

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: 236p248

Luminaire Tested: **HBL-632-M-UNV-EB82-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: 236p248  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBL-632-M-UNV-EB82-U  
Description: OPEN HIGH BAY LUMINAIRE WITH MATTE REFLECTOR, MEDIUM  
DISTRIBUTION, NO UPLIGHT  
Light Source: SIX 32 WATT T8 - 3100 LUMENS EA  
Ballast/Driver: -

**Summary**

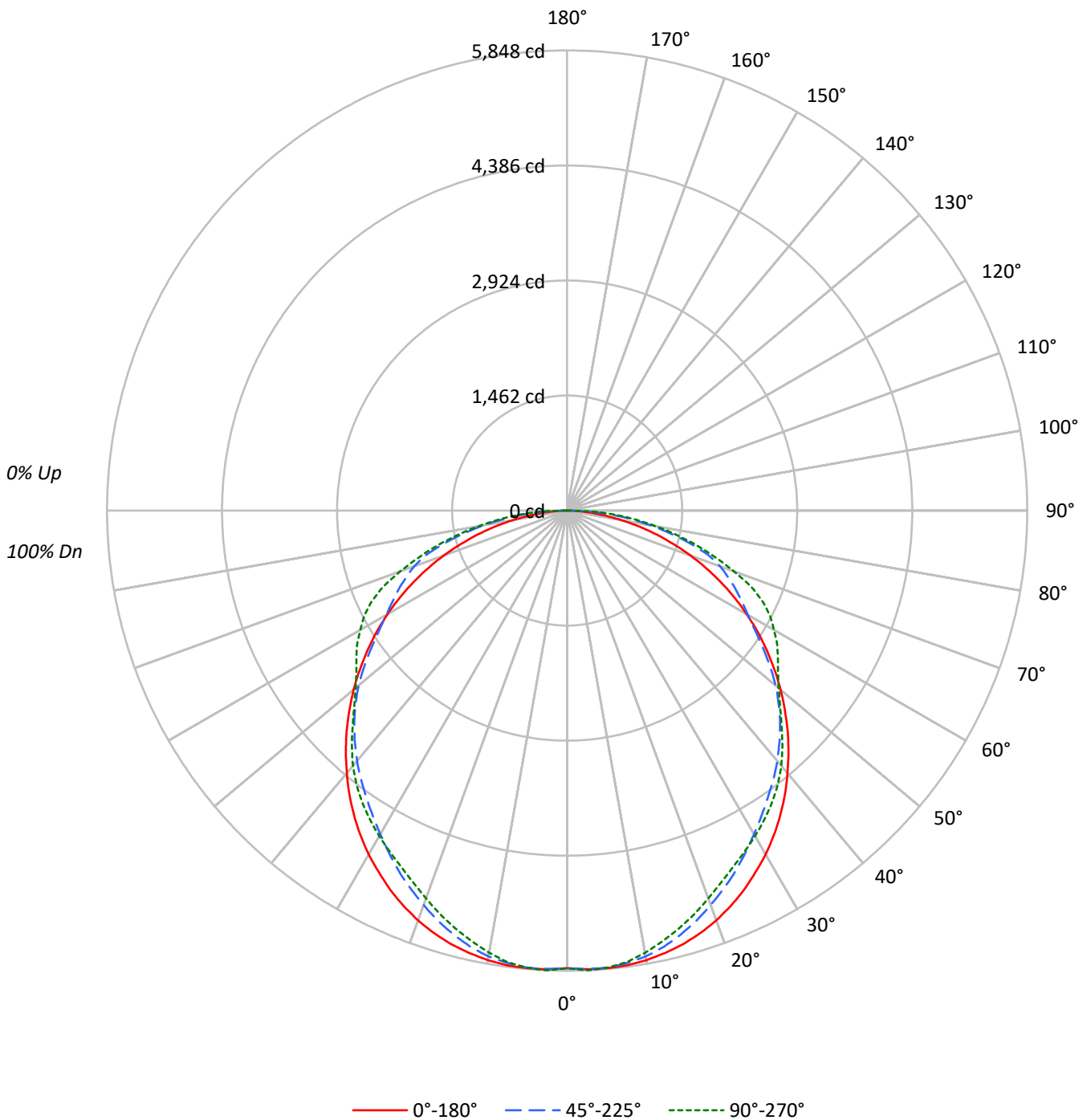
Lumens per Lamp: 3100 (6 lamps)  
Luminaire Lumens: 17566.8 lumens  
Efficiency: 94.4%  
Efficacy: 79.5 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.23 / 1.36  
Luminous Opening: Rectangular (W 1.58' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 221  
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: 236p248

CATALOG NUMBER: HBL-632-M-UNV-EB82-U

### Luminous Intensity Polar Plot





TEST NUMBER: 236p248

CATALOG NUMBER: HBL-632-M-UNV-EB82-U

**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	112	112	112	112	110	110	110	110	105	105	105	100	100	100	96	96	96	94
1	102	97	92	88	99	95	91	87	91	87	84	87	84	82	83	81	79	77
2	92	84	77	71	89	82	75	70	78	73	68	75	71	67	72	69	65	63
3	84	73	65	58	81	71	64	58	69	62	57	66	60	56	64	59	55	53
4	76	64	56	49	74	63	55	49	61	54	48	59	52	47	56	51	47	45
5	70	57	49	42	68	56	48	42	54	47	41	52	46	41	51	45	40	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	45	37	32	43	37	32	42	36	31	29
8	56	43	34	29	54	42	34	29	41	34	28	40	33	28	38	32	28	26
9	52	39	31	26	51	39	31	26	37	31	26	36	30	25	35	30	25	24
10	49	36	28	23	48	36	28	23	35	28	23	34	28	23	33	27	23	21

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

	0°	45°	90°
0°	9885	9885	9885
5°	9962	9950	9948
10°	10011	9930	9846
15°	10035	9813	9670
20°	10022	9647	9486
25°	9975	9487	9365
30°	9903	9320	9375
35°	9799	9229	9411
40°	9664	9216	9396
45°	9525	9198	9256
50°	9365	9148	9270
55°	9183	8990	9689
60°	8960	9014	10316
65°	8674	9503	11051
70°	8274	10281	11206
75°	7729	10658	11183
80°	6910	10551	11187
85°	5460	10725	12032



TEST NUMBER: 236p248

CATALOG NUMBER: HBL-632-M-UNV-EB82-U

**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	554.0	3.2	3.0	0°	5816	5816	5816	5816	5816	
10°-20°	1574.8	9.0	8.5	5°	5839	5835	5832	5824	5831	556
20°-30°	2352.6	13.4	12.6	15°	5703	5662	5577	5502	5496	1609
30°-40°	2835.2	16.1	15.2	25°	5319	5197	5059	4996	4994	2450
40°-50°	2961.5	16.9	15.9	35°	4723	4532	4448	4510	4536	2954
50°-60°	2768.3	15.8	14.9	45°	3963	3755	3827	3863	3851	3056
60°-70°	2367.3	13.5	12.7	55°	3099	2960	3034	3171	3270	2769
70°-80°	1590.1	9.1	8.5	65°	2157	2134	2363	2677	2748	2132
80°-90°	563.2	3.2	3.0	75°	1177	1283	1623	1682	1703	1244
90°-100°	0.0	0.0	0.0	85°	280	463	550	600	617	332
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°	4481.3	25.5	24.1							
0°-40°	7316.5	41.6	39.3							
0°-60°	13046.3	74.3	70.1							
0°-90°	17566.8	100.0	94.4							
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°	17566.8	100.0	94.4							



TEST NUMBER: 236p248

CATALOG NUMBER: HBL-632-M-UNV-EB82-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5816	5816	5816	5816	5816
2.5°	5834	5830	5830	5834	5848
5°	5839	5835	5832	5824	5831
7.5°	5828	5820	5801	5785	5789
10°	5801	5787	5754	5710	5705
12.5°	5758	5736	5678	5614	5606
15°	5703	5662	5577	5502	5496
17.5°	5630	5573	5464	5384	5376
20°	5541	5467	5334	5263	5245
22.5°	5437	5341	5200	5125	5114
25°	5319	5197	5059	4996	4994
27.5°	5182	5045	4904	4866	4884
30°	5046	4887	4749	4752	4777
32.5°	4891	4712	4598	4638	4660
35°	4723	4532	4448	4510	4536
37.5°	4548	4345	4305	4374	4396
40°	4356	4153	4154	4225	4235
42.5°	4163	3957	3993	4054	4050
45°	3963	3755	3827	3863	3851
47.5°	3753	3552	3649	3658	3668
50°	3542	3353	3460	3471	3506
52.5°	3321	3155	3250	3304	3377
55°	3099	2960	3034	3171	3270
57.5°	2871	2761	2831	3062	3165
60°	2636	2558	2652	2943	3035
62.5°	2398	2347	2500	2803	2909
65°	2157	2134	2363	2677	2748
67.5°	1909	1905	2215	2496	2533
70°	1665	1676	2069	2241	2255
72.5°	1417	1469	1885	1958	1975
75°	1177	1283	1623	1682	1703
77.5°	938	1127	1344	1406	1421
80°	706	953	1078	1124	1143
82.5°	485	710	803	860	878
85°	280	463	550	600	617
87.5°	101	230	306	352	367
90°	0	0	0	0	0

(END OF REPORT)