

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: P182463

Luminaire Tested: **LDSQA4A13830D010TE LAR25NF 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182463  
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: LDSQA4A13830D010TE 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: 1830.1 lumens  
Efficiency: N/A  
Efficacy: 82.2 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

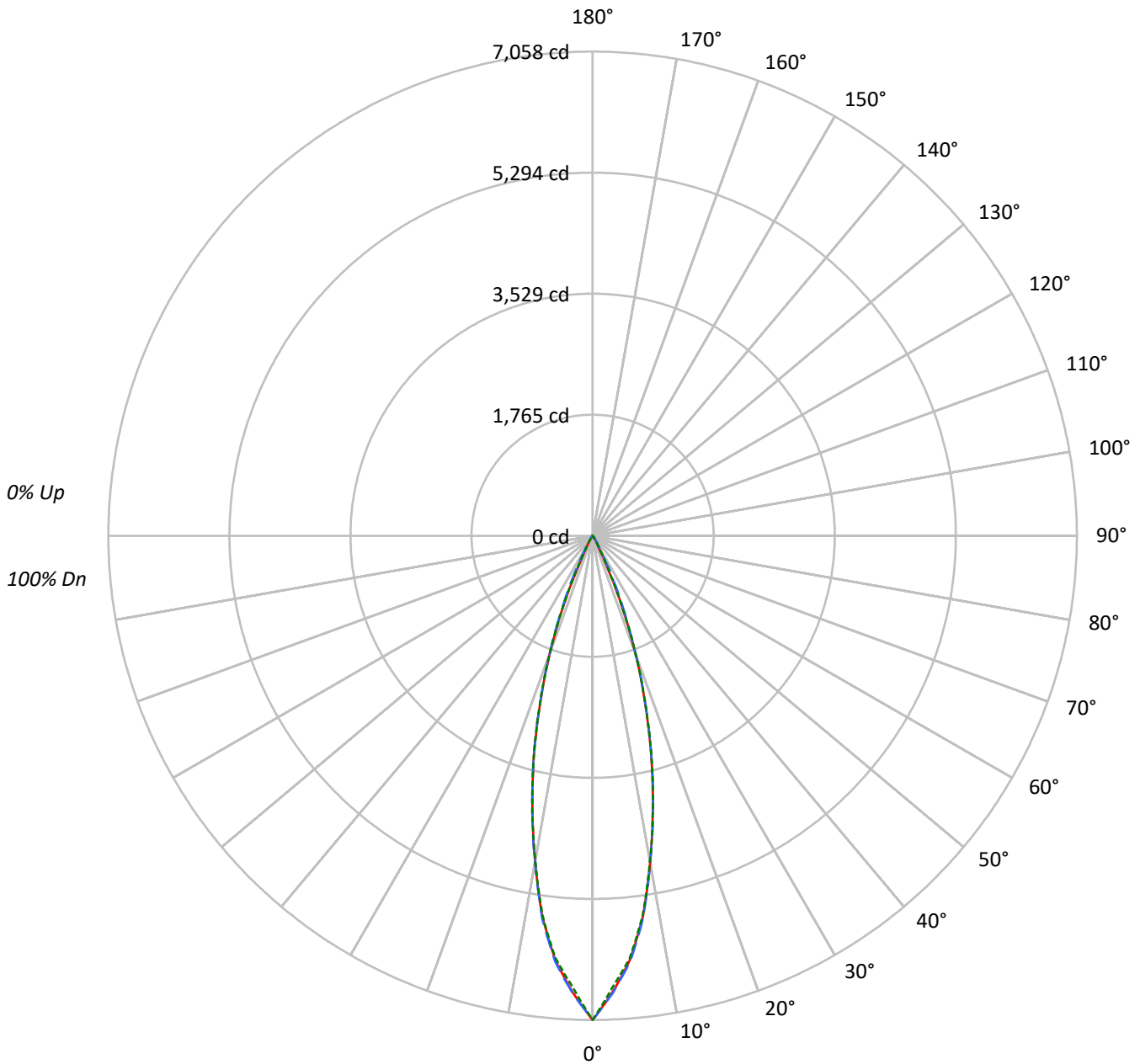
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	92	90	88	87															
4	104	99	95	92	103	98	94	91	96	93	90	94	91	89	92	90	88	87	90	87	85	84															
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°	683747	683747	683747
5°	604390	606462	601327
10°	475038	475579	473562
15°	330686	331638	331869
20°	187598	188814	189464
25°	50570	76523	56887
30°	12529	17115	12875
35°	3725	7829	4009
40°	1492	2592	1492
45°	754	1082	644
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°	553.7	30.3
10°-20°	900.4	49.2
20°-30°	334.7	18.3
30°-40°	33.2	1.8
40°-50°	5.6	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°	1788.8	97.7
0°-40°	1822.1	99.6
0°-60°	1829.2	99.9
0°-90°	1830.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1830.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7058	7058	7058	7058	7058	
5°	6215	6277	6236	6310	6184	550
15°	3297	3334	3307	3361	3309	892
25°	473	695	716	669	532	296
35°	32	39	66	41	34	25
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°	7058.0	7058.0	7058.0	7058.0	7058.0
2.5°	6660.6	6696.1	6674.0	6733.1	6590.4
5°	6215.1	6277.4	6236.4	6309.8	6183.6
7.5°	5603.3	5668.0	5626.2	5697.2	5584.4
10°	4829.1	4877.2	4834.6	4903.2	4814.1
12.5°	4054.9	4103.0	4071.4	4134.5	4063.5
15°	3297.2	3334.2	3306.7	3361.1	3309.0
17.5°	2527.7	2563.2	2537.9	2582.1	2542.7
20°	1819.7	1850.4	1831.5	1868.6	1837.8
22.5°	1129.8	1211.8	1225.2	1228.4	1139.3
25°	473.1	694.6	715.9	668.6	532.2
27.5°	194.7	255.4	340.6	268.9	205.0
30°	112.0	130.1	153.0	134.0	115.1
32.5°	56.0	72.5	100.1	76.5	59.1
35°	31.5	39.4	66.2	41.0	33.9
37.5°	18.9	22.9	33.1	23.7	19.7
40°	11.8	14.2	20.5	15.0	11.8
42.5°	7.9	9.5	12.6	9.5	7.9
45°	5.5	6.3	7.9	6.3	4.7
47.5°	3.9	3.9	4.7	3.9	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)