

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: P182464

Luminaire Tested: **LDSQA4A13835D010TE LAR25NF 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182464  
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: LDSQA4A13835D010TE LAR25NF 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
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: 1863.0 lumens  
Efficiency: N/A  
Efficacy: 83.7 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

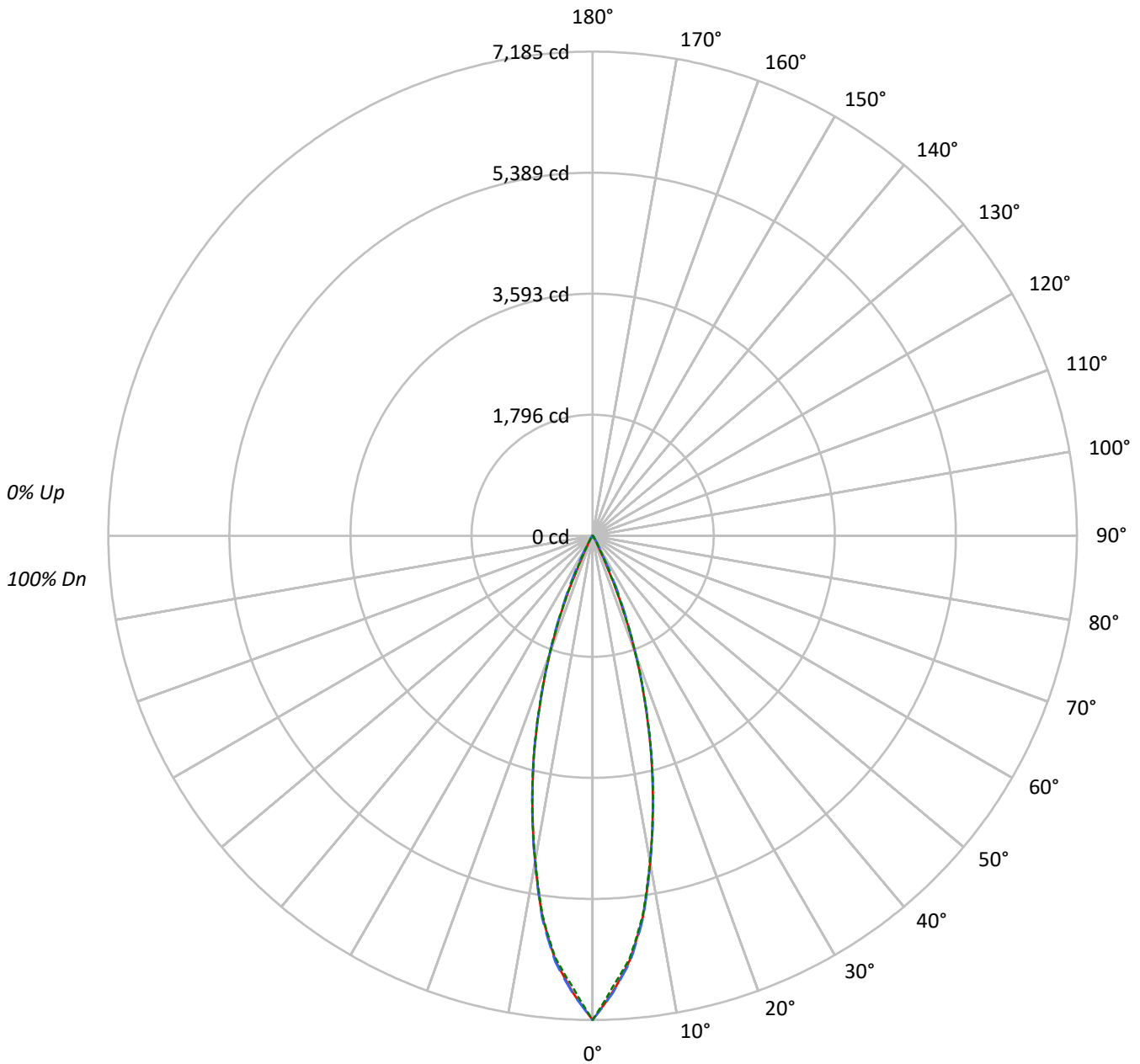
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	696040	696040	696040
5°	615262	617373	612141
10°	483577	484137	482081
15°	336633	337596	337836
20°	190969	192206	192876
25°	51478	77902	57913
30°	12752	17417	13110
35°	3796	7971	4080
40°	1518	2643	1518
45°	767	1096	658
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°	563.7	30.3
10°-20°	916.6	49.2
20°-30°	340.7	18.3
30°-40°	33.8	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°	1821.0	97.7
0°-40°	1854.8	99.6
0°-60°	1862.0	99.9
0°-90°	1863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1863.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7185	7185	7185	7185	7185	
5°	6327	6390	6349	6423	6295	560
15°	3356	3394	3366	3422	3368	908
25°	482	707	729	681	542	301
35°	32	40	67	42	34	26
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°	7184.9	7184.9	7184.9	7184.9	7184.9
2.5°	6780.4	6816.5	6794.0	6854.2	6709.0
5°	6326.9	6390.3	6348.6	6423.2	6294.8
7.5°	5704.1	5769.9	5727.4	5799.6	5684.8
10°	4915.9	4964.9	4921.6	4991.4	4900.7
12.5°	4127.8	4176.7	4144.6	4208.8	4136.6
15°	3356.5	3394.2	3366.1	3421.5	3368.5
17.5°	2573.1	2609.3	2583.6	2628.5	2588.4
20°	1852.4	1883.7	1864.4	1902.2	1870.9
22.5°	1150.1	1233.6	1247.2	1250.5	1159.8
25°	481.6	707.1	728.8	680.6	541.8
27.5°	198.2	260.0	346.7	273.7	208.7
30°	114.0	132.4	155.7	136.4	117.2
32.5°	57.0	73.8	101.9	77.9	60.2
35°	32.1	40.1	67.4	41.7	34.5
37.5°	19.3	23.3	33.7	24.1	20.1
40°	12.0	14.4	20.9	15.2	12.0
42.5°	8.0	9.6	12.8	9.6	8.0
45°	5.6	6.4	8.0	6.4	4.8
47.5°	4.0	4.0	4.8	4.0	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)