

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: P182469

Luminaire Tested: **LDSQA4A13940D010TE LAR25NF 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182469  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26785)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A13940D010TE LAR25NF 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 25° NARROW FLOOD  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1641.4 lumens  
Efficiency: N/A  
Efficacy: 73.7 lumens/watt  
Spacing Criteria (0/90/45): 0.47 / 0.47 / 0.49  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

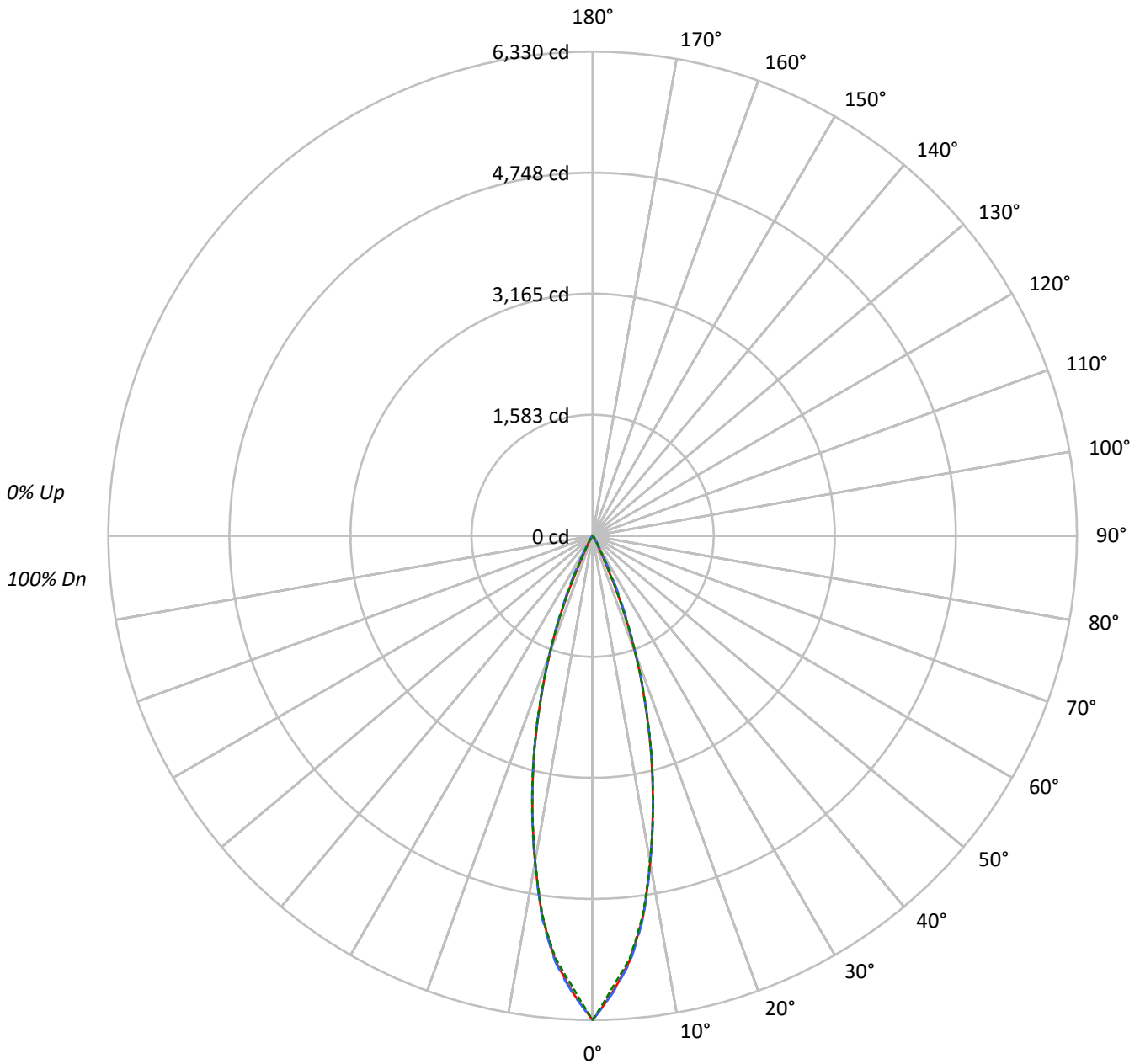
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	107	105	104	103	102	101	100	99	98	97	97	96	95	93															
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	97	96	95	93	95	93	91	90															
3	108	103	99	96	106	102	98	96	99	96	94	97	95	93	95	93	91	90	95	93	91	90															
4	104	99	95	92	103	98	94	91	96	93	90	94	91	89	92	90	88	87	92	90	88	87															
5	101	95	91	88	100	94	90	88	93	89	87	91	88	86	90	87	85	84	90	87	85	84															
6	98	92	88	84	97	91	87	84	90	86	84	88	85	83	87	85	83	82	87	85	83	82															
7	95	89	84	81	94	88	84	81	87	83	81	86	83	80	85	82	80	79	85	82	80	79															
8	92	86	82	79	91	85	81	79	84	81	78	84	80	78	83	80	78	77	83	80	78	77															
9	90	83	79	76	89	83	79	76	82	78	76	81	78	76	80	78	75	74	80	78	75	74															
10	87	81	77	74	87	80	76	74	80	76	74	79	76	73	78	75	73	72	78	75	73	72															

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

	0°	45°	90°
0°	613270	613270	613270
5°	542105	543952	539353
10°	426079	426561	424751
15°	296596	297448	297669
20°	168258	169350	169938
25°	45354	68634	51019
30°	11231	15347	11544
35°	3347	7025	3595
40°	1340	2327	1340
45°	685	973	575
50°	422	422	211
55°	355	236	118
60°	271	136	136
65°	160	160	160
70°	198	198	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	496.6	30.3
10°-20°	807.6	49.2
20°-30°	300.2	18.3
30°-40°	29.8	1.8
40°-50°	5.0	0.3
50°-60°	1.4	0.1
60°-70°	0.7	0.0
70°-80°	0.1	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°	1604.5	97.7
0°-40°	1634.3	99.6
0°-60°	1640.6	99.9
0°-90°	1641.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1641.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6330	6330	6330	6330	6330	
5°	5575	5630	5594	5659	5546	494
15°	2957	2991	2966	3015	2968	800
25°	424	623	642	600	477	265
35°	28	35	59	37	30	23
45°	5	6	7	6	4	4
55°	2	1	1	1	1	2
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°	6330.5	6330.5	6330.5	6330.5	6330.5
2.5°	5974.1	6005.9	5986.1	6039.2	5911.2
5°	5574.6	5630.4	5593.6	5659.4	5546.3
7.5°	5025.8	5083.8	5046.3	5109.9	5008.8
10°	4331.4	4374.5	4336.3	4397.8	4317.9
12.5°	3636.9	3680.1	3651.8	3708.4	3644.7
15°	2957.3	2990.6	2965.8	3014.6	2968.0
17.5°	2267.2	2299.0	2276.4	2316.0	2280.6
20°	1632.1	1659.7	1642.7	1676.0	1648.4
22.5°	1013.4	1086.9	1098.9	1101.8	1021.8
25°	424.3	623.0	642.1	599.7	477.3
27.5°	174.7	229.1	305.5	241.1	183.9
30°	100.4	116.7	137.2	120.2	103.2
32.5°	50.2	65.1	89.8	68.6	53.0
35°	28.3	35.4	59.4	36.8	30.4
37.5°	17.0	20.5	29.7	21.2	17.7
40°	10.6	12.7	18.4	13.4	10.6
42.5°	7.1	8.5	11.3	8.5	7.1
45°	5.0	5.7	7.1	5.7	4.2
47.5°	3.5	3.5	4.2	3.5	2.8
50°	2.8	2.8	2.8	2.1	1.4
52.5°	2.1	2.1	2.1	1.4	1.4
55°	2.1	1.4	1.4	1.4	0.7
57.5°	1.4	1.4	1.4	0.7	0.7
60°	1.4	1.4	0.7	0.7	0.7
62.5°	0.7	0.7	0.7	0.7	0.7
65°	0.7	0.7	0.7	0.7	0.7
67.5°	0.7	0.7	0.7	0.7	0.7
70°	0.7	0.7	0.7	0.7	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.7	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)