

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: P685647

Luminaire Tested: **8CZL-24-UNV-FUL-L940-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685647  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 8CZL-24-UNV-FUL-L940-CD-U  
Description: METALUX CRUZE LINEAR 8FT FROSTED LENS MODEL WITH UPLIGHT @90 CRI and 4000K  
Light Source: (1176) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

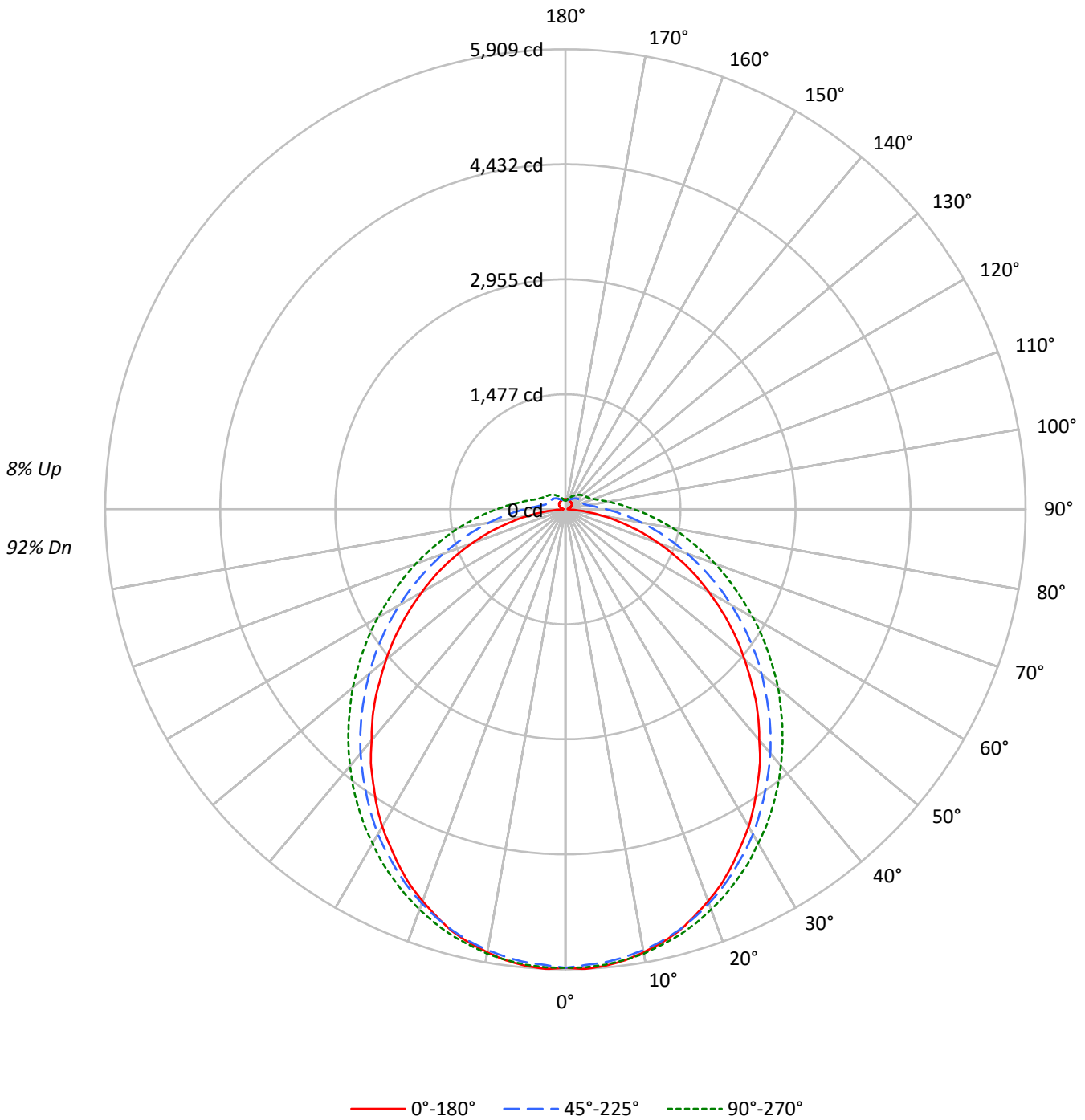
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18375.3 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 8' x H: 0.17')  
CIE Type: Direct

Input Watts (W): 154  
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	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°	9510	9510	9510
5°	9524	9339	9352
10°	9440	9174	9178
15°	9332	8986	8981
20°	9136	8760	8764
25°	8917	8501	8530
30°	8671	8237	8277
35°	8354	7924	8033
40°	8023	7627	7766
45°	7725	7299	7493
50°	7365	6964	7230
55°	7016	6617	6941
60°	6626	6250	6671
65°	6246	5872	6417
70°	5690	5506	6225
75°	5005	5167	6054
80°	4017	4916	6097
85°	2527	4847	6279



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	557.2	3.0
10°-20°	1585.3	8.6
20°-30°	2367.1	12.9
30°-40°	2798.3	15.2
40°-50°	2851.5	15.5
50°-60°	2571.1	14.0
60°-70°	2034.4	11.1
70°-80°	1374.9	7.5
80°-90°	768.9	4.2
90°-100°	418.4	2.3
100°-110°	274.4	1.5
110°-120°	217.7	1.2
120°-130°	185.2	1.0
130°-140°	148.1	0.8
140°-150°	106.0	0.6
150°-160°	68.3	0.4
160°-170°	36.9	0.2
170°-180°	11.5	0.1
0°-30°	4509.5	24.5
0°-40°	7307.8	39.8
0°-60°	12730.5	69.3
0°-90°	16908.7	92.0
90°-120°	910.5	5.0
90°-150°	1349.8	7.3
90°-180°	1467.0	8.0
0°-180°	18375.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5890	5890	5890	5890	5890	
5°	5887	5877	5841	5874	5871	558
15°	5614	5607	5601	5649	5661	1579
25°	5054	5078	5119	5215	5235	2326
35°	4300	4360	4460	4602	4646	2692
45°	3454	3522	3696	3868	3938	2660
55°	2567	2662	2875	3092	3170	2296
65°	1708	1794	2052	2304	2400	1686
75°	865	984	1311	1602	1695	918
85°	169	379	729	1012	1114	207
90°	26	209	524	783	880	20
95°	28	137	385	615	702	24
105°	48	122	252	397	456	51
115°	76	131	224	307	341	75
125°	100	136	214	276	299	89
135°	111	134	198	247	263	86
145°	116	128	166	210	222	73
155°	124	125	138	174	178	57
165°	129	126	124	130	141	36
175°	130	128	123	108	109	12
180°	120	120	120	120	120	

TEST NUMBER: P685647

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5890.2	5890.2	5890.2	5890.2	5890.2
2.5°	5909.1	5899.7	5860.7	5891.4	5890.2
5°	5886.7	5877.2	5840.6	5873.7	5871.3
7.5°	5843.0	5837.1	5802.8	5839.4	5838.3
10°	5779.2	5779.2	5749.7	5792.2	5795.7
12.5°	5702.4	5701.3	5685.9	5729.6	5729.6
15°	5613.8	5606.8	5600.9	5649.3	5661.1
17.5°	5487.5	5492.2	5502.8	5560.7	5572.5
20°	5357.5	5368.2	5388.3	5456.8	5472.1
22.5°	5218.2	5230.0	5261.9	5336.3	5361.1
25°	5054.0	5077.6	5119.0	5214.6	5234.7
27.5°	4876.8	4918.2	4971.3	5072.9	5107.1
30°	4706.8	4739.8	4816.6	4922.9	4952.4
32.5°	4510.7	4550.8	4640.6	4768.2	4808.3
35°	4300.4	4359.5	4459.9	4601.6	4646.5
37.5°	4104.4	4151.6	4275.6	4426.8	4480.0
40°	3872.9	3949.7	4092.6	4241.4	4302.8
42.5°	3669.7	3735.9	3896.5	4060.7	4124.5
45°	3453.6	3522.1	3695.7	3868.2	3937.8
47.5°	3222.1	3303.6	3489.0	3681.5	3746.5
50°	3004.8	3089.8	3288.2	3483.1	3564.6
52.5°	2791.0	2879.6	3085.1	3290.6	3366.2
55°	2566.6	2662.2	2874.8	3092.2	3170.1
57.5°	2346.9	2442.5	2669.3	2893.7	2977.6
60°	2126.0	2215.8	2459.1	2689.4	2781.5
62.5°	1919.3	2006.7	2257.1	2505.1	2585.5
65°	1707.9	1794.1	2051.6	2304.4	2400.0
67.5°	1489.4	1593.3	1852.0	2116.6	2218.1
70°	1274.4	1380.7	1666.6	1941.8	2043.3
72.5°	1071.3	1191.7	1479.9	1761.0	1865.0
75°	864.6	983.9	1311.0	1601.6	1694.9
77.5°	669.7	809.1	1145.7	1438.6	1548.4
80°	483.1	641.3	996.9	1283.9	1399.6
82.5°	317.7	498.4	858.7	1143.3	1247.3
85°	168.9	379.1	728.7	1012.2	1113.8
87.5°	66.1	281.1	620.1	892.9	994.5
90°	26.0	209.1	524.4	783.1	879.9
92.5°	26.0	163.0	446.5	694.5	785.4
95°	28.3	137.0	385.0	615.4	701.6
97.5°	30.7	124.0	336.6	545.7	622.4
100°	35.4	119.3	300.0	489.0	558.7
102.5°	41.3	119.3	270.5	437.0	503.2
105°	48.4	121.7	251.6	396.9	455.9
107.5°	54.3	124.0	238.6	363.8	416.9
110°	61.4	127.6	231.5	339.0	385.0

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	68.5	129.9	226.8	321.3	361.4
115°	75.6	131.1	224.4	307.1	341.3
117.5°	82.7	133.5	222.0	297.6	327.2
120°	89.8	134.6	219.7	290.6	316.5
122.5°	95.7	134.6	217.3	283.5	307.1
125°	100.4	135.8	213.8	276.4	298.8
127.5°	103.9	137.0	211.4	269.3	289.4
130°	107.5	135.8	207.9	262.2	281.1
132.5°	109.8	134.6	203.2	255.1	272.8
135°	111.0	133.5	198.4	246.9	263.4
137.5°	112.2	132.3	191.3	238.6	253.9
140°	112.2	131.1	183.1	229.1	243.3
142.5°	113.4	128.7	174.8	219.7	232.7
145°	115.7	127.6	166.5	210.2	222.0
147.5°	118.1	125.2	159.5	199.6	210.2
150°	120.5	125.2	152.4	190.2	199.6
152.5°	121.7	125.2	145.3	181.9	189.0
155°	124.0	125.2	138.2	173.6	178.3
157.5°	125.2	125.2	133.5	163.0	167.7
160°	126.4	126.4	128.7	151.2	158.3
162.5°	128.7	126.4	126.4	139.4	148.8
165°	128.7	126.4	124.0	129.9	140.6
167.5°	129.9	127.6	122.8	122.8	133.5
170°	129.9	127.6	122.8	116.9	122.8
172.5°	129.9	127.6	122.8	112.2	114.6
175°	129.9	127.6	122.8	107.5	108.7
177.5°	129.9	127.6	121.7	103.9	108.7
180°	120.5	120.5	120.5	120.5	120.5

(END OF REPORT)