

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: P209523

Luminaire Tested: **LDSQA4A09930D2WD010TED2W LAR15SP 4LA1H DIF-20**

Test Date: 11/01/16

Test Information

Test Method: LM-41-14
Report Number: P209523
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29023)
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 4LA1H DIF-20
Description: 4" SQUARE, 900lm 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: 530.9 lumens
Efficiency: N/A
Efficacy: 38.7 lumens/watt
Spacing Criteria (0/90/45): 0.52 / 0.53 / 0.57
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

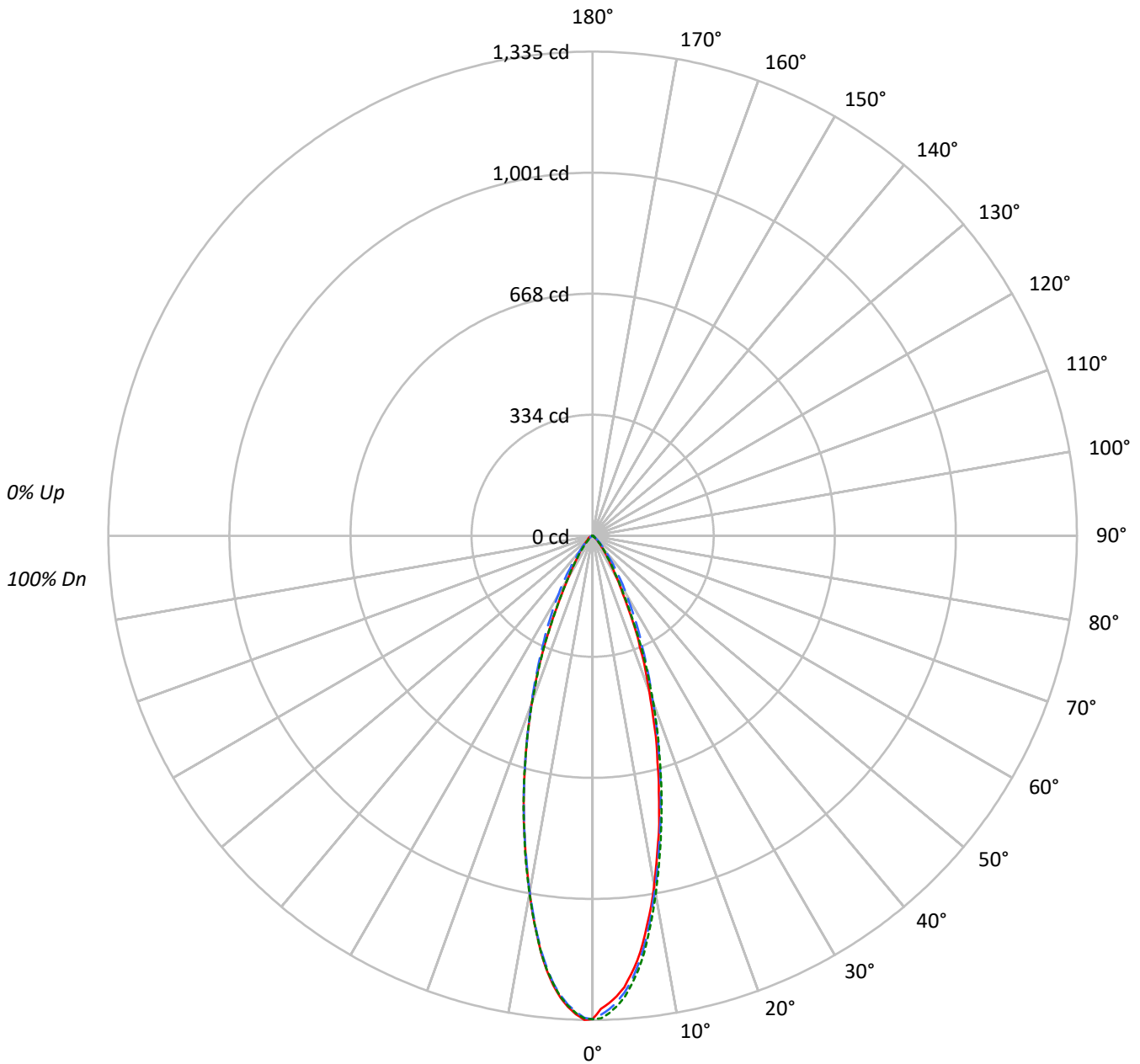
Input Watts (W): 13.7
Input Voltage (V): 120.0
Input Current (A_{in}): 0.116
Voltage Rise (V): NR
Power Factor: 0.9975
Total Harmonic Distortion (THDi): 15.4%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.9
Test Distance: 25 FT



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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	98	97	95																			
2	109	105	102	99	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	87	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	83	79	85	81	79	84	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	74	71	70																			
8	86	77	72	69	84	77	72	69	76	72	68	75	71	68	74	70	68	67																			
9	82	74	69	66	81	74	69	66	73	68	65	72	68	65	71	68	65	64																			
10	79	71	66	63	79	71	66	63	70	66	63	69	65	63	69	65	62	61																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	129135	129135	129135
5°	118056	120682	120973
10°	96206	98567	98370
15°	70606	73615	73515
20°	47113	50206	50515
25°	28326	29609	29609
30°	14206	15213	15213
35°	8042	8278	8633
40°	4553	4932	6070
45°	2329	2603	4247
50°	754	904	2713
55°	507	507	2365
60°	388	388	2325
65°	458	229	1605
70°	283	283	283
75°	374	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.1	20.7
10°-20°	199.8	37.6
20°-30°	135.8	25.6
30°-40°	55.9	10.5
40°-50°	20.4	3.8
50°-60°	5.7	1.1
60°-70°	2.4	0.4
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°	445.7	84.0
0°-40°	501.6	94.5
0°-60°	527.7	99.4
0°-90°	530.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	530.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1333	1333	1333	1333	1333	
5°	1214	1231	1241	1239	1244	108
15°	704	725	734	732	733	193
25°	265	310	277	316	277	121
35°	68	102	70	106	73	45
45°	17	29	19	31	31	14
55°	3	5	3	7	14	3
65°	2	2	1	2	7	2
75°	1	1	0	1	0	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°	1333	1333	1333	1333	1333	1333	1333	1333	1333
1°	1305	1315	1321	1319	1331	1331	1329	1339	1335
2°	1290	1300	1306	1304	1317	1316	1314	1324	1320
3°	1271	1280	1287	1287	1298	1297	1295	1304	1301
4°	1248	1259	1262	1263	1274	1272	1270	1278	1276
5°	1214	1229	1231	1231	1241	1241	1239	1245	1244
6°	1178	1190	1192	1194	1204	1202	1200	1205	1206
7°	1134	1148	1148	1151	1160	1157	1156	1160	1161
8°	1082	1097	1098	1102	1109	1107	1105	1107	1108
9°	1033	1038	1045	1049	1056	1054	1052	1053	1056
10°	978	984	990	995	1002	1000	998	998	1000
11°	922	928	935	940	947	944	943	949	945
12°	867	876	881	886	893	891	889	894	891
13°	816	823	828	834	838	837	836	841	837
14°	756	770	777	782	786	785	784	788	785
15°	704	716	725	731	734	739	732	735	733
16°	649	664	674	680	682	688	680	683	681
17°	604	613	625	629	630	637	631	633	631
18°	553	564	577	582	582	588	583	584	582
19°	500	516	530	535	533	542	537	538	535
20°	457	471	486	490	487	497	494	493	490
21°	416	428	445	448	441	453	452	451	447
22°	377	388	407	408	400	414	415	412	403
23°	334	352	371	370	359	376	379	374	358
24°	304	317	338	334	316	340	346	336	316
25°	265	286	310	300	277	305	316	300	277
26°	227	255	282	266	240	270	288	266	241
27°	195	222	255	233	208	237	261	233	207
28°	168	194	229	204	180	207	236	203	180
29°	149	169	205	178	157	181	213	177	156
30°	127	148	185	156	136	159	192	155	136
32.5°	92	106	140	112	99	114	145	112	98
35°	68	78	102	82	70	84	106	83	73
37.5°	49	58	73	61	53	62	76	62	58
40°	36	44	53	46	39	47	56	48	48
42.5°	26	32	39	34	28	35	42	38	39
45°	17	22	29	23	19	25	31	30	31
47.5°	10	14	20	16	12	17	22	23	23
50°	5	8	14	9	6	11	15	17	18
52.5°	3	4	8	5	4	6	10	12	15
55°	3	3	5	4	3	4	7	11	14
57.5°	2	2	4	3	3	4	6	10	13
60°	2	2	3	3	2	3	5	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	2	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	0	1	1	1	0
77.5°	0	1	1	1	0	1	1	1	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)