

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: P685851

Luminaire Tested: **4CZL-9-UNV-W-LVR-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685851
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-W-LVR-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @80 CRI and 4000K
Light Source: (588) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

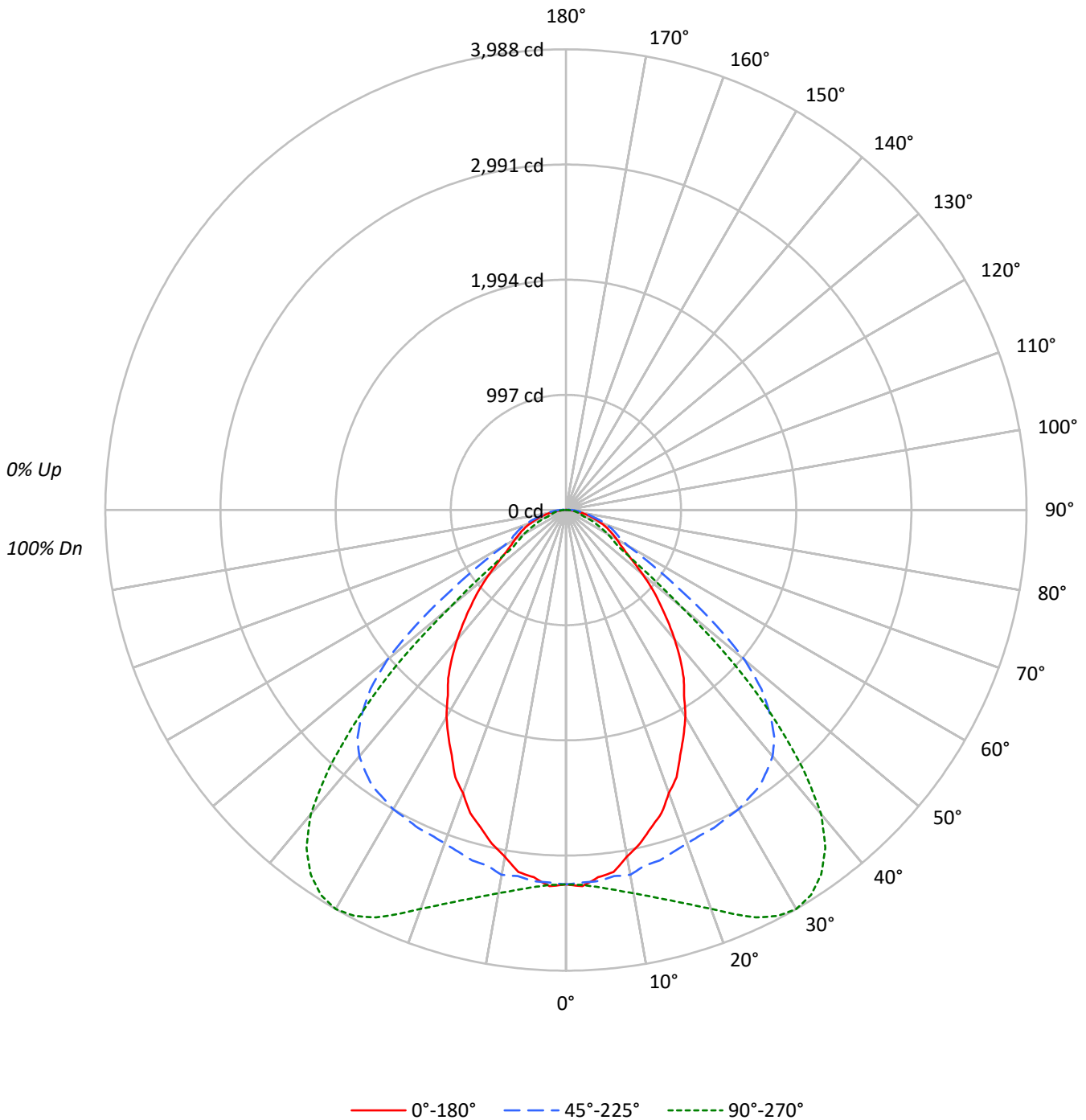
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7708.8 lumens
Efficiency: N/A
Efficacy: 142.8 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): 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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	89	89	89	87
2	102	95	89	84	99	93	88	83	89	85	81	86	82	79	83	80	77	77	77	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	68	68	68	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	59	59	59	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	53	53	53	51
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	47	47	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	42	42	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	38	38	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	34	34	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	31	31	31	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10463	10463	10463
5°	10344	10451	10622
10°	9987	10515	11045
15°	9517	10494	11694
20°	8958	10552	12622
25°	8340	10811	13863
30°	7711	11153	14871
35°	7006	11514	15183
40°	6176	11731	14486
45°	5265	11411	11613
50°	4363	10147	6590
55°	3554	6856	3152
60°	3281	3986	2723
65°	3163	3667	2214
70°	2985	3597	1581
75°	2779	3284	1537
80°	2533	3226	1689
85°	1941	3864	1864



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	308.1	4.0
10°-20°	894.3	11.6
20°-30°	1419.3	18.4
30°-40°	1772.6	23.0
40°-50°	1628.1	21.1
50°-60°	868.9	11.3
60°-70°	447.2	5.8
70°-80°	245.9	3.2
80°-90°	101.4	1.3
90°-100°	19.6	0.3
100°-110°	1.1	0.0
110°-120°	0.2	0.0
120°-130°	0.3	0.0
130°-140°	0.6	0.0
140°-150°	0.5	0.0
150°-160°	0.4	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	2621.7	34.0
0°-40°	4394.3	57.0
0°-60°	6891.2	89.4
0°-90°	7685.7	99.7
90°-120°	20.9	0.3
90°-150°	22.3	0.3
90°-180°	23.0	0.3
0°-180°	7708.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3240	3240	3240	3240	3240	
5°	3191	3199	3224	3274	3277	301
15°	2847	2940	3139	3395	3498	800
25°	2341	2561	3034	3590	3891	1079
35°	1777	2105	2921	3558	3851	1103
45°	1153	1662	2499	2589	2543	892
55°	631	1132	1218	682	560	583
65°	414	543	480	391	290	409
75°	223	247	263	234	123	236
85°	52	69	104	137	50	60
90°	0	20	51	83	11	2
95°	0	2	20	38	5	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	1	1	0	0	0
145°	0	1	1	0	0	0
155°	1	1	1	0	0	0
165°	1	2	1	0	0	0
175°	2	2	1	0	0	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3240.2	3240.2	3240.2	3240.2	3240.2
2.5°	3259.1	3252.1	3228.8	3249.9	3248.3
5°	3191.0	3199.1	3224.0	3273.7	3276.9
7.5°	3160.7	3182.9	3196.9	3304.5	3318.5
10°	3045.6	3080.2	3206.7	3318.5	3368.3
12.5°	2959.1	3028.8	3151.5	3341.2	3427.7
15°	2846.7	2939.7	3139.1	3394.7	3498.0
17.5°	2751.0	2846.2	3101.3	3435.3	3579.6
20°	2606.7	2779.1	3070.5	3477.4	3673.1
22.5°	2503.5	2678.1	3046.7	3514.7	3783.9
25°	2340.8	2560.8	3034.2	3589.9	3890.9
27.5°	2204.6	2461.9	3006.7	3638.0	3961.7
30°	2067.9	2340.8	2991.0	3646.6	3988.2
32.5°	1903.0	2242.4	2951.5	3626.6	3950.4
35°	1777.1	2105.2	2920.7	3558.0	3851.4
37.5°	1623.6	1997.1	2853.2	3433.7	3689.3
40°	1465.2	1897.1	2782.9	3239.6	3436.4
42.5°	1305.3	1784.7	2670.5	2980.7	3040.7
45°	1152.8	1662.0	2498.6	2589.4	2542.9
47.5°	1016.1	1530.1	2295.4	2098.7	1989.5
50°	868.5	1396.1	2019.8	1597.7	1311.7
52.5°	735.6	1284.2	1640.4	1082.0	816.1
55°	631.3	1131.8	1217.7	682.1	559.9
57.5°	557.2	1015.0	878.8	539.4	479.4
60°	508.0	869.1	617.2	495.1	421.6
62.5°	459.4	687.5	528.0	451.3	354.6
65°	414.0	542.6	479.9	391.3	289.7
67.5°	367.0	440.5	433.5	355.1	241.6
70°	316.2	362.1	381.0	297.3	167.5
72.5°	270.8	303.7	324.3	254.0	142.1
75°	222.7	247.0	263.2	234.0	123.2
77.5°	176.7	198.9	214.6	211.9	108.1
80°	136.2	150.8	173.5	189.7	90.8
82.5°	93.0	103.8	136.7	163.8	70.8
85°	52.4	68.6	104.3	137.3	50.3
87.5°	15.1	40.5	75.7	110.3	29.2
90°	0.0	19.5	51.3	83.2	10.8
92.5°	0.0	7.6	33.5	58.4	7.6
95°	0.0	2.2	19.5	38.4	4.9
97.5°	0.0	0.5	9.2	22.7	2.2
100°	0.0	0.5	3.2	10.8	0.5
102.5°	0.0	0.5	1.1	3.8	0.0
105°	0.0	0.5	0.5	0.5	0.0
107.5°	0.0	0.5	0.5	0.0	0.0
110°	0.0	0.5	0.5	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.5	0.5	0.0	0.0
115°	0.0	0.5	0.5	0.0	0.0
117.5°	0.0	0.5	0.5	0.0	0.0
120°	0.0	0.5	0.5	0.0	0.0
122.5°	0.0	0.5	0.5	0.0	0.0
125°	0.0	0.5	0.5	0.0	0.0
127.5°	0.5	0.5	0.5	0.5	0.0
130°	0.5	1.1	1.1	0.5	0.0
132.5°	0.5	1.1	1.1	0.5	0.0
135°	0.5	1.1	1.1	0.5	0.5
137.5°	0.5	1.1	1.1	0.5	0.5
140°	0.5	1.1	1.1	0.5	0.5
142.5°	0.5	1.1	1.1	0.5	0.5
145°	0.5	1.1	1.1	0.5	0.5
147.5°	0.5	1.1	1.1	0.5	0.5
150°	0.5	1.1	1.1	0.5	0.5
152.5°	1.1	1.1	1.1	0.5	0.5
155°	1.1	1.1	1.1	0.5	0.5
157.5°	1.1	1.1	1.1	0.5	0.5
160°	1.1	1.1	1.1	0.5	0.5
162.5°	1.1	1.6	1.1	0.5	0.5
165°	1.1	1.6	1.1	0.5	0.5
167.5°	1.1	1.6	1.1	0.5	0.5
170°	1.1	1.6	1.1	0.5	0.5
172.5°	1.1	1.6	1.1	0.5	0.5
175°	1.6	1.6	1.1	0.5	0.5
177.5°	1.6	1.6	1.1	1.1	1.1
180°	1.1	1.1	1.1	1.1	1.1

(END OF REPORT)