

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: P685832

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685832
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-M-LVR-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

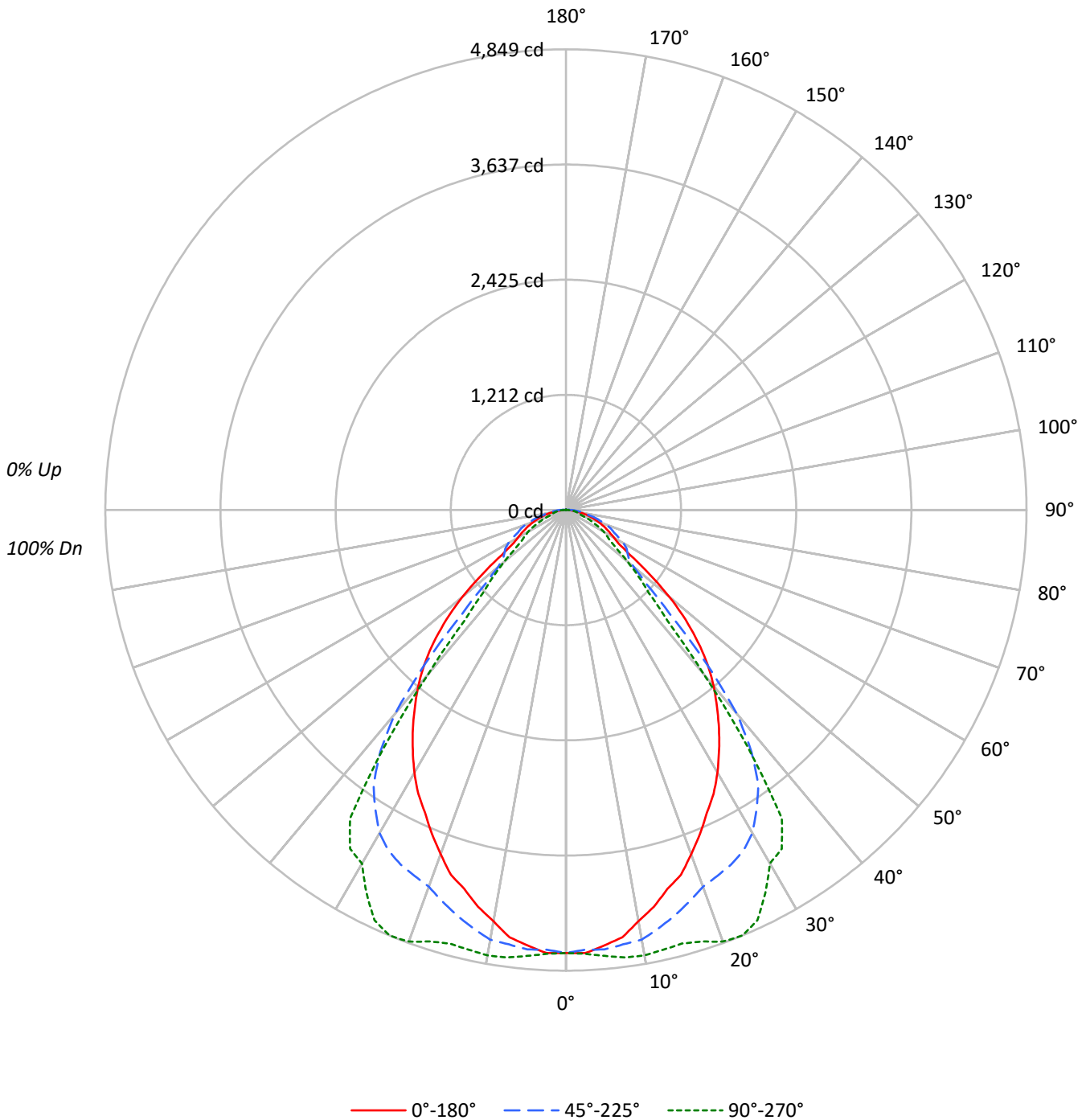
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8623.7 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.34 / 1.2
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_{in}): 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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88	88	88	88
2	103	96	90	86	100	94	89	84	91	86	83	87	84	81	84	81	79	77	77	77	77
3	95	87	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	68	68	68	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	70	66	62	60	60	60	60
5	83	72	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	54	54	54	54
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	49	49	49	49
7	72	60	53	47	70	59	52	47	58	51	47	57	51	46	55	50	46	44	44	44	44
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	40	40	40	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	37	37	37	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	35	34	34	34	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15054	15054	15054
5°	14915	15049	15273
10°	14409	15057	15607
15°	13803	14777	15790
20°	13246	14495	16611
25°	12515	14668	16981
30°	11895	14636	16016
35°	11076	13918	15617
40°	10196	11798	9517
45°	8983	7032	5641
50°	7131	4670	4257
55°	4617	4442	3230
60°	3769	4515	2968
65°	3590	4254	2424
70°	3409	4270	1917
75°	3239	3998	1783
80°	2996	3775	2001
85°	2679	4617	2456



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	442.4	5.1
10°-20°	1254.8	14.6
20°-30°	1892.2	21.9
30°-40°	2090.8	24.2
40°-50°	1310.9	15.2
50°-60°	705.8	8.2
60°-70°	479.3	5.6
70°-80°	286.3	3.3
80°-90°	124.4	1.4
90°-100°	27.3	0.3
100°-110°	3.1	0.0
110°-120°	1.1	0.0
120°-130°	1.0	0.0
130°-140°	1.2	0.0
140°-150°	1.1	0.0
150°-160°	0.9	0.0
160°-170°	0.7	0.0
170°-180°	0.3	0.0
0°-30°	3589.4	41.6
0°-40°	5680.3	65.9
0°-60°	7697.0	89.3
0°-90°	8587.1	99.6
90°-120°	31.5	0.4
90°-150°	34.8	0.4
90°-180°	37.0	0.4
0°-180°	8623.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4662	4662	4662	4662	4662	
5°	4601	4609	4642	4697	4712	434
15°	4129	4274	4420	4634	4723	1166
25°	3512	3726	4117	4556	4766	1622
35°	2810	3140	3531	3798	3962	1753
45°	1967	2142	1540	1255	1235	1501
55°	820	858	789	683	574	797
65°	470	517	557	452	317	465
75°	260	289	320	263	143	274
85°	72	89	125	164	66	78
90°	2	27	63	105	20	5
95°	1	4	25	54	10	0
105°	1	1	2	4	2	1
115°	1	1	1	1	1	1
125°	1	1	1	1	1	1
135°	1	1	2	2	2	1
145°	1	2	2	2	2	1
155°	2	2	2	2	2	1
165°	2	2	2	2	2	1
175°	2	2	2	3	3	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4661.9	4661.9	4661.9	4661.9	4661.9
2.5°	4668.0	4655.2	4631.5	4674.1	4674.7
5°	4601.1	4609.0	4642.5	4697.2	4711.8
7.5°	4536.1	4566.5	4611.5	4743.4	4750.1
10°	4394.4	4457.7	4592.0	4719.1	4759.8
12.5°	4276.5	4370.1	4508.7	4675.9	4739.1
15°	4128.8	4273.5	4420.0	4633.9	4723.3
17.5°	4025.4	4141.6	4320.9	4614.5	4761.0
20°	3854.6	4018.2	4218.1	4627.9	4833.9
22.5°	3688.7	3887.5	4166.5	4632.7	4849.1
25°	3512.4	3725.8	4116.6	4555.5	4765.9
27.5°	3366.5	3545.2	4042.5	4394.4	4546.4
30°	3190.2	3400.5	3925.1	4148.2	4295.4
32.5°	3000.5	3267.4	3734.9	3959.8	4227.3
35°	2809.7	3139.8	3530.6	3798.1	3961.6
37.5°	2610.3	3034.6	3209.7	3252.8	3141.0
40°	2418.8	2888.1	2798.7	2381.1	2257.7
42.5°	2209.7	2573.2	2182.9	1638.3	1582.9
45°	1967.1	2141.6	1539.8	1255.3	1235.2
47.5°	1708.8	1658.3	1148.3	1049.2	1037.7
50°	1419.4	1325.8	929.5	925.8	847.4
52.5°	1106.4	1052.9	833.4	803.0	678.4
55°	820.0	857.7	789.0	682.7	573.8
57.5°	656.5	744.1	758.0	596.3	513.1
60°	583.6	651.1	699.1	548.3	459.6
62.5°	523.4	576.9	626.1	508.8	396.3
65°	469.9	516.7	556.8	452.3	317.3
67.5°	413.4	462.0	511.2	388.4	269.9
70°	361.1	412.8	452.3	344.7	203.0
72.5°	307.0	360.5	378.1	288.1	162.3
75°	259.6	288.7	320.4	263.2	142.9
77.5°	209.7	234.6	247.4	241.3	125.8
80°	161.1	181.2	203.0	219.4	107.6
82.5°	117.9	132.5	162.3	193.3	86.3
85°	72.3	88.8	124.6	164.1	66.3
87.5°	32.2	52.9	91.8	135.6	42.6
90°	1.8	27.4	63.2	105.2	19.5
92.5°	0.6	12.2	41.3	77.8	13.4
95°	0.6	4.3	24.9	54.1	9.7
97.5°	0.6	1.8	14.0	34.6	6.1
100°	0.6	1.2	6.7	20.1	4.3
102.5°	0.6	1.2	3.0	9.7	3.0
105°	0.6	1.2	1.8	4.3	1.8
107.5°	0.6	1.2	1.2	1.8	1.2
110°	0.6	1.2	1.2	1.2	1.2



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)