

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: 236p226

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 236p226
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBI-432-N-UNV-EB82/PLUS-U
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH FOUR T8 LAMPS
NARROW DISTRIBUTION SPECULAR REFLECTOR, NO UPLIGHT
Light Source: FOUR T8 LINEAR FLUORESCENT LAMPS, F32T8 32W - 3100 LUMENS EA
Ballast/Driver: -

Summary

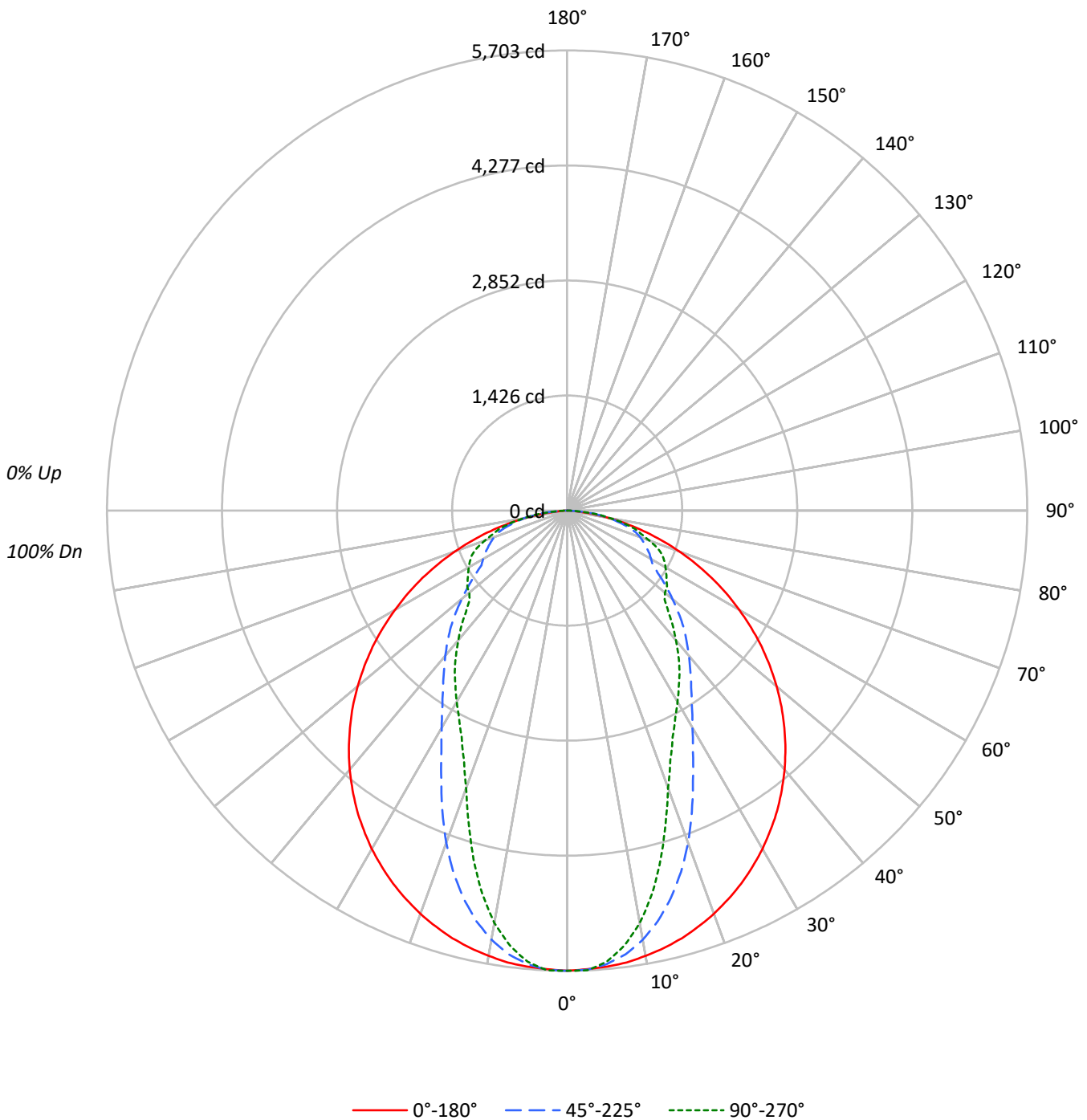
Lumens per Lamp: 3100 (4 lamps)
Luminaire Lumens: 11221.8 lumens
Efficiency: 90.5%
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 0.77 / 1
Luminous Opening: Rectangular (W 1.17' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 153
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	108	108	108	108	105	105	105	105	101	101	101	96	96	96	92	92	92	90
1	99	94	91	87	96	92	89	86	88	86	83	85	83	80	82	80	78	76
2	90	83	77	72	88	81	76	71	78	73	69	75	71	68	72	69	66	64
3	83	73	66	60	80	72	65	60	69	63	59	67	62	58	64	60	57	55
4	76	65	58	52	74	64	57	52	62	56	51	60	55	50	58	53	49	48
5	70	59	51	45	68	58	51	45	56	50	45	54	49	44	53	48	44	42
6	65	54	46	40	63	53	45	40	51	44	40	50	44	39	48	43	39	37
7	61	49	41	36	59	48	41	36	47	40	35	46	40	35	44	39	35	33
8	57	45	38	32	55	44	37	32	43	37	32	42	36	32	41	36	32	30
9	53	42	34	29	52	41	34	29	40	34	29	39	33	29	38	33	29	27
10	50	39	32	27	49	38	31	27	37	31	27	36	31	27	36	30	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13434	13434	13434
5°	13417	13339	13275
10°	13402	12917	12412
15°	13384	12120	10921
20°	13331	10985	9172
25°	13261	9593	8047
30°	13170	8454	7442
35°	13056	7707	6985
40°	12891	7220	6445
45°	12686	6786	5910
50°	12427	6245	5801
55°	12087	5709	6181
60°	11613	5654	6633
65°	11025	6037	7252
70°	10180	6633	7452
75°	8938	7072	7864
80°	6973	7285	7393
85°	3649	6297	5270



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	530.8	4.7	4.3	0°	5703	5703	5703	5703	5703	
10°-20°	1389.9	12.4	11.2	5°	5674	5670	5641	5614	5614	539
20°-30°	1803.8	16.1	14.5	15°	5488	5340	4970	4614	4478	1548
30°-40°	1919.7	17.1	15.5	25°	5102	4649	3691	3199	3096	2351
40°-50°	1775.6	15.8	14.3	35°	4540	3635	2680	2481	2429	2837
50°-60°	1516.2	13.5	12.2	45°	3808	2514	2037	1856	1774	2936
60°-70°	1233.5	11.0	9.9	55°	2943	1686	1390	1464	1505	2626
70°-80°	811.8	7.2	6.5	65°	1978	1026	1083	1250	1301	1954
80°-90°	240.4	2.1	1.9	75°	982	571	777	835	864	1040
90°-100°	0.0	0.0	0.0	85°	135	213	233	208	195	198
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°	3724.5	33.2	30.0							
0°-40°	5644.3	50.3	45.5							
0°-60°	8936.1	79.6	72.1							
0°-90°	11221.8	100.0	90.5							
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°	11221.8	100.0	90.5							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5703	5703	5703	5703	5703
2.5°	5688	5695	5697	5693	5703
5°	5674	5670	5641	5614	5614
7.5°	5649	5619	5547	5464	5439
10°	5603	5550	5400	5247	5189
12.5°	5552	5456	5208	4959	4864
15°	5488	5340	4970	4614	4478
17.5°	5407	5199	4693	4223	4057
20°	5318	5040	4382	3823	3659
22.5°	5214	4855	4038	3479	3342
25°	5102	4649	3691	3199	3096
27.5°	4976	4424	3376	2975	2900
30°	4842	4179	3108	2799	2736
32.5°	4693	3916	2877	2635	2576
35°	4540	3635	2680	2481	2429
37.5°	4368	3345	2509	2332	2264
40°	4192	3054	2348	2169	2096
42.5°	4005	2771	2191	2010	1940
45°	3808	2514	2037	1856	1774
47.5°	3603	2274	1870	1679	1638
50°	3391	2062	1704	1550	1583
52.5°	3167	1865	1548	1496	1559
55°	2943	1686	1390	1464	1505
57.5°	2705	1514	1260	1405	1457
60°	2465	1348	1200	1354	1408
62.5°	2224	1187	1149	1303	1358
65°	1978	1026	1083	1250	1301
67.5°	1727	874	1025	1183	1213
70°	1478	735	963	1077	1082
72.5°	1227	636	891	941	959
75°	982	571	777	835	864
77.5°	742	500	645	718	714
80°	514	427	537	549	545
82.5°	305	321	380	391	391
85°	135	213	233	208	195
87.5°	31	90	66	56	56
90°	0	0	0	0	0

(END OF REPORT)