

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: P685309

Luminaire Tested: **4CZL-5-UNV-L840-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685309  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-5-UNV-L840-CD-U  
Description: METALUX CRUZE LINEAR 4FT BASE MODEL @80 CRI and 4000K  
Light Source: (392) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

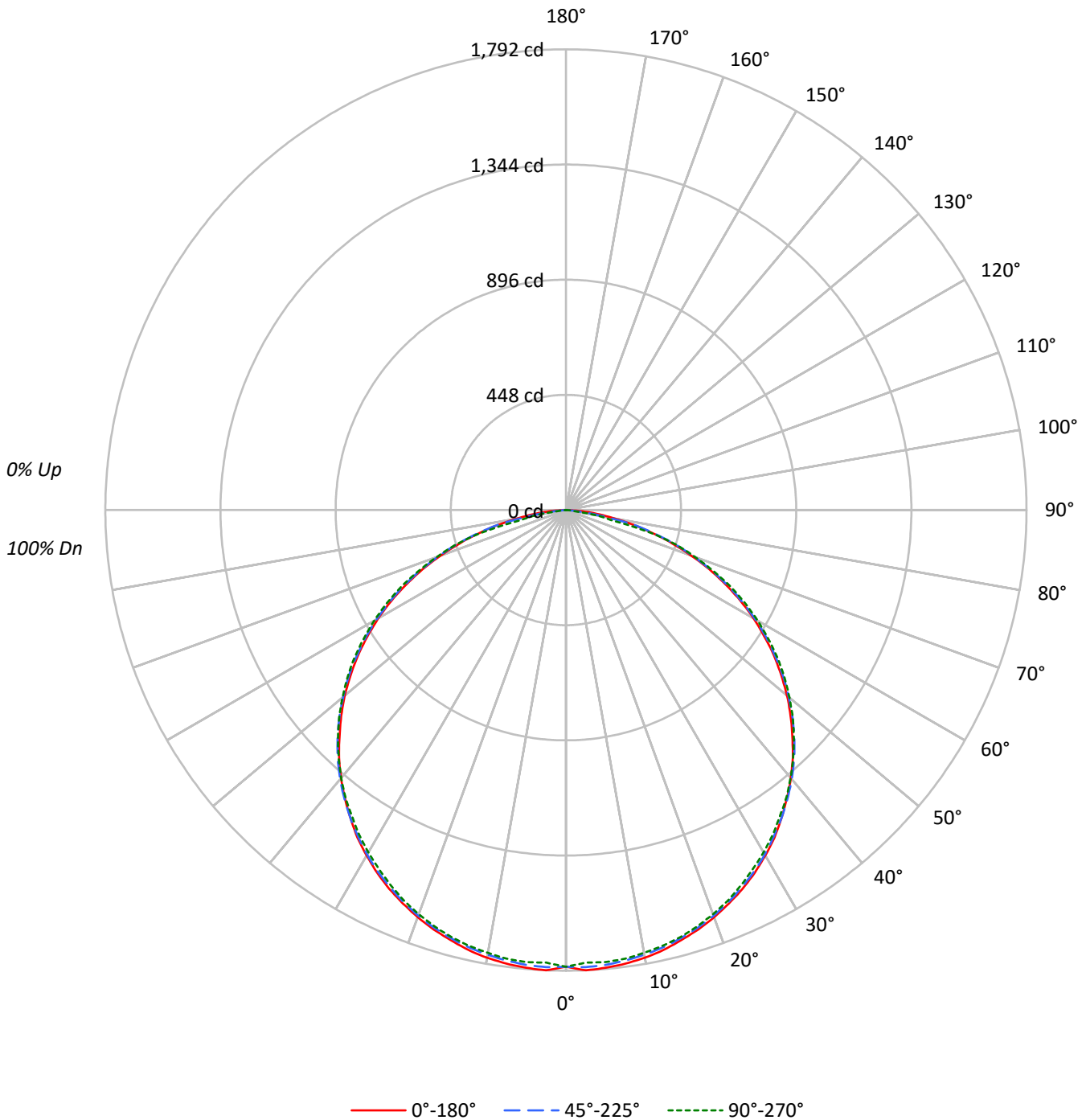
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5270.0 lumens  
Efficiency: N/A  
Efficacy: 170.0 lumens/watt  
Spacing Criteria (0/90/45): 1.3 / 1.29 / 1.41  
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 31  
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

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	52	50
5	76	63	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	45	45	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	39	39	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	35	35	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	31	31	31	29
9	56	42	34	29	55	42	34	29	41	33	28	40	33	28	39	33	28	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	25	25	25	24

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

	0°	45°	90°
0°	5737	5737	5737
5°	5794	5757	5722
10°	5799	5760	5735
15°	5791	5767	5749
20°	5792	5772	5749
25°	5793	5770	5741
30°	5786	5770	5734
35°	5765	5765	5725
40°	5738	5761	5733
45°	5690	5739	5727
50°	5642	5682	5701
55°	5566	5606	5661
60°	5444	5493	5560
65°	5242	5317	5407
70°	4903	4999	5046
75°	4412	4493	4263
80°	3686	3001	2336
85°	2749	722	259



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	168.5	3.2
10°-20°	485.9	9.2
20°-30°	744.1	14.1
30°-40°	911.0	17.3
40°-50°	963.8	18.3
50°-60°	888.8	16.9
60°-70°	685.6	13.0
70°-80°	366.2	6.9
80°-90°	56.0	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1398.6	26.5
0°-40°	2309.6	43.8
0°-60°	4162.2	79.0
0°-90°	5270.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5270.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1776	1776	1776	1776	1776	
5°	1787	1766	1776	1768	1765	170
15°	1732	1714	1725	1719	1720	489
25°	1626	1609	1620	1608	1611	749
35°	1462	1454	1462	1450	1452	915
45°	1246	1245	1257	1248	1254	962
55°	989	988	996	1002	1006	882
65°	686	686	696	701	708	677
75°	354	353	360	363	342	374
85°	74	53	20	8	7	91
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1776.5	1776.5	1776.5	1776.5	1776.5
2.5°	1792.2	1771.1	1779.8	1773.3	1762.4
5°	1787.3	1766.2	1776.0	1768.4	1765.1
7.5°	1779.8	1758.1	1767.9	1761.9	1760.8
10°	1768.4	1746.2	1756.5	1750.0	1748.9
12.5°	1753.2	1731.6	1742.9	1735.4	1736.5
15°	1732.1	1713.7	1725.1	1719.1	1719.7
17.5°	1711.0	1692.1	1704.0	1698.0	1698.6
20°	1685.6	1667.1	1679.6	1670.4	1673.1
22.5°	1656.9	1640.6	1651.4	1639.5	1644.9
25°	1626.0	1609.2	1619.5	1607.6	1611.4
27.5°	1590.8	1575.1	1585.4	1572.9	1574.6
30°	1551.8	1537.7	1547.5	1535.0	1537.7
32.5°	1510.1	1497.7	1505.3	1493.9	1497.7
35°	1462.5	1453.8	1462.5	1450.0	1452.2
37.5°	1412.7	1404.0	1415.9	1405.1	1408.9
40°	1361.2	1353.1	1366.6	1355.8	1360.1
42.5°	1306.5	1300.6	1314.1	1303.3	1308.7
45°	1245.9	1245.4	1256.7	1248.1	1254.0
47.5°	1185.8	1184.7	1196.1	1190.1	1197.2
50°	1123.0	1121.9	1131.1	1130.6	1134.9
52.5°	1055.8	1057.5	1066.1	1067.8	1072.6
55°	988.7	987.6	995.7	1001.7	1005.5
57.5°	915.6	917.8	924.3	931.3	934.0
60°	843.0	842.0	850.6	856.6	860.9
62.5°	766.2	766.2	773.2	781.9	786.2
65°	686.0	686.0	695.8	701.2	707.7
67.5°	604.3	602.6	611.3	623.2	622.1
70°	519.3	519.8	529.5	535.5	534.4
72.5°	434.8	436.4	446.7	449.4	452.1
75°	353.6	353.0	360.1	362.8	341.7
77.5°	272.9	273.4	277.8	203.6	178.7
80°	198.2	199.3	161.4	125.6	125.6
82.5°	131.0	128.9	82.8	48.7	35.7
85°	74.2	53.1	19.5	8.1	7.0
87.5°	30.3	9.7	5.4	3.8	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)