

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: P209526

Luminaire Tested: **LDSQA4A13930D2WD010TED2W LAR15SP 4LAL1H DIF-20**

Test Date: 11/01/16

Test Information

Test Method: LM-41-14
Report Number: P209526
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29026)
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 4LAL1H DIF-20
Description: 4" SQUARE, 1300lm 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: 722.6 lumens
Efficiency: N/A
Efficacy: 31.4 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

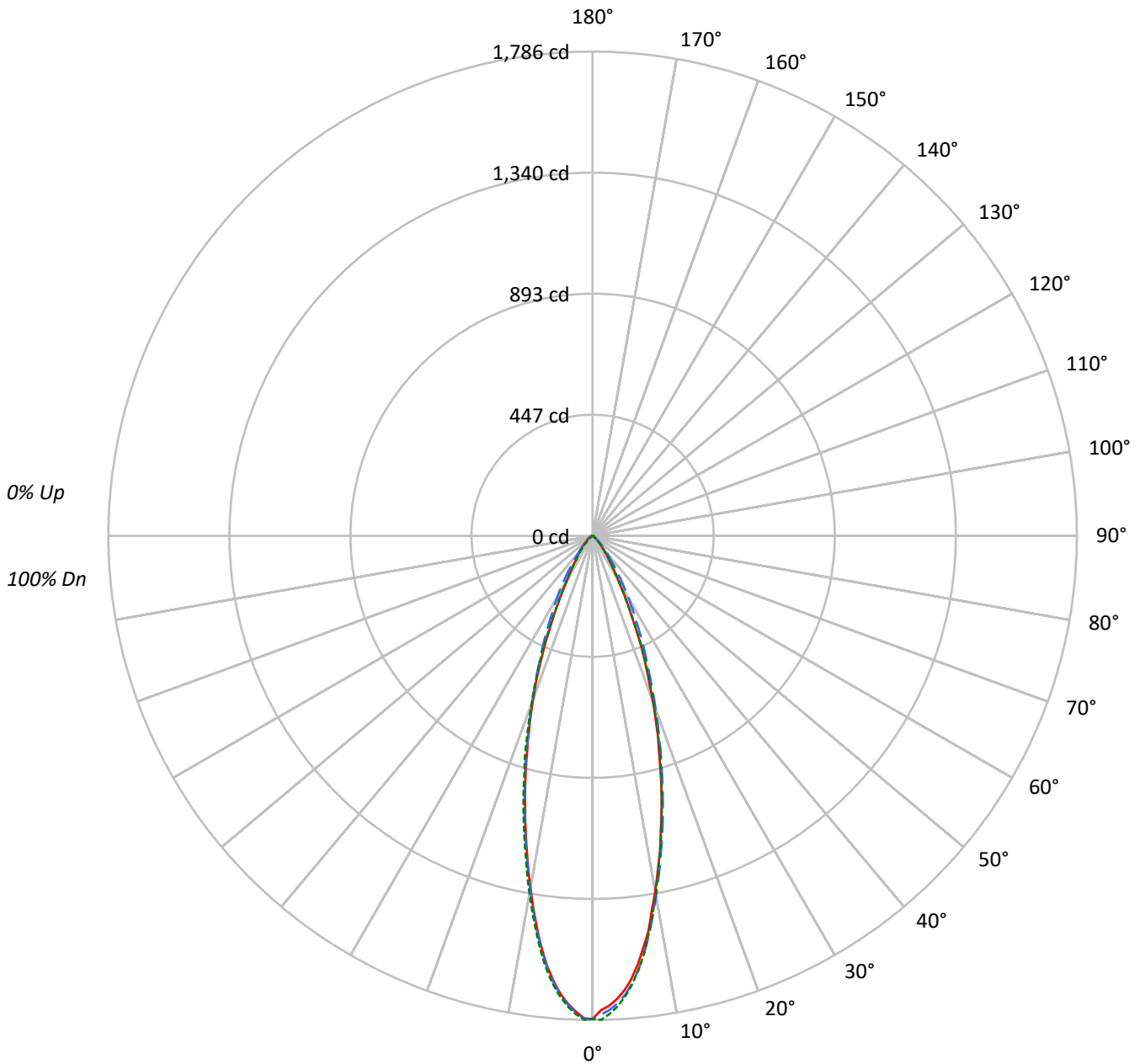
Input Watts (W): 23
Input Voltage (V): 120.0
Input Current (A_{in}): 0.186
Voltage Rise (V): NR
Power Factor: 0.9909
Total Harmonic Distortion (THDi): 12.7%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 24 HR
Ambient Temperature (°C): 24.5
Test Distance: 25 FT



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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	109	107	106	105	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	80																			
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	75	82	78	75	81	77	74	80	77	74	73																			
7	89	81	75	72	87	80	75	72	79	74	71	78	74	71	77	73	71	69																			
8	85	77	72	68	84	77	72	68	75	71	68	75	71	68	74	70	67	66																			
9	82	74	69	65	81	73	68	65	72	68	65	72	68	65	71	67	64	63																			
10	79	71	66	62	78	70	66	62	70	65	62	69	65	62	68	65	62	61																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	172632	172632	172632
5°	159580	161719	160455
10°	130832	131816	129750
15°	98387	98688	96381
20°	67113	67938	65979
25°	40084	40618	39229
30°	21142	21254	20806
35°	11708	11945	12418
40°	6576	6955	8852
45°	3425	3699	6439
50°	1055	1356	4220
55°	676	844	3547
60°	581	581	3294
65°	458	458	2292
70°	566	283	566
75°	374	374	374
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.3	20.4
10°-20°	268.6	37.2
20°-30°	185.1	25.6
30°-40°	78.6	10.9
40°-50°	29.5	4.1
50°-60°	8.6	1.2
60°-70°	3.7	0.5
70°-80°	1.1	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°	601.1	83.2
0°-40°	679.7	94.1
0°-60°	717.7	99.3
0°-90°	722.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	722.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1782	1782	1782	1782	1782	
5°	1641	1659	1663	1654	1650	146
15°	981	1000	984	968	961	268
25°	375	432	380	416	367	174
35°	99	146	101	144	105	66
45°	25	42	27	44	47	20
55°	4	7	5	12	21	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°	1782	1782	1782	1782	1782	1782	1782	1782	1782
1°	1750	1753	1767	1770	1786	1777	1783	1778	1780
2°	1735	1738	1751	1753	1766	1757	1761	1756	1757
3°	1711	1716	1729	1729	1740	1730	1733	1727	1729
4°	1681	1687	1699	1697	1706	1695	1698	1691	1694
5°	1641	1648	1659	1656	1663	1652	1654	1646	1650
6°	1590	1601	1611	1607	1612	1600	1601	1593	1597
7°	1532	1545	1554	1549	1552	1540	1540	1531	1535
8°	1473	1480	1489	1483	1484	1472	1471	1462	1466
9°	1398	1411	1419	1413	1413	1401	1399	1389	1394
10°	1330	1342	1349	1343	1340	1328	1325	1315	1319
11°	1257	1270	1277	1270	1267	1254	1251	1241	1245
12°	1194	1200	1207	1199	1194	1182	1179	1169	1173
13°	1117	1131	1137	1127	1124	1111	1107	1098	1101
14°	1050	1061	1069	1058	1054	1042	1038	1029	1030
15°	981	991	1000	988	984	972	968	960	961
16°	911	922	933	920	914	905	901	892	892
17°	838	854	866	851	853	837	834	825	825
18°	779	788	801	787	787	773	771	762	761
19°	709	724	739	723	721	710	710	700	700
20°	651	663	678	663	659	650	652	642	640
21°	583	605	623	606	599	594	598	587	585
22°	530	551	570	552	543	541	547	537	529
23°	480	501	521	502	489	492	500	490	472
24°	429	454	475	455	433	446	457	442	418
25°	375	411	432	408	380	399	416	395	367
26°	326	367	393	361	332	356	379	351	322
27°	291	324	357	319	290	315	345	311	281
28°	250	285	323	280	252	277	313	278	246
29°	213	250	291	244	217	243	285	241	213
30°	189	217	263	213	190	213	257	210	186
32.5°	136	156	199	154	137	155	198	157	140
35°	99	114	146	113	101	115	144	116	105
37.5°	72	85	105	86	75	87	106	88	85
40°	52	63	76	64	55	65	79	69	70
42.5°	37	47	57	48	40	49	59	54	58
45°	25	33	42	34	27	36	44	44	47
47.5°	15	22	30	23	17	25	32	35	36
50°	7	13	20	14	9	16	22	26	28
52.5°	4	7	13	8	6	9	15	20	23
55°	4	4	7	5	5	6	12	16	21
57.5°	3	3	5	4	4	5	9	15	19
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	2	4	4
70°	2	2	2	2	1	2	2	2	2
72.5°	2	1	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	0	0	0	0	1	1	0	0
82.5°	0	0	1	0	0	1	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	6	10	13
65°	2	2	2	2	2	3	4	7	10



(END OF REPORT)