

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: 227p162

Luminaire Tested: **MBF-154T5-TB-UNV-EBT1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 227p162
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: MBF-154T5-TB-UNV-EBT1-U
Description: MICROBAY, 1 LAMP T5, WITH SPECULAR TASK BEAM REFLECTOR
Light Source: ONE T5 HIGH OUTPUT LINEAR FLUORESCENT LAMP
F54T5 54 WATTS
Ballast/Driver: -

Summary

Lumens per Lamp: 4400 (1 lamp)
Luminaire Lumens: 4397.2 lumens
Efficiency: 99.9%
Efficacy: 68.7 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 0.79 / 0.91
Luminous Opening: Rectangular (W 0.6' x L: 3.83' x H: 0')
CIE Type: Direct

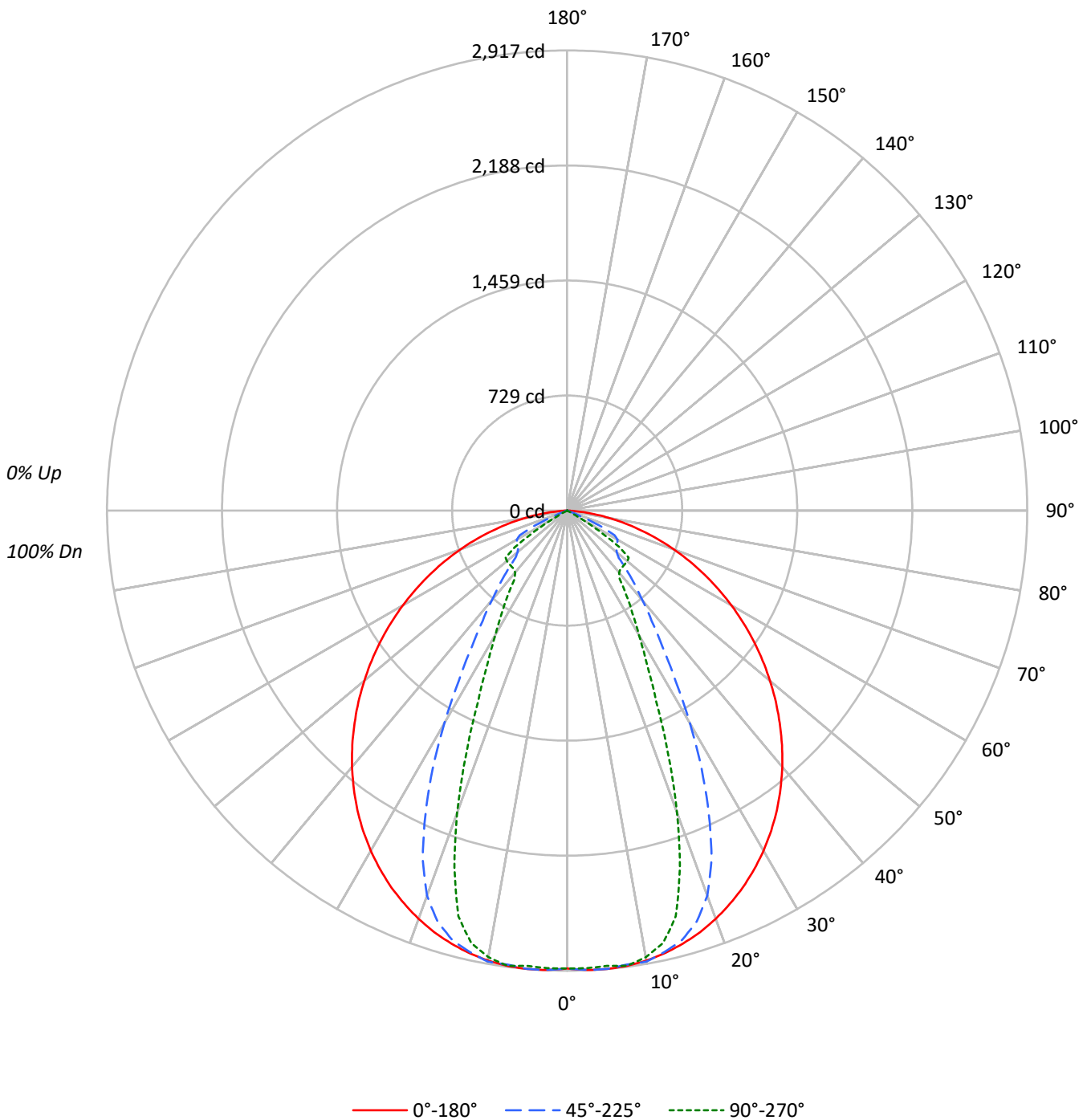
Input Watts (W): 64
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	111	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89				89
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78				78
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	71	69				69
4	89	80	72	67	87	78	72	66	76	70	65	74	69	65	72	67	64	62				62
5	83	73	65	59	82	72	64	59	70	63	59	68	62	58	66	61	57	56				56
6	78	67	59	54	76	66	59	53	64	58	53	63	57	52	61	56	52	50				50
7	73	61	54	49	72	61	54	48	59	53	48	58	52	48	57	51	48	46				46
8	69	57	49	44	67	56	49	44	55	49	44	54	48	44	53	48	44	42				42
9	65	53	46	41	63	52	45	41	51	45	41	50	45	40	49	44	40	39				39
10	61	49	42	38	60	49	42	38	48	42	38	47	41	37	46	41	37	36				36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13492	13492	13492
5°	13609	13609	13516
10°	13667	13700	13564
15°	13670	13554	12809
20°	13621	12850	10080
25°	13518	10908	6851
30°	13363	8340	4868
35°	13152	5963	3705
40°	12868	4496	3106
45°	12528	3503	3286
50°	12140	2957	3601
55°	11701	3112	3298
60°	11182	3430	697
65°	10557	2474	0
70°	9784	177	0
75°	8763	162	0
80°	7280	214	0
85°	4693	427	53



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	277.5	6.3	6.3	0°	2903	2903	2903	2903	2903	
10°-20°	772.8	17.6	17.6	5°	2917	2918	2917	2913	2897	278
20°-30°	947.4	21.5	21.5	15°	2841	2840	2817	2719	2662	802
30°-40°	844.7	19.2	19.2	25°	2636	2616	2127	1527	1336	1214
40°-50°	677.0	15.4	15.4	35°	2318	2138	1051	721	653	1449
50°-60°	507.9	11.6	11.5	45°	1906	1288	533	473	500	1470
60°-70°	244.9	5.6	5.6	55°	1444	575	384	452	407	1290
70°-80°	102.2	2.3	2.3	65°	960	243	225	1	0	951
80°-90°	22.0	0.5	0.5	75°	488	160	9	1	0	517
90°-100°	0.7	0.0	0.0	85°	88	19	8	1	1	111
100°-110°	0.0	0.0	0.0	90°	1	14	5	1	1	3
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°	1997.7	45.4	45.4	165°	0	0	0	0	0	0
0°-40°	2842.5	64.6	64.6	175°	0	0	0	0	0	0
0°-60°	4027.4	91.6	91.5	180°	0	0	0	0	0	0
0°-90°	4396.5	100.0	99.9							
90°-120°	0.7	0.0	0.0							
90°-150°	0.7	0.0	0.0							
90°-180°	1.0	0.0	0.0							
0°-180°	4397.2	100.0	99.9							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2903	2903	2903	2903	2903
2.5°	2915	2915	2914	2914	2903
5°	2917	2918	2917	2913	2897
7.5°	2911	2911	2902	2916	2910
10°	2896	2897	2903	2889	2874
12.5°	2873	2866	2865	2838	2808
15°	2841	2840	2817	2719	2662
17.5°	2802	2810	2731	2510	2377
20°	2754	2758	2598	2203	2038
22.5°	2698	2688	2393	1871	1676
25°	2636	2616	2127	1527	1336
27.5°	2566	2529	1845	1223	1091
30°	2490	2421	1554	1011	907
32.5°	2407	2289	1278	845	770
35°	2318	2138	1051	721	653
37.5°	2222	1940	880	609	546
40°	2121	1726	741	514	512
42.5°	2016	1505	632	483	501
45°	1906	1288	533	473	500
47.5°	1794	1068	444	470	499
50°	1679	867	409	466	498
52.5°	1562	704	393	464	491
55°	1444	575	384	452	407
57.5°	1324	468	376	352	238
60°	1203	380	369	190	75
62.5°	1082	298	338	44	3
65°	960	243	225	1	0
67.5°	840	219	84	1	0
70°	720	204	13	1	0
72.5°	602	191	10	0	0
75°	488	160	9	1	0
77.5°	377	64	8	1	0
80°	272	25	8	1	0
82.5°	174	22	8	1	1
85°	88	19	8	1	1
87.5°	23	17	7	1	1
90°	1	14	5	1	1
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)