

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: P588637

Luminaire Tested: **FM11WRCCR-5000K**

Issue Date: 12/1/2021

Test Information

Test Method: LM-79-08
Report Number: P588637
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-5000K
Description: FM WR CCT SELECT
Light Source: (1) 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

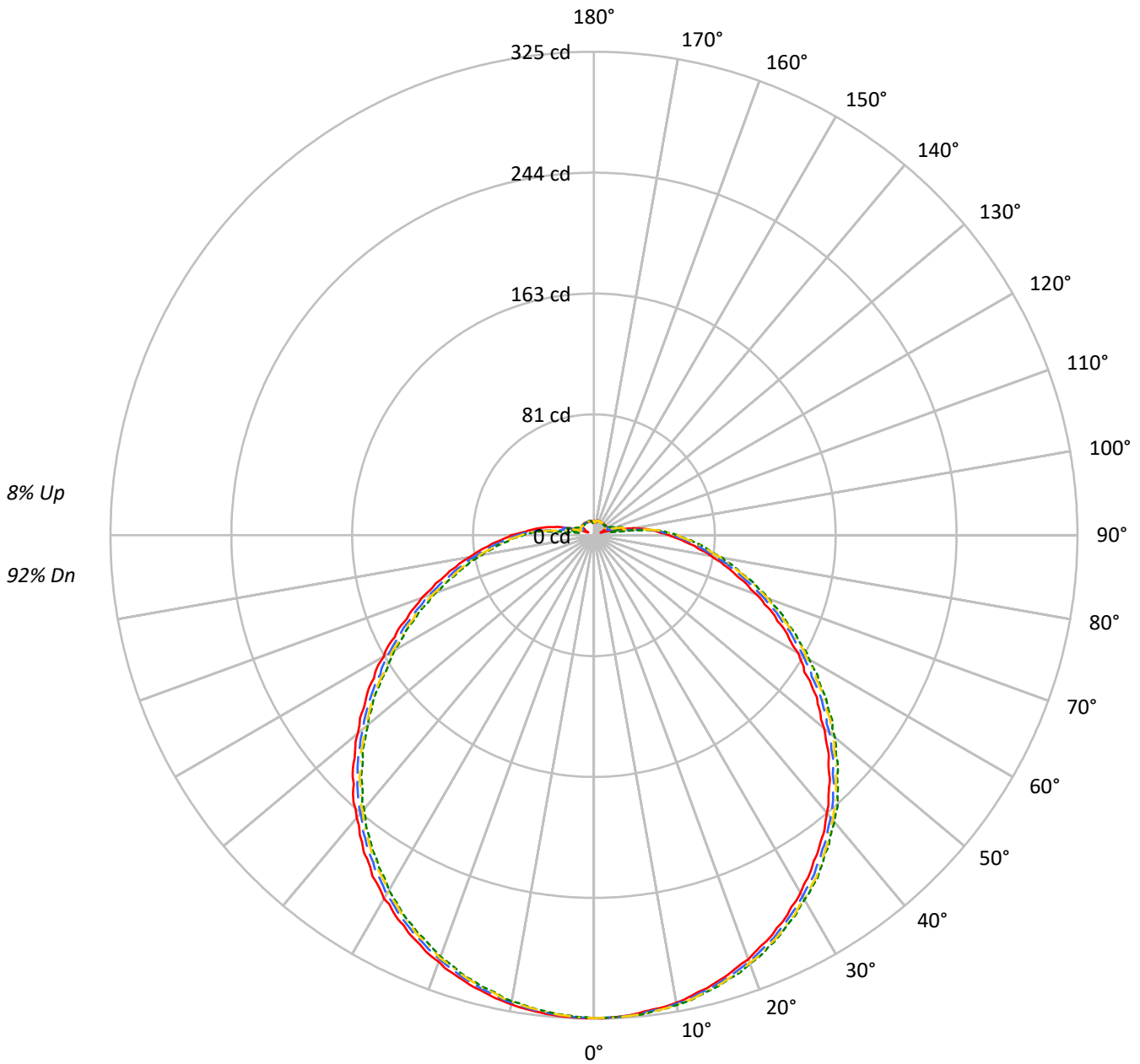
Lumens per Lamp: N/A
Luminaire Lumens: 1172.0 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.28 / 1.4
Luminous Opening: Vertical Cylinder (Dia: 0.92m x H: 0.25m)
CIE Type: Direct

Input Watts (W): 12.6
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°	492	492	492	492
5°	477	478	478	476
10°	463	465	464	461
15°	448	452	451	446
20°	434	439	437	432
25°	419	427	424	416
30°	405	412	411	402
35°	389	399	395	386
40°	373	385	380	368
45°	355	368	365	350
50°	337	353	346	331
55°	317	336	329	311
60°	300	316	309	293
65°	280	299	293	272
70°	264	284	279	256
75°	248	267	262	239
80°	234	259	250	225
85°	224	250	242	214



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.7	2.6
10°-20°	88.4	7.5
20°-30°	135.0	11.5
30°-40°	165.0	14.1
40°-50°	174.6	14.9
50°-60°	163.6	14.0
60°-70°	138.4	11.8
70°-80°	105.8	9.0
80°-90°	72.7	6.2
90°-100°	39.8	3.4
100°-110°	17.6	1.5
110°-120°	9.4	0.8
120°-130°	8.8	0.8
130°-140°	7.7	0.7
140°-150°	6.2	0.5
150°-160°	4.6	0.4
160°-170°	2.8	0.2
170°-180°	0.9	0.1
0°-30°	254.1	21.7
0°-40°	419.1	35.8
0°-60°	757.3	64.6
0°-90°	1074.1	91.7
90°-120°	66.9	5.7
90°-150°	89.5	7.6
90°-180°	98.0	8.4
0°-180°	1172.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	325	325	325	325	325	
5°	323	324	324	322	323	31
15°	312	315	314	310	312	88
25°	291	296	295	289	291	134
35°	262	268	266	259	262	164
45°	223	231	229	220	223	173
55°	180	190	186	176	180	161
65°	136	145	143	132	136	136
75°	97	105	103	94	97	103
85°	64	72	69	61	64	56
90°	50	56	56	48	50	28
95°	39	39	42	28	39	29
105°	13	20	20	18	13	15
115°	7	13	4	12	7	7
125°	10	10	9	10	10	9
135°	10	10	10	10	10	8
145°	10	10	10	10	10	6
155°	10	10	10	10	10	5
165°	10	10	10	10	10	3
175°	8	9	9	8	8	1
180°	10	10	10	10	10	



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CANDELA DISTRIBUTION (FULL):

	0°	90°	180°	270°	360°
0°	324.6	324.6	324.6	324.6	324.6
1°	324.9	324.3	324.7	324.1	324.9
2°	324.4	324.4	324.6	323.9	324.4
3°	324.0	324.3	324.3	323.3	324.0
4°	323.6	324.0	324.0	323.0	323.6
5°	323.0	323.9	323.6	322.2	323.0
6°	322.0	323.6	323.2	321.5	322.0
7°	321.3	322.6	322.5	320.9	321.3
8°	320.9	322.2	321.9	319.9	320.9
9°	320.1	321.5	321.2	318.7	320.1
10°	319.0	320.6	320.2	318.0	319.0
11°	318.0	319.8	319.1	317.0	318.0
12°	316.3	319.0	318.2	314.7	316.3
13°	314.7	317.3	316.7	313.5	314.7
14°	313.9	316.0	315.2	312.6	313.9
15°	312.0	315.0	314.2	310.5	312.0
16°	310.4	313.5	312.5	309.2	310.4
17°	308.8	311.7	310.8	307.4	308.8
18°	306.6	310.6	309.2	305.0	306.6
19°	304.7	308.9	307.7	303.2	304.7
20°	303.4	306.6	305.1	301.5	303.4
21°	300.8	305.1	303.6	298.8	300.8
22°	298.3	303.2	301.8	296.4	298.3
23°	296.5	300.5	299.1	293.9	296.5
24°	294.3	298.8	297.1	292.2	294.3
25°	291.2	296.4	294.9	289.1	291.2
26°	289.2	293.6	291.8	287.1	289.2
27°	286.4	291.0	289.9	284.4	286.4
28°	282.9	289.1	287.2	280.8	282.9
29°	280.8	285.6	283.6	278.4	280.8
30°	277.7	282.9	282.2	275.6	277.7
31°	273.9	280.8	278.4	271.5	273.9
32°	271.5	277.6	275.6	268.2	271.5
33°	268.2	275.6	273.3	265.7	268.2
34°	264.2	271.6	269.0	261.6	264.2
35°	261.6	268.4	265.7	259.1	261.6
36°	258.0	264.2	263.3	255.3	258.0
37°	254.6	262.2	258.9	251.8	254.6
38°	251.8	257.7	255.6	248.8	251.8
39°	247.4	254.4	251.1	244.2	247.4
40°	243.5	251.5	248.0	240.4	243.5
41°	240.4	247.7	244.2	237.4	240.4
42°	235.6	244.9	241.4	232.3	235.6
43°	231.6	239.9	237.6	228.5	231.6
44°	228.4	236.0	232.5	225.3	228.4



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
45°	223.2	231.1	229.4	220.2	223.2
46°	219.1	228.0	225.3	215.9	219.1
47°	215.9	223.9	220.1	212.8	215.9
48°	210.6	218.8	215.9	207.4	210.6
49°	206.3	215.7	212.5	202.8	206.3
50°	202.1	211.4	207.3	198.3	202.1
51°	196.4	206.1	202.9	194.9	196.4
52°	192.9	203.8	199.5	189.5	192.9
53°	188.4	198.1	194.0	186.1	188.4
54°	185.3	193.9	189.8	181.6	185.3
55°	179.5	190.4	186.3	176.0	179.5
56°	175.0	184.9	182.1	171.7	175.0
57°	168.6	180.4	176.3	166.0	168.6
58°	166.3	177.1	173.3	162.8	166.3
59°	161.9	171.4	169.0	158.4	161.9
60°	158.6	167.0	163.2	155.0	158.6
61°	152.9	163.8	160.1	149.7	152.9
62°	148.8	158.3	155.6	145.3	148.8
63°	145.7	154.0	150.1	142.1	145.7
64°	141.5	150.5	147.2	137.7	141.5
65°	136.0	145.3	142.8	132.5	136.0
66°	133.1	140.9	137.6	129.5	133.1
67°	128.8	137.9	134.5	125.2	128.8
68°	123.7	133.6	130.3	120.1	123.7
69°	120.7	128.5	126.3	117.1	120.7
70°	116.4	125.3	123.2	113.1	116.4
71°	111.4	121.5	118.3	108.3	111.4
72°	108.8	116.3	114.3	105.3	108.8
73°	104.8	113.3	111.3	101.2	104.8
74°	100.2	109.4	106.3	96.7	100.2
75°	97.3	104.8	102.8	93.9	97.3
76°	93.8	100.7	100.0	90.3	93.8
77°	90.0	98.0	95.3	86.9	90.0
78°	87.3	94.4	92.6	84.5	87.3
79°	83.0	89.8	89.1	80.0	83.0
80°	79.7	88.1	85.0	76.6	79.7
81°	77.3	83.1	81.5	74.4	77.3
82°	73.1	79.5	78.7	70.1	73.1
83°	70.0	77.0	75.6	67.0	70.0
84°	67.9	74.5	71.5	65.1	67.9
85°	64.1	71.5	69.1	61.3	64.1
86°	61.1	67.6	66.2	58.2	61.1
87°	58.7	65.3	62.4	56.2	58.7
88°	55.5	61.3	60.1	53.4	55.5
89°	52.7	58.3	57.3	50.0	52.7



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
90°	50.3	56.3	55.9	47.6	50.3
91°	48.3	53.4	51.8	45.6	48.3
92°	45.3	49.9	49.1	42.8	45.3
93°	43.2	47.6	46.1	39.8	43.2
94°	41.4	45.3	44.4	36.2	41.4
95°	38.6	39.4	42.1	28.3	38.6
96°	37.0	32.1	40.1	23.2	37.0
97°	34.8	26.6	38.3	17.2	34.8
98°	31.7	18.7	35.8	11.7	31.7
99°	29.2	14.3	33.5	10.0	29.2
100°	27.0	12.1	31.8	9.7	27.0
101°	23.6	11.4	29.2	12.3	23.6
102°	20.7	13.7	26.7	14.3	20.7
103°	18.9	15.9	25.1	17.5	18.9
104°	16.0	19.0	21.7	18.6	16.0
105°	13.0	20.0	19.6	17.8	13.0
106°	11.4	19.6	17.6	16.9	11.4
107°	9.4	18.6	14.8	16.3	9.4
108°	7.6	17.3	12.7	15.6	7.6
109°	6.6	17.0	11.4	14.9	6.6
110°	5.5	16.0	9.4	14.5	5.5
111°	4.8	15.2	7.5	13.7	4.8
112°	4.8	14.8	6.6	13.2	4.8
113°	5.2	14.1	5.4	12.8	5.2
114°	6.2	13.5	4.5	12.5	6.2
115°	6.6	12.8	4.4	12.3	6.6
116°	7.5	12.5	4.1	11.8	7.5
117°	8.2	12.1	4.8	11.3	8.2
118°	8.7	11.8	5.1	11.1	8.7
119°	9.4	11.5	5.5	10.8	9.4
120°	9.9	11.0	6.6	10.7	9.9
121°	10.0	11.0	7.2	10.5	10.0
122°	10.3	10.7	7.7	10.4	10.3
123°	10.4	10.5	7.7	9.9	10.4
124°	10.3	10.4	8.7	10.0	10.3
125°	10.3	10.3	9.2	9.9	10.3
126°	10.3	9.9	9.6	10.0	10.3
127°	10.0	9.9	10.0	10.0	10.0
128°	10.0	9.9	10.3	9.7	10.0
129°	10.0	9.9	10.3	9.9	10.0
130°	10.0	9.7	10.3	9.9	10.0
131°	10.3	9.6	10.3	9.7	10.3
132°	10.0	9.7	10.3	10.0	10.0
133°	9.9	9.9	10.0	9.9	9.9
134°	9.7	9.9	10.3	9.6	9.7



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CANDELA DISTRIBUTION (continued):

	0°	90°	180°	270°	360°
135°	10.0	9.7	10.0	9.6	10.0
136°	9.9	9.6	10.0	9.9	9.9
137°	9.9	9.7	10.0	9.7	9.9
138°	10.0	9.7	9.9	9.6	10.0
139°	9.9	9.6	10.0	9.6	9.9
140°	9.9	9.6	10.3	9.7	9.9
141°	9.9	9.7	10.3	9.7	9.9
142°	9.9	9.4	9.9	9.6	9.9
143°	9.6	9.6	10.0	9.7	9.6
144°	9.9	9.7	10.3	9.7	9.9
145°	9.7	9.9	9.9	9.7	9.7
146°	9.9	9.9	10.0	9.7	9.9
147°	10.0	9.7	9.9	9.7	10.0
148°	10.0	9.9	10.0	9.6	10.0
149°	10.0	10.0	9.7	9.9	10.0
150°	9.9	10.0	9.9	9.7	9.9
151°	10.0	9.7	9.9	9.6	10.0
152°	9.9	10.0	9.7	9.6	9.9
153°	10.0	9.9	9.9	9.6	10.0
154°	10.0	10.0	10.0	9.7	10.0
155°	9.9	10.3	10.0	9.7	9.9
156°	9.7	10.3	9.9	9.9	9.7
157°	9.9	9.7	9.9	9.9	9.9
158°	10.0	10.0	10.0	10.0	10.0
159°	9.7	10.0	9.7	9.9	9.7
160°	9.9	10.0	9.9	9.9	9.9
161°	9.7	10.3	9.9	10.0	9.7
162°	9.7	10.0	9.7	10.3	9.7
163°	9.9	10.3	9.7	10.3	9.9
164°	10.0	10.3	9.7	10.0	10.0
165°	10.0	10.0	9.6	10.0	10.0
166°	10.3	10.3	9.4	10.0	10.3
167°	9.9	10.0	9.6	10.0	9.9
168°	9.7	10.3	9.6	10.0	9.7
169°	9.3	10.3	10.0	9.9	9.3
170°	9.4	9.9	10.0	9.3	9.4
171°	9.2	9.7	9.4	9.3	9.2
172°	8.9	9.6	9.4	9.0	8.9
173°	8.7	9.3	9.4	8.7	8.7
174°	8.5	9.0	8.9	8.5	8.5
175°	8.3	8.7	8.9	8.3	8.3
176°	9.0	8.7	8.6	8.6	9.0
177°	9.6	8.6	8.2	9.6	9.6
178°	9.7	9.6	8.7	9.7	9.7
179°	9.9	9.7	9.4	9.7	9.9



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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)