

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: P282581

Luminaire Tested: **LDA2B208030D010 EU2B20SP158030 2LBALPINSQ1MW**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P282581  
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: LDA2B208030D010 EU2B20SP158030 2LBALPINSQ1MW  
Description: PORTFOLIO 2IN ADJ 2000 LUMEN LED LUMINAIRE WITH SPOT OPTIC AND 2in Adj SQ Pinhole w-lens, MW  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2002.8 lumens  
Efficiency: N/A  
Efficacy: 97.2 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

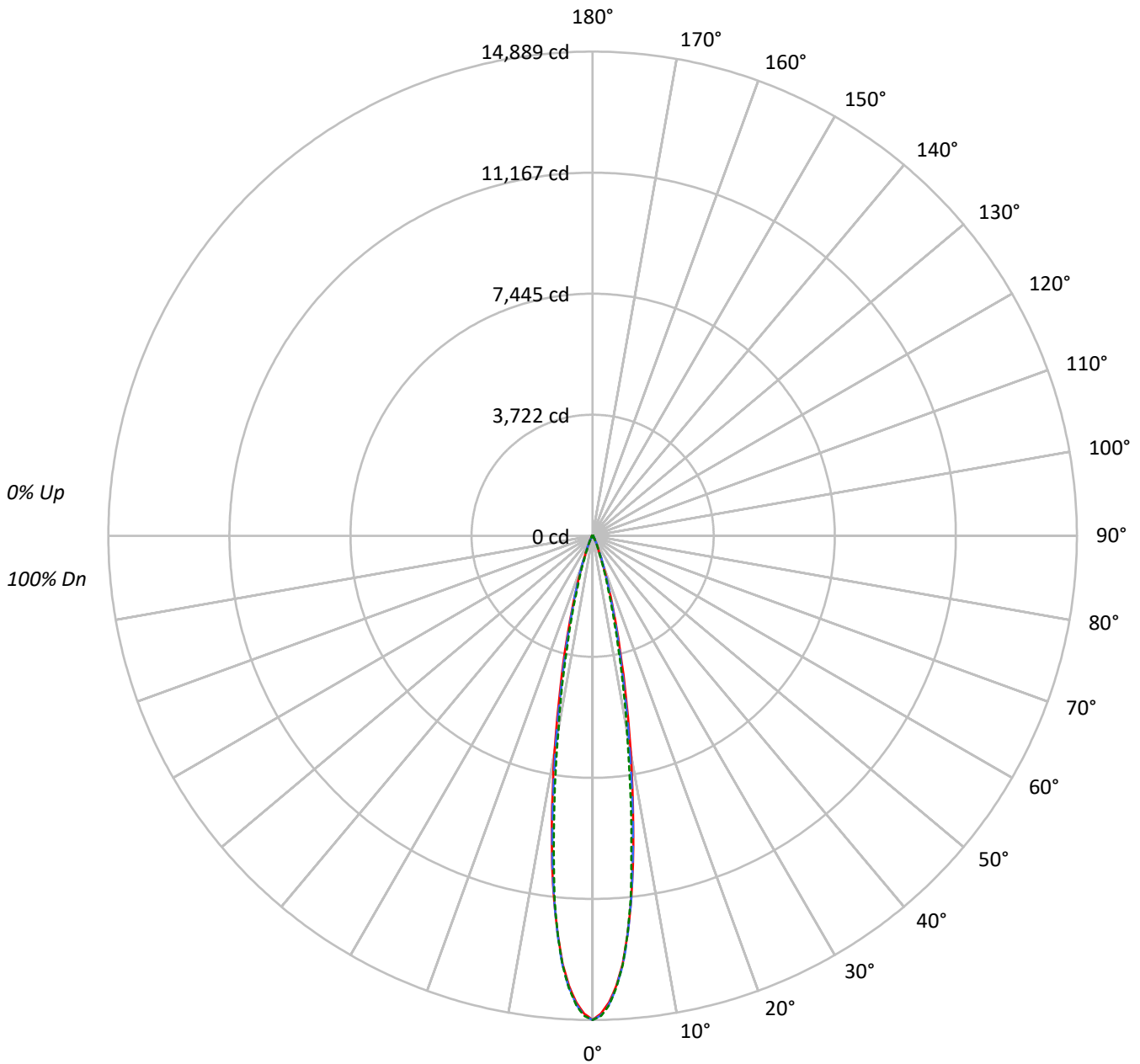
Input Watts (W): 20.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	98	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											
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°	7345466	7345466	7345466
5°	6093808	6113569	6090391
10°	3372698	3250862	3028330
15°	1365328	1305824	1159438
20°	457401	485018	392666
25°	174033	174687	165323
30°	78047	76737	74173
35°	37823	33728	26802
40°	24989	31622	22091
45°	6349	10326	9559
50°	1765	2610	3531
55°	15741	13762	21590
60°	22497	18057	29306
65°	10623	28017	26617
70°	9953	8222	9953
75°	4384	10865	30499
80°	51993	71313	64778
85°	0	32266	39059



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	975.1	48.7
10°-20°	738.6	36.9
20°-30°	167.9	8.4
30°-40°	49.6	2.5
40°-50°	16.5	0.8
50°-60°	14.6	0.7
60°-70°	17.5	0.9
70°-80°	11.2	0.6
80°-90°	11.7	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°	1881.7	94.0
0°-40°	1931.3	96.4
0°-60°	1962.4	98.0
0°-90°	2002.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2002.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	14889	14889	14889	14889	14889	
5°	12305	12402	12344	12184	12298	987
15°	2673	2710	2557	2317	2270	777
25°	320	344	321	317	304	167
35°	63	70	56	65	44	49
45°	9	26	15	26	14	14
55°	18	26	16	24	25	8
65°	9	19	24	23	23	9
75°	2	8	6	10	16	5
85°	0	0	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	14888.6	14888.6	14888.6	14888.6	14888.6
1°	14696.7	14756.1	14750.4	14726.4	14768.7
2°	14358.7	14430.7	14423.8	14371.3	14446.7
3°	13863.2	13927.1	13916.8	13841.5	13923.7
4°	13200.9	13274.0	13245.4	13132.4	13237.4
5°	12304.6	12401.6	12344.5	12183.5	12297.7
6°	11311.1	11393.4	11303.2	11089.6	11201.5
7°	10199.0	10250.4	10131.6	9857.6	9782.2
8°	8985.2	9052.6	8887.0	8567.3	8485.1
9°	7825.1	7847.9	7647.0	7306.7	7202.8
10°	6732.3	6715.2	6489.1	6144.3	6044.9
11°	5696.7	5673.8	5435.2	5116.6	5148.6
12°	4754.7	4799.2	4521.7	4232.8	4238.5
13°	3980.5	3985.1	3746.4	3471.2	3455.2
14°	3258.8	3301.1	3096.7	2850.1	2804.4
15°	2673.1	2709.6	2556.6	2316.8	2270.0
16°	2139.8	2185.5	2075.9	1858.9	1797.3
17°	1723.0	1781.3	1709.3	1527.8	1457.0
18°	1378.2	1422.7	1405.6	1218.4	1160.1
19°	1088.2	1149.8	1154.4	998.0	928.3
20°	871.2	927.2	923.8	802.7	747.9
22.5°	500.1	529.8	531.0	473.9	441.9
25°	319.7	343.7	320.9	317.4	303.7
26°	277.5	296.9	271.8	271.8	259.2
27°	224.9	242.1	218.1	228.4	211.2
28°	189.5	207.8	187.3	185.0	182.7
29°	157.6	174.7	148.4	159.9	153.0
30°	137.0	149.6	134.7	151.9	130.2
32.5°	106.2	116.5	90.2	114.2	85.6
35°	62.8	69.7	56.0	65.1	44.5
37.5°	65.1	67.4	60.5	67.4	62.8
40°	38.8	40.0	49.1	49.1	34.3
42.5°	36.5	35.4	21.7	34.3	27.4
45°	9.1	26.3	14.8	26.3	13.7
47.5°	6.9	9.1	9.1	18.3	18.3
50°	2.3	9.1	3.4	6.9	4.6
52.5°	0.0	21.7	4.6	16.0	13.7
55°	18.3	26.3	16.0	24.0	25.1
57.5°	2.3	18.3	9.1	19.4	13.7
60°	22.8	30.8	18.3	33.1	29.7
62.5°	2.3	20.6	24.0	18.3	16.0
65°	9.1	19.4	24.0	22.8	22.8
67.5°	11.4	19.4	14.8	14.8	20.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
75°	2.3	8.0	5.7	10.3	16.0
77.5°	2.3	9.1	8.0	18.3	13.7
80°	18.3	20.6	25.1	33.1	22.8
82.5°	16.0	16.0	25.1	18.3	13.7
85°	0.0	0.0	5.7	5.7	6.9
87.5°	0.0	4.6	11.4	9.1	16.0
90°	0.0	0.0	0.0	0.0	0.0



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







70°	6.9	2.3	5.7	5.7	6.9
72.5°	2.3	10.3	9.1	5.7	11.4



(END OF REPORT)