

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: P30365

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P30365
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBI-432-N-CL-UNV-EB81-U
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH FOUR T8 LAMPS,
NARROW DISTRIBUTION SPECULAR REFLECTOR AND CLEAR 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

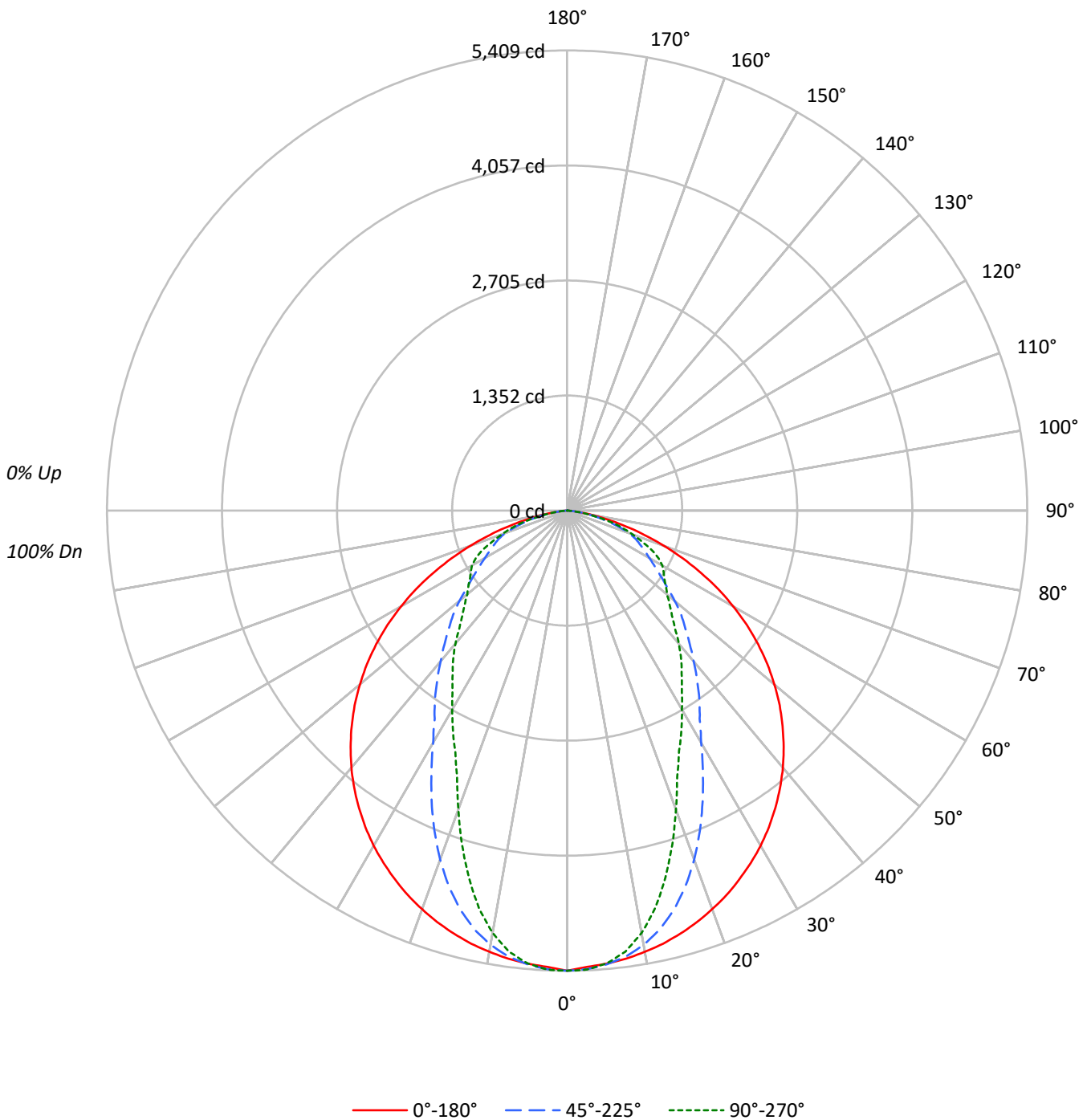
Lumens per Lamp: 3100 (4 lamps)
Luminaire Lumens: 10445.0 lumens
Efficiency: 84.2%
Efficacy: 76.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 0.82 / 1.04
Luminous Opening: Rectangular (W 1.21' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 137.2
Input Voltage (V): NR
Input Current (A_{in}): 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

TEST NUMBER: P30365

CATALOG NUMBER: HBI-432-N-CL-UNV-EB81-U

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	100	100	100	100	98	98	98	98	94	94	94		90	90	90		86	86	86	84
1	93	89	86	83	90	87	84	81	83	81	79		80	78	76		77	76	74	72
2	85	79	73	69	83	77	72	68	74	70	66		71	68	65		69	66	64	62
3	78	70	63	58	76	68	63	58	66	61	57		64	59	56		62	58	55	53
4	72	62	56	50	70	61	55	50	59	54	49		57	53	49		56	51	48	46
5	66	56	49	44	65	55	49	44	54	48	43		52	47	43		51	46	42	41
6	62	51	44	39	60	50	44	39	49	43	38		48	42	38		46	42	38	36
7	58	47	40	35	56	46	39	35	45	39	35		44	38	34		43	38	34	32
8	54	43	36	32	53	42	36	31	41	35	31		40	35	31		39	34	31	29
9	50	40	33	29	49	39	33	29	38	33	28		37	32	28		37	32	28	27
10	47	37	31	26	46	36	30	26	36	30	26		35	30	26		34	29	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12302	12302	12302
5°	12205	12224	12199
10°	12162	11970	11642
15°	12122	11432	10516
20°	12068	10565	9045
25°	12011	9458	7815
30°	11947	8270	7091
35°	11847	7522	6514
40°	11716	6870	6066
45°	11521	6333	5603
50°	11255	5845	5424
55°	10865	5321	5532
60°	10262	5067	5877
65°	9370	5091	5914
70°	8053	5134	5420
75°	6222	4341	4824
80°	3877	3314	3196
85°	1279	1514	1331



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	505.0	4.8	4.1	0°	5409	5409	5409	5409	5409	
10°-20°	1351.5	12.9	10.9	5°	5346	5356	5354	5341	5343	508
20°-30°	1784.3	17.1	14.4	15°	5148	5092	4855	4574	4466	1453
30°-40°	1891.6	18.1	15.3	25°	4786	4537	3769	3225	3114	2206
40°-50°	1743.0	16.7	14.1	35°	4267	3671	2709	2412	2346	2669
50°-60°	1450.8	13.9	11.7	45°	3582	2587	1969	1784	1742	2761
60°-70°	1078.5	10.3	8.7	55°	2740	1693	1342	1363	1395	2443
70°-80°	550.7	5.3	4.4	65°	1741	949	946	1075	1099	1718
80°-90°	89.5	0.9	0.7	75°	708	421	494	535	549	764
90°-100°	0.1	0.0	0.0	85°	49	59	58	55	51	94
100°-110°	0.0	0.0	0.0	90°	0	0	1	2	2	1
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°	3640.8	34.9	29.4	165°	0	0	0	0	0	0
0°-40°	5532.4	53.0	44.6	175°	0	0	0	0	0	0
0°-60°	8726.2	83.5	70.4	180°	0	0	0	0	0	0
0°-90°	10444.8	100.0	84.2							
90°-120°	0.1	0.0	0.0							
90°-150°	0.1	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	10445.0	100.0	84.2							



TEST NUMBER: P30365

CATALOG NUMBER: HBI-432-N-CL-UNV-EB81-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5409	5409	5409	5409	5409
2.5°	5369	5384	5396	5397	5400
5°	5346	5356	5354	5341	5343
7.5°	5313	5314	5287	5243	5230
10°	5266	5253	5183	5081	5041
12.5°	5214	5182	5041	4860	4786
15°	5148	5092	4855	4574	4466
17.5°	5072	4982	4628	4252	4112
20°	4986	4852	4365	3898	3737
22.5°	4892	4704	4076	3539	3379
25°	4786	4537	3769	3225	3114
27.5°	4671	4348	3455	2998	2910
30°	4549	4139	3149	2795	2700
32.5°	4413	3914	2900	2590	2509
35°	4267	3671	2709	2412	2346
37.5°	4111	3412	2509	2248	2202
40°	3946	3143	2314	2108	2043
42.5°	3768	2863	2135	1954	1875
45°	3582	2587	1969	1784	1742
47.5°	3388	2323	1819	1643	1633
50°	3181	2093	1652	1537	1533
52.5°	2966	1895	1483	1436	1462
55°	2740	1693	1342	1363	1395
57.5°	2504	1493	1223	1292	1345
60°	2256	1300	1114	1236	1292
62.5°	2003	1121	1029	1172	1210
65°	1741	949	946	1075	1099
67.5°	1472	773	872	947	950
70°	1211	632	772	799	815
72.5°	952	514	640	664	685
75°	708	421	494	535	549
77.5°	488	336	372	390	386
80°	296	236	253	246	244
82.5°	146	133	137	134	138
85°	49	59	58	55	51
87.5°	8	13	11	11	11
90°	0	0	1	2	2
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



TEST NUMBER: P30365

CATALOG NUMBER: HBI-432-N-CL-UNV-EB81-U

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)