

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: P685741

Luminaire Tested: **4CZL-9-UNV-N-LVR-L850-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685741  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-9-UNV-N-LVR-L850-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @80 CRI and 5000K  
Light Source: (588) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

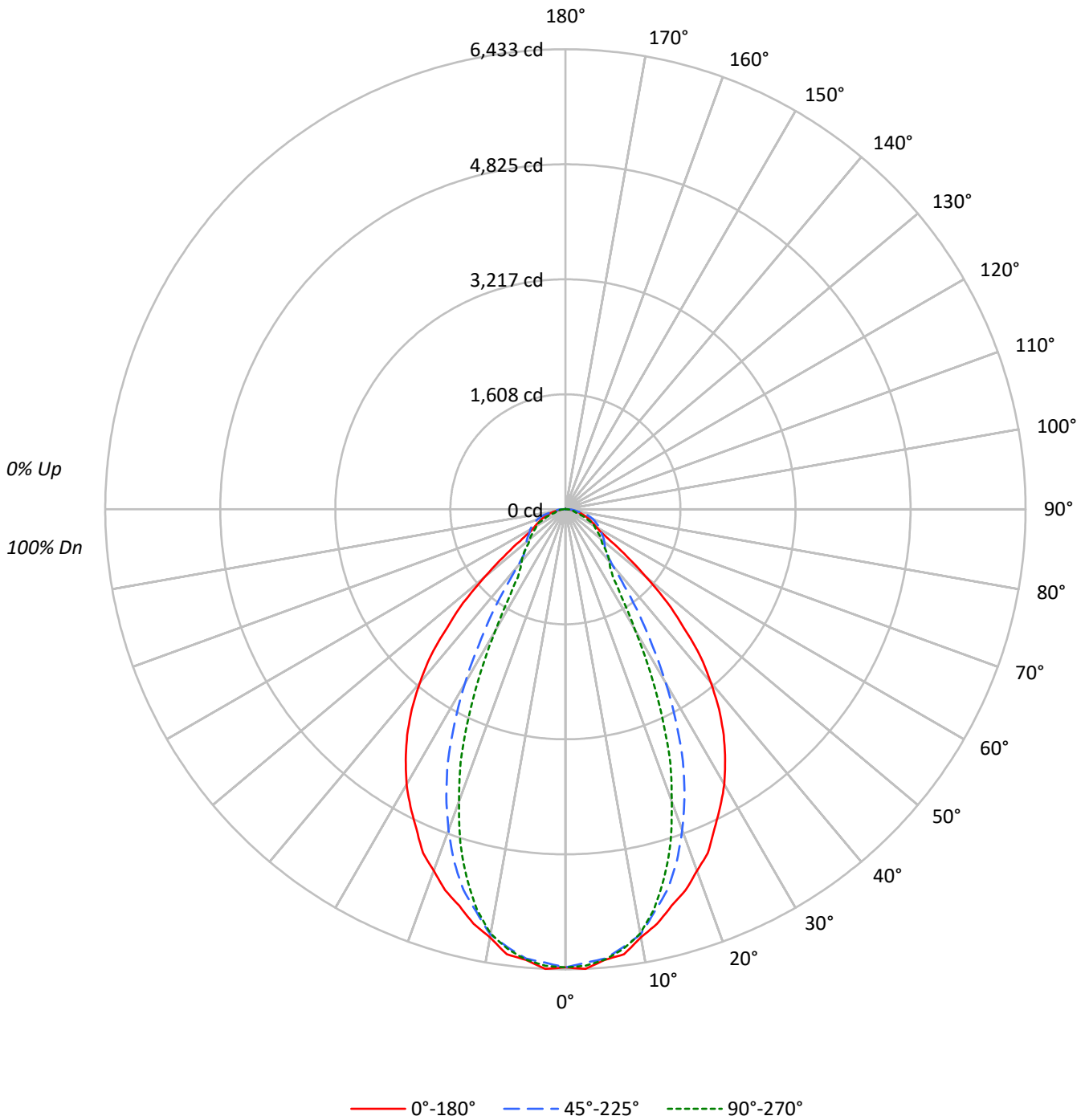
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7583.8 lumens  
Efficiency: N/A  
Efficacy: 140.4 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.8 / 0.85  
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 54  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	103	97	92	87	101	95	90	86	92	88	84	88	85	82	86	83	80	78	78	78	78
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70	70	70	70
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63	63	63	63
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	58	58	58	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55	53	53	53	53
7	75	64	57	51	73	63	56	51	62	55	51	60	55	51	59	54	50	49	49	49	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45	45	45	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	43	42	42	42	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39	39	39	39

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

	0°	45°	90°
0°	20684	20684	20684
5°	20501	20443	20495
10°	19923	19800	19752
15°	19184	18418	17834
20°	18477	16408	14936
25°	17559	13854	11389
30°	16563	10480	7277
35°	15202	7105	4572
40°	13332	4328	4010
45°	10682	3606	3594
50°	7385	3563	3244
55°	4351	3532	3055
60°	3242	3670	3018
65°	3069	3694	2654
70°	2951	3940	2003
75°	2782	3954	1713
80°	2583	3280	1938
85°	2293	3983	2393



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	595.0	7.8
10°-20°	1540.7	20.3
20°-30°	1799.8	23.7
30°-40°	1335.3	17.6
40°-50°	885.2	11.7
50°-60°	587.1	7.7
60°-70°	438.0	5.8
70°-80°	258.5	3.4
80°-90°	108.9	1.4
90°-100°	23.5	0.3
100°-110°	3.2	0.0
110°-120°	1.6	0.0
120°-130°	1.5	0.0
130°-140°	1.4	0.0
140°-150°	1.5	0.0
150°-160°	1.3	0.0
160°-170°	1.0	0.0
170°-180°	0.4	0.0
0°-30°	3935.5	51.9
0°-40°	5270.8	69.5
0°-60°	6743.1	88.9
0°-90°	7548.5	99.5
90°-120°	28.3	0.4
90°-150°	32.7	0.4
90°-180°	35.0	0.5
0°-180°	7583.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6405	6405	6405	6405	6405	
5°	6324	6319	6307	6329	6323	598
15°	5738	5670	5509	5414	5335	1619
25°	4928	4574	3888	3335	3196	2270
35°	3856	2857	1802	1218	1160	2394
45°	2339	1380	790	820	787	1800
55°	773	679	627	606	543	760
65°	402	449	484	473	347	400
75°	223	250	317	230	137	235
85°	62	75	108	143	65	67
90°	1	23	54	92	19	4
95°	0	4	21	46	10	0
105°	0	1	2	4	3	1
115°	0	1	2	2	2	0
125°	1	1	2	2	2	1
135°	1	2	2	2	2	1
145°	2	2	2	3	3	1
155°	2	3	3	3	3	1
165°	3	3	3	4	4	1
175°	3	3	4	4	5	0
180°	4	4	4	4	4	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6405.3	6405.3	6405.3	6405.3	6405.3
2.5°	6433.0	6398.3	6348.4	6393.4	6389.6
5°	6324.5	6319.0	6306.6	6329.4	6322.8
7.5°	6275.6	6246.3	6176.9	6230.6	6200.2
10°	6075.9	6041.7	6038.5	6027.6	6023.8
12.5°	5934.3	5893.0	5761.2	5754.1	5724.8
15°	5738.4	5670.0	5509.4	5414.4	5334.6
17.5°	5586.4	5437.7	5169.6	4992.7	4890.2
20°	5376.9	5213.1	4774.6	4465.8	4346.4
22.5°	5204.4	4914.0	4350.2	3913.3	3831.4
25°	4928.1	4573.8	3888.4	3335.4	3196.4
27.5°	4688.3	4199.3	3343.5	2736.8	2566.4
30°	4441.9	3779.8	2810.6	2149.6	1951.5
32.5°	4154.8	3357.1	2261.9	1612.9	1469.6
35°	3856.3	2857.2	1802.3	1218.3	1159.7
37.5°	3527.5	2407.9	1354.5	1017.5	1027.3
40°	3162.8	2016.1	1026.8	932.9	951.3
42.5°	2799.2	1686.1	854.2	877.5	883.0
45°	2339.0	1380.1	789.6	819.5	786.9
47.5°	1936.8	1127.7	744.0	740.8	694.6
50°	1470.1	919.3	709.3	670.2	645.8
52.5°	1088.6	775.5	676.2	633.3	608.4
55°	772.8	678.9	627.3	605.6	542.7
57.5°	580.7	610.5	589.9	541.1	497.1
60°	502.0	550.3	568.2	510.1	467.3
62.5°	453.1	498.7	532.9	491.7	427.6
65°	401.6	448.8	483.5	472.7	347.3
67.5°	356.5	409.2	452.1	405.4	283.8
70°	312.6	361.4	417.3	344.1	212.2
72.5°	265.4	302.3	369.6	267.5	154.7
75°	223.0	249.6	316.9	230.1	137.3
77.5°	178.5	200.8	217.1	209.5	121.0
80°	138.9	161.2	176.4	190.5	104.2
82.5°	100.9	115.6	140.0	168.8	86.8
85°	61.9	75.4	107.5	142.7	64.6
87.5°	26.6	46.1	78.7	118.3	42.3
90°	1.1	22.8	53.7	92.3	19.0
92.5°	0.5	9.8	34.7	67.8	12.5
95°	0.5	3.8	21.2	46.1	9.8
97.5°	0.5	1.6	10.9	29.8	7.1
100°	0.5	1.1	6.0	17.4	4.9
102.5°	0.5	1.1	2.7	8.7	3.8
105°	0.5	1.1	2.2	3.8	3.3
107.5°	0.5	1.1	1.6	2.7	2.7
110°	0.5	1.1	1.6	2.7	2.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.5	1.1	1.6	2.7	2.7
115°	0.5	1.1	1.6	2.2	2.2
117.5°	0.5	1.1	1.6	2.2	2.2
120°	0.5	1.1	1.6	2.2	2.2
122.5°	0.5	1.1	1.6	2.2	2.2
125°	1.1	1.1	1.6	2.2	2.2
127.5°	1.1	1.6	1.6	2.2	2.2
130°	1.1	1.6	1.6	2.2	2.2
132.5°	1.1	1.6	1.6	2.2	2.2
135°	1.1	1.6	1.6	2.2	2.2
137.5°	1.1	1.6	2.2	2.2	2.2
140°	1.6	2.2	2.2	2.2	2.2
142.5°	1.6	2.2	2.2	2.7	2.2
145°	1.6	2.2	2.2	2.7	2.7
147.5°	1.6	2.2	2.7	2.7	2.7
150°	1.6	2.2	2.7	3.3	3.3
152.5°	2.2	2.2	2.7	3.3	3.3
155°	2.2	2.7	2.7	3.3	3.3
157.5°	2.2	2.7	2.7	3.3	3.8
160°	2.2	2.7	3.3	3.8	3.8
162.5°	2.2	2.7	3.3	3.8	3.8
165°	2.7	3.3	3.3	3.8	3.8
167.5°	2.7	3.3	3.8	3.8	4.3
170°	2.7	3.3	3.8	4.3	4.3
172.5°	2.7	3.3	3.8	4.3	4.3
175°	2.7	3.3	3.8	4.3	4.9
177.5°	2.7	3.3	3.8	4.3	4.9
180°	3.8	3.8	3.8	3.8	3.8

(END OF REPORT)