

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: P685472

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685472
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-M-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT MEDIUM LENS MODEL @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

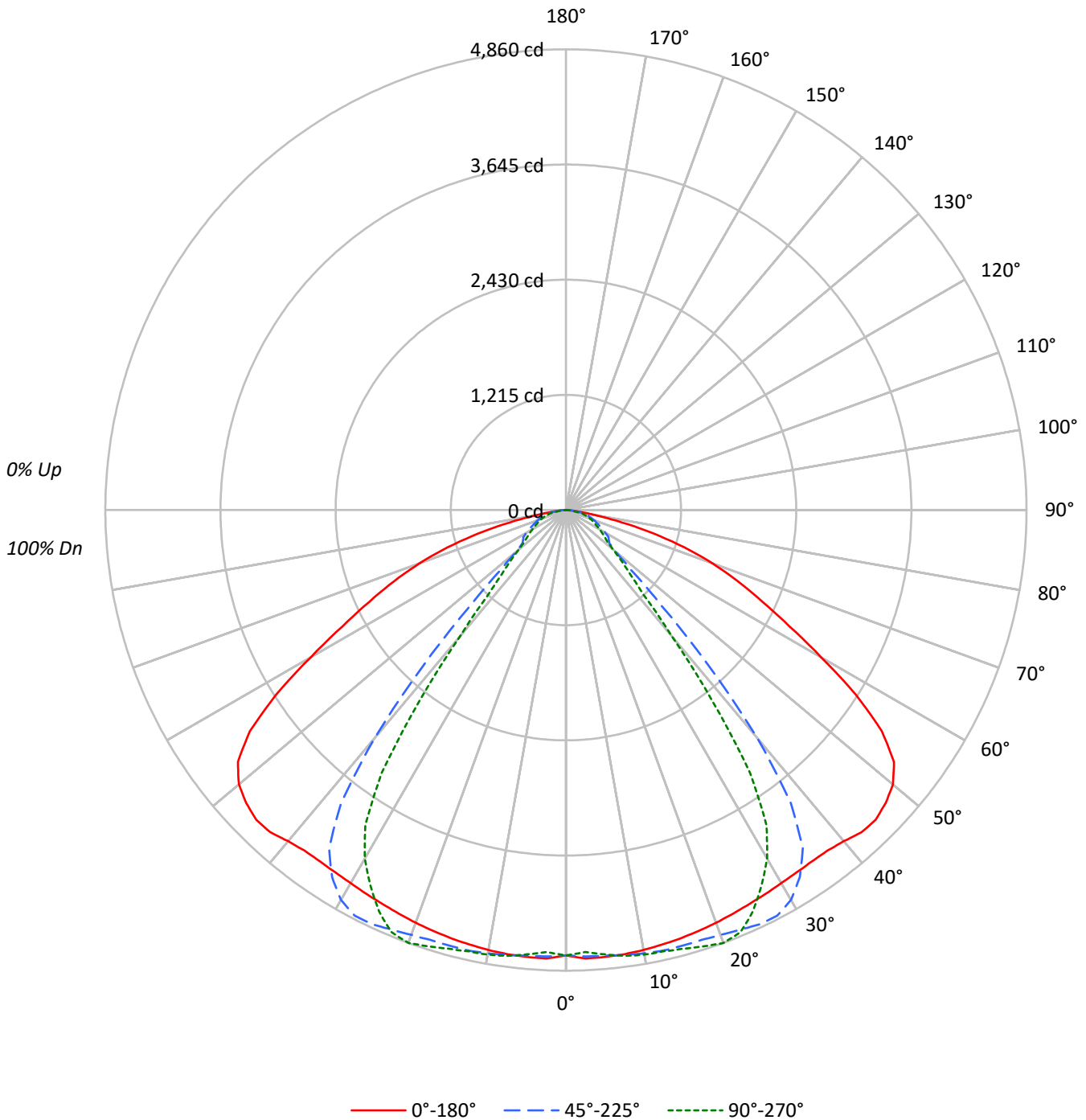
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10150.7 lumens
Efficiency: N/A
Efficacy: 131.8 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 1.28 / 1.22
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				
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	96	90	86	100	94	89	85	91	87	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	79	73	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	51	61	55	50	59	54	50	50	50	50	48
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	37	36
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	34	34	34	33

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15172	15172	15172
5°	15342	15298	15255
10°	15454	15574	15618
15°	15637	15904	16016
20°	15924	16390	16700
25°	16332	17188	16637
30°	16947	17706	15827
35°	17838	17175	13365
40°	19224	13246	7310
45°	21106	6512	4369
50°	22631	3403	3258
55°	22920	3106	2812
60°	20100	3096	2651
65°	17491	2975	2567
70°	15522	3014	2583
75°	11908	3094	2623
80°	6060	3145	2172
85°	2390	1771	619



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	450.2	4.4
10°-20°	1341.8	13.2
20°-30°	2165.4	21.3
30°-40°	2536.0	25.0
40°-50°	1726.4	17.0
50°-60°	999.7	9.8
60°-70°	571.5	5.6
70°-80°	294.2	2.9
80°-90°	65.5	0.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3957.3	39.0
0°-40°	6493.4	64.0
0°-60°	9219.5	90.8
0°-90°	10150.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10150.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4698	4698	4698	4698	4698	
5°	4733	4686	4720	4714	4706	451
15°	4677	4670	4757	4770	4791	1324
25°	4584	4648	4824	4750	4670	2122
35°	4525	4748	4357	3674	3390	2849
45°	4622	3439	1426	960	957	3551
55°	4071	1180	552	514	499	3547
65°	2289	421	389	344	336	2295
75°	954	260	248	216	210	1015
85°	64	79	48	22	17	109
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4698.4	4698.4	4698.4	4698.4	4698.4	4698.4	4698.4	4698.4	4698.4	4698.4	4698.4
2.5°	4736.2	4722.9	4696.2	4685.1	4685.1	4714.0	4718.4	4700.6	4697.3	4681.7	4667.3
5°	4732.9	4719.5	4694.0	4683.9	4687.3	4719.5	4727.3	4712.9	4717.3	4712.9	4706.2
7.5°	4726.2	4711.7	4688.4	4681.7	4691.7	4732.9	4746.2	4738.4	4748.5	4746.2	4744.0
10°	4712.9	4701.7	4679.5	4678.4	4698.4	4749.6	4766.3	4756.2	4759.6	4758.5	4762.9
12.5°	4695.1	4685.1	4666.1	4676.2	4705.1	4759.6	4770.7	4755.1	4759.6	4760.7	4768.5
15°	4677.3	4665.0	4652.8	4676.2	4706.2	4757.4	4768.5	4766.3	4779.6	4780.7	4790.7
17.5°	4655.0	4647.2	4643.9	4675.0	4698.4	4755.1	4780.7	4794.1	4811.9	4816.3	4826.3
20°	4633.9	4627.2	4635.0	4669.5	4695.1	4769.6	4805.2	4825.2	4844.1	4849.7	4859.7
22.5°	4608.3	4603.9	4625.0	4661.7	4700.6	4791.8	4831.9	4834.1	4826.3	4811.9	4818.5
25°	4583.8	4583.8	4615.0	4659.5	4717.3	4824.1	4827.4	4764.0	4707.3	4669.5	4669.5
27.5°	4563.8	4568.3	4607.2	4669.5	4749.6	4826.3	4734.0	4608.3	4524.9	4470.4	4467.0
30°	4544.9	4552.7	4607.2	4697.3	4772.9	4748.5	4569.4	4417.0	4301.3	4249.0	4244.6
32.5°	4531.6	4543.8	4627.2	4739.6	4745.1	4591.6	4358.0	4165.6	4028.8	3950.9	3937.6
35°	4524.9	4539.3	4665.0	4776.3	4632.8	4356.9	4025.5	3728.5	3511.6	3411.5	3390.3
37.5°	4529.3	4554.9	4717.3	4745.1	4351.4	3895.3	3419.2	2993.2	2695.1	2600.6	2535.0
40°	4560.5	4603.9	4758.5	4491.5	3760.7	3142.3	2511.6	2053.3	1847.5	1779.7	1734.1
42.5°	4612.8	4656.1	4650.6	3910.9	2937.6	2232.4	1618.4	1343.7	1243.6	1232.4	1211.3
45°	4621.7	4638.3	4301.3	3151.2	2136.7	1426.0	1042.2	961.0	958.8	966.6	956.6
47.5°	4574.9	4542.7	3797.4	2410.4	1471.6	922.1	784.2	797.5	804.2	798.6	790.9
50°	4504.9	4385.8	3232.4	1771.9	981.1	677.4	684.1	696.3	672.9	657.4	648.5
52.5°	4362.5	4131.1	2605.0	1255.8	678.5	578.4	631.8	596.2	562.8	553.9	552.8
55°	4071.1	3752.9	2004.4	905.4	518.3	551.7	561.7	516.1	506.1	501.7	499.4
57.5°	3627.2	3282.4	1507.2	654.0	454.9	532.8	488.3	470.5	460.5	457.2	453.8
60°	3112.2	2756.3	1123.4	480.5	441.6	479.4	442.7	426.0	414.9	410.4	410.4
62.5°	2656.2	2281.3	830.9	390.4	438.3	432.7	399.3	381.5	374.8	372.6	370.4
65°	2289.1	1835.3	599.5	361.5	409.3	389.3	357.1	344.8	340.4	335.9	335.9
67.5°	1962.1	1437.1	441.6	354.8	376.0	350.4	325.9	315.9	310.3	309.2	308.1
70°	1644.0	1058.9	335.9	347.0	357.1	319.2	295.9	283.6	277.0	273.6	273.6
72.5°	1309.2	726.3	268.1	319.2	327.0	282.5	259.2	250.3	244.7	241.4	240.3
75°	954.4	456.0	235.8	268.1	281.4	248.0	224.7	216.9	214.7	211.3	210.2
77.5°	607.3	272.5	201.3	219.1	230.2	209.1	191.3	181.3	180.2	176.9	175.7
80°	325.9	174.6	161.3	172.4	179.1	169.1	147.9	127.9	122.4	117.9	116.8
82.5°	151.3	111.2	120.1	130.1	133.5	107.9	89.0	80.1	74.5	69.0	65.6
85°	64.5	60.1	74.5	80.1	65.6	47.8	31.1	23.4	18.9	17.8	16.7
87.5°	23.4	23.4	27.8	18.9	11.1	8.9	8.9	7.8	6.7	5.6	5.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)