

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: P685901

Luminaire Tested: **4CZL-9-UNV-LVRF-L835-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685901  
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-L835-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @80 CRI and 3500K  
Light Source: (588) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

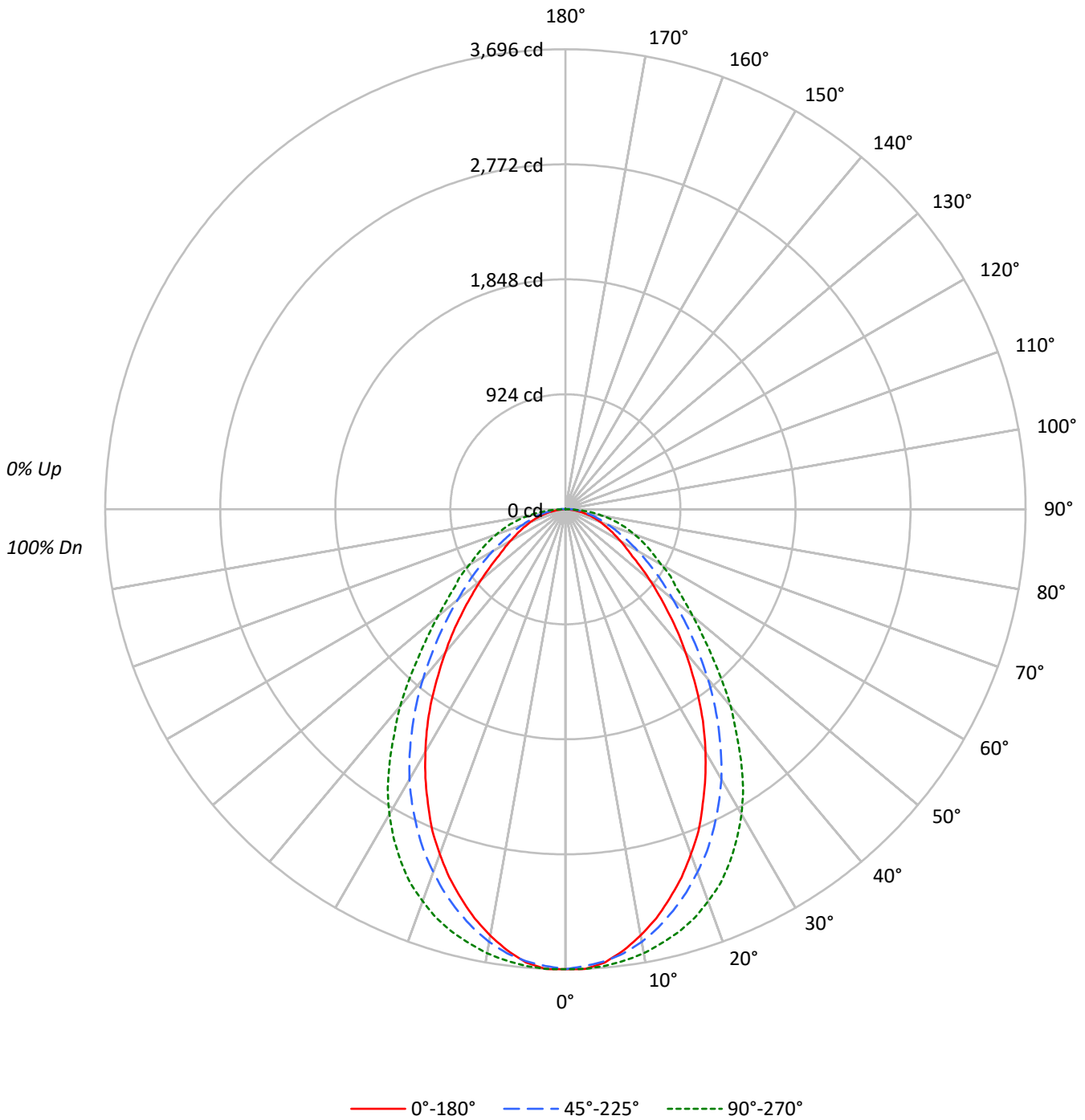
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6815.6 lumens  
Efficiency: N/A  
Efficacy: 126.2 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 (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				
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°	11931	11931	11931
5°	11844	11816	11935
10°	11401	11570	11877
15°	10818	11166	11752
20°	10131	10657	11518
25°	9303	10054	11136
30°	8385	9343	10545
35°	7385	8451	9685
40°	6321	7503	8709
45°	5325	6540	7585
50°	4447	5669	6706
55°	3680	4980	6081
60°	3316	4366	5734
65°	3014	3843	5607
70°	2808	3449	5565
75°	2604	3220	5678
80°	2360	3189	5689
85°	2027	3738	5628



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	345.7	5.1
10°-20°	944.8	13.9
20°-30°	1305.4	19.2
30°-40°	1342.9	19.7
40°-50°	1100.9	16.2
50°-60°	790.0	11.6
60°-70°	531.3	7.8
70°-80°	310.1	4.6
80°-90°	119.5	1.8
90°-100°	20.7	0.3
100°-110°	1.7	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°	0.5	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	2595.9	38.1
0°-40°	3938.8	57.8
0°-60°	5829.6	85.5
0°-90°	6790.6	99.6
90°-120°	22.8	0.3
90°-150°	24.0	0.4
90°-180°	25.0	0.4
0°-180°	6815.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3695	3695	3695	3695	3695	
5°	3654	3656	3645	3679	3682	343
15°	3236	3269	3340	3470	3515	908
25°	2611	2672	2822	3018	3126	1198
35°	1873	1960	2144	2344	2457	1167
45°	1166	1257	1432	1573	1661	905
55°	654	732	885	1006	1080	602
65°	394	418	503	646	734	393
75°	209	216	258	358	455	222
85°	55	68	101	151	152	59
90°	0	23	52	79	16	3
95°	0	4	22	38	7	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	2	1	0	0	1
165°	2	2	2	1	0	0
175°	2	2	2	1	1	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3694.7	3694.7	3694.7	3694.7	3694.7
2.5°	3696.3	3693.1	3672.4	3696.3	3695.2
5°	3653.8	3656.5	3645.3	3679.3	3682.0
7.5°	3574.7	3585.3	3597.5	3647.5	3656.5
10°	3477.0	3492.9	3528.5	3602.8	3622.0
12.5°	3367.1	3384.6	3442.5	3545.0	3571.5
15°	3235.9	3268.8	3340.0	3469.6	3515.2
17.5°	3100.5	3140.9	3229.0	3382.5	3444.1
20°	2948.1	2988.5	3101.1	3272.0	3351.7
22.5°	2795.2	2834.5	2972.0	3154.2	3253.5
25°	2610.9	2672.0	2821.7	3018.2	3125.5
27.5°	2434.6	2499.4	2666.2	2877.0	2983.7
30°	2248.8	2324.7	2505.8	2707.0	2828.1
32.5°	2064.5	2141.5	2326.3	2536.1	2656.1
35°	1873.4	1959.9	2143.7	2344.4	2456.9
37.5°	1679.6	1774.1	1963.1	2160.6	2251.4
40°	1499.6	1592.5	1779.9	1956.7	2066.1
42.5°	1333.3	1424.7	1598.3	1758.7	1856.9
45°	1166.1	1256.9	1432.1	1572.8	1661.0
47.5°	1016.3	1109.3	1272.3	1414.6	1488.4
50°	885.2	969.6	1128.4	1257.4	1334.9
52.5°	765.2	842.2	999.3	1124.7	1199.5
55°	653.7	731.7	884.6	1005.7	1080.1
57.5°	578.8	634.5	772.1	906.4	1002.0
60°	513.5	548.0	676.0	835.3	887.8
62.5°	447.1	478.4	583.6	723.8	805.5
65°	394.5	417.9	502.9	645.7	733.8
67.5°	342.5	360.0	432.8	570.3	659.5
70°	297.4	308.5	365.3	496.0	589.4
72.5°	254.4	260.2	311.2	428.0	520.9
75°	208.7	216.1	258.1	358.4	455.1
77.5°	165.1	175.8	212.9	299.0	379.7
80°	126.9	135.4	171.5	245.9	305.9
82.5°	88.1	99.8	133.8	194.3	234.2
85°	54.7	68.0	100.9	150.8	151.9
87.5°	22.8	42.5	73.8	111.5	77.5
90°	0.5	22.8	51.5	78.6	16.5
92.5°	0.0	10.6	35.0	56.3	9.6
95°	0.5	3.7	21.8	37.7	6.9
97.5°	0.0	1.1	11.7	23.9	4.2
100°	0.0	0.5	4.8	13.3	2.7
102.5°	0.0	0.5	2.1	5.8	1.6
105°	0.0	0.5	1.1	2.1	1.1
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	1.1	0.5	0.5	0.0
135°	0.5	1.1	0.5	0.5	0.0
137.5°	0.5	1.1	0.5	0.5	0.0
140°	0.5	1.1	0.5	0.5	0.5
142.5°	1.1	1.1	1.1	0.5	0.5
145°	1.1	1.1	1.1	0.5	0.5
147.5°	1.1	1.1	1.1	0.5	0.5
150°	1.1	1.1	1.1	0.5	0.5
152.5°	1.1	1.6	1.1	0.5	0.5
155°	1.1	1.6	1.1	0.5	0.5
157.5°	1.1	1.6	1.1	0.5	0.5
160°	1.1	1.6	1.1	0.5	0.5
162.5°	1.6	1.6	1.1	1.1	0.5
165°	1.6	1.6	1.6	1.1	0.5
167.5°	1.6	1.6	1.6	1.1	0.5
170°	1.6	1.6	1.6	1.1	1.1
172.5°	1.6	1.6	1.6	1.1	1.1
175°	1.6	2.1	1.6	1.1	1.1
177.5°	1.6	2.1	1.6	1.1	1.1
180°	1.6	1.6	1.6	1.6	1.6

(END OF REPORT)