

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: P685891

Luminaire Tested: **4CZL-9-UNV-W-LVR-L950-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685891
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-W-LVR-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

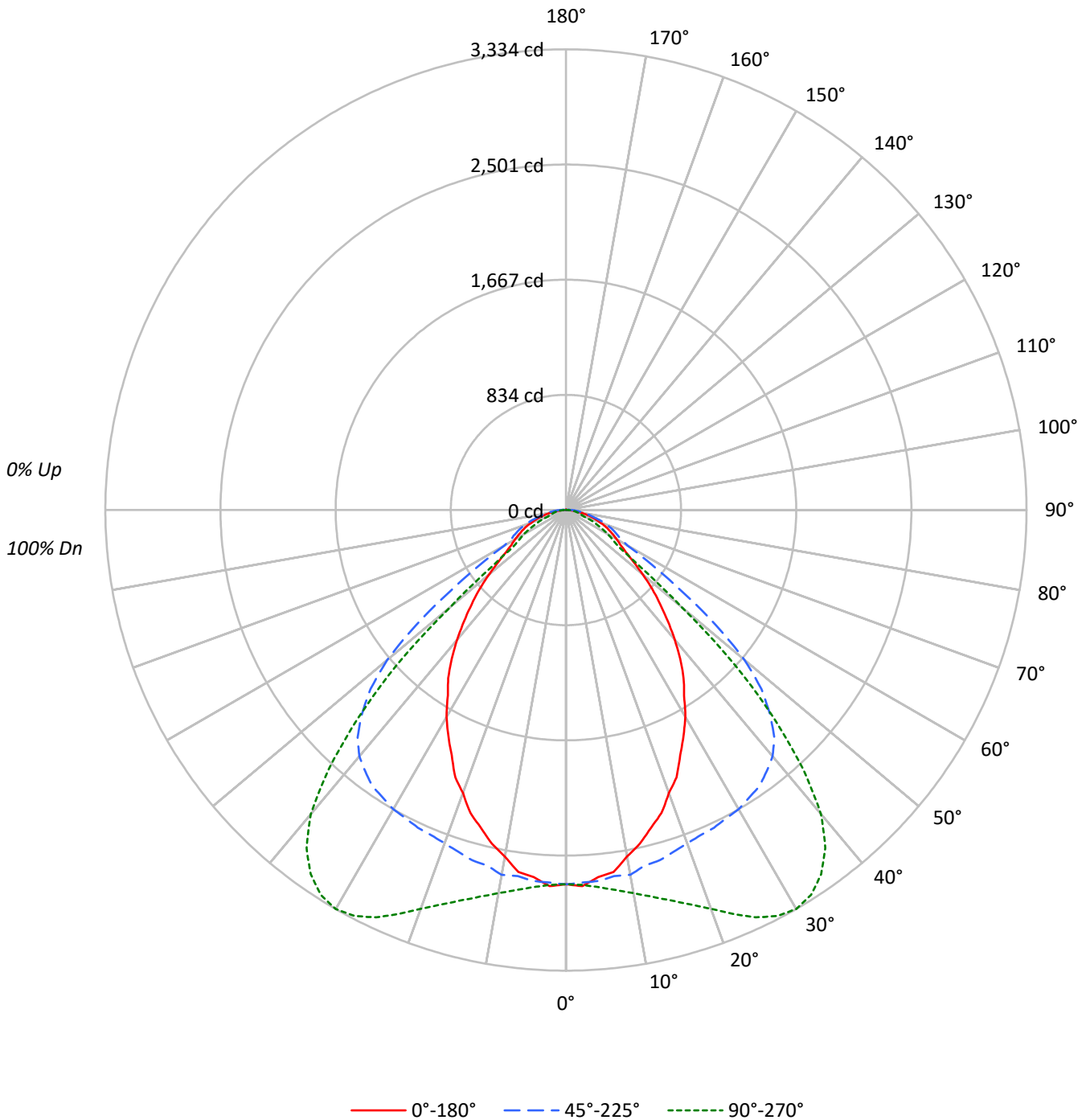
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6444.0 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.64 / 1.46
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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8746	8746	8746
5°	8646	8736	8879
10°	8348	8789	9232
15°	7955	8772	9775
20°	7488	8820	10551
25°	6972	9037	11588
30°	6445	9323	12431
35°	5856	9624	12691
40°	5163	9806	12109
45°	4401	9538	9708
50°	3647	8482	5509
55°	2971	5731	2635
60°	2743	3332	2276
65°	2645	3066	1851
70°	2495	3007	1323
75°	2322	2745	1285
80°	2116	2696	1411
85°	1623	3231	1556



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.5	4.0
10°-20°	747.6	11.6
20°-30°	1186.4	18.4
30°-40°	1481.7	23.0
40°-50°	1360.9	21.1
50°-60°	726.3	11.3
60°-70°	373.8	5.8
70°-80°	205.5	3.2
80°-90°	84.8	1.3
90°-100°	16.4	0.3
100°-110°	0.9	0.0
110°-120°	0.2	0.0
120°-130°	0.3	0.0
130°-140°	0.5	0.0
140°-150°	0.4	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	2191.4	34.0
0°-40°	3673.2	57.0
0°-60°	5760.4	89.4
0°-90°	6424.5	99.7
90°-120°	17.5	0.3
90°-150°	18.8	0.3
90°-180°	19.0	0.3
0°-180°	6444.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2708	2708	2708	2708	2708	
5°	2667	2674	2695	2736	2739	252
15°	2380	2457	2624	2838	2924	669
25°	1957	2141	2536	3001	3252	902
35°	1486	1760	2441	2974	3219	922
45°	964	1389	2089	2164	2126	746
55°	528	946	1018	570	468	487
65°	346	454	401	327	242	342
75°	186	206	220	196	103	198
85°	44	57	87	115	42	50
90°	0	16	43	70	9	2
95°	0	2	16	32	4	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	1	1	0	0	0
145°	0	1	1	0	0	0
155°	1	1	1	0	0	0
165°	1	1	1	0	0	0
175°	1	1	1	0	0	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2708.5	2708.5	2708.5	2708.5	2708.5
2.5°	2724.3	2718.4	2699.0	2716.6	2715.2
5°	2667.3	2674.1	2694.9	2736.5	2739.2
7.5°	2642.0	2660.6	2672.3	2762.2	2774.0
10°	2545.8	2574.7	2680.4	2774.0	2815.5
12.5°	2473.5	2531.8	2634.4	2792.9	2865.2
15°	2379.6	2457.3	2624.0	2837.7	2924.0
17.5°	2299.6	2379.1	2592.3	2871.5	2992.2
20°	2179.0	2323.1	2566.6	2906.8	3070.3
22.5°	2092.7	2238.6	2546.7	2938.0	3162.9
25°	1956.7	2140.6	2536.3	3000.8	3252.4
27.5°	1842.8	2057.9	2513.3	3041.0	3311.6
30°	1728.5	1956.7	2500.2	3048.2	3333.7
32.5°	1590.7	1874.5	2467.2	3031.5	3302.1
35°	1485.5	1759.7	2441.4	2974.1	3219.4
37.5°	1357.2	1669.3	2385.0	2870.2	3083.9
40°	1224.8	1585.8	2326.2	2708.0	2872.5
42.5°	1091.1	1491.8	2232.3	2491.6	2541.7
45°	963.7	1389.2	2088.6	2164.5	2125.7
47.5°	849.4	1279.0	1918.7	1754.3	1663.0
50°	726.0	1167.0	1688.3	1335.5	1096.5
52.5°	614.9	1073.4	1371.2	904.5	682.2
55°	527.7	946.0	1017.9	570.2	468.0
57.5°	465.8	848.5	734.6	450.9	400.7
60°	424.7	726.5	515.9	413.8	352.4
62.5°	384.0	574.7	441.4	377.2	296.4
65°	346.1	453.6	401.2	327.1	242.2
67.5°	306.8	368.2	362.3	296.8	201.9
70°	264.3	302.7	318.5	248.5	140.1
72.5°	226.3	253.9	271.1	212.3	118.8
75°	186.1	206.5	220.0	195.6	103.0
77.5°	147.7	166.3	179.4	177.1	90.4
80°	113.8	126.0	145.0	158.6	75.9
82.5°	77.7	86.7	114.3	136.9	59.2
85°	43.8	57.4	87.2	114.8	42.0
87.5°	12.6	33.9	63.2	92.2	24.4
90°	0.0	16.3	42.9	69.6	9.0
92.5°	0.0	6.3	28.0	48.8	6.3
95°	0.0	1.8	16.3	32.1	4.1
97.5°	0.0	0.5	7.7	19.0	1.8
100°	0.0	0.5	2.7	9.0	0.5
102.5°	0.0	0.5	0.9	3.2	0.0
105°	0.0	0.5	0.5	0.5	0.0
107.5°	0.0	0.5	0.5	0.0	0.0
110°	0.0	0.5	0.5	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.5	0.5	0.0	0.0
115°	0.0	0.5	0.5	0.0	0.0
117.5°	0.0	0.5	0.5	0.0	0.0
120°	0.0	0.5	0.5	0.0	0.0
122.5°	0.0	0.5	0.5	0.0	0.0
125°	0.0	0.5	0.5	0.0	0.0
127.5°	0.5	0.5	0.5	0.5	0.0
130°	0.5	0.9	0.9	0.5	0.0
132.5°	0.5	0.9	0.9	0.5	0.0
135°	0.5	0.9	0.9	0.5	0.5
137.5°	0.5	0.9	0.9	0.5	0.5
140°	0.5	0.9	0.9	0.5	0.5
142.5°	0.5	0.9	0.9	0.5	0.5
145°	0.5	0.9	0.9	0.5	0.5
147.5°	0.5	0.9	0.9	0.5	0.5
150°	0.5	0.9	0.9	0.5	0.5
152.5°	0.9	0.9	0.9	0.5	0.5
155°	0.9	0.9	0.9	0.5	0.5
157.5°	0.9	0.9	0.9	0.5	0.5
160°	0.9	0.9	0.9	0.5	0.5
162.5°	0.9	1.4	0.9	0.5	0.5
165°	0.9	1.4	0.9	0.5	0.5
167.5°	0.9	1.4	0.9	0.5	0.5
170°	0.9	1.4	0.9	0.5	0.5
172.5°	0.9	1.4	0.9	0.5	0.5
175°	1.4	1.4	0.9	0.5	0.5
177.5°	1.4	1.4	0.9	0.9	0.9
180°	0.9	0.9	0.9	0.9	0.9

(END OF REPORT)