

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: P315317

Luminaire Tested: **LDA2B10FL8050D010 PIN1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315317
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: LDA2B10FL8050D010 PIN1MMS
Description: PORTFOLIO 2IN ADJ 1000 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, Black oculus, matte metallic silver finish
Light Source: -
Ballast/Driver: -

Summary

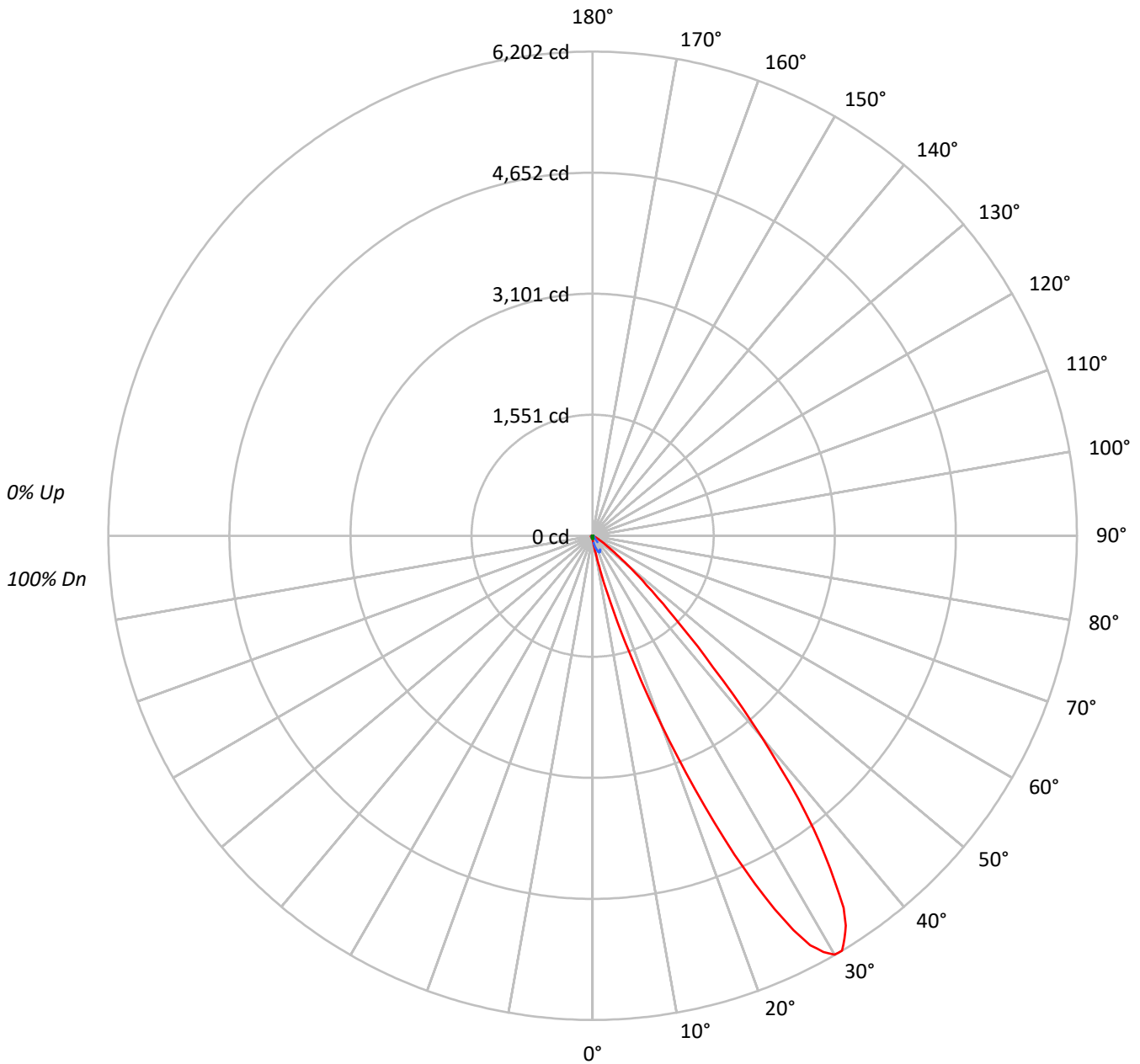
Lumens per Lamp: N/A
Luminaire Lumens: 905.0 lumens
Efficiency: N/A
Efficacy: 90.5 lumens/watt
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

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



TEST NUMBER: P315317
CATALOG NUMBER: LDA2B10FL8050D010 PIN1MMS

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90					90			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80					80			
3	97	89	82	77	95	87	82	77	85	80	75	82	78	74	80	76	73	71					71			
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63					63			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	59	53	76	66	58	53	64	58	53	62	57	52	61	56	52	50					50			
7	72	61	53	48	71	60	53	47	58	52	47	57	51	47	56	51	47	45					45			
8	67	55	48	43	66	55	47	42	53	47	42	52	46	42	51	46	42	40					40			
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36					36			
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32					32			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	18994	18994	18994
5°	42492	19612	15303
10°	113671	12224	4358
15°	447431	15783	10266
20°	1353461	9713	7980
25°	2678437	8274	7077
30°	3529313	4956	8659
35°	3256668	7167	10480
40°	2169185	6312	14362
45°	1023135	2302	6070
50°	451157	8366	18728
55°	183470	0	19181
60°	76076	5328	17169
65°	26033	6304	12725
70°	21926	12550	32168
75°	12390	18681	42508
80°	0	9376	18468
85°	12454	12454	61702



TEST NUMBER: P315317

CATALOG NUMBER: LDA2B10FL8050D010 PIN1MMS

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.2	0.6
10°-20°	55.4	6.1
20°-30°	284.6	31.5
30°-40°	364.5	40.3
40°-50°	140.2	15.5
50°-60°	28.5	3.1
60°-70°	9.7	1.1
70°-80°	11.2	1.2
80°-90°	5.7	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°	345.2	38.1
0°-40°	709.7	78.4
0°-60°	878.4	97.1
0°-90°	905.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	905.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	38	38	38	38	38	
5°	86	71	40	29	31	13
15°	876	170	31	18	20	336
25°	4920	222	15	12	13	2246
35°	5407	116	12	10	17	3232
45°	1466	29	3	2	9	1260
55°	213	5	0	4	22	221
65°	22	8	5	8	11	31
75°	6	12	10	16	22	9
85°	2	8	2	9	11	1
90°	0	0	0	0	0	



TEST NUMBER: P315317

CATALOG NUMBER: LDA2B10FL8050D010 PIN1MMS

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
2.5°	57.0	49.4	51.6	44.0	48.3	49.4	40.7	53.7	48.3	50.5	44.0
5°	85.8	92.3	84.7	81.4	79.2	81.4	79.2	82.5	80.3	70.6	50.5
7.5°	143.3	130.8	130.8	126.5	129.7	128.6	123.2	126.5	118.9	85.8	58.1
10°	226.9	214.4	213.3	210.0	208.9	199.2	193.8	189.4	173.7	101.5	52.6
12.5°	444.5	433.6	426.0	407.0	394.0	386.4	357.7	342.5	297.4	150.9	67.3
15°	876.0	820.1	834.2	772.8	727.8	697.9	638.2	585.6	477.6	170.4	65.1
17.5°	1550.0	1495.7	1459.4	1392.6	1300.9	1221.7	1103.9	987.2	767.4	193.8	60.8
20°	2577.9	2492.2	2416.2	2301.7	2125.3	1972.8	1765.5	1542.4	1142.4	221.4	54.8
21°	3029.5	2963.3	2875.3	2724.5	2518.8	2314.7	2066.1	1797.5	1302.0	223.6	49.4
22°	3500.6	3457.7	3342.1	3169.0	2929.1	2685.9	2380.9	2085.7	1471.9	226.9	47.2
23°	3991.2	3946.1	3815.3	3617.2	3347.5	3053.4	2697.9	2347.8	1631.4	231.2	46.1
24°	4471.5	4421.6	4275.6	4054.1	3748.0	3409.9	3008.3	2602.4	1780.1	229.0	48.3
25°	4920.3	4850.9	4696.7	4451.4	4115.5	3736.1	3293.2	2822.2	1910.9	222.5	40.7
26°	5320.9	5241.6	5075.5	4808.0	4440.6	4029.7	3531.0	3026.2	2007.5	217.1	38.5
27°	5668.7	5568.9	5391.4	5110.8	4716.8	4263.1	3733.9	3185.8	2092.7	208.9	30.9
28°	5939.6	5825.0	5644.9	5348.5	4932.3	4444.9	3883.2	3285.6	2143.2	210.0	35.3
29°	6095.9	6007.9	5812.0	5501.6	5063.6	4549.6	3961.9	3341.0	2153.0	193.8	33.1
30°	6195.2	6097.0	5895.6	5571.1	5114.1	4573.5	3971.6	3330.7	2124.2	181.8	30.9
31°	6201.7	6099.1	5894.5	5558.6	5094.5	4533.9	3917.4	3269.4	2061.8	169.3	25.5
32°	6085.0	6005.8	5804.4	5457.6	4988.7	4424.8	3800.7	3165.7	1963.6	144.4	17.4
33°	5953.1	5857.1	5656.8	5306.7	4842.2	4275.6	3632.4	3026.2	1861.5	142.2	22.3
34°	5748.0	5632.4	5435.4	5090.7	4638.7	4062.8	3432.2	2840.1	1731.3	129.7	21.2
35°	5407.2	5345.3	5146.1	4805.8	4366.7	3807.7	3191.2	2635.5	1592.9	115.6	15.2
36°	5065.8	4989.8	4801.5	4472.6	4056.3	3503.8	2919.3	2402.1	1436.6	98.2	11.9
37°	4704.9	4605.5	4434.0	4112.2	3677.5	3201.0	2658.3	2179.6	1309.0	103.7	16.3
38°	4284.3	4251.1	4025.4	3725.8	3324.2	2874.3	2377.7	1945.1	1167.9	96.6	26.6
39°	3821.9	3799.6	3574.4	3301.4	2941.0	2527.5	2090.6	1702.0	1026.8	70.6	8.7
40°	3368.1	3304.6	3145.1	2897.1	2583.4	2211.6	1833.9	1494.7	904.7	69.5	17.4
42.5°	2282.7	2302.8	2130.2	1952.7	1751.4	1499.0	1247.2	1024.7	632.8	51.6	10.9
45°	1466.4	1470.8	1393.7	1255.9	1124.0	966.6	800.5	667.0	408.1	28.8	3.3
47.5°	933.5	931.3	881.9	802.7	716.4	624.1	520.5	435.8	264.3	22.3	9.8
50°	587.8	585.6	554.7	504.2	455.9	395.1	330.0	280.6	167.2	26.6	10.9
51°	477.6	480.9	454.8	403.8	366.3	308.3	263.2	223.6	130.8	18.5	9.8
52°	394.0	391.8	375.6	332.7	301.8	251.8	214.4	182.9	109.1	16.3	4.3
53°	317.0	318.0	301.8	268.6	238.8	201.4	171.5	142.2	78.2	11.9	3.3
54°	250.7	248.6	243.1	211.1	192.7	159.6	134.1	109.1	67.3	2.2	0.0
55°	213.3	210.0	202.4	174.8	156.3	131.9	106.9	93.3	58.1	5.4	0.0
57.5°	123.2	123.2	118.9	103.7	91.2	81.4	65.1	60.8	29.8	5.4	0.0
60°	77.1	67.3	74.9	64.0	50.5	45.0	37.4	34.2	25.5	9.8	2.2
61°	64.0	51.6	50.5	47.2	44.0	29.8	25.5	27.7	16.3	3.3	2.2
62°	46.1	40.7	44.0	37.4	33.1	23.3	21.2	20.1	9.8	4.3	5.4
63°	41.8	37.4	36.4	27.7	24.4	24.4	18.5	17.4	11.9	8.7	4.3



TEST NUMBER: P315317

CATALOG NUMBER: LDA2B10FL8050D010 PIN1MMS

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
66°	22.3	18.5	16.3	18.5	10.9	14.1	5.4	15.2	3.3	5.4	3.3
67.5°	17.4	10.9	9.8	11.9	7.6	5.4	7.6	9.8	3.3	5.4	7.6
70°	15.2	7.6	10.9	9.8	7.6	9.8	10.9	10.9	3.3	10.9	9.8
72.5°	15.2	9.8	5.4	4.3	4.3	4.3	4.3	4.3	6.5	15.2	11.9
75°	6.5	6.5	3.3	7.6	4.3	6.5	4.3	10.9	4.3	11.9	9.8
77.5°	4.3	5.4	0.0	5.4	0.0	0.0	3.3	7.6	3.3	8.7	10.9
80°	0.0	5.4	3.3	0.0	2.2	3.3	0.0	1.1	2.2	9.8	4.3
82.5°	2.2	3.3	4.3	2.2	2.2	0.0	0.0	0.0	0.0	6.5	5.4
85°	2.2	4.3	0.0	1.1	4.3	2.2	1.1	5.4	2.2	7.6	8.7
87.5°	0.0	2.2	2.2	0.0	3.3	0.0	3.3	2.2	0.0	6.5	3.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P315317

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	38.5	38.5	38.5	38.5	38.5
2.5°	33.1	29.8	25.5	32.0	26.6
5°	39.6	36.4	28.8	34.2	30.9
7.5°	40.7	34.2	29.8	27.7	30.9
10°	24.4	16.3	11.9	16.3	8.7
12.5°	40.7	28.8	26.6	29.8	33.1
15°	30.9	18.5	18.5	14.1	20.1
17.5°	17.4	14.1	13.0	17.4	20.1
20°	18.5	11.9	9.8	16.3	15.2
21°	16.3	4.3	13.0	13.0	15.2
22°	23.3	10.9	13.0	21.2	22.3
23°	15.2	11.9	9.8	13.0	17.4
24°	22.3	13.0	11.9	16.3	24.4
25°	15.2	11.9	11.9	15.2	13.0
26°	8.7	11.9	8.7	13.0	10.9
27°	6.5	10.9	6.5	9.8	13.0
28°	14.1	17.4	16.3	17.4	15.2
29°	15.2	18.5	15.2	23.3	17.4
30°	8.7	16.3	7.6	17.4	15.2
31°	8.7	11.9	5.4	17.4	15.2
32°	1.1	6.5	3.3	6.5	6.5
33°	6.5	7.6	8.7	14.1	10.9
34°	10.9	13.0	8.7	15.2	13.0
35°	11.9	6.5	9.8	16.3	17.4
36°	3.3	3.3	5.4	13.0	4.3
37°	6.5	18.5	13.0	22.3	13.0
38°	10.9	22.3	21.2	27.7	22.3
39°	2.2	6.5	7.6	15.2	15.2
40°	9.8	16.3	11.9	22.3	22.3
42.5°	7.6	11.9	8.7	18.5	15.2
45°	3.3	3.3	2.2	11.9	8.7
47.5°	5.4	5.4	9.8	15.2	26.6
50°	10.9	10.9	14.1	25.5	24.4
51°	6.5	5.4	7.6	17.4	22.3
52°	5.4	7.6	7.6	17.4	17.4
53°	2.2	0.0	0.0	13.0	10.9
54°	2.2	1.1	3.3	9.8	15.2
55°	0.0	5.4	4.3	20.1	22.3
57.5°	1.1	8.7	4.3	14.1	17.4
60°	5.4	6.5	11.9	14.1	17.4
61°	0.0	5.4	5.4	13.0	15.2
62°	0.0	4.3	9.8	11.9	15.2
63°	5.4	6.5	8.7	14.1	17.4



TEST NUMBER: P315317

CATALOG NUMBER: LDA2B10FL8050D010 PIN1MMS

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	3.3	8.7	10.9	14.1	13.0
67.5°	6.5	7.6	6.5	18.5	22.3
70°	8.7	14.1	15.2	13.0	22.3
72.5°	5.4	7.6	10.9	20.1	22.3
75°	9.8	10.9	16.3	18.5	22.3
77.5°	7.6	10.9	10.9	11.9	22.3
80°	3.3	9.8	10.9	11.9	6.5
82.5°	4.3	6.5	4.3	11.9	8.7
85°	2.2	9.8	8.7	10.9	10.9
87.5°	3.3	5.4	5.4	9.8	6.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	24.4	25.5	24.4	17.4	13.0	11.9	8.7	15.2	4.3	4.3	0.0
65°	22.3	24.4	18.5	21.2	14.1	13.0	7.6	15.2	2.2	7.6	5.4





64°	3.3	5.4	5.4	9.8	15.2
65°	5.4	7.6	7.6	14.1	10.9



(END OF REPORT)