

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: P182523

Luminaire Tested: **LDSQA4A09930D010TE LAR15SP 4LSQAL1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182523  
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: LDSQA4A09930D010TE LAR15SP 4LSQAL1H  
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 15° SPOT  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 851.2 lumens  
Efficiency: N/A  
Efficacy: 61.5 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

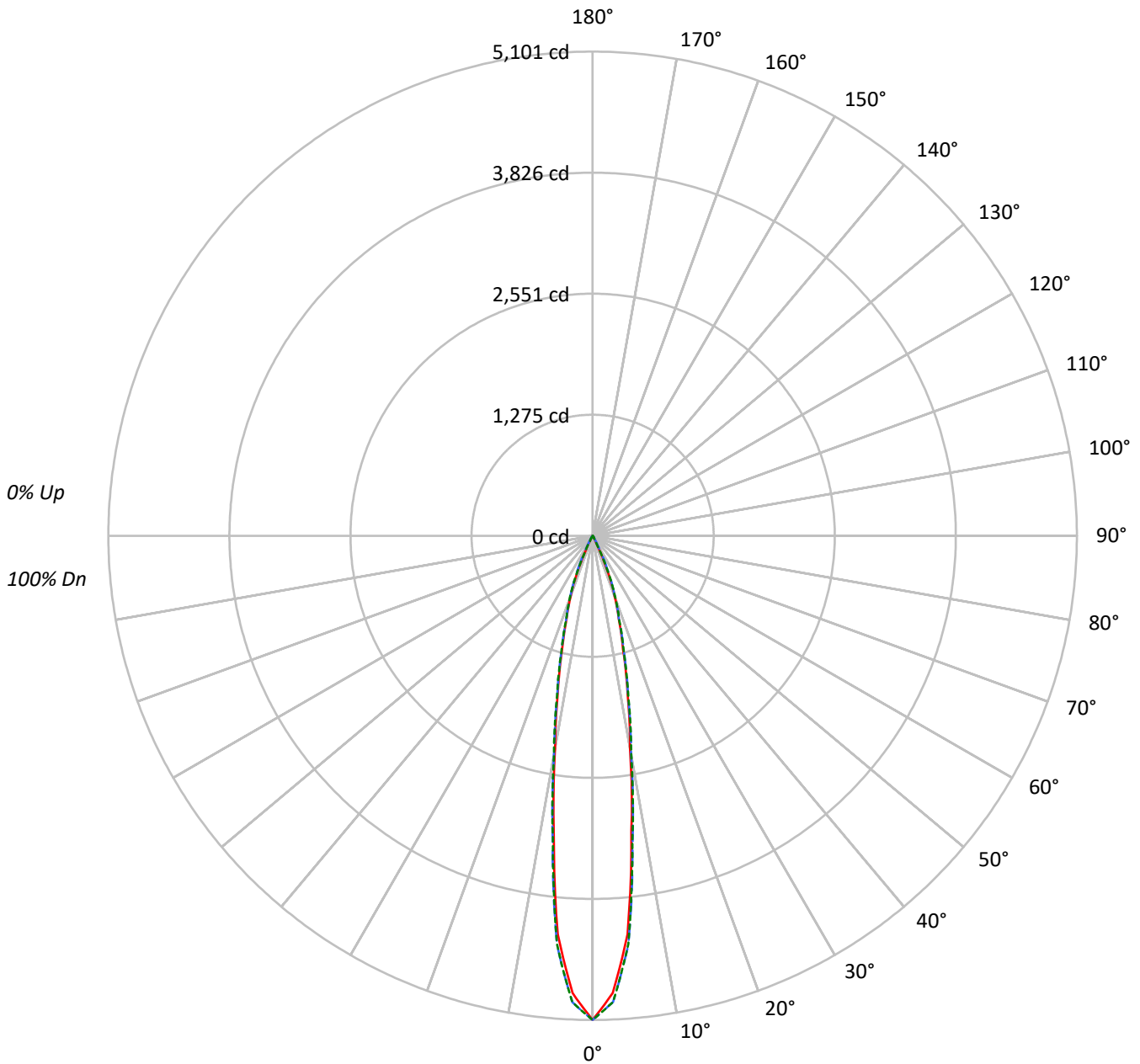
Input Watts (W): 13.84  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20					20					20					20					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	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	100	100	100		
1	115	113	111	110	113	111	109	108	107	106	105	103	102	102	100	99	99	97	97	97	97	97	97	97		
2	112	108	105	103	110	107	104	102	103	101	100	101	99	98	98	97	96	94	94	94	94	94	94	94		
3	108	104	100	98	107	103	99	97	100	98	95	98	96	94	96	94	93	91	91	91	91	91	91	91		
4	105	100	96	94	104	99	96	93	97	94	92	95	93	91	94	92	90	89	89	89	89	89	89	89		
5	102	97	93	90	101	96	92	90	94	91	89	93	90	88	92	89	87	86	86	86	86	86	86	86		
6	100	94	90	87	98	93	89	87	92	89	86	91	88	86	89	87	85	84	84	84	84	84	84	84		
7	97	91	87	84	96	90	87	84	89	86	84	88	85	83	87	85	83	82	82	82	82	82	82	82		
8	95	88	85	82	94	88	84	82	87	84	81	86	83	81	85	83	81	80	80	80	80	80	80	80		
9	92	86	82	80	92	86	82	80	85	82	79	84	81	79	84	81	79	78	78	78	78	78	78	78		
10	90	84	80	78	89	84	80	78	83	80	77	82	79	77	82	79	77	76	76	76	76	76	76	76		

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

	0°	45°	90°
0°	494133	494133	494133
5°	409870	420480	419887
10°	223339	229930	231100
15°	124183	127733	128395
20°	70010	72000	72897
25°	21079	31052	20983
30°	3971	5683	3971
35°	1715	2637	1762
40°	835	1391	835
45°	534	726	425
50°	332	392	196
55°	220	220	152
60°	174	78	78
65°	92	92	92
70°	0	113	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	339.6	39.9
10°-20°	362.0	42.5
20°-30°	132.0	15.5
30°-40°	12.6	1.5
40°-50°	3.5	0.4
50°-60°	1.0	0.1
60°-70°	0.4	0.0
70°-80°	0.1	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°	833.6	97.9
0°-40°	846.2	99.4
0°-60°	850.7	99.9
0°-90°	851.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	851.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5101	5101	5101	5101	5101	
5°	4215	4321	4324	4279	4318	333
15°	1238	1268	1274	1271	1280	354
25°	197	285	290	288	196	114
35°	14	18	22	18	15	10
45°	4	4	5	4	3	3
55°	1	1	1	1	1	1
65°	0	0	0	0	0	0
75°	0	0	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°	5100.7	5100.7	5100.7	5100.7	5100.7
2.5°	4822.5	4924.2	4916.7	4893.9	4916.7
5°	4214.8	4321.3	4323.9	4278.8	4317.8
7.5°	3133.1	3215.4	3229.9	3185.7	3215.0
10°	2270.4	2344.0	2337.4	2328.7	2349.3
12.5°	1696.0	1733.2	1729.3	1738.9	1740.3
15°	1238.2	1267.5	1273.6	1271.0	1280.2
17.5°	911.8	927.5	924.5	929.3	932.8
20°	679.1	704.1	698.4	702.8	707.1
22.5°	450.4	496.4	490.7	497.7	493.8
25°	197.2	285.2	290.5	287.9	196.3
27.5°	60.5	102.1	131.0	99.9	60.5
30°	35.5	42.5	50.8	41.6	35.5
32.5°	22.3	26.7	32.0	26.3	21.9
35°	14.5	17.5	22.3	17.5	14.9
37.5°	9.6	11.8	15.8	11.8	10.1
40°	6.6	7.9	11.0	8.3	6.6
42.5°	4.8	5.7	7.4	5.7	4.4
45°	3.9	3.9	5.3	3.9	3.1
47.5°	3.1	3.1	3.5	2.6	2.2
50°	2.2	2.2	2.6	1.8	1.3
52.5°	1.3	1.8	1.8	1.3	0.9
55°	1.3	1.3	1.3	0.9	0.9
57.5°	0.9	0.9	0.9	0.4	0.4
60°	0.9	0.9	0.4	0.4	0.4
62.5°	0.4	0.4	0.4	0.4	0.4
65°	0.4	0.4	0.4	0.4	0.4
67.5°	0.4	0.4	0.4	0.4	0.4
70°	0.0	0.4	0.4	0.0	0.0
72.5°	0.0	0.4	0.0	0.0	0.0
75°	0.0	0.4	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)