

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: P685921

Luminaire Tested: **4CZL-9-UNV-LVRF-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685921
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-LVRF-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @80 CRI and 5000K
Light Source: (588) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

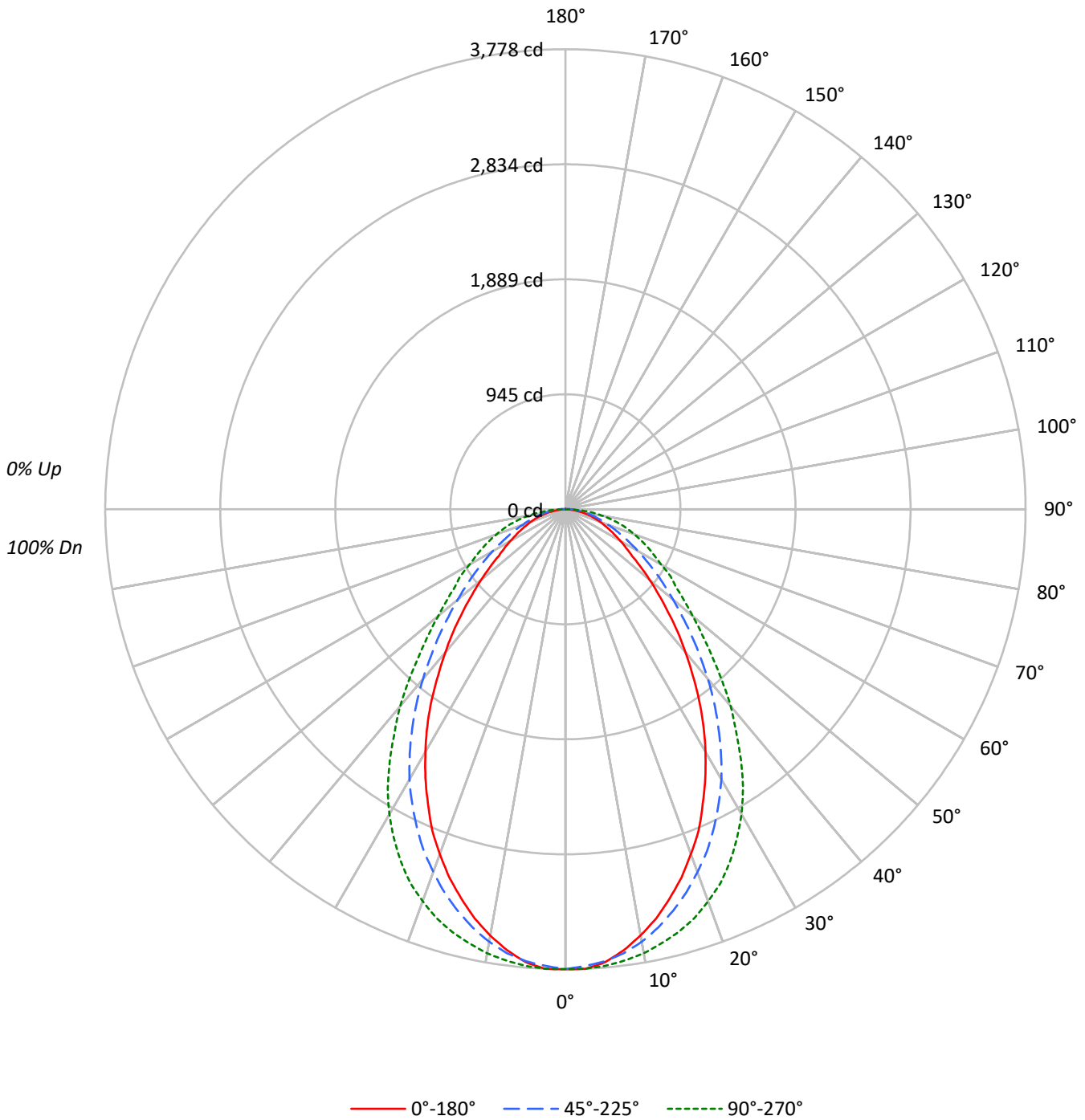
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6966.0 lumens
Efficiency: N/A
Efficacy: 129.0 lumens/watt
Spacing Criteria (0/90/45): 0.97 / 1.15 / 1.12
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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86	86	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	82	79	76	74	74	74
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	74	70	67	65	65	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51	51	51
6	75	63	55	49	73	62	54	48	60	53	48	58	52	48	57	51	47	45	45	45
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	41	41	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37	37	37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34	34	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31	31	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12194	12194	12194
5°	12105	12077	12199
10°	11653	11825	12139
15°	11057	11413	12011
20°	10355	10892	11772
25°	9508	10276	11382
30°	8571	9550	10778
35°	7548	8637	9899
40°	6461	7669	8902
45°	5443	6684	7753
50°	4545	5794	6854
55°	3761	5091	6215
60°	3389	4462	5860
65°	3081	3927	5731
70°	2869	3525	5688
75°	2661	3291	5803
80°	2412	3260	5813
85°	2071	3820	5750



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	353.3	5.1
10°-20°	965.6	13.9
20°-30°	1334.2	19.2
30°-40°	1372.5	19.7
40°-50°	1125.2	16.2
50°-60°	807.4	11.6
60°-70°	543.1	7.8
70°-80°	317.0	4.6
80°-90°	122.1	1.8
90°-100°	21.2	0.3
100°-110°	1.8	0.0
110°-120°	0.3	0.0
120°-130°	0.3	0.0
130°-140°	0.4	0.0
140°-150°	0.5	0.0
150°-160°	0.5	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	2653.2	38.1
0°-40°	4025.7	57.8
0°-60°	5958.4	85.5
0°-90°	6940.5	99.6
90°-120°	23.2	0.3
90°-150°	24.5	0.4
90°-180°	25.0	0.4
0°-180°	6966.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3776	3776	3776	3776	3776	
5°	3734	3737	3726	3761	3763	350
15°	3307	3341	3414	3546	3593	928
25°	2669	2731	2884	3085	3194	1225
35°	1915	2003	2191	2396	2511	1193
45°	1192	1285	1464	1608	1698	925
55°	668	748	904	1028	1104	615
65°	403	427	514	660	750	402
75°	213	221	264	366	465	226
85°	56	70	103	154	155	61
90°	0	23	53	80	17	3
95°	0	4	22	38	7	0
105°	0	0	1	2	1	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	1	0	0	0	0
145°	1	1	1	0	0	1
155°	1	2	1	0	0	1
165°	2	2	2	1	0	0
175°	2	2	2	1	1	0
180°	2	2	2	2	2	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3776.3	3776.3	3776.3	3776.3	3776.3
2.5°	3777.9	3774.7	3753.5	3777.9	3776.9
5°	3734.5	3737.2	3725.8	3760.6	3763.3
7.5°	3653.7	3664.5	3677.0	3728.0	3737.2
10°	3553.8	3570.1	3606.4	3682.4	3702.0
12.5°	3441.5	3459.4	3518.5	3623.3	3650.4
15°	3307.4	3341.0	3413.8	3546.2	3592.9
17.5°	3169.0	3210.2	3300.3	3457.2	3520.1
20°	3013.2	3054.5	3169.5	3344.3	3425.7
22.5°	2856.9	2897.1	3037.7	3223.8	3325.3
25°	2668.6	2731.0	2884.1	3084.9	3194.5
27.5°	2488.4	2554.6	2725.0	2940.5	3049.6
30°	2298.5	2376.1	2561.1	2766.8	2890.6
32.5°	2110.1	2188.8	2377.7	2592.1	2714.7
35°	1914.8	2003.2	2191.0	2396.2	2511.2
37.5°	1716.7	1813.3	2006.5	2208.4	2301.2
40°	1532.7	1627.6	1819.2	2000.0	2111.8
42.5°	1362.8	1456.1	1633.6	1797.5	1897.9
45°	1191.8	1284.6	1463.7	1607.6	1697.7
47.5°	1038.8	1133.8	1300.4	1445.8	1521.3
50°	904.7	991.0	1153.3	1285.2	1364.4
52.5°	782.1	860.8	1021.4	1149.5	1226.0
55°	668.1	747.9	904.2	1027.9	1103.9
57.5°	591.6	648.6	789.1	926.4	1024.1
60°	524.8	560.1	690.9	853.7	907.4
62.5°	457.0	489.0	596.5	739.7	823.3
65°	403.2	427.1	514.0	660.0	750.1
67.5°	350.1	368.0	442.3	582.9	674.1
70°	303.9	315.3	373.4	506.9	602.4
72.5°	260.0	265.9	318.0	437.4	532.4
75°	213.3	220.9	263.8	366.3	465.1
77.5°	168.8	179.6	217.6	305.6	388.1
80°	129.7	138.4	175.3	251.3	312.6
82.5°	90.1	102.0	136.8	198.6	239.3
85°	55.9	69.5	103.1	154.1	155.2
87.5°	23.3	43.4	75.4	114.0	79.2
90°	0.5	23.3	52.6	80.3	16.8
92.5°	0.0	10.9	35.8	57.5	9.8
95°	0.5	3.8	22.3	38.5	7.1
97.5°	0.0	1.1	11.9	24.4	4.3
100°	0.0	0.5	4.9	13.6	2.7
102.5°	0.0	0.5	2.2	6.0	1.6
105°	0.0	0.5	1.1	2.2	1.1
107.5°	0.0	0.5	0.5	0.5	0.5
110°	0.5	0.5	0.5	0.5	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°	0.5	0.5	0.5	0.0	0.0
117.5°	0.5	0.5	0.5	0.0	0.0
120°	0.5	0.5	0.5	0.0	0.0
122.5°	0.5	0.5	0.5	0.0	0.0
125°	0.5	0.5	0.5	0.0	0.0
127.5°	0.5	0.5	0.5	0.0	0.0
130°	0.5	0.5	0.5	0.0	0.0
132.5°	0.5	1.1	0.5	0.5	0.0
135°	0.5	1.1	0.5	0.5	0.0
137.5°	0.5	1.1	0.5	0.5	0.0
140°	0.5	1.1	0.5	0.5	0.5
142.5°	1.1	1.1	1.1	0.5	0.5
145°	1.1	1.1	1.1	0.5	0.5
147.5°	1.1	1.1	1.1	0.5	0.5
150°	1.1	1.1	1.1	0.5	0.5
152.5°	1.1	1.6	1.1	0.5	0.5
155°	1.1	1.6	1.1	0.5	0.5
157.5°	1.1	1.6	1.1	0.5	0.5
160°	1.1	1.6	1.1	0.5	0.5
162.5°	1.6	1.6	1.1	1.1	0.5
165°	1.6	1.6	1.6	1.1	0.5
167.5°	1.6	1.6	1.6	1.1	0.5
170°	1.6	1.6	1.6	1.1	1.1
172.5°	1.6	1.6	1.6	1.1	1.1
175°	1.6	2.2	1.6	1.1	1.1
177.5°	1.6	2.2	1.6	1.1	1.1
180°	1.6	1.6	1.6	1.6	1.6

(END OF REPORT)