

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: P182627

Luminaire Tested: **LDSQA4A13930D010TE LAR15SP 4LSQA1H-LSF-20**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182627  
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: LDSQA4A13930D010TE 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 / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1277.3 lumens  
Efficiency: N/A  
Efficacy: 57.4 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

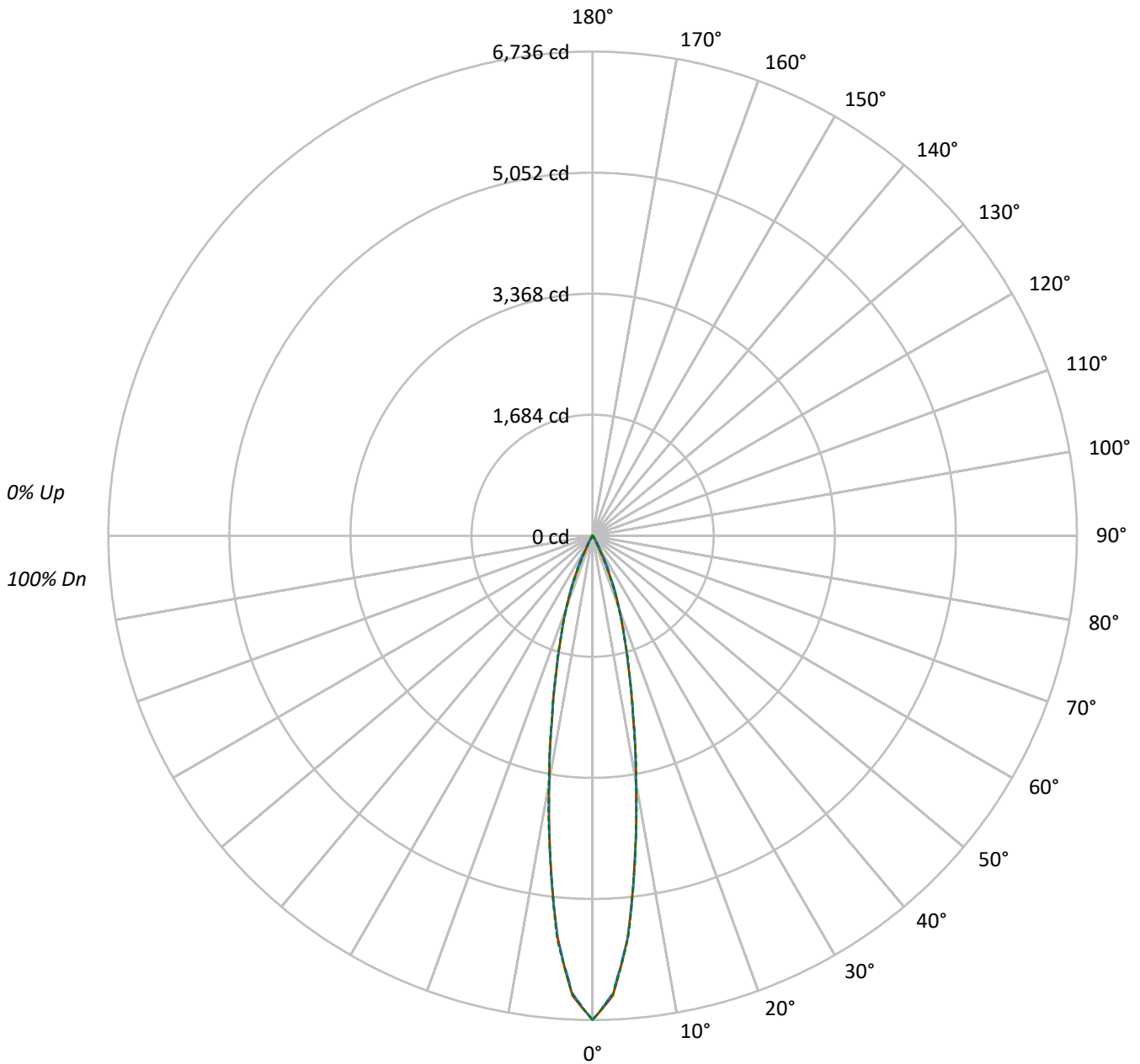
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P182627

CATALOG NUMBER: LDSQA4A13930D010TE LAR15SP 4LSQA1H-LSF-20

### Luminous Intensity Polar Plot





TEST NUMBER: P182627

CATALOG NUMBER: LDSQA4A13930D010TE 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			97															
2	111	108	105	102	109	106	104	101	103	101	99	100	99	97	98	96	95	94			94																
3	108	103	100	97	106	102	99	96	100	97	95	97	95	93	95	93	92	91			91																
4	105	99	96	93	103	98	95	92	96	93	91	95	92	90	93	91	89	88			88																
5	102	96	92	89	100	95	91	89	93	90	88	92	89	87	91	88	86	85			85																
6	99	93	89	86	98	92	88	85	91	87	85	89	87	84	88	86	84	83			83																
7	96	90	86	83	95	89	85	83	88	85	82	87	84	82	86	83	81	80			80																
8	94	87	83	80	93	87	83	80	86	82	80	85	82	80	84	81	79	78			78																
9	91	85	81	78	90	84	80	78	83	80	78	83	80	77	82	79	77	76			76																
10	89	82	78	76	88	82	78	76	81	78	76	81	78	75	80	77	75	74			74																

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

	0°	45°	90°
0°	652563	652563	652563
5°	544847	544847	547434
10°	341334	340566	344009
15°	194789	195892	196223
20°	110278	109948	109474
25°	41399	53531	42296
30°	8490	17920	8557
35°	3370	5830	3300
40°	1720	2542	1644
45°	1151	1329	973
50°	678	678	482
55°	321	439	220
60°	252	252	116
65°	138	138	138
70°	170	170	170
75°	0	0	0
80°	0	0	0
85°	0	0	0



TEST NUMBER: P182627

CATALOG NUMBER: LDSQA4A13930D010TE LAR15SP 4LSQA1H-LSF-20

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	465.5	36.4
10°-20°	553.6	43.3
20°-30°	220.7	17.3
30°-40°	27.8	2.2
40°-50°	6.8	0.5
50°-60°	2.0	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°	1239.8	97.1
0°-40°	1267.6	99.2
0°-60°	1276.4	99.9
0°-90°	1277.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1277.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6736	6736	6736	6736	6736	
5°	5603	5654	5603	5608	5629	464
15°	1942	1954	1953	1953	1956	552
25°	387	476	501	456	396	199
35°	28	34	49	33	28	21
45°	8	8	10	8	7	7
55°	2	2	3	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: P182627

CATALOG NUMBER: LDSQA4A13930D010TE LAR15SP 4LSQA1H-LSF-20

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6736.1	6736.1	6736.1	6736.1	6736.1
2.5°	6405.3	6439.6	6373.5	6380.0	6388.4
5°	5602.8	5654.1	5602.8	5608.0	5629.4
7.5°	4508.5	4553.2	4524.0	4537.0	4513.7
10°	3469.9	3486.1	3462.1	3473.8	3497.1
12.5°	2609.1	2627.2	2609.7	2610.4	2620.7
15°	1942.2	1953.9	1953.2	1953.2	1956.5
17.5°	1450.5	1466.1	1449.2	1450.5	1454.4
20°	1069.7	1080.1	1066.5	1064.5	1061.9
22.5°	729.8	751.8	760.3	749.2	714.2
25°	387.3	475.5	500.8	456.0	395.7
27.5°	155.7	236.8	292.6	231.6	169.3
30°	75.9	103.1	160.2	105.7	76.5
32.5°	44.8	55.8	87.6	55.1	44.1
35°	28.5	34.4	49.3	33.1	27.9
37.5°	18.8	22.7	30.5	22.1	18.2
40°	13.6	15.6	20.1	14.9	13.0
42.5°	10.4	11.0	13.6	11.0	9.7
45°	8.4	8.4	9.7	7.8	7.1
47.5°	6.5	6.5	6.5	5.8	4.5
50°	4.5	4.5	4.5	3.9	3.2
52.5°	3.2	3.2	3.2	2.6	1.9
55°	1.9	1.9	2.6	1.9	1.3
57.5°	1.9	1.3	1.9	1.3	1.3
60°	1.3	1.3	1.3	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)