

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: 227p165

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 227p165
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: MBF-254T5-NB-UNV-EB81-U
Description: MICROBAY, 2 LAMP T5, WITH SPECULAR NORMAL BEAM REFLECTOR
(90352NBT52L), 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: 8477.4 lumens
Efficiency: 96.3%
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.1 / 1.18
Luminous Opening: Rectangular (W 0.73' x L: 3.83' x H: 0')
CIE Type: Direct

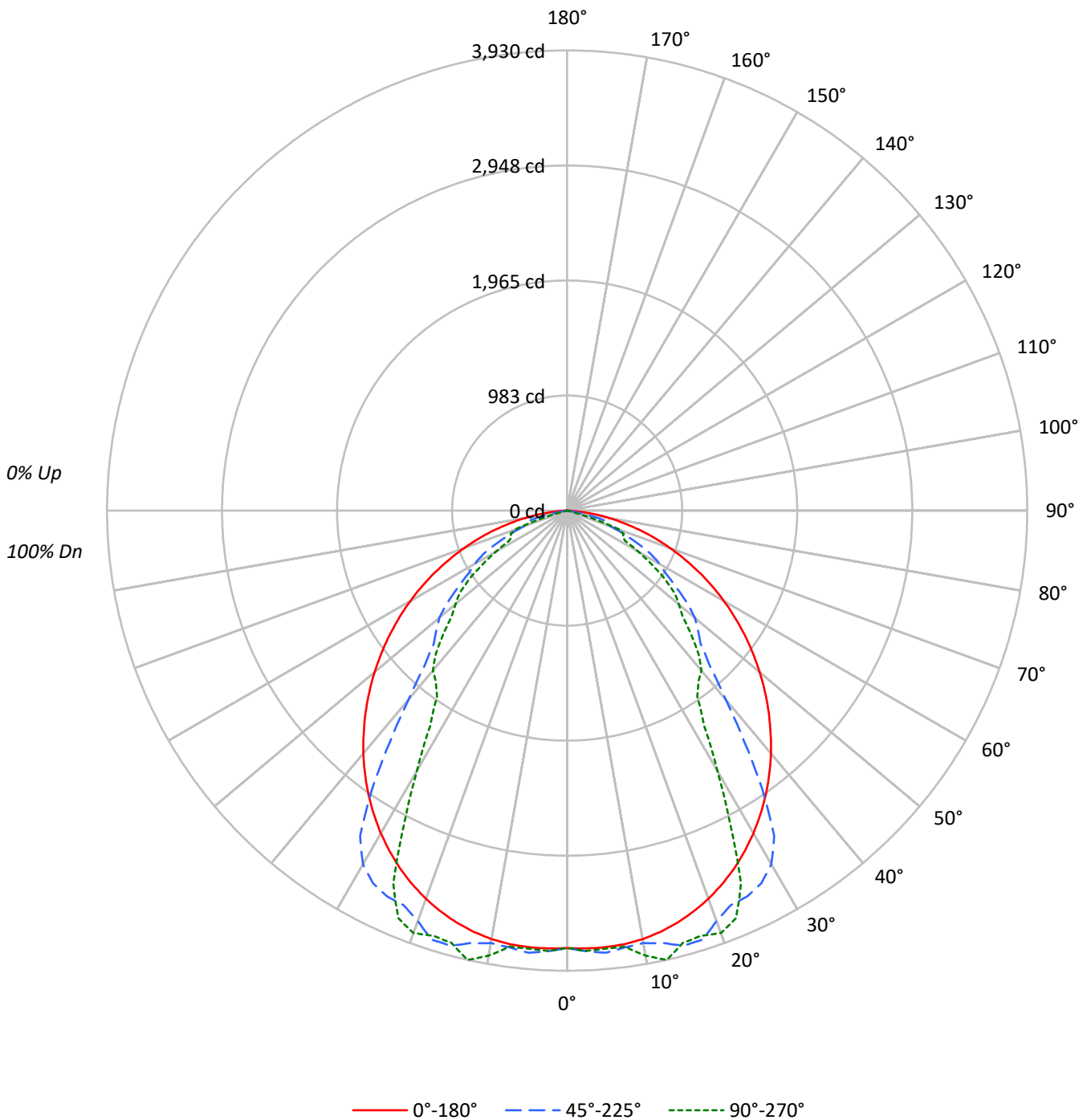
Input Watts (W): 119
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	115	115	115	115	112	112	112	112	107	107	107	102	102	102	98	98	98	96				
1	106	102	99	96	104	100	97	94	96	94	91	93	90	88	89	87	86	84				
2	98	91	85	80	95	89	84	79	86	81	77	83	79	76	80	77	74	72				
3	90	81	74	68	88	80	73	68	77	71	67	74	69	65	72	68	64	62				
4	83	73	65	59	81	71	64	59	69	63	58	67	62	57	65	60	56	55				
5	77	66	58	52	75	65	57	52	63	56	51	61	55	50	59	54	50	48				
6	71	60	52	46	70	59	51	46	57	50	45	55	49	45	54	49	45	43				
7	67	54	47	41	65	54	46	41	52	45	41	51	45	40	50	44	40	38				
8	62	50	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36	34				
9	58	46	39	34	57	45	38	33	44	38	33	43	37	33	42	37	33	31				
10	55	43	35	31	54	42	35	31	41	35	30	40	34	30	40	34	30	29				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14387	14387	14387
5°	14469	14655	14519
10°	14531	14668	15094
15°	14524	15333	15237
20°	14458	15286	15733
25°	14336	15450	14931
30°	14149	15510	11401
35°	13915	13657	9115
40°	13613	10572	8963
45°	13256	8779	8153
50°	12863	8531	7453
55°	12414	7607	6835
60°	11923	7032	5391
65°	11308	6060	4757
70°	10539	4447	5359
75°	9522	5267	595
80°	8028	665	0
85°	5391	707	0



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	359.7	4.2	4.1	0°	3736	3736	3736	3736	3736	
10°-20°	1066.1	12.6	12.1	5°	3743	3775	3791	3783	3756	356
20°-30°	1617.5	19.1	18.4	15°	3643	3670	3846	3876	3822	1028
30°-40°	1662.5	19.6	18.9	25°	3374	3539	3636	3672	3514	1554
40°-50°	1509.7	17.8	17.2	35°	2960	3113	2905	2073	1939	1850
50°-60°	1168.0	13.8	13.3	45°	2434	2665	1612	1568	1497	1877
60°-70°	722.8	8.5	8.2	55°	1849	1594	1133	1066	1018	1653
70°-80°	322.9	3.8	3.7	65°	1241	827	665	495	522	1228
80°-90°	48.1	0.6	0.5	75°	640	390	354	125	40	679
90°-100°	0.0	0.0	0.0	85°	122	54	16	2	0	156
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	3043.4	35.9	34.6							
0°-40°	4705.8	55.5	53.5							
0°-60°	7383.5	87.1	83.9							
0°-90°	8477.4	100.0	96.3							
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°	8477.4	100.0	96.3							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3736	3736	3736	3736	3736
2.5°	3743	3751	3767	3776	3764
5°	3743	3775	3791	3783	3756
7.5°	3735	3777	3763	3763	3756
10°	3716	3759	3751	3829	3860
12.5°	3685	3714	3783	3922	3930
15°	3643	3670	3846	3876	3822
17.5°	3590	3625	3842	3777	3807
20°	3528	3587	3730	3810	3839
22.5°	3455	3562	3648	3777	3768
25°	3374	3539	3636	3672	3514
27.5°	3282	3486	3590	3335	3016
30°	3182	3404	3488	2851	2564
32.5°	3074	3268	3290	2415	2176
35°	2960	3113	2905	2073	1939
37.5°	2836	2995	2483	1855	1840
40°	2708	2905	2103	1773	1783
42.5°	2572	2804	1808	1710	1660
45°	2434	2665	1612	1568	1497
47.5°	2291	2506	1515	1402	1338
50°	2147	2276	1424	1249	1244
52.5°	1998	1938	1285	1157	1157
55°	1849	1594	1133	1066	1018
57.5°	1699	1297	997	920	857
60°	1548	1075	913	767	700
62.5°	1394	923	809	612	559
65°	1241	827	665	495	522
67.5°	1087	687	520	479	523
70°	936	570	395	478	476
72.5°	787	483	365	347	247
75°	640	390	354	125	40
77.5°	498	271	190	2	0
80°	362	194	30	2	0
82.5°	235	162	23	2	1
85°	122	54	16	2	0
87.5°	37	37	10	1	0
90°	0	0	0	0	0

(END OF REPORT)