

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P588656

Luminaire Tested: **FM9WSCCR-3000K**

Issue Date: 12/1/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P588656  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( MXL1052-9A)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 12/1/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: FM9WSCCR-3000K  
Description: FM WS CCT SELECT  
Light Source: (1) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

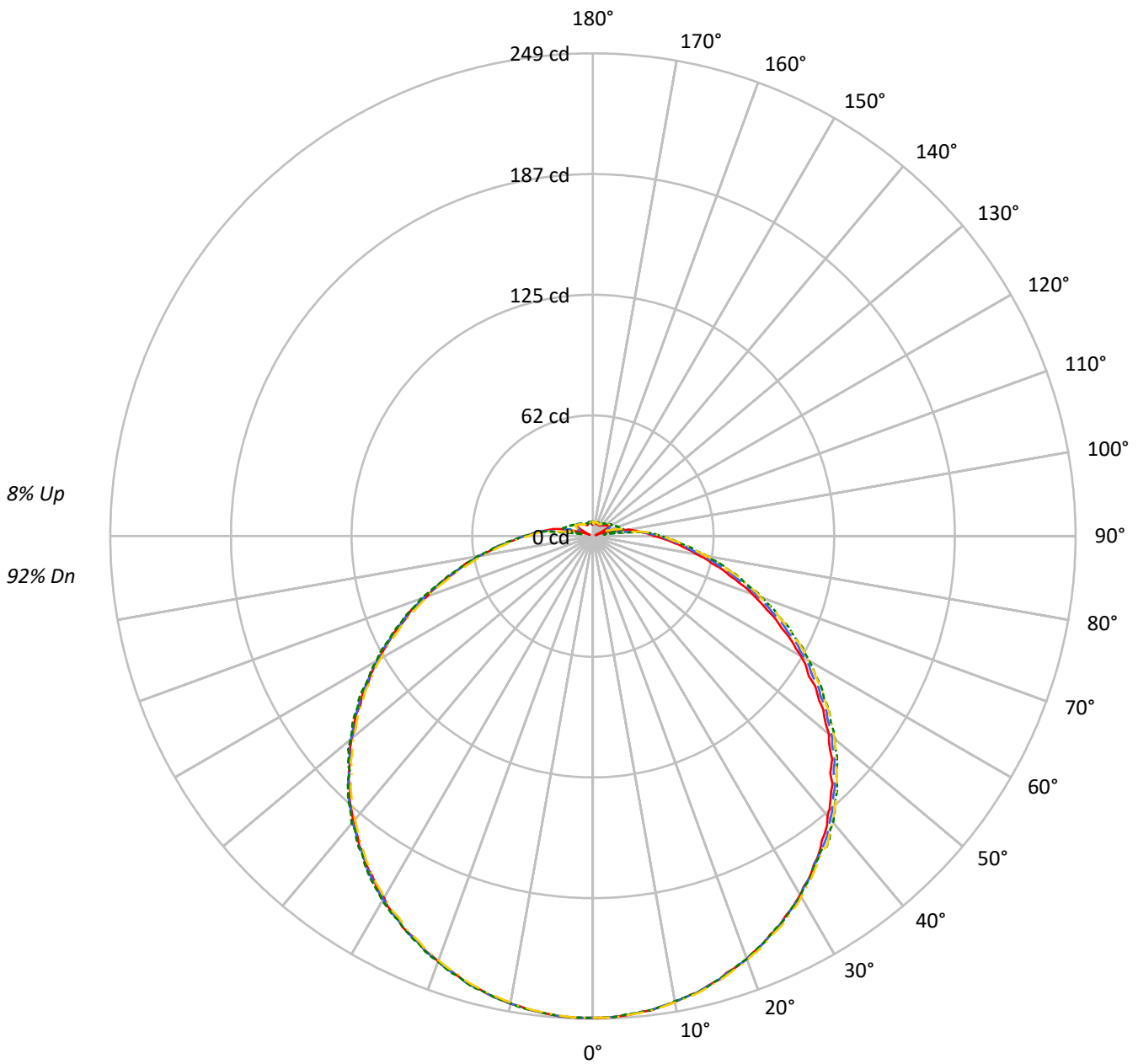
Lumens per Lamp: N/A  
Luminaire Lumens: 900.0 lumens  
Efficiency: N/A  
Efficacy: 75.0 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.75m x L: 0.75m x H: 0.25m)  
CIE Type: Direct

Input Watts (W): 12  
Input Voltage (V): 120  
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: 24 FT



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### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    - - - 90°-270°    - · - 135°-315°



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	50	30	10	0
RCR																					
0	117	117	117	117	113	113	113	113	107	107	107	100	100	100	94	94	94	94	94	94	92
1	105	99	94	90	101	96	92	88	90	87	83	85	82	79	80	78	75	75	75	75	73
2	95	86	78	72	91	83	76	70	78	72	67	73	69	64	69	65	62	62	62	62	59
3	86	75	66	59	83	72	64	58	68	61	56	64	58	54	60	56	52	52	52	52	49
4	78	66	56	49	75	64	55	48	60	53	47	57	50	45	54	48	44	44	44	44	41
5	72	58	49	42	69	57	48	41	54	46	40	51	44	39	48	42	38	38	38	38	35
6	66	52	43	36	64	51	42	36	48	41	35	46	39	34	43	38	33	33	33	33	31
7	61	47	38	32	59	46	38	32	44	36	31	42	35	30	40	34	29	29	29	29	27
8	57	43	34	28	55	42	34	28	40	33	27	38	32	27	36	30	26	26	26	26	24
9	53	39	31	25	51	39	31	25	37	30	25	35	29	24	34	28	23	23	23	23	21
10	50	36	28	23	48	36	28	23	34	27	22	32	26	22	31	25	21	21	21	21	19

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

	0°	90°	180°	270°
0°	442	442	442	442
5°	429	428	430	430
10°	416	415	418	417
15°	403	403	406	407
20°	392	392	394	394
25°	380	379	383	384
30°	368	369	371	374
35°	356	357	361	362
40°	341	350	349	351
45°	326	335	336	337
50°	315	323	322	323
55°	296	306	306	310
60°	280	291	287	291
65°	259	274	269	274
70°	237	252	247	256
75°	216	233	228	233
80°	193	213	212	215
85°	180	195	193	196



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.5	2.6
10°-20°	67.6	7.5
20°-30°	103.6	11.5
30°-40°	127.7	14.2
40°-50°	136.8	15.2
50°-60°	129.6	14.4
60°-70°	108.5	12.1
70°-80°	78.7	8.7
80°-90°	49.8	5.5
90°-100°	26.2	2.9
100°-110°	13.1	1.5
110°-120°	8.4	0.9
120°-130°	9.1	1.0
130°-140°	6.7	0.7
140°-150°	4.7	0.5
150°-160°	3.2	0.4
160°-170°	2.1	0.2
170°-180°	0.7	0.1
0°-30°	194.8	21.6
0°-40°	322.5	35.8
0°-60°	588.9	65.4
0°-90°	825.9	91.8
90°-120°	47.8	5.3
90°-150°	68.2	7.6
90°-180°	74.0	8.2
0°-180°	900.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	248	248	248	248	248	
5°	247	247	248	248	247	24
15°	239	239	240	241	239	67
25°	224	223	226	226	224	103
35°	202	203	205	206	202	126
45°	173	178	178	179	173	134
55°	141	146	146	148	141	126
65°	105	112	110	112	105	104
75°	71	76	74	76	71	75
85°	42	46	46	46	42	37
90°	31	35	35	35	31	18
95°	25	24	27	26	25	19
105°	11	16	12	16	11	11
115°	4	13	4	13	4	4
125°	10	10	10	10	10	8
135°	8	9	9	9	8	6
145°	7	8	7	8	7	4
155°	6	7	6	7	6	3
165°	7	8	7	8	7	2
175°	6	7	6	7	6	1
180°	8	8	8	8	8	



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**CANDELA DISTRIBUTION (FULL):**

	0°	90°	180°	270°	360°
0°	248.5	248.5	248.5	248.5	248.5
1°	248.5	248.4	248.6	248.5	248.5
2°	248.4	248.4	248.6	248.5	248.4
3°	248.1	248.1	248.4	248.5	248.1
4°	247.8	247.3	248.4	248.1	247.8
5°	247.3	247.1	247.7	247.7	247.3
6°	246.7	246.7	247.3	247.3	246.7
7°	246.5	246.3	246.8	246.7	246.5
8°	245.4	245.4	246.3	246.4	245.4
9°	244.8	244.7	245.3	245.8	244.8
10°	244.0	243.6	245.0	244.7	244.0
11°	243.0	243.0	244.0	244.1	243.0
12°	242.0	242.1	243.3	243.4	242.0
13°	241.4	241.3	242.3	242.1	241.4
14°	239.9	240.3	241.0	241.3	239.9
15°	238.7	238.7	240.0	240.7	238.7
16°	237.8	237.5	239.1	239.3	237.8
17°	235.6	236.3	237.5	237.5	235.6
18°	234.6	234.6	236.1	236.8	234.6
19°	233.6	233.2	235.1	235.3	233.6
20°	232.1	232.1	233.4	233.6	232.1
21°	230.2	230.2	231.9	232.5	230.2
22°	228.9	228.7	230.7	231.1	228.9
23°	227.1	227.3	228.7	228.9	227.1
24°	225.0	225.3	226.9	227.7	225.0
25°	223.9	223.3	225.7	226.0	223.9
26°	221.9	222.0	224.3	224.0	221.9
27°	219.5	220.2	221.6	222.0	219.5
28°	218.0	217.8	220.0	220.9	218.0
29°	215.8	216.4	218.3	218.9	215.8
30°	213.8	214.2	215.5	217.2	213.8
31°	211.1	211.5	214.1	214.8	211.1
32°	209.3	209.8	211.7	212.7	209.3
33°	207.0	207.7	209.0	210.8	207.0
34°	204.0	204.5	207.2	208.3	204.0
35°	202.2	202.8	204.9	205.7	202.2
36°	199.6	200.3	201.6	202.6	199.6
37°	196.4	200.6	200.3	200.9	196.4
38°	194.4	198.2	197.1	198.3	194.4
39°	192.0	194.7	194.5	195.1	192.0
40°	188.3	192.8	192.4	193.7	188.3
41°	186.2	190.0	189.3	190.3	186.2
42°	183.2	186.6	186.9	187.6	183.2
43°	180.2	183.8	184.2	185.3	180.2
44°	177.9	181.6	180.2	181.9	177.9



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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
45°	173.1	177.8	178.2	178.9	173.1
46°	171.0	174.7	175.0	174.3	171.0
47°	168.7	172.3	171.3	172.9	168.7
48°	164.6	169.4	168.2	169.4	164.6
49°	161.4	165.6	165.9	167.3	161.4
50°	159.0	163.1	162.5	163.2	159.0
51°	154.7	159.8	158.5	160.0	154.7
52°	151.5	155.7	156.0	157.5	151.5
53°	148.8	153.2	152.9	154.2	148.8
54°	144.4	149.9	148.3	150.0	144.4
55°	141.1	145.5	145.8	147.6	141.1
56°	138.4	143.0	142.4	144.0	138.4
57°	132.9	139.6	138.0	139.6	132.9
58°	130.3	135.2	135.3	136.0	130.3
59°	127.8	132.5	131.8	133.3	127.8
60°	124.0	128.9	127.4	128.9	124.0
61°	119.6	125.3	124.6	126.3	119.6
62°	116.6	122.6	120.7	122.6	116.6
63°	112.9	118.0	117.3	118.2	112.9
64°	108.2	114.4	114.6	115.2	108.2
65°	105.4	111.6	109.8	111.8	105.4
66°	101.9	107.0	106.1	107.9	101.9
67°	97.5	103.4	103.4	105.1	97.5
68°	94.5	100.6	100.7	100.6	94.5
69°	90.8	96.1	95.2	97.0	90.8
70°	87.5	92.8	91.0	94.4	87.5
71°	84.7	90.0	88.3	89.8	84.7
72°	80.3	85.3	84.6	86.3	80.3
73°	77.2	82.0	82.5	81.8	77.2
74°	73.0	79.3	78.1	79.2	73.0
75°	70.6	76.2	74.4	76.1	70.6
76°	67.3	72.1	71.4	71.8	67.3
77°	63.3	69.6	69.0	69.1	63.3
78°	60.9	66.4	66.7	66.1	60.9
79°	58.2	62.3	62.1	62.8	58.2
80°	54.4	60.2	59.9	60.6	54.4
81°	52.3	57.2	56.2	56.9	52.3
82°	49.7	53.3	53.1	53.9	49.7
83°	47.2	51.6	51.3	51.9	47.2
84°	45.2	49.0	49.2	48.7	45.2
85°	42.4	45.9	45.5	46.2	42.4
86°	40.1	44.4	43.8	44.4	40.1
87°	38.4	41.8	40.9	41.5	38.4
88°	35.8	39.7	38.7	39.4	35.8
89°	33.9	37.8	37.5	37.5	33.9



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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
90°	31.3	35.3	35.2	35.0	31.3
91°	30.5	33.3	33.0	33.2	30.5
92°	28.9	32.0	31.6	32.0	28.9
93°	27.8	30.0	30.0	30.5	27.8
94°	25.9	27.5	28.2	28.5	25.9
95°	24.7	24.4	27.2	26.5	24.7
96°	23.4	17.6	25.8	22.1	23.4
97°	22.4	11.6	24.0	15.3	22.4
98°	21.0	8.1	23.0	11.3	21.0
99°	20.1	5.6	21.8	6.9	20.1
100°	19.1	7.4	21.0	5.2	19.1
101°	17.1	9.9	19.1	6.8	17.1
102°	15.6	13.2	17.3	10.2	15.6
103°	14.0	16.1	15.3	14.3	14.0
104°	12.1	16.0	13.9	15.8	12.1
105°	10.6	15.7	11.6	16.0	10.6
106°	8.6	15.3	9.9	15.6	8.6
107°	6.8	14.9	8.2	15.0	6.8
108°	4.4	14.6	5.9	14.8	4.4
109°	3.4	14.0	4.3	14.5	3.4
110°	2.3	13.9	3.3	14.2	2.3
111°	1.4	13.6	1.7	13.9	1.4
112°	1.7	13.2	1.7	13.3	1.7
113°	2.6	13.2	2.0	13.3	2.6
114°	3.1	12.9	2.7	12.9	3.1
115°	4.1	12.8	3.7	12.9	4.1
116°	5.0	12.6	4.1	12.5	5.0
117°	5.9	12.2	5.0	12.2	5.9
118°	7.4	12.2	6.5	11.9	7.4
119°	8.4	11.9	7.2	11.9	8.4
120°	8.9	11.5	8.2	11.6	8.9
121°	9.8	11.3	9.5	11.5	9.8
122°	10.1	11.1	10.1	11.2	10.1
123°	9.9	11.2	10.1	11.1	9.9
124°	9.9	10.6	10.3	10.8	9.9
125°	9.5	10.5	10.1	10.5	9.5
126°	9.3	10.5	10.1	10.5	9.3
127°	9.2	10.3	9.9	10.2	9.2
128°	9.1	10.2	9.9	10.1	9.1
129°	8.9	9.9	9.5	9.9	8.9
130°	8.8	9.9	9.3	9.8	8.8
131°	8.5	9.3	9.1	9.5	8.5
132°	8.4	9.6	9.1	9.5	8.4
133°	8.2	9.5	8.9	9.3	8.2
134°	7.9	9.1	8.8	9.3	7.9





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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
135°	8.1	8.9	8.6	8.8	8.1
136°	7.8	8.8	8.4	8.9	7.8
137°	7.8	8.8	8.4	8.9	7.8
138°	7.6	8.6	7.9	8.6	7.6
139°	7.5	8.4	7.9	8.5	7.5
140°	7.5	8.4	7.8	8.4	7.5
141°	7.4	8.1	7.6	8.2	7.4
142°	7.1	8.1	7.6	8.2	7.1
143°	6.8	8.1	7.5	8.1	6.8
144°	6.9	7.8	7.4	7.9	6.9
145°	6.6	7.9	7.2	7.6	6.6
146°	6.8	7.6	7.1	7.6	6.8
147°	6.6	7.6	6.9	7.6	6.6
148°	6.5	7.6	6.9	7.4	6.5
149°	6.4	7.5	6.8	7.4	6.4
150°	6.4	7.5	6.6	7.2	6.4
151°	6.4	7.4	6.6	7.4	6.4
152°	6.5	7.2	6.5	7.1	6.5
153°	6.4	7.4	6.4	7.2	6.4
154°	6.4	7.2	6.5	7.2	6.4
155°	6.4	7.2	6.4	6.9	6.4
156°	6.4	7.2	6.5	7.1	6.4
157°	6.5	7.5	6.4	7.1	6.5
158°	6.5	7.5	6.8	7.2	6.5
159°	6.5	7.6	6.6	7.4	6.5
160°	6.6	7.5	6.8	7.5	6.6
161°	6.8	7.5	6.9	7.4	6.8
162°	6.8	7.6	6.9	7.5	6.8
163°	6.8	7.5	7.2	7.8	6.8
164°	7.1	7.6	7.2	7.6	7.1
165°	7.1	7.8	7.4	7.8	7.1
166°	6.9	7.8	7.1	7.5	6.9
167°	7.1	7.8	7.4	7.8	7.1
168°	6.9	7.9	7.4	7.5	6.9
169°	6.8	7.6	7.1	7.6	6.8
170°	6.8	7.8	7.1	7.6	6.8
171°	6.8	7.5	7.1	7.4	6.8
172°	6.5	7.4	6.9	7.4	6.5
173°	6.5	7.1	6.8	7.4	6.5
174°	6.4	7.1	6.6	6.9	6.4
175°	6.2	6.9	6.4	6.6	6.2
176°	6.1	6.8	6.1	6.6	6.1
177°	6.1	6.8	5.9	6.6	6.1
178°	6.8	6.9	6.6	6.5	6.8
179°	7.4	7.4	7.1	6.8	7.4



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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
180°	7.5	7.5	7.5	7.5	7.5

(END OF REPORT)