

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: P282607

Luminaire Tested: **LDA2B209040D010 EU2B20SP159040 2LBALPINSQ1MMS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P282607  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1808-908-7)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA2B209040D010 EU2B20SP159040 2LBALPINSQ1MMS  
Description: PORTFOLIO 2IN ADJ 2000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj SQ Pinhole w-lens, MMS  
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

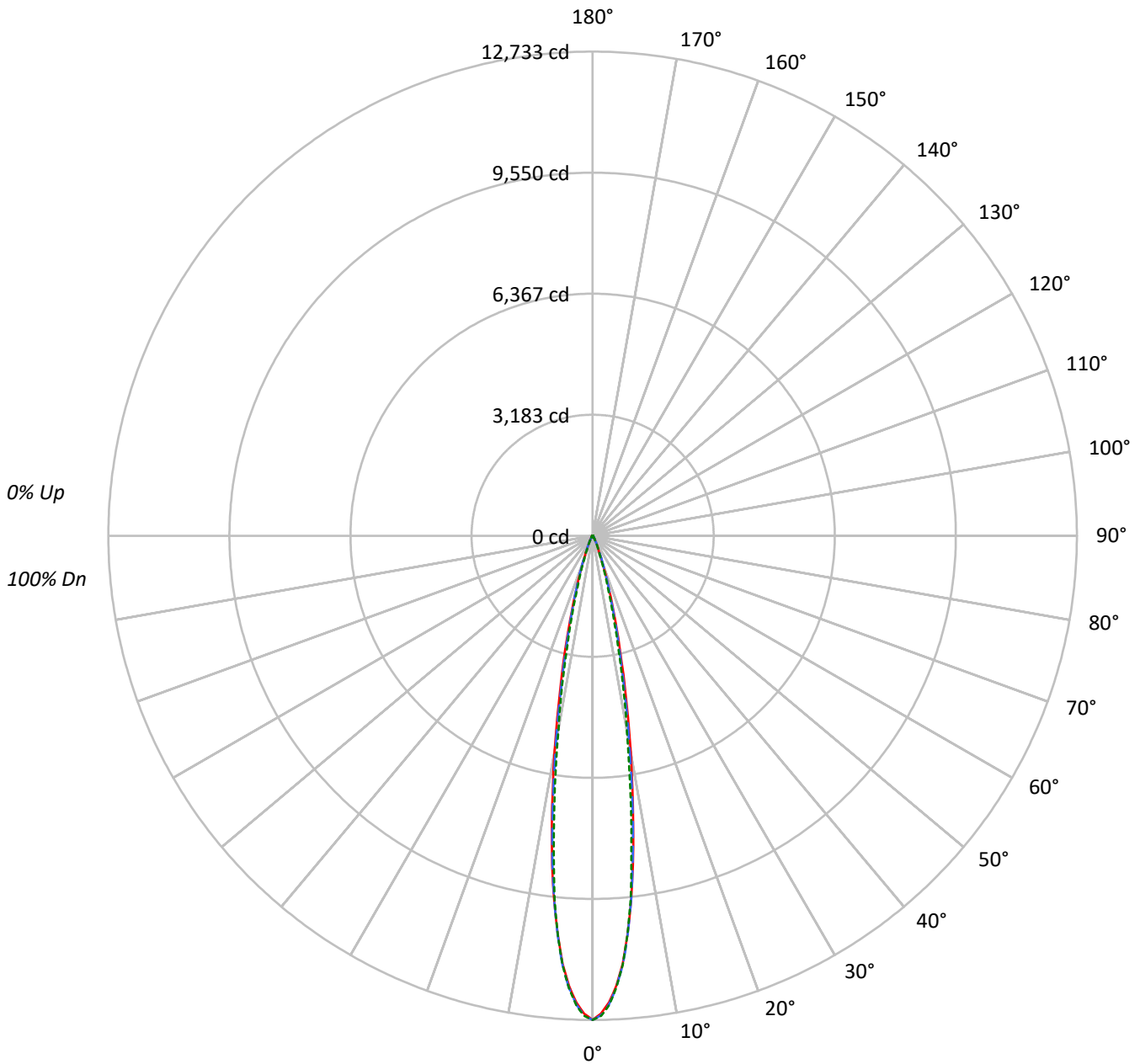
Input Watts (W): 20.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96	95	94	92	91	89	87	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0								
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	98	96	95	94	92	91	89	87	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0										
3	108	104	100	97	106	102	99	97	100	97	95	98	95	94	96	93	92	90	89	87	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0												
4	105	100	96	93	104	99	96	93	97	94	92	95	93	91	94	92	90	89	87	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0													
5	102	97	93	90	101	96	93	90	95	91	89	93	90	88	92	89	88	87	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0														
6	100	94	90	88	99	94	90	87	92	89	87	91	88	86	90	88	86	85	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0															
7	98	92	88	85	97	91	88	85	90	87	85	89	86	84	88	86	84	83	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0																
8	96	90	86	83	95	89	86	83	88	85	83	87	85	82	87	84	82	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0																	
9	94	88	84	81	93	87	84	81	86	83	81	86	83	81	85	82	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0																		
10	92	86	82	80	91	85	82	80	85	82	79	84	81	79	84	81	79	77	75	73	71	69	67	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35	33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	0																			

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

	0°	45°	90°
0°	6281778	6281778	6281778
5°	5211378	5228316	5208456
10°	2884350	2780148	2589828
15°	1167610	1116738	991549
20°	391196	414769	335806
25°	148829	149374	141371
30°	66767	65628	63406
35°	32343	28789	22947
40°	21382	27050	18870
45°	5442	8861	8163
50°	1535	2226	2993
55°	13418	11784	18493
60°	19241	15393	25063
65°	9106	23932	22764
70°	8511	7068	8511
75°	3812	9340	26115
80°	44322	61085	55403
85°	0	27737	33398



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	833.9	48.7
10°-20°	631.7	36.9
20°-30°	143.6	8.4
30°-40°	42.4	2.5
40°-50°	14.2	0.8
50°-60°	12.5	0.7
60°-70°	15.0	0.9
70°-80°	9.6	0.6
80°-90°	10.0	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°	1609.2	94.0
0°-40°	1651.6	96.4
0°-60°	1678.2	98.0
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°	12733	12733	12733	12733	12733	
5°	10523	10606	10557	10419	10517	844
15°	2286	2317	2186	1981	1941	664
25°	273	294	274	272	260	143
35°	54	60	48	56	38	42
45°	8	22	13	22	12	12
55°	16	22	14	20	22	6
65°	8	17	20	20	20	8
75°	2	7	5	9	14	4
85°	0	0	5	5	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	12732.6	12732.6	12732.6	12732.6	12732.6
1°	12568.6	12619.4	12614.5	12594.0	12630.1
2°	12279.5	12341.1	12335.2	12290.3	12354.7
3°	11855.7	11910.4	11901.6	11837.2	11907.5
4°	11289.4	11351.9	11327.4	11230.8	11320.6
5°	10522.8	10605.8	10557.0	10419.3	10516.9
6°	9673.2	9743.6	9666.4	9483.8	9579.5
7°	8722.1	8766.1	8664.5	8430.2	8365.7
8°	7684.1	7741.7	7600.1	7326.7	7256.4
9°	6692.0	6711.5	6539.6	6248.6	6159.8
10°	5757.5	5742.8	5549.5	5254.6	5169.6
11°	4871.8	4852.2	4648.2	4375.7	4403.1
12°	4066.2	4104.2	3867.0	3619.9	3624.8
13°	3404.1	3408.0	3203.9	2968.6	2954.9
14°	2786.9	2823.1	2648.3	2437.4	2398.3
15°	2286.0	2317.2	2186.4	1981.3	1941.3
16°	1830.0	1869.0	1775.3	1589.7	1537.0
17°	1473.5	1523.3	1461.8	1306.6	1246.0
18°	1178.6	1216.7	1202.1	1041.9	992.1
19°	930.6	983.3	987.2	853.5	793.9
20°	745.1	792.9	790.0	686.5	639.6
22.5°	427.7	453.1	454.1	405.2	377.9
25°	273.4	293.9	274.4	271.5	259.7
26°	237.3	253.9	232.4	232.4	221.7
27°	192.4	207.0	186.5	195.3	180.7
28°	162.1	177.7	160.1	158.2	156.2
29°	134.8	149.4	126.9	136.7	130.9
30°	117.2	127.9	115.2	129.9	111.3
32.5°	90.8	99.6	77.1	97.7	73.2
35°	53.7	59.6	47.8	55.7	38.1
37.5°	55.7	57.6	51.8	57.6	53.7
40°	33.2	34.2	42.0	42.0	29.3
42.5°	31.2	30.3	18.6	29.3	23.4
45°	7.8	22.5	12.7	22.5	11.7
47.5°	5.9	7.8	7.8	15.6	15.6
50°	2.0	7.8	2.9	5.9	3.9
52.5°	0.0	18.6	3.9	13.7	11.7
55°	15.6	22.5	13.7	20.5	21.5
57.5°	2.0	15.6	7.8	16.6	11.7
60°	19.5	26.4	15.6	28.3	25.4
62.5°	2.0	17.6	20.5	15.6	13.7
65°	7.8	16.6	20.5	19.5	19.5
67.5°	9.8	16.6	12.7	12.7	17.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
75°	2.0	6.8	4.9	8.8	13.7
77.5°	2.0	7.8	6.8	15.6	11.7
80°	15.6	17.6	21.5	28.3	19.5
82.5°	13.7	13.7	21.5	15.6	11.7
85°	0.0	0.0	4.9	4.9	5.9
87.5°	0.0	3.9	9.8	7.8	13.7
90°	0.0	0.0	0.0	0.0	0.0



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







70°	5.9	2.0	4.9	4.9	5.9
72.5°	2.0	8.8	7.8	4.9	9.8



(END OF REPORT)