

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: P588638

Luminaire Tested: **FM11WSCCR-3000K**

Issue Date: 12/1/2021

Test Information

Test Method: LM-79-08
Report Number: P588638
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (MXL1052-11A)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 12/1/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: FM11WSCCR-3000K
Description: FM WS CCT SELECT
Light Source: (1) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

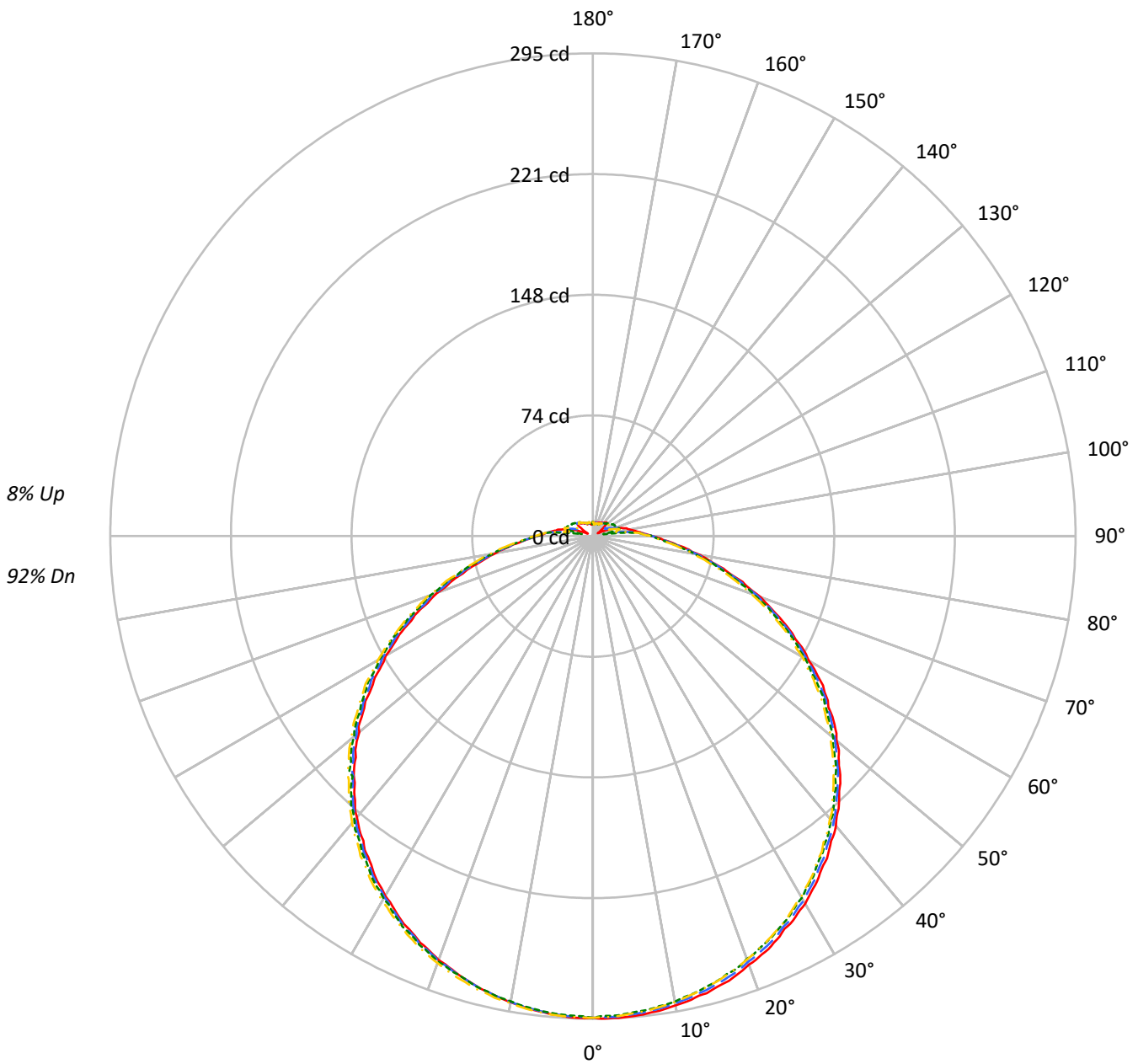
Lumens per Lamp: N/A
Luminaire Lumens: 1050.1 lumens
Efficiency: N/A
Efficacy: 75.0 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.29 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.92m x L: 0.92m x H: 0.25m)
CIE Type: Direct

Input Watts (W): 14
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



TEST NUMBER: P588638
CATALOG NUMBER: FM11WSCCR-3000K

Luminous Intensity Polar Plot



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



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CATALOG NUMBER: FM11WSCCR-3000K

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	100	95	90	102	97	92	88	91	87	84	85	83	80	81	78	76	76	76	76	73
2	95	86	79	72	92	83	77	71	78	73	68	74	69	65	70	66	62	62	62	62	60
3	86	75	66	59	83	73	65	58	69	62	56	65	59	54	61	56	52	52	52	52	50
4	79	66	57	50	76	64	56	49	61	53	47	57	51	46	54	49	44	44	44	44	42
5	72	59	49	43	69	57	48	42	54	47	41	51	45	40	49	43	38	38	38	38	36
6	67	53	44	37	64	51	43	36	49	41	35	46	40	34	44	38	34	34	34	34	31
7	62	48	39	32	59	47	38	32	44	37	31	42	35	30	40	34	30	30	30	30	27
8	57	43	35	29	55	42	34	28	40	33	28	38	32	27	37	31	26	26	26	26	24
9	53	40	31	26	52	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	23	33	26	22	31	26	22	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	350	350	350	350
5°	343	340	342	341
10°	336	333	333	333
15°	328	325	325	325
20°	321	317	317	319
25°	314	310	309	311
30°	308	303	301	303
35°	299	294	292	295
40°	292	286	283	286
45°	283	277	273	275
50°	271	268	260	266
55°	262	257	249	255
60°	246	242	236	244
65°	233	227	218	226
70°	217	208	200	210
75°	194	189	181	190
80°	178	170	163	167
85°	163	155	149	154



TEST NUMBER: P588638
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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.9	2.7
10°-20°	80.2	7.6
20°-30°	123.2	11.7
30°-40°	151.7	14.4
40°-50°	161.9	15.4
50°-60°	152.9	14.6
60°-70°	126.0	12.0
70°-80°	87.8	8.4
80°-90°	52.1	5.0
90°-100°	27.5	2.6
100°-110°	16.7	1.6
110°-120°	10.8	1.0
120°-130°	9.5	0.9
130°-140°	8.7	0.8
140°-150°	6.1	0.6
150°-160°	3.9	0.4
160°-170°	2.3	0.2
170°-180°	0.7	0.1
0°-30°	231.3	22.0
0°-40°	383.1	36.5
0°-60°	697.9	66.5
0°-90°	963.8	91.8
90°-120°	55.0	5.2
90°-150°	79.3	7.5
90°-180°	86.0	8.2
0°-180°	1050.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	294	294	294	294	294	
5°	294	292	293	293	294	28
15°	286	283	283	284	286	81
25°	270	266	265	267	270	125
35°	246	241	240	242	246	154
45°	214	209	207	208	214	165
55°	175	172	167	171	175	156
65°	131	128	123	127	131	130
75°	85	83	80	83	85	91
85°	49	47	45	47	49	43
90°	36	37	34	34	36	20
95°	28	24	27	25	28	22
105°	19	17	16	17	19	20
115°	8	15	3	16	8	8
125°	6	13	10	14	6	5
135°	12	11	11	12	12	9
145°	10	9	10	10	10	6
155°	9	8	8	9	9	4
165°	9	8	8	9	9	2
175°	8	7	7	7	8	1
180°	8	8	8	8	8	



TEST NUMBER: P588638

CATALOG NUMBER: FM11WSCCR-3000K

CANDELA DISTRIBUTION (FULL):

	0°	90°	180°	270°	360°
0°	294.4	294.4	294.4	294.4	294.4
1°	295.0	293.4	294.7	293.6	295.0
2°	294.9	293.4	294.6	293.4	294.9
3°	294.9	293.3	294.3	293.3	294.9
4°	294.6	292.6	293.7	292.9	294.6
5°	294.3	292.0	293.3	292.6	294.3
6°	294.0	291.7	292.6	292.0	294.0
7°	293.3	291.2	291.9	291.3	293.3
8°	292.9	290.2	291.3	290.7	292.9
9°	292.0	289.7	290.3	289.9	292.0
10°	291.2	288.9	289.3	288.7	291.2
11°	290.5	287.5	288.3	288.0	290.5
12°	289.7	286.6	287.2	287.2	289.7
13°	288.2	285.6	285.9	285.8	288.2
14°	287.9	284.2	284.9	284.9	287.9
15°	286.3	283.1	283.3	283.6	286.3
16°	285.1	281.8	281.9	281.9	285.1
17°	284.2	279.9	280.5	280.5	284.2
18°	282.5	279.1	278.6	279.5	282.5
19°	280.8	277.4	276.9	277.8	280.8
20°	278.8	275.1	275.7	276.7	278.8
21°	277.5	273.8	273.5	274.7	277.5
22°	275.8	271.8	271.5	272.8	275.8
23°	274.4	270.0	270.0	271.4	274.4
24°	272.0	268.5	267.4	268.8	272.0
25°	270.1	266.3	265.4	267.1	270.1
26°	267.0	264.1	263.7	265.5	267.0
27°	265.9	262.4	261.2	262.8	265.9
28°	263.7	259.7	258.4	260.5	263.7
29°	261.2	257.1	255.8	257.5	261.2
30°	259.5	255.4	254.0	255.8	259.5
31°	256.6	252.4	250.9	253.0	256.6
32°	254.0	249.9	248.7	251.0	254.0
33°	251.7	247.7	245.9	248.4	251.7
34°	248.3	244.0	242.3	245.0	248.3
35°	245.6	241.3	239.5	242.0	245.6
36°	243.5	239.1	237.2	239.8	243.5
37°	239.9	235.4	233.1	236.1	239.9
38°	236.5	233.1	230.8	233.1	236.5
39°	234.2	229.8	227.7	230.9	234.2
40°	231.1	226.5	224.3	226.7	231.1
41°	227.1	224.1	221.7	223.4	227.1
42°	224.4	220.0	217.3	221.0	224.4
43°	220.8	216.4	214.0	216.6	220.8
44°	216.7	213.9	209.6	213.0	216.7



TEST NUMBER: P588638
 CATALOG NUMBER: FM11WSCCR-3000K

CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
45°	213.9	209.3	206.7	207.8	213.9
46°	210.2	206.6	202.9	207.0	210.2
47°	205.7	202.9	198.2	202.2	205.7
48°	202.2	198.5	195.3	199.2	202.2
49°	199.3	194.5	191.3	195.2	199.3
50°	194.3	191.8	186.4	190.5	194.3
51°	191.5	187.6	184.4	187.4	191.5
52°	187.4	182.8	179.3	183.5	187.4
53°	183.4	179.5	175.0	178.4	183.4
54°	178.0	175.3	171.9	175.3	178.0
55°	175.3	172.3	166.7	171.1	175.3
56°	170.9	167.2	162.3	167.0	170.9
57°	167.6	162.7	159.1	163.9	167.6
58°	162.3	157.5	153.8	158.5	162.3
59°	157.9	153.9	149.2	153.9	157.9
60°	152.5	149.9	146.1	150.8	152.5
61°	148.9	144.5	140.7	145.2	148.9
62°	144.8	141.1	136.4	140.8	144.8
63°	138.9	136.7	132.8	137.5	138.9
64°	135.5	132.3	128.1	131.7	135.5
65°	131.0	127.6	122.6	127.1	131.0
66°	126.3	123.0	119.2	123.7	126.3
67°	121.7	118.5	114.6	117.9	121.7
68°	117.3	115.0	108.8	113.2	117.3
69°	112.8	109.4	105.5	110.1	112.8
70°	109.2	104.8	100.8	105.4	109.2
71°	103.4	101.4	95.1	99.7	103.4
72°	98.8	95.8	91.7	96.3	98.8
73°	95.7	91.4	87.7	91.9	95.7
74°	89.7	88.3	82.7	86.4	89.7
75°	85.4	82.8	79.6	83.3	85.4
76°	82.3	78.7	75.4	79.0	82.3
77°	77.0	75.6	70.5	73.9	77.0
78°	73.0	71.7	67.6	70.8	73.0
79°	70.0	66.8	64.1	66.8	70.0
80°	66.3	63.1	60.5	62.2	66.3
81°	61.5	60.4	58.1	59.7	61.5
82°	59.1	56.1	54.0	56.0	59.1
83°	55.7	53.5	50.8	52.0	55.7
84°	51.5	50.3	48.8	49.7	51.5
85°	49.1	46.7	45.0	46.6	49.1
86°	46.3	43.9	42.6	43.9	46.3
87°	42.9	42.0	40.6	41.3	42.9
88°	41.2	38.9	37.9	38.7	41.2
89°	38.9	37.3	35.8	36.9	38.9



TEST NUMBER: P588638
 CATALOG NUMBER: FM11WSCCR-3000K

CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
90°	36.0	36.6	34.2	33.9	36.0
91°	34.6	32.8	32.1	32.9	34.6
92°	32.6	30.8	30.5	31.5	32.6
93°	30.9	29.8	29.6	29.6	30.9
94°	29.8	28.0	28.3	28.3	29.8
95°	28.3	23.8	26.7	25.2	28.3
96°	26.9	20.6	25.9	19.8	26.9
97°	26.2	16.2	24.8	16.5	26.2
98°	24.8	10.7	23.6	12.0	24.8
99°	23.9	8.0	22.5	8.3	23.9
100°	23.0	6.5	22.2	6.8	23.0
101°	22.2	8.3	20.9	7.4	22.2
102°	21.5	10.5	19.5	10.1	21.5
103°	21.1	13.5	18.6	12.1	21.1
104°	19.9	16.4	17.2	15.6	19.9
105°	18.8	16.8	15.8	17.4	18.8
106°	17.9	16.8	14.7	17.8	17.9
107°	16.8	16.5	13.4	17.4	16.8
108°	15.8	16.4	11.7	16.9	15.8
109°	13.9	16.1	10.7	16.9	13.9
110°	13.9	15.9	9.2	16.6	13.9
111°	12.2	15.6	7.4	16.5	12.2
112°	11.0	15.5	6.3	16.4	11.0
113°	9.8	15.4	5.0	16.2	9.8
114°	8.8	15.1	3.7	16.1	8.8
115°	7.5	14.9	3.4	15.8	7.5
116°	6.7	14.7	3.3	15.6	6.7
117°	5.1	14.7	3.6	15.4	5.1
118°	4.3	14.7	4.0	15.1	4.3
119°	3.4	14.2	4.8	14.8	3.4
120°	3.4	14.1	6.0	14.7	3.4
121°	3.6	13.8	6.5	14.7	3.6
122°	4.3	13.7	7.7	14.4	4.3
123°	4.7	13.2	8.1	14.1	4.7
124°	5.5	13.2	9.1	13.9	5.5
125°	6.0	12.9	10.1	13.8	6.0
126°	6.5	12.7	11.0	13.4	6.5
127°	7.3	12.4	11.5	13.5	7.3
128°	7.8	12.2	12.2	13.1	7.8
129°	8.7	12.1	12.0	12.9	8.7
130°	9.7	12.0	12.0	12.9	9.7
131°	10.1	11.7	11.7	12.5	10.1
132°	11.0	11.5	11.8	12.2	11.0
133°	11.5	11.2	11.4	12.2	11.5
134°	11.8	11.2	11.1	12.1	11.8



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
135°	11.7	10.8	11.1	11.7	11.7
136°	11.5	10.5	10.8	11.8	11.5
137°	11.1	10.5	10.5	11.5	11.1
138°	11.1	10.5	10.4	11.2	11.1
139°	11.0	10.2	10.5	11.0	11.0
140°	10.5	10.0	10.4	10.8	10.5
141°	10.4	9.8	10.0	10.5	10.4
142°	10.5	9.7	10.1	10.4	10.5
143°	10.2	9.5	10.0	10.2	10.2
144°	10.0	9.2	9.8	10.1	10.0
145°	9.8	9.1	9.7	10.1	9.8
146°	9.7	9.1	9.4	10.0	9.7
147°	9.5	9.0	9.4	9.7	9.5
148°	9.5	9.0	9.2	9.5	9.5
149°	9.4	8.8	9.1	9.5	9.4
150°	9.4	8.7	8.7	9.2	9.4
151°	9.1	8.4	8.8	9.1	9.1
152°	9.0	8.1	8.5	8.8	9.0
153°	9.0	8.3	8.4	9.0	9.0
154°	8.7	8.1	8.1	8.8	8.7
155°	9.0	8.0	8.3	8.7	9.0
156°	8.8	8.1	8.0	8.7	8.8
157°	8.5	8.0	8.1	8.4	8.5
158°	8.5	8.0	8.1	8.5	8.5
159°	8.7	7.8	8.1	8.4	8.7
160°	8.4	8.0	8.1	8.4	8.4
161°	8.5	7.8	7.8	8.4	8.5
162°	8.5	7.8	8.1	8.7	8.5
163°	8.7	7.8	8.1	8.8	8.7
164°	8.8	8.1	8.1	8.7	8.8
165°	8.7	8.1	8.4	8.7	8.7
166°	8.8	8.1	8.1	8.5	8.8
167°	8.7	8.0	7.8	8.4	8.7
168°	8.5	7.7	7.7	8.1	8.5
169°	8.3	7.5	7.7	8.1	8.3
170°	8.4	7.5	7.4	8.0	8.4
171°	8.3	7.4	7.7	7.7	8.3
172°	8.3	7.4	7.5	7.7	8.3
173°	8.0	7.3	7.1	7.5	8.0
174°	7.7	7.1	7.1	7.4	7.7
175°	7.8	7.0	7.0	7.1	7.8
176°	7.7	7.4	7.8	7.1	7.7
177°	7.8	8.4	8.4	8.0	7.8
178°	8.4	8.5	8.4	8.5	8.4
179°	8.5	8.4	8.4	8.7	8.5



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
180°	8.5	8.5	8.5	8.5	8.5

(END OF REPORT)