

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: P685730

Luminaire Tested: **4CZL-7-UNV-N-LVR-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685730
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-7-UNV-N-LVR-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @80 CRI and 4000K
Light Source: (392) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

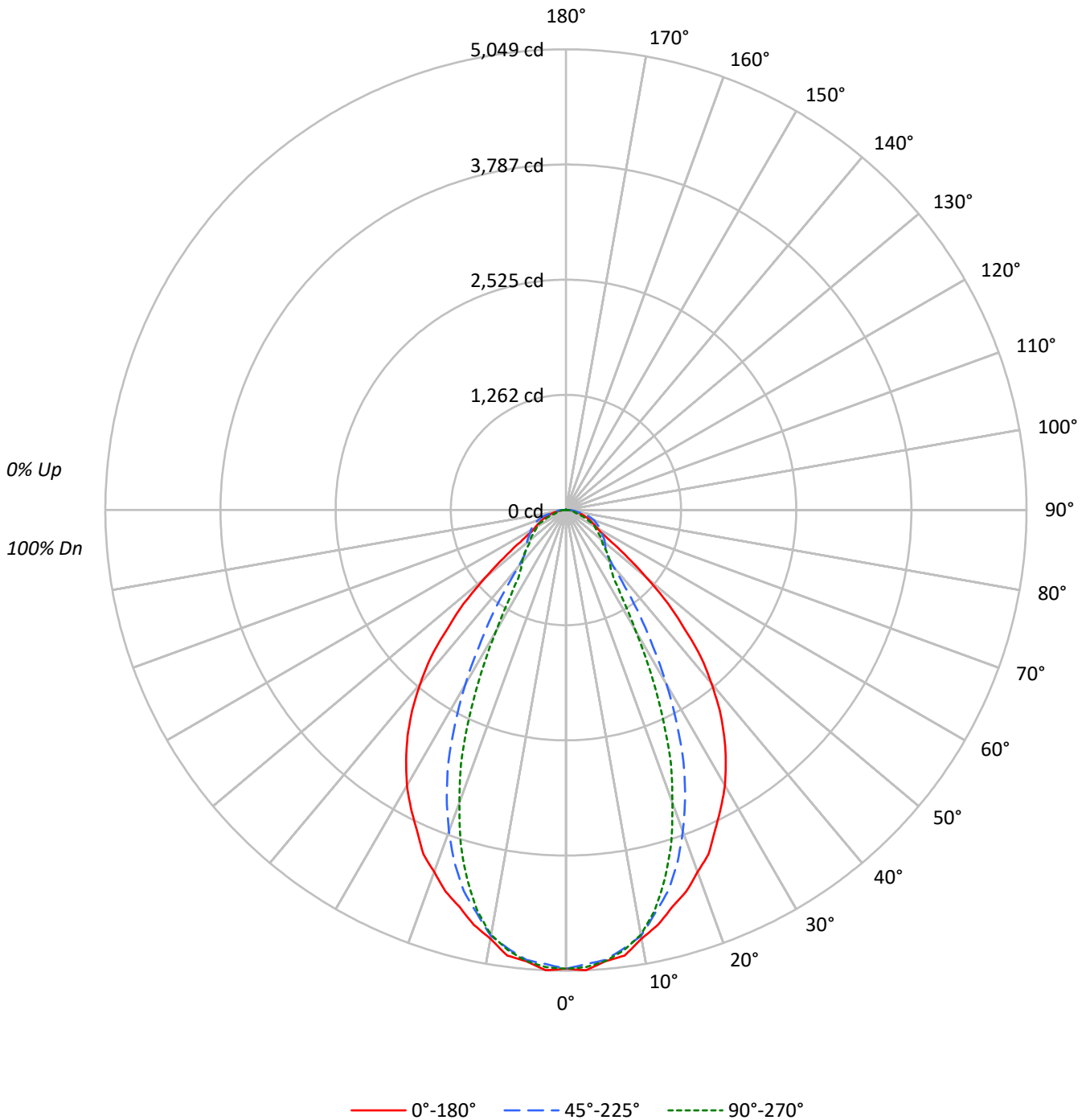
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5952.0 lumens
Efficiency: N/A
Efficacy: 135.3 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): 44
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	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°	16233	16233	16233
5°	16090	16044	16085
10°	15636	15540	15502
15°	15056	14455	13997
20°	14501	12877	11722
25°	13781	10873	8938
30°	12999	8225	5711
35°	11931	5576	3588
40°	10463	3397	3147
45°	8383	2830	2820
50°	5796	2797	2546
55°	3415	2772	2398
60°	2545	2880	2368
65°	2408	2900	2083
70°	2316	3092	1572
75°	2183	3103	1345
80°	2027	2574	1521
85°	1801	3123	1878



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	467.0	7.8
10°-20°	1209.1	20.3
20°-30°	1412.5	23.7
30°-40°	1048.0	17.6
40°-50°	694.7	11.7
50°-60°	460.7	7.7
60°-70°	343.8	5.8
70°-80°	202.9	3.4
80°-90°	85.4	1.4
90°-100°	18.5	0.3
100°-110°	2.5	0.0
110°-120°	1.3	0.0
120°-130°	1.2	0.0
130°-140°	1.1	0.0
140°-150°	1.1	0.0
150°-160°	1.0	0.0
160°-170°	0.8	0.0
170°-180°	0.3	0.0
0°-30°	3088.7	51.9
0°-40°	4136.6	69.5
0°-60°	5292.1	88.9
0°-90°	5924.2	99.5
90°-120°	22.2	0.4
90°-150°	25.7	0.4
90°-180°	28.0	0.5
0°-180°	5952.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5027	5027	5027	5027	5027	
5°	4964	4959	4950	4967	4962	470
15°	4504	4450	4324	4249	4187	1270
25°	3868	3590	3052	2618	2509	1781
35°	3026	2242	1414	956	910	1879
45°	1836	1083	620	643	618	1413
55°	606	533	492	475	426	597
65°	315	352	380	371	273	314
75°	175	196	249	181	108	185
85°	49	59	84	112	51	52
90°	1	18	42	72	15	3
95°	0	3	17	36	8	0
105°	0	1	2	3	3	0
115°	0	1	1	2	2	0
125°	1	1	1	2	2	1
135°	1	1	1	2	2	1
145°	1	2	2	2	2	1
155°	2	2	2	3	3	1
165°	2	3	3	3	3	1
175°	2	3	3	3	4	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5027.0	5027.0	5027.0	5027.0	5027.0
2.5°	5048.8	5021.5	4982.3	5017.7	5014.7
5°	4963.6	4959.3	4949.5	4967.4	4962.3
7.5°	4925.2	4902.2	4847.7	4889.9	4866.0
10°	4768.5	4741.7	4739.1	4730.6	4727.6
12.5°	4657.3	4625.0	4521.5	4515.9	4492.9
15°	4503.6	4449.9	4323.9	4249.3	4186.7
17.5°	4384.3	4267.6	4057.2	3918.4	3837.9
20°	4219.9	4091.3	3747.2	3504.8	3411.1
22.5°	4084.5	3856.6	3414.1	3071.3	3006.9
25°	3867.7	3589.6	3051.7	2617.7	2508.6
27.5°	3679.5	3295.7	2624.0	2147.9	2014.1
30°	3486.1	2966.5	2205.8	1687.0	1531.6
32.5°	3260.8	2634.7	1775.2	1265.8	1153.4
35°	3026.5	2242.4	1414.5	956.2	910.2
37.5°	2768.4	1889.8	1063.1	798.6	806.3
40°	2482.2	1582.3	805.8	732.1	746.6
42.5°	2196.9	1323.3	670.4	688.7	693.0
45°	1835.7	1083.1	619.7	643.1	617.6
47.5°	1520.1	885.0	583.9	581.4	545.2
50°	1153.8	721.5	556.7	526.0	506.8
52.5°	854.4	608.6	530.7	497.0	477.4
55°	606.5	532.8	492.4	475.3	425.9
57.5°	455.7	479.2	463.0	424.6	390.1
60°	394.0	431.9	445.9	400.4	366.7
62.5°	355.6	391.4	418.2	385.9	335.6
65°	315.2	352.2	379.5	371.0	272.6
67.5°	279.8	321.1	354.8	318.2	222.8
70°	245.3	283.7	327.5	270.0	166.5
72.5°	208.3	237.2	290.0	210.0	121.4
75°	175.0	195.9	248.7	180.6	107.8
77.5°	140.1	157.6	170.4	164.4	95.0
80°	109.0	126.5	138.4	149.5	81.8
82.5°	79.2	90.7	109.9	132.5	68.1
85°	48.6	59.2	84.3	112.0	50.7
87.5°	20.9	36.2	61.8	92.8	33.2
90°	0.9	17.9	42.2	72.4	14.9
92.5°	0.4	7.7	27.3	53.2	9.8
95°	0.4	3.0	16.6	36.2	7.7
97.5°	0.4	1.3	8.5	23.4	5.5
100°	0.4	0.9	4.7	13.6	3.8
102.5°	0.4	0.9	2.1	6.8	3.0
105°	0.4	0.9	1.7	3.0	2.6
107.5°	0.4	0.9	1.3	2.1	2.1
110°	0.4	0.9	1.3	2.1	2.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.4	0.9	1.3	2.1	2.1
115°	0.4	0.9	1.3	1.7	1.7
117.5°	0.4	0.9	1.3	1.7	1.7
120°	0.4	0.9	1.3	1.7	1.7
122.5°	0.4	0.9	1.3	1.7	1.7
125°	0.9	0.9	1.3	1.7	1.7
127.5°	0.9	1.3	1.3	1.7	1.7
130°	0.9	1.3	1.3	1.7	1.7
132.5°	0.9	1.3	1.3	1.7	1.7
135°	0.9	1.3	1.3	1.7	1.7
137.5°	0.9	1.3	1.7	1.7	1.7
140°	1.3	1.7	1.7	1.7	1.7
142.5°	1.3	1.7	1.7	2.1	1.7
145°	1.3	1.7	1.7	2.1	2.1
147.5°	1.3	1.7	2.1	2.1	2.1
150°	1.3	1.7	2.1	2.6	2.6
152.5°	1.7	1.7	2.1	2.6	2.6
155°	1.7	2.1	2.1	2.6	2.6
157.5°	1.7	2.1	2.1	2.6	3.0
160°	1.7	2.1	2.6	3.0	3.0
162.5°	1.7	2.1	2.6	3.0	3.0
165°	2.1	2.6	2.6	3.0	3.0
167.5°	2.1	2.6	3.0	3.0	3.4
170°	2.1	2.6	3.0	3.4	3.4
172.5°	2.1	2.6	3.0	3.4	3.4
175°	2.1	2.6	3.0	3.4	3.8
177.5°	2.1	2.6	3.0	3.4	3.8
180°	3.0	3.0	3.0	3.0	3.0

(END OF REPORT)