

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: 227p163

Luminaire Tested: **MBF-254T5-FB-UNV-EB81-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 227p163
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: MBF-254T5-FB-UNV-EB81-U
Description: MICROBAY, 2 LAMP T5, WITH SPECULAR FOCUS BEAM REFLECTOR
(90352FBT52L), TALL SOCKETS
Light Source: TWO T5 HIGH OUTPUT LINEAR FLUORESCENT LAMP
F54T5 54 WATTS
Ballast/Driver: -

Summary

Lumens per Lamp: 4400 (2 lamps)
Luminaire Lumens: 8816.1 lumens
Efficiency: 100.2%
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 0.56 / 0.77
Luminous Opening: Rectangular (W 0.75' x L: 3.83' x H: 0')
CIE Type: Direct

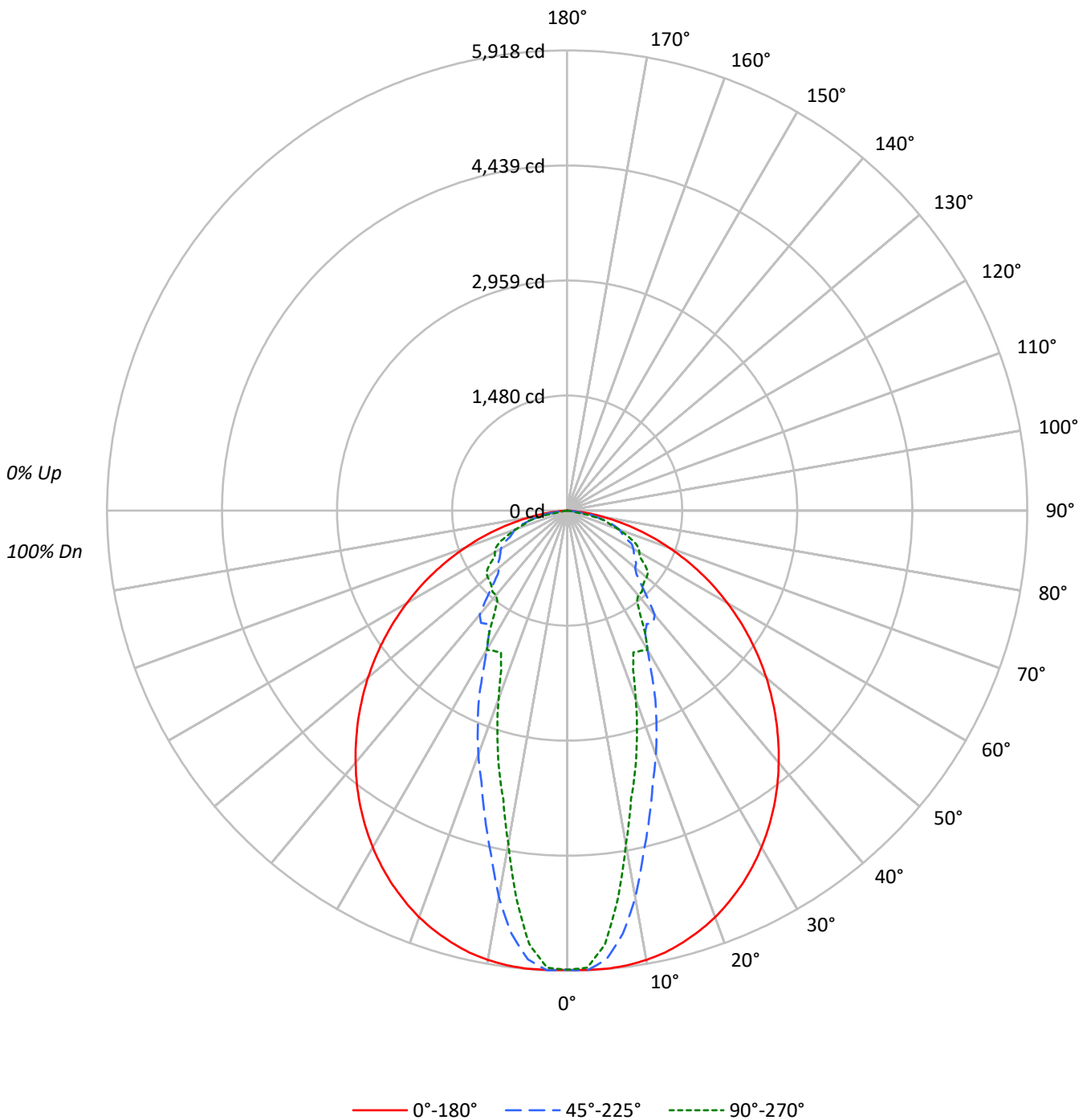
Input Watts (W): 117
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111	107	107	107	102	102	102	100
1	110	105	102	98	107	103	100	96	99	96	93	95	93	90	92	90	88	86
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63
4	85	74	66	60	83	73	65	59	70	64	58	68	62	58	66	61	57	55
5	79	67	59	52	77	66	58	52	64	57	51	62	56	51	60	55	50	48
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	69	56	48	42	67	55	47	42	54	47	41	52	46	41	51	45	41	39
8	64	52	44	38	63	51	43	38	50	43	38	48	42	37	47	42	37	35
9	60	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	32
10	57	45	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22112	22112	22112
5°	22230	21772	21031
10°	22309	19199	16557
15°	22295	15826	13167
20°	22172	13311	10271
25°	21940	11096	8316
30°	21616	8893	8936
35°	21203	8140	7487
40°	20688	8548	6945
45°	20115	7127	7280
50°	19477	6646	7776
55°	18734	6913	7990
60°	17844	7361	8027
65°	16761	7220	8434
70°	15292	7849	7553
75°	13265	7262	7406
80°	10284	6835	1574
85°	6057	859	86



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	528.4	6.0	6.0	0°	5906	5906	5906	5906	5906	
10°-20°	1215.0	13.8	13.8	5°	5915	5902	5793	5658	5596	563
20°-30°	1429.9	16.2	16.2	15°	5752	5189	4083	3551	3397	1622
30°-40°	1477.5	16.8	16.8	25°	5311	3854	2686	2095	2013	2446
40°-50°	1351.1	15.3	15.4	35°	4639	2710	1781	1757	1638	2900
50°-60°	1216.3	13.8	13.8	45°	3799	1666	1346	1355	1375	2929
60°-70°	951.1	10.8	10.8	55°	2870	1188	1059	1217	1224	2564
70°-80°	554.2	6.3	6.3	65°	1892	664	815	931	952	1871
80°-90°	91.5	1.0	1.0	75°	917	455	502	489	512	974
90°-100°	1.1	0.0	0.0	85°	141	150	20	3	2	187
100°-110°	0.0	0.0	0.0	90°	1	24	6	1	2	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°	3173.4	36.0	36.1	165°	0	0	0	0	0	0
0°-40°	4650.8	52.8	52.9	175°	0	0	0	0	0	0
0°-60°	7218.2	81.9	82.0	180°	0	0	0	0	0	0
0°-90°	8815.0	100.0	100.2							
90°-120°	1.1	0.0	0.0							
90°-150°	1.1	0.0	0.0							
90°-180°	1.0	0.0	0.0							
0°-180°	8816.1	100.0	100.2							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5906	5906	5906	5906	5906
2.5°	5913	5924	5918	5898	5883
5°	5915	5902	5793	5658	5596
7.5°	5900	5815	5490	5155	5019
10°	5868	5669	5050	4521	4355
12.5°	5820	5458	4524	3985	3799
15°	5752	5189	4083	3551	3397
17.5°	5666	4871	3663	3153	2987
20°	5565	4521	3341	2778	2578
22.5°	5445	4170	3002	2379	2216
25°	5311	3854	2686	2095	2013
27.5°	5163	3540	2343	1949	2035
30°	5000	3233	2057	2015	2067
32.5°	4825	2974	1865	1988	1865
35°	4639	2710	1781	1757	1638
37.5°	4442	2448	1820	1550	1475
40°	4233	2189	1749	1411	1421
42.5°	4019	1926	1533	1356	1420
45°	3799	1666	1346	1355	1375
47.5°	3572	1458	1206	1303	1346
50°	3344	1306	1141	1272	1335
52.5°	3108	1215	1118	1251	1312
55°	2870	1188	1059	1217	1224
57.5°	2628	1097	1018	1109	1103
60°	2383	919	983	1013	1072
62.5°	2139	763	938	980	1036
65°	1892	664	815	931	952
67.5°	1642	616	759	833	822
70°	1397	557	717	704	690
72.5°	1154	512	627	579	572
75°	917	455	502	489	512
77.5°	688	373	389	372	308
80°	477	323	317	136	73
82.5°	292	224	111	3	1
85°	141	150	20	3	2
87.5°	34	42	13	3	2
90°	1	24	6	1	2
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)