

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: 132P108

Luminaire Tested: **2M-432R25-A**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: 132P108  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 2M-432R25-A  
Description: 2 X 4 Surface Modular Luminaire with a .125" thick linear ribbed lens. Linear prisms run parallel to lamps, prisms inverted (towards lamp cavity).  
Light Source: Four-F32T8/35K - 2900 Lumens ea. - 32 Watts ea.  
Ballast/Driver: Triad-Utrad B4321120RH Electronic

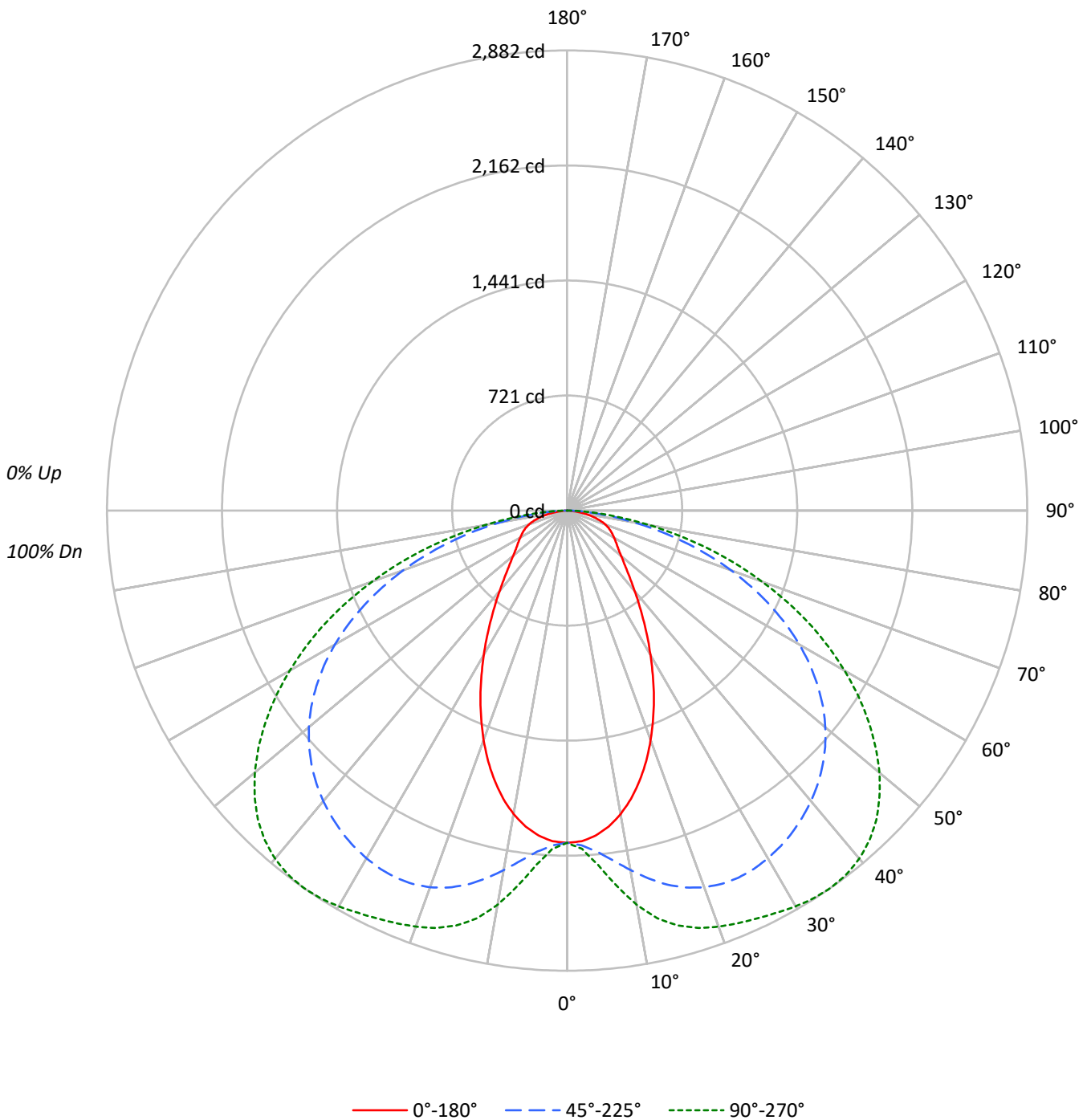
**Summary**

Lumens per Lamp: 2900 (4 lamps)  
Luminaire Lumens: 8247.8 lumens  
Efficiency: 71.1%  
Efficacy: 75.6 lumens/watt  
Spacing Criteria (0/90/45): 0.87 / 1.92 / 1.76  
Luminous Opening: Rectangular (W 1.79' x L: 3.81' x H: 0')  
CIE Type: Direct

Input Watts (W): 109.1  
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: 132P108  
CATALOG NUMBER: 2M-432R25-A

### Luminous Intensity Polar Plot





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 CATALOG NUMBER: 2M-432R25-A

**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	85	85	85	85	83	83	83	83	79	79	79	76	76	76	73	73	73	71
1	77	73	70	67	75	72	69	66	69	66	64	66	64	62	63	62	60	59
2	70	63	58	54	68	62	57	53	59	55	52	57	54	51	55	52	50	48
3	63	55	49	44	61	54	48	44	52	47	43	50	46	42	48	45	42	40
4	57	49	42	37	56	48	41	37	46	40	36	44	39	36	42	38	35	34
5	53	43	36	31	51	42	36	31	41	35	31	39	34	31	38	34	30	29
6	48	39	32	27	47	38	32	27	37	31	27	35	30	27	34	30	26	25
7	45	35	28	24	43	34	28	24	33	28	23	32	27	23	31	27	23	22
8	42	32	25	21	40	31	25	21	30	25	21	29	24	21	28	24	21	19
9	39	29	23	19	38	28	23	19	28	22	19	27	22	18	26	22	18	17
10	36	27	21	17	35	26	21	17	25	20	17	25	20	17	24	20	17	15

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

	0°	45°	90°
0°	3279	3279	3279
5°	3233	3391	3524
10°	3088	3658	4010
15°	2860	3958	4390
20°	2564	4211	4650
25°	2234	4411	4900
30°	1898	4574	5208
35°	1595	4732	5544
40°	1354	4888	5854
45°	1179	5041	6104
50°	1081	5175	6261
55°	1049	5269	6332
60°	1068	5298	6325
65°	1122	5228	6234
70°	1170	5027	5980
75°	1151	4609	5528
80°	1007	3875	4719
85°	669	2676	3417



TEST NUMBER: 132P108  
 CATALOG NUMBER: 2M-432R25-A

**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	207.9	2.5	1.8	0°	2081	2081	2081	2081	2081	
10°-20°	657.0	8.0	5.7	5°	2044	2073	2144	2205	2228	191
20°-30°	1066.3	12.9	9.2	15°	1753	2017	2426	2634	2691	489
30°-40°	1373.2	16.6	11.8	25°	1285	1902	2537	2749	2818	588
40°-50°	1522.9	18.5	13.1	35°	829	1695	2460	2765	2882	521
50°-60°	1451.3	17.6	12.5	45°	529	1389	2262	2622	2739	413
60°-70°	1149.4	13.9	9.9	55°	382	1019	1918	2227	2305	345
70°-80°	661.8	8.0	5.7	65°	301	655	1402	1616	1672	296
80°-90°	158.0	1.9	1.4	75°	189	328	757	876	908	197
90°-100°	0.0	0.0	0.0	85°	37	60	148	180	189	46
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	2
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°	1931.1	23.4	16.6	165°	0	0	0	0	0	0
0°-40°	3304.4	40.1	28.5	175°	0	0	0	0	0	0
0°-60°	6278.6	76.1	54.1	180°	0	0	0	0	0	0
0°-90°	8247.8	100.0	71.1							
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°	8247.8	100.0	71.1							



TEST NUMBER: 132P108  
 CATALOG NUMBER: 2M-432R25-A

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2081	2081	2081	2081	2081
2.5°	2073	2079	2098	2113	2120
5°	2044	2073	2144	2205	2228
7.5°	1996	2064	2210	2328	2370
10°	1930	2051	2286	2452	2506
12.5°	1849	2035	2361	2557	2616
15°	1753	2017	2426	2634	2691
17.5°	1646	1995	2476	2686	2741
20°	1529	1969	2511	2718	2773
22.5°	1408	1938	2531	2737	2797
25°	1285	1902	2537	2749	2818
27.5°	1161	1860	2531	2758	2840
30°	1043	1812	2514	2765	2862
32.5°	932	1757	2491	2768	2878
35°	829	1695	2460	2765	2882
37.5°	738	1627	2421	2751	2873
40°	658	1554	2376	2723	2846
42.5°	588	1474	2323	2680	2802
45°	529	1389	2262	2622	2739
47.5°	481	1300	2192	2548	2654
50°	441	1207	2111	2456	2554
52.5°	408	1113	2021	2349	2436
55°	382	1019	1918	2227	2305
57.5°	360	925	1805	2091	2162
60°	339	834	1681	1942	2007
62.5°	320	743	1546	1785	1844
65°	301	655	1402	1616	1672
67.5°	279	570	1250	1439	1489
70°	254	486	1091	1256	1298
72.5°	224	406	925	1068	1104
75°	189	328	757	876	908
77.5°	151	252	590	682	711
80°	111	179	427	498	520
82.5°	72	114	276	326	344
85°	37	60	148	180	189
87.5°	11	19	55	72	77
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: 132P108  
CATALOG NUMBER: 2M-432R25-A

**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)