

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: P685923

Luminaire Tested: **4CZL-16-UNV-LVRF-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685923
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-LVRF-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @80 CRI and 5000K
Light Source: (588) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

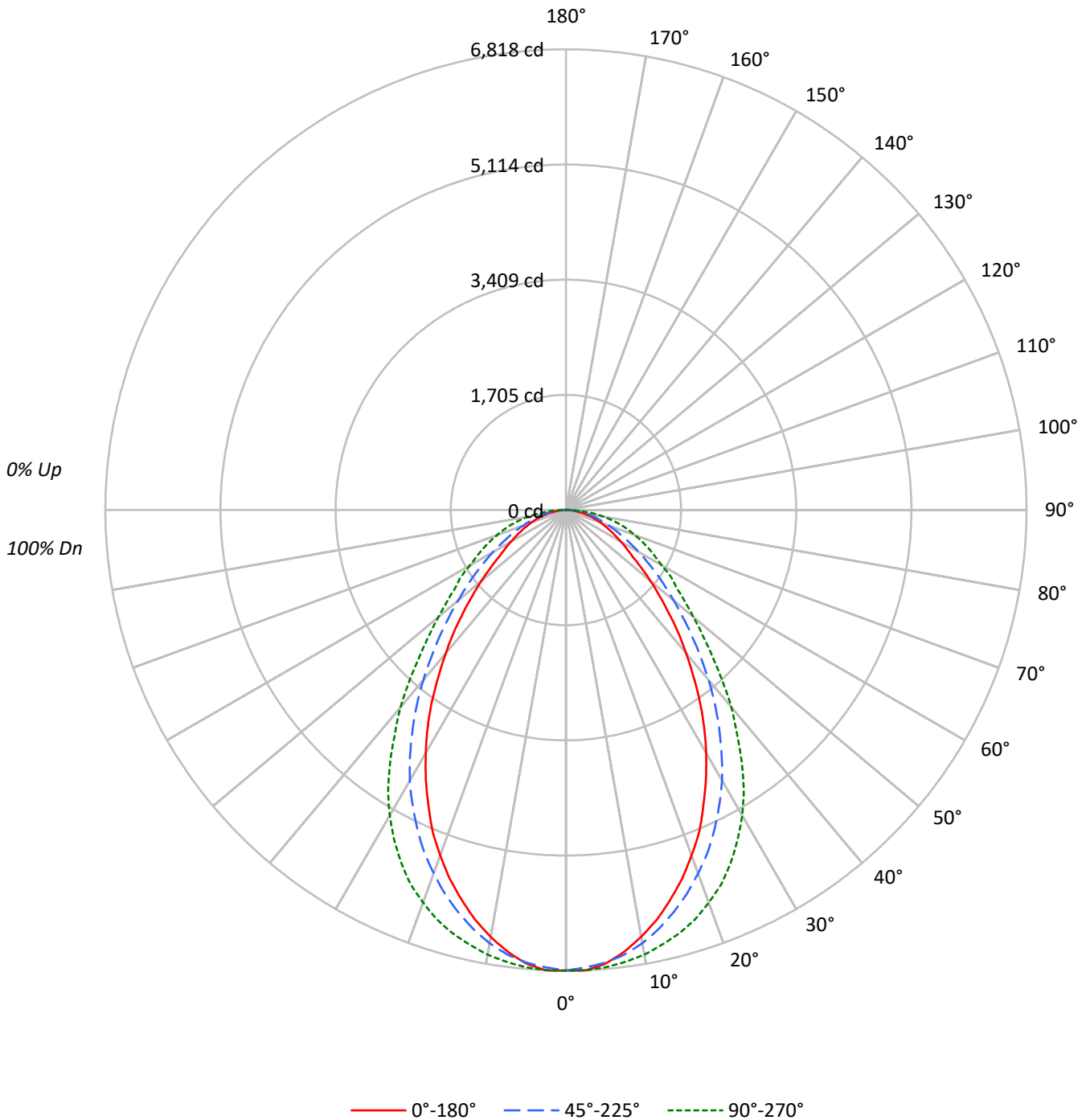
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12572.4 lumens
Efficiency: N/A
Efficacy: 122.1 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): 103
Input Voltage (V): 120
Input Current (Ain): 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°	22008	22008	22008
5°	21848	21797	22016
10°	21031	21342	21908
15°	19955	20597	21678
20°	18688	19657	21246
25°	17160	18546	20542
30°	15468	17235	19452
35°	13623	15588	17866
40°	11660	13840	16066
45°	9823	12064	13992
50°	8203	10457	12371
55°	6789	9187	11216
60°	6117	8053	10577
65°	5561	7088	10343
70°	5179	6363	10266
75°	4802	5939	10473
80°	4353	5884	10492
85°	3738	6895	10378



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	637.7	5.1
10°-20°	1742.8	13.9
20°-30°	2408.0	19.2
30°-40°	2477.1	19.7
40°-50°	2030.8	16.2
50°-60°	1457.2	11.6
60°-70°	980.1	7.8
70°-80°	572.1	4.6
80°-90°	220.4	1.8
90°-100°	38.2	0.3
100°-110°	3.2	0.0
110°-120°	0.6	0.0
120°-130°	0.6	0.0
130°-140°	0.8	0.0
140°-150°	1.0	0.0
150°-160°	0.8	0.0
160°-170°	0.6	0.0
170°-180°	0.3	0.0
0°-30°	4788.5	38.1
0°-40°	7265.6	57.8
0°-60°	10753.6	85.5
0°-90°	12526.2	99.6
90°-120°	42.1	0.3
90°-150°	44.5	0.4
90°-180°	46.0	0.4
0°-180°	12572.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6815	6815	6815	6815	6815	
5°	6740	6745	6724	6787	6792	633
15°	5969	6030	6161	6400	6484	1674
25°	4816	4929	5205	5568	5765	2211
35°	3456	3615	3954	4324	4532	2153
45°	2151	2318	2642	2901	3064	1669
55°	1206	1350	1632	1855	1992	1110
65°	728	771	928	1191	1354	725
75°	385	399	476	661	839	409
85°	101	125	186	278	280	109
90°	1	42	95	145	30	6
95°	1	7	40	70	13	0
105°	0	1	2	4	2	0
115°	1	1	1	0	0	1
125°	1	1	1	0	0	1
135°	1	2	1	1	0	1
145°	2	2	2	1	1	1
155°	2	3	2	1	1	1
165°	3	3	3	2	1	1
175°	3	4	3	2	2	0
180°	3	3	3	3	3	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6815.4	6815.4	6815.4	6815.4	6815.4
2.5°	6818.4	6812.5	6774.3	6818.4	6816.4
5°	6740.0	6744.9	6724.3	6787.0	6791.9
7.5°	6594.0	6613.6	6636.2	6728.2	6744.9
10°	6413.8	6443.2	6508.8	6646.0	6681.2
12.5°	6211.1	6243.4	6350.1	6539.2	6588.2
15°	5969.1	6029.8	6161.1	6400.1	6484.3
17.5°	5719.3	5793.8	5956.4	6239.5	6353.1
20°	5438.2	5512.7	5720.3	6035.7	6182.7
22.5°	5156.1	5228.6	5482.3	5818.3	6001.4
25°	4816.2	4928.9	5205.1	5567.5	5765.4
27.5°	4491.0	4610.5	4918.1	5307.0	5503.9
30°	4148.2	4288.3	4622.3	4993.5	5216.9
32.5°	3808.3	3950.4	4291.2	4678.1	4899.5
35°	3455.7	3615.4	3954.3	4324.5	4532.2
37.5°	3098.2	3272.5	3621.2	3985.6	4153.1
40°	2766.1	2937.5	3283.3	3609.5	3811.3
42.5°	2459.5	2628.0	2948.3	3244.1	3425.3
45°	2151.0	2318.5	2641.7	2901.3	3063.9
47.5°	1874.8	2046.2	2346.9	2609.4	2745.6
50°	1632.8	1788.6	2081.5	2319.5	2462.5
52.5°	1411.5	1553.5	1843.4	2074.6	2212.7
55°	1205.8	1349.8	1631.9	1855.2	1992.3
57.5°	1067.7	1170.5	1424.2	1672.0	1848.3
60°	947.2	1010.9	1246.9	1540.8	1637.7
62.5°	824.7	882.5	1076.5	1335.1	1485.9
65°	727.8	770.9	927.6	1191.1	1353.7
67.5°	631.8	664.1	798.3	1052.0	1216.5
70°	548.5	569.1	673.9	914.9	1087.3
72.5°	469.2	480.0	574.0	789.5	960.9
75°	384.9	398.7	476.0	661.2	839.4
77.5°	304.6	324.2	392.8	551.5	700.3
80°	234.1	249.8	316.4	453.5	564.2
82.5°	162.6	184.1	246.8	358.5	432.0
85°	100.9	125.4	186.1	278.2	280.1
87.5°	42.1	78.4	136.2	205.7	143.0
90°	1.0	42.1	95.0	145.0	30.4
92.5°	0.0	19.6	64.6	103.8	17.6
95°	1.0	6.9	40.2	69.5	12.7
97.5°	0.0	2.0	21.5	44.1	7.8
100°	0.0	1.0	8.8	24.5	4.9
102.5°	0.0	1.0	3.9	10.8	2.9
105°	0.0	1.0	2.0	3.9	2.0
107.5°	0.0	1.0	1.0	1.0	1.0
110°	1.0	1.0	1.0	1.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	1.0	1.0	0.0	0.0
115°	1.0	1.0	1.0	0.0	0.0
117.5°	1.0	1.0	1.0	0.0	0.0
120°	1.0	1.0	1.0	0.0	0.0
122.5°	1.0	1.0	1.0	0.0	0.0
125°	1.0	1.0	1.0	0.0	0.0
127.5°	1.0	1.0	1.0	0.0	0.0
130°	1.0	1.0	1.0	0.0	0.0
132.5°	1.0	2.0	1.0	1.0	0.0
135°	1.0	2.0	1.0	1.0	0.0
137.5°	1.0	2.0	1.0	1.0	0.0
140°	1.0	2.0	1.0	1.0	1.0
142.5°	2.0	2.0	2.0	1.0	1.0
145°	2.0	2.0	2.0	1.0	1.0
147.5°	2.0	2.0	2.0	1.0	1.0
150°	2.0	2.0	2.0	1.0	1.0
152.5°	2.0	2.9	2.0	1.0	1.0
155°	2.0	2.9	2.0	1.0	1.0
157.5°	2.0	2.9	2.0	1.0	1.0
160°	2.0	2.9	2.0	1.0	1.0
162.5°	2.9	2.9	2.0	2.0	1.0
165°	2.9	2.9	2.9	2.0	1.0
167.5°	2.9	2.9	2.9	2.0	1.0
170°	2.9	2.9	2.9	2.0	2.0
172.5°	2.9	2.9	2.9	2.0	2.0
175°	2.9	3.9	2.9	2.0	2.0
177.5°	2.9	3.9	2.9	2.0	2.0
180°	2.9	2.9	2.9	2.9	2.9

(END OF REPORT)