

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: 227P109

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: 227P109  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SML-228T5 (SML-2IN-SYM-4FT-2LT-REFL-B)  
Description: SML Series Staggered Commercial Micro-Striplight  
with a solid symmetric 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**

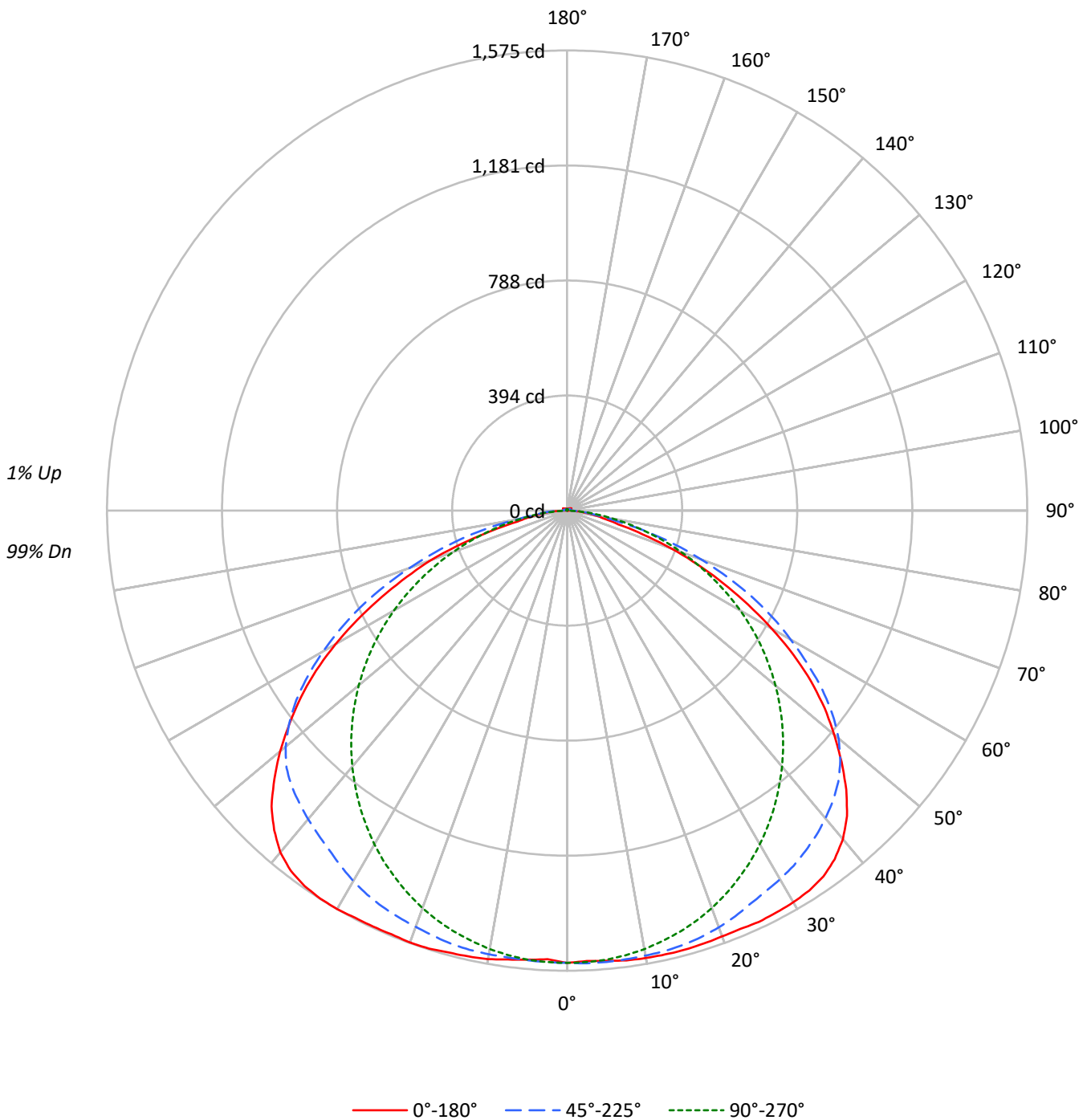
Lumens per Lamp: 2900 (2 lamps)  
Luminaire Lumens: 5176.8 lumens  
Efficiency: 89.3%  
Efficacy: 80.9 lumens/watt  
Spacing Criteria (0/90/45): 1.52 / 1.26 / 1.55  
Luminous Opening: Rectangular w/ Sides (W: 4.09' x L: 0.35' x H: 0.05')  
CIE Type: Direct

Input Watts (W): 64  
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	106	106	106	106	104	104	104	104	99	99	99	94	94	94	90	90	90	89
1	97	93	89	85	94	90	87	84	87	84	81	83	81	78	80	78	76	74
2	88	80	74	69	85	79	73	68	75	71	66	72	68	65	69	66	63	61
3	80	70	63	57	78	69	62	56	66	60	55	63	58	54	61	57	53	51
4	73	62	54	48	71	61	53	47	58	52	47	56	50	46	54	49	45	43
5	67	55	47	41	65	54	46	41	52	45	40	50	44	39	48	43	39	37
6	61	49	41	35	60	48	41	35	47	40	35	45	39	34	44	38	34	32
7	57	45	37	31	55	44	36	31	42	35	31	41	35	30	40	34	30	28
8	53	40	33	27	51	40	32	27	39	32	27	37	31	27	36	31	27	25
9	49	37	30	25	48	36	29	24	35	29	24	34	28	24	33	28	24	22
10	46	34	27	22	45	34	27	22	33	26	22	32	26	22	31	25	22	20

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

	0°	90°	180°
0°	11640	11640	11640
5°	11533	11634	11503
10°	11581	11611	11611
15°	11666	11577	11741
20°	11798	11535	11965
25°	12080	11459	12220
30°	12417	11372	12633
35°	12759	11259	13084
40°	12867	11115	13384
45°	12571	10947	13315
50°	11925	10734	12825
55°	11095	10462	12108
60°	9765	10088	11043
65°	8036	9553	9534
70°	5984	8849	7831
75°	3449	7835	5041
80°	2416	6479	3182
85°	1475	4466	2130



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	147.6	2.9	2.5	0°	1548	1548	1548	1548	1548	
10°-20°	433.6	8.4	7.5	5°	1547	1551	1543	1545	1543	148
20°-30°	686.3	13.3	11.8	15°	1556	1539	1492	1535	1566	441
30°-40°	883.0	17.1	15.2	25°	1553	1485	1389	1496	1571	718
40°-50°	978.0	18.9	16.9	35°	1529	1422	1237	1419	1568	954
50°-60°	912.6	17.6	15.7	45°	1351	1313	1042	1334	1431	1037
60°-70°	682.7	13.2	11.8	55°	1019	1065	812	1132	1112	905
70°-80°	334.7	6.5	5.8	65°	590	696	551	780	700	585
80°-90°	77.6	1.5	1.3	75°	182	288	282	375	266	217
90°-100°	8.8	0.2	0.2	85°	45	57	59	78	65	48
100°-110°	7.9	0.2	0.1	90°	2	14	1	16	4	3
110°-120°	8.4	0.2	0.1	95°	3	12	0	11	3	2
120°-130°	6.0	0.1	0.1	105°	6	12	0	10	7	7
130°-140°	4.0	0.1	0.1	115°	15	11	0	8	14	14
140°-150°	2.5	0.0	0.0	125°	14	8	1	6	11	12
150°-160°	1.8	0.0	0.0	135°	10	5	2	4	9	8
160°-170°	1.3	0.0	0.0	145°	7	4	3	2	6	4
170°-180°	0.1	0.0	0.0	155°	4	4	4	4	4	2
0°-30°	1267.5	24.5	21.9	165°	4	5	5	4	5	1
0°-40°	2150.5	41.5	37.1	175°	0	0	0	0	0	0
0°-60°	4041.1	78.1	69.7	180°	0	0	0	0	0	
0°-90°	5136.0	99.2	88.6							
90°-120°	25.1	0.5	0.4							
90°-150°	37.6	0.7	0.6							
90°-180°	41.0	0.8	0.7							
0°-180°	5176.8	100.0	89.3							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1548	1548	1548	1548	1548	1548	1548	1548	1548
2.5°	1543	1555	1551	1547	1547	1545	1547	1549	1537
5°	1547	1559	1551	1544	1543	1539	1545	1551	1543
7.5°	1553	1562	1549	1539	1535	1533	1543	1556	1550
10°	1555	1562	1547	1532	1524	1524	1542	1560	1559
12.5°	1556	1562	1544	1522	1509	1514	1540	1564	1563
15°	1556	1562	1539	1510	1492	1501	1535	1565	1566
17.5°	1554	1559	1530	1494	1472	1486	1526	1564	1572
20°	1551	1553	1518	1475	1448	1469	1516	1560	1573
22.5°	1550	1548	1503	1453	1420	1449	1507	1558	1570
25°	1553	1547	1485	1428	1389	1425	1496	1553	1571
27.5°	1551	1546	1470	1400	1356	1399	1482	1544	1571
30°	1548	1540	1457	1371	1319	1371	1464	1538	1575
32.5°	1542	1530	1442	1339	1279	1340	1442	1535	1574
35°	1529	1516	1422	1304	1237	1307	1419	1528	1568
37.5°	1504	1494	1401	1268	1191	1272	1399	1519	1554
40°	1468	1462	1375	1231	1144	1235	1379	1501	1527
42.5°	1418	1417	1347	1191	1094	1197	1357	1467	1484
45°	1351	1358	1313	1152	1042	1157	1334	1422	1431
47.5°	1274	1286	1268	1114	987	1114	1303	1366	1359
50°	1193	1202	1213	1072	931	1069	1258	1294	1283
52.5°	1111	1118	1145	1027	872	1024	1200	1213	1198
55°	1019	1030	1065	980	812	981	1132	1127	1112
57.5°	918	936	975	929	749	937	1052	1038	1019
60°	810	831	884	876	685	891	965	944	916
62.5°	698	722	794	817	618	842	873	839	809
65°	590	614	696	747	551	781	780	731	700
67.5°	485	508	593	663	484	707	677	626	594
70°	379	404	488	566	416	618	573	522	496
72.5°	272	297	388	471	348	521	472	426	380
75°	182	200	288	379	282	426	375	309	266
77.5°	131	137	190	287	219	329	277	202	174
80°	101	105	120	200	160	238	172	141	133
82.5°	73	76	86	117	106	158	113	105	98
85°	45	47	57	63	59	79	78	72	65
87.5°	16	18	29	35	19	45	46	40	32
90°	2	7	14	17	1	18	16	10	4
92.5°	3	7	13	14	1	15	13	6	3
95°	3	7	12	11	0	12	11	6	3
97.5°	2	6	11	10	0	10	10	6	3
100°	3	6	11	9	0	9	10	5	3
102.5°	4	8	11	8	0	7	10	6	4
105°	6	10	12	7	0	6	10	8	7
107.5°	9	12	13	6	0	5	10	10	10
110°	11	14	12	5	0	4	10	11	11



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	13	15	12	4	0	3	9	12	13
115°	15	16	11	4	0	3	8	13	14
117.5°	16	16	10	3	0	2	8	13	15
120°	15	15	9	2	1	2	7	11	15
122.5°	14	14	9	2	1	1	6	10	12
125°	14	13	8	2	1	1	6	10	11
127.5°	13	12	7	2	1	1	5	9	10
130°	12	11	7	2	1	1	5	8	11
132.5°	11	10	6	2	2	1	4	8	10
135°	10	10	5	2	2	2	4	7	9
137.5°	9	9	5	2	2	2	3	7	9
140°	9	8	4	2	2	2	3	6	7
142.5°	8	7	4	3	3	2	3	5	7
145°	7	6	4	3	3	3	2	5	6
147.5°	6	5	3	3	3	3	3	4	5
150°	5	5	3	3	3	3	3	3	4
152.5°	4	4	4	4	4	4	3	3	4
155°	4	4	4	4	4	4	4	3	4
157.5°	4	4	4	4	4	4	4	4	4
160°	4	4	4	4	5	4	4	4	4
162.5°	4	5	5	5	5	5	4	4	5
165°	4	5	5	5	5	5	4	4	5
167.5°	4	5	5	5	5	5	5	5	5
170°	5	5	5	5	5	5	5	5	6
172.5°	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0

(END OF REPORT)