

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: ITL63246

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: ITL63246
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-UPL-U
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH FOUR T8 LAMPS
WIDE DISTRIBUTION WHITE ALUM REFLECTOR WITH UPLIGHT
Light Source: FOUR T8 LINEAR FLUORESCENT LAMPS, F32T8 32W - 3100 LUMENS EA
Ballast/Driver: -

Summary

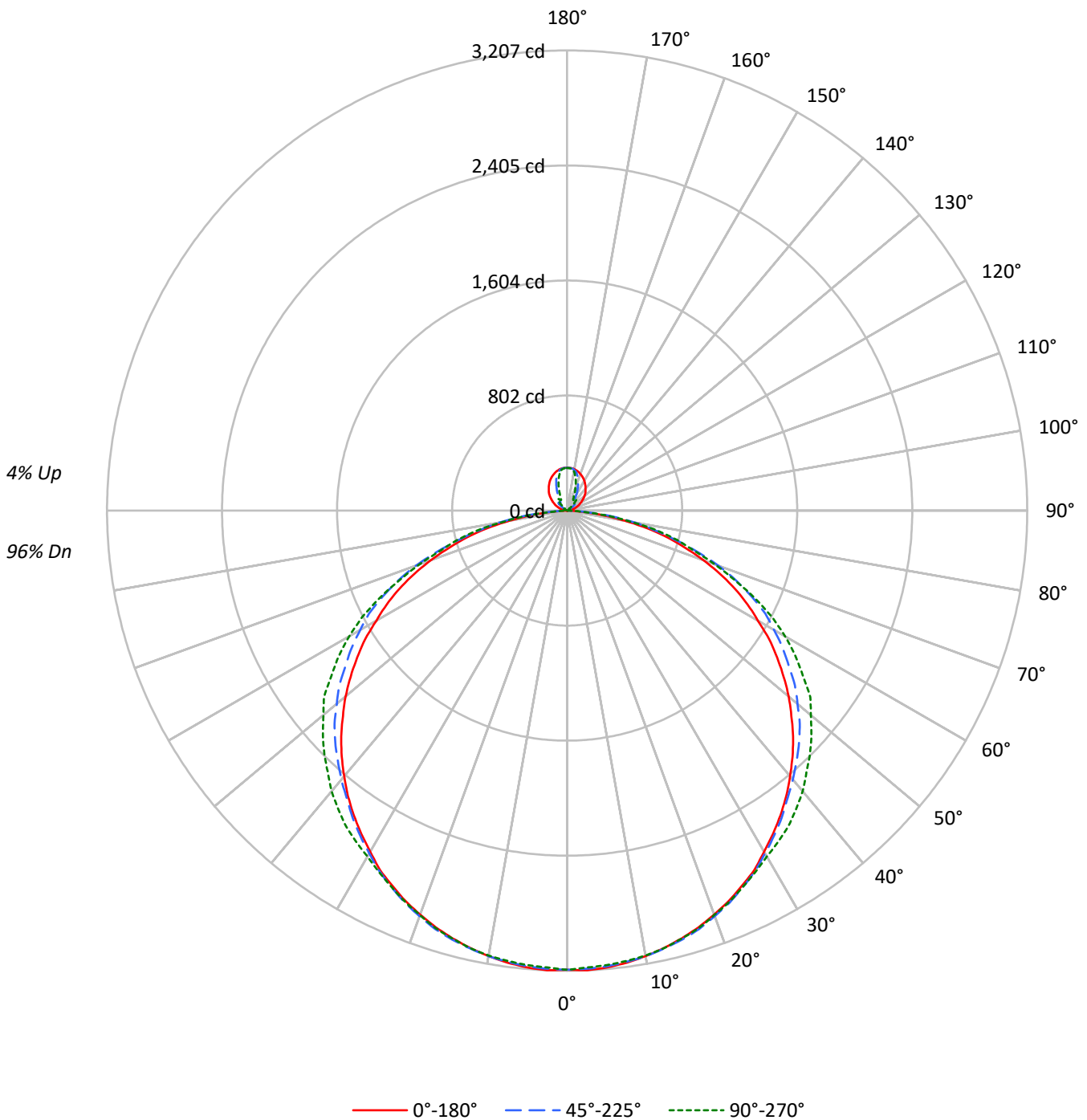
Lumens per Lamp: 3100 (4 lamps)
Luminaire Lumens: 10387.1 lumens
Efficiency: 83.8%
Efficacy: 69.0 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.31 / 1.42
Luminous Opening: Rectangular (W 1.3' x L: 3.99' x H: 0')
CIE Type: Direct

Input Watts (W): 150.6
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	91	91	91	87	87	87	82	82	82	80																			
1	90	86	82	79	87	84	80	77	79	77	74	75	73	71	72	70	68	66																			
2	81	74	68	63	79	72	67	62	69	64	60	66	62	59	63	59	57	55																			
3	74	65	58	52	72	63	57	52	60	55	50	57	53	49	55	51	48	46																			
4	68	57	50	44	65	56	49	43	53	47	42	51	46	41	49	44	41	39																			
5	62	51	43	38	60	50	43	37	48	41	36	46	40	36	44	39	35	33																			
6	57	46	38	33	55	45	38	32	43	36	32	41	35	31	39	34	31	29																			
7	53	41	34	29	51	40	33	28	39	33	28	37	32	27	36	31	27	25																			
8	49	38	30	25	48	37	30	25	35	29	25	34	29	24	33	28	24	22																			
9	46	34	27	23	44	34	27	23	33	27	22	31	26	22	30	25	22	20																			
10	43	32	25	21	42	31	25	20	30	24	20	29	24	20	28	23	20	18																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6631	6631	6631
5°	6648	6631	6612
10°	6634	6636	6626
15°	6620	6641	6624
20°	6606	6633	6615
25°	6596	6623	6619
30°	6568	6601	6661
35°	6557	6600	6797
40°	6538	6622	6908
45°	6526	6699	7015
50°	6499	6757	7147
55°	6452	6813	7247
60°	6365	6904	7273
65°	6330	6962	7080
70°	6125	6810	6634
75°	5804	6189	6341
80°	4845	5680	5394
85°	2544	3780	2996



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	303.2	2.9	2.4	0°	3200	3200	3200	3200	3200	
10°-20°	872.9	8.4	7.0	5°	3196	3195	3188	3181	3179	304
20°-30°	1335.2	12.9	10.8	15°	3086	3094	3096	3094	3088	871
30°-40°	1644.1	15.8	13.3	25°	2885	2901	2897	2892	2895	1330
40°-50°	1770.0	17.0	14.3	35°	2592	2604	2609	2654	2687	1622
50°-60°	1682.0	16.2	13.6	45°	2227	2229	2286	2362	2394	1717
60°-70°	1351.7	13.0	10.9	55°	1786	1759	1886	1997	2006	1596
70°-80°	803.6	7.7	6.5	65°	1291	1257	1420	1437	1444	1271
80°-90°	191.6	1.8	1.5	75°	725	744	773	783	792	757
90°-100°	4.8	0.0	0.0	85°	107	165	159	137	126	157
100°-110°	13.1	0.1	0.1	90°	0	1	6	2	6	3
110°-120°	29.7	0.3	0.2	95°	5	4	4	4	3	9
120°-130°	44.8	0.4	0.4	105°	44	10	6	5	4	47
130°-140°	74.0	0.7	0.6	115°	90	44	17	13	11	88
140°-150°	81.0	0.8	0.7	125°	133	53	43	18	21	119
150°-160°	84.8	0.8	0.7	135°	180	108	78	83	62	139
160°-170°	72.6	0.7	0.6	145°	220	180	88	85	95	138
170°-180°	28.0	0.3	0.2	155°	256	243	174	137	112	118
0°-30°	2511.2	24.2	20.3	165°	284	281	263	245	229	80
0°-40°	4155.3	40.0	33.5	175°	298	298	297	296	294	28
0°-60°	7607.4	73.2	61.3	180°	297	297	297	297	297	
0°-90°	9954.3	95.8	80.3							
90°-120°	47.6	0.5	0.4							
90°-150°	247.4	2.4	2.0							
90°-180°	433.0	4.2	3.5							
0°-180°	10387.1	100.0	83.8							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3200	3200	3200	3200	3200
2.5°	3207	3205	3196	3189	3187
5°	3196	3195	3188	3181	3179
7.5°	3178	3179	3172	3168	3166
10°	3153	3156	3154	3149	3149
12.5°	3122	3128	3126	3124	3123
15°	3086	3094	3096	3094	3088
17.5°	3045	3051	3058	3048	3051
20°	2996	3007	3008	3003	3000
22.5°	2945	2955	2958	2949	2952
25°	2885	2901	2897	2892	2895
27.5°	2825	2839	2834	2832	2840
30°	2745	2766	2759	2767	2784
32.5°	2670	2691	2685	2710	2737
35°	2592	2604	2609	2654	2687
37.5°	2509	2521	2524	2595	2621
40°	2417	2422	2448	2520	2554
42.5°	2325	2327	2366	2446	2470
45°	2227	2229	2286	2362	2394
47.5°	2120	2108	2199	2271	2309
50°	2016	1996	2096	2183	2217
52.5°	1902	1876	2001	2086	2136
55°	1786	1759	1886	1997	2006
57.5°	1670	1641	1781	1871	1887
60°	1536	1514	1666	1733	1755
62.5°	1418	1398	1557	1608	1611
65°	1291	1257	1420	1437	1444
67.5°	1154	1132	1274	1269	1260
70°	1011	990	1124	1087	1095
72.5°	862	870	943	917	922
75°	725	744	773	783	792
77.5°	576	599	618	647	645
80°	406	443	476	465	452
82.5°	256	287	318	296	302
85°	107	165	159	137	126
87.5°	23	44	36	38	40
90°	0	1	6	2	6
92.5°	0	3	4	3	2
95°	5	4	4	4	3
97.5°	16	4	5	5	3
100°	23	6	4	5	4
102.5°	32	10	5	5	4
105°	44	10	6	5	4
107.5°	58	15	8	7	5
110°	68	25	11	8	6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	79	37	15	11	8
115°	90	44	17	13	11
117.5°	99	44	16	18	13
120°	111	44	17	23	20
122.5°	121	46	27	21	24
125°	133	53	43	18	21
127.5°	145	61	63	24	18
130°	157	75	77	43	21
132.5°	170	92	81	63	40
135°	180	108	78	83	62
137.5°	190	126	74	97	84
140°	200	143	72	97	101
142.5°	210	162	77	92	102
145°	220	180	88	85	95
147.5°	230	196	106	84	86
150°	240	213	131	92	85
152.5°	248	228	152	109	93
155°	256	243	174	137	112
157.5°	264	255	200	163	141
160°	271	266	223	192	169
162.5°	278	274	245	220	200
165°	284	281	263	245	229
167.5°	288	287	278	267	253
170°	293	292	287	284	277
172.5°	296	296	294	292	288
175°	298	298	297	296	294
177.5°	299	298	298	297	296
180°	297	297	297	297	297

(END OF REPORT)