

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: P30368

Luminaire Tested: **HBI-532-N-CL-UNV-EB82-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P30368  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBI-532-N-CL-UNV-EB82-U  
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH FIVE T8 LAMPS,  
NARROW DISTRIBUTION SPECULAR REFLECTOR AND CLEAR ACRYLIC LENS  
IN DOORFRAME, NO UPLIGHT  
Light Source: FIVE T8 LINEAR FLUORESCENT LAMPS, F32T8 32W - 3100 LUMENS EA  
Ballast/Driver: UNIVERSAL ELECTRONIC BALLAST  
B432IUNVHPA, B232IUNVHPA

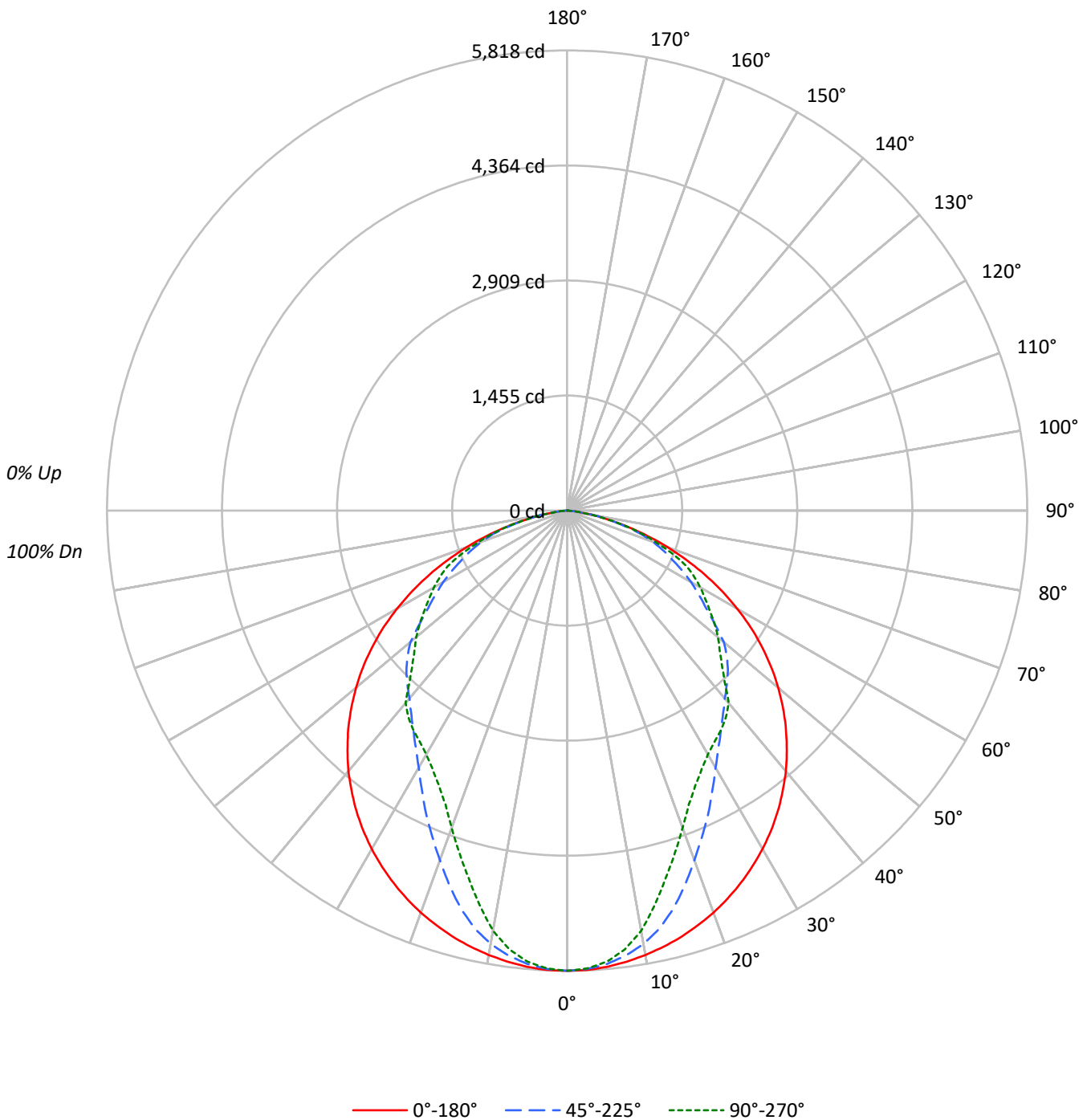
**Summary**

Lumens per Lamp: 3100 (5 lamps)  
Luminaire Lumens: 13172.0 lumens  
Efficiency: 85.0%  
Efficacy: 96.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 0.91 / 1.16  
Luminous Opening: Rectangular (W 1.21' x L: 3.92' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 136.4  
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: P30368

CATALOG NUMBER: HBI-532-N-CL-UNV-EB82-U

### Luminous Intensity Polar Plot





TEST NUMBER: P30368

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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	101	101	101	101	99	99	99	99	94	94	94	90	90	90	87	87	87	85				
1	93	89	86	83	91	87	84	81	84	81	79	80	78	76	77	76	74	72				
2	85	78	73	68	83	77	71	67	74	69	66	71	67	64	68	65	63	61				
3	78	69	62	57	75	68	61	56	65	60	55	63	58	54	61	57	53	52				
4	71	61	54	49	69	60	53	48	58	52	48	56	51	47	54	50	46	44				
5	66	55	48	42	64	54	47	42	52	46	41	51	45	41	49	44	40	39				
6	61	50	42	37	59	49	42	37	47	41	36	46	40	36	45	40	36	34				
7	56	45	38	33	55	44	38	33	43	37	32	42	36	32	41	36	32	30				
8	53	41	34	29	51	41	34	29	40	34	29	39	33	29	38	33	29	27				
9	49	38	31	27	48	38	31	27	37	31	26	36	30	26	35	30	26	25				
10	46	35	29	24	45	35	28	24	34	28	24	33	28	24	32	27	24	22				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13232	13232	13232
5°	13219	13137	13073
10°	13176	12845	12455
15°	13136	12249	11326
20°	13092	11383	10328
25°	13037	10600	9624
30°	12976	9856	9349
35°	12891	9410	9412
40°	12770	9210	9436
45°	12589	9244	8900
50°	12328	9147	8807
55°	11932	8502	8728
60°	11313	8229	8847
65°	10365	7890	8987
70°	8984	7641	8133
75°	7013	6573	6872
80°	4427	4702	4375
85°	1540	1879	1461



TEST NUMBER: P30368

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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	542.9	4.1	3.5	0°	5818	5818	5818	5818	5818	
10°-20°	1459.1	11.1	9.4	5°	5790	5772	5754	5731	5726	550
20°-30°	2018.4	15.3	13.0	15°	5579	5479	5202	4915	4810	1575
30°-40°	2311.2	17.5	14.9	25°	5195	4874	4224	3895	3835	2395
40°-50°	2331.2	17.7	15.0	35°	4643	3981	3389	3363	3390	2904
50°-60°	2047.8	15.5	13.2	45°	3914	3037	2874	2813	2767	3016
60°-70°	1555.4	11.8	10.0	55°	3009	2199	2144	2185	2201	2683
70°-80°	786.4	6.0	5.1	65°	1926	1459	1466	1619	1670	1901
80°-90°	119.3	0.9	0.8	75°	798	645	748	784	782	858
90°-100°	0.3	0.0	0.0	85°	59	83	72	62	56	109
100°-110°	0.0	0.0	0.0	90°	2	1	3	3	2	2
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°	4020.4	30.5	25.9	165°	0	0	0	0	0	0
0°-40°	6331.6	48.1	40.8	175°	0	0	0	0	0	0
0°-60°	10710.6	81.3	69.1	180°	0	0	0	0	0	0
0°-90°	13171.7	100.0	85.0							
90°-120°	0.3	0.0	0.0							
90°-150°	0.3	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	13172.0	100.0	85.0							



TEST NUMBER: P30368

CATALOG NUMBER: HBI-532-N-CL-UNV-EB82-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5818	5818	5818	5818	5818
2.5°	5815	5800	5801	5796	5795
5°	5790	5772	5754	5731	5726
7.5°	5752	5724	5675	5620	5595
10°	5705	5658	5562	5445	5393
12.5°	5647	5576	5408	5195	5112
15°	5579	5479	5202	4915	4810
17.5°	5498	5359	4959	4632	4535
20°	5409	5221	4703	4378	4267
22.5°	5307	5058	4457	4117	4020
25°	5195	4874	4224	3895	3835
27.5°	5072	4665	3979	3724	3685
30°	4941	4447	3753	3579	3560
32.5°	4798	4218	3559	3457	3465
35°	4643	3981	3389	3363	3390
37.5°	4476	3751	3238	3280	3297
40°	4301	3519	3102	3182	3178
42.5°	4111	3278	2987	3044	2950
45°	3914	3037	2874	2813	2767
47.5°	3704	2805	2741	2626	2617
50°	3484	2590	2585	2471	2489
52.5°	3254	2389	2348	2337	2349
55°	3009	2199	2144	2185	2201
57.5°	2754	2016	1968	2030	2067
60°	2487	1845	1809	1893	1945
62.5°	2209	1662	1635	1757	1812
65°	1926	1459	1466	1619	1670
67.5°	1636	1222	1310	1454	1455
70°	1351	1007	1149	1217	1223
72.5°	1066	819	974	993	1013
75°	798	645	748	784	782
77.5°	552	486	550	549	536
80°	338	345	359	341	334
82.5°	169	195	189	176	168
85°	59	83	72	62	56
87.5°	12	18	15	13	12
90°	2	1	3	3	2
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: P30368

CATALOG NUMBER: HBI-532-N-CL-UNV-EB82-U

**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)