

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: P685951

Luminaire Tested: **4CZL-9-UNV-LVRF-L950-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685951  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-9-UNV-LVRF-L950-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @90 CRI and 5000K  
Light Source: (588) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

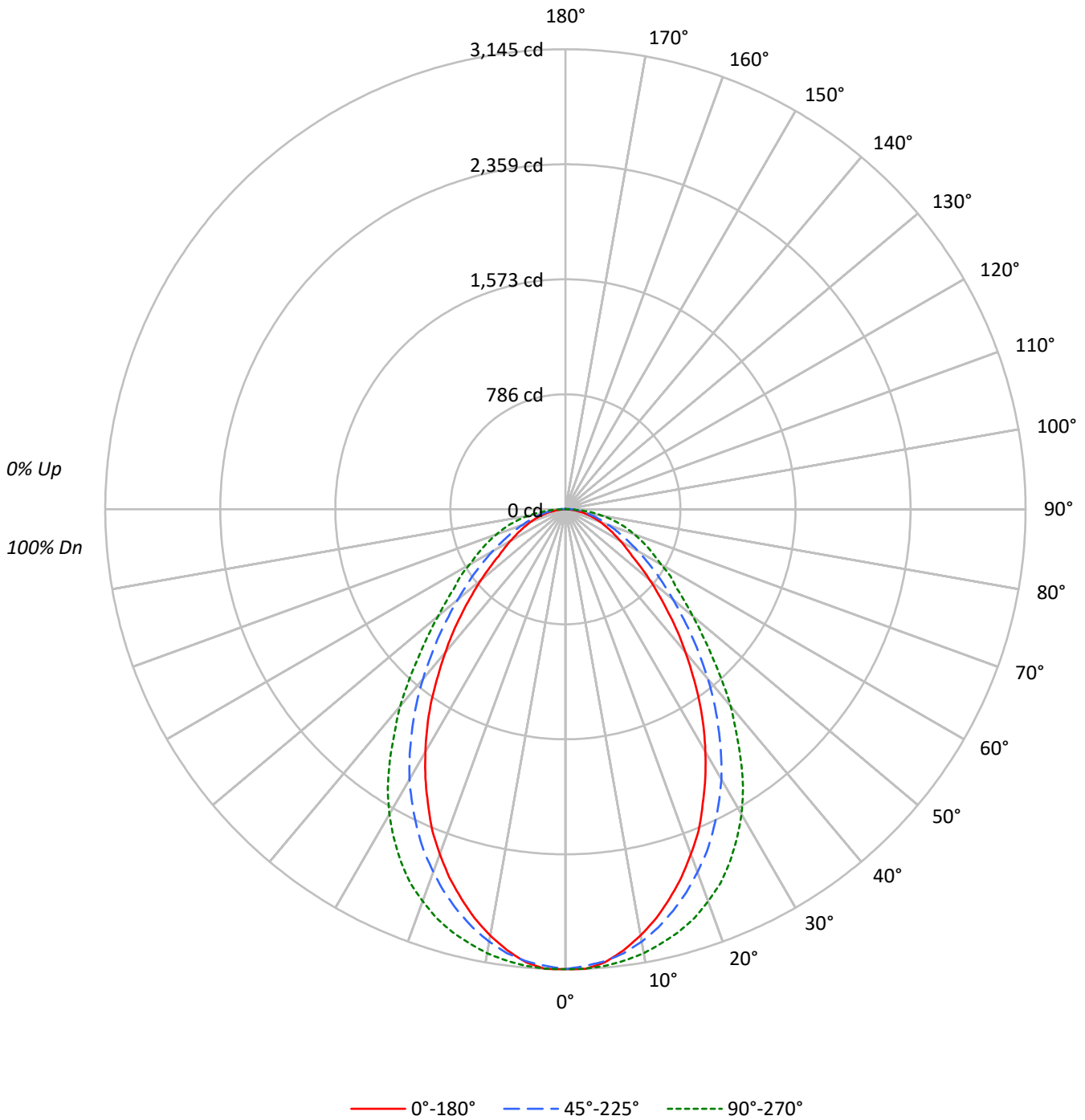
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5798.8 lumens  
Efficiency: N/A  
Efficacy: 107.4 lumens/watt  
Spacing Criteria (0/90/45): 0.97 / 1.15 / 1.12  
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	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	88	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	81	78	82	79	76	76	76	76	74
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	74	70	67	67	67	67	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	59	59	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	53	53	53	51
6	75	63	55	49	73	62	54	48	60	53	48	58	52	48	57	51	47	47	47	47	45
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	43	43	43	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	39	39	39	37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	36	36	36	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	33	33	33	31

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

	0°	45°	90°
0°	10151	10151	10151
5°	10077	10053	10154
10°	9700	9844	10104
15°	9204	9500	9998
20°	8619	9066	9799
25°	7915	8554	9474
30°	7134	7949	8972
35°	6283	7190	8240
40°	5378	6383	7410
45°	4531	5564	6453
50°	3783	4823	5706
55°	3131	4237	5173
60°	2822	3714	4879
65°	2565	3269	4770
70°	2389	2934	4735
75°	2215	2740	4831
80°	2008	2713	4839
85°	1723	3179	4787



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	294.1	5.1
10°-20°	803.8	13.9
20°-30°	1110.6	19.2
30°-40°	1142.5	19.7
40°-50°	936.6	16.2
50°-60°	672.1	11.6
60°-70°	452.1	7.8
70°-80°	263.8	4.6
80°-90°	101.7	1.8
90°-100°	17.6	0.3
100°-110°	1.5	0.0
110°-120°	0.3	0.0
120°-130°	0.3	0.0
130°-140°	0.4	0.0
140°-150°	0.5	0.0
150°-160°	0.4	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	2208.5	38.1
0°-40°	3351.1	57.8
0°-60°	4959.8	85.5
0°-90°	5777.3	99.6
90°-120°	19.5	0.3
90°-150°	20.6	0.4
90°-180°	21.0	0.4
0°-180°	5798.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3143	3143	3143	3143	3143	
5°	3109	3111	3101	3130	3133	292
15°	2753	2781	2842	2952	2991	772
25°	2221	2273	2401	2568	2659	1020
35°	1594	1668	1824	1995	2090	993
45°	992	1069	1218	1338	1413	770
55°	556	622	753	856	919	512
65°	336	356	428	549	624	334
75°	178	184	220	305	387	189
85°	46	58	86	128	129	50
90°	0	19	44	67	14	3
95°	0	3	18	32	6	0
105°	0	0	1	2	1	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	1	0	0	0	0
145°	1	1	1	0	0	1
155°	1	1	1	0	0	0
165°	1	1	1	1	0	0
175°	1	2	1	1	1	0
180°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3143.4	3143.4	3143.4	3143.4	3143.4
2.5°	3144.8	3142.1	3124.4	3144.8	3143.9
5°	3108.6	3110.9	3101.4	3130.3	3132.6
7.5°	3041.3	3050.4	3060.7	3103.2	3110.9
10°	2958.2	2971.7	3002.0	3065.3	3081.5
12.5°	2864.7	2879.6	2928.8	3016.0	3038.6
15°	2753.1	2781.1	2841.6	2951.9	2990.7
17.5°	2637.9	2672.2	2747.2	2877.8	2930.2
20°	2508.2	2542.6	2638.3	2783.8	2851.6
22.5°	2378.1	2411.6	2528.6	2683.5	2768.0
25°	2221.4	2273.3	2400.7	2567.9	2659.1
27.5°	2071.4	2126.5	2268.3	2447.7	2538.5
30°	1913.2	1977.9	2131.9	2303.1	2406.1
32.5°	1756.5	1822.0	1979.2	2157.7	2259.8
35°	1593.8	1667.5	1823.8	1994.6	2090.3
37.5°	1429.0	1509.4	1670.2	1838.3	1915.5
40°	1275.8	1354.9	1514.3	1664.8	1757.8
42.5°	1134.4	1212.1	1359.8	1496.3	1579.8
45°	992.1	1069.3	1218.4	1338.1	1413.1
47.5°	864.7	943.7	1082.4	1203.5	1266.3
50°	753.1	824.9	960.0	1069.8	1135.8
52.5°	651.0	716.5	850.2	956.9	1020.5
55°	556.1	622.5	752.6	855.7	918.9
57.5°	492.4	539.9	656.9	771.2	852.5
60°	436.9	466.2	575.1	710.6	755.4
62.5°	380.4	407.0	496.5	615.8	685.3
65°	335.7	355.5	427.8	549.4	624.3
67.5°	291.4	306.3	368.2	485.2	561.1
70°	253.0	262.5	310.8	422.0	501.5
72.5°	216.4	221.4	264.7	364.1	443.2
75°	177.5	183.9	219.6	304.9	387.2
77.5°	140.5	149.5	181.2	254.3	323.0
80°	108.0	115.2	145.9	209.2	260.2
82.5°	75.0	84.9	113.8	165.3	199.2
85°	46.5	57.8	85.8	128.3	129.2
87.5°	19.4	36.1	62.8	94.9	66.0
90°	0.5	19.4	43.8	66.9	14.0
92.5°	0.0	9.0	29.8	47.9	8.1
95°	0.5	3.2	18.5	32.1	5.9
97.5°	0.0	0.9	9.9	20.3	3.6
100°	0.0	0.5	4.1	11.3	2.3
102.5°	0.0	0.5	1.8	5.0	1.4
105°	0.0	0.5	0.9	1.8	0.9
107.5°	0.0	0.5	0.5	0.5	0.5
110°	0.5	0.5	0.5	0.5	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.5	0.5	0.0	0.0
115°	0.5	0.5	0.5	0.0	0.0
117.5°	0.5	0.5	0.5	0.0	0.0
120°	0.5	0.5	0.5	0.0	0.0
122.5°	0.5	0.5	0.5	0.0	0.0
125°	0.5	0.5	0.5	0.0	0.0
127.5°	0.5	0.5	0.5	0.0	0.0
130°	0.5	0.5	0.5	0.0	0.0
132.5°	0.5	0.9	0.5	0.5	0.0
135°	0.5	0.9	0.5	0.5	0.0
137.5°	0.5	0.9	0.5	0.5	0.0
140°	0.5	0.9	0.5	0.5	0.5
142.5°	0.9	0.9	0.9	0.5	0.5
145°	0.9	0.9	0.9	0.5	0.5
147.5°	0.9	0.9	0.9	0.5	0.5
150°	0.9	0.9	0.9	0.5	0.5
152.5°	0.9	1.4	0.9	0.5	0.5
155°	0.9	1.4	0.9	0.5	0.5
157.5°	0.9	1.4	0.9	0.5	0.5
160°	0.9	1.4	0.9	0.5	0.5
162.5°	1.4	1.4	0.9	0.9	0.5
165°	1.4	1.4	1.4	0.9	0.5
167.5°	1.4	1.4	1.4	0.9	0.5
170°	1.4	1.4	1.4	0.9	0.9
172.5°	1.4	1.4	1.4	0.9	0.9
175°	1.4	1.8	1.4	0.9	0.9
177.5°	1.4	1.8	1.4	0.9	0.9
180°	1.4	1.4	1.4	1.4	1.4

(END OF REPORT)