

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: P685512

Luminaire Tested: **4CZL-12-UNV-W-L935-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685512
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-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

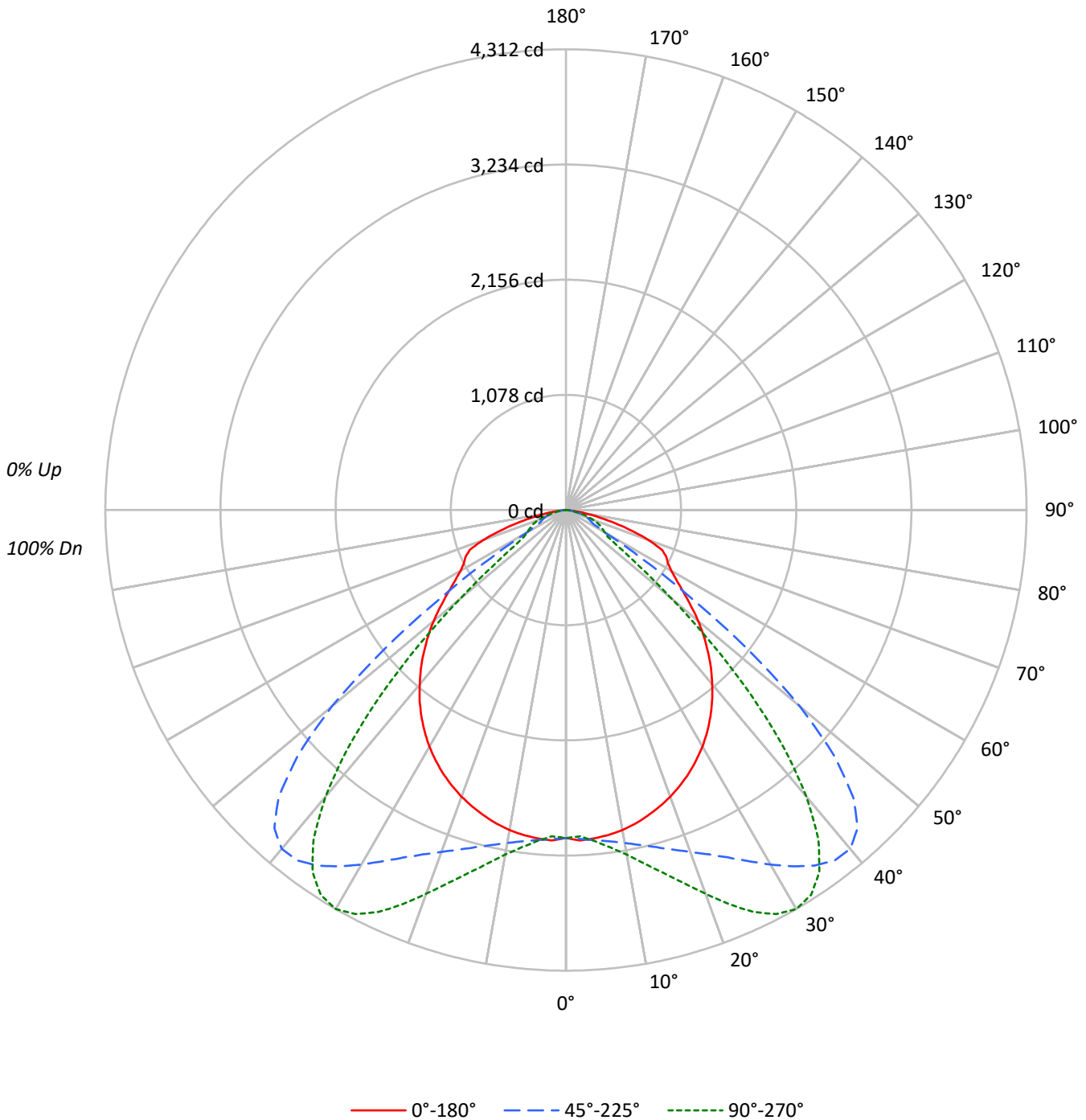
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9816.2 lumens
Efficiency: N/A
Efficacy: 127.5 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): 77
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	
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	73	66	60	71	65	59	69	63	59	67	62	58	56
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	43
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	38
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9911	9911	9911
5°	9998	10049	10080
10°	9973	10372	10736
15°	9901	10921	11752
20°	9814	11699	13129
25°	9696	12784	14788
30°	9530	14286	16080
35°	9297	16012	16302
40°	8975	17446	14769
45°	8587	17379	11209
50°	8122	14363	6461
55°	7571	7901	3323
60°	7347	2757	2709
65°	7918	2006	2716
70°	7819	2055	2620
75°	5911	1798	2104
80°	3572	1469	1488
85°	1778	752	315



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.1	3.0
10°-20°	923.7	9.4
20°-30°	1622.6	16.5
30°-40°	2254.2	23.0
40°-50°	2286.0	23.3
50°-60°	1467.0	14.9
60°-70°	686.2	7.0
70°-80°	237.9	2.4
80°-90°	41.5	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°	2843.3	29.0
0°-40°	5097.5	51.9
0°-60°	8850.6	90.2
0°-90°	9816.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9816.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3069	3069	3069	3069	3069	
5°	3084	3062	3100	3110	3110	293
15°	2962	3032	3267	3442	3515	836
25°	2721	3000	3588	4008	4150	1253
35°	2358	3025	4062	4202	4135	1473
45°	1880	3239	3806	2838	2454	1450
55°	1345	3345	1403	676	590	1214
65°	1036	1069	262	329	355	1008
75°	474	164	144	166	169	513
85°	48	43	20	11	8	73
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°	3069.2	3069.2	3069.2	3069.2	3069.2	3069.2	3069.2	3069.2	3069.2	3069.2	3069.2
2.5°	3095.9	3086.3	3070.3	3063.9	3067.1	3083.1	3088.5	3076.7	3073.5	3065.0	3056.4
5°	3084.2	3075.7	3063.9	3061.8	3073.5	3100.2	3111.9	3108.7	3114.1	3115.1	3109.8
7.5°	3067.1	3059.6	3050.0	3059.6	3084.2	3126.9	3153.6	3162.1	3181.3	3185.6	3184.5
10°	3041.5	3035.1	3031.9	3056.4	3099.1	3163.2	3210.1	3233.6	3261.3	3270.9	3274.1
12.5°	3007.4	3000.9	3009.5	3052.2	3119.4	3211.2	3280.6	3322.2	3361.7	3381.9	3388.3
15°	2961.5	2959.3	2980.7	3049.0	3145.0	3266.7	3362.7	3427.8	3484.4	3506.8	3515.3
17.5°	2911.3	2912.4	2950.8	3047.9	3176.0	3331.8	3454.5	3547.3	3616.7	3648.7	3658.3
20°	2855.8	2859.0	2916.6	3046.8	3214.4	3404.3	3555.9	3677.5	3764.0	3806.7	3820.6
22.5°	2790.7	2797.1	2879.3	3047.9	3254.9	3487.6	3675.4	3820.6	3924.1	3975.3	3992.4
25°	2721.3	2730.9	2840.9	3053.2	3306.2	3587.9	3812.0	3981.7	4086.3	4131.1	4150.3
27.5°	2641.3	2657.3	2799.2	3060.7	3367.0	3704.2	3951.8	4115.1	4212.2	4246.4	4263.4
30°	2555.9	2574.1	2758.7	3075.7	3446.0	3831.2	4080.9	4218.6	4283.7	4302.9	4312.5
32.5°	2462.0	2491.9	2718.1	3100.2	3538.8	3954.0	4175.9	4258.1	4274.1	4267.7	4270.9
35°	2358.5	2390.5	2679.7	3140.7	3644.5	4061.7	4213.3	4213.3	4166.3	4137.5	4135.4
37.5°	2248.6	2289.1	2641.3	3187.7	3767.2	4133.2	4172.7	4067.1	3952.9	3891.0	3881.4
40°	2129.1	2183.5	2614.6	3251.7	3878.2	4138.6	4027.6	3809.9	3615.7	3515.3	3503.6
42.5°	2010.6	2077.8	2602.9	3335.0	3961.4	4040.4	3754.4	3418.2	3154.6	3036.2	3023.4
45°	1880.4	1969.0	2607.2	3449.2	3983.8	3805.6	3347.8	2912.4	2616.8	2467.4	2454.5
47.5°	1751.3	1861.2	2617.8	3578.3	3885.7	3407.5	2806.7	2303.0	2009.5	1852.6	1850.5
50°	1616.8	1759.8	2643.4	3684.0	3619.9	2859.0	2141.9	1649.9	1415.1	1295.6	1286.0
52.5°	1477.0	1671.2	2698.9	3703.2	3147.2	2154.7	1453.5	1101.3	948.7	873.0	858.0
55°	1344.7	1596.5	2789.6	3530.3	2467.4	1403.4	915.7	694.7	617.9	587.0	590.2
57.5°	1230.5	1541.0	2895.3	3078.9	1601.9	826.0	530.4	462.1	460.0	463.2	464.2
60°	1137.6	1506.9	2942.3	2309.4	879.4	426.9	370.3	385.3	405.5	417.3	419.4
62.5°	1076.8	1488.7	2799.2	1338.3	390.6	297.7	323.4	351.1	374.6	385.3	386.3
65°	1036.2	1440.7	2290.2	661.7	239.1	262.5	294.5	323.4	344.7	353.2	355.4
67.5°	973.3	1305.2	1569.8	274.3	210.2	236.9	267.9	295.6	313.8	320.2	321.2
70°	828.1	1092.8	912.5	182.5	190.0	217.7	242.3	263.6	275.3	278.5	277.5
72.5°	646.7	865.5	461.0	165.4	176.1	191.0	204.9	216.6	223.0	226.2	226.2
75°	473.8	632.8	216.6	146.2	131.3	144.1	157.9	165.4	167.5	168.6	168.6
77.5°	318.0	436.5	129.1	113.1	101.4	112.1	117.4	114.2	112.1	114.2	114.2
80°	192.1	268.9	113.1	82.2	77.9	79.0	74.7	74.7	79.0	81.1	80.0
82.5°	103.5	152.6	99.2	59.8	52.3	48.0	47.0	44.8	42.7	41.6	41.6
85°	48.0	77.9	64.0	36.3	27.7	20.3	16.0	11.7	10.7	8.5	8.5
87.5°	19.2	29.9	19.2	11.7	6.4	4.3	3.2	2.1	1.1	1.1	1.1
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)