

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: P685359

Luminaire Tested: **4CZL-5-UNV-N-L835-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685359  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-5-UNV-N-L835-CD-U  
Description: METALUX CRUZE LINEAR 4FT NARROW LENS MODEL @80 CRI and 3500K  
Light Source: (392) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

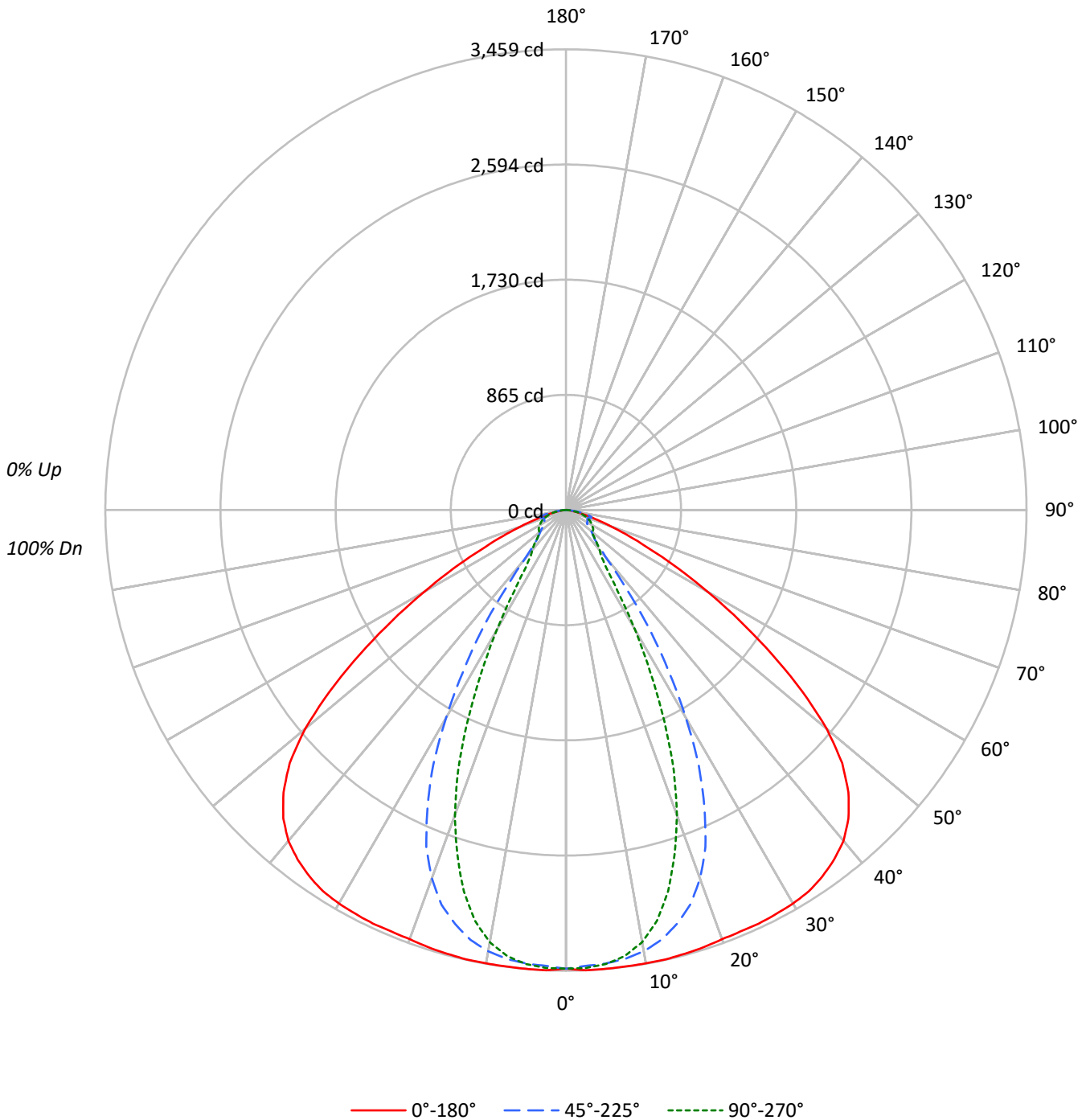
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4862.0 lumens  
Efficiency: N/A  
Efficacy: 156.8 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): 31  
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				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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	91	91	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	80	80	80	80	79
3	96	88	81	76	94	86	80	76	84	79	74	81	77	73	79	75	72	72	72	72	70
4	90	80	73	68	88	79	72	67	77	71	66	74	70	66	72	68	65	65	65	65	63
5	84	74	66	61	82	73	66	60	71	64	60	69	63	59	67	62	59	59	59	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	53	53	53	52
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	49	49	49	47
8	70	58	51	46	68	58	51	46	56	50	46	55	50	45	54	49	45	45	45	45	44
9	66	54	47	42	65	54	47	42	53	47	42	52	46	42	51	46	42	42	42	42	40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	39	39	39	37

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

	0°	45°	90°
0°	11121	11121	11121
5°	11207	11078	11095
10°	11332	11031	10802
15°	11530	10758	9904
20°	11784	10117	8373
25°	12207	8768	6221
30°	12718	6715	3860
35°	13241	4341	2071
40°	13670	2021	1658
45°	13699	1371	1412
50°	12844	1256	1299
55°	10619	1132	1410
60°	7948	1194	1447
65°	5358	1365	1550
70°	3401	1665	1595
75°	2052	2479	1591
80°	1252	2213	1482
85°	808	1434	1019



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	326.0	6.7
10°-20°	900.1	18.5
20°-30°	1149.6	23.6
30°-40°	932.4	19.2
40°-50°	659.7	13.6
50°-60°	429.7	8.8
60°-70°	263.8	5.4
70°-80°	156.7	3.2
80°-90°	44.0	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°	2375.7	48.9
0°-40°	3308.1	68.0
0°-60°	4397.4	90.4
0°-90°	4862.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4862.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3444	3444	3444	3444	3444	
5°	3457	3450	3418	3431	3423	330
15°	3449	3402	3218	3051	2963	977
25°	3426	3143	2461	1913	1746	1584
35°	3359	2280	1101	591	525	2101
45°	3000	1148	300	319	309	2288
55°	1886	386	201	235	250	1685
65°	701	198	179	214	203	729
75°	164	112	199	146	128	192
85°	22	44	39	34	28	31
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3443.8	3443.8	3443.8	3443.8	3443.8
2.5°	3459.2	3452.4	3426.1	3446.8	3440.9
5°	3457.4	3450.0	3417.6	3431.4	3422.9
7.5°	3456.2	3445.3	3399.2	3395.1	3377.4
10°	3455.9	3436.7	3364.1	3324.3	3294.4
12.5°	3456.5	3422.6	3306.5	3218.6	3158.0
15°	3448.8	3402.2	3218.0	3050.8	2962.6
17.5°	3441.8	3355.6	3106.4	2845.6	2713.1
20°	3429.1	3309.5	2944.0	2594.1	2436.4
22.5°	3425.5	3239.8	2738.8	2270.2	2114.0
25°	3426.1	3143.3	2460.9	1913.2	1746.1
27.5°	3419.6	3014.5	2158.3	1568.1	1370.3
30°	3410.8	2832.1	1801.0	1198.1	1035.2
32.5°	3395.1	2576.1	1435.2	853.9	718.6
35°	3358.8	2280.2	1101.3	590.8	525.3
37.5°	3308.3	1951.3	742.6	443.5	432.8
40°	3242.8	1652.8	479.5	387.7	393.3
42.5°	3141.2	1395.1	350.2	352.5	353.1
45°	2999.8	1147.9	300.3	319.2	309.1
47.5°	2813.8	901.4	272.8	278.1	276.7
50°	2556.6	674.9	250.1	248.9	258.6
52.5°	2238.6	499.3	226.8	236.8	255.1
55°	1886.1	386.5	201.1	234.7	250.4
57.5°	1548.0	313.3	186.3	228.8	238.0
60°	1230.6	261.0	184.8	217.9	224.1
62.5°	950.7	223.8	183.9	212.6	214.9
65°	701.2	198.1	178.6	214.4	202.8
67.5°	510.8	189.8	174.5	211.4	186.9
70°	360.2	166.8	176.3	195.2	168.9
72.5°	244.5	139.4	196.0	172.1	147.9
75°	164.5	112.5	198.7	145.6	127.5
77.5°	106.9	93.6	168.9	119.0	105.7
80°	67.3	77.9	119.0	91.5	79.7
82.5°	43.7	59.9	75.3	64.7	54.9
85°	21.8	43.7	38.7	34.5	27.5
87.5°	13.0	26.6	20.7	15.1	13.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)