

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: P685949

Luminaire Tested: **4CZL-5-UNV-LVRF-L950-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685949  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-5-UNV-LVRF-L950-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @90 CRI and 5000K  
Light Source: (392) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

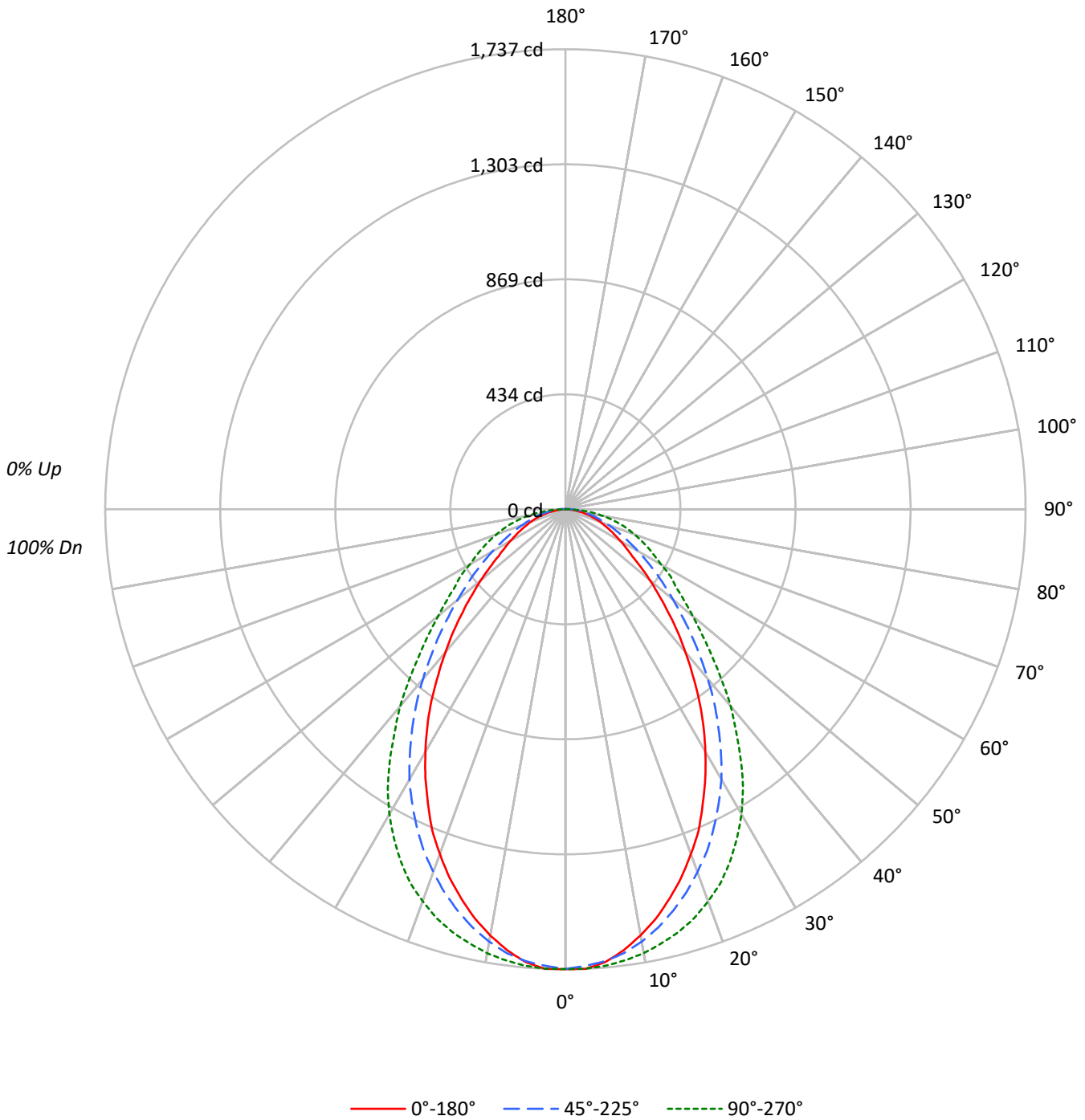
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3202.1 lumens  
Efficiency: N/A  
Efficacy: 103.3 lumens/watt  
Spacing Criteria (0/90/45): 0.97 / 1.15 / 1.12  
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 (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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86	86	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	82	79	76	74	74	74
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	74	70	67	65	65	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51	51	51
6	75	63	55	49	73	62	54	48	60	53	48	58	52	48	57	51	47	45	45	45
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	41	41	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37	37	37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34	34	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31	31	31

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

	0°	45°	90°
0°	5606	5606	5606
5°	5565	5552	5608
10°	5357	5436	5580
15°	5083	5246	5521
20°	4760	5007	5411
25°	4371	4724	5232
30°	3940	4390	4955
35°	3470	3970	4551
40°	2970	3525	4092
45°	2502	3073	3564
50°	2089	2664	3151
55°	1729	2340	2857
60°	1558	2051	2694
65°	1417	1806	2635
70°	1319	1620	2614
75°	1223	1512	2668
80°	1108	1499	2672
85°	952	1756	2645



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.4	5.1
10°-20°	443.9	13.9
20°-30°	613.3	19.2
30°-40°	630.9	19.7
40°-50°	517.3	16.2
50°-60°	371.2	11.6
60°-70°	249.6	7.8
70°-80°	145.7	4.6
80°-90°	56.1	1.8
90°-100°	9.7	0.3
100°-110°	0.8	0.0
110°-120°	0.1	0.0
120°-130°	0.1	0.0
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1219.6	38.1
0°-40°	1850.6	57.8
0°-60°	2739.0	85.5
0°-90°	3190.5	99.6
90°-120°	10.6	0.3
90°-150°	11.2	0.3
90°-180°	12.0	0.4
0°-180°	3202.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1736	1736	1736	1736	1736	
5°	1717	1718	1713	1729	1730	161
15°	1520	1536	1569	1630	1652	426
25°	1227	1255	1326	1418	1468	563
35°	880	921	1007	1102	1154	548
45°	548	590	673	739	780	425
55°	307	344	416	472	508	283
65°	185	196	236	303	345	185
75°	98	102	121	168	214	104
85°	26	32	47	71	71	28
90°	0	11	24	37	8	2
95°	0	2	10	18	3	0
105°	0	0	0	1	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	1	0	0	0	0
165°	1	1	1	0	0	0
175°	1	1	1	0	0	0
180°	1	1	1	1	1	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1735.9	1735.9	1735.9	1735.9	1735.9
2.5°	1736.7	1735.2	1725.4	1736.7	1736.2
5°	1716.7	1718.0	1712.7	1728.7	1729.9
7.5°	1679.5	1684.5	1690.3	1713.7	1718.0
10°	1633.6	1641.1	1657.8	1692.8	1701.7
12.5°	1582.0	1590.2	1617.4	1665.6	1678.0
15°	1520.4	1535.8	1569.3	1630.1	1651.6
17.5°	1456.7	1475.7	1517.1	1589.2	1618.2
20°	1385.1	1404.1	1457.0	1537.3	1574.7
22.5°	1313.3	1331.7	1396.4	1481.9	1528.6
25°	1226.7	1255.4	1325.8	1418.1	1468.5
27.5°	1143.9	1174.3	1252.7	1351.7	1401.9
30°	1056.6	1092.2	1177.3	1271.9	1328.8
32.5°	970.0	1006.2	1093.0	1191.5	1247.9
35°	880.2	920.8	1007.2	1101.5	1154.4
37.5°	789.1	833.5	922.3	1015.2	1057.8
40°	704.5	748.2	836.3	919.4	970.7
42.5°	626.5	669.4	750.9	826.3	872.4
45°	547.9	590.5	672.9	739.0	780.4
47.5°	477.5	521.2	597.8	664.6	699.3
50°	415.9	455.6	530.2	590.8	627.2
52.5°	359.5	395.7	469.5	528.4	563.6
55°	307.1	343.8	415.6	472.5	507.5
57.5°	271.9	298.1	362.8	425.9	470.8
60°	241.3	257.5	317.6	392.4	417.1
62.5°	210.1	224.8	274.2	340.0	378.5
65°	185.4	196.3	236.3	303.4	344.8
67.5°	160.9	169.2	203.3	267.9	309.9
70°	139.7	145.0	171.6	233.0	276.9
72.5°	119.5	122.2	146.2	201.1	244.7
75°	98.0	101.5	121.2	168.4	213.8
77.5°	77.6	82.6	100.0	140.5	178.4
80°	59.6	63.6	80.6	115.5	143.7
82.5°	41.4	46.9	62.9	91.3	110.0
85°	25.7	31.9	47.4	70.9	71.4
87.5°	10.7	20.0	34.7	52.4	36.4
90°	0.2	10.7	24.2	36.9	7.7
92.5°	0.0	5.0	16.5	26.4	4.5
95°	0.2	1.7	10.2	17.7	3.2
97.5°	0.0	0.5	5.5	11.2	2.0
100°	0.0	0.2	2.2	6.2	1.2
102.5°	0.0	0.2	1.0	2.7	0.7
105°	0.0	0.2	0.5	1.0	0.5
107.5°	0.0	0.2	0.2	0.2	0.2
110°	0.2	0.2	0.2	0.2	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.2	0.2	0.0	0.0
115°	0.2	0.2	0.2	0.0	0.0
117.5°	0.2	0.2	0.2	0.0	0.0
120°	0.2	0.2	0.2	0.0	0.0
122.5°	0.2	0.2	0.2	0.0	0.0
125°	0.2	0.2	0.2	0.0	0.0
127.5°	0.2	0.2	0.2	0.0	0.0
130°	0.2	0.2	0.2	0.0	0.0
132.5°	0.2	0.5	0.2	0.2	0.0
135°	0.2	0.5	0.2	0.2	0.0
137.5°	0.2	0.5	0.2	0.2	0.0
140°	0.2	0.5	0.2	0.2	0.2
142.5°	0.5	0.5	0.5	0.2	0.2
145°	0.5	0.5	0.5	0.2	0.2
147.5°	0.5	0.5	0.5	0.2	0.2
150°	0.5	0.5	0.5	0.2	0.2
152.5°	0.5	0.7	0.5	0.2	0.2
155°	0.5	0.7	0.5	0.2	0.2
157.5°	0.5	0.7	0.5	0.2	0.2
160°	0.5	0.7	0.5	0.2	0.2
162.5°	0.7	0.7	0.5	0.5	0.2
165°	0.7	0.7	0.7	0.5	0.2
167.5°	0.7	0.7	0.7	0.5	0.2
170°	0.7	0.7	0.7	0.5	0.5
172.5°	0.7	0.7	0.7	0.5	0.5
175°	0.7	1.0	0.7	0.5	0.5
177.5°	0.7	1.0	0.7	0.5	0.5
180°	0.7	0.7	0.7	0.7	0.7

(END OF REPORT)