

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: P685822

Luminaire Tested: **4CZL-12-UNV-M-LVR-L940-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685822
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-M-LVR-L940-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @90 CRI and 4000K
Light Source: (588) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

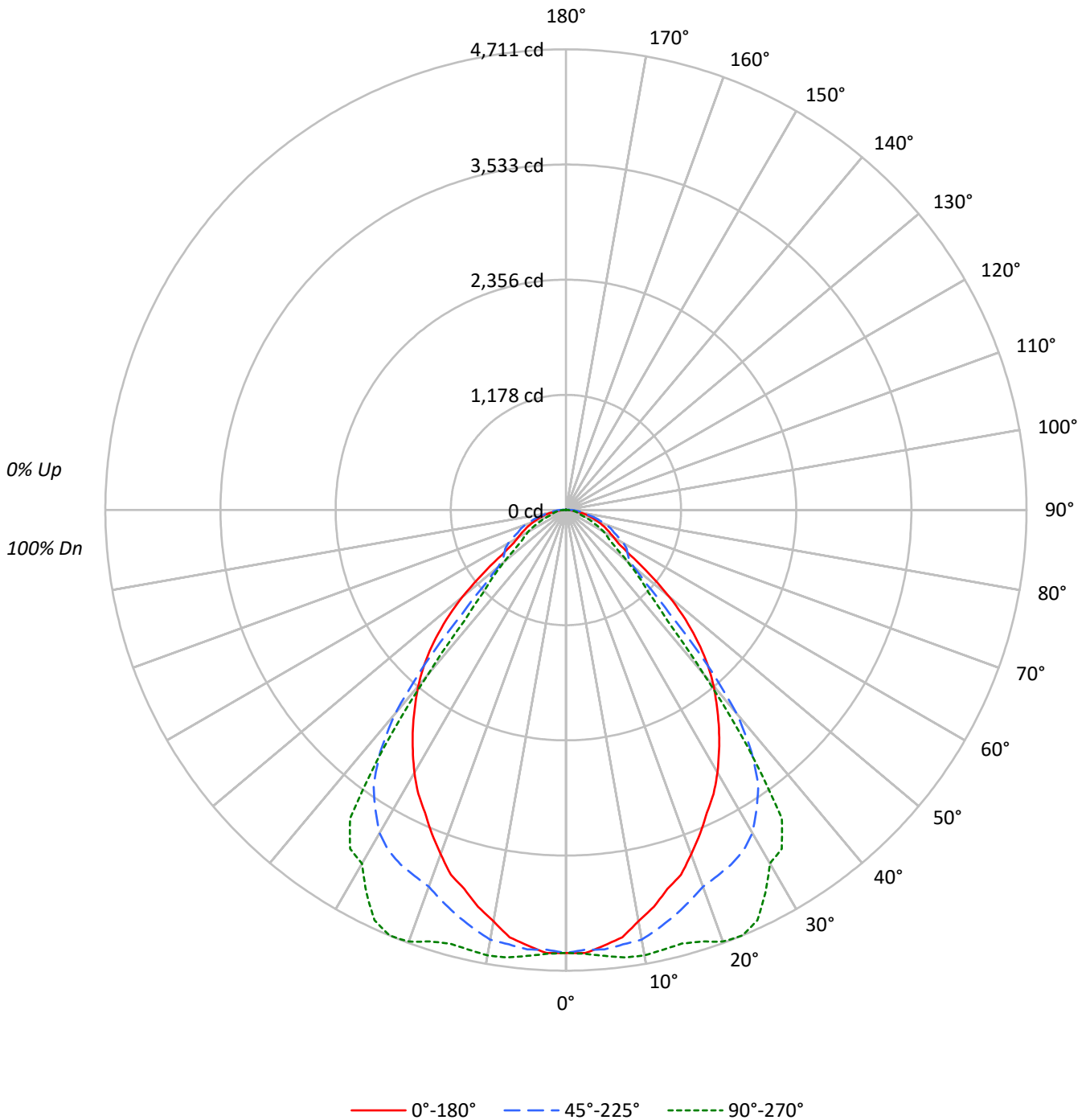
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8378.4 lumens
Efficiency: N/A
Efficacy: 108.8 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): 77
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	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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	90	90	90	88
2	103	96	90	86	100	94	89	84	91	86	83	87	84	81	84	81	79	79	79	79	77
3	95	87	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	70	70	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	70	66	62	62	62	62	60
5	83	72	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	56	56	56	54
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	51	51	51	49
7	72	60	53	47	70	59	52	47	58	51	47	57	51	46	55	50	46	46	46	46	44
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	42	42	42	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	39	39	39	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	35	35	35	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14626	14626	14626
5°	14490	14620	14838
10°	13999	14629	15163
15°	13410	14356	15341
20°	12869	14082	16139
25°	12158	14250	16497
30°	11557	14219	15560
35°	10761	13522	15172
40°	9906	11462	9246
45°	8728	6831	5481
50°	6928	4536	4136
55°	4485	4316	3139
60°	3662	4387	2884
65°	3488	4134	2356
70°	3312	4149	1863
75°	3147	3883	1732
80°	2910	3669	1943
85°	2605	4487	2386



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	429.8	5.1
10°-20°	1219.1	14.6
20°-30°	1838.3	21.9
30°-40°	2031.3	24.2
40°-50°	1273.6	15.2
50°-60°	685.7	8.2
60°-70°	465.7	5.6
70°-80°	278.1	3.3
80°-90°	120.9	1.4
90°-100°	26.5	0.3
100°-110°	3.1	0.0
110°-120°	1.1	0.0
120°-130°	1.0	0.0
130°-140°	1.2	0.0
140°-150°	1.1	0.0
150°-160°	0.9	0.0
160°-170°	0.7	0.0
170°-180°	0.3	0.0
0°-30°	3487.2	41.6
0°-40°	5518.6	65.9
0°-60°	7477.9	89.3
0°-90°	8342.6	99.6
90°-120°	30.7	0.4
90°-150°	34.0	0.4
90°-180°	36.0	0.4
0°-180°	8378.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4529	4529	4529	4529	4529	
5°	4470	4478	4510	4563	4578	421
15°	4011	4152	4294	4502	4589	1132
25°	3412	3620	3999	4426	4630	1575
35°	2730	3050	3430	3690	3849	1703
45°	1911	2081	1496	1220	1200	1458
55°	797	833	767	663	558	774
65°	456	502	541	439	308	452
75°	252	280	311	256	139	266
85°	70	86	121	160	64	76
90°	2	27	61	102	19	5
95°	1	4	24	53	9	0
105°	1	1	2	4	2	1
115°	1	1	1	1	1	1
125°	1	1	1	1	1	1
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	1
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°	4529.2	4529.2	4529.2	4529.2	4529.2
2.5°	4535.1	4522.7	4499.6	4541.0	4541.6
5°	4470.1	4477.8	4510.3	4563.4	4577.6
7.5°	4406.9	4436.5	4480.2	4608.3	4614.8
10°	4269.3	4330.7	4461.3	4584.7	4624.3
12.5°	4154.7	4245.7	4380.3	4542.8	4604.2
15°	4011.2	4151.8	4294.1	4502.0	4588.8
17.5°	3910.8	4023.6	4197.9	4483.1	4625.4
20°	3744.9	3903.7	4098.0	4496.1	4696.3
22.5°	3583.7	3776.8	4047.8	4500.8	4711.1
25°	3412.4	3619.7	3999.4	4425.8	4630.2
27.5°	3270.6	3444.3	3927.4	4269.3	4417.0
30°	3099.4	3303.7	3813.4	4030.1	4173.1
32.5°	2915.1	3174.4	3628.5	3847.1	4106.9
35°	2729.7	3050.4	3430.1	3690.0	3848.8
37.5°	2536.0	2948.2	3118.3	3160.2	3051.5
40°	2349.9	2805.9	2719.0	2313.3	2193.4
42.5°	2146.8	2499.9	2120.8	1591.6	1537.9
45°	1911.1	2080.6	1495.9	1219.6	1200.1
47.5°	1660.1	1611.1	1115.6	1019.3	1008.1
50°	1379.0	1288.1	903.0	899.5	823.3
52.5°	1074.9	1022.9	809.7	780.2	659.1
55°	796.7	833.3	766.6	663.2	557.5
57.5°	637.8	722.9	736.5	579.4	498.5
60°	567.0	632.5	679.2	532.7	446.5
62.5°	508.5	560.5	608.3	494.3	385.1
65°	456.5	502.0	541.0	439.4	308.3
67.5°	401.6	448.8	496.7	377.4	262.2
70°	350.8	401.0	439.4	334.9	197.3
72.5°	298.2	350.2	367.3	279.9	157.7
75°	252.2	280.5	311.2	255.7	138.8
77.5°	203.8	228.0	240.4	234.5	122.3
80°	156.5	176.0	197.3	213.2	104.5
82.5°	114.6	128.7	157.7	187.8	83.9
85°	70.3	86.2	121.1	159.5	64.4
87.5°	31.3	51.4	89.2	131.7	41.3
90°	1.8	26.6	61.4	102.2	18.9
92.5°	0.6	11.8	40.2	75.6	13.0
95°	0.6	4.1	24.2	52.6	9.4
97.5°	0.6	1.8	13.6	33.7	5.9
100°	0.6	1.2	6.5	19.5	4.1
102.5°	0.6	1.2	3.0	9.4	3.0
105°	0.6	1.2	1.8	4.1	1.8
107.5°	0.6	1.2	1.2	1.8	1.2
110°	0.6	1.2	1.2	1.2	1.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.6	1.2	1.2	1.2	1.2
115°	0.6	1.2	1.2	1.2	1.2
117.5°	0.6	1.2	1.2	1.2	1.2
120°	0.6	1.2	1.2	1.2	1.2
122.5°	0.6	1.2	1.2	1.2	1.2
125°	0.6	1.2	1.2	1.2	1.2
127.5°	0.6	1.2	1.2	1.2	1.2
130°	0.6	1.2	1.2	1.2	1.2
132.5°	1.2	1.2	1.8	1.8	1.8
135°	1.2	1.2	1.8	1.8	1.8
137.5°	1.2	1.8	1.8	1.8	1.8
140°	1.2	1.8	1.8	1.8	1.8
142.5°	1.2	1.8	1.8	1.8	1.8
145°	1.2	1.8	1.8	1.8	2.4
147.5°	1.2	1.8	1.8	1.8	2.4
150°	1.2	1.8	1.8	1.8	1.8
152.5°	1.8	1.8	1.8	1.8	1.8
155°	1.8	1.8	1.8	1.8	1.8
157.5°	1.8	1.8	1.8	2.4	2.4
160°	1.8	2.4	2.4	2.4	2.4
162.5°	1.8	2.4	2.4	2.4	2.4
165°	1.8	2.4	2.4	2.4	2.4
167.5°	1.8	2.4	2.4	2.4	3.0
170°	2.4	2.4	2.4	3.0	3.0
172.5°	2.4	2.4	2.4	3.0	3.0
175°	2.4	2.4	2.4	3.0	3.0
177.5°	2.4	3.0	2.4	3.0	3.5
180°	3.0	3.0	3.0	3.0	3.0

(END OF REPORT)