

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: P685672

Luminaire Tested: **4CZL-12-UNV-LVR-L840-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685672  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-12-UNV-LVR-L840-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @80 CRI and 4000K  
Light Source: (588) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

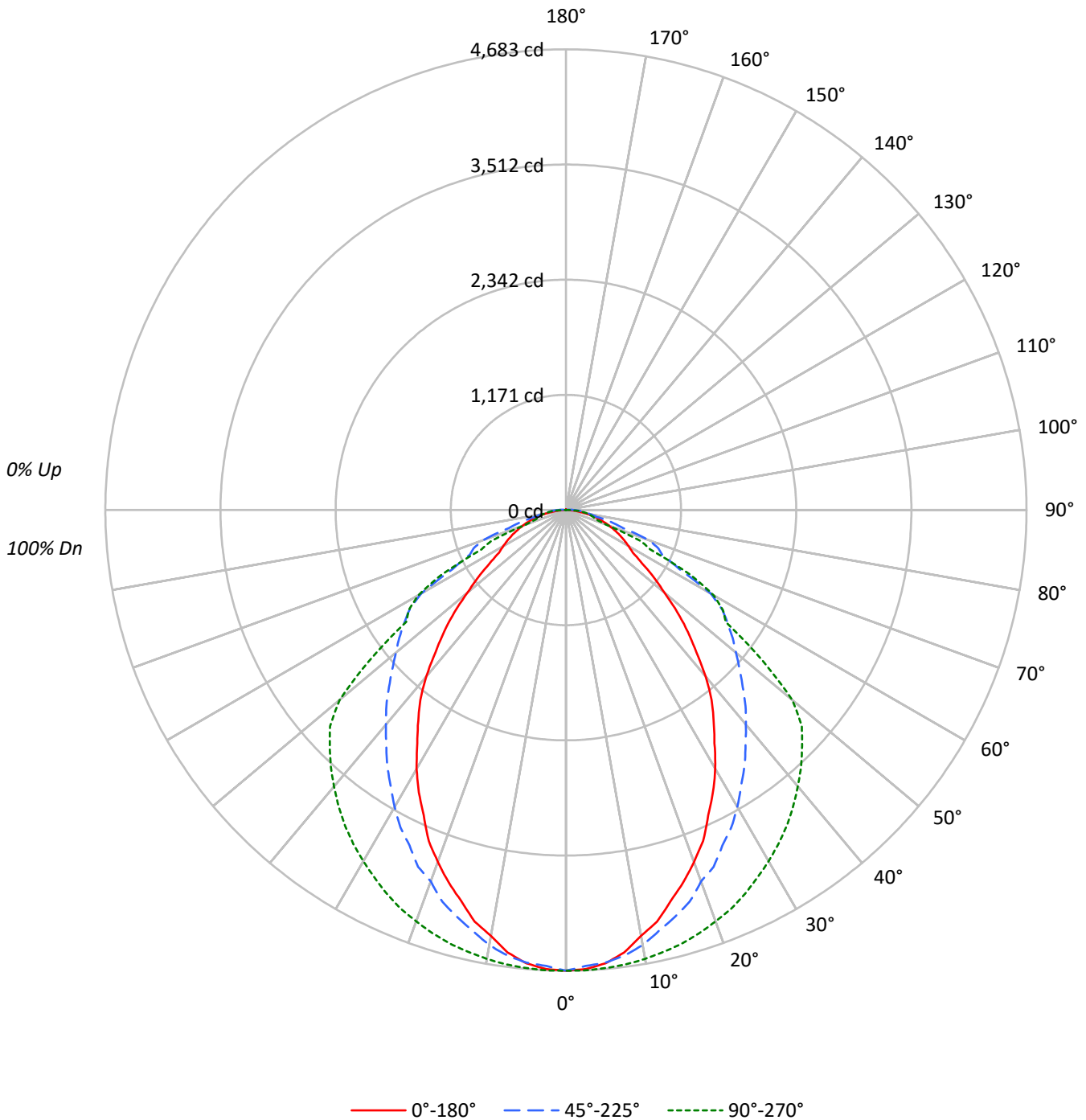
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10604.8 lumens  
Efficiency: N/A  
Efficacy: 137.7 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 1.31 / 1.26  
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 (Ain): 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	100	100	100	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85	85	85	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73	73	73	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63	63	63	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54	54	54	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	47	47	47	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42	42	42	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37	37	37	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34	34	34	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30	30	30	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28	28	28	28

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

	0°	45°	90°
0°	15121	15121	15121
5°	14990	14969	15149
10°	14408	14725	15193
15°	13754	14313	15254
20°	13078	13805	15290
25°	12197	13407	15340
30°	11324	12994	15365
35°	10324	12485	15435
40°	9314	11999	15463
45°	8011	11614	15503
50°	6547	11341	15096
55°	5331	11296	11165
60°	4753	10981	11202
65°	4595	8241	7224
70°	4415	8445	4106
75°	4256	5953	3666
80°	3881	4842	4368
85°	3475	6036	5443



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	438.6	4.1
10°-20°	1215.9	11.5
20°-30°	1759.2	16.6
30°-40°	2007.8	18.9
40°-50°	1972.9	18.6
50°-60°	1573.6	14.8
60°-70°	991.2	9.3
70°-80°	439.1	4.1
80°-90°	168.4	1.6
90°-100°	33.4	0.3
100°-110°	2.2	0.0
110°-120°	0.3	0.0
120°-130°	0.3	0.0
130°-140°	0.5	0.0
140°-150°	0.5	0.0
150°-160°	0.4	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	3413.7	32.2
0°-40°	5421.5	51.1
0°-60°	8968.0	84.6
0°-90°	10566.8	99.6
90°-120°	35.9	0.3
90°-150°	37.2	0.4
90°-180°	38.0	0.4
0°-180°	10604.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4683	4683	4683	4683	4683	
5°	4624	4635	4618	4656	4673	434
15°	4114	4155	4281	4482	4563	1158
25°	3423	3534	3763	4108	4305	1577
35°	2619	2777	3167	3634	3916	1637
45°	1754	2009	2543	3113	3395	1348
55°	947	1282	2006	2164	1983	871
65°	601	819	1078	1149	945	596
75°	341	394	477	361	294	358
85°	94	114	163	210	147	99
90°	1	39	86	125	24	5
95°	1	6	36	61	8	1
105°	1	1	1	2	0	1
115°	1	1	0	0	0	1
125°	1	2	0	0	0	1
135°	1	2	1	0	0	1
145°	2	2	1	0	0	1
155°	2	2	1	0	0	1
165°	2	2	2	1	0	1
175°	2	2	2	1	1	0
180°	2	2	2	2	2	



TEST NUMBER: P685672

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4682.7	4682.7	4682.7	4682.7	4682.7
2.5°	4670.4	4667.4	4639.1	4679.1	4683.4
5°	4624.5	4634.7	4618.0	4656.5	4673.3
7.5°	4536.5	4547.4	4567.1	4637.6	4658.0
10°	4394.0	4421.6	4490.7	4589.6	4633.3
12.5°	4284.9	4319.1	4380.9	4548.9	4599.1
15°	4114.0	4154.7	4281.3	4482.0	4562.7
17.5°	3968.6	4042.7	4177.3	4397.6	4510.4
20°	3805.7	3865.3	4017.3	4314.7	4449.3
22.5°	3642.8	3718.4	3925.7	4204.2	4387.5
25°	3423.1	3533.7	3762.8	4107.5	4305.3
27.5°	3237.0	3376.6	3639.9	3993.3	4213.6
30°	3037.0	3145.3	3484.9	3876.9	4120.6
32.5°	2811.5	2981.7	3317.7	3743.8	4023.1
35°	2618.8	2777.3	3167.1	3634.0	3915.5
37.5°	2432.6	2581.7	3000.6	3509.7	3796.2
40°	2209.4	2405.7	2846.4	3367.9	3668.2
42.5°	1962.1	2202.8	2703.2	3234.0	3538.0
45°	1754.1	2009.4	2543.2	3112.6	3394.8
47.5°	1538.1	1807.2	2393.4	2965.0	3253.0
50°	1303.2	1630.5	2257.4	2828.2	3005.0
52.5°	1131.6	1446.5	2135.2	2581.0	2533.0
55°	946.9	1282.1	2006.5	2163.5	1983.2
57.5°	806.5	1133.8	1885.7	1698.8	1893.0
60°	736.0	1015.2	1700.3	1617.4	1734.5
62.5°	669.8	911.2	1300.3	1517.0	1426.9
65°	601.4	818.9	1078.5	1149.0	945.4
67.5°	535.3	738.9	1016.7	858.1	823.2
70°	467.6	677.1	894.5	731.6	434.9
72.5°	403.6	605.8	611.6	405.1	322.9
75°	341.1	394.2	477.1	361.4	293.8
77.5°	272.7	338.2	319.3	323.6	266.2
80°	208.7	232.7	260.4	289.4	234.9
82.5°	147.6	173.1	210.9	253.1	192.7
85°	93.8	114.2	162.9	210.2	146.9
87.5°	37.1	72.0	121.4	169.4	86.5
90°	0.7	39.3	85.8	125.1	24.0
92.5°	0.7	18.2	57.5	91.6	12.4
95°	0.7	5.8	35.6	61.1	8.0
97.5°	0.7	2.2	18.9	37.8	4.4
100°	0.7	0.7	8.0	20.4	2.2
102.5°	0.7	0.7	2.9	8.0	0.7
105°	0.7	0.7	0.7	2.2	0.0
107.5°	0.7	0.7	0.0	0.0	0.0
110°	0.7	0.7	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.7	0.7	0.0	0.0	0.0
115°	0.7	0.7	0.0	0.0	0.0
117.5°	0.7	0.7	0.0	0.0	0.0
120°	0.7	0.7	0.0	0.0	0.0
122.5°	0.7	0.7	0.0	0.0	0.0
125°	0.7	1.5	0.0	0.0	0.0
127.5°	0.7	0.7	0.0	0.0	0.0
130°	0.7	1.5	0.7	0.0	0.0
132.5°	0.7	1.5	0.7	0.0	0.0
135°	0.7	1.5	0.7	0.0	0.0
137.5°	0.7	1.5	0.7	0.0	0.0
140°	1.5	1.5	0.7	0.0	0.0
142.5°	1.5	1.5	0.7	0.0	0.0
145°	1.5	1.5	0.7	0.0	0.0
147.5°	1.5	1.5	0.7	0.0	0.0
150°	1.5	1.5	0.7	0.0	0.0
152.5°	1.5	1.5	0.7	0.0	0.0
155°	1.5	1.5	0.7	0.0	0.0
157.5°	1.5	2.2	0.7	0.0	0.0
160°	2.2	2.2	0.7	0.0	0.0
162.5°	2.2	2.2	1.5	0.7	0.0
165°	2.2	2.2	1.5	0.7	0.0
167.5°	2.2	2.2	1.5	0.7	0.0
170°	2.2	2.2	1.5	0.7	0.7
172.5°	2.2	2.2	1.5	0.7	0.7
175°	2.2	2.2	1.5	0.7	0.7
177.5°	2.2	2.2	1.5	0.7	0.7
180°	1.5	1.5	1.5	1.5	1.5

(END OF REPORT)