

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: P182559

Luminaire Tested: **LDSQA4A13830D010TE LAR25NF 4LSQAL1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182559  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26797)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A13830D010TE LAR25NF 4LSQAL1H  
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, 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: 1691.3 lumens  
Efficiency: N/A  
Efficacy: 75.9 lumens/watt  
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.5  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

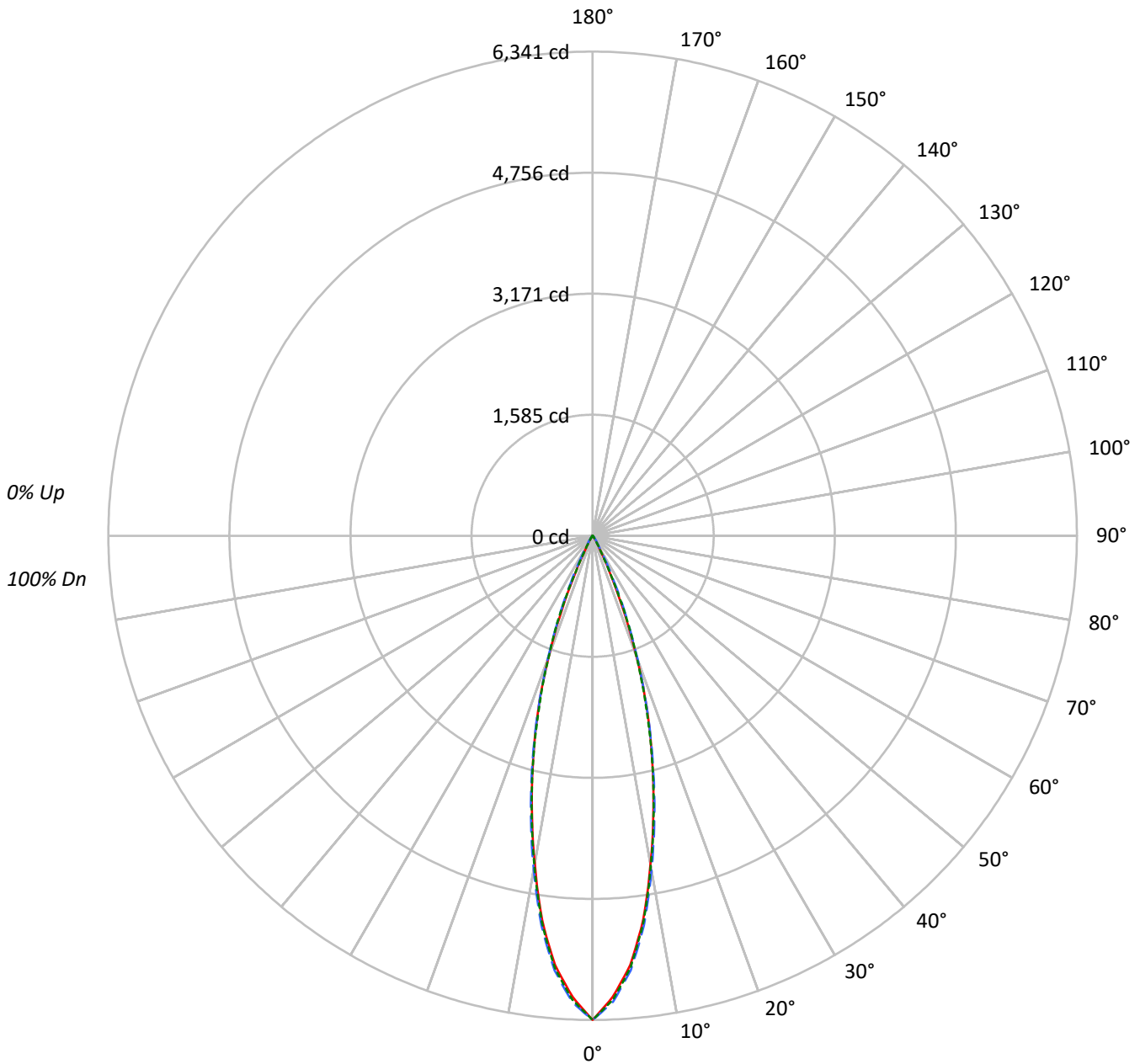
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P182559

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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									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	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96	97	96	94	93	93	93	93	93	96																			
2	111	107	104	102	109	106	103	101	103	100	99	100	98	96	97	96	94	93	93	93	93	93	93	93	93	93	93																			
3	107	103	99	96	106	101	98	95	99	96	94	97	94	92	95	93	91	90	95	93	91	90	90	90	90	90	90																			
4	104	99	95	91	102	97	94	91	95	92	90	94	91	89	92	90	88	87	92	90	88	87	87	87	87	87	87																			
5	101	95	91	87	99	94	90	87	92	89	86	91	88	86	89	87	85	84	89	87	85	84	84	84	84	84	84																			
6	98	91	87	84	96	91	87	84	89	86	83	88	85	83	87	84	82	81	87	84	82	81	81	81	81	81	81																			
7	95	88	84	81	94	88	84	81	87	83	80	85	82	80	85	82	80	79	85	82	80	79	79	79	79	79	79																			
8	92	85	81	78	91	85	81	78	84	80	78	83	80	77	82	79	77	76	82	79	77	76	76	76	76	76	76																			
9	89	83	78	76	89	82	78	76	81	78	75	81	77	75	80	77	75	74	80	77	75	74	74	74	74	74	74																			
10	87	80	76	73	86	80	76	73	79	76	73	78	75	73	78	75	73	72	78	75	73	72	72	72	72	72	72																			

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

	0°	45°	90°
0°	614306	614306	614306
5°	548630	555525	552082
10°	429453	437136	431785
15°	301570	303787	299916
20°	173082	176660	172928
25°	54792	72076	56566
30°	14553	18088	14028
35°	4943	8953	5038
40°	2188	3592	2188
45°	1192	1617	973
50°	708	829	482
55°	405	405	270
60°	310	310	155
65°	183	183	183
70°	227	227	227
75°	0	299	299
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	503.0	29.7
10°-20°	820.1	48.5
20°-30°	317.6	18.8
30°-40°	38.9	2.3
40°-50°	8.2	0.5
50°-60°	2.2	0.1
60°-70°	0.9	0.1
70°-80°	0.5	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°	1640.7	97.0
0°-40°	1679.6	99.3
0°-60°	1690.0	99.9
0°-90°	1691.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1691.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6341	6341	6341	6341	6341	
5°	5642	5724	5713	5678	5677	498
15°	3007	3047	3029	3007	2990	816
25°	513	642	674	662	529	287
35°	42	50	76	50	43	32
45°	9	10	12	9	7	7
55°	2	2	2	2	2	2
65°	1	1	1	1	1	1
75°	0	1	1	1	1	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°	6341.2	6341.2	6341.2	6341.2	6341.2
2.5°	6044.6	6129.0	6109.3	6069.9	6080.1
5°	5641.7	5723.7	5712.6	5677.9	5677.2
7.5°	5073.1	5153.5	5144.1	5102.3	5098.3
10°	4365.7	4439.0	4443.8	4383.1	4389.4
12.5°	3674.9	3734.8	3737.2	3695.4	3686.7
15°	3006.9	3047.2	3029.0	3006.9	2990.4
17.5°	2348.5	2357.1	2353.2	2320.9	2309.0
20°	1678.9	1716.8	1713.6	1686.0	1677.4
22.5°	1045.7	1114.3	1145.8	1120.6	1134.0
25°	512.6	641.9	674.3	662.4	529.2
27.5°	208.2	272.1	339.1	268.1	201.1
30°	130.1	141.9	161.7	136.4	125.4
32.5°	68.6	86.0	109.6	83.6	68.6
35°	41.8	50.5	75.7	49.7	42.6
37.5°	26.8	31.5	44.2	31.5	27.6
40°	17.3	20.5	28.4	20.5	17.3
42.5°	11.8	13.4	18.1	13.4	11.0
45°	8.7	9.5	11.8	8.7	7.1
47.5°	6.3	7.1	7.9	5.5	4.7
50°	4.7	4.7	5.5	3.9	3.2
52.5°	3.2	3.9	3.9	2.4	2.4
55°	2.4	2.4	2.4	1.6	1.6
57.5°	2.4	1.6	1.6	1.6	1.6
60°	1.6	1.6	1.6	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	0.8
72.5°	0.8	0.8	0.8	0.8	0.0
75°	0.0	0.8	0.8	0.8	0.8
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)