

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: ITL51787

Luminaire Tested: **8TP410-254T5-TBW-UPL**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: ITL51787  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 8TP410-254T5-TBW-UPL  
Description: FABRICATED METAL HOUSING WITH WHITE PAINTED GENERAL INTERIOR FINISH AND MOLDED WHITE PLASTIC END CAPS, TWO FORMED METAL REFLECTORS WITH PREMIUM SPECULAR FINISH, TWO FABRICATED WHITE PAINTED METAL 32-VANE LOUVERS FORMING 65-CELLS. EACH SIDE OF HOUSING HAS 16 RECTANGULAR UPLIGHT APERTURES MEASURING APPROXIMATELY 5.1875" X 1" EACH.  
Light Source: FOUR 54-WATT T-5 SYLVANIA FP54/835/HO LINEAR FLUORESCENTS.  
Ballast/Driver: TWO ENERGY SAVINGS ES-2-T5-54-UNV-K

**Summary**

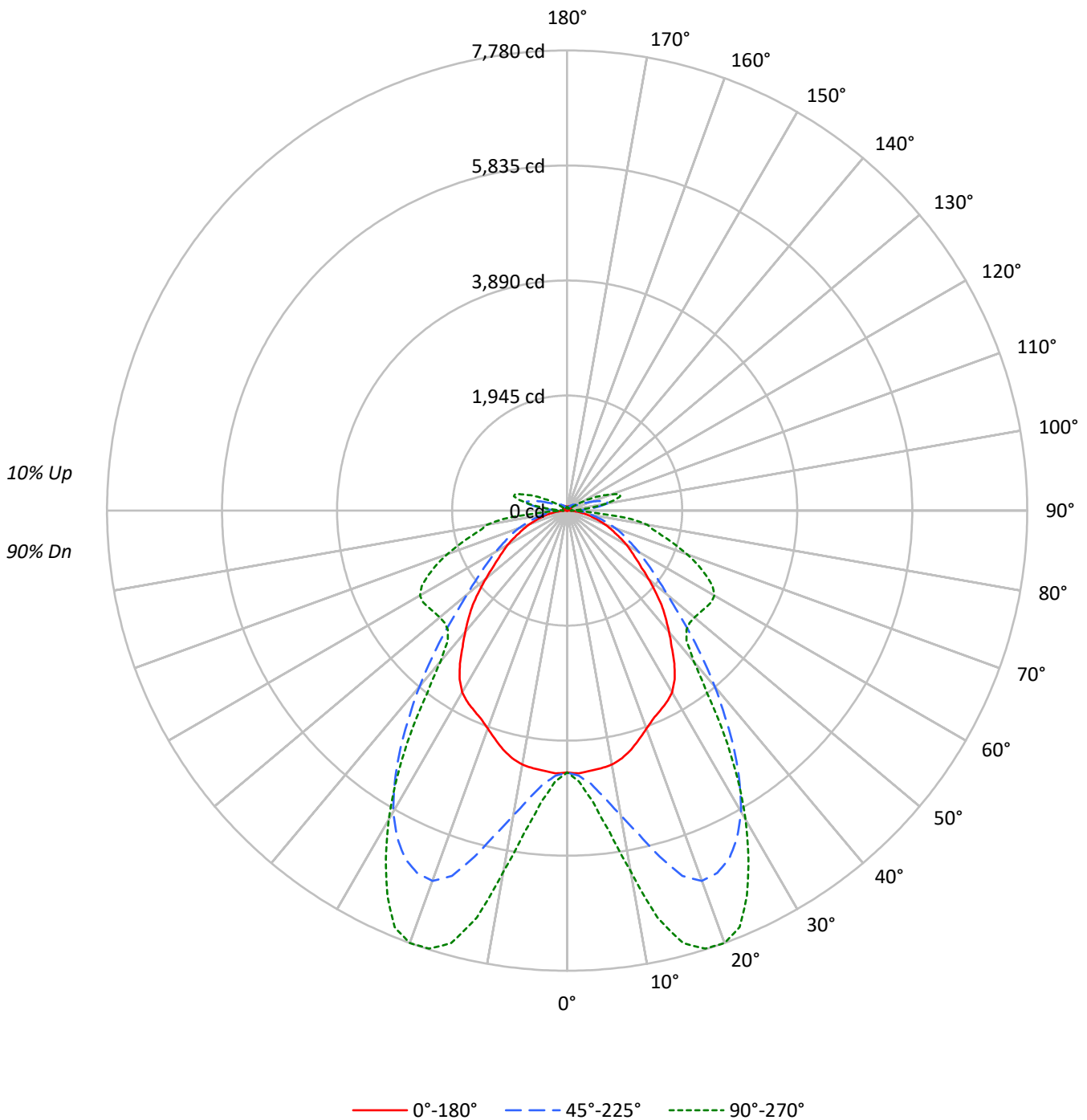
Lumens per Lamp: 5000 (4 lamps)  
Luminaire Lumens: 15749.6 lumens  
Efficiency: 78.7%  
Efficacy: 60.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.47 / 1.38  
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 7.99' x H: 0.24')  
CIE Type: Direct

Input Watts (W): 262  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0													
RCR																																					
0	92	92	92	92	89	89	89	89	83	83	83	78	78	78	73	73	73	73	73	73	73	73	71														
1	84	81	77	75	81	78	75	73	73	71	69	69	67	66	65	64	62	65	64	62	65	64	60														
2	77	71	66	62	74	69	64	60	65	61	58	61	58	55	58	55	53	58	55	53	58	55	51														
3	71	63	57	52	68	61	56	51	58	53	49	55	51	48	52	49	46	52	49	46	52	49	44														
4	65	56	50	45	63	55	49	44	52	47	43	49	45	41	47	43	40	47	43	40	47	43	38														
5	60	51	44	39	58	49	43	39	47	42	37	45	40	36	42	38	35	42	38	35	42	38	34														
6	56	46	39	34	54	45	39	34	43	37	33	41	36	32	39	35	31	39	35	31	39	35	30														
7	52	42	35	31	50	41	35	30	39	34	30	37	32	29	36	31	28	36	31	28	36	31	27														
8	48	38	32	28	47	37	31	27	36	30	27	34	30	26	33	29	25	33	29	25	33	29	24														
9	45	35	29	25	44	34	29	25	33	28	24	32	27	24	30	26	23	30	26	23	30	26	22														
10	43	33	27	23	41	32	26	22	31	26	22	29	25	22	28	24	21	28	24	21	28	24	20														

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

	0°	45°	90°
0°	7159	7159	7159
5°	7151	7381	7802
10°	7120	8264	9675
15°	6942	9561	11766
20°	6675	10598	12117
25°	6559	10480	11311
30°	6513	9722	9661
35°	6111	8393	7612
40°	5515	6896	5655
45°	5008	5493	5065
50°	4361	4375	5262
55°	3844	3718	5713
60°	3578	3252	6201
65°	3203	2856	6136
70°	2948	2532	5691
75°	2624	2111	5065
80°	2228	1708	4856
85°	1685	1456	2177



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	461.8	2.9	2.3	0°	4428	4428	4428	4428	4428	
10°-20°	1673.4	10.6	8.4	5°	4418	4461	4637	4766	4928	420
20°-30°	2720.4	17.3	13.6	15°	4181	4702	6056	7162	7571	1174
30°-40°	2816.5	17.9	14.1	25°	3728	4809	6490	7115	7191	1722
40°-50°	2192.3	13.9	11.0	35°	3161	4518	4921	4842	4633	1961
50°-60°	1765.3	11.2	8.8	45°	2256	2942	2942	2751	2852	1729
60°-70°	1417.0	9.0	7.1	55°	1422	1552	1742	2371	2859	1290
70°-80°	854.0	5.4	4.3	65°	891	948	1106	1954	2593	894
80°-90°	352.0	2.2	1.8	75°	467	514	621	973	1681	497
90°-100°	336.2	2.1	1.7	85°	122	176	280	449	503	134
100°-110°	547.3	3.5	2.7	90°	0	67	168	231	61	7
110°-120°	306.8	1.9	1.5	95°	12	292	396	424	260	12
120°-130°	125.9	0.8	0.6	105°	38	149	617	931	931	40
130°-140°	79.8	0.5	0.4	115°	68	151	265	490	550	66
140°-150°	52.3	0.3	0.3	125°	79	151	166	116	93	71
150°-160°	29.8	0.2	0.1	135°	85	120	136	92	45	66
160°-170°	13.8	0.1	0.1	145°	88	91	98	75	45	55
170°-180°	5.1	0.0	0.0	155°	83	63	68	57	50	39
0°-30°	4855.6	30.8	24.3	165°	75	46	42	34	45	21
0°-40°	7672.0	48.7	38.4	175°	66	64	64	57	50	6
0°-60°	11629.5	73.8	58.1	180°	59	59	59	59	59	
0°-90°	14252.5	90.5	71.3							
90°-120°	1190.3	7.6	6.0							
90°-150°	1448.3	9.2	7.2							
90°-180°	1497.0	9.5	7.5							
0°-180°	15749.6	100.0	78.7							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4428	4428	4428	4428	4428
2.5°	4447	4432	4486	4522	4583
5°	4418	4461	4637	4766	4928
7.5°	4396	4518	4903	5240	5474
10°	4360	4583	5233	5801	6192
12.5°	4289	4648	5607	6551	7047
15°	4181	4702	6056	7162	7571
17.5°	4051	4737	6476	7428	7765
20°	3922	4763	6663	7478	7780
22.5°	3807	4781	6630	7388	7622
25°	3728	4809	6490	7115	7191
27.5°	3649	4838	6224	6645	6638
30°	3549	4838	5883	6084	6034
32.5°	3383	4745	5424	5488	5359
35°	3161	4518	4921	4842	4633
37.5°	2902	4210	4378	4195	3879
40°	2679	3822	3883	3570	3326
42.5°	2464	3380	3391	3067	2988
45°	2256	2942	2942	2751	2852
47.5°	2019	2550	2529	2600	2809
50°	1796	2148	2205	2511	2809
52.5°	1588	1817	1954	2442	2830
55°	1422	1552	1742	2371	2859
57.5°	1286	1365	1555	2313	2888
60°	1164	1221	1397	2238	2873
62.5°	1020	1081	1236	2137	2773
65°	891	948	1106	1954	2593
67.5°	783	830	988	1731	2385
70°	675	708	866	1473	2155
72.5°	567	614	736	1232	1911
75°	467	514	621	973	1681
77.5°	374	413	510	758	1487
80°	280	327	417	639	1372
82.5°	208	255	348	593	1092
85°	122	176	280	449	503
87.5°	43	111	212	320	180
90°	0	67	168	231	61
92.5°	7	179	240	276	98
95°	12	292	396	424	260
97.5°	17	290	559	598	458
100°	24	241	681	760	654
102.5°	31	190	701	890	824
105°	38	149	617	931	931
107.5°	44	143	528	845	923
110°	52	146	437	736	798



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	62	149	345	611	675
115°	68	151	265	490	550
117.5°	72	151	204	369	417
120°	76	153	184	259	297
122.5°	78	154	175	163	187
125°	79	151	166	116	93
127.5°	82	143	161	105	47
130°	82	133	154	99	42
132.5°	84	125	146	94	42
135°	85	120	136	92	45
137.5°	88	114	124	87	47
140°	88	110	115	82	47
142.5°	88	102	106	78	46
145°	88	91	98	75	45
147.5°	87	80	88	73	47
150°	87	75	81	70	51
152.5°	86	68	75	64	51
155°	83	63	68	57	50
157.5°	82	56	67	50	48
160°	80	51	50	47	48
162.5°	76	47	45	45	49
165°	75	46	42	34	45
167.5°	72	64	40	33	38
170°	70	70	38	33	40
172.5°	68	67	45	33	40
175°	66	64	64	57	50
177.5°	63	61	60	52	57
180°	59	59	59	59	59

(END OF REPORT)