

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: P35088

Luminaire Tested: **LDSQ4B15D010 EU4B10208035 4LBSQ1LI**

Test Date: 11/03/16

Test Information

Test Method: LM-41-14
Report Number: P35088
Test Lab: INNOVATION CENTER-P3
Test Date: 11/03/16
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQ4B15D010 EU4B10208035 4LBSQ1LI
Description: PORTFOLIO LD4 SERIES 4" RECESSED FIXTURE WITH A SQUARE LOW IRIDESCENT TRIM.
Light Source: (1) CITIZEN 3500K LED, 80 CRI
CLU038-1205C4-353M2K1
Ballast/Driver: (1) EATON ELECTRONIC DRIVER
XEL-045REU-CX350-ZNT02

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1453.1 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.9 / 0.94
Luminous Opening: Rectangular (W 0.38' x L: 0.38' x H: 0')
CIE Type: Direct

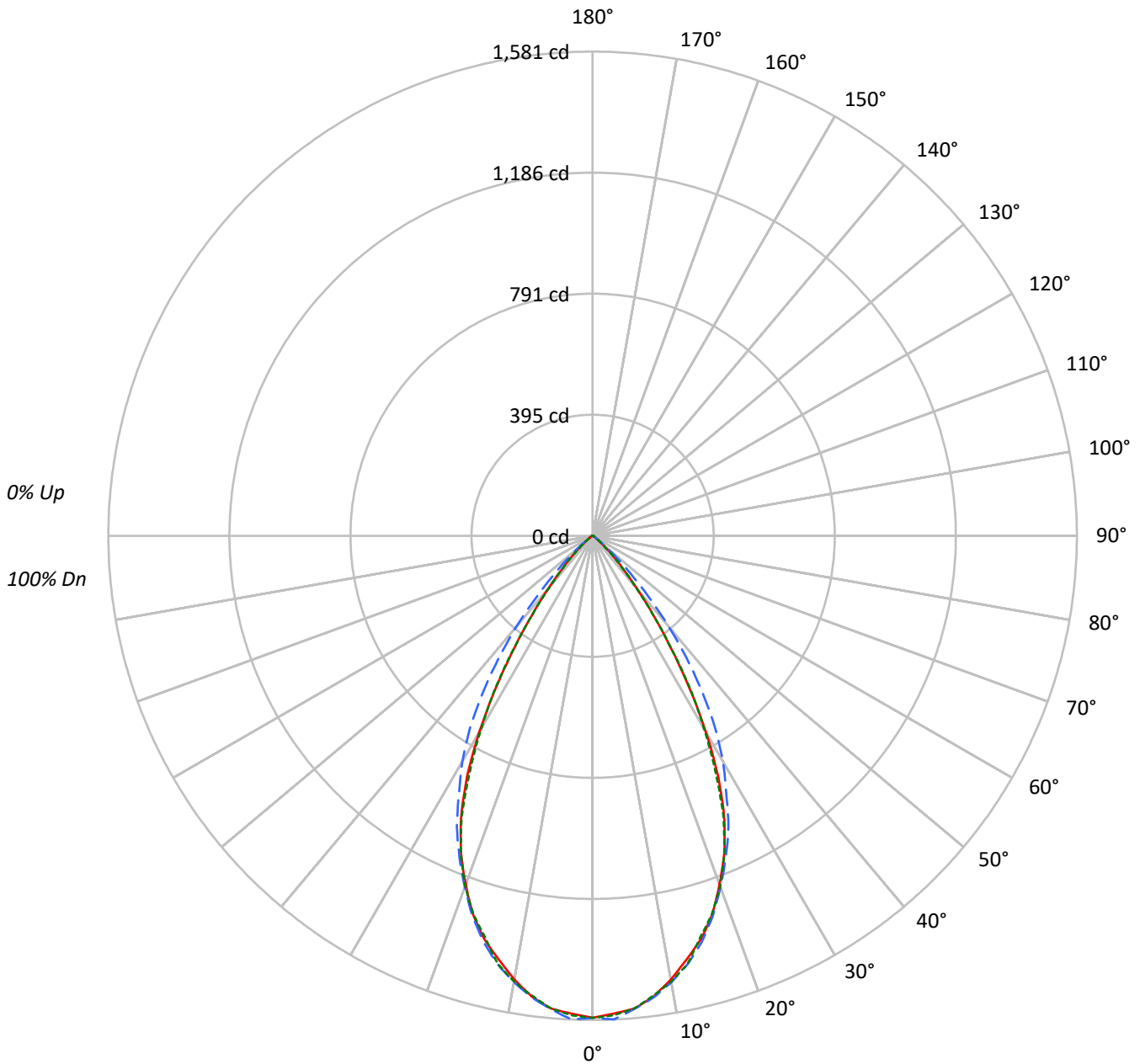
Input Watts (W): 14
Input Voltage (V): 120.0
Input Current (A_{in}): 0.117
Voltage Rise (V): NR
Power Factor: 0.9986
Total Harmonic Distortion (THDi): 7.95%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 5 HR
Ambient Temperature (°C): 24.2
Test Distance: 25 FT



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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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93																			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87																			
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80																			
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75																			
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69																			
6	87	78	72	68	86	77	71	67	76	71	67	74	70	66	73	69	66	64																			
7	83	73	67	63	81	73	67	63	71	66	62	70	65	62	69	65	62	60																			
8	79	69	63	59	77	68	62	58	67	62	58	66	61	58	65	61	58	56																			
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53																			
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	120479	120479	120479
5°	119095	119249	119095
10°	114332	115032	114876
15°	108088	108881	107534
20°	98643	99376	99132
25°	85892	88595	85301
30°	65316	75127	64344
35°	41115	58401	41488
40°	22182	38569	21783
45°	10500	19052	10392
50°	3930	7145	3930
55°	1868	2269	1735
60°	1225	1072	1225
65°	724	724	724
70°	448	671	448
75°	296	296	296
80°	441	441	441
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.9	10.0
10°-20°	382.5	26.3
20°-30°	467.2	32.2
30°-40°	326.8	22.5
40°-50°	107.1	7.4
50°-60°	17.0	1.2
60°-70°	4.6	0.3
70°-80°	1.5	0.1
80°-90°	0.4	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°	995.6	68.5
0°-40°	1322.4	91.0
0°-60°	1446.5	99.5
0°-90°	1453.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1453.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1574	1574	1574	1574	1574	
5°	1550	1550	1552	1542	1550	145
15°	1364	1370	1374	1365	1357	380
25°	1017	1032	1049	1030	1010	457
35°	440	520	625	512	444	281
45°	97	120	176	118	96	81
55°	14	15	17	15	13	14
65°	4	5	4	5	4	4
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1574	1574	1574	1574	1574	1574	1574	1574	1574	1574	1574
2.5°	1562	1573	1570	1577	1577	1569	1571	1574	1578	1581	1557
5°	1550	1560	1551	1561	1555	1546	1561	1553	1558	1552	1556
7.5°	1518	1534	1516	1528	1524	1519	1525	1523	1526	1521	1510
10°	1471	1484	1472	1489	1481	1476	1481	1486	1485	1480	1486
12.5°	1417	1432	1426	1436	1427	1427	1439	1436	1437	1433	1440
15°	1364	1375	1366	1379	1375	1364	1369	1369	1377	1374	1366
17.5°	1298	1307	1297	1300	1296	1294	1315	1301	1309	1303	1304
20°	1211	1215	1212	1220	1215	1221	1219	1217	1217	1220	1213
22.5°	1123	1123	1126	1128	1132	1126	1138	1128	1129	1136	1134
25°	1017	1014	1021	1031	1035	1030	1046	1038	1044	1049	1038
27.5°	888	888	895	912	915	921	943	943	951	944	952
30°	739	750	759	781	788	801	824	835	853	850	846
32.5°	586	601	602	625	644	666	697	723	736	745	735
35°	440	449	457	473	505	534	562	596	619	625	616
37.5°	322	324	332	347	371	399	433	470	494	503	493
40°	222	224	228	241	261	281	308	346	368	386	373
42.5°	149	151	155	165	176	195	216	240	261	269	262
45°	97	97	99	106	112	127	142	157	171	176	171
47.5°	57	58	60	65	72	78	89	99	103	107	105
50°	33	33	36	39	44	48	52	56	58	60	58
52.5°	18	19	20	21	23	27	30	30	31	32	31
55°	14	14	14	14	15	15	15	16	16	17	16
57.5°	10	10	10	11	11	11	10	10	10	10	10
60°	8	8	8	8	8	8	8	7	7	7	7
62.5°	6	6	6	6	6	6	6	6	6	6	6
65°	4	4	5	5	5	5	5	4	4	4	4
67.5°	3	3	3	3	4	4	3	3	3	3	3
70°	2	2	2	3	3	3	3	3	3	3	3
72.5°	2	2	2	2	2	2	2	2	2	2	2
75°	1	1	1	1	1	1	1	1	1	1	1
77.5°	1	1	1	1	1	1	1	1	1	1	1
80°	1	1	1	1	1	1	1	1	1	1	1
82.5°	0	0	0	0	0	0	0	1	0	0	0
85°	0	0	0	0	0	0	0	0	0	0	0
87.5°	1	1	1	1	1	1	1	1	1	1	1
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1574	1574	1574	1574	1574	1574	1574	1574
2.5°	1574	1557	1559	1568	1563	1568	1567	1567
5°	1557	1552	1544	1541	1547	1560	1558	1550
7.5°	1525	1512	1521	1525	1520	1528	1532	1515
10°	1487	1482	1480	1482	1480	1488	1478	1478
12.5°	1433	1425	1425	1437	1430	1424	1432	1431
15°	1379	1363	1363	1367	1370	1366	1367	1357
17.5°	1299	1294	1287	1298	1301	1297	1300	1295
20°	1224	1224	1211	1216	1220	1223	1225	1217
22.5°	1128	1130	1121	1131	1134	1124	1126	1124
25°	1040	1039	1032	1028	1030	1026	1025	1010
27.5°	943	933	918	922	905	891	891	868
30°	838	821	801	781	766	750	741	728
32.5°	715	692	667	640	623	599	586	593
35°	593	559	525	498	472	458	442	444
37.5°	475	427	397	368	346	328	321	319
40°	347	309	279	258	243	229	221	218
42.5°	240	213	189	172	162	153	149	148
45°	156	140	124	112	104	98	97	96
47.5°	98	90	80	71	64	60	57	57
50°	56	53	48	43	39	37	34	33
52.5°	30	30	28	24	21	19	19	18
55°	16	16	15	15	14	14	14	13
57.5°	10	10	11	11	10	10	10	10
60°	7	8	8	8	8	8	8	8
62.5°	6	6	6	6	6	6	6	6
65°	4	5	5	5	5	4	4	4
67.5°	3	3	3	3	3	3	3	3
70°	3	3	3	3	3	2	2	2
72.5°	2	2	2	2	2	2	2	2
75°	1	1	1	1	1	1	1	1
77.5°	1	1	1	1	1	1	1	1
80°	1	1	1	1	1	1	1	1
82.5°	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0
87.5°	1	1	1	1	1	1	1	1
90°	0	0	0	0	0	0	0	0



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180° - - 45°-225° - - - - 90°-270°









(END OF REPORT)