

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: 163P109

Luminaire Tested: **GCASF2048-232A-PAF**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: 163P109  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: GCASF2048-232A-PAF  
Description: 20 X 48 Recessed Air Supply Convertible Body Troffer  
with a .095 pattern 12 acrylic lens.  
Light Source: Two - FO32T8/35K - 2850 Lumens ea. - 32 Watts ea.  
Ballast/Driver: Magnetek B232I120RH Electronic - L.O.B.F. = 87.9

**Summary**

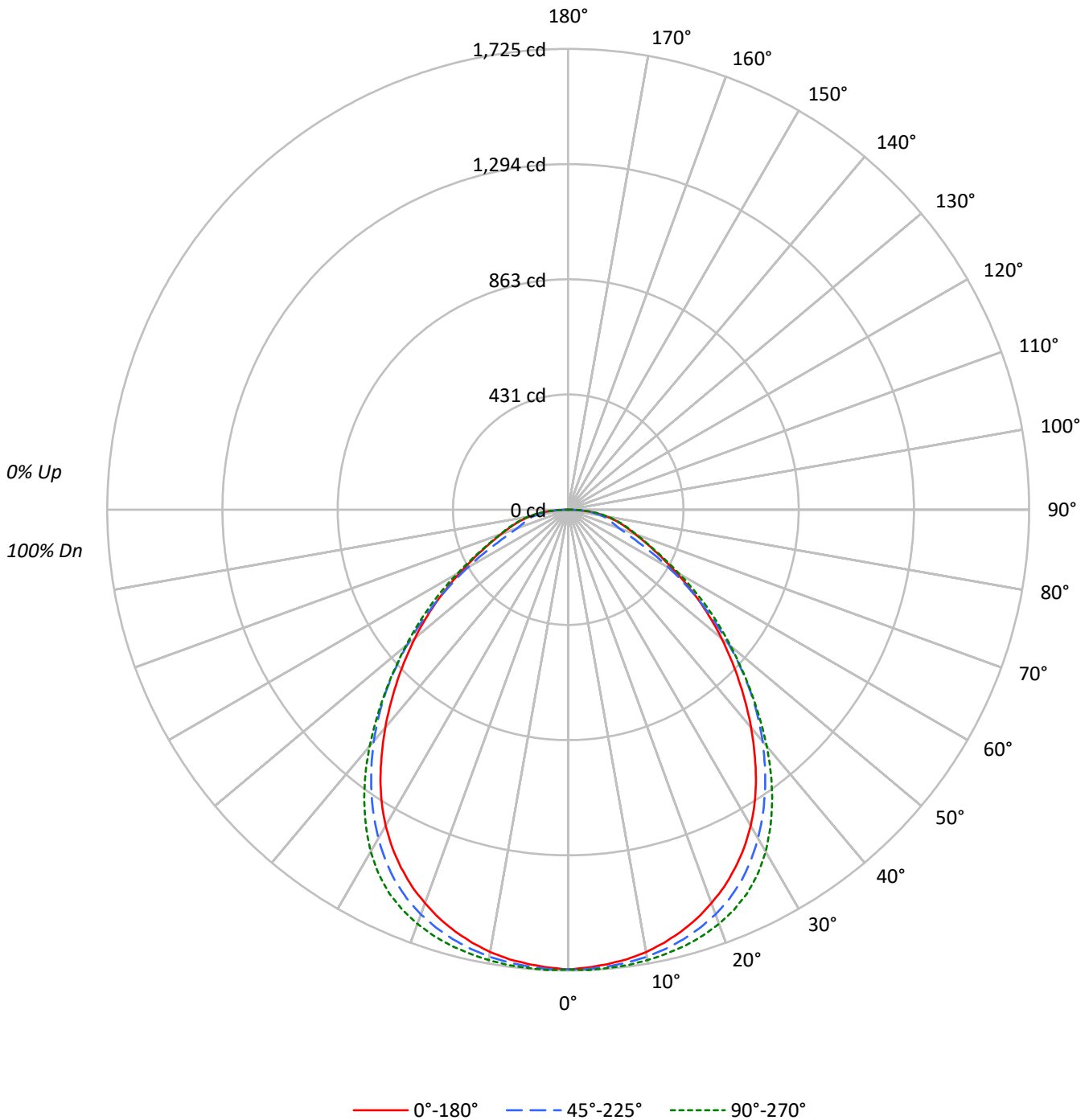
Lumens per Lamp: 2850 (2 lamps)  
Luminaire Lumens: 4012.2 lumens  
Efficiency: 70.4%  
Efficacy: 69.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.28  
Luminous Opening: Rectangular (W 1.35' x L: 3.7' x H: 0')  
CIE Type: Direct

Input Watts (W): 57.8  
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	50	30	10	0	
RCR																						
0	84	84	84	84	82	82	82	82	78	78	78	75	75	75	72	72	72	70				70
1	77	74	71	69	75	72	70	68	70	67	66	67	65	64	64	63	62	60				60
2	71	65	61	57	69	64	60	57	62	58	55	59	57	54	57	55	53	51				51
3	65	58	53	49	63	57	52	48	55	51	47	53	50	47	51	48	46	44				44
4	60	52	46	42	58	51	46	42	49	45	41	48	44	41	46	43	40	39				39
5	55	47	41	37	54	46	41	36	45	40	36	43	39	36	42	38	35	34				34
6	51	43	37	32	50	42	36	32	41	36	32	40	35	32	38	35	31	30				30
7	48	39	33	29	47	38	33	29	37	32	29	36	32	28	35	31	28	27				27
8	45	36	30	26	44	35	30	26	34	29	26	33	29	26	33	28	25	24				24
9	42	33	27	24	41	32	27	23	32	27	23	31	26	23	30	26	23	22				22
10	39	30	25	21	38	30	25	21	29	25	21	29	24	21	28	24	21	20				20

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

	0°	45°	90°
0°	3694	3694	3694
5°	3678	3697	3710
10°	3664	3703	3731
15°	3631	3700	3755
20°	3579	3682	3769
25°	3503	3631	3751
30°	3386	3522	3663
35°	3210	3364	3488
40°	2984	3172	3239
45°	2741	2929	2941
50°	2501	2621	2648
55°	2249	2264	2365
60°	1983	1867	2061
65°	1773	1478	1813
70°	1669	1268	1707
75°	1700	1360	1750
80°	1792	1570	1879
85°	1970	1749	2093



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	163.1	4.1	2.9	0°	1721	1721	1721	1721	1721	
10°-20°	469.0	11.7	8.2	5°	1707	1709	1716	1719	1722	162
20°-30°	703.5	17.5	12.3	15°	1634	1642	1665	1681	1690	461
30°-40°	798.6	19.9	14.0	25°	1479	1495	1533	1566	1584	680
40°-50°	732.0	18.2	12.8	35°	1225	1242	1284	1320	1331	763
50°-60°	544.4	13.6	9.6	45°	903	931	965	971	969	697
60°-70°	326.0	8.1	5.7	55°	601	599	605	612	632	538
70°-80°	195.9	4.9	3.4	65°	349	318	291	322	357	351
80°-90°	79.7	2.0	1.4	75°	205	184	164	185	211	217
90°-100°	0.0	0.0	0.0	85°	80	77	71	76	85	78
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	6
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°	1335.6	33.3	23.4	165°	0	0	0	0	0	0
0°-40°	2134.2	53.2	37.4	175°	0	0	0	0	0	0
0°-60°	3410.6	85.0	59.8	180°	0	0	0	0	0	0
0°-90°	4012.2	100.0	70.4							
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°	4012.2	100.0	70.4							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1721	1721	1721	1721	1721
2.5°	1715	1715	1721	1721	1725
5°	1707	1709	1716	1719	1722
7.5°	1697	1699	1709	1713	1719
10°	1681	1686	1699	1706	1712
12.5°	1660	1666	1684	1696	1702
15°	1634	1642	1665	1681	1690
17.5°	1604	1614	1641	1662	1672
20°	1567	1580	1612	1637	1650
22.5°	1527	1540	1576	1606	1621
25°	1479	1495	1533	1566	1584
27.5°	1426	1442	1480	1519	1537
30°	1366	1381	1421	1460	1478
32.5°	1299	1314	1355	1393	1408
35°	1225	1242	1284	1320	1331
37.5°	1145	1166	1209	1239	1246
40°	1065	1089	1132	1153	1156
42.5°	983	1010	1050	1063	1061
45°	903	931	965	971	969
47.5°	825	849	875	878	879
50°	749	766	785	786	793
52.5°	674	683	693	698	711
55°	601	599	605	612	632
57.5°	530	518	518	529	554
60°	462	442	435	451	480
62.5°	402	375	359	381	413
65°	349	318	291	322	357
67.5°	305	272	239	277	310
70°	266	238	202	241	272
72.5°	234	209	180	211	240
75°	205	184	164	185	211
77.5°	176	159	148	159	182
80°	145	134	127	133	152
82.5°	113	108	100	106	119
85°	80	77	71	76	85
87.5°	42	42	38	40	45
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



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**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)