

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: P30363

Luminaire Tested: **HBI-432-N-A-UNV-EB81-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P30363
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBI-432-N-A-UNV-EB81-U
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH FOUR T8 LAMPS,
NARROW DISTRIBUTION SPECULAR REFLECTOR AND PRISMATIC ACRYLIC LENS
IN DOORFRAME, NO UPLIGHT
Light Source: FOUR T8 LINEAR FLUORESCENT LAMPS, F32T8 32W - 3100 LUMENS EA
Ballast/Driver: GE ELECTRONIC BALLAST
GE432MAXULTRA

Summary

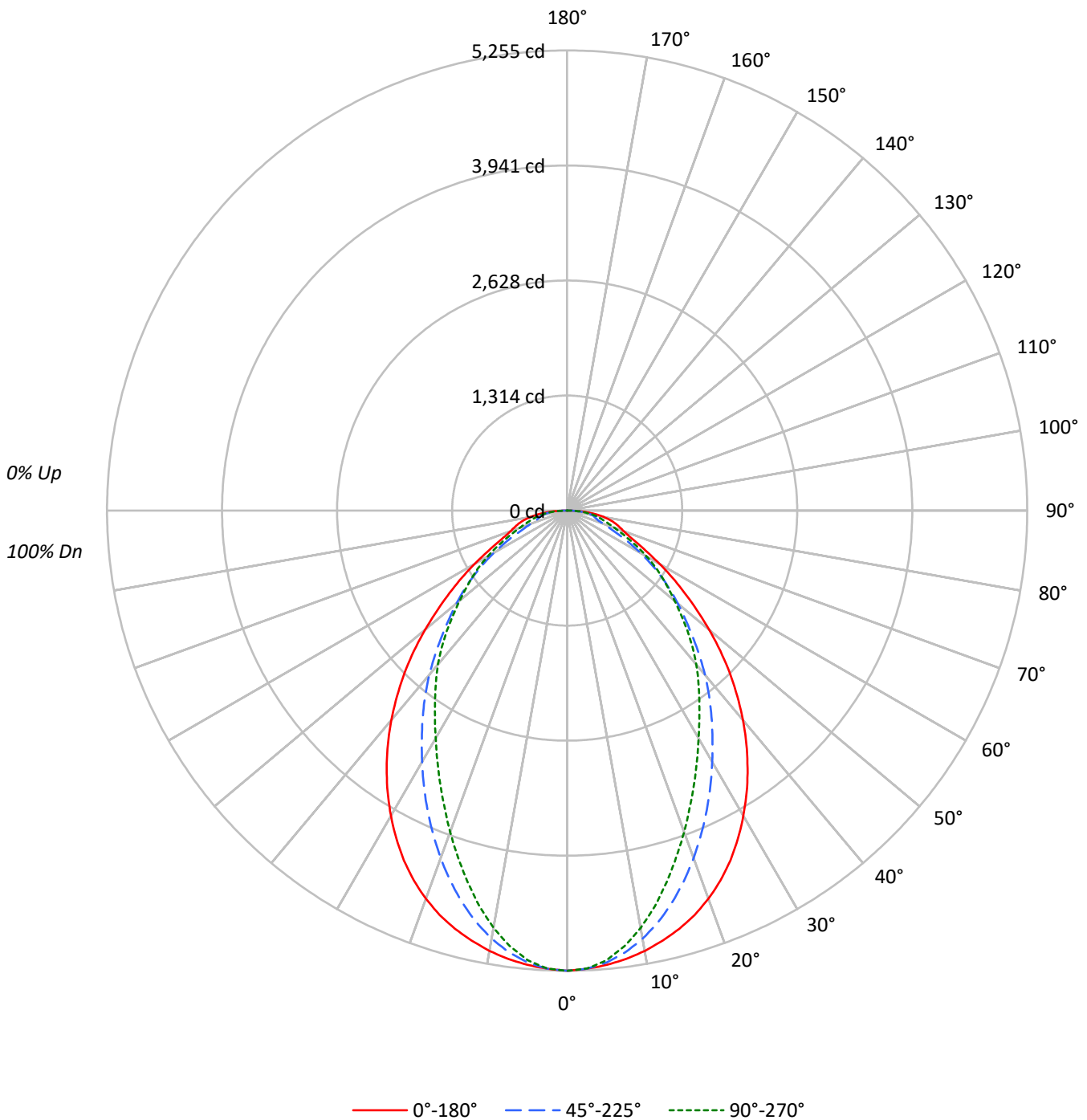
Lumens per Lamp: 3100 (4 lamps)
Luminaire Lumens: 9714.6 lumens
Efficiency: 78.3%
Efficacy: 71.5 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.91 / 1.09
Luminous Opening: Rectangular (W 1.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 135.9
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	0																
RCR																																					
0	93	93	93	93	91	91	91	91	87	87	87	83	83	83	80	80	80	80	80	80	78																
1	86	83	80	77	84	81	78	76	78	75	73	75	73	71	72	70	69	67	67	67	67																
2	79	73	69	65	77	72	68	64	69	66	62	67	64	61	64	62	60	58	58	58	58																
3	73	66	60	55	71	64	59	55	62	57	54	60	56	53	58	55	52	50	50	50	50																
4	67	59	53	48	66	58	52	48	56	51	47	54	50	46	53	49	46	44	44	44	44																
5	63	53	47	42	61	52	46	42	51	46	41	49	45	41	48	44	41	39	39	39	39																
6	58	49	42	37	57	48	42	37	46	41	37	45	40	37	44	40	36	35	35	35	35																
7	54	44	38	34	53	44	38	34	43	37	33	42	37	33	41	36	33	31	31	31	31																
8	51	41	35	30	50	40	34	30	39	34	30	38	34	30	38	33	30	28	28	28	28																
9	48	38	32	28	47	37	32	28	37	31	28	36	31	27	35	31	27	26	26	26	26																
10	45	35	29	25	44	35	29	25	34	29	25	33	29	25	33	28	25	24	24	24	24																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12739	12739	12739
5°	12674	12606	12542
10°	12569	12222	11909
15°	12411	11628	11020
20°	12169	10895	10074
25°	11796	10095	9188
30°	11267	9277	8403
35°	10633	8505	7783
40°	9886	7750	7266
45°	9006	6919	6661
50°	7977	6215	6034
55°	6919	5520	5575
60°	5920	4679	5091
65°	5077	3740	4497
70°	4862	3097	4076
75°	5348	3166	4037
80°	5989	4035	4440
85°	6397	4756	4812



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	487.5	5.0	3.9	0°	5255	5255	5255	5255	5255	
10°-20°	1303.9	13.4	10.5	5°	5208	5195	5180	5156	5154	494
20°-30°	1765.5	18.2	14.2	15°	4945	4841	4633	4452	4391	1393
30°-40°	1865.3	19.2	15.0	25°	4410	4165	3774	3513	3435	2025
40°-50°	1653.8	17.0	13.3	35°	3593	3279	2874	2674	2630	2242
50°-60°	1244.0	12.8	10.0	45°	2627	2329	2018	1927	1943	2021
60°-70°	756.8	7.8	6.1	55°	1637	1478	1306	1294	1319	1472
70°-80°	443.1	4.6	3.6	65°	885	793	652	712	784	900
80°-90°	193.3	2.0	1.6	75°	571	442	338	379	431	597
90°-100°	1.2	0.0	0.0	85°	230	212	171	163	173	228
100°-110°	0.0	0.0	0.0	90°	8	8	9	9	11	18
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	3556.9	36.6	28.7	165°	0	0	0	0	0	0
0°-40°	5422.3	55.8	43.7	175°	0	0	0	0	0	0
0°-60°	8320.1	85.6	67.1	180°	0	0	0	0	0	0
0°-90°	9713.4	100.0	78.3							
90°-120°	1.2	0.0	0.0							
90°-150°	1.2	0.0	0.0							
90°-180°	1.0	0.0	0.0							
0°-180°	9714.6	100.0	78.3							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5255	5255	5255	5255	5255
2.5°	5237	5231	5236	5231	5234
5°	5208	5195	5180	5156	5154
7.5°	5164	5137	5087	5033	5016
10°	5106	5059	4965	4870	4838
12.5°	5032	4960	4811	4672	4627
15°	4945	4841	4633	4452	4391
17.5°	4842	4701	4435	4218	4147
20°	4717	4539	4223	3981	3905
22.5°	4574	4361	4000	3743	3663
25°	4410	4165	3774	3513	3435
27.5°	4225	3950	3542	3284	3211
30°	4025	3730	3314	3070	3002
32.5°	3816	3505	3088	2866	2809
35°	3593	3279	2874	2674	2630
37.5°	3362	3047	2663	2488	2461
40°	3124	2812	2449	2302	2296
42.5°	2876	2572	2229	2112	2121
45°	2627	2329	2018	1927	1943
47.5°	2372	2097	1826	1757	1765
50°	2115	1881	1648	1598	1600
52.5°	1866	1674	1478	1447	1455
55°	1637	1478	1306	1294	1319
57.5°	1424	1294	1136	1143	1188
60°	1221	1116	965	993	1050
62.5°	1037	945	801	845	912
65°	885	793	652	712	784
67.5°	767	671	529	597	669
70°	686	577	437	507	575
72.5°	626	502	372	436	495
75°	571	442	338	379	431
77.5°	505	386	317	326	377
80°	429	339	289	274	318
82.5°	338	284	237	221	247
85°	230	212	171	163	173
87.5°	115	114	93	92	94
90°	8	8	9	9	11
92.5°	0	0	0	0	0
95°	0	0	0	0	0
97.5°	0	0	0	0	0
100°	0	0	0	0	0
102.5°	0	0	0	0	0
105°	0	0	0	0	0
107.5°	0	0	0	0	0
110°	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0	0	0	0	0
115°	0	0	0	0	0
117.5°	0	0	0	0	0
120°	0	0	0	0	0
122.5°	0	0	0	0	0
125°	0	0	0	0	0
127.5°	0	0	0	0	0
130°	0	0	0	0	0
132.5°	0	0	0	0	0
135°	0	0	0	0	0
137.5°	0	0	0	0	0
140°	0	0	0	0	0
142.5°	0	0	0	0	0
145°	0	0	0	0	0
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)