

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: P685873

Luminaire Tested: **4CZL-16-UNV-W-LVR-L935-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685873
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-W-LVR-L935-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @90 CRI and 3500K
Light Source: (588) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

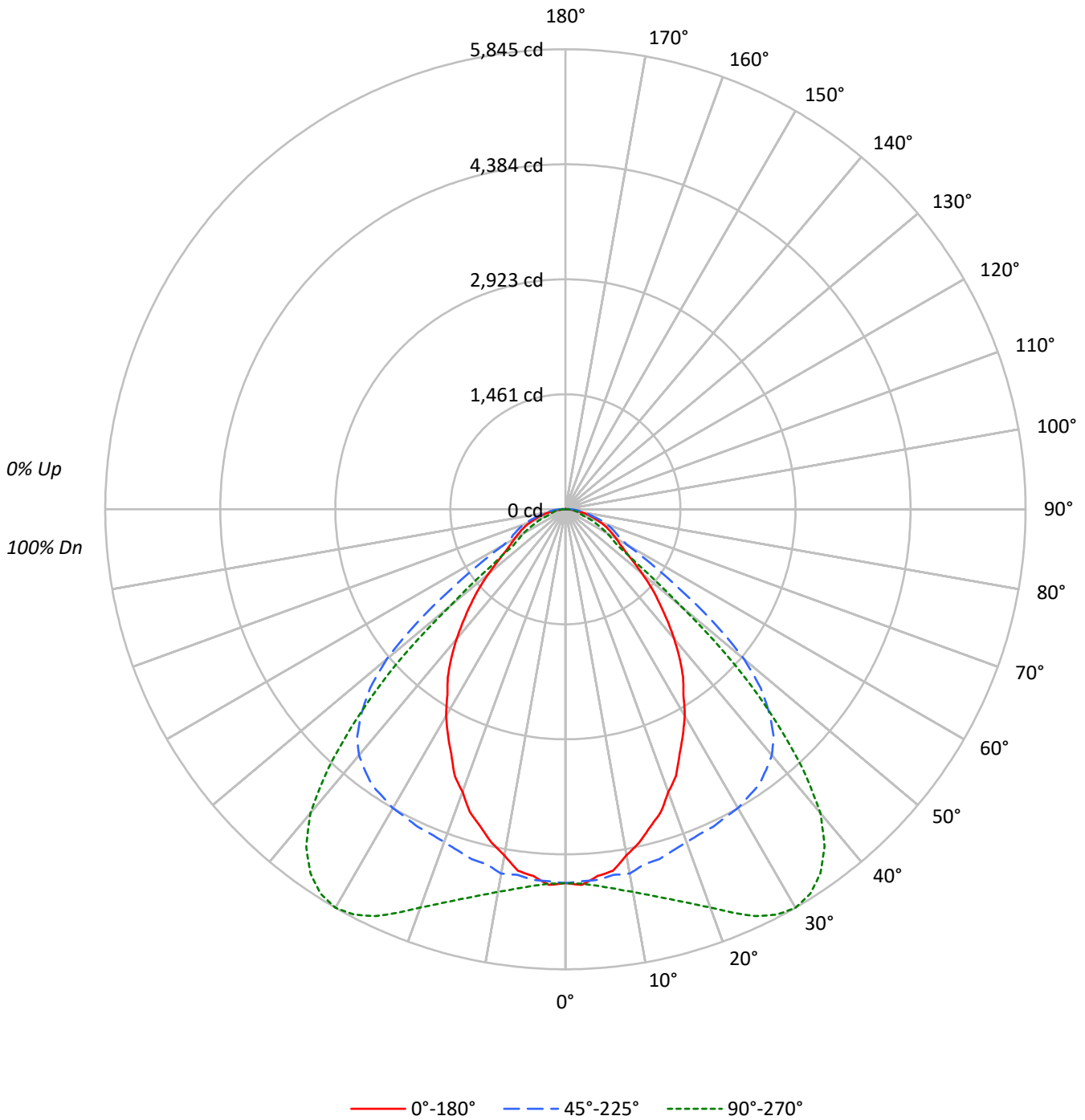
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11298.6 lumens
Efficiency: N/A
Efficacy: 109.7 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): 103
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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	89	89	89	87
2	102	95	89	84	99	93	88	83	89	85	81	86	82	79	83	80	77	77	77	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	68	68	68	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	59	59	59	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	53	53	53	51
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	47	47	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	42	42	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	38	38	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	34	34	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	31	31	31	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15335	15335	15335
5°	15160	15317	15568
10°	14637	15411	16187
15°	13948	15381	17139
20°	13129	15465	18500
25°	12224	15845	20319
30°	11301	16346	21796
35°	10268	16875	22253
40°	9053	17194	21231
45°	7716	16724	17021
50°	6395	14872	9659
55°	5209	10048	4620
60°	4809	5842	3991
65°	4637	5375	3244
70°	4375	5273	2319
75°	4072	4813	2253
80°	3712	4729	2475
85°	2845	5665	2731



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	451.5	4.0
10°-20°	1310.8	11.6
20°-30°	2080.1	18.4
30°-40°	2598.0	23.0
40°-50°	2386.2	21.1
50°-60°	1273.5	11.3
60°-70°	655.4	5.8
70°-80°	360.4	3.2
80°-90°	148.7	1.3
90°-100°	28.7	0.3
100°-110°	1.6	0.0
110°-120°	0.4	0.0
120°-130°	0.5	0.0
130°-140°	0.9	0.0
140°-150°	0.8	0.0
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	3842.5	34.0
0°-40°	6440.5	57.0
0°-60°	10100.2	89.4
0°-90°	11264.7	99.7
90°-120°	30.7	0.3
90°-150°	32.8	0.3
90°-180°	34.0	0.3
0°-180°	11298.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4749	4749	4749	4749	4749	
5°	4677	4689	4725	4798	4803	442
15°	4172	4308	4601	4976	5127	1173
25°	3431	3753	4447	5262	5703	1581
35°	2605	3086	4281	5215	5645	1617
45°	1690	2436	3662	3795	3727	1308
55°	925	1659	1785	1000	821	854
65°	607	795	703	574	425	599
75°	326	362	386	343	181	346
85°	77	101	153	201	74	88
90°	0	28	75	122	16	3
95°	0	3	28	56	7	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	1
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°	4749.0	4749.0	4749.0	4749.0	4749.0
2.5°	4776.7	4766.4	4732.3	4763.2	4760.9
5°	4676.9	4688.8	4725.2	4798.1	4802.8
7.5°	4632.5	4665.0	4685.6	4843.2	4863.8
10°	4463.8	4514.5	4699.9	4863.8	4936.7
12.5°	4337.1	4439.2	4619.1	4897.1	5023.9
15°	4172.3	4308.5	4600.8	4975.5	5126.8
17.5°	4032.1	4171.5	4545.4	5035.0	5246.5
20°	3820.6	4073.3	4500.2	5096.7	5383.5
22.5°	3669.3	3925.1	4465.4	5151.4	5545.9
25°	3430.8	3753.2	4447.2	5261.5	5702.7
27.5°	3231.2	3608.3	4406.8	5332.0	5806.5
30°	3030.8	3430.8	4383.8	5344.7	5845.3
32.5°	2789.2	3286.7	4326.0	5315.4	5789.9
35°	2604.6	3085.5	4280.8	5214.8	5644.9
37.5°	2379.6	2927.0	4181.8	5032.6	5407.3
40°	2147.5	2780.5	4078.8	4748.2	5036.5
42.5°	1913.1	2615.7	3914.0	4368.7	4456.7
45°	1689.7	2435.9	3662.1	3795.2	3727.1
47.5°	1489.3	2242.6	3364.3	3075.9	2915.9
50°	1273.0	2046.1	2960.3	2341.6	1922.6
52.5°	1078.1	1882.2	2404.2	1585.9	1196.2
55°	925.2	1658.8	1784.7	999.7	820.7
57.5°	816.7	1487.7	1288.0	790.6	702.6
60°	744.6	1273.8	904.6	725.6	617.9
62.5°	673.3	1007.6	773.9	661.5	519.7
65°	606.8	795.3	703.4	573.5	424.6
67.5°	537.9	645.6	635.3	520.4	354.1
70°	463.4	530.7	558.5	435.7	245.6
72.5°	396.9	445.2	475.3	372.3	208.3
75°	326.4	362.0	385.8	343.0	180.6
77.5°	259.0	291.5	314.5	310.5	158.4
80°	199.6	221.0	254.3	278.0	133.1
82.5°	136.3	152.1	200.4	240.0	103.8
85°	76.8	100.6	152.9	201.2	73.7
87.5°	22.2	59.4	110.9	161.6	42.8
90°	0.0	28.5	75.3	122.0	15.8
92.5°	0.0	11.1	49.1	85.6	11.1
95°	0.0	3.2	28.5	56.2	7.1
97.5°	0.0	0.8	13.5	33.3	3.2
100°	0.0	0.8	4.8	15.8	0.8
102.5°	0.0	0.8	1.6	5.5	0.0
105°	0.0	0.8	0.8	0.8	0.0
107.5°	0.0	0.8	0.8	0.0	0.0
110°	0.0	0.8	0.8	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.8	0.8	0.0	0.0
115°	0.0	0.8	0.8	0.0	0.0
117.5°	0.0	0.8	0.8	0.0	0.0
120°	0.0	0.8	0.8	0.0	0.0
122.5°	0.0	0.8	0.8	0.0	0.0
125°	0.0	0.8	0.8	0.0	0.0
127.5°	0.8	0.8	0.8	0.8	0.0
130°	0.8	1.6	1.6	0.8	0.0
132.5°	0.8	1.6	1.6	0.8	0.0
135°	0.8	1.6	1.6	0.8	0.8
137.5°	0.8	1.6	1.6	0.8	0.8
140°	0.8	1.6	1.6	0.8	0.8
142.5°	0.8	1.6	1.6	0.8	0.8
145°	0.8	1.6	1.6	0.8	0.8
147.5°	0.8	1.6	1.6	0.8	0.8
150°	0.8	1.6	1.6	0.8	0.8
152.5°	1.6	1.6	1.6	0.8	0.8
155°	1.6	1.6	1.6	0.8	0.8
157.5°	1.6	1.6	1.6	0.8	0.8
160°	1.6	1.6	1.6	0.8	0.8
162.5°	1.6	2.4	1.6	0.8	0.8
165°	1.6	2.4	1.6	0.8	0.8
167.5°	1.6	2.4	1.6	0.8	0.8
170°	1.6	2.4	1.6	0.8	0.8
172.5°	1.6	2.4	1.6	0.8	0.8
175°	2.4	2.4	1.6	0.8	0.8
177.5°	2.4	2.4	1.6	1.6	1.6
180°	1.6	1.6	1.6	1.6	1.6

(END OF REPORT)