

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: P685492

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

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685492  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-12-UNV-W-L840-CD-U  
Description: METALUX CRUZE LINEAR 4FT WIDE LENS MODEL @80 CRI and 4000K  
Light Source: (588) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

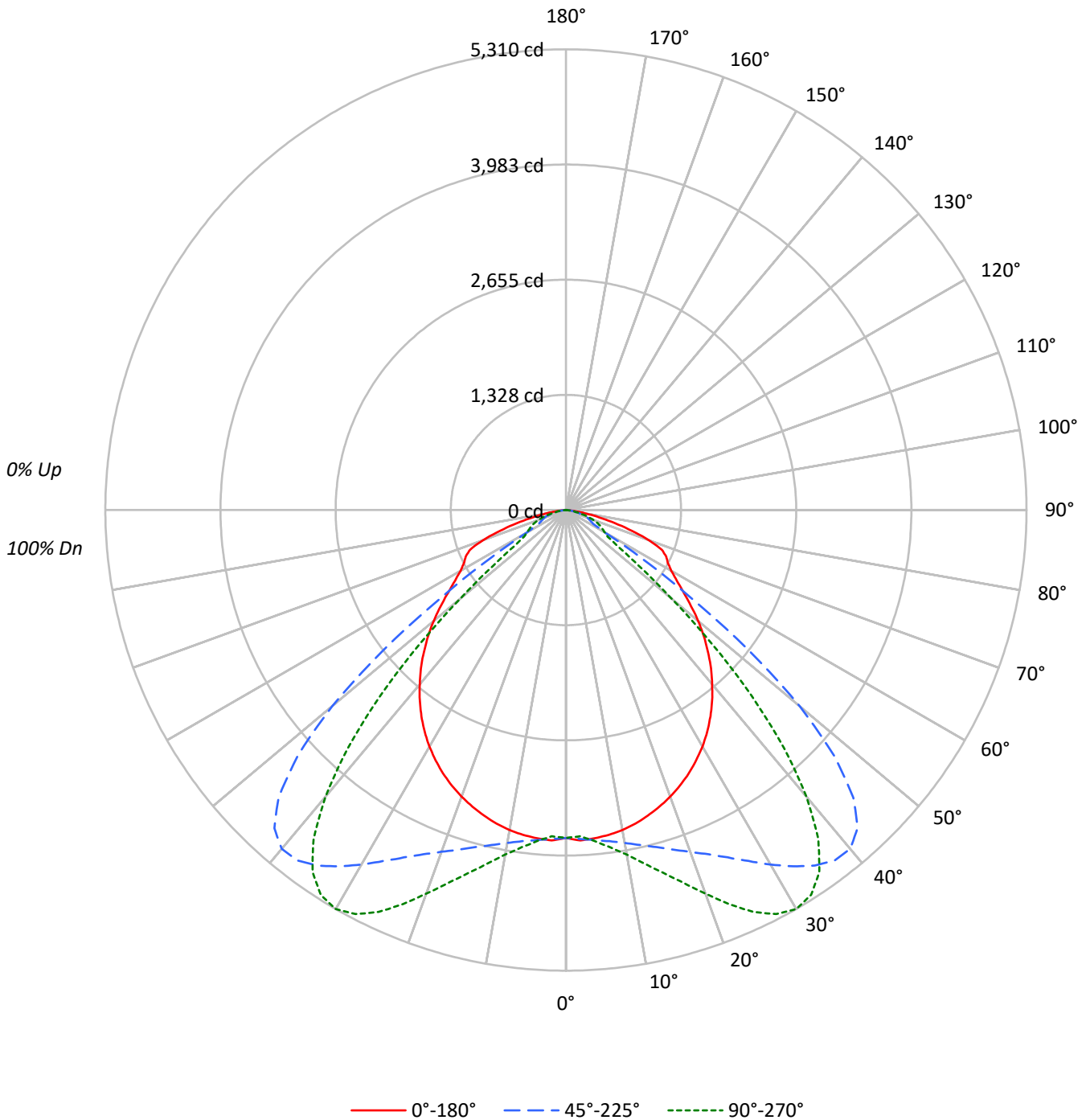
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12087.4 lumens  
Efficiency: N/A  
Efficacy: 157.0 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.69 / 1.65  
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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	89	89	89	87
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	77	77	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	67	67	67	65
4	86	75	67	61	84	73	66	60	71	65	59	69	63	59	67	62	58	58	58	58	56
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	51	51	51	51	49
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	45	45	45	43
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	39	39	39	38
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	35	35	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	32	32	32	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	29	29	29	27

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

	0°	45°	90°
0°	12204	12204	12204
5°	12311	12375	12413
10°	12281	12772	13220
15°	12191	13448	14471
20°	12085	14406	16167
25°	11940	15742	18209
30°	11735	17591	19801
35°	11449	19716	20074
40°	11052	21482	18186
45°	10574	21400	13803
50°	10002	17686	7955
55°	9322	9729	4091
60°	9047	3395	3335
65°	9750	2470	3344
70°	9628	2531	3226
75°	7280	2213	2590
80°	4398	1808	1834
85°	2190	926	389



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	365.8	3.0
10°-20°	1137.4	9.4
20°-30°	1998.0	16.5
30°-40°	2775.8	23.0
40°-50°	2815.0	23.3
50°-60°	1806.5	14.9
60°-70°	844.9	7.0
70°-80°	293.0	2.4
80°-90°	51.1	0.4
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°	3501.2	29.0
0°-40°	6277.0	51.9
0°-60°	10898.4	90.2
0°-90°	12087.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12087.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3779	3779	3779	3779	3779	
5°	3798	3771	3818	3830	3829	361
15°	3647	3733	4022	4238	4329	1029
25°	3351	3694	4418	4935	5111	1542
35°	2904	3725	5002	5174	5092	1814
45°	2316	3988	4686	3495	3022	1785
55°	1656	4119	1728	832	727	1494
65°	1276	1316	323	405	438	1241
75°	584	202	177	204	208	632
85°	59	53	25	14	10	89
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°	3779.4	3779.4	3779.4	3779.4	3779.4	3779.4	3779.4	3779.4	3779.4	3779.4	3779.4
2.5°	3812.2	3800.4	3780.7	3772.8	3776.8	3796.5	3803.0	3788.6	3784.7	3774.1	3763.6
5°	3797.8	3787.3	3772.8	3770.2	3784.7	3817.5	3832.0	3828.0	3834.6	3835.9	3829.3
7.5°	3776.8	3767.6	3755.7	3767.6	3797.8	3850.4	3883.2	3893.7	3917.4	3922.6	3921.3
10°	3745.2	3737.3	3733.4	3763.6	3816.2	3895.0	3952.9	3981.8	4015.9	4027.8	4031.7
12.5°	3703.2	3695.3	3705.8	3758.4	3841.2	3954.2	4039.6	4090.8	4139.5	4164.4	4172.3
15°	3646.7	3644.0	3670.3	3754.4	3872.7	4022.5	4140.8	4220.9	4290.6	4318.2	4328.7
17.5°	3584.9	3586.2	3633.5	3753.1	3910.8	4102.7	4253.8	4368.1	4453.5	4493.0	4504.8
20°	3516.6	3520.5	3591.5	3751.8	3958.1	4192.0	4378.6	4528.4	4634.9	4687.4	4704.5
22.5°	3436.4	3444.3	3545.5	3753.1	4008.1	4294.5	4525.8	4704.5	4832.0	4895.1	4916.1
25°	3351.0	3362.8	3498.2	3759.7	4071.1	4418.1	4694.0	4903.0	5031.7	5086.9	5110.6
27.5°	3252.4	3272.1	3446.9	3768.9	4146.0	4561.3	4866.2	5067.2	5186.8	5228.9	5249.9
30°	3147.3	3169.6	3397.0	3787.3	4243.3	4717.7	5025.2	5194.7	5274.9	5298.5	5310.3
32.5°	3031.7	3068.5	3347.1	3817.5	4357.6	4868.8	5142.1	5243.3	5263.0	5255.1	5259.1
35°	2904.2	2943.6	3299.7	3867.4	4487.7	5001.5	5188.1	5188.1	5130.3	5094.8	5092.2
37.5°	2768.8	2818.8	3252.4	3925.3	4638.8	5089.6	5138.2	5008.1	4867.5	4791.3	4779.4
40°	2621.7	2688.7	3219.6	4004.1	4775.5	5096.1	4959.5	4691.4	4452.2	4328.7	4314.2
42.5°	2475.8	2558.6	3205.1	4106.6	4878.0	4975.2	4623.1	4209.1	3884.5	3738.7	3722.9
45°	2315.5	2424.5	3210.4	4247.2	4905.6	4686.1	4122.4	3586.2	3222.2	3038.2	3022.5
47.5°	2156.5	2291.8	3223.5	4406.2	4784.7	4196.0	3456.1	2835.9	2474.5	2281.3	2278.7
50°	1990.9	2167.0	3255.1	4536.3	4457.5	3520.5	2637.4	2031.6	1742.5	1595.3	1583.5
52.5°	1818.7	2057.9	3323.4	4560.0	3875.3	2653.2	1789.8	1356.2	1168.2	1074.9	1056.5
55°	1655.8	1965.9	3435.1	4347.1	3038.2	1728.1	1127.5	855.5	760.9	722.8	726.7
57.5°	1515.2	1897.6	3565.2	3791.2	1972.5	1017.1	653.1	569.0	566.4	570.3	571.6
60°	1400.8	1855.5	3623.0	2843.7	1082.8	525.6	456.0	474.4	499.4	513.8	516.4
62.5°	1325.9	1833.2	3446.9	1647.9	481.0	366.6	398.2	432.3	461.3	474.4	475.7
65°	1276.0	1774.1	2820.1	814.8	294.4	323.3	362.7	398.2	424.5	435.0	437.6
67.5°	1198.5	1607.2	1933.1	337.7	258.9	291.7	329.8	364.0	386.3	394.2	395.5
70°	1019.8	1345.7	1123.6	224.7	233.9	268.1	298.3	324.6	339.0	343.0	341.7
72.5°	796.4	1065.7	567.7	203.7	216.8	235.2	252.3	266.8	274.7	278.6	278.6
75°	583.5	779.3	266.8	180.0	161.6	177.4	194.5	203.7	206.3	207.6	207.6
77.5°	391.6	537.5	159.0	139.3	124.8	138.0	144.6	140.6	138.0	140.6	140.6
80°	236.5	331.2	139.3	101.2	95.9	97.2	92.0	92.0	97.2	99.9	98.6
82.5°	127.5	187.9	122.2	73.6	64.4	59.1	57.8	55.2	52.6	51.3	51.3
85°	59.1	95.9	78.8	44.7	34.2	25.0	19.7	14.5	13.1	10.5	10.5
87.5°	23.7	36.8	23.7	14.5	7.9	5.3	3.9	2.6	1.3	1.3	1.3
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)