

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: 175P217

Luminaire Tested: **HBE-654T5-W-UNV-EBT2-UPL-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 175P217
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBE-654T5-W-UNV-EBT2-UPL-U
Description: OPEN HIGH BAY LUMINAIRE WITH WHITE REFLECTOR, WIDE
DISTRIBUTION WITH UPLIGHT
Light Source: SIX 54 WATT T5HO - 4400 LUMENS EA
Ballast/Driver: -

Summary

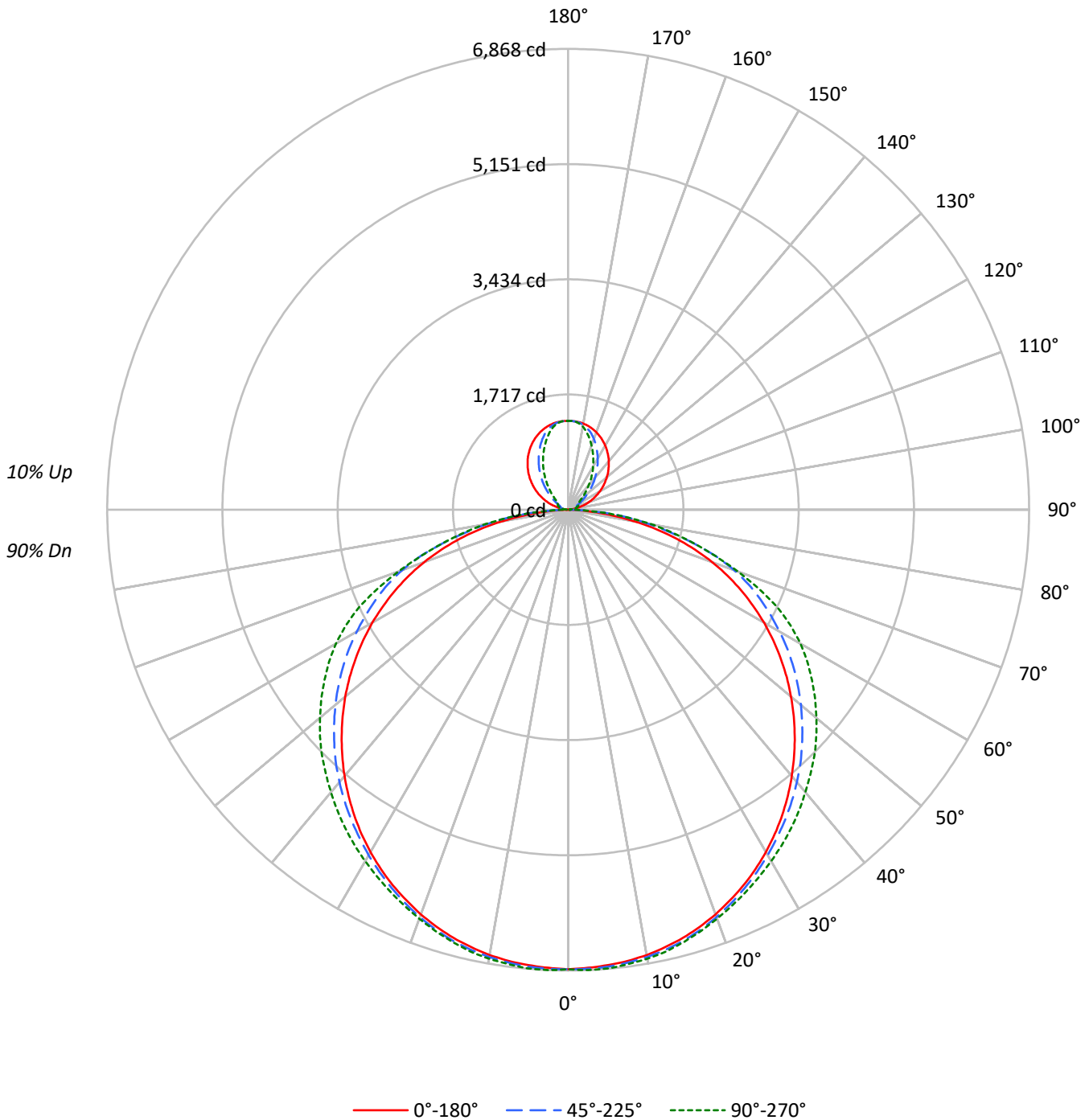
Lumens per Lamp: 4400 (6 lamps)
Luminaire Lumens: 24623.1 lumens
Efficiency: 93.3%
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.32 / 1.43
Luminous Opening: Rectangular (W 1.58' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 346
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	109	109	109	109	105	105	105	105	98	98	98	92	92	92	86	86	86	84
1	99	94	90	86	95	91	87	83	85	82	79	80	77	75	75	73	71	68
2	89	81	74	69	86	78	72	67	74	69	64	69	65	61	65	62	59	56
3	81	71	63	57	78	68	61	55	64	58	53	60	55	51	57	53	49	46
4	74	62	54	47	71	60	53	47	57	50	45	53	48	43	50	46	42	39
5	68	55	47	40	65	54	46	40	51	44	38	48	42	37	45	40	36	34
6	62	50	41	35	60	48	40	34	46	39	33	43	37	32	41	35	31	29
7	58	45	37	31	55	44	36	30	41	34	29	39	33	29	37	32	28	26
8	54	41	33	27	51	40	32	27	38	31	26	36	30	25	34	29	25	23
9	50	37	30	24	48	36	29	24	35	28	23	33	27	23	31	26	22	20
10	47	34	27	22	45	33	26	22	32	26	21	30	25	21	29	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11642	11642	11642
5°	11625	11663	11709
10°	11630	11684	11728
15°	11625	11697	11732
20°	11608	11686	11733
25°	11587	11668	11773
30°	11561	11667	11871
35°	11532	11696	12017
40°	11499	11761	12198
45°	11472	11847	12467
50°	11462	11967	12763
55°	11455	12149	13138
60°	11455	12366	13586
65°	11433	12704	13822
70°	11345	13069	13342
75°	10979	12687	12746
80°	9905	11901	12401
85°	6786	10686	10686



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	650.1	2.6	2.5	0°	6850	6850	6850	6850	6850	
10°-20°	1874.6	7.6	7.1	5°	6814	6821	6836	6839	6863	648
20°-30°	2872.0	11.7	10.9	15°	6607	6623	6648	6653	6668	1865
30°-40°	3542.5	14.4	13.4	25°	6179	6205	6222	6252	6278	2848
40°-50°	3821.1	15.5	14.5	35°	5558	5577	5637	5745	5792	3478
50°-60°	3678.4	14.9	13.9	45°	4773	4783	4929	5111	5187	3684
60°-70°	3080.6	12.5	11.7	55°	3866	3864	4100	4345	4434	3455
70°-80°	1953.7	7.9	7.4	65°	2843	2818	3159	3399	3437	2808
80°-90°	591.5	2.4	2.2	75°	1672	1718	1932	1933	1941	1753
90°-100°	59.1	0.2	0.2	85°	348	495	548	554	548	427
100°-110°	131.5	0.5	0.5	90°	4	19	37	47	50	20
110°-120°	210.9	0.9	0.8	95°	43	53	54	43	25	55
120°-130°	310.3	1.3	1.2	105°	218	84	113	129	130	234
130°-140°	423.4	1.7	1.6	115°	433	233	144	164	170	430
140°-150°	490.7	2.0	1.9	125°	649	454	280	214	204	580
150°-160°	467.3	1.9	1.8	135°	847	696	500	391	360	655
160°-170°	340.6	1.4	1.3	145°	1026	931	753	643	608	642
170°-180°	124.6	0.5	0.5	155°	1171	1130	1005	910	880	539
0°-30°	5396.8	21.9	20.4	165°	1272	1262	1217	1166	1149	359
0°-40°	8939.3	36.3	33.9	175°	1319	1319	1317	1314	1316	125
0°-60°	16438.8	66.8	62.3	180°	1324	1324	1324	1324	1324	
0°-90°	22064.5	89.6	83.6							
90°-120°	401.5	1.6	1.5							
90°-150°	1625.9	6.6	6.2							
90°-180°	2559.0	10.4	9.7							
0°-180°	24623.1	100.0	93.3							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6850	6850	6850	6850	6850
2.5°	6834	6839	6849	6853	6868
5°	6814	6821	6836	6839	6863
7.5°	6785	6793	6809	6815	6831
10°	6739	6748	6770	6776	6796
12.5°	6678	6693	6716	6726	6743
15°	6607	6623	6648	6653	6668
17.5°	6518	6538	6562	6565	6583
20°	6418	6442	6461	6469	6487
22.5°	6302	6326	6347	6363	6384
25°	6179	6205	6222	6252	6278
27.5°	6041	6066	6088	6134	6166
30°	5891	5917	5945	6009	6049
32.5°	5731	5753	5793	5880	5924
35°	5558	5577	5637	5745	5792
37.5°	5376	5393	5473	5597	5649
40°	5183	5198	5301	5442	5498
42.5°	4982	4992	5122	5274	5343
45°	4773	4783	4929	5111	5187
47.5°	4559	4563	4731	4938	5014
50°	4335	4339	4526	4752	4827
52.5°	4104	4105	4316	4553	4636
55°	3866	3864	4100	4345	4434
57.5°	3620	3611	3874	4135	4225
60°	3370	3356	3638	3911	3997
62.5°	3108	3087	3399	3669	3732
65°	2843	2818	3159	3399	3437
67.5°	2566	2547	2908	3075	3068
70°	2283	2268	2630	2693	2685
72.5°	1982	1987	2309	2308	2301
75°	1672	1718	1932	1933	1941
77.5°	1345	1455	1558	1582	1598
80°	1012	1161	1216	1257	1267
82.5°	672	811	898	904	892
85°	348	495	548	554	548
87.5°	93	206	220	223	220
90°	4	19	37	47	50
92.5°	43	56	56	36	19
95°	43	53	54	43	25
97.5°	77	61	75	67	49
100°	124	67	86	89	86
102.5°	171	73	103	101	98
105°	218	84	113	129	130
107.5°	272	110	121	139	143
110°	326	145	128	149	156



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	381	186	134	158	165
115°	433	233	144	164	170
117.5°	489	284	164	168	176
120°	543	340	195	175	180
122.5°	596	397	235	189	188
125°	649	454	280	214	204
127.5°	700	515	330	249	230
130°	751	576	383	290	266
132.5°	802	637	441	340	311
135°	847	696	500	391	360
137.5°	896	756	563	448	415
140°	941	816	626	510	475
142.5°	986	875	690	578	541
145°	1026	931	753	643	608
147.5°	1066	985	817	710	675
150°	1104	1038	881	778	744
152.5°	1138	1085	942	843	811
155°	1171	1130	1005	910	880
157.5°	1201	1170	1064	976	950
160°	1228	1206	1121	1043	1018
162.5°	1252	1236	1173	1106	1086
165°	1272	1262	1217	1166	1149
167.5°	1290	1284	1255	1219	1208
170°	1303	1300	1284	1263	1257
172.5°	1313	1313	1306	1296	1293
175°	1319	1319	1317	1314	1316
177.5°	1323	1323	1324	1323	1325
180°	1324	1324	1324	1324	1324

(END OF REPORT)