

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: P182430

Luminaire Tested: **LDSQA4A13827D010TE LAR15SP 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182430  
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: LDSQA4A13827D010TE LAR15SP 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 15° SPOT  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1616.3 lumens  
Efficiency: N/A  
Efficacy: 72.6 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

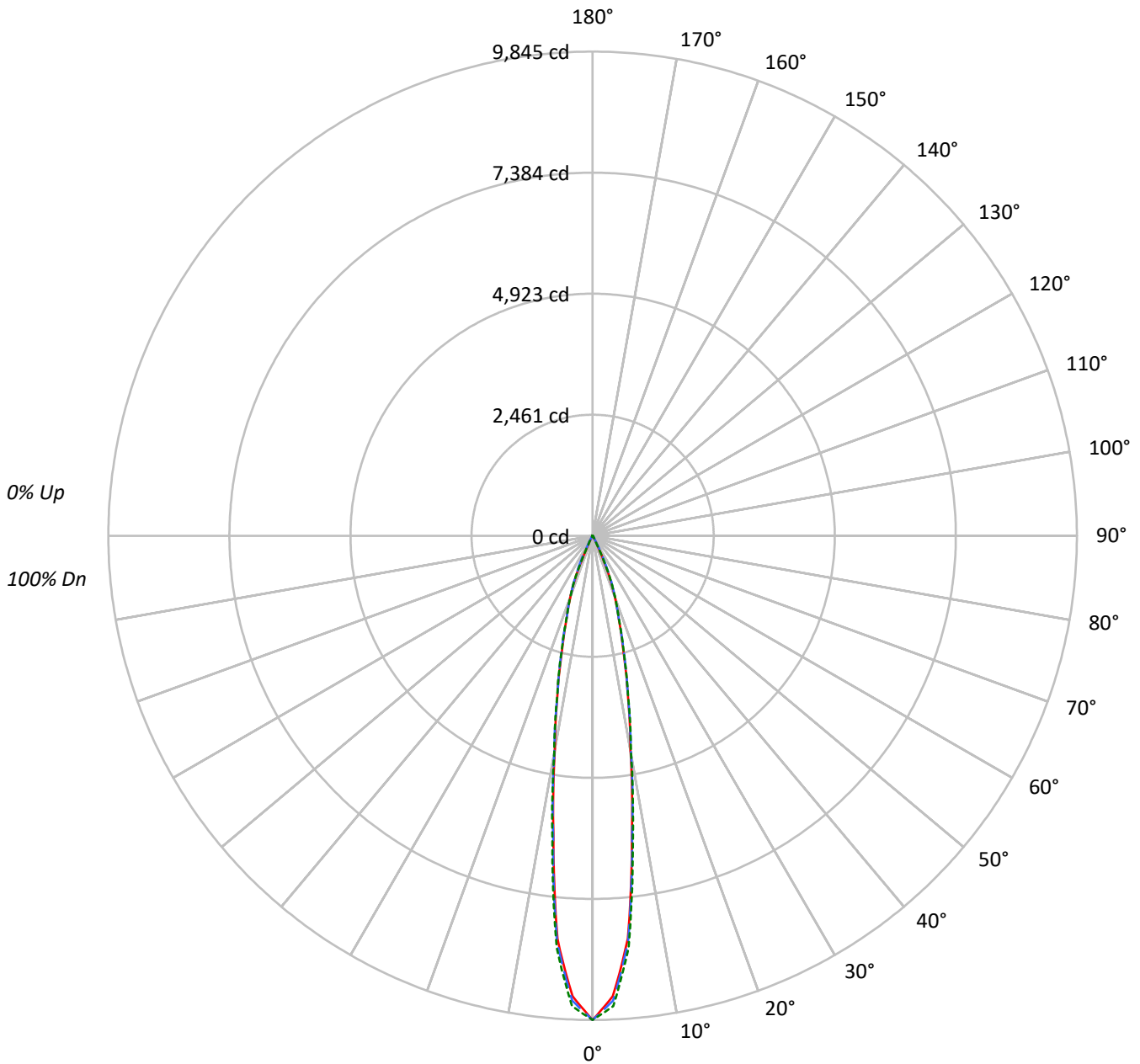
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P182430

CATALOG NUMBER: LDSQA4A13827D010TE LAR15SP 4LSQA1H

### Luminous Intensity Polar Plot





TEST NUMBER: P182430

CATALOG NUMBER: LDSQA4A13827D010TE LAR15SP 4LSQA1H

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

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

	0°	45°	90°
0°	953700	953700	953700
5°	799358	806126	817844
10°	434883	441346	443019
15°	240482	244353	245286
20°	136185	136577	137371
25°	37155	58212	36492
30°	5962	9072	5794
35°	2010	3382	1916
40°	885	1366	885
45°	534	630	425
50°	347	347	226
55°	253	253	135
60°	155	155	155
65°	183	183	183
70°	227	227	227
75°	0	0	0
80°	0	0	0
85°	0	0	0



TEST NUMBER: P182430

CATALOG NUMBER: LDSQA4A13827D010TE LAR15SP 4LSQA1H

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	656.2	40.6
10°-20°	693.9	42.9
20°-30°	244.1	15.1
30°-40°	16.4	1.0
40°-50°	3.4	0.2
50°-60°	1.1	0.1
60°-70°	0.8	0.0
70°-80°	0.3	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°	1594.2	98.6
0°-40°	1610.7	99.7
0°-60°	1615.2	99.9
0°-90°	1616.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1616.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	9845	9845	9845	9845	9845	
5°	8220	8344	8290	8305	8410	649
15°	2398	2438	2436	2431	2446	687
25°	348	528	545	519	341	215
35°	17	21	29	21	16	13
45°	4	4	5	4	3	3
55°	2	2	2	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: P182430

CATALOG NUMBER: LDSQA4A13827D010TE LAR15SP 4LSQA1H

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	9844.6	9844.6	9844.6	9844.6	9844.6
2.5°	9371.8	9494.6	9463.7	9443.7	9572.7
5°	8220.0	8343.6	8289.6	8305.0	8410.1
7.5°	6111.1	6215.4	6159.8	6183.0	6263.3
10°	4420.9	4524.5	4486.6	4499.0	4503.6
12.5°	3296.2	3341.8	3311.7	3320.1	3335.6
15°	2397.8	2438.0	2436.4	2431.0	2445.7
17.5°	1759.7	1779.0	1759.7	1759.0	1769.0
20°	1321.0	1348.0	1324.8	1327.9	1332.5
22.5°	887.6	941.7	932.4	920.8	908.4
25°	347.6	527.6	544.6	519.1	341.4
27.5°	99.7	164.5	234.1	161.4	96.6
30°	53.3	63.3	81.1	61.8	51.8
32.5°	28.6	36.3	46.3	35.5	27.8
35°	17.0	20.9	28.6	20.9	16.2
37.5°	10.8	13.1	17.8	13.1	10.8
40°	7.0	8.5	10.8	8.5	7.0
42.5°	5.4	6.2	7.0	5.4	4.6
45°	3.9	3.9	4.6	3.9	3.1
47.5°	3.1	3.1	3.1	2.3	2.3
50°	2.3	2.3	2.3	1.5	1.5
52.5°	1.5	1.5	1.5	1.5	1.5
55°	1.5	1.5	1.5	0.8	0.8
57.5°	1.5	0.8	0.8	0.8	0.8
60°	0.8	0.8	0.8	0.8	0.8
62.5°	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.8	0.8
67.5°	0.8	0.8	0.8	0.8	0.0
70°	0.8	0.8	0.8	0.8	0.8
72.5°	0.8	0.8	0.8	0.0	0.0
75°	0.0	0.8	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)