

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: P685701

Luminaire Tested: **4CZL-9-UNV-LVR-L940-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685701
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-LVR-L940-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @90 CRI and 4000K
Light Source: (588) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

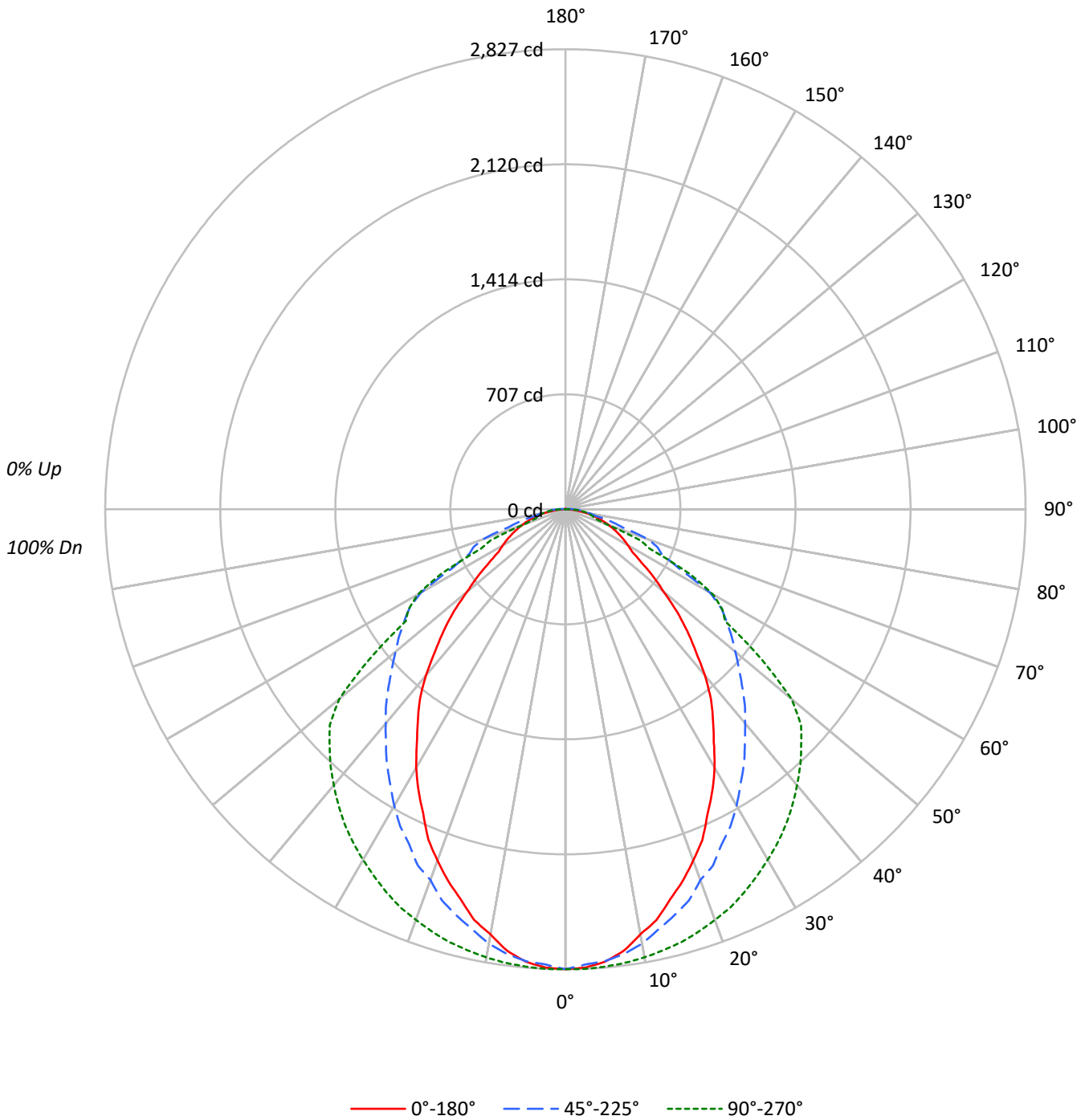
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6400.2 lumens
Efficiency: N/A
Efficacy: 118.5 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1.31 / 1.26
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			
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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	88	88	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	75	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	65	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	56	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	49	49	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	44	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	39	39	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	35	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	32	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29	29	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9126	9126	9126
5°	9047	9034	9142
10°	8696	8887	9169
15°	8301	8638	9206
20°	7893	8332	9228
25°	7361	8091	9258
30°	6834	7843	9273
35°	6231	7535	9316
40°	5621	7242	9332
45°	4834	7010	9356
50°	3951	6844	9111
55°	3217	6818	6738
60°	2869	6628	6761
65°	2774	4973	4360
70°	2664	5097	2478
75°	2568	3592	2212
80°	2343	2921	2637
85°	2097	3642	3286



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.7	4.1
10°-20°	733.8	11.5
20°-30°	1061.7	16.6
30°-40°	1211.8	18.9
40°-50°	1190.7	18.6
50°-60°	949.7	14.8
60°-70°	598.2	9.3
70°-80°	265.0	4.1
80°-90°	101.6	1.6
90°-100°	20.1	0.3
100°-110°	1.3	0.0
110°-120°	0.1	0.0
120°-130°	0.2	0.0
130°-140°	0.3	0.0
140°-150°	0.3	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	2060.3	32.2
0°-40°	3272.0	51.1
0°-60°	5412.4	84.6
0°-90°	6377.3	99.6
90°-120°	21.6	0.3
90°-150°	22.4	0.3
90°-180°	23.0	0.4
0°-180°	6400.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2826	2826	2826	2826	2826	
5°	2791	2797	2787	2810	2820	262
15°	2483	2508	2584	2705	2754	699
25°	2066	2133	2271	2479	2598	952
35°	1580	1676	1912	2193	2363	988
45°	1059	1213	1535	1878	2049	814
55°	572	774	1211	1306	1197	525
65°	363	494	651	694	571	360
75°	206	238	288	218	177	216
85°	57	69	98	127	89	60
90°	0	24	52	76	14	3
95°	0	4	22	37	5	0
105°	0	0	0	1	0	0
115°	0	0	0	0	0	0
125°	0	1	0	0	0	0
135°	0	1	0	0	0	0
145°	1	1	0	0	0	1
155°	1	1	0	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°	2826.1	2826.1	2826.1	2826.1	2826.1
2.5°	2818.7	2816.9	2799.8	2823.9	2826.6
5°	2791.0	2797.2	2787.1	2810.3	2820.4
7.5°	2737.9	2744.5	2756.4	2798.9	2811.2
10°	2651.9	2668.6	2710.3	2770.0	2796.3
12.5°	2586.1	2606.7	2644.0	2745.4	2775.7
15°	2482.9	2507.5	2583.9	2705.0	2753.7
17.5°	2395.1	2439.9	2521.1	2654.1	2722.1
20°	2296.8	2332.8	2424.5	2604.1	2685.2
22.5°	2198.5	2244.1	2369.2	2537.3	2647.9
25°	2065.9	2132.7	2270.9	2479.0	2598.3
27.5°	1953.6	2037.9	2196.7	2410.1	2543.0
30°	1832.9	1898.3	2103.3	2339.8	2486.9
32.5°	1696.8	1799.5	2002.3	2259.5	2428.0
35°	1580.5	1676.2	1911.5	2193.2	2363.1
37.5°	1468.2	1558.1	1810.9	2118.2	2291.1
40°	1333.4	1451.9	1717.9	2032.6	2213.9
42.5°	1184.2	1329.5	1631.4	1951.8	2135.3
45°	1058.6	1212.7	1534.9	1878.5	2048.8
47.5°	928.3	1090.7	1444.5	1789.4	1963.2
50°	786.5	984.0	1362.4	1706.9	1813.6
52.5°	682.9	873.0	1288.6	1557.7	1528.7
55°	571.5	773.8	1211.0	1305.8	1196.9
57.5°	486.8	684.3	1138.1	1025.3	1142.5
60°	444.2	612.7	1026.2	976.1	1046.8
62.5°	404.2	550.0	784.8	915.6	861.1
65°	363.0	494.2	650.9	693.5	570.6
67.5°	323.0	445.9	613.6	517.9	496.8
70°	282.2	408.6	539.9	441.5	262.5
72.5°	243.6	365.6	369.1	244.5	194.9
75°	205.8	237.9	287.9	218.1	177.3
77.5°	164.6	204.1	192.7	195.3	160.6
80°	126.0	140.5	157.1	174.7	141.8
82.5°	89.1	104.5	127.3	152.7	116.3
85°	56.6	68.9	98.3	126.8	88.7
87.5°	22.4	43.5	73.3	102.3	52.2
90°	0.4	23.7	51.8	75.5	14.5
92.5°	0.4	11.0	34.7	55.3	7.5
95°	0.4	3.5	21.5	36.9	4.8
97.5°	0.4	1.3	11.4	22.8	2.6
100°	0.4	0.4	4.8	12.3	1.3
102.5°	0.4	0.4	1.8	4.8	0.4
105°	0.4	0.4	0.4	1.3	0.0
107.5°	0.4	0.4	0.0	0.0	0.0
110°	0.4	0.4	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.4	0.4	0.0	0.0	0.0
115°	0.4	0.4	0.0	0.0	0.0
117.5°	0.4	0.4	0.0	0.0	0.0
120°	0.4	0.4	0.0	0.0	0.0
122.5°	0.4	0.4	0.0	0.0	0.0
125°	0.4	0.9	0.0	0.0	0.0
127.5°	0.4	0.4	0.0	0.0	0.0
130°	0.4	0.9	0.4	0.0	0.0
132.5°	0.4	0.9	0.4	0.0	0.0
135°	0.4	0.9	0.4	0.0	0.0
137.5°	0.4	0.9	0.4	0.0	0.0
140°	0.9	0.9	0.4	0.0	0.0
142.5°	0.9	0.9	0.4	0.0	0.0
145°	0.9	0.9	0.4	0.0	0.0
147.5°	0.9	0.9	0.4	0.0	0.0
150°	0.9	0.9	0.4	0.0	0.0
152.5°	0.9	0.9	0.4	0.0	0.0
155°	0.9	0.9	0.4	0.0	0.0
157.5°	0.9	1.3	0.4	0.0	0.0
160°	1.3	1.3	0.4	0.0	0.0
162.5°	1.3	1.3	0.9	0.4	0.0
165°	1.3	1.3	0.9	0.4	0.0
167.5°	1.3	1.3	0.9	0.4	0.0
170°	1.3	1.3	0.9	0.4	0.4
172.5°	1.3	1.3	0.9	0.4	0.4
175°	1.3	1.3	0.9	0.4	0.4
177.5°	1.3	1.3	0.9	0.4	0.4
180°	0.9	0.9	0.9	0.9	0.9

(END OF REPORT)