

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: P685720

Luminaire Tested: **4CZL-7-UNV-N-LVR-L835-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685720  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-7-UNV-N-LVR-L835-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @80 CRI and 3500K  
Light Source: (392) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

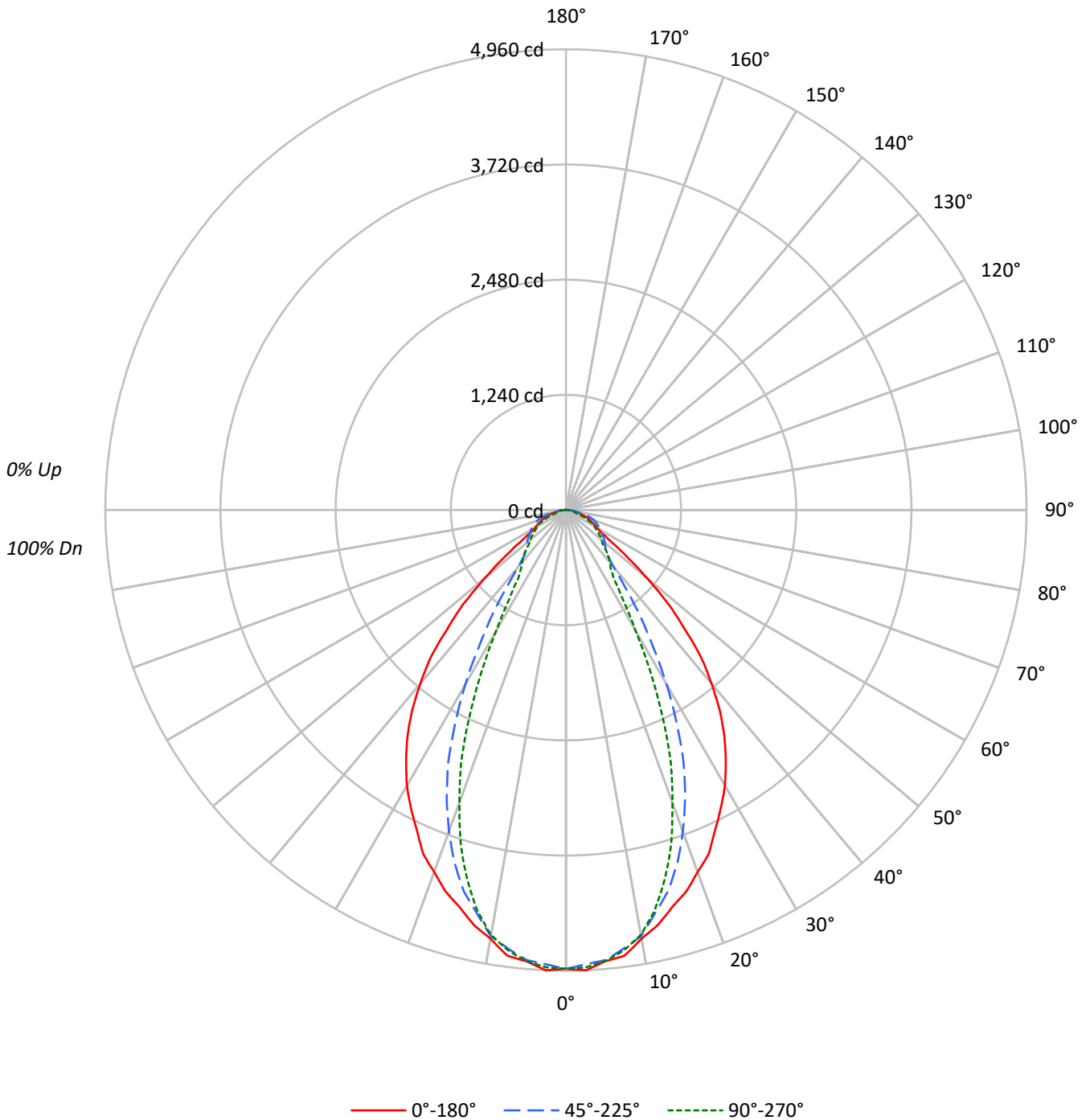
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5847.8 lumens  
Efficiency: N/A  
Efficacy: 132.9 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): 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				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	90	90	90	88
2	103	97	92	87	101	95	90	86	92	88	84	88	85	82	86	83	80	80	80	80	78
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	72	72	72	70
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	65	65	65	63
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	59	59	59	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55	55	55	55	53
7	75	64	57	51	73	63	56	51	62	55	51	60	55	51	59	54	50	50	50	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	47	47	47	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	43	43	43	43	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	41	41	41	39

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

	0°	45°	90°
0°	15949	15949	15949
5°	15808	15763	15804
10°	15362	15268	15231
15°	14793	14202	13752
20°	14248	12652	11517
25°	13539	10683	8782
30°	12771	8081	5611
35°	11722	5478	3525
40°	10281	3337	3092
45°	8237	2781	2771
50°	5695	2747	2502
55°	3355	2723	2356
60°	2500	2829	2327
65°	2366	2849	2046
70°	2275	3038	1545
75°	2146	3049	1321
80°	1992	2529	1493
85°	1767	3072	1845



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	458.8	7.8
10°-20°	1188.0	20.3
20°-30°	1387.8	23.7
30°-40°	1029.6	17.6
40°-50°	682.6	11.7
50°-60°	452.7	7.7
60°-70°	337.8	5.8
70°-80°	199.3	3.4
80°-90°	84.0	1.4
90°-100°	18.1	0.3
100°-110°	2.4	0.0
110°-120°	1.3	0.0
120°-130°	1.2	0.0
130°-140°	1.1	0.0
140°-150°	1.1	0.0
150°-160°	1.0	0.0
160°-170°	0.7	0.0
170°-180°	0.3	0.0
0°-30°	3034.6	51.9
0°-40°	4064.2	69.5
0°-60°	5199.5	88.9
0°-90°	5820.5	99.5
90°-120°	21.8	0.4
90°-150°	25.2	0.4
90°-180°	27.0	0.5
0°-180°	5847.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4939	4939	4939	4939	4939	
5°	4877	4872	4863	4880	4876	461
15°	4425	4372	4248	4175	4113	1248
25°	3800	3527	2998	2572	2465	1750
35°	2974	2203	1390	939	894	1846
45°	1804	1064	609	632	607	1388
55°	596	524	484	467	418	586
65°	310	346	373	364	268	309
75°	172	192	244	177	106	182
85°	48	58	83	110	50	51
90°	1	18	41	71	15	3
95°	0	3	16	36	8	0
105°	0	1	2	3	2	0
115°	0	1	1	2	2	0
125°	1	1	1	2	2	1
135°	1	1	1	2	2	1
145°	1	2	2	2	2	1
155°	2	2	2	2	2	1
165°	2	2	2	3	3	1
175°	2	2	3	3	4	0
180°	3	3	3	3	3	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4939.1	4939.1	4939.1	4939.1	4939.1
2.5°	4960.4	4933.6	4895.1	4929.9	4926.9
5°	4876.7	4872.5	4862.9	4880.5	4875.5
7.5°	4839.1	4816.5	4762.9	4804.3	4780.9
10°	4685.1	4658.7	4656.2	4647.8	4644.9
12.5°	4575.8	4544.0	4442.4	4436.9	4414.3
15°	4424.8	4372.1	4248.2	4175.0	4113.4
17.5°	4307.6	4193.0	3986.2	3849.8	3770.7
20°	4146.1	4019.7	3681.6	3443.5	3351.4
22.5°	4013.0	3789.1	3354.4	3017.5	2954.3
25°	3800.0	3526.8	2998.3	2571.8	2464.7
27.5°	3615.1	3238.0	2578.1	2110.3	1978.9
30°	3425.1	2914.6	2167.2	1657.5	1504.8
32.5°	3203.7	2588.6	1744.1	1243.7	1133.2
35°	2973.6	2203.2	1389.7	939.4	894.2
37.5°	2720.0	1856.7	1044.5	784.6	792.1
40°	2438.8	1554.6	791.7	719.3	733.6
42.5°	2158.4	1300.2	658.7	676.6	680.8
45°	1803.6	1064.1	608.9	631.9	606.8
47.5°	1493.5	869.6	573.7	571.2	535.6
50°	1133.6	708.9	546.9	516.8	498.0
52.5°	839.4	598.0	521.4	488.3	469.1
55°	595.9	523.5	483.7	467.0	418.5
57.5°	447.8	470.8	454.9	417.2	383.3
60°	387.1	424.3	438.1	393.4	360.3
62.5°	349.4	384.6	410.9	379.1	329.7
65°	309.7	346.1	372.8	364.5	267.8
67.5°	274.9	315.5	348.6	312.6	218.9
70°	241.0	278.7	321.8	265.3	163.6
72.5°	204.6	233.1	285.0	206.3	119.3
75°	172.0	192.5	244.4	177.4	105.9
77.5°	137.7	154.8	167.4	161.5	93.3
80°	107.1	124.3	136.0	146.9	80.3
82.5°	77.8	89.1	108.0	130.1	67.0
85°	47.7	58.2	82.9	110.1	49.8
87.5°	20.5	35.6	60.7	91.2	32.6
90°	0.8	17.6	41.4	71.1	14.6
92.5°	0.4	7.5	26.8	52.3	9.6
95°	0.4	2.9	16.3	35.6	7.5
97.5°	0.4	1.3	8.4	23.0	5.4
100°	0.4	0.8	4.6	13.4	3.8
102.5°	0.4	0.8	2.1	6.7	2.9
105°	0.4	0.8	1.7	2.9	2.5
107.5°	0.4	0.8	1.3	2.1	2.1
110°	0.4	0.8	1.3	2.1	2.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.4	0.8	1.3	2.1	2.1
115°	0.4	0.8	1.3	1.7	1.7
117.5°	0.4	0.8	1.3	1.7	1.7
120°	0.4	0.8	1.3	1.7	1.7
122.5°	0.4	0.8	1.3	1.7	1.7
125°	0.8	0.8	1.3	1.7	1.7
127.5°	0.8	1.3	1.3	1.7	1.7
130°	0.8	1.3	1.3	1.7	1.7
132.5°	0.8	1.3	1.3	1.7	1.7
135°	0.8	1.3	1.3	1.7	1.7
137.5°	0.8	1.3	1.7	1.7	1.7
140°	1.3	1.7	1.7	1.7	1.7
142.5°	1.3	1.7	1.7	2.1	1.7
145°	1.3	1.7	1.7	2.1	2.1
147.5°	1.3	1.7	2.1	2.1	2.1
150°	1.3	1.7	2.1	2.5	2.5
152.5°	1.7	1.7	2.1	2.5	2.5
155°	1.7	2.1	2.1	2.5	2.5
157.5°	1.7	2.1	2.1	2.5	2.9
160°	1.7	2.1	2.5	2.9	2.9
162.5°	1.7	2.1	2.5	2.9	2.9
165°	2.1	2.5	2.5	2.9	2.9
167.5°	2.1	2.5	2.9	2.9	3.3
170°	2.1	2.5	2.9	3.3	3.3
172.5°	2.1	2.5	2.9	3.3	3.3
175°	2.1	2.5	2.9	3.3	3.8
177.5°	2.1	2.5	2.9	3.3	3.8
180°	2.9	2.9	2.9	2.9	2.9

(END OF REPORT)