

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: P685302

Luminaire Tested: **4CZL-12-UNV-L835-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685302  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-12-UNV-L835-CD-U  
Description: METALUX CRUZE LINEAR 4FT BASE MODEL @80 CRI and 3500K  
Light Source: (588) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

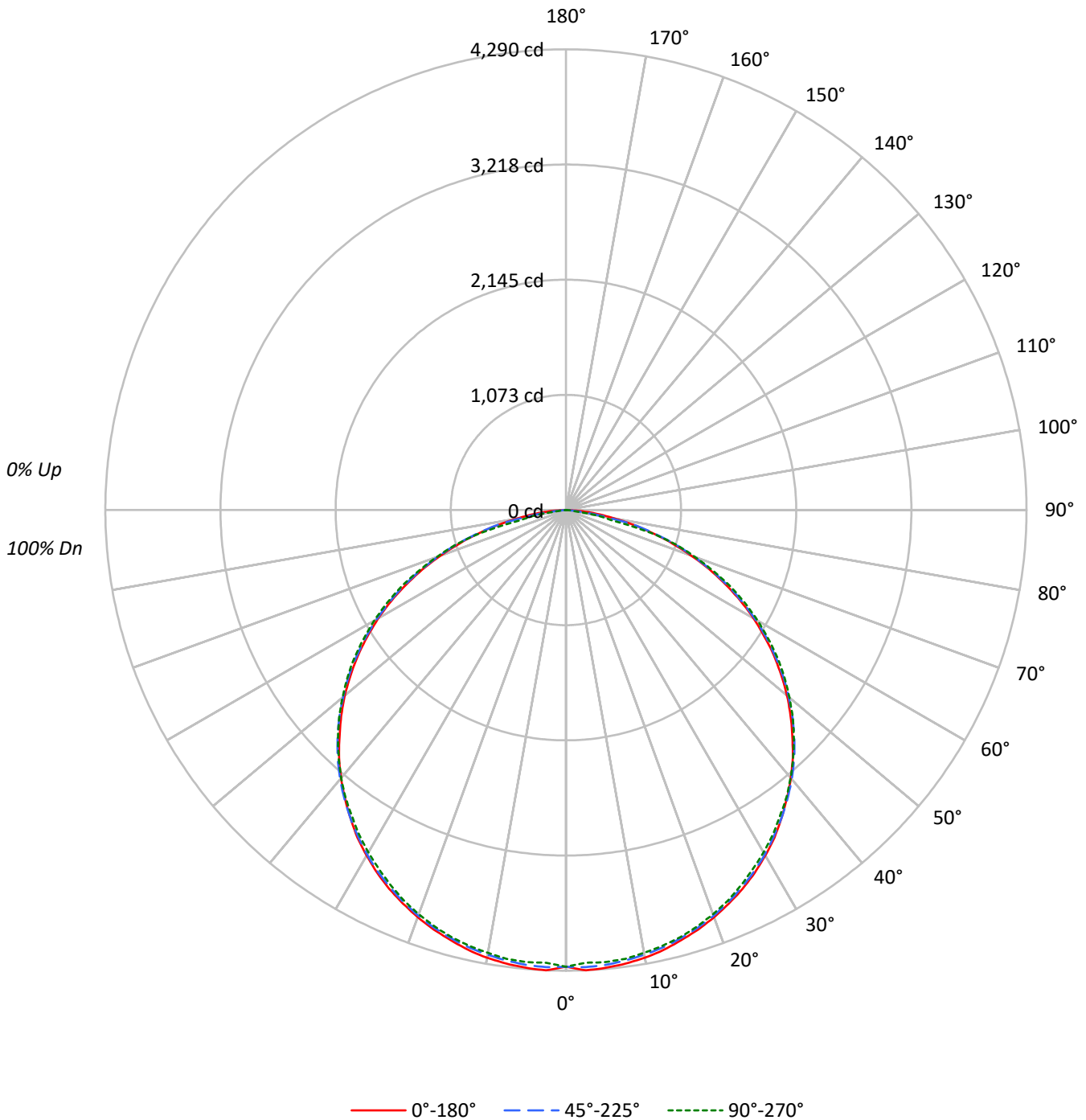
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12616.2 lumens  
Efficiency: N/A  
Efficacy: 163.8 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				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°	13734	13734	13734
5°	13870	13782	13698
10°	13882	13788	13729
15°	13863	13806	13763
20°	13867	13818	13764
25°	13869	13814	13745
30°	13852	13814	13727
35°	13802	13802	13705
40°	13737	13792	13726
45°	13621	13740	13710
50°	13506	13603	13649
55°	13325	13421	13552
60°	13034	13152	13311
65°	12549	12727	12945
70°	11737	11969	12079
75°	10560	10755	10205
80°	8822	7184	5592
85°	6580	1730	626



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	403.5	3.2
10°-20°	1163.3	9.2
20°-30°	1781.4	14.1
30°-40°	2181.0	17.3
40°-50°	2307.3	18.3
50°-60°	2127.7	16.9
60°-70°	1641.3	13.0
70°-80°	876.6	6.9
80°-90°	134.1	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°	3348.1	26.5
0°-40°	5529.1	43.8
0°-60°	9964.1	79.0
0°-90°	12616.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12616.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4253	4253	4253	4253	4253	
5°	4279	4228	4252	4234	4226	407
15°	4147	4103	4130	4116	4117	1172
25°	3893	3852	3877	3848	3858	1794
35°	3501	3480	3501	3471	3476	2191
45°	2983	2981	3009	2988	3002	2302
55°	2367	2364	2384	2398	2407	2112
65°	1642	1642	1666	1679	1694	1621
75°	846	845	862	868	818	896
85°	178	127	47	19	17	218
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4253.0	4253.0	4253.0	4253.0	4253.0
2.5°	4290.5	4240.0	4260.7	4245.2	4219.3
5°	4278.9	4228.3	4251.7	4233.5	4225.7
7.5°	4260.7	4208.9	4232.2	4218.0	4215.4
10°	4233.5	4180.4	4205.0	4189.4	4186.8
12.5°	4197.2	4145.4	4172.6	4154.4	4157.0
15°	4146.7	4102.6	4129.8	4115.6	4116.9
17.5°	4096.1	4050.7	4079.3	4065.0	4066.3
20°	4035.2	3991.1	4020.9	3998.9	4005.4
22.5°	3966.5	3927.6	3953.5	3925.0	3938.0
25°	3892.6	3852.4	3877.0	3848.5	3857.6
27.5°	3808.3	3770.8	3795.4	3765.6	3769.5
30°	3715.0	3681.3	3704.6	3674.8	3681.3
32.5°	3615.2	3585.4	3603.5	3576.3	3585.4
35°	3501.1	3480.4	3501.1	3471.3	3476.5
37.5°	3381.9	3361.1	3389.7	3363.7	3372.8
40°	3258.7	3239.3	3271.7	3245.8	3256.1
42.5°	3127.8	3113.6	3146.0	3120.0	3133.0
45°	2982.6	2981.3	3008.6	2987.8	3002.1
47.5°	2838.8	2836.2	2863.4	2849.1	2866.0
50°	2688.4	2685.8	2707.8	2706.5	2716.9
52.5°	2527.7	2531.6	2552.3	2556.2	2567.8
55°	2366.9	2364.3	2383.8	2398.0	2407.1
57.5°	2191.9	2197.1	2212.7	2229.5	2236.0
60°	2018.2	2015.6	2036.4	2050.6	2061.0
62.5°	1834.2	1834.2	1851.0	1871.8	1882.1
65°	1642.3	1642.3	1665.7	1678.6	1694.2
67.5°	1446.6	1442.7	1463.5	1492.0	1489.4
70°	1243.1	1244.4	1267.7	1282.0	1279.4
72.5°	1040.9	1044.8	1069.4	1075.9	1082.4
75°	846.4	845.1	862.0	868.5	817.9
77.5°	653.3	654.6	665.0	487.4	427.8
80°	474.4	477.0	386.3	300.7	300.7
82.5°	313.7	308.5	198.3	116.7	85.6
85°	177.6	127.0	46.7	19.4	16.9
87.5°	72.6	23.3	13.0	9.1	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)