

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: P685910

Luminaire Tested: **4CZL-7-UNV-LVRF-L840-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685910  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-7-UNV-LVRF-L840-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @80 CRI and 4000K  
Light Source: (392) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

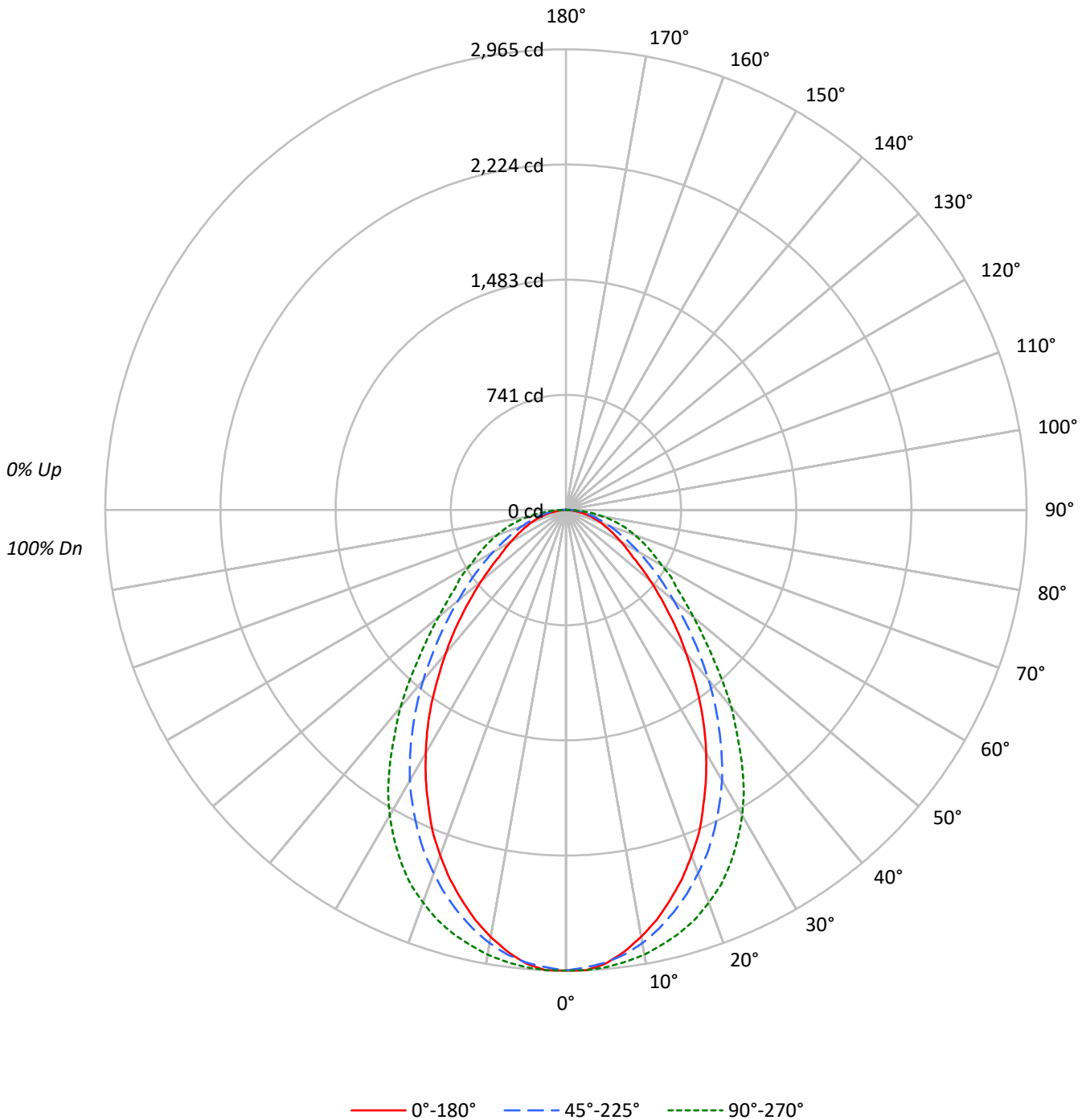
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5467.2 lumens  
Efficiency: N/A  
Efficacy: 124.3 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): 44  
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	82	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°	9570	9570	9570
5°	9501	9479	9574
10°	9145	9281	9527
15°	8678	8957	9427
20°	8127	8548	9239
25°	7462	8065	8933
30°	6726	7495	8459
35°	5924	6778	7770
40°	5071	6019	6987
45°	4272	5246	6085
50°	3567	4547	5379
55°	2952	3995	4878
60°	2660	3502	4600
65°	2418	3082	4498
70°	2252	2767	4464
75°	2089	2583	4554
80°	1893	2559	4562
85°	1627	2997	4513



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	277.3	5.1
10°-20°	757.9	13.9
20°-30°	1047.1	19.2
30°-40°	1077.2	19.7
40°-50°	883.1	16.2
50°-60°	633.7	11.6
60°-70°	426.2	7.8
70°-80°	248.8	4.6
80°-90°	95.8	1.8
90°-100°	16.6	0.3
100°-110°	1.4	0.0
110°-120°	0.2	0.0
120°-130°	0.2	0.0
130°-140°	0.3	0.0
140°-150°	0.4	0.0
150°-160°	0.4	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	2082.3	38.1
0°-40°	3159.5	57.8
0°-60°	4676.3	85.5
0°-90°	5447.1	99.6
90°-120°	18.3	0.3
90°-150°	19.3	0.4
90°-180°	20.0	0.4
0°-180°	5467.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2964	2964	2964	2964	2964	
5°	2931	2933	2924	2951	2954	275
15°	2596	2622	2679	2783	2820	728
25°	2094	2143	2264	2421	2507	961
35°	1503	1572	1720	1881	1971	936
45°	935	1008	1149	1262	1332	726
55°	524	587	710	807	866	483
65°	316	335	403	518	589	315
75°	167	173	207	288	365	178
85°	44	54	81	121	122	47
90°	0	18	41	63	13	3
95°	0	3	18	30	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°	2963.7	2963.7	2963.7	2963.7	2963.7
2.5°	2965.0	2962.5	2945.8	2965.0	2964.2
5°	2930.9	2933.1	2924.1	2951.4	2953.5
7.5°	2867.5	2876.0	2885.8	2925.8	2933.1
10°	2789.1	2801.9	2830.4	2890.0	2905.4
12.5°	2700.9	2715.0	2761.4	2843.6	2864.9
15°	2595.7	2622.1	2679.2	2783.1	2819.8
17.5°	2487.1	2519.5	2590.2	2713.3	2762.7
20°	2364.9	2397.2	2487.5	2624.7	2688.6
22.5°	2242.2	2273.7	2384.0	2530.1	2609.8
25°	2094.4	2143.4	2263.5	2421.1	2507.1
27.5°	1953.0	2004.9	2138.7	2307.8	2393.4
30°	1803.9	1864.8	2010.0	2171.5	2268.6
32.5°	1656.1	1717.8	1866.1	2034.3	2130.6
35°	1502.7	1572.2	1719.5	1880.6	1970.9
37.5°	1347.3	1423.1	1574.7	1733.2	1806.0
40°	1202.9	1277.4	1427.8	1569.6	1657.4
42.5°	1069.6	1142.8	1282.1	1410.7	1489.5
45°	935.4	1008.2	1148.8	1261.7	1332.4
47.5°	815.3	889.8	1020.6	1134.7	1193.9
50°	710.1	777.8	905.1	1008.6	1070.8
52.5°	613.8	675.6	801.6	902.2	962.2
55°	524.3	587.0	709.6	806.7	866.4
57.5°	464.3	509.0	619.3	727.1	803.8
60°	411.9	439.6	542.2	670.0	712.2
62.5°	358.6	383.8	468.1	580.6	646.2
65°	316.5	335.2	403.4	518.0	588.7
67.5°	274.7	288.8	347.1	457.5	529.0
70°	238.5	247.5	293.1	397.8	472.8
72.5°	204.0	208.7	249.6	343.3	417.9
75°	167.4	173.4	207.0	287.5	365.0
77.5°	132.5	141.0	170.8	239.8	304.6
80°	101.8	108.6	137.6	197.2	245.3
82.5°	70.7	80.1	107.3	155.9	187.8
85°	43.9	54.5	80.9	121.0	121.8
87.5°	18.3	34.1	59.2	89.4	62.2
90°	0.4	18.3	41.3	63.0	13.2
92.5°	0.0	8.5	28.1	45.2	7.7
95°	0.4	3.0	17.5	30.2	5.5
97.5°	0.0	0.9	9.4	19.2	3.4
100°	0.0	0.4	3.8	10.6	2.1
102.5°	0.0	0.4	1.7	4.7	1.3
105°	0.0	0.4	0.9	1.7	0.9
107.5°	0.0	0.4	0.4	0.4	0.4
110°	0.4	0.4	0.4	0.4	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°	0.4	0.4	0.4	0.0	0.0
117.5°	0.4	0.4	0.4	0.0	0.0
120°	0.4	0.4	0.4	0.0	0.0
122.5°	0.4	0.4	0.4	0.0	0.0
125°	0.4	0.4	0.4	0.0	0.0
127.5°	0.4	0.4	0.4	0.0	0.0
130°	0.4	0.4	0.4	0.0	0.0
132.5°	0.4	0.9	0.4	0.4	0.0
135°	0.4	0.9	0.4	0.4	0.0
137.5°	0.4	0.9	0.4	0.4	0.0
140°	0.4	0.9	0.4	0.4	0.4
142.5°	0.9	0.9	0.9	0.4	0.4
145°	0.9	0.9	0.9	0.4	0.4
147.5°	0.9	0.9	0.9	0.4	0.4
150°	0.9	0.9	0.9	0.4	0.4
152.5°	0.9	1.3	0.9	0.4	0.4
155°	0.9	1.3	0.9	0.4	0.4
157.5°	0.9	1.3	0.9	0.4	0.4
160°	0.9	1.3	0.9	0.4	0.4
162.5°	1.3	1.3	0.9	0.9	0.4
165°	1.3	1.3	1.3	0.9	0.4
167.5°	1.3	1.3	1.3	0.9	0.4
170°	1.3	1.3	1.3	0.9	0.9
172.5°	1.3	1.3	1.3	0.9	0.9
175°	1.3	1.7	1.3	0.9	0.9
177.5°	1.3	1.7	1.3	0.9	0.9
180°	1.3	1.3	1.3	1.3	1.3

(END OF REPORT)