

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: P182451

Luminaire Tested: **LDSQA4A18930D010TE LAR25NF 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182451  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26785)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A18930D010TE LAR25NF 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 25° NARROW FLOOD  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1876.0 lumens  
Efficiency: N/A  
Efficacy: 64.4 lumens/watt  
Spacing Criteria (0/90/45): 0.47 / 0.47 / 0.49  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

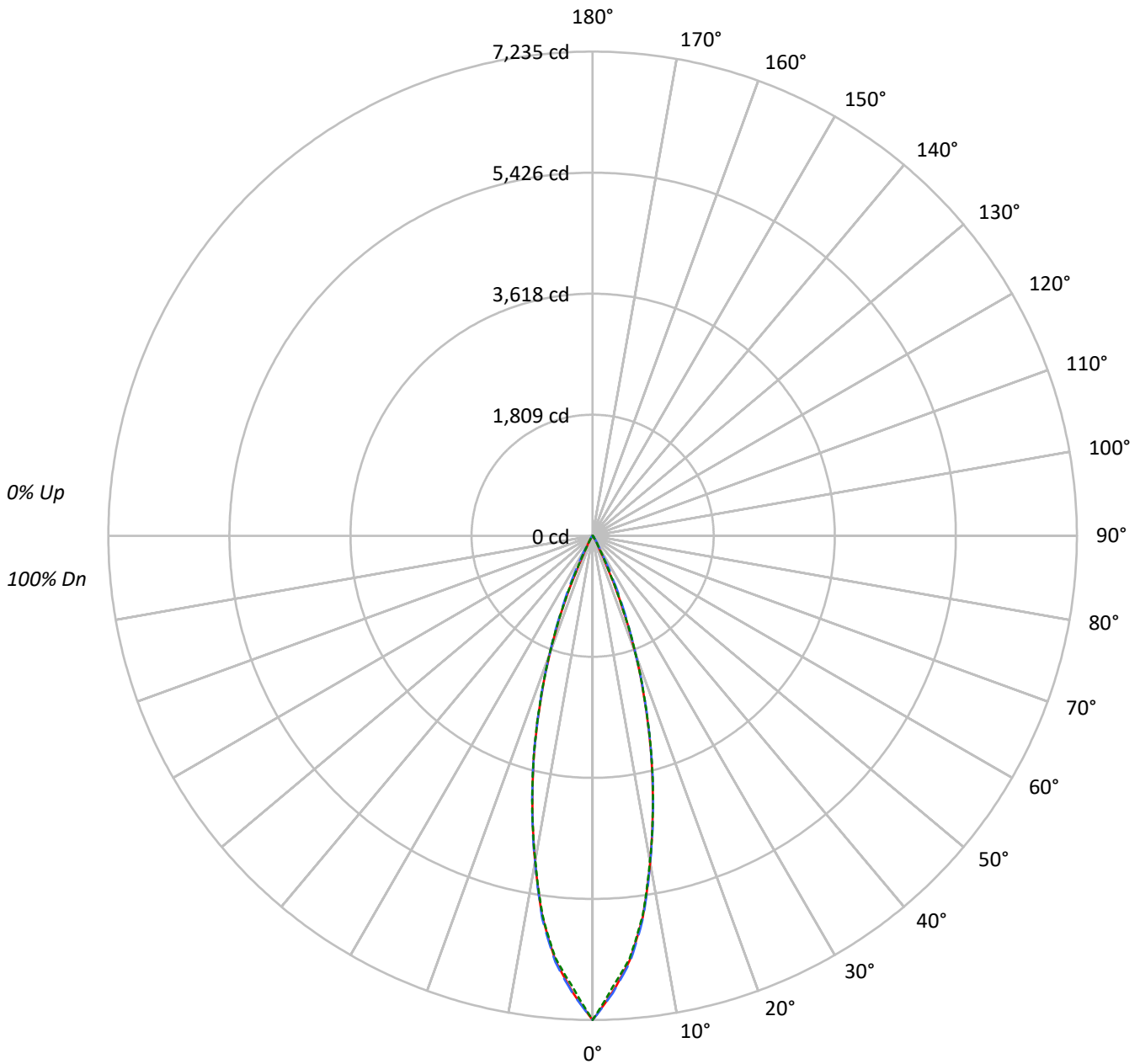
Input Watts (W): 29.12  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	113	111	109	107	107	105	104	103	102	101	100	99	98	97	97	96	95	93															
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	97	96	95	93	95	93	91	90															
3	108	103	99	96	106	102	98	96	99	96	94	97	95	93	95	93	91	90	95	93	91	90															
4	104	99	95	92	103	98	94	91	96	93	90	94	91	89	92	90	88	87	92	90	88	87															
5	101	95	91	88	100	94	90	88	93	89	87	91	88	86	90	87	85	84	90	87	85	84															
6	98	92	88	84	97	91	87	84	90	86	84	88	85	83	87	85	83	82	87	85	83	82															
7	95	89	84	81	94	88	84	81	87	83	81	86	83	80	85	82	80	79	85	82	80	79															
8	92	86	82	79	91	85	81	79	84	81	78	84	80	78	83	80	78	77	83	80	78	77															
9	90	83	79	76	89	83	79	76	82	78	76	81	78	76	80	78	75	74	80	78	75	74															
10	87	81	77	74	87	80	76	74	80	76	74	79	76	73	78	75	73	72	78	75	73	72															

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

	0°	45°	90°
0°	700894	700894	700894
5°	619561	621681	616410
10°	486951	487511	485446
15°	338980	339953	340193
20°	192299	193557	194216
25°	51831	78436	58309
30°	12842	17540	13200
35°	3820	8030	4116
40°	1530	2656	1530
45°	781	1110	658
50°	482	482	241
55°	405	270	135
60°	310	155	155
65°	183	183	183
70°	227	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°	567.6	30.3
10°-20°	923.0	49.2
20°-30°	343.1	18.3
30°-40°	34.0	1.8
40°-50°	5.7	0.3
50°-60°	1.5	0.1
60°-70°	0.8	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°	1833.7	97.7
0°-40°	1867.8	99.6
0°-60°	1875.0	99.9
0°-90°	1876.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1876.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7235	7235	7235	7235	7235	
5°	6371	6435	6393	6468	6339	564
15°	3380	3418	3390	3445	3392	914
25°	485	712	734	685	546	303
35°	32	40	68	42	35	26
45°	6	6	8	6	5	5
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



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7235.0	7235.0	7235.0	7235.0	7235.0
2.5°	6827.7	6864.1	6841.4	6902.0	6755.8
5°	6371.1	6434.9	6392.9	6468.0	6338.7
7.5°	5743.9	5810.2	5767.3	5840.1	5724.5
10°	4950.2	4999.5	4955.9	5026.2	4934.9
12.5°	4156.6	4205.9	4173.6	4238.2	4165.5
15°	3379.9	3417.9	3389.6	3445.4	3392.0
17.5°	2591.1	2627.5	2601.6	2646.9	2606.5
20°	1865.3	1896.9	1877.5	1915.4	1883.9
22.5°	1158.2	1242.2	1255.9	1259.2	1167.9
25°	484.9	712.0	733.8	685.4	545.5
27.5°	199.6	261.9	349.1	275.6	210.1
30°	114.8	133.4	156.8	137.4	118.0
32.5°	57.4	74.4	102.6	78.4	60.6
35°	32.3	40.4	67.9	42.0	34.8
37.5°	19.4	23.4	33.9	24.2	20.2
40°	12.1	14.5	21.0	15.4	12.1
42.5°	8.1	9.7	12.9	9.7	8.1
45°	5.7	6.5	8.1	6.5	4.8
47.5°	4.0	4.0	4.8	4.0	3.2
50°	3.2	3.2	3.2	2.4	1.6
52.5°	2.4	2.4	2.4	1.6	1.6
55°	2.4	1.6	1.6	1.6	0.8
57.5°	1.6	1.6	1.6	0.8	0.8
60°	1.6	1.6	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°	0.8	0.8	0.8	0.8	0.0
72.5°	0.0	0.0	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)