

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: P315256

Luminaire Tested: **LDA2B05FL9035D010 PINW1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315256
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: LDA2B05FL9035D010 PINW1MW
Description: PORTFOLIO 2IN ADJ 500 LUMEN LED LUMINAIRE WITH FLOOD OPTIC AND 2in Adj PinHole, Black oculus, matte white finish
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 553.9 lumens
Efficiency: N/A
Efficacy: 79.1 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

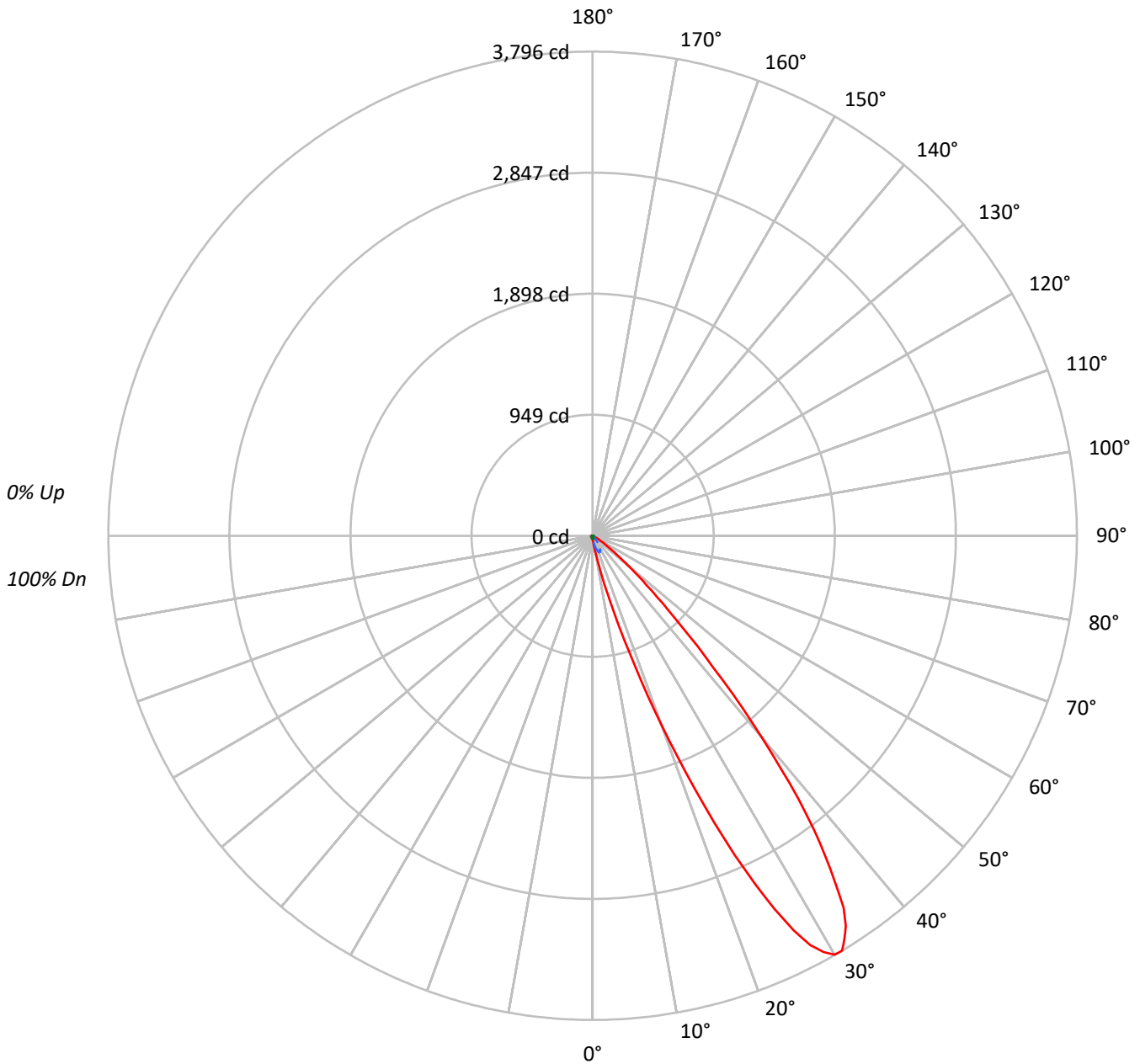
Input Watts (W): 7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	11643	11643	11643
5°	26000	11985	9360
10°	69585	7464	2655
15°	273821	9653	6282
20°	828436	5933	4883
25°	1639408	5063	4355
30°	2160189	3019	5298
35°	1993257	4397	6384
40°	1327684	3864	8759
45°	626273	1395	3698
50°	276159	5066	11436
55°	112250	0	11698
60°	46573	3256	10459
65°	15877	3852	7705
70°	13415	7645	19618
75°	7625	11437	25924
80°	0	5682	11365
85°	7359	7359	37361



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.2	0.6
10°-20°	33.9	6.1
20°-30°	174.2	31.5
30°-40°	223.1	40.3
40°-50°	85.8	15.5
50°-60°	17.4	3.1
60°-70°	5.9	1.1
70°-80°	6.9	1.2
80°-90°	3.5	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°	211.3	38.1
0°-40°	434.4	78.4
0°-60°	537.6	97.1
0°-90°	553.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	553.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	24	24	24	24	24	
5°	52	43	24	18	19	8
15°	536	104	19	11	12	206
25°	3012	136	9	7	8	1375
35°	3310	71	7	6	11	1978
45°	898	18	2	1	5	771
55°	130	3	0	3	14	135
65°	14	5	3	5	7	19
75°	4	7	6	10	14	5
85°	1	5	1	5	7	1
90°	0	0	0	0	0	



TEST NUMBER: P315256

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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°	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6
2.5°	34.9	30.2	31.6	26.9	29.6	30.2	24.9	32.9	29.6	30.9	26.9
5°	52.5	56.5	51.8	49.8	48.5	49.8	48.5	50.5	49.2	43.2	30.9
7.5°	87.7	80.1	80.1	77.4	79.4	78.7	75.4	77.4	72.7	52.5	35.5
10°	138.9	131.2	130.5	128.6	127.9	121.9	118.6	115.9	106.3	62.1	32.2
12.5°	272.1	265.4	260.8	249.1	241.2	236.5	218.9	209.6	182.0	92.3	41.2
15°	536.1	501.9	510.6	473.0	445.5	427.2	390.6	358.4	292.3	104.3	39.9
17.5°	948.7	915.5	893.2	852.4	796.2	747.7	675.7	604.2	469.7	118.6	37.2
20°	1577.9	1525.4	1478.9	1408.8	1300.8	1207.5	1080.6	944.1	699.2	135.5	33.6
21°	1854.2	1813.7	1759.9	1667.6	1541.7	1416.8	1264.6	1100.2	796.9	136.9	30.2
22°	2142.6	2116.3	2045.6	1939.6	1792.8	1644.0	1457.3	1276.6	900.9	138.9	28.9
23°	2442.9	2415.3	2335.3	2214.0	2048.9	1868.9	1651.3	1437.0	998.5	141.5	28.2
24°	2736.9	2706.3	2616.9	2481.4	2294.1	2087.1	1841.3	1592.8	1089.6	140.2	29.6
25°	3011.6	2969.1	2874.7	2724.6	2518.9	2286.8	2015.7	1727.4	1169.6	136.2	24.9
26°	3256.7	3208.2	3106.6	2942.8	2717.9	2466.5	2161.2	1852.3	1228.7	132.9	23.6
27°	3469.7	3408.5	3299.9	3128.2	2887.0	2609.3	2285.4	1949.9	1280.9	127.9	18.9
28°	3635.4	3565.3	3455.0	3273.7	3018.9	2720.6	2376.8	2011.0	1311.8	128.6	21.6
29°	3731.1	3677.3	3557.4	3367.3	3099.3	2784.7	2424.9	2044.9	1317.8	118.6	20.3
30°	3791.9	3731.8	3608.5	3409.9	3130.2	2799.3	2430.9	2038.6	1300.2	111.3	18.9
31°	3795.9	3733.1	3607.8	3402.2	3118.2	2775.1	2397.7	2001.1	1262.0	103.6	15.6
32°	3724.4	3675.9	3552.7	3340.4	3053.4	2708.3	2326.3	1937.6	1201.8	88.4	10.6
33°	3643.7	3584.9	3462.3	3248.1	2963.7	2616.9	2223.3	1852.3	1139.4	87.0	13.6
34°	3518.2	3447.4	3326.8	3115.9	2839.2	2486.7	2100.7	1738.3	1059.7	79.4	13.0
35°	3309.5	3271.7	3149.8	2941.5	2672.7	2330.6	1953.2	1613.1	975.0	70.8	9.3
36°	3100.6	3054.1	2938.8	2737.5	2482.7	2144.6	1786.8	1470.2	879.3	60.1	7.3
37°	2879.7	2818.9	2713.9	2517.0	2250.9	1959.2	1627.0	1334.0	801.2	63.4	10.0
38°	2622.3	2602.0	2463.8	2280.4	2034.6	1759.2	1455.3	1190.5	714.9	59.1	16.3
39°	2339.2	2325.6	2187.8	2020.7	1800.1	1547.0	1279.6	1041.7	628.5	43.2	5.3
40°	2061.5	2022.7	1925.0	1773.2	1581.2	1353.6	1122.4	914.8	553.7	42.5	10.6
42.5°	1397.2	1409.5	1303.8	1195.2	1072.0	917.5	763.4	627.2	387.3	31.6	6.6
45°	897.6	900.2	853.0	768.7	688.0	591.6	490.0	408.3	249.8	17.6	2.0
47.5°	571.4	570.0	539.8	491.3	438.5	382.0	318.6	266.7	161.8	13.6	6.0
50°	359.8	358.4	339.5	308.6	279.0	241.8	202.0	171.7	102.3	16.3	6.6
51°	292.3	294.3	278.4	247.1	224.2	188.7	161.1	136.9	80.1	11.3	6.0
52°	241.2	239.8	229.9	203.6	184.7	154.1	131.2	111.9	66.8	10.0	2.7
53°	194.0	194.7	184.7	164.4	146.2	123.2	105.0	87.0	47.8	7.3	2.0
54°	153.5	152.1	148.8	129.2	117.9	97.7	82.0	66.8	41.2	1.3	0.0
55°	130.5	128.6	123.9	107.0	95.7	80.7	65.4	57.1	35.5	3.3	0.0
57.5°	75.4	75.4	72.7	63.4	55.8	49.8	39.9	37.2	18.3	3.3	0.0
60°	47.2	41.2	45.8	39.2	30.9	27.6	22.9	20.9	15.6	6.0	1.3
61°	39.2	31.6	30.9	28.9	26.9	18.3	15.6	16.9	10.0	2.0	1.3
62°	28.2	24.9	26.9	22.9	20.3	14.3	13.0	12.3	6.0	2.7	3.3
63°	25.6	22.9	22.3	16.9	14.9	14.9	11.3	10.6	7.3	5.3	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°	13.6	11.3	10.0	11.3	6.6	8.6	3.3	9.3	2.0	3.3	2.0
67.5°	10.6	6.6	6.0	7.3	4.7	3.3	4.7	6.0	2.0	3.3	4.7
70°	9.3	4.7	6.6	6.0	4.7	6.0	6.6	6.6	2.0	6.6	6.0
72.5°	9.3	6.0	3.3	2.7	2.7	2.7	2.7	2.7	4.0	9.3	7.3
75°	4.0	4.0	2.0	4.7	2.7	4.0	2.7	6.6	2.7	7.3	6.0
77.5°	2.7	3.3	0.0	3.3	0.0	0.0	2.0	4.7	2.0	5.3	6.6
80°	0.0	3.3	2.0	0.0	1.3	2.0	0.0	0.7	1.3	6.0	2.7
82.5°	1.3	2.0	2.7	1.3	1.3	0.0	0.0	0.0	0.0	4.0	3.3
85°	1.3	2.7	0.0	0.7	2.7	1.3	0.7	3.3	1.3	4.7	5.3
87.5°	0.0	1.3	1.3	0.0	2.0	0.0	2.0	1.3	0.0	4.0	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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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	23.6	23.6	23.6	23.6	23.6
2.5°	20.3	18.3	15.6	19.6	16.3
5°	24.2	22.3	17.6	20.9	18.9
7.5°	24.9	20.9	18.3	16.9	18.9
10°	14.9	10.0	7.3	10.0	5.3
12.5°	24.9	17.6	16.3	18.3	20.3
15°	18.9	11.3	11.3	8.6	12.3
17.5°	10.6	8.6	8.0	10.6	12.3
20°	11.3	7.3	6.0	10.0	9.3
21°	10.0	2.7	8.0	8.0	9.3
22°	14.3	6.6	8.0	13.0	13.6
23°	9.3	7.3	6.0	8.0	10.6
24°	13.6	8.0	7.3	10.0	14.9
25°	9.3	7.3	7.3	9.3	8.0
26°	5.3	7.3	5.3	8.0	6.6
27°	4.0	6.6	4.0	6.0	8.0
28°	8.6	10.6	10.0	10.6	9.3
29°	9.3	11.3	9.3	14.3	10.6
30°	5.3	10.0	4.7	10.6	9.3
31°	5.3	7.3	3.3	10.6	9.3
32°	0.7	4.0	2.0	4.0	4.0
33°	4.0	4.7	5.3	8.6	6.6
34°	6.6	8.0	5.3	9.3	8.0
35°	7.3	4.0	6.0	10.0	10.6
36°	2.0	2.0	3.3	8.0	2.7
37°	4.0	11.3	8.0	13.6	8.0
38°	6.6	13.6	13.0	16.9	13.6
39°	1.3	4.0	4.7	9.3	9.3
40°	6.0	10.0	7.3	13.6	13.6
42.5°	4.7	7.3	5.3	11.3	9.3
45°	2.0	2.0	1.3	7.3	5.3
47.5°	3.3	3.3	6.0	9.3	16.3
50°	6.6	6.6	8.6	15.6	14.9
51°	4.0	3.3	4.7	10.6	13.6
52°	3.3	4.7	4.7	10.6	10.6
53°	1.3	0.0	0.0	8.0	6.6
54°	1.3	0.7	2.0	6.0	9.3
55°	0.0	3.3	2.7	12.3	13.6
57.5°	0.7	5.3	2.7	8.6	10.6
60°	3.3	4.0	7.3	8.6	10.6
61°	0.0	3.3	3.3	8.0	9.3
62°	0.0	2.7	6.0	7.3	9.3
63°	3.3	4.0	5.3	8.6	10.6



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	2.0	5.3	6.6	8.6	8.0
67.5°	4.0	4.7	4.0	11.3	13.6
70°	5.3	8.6	9.3	8.0	13.6
72.5°	3.3	4.7	6.6	12.3	13.6
75°	6.0	6.6	10.0	11.3	13.6
77.5°	4.7	6.6	6.6	7.3	13.6
80°	2.0	6.0	6.6	7.3	4.0
82.5°	2.7	4.0	2.7	7.3	5.3
85°	1.3	6.0	5.3	6.6	6.6
87.5°	2.0	3.3	3.3	6.0	4.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	14.9	15.6	14.9	10.6	8.0	7.3	5.3	9.3	2.7	2.7	0.0
65°	13.6	14.9	11.3	13.0	8.6	8.0	4.7	9.3	1.3	4.7	3.3





64°	2.0	3.3	3.3	6.0	9.3
65°	3.3	4.7	4.7	8.6	6.6



(END OF REPORT)