

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: P182433

Luminaire Tested: **LDSQA4A13840D010TE LAR15SP 4LSQA1H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182433  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26794)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A13840D010TE LAR15SP 4LSQA1H  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 15° SPOT  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1760.9 lumens  
Efficiency: N/A  
Efficacy: 79.1 lumens/watt  
Spacing Criteria (0/90/45): 0.32 / 0.32 / 0.36  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

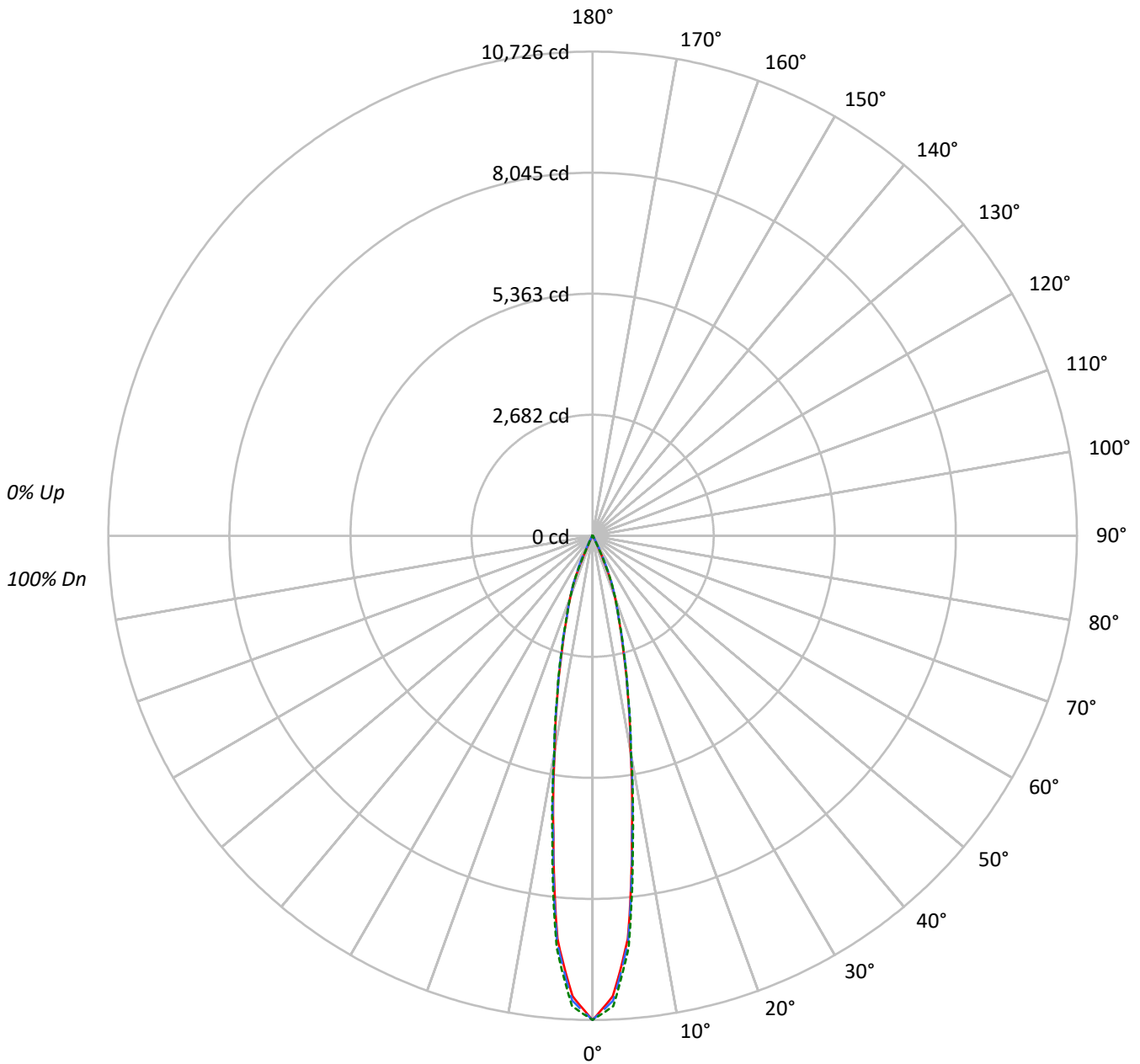
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20					20					20					20					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	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	100	100	100		
1	115	113	111	110	113	111	110	108	107	106	105	104	103	102	100	99	99	97	97	97	97	97	97	97		
2	112	108	105	103	110	107	104	102	104	102	100	101	99	98	98	97	96	94	94	94	94	94	94	94		
3	108	104	101	98	107	103	100	97	100	98	96	98	96	94	96	94	93	92	92	92	92	92	92	92		
4	105	100	97	94	104	99	96	93	97	95	92	96	93	91	94	92	90	89	89	89	89	89	89	89		
5	103	97	93	90	101	96	93	90	95	92	89	93	91	89	92	90	88	87	87	87	87	87	87	87		
6	100	94	90	87	99	93	90	87	92	89	87	91	88	86	90	87	86	85	85	85	85	85	85	85		
7	97	91	88	85	96	91	87	85	90	87	84	89	86	84	88	85	83	82	82	82	82	82	82	82		
8	95	89	85	82	94	88	85	82	88	84	82	87	84	82	86	83	81	80	80	80	80	80	80	80		
9	93	87	83	80	92	86	83	80	85	82	80	85	82	80	84	81	79	79	79	79	79	79	79	79		
10	91	84	81	78	90	84	81	78	83	80	78	83	80	78	82	80	78	77	77	77	77	77	77	77		

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

	0°	45°	90°
0°	1039076	1039076	1039076
5°	870921	878292	891060
10°	473818	480862	482681
15°	262015	266227	267240
20°	148371	148804	149670
25°	40479	63429	39763
30°	6499	9889	6309
35°	2188	3678	2093
40°	961	1492	961
45°	575	685	466
50°	377	377	256
55°	287	287	135
60°	155	155	155
65°	183	183	183
70°	227	227	227
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	714.9	40.6
10°-20°	756.0	42.9
20°-30°	266.0	15.1
30°-40°	17.9	1.0
40°-50°	3.7	0.2
50°-60°	1.2	0.1
60°-70°	0.8	0.0
70°-80°	0.3	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°	1737.0	98.6
0°-40°	1754.9	99.7
0°-60°	1759.8	99.9
0°-90°	1760.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1760.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	10726	10726	10726	10726	10726	
5°	8956	9091	9032	9048	9163	707
15°	2612	2656	2654	2649	2665	749
25°	379	575	593	566	372	234
35°	18	23	31	23	18	14
45°	4	4	5	4	3	4
55°	2	2	2	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°	10725.9	10725.9	10725.9	10725.9	10725.9
2.5°	10210.8	10344.7	10311.0	10289.1	10429.7
5°	8955.9	9090.6	9031.7	9048.5	9163.0
7.5°	6658.2	6771.9	6711.3	6736.5	6824.1
10°	4816.7	4929.5	4888.3	4901.7	4906.8
12.5°	3591.3	3641.0	3608.1	3617.4	3634.2
15°	2612.5	2656.2	2654.5	2648.7	2664.6
17.5°	1917.3	1938.3	1917.3	1916.4	1927.4
20°	1439.2	1468.7	1443.4	1446.8	1451.8
22.5°	967.0	1026.0	1015.9	1003.2	989.8
25°	378.7	574.8	593.4	565.6	372.0
27.5°	108.6	179.3	255.0	175.9	105.2
30°	58.1	69.0	88.4	67.3	56.4
32.5°	31.1	39.6	50.5	38.7	30.3
35°	18.5	22.7	31.1	22.7	17.7
37.5°	11.8	14.3	19.4	14.3	11.8
40°	7.6	9.3	11.8	9.3	7.6
42.5°	5.9	6.7	7.6	5.9	5.0
45°	4.2	4.2	5.0	4.2	3.4
47.5°	3.4	3.4	3.4	2.5	2.5
50°	2.5	2.5	2.5	1.7	1.7
52.5°	1.7	1.7	1.7	1.7	1.7
55°	1.7	1.7	1.7	0.8	0.8
57.5°	1.7	0.8	0.8	0.8	0.8
60°	0.8	0.8	0.8	0.8	0.8
62.5°	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.8	0.8
67.5°	0.8	0.8	0.8	0.8	0.0
70°	0.8	0.8	0.8	0.8	0.8
72.5°	0.8	0.8	0.8	0.0	0.0
75°	0.0	0.8	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)