

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: P685311

Luminaire Tested: **4CZL-9-UNV-L840-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685311  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-9-UNV-L840-CD-U  
Description: METALUX CRUZE LINEAR 4FT BASE MODEL @80 CRI and 4000K  
Light Source: (588) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

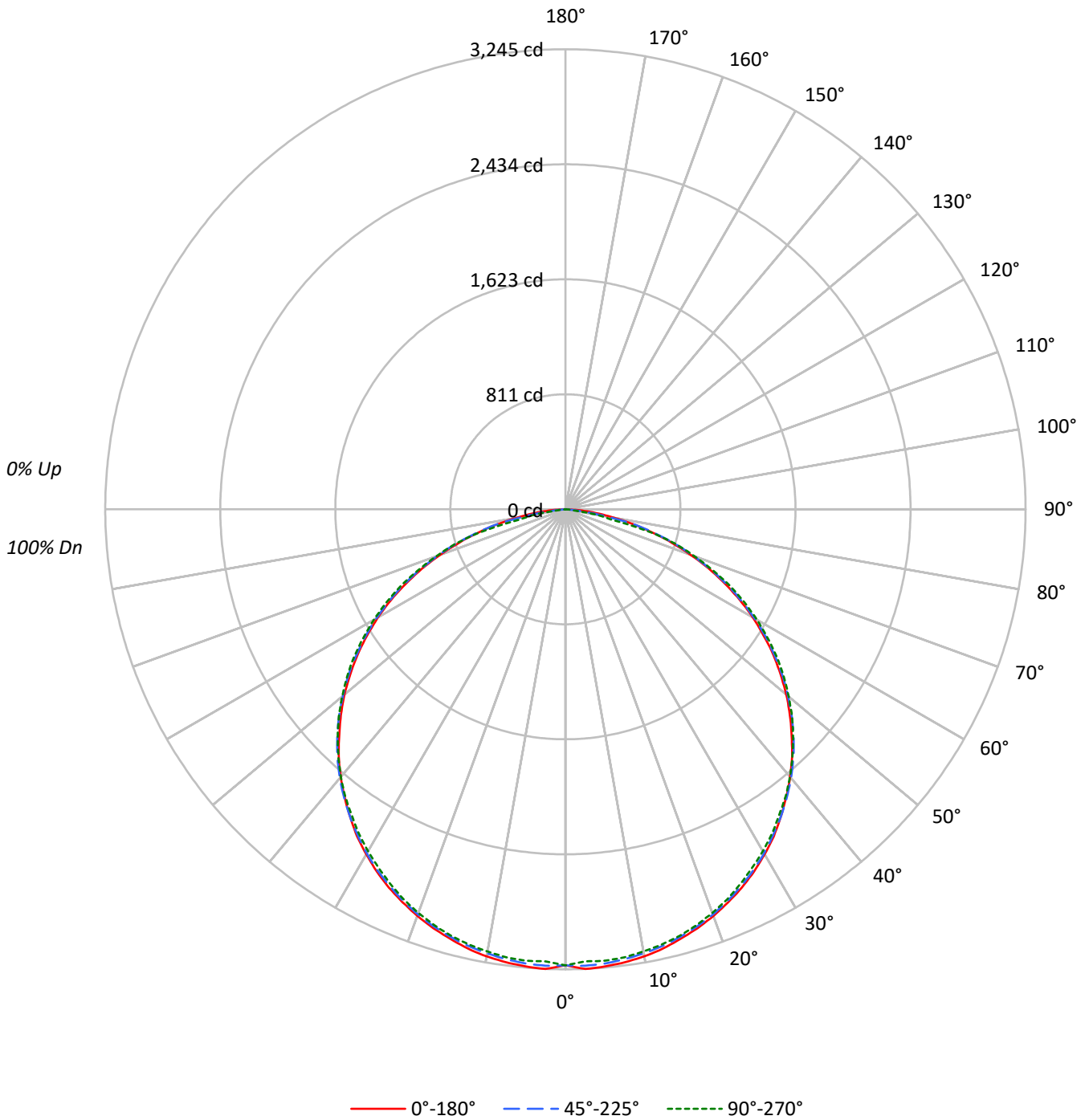
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9542.9 lumens  
Efficiency: N/A  
Efficacy: 176.7 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): 54  
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°	10388	10388	10388
5°	10492	10425	10361
10°	10500	10430	10384
15°	10486	10443	10410
20°	10489	10452	10411
25°	10491	10449	10397
30°	10478	10449	10383
35°	10440	10440	10366
40°	10391	10432	10383
45°	10303	10393	10370
50°	10216	10290	10324
55°	10080	10151	10250
60°	9859	9948	10069
65°	9492	9627	9792
70°	8878	9053	9137
75°	7989	8135	7719
80°	6674	5434	4231
85°	4976	1308	471



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	305.2	3.2
10°-20°	879.9	9.2
20°-30°	1347.5	14.1
30°-40°	1649.7	17.3
40°-50°	1745.3	18.3
50°-60°	1609.4	16.9
60°-70°	1241.5	13.0
70°-80°	663.1	6.9
80°-90°	101.5	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°	2532.5	26.5
0°-40°	4182.3	43.8
0°-60°	7536.9	79.0
0°-90°	9542.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9542.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3217	3217	3217	3217	3217	
5°	3237	3198	3216	3202	3196	308
15°	3137	3103	3124	3113	3114	886
25°	2944	2914	2933	2911	2918	1357
35°	2648	2633	2648	2626	2630	1657
45°	2256	2255	2276	2260	2271	1741
55°	1790	1788	1803	1814	1821	1597
65°	1242	1242	1260	1270	1282	1226
75°	640	639	652	657	619	678
85°	134	96	35	15	13	165
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3217.0	3217.0	3217.0	3217.0	3217.0
2.5°	3245.4	3207.1	3222.8	3211.1	3191.5
5°	3236.6	3198.3	3216.0	3202.2	3196.4
7.5°	3222.8	3183.6	3201.3	3190.5	3188.5
10°	3202.2	3162.0	3180.7	3168.9	3166.9
12.5°	3174.8	3135.6	3156.2	3142.4	3144.4
15°	3136.6	3103.2	3123.8	3113.0	3114.0
17.5°	3098.3	3064.0	3085.6	3074.8	3075.8
20°	3052.2	3018.9	3041.4	3024.8	3029.7
22.5°	3000.3	2970.9	2990.5	2968.9	2978.7
25°	2944.4	2914.0	2932.6	2911.0	2917.9
27.5°	2880.6	2852.2	2870.8	2848.3	2851.2
30°	2810.1	2784.6	2802.2	2779.7	2784.6
32.5°	2734.6	2712.0	2725.7	2705.1	2712.0
35°	2648.3	2632.6	2648.3	2625.7	2629.6
37.5°	2558.1	2542.4	2564.0	2544.3	2551.2
40°	2464.9	2450.2	2474.7	2455.1	2463.0
42.5°	2365.9	2355.1	2379.6	2360.0	2369.8
45°	2256.1	2255.1	2275.7	2260.0	2270.8
47.5°	2147.2	2145.3	2165.9	2155.1	2167.8
50°	2033.5	2031.6	2048.2	2047.2	2055.1
52.5°	1911.9	1914.9	1930.6	1933.5	1942.3
55°	1790.4	1788.4	1803.1	1813.9	1820.7
57.5°	1658.0	1661.9	1673.7	1686.4	1691.3
60°	1526.6	1524.6	1540.3	1551.1	1559.0
62.5°	1387.4	1387.4	1400.1	1415.8	1423.7
65°	1242.3	1242.3	1259.9	1269.7	1281.5
67.5°	1094.2	1091.3	1107.0	1128.5	1126.6
70°	940.3	941.3	958.9	969.7	967.7
72.5°	787.3	790.3	808.9	813.8	818.7
75°	640.3	639.3	652.0	656.9	618.7
77.5°	494.2	495.1	503.0	368.7	323.6
80°	358.9	360.8	292.2	227.5	227.5
82.5°	237.3	233.4	150.0	88.2	64.7
85°	134.3	96.1	35.3	14.7	12.7
87.5°	54.9	17.6	9.8	6.9	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)