

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: 167P118

Luminaire Tested: **RWW-228T5MI**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: 167P118  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: RWW-228T5MI  
Description: Recessed Wall Wash Luminaire  
Light Source: Two - F28T5/835 - 2900 Lumens ea. - 28 Watts ea.  
Ballast/Driver: Energy Savings - ES-2-T5-28-120F - L.O.B.F. = 92.7%

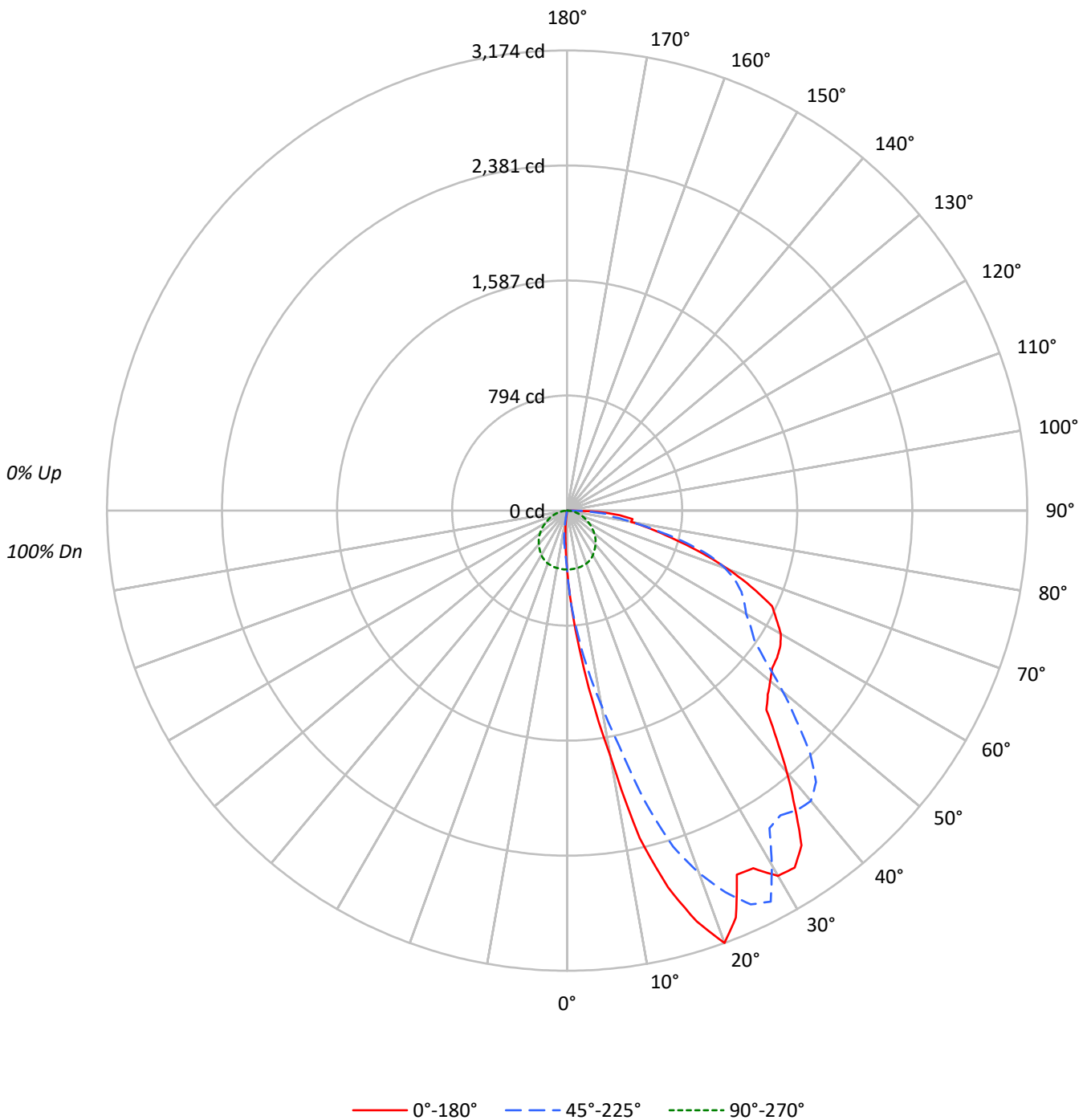
**Summary**

Lumens per Lamp: 2900 (2 lamps)  
Luminaire Lumens: 4152.1 lumens  
Efficiency: 71.6%  
Efficacy: 73.4 lumens/watt  
Spacing Criteria (0/90/45): 2.6 / 1.29 / 2.34  
Luminous Opening: Rectangular (W 3.9' x L: 0.65' x H: 0')  
CIE Type: Direct

Input Watts (W): 56.6  
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	85	85	85	85	83	83	83	83	80	80	80	76	76	76	73	73	73	72
1	77	73	70	67	75	72	68	66	68	66	64	66	64	62	63	61	60	58
2	69	63	58	53	67	62	57	52	59	55	51	57	53	50	54	51	49	47
3	63	55	48	43	61	53	48	43	51	46	42	49	45	41	47	44	41	39
4	57	48	41	36	55	47	41	36	45	40	35	43	39	35	42	38	34	33
5	52	42	35	30	51	42	35	30	40	34	30	39	33	30	37	33	29	28
6	48	38	31	26	47	37	31	26	36	30	26	35	29	25	33	29	25	24
7	44	34	27	23	43	33	27	23	32	27	22	31	26	22	30	26	22	21
8	41	31	24	20	40	30	24	20	29	24	20	28	23	20	27	23	19	18
9	38	28	22	18	37	28	22	18	27	21	17	26	21	17	25	21	17	16
10	36	26	20	16	35	25	20	16	25	19	16	24	19	16	23	19	15	14

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

	0°	90°	180°
0°	1733	1733	1733
5°	4067	1739	567
10°	7472	1746	43
15°	11910	1758	35
20°	14451	1771	27
25°	13076	1766	24
30°	14371	1754	20
35°	14718	1724	31
40°	13175	1692	22
45°	11762	1670	24
50°	12174	1624	27
55°	13188	1566	30
60°	14563	1497	34
65°	15793	1427	40
70°	14786	1376	50
75°	12679	1289	66
80°	11013	1232	99
85°	17868	589	196



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	55.0	1.3	0.9	0°	405	405	405	405	405	
10°-20°	277.4	6.7	4.8	5°	947	864	405	228	132	114
20°-30°	548.5	13.2	9.5	15°	2689	2083	397	8	8	759
30°-40°	735.5	17.7	12.7	25°	2770	2997	374	4	5	1341
40°-50°	757.9	18.3	13.1	35°	2818	2565	330	2	6	1713
50°-60°	687.3	16.6	11.9	45°	1944	2369	276	2	4	1554
60°-70°	604.1	14.5	10.4	55°	1768	1580	210	1	4	1582
70°-80°	364.4	8.8	6.3	65°	1560	1326	141	1	4	1487
80°-90°	122.0	2.9	2.1	75°	767	835	78	1	4	833
90°-100°	0.0	0.0	0.0	85°	364	274	12	1	4	313
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	29
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°	880.9	21.2	15.2	165°	0	0	0	0	0	0
0°-40°	1616.4	38.9	27.9	175°	0	0	0	0	0	0
0°-60°	3061.6	73.7	52.8	180°	0	0	0	0	0	0
0°-90°	4152.1	100.0	71.6							
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°	4152.1	100.0	71.6							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	405	405	405	405	405	405	405	405	405
2.5°	643	709	650	530	407	328	283	266	233
5°	947	1017	864	673	405	273	228	191	132
7.5°	1308	1347	1115	771	404	238	159	71	25
10°	1720	1754	1364	893	402	219	59	14	10
12.5°	2315	2297	1662	1029	400	185	14	8	9
15°	2689	2662	2083	1163	397	124	8	7	8
17.5°	2971	2933	2430	1291	393	68	7	6	7
20°	3174	3137	2661	1417	389	28	5	5	6
22.5°	3039	3123	2849	1576	382	13	5	5	6
25°	2770	2853	2997	1785	374	9	4	4	5
27.5°	2782	2751	3040	1995	366	8	3	4	5
30°	2909	2839	2822	2154	355	7	3	3	4
32.5°	2920	2900	2597	2231	343	7	3	3	5
35°	2818	2848	2565	2298	330	5	2	3	6
37.5°	2580	2675	2604	2336	317	5	2	3	7
40°	2359	2437	2615	2359	303	4	2	3	4
42.5°	2138	2232	2541	2351	290	3	2	3	4
45°	1944	2016	2369	2252	276	3	2	3	4
47.5°	1877	1870	2146	2008	261	2	2	3	4
50°	1829	1812	1943	1814	244	2	2	3	4
52.5°	1783	1753	1738	1739	227	1	2	3	4
55°	1768	1715	1580	1700	210	1	1	3	4
57.5°	1743	1685	1504	1650	192	1	1	3	4
60°	1702	1647	1426	1541	175	1	1	3	4
62.5°	1628	1586	1378	1377	158	1	1	3	4
65°	1560	1510	1326	1192	141	1	1	2	4
67.5°	1375	1383	1253	1010	125	1	1	3	4
70°	1182	1172	1159	872	110	1	1	3	4
72.5°	975	974	1029	778	94	0	1	3	4
75°	767	756	835	692	78	1	1	2	4
77.5°	603	584	624	591	63	1	1	3	4
80°	447	430	450	465	50	1	1	3	4
82.5°	455	421	310	302	32	0	1	3	4
85°	364	326	274	160	12	0	1	3	4
87.5°	212	163	144	94	1	0	1	3	4
90°	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0
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)