

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: P314856

Luminaire Tested: **LDA2B20SP9040D010 PIN1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P314856  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-8)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA2B20SP9040D010 PIN1MW  
Description: PORTFOLIO 2IN ADJ 2000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in  
Adj PinHole, Black oculus, matte white finish  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1712.8 lumens  
Efficiency: N/A  
Efficacy: 83.1 lumens/watt  
Spacing Criteria (0/90/45): 0.32 / 0.3 / 0.32  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

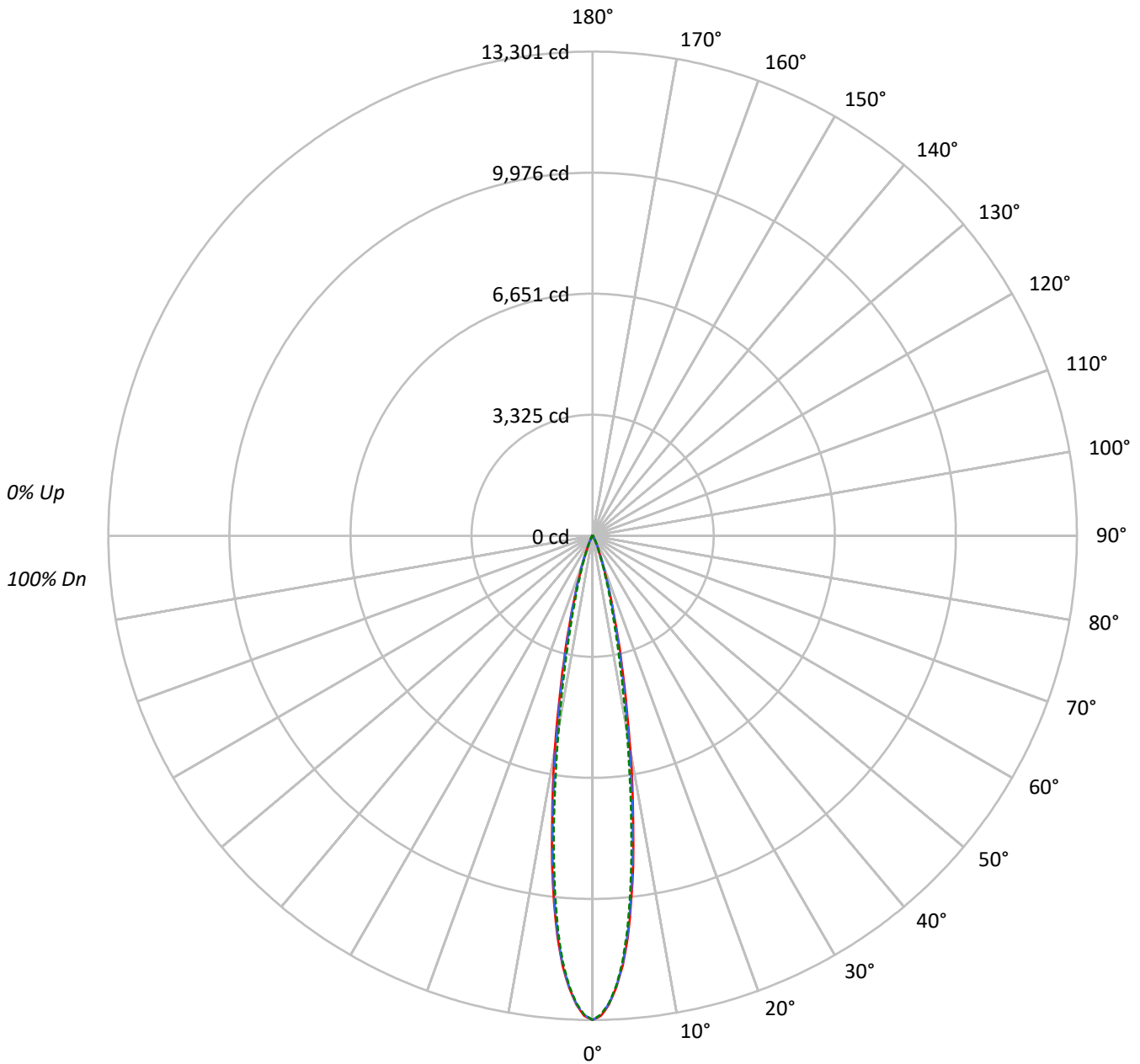
Input Watts (W): 20.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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				100															
1	115	113	112	110	113	111	110	108	107	106	105	104	103	102	100	100	99	97				97															
2	112	109	106	104	110	107	105	103	104	102	101	101	100	98	99	98	96	95				95															
3	109	105	102	99	107	104	101	98	101	99	97	99	97	95	97	95	94	93				93															
4	106	102	98	96	105	101	97	95	99	96	94	97	95	93	95	93	92	91				91															
5	104	99	95	92	103	98	95	92	96	94	91	95	92	91	94	92	90	89				89															
6	101	96	92	90	100	95	92	90	94	91	89	93	90	89	92	90	88	87				87															
7	99	94	90	88	98	93	90	87	92	89	87	91	89	87	90	88	86	85				85															
8	97	92	88	86	96	91	88	85	90	87	85	89	87	85	89	86	85	84				84															
9	95	90	86	84	95	89	86	84	88	86	83	88	85	83	87	85	83	82				82															
10	93	88	84	82	93	87	84	82	87	84	82	86	84	82	86	83	82	81				81															

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6562106	6562106	6562106
5°	5482328	5456129	5391549
10°	2986949	2870574	2686867
15°	1184210	1154024	990681
20°	397916	425165	351399
25°	138051	149156	132553
30°	50474	55146	53949
35°	32523	38064	28849
40°	17067	20352	20996
45°	15629	12071	11373
50°	9364	6217	4682
55°	0	0	0
60°	6019	6019	1973
65°	4786	1167	0
70°	0	4472	5914
75°	0	9722	0
80°	0	0	0
85°	0	5661	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	869.6	50.8
10°-20°	647.3	37.8
20°-30°	143.1	8.4
30°-40°	31.8	1.9
40°-50°	13.0	0.8
50°-60°	2.2	0.1
60°-70°	2.2	0.1
70°-80°	1.8	0.1
80°-90°	1.7	0.1
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°	1660.1	96.9
0°-40°	1691.9	98.8
0°-60°	1707.1	99.7
0°-90°	1712.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1712.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	13301	13301	13301	13301	13301	
5°	11070	11024	11017	10975	10887	883
15°	2318	2311	2259	2049	1940	682
25°	254	283	274	254	244	138
35°	54	54	63	51	48	31
45°	22	18	17	17	16	13
55°	0	0	0	0	0	3
65°	4	2	1	0	0	4
75°	0	0	5	0	0	1
85°	0	1	1	3	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	13300.8	13300.8	13300.8	13300.8	13300.8
1°	13191.8	13137.8	13164.3	13179.6	13157.2
2°	12884.2	12819.0	12860.8	12864.8	12842.4
3°	12425.8	12396.2	12409.5	12414.6	12369.8
4°	11839.0	11796.2	11805.4	11794.2	11739.2
5°	11069.9	11024.1	11017.0	10975.2	10886.6
6°	10129.7	10103.2	10055.3	9984.0	9865.9
7°	9122.2	9100.8	9018.3	8890.0	8753.5
8°	8018.0	8018.0	7898.8	7721.5	7565.7
9°	6972.8	6934.1	6782.3	6568.4	6417.6
10°	5962.3	5910.3	5730.0	5513.1	5363.3
11°	5005.8	4950.8	4777.6	4555.5	4417.0
12°	4179.6	4150.1	4015.6	3771.1	3632.6
13°	3481.8	3443.1	3325.0	3093.7	2975.5
14°	2873.7	2824.8	2730.0	2518.2	2403.1
15°	2318.5	2311.4	2259.4	2048.6	1939.6
16°	1894.7	1890.7	1841.8	1636.0	1591.2
17°	1520.9	1542.3	1528.0	1338.5	1287.6
18°	1183.7	1226.5	1236.7	1065.5	1014.6
19°	952.5	993.2	1010.5	860.8	818.0
20°	757.9	796.6	809.8	697.8	669.3
22.5°	429.9	481.8	483.9	425.8	396.3
25°	253.6	283.2	274.0	253.6	243.5
26°	212.9	241.4	227.2	221.1	212.9
27°	179.3	198.6	187.4	177.2	184.4
28°	148.7	162.0	150.8	153.8	142.6
29°	118.2	140.6	124.3	127.3	118.2
30°	88.6	109.0	96.8	101.9	94.7
32.5°	66.2	72.3	64.2	72.3	72.3
35°	54.0	54.0	63.2	50.9	47.9
37.5°	24.4	19.4	21.4	17.3	20.4
40°	26.5	29.5	31.6	26.5	32.6
42.5°	18.3	24.4	24.4	16.3	28.5
45°	22.4	18.3	17.3	17.3	16.3
47.5°	10.2	7.1	8.1	9.2	14.3
50°	12.2	5.1	8.1	12.2	6.1
52.5°	4.1	0.0	5.1	0.0	2.0
55°	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	1.0	2.0	0.0
60°	6.1	7.1	6.1	4.1	2.0
62.5°	10.2	2.0	3.1	4.1	0.0
65°	4.1	2.0	1.0	0.0	0.0
67.5°	0.0	0.0	3.1	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
75°	0.0	0.0	5.1	0.0	0.0
77.5°	2.0	0.0	4.1	0.0	0.0
80°	0.0	2.0	0.0	0.0	0.0
82.5°	0.0	0.0	5.1	4.1	0.0
85°	0.0	1.0	1.0	3.1	0.0
87.5°	0.0	3.1	4.1	1.0	2.0
90°	0.0	0.0	0.0	0.0	0.0



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







70°	0.0	0.0	3.1	2.0	4.1
72.5°	0.0	1.0	4.1	6.1	2.0



(END OF REPORT)