

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: 132P109

Luminaire Tested: **2M-432-E3**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 132P109
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2M-432-E3
Description: 2 X 4 Surface Modular Luminaire with a
.150" thick lens with elevating prisms.
Light Source: Four-F32T8/35K - 2900 Lumens ea. - 32 Watts ea.
Ballast/Driver: Triad-Utrad B432I120RH Electronic

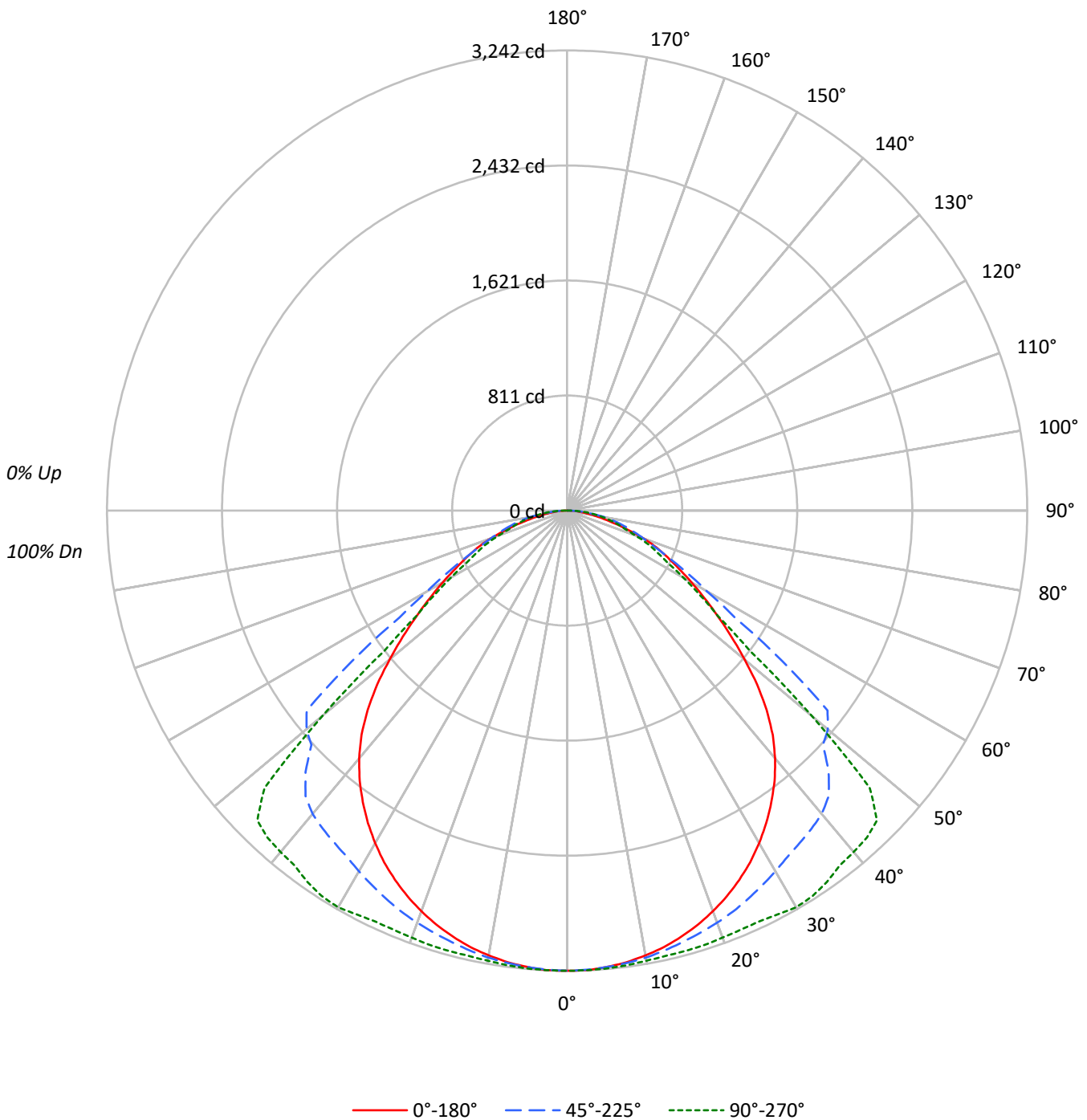
Summary

Lumens per Lamp: 2900 (4 lamps)
Luminaire Lumens: 9098.9 lumens
Efficiency: 78.4%
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.5 / 1.51
Luminous Opening: Rectangular (W 1.79' x L: 3.81' x H: 0')
CIE Type: Direct

Input Watts (W): 109.3
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: 132P109
CATALOG NUMBER: 2M-432-E3

Luminous Intensity Polar Plot





TEST NUMBER: 132P109
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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	50	30	10	0													
RCR																																					
0	93	93	93	93	91	91	91	91	87	87	87	83	83	83	80	80	80	80	80	80	80	80	80	78													
1	86	83	79	77	84	81	78	75	77	75	73	74	72	71	72	70	69	67	67	67	67	67	67	67													
2	79	73	68	63	77	71	67	63	68	64	61	66	63	60	63	61	58	57	57	57	57	57	57	57													
3	72	64	58	53	70	63	57	53	61	56	52	58	54	51	57	53	50	48	48	48	48	48	48	48													
4	66	57	50	45	64	56	50	45	54	49	44	52	48	44	51	47	43	42	42	42	42	42	42	42													
5	61	51	44	39	59	50	44	39	49	43	39	47	42	38	46	41	38	36	36	36	36	36	36	36													
6	56	46	39	34	55	45	39	34	44	38	34	43	37	34	41	37	33	32	32	32	32	32	32	32													
7	52	42	35	30	51	41	35	30	40	34	30	39	34	30	38	33	30	28	28	28	28	28	28	28													
8	48	38	32	27	47	38	31	27	36	31	27	36	30	27	35	30	26	25	25	25	25	25	25	25													
9	45	35	29	24	44	34	28	24	34	28	24	33	28	24	32	27	24	22	22	22	22	22	22	22													
10	42	32	26	22	41	32	26	22	31	26	22	30	25	22	30	25	22	20	20	20	20	20	20	20													

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5109	5109	5109
5°	5106	5106	5122
10°	5091	5117	5152
15°	5070	5134	5240
20°	5037	5182	5368
25°	4990	5247	5555
30°	4922	5339	5872
35°	4826	5498	6142
40°	4688	5739	6459
45°	4428	5807	6879
50°	4001	5879	5511
55°	3555	5082	3566
60°	3186	3583	2985
65°	2912	2961	2621
70°	2631	2626	2345
75°	2076	2508	2234
80°	1642	2396	2205
85°	1446	2025	2332



TEST NUMBER: 132P109
 CATALOG NUMBER: 2M-432-E3

ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	307.3	3.4	2.6	0°	3242	3242	3242	3242	3242	
10°-20°	891.5	9.8	7.7	5°	3228	3223	3228	3233	3238	307
20°-30°	1396.5	15.3	12.0	15°	3108	3114	3147	3188	3212	877
30°-40°	1786.8	19.6	15.4	25°	2870	2899	3018	3138	3195	1322
40°-50°	1947.3	21.4	16.8	35°	2509	2588	2858	3115	3193	1567
50°-60°	1406.0	15.5	12.1	45°	1987	2169	2606	2906	3087	1523
60°-70°	817.1	9.0	7.0	55°	1294	1553	1850	1369	1298	1165
70°-80°	422.9	4.6	3.6	65°	781	966	794	720	703	777
80°-90°	123.6	1.4	1.1	75°	341	439	412	371	367	374
90°-100°	0.0	0.0	0.0	85°	80	101	112	118	129	86
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	5
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	2595.3	28.5	22.4	165°	0	0	0	0	0	0
0°-40°	4382.1	48.2	37.8	175°	0	0	0	0	0	0
0°-60°	7735.3	85.0	66.7	180°	0	0	0	0	0	0
0°-90°	9098.9	100.0	78.4							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	9098.9	100.0	78.4							



TEST NUMBER: 132P109
 CATALOG NUMBER: 2M-432-E3

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3242	3242	3242	3242	3242
2.5°	3241	3235	3237	3238	3241
5°	3228	3223	3228	3233	3238
7.5°	3209	3205	3215	3224	3231
10°	3182	3182	3198	3211	3220
12.5°	3150	3152	3174	3197	3213
15°	3108	3114	3147	3188	3212
17.5°	3060	3070	3119	3181	3210
20°	3004	3020	3090	3166	3201
22.5°	2941	2963	3057	3151	3196
25°	2870	2899	3018	3138	3195
27.5°	2793	2828	2976	3128	3208
30°	2705	2753	2934	3138	3227
32.5°	2611	2672	2891	3138	3219
35°	2509	2588	2858	3115	3193
37.5°	2400	2499	2827	3076	3153
40°	2279	2402	2790	3044	3140
42.5°	2144	2294	2728	2988	3125
45°	1987	2169	2606	2906	3087
47.5°	1815	2023	2444	2823	2892
50°	1632	1861	2398	2537	2248
52.5°	1458	1700	2312	1816	1623
55°	1294	1553	1850	1369	1298
57.5°	1145	1492	1401	1149	1111
60°	1011	1414	1137	998	947
62.5°	887	1165	956	842	800
65°	781	966	794	720	703
67.5°	683	804	666	644	619
70°	571	669	570	556	509
72.5°	449	551	487	452	422
75°	341	439	412	371	367
77.5°	253	331	341	309	307
80°	181	238	264	257	243
82.5°	128	161	178	188	185
85°	80	101	112	118	129
87.5°	37	51	54	58	62
90°	0	0	0	0	0
92.5°	0	0	0	0	0
95°	0	0	0	0	0
97.5°	0	0	0	0	0
100°	0	0	0	0	0
102.5°	0	0	0	0	0
105°	0	0	0	0	0
107.5°	0	0	0	0	0
110°	0	0	0	0	0



TEST NUMBER: 132P109
CATALOG NUMBER: 2M-432-E3

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0	0	0	0	0
115°	0	0	0	0	0
117.5°	0	0	0	0	0
120°	0	0	0	0	0
122.5°	0	0	0	0	0
125°	0	0	0	0	0
127.5°	0	0	0	0	0
130°	0	0	0	0	0
132.5°	0	0	0	0	0
135°	0	0	0	0	0
137.5°	0	0	0	0	0
140°	0	0	0	0	0
142.5°	0	0	0	0	0
145°	0	0	0	0	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)