

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: P685501

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685501
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-W-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT WIDE LENS MODEL @80 CRI and 5000K
Light Source: (588) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

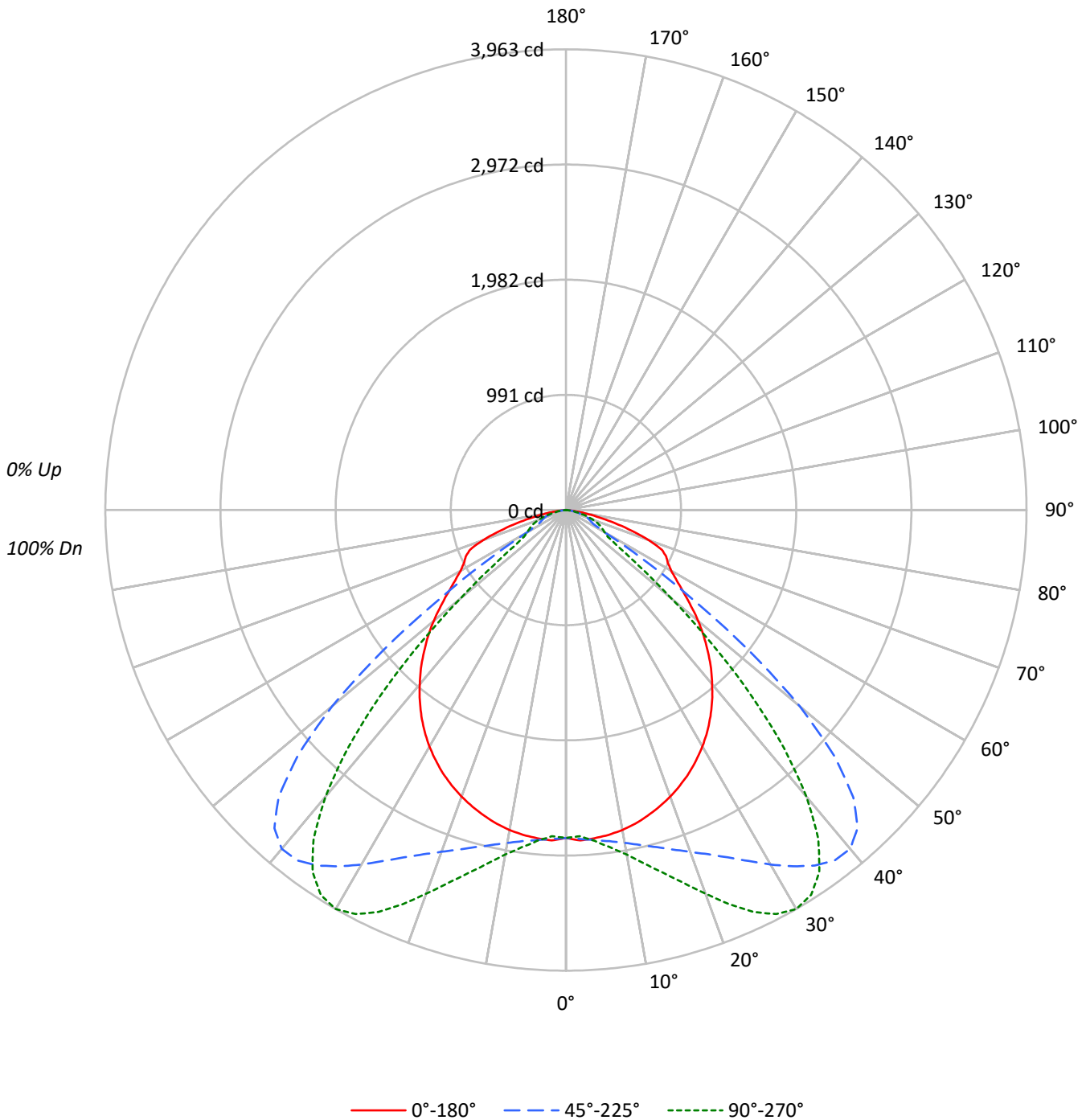
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9020.7 lumens
Efficiency: N/A
Efficacy: 167.0 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): 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	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87	87	87	87
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	73	66	60	71	65	59	69	63	59	67	62	58	56	56	56	56
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	51	49	49	49	49
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	43	43	43	43
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	38	38	38	38
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33	33	33	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30	30	30	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27	27	27	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9108	9108	9108
5°	9187	9235	9264
10°	9165	9531	9866
15°	9098	10036	10800
20°	9019	10751	12065
25°	8910	11748	13589
30°	8758	13128	14777
35°	8544	14714	14981
40°	8247	16032	13572
45°	7891	15971	10301
50°	7464	13199	5937
55°	6957	7260	3053
60°	6752	2534	2489
65°	7276	1844	2496
70°	7185	1889	2408
75°	5432	1652	1934
80°	3282	1350	1369
85°	1634	689	289



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.0	3.0
10°-20°	848.8	9.4
20°-30°	1491.1	16.5
30°-40°	2071.5	23.0
40°-50°	2100.8	23.3
50°-60°	1348.1	14.9
60°-70°	630.6	7.0
70°-80°	218.7	2.4
80°-90°	38.1	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°	2612.9	29.0
0°-40°	4684.4	51.9
0°-60°	8133.4	90.2
0°-90°	9020.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9020.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2820	2820	2820	2820	2820	
5°	2834	2814	2849	2858	2858	269
15°	2722	2786	3002	3163	3230	768
25°	2501	2757	3297	3683	3814	1151
35°	2167	2780	3733	3861	3800	1354
45°	1728	2976	3497	2608	2256	1332
55°	1236	3074	1290	621	542	1115
65°	952	982	241	302	327	926
75°	435	151	132	152	155	471
85°	44	40	19	11	8	67
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°	2820.5	2820.5	2820.5	2820.5	2820.5	2820.5	2820.5	2820.5	2820.5	2820.5	2820.5
2.5°	2845.0	2836.2	2821.5	2815.6	2818.6	2833.3	2838.2	2827.4	2824.4	2816.6	2808.7
5°	2834.2	2826.4	2815.6	2813.7	2824.4	2849.0	2859.7	2856.8	2861.7	2862.7	2857.8
7.5°	2818.6	2811.7	2802.9	2811.7	2834.2	2873.5	2898.0	2905.8	2923.5	2927.4	2926.4
10°	2795.0	2789.1	2786.2	2808.7	2848.0	2906.8	2950.0	2971.5	2997.0	3005.9	3008.8
12.5°	2763.6	2757.8	2765.6	2804.8	2866.6	2951.0	3014.7	3052.9	3089.2	3107.9	3113.7
15°	2721.5	2719.5	2739.1	2801.9	2890.1	3001.9	3090.2	3150.0	3202.0	3222.6	3230.5
17.5°	2675.4	2676.4	2711.7	2800.9	2918.6	3061.8	3174.6	3259.9	3323.6	3353.0	3361.9
20°	2624.4	2627.3	2680.3	2799.9	2953.9	3128.5	3267.7	3379.5	3459.0	3498.2	3510.9
22.5°	2564.6	2570.4	2646.0	2800.9	2991.2	3205.0	3377.6	3510.9	3606.1	3653.1	3668.8
25°	2500.8	2509.6	2610.6	2805.8	3038.2	3297.1	3503.1	3659.0	3755.1	3796.3	3814.0
27.5°	2427.3	2442.0	2572.4	2812.7	3094.1	3404.0	3631.6	3781.6	3870.9	3902.2	3917.9
30°	2348.8	2365.5	2535.1	2826.4	3166.7	3520.7	3750.2	3876.7	3936.6	3954.2	3963.0
32.5°	2262.5	2290.0	2497.9	2849.0	3252.0	3633.5	3837.5	3913.0	3927.7	3921.9	3924.8
35°	2167.4	2196.8	2462.6	2886.2	3349.1	3732.6	3871.8	3871.8	3828.7	3802.2	3800.2
37.5°	2066.4	2103.6	2427.3	2929.4	3461.9	3798.3	3834.6	3737.5	3632.5	3575.7	3566.8
40°	1956.5	2006.5	2402.7	2988.2	3563.9	3803.2	3701.2	3501.1	3322.6	3230.5	3219.7
42.5°	1847.7	1909.4	2391.9	3064.7	3640.4	3713.0	3450.1	3141.2	2899.0	2790.1	2778.3
45°	1728.0	1809.4	2395.9	3169.6	3661.0	3497.2	3076.5	2676.4	2404.7	2267.4	2255.6
47.5°	1609.3	1710.4	2405.7	3288.3	3570.8	3131.4	2579.3	2116.4	1846.7	1702.5	1700.5
50°	1485.8	1617.2	2429.2	3385.4	3326.6	2627.3	1968.3	1516.2	1300.4	1190.6	1181.8
52.5°	1357.3	1535.8	2480.2	3403.1	2892.1	1980.0	1335.7	1012.1	871.8	802.2	788.5
55°	1235.7	1467.1	2563.6	3244.2	2267.4	1289.6	841.4	638.4	567.8	539.4	542.3
57.5°	1130.8	1416.1	2660.7	2829.3	1472.0	759.1	487.4	424.6	422.7	425.6	426.6
60°	1045.4	1384.8	2703.8	2122.3	808.1	392.3	340.3	354.0	372.7	383.5	385.4
62.5°	989.5	1368.1	2572.4	1229.8	358.9	273.6	297.2	322.7	344.2	354.0	355.0
65°	952.3	1324.0	2104.6	608.0	219.7	241.3	270.7	297.2	316.8	324.6	326.6
67.5°	894.4	1199.4	1442.6	252.0	193.2	217.7	246.2	271.7	288.3	294.2	295.2
70°	761.0	1004.2	838.5	167.7	174.6	200.1	222.6	242.2	253.0	256.0	255.0
72.5°	594.3	795.4	423.7	152.0	161.8	175.5	188.3	199.1	205.0	207.9	207.9
75°	435.4	581.6	199.1	134.4	120.6	132.4	145.1	152.0	154.0	155.0	155.0
77.5°	292.3	401.1	118.7	104.0	93.2	103.0	107.9	104.9	103.0	104.9	104.9
80°	176.5	247.1	104.0	75.5	71.6	72.6	68.6	68.6	72.6	74.5	73.6
82.5°	95.1	140.2	91.2	54.9	48.1	44.1	43.2	41.2	39.2	38.2	38.2
85°	44.1	71.6	58.8	33.3	25.5	18.6	14.7	10.8	9.8	7.8	7.8
87.5°	17.7	27.5	17.7	10.8	5.9	3.9	2.9	2.0	1.0	1.0	1.0
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)