

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: P685712

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

Issue Date: 05/10/2023

Test Information

Test Method: LM-79-08
Report Number: P685712
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-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

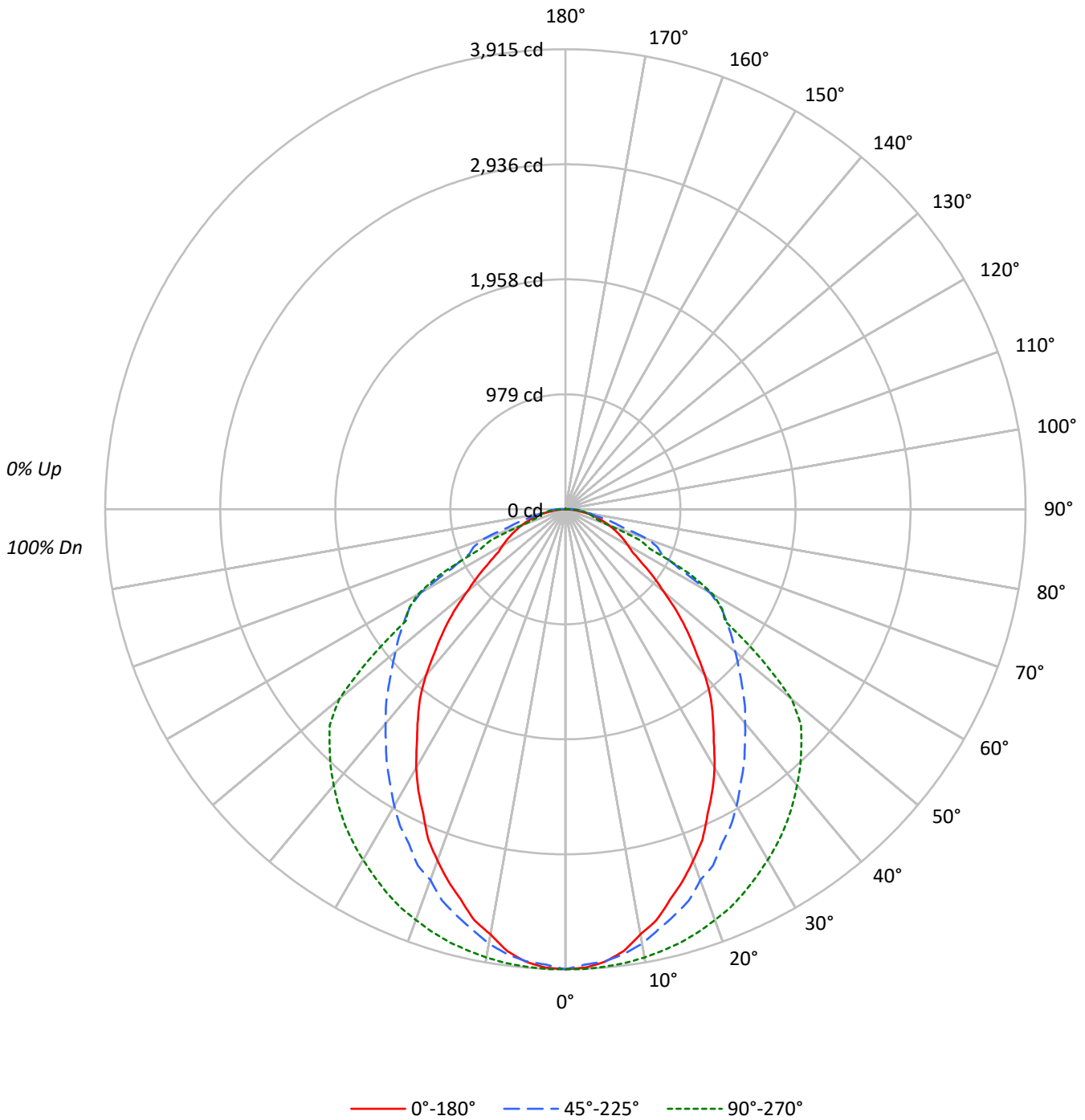
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8864.5 lumens
Efficiency: N/A
Efficacy: 115.1 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 (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

TEST NUMBER: P685712
CATALOG NUMBER: 4CZL-12-UNV-LVR-L950-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P685712
 CATALOG NUMBER: 4CZL-12-UNV-LVR-L950-CD-U

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	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	88	88	88	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	75	75	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	65	65	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	56	56	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	49	49	49	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	44	44	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	39	39	39	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	35	35	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	32	32	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29	29	29	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12640	12640	12640
5°	12531	12513	12663
10°	12043	12309	12699
15°	11497	11964	12751
20°	10932	11540	12780
25°	10195	11207	12823
30°	9466	10862	12843
35°	8630	10436	12902
40°	7785	10030	12926
45°	6696	9708	12959
50°	5473	9479	12619
55°	4456	9442	9333
60°	3973	9179	9363
65°	3841	6888	6039
70°	3691	7059	3432
75°	3557	4976	3064
80°	3245	4047	3652
85°	2905	5046	4550



TEST NUMBER: P685712
 CATALOG NUMBER: 4CZL-12-UNV-LVR-L950-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	366.6	4.1
10°-20°	1016.4	11.5
20°-30°	1470.5	16.6
30°-40°	1678.3	18.9
40°-50°	1649.1	18.6
50°-60°	1315.4	14.8
60°-70°	828.6	9.3
70°-80°	367.1	4.1
80°-90°	140.7	1.6
90°-100°	27.9	0.3
100°-110°	1.9	0.0
110°-120°	0.2	0.0
120°-130°	0.3	0.0
130°-140°	0.4	0.0
140°-150°	0.4	0.0
150°-160°	0.3	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	2853.5	32.2
0°-40°	4531.9	51.1
0°-60°	7496.4	84.6
0°-90°	8832.7	99.6
90°-120°	30.0	0.3
90°-150°	31.0	0.4
90°-180°	32.0	0.4
0°-180°	8864.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3914	3914	3914	3914	3914	
5°	3866	3874	3860	3892	3906	363
15°	3439	3473	3579	3746	3814	968
25°	2861	2954	3145	3433	3599	1319
35°	2189	2322	2647	3038	3273	1368
45°	1466	1680	2126	2602	2838	1127
55°	792	1072	1677	1808	1658	728
65°	503	684	902	960	790	498
75°	285	330	399	302	246	299
85°	78	95	136	176	123	83
90°	1	33	72	105	20	4
95°	1	5	30	51	7	0
105°	1	1	1	2	0	1
115°	1	1	0	0	0	1
125°	1	1	0	0	0	1
135°	1	1	1	0	0	1
145°	1	1	1	0	0	1
155°	1	1	1	0	0	1
165°	2	2	1	1	0	1
175°	2	2	1	1	1	0
180°	1	1	1	1	1	

TEST NUMBER: P685712

CATALOG NUMBER: 4CZL-12-UNV-LVR-L950-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3914.3	3914.3	3914.3	3914.3	3914.3
2.5°	3903.9	3901.5	3877.8	3911.2	3914.9
5°	3865.7	3874.2	3860.2	3892.4	3906.4
7.5°	3792.1	3801.2	3817.6	3876.6	3893.6
10°	3672.9	3696.0	3753.8	3836.5	3872.9
12.5°	3581.8	3610.3	3662.0	3802.4	3844.4
15°	3438.9	3472.9	3578.7	3746.5	3814.0
17.5°	3317.3	3379.3	3491.8	3676.0	3770.2
20°	3181.2	3231.0	3358.1	3606.7	3719.1
22.5°	3045.0	3108.2	3281.5	3514.3	3667.5
25°	2861.4	2953.8	3145.3	3433.4	3598.8
27.5°	2705.8	2822.5	3042.6	3338.0	3522.2
30°	2538.6	2629.2	2913.1	3240.7	3444.4
32.5°	2350.2	2492.4	2773.3	3129.5	3362.9
35°	2189.1	2321.6	2647.4	3037.7	3272.9
37.5°	2033.4	2158.1	2508.2	2933.7	3173.2
40°	1846.8	2010.9	2379.3	2815.2	3066.3
42.5°	1640.1	1841.3	2259.6	2703.3	2957.4
45°	1466.3	1679.6	2125.8	2601.8	2837.7
47.5°	1285.7	1510.6	2000.6	2478.4	2719.1
50°	1089.4	1362.9	1886.9	2364.1	2511.9
52.5°	945.9	1209.1	1784.8	2157.4	2117.3
55°	791.5	1071.7	1677.2	1808.5	1657.7
57.5°	674.2	947.7	1576.3	1420.1	1582.4
60°	615.2	848.6	1421.3	1352.0	1449.8
62.5°	559.9	761.7	1086.9	1268.1	1192.7
65°	502.7	684.5	901.5	960.5	790.3
67.5°	447.4	617.6	849.8	717.3	688.1
70°	390.9	566.0	747.7	611.5	363.5
72.5°	337.4	506.4	511.2	338.6	269.9
75°	285.1	329.5	398.8	302.1	245.6
77.5°	228.0	282.7	266.9	270.5	222.5
80°	174.5	194.5	217.6	241.9	196.4
82.5°	123.4	144.7	176.3	211.5	161.1
85°	78.4	95.4	136.2	175.7	122.8
87.5°	31.0	60.2	101.5	141.6	72.3
90°	0.6	32.8	71.7	104.6	20.1
92.5°	0.6	15.2	48.0	76.6	10.3
95°	0.6	4.9	29.8	51.1	6.7
97.5°	0.6	1.8	15.8	31.6	3.6
100°	0.6	0.6	6.7	17.0	1.8
102.5°	0.6	0.6	2.4	6.7	0.6
105°	0.6	0.6	0.6	1.8	0.0
107.5°	0.6	0.6	0.0	0.0	0.0
110°	0.6	0.6	0.0	0.0	0.0



TEST NUMBER: P685712
CATALOG NUMBER: 4CZL-12-UNV-LVR-L950-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.6	0.6	0.0	0.0	0.0
115°	0.6	0.6	0.0	0.0	0.0
117.5°	0.6	0.6	0.0	0.0	0.0
120°	0.6	0.6	0.0	0.0	0.0
122.5°	0.6	0.6	0.0	0.0	0.0
125°	0.6	1.2	0.0	0.0	0.0
127.5°	0.6	0.6	0.0	0.0	0.0
130°	0.6	1.2	0.6	0.0	0.0
132.5°	0.6	1.2	0.6	0.0	0.0
135°	0.6	1.2	0.6	0.0	0.0
137.5°	0.6	1.2	0.6	0.0	0.0
140°	1.2	1.2	0.6	0.0	0.0
142.5°	1.2	1.2	0.6	0.0	0.0
145°	1.2	1.2	0.6	0.0	0.0
147.5°	1.2	1.2	0.6	0.0	0.0
150°	1.2	1.2	0.6	0.0	0.0
152.5°	1.2	1.2	0.6	0.0	0.0
155°	1.2	1.2	0.6	0.0	0.0
157.5°	1.2	1.8	0.6	0.0	0.0
160°	1.8	1.8	0.6	0.0	0.0
162.5°	1.8	1.8	1.2	0.6	0.0
165°	1.8	1.8	1.2	0.6	0.0
167.5°	1.8	1.8	1.2	0.6	0.0
170°	1.8	1.8	1.2	0.6	0.6
172.5°	1.8	1.8	1.2	0.6	0.6
175°	1.8	1.8	1.2	0.6	0.6
177.5°	1.8	1.8	1.2	0.6	0.6
180°	1.2	1.2	1.2	1.2	1.2

(END OF REPORT)