

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: P685322

Luminaire Tested: **4CZL-12-UNV-L850-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685322  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-12-UNV-L850-CD-U  
Description: METALUX CRUZE LINEAR 4FT BASE MODEL @80 CRI and 5000K  
Light Source: (588) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

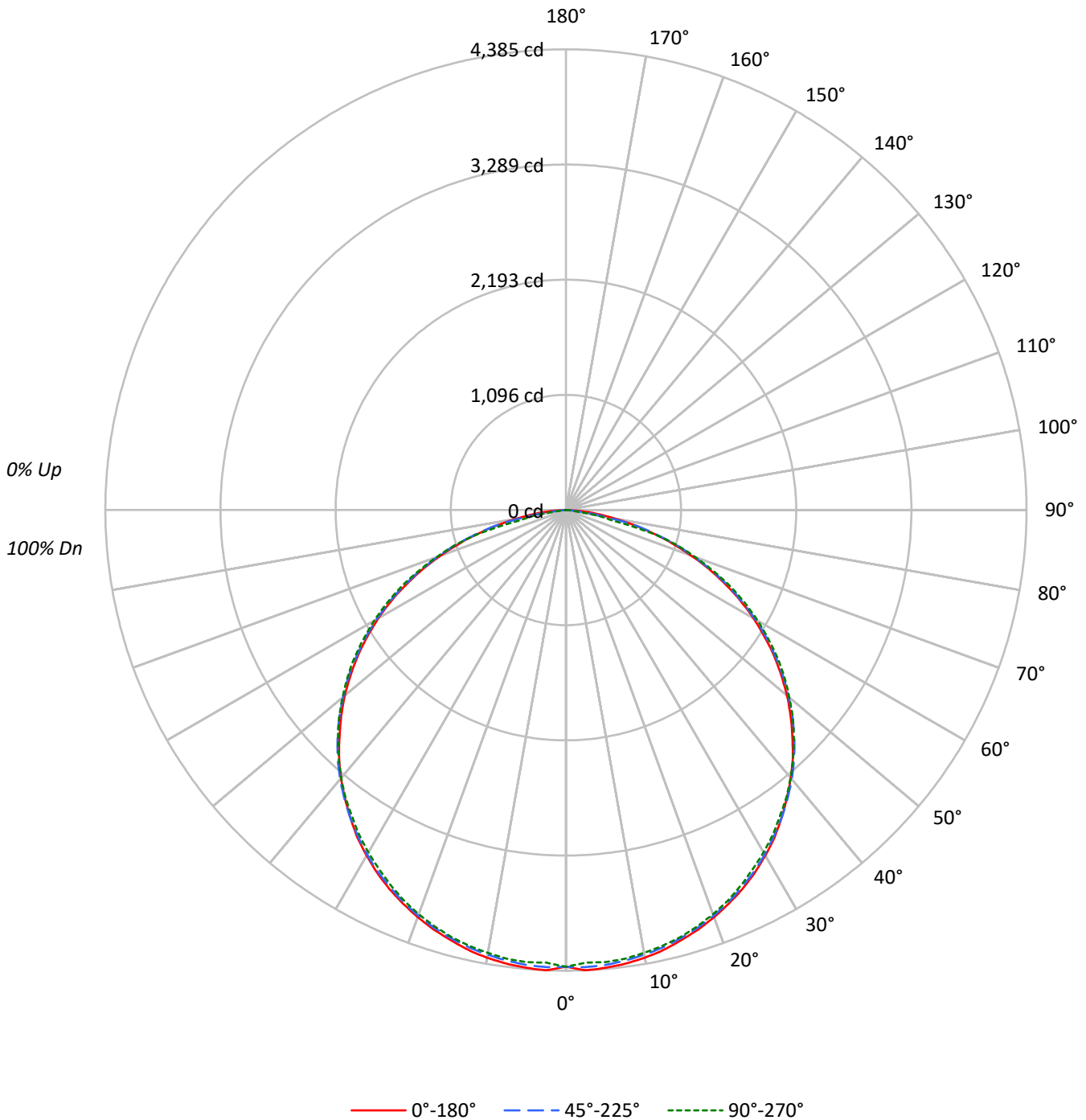
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12894.8 lumens  
Efficiency: N/A  
Efficacy: 167.5 lumens/watt  
Spacing Criteria (0/90/45): 1.3 / 1.29 / 1.41  
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	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	52	50
5	76	63	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	45	45	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	39	39	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	35	35	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	31	31	31	29
9	56	42	34	29	55	42	34	29	41	33	28	40	33	28	39	33	28	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	25	25	25	24

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

	0°	45°	90°
0°	14037	14037	14037
5°	14176	14086	14000
10°	14188	14093	14032
15°	14169	14111	14067
20°	14173	14123	14068
25°	14176	14119	14048
30°	14158	14119	14030
35°	14107	14107	14007
40°	14040	14096	14029
45°	13922	14043	14013
50°	13804	13904	13950
55°	13620	13717	13851
60°	13322	13442	13605
65°	12826	13009	13231
70°	11995	12233	12346
75°	10794	10992	10430
80°	9017	7342	5716
85°	6725	1767	637



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	412.4	3.2
10°-20°	1189.0	9.2
20°-30°	1820.7	14.1
30°-40°	2229.2	17.3
40°-50°	2358.3	18.3
50°-60°	2174.7	16.9
60°-70°	1677.6	13.0
70°-80°	895.9	6.9
80°-90°	137.1	1.1
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°	3422.1	26.5
0°-40°	5651.3	43.8
0°-60°	10184.2	79.0
0°-90°	12894.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12894.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4347	4347	4347	4347	4347	
5°	4373	4322	4346	4327	4319	416
15°	4238	4193	4221	4206	4208	1198
25°	3979	3938	3963	3934	3943	1834
35°	3578	3557	3578	3548	3553	2239
45°	3048	3047	3075	3054	3068	2353
55°	2419	2417	2436	2451	2460	2158
65°	1679	1679	1702	1716	1732	1657
75°	865	864	881	888	836	916
85°	182	130	48	20	17	223
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4346.9	4346.9	4346.9	4346.9	4346.9
2.5°	4385.3	4333.6	4354.8	4338.9	4312.4
5°	4373.4	4321.7	4345.6	4327.0	4319.1
7.5°	4354.8	4301.8	4325.7	4311.1	4308.5
10°	4327.0	4272.7	4297.9	4282.0	4279.3
12.5°	4289.9	4236.9	4264.7	4246.2	4248.8
15°	4238.3	4193.2	4221.0	4206.5	4207.8
17.5°	4186.6	4140.2	4169.4	4154.8	4156.1
20°	4124.3	4079.3	4109.7	4087.2	4093.8
22.5°	4054.1	4014.3	4040.8	4011.7	4024.9
25°	3978.6	3937.5	3962.7	3933.5	3942.8
27.5°	3892.5	3854.0	3879.2	3848.7	3852.7
30°	3797.1	3762.6	3786.5	3756.0	3762.6
32.5°	3695.1	3664.6	3683.1	3655.3	3664.6
35°	3578.5	3557.3	3578.5	3548.0	3553.3
37.5°	3456.6	3435.4	3464.5	3438.0	3447.3
40°	3330.7	3310.8	3344.0	3317.5	3328.1
42.5°	3196.9	3182.3	3215.5	3189.0	3202.2
45°	3048.5	3047.2	3075.0	3053.8	3068.4
47.5°	2901.5	2898.8	2926.6	2912.1	2929.3
50°	2747.8	2745.1	2767.6	2766.3	2776.9
52.5°	2583.5	2587.5	2608.7	2612.6	2624.6
55°	2419.2	2416.6	2436.4	2451.0	2460.3
57.5°	2240.4	2245.6	2261.5	2278.8	2285.4
60°	2062.8	2060.2	2081.4	2095.9	2106.5
62.5°	1874.7	1874.7	1891.9	1913.1	1923.7
65°	1678.6	1678.6	1702.5	1715.7	1731.6
67.5°	1478.6	1474.6	1495.8	1524.9	1522.3
70°	1270.5	1271.9	1295.7	1310.3	1307.6
72.5°	1063.9	1067.8	1093.0	1099.6	1106.3
75°	865.1	863.8	881.0	887.7	836.0
77.5°	667.7	669.1	679.7	498.2	437.2
80°	484.9	487.6	394.8	307.4	307.4
82.5°	320.6	315.3	202.7	119.2	87.4
85°	181.5	129.8	47.7	19.9	17.2
87.5°	74.2	23.8	13.2	9.3	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)