

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: P30625

Luminaire Tested: **HBI-647T5-N-UNV-EHT1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P30625
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBI-647T5-N-UNV-EHT1
Description: METALUX F-BAY HBI SERIES, FULL BODY STEEL HOUSING, WITH
A NARROW DISTRIBUTION SPECULAR ALUMINUM REFLECTOR, NO UPLIGHT
Light Source: (6) BIPIN T5 LINEAR FLUORESCENT LAMP 4100K - 4285 LUMENS EA
GE F54T5-47W 841-ECO 47W
Ballast/Driver: GE ELECTRONIC BALLAST
GE 454MVPS90E, 254MVPS90E

Summary

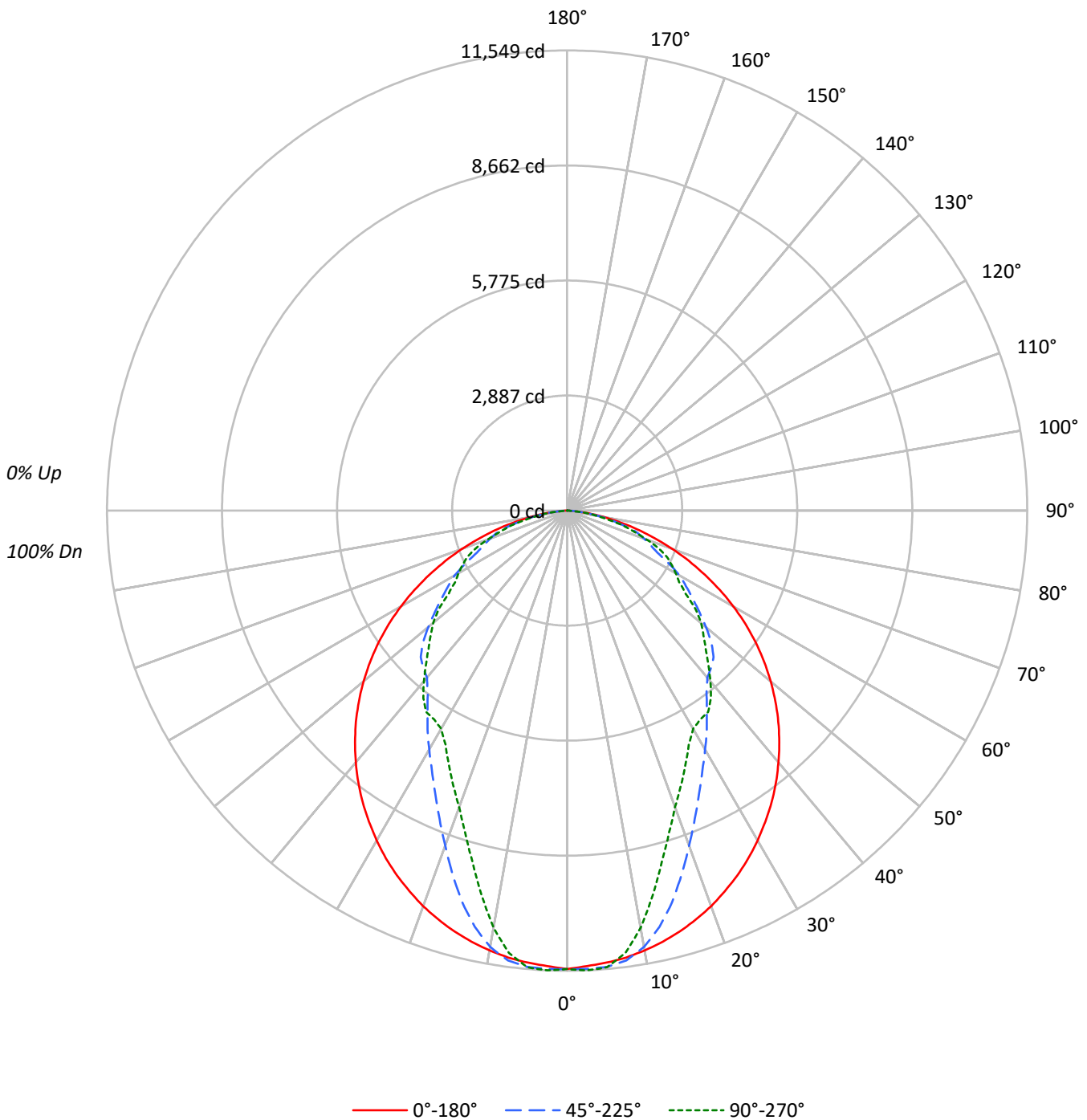
Lumens per Lamp: 4285 (6 lamps)
Luminaire Lumens: 24506.9 lumens
Efficiency: 95.3%
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.85 / 1.09
Luminous Opening: Rectangular (W 1.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 304
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	113	113	113	113	111	111	111	111	106	106	106	101	101	101	97	97	97	95
1	104	100	96	92	102	98	94	91	94	91	88	90	88	85	86	85	83	81
2	95	88	81	76	93	86	80	75	82	78	73	79	75	72	76	73	70	68
3	87	77	70	64	85	76	69	63	73	67	62	70	65	61	68	64	60	58
4	80	69	61	55	78	68	60	54	65	59	53	63	57	53	61	56	52	50
5	74	62	54	47	72	61	53	47	59	52	47	57	51	46	55	50	46	44
6	68	56	48	42	67	55	47	42	53	46	41	52	46	41	50	45	41	39
7	64	51	43	37	62	50	43	37	49	42	37	47	41	37	46	41	36	34
8	59	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	31
9	56	43	36	30	54	43	35	30	42	35	30	40	34	30	40	34	30	28
10	52	40	33	28	51	39	32	28	39	32	28	38	32	27	37	31	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25192	25192	25192
5°	25029	25264	25284
10°	24920	24720	23629
15°	24786	23064	20748
20°	24614	20844	18449
25°	24412	18926	16979
30°	24170	17504	15982
35°	23904	16322	16485
40°	23580	15647	15993
45°	23208	16090	15242
50°	22717	15504	14952
55°	22062	14668	13844
60°	21118	14278	13771
65°	19757	12904	14360
70°	17897	13141	13589
75°	15403	12747	12316
80°	11826	10653	9456
85°	6230	6807	2386



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	1080.5	4.4	4.2	0°	11507	11507	11507	11507	11507	
10°-20°	2842.2	11.6	11.1	5°	11389	11432	11496	11493	11505	###
20°-30°	3808.9	15.5	14.8	15°	10936	10939	10176	9397	9154	3085
30°-40°	4246.7	17.3	16.5	25°	10106	9488	7835	7199	7029	4656
40°-50°	4224.6	17.2	16.4	35°	8944	7454	6107	6038	6168	5593
50°-60°	3640.9	14.9	14.2	45°	7496	5531	5197	4985	4923	5778
60°-70°	2770.6	11.3	10.8	55°	5780	3890	3843	3774	3627	5158
70°-80°	1555.7	6.3	6.1	65°	3814	2698	2491	2695	2772	3772
80°-90°	334.9	1.4	1.3	75°	1821	1287	1507	1441	1456	1936
90°-100°	1.8	0.0	0.0	85°	248	288	271	129	95	356
100°-110°	0.0	0.0	0.0	90°	23	13	11	13	8	14
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	7731.6	31.5	30.1	165°	0	0	0	0	0	0
0°-40°	11978.3	48.9	46.6	175°	0	0	0	0	0	0
0°-60°	19843.8	81.0	77.2	180°	0	0	0	0	0	0
0°-90°	24505.1	100.0	95.3							
90°-120°	1.8	0.0	0.0							
90°-150°	1.8	0.0	0.0							
90°-180°	2.0	0.0	0.0							
0°-180°	24506.9	100.0	95.3							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	11507	11507	11507	11507	11507
2.5°	11442	11469	11512	11526	11549
5°	11389	11432	11496	11493	11505
7.5°	11315	11374	11386	11249	11197
10°	11210	11291	11120	10768	10629
12.5°	11084	11145	10700	10116	9899
15°	10936	10939	10176	9397	9154
17.5°	10760	10662	9564	8735	8492
20°	10565	10324	8947	8128	7919
22.5°	10341	9927	8373	7634	7465
25°	10106	9488	7835	7199	7029
27.5°	9845	9003	7347	6777	6617
30°	9561	8485	6924	6390	6322
32.5°	9256	7959	6518	6125	6216
35°	8944	7454	6107	6038	6168
37.5°	8611	6948	5742	5952	5930
40°	8251	6456	5475	5703	5596
42.5°	7881	5973	5346	5366	5241
45°	7496	5531	5197	4985	4923
47.5°	7090	5107	4909	4666	4644
50°	6670	4691	4552	4383	4390
52.5°	6232	4272	4179	4123	4060
55°	5780	3890	3843	3774	3627
57.5°	5308	3584	3540	3354	3331
60°	4823	3355	3261	3082	3145
62.5°	4319	3070	2878	2887	2959
65°	3814	2698	2491	2695	2772
67.5°	3310	2306	2262	2515	2491
70°	2796	1943	2053	2169	2123
72.5°	2297	1644	1843	1789	1746
75°	1821	1287	1507	1441	1456
77.5°	1362	1003	1141	1142	1067
80°	938	811	845	751	750
82.5°	563	550	494	557	526
85°	248	288	271	129	95
87.5°	58	90	61	62	60
90°	23	13	11	13	8
92.5°	0	0	0	0	0
95°	0	0	0	0	0
97.5°	0	0	0	0	0
100°	0	0	0	0	0
102.5°	0	0	0	0	0
105°	0	0	0	0	0
107.5°	0	0	0	0	0
110°	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0	0	0	0	0
115°	0	0	0	0	0
117.5°	0	0	0	0	0
120°	0	0	0	0	0
122.5°	0	0	0	0	0
125°	0	0	0	0	0
127.5°	0	0	0	0	0
130°	0	0	0	0	0
132.5°	0	0	0	0	0
135°	0	0	0	0	0
137.5°	0	0	0	0	0
140°	0	0	0	0	0
142.5°	0	0	0	0	0
145°	0	0	0	0	0
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)