

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: P209522

Luminaire Tested: **LDA4A18930D2WD010TED2W LAR15SP 4LAL1H DIF-20**

Test Date: 10/29/16

Test Information

Test Method: LM-41-14
Report Number: P209522
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29022)
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: LDA4A18930D2WD010TED2W LAR15SP 4LAL1H DIF-20
Description: 4" ROUND, 1800lm D2W, FLOOD OPTIC WITH DIFFUSED LENS, LENSED ACCENT
SELF FLANGED, HAZE TRIM
Light Source: (1) High Lumen 3000K 90 CRI LED
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 859.7 lumens
Efficiency: N/A
Efficacy: 26.2 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 0.53 / 0.56
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

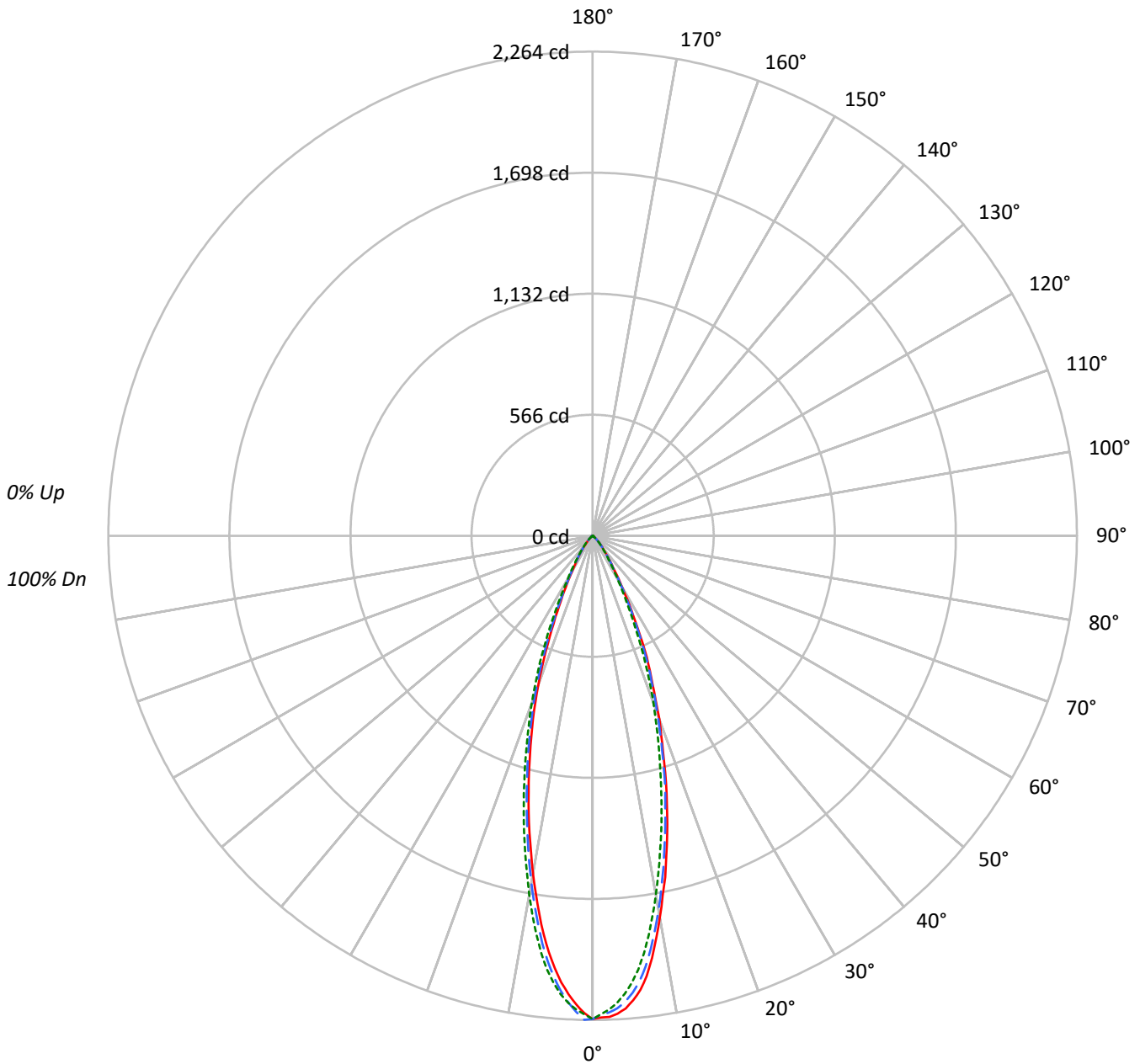
Input Watts (W): 32.8
Input Voltage (V): 120.0
Input Current (A_{in}): 0.277
Voltage Rise (V): NR
Power Factor: 0.9944
Total Harmonic Distortion (THDi): 12.3%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.2
Test Distance: 25 FT



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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	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	105	100	96	92	104	99	95	92	96	93	90	94	91	89	92	89	88	86																			
4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	86	83	82																			
5	97	90	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78																			
6	94	86	81	78	92	86	81	77	84	80	77	83	79	76	82	78	76	75																			
7	90	82	78	74	89	82	77	74	81	77	73	80	76	73	79	75	73	72																			
8	87	79	74	71	86	79	74	71	78	73	70	77	73	70	76	72	70	69																			
9	84	76	71	68	83	75	71	68	75	70	67	74	70	67	73	69	67	66																			
10	81	73	68	65	80	73	68	65	72	68	65	71	67	65	70	67	64	63																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	278761	278761	278761
5°	269921	259768	251348
10°	226950	213423	200773
15°	172135	158472	146724
20°	119579	108947	97396
25°	75262	64102	53078
30°	38740	33328	27204
35°	19876	17618	14907
40°	11271	9983	8212
45°	6280	5408	4186
50°	2686	1919	1727
55°	645	645	1075
60°	740	740	740
65°	876	584	292
70°	1082	361	361
75°	1430	0	0
80°	1421	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.2	21.9
10°-20°	342.1	39.8
20°-30°	219.3	25.5
30°-40°	78.1	9.1
40°-50°	24.7	2.9
50°-60°	4.1	0.5
60°-70°	2.0	0.2
70°-80°	1.1	0.1
80°-90°	0.1	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°	749.6	87.2
0°-40°	827.8	96.3
0°-60°	856.5	99.6
0°-90°	859.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	859.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2260	2260	2260	2260	2260	
5°	2180	2145	2098	2072	2030	196
15°	1348	1312	1241	1186	1149	369
25°	553	531	471	419	390	250
35°	132	127	117	105	99	89
45°	36	34	31	27	24	29
55°	3	2	3	4	5	5
65°	3	2	2	2	1	3
75°	3	2	0	0	0	3
85°	0	0	0	0	0	1
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°	2260	2260	2260	2260	2260	2260	2260	2260	2260
1°	2253	2248	2240	2250	2238	2244	2264	2260	2232
2°	2251	2243	2230	2233	2216	2215	2227	2221	2193
3°	2238	2230	2213	2210	2187	2178	2185	2174	2147
4°	2216	2207	2185	2177	2148	2133	2133	2121	2094
5°	2180	2171	2145	2132	2098	2079	2072	2057	2030
6°	2135	2121	2095	2076	2039	2014	2002	1985	1959
7°	2074	2050	2030	2006	1967	1940	1923	1903	1879
8°	1994	1972	1951	1925	1884	1854	1834	1812	1789
9°	1902	1887	1865	1837	1796	1765	1742	1720	1697
10°	1812	1797	1776	1746	1704	1673	1648	1625	1603
11°	1717	1703	1683	1652	1610	1579	1554	1531	1509
12°	1632	1610	1589	1556	1515	1485	1459	1438	1419
13°	1532	1517	1495	1463	1423	1392	1365	1346	1328
14°	1441	1424	1403	1372	1331	1301	1274	1253	1238
15°	1348	1331	1312	1280	1241	1202	1186	1165	1149
16°	1254	1239	1231	1189	1152	1115	1101	1080	1064
17°	1160	1148	1141	1100	1065	1033	1018	998	981
18°	1065	1060	1052	1014	983	953	939	919	901
19°	987	974	967	940	905	876	862	841	823
20°	911	891	886	863	830	799	783	758	742
21°	821	813	810	799	754	723	703	676	661
22°	750	740	731	725	681	649	625	597	585
23°	685	675	672	644	610	584	551	524	513
24°	623	608	601	572	538	504	482	458	448
25°	553	539	531	511	471	440	419	398	390
26°	482	472	464	446	410	383	364	351	338
27°	415	409	403	386	355	331	315	304	294
28°	366	353	348	334	307	292	273	259	255
29°	311	304	300	289	266	254	237	229	222
30°	272	262	259	250	234	220	204	198	191
32.5°	187	181	179	173	163	154	146	141	137
35°	132	129	127	123	117	112	105	102	99
37.5°	95	94	93	90	85	82	77	74	72
40°	70	69	67	66	62	59	56	53	51
42.5°	52	50	48	48	45	42	40	37	36
45°	36	35	34	33	31	28	27	25	24
47.5°	23	23	22	21	19	17	17	16	15
50°	14	13	12	11	10	10	10	10	9
52.5°	6	6	5	5	5	5	5	6	6
55°	3	2	2	2	3	4	4	5	5
57.5°	3	2	2	2	3	3	4	4	4
60°	3	3	2	2	3	3	3	3	3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	3	3	2	2	2	1	1	1	1
70°	3	3	2	1	1	1	1	1	1
72.5°	3	3	2	1	1	1	0	1	1
75°	3	3	2	1	0	0	0	0	0
77.5°	3	3	2	1	0	0	0	0	0
80°	2	2	1	0	0	0	0	0	0
82.5°	1	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	2
65°	3	3	2	2	2	2	2	1	1	1



(END OF REPORT)