

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: 236p257

Luminaire Tested: **HBL-832-M-UNV-EB82-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: 236p257  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBL-832-M-UNV-EB82-U  
Description: OPEN HIGH BAY LUMINAIRE WITH MATTE REFLECTOR, MEDIUM  
DISTRIBUTION, NO UPLIGHT  
Light Source: EIGHT 32 WATT T8 - 3100 LUMENS EA  
Ballast/Driver: -

**Summary**

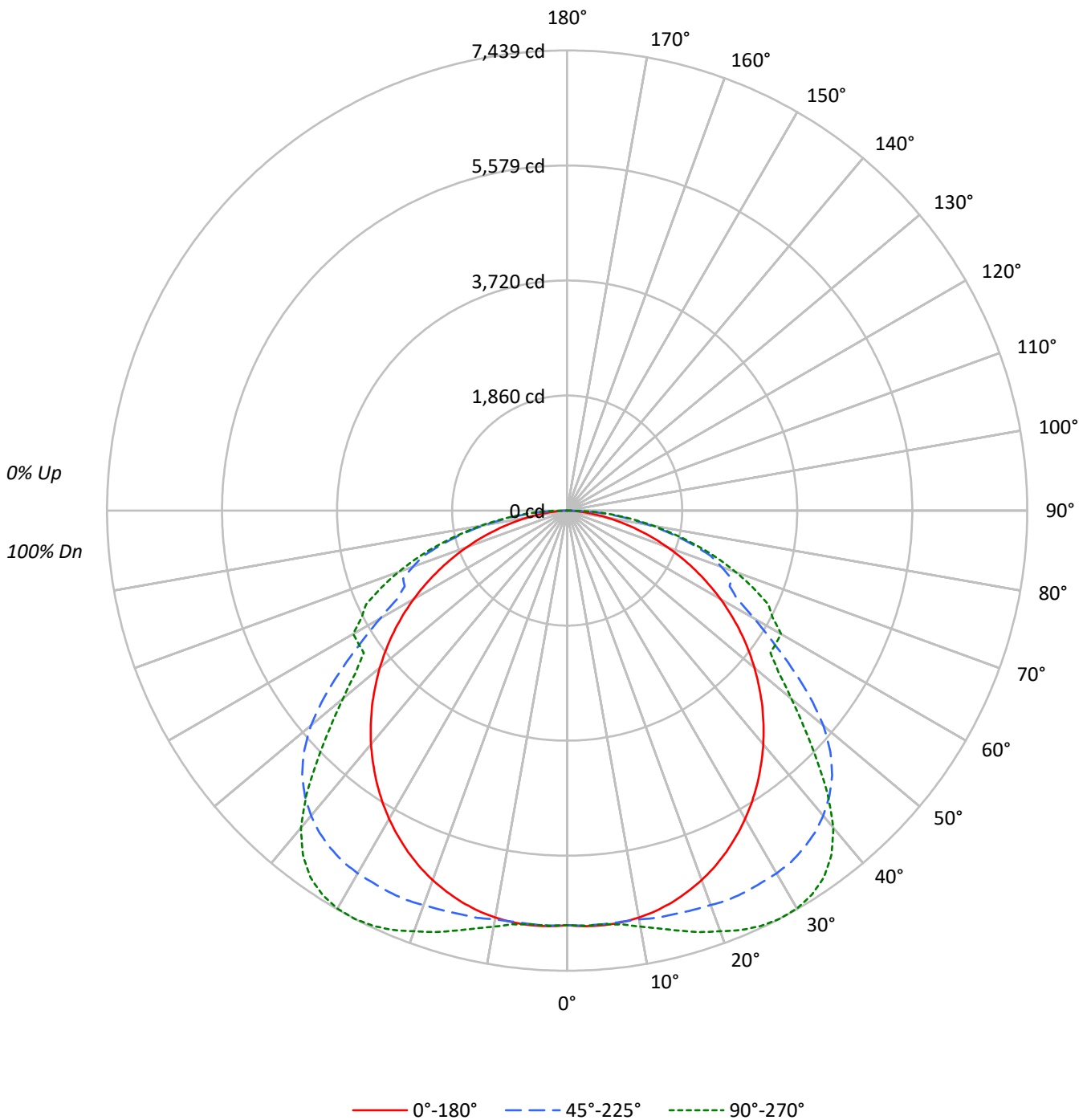
Lumens per Lamp: 3100 (8 lamps)  
Luminaire Lumens: 23494.4 lumens  
Efficiency: 94.7%  
Efficacy: 81.3 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.58 / 1.58  
Luminous Opening: Rectangular (W 2.06' x L: 3.75' x H: 0')  
CIE Type: Direct

Input Watts (W): 289  
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: 236p257

CATALOG NUMBER: HBL-832-M-UNV-EB82-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	113	113	113	113	110	110	110	110	105	105	105	101	101	101	97	97	97	95
1	102	97	93	89	100	95	91	88	91	88	85	87	85	82	84	82	80	78
2	92	84	77	72	90	82	76	71	79	74	69	76	71	67	73	69	66	64
3	84	73	65	59	82	72	64	58	69	63	57	66	61	56	64	59	55	53
4	77	65	56	49	74	63	55	49	61	54	48	59	53	48	57	51	47	45
5	70	58	49	42	68	57	48	42	54	47	42	53	46	41	51	45	41	38
6	65	52	43	37	63	51	42	36	49	42	36	47	41	36	46	40	35	33
7	60	47	38	32	58	46	38	32	44	37	32	43	36	32	42	36	31	29
8	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
9	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23
10	49	36	28	23	47	35	28	23	34	28	23	33	27	23	33	27	23	21

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

	0°	45°	90°
0°	9327	9327	9327
5°	9401	9375	9377
10°	9441	9485	9649
15°	9446	9725	10129
20°	9416	10052	10718
25°	9350	10453	11377
30°	9251	10881	11938
35°	9118	11325	12297
40°	8962	11702	12161
45°	8778	11925	11244
50°	8559	11709	10247
55°	8303	10749	9732
60°	7974	9717	11109
65°	7551	9543	11806
70°	7003	10783	11796
75°	6286	11168	11625
80°	5298	10876	11348
85°	3800	10491	11529



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	641.4	2.7	2.6	0°	6702	6702	6702	6702	6702	
10°-20°	1917.5	8.2	7.7	5°	6729	6719	6711	6708	6712	641
20°-30°	3121.6	13.3	12.6	15°	6556	6564	6750	6938	7030	1850
30°-40°	4041.2	17.2	16.3	25°	6089	6244	6807	7250	7409	2804
40°-50°	4278.0	18.2	17.3	35°	5367	5793	6666	7126	7238	3356
50°-60°	3754.1	16.0	15.1	45°	4460	5205	6059	5922	5713	3438
60°-70°	3092.5	13.2	12.5	55°	3422	4444	4430	4020	4011	3056
70°-80°	1979.9	8.4	8.0	65°	2293	3236	2898	3438	3585	2269
80°-90°	668.2	2.8	2.7	75°	1169	1538	2077	2153	2162	1239
90°-100°	0.0	0.0	0.0	85°	238	568	657	706	722	293
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	5680.5	24.2	22.9							
0°-40°	9721.6	41.4	39.2							
0°-60°	17753.8	75.6	71.6							
0°-90°	23494.4	100.0	94.7							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	23494.4	100.0	94.7							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6702	6702	6702	6702	6702
2.5°	6727	6722	6716	6713	6718
5°	6729	6719	6711	6708	6712
7.5°	6715	6703	6705	6728	6747
10°	6681	6669	6712	6795	6828
12.5°	6630	6622	6743	6859	6921
15°	6556	6564	6750	6938	7030
17.5°	6464	6499	6769	7039	7145
20°	6358	6434	6787	7111	7237
22.5°	6232	6349	6811	7180	7339
25°	6089	6244	6807	7250	7409
27.5°	5927	6140	6787	7276	7439
30°	5757	6035	6771	7269	7429
32.5°	5568	5910	6736	7223	7362
35°	5367	5793	6666	7126	7238
37.5°	5154	5665	6571	6968	7017
40°	4933	5519	6441	6724	6694
42.5°	4699	5362	6272	6378	6240
45°	4460	5205	6059	5922	5713
47.5°	4207	5041	5772	5393	5197
50°	3953	4860	5408	4886	4733
52.5°	3690	4660	4947	4426	4313
55°	3422	4444	4430	4020	4011
57.5°	3147	4199	3931	3743	4001
60°	2865	3925	3491	3760	3991
62.5°	2580	3614	3098	3678	3746
65°	2293	3236	2898	3438	3585
67.5°	2007	2789	2872	3234	3248
70°	1721	2306	2650	2872	2899
72.5°	1438	1869	2432	2520	2536
75°	1169	1538	2077	2153	2162
77.5°	903	1385	1723	1767	1772
80°	661	1198	1357	1400	1416
82.5°	431	893	994	1043	1058
85°	238	568	657	706	722
87.5°	79	264	343	392	404
90°	0	0	0	0	0

(END OF REPORT)