

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: P315264

Luminaire Tested: **LDA2B05FL9040D010 PINW1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315264
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: LDA2B05FL9040D010 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: 565.7 lumens
Efficiency: N/A
Efficacy: 80.8 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

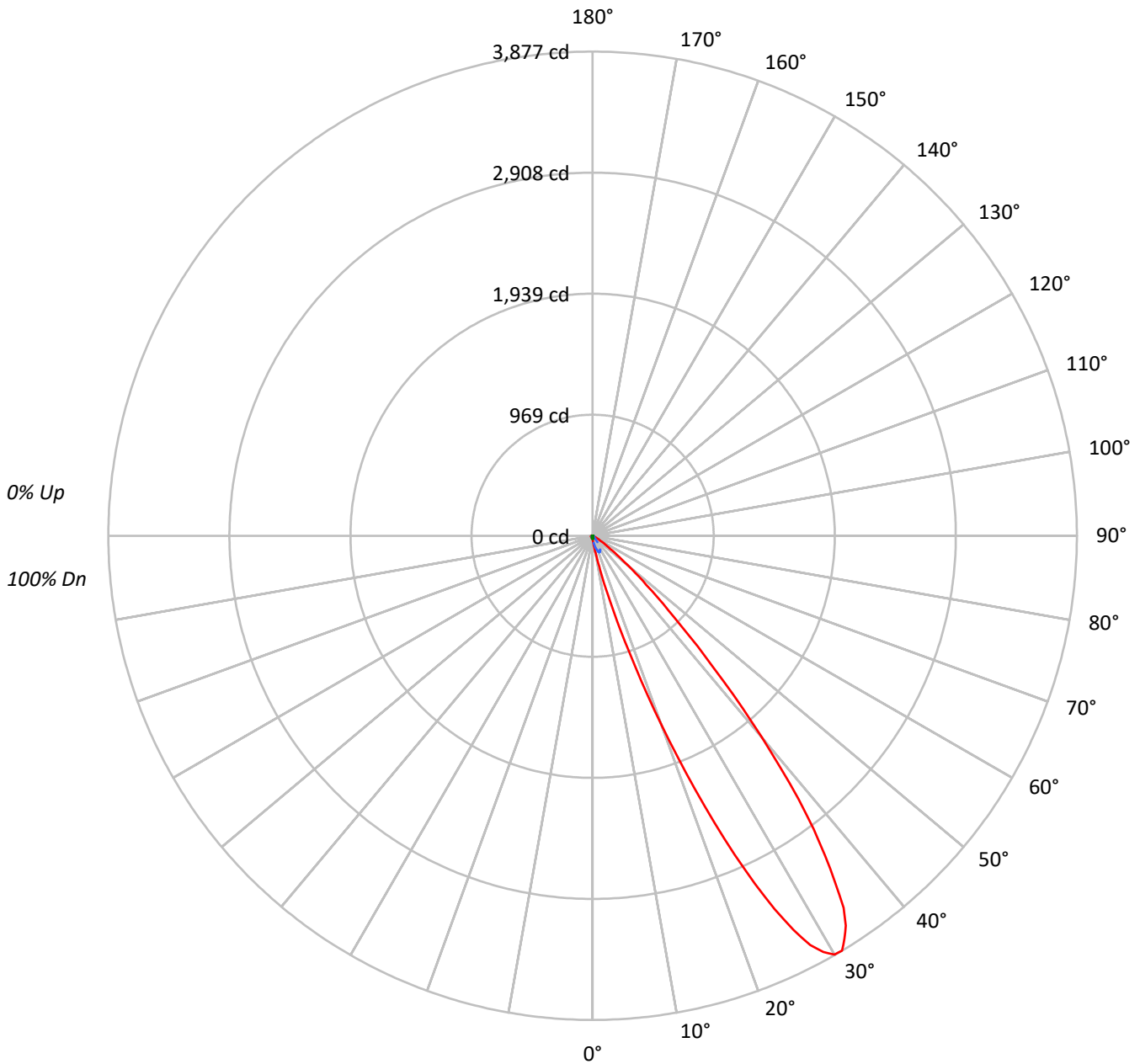
Input Watts (W): 7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	11890	11890	11890
5°	26545	12282	9558
10°	71038	7665	2705
15°	279644	9858	6436
20°	846025	6038	4988
25°	1674247	5171	4409
30°	2206106	3076	5412
35°	2035658	4517	6565
40°	1355958	3929	8952
45°	639529	1395	3768
50°	281992	5219	11743
55°	114658	0	11956
60°	47560	3355	10755
65°	16227	3969	7938
70°	13704	7789	20051
75°	7815	11628	26496
80°	0	5682	11649
85°	7925	7925	38493



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.3	0.6
10°-20°	34.6	6.1
20°-30°	177.9	31.5
30°-40°	227.8	40.3
40°-50°	87.6	15.5
50°-60°	17.8	3.1
60°-70°	6.0	1.1
70°-80°	7.0	1.2
80°-90°	3.6	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°	215.8	38.1
0°-40°	443.6	78.4
0°-60°	549.0	97.1
0°-90°	565.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	565.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	24	24	24	24	24	
5°	54	44	25	18	19	8
15°	548	106	19	12	13	210
25°	3076	139	10	8	8	1404
35°	3380	72	8	6	11	2020
45°	917	18	2	1	5	788
55°	133	3	0	3	14	138
65°	14	5	3	5	7	20
75°	4	8	6	10	14	6
85°	1	5	1	5	7	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°	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1
2.5°	35.6	30.9	32.2	27.5	30.2	30.9	25.4	33.6	30.2	31.5	27.5
5°	53.6	57.7	52.9	50.9	49.5	50.9	49.5	51.6	50.2	44.1	31.5
7.5°	89.6	81.8	81.8	79.0	81.1	80.4	77.0	79.0	74.3	53.6	36.3
10°	141.8	134.0	133.3	131.3	130.6	124.5	121.1	118.4	108.6	63.4	32.9
12.5°	277.8	271.1	266.3	254.4	246.3	241.5	223.6	214.1	185.9	94.3	42.1
15°	547.5	512.6	521.4	483.1	454.9	436.3	399.0	366.0	298.5	106.5	40.7
17.5°	968.9	935.0	912.2	870.5	813.2	763.6	690.0	617.1	479.7	121.1	38.0
20°	1611.4	1557.8	1510.3	1438.7	1328.5	1233.2	1103.6	964.1	714.1	138.4	34.3
21°	1893.7	1852.3	1797.3	1703.0	1574.4	1446.9	1291.5	1123.6	813.9	139.8	30.9
22°	2188.1	2161.3	2089.1	1980.9	1830.9	1678.9	1488.3	1303.7	920.0	141.8	29.5
23°	2494.8	2466.7	2384.9	2261.1	2092.5	1908.6	1686.4	1467.6	1019.8	144.5	28.8
24°	2795.0	2763.8	2672.6	2534.2	2342.8	2131.5	1880.4	1626.7	1112.7	143.2	30.2
25°	3075.6	3032.2	2935.8	2782.5	2572.5	2335.4	2058.5	1764.1	1194.5	139.1	25.4
26°	3326.0	3276.4	3172.6	3005.4	2775.7	2518.9	2207.1	1891.6	1254.9	135.7	24.1
27°	3543.4	3481.0	3370.1	3194.7	2948.4	2664.8	2334.0	1991.4	1308.1	130.6	19.3
28°	3712.7	3641.1	3528.5	3343.3	3083.1	2778.4	2427.3	2053.8	1339.7	131.3	22.1
29°	3810.4	3755.5	3633.0	3438.9	3165.2	2843.9	2476.5	2088.4	1345.8	121.1	20.7
30°	3872.5	3811.1	3685.2	3482.4	3196.7	2858.8	2482.6	2082.0	1327.8	113.6	19.3
31°	3876.6	3812.4	3684.5	3474.6	3184.5	2834.1	2448.7	2043.6	1288.8	105.8	15.9
32°	3803.6	3754.1	3628.2	3411.5	3118.3	2765.9	2375.7	1978.8	1227.4	90.2	10.9
33°	3721.2	3661.1	3536.0	3317.1	3026.8	2672.6	2270.6	1891.6	1163.6	88.9	13.9
34°	3593.0	3520.7	3397.5	3182.1	2899.5	2539.6	2145.4	1775.3	1082.2	81.1	13.2
35°	3379.9	3341.2	3216.7	3004.0	2729.6	2380.1	1994.8	1647.4	995.7	72.3	9.5
36°	3166.5	3119.0	3001.3	2795.7	2535.5	2190.2	1824.8	1501.5	898.0	61.4	7.5
37°	2940.9	2878.8	2771.6	2570.5	2298.7	2000.9	1661.6	1362.4	818.3	64.8	10.2
38°	2678.0	2657.3	2516.2	2328.9	2077.9	1796.6	1486.2	1215.9	730.1	60.4	16.6
39°	2389.0	2375.1	2234.3	2063.6	1838.4	1579.9	1306.8	1063.9	641.9	44.1	5.4
40°	2105.4	2065.7	1965.9	1810.9	1614.8	1382.4	1146.3	934.3	565.5	43.4	10.9
42.5°	1426.9	1439.4	1331.5	1220.6	1094.7	937.0	779.6	640.5	395.6	32.2	6.8
45°	916.6	919.4	871.2	785.0	702.6	604.2	500.4	416.9	255.1	18.0	2.0
47.5°	583.5	582.1	551.3	501.7	447.8	390.1	325.3	272.4	165.2	13.9	6.1
50°	367.4	366.0	346.7	315.2	285.0	247.0	206.3	175.4	104.5	16.6	6.8
51°	298.5	300.6	284.3	252.4	229.0	192.7	164.5	139.8	81.8	11.5	6.1
52°	246.3	244.9	234.8	208.0	188.6	157.4	134.0	114.3	68.2	10.2	2.7
53°	198.1	198.8	188.6	167.9	149.3	125.9	107.2	88.9	48.9	7.5	2.0
54°	156.7	155.4	152.0	132.0	120.4	99.7	83.8	68.2	42.1	1.4	0.0
55°	133.3	131.3	126.5	109.2	97.7	82.4	66.8	58.4	36.3	3.4	0.0
57.5°	77.0	77.0	74.3	64.8	57.0	50.9	40.7	38.0	18.7	3.4	0.0
60°	48.2	42.1	46.8	40.0	31.5	28.2	23.4	21.4	15.9	6.1	1.4
61°	40.0	32.2	31.5	29.5	27.5	18.7	15.9	17.3	10.2	2.0	1.4
62°	28.8	25.4	27.5	23.4	20.7	14.6	13.2	12.6	6.1	2.7	3.4
63°	26.1	23.4	22.7	17.3	15.3	15.3	11.5	10.9	7.5	5.4	2.7



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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°	13.9	11.5	10.2	11.5	6.8	8.8	3.4	9.5	2.0	3.4	2.0
67.5°	10.9	6.8	6.1	7.5	4.7	3.4	4.7	6.1	2.0	3.4	4.7
70°	9.5	4.7	6.8	6.1	4.7	6.1	6.8	6.8	2.0	6.8	6.1
72.5°	9.5	6.1	3.4	2.7	2.7	2.7	2.7	2.7	4.1	9.5	7.5
75°	4.1	4.1	2.0	4.7	2.7	4.1	2.7	6.8	2.7	7.5	6.1
77.5°	2.7	3.4	0.0	3.4	0.0	0.0	2.0	4.7	2.0	5.4	6.8
80°	0.0	3.4	2.0	0.0	1.4	2.0	0.0	0.7	1.4	6.1	2.7
82.5°	1.4	2.0	2.7	1.4	1.4	0.0	0.0	0.0	0.0	4.1	3.4
85°	1.4	2.7	0.0	0.7	2.7	1.4	0.7	3.4	1.4	4.7	5.4
87.5°	0.0	1.4	1.4	0.0	2.0	0.0	2.0	1.4	0.0	4.1	2.0
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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CATALOG NUMBER: LDA2B05FL9040D010 PINW1MMS

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	24.1	24.1	24.1	24.1	24.1
2.5°	20.7	18.7	15.9	20.0	16.6
5°	24.8	22.7	18.0	21.4	19.3
7.5°	25.4	21.4	18.7	17.3	19.3
10°	15.3	10.2	7.5	10.2	5.4
12.5°	25.4	18.0	16.6	18.7	20.7
15°	19.3	11.5	11.5	8.8	12.6
17.5°	10.9	8.8	8.1	10.9	12.6
20°	11.5	7.5	6.1	10.2	9.5
21°	10.2	2.7	8.1	8.1	9.5
22°	14.6	6.8	8.1	13.2	13.9
23°	9.5	7.5	6.1	8.1	10.9
24°	13.9	8.1	7.5	10.2	15.3
25°	9.5	7.5	7.5	9.5	8.1
26°	5.4	7.5	5.4	8.1	6.8
27°	4.1	6.8	4.1	6.1	8.1
28°	8.8	10.9	10.2	10.9	9.5
29°	9.5	11.5	9.5	14.6	10.9
30°	5.4	10.2	4.7	10.9	9.5
31°	5.4	7.5	3.4	10.9	9.5
32°	0.7	4.1	2.0	4.1	4.1
33°	4.1	4.7	5.4	8.8	6.8
34°	6.8	8.1	5.4	9.5	8.1
35°	7.5	4.1	6.1	10.2	10.9
36°	2.0	2.0	3.4	8.1	2.7
37°	4.1	11.5	8.1	13.9	8.1
38°	6.8	13.9	13.2	17.3	13.9
39°	1.4	4.1	4.7	9.5	9.5
40°	6.1	10.2	7.5	13.9	13.9
42.5°	4.7	7.5	5.4	11.5	9.5
45°	2.0	2.0	1.4	7.5	5.4
47.5°	3.4	3.4	6.1	9.5	16.6
50°	6.8	6.8	8.8	15.9	15.3
51°	4.1	3.4	4.7	10.9	13.9
52°	3.4	4.7	4.7	10.9	10.9
53°	1.4	0.0	0.0	8.1	6.8
54°	1.4	0.7	2.0	6.1	9.5
55°	0.0	3.4	2.7	12.6	13.9
57.5°	0.7	5.4	2.7	8.8	10.9
60°	3.4	4.1	7.5	8.8	10.9
61°	0.0	3.4	3.4	8.1	9.5
62°	0.0	2.7	6.1	7.5	9.5
63°	3.4	4.1	5.4	8.8	10.9



TEST NUMBER: P315264

CATALOG NUMBER: LDA2B05FL9040D010 PINW1MMS

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	2.0	5.4	6.8	8.8	8.1
67.5°	4.1	4.7	4.1	11.5	13.9
70°	5.4	8.8	9.5	8.1	13.9
72.5°	3.4	4.7	6.8	12.6	13.9
75°	6.1	6.8	10.2	11.5	13.9
77.5°	4.7	6.8	6.8	7.5	13.9
80°	2.0	6.1	6.8	7.5	4.1
82.5°	2.7	4.1	2.7	7.5	5.4
85°	1.4	6.1	5.4	6.8	6.8
87.5°	2.0	3.4	3.4	6.1	4.1
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	15.3	15.9	15.3	10.9	8.1	7.5	5.4	9.5	2.7	2.7	0.0
65°	13.9	15.3	11.5	13.2	8.8	8.1	4.7	9.5	1.4	4.7	3.4





64°	2.0	3.4	3.4	6.1	9.5
65°	3.4	4.7	4.7	8.8	6.8



(END OF REPORT)