

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: P685702

Luminaire Tested: **4CZL-12-UNV-LVR-L940-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685702  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-12-UNV-LVR-L940-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @90 CRI and 4000K  
Light Source: (588) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

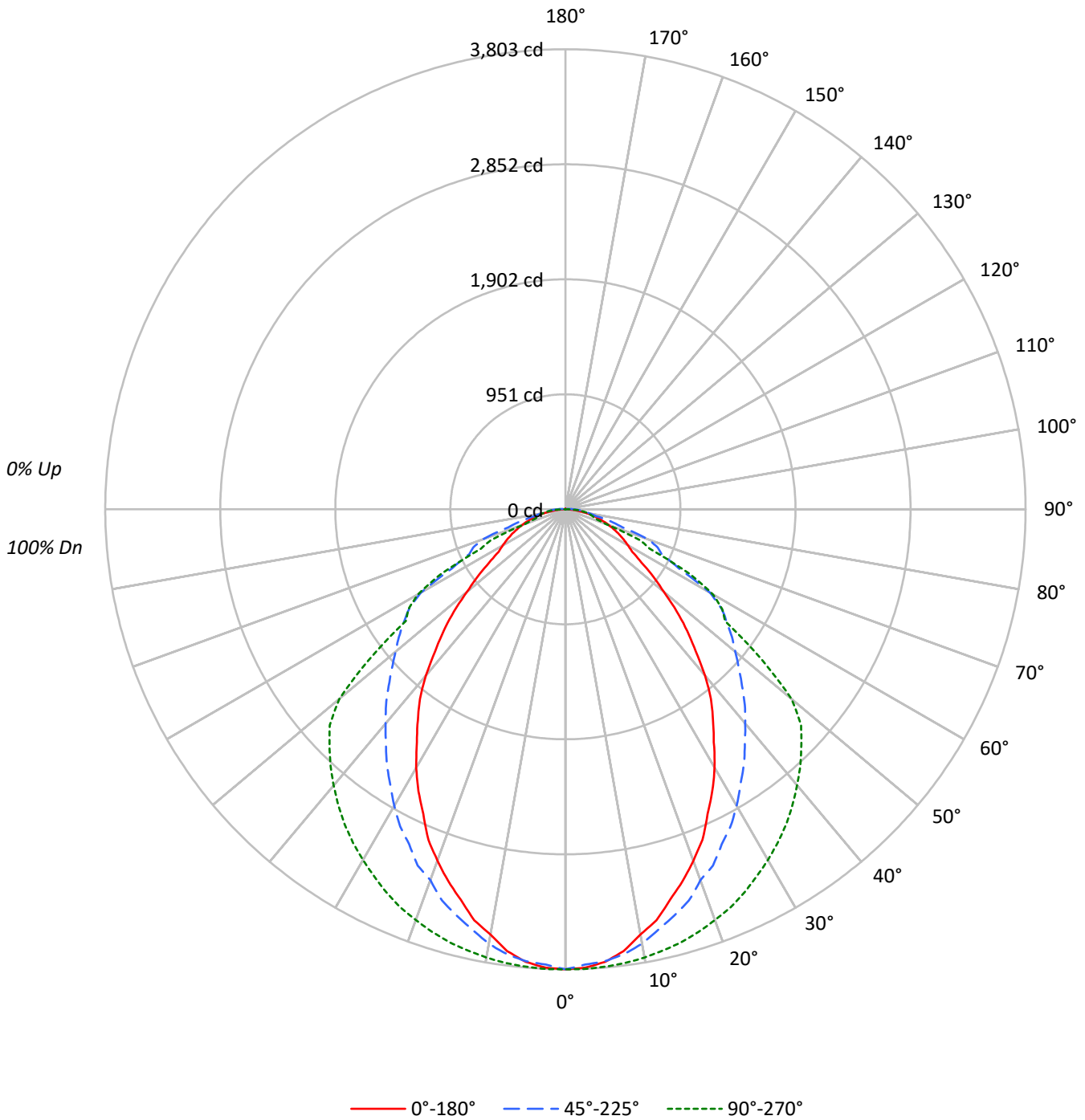
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8612.2 lumens  
Efficiency: N/A  
Efficacy: 111.8 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 1.31 / 1.26  
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 77  
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: 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				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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85	85	85	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73	73	73	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63	63	63	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54	54	54	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	47	47	47	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42	42	42	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37	37	37	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34	34	34	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30	30	30	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28	28	28	28

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

	0°	45°	90°
0°	12280	12280	12280
5°	12174	12157	12302
10°	11701	11958	12338
15°	11169	11623	12388
20°	10621	11211	12417
25°	9905	10888	12457
30°	9196	10553	12477
35°	8384	10139	12535
40°	7563	9744	12558
45°	6505	9432	12590
50°	5317	9209	12259
55°	4329	9173	9067
60°	3860	8918	9097
65°	3732	6693	5867
70°	3586	6858	3335
75°	3456	4833	2977
80°	3152	3931	3548
85°	2823	4902	4420



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	356.2	4.1
10°-20°	987.5	11.5
20°-30°	1428.6	16.6
30°-40°	1630.6	18.9
40°-50°	1602.2	18.6
50°-60°	1278.0	14.8
60°-70°	805.0	9.3
70°-80°	356.6	4.1
80°-90°	136.8	1.6
90°-100°	27.1	0.3
100°-110°	1.8	0.0
110°-120°	0.2	0.0
120°-130°	0.3	0.0
130°-140°	0.4	0.0
140°-150°	0.4	0.0
150°-160°	0.3	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	2772.3	32.2
0°-40°	4402.8	51.1
0°-60°	7282.9	84.6
0°-90°	8581.3	99.6
90°-120°	29.2	0.3
90°-150°	30.2	0.4
90°-180°	31.0	0.4
0°-180°	8612.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3803	3803	3803	3803	3803	
5°	3756	3764	3750	3782	3795	353
15°	3341	3374	3477	3640	3705	941
25°	2780	2870	3056	3336	3496	1281
35°	2127	2256	2572	2951	3180	1329
45°	1424	1632	2065	2528	2757	1095
55°	769	1041	1629	1757	1610	707
65°	488	665	876	933	768	484
75°	277	320	387	294	239	290
85°	76	93	132	171	119	80
90°	1	32	70	102	20	4
95°	1	5	29	50	6	0
105°	1	1	1	2	0	1
115°	1	1	0	0	0	1
125°	1	1	0	0	0	1
135°	1	1	1	0	0	1
145°	1	1	1	0	0	1
155°	1	1	1	0	0	1
165°	2	2	1	1	0	1
175°	2	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°	3802.8	3802.8	3802.8	3802.8	3802.8
2.5°	3792.8	3790.4	3767.4	3799.9	3803.4
5°	3755.6	3763.9	3750.3	3781.6	3795.2
7.5°	3684.1	3693.0	3708.9	3766.2	3782.8
10°	3568.4	3590.8	3646.9	3727.2	3762.7
12.5°	3479.8	3507.5	3557.7	3694.2	3734.9
15°	3341.0	3374.1	3476.8	3639.8	3705.4
17.5°	3222.9	3283.1	3392.4	3571.3	3662.9
20°	3090.6	3139.0	3262.4	3504.0	3613.3
22.5°	2958.3	3019.7	3188.0	3414.2	3563.1
25°	2779.9	2869.7	3055.7	3335.7	3496.3
27.5°	2628.7	2742.1	2955.9	3243.0	3421.9
30°	2466.3	2554.3	2830.1	3148.5	3346.3
32.5°	2283.2	2421.4	2694.3	3040.4	3267.2
35°	2126.7	2255.5	2572.0	2951.2	3179.8
37.5°	1975.5	2096.6	2436.8	2850.2	3082.9
40°	1794.2	1953.7	2311.6	2735.0	2979.0
42.5°	1593.4	1788.9	2195.2	2626.4	2873.2
45°	1424.5	1631.8	2065.3	2527.7	2756.9
47.5°	1249.1	1467.6	1943.6	2407.9	2641.7
50°	1058.3	1324.1	1833.2	2296.8	2440.3
52.5°	919.0	1174.7	1734.0	2096.0	2057.0
55°	769.0	1041.2	1629.4	1757.0	1610.5
57.5°	655.0	920.7	1531.4	1379.6	1537.3
60°	597.7	824.5	1380.8	1313.5	1408.6
62.5°	543.9	740.0	1056.0	1232.0	1158.7
65°	488.4	665.0	875.9	933.1	767.8
67.5°	434.7	600.0	825.7	696.9	668.6
70°	379.8	549.8	726.4	594.1	353.2
72.5°	327.8	492.0	496.7	329.0	262.2
75°	277.0	320.1	387.4	293.5	238.6
77.5°	221.5	274.6	259.3	262.8	216.2
80°	169.5	189.0	211.4	235.1	190.8
82.5°	119.9	140.6	171.3	205.5	156.5
85°	76.2	92.7	132.3	170.7	119.3
87.5°	30.1	58.5	98.6	137.6	70.3
90°	0.6	31.9	69.7	101.6	19.5
92.5°	0.6	14.8	46.7	74.4	10.0
95°	0.6	4.7	28.9	49.6	6.5
97.5°	0.6	1.8	15.4	30.7	3.5
100°	0.6	0.6	6.5	16.5	1.8
102.5°	0.6	0.6	2.4	6.5	0.6
105°	0.6	0.6	0.6	1.8	0.0
107.5°	0.6	0.6	0.0	0.0	0.0
110°	0.6	0.6	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.6	0.6	0.0	0.0	0.0
115°	0.6	0.6	0.0	0.0	0.0
117.5°	0.6	0.6	0.0	0.0	0.0
120°	0.6	0.6	0.0	0.0	0.0
122.5°	0.6	0.6	0.0	0.0	0.0
125°	0.6	1.2	0.0	0.0	0.0
127.5°	0.6	0.6	0.0	0.0	0.0
130°	0.6	1.2	0.6	0.0	0.0
132.5°	0.6	1.2	0.6	0.0	0.0
135°	0.6	1.2	0.6	0.0	0.0
137.5°	0.6	1.2	0.6	0.0	0.0
140°	1.2	1.2	0.6	0.0	0.0
142.5°	1.2	1.2	0.6	0.0	0.0
145°	1.2	1.2	0.6	0.0	0.0
147.5°	1.2	1.2	0.6	0.0	0.0
150°	1.2	1.2	0.6	0.0	0.0
152.5°	1.2	1.2	0.6	0.0	0.0
155°	1.2	1.2	0.6	0.0	0.0
157.5°	1.2	1.8	0.6	0.0	0.0
160°	1.8	1.8	0.6	0.0	0.0
162.5°	1.8	1.8	1.2	0.6	0.0
165°	1.8	1.8	1.2	0.6	0.0
167.5°	1.8	1.8	1.2	0.6	0.0
170°	1.8	1.8	1.2	0.6	0.6
172.5°	1.8	1.8	1.2	0.6	0.6
175°	1.8	1.8	1.2	0.6	0.6
177.5°	1.8	1.8	1.2	0.6	0.6
180°	1.2	1.2	1.2	1.2	1.2

(END OF REPORT)