

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: P182513

Luminaire Tested: **LDSQA4A18840D010TE LAR15SP 4LSQAL1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182513  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26796)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A18840D010TE LAR15SP 4LSQAL1H  
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 15° SPOT  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2037.5 lumens  
Efficiency: N/A  
Efficacy: 70.0 lumens/watt  
Spacing Criteria (0/90/45): 0.31 / 0.32 / 0.36  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

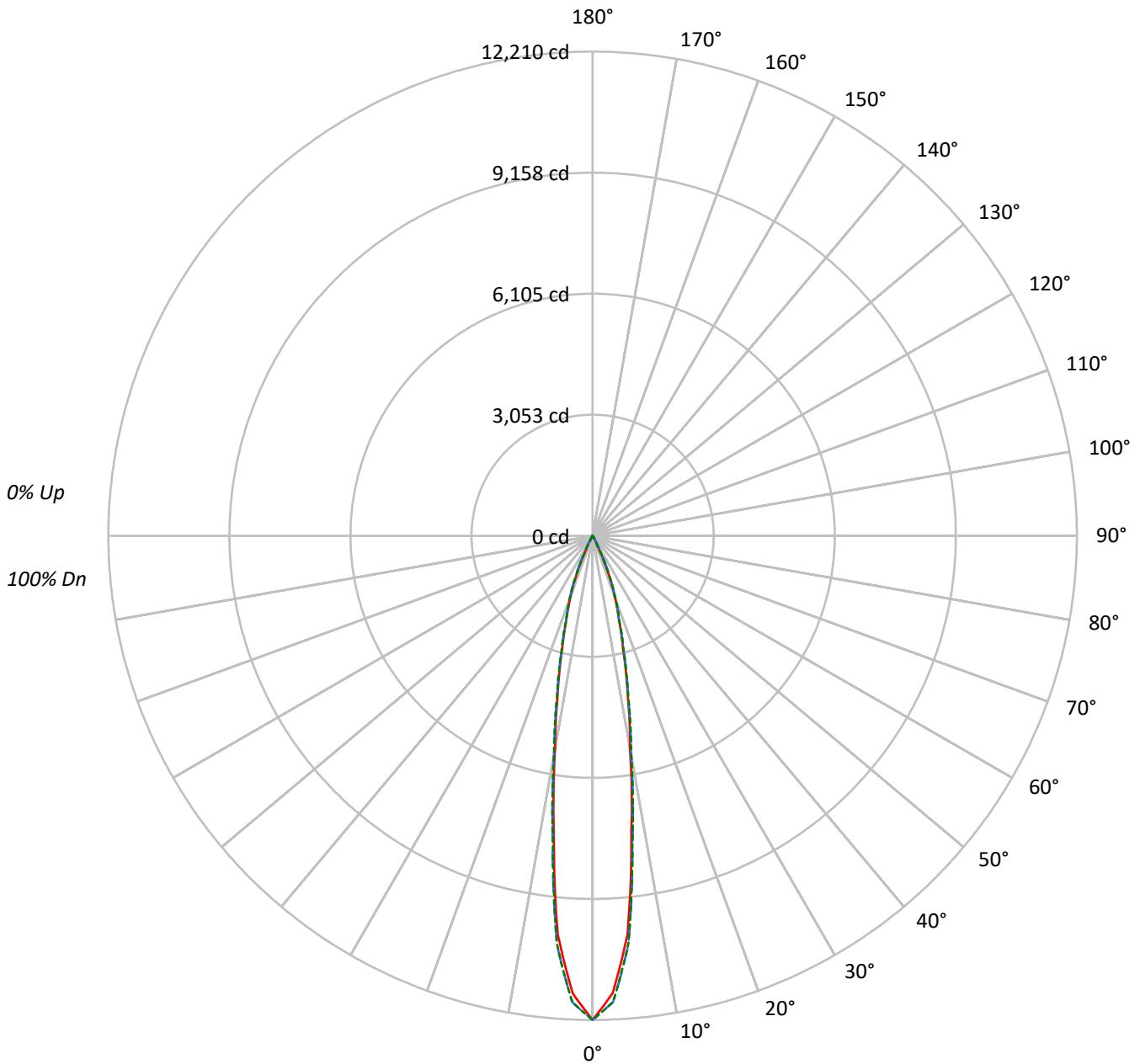
Input Watts (W): 29.12  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	100	100	100		
1	115	113	111	110	113	111	109	108	107	106	105	103	102	102	100	99	99	97	97	97	97	97	97	97		
2	112	108	105	103	110	107	104	102	103	101	100	101	99	98	98	97	96	94	94	94	94	94	94	94		
3	108	104	100	98	107	103	99	97	100	98	95	98	96	94	96	94	93	91	91	91	91	91	91	91		
4	105	100	96	94	104	99	96	93	97	94	92	95	93	91	94	92	90	89	89	89	89	89	89	89		
5	102	97	93	90	101	96	92	90	94	91	89	93	90	88	92	89	87	86	86	86	86	86	86	86		
6	100	94	90	87	98	93	89	87	92	89	86	91	88	86	89	87	85	84	84	84	84	84	84	84		
7	97	91	87	84	96	90	87	84	89	86	84	88	85	83	87	85	83	82	82	82	82	82	82	82		
8	95	88	85	82	94	88	84	82	87	84	81	86	83	81	85	83	81	80	80	80	80	80	80	80		
9	92	86	82	80	92	86	82	80	85	82	79	84	81	79	84	81	79	78	78	78	78	78	78	78		
10	90	84	80	78	89	84	80	78	83	80	77	82	79	77	82	79	77	76	76	76	76	76	76	76		

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

	0°	45°	90°
0°	1182849	1182849	1182849
5°	981139	1006539	1005110
10°	534621	550409	553193
15°	297258	305773	307357
20°	167587	172350	174505
25°	50452	74321	50228
30°	9508	13614	9508
35°	4092	6327	4222
40°	1985	3313	1985
45°	1288	1726	1000
50°	784	949	467
55°	524	524	355
60°	407	194	194
65°	229	229	229
70°	0	283	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	812.9	39.9
10°-20°	866.5	42.5
20°-30°	316.0	15.5
30°-40°	30.1	1.5
40°-50°	8.3	0.4
50°-60°	2.5	0.1
60°-70°	1.0	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°	1995.5	97.9
0°-40°	2025.6	99.4
0°-60°	2036.3	99.9
0°-90°	2037.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2037.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	12210	12210	12210	12210	12210	
5°	10089	10344	10350	10242	10336	797
15°	2964	3034	3049	3042	3065	848
25°	472	683	695	689	470	272
35°	35	42	54	42	36	25
45°	9	9	13	9	7	7
55°	3	3	3	2	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°	12210.0	12210.0	12210.0	12210.0	12210.0
2.5°	11544.0	11787.3	11769.5	11714.9	11769.5
5°	10089.3	10344.2	10350.5	10242.4	10335.8
7.5°	7499.9	7697.0	7731.6	7625.7	7696.0
10°	5434.8	5611.0	5595.3	5574.3	5623.6
12.5°	4059.8	4149.0	4139.6	4162.6	4165.8
15°	2963.9	3034.1	3048.8	3042.5	3064.6
17.5°	2182.5	2220.3	2212.9	2224.5	2232.9
20°	1625.6	1685.4	1671.8	1682.3	1692.7
22.5°	1078.2	1188.3	1174.6	1191.4	1182.0
25°	472.0	682.8	695.3	689.1	469.9
27.5°	144.7	244.4	313.6	239.1	144.7
30°	85.0	101.7	121.7	99.6	85.0
32.5°	53.5	64.0	76.6	62.9	52.4
35°	34.6	42.0	53.5	42.0	35.7
37.5°	23.1	28.3	37.8	28.3	24.1
40°	15.7	18.9	26.2	19.9	15.7
42.5°	11.5	13.6	17.8	13.6	10.5
45°	9.4	9.4	12.6	9.4	7.3
47.5°	7.3	7.3	8.4	6.3	5.2
50°	5.2	5.2	6.3	4.2	3.1
52.5°	3.1	4.2	4.2	3.1	2.1
55°	3.1	3.1	3.1	2.1	2.1
57.5°	2.1	2.1	2.1	1.0	1.0
60°	2.1	2.1	1.0	1.0	1.0
62.5°	1.0	1.0	1.0	1.0	1.0
65°	1.0	1.0	1.0	1.0	1.0
67.5°	1.0	1.0	1.0	1.0	1.0
70°	0.0	1.0	1.0	0.0	0.0
72.5°	0.0	1.0	0.0	0.0	0.0
75°	0.0	1.0	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)