

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: P685871

Luminaire Tested: **4CZL-9-UNV-W-LVR-L935-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685871  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-9-UNV-W-LVR-L935-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @90 CRI and 3500K  
Light Source: (588) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

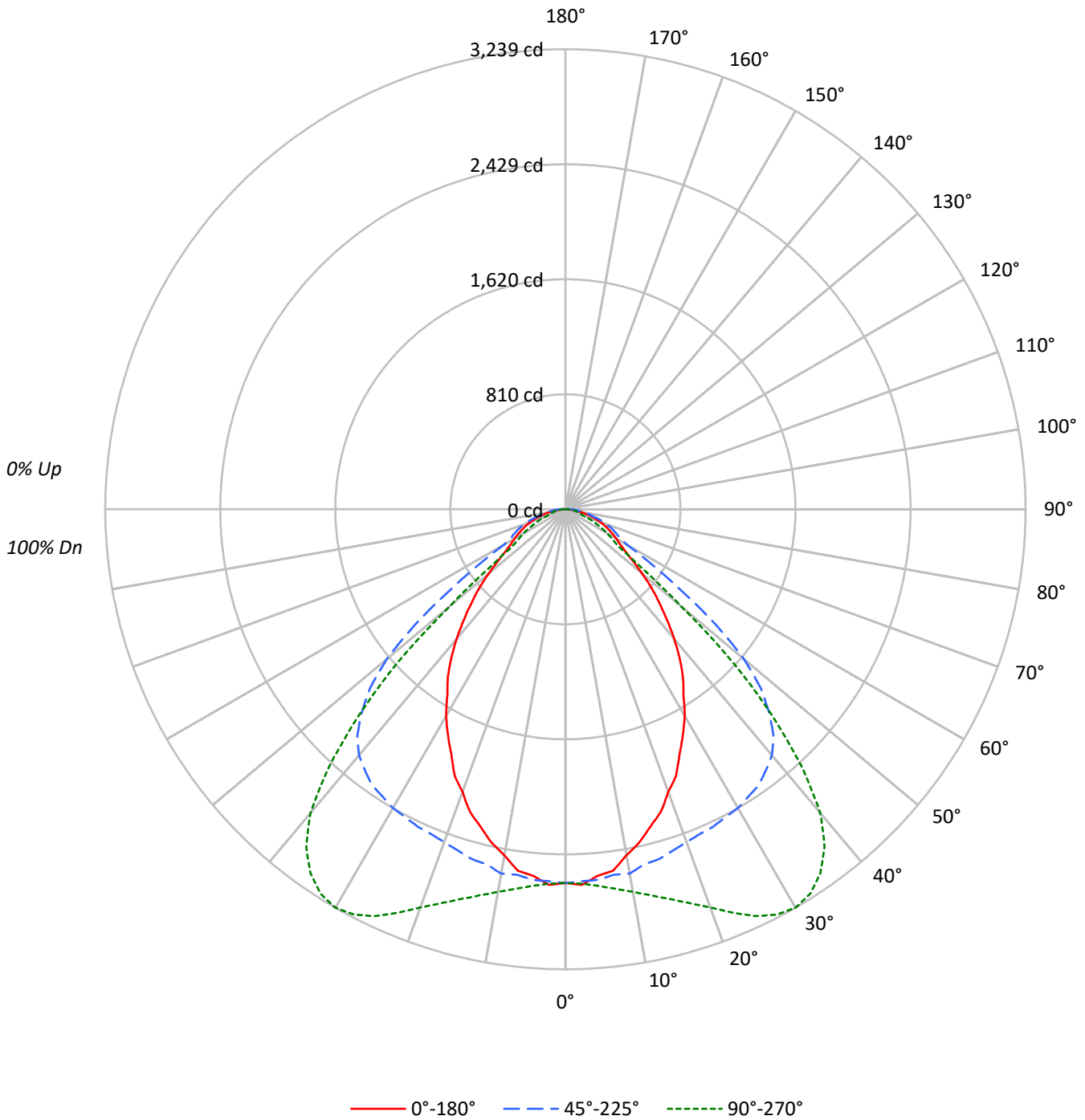
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6260.3 lumens  
Efficiency: N/A  
Efficacy: 115.9 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.64 / 1.46  
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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	89	89	89	87
2	102	95	89	84	99	93	88	83	89	85	81	86	82	79	83	80	77	77	77	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	68	68	68	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	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	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	47	47	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	42	42	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	38	38	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	34	34	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	31	31	31	30

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

	0°	45°	90°
0°	8497	8497	8497
5°	8400	8487	8626
10°	8110	8539	8969
15°	7729	8523	9497
20°	7275	8569	10251
25°	6773	8780	11258
30°	6262	9057	12077
35°	5689	9350	12330
40°	5016	9527	11764
45°	4275	9266	9431
50°	3543	8240	5352
55°	2886	5567	2560
60°	2665	3237	2211
65°	2569	2978	1798
70°	2425	2921	1285
75°	2256	2668	1249
80°	2057	2620	1371
85°	1578	3138	1512



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	250.2	4.0
10°-20°	726.3	11.6
20°-30°	1152.6	18.4
30°-40°	1439.5	23.0
40°-50°	1322.2	21.1
50°-60°	705.6	11.3
60°-70°	363.2	5.8
70°-80°	199.7	3.2
80°-90°	82.4	1.3
90°-100°	15.9	0.3
100°-110°	0.9	0.0
110°-120°	0.2	0.0
120°-130°	0.3	0.0
130°-140°	0.5	0.0
140°-150°	0.4	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	2129.0	34.0
0°-40°	3568.6	57.0
0°-60°	5596.4	89.4
0°-90°	6241.6	99.7
90°-120°	16.9	0.3
90°-150°	18.1	0.3
90°-180°	19.0	0.3
0°-180°	6260.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2631	2631	2631	2631	2631	
5°	2591	2598	2618	2659	2661	245
15°	2312	2387	2549	2757	2841	650
25°	1901	2080	2464	2915	3160	876
35°	1443	1710	2372	2889	3128	896
45°	936	1350	2029	2103	2065	725
55°	513	919	989	554	455	473
65°	336	441	390	318	235	332
75°	181	201	214	190	100	192
85°	43	56	85	112	41	49
90°	0	16	42	68	9	2
95°	0	2	16	31	4	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	1	1	0	0	0
145°	0	1	1	0	0	0
155°	1	1	1	0	0	0
165°	1	1	1	0	0	0
175°	1	1	1	0	0	0
180°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2631.3	2631.3	2631.3	2631.3	2631.3
2.5°	2646.7	2641.0	2622.1	2639.2	2637.9
5°	2591.4	2598.0	2618.2	2658.6	2661.2
7.5°	2566.8	2584.8	2596.2	2683.6	2695.0
10°	2473.3	2501.4	2604.1	2695.0	2735.4
12.5°	2403.1	2459.7	2559.4	2713.4	2783.6
15°	2311.8	2387.3	2549.3	2756.9	2840.7
17.5°	2234.1	2311.4	2518.5	2789.8	2907.0
20°	2116.9	2256.9	2493.5	2824.0	2982.9
22.5°	2033.1	2174.9	2474.2	2854.3	3072.9
25°	1901.0	2079.6	2464.1	2915.3	3159.8
27.5°	1790.4	1999.3	2441.7	2954.4	3217.3
30°	1679.3	1901.0	2429.0	2961.4	3238.8
32.5°	1545.4	1821.1	2397.0	2945.2	3208.1
35°	1443.2	1709.6	2371.9	2889.4	3127.8
37.5°	1318.5	1621.8	2317.1	2788.5	2996.1
40°	1189.9	1540.6	2260.0	2630.9	2790.7
42.5°	1060.0	1449.3	2168.7	2420.7	2469.4
45°	936.2	1349.7	2029.1	2102.9	2065.1
47.5°	825.2	1242.6	1864.1	1704.3	1615.7
50°	705.3	1133.7	1640.3	1297.5	1065.3
52.5°	597.4	1042.9	1332.1	878.7	662.8
55°	512.7	919.1	988.9	553.9	454.7
57.5°	452.5	824.3	713.7	438.0	389.3
60°	412.6	705.8	501.2	402.1	342.4
62.5°	373.1	558.3	428.8	366.5	287.9
65°	336.2	440.7	389.8	317.8	235.3
67.5°	298.0	357.7	352.0	288.4	196.2
70°	256.8	294.1	309.4	241.4	136.1
72.5°	219.9	246.7	263.4	206.3	115.4
75°	180.8	200.6	213.8	190.1	100.1
77.5°	143.5	161.5	174.3	172.1	87.8
80°	110.6	122.5	140.9	154.1	73.7
82.5°	75.5	84.3	111.0	133.0	57.5
85°	42.6	55.7	84.7	111.5	40.8
87.5°	12.3	32.9	61.4	89.5	23.7
90°	0.0	15.8	41.7	67.6	8.8
92.5°	0.0	6.1	27.2	47.4	6.1
95°	0.0	1.8	15.8	31.2	4.0
97.5°	0.0	0.4	7.5	18.4	1.8
100°	0.0	0.4	2.6	8.8	0.4
102.5°	0.0	0.4	0.9	3.1	0.0
105°	0.0	0.4	0.4	0.4	0.0
107.5°	0.0	0.4	0.4	0.0	0.0
110°	0.0	0.4	0.4	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.4	0.4	0.0	0.0
115°	0.0	0.4	0.4	0.0	0.0
117.5°	0.0	0.4	0.4	0.0	0.0
120°	0.0	0.4	0.4	0.0	0.0
122.5°	0.0	0.4	0.4	0.0	0.0
125°	0.0	0.4	0.4	0.0	0.0
127.5°	0.4	0.4	0.4	0.4	0.0
130°	0.4	0.9	0.9	0.4	0.0
132.5°	0.4	0.9	0.9	0.4	0.0
135°	0.4	0.9	0.9	0.4	0.4
137.5°	0.4	0.9	0.9	0.4	0.4
140°	0.4	0.9	0.9	0.4	0.4
142.5°	0.4	0.9	0.9	0.4	0.4
145°	0.4	0.9	0.9	0.4	0.4
147.5°	0.4	0.9	0.9	0.4	0.4
150°	0.4	0.9	0.9	0.4	0.4
152.5°	0.9	0.9	0.9	0.4	0.4
155°	0.9	0.9	0.9	0.4	0.4
157.5°	0.9	0.9	0.9	0.4	0.4
160°	0.9	0.9	0.9	0.4	0.4
162.5°	0.9	1.3	0.9	0.4	0.4
165°	0.9	1.3	0.9	0.4	0.4
167.5°	0.9	1.3	0.9	0.4	0.4
170°	0.9	1.3	0.9	0.4	0.4
172.5°	0.9	1.3	0.9	0.4	0.4
175°	1.3	1.3	0.9	0.4	0.4
177.5°	1.3	1.3	0.9	0.9	0.9
180°	0.9	0.9	0.9	0.9	0.9

(END OF REPORT)