

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: P30616

Luminaire Tested: **HBI-454T5-W-UNV-EHT1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P30616
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBI-454T5-W-UNV-EHT1
Description: METALUX F-BAY HBI SERIES, FULL BODY STEEL HOUSING WITH
WIDE DISTRIBUTION, WHITE REFLECTOR, NO DOOR, NO UPLIGHT
Light Source: (4) FOUR T5 HIGH OUTPUT LINEAR FLUORESCENT LAMP, F54T5 54W - 4400 LUMENS
EA
Ballast/Driver: -
ICN4554-90C-2SL-G

Summary

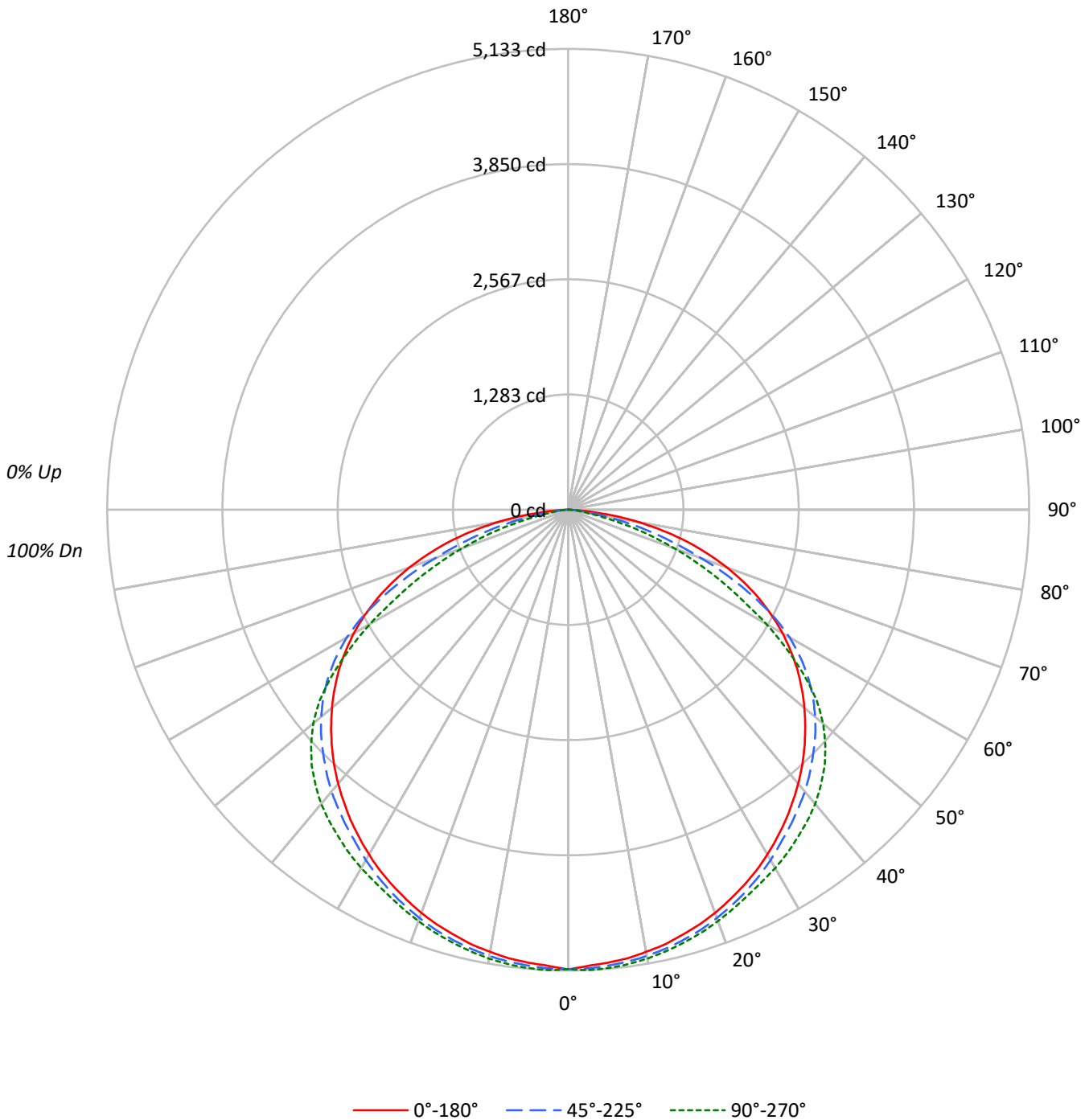
Lumens per Lamp: 4400 (4 lamps)
Luminaire Lumens: 15922.7 lumens
Efficiency: 90.5%
Efficacy: 69.3 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.35 / 1.46
Luminous Opening: Rectangular (W 1.21' x L: 3.71' x H: 0')
CIE Type: Direct

Input Watts (W): 229.8
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: P30616

CATALOG NUMBER: HBI-454T5-W-UNV-EHT1

Luminous Intensity Polar Plot





TEST NUMBER: P30616

CATALOG NUMBER: HBI-454T5-W-UNV-EHT1

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	108	108	108	108	105	105	105	105	101	101	101	96	96	96	92	92	92	90				
1	98	94	90	87	96	92	89	85	88	85	83	85	82	80	82	80	78	76				
2	89	82	76	70	87	80	74	70	77	72	68	74	70	66	71	68	65	63				
3	81	72	64	58	79	70	63	58	67	61	57	65	60	56	63	58	55	53				
4	74	63	55	49	72	62	54	49	60	53	48	57	52	47	56	51	47	45				
5	68	56	48	42	66	55	47	42	53	46	41	51	45	41	50	44	40	38				
6	63	50	42	36	61	50	42	36	48	41	36	46	40	35	45	39	35	33				
7	58	46	37	32	56	45	37	32	43	36	31	42	36	31	41	35	31	29				
8	54	41	34	28	52	41	33	28	40	33	28	38	32	28	37	32	28	26				
9	50	38	30	25	49	37	30	25	36	30	25	35	29	25	34	29	25	23				
10	47	35	28	23	46	34	27	23	34	27	23	33	27	23	32	26	22	21				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12299	12299	12299
5°	12213	12293	12358
10°	12199	12311	12384
15°	12196	12338	12410
20°	12217	12373	12465
25°	12248	12428	12558
30°	12305	12499	12784
35°	12381	12624	13061
40°	12493	12854	13418
45°	12641	13100	13714
50°	12833	13420	13850
55°	13058	13670	13414
60°	13250	13678	12241
65°	13346	12863	10652
70°	13197	11048	8829
75°	12660	8817	6293
80°	10998	5547	3168
85°	6532	2425	1984



TEST NUMBER: P30616

CATALOG NUMBER: HBI-454T5-W-UNV-EHT1

ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	484.7	3.0	2.8	0°	5120	5120	5120	5120	5120	
10°-20°	1399.7	8.8	8.0	5°	5065	5080	5098	5107	5125	482
20°-30°	2162.0	13.6	12.3	15°	4904	4931	4961	4974	4990	1386
30°-40°	2709.8	17.0	15.4	25°	4621	4655	4689	4712	4738	2132
40°-50°	2980.1	18.7	16.9	35°	4222	4252	4305	4408	4454	2643
50°-60°	2838.2	17.8	16.1	45°	3721	3725	3856	3995	4037	2873
60°-70°	2126.8	13.4	12.1	55°	3118	3071	3264	3272	3203	2783
70°-80°	1050.5	6.6	6.0	65°	2348	2278	2263	1963	1874	2314
80°-90°	170.5	1.1	1.0	75°	1364	1248	950	756	678	1427
90°-100°	0.6	0.0	0.0	85°	237	147	88	77	72	315
100°-110°	0.0	0.0	0.0	90°	4	5	5	3	3	6
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°	4046.4	25.4	23.0	165°	0	0	0	0	0	0
0°-40°	6756.1	42.4	38.4	175°	0	0	0	0	0	0
0°-60°	12574.4	79.0	71.4	180°	0	0	0	0	0	0
0°-90°	15922.1	100.0	90.5							
90°-120°	0.6	0.0	0.0							
90°-150°	0.6	0.0	0.0							
90°-180°	1.0	0.0	0.0							
0°-180°	15922.7	100.0	90.5							



TEST NUMBER: P30616

CATALOG NUMBER: HBI-454T5-W-UNV-EHT1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5120	5120	5120	5120	5120
2.5°	5085	5098	5113	5120	5133
5°	5065	5080	5098	5107	5125
7.5°	5040	5055	5078	5090	5106
10°	5001	5021	5047	5060	5077
12.5°	4961	4980	5009	5021	5037
15°	4904	4931	4961	4974	4990
17.5°	4847	4876	4906	4922	4938
20°	4779	4810	4840	4860	4876
22.5°	4703	4736	4768	4788	4808
25°	4621	4655	4689	4712	4738
27.5°	4533	4565	4600	4634	4671
30°	4436	4469	4506	4564	4609
32.5°	4330	4362	4402	4490	4538
35°	4222	4252	4305	4408	4454
37.5°	4105	4133	4202	4316	4372
40°	3984	4005	4099	4225	4279
42.5°	3857	3869	3982	4117	4164
45°	3721	3725	3856	3995	4037
47.5°	3581	3572	3731	3856	3884
50°	3434	3410	3591	3694	3706
52.5°	3279	3244	3436	3503	3487
55°	3118	3071	3264	3272	3203
57.5°	2942	2893	3068	2981	2884
60°	2758	2696	2847	2655	2548
62.5°	2559	2487	2581	2314	2191
65°	2348	2278	2263	1963	1874
67.5°	2121	2047	1924	1647	1562
70°	1879	1801	1573	1340	1257
72.5°	1628	1534	1252	1042	963
75°	1364	1248	950	756	678
77.5°	1082	921	663	494	410
80°	795	610	401	258	229
82.5°	507	351	186	144	131
85°	237	147	88	77	72
87.5°	38	39	35	34	33
90°	4	5	5	3	3
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



TEST NUMBER: P30616

CATALOG NUMBER: HBI-454T5-W-UNV-EHT1

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)