

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: P685711

Luminaire Tested: **4CZL-9-UNV-LVR-L950-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685711
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-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

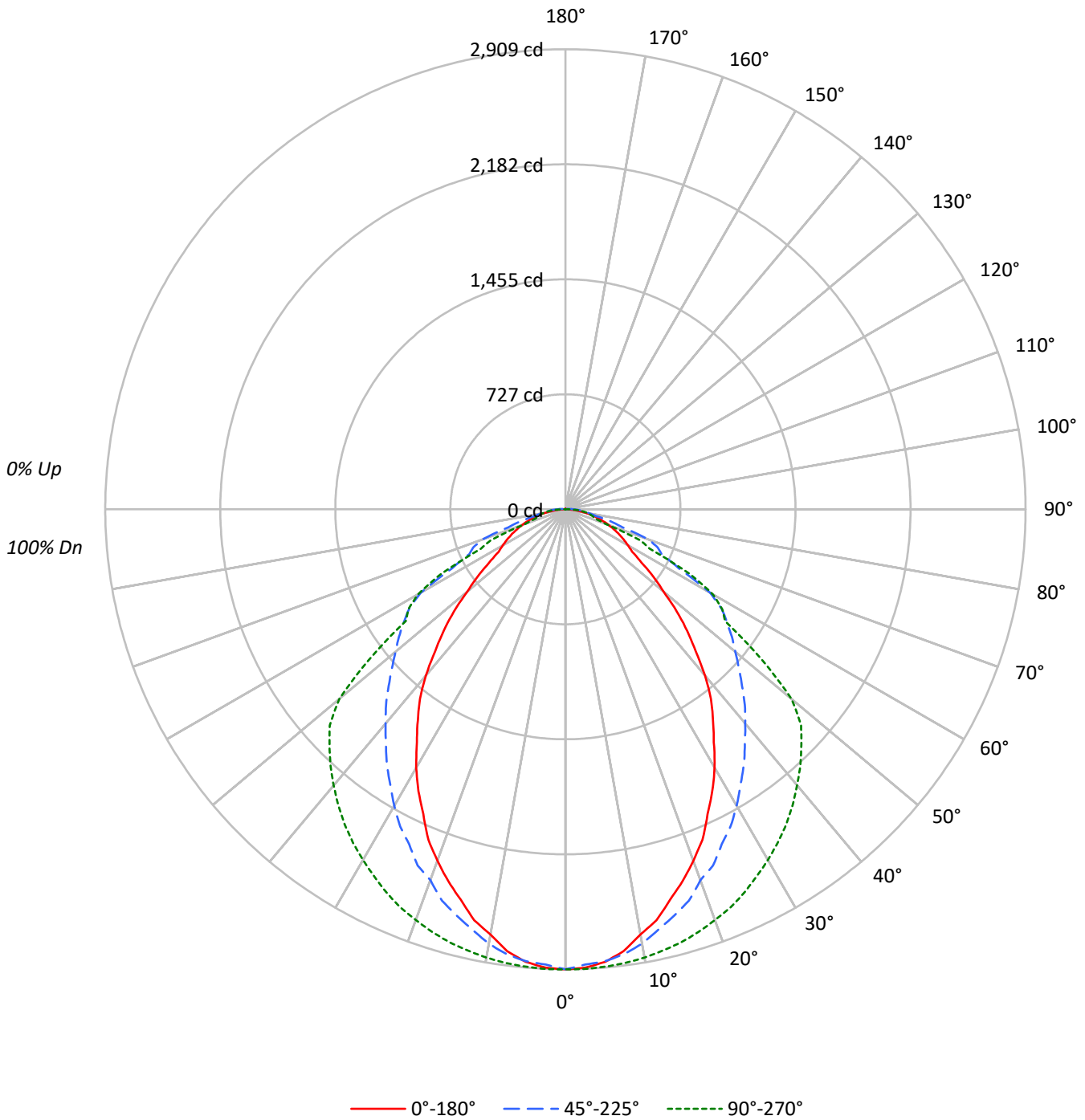
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6588.0 lumens
Efficiency: N/A
Efficacy: 122.0 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	29	39	34	29	29	29	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9394	9394	9394
5°	9312	9299	9410
10°	8950	9147	9438
15°	8544	8891	9476
20°	8124	8576	9498
25°	7577	8329	9529
30°	7035	8072	9544
35°	6413	7756	9588
40°	5786	7454	9606
45°	4976	7215	9631
50°	4067	7045	9378
55°	3312	7017	6936
60°	2953	6821	6959
65°	2855	5119	4488
70°	2743	5247	2551
75°	2644	3698	2277
80°	2412	3007	2713
85°	2160	3750	3383



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	272.5	4.1
10°-20°	755.4	11.5
20°-30°	1092.8	16.6
30°-40°	1247.3	18.9
40°-50°	1225.6	18.6
50°-60°	977.6	14.8
60°-70°	615.8	9.3
70°-80°	272.8	4.1
80°-90°	104.6	1.6
90°-100°	20.7	0.3
100°-110°	1.4	0.0
110°-120°	0.2	0.0
120°-130°	0.2	0.0
130°-140°	0.3	0.0
140°-150°	0.3	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	2120.6	32.2
0°-40°	3367.9	51.1
0°-60°	5571.1	84.6
0°-90°	6564.2	99.6
90°-120°	22.3	0.3
90°-150°	23.2	0.4
90°-180°	24.0	0.4
0°-180°	6588.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2909	2909	2909	2909	2909	
5°	2873	2879	2869	2893	2903	270
15°	2556	2581	2660	2784	2834	720
25°	2126	2195	2338	2552	2674	980
35°	1627	1725	1968	2258	2432	1017
45°	1090	1248	1580	1934	2109	837
55°	588	796	1246	1344	1232	541
65°	374	509	670	714	587	370
75°	212	245	296	224	182	222
85°	58	71	101	131	91	62
90°	0	24	53	78	15	3
95°	0	4	22	38	5	0
105°	0	0	0	1	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	0
165°	1	1	1	0	0	0
175°	1	1	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°	2909.0	2909.0	2909.0	2909.0	2909.0
2.5°	2901.3	2899.5	2881.9	2906.7	2909.4
5°	2872.8	2879.1	2868.8	2892.7	2903.1
7.5°	2818.2	2824.9	2837.1	2881.0	2893.6
10°	2729.6	2746.8	2789.7	2851.1	2878.2
12.5°	2661.8	2683.1	2721.5	2825.8	2857.0
15°	2555.7	2581.0	2659.6	2784.3	2834.4
17.5°	2465.3	2511.4	2595.0	2731.9	2801.9
20°	2364.1	2401.2	2495.6	2680.4	2763.9
22.5°	2262.9	2309.9	2438.7	2611.7	2725.5
25°	2126.5	2195.2	2337.5	2551.6	2674.5
27.5°	2010.8	2097.6	2261.1	2480.7	2617.6
30°	1886.6	1953.9	2164.9	2408.4	2559.7
32.5°	1746.6	1852.3	2061.0	2325.7	2499.2
35°	1626.8	1725.3	1967.5	2257.5	2432.3
37.5°	1511.2	1603.8	1864.0	2180.3	2358.3
40°	1372.5	1494.5	1768.2	2092.2	2278.7
42.5°	1218.9	1368.4	1679.2	2009.0	2197.9
45°	1089.7	1248.2	1579.8	1933.6	2108.9
47.5°	955.5	1122.7	1486.8	1841.9	2020.8
50°	809.6	1012.9	1402.3	1756.9	1866.7
52.5°	703.0	898.6	1326.4	1603.3	1573.5
55°	588.2	796.5	1246.4	1344.0	1232.0
57.5°	501.0	704.3	1171.4	1055.3	1176.0
60°	457.2	630.7	1056.2	1004.7	1077.5
62.5°	416.1	566.1	807.8	942.4	886.4
65°	373.6	508.7	670.0	713.8	587.3
67.5°	332.5	459.0	631.6	533.1	511.4
70°	290.5	420.6	555.7	454.5	270.2
72.5°	250.7	376.3	379.9	251.6	200.6
75°	211.9	244.9	296.4	224.5	182.5
77.5°	169.4	210.1	198.3	201.0	165.3
80°	129.7	144.6	161.7	179.8	145.9
82.5°	91.7	107.5	131.0	157.2	119.7
85°	58.3	70.9	101.2	130.6	91.3
87.5°	23.0	44.7	75.4	105.3	53.8
90°	0.5	24.4	53.3	77.7	14.9
92.5°	0.5	11.3	35.7	56.9	7.7
95°	0.5	3.6	22.1	37.9	5.0
97.5°	0.5	1.4	11.7	23.5	2.7
100°	0.5	0.5	5.0	12.6	1.4
102.5°	0.5	0.5	1.8	5.0	0.5
105°	0.5	0.5	0.5	1.4	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	0.9	0.0	0.0	0.0
127.5°	0.5	0.5	0.0	0.0	0.0
130°	0.5	0.9	0.5	0.0	0.0
132.5°	0.5	0.9	0.5	0.0	0.0
135°	0.5	0.9	0.5	0.0	0.0
137.5°	0.5	0.9	0.5	0.0	0.0
140°	0.9	0.9	0.5	0.0	0.0
142.5°	0.9	0.9	0.5	0.0	0.0
145°	0.9	0.9	0.5	0.0	0.0
147.5°	0.9	0.9	0.5	0.0	0.0
150°	0.9	0.9	0.5	0.0	0.0
152.5°	0.9	0.9	0.5	0.0	0.0
155°	0.9	0.9	0.5	0.0	0.0
157.5°	0.9	1.4	0.5	0.0	0.0
160°	1.4	1.4	0.5	0.0	0.0
162.5°	1.4	1.4	0.9	0.5	0.0
165°	1.4	1.4	0.9	0.5	0.0
167.5°	1.4	1.4	0.9	0.5	0.0
170°	1.4	1.4	0.9	0.5	0.5
172.5°	1.4	1.4	0.9	0.5	0.5
175°	1.4	1.4	0.9	0.5	0.5
177.5°	1.4	1.4	0.9	0.5	0.5
180°	0.9	0.9	0.9	0.9	0.9

(END OF REPORT)