

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: P685430

Luminaire Tested: **4CZL-7-UNV-M-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685430
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-7-UNV-M-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT MEDIUM LENS MODEL @80 CRI and 4000K
Light Source: (392) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

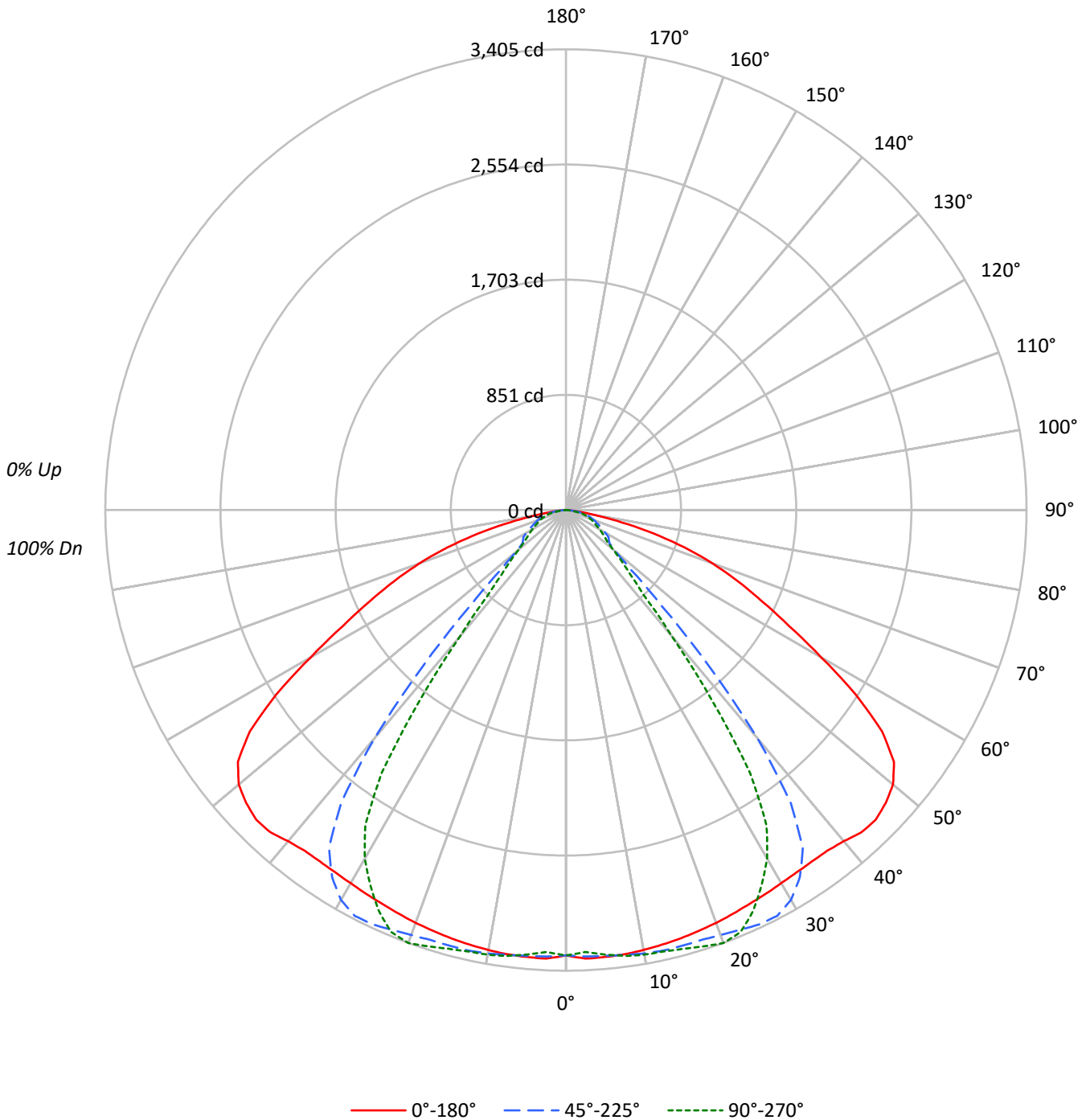
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7112.4 lumens
Efficiency: N/A
Efficacy: 161.6 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 1.28 / 1.22
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	90	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77				77
3	95	86	80	74	93	85	79	73	82	77	72	79	75	71	77	73	70	68				68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60				60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	53				53
6	76	65	57	51	75	64	56	51	62	55	51	61	55	50	59	54	50	48				48
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43				43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	39				39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36				36
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	33				33

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10631	10631	10631
5°	10750	10719	10689
10°	10828	10912	10943
15°	10956	11144	11222
20°	11158	11485	11701
25°	11444	12044	11657
30°	11874	12406	11090
35°	12498	12034	9364
40°	13470	9281	5122
45°	14789	4563	3061
50°	15857	2384	2283
55°	16059	2177	1970
60°	14084	2169	1857
65°	12256	2084	1799
70°	10876	2112	1810
75°	8343	2168	1838
80°	4247	2204	1521
85°	1675	1241	433



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.4	4.4
10°-20°	940.1	13.2
20°-30°	1517.3	21.3
30°-40°	1777.0	25.0
40°-50°	1209.7	17.0
50°-60°	700.4	9.8
60°-70°	400.5	5.6
70°-80°	206.1	2.9
80°-90°	45.9	0.6
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°	2772.8	39.0
0°-40°	4549.8	64.0
0°-60°	6459.9	90.8
0°-90°	7112.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7112.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3292	3292	3292	3292	3292	
5°	3316	3284	3307	3303	3298	316
15°	3277	3272	3333	3342	3357	928
25°	3212	3257	3380	3328	3272	1487
35°	3170	3327	3053	2574	2376	1996
45°	3238	2409	999	673	670	2488
55°	2852	827	387	360	350	2485
65°	1604	295	273	241	235	1608
75°	669	182	174	152	147	711
85°	45	55	34	16	12	77
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°	3292.1	3292.1	3292.1	3292.1	3292.1	3292.1	3292.1	3292.1	3292.1	3292.1	3292.1
2.5°	3318.6	3309.2	3290.5	3282.7	3282.7	3303.0	3306.1	3293.7	3291.3	3280.4	3270.3
5°	3316.3	3306.9	3289.0	3282.0	3284.3	3306.9	3312.4	3302.2	3305.3	3302.2	3297.6
7.5°	3311.6	3301.4	3285.1	3280.4	3287.4	3316.3	3325.6	3320.2	3327.2	3325.6	3324.1
10°	3302.2	3294.4	3278.8	3278.1	3292.1	3327.9	3339.6	3332.6	3335.0	3334.2	3337.3
12.5°	3289.8	3282.7	3269.5	3276.5	3296.8	3335.0	3342.8	3331.8	3335.0	3335.7	3341.2
15°	3277.3	3268.7	3260.1	3276.5	3297.6	3333.4	3341.2	3339.6	3349.0	3349.8	3356.8
17.5°	3261.7	3256.2	3253.9	3275.7	3292.1	3331.8	3349.8	3359.1	3371.6	3374.7	3381.7
20°	3246.9	3242.2	3247.7	3271.8	3289.8	3342.0	3366.9	3380.9	3394.2	3398.1	3405.1
22.5°	3229.0	3225.8	3240.7	3266.4	3293.7	3357.6	3385.6	3387.2	3381.7	3371.6	3376.3
25°	3211.8	3211.8	3233.6	3264.8	3305.3	3380.2	3382.5	3338.1	3298.3	3271.8	3271.8
27.5°	3197.8	3200.9	3228.2	3271.8	3327.9	3381.7	3317.0	3229.0	3170.5	3132.3	3130.0
30°	3184.5	3190.0	3228.2	3291.3	3344.3	3327.2	3201.7	3094.9	3013.9	2977.2	2974.1
32.5°	3175.2	3183.8	3242.2	3320.9	3324.8	3217.3	3053.6	2918.8	2822.9	2768.4	2759.0
35°	3170.5	3180.6	3268.7	3346.7	3246.1	3052.8	2820.6	2612.5	2460.5	2390.4	2375.5
37.5°	3173.6	3191.6	3305.3	3324.8	3048.9	2729.4	2395.8	2097.3	1888.4	1822.2	1776.2
40°	3195.5	3225.8	3334.2	3147.1	2635.1	2201.7	1759.8	1438.7	1294.5	1247.0	1215.1
42.5°	3232.1	3262.5	3258.6	2740.3	2058.3	1564.2	1134.0	941.5	871.3	863.6	848.7
45°	3238.3	3250.0	3013.9	2208.0	1497.2	999.2	730.3	673.4	671.8	677.3	670.3
47.5°	3205.6	3183.0	2660.8	1688.9	1031.1	646.1	549.5	558.8	563.5	559.6	554.1
50°	3156.5	3073.1	2264.9	1241.6	687.4	474.6	479.3	487.9	471.5	460.6	454.4
52.5°	3056.7	2894.6	1825.3	879.9	475.4	405.3	442.7	417.7	394.4	388.1	387.4
55°	2852.5	2629.6	1404.4	634.4	363.2	386.6	393.6	361.6	354.6	351.5	349.9
57.5°	2541.6	2299.9	1056.1	458.3	318.8	373.3	342.1	329.7	322.7	320.3	318.0
60°	2180.7	1931.3	787.2	336.7	309.4	335.9	310.2	298.5	290.7	287.6	287.6
62.5°	1861.2	1598.5	582.2	273.6	307.1	303.2	279.8	267.3	262.7	261.1	259.5
65°	1604.0	1286.0	420.1	253.3	286.8	272.8	250.2	241.6	238.5	235.4	235.4
67.5°	1374.8	1007.0	309.4	248.6	263.4	245.5	228.4	221.3	217.4	216.7	215.9
70°	1151.9	742.0	235.4	243.2	250.2	223.7	207.3	198.7	194.1	191.7	191.7
72.5°	917.3	508.9	187.8	223.7	229.1	198.0	181.6	175.4	171.5	169.1	168.3
75°	668.7	319.5	165.2	187.8	197.2	173.8	157.4	152.0	150.4	148.1	147.3
77.5°	425.5	190.9	141.1	153.5	161.3	146.5	134.1	127.0	126.3	123.9	123.1
80°	228.4	122.4	113.0	120.8	125.5	118.5	103.7	89.6	85.7	82.6	81.8
82.5°	106.0	77.9	84.2	91.2	93.5	75.6	62.4	56.1	52.2	48.3	46.0
85°	45.2	42.1	52.2	56.1	46.0	33.5	21.8	16.4	13.2	12.5	11.7
87.5°	16.4	16.4	19.5	13.2	7.8	6.2	6.2	5.5	4.7	3.9	3.9
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)