

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: P182624

Luminaire Tested: **LDSQA4A13835D010TE LAR15SP 4LSQA1H-LSF-20**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182624  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26829)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDSQA4A13835D010TE LAR15SP 4LSQA1H-LSF-20  
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,  
SELF-FLANGED, 15° SPOT WITH SOLITE LENS  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1580.4 lumens  
Efficiency: N/A  
Efficacy: 71.0 lumens/watt  
Spacing Criteria (0/90/45): 0.35 / 0.35 / 0.39  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

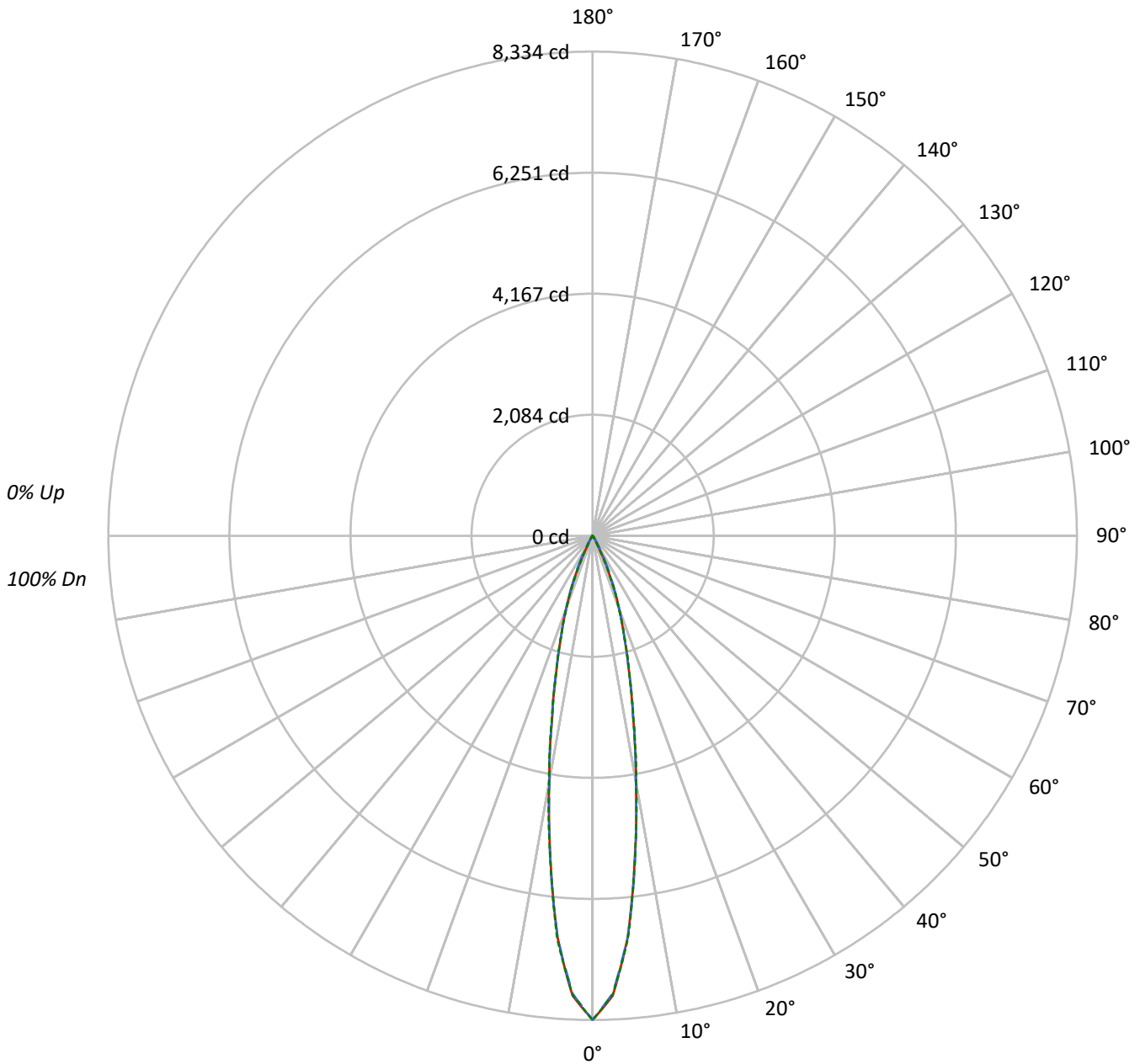
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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	108	107	106	104	103	102	101	100	99	98	97	97	98	98	97															
2	111	108	105	102	109	106	104	101	103	101	99	100	99	97	98	96	95	94	94	98	96	95															
3	108	103	100	97	106	102	99	96	100	97	95	97	95	93	95	93	92	91	91	95	93	92															
4	105	99	96	93	103	98	95	92	96	93	91	95	92	90	93	91	89	88	88	93	91	89															
5	102	96	92	89	100	95	91	89	93	90	88	92	89	87	91	88	86	85	85	91	88	86															
6	99	93	89	86	98	92	88	85	91	87	85	89	87	84	88	86	84	83	83	88	86	84															
7	96	90	86	83	95	89	85	83	88	85	82	87	84	82	86	83	81	80	80	86	83	81															
8	94	87	83	80	93	87	83	80	86	82	80	85	82	80	84	81	79	78	78	84	81	79															
9	91	85	81	78	90	84	80	78	83	80	78	83	80	77	82	79	77	76	76	82	79	77															
10	89	82	78	76	88	82	78	76	81	78	76	81	78	75	80	77	75	74	74	80	77	75															

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

	0°	45°	90°
0°	807360	807360	807360
5°	674096	674096	677295
10°	422302	421358	425617
15°	240994	242368	242769
20°	136433	136020	135443
25°	51211	66229	52333
30°	10504	22171	10593
35°	4175	7214	4080
40°	2137	3149	2036
45°	1425	1644	1206
50°	844	844	603
55°	405	540	270
60°	310	310	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°	575.9	36.4
10°-20°	684.9	43.3
20°-30°	273.1	17.3
30°-40°	34.4	2.2
40°-50°	8.5	0.5
50°-60°	2.5	0.2
60°-70°	0.9	0.1
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°	1533.8	97.1
0°-40°	1568.3	99.2
0°-60°	1579.2	99.9
0°-90°	1580.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1580.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8334	8334	8334	8334	8334	
5°	6932	6995	6932	6938	6965	574
15°	2403	2417	2417	2417	2421	683
25°	479	588	620	564	490	246
35°	35	42	61	41	34	26
45°	10	10	12	10	9	8
55°	2	2	3	2	2	3
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°	8334.0	8334.0	8334.0	8334.0	8334.0
2.5°	7924.6	7967.2	7885.3	7893.3	7903.8
5°	6931.9	6995.3	6931.9	6938.3	6964.8
7.5°	5577.9	5633.3	5597.2	5613.2	5584.3
10°	4293.0	4313.0	4283.4	4297.8	4326.7
12.5°	3228.0	3250.4	3228.8	3229.6	3242.4
15°	2402.9	2417.4	2416.6	2416.6	2420.6
17.5°	1794.6	1813.8	1793.0	1794.6	1799.4
20°	1323.4	1336.3	1319.4	1317.0	1313.8
22.5°	902.9	930.2	940.6	927.0	883.6
25°	479.1	588.3	619.6	564.2	489.6
27.5°	192.6	292.9	362.0	286.5	209.5
30°	93.9	127.6	198.2	130.8	94.7
32.5°	55.4	69.0	108.3	68.2	54.6
35°	35.3	42.5	61.0	40.9	34.5
37.5°	23.3	28.1	37.7	27.3	22.5
40°	16.9	19.3	24.9	18.5	16.1
42.5°	12.8	13.6	16.9	13.6	12.0
45°	10.4	10.4	12.0	9.6	8.8
47.5°	8.0	8.0	8.0	7.2	5.6
50°	5.6	5.6	5.6	4.8	4.0
52.5°	4.0	4.0	4.0	3.2	2.4
55°	2.4	2.4	3.2	2.4	1.6
57.5°	2.4	1.6	2.4	1.6	1.6
60°	1.6	1.6	1.6	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	0.8
70°	0.8	0.8	0.8	0.8	0.8
72.5°	0.8	0.8	0.8	0.8	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)