

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: P588635

Luminaire Tested: **FM11WRCCR-3000K**

Issue Date: 12/1/2021

Test Information

Test Method: LM-79-08
Report Number: P588635
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (MXL1053-11A)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 12/1/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: FM11WRCCR-3000K
Description: FM WR CCT SELECT
Light Source: (1) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

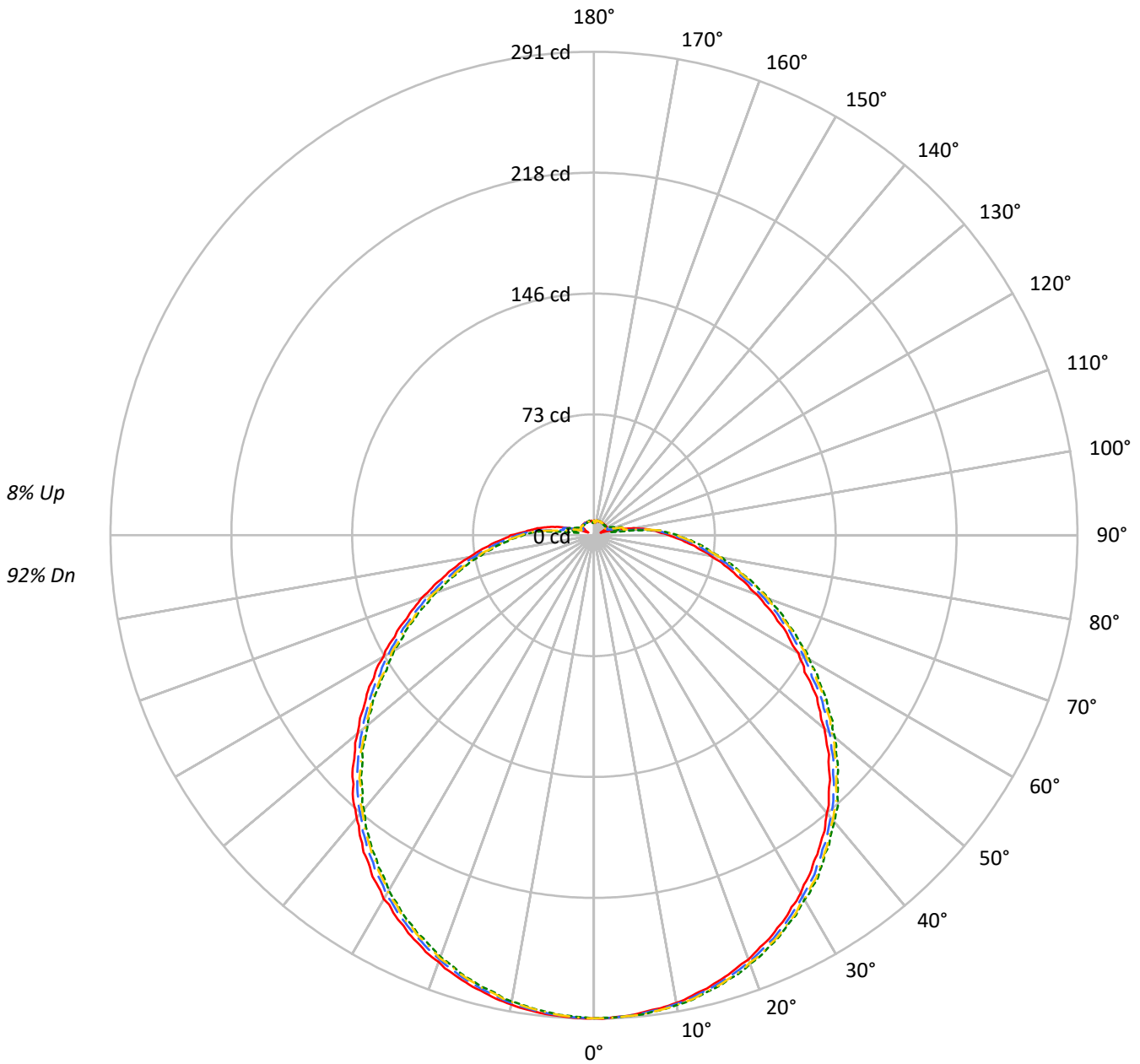
Lumens per Lamp: N/A
Luminaire Lumens: 1050.0 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.28 / 1.4
Luminous Opening: Vertical Cylinder (Dia: 0.92m x H: 0.25m)
CIE Type: Direct

Input Watts (W): 12.8
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	92
1	105	99	94	89	101	96	91	87	90	86	83	85	81	79	80	77	75	80	77	75	72
2	94	85	77	71	91	82	75	70	77	72	67	73	68	64	69	65	61	69	65	61	58
3	86	74	65	58	82	72	64	57	68	61	55	64	58	53	60	55	51	60	55	51	48
4	78	65	56	49	75	63	55	48	60	52	47	56	50	45	53	48	43	53	48	43	41
5	72	58	49	42	69	57	48	41	53	46	40	51	44	39	48	42	38	48	42	38	35
6	66	52	43	36	64	51	42	36	48	40	35	46	39	34	43	37	33	43	37	33	31
7	61	47	38	32	59	46	38	31	44	36	31	42	35	30	39	34	29	39	34	29	27
8	57	43	34	28	55	42	34	28	40	33	27	38	31	27	36	30	26	36	30	26	24
9	53	39	31	25	51	38	31	25	37	30	24	35	29	24	33	28	23	33	28	23	21
10	50	36	28	23	48	35	28	23	34	27	22	32	26	22	31	25	21	31	25	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	441	441	441	441
5°	427	428	428	426
10°	414	416	416	413
15°	401	405	404	399
20°	389	393	391	387
25°	375	382	380	373
30°	363	369	369	360
35°	349	358	354	345
40°	334	345	340	330
45°	318	329	327	314
50°	302	316	310	296
55°	284	301	295	279
60°	269	283	277	263
65°	251	267	263	244
70°	236	254	250	230
75°	222	239	235	214
80°	210	232	224	202
85°	201	224	217	192



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.5	2.6
10°-20°	79.2	7.5
20°-30°	121.0	11.5
30°-40°	147.8	14.1
40°-50°	156.4	14.9
50°-60°	146.6	14.0
60°-70°	124.0	11.8
70°-80°	94.8	9.0
80°-90°	65.1	6.2
90°-100°	35.7	3.4
100°-110°	15.8	1.5
110°-120°	8.4	0.8
120°-130°	7.9	0.8
130°-140°	6.9	0.7
140°-150°	5.5	0.5
150°-160°	4.1	0.4
160°-170°	2.5	0.2
170°-180°	0.8	0.1
0°-30°	227.7	21.7
0°-40°	375.5	35.8
0°-60°	678.4	64.6
0°-90°	962.3	91.7
90°-120°	59.9	5.7
90°-150°	80.3	7.6
90°-180°	88.0	8.4
0°-180°	1050.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	291	291	291	291	291	
5°	289	290	290	289	289	28
15°	280	282	282	278	280	79
25°	261	266	264	259	261	120
35°	234	240	238	232	234	147
45°	200	207	206	197	200	155
55°	161	171	167	158	161	144
65°	122	130	128	119	122	121
75°	87	94	92	84	87	92
85°	57	64	62	55	57	50
90°	45	50	50	43	45	25
95°	35	35	38	25	35	26
105°	12	18	18	16	12	14
115°	6	12	4	11	6	6
125°	9	9	8	9	9	8
135°	9	9	9	9	9	7
145°	9	9	9	9	9	6
155°	9	9	9	9	9	4
165°	9	9	9	9	9	3
175°	7	8	8	7	7	1
180°	9	9	9	9	9	



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CANDELA DISTRIBUTION (FULL):

	0°	90°	180°	270°	360°
0°	290.8	290.8	290.8	290.8	290.8
1°	291.1	290.5	290.9	290.3	291.1
2°	290.6	290.6	290.8	290.1	290.6
3°	290.2	290.5	290.5	289.7	290.2
4°	289.9	290.2	290.2	289.4	289.9
5°	289.4	290.1	289.9	288.7	289.4
6°	288.5	289.9	289.6	288.0	288.5
7°	287.9	289.0	289.0	287.5	287.9
8°	287.5	288.7	288.4	286.6	287.5
9°	286.7	288.0	287.8	285.6	286.7
10°	285.8	287.2	286.8	284.9	285.8
11°	284.9	286.5	285.9	284.0	284.9
12°	283.4	285.8	285.1	282.0	283.4
13°	282.0	284.3	283.7	280.9	282.0
14°	281.2	283.1	282.4	280.0	281.2
15°	279.5	282.2	281.5	278.2	279.5
16°	278.1	280.9	280.0	277.0	278.1
17°	276.6	279.2	278.5	275.4	276.6
18°	274.7	278.3	277.0	273.2	274.7
19°	273.0	276.7	275.6	271.6	273.0
20°	271.8	274.7	273.3	270.1	271.8
21°	269.5	273.3	272.0	267.7	269.5
22°	267.3	271.6	270.4	265.5	267.3
23°	265.6	269.2	267.9	263.3	265.6
24°	263.7	267.7	266.2	261.8	263.7
25°	260.8	265.5	264.2	259.0	260.8
26°	259.1	263.1	261.4	257.2	259.1
27°	256.6	260.7	259.7	254.8	256.6
28°	253.4	259.0	257.3	251.6	253.4
29°	251.6	255.9	254.1	249.5	251.6
30°	248.8	253.4	252.9	246.9	248.8
31°	245.4	251.6	249.5	243.2	245.4
32°	243.2	248.7	246.9	240.3	243.2
33°	240.3	246.9	244.9	238.1	240.3
34°	236.7	243.3	241.0	234.4	236.7
35°	234.4	240.5	238.1	232.1	234.4
36°	231.2	236.7	235.9	228.7	231.2
37°	228.1	234.9	231.9	225.6	228.1
38°	225.6	230.9	229.0	222.9	225.6
39°	221.6	227.9	224.9	218.8	221.6
40°	218.1	225.3	222.2	215.4	218.1
41°	215.4	221.9	218.8	212.7	215.4
42°	211.1	219.4	216.3	208.1	211.1
43°	207.5	214.9	212.9	204.7	207.5
44°	204.6	211.4	208.3	201.9	204.6



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
45°	200.0	207.0	205.6	197.3	200.0
46°	196.3	204.3	201.9	193.4	196.3
47°	193.4	200.6	197.2	190.7	193.4
48°	188.7	196.0	193.4	185.8	188.7
49°	184.8	193.2	190.4	181.7	184.8
50°	181.0	189.4	185.7	177.6	181.0
51°	176.0	184.6	181.8	174.6	176.0
52°	172.9	182.6	178.7	169.7	172.9
53°	168.8	177.5	173.8	166.7	168.8
54°	166.0	173.7	170.0	162.7	166.0
55°	160.8	170.6	166.9	157.7	160.8
56°	156.8	165.7	163.1	153.8	156.8
57°	151.1	161.7	158.0	148.7	151.1
58°	149.0	158.6	155.2	145.9	149.0
59°	145.0	153.6	151.4	141.9	145.0
60°	142.1	149.6	146.2	138.9	142.1
61°	136.9	146.8	143.5	134.1	136.9
62°	133.3	141.8	139.4	130.1	133.3
63°	130.5	138.0	134.5	127.3	130.5
64°	126.8	134.8	131.9	123.4	126.8
65°	121.9	130.1	127.9	118.7	121.9
66°	119.2	126.2	123.3	116.0	119.2
67°	115.4	123.5	120.5	112.1	115.4
68°	110.9	119.7	116.7	107.6	110.9
69°	108.1	115.1	113.2	104.9	108.1
70°	104.2	112.2	110.4	101.3	104.2
71°	99.8	108.8	106.0	97.0	99.8
72°	97.5	104.2	102.4	94.3	97.5
73°	93.9	101.5	99.7	90.7	93.9
74°	89.7	98.0	95.2	86.6	89.7
75°	87.2	93.9	92.1	84.1	87.2
76°	84.0	90.2	89.6	80.9	84.0
77°	80.6	87.8	85.4	77.9	80.6
78°	78.3	84.6	82.9	75.7	78.3
79°	74.4	80.5	79.8	71.6	74.4
80°	71.4	78.9	76.1	68.6	71.4
81°	69.3	74.5	73.0	66.7	69.3
82°	65.5	71.2	70.5	62.8	65.5
83°	62.7	69.0	67.7	60.1	62.7
84°	60.8	66.8	64.0	58.3	60.8
85°	57.4	64.0	61.9	54.9	57.4
86°	54.7	60.5	59.3	52.2	54.7
87°	52.6	58.5	55.9	50.3	52.6
88°	49.7	54.9	53.8	47.9	49.7
89°	47.2	52.3	51.3	44.8	47.2



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
90°	45.1	50.4	50.1	42.6	45.1
91°	43.3	47.9	46.4	40.9	43.3
92°	40.6	44.7	44.0	38.3	40.6
93°	38.7	42.6	41.3	35.6	38.7
94°	37.1	40.6	39.8	32.4	37.1
95°	34.6	35.3	37.7	25.4	34.6
96°	33.2	28.7	35.9	20.8	33.2
97°	31.1	23.8	34.4	15.4	31.1
98°	28.4	16.7	32.1	10.5	28.4
99°	26.2	12.8	30.0	9.0	26.2
100°	24.2	10.8	28.5	8.7	24.2
101°	21.1	10.2	26.2	11.0	21.1
102°	18.6	12.3	23.9	12.8	18.6
103°	16.9	14.2	22.5	15.7	16.9
104°	14.3	17.0	19.5	16.6	14.3
105°	11.7	17.9	17.5	16.0	11.7
106°	10.2	17.5	15.8	15.2	10.2
107°	8.5	16.6	13.2	14.6	8.5
108°	6.8	15.5	11.4	14.0	6.8
109°	5.9	15.2	10.2	13.3	5.9
110°	5.0	14.3	8.5	13.0	5.0
111°	4.3	13.6	6.7	12.3	4.3
112°	4.3	13.2	5.9	11.8	4.3
113°	4.7	12.7	4.9	11.5	4.7
114°	5.5	12.1	4.0	11.2	5.5
115°	5.9	11.5	3.9	11.0	5.9
116°	6.7	11.2	3.7	10.6	6.7
117°	7.3	10.8	4.3	10.1	7.3
118°	7.8	10.6	4.6	9.9	7.8
119°	8.5	10.3	5.0	9.6	8.5
120°	8.9	9.8	5.9	9.6	8.9
121°	9.0	9.8	6.4	9.4	9.0
122°	9.2	9.6	6.9	9.3	9.2
123°	9.3	9.4	6.9	8.9	9.3
124°	9.2	9.3	7.8	9.0	9.2
125°	9.2	9.2	8.3	8.9	9.2
126°	9.2	8.9	8.6	9.0	9.2
127°	9.0	8.9	9.0	9.0	9.0
128°	9.0	8.9	9.2	8.7	9.0
129°	9.0	8.9	9.2	8.9	9.0
130°	9.0	8.7	9.2	8.9	9.0
131°	9.2	8.6	9.2	8.7	9.2
132°	9.0	8.7	9.2	9.0	9.0
133°	8.9	8.9	9.0	8.9	8.9
134°	8.7	8.9	9.2	8.6	8.7



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
135°	9.0	8.7	9.0	8.6	9.0
136°	8.9	8.6	9.0	8.9	8.9
137°	8.9	8.7	9.0	8.7	8.9
138°	9.0	8.7	8.9	8.6	9.0
139°	8.9	8.6	9.0	8.6	8.9
140°	8.9	8.6	9.2	8.7	8.9
141°	8.9	8.7	9.2	8.7	8.9
142°	8.9	8.5	8.9	8.6	8.9
143°	8.6	8.6	9.0	8.7	8.6
144°	8.9	8.7	9.2	8.7	8.9
145°	8.7	8.9	8.9	8.7	8.7
146°	8.9	8.9	9.0	8.7	8.9
147°	9.0	8.7	8.9	8.7	9.0
148°	9.0	8.9	9.0	8.6	9.0
149°	9.0	9.0	8.7	8.9	9.0
150°	8.9	9.0	8.9	8.7	8.9
151°	9.0	8.7	8.9	8.6	9.0
152°	8.9	9.0	8.7	8.6	8.9
153°	9.0	8.9	8.9	8.6	9.0
154°	9.0	9.0	9.0	8.7	9.0
155°	8.9	9.2	9.0	8.7	8.9
156°	8.7	9.2	8.9	8.9	8.7
157°	8.9	8.7	8.9	8.9	8.9
158°	9.0	9.0	9.0	9.0	9.0
159°	8.7	9.0	8.7	8.9	8.7
160°	8.9	9.0	8.9	8.9	8.9
161°	8.7	9.2	8.9	9.0	8.7
162°	8.7	9.0	8.7	9.2	8.7
163°	8.9	9.2	8.7	9.2	8.9
164°	9.0	9.2	8.7	9.0	9.0
165°	9.0	9.0	8.6	9.0	9.0
166°	9.2	9.2	8.5	9.0	9.2
167°	8.9	9.0	8.6	9.0	8.9
168°	8.7	9.2	8.6	9.0	8.7
169°	8.4	9.2	9.0	8.9	8.4
170°	8.5	8.9	9.0	8.4	8.5
171°	8.3	8.7	8.5	8.4	8.3
172°	8.0	8.6	8.5	8.1	8.0
173°	7.8	8.4	8.5	7.8	7.8
174°	7.6	8.1	8.0	7.6	7.6
175°	7.4	7.8	8.0	7.4	7.4
176°	8.1	7.8	7.7	7.7	8.1
177°	8.6	7.7	7.3	8.6	8.6
178°	8.7	8.6	7.8	8.7	8.7
179°	8.9	8.7	8.5	8.7	8.9



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
180°	8.7	8.7	8.7	8.7	8.7

(END OF REPORT)