

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: P588641

Luminaire Tested: **FM15WRCCR-3000K**

Issue Date: 12/1/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P588641  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( MXL1053-15A)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 12/1/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: FM15WRCCR-3000K  
Description: FM WR CCT SELECT  
Light Source: (1) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

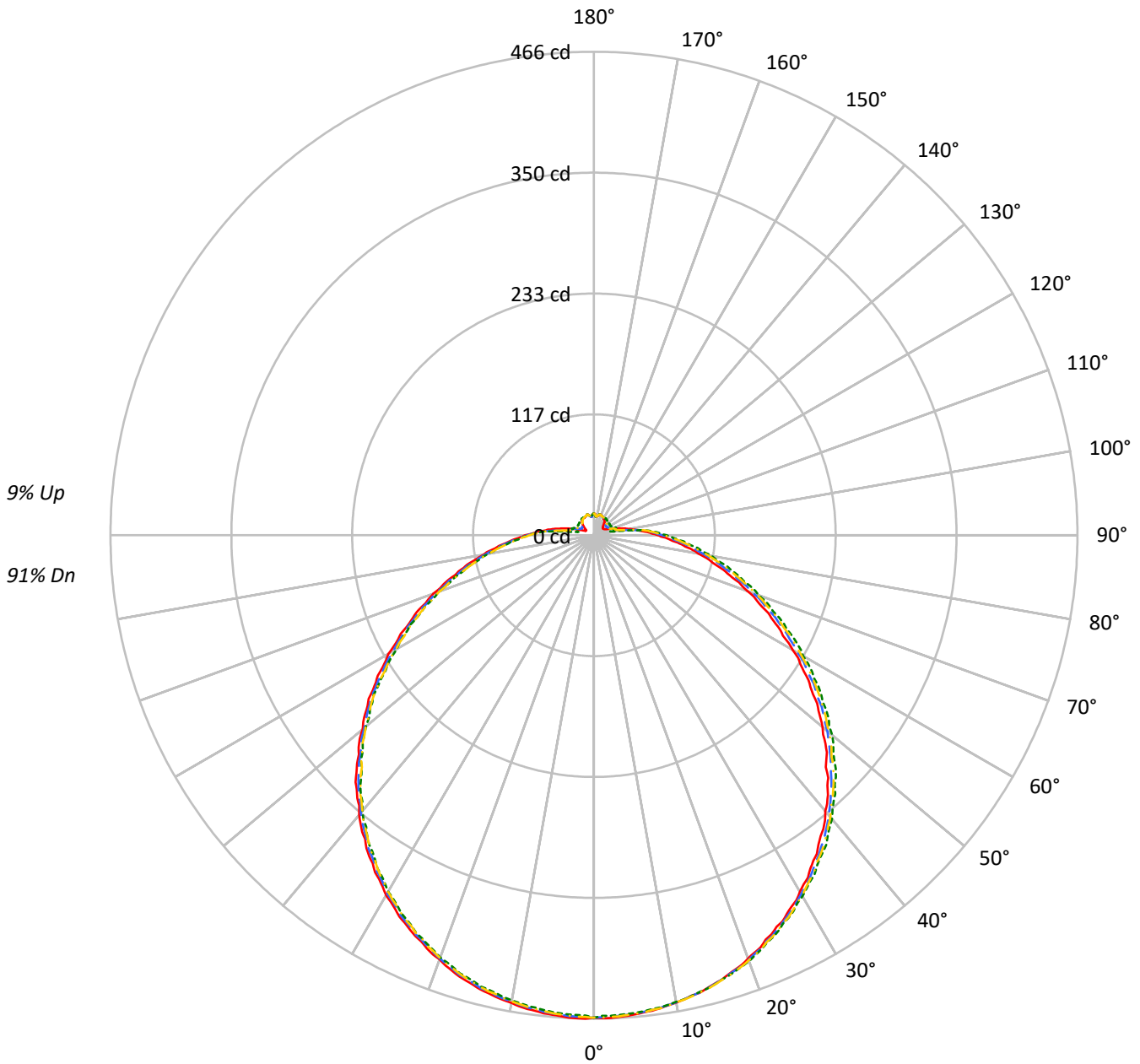
Lumens per Lamp: N/A  
Luminaire Lumens: 1650.0 lumens  
Efficiency: N/A  
Efficacy: 72.4 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.28 / 1.4  
Luminous Opening: Vertical Cylinder (Dia: 1.25m x H: 0.34m)  
CIE Type: Direct

Input Watts (W): 22.8  
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	100	100	100	94	94	94	94	94	94	91
1	105	99	94	90	101	96	92	87	90	86	83	85	82	79	80	77	75	75	75	75	72
2	95	86	78	72	91	83	76	70	78	72	67	73	68	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	57	50	75	64	55	49	60	53	47	57	51	45	54	48	44	44	44	44	41
5	72	59	49	42	69	57	48	42	54	46	40	51	44	39	48	42	38	38	38	38	36
6	66	53	43	37	64	51	43	36	48	41	35	46	39	34	44	38	33	33	33	33	31
7	61	48	39	32	59	46	38	32	44	37	31	42	35	30	40	34	29	29	29	29	27
8	57	43	35	29	55	42	34	28	40	33	28	38	32	27	36	31	26	26	26	26	24
9	53	40	31	26	51	39	31	25	37	30	25	35	29	24	34	28	24	24	24	24	22
10	50	37	29	23	48	36	28	23	34	27	22	33	26	22	31	26	21	21	21	21	20

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

	0°	90°	180°	270°
0°	379	379	379	379
5°	368	367	368	366
10°	357	356	357	355
15°	346	346	346	344
20°	334	336	335	333
25°	322	326	325	322
30°	311	315	314	311
35°	300	304	302	298
40°	286	294	290	286
45°	270	282	277	271
50°	258	269	261	257
55°	242	254	247	242
60°	225	237	233	223
65°	208	223	214	208
70°	192	206	201	194
75°	177	193	185	176
80°	161	182	171	164
85°	152	169	160	153



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.0	2.7
10°-20°	126.4	7.7
20°-30°	192.9	11.7
30°-40°	235.4	14.3
40°-50°	248.4	15.1
50°-60°	231.8	14.0
60°-70°	191.9	11.6
70°-80°	141.5	8.6
80°-90°	92.6	5.6
90°-100°	51.2	3.1
100°-110°	23.8	1.4
110°-120°	15.9	1.0
120°-130°	12.9	0.8
130°-140°	12.8	0.8
140°-150°	11.9	0.7
150°-160°	9.2	0.6
160°-170°	5.7	0.3
170°-180°	1.8	0.1
0°-30°	363.2	22.0
0°-40°	598.6	36.3
0°-60°	1078.9	65.4
0°-90°	1504.8	91.2
90°-120°	90.8	5.5
90°-150°	128.4	7.8
90°-180°	145.0	8.8
0°-180°	1650.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	465	465	465	465	465	
5°	463	462	464	461	463	44
15°	448	448	449	446	448	126
25°	416	421	419	416	416	192
35°	375	380	378	372	375	234
45°	316	330	324	317	316	246
55°	255	268	260	254	255	228
65°	189	202	194	188	189	187
75°	129	141	135	129	129	137
85°	81	90	85	81	81	70
90°	62	70	66	62	62	34
95°	47	52	49	42	47	36
105°	25	18	25	20	25	27
115°	14	19	11	18	14	14
125°	11	18	10	18	11	10
135°	13	19	16	19	13	10
145°	18	19	19	20	18	11
155°	20	20	20	20	20	9
165°	20	21	20	20	20	6
175°	20	18	19	20	20	2
180°	21	21	21	21	21	



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**CANDELA DISTRIBUTION (FULL):**

	0°	90°	180°	270°	360°
0°	465.0	465.0	465.0	465.0	465.0
1°	465.7	463.4	466.1	463.1	465.7
2°	465.6	463.4	465.8	462.8	465.6
3°	464.9	463.0	465.6	462.5	464.9
4°	464.3	462.5	464.6	461.9	464.3
5°	463.4	462.1	463.9	461.2	463.4
6°	462.4	461.3	463.3	460.2	462.4
7°	461.6	460.2	461.9	458.9	461.6
8°	460.3	459.7	461.2	458.0	460.3
9°	458.6	458.2	459.8	456.6	458.6
10°	457.5	456.7	457.7	455.2	457.5
11°	455.8	455.6	456.6	453.9	455.8
12°	453.5	454.0	454.9	451.6	453.5
13°	452.7	452.0	453.0	449.8	452.7
14°	450.0	450.6	451.5	448.5	450.0
15°	447.7	448.5	448.9	445.6	447.7
16°	445.8	445.8	446.7	443.3	445.8
17°	442.7	444.0	444.7	441.6	442.7
18°	440.2	441.6	441.5	438.0	440.2
19°	438.0	439.4	438.8	435.3	438.0
20°	434.1	437.0	435.1	433.2	434.1
21°	431.1	433.6	432.9	429.2	431.1
22°	428.7	430.6	429.7	426.0	428.7
23°	423.6	426.7	425.6	422.7	423.6
24°	421.0	424.2	422.9	420.3	421.0
25°	416.4	420.7	419.4	415.6	416.4
26°	414.3	416.2	415.9	412.0	414.3
27°	409.5	413.6	412.7	408.9	409.5
28°	405.5	410.0	408.0	404.0	405.5
29°	402.3	405.0	404.0	399.9	402.3
30°	397.0	401.9	400.7	396.7	397.0
31°	392.5	397.6	395.2	391.3	392.5
32°	389.2	393.4	390.8	386.5	389.2
33°	383.0	390.1	387.4	383.1	383.0
34°	378.3	384.4	381.4	377.2	378.3
35°	374.7	379.8	377.7	372.3	374.7
36°	368.4	376.2	373.0	368.6	368.4
37°	363.1	372.6	366.6	363.2	363.1
38°	359.3	366.2	362.9	356.7	359.3
39°	353.8	361.3	357.5	352.8	353.8
40°	347.0	357.1	352.0	347.1	347.0
41°	342.6	350.7	345.0	340.2	342.6
42°	336.9	345.2	341.0	336.0	336.9
43°	329.8	341.0	335.3	330.2	329.8
44°	325.1	334.0	330.8	322.6	325.1



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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
45°	316.0	329.8	323.5	316.7	316.0
46°	311.4	324.0	317.4	312.3	311.4
47°	306.8	316.5	309.8	304.4	306.8
48°	300.4	310.5	305.3	299.9	300.4
49°	292.6	305.8	299.0	293.4	292.6
50°	287.7	299.8	291.0	286.8	287.7
51°	281.2	291.7	286.2	278.7	281.2
52°	274.7	287.1	279.8	273.9	274.7
53°	269.5	280.3	273.2	267.5	269.5
54°	261.2	272.5	268.3	262.5	261.2
55°	254.7	267.5	260.1	254.4	254.7
56°	249.6	261.0	253.5	247.5	249.6
57°	241.4	252.9	248.4	239.3	241.4
58°	234.6	247.9	240.2	234.2	234.6
59°	229.7	241.1	233.5	227.5	229.7
60°	221.4	232.9	228.7	219.2	221.4
61°	214.7	228.0	220.2	214.4	214.7
62°	206.3	221.5	213.8	208.0	206.3
63°	201.7	215.0	208.9	201.3	201.7
64°	195.1	206.9	200.5	196.6	195.1
65°	188.6	202.0	194.1	188.5	188.6
66°	183.9	195.6	189.3	182.2	183.9
67°	175.8	187.5	183.1	177.4	175.8
68°	169.6	182.7	175.0	169.6	169.6
69°	165.1	176.6	170.5	163.5	165.1
70°	157.5	169.0	164.5	158.8	157.5
71°	151.2	164.4	156.7	151.5	151.2
72°	147.0	158.4	152.3	145.3	147.0
73°	139.6	150.9	146.5	141.1	139.6
74°	133.9	146.7	139.3	134.1	133.9
75°	129.4	140.8	135.0	128.7	129.4
76°	122.7	135.4	129.4	124.7	122.7
77°	117.4	131.4	125.5	119.1	117.4
78°	113.5	124.5	118.7	112.6	113.5
79°	108.4	119.1	113.3	109.0	108.4
80°	102.1	115.4	108.4	103.9	102.1
81°	98.6	109.0	104.6	97.9	98.6
82°	94.0	103.9	98.6	94.4	94.0
83°	88.5	100.5	94.0	90.2	88.5
84°	85.0	94.5	90.5	84.6	85.0
85°	80.8	89.9	84.9	81.3	80.8
86°	75.7	86.7	80.9	77.3	75.7
87°	72.7	81.2	77.6	72.4	72.7
88°	68.8	76.9	72.6	70.6	68.8
89°	64.4	74.0	68.8	66.1	64.4



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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
90°	61.7	70.0	66.1	62.2	61.7
91°	58.4	65.4	61.6	59.8	58.4
92°	55.2	62.9	58.1	55.5	55.2
93°	53.0	59.6	55.8	52.4	53.0
94°	49.4	55.2	52.7	49.7	49.4
95°	46.7	52.5	49.1	42.5	46.7
96°	43.6	47.0	46.4	36.0	43.6
97°	41.8	38.8	44.3	31.2	41.8
98°	39.4	33.8	41.1	24.0	39.4
99°	37.5	27.8	39.3	20.1	37.5
100°	34.7	21.8	36.6	18.3	34.7
101°	32.5	19.2	33.6	16.6	32.5
102°	31.1	17.5	31.8	15.4	31.1
103°	28.8	16.1	29.4	15.8	28.8
104°	26.6	15.8	26.7	18.1	26.6
105°	25.4	17.9	24.9	20.1	25.4
106°	23.8	19.9	23.2	21.4	23.8
107°	21.9	21.0	21.2	22.4	21.9
108°	21.0	22.5	19.1	21.6	21.0
109°	19.7	22.5	17.6	21.1	19.7
110°	18.2	21.9	16.1	20.5	18.2
111°	17.5	21.0	14.2	20.0	17.5
112°	16.6	20.6	13.4	19.6	16.6
113°	15.5	20.3	12.4	19.3	15.5
114°	14.9	19.7	11.2	18.8	14.9
115°	14.0	19.3	10.8	18.5	14.0
116°	13.2	19.2	10.1	18.5	13.2
117°	12.8	18.8	9.4	18.3	12.8
118°	12.4	18.8	9.4	18.2	12.4
119°	12.1	18.5	8.8	18.2	12.1
120°	11.8	18.5	8.7	17.8	11.8
121°	11.5	18.4	8.7	17.9	11.5
122°	11.2	18.3	8.8	18.1	11.2
123°	11.0	18.2	8.8	18.2	11.0
124°	11.0	18.4	9.0	17.9	11.0
125°	10.9	18.4	9.6	18.2	10.9
126°	10.9	18.4	10.3	18.3	10.9
127°	10.9	18.5	10.8	18.2	10.9
128°	11.0	18.5	11.5	18.3	11.0
129°	10.9	18.7	12.1	18.4	10.9
130°	11.0	18.5	12.7	18.5	11.0
131°	11.4	18.8	13.4	18.7	11.4
132°	11.5	18.5	13.9	18.5	11.5
133°	11.8	19.0	14.6	18.7	11.8
134°	12.1	19.0	14.8	18.8	12.1





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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
135°	12.7	19.0	15.7	19.1	12.7
136°	13.0	19.0	16.0	19.0	13.0
137°	13.4	19.0	16.7	19.1	13.4
138°	14.2	19.1	17.3	19.1	14.2
139°	14.6	19.2	17.6	19.3	14.6
140°	15.5	19.3	17.9	19.3	15.5
141°	15.7	19.4	18.4	19.4	15.7
142°	16.6	19.4	18.5	19.6	16.6
143°	16.9	19.4	19.0	19.4	16.9
144°	17.2	19.7	19.1	19.9	17.2
145°	17.5	19.4	19.3	19.9	17.5
146°	17.9	19.7	19.4	19.6	17.9
147°	18.2	19.6	19.3	19.9	18.2
148°	18.4	19.7	19.4	19.7	18.4
149°	18.5	19.7	19.3	19.7	18.5
150°	18.7	19.6	19.4	19.9	18.7
151°	19.1	19.7	19.3	20.0	19.1
152°	19.2	19.7	19.3	19.9	19.2
153°	19.4	20.0	19.4	20.0	19.4
154°	19.4	20.0	19.6	20.0	19.4
155°	19.7	20.0	19.7	20.0	19.7
156°	20.0	20.0	19.7	20.2	20.0
157°	19.9	20.1	19.7	20.1	19.9
158°	20.2	20.2	20.0	20.1	20.2
159°	20.0	20.3	20.3	20.2	20.0
160°	20.5	20.2	20.6	20.6	20.5
161°	20.7	20.3	20.6	20.9	20.7
162°	21.1	20.5	21.2	21.0	21.1
163°	21.1	20.7	21.1	20.9	21.1
164°	20.9	20.7	21.0	20.7	20.9
165°	20.2	21.0	20.3	20.1	20.2
166°	19.7	20.6	19.9	19.7	19.7
167°	19.4	20.3	19.4	19.4	19.4
168°	19.1	20.1	19.0	19.1	19.1
169°	18.7	19.6	18.7	18.5	18.7
170°	19.0	19.3	18.4	18.3	19.0
171°	18.7	19.0	18.1	17.8	18.7
172°	18.4	18.7	18.2	17.5	18.4
173°	18.1	18.3	17.8	17.3	18.1
174°	18.4	17.9	18.3	18.1	18.4
175°	19.6	17.8	19.2	19.7	19.6
176°	20.1	19.1	20.0	20.2	20.1
177°	20.7	19.6	20.3	20.5	20.7
178°	20.7	20.3	20.9	21.0	20.7
179°	20.9	20.6	20.7	21.0	20.9



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**CANDELA DISTRIBUTION (continued):**

	0°	90°	180°	270°	360°
180°	20.7	20.7	20.7	20.7	20.7

(END OF REPORT)