

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: P182613

Luminaire Tested: **LDSQA4A18940D010TE LAR15SP 4LSQA1H-LSF-20**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182613  
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: LDSQA4A18940D010TE 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**

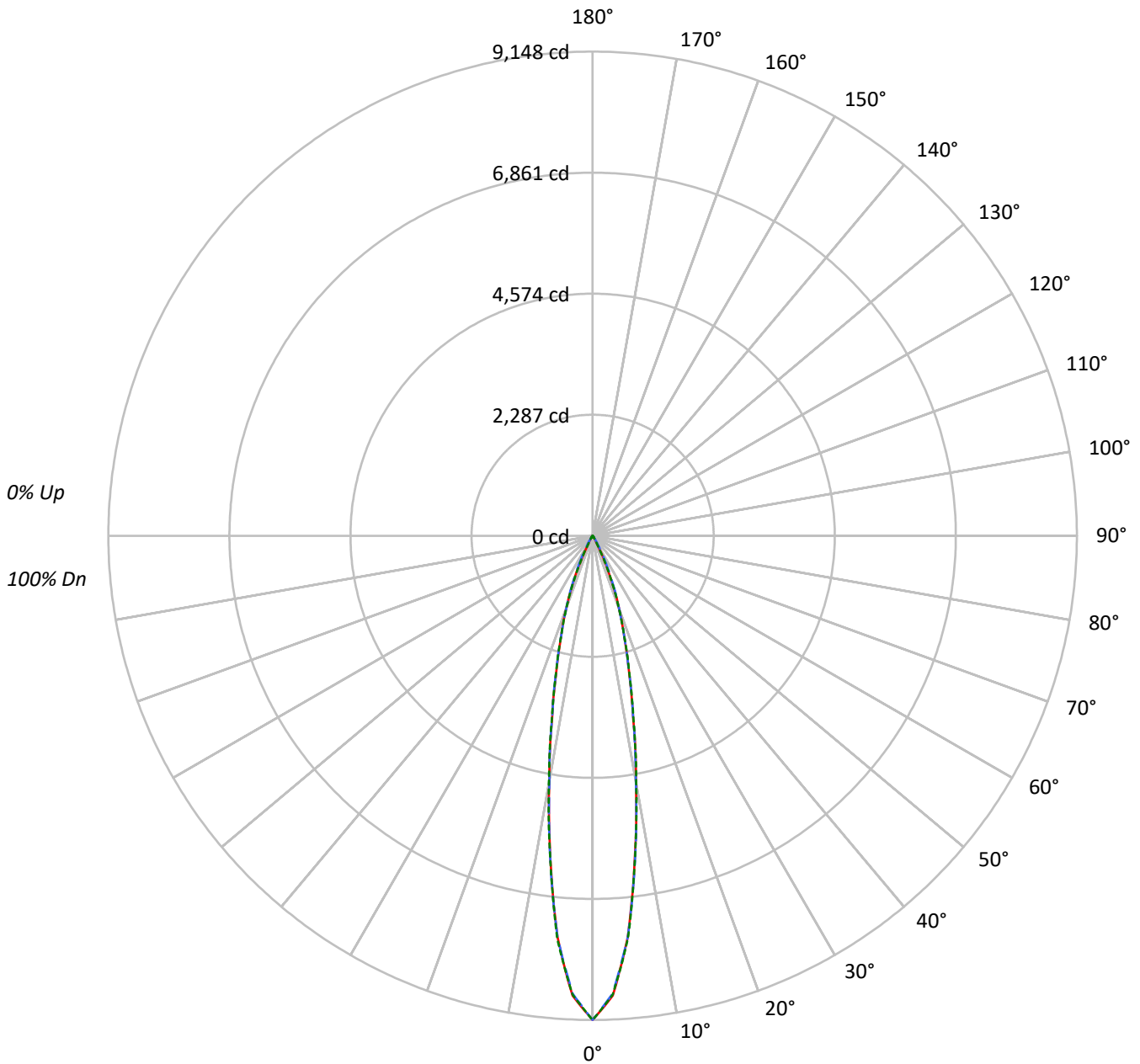
Lumens per Lamp: N/A  
Luminaire Lumens: 1734.9 lumens  
Efficiency: N/A  
Efficacy: 59.6 lumens/watt  
Spacing Criteria (0/90/45): 0.35 / 0.35 / 0.39  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 29.12  
Input Voltage (V): NR  
Input Current (A<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	108	107	106	104	103	102	101	100	99	98	97	97	98	98	97															
2	111	108	105	102	109	106	104	101	103	101	99	100	99	97	98	96	95	94	94	98	96	95															
3	108	103	100	97	106	102	99	96	100	97	95	97	95	93	95	93	92	91	91	95	93	92															
4	105	99	96	93	103	98	95	92	96	93	91	95	92	90	93	91	89	88	88	93	91	89															
5	102	96	92	89	100	95	91	89	93	90	88	92	89	87	91	88	86	85	85	91	88	86															
6	99	93	89	86	98	92	88	85	91	87	85	89	87	84	88	86	84	83	83	88	86	84															
7	96	90	86	83	95	89	85	83	88	85	82	87	84	82	86	83	81	80	80	86	83	81															
8	94	87	83	80	93	87	83	80	86	82	80	85	82	80	84	81	79	78	78	84	81	79															
9	91	85	81	78	90	84	80	78	83	80	78	83	80	77	82	79	77	76	76	82	79	77															
10	89	82	78	76	88	82	78	76	81	78	75	81	78	75	80	77	75	74	74	80	77	75															

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

	0°	45°	90°
0°	886226	886226	886226
5°	739941	739941	743461
10°	463558	462516	467198
15°	264542	266037	266478
20°	149763	149309	148680
25°	56214	72696	57443
30°	11533	24341	11634
35°	4589	7924	4482
40°	2340	3452	2226
45°	1576	1808	1329
50°	934	934	663
55°	439	591	304
60°	349	349	174
65°	206	206	206
70°	255	255	255
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	632.1	36.4
10°-20°	751.8	43.3
20°-30°	299.7	17.3
30°-40°	37.8	2.2
40°-50°	9.3	0.5
50°-60°	2.7	0.2
60°-70°	1.0	0.1
70°-80°	0.4	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°	1683.7	97.0
0°-40°	1721.5	99.2
0°-60°	1733.6	99.9
0°-90°	1734.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1734.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	9148	9148	9148	9148	9148	
5°	7609	7679	7609	7616	7645	630
15°	2638	2654	2653	2653	2657	750
25°	526	646	680	619	537	271
35°	39	47	67	45	38	28
45°	12	12	13	11	10	9
55°	3	3	4	3	2	3
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°	9148.1	9148.1	9148.1	9148.1	9148.1
2.5°	8698.8	8745.5	8655.6	8664.5	8675.9
5°	7609.0	7678.6	7609.0	7616.1	7645.2
7.5°	6122.8	6183.6	6144.0	6161.6	6129.9
10°	4712.4	4734.4	4701.8	4717.7	4749.4
12.5°	3543.3	3568.0	3544.2	3545.1	3559.2
15°	2637.7	2653.5	2652.6	2652.6	2657.0
17.5°	1969.9	1991.0	1968.1	1969.9	1975.2
20°	1452.7	1466.8	1448.3	1445.7	1442.2
22.5°	991.1	1021.1	1032.5	1017.5	970.0
25°	525.9	645.8	680.1	619.3	537.4
27.5°	211.4	321.6	397.3	314.5	229.9
30°	103.1	140.1	217.6	143.6	104.0
32.5°	60.8	75.8	118.9	74.9	59.9
35°	38.8	46.7	67.0	44.9	37.9
37.5°	25.5	30.8	41.4	30.0	24.7
40°	18.5	21.1	27.3	20.3	17.6
42.5°	14.1	15.0	18.5	15.0	13.2
45°	11.5	11.5	13.2	10.6	9.7
47.5°	8.8	8.8	8.8	7.9	6.2
50°	6.2	6.2	6.2	5.3	4.4
52.5°	4.4	4.4	4.4	3.5	2.6
55°	2.6	2.6	3.5	2.6	1.8
57.5°	2.6	1.8	2.6	1.8	1.8
60°	1.8	1.8	1.8	0.9	0.9
62.5°	0.9	0.9	0.9	0.9	0.9
65°	0.9	0.9	0.9	0.9	0.9
67.5°	0.9	0.9	0.9	0.9	0.9
70°	0.9	0.9	0.9	0.9	0.9
72.5°	0.9	0.9	0.9	0.9	0.0
75°	0.0	0.9	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)