

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: P182425

Luminaire Tested: **LDSQA4A09840D010TE LAR15SP 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182425  
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: LDSQA4A09840D010TE LAR15SP 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
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: 1189.1 lumens  
Efficiency: N/A  
Efficacy: 85.9 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

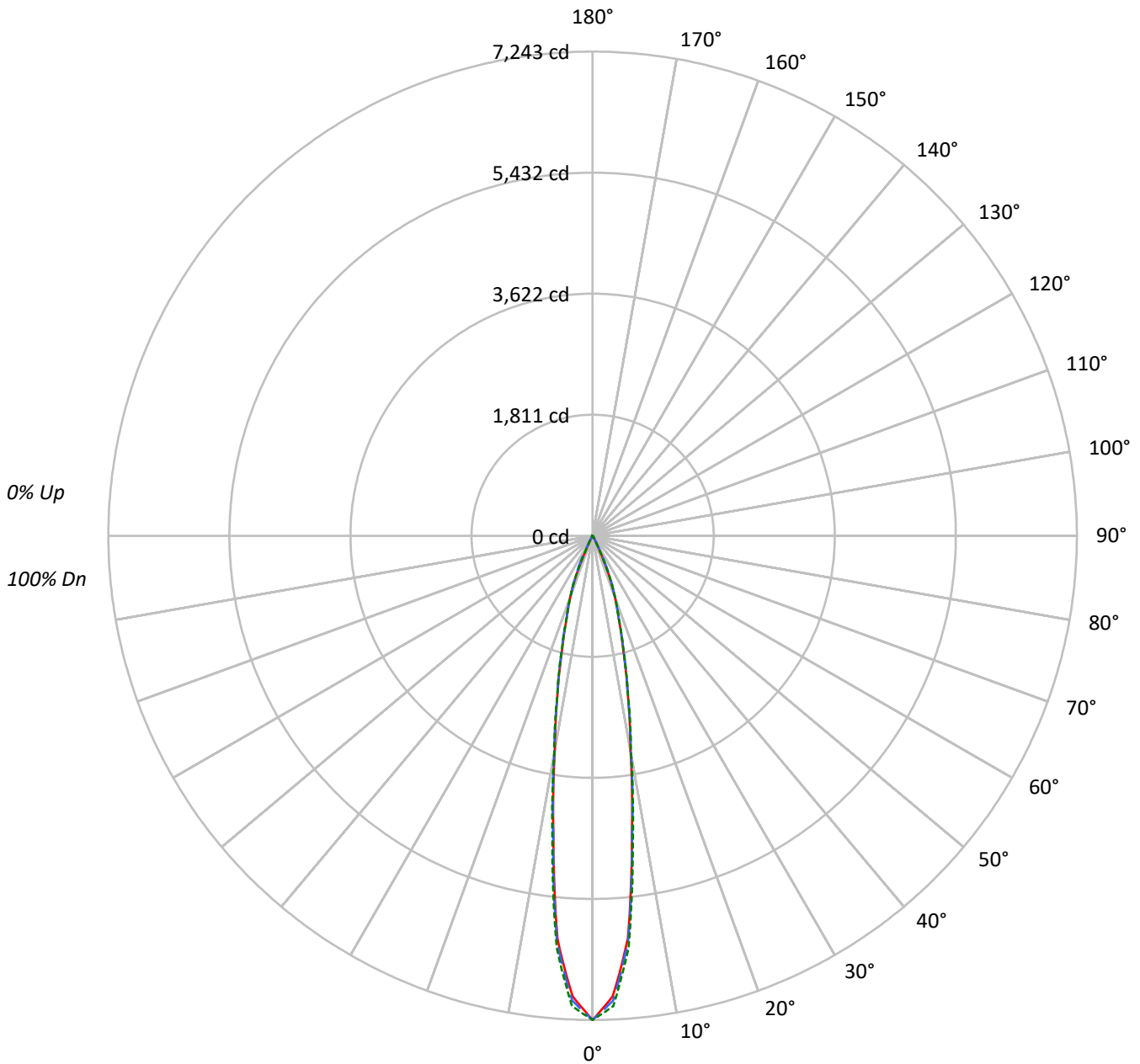
Input Watts (W): 13.84  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	110	108	107	106	105	104	103	102	100	99	99	97	97	97	97	97	97	97		
2	112	108	105	103	110	107	104	102	104	102	100	101	99	98	98	97	96	94	94	94	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	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	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	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	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	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	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	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	77	77	77		

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

	0°	45°	90°
0°	701640	701640	701640
5°	588092	593071	601687
10°	319948	324699	325929
15°	176927	179775	180457
20°	100185	100484	101072
25°	27332	42831	26851
30°	4385	6678	4262
35°	1478	2484	1407
40°	645	1012	645
45°	384	466	315
50°	256	256	166
55°	186	186	101
60°	116	116	116
65°	138	138	138
70°	170	170	170
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	482.8	40.6
10°-20°	510.5	42.9
20°-30°	179.6	15.1
30°-40°	12.1	1.0
40°-50°	2.5	0.2
50°-60°	0.8	0.1
60°-70°	0.6	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°	1172.9	98.6
0°-40°	1185.0	99.7
0°-60°	1188.3	99.9
0°-90°	1189.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1189.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7243	7243	7243	7243	7243	
5°	6048	6138	6099	6110	6187	477
15°	1764	1794	1792	1788	1799	505
25°	256	388	401	382	251	158
35°	12	15	21	15	12	10
45°	3	3	3	3	2	2
55°	1	1	1	1	1	1
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°	7242.7	7242.7	7242.7	7242.7	7242.7
2.5°	6894.9	6985.3	6962.5	6947.8	7042.7
5°	6047.5	6138.5	6098.7	6110.1	6187.3
7.5°	4496.0	4572.7	4531.8	4548.9	4608.0
10°	3252.5	3328.7	3300.8	3309.9	3313.3
12.5°	2425.0	2458.6	2436.4	2442.7	2454.0
15°	1764.1	1793.6	1792.5	1788.5	1799.3
17.5°	1294.6	1308.9	1294.6	1294.1	1301.5
20°	971.8	991.7	974.7	976.9	980.4
22.5°	653.0	692.8	686.0	677.4	668.3
25°	255.7	388.2	400.7	381.9	251.2
27.5°	73.3	121.1	172.2	118.8	71.0
30°	39.2	46.6	59.7	45.5	38.1
32.5°	21.0	26.7	34.1	26.1	20.5
35°	12.5	15.3	21.0	15.3	11.9
37.5°	8.0	9.7	13.1	9.7	8.0
40°	5.1	6.3	8.0	6.3	5.1
42.5°	4.0	4.5	5.1	4.0	3.4
45°	2.8	2.8	3.4	2.8	2.3
47.5°	2.3	2.3	2.3	1.7	1.7
50°	1.7	1.7	1.7	1.1	1.1
52.5°	1.1	1.1	1.1	1.1	1.1
55°	1.1	1.1	1.1	0.6	0.6
57.5°	1.1	0.6	0.6	0.6	0.6
60°	0.6	0.6	0.6	0.6	0.6
62.5°	0.6	0.6	0.6	0.6	0.6
65°	0.6	0.6	0.6	0.6	0.6
67.5°	0.6	0.6	0.6	0.6	0.0
70°	0.6	0.6	0.6	0.6	0.6
72.5°	0.6	0.6	0.6	0.0	0.0
75°	0.0	0.6	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)