

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: P182629

Luminaire Tested: **LDSQA4A13940D010TE LAR15SP 4LSQA1H-LSF-20**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182629  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26829)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A13940D010TE LAR15SP 4LSQA1H-LSF-20  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 15° SPOT WITH SOLITE LENS  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1392.5 lumens  
Efficiency: N/A  
Efficacy: 62.5 lumens/watt  
Spacing Criteria (0/90/45): 0.35 / 0.35 / 0.39  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

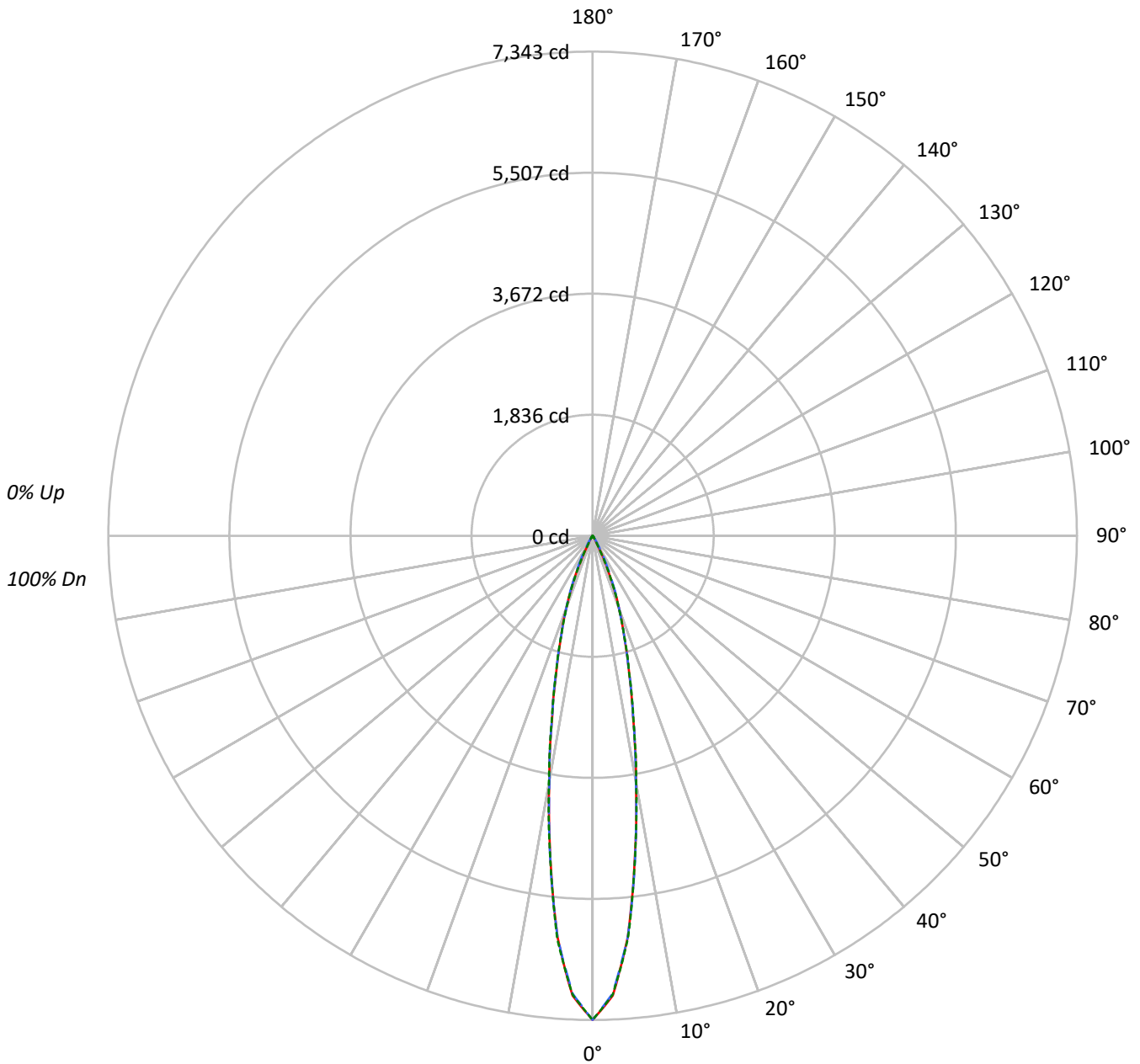
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot



0% Up  
100% Dn



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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	108	107	106	104	103	102	101	100	99	98	97	97	97	97																
2	111	108	105	102	109	106	104	101	103	101	99	100	99	97	98	96	95	94	94	94	94																
3	108	103	100	97	106	102	99	96	100	97	95	97	95	93	95	93	92	91	91	91	91																
4	105	99	96	93	103	98	95	92	96	93	91	95	92	90	93	91	89	88	88	88	88																
5	102	96	92	89	100	95	91	89	93	90	88	92	89	87	91	88	86	85	85	85	85																
6	99	93	89	86	98	92	88	85	91	87	85	89	87	84	88	86	84	83	83	83	83																
7	96	90	86	83	95	89	85	83	88	85	82	87	84	82	86	83	81	80	80	80	80																
8	94	87	83	80	93	87	83	80	86	82	80	85	82	80	84	81	79	78	78	78	78																
9	91	85	81	78	90	84	80	78	83	80	78	83	80	77	82	79	77	76	76	76	76																
10	89	82	78	76	88	82	78	76	81	78	76	81	78	75	80	77	75	74	74	74	74																

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

	0°	45°	90°
0°	711347	711347	711347
5°	593936	593936	596747
10°	372084	371248	375006
15°	212340	213543	213895
20°	120216	119845	119340
25°	45129	58351	46112
30°	9251	19542	9329
35°	3678	6351	3595
40°	1872	2770	1783
45°	1260	1452	1069
50°	738	738	527
55°	355	473	236
60°	271	271	136
65°	160	160	160
70°	198	198	198
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	507.4	36.4
10°-20°	603.5	43.3
20°-30°	240.6	17.3
30°-40°	30.3	2.2
40°-50°	7.5	0.5
50°-60°	2.2	0.2
60°-70°	0.7	0.1
70°-80°	0.3	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°	1351.4	97.1
0°-40°	1381.8	99.2
0°-60°	1391.4	99.9
0°-90°	1392.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1392.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7343	7343	7343	7343	7343	
5°	6108	6163	6108	6113	6136	506
15°	2117	2130	2129	2129	2133	602
25°	422	518	546	497	431	217
35°	31	38	54	36	30	23
45°	9	9	11	8	8	7
55°	2	2	3	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°	7342.9	7342.9	7342.9	7342.9	7342.9
2.5°	6982.3	7019.8	6947.6	6954.7	6963.9
5°	6107.6	6163.4	6107.6	6113.2	6136.5
7.5°	4914.6	4963.4	4931.6	4945.7	4920.3
10°	3782.5	3800.2	3774.0	3786.7	3812.2
12.5°	2844.1	2863.9	2844.8	2845.5	2856.8
15°	2117.2	2129.9	2129.2	2129.2	2132.7
17.5°	1581.2	1598.1	1579.7	1581.2	1585.4
20°	1166.1	1177.4	1162.5	1160.4	1157.6
22.5°	795.5	819.6	828.8	816.7	778.6
25°	422.2	518.3	545.9	497.1	431.4
27.5°	169.7	258.1	318.9	252.4	184.6
30°	82.7	112.4	174.7	115.3	83.4
32.5°	48.8	60.8	95.5	60.1	48.1
35°	31.1	37.5	53.7	36.1	30.4
37.5°	20.5	24.7	33.2	24.0	19.8
40°	14.8	17.0	21.9	16.3	14.1
42.5°	11.3	12.0	14.8	12.0	10.6
45°	9.2	9.2	10.6	8.5	7.8
47.5°	7.1	7.1	7.1	6.4	4.9
50°	4.9	4.9	4.9	4.2	3.5
52.5°	3.5	3.5	3.5	2.8	2.1
55°	2.1	2.1	2.8	2.1	1.4
57.5°	2.1	1.4	2.1	1.4	1.4
60°	1.4	1.4	1.4	0.7	0.7
62.5°	0.7	0.7	0.7	0.7	0.7
65°	0.7	0.7	0.7	0.7	0.7
67.5°	0.7	0.7	0.7	0.7	0.7
70°	0.7	0.7	0.7	0.7	0.7
72.5°	0.7	0.7	0.7	0.7	0.0
75°	0.0	0.7	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)