

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: P315312

Luminaire Tested: **LDA2B10FL8040D010 PINW1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315312
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: LDA2B10FL8040D010 PINW1MMS
Description: PORTFOLIO 2IN ADJ 1000 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: 945.8 lumens
Efficiency: N/A
Efficacy: 94.6 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

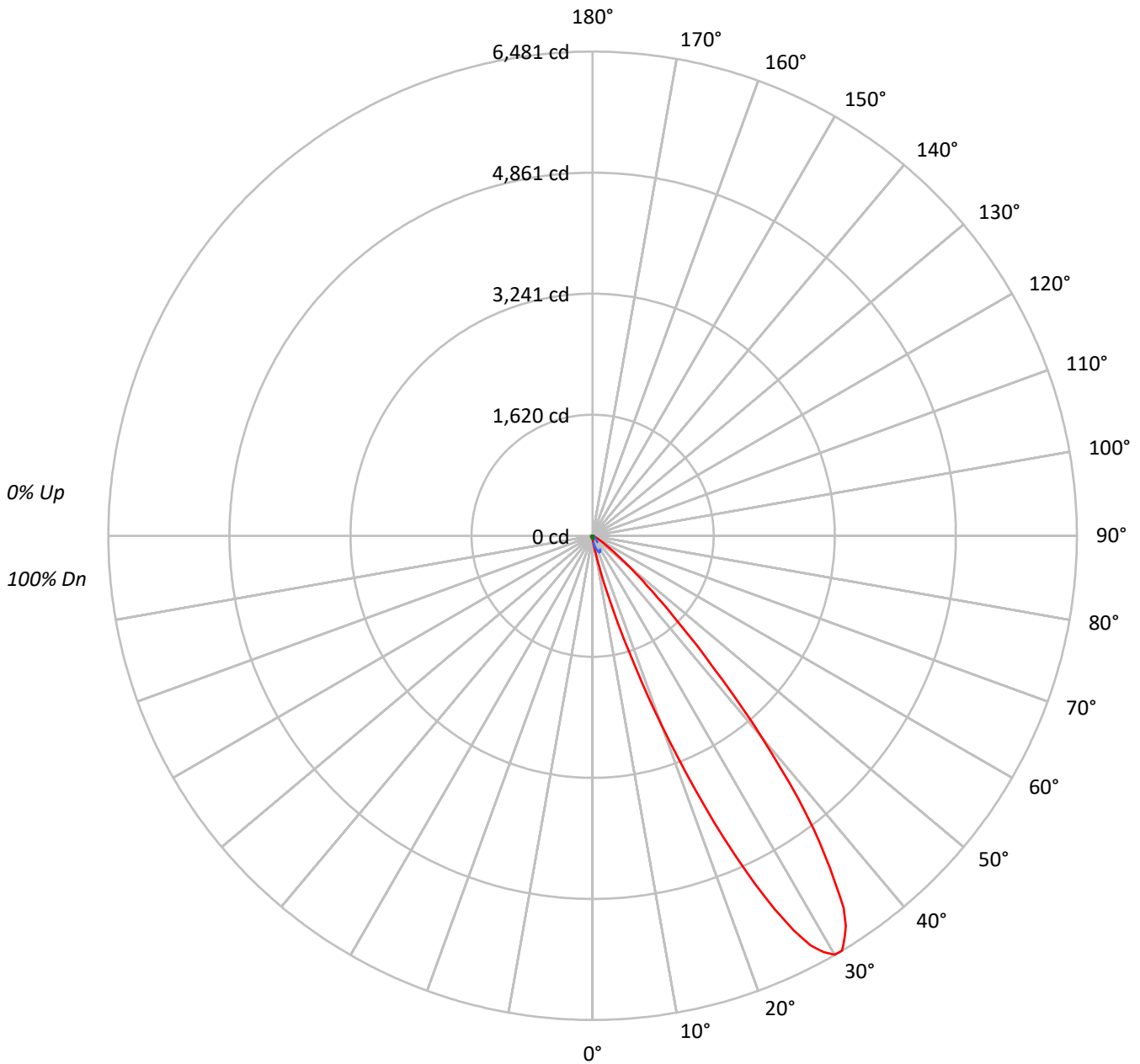
Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	19882	19882	19882
5°	44374	20503	15996
10°	118781	12775	4559
15°	467555	16498	10726
20°	1414521	10133	8348
25°	2799231	8655	7403
30°	3688426	5184	9058
35°	3403444	7529	10962
40°	2267014	6569	15006
45°	1069324	2372	6349
50°	471497	8673	19572
55°	191727	0	20041
60°	79431	5624	17958
65°	27200	6654	13192
70°	22936	13127	33610
75°	12962	19443	44415
80°	0	9660	19320
85°	13020	13020	63966



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.5	0.6
10°-20°	57.9	6.1
20°-30°	297.5	31.5
30°-40°	380.9	40.3
40°-50°	146.5	15.5
50°-60°	29.8	3.1
60°-70°	10.1	1.1
70°-80°	11.7	1.2
80°-90°	6.0	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°	360.8	38.1
0°-40°	741.7	78.4
0°-60°	918.0	97.1
0°-90°	945.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	945.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	40	40	40	40	40	
5°	90	74	41	30	32	13
15°	915	178	32	19	21	351
25°	5142	232	16	12	14	2347
35°	5651	121	12	10	18	3378
45°	1533	30	3	2	9	1317
55°	223	6	0	4	23	231
65°	23	8	6	8	11	33
75°	7	12	10	17	23	9
85°	2	8	2	9	11	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°	40.3	40.3	40.3	40.3	40.3	40.3	40.3	40.3	40.3	40.3	40.3
2.5°	59.6	51.6	53.9	45.9	50.5	51.6	42.5	56.2	50.5	52.7	45.9
5°	89.6	96.4	88.5	85.1	82.8	85.1	82.8	86.2	83.9	73.7	52.7
7.5°	149.7	136.7	136.7	132.2	135.6	134.4	128.8	132.2	124.2	89.6	60.7
10°	237.1	224.0	222.9	219.5	218.4	208.2	202.5	197.9	181.5	106.1	55.0
12.5°	464.5	453.2	445.2	425.4	411.8	403.8	373.8	357.9	310.8	157.7	70.3
15°	915.4	857.0	871.8	807.7	760.6	729.4	667.0	612.0	499.1	178.1	68.1
17.5°	1619.9	1563.2	1525.2	1455.4	1359.6	1276.7	1153.7	1031.7	802.0	202.5	63.5
20°	2694.2	2604.5	2525.1	2405.5	2221.1	2061.7	1845.1	1612.0	1193.9	231.4	57.3
21°	3166.1	3096.9	3005.0	2847.3	2632.3	2419.1	2159.3	1878.5	1360.7	233.7	51.6
22°	3658.4	3613.6	3492.8	3311.8	3061.1	2807.0	2488.3	2179.7	1538.2	237.1	49.3
23°	4171.1	4124.1	3987.4	3780.3	3498.4	3191.0	2819.5	2453.7	1705.0	241.6	48.2
24°	4673.1	4620.9	4468.3	4236.9	3917.0	3563.7	3143.9	2719.7	1860.4	239.4	50.5
25°	5142.2	5069.6	4908.5	4652.1	4301.0	3904.5	3441.7	2949.4	1997.1	232.5	42.5
26°	5560.7	5477.9	5304.4	5024.8	4640.8	4211.4	3690.2	3162.7	2098.0	226.9	40.3
27°	5924.3	5820.0	5634.5	5341.2	4929.5	4455.3	3902.3	3329.4	2187.1	218.4	32.3
28°	6207.3	6087.7	5899.4	5589.7	5154.6	4645.3	4058.3	3433.8	2239.8	219.5	36.9
29°	6370.7	6278.8	6074.1	5749.6	5291.9	4754.8	4140.5	3491.6	2250.1	202.5	34.6
30°	6474.5	6371.8	6161.4	5822.2	5344.6	4779.7	4150.7	3480.9	2220.0	190.0	32.3
31°	6481.3	6374.1	6160.3	5809.2	5324.2	4738.3	4094.0	3416.8	2154.8	177.0	26.7
32°	6359.4	6276.5	6066.1	5703.7	5213.6	4624.3	3972.0	3308.4	2052.1	150.9	18.2
33°	6221.5	6121.1	5911.8	5546.0	5060.5	4468.3	3796.2	3162.7	1945.5	148.6	23.3
34°	6007.1	5886.3	5680.4	5320.3	4847.8	4246.0	3586.9	2968.1	1809.3	135.6	22.1
35°	5650.9	5586.3	5378.1	5022.5	4563.6	3979.4	3335.1	2754.3	1664.7	120.8	15.9
36°	5294.2	5214.8	5017.9	4674.2	4239.2	3661.8	3050.9	2510.4	1501.4	102.7	12.5
37°	4917.0	4813.2	4634.0	4297.6	3843.3	3345.3	2778.1	2277.8	1368.1	108.3	17.0
38°	4477.4	4442.8	4206.9	3893.8	3474.1	3003.8	2484.9	2032.8	1220.6	101.0	27.8
39°	3994.2	3970.9	3735.5	3450.2	3073.6	2641.4	2184.8	1778.7	1073.1	73.7	9.1
40°	3520.0	3453.6	3286.9	3027.7	2699.8	2311.3	1916.5	1562.0	945.5	72.6	18.2
42.5°	2385.6	2406.6	2226.2	2040.8	1830.3	1566.6	1303.4	1070.9	661.3	53.9	11.3
45°	1532.6	1537.1	1456.5	1312.5	1174.7	1010.2	836.6	697.1	426.5	30.1	3.4
47.5°	975.6	973.3	921.7	838.9	748.7	652.3	543.9	455.5	276.2	23.3	10.2
50°	614.3	612.0	579.7	526.9	476.4	412.9	344.9	293.2	174.7	27.8	11.3
51°	499.1	502.5	475.3	422.0	382.9	322.2	275.1	233.7	136.7	19.3	10.2
52°	411.8	409.5	392.5	347.7	315.4	263.2	224.0	191.1	114.0	17.0	4.5
53°	331.2	332.4	315.4	280.8	249.6	210.4	179.2	148.6	81.7	12.5	3.4
54°	262.0	259.8	254.1	220.6	201.4	166.8	140.1	114.0	70.3	2.3	0.0
55°	222.9	219.5	211.6	182.6	163.4	137.8	111.7	97.6	60.7	5.7	0.0
57.5°	128.8	128.8	124.2	108.3	95.3	85.1	68.1	63.5	31.2	5.7	0.0
60°	80.5	70.3	78.3	66.9	52.7	47.1	39.1	35.7	26.7	10.2	2.3
61°	66.9	53.9	52.7	49.3	45.9	31.2	26.7	28.9	17.0	3.4	2.3
62°	48.2	42.5	45.9	39.1	34.6	24.4	22.1	21.0	10.2	4.5	5.7
63°	43.7	39.1	38.0	28.9	25.5	25.5	19.3	18.2	12.5	9.1	4.5



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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°	23.3	19.3	17.0	19.3	11.3	14.7	5.7	15.9	3.4	5.7	3.4
67.5°	18.2	11.3	10.2	12.5	7.9	5.7	7.9	10.2	3.4	5.7	7.9
70°	15.9	7.9	11.3	10.2	7.9	10.2	11.3	11.3	3.4	11.3	10.2
72.5°	15.9	10.2	5.7	4.5	4.5	4.5	4.5	4.5	6.8	15.9	12.5
75°	6.8	6.8	3.4	7.9	4.5	6.8	4.5	11.3	4.5	12.5	10.2
77.5°	4.5	5.7	0.0	5.7	0.0	0.0	3.4	7.9	3.4	9.1	11.3
80°	0.0	5.7	3.4	0.0	2.3	3.4	0.0	1.1	2.3	10.2	4.5
82.5°	2.3	3.4	4.5	2.3	2.3	0.0	0.0	0.0	0.0	6.8	5.7
85°	2.3	4.5	0.0	1.1	4.5	2.3	1.1	5.7	2.3	7.9	9.1
87.5°	0.0	2.3	2.3	0.0	3.4	0.0	3.4	2.3	0.0	6.8	3.4
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°	40.3	40.3	40.3	40.3	40.3
2.5°	34.6	31.2	26.7	33.5	27.8
5°	41.4	38.0	30.1	35.7	32.3
7.5°	42.5	35.7	31.2	28.9	32.3
10°	25.5	17.0	12.5	17.0	9.1
12.5°	42.5	30.1	27.8	31.2	34.6
15°	32.3	19.3	19.3	14.7	21.0
17.5°	18.2	14.7	13.6	18.2	21.0
20°	19.3	12.5	10.2	17.0	15.9
21°	17.0	4.5	13.6	13.6	15.9
22°	24.4	11.3	13.6	22.1	23.3
23°	15.9	12.5	10.2	13.6	18.2
24°	23.3	13.6	12.5	17.0	25.5
25°	15.9	12.5	12.5	15.9	13.6
26°	9.1	12.5	9.1	13.6	11.3
27°	6.8	11.3	6.8	10.2	13.6
28°	14.7	18.2	17.0	18.2	15.9
29°	15.9	19.3	15.9	24.4	18.2
30°	9.1	17.0	7.9	18.2	15.9
31°	9.1	12.5	5.7	18.2	15.9
32°	1.1	6.8	3.4	6.8	6.8
33°	6.8	7.9	9.1	14.7	11.3
34°	11.3	13.6	9.1	15.9	13.6
35°	12.5	6.8	10.2	17.0	18.2
36°	3.4	3.4	5.7	13.6	4.5
37°	6.8	19.3	13.6	23.3	13.6
38°	11.3	23.3	22.1	28.9	23.3
39°	2.3	6.8	7.9	15.9	15.9
40°	10.2	17.0	12.5	23.3	23.3
42.5°	7.9	12.5	9.1	19.3	15.9
45°	3.4	3.4	2.3	12.5	9.1
47.5°	5.7	5.7	10.2	15.9	27.8
50°	11.3	11.3	14.7	26.7	25.5
51°	6.8	5.7	7.9	18.2	23.3
52°	5.7	7.9	7.9	18.2	18.2
53°	2.3	0.0	0.0	13.6	11.3
54°	2.3	1.1	3.4	10.2	15.9
55°	0.0	5.7	4.5	21.0	23.3
57.5°	1.1	9.1	4.5	14.7	18.2
60°	5.7	6.8	12.5	14.7	18.2
61°	0.0	5.7	5.7	13.6	15.9
62°	0.0	4.5	10.2	12.5	15.9
63°	5.7	6.8	9.1	14.7	18.2



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	3.4	9.1	11.3	14.7	13.6
67.5°	6.8	7.9	6.8	19.3	23.3
70°	9.1	14.7	15.9	13.6	23.3
72.5°	5.7	7.9	11.3	21.0	23.3
75°	10.2	11.3	17.0	19.3	23.3
77.5°	7.9	11.3	11.3	12.5	23.3
80°	3.4	10.2	11.3	12.5	6.8
82.5°	4.5	6.8	4.5	12.5	9.1
85°	2.3	10.2	9.1	11.3	11.3
87.5°	3.4	5.7	5.7	10.2	6.8
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	25.5	26.7	25.5	18.2	13.6	12.5	9.1	15.9	4.5	4.5	0.0
65°	23.3	25.5	19.3	22.1	14.7	13.6	7.9	15.9	2.3	7.9	5.7





64°	3.4	5.7	5.7	10.2	15.9
65°	5.7	7.9	7.9	14.7	11.3



(END OF REPORT)