

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: P685369

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

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685369  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-5-UNV-N-L840-CD-U  
Description: METALUX CRUZE LINEAR 4FT NARROW LENS MODEL @80 CRI and 4000K  
Light Source: (392) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

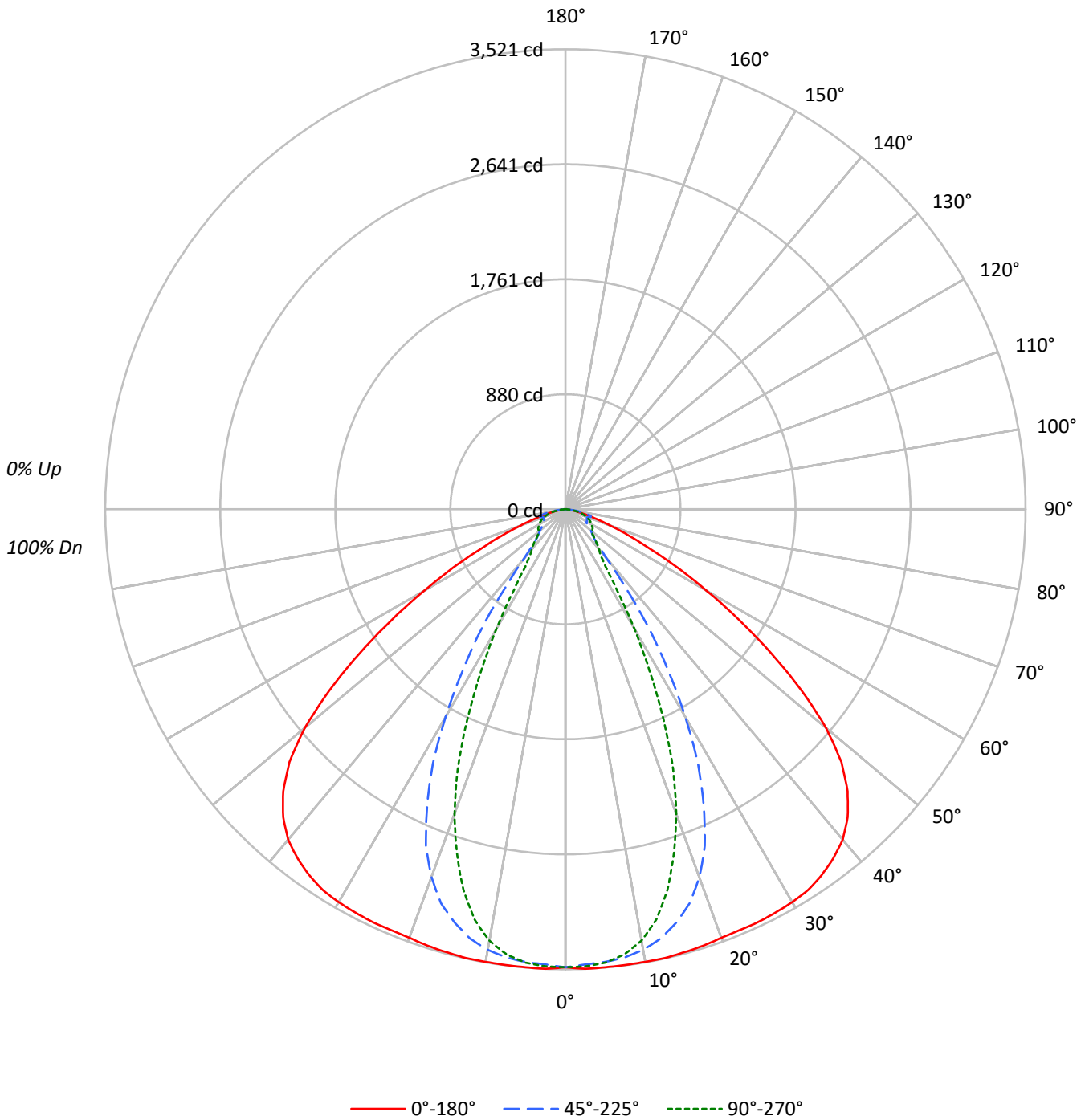
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4948.6 lumens  
Efficiency: N/A  
Efficacy: 159.6 lumens/watt  
Spacing Criteria (0/90/45): 1.48 / 0.81 / 0.89  
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			
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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89	89	
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	80	79	79	
3	96	88	81	76	94	86	80	76	84	79	74	81	77	73	79	75	72	70	70	
4	90	80	73	68	88	79	72	67	77	71	66	74	70	66	72	68	65	63	63	
5	84	74	66	61	82	73	66	60	71	64	60	69	63	59	67	62	59	57	57	
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	52	52	
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	47	47	
8	70	58	51	46	68	58	51	46	56	50	46	55	50	45	54	49	45	44	44	
9	66	54	47	42	65	54	47	42	53	47	42	52	46	42	51	46	42	40	40	
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37	37	

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

	0°	45°	90°
0°	11319	11319	11319
5°	11407	11275	11293
10°	11534	11227	10995
15°	11735	10950	10080
20°	11993	10297	8522
25°	12425	8925	6332
30°	12944	6835	3929
35°	13476	4419	2107
40°	13913	2057	1687
45°	13943	1396	1437
50°	13072	1279	1322
55°	10808	1152	1435
60°	8089	1215	1473
65°	5453	1389	1578
70°	3461	1694	1623
75°	2089	2523	1619
80°	1274	2252	1508
85°	823	1460	1034



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	331.8	6.7
10°-20°	916.1	18.5
20°-30°	1170.0	23.6
30°-40°	949.0	19.2
40°-50°	671.5	13.6
50°-60°	437.3	8.8
60°-70°	268.6	5.4
70°-80°	159.5	3.2
80°-90°	44.8	0.9
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°	2418.0	48.9
0°-40°	3367.0	68.0
0°-60°	4475.7	90.4
0°-90°	4948.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4948.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3505	3505	3505	3505	3505	
5°	3519	3512	3478	3492	3484	336
15°	3510	3463	3275	3105	3015	994
25°	3487	3199	2505	1947	1777	1612
35°	3419	2321	1121	601	535	2138
45°	3053	1168	306	325	315	2329
55°	1920	393	205	239	255	1716
65°	714	202	182	218	206	741
75°	167	114	202	148	130	195
85°	22	44	39	35	28	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3505.2	3505.2	3505.2	3505.2	3505.2
2.5°	3520.8	3513.9	3487.1	3508.2	3502.2
5°	3519.0	3511.5	3478.4	3492.5	3483.8
7.5°	3517.8	3506.7	3459.8	3455.6	3437.6
10°	3517.5	3498.0	3424.0	3383.5	3353.1
12.5°	3518.1	3483.5	3365.4	3275.9	3214.3
15°	3510.3	3462.8	3275.3	3105.2	3015.3
17.5°	3503.1	3415.3	3161.7	2896.3	2761.4
20°	3490.1	3368.4	2996.4	2640.3	2479.8
22.5°	3486.5	3297.5	2787.5	2310.6	2151.7
25°	3487.1	3199.3	2504.8	1947.3	1777.2
27.5°	3480.5	3068.2	2196.7	1596.0	1394.7
30°	3471.5	2882.5	1833.1	1219.5	1053.6
32.5°	3455.6	2622.0	1460.8	869.1	731.4
35°	3418.6	2320.9	1120.9	601.3	534.6
37.5°	3367.2	1986.1	755.8	451.4	440.6
40°	3300.5	1682.3	488.0	394.6	400.3
42.5°	3197.1	1419.9	356.4	358.8	359.4
45°	3053.2	1168.4	305.6	324.9	314.6
47.5°	2863.9	917.5	277.7	283.1	281.6
50°	2602.1	687.0	254.5	253.3	263.2
52.5°	2278.5	508.2	230.8	241.0	259.6
55°	1919.7	393.4	204.6	238.9	254.8
57.5°	1575.6	318.8	189.6	232.9	242.2
60°	1252.5	265.7	188.1	221.8	228.1
62.5°	967.6	227.8	187.2	216.4	218.8
65°	713.7	201.6	181.8	218.2	206.5
67.5°	519.9	193.2	177.6	215.2	190.2
70°	366.6	169.8	179.4	198.6	171.9
72.5°	248.8	141.8	199.5	175.2	150.6
75°	167.4	114.5	202.2	148.2	129.8
77.5°	108.8	95.3	171.9	121.1	107.6
80°	68.5	79.3	121.1	93.2	81.1
82.5°	44.5	61.0	76.6	65.8	55.9
85°	22.2	44.5	39.4	35.2	27.9
87.5°	13.2	27.0	21.0	15.3	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)