

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: P685301

Luminaire Tested: **4CZL-9-UNV-L835-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685301  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-9-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

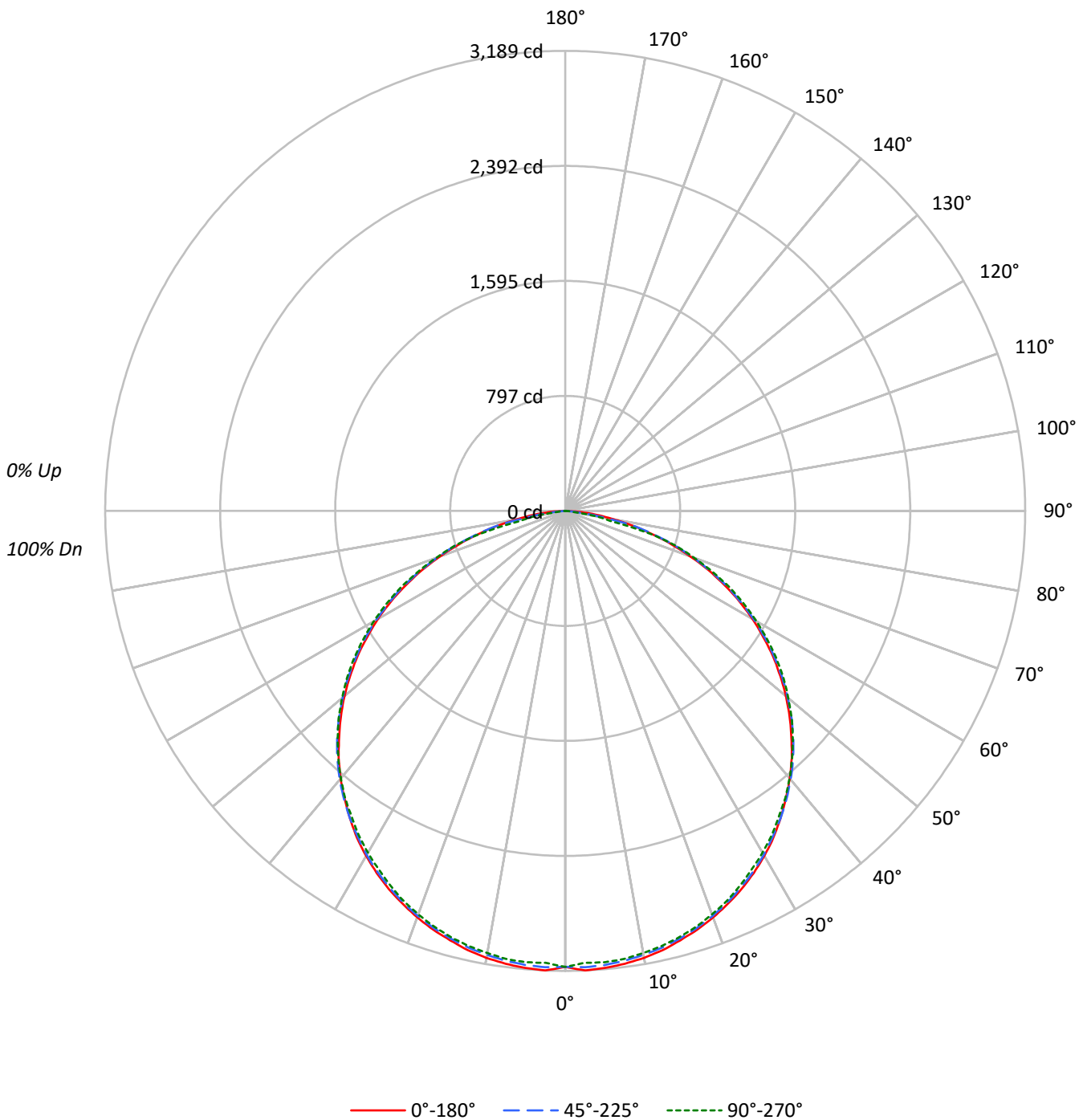
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9375.9 lumens  
Efficiency: N/A  
Efficacy: 173.6 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				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°	10206	10206	10206
5°	10308	10242	10180
10°	10316	10247	10203
15°	10302	10260	10228
20°	10305	10269	10229
25°	10307	10266	10214
30°	10295	10266	10201
35°	10257	10257	10185
40°	10209	10249	10201
45°	10123	10211	10189
50°	10037	10110	10143
55°	9903	9973	10071
60°	9687	9774	9892
65°	9326	9459	9621
70°	8722	8895	8977
75°	7848	7993	7585
80°	6557	5339	4156
85°	4891	1286	463



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	299.8	3.2
10°-20°	864.5	9.2
20°-30°	1323.9	14.1
30°-40°	1620.9	17.3
40°-50°	1714.7	18.3
50°-60°	1581.2	16.9
60°-70°	1219.8	13.0
70°-80°	651.4	6.9
80°-90°	99.7	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°	2488.2	26.5
0°-40°	4109.1	43.8
0°-60°	7405.0	79.0
0°-90°	9375.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9375.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3161	3161	3161	3161	3161	
5°	3180	3142	3160	3146	3140	302
15°	3082	3049	3069	3058	3060	871
25°	2893	2863	2881	2860	2867	1333
35°	2602	2586	2602	2580	2584	1628
45°	2217	2216	2236	2220	2231	1711
55°	1759	1757	1772	1782	1789	1569
65°	1220	1220	1238	1248	1259	1205
75°	629	628	641	645	608	666
85°	132	94	35	14	12	162
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3160.7	3160.7	3160.7	3160.7	3160.7
2.5°	3188.6	3151.0	3166.4	3154.9	3135.6
5°	3179.9	3142.4	3159.7	3146.2	3140.4
7.5°	3166.4	3127.9	3145.2	3134.6	3132.7
10°	3146.2	3106.7	3125.0	3113.5	3111.5
12.5°	3119.2	3080.7	3100.9	3087.4	3089.4
15°	3081.7	3048.9	3069.1	3058.5	3059.5
17.5°	3044.1	3010.4	3031.6	3021.0	3021.9
20°	2998.8	2966.1	2988.2	2971.8	2976.7
22.5°	2947.8	2918.9	2938.1	2916.9	2926.6
25°	2892.9	2863.0	2881.3	2860.1	2866.8
27.5°	2830.2	2802.3	2820.6	2798.4	2801.3
30°	2760.9	2735.8	2753.2	2731.0	2735.8
32.5°	2686.7	2664.5	2678.0	2657.8	2664.5
35°	2601.9	2586.5	2601.9	2579.8	2583.6
37.5°	2513.3	2497.9	2519.1	2499.8	2506.6
40°	2421.8	2407.3	2431.4	2412.2	2419.9
42.5°	2324.5	2313.9	2338.0	2318.7	2328.3
45°	2216.6	2215.6	2235.9	2220.5	2231.1
47.5°	2109.7	2107.7	2128.0	2117.4	2129.9
50°	1997.9	1996.0	2012.4	2011.4	2019.1
52.5°	1878.5	1881.4	1896.8	1899.7	1908.3
55°	1759.0	1757.1	1771.5	1782.1	1788.9
57.5°	1629.0	1632.8	1644.4	1656.9	1661.7
60°	1499.9	1498.0	1513.4	1524.0	1531.7
62.5°	1363.1	1363.1	1375.6	1391.0	1398.7
65°	1220.5	1220.5	1237.9	1247.5	1259.1
67.5°	1075.1	1072.2	1087.6	1108.8	1106.9
70°	923.8	924.8	942.1	952.7	950.8
72.5°	773.5	776.4	794.7	799.6	804.4
75°	629.0	628.1	640.6	645.4	607.9
77.5°	485.5	486.5	494.2	362.2	317.9
80°	352.6	354.5	287.1	223.5	223.5
82.5°	233.1	229.3	147.4	86.7	63.6
85°	132.0	94.4	34.7	14.4	12.5
87.5°	53.9	17.3	9.6	6.7	5.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)