

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: 227P102

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 227P102
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SM-228T5 (SM-2IN-SYM-4FT-REFL-B)
Description: SM Series Commercial Micro-Striplight with a
solid 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

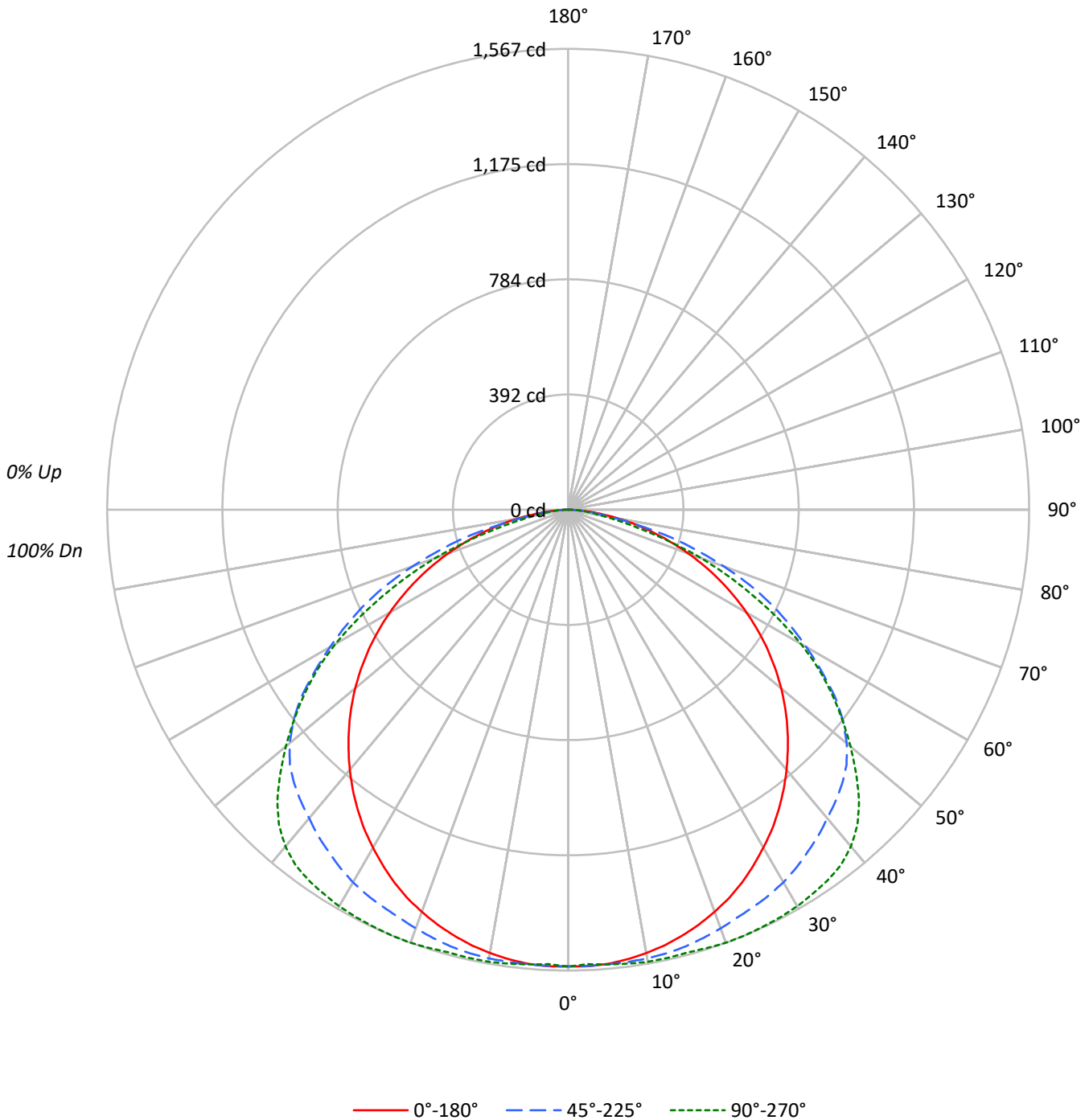
Lumens per Lamp: 2900 (2 lamps)
Luminaire Lumens: 5194.5 lumens
Efficiency: 89.6%
Efficacy: 82.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.51 / 1.56
Luminous Opening: Rectangular (W 0.38' x L: 3.76' x H: 0')
CIE Type: Direct

Input Watts (W): 63
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	107	107	107	107	104	104	104	104	100	100	100	95	95	95	91	91	91	90
1	97	93	89	86	95	91	87	84	87	84	82	84	81	79	80	78	77	75
2	88	81	74	69	86	79	73	68	76	71	67	73	69	65	70	67	64	62
3	80	70	63	57	78	69	62	56	66	60	55	64	59	54	61	57	53	51
4	73	62	54	48	71	61	53	47	59	52	47	56	51	46	54	50	45	43
5	67	55	47	41	65	54	46	40	52	45	40	50	44	40	49	43	39	37
6	62	49	41	35	60	49	41	35	47	40	35	45	39	34	44	38	34	32
7	57	45	37	31	55	44	36	31	42	36	31	41	35	30	40	34	30	28
8	53	41	33	27	51	40	32	27	39	32	27	38	31	27	36	31	27	25
9	49	37	30	24	48	37	29	24	35	29	24	34	28	24	34	28	24	22
10	46	34	27	22	45	34	27	22	33	26	22	32	26	22	31	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11700	11700	11700
5°	11722	11737	11737
10°	11712	11849	11941
15°	11691	11995	12159
20°	11665	12146	12563
25°	11629	12385	13009
30°	11544	12727	13544
35°	11468	13059	14145
40°	11359	13473	14702
45°	11229	14031	14894
50°	11075	14486	14685
55°	10862	14527	14382
60°	10562	14088	13786
65°	10143	13601	12407
70°	9560	12401	10595
75°	8732	10420	7568
80°	7592	6768	4902
85°	5791	4668	4149



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	148.1	2.9	2.6	0°	1553	1553	1553	1553	1553	
10°-20°	434.3	8.4	7.5	5°	1550	1547	1552	1559	1552	147
20°-30°	687.6	13.2	11.9	15°	1499	1511	1538	1562	1559	423
30°-40°	882.2	17.0	15.2	25°	1399	1432	1490	1553	1565	644
40°-50°	980.6	18.9	16.9	35°	1247	1308	1420	1512	1538	780
50°-60°	924.3	17.8	15.9	45°	1054	1162	1317	1393	1398	813
60°-70°	708.7	13.6	12.2	55°	827	982	1106	1098	1095	738
70°-80°	355.2	6.8	6.1	65°	569	767	763	720	696	562
80°-90°	73.5	1.4	1.3	75°	300	412	358	281	260	318
90°-100°	0.0	0.0	0.0	85°	67	74	54	49	48	77
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	3
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	1270.0	24.4	21.9	165°	0	0	0	0	0	0
0°-40°	2152.2	41.4	37.1	175°	0	0	0	0	0	0
0°-60°	4057.1	78.1	70.0	180°	0	0	0	0	0	0
0°-90°	5194.5	100.0	89.6							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	5194.5	100.0	89.6							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1553	1553	1553	1553	1553
2.5°	1554	1551	1553	1556	1547
5°	1550	1547	1552	1559	1552
7.5°	1542	1542	1551	1563	1557
10°	1531	1534	1549	1564	1561
12.5°	1517	1524	1545	1564	1561
15°	1499	1511	1538	1562	1559
17.5°	1479	1496	1527	1558	1563
20°	1455	1478	1515	1557	1567
22.5°	1429	1457	1501	1557	1567
25°	1399	1432	1490	1553	1565
27.5°	1364	1404	1478	1545	1562
30°	1327	1374	1463	1537	1557
32.5°	1289	1342	1443	1525	1548
35°	1247	1308	1420	1512	1538
37.5°	1202	1272	1397	1497	1523
40°	1155	1236	1370	1475	1495
42.5°	1105	1199	1345	1441	1455
45°	1054	1162	1317	1393	1398
47.5°	1001	1120	1283	1333	1327
50°	945	1075	1236	1257	1253
52.5°	887	1029	1177	1178	1175
55°	827	982	1106	1098	1095
57.5°	764	933	1020	1015	1010
60°	701	882	935	928	915
62.5°	635	829	850	828	807
65°	569	767	763	720	696
67.5°	502	690	667	610	588
70°	434	596	563	505	481
72.5°	366	497	457	392	362
75°	300	412	358	281	260
77.5°	236	324	246	189	175
80°	175	235	156	120	113
82.5°	118	146	90	79	77
85°	67	74	54	49	48
87.5°	23	34	26	23	23
90°	0	0	0	0	0
92.5°	0	0	0	0	0
95°	0	0	0	0	0
97.5°	0	0	0	0	0
100°	0	0	0	0	0
102.5°	0	0	0	0	0
105°	0	0	0	0	0
107.5°	0	0	0	0	0
110°	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0	0	0	0	0
115°	0	0	0	0	0
117.5°	0	0	0	0	0
120°	0	0	0	0	0
122.5°	0	0	0	0	0
125°	0	0	0	0	0
127.5°	0	0	0	0	0
130°	0	0	0	0	0
132.5°	0	0	0	0	0
135°	0	0	0	0	0
137.5°	0	0	0	0	0
140°	0	0	0	0	0
142.5°	0	0	0	0	0
145°	0	0	0	0	0
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
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)