

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: P685620

Luminaire Tested: **4CZL-7-UNV-FUL-L850-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685620  
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-L850-CD-U  
Description: METALUX CRUZE LINEAR 4FT FROSTED LENS MODEL WITH UPLIGHT @80 CRI and 5000K  
Light Source: (392) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

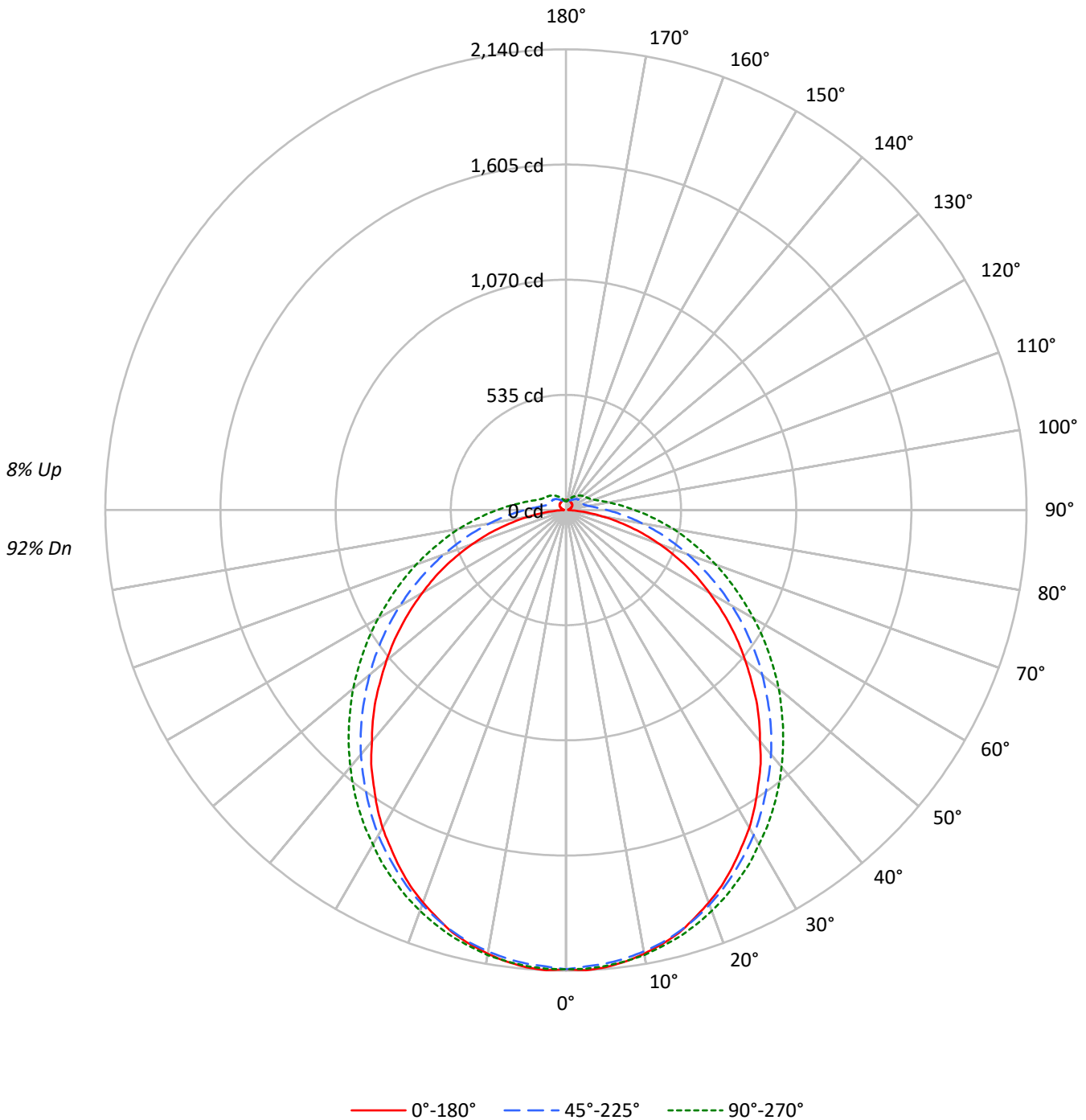
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6654.4 lumens  
Efficiency: N/A  
Efficacy: 151.2 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°	6888	6888	6888
5°	6885	6755	6774
10°	6813	6628	6648
15°	6721	6484	6505
20°	6568	6313	6348
25°	6397	6118	6178
30°	6206	5920	5995
35°	5965	5686	5819
40°	5712	5464	5625
45°	5483	5220	5427
50°	5208	4970	5237
55°	4939	4711	5027
60°	4638	4438	4832
65°	4338	4155	4647
70°	3910	3877	4509
75°	3381	3617	4385
80°	2631	3409	4417
85°	1536	3311	4547



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	201.8	3.0
10°-20°	574.1	8.6
20°-30°	857.2	12.9
30°-40°	1013.4	15.2
40°-50°	1032.6	15.5
50°-60°	931.1	14.0
60°-70°	736.7	11.1
70°-80°	497.9	7.5
80°-90°	278.5	4.2
90°-100°	151.5	2.3
100°-110°	99.4	1.5
110°-120°	78.8	1.2
120°-130°	67.1	1.0
130°-140°	53.7	0.8
140°-150°	38.4	0.6
150°-160°	24.7	0.4
160°-170°	13.4	0.2
170°-180°	4.2	0.1
0°-30°	1633.1	24.5
0°-40°	2646.4	39.8
0°-60°	4610.2	69.3
0°-90°	6123.3	92.0
90°-120°	329.7	5.0
90°-150°	488.8	7.3
90°-180°	531.0	8.0
0°-180°	6654.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2133	2133	2133	2133	2133	
5°	2132	2128	2115	2127	2126	202
15°	2033	2030	2028	2046	2050	572
25°	1830	1839	1854	1888	1896	842
35°	1557	1579	1615	1666	1683	975
45°	1251	1276	1338	1401	1426	963
55°	930	964	1041	1120	1148	831
65°	618	650	743	834	869	611
75°	313	356	475	580	614	333
85°	61	137	264	367	403	75
90°	9	76	190	284	319	7
95°	10	50	139	223	254	9
105°	18	44	91	144	165	18
115°	27	48	81	111	124	27
125°	36	49	77	100	108	32
135°	40	48	72	89	95	31
145°	42	46	60	76	80	26
155°	45	45	50	63	65	21
165°	47	46	45	47	51	13
175°	47	46	44	39	39	4
180°	44	44	44	44	44	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2133.1	2133.1	2133.1	2133.1	2133.1
2.5°	2139.9	2136.5	2122.4	2133.5	2133.1
5°	2131.8	2128.4	2115.1	2127.1	2126.2
7.5°	2116.0	2113.8	2101.4	2114.7	2114.3
10°	2092.9	2092.9	2082.2	2097.6	2098.9
12.5°	2065.1	2064.6	2059.1	2074.9	2074.9
15°	2033.0	2030.4	2028.3	2045.8	2050.1
17.5°	1987.2	1988.9	1992.8	2013.7	2018.0
20°	1940.2	1944.0	1951.3	1976.1	1981.7
22.5°	1889.7	1894.0	1905.5	1932.5	1941.5
25°	1830.2	1838.8	1853.8	1888.4	1895.7
27.5°	1766.1	1781.1	1800.3	1837.1	1849.5
30°	1704.5	1716.5	1744.3	1782.8	1793.5
32.5°	1633.5	1648.0	1680.5	1726.7	1741.3
35°	1557.4	1578.7	1615.1	1666.4	1682.7
37.5°	1486.4	1503.5	1548.4	1603.1	1622.4
40°	1402.5	1430.3	1482.1	1536.0	1558.2
42.5°	1328.9	1352.9	1411.1	1470.5	1493.6
45°	1250.7	1275.5	1338.4	1400.8	1426.0
47.5°	1166.8	1196.4	1263.5	1333.2	1356.8
50°	1088.1	1118.9	1190.8	1261.4	1290.9
52.5°	1010.7	1042.8	1117.2	1191.6	1219.0
55°	929.5	964.1	1041.1	1119.8	1148.0
57.5°	849.9	884.5	966.7	1047.9	1078.3
60°	769.9	802.4	890.5	973.9	1007.3
62.5°	695.1	726.7	817.4	907.2	936.3
65°	618.5	649.7	743.0	834.5	869.1
67.5°	539.4	577.0	670.7	766.5	803.3
70°	461.5	500.0	603.5	703.2	740.0
72.5°	387.9	431.6	535.9	637.7	675.4
75°	313.1	356.3	474.8	580.0	613.8
77.5°	242.5	293.0	414.9	521.0	560.8
80°	174.9	232.3	361.0	464.9	506.9
82.5°	115.1	180.5	311.0	414.0	451.7
85°	61.2	137.3	263.9	366.6	403.3
87.5°	24.0	101.8	224.6	323.4	360.1
90°	9.4	75.7	189.9	283.6	318.7
92.5°	9.4	59.0	161.7	251.5	284.4
95°	10.3	49.6	139.4	222.8	254.1
97.5°	11.1	44.9	121.9	197.6	225.4
100°	12.8	43.2	108.6	177.1	202.3
102.5°	15.0	43.2	97.9	158.3	182.2
105°	17.5	44.1	91.1	143.7	165.1
107.5°	19.7	44.9	86.4	131.7	151.0
110°	22.2	46.2	83.8	122.8	139.4

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	24.8	47.1	82.1	116.3	130.9
115°	27.4	47.5	81.3	111.2	123.6
117.5°	29.9	48.3	80.4	107.8	118.5
120°	32.5	48.8	79.6	105.2	114.6
122.5°	34.6	48.8	78.7	102.7	111.2
125°	36.4	49.2	77.4	100.1	108.2
127.5°	37.6	49.6	76.6	97.5	104.8
130°	38.9	49.2	75.3	95.0	101.8
132.5°	39.8	48.8	73.6	92.4	98.8
135°	40.2	48.3	71.9	89.4	95.4
137.5°	40.6	47.9	69.3	86.4	92.0
140°	40.6	47.5	66.3	83.0	88.1
142.5°	41.1	46.6	63.3	79.6	84.3
145°	41.9	46.2	60.3	76.1	80.4
147.5°	42.8	45.3	57.7	72.3	76.1
150°	43.6	45.3	55.2	68.9	72.3
152.5°	44.1	45.3	52.6	65.9	68.4
155°	44.9	45.3	50.0	62.9	64.6
157.5°	45.3	45.3	48.3	59.0	60.7
160°	45.8	45.8	46.6	54.7	57.3
162.5°	46.6	45.8	45.8	50.5	53.9
165°	46.6	45.8	44.9	47.1	50.9
167.5°	47.1	46.2	44.5	44.5	48.3
170°	47.1	46.2	44.5	42.3	44.5
172.5°	47.1	46.2	44.5	40.6	41.5
175°	47.1	46.2	44.5	38.9	39.4
177.5°	47.1	46.2	44.1	37.6	39.4
180°	43.6	43.6	43.6	43.6	43.6

(END OF REPORT)