

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: P685450

Luminaire Tested: **4CZL-7-UNV-M-L935-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685450  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-7-UNV-M-L935-CD-U  
Description: METALUX CRUZE LINEAR 4FT MEDIUM LENS MODEL @90 CRI and 3500K  
Light Source: (392) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

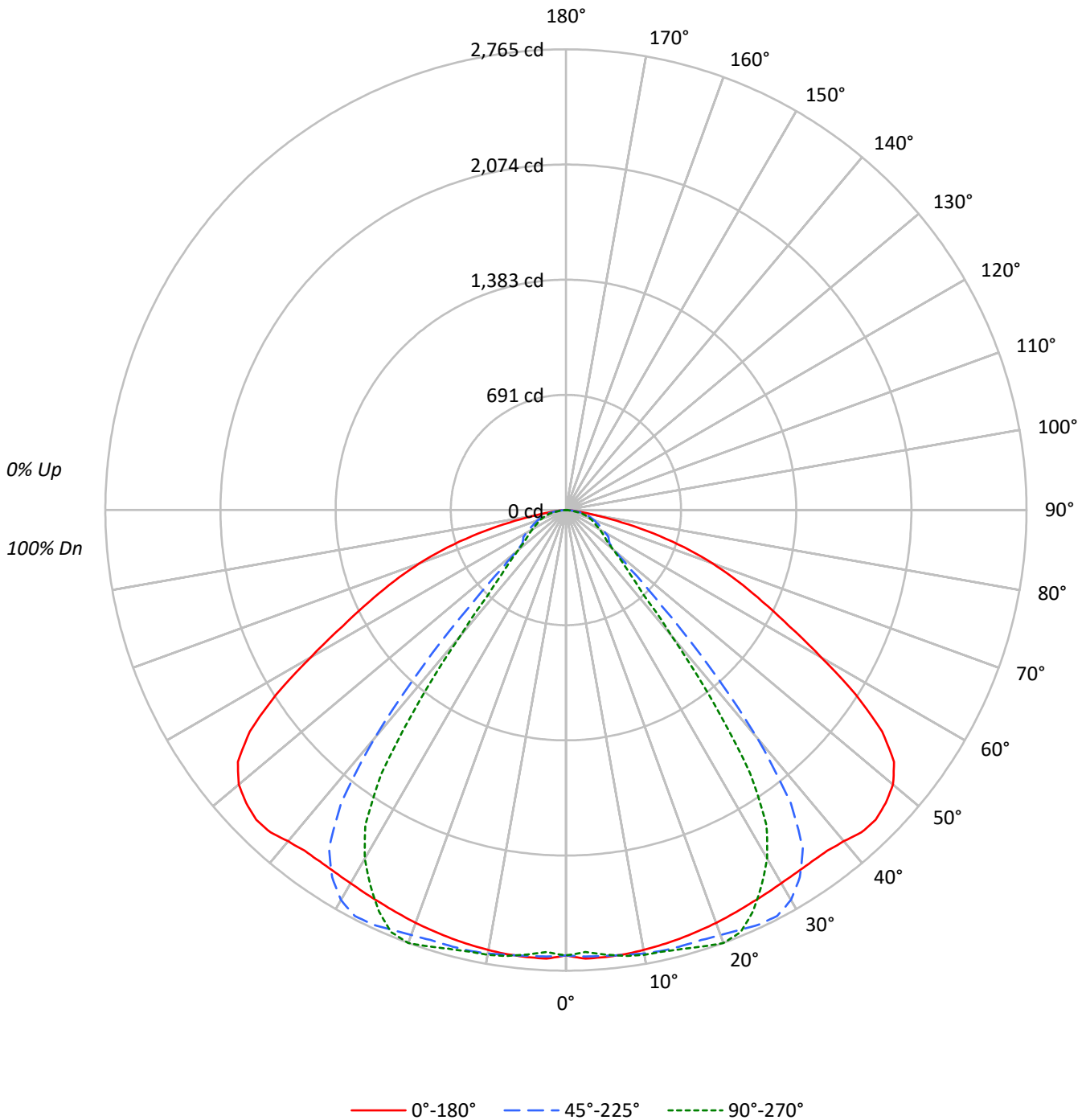
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5776.0 lumens  
Efficiency: N/A  
Efficacy: 131.3 lumens/watt  
Spacing Criteria (0/90/45): 1.48 / 1.28 / 1.22  
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 44  
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	90	88
2	103	96	90	86	100	94	89	85	91	87	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	79	73	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	51	61	55	50	59	54	50	50	50	50	48
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	37	36
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	34	34	34	33

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

	0°	45°	90°
0°	8633	8633	8633
5°	8730	8705	8680
10°	8793	8862	8887
15°	8898	9050	9113
20°	9061	9326	9503
25°	9293	9780	9467
30°	9643	10075	9006
35°	10150	9773	7605
40°	10939	7537	4159
45°	12010	3705	2486
50°	12878	1937	1854
55°	13042	1767	1600
60°	11437	1762	1509
65°	9953	1692	1460
70°	8833	1716	1470
75°	6776	1760	1492
80°	3448	1789	1237
85°	1360	1008	352



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	256.2	4.4
10°-20°	763.5	13.2
20°-30°	1232.2	21.3
30°-40°	1443.1	25.0
40°-50°	982.4	17.0
50°-60°	568.8	9.8
60°-70°	325.2	5.6
70°-80°	167.4	2.9
80°-90°	37.3	0.6
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°	2251.8	39.0
0°-40°	3694.9	64.0
0°-60°	5246.1	90.8
0°-90°	5776.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5776.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2674	2674	2674	2674	2674	
5°	2693	2667	2686	2682	2678	257
15°	2662	2658	2707	2714	2726	753
25°	2608	2645	2745	2703	2657	1207
35°	2575	2702	2479	2091	1929	1621
45°	2630	1957	811	547	544	2020
55°	2316	672	314	292	284	2018
65°	1303	240	222	196	191	1306
75°	543	148	141	123	120	577
85°	37	45	27	13	10	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2673.5	2673.5	2673.5	2673.5	2673.5	2673.5	2673.5	2673.5	2673.5	2673.5	2673.5
2.5°	2695.0	2687.4	2672.2	2665.9	2665.9	2682.4	2684.9	2674.8	2672.9	2664.0	2655.8
5°	2693.1	2685.5	2671.0	2665.3	2667.2	2685.5	2690.0	2681.7	2684.3	2681.7	2677.9
7.5°	2689.3	2681.1	2667.8	2664.0	2669.7	2693.1	2700.7	2696.3	2702.0	2700.7	2699.5
10°	2681.7	2675.4	2662.8	2662.1	2673.5	2702.6	2712.1	2706.4	2708.3	2707.7	2710.2
12.5°	2671.6	2665.9	2655.2	2660.9	2677.3	2708.3	2714.7	2705.8	2708.3	2709.0	2713.4
15°	2661.5	2654.5	2647.6	2660.9	2677.9	2707.1	2713.4	2712.1	2719.7	2720.3	2726.0
17.5°	2648.8	2644.4	2642.5	2660.2	2673.5	2705.8	2720.3	2727.9	2738.1	2740.6	2746.3
20°	2636.8	2633.0	2637.4	2657.1	2671.6	2714.0	2734.3	2745.7	2756.4	2759.6	2765.3
22.5°	2622.2	2619.7	2631.7	2652.6	2674.8	2726.7	2749.5	2750.7	2746.3	2738.1	2741.9
25°	2608.3	2608.3	2626.0	2651.4	2684.3	2745.0	2746.9	2710.9	2678.6	2657.1	2657.1
27.5°	2596.9	2599.5	2621.6	2657.1	2702.6	2746.3	2693.8	2622.2	2574.8	2543.8	2541.9
30°	2586.2	2590.6	2621.6	2672.9	2715.9	2702.0	2600.1	2513.4	2447.6	2417.8	2415.3
32.5°	2578.6	2585.5	2633.0	2696.9	2700.1	2612.7	2479.8	2370.3	2292.5	2248.2	2240.6
35°	2574.8	2583.0	2654.5	2717.8	2636.2	2479.2	2290.6	2121.6	1998.2	1941.2	1929.2
37.5°	2577.3	2591.9	2684.3	2700.1	2476.0	2216.5	1945.6	1703.2	1533.6	1479.8	1442.5
40°	2595.0	2619.7	2707.7	2555.8	2139.9	1788.0	1429.2	1168.4	1051.3	1012.7	986.7
42.5°	2624.8	2649.5	2646.3	2225.4	1671.6	1270.3	920.9	764.6	707.6	701.3	689.3
45°	2629.8	2639.3	2447.6	1793.1	1215.9	811.4	593.1	546.9	545.6	550.0	544.3
47.5°	2603.3	2584.9	2160.8	1371.6	837.4	524.7	446.2	453.8	457.6	454.4	450.0
50°	2563.4	2495.7	1839.3	1008.3	558.2	385.5	389.3	396.2	382.9	374.1	369.0
52.5°	2482.4	2350.7	1482.3	714.6	386.1	329.1	359.5	339.3	320.3	315.2	314.6
55°	2316.5	2135.5	1140.5	515.2	294.9	313.9	319.6	293.7	288.0	285.5	284.2
57.5°	2064.0	1867.8	857.6	372.2	258.9	303.2	277.9	267.7	262.0	260.1	258.2
60°	1770.9	1568.4	639.3	273.4	251.3	272.8	251.9	242.4	236.1	233.6	233.6
62.5°	1511.4	1298.1	472.8	222.2	249.4	246.2	227.2	217.1	213.3	212.0	210.8
65°	1302.6	1044.3	341.2	205.7	232.9	221.5	203.2	196.2	193.7	191.1	191.1
67.5°	1116.5	817.7	251.3	201.9	213.9	199.4	185.4	179.8	176.6	176.0	175.3
70°	935.5	602.6	191.1	197.5	203.2	181.7	168.4	161.4	157.6	155.7	155.7
72.5°	745.0	413.3	152.5	181.7	186.1	160.8	147.5	142.4	139.2	137.3	136.7
75°	543.1	259.5	134.2	152.5	160.1	141.1	127.9	123.4	122.2	120.3	119.6
77.5°	345.6	155.1	114.6	124.7	131.0	119.0	108.9	103.2	102.5	100.6	100.0
80°	185.4	99.4	91.8	98.1	101.9	96.2	84.2	72.8	69.6	67.1	66.5
82.5°	86.1	63.3	68.4	74.1	76.0	61.4	50.6	45.6	42.4	39.2	37.3
85°	36.7	34.2	42.4	45.6	37.3	27.2	17.7	13.3	10.8	10.1	9.5
87.5°	13.3	13.3	15.8	10.8	6.3	5.1	5.1	4.4	3.8	3.2	3.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)