.4	1.7	3.4	3.4
33°	3.4	4.0	4.5	7.4	5.7
34°	5.7	6.8	4.5	7.9	6.8
35°	6.2	3.4	5.1	8.5	9.1
36°	1.7	1.7	2.8	6.8	2.3
37°	3.4	9.6	6.8	11.6	6.8
38°	5.7	11.6	11.0	14.4	11.6
39°	1.1	3.4	4.0	7.9	7.9
40°	5.1	8.5	6.2	11.6	11.6
42.5°	4.0	6.2	4.5	9.6	7.9
45°	1.7	1.7	1.1	6.2	4.5
47.5°	2.8	2.8	5.1	7.9	13.9
50°	5.7	5.7	7.4	13.3	12.7
51°	3.4	2.8	4.0	9.1	11.6
52°	2.8	4.0	4.0	9.1	9.1
53°	1.1	0.0	0.0	6.8	5.7
54°	1.1	0.6	1.7	5.1	7.9
55°	0.0	2.8	2.3	10.5	11.6
57.5°	0.6	4.5	2.3	7.4	9.1
60°	2.8	3.4	6.2	7.4	9.1
61°	0.0	2.8	2.8	6.8	7.9
62°	0.0	2.3	5.1	6.2	7.9
63°	2.8	3.4	4.5	7.4	9.1



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	1.7	4.5	5.7	7.4	6.8
67.5°	3.4	4.0	3.4	9.6	11.6
70°	4.5	7.4	7.9	6.8	11.6
72.5°	2.8	4.0	5.7	10.5	11.6
75°	5.1	5.7	8.5	9.6	11.6
77.5°	4.0	5.7	5.7	6.2	11.6
80°	1.7	5.1	5.7	6.2	3.4
82.5°	2.3	3.4	2.3	6.2	4.5
85°	1.1	5.1	4.5	5.7	5.7
87.5°	1.7	2.8	2.8	5.1	3.4
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	12.7	13.3	12.7	9.1	6.8	6.2	4.5	7.9	2.3	2.3	0.0
65°	11.6	12.7	9.6	11.0	7.4	6.8	4.0	7.9	1.1	4.0	2.8





64°	1.7	2.8	2.8	5.1	7.9
65°	2.8	4.0	4.0	7.4	5.7



(END OF REPORT)