

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: P182621

Luminaire Tested: **LDSQA4A09940D010TE LAR15SP 4LSQA1H-LSF-20**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182621
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: LDSQA4A09940D010TE 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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 940.3 lumens
Efficiency: N/A
Efficacy: 67.9 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

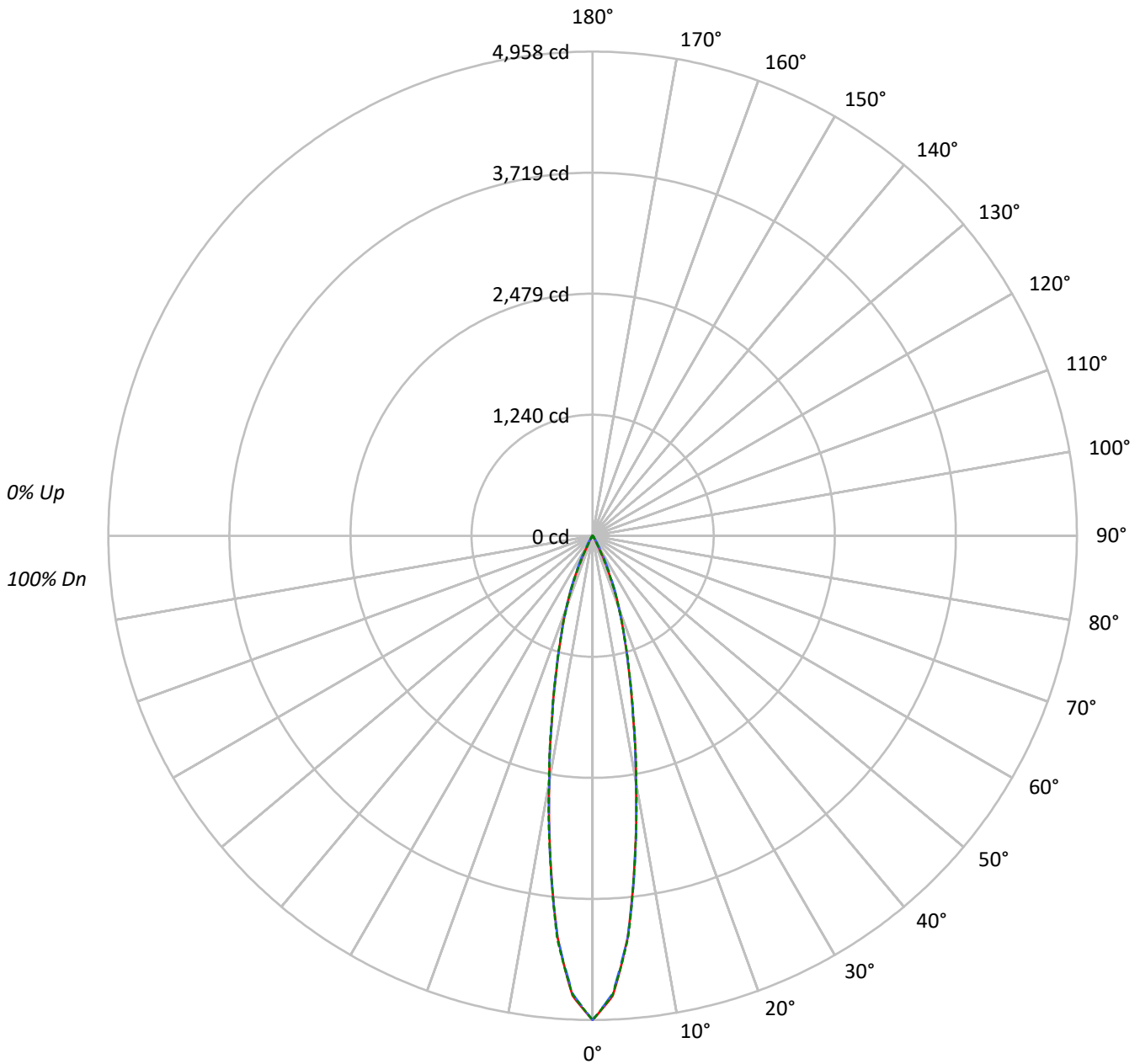
Input Watts (W): 13.84
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	480337	480337	480337
5°	401060	401060	402956
10°	251247	250686	253224
15°	143379	144191	144432
20°	81175	80928	80588
25°	30474	39400	31137
30°	6253	13189	6298
35°	2484	4293	2424
40°	1265	1872	1201
45°	849	986	726
50°	497	497	362
55°	236	321	169
60°	194	194	97
65°	115	115	115
70°	142	142	142
75°	0	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.6	36.4
10°-20°	407.5	43.3
20°-30°	162.5	17.3
30°-40°	20.5	2.2
40°-50°	5.0	0.5
50°-60°	1.5	0.2
60°-70°	0.5	0.1
70°-80°	0.2	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°	912.6	97.0
0°-40°	933.1	99.2
0°-60°	939.6	99.9
0°-90°	940.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	940.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4958	4958	4958	4958	4958	
5°	4124	4162	4124	4128	4144	342
15°	1430	1438	1438	1438	1440	406
25°	285	350	369	336	291	147
35°	21	25	36	24	20	15
45°	6	6	7	6	5	5
55°	1	1	2	1	1	2
65°	0	0	0	0	0	1
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°	4958.3	4958.3	4958.3	4958.3	4958.3
2.5°	4714.8	4740.1	4691.4	4696.2	4702.4
5°	4124.2	4161.9	4124.2	4128.0	4143.7
7.5°	3318.6	3351.6	3330.1	3339.6	3322.4
10°	2554.1	2566.1	2548.4	2557.0	2574.2
12.5°	1920.5	1933.9	1921.0	1921.5	1929.1
15°	1429.6	1438.2	1437.7	1437.7	1440.1
17.5°	1067.7	1079.1	1066.7	1067.7	1070.6
20°	787.4	795.0	785.0	783.6	781.7
22.5°	537.2	553.4	559.6	551.5	525.7
25°	285.1	350.0	368.6	335.7	291.3
27.5°	114.6	174.3	215.4	170.5	124.6
30°	55.9	75.9	117.9	77.8	56.3
32.5°	32.9	41.1	64.5	40.6	32.5
35°	21.0	25.3	36.3	24.4	20.5
37.5°	13.8	16.7	22.4	16.2	13.4
40°	10.0	11.5	14.8	11.0	9.5
42.5°	7.6	8.1	10.0	8.1	7.2
45°	6.2	6.2	7.2	5.7	5.3
47.5°	4.8	4.8	4.8	4.3	3.3
50°	3.3	3.3	3.3	2.9	2.4
52.5°	2.4	2.4	2.4	1.9	1.4
55°	1.4	1.4	1.9	1.4	1.0
57.5°	1.4	1.0	1.4	1.0	1.0
60°	1.0	1.0	1.0	0.5	0.5
62.5°	0.5	0.5	0.5	0.5	0.5
65°	0.5	0.5	0.5	0.5	0.5
67.5°	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.0
75°	0.0	0.5	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)