

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: P182573

Luminaire Tested: **LDSQA4A28940D010TE LAR25NF 4LSQAL1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182573  
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: LDSQA4A28940D010TE LAR25NF 4LSQAL1H  
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, 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: 2588.6 lumens  
Efficiency: N/A  
Efficacy: 58.2 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

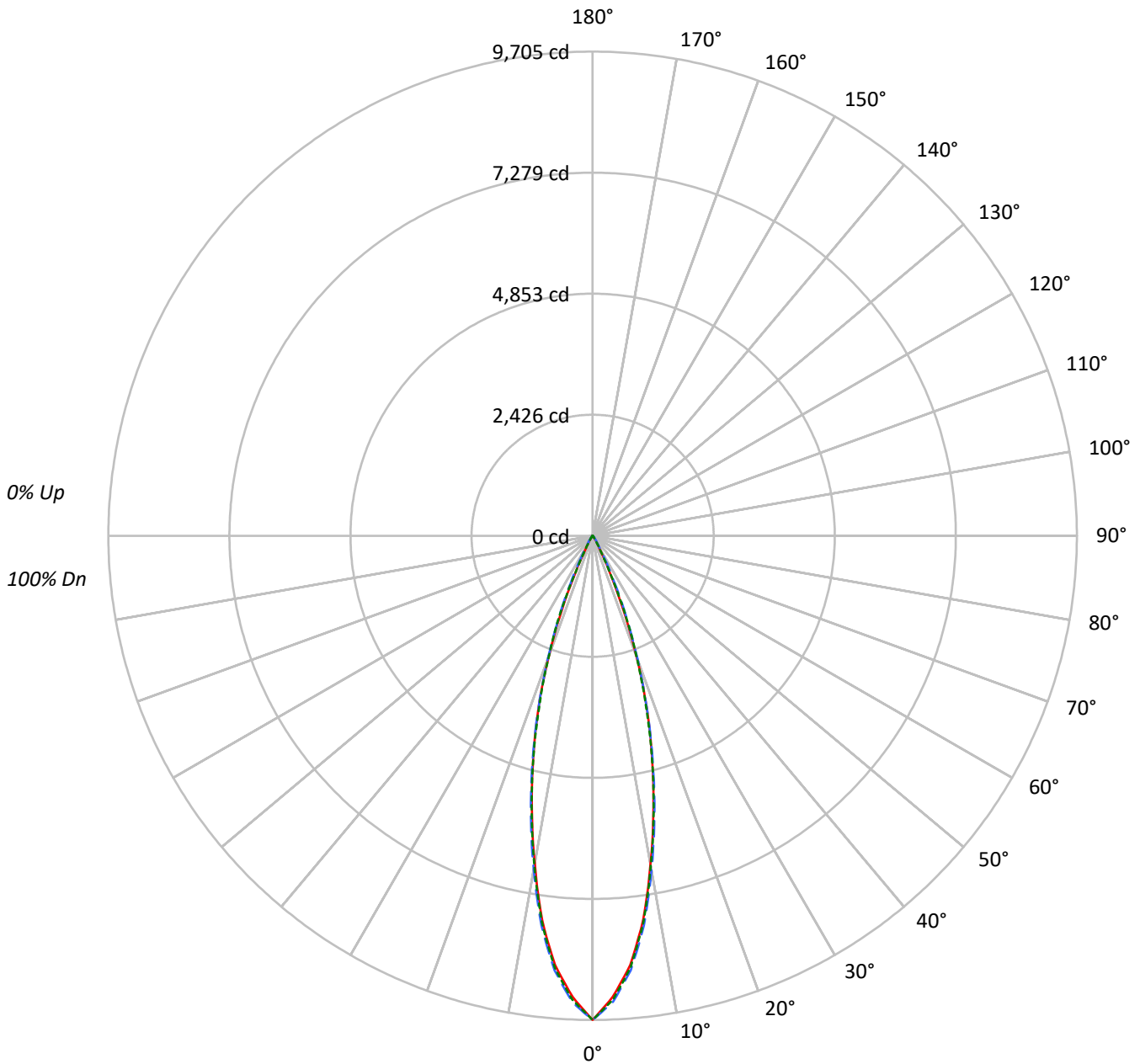
Input Watts (W): 44.49  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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	96	96	98	98	96															
2	111	107	104	102	109	106	103	101	103	100	99	100	98	96	97	96	94	93	94	96	94	93															
3	107	103	99	96	106	101	98	95	99	96	94	97	94	92	95	93	91	90	91	93	91	90															
4	104	99	95	91	102	97	94	91	95	92	90	94	91	89	92	90	88	87	88	90	88	87															
5	101	95	91	87	99	94	90	87	92	89	86	91	88	86	89	87	85	84	86	87	85	84															
6	98	91	87	84	97	91	87	84	89	86	83	88	85	83	87	84	82	81	83	84	82	81															
7	95	88	84	81	94	88	84	81	87	83	80	85	82	80	85	82	80	79	80	82	80	79															
8	92	85	81	78	91	85	81	78	84	80	78	83	80	77	82	79	77	76	77	79	77	76															
9	89	83	78	76	89	82	78	76	81	78	75	81	77	75	80	77	75	74	75	77	75	74															
10	87	80	76	73	86	80	76	73	79	76	73	78	75	73	78	75	73	72	73	75	73	72															

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

	0°	45°	90°
0°	940195	940195	940195
5°	839676	850246	844956
10°	657288	669043	660849
15°	461568	464958	459020
20°	264907	270381	264660
25°	83855	110311	86570
30°	22272	27675	21466
35°	7569	13707	7711
40°	3364	5501	3364
45°	1822	2480	1493
50°	1085	1266	723
55°	608	608	405
60°	465	465	233
65°	275	275	275
70°	340	340	340
75°	0	449	449
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	769.8	29.7
10°-20°	1255.2	48.5
20°-30°	486.1	18.8
30°-40°	59.6	2.3
40°-50°	12.5	0.5
50°-60°	3.3	0.1
60°-70°	1.3	0.0
70°-80°	0.7	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°	2511.1	97.0
0°-40°	2570.7	99.3
0°-60°	2586.6	99.9
0°-90°	2588.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2588.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	9705	9705	9705	9705	9705	
5°	8635	8760	8743	8690	8689	763
15°	4602	4664	4636	4602	4577	1248
25°	784	982	1032	1014	810	440
35°	64	77	116	76	65	49
45°	13	14	18	13	11	11
55°	4	4	4	2	2	4
65°	1	1	1	1	1	1
75°	0	1	1	1	1	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°	9705.2	9705.2	9705.2	9705.2	9705.2
2.5°	9251.4	9380.5	9350.4	9290.0	9305.7
5°	8634.6	8760.2	8743.3	8690.2	8688.9
7.5°	7764.4	7887.5	7873.0	7809.1	7803.0
10°	6681.8	6794.0	6801.3	6708.3	6718.0
12.5°	5624.5	5716.2	5719.8	5655.8	5642.6
15°	4602.2	4663.7	4636.0	4602.2	4576.8
17.5°	3594.3	3607.6	3601.6	3552.1	3534.0
20°	2569.6	2627.6	2622.7	2580.5	2567.2
22.5°	1600.4	1705.4	1753.7	1715.1	1735.6
25°	784.5	982.5	1032.0	1013.9	809.9
27.5°	318.6	416.4	519.0	410.4	307.8
30°	199.1	217.3	247.4	208.8	191.9
32.5°	105.0	131.6	167.8	127.9	105.0
35°	64.0	77.2	115.9	76.0	65.2
37.5°	41.0	48.3	67.6	48.3	42.2
40°	26.6	31.4	43.5	31.4	26.6
42.5°	18.1	20.5	27.8	20.5	16.9
45°	13.3	14.5	18.1	13.3	10.9
47.5°	9.7	10.9	12.1	8.4	7.2
50°	7.2	7.2	8.4	6.0	4.8
52.5°	4.8	6.0	6.0	3.6	3.6
55°	3.6	3.6	3.6	2.4	2.4
57.5°	3.6	2.4	2.4	2.4	2.4
60°	2.4	2.4	2.4	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	1.2
72.5°	1.2	1.2	1.2	1.2	0.0
75°	0.0	1.2	1.2	1.2	1.2
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)