

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: P209527

Luminaire Tested: **LDSQA4A18930D2WD010TED2W LAR15SP 4LA1H DIF-20**

Test Date: 11/01/16

Test Information

Test Method: LM-41-14
Report Number: P209527
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29027)
Test Lab: INNOVATION CENTER-P2
Test Date: 11/01/16
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQA4A18930D2WD010TED2W LAR15SP 4LA1H DIF-20
Description: 4" SQUARE, 1800lm 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: 960.7 lumens
Efficiency: N/A
Efficacy: 29.2 lumens/watt
Spacing Criteria (0/90/45): 0.54 / 0.54 / 0.57
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

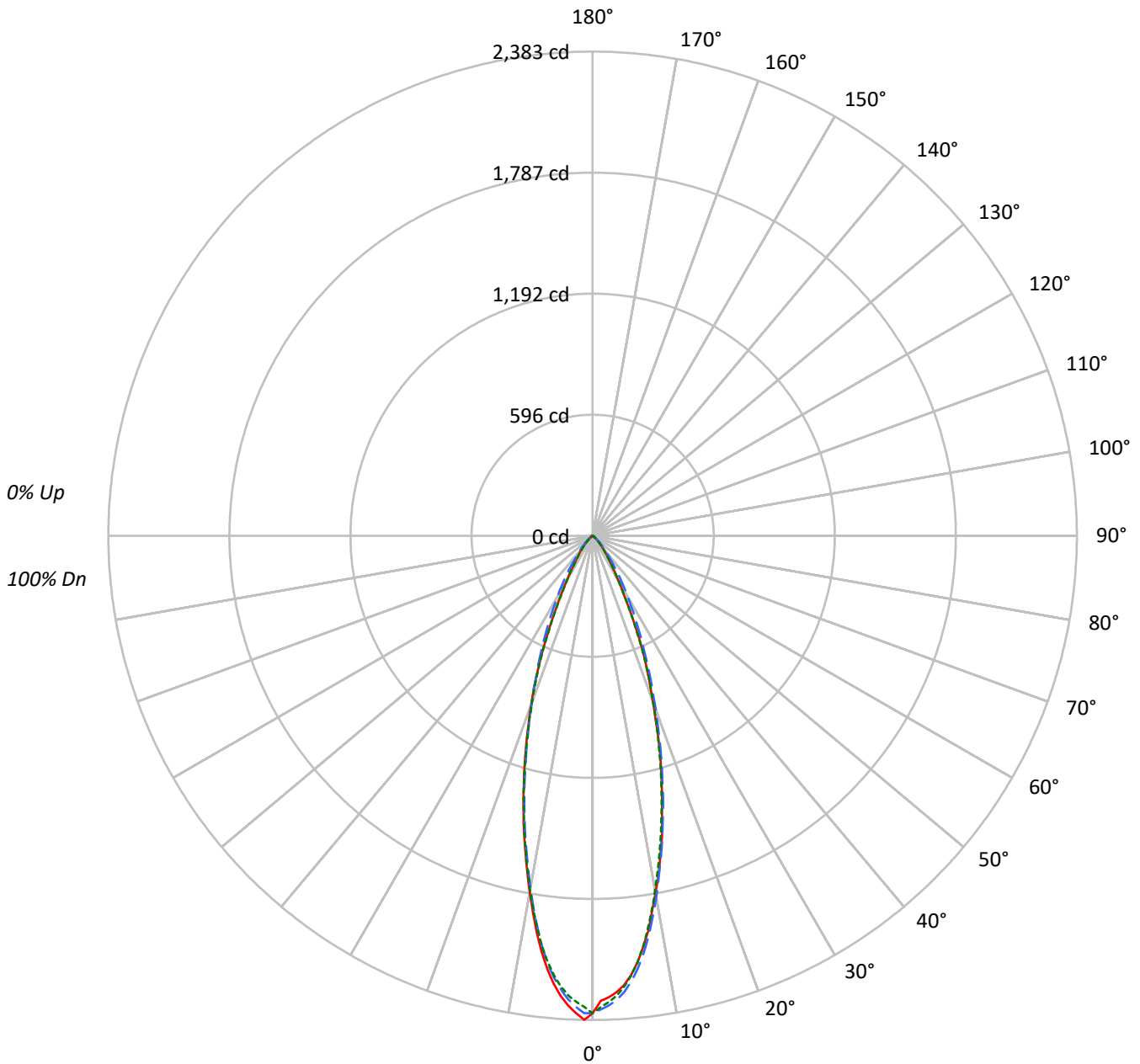
Input Watts (W): 32.9
Input Voltage (V): 120.0
Input Current (A_{in}): 0.277
Voltage Rise (V): NR
Power Factor: 0.9943
Total Harmonic Distortion (THDi): 12.3%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.2
Test Distance: 25 FT



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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	109	107	112	110	108	106	106	104	103	102	101	99	98	97	97	95																			
2	109	105	101	98	107	103	100	97	100	98	95	97	95	93	95	93	91	90																			
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	86	85																			
4	100	94	89	85	99	93	88	85	91	87	84	89	86	83	87	84	82	81																			
5	96	89	84	80	95	88	84	80	87	82	79	85	81	79	83	80	78	77																			
6	93	85	80	76	91	84	79	76	83	78	75	81	78	75	80	77	74	73																			
7	89	81	76	72	88	80	75	72	79	75	72	78	74	71	77	73	71	70																			
8	85	77	72	69	84	77	72	69	76	71	68	75	71	68	74	70	68	67																			
9	82	74	69	66	81	74	69	65	73	68	65	72	68	65	71	67	65	64																			
10	79	71	66	63	78	71	66	63	70	66	62	69	65	62	68	65	62	61																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	227657	227657	227657
5°	211120	211314	215010
10°	175197	174311	175394
15°	132286	131484	131885
20°	89484	89897	90825
25°	54193	53552	54193
30°	27742	27854	28413
35°	15729	15256	15847
40°	8979	8979	9485
45°	4521	4795	5206
50°	1507	1959	2261
55°	844	1013	1689
60°	775	775	1550
65°	688	688	688
70°	566	566	566
75°	374	374	374
80°	558	558	558
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.7	20.4
10°-20°	361.3	37.6
20°-30°	249.3	25.9
30°-40°	103.3	10.7
40°-50°	36.8	3.8
50°-60°	8.9	0.9
60°-70°	3.8	0.4
70°-80°	1.4	0.1
80°-90°	0.3	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°	806.3	83.9
0°-40°	909.5	94.7
0°-60°	955.2	99.4
0°-90°	960.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	960.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2350	2350	2350	2350	2350	
5°	2171	2200	2173	2183	2211	194
15°	1319	1339	1311	1296	1315	361
25°	507	572	501	565	507	233
35°	133	188	129	194	134	87
45°	33	55	35	57	38	27
55°	5	10	6	13	10	5
65°	3	3	3	5	3	3
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°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2350	2350	2350	2350	2350	2350	2350	2350	2350
1°	2289	2322	2332	2314	2320	2349	2350	2376	2383
2°	2273	2305	2313	2293	2296	2322	2321	2345	2351
3°	2250	2283	2286	2264	2266	2288	2285	2307	2315
4°	2217	2249	2249	2226	2225	2244	2239	2260	2269
5°	2171	2203	2200	2176	2173	2189	2183	2201	2211
6°	2110	2145	2139	2116	2111	2124	2116	2132	2142
7°	2039	2075	2068	2043	2037	2046	2037	2052	2063
8°	1965	1994	1984	1961	1953	1960	1948	1961	1973
9°	1870	1905	1894	1873	1864	1867	1856	1867	1878
10°	1781	1814	1804	1782	1772	1773	1761	1772	1783
11°	1699	1720	1709	1689	1678	1678	1666	1675	1687
12°	1604	1626	1615	1598	1585	1595	1572	1580	1592
13°	1516	1534	1523	1507	1493	1503	1479	1487	1500
14°	1410	1439	1430	1417	1401	1409	1387	1392	1407
15°	1319	1346	1339	1327	1311	1319	1296	1301	1315
16°	1223	1251	1246	1237	1218	1227	1205	1209	1223
17°	1142	1157	1158	1148	1128	1139	1118	1121	1134
18°	1044	1066	1070	1061	1040	1052	1033	1034	1047
19°	947	978	985	966	954	968	951	952	962
20°	868	894	904	895	872	887	874	883	881
21°	791	815	828	818	793	811	810	807	808
22°	718	741	758	746	720	739	734	730	731
23°	649	671	691	677	646	672	679	673	653
24°	582	607	629	614	572	609	620	608	578
25°	507	548	572	552	501	546	565	543	507
26°	439	489	519	491	437	485	514	482	443
27°	379	430	470	433	380	428	467	425	385
28°	325	376	424	380	330	376	425	373	334
29°	288	328	382	332	286	329	385	327	291
30°	248	287	344	291	249	289	348	282	254
32.5°	178	204	261	208	176	206	265	203	182
35°	133	150	188	151	129	151	194	151	134
37.5°	97	112	136	111	96	113	141	115	100
40°	71	84	101	83	71	84	103	88	75
42.5°	50	62	74	62	51	63	77	66	54
45°	33	44	55	45	35	46	57	48	38
47.5°	20	29	40	31	23	32	41	34	25
50°	10	18	27	19	13	20	29	22	15
52.5°	6	9	17	11	8	11	18	14	10
55°	5	5	10	7	6	7	13	10	10
57.5°	4	4	6	6	5	7	11	10	9
60°	4	4	5	5	4	6	9	9	8



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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	3	2	3	3	4	2
70°	2	2	2	2	2	2	2	2	2
72.5°	2	2	2	2	1	2	2	2	1
75°	1	2	1	1	1	1	1	1	1
77.5°	1	1	1	1	1	1	1	1	1
80°	1	1	1	1	1	1	1	1	1
82.5°	0	0	1	1	0	1	1	1	1
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°	4	3	4	4	4	5	7	7	5
65°	3	3	3	3	3	4	5	5	3



(END OF REPORT)