

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: P30648

Luminaire Tested: **I5-447T5-UNV-EBT1-UPL**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P30648
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: I5-447T5-UNV-EBT1-UPL
Description: METALUX F-BAY I5 SERIES HIGH BAY 4' OPEN LINEAR FLUORESCENT LUMINAIRE WITH A SPECULAR ALUMINUM NARROW DISTRIBUTION REFLECTOR & UPLIGHT
Light Source: (4) BIPIN T5 LINEAR FLUORESCENT LAMP 4100K - 4285 LUMENS EA GE F54T5-47W 841-ECO 47W
Ballast/Driver: GE ELECTRONIC BALLAST GE454MVPS90-E

Summary

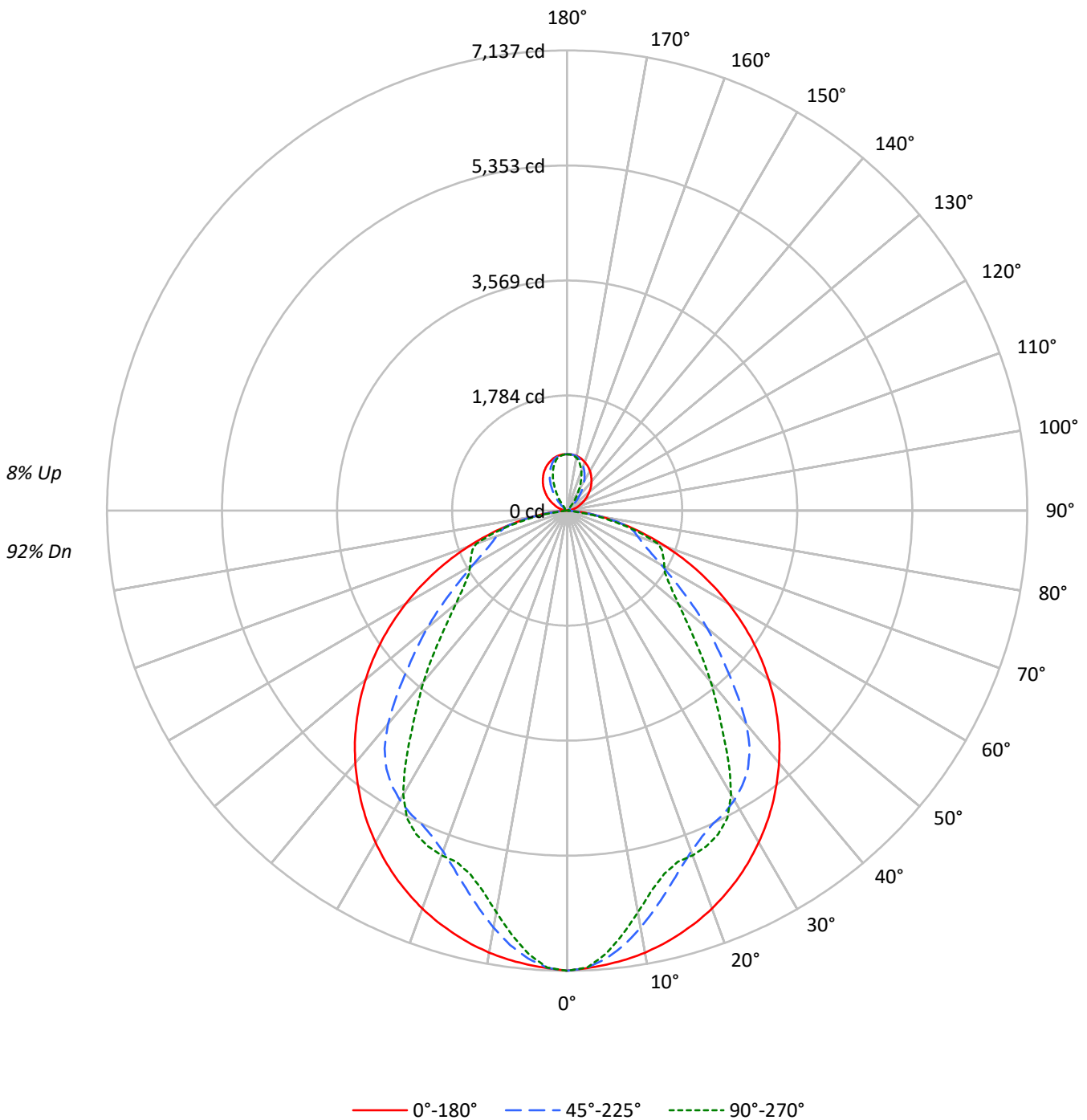
Lumens per Lamp: 4285 (4 lamps)
Luminaire Lumens: 16950.5 lumens
Efficiency: 98.9%
Efficacy: 82.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.09 / 1.22
Luminous Opening: Rectangular (W 0.92' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 206
Input Voltage (V): NR
Input Current (A_{in}): 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	116	116	116	116	112	112	112	112	106	106	106	100	100	100	94	94	94	91
1	107	102	98	95	103	99	96	93	94	91	88	89	86	84	84	82	80	78
2	97	90	84	78	94	87	82	77	83	78	74	78	74	71	74	71	68	66
3	89	79	72	66	86	77	70	65	73	67	63	70	65	61	66	62	59	56
4	82	71	63	56	79	69	61	56	66	59	54	62	57	52	60	55	51	49
5	76	64	55	49	73	62	54	48	59	52	47	56	51	46	54	49	45	43
6	70	58	49	43	68	56	48	43	54	47	42	51	45	41	49	44	40	38
7	65	52	44	38	63	51	43	38	49	42	37	47	41	36	45	40	36	34
8	61	48	40	34	59	47	39	34	45	38	33	43	37	33	42	36	32	30
9	57	44	36	31	55	43	36	31	42	35	30	40	34	30	38	33	29	27
10	53	41	33	28	52	40	33	28	39	32	28	37	31	27	36	30	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21862	21862	21862
5°	21734	21439	21214
10°	21655	20427	19671
15°	21540	19234	18489
20°	21417	18340	18548
25°	21239	18103	18721
30°	21028	18344	17983
35°	20773	18279	15758
40°	20442	17291	13852
45°	20010	15240	11996
50°	19453	13510	10723
55°	18713	11653	10233
60°	17724	10323	10660
65°	16403	9792	11887
70°	14590	10434	13417
75°	12226	11847	11208
80°	9103	9173	7409
85°	4956	1652	176



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	654.1	3.9	3.8	0°	7137	7137	7137	7137	7137	
10°-20°	1747.6	10.3	10.2	5°	7068	7042	6972	6913	6899	671
20°-30°	2580.2	15.2	15.1	15°	6792	6503	6065	5858	5830	1917
30°-40°	2956.8	17.4	17.3	25°	6284	5640	5356	5507	5539	2896
40°-50°	2742.3	16.2	16.0	35°	5555	4726	4888	4459	4214	3473
50°-60°	2219.2	13.1	12.9	45°	4619	4023	3518	2951	2769	3560
60°-70°	1627.7	9.6	9.5	55°	3504	3069	2182	1941	1916	3128
70°-80°	955.6	5.6	5.6	65°	2263	1677	1351	1558	1640	2237
80°-90°	161.0	0.9	0.9	75°	1033	682	1001	993	947	1103
90°-100°	30.4	0.2	0.2	85°	141	173	47	12	5	197
100°-110°	47.8	0.3	0.3	90°	7	19	19	15	11	9
110°-120°	72.6	0.4	0.4	95°	34	27	31	29	27	33
120°-130°	117.5	0.7	0.7	105°	119	32	38	35	35	125
130°-140°	179.5	1.1	1.0	115°	232	54	43	44	44	233
140°-150°	261.8	1.5	1.5	125°	376	208	47	52	50	335
150°-160°	290.5	1.7	1.7	135°	521	400	173	55	56	400
160°-170°	223.5	1.3	1.3	145°	649	578	405	265	216	406
170°-180°	82.3	0.5	0.5	155°	757	731	636	547	505	349
0°-30°	4981.9	29.4	29.1	165°	836	829	807	769	755	235
0°-40°	7938.7	46.8	46.3	175°	873	871	872	866	863	83
0°-60°	12900.2	76.1	75.3	180°	872	872	872	872	872	
0°-90°	15644.4	92.3	91.3							
90°-120°	150.8	0.9	0.9							
90°-150°	709.7	4.2	4.1							
90°-180°	1306.0	7.7	7.6							
0°-180°	16950.5	100.0	98.9							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7137	7137	7137	7137	7137
2.5°	7103	7103	7098	7089	7094
5°	7068	7042	6972	6913	6899
7.5°	7023	6947	6796	6663	6624
10°	6962	6825	6567	6377	6324
12.5°	6885	6675	6317	6092	6039
15°	6792	6503	6065	5858	5830
17.5°	6688	6304	5826	5698	5711
20°	6570	6091	5626	5617	5690
22.5°	6433	5870	5470	5594	5637
25°	6284	5640	5356	5507	5539
27.5°	6121	5401	5289	5382	5378
30°	5945	5165	5186	5195	5084
32.5°	5755	4940	5058	4876	4671
35°	5555	4726	4888	4459	4214
37.5°	5338	4530	4651	4024	3814
40°	5112	4352	4324	3645	3464
42.5°	4873	4190	3926	3306	3103
45°	4619	4023	3518	2951	2769
47.5°	4357	3822	3162	2628	2484
50°	4082	3604	2835	2353	2250
52.5°	3799	3361	2497	2130	2063
55°	3504	3069	2182	1941	1916
57.5°	3202	2709	1910	1795	1800
60°	2893	2338	1685	1689	1740
62.5°	2579	1986	1501	1622	1691
65°	2263	1677	1351	1558	1640
67.5°	1942	1372	1244	1501	1588
70°	1629	1092	1165	1438	1498
72.5°	1322	863	1087	1271	1235
75°	1033	682	1001	993	947
77.5°	760	550	780	709	661
80°	516	456	520	471	420
82.5°	308	358	304	145	74
85°	141	173	47	12	5
87.5°	34	30	18	11	6
90°	7	19	19	15	11
92.5°	17	25	29	26	22
95°	34	27	31	29	27
97.5°	45	29	31	31	29
100°	65	31	32	31	30
102.5°	90	31	35	32	31
105°	119	32	38	35	35
107.5°	147	35	39	37	36
110°	175	34	42	39	38



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	205	37	45	44	42
115°	232	54	43	44	44
117.5°	267	87	45	47	47
120°	304	124	49	48	50
122.5°	339	165	49	48	49
125°	376	208	47	52	50
127.5°	411	254	49	55	53
130°	446	302	74	54	57
132.5°	484	350	120	52	57
135°	521	400	173	55	56
137.5°	554	446	228	85	58
140°	586	491	284	137	91
142.5°	618	534	344	199	149
145°	649	578	405	265	216
147.5°	680	621	469	335	286
150°	708	659	530	404	358
152.5°	733	696	586	474	430
155°	757	731	636	547	505
157.5°	780	760	684	612	581
160°	800	786	729	669	646
162.5°	818	807	769	721	702
165°	836	829	807	769	755
167.5°	849	844	833	808	799
170°	861	856	852	839	833
172.5°	867	865	865	855	851
175°	873	871	872	866	863
177.5°	875	874	876	871	869
180°	872	872	872	872	872

(END OF REPORT)