

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: P685769

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

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685769  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-5-UNV-N-LVR-L950-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @90 CRI and 5000K  
Light Source: (392) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

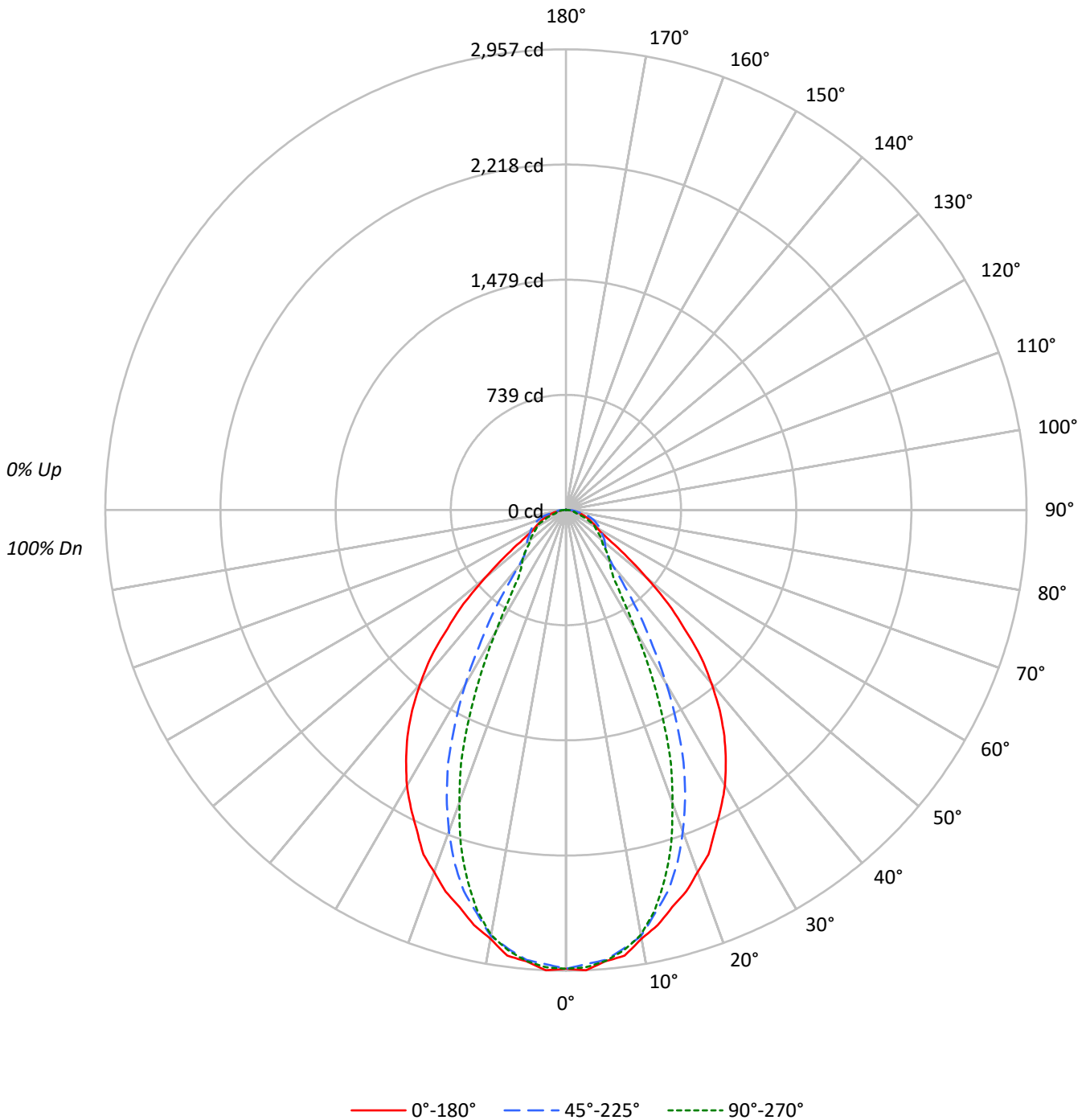
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3486.1 lumens  
Efficiency: N/A  
Efficacy: 112.5 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): 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	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°	9508	9508	9508
5°	9424	9397	9421
10°	9158	9102	9080
15°	8818	8467	8198
20°	8494	7542	6866
25°	8072	6369	5235
30°	7614	4818	3345
35°	6988	3266	2102
40°	6129	1990	1843
45°	4910	1658	1652
50°	3395	1638	1492
55°	2000	1624	1405
60°	1491	1687	1387
65°	1411	1699	1220
70°	1357	1811	921
75°	1279	1818	787
80°	1188	1508	891
85°	1052	1830	1100



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	273.5	7.8
10°-20°	708.2	20.3
20°-30°	827.4	23.7
30°-40°	613.8	17.6
40°-50°	406.9	11.7
50°-60°	269.9	7.7
60°-70°	201.4	5.8
70°-80°	118.9	3.4
80°-90°	50.1	1.4
90°-100°	10.8	0.3
100°-110°	1.4	0.0
110°-120°	0.7	0.0
120°-130°	0.7	0.0
130°-140°	0.6	0.0
140°-150°	0.7	0.0
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	1809.1	51.9
0°-40°	2422.9	69.5
0°-60°	3099.7	88.9
0°-90°	3469.9	99.5
90°-120°	13.0	0.4
90°-150°	14.9	0.4
90°-180°	16.0	0.5
0°-180°	3486.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2944	2944	2944	2944	2944	
5°	2907	2905	2899	2910	2906	275
15°	2638	2606	2533	2489	2452	744
25°	2265	2102	1787	1533	1469	1043
35°	1773	1313	828	560	533	1100
45°	1075	634	363	377	362	828
55°	355	312	288	278	250	350
65°	185	206	222	217	160	184
75°	102	115	146	106	63	108
85°	28	35	49	66	30	31
90°	0	10	25	42	9	2
95°	0	2	10	21	4	0
105°	0	0	1	2	2	0
115°	0	0	1	1	1	0
125°	0	0	1	1	1	0
135°	0	1	1	1	1	0
145°	1	1	1	1	1	0
155°	1	1	1	2	2	0
165°	1	2	2	2	2	0
175°	1	2	2	2	2	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2944.4	2944.4	2944.4	2944.4	2944.4
2.5°	2957.2	2941.2	2918.2	2938.9	2937.2
5°	2907.3	2904.8	2899.0	2909.5	2906.5
7.5°	2884.8	2871.3	2839.4	2864.1	2850.1
10°	2793.0	2777.3	2775.8	2770.8	2769.1
12.5°	2727.9	2708.9	2648.3	2645.1	2631.6
15°	2637.8	2606.4	2532.6	2488.9	2452.2
17.5°	2568.0	2499.6	2376.4	2295.1	2247.9
20°	2471.7	2396.4	2194.8	2052.8	1998.0
22.5°	2392.4	2258.9	1999.7	1798.9	1761.2
25°	2265.4	2102.5	1787.4	1533.2	1469.3
27.5°	2155.1	1930.4	1537.0	1258.1	1179.7
30°	2041.9	1737.5	1292.0	988.1	897.1
32.5°	1909.9	1543.2	1039.8	741.4	675.6
35°	1772.7	1313.4	828.5	560.0	533.1
37.5°	1621.5	1106.9	622.7	467.7	472.2
40°	1453.9	926.8	472.0	428.8	437.3
42.5°	1286.7	775.1	392.7	403.4	405.9
45°	1075.2	634.4	363.0	376.7	361.7
47.5°	890.3	518.4	342.0	340.5	319.3
50°	675.8	422.6	326.1	308.1	296.9
52.5°	500.4	356.5	310.8	291.1	279.6
55°	355.2	312.1	288.4	278.4	249.5
57.5°	266.9	280.6	271.2	248.7	228.5
60°	230.8	253.0	261.2	234.5	214.8
62.5°	208.3	229.3	245.0	226.0	196.6
65°	184.6	206.3	222.3	217.3	159.7
67.5°	163.9	188.1	207.8	186.4	130.5
70°	143.7	166.1	191.8	158.2	97.5
72.5°	122.0	139.0	169.9	123.0	71.1
75°	102.5	114.8	145.7	105.8	63.1
77.5°	82.1	92.3	99.8	96.3	55.6
80°	63.9	74.1	81.1	87.6	47.9
82.5°	46.4	53.1	64.4	77.6	39.9
85°	28.4	34.7	49.4	65.6	29.7
87.5°	12.2	21.2	36.2	54.4	19.5
90°	0.5	10.5	24.7	42.4	8.7
92.5°	0.2	4.5	16.0	31.2	5.7
95°	0.2	1.7	9.7	21.2	4.5
97.5°	0.2	0.7	5.0	13.7	3.2
100°	0.2	0.5	2.7	8.0	2.2
102.5°	0.2	0.5	1.2	4.0	1.7
105°	0.2	0.5	1.0	1.7	1.5
107.5°	0.2	0.5	0.7	1.2	1.2
110°	0.2	0.5	0.7	1.2	1.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.2	0.5	0.7	1.2	1.2
115°	0.2	0.5	0.7	1.0	1.0
117.5°	0.2	0.5	0.7	1.0	1.0
120°	0.2	0.5	0.7	1.0	1.0
122.5°	0.2	0.5	0.7	1.0	1.0
125°	0.5	0.5	0.7	1.0	1.0
127.5°	0.5	0.7	0.7	1.0	1.0
130°	0.5	0.7	0.7	1.0	1.0
132.5°	0.5	0.7	0.7	1.0	1.0
135°	0.5	0.7	0.7	1.0	1.0
137.5°	0.5	0.7	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	1.2	1.0
145°	0.7	1.0	1.0	1.2	1.2
147.5°	0.7	1.0	1.2	1.2	1.2
150°	0.7	1.0	1.2	1.5	1.5
152.5°	1.0	1.0	1.2	1.5	1.5
155°	1.0	1.2	1.2	1.5	1.5
157.5°	1.0	1.2	1.2	1.5	1.7
160°	1.0	1.2	1.5	1.7	1.7
162.5°	1.0	1.2	1.5	1.7	1.7
165°	1.2	1.5	1.5	1.7	1.7
167.5°	1.2	1.5	1.7	1.7	2.0
170°	1.2	1.5	1.7	2.0	2.0
172.5°	1.2	1.5	1.7	2.0	2.0
175°	1.2	1.5	1.7	2.0	2.2
177.5°	1.2	1.5	1.7	2.0	2.2
180°	1.7	1.7	1.7	1.7	1.7

(END OF REPORT)