

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: P685482

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

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685482  
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-L835-CD-U  
Description: METALUX CRUZE LINEAR 4FT WIDE LENS MODEL @80 CRI and 3500K  
Light Source: (588) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

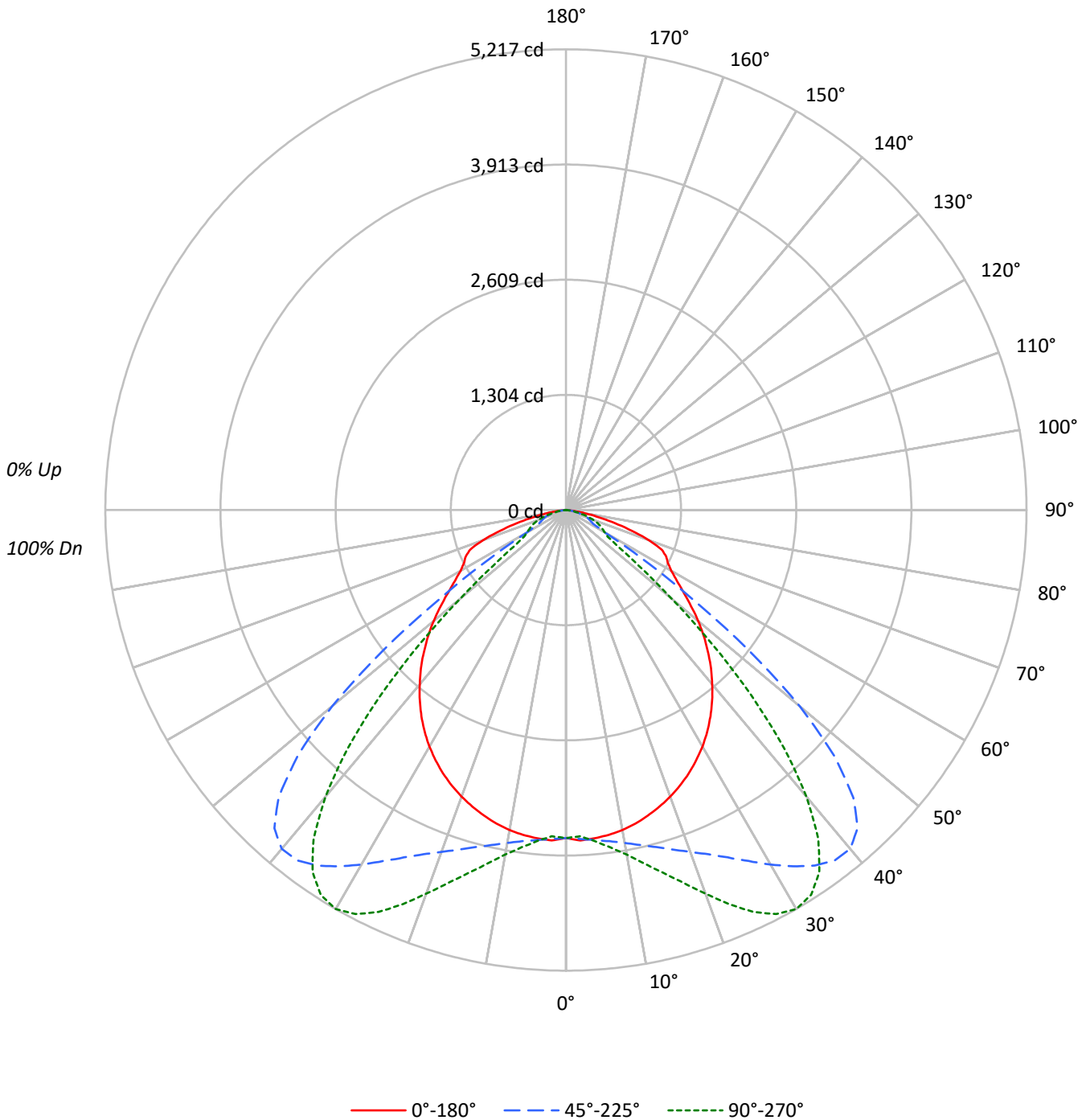
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11875.9 lumens  
Efficiency: N/A  
Efficacy: 154.2 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°	11991	11991	11991
5°	12095	12158	12196
10°	12066	12548	12989
15°	11978	13212	14218
20°	11873	14154	15884
25°	11731	15466	17891
30°	11530	17283	19454
35°	11248	19372	19723
40°	10858	21107	17868
45°	10389	21026	13561
50°	9826	17377	7816
55°	9159	9558	4020
60°	8889	3335	3277
65°	9579	2427	3285
70°	9459	2487	3170
75°	7153	2175	2545
80°	4322	1776	1800
85°	2153	908	382



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	359.4	3.0
10°-20°	1117.5	9.4
20°-30°	1963.1	16.5
30°-40°	2727.2	23.0
40°-50°	2765.7	23.3
50°-60°	1774.9	14.9
60°-70°	830.1	7.0
70°-80°	287.9	2.4
80°-90°	50.2	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°	3439.9	29.0
0°-40°	6167.1	51.9
0°-60°	10707.7	90.2
0°-90°	11875.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11875.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3713	3713	3713	3713	3713	
5°	3731	3705	3751	3763	3762	354
15°	3583	3668	3952	4164	4253	1011
25°	3292	3630	4341	4849	5021	1515
35°	2853	3660	4914	5083	5003	1782
45°	2275	3918	4604	3434	2970	1754
55°	1627	4047	1698	817	714	1468
65°	1254	1293	318	398	430	1220
75°	573	198	174	201	204	621
85°	58	52	24	14	10	88
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°	3713.3	3713.3	3713.3	3713.3	3713.3	3713.3	3713.3	3713.3	3713.3	3713.3	3713.3
2.5°	3745.5	3733.9	3714.5	3706.8	3710.7	3730.0	3736.5	3722.3	3718.4	3708.1	3697.8
5°	3731.3	3721.0	3706.8	3704.2	3718.4	3750.7	3764.9	3761.0	3767.5	3768.8	3762.3
7.5°	3710.7	3701.6	3690.0	3701.6	3731.3	3783.0	3815.3	3825.6	3848.8	3854.0	3852.7
10°	3679.7	3671.9	3668.1	3697.8	3749.4	3826.9	3883.7	3912.1	3945.7	3957.3	3961.2
12.5°	3638.4	3630.6	3641.0	3692.6	3773.9	3885.0	3968.9	4019.3	4067.0	4091.6	4099.3
15°	3582.9	3580.3	3606.1	3688.7	3804.9	3952.1	4068.3	4147.1	4215.5	4242.6	4252.9
17.5°	3522.2	3523.5	3569.9	3687.4	3842.4	4030.9	4179.4	4291.7	4375.6	4414.3	4426.0
20°	3455.0	3458.9	3528.6	3686.1	3888.8	4118.7	4302.0	4449.2	4553.8	4605.4	4622.2
22.5°	3376.3	3384.0	3483.4	3687.4	3937.9	4219.4	4446.6	4622.2	4747.4	4809.4	4830.1
25°	3292.4	3304.0	3437.0	3693.9	3999.9	4340.7	4611.9	4817.2	4943.7	4997.9	5021.2
27.5°	3195.5	3214.9	3386.6	3702.9	4073.5	4481.5	4781.0	4978.6	5096.0	5137.4	5158.0
30°	3092.2	3114.2	3337.5	3721.0	4169.0	4635.1	4937.2	5103.8	5182.5	5205.8	5217.4
32.5°	2978.6	3014.8	3288.5	3750.7	4281.3	4783.6	5052.1	5151.6	5170.9	5163.2	5167.1
35°	2853.4	2892.1	3242.0	3799.8	4409.2	4914.0	5097.3	5097.3	5040.5	5005.7	5003.1
37.5°	2720.4	2769.4	3195.5	3856.6	4557.6	5000.5	5048.3	4920.5	4782.3	4707.4	4695.8
40°	2575.8	2641.6	3163.2	3934.0	4691.9	5007.0	4872.7	4609.3	4374.3	4252.9	4238.7
42.5°	2432.5	2513.8	3149.0	4034.7	4792.6	4888.2	4542.2	4135.5	3816.5	3673.2	3657.7
45°	2275.0	2382.1	3154.2	4172.9	4819.7	4604.1	4050.2	3523.5	3165.8	2985.1	2969.6
47.5°	2118.7	2251.7	3167.1	4329.1	4701.0	4122.5	3395.6	2786.2	2431.2	2241.4	2238.8
50°	1956.0	2129.1	3198.1	4456.9	4379.5	3458.9	2591.3	1996.1	1712.0	1567.4	1555.8
52.5°	1786.9	2021.9	3265.2	4480.2	3807.5	2606.8	1758.5	1332.4	1147.8	1056.1	1038.1
55°	1626.8	1931.5	3375.0	4271.0	2985.1	1697.8	1107.8	840.5	747.6	710.1	714.0
57.5°	1488.7	1864.4	3502.8	3724.9	1938.0	999.3	641.7	559.1	556.5	560.3	561.6
60°	1376.3	1823.1	3559.6	2794.0	1063.9	516.4	448.0	466.1	490.6	504.8	507.4
62.5°	1302.7	1801.1	3386.6	1619.1	472.5	360.2	391.2	424.8	453.2	466.1	467.4
65°	1253.7	1743.0	2770.7	800.5	289.2	317.6	356.3	391.2	417.0	427.4	429.9
67.5°	1177.5	1579.0	1899.2	331.8	254.4	286.6	324.1	357.6	379.6	387.3	388.6
70°	1001.9	1322.1	1103.9	220.8	229.8	263.4	293.1	318.9	333.1	337.0	335.7
72.5°	782.4	1047.1	557.8	200.1	213.0	231.1	247.9	262.1	269.8	273.7	273.7
75°	573.3	765.6	262.1	176.9	158.8	174.3	191.1	200.1	202.7	204.0	204.0
77.5°	384.8	528.1	156.2	136.9	122.7	135.6	142.0	138.1	135.6	138.1	138.1
80°	232.4	325.4	136.9	99.4	94.3	95.5	90.4	90.4	95.5	98.1	96.8
82.5°	125.2	184.6	120.1	72.3	63.3	58.1	56.8	54.2	51.6	50.4	50.4
85°	58.1	94.3	77.5	43.9	33.6	24.5	19.4	14.2	12.9	10.3	10.3
87.5°	23.2	36.2	23.2	14.2	7.7	5.2	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)