

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: P685481

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685481
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-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

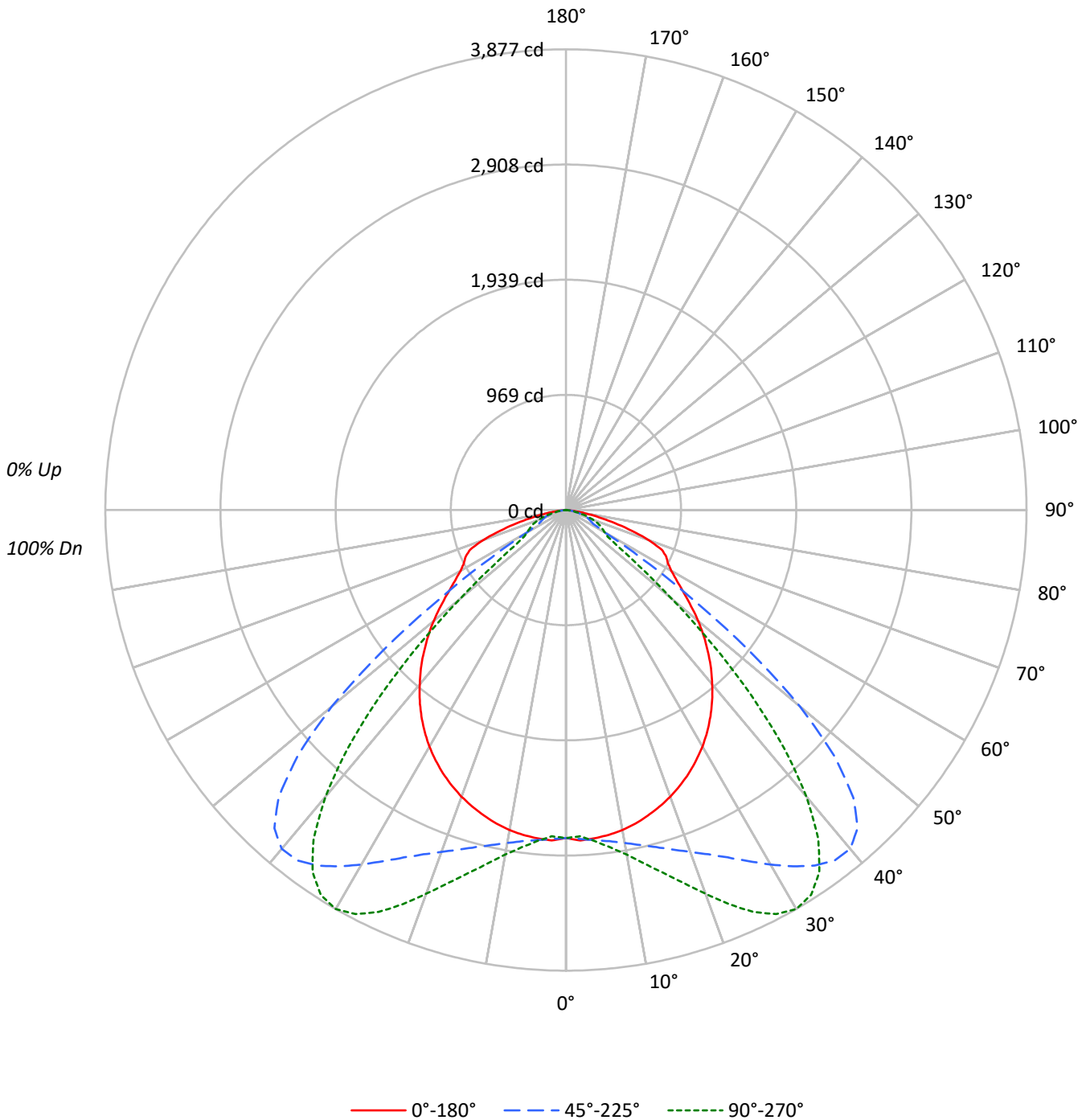
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8825.7 lumens
Efficiency: N/A
Efficacy: 163.4 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	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°	8911	8911	8911
5°	8989	9035	9063
10°	8967	9325	9653
15°	8902	9819	10566
20°	8824	10519	11804
25°	8718	11494	13296
30°	8569	12844	14458
35°	8359	14396	14657
40°	8069	15686	13279
45°	7721	15626	10078
50°	7303	12913	5808
55°	6807	7104	2987
60°	6606	2479	2435
65°	7119	1803	2441
70°	7030	1848	2356
75°	5315	1616	1891
80°	3212	1320	1339
85°	1601	674	285



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.1	3.0
10°-20°	830.5	9.4
20°-30°	1458.9	16.5
30°-40°	2026.8	23.0
40°-50°	2055.4	23.3
50°-60°	1319.0	14.9
60°-70°	616.9	7.0
70°-80°	213.9	2.4
80°-90°	37.3	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°	2556.5	29.0
0°-40°	4583.2	51.9
0°-60°	7957.6	90.2
0°-90°	8825.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8825.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2760	2760	2760	2760	2760	
5°	2773	2753	2787	2796	2796	263
15°	2663	2726	2937	3095	3161	751
25°	2447	2697	3226	3604	3732	1126
35°	2120	2720	3652	3778	3718	1324
45°	1691	2912	3422	2552	2207	1303
55°	1209	3008	1262	607	531	1091
65°	932	961	236	296	320	906
75°	426	147	130	149	152	461
85°	43	39	18	10	8	65
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°	2759.6	2759.6	2759.6	2759.6	2759.6	2759.6	2759.6	2759.6	2759.6	2759.6	2759.6
2.5°	2783.6	2774.9	2760.5	2754.8	2757.6	2772.0	2776.8	2766.3	2763.4	2755.7	2748.1
5°	2773.0	2765.3	2754.8	2752.9	2763.4	2787.4	2797.9	2795.1	2799.9	2800.8	2796.0
7.5°	2757.6	2750.9	2742.3	2750.9	2773.0	2811.4	2835.4	2843.0	2860.3	2864.2	2863.2
10°	2734.6	2728.9	2726.0	2748.1	2786.4	2844.0	2886.2	2907.3	2932.3	2940.9	2943.8
12.5°	2703.9	2698.2	2705.8	2744.2	2804.7	2887.2	2949.6	2987.0	3022.5	3040.7	3046.5
15°	2662.7	2660.7	2679.9	2741.3	2827.7	2937.1	3023.4	3082.0	3132.8	3153.0	3160.6
17.5°	2617.6	2618.5	2653.1	2740.4	2855.5	2995.6	3106.0	3189.4	3251.8	3280.6	3289.2
20°	2567.7	2570.5	2622.4	2739.4	2890.1	3060.9	3197.1	3306.5	3384.2	3422.6	3435.1
22.5°	2509.1	2514.9	2588.8	2740.4	2926.5	3135.7	3304.6	3435.1	3528.1	3574.2	3589.5
25°	2446.8	2455.4	2554.2	2745.2	2972.6	3225.9	3427.4	3580.0	3674.0	3714.3	3731.6
27.5°	2374.8	2389.2	2516.8	2751.9	3027.3	3330.5	3553.1	3699.9	3787.2	3817.9	3833.3
30°	2298.0	2314.4	2480.3	2765.3	3098.3	3444.7	3669.2	3793.0	3851.5	3868.8	3877.4
32.5°	2213.6	2240.5	2443.9	2787.4	3181.8	3555.0	3754.6	3828.5	3842.9	3837.1	3840.0
35°	2120.5	2149.3	2409.3	2823.9	3276.7	3651.9	3788.2	3788.2	3745.9	3720.0	3718.1
37.5°	2021.7	2058.2	2374.8	2866.1	3387.1	3716.2	3751.7	3656.7	3554.0	3498.4	3489.8
40°	1914.2	1963.2	2350.8	2923.6	3486.9	3721.0	3621.2	3425.5	3250.8	3160.6	3150.1
42.5°	1807.7	1868.2	2340.3	2998.5	3561.7	3632.7	3375.6	3073.3	2836.3	2729.8	2718.3
45°	1690.7	1770.3	2344.1	3101.2	3581.9	3421.6	3010.0	2618.5	2352.7	2218.4	2206.9
47.5°	1574.6	1673.4	2353.7	3217.3	3493.6	3063.7	2523.5	2070.6	1806.8	1665.7	1663.8
50°	1453.7	1582.2	2376.7	3312.2	3254.7	2570.5	1925.7	1483.4	1272.3	1164.9	1156.2
52.5°	1328.0	1502.6	2426.6	3329.5	2829.6	1937.3	1306.9	990.2	853.0	784.9	771.5
55°	1209.0	1435.4	2508.2	3174.1	2218.4	1261.8	823.3	624.6	555.6	527.7	530.6
57.5°	1106.3	1385.5	2603.2	2768.2	1440.2	742.7	476.9	415.5	413.6	416.4	417.4
60°	1022.8	1354.8	2645.4	2076.4	790.6	383.8	333.0	346.4	364.6	375.2	377.1
62.5°	968.2	1338.5	2516.8	1203.2	351.2	267.7	290.7	315.7	336.8	346.4	347.3
65°	931.7	1295.3	2059.1	594.9	214.9	236.0	264.8	290.7	309.9	317.6	319.5
67.5°	875.1	1173.5	1411.4	246.6	189.0	213.0	240.8	265.8	282.1	287.9	288.8
70°	744.6	982.5	820.4	164.1	170.8	195.7	217.8	237.0	247.6	250.4	249.5
72.5°	581.5	778.2	414.5	148.7	158.3	171.8	184.2	194.8	200.5	203.4	203.4
75°	426.0	569.0	194.8	131.5	118.0	129.5	142.0	148.7	150.6	151.6	151.6
77.5°	285.9	392.4	116.1	101.7	91.2	100.7	105.5	102.7	100.7	102.7	102.7
80°	172.7	241.8	101.7	73.9	70.0	71.0	67.2	67.2	71.0	72.9	72.0
82.5°	93.1	137.2	89.2	53.7	47.0	43.2	42.2	40.3	38.4	37.4	37.4
85°	43.2	70.0	57.6	32.6	24.9	18.2	14.4	10.6	9.6	7.7	7.7
87.5°	17.3	26.9	17.3	10.6	5.8	3.8	2.9	1.9	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)