

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: ITL63241

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

Issue Date: 3/3/2020



**Test Information**

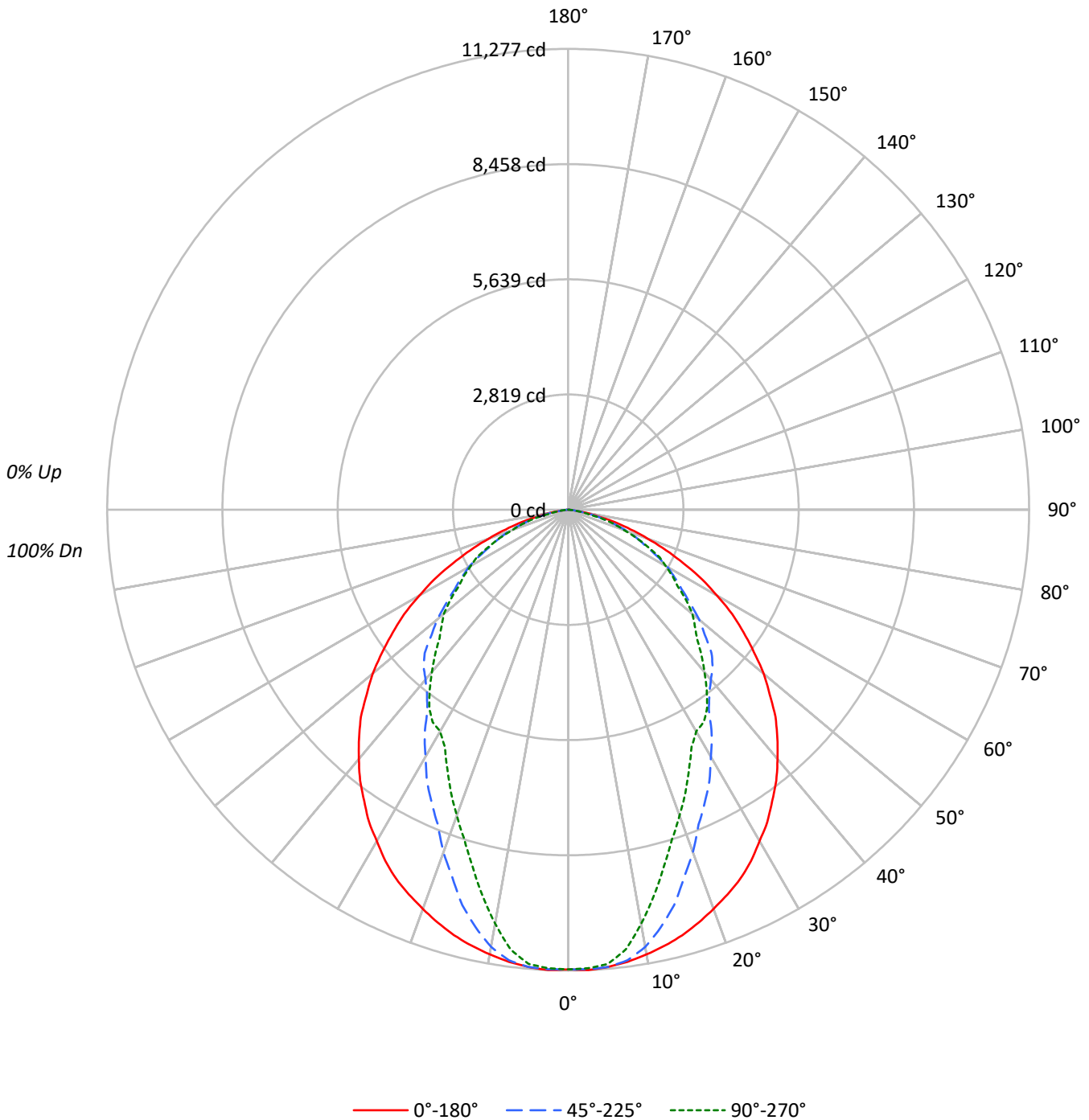
Test Method: LM-41-14  
Report Number: ITL63241  
Test Lab: INDEPENDENT TESTING LABORATORIES, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBI-654T5-N-CL-UNV-EHT2-U  
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH SIX T5HO LAMPS  
NARROW DISTRIBUTION SPECULAR REFLECTOR AND STANDARD DOORFRAME  
WITH CLEAR 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: 22523.1 lumens  
Efficiency: 85.3%  
Efficacy: 72.6 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 0.87 / 1.09  
Luminous Opening: Rectangular (W 1.2' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 310.2  
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	102	102	102	102	99	99	99	99	95	95	95	91	91	91	87	87	87	85
1	94	90	87	84	92	88	86	83	85	82	80	82	80	78	79	77	76	74
2	86	80	75	70	84	78	73	69	75	71	68	73	69	66	70	67	65	63
3	79	71	65	59	77	70	64	59	67	62	58	65	61	57	63	59	56	54
4	73	63	56	51	71	62	56	51	60	55	50	58	53	49	56	52	49	47
5	67	57	50	45	66	56	49	44	54	49	44	53	48	44	51	47	43	41
6	63	52	45	39	61	51	44	39	50	43	39	48	43	39	47	42	38	37
7	58	47	40	35	57	47	40	35	45	39	35	44	39	35	43	38	34	33
8	54	43	36	32	53	43	36	32	42	36	31	41	35	31	40	35	31	30
9	51	40	33	29	50	40	33	29	39	33	29	38	32	28	37	32	28	27
10	48	37	31	26	47	37	30	26	36	30	26	35	30	26	34	29	26	25

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

	0°	45°	90°
0°	25945	25945	25945
5°	26003	26003	25834
10°	25875	25444	24092
15°	25745	23916	21586
20°	25519	21896	19555
25°	25362	20122	17801
30°	24931	18582	16677
35°	24499	16883	16677
40°	23987	16343	15623
45°	23384	16179	14505
50°	22401	14984	14245
55°	21051	13624	13161
60°	19370	12921	12685
65°	17011	11308	11657
70°	13912	10264	9771
75°	10462	7967	7922
80°	5844	4928	4622
85°	1217	1826	979



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	1056.4	4.7	4.0	0°	11249	11249	11249	11249	11249	
10°-20°	2800.8	12.4	10.6	5°	11231	11245	11231	11194	11158	###
20°-30°	3793.4	16.8	14.4	15°	10782	10754	10016	9260	9040	3040
30°-40°	4175.6	18.5	15.8	25°	9966	9384	7907	7220	6995	4583
40°-50°	4014.5	17.8	15.2	35°	8701	7458	5996	5941	5923	5447
50°-60°	3305.8	14.7	12.5	45°	7169	5538	4960	4552	4447	5505
60°-70°	2267.0	10.1	8.6	55°	5235	3663	3388	3337	3273	4680
70°-80°	986.9	4.4	3.7	65°	3117	2246	2072	2196	2136	3100
80°-90°	122.7	0.5	0.5	75°	1174	843	894	917	889	1256
90°-100°	0.0	0.0	0.0	85°	46	64	69	41	37	124
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°	7650.6	34.0	29.0							
0°-40°	11826.2	52.5	44.8							
0°-60°	19146.5	85.0	72.5							
0°-90°	22523.1	100.0	85.3							
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°	22523.1	100.0	85.3							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	11249	11249	11249	11249	11249
2.5°	11277	11268	11254	11240	11231
5°	11231	11245	11231	11194	11158
7.5°	11158	11181	11121	10924	10846
10°	11048	11093	10864	10488	10287
12.5°	10928	10901	10470	9892	9682
15°	10782	10754	10016	9260	9040
17.5°	10598	10507	9429	8714	8453
20°	10397	10167	8921	8164	7967
22.5°	10186	9810	8338	7733	7490
25°	9966	9384	7907	7220	6995
27.5°	9691	8934	7486	6734	6537
30°	9361	8412	6977	6285	6262
32.5°	9067	7944	6537	6101	6170
35°	8701	7458	5996	5941	5923
37.5°	8361	6931	5670	5693	5565
40°	7967	6459	5428	5322	5189
42.5°	7573	5987	5230	4960	4822
45°	7169	5538	4960	4552	4447
47.5°	6684	5075	4534	4217	4199
50°	6243	4547	4176	3929	3970
52.5°	5730	4112	3754	3713	3640
55°	5235	3663	3388	3337	3273
57.5°	4758	3378	3090	3007	3025
60°	4199	3039	2801	2732	2750
62.5°	3704	2654	2439	2475	2521
65°	3117	2246	2072	2196	2136
67.5°	2595	1843	1824	1834	1815
70°	2063	1494	1522	1508	1449
72.5°	1604	1169	1201	1178	1183
75°	1174	843	894	917	889
77.5°	743	633	637	582	513
80°	440	390	371	344	348
82.5°	183	211	183	211	165
85°	46	64	69	41	37
87.5°	9	14	18	18	18
90°	0	0	0	0	0

(END OF REPORT)