

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: P685810

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

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685810  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-7-UNV-M-LVR-L935-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @90 CRI and 3500K  
Light Source: (392) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

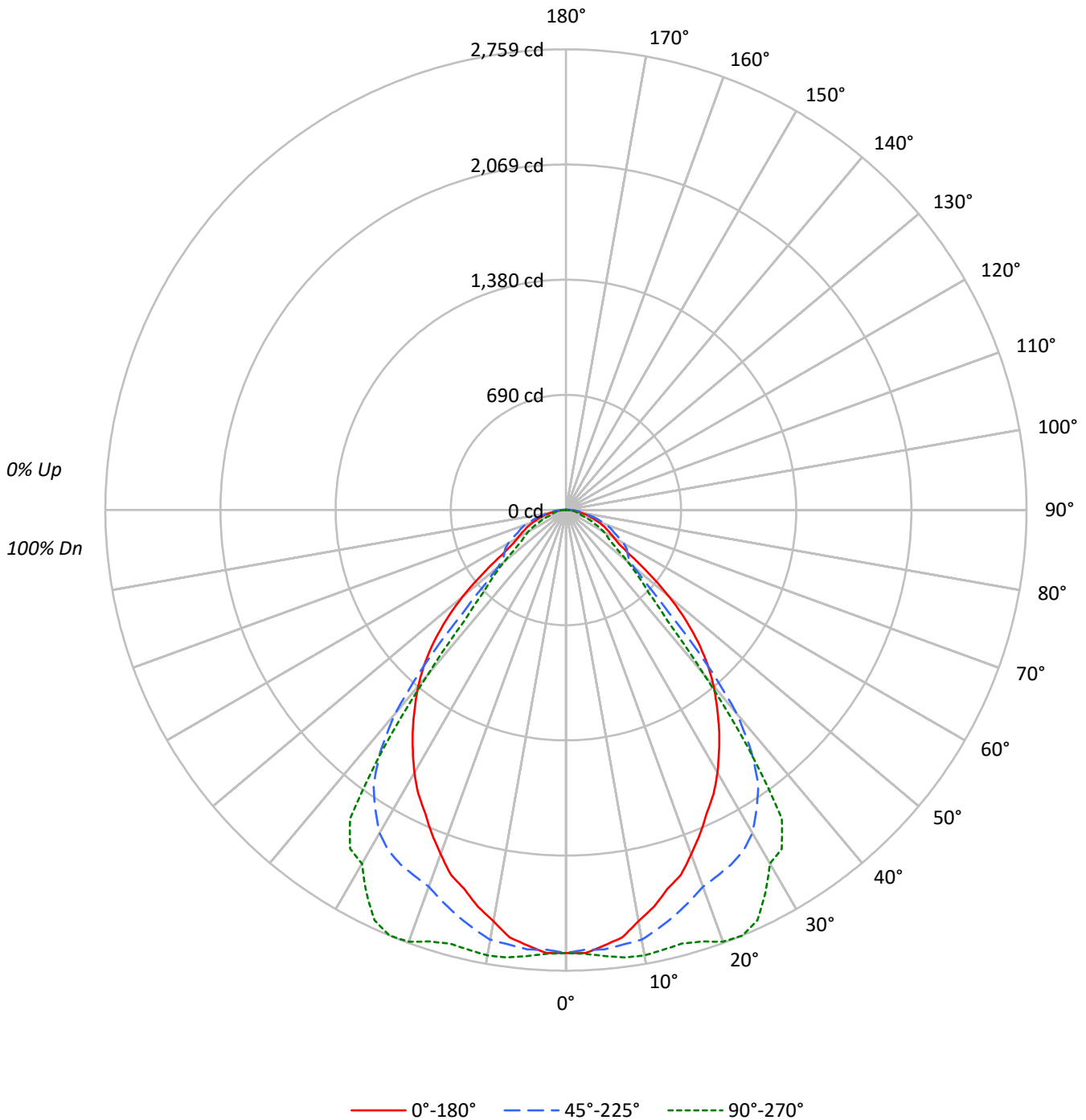
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4907.1 lumens  
Efficiency: N/A  
Efficacy: 111.5 lumens/watt  
Spacing Criteria (0/90/45): 1.05 / 1.34 / 1.2  
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	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	93	91	90	88
2	103	96	90	86	100	94	89	84	91	86	83	87	84	81	84	81	79	84	81	79	77
3	95	87	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	70	66	62	70	66	62	60
5	83	72	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	65	60	56	54
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	60	55	51	49
7	72	60	53	47	70	59	52	47	58	51	47	57	51	46	55	50	46	55	50	46	44
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	51	46	42	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	48	42	39	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	35	45	39	35	34

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

	0°	45°	90°
0°	8566	8566	8566
5°	8487	8563	8691
10°	8199	8568	8881
15°	7854	8408	8985
20°	7537	8248	9452
25°	7121	8346	9663
30°	6769	8328	9114
35°	6303	7920	8887
40°	5802	6713	5416
45°	5112	4001	3210
50°	4058	2657	2422
55°	2627	2528	1838
60°	2145	2569	1689
65°	2043	2421	1380
70°	1940	2430	1090
75°	1843	2274	1014
80°	1705	2148	1138
85°	1526	2627	1397



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	251.7	5.1
10°-20°	714.0	14.6
20°-30°	1076.7	21.9
30°-40°	1189.7	24.2
40°-50°	746.0	15.2
50°-60°	401.6	8.2
60°-70°	272.8	5.6
70°-80°	162.9	3.3
80°-90°	70.8	1.4
90°-100°	15.5	0.3
100°-110°	1.8	0.0
110°-120°	0.6	0.0
120°-130°	0.6	0.0
130°-140°	0.7	0.0
140°-150°	0.6	0.0
150°-160°	0.5	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	2042.5	41.6
0°-40°	3232.2	65.9
0°-60°	4379.8	89.3
0°-90°	4886.3	99.6
90°-120°	17.9	0.4
90°-150°	19.8	0.4
90°-180°	21.0	0.4
0°-180°	4907.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2653	2653	2653	2653	2653	
5°	2618	2623	2642	2673	2681	247
15°	2349	2432	2515	2637	2688	663
25°	1999	2120	2342	2592	2712	923
35°	1599	1787	2009	2161	2254	998
45°	1119	1219	876	714	703	854
55°	467	488	449	388	326	453
65°	267	294	317	257	181	265
75°	148	164	182	150	81	156
85°	41	50	71	93	38	44
90°	1	16	36	60	11	3
95°	0	2	14	31	6	0
105°	0	1	1	2	1	0
115°	0	1	1	1	1	0
125°	0	1	1	1	1	0
135°	1	1	1	1	1	1
145°	1	1	1	1	1	0
155°	1	1	1	1	1	0
165°	1	1	1	1	1	0
175°	1	1	1	2	2	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2652.7	2652.7	2652.7	2652.7	2652.7
2.5°	2656.2	2648.9	2635.5	2659.7	2660.0
5°	2618.2	2622.7	2641.7	2672.8	2681.1
7.5°	2581.1	2598.4	2624.0	2699.1	2702.9
10°	2500.5	2536.5	2613.0	2685.3	2708.4
12.5°	2433.4	2486.7	2565.6	2660.7	2696.7
15°	2349.4	2431.7	2515.1	2636.8	2687.7
17.5°	2290.6	2356.7	2458.7	2625.8	2709.1
20°	2193.4	2286.4	2400.2	2633.4	2750.6
22.5°	2099.0	2212.1	2370.8	2636.1	2759.3
25°	1998.6	2120.1	2342.5	2592.2	2711.9
27.5°	1915.6	2017.3	2300.3	2500.5	2587.0
30°	1815.3	1935.0	2233.5	2360.5	2444.2
32.5°	1707.4	1859.2	2125.2	2253.2	2405.4
35°	1598.8	1786.6	2009.0	2161.2	2254.3
37.5°	1485.3	1726.8	1826.4	1850.9	1787.3
40°	1376.4	1643.4	1592.5	1354.9	1284.7
42.5°	1257.4	1464.2	1242.1	932.2	900.7
45°	1119.3	1218.6	876.2	714.3	702.9
47.5°	972.3	943.6	653.4	597.0	590.5
50°	807.7	754.4	528.9	526.8	482.2
52.5°	629.5	599.1	474.2	456.9	386.0
55°	466.6	488.1	449.0	388.5	326.5
57.5°	373.6	423.4	431.3	339.3	291.9
60°	332.1	370.5	397.8	312.0	261.5
62.5°	297.8	328.3	356.3	289.5	225.5
65°	267.4	294.0	316.8	257.4	180.6
67.5°	235.2	262.9	290.9	221.0	153.6
70°	205.5	234.9	257.4	196.1	115.5
72.5°	174.7	205.1	215.2	164.0	92.4
75°	147.7	164.3	182.3	149.8	81.3
77.5°	119.3	133.5	140.8	137.3	71.6
80°	91.7	103.1	115.5	124.9	61.2
82.5°	67.1	75.4	92.4	110.0	49.1
85°	41.2	50.5	70.9	93.4	37.7
87.5°	18.3	30.1	52.2	77.1	24.2
90°	1.0	15.6	36.0	59.8	11.1
92.5°	0.3	6.9	23.5	44.3	7.6
95°	0.3	2.4	14.2	30.8	5.5
97.5°	0.3	1.0	8.0	19.7	3.5
100°	0.3	0.7	3.8	11.4	2.4
102.5°	0.3	0.7	1.7	5.5	1.7
105°	0.3	0.7	1.0	2.4	1.0
107.5°	0.3	0.7	0.7	1.0	0.7
110°	0.3	0.7	0.7	0.7	0.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.3	0.7	0.7	0.7	0.7
115°	0.3	0.7	0.7	0.7	0.7
117.5°	0.3	0.7	0.7	0.7	0.7
120°	0.3	0.7	0.7	0.7	0.7
122.5°	0.3	0.7	0.7	0.7	0.7
125°	0.3	0.7	0.7	0.7	0.7
127.5°	0.3	0.7	0.7	0.7	0.7
130°	0.3	0.7	0.7	0.7	0.7
132.5°	0.7	0.7	1.0	1.0	1.0
135°	0.7	0.7	1.0	1.0	1.0
137.5°	0.7	1.0	1.0	1.0	1.0
140°	0.7	1.0	1.0	1.0	1.0
142.5°	0.7	1.0	1.0	1.0	1.0
145°	0.7	1.0	1.0	1.0	1.4
147.5°	0.7	1.0	1.0	1.0	1.4
150°	0.7	1.0	1.0	1.0	1.0
152.5°	1.0	1.0	1.0	1.0	1.0
155°	1.0	1.0	1.0	1.0	1.0
157.5°	1.0	1.0	1.0	1.4	1.4
160°	1.0	1.4	1.4	1.4	1.4
162.5°	1.0	1.4	1.4	1.4	1.4
165°	1.0	1.4	1.4	1.4	1.4
167.5°	1.0	1.4	1.4	1.4	1.7
170°	1.4	1.4	1.4	1.7	1.7
172.5°	1.4	1.4	1.4	1.7	1.7
175°	1.4	1.4	1.4	1.7	1.7
177.5°	1.4	1.7	1.4	1.7	2.1
180°	1.7	1.7	1.7	1.7	1.7

(END OF REPORT)