

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: P685811

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685811
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-M-LVR-L935-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @90 CRI and 3500K
Light Source: (588) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

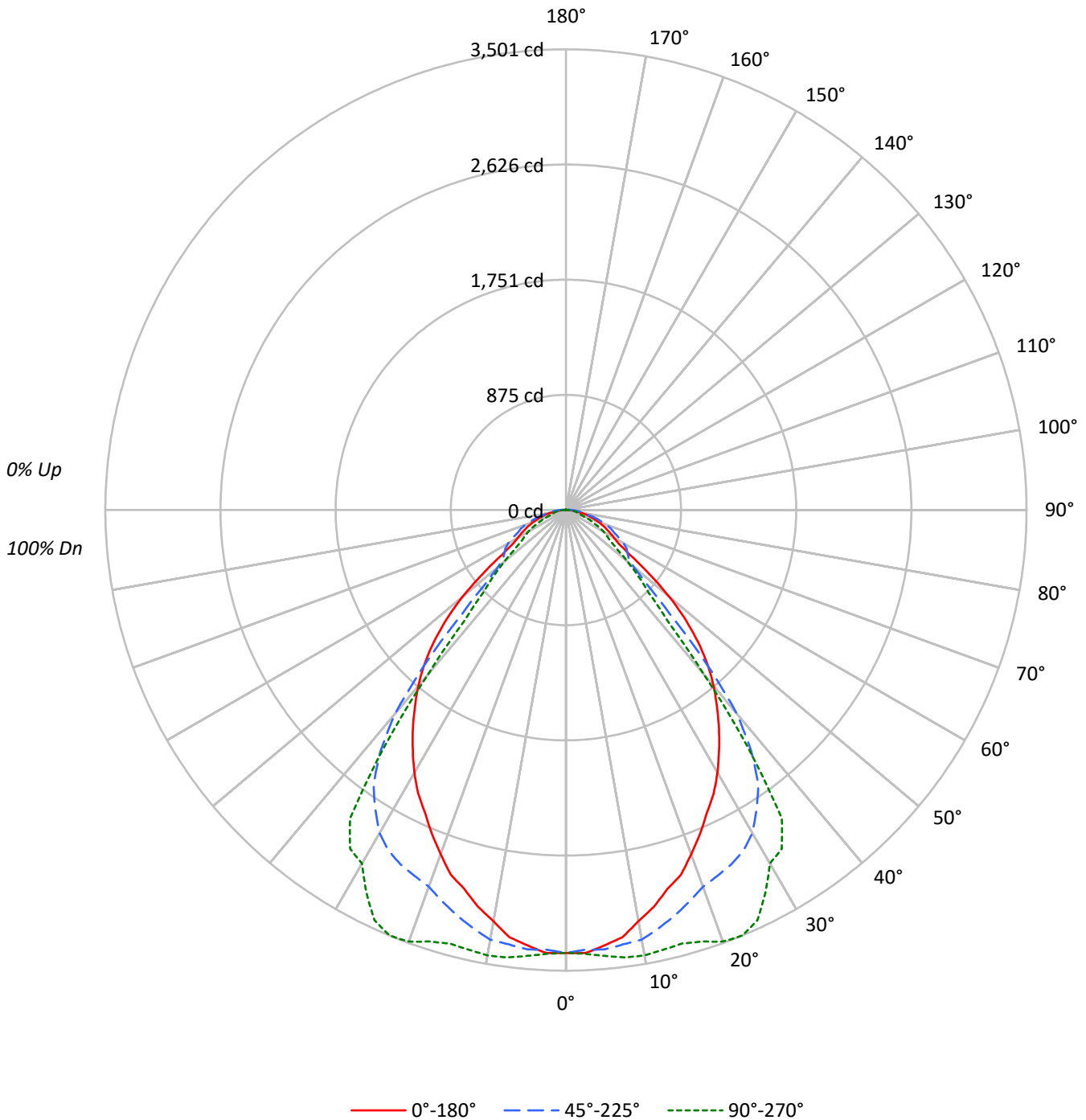
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6226.5 lumens
Efficiency: N/A
Efficacy: 115.3 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.34 / 1.2
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 (A_{in}): 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	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88
2	103	96	90	86	100	94	89	84	91	86	83	87	84	81	84	81	79	77
3	95	87	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	70	66	62	60
5	83	72	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	54
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	49
7	72	60	53	47	70	59	52	47	58	51	47	57	51	46	55	50	46	44
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10869	10869	10869
5°	10768	10865	11027
10°	10404	10872	11269
15°	9966	10669	11401
20°	9564	10466	11993
25°	9036	10590	12260
30°	8589	10567	11564
35°	7997	10049	11276
40°	7362	8518	6872
45°	6486	5077	4073
50°	5148	3371	3074
55°	3333	3207	2332
60°	2721	3260	2143
65°	2593	3072	1751
70°	2461	3083	1384
75°	2338	2886	1286
80°	2163	2726	1445
85°	1934	3335	1771



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	319.4	5.1
10°-20°	906.0	14.6
20°-30°	1366.2	21.9
30°-40°	1509.6	24.2
40°-50°	946.5	15.2
50°-60°	509.6	8.2
60°-70°	346.1	5.6
70°-80°	206.7	3.3
80°-90°	89.8	1.4
90°-100°	19.7	0.3
100°-110°	2.3	0.0
110°-120°	0.8	0.0
120°-130°	0.8	0.0
130°-140°	0.9	0.0
140°-150°	0.8	0.0
150°-160°	0.6	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	2591.6	41.6
0°-40°	4101.2	65.9
0°-60°	5557.3	89.3
0°-90°	6199.9	99.6
90°-120°	22.8	0.4
90°-150°	25.2	0.4
90°-180°	27.0	0.4
0°-180°	6226.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3366	3366	3366	3366	3366	
5°	3322	3328	3352	3391	3402	313
15°	2981	3086	3191	3346	3410	842
25°	2536	2690	2972	3289	3441	1171
35°	2029	2267	2549	2742	2860	1266
45°	1420	1546	1112	906	892	1083
55°	592	619	570	493	414	575
65°	339	373	402	326	229	336
75°	187	208	231	190	103	198
85°	52	64	90	118	48	56
90°	1	20	46	76	14	4
95°	0	3	18	39	7	0
105°	0	1	1	3	1	0
115°	0	1	1	1	1	0
125°	0	1	1	1	1	0
135°	1	1	1	1	1	1
145°	1	1	1	1	2	1
155°	1	1	1	1	1	1
165°	1	2	2	2	2	0
175°	2	2	2	2	2	0
180°	2	2	2	2	2	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3365.9	3365.9	3365.9	3365.9	3365.9
2.5°	3370.3	3361.1	3344.0	3374.7	3375.1
5°	3322.0	3327.7	3351.9	3391.4	3401.9
7.5°	3275.1	3297.0	3329.5	3424.7	3429.6
10°	3172.8	3218.5	3315.5	3407.2	3436.6
12.5°	3087.7	3155.3	3255.3	3376.0	3421.7
15°	2981.0	3085.5	3191.2	3345.7	3410.3
17.5°	2906.4	2990.2	3119.7	3331.7	3437.5
20°	2783.1	2901.1	3045.5	3341.4	3490.1
22.5°	2663.2	2806.8	3008.2	3344.9	3501.1
25°	2536.0	2690.0	2972.2	3289.1	3441.0
27.5°	2430.6	2559.7	2918.7	3172.8	3282.5
30°	2303.4	2455.2	2834.0	2995.1	3101.3
32.5°	2166.4	2359.1	2696.6	2859.0	3052.1
35°	2028.6	2266.9	2549.1	2742.3	2860.3
37.5°	1884.6	2191.0	2317.4	2348.6	2267.8
40°	1746.4	2085.2	2020.7	1719.2	1630.1
42.5°	1595.4	1857.9	1576.1	1182.8	1142.9
45°	1420.3	1546.2	1111.7	906.3	891.8
47.5°	1233.7	1197.3	829.1	757.5	749.2
50°	1024.8	957.2	671.1	668.4	611.8
52.5°	798.8	760.2	601.7	579.8	489.8
55°	592.1	619.3	569.7	492.9	414.3
57.5°	474.0	537.2	547.3	430.6	370.4
60°	421.3	470.1	504.7	395.9	331.8
62.5°	377.9	416.5	452.1	367.4	286.2
65°	339.3	373.1	402.0	326.5	229.1
67.5°	298.5	333.6	369.1	280.5	194.9
70°	260.7	298.0	326.5	248.9	146.6
72.5°	221.6	260.3	273.0	208.0	117.2
75°	187.4	208.5	231.3	190.0	103.1
77.5°	151.4	169.4	178.6	174.2	90.9
80°	116.3	130.8	146.6	158.4	77.7
82.5°	85.1	95.7	117.2	139.6	62.3
85°	52.2	64.1	90.0	118.5	47.8
87.5°	23.3	38.2	66.3	97.9	30.7
90°	1.3	19.8	45.6	75.9	14.0
92.5°	0.4	8.8	29.8	56.2	9.7
95°	0.4	3.1	18.0	39.1	7.0
97.5°	0.4	1.3	10.1	25.0	4.4
100°	0.4	0.9	4.8	14.5	3.1
102.5°	0.4	0.9	2.2	7.0	2.2
105°	0.4	0.9	1.3	3.1	1.3
107.5°	0.4	0.9	0.9	1.3	0.9
110°	0.4	0.9	0.9	0.9	0.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.4	0.9	0.9	0.9	0.9
115°	0.4	0.9	0.9	0.9	0.9
117.5°	0.4	0.9	0.9	0.9	0.9
120°	0.4	0.9	0.9	0.9	0.9
122.5°	0.4	0.9	0.9	0.9	0.9
125°	0.4	0.9	0.9	0.9	0.9
127.5°	0.4	0.9	0.9	0.9	0.9
130°	0.4	0.9	0.9	0.9	0.9
132.5°	0.9	0.9	1.3	1.3	1.3
135°	0.9	0.9	1.3	1.3	1.3
137.5°	0.9	1.3	1.3	1.3	1.3
140°	0.9	1.3	1.3	1.3	1.3
142.5°	0.9	1.3	1.3	1.3	1.3
145°	0.9	1.3	1.3	1.3	1.8
147.5°	0.9	1.3	1.3	1.3	1.8
150°	0.9	1.3	1.3	1.3	1.3
152.5°	1.3	1.3	1.3	1.3	1.3
155°	1.3	1.3	1.3	1.3	1.3
157.5°	1.3	1.3	1.3	1.8	1.8
160°	1.3	1.8	1.8	1.8	1.8
162.5°	1.3	1.8	1.8	1.8	1.8
165°	1.3	1.8	1.8	1.8	1.8
167.5°	1.3	1.8	1.8	1.8	2.2
170°	1.8	1.8	1.8	2.2	2.2
172.5°	1.8	1.8	1.8	2.2	2.2
175°	1.8	1.8	1.8	2.2	2.2
177.5°	1.8	2.2	1.8	2.2	2.6
180°	2.2	2.2	2.2	2.2	2.2

(END OF REPORT)