

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: ITL44177

Luminaire Tested: **EIM-396HO**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: ITL44177
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: EIM-396HO
Description: FABRICATED METAL STRIP BALLAST HOUSING WITH WHITE PAINTED SOCKET HOUSINGS, WHITE PAINTED FABRICATED METAL REFLECTOR WITH UP-LIGHT APERTURES, OPEN ENDS AND BOTTOM.
Light Source: THREE 110-WATT F96T12/CW/HO/EW FLUORESCENTS.
Ballast/Driver: ONE MAGNETEK UNIVERSAL 480-XLH-TC-P (BALLAST FACTOR 83.9 %), ONE MAGNETEK UNIVERSAL 481-LH-TC-P (BALLAST FACTOR 83.5 %).

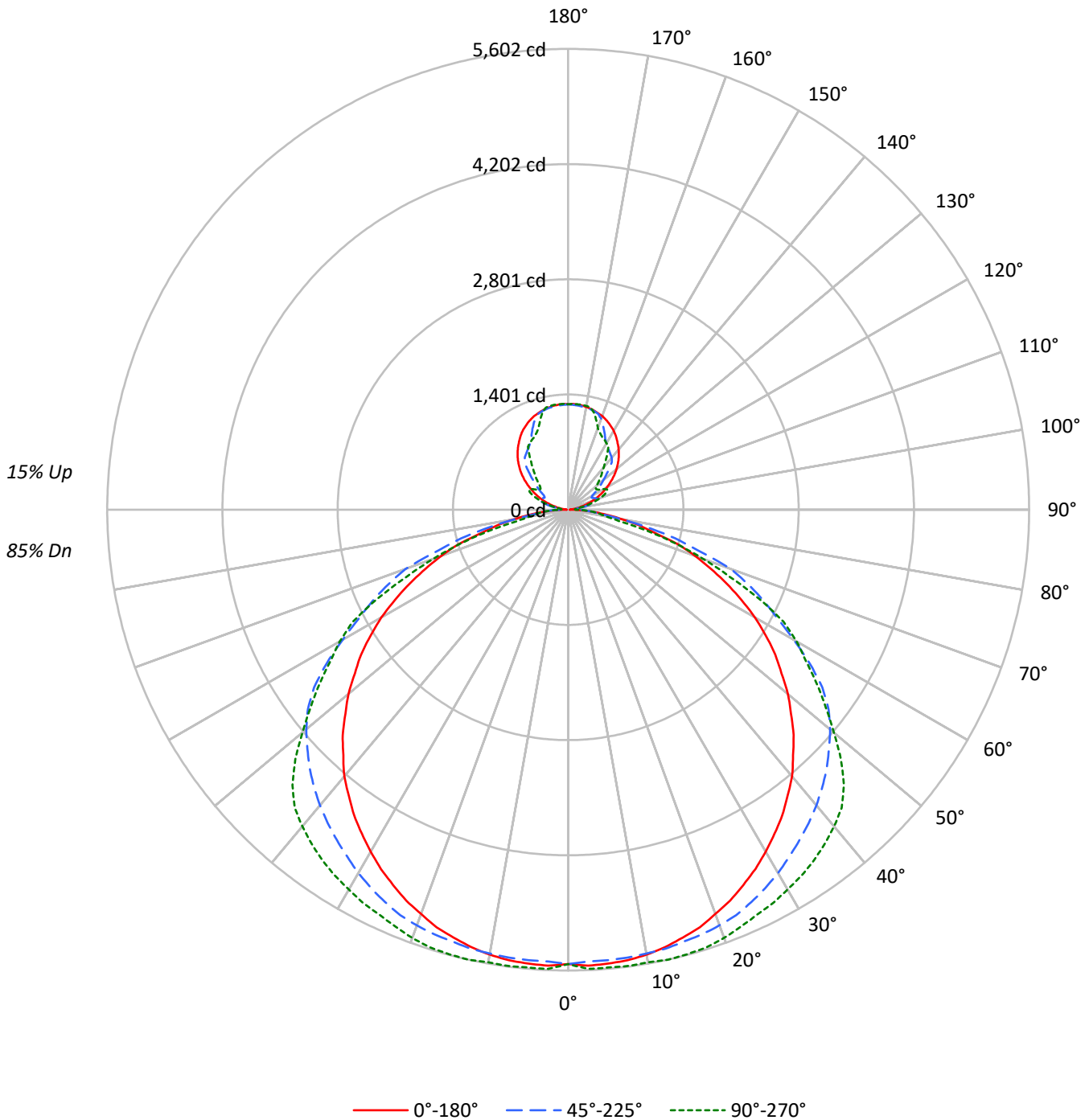
Summary

Lumens per Lamp: 8000 (3 lamps)
Luminaire Lumens: 21701.6 lumens
Efficiency: 90.4%
Efficacy: 68.5 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.44 / 1.52
Luminous Opening: Rectangular (W 1.08' x L: 8' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 317
Input Voltage (V): NR
Input Current (A_{in}): 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

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	104	104	104	104	100	100	100	100	93	93	93	86	86	86	80	80	80	77
1	95	91	87	83	91	87	84	81	81	78	75	75	73	71	70	68	66	64
2	86	79	72	67	82	76	70	65	70	66	62	65	61	58	61	58	55	52
3	78	69	61	55	75	66	59	54	61	56	51	57	52	49	53	49	46	44
4	71	60	52	46	68	58	51	45	54	48	43	51	45	41	47	43	39	37
5	65	54	46	39	62	52	44	39	48	42	37	45	40	35	42	37	34	31
6	60	48	40	34	57	46	39	33	43	37	32	41	35	31	38	33	29	27
7	56	43	35	30	53	42	35	29	39	33	28	37	31	27	35	30	26	24
8	52	39	32	26	49	38	31	26	36	29	25	34	28	24	32	27	23	21
9	48	36	29	24	46	35	28	23	33	27	22	31	25	21	29	24	21	19
10	45	33	26	21	43	32	25	21	30	24	20	29	23	19	27	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6860	6860	6860
5°	6907	6854	6966
10°	6928	6909	7046
15°	6923	6989	7193
20°	6911	7107	7322
25°	6899	7214	7443
30°	6885	7314	7644
35°	6878	7433	7892
40°	6863	7607	8149
45°	6806	7804	8324
50°	6736	8029	8148
55°	6654	8164	7986
60°	6513	7867	7964
65°	6242	7706	7524
70°	5963	7630	6330
75°	5192	6459	4780
80°	4728	4535	3226
85°	4318	4218	4432



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	526.2	2.4	2.2	0°	5523	5523	5523	5523	5523	
10°-20°	1543.0	7.1	6.4	5°	5540	5485	5497	5532	5587	527
20°-30°	2420.4	11.2	10.1	15°	5384	5377	5435	5520	5594	1521
30°-40°	3067.2	14.1	12.8	25°	5034	5108	5264	5365	5431	2322
40°-50°	3385.8	15.6	14.1	35°	4536	4711	4902	5108	5205	2836
50°-60°	3195.7	14.7	13.3	45°	3875	4155	4443	4707	4739	2984
60°-70°	2529.9	11.7	10.5	55°	3073	3462	3770	3731	3688	2739
70°-80°	1354.5	6.2	5.6	65°	2124	2642	2622	2723	2560	2104
80°-90°	377.4	1.7	1.6	75°	1082	1552	1346	1190	996	1192
90°-100°	106.6	0.5	0.4	85°	303	377	296	319	311	322
100°-110°	272.6	1.3	1.1	90°	26	93	88	96	90	30
110°-120°	406.9	1.9	1.7	95°	36	99	81	87	88	44
120°-130°	448.9	2.1	1.9	105°	198	178	305	305	278	213
130°-140°	534.6	2.5	2.2	115°	427	358	333	498	519	423
140°-150°	572.3	2.6	2.4	125°	657	593	440	399	424	586
150°-160°	492.7	2.3	2.1	135°	865	757	704	596	555	666
160°-170°	345.5	1.6	1.4	145°	1032	1007	871	886	826	646
170°-180°	121.5	0.6	0.5	155°	1164	1165	1042	984	975	537
0°-30°	4489.6	20.7	18.7	165°	1244	1233	1238	1241	1218	351
0°-40°	7556.8	34.8	31.5	175°	1283	1268	1273	1278	1286	122
0°-60°	14138.3	65.1	58.9	180°	1281	1281	1281	1281	1281	
0°-90°	18400.1	84.8	76.7							
90°-120°	786.1	3.6	3.3							
90°-150°	2341.9	10.8	9.8							
90°-180°	3302.0	15.2	13.8							
0°-180°	21701.6	100.0	90.4							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5523	5523	5523	5523	5523
2.5°	5548	5482	5497	5528	5587
5°	5540	5485	5497	5532	5587
7.5°	5524	5466	5493	5536	5594
10°	5493	5443	5478	5532	5587
12.5°	5447	5412	5466	5520	5602
15°	5384	5377	5435	5520	5594
17.5°	5322	5322	5412	5513	5579
20°	5229	5260	5377	5478	5540
22.5°	5143	5182	5334	5431	5485
25°	5034	5108	5264	5365	5431
27.5°	4925	5015	5186	5307	5392
30°	4801	4914	5100	5240	5330
32.5°	4668	4824	4999	5178	5275
35°	4536	4711	4902	5108	5205
37.5°	4381	4587	4801	5030	5120
40°	4233	4458	4692	4929	5026
42.5°	4046	4303	4571	4824	4917
45°	3875	4155	4443	4707	4739
47.5°	3673	3980	4299	4528	4497
50°	3486	3813	4155	4287	4217
52.5°	3268	3634	3988	3988	3945
55°	3073	3462	3770	3731	3688
57.5°	2848	3260	3482	3459	3424
60°	2622	3073	3167	3217	3206
62.5°	2373	2867	2867	2968	2949
65°	2124	2642	2622	2723	2560
67.5°	1875	2408	2361	2334	2116
70°	1642	2148	2101	1895	1743
72.5°	1401	1844	1657	1525	1377
75°	1082	1552	1346	1190	996
77.5°	887	1260	969	774	630
80°	661	1008	634	482	451
82.5°	475	681	385	401	389
85°	303	377	296	319	311
87.5°	148	218	210	233	210
90°	26	93	88	96	90
92.5°	19	72	78	84	84
95°	36	99	81	87	88
97.5°	65	152	112	113	100
100°	102	187	175	164	142
102.5°	150	184	242	233	205
105°	198	178	305	305	278
107.5°	255	201	357	375	346
110°	312	248	382	436	412



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	371	302	363	480	477
115°	427	358	333	498	519
117.5°	486	428	321	469	533
120°	543	502	339	426	501
122.5°	599	557	385	400	453
125°	657	593	440	399	424
127.5°	713	632	498	435	422
130°	766	668	558	484	448
132.5°	817	708	625	542	499
135°	865	757	704	596	555
137.5°	910	813	785	660	610
140°	953	877	822	726	672
142.5°	994	943	846	814	744
145°	1032	1007	871	886	826
147.5°	1072	1061	895	910	910
150°	1107	1108	929	934	932
152.5°	1137	1140	975	955	956
155°	1164	1165	1042	984	975
157.5°	1189	1187	1109	1030	1009
160°	1211	1204	1174	1100	1053
162.5°	1227	1220	1218	1176	1136
165°	1244	1233	1238	1241	1218
167.5°	1257	1245	1250	1263	1270
170°	1268	1254	1262	1271	1281
172.5°	1277	1263	1266	1276	1287
175°	1283	1268	1273	1278	1286
177.5°	1287	1271	1276	1280	1288
180°	1281	1281	1281	1281	1281

(END OF REPORT)