

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: P315208

Luminaire Tested: **LDA2B05FL8027D010 PINW1MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315208
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: LDA2B05FL8027D010 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: 649.0 lumens
Efficiency: N/A
Efficacy: 92.7 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

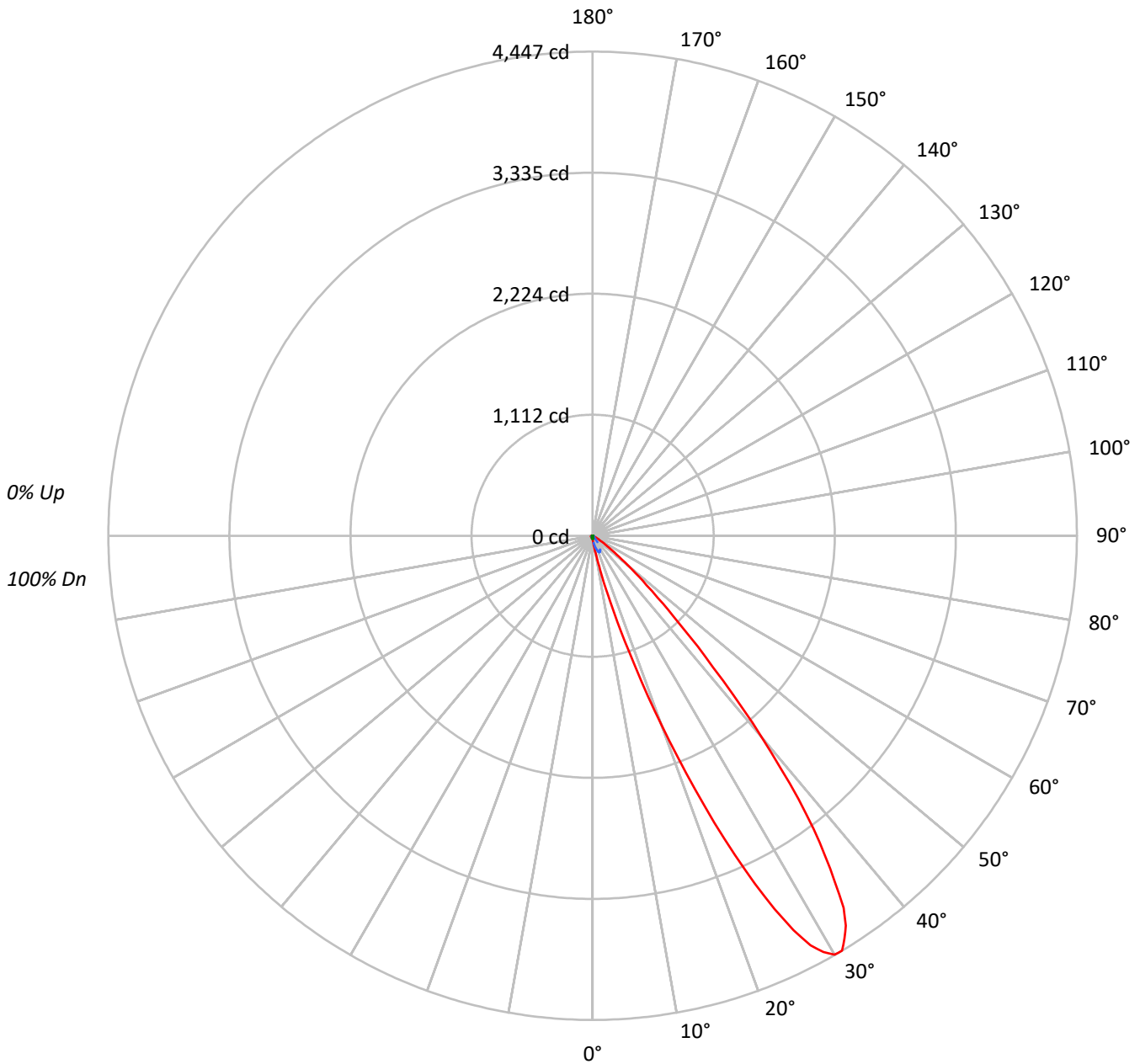
Input Watts (W): 7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	13617	13617	13617
5°	30458	14065	10994
10°	81508	8767	3106
15°	320812	11339	7355
20°	970561	6930	5723
25°	1920681	5934	5063
30°	2530826	3532	6210
35°	2335294	5180	7529
40°	1555545	4508	10305
45°	733721	1605	4326
50°	323516	5987	13432
55°	131517	0	13762
60°	54566	3848	12334
65°	18678	4553	9106
70°	15723	8943	23080
75°	8959	13343	30499
80°	0	6535	13353
85°	9057	9057	44153



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.8	0.6
10°-20°	39.7	6.1
20°-30°	204.1	31.5
30°-40°	261.4	40.3
40°-50°	100.5	15.5
50°-60°	20.4	3.1
60°-70°	6.9	1.1
70°-80°	8.1	1.2
80°-90°	4.1	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°	247.6	38.1
0°-40°	508.9	78.4
0°-60°	629.9	97.1
0°-90°	649.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	649.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	28	28	28	28	28	
5°	62	51	28	21	22	9
15°	628	122	22	13	14	241
25°	3528	160	11	9	9	1611
35°	3877	83	9	7	12	2317
45°	1052	21	2	2	6	904
55°	153	4	0	3	16	158
65°	16	5	4	5	8	22
75°	5	9	7	12	16	6
85°	2	5	2	6	8	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°	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
2.5°	40.9	35.4	37.0	31.5	34.6	35.4	29.2	38.5	34.6	36.2	31.5
5°	61.5	66.2	60.7	58.4	56.8	58.4	56.8	59.2	57.6	50.6	36.2
7.5°	102.7	93.8	93.8	90.7	93.0	92.2	88.3	90.7	85.2	61.5	41.6
10°	162.7	153.7	152.9	150.6	149.8	142.8	138.9	135.8	124.5	72.8	37.8
12.5°	318.7	311.0	305.5	291.9	282.5	277.1	256.5	245.6	213.3	108.2	48.3
15°	628.1	588.1	598.2	554.2	521.9	500.5	457.7	419.9	342.5	122.2	46.7
17.5°	1111.5	1072.6	1046.5	998.6	932.9	876.1	791.6	707.9	550.3	138.9	43.6
20°	1848.6	1787.1	1732.6	1650.5	1524.0	1414.7	1266.0	1106.1	819.2	158.8	39.3
21°	2172.4	2124.9	2061.9	1953.7	1806.2	1659.9	1481.6	1289.0	933.7	160.3	35.4
22°	2510.2	2479.5	2396.6	2272.4	2100.4	1926.1	1707.4	1495.6	1055.5	162.7	33.9
23°	2862.1	2829.8	2736.0	2593.9	2400.5	2189.6	1934.6	1683.6	1169.9	165.8	33.1
24°	3206.5	3170.7	3066.0	2907.2	2687.7	2445.2	2157.2	1866.1	1276.5	164.2	34.6
25°	3528.3	3478.5	3368.0	3192.1	2951.2	2679.1	2361.6	2023.8	1370.3	159.6	29.2
26°	3815.6	3758.7	3639.7	3447.8	3184.3	2889.7	2532.0	2170.1	1439.6	155.7	27.6
27°	4065.0	3993.4	3866.2	3664.9	3382.4	3057.0	2677.6	2284.5	1500.7	149.8	22.2
28°	4259.2	4177.1	4047.9	3835.4	3536.9	3187.4	2784.6	2356.1	1536.9	150.6	25.3
29°	4371.3	4308.3	4167.8	3945.2	3631.1	3262.5	2841.0	2395.8	1543.9	138.9	23.7
30°	4442.5	4372.1	4227.7	3995.0	3667.3	3279.7	2848.1	2388.4	1523.3	130.4	22.2
31°	4447.2	4373.7	4226.9	3986.0	3653.3	3251.2	2809.1	2344.4	1478.5	121.4	18.3
32°	4363.5	4306.7	4162.3	3913.6	3577.4	3173.0	2725.5	2270.1	1408.1	103.5	12.5
33°	4269.0	4200.1	4056.5	3805.4	3472.3	3066.0	2604.8	2170.1	1334.9	102.0	16.0
34°	4121.9	4039.0	3897.7	3650.5	3326.4	2913.4	2461.2	2036.6	1241.5	93.0	15.2
35°	3877.4	3833.1	3690.2	3446.2	3131.4	2730.5	2288.4	1889.9	1142.3	82.9	10.9
36°	3632.6	3578.2	3443.1	3207.3	2908.8	2512.6	2093.4	1722.5	1030.2	70.4	8.6
37°	3373.8	3302.6	3179.6	2948.8	2637.1	2295.4	1906.2	1563.0	938.7	74.3	11.7
38°	3072.2	3048.5	2886.6	2671.8	2383.8	2061.1	1705.0	1394.8	837.5	69.3	19.1
39°	2740.6	2724.7	2563.2	2367.4	2109.0	1812.4	1499.1	1220.5	736.3	50.6	6.2
40°	2415.3	2369.7	2255.3	2077.5	1852.5	1585.9	1315.1	1071.8	648.8	49.8	12.5
42.5°	1636.9	1651.3	1527.5	1400.3	1255.9	1074.9	894.3	734.8	453.8	37.0	7.8
45°	1051.6	1054.7	999.4	900.6	806.0	693.1	574.0	478.3	292.7	20.6	2.3
47.5°	669.4	667.8	632.4	575.6	513.7	447.6	373.2	312.5	189.5	16.0	7.0
50°	421.5	419.9	397.7	361.6	326.9	283.3	236.6	201.2	119.9	19.1	7.8
51°	342.5	344.8	326.1	289.6	262.7	221.1	188.8	160.3	93.8	13.2	7.0
52°	282.5	281.0	269.3	238.6	216.4	180.6	153.7	131.2	78.2	11.7	3.1
53°	227.3	228.1	216.4	192.6	171.2	144.4	123.0	102.0	56.0	8.6	2.3
54°	179.8	178.2	174.4	151.4	138.2	114.4	96.1	78.2	48.3	1.6	0.0
55°	152.9	150.6	145.2	125.3	112.1	94.6	76.7	66.9	41.6	3.9	0.0
57.5°	88.3	88.3	85.2	74.3	65.4	58.4	46.7	43.6	21.4	3.9	0.0
60°	55.3	48.3	53.7	45.9	36.2	32.3	26.9	24.5	18.3	7.0	1.6
61°	45.9	37.0	36.2	33.9	31.5	21.4	18.3	19.8	11.7	2.3	1.6
62°	33.1	29.2	31.5	26.9	23.7	16.7	15.2	14.4	7.0	3.1	3.9
63°	30.0	26.9	26.1	19.8	17.5	17.5	13.2	12.5	8.6	6.2	3.1



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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°	16.0	13.2	11.7	13.2	7.8	10.1	3.9	10.9	2.3	3.9	2.3
67.5°	12.5	7.8	7.0	8.6	5.4	3.9	5.4	7.0	2.3	3.9	5.4
70°	10.9	5.4	7.8	7.0	5.4	7.0	7.8	7.8	2.3	7.8	7.0
72.5°	10.9	7.0	3.9	3.1	3.1	3.1	3.1	3.1	4.7	10.9	8.6
75°	4.7	4.7	2.3	5.4	3.1	4.7	3.1	7.8	3.1	8.6	7.0
77.5°	3.1	3.9	0.0	3.9	0.0	0.0	2.3	5.4	2.3	6.2	7.8
80°	0.0	3.9	2.3	0.0	1.6	2.3	0.0	0.8	1.6	7.0	3.1
82.5°	1.6	2.3	3.1	1.6	1.6	0.0	0.0	0.0	0.0	4.7	3.9
85°	1.6	3.1	0.0	0.8	3.1	1.6	0.8	3.9	1.6	5.4	6.2
87.5°	0.0	1.6	1.6	0.0	2.3	0.0	2.3	1.6	0.0	4.7	2.3
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°	27.6	27.6	27.6	27.6	27.6
2.5°	23.7	21.4	18.3	23.0	19.1
5°	28.4	26.1	20.6	24.5	22.2
7.5°	29.2	24.5	21.4	19.8	22.2
10°	17.5	11.7	8.6	11.7	6.2
12.5°	29.2	20.6	19.1	21.4	23.7
15°	22.2	13.2	13.2	10.1	14.4
17.5°	12.5	10.1	9.3	12.5	14.4
20°	13.2	8.6	7.0	11.7	10.9
21°	11.7	3.1	9.3	9.3	10.9
22°	16.7	7.8	9.3	15.2	16.0
23°	10.9	8.6	7.0	9.3	12.5
24°	16.0	9.3	8.6	11.7	17.5
25°	10.9	8.6	8.6	10.9	9.3
26°	6.2	8.6	6.2	9.3	7.8
27°	4.7	7.8	4.7	7.0	9.3
28°	10.1	12.5	11.7	12.5	10.9
29°	10.9	13.2	10.9	16.7	12.5
30°	6.2	11.7	5.4	12.5	10.9
31°	6.2	8.6	3.9	12.5	10.9
32°	0.8	4.7	2.3	4.7	4.7
33°	4.7	5.4	6.2	10.1	7.8
34°	7.8	9.3	6.2	10.9	9.3
35°	8.6	4.7	7.0	11.7	12.5
36°	2.3	2.3	3.9	9.3	3.1
37°	4.7	13.2	9.3	16.0	9.3
38°	7.8	16.0	15.2	19.8	16.0
39°	1.6	4.7	5.4	10.9	10.9
40°	7.0	11.7	8.6	16.0	16.0
42.5°	5.4	8.6	6.2	13.2	10.9
45°	2.3	2.3	1.6	8.6	6.2
47.5°	3.9	3.9	7.0	10.9	19.1
50°	7.8	7.8	10.1	18.3	17.5
51°	4.7	3.9	5.4	12.5	16.0
52°	3.9	5.4	5.4	12.5	12.5
53°	1.6	0.0	0.0	9.3	7.8
54°	1.6	0.8	2.3	7.0	10.9
55°	0.0	3.9	3.1	14.4	16.0
57.5°	0.8	6.2	3.1	10.1	12.5
60°	3.9	4.7	8.6	10.1	12.5
61°	0.0	3.9	3.9	9.3	10.9
62°	0.0	3.1	7.0	8.6	10.9
63°	3.9	4.7	6.2	10.1	12.5



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	2.3	6.2	7.8	10.1	9.3
67.5°	4.7	5.4	4.7	13.2	16.0
70°	6.2	10.1	10.9	9.3	16.0
72.5°	3.9	5.4	7.8	14.4	16.0
75°	7.0	7.8	11.7	13.2	16.0
77.5°	5.4	7.8	7.8	8.6	16.0
80°	2.3	7.0	7.8	8.6	4.7
82.5°	3.1	4.7	3.1	8.6	6.2
85°	1.6	7.0	6.2	7.8	7.8
87.5°	2.3	3.9	3.9	7.0	4.7
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	17.5	18.3	17.5	12.5	9.3	8.6	6.2	10.9	3.1	3.1	0.0
65°	16.0	17.5	13.2	15.2	10.1	9.3	5.4	10.9	1.6	5.4	3.9





64°	2.3	3.9	3.9	7.0	10.9
65°	3.9	5.4	5.4	10.1	7.8



(END OF REPORT)