

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: ITL63248

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: ITL63248  
Test Lab: INDEPENDENT TESTING LABORATORIES, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBI-432-W-UNV-EB82/PLUS-U  
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH FOUR T8 LAMPS  
WIDE DISTRIBUTION WHITE ALUM REFLECTOR NO UPLIGHT  
Light Source: FOUR T8 LINEAR FLUORESCENT LAMPS, F32T8 32W - 3100 LUMENS EA  
Ballast/Driver: -

**Summary**

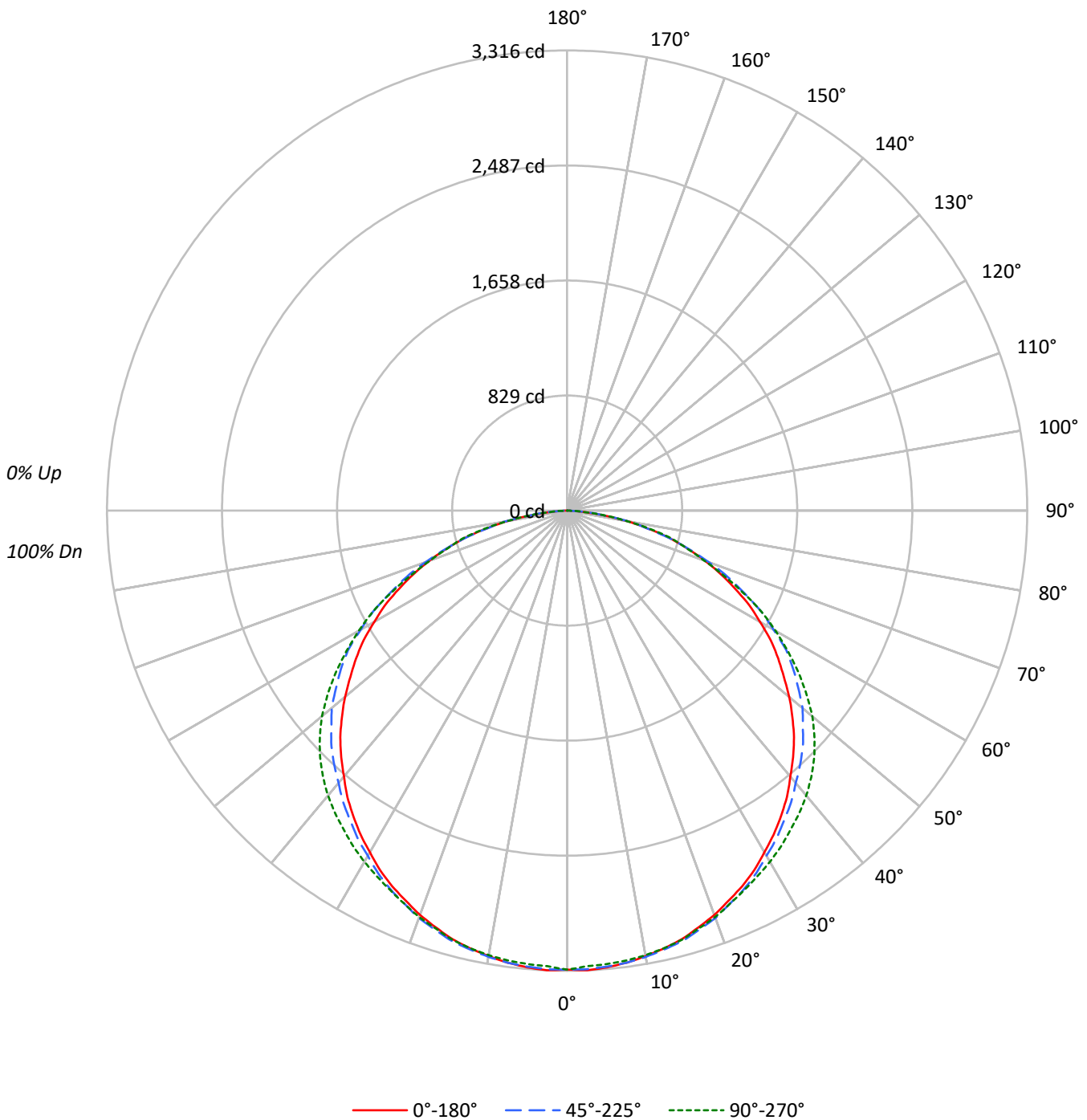
Lumens per Lamp: 3100 (4 lamps)  
Luminaire Lumens: 10276.4 lumens  
Efficiency: 82.9%  
Efficacy: 71.6 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.32 / 1.44  
Luminous Opening: Rectangular (W 1.3' x L: 3.99' x H: 0')  
CIE Type: Direct

Input Watts (W): 143.6  
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									
RC	80									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	50	30	10	0													
RCR																																					
0	99	99	99	99	96	96	96	96	92	92	92	88	88	88	85	85	85	83						83													
1	90	86	82	79	88	84	81	78	80	78	75	77	75	73	74	72	71	69						69													
2	81	74	68	64	79	73	67	63	70	65	61	67	63	60	65	61	59	57						57													
3	74	65	58	52	72	64	57	52	61	56	51	59	54	50	57	53	49	47						47													
4	68	57	50	44	66	56	49	44	54	48	43	52	47	43	50	46	42	40						40													
5	62	51	43	38	60	50	43	37	48	42	37	47	41	37	45	40	36	34						34													
6	57	46	38	33	55	45	38	33	43	37	32	42	36	32	41	36	32	30						30													
7	53	41	34	29	51	41	34	29	39	33	28	38	32	28	37	32	28	26						26													
8	49	38	31	26	48	37	30	25	36	30	25	35	29	25	34	29	25	23						23													
9	46	35	28	23	45	34	27	23	33	27	23	32	27	23	31	26	22	21						21													
10	43	32	25	21	42	31	25	21	31	25	21	30	24	20	29	24	20	19						19													

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

	0°	45°	90°
0°	6854	6854	6854
5°	6872	6862	6822
10°	6859	6870	6844
15°	6858	6888	6869
20°	6838	6889	6875
25°	6827	6886	6900
30°	6802	6874	6991
35°	6797	6893	7100
40°	6768	6933	7252
45°	6775	7042	7379
50°	6737	7137	7434
55°	6705	7185	7352
60°	6651	7120	7186
65°	6570	6903	6849
70°	6416	6585	6361
75°	6100	6036	6253
80°	5238	5453	5155
85°	2710	3590	2924



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	313.5	3.1	2.5	0°	3308	3308	3308	3308	3308	
10°-20°	904.2	8.8	7.3	5°	3304	3306	3299	3286	3280	314
20°-30°	1387.5	13.5	11.2	15°	3197	3205	3211	3202	3202	902
30°-40°	1717.5	16.7	13.9	25°	2986	3003	3012	3012	3018	1376
40°-50°	1855.5	18.1	15.0	35°	2687	2715	2725	2787	2807	1681
50°-60°	1745.2	17.0	14.1	45°	2312	2317	2403	2491	2518	1781
60°-70°	1368.1	13.3	11.0	55°	1856	1851	1989	2034	2035	1658
70°-80°	799.1	7.8	6.4	65°	1340	1343	1408	1432	1397	1325
80°-90°	185.8	1.8	1.5	75°	762	749	754	775	781	794
90°-100°	0.0	0.0	0.0	85°	114	153	151	140	123	168
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°	2605.1	25.4	21.0							
0°-40°	4322.7	42.1	34.9							
0°-60°	7923.4	77.1	63.9							
0°-90°	10276.4	100.0	82.9							
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°	10276.4	100.0	82.9							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3308	3308	3308	3308	3308
2.5°	3316	3316	3308	3291	3286
5°	3304	3306	3299	3286	3280
7.5°	3286	3289	3286	3272	3270
10°	3260	3266	3265	3255	3253
12.5°	3231	3237	3239	3228	3230
15°	3197	3205	3211	3202	3202
17.5°	3149	3163	3167	3163	3157
20°	3101	3118	3124	3117	3118
22.5°	3042	3064	3066	3066	3066
25°	2986	3003	3012	3012	3018
27.5°	2921	2941	2948	2958	2971
30°	2843	2868	2873	2903	2922
32.5°	2770	2795	2806	2845	2869
35°	2687	2715	2725	2787	2807
37.5°	2602	2621	2651	2719	2748
40°	2502	2530	2563	2654	2681
42.5°	2410	2422	2485	2574	2604
45°	2312	2317	2403	2491	2518
47.5°	2202	2214	2304	2409	2418
50°	2090	2088	2214	2297	2306
52.5°	1968	1976	2099	2178	2175
55°	1856	1851	1989	2034	2035
57.5°	1739	1727	1873	1891	1886
60°	1605	1595	1718	1732	1734
62.5°	1481	1468	1577	1588	1582
65°	1340	1343	1408	1432	1397
67.5°	1199	1195	1256	1245	1219
70°	1059	1057	1087	1076	1050
72.5°	906	896	914	903	899
75°	762	749	754	775	781
77.5°	595	599	584	641	616
80°	439	441	457	446	432
82.5°	260	289	278	297	281
85°	114	153	151	140	123
87.5°	26	42	35	38	37
90°	0	0	0	0	0

(END OF REPORT)