

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: P685869

Luminaire Tested: **4CZL-5-UNV-W-LVR-L935-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685869  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-5-UNV-W-LVR-L935-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @90 CRI and 3500K  
Light Source: (392) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

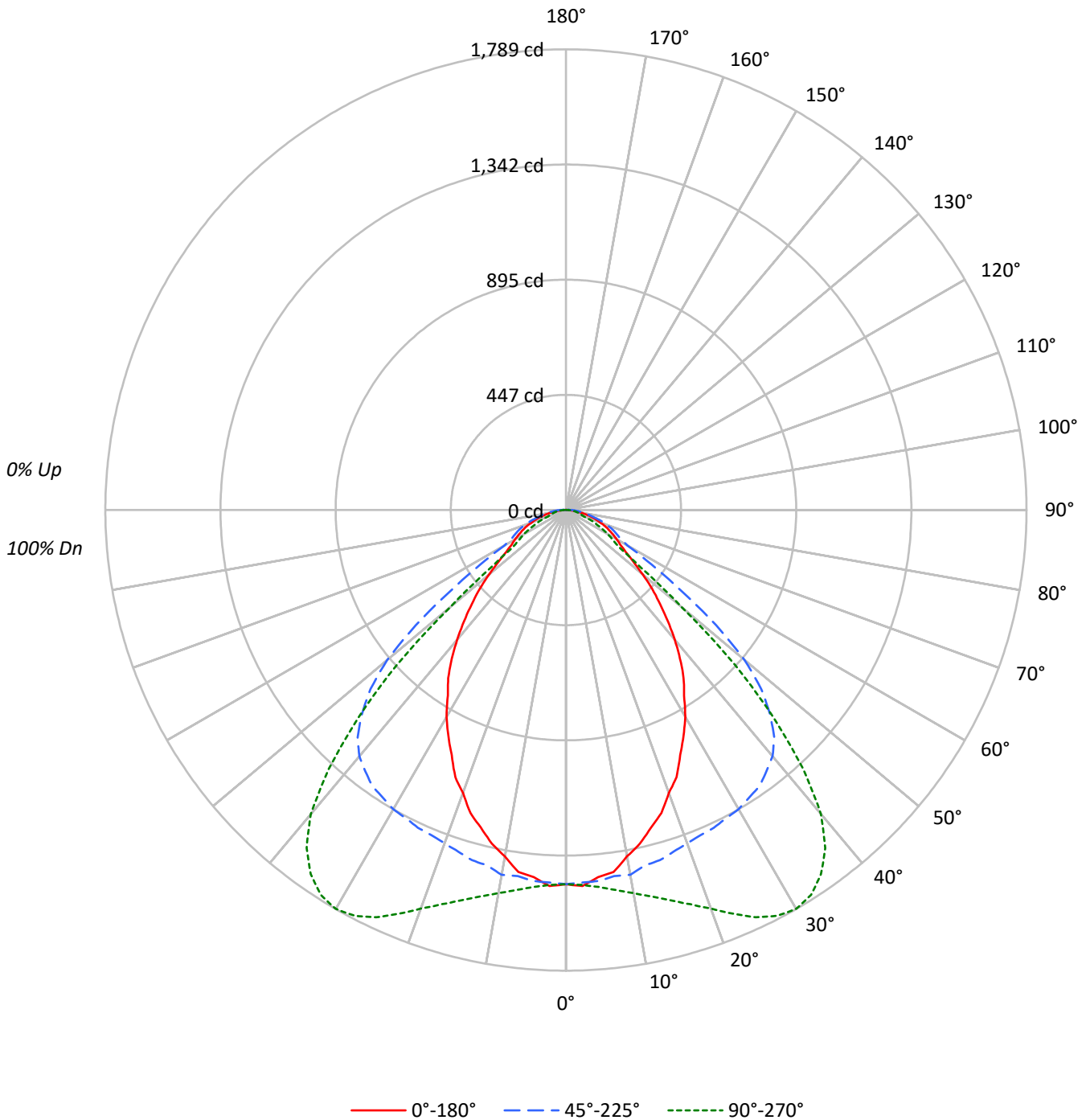
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3457.1 lumens  
Efficiency: N/A  
Efficacy: 111.5 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.64 / 1.46  
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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	89	89	89	87
2	102	95	89	84	99	93	88	83	89	85	81	86	82	79	83	80	77	77	77	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	68	68	68	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	59	59	59	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	53	53	53	51
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	47	47	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	42	42	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	38	38	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	34	34	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	31	31	31	30

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

	0°	45°	90°
0°	4692	4692	4692
5°	4639	4687	4764
10°	4479	4716	4953
15°	4268	4706	5244
20°	4017	4732	5661
25°	3740	4849	6217
30°	3458	5002	6669
35°	3142	5164	6809
40°	2770	5261	6496
45°	2361	5118	5208
50°	1957	4550	2955
55°	1594	3074	1414
60°	1471	1788	1221
65°	1419	1644	993
70°	1339	1614	709
75°	1246	1472	690
80°	1136	1447	757
85°	871	1734	834



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.2	4.0
10°-20°	401.1	11.6
20°-30°	636.5	18.4
30°-40°	795.0	23.0
40°-50°	730.2	21.1
50°-60°	389.7	11.3
60°-70°	200.5	5.8
70°-80°	110.3	3.2
80°-90°	45.5	1.3
90°-100°	8.8	0.3
100°-110°	0.5	0.0
110°-120°	0.1	0.0
120°-130°	0.1	0.0
130°-140°	0.3	0.0
140°-150°	0.2	0.0
150°-160°	0.2	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	1175.7	34.0
0°-40°	1970.7	57.0
0°-60°	3090.5	89.4
0°-90°	3446.8	99.7
90°-120°	9.3	0.3
90°-150°	9.9	0.3
90°-180°	10.0	0.3
0°-180°	3457.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1453	1453	1453	1453	1453	
5°	1431	1435	1446	1468	1470	135
15°	1277	1318	1408	1522	1569	359
25°	1050	1148	1361	1610	1745	484
35°	797	944	1310	1596	1727	495
45°	517	745	1121	1161	1140	400
55°	283	508	546	306	251	261
65°	186	243	215	176	130	183
75°	100	111	118	105	55	106
85°	24	31	47	62	22	27
90°	0	9	23	37	5	1
95°	0	1	9	17	2	0
105°	0	0	0	0	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	0	0	0	0	0
165°	0	1	0	0	0	0
175°	1	1	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1453.1	1453.1	1453.1	1453.1	1453.1
2.5°	1461.6	1458.5	1448.0	1457.5	1456.8
5°	1431.1	1434.7	1445.9	1468.2	1469.6
7.5°	1417.5	1427.4	1433.7	1482.0	1488.3
10°	1365.9	1381.4	1438.1	1488.3	1510.6
12.5°	1327.1	1358.3	1413.4	1498.4	1537.2
15°	1276.7	1318.4	1407.8	1522.4	1568.7
17.5°	1233.8	1276.4	1390.8	1540.6	1605.3
20°	1169.0	1246.4	1377.0	1559.5	1647.3
22.5°	1122.7	1201.0	1366.3	1576.3	1697.0
25°	1049.8	1148.4	1360.8	1609.9	1745.0
27.5°	988.7	1104.1	1348.4	1631.5	1776.7
30°	927.4	1049.8	1341.4	1635.4	1788.6
32.5°	853.5	1005.7	1323.7	1626.4	1771.6
35°	797.0	944.1	1309.9	1595.6	1727.3
37.5°	728.1	895.6	1279.6	1539.9	1654.5
40°	657.1	850.8	1248.1	1452.9	1541.1
42.5°	585.4	800.4	1197.6	1336.8	1363.7
45°	517.0	745.3	1120.6	1161.3	1140.4
47.5°	455.7	686.2	1029.4	941.2	892.2
50°	389.5	626.1	905.8	716.5	588.3
52.5°	329.9	575.9	735.7	485.3	366.0
55°	283.1	507.6	546.1	305.9	251.1
57.5°	249.9	455.2	394.1	241.9	215.0
60°	227.8	389.8	276.8	222.0	189.1
62.5°	206.0	308.3	236.8	202.4	159.0
65°	185.7	243.4	215.2	175.5	129.9
67.5°	164.6	197.5	194.4	159.2	108.3
70°	141.8	162.4	170.9	133.3	75.1
72.5°	121.4	136.2	145.4	113.9	63.7
75°	99.9	110.8	118.0	105.0	55.3
77.5°	79.3	89.2	96.2	95.0	48.5
80°	61.1	67.6	77.8	85.1	40.7
82.5°	41.7	46.5	61.3	73.4	31.8
85°	23.5	30.8	46.8	61.6	22.5
87.5°	6.8	18.2	33.9	49.4	13.1
90°	0.0	8.7	23.0	37.3	4.8
92.5°	0.0	3.4	15.0	26.2	3.4
95°	0.0	1.0	8.7	17.2	2.2
97.5°	0.0	0.2	4.1	10.2	1.0
100°	0.0	0.2	1.5	4.8	0.2
102.5°	0.0	0.2	0.5	1.7	0.0
105°	0.0	0.2	0.2	0.2	0.0
107.5°	0.0	0.2	0.2	0.0	0.0
110°	0.0	0.2	0.2	0.0	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°	0.0	0.2	0.2	0.0	0.0
117.5°	0.0	0.2	0.2	0.0	0.0
120°	0.0	0.2	0.2	0.0	0.0
122.5°	0.0	0.2	0.2	0.0	0.0
125°	0.0	0.2	0.2	0.0	0.0
127.5°	0.2	0.2	0.2	0.2	0.0
130°	0.2	0.5	0.5	0.2	0.0
132.5°	0.2	0.5	0.5	0.2	0.0
135°	0.2	0.5	0.5	0.2	0.2
137.5°	0.2	0.5	0.5	0.2	0.2
140°	0.2	0.5	0.5	0.2	0.2
142.5°	0.2	0.5	0.5	0.2	0.2
145°	0.2	0.5	0.5	0.2	0.2
147.5°	0.2	0.5	0.5	0.2	0.2
150°	0.2	0.5	0.5	0.2	0.2
152.5°	0.5	0.5	0.5	0.2	0.2
155°	0.5	0.5	0.5	0.2	0.2
157.5°	0.5	0.5	0.5	0.2	0.2
160°	0.5	0.5	0.5	0.2	0.2
162.5°	0.5	0.7	0.5	0.2	0.2
165°	0.5	0.7	0.5	0.2	0.2
167.5°	0.5	0.7	0.5	0.2	0.2
170°	0.5	0.7	0.5	0.2	0.2
172.5°	0.5	0.7	0.5	0.2	0.2
175°	0.7	0.7	0.5	0.2	0.2
177.5°	0.7	0.7	0.5	0.5	0.5
180°	0.5	0.5	0.5	0.5	0.5

(END OF REPORT)