

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: P182541

Luminaire Tested: **LDSQA4A28940D010TE LAR15SP 4LSQAL1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182541  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26796)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A28940D010TE LAR15SP 4LSQAL1H  
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 15° SPOT  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2344.8 lumens  
Efficiency: N/A  
Efficacy: 52.7 lumens/watt  
Spacing Criteria (0/90/45): 0.31 / 0.32 / 0.36  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

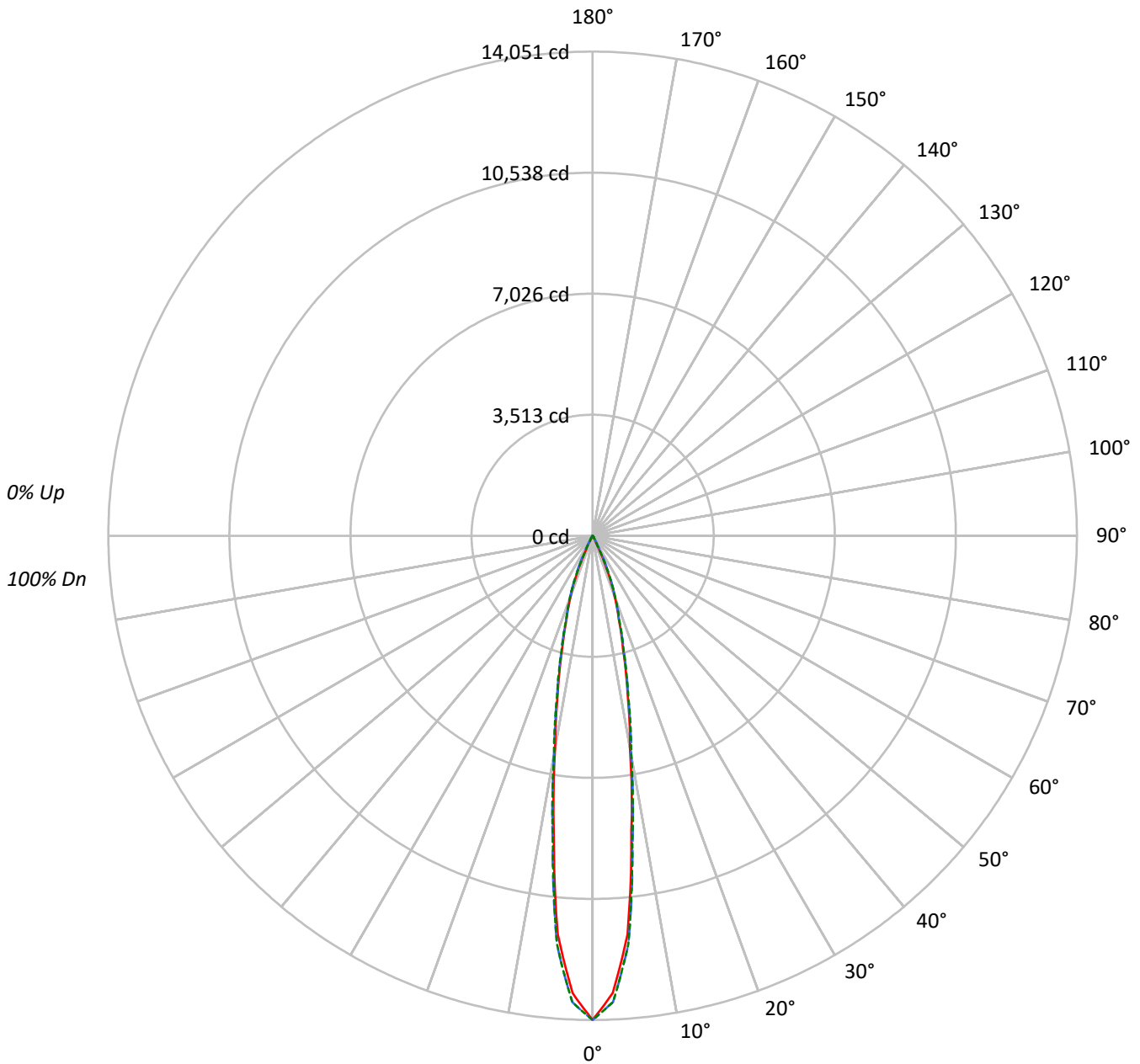
Input Watts (W): 44.49  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	110	113	111	109	108	107	106	105	103	102	102	100	99	99	97				97															
2	112	108	105	103	110	107	104	102	103	101	100	101	99	98	98	97	96	94				94															
3	108	104	100	98	107	103	99	97	100	98	95	98	96	94	96	94	93	91				91															
4	105	100	96	94	104	99	96	93	97	94	92	95	93	91	94	92	90	89				89															
5	102	97	93	90	101	96	92	90	94	91	89	93	90	88	92	89	87	86				86															
6	100	94	90	87	98	93	89	87	92	89	86	91	88	86	89	87	85	84				84															
7	97	91	87	84	96	90	87	84	89	86	84	88	85	83	87	85	83	82				82															
8	95	88	85	82	94	88	84	82	87	84	81	86	83	81	85	83	81	80				80															
9	92	86	82	80	92	86	82	80	85	82	79	84	81	79	84	81	79	78				78															
10	90	84	80	78	89	84	80	78	83	80	77	82	79	77	82	79	77	76				76															

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

	0°	45°	90°
0°	1361177	1361177	1361177
5°	1129069	1158291	1156647
10°	615225	633394	636601
15°	342069	351877	353693
20°	192855	198330	200825
25°	58052	85534	57796
30°	10940	15661	10940
35°	4707	7285	4849
40°	2289	3819	2289
45°	1493	1987	1151
50°	904	1085	543
55°	608	608	405
60°	465	233	233
65°	275	275	275
70°	0	340	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	935.5	39.9
10°-20°	997.1	42.5
20°-30°	363.7	15.5
30°-40°	34.7	1.5
40°-50°	9.5	0.4
50°-60°	2.8	0.1
60°-70°	1.2	0.0
70°-80°	0.2	0.0
80°-90°	0.0	0.0
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°	2296.3	97.9
0°-40°	2331.0	99.4
0°-60°	2343.4	99.9
0°-90°	2344.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2344.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	14051	14051	14051	14051	14051	
5°	11610	11904	11911	11787	11894	917
15°	3411	3492	3508	3501	3527	976
25°	543	786	800	793	541	313
35°	40	48	62	48	41	28
45°	11	11	14	11	8	9
55°	4	4	4	2	2	3
65°	1	1	1	1	1	1
75°	0	1	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	14050.8	14050.8	14050.8	14050.8	14050.8
2.5°	13284.5	13564.5	13543.9	13481.2	13543.9
5°	11610.5	11903.8	11911.0	11786.7	11894.1
7.5°	8630.6	8857.5	8897.3	8775.4	8856.3
10°	6254.2	6457.0	6438.9	6414.7	6471.5
12.5°	4671.9	4774.5	4763.7	4790.2	4793.8
15°	3410.7	3491.6	3508.5	3501.2	3526.6
17.5°	2511.6	2555.0	2546.6	2559.9	2569.5
20°	1870.7	1939.5	1923.8	1935.9	1948.0
22.5°	1240.7	1367.4	1351.7	1371.0	1360.2
25°	543.1	785.7	800.2	792.9	540.7
27.5°	166.6	281.2	360.9	275.2	166.6
30°	97.8	117.1	140.0	114.7	97.8
32.5°	61.6	73.6	88.1	72.4	60.3
35°	39.8	48.3	61.6	48.3	41.0
37.5°	26.6	32.6	43.4	32.6	27.8
40°	18.1	21.7	30.2	22.9	18.1
42.5°	13.3	15.7	20.5	15.7	12.1
45°	10.9	10.9	14.5	10.9	8.4
47.5°	8.4	8.4	9.7	7.2	6.0
50°	6.0	6.0	7.2	4.8	3.6
52.5°	3.6	4.8	4.8	3.6	2.4
55°	3.6	3.6	3.6	2.4	2.4
57.5°	2.4	2.4	2.4	1.2	1.2
60°	2.4	2.4	1.2	1.2	1.2
62.5°	1.2	1.2	1.2	1.2	1.2
65°	1.2	1.2	1.2	1.2	1.2
67.5°	1.2	1.2	1.2	1.2	1.2
70°	0.0	1.2	1.2	0.0	0.0
72.5°	0.0	1.2	0.0	0.0	0.0
75°	0.0	1.2	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)