

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: P685331

Luminaire Tested: **4CZL-9-UNV-L935-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685331  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-9-UNV-L935-CD-U  
Description: METALUX CRUZE LINEAR 4FT BASE MODEL @90 CRI and 3500K  
Light Source: (588) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

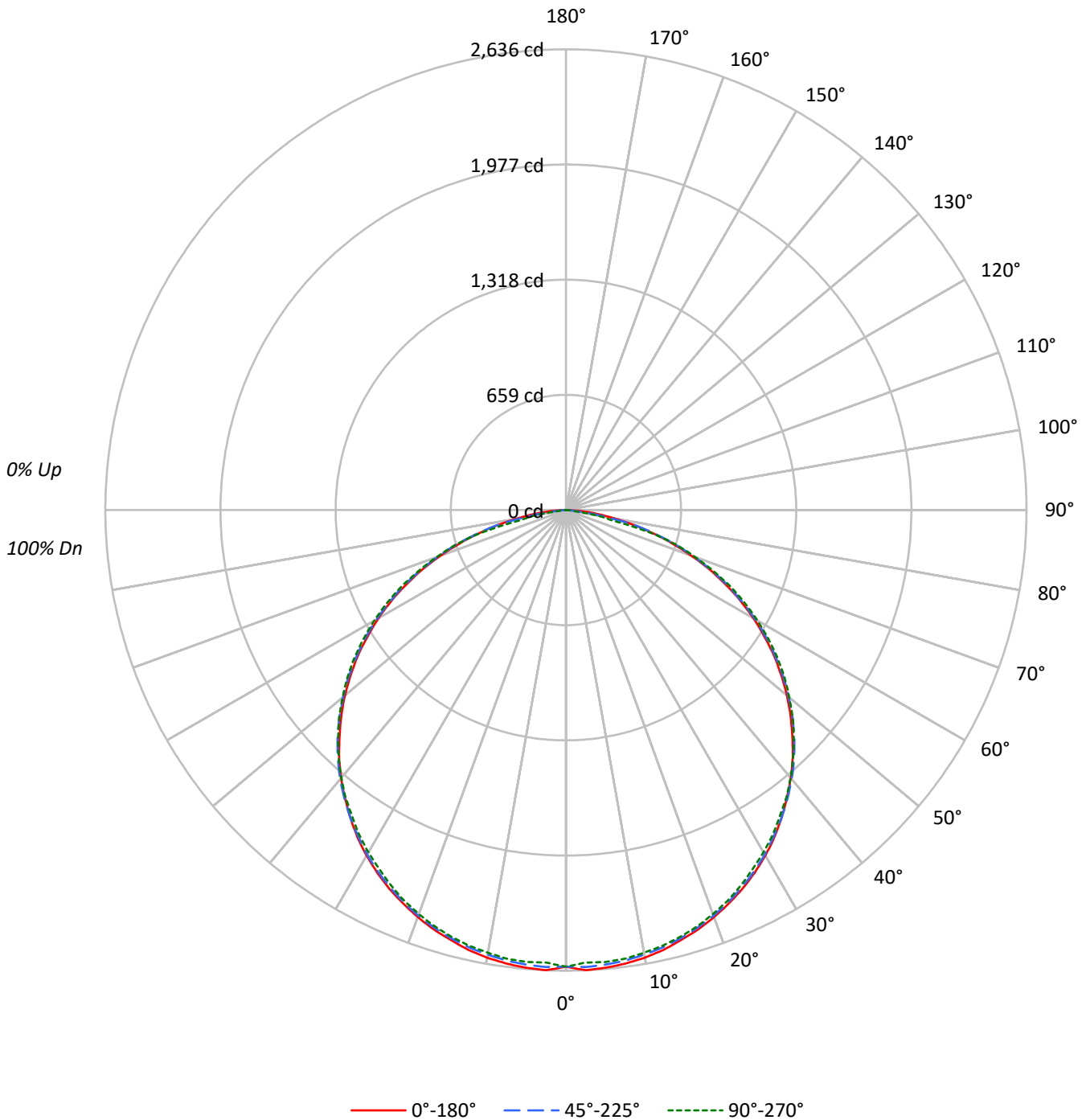
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7749.8 lumens  
Efficiency: N/A  
Efficacy: 143.5 lumens/watt  
Spacing Criteria (0/90/45): 1.3 / 1.29 / 1.41  
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 54  
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	100	100	100	100
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	70	70	70	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58	58	58	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50	50	50	50
5	76	63	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43	43	43	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37	37	37	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33	33	33	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29	29	29	29
9	56	42	34	29	55	42	34	29	41	33	28	40	33	28	39	33	28	26	26	26	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24	24	24	24

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

	0°	45°	90°
0°	8436	8436	8436
5°	8520	8466	8414
10°	8527	8470	8433
15°	8516	8481	8454
20°	8518	8488	8455
25°	8520	8486	8443
30°	8509	8486	8432
35°	8478	8478	8418
40°	8438	8472	8432
45°	8367	8440	8422
50°	8296	8356	8384
55°	8185	8244	8324
60°	8007	8079	8176
65°	7708	7818	7952
70°	7210	7352	7420
75°	6487	6606	6268
80°	5419	4413	3435
85°	4042	1063	385



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	247.8	3.2
10°-20°	714.6	9.2
20°-30°	1094.3	14.1
30°-40°	1339.7	17.3
40°-50°	1417.3	18.3
50°-60°	1307.0	16.9
60°-70°	1008.2	13.0
70°-80°	538.5	6.9
80°-90°	82.4	1.1
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°	2056.7	26.5
0°-40°	3396.4	43.8
0°-60°	6120.7	79.0
0°-90°	7749.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7749.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2612	2612	2612	2612	2612	
5°	2628	2597	2612	2600	2596	250
15°	2547	2520	2537	2528	2529	720
25°	2391	2366	2382	2364	2370	1102
35°	2151	2138	2151	2132	2136	1346
45°	1832	1831	1848	1835	1844	1414
55°	1454	1452	1464	1473	1479	1297
65°	1009	1009	1023	1031	1041	996
75°	520	519	530	534	502	550
85°	109	78	29	12	10	134
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2612.5	2612.5	2612.5	2612.5	2612.5
2.5°	2635.6	2604.5	2617.3	2607.7	2591.8
5°	2628.4	2597.4	2611.7	2600.5	2595.8
7.5°	2617.3	2585.4	2599.7	2591.0	2589.4
10°	2600.5	2567.9	2583.0	2573.5	2571.9
12.5°	2578.2	2546.4	2563.1	2552.0	2553.6
15°	2547.2	2520.1	2536.8	2528.1	2528.9
17.5°	2516.1	2488.3	2505.8	2497.0	2497.8
20°	2478.7	2451.6	2470.0	2456.4	2460.4
22.5°	2436.5	2412.6	2428.6	2411.0	2419.0
25°	2391.1	2366.4	2381.6	2364.1	2369.6
27.5°	2339.4	2316.3	2331.4	2313.1	2315.5
30°	2282.0	2261.3	2275.7	2257.4	2261.3
32.5°	2220.7	2202.4	2213.6	2196.8	2202.4
35°	2150.7	2137.9	2150.7	2132.3	2135.5
37.5°	2077.4	2064.7	2082.2	2066.3	2071.8
40°	2001.8	1989.8	2009.7	1993.8	2000.2
42.5°	1921.3	1912.6	1932.5	1916.6	1924.5
45°	1832.2	1831.4	1848.1	1835.3	1844.1
47.5°	1743.8	1742.2	1758.9	1750.2	1760.5
50°	1651.4	1649.8	1663.4	1662.6	1668.9
52.5°	1552.7	1555.1	1567.8	1570.2	1577.4
55°	1453.9	1452.4	1464.3	1473.1	1478.6
57.5°	1346.5	1349.6	1359.2	1369.5	1373.5
60°	1239.8	1238.2	1250.9	1259.7	1266.0
62.5°	1126.7	1126.7	1137.0	1149.8	1156.2
65°	1008.8	1008.8	1023.2	1031.1	1040.7
67.5°	888.6	886.2	899.0	916.5	914.9
70°	763.6	764.4	778.7	787.5	785.9
72.5°	639.4	641.8	656.9	660.9	664.9
75°	519.9	519.2	529.5	533.5	502.4
77.5°	401.3	402.1	408.5	299.4	262.8
80°	291.4	293.0	237.3	184.7	184.7
82.5°	192.7	189.5	121.8	71.7	52.6
85°	109.1	78.0	28.7	11.9	10.4
87.5°	44.6	14.3	8.0	5.6	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)