

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: P685671

Luminaire Tested: **4CZL-9-UNV-LVR-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685671
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-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @80 CRI and 4000K
Light Source: (588) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

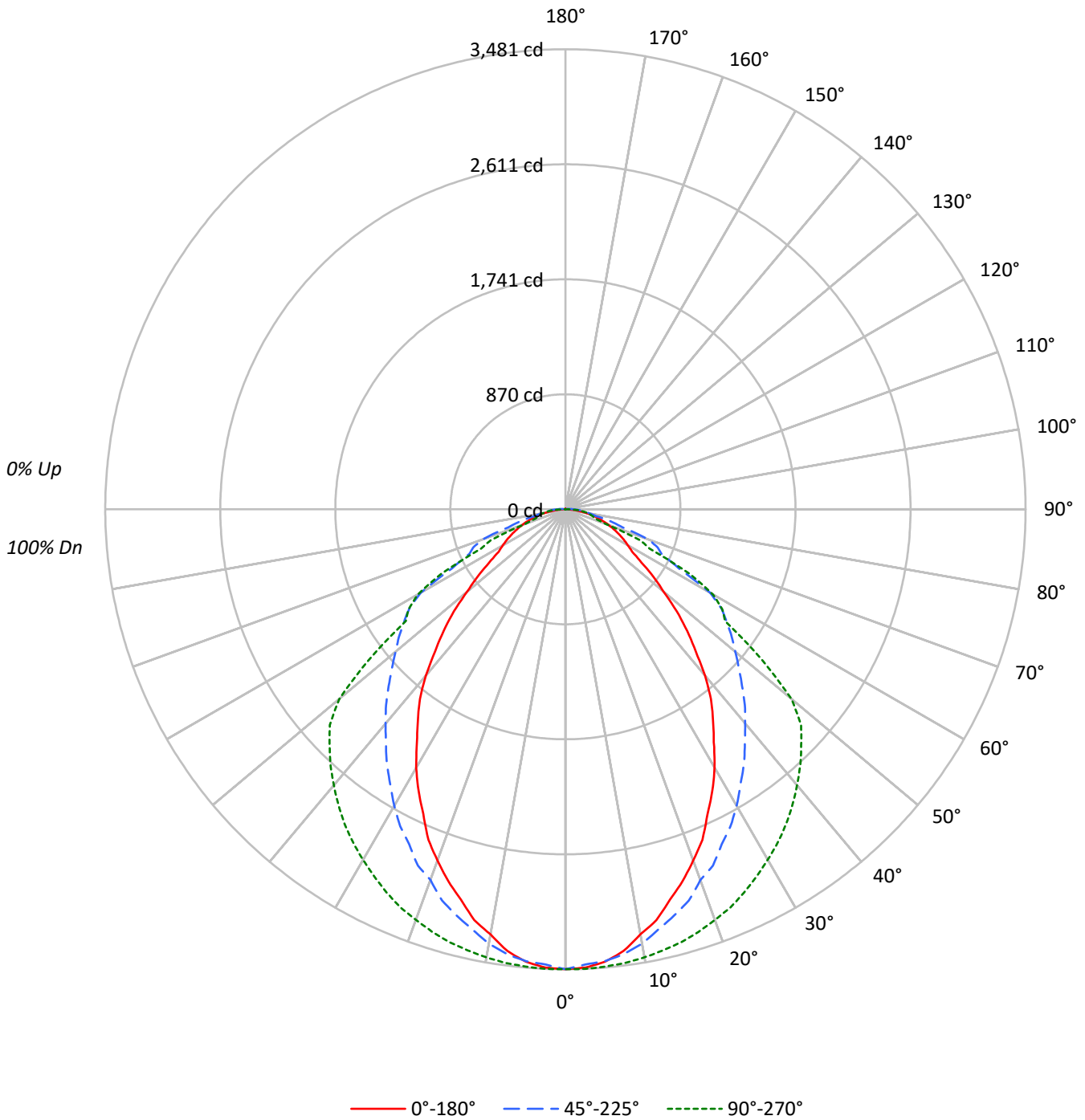
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7881.1 lumens
Efficiency: N/A
Efficacy: 145.9 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				
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°	11238	11238	11238
5°	11140	11125	11258
10°	10708	10943	11291
15°	10221	10637	11336
20°	9719	10259	11363
25°	9064	9964	11400
30°	8416	9657	11419
35°	7672	9279	11471
40°	6921	8917	11492
45°	5953	8631	11521
50°	4865	8428	11219
55°	3962	8395	8297
60°	3532	8161	8325
65°	3415	6124	5369
70°	3281	6277	3051
75°	3163	4423	2724
80°	2884	3598	3247
85°	2582	4487	4046



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.0	4.1
10°-20°	903.6	11.5
20°-30°	1307.3	16.6
30°-40°	1492.1	18.9
40°-50°	1466.2	18.6
50°-60°	1169.5	14.8
60°-70°	736.6	9.3
70°-80°	326.3	4.1
80°-90°	125.1	1.6
90°-100°	24.8	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°	2536.9	32.2
0°-40°	4029.1	51.1
0°-60°	6664.7	84.6
0°-90°	7852.9	99.6
90°-120°	26.6	0.3
90°-150°	27.6	0.3
90°-180°	28.0	0.4
0°-180°	7881.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3480	3480	3480	3480	3480	
5°	3437	3444	3432	3461	3473	323
15°	3057	3088	3182	3331	3391	861
25°	2544	2626	2796	3052	3200	1172
35°	1946	2064	2354	2701	2910	1217
45°	1304	1493	1890	2313	2523	1002
55°	704	953	1491	1608	1474	647
65°	447	609	802	854	703	443
75°	254	293	354	269	218	266
85°	70	85	121	156	109	74
90°	0	29	64	93	18	4
95°	0	4	26	45	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°	3480.0	3480.0	3480.0	3480.0	3480.0
2.5°	3470.8	3468.7	3447.6	3477.3	3480.6
5°	3436.8	3444.4	3431.9	3460.6	3473.0
7.5°	3371.4	3379.5	3394.1	3446.5	3461.7
10°	3265.5	3286.0	3337.4	3410.9	3443.3
12.5°	3184.4	3209.8	3255.7	3380.6	3417.9
15°	3057.4	3087.7	3181.7	3330.9	3390.9
17.5°	2949.3	3004.4	3104.4	3268.2	3351.9
20°	2828.2	2872.6	2985.5	3206.6	3306.5
22.5°	2707.2	2763.4	2917.4	3124.4	3260.6
25°	2544.0	2626.1	2796.4	3052.5	3199.5
27.5°	2405.6	2509.4	2705.0	2967.7	3131.4
30°	2257.0	2337.5	2589.9	2881.2	3062.3
32.5°	2089.4	2215.9	2465.6	2782.3	2989.8
35°	1946.2	2064.0	2353.7	2700.7	2909.8
37.5°	1807.8	1918.6	2229.9	2608.3	2821.2
40°	1641.9	1787.8	2115.4	2502.9	2726.1
42.5°	1458.2	1637.1	2008.9	2403.4	2629.3
45°	1303.6	1493.3	1890.0	2313.2	2522.9
47.5°	1143.1	1343.0	1778.7	2203.5	2417.5
50°	968.5	1211.7	1677.6	2101.9	2233.2
52.5°	841.0	1075.0	1586.8	1918.1	1882.4
55°	703.7	952.8	1491.1	1607.9	1473.8
57.5°	599.4	842.6	1401.4	1262.5	1406.8
60°	546.9	754.5	1263.6	1202.0	1289.0
62.5°	497.8	677.2	966.3	1127.4	1060.4
65°	447.0	608.6	801.5	853.9	702.6
67.5°	397.8	549.1	755.6	637.7	611.8
70°	347.5	503.2	664.8	543.7	323.2
72.5°	300.0	450.2	454.5	301.0	240.0
75°	253.5	292.9	354.5	268.6	218.3
77.5°	202.7	251.3	237.3	240.5	197.8
80°	155.1	172.9	193.5	215.1	174.6
82.5°	109.7	128.6	156.7	188.1	143.2
85°	69.7	84.9	121.1	156.2	109.2
87.5°	27.6	53.5	90.3	125.9	64.3
90°	0.5	29.2	63.8	93.0	17.8
92.5°	0.5	13.5	42.7	68.1	9.2
95°	0.5	4.3	26.5	45.4	5.9
97.5°	0.5	1.6	14.1	28.1	3.2
100°	0.5	0.5	5.9	15.1	1.6
102.5°	0.5	0.5	2.2	5.9	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)