

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: P685742

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

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685742  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-12-UNV-N-LVR-L850-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @80 CRI and 5000K  
Light Source: (588) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

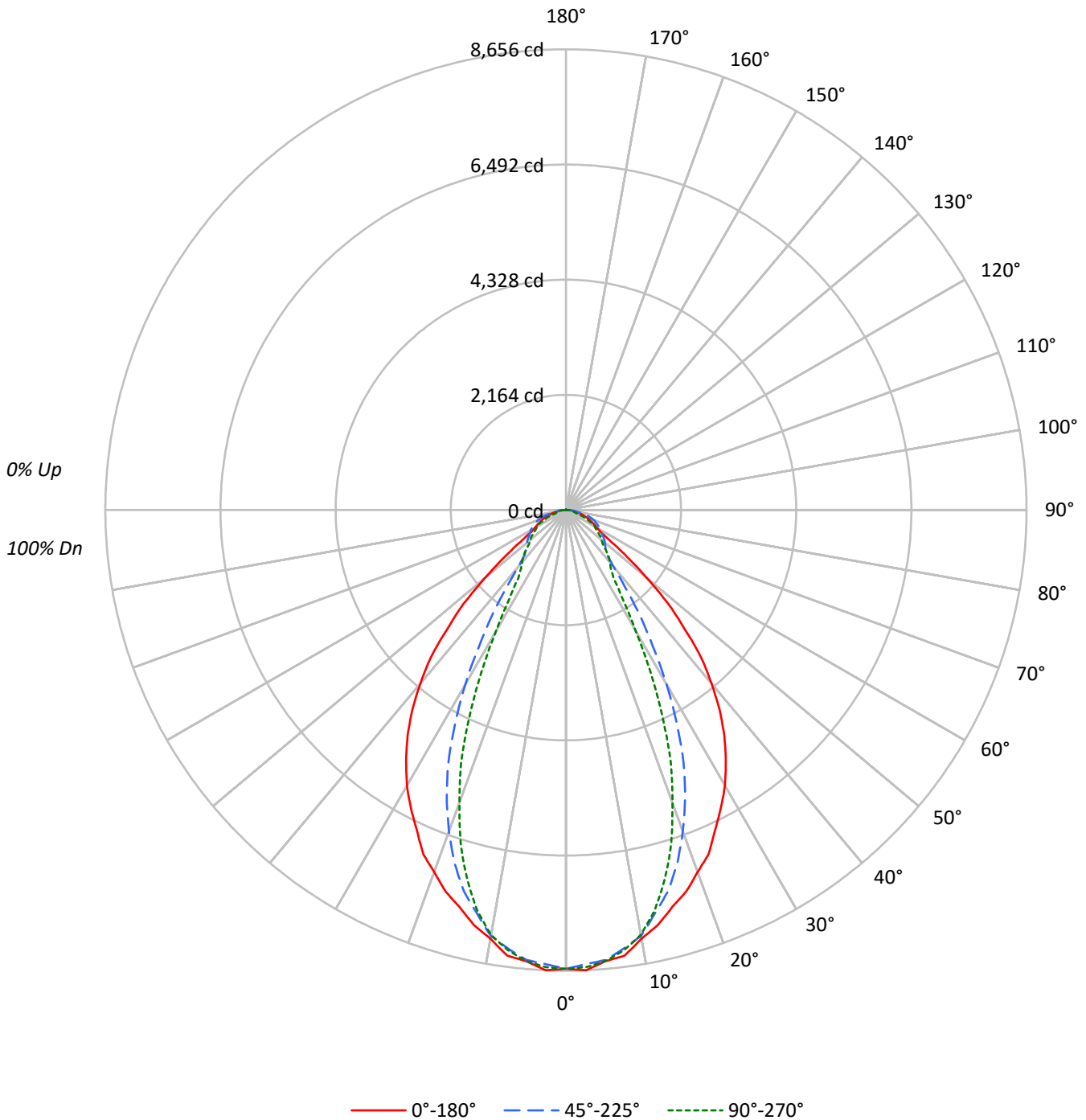
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10204.7 lumens  
Efficiency: N/A  
Efficacy: 132.5 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.8 / 0.85  
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<sub>in</sub>): 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	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	90	88
2	103	97	92	87	101	95	90	86	92	88	84	88	85	82	86	83	80	80	80	80	78
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	72	72	72	70
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	65	65	65	63
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	59	59	59	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55	55	55	55	53
7	75	64	57	51	73	63	56	51	62	55	51	60	55	51	59	54	50	50	50	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	47	47	47	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	43	43	43	43	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	41	41	41	39

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	27832	27832	27832
5°	27586	27508	27579
10°	26808	26643	26578
15°	25814	24784	23997
20°	24863	22078	20098
25°	23627	18642	15325
30°	22287	14102	9791
35°	20456	9560	6152
40°	17940	5824	5396
45°	14373	4852	4835
50°	9938	4795	4366
55°	5855	4753	4111
60°	4363	4938	4060
65°	4129	4971	3571
70°	3971	5302	2696
75°	3744	5321	2304
80°	3476	4413	2607
85°	3083	5358	3220



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	800.6	7.8
10°-20°	2073.1	20.3
20°-30°	2421.8	23.7
30°-40°	1796.8	17.6
40°-50°	1191.1	11.7
50°-60°	790.0	7.7
60°-70°	589.4	5.8
70°-80°	347.9	3.4
80°-90°	146.5	1.4
90°-100°	31.6	0.3
100°-110°	4.3	0.0
110°-120°	2.2	0.0
120°-130°	2.0	0.0
130°-140°	1.9	0.0
140°-150°	2.0	0.0
150°-160°	1.8	0.0
160°-170°	1.3	0.0
170°-180°	0.5	0.0
0°-30°	5295.6	51.9
0°-40°	7092.3	69.5
0°-60°	9073.4	88.9
0°-90°	10157.2	99.5
90°-120°	38.1	0.4
90°-150°	44.0	0.4
90°-180°	48.0	0.5
0°-180°	10204.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8619	8619	8619	8619	8619	
5°	8510	8503	8486	8517	8508	805
15°	7722	7630	7413	7286	7178	2178
25°	6631	6154	5232	4488	4301	3054
35°	5189	3845	2425	1639	1560	3221
45°	3147	1857	1062	1103	1059	2422
55°	1040	914	844	815	730	1023
65°	540	604	651	636	467	539
75°	300	336	426	310	185	317
85°	83	102	145	192	87	90
90°	2	31	72	124	26	5
95°	1	5	28	62	13	1
105°	1	2	3	5	4	1
115°	1	2	2	3	3	1
125°	2	2	2	3	3	1
135°	2	2	2	3	3	1
145°	2	3	3	4	4	1
155°	3	4	4	4	4	1
165°	4	4	4	5	5	1
175°	4	4	5	6	7	0
180°	5	5	5	5	5	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	8619.0	8619.0	8619.0	8619.0	8619.0
2.5°	8656.2	8609.5	8542.3	8602.9	8597.8
5°	8510.2	8502.9	8486.1	8516.7	8508.0
7.5°	8444.5	8405.0	8311.5	8383.8	8342.9
10°	8175.7	8129.7	8125.3	8110.7	8105.6
12.5°	7985.1	7929.6	7752.2	7742.7	7703.3
15°	7721.5	7629.5	7413.4	7285.6	7178.2
17.5°	7517.1	7317.0	6956.2	6718.2	6580.2
20°	7235.2	7014.6	6424.6	6009.1	5848.5
22.5°	7003.0	6612.3	5853.6	5265.7	5155.5
25°	6631.3	6154.4	5232.1	4488.0	4301.1
27.5°	6308.5	5650.6	4499.0	3682.6	3453.3
30°	5977.0	5086.1	3781.9	2892.5	2625.9
32.5°	5590.7	4517.2	3043.6	2170.3	1977.5
35°	5189.1	3844.7	2425.1	1639.4	1560.5
37.5°	4746.5	3240.1	1822.7	1369.2	1382.3
40°	4255.8	2712.8	1381.6	1255.3	1280.1
42.5°	3766.6	2268.8	1149.4	1180.8	1188.1
45°	3147.3	1857.0	1062.5	1102.7	1058.8
47.5°	2606.2	1517.4	1001.2	996.8	934.7
50°	1978.2	1237.0	954.4	901.8	869.0
52.5°	1464.9	1043.5	909.9	852.2	818.6
55°	1039.9	913.5	844.2	814.9	730.2
57.5°	781.4	821.5	793.8	728.0	668.9
60°	675.5	740.5	764.6	686.4	628.7
62.5°	609.7	671.1	717.1	661.6	575.4
65°	540.4	603.9	650.6	636.0	467.4
67.5°	479.8	550.6	608.3	545.5	381.9
70°	420.6	486.3	561.6	463.0	285.5
72.5°	357.1	406.7	497.3	360.0	208.1
75°	300.1	335.9	426.5	309.6	184.7
77.5°	240.2	270.2	292.1	281.9	162.8
80°	186.9	216.9	237.3	256.3	140.2
82.5°	135.8	155.5	188.4	227.1	116.8
85°	83.2	101.5	144.6	192.1	86.9
87.5°	35.8	62.1	105.9	159.2	57.0
90°	1.5	30.7	72.3	124.1	25.6
92.5°	0.7	13.1	46.7	91.3	16.8
95°	0.7	5.1	28.5	62.1	13.1
97.5°	0.7	2.2	14.6	40.2	9.5
100°	0.7	1.5	8.0	23.4	6.6
102.5°	0.7	1.5	3.7	11.7	5.1
105°	0.7	1.5	2.9	5.1	4.4
107.5°	0.7	1.5	2.2	3.7	3.7
110°	0.7	1.5	2.2	3.7	3.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.7	1.5	2.2	3.7	3.7
115°	0.7	1.5	2.2	2.9	2.9
117.5°	0.7	1.5	2.2	2.9	2.9
120°	0.7	1.5	2.2	2.9	2.9
122.5°	0.7	1.5	2.2	2.9	2.9
125°	1.5	1.5	2.2	2.9	2.9
127.5°	1.5	2.2	2.2	2.9	2.9
130°	1.5	2.2	2.2	2.9	2.9
132.5°	1.5	2.2	2.2	2.9	2.9
135°	1.5	2.2	2.2	2.9	2.9
137.5°	1.5	2.2	2.9	2.9	2.9
140°	2.2	2.9	2.9	2.9	2.9
142.5°	2.2	2.9	2.9	3.7	2.9
145°	2.2	2.9	2.9	3.7	3.7
147.5°	2.2	2.9	3.7	3.7	3.7
150°	2.2	2.9	3.7	4.4	4.4
152.5°	2.9	2.9	3.7	4.4	4.4
155°	2.9	3.7	3.7	4.4	4.4
157.5°	2.9	3.7	3.7	4.4	5.1
160°	2.9	3.7	4.4	5.1	5.1
162.5°	2.9	3.7	4.4	5.1	5.1
165°	3.7	4.4	4.4	5.1	5.1
167.5°	3.7	4.4	5.1	5.1	5.8
170°	3.7	4.4	5.1	5.8	5.8
172.5°	3.7	4.4	5.1	5.8	5.8
175°	3.7	4.4	5.1	5.8	6.6
177.5°	3.7	4.4	5.1	5.8	6.6
180°	5.1	5.1	5.1	5.1	5.1

(END OF REPORT)