

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: P588658

Luminaire Tested: **FM9WSCCR-5000K**

Issue Date: 12/1/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P588658  
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-5000K  
Description: FM WS CCT SELECT  
Light Source: (1) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

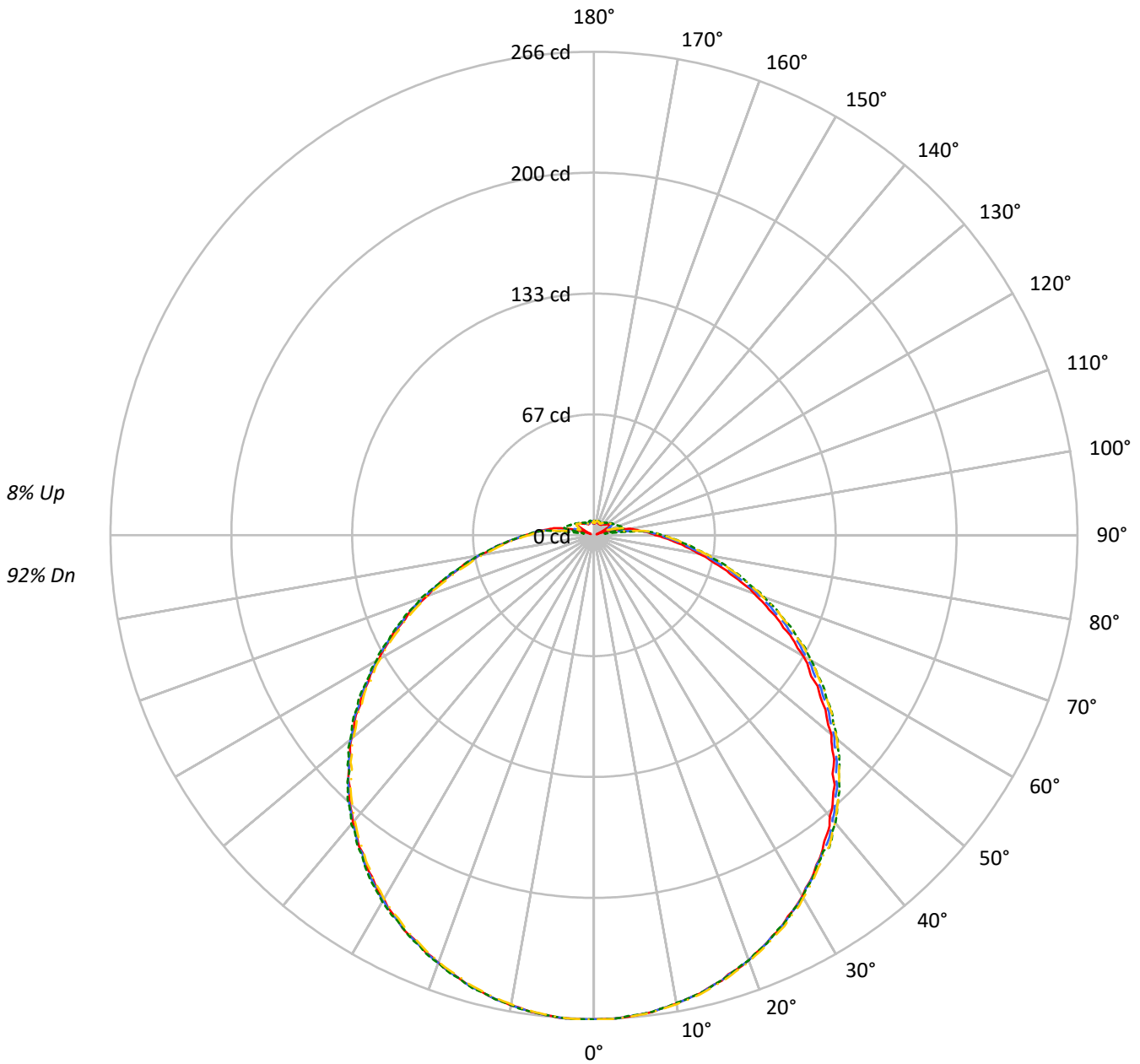
Lumens per Lamp: N/A  
Luminaire Lumens: 965.0 lumens  
Efficiency: N/A  
Efficacy: 82.5 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.75m x L: 0.75m x H: 0.25m)  
CIE Type: Direct

Input Watts (W): 11.7  
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°	474	474	474	474
5°	460	460	461	461
10°	446	445	448	447
15°	432	432	435	436
20°	420	420	422	423
25°	408	406	411	412
30°	395	395	398	401
35°	381	383	387	388
40°	366	375	374	377
45°	350	359	360	362
50°	337	346	345	346
55°	318	328	328	332
60°	300	312	308	312
65°	277	294	289	294
70°	254	270	265	275
75°	232	250	244	249
80°	207	228	227	230
85°	193	209	207	210



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.2	2.6
10°-20°	72.5	7.5
20°-30°	111.1	11.5
30°-40°	136.9	14.2
40°-50°	146.7	15.2
50°-60°	139.0	14.4
60°-70°	116.3	12.1
70°-80°	84.3	8.7
80°-90°	53.4	5.5
90°-100°	28.1	2.9
100°-110°	14.0	1.5
110°-120°	9.1	0.9
120°-130°	9.8	1.0
130°-140°	7.2	0.7
140°-150°	5.0	0.5
150°-160°	3.4	0.4
160°-170°	2.2	0.2
170°-180°	0.7	0.1
0°-30°	208.8	21.6
0°-40°	345.8	35.8
0°-60°	631.4	65.4
0°-90°	885.5	91.8
90°-120°	51.2	5.3
90°-150°	73.2	7.6
90°-180°	79.0	8.2
0°-180°	965.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	266	266	266	266	266	
5°	265	265	266	266	265	25
15°	256	256	257	258	256	72
25°	240	239	242	242	240	111
35°	217	218	220	221	217	136
45°	186	191	191	192	186	144
55°	151	156	156	158	151	135
65°	113	120	118	120	113	112
75°	76	82	80	82	76	80
85°	46	49	49	50	46	40
90°	34	38	38	38	34	19
95°	26	26	29	28	26	20
105°	11	17	12	17	11	12
115°	4	14	4	14	4	5
125°	10	11	11	11	10	9
135°	9	10	9	9	9	7
145°	7	8	8	8	7	5
155°	7	8	7	7	7	3
165°	8	8	8	8	8	2
175°	7	7	7	7	7	1
180°	8	8	8	8	8	



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**CANDELA DISTRIBUTION (FULL):**

	0°	90°	180°	270°	360°
0°	266.4	266.4	266.4	266.4	266.4
1°	266.4	266.3	266.5	266.4	266.4
2°	266.3	266.3	266.5	266.4	266.3
3°	266.0	266.0	266.3	266.4	266.0
4°	265.7	265.2	266.3	266.0	265.7
5°	265.2	265.0	265.6	265.6	265.2
6°	264.6	264.6	265.2	265.2	264.6
7°	264.3	264.1	264.7	264.6	264.3
8°	263.1	263.1	264.1	264.2	263.1
9°	262.5	262.4	263.0	263.6	262.5
10°	261.6	261.2	262.7	262.4	261.6
11°	260.6	260.6	261.6	261.7	260.6
12°	259.5	259.6	260.9	261.0	259.5
13°	258.8	258.7	259.8	259.6	258.8
14°	257.2	257.6	258.4	258.7	257.2
15°	255.9	255.9	257.3	258.1	255.9
16°	255.0	254.7	256.3	256.5	255.0
17°	252.6	253.4	254.7	254.7	252.6
18°	251.6	251.6	253.2	253.9	251.6
19°	250.5	250.0	252.1	252.3	250.5
20°	248.9	248.9	250.3	250.5	248.9
21°	246.8	246.8	248.6	249.3	246.8
22°	245.4	245.2	247.3	247.8	245.4
23°	243.5	243.8	245.2	245.4	243.5
24°	241.3	241.6	243.3	244.2	241.3
25°	240.1	239.4	242.0	242.4	240.1
26°	237.9	238.0	240.5	240.2	237.9
27°	235.3	236.1	237.6	238.0	235.3
28°	233.7	233.5	235.9	236.8	233.7
29°	231.4	232.1	234.0	234.7	231.4
30°	229.3	229.7	231.1	232.9	229.3
31°	226.3	226.8	229.6	230.3	226.3
32°	224.4	224.9	227.0	228.1	224.4
33°	222.0	222.6	224.1	226.0	222.0
34°	218.7	219.3	222.2	223.3	218.7
35°	216.8	217.5	219.7	220.6	216.8
36°	214.0	214.7	216.2	217.2	214.0
37°	210.6	215.1	214.7	215.4	210.6
38°	208.5	212.5	211.4	212.6	208.5
39°	205.9	208.8	208.6	209.2	205.9
40°	201.9	206.7	206.3	207.7	201.9
41°	199.7	203.7	202.9	204.0	199.7
42°	196.4	200.1	200.4	201.1	196.4
43°	193.2	197.1	197.5	198.7	193.2
44°	190.7	194.7	193.2	195.0	190.7



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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
45°	185.6	190.6	191.0	191.8	185.6
46°	183.3	187.3	187.7	186.9	183.3
47°	180.8	184.7	183.7	185.4	180.8
48°	176.5	181.6	180.3	181.6	176.5
49°	173.1	177.6	177.9	179.3	173.1
50°	170.5	174.9	174.2	175.0	170.5
51°	165.9	171.3	169.9	171.5	165.9
52°	162.4	167.0	167.3	168.8	162.4
53°	159.5	164.3	164.0	165.4	159.5
54°	154.9	160.7	159.0	160.8	154.9
55°	151.3	156.0	156.4	158.2	151.3
56°	148.4	153.3	152.7	154.4	148.4
57°	142.5	149.7	147.9	149.7	142.5
58°	139.7	145.0	145.1	145.9	139.7
59°	137.0	142.1	141.3	142.9	137.0
60°	133.0	138.2	136.6	138.2	133.0
61°	128.2	134.4	133.6	135.5	128.2
62°	125.0	131.5	129.4	131.5	125.0
63°	121.1	126.5	125.7	126.7	121.1
64°	116.0	122.7	122.9	123.6	116.0
65°	113.1	119.7	117.7	119.9	113.1
66°	109.3	114.7	113.8	115.7	109.3
67°	104.5	110.9	110.9	112.7	104.5
68°	101.4	107.9	108.0	107.9	101.4
69°	97.4	103.1	102.1	104.0	97.4
70°	93.8	99.5	97.6	101.3	93.8
71°	90.9	96.5	94.6	96.3	90.9
72°	86.1	91.5	90.7	92.5	86.1
73°	82.7	87.9	88.5	87.7	82.7
74°	78.3	85.0	83.7	84.9	78.3
75°	75.7	81.7	79.8	81.5	75.7
76°	72.1	77.3	76.6	77.0	72.1
77°	67.9	74.6	74.0	74.1	67.9
78°	65.3	71.1	71.5	70.8	65.3
79°	62.4	66.8	66.6	67.4	62.4
80°	58.4	64.5	64.2	65.0	58.4
81°	56.1	61.3	60.2	61.0	56.1
82°	53.3	57.2	57.0	57.8	53.3
83°	50.6	55.3	55.0	55.7	50.6
84°	48.5	52.5	52.7	52.2	48.5
85°	45.5	49.2	48.8	49.5	45.5
86°	43.0	47.6	47.0	47.6	43.0
87°	41.2	44.8	43.9	44.5	41.2
88°	38.3	42.6	41.5	42.2	38.3
89°	36.4	40.5	40.2	40.2	36.4



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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
90°	33.6	37.9	37.8	37.6	33.6
91°	32.7	35.7	35.4	35.6	32.7
92°	31.0	34.3	33.9	34.3	31.0
93°	29.8	32.2	32.2	32.7	29.8
94°	27.7	29.5	30.2	30.5	27.7
95°	26.5	26.2	29.1	28.4	26.5
96°	25.1	18.8	27.6	23.7	25.1
97°	24.0	12.5	25.8	16.4	24.0
98°	22.5	8.7	24.7	12.1	22.5
99°	21.6	6.0	23.4	7.4	21.6
100°	20.5	7.9	22.5	5.5	20.5
101°	18.3	10.6	20.5	7.3	18.3
102°	16.7	14.2	18.5	10.9	16.7
103°	15.1	17.2	16.4	15.4	15.1
104°	13.0	17.1	14.9	16.9	13.0
105°	11.4	16.8	12.5	17.1	11.4
106°	9.2	16.4	10.6	16.7	9.2
107°	7.3	16.0	8.8	16.1	7.3
108°	4.8	15.7	6.3	15.9	4.8
109°	3.7	15.1	4.7	15.6	3.7
110°	2.5	14.9	3.6	15.3	2.5
111°	1.5	14.6	1.8	14.9	1.5
112°	1.8	14.2	1.8	14.3	1.8
113°	2.8	14.2	2.2	14.3	2.8
114°	3.4	13.9	2.9	13.9	3.4
115°	4.4	13.8	4.0	13.9	4.4
116°	5.4	13.5	4.4	13.4	5.4
117°	6.3	13.1	5.4	13.1	6.3
118°	7.9	13.1	6.9	12.8	7.9
119°	9.0	12.8	7.7	12.8	9.0
120°	9.5	12.3	8.8	12.5	9.5
121°	10.5	12.1	10.2	12.3	10.5
122°	10.8	11.9	10.8	12.0	10.8
123°	10.6	12.0	10.8	11.9	10.6
124°	10.6	11.4	11.0	11.6	10.6
125°	10.2	11.3	10.8	11.3	10.2
126°	10.0	11.3	10.8	11.3	10.0
127°	9.9	11.0	10.6	10.9	9.9
128°	9.7	10.9	10.6	10.8	9.7
129°	9.5	10.6	10.2	10.6	9.5
130°	9.4	10.6	10.0	10.5	9.4
131°	9.1	10.0	9.7	10.2	9.1
132°	9.0	10.3	9.7	10.2	9.0
133°	8.8	10.2	9.5	10.0	8.8
134°	8.4	9.7	9.4	10.0	8.4





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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
135°	8.7	9.5	9.2	9.4	8.7
136°	8.3	9.4	9.0	9.5	8.3
137°	8.3	9.4	9.0	9.5	8.3
138°	8.1	9.2	8.4	9.2	8.1
139°	8.0	9.0	8.4	9.1	8.0
140°	8.0	9.0	8.3	9.0	8.0
141°	7.9	8.7	8.1	8.8	7.9
142°	7.6	8.7	8.1	8.8	7.6
143°	7.3	8.7	8.0	8.7	7.3
144°	7.4	8.3	7.9	8.4	7.4
145°	7.0	8.4	7.7	8.1	7.0
146°	7.3	8.1	7.6	8.1	7.3
147°	7.0	8.1	7.4	8.1	7.0
148°	6.9	8.1	7.4	7.9	6.9
149°	6.8	8.0	7.3	7.9	6.8
150°	6.8	8.0	7.0	7.7	6.8
151°	6.8	7.9	7.0	7.9	6.8
152°	6.9	7.7	6.9	7.6	6.9
153°	6.8	7.9	6.8	7.7	6.8
154°	6.8	7.7	6.9	7.7	6.8
155°	6.8	7.7	6.8	7.4	6.8
156°	6.8	7.7	6.9	7.6	6.8
157°	6.9	8.0	6.8	7.6	6.9
158°	6.9	8.0	7.3	7.7	6.9
159°	6.9	8.1	7.0	7.9	6.9
160°	7.0	8.0	7.3	8.0	7.0
161°	7.3	8.0	7.4	7.9	7.3
162°	7.3	8.1	7.4	8.0	7.3
163°	7.3	8.0	7.7	8.3	7.3
164°	7.6	8.1	7.7	8.1	7.6
165°	7.6	8.3	7.9	8.3	7.6
166°	7.4	8.3	7.6	8.0	7.4
167°	7.6	8.3	7.9	8.3	7.6
168°	7.4	8.4	7.9	8.0	7.4
169°	7.3	8.1	7.6	8.1	7.3
170°	7.3	8.3	7.6	8.1	7.3
171°	7.3	8.0	7.6	7.9	7.3
172°	6.9	7.9	7.4	7.9	6.9
173°	6.9	7.6	7.3	7.9	6.9
174°	6.8	7.6	7.0	7.4	6.8
175°	6.6	7.4	6.8	7.0	6.6
176°	6.5	7.3	6.5	7.0	6.5
177°	6.5	7.3	6.3	7.0	6.5
178°	7.3	7.4	7.0	6.9	7.3
179°	7.9	7.9	7.6	7.3	7.9



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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
180°	8.0	8.0	8.0	8.0	8.0

(END OF REPORT)