

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: ITL63243

Luminaire Tested: **HBI-654T5-N-A-UNV-EHT2-U**

Issue Date: 3/3/2020



**Test Information**

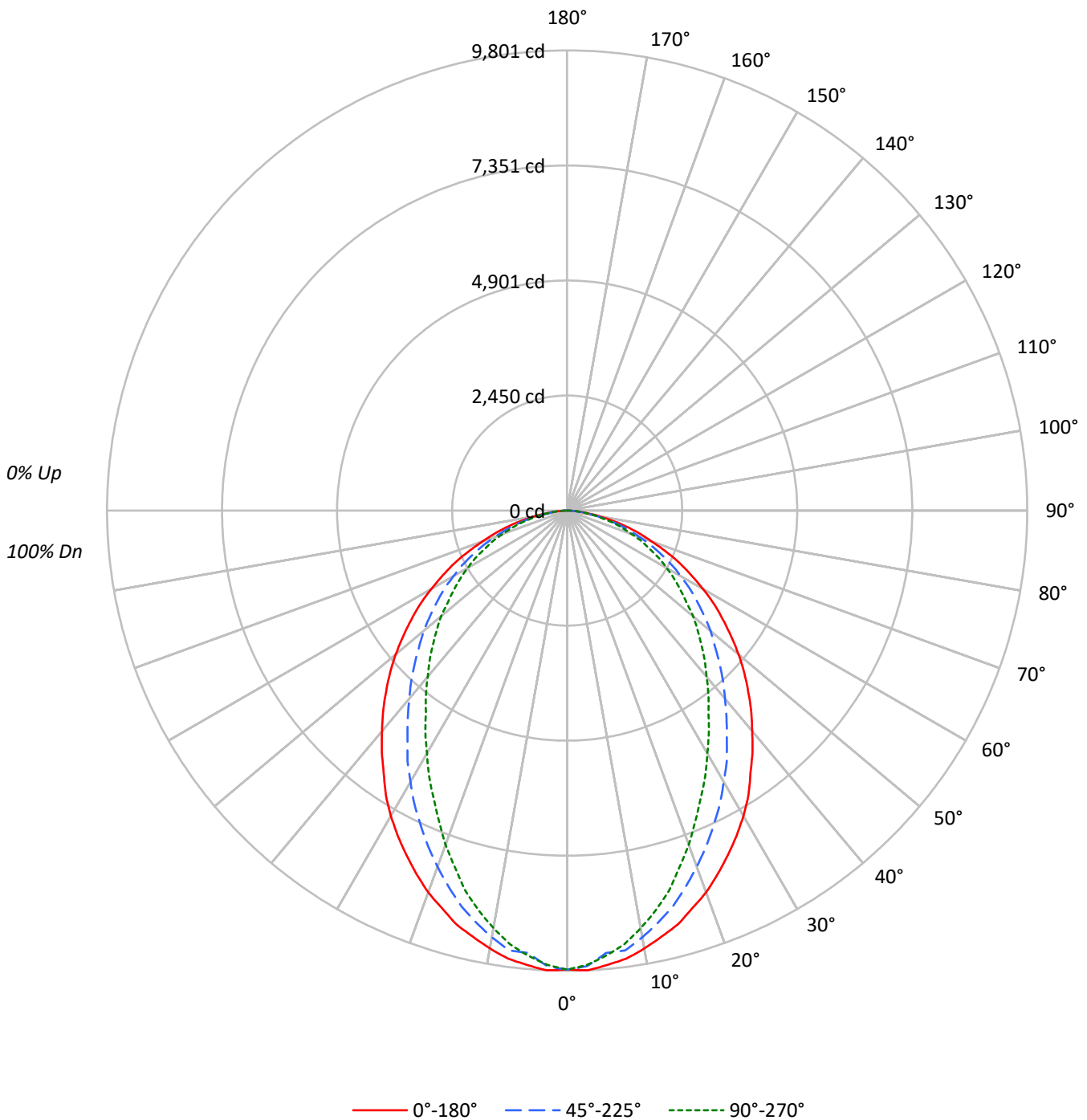
Test Method: LM-41-14  
Report Number: ITL63243  
Test Lab: INDEPENDENT TESTING LABORATORIES, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBI-654T5-N-A-UNV-EHT2-U  
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH SIX T5HO LAMPS  
NARROW DISTRIBUTION SPECULAR REFLECTOR AND STANDARD DOORFRAME  
WITH PRISMATIC ACRYLIC LENS, NO UPLIGHT  
Light Source: SIX T5 HIGH OUTPUT LINEAR FLUORESCENT LAMPS, F54T5 54W - 4400 LUMENS EA  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 4400 (6 lamps)  
Luminaire Lumens: 20952.7 lumens  
Efficiency: 79.4%  
Efficacy: 67.7 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 0.96 / 1.16  
Luminous Opening: Rectangular (W 1.2' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 309.6  
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									
RC	80									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	50	30	10	0													
RCR																																					
0	94	94	94	94	92	92	92	92	88	88	88	84	84	84	81	81	81	79																			
1	87	83	80	77	85	82	79	76	78	76	74	75	73	71	72	71	69	68																			
2	79	73	68	64	77	72	67	63	69	65	62	66	63	60	64	61	59	57																			
3	73	65	59	54	71	64	58	53	61	56	52	59	55	51	57	54	51	49																			
4	67	58	51	46	65	57	51	46	55	49	45	53	48	45	51	47	44	42																			
5	62	52	45	40	60	51	45	40	49	44	39	48	43	39	46	42	39	37																			
6	57	47	40	35	56	46	40	35	45	39	35	44	38	35	42	38	34	33																			
7	53	43	36	31	52	42	36	31	41	35	31	40	35	31	39	34	31	29																			
8	50	39	33	28	49	39	33	28	38	32	28	37	32	28	36	31	28	26																			
9	47	36	30	26	45	36	30	26	35	29	25	34	29	25	33	29	25	24																			
10	44	34	28	23	43	33	27	23	32	27	23	32	27	23	31	26	23	22																			

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

	0°	45°	90°
0°	22550	22550	22550
5°	22500	21905	22032
10°	22181	21612	21151
15°	21782	20819	20010
20°	21243	19815	18588
25°	20601	18804	17150
30°	19998	17764	15894
35°	19180	16688	14765
40°	18466	15747	13913
45°	17793	14952	13187
50°	17105	14310	12566
55°	16294	13604	11834
60°	15393	12898	11292
65°	14462	12083	10609
70°	12921	11066	9893
75°	11603	9847	9072
80°	9497	8036	8036
85°	6801	5954	6801



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	905.5	4.3	3.4	0°	9777	9777	9777	9777	9777	
10°-20°	2450.3	11.7	9.3	5°	9718	9686	9461	9562	9516	920
20°-30°	3409.2	16.3	12.9	15°	9122	8971	8719	8476	8380	2565
30°-40°	3755.5	17.9	14.2	25°	8095	7866	7389	6945	6739	3730
40°-50°	3615.8	17.3	13.7	35°	6812	6578	5927	5469	5244	4271
50°-60°	3085.8	14.7	11.7	45°	5455	5194	4584	4208	4043	4211
60°-70°	2240.2	10.7	8.5	55°	4052	3805	3383	3080	2943	3625
70°-80°	1199.2	5.7	4.5	65°	2650	2503	2214	2063	1944	2602
80°-90°	291.3	1.4	1.1	75°	1302	1210	1105	1064	1018	1371
90°-100°	0.0	0.0	0.0	85°	257	206	225	238	257	314
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°	6765.0	32.3	25.6							
0°-40°	10520.4	50.2	39.9							
0°-60°	17222.0	82.2	65.2							
0°-90°	20952.7	100.0	79.4							
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°	20952.7	100.0	79.4							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	9777	9777	9777	9777	9777
2.5°	9801	9764	9714	9686	9682
5°	9718	9686	9461	9562	9516
7.5°	9627	9549	9448	9356	9315
10°	9471	9397	9228	9118	9031
12.5°	9296	9177	8980	8806	8719
15°	9122	8971	8719	8476	8380
17.5°	8875	8733	8398	8128	7958
20°	8655	8458	8073	7720	7573
22.5°	8380	8183	7738	7353	7142
25°	8095	7866	7389	6945	6739
27.5°	7811	7568	7046	6555	6372
30°	7509	7234	6670	6161	5968
32.5°	7188	6913	6326	5808	5620
35°	6812	6578	5927	5469	5244
37.5°	6482	6198	5574	5102	4942
40°	6133	5886	5230	4800	4621
42.5°	5803	5505	4910	4488	4337
45°	5455	5194	4584	4208	4043
47.5°	5116	4850	4268	3938	3768
50°	4767	4488	3988	3635	3502
52.5°	4401	4167	3672	3360	3200
55°	4052	3805	3383	3080	2943
57.5°	3713	3484	3099	2838	2705
60°	3337	3149	2796	2558	2448
62.5°	2980	2815	2517	2306	2210
65°	2650	2503	2214	2063	1944
67.5°	2265	2155	1934	1779	1724
70°	1916	1838	1641	1549	1467
72.5°	1604	1508	1366	1274	1229
75°	1302	1210	1105	1064	1018
77.5°	981	935	834	816	779
80°	715	669	605	605	605
82.5°	449	435	385	413	403
85°	257	206	225	238	257
87.5°	92	87	105	128	128
90°	0	0	0	0	0

(END OF REPORT)