

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: P685852

Luminaire Tested: **4CZL-12-UNV-W-LVR-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685852
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-W-LVR-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @80 CRI and 4000K
Light Source: (588) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

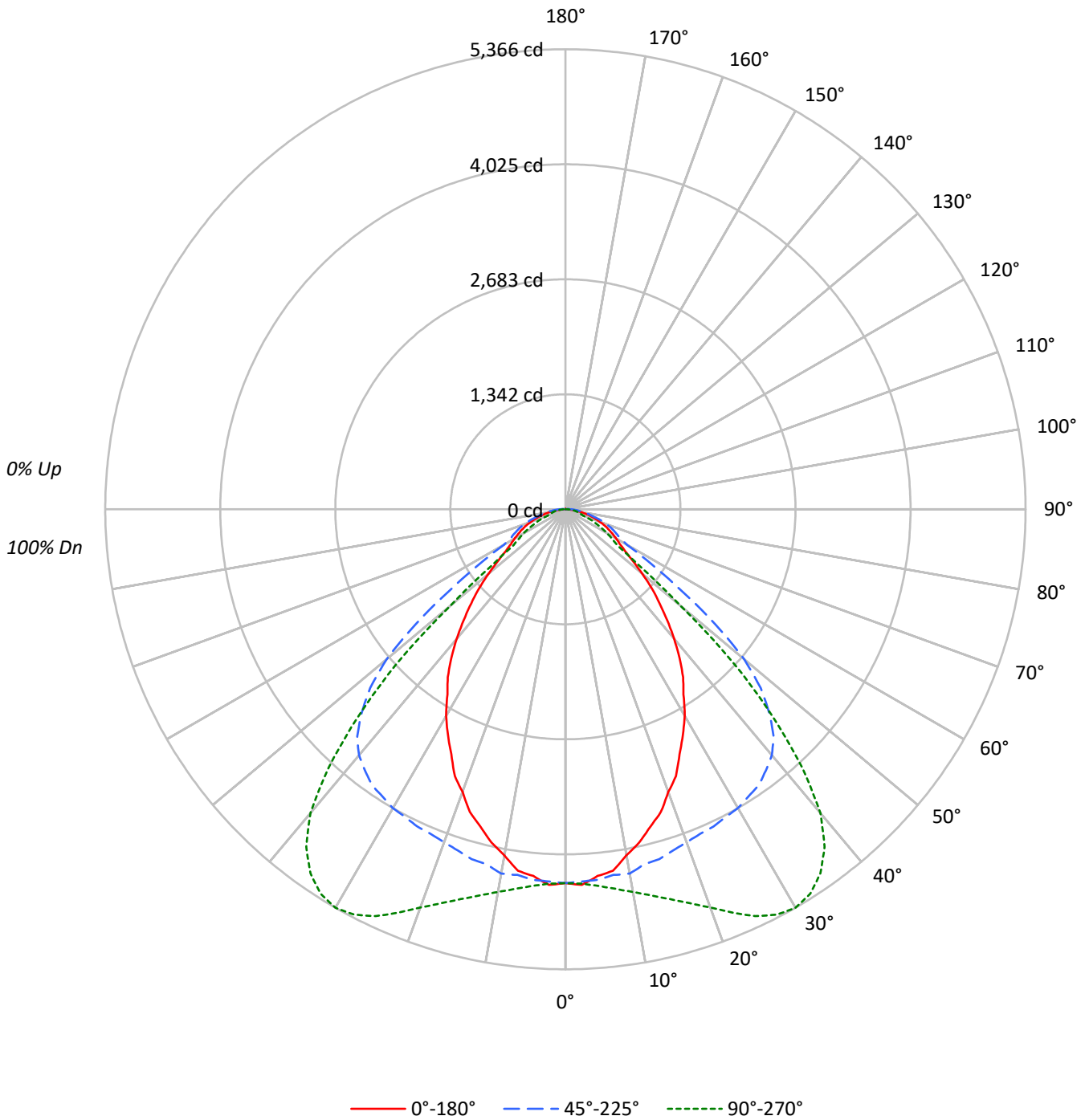
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10373.0 lumens
Efficiency: N/A
Efficacy: 134.7 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): 77
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	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	88	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°	14079	14079	14079
5°	13918	14062	14293
10°	13438	14149	14861
15°	12806	14121	15735
20°	12054	14198	16985
25°	11223	14547	18655
30°	10375	15007	20010
35°	9426	15493	20430
40°	8311	15785	19492
45°	7084	15354	15627
50°	5871	13653	8867
55°	4782	9225	4242
60°	4415	5364	3664
65°	4257	4934	2978
70°	4016	4841	2129
75°	3738	4419	2069
80°	3409	4342	2272
85°	2612	5202	2505



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	414.6	4.0
10°-20°	1203.4	11.6
20°-30°	1909.7	18.4
30°-40°	2385.2	23.0
40°-50°	2190.7	21.1
50°-60°	1169.1	11.3
60°-70°	601.7	5.8
70°-80°	330.9	3.2
80°-90°	136.5	1.3
90°-100°	26.3	0.3
100°-110°	1.4	0.0
110°-120°	0.3	0.0
120°-130°	0.4	0.0
130°-140°	0.8	0.0
140°-150°	0.7	0.0
150°-160°	0.5	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	3527.7	34.0
0°-40°	5912.9	57.0
0°-60°	9272.8	89.4
0°-90°	10341.9	99.7
90°-120°	28.1	0.3
90°-150°	30.1	0.3
90°-180°	31.0	0.3
0°-180°	10373.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4360	4360	4360	4360	4360	
5°	4294	4305	4338	4405	4409	406
15°	3830	3956	4224	4568	4707	1077
25°	3150	3446	4083	4830	5236	1451
35°	2391	2833	3930	4788	5182	1484
45°	1551	2236	3362	3484	3422	1201
55°	849	1523	1638	918	753	784
65°	557	730	646	526	390	550
75°	300	332	354	315	166	318
85°	70	92	140	185	68	81
90°	0	26	69	112	14	3
95°	0	3	26	52	6	0
105°	0	1	1	1	0	0
115°	0	1	1	0	0	0
125°	0	1	1	0	0	0
135°	1	2	2	1	1	1
145°	1	2	2	1	1	0
155°	2	2	2	1	1	1
165°	2	2	2	1	1	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°	4359.9	4359.9	4359.9	4359.9	4359.9
2.5°	4385.4	4375.9	4344.7	4373.0	4370.9
5°	4293.8	4304.7	4338.1	4405.0	4409.4
7.5°	4253.0	4282.9	4301.8	4446.5	4465.4
10°	4098.1	4144.7	4314.9	4465.4	4532.3
12.5°	3981.8	4075.6	4240.7	4495.9	4612.3
15°	3830.5	3955.6	4223.9	4567.9	4706.8
17.5°	3701.8	3829.8	4173.0	4622.5	4816.7
20°	3507.6	3739.6	4131.6	4679.2	4942.5
22.5°	3368.7	3603.6	4099.6	4729.4	5091.6
25°	3149.8	3445.8	4082.9	4830.5	5235.6
27.5°	2966.5	3312.7	4045.8	4895.2	5330.8
30°	2782.5	3149.8	4024.7	4906.8	5366.5
32.5°	2560.7	3017.4	3971.6	4879.9	5315.6
35°	2391.2	2832.7	3930.1	4787.6	5182.5
37.5°	2184.7	2687.2	3839.2	4620.3	4964.3
40°	1971.6	2552.7	3744.7	4359.2	4623.9
42.5°	1756.3	2401.4	3593.4	4010.9	4091.6
45°	1551.3	2236.3	3362.1	3484.3	3421.8
47.5°	1367.3	2058.9	3088.7	2824.0	2677.1
50°	1168.7	1878.5	2717.8	2149.8	1765.1
52.5°	989.8	1728.0	2207.2	1456.0	1098.2
55°	849.4	1522.9	1638.5	917.8	753.4
57.5°	749.8	1365.8	1182.5	725.8	645.1
60°	683.6	1169.4	830.5	666.2	567.3
62.5°	618.2	925.1	710.5	607.3	477.1
65°	557.1	730.2	645.8	526.5	389.8
67.5°	493.8	592.7	583.3	477.8	325.1
70°	425.4	487.3	512.7	400.0	225.5
72.5°	364.4	408.7	436.4	341.8	191.3
75°	299.6	332.4	354.2	314.9	165.8
77.5°	237.8	267.6	288.7	285.1	145.5
80°	183.3	202.9	233.5	255.3	122.2
82.5°	125.1	139.6	184.0	220.4	95.3
85°	70.5	92.4	140.4	184.7	67.6
87.5°	20.4	54.5	101.8	148.4	39.3
90°	0.0	26.2	69.1	112.0	14.5
92.5°	0.0	10.2	45.1	78.5	10.2
95°	0.0	2.9	26.2	51.6	6.5
97.5°	0.0	0.7	12.4	30.5	2.9
100°	0.0	0.7	4.4	14.5	0.7
102.5°	0.0	0.7	1.5	5.1	0.0
105°	0.0	0.7	0.7	0.7	0.0
107.5°	0.0	0.7	0.7	0.0	0.0
110°	0.0	0.7	0.7	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.7	0.7	0.0	0.0
115°	0.0	0.7	0.7	0.0	0.0
117.5°	0.0	0.7	0.7	0.0	0.0
120°	0.0	0.7	0.7	0.0	0.0
122.5°	0.0	0.7	0.7	0.0	0.0
125°	0.0	0.7	0.7	0.0	0.0
127.5°	0.7	0.7	0.7	0.7	0.0
130°	0.7	1.5	1.5	0.7	0.0
132.5°	0.7	1.5	1.5	0.7	0.0
135°	0.7	1.5	1.5	0.7	0.7
137.5°	0.7	1.5	1.5	0.7	0.7
140°	0.7	1.5	1.5	0.7	0.7
142.5°	0.7	1.5	1.5	0.7	0.7
145°	0.7	1.5	1.5	0.7	0.7
147.5°	0.7	1.5	1.5	0.7	0.7
150°	0.7	1.5	1.5	0.7	0.7
152.5°	1.5	1.5	1.5	0.7	0.7
155°	1.5	1.5	1.5	0.7	0.7
157.5°	1.5	1.5	1.5	0.7	0.7
160°	1.5	1.5	1.5	0.7	0.7
162.5°	1.5	2.2	1.5	0.7	0.7
165°	1.5	2.2	1.5	0.7	0.7
167.5°	1.5	2.2	1.5	0.7	0.7
170°	1.5	2.2	1.5	0.7	0.7
172.5°	1.5	2.2	1.5	0.7	0.7
175°	2.2	2.2	1.5	0.7	0.7
177.5°	2.2	2.2	1.5	1.5	1.5
180°	1.5	1.5	1.5	1.5	1.5

(END OF REPORT)