

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: P182560

Luminaire Tested: **LDSQA4A13835D010TE LAR25NF 4LSQAL1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182560  
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: LDSQA4A13835D010TE LAR25NF 4LSQAL1H  
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 25° NARROW FLOOD  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1721.7 lumens  
Efficiency: N/A  
Efficacy: 77.3 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

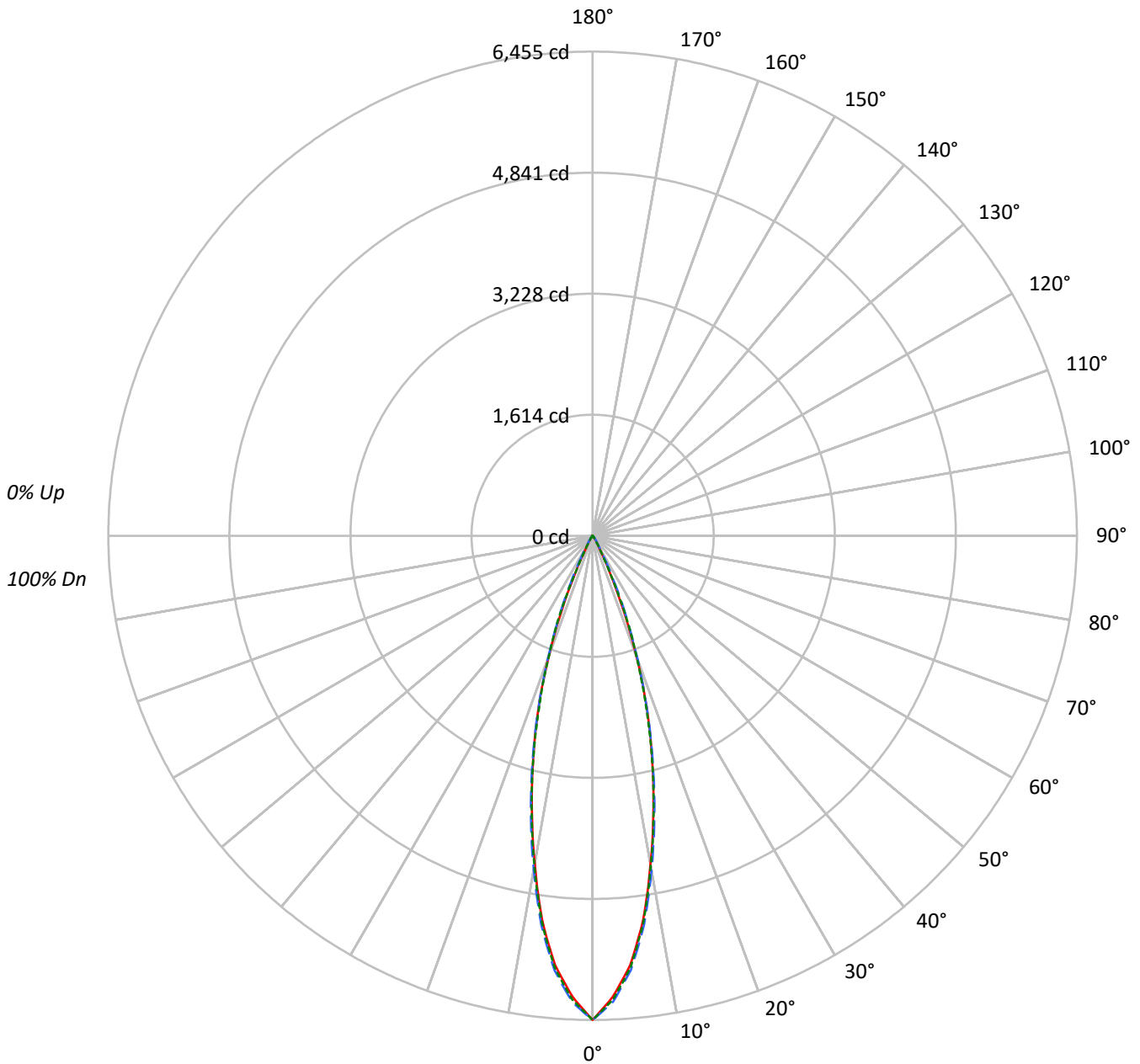
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	625350	625350	625350
5°	558491	565521	562001
10°	437175	444996	439546
15°	306996	309253	305311
20°	176196	179845	176031
25°	55775	73369	57582
30°	14822	18413	14274
35°	5026	9118	5133
40°	2238	3655	2238
45°	1206	1644	986
50°	723	844	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°	512.0	29.7
10°-20°	834.8	48.5
20°-30°	323.3	18.8
30°-40°	39.6	2.3
40°-50°	8.3	0.5
50°-60°	2.2	0.1
60°-70°	0.9	0.0
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°	1670.2	97.0
0°-40°	1709.8	99.3
0°-60°	1720.4	99.9
0°-90°	1721.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1721.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6455	6455	6455	6455	6455	
5°	5743	5827	5815	5780	5779	507
15°	3061	3102	3084	3061	3044	830
25°	522	654	686	674	539	293
35°	42	51	77	51	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°	6455.2	6455.2	6455.2	6455.2	6455.2
2.5°	6153.3	6239.2	6219.2	6179.0	6189.5
5°	5743.1	5826.6	5815.4	5780.0	5779.2
7.5°	5164.3	5246.2	5236.6	5194.0	5190.0
10°	4444.2	4518.9	4523.7	4461.9	4468.3
12.5°	3741.0	3802.0	3804.4	3761.8	3753.0
15°	3061.0	3102.0	3083.5	3061.0	3044.2
17.5°	2390.7	2399.5	2395.5	2362.6	2350.6
20°	1709.1	1747.7	1744.5	1716.4	1707.5
22.5°	1064.5	1134.3	1166.4	1140.8	1154.4
25°	521.8	653.5	686.4	674.3	538.7
27.5°	211.9	277.0	345.2	272.9	204.7
30°	132.5	144.5	164.6	138.9	127.6
32.5°	69.8	87.5	111.6	85.1	69.8
35°	42.5	51.4	77.1	50.6	43.4
37.5°	27.3	32.1	45.0	32.1	28.1
40°	17.7	20.9	28.9	20.9	17.7
42.5°	12.0	13.6	18.5	13.6	11.2
45°	8.8	9.6	12.0	8.8	7.2
47.5°	6.4	7.2	8.0	5.6	4.8
50°	4.8	4.8	5.6	4.0	3.2
52.5°	3.2	4.0	4.0	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)