

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: P209517

Luminaire Tested: **LDA4A09930D2WD010TED2W LAR15SP 4LA1H DIF-20**

Test Date: 10/29/16

Test Information

Test Method: LM-41-14
Report Number: P209517
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29017)
Test Lab: INNOVATION CENTER-P2
Test Date: 10/29/16
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A09930D2WD010TED2W LAR15SP 4LA1H DIF-20
Description: 4" ROUND, 900lm D2W, FLOOD OPTIC WITH DIFFUSED LENS, ACCENT SELF
FLANGED, HAZE TRIM
Light Source: (1) High Lumen 3000K 90 CRI LED
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 509.1 lumens
Efficiency: N/A
Efficacy: 37.2 lumens/watt
Spacing Criteria (0/90/45): 0.52 / 0.52 / 0.55
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

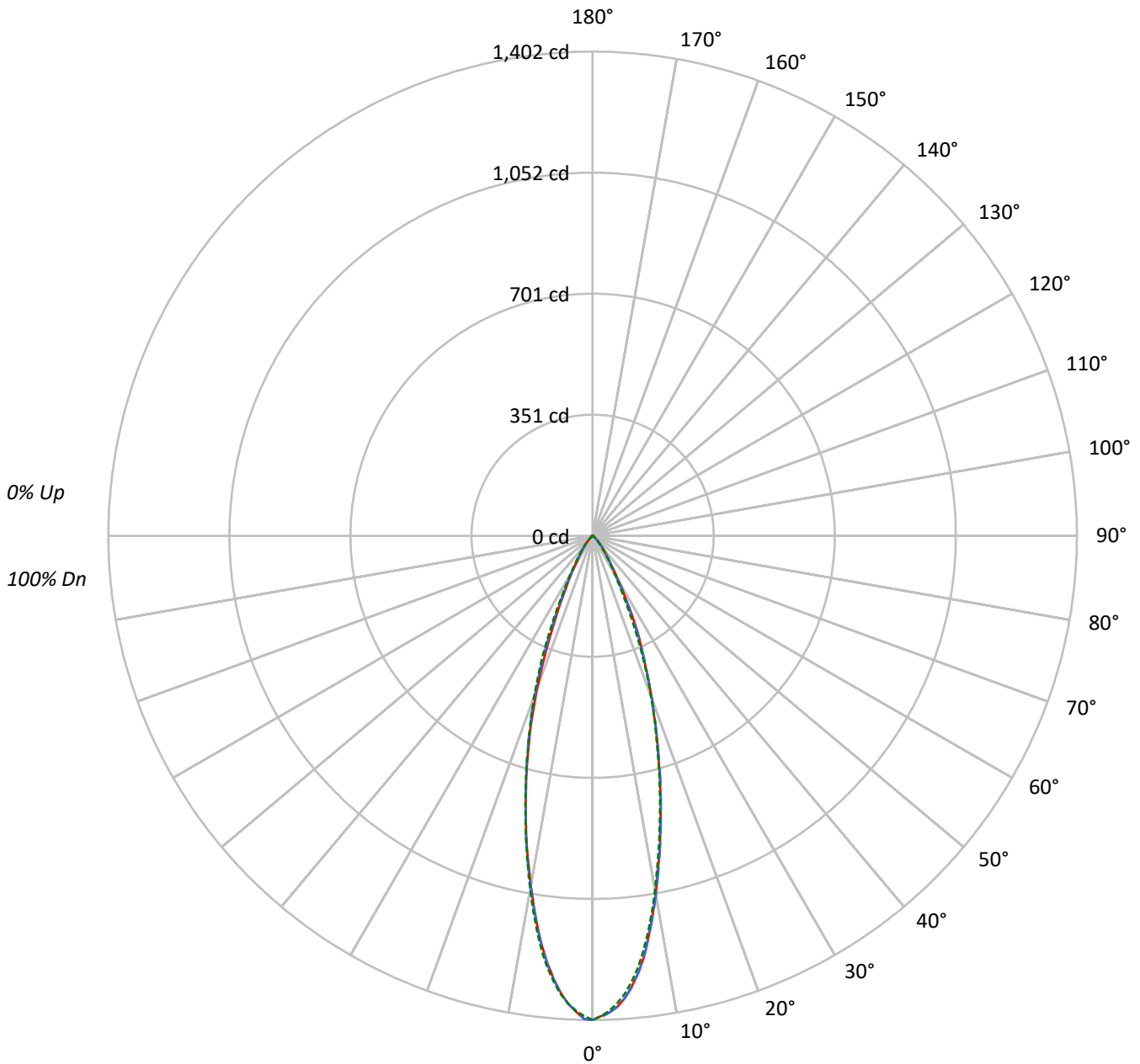
Input Watts (W): 13.7
Input Voltage (V): 120.0
Input Current (A_{in}): 0.116
Voltage Rise (V): NR
Power Factor: 0.9975
Total Harmonic Distortion (THDi): 15.1%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.5
Test Distance: 25 FT



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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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95																			
2	110	106	102	100	108	104	101	98	101	98	96	98	96	94	95	94	92	91																			
3	106	100	96	93	104	99	95	92	96	93	91	94	91	89	92	90	88	86																			
4	102	95	91	87	100	94	90	87	92	89	86	90	87	85	89	86	84	83																			
5	98	91	86	82	96	90	85	82	88	84	81	87	83	81	85	82	80	79																			
6	94	87	82	78	93	86	81	78	85	81	78	83	80	77	82	79	77	75																			
7	91	83	78	75	89	82	78	75	81	77	74	80	77	74	79	76	73	72																			
8	87	80	75	71	86	79	75	71	78	74	71	77	73	71	76	73	70	69																			
9	84	77	72	68	83	76	71	68	75	71	68	74	71	68	74	70	68	67																			
10	82	74	69	66	81	73	69	66	73	68	65	72	68	65	71	68	65	64																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	172931	172931	172931
5°	161952	160467	159600
10°	131761	130384	128881
15°	96922	95773	95134
20°	65631	64975	61037
25°	42190	36746	31711
30°	20937	18231	15667
35°	10992	9788	8432
40°	6280	5475	4830
45°	3489	2791	2268
50°	1343	959	959
55°	215	430	645
60°	493	247	493
65°	584	292	292
70°	721	361	361
75°	953	0	0
80°	710	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.6	22.7
10°-20°	206.4	40.5
20°-30°	126.4	24.8
30°-40°	43.6	8.6
40°-50°	13.1	2.6
50°-60°	2.1	0.4
60°-70°	1.2	0.2
70°-80°	0.5	0.1
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°	448.5	88.1
0°-40°	492.1	96.7
0°-60°	507.3	99.6
0°-90°	509.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	509.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1402	1402	1402	1402	1402	
5°	1308	1311	1296	1290	1289	117
15°	759	761	750	742	745	208
25°	310	297	270	252	233	138
35°	73	71	65	60	56	49
45°	20	18	16	14	13	16
55°	1	1	2	2	3	2
65°	2	1	1	1	1	2
75°	2	1	0	0	0	2
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°	112.5°	135°	157.5°	180°
0°	1402	1402	1402	1402	1402	1402	1402	1402	1402
1°	1391	1388	1394	1385	1391	1403	1399	1403	1400
2°	1382	1376	1382	1371	1376	1386	1379	1384	1379
3°	1366	1361	1365	1353	1356	1364	1356	1360	1357
4°	1342	1338	1342	1328	1330	1336	1327	1330	1326
5°	1308	1307	1311	1295	1296	1301	1290	1294	1289
6°	1271	1268	1271	1255	1257	1260	1249	1251	1246
7°	1225	1222	1225	1208	1210	1211	1200	1203	1198
8°	1168	1169	1172	1155	1156	1157	1146	1149	1144
9°	1112	1110	1114	1098	1100	1106	1088	1092	1087
10°	1052	1057	1055	1039	1041	1040	1030	1034	1029
11°	989	996	995	979	980	988	977	976	972
12°	935	936	934	921	921	928	920	919	916
13°	870	877	876	864	863	869	862	862	858
14°	815	819	817	807	806	811	797	804	801
15°	759	762	761	752	750	756	742	747	745
16°	701	707	705	697	694	700	694	692	688
17°	644	651	650	643	640	647	642	638	631
18°	598	599	598	591	590	597	591	585	578
19°	544	549	547	542	542	547	539	528	521
20°	500	501	500	497	495	498	484	471	465
21°	457	456	456	454	448	446	437	417	409
22°	409	415	416	410	402	395	384	364	358
23°	372	378	377	369	356	347	336	317	312
24°	338	343	337	326	312	302	286	274	270
25°	310	304	297	284	270	260	252	236	233
26°	270	267	259	247	233	223	214	201	199
27°	234	231	222	211	199	192	184	173	171
28°	197	198	191	182	172	165	159	149	148
29°	174	171	165	157	148	143	137	129	128
30°	147	147	142	135	128	123	118	111	110
32.5°	103	103	100	95	90	87	83	78	78
35°	73	73	71	68	65	62	60	57	56
37.5°	54	53	52	49	47	45	43	41	41
40°	39	39	38	36	34	33	31	30	30
42.5°	28	28	27	25	24	22	21	21	20
45°	20	19	18	17	16	14	14	14	13
47.5°	12	12	11	10	9	9	8	8	8
50°	7	6	6	5	5	4	4	4	5
52.5°	3	3	2	2	2	3	3	3	3
55°	1	1	1	1	2	2	2	3	3
57.5°	2	2	1	1	2	2	2	2	2
60°	2	2	1	1	1	2	2	2	2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	2	2	1	1	1	1	1	1	1
70°	2	2	1	1	1	1	1	1	1
72.5°	2	1	1	1	0	0	0	0	0
75°	2	1	1	1	0	0	0	0	0
77.5°	1	1	1	0	0	0	0	0	0
80°	1	1	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0



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







62.5°	2	2	1	1	1	1	1	1	1
65°	2	2	1	1	1	1	1	1	1



(END OF REPORT)