

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: P685940

Luminaire Tested: **4CZL-7-UNV-LVRF-L940-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685940  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-7-UNV-LVRF-L940-CD-U  
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @90 CRI and 4000K  
Light Source: (392) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

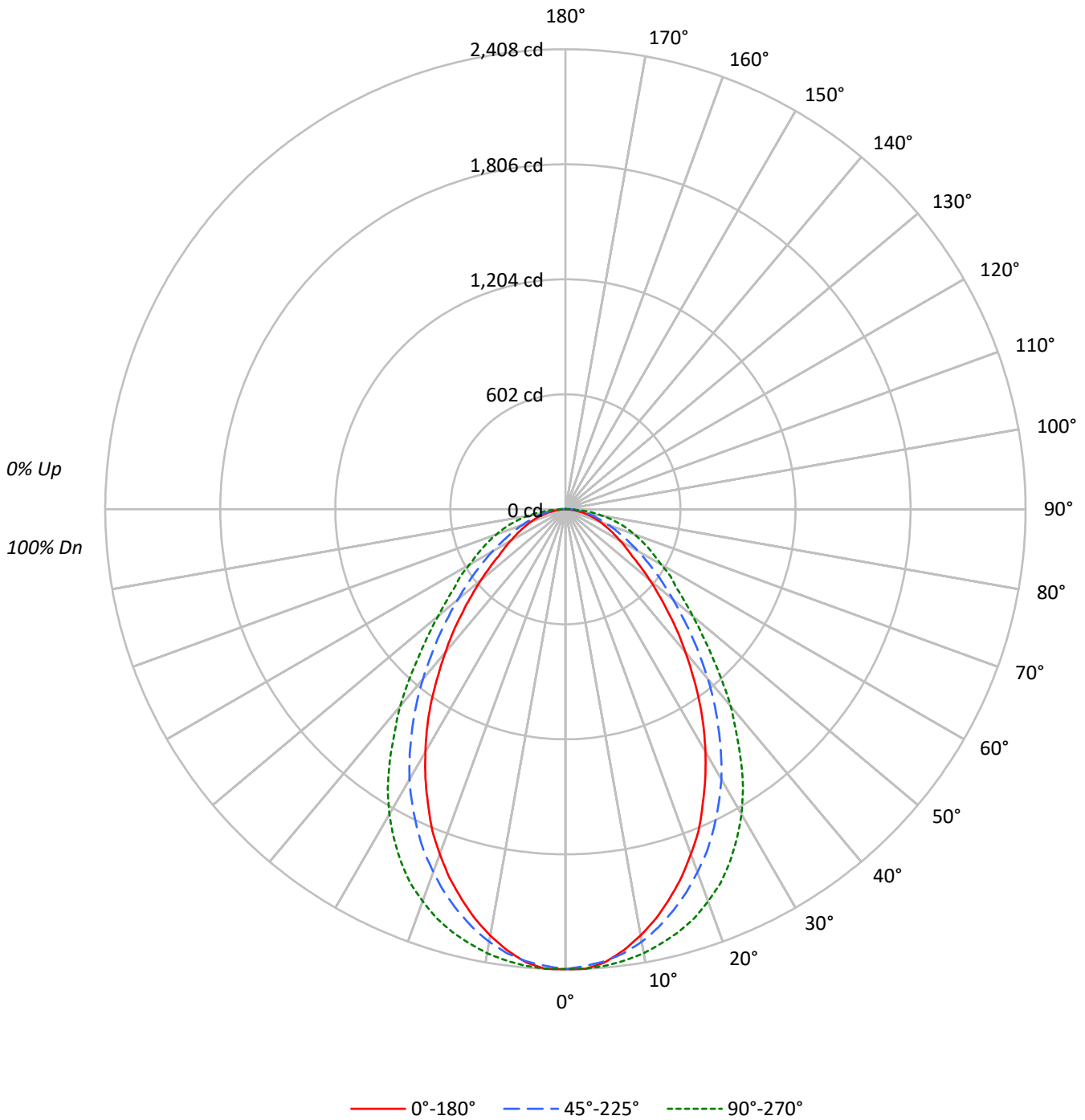
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4439.8 lumens  
Efficiency: N/A  
Efficacy: 100.9 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): 44  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	7772	7772	7772
5°	7715	7698	7775
10°	7427	7537	7737
15°	7047	7274	7655
20°	6600	6942	7503
25°	6060	6550	7254
30°	5462	6087	6869
35°	4811	5505	6309
40°	4118	4888	5674
45°	3469	4260	4941
50°	2897	3693	4369
55°	2397	3245	3961
60°	2160	2844	3736
65°	1964	2503	3652
70°	1829	2247	3626
75°	1696	2097	3698
80°	1538	2077	3704
85°	1319	2434	3664



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	225.2	5.1
10°-20°	615.5	13.9
20°-30°	850.4	19.2
30°-40°	874.8	19.7
40°-50°	717.2	16.2
50°-60°	514.6	11.6
60°-70°	346.1	7.8
70°-80°	202.0	4.6
80°-90°	77.8	1.8
90°-100°	13.5	0.3
100°-110°	1.1	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°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1691.0	38.1
0°-40°	2565.8	57.8
0°-60°	3797.6	85.5
0°-90°	4423.6	99.6
90°-120°	14.8	0.3
90°-150°	15.6	0.4
90°-180°	16.0	0.4
0°-180°	4439.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2407	2407	2407	2407	2407	
5°	2380	2382	2375	2397	2398	223
15°	2108	2129	2176	2260	2290	591
25°	1701	1741	1838	1966	2036	781
35°	1220	1277	1396	1527	1600	760
45°	760	819	933	1025	1082	590
55°	426	477	576	655	704	392
65°	257	272	328	421	478	256
75°	136	141	168	234	296	144
85°	36	44	66	98	99	39
90°	0	15	34	51	11	2
95°	0	2	14	25	4	0
105°	0	0	1	1	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	0
155°	1	1	1	0	0	0
165°	1	1	1	1	0	0
175°	1	1	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°	2406.8	2406.8	2406.8	2406.8	2406.8
2.5°	2407.9	2405.8	2392.3	2407.9	2407.2
5°	2380.2	2381.9	2374.7	2396.8	2398.5
7.5°	2328.7	2335.6	2343.5	2376.1	2381.9
10°	2265.0	2275.4	2298.6	2347.0	2359.5
12.5°	2193.4	2204.8	2242.5	2309.3	2326.6
15°	2108.0	2129.4	2175.8	2260.2	2289.9
17.5°	2019.8	2046.1	2103.5	2203.5	2243.6
20°	1920.5	1946.8	2020.1	2131.5	2183.4
22.5°	1820.9	1846.5	1936.1	2054.7	2119.4
25°	1700.8	1740.6	1838.2	1966.2	2036.0
27.5°	1586.0	1628.2	1736.8	1874.1	1943.7
30°	1464.9	1514.4	1632.4	1763.5	1842.3
32.5°	1344.9	1395.1	1515.4	1652.1	1730.2
35°	1220.4	1276.8	1396.4	1527.2	1600.5
37.5°	1094.1	1155.7	1278.8	1407.5	1466.7
40°	976.9	1037.4	1159.5	1274.7	1345.9
42.5°	868.6	928.1	1041.2	1145.7	1209.6
45°	759.6	818.8	932.9	1024.6	1082.0
47.5°	662.1	722.6	828.8	921.5	969.6
50°	576.6	631.6	735.1	819.1	869.6
52.5°	498.5	548.6	651.0	732.6	781.4
55°	425.8	476.7	576.3	655.2	703.6
57.5°	377.0	413.4	503.0	590.5	652.7
60°	334.5	357.0	440.3	544.1	578.4
62.5°	291.3	311.7	380.2	471.5	524.7
65°	257.0	272.2	327.6	420.6	478.0
67.5°	223.1	234.5	281.9	371.5	429.6
70°	193.7	201.0	238.0	323.1	384.0
72.5°	165.7	169.5	202.7	278.8	339.3
75°	135.9	140.8	168.1	233.5	296.4
77.5°	107.6	114.5	138.7	194.7	247.3
80°	82.7	88.2	111.7	160.2	199.2
82.5°	57.4	65.0	87.2	126.6	152.5
85°	35.6	44.3	65.7	98.2	98.9
87.5°	14.9	27.7	48.1	72.6	50.5
90°	0.3	14.9	33.6	51.2	10.7
92.5°	0.0	6.9	22.8	36.7	6.2
95°	0.3	2.4	14.2	24.6	4.5
97.5°	0.0	0.7	7.6	15.6	2.8
100°	0.0	0.3	3.1	8.6	1.7
102.5°	0.0	0.3	1.4	3.8	1.0
105°	0.0	0.3	0.7	1.4	0.7
107.5°	0.0	0.3	0.3	0.3	0.3
110°	0.3	0.3	0.3	0.3	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.3	0.3	0.0	0.0
115°	0.3	0.3	0.3	0.0	0.0
117.5°	0.3	0.3	0.3	0.0	0.0
120°	0.3	0.3	0.3	0.0	0.0
122.5°	0.3	0.3	0.3	0.0	0.0
125°	0.3	0.3	0.3	0.0	0.0
127.5°	0.3	0.3	0.3	0.0	0.0
130°	0.3	0.3	0.3	0.0	0.0
132.5°	0.3	0.7	0.3	0.3	0.0
135°	0.3	0.7	0.3	0.3	0.0
137.5°	0.3	0.7	0.3	0.3	0.0
140°	0.3	0.7	0.3	0.3	0.3
142.5°	0.7	0.7	0.7	0.3	0.3
145°	0.7	0.7	0.7	0.3	0.3
147.5°	0.7	0.7	0.7	0.3	0.3
150°	0.7	0.7	0.7	0.3	0.3
152.5°	0.7	1.0	0.7	0.3	0.3
155°	0.7	1.0	0.7	0.3	0.3
157.5°	0.7	1.0	0.7	0.3	0.3
160°	0.7	1.0	0.7	0.3	0.3
162.5°	1.0	1.0	0.7	0.7	0.3
165°	1.0	1.0	1.0	0.7	0.3
167.5°	1.0	1.0	1.0	0.7	0.3
170°	1.0	1.0	1.0	0.7	0.7
172.5°	1.0	1.0	1.0	0.7	0.7
175°	1.0	1.4	1.0	0.7	0.7
177.5°	1.0	1.4	1.0	0.7	0.7
180°	1.0	1.0	1.0	1.0	1.0

(END OF REPORT)