

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: P182465

Luminaire Tested: **LDSQA4A13840D010TE LAR25NF 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182465  
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: LDSQA4A13840D010TE LAR25NF 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
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: 1953.7 lumens  
Efficiency: N/A  
Efficacy: 87.7 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

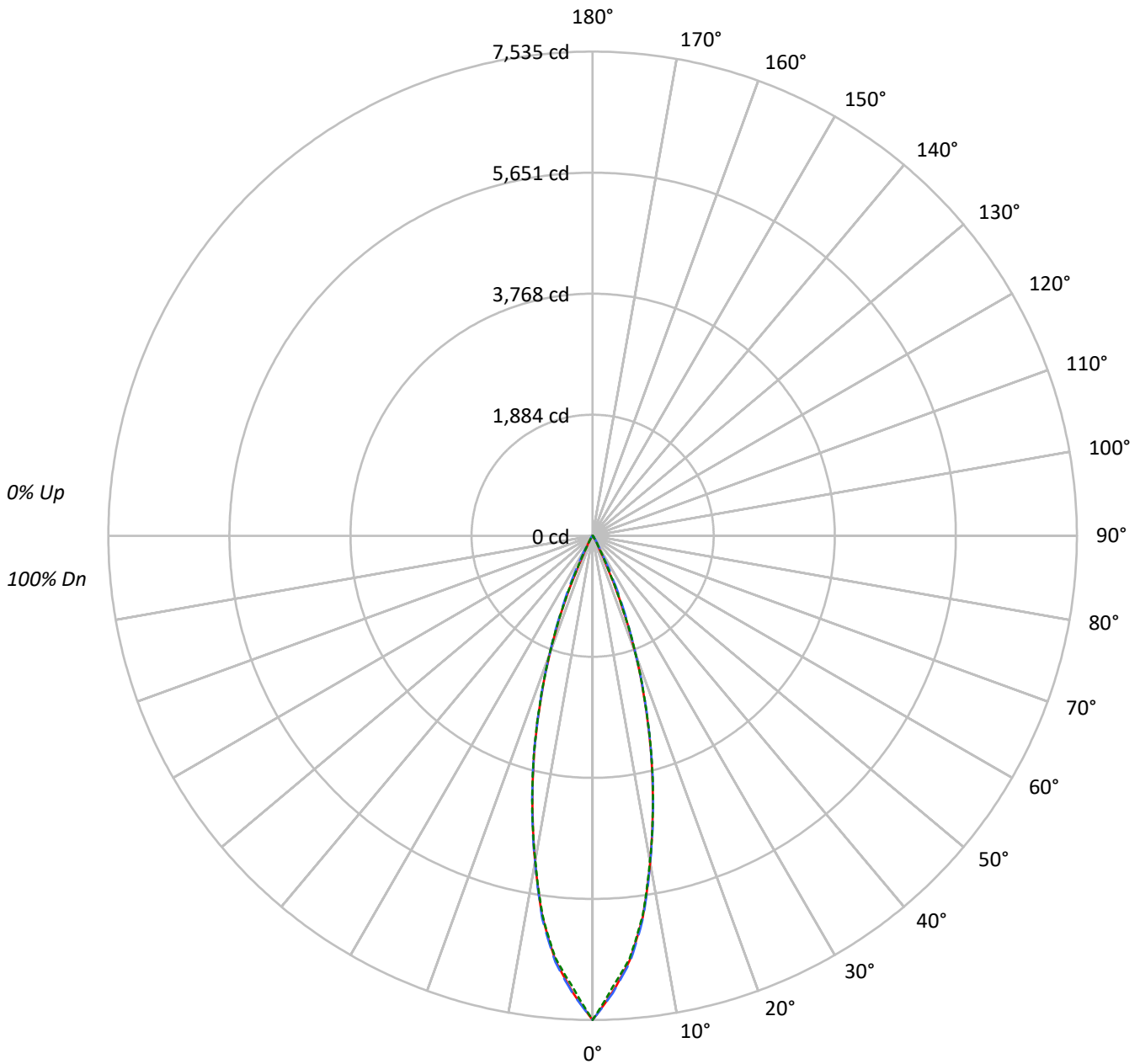
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	729927	729927	729927
5°	645214	647431	641947
10°	507126	507707	505552
15°	353021	354034	354284
20°	200268	201567	202268
25°	53980	81685	60724
30°	13368	18267	13748
35°	3985	8361	4281
40°	1593	2770	1593
45°	808	1151	699
50°	512	512	256
55°	422	287	135
60°	329	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°	591.1	30.3
10°-20°	961.3	49.2
20°-30°	357.3	18.3
30°-40°	35.5	1.8
40°-50°	5.9	0.3
50°-60°	1.6	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°	1909.7	97.7
0°-40°	1945.1	99.6
0°-60°	1952.7	100.0
0°-90°	1953.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1953.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7535	7535	7535	7535	7535	
5°	6635	6701	6658	6736	6601	588
15°	3520	3560	3530	3588	3532	952
25°	505	742	764	714	568	316
35°	34	42	71	44	36	27
45°	6	7	8	7	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°	7534.7	7534.7	7534.7	7534.7	7534.7
2.5°	7110.5	7148.4	7124.8	7187.9	7035.6
5°	6634.9	6701.4	6657.7	6735.9	6601.3
7.5°	5981.8	6050.8	6006.2	6082.0	5961.6
10°	5155.3	5206.6	5161.2	5234.4	5139.3
12.5°	4328.7	4380.1	4346.4	4413.8	4338.0
15°	3519.9	3559.5	3530.0	3588.1	3532.5
17.5°	2698.4	2736.3	2709.4	2756.5	2714.4
20°	1942.6	1975.4	1955.2	1994.8	1962.0
22.5°	1206.1	1293.7	1308.0	1311.3	1216.2
25°	505.0	741.5	764.2	713.7	568.1
27.5°	207.9	272.7	363.6	287.0	218.8
30°	119.5	138.9	163.3	143.1	122.9
32.5°	59.8	77.4	106.9	81.6	63.1
35°	33.7	42.1	70.7	43.8	36.2
37.5°	20.2	24.4	35.4	25.3	21.0
40°	12.6	15.2	21.9	16.0	12.6
42.5°	8.4	10.1	13.5	10.1	8.4
45°	5.9	6.7	8.4	6.7	5.1
47.5°	4.2	4.2	5.1	4.2	3.4
50°	3.4	3.4	3.4	2.5	1.7
52.5°	2.5	2.5	2.5	1.7	1.7
55°	2.5	1.7	1.7	1.7	0.8
57.5°	1.7	1.7	1.7	0.8	0.8
60°	1.7	1.7	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)