

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: 236p215

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 236p215
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBL-654T5-N-UNV-EBT2-U
Description: OPEN HIGH BAY LUMINAIRE WITH SPECULAR REFLECTOR, NARROW DISTRIBUTION
NO UPLIGHT
Light Source: SIX 54 WATT T5HO - 4400 LUMENS EA
Ballast/Driver: -

Summary

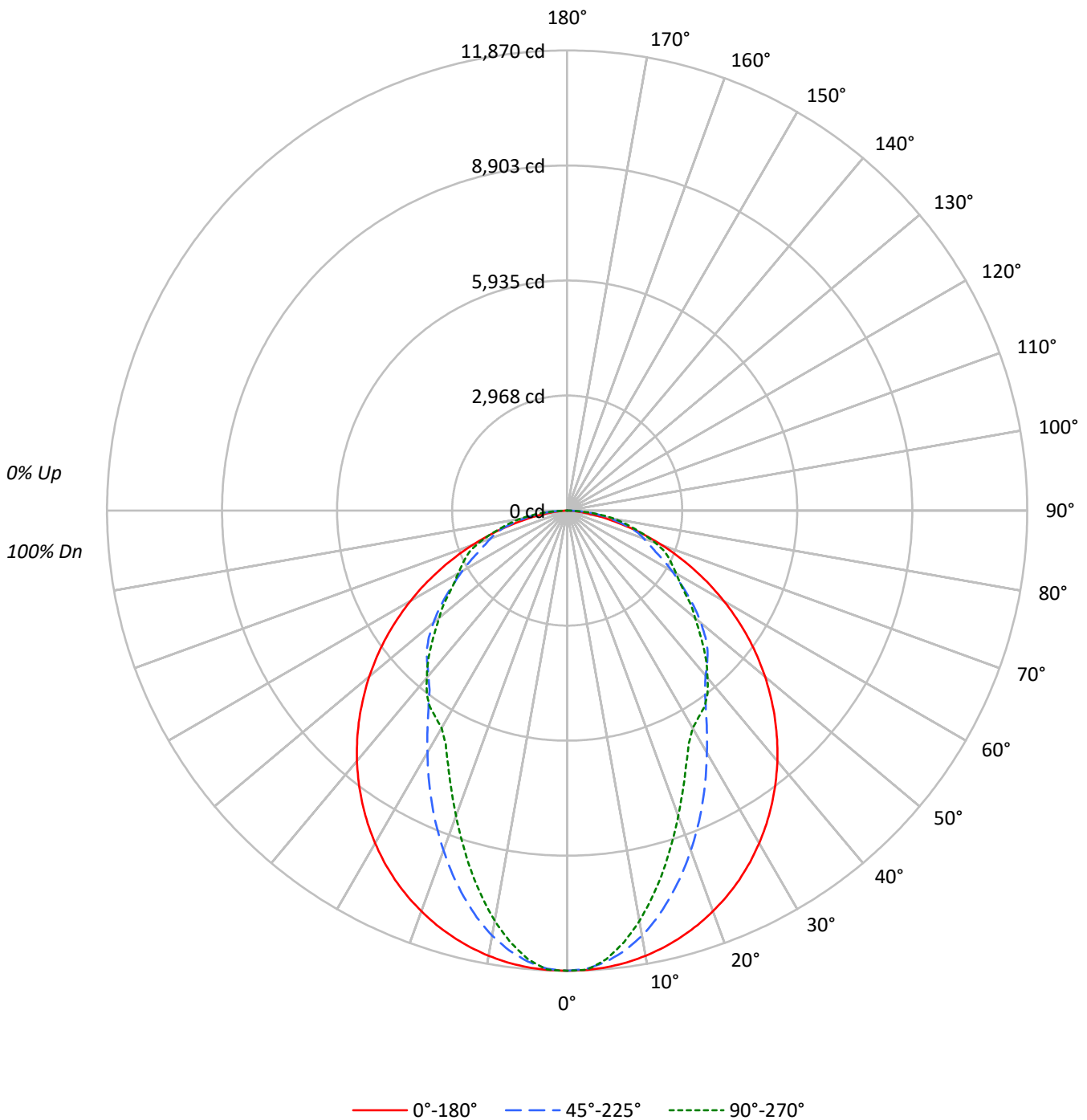
Lumens per Lamp: 4400 (6 lamps)
Luminaire Lumens: 25140.9 lumens
Efficiency: 95.2%
Efficacy: 71.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.86 / 1.08
Luminous Opening: Rectangular (W 1.6' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 352
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	113	113	113	113	111	111	111	111	106	106	106	101	101	101	97	97	97	95
1	104	99	95	92	101	97	94	90	93	90	87	89	87	85	86	84	82	80
2	95	87	81	75	92	85	79	74	82	77	73	79	75	71	76	73	70	67
3	87	77	69	63	84	75	68	63	73	67	62	70	65	61	68	63	60	57
4	80	69	60	54	78	67	60	54	65	58	53	63	57	52	61	56	52	50
5	74	62	53	47	72	61	53	47	59	52	46	57	51	46	55	50	45	43
6	68	56	48	42	66	55	47	41	53	46	41	52	45	41	50	45	40	38
7	63	51	43	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34
8	59	47	39	33	58	46	38	33	45	38	33	44	37	33	43	37	33	31
9	56	43	35	30	54	42	35	30	41	35	30	40	34	30	39	34	30	28
10	52	40	33	28	51	39	32	28	38	32	27	38	32	27	37	31	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19912	19912	19912
5°	19910	19666	19560
10°	19866	18967	18306
15°	19772	17909	16674
20°	19635	16650	14958
25°	19449	15324	13438
30°	19194	13964	12550
35°	18871	12764	12645
40°	18475	12164	12340
45°	17985	12151	11805
50°	17391	11749	11240
55°	16650	11119	10844
60°	15658	10484	10884
65°	14420	9983	11491
70°	12762	10280	11840
75°	10487	10850	11615
80°	7748	10559	12037
85°	4446	10336	10721



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	1098.9	4.4	4.2	0°	11870	11870	11870	11870	11870	
10°-20°	2914.6	11.6	11.0	5°	11824	11771	11679	11594	11616	###
20°-30°	3937.0	15.7	14.9	15°	11385	10999	10312	9762	9601	3212
30°-40°	4342.3	17.3	16.4	25°	10508	9578	8279	7473	7260	4840
40°-50°	4258.6	16.9	16.1	35°	9215	7716	6233	6093	6175	5761
50°-60°	3606.6	14.3	13.7	45°	7581	5682	5122	5049	4976	5843
60°-70°	2759.0	11.0	10.5	55°	5693	3846	3802	3743	3708	5079
70°-80°	1699.5	6.8	6.4	65°	3633	2555	2515	2798	2895	3593
80°-90°	524.4	2.1	2.0	75°	1618	1258	1674	1765	1792	1737
90°-100°	0.0	0.0	0.0	85°	231	403	537	557	557	318
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°	7950.5	31.6	30.1							
0°-40°	12292.8	48.9	46.6							
0°-60°	20158.0	80.2	76.4							
0°-90°	25140.9	100.0	95.2							
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°	25140.9	100.0	95.2							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	11870	11870	11870	11870	11870
2.5°	11859	11844	11829	11812	11851
5°	11824	11771	11679	11594	11616
7.5°	11759	11645	11444	11260	11229
10°	11663	11472	11135	10825	10747
12.5°	11539	11256	10752	10314	10191
15°	11385	10999	10312	9762	9601
17.5°	11208	10699	9835	9185	8983
20°	10999	10360	9327	8604	8379
22.5°	10768	9984	8808	8024	7796
25°	10508	9578	8279	7473	7260
27.5°	10220	9143	7740	6964	6784
30°	9909	8684	7209	6529	6479
32.5°	9574	8206	6705	6260	6315
35°	9215	7716	6233	6093	6175
37.5°	8834	7212	5832	5938	5950
40°	8437	6707	5555	5694	5635
42.5°	8017	6195	5341	5384	5316
45°	7581	5682	5122	5049	4976
47.5°	7127	5183	4838	4688	4623
50°	6664	4702	4502	4334	4307
52.5°	6183	4247	4156	4025	4033
55°	5693	3846	3802	3743	3708
57.5°	5181	3502	3441	3416	3446
60°	4667	3202	3125	3164	3244
62.5°	4153	2891	2821	2968	3058
65°	3633	2555	2515	2798	2895
67.5°	3111	2205	2287	2624	2700
70°	2602	1862	2096	2387	2414
72.5°	2092	1540	1921	2077	2100
75°	1618	1258	1674	1765	1792
77.5°	1182	1027	1376	1472	1508
80°	802	856	1093	1207	1246
82.5°	482	643	840	904	907
85°	231	403	537	557	557
87.5°	57	178	192	170	161
90°	0	0	0	0	0

(END OF REPORT)