

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: P30503

Luminaire Tested: **HBI-454T5-W-A-UNV-EHT2-SDF-UPL**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P30503
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBI-454T5-W-A-UNV-EHT2-SDF-UPL
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH FOUR T5HO LAMPS,
WIDE DISTRIBUTION WHITE REFLECTOR AND PRISMATIC ACRYLIC LENS
IN SLOTTED DOORFRAME, WITH UPLIGHT
Light Source: FOUR T5 HIGH OUTPUT LINEAR FLUORESCENT LAMPS - 4400 LUMENS EA
Ballast/Driver: ADVANCE ELECTRONIC BALLAST
ICN455490C2LSG

Summary

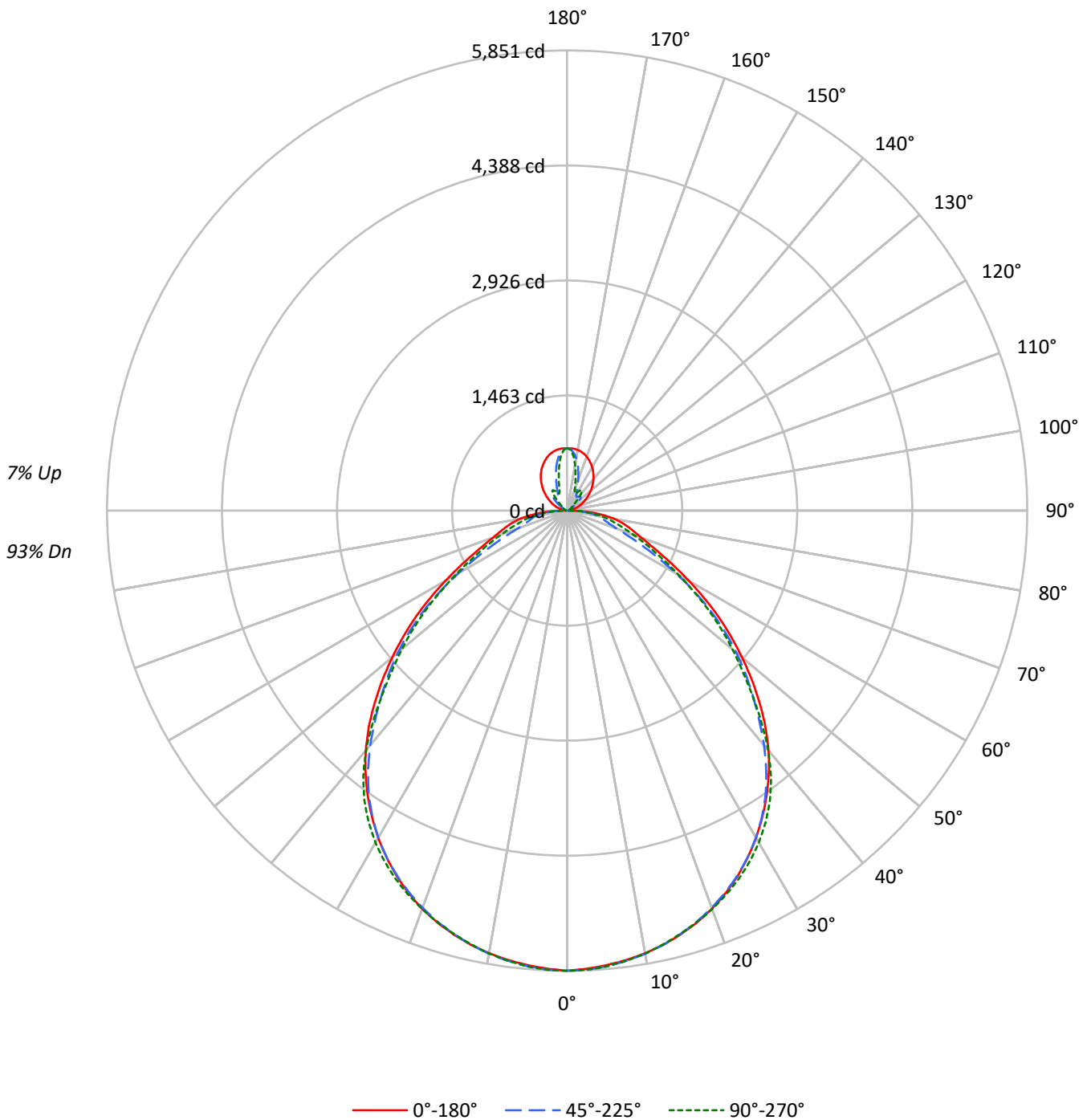
Lumens per Lamp: 4400 (4 lamps)
Luminaire Lumens: 14992.6 lumens
Efficiency: 85.2%
Efficacy: 69.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.24 / 1.29
Luminous Opening: Rectangular (W 1.21' x L: 3.71' x H: 0')
CIE Type: Direct

Input Watts (W): 215
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

TEST NUMBER: P30503

CATALOG NUMBER: HBI-454T5-W-A-UNV-EHT2-SDF-UPL

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	100	100	100	100	97	97	97	97	91	91	91		86	86	86		81	81	81	79
1	92	88	85	82	89	86	83	80	81	79	76		77	75	73		73	71	70	68
2	84	78	72	68	82	76	71	67	72	68	64		68	65	62		65	62	60	58
3	77	69	63	57	75	67	61	57	64	59	55		61	57	53		58	55	52	50
4	71	62	55	49	69	60	54	49	57	52	47		55	50	46		52	48	45	43
5	66	55	48	43	64	54	47	42	52	46	41		49	44	40		47	43	40	38
6	61	50	43	38	59	49	42	37	47	41	37		45	40	36		43	39	35	33
7	57	46	39	34	55	45	38	33	43	37	33		41	36	32		40	35	31	30
8	53	42	35	30	51	41	34	30	39	33	29		38	33	29		36	32	28	27
9	49	38	32	27	48	38	31	27	36	31	27		35	30	26		34	29	26	24
10	46	35	29	25	45	35	29	25	34	28	24		32	27	24		31	27	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14055	14055	14055
5°	13988	14017	14027
10°	13940	13957	13948
15°	13875	13860	13852
20°	13771	13740	13786
25°	13592	13571	13690
30°	13328	13320	13522
35°	12968	12903	13185
40°	12493	12214	12474
45°	11764	11353	11319
50°	10841	10490	10251
55°	9808	9348	9138
60°	8585	7692	7874
65°	7486	5951	6878
70°	7023	4727	6279
75°	7453	4659	6079
80°	8411	5713	6516
85°	9426	6615	6835



TEST NUMBER: P30503

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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	551.7	3.7	3.1	0°	5851	5851	5851	5851	5851	
10°-20°	1572.5	10.5	8.9	5°	5801	5798	5813	5819	5817	551
20°-30°	2361.9	15.8	13.4	15°	5579	5571	5573	5573	5570	1574
30°-40°	2756.9	18.4	15.7	25°	5128	5105	5120	5152	5165	2360
40°-50°	2594.0	17.3	14.7	35°	4422	4383	4400	4459	4496	2762
50°-60°	1983.5	13.2	11.3	45°	3463	3361	3342	3352	3332	2664
60°-70°	1174.1	7.8	6.7	55°	2342	2261	2232	2138	2182	2091
70°-80°	671.9	4.5	3.8	65°	1317	1238	1047	1082	1210	1332
80°-90°	280.3	1.9	1.6	75°	803	694	502	588	655	848
90°-100°	19.2	0.1	0.1	85°	342	315	240	235	248	332
100°-110°	42.8	0.3	0.2	90°	10	11	12	10	10	28
110°-120°	84.3	0.6	0.5	95°	20	17	17	17	16	25
120°-130°	121.3	0.8	0.7	105°	103	41	27	25	25	111
130°-140°	179.2	1.2	1.0	115°	209	116	57	48	44	207
140°-150°	196.8	1.3	1.1	125°	325	140	120	76	78	290
150°-160°	175.8	1.2	1.0	135°	454	179	245	202	166	351
160°-170°	156.4	1.0	0.9	145°	580	316	211	288	316	362
170°-180°	69.9	0.5	0.4	155°	685	504	302	241	239	315
0°-30°	4486.1	29.9	25.5	165°	761	682	540	436	408	214
0°-40°	7243.0	48.3	41.2	175°	792	782	758	738	736	75
0°-60°	11820.4	78.8	67.2	180°	791	791	791	791	791	
0°-90°	13946.8	93.0	79.2							
90°-120°	146.4	1.0	0.8							
90°-150°	643.7	4.3	3.7							
90°-180°	1046.0	7.0	5.9							
0°-180°	14992.6	100.0	85.2							



TEST NUMBER: P30503

CATALOG NUMBER: HBI-454T5-W-A-UNV-EHT2-SDF-UPL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5851	5851	5851	5851	5851
2.5°	5829	5826	5843	5848	5845
5°	5801	5798	5813	5819	5817
7.5°	5764	5761	5774	5776	5773
10°	5715	5712	5722	5721	5718
12.5°	5655	5650	5654	5653	5648
15°	5579	5571	5573	5573	5570
17.5°	5491	5479	5481	5485	5486
20°	5387	5372	5375	5389	5393
22.5°	5266	5247	5255	5278	5284
25°	5128	5105	5120	5152	5165
27.5°	4973	4947	4971	5012	5029
30°	4805	4777	4802	4853	4875
32.5°	4619	4588	4611	4667	4697
35°	4422	4383	4400	4459	4496
37.5°	4212	4154	4159	4219	4258
40°	3984	3906	3895	3945	3978
42.5°	3733	3635	3615	3650	3658
45°	3463	3361	3342	3352	3332
47.5°	3183	3087	3076	3058	3025
50°	2901	2816	2807	2760	2743
52.5°	2621	2540	2528	2453	2465
55°	2342	2261	2232	2138	2182
57.5°	2059	1980	1917	1831	1901
60°	1787	1708	1601	1546	1639
62.5°	1537	1454	1304	1292	1404
65°	1317	1238	1047	1082	1210
67.5°	1142	1066	835	915	1041
70°	1000	926	673	786	894
72.5°	891	802	565	681	764
75°	803	694	502	588	655
77.5°	712	597	459	499	565
80°	608	509	413	409	471
82.5°	486	422	340	323	364
85°	342	315	240	235	248
87.5°	175	168	124	126	125
90°	10	11	12	10	10
92.5°	12	13	14	13	12
95°	20	17	17	17	16
97.5°	39	20	18	19	19
100°	57	26	22	21	21
102.5°	76	34	23	23	22
105°	103	41	27	25	25
107.5°	133	49	33	29	27
110°	159	67	42	33	30



TEST NUMBER: P30503

CATALOG NUMBER: HBI-454T5-W-A-UNV-EHT2-SDF-UPL

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	184	92	49	39	36
115°	209	116	57	48	44
117.5°	234	132	62	56	52
120°	262	138	66	65	62
122.5°	292	140	83	71	71
125°	325	140	120	76	78
127.5°	356	140	159	82	82
130°	390	148	198	104	89
132.5°	424	164	233	153	118
135°	454	179	245	202	166
137.5°	488	207	241	248	221
140°	519	238	232	286	269
142.5°	550	275	221	299	308
145°	580	316	211	288	316
147.5°	609	358	216	270	300
150°	636	404	230	241	276
152.5°	661	454	258	234	250
155°	685	504	302	241	239
157.5°	708	553	351	262	252
160°	728	601	406	310	284
162.5°	747	646	470	369	342
165°	761	682	540	436	408
167.5°	774	715	611	518	489
170°	782	742	673	603	581
172.5°	789	763	721	681	670
175°	792	782	758	738	736
177.5°	792	792	785	776	780
180°	791	791	791	791	791

(END OF REPORT)