

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: 102P109

Luminaire Tested: **ICF-232**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: 102P109  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: ICF-232  
Description: ICF Series Industrial Luminaire  
Light Source: Two-F32T8/35K - 2850 Lumens ea. - 32 Watts ea.  
Ballast/Driver: Triad-Utrad B232I120 Electronic

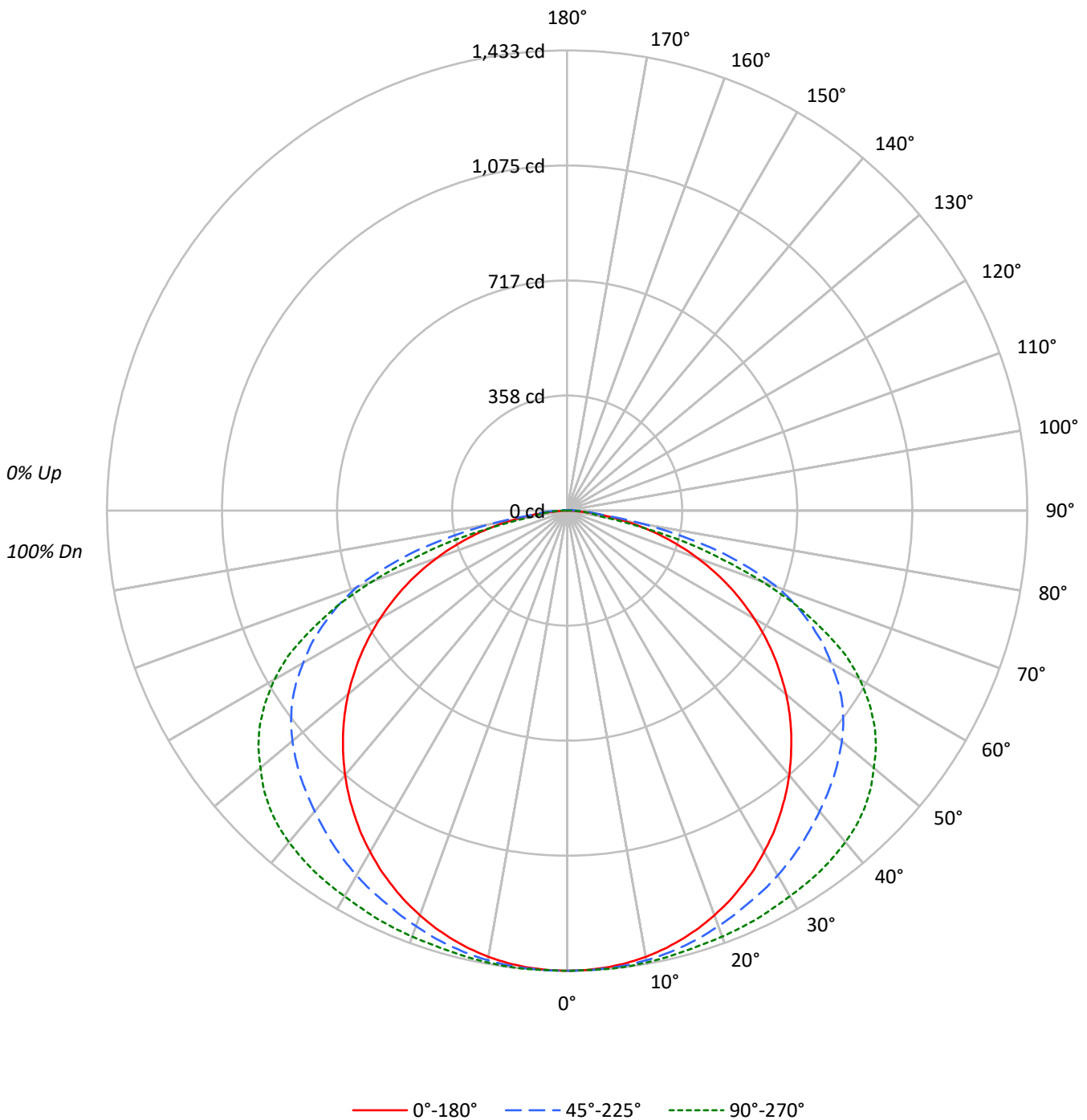
**Summary**

Lumens per Lamp: 2850 (2 lamps)  
Luminaire Lumens: 5084.2 lumens  
Efficiency: 89.2%  
Efficacy: 81.5 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.47 / 1.54  
Luminous Opening: Rectangular (W 0.94' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 62.4  
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	106	106	106	106	104	104	104	104	99	99	99	95	95	95	91	91	91	89
1	96	92	87	84	94	89	86	82	86	82	80	82	79	77	79	77	75	73
2	87	79	72	67	84	77	71	66	74	69	64	71	66	63	68	64	61	59
3	78	68	61	54	76	67	60	54	64	58	53	62	56	52	59	55	51	49
4	71	60	52	45	69	59	51	45	56	50	44	54	48	44	52	47	43	41
5	65	53	45	39	63	52	44	38	50	43	38	48	42	37	47	41	37	35
6	60	48	39	33	58	47	39	33	45	38	33	43	37	32	42	36	32	30
7	56	43	35	29	54	42	34	29	41	34	29	39	33	28	38	32	28	26
8	52	39	31	26	50	38	31	26	37	30	25	36	30	25	35	29	25	23
9	48	36	28	23	47	35	28	23	34	27	23	33	27	23	32	26	22	21
10	45	33	26	21	44	32	25	21	31	25	20	31	25	20	30	24	20	19

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

	0°	45°	90°
0°	4113	4113	4113
5°	4115	4123	4129
10°	4113	4145	4165
15°	4107	4172	4220
20°	4096	4206	4313
25°	4082	4260	4440
30°	4067	4349	4597
35°	4051	4450	4808
40°	4032	4583	5051
45°	4007	4766	5318
50°	3974	4988	5568
55°	3928	5235	5850
60°	3864	5448	6045
65°	3776	5678	5977
70°	3626	5841	5422
75°	3383	5423	4248
80°	2893	4033	1835
85°	1877	2668	2009



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	136.3	2.7	2.4	0°	1433	1433	1433	1433	1433	
10°-20°	396.8	7.8	7.0	5°	1428	1428	1431	1436	1433	136
20°-30°	622.2	12.2	10.9	15°	1382	1390	1404	1419	1420	390
30°-40°	794.1	15.6	13.9	25°	1289	1307	1345	1391	1402	594
40°-50°	895.7	17.6	15.7	35°	1156	1187	1270	1347	1372	723
50°-60°	899.7	17.7	15.8	45°	987	1040	1174	1280	1310	761
60°-70°	769.3	15.1	13.5	55°	785	870	1046	1141	1169	701
70°-80°	444.3	8.7	7.8	65°	556	693	836	886	880	549
80°-90°	103.5	2.0	1.8	75°	305	459	489	409	383	321
90°-100°	13.9	0.3	0.2	85°	57	136	81	64	61	72
100°-110°	4.7	0.1	0.1	90°	2	45	23	6	0	3
110°-120°	1.6	0.0	0.0	95°	1	29	17	4	0	0
120°-130°	0.9	0.0	0.0	105°	0	9	7	2	0	0
130°-140°	0.8	0.0	0.0	115°	0	2	3	1	0	0
140°-150°	0.3	0.0	0.0	125°	0	1	2	1	0	0
150°-160°	0.0	0.0	0.0	135°	0	1	2	1	0	0
160°-170°	0.0	0.0	0.0	145°	0	1	1	1	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	1155.4	22.7	20.3	165°	0	0	0	0	0	0
0°-40°	1949.5	38.3	34.2	175°	0	0	0	0	0	0
0°-60°	3744.9	73.7	65.7	180°	0	0	0	0	0	0
0°-90°	5062.0	99.6	88.8							
90°-120°	20.3	0.4	0.4							
90°-150°	22.2	0.4	0.4							
90°-180°	22.0	0.4	0.4							
0°-180°	5084.2	100.0	89.2							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1433	1433	1433	1433	1433
2.5°	1432	1432	1433	1436	1432
5°	1428	1428	1431	1436	1433
7.5°	1421	1423	1428	1434	1432
10°	1411	1415	1422	1430	1429
12.5°	1398	1404	1414	1426	1425
15°	1382	1390	1404	1419	1420
17.5°	1363	1373	1392	1411	1415
20°	1341	1353	1377	1405	1412
22.5°	1317	1332	1362	1399	1407
25°	1289	1307	1345	1391	1402
27.5°	1260	1282	1330	1381	1394
30°	1227	1252	1312	1371	1387
32.5°	1193	1221	1292	1359	1380
35°	1156	1187	1270	1347	1372
37.5°	1117	1152	1247	1334	1361
40°	1076	1115	1223	1320	1348
42.5°	1032	1079	1199	1302	1332
45°	987	1040	1174	1280	1310
47.5°	940	1000	1146	1254	1282
50°	890	957	1117	1220	1247
52.5°	838	913	1084	1181	1212
55°	785	870	1046	1141	1169
57.5°	730	826	1001	1092	1115
60°	673	782	949	1034	1053
62.5°	615	738	898	967	980
65°	556	693	836	886	880
67.5°	495	645	773	781	774
70°	432	591	696	671	646
72.5°	369	526	596	539	510
75°	305	459	489	409	383
77.5°	240	398	365	271	232
80°	175	324	244	136	111
82.5°	113	237	121	84	81
85°	57	136	81	64	61
87.5°	18	75	52	32	27
90°	2	45	23	6	0
92.5°	1	38	20	4	0
95°	1	29	17	4	0
97.5°	0	22	13	3	0
100°	0	17	11	2	0
102.5°	0	12	8	2	0
105°	0	9	7	2	0
107.5°	0	6	5	1	0
110°	0	4	4	1	0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0	3	3	1	0
115°	0	2	3	1	0
117.5°	0	2	3	1	0
120°	0	2	2	1	0
122.5°	0	1	2	1	0
125°	0	1	2	1	0
127.5°	0	1	2	1	0
130°	0	1	2	1	0
132.5°	0	1	2	1	0
135°	0	1	2	1	0
137.5°	0	1	2	1	0
140°	0	1	1	1	0
142.5°	0	1	1	1	0
145°	0	1	1	1	0
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)