

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: P685382

Luminaire Tested: **4CZL-12-UNV-N-L850-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685382  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-12-UNV-N-L850-CD-U  
Description: METALUX CRUZE LINEAR 4FT NARROW LENS MODEL @80 CRI and 5000K  
Light Source: (588) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

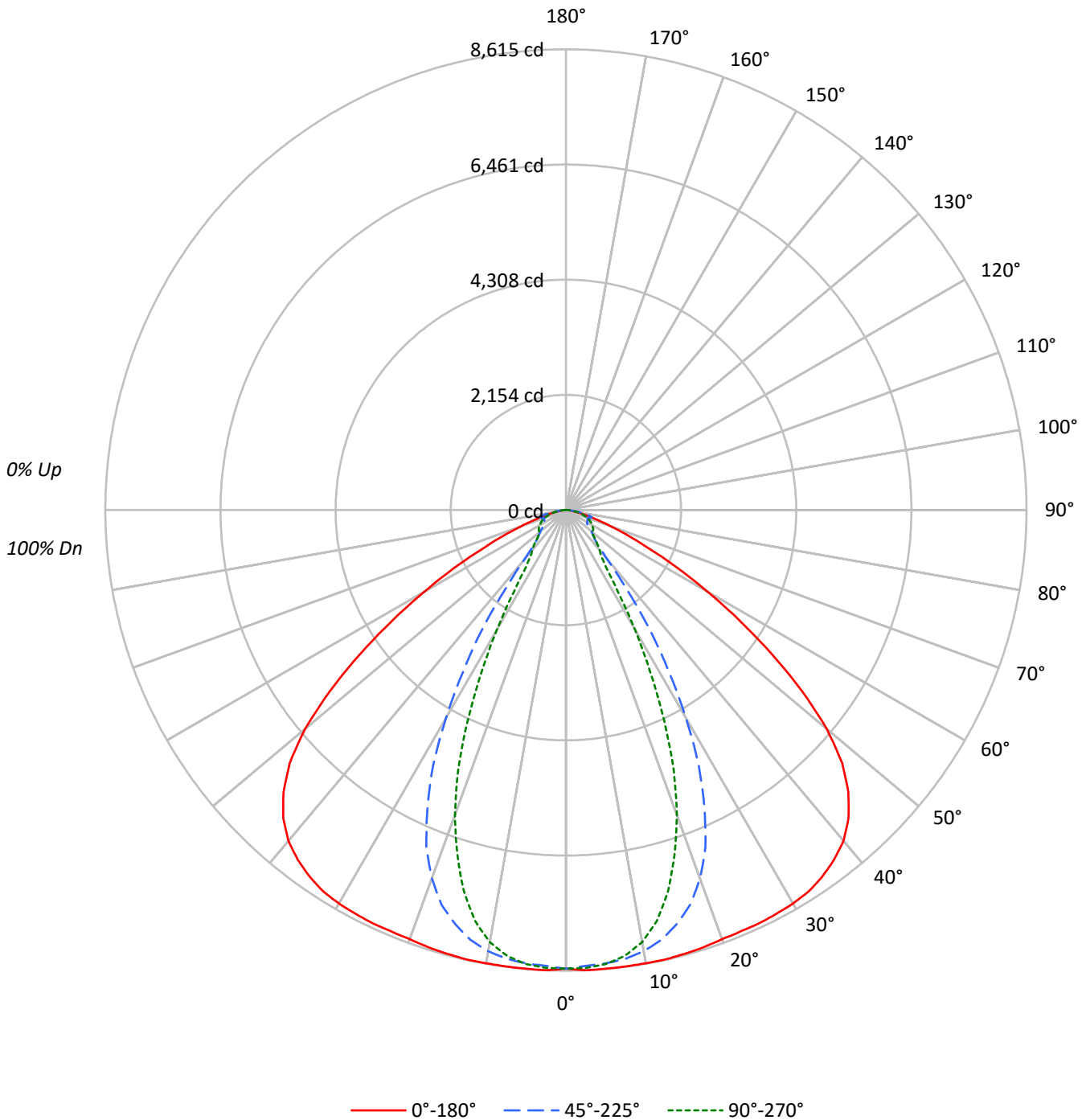
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12108.6 lumens  
Efficiency: N/A  
Efficacy: 157.3 lumens/watt  
Spacing Criteria (0/90/45): 1.48 / 0.81 / 0.89  
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	
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	80	79
3	96	88	81	76	94	86	80	76	84	79	74	81	77	73	79	75	72	70
4	90	80	73	68	88	79	72	67	77	71	66	74	70	66	72	68	65	63
5	84	74	66	61	82	73	66	60	71	64	60	69	63	59	67	62	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	52
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	47
8	70	58	51	46	68	58	51	46	56	50	46	55	50	45	54	49	45	44
9	66	54	47	42	65	54	47	42	53	47	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37

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

	0°	45°	90°
0°	27695	27695	27695
5°	27911	27589	27632
10°	28222	27472	26903
15°	28715	26792	24666
20°	29347	25195	20852
25°	30401	21837	15494
30°	31673	16725	9613
35°	32975	10812	5157
40°	34043	5034	4129
45°	34117	3415	3516
50°	31986	3129	3236
55°	26445	2819	3510
60°	19794	2973	3604
65°	13344	3399	3860
70°	8470	4145	3971
75°	5110	6175	3964
80°	3119	5510	3691
85°	2016	3568	2534



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	811.9	6.7
10°-20°	2241.6	18.5
20°-30°	2862.9	23.6
30°-40°	2322.0	19.2
40°-50°	1643.0	13.6
50°-60°	1070.0	8.8
60°-70°	657.1	5.4
70°-80°	390.3	3.2
80°-90°	109.7	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	5916.5	48.9
0°-40°	8238.5	68.0
0°-60°	10951.5	90.4
0°-90°	12108.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12108.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8577	8577	8577	8577	8577	
5°	8610	8592	8511	8546	8524	822
15°	8589	8473	8014	7598	7378	2433
25°	8532	7828	6129	4765	4349	3945
35°	8365	5679	2743	1471	1308	5232
45°	7471	2859	748	795	770	5698
55°	4697	962	501	585	624	4198
65°	1746	493	445	534	505	1814
75°	410	280	495	362	318	478
85°	54	109	96	86	68	76
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8576.6	8576.6	8576.6	8576.6	8576.6
2.5°	8614.9	8598.0	8532.5	8584.0	8569.3
5°	8610.5	8592.1	8511.2	8545.8	8524.4
7.5°	8607.5	8580.3	8465.6	8455.3	8411.2
10°	8606.8	8559.0	8378.1	8278.8	8204.6
12.5°	8608.3	8523.7	8234.7	8015.6	7864.9
15°	8589.2	8473.0	8014.1	7598.0	7378.1
17.5°	8571.5	8356.8	7736.2	7086.9	6756.8
20°	8539.9	8242.1	7331.8	6460.4	6067.8
22.5°	8531.1	8068.6	6820.7	5653.8	5264.8
25°	8532.5	7828.1	6128.8	4764.8	4348.6
27.5°	8516.4	7507.5	5375.1	3905.2	3412.6
30°	8494.3	7053.1	4485.4	2983.9	2578.0
32.5°	8455.3	6415.6	3574.3	2126.5	1789.7
35°	8364.9	5678.8	2742.7	1471.4	1308.1
37.5°	8239.1	4859.7	1849.3	1104.4	1078.0
40°	8075.9	4116.3	1194.1	965.5	979.4
42.5°	7823.0	3474.3	872.1	878.0	879.4
45°	7470.7	2858.9	747.8	794.9	769.9
47.5°	7007.5	2244.9	679.4	692.7	689.0
50°	6367.0	1680.9	622.8	619.9	644.1
52.5°	5575.1	1243.4	564.7	589.7	635.3
55°	4697.2	962.5	500.7	584.6	623.5
57.5°	3855.2	780.2	464.0	569.9	592.7
60°	3064.8	650.0	460.3	542.7	558.1
62.5°	2367.7	557.4	458.1	529.4	535.3
65°	1746.4	493.4	444.9	533.8	505.2
67.5°	1272.1	472.8	434.6	526.5	465.5
70°	897.1	415.4	439.0	486.0	420.6
72.5°	608.8	347.1	488.2	428.7	368.4
75°	409.6	280.2	494.9	362.5	317.7
77.5°	266.2	233.1	420.6	296.3	263.2
80°	167.7	194.1	296.3	227.9	198.5
82.5°	108.8	149.3	187.5	161.0	136.8
85°	54.4	108.8	96.3	86.0	68.4
87.5°	32.4	66.2	51.5	37.5	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)