

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: P30404

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P30404
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBI-654T5-N-A-UNV-EHT2-SDF-U
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH SIX T5HO LAMPS,
NARROW DISTRIBUTION SPECULAR REFLECTOR AND PRISMATIC ACRYLIC LENS
IN SLOTTED DOORFRAME, NO UPLIGHT
Light Source: SIX T5 HIGH OUTPUT LINEAR FLUORESCENT LAMPS - 4400 LUMENS EA
Ballast/Driver: ADVANCE ELECTRONIC BALLAST
ADVANCE ICN2S5490C, ICN4S5490C2LSG

Summary

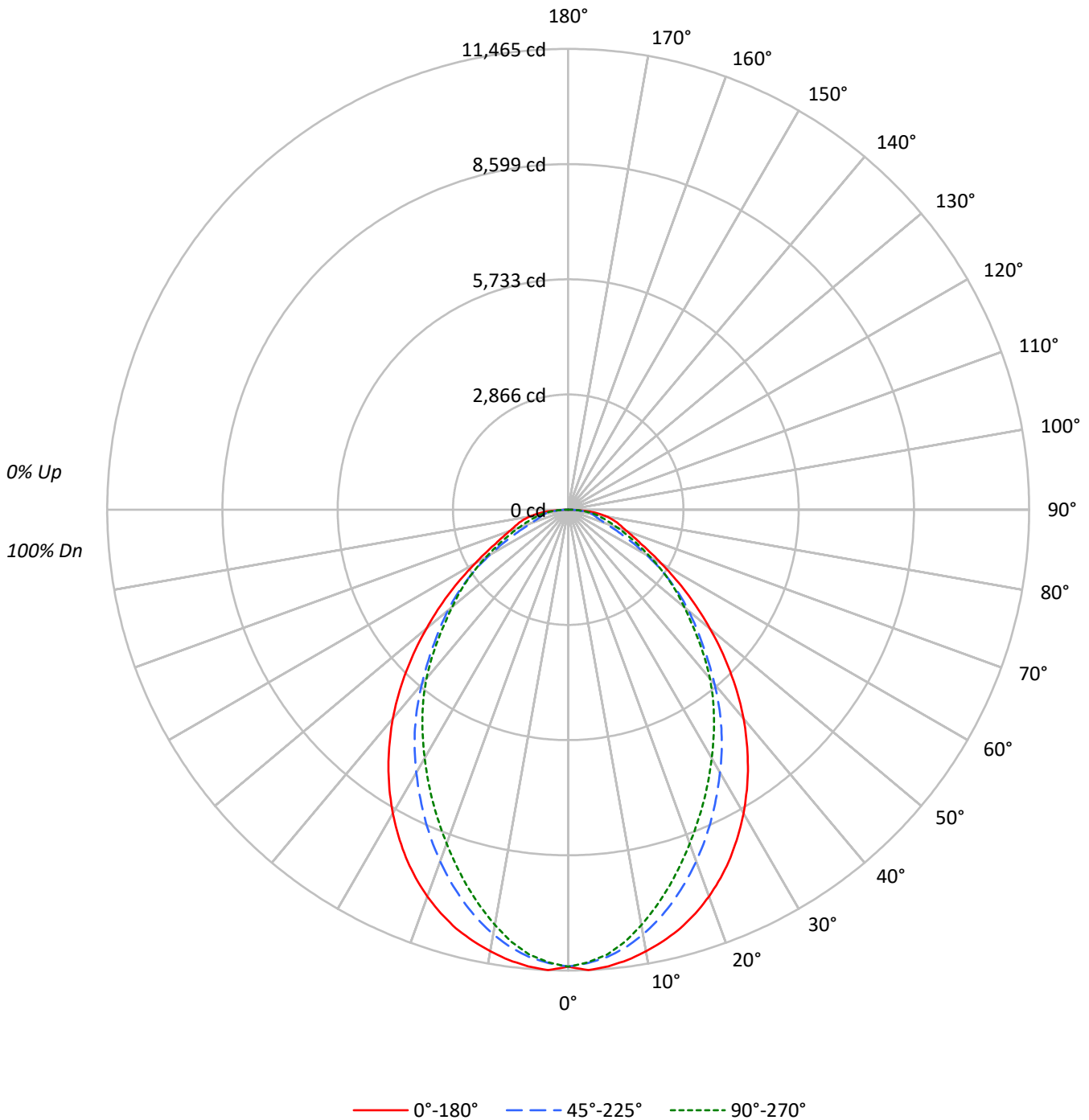
Lumens per Lamp: 4400 (6 lamps)
Luminaire Lumens: 21885.7 lumens
Efficiency: 82.9%
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.97 / 1.13
Luminous Opening: Rectangular (W 1.21' x L: 3.71' x H: 0')
CIE Type: Direct

Input Watts (W): 319.2
Input Voltage (V): NR
Input Current (A_{in}): 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	50	30	10	0	
RCR																						
0	99	99	99	99	96	96	96	96	92	92	92	88	88	88	85	85	85	85	85	85	83	
1	91	87	84	81	89	86	83	80	82	80	78	79	77	75	76	74	73	76	74	73	71	
2	84	78	73	68	82	76	71	67	73	69	66	71	67	64	68	65	63	68	65	63	61	
3	77	69	63	58	75	68	62	58	66	61	57	63	59	56	61	58	55	61	58	55	53	
4	71	62	56	50	69	61	55	50	59	54	49	57	53	49	56	52	48	56	52	48	47	
5	66	56	49	44	64	55	49	44	54	48	44	52	47	43	51	46	43	51	46	43	41	
6	61	51	44	39	60	50	44	39	49	43	39	48	42	39	46	42	38	46	42	38	37	
7	57	47	40	35	56	46	40	35	45	39	35	44	39	35	43	38	34	43	38	34	33	
8	54	43	36	32	52	42	36	32	41	36	32	40	35	31	39	35	31	39	35	31	30	
9	50	40	33	29	49	39	33	29	38	33	29	38	32	29	37	32	29	37	32	29	27	
10	47	37	31	27	46	36	31	27	36	30	26	35	30	26	34	30	26	34	30	26	25	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27308	27308	27308
5°	27497	26937	26788
10°	27215	26168	25595
15°	26816	25088	24123
20°	26180	23807	22588
25°	25315	22397	21162
30°	24190	20953	19805
35°	22856	19481	18536
40°	21273	17758	17197
45°	19357	16042	15549
50°	17202	14582	14089
55°	15002	12983	12832
60°	12842	10800	11343
65°	11277	8509	10010
70°	10823	6834	9124
75°	11778	6794	8864
80°	13391	8231	9573
85°	14911	9343	10033



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	1055.3	4.8	4.0	0°	11368	11368	11368	11368	11368	
10°-20°	2851.5	13.0	10.8	5°	11403	11248	11171	11128	11109	###
20°-30°	3951.5	18.1	15.0	15°	10783	10476	10088	9808	9700	3034
30°-40°	4261.1	19.5	16.1	25°	9551	9070	8450	8093	7984	4387
40°-50°	3798.0	17.4	14.4	35°	7794	7243	6643	6375	6321	4862
50°-60°	2839.3	13.0	10.8	45°	5698	5204	4722	4608	4577	4390
60°-70°	1715.1	7.8	6.5	55°	3582	3290	3100	2984	3064	3214
70°-80°	1000.4	4.6	3.8	65°	1984	1830	1497	1577	1761	2010
80°-90°	413.5	1.9	1.6	75°	1269	1044	732	864	955	1331
90°-100°	0.0	0.0	0.0	85°	541	465	339	338	364	564
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°	7858.3	35.9	29.8							
0°-40°	12119.4	55.4	45.9							
0°-60°	18756.7	85.7	71.0							
0°-90°	21885.7	100.0	82.9							
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°	21885.7	100.0	82.9							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	11368	11368	11368	11368	11368
2.5°	11465	11329	11289	11284	11273
5°	11403	11248	11171	11128	11109
7.5°	11302	11121	10981	10882	10838
10°	11157	10943	10728	10561	10493
12.5°	10984	10726	10428	10202	10108
15°	10783	10476	10088	9808	9700
17.5°	10528	10183	9711	9385	9270
20°	10241	9850	9313	8962	8836
22.5°	9914	9469	8889	8526	8407
25°	9551	9070	8450	8093	7984
27.5°	9148	8646	8000	7665	7558
30°	8721	8202	7554	7235	7140
32.5°	8269	7735	7107	6808	6728
35°	7794	7243	6643	6375	6321
37.5°	7295	6736	6159	5928	5911
40°	6784	6230	5663	5481	5484
42.5°	6251	5718	5176	5034	5036
45°	5698	5204	4722	4608	4577
47.5°	5153	4688	4303	4196	4147
50°	4603	4199	3902	3791	3770
52.5°	4083	3734	3507	3391	3415
55°	3582	3290	3100	2984	3064
57.5°	3102	2877	2675	2586	2703
60°	2673	2484	2248	2214	2361
62.5°	2299	2136	1850	1875	2042
65°	1984	1830	1497	1577	1761
67.5°	1740	1586	1203	1338	1522
70°	1541	1385	973	1151	1299
72.5°	1391	1206	826	999	1117
75°	1269	1044	732	864	955
77.5°	1128	893	669	729	820
80°	968	763	595	600	692
82.5°	780	638	491	477	540
85°	541	465	339	338	364
87.5°	267	248	171	178	185
90°	0	0	0	0	0

(END OF REPORT)