

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: P685919

Luminaire Tested: **4CZL-5-UNV-LVRF-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685919
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-LVRF-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @80 CRI and 5000K
Light Source: (392) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

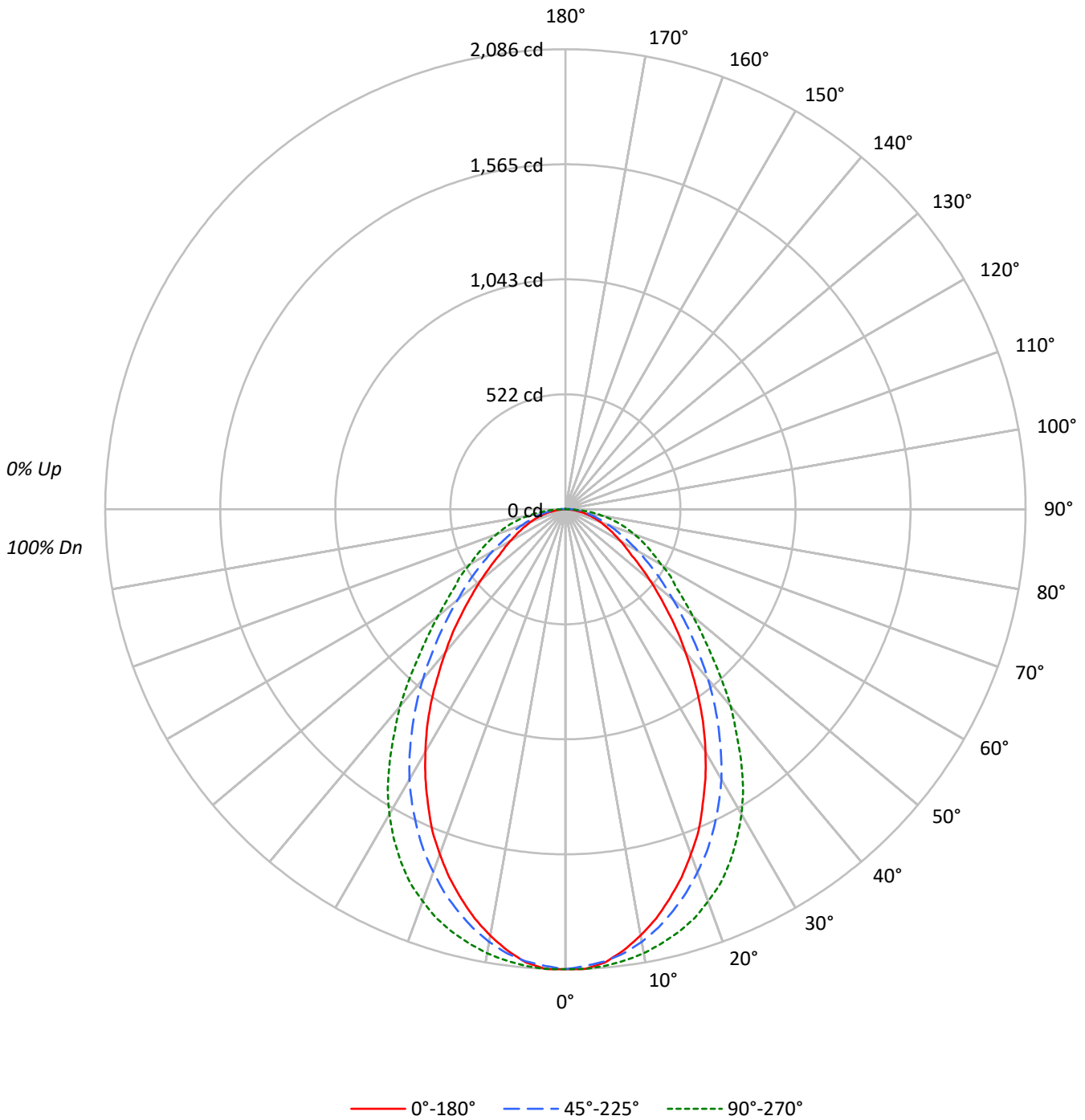
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3847.0 lumens
Efficiency: N/A
Efficacy: 124.1 lumens/watt
Spacing Criteria (0/90/45): 0.97 / 1.15 / 1.12
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31
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	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	88	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	82	79	76	76	76	76	74
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	74	70	67	67	67	67	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	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	63	55	49	73	62	54	48	60	53	48	58	52	48	57	51	47	47	47	47	45
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	43	43	43	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	39	39	39	37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	36	36	36	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	33	33	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6734	6734	6734
5°	6685	6669	6737
10°	6435	6530	6704
15°	6106	6302	6633
20°	5718	6015	6501
25°	5251	5675	6286
30°	4733	5274	5952
35°	4168	4770	5467
40°	3568	4235	4916
45°	3006	3691	4281
50°	2510	3200	3785
55°	2077	2811	3432
60°	1872	2464	3236
65°	1702	2168	3165
70°	1584	1947	3141
75°	1470	1818	3205
80°	1331	1800	3210
85°	1145	2108	3175



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.1	5.1
10°-20°	533.3	13.9
20°-30°	736.8	19.2
30°-40°	758.0	19.7
40°-50°	621.4	16.2
50°-60°	445.9	11.6
60°-70°	299.9	7.8
70°-80°	175.0	4.6
80°-90°	67.4	1.8
90°-100°	11.7	0.3
100°-110°	1.0	0.0
110°-120°	0.2	0.0
120°-130°	0.2	0.0
130°-140°	0.2	0.0
140°-150°	0.3	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1465.2	38.1
0°-40°	2223.2	57.8
0°-60°	3290.5	85.5
0°-90°	3832.9	99.6
90°-120°	12.9	0.3
90°-150°	13.6	0.4
90°-180°	14.0	0.4
0°-180°	3847.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2085	2085	2085	2085	2085	
5°	2062	2064	2058	2077	2078	194
15°	1826	1845	1885	1958	1984	512
25°	1474	1508	1593	1704	1764	676
35°	1057	1106	1210	1323	1387	659
45°	658	709	808	888	938	511
55°	369	413	499	568	610	340
65°	223	236	284	364	414	222
75°	118	122	146	202	257	125
85°	31	38	57	85	86	33
90°	0	13	29	44	9	2
95°	0	2	12	21	4	0
105°	0	0	1	1	1	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	1	0	0	0	0
145°	1	1	1	0	0	0
155°	1	1	1	0	0	0
165°	1	1	1	1	0	0
175°	1	1	1	1	1	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2085.4	2085.4	2085.4	2085.4	2085.4
2.5°	2086.3	2084.5	2072.8	2086.3	2085.7
5°	2062.3	2063.8	2057.5	2076.7	2078.2
7.5°	2017.7	2023.7	2030.6	2058.7	2063.8
10°	1962.5	1971.5	1991.6	2033.6	2044.4
12.5°	1900.5	1910.4	1943.1	2000.9	2015.9
15°	1826.5	1845.1	1885.2	1958.3	1984.1
17.5°	1750.0	1772.8	1822.6	1909.2	1944.0
20°	1664.0	1686.8	1750.3	1846.8	1891.8
22.5°	1577.7	1599.9	1677.5	1780.3	1836.4
25°	1473.7	1508.2	1592.7	1703.6	1764.1
27.5°	1374.2	1410.8	1504.9	1623.9	1684.1
30°	1269.3	1312.2	1414.4	1528.0	1596.3
32.5°	1165.3	1208.8	1313.1	1431.4	1499.2
35°	1057.4	1106.3	1210.0	1323.2	1386.8
37.5°	948.0	1001.4	1108.0	1219.5	1270.8
40°	846.4	898.8	1004.6	1104.5	1166.2
42.5°	752.6	804.1	902.1	992.7	1048.1
45°	658.2	709.4	808.3	887.8	937.5
47.5°	573.7	626.1	718.1	798.4	840.1
50°	499.6	547.3	636.9	709.7	753.5
52.5°	431.9	475.3	564.1	634.8	677.1
55°	369.0	413.0	499.3	567.7	609.6
57.5°	326.7	358.2	435.8	511.6	565.6
60°	289.8	309.3	381.5	471.5	501.1
62.5°	252.4	270.0	329.4	408.5	454.7
65°	222.7	235.9	283.8	364.5	414.2
67.5°	193.3	203.2	244.3	321.9	372.2
70°	167.8	174.1	206.2	279.9	332.7
72.5°	143.6	146.9	175.6	241.6	294.0
75°	117.8	122.0	145.7	202.3	256.9
77.5°	93.2	99.2	120.2	168.7	214.3
80°	71.6	76.4	96.8	138.8	172.6
82.5°	49.8	56.3	75.5	109.7	132.2
85°	30.9	38.4	56.9	85.1	85.7
87.5°	12.9	24.0	41.7	62.9	43.8
90°	0.3	12.9	29.1	44.4	9.3
92.5°	0.0	6.0	19.8	31.8	5.4
95°	0.3	2.1	12.3	21.3	3.9
97.5°	0.0	0.6	6.6	13.5	2.4
100°	0.0	0.3	2.7	7.5	1.5
102.5°	0.0	0.3	1.2	3.3	0.9
105°	0.0	0.3	0.6	1.2	0.6
107.5°	0.0	0.3	0.3	0.3	0.3
110°	0.3	0.3	0.3	0.3	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.3	0.3	0.0	0.0
115°	0.3	0.3	0.3	0.0	0.0
117.5°	0.3	0.3	0.3	0.0	0.0
120°	0.3	0.3	0.3	0.0	0.0
122.5°	0.3	0.3	0.3	0.0	0.0
125°	0.3	0.3	0.3	0.0	0.0
127.5°	0.3	0.3	0.3	0.0	0.0
130°	0.3	0.3	0.3	0.0	0.0
132.5°	0.3	0.6	0.3	0.3	0.0
135°	0.3	0.6	0.3	0.3	0.0
137.5°	0.3	0.6	0.3	0.3	0.0
140°	0.3	0.6	0.3	0.3	0.3
142.5°	0.6	0.6	0.6	0.3	0.3
145°	0.6	0.6	0.6	0.3	0.3
147.5°	0.6	0.6	0.6	0.3	0.3
150°	0.6	0.6	0.6	0.3	0.3
152.5°	0.6	0.9	0.6	0.3	0.3
155°	0.6	0.9	0.6	0.3	0.3
157.5°	0.6	0.9	0.6	0.3	0.3
160°	0.6	0.9	0.6	0.3	0.3
162.5°	0.9	0.9	0.6	0.6	0.3
165°	0.9	0.9	0.9	0.6	0.3
167.5°	0.9	0.9	0.9	0.6	0.3
170°	0.9	0.9	0.9	0.6	0.6
172.5°	0.9	0.9	0.9	0.6	0.6
175°	0.9	1.2	0.9	0.6	0.6
177.5°	0.9	1.2	0.9	0.6	0.6
180°	0.9	0.9	0.9	0.9	0.9

(END OF REPORT)