

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: P685640

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

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685640  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-7-UNV-FUL-L940-CD-U  
Description: METALUX CRUZE LINEAR 4FT FROSTED LENS MODEL WITH UPLIGHT @90 CRI and 4000K  
Light Source: (392) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

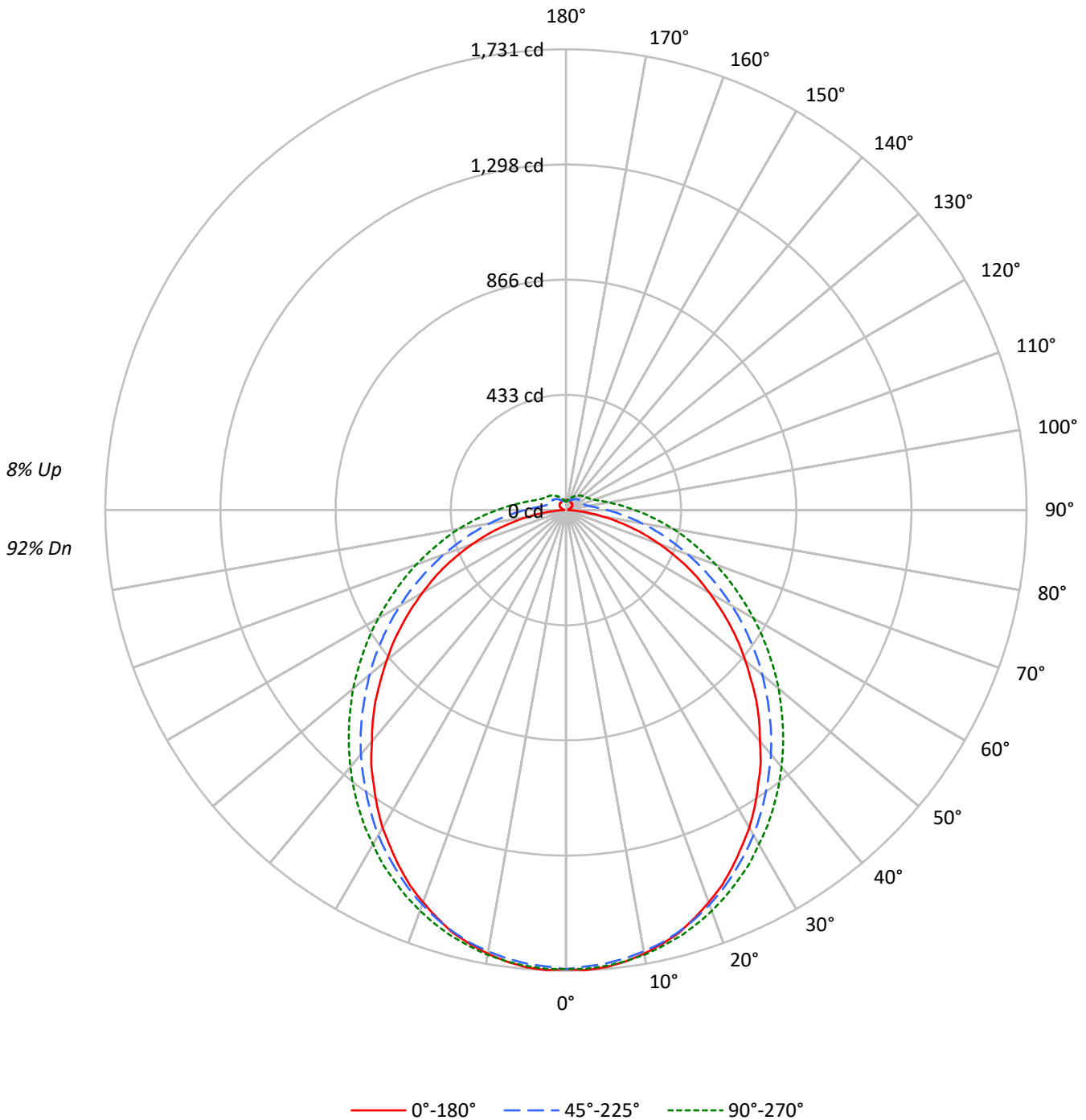
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5381.4 lumens  
Efficiency: N/A  
Efficacy: 122.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 4' x H: 0.17')  
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				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	117	117	117	117	113	113	113	113	107	107	107	100	100	100	95	95	95	95	95	95	92
1	106	101	96	92	102	98	93	90	92	88	85	87	84	81	82	79	77	77	77	77	75
2	96	87	80	74	93	85	78	73	80	74	70	75	71	67	71	68	64	64	64	64	62
3	87	77	68	61	84	74	67	60	70	64	58	66	61	56	63	58	54	54	54	54	52
4	80	68	59	52	77	66	58	51	62	55	50	59	53	48	56	51	47	47	47	47	44
5	74	61	51	45	71	59	50	44	56	49	43	53	47	42	50	45	41	41	41	41	38
6	68	54	45	39	65	53	45	38	50	43	38	48	42	37	46	40	36	36	36	36	33
7	63	49	41	34	61	48	40	34	46	39	33	44	37	32	42	36	32	32	32	32	30
8	59	45	37	31	57	44	36	30	42	35	30	40	34	29	38	33	28	28	28	28	26
9	55	41	33	28	53	40	33	27	39	32	27	37	31	26	35	30	26	26	26	26	24
10	51	38	30	25	50	37	30	25	36	29	24	34	28	24	33	27	23	23	23	23	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5570	5570	5570
5°	5568	5463	5478
10°	5509	5360	5376
15°	5436	5244	5261
20°	5311	5105	5134
25°	5173	4947	4996
30°	5019	4787	4848
35°	4824	4599	4705
40°	4620	4419	4548
45°	4434	4221	4389
50°	4212	4019	4235
55°	3994	3810	4066
60°	3750	3589	3907
65°	3508	3360	3759
70°	3162	3136	3646
75°	2734	2925	3546
80°	2128	2757	3572
85°	1242	2677	3678



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.2	3.0
10°-20°	464.3	8.6
20°-30°	693.2	12.9
30°-40°	819.5	15.2
40°-50°	835.1	15.5
50°-60°	753.0	14.0
60°-70°	595.8	11.1
70°-80°	402.6	7.5
80°-90°	225.2	4.2
90°-100°	122.5	2.3
100°-110°	80.4	1.5
110°-120°	63.7	1.2
120°-130°	54.2	1.0
130°-140°	43.4	0.8
140°-150°	31.0	0.6
150°-160°	20.0	0.4
160°-170°	10.8	0.2
170°-180°	3.4	0.1
0°-30°	1320.7	24.5
0°-40°	2140.2	39.8
0°-60°	3728.3	69.3
0°-90°	4951.9	92.0
90°-120°	266.6	5.0
90°-150°	395.3	7.3
90°-180°	429.0	8.0
0°-180°	5381.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1725	1725	1725	1725	1725	
5°	1724	1721	1710	1720	1720	164
15°	1644	1642	1640	1654	1658	463
25°	1480	1487	1499	1527	1533	681
35°	1259	1277	1306	1348	1361	788
45°	1011	1032	1082	1133	1153	779
55°	752	780	842	906	928	672
65°	500	525	601	675	703	494
75°	253	288	384	469	496	269
85°	50	111	213	296	326	61
90°	8	61	154	229	258	6
95°	8	40	113	180	206	7
105°	14	36	74	116	134	15
115°	22	38	66	90	100	22
125°	29	40	63	81	88	26
135°	32	39	58	72	77	25
145°	34	37	49	62	65	21
155°	36	37	40	51	52	17
165°	38	37	36	38	41	11
175°	38	37	36	32	32	4
180°	35	35	35	35	35	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1725.0	1725.0	1725.0	1725.0	1725.0
2.5°	1730.6	1727.8	1716.4	1725.4	1725.0
5°	1724.0	1721.2	1710.5	1720.2	1719.5
7.5°	1711.2	1709.5	1699.4	1710.2	1709.8
10°	1692.5	1692.5	1683.9	1696.3	1697.4
12.5°	1670.0	1669.7	1665.2	1678.0	1678.0
15°	1644.1	1642.0	1640.3	1654.5	1657.9
17.5°	1607.1	1608.5	1611.6	1628.5	1632.0
20°	1569.0	1572.1	1578.0	1598.1	1602.6
22.5°	1528.2	1531.7	1541.0	1562.8	1570.1
25°	1480.1	1487.0	1499.2	1527.2	1533.0
27.5°	1428.2	1440.3	1455.9	1485.7	1495.7
30°	1378.4	1388.1	1410.6	1441.7	1450.4
32.5°	1321.0	1332.8	1359.1	1396.4	1408.2
35°	1259.4	1276.7	1306.1	1347.6	1360.8
37.5°	1202.0	1215.9	1252.2	1296.5	1312.0
40°	1134.2	1156.7	1198.6	1242.1	1260.1
42.5°	1074.7	1094.1	1141.1	1189.2	1207.9
45°	1011.4	1031.5	1082.3	1132.8	1153.2
47.5°	943.6	967.5	1021.8	1078.2	1097.2
50°	880.0	904.9	963.0	1020.1	1043.9
52.5°	817.4	843.3	903.5	963.7	985.8
55°	751.7	779.7	841.9	905.6	928.4
57.5°	687.3	715.3	781.7	847.5	872.0
60°	622.6	648.9	720.2	787.6	814.6
62.5°	562.1	587.7	661.0	733.7	757.2
65°	500.2	525.4	600.8	674.9	702.9
67.5°	436.2	466.6	542.4	619.9	649.6
70°	373.2	404.4	488.1	568.7	598.4
72.5°	313.7	349.0	433.4	515.7	546.2
75°	253.2	288.1	384.0	469.0	496.4
77.5°	196.1	236.9	335.5	421.3	453.5
80°	141.5	187.8	291.9	376.0	409.9
82.5°	93.0	146.0	251.5	334.8	365.3
85°	49.5	111.0	213.4	296.4	326.2
87.5°	19.4	82.3	181.6	261.5	291.3
90°	7.6	61.2	153.6	229.3	257.7
92.5°	7.6	47.7	130.8	203.4	230.0
95°	8.3	40.1	112.8	180.2	205.5
97.5°	9.0	36.3	98.6	159.8	182.3
100°	10.4	34.9	87.9	143.2	163.6
102.5°	12.1	34.9	79.2	128.0	147.4
105°	14.2	35.6	73.7	116.2	133.5
107.5°	15.9	36.3	69.9	106.5	122.1
110°	18.0	37.4	67.8	99.3	112.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	20.1	38.0	66.4	94.1	105.8
115°	22.1	38.4	65.7	89.9	100.0
117.5°	24.2	39.1	65.0	87.2	95.8
120°	26.3	39.4	64.3	85.1	92.7
122.5°	28.0	39.4	63.6	83.0	89.9
125°	29.4	39.8	62.6	80.9	87.5
127.5°	30.4	40.1	61.9	78.9	84.7
130°	31.5	39.8	60.9	76.8	82.3
132.5°	32.2	39.4	59.5	74.7	79.9
135°	32.5	39.1	58.1	72.3	77.1
137.5°	32.9	38.7	56.0	69.9	74.4
140°	32.9	38.4	53.6	67.1	71.3
142.5°	33.2	37.7	51.2	64.3	68.1
145°	33.9	37.4	48.8	61.6	65.0
147.5°	34.6	36.7	46.7	58.5	61.6
150°	35.3	36.7	44.6	55.7	58.5
152.5°	35.6	36.7	42.5	53.3	55.3
155°	36.3	36.7	40.5	50.8	52.2
157.5°	36.7	36.7	39.1	47.7	49.1
160°	37.0	37.0	37.7	44.3	46.4
162.5°	37.7	37.0	37.0	40.8	43.6
165°	37.7	37.0	36.3	38.0	41.2
167.5°	38.0	37.4	36.0	36.0	39.1
170°	38.0	37.4	36.0	34.2	36.0
172.5°	38.0	37.4	36.0	32.9	33.6
175°	38.0	37.4	36.0	31.5	31.8
177.5°	38.0	37.4	35.6	30.4	31.8
180°	35.3	35.3	35.3	35.3	35.3

(END OF REPORT)