

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: P685750

Luminaire Tested: **4CZL-7-UNV-N-LVR-L935-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685750
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-7-UNV-N-LVR-L935-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @90 CRI and 3500K
Light Source: (392) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

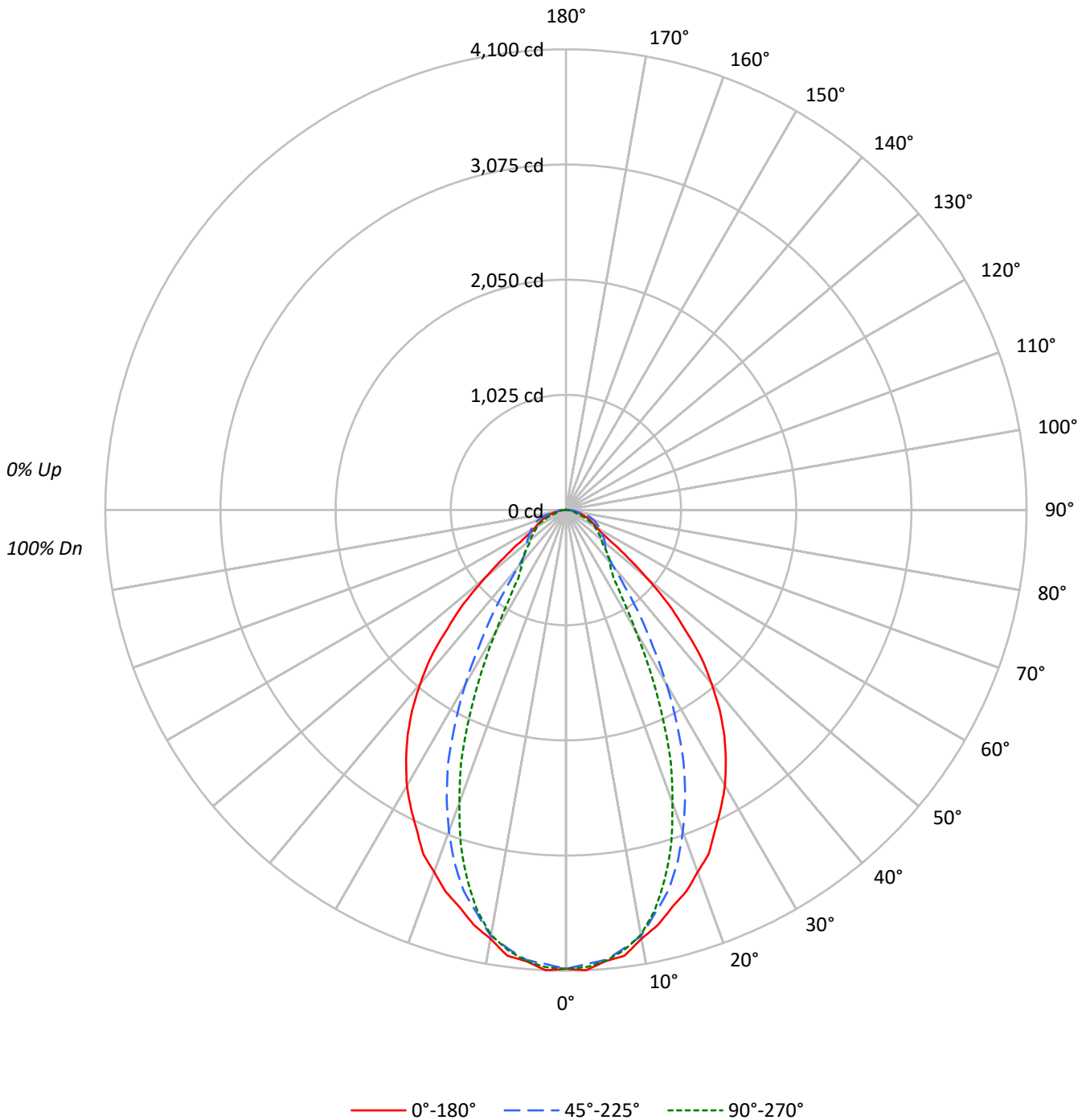
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4833.5 lumens
Efficiency: N/A
Efficacy: 109.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.8 / 0.85
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88
2	103	97	92	87	101	95	90	86	92	88	84	88	85	82	86	83	80	78	78	78
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70	70	70
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63	63	63
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	58	58	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55	53	53	53
7	75	64	57	51	73	63	56	51	62	55	51	60	55	51	59	54	50	49	49	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45	45	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	43	42	42	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39	39	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13183	13183	13183
5°	13066	13029	13063
10°	12698	12620	12589
15°	12227	11739	11367
20°	11777	10457	9520
25°	11191	8830	7259
30°	10556	6679	4638
35°	9689	4528	2914
40°	8497	2759	2556
45°	6808	2298	2290
50°	4707	2271	2068
55°	2773	2251	1947
60°	2066	2339	1923
65°	1956	2355	1692
70°	1881	2511	1276
75°	1774	2520	1092
80°	1646	2090	1235
85°	1460	2538	1526



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	379.2	7.8
10°-20°	981.9	20.3
20°-30°	1147.1	23.7
30°-40°	851.0	17.6
40°-50°	564.2	11.7
50°-60°	374.2	7.7
60°-70°	279.2	5.8
70°-80°	164.8	3.4
80°-90°	69.4	1.4
90°-100°	15.0	0.3
100°-110°	2.0	0.0
110°-120°	1.0	0.0
120°-130°	0.9	0.0
130°-140°	0.9	0.0
140°-150°	0.9	0.0
150°-160°	0.8	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	2508.3	51.9
0°-40°	3359.3	69.5
0°-60°	4297.7	88.9
0°-90°	4811.0	99.5
90°-120°	18.0	0.4
90°-150°	20.8	0.4
90°-180°	22.0	0.5
0°-180°	4833.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4082	4082	4082	4082	4082	
5°	4031	4028	4020	4034	4030	381
15°	3657	3614	3511	3451	3400	1032
25°	3141	2915	2478	2126	2037	1447
35°	2458	1821	1149	776	739	1526
45°	1491	880	503	522	502	1147
55°	492	433	400	386	346	485
65°	256	286	308	301	221	255
75°	142	159	202	147	88	150
85°	39	48	68	91	41	43
90°	1	14	34	59	12	3
95°	0	2	14	29	6	0
105°	0	1	1	2	2	0
115°	0	1	1	1	1	0
125°	1	1	1	1	1	0
135°	1	1	1	1	1	1
145°	1	1	1	2	2	1
155°	1	2	2	2	2	1
165°	2	2	2	2	2	0
175°	2	2	2	3	3	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4082.5	4082.5	4082.5	4082.5	4082.5
2.5°	4100.1	4078.0	4046.1	4074.8	4072.4
5°	4030.9	4027.5	4019.5	4034.0	4029.9
7.5°	3999.8	3981.1	3936.8	3971.1	3951.7
10°	3872.5	3850.7	3848.6	3841.7	3839.3
12.5°	3782.2	3755.9	3671.9	3667.4	3648.7
15°	3657.4	3613.8	3511.4	3450.9	3400.0
17.5°	3560.5	3465.7	3294.9	3182.1	3116.8
20°	3427.0	3322.6	3043.1	2846.3	2770.2
22.5°	3317.0	3132.0	2772.6	2494.2	2441.9
25°	3141.0	2915.1	2478.3	2125.8	2037.3
27.5°	2988.1	2676.4	2131.0	1744.3	1635.7
30°	2831.1	2409.1	1791.3	1370.0	1243.8
32.5°	2648.1	2139.6	1441.6	1028.0	936.7
35°	2457.8	1821.1	1148.7	776.5	739.2
37.5°	2248.2	1534.7	863.3	648.5	654.8
40°	2015.8	1285.0	654.4	594.6	606.3
42.5°	1784.1	1074.7	544.4	559.3	562.8
45°	1490.8	879.6	503.3	522.3	501.5
47.5°	1234.5	718.7	474.2	472.1	442.7
50°	937.0	585.9	452.1	427.2	411.6
52.5°	693.8	494.3	431.0	403.6	387.7
55°	492.5	432.7	399.8	386.0	345.9
57.5°	370.1	389.1	376.0	344.8	316.8
60°	319.9	350.7	362.1	325.1	297.8
62.5°	288.8	317.9	339.7	313.4	272.6
65°	256.0	286.0	308.2	301.3	221.4
67.5°	227.2	260.8	288.1	258.4	180.9
70°	199.2	230.4	266.0	219.3	135.2
72.5°	169.1	192.7	235.5	170.5	98.6
75°	142.2	159.1	202.0	146.7	87.5
77.5°	113.8	128.0	138.4	133.5	77.1
80°	88.5	102.7	112.4	121.4	66.4
82.5°	64.3	73.7	89.2	107.6	55.3
85°	39.4	48.1	68.5	91.0	41.2
87.5°	16.9	29.4	50.2	75.4	27.0
90°	0.7	14.5	34.2	58.8	12.1
92.5°	0.3	6.2	22.1	43.2	8.0
95°	0.3	2.4	13.5	29.4	6.2
97.5°	0.3	1.0	6.9	19.0	4.5
100°	0.3	0.7	3.8	11.1	3.1
102.5°	0.3	0.7	1.7	5.5	2.4
105°	0.3	0.7	1.4	2.4	2.1
107.5°	0.3	0.7	1.0	1.7	1.7
110°	0.3	0.7	1.0	1.7	1.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.3	0.7	1.0	1.7	1.7
115°	0.3	0.7	1.0	1.4	1.4
117.5°	0.3	0.7	1.0	1.4	1.4
120°	0.3	0.7	1.0	1.4	1.4
122.5°	0.3	0.7	1.0	1.4	1.4
125°	0.7	0.7	1.0	1.4	1.4
127.5°	0.7	1.0	1.0	1.4	1.4
130°	0.7	1.0	1.0	1.4	1.4
132.5°	0.7	1.0	1.0	1.4	1.4
135°	0.7	1.0	1.0	1.4	1.4
137.5°	0.7	1.0	1.4	1.4	1.4
140°	1.0	1.4	1.4	1.4	1.4
142.5°	1.0	1.4	1.4	1.7	1.4
145°	1.0	1.4	1.4	1.7	1.7
147.5°	1.0	1.4	1.7	1.7	1.7
150°	1.0	1.4	1.7	2.1	2.1
152.5°	1.4	1.4	1.7	2.1	2.1
155°	1.4	1.7	1.7	2.1	2.1
157.5°	1.4	1.7	1.7	2.1	2.4
160°	1.4	1.7	2.1	2.4	2.4
162.5°	1.4	1.7	2.1	2.4	2.4
165°	1.7	2.1	2.1	2.4	2.4
167.5°	1.7	2.1	2.4	2.4	2.8
170°	1.7	2.1	2.4	2.8	2.8
172.5°	1.7	2.1	2.4	2.8	2.8
175°	1.7	2.1	2.4	2.8	3.1
177.5°	1.7	2.1	2.4	2.8	3.1
180°	2.4	2.4	2.4	2.4	2.4

(END OF REPORT)