

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: 236p328

Luminaire Tested: **HBI-632-N-UNV-EB82/PLUS-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 236p328
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBI-632-N-UNV-EB82/PLUS-U
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH SIX T8 LAMPS
NARROW DISTRIBUTION SPECULAR REFLECTOR NO UPLIGHT
Light Source: SIX T8 LINEAR FLUORESCENT LAMPS, F32T8 32W - 2850 LUMENS EA
Ballast/Driver: -

Summary

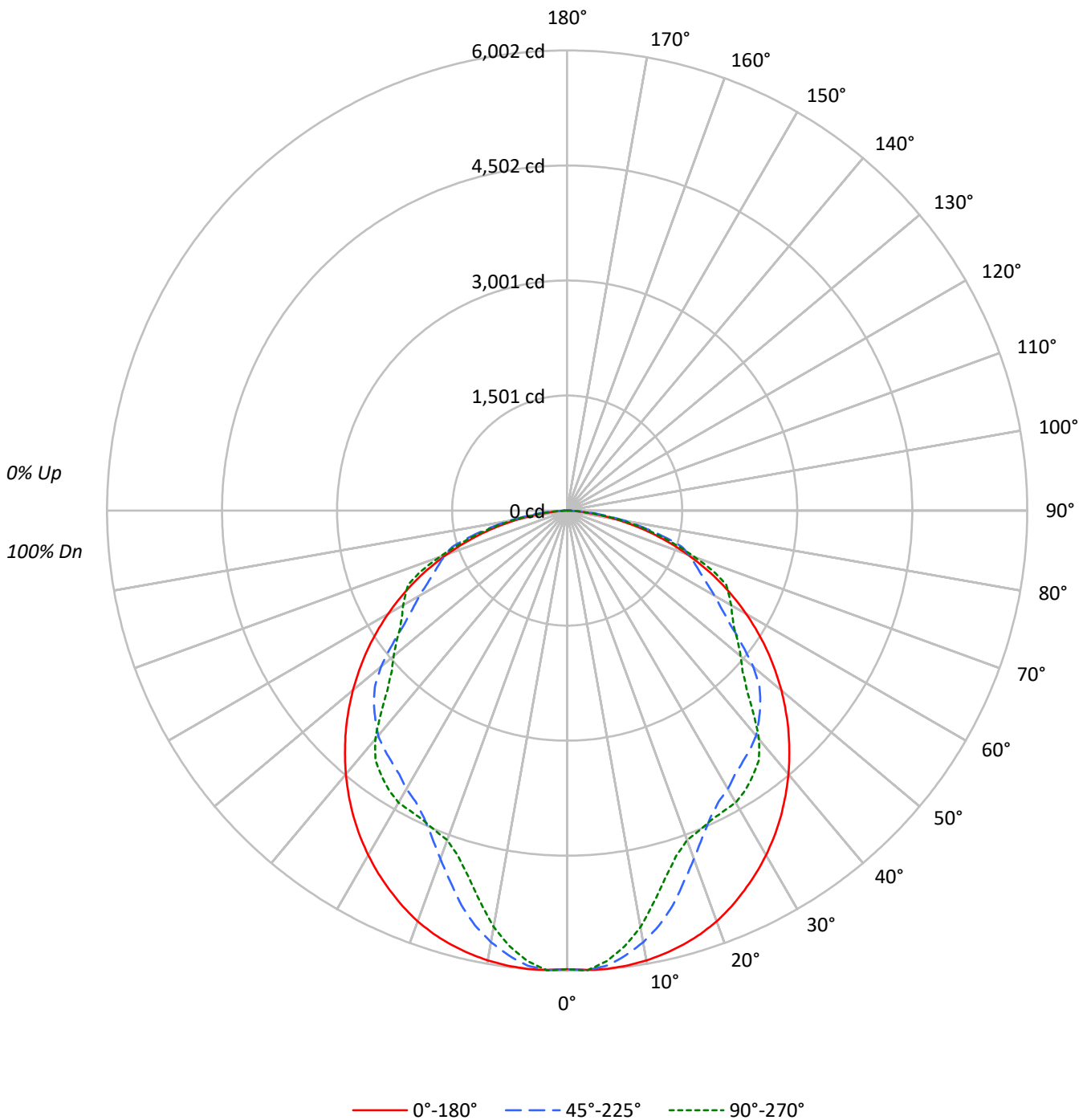
Lumens per Lamp: 2850 (6 lamps)
Luminaire Lumens: 15609.8 lumens
Efficiency: 91.3%
Efficacy: 74.7 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.09 / 1.29
Luminous Opening: Rectangular (W 1.23' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 209
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	109	109	109	109	106	106	106	106	101	101	101	97	97	97	93	93	93	91
1	99	94	90	87	96	92	89	85	88	85	83	85	82	80	82	80	78	76
2	90	82	76	70	87	80	74	69	77	72	68	74	70	66	71	68	65	63
3	82	72	64	58	79	70	63	58	68	62	57	65	60	56	63	58	55	53
4	75	64	55	49	73	62	55	49	60	53	48	58	52	47	56	51	47	45
5	69	57	48	42	67	56	48	42	54	47	42	52	46	41	50	45	41	39
6	63	51	43	37	62	50	42	37	49	42	36	47	41	36	46	40	36	34
7	59	46	38	33	57	46	38	33	44	37	32	43	37	32	42	36	32	30
8	55	42	35	29	53	42	34	29	41	34	29	39	33	29	38	33	29	27
9	51	39	31	26	50	38	31	26	37	31	26	36	30	26	35	30	26	24
10	48	36	29	24	47	35	29	24	35	28	24	34	28	24	33	27	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13373	13373	13373
5°	13466	13372	13242
10°	13529	12977	12523
15°	13567	12337	11465
20°	13567	11497	10878
25°	13489	10899	10983
30°	13397	10820	11354
35°	13271	10907	11524
40°	13108	11190	11365
45°	12917	11266	10479
50°	12693	11023	10272
55°	12419	10127	10357
60°	12069	9927	11041
65°	11602	10126	12120
70°	10904	11067	11545
75°	9883	11153	10591
80°	8176	9786	9052
85°	4977	7029	5823



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	560.6	3.6	3.3	0°	5981	5981	5981	5981	5981	
10°-20°	1507.7	9.7	8.8	5°	6000	5988	5958	5911	5900	571
20°-30°	2171.7	13.9	12.7	15°	5861	5668	5330	5027	4953	1654
30°-40°	2626.6	16.8	15.4	25°	5468	4995	4418	4413	4452	2520
40°-50°	2696.0	17.3	15.8	35°	4862	4067	3996	4187	4222	3041
50°-60°	2432.4	15.6	14.2	45°	4085	3278	3563	3419	3314	3149
60°-70°	2030.3	13.0	11.9	55°	3186	2676	2598	2626	2657	2845
70°-80°	1257.6	8.1	7.4	65°	2193	1935	1914	2196	2291	2166
80°-90°	325.2	2.1	1.9	75°	1144	1036	1291	1244	1226	1208
90°-100°	1.8	0.0	0.0	85°	194	309	274	242	227	255
100°-110°	0.0	0.0	0.0	90°	10	14	14	14	14	10
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°	4240.0	27.2	24.8	165°	0	0	0	0	0	0
0°-40°	6866.6	44.0	40.2	175°	0	0	0	0	0	0
0°-60°	11994.9	76.8	70.1	180°	0	0	0	0	0	0
0°-90°	15608.0	100.0	91.3							
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°	15609.8	100.0	91.3							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5981	5981	5981	5981	5981
2.5°	5997	5996	5999	5996	6002
5°	6000	5988	5958	5911	5900
7.5°	5985	5948	5852	5762	5733
10°	5959	5882	5716	5571	5516
12.5°	5916	5783	5543	5324	5230
15°	5861	5668	5330	5027	4953
17.5°	5790	5527	5071	4788	4725
20°	5702	5371	4832	4596	4572
22.5°	5592	5188	4609	4492	4514
25°	5468	4995	4418	4413	4452
27.5°	5334	4774	4279	4367	4419
30°	5189	4534	4191	4327	4398
32.5°	5033	4292	4077	4284	4324
35°	4862	4067	3996	4187	4222
37.5°	4680	3840	3921	4073	4108
40°	4491	3625	3834	3944	3894
42.5°	4290	3431	3703	3718	3598
45°	4085	3278	3563	3419	3314
47.5°	3868	3115	3403	3135	3104
50°	3649	2962	3169	2936	2953
52.5°	3419	2814	2876	2778	2805
55°	3186	2676	2598	2626	2657
57.5°	2942	2523	2389	2480	2553
60°	2699	2348	2220	2375	2469
62.5°	2448	2160	2053	2285	2378
65°	2193	1935	1914	2196	2291
67.5°	1932	1656	1801	2080	2059
70°	1668	1400	1693	1800	1766
72.5°	1404	1207	1570	1512	1489
75°	1144	1036	1291	1244	1226
77.5°	884	895	1014	983	962
80°	635	769	760	728	703
82.5°	399	541	509	469	451
85°	194	309	274	242	227
87.5°	54	115	82	60	60
90°	10	14	14	14	14
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)