

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: 175P214

Luminaire Tested: **HBL-654T5-M-UNV-EBT2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 175P214
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBL-654T5-M-UNV-EBT2-U
Description: OPEN HIGH BAY LUMINAIRE WITH MATTE REFLECTOR, MEDIUM
DISTRIBUTION WITH NO UPLIGHT
Light Source: SIX 54 WATT T5HO - 4400 LUMENS EA
Ballast/Driver: -

Summary

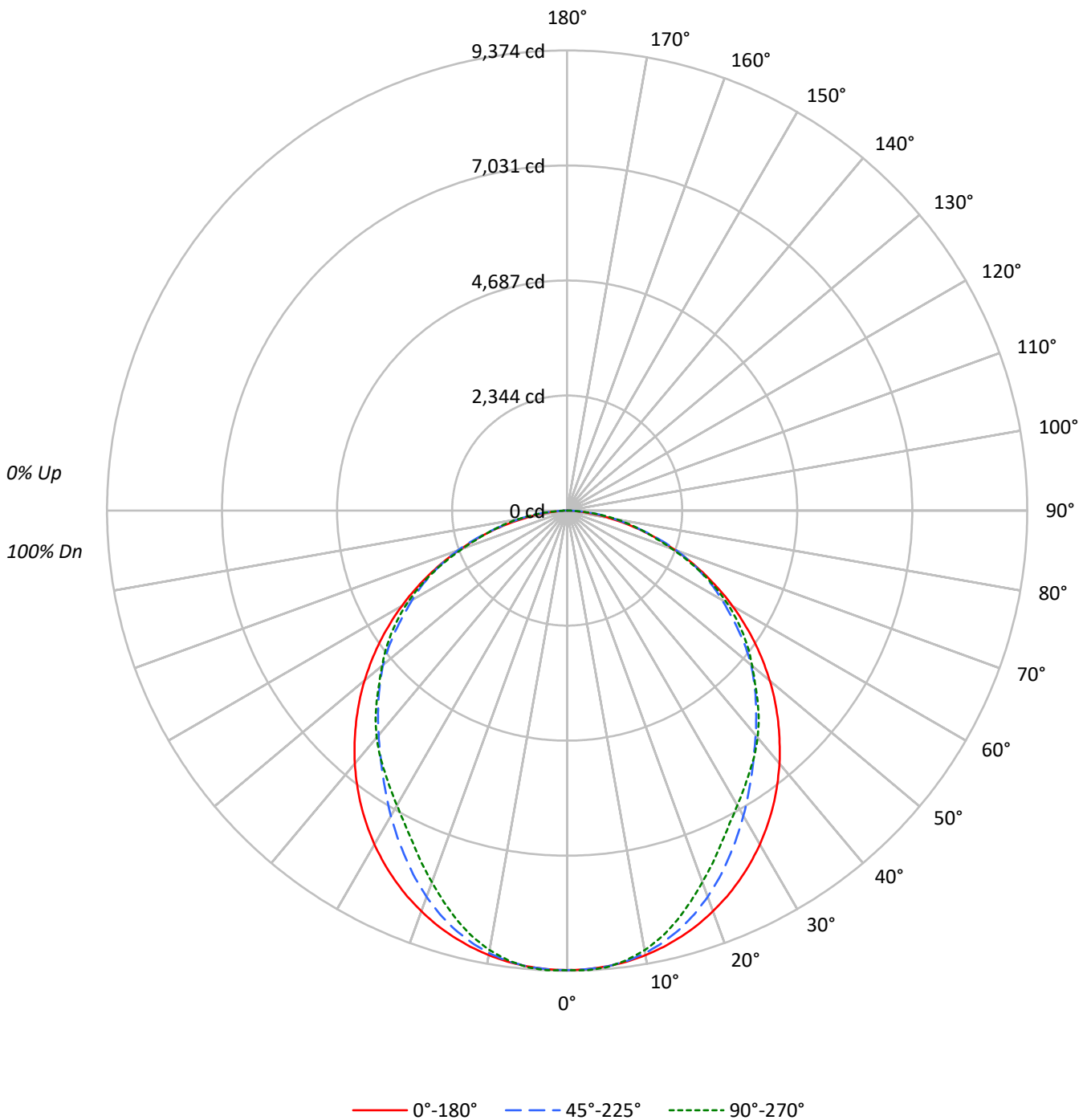
Lumens per Lamp: 4400 (6 lamps)
Luminaire Lumens: 24537.9 lumens
Efficiency: 92.9%
Efficacy: 71.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.11 / 1.28
Luminous Opening: Rectangular (W 1.5' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 343
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				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	111	111	111	111	108	108	108	108	103	103	103	99	99	99	95	95	95	93
1	101	97	93	89	99	95	91	88	91	88	85	87	85	82	84	82	80	78
2	92	84	78	73	90	83	77	72	79	74	70	76	72	68	73	70	67	65
3	84	74	66	60	82	73	66	60	70	64	59	67	62	58	65	61	57	55
4	77	66	58	51	75	64	57	51	62	55	50	60	54	50	58	53	49	47
5	71	59	50	44	69	58	50	44	56	49	44	54	48	43	52	47	43	41
6	65	53	45	39	64	52	44	39	50	43	38	49	43	38	47	42	38	36
7	61	48	40	34	59	47	40	34	46	39	34	45	38	34	43	38	33	32
8	56	44	36	31	55	43	36	31	42	35	30	41	35	30	40	34	30	28
9	53	40	33	28	51	40	33	28	39	32	27	38	32	27	37	31	27	25
10	50	37	30	25	48	37	30	25	36	29	25	35	29	25	34	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16795	16795	16795
5°	16784	16789	16813
10°	16754	16677	16564
15°	16689	16411	16056
20°	16583	15983	15378
25°	16447	15436	14751
30°	16266	14876	14364
35°	16042	14351	14207
40°	15761	13995	14145
45°	15423	13784	13918
50°	15040	13659	13731
55°	14560	13349	13690
60°	13961	13082	13484
65°	13206	12866	12922
70°	12216	12421	11886
75°	10862	11194	11111
80°	8978	10187	10496
85°	6093	8563	8275



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	884.2	3.6	3.3	0°	9362	9362	9362	9362	9362	
10°-20°	2482.9	10.1	9.4	5°	9320	9320	9323	9311	9336	886
20°-30°	3614.5	14.7	13.7	15°	8986	8953	8836	8688	8645	2535
30°-40°	4219.3	17.2	16.0	25°	8309	8170	7798	7529	7452	3828
40°-50°	4309.7	17.6	16.3	35°	7325	7021	6553	6482	6487	4579
50°-60°	3873.2	15.8	14.7	45°	6079	5628	5433	5507	5486	4688
60°-70°	2983.1	12.2	11.3	55°	4655	4202	4268	4352	4377	4157
70°-80°	1710.3	7.0	6.5	65°	3111	2914	3031	3069	3044	3078
80°-90°	460.8	1.9	1.7	75°	1567	1633	1615	1593	1603	1665
90°-100°	0.0	0.0	0.0	85°	296	391	416	413	402	376
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°	6981.5	28.5	26.4							
0°-40°	11200.8	45.6	42.4							
0°-60°	19383.7	79.0	73.4							
0°-90°	24537.9	100.0	92.9							
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°	24537.9	100.0	92.9							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9362	9362	9362	9362	9362
2.5°	9350	9351	9353	9352	9374
5°	9320	9320	9323	9311	9336
7.5°	9272	9268	9257	9229	9238
10°	9197	9189	9155	9099	9093
12.5°	9101	9084	9013	8916	8896
15°	8986	8953	8836	8688	8645
17.5°	8848	8798	8621	8417	8356
20°	8686	8612	8372	8129	8055
22.5°	8508	8405	8098	7831	7759
25°	8309	8170	7798	7529	7452
27.5°	8091	7918	7492	7234	7175
30°	7852	7639	7181	6961	6934
32.5°	7597	7335	6861	6715	6706
35°	7325	7021	6553	6482	6487
37.5°	7032	6684	6252	6250	6272
40°	6730	6342	5976	6021	6040
42.5°	6407	5986	5702	5781	5777
45°	6079	5628	5433	5507	5486
47.5°	5740	5265	5168	5210	5189
50°	5389	4903	4894	4897	4920
52.5°	5022	4544	4587	4618	4658
55°	4655	4202	4268	4352	4377
57.5°	4273	3870	3941	4055	4075
60°	3891	3542	3646	3743	3758
62.5°	3501	3227	3354	3424	3412
65°	3111	2914	3031	3069	3044
67.5°	2720	2592	2708	2696	2653
70°	2329	2257	2368	2302	2266
72.5°	1944	1938	1996	1925	1907
75°	1567	1633	1615	1593	1603
77.5°	1207	1315	1271	1305	1316
80°	869	986	986	1023	1016
82.5°	560	653	719	704	692
85°	296	391	416	413	402
87.5°	91	148	145	136	126
90°	0	0	0	0	0

(END OF REPORT)