

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: P182619

Luminaire Tested: **LDSQA4A09930D010TE LAR15SP 4LSQA1H-LSF-20**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182619  
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: LDSQA4A09930D010TE 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 / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 862.6 lumens  
Efficiency: N/A  
Efficacy: 62.3 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

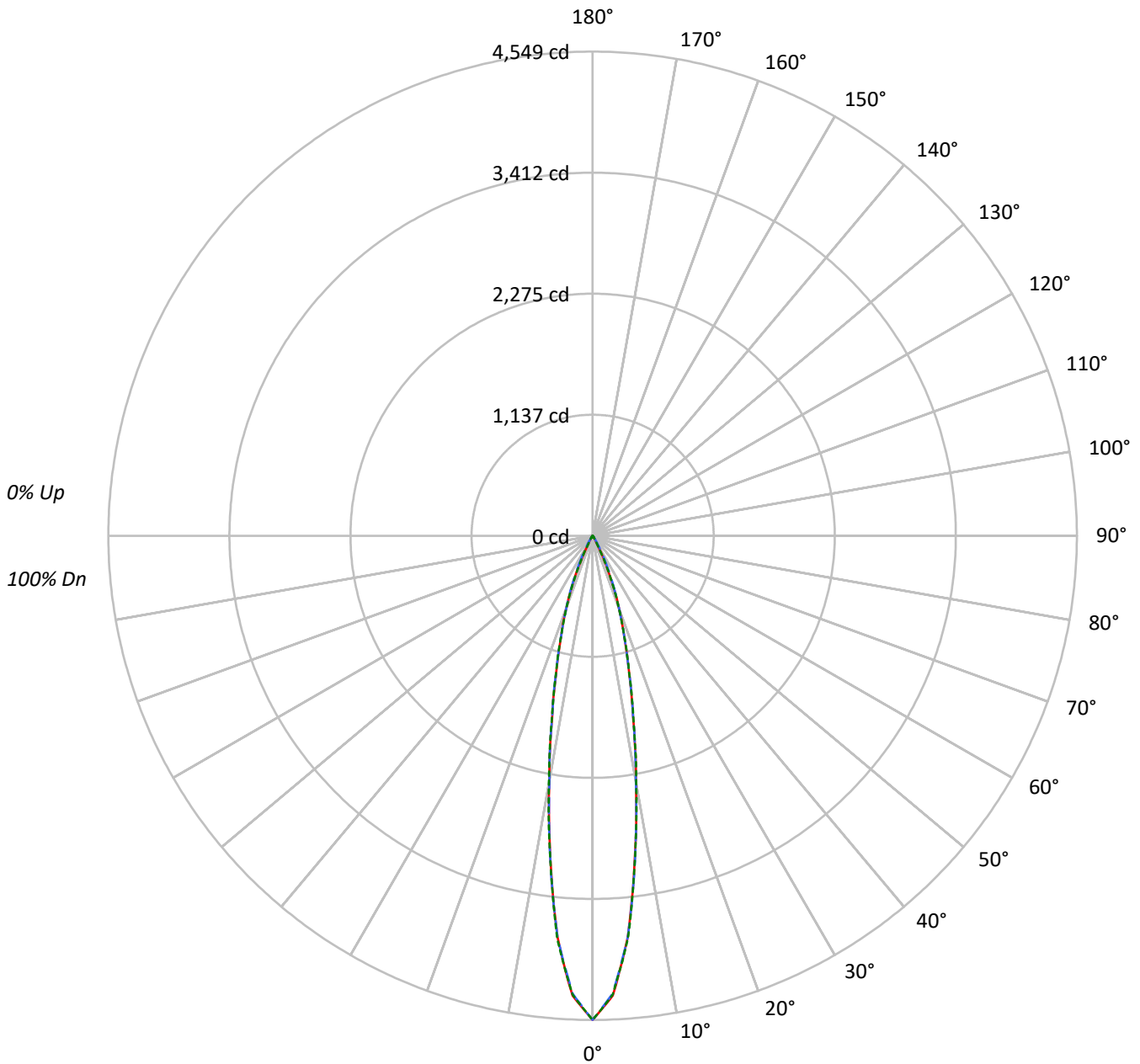
Input Watts (W): 13.84  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	440648	440648	440648
5°	367909	367909	369659
10°	230490	229969	232300
15°	131534	132276	132497
20°	74464	74237	73928
25°	27952	36150	28561
30°	5739	12103	5783
35°	2282	3938	2223
40°	1163	1720	1113
45°	781	904	658
50°	467	467	332
55°	220	304	152
60°	174	174	78
65°	92	92	92
70°	113	113	113
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	314.3	36.4
10°-20°	373.8	43.3
20°-30°	149.0	17.3
30°-40°	18.8	2.2
40°-50°	4.6	0.5
50°-60°	1.4	0.2
60°-70°	0.4	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°	837.2	97.1
0°-40°	856.0	99.2
0°-60°	862.0	99.9
0°-90°	862.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	862.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4549	4549	4549	4549	4549	
5°	3783	3818	3783	3787	3801	313
15°	1312	1319	1319	1319	1321	373
25°	262	321	338	308	267	135
35°	19	23	33	22	19	14
45°	6	6	7	5	5	4
55°	1	1	2	1	1	2
65°	0	0	0	0	0	0
75°	0	0	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°	4548.6	4548.6	4548.6	4548.6	4548.6
2.5°	4325.2	4348.4	4303.7	4308.1	4313.8
5°	3783.3	3817.9	3783.3	3786.8	3801.3
7.5°	3044.4	3074.6	3054.9	3063.6	3047.9
10°	2343.1	2354.0	2337.8	2345.7	2361.5
12.5°	1761.8	1774.1	1762.2	1762.7	1769.7
15°	1311.5	1319.4	1318.9	1318.9	1321.1
17.5°	979.5	990.0	978.6	979.5	982.1
20°	722.3	729.3	720.1	718.8	717.1
22.5°	492.8	507.7	513.4	505.9	482.3
25°	261.5	321.1	338.2	307.9	267.2
27.5°	105.1	159.9	197.6	156.4	114.3
30°	51.3	69.6	108.2	71.4	51.7
32.5°	30.2	37.7	59.1	37.2	29.8
35°	19.3	23.2	33.3	22.3	18.8
37.5°	12.7	15.3	20.6	14.9	12.3
40°	9.2	10.5	13.6	10.1	8.8
42.5°	7.0	7.4	9.2	7.4	6.6
45°	5.7	5.7	6.6	5.3	4.8
47.5°	4.4	4.4	4.4	3.9	3.1
50°	3.1	3.1	3.1	2.6	2.2
52.5°	2.2	2.2	2.2	1.8	1.3
55°	1.3	1.3	1.8	1.3	0.9
57.5°	1.3	0.9	1.3	0.9	0.9
60°	0.9	0.9	0.9	0.4	0.4
62.5°	0.4	0.4	0.4	0.4	0.4
65°	0.4	0.4	0.4	0.4	0.4
67.5°	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.0
75°	0.0	0.4	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)