

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: P182424

Luminaire Tested: **LDSQA4A09835D010TE LAR15SP 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182424  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26794)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A09835D010TE LAR15SP 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 15° SPOT  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1133.8 lumens  
Efficiency: N/A  
Efficacy: 81.9 lumens/watt  
Spacing Criteria (0/90/45): 0.32 / 0.32 / 0.36  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

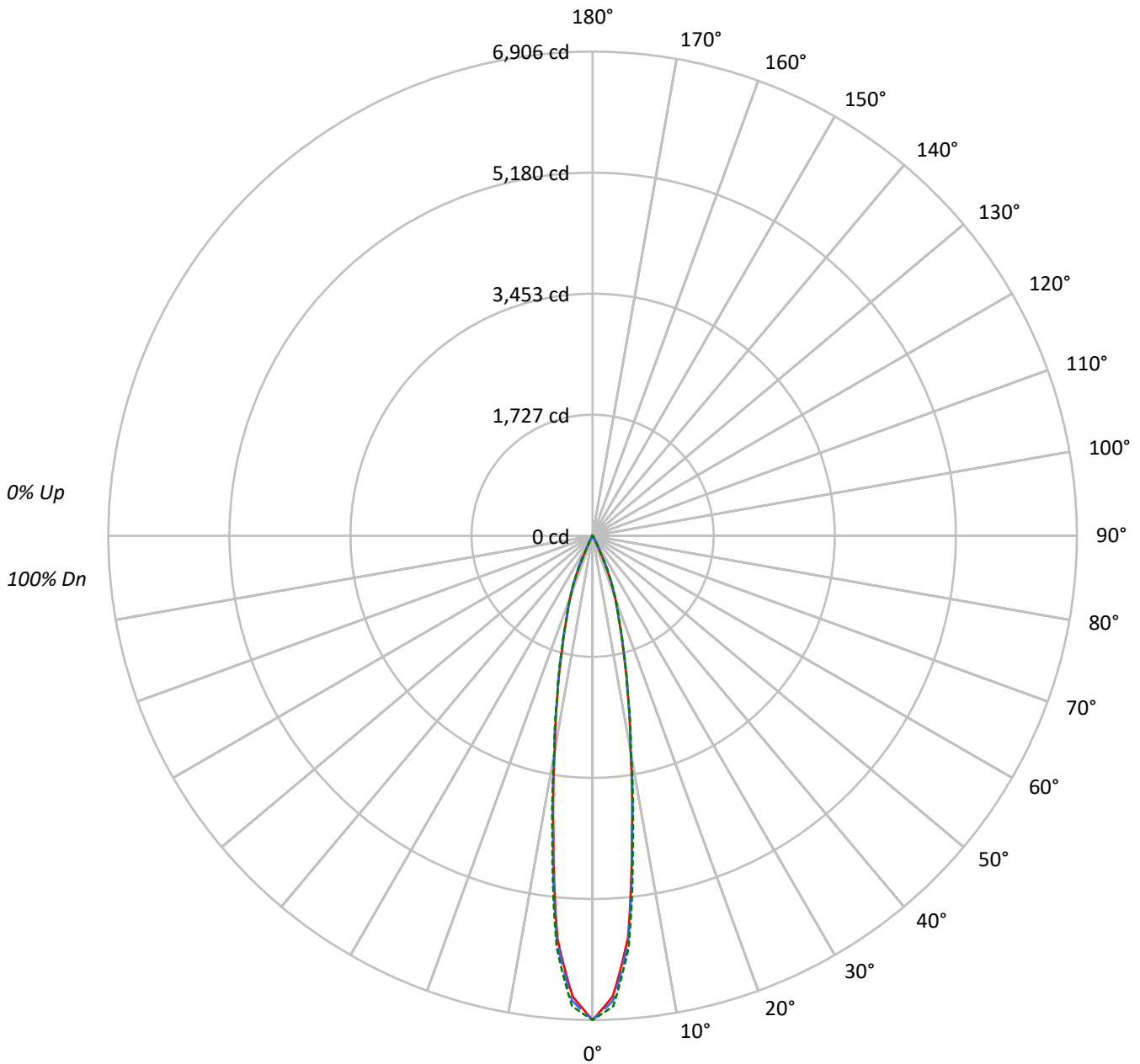
Input Watts (W): 13.84  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20					
RC	80					70					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	100	100					
1	115	113	111	110	113	111	110	108	107	106	105	104	103	102	100	99	99	97	97	97	97					
2	112	108	106	103	110	107	104	102	104	102	100	101	99	98	98	97	96	94	94	94	94					
3	108	104	101	98	107	103	100	97	100	98	96	98	96	94	96	94	93	92	92	92	92					
4	105	100	97	94	104	99	96	93	97	95	92	96	93	91	94	92	90	89	89	89	89					
5	103	97	93	90	101	96	93	90	95	92	89	93	91	89	92	90	88	87	87	87	87					
6	100	94	90	87	99	93	90	87	92	89	87	91	88	86	90	87	86	85	85	85	85					
7	97	91	88	85	96	91	87	85	90	87	84	89	86	84	88	85	83	82	82	82	82					
8	95	89	85	82	94	88	85	82	88	84	82	87	84	82	86	83	81	80	80	80	80					
9	93	87	83	80	92	86	83	80	85	82	80	85	82	80	84	81	79	79	79	79	79					
10	91	84	81	78	90	84	81	78	83	80	78	83	80	78	82	80	78	77	77	77	77					

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

	0°	45°	90°
0°	669070	669070	669070
5°	560795	565541	573758
10°	305094	309629	310800
15°	168713	171431	172082
20°	95536	95814	96371
25°	26071	40843	25600
30°	4184	6365	4061
35°	1407	2377	1348
40°	620	961	620
45°	370	452	301
50°	241	241	166
55°	186	186	84
60°	97	97	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°	460.4	40.6
10°-20°	486.8	42.9
20°-30°	171.3	15.1
30°-40°	11.5	1.0
40°-50°	2.4	0.2
50°-60°	0.8	0.1
60°-70°	0.5	0.0
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°	1118.4	98.6
0°-40°	1130.0	99.7
0°-60°	1133.2	99.9
0°-90°	1133.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1133.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6906	6906	6906	6906	6906	
5°	5767	5854	5816	5826	5900	455
15°	1682	1710	1709	1706	1716	482
25°	244	370	382	364	240	151
35°	12	15	20	15	11	9
45°	3	3	3	3	2	2
55°	1	1	1	0	0	1
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°	6906.5	6906.5	6906.5	6906.5	6906.5
2.5°	6574.8	6661.0	6639.3	6625.2	6715.7
5°	5766.8	5853.5	5815.6	5826.4	5900.1
7.5°	4287.3	4360.4	4321.4	4337.7	4394.0
10°	3101.5	3174.1	3147.6	3156.3	3159.5
12.5°	2312.5	2344.4	2323.3	2329.3	2340.1
15°	1682.2	1710.4	1709.3	1705.5	1715.8
17.5°	1234.5	1248.1	1234.5	1234.0	1241.0
20°	926.7	945.7	929.4	931.6	934.8
22.5°	622.7	660.6	654.1	646.0	637.3
25°	243.9	370.1	382.1	364.2	239.5
27.5°	69.9	115.4	164.2	113.3	67.7
30°	37.4	44.4	56.9	43.4	36.3
32.5°	20.1	25.5	32.5	24.9	19.5
35°	11.9	14.6	20.1	14.6	11.4
37.5°	7.6	9.2	12.5	9.2	7.6
40°	4.9	6.0	7.6	6.0	4.9
42.5°	3.8	4.3	4.9	3.8	3.3
45°	2.7	2.7	3.3	2.7	2.2
47.5°	2.2	2.2	2.2	1.6	1.6
50°	1.6	1.6	1.6	1.1	1.1
52.5°	1.1	1.1	1.1	1.1	1.1
55°	1.1	1.1	1.1	0.5	0.5
57.5°	1.1	0.5	0.5	0.5	0.5
60°	0.5	0.5	0.5	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	0.0
70°	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.0	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)