

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: P685321

Luminaire Tested: **4CZL-9-UNV-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685321
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-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

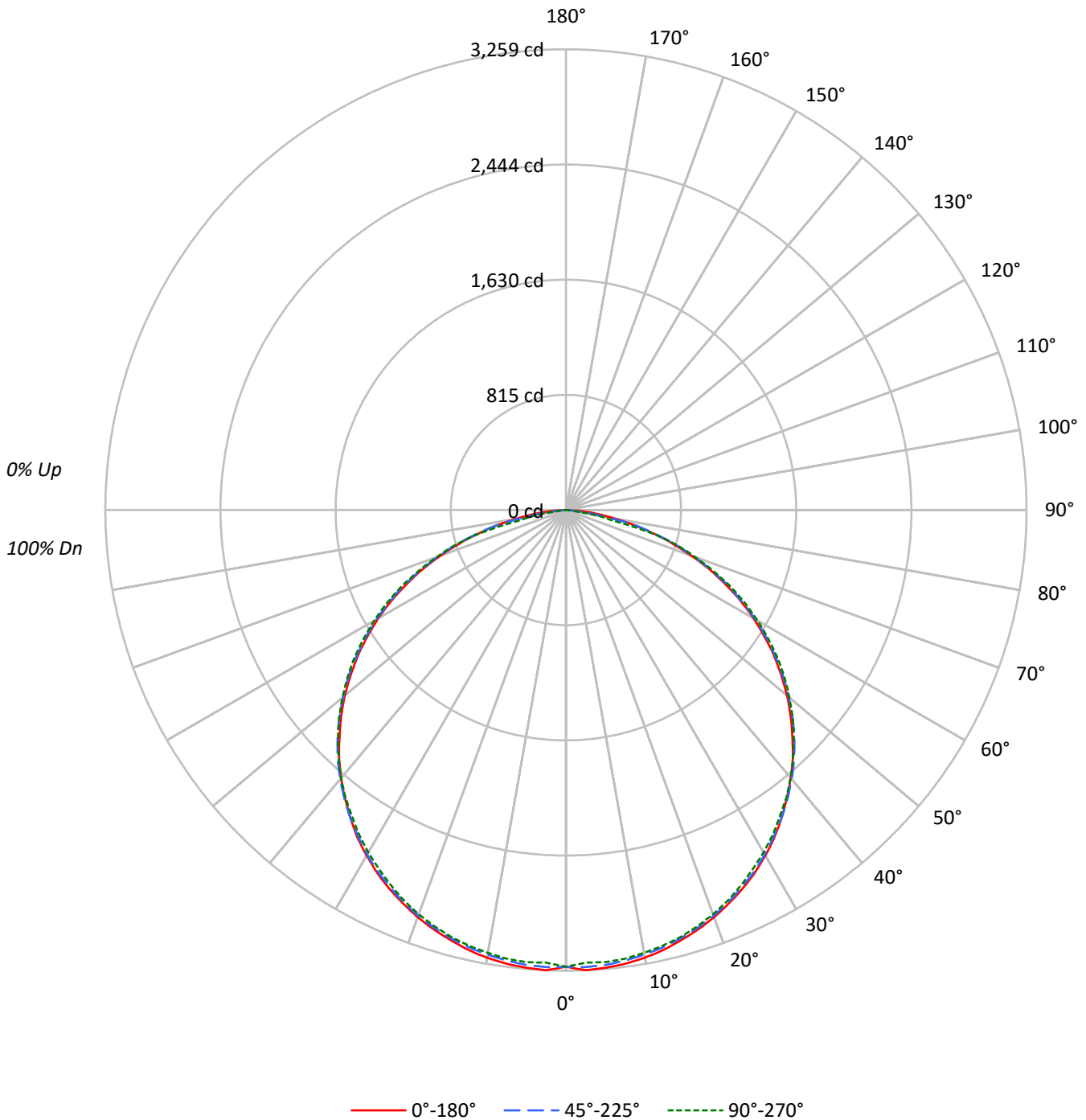
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9583.0 lumens
Efficiency: N/A
Efficacy: 177.5 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): 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	100	100	100	100
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	70	70	70	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58	58	58	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50	50	50	50
5	76	63	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43	43	43	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37	37	37	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33	33	33	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29	29	29	29
9	56	42	34	29	55	42	34	29	41	33	28	40	33	28	39	33	28	26	26	26	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24	24	24	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10432	10432	10432
5°	10536	10468	10405
10°	10544	10473	10428
15°	10530	10487	10454
20°	10533	10496	10455
25°	10535	10493	10440
30°	10522	10493	10427
35°	10484	10484	10410
40°	10434	10476	10426
45°	10346	10436	10414
50°	10259	10333	10367
55°	10122	10194	10294
60°	9901	9990	10111
65°	9532	9667	9833
70°	8915	9091	9175
75°	8021	8170	7752
80°	6702	5456	4247
85°	4998	1312	474



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	306.5	3.2
10°-20°	883.6	9.2
20°-30°	1353.1	14.1
30°-40°	1656.7	17.3
40°-50°	1752.6	18.3
50°-60°	1616.1	16.9
60°-70°	1246.7	13.0
70°-80°	665.8	6.9
80°-90°	101.9	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°	2543.2	26.5
0°-40°	4199.8	43.8
0°-60°	7568.6	79.0
0°-90°	9583.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9583.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3230	3230	3230	3230	3230	
5°	3250	3212	3230	3216	3210	309
15°	3150	3116	3137	3126	3127	890
25°	2957	2926	2945	2923	2930	1363
35°	2659	2644	2659	2637	2641	1664
45°	2266	2265	2285	2270	2280	1749
55°	1798	1796	1811	1822	1828	1604
65°	1248	1248	1265	1275	1287	1232
75°	643	642	655	660	621	681
85°	135	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°	3230.5	3230.5	3230.5	3230.5	3230.5
2.5°	3259.0	3220.6	3236.4	3224.6	3204.9
5°	3250.2	3211.8	3229.5	3215.7	3209.8
7.5°	3236.4	3197.0	3214.7	3203.9	3201.9
10°	3215.7	3175.3	3194.0	3182.2	3180.2
12.5°	3188.1	3148.7	3169.4	3155.6	3157.6
15°	3149.7	3116.2	3136.9	3126.1	3127.1
17.5°	3111.3	3076.9	3098.5	3087.7	3088.7
20°	3065.0	3031.6	3054.2	3037.5	3042.4
22.5°	3012.9	2983.3	3003.0	2981.4	2991.2
25°	2956.7	2926.2	2944.9	2923.3	2930.2
27.5°	2892.7	2864.2	2882.9	2860.3	2863.2
30°	2821.9	2796.3	2814.0	2791.3	2796.3
32.5°	2746.0	2723.4	2737.2	2716.5	2723.4
35°	2659.4	2643.6	2659.4	2636.8	2640.7
37.5°	2568.8	2553.1	2574.7	2555.0	2561.9
40°	2475.3	2460.5	2485.1	2465.4	2473.3
42.5°	2375.8	2365.0	2389.6	2369.9	2379.8
45°	2265.6	2264.6	2285.2	2269.5	2280.3
47.5°	2156.3	2154.3	2175.0	2164.1	2176.9
50°	2042.1	2040.1	2056.8	2055.8	2063.7
52.5°	1920.0	1922.9	1938.7	1941.6	1950.5
55°	1797.9	1795.9	1810.7	1821.5	1828.4
57.5°	1665.0	1668.9	1680.7	1693.5	1698.4
60°	1533.0	1531.0	1546.8	1557.6	1565.5
62.5°	1393.2	1393.2	1406.0	1421.8	1429.6
65°	1247.5	1247.5	1265.2	1275.1	1286.9
67.5°	1098.8	1095.9	1111.6	1133.3	1131.3
70°	944.2	945.2	962.9	973.8	971.8
72.5°	790.6	793.6	812.3	817.2	822.1
75°	642.9	642.0	654.8	659.7	621.3
77.5°	496.2	497.2	505.1	370.2	324.9
80°	360.4	362.3	293.4	228.4	228.4
82.5°	238.3	234.3	150.6	88.6	65.0
85°	134.9	96.5	35.4	14.8	12.8
87.5°	55.1	17.7	9.8	6.9	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)