

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: P685831

Luminaire Tested: **4CZL-9-UNV-M-LVR-L950-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685831
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-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

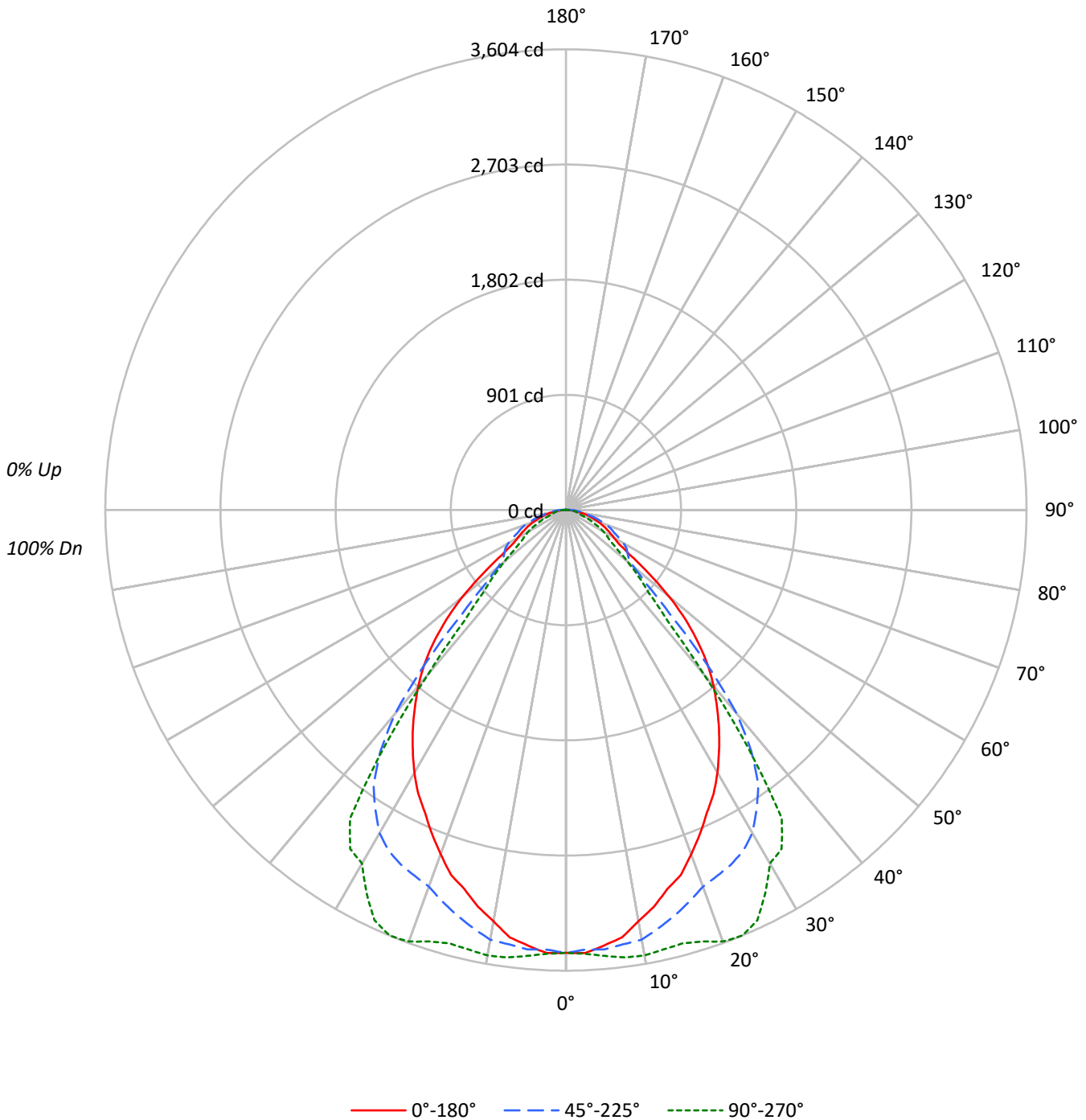
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6409.0 lumens
Efficiency: N/A
Efficacy: 118.7 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°	11188	11188	11188
5°	11084	11184	11351
10°	10709	11190	11599
15°	10258	10981	11735
20°	9844	10773	12345
25°	9301	10900	12619
30°	8840	10877	11903
35°	8232	10343	11606
40°	7578	8768	7073
45°	6676	5226	4192
50°	5300	3470	3164
55°	3431	3301	2401
60°	2801	3355	2206
65°	2668	3162	1802
70°	2533	3173	1425
75°	2407	2971	1325
80°	2226	2806	1488
85°	1993	3431	1823



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.8	5.1
10°-20°	932.5	14.6
20°-30°	1406.2	21.9
30°-40°	1553.8	24.2
40°-50°	974.3	15.2
50°-60°	524.5	8.2
60°-70°	356.2	5.6
70°-80°	212.8	3.3
80°-90°	92.5	1.4
90°-100°	20.3	0.3
100°-110°	2.3	0.0
110°-120°	0.8	0.0
120°-130°	0.8	0.0
130°-140°	0.9	0.0
140°-150°	0.9	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	2667.6	41.6
0°-40°	4221.4	65.9
0°-60°	5720.2	89.3
0°-90°	6381.6	99.6
90°-120°	23.5	0.4
90°-150°	26.0	0.4
90°-180°	27.0	0.4
0°-180°	6409.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3465	3465	3465	3465	3465	
5°	3419	3425	3450	3491	3502	322
15°	3068	3176	3285	3444	3510	866
25°	2610	2769	3059	3386	3542	1205
35°	2088	2333	2624	2823	2944	1303
45°	1462	1592	1144	933	918	1115
55°	609	637	586	507	426	592
65°	349	384	414	336	236	345
75°	193	215	238	196	106	203
85°	54	66	93	122	49	58
90°	1	20	47	78	14	4
95°	0	3	18	40	7	0
105°	0	1	1	3	1	1
115°	0	1	1	1	1	0
125°	0	1	1	1	1	0
135°	1	1	1	1	1	1
145°	1	1	1	1	2	1
155°	1	1	1	1	1	1
165°	1	2	2	2	2	0
175°	2	2	2	2	2	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3464.6	3464.6	3464.6	3464.6	3464.6
2.5°	3469.1	3459.6	3442.0	3473.6	3474.1
5°	3419.4	3425.3	3450.1	3490.8	3501.6
7.5°	3371.1	3393.6	3427.1	3525.1	3530.1
10°	3265.8	3312.8	3412.6	3507.0	3537.3
12.5°	3178.2	3247.7	3350.7	3475.0	3521.9
15°	3068.4	3175.9	3284.8	3443.8	3510.2
17.5°	2991.6	3077.9	3211.1	3429.3	3538.2
20°	2864.6	2986.2	3134.8	3439.3	3592.4
22.5°	2741.3	2889.0	3096.4	3442.9	3603.7
25°	2610.3	2768.9	3059.3	3385.5	3541.8
27.5°	2501.9	2634.7	3004.2	3265.8	3378.7
30°	2370.9	2527.2	2917.0	3082.8	3192.2
32.5°	2229.9	2428.2	2775.6	2942.8	3141.6
35°	2088.1	2333.4	2623.8	2822.6	2944.1
37.5°	1939.9	2255.2	2385.3	2417.4	2334.3
40°	1797.6	2146.3	2079.9	1769.6	1677.8
42.5°	1642.2	1912.3	1622.3	1217.5	1176.4
45°	1461.9	1591.6	1144.3	932.9	918.0
47.5°	1269.9	1232.4	853.4	779.7	771.2
50°	1054.9	985.3	690.7	688.0	629.8
52.5°	822.2	782.5	619.4	596.8	504.2
55°	609.4	637.4	586.4	507.3	426.5
57.5°	487.9	553.0	563.3	443.2	381.3
60°	433.7	483.8	519.5	407.5	341.5
62.5°	389.0	428.7	465.3	378.1	294.5
65°	349.2	384.0	413.8	336.1	235.8
67.5°	307.2	343.3	379.9	288.7	200.6
70°	268.3	306.7	336.1	256.1	150.9
72.5°	228.1	267.9	281.0	214.1	120.6
75°	192.9	214.6	238.1	195.6	106.2
77.5°	155.9	174.4	183.9	179.4	93.5
80°	119.7	134.6	150.9	163.1	80.0
82.5°	87.6	98.5	120.6	143.7	64.2
85°	53.8	66.0	92.6	122.0	49.2
87.5°	23.9	39.3	68.2	100.7	31.6
90°	1.4	20.3	47.0	78.2	14.5
92.5°	0.5	9.0	30.7	57.8	9.9
95°	0.5	3.2	18.5	40.2	7.2
97.5°	0.5	1.4	10.4	25.8	4.5
100°	0.5	0.9	5.0	14.9	3.2
102.5°	0.5	0.9	2.3	7.2	2.3
105°	0.5	0.9	1.4	3.2	1.4
107.5°	0.5	0.9	0.9	1.4	0.9
110°	0.5	0.9	0.9	0.9	0.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.5	0.9	0.9	0.9	0.9
115°	0.5	0.9	0.9	0.9	0.9
117.5°	0.5	0.9	0.9	0.9	0.9
120°	0.5	0.9	0.9	0.9	0.9
122.5°	0.5	0.9	0.9	0.9	0.9
125°	0.5	0.9	0.9	0.9	0.9
127.5°	0.5	0.9	0.9	0.9	0.9
130°	0.5	0.9	0.9	0.9	0.9
132.5°	0.9	0.9	1.4	1.4	1.4
135°	0.9	0.9	1.4	1.4	1.4
137.5°	0.9	1.4	1.4	1.4	1.4
140°	0.9	1.4	1.4	1.4	1.4
142.5°	0.9	1.4	1.4	1.4	1.4
145°	0.9	1.4	1.4	1.4	1.8
147.5°	0.9	1.4	1.4	1.4	1.8
150°	0.9	1.4	1.4	1.4	1.4
152.5°	1.4	1.4	1.4	1.4	1.4
155°	1.4	1.4	1.4	1.4	1.4
157.5°	1.4	1.4	1.4	1.8	1.8
160°	1.4	1.8	1.8	1.8	1.8
162.5°	1.4	1.8	1.8	1.8	1.8
165°	1.4	1.8	1.8	1.8	1.8
167.5°	1.4	1.8	1.8	1.8	2.3
170°	1.8	1.8	1.8	2.3	2.3
172.5°	1.8	1.8	1.8	2.3	2.3
175°	1.8	1.8	1.8	2.3	2.3
177.5°	1.8	2.3	1.8	2.3	2.7
180°	2.3	2.3	2.3	2.3	2.3

(END OF REPORT)