

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: P182526

Luminaire Tested: **LDSQA4A13827D010TE LAR15SP 4LSQAL1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182526  
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: LDSQA4A13827D010TE LAR15SP 4LSQAL1H  
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, 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: 1501.1 lumens  
Efficiency: N/A  
Efficacy: 67.4 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

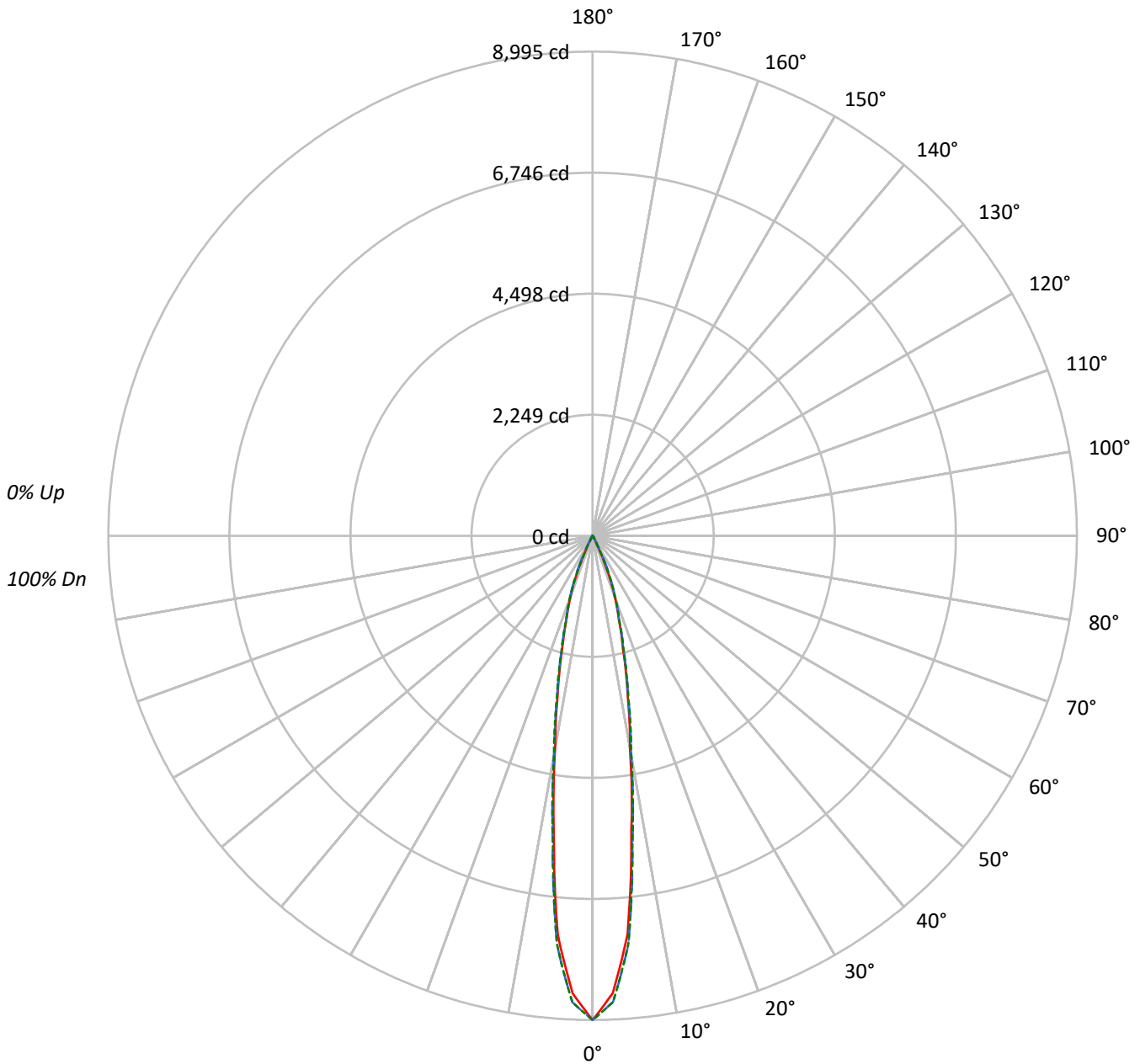
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	871424	871424	871424
5°	722826	741536	740476
10°	393863	405491	407546
15°	218989	225268	226431
20°	123464	126969	128567
25°	37166	54760	37005
30°	7003	10023	7003
35°	3016	4660	3110
40°	1467	2441	1467
45°	959	1274	740
50°	588	693	347
55°	388	388	253
60°	291	155	155
65°	183	183	183
70°	0	227	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	598.9	39.9
10°-20°	638.4	42.5
20°-30°	232.8	15.5
30°-40°	22.2	1.5
40°-50°	6.1	0.4
50°-60°	1.8	0.1
60°-70°	0.8	0.1
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°	1470.1	97.9
0°-40°	1492.3	99.4
0°-60°	1500.2	99.9
0°-90°	1501.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1501.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8995	8995	8995	8995	8995	
5°	7433	7621	7625	7546	7614	587
15°	2184	2235	2246	2242	2258	625
25°	348	503	512	508	346	201
35°	26	31	39	31	26	18
45°	7	7	9	7	5	5
55°	2	2	2	2	2	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



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8995.3	8995.3	8995.3	8995.3	8995.3
2.5°	8504.6	8683.9	8670.8	8630.6	8670.8
5°	7433.0	7620.7	7625.4	7545.8	7614.5
7.5°	5525.3	5670.5	5696.0	5618.0	5669.8
10°	4003.9	4133.7	4122.1	4106.7	4143.0
12.5°	2991.0	3056.6	3049.7	3066.7	3069.0
15°	2183.5	2235.3	2246.1	2241.5	2257.7
17.5°	1607.9	1635.7	1630.3	1638.8	1645.0
20°	1197.6	1241.7	1231.6	1239.3	1247.1
22.5°	794.3	875.4	865.4	877.7	870.8
25°	347.7	503.0	512.3	507.6	346.2
27.5°	106.6	180.0	231.0	176.2	106.6
30°	62.6	74.9	89.6	73.4	62.6
32.5°	39.4	47.1	56.4	46.4	38.6
35°	25.5	30.9	39.4	30.9	26.3
37.5°	17.0	20.9	27.8	20.9	17.8
40°	11.6	13.9	19.3	14.7	11.6
42.5°	8.5	10.0	13.1	10.0	7.7
45°	7.0	7.0	9.3	7.0	5.4
47.5°	5.4	5.4	6.2	4.6	3.9
50°	3.9	3.9	4.6	3.1	2.3
52.5°	2.3	3.1	3.1	2.3	1.5
55°	2.3	2.3	2.3	1.5	1.5
57.5°	1.5	1.5	1.5	0.8	0.8
60°	1.5	1.5	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	0.8
70°	0.0	0.8	0.8	0.0	0.0
72.5°	0.0	0.8	0.0	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



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







(END OF REPORT)