

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: METALUX

Report Number: P20021

Luminaire Tested: **WSC-432A-EB81-U**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-41-14  
Report Number: P20021  
Test Lab: PTC RESEARCH  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: WSC-432A-EB81-U  
Description: 4FT SURFACE MOUNT WRAP, 4 LAMP T8, WITH WHITE PLASTIC DIFFUSER  
Light Source: FOUR LINEAR FLUORESCENT LAMPS, F32T8 32W - 2800 LUMENS EA  
Ballast/Driver: ONE ELECTRONIC BALLAST.

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

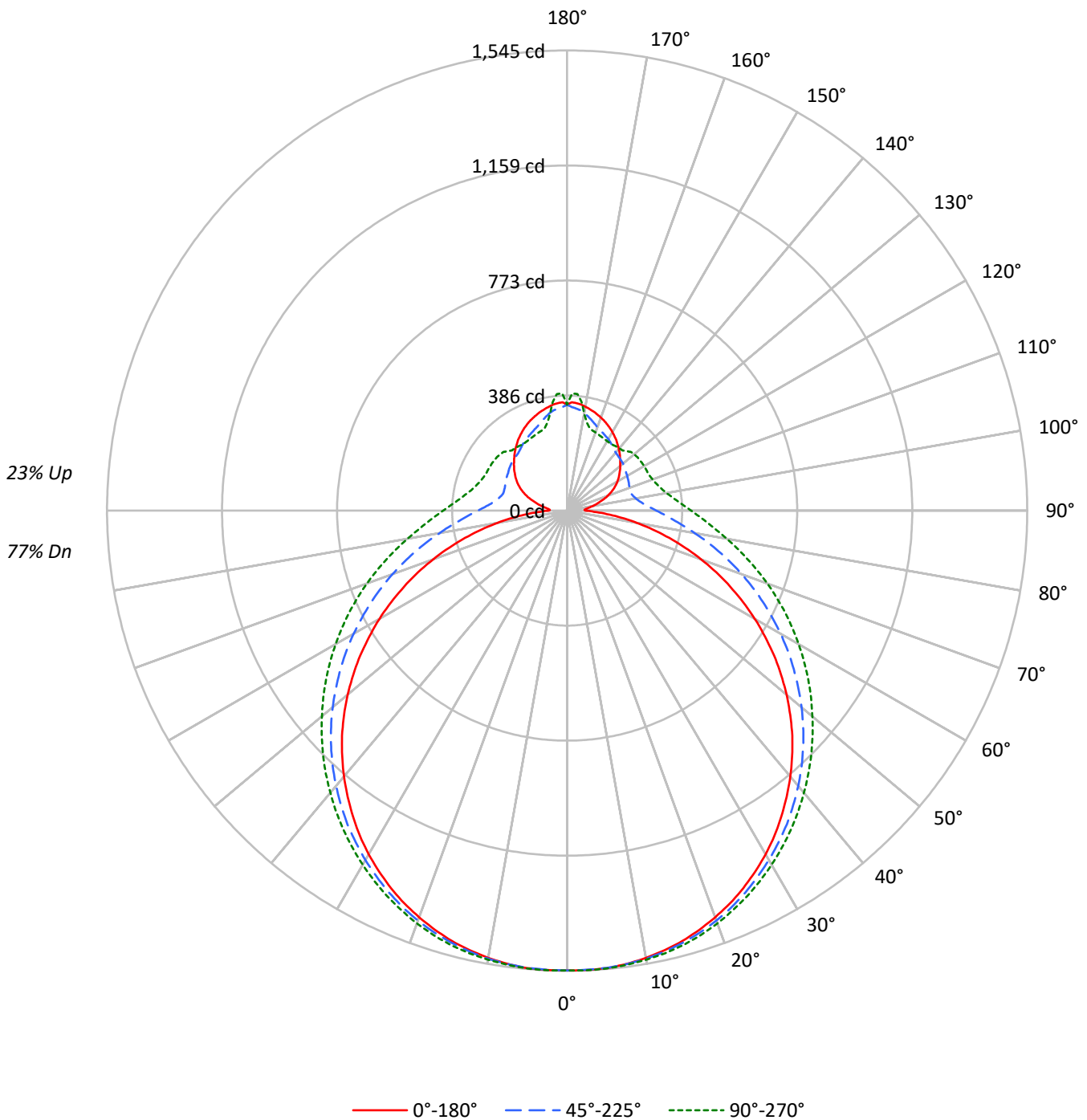
Lumens per Lamp: 2800 (4 lamps)  
Luminaire Lumens: 6901.8 lumens  
Efficiency: 61.6%  
Efficacy: 66.0 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.32 / 1.44  
Luminous Opening: Rectangular w/ Sides (W: 1.25' x L: 4.29' x H: 0.38')  
CIE Type: Semi-Direct

Input Watts (W): 104.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

TEST NUMBER: P20021

CATALOG NUMBER: WSC-432A-EB81-U

### Luminous Intensity Polar Plot





TEST NUMBER: P20021

CATALOG NUMBER: WSC-432A-EB81-U

**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	50	30	10	0													
RCR																																					
0	70	70	70	70	67	67	67	67	61	61	61	55	55	55	50	50	50	48						48													
1	63	59	56	54	59	56	54	51	51	49	47	46	45	43	42	41	40	37						37													
2	57	51	46	43	54	49	45	41	44	41	38	40	37	35	36	34	32	30						30													
3	51	44	39	35	48	42	38	34	39	35	31	35	32	29	32	29	27	25						25													
4	47	39	34	29	44	37	32	28	34	30	26	31	27	25	28	25	23	21						21													
5	43	35	29	25	41	33	28	24	30	26	23	28	24	21	25	22	20	18						18													
6	39	31	26	22	37	30	25	21	27	23	20	25	21	18	23	20	17	16						16													
7	36	28	23	19	35	27	22	18	25	20	17	23	19	16	21	18	15	14						14													
8	34	26	20	17	32	25	20	16	23	18	15	21	17	14	19	16	13	12						12													
9	32	23	18	15	30	22	18	14	21	17	14	19	15	13	17	14	12	11						11													
10	30	21	17	13	28	21	16	13	19	15	12	18	14	12	16	13	11	10						10													

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3098	3098	3098
5°	3082	3031	3028
10°	3060	2970	2963
15°	3036	2907	2903
20°	3007	2845	2839
25°	2976	2778	2775
30°	2940	2711	2711
35°	2895	2643	2650
40°	2845	2571	2588
45°	2790	2497	2530
50°	2720	2419	2472
55°	2637	2336	2420
60°	2537	2254	2371
65°	2415	2168	2331
70°	2266	2089	2299
75°	2075	2016	2290
80°	1839	1968	2327
85°	1543	1995	2459



TEST NUMBER: P20021

CATALOG NUMBER: WSC-432A-EB81-U

**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	146.8	2.1	1.3	0°	1544	1544	1544	1544	1544	
10°-20°	424.5	6.2	3.8	5°	1542	1542	1541	1544	1543	147
20°-30°	652.5	9.5	5.8	15°	1496	1498	1502	1509	1510	422
30°-40°	803.6	11.6	7.2	25°	1399	1404	1415	1427	1429	645
40°-50°	862.5	12.5	7.7	35°	1254	1264	1286	1304	1309	785
50°-60°	826.4	12.0	7.4	45°	1069	1086	1121	1149	1159	824
60°-70°	709.0	10.3	6.3	55°	848	876	929	972	988	757
70°-80°	539.3	7.8	4.8	65°	604	647	725	785	807	598
80°-90°	368.4	5.3	3.3	75°	355	419	526	601	626	376
90°-100°	264.3	3.8	2.4	85°	134	228	358	446	473	131
100°-110°	232.8	3.4	2.1	90°	61	168	299	388	416	37
110°-120°	227.9	3.3	2.0	95°	64	137	258	343	371	57
120°-130°	219.6	3.2	2.0	105°	115	144	222	292	318	122
130°-140°	199.5	2.9	1.8	115°	172	176	228	279	299	170
140°-150°	168.5	2.4	1.5	125°	214	203	239	283	297	192
150°-160°	133.7	1.9	1.2	135°	251	232	249	285	282	194
160°-170°	89.4	1.3	0.8	145°	288	264	265	263	269	180
170°-180°	33.0	0.5	0.3	155°	319	303	286	272	273	147
0°-30°	1223.7	17.7	10.9	165°	344	341	315	293	288	97
0°-40°	2027.3	29.4	18.1	175°	362	361	344	323	393	34
0°-60°	3716.2	53.8	33.2	180°	355	355	355	355	355	
0°-90°	5333.0	77.3	47.6							
90°-120°	725.0	10.5	6.5							
90°-150°	1312.7	19.0	11.7							
90°-180°	1569.0	22.7	14.0							
0°-180°	6901.8	100.0	61.6							



TEST NUMBER: P20021

CATALOG NUMBER: WSC-432A-EB81-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1544	1544	1544	1544	1544
2.5°	1544	1544	1543	1546	1545
5°	1542	1542	1541	1544	1543
7.5°	1535	1536	1536	1539	1538
10°	1525	1526	1528	1532	1531
12.5°	1512	1514	1516	1522	1522
15°	1496	1498	1502	1509	1510
17.5°	1476	1479	1485	1493	1494
20°	1453	1457	1465	1474	1475
22.5°	1428	1432	1442	1452	1453
25°	1399	1404	1415	1427	1429
27.5°	1367	1373	1386	1399	1402
30°	1333	1339	1355	1370	1373
32.5°	1295	1303	1321	1338	1342
35°	1254	1264	1286	1304	1309
37.5°	1211	1223	1247	1268	1274
40°	1166	1180	1207	1230	1237
42.5°	1118	1134	1165	1190	1199
45°	1069	1086	1121	1149	1159
47.5°	1016	1037	1075	1106	1118
50°	962	985	1028	1062	1075
52.5°	905	932	978	1017	1032
55°	848	876	929	972	988
57.5°	788	820	879	926	943
60°	728	763	828	879	898
62.5°	666	705	776	832	852
65°	604	647	725	785	807
67.5°	542	589	674	738	760
70°	479	531	624	692	715
72.5°	416	474	574	646	670
75°	355	419	526	601	626
77.5°	295	366	479	558	584
80°	238	316	435	518	544
82.5°	184	270	395	480	507
85°	134	228	358	446	473
87.5°	90	194	327	415	443
90°	61	168	299	388	416
92.5°	58	149	276	364	392
95°	64	137	258	343	371
97.5°	73	132	244	325	354
100°	86	132	234	311	339
102.5°	100	137	227	300	327
105°	115	144	222	292	318
107.5°	130	152	222	285	311
110°	145	161	223	281	305



TEST NUMBER: P20021

CATALOG NUMBER: WSC-432A-EB81-U

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	159	169	225	279	301
115°	172	176	228	279	299
117.5°	184	182	230	280	299
120°	195	189	233	281	298
122.5°	205	196	235	281	298
125°	214	203	239	283	297
127.5°	224	210	242	284	296
130°	233	217	245	284	294
132.5°	242	225	247	284	291
135°	251	232	249	285	282
137.5°	261	240	251	281	274
140°	270	248	254	276	273
142.5°	279	256	259	269	271
145°	288	264	265	263	269
147.5°	296	273	271	262	268
150°	304	282	277	263	269
152.5°	312	293	281	267	271
155°	319	303	286	272	273
157.5°	326	313	292	278	276
160°	332	323	298	284	279
162.5°	338	333	306	289	282
165°	344	341	315	293	288
167.5°	349	348	324	299	303
170°	354	353	333	307	330
172.5°	359	357	340	316	369
175°	362	361	344	323	393
177.5°	364	363	348	327	394
180°	355	355	355	355	355

(END OF REPORT)