

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: P209524

Luminaire Tested: **LDSQA4A09930D2WD010TED2W LAR15SP 4LAL1H DIF-20**

Test Date: 11/01/16

Test Information

Test Method: LM-41-14
Report Number: P209524
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29024)
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: LDSQA4A09930D2WD010TED2W LAR15SP 4LAL1H DIF-20
Description: 4" SQUARE, 900lm 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: 497.8 lumens
Efficiency: N/A
Efficacy: 36.3 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

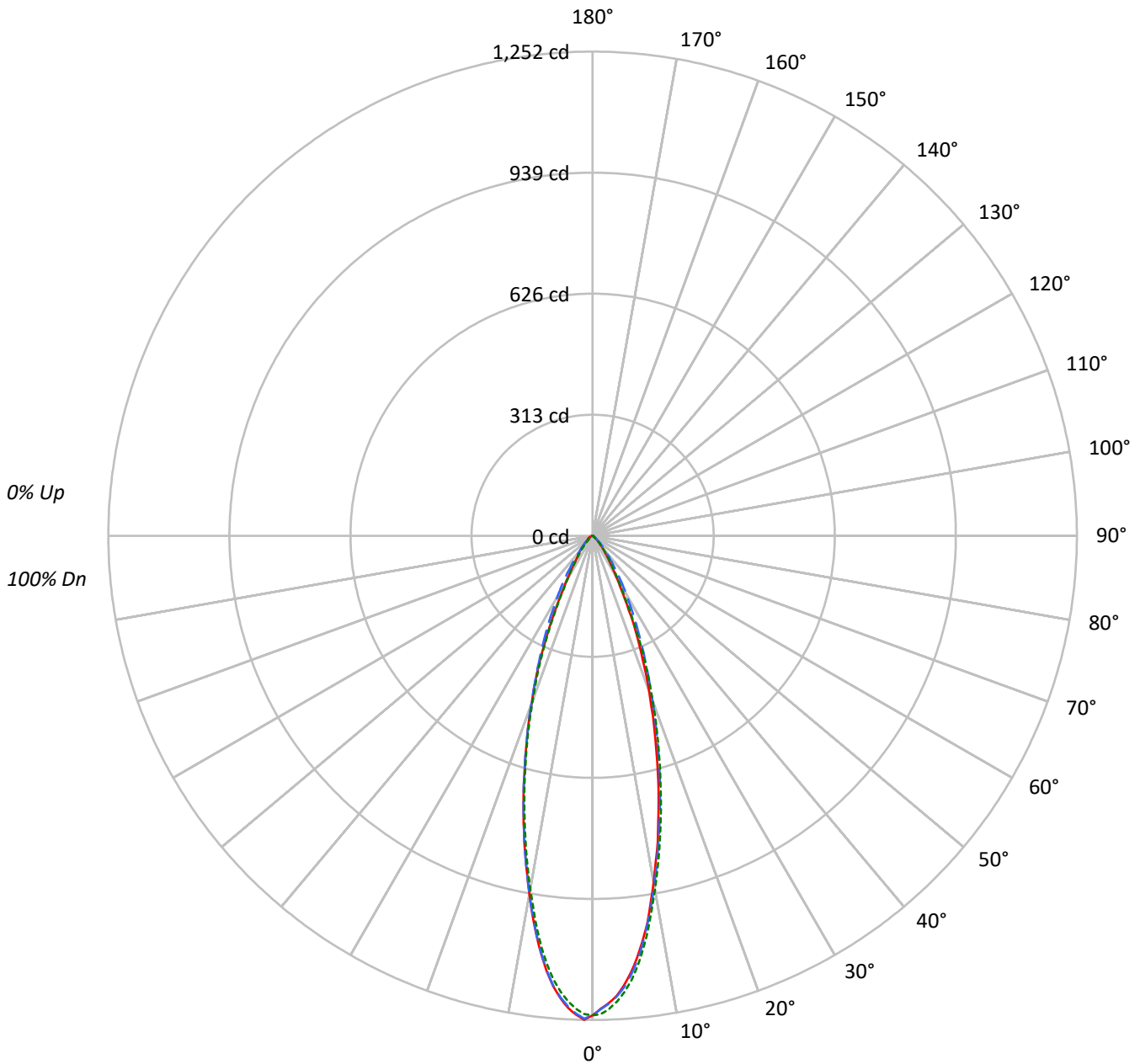
Input Watts (W): 13.7
Input Voltage (V): 120.0
Input Current (A_{in}): 0.116
Voltage Rise (V): NR
Power Factor: 0.9975
Total Harmonic Distortion (THDi): 15.0%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.8
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	120126	120126	120126
5°	110276	112124	113680
10°	89418	91287	92664
15°	65792	68299	69202
20°	44021	46701	47629
25°	26509	27898	28753
30°	13535	14542	15101
35°	7687	8160	8397
40°	4426	4806	6070
45°	2192	2603	4384
50°	754	904	2864
55°	507	507	2365
60°	388	388	2325
65°	458	229	1605
70°	283	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°	102.3	20.5
10°-20°	185.4	37.2
20°-30°	127.4	25.6
30°-40°	53.7	10.8
40°-50°	20.1	4.0
50°-60°	5.8	1.2
60°-70°	2.3	0.5
70°-80°	0.8	0.2
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°	415.1	83.4
0°-40°	468.8	94.2
0°-60°	494.7	99.4
0°-90°	497.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	497.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1240	1240	1240	1240	1240	
5°	1134	1140	1153	1167	1169	101
15°	656	673	681	689	690	179
25°	248	286	261	297	269	113
35°	65	96	69	103	71	43
45°	16	28	19	30	32	13
55°	3	5	3	8	14	3
65°	2	2	1	2	7	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°	1240	1240	1240	1240	1240	1240	1240	1240	1240
1°	1223	1215	1224	1217	1237	1236	1249	1240	1252
2°	1209	1203	1211	1206	1224	1223	1236	1228	1239
3°	1191	1185	1193	1189	1206	1205	1219	1209	1222
4°	1165	1162	1170	1166	1182	1181	1196	1185	1198
5°	1134	1132	1140	1138	1153	1151	1167	1155	1169
6°	1098	1097	1105	1103	1117	1115	1131	1119	1133
7°	1057	1056	1063	1063	1075	1072	1089	1076	1091
8°	1013	1009	1016	1012	1029	1026	1042	1028	1043
9°	959	959	967	970	978	976	992	978	993
10°	909	909	917	920	928	925	941	927	942
11°	856	858	867	870	878	875	890	876	890
12°	810	808	817	820	828	824	839	826	840
13°	754	759	768	772	778	774	789	777	789
14°	705	709	720	723	729	725	738	727	739
15°	656	660	673	676	681	676	689	679	690
16°	606	612	626	629	633	628	641	631	641
17°	556	565	581	584	586	582	594	585	594
18°	514	519	535	539	541	536	549	539	549
19°	466	475	492	497	497	494	505	496	505
20°	427	433	452	455	453	458	464	455	462
21°	388	399	414	417	413	418	425	417	424
22°	345	358	379	379	374	386	390	381	385
23°	311	328	346	345	336	352	356	349	345
24°	278	297	315	313	297	318	326	316	306
25°	248	267	286	281	261	286	297	282	269
26°	213	239	260	250	228	254	270	252	236
27°	184	208	234	220	197	224	246	220	204
28°	158	182	211	193	171	196	222	194	177
29°	140	160	190	169	149	172	201	171	155
30°	121	140	172	149	130	151	182	150	135
32.5°	87	101	131	106	94	109	139	109	98
35°	65	75	96	78	69	80	103	80	71
37.5°	48	57	70	58	51	60	75	61	58
40°	35	42	51	44	38	45	55	47	48
42.5°	24	31	38	33	27	34	41	37	40
45°	16	22	28	23	19	25	30	30	32
47.5°	10	15	20	16	11	18	22	24	25
50°	5	9	14	9	6	11	15	18	19
52.5°	3	5	9	5	4	6	10	14	16
55°	3	3	5	3	3	4	8	11	14
57.5°	2	2	3	3	3	4	6	10	13
60°	2	2	3	3	2	3	4	9	12



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	1	1	1	1	1	1	1	2	2
70°	1	1	1	1	1	1	1	1	1
72.5°	1	1	1	1	1	1	1	1	1
75°	1	1	1	1	1	1	1	1	1
77.5°	0	0	1	0	0	1	1	0	0
80°	0	0	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	2	2	2	3	3	7	9
65°	2	2	2	2	1	2	2	4	7



(END OF REPORT)