

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: 227P105

Luminaire Tested: **SM-228T5 (RP-2IN-SYM-4FT-REFL-B)**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 227P105
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SM-228T5 (RP-2IN-SYM-4FT-REFL-B)
Description: SM Series Commercial Micro-Striplight with a
perforated symmetrical reflector.
Light Source: Two - F28T5/835 - 2900 Lumens ea. - 28 Watts ea.
Ballast/Driver: Magnetek BT5-228/120 Electronic - L.O.B.F.= 97.5%

Summary

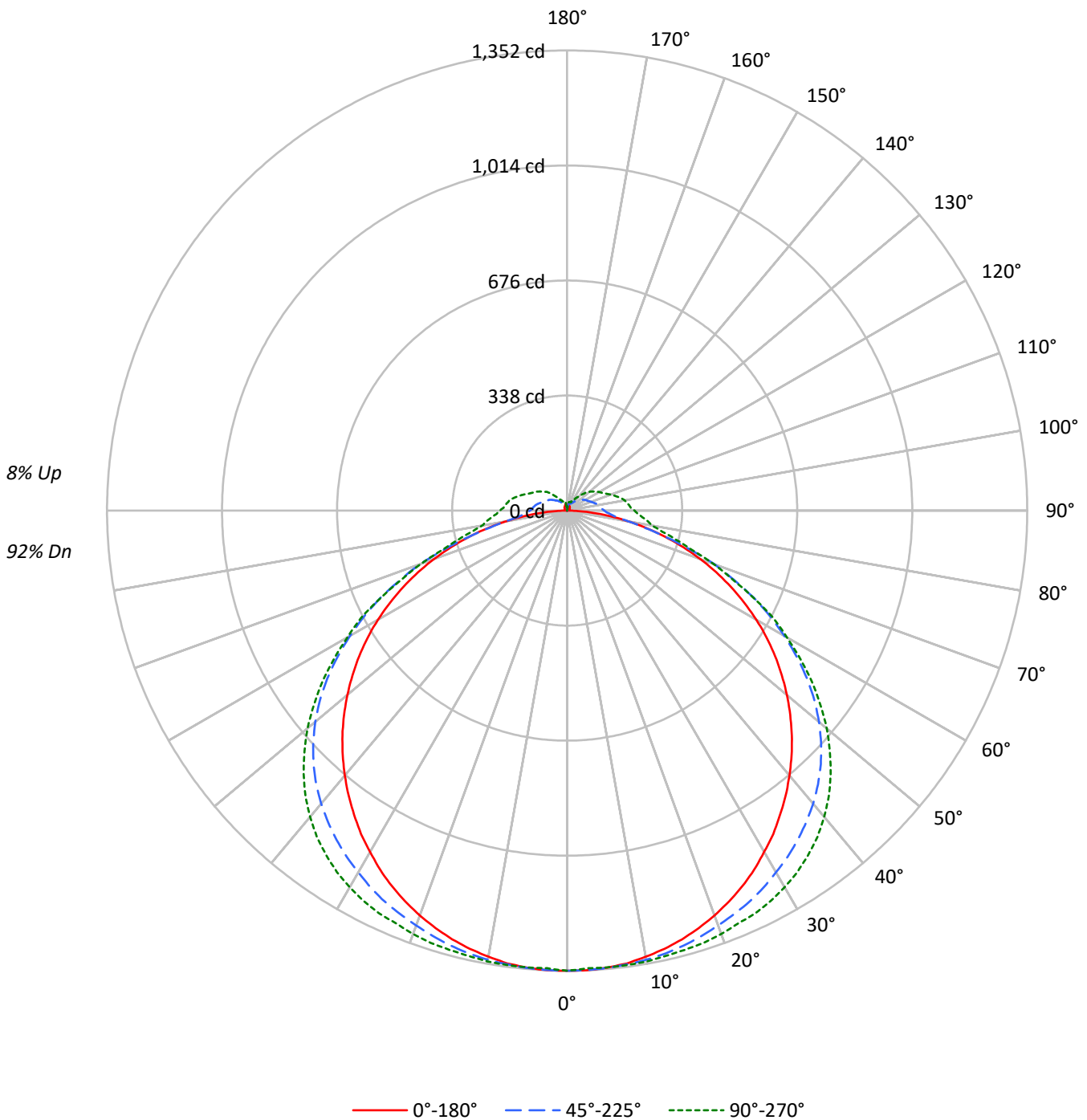
Lumens per Lamp: 2900 (2 lamps)
Luminaire Lumens: 4821.5 lumens
Efficiency: 83.1%
Efficacy: 74.2 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.41 / 1.49
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 3.76' x H: 0.1')
CIE Type: Direct

Input Watts (W): 65
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	97	97	97	97	94	94	94	94	89	89	89	84	84	84	79	79	79	77
1	88	84	80	77	85	81	78	75	77	74	71	72	70	68	68	67	65	63
2	80	73	67	62	77	71	65	61	67	62	58	63	59	56	59	56	54	51
3	73	64	57	51	70	62	55	50	58	53	48	55	50	47	52	48	45	43
4	66	56	48	43	64	54	47	42	52	46	41	49	44	40	46	42	38	36
5	61	50	42	37	58	48	41	36	46	40	35	44	38	34	41	37	33	31
6	56	45	37	32	54	44	36	31	41	35	30	39	34	30	37	33	29	27
7	52	40	33	28	50	39	32	27	37	31	27	36	30	26	34	29	26	24
8	48	37	30	25	46	36	29	24	34	28	24	33	27	23	31	26	23	21
9	45	34	27	22	43	33	26	22	31	25	21	30	25	21	29	24	20	19
10	42	31	24	20	41	30	24	20	29	23	19	28	23	19	27	22	18	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13346	13346	13346
5°	13327	13067	12957
10°	13279	12837	12709
15°	13232	12632	12499
20°	13172	12436	12358
25°	13104	12304	12255
30°	13000	12145	12149
35°	12907	12021	11988
40°	12807	11869	11744
45°	12701	11654	11367
50°	12549	11299	10841
55°	12369	10764	10136
60°	12117	10001	9221
65°	11734	9025	8084
70°	11189	7712	6773
75°	10340	5778	5537
80°	9040	4156	4866
85°	6601	3651	5089



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	128.5	2.7	2.2	0°	1352	1352	1352	1352	1352	
10°-20°	374.0	7.8	6.4	5°	1348	1346	1349	1354	1347	128
20°-30°	584.1	12.1	10.1	15°	1304	1310	1323	1339	1336	368
30°-40°	734.5	15.2	12.7	25°	1218	1233	1268	1300	1306	561
40°-50°	796.8	16.5	13.7	35°	1091	1121	1181	1229	1235	683
50°-60°	747.7	15.5	12.9	45°	934	978	1054	1090	1095	720
60°-70°	583.0	12.1	10.1	55°	746	805	860	875	879	666
70°-80°	338.0	7.0	5.8	65°	531	590	604	609	602	525
80°-90°	156.1	3.2	2.7	75°	298	330	300	319	332	315
90°-100°	105.2	2.2	1.8	85°	76	72	129	197	222	85
100°-110°	87.7	1.8	1.5	90°	3	34	109	175	198	5
110°-120°	66.9	1.4	1.2	95°	1	30	101	162	183	1
120°-130°	50.0	1.0	0.9	105°	2	34	84	135	155	2
130°-140°	32.8	0.7	0.6	115°	4	33	67	104	120	4
140°-150°	19.2	0.4	0.3	125°	8	30	55	85	98	7
150°-160°	10.8	0.2	0.2	135°	11	26	42	59	72	8
160°-170°	6.0	0.1	0.1	145°	13	23	30	39	45	8
170°-180°	0.4	0.0	0.0	155°	14	20	23	27	29	7
0°-30°	1086.6	22.5	18.7	165°	19	20	21	21	26	5
0°-40°	1821.1	37.8	31.4	175°	0	0	0	0	0	0
0°-60°	3365.6	69.8	58.0	180°	0	0	0	0	0	
0°-90°	4442.6	92.1	76.6							
90°-120°	259.8	5.4	4.5							
90°-150°	361.6	7.5	6.2							
90°-180°	379.0	7.9	6.5							
0°-180°	4821.5	100.0	83.1							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1352	1352	1352	1352	1352
2.5°	1352	1350	1351	1353	1346
5°	1348	1346	1349	1354	1347
7.5°	1342	1342	1345	1352	1347
10°	1331	1333	1340	1349	1345
12.5°	1319	1323	1333	1345	1340
15°	1304	1310	1323	1339	1336
17.5°	1286	1295	1311	1332	1332
20°	1266	1277	1297	1323	1324
22.5°	1243	1256	1283	1312	1313
25°	1218	1233	1268	1300	1306
27.5°	1190	1208	1249	1288	1294
30°	1158	1181	1227	1272	1278
32.5°	1127	1153	1206	1252	1259
35°	1091	1121	1181	1229	1235
37.5°	1055	1088	1154	1202	1208
40°	1016	1054	1124	1168	1175
42.5°	976	1017	1091	1131	1138
45°	934	978	1054	1090	1095
47.5°	889	937	1012	1042	1047
50°	843	895	966	990	996
52.5°	795	851	916	934	938
55°	746	805	860	875	879
57.5°	695	756	800	813	813
60°	642	704	737	745	746
62.5°	587	649	672	674	683
65°	531	590	604	609	602
67.5°	474	530	529	523	523
70°	416	464	460	448	457
72.5°	357	398	375	381	384
75°	298	330	300	319	332
77.5°	240	260	233	269	286
80°	183	188	182	230	253
82.5°	128	122	145	212	239
85°	76	72	129	197	222
87.5°	32	46	116	182	207
90°	3	34	109	175	198
92.5°	0	30	103	166	187
95°	1	30	101	162	183
97.5°	1	31	97	157	177
100°	1	32	94	151	172
102.5°	2	33	89	144	164
105°	2	34	84	135	155
107.5°	2	34	79	127	146
110°	3	34	75	119	137



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4	33	71	111	128
115°	4	33	67	104	120
117.5°	5	33	65	100	114
120°	6	32	62	95	109
122.5°	7	31	59	90	104
125°	8	30	55	85	98
127.5°	9	30	51	78	92
130°	9	28	47	73	86
132.5°	10	27	44	66	81
135°	11	26	42	59	72
137.5°	11	25	38	54	63
140°	12	24	35	49	56
142.5°	12	23	33	45	49
145°	13	23	30	39	45
147.5°	13	22	27	35	38
150°	14	21	25	33	35
152.5°	14	20	24	30	32
155°	14	20	23	27	29
157.5°	15	20	22	25	27
160°	17	19	22	24	27
162.5°	18	19	21	22	26
165°	19	20	21	21	26
167.5°	20	20	21	20	25
170°	21	21	20	19	24
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)