

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: P182447

Luminaire Tested: **LDSQA4A18830D010TE LAR25NF 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182447  
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: LDSQA4A18830D010TE LAR25NF 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 25° NARROW FLOOD  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2280.0 lumens  
Efficiency: N/A  
Efficacy: 78.3 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

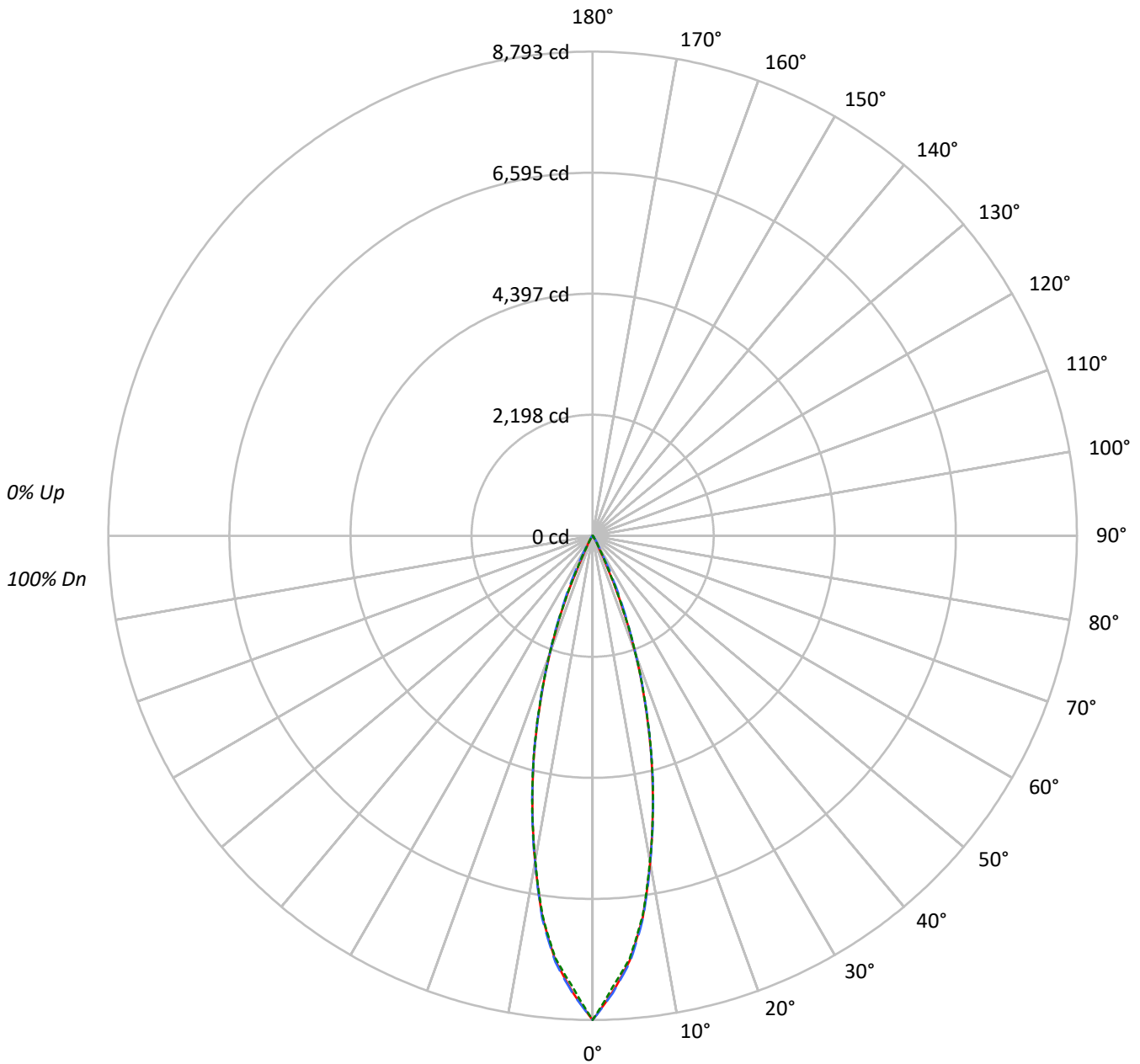
Input Watts (W): 29.12  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	851835	851835	851835
5°	752981	755558	749160
10°	591823	592502	589983
15°	411983	413166	413457
20°	233711	235237	236041
25°	63001	95335	70868
30°	15605	21321	16041
35°	4648	9757	4991
40°	1859	3225	1859
45°	945	1343	808
50°	588	588	301
55°	490	338	169
60°	388	194	194
65°	229	229	229
70°	283	283	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	689.8	30.3
10°-20°	1121.8	49.2
20°-30°	417.0	18.3
30°-40°	41.4	1.8
40°-50°	6.9	0.3
50°-60°	1.9	0.1
60°-70°	1.0	0.0
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°	2228.6	97.7
0°-40°	2270.0	99.6
0°-60°	2278.8	99.9
0°-90°	2280.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2280.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8793	8793	8793	8793	8793	
5°	7743	7821	7770	7861	7704	686
15°	4108	4154	4120	4187	4122	1111
25°	589	865	892	833	663	368
35°	39	49	82	51	42	32
45°	7	8	10	8	6	6
55°	3	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°	8793.1	8793.1	8793.1	8793.1	8793.1
2.5°	8298.1	8342.3	8314.7	8388.4	8210.6
5°	7743.1	7820.7	7769.6	7861.0	7703.8
7.5°	6980.9	7061.4	7009.3	7097.7	6957.3
10°	6016.3	6076.2	6023.2	6108.6	5997.6
12.5°	5051.7	5111.6	5072.3	5150.9	5062.5
15°	4107.8	4153.9	4119.6	4187.3	4122.5
17.5°	3149.1	3193.3	3161.9	3216.9	3167.8
20°	2267.0	2305.3	2281.8	2327.9	2289.6
22.5°	1407.6	1509.7	1526.4	1530.3	1419.4
25°	589.4	865.4	891.9	832.9	663.0
27.5°	242.6	318.2	424.3	334.9	255.4
30°	139.5	162.1	190.6	167.0	143.4
32.5°	69.7	90.4	124.7	95.3	73.7
35°	39.3	49.1	82.5	51.1	42.2
37.5°	23.6	28.5	41.3	29.5	24.6
40°	14.7	17.7	25.5	18.7	14.7
42.5°	9.8	11.8	15.7	11.8	9.8
45°	6.9	7.9	9.8	7.9	5.9
47.5°	4.9	4.9	5.9	4.9	3.9
50°	3.9	3.9	3.9	2.9	2.0
52.5°	2.9	2.9	2.9	2.0	2.0
55°	2.9	2.0	2.0	2.0	1.0
57.5°	2.0	2.0	2.0	1.0	1.0
60°	2.0	2.0	1.0	1.0	1.0
62.5°	1.0	1.0	1.0	1.0	1.0
65°	1.0	1.0	1.0	1.0	1.0
67.5°	1.0	1.0	1.0	1.0	1.0
70°	1.0	1.0	1.0	1.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	1.0	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)