

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: ITL63648

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: ITL63648
Test Lab: INDEPENDENT TESTING LABORATORIES, INC.
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBI-532-N-UNV-EB82-UPL-U
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH FIVE T8 LAMPS
NARROW DISTRIBUTION SPECULAR REFLECTOR WITH UPLIGHT
Light Source: FIVE T8 LINEAR FLUORESCENT LAMPS, F32T8 32W - 3100 LUMENS EA
Ballast/Driver: -

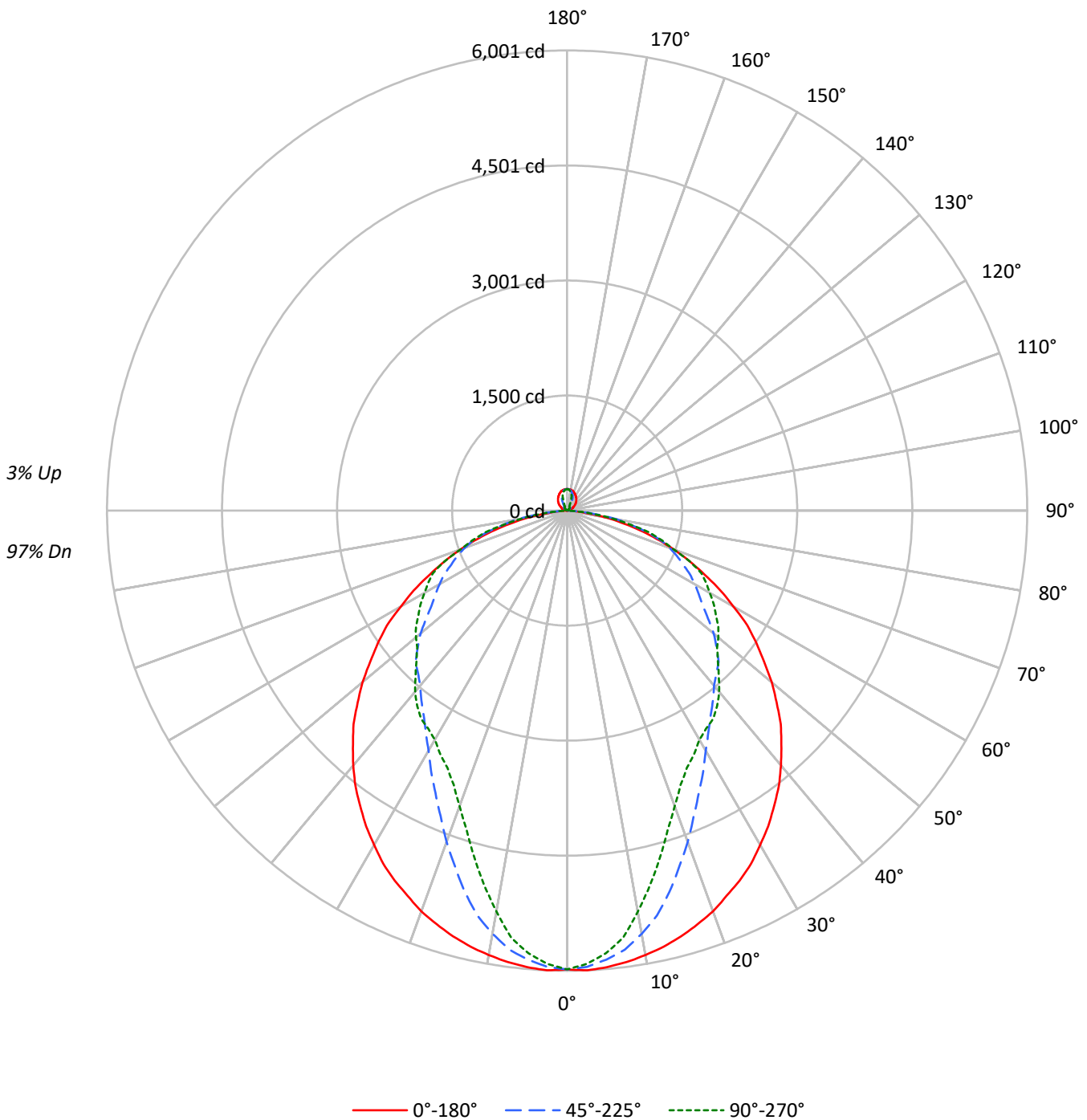
Summary

Lumens per Lamp: 3100 (5 lamps)
Luminaire Lumens: 14013.3 lumens
Efficiency: 90.4%
Efficacy: 94.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 0.85 / 1.12
Luminous Opening: Rectangular (W 1.3' x L: 3.99' x H: 0')
CIE Type: Direct

Input Watts (W): 147.7
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	107	107	107	107	104	104	104	104	99	99	99	94	94	94	90	90	90	88
1	98	93	89	86	95	91	88	84	87	84	81	83	81	78	79	77	76	74
2	89	81	75	70	86	79	74	69	76	71	67	73	69	65	69	66	63	61
3	81	71	64	58	79	70	63	58	67	61	56	64	59	55	61	57	54	52
4	74	63	56	49	72	62	55	49	59	53	48	57	52	47	55	50	46	44
5	68	57	49	43	66	56	48	42	53	47	42	51	46	41	50	44	40	38
6	63	51	43	37	61	50	43	37	48	42	37	47	41	36	45	40	36	34
7	59	47	39	33	57	46	38	33	44	38	33	43	37	32	41	36	32	30
8	55	43	35	30	53	42	35	30	41	34	29	39	33	29	38	33	29	27
9	51	39	32	27	50	39	32	27	37	31	27	36	30	26	35	30	26	24
10	48	36	29	25	47	36	29	24	35	29	24	34	28	24	33	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12397	12397	12397
5°	12430	12226	12054
10°	12382	11789	11170
15°	12330	11052	10042
20°	12264	10137	9047
25°	12168	9287	8452
30°	12044	8645	8255
35°	11896	8249	8390
40°	11734	8063	8345
45°	11540	8184	8149
50°	11224	8049	8301
55°	10877	7792	8547
60°	10385	7965	8897
65°	9688	8173	9468
70°	8948	8609	8960
75°	7774	8510	8927
80°	5895	7720	7148
85°	2639	4493	3590



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	553.0	3.9	3.6	0°	5983	5983	5983	5983	5983	
10°-20°	1455.4	10.4	9.4	5°	5976	5949	5878	5827	5795	568
20°-30°	1983.2	14.2	12.8	15°	5748	5585	5152	4796	4681	1622
30°-40°	2256.9	16.1	14.6	25°	5322	4847	4062	3758	3697	2452
40°-50°	2281.3	16.3	14.7	35°	4703	3874	3261	3270	3317	2945
50°-60°	2081.0	14.9	13.4	45°	3938	2899	2793	2798	2781	3029
60°-70°	1715.5	12.2	11.1	55°	3011	2099	2157	2337	2366	2690
70°-80°	1065.3	7.6	6.9	65°	1976	1486	1667	1877	1931	1967
80°-90°	246.1	1.8	1.6	75°	971	875	1063	1104	1115	1027
90°-100°	6.3	0.0	0.0	85°	111	223	189	158	151	175
100°-110°	13.5	0.1	0.1	90°	0	5	4	8	2	4
110°-120°	25.6	0.2	0.2	95°	5	5	6	7	5	8
120°-130°	37.1	0.3	0.2	105°	37	10	8	8	7	40
130°-140°	58.8	0.4	0.4	115°	78	29	13	15	15	77
140°-150°	66.0	0.5	0.4	125°	121	38	36	16	16	108
150°-160°	74.8	0.5	0.5	135°	166	88	50	61	50	128
160°-170°	67.5	0.5	0.4	145°	205	165	67	53	59	128
170°-180°	26.1	0.2	0.2	155°	239	219	161	107	83	110
0°-30°	3991.6	28.5	25.8	165°	267	260	240	227	217	75
0°-40°	6248.5	44.6	40.3	175°	280	279	277	276	273	27
0°-60°	10610.7	75.7	68.5	180°	280	280	280	280	280	
0°-90°	13637.7	97.3	88.0							
90°-120°	45.4	0.3	0.3							
90°-150°	207.3	1.5	1.3							
90°-180°	376.0	2.7	2.4							
0°-180°	14013.3	100.0	90.4							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5983	5983	5983	5983	5983
2.5°	6001	5986	5955	5923	5916
5°	5976	5949	5878	5827	5795
7.5°	5939	5886	5774	5650	5615
10°	5885	5809	5603	5418	5309
12.5°	5825	5703	5409	5105	5000
15°	5748	5585	5152	4796	4681
17.5°	5657	5443	4865	4511	4362
20°	5562	5264	4597	4209	4103
22.5°	5437	5075	4314	3977	3869
25°	5322	4847	4062	3758	3697
27.5°	5193	4614	3839	3602	3583
30°	5034	4351	3613	3470	3450
32.5°	4881	4119	3428	3351	3373
35°	4703	3874	3261	3270	3317
37.5°	4535	3617	3122	3203	3213
40°	4338	3379	2981	3090	3085
42.5°	4136	3114	2878	2946	2927
45°	3938	2899	2793	2798	2781
47.5°	3705	2675	2643	2635	2650
50°	3482	2458	2497	2510	2575
52.5°	3237	2283	2316	2428	2486
55°	3011	2099	2157	2337	2366
57.5°	2787	1944	2035	2217	2268
60°	2506	1787	1922	2089	2147
62.5°	2255	1645	1807	1981	2044
65°	1976	1486	1667	1877	1931
67.5°	1732	1289	1552	1741	1727
70°	1477	1131	1421	1526	1479
72.5°	1222	995	1277	1291	1297
75°	971	875	1063	1104	1115
77.5°	721	747	845	896	838
80°	494	604	647	612	599
82.5°	271	417	389	406	359
85°	111	223	189	158	151
87.5°	31	55	42	44	46
90°	0	5	4	8	2
92.5°	1	5	5	5	4
95°	5	5	6	7	5
97.5°	13	6	6	7	6
100°	20	3	6	7	6
102.5°	28	10	7	7	6
105°	37	10	8	8	7
107.5°	49	14	11	10	7
110°	59	20	12	11	9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	67	26	14	14	11
115°	78	29	13	15	15
117.5°	88	30	14	20	17
120°	98	29	17	18	21
122.5°	109	32	27	16	19
125°	121	38	36	16	16
127.5°	134	46	47	22	16
130°	144	57	54	38	21
132.5°	156	70	53	50	39
135°	166	88	50	61	50
137.5°	176	110	47	68	63
140°	186	129	48	64	71
142.5°	195	150	55	58	66
145°	205	165	67	53	59
147.5°	214	179	80	56	51
150°	222	192	101	66	55
152.5°	231	206	130	82	66
155°	239	219	161	107	83
157.5°	248	231	190	142	111
160°	256	244	208	182	151
162.5°	262	253	227	209	193
165°	267	260	240	227	217
167.5°	271	267	253	246	236
170°	275	272	264	259	251
172.5°	278	276	272	270	264
175°	280	279	277	276	273
177.5°	282	280	280	278	278
180°	280	280	280	280	280

(END OF REPORT)