

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: P685781

Luminaire Tested: **4CZL-9-UNV-M-LVR-L835-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685781
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-M-LVR-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @80 CRI and 3500K
Light Source: (588) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

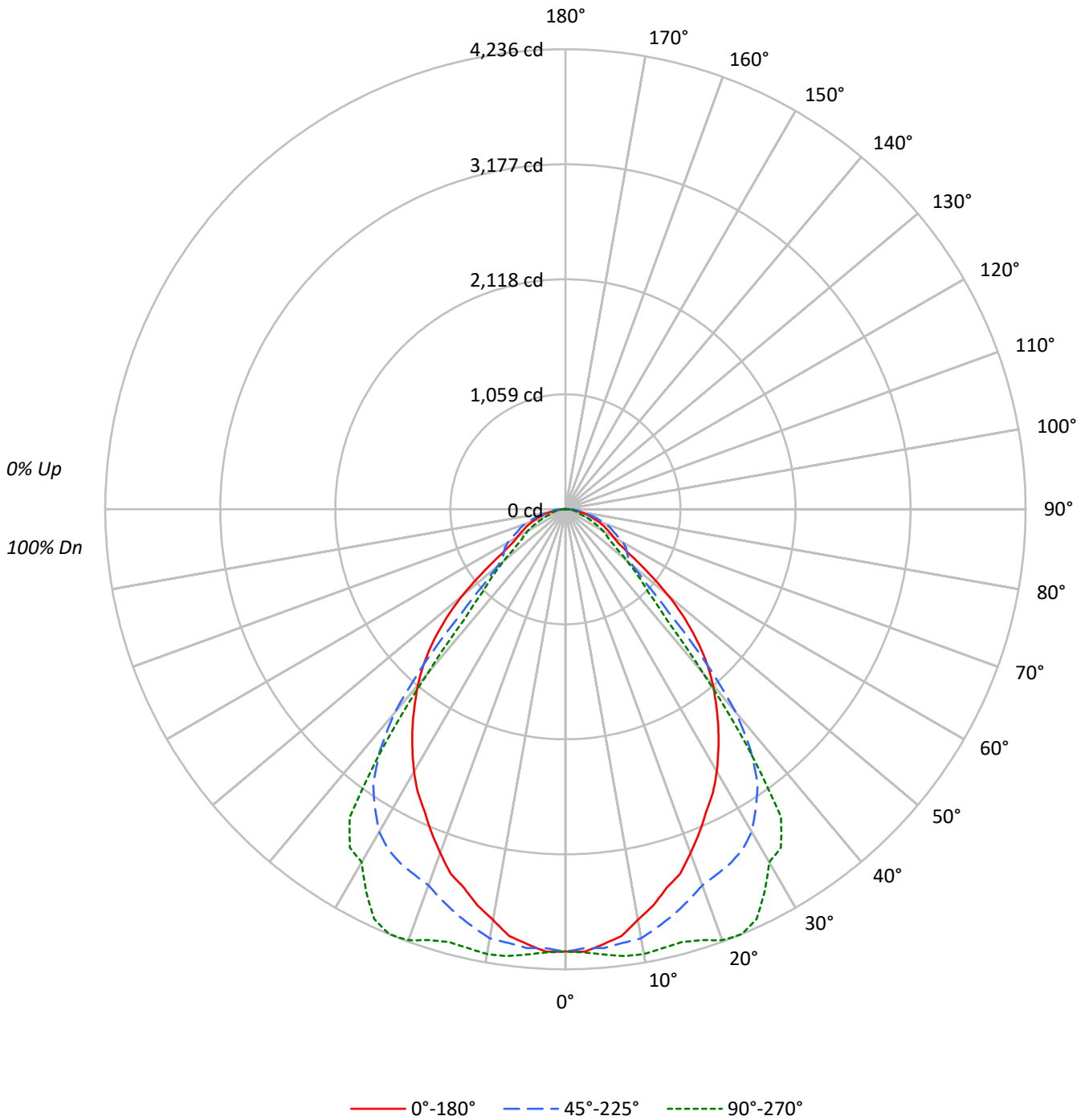
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7533.0 lumens
Efficiency: N/A
Efficacy: 139.5 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.34 / 1.2
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 54
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88
2	103	96	90	86	100	94	89	84	91	86	83	87	84	81	84	81	79	77
3	95	87	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	70	66	62	60
5	83	72	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	54
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	49
7	72	60	53	47	70	59	52	47	58	51	47	57	51	46	55	50	46	44
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13150	13150	13150
5°	13028	13145	13341
10°	12587	13152	13633
15°	12057	12907	13793
20°	11570	12662	14510
25°	10932	12812	14833
30°	10391	12784	13990
35°	9675	12157	13642
40°	8906	10305	8313
45°	7847	6142	4928
50°	6229	4079	3719
55°	4033	3880	2822
60°	3292	3943	2592
65°	3137	3717	2118
70°	2978	3730	1675
75°	2828	3491	1557
80°	2616	3299	1748
85°	2342	4035	2145



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	386.4	5.1
10°-20°	1096.1	14.6
20°-30°	1652.9	21.9
30°-40°	1826.3	24.2
40°-50°	1145.1	15.2
50°-60°	616.5	8.2
60°-70°	418.7	5.6
70°-80°	250.1	3.3
80°-90°	108.7	1.4
90°-100°	23.8	0.3
100°-110°	2.7	0.0
110°-120°	1.0	0.0
120°-130°	0.9	0.0
130°-140°	1.1	0.0
140°-150°	1.0	0.0
150°-160°	0.8	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	3135.4	41.6
0°-40°	4961.7	65.9
0°-60°	6723.4	89.3
0°-90°	7500.8	99.6
90°-120°	27.6	0.4
90°-150°	30.6	0.4
90°-180°	32.0	0.4
0°-180°	7533.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4072	4072	4072	4072	4072	
5°	4019	4026	4055	4103	4116	379
15°	3606	3733	3861	4048	4126	1018
25°	3068	3254	3596	3979	4163	1416
35°	2454	2743	3084	3318	3460	1532
45°	1718	1871	1345	1096	1079	1311
55°	716	749	689	596	501	696
65°	410	451	486	395	277	406
75°	227	252	280	230	125	239
85°	63	78	109	143	58	68
90°	2	24	55	92	17	4
95°	0	4	22	47	8	0
105°	0	1	2	4	2	1
115°	0	1	1	1	1	0
125°	0	1	1	1	1	0
135°	1	1	2	2	2	1
145°	1	2	2	2	2	1
155°	2	2	2	2	2	1
165°	2	2	2	2	2	0
175°	2	2	2	3	3	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4072.2	4072.2	4072.2	4072.2	4072.2
2.5°	4077.5	4066.3	4045.6	4082.8	4083.3
5°	4019.1	4026.0	4055.2	4103.0	4115.7
7.5°	3962.3	3988.8	4028.1	4143.3	4149.2
10°	3838.6	3893.8	4011.1	4122.1	4157.7
12.5°	3735.5	3817.3	3938.4	4084.4	4139.6
15°	3606.5	3732.9	3860.9	4047.8	4125.8
17.5°	3516.2	3617.7	3774.3	4030.8	4158.7
20°	3367.0	3509.9	3684.6	4042.5	4222.5
22.5°	3222.1	3395.7	3639.4	4046.7	4235.7
25°	3068.1	3254.5	3595.9	3979.3	4163.0
27.5°	2940.6	3096.8	3531.1	3838.6	3971.3
30°	2786.7	2970.4	3428.6	3623.5	3752.0
32.5°	2621.0	2854.1	3262.4	3458.9	3692.5
35°	2454.3	2742.6	3084.0	3317.6	3460.5
37.5°	2280.1	2650.7	2803.6	2841.3	2743.6
40°	2112.8	2522.8	2444.7	2079.9	1972.1
42.5°	1930.2	2247.7	1906.8	1431.0	1382.7
45°	1718.3	1870.7	1345.0	1096.5	1079.0
47.5°	1492.6	1448.6	1003.0	916.5	906.4
50°	1239.9	1158.1	811.9	808.7	740.2
52.5°	966.4	919.7	728.0	701.4	592.6
55°	716.3	749.2	689.2	596.3	501.3
57.5°	573.5	649.9	662.1	520.9	448.2
60°	509.8	568.7	610.6	479.0	401.4
62.5°	457.2	503.9	546.9	444.4	346.2
65°	410.5	451.3	486.4	395.1	277.2
67.5°	361.1	403.6	446.6	339.3	235.8
70°	315.4	360.5	395.1	301.1	177.4
72.5°	268.2	314.9	330.3	251.7	141.8
75°	226.7	252.2	279.8	229.9	124.8
77.5°	183.2	205.0	216.1	210.8	109.9
80°	140.7	158.2	177.4	191.7	94.0
82.5°	103.0	115.8	141.8	168.9	75.4
85°	63.2	77.5	108.9	143.4	57.9
87.5°	28.1	46.2	80.2	118.4	37.2
90°	1.6	23.9	55.2	91.9	17.0
92.5°	0.5	10.6	36.1	68.0	11.7
95°	0.5	3.7	21.8	47.3	8.5
97.5°	0.5	1.6	12.2	30.3	5.3
100°	0.5	1.1	5.8	17.5	3.7
102.5°	0.5	1.1	2.7	8.5	2.7
105°	0.5	1.1	1.6	3.7	1.6
107.5°	0.5	1.1	1.1	1.6	1.1
110°	0.5	1.1	1.1	1.1	1.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.5	1.1	1.1	1.1	1.1
115°	0.5	1.1	1.1	1.1	1.1
117.5°	0.5	1.1	1.1	1.1	1.1
120°	0.5	1.1	1.1	1.1	1.1
122.5°	0.5	1.1	1.1	1.1	1.1
125°	0.5	1.1	1.1	1.1	1.1
127.5°	0.5	1.1	1.1	1.1	1.1
130°	0.5	1.1	1.1	1.1	1.1
132.5°	1.1	1.1	1.6	1.6	1.6
135°	1.1	1.1	1.6	1.6	1.6
137.5°	1.1	1.6	1.6	1.6	1.6
140°	1.1	1.6	1.6	1.6	1.6
142.5°	1.1	1.6	1.6	1.6	1.6
145°	1.1	1.6	1.6	1.6	2.1
147.5°	1.1	1.6	1.6	1.6	2.1
150°	1.1	1.6	1.6	1.6	1.6
152.5°	1.6	1.6	1.6	1.6	1.6
155°	1.6	1.6	1.6	1.6	1.6
157.5°	1.6	1.6	1.6	2.1	2.1
160°	1.6	2.1	2.1	2.1	2.1
162.5°	1.6	2.1	2.1	2.1	2.1
165°	1.6	2.1	2.1	2.1	2.1
167.5°	1.6	2.1	2.1	2.1	2.7
170°	2.1	2.1	2.1	2.7	2.7
172.5°	2.1	2.1	2.1	2.7	2.7
175°	2.1	2.1	2.1	2.7	2.7
177.5°	2.1	2.7	2.1	2.7	3.2
180°	2.7	2.7	2.7	2.7	2.7

(END OF REPORT)