

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: P685911

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685911
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-LVRF-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @80 CRI and 4000K
Light Source: (588) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

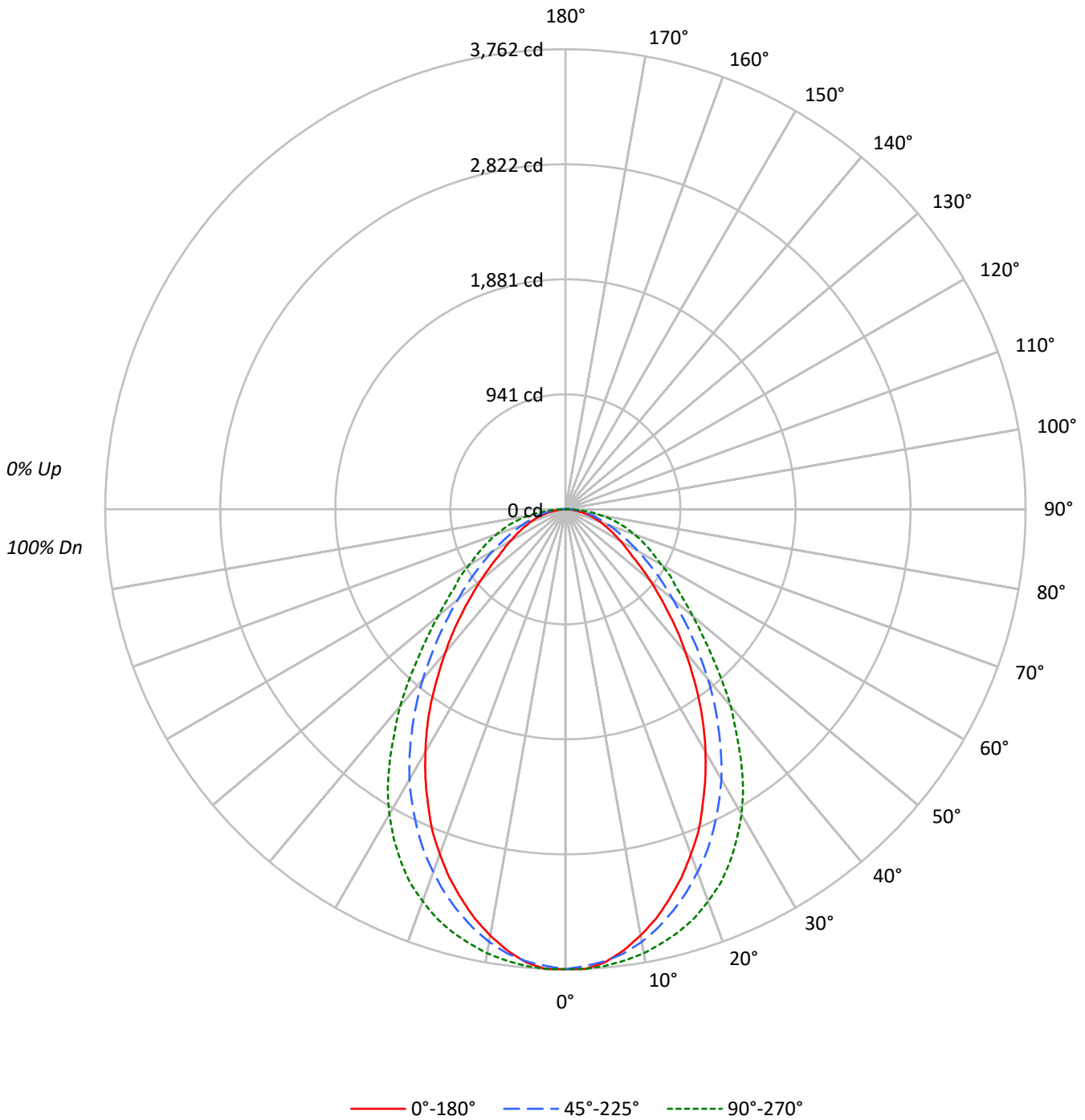
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6936.9 lumens
Efficiency: N/A
Efficacy: 128.5 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): 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

TEST NUMBER: P685911
CATALOG NUMBER: 4CZL-9-UNV-LVRF-L840-CD-U

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°	12143	12143	12143
5°	12055	12027	12148
10°	11604	11776	12088
15°	11011	11365	11961
20°	10311	10846	11723
25°	9468	10233	11334
30°	8534	9510	10733
35°	7516	8601	9858
40°	6434	7637	8865
45°	5420	6657	7721
50°	4526	5770	6826
55°	3746	5069	6189
60°	3375	4443	5836
65°	3069	3911	5707
70°	2858	3510	5664
75°	2650	3278	5779
80°	2403	3247	5789
85°	2064	3805	5728



TEST NUMBER: P685911
 CATALOG NUMBER: 4CZL-9-UNV-LVRF-L840-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	351.9	5.1
10°-20°	961.6	13.9
20°-30°	1328.7	19.2
30°-40°	1366.8	19.7
40°-50°	1120.5	16.2
50°-60°	804.0	11.6
60°-70°	540.8	7.8
70°-80°	315.6	4.6
80°-90°	121.6	1.8
90°-100°	21.1	0.3
100°-110°	1.8	0.0
110°-120°	0.3	0.0
120°-130°	0.3	0.0
130°-140°	0.4	0.0
140°-150°	0.5	0.0
150°-160°	0.5	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	2642.1	38.1
0°-40°	4008.9	57.8
0°-60°	5933.5	85.5
0°-90°	6911.5	99.6
90°-120°	23.2	0.3
90°-150°	24.4	0.4
90°-180°	25.0	0.4
0°-180°	6936.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3760	3760	3760	3760	3760	
5°	3719	3722	3710	3745	3748	349
15°	3294	3327	3400	3531	3578	924
25°	2657	2720	2872	3072	3181	1220
35°	1907	1995	2182	2386	2501	1188
45°	1187	1279	1458	1601	1691	921
55°	665	745	900	1024	1099	612
65°	402	425	512	657	747	400
75°	212	220	263	365	463	226
85°	56	69	103	154	155	60
90°	0	23	52	80	17	3
95°	0	4	22	38	7	0
105°	0	0	1	2	1	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	1	0	0	0	0
145°	1	1	1	0	0	1
155°	1	2	1	0	0	1
165°	2	2	2	1	0	0
175°	2	2	2	1	1	0
180°	2	2	2	2	2	

TEST NUMBER: P685911

CATALOG NUMBER: 4CZL-9-UNV-LVRF-L840-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3760.5	3760.5	3760.5	3760.5	3760.5
2.5°	3762.1	3758.9	3737.8	3762.1	3761.1
5°	3718.9	3721.6	3710.3	3744.8	3747.6
7.5°	3638.4	3649.2	3661.6	3712.4	3721.6
10°	3538.9	3555.1	3591.4	3667.0	3686.5
12.5°	3427.1	3444.9	3503.8	3608.1	3635.1
15°	3293.6	3327.1	3399.5	3531.4	3577.8
17.5°	3155.7	3196.8	3286.5	3442.7	3505.4
20°	3000.6	3041.7	3156.3	3330.3	3411.4
22.5°	2845.0	2885.0	3025.0	3210.3	3311.4
25°	2657.4	2719.6	2872.0	3072.0	3181.1
27.5°	2478.0	2543.9	2713.7	2928.2	3036.8
30°	2288.8	2366.1	2550.4	2755.3	2878.5
32.5°	2101.3	2179.7	2367.8	2581.2	2703.4
35°	1906.7	1994.8	2181.8	2386.1	2500.7
37.5°	1709.5	1805.7	1998.1	2199.1	2291.6
40°	1526.3	1620.8	1811.6	1991.6	2102.9
42.5°	1357.1	1450.1	1626.8	1790.0	1890.0
45°	1186.9	1279.3	1457.6	1600.8	1690.6
47.5°	1034.4	1129.0	1294.9	1439.8	1514.9
50°	900.9	986.9	1148.5	1279.8	1358.7
52.5°	778.8	857.2	1017.1	1144.7	1220.9
55°	665.3	744.8	900.4	1023.6	1099.3
57.5°	589.1	645.8	785.8	922.6	1019.8
60°	522.6	557.8	688.0	850.1	903.6
62.5°	455.1	487.0	594.0	736.6	819.9
65°	401.6	425.3	511.8	657.2	746.9
67.5°	348.6	366.4	440.5	580.5	671.3
70°	302.7	314.0	371.8	504.8	599.9
72.5°	258.9	264.8	316.7	435.6	530.2
75°	212.4	220.0	262.7	364.8	463.2
77.5°	168.1	178.9	216.7	304.3	386.4
80°	129.2	137.8	174.6	250.2	311.3
82.5°	89.7	101.6	136.2	197.8	238.3
85°	55.7	69.2	102.7	153.5	154.6
87.5°	23.2	43.2	75.1	113.5	78.9
90°	0.5	23.2	52.4	80.0	16.8
92.5°	0.0	10.8	35.7	57.3	9.7
95°	0.5	3.8	22.2	38.4	7.0
97.5°	0.0	1.1	11.9	24.3	4.3
100°	0.0	0.5	4.9	13.5	2.7
102.5°	0.0	0.5	2.2	5.9	1.6
105°	0.0	0.5	1.1	2.2	1.1
107.5°	0.0	0.5	0.5	0.5	0.5
110°	0.5	0.5	0.5	0.5	0.0



TEST NUMBER: P685911
 CATALOG NUMBER: 4CZL-9-UNV-LVRF-L840-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.5	0.5	0.0	0.0
115°	0.5	0.5	0.5	0.0	0.0
117.5°	0.5	0.5	0.5	0.0	0.0
120°	0.5	0.5	0.5	0.0	0.0
122.5°	0.5	0.5	0.5	0.0	0.0
125°	0.5	0.5	0.5	0.0	0.0
127.5°	0.5	0.5	0.5	0.0	0.0
130°	0.5	0.5	0.5	0.0	0.0
132.5°	0.5	1.1	0.5	0.5	0.0
135°	0.5	1.1	0.5	0.5	0.0
137.5°	0.5	1.1	0.5	0.5	0.0
140°	0.5	1.1	0.5	0.5	0.5
142.5°	1.1	1.1	1.1	0.5	0.5
145°	1.1	1.1	1.1	0.5	0.5
147.5°	1.1	1.1	1.1	0.5	0.5
150°	1.1	1.1	1.1	0.5	0.5
152.5°	1.1	1.6	1.1	0.5	0.5
155°	1.1	1.6	1.1	0.5	0.5
157.5°	1.1	1.6	1.1	0.5	0.5
160°	1.1	1.6	1.1	0.5	0.5
162.5°	1.6	1.6	1.1	1.1	0.5
165°	1.6	1.6	1.6	1.1	0.5
167.5°	1.6	1.6	1.6	1.1	0.5
170°	1.6	1.6	1.6	1.1	1.1
172.5°	1.6	1.6	1.6	1.1	1.1
175°	1.6	2.2	1.6	1.1	1.1
177.5°	1.6	2.2	1.6	1.1	1.1
180°	1.6	1.6	1.6	1.6	1.6

(END OF REPORT)