

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: P182434

Luminaire Tested: **LDSQA4A13927D010TE LAR15SP 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182434  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26794)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A13927D010TE LAR15SP 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 15° SPOT  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1297.1 lumens  
Efficiency: N/A  
Efficacy: 58.2 lumens/watt  
Spacing Criteria (0/90/45): 0.32 / 0.32 / 0.36  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

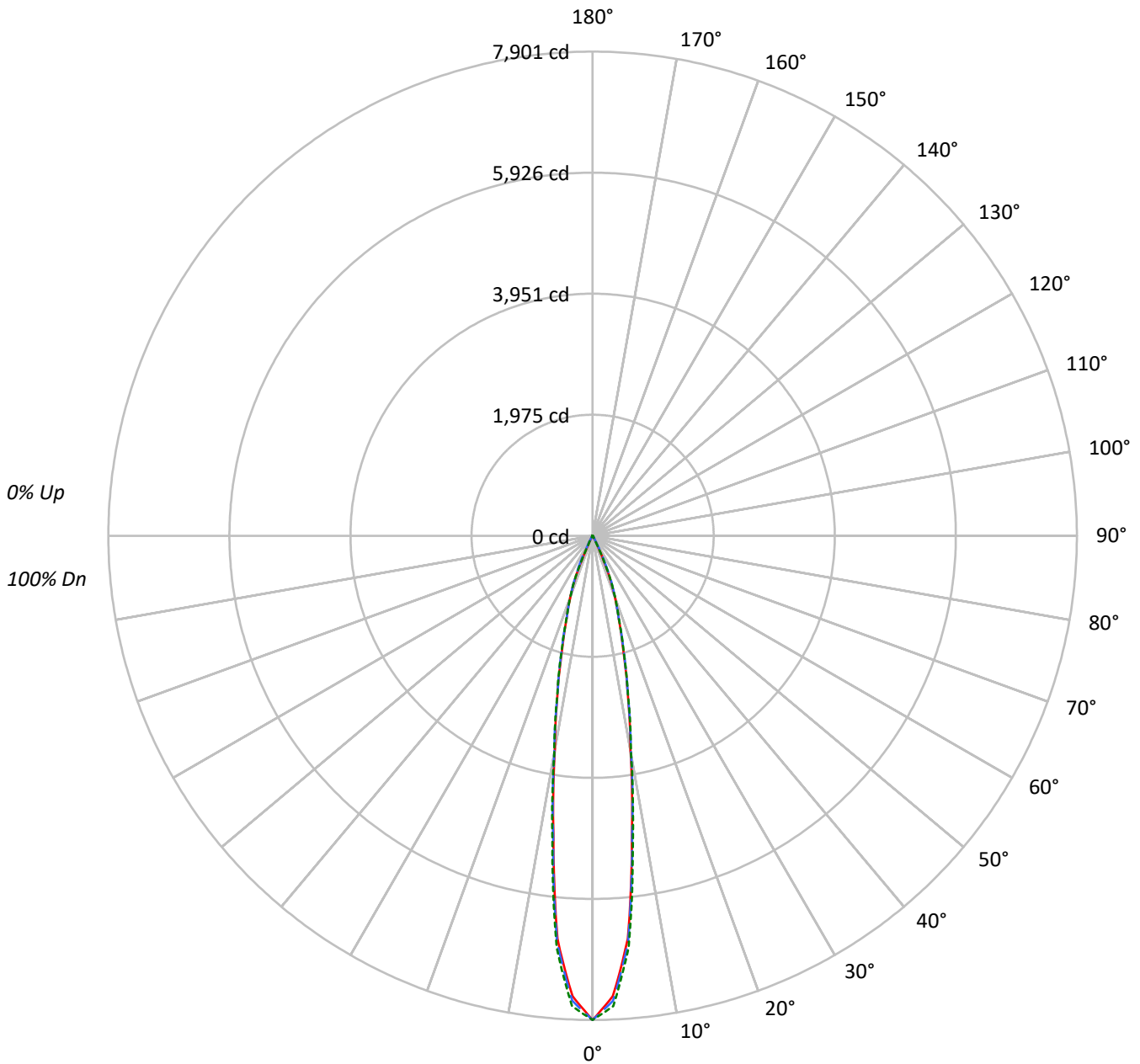
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P182434

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H

### Luminous Intensity Polar Plot





TEST NUMBER: P182434

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20
RC	80				70				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	100	100
1	115	113	111	110	113	111	110	108	107	106	105	104	103	102	100	99	99	97	97	97	97
2	112	108	105	103	110	107	104	102	104	102	100	101	99	98	98	97	96	94	94	94	94
3	108	104	101	98	107	103	100	97	100	98	96	98	96	94	96	94	93	92	92	92	92
4	105	100	97	94	104	99	96	93	97	95	92	96	93	91	94	92	90	89	89	89	89
5	103	97	93	90	101	96	93	90	95	92	89	93	91	89	92	90	88	87	87	87	87
6	100	94	90	87	99	93	90	87	92	89	87	91	88	86	90	87	86	85	85	85	85
7	97	91	88	85	96	91	87	85	90	87	84	89	86	84	88	85	83	82	82	82	82
8	95	89	85	82	94	88	85	82	88	84	82	87	84	82	86	83	81	80	80	80	80
9	93	87	83	80	92	86	83	80	85	82	80	85	82	80	84	81	79	79	79	79	79
10	91	84	81	78	90	84	81	78	83	80	78	83	80	78	82	80	78	77	77	77	77

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

	0°	45°	90°
0°	765432	765432	765432
5°	641567	646994	656397
10°	349036	354220	355568
15°	193014	196123	196865
20°	109299	109618	110258
25°	29822	46722	29288
30°	4788	7282	4642
35°	1608	2708	1537
40°	708	1100	708
45°	425	507	343
50°	286	286	181
55°	203	203	101
60°	116	116	116
65°	138	138	138
70°	170	170	170
75°	0	0	0
80°	0	0	0
85°	0	0	0



TEST NUMBER: P182434

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	526.7	40.6
10°-20°	556.9	42.9
20°-30°	195.9	15.1
30°-40°	13.2	1.0
40°-50°	2.7	0.2
50°-60°	0.9	0.1
60°-70°	0.6	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°	1279.5	98.6
0°-40°	1292.7	99.7
0°-60°	1296.3	99.9
0°-90°	1297.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1297.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7901	7901	7901	7901	7901	
5°	6597	6697	6653	6666	6750	521
15°	1924	1957	1956	1951	1963	551
25°	279	424	437	417	274	173
35°	14	17	23	17	13	10
45°	3	3	4	3	2	3
55°	1	1	1	1	1	1
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



TEST NUMBER: P182434

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7901.2	7901.2	7901.2	7901.2	7901.2
2.5°	7521.8	7620.4	7595.6	7579.4	7683.0
5°	6597.4	6696.6	6653.2	6665.6	6749.9
7.5°	4904.8	4988.5	4943.8	4962.4	5026.9
10°	3548.2	3631.3	3600.9	3610.9	3614.6
12.5°	2645.5	2682.1	2657.9	2664.7	2677.1
15°	1924.5	1956.7	1955.5	1951.1	1962.9
17.5°	1412.3	1427.8	1412.3	1411.7	1419.8
20°	1060.2	1081.9	1063.3	1065.8	1069.5
22.5°	712.4	755.8	748.3	739.0	729.1
25°	279.0	423.5	437.1	416.6	274.0
27.5°	80.0	132.1	187.9	129.6	77.5
30°	42.8	50.8	65.1	49.6	41.5
32.5°	22.9	29.1	37.2	28.5	22.3
35°	13.6	16.7	22.9	16.7	13.0
37.5°	8.7	10.5	14.3	10.5	8.7
40°	5.6	6.8	8.7	6.8	5.6
42.5°	4.3	5.0	5.6	4.3	3.7
45°	3.1	3.1	3.7	3.1	2.5
47.5°	2.5	2.5	2.5	1.9	1.9
50°	1.9	1.9	1.9	1.2	1.2
52.5°	1.2	1.2	1.2	1.2	1.2
55°	1.2	1.2	1.2	0.6	0.6
57.5°	1.2	0.6	0.6	0.6	0.6
60°	0.6	0.6	0.6	0.6	0.6
62.5°	0.6	0.6	0.6	0.6	0.6
65°	0.6	0.6	0.6	0.6	0.6
67.5°	0.6	0.6	0.6	0.6	0.0
70°	0.6	0.6	0.6	0.6	0.6
72.5°	0.6	0.6	0.6	0.0	0.0
75°	0.0	0.6	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



Report Generated By E9808895 / USPTCWHP6082093







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







(END OF REPORT)