

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: P588655

Luminaire Tested: **FM9WRCCR-5000K**

Issue Date: 12/1/2021

Test Information

Test Method: LM-79-08
Report Number: P588655
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (MXL1053-9A)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 12/1/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: FM9WRCCR-5000K
Description: FM WR CCT SELECT
Light Source: (1) 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

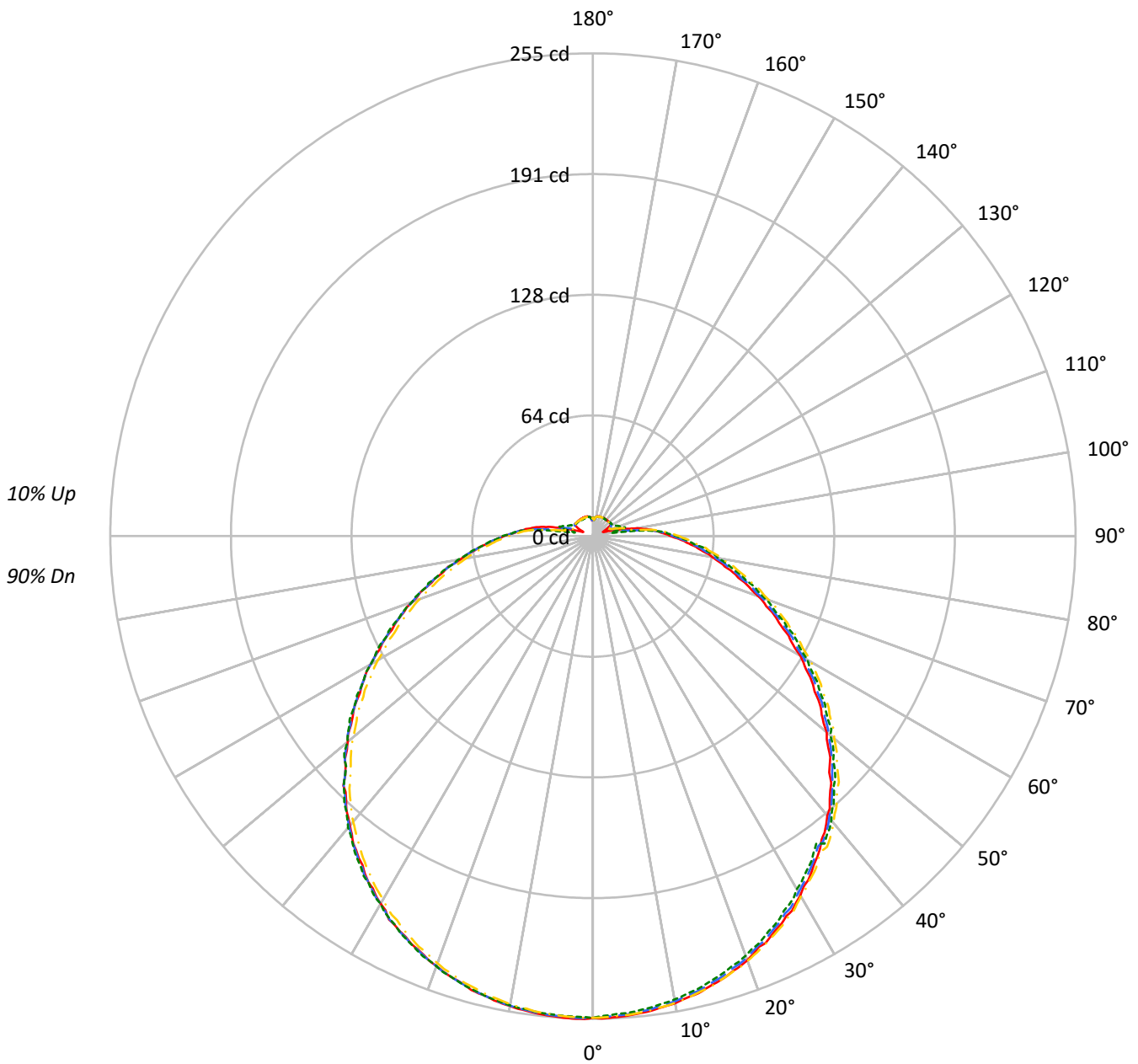
Lumens per Lamp: N/A
Luminaire Lumens: 965.0 lumens
Efficiency: N/A
Efficacy: 93.7 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.42
Luminous Opening: Vertical Cylinder (Dia: 0.75m x H: 0.25m)
CIE Type: Direct

Input Watts (W): 10.3
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	106	106	106	99	99	99	93	93	93	93	93	93	90
1	104	98	93	89	100	95	90	86	89	85	82	83	80	77	78	76	73	78	76	73	70
2	94	85	77	70	90	82	75	69	76	71	66	72	67	63	67	63	60	67	63	60	57
3	85	74	65	58	82	71	63	56	67	60	54	63	57	52	59	54	50	59	54	50	47
4	78	65	55	48	74	63	54	47	59	52	46	55	49	44	52	47	42	52	47	42	40
5	71	58	48	41	68	56	47	40	53	45	39	50	43	38	47	41	36	47	41	36	34
6	66	52	42	36	63	50	41	35	47	40	34	45	38	33	42	36	32	42	36	32	29
7	61	47	38	31	58	45	37	31	43	35	30	41	34	29	38	33	28	38	33	28	26
8	56	43	34	28	54	41	33	27	39	32	27	37	31	26	35	29	25	35	29	25	23
9	53	39	31	25	51	38	30	25	36	29	24	34	28	23	33	27	23	33	27	23	21
10	49	36	28	22	48	35	27	22	33	26	22	32	25	21	30	25	20	30	25	20	19

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	576	576	576	576
5°	556	552	557	556
10°	536	532	539	538
15°	516	511	522	521
20°	498	492	504	505
25°	478	473	487	489
30°	460	452	471	471
35°	441	433	452	455
40°	420	427	435	438
45°	397	407	419	418
50°	377	383	395	396
55°	352	362	375	376
60°	330	342	354	354
65°	305	317	329	334
70°	284	297	310	310
75°	264	277	292	292
80°	245	257	272	277
85°	231	243	260	260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.1	2.5
10°-20°	69.5	7.2
20°-30°	106.6	11.0
30°-40°	131.3	13.6
40°-50°	140.7	14.6
50°-60°	133.6	13.8
60°-70°	113.8	11.8
70°-80°	87.8	9.1
80°-90°	61.5	6.4
90°-100°	35.8	3.7
100°-110°	15.7	1.6
110°-120°	10.2	1.1
120°-130°	10.2	1.1
130°-140°	8.6	0.9
140°-150°	6.8	0.7
150°-160°	5.0	0.5
160°-170°	3.0	0.3
170°-180°	0.9	0.1
0°-30°	200.2	20.7
0°-40°	331.4	34.3
0°-60°	605.7	62.8
0°-90°	868.8	90.0
90°-120°	61.7	6.4
90°-150°	87.3	9.0
90°-180°	96.0	9.9
0°-180°	965.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	254	254	254	254	254	
5°	254	252	254	254	254	24
15°	245	243	248	248	245	69
25°	229	227	234	234	229	106
35°	207	204	212	214	207	129
45°	176	181	186	186	176	137
55°	143	148	153	153	143	128
65°	109	113	117	119	109	108
75°	78	82	86	86	78	82
85°	52	55	58	58	52	45
90°	41	44	47	48	41	23
95°	32	32	37	36	32	25
105°	12	18	15	18	12	14
115°	7	13	6	13	7	7
125°	12	12	11	11	12	10
135°	11	11	11	11	11	9
145°	11	11	11	10	11	7
155°	11	11	11	10	11	5
165°	11	10	11	10	11	3
175°	9	9	9	9	9	1
180°	10	10	10	10	10	



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CANDELA DISTRIBUTION (FULL):

	0°	90°	180°	270°	360°
0°	254.5	254.5	254.5	254.5	254.5
1°	255.0	253.6	255.2	254.1	255.0
2°	254.6	253.3	255.2	254.1	254.6
3°	254.4	252.7	255.0	254.0	254.4
4°	254.1	252.6	254.8	253.8	254.1
5°	253.6	252.1	254.4	253.6	253.6
6°	253.1	251.4	254.2	253.5	253.1
7°	252.7	251.0	253.8	253.1	252.7
8°	251.8	250.0	253.2	252.4	251.8
9°	251.2	249.4	252.9	252.3	251.2
10°	250.6	248.6	252.1	251.7	250.6
11°	249.4	247.6	251.5	251.0	249.4
12°	248.5	246.4	250.8	250.3	248.5
13°	247.9	245.6	249.6	249.7	247.9
14°	246.4	244.3	249.0	248.6	246.4
15°	245.2	242.9	248.2	247.7	245.2
16°	244.2	241.8	246.5	246.9	244.2
17°	242.9	240.3	245.4	245.6	242.9
18°	241.2	238.6	244.5	244.3	241.2
19°	240.1	237.6	243.3	243.6	240.1
20°	238.5	235.9	241.7	241.8	238.5
21°	236.5	233.9	240.6	240.4	236.5
22°	234.0	232.7	238.6	239.5	234.0
23°	233.6	230.7	237.0	237.7	233.6
24°	231.3	228.4	235.9	236.0	231.3
25°	229.2	226.9	233.8	234.5	229.2
26°	227.7	225.0	232.4	232.8	227.7
27°	225.2	222.2	230.6	230.4	225.2
28°	224.2	220.7	229.5	228.9	224.2
29°	221.4	218.6	226.0	227.1	221.4
30°	219.2	215.4	224.3	224.3	219.2
31°	216.2	213.6	222.2	223.0	216.2
32°	214.5	211.1	219.5	220.7	214.5
33°	211.9	208.8	217.8	218.0	211.9
34°	209.0	206.8	215.4	216.6	209.0
35°	206.8	203.5	212.2	213.6	206.8
36°	204.2	200.8	210.4	211.3	204.2
37°	200.8	203.4	207.8	209.1	200.8
38°	198.8	200.6	205.8	206.1	198.8
39°	195.8	198.8	202.5	203.4	195.8
40°	192.7	195.9	199.7	201.2	192.7
41°	190.7	192.4	197.0	197.8	190.7
42°	187.0	190.1	194.7	194.9	187.0
43°	183.8	186.8	191.1	192.7	183.8
44°	181.3	183.3	188.1	189.1	181.3



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
45°	176.5	181.1	186.5	186.1	176.5
46°	174.0	177.7	181.9	182.1	174.0
47°	171.5	173.6	178.7	178.3	171.5
48°	167.4	171.2	176.3	176.6	167.4
49°	163.7	168.0	172.2	174.1	163.7
50°	161.3	163.7	169.1	169.2	161.3
51°	156.8	162.1	166.5	166.7	156.8
52°	153.4	157.7	162.2	163.4	153.4
53°	150.8	154.1	158.9	160.9	150.8
54°	147.3	151.7	156.2	156.7	147.3
55°	143.1	147.5	152.8	153.0	143.1
56°	140.3	144.0	148.5	150.4	140.3
57°	137.0	141.4	145.8	146.0	137.0
58°	132.7	137.1	142.5	142.6	132.7
59°	129.8	133.4	139.7	139.9	129.8
60°	126.5	130.9	135.5	135.6	126.5
61°	122.1	126.7	132.0	132.0	122.1
62°	118.6	123.2	127.6	129.3	118.6
63°	116.1	120.6	124.9	126.0	116.1
64°	111.9	117.3	121.4	121.4	111.9
65°	108.6	113.0	117.2	119.2	108.6
66°	106.0	110.4	114.6	115.6	106.0
67°	102.8	106.0	111.3	111.5	102.8
68°	98.7	103.0	107.9	108.9	98.7
69°	96.4	100.5	105.4	105.4	96.4
70°	93.1	97.2	101.3	101.6	93.1
71°	89.2	93.3	98.0	99.3	89.2
72°	86.6	90.8	95.8	95.9	86.6
73°	83.8	87.9	91.6	91.9	83.8
74°	79.9	83.9	88.5	90.4	79.9
75°	77.9	81.8	86.3	86.3	77.9
76°	74.9	78.7	82.5	83.4	74.9
77°	71.4	75.3	80.3	81.1	71.4
78°	69.6	73.2	78.2	77.5	69.6
79°	66.7	70.3	73.9	74.6	66.7
80°	64.0	67.1	71.1	72.4	64.0
81°	62.1	65.8	68.9	69.1	62.1
82°	59.1	62.4	66.4	66.4	59.1
83°	56.7	59.9	63.0	64.4	56.7
84°	54.8	58.8	61.2	61.0	54.8
85°	52.0	54.8	58.5	58.5	52.0
86°	49.8	52.6	55.6	56.5	49.8
87°	48.1	50.7	53.7	54.4	48.1
88°	45.6	48.3	51.3	51.3	45.6
89°	43.3	45.8	48.6	49.1	43.3



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
90°	41.0	44.2	46.9	47.7	41.0
91°	39.5	41.7	44.7	44.9	39.5
92°	37.7	39.6	42.1	42.7	37.7
93°	35.8	38.3	40.4	41.1	35.8
94°	34.5	35.4	38.9	38.6	34.5
95°	32.5	32.0	36.9	35.5	32.5
96°	31.3	28.1	35.7	31.9	31.3
97°	29.5	21.9	33.3	24.5	29.5
98°	27.2	15.3	31.8	19.0	27.2
99°	25.7	11.4	30.2	15.0	25.7
100°	23.7	9.7	27.7	11.7	23.7
101°	20.8	9.7	25.1	9.7	20.8
102°	18.8	11.2	23.4	10.2	18.8
103°	17.0	14.0	19.9	12.6	17.0
104°	14.4	16.7	17.7	15.8	14.4
105°	12.5	17.6	14.9	17.7	12.5
106°	11.4	17.2	13.2	18.4	11.4
107°	9.9	16.6	11.1	17.3	9.9
108°	8.7	16.2	10.0	17.0	8.7
109°	7.3	15.7	8.3	16.4	7.3
110°	6.4	15.0	7.0	15.5	6.4
111°	5.9	14.7	5.9	14.7	5.9
112°	5.7	14.4	5.6	14.4	5.7
113°	5.6	13.8	5.5	14.1	5.6
114°	6.1	13.4	5.9	13.7	6.1
115°	6.8	13.2	6.4	13.4	6.8
116°	7.6	13.1	7.2	13.0	7.6
117°	8.2	12.8	8.4	12.8	8.2
118°	8.8	12.5	9.0	12.3	8.8
119°	9.7	12.3	9.7	12.0	9.7
120°	10.0	12.1	10.2	12.0	10.0
121°	10.4	11.9	10.9	11.7	10.4
122°	10.9	11.9	11.1	11.5	10.9
123°	11.2	11.7	11.4	11.5	11.2
124°	11.4	11.7	11.4	11.2	11.4
125°	11.5	11.7	11.4	11.2	11.5
126°	11.5	11.7	11.5	11.0	11.5
127°	11.5	11.4	11.1	11.0	11.5
128°	11.5	11.4	11.2	11.0	11.5
129°	11.4	11.4	11.1	11.0	11.4
130°	11.4	11.4	11.1	10.9	11.4
131°	11.4	11.4	11.0	10.9	11.4
132°	11.4	11.2	11.2	10.9	11.4
133°	11.4	11.1	11.1	10.9	11.4
134°	11.4	11.1	11.1	10.9	11.4



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
135°	11.1	11.0	11.0	10.8	11.1
136°	11.2	11.1	11.1	10.8	11.2
137°	11.1	11.1	11.0	10.6	11.1
138°	11.1	11.1	11.0	10.6	11.1
139°	11.1	11.0	11.0	10.5	11.1
140°	11.0	11.0	11.0	10.6	11.0
141°	11.2	10.9	11.1	10.5	11.2
142°	11.0	11.0	11.0	10.3	11.0
143°	11.2	11.0	11.0	10.5	11.2
144°	11.1	11.0	11.1	10.4	11.1
145°	11.1	11.0	10.9	10.4	11.1
146°	11.0	11.0	10.9	10.3	11.0
147°	10.9	11.0	11.1	10.3	10.9
148°	11.1	11.0	10.9	10.4	11.1
149°	11.1	11.0	10.9	10.3	11.1
150°	11.1	11.0	10.9	10.4	11.1
151°	11.1	11.0	10.9	10.3	11.1
152°	11.0	11.1	11.0	10.4	11.0
153°	11.0	11.0	10.9	10.3	11.0
154°	10.9	10.9	11.0	10.3	10.9
155°	10.9	11.0	10.9	10.3	10.9
156°	11.0	11.0	11.0	10.4	11.0
157°	10.9	10.9	11.0	10.2	10.9
158°	10.9	10.9	11.0	10.4	10.9
159°	10.9	10.6	10.8	10.3	10.9
160°	10.8	10.9	10.9	10.4	10.8
161°	10.9	10.8	10.9	10.3	10.9
162°	10.9	10.6	10.8	10.3	10.9
163°	10.6	10.5	10.9	10.3	10.6
164°	10.8	10.6	10.8	10.3	10.8
165°	10.8	10.5	10.8	10.3	10.8
166°	10.6	10.5	10.5	10.4	10.6
167°	10.5	10.5	10.5	10.2	10.5
168°	10.5	10.4	10.5	10.3	10.5
169°	10.6	10.4	10.5	10.3	10.6
170°	10.4	10.3	10.5	10.2	10.4
171°	10.3	10.2	10.3	10.2	10.3
172°	10.0	9.7	10.2	9.9	10.0
173°	9.6	9.4	10.0	9.7	9.6
174°	9.1	8.9	9.7	9.4	9.1
175°	9.0	8.7	9.3	8.8	9.0
176°	8.7	8.5	8.8	8.5	8.7
177°	8.9	9.1	8.2	8.5	8.9
178°	9.6	9.9	8.4	8.5	9.6
179°	9.7	9.7	9.7	8.8	9.7



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
180°	9.7	9.7	9.7	9.7	9.7

(END OF REPORT)