

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: 236P116

Luminaire Tested: **I5-354T5-G-TBW-UNV-EBT2-UPL**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: 236P116  
Test Lab: METALUX LABORATORIES  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: I5-354T5-G-TBW-UNV-EBT2-UPL  
Description: I5 SERIES LUMINAIRE WITH HIGH REFLECTANCE WHITE WIDE  
DISTRIBUTION REFLECTOR, UPLIGHT, AND THIN WHITE LOUVER  
Light Source: THREE 54-WATT T5HO - 4400 LUMENS EA  
Ballast/Driver: TWO UNIVERSAL B254PUNV-D

**Summary**

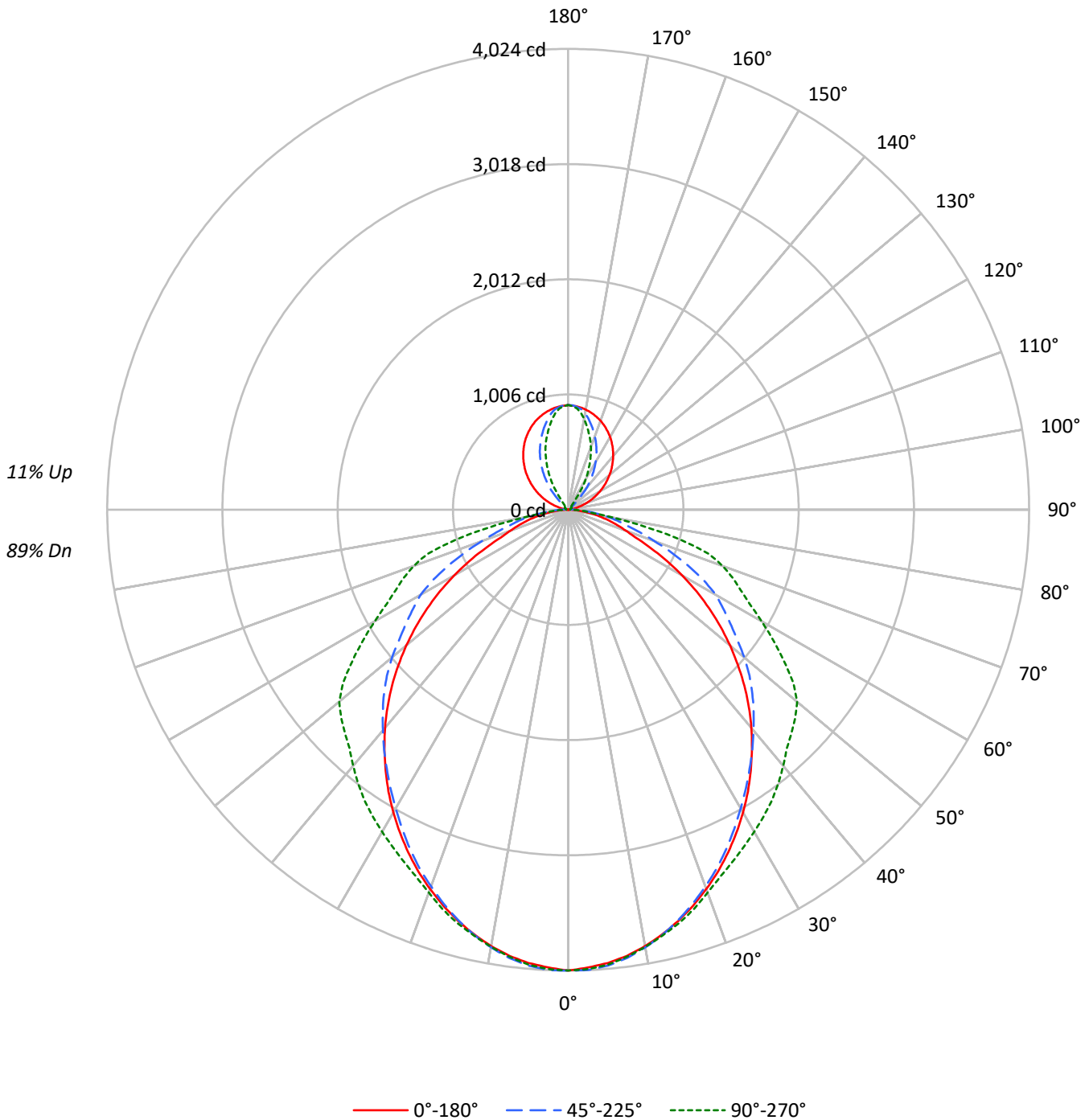
Lumens per Lamp: 4400 (3 lamps)  
Luminaire Lumens: 11348.3 lumens  
Efficiency: 86.0%  
Efficacy: 63.4 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.21 / 1.27  
Luminous Opening: Rectangular w/ Sides (W: 0.85' x L: 3.83' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 179  
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	50	30	10	0	
RCR																						
0	100	100	100	100	97	97	97	97	90	90	90	85	85	85	79	79	79	77				
1	92	88	84	81	88	85	82	79	80	77	75	75	73	71	70	69	67	65				
2	83	77	71	66	80	74	69	65	70	65	62	66	62	59	62	59	56	54				
3	76	67	61	55	73	65	59	54	62	56	52	58	54	50	55	51	48	46				
4	70	60	53	47	67	58	51	46	55	49	45	52	47	43	49	45	41	39				
5	64	54	46	40	62	52	45	40	49	43	39	47	41	37	44	40	36	34				
6	59	48	41	35	57	47	40	35	44	38	34	42	37	33	40	35	32	30				
7	55	44	36	31	53	43	36	31	40	34	30	38	33	29	37	32	28	27				
8	51	40	33	28	49	39	32	28	37	31	27	35	30	26	34	29	25	24				
9	48	37	30	25	46	36	29	25	34	28	24	33	27	24	31	26	23	21				
10	45	34	27	23	43	33	27	23	32	26	22	30	25	22	29	24	21	19				

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

	0°	45°	90°
0°	13305	13305	13305
5°	13129	13042	12982
10°	12877	12601	12520
15°	12553	12075	12069
20°	12183	11509	11577
25°	11774	10937	11207
30°	11328	10342	10983
35°	10837	9817	10816
40°	10305	9345	10613
45°	9689	8912	10533
50°	8961	8392	10597
55°	8080	7789	10041
60°	7003	7373	9291
65°	5636	6379	8779
70°	4543	5034	8576
75°	3978	3905	7090
80°	3314	3071	3308
85°	2300	1881	1430



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	377.1	3.3	2.9	0°	4024	4024	4024	4024	4024	
10°-20°	1047.1	9.2	7.9	5°	3973	3976	3996	3999	3988	376
20°-30°	1523.3	13.4	11.5	15°	3716	3709	3710	3731	3737	1046
30°-40°	1782.2	15.7	13.5	25°	3302	3268	3268	3340	3392	1520
40°-50°	1812.6	16.0	13.7	35°	2778	2718	2761	2979	3099	1737
50°-60°	1606.2	14.2	12.2	45°	2175	2094	2274	2552	2756	1675
60°-70°	1158.7	10.2	8.8	55°	1501	1455	1724	2117	2298	1340
70°-80°	654.4	5.8	5.0	65°	797	851	1153	1418	1660	803
80°-90°	175.6	1.5	1.3	75°	369	417	526	902	1018	393
90°-100°	35.7	0.3	0.3	85°	95	121	159	191	134	104
100°-110°	33.2	0.3	0.3	90°	1	32	71	104	23	6
110°-120°	61.2	0.5	0.5	95°	15	16	33	51	17	20
120°-130°	107.8	0.9	0.8	105°	100	21	20	21	20	109
130°-140°	160.6	1.4	1.2	115°	243	47	31	30	28	240
140°-150°	237.6	2.1	1.8	125°	396	206	33	29	34	354
150°-160°	273.5	2.4	2.1	135°	542	383	108	33	25	418
160°-170°	217.3	1.9	1.6	145°	674	551	365	201	115	421
170°-180°	84.3	0.7	0.6	155°	782	711	584	484	443	360
0°-30°	2947.5	26.0	22.3	165°	860	841	771	716	694	243
0°-40°	4729.7	41.7	35.8	175°	905	904	900	895	887	86
0°-60°	8148.5	71.8	61.7	180°	914	914	914	914	914	
0°-90°	10137.1	89.3	76.8							
90°-120°	130.2	1.1	1.0							
90°-150°	636.1	5.6	4.8							
90°-180°	1211.0	10.7	9.2							
0°-180°	11348.3	100.0	86.0							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4024	4024	4024	4024	4024
2.5°	4001	4004	4023	4026	4015
5°	3973	3976	3996	3999	3988
7.5°	3929	3933	3947	3951	3937
10°	3869	3872	3881	3889	3876
12.5°	3798	3796	3802	3814	3808
15°	3716	3709	3710	3731	3737
17.5°	3625	3612	3609	3640	3654
20°	3525	3506	3501	3541	3558
22.5°	3419	3391	3389	3437	3468
25°	3302	3268	3268	3340	3392
27.5°	3180	3137	3140	3247	3319
30°	3052	3002	3011	3158	3248
32.5°	2919	2864	2886	3069	3175
35°	2778	2718	2761	2979	3099
37.5°	2635	2568	2639	2882	3012
40°	2487	2415	2516	2775	2920
42.5°	2334	2255	2396	2665	2825
45°	2175	2094	2274	2552	2756
47.5°	2010	1931	2146	2460	2688
50°	1845	1771	2007	2369	2609
52.5°	1674	1611	1857	2269	2474
55°	1501	1455	1724	2117	2298
57.5°	1327	1301	1603	1940	2122
60°	1150	1151	1488	1763	1949
62.5°	975	1002	1330	1583	1787
65°	797	851	1153	1418	1660
67.5°	637	695	974	1293	1553
70°	534	564	797	1175	1432
72.5°	450	488	653	1046	1292
75°	369	417	526	902	1018
77.5°	293	330	438	652	691
80°	223	246	338	432	394
82.5°	157	180	241	251	196
85°	95	121	159	191	134
87.5°	37	66	109	143	75
90°	1	32	71	104	23
92.5°	5	18	47	73	17
95°	15	16	33	51	17
97.5°	31	15	26	36	16
100°	50	16	22	26	17
102.5°	73	18	20	22	18
105°	100	21	20	21	20
107.5°	132	23	22	21	20
110°	167	28	26	22	21



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	205	34	28	25	23
115°	243	47	31	30	28
117.5°	281	71	30	32	31
120°	320	106	29	35	33
122.5°	358	166	30	35	37
125°	396	206	33	29	34
127.5°	433	248	37	26	25
130°	470	293	49	26	22
132.5°	508	339	76	29	23
135°	542	383	108	33	25
137.5°	577	426	182	46	30
140°	611	469	256	75	44
142.5°	643	510	309	111	75
145°	674	551	365	201	115
147.5°	704	592	422	288	223
150°	732	632	480	350	305
152.5°	758	672	534	417	373
155°	782	711	584	484	443
157.5°	805	748	633	549	514
160°	826	783	680	608	579
162.5°	844	814	726	663	639
165°	860	841	771	716	694
167.5°	875	863	815	769	748
170°	887	880	854	820	803
172.5°	897	893	883	867	852
175°	905	904	900	895	887
177.5°	909	911	912	910	904
180°	914	914	914	914	914

(END OF REPORT)