

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: P182636

Luminaire Tested: **LDSQA4A28935D010TE LAR15SP 4LSQA1H-LSF-20**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182636  
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: LDSQA4A28935D010TE 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 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2200.7 lumens  
Efficiency: N/A  
Efficacy: 49.5 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

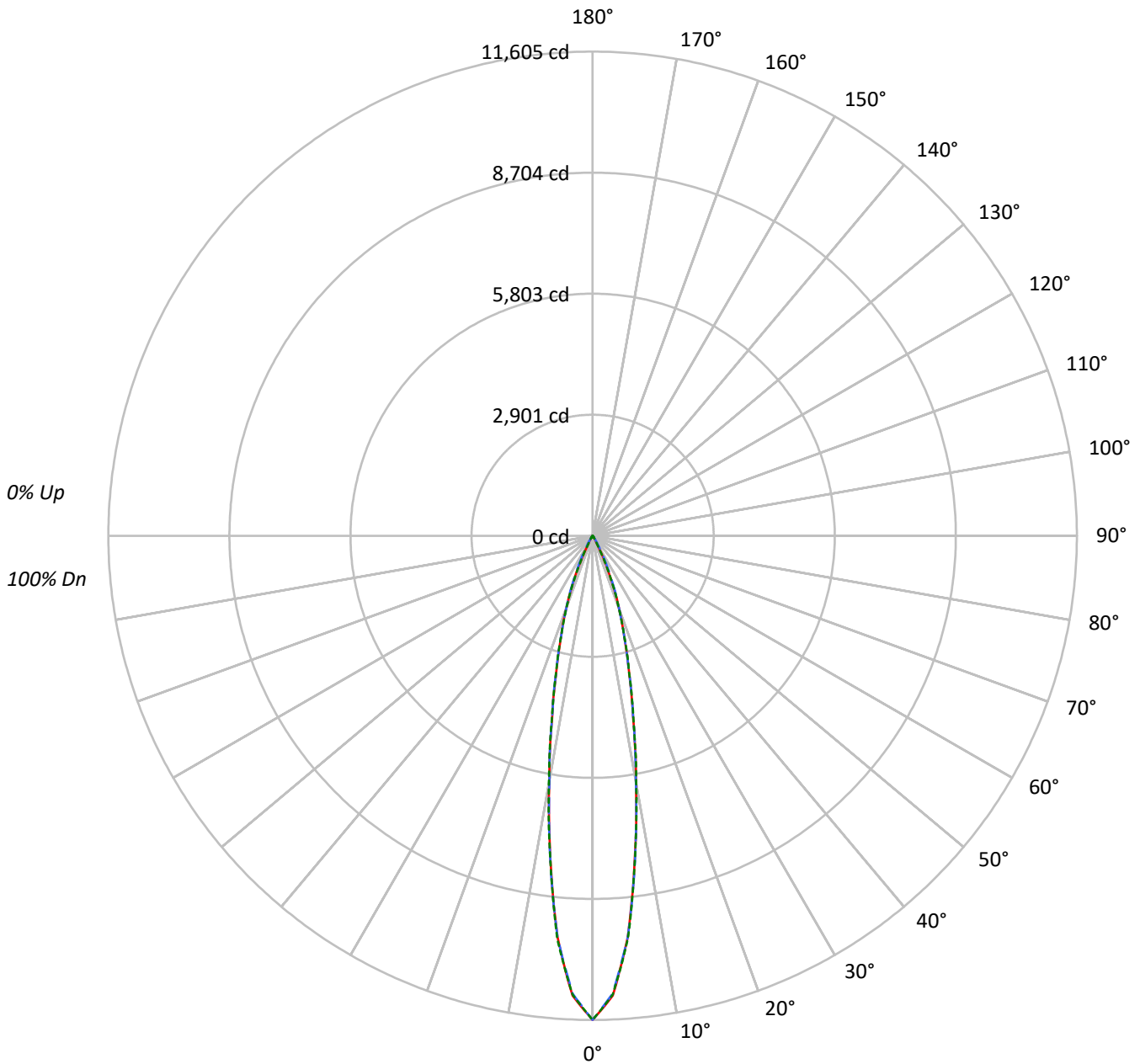
Input Watts (W): 44.49  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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																			
1	115	113	111	109	113	111	109	108	107	106	104	103	102	101	100	99	98	97	97																		
2	111	108	105	102	109	106	104	101	103	101	99	100	99	97	98	96	95	94																			
3	108	103	100	97	106	102	99	96	100	97	95	97	95	93	95	93	92	91																			
4	105	99	96	93	103	98	95	92	96	93	91	95	92	90	93	91	89	88																			
5	102	96	92	89	100	95	91	89	93	90	88	92	89	87	91	88	86	85																			
6	99	93	89	86	98	92	88	85	91	87	85	89	87	84	88	86	84	83																			
7	96	90	86	83	95	89	85	83	88	85	82	87	84	82	86	83	81	80																			
8	94	87	83	80	93	87	83	80	86	82	80	85	82	80	84	81	79	78																			
9	91	85	81	78	90	84	80	78	83	80	78	83	80	77	82	79	77	76																			
10	89	82	78	76	88	82	78	76	81	78	76	81	78	75	80	77	75	74																			

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

	0°	45°	90°
0°	1124210	1124210	1124210
5°	938643	938643	943096
10°	588036	586717	592649
15°	335580	337485	338037
20°	189979	189412	188598
25°	71317	92225	72867
30°	14632	30874	14755
35°	5819	10041	5688
40°	2972	4376	2833
45°	1987	2302	1685
50°	1176	1176	844
55°	574	760	372
60°	426	426	213
65°	252	252	252
70°	312	312	312
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	801.9	36.4
10°-20°	953.7	43.3
20°-30°	380.2	17.3
30°-40°	48.0	2.2
40°-50°	11.8	0.5
50°-60°	3.5	0.2
60°-70°	1.2	0.1
70°-80°	0.5	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°	2135.8	97.1
0°-40°	2183.8	99.2
0°-60°	2199.1	99.9
0°-90°	2200.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2200.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	11605	11605	11605	11605	11605	
5°	9652	9741	9652	9661	9698	800
15°	3346	3366	3365	3365	3370	951
25°	667	819	863	786	682	343
35°	49	59	85	57	48	36
45°	14	14	17	13	12	11
55°	3	3	4	3	2	4
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°	11604.7	11604.7	11604.7	11604.7	11604.7
2.5°	11034.7	11094.0	10980.0	10991.2	11005.7
5°	9652.3	9740.6	9652.3	9661.3	9698.1
7.5°	7767.0	7844.1	7793.8	7816.2	7775.9
10°	5977.8	6005.7	5964.4	5984.5	6024.7
12.5°	4494.8	4526.1	4495.9	4497.0	4514.9
15°	3346.0	3366.1	3365.0	3365.0	3370.5
17.5°	2498.9	2525.7	2496.6	2498.9	2505.6
20°	1842.8	1860.7	1837.3	1833.9	1829.4
22.5°	1257.2	1295.2	1309.8	1290.8	1230.4
25°	667.2	819.2	862.8	785.6	681.7
27.5°	268.2	407.9	504.0	399.0	291.7
30°	130.8	177.7	276.0	182.2	131.9
32.5°	77.1	96.1	150.9	95.0	76.0
35°	49.2	59.2	84.9	57.0	48.1
37.5°	32.4	39.1	52.5	38.0	31.3
40°	23.5	26.8	34.6	25.7	22.4
42.5°	17.9	19.0	23.5	19.0	16.8
45°	14.5	14.5	16.8	13.4	12.3
47.5°	11.2	11.2	11.2	10.1	7.8
50°	7.8	7.8	7.8	6.7	5.6
52.5°	5.6	5.6	5.6	4.5	3.4
55°	3.4	3.4	4.5	3.4	2.2
57.5°	3.4	2.2	3.4	2.2	2.2
60°	2.2	2.2	2.2	1.1	1.1
62.5°	1.1	1.1	1.1	1.1	1.1
65°	1.1	1.1	1.1	1.1	1.1
67.5°	1.1	1.1	1.1	1.1	1.1
70°	1.1	1.1	1.1	1.1	1.1
72.5°	1.1	1.1	1.1	1.1	0.0
75°	0.0	1.1	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)