

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: P685861

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

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685861  
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-L850-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @80 CRI and 5000K  
Light Source: (588) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

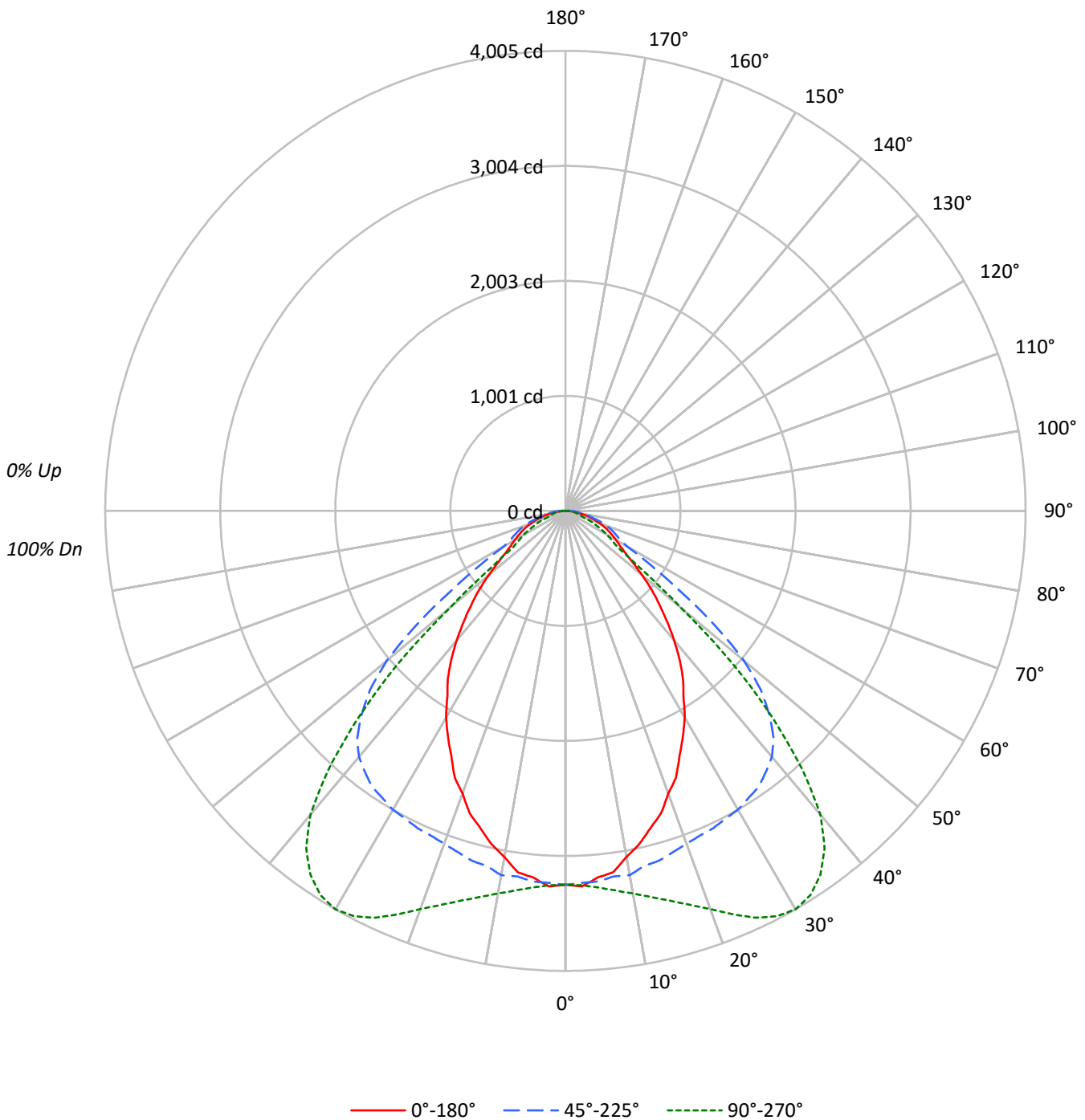
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7741.2 lumens  
Efficiency: N/A  
Efficacy: 143.4 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°	10507	10507	10507
5°	10387	10494	10667
10°	10029	10559	11091
15°	9557	10538	11743
20°	8996	10596	12675
25°	8375	10857	13921
30°	7743	11200	14933
35°	7035	11562	15247
40°	6203	11780	14547
45°	5287	11458	11662
50°	4382	10189	6617
55°	3569	6884	3166
60°	3295	4003	2734
65°	3176	3683	2223
70°	2998	3612	1589
75°	2790	3298	1543
80°	2544	3239	1696
85°	1949	3883	1871



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	309.4	4.0
10°-20°	898.1	11.6
20°-30°	1425.2	18.4
30°-40°	1780.0	23.0
40°-50°	1634.9	21.1
50°-60°	872.5	11.3
60°-70°	449.1	5.8
70°-80°	246.9	3.2
80°-90°	101.9	1.3
90°-100°	19.7	0.3
100°-110°	1.1	0.0
110°-120°	0.2	0.0
120°-130°	0.3	0.0
130°-140°	0.6	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°	2632.7	34.0
0°-40°	4412.7	57.0
0°-60°	6920.2	89.4
0°-90°	7718.0	99.7
90°-120°	21.0	0.3
90°-150°	22.4	0.3
90°-180°	23.0	0.3
0°-180°	7741.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3254	3254	3254	3254	3254	
5°	3204	3212	3238	3287	3291	303
15°	2859	2952	3152	3409	3513	804
25°	2351	2572	3047	3605	3907	1083
35°	1785	2114	2933	3573	3868	1108
45°	1158	1669	2509	2600	2554	896
55°	634	1136	1223	685	562	585
65°	416	545	482	393	291	411
75°	224	248	264	235	124	237
85°	53	69	105	138	50	60
90°	0	20	52	84	11	2
95°	0	2	20	38	5	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	2	1	0	0	0
175°	2	2	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°	3253.8	3253.8	3253.8	3253.8	3253.8
2.5°	3272.8	3265.7	3242.4	3263.5	3261.9
5°	3204.4	3212.5	3237.5	3287.4	3290.7
7.5°	3174.0	3196.2	3210.4	3318.4	3332.5
10°	3058.4	3093.1	3220.1	3332.5	3382.4
12.5°	2971.5	3041.6	3164.8	3355.3	3442.1
15°	2858.7	2952.0	3152.3	3409.0	3512.7
17.5°	2762.6	2858.1	3114.3	3449.7	3594.6
20°	2617.7	2790.8	3083.4	3492.0	3688.5
22.5°	2514.0	2689.3	3059.5	3529.5	3799.8
25°	2350.6	2571.5	3047.0	3604.9	3907.2
27.5°	2213.9	2472.2	3019.3	3653.2	3978.3
30°	2076.6	2350.6	3003.6	3661.9	4004.9
32.5°	1911.0	2251.9	2963.9	3641.8	3966.9
35°	1784.6	2114.0	2933.0	3572.9	3867.6
37.5°	1630.4	2005.5	2865.2	3448.1	3704.8
40°	1471.4	1905.0	2794.6	3253.2	3450.8
42.5°	1310.7	1792.2	2681.7	2993.3	3053.5
45°	1157.7	1668.9	2509.1	2600.3	2553.6
47.5°	1020.4	1536.5	2305.1	2107.5	1997.9
50°	872.2	1401.9	2028.2	1604.4	1317.2
52.5°	738.7	1289.6	1647.2	1086.6	819.5
55°	633.9	1136.5	1222.8	684.9	562.3
57.5°	559.6	1019.3	882.5	541.7	481.4
60°	510.2	872.7	619.8	497.2	423.3
62.5°	461.3	690.4	530.3	453.2	356.0
65°	415.7	544.9	482.0	392.9	290.9
67.5°	368.5	442.3	435.3	356.6	242.6
70°	317.5	363.6	382.6	298.5	168.3
72.5°	271.9	305.0	325.6	255.1	142.7
75°	223.6	248.0	264.3	235.0	123.7
77.5°	177.5	199.7	215.5	212.8	108.5
80°	136.8	151.4	174.2	190.5	91.2
82.5°	93.4	104.2	137.3	164.5	71.1
85°	52.6	68.9	104.8	137.9	50.5
87.5°	15.2	40.7	76.0	110.7	29.3
90°	0.0	19.5	51.6	83.6	10.9
92.5°	0.0	7.6	33.7	58.6	7.6
95°	0.0	2.2	19.5	38.5	4.9
97.5°	0.0	0.5	9.2	22.8	2.2
100°	0.0	0.5	3.3	10.9	0.5
102.5°	0.0	0.5	1.1	3.8	0.0
105°	0.0	0.5	0.5	0.5	0.0
107.5°	0.0	0.5	0.5	0.0	0.0
110°	0.0	0.5	0.5	0.0	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°	0.0	0.5	0.5	0.0	0.0
117.5°	0.0	0.5	0.5	0.0	0.0
120°	0.0	0.5	0.5	0.0	0.0
122.5°	0.0	0.5	0.5	0.0	0.0
125°	0.0	0.5	0.5	0.0	0.0
127.5°	0.5	0.5	0.5	0.5	0.0
130°	0.5	1.1	1.1	0.5	0.0
132.5°	0.5	1.1	1.1	0.5	0.0
135°	0.5	1.1	1.1	0.5	0.5
137.5°	0.5	1.1	1.1	0.5	0.5
140°	0.5	1.1	1.1	0.5	0.5
142.5°	0.5	1.1	1.1	0.5	0.5
145°	0.5	1.1	1.1	0.5	0.5
147.5°	0.5	1.1	1.1	0.5	0.5
150°	0.5	1.1	1.1	0.5	0.5
152.5°	1.1	1.1	1.1	0.5	0.5
155°	1.1	1.1	1.1	0.5	0.5
157.5°	1.1	1.1	1.1	0.5	0.5
160°	1.1	1.1	1.1	0.5	0.5
162.5°	1.1	1.6	1.1	0.5	0.5
165°	1.1	1.6	1.1	0.5	0.5
167.5°	1.1	1.6	1.1	0.5	0.5
170°	1.1	1.6	1.1	0.5	0.5
172.5°	1.1	1.6	1.1	0.5	0.5
175°	1.6	1.6	1.1	0.5	0.5
177.5°	1.6	1.6	1.1	1.1	1.1
180°	1.1	1.1	1.1	1.1	1.1

(END OF REPORT)