

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: P685801

Luminaire Tested: **4CZL-9-UNV-M-LVR-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685801
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-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @80 CRI and 5000K
Light Source: (588) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

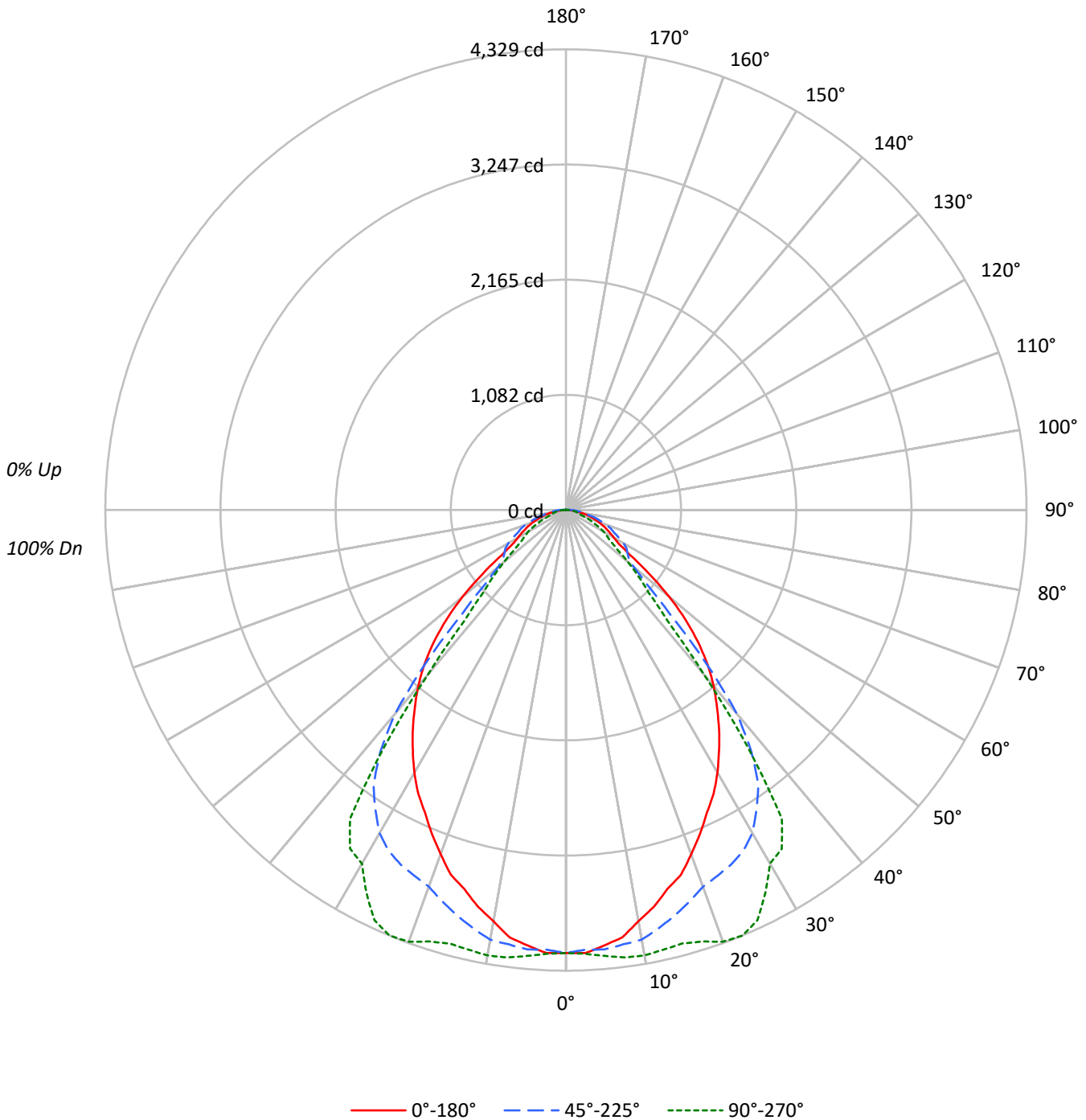
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7699.3 lumens
Efficiency: N/A
Efficacy: 142.6 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	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	93	91	90	88
2	103	96	90	86	100	94	89	84	91	86	83	87	84	81	84	81	79	84	81	79	77
3	95	87	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	70	66	62	70	66	62	60
5	83	72	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	65	60	56	54
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	60	55	51	49
7	72	60	53	47	70	59	52	47	58	51	47	57	51	46	55	50	46	55	50	46	44
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	51	46	42	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	48	42	39	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	35	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13440	13440	13440
5°	13316	13435	13636
10°	12865	13443	13934
15°	12323	13192	14098
20°	11826	12941	14831
25°	11173	13095	15160
30°	10620	13067	14299
35°	9889	12426	13943
40°	9103	10533	8497
45°	8020	6278	5036
50°	6367	4169	3801
55°	4122	3966	2884
60°	3365	4031	2650
65°	3205	3798	2165
70°	3044	3812	1712
75°	2891	3568	1591
80°	2674	3371	1787
85°	2393	4124	2193



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	395.0	5.1
10°-20°	1120.3	14.6
20°-30°	1689.4	21.9
30°-40°	1866.7	24.2
40°-50°	1170.4	15.2
50°-60°	630.1	8.2
60°-70°	428.0	5.6
70°-80°	255.6	3.3
80°-90°	111.1	1.4
90°-100°	24.3	0.3
100°-110°	2.8	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°	3204.6	41.6
0°-40°	5071.3	65.9
0°-60°	6871.9	89.3
0°-90°	7666.5	99.6
90°-120°	28.1	0.4
90°-150°	31.1	0.4
90°-180°	33.0	0.4
0°-180°	7699.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4162	4162	4162	4162	4162	
5°	4108	4115	4145	4194	4207	387
15°	3686	3815	3946	4137	4217	1041
25°	3136	3326	3675	4067	4255	1448
35°	2508	2803	3152	3391	3537	1565
45°	1756	1912	1375	1121	1103	1340
55°	732	766	704	610	512	711
65°	420	461	497	404	283	415
75°	232	258	286	235	128	244
85°	65	79	111	146	59	70
90°	2	24	56	94	17	4
95°	0	4	22	48	9	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°	4162.1	4162.1	4162.1	4162.1	4162.1
2.5°	4167.6	4156.2	4135.0	4173.0	4173.5
5°	4107.9	4114.9	4144.8	4193.6	4206.6
7.5°	4049.8	4076.9	4117.1	4234.9	4240.8
10°	3923.3	3979.8	4099.7	4213.1	4249.5
12.5°	3818.0	3901.6	4025.4	4174.6	4231.1
15°	3686.2	3815.3	3946.1	4137.2	4216.9
17.5°	3593.9	3697.6	3857.7	4119.8	4250.6
20°	3441.4	3587.4	3765.9	4131.7	4315.7
22.5°	3293.2	3470.7	3719.8	4136.1	4329.3
25°	3135.8	3326.3	3675.3	4067.2	4254.9
27.5°	3005.6	3165.2	3609.1	3923.3	4059.0
30°	2848.2	3036.0	3504.4	3703.5	3834.9
32.5°	2678.9	2917.1	3334.5	3535.3	3774.1
35°	2508.5	2803.2	3152.1	3390.9	3536.9
37.5°	2330.4	2709.3	2865.6	2904.1	2804.2
40°	2159.5	2578.5	2498.7	2125.8	2015.7
42.5°	1972.8	2297.3	1948.9	1462.6	1413.2
45°	1756.2	1912.0	1374.7	1120.7	1102.8
47.5°	1525.6	1480.5	1025.2	936.7	926.4
50°	1267.3	1183.7	829.8	826.6	756.6
52.5°	987.8	940.0	744.1	716.9	605.7
55°	732.1	765.8	704.5	609.5	512.3
57.5°	586.1	664.3	676.8	532.4	458.1
60°	521.0	581.3	624.1	489.5	410.3
62.5°	467.3	515.0	559.0	454.3	353.9
65°	419.5	461.3	497.1	403.8	283.3
67.5°	369.1	412.5	456.4	346.8	241.0
70°	322.4	368.5	403.8	307.7	181.3
72.5°	274.1	321.8	337.6	257.2	144.9
75°	231.7	257.8	286.0	235.0	127.5
77.5°	187.2	209.5	220.9	215.5	112.3
80°	143.8	161.7	181.3	195.9	96.1
82.5°	105.3	118.3	144.9	172.6	77.1
85°	64.6	79.2	111.3	146.5	59.2
87.5°	28.8	47.2	82.0	121.0	38.0
90°	1.6	24.4	56.4	93.9	17.4
92.5°	0.5	10.9	36.9	69.5	11.9
95°	0.5	3.8	22.3	48.3	8.7
97.5°	0.5	1.6	12.5	30.9	5.4
100°	0.5	1.1	6.0	17.9	3.8
102.5°	0.5	1.1	2.7	8.7	2.7
105°	0.5	1.1	1.6	3.8	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	2.2
147.5°	1.1	1.6	1.6	1.6	2.2
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	2.2	2.2
160°	1.6	2.2	2.2	2.2	2.2
162.5°	1.6	2.2	2.2	2.2	2.2
165°	1.6	2.2	2.2	2.2	2.2
167.5°	1.6	2.2	2.2	2.2	2.7
170°	2.2	2.2	2.2	2.7	2.7
172.5°	2.2	2.2	2.2	2.7	2.7
175°	2.2	2.2	2.2	2.7	2.7
177.5°	2.2	2.7	2.2	2.7	3.3
180°	2.7	2.7	2.7	2.7	2.7

(END OF REPORT)