

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: P685511

Luminaire Tested: **4CZL-9-UNV-W-L935-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685511
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-L935-CD-U
Description: METALUX CRUZE LINEAR 4FT WIDE LENS MODEL @90 CRI and 3500K
Light Source: (588) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

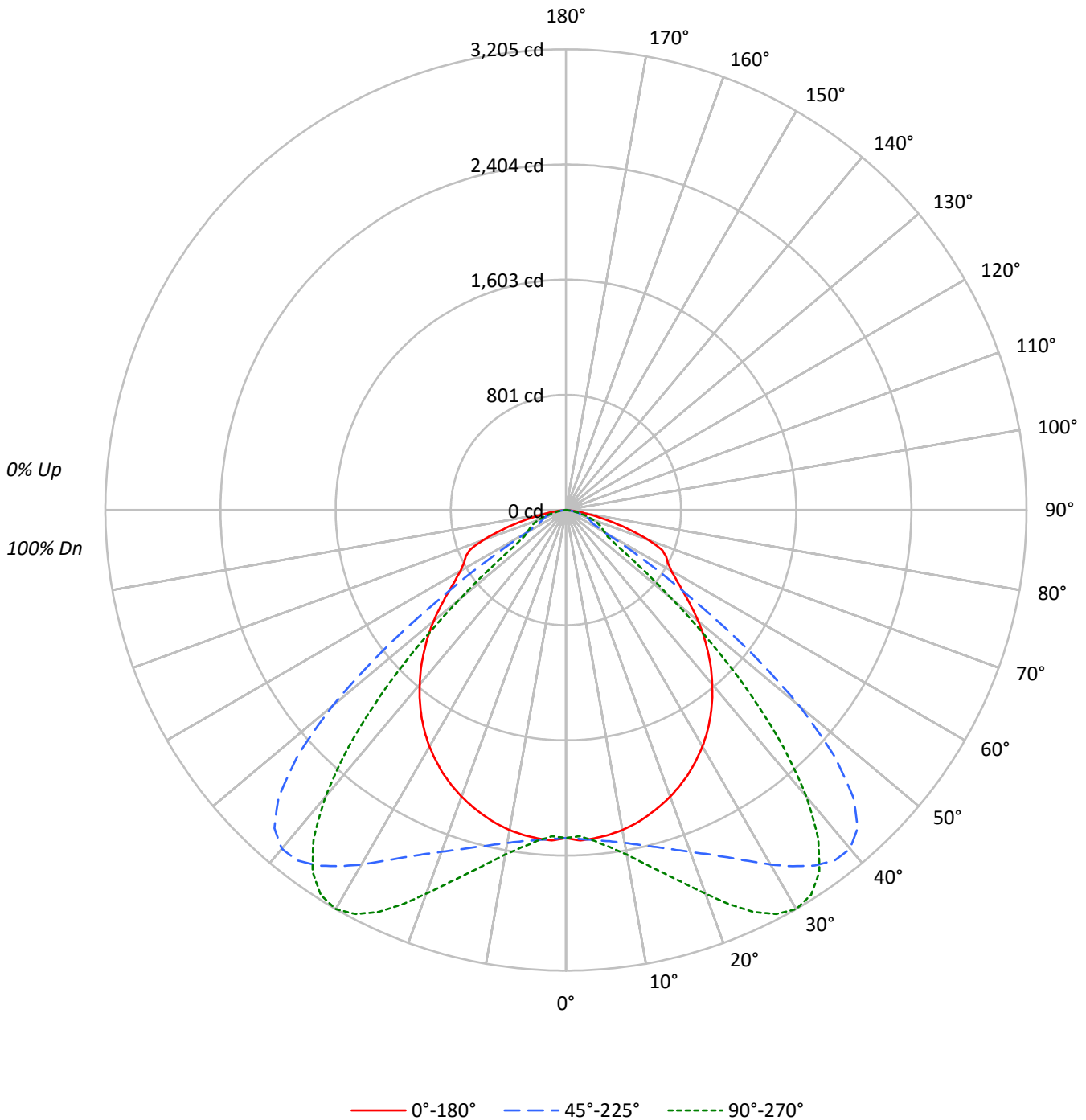
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7295.1 lumens
Efficiency: N/A
Efficacy: 135.1 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°	7366	7366	7366
5°	7430	7468	7491
10°	7412	7708	7978
15°	7358	8116	8734
20°	7293	8694	9757
25°	7206	9500	10990
30°	7083	10616	11950
35°	6910	11899	12115
40°	6670	12965	10976
45°	6382	12916	8330
50°	6036	10674	4801
55°	5626	5871	2469
60°	5460	2049	2013
65°	5884	1491	2018
70°	5810	1528	1947
75°	4393	1336	1563
80°	2656	1092	1106
85°	1323	559	233



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.8	3.0
10°-20°	686.4	9.4
20°-30°	1205.9	16.5
30°-40°	1675.2	23.0
40°-50°	1698.9	23.3
50°-60°	1090.3	14.9
60°-70°	509.9	7.0
70°-80°	176.8	2.4
80°-90°	30.8	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°	2113.1	29.0
0°-40°	3788.3	51.9
0°-60°	6577.5	90.2
0°-90°	7295.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7295.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2281	2281	2281	2281	2281	
5°	2292	2276	2304	2311	2311	218
15°	2201	2253	2428	2558	2612	621
25°	2022	2230	2666	2979	3084	931
35°	1753	2248	3018	3122	3073	1095
45°	1397	2407	2828	2109	1824	1077
55°	999	2486	1043	502	439	902
65°	770	794	195	244	264	749
75°	352	122	107	123	125	381
85°	36	32	15	8	6	54
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°	2281.0	2281.0	2281.0	2281.0	2281.0	2281.0	2281.0	2281.0	2281.0	2281.0	2281.0
2.5°	2300.8	2293.7	2281.8	2277.0	2279.4	2291.3	2295.2	2286.5	2284.1	2277.8	2271.4
5°	2292.1	2285.7	2277.0	2275.4	2284.1	2304.0	2312.7	2310.3	2314.3	2315.1	2311.1
7.5°	2279.4	2273.8	2266.7	2273.8	2292.1	2323.8	2343.6	2350.0	2364.2	2367.4	2366.6
10°	2260.3	2255.6	2253.2	2271.4	2303.2	2350.8	2385.7	2403.1	2423.7	2430.9	2433.2
12.5°	2235.0	2230.2	2236.5	2268.3	2318.2	2386.4	2438.0	2468.9	2498.3	2513.3	2518.1
15°	2200.9	2199.3	2215.1	2265.9	2337.3	2427.7	2499.1	2547.4	2589.5	2606.1	2612.5
17.5°	2163.6	2164.4	2192.9	2265.1	2360.3	2476.1	2567.3	2636.3	2687.8	2711.6	2718.8
20°	2122.3	2124.7	2167.5	2264.3	2388.8	2530.0	2642.6	2733.0	2797.3	2829.0	2839.3
22.5°	2074.0	2078.7	2139.8	2265.1	2419.0	2591.9	2731.4	2839.3	2916.2	2954.3	2967.0
25°	2022.4	2029.5	2111.2	2269.1	2457.0	2666.4	2833.0	2959.1	3036.8	3070.1	3084.4
27.5°	1962.9	1974.8	2080.3	2274.6	2502.2	2752.9	2936.9	3058.2	3130.4	3155.8	3168.4
30°	1899.5	1913.0	2050.2	2285.7	2560.9	2847.2	3032.8	3135.1	3183.5	3197.8	3204.9
32.5°	1829.7	1851.9	2020.0	2304.0	2629.9	2938.4	3103.4	3164.5	3176.4	3171.6	3174.0
35°	1752.8	1776.5	1991.5	2334.1	2708.4	3018.5	3131.2	3131.2	3096.3	3074.9	3073.3
37.5°	1671.1	1701.2	1962.9	2369.0	2799.7	3071.7	3101.0	3022.5	2937.7	2891.7	2884.5
40°	1582.2	1622.7	1943.1	2416.6	2882.1	3075.6	2993.2	2831.4	2687.0	2612.5	2603.8
42.5°	1494.2	1544.2	1934.4	2478.4	2944.0	3002.7	2790.1	2540.3	2344.4	2256.4	2246.9
45°	1397.4	1463.3	1937.5	2563.3	2960.7	2828.2	2488.0	2164.4	1944.7	1833.7	1824.1
47.5°	1301.5	1383.2	1945.5	2659.3	2887.7	2532.4	2085.9	1711.5	1493.4	1376.8	1375.2
50°	1201.5	1307.8	1964.5	2737.8	2690.2	2124.7	1591.8	1226.1	1051.7	962.8	955.7
52.5°	1097.7	1242.0	2005.8	2752.1	2338.9	1601.3	1080.2	818.5	705.1	648.8	637.7
55°	999.3	1186.5	2073.2	2623.6	1833.7	1042.9	680.5	516.3	459.2	436.2	438.6
57.5°	914.4	1145.2	2151.7	2288.1	1190.4	613.9	394.2	343.4	341.8	344.2	345.0
60°	845.4	1119.9	2186.6	1716.3	653.5	317.2	275.2	286.3	301.4	310.1	311.7
62.5°	800.2	1106.4	2080.3	994.6	290.3	221.3	240.3	260.9	278.4	286.3	287.1
65°	770.1	1070.7	1702.0	491.7	177.7	195.1	218.9	240.3	256.2	262.5	264.1
67.5°	723.3	970.0	1166.7	203.8	156.2	176.1	199.1	219.7	233.2	237.9	238.7
70°	615.4	812.1	678.1	135.6	141.2	161.8	180.0	195.9	204.6	207.0	206.2
72.5°	480.6	643.2	342.6	122.9	130.9	142.0	152.3	161.0	165.8	168.1	168.1
75°	352.1	470.3	161.0	108.7	97.6	107.1	117.4	122.9	124.5	125.3	125.3
77.5°	236.3	324.4	96.0	84.1	75.3	83.3	87.2	84.9	83.3	84.9	84.9
80°	142.8	199.9	84.1	61.1	57.9	58.7	55.5	55.5	58.7	60.3	59.5
82.5°	76.9	113.4	73.8	44.4	38.9	35.7	34.9	33.3	31.7	30.9	30.9
85°	35.7	57.9	47.6	27.0	20.6	15.1	11.9	8.7	7.9	6.3	6.3
87.5°	14.3	22.2	14.3	8.7	4.8	3.2	2.4	1.6	0.8	0.8	0.8
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)