

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: P685862

Luminaire Tested: **4CZL-12-UNV-W-LVR-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685862
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-W-LVR-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @80 CRI and 5000K
Light Source: (588) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

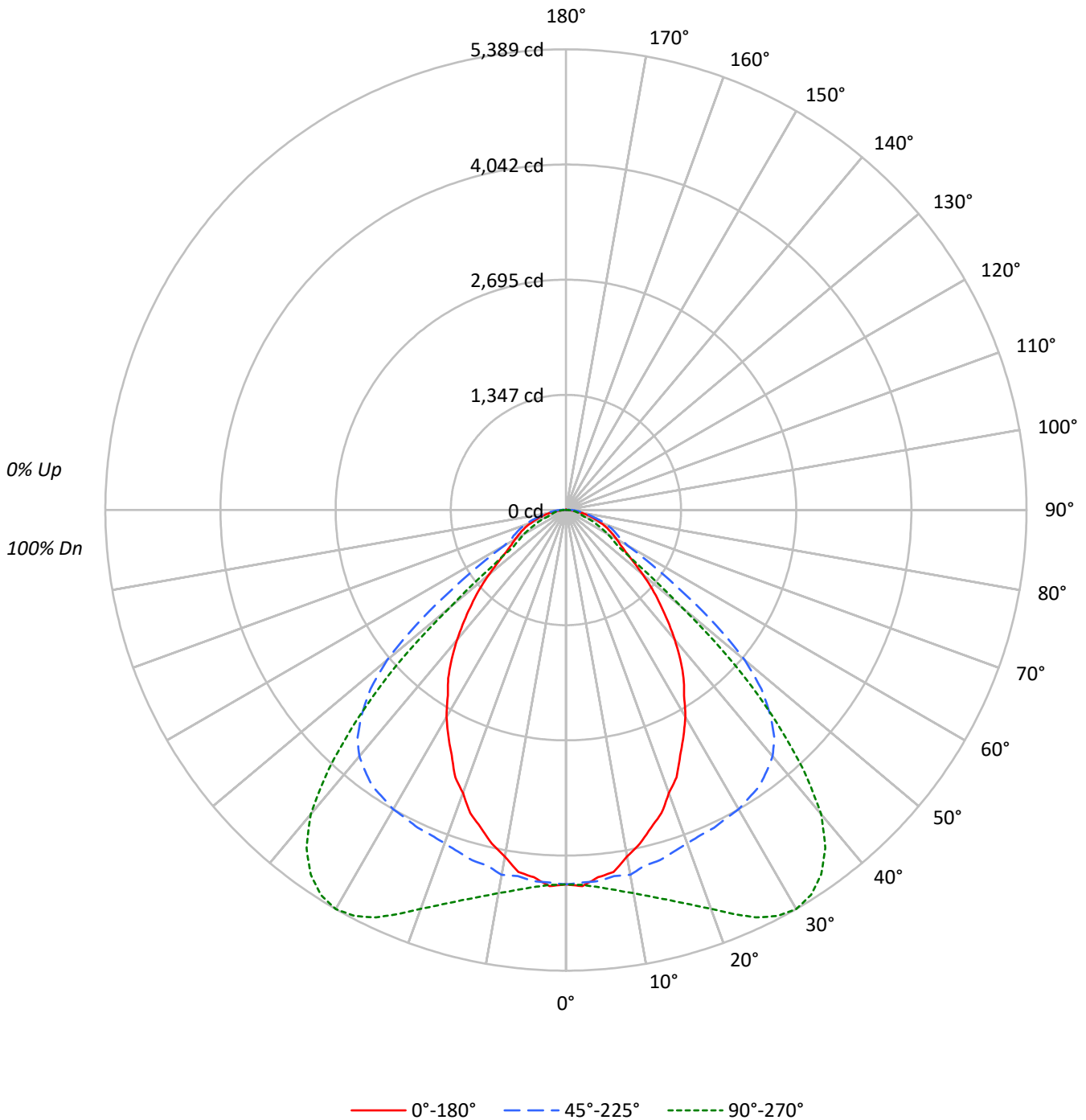
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10416.6 lumens
Efficiency: N/A
Efficacy: 135.3 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): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87
2	102	95	89	84	99	93	88	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14138	14138	14138
5°	13977	14121	14353
10°	13494	14208	14924
15°	12860	14180	15802
20°	12104	14257	17056
25°	11270	14608	18733
30°	10419	15070	20094
35°	9466	15558	20516
40°	8346	15852	19574
45°	7114	15419	15692
50°	5896	13711	8905
55°	4802	9263	4260
60°	4434	5386	3679
65°	4274	4955	2991
70°	4033	4861	2138
75°	3754	4438	2077
80°	3422	4359	2282
85°	2623	5224	2516



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	416.3	4.0
10°-20°	1208.4	11.6
20°-30°	1917.8	18.4
30°-40°	2395.2	23.0
40°-50°	2199.9	21.1
50°-60°	1174.1	11.3
60°-70°	604.3	5.8
70°-80°	332.3	3.2
80°-90°	137.1	1.3
90°-100°	26.4	0.3
100°-110°	1.4	0.0
110°-120°	0.3	0.0
120°-130°	0.4	0.0
130°-140°	0.8	0.0
140°-150°	0.7	0.0
150°-160°	0.5	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	3542.5	34.0
0°-40°	5937.7	57.0
0°-60°	9311.7	89.4
0°-90°	10385.3	99.7
90°-120°	28.2	0.3
90°-150°	30.2	0.3
90°-180°	31.0	0.3
0°-180°	10416.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4378	4378	4378	4378	4378	
5°	4312	4323	4356	4424	4428	407
15°	3847	3972	4242	4587	4727	1082
25°	3163	3460	4100	4851	5258	1457
35°	2401	2845	3947	4808	5204	1491
45°	1558	2246	3376	3499	3436	1206
55°	853	1529	1645	922	757	788
65°	559	733	648	529	392	553
75°	301	334	356	316	166	319
85°	71	93	141	186	68	81
90°	0	26	69	112	15	3
95°	0	3	26	52	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	0
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°	4378.3	4378.3	4378.3	4378.3	4378.3
2.5°	4403.8	4394.3	4362.9	4391.4	4389.2
5°	4311.8	4322.8	4356.3	4423.5	4427.9
7.5°	4270.9	4300.8	4319.8	4465.2	4484.2
10°	4115.3	4162.1	4333.0	4484.2	4551.3
12.5°	3998.5	4092.7	4258.5	4514.8	4631.7
15°	3846.6	3972.2	4241.7	4587.1	4726.6
17.5°	3717.3	3845.9	4190.6	4641.9	4836.9
20°	3522.3	3755.3	4148.9	4698.9	4963.2
22.5°	3382.8	3618.7	4116.8	4749.3	5113.0
25°	3163.0	3460.2	4100.0	4850.8	5257.6
27.5°	2979.0	3326.6	4062.8	4915.8	5353.2
30°	2794.2	3163.0	4041.6	4927.5	5389.0
32.5°	2571.4	3030.1	3988.3	4900.4	5337.9
35°	2401.3	2844.6	3946.6	4807.7	5204.2
37.5°	2193.9	2698.5	3855.3	4639.7	4985.2
40°	1979.9	2563.4	3760.4	4377.5	4643.4
42.5°	1763.7	2411.5	3608.5	4027.7	4108.8
45°	1557.8	2245.7	3376.3	3499.0	3436.1
47.5°	1373.0	2067.5	3101.7	2835.8	2688.3
50°	1173.6	1886.4	2729.2	2158.8	1772.5
52.5°	994.0	1735.2	2216.5	1462.1	1102.8
55°	853.0	1529.3	1645.4	921.7	756.6
57.5°	753.0	1371.5	1187.5	728.9	647.8
60°	686.5	1174.4	834.0	669.0	569.6
62.5°	620.8	929.0	713.5	609.8	479.1
65°	559.4	733.2	648.5	528.8	391.5
67.5°	495.9	595.2	585.7	479.8	326.5
70°	427.2	489.3	514.9	401.7	226.4
72.5°	365.9	410.4	438.2	343.2	192.1
75°	300.9	333.8	355.7	316.2	166.5
77.5°	238.8	268.8	289.9	286.3	146.1
80°	184.0	203.8	234.4	256.3	122.7
82.5°	125.6	140.2	184.8	221.3	95.7
85°	70.8	92.8	141.0	185.5	67.9
87.5°	20.4	54.8	102.2	149.0	39.4
90°	0.0	26.3	69.4	112.5	14.6
92.5°	0.0	10.2	45.3	78.9	10.2
95°	0.0	2.9	26.3	51.9	6.6
97.5°	0.0	0.7	12.4	30.7	2.9
100°	0.0	0.7	4.4	14.6	0.7
102.5°	0.0	0.7	1.5	5.1	0.0
105°	0.0	0.7	0.7	0.7	0.0
107.5°	0.0	0.7	0.7	0.0	0.0
110°	0.0	0.7	0.7	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.7	0.7	0.0	0.0
115°	0.0	0.7	0.7	0.0	0.0
117.5°	0.0	0.7	0.7	0.0	0.0
120°	0.0	0.7	0.7	0.0	0.0
122.5°	0.0	0.7	0.7	0.0	0.0
125°	0.0	0.7	0.7	0.0	0.0
127.5°	0.7	0.7	0.7	0.7	0.0
130°	0.7	1.5	1.5	0.7	0.0
132.5°	0.7	1.5	1.5	0.7	0.0
135°	0.7	1.5	1.5	0.7	0.7
137.5°	0.7	1.5	1.5	0.7	0.7
140°	0.7	1.5	1.5	0.7	0.7
142.5°	0.7	1.5	1.5	0.7	0.7
145°	0.7	1.5	1.5	0.7	0.7
147.5°	0.7	1.5	1.5	0.7	0.7
150°	0.7	1.5	1.5	0.7	0.7
152.5°	1.5	1.5	1.5	0.7	0.7
155°	1.5	1.5	1.5	0.7	0.7
157.5°	1.5	1.5	1.5	0.7	0.7
160°	1.5	1.5	1.5	0.7	0.7
162.5°	1.5	2.2	1.5	0.7	0.7
165°	1.5	2.2	1.5	0.7	0.7
167.5°	1.5	2.2	1.5	0.7	0.7
170°	1.5	2.2	1.5	0.7	0.7
172.5°	1.5	2.2	1.5	0.7	0.7
175°	2.2	2.2	1.5	0.7	0.7
177.5°	2.2	2.2	1.5	1.5	1.5
180°	1.5	1.5	1.5	1.5	1.5

(END OF REPORT)