

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: P685882

Luminaire Tested: **4CZL-12-UNV-W-LVR-L940-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685882
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-W-LVR-L940-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @90 CRI and 4000K
Light Source: (588) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

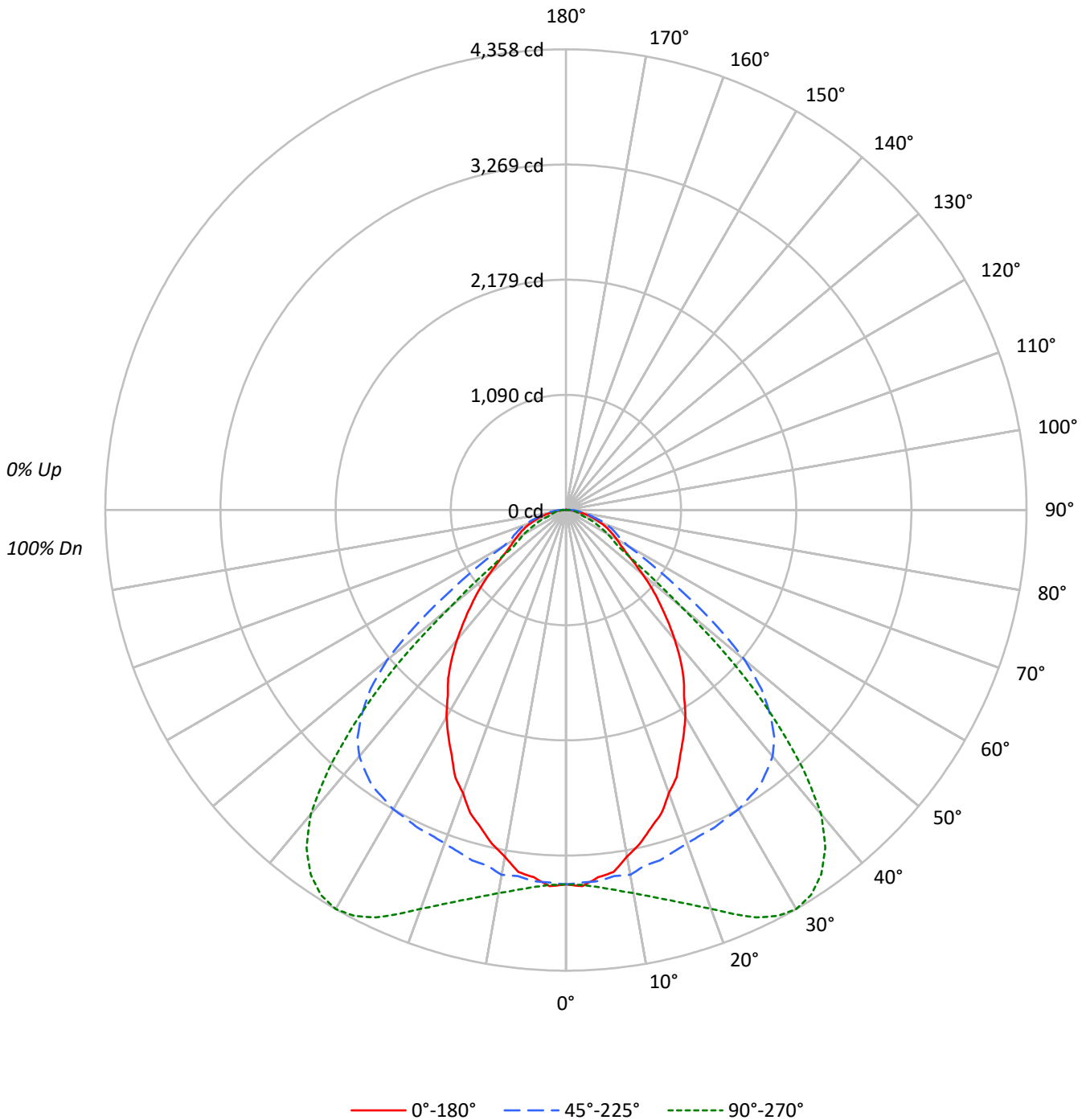
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8424.0 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.64 / 1.46
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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	89	89	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	77	77	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	68	68	68	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	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	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	47	47	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	42	42	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	38	38	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	34	34	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	31	31	31	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11434	11434	11434
5°	11303	11420	11608
10°	10913	11490	12069
15°	10399	11468	12779
20°	9789	11530	13793
25°	9114	11814	15149
30°	8426	12187	16250
35°	7655	12582	16591
40°	6749	12819	15829
45°	5753	12469	12690
50°	4768	11088	7201
55°	3884	7491	3445
60°	3586	4356	2975
65°	3457	4008	2419
70°	3262	3931	1729
75°	3036	3588	1681
80°	2767	3526	1845
85°	2123	4224	2034



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.7	4.0
10°-20°	977.3	11.6
20°-30°	1550.9	18.4
30°-40°	1937.0	23.0
40°-50°	1779.1	21.1
50°-60°	949.5	11.3
60°-70°	488.7	5.8
70°-80°	268.7	3.2
80°-90°	110.9	1.3
90°-100°	21.4	0.3
100°-110°	1.2	0.0
110°-120°	0.3	0.0
120°-130°	0.4	0.0
130°-140°	0.7	0.0
140°-150°	0.6	0.0
150°-160°	0.4	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	2864.8	34.0
0°-40°	4801.9	57.0
0°-60°	7530.4	89.4
0°-90°	8398.6	99.7
90°-120°	22.9	0.3
90°-150°	24.5	0.3
90°-180°	25.0	0.3
0°-180°	8424.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3541	3541	3541	3541	3541	
5°	3487	3496	3523	3577	3581	329
15°	3111	3212	3430	3710	3822	875
25°	2558	2798	3316	3923	4252	1179
35°	1942	2300	3192	3888	4209	1206
45°	1260	1816	2730	2830	2779	975
55°	690	1237	1331	745	612	637
65°	452	593	524	428	317	447
75°	243	270	288	256	135	258
85°	57	75	114	150	55	66
90°	0	21	56	91	12	2
95°	0	2	21	42	5	0
105°	0	1	1	1	0	0
115°	0	1	1	0	0	0
125°	0	1	1	0	0	0
135°	1	1	1	1	1	0
145°	1	1	1	1	1	0
155°	1	1	1	1	1	1
165°	1	2	1	1	1	0
175°	2	2	1	1	1	0
180°	1	1	1	1	1	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3540.7	3540.7	3540.7	3540.7	3540.7
2.5°	3561.4	3553.7	3528.3	3551.3	3549.6
5°	3487.0	3495.8	3523.0	3577.3	3580.9
7.5°	3453.9	3478.1	3493.5	3611.0	3626.3
10°	3328.1	3365.9	3504.1	3626.3	3680.7
12.5°	3233.6	3309.8	3443.9	3651.2	3745.7
15°	3110.7	3212.3	3430.3	3709.6	3822.4
17.5°	3006.2	3110.2	3388.9	3753.9	3911.6
20°	2848.5	3036.9	3355.3	3800.0	4013.8
22.5°	2735.7	2926.5	3329.3	3840.7	4134.9
25°	2557.9	2798.3	3315.7	3922.8	4251.8
27.5°	2409.1	2690.2	3285.6	3975.4	4329.2
30°	2259.7	2557.9	3268.4	3984.9	4358.1
32.5°	2079.5	2450.4	3225.3	3963.0	4316.8
35°	1941.9	2300.4	3191.7	3888.0	4208.7
37.5°	1774.2	2182.3	3117.8	3752.1	4031.5
40°	1601.1	2073.0	3041.1	3540.1	3755.1
42.5°	1426.3	1950.2	2918.2	3257.2	3322.8
45°	1259.8	1816.1	2730.4	2829.6	2778.8
47.5°	1110.3	1672.0	2508.3	2293.3	2174.0
50°	949.1	1525.5	2207.1	1745.8	1433.4
52.5°	803.8	1403.3	1792.5	1182.4	891.8
55°	689.8	1236.7	1330.6	745.4	611.9
57.5°	608.9	1109.2	960.3	589.4	523.9
60°	555.2	949.7	674.5	541.0	460.7
62.5°	502.0	751.3	577.0	493.2	387.4
65°	452.4	593.0	524.5	427.6	316.6
67.5°	401.0	481.3	473.7	388.0	264.0
70°	345.5	395.7	416.4	324.8	183.1
72.5°	295.9	331.9	354.4	277.6	155.3
75°	243.3	269.9	287.6	255.7	134.7
77.5°	193.1	217.3	234.5	231.5	118.1
80°	148.8	164.8	189.6	207.3	99.2
82.5°	101.6	113.4	149.4	179.0	77.4
85°	57.3	75.0	114.0	150.0	54.9
87.5°	16.5	44.3	82.7	120.5	31.9
90°	0.0	21.3	56.1	91.0	11.8
92.5°	0.0	8.3	36.6	63.8	8.3
95°	0.0	2.4	21.3	41.9	5.3
97.5°	0.0	0.6	10.0	24.8	2.4
100°	0.0	0.6	3.5	11.8	0.6
102.5°	0.0	0.6	1.2	4.1	0.0
105°	0.0	0.6	0.6	0.6	0.0
107.5°	0.0	0.6	0.6	0.0	0.0
110°	0.0	0.6	0.6	0.0	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°	0.0	0.6	0.6	0.0	0.0
117.5°	0.0	0.6	0.6	0.0	0.0
120°	0.0	0.6	0.6	0.0	0.0
122.5°	0.0	0.6	0.6	0.0	0.0
125°	0.0	0.6	0.6	0.0	0.0
127.5°	0.6	0.6	0.6	0.6	0.0
130°	0.6	1.2	1.2	0.6	0.0
132.5°	0.6	1.2	1.2	0.6	0.0
135°	0.6	1.2	1.2	0.6	0.6
137.5°	0.6	1.2	1.2	0.6	0.6
140°	0.6	1.2	1.2	0.6	0.6
142.5°	0.6	1.2	1.2	0.6	0.6
145°	0.6	1.2	1.2	0.6	0.6
147.5°	0.6	1.2	1.2	0.6	0.6
150°	0.6	1.2	1.2	0.6	0.6
152.5°	1.2	1.2	1.2	0.6	0.6
155°	1.2	1.2	1.2	0.6	0.6
157.5°	1.2	1.2	1.2	0.6	0.6
160°	1.2	1.2	1.2	0.6	0.6
162.5°	1.2	1.8	1.2	0.6	0.6
165°	1.2	1.8	1.2	0.6	0.6
167.5°	1.2	1.8	1.2	0.6	0.6
170°	1.2	1.8	1.2	0.6	0.6
172.5°	1.2	1.8	1.2	0.6	0.6
175°	1.8	1.8	1.2	0.6	0.6
177.5°	1.8	1.8	1.2	1.2	1.2
180°	1.2	1.2	1.2	1.2	1.2

(END OF REPORT)