

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: P685713

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685713
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-LVR-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

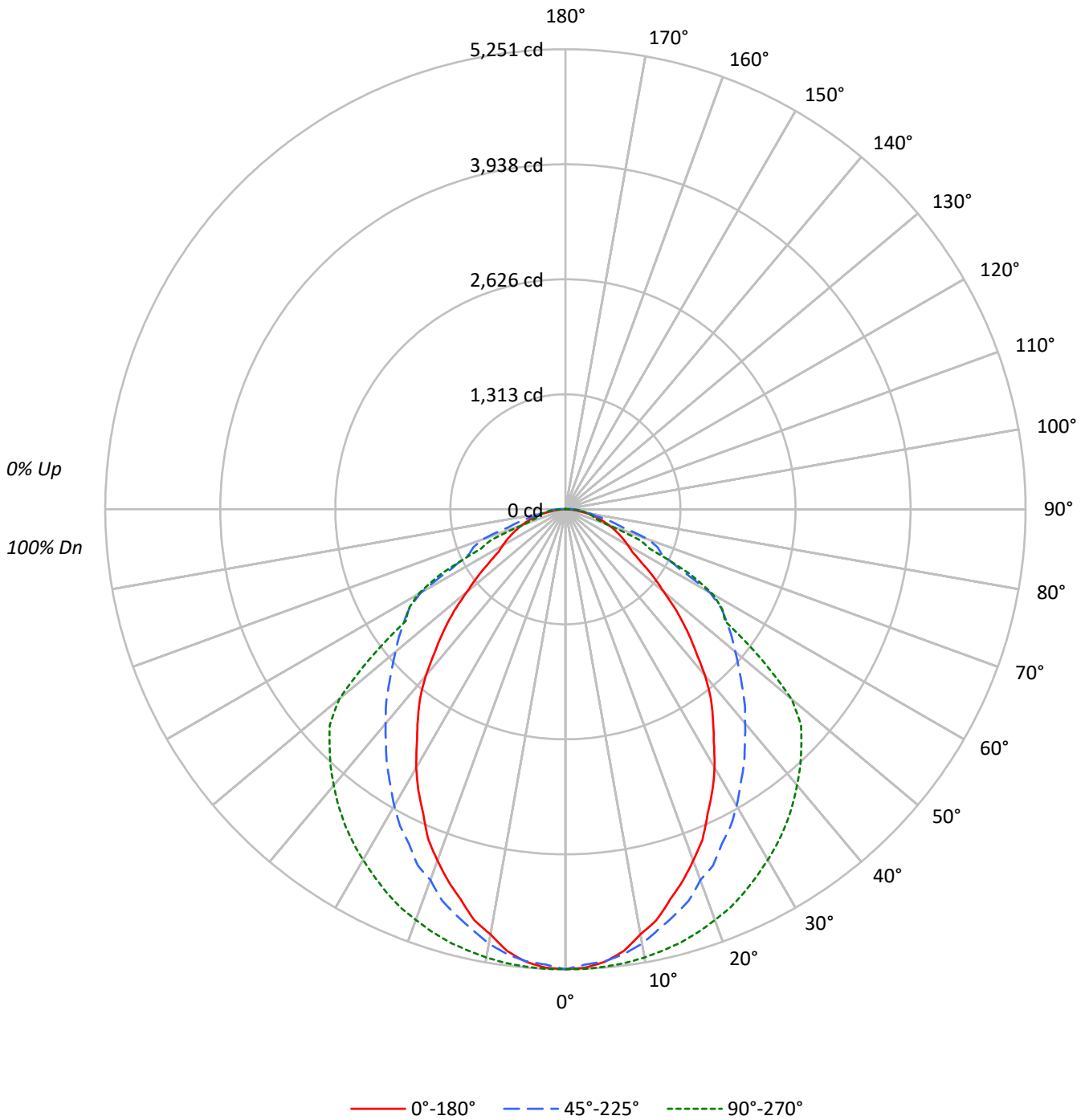
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11889.6 lumens
Efficiency: N/A
Efficacy: 115.4 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1.31 / 1.26
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				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	100	100	100	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85	85	85	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73	73	73	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63	63	63	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54	54	54	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	47	47	47	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42	42	42	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37	37	37	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34	34	34	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30	30	30	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29	28	28	28	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16953	16953	16953
5°	16807	16783	16984
10°	16153	16509	17033
15°	15420	16047	17102
20°	14662	15478	17142
25°	13674	15031	17198
30°	12696	14569	17226
35°	11574	13998	17305
40°	10442	13453	17336
45°	8981	13021	17382
50°	7340	12714	16925
55°	5977	12664	12518
60°	5329	12312	12559
65°	5152	9239	8099
70°	4950	9469	4604
75°	4771	6674	4110
80°	4351	5428	4898
85°	3898	6765	6102



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	491.8	4.1
10°-20°	1363.2	11.5
20°-30°	1972.3	16.6
30°-40°	2251.1	18.9
40°-50°	2211.9	18.6
50°-60°	1764.3	14.8
60°-70°	1111.3	9.3
70°-80°	492.3	4.1
80°-90°	188.8	1.6
90°-100°	37.4	0.3
100°-110°	2.5	0.0
110°-120°	0.3	0.0
120°-130°	0.4	0.0
130°-140°	0.6	0.0
140°-150°	0.5	0.0
150°-160°	0.4	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	3827.3	32.2
0°-40°	6078.4	51.1
0°-60°	10054.5	84.6
0°-90°	11847.0	99.6
90°-120°	40.2	0.3
90°-150°	41.6	0.4
90°-180°	43.0	0.4
0°-180°	11889.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5250	5250	5250	5250	5250	
5°	5185	5196	5178	5221	5239	487
15°	4612	4658	4800	5025	5116	1299
25°	3838	3962	4219	4605	4827	1769
35°	2936	3114	3551	4074	4390	1835
45°	1967	2253	2851	3490	3806	1511
55°	1062	1438	2250	2426	2224	976
65°	674	918	1209	1288	1060	668
75°	382	442	535	405	329	401
85°	105	128	183	236	165	111
90°	1	44	96	140	27	6
95°	1	6	40	68	9	1
105°	1	1	1	2	0	1
115°	1	1	0	0	0	1
125°	1	2	0	0	0	1
135°	1	2	1	0	0	1
145°	2	2	1	0	0	1
155°	2	2	1	0	0	1
165°	2	2	2	1	0	1
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°	5250.0	5250.0	5250.0	5250.0	5250.0
2.5°	5236.2	5232.9	5201.1	5246.0	5250.8
5°	5184.8	5196.2	5177.5	5220.7	5239.4
7.5°	5086.1	5098.4	5120.4	5199.5	5222.3
10°	4926.3	4957.3	5034.8	5145.7	5194.6
12.5°	4804.0	4842.4	4911.7	5100.0	5156.3
15°	4612.4	4658.1	4800.0	5025.0	5115.5
17.5°	4449.4	4532.5	4683.4	4930.4	5056.8
20°	4266.7	4333.6	4504.0	4837.5	4988.3
22.5°	4084.1	4168.9	4401.3	4713.5	4919.0
25°	3837.8	3961.8	4218.6	4605.1	4826.9
27.5°	3629.1	3785.7	4080.8	4477.1	4724.1
30°	3404.9	3526.4	3907.2	4346.6	4619.8
32.5°	3152.1	3342.9	3719.6	4197.4	4510.5
35°	2936.1	3113.8	3550.8	4074.3	4389.8
37.5°	2727.3	2894.5	3364.1	3934.9	4256.1
40°	2477.0	2697.2	3191.3	3775.9	4112.6
42.5°	2199.8	2469.7	3030.7	3625.9	3966.7
45°	1966.6	2252.8	2851.3	3489.7	3806.1
47.5°	1724.5	2026.1	2683.3	3324.2	3647.1
50°	1461.1	1828.0	2530.8	3170.9	3369.0
52.5°	1268.7	1621.7	2393.9	2893.7	2839.9
55°	1061.6	1437.5	2249.5	2425.7	2223.5
57.5°	904.2	1271.1	2114.2	1904.7	2122.4
60°	825.1	1138.2	1906.3	1813.3	1944.6
62.5°	750.9	1021.6	1457.8	1700.8	1599.7
65°	674.3	918.1	1209.2	1288.3	1060.0
67.5°	600.1	828.4	1139.9	962.1	923.0
70°	524.3	759.1	1002.9	820.2	487.6
72.5°	452.5	679.2	685.7	454.1	362.0
75°	382.4	441.9	534.9	405.2	329.4
77.5°	305.8	379.1	357.9	362.8	298.4
80°	234.0	260.9	291.9	324.5	263.4
82.5°	165.5	194.1	236.5	283.7	216.1
85°	105.2	128.0	182.6	235.6	164.7
87.5°	41.6	80.7	136.2	190.0	97.0
90°	0.8	44.0	96.2	140.2	26.9
92.5°	0.8	20.4	64.4	102.7	13.9
95°	0.8	6.5	40.0	68.5	9.0
97.5°	0.8	2.4	21.2	42.4	4.9
100°	0.8	0.8	9.0	22.8	2.4
102.5°	0.8	0.8	3.3	9.0	0.8
105°	0.8	0.8	0.8	2.4	0.0
107.5°	0.8	0.8	0.0	0.0	0.0
110°	0.8	0.8	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)