

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: P182509

Luminaire Tested: **LDSQA4A28940D010TE LAR35FL 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182509  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26795)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A28940D010TE LAR35FL 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 35° FLOOD  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2838.4 lumens  
Efficiency: N/A  
Efficacy: 63.8 lumens/watt  
Spacing Criteria (0/90/45): 0.62 / 0.63 / 0.57  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

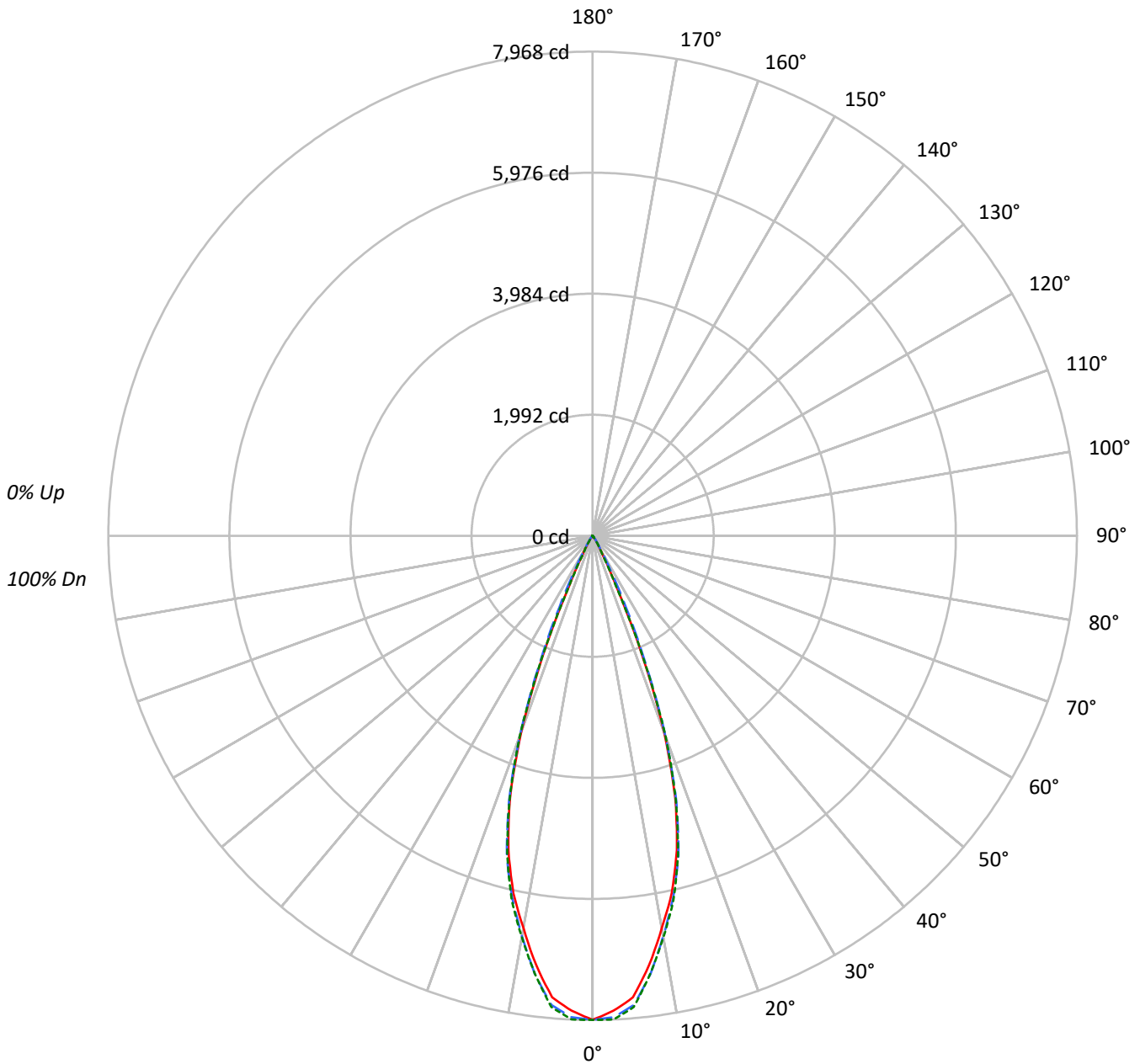
Input Watts (W): 44.49  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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																			
1	115	113	111	109	112	110	109	107	107	105	104	103	102	101	99	99	98	96																			
2	111	107	104	101	109	105	103	100	102	100	98	99	98	96	97	95	94	93																			
3	107	102	98	95	105	101	97	95	98	96	93	96	94	92	94	92	90	89																			
4	103	98	94	91	102	97	93	90	95	92	89	93	90	88	91	89	87	86																			
5	100	94	90	86	99	93	89	86	91	88	85	90	87	85	88	86	84	83																			
6	97	90	86	83	96	90	85	82	88	85	82	87	84	81	86	83	81	80																			
7	94	87	83	79	93	86	82	79	85	82	79	84	81	79	83	80	78	77																			
8	91	84	80	77	90	83	79	76	82	79	76	82	78	76	81	78	76	74																			
9	88	81	77	74	87	81	77	74	80	76	73	79	76	73	78	75	73	72																			
10	86	78	74	71	85	78	74	71	77	74	71	77	73	71	76	73	71	70																			

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

	0°	45°	90°
0°	771681	771681	771681
5°	741536	753973	757017
10°	644815	657986	659885
15°	537118	547158	544740
20°	352938	360897	361402
25°	97901	137632	96351
30°	23491	29834	23894
35°	6280	10845	6138
40°	2289	4123	2137
45°	1151	1493	986
50°	723	723	543
55°	405	405	203
60°	465	233	233
65°	275	275	275
70°	340	340	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	700.0	24.7
10°-20°	1451.5	51.1
20°-30°	619.9	21.8
30°-40°	54.8	1.9
40°-50°	8.1	0.3
50°-60°	2.3	0.1
60°-70°	1.2	0.0
70°-80°	0.5	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°	2771.4	97.6
0°-40°	2826.2	99.6
0°-60°	2836.6	99.9
0°-90°	2838.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2838.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7966	7966	7966	7966	7966	
5°	7625	7688	7753	7741	7785	691
15°	5356	5407	5456	5416	5432	1436
25°	916	1248	1288	1232	901	562
35°	53	66	92	65	52	45
45°	8	8	11	8	7	7
55°	2	2	2	2	1	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°	7965.7	7965.7	7965.7	7965.7	7965.7
2.5°	7825.7	7881.2	7930.7	7927.0	7968.1
5°	7625.4	7688.1	7753.3	7741.2	7784.6
7.5°	7125.8	7189.7	7274.2	7241.6	7270.6
10°	6555.0	6622.6	6688.9	6668.4	6708.2
12.5°	6020.4	6059.0	6107.3	6103.7	6145.9
15°	5355.5	5407.4	5455.6	5415.8	5431.5
17.5°	4522.8	4543.4	4579.6	4539.7	4550.6
20°	3423.5	3480.2	3500.7	3454.9	3505.6
22.5°	2142.0	2278.3	2289.2	2265.0	2189.0
25°	915.9	1247.8	1287.6	1232.1	901.4
27.5°	370.5	473.0	613.0	463.4	360.8
30°	210.0	228.1	266.7	224.5	213.6
32.5°	100.2	127.9	153.3	124.3	101.4
35°	53.1	66.4	91.7	65.2	51.9
37.5°	30.2	38.6	55.5	36.2	30.2
40°	18.1	22.9	32.6	21.7	16.9
42.5°	12.1	14.5	18.1	13.3	10.9
45°	8.4	8.4	10.9	8.4	7.2
47.5°	6.0	6.0	7.2	4.8	4.8
50°	4.8	4.8	4.8	3.6	3.6
52.5°	3.6	3.6	3.6	2.4	2.4
55°	2.4	2.4	2.4	2.4	1.2
57.5°	2.4	2.4	2.4	1.2	1.2
60°	2.4	2.4	1.2	1.2	1.2
62.5°	1.2	1.2	1.2	1.2	1.2
65°	1.2	1.2	1.2	1.2	1.2
67.5°	1.2	1.2	1.2	1.2	1.2
70°	1.2	1.2	1.2	1.2	0.0
72.5°	1.2	1.2	1.2	1.2	1.2
75°	0.0	1.2	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)