

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: P685893

Luminaire Tested: **4CZL-16-UNV-W-LVR-L950-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685893  
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-L950-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @90 CRI and 5000K  
Light Source: (588) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

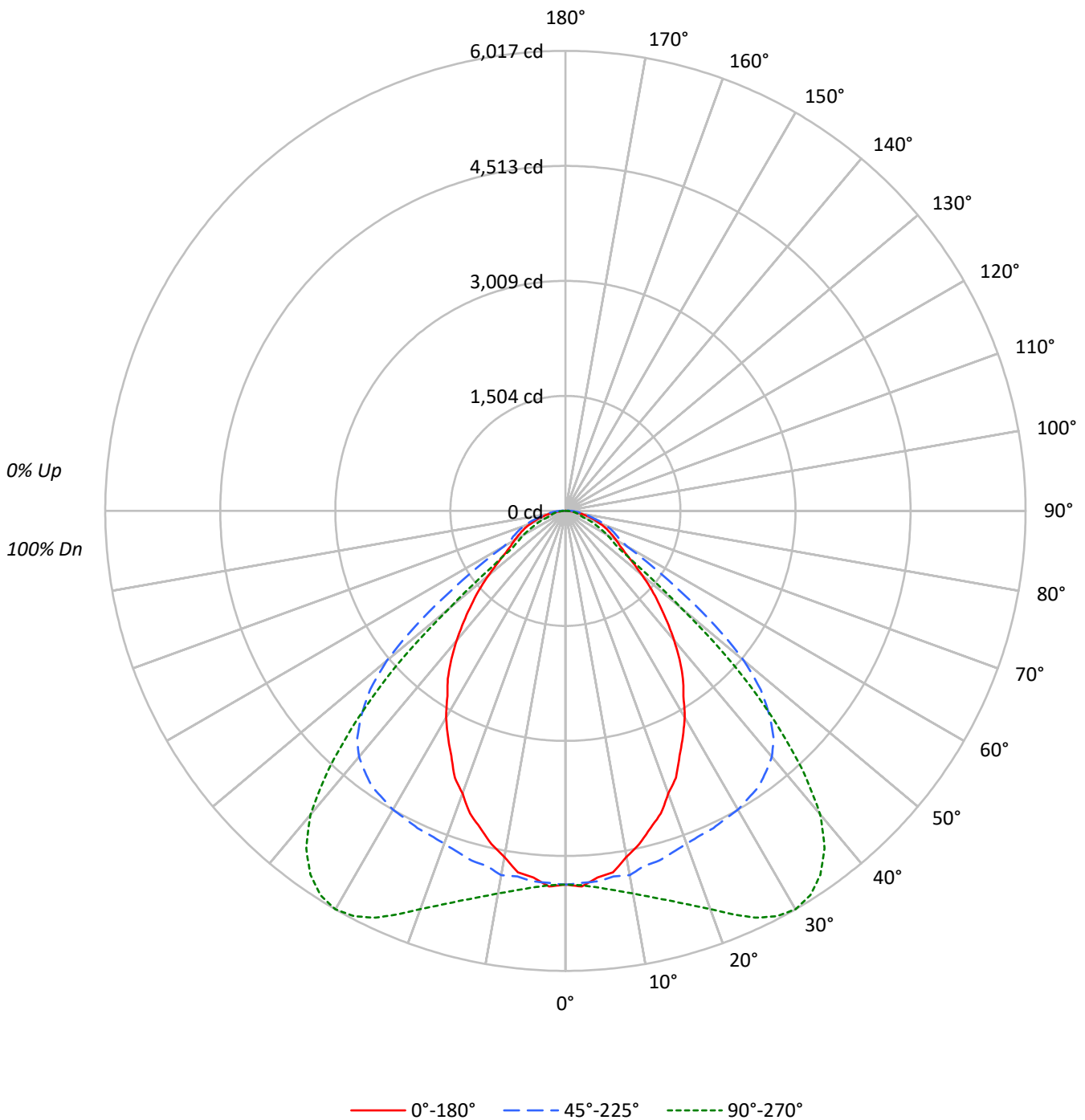
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11629.7 lumens  
Efficiency: N/A  
Efficacy: 112.9 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 (A<sub>in</sub>): 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				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°	15785	15785	15785
5°	15605	15766	16025
10°	15066	15863	16662
15°	14357	15832	17642
20°	13514	15918	19042
25°	12582	16310	20915
30°	11632	16825	22434
35°	10568	17370	22905
40°	9318	17698	21853
45°	7943	17214	17519
50°	6583	15307	9941
55°	5362	10342	4756
60°	4950	6014	4108
65°	4773	5533	3339
70°	4504	5427	2387
75°	4191	4954	2319
80°	3822	4867	2548
85°	2931	5832	2808



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	464.8	4.0
10°-20°	1349.2	11.6
20°-30°	2141.1	18.4
30°-40°	2674.2	23.0
40°-50°	2456.2	21.1
50°-60°	1310.8	11.3
60°-70°	674.6	5.8
70°-80°	370.9	3.2
80°-90°	153.0	1.3
90°-100°	29.5	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°	3955.1	34.0
0°-40°	6629.2	57.0
0°-60°	10396.2	89.4
0°-90°	11594.8	99.7
90°-120°	31.5	0.3
90°-150°	33.7	0.3
90°-180°	35.0	0.3
0°-180°	11629.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4888	4888	4888	4888	4888	
5°	4814	4826	4864	4939	4944	455
15°	4295	4435	4736	5121	5277	1208
25°	3531	3863	4578	5416	5870	1627
35°	2681	3176	4406	5368	5810	1664
45°	1739	2507	3770	3906	3836	1346
55°	952	1707	1837	1029	845	879
65°	625	819	724	590	437	617
75°	336	373	397	353	186	357
85°	79	104	157	207	76	91
90°	0	29	78	126	16	3
95°	0	3	29	58	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	



TEST NUMBER: P685893

CATALOG NUMBER: 4CZL-16-UNV-W-LVR-L950-CD-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4888.2	4888.2	4888.2	4888.2	4888.2
2.5°	4916.7	4906.1	4871.0	4902.8	4900.4
5°	4814.0	4826.2	4863.7	4938.7	4943.6
7.5°	4768.3	4801.7	4822.9	4985.2	5006.4
10°	4594.6	4646.8	4837.6	5006.4	5081.4
12.5°	4464.2	4569.3	4754.4	5040.6	5171.1
15°	4294.6	4434.8	4735.7	5121.4	5277.1
17.5°	4150.2	4293.8	4678.6	5182.5	5400.2
20°	3932.5	4192.6	4632.1	5246.1	5541.3
22.5°	3776.8	4040.2	4596.3	5302.4	5708.4
25°	3531.4	3863.2	4577.5	5415.7	5869.9
27.5°	3325.9	3714.0	4535.9	5488.3	5976.7
30°	3119.6	3531.4	4512.3	5501.3	6016.6
32.5°	2870.9	3383.0	4452.7	5471.1	5959.6
35°	2680.9	3175.9	4406.3	5367.6	5810.3
37.5°	2449.4	3012.8	4304.4	5180.1	5565.7
40°	2210.5	2862.0	4198.4	4887.3	5184.1
42.5°	1969.1	2692.4	4028.8	4496.8	4587.3
45°	1739.2	2507.3	3769.5	3906.4	3836.3
47.5°	1532.9	2308.3	3462.9	3166.1	3001.4
50°	1310.3	2106.1	3047.0	2410.2	1978.9
52.5°	1109.7	1937.3	2474.7	1632.4	1231.2
55°	952.4	1707.4	1837.0	1029.0	844.7
57.5°	840.6	1531.3	1325.8	813.7	723.2
60°	766.5	1311.1	931.2	746.9	636.0
62.5°	693.1	1037.2	796.6	680.8	534.9
65°	624.6	818.6	724.1	590.3	437.0
67.5°	553.6	664.5	653.9	535.7	364.5
70°	477.0	546.3	574.8	448.5	252.8
72.5°	408.5	458.2	489.2	383.2	214.4
75°	335.9	372.6	397.1	353.1	185.9
77.5°	266.6	300.1	323.7	319.6	163.1
80°	205.5	227.5	261.7	286.2	137.0
82.5°	140.2	156.6	206.3	247.1	106.8
85°	79.1	103.6	157.4	207.1	75.8
87.5°	22.8	61.2	114.2	166.3	44.0
90°	0.0	29.4	77.5	125.6	16.3
92.5°	0.0	11.4	50.6	88.1	11.4
95°	0.0	3.3	29.4	57.9	7.3
97.5°	0.0	0.8	13.9	34.2	3.3
100°	0.0	0.8	4.9	16.3	0.8
102.5°	0.0	0.8	1.6	5.7	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)