

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: P685842

Luminaire Tested: **4CZL-12-UNV-W-LVR-L835-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685842  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-12-UNV-W-LVR-L835-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @80 CRI and 3500K  
Light Source: (588) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

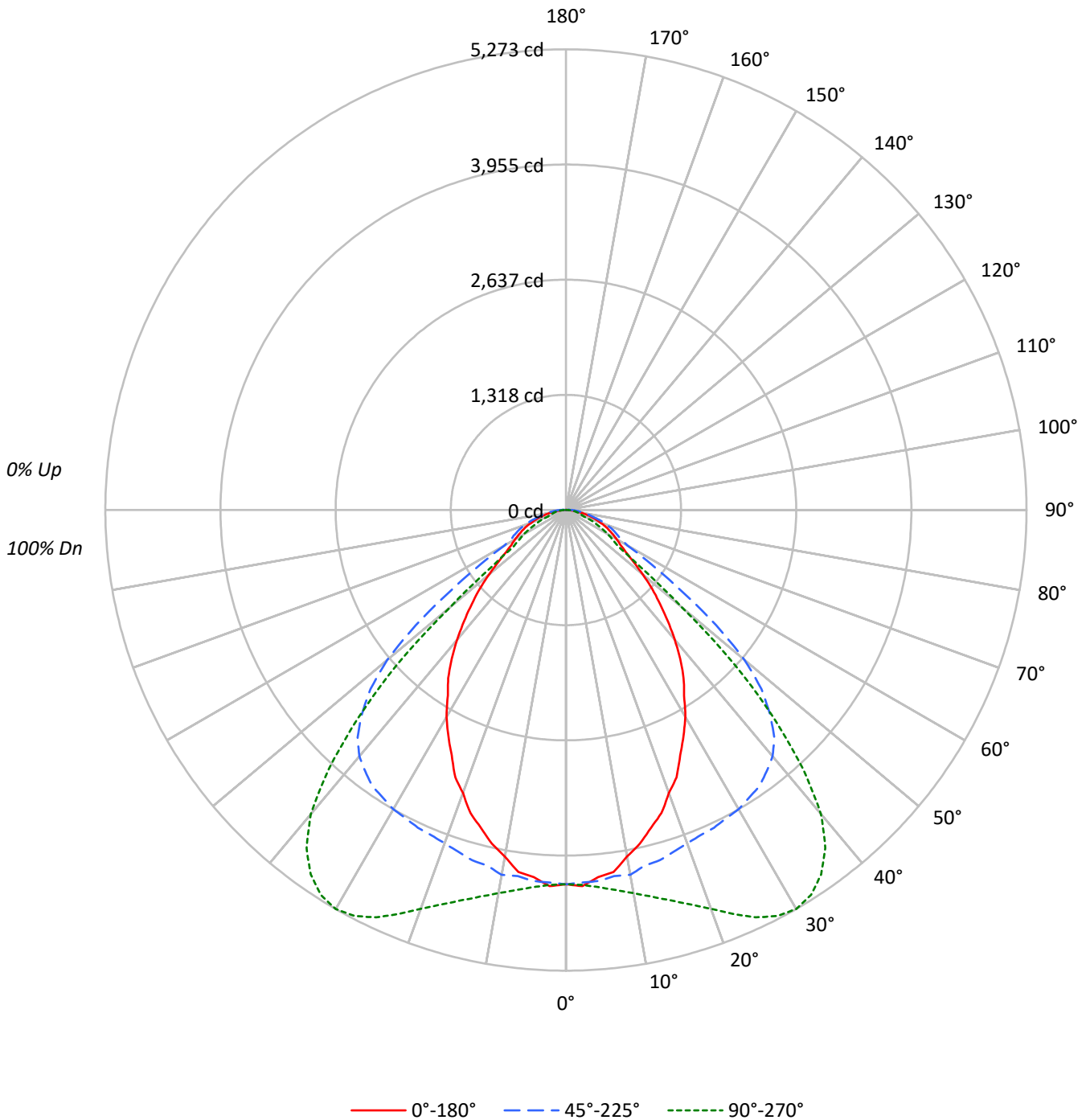
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10191.4 lumens  
Efficiency: N/A  
Efficacy: 132.4 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): 77  
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°	13833	13833	13833
5°	13675	13816	14043
10°	13203	13901	14601
15°	12582	13874	15460
20°	11843	13949	16687
25°	11026	14293	18328
30°	10194	14744	19660
35°	9262	15222	20072
40°	8166	15509	19151
45°	6960	15085	15353
50°	5769	13414	8712
55°	4699	9064	4168
60°	4338	5270	3599
65°	4182	4848	2926
70°	3947	4756	2091
75°	3673	4342	2032
80°	3349	4266	2232
85°	2568	5109	2464



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	407.3	4.0
10°-20°	1182.3	11.6
20°-30°	1876.3	18.4
30°-40°	2343.5	23.0
40°-50°	2152.4	21.1
50°-60°	1148.7	11.3
60°-70°	591.2	5.8
70°-80°	325.1	3.2
80°-90°	134.1	1.3
90°-100°	25.9	0.3
100°-110°	1.4	0.0
110°-120°	0.3	0.0
120°-130°	0.4	0.0
130°-140°	0.8	0.0
140°-150°	0.7	0.0
150°-160°	0.5	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	3466.0	34.0
0°-40°	5809.4	57.0
0°-60°	9110.5	89.4
0°-90°	10160.9	99.7
90°-120°	27.6	0.3
90°-150°	29.5	0.3
90°-180°	31.0	0.3
0°-180°	10191.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4284	4284	4284	4284	4284	
5°	4219	4229	4262	4328	4332	399
15°	3764	3886	4150	4488	4624	1058
25°	3095	3386	4011	4746	5144	1426
35°	2349	2783	3861	4704	5092	1459
45°	1524	2197	3303	3423	3362	1180
55°	835	1496	1610	902	740	771
65°	547	717	634	517	383	541
75°	294	326	348	309	163	313
85°	69	91	138	182	66	79
90°	0	26	68	110	14	3
95°	0	3	26	51	6	0
105°	0	1	1	1	0	0
115°	0	1	1	0	0	0
125°	0	1	1	0	0	0
135°	1	1	1	1	1	1
145°	1	1	1	1	1	0
155°	1	1	1	1	1	1
165°	1	2	1	1	1	0
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°	4283.6	4283.6	4283.6	4283.6	4283.6
2.5°	4308.7	4299.4	4268.6	4296.5	4294.4
5°	4218.6	4229.3	4262.2	4327.9	4332.2
7.5°	4178.6	4207.9	4226.5	4368.7	4387.3
10°	4026.4	4072.1	4239.3	4387.3	4453.0
12.5°	3912.1	4004.3	4166.5	4417.3	4531.6
15°	3763.5	3886.4	4150.0	4488.0	4624.5
17.5°	3637.0	3762.7	4100.0	4541.6	4732.4
20°	3446.2	3674.1	4059.3	4597.3	4856.0
22.5°	3309.7	3540.5	4027.8	4646.6	5002.5
25°	3094.7	3385.5	4011.4	4746.0	5143.9
27.5°	2914.6	3254.7	3975.0	4809.5	5237.6
30°	2733.8	3094.7	3954.2	4821.0	5272.6
32.5°	2515.9	2964.6	3902.1	4794.5	5222.5
35°	2349.4	2783.1	3861.4	4703.8	5091.8
37.5°	2146.5	2640.2	3772.0	4539.4	4877.4
40°	1937.1	2508.0	3679.1	4282.9	4543.0
42.5°	1725.6	2359.4	3530.5	3940.7	4020.0
45°	1524.1	2197.2	3303.3	3423.3	3361.9
47.5°	1343.3	2022.9	3034.6	2774.5	2630.2
50°	1148.3	1845.6	2670.2	2112.2	1734.2
52.5°	972.5	1697.7	2168.6	1430.5	1078.9
55°	834.6	1496.2	1609.9	901.7	740.3
57.5°	736.7	1341.9	1161.8	713.1	633.8
60°	671.7	1149.0	816.0	654.5	557.3
62.5°	607.4	908.9	698.1	596.6	468.7
65°	547.3	717.4	634.5	517.3	383.0
67.5°	485.2	582.3	573.1	469.5	319.4
70°	418.0	478.7	503.7	393.0	221.5
72.5°	358.0	401.6	428.7	335.8	187.9
75°	294.4	326.5	348.0	309.4	162.9
77.5°	233.7	262.9	283.7	280.1	142.9
80°	180.1	199.4	229.4	250.8	120.0
82.5°	122.9	137.2	180.8	216.5	93.6
85°	69.3	90.7	137.9	181.5	66.5
87.5°	20.0	53.6	100.0	145.8	38.6
90°	0.0	25.7	67.9	110.0	14.3
92.5°	0.0	10.0	44.3	77.2	10.0
95°	0.0	2.9	25.7	50.7	6.4
97.5°	0.0	0.7	12.1	30.0	2.9
100°	0.0	0.7	4.3	14.3	0.7
102.5°	0.0	0.7	1.4	5.0	0.0
105°	0.0	0.7	0.7	0.7	0.0
107.5°	0.0	0.7	0.7	0.0	0.0
110°	0.0	0.7	0.7	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.7	0.7	0.0	0.0
115°	0.0	0.7	0.7	0.0	0.0
117.5°	0.0	0.7	0.7	0.0	0.0
120°	0.0	0.7	0.7	0.0	0.0
122.5°	0.0	0.7	0.7	0.0	0.0
125°	0.0	0.7	0.7	0.0	0.0
127.5°	0.7	0.7	0.7	0.7	0.0
130°	0.7	1.4	1.4	0.7	0.0
132.5°	0.7	1.4	1.4	0.7	0.0
135°	0.7	1.4	1.4	0.7	0.7
137.5°	0.7	1.4	1.4	0.7	0.7
140°	0.7	1.4	1.4	0.7	0.7
142.5°	0.7	1.4	1.4	0.7	0.7
145°	0.7	1.4	1.4	0.7	0.7
147.5°	0.7	1.4	1.4	0.7	0.7
150°	0.7	1.4	1.4	0.7	0.7
152.5°	1.4	1.4	1.4	0.7	0.7
155°	1.4	1.4	1.4	0.7	0.7
157.5°	1.4	1.4	1.4	0.7	0.7
160°	1.4	1.4	1.4	0.7	0.7
162.5°	1.4	2.1	1.4	0.7	0.7
165°	1.4	2.1	1.4	0.7	0.7
167.5°	1.4	2.1	1.4	0.7	0.7
170°	1.4	2.1	1.4	0.7	0.7
172.5°	1.4	2.1	1.4	0.7	0.7
175°	2.1	2.1	1.4	0.7	0.7
177.5°	2.1	2.1	1.4	1.4	1.4
180°	1.4	1.4	1.4	1.4	1.4

(END OF REPORT)