

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: 103P104

Luminaire Tested: **EIM-432**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: 103P104  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: EIM-432  
Description: EIM Series Environmental Industrial Luminaire  
Light Source: Four - FO32T8/35K - 2800 Lumens ea. - 32 Watts ea.  
Ballast/Driver: Magnetek B4321120RH Electronic - L.O.B.F. = 89.7

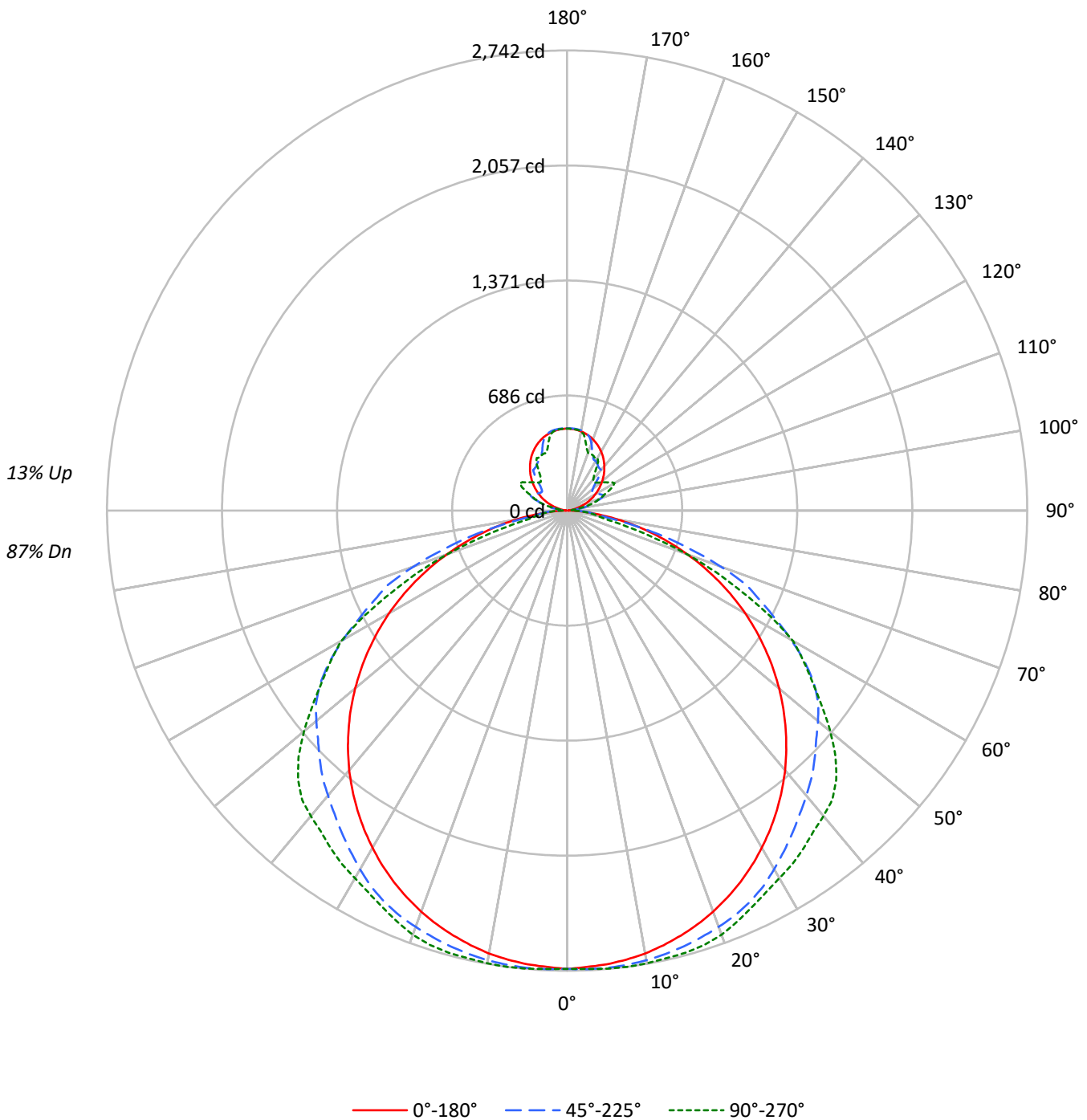
**Summary**

Lumens per Lamp: 2800 (4 lamps)  
Luminaire Lumens: 10055.2 lumens  
Efficiency: 89.8%  
Efficacy: 87.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.39 / 1.48  
Luminous Opening: Rectangular (W 1.1' x L: 4.15' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 115  
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

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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	87	87	87	81	81	81	78
1	95	91	87	83	91	87	84	81	81	79	76	76	74	72	71	69	67	65
2	86	79	73	67	83	76	70	66	71	66	62	66	62	59	62	59	56	54
3	78	69	61	56	75	66	60	54	62	56	52	58	53	49	54	50	47	45
4	71	61	53	47	68	59	51	46	55	49	44	51	46	42	48	44	40	38
5	65	54	46	40	63	52	45	39	49	43	38	46	40	36	43	38	35	32
6	60	48	40	35	58	47	39	34	44	38	33	41	36	31	39	34	30	28
7	56	44	36	30	53	42	35	30	40	33	29	38	32	28	35	30	27	25
8	52	40	32	27	50	39	31	26	36	30	26	34	29	25	32	27	24	22
9	48	36	29	24	46	35	28	24	33	27	23	32	26	22	30	25	21	20
10	45	33	26	22	43	32	26	21	31	25	21	29	24	20	28	23	19	18

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

	0°	45°	90°
0°	6422	6422	6422
5°	6407	6459	6468
10°	6400	6498	6541
15°	6381	6544	6639
20°	6364	6607	6732
25°	6339	6679	6762
30°	6300	6702	6867
35°	6256	6723	7051
40°	6201	6806	7294
45°	6126	6937	7543
50°	6033	7138	7489
55°	5912	7364	7318
60°	5766	7257	7314
65°	5548	7061	6421
70°	5239	6697	5205
75°	4807	5461	3335
80°	4158	3345	2573
85°	3292	3535	3184



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	260.3	2.6	2.3	0°	2731	2731	2731	2731	2731	
10°-20°	758.3	7.5	6.8	5°	2714	2722	2736	2744	2740	258
20°-30°	1175.6	11.7	10.5	15°	2621	2650	2688	2718	2727	740
30°-40°	1465.0	14.6	13.1	25°	2443	2495	2574	2600	2606	1126
40°-50°	1605.2	16.0	14.3	35°	2179	2271	2342	2428	2456	1363
50°-60°	1514.9	15.1	13.5	45°	1842	1966	2086	2238	2268	1421
60°-70°	1175.0	11.7	10.5	55°	1442	1580	1796	1793	1785	1289
70°-80°	590.2	5.9	5.3	65°	997	1191	1269	1217	1154	986
80°-90°	156.5	1.6	1.4	75°	529	717	601	430	367	560
90°-100°	44.8	0.4	0.4	85°	122	157	131	120	118	139
100°-110°	136.5	1.4	1.2	90°	13	57	41	29	24	12
110°-120°	205.6	2.0	1.8	95°	9	47	33	30	27	13
120°-130°	209.5	2.1	1.9	105°	69	114	152	156	148	74
130°-140°	196.9	2.0	1.8	115°	152	123	226	277	269	150
140°-150°	207.2	2.1	1.8	125°	234	214	189	264	292	209
150°-160°	179.4	1.8	1.6	135°	310	259	247	223	236	239
160°-170°	127.8	1.3	1.1	145°	377	346	322	326	298	236
170°-180°	46.4	0.5	0.4	155°	430	433	361	363	363	198
0°-30°	2194.2	21.8	19.6	165°	467	472	470	446	426	132
0°-40°	3659.2	36.4	32.7	175°	486	487	490	489	487	46
0°-60°	6779.4	67.4	60.5	180°	489	489	489	489	489	
0°-90°	8701.1	86.5	77.7							
90°-120°	386.9	3.8	3.5							
90°-150°	1000.5	9.9	8.9							
90°-180°	1354.0	13.5	12.1							
0°-180°	10055.2	100.0	89.8							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2731	2731	2731	2731	2731
2.5°	2722	2728	2735	2741	2734
5°	2714	2722	2736	2744	2740
7.5°	2699	2713	2730	2743	2742
10°	2680	2697	2721	2738	2739
12.5°	2653	2676	2706	2730	2732
15°	2621	2650	2688	2718	2727
17.5°	2585	2619	2665	2707	2714
20°	2543	2583	2640	2685	2690
22.5°	2495	2541	2612	2648	2650
25°	2443	2495	2574	2600	2606
27.5°	2384	2445	2527	2553	2565
30°	2320	2390	2468	2509	2529
32.5°	2252	2332	2405	2468	2498
35°	2179	2271	2342	2428	2456
37.5°	2102	2204	2278	2377	2411
40°	2020	2131	2217	2326	2376
42.5°	1933	2053	2157	2285	2338
45°	1842	1966	2086	2238	2268
47.5°	1748	1872	2014	2160	2170
50°	1649	1775	1951	2056	2047
52.5°	1547	1677	1887	1927	1914
55°	1442	1580	1796	1793	1785
57.5°	1335	1485	1680	1663	1670
60°	1226	1388	1543	1549	1555
62.5°	1113	1285	1401	1417	1367
65°	997	1191	1269	1217	1154
67.5°	881	1105	1155	1009	958
70°	762	999	974	827	757
72.5°	646	861	778	608	549
75°	529	717	601	430	367
77.5°	416	597	408	252	229
80°	307	438	247	193	190
82.5°	208	284	173	157	154
85°	122	157	131	120	118
87.5°	52	100	92	83	78
90°	13	57	41	29	24
92.5°	6	42	34	27	24
95°	9	47	33	30	27
97.5°	18	72	55	32	30
100°	33	96	89	77	70
102.5°	50	118	124	112	101
105°	69	114	152	156	148
107.5°	89	110	181	182	179
110°	110	108	217	209	207



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	131	110	237	240	234
115°	152	123	226	277	269
117.5°	173	143	214	303	305
120°	193	172	204	302	326
122.5°	214	204	195	279	315
125°	234	214	189	264	292
127.5°	253	222	188	250	277
130°	273	237	198	237	261
132.5°	291	250	217	227	246
135°	310	259	247	223	236
137.5°	328	271	286	232	232
140°	345	292	315	251	242
142.5°	361	316	317	284	263
145°	377	346	322	326	298
147.5°	392	377	333	353	343
150°	405	400	340	351	362
152.5°	418	419	342	355	356
155°	430	433	361	363	363
157.5°	441	446	387	363	367
160°	451	456	425	374	365
162.5°	460	465	453	403	387
165°	467	472	470	446	426
167.5°	474	477	480	472	463
170°	479	481	485	483	478
172.5°	483	485	488	488	485
175°	486	487	490	489	487
177.5°	487	489	490	490	488
180°	489	489	489	489	489

(END OF REPORT)