

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: P209525

Luminaire Tested: **LDSQA4A13930D2WD010TED2W LAR15SP 4LA1H DIF-20**

Test Date: 11/01/16

Test Information

Test Method: LM-41-14
Report Number: P209525
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29025)
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: LDSQA4A13930D2WD010TED2W LAR15SP 4LA1H DIF-20
Description: 4" SQUARE, 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: 774.1 lumens
Efficiency: N/A
Efficacy: 35.2 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 0.53 / 0.57
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

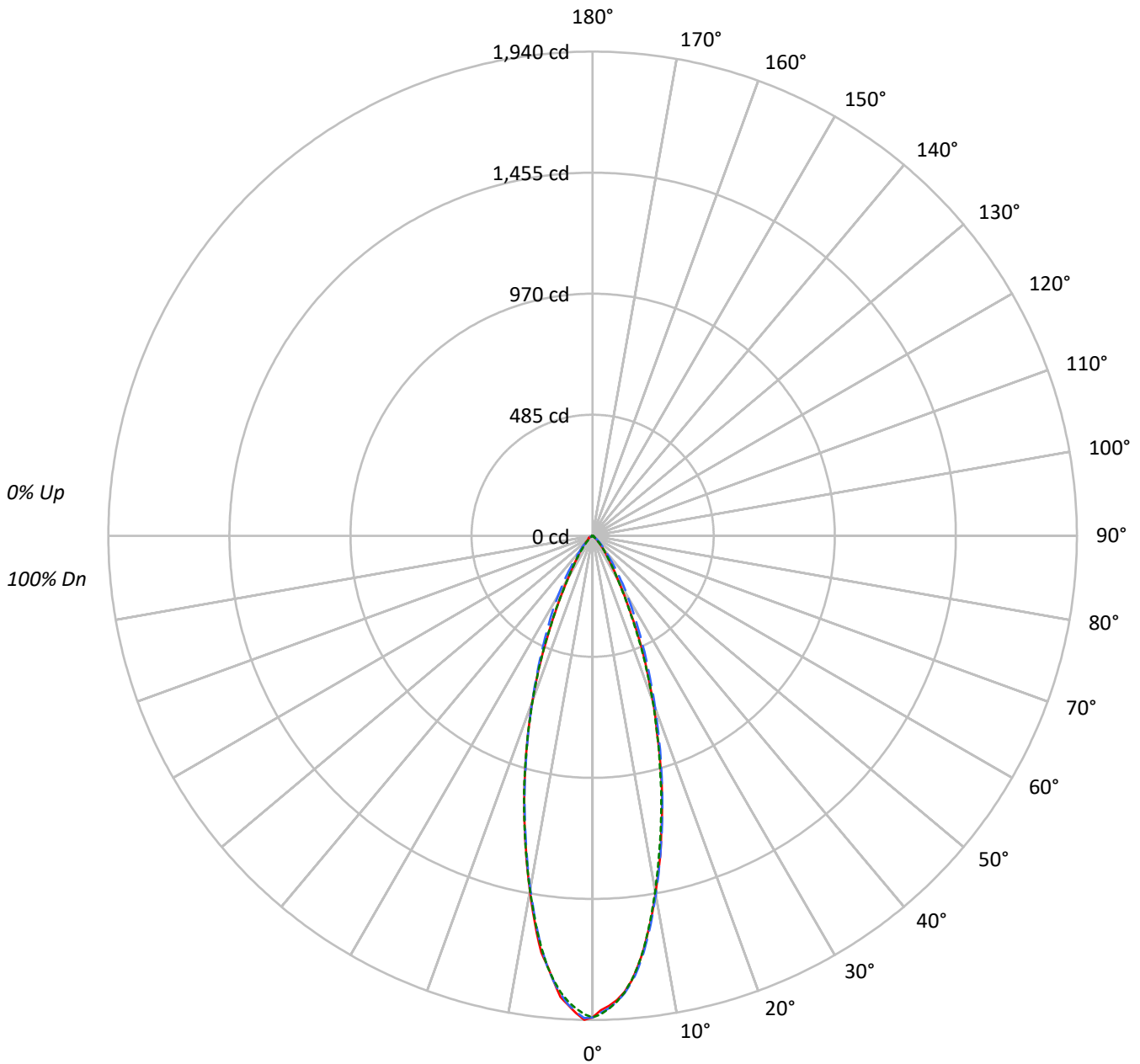
Input Watts (W): 22
Input Voltage (V): 120.0
Input Current (A_{in}): 0.186
Voltage Rise (V): NR
Power Factor: 0.9908
Total Harmonic Distortion (THDi): 12.7%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.5
Test Distance: 25 FT



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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	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	86	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	68	65	64																			
10	79	71	66	63	78	71	66	63	70	66	63	69	65	62	69	65	62	61																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	186970	186970	186970
5°	174069	173875	174264
10°	143030	142046	142341
15°	107714	106310	106010
20°	73196	72268	72680
25°	43718	42542	42115
30°	22708	21925	22037
35°	12299	12418	12536
40°	7082	7082	8852
45°	3562	3836	6028
50°	1206	1507	3768
55°	676	844	3378
60°	581	581	3294
65°	458	458	2292
70°	566	283	283
75°	374	374	374
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.6	20.6
10°-20°	290.9	37.6
20°-30°	198.5	25.6
30°-40°	82.0	10.6
40°-50°	29.7	3.8
50°-60°	8.4	1.1
60°-70°	3.7	0.5
70°-80°	1.2	0.2
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°	649.0	83.8
0°-40°	730.9	94.4
0°-60°	769.1	99.4
0°-90°	774.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	774.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1930	1930	1930	1930	1930	
5°	1790	1796	1788	1792	1792	160
15°	1074	1079	1060	1052	1057	293
25°	409	464	398	451	394	189
35°	104	153	105	150	106	70
45°	26	43	28	44	44	21
55°	4	8	5	11	20	4
65°	2	2	2	4	10	2
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°	1930	1930	1930	1930	1930	1930	1930	1930	1930
1°	1901	1896	1911	1917	1917	1922	1933	1933	1940
2°	1885	1879	1894	1898	1896	1900	1909	1909	1914
3°	1862	1856	1870	1872	1869	1870	1880	1879	1882
4°	1832	1825	1838	1836	1834	1833	1840	1840	1853
5°	1790	1783	1796	1791	1788	1786	1792	1791	1792
6°	1735	1732	1743	1738	1735	1730	1736	1734	1733
7°	1673	1672	1681	1674	1670	1664	1670	1668	1683
8°	1599	1602	1611	1602	1598	1590	1595	1593	1608
9°	1529	1528	1536	1525	1521	1513	1517	1514	1527
10°	1454	1453	1459	1448	1444	1435	1437	1433	1447
11°	1376	1376	1381	1369	1364	1356	1358	1353	1366
12°	1306	1301	1305	1292	1287	1278	1279	1274	1286
13°	1222	1225	1229	1215	1210	1201	1201	1196	1208
14°	1149	1149	1153	1141	1135	1125	1126	1120	1132
15°	1074	1064	1079	1066	1060	1051	1052	1045	1057
16°	995	998	1005	991	983	976	977	971	981
17°	917	925	934	927	910	905	906	899	909
18°	838	852	863	855	838	833	836	830	838
19°	774	783	795	787	768	766	771	763	770
20°	710	717	731	713	701	701	707	700	705
21°	637	654	670	652	636	640	648	640	641
22°	578	595	613	593	576	583	593	583	576
23°	523	540	559	538	516	529	543	528	511
24°	469	489	510	487	454	478	495	473	450
25°	409	442	464	435	398	427	451	421	394
26°	354	395	421	391	347	379	410	372	344
27°	306	349	382	344	301	334	373	328	300
28°	271	305	344	301	261	293	338	287	261
29°	230	267	310	264	226	257	305	252	225
30°	203	232	280	229	196	224	275	219	197
32.5°	145	165	211	164	143	161	205	162	142
35°	104	120	153	120	105	118	150	119	106
37.5°	77	88	109	89	77	88	109	90	85
40°	56	65	79	65	56	67	80	70	70
42.5°	39	48	58	48	40	50	59	55	57
45°	26	34	43	35	28	36	44	43	44
47.5°	15	22	30	24	17	25	32	33	33
50°	8	13	20	14	10	16	21	24	25
52.5°	4	7	12	8	6	9	14	18	22
55°	4	4	8	6	5	6	11	16	20
57.5°	4	4	5	5	4	5	9	14	18
60°	3	3	4	4	3	5	7	13	17



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	2	2	2	2	2	2	3	4	4
70°	2	2	2	2	1	2	2	2	1
72.5°	2	2	1	1	1	1	1	1	1
75°	1	1	1	1	1	1	1	1	1
77.5°	1	1	1	1	1	1	1	1	1
80°	0	1	1	1	0	1	1	1	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	3	3	3	4	5	10	14
65°	2	2	2	2	2	3	4	7	10



(END OF REPORT)