

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: P209519

Luminaire Tested: **LDA4A13930D2WD010TED2W LAR15SP 4LA1H DIF-20**

Test Date: 10/27/16

Test Information

Test Method: LM-41-14
Report Number: P209519
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29019)
Test Lab: INNOVATION CENTER-P2
Test Date: 10/27/16
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A13930D2WD010TED2W LAR15SP 4LA1H DIF-20
Description: 4" ROUND, 1300lm 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: 750.1 lumens
Efficiency: N/A
Efficacy: 34.1 lumens/watt
Spacing Criteria (0/90/45): 0.52 / 0.53 / 0.56
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

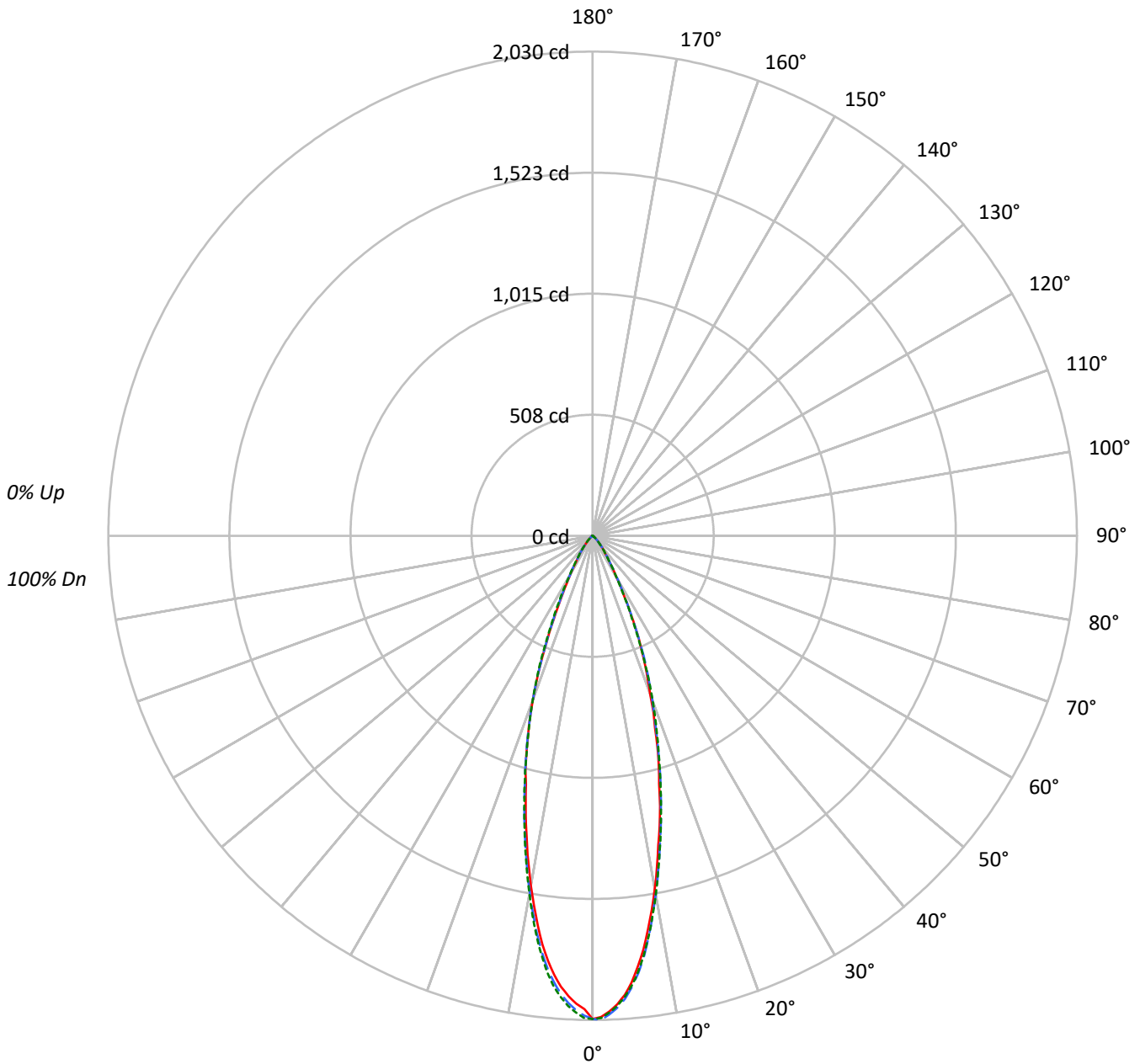
Input Watts (W): 22
Input Voltage (V): 120.0
Input Current (A_{in}): 0.187
Voltage Rise (V): NR
Power Factor: 0.9907
Total Harmonic Distortion (THDi): 12.7%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.5
Test Distance: 25 FT



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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	99	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	101	95	91	87	100	94	90	87	92	88	86	90	87	85	88	86	84	82																			
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	84	80	77	83	80	77	82	79	76	75																			
7	90	83	78	74	89	82	78	74	81	77	74	80	76	74	79	76	73	72																			
8	87	79	75	71	86	79	74	71	78	74	71	77	73	70	76	73	70	69																			
9	84	76	71	68	83	76	71	68	75	71	68	74	70	68	73	70	67	66																			
10	81	73	69	65	80	73	68	65	72	68	65	72	68	65	71	67	65	64																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	249898	249898	249898
5°	232776	234261	228813
10°	188248	191129	186495
15°	137402	140977	137913
20°	92802	96477	96609
25°	57433	55391	52669
30°	28201	28201	26349
35°	14757	14907	14004
40°	8534	8373	7890
45°	4535	4186	4012
50°	1535	1343	1535
55°	645	430	860
60°	740	493	493
65°	876	292	292
70°	1082	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°	167.7	22.4
10°-20°	301.8	40.2
20°-30°	189.8	25.3
30°-40°	65.7	8.8
40°-50°	19.8	2.6
50°-60°	3.0	0.4
60°-70°	1.6	0.2
70°-80°	0.7	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°	659.3	87.9
0°-40°	725.0	96.7
0°-60°	747.8	99.7
0°-90°	750.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	750.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2026	2026	2026	2026	2026	
5°	1880	1898	1892	1877	1848	167
15°	1076	1102	1104	1103	1080	297
25°	422	424	407	394	387	192
35°	98	102	99	95	93	67
45°	26	25	24	23	23	21
55°	3	2	2	3	4	3
65°	3	2	1	1	1	3
75°	2	1	0	0	0	2
85°	0	0	0	0	0	0
90°	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°	2026	2026	2026	2026	2026	2026	2026	2026	2026
1°	2018	2036	2030	2018	2022	2006	2012	2002	1985
2°	1996	2015	2009	1997	2001	1989	1990	1980	1963
3°	1967	1987	1982	1970	1974	1961	1961	1950	1933
4°	1929	1948	1945	1934	1938	1927	1924	1913	1895
5°	1880	1899	1898	1887	1892	1874	1877	1866	1848
6°	1816	1841	1841	1831	1836	1818	1821	1809	1792
7°	1747	1772	1773	1764	1769	1753	1755	1743	1726
8°	1665	1693	1694	1687	1693	1678	1681	1668	1651
9°	1587	1610	1610	1604	1610	1598	1601	1588	1571
10°	1503	1523	1525	1519	1526	1515	1518	1506	1489
11°	1415	1438	1439	1433	1439	1431	1434	1422	1406
12°	1326	1353	1353	1347	1353	1346	1350	1338	1324
13°	1248	1267	1267	1262	1268	1262	1266	1256	1242
14°	1168	1183	1183	1180	1185	1179	1183	1183	1161
15°	1076	1101	1102	1099	1104	1100	1103	1103	1080
16°	1007	1020	1021	1018	1024	1021	1025	1025	1022
17°	928	941	942	940	946	946	950	950	947
18°	848	864	866	864	873	874	879	878	875
19°	782	791	792	791	802	803	806	807	806
20°	707	721	731	725	735	733	735	735	736
21°	646	657	668	662	666	663	663	660	660
22°	590	598	608	598	600	594	590	586	585
23°	535	538	547	535	533	525	519	515	513
24°	478	479	484	470	468	460	454	448	447
25°	422	422	424	410	407	400	394	389	387
26°	366	369	369	356	359	347	341	336	334
27°	314	319	320	307	310	300	295	290	288
28°	268	274	276	265	267	258	254	250	249
29°	236	236	238	228	230	223	219	214	213
30°	198	202	204	196	198	192	189	186	185
32.5°	139	141	143	137	139	135	133	131	130
35°	98	101	102	98	99	99	95	94	93
37.5°	72	73	74	71	72	72	69	68	68
40°	53	53	54	51	52	52	50	50	49
42.5°	38	38	38	36	36	36	35	35	35
45°	26	26	25	24	24	24	23	23	23
47.5°	16	16	15	14	14	14	14	14	14
50°	8	8	8	7	7	7	7	8	8
52.5°	4	3	3	3	3	4	4	4	4
55°	3	2	2	2	2	3	3	3	4
57.5°	3	3	2	2	2	3	3	3	3
60°	3	2	2	2	2	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°	3	2	2	1	1	1	1	1	1
70°	3	2	2	1	1	1	1	1	1
72.5°	2	2	1	1	1	0	0	0	0
75°	2	2	1	1	0	0	0	0	0
77.5°	2	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°	3	3	2	2	2	2	2	2	2
65°	3	2	2	1	1	1	1	1	1



(END OF REPORT)