

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: P182459

Luminaire Tested: **LDSQA4A09930D010TE LAR25NF 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182459  
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: LDSQA4A09930D010TE LAR25NF 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 25° NARROW FLOOD  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1016.8 lumens  
Efficiency: N/A  
Efficacy: 73.5 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

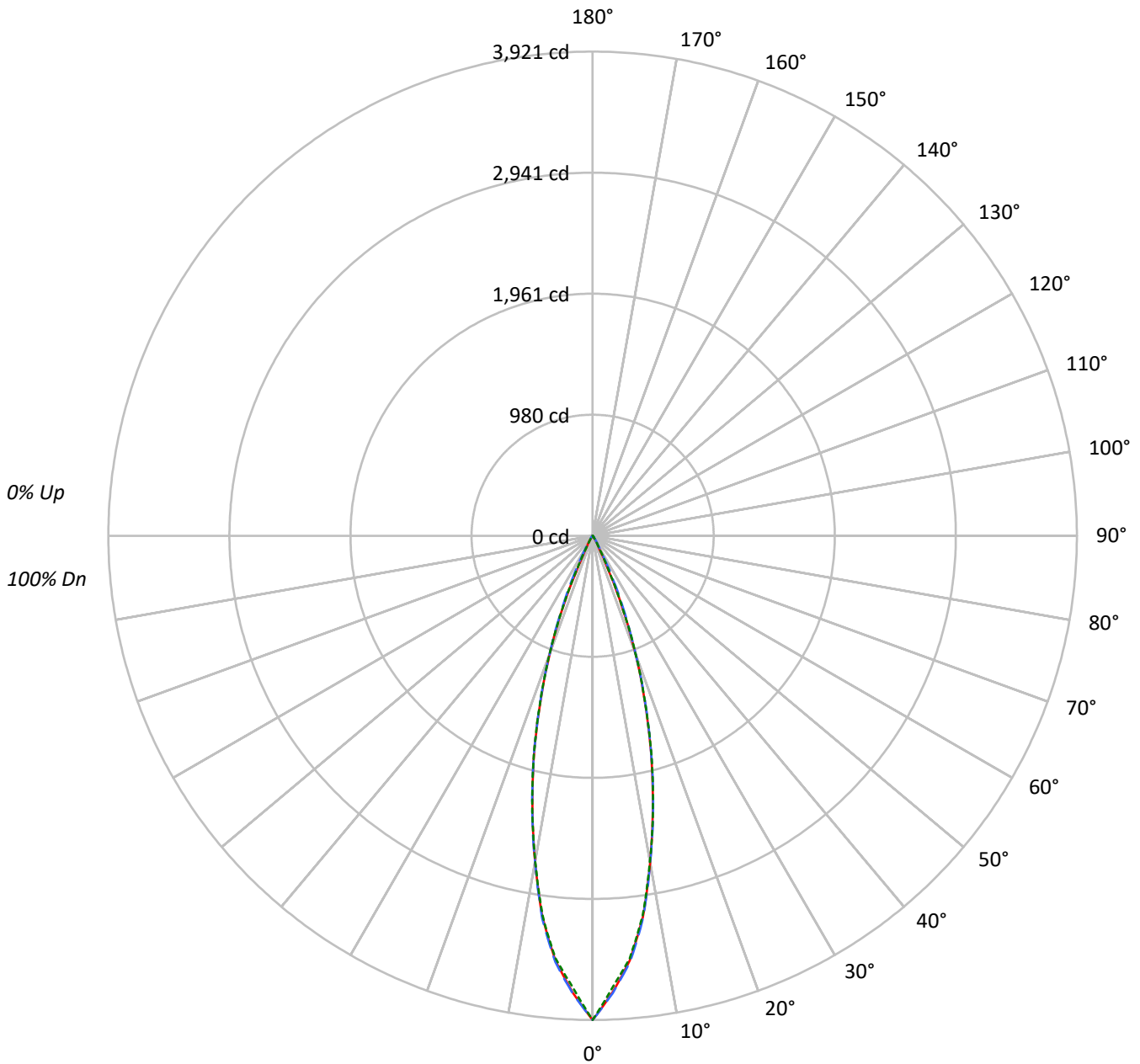
Input Watts (W): 13.84  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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°	379887	379887	379887
5°	335808	336956	334097
10°	263936	264231	263110
15°	183726	184258	184388
20°	104227	104907	105268
25°	28091	42521	31607
30°	6958	9508	7159
35°	2070	4352	2223
40°	835	1442	835
45°	425	603	356
50°	271	271	136
55°	220	152	68
60°	174	78	78
65°	92	92	92
70°	113	113	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	307.6	30.3
10°-20°	500.3	49.2
20°-30°	186.0	18.3
30°-40°	18.5	1.8
40°-50°	3.1	0.3
50°-60°	0.8	0.1
60°-70°	0.4	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°	993.9	97.7
0°-40°	1012.3	99.6
0°-60°	1016.3	100.0
0°-90°	1016.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1016.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3921	3921	3921	3921	3921	
5°	3453	3488	3465	3506	3436	306
15°	1832	1852	1837	1867	1838	496
25°	263	386	398	372	296	164
35°	18	22	37	23	19	14
45°	3	4	4	4	3	3
55°	1	1	1	1	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°	3921.4	3921.4	3921.4	3921.4	3921.4
2.5°	3700.7	3720.4	3708.1	3741.0	3661.7
5°	3453.2	3487.8	3465.0	3505.7	3435.6
7.5°	3113.2	3149.2	3125.9	3165.4	3102.7
10°	2683.1	2709.8	2686.1	2724.2	2674.7
12.5°	2252.9	2279.6	2262.1	2297.1	2257.7
15°	1831.9	1852.5	1837.2	1867.4	1838.5
17.5°	1404.4	1424.1	1410.1	1434.6	1412.7
20°	1011.0	1028.1	1017.6	1038.2	1021.1
22.5°	627.7	673.3	680.7	682.5	633.0
25°	262.8	385.9	397.8	371.5	295.7
27.5°	108.2	141.9	189.2	149.4	113.9
30°	62.2	72.3	85.0	74.5	64.0
32.5°	31.1	40.3	55.6	42.5	32.9
35°	17.5	21.9	36.8	22.8	18.8
37.5°	10.5	12.7	18.4	13.1	11.0
40°	6.6	7.9	11.4	8.3	6.6
42.5°	4.4	5.3	7.0	5.3	4.4
45°	3.1	3.5	4.4	3.5	2.6
47.5°	2.2	2.2	2.6	2.2	1.8
50°	1.8	1.8	1.8	1.3	0.9
52.5°	1.3	1.3	1.3	0.9	0.9
55°	1.3	0.9	0.9	0.9	0.4
57.5°	0.9	0.9	0.9	0.4	0.4
60°	0.9	0.9	0.4	0.4	0.4
62.5°	0.4	0.4	0.4	0.4	0.4
65°	0.4	0.4	0.4	0.4	0.4
67.5°	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.4	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)