

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: P182545

Luminaire Tested: **LDSQA4A18840D010TE LAR25NF 4LSQAL1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182545  
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: LDSQA4A18840D010TE LAR25NF 4LSQAL1H  
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 25° NARROW FLOOD  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2249.3 lumens  
Efficiency: N/A  
Efficacy: 77.2 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

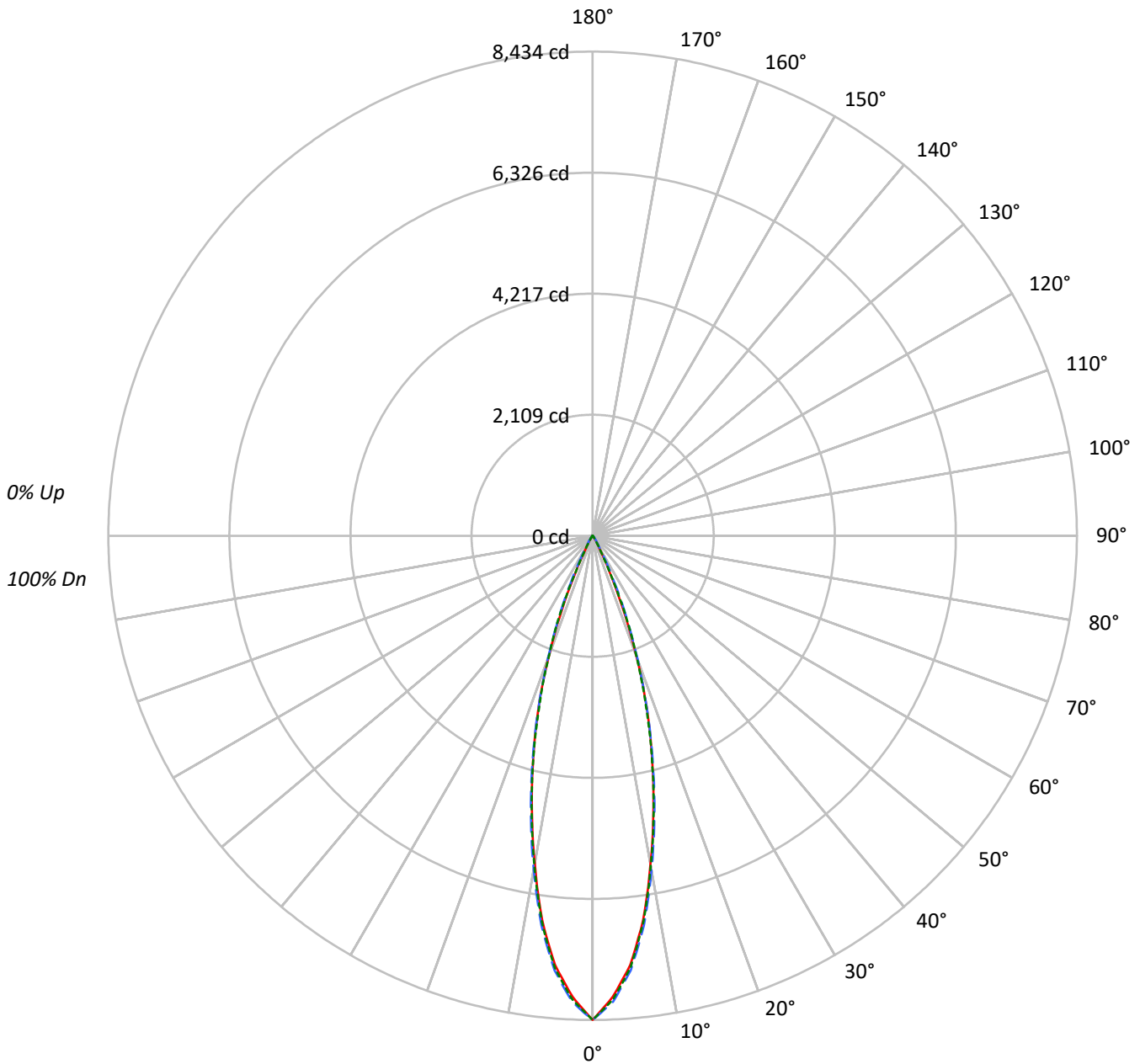
Input Watts (W): 29.12  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	817018	817018	817018
5°	729672	738852	734262
10°	571165	581386	574264
15°	401091	404040	398885
20°	230206	234959	229989
25°	72867	95859	75229
30°	19363	24050	18659
35°	6575	11909	6694
40°	2921	4780	2921
45°	1576	2151	1288
50°	949	1100	633
55°	524	524	355
60°	407	407	194
65°	229	229	229
70°	283	283	283
75°	0	374	374
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	668.9	29.7
10°-20°	1090.7	48.5
20°-30°	422.5	18.8
30°-40°	51.8	2.3
40°-50°	10.9	0.5
50°-60°	2.9	0.1
60°-70°	1.1	0.0
70°-80°	0.6	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°	2182.1	97.0
0°-40°	2233.9	99.3
0°-60°	2247.7	99.9
0°-90°	2249.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2249.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8434	8434	8434	8434	8434	
5°	7503	7612	7598	7552	7551	663
15°	3999	4053	4029	3999	3977	1085
25°	682	854	897	881	704	382
35°	56	67	101	66	57	42
45°	12	13	16	12	9	10
55°	3	3	3	2	2	3
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°	8433.7	8433.7	8433.7	8433.7	8433.7
2.5°	8039.3	8151.5	8125.3	8072.9	8086.5
5°	7503.4	7612.4	7597.8	7551.6	7550.6
7.5°	6747.1	6854.1	6841.5	6786.0	6780.7
10°	5806.3	5903.9	5910.2	5829.4	5837.8
12.5°	4887.6	4967.3	4970.4	4914.8	4903.3
15°	3999.2	4052.7	4028.6	3999.2	3977.2
17.5°	3123.4	3135.0	3129.7	3086.7	3071.0
20°	2233.0	2283.3	2279.1	2242.4	2230.9
22.5°	1390.8	1482.0	1524.0	1490.4	1508.2
25°	681.7	853.8	896.8	881.0	703.8
27.5°	276.9	361.8	451.0	356.6	267.5
30°	173.1	188.8	215.0	181.4	166.8
32.5°	91.2	114.3	145.8	111.2	91.2
35°	55.6	67.1	100.7	66.1	56.6
37.5°	35.7	42.0	58.7	42.0	36.7
40°	23.1	27.3	37.8	27.3	23.1
42.5°	15.7	17.8	24.1	17.8	14.7
45°	11.5	12.6	15.7	11.5	9.4
47.5°	8.4	9.4	10.5	7.3	6.3
50°	6.3	6.3	7.3	5.2	4.2
52.5°	4.2	5.2	5.2	3.1	3.1
55°	3.1	3.1	3.1	2.1	2.1
57.5°	3.1	2.1	2.1	2.1	2.1
60°	2.1	2.1	2.1	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	1.0
72.5°	1.0	1.0	1.0	1.0	0.0
75°	0.0	1.0	1.0	1.0	1.0
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)