

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: P182556

Luminaire Tested: **LDSQA4A09935D010TE LAR25NF 4LSQAL1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182556  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26797)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A09935D010TE LAR25NF 4LSQAL1H  
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 25° NARROW FLOOD  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 948.7 lumens  
Efficiency: N/A  
Efficacy: 68.5 lumens/watt  
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.5  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

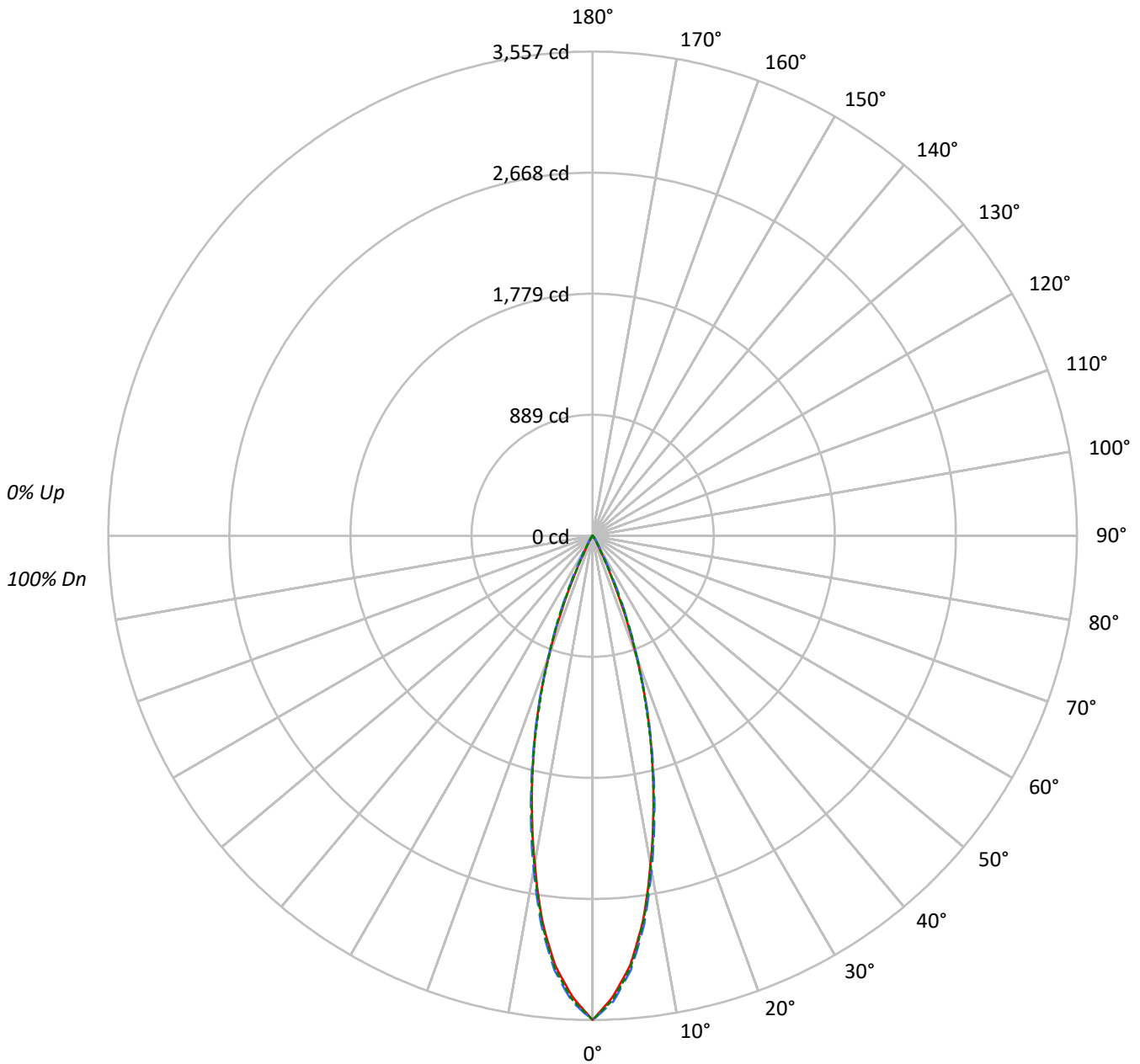
Input Watts (W): 13.84  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96	96	96	96
2	111	107	104	102	109	106	103	101	103	100	99	100	98	96	97	96	94	93	93	93	93
3	107	103	99	96	106	101	98	95	99	96	94	97	94	92	95	93	91	90	90	90	90
4	104	99	95	91	102	97	94	91	95	92	90	94	91	89	92	90	88	87	87	87	87
5	101	95	91	87	99	94	90	87	92	89	86	91	88	86	89	87	85	84	84	84	84
6	98	91	87	84	97	91	87	84	89	86	83	88	85	83	87	84	82	81	81	81	81
7	95	88	84	81	94	88	84	81	87	83	80	86	82	80	85	82	80	79	79	79	79
8	92	85	81	78	91	85	81	78	84	80	78	83	80	77	82	79	77	76	76	76	76
9	89	83	78	76	89	82	78	76	81	78	75	81	77	75	80	77	75	74	74	74	74
10	87	80	76	73	86	80	76	73	79	76	73	78	75	73	78	75	73	72	72	72	72

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

	0°	45°	90°
0°	344586	344586	344586
5°	307743	311613	309678
10°	240898	245207	242206
15°	169164	170408	168231
20°	97093	99093	97000
25°	30731	40426	31725
30°	8166	10146	7864
35°	2767	5026	2826
40°	1227	2011	1227
45°	671	904	548
50°	407	467	271
55°	220	220	152
60°	174	174	78
65°	92	92	92
70°	113	113	113
75°	0	150	150
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	282.1	29.7
10°-20°	460.0	48.5
20°-30°	178.2	18.8
30°-40°	21.8	2.3
40°-50°	4.6	0.5
50°-60°	1.2	0.1
60°-70°	0.4	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°	920.3	97.0
0°-40°	942.2	99.3
0°-60°	948.0	99.9
0°-90°	948.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	948.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3557	3557	3557	3557	3557	
5°	3165	3211	3204	3185	3184	280
15°	1687	1709	1699	1687	1677	457
25°	288	360	378	372	297	161
35°	23	28	42	28	24	18
45°	5	5	7	5	4	4
55°	1	1	1	1	1	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°	3557.0	3557.0	3557.0	3557.0	3557.0
2.5°	3390.7	3438.0	3426.9	3404.8	3410.6
5°	3164.6	3210.6	3204.4	3185.0	3184.5
7.5°	2845.7	2890.8	2885.5	2862.0	2859.8
10°	2448.9	2490.0	2492.7	2458.6	2462.2
12.5°	2061.4	2095.0	2096.3	2072.9	2068.0
15°	1686.7	1709.3	1699.1	1686.7	1677.4
17.5°	1317.3	1322.2	1320.0	1301.9	1295.2
20°	941.8	963.0	961.2	945.8	940.9
22.5°	586.6	625.0	642.7	628.6	636.1
25°	287.5	360.1	378.2	371.6	296.8
27.5°	116.8	152.6	190.2	150.4	112.8
30°	73.0	79.6	90.7	76.5	70.3
32.5°	38.5	48.2	61.5	46.9	38.5
35°	23.4	28.3	42.5	27.9	23.9
37.5°	15.0	17.7	24.8	17.7	15.5
40°	9.7	11.5	15.9	11.5	9.7
42.5°	6.6	7.5	10.2	7.5	6.2
45°	4.9	5.3	6.6	4.9	4.0
47.5°	3.5	4.0	4.4	3.1	2.7
50°	2.7	2.7	3.1	2.2	1.8
52.5°	1.8	2.2	2.2	1.3	1.3
55°	1.3	1.3	1.3	0.9	0.9
57.5°	1.3	0.9	0.9	0.9	0.9
60°	0.9	0.9	0.9	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	0.4
72.5°	0.4	0.4	0.4	0.4	0.0
75°	0.0	0.4	0.4	0.4	0.4
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)