

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: P685932

Luminaire Tested: **4CZL-12-UNV-LVRF-L935-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685932
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-LVRF-L935-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @90 CRI and 3500K
Light Source: (588) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

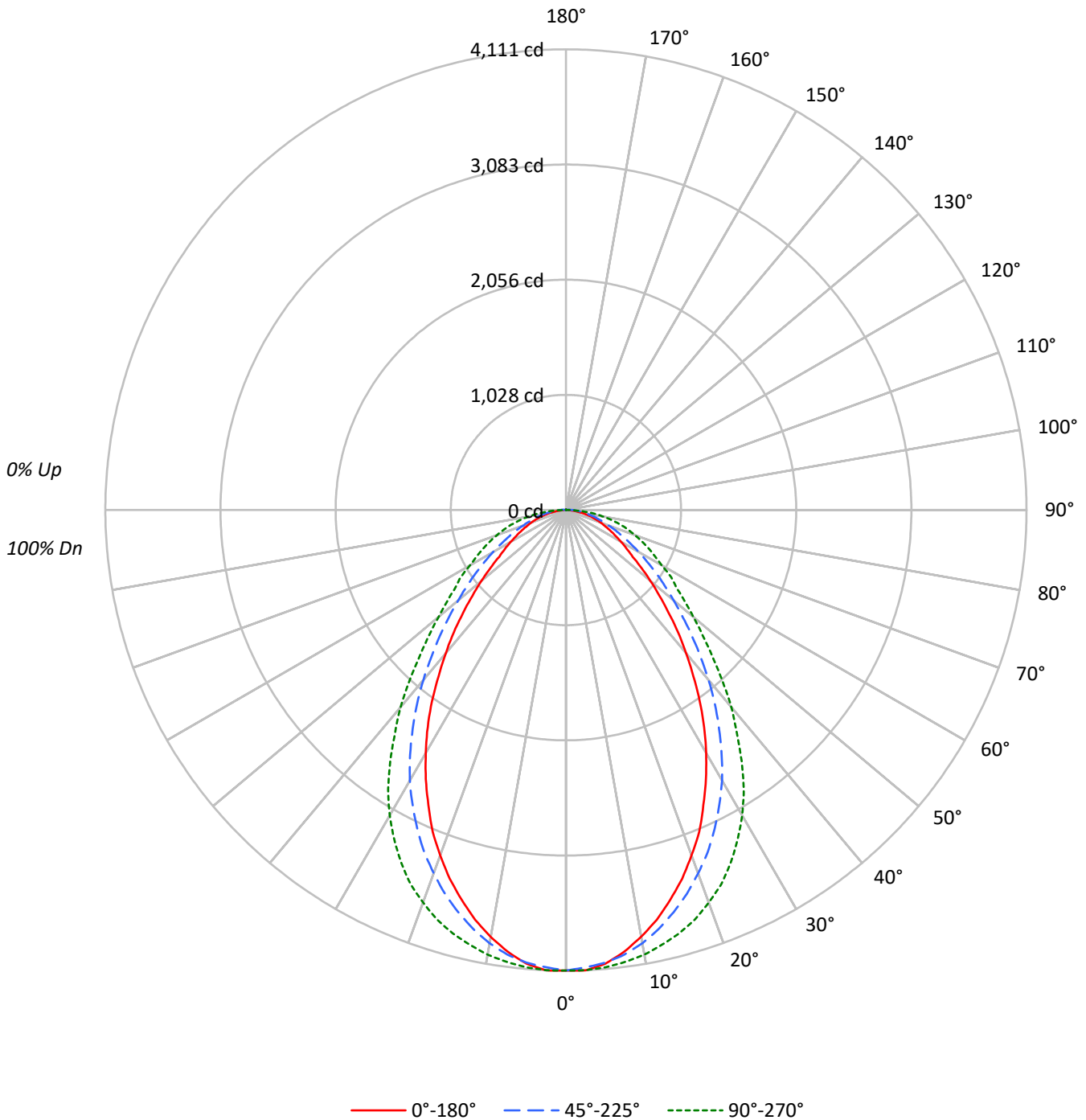
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7580.5 lumens
Efficiency: N/A
Efficacy: 98.4 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): 77
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°	13270	13270	13270
5°	13173	13142	13275
10°	12681	12868	13209
15°	12032	12419	13071
20°	11268	11853	12810
25°	10347	11182	12386
30°	9326	10392	11729
35°	8214	9399	10773
40°	7030	8345	9687
45°	5923	7274	8437
50°	4946	6305	7459
55°	4093	5539	6763
60°	3688	4855	6378
65°	3353	4274	6237
70°	3122	3836	6190
75°	2896	3581	6314
80°	2626	3548	6326
85°	2253	4157	6258



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	384.5	5.1
10°-20°	1050.8	13.9
20°-30°	1451.9	19.2
30°-40°	1493.6	19.7
40°-50°	1224.4	16.2
50°-60°	878.6	11.6
60°-70°	591.0	7.8
70°-80°	344.9	4.6
80°-90°	132.9	1.8
90°-100°	23.0	0.3
100°-110°	2.0	0.0
110°-120°	0.4	0.0
120°-130°	0.3	0.0
130°-140°	0.5	0.0
140°-150°	0.6	0.0
150°-160°	0.5	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	2887.2	38.1
0°-40°	4380.8	57.8
0°-60°	6483.8	85.5
0°-90°	7552.6	99.6
90°-120°	25.4	0.3
90°-150°	26.8	0.4
90°-180°	28.0	0.4
0°-180°	7580.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4109	4109	4109	4109	4109	
5°	4064	4067	4054	4092	4095	381
15°	3599	3636	3715	3859	3910	1010
25°	2904	2972	3138	3357	3476	1333
35°	2084	2180	2384	2608	2733	1298
45°	1297	1398	1593	1749	1847	1007
55°	727	814	984	1119	1201	669
65°	439	465	559	718	816	437
75°	232	240	287	399	506	246
85°	61	76	112	168	169	66
90°	1	25	57	87	18	4
95°	1	4	24	42	8	0
105°	0	1	1	2	1	0
115°	1	1	1	0	0	0
125°	1	1	1	0	0	1
135°	1	1	1	1	0	0
145°	1	1	1	1	1	1
155°	1	2	1	1	1	1
165°	2	2	2	1	1	0
175°	2	2	2	1	1	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4109.3	4109.3	4109.3	4109.3	4109.3
2.5°	4111.1	4107.6	4084.5	4111.1	4109.9
5°	4063.9	4066.8	4054.4	4092.2	4095.2
7.5°	3975.9	3987.7	4001.3	4056.8	4066.8
10°	3867.2	3884.9	3924.5	4007.2	4028.4
12.5°	3744.9	3764.4	3828.8	3942.8	3972.3
15°	3599.1	3635.7	3714.8	3858.9	3909.7
17.5°	3448.5	3493.3	3591.4	3762.1	3830.6
20°	3279.0	3323.8	3449.1	3639.2	3727.8
22.5°	3108.9	3152.6	3305.5	3508.1	3618.6
25°	2903.9	2971.9	3138.4	3356.9	3476.2
27.5°	2707.9	2779.9	2965.4	3199.8	3318.5
30°	2501.2	2585.6	2787.0	3010.8	3145.5
32.5°	2296.2	2381.9	2587.4	2820.7	2954.1
35°	2083.6	2179.9	2384.2	2607.5	2732.7
37.5°	1868.0	1973.2	2183.4	2403.1	2504.1
40°	1667.8	1771.2	1979.7	2176.3	2298.0
42.5°	1483.0	1584.6	1777.7	1956.0	2065.3
45°	1296.9	1397.9	1592.8	1749.3	1847.4
47.5°	1130.4	1233.7	1415.1	1573.3	1655.4
50°	984.5	1078.4	1255.0	1398.5	1484.7
52.5°	851.0	936.7	1111.5	1250.9	1334.1
55°	727.0	813.8	983.9	1118.6	1201.3
57.5°	643.7	705.8	858.7	1008.1	1114.4
60°	571.1	609.5	751.8	929.0	987.5
62.5°	497.3	532.1	649.1	805.0	895.9
65°	438.8	464.8	559.3	718.2	816.2
67.5°	380.9	400.4	481.3	634.3	733.5
70°	330.7	343.1	406.3	551.6	655.6
72.5°	282.9	289.4	346.1	476.0	579.4
75°	232.1	240.4	287.0	398.6	506.1
77.5°	183.7	195.5	236.8	332.5	422.3
80°	141.2	150.6	190.8	273.4	340.2
82.5°	98.0	111.0	148.8	216.2	260.5
85°	60.8	75.6	112.2	167.7	168.9
87.5°	25.4	47.2	82.1	124.0	86.2
90°	0.6	25.4	57.3	87.4	18.3
92.5°	0.0	11.8	39.0	62.6	10.6
95°	0.6	4.1	24.2	41.9	7.7
97.5°	0.0	1.2	13.0	26.6	4.7
100°	0.0	0.6	5.3	14.8	3.0
102.5°	0.0	0.6	2.4	6.5	1.8
105°	0.0	0.6	1.2	2.4	1.2
107.5°	0.0	0.6	0.6	0.6	0.6
110°	0.6	0.6	0.6	0.6	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.6	0.6	0.0	0.0
115°	0.6	0.6	0.6	0.0	0.0
117.5°	0.6	0.6	0.6	0.0	0.0
120°	0.6	0.6	0.6	0.0	0.0
122.5°	0.6	0.6	0.6	0.0	0.0
125°	0.6	0.6	0.6	0.0	0.0
127.5°	0.6	0.6	0.6	0.0	0.0
130°	0.6	0.6	0.6	0.0	0.0
132.5°	0.6	1.2	0.6	0.6	0.0
135°	0.6	1.2	0.6	0.6	0.0
137.5°	0.6	1.2	0.6	0.6	0.0
140°	0.6	1.2	0.6	0.6	0.6
142.5°	1.2	1.2	1.2	0.6	0.6
145°	1.2	1.2	1.2	0.6	0.6
147.5°	1.2	1.2	1.2	0.6	0.6
150°	1.2	1.2	1.2	0.6	0.6
152.5°	1.2	1.8	1.2	0.6	0.6
155°	1.2	1.8	1.2	0.6	0.6
157.5°	1.2	1.8	1.2	0.6	0.6
160°	1.2	1.8	1.2	0.6	0.6
162.5°	1.8	1.8	1.2	1.2	0.6
165°	1.8	1.8	1.8	1.2	0.6
167.5°	1.8	1.8	1.8	1.2	0.6
170°	1.8	1.8	1.8	1.2	1.2
172.5°	1.8	1.8	1.8	1.2	1.2
175°	1.8	2.4	1.8	1.2	1.2
177.5°	1.8	2.4	1.8	1.2	1.2
180°	1.8	1.8	1.8	1.8	1.8

(END OF REPORT)