

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: P182460

Luminaire Tested: **LDSQA4A09935D010TE LAR25NF 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182460  
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: LDSQA4A09935D010TE LAR25NF 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
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: 1026.5 lumens  
Efficiency: N/A  
Efficacy: 74.2 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

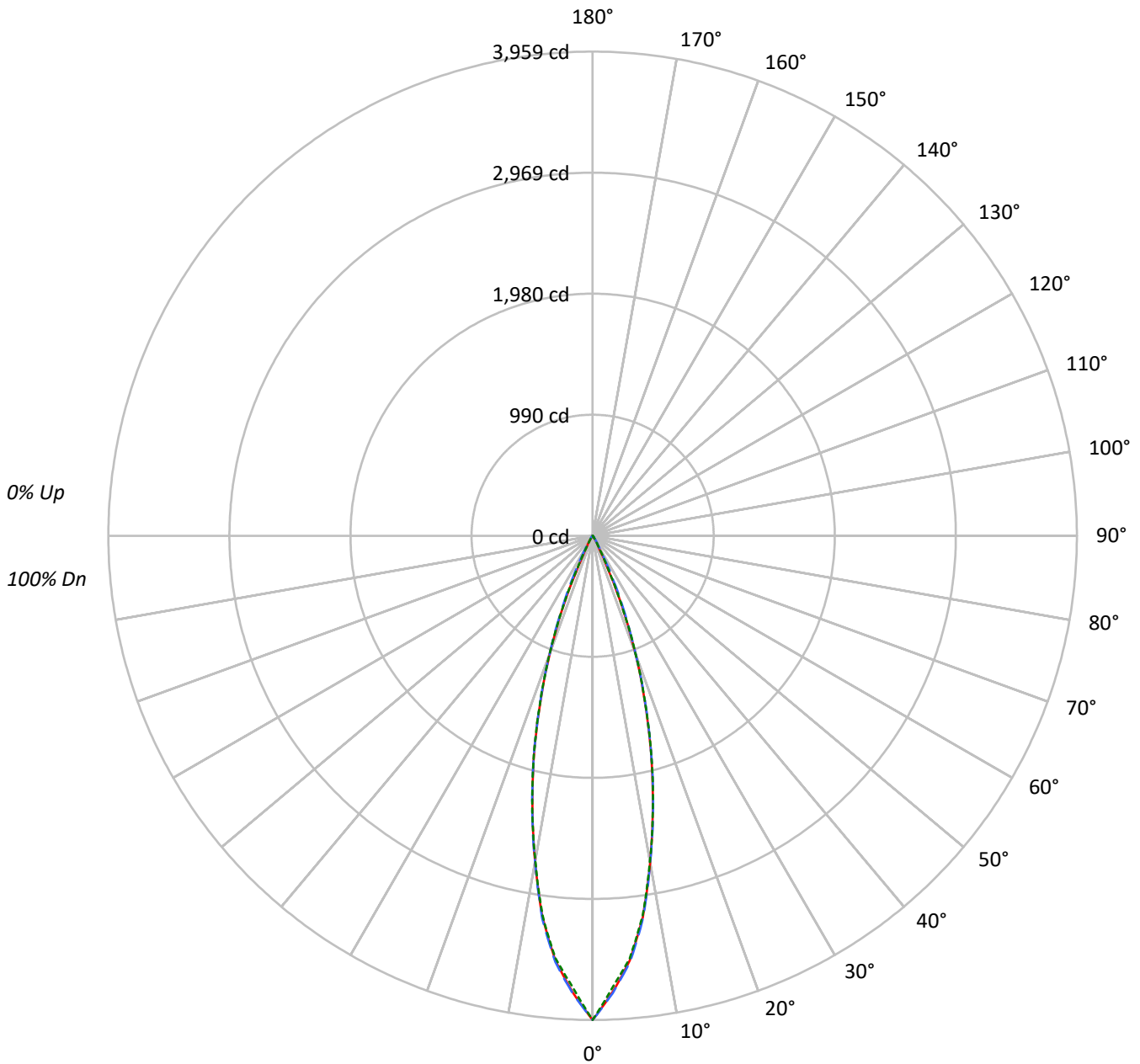
Input Watts (W): 13.84  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	92	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°	383540	383540	383540
5°	339027	340184	337306
10°	266464	266769	265638
15°	185492	186023	186154
20°	105227	105917	106278
25°	28369	42927	31907
30°	7025	9598	7226
35°	2093	4388	2247
40°	835	1454	835
45°	425	603	370
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°	310.6	30.3
10°-20°	505.1	49.2
20°-30°	187.7	18.3
30°-40°	18.6	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°	1003.4	97.8
0°-40°	1022.1	99.6
0°-60°	1026.0	100.0
0°-90°	1026.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1026.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3959	3959	3959	3959	3959	
5°	3486	3521	3498	3539	3469	309
15°	1850	1870	1855	1885	1856	500
25°	265	390	402	375	298	166
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°	3959.1	3959.1	3959.1	3959.1	3959.1
2.5°	3736.2	3756.1	3743.7	3776.9	3696.8
5°	3486.3	3521.2	3498.2	3539.4	3468.6
7.5°	3143.1	3179.4	3155.9	3195.7	3132.5
10°	2708.8	2735.8	2711.9	2750.4	2700.4
12.5°	2274.5	2301.5	2283.8	2319.2	2279.4
15°	1849.5	1870.3	1854.8	1885.3	1856.1
17.5°	1417.9	1437.8	1423.6	1448.4	1426.3
20°	1020.7	1038.0	1027.4	1048.1	1030.9
22.5°	633.8	679.7	687.3	689.0	639.1
25°	265.4	389.6	401.6	375.0	298.5
27.5°	109.2	143.3	191.1	150.8	115.0
30°	62.8	73.0	85.8	75.2	64.6
32.5°	31.4	40.7	56.2	42.9	33.2
35°	17.7	22.1	37.1	23.0	19.0
37.5°	10.6	12.8	18.6	13.3	11.1
40°	6.6	8.0	11.5	8.4	6.6
42.5°	4.4	5.3	7.1	5.3	4.4
45°	3.1	3.5	4.4	3.5	2.7
47.5°	2.2	2.2	2.7	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)