

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: P30366

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P30366  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBI-532-N-A-UNV-EB82-U  
Description: HBI SERIES, FULL BODY STEEL HOUSING, WITH FIVE T8 LAMPS,  
NARROW DISTRIBUTION SPECULAR REFLECTOR AND PRISMATIC ACRYLIC LENS  
IN DOORFRAME, NO UPLIGHT  
Light Source: FIVE T8 LINEAR FLUORESCENT LAMPS, F32T8 32W - 3100 LUMENS EA  
Ballast/Driver: UNIVERSAL ELECTRONIC BALLAST  
B432IUNVHPA, B232IUNVHPA

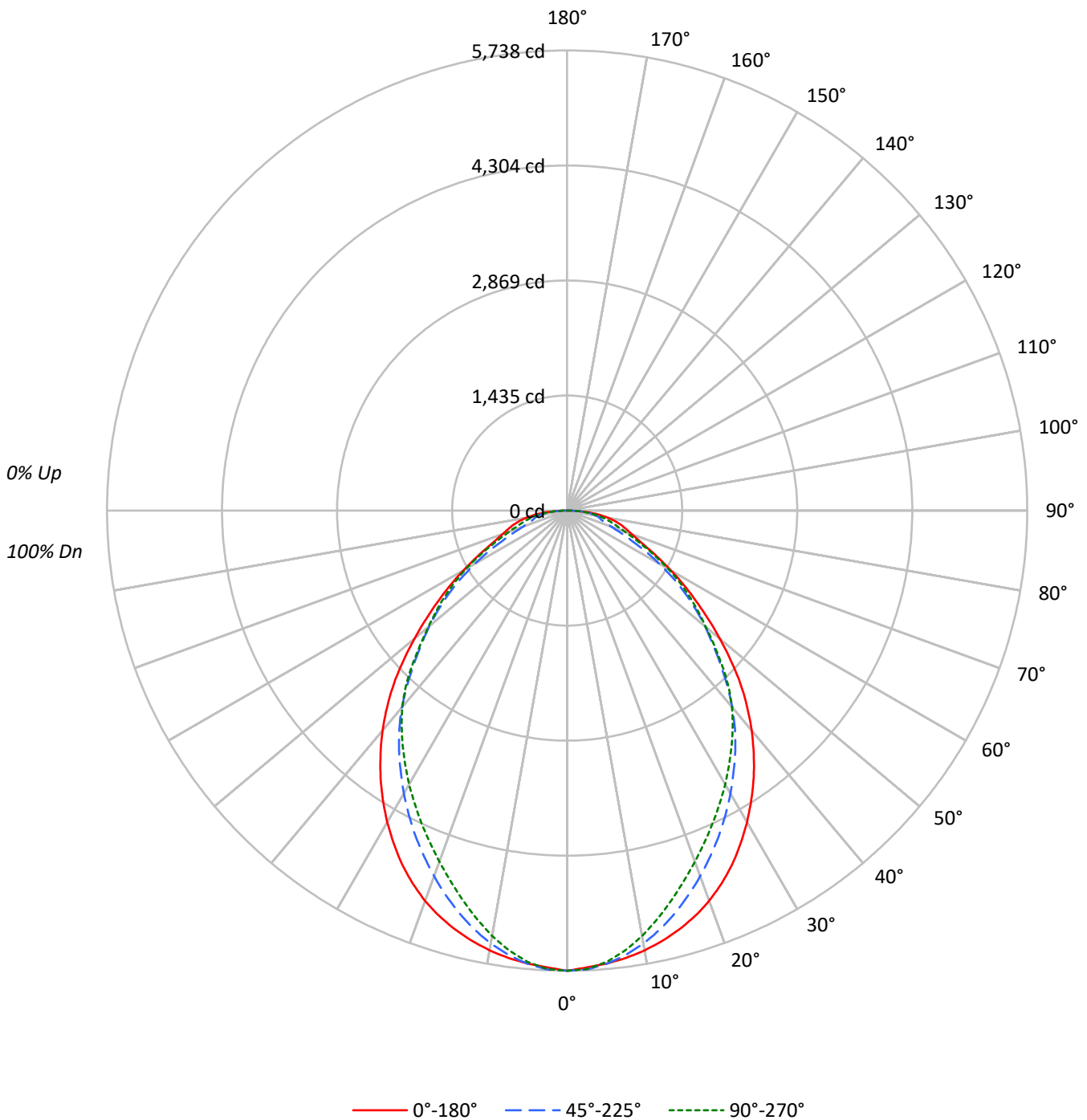
**Summary**

Lumens per Lamp: 3100 (5 lamps)  
Luminaire Lumens: 12042.7 lumens  
Efficiency: 77.7%  
Efficacy: 91.1 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.04 / 1.19  
Luminous Opening: Rectangular (W 1.15' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 132.2  
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

TEST NUMBER: P30366

CATALOG NUMBER: HBI-532-N-A-UNV-EB82-U

### Luminous Intensity Polar Plot





TEST NUMBER: P30366

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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	92	92	92	92	90	90	90	90	86	86	86	83	83	83	79	79	79	78
1	85	82	79	76	83	80	77	75	77	74	72	74	72	70	71	69	68	66
2	78	72	67	63	76	71	66	63	68	64	61	66	62	60	63	61	58	57
3	72	64	58	54	70	63	58	53	61	56	52	59	55	51	57	53	51	49
4	66	58	51	46	65	57	51	46	55	50	45	53	48	45	51	47	44	43
5	61	52	45	41	60	51	45	40	50	44	40	48	43	40	47	42	39	38
6	57	47	41	36	55	46	40	36	45	40	35	44	39	35	43	38	35	33
7	53	43	37	32	52	42	36	32	41	36	32	40	35	32	39	35	31	30
8	50	40	33	29	48	39	33	29	38	33	29	37	32	28	36	32	28	27
9	46	36	30	26	45	36	30	26	35	30	26	34	29	26	34	29	26	24
10	44	34	28	24	43	33	28	24	33	27	24	32	27	24	31	27	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13910	13910	13910
5°	13796	13805	13747
10°	13706	13495	13258
15°	13568	13043	12619
20°	13364	12515	12014
25°	13024	11970	11497
30°	12558	11401	11032
35°	12007	10814	10580
40°	11333	10146	10120
45°	10484	9250	9380
50°	9380	8456	8516
55°	8276	7578	7853
60°	7258	6439	7064
65°	6344	5088	6080
70°	6053	4111	5437
75°	6529	4121	5348
80°	7204	5207	5794
85°	7705	6314	6231



TEST NUMBER: P30366

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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	535.0	4.4	3.5	0°	5738	5738	5738	5738	5738	
10°-20°	1464.9	12.2	9.5	5°	5669	5679	5673	5656	5649	538
20°-30°	2082.6	17.3	13.4	15°	5406	5344	5197	5074	5028	1524
30°-40°	2328.8	19.3	15.0	25°	4869	4712	4475	4340	4298	2238
40°-50°	2149.8	17.9	13.9	35°	4057	3862	3654	3587	3575	2531
50°-60°	1655.0	13.7	10.7	45°	3058	2858	2698	2688	2736	2348
60°-70°	1002.3	8.3	6.5	55°	1958	1891	1793	1818	1858	1760
70°-80°	572.1	4.8	3.7	65°	1106	1022	887	967	1060	1120
80°-90°	249.8	2.1	1.6	75°	697	562	440	500	571	731
90°-100°	2.4	0.0	0.0	85°	277	268	227	219	224	274
100°-110°	0.0	0.0	0.0	90°	13	17	17	19	19	23
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°	4082.6	33.9	26.3	165°	0	0	0	0	0	0
0°-40°	6411.4	53.2	41.4	175°	0	0	0	0	0	0
0°-60°	10216.1	84.8	65.9	180°	0	0	0	0	0	0
0°-90°	12040.4	100.0	77.7							
90°-120°	2.4	0.0	0.0							
90°-150°	2.4	0.0	0.0							
90°-180°	2.0	0.0	0.0							
0°-180°	12042.7	100.0	77.7							



TEST NUMBER: P30366

CATALOG NUMBER: HBI-532-N-A-UNV-EB82-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5738	5738	5738	5738	5738
2.5°	5701	5716	5726	5725	5721
5°	5669	5679	5673	5656	5649
7.5°	5626	5623	5590	5550	5533
10°	5568	5549	5482	5413	5386
12.5°	5495	5455	5350	5252	5212
15°	5406	5344	5197	5074	5028
17.5°	5302	5213	5029	4889	4840
20°	5180	5065	4851	4706	4657
22.5°	5033	4896	4664	4522	4477
25°	4869	4712	4475	4340	4298
27.5°	4683	4511	4277	4154	4119
30°	4486	4303	4073	3969	3941
32.5°	4275	4086	3863	3780	3758
35°	4057	3862	3654	3587	3575
37.5°	3823	3629	3438	3386	3391
40°	3581	3384	3206	3170	3198
42.5°	3324	3125	2951	2932	2980
45°	3058	2858	2698	2688	2736
47.5°	2772	2597	2462	2459	2486
50°	2487	2356	2242	2247	2258
52.5°	2211	2121	2018	2032	2054
55°	1958	1891	1793	1818	1858
57.5°	1722	1664	1563	1599	1661
60°	1497	1441	1328	1378	1457
62.5°	1286	1220	1097	1162	1247
65°	1106	1022	887	967	1060
67.5°	962	863	715	802	899
70°	854	738	580	676	767
72.5°	775	642	488	579	658
75°	697	562	440	500	571
77.5°	613	491	411	433	497
80°	516	428	373	365	415
82.5°	403	358	311	297	320
85°	277	268	227	219	224
87.5°	141	149	124	125	119
90°	13	17	17	19	19
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: P30366

CATALOG NUMBER: HBI-532-N-A-UNV-EB82-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)