

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: P182615

Luminaire Tested: **LDSQA4A09830D010TE LAR15SP 4LSQA1H-LSF-20**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182615  
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: LDSQA4A09830D010TE 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 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1048.3 lumens  
Efficiency: N/A  
Efficacy: 75.7 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

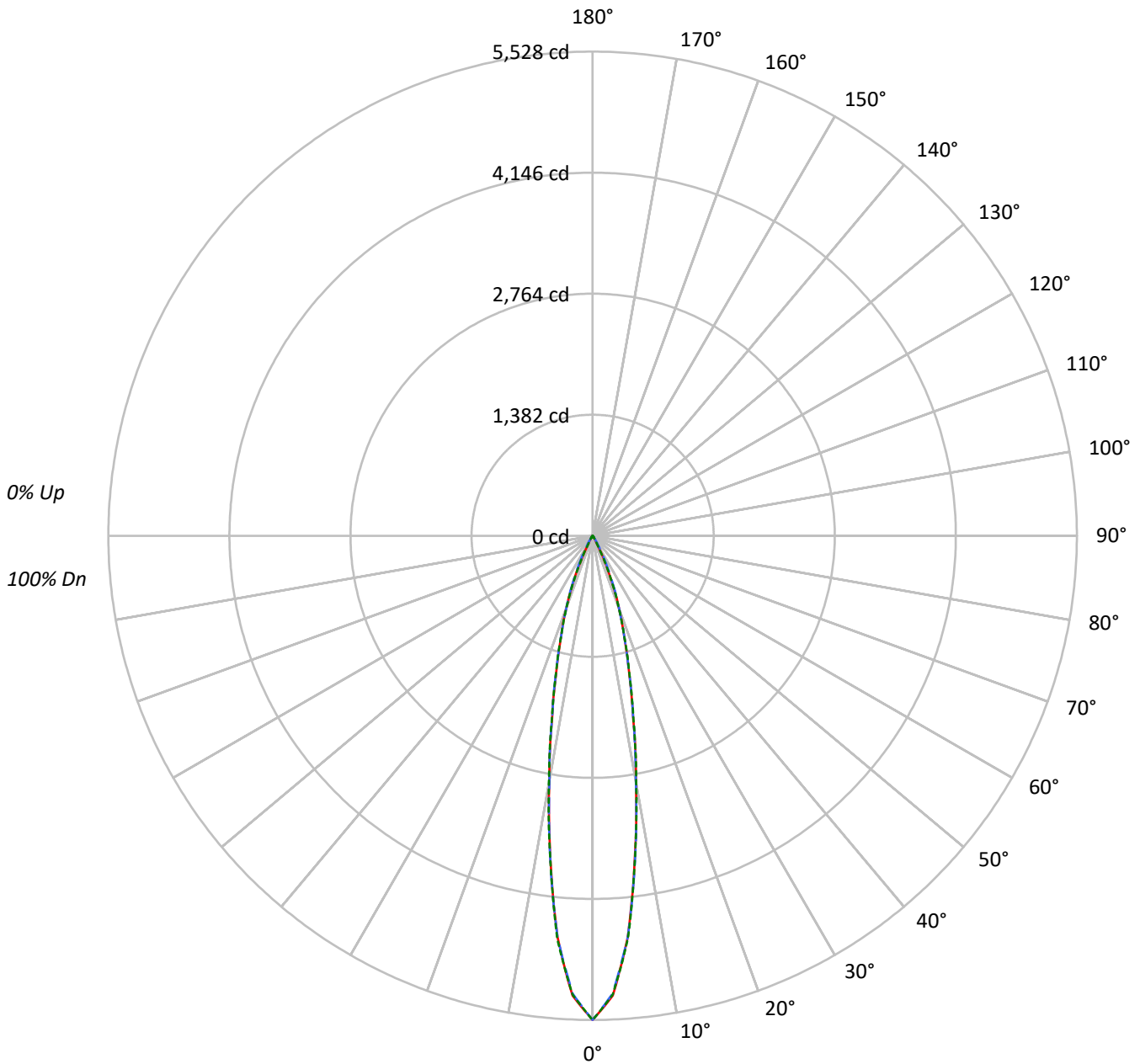
Input Watts (W): 13.84  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	535537	535537	535537
5°	447144	447144	449264
10°	280118	279498	282322
15°	159857	160769	161030
20°	90505	90227	89845
25°	33970	43932	34707
30°	6969	14710	7025
35°	2767	4790	2708
40°	1416	2087	1340
45°	945	1096	808
50°	558	558	407
55°	270	355	186
60°	213	213	97
65°	115	115	115
70°	142	142	142
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	382.0	36.4
10°-20°	454.3	43.3
20°-30°	181.1	17.3
30°-40°	22.8	2.2
40°-50°	5.6	0.5
50°-60°	1.7	0.2
60°-70°	0.5	0.1
70°-80°	0.2	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°	1017.4	97.1
0°-40°	1040.3	99.2
0°-60°	1047.6	99.9
0°-90°	1048.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1048.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5528	5528	5528	5528	5528	
5°	4598	4640	4598	4602	4620	381
15°	1594	1604	1603	1603	1606	453
25°	318	390	411	374	325	164
35°	23	28	40	27	23	17
45°	7	7	8	6	6	5
55°	2	2	2	2	1	2
65°	0	0	0	0	0	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5528.1	5528.1	5528.1	5528.1	5528.1
2.5°	5256.6	5284.8	5230.5	5235.9	5242.8
5°	4598.1	4640.1	4598.1	4602.3	4619.9
7.5°	3700.0	3736.7	3712.8	3723.4	3704.2
10°	2847.6	2861.0	2841.3	2850.8	2870.0
12.5°	2141.2	2156.1	2141.7	2142.3	2150.8
15°	1593.9	1603.5	1603.0	1603.0	1605.6
17.5°	1190.4	1203.2	1189.3	1190.4	1193.6
20°	877.9	886.4	875.2	873.6	871.5
22.5°	598.9	617.0	623.9	614.9	586.1
25°	317.8	390.2	411.0	374.3	324.7
27.5°	127.8	194.3	240.1	190.1	138.9
30°	62.3	84.6	131.5	86.8	62.8
32.5°	36.7	45.8	71.9	45.3	36.2
35°	23.4	28.2	40.5	27.2	22.9
37.5°	15.4	18.6	25.0	18.1	14.9
40°	11.2	12.8	16.5	12.2	10.6
42.5°	8.5	9.1	11.2	9.1	8.0
45°	6.9	6.9	8.0	6.4	5.9
47.5°	5.3	5.3	5.3	4.8	3.7
50°	3.7	3.7	3.7	3.2	2.7
52.5°	2.7	2.7	2.7	2.1	1.6
55°	1.6	1.6	2.1	1.6	1.1
57.5°	1.6	1.1	1.6	1.1	1.1
60°	1.1	1.1	1.1	0.5	0.5
62.5°	0.5	0.5	0.5	0.5	0.5
65°	0.5	0.5	0.5	0.5	0.5
67.5°	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.0
75°	0.0	0.5	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)