

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: P315275

Luminaire Tested: **LDA2B05FL9727D010 PIN1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P315275  
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: LDA2B05FL9727D010 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**

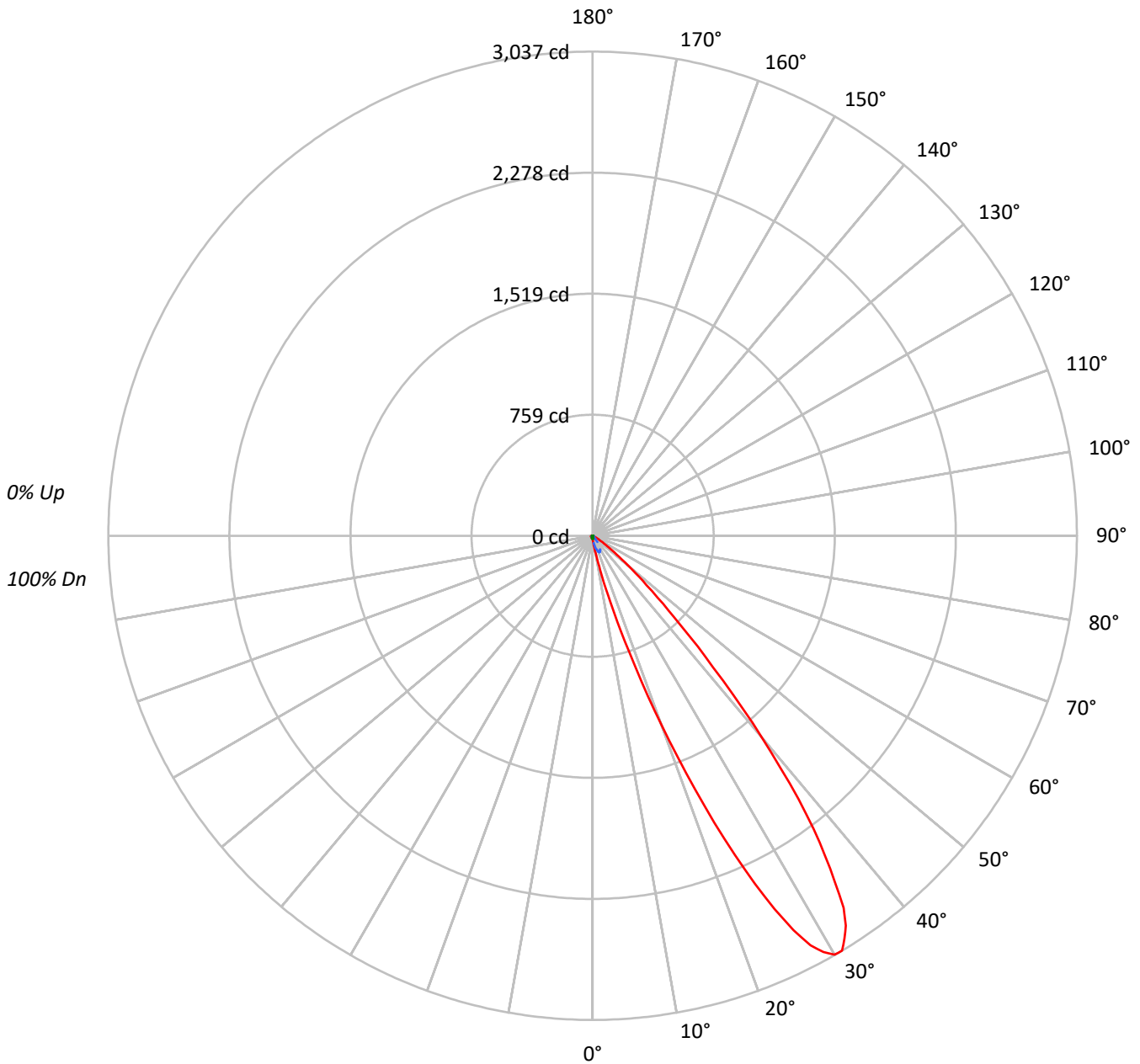
Lumens per Lamp: N/A  
Luminaire Lumens: 443.2 lumens  
Efficiency: N/A  
Efficacy: 63.3 lumens/watt  
Spacing Criteria (0/90/45): 2.92 / 0.6 / 1.34  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

Input Watts (W): 7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	9325	9325	9325
5°	20800	9608	7478
10°	55658	6012	2154
15°	219118	7713	5006
20°	662844	4725	3885
25°	1311701	4028	3484
30°	1728368	2450	4216
35°	1594847	3493	5119
40°	1062341	3091	7020
45°	501032	1116	3000
50°	220896	4068	9210
55°	89886	0	9376
60°	37199	2664	8387
65°	12725	3152	6187
70°	10674	6203	15723
75°	6100	9150	20778
80°	0	4546	9092
85°	6227	6227	30002



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2.6	0.6
10°-20°	27.1	6.1
20°-30°	139.4	31.5
30°-40°	178.5	40.3
40°-50°	68.6	15.5
50°-60°	14.0	3.1
60°-70°	4.7	1.1
70°-80°	5.5	1.2
80°-90°	2.8	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°	169.1	38.1
0°-40°	347.6	78.4
0°-60°	430.2	97.1
0°-90°	443.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	443.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	19	19	19	19	19	
5°	42	35	19	14	15	6
15°	429	84	15	9	10	165
25°	2410	109	7	6	6	1100
35°	2648	57	6	5	8	1583
45°	718	14	2	1	4	617
55°	104	3	0	2	11	108
65°	11	4	3	4	5	15
75°	3	6	5	8	11	4
85°	1	4	1	4	5	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°	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9
2.5°	27.9	24.2	25.2	21.5	23.7	24.2	19.9	26.3	23.7	24.7	21.5
5°	42.0	45.2	41.5	39.9	38.8	39.9	38.8	40.4	39.3	34.6	24.7
7.5°	70.2	64.1	64.1	61.9	63.5	63.0	60.3	61.9	58.2	42.0	28.4
10°	111.1	105.0	104.5	102.9	102.3	97.5	94.9	92.8	85.1	49.7	25.8
12.5°	217.7	212.4	208.6	199.3	193.0	189.2	175.2	167.7	145.6	73.9	33.0
15°	429.0	401.6	408.5	378.5	356.4	341.8	312.6	286.8	233.9	83.5	31.9
17.5°	759.1	732.5	714.7	682.0	637.1	598.3	540.6	483.5	375.8	94.9	29.8
20°	1262.5	1220.5	1183.3	1127.2	1040.8	966.1	864.6	755.4	559.5	108.4	26.8
21°	1483.6	1451.2	1408.1	1334.2	1233.5	1133.6	1011.8	880.3	637.6	109.5	24.2
22°	1714.3	1693.3	1636.7	1551.9	1434.4	1315.4	1166.0	1021.4	720.8	111.1	23.1
23°	1954.6	1932.5	1868.5	1771.4	1639.4	1495.3	1321.2	1149.8	798.9	113.2	22.6
24°	2189.8	2165.3	2093.8	1985.4	1835.5	1669.9	1473.2	1274.4	871.8	112.2	23.7
25°	2409.6	2375.6	2300.1	2180.0	2015.4	1829.7	1612.8	1382.1	935.8	109.0	19.9
26°	2605.7	2566.9	2485.6	2354.6	2174.6	1973.4	1729.2	1482.0	983.1	106.3	18.9
27°	2776.1	2727.2	2640.3	2502.9	2309.9	2087.7	1828.6	1560.1	1024.9	102.3	15.1
28°	2908.7	2852.7	2764.4	2619.3	2415.4	2176.8	1901.7	1609.1	1049.6	102.9	17.3
29°	2985.3	2942.2	2846.3	2694.2	2479.8	2228.1	1940.2	1636.2	1054.4	94.9	16.2
30°	3033.9	2985.8	2887.2	2728.3	2504.5	2239.8	1945.0	1631.1	1040.3	89.0	15.1
31°	3037.1	2986.9	2886.7	2722.2	2494.9	2220.4	1918.4	1601.1	1009.7	82.9	12.5
32°	2980.0	2941.2	2842.6	2672.7	2443.1	2166.9	1861.3	1550.3	961.6	70.7	8.5
33°	2915.4	2868.3	2770.3	2598.8	2371.3	2093.8	1778.9	1482.0	911.6	69.6	10.9
34°	2814.9	2758.3	2661.8	2493.0	2271.6	1989.7	1680.8	1390.8	847.8	63.5	10.4
35°	2648.0	2617.7	2520.2	2353.5	2138.5	1864.7	1562.8	1290.6	780.1	56.6	7.4
36°	2480.8	2443.6	2351.4	2190.3	1986.5	1715.9	1429.6	1176.4	703.5	48.1	5.8
37°	2304.1	2255.4	2171.4	2013.8	1800.9	1567.6	1301.8	1067.4	641.1	50.8	8.0
38°	2098.1	2081.9	1971.3	1824.6	1627.9	1407.6	1164.4	952.6	572.0	47.3	13.0
39°	1871.6	1860.7	1750.4	1616.8	1440.3	1237.8	1023.8	833.5	502.9	34.6	4.3
40°	1649.5	1618.4	1540.2	1418.8	1265.1	1083.1	898.1	732.0	443.1	34.0	8.5
42.5°	1117.9	1127.7	1043.2	956.3	857.7	734.1	610.8	501.8	309.9	25.2	5.3
45°	718.1	720.3	682.5	615.0	550.4	473.4	392.0	326.6	199.9	14.1	1.6
47.5°	457.1	456.1	431.9	393.1	350.8	305.7	254.9	213.4	129.4	10.9	4.8
50°	287.8	286.8	271.6	246.9	223.3	193.5	161.6	137.4	81.9	13.0	5.3
51°	233.9	235.5	222.7	197.7	179.4	151.0	128.9	109.5	64.1	9.0	4.8
52°	193.0	191.9	183.9	162.9	147.8	123.3	105.0	89.6	53.4	8.0	2.1
53°	155.2	155.7	147.8	131.6	116.9	98.6	84.0	69.6	38.3	5.8	1.6
54°	122.8	121.7	119.1	103.4	94.4	78.1	65.6	53.4	33.0	1.1	0.0
55°	104.5	102.9	99.1	85.6	76.5	64.6	52.4	45.7	28.4	2.7	0.0
57.5°	60.3	60.3	58.2	50.8	44.7	39.9	31.9	29.8	14.6	2.7	0.0
60°	37.7	33.0	36.7	31.4	24.7	22.1	18.3	16.7	12.5	4.8	1.1
61°	31.4	25.2	24.7	23.1	21.5	14.6	12.5	13.6	8.0	1.6	1.1
62°	22.6	19.9	21.5	18.3	16.2	11.4	10.4	9.8	4.8	2.1	2.7
63°	20.5	18.3	17.8	13.6	12.0	12.0	9.0	8.5	5.8	4.3	2.1



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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°	10.9	9.0	8.0	9.0	5.3	6.9	2.7	7.4	1.6	2.7	1.6
67.5°	8.5	5.3	4.8	5.8	3.7	2.7	3.7	4.8	1.6	2.7	3.7
70°	7.4	3.7	5.3	4.8	3.7	4.8	5.3	5.3	1.6	5.3	4.8
72.5°	7.4	4.8	2.7	2.1	2.1	2.1	2.1	2.1	3.2	7.4	5.8
75°	3.2	3.2	1.6	3.7	2.1	3.2	2.1	5.3	2.1	5.8	4.8
77.5°	2.1	2.7	0.0	2.7	0.0	0.0	1.6	3.7	1.6	4.3	5.3
80°	0.0	2.7	1.6	0.0	1.1	1.6	0.0	0.5	1.1	4.8	2.1
82.5°	1.1	1.6	2.1	1.1	1.1	0.0	0.0	0.0	0.0	3.2	2.7
85°	1.1	2.1	0.0	0.5	2.1	1.1	0.5	2.7	1.1	3.7	4.3
87.5°	0.0	1.1	1.1	0.0	1.6	0.0	1.6	1.1	0.0	3.2	1.6
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°	18.9	18.9	18.9	18.9	18.9
2.5°	16.2	14.6	12.5	15.7	13.0
5°	19.4	17.8	14.1	16.7	15.1
7.5°	19.9	16.7	14.6	13.6	15.1
10°	12.0	8.0	5.8	8.0	4.3
12.5°	19.9	14.1	13.0	14.6	16.2
15°	15.1	9.0	9.0	6.9	9.8
17.5°	8.5	6.9	6.4	8.5	9.8
20°	9.0	5.8	4.8	8.0	7.4
21°	8.0	2.1	6.4	6.4	7.4
22°	11.4	5.3	6.4	10.4	10.9
23°	7.4	5.8	4.8	6.4	8.5
24°	10.9	6.4	5.8	8.0	12.0
25°	7.4	5.8	5.8	7.4	6.4
26°	4.3	5.8	4.3	6.4	5.3
27°	3.2	5.3	3.2	4.8	6.4
28°	6.9	8.5	8.0	8.5	7.4
29°	7.4	9.0	7.4	11.4	8.5
30°	4.3	8.0	3.7	8.5	7.4
31°	4.3	5.8	2.7	8.5	7.4
32°	0.5	3.2	1.6	3.2	3.2
33°	3.2	3.7	4.3	6.9	5.3
34°	5.3	6.4	4.3	7.4	6.4
35°	5.8	3.2	4.8	8.0	8.5
36°	1.6	1.6	2.7	6.4	2.1
37°	3.2	9.0	6.4	10.9	6.4
38°	5.3	10.9	10.4	13.6	10.9
39°	1.1	3.2	3.7	7.4	7.4
40°	4.8	8.0	5.8	10.9	10.9
42.5°	3.7	5.8	4.3	9.0	7.4
45°	1.6	1.6	1.1	5.8	4.3
47.5°	2.7	2.7	4.8	7.4	13.0
50°	5.3	5.3	6.9	12.5	12.0
51°	3.2	2.7	3.7	8.5	10.9
52°	2.7	3.7	3.7	8.5	8.5
53°	1.1	0.0	0.0	6.4	5.3
54°	1.1	0.5	1.6	4.8	7.4
55°	0.0	2.7	2.1	9.8	10.9
57.5°	0.5	4.3	2.1	6.9	8.5
60°	2.7	3.2	5.8	6.9	8.5
61°	0.0	2.7	2.7	6.4	7.4
62°	0.0	2.1	4.8	5.8	7.4
63°	2.7	3.2	4.3	6.9	8.5





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**CANDELA DISTRIBUTION (continued):**

	90°	112.5°	135°	157.5°	180°
66°	1.6	4.3	5.3	6.9	6.4
67.5°	3.2	3.7	3.2	9.0	10.9
70°	4.3	6.9	7.4	6.4	10.9
72.5°	2.7	3.7	5.3	9.8	10.9
75°	4.8	5.3	8.0	9.0	10.9
77.5°	3.7	5.3	5.3	5.8	10.9
80°	1.6	4.8	5.3	5.8	3.2
82.5°	2.1	3.2	2.1	5.8	4.3
85°	1.1	4.8	4.3	5.3	5.3
87.5°	1.6	2.7	2.7	4.8	3.2
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	12.0	12.5	12.0	8.5	6.4	5.8	4.3	7.4	2.1	2.1	0.0
65°	10.9	12.0	9.0	10.4	6.9	6.4	3.7	7.4	1.1	3.7	2.7







64°	1.6	2.7	2.7	4.8	7.4
65°	2.7	3.7	3.7	6.9	5.3



(END OF REPORT)