

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: p20004

Luminaire Tested: **HBI-654T5-W-UNV-EHT2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: p20004  
Test Lab: COOPER LIGHTING PTC RESEARCH LAB  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBI-654T5-W-UNV-EHT2-U  
Description: [ HBI SERIES, FULL BODY STEEL HOUSING, WITH SIX T5HO LAMPS  
WIDE DISTRIBUTION SPECULAR REFLECTOR NO UPLIGHT  
Light Source: SIX T5 HIGH OUTPUT LINEAR FLUORESCENT LAMPS, F54T5 54W - 4400 LUMENS EA  
Ballast/Driver: -

**Summary**

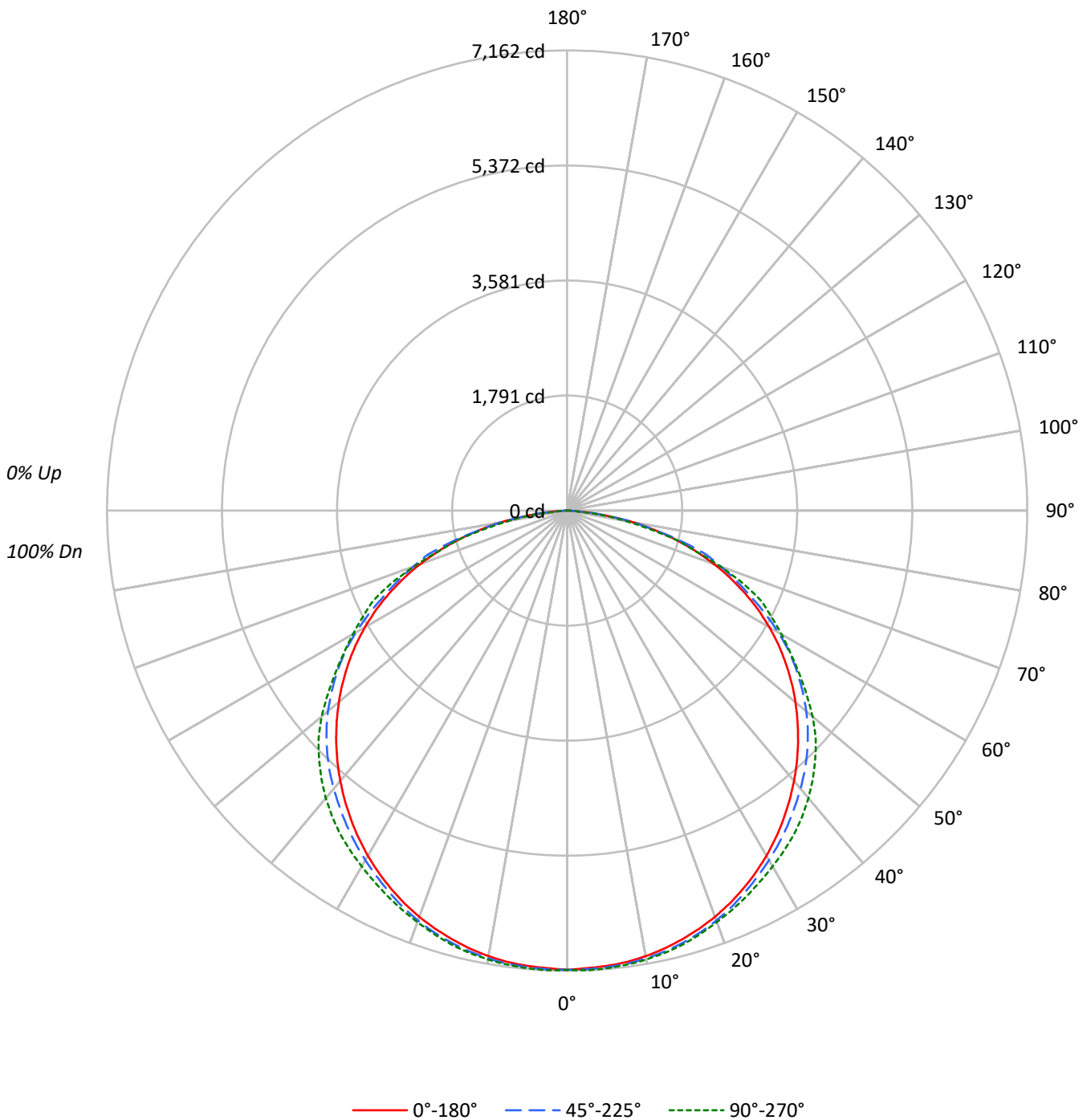
Lumens per Lamp: 4400 (6 lamps)  
Luminaire Lumens: 22714.9 lumens  
Efficiency: 86.0%  
Efficacy: 69.3 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.34 / 1.45  
Luminous Opening: Rectangular (W 1.42' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 328  
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	100	100	100	100	96	96	96	92	92	92	88	88	88	86
1	93	89	85	82	91	87	83	80	83	80	78	80	78	75	77	75	73	71
2	84	77	71	66	82	75	70	65	72	67	63	69	65	62	67	63	61	59
3	77	67	60	54	74	66	59	54	63	57	53	61	56	52	59	54	51	49
4	70	59	51	45	68	58	51	45	56	49	44	54	48	44	52	47	43	41
5	64	53	45	39	62	52	44	39	50	43	38	48	42	38	46	41	37	35
6	59	47	39	34	57	46	39	33	45	38	33	43	37	33	42	37	33	31
7	55	43	35	30	53	42	35	29	41	34	29	39	33	29	38	33	29	27
8	51	39	31	26	49	38	31	26	37	31	26	36	30	26	35	30	26	24
9	47	36	28	24	46	35	28	23	34	28	23	33	27	23	32	27	23	21
10	44	33	26	21	43	32	26	21	31	25	21	31	25	21	30	25	21	19

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

	0°	45°	90°
0°	13578	13578	13578
5°	13565	13605	13633
10°	13583	13650	13685
15°	13587	13695	13742
20°	13602	13725	13778
25°	13604	13734	13871
30°	13608	13781	14031
35°	13607	13872	14268
40°	13623	14012	14489
45°	13657	14203	14673
50°	13712	14362	14734
55°	13773	14466	14585
60°	13809	14436	14638
65°	13749	14127	14994
70°	13490	14151	14023
75°	12851	13467	12888
80°	11289	11409	9911
85°	6756	6909	3008



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	679.2	3.0	2.6	0°	7148	7148	7148	7148	7148	
10°-20°	1965.1	8.7	7.4	5°	7114	7120	7135	7155	7150	677
20°-30°	3025.9	13.3	11.5	15°	6909	6929	6964	6992	6988	1952
30°-40°	3756.1	16.5	14.2	25°	6491	6521	6553	6608	6618	2993
40°-50°	4063.4	17.9	15.4	35°	5868	5895	5982	6115	6153	3673
50°-60°	3844.2	16.9	14.6	45°	5084	5089	5287	5425	5462	3923
60°-70°	3122.5	13.7	11.8	55°	4159	4146	4368	4408	4404	3716
70°-80°	1851.8	8.2	7.0	65°	3059	3054	3143	3268	3336	3019
80°-90°	406.7	1.8	1.5	75°	1751	1703	1835	1751	1756	1840
90°-100°	0.0	0.0	0.0	85°	310	365	317	174	138	421
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°	5670.2	25.0	21.5							
0°-40°	9426.3	41.5	35.7							
0°-60°	17334.0	76.3	65.7							
0°-90°	22714.9	100.0	86.0							
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°	22714.9	100.0	86.0							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7148	7148	7148	7148	7148
2.5°	7127	7132	7145	7168	7162
5°	7114	7120	7135	7155	7150
7.5°	7087	7096	7114	7134	7128
10°	7042	7055	7077	7101	7095
12.5°	6983	6998	7027	7055	7050
15°	6909	6929	6964	6992	6988
17.5°	6825	6847	6884	6911	6907
20°	6729	6753	6790	6817	6816
22.5°	6617	6644	6679	6716	6721
25°	6491	6521	6553	6608	6618
27.5°	6353	6383	6420	6490	6507
30°	6204	6233	6283	6370	6397
32.5°	6041	6069	6137	6246	6280
35°	5868	5895	5982	6115	6153
37.5°	5684	5706	5818	5969	6006
40°	5494	5508	5651	5808	5843
42.5°	5294	5302	5476	5627	5660
45°	5084	5089	5287	5425	5462
47.5°	4865	4867	5081	5209	5248
50°	4640	4637	4860	4981	4986
52.5°	4405	4394	4619	4705	4697
55°	4159	4146	4368	4408	4404
57.5°	3903	3893	4103	4102	4118
60°	3635	3633	3800	3815	3853
62.5°	3355	3355	3476	3540	3585
65°	3059	3054	3143	3268	3336
67.5°	2752	2739	2844	3003	2965
70°	2429	2412	2548	2587	2525
72.5°	2098	2076	2264	2146	2087
75°	1751	1703	1835	1751	1756
77.5°	1397	1358	1398	1372	1282
80°	1032	1058	1043	920	906
82.5°	661	692	614	657	605
85°	310	365	317	174	138
87.5°	61	103	71	73	72
90°	0	0	0	0	0

(END OF REPORT)