

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: P685362

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

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685362  
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-L835-CD-U  
Description: METALUX CRUZE LINEAR 4FT NARROW LENS MODEL @80 CRI and 3500K  
Light Source: (588) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

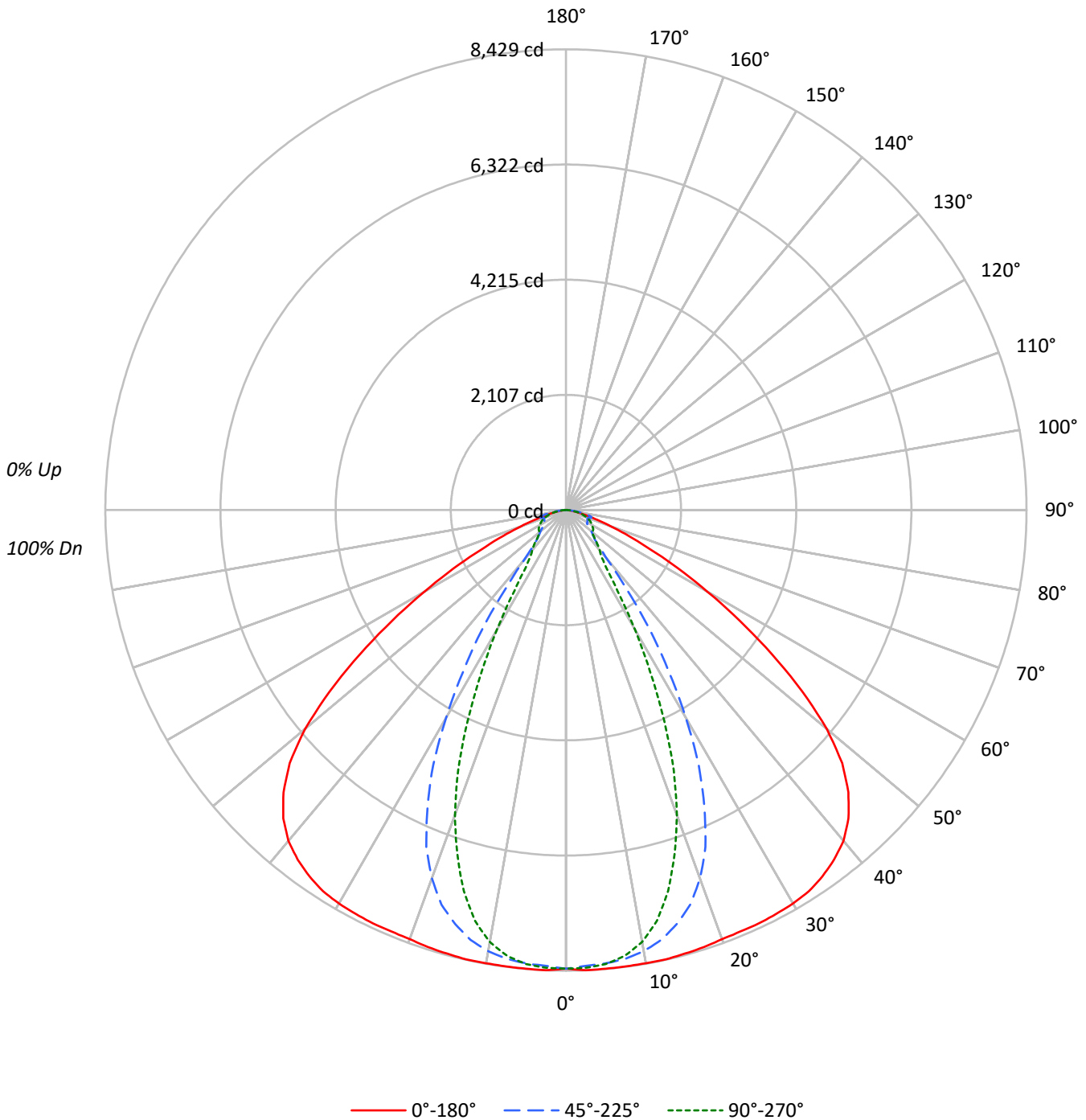
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11846.9 lumens  
Efficiency: N/A  
Efficacy: 153.9 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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89	89	
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	80	79	79	
3	96	88	81	76	94	86	80	76	84	79	74	81	77	73	79	75	72	70	70	
4	90	80	73	68	88	79	72	67	77	71	66	74	70	66	72	68	65	63	63	
5	84	74	66	61	82	73	66	60	71	64	60	69	63	59	67	62	59	57	57	
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	52	52	
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	47	47	
8	70	58	51	46	68	58	51	46	56	50	46	55	50	45	54	49	45	44	44	
9	66	54	47	42	65	54	47	42	53	47	42	52	46	42	51	46	42	40	40	
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37	37	

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

	0°	45°	90°
0°	27097	27097	27097
5°	27308	26993	27035
10°	27612	26878	26322
15°	28094	26213	24133
20°	28712	24651	20401
25°	29744	21365	15159
30°	30988	16364	9405
35°	32263	10578	5045
40°	33308	4925	4040
45°	33380	3341	3440
50°	31295	3061	3166
55°	25873	2758	3435
60°	19365	2909	3526
65°	13055	3325	3776
70°	8287	4055	3885
75°	4999	6041	3878
80°	3050	5391	3611
85°	1971	3490	2479



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	794.4	6.7
10°-20°	2193.2	18.5
20°-30°	2801.1	23.6
30°-40°	2271.8	19.2
40°-50°	1607.5	13.6
50°-60°	1046.9	8.8
60°-70°	642.9	5.4
70°-80°	381.9	3.2
80°-90°	107.3	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°	5788.7	48.9
0°-40°	8060.5	68.0
0°-60°	10714.9	90.4
0°-90°	11846.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11846.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8391	8391	8391	8391	8391	
5°	8424	8406	8327	8361	8340	804
15°	8404	8290	7841	7434	7219	2380
25°	8348	7659	5996	4662	4255	3860
35°	8184	5556	2683	1440	1280	5119
45°	7309	2797	732	778	753	5575
55°	4596	942	490	572	610	4107
65°	1709	483	435	522	494	1775
75°	401	274	484	355	311	467
85°	53	106	94	84	67	74
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8391.3	8391.3	8391.3	8391.3	8391.3
2.5°	8428.7	8412.2	8348.1	8398.5	8384.1
5°	8424.4	8406.4	8327.3	8361.1	8340.2
7.5°	8421.5	8394.9	8282.7	8272.6	8229.4
10°	8420.8	8374.0	8197.1	8099.9	8027.3
12.5°	8422.3	8339.5	8056.8	7842.4	7694.9
15°	8403.5	8289.9	7841.0	7433.8	7218.7
17.5°	8386.3	8176.2	7569.0	6933.8	6610.8
20°	8355.3	8064.0	7173.3	6320.8	5936.7
22.5°	8346.7	7894.2	6673.3	5531.6	5151.0
25°	8348.1	7658.9	5996.4	4661.8	4254.6
27.5°	8332.3	7345.3	5259.0	3820.8	3338.8
30°	8310.7	6900.7	4388.5	2919.4	2522.3
32.5°	8272.6	6276.9	3497.1	2080.6	1751.1
35°	8184.1	5556.1	2683.4	1439.6	1279.8
37.5°	8061.1	4754.6	1809.3	1080.6	1054.7
40°	7901.4	4027.3	1168.3	944.6	958.3
42.5°	7653.9	3399.3	853.2	859.0	860.4
45°	7309.3	2797.1	731.7	777.7	753.2
47.5°	6856.1	2196.4	664.7	677.7	674.1
50°	6229.5	1644.6	609.3	606.5	630.2
52.5°	5454.6	1216.5	552.5	577.0	621.6
55°	4595.7	941.7	489.9	571.9	610.1
57.5°	3771.9	763.3	454.0	557.6	579.9
60°	2998.5	636.0	450.4	530.9	546.0
62.5°	2316.5	545.3	448.2	518.0	523.7
65°	1708.6	482.7	435.2	522.3	494.2
67.5°	1244.6	462.6	425.2	515.1	455.4
70°	877.7	406.5	429.5	475.5	411.5
72.5°	595.7	339.6	477.7	419.4	360.4
75°	400.7	274.1	484.2	354.7	310.8
77.5°	260.4	228.1	411.5	289.9	257.6
80°	164.0	189.9	289.9	223.0	194.2
82.5°	106.5	146.0	183.5	157.6	133.8
85°	53.2	106.5	94.2	84.2	66.9
87.5°	31.7	64.7	50.4	36.7	33.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)