

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: P315246

Luminaire Tested: **LDA2B05FL9027D010 PINW1MMS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P315246
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: LDA2B05FL9027D010 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: 511.4 lumens
Efficiency: N/A
Efficacy: 73.1 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

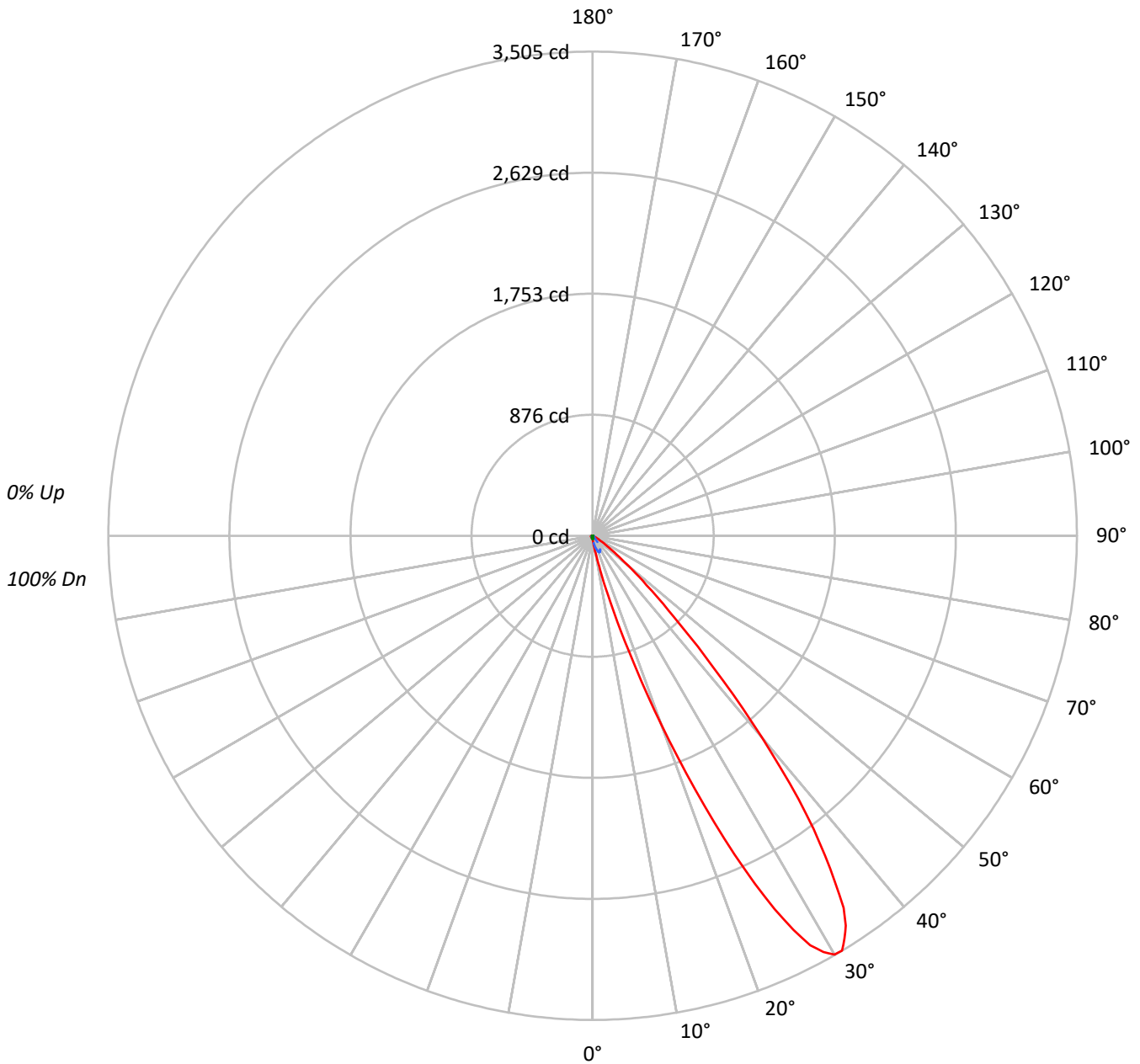
Input Watts (W): 7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	10755	10755	10755
5°	24019	11094	8667
10°	64225	6913	2455
15°	252829	8938	5772
20°	764856	5460	4515
25°	1513606	4682	4028
30°	1994411	2791	4899
35°	1840338	4035	5902
40°	1225798	3542	8115
45°	578200	1256	3419
50°	254898	4682	10592
55°	103648	0	10838
60°	43021	3059	9670
65°	14709	3619	7121
70°	12405	7068	18175
75°	7053	10484	24018
80°	0	5114	10512
85°	6793	6793	34530



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.0	0.6
10°-20°	31.3	6.1
20°-30°	160.8	31.5
30°-40°	206.0	40.3
40°-50°	79.2	15.5
50°-60°	16.1	3.1
60°-70°	5.5	1.1
70°-80°	6.3	1.2
80°-90°	3.2	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°	195.1	38.2
0°-40°	401.1	78.4
0°-60°	496.4	97.1
0°-90°	511.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	511.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	22	22	22	22	22	
5°	48	40	22	16	18	7
15°	495	96	18	10	11	190
25°	2780	126	9	7	7	1269
35°	3056	65	7	6	10	1826
45°	829	16	2	1	5	712
55°	120	3	0	2	13	125
65°	13	4	3	4	6	18
75°	4	7	6	9	13	5
85°	1	4	1	5	6	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°	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8
2.5°	32.2	27.9	29.1	24.8	27.3	27.9	23.0	30.4	27.3	28.5	24.8
5°	48.5	52.1	47.8	46.0	44.8	46.0	44.8	46.6	45.4	39.9	28.5
7.5°	81.0	73.9	73.9	71.5	73.3	72.7	69.6	71.5	67.2	48.5	32.8
10°	128.2	121.1	120.5	118.7	118.1	112.6	109.5	107.0	98.1	57.4	29.7
12.5°	251.2	245.0	240.8	230.0	222.7	218.4	202.1	193.5	168.1	85.3	38.0
15°	495.0	463.4	471.4	436.7	411.3	394.4	360.7	330.9	269.9	96.3	36.8
17.5°	875.9	845.2	824.7	787.0	735.1	690.4	623.8	557.9	433.7	109.5	34.3
20°	1456.8	1408.3	1365.4	1300.7	1201.0	1114.8	997.7	871.6	645.6	125.1	31.0
21°	1712.0	1674.5	1624.9	1539.6	1423.4	1308.0	1167.6	1015.8	735.8	126.4	27.9
22°	1978.2	1953.9	1888.6	1790.8	1655.2	1517.8	1345.5	1178.6	831.8	128.2	26.7
23°	2255.4	2230.0	2156.1	2044.1	1891.7	1725.5	1524.6	1326.8	921.9	130.7	26.1
24°	2526.8	2498.6	2416.1	2291.0	2118.0	1927.0	1700.0	1470.6	1006.0	129.4	27.3
25°	2780.5	2741.2	2654.1	2515.5	2325.7	2111.3	1861.0	1594.8	1079.9	125.7	23.0
26°	3006.8	2962.0	2868.2	2717.0	2509.4	2277.2	1995.3	1710.1	1134.5	122.7	21.8
27°	3203.4	3147.0	3046.7	2888.1	2665.5	2409.1	2110.0	1800.3	1182.6	118.1	17.5
28°	3356.5	3291.7	3189.9	3022.5	2787.2	2511.8	2194.4	1856.7	1211.1	118.7	19.9
29°	3444.8	3395.1	3284.4	3108.9	2861.4	2571.0	2238.9	1888.0	1216.7	109.5	18.7
30°	3500.9	3445.4	3331.6	3148.2	2890.0	2584.5	2244.4	1882.2	1200.4	102.7	17.5
31°	3504.6	3446.6	3331.0	3141.2	2878.9	2562.1	2213.7	1847.5	1165.1	95.7	14.4
32°	3438.6	3393.9	3280.1	3084.1	2819.1	2500.5	2147.8	1788.9	1109.6	81.6	9.8
33°	3364.1	3309.8	3196.7	2998.8	2736.3	2416.1	2052.7	1710.1	1052.0	80.4	12.6
34°	3248.2	3182.9	3071.5	2876.8	2621.3	2295.9	1939.5	1604.9	978.4	73.3	12.0
35°	3055.6	3020.6	2908.1	2715.8	2467.7	2151.8	1803.4	1489.3	900.1	65.3	8.6
36°	2862.7	2819.7	2713.3	2527.5	2292.2	1980.0	1649.7	1357.4	811.8	55.5	6.7
37°	2658.7	2602.6	2505.7	2323.8	2078.2	1808.9	1502.2	1231.7	739.7	58.6	9.2
38°	2421.0	2402.3	2274.7	2105.4	1878.5	1624.2	1343.6	1099.2	660.0	54.6	15.0
39°	2159.7	2147.2	2019.9	1865.6	1662.0	1428.3	1181.4	961.8	580.3	39.9	4.9
40°	1903.3	1867.5	1777.3	1637.1	1459.9	1249.8	1036.3	844.6	511.3	39.3	9.8
42.5°	1290.0	1301.3	1203.8	1103.5	989.7	847.1	704.8	579.0	357.6	29.1	6.1
45°	828.7	831.1	787.6	709.7	635.2	546.2	452.4	376.9	230.6	16.3	1.8
47.5°	527.5	526.3	498.4	453.6	404.8	352.7	294.1	246.3	149.4	12.6	5.5
50°	332.1	330.9	313.4	284.9	257.6	223.3	186.5	158.6	94.5	15.0	6.1
51°	269.9	271.7	257.0	228.2	207.0	174.2	148.7	126.4	73.9	10.4	5.5
52°	222.7	221.4	212.2	188.0	170.5	142.3	121.1	103.4	61.6	9.2	2.5
53°	179.1	179.7	170.5	151.8	134.9	113.8	96.9	80.4	44.2	6.7	1.8
54°	141.7	140.5	137.4	119.3	108.9	90.2	75.8	61.6	38.0	1.2	0.0
55°	120.5	118.7	114.4	98.8	88.3	74.5	60.4	52.8	32.8	3.1	0.0
57.5°	69.6	69.6	67.2	58.6	51.5	46.0	36.8	34.3	16.9	3.1	0.0
60°	43.6	38.0	42.3	36.2	28.5	25.5	21.2	19.3	14.4	5.5	1.2
61°	36.2	29.1	28.5	26.7	24.8	16.9	14.4	15.6	9.2	1.8	1.2
62°	26.1	23.0	24.8	21.2	18.7	13.2	12.0	11.3	5.5	2.5	3.1
63°	23.6	21.2	20.5	15.6	13.8	13.8	10.4	9.8	6.7	4.9	2.5



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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°	12.6	10.4	9.2	10.4	6.1	8.0	3.1	8.6	1.8	3.1	1.8
67.5°	9.8	6.1	5.5	6.7	4.3	3.1	4.3	5.5	1.8	3.1	4.3
70°	8.6	4.3	6.1	5.5	4.3	5.5	6.1	6.1	1.8	6.1	5.5
72.5°	8.6	5.5	3.1	2.5	2.5	2.5	2.5	2.5	3.7	8.6	6.7
75°	3.7	3.7	1.8	4.3	2.5	3.7	2.5	6.1	2.5	6.7	5.5
77.5°	2.5	3.1	0.0	3.1	0.0	0.0	1.8	4.3	1.8	4.9	6.1
80°	0.0	3.1	1.8	0.0	1.2	1.8	0.0	0.6	1.2	5.5	2.5
82.5°	1.2	1.8	2.5	1.2	1.2	0.0	0.0	0.0	0.0	3.7	3.1
85°	1.2	2.5	0.0	0.6	2.5	1.2	0.6	3.1	1.2	4.3	4.9
87.5°	0.0	1.2	1.2	0.0	1.8	0.0	1.8	1.2	0.0	3.7	1.8
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°	21.8	21.8	21.8	21.8	21.8
2.5°	18.7	16.9	14.4	18.1	15.0
5°	22.4	20.5	16.3	19.3	17.5
7.5°	23.0	19.3	16.9	15.6	17.5
10°	13.8	9.2	6.7	9.2	4.9
12.5°	23.0	16.3	15.0	16.9	18.7
15°	17.5	10.4	10.4	8.0	11.3
17.5°	9.8	8.0	7.4	9.8	11.3
20°	10.4	6.7	5.5	9.2	8.6
21°	9.2	2.5	7.4	7.4	8.6
22°	13.2	6.1	7.4	12.0	12.6
23°	8.6	6.7	5.5	7.4	9.8
24°	12.6	7.4	6.7	9.2	13.8
25°	8.6	6.7	6.7	8.6	7.4
26°	4.9	6.7	4.9	7.4	6.1
27°	3.7	6.1	3.7	5.5	7.4
28°	8.0	9.8	9.2	9.8	8.6
29°	8.6	10.4	8.6	13.2	9.8
30°	4.9	9.2	4.3	9.8	8.6
31°	4.9	6.7	3.1	9.8	8.6
32°	0.6	3.7	1.8	3.7	3.7
33°	3.7	4.3	4.9	8.0	6.1
34°	6.1	7.4	4.9	8.6	7.4
35°	6.7	3.7	5.5	9.2	9.8
36°	1.8	1.8	3.1	7.4	2.5
37°	3.7	10.4	7.4	12.6	7.4
38°	6.1	12.6	12.0	15.6	12.6
39°	1.2	3.7	4.3	8.6	8.6
40°	5.5	9.2	6.7	12.6	12.6
42.5°	4.3	6.7	4.9	10.4	8.6
45°	1.8	1.8	1.2	6.7	4.9
47.5°	3.1	3.1	5.5	8.6	15.0
50°	6.1	6.1	8.0	14.4	13.8
51°	3.7	3.1	4.3	9.8	12.6
52°	3.1	4.3	4.3	9.8	9.8
53°	1.2	0.0	0.0	7.4	6.1
54°	1.2	0.6	1.8	5.5	8.6
55°	0.0	3.1	2.5	11.3	12.6
57.5°	0.6	4.9	2.5	8.0	9.8
60°	3.1	3.7	6.7	8.0	9.8
61°	0.0	3.1	3.1	7.4	8.6
62°	0.0	2.5	5.5	6.7	8.6
63°	3.1	3.7	4.9	8.0	9.8



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
66°	1.8	4.9	6.1	8.0	7.4
67.5°	3.7	4.3	3.7	10.4	12.6
70°	4.9	8.0	8.6	7.4	12.6
72.5°	3.1	4.3	6.1	11.3	12.6
75°	5.5	6.1	9.2	10.4	12.6
77.5°	4.3	6.1	6.1	6.7	12.6
80°	1.8	5.5	6.1	6.7	3.7
82.5°	2.5	3.7	2.5	6.7	4.9
85°	1.2	5.5	4.9	6.1	6.1
87.5°	1.8	3.1	3.1	5.5	3.7
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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







64°	13.8	14.4	13.8	9.8	7.4	6.7	4.9	8.6	2.5	2.5	0.0
65°	12.6	13.8	10.4	12.0	8.0	7.4	4.3	8.6	1.2	4.3	3.1





64°	1.8	3.1	3.1	5.5	8.6
65°	3.1	4.3	4.3	8.0	6.1



(END OF REPORT)