

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: 236p221

Luminaire Tested: **2HBG-654T5-A-UNV-EBT1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 236p221
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2HBG-654T5-A-UNV-EBT1-U
Description: 2X4 HIGH PERFORMANCE F-BAY RECESSED TROFFER, 6 LAMP T5, WITH
ACRYLIC LENS
Light Source: SIX -F54T5/841HO - 4400 LUMENS - 54 WATTS
Ballast/Driver: B454PUNV-E/B254PUNV

Summary

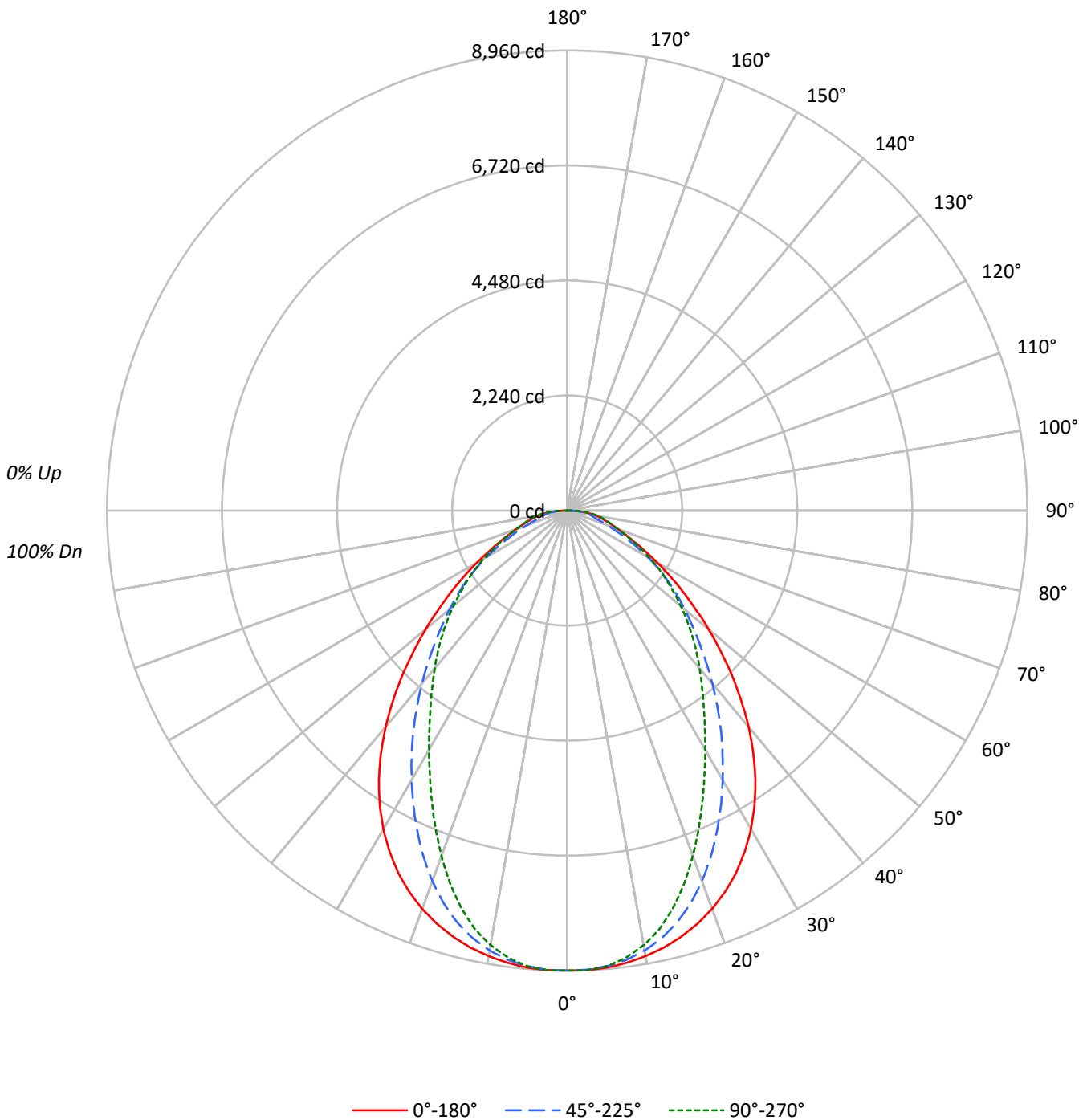
Lumens per Lamp: 4400 (6 lamps)
Luminaire Lumens: 17254.8 lumens
Efficiency: 65.4%
Efficacy: 59.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 1.75' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 288
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	78	78	78	78	76	76	76	76	73	73	73		70	70	70		67	67	67	65
1	72	69	67	64	70	68	65	63	65	63	61		62	61	59		60	59	58	56
2	66	61	57	54	65	60	56	53	58	55	52		56	53	51		54	52	50	49
3	61	55	50	46	59	54	49	46	52	48	45		50	47	44		49	46	43	42
4	56	49	44	40	55	48	44	40	47	43	39		45	42	39		44	41	38	37
5	52	45	39	35	51	44	39	35	43	38	35		41	37	34		40	37	34	33
6	49	41	35	31	47	40	35	31	39	34	31		38	34	31		37	33	30	29
7	45	37	32	28	44	37	32	28	36	31	28		35	31	28		34	30	27	26
8	42	34	29	25	41	34	29	25	33	28	25		32	28	25		31	28	25	24
9	40	32	27	23	39	31	26	23	31	26	23		30	26	23		29	26	23	22
10	37	29	25	21	37	29	24	21	28	24	21		28	24	21		27	24	21	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14372	14372	14372
5°	14387	14343	14343
10°	14351	14173	13999
15°	14266	13778	13283
20°	14089	13109	12214
25°	13778	12214	11042
30°	13264	11220	9962
35°	12521	10219	9081
40°	11516	9212	8404
45°	10295	8253	7813
50°	8982	7456	7214
55°	7687	6714	6613
60°	6489	5805	6017
65°	5509	4746	5346
70°	4931	3856	4898
75°	4798	3528	5022
80°	5267	4103	5710
85°	6075	4971	6793



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	843.6	4.9	3.2	0°	8957	8957	8957	8957	8957	
10°-20°	2325.1	13.5	8.8	5°	8932	8915	8905	8897	8905	849
20°-30°	3192.3	18.5	12.1	15°	8588	8496	8294	8081	7996	2420
30°-40°	3344.4	19.4	12.7	25°	7782	7493	6899	6411	6237	3573
40°-50°	2931.3	17.0	11.1	35°	6392	5921	5217	4764	4636	3979
50°-60°	2190.9	12.7	8.3	45°	4537	4100	3637	3452	3443	3495
60°-70°	1348.8	7.8	5.1	55°	2748	2480	2400	2339	2364	2471
70°-80°	756.5	4.4	2.9	65°	1451	1325	1250	1354	1408	1467
80°-90°	322.0	1.9	1.2	75°	774	696	569	759	810	832
90°-100°	0.0	0.0	0.0	85°	330	284	270	341	369	346
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°	6361.0	36.9	24.1							
0°-40°	9705.4	56.2	36.8							
0°-60°	14827.5	85.9	56.2							
0°-90°	17254.8	100.0	65.4							
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°	17254.8	100.0	65.4							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8957	8957	8957	8957	8957
2.5°	8958	8947	8950	8954	8960
5°	8932	8915	8905	8897	8905
7.5°	8882	8856	8823	8788	8780
10°	8808	8770	8699	8621	8592
12.5°	8714	8649	8520	8386	8336
15°	8588	8496	8294	8081	7996
17.5°	8436	8305	8009	7714	7599
20°	8251	8076	7677	7299	7153
22.5°	8035	7803	7304	6860	6695
25°	7782	7493	6899	6411	6237
27.5°	7487	7145	6481	5967	5792
30°	7159	6761	6056	5543	5377
32.5°	6791	6353	5633	5139	4986
35°	6392	5921	5217	4764	4636
37.5°	5956	5473	4800	4405	4313
40°	5498	5018	4398	4074	4012
42.5°	5018	4555	4006	3754	3725
45°	4537	4100	3637	3452	3443
47.5°	4054	3653	3296	3160	3163
50°	3598	3240	2987	2885	2890
52.5°	3153	2845	2687	2609	2619
55°	2748	2480	2400	2339	2364
57.5°	2368	2146	2103	2077	2118
60°	2022	1842	1809	1823	1875
62.5°	1714	1568	1520	1578	1635
65°	1451	1325	1250	1354	1408
67.5°	1233	1118	1016	1160	1210
70°	1051	946	822	1000	1044
72.5°	903	809	674	870	915
75°	774	696	569	759	810
77.5°	667	593	499	655	714
80°	570	492	444	556	618
82.5°	460	389	367	457	506
85°	330	284	270	341	369
87.5°	195	170	155	213	224
90°	0	0	0	0	0

(END OF REPORT)