

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: P182626

Luminaire Tested: **LDSQA4A13927D010TE LAR15SP 4LSQA1H-LSF-20**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182626  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26829)  
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-LSF-20  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 15° SPOT WITH SOLITE LENS  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1220.9 lumens  
Efficiency: N/A  
Efficacy: 54.8 lumens/watt  
Spacing Criteria (0/90/45): 0.35 / 0.35 / 0.39  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

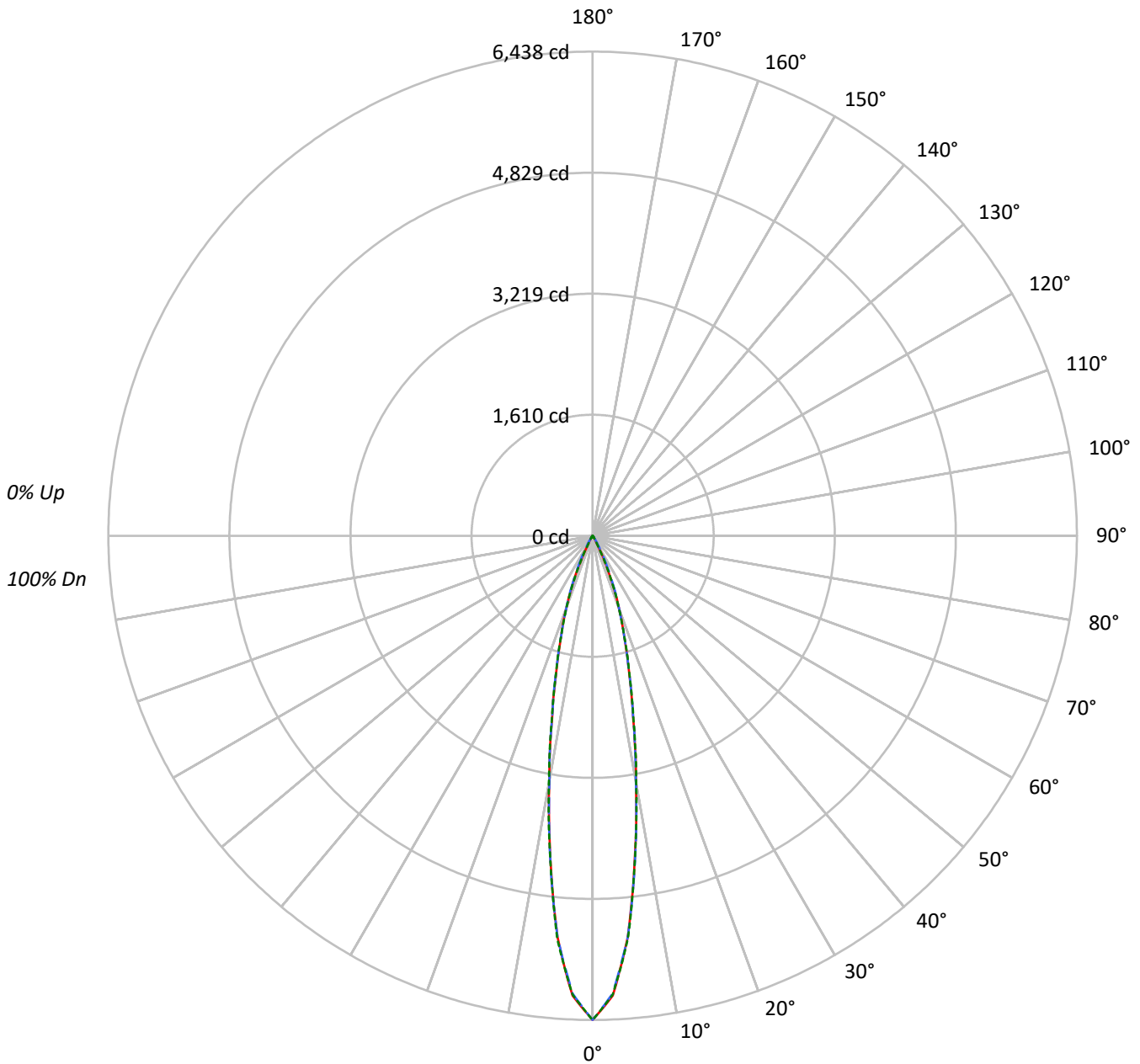
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P182626

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H-LSF-20

### Luminous Intensity Polar Plot





TEST NUMBER: P182626

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H-LSF-20

**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	109	113	111	109	108	107	106	104	103	102	101	100	99	98	97	97	98	98	97															
2	111	108	105	102	109	106	104	101	103	101	99	100	99	97	98	96	95	94	94	95	95	94															
3	108	103	100	97	106	102	99	96	100	97	95	97	95	93	95	93	92	91	91	92	92	91															
4	105	99	96	93	103	98	95	92	96	93	91	95	92	90	93	91	89	88	88	89	89	88															
5	102	96	92	89	100	95	91	89	93	90	88	92	89	87	91	88	86	85	85	86	86	85															
6	99	93	89	86	98	92	88	85	91	87	85	89	87	84	88	86	84	83	83	84	84	83															
7	96	90	86	83	95	89	85	83	88	85	82	87	84	82	86	83	81	80	80	81	81	80															
8	94	87	83	80	93	87	83	80	86	82	80	85	82	80	84	81	79	78	78	79	79	78															
9	91	85	81	78	90	84	80	78	83	80	78	83	80	77	82	79	77	76	76	77	77	76															
10	89	82	78	76	88	82	78	76	81	78	76	81	78	75	80	77	75	74	74	75	75	74															

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

	0°	45°	90°
0°	623694	623694	623694
5°	520740	520740	523220
10°	326234	325496	328792
15°	186174	187227	187538
20°	105402	105082	104629
25°	39560	51158	40426
30°	8110	17126	8188
35°	3229	5570	3158
40°	1644	2428	1568
45°	1110	1274	932
50°	648	648	467
55°	321	422	203
60°	233	233	116
65°	138	138	138
70°	170	170	170
75°	0	0	0
80°	0	0	0
85°	0	0	0



TEST NUMBER: P182626

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H-LSF-20

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	444.9	36.4
10°-20°	529.1	43.3
20°-30°	210.9	17.3
30°-40°	26.6	2.2
40°-50°	6.5	0.5
50°-60°	1.9	0.2
60°-70°	0.6	0.1
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°	1184.9	97.1
0°-40°	1211.5	99.2
0°-60°	1220.0	99.9
0°-90°	1220.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1220.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6438	6438	6438	6438	6438	
5°	5355	5404	5355	5360	5380	444
15°	1856	1867	1867	1867	1870	528
25°	370	454	479	436	378	190
35°	27	33	47	32	27	20
45°	8	8	9	7	7	6
55°	2	2	2	2	1	2
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: P182626

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H-LSF-20

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6438.1	6438.1	6438.1	6438.1	6438.1
2.5°	6121.9	6154.7	6091.5	6097.7	6105.8
5°	5354.9	5403.9	5354.9	5359.9	5380.4
7.5°	4309.0	4351.8	4323.9	4336.3	4314.0
10°	3316.4	3331.9	3308.9	3320.1	3342.4
12.5°	2493.6	2511.0	2494.3	2494.9	2504.8
15°	1856.3	1867.4	1866.8	1866.8	1869.9
17.5°	1386.3	1401.2	1385.1	1386.3	1390.0
20°	1022.4	1032.3	1019.3	1017.4	1014.9
22.5°	697.5	718.6	726.6	716.1	682.6
25°	370.1	454.5	478.6	435.9	378.2
27.5°	148.8	226.3	279.6	221.3	161.8
30°	72.5	98.6	153.1	101.1	73.2
32.5°	42.8	53.3	83.7	52.7	42.2
35°	27.3	32.9	47.1	31.6	26.7
37.5°	18.0	21.7	29.1	21.1	17.4
40°	13.0	14.9	19.2	14.3	12.4
42.5°	9.9	10.5	13.0	10.5	9.3
45°	8.1	8.1	9.3	7.4	6.8
47.5°	6.2	6.2	6.2	5.6	4.3
50°	4.3	4.3	4.3	3.7	3.1
52.5°	3.1	3.1	3.1	2.5	1.9
55°	1.9	1.9	2.5	1.9	1.2
57.5°	1.9	1.2	1.9	1.2	1.2
60°	1.2	1.2	1.2	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	0.6
70°	0.6	0.6	0.6	0.6	0.6
72.5°	0.6	0.6	0.6	0.6	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)