

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: P685803

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685803
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-M-LVR-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @80 CRI and 5000K
Light Source: (588) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

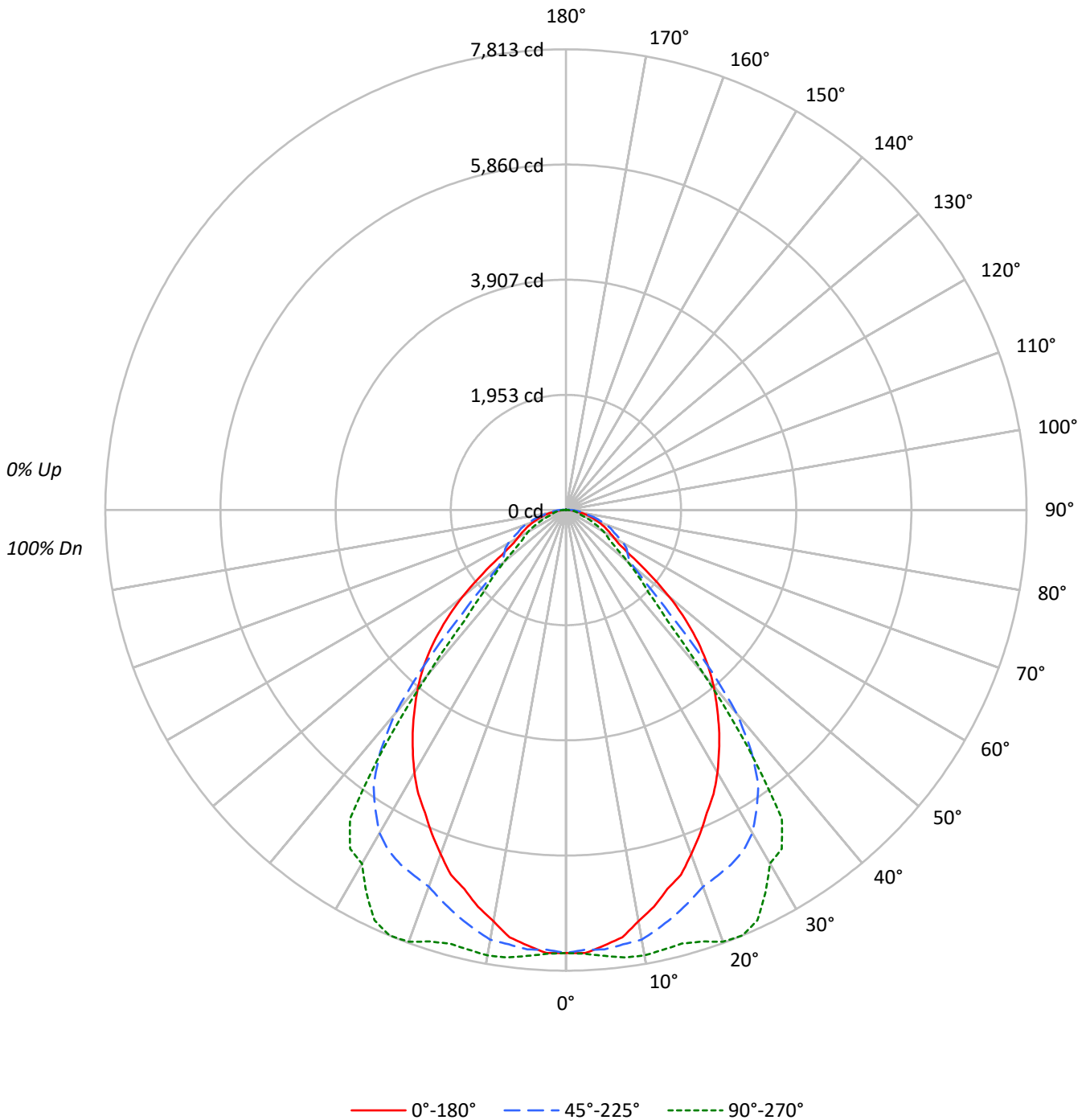
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13895.6 lumens
Efficiency: N/A
Efficacy: 134.9 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): 103
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	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	93	91	90	88
2	103	96	90	86	100	94	89	84	91	86	83	87	84	81	84	81	79	84	81	79	77
3	95	87	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	70	66	62	70	66	62	60
5	83	72	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	65	60	56	54
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	60	55	51	49
7	72	60	53	47	70	59	52	47	58	51	47	57	51	46	55	50	46	55	50	46	44
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	51	46	42	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	48	42	39	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	35	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24257	24257	24257
5°	24032	24248	24610
10°	23218	24262	25148
15°	22241	23809	25443
20°	21344	23356	26766
25°	20165	23634	27361
30°	19167	23583	25807
35°	17847	22426	25164
40°	16429	19010	15335
45°	14475	11331	9089
50°	11490	7524	6859
55°	7439	7158	5205
60°	6073	7275	4782
65°	5785	6855	3907
70°	5493	6880	3089
75°	5218	6440	2872
80°	4828	6085	3225
85°	4320	7440	3957



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	712.8	5.1
10°-20°	2021.9	14.6
20°-30°	3048.9	21.9
30°-40°	3369.0	24.2
40°-50°	2112.3	15.2
50°-60°	1137.3	8.2
60°-70°	772.4	5.6
70°-80°	461.3	3.3
80°-90°	200.5	1.4
90°-100°	43.9	0.3
100°-110°	5.1	0.0
110°-120°	1.9	0.0
120°-130°	1.7	0.0
130°-140°	2.0	0.0
140°-150°	1.8	0.0
150°-160°	1.4	0.0
160°-170°	1.1	0.0
170°-180°	0.4	0.0
0°-30°	5783.7	41.6
0°-40°	9152.6	65.9
0°-60°	12402.2	89.3
0°-90°	13836.4	99.6
90°-120°	50.9	0.4
90°-150°	56.3	0.4
90°-180°	59.0	0.4
0°-180°	13895.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7512	7512	7512	7512	7512	
5°	7414	7426	7480	7568	7592	699
15°	6653	6886	7122	7467	7611	1878
25°	5660	6003	6633	7340	7679	2613
35°	4527	5059	5689	6120	6383	2825
45°	3170	3451	2481	2023	1990	2418
55°	1321	1382	1271	1100	925	1283
65°	757	833	897	729	511	749
75°	418	465	516	424	230	441
85°	117	143	201	264	107	126
90°	3	44	102	170	31	8
95°	1	7	40	87	16	1
105°	1	2	3	7	3	1
115°	1	2	2	2	2	1
125°	1	2	2	2	2	1
135°	2	2	3	3	3	1
145°	2	3	3	3	4	1
155°	3	3	3	3	3	1
165°	3	4	4	4	4	1
175°	4	4	4	5	5	0
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7511.7	7511.7	7511.7	7511.7	7511.7
2.5°	7521.5	7500.9	7462.7	7531.3	7532.3
5°	7413.8	7426.5	7480.4	7568.5	7592.0
7.5°	7309.0	7357.9	7430.4	7643.0	7653.8
10°	7080.7	7182.6	7399.1	7603.8	7669.4
12.5°	6890.7	7041.6	7264.9	7534.3	7636.1
15°	6652.7	6885.8	7121.9	7466.7	7610.7
17.5°	6486.2	6673.3	6962.2	7435.3	7671.4
20°	6211.0	6474.4	6796.7	7456.9	7788.9
22.5°	5943.6	6263.9	6713.4	7464.7	7813.4
25°	5659.5	6003.3	6633.1	7340.3	7679.2
27.5°	5424.4	5712.4	6513.6	7080.7	7325.6
30°	5140.4	5479.3	6324.6	6684.1	6921.1
32.5°	4834.8	5264.8	6018.0	6380.4	6811.4
35°	4527.2	5059.1	5688.9	6119.9	6383.3
37.5°	4205.9	4889.6	5171.7	5241.3	5061.0
40°	3897.4	4653.6	4509.6	3836.7	3637.8
42.5°	3560.5	4146.2	3517.4	2639.7	2550.6
45°	3169.6	3450.8	2481.1	2022.7	1990.3
47.5°	2753.4	2672.1	1850.3	1690.6	1672.0
50°	2287.1	2136.3	1497.6	1491.8	1365.4
52.5°	1782.7	1696.5	1342.9	1293.9	1093.1
55°	1321.3	1382.1	1271.4	1100.0	924.6
57.5°	1057.9	1198.9	1221.4	960.9	826.7
60°	940.3	1049.0	1126.4	883.5	740.5
62.5°	843.3	929.5	1008.9	819.8	638.6
65°	757.1	832.6	897.2	728.7	511.3
67.5°	666.1	744.4	823.8	625.9	434.9
70°	581.8	665.1	728.7	555.4	327.2
72.5°	494.6	580.8	609.2	464.3	261.5
75°	418.2	465.3	516.2	424.1	230.2
77.5°	337.9	378.1	398.7	388.9	202.8
80°	259.6	291.9	327.2	353.6	173.4
82.5°	190.0	213.5	261.5	311.5	139.1
85°	116.6	143.0	200.8	264.5	106.8
87.5°	51.9	85.2	147.9	218.4	68.6
90°	2.9	44.1	101.9	169.5	31.3
92.5°	1.0	19.6	66.6	125.4	21.5
95°	1.0	6.9	40.2	87.2	15.7
97.5°	1.0	2.9	22.5	55.8	9.8
100°	1.0	2.0	10.8	32.3	6.9
102.5°	1.0	2.0	4.9	15.7	4.9
105°	1.0	2.0	2.9	6.9	2.9
107.5°	1.0	2.0	2.0	2.9	2.0
110°	1.0	2.0	2.0	2.0	2.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	2.0	2.0	2.0	2.0
115°	1.0	2.0	2.0	2.0	2.0
117.5°	1.0	2.0	2.0	2.0	2.0
120°	1.0	2.0	2.0	2.0	2.0
122.5°	1.0	2.0	2.0	2.0	2.0
125°	1.0	2.0	2.0	2.0	2.0
127.5°	1.0	2.0	2.0	2.0	2.0
130°	1.0	2.0	2.0	2.0	2.0
132.5°	2.0	2.0	2.9	2.9	2.9
135°	2.0	2.0	2.9	2.9	2.9
137.5°	2.0	2.9	2.9	2.9	2.9
140°	2.0	2.9	2.9	2.9	2.9
142.5°	2.0	2.9	2.9	2.9	2.9
145°	2.0	2.9	2.9	2.9	3.9
147.5°	2.0	2.9	2.9	2.9	3.9
150°	2.0	2.9	2.9	2.9	2.9
152.5°	2.9	2.9	2.9	2.9	2.9
155°	2.9	2.9	2.9	2.9	2.9
157.5°	2.9	2.9	2.9	3.9	3.9
160°	2.9	3.9	3.9	3.9	3.9
162.5°	2.9	3.9	3.9	3.9	3.9
165°	2.9	3.9	3.9	3.9	3.9
167.5°	2.9	3.9	3.9	3.9	4.9
170°	3.9	3.9	3.9	4.9	4.9
172.5°	3.9	3.9	3.9	4.9	4.9
175°	3.9	3.9	3.9	4.9	4.9
177.5°	3.9	4.9	3.9	4.9	5.9
180°	4.9	4.9	4.9	4.9	4.9

(END OF REPORT)