

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: P685681

Luminaire Tested: **4CZL-9-UNV-LVR-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685681
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-LVR-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @80 CRI and 5000K
Light Source: (588) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

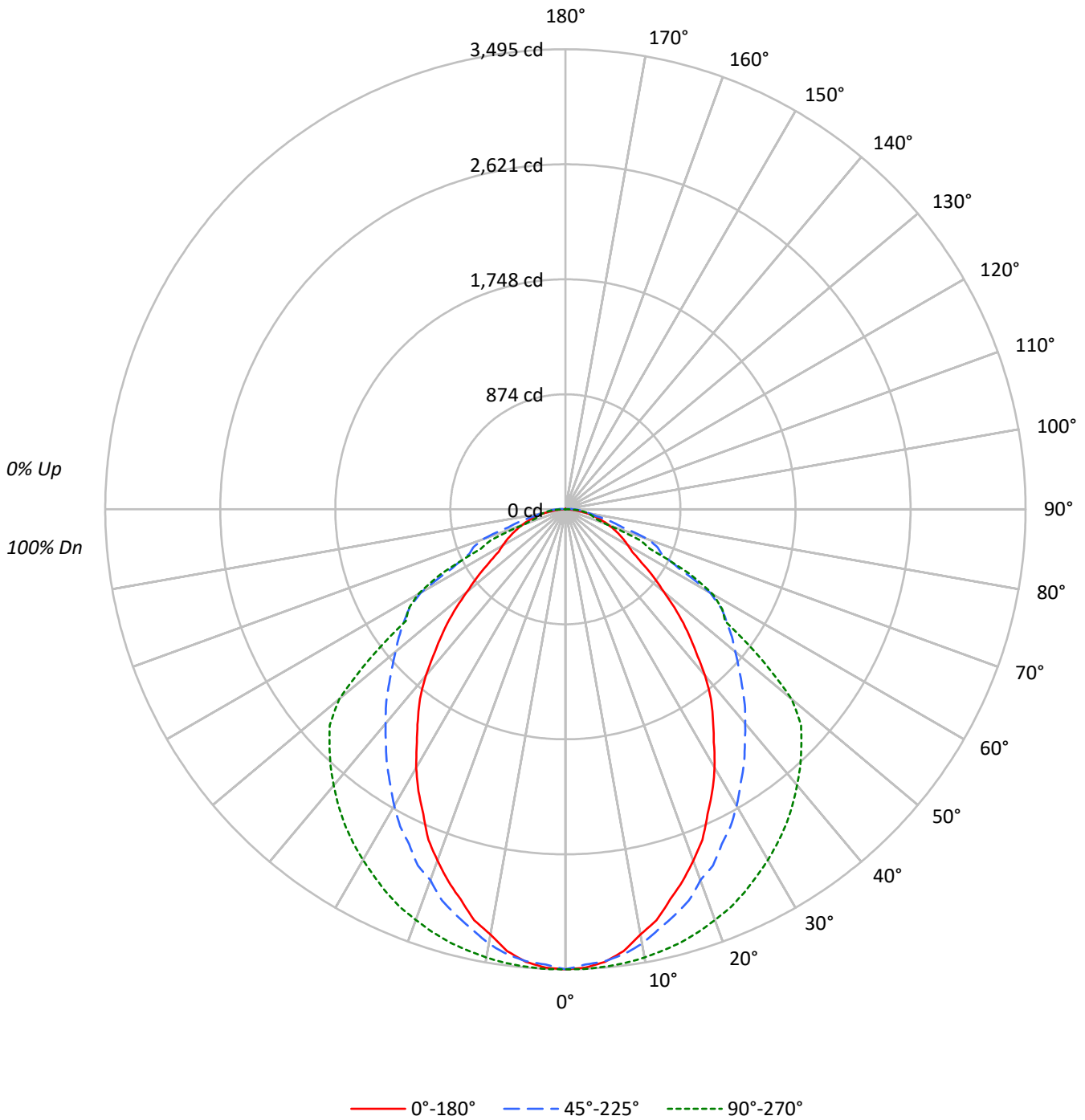
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7914.2 lumens
Efficiency: N/A
Efficacy: 146.6 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1.31 / 1.26
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 (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				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	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	88	88	88	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	75	75	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	65	65	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	56	56	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	49	49	49	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	44	44	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	39	39	39	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	35	35	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	32	32	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29	29	29	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11285	11285	11285
5°	11187	11172	11305
10°	10753	10989	11338
15°	10264	10682	11384
20°	9760	10303	11410
25°	9102	10005	11448
30°	8451	9698	11466
35°	7704	9318	11519
40°	6950	8955	11540
45°	5978	8667	11570
50°	4886	8463	11266
55°	3978	8430	8332
60°	3547	8195	8360
65°	3429	6150	5391
70°	3295	6303	3065
75°	3175	4442	2736
80°	2897	3613	3260
85°	2594	4505	4061



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.3	4.1
10°-20°	907.4	11.5
20°-30°	1312.8	16.6
30°-40°	1498.4	18.9
40°-50°	1472.3	18.6
50°-60°	1174.4	14.8
60°-70°	739.7	9.3
70°-80°	327.7	4.1
80°-90°	125.7	1.6
90°-100°	24.9	0.3
100°-110°	1.6	0.0
110°-120°	0.2	0.0
120°-130°	0.2	0.0
130°-140°	0.4	0.0
140°-150°	0.3	0.0
150°-160°	0.3	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	2547.6	32.2
0°-40°	4046.0	51.1
0°-60°	6692.7	84.6
0°-90°	7885.8	99.6
90°-120°	26.7	0.3
90°-150°	27.7	0.3
90°-180°	28.0	0.4
0°-180°	7914.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3495	3495	3495	3495	3495	
5°	3451	3459	3446	3475	3488	324
15°	3070	3101	3195	3345	3405	864
25°	2555	2637	2808	3065	3213	1177
35°	1954	2073	2364	2712	2922	1222
45°	1309	1500	1898	2323	2534	1006
55°	707	957	1497	1615	1480	650
65°	449	611	805	858	706	445
75°	254	294	356	270	219	267
85°	70	85	122	157	110	74
90°	0	29	64	93	18	4
95°	0	4	27	46	6	0
105°	0	0	0	2	0	1
115°	0	0	0	0	0	0
125°	0	1	0	0	0	0
135°	0	1	0	0	0	0
145°	1	1	0	0	0	1
155°	1	1	0	0	0	1
165°	2	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°	3494.7	3494.7	3494.7	3494.7	3494.7
2.5°	3485.4	3483.3	3462.1	3491.9	3495.2
5°	3451.2	3458.8	3446.4	3475.1	3487.6
7.5°	3385.6	3393.7	3408.4	3461.0	3476.2
10°	3279.2	3299.8	3351.4	3425.2	3457.7
12.5°	3197.8	3223.3	3269.4	3394.8	3432.2
15°	3070.2	3100.6	3195.1	3344.9	3405.1
17.5°	2961.7	3017.0	3117.5	3281.9	3366.0
20°	2840.1	2884.6	2998.1	3220.0	3320.4
22.5°	2718.5	2775.0	2929.7	3137.5	3274.3
25°	2554.6	2637.1	2808.1	3065.4	3213.0
27.5°	2415.7	2519.9	2716.4	2980.1	3144.6
30°	2266.5	2347.3	2600.8	2893.3	3075.1
32.5°	2098.2	2225.2	2475.9	2794.0	3002.4
35°	1954.4	2072.7	2363.6	2712.0	2922.1
37.5°	1815.4	1926.7	2239.3	2619.2	2833.1
40°	1648.8	1795.4	2124.3	2513.4	2737.5
42.5°	1464.3	1643.9	2017.3	2413.5	2640.4
45°	1309.1	1499.6	1897.9	2322.9	2533.5
47.5°	1147.9	1348.7	1786.1	2212.7	2427.6
50°	972.6	1216.8	1684.6	2110.7	2242.6
52.5°	844.5	1079.5	1593.5	1926.2	1890.3
55°	706.6	956.8	1497.4	1614.6	1480.0
57.5°	601.9	846.1	1407.3	1267.8	1412.7
60°	549.2	757.7	1268.9	1207.0	1294.4
62.5°	499.9	680.0	970.4	1132.1	1064.8
65°	448.8	611.1	804.9	857.5	705.6
67.5°	399.5	551.4	758.7	640.4	614.4
70°	349.0	505.3	667.6	546.0	324.6
72.5°	301.2	452.1	456.4	302.3	241.0
75°	254.5	294.2	356.0	269.7	219.3
77.5°	203.5	252.4	238.3	241.5	198.6
80°	155.8	173.7	194.3	216.0	175.3
82.5°	110.2	129.2	157.4	188.9	143.8
85°	70.0	85.2	121.6	156.8	109.6
87.5°	27.7	53.7	90.6	126.5	64.6
90°	0.5	29.3	64.0	93.3	17.9
92.5°	0.5	13.6	42.9	68.4	9.2
95°	0.5	4.3	26.6	45.6	6.0
97.5°	0.5	1.6	14.1	28.2	3.3
100°	0.5	0.5	6.0	15.2	1.6
102.5°	0.5	0.5	2.2	6.0	0.5
105°	0.5	0.5	0.5	1.6	0.0
107.5°	0.5	0.5	0.0	0.0	0.0
110°	0.5	0.5	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)