

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: P685953

Luminaire Tested: **4CZL-16-UNV-LVRF-L950-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685953
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-LVRF-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

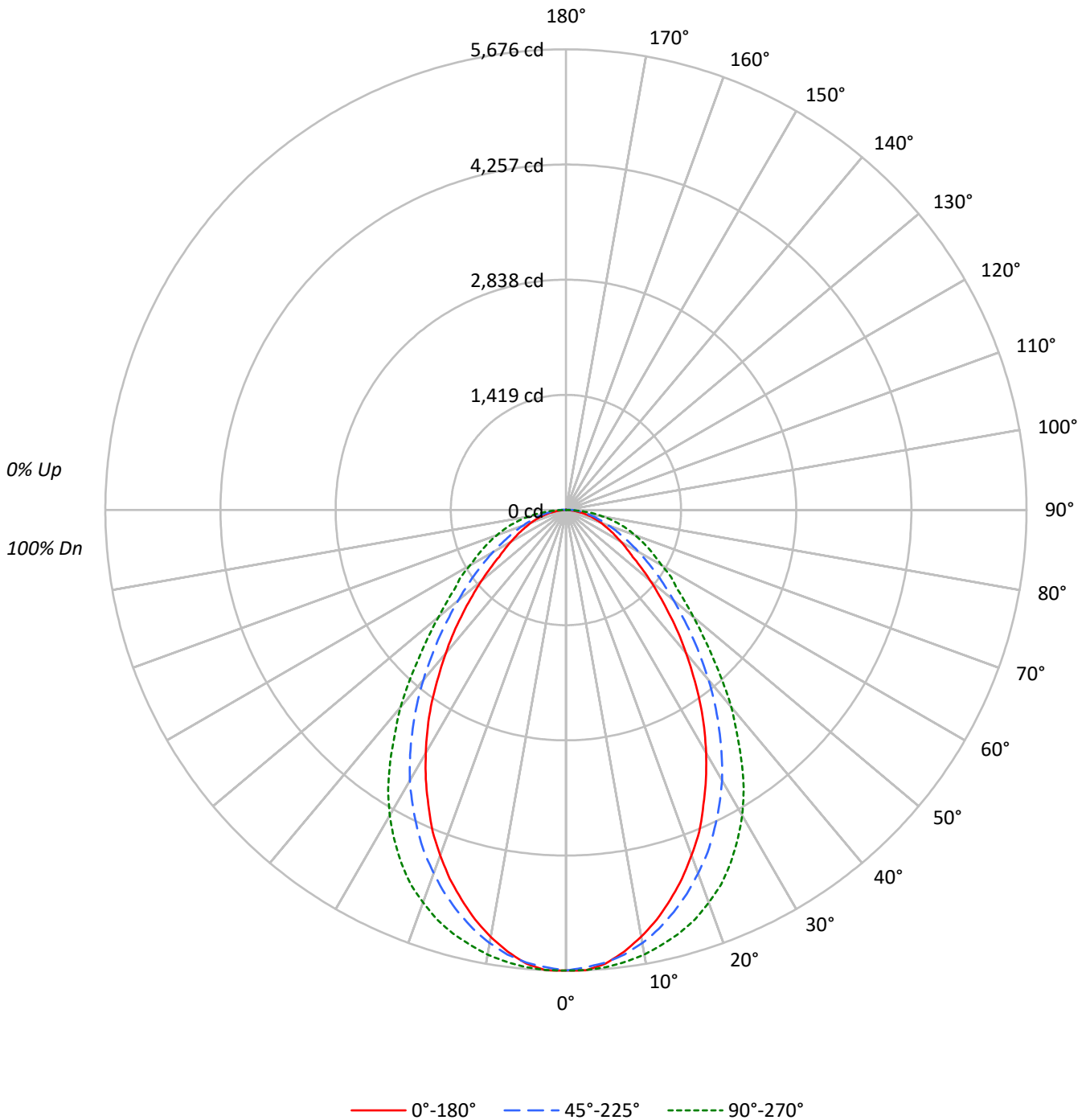
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10465.2 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 0.97 / 1.15 / 1.12
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 103
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			
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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86	86	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	82	79	76	74	74	74
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	74	70	67	65	65	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51	51	51
6	75	63	55	49	73	62	54	48	60	53	48	58	52	48	57	51	47	45	45	45
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	41	41	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37	37	37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34	34	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31	31	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18320	18320	18320
5°	18186	18144	18326
10°	17506	17766	18236
15°	16611	17145	18045
20°	15556	16363	17686
25°	14284	15437	17099
30°	12875	14347	16192
35°	11339	12976	14872
40°	9706	11521	13373
45°	8177	10042	11647
50°	6828	8704	10298
55°	5651	7648	9337
60°	5092	6703	8805
65°	4629	5900	8610
70°	4311	5297	8545
75°	3998	4944	8719
80°	3624	4898	8733
85°	3112	5739	8640



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	530.8	5.1
10°-20°	1450.7	13.9
20°-30°	2004.4	19.2
30°-40°	2062.0	19.7
40°-50°	1690.4	16.2
50°-60°	1213.0	11.6
60°-70°	815.9	7.8
70°-80°	476.2	4.6
80°-90°	183.5	1.8
90°-100°	31.8	0.3
100°-110°	2.7	0.0
110°-120°	0.5	0.0
120°-130°	0.4	0.0
130°-140°	0.7	0.0
140°-150°	0.8	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	3985.9	38.1
0°-40°	6047.9	57.8
0°-60°	8951.3	85.5
0°-90°	10426.9	99.6
90°-120°	35.0	0.3
90°-150°	36.9	0.4
90°-180°	38.0	0.4
0°-180°	10465.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5673	5673	5673	5673	5673	
5°	5610	5614	5597	5650	5654	527
15°	4969	5019	5128	5328	5398	1394
25°	4009	4103	4333	4634	4799	1840
35°	2876	3009	3292	3600	3773	1792
45°	1790	1930	2199	2415	2550	1390
55°	1004	1124	1358	1544	1658	924
65°	606	642	772	992	1127	604
75°	320	332	396	550	699	340
85°	84	104	155	232	233	91
90°	1	35	79	121	25	5
95°	1	6	33	58	11	0
105°	0	1	2	3	2	0
115°	1	1	1	0	0	1
125°	1	1	1	0	0	1
135°	1	2	1	1	0	1
145°	2	2	2	1	1	1
155°	2	2	2	1	1	1
165°	2	2	2	2	1	1
175°	2	3	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°	5673.2	5673.2	5673.2	5673.2	5673.2
2.5°	5675.6	5670.7	5638.9	5675.6	5674.0
5°	5610.4	5614.5	5597.4	5649.5	5653.6
7.5°	5488.9	5505.2	5524.0	5600.6	5614.5
10°	5338.9	5363.3	5418.0	5532.1	5561.5
12.5°	5170.1	5197.0	5285.9	5443.2	5484.0
15°	4968.7	5019.3	5128.5	5327.5	5397.6
17.5°	4760.8	4822.8	4958.1	5193.8	5288.3
20°	4526.8	4588.8	4761.6	5024.2	5146.5
22.5°	4292.0	4352.3	4563.5	4843.2	4995.6
25°	4009.1	4102.8	4332.7	4634.4	4799.1
27.5°	3738.4	3837.8	4093.9	4417.5	4581.4
30°	3453.0	3569.6	3847.6	4156.6	4342.5
32.5°	3170.1	3288.3	3572.0	3894.1	4078.4
35°	2876.5	3009.4	3291.6	3599.8	3772.6
37.5°	2578.9	2724.1	3014.3	3317.6	3457.1
40°	2302.5	2445.2	2733.0	3004.5	3172.5
42.5°	2047.3	2187.6	2454.2	2700.4	2851.3
45°	1790.5	1929.9	2199.0	2415.1	2550.4
47.5°	1560.6	1703.3	1953.6	2172.1	2285.4
50°	1359.2	1488.8	1732.6	1930.7	2049.8
52.5°	1174.9	1293.1	1534.5	1726.9	1841.9
55°	1003.7	1123.5	1358.4	1544.3	1658.4
57.5°	888.7	974.3	1185.5	1391.8	1538.6
60°	788.4	841.4	1037.9	1282.5	1363.3
62.5°	686.5	734.6	896.1	1111.3	1236.9
65°	605.8	641.7	772.1	991.5	1126.8
67.5°	525.9	552.8	664.5	875.7	1012.7
70°	456.6	473.7	561.0	761.5	905.0
72.5°	390.6	399.5	477.8	657.2	799.9
75°	320.4	331.8	396.3	550.4	698.8
77.5°	253.6	269.9	327.0	459.0	583.0
80°	194.9	207.9	263.4	377.5	469.6
82.5°	135.3	153.3	205.5	298.4	359.6
85°	84.0	104.4	154.9	231.6	233.2
87.5°	35.1	65.2	113.3	171.2	119.0
90°	0.8	35.1	79.1	120.7	25.3
92.5°	0.0	16.3	53.8	86.4	14.7
95°	0.8	5.7	33.4	57.9	10.6
97.5°	0.0	1.6	17.9	36.7	6.5
100°	0.0	0.8	7.3	20.4	4.1
102.5°	0.0	0.8	3.3	9.0	2.4
105°	0.0	0.8	1.6	3.3	1.6
107.5°	0.0	0.8	0.8	0.8	0.8
110°	0.8	0.8	0.8	0.8	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.8	0.8	0.0	0.0
115°	0.8	0.8	0.8	0.0	0.0
117.5°	0.8	0.8	0.8	0.0	0.0
120°	0.8	0.8	0.8	0.0	0.0
122.5°	0.8	0.8	0.8	0.0	0.0
125°	0.8	0.8	0.8	0.0	0.0
127.5°	0.8	0.8	0.8	0.0	0.0
130°	0.8	0.8	0.8	0.0	0.0
132.5°	0.8	1.6	0.8	0.8	0.0
135°	0.8	1.6	0.8	0.8	0.0
137.5°	0.8	1.6	0.8	0.8	0.0
140°	0.8	1.6	0.8	0.8	0.8
142.5°	1.6	1.6	1.6	0.8	0.8
145°	1.6	1.6	1.6	0.8	0.8
147.5°	1.6	1.6	1.6	0.8	0.8
150°	1.6	1.6	1.6	0.8	0.8
152.5°	1.6	2.4	1.6	0.8	0.8
155°	1.6	2.4	1.6	0.8	0.8
157.5°	1.6	2.4	1.6	0.8	0.8
160°	1.6	2.4	1.6	0.8	0.8
162.5°	2.4	2.4	1.6	1.6	0.8
165°	2.4	2.4	2.4	1.6	0.8
167.5°	2.4	2.4	2.4	1.6	0.8
170°	2.4	2.4	2.4	1.6	1.6
172.5°	2.4	2.4	2.4	1.6	1.6
175°	2.4	3.3	2.4	1.6	1.6
177.5°	2.4	3.3	2.4	1.6	1.6
180°	2.4	2.4	2.4	2.4	2.4

(END OF REPORT)