

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: ITL63247

Luminaire Tested: **HBI-432-M-UNV-EB82/PLUS-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: ITL63247  
Test Lab: INDEPENDENT TESTING LABORATORIES, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBI-432-M-UNV-EB82/PLUS-U  
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH FOUR T8 LAMPS  
MEDIUM DISTRIBUTION MATTE REFLECTOR, NO UPLIGHT  
Light Source: FOUR T8 LINEAR FLUORESCENT LAMPS, F32T8 32W - 3100 LUMENS EA  
Ballast/Driver: -

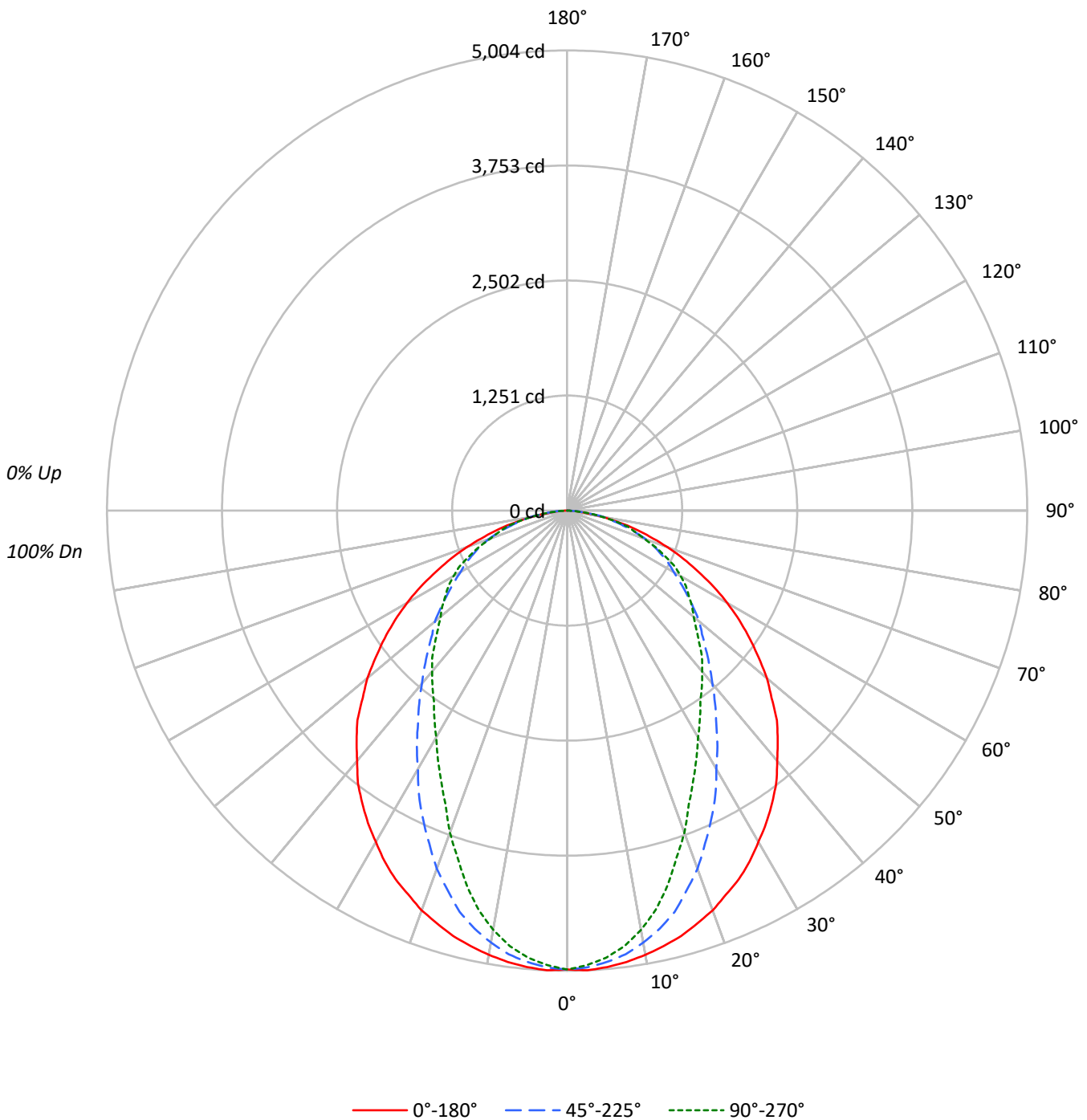
**Summary**

Lumens per Lamp: 3100 (4 lamps)  
Luminaire Lumens: 10800.4 lumens  
Efficiency: 87.1%  
Efficacy: 72.2 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 0.9 / 1.11  
Luminous Opening: Rectangular (W 1.3' x L: 3.99' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 149.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	104	104	104	104	101	101	101	101	97	97	97		93	93	93		89	89	89	87
1	95	91	88	84	93	89	86	83	86	83	80		82	80	78		79	77	76	74
2	87	80	74	70	85	78	73	69	75	71	67		72	69	66		70	67	64	62
3	80	71	64	58	77	69	63	58	67	61	57		64	60	56		62	58	55	53
4	73	63	56	50	71	62	55	50	60	54	49		58	53	48		56	51	48	46
5	68	57	49	44	66	56	49	43	54	48	43		52	47	42		51	46	42	40
6	63	51	44	38	61	51	43	38	49	43	38		48	42	38		46	41	37	36
7	58	47	39	34	57	46	39	34	45	38	34		44	38	34		42	37	33	32
8	54	43	36	31	53	42	35	31	41	35	31		40	34	30		39	34	30	29
9	51	40	33	28	50	39	32	28	38	32	28		37	32	28		36	31	27	26
10	48	37	30	26	47	36	30	25	35	29	25		35	29	25		34	29	25	24

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

	0°	45°	90°
0°	10340	10340	10340
5°	10365	10252	10150
10°	10320	10036	9740
15°	10273	9690	9050
20°	10201	9138	8218
25°	10108	8475	7410
30°	9953	7762	6814
35°	9825	7151	6390
40°	9610	6646	6178
45°	9453	6250	5952
50°	9142	6047	5790
55°	8757	5751	5834
60°	8330	5557	5910
65°	7698	5535	5771
70°	6991	5507	5374
75°	6044	5068	5468
80°	4594	4904	4570
85°	2473	3495	2805



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	465.6	4.3	3.8	0°	4990	4990	4990	4990	4990	
10°-20°	1263.3	11.7	10.2	5°	4983	4965	4929	4899	4880	473
20°-30°	1736.2	16.1	14.0	15°	4789	4706	4517	4302	4219	1350
30°-40°	1896.6	17.6	15.3	25°	4421	4206	3707	3347	3241	2034
40°-50°	1824.5	16.9	14.7	35°	3884	3498	2827	2593	2526	2428
50°-60°	1569.3	14.5	12.7	45°	3226	2628	2133	2072	2031	2475
60°-70°	1190.4	11.0	9.6	55°	2424	1790	1592	1607	1615	2167
70°-80°	687.5	6.4	5.5	65°	1570	1127	1129	1198	1177	1564
80°-90°	166.8	1.5	1.3	75°	755	600	633	666	683	795
90°-100°	0.0	0.0	0.0	85°	104	142	147	138	118	149
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°	3465.2	32.1	27.9							
0°-40°	5361.8	49.6	43.2							
0°-60°	8755.7	81.1	70.6							
0°-90°	10800.4	100.0	87.1							
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°	10800.4	100.0	87.1							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4990	4990	4990	4990	4990
2.5°	5004	4991	4973	4952	4947
5°	4983	4965	4929	4899	4880
7.5°	4950	4923	4867	4802	4776
10°	4905	4865	4770	4673	4629
12.5°	4850	4791	4656	4492	4447
15°	4789	4706	4517	4302	4219
17.5°	4707	4607	4327	4076	3958
20°	4626	4487	4144	3820	3727
22.5°	4518	4361	3920	3586	3458
25°	4421	4206	3707	3347	3241
27.5°	4301	4052	3491	3135	3044
30°	4160	3860	3244	2923	2848
32.5°	4030	3684	3042	2755	2687
35°	3884	3498	2827	2593	2526
37.5°	3736	3272	2642	2435	2406
40°	3553	3065	2457	2312	2284
42.5°	3389	2843	2293	2189	2171
45°	3226	2628	2133	2072	2031
47.5°	3014	2413	1989	1940	1905
50°	2836	2195	1876	1796	1796
52.5°	2624	1994	1729	1690	1712
55°	2424	1790	1592	1607	1615
57.5°	2220	1609	1460	1504	1531
60°	2010	1427	1341	1405	1426
62.5°	1801	1266	1243	1311	1321
65°	1570	1127	1129	1198	1177
67.5°	1370	979	1025	1046	1039
70°	1154	840	909	904	887
72.5°	940	703	766	764	775
75°	755	600	633	666	683
77.5°	553	492	504	566	530
80°	385	363	411	401	383
82.5°	226	241	250	255	257
85°	104	142	147	138	118
87.5°	27	48	33	37	36
90°	0	0	0	0	0

(END OF REPORT)