

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: P30220

Luminaire Tested: **HBL-1054T5-N-UNV-EBT3-UPL-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P30220  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBL-1054T5-N-UNV-EBT3-UPL-U  
Description: OPEN HIGH BAY LUMINAIRE WITH A SPECULAR, NARROW  
DISTRIBUTION WITH UPLIGHT  
Light Source: TEN 54 WATT T5 LINEAR FLUORESCENT LAMPS - 4400 LUMENS EA  
Ballast/Driver: -

**Summary**

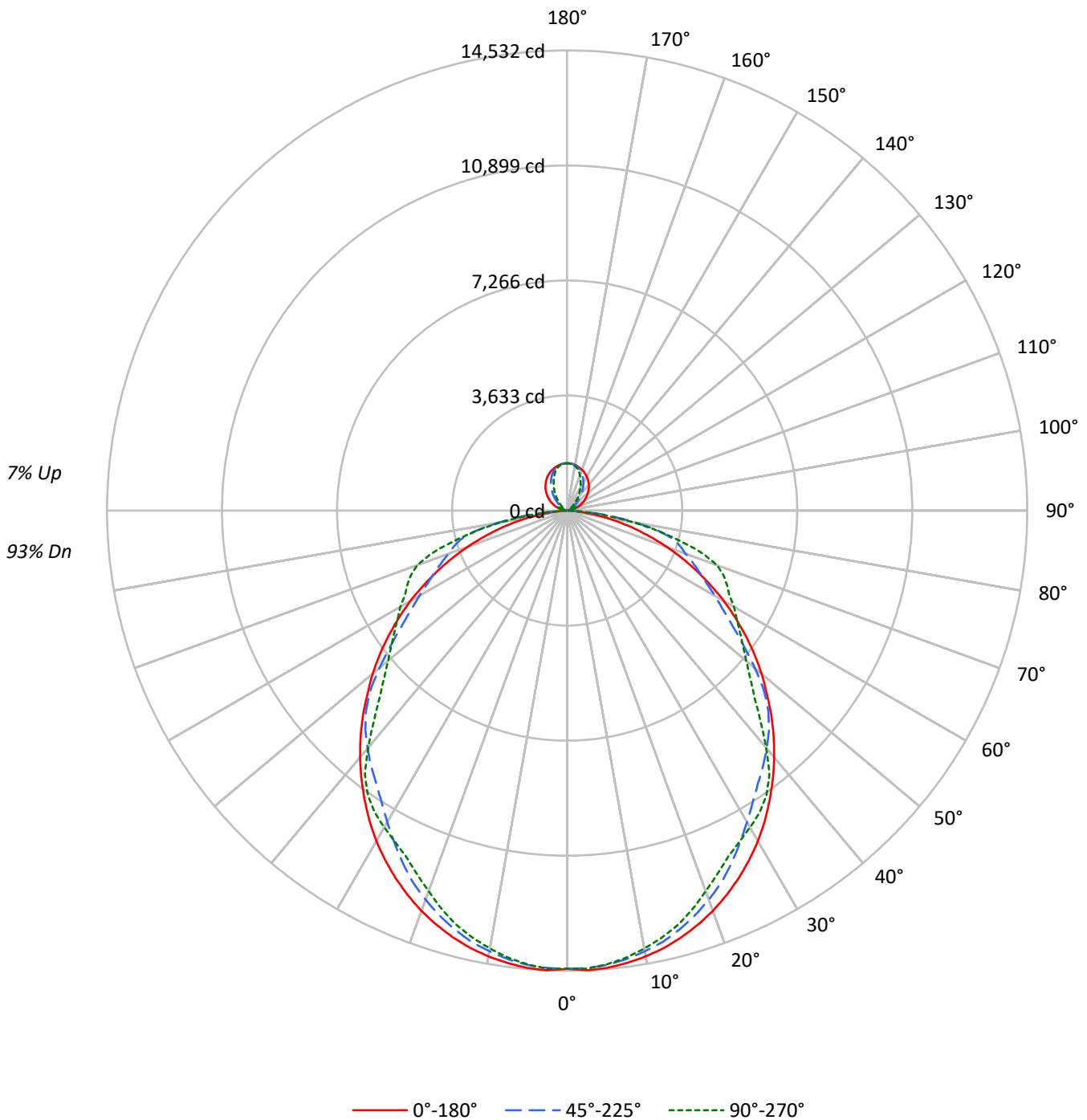
Lumens per Lamp: 4400 (10 lamps)  
Luminaire Lumens: 42110.1 lumens  
Efficiency: 95.7%  
Efficacy: 69.6 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.2 / 1.32  
Luminous Opening: Rectangular (W 2.1' x L: 4.04' x H: 0')  
CIE Type: Direct

Input Watts (W): 605  
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	112	112	112	112	109	109	109	109	103	103	103	97	97	97	92	92	92	89
1	102	98	93	90	99	95	91	88	90	87	84	85	82	80	80	78	76	74
2	93	85	78	73	90	83	77	71	78	73	69	74	70	66	70	67	64	61
3	85	75	67	60	82	73	65	59	69	63	58	65	60	56	62	58	54	52
4	78	66	58	51	75	64	57	50	61	54	49	58	52	48	55	50	46	44
5	71	59	50	44	69	58	50	44	55	48	42	52	46	41	50	45	40	38
6	66	53	45	39	64	52	44	38	50	42	37	47	41	36	45	40	36	33
7	61	48	40	34	59	47	39	34	45	38	33	43	37	32	41	36	32	30
8	57	44	36	30	55	43	35	30	41	34	30	40	33	29	38	33	28	27
9	53	40	33	27	51	40	32	27	38	31	27	37	30	26	35	30	26	24
10	50	37	30	25	48	37	29	25	35	29	24	34	28	24	33	27	23	22

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

	0°	45°	90°
0°	18338	18338	18338
5°	18440	18323	18303
10°	18399	18185	18072
15°	18303	17972	17764
20°	18144	17635	17251
25°	17911	17173	16846
30°	17634	16624	16905
35°	17250	16260	16967
40°	16830	16223	16170
45°	16340	16107	15012
50°	15804	15248	14551
55°	15193	14134	14704
60°	14486	13634	15418
65°	13545	13803	16709
70°	12343	14744	18649
75°	10763	16972	18049
80°	8473	16078	15377
85°	4828	10862	9074



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	1367.5	3.2	3.1	0°	14470	14470	14470	14470	14470	
10°-20°	3860.6	9.2	8.8	5°	14495	14466	14403	14361	14387	###
20°-30°	5686.2	13.5	12.9	15°	13950	13860	13698	13538	13539	3934
30°-40°	6752.6	16.0	15.3	25°	12809	12579	12281	12025	12047	5900
40°-50°	6735.9	16.0	15.3	35°	11150	10822	10510	10852	10967	6973
50°-60°	5901.8	14.0	13.4	45°	9117	8664	8987	8502	8376	7025
60°-70°	4818.0	11.4	10.9	55°	6876	6628	6397	6496	6655	6146
70°-80°	3245.2	7.7	7.4	65°	4517	4500	4603	5258	5572	4469
80°-90°	866.5	2.1	2.0	75°	2198	2379	3466	3697	3686	2335
90°-100°	61.9	0.1	0.1	85°	332	800	747	668	624	452
100°-110°	186.8	0.4	0.4	90°	9	20	50	68	73	17
110°-120°	217.2	0.5	0.5	95°	62	51	44	48	50	69
120°-130°	321.3	0.8	0.7	105°	258	74	215	245	224	273
130°-140°	469.7	1.1	1.1	115°	503	256	102	107	157	501
140°-150°	556.8	1.3	1.3	125°	738	527	282	172	147	661
150°-160°	534.4	1.3	1.2	135°	964	819	556	400	365	742
160°-170°	387.2	0.9	0.9	145°	1152	1077	864	710	663	722
170°-180°	140.5	0.3	0.3	155°	1308	1276	1170	1049	1013	603
0°-30°	10914.4	25.9	24.8	165°	1418	1412	1386	1346	1334	401
0°-40°	17667.0	42.0	40.2	175°	1490	1487	1485	1479	1483	141
0°-60°	30304.7	72.0	68.9	180°	1493	1493	1493	1493	1493	
0°-90°	39234.4	93.2	89.2							
90°-120°	465.9	1.1	1.1							
90°-150°	1813.7	4.3	4.1							
90°-180°	2876.0	6.8	6.5							
0°-180°	42110.1	100.0	95.7							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	14470	14470	14470	14470	14470
2.5°	14532	14500	14460	14440	14477
5°	14495	14466	14403	14361	14387
7.5°	14412	14387	14290	14218	14243
10°	14297	14276	14131	14028	14043
12.5°	14144	14097	13952	13797	13811
15°	13950	13860	13698	13538	13539
17.5°	13716	13589	13406	13212	13190
20°	13453	13287	13076	12832	12791
22.5°	13147	12949	12715	12423	12410
25°	12809	12579	12281	12025	12047
27.5°	12442	12175	11817	11669	11783
30°	12050	11751	11360	11404	11552
32.5°	11615	11300	10909	11135	11307
35°	11150	10822	10510	10852	10967
37.5°	10671	10315	10167	10480	10491
40°	10173	9783	9806	9956	9774
42.5°	9649	9226	9429	9223	9036
45°	9117	8664	8987	8502	8376
47.5°	8542	8115	8440	7867	7838
50°	8016	7583	7734	7334	7380
52.5°	7451	7092	7030	6885	6996
55°	6876	6628	6397	6496	6655
57.5°	6297	6151	5841	6142	6345
60°	5715	5674	5379	5838	6083
62.5°	5112	5133	4966	5569	5772
65°	4517	4500	4603	5258	5572
67.5°	3918	3840	4291	5054	5342
70°	3331	3257	3979	4788	5033
72.5°	2752	2769	3745	4406	4470
75°	2198	2379	3466	3697	3686
77.5°	1663	2050	2952	2924	2911
80°	1161	1760	2203	2151	2107
82.5°	711	1420	1474	1386	1339
85°	332	800	747	668	624
87.5°	78	231	206	207	206
90°	9	20	50	68	73
92.5°	28	28	36	41	42
95°	62	51	44	48	50
97.5°	106	88	64	58	61
100°	144	65	122	78	75
102.5°	196	55	197	141	119
105°	258	74	215	245	224
107.5°	315	105	130	315	312
110°	386	154	88	303	355



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	447	203	88	189	278
115°	503	256	102	107	157
117.5°	569	322	136	96	107
120°	623	384	177	108	103
122.5°	681	454	226	133	120
125°	738	527	282	172	147
127.5°	798	598	339	222	194
130°	853	675	409	279	247
132.5°	907	742	477	332	298
135°	964	819	556	400	365
137.5°	1014	889	634	470	429
140°	1063	955	710	550	504
142.5°	1111	1019	792	631	584
145°	1152	1077	864	710	663
147.5°	1199	1136	949	797	750
150°	1238	1188	1026	880	836
152.5°	1273	1233	1099	967	921
155°	1308	1276	1170	1049	1013
157.5°	1342	1313	1235	1135	1103
160°	1370	1349	1295	1213	1184
162.5°	1396	1380	1347	1285	1266
165°	1418	1412	1386	1346	1334
167.5°	1442	1438	1420	1394	1388
170°	1458	1457	1448	1431	1429
172.5°	1478	1477	1469	1462	1464
175°	1490	1487	1485	1479	1483
177.5°	1495	1494	1491	1487	1490
180°	1493	1493	1493	1493	1493

(END OF REPORT)