

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: P685772

Luminaire Tested: **4CZL-12-UNV-N-LVR-L950-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685772  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-12-UNV-N-LVR-L950-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @90 CRI and 5000K  
Light Source: (588) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

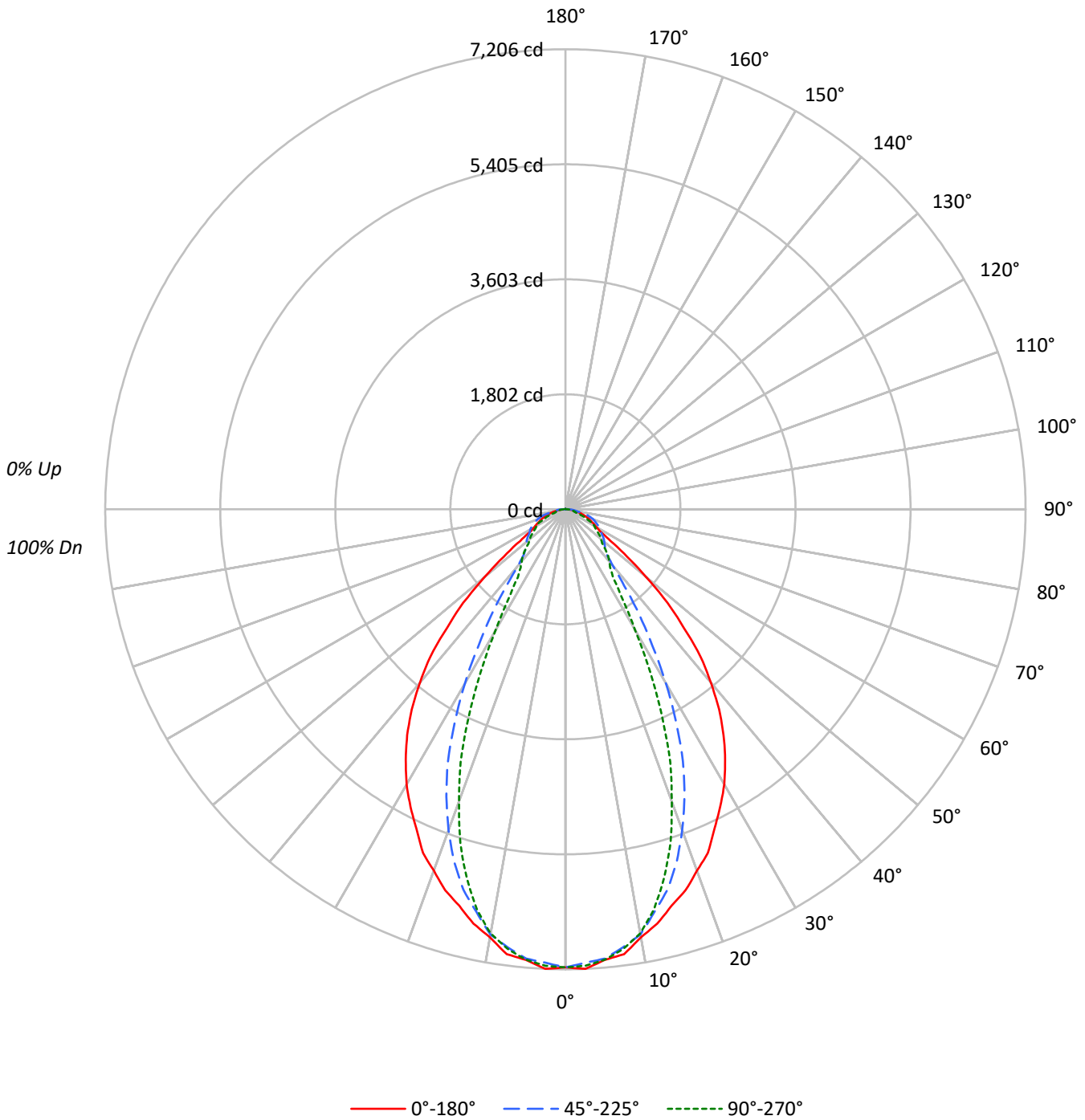
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8494.3 lumens  
Efficiency: N/A  
Efficacy: 110.3 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.8 / 0.85  
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 77  
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

TEST NUMBER: P685772  
CATALOG NUMBER: 4CZL-12-UNV-N-LVR-L950-CD-U

### Luminous Intensity Polar Plot





TEST NUMBER: P685772

CATALOG NUMBER: 4CZL-12-UNV-N-LVR-L950-CD-U

**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	93	92	90	88
2	103	97	92	87	101	95	90	86	92	88	84	88	85	82	86	83	80	86	83	80	78
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	79	75	72	70
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	73	69	65	63
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	68	63	59	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55	63	58	55	53
7	75	64	57	51	73	63	56	51	62	55	51	60	55	51	59	54	50	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	55	50	47	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	43	52	47	43	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	49	44	41	39

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

	0°	45°	90°
0°	23168	23168	23168
5°	22963	22897	22957
10°	22315	22178	22124
15°	21487	20630	19976
20°	20696	18378	16730
25°	19667	15518	12756
30°	18552	11738	8150
35°	17028	7958	5121
40°	14933	4848	4492
45°	11964	4039	4025
50°	8273	3991	3634
55°	4873	3956	3422
60°	3632	4110	3380
65°	3437	4138	2972
70°	3305	4413	2244
75°	3117	4429	1919
80°	2894	3675	2170
85°	2568	4461	2679



TEST NUMBER: P685772  
 CATALOG NUMBER: 4CZL-12-UNV-N-LVR-L950-CD-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	666.5	7.8
10°-20°	1725.6	20.3
20°-30°	2016.0	23.7
30°-40°	1495.6	17.6
40°-50°	991.5	11.7
50°-60°	657.6	7.7
60°-70°	490.6	5.8
70°-80°	289.6	3.4
80°-90°	122.0	1.4
90°-100°	26.3	0.3
100°-110°	3.5	0.0
110°-120°	1.8	0.0
120°-130°	1.6	0.0
130°-140°	1.6	0.0
140°-150°	1.6	0.0
150°-160°	1.5	0.0
160°-170°	1.1	0.0
170°-180°	0.4	0.0
0°-30°	4408.1	51.9
0°-40°	5903.7	69.5
0°-60°	7552.7	88.9
0°-90°	8454.9	99.5
90°-120°	31.7	0.4
90°-150°	36.5	0.4
90°-180°	39.0	0.5
0°-180°	8494.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7174	7174	7174	7174	7174	
5°	7084	7078	7064	7089	7082	670
15°	6427	6351	6171	6064	5975	1813
25°	5520	5123	4355	3736	3580	2542
35°	4319	3200	2019	1365	1299	2681
45°	2620	1546	884	918	881	2016
55°	866	760	703	678	608	852
65°	450	503	542	529	389	449
75°	250	280	355	258	154	264
85°	69	84	120	160	72	75
90°	1	26	60	103	21	4
95°	1	4	24	52	11	0
105°	1	1	2	4	4	1
115°	1	1	2	2	2	1
125°	1	1	2	2	2	1
135°	1	2	2	2	2	1
145°	2	2	2	3	3	1
155°	2	3	3	4	4	1
165°	3	4	4	4	4	1
175°	3	4	4	5	6	0
180°	4	4	4	4	4	

TEST NUMBER: P685772

CATALOG NUMBER: 4CZL-12-UNV-N-LVR-L950-CD-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7174.5	7174.5	7174.5	7174.5	7174.5
2.5°	7205.5	7166.6	7110.6	7161.1	7156.8
5°	7083.9	7077.8	7063.8	7089.4	7082.1
7.5°	7029.2	6996.4	6918.6	6978.7	6944.7
10°	6805.5	6767.2	6763.6	6751.4	6747.2
12.5°	6646.9	6600.7	6453.0	6445.0	6412.2
15°	6427.4	6350.8	6170.9	6064.5	5975.2
17.5°	6257.2	6090.7	5790.4	5592.2	5477.3
20°	6022.6	5839.0	5347.9	5002.0	4868.3
22.5°	5829.3	5504.1	4872.5	4383.2	4291.4
25°	5519.9	5123.0	4355.3	3735.9	3580.2
27.5°	5251.2	4703.6	3745.0	3065.4	2874.5
30°	4975.3	4233.7	3148.1	2407.7	2185.8
32.5°	4653.7	3760.2	2533.5	1806.5	1646.1
35°	4319.4	3200.3	2018.7	1364.6	1299.0
37.5°	3951.0	2697.0	1517.2	1139.7	1150.7
40°	3542.6	2258.2	1150.1	1044.9	1065.6
42.5°	3135.3	1888.6	956.8	982.9	989.0
45°	2619.8	1545.8	884.4	917.9	881.4
47.5°	2169.4	1263.1	833.4	829.7	778.0
50°	1646.7	1029.7	794.5	750.7	723.3
52.5°	1219.3	868.6	757.4	709.4	681.4
55°	865.6	760.4	702.7	678.4	607.9
57.5°	650.4	683.8	660.7	606.0	556.8
60°	562.3	616.4	636.4	571.4	523.4
62.5°	507.6	558.6	596.9	550.7	479.0
65°	449.8	502.7	541.6	529.4	389.0
67.5°	399.4	458.3	506.3	454.1	317.9
70°	350.1	404.8	467.4	385.4	237.7
72.5°	297.2	338.6	413.9	299.7	173.2
75°	249.8	279.6	355.0	257.7	153.8
77.5°	200.0	224.9	243.1	234.6	135.6
80°	155.6	180.5	197.6	213.4	116.7
82.5°	113.1	129.5	156.8	189.0	97.3
85°	69.3	84.5	120.4	159.9	72.3
87.5°	29.8	51.7	88.1	132.5	47.4
90°	1.2	25.5	60.2	103.3	21.3
92.5°	0.6	10.9	38.9	76.0	14.0
95°	0.6	4.3	23.7	51.7	10.9
97.5°	0.6	1.8	12.2	33.4	7.9
100°	0.6	1.2	6.7	19.5	5.5
102.5°	0.6	1.2	3.0	9.7	4.3
105°	0.6	1.2	2.4	4.3	3.6
107.5°	0.6	1.2	1.8	3.0	3.0
110°	0.6	1.2	1.8	3.0	3.0

TEST NUMBER: P685772

CATALOG NUMBER: 4CZL-12-UNV-N-LVR-L950-CD-U

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.6	1.2	1.8	3.0	3.0
115°	0.6	1.2	1.8	2.4	2.4
117.5°	0.6	1.2	1.8	2.4	2.4
120°	0.6	1.2	1.8	2.4	2.4
122.5°	0.6	1.2	1.8	2.4	2.4
125°	1.2	1.2	1.8	2.4	2.4
127.5°	1.2	1.8	1.8	2.4	2.4
130°	1.2	1.8	1.8	2.4	2.4
132.5°	1.2	1.8	1.8	2.4	2.4
135°	1.2	1.8	1.8	2.4	2.4
137.5°	1.2	1.8	2.4	2.4	2.4
140°	1.8	2.4	2.4	2.4	2.4
142.5°	1.8	2.4	2.4	3.0	2.4
145°	1.8	2.4	2.4	3.0	3.0
147.5°	1.8	2.4	3.0	3.0	3.0
150°	1.8	2.4	3.0	3.6	3.6
152.5°	2.4	2.4	3.0	3.6	3.6
155°	2.4	3.0	3.0	3.6	3.6
157.5°	2.4	3.0	3.0	3.6	4.3
160°	2.4	3.0	3.6	4.3	4.3
162.5°	2.4	3.0	3.6	4.3	4.3
165°	3.0	3.6	3.6	4.3	4.3
167.5°	3.0	3.6	4.3	4.3	4.9
170°	3.0	3.6	4.3	4.9	4.9
172.5°	3.0	3.6	4.3	4.9	4.9
175°	3.0	3.6	4.3	4.9	5.5
177.5°	3.0	3.6	4.3	4.9	5.5
180°	4.3	4.3	4.3	4.3	4.3

(END OF REPORT)