

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: P685372

Luminaire Tested: **4CZL-12-UNV-N-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685372
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-N-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT NARROW LENS MODEL @80 CRI and 4000K
Light Source: (588) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

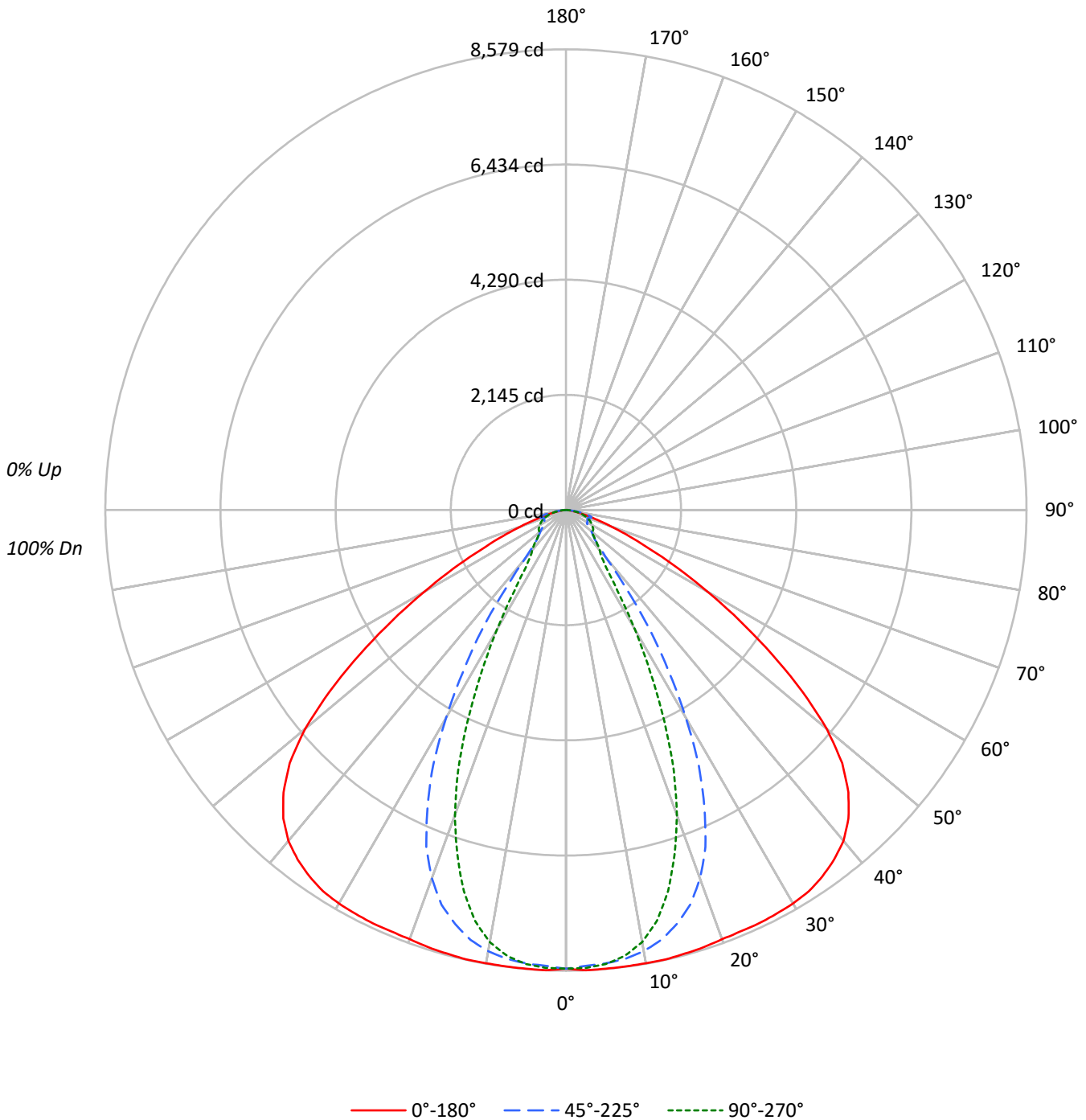
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12057.9 lumens
Efficiency: N/A
Efficacy: 156.6 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): 77
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	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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	91	91	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	80	80	80	80	79
3	96	88	81	76	94	86	80	76	84	79	74	81	77	73	79	75	72	72	72	72	70
4	90	80	73	68	88	79	72	67	77	71	66	74	70	66	72	68	65	65	65	65	63
5	84	74	66	61	82	73	66	60	71	64	60	69	63	59	67	62	59	59	59	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	53	53	53	52
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	49	49	49	47
8	70	58	51	46	68	58	51	46	56	50	46	55	50	45	54	49	45	45	45	45	44
9	66	54	47	42	65	54	47	42	53	47	42	52	46	42	51	46	42	42	42	42	40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	39	39	39	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27580	27580	27580
5°	27794	27474	27517
10°	28104	27357	26790
15°	28594	26680	24562
20°	29224	25090	20764
25°	30274	21746	15429
30°	31541	16655	9572
35°	32837	10767	5135
40°	33901	5013	4111
45°	33974	3401	3501
50°	31852	3116	3222
55°	26334	2808	3496
60°	19711	2961	3590
65°	13288	3385	3843
70°	8434	4127	3954
75°	5089	6148	3946
80°	3104	5488	3676
85°	2008	3553	2523



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	808.5	6.7
10°-20°	2232.3	18.5
20°-30°	2851.0	23.6
30°-40°	2312.3	19.2
40°-50°	1636.1	13.6
50°-60°	1065.6	8.8
60°-70°	654.4	5.4
70°-80°	388.7	3.2
80°-90°	109.2	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°	5891.8	48.9
0°-40°	8204.0	68.0
0°-60°	10905.7	90.4
0°-90°	12057.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12057.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8541	8541	8541	8541	8541	
5°	8574	8556	8476	8510	8489	818
15°	8553	8438	7981	7566	7347	2423
25°	8497	7795	6103	4745	4330	3929
35°	8330	5655	2731	1465	1303	5210
45°	7440	2847	745	792	767	5674
55°	4678	958	499	582	621	4180
65°	1739	491	443	532	503	1807
75°	408	279	493	361	316	476
85°	54	108	96	86	68	76
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8540.8	8540.8	8540.8	8540.8	8540.8
2.5°	8578.9	8562.0	8496.8	8548.1	8533.5
5°	8574.5	8556.2	8475.6	8510.0	8488.8
7.5°	8571.5	8544.4	8430.2	8420.0	8376.0
10°	8570.8	8523.2	8343.1	8244.2	8170.3
12.5°	8572.3	8488.1	8200.3	7982.1	7832.0
15°	8553.2	8437.5	7980.6	7566.2	7347.2
17.5°	8535.7	8321.8	7703.8	7057.3	6728.5
20°	8504.2	8207.6	7301.1	6433.4	6042.4
22.5°	8495.4	8034.8	6792.2	5630.1	5242.8
25°	8496.8	7795.4	6103.2	4744.9	4330.4
27.5°	8480.7	7476.1	5352.6	3888.9	3398.3
30°	8458.8	7023.6	4466.6	2971.4	2567.2
32.5°	8420.0	6388.7	3559.4	2117.6	1782.3
35°	8329.9	5655.0	2731.2	1465.2	1302.6
37.5°	8204.7	4839.3	1841.6	1099.8	1073.5
40°	8042.1	4099.0	1189.1	961.4	975.3
42.5°	7790.2	3459.8	868.4	874.3	875.8
45°	7439.5	2846.9	744.7	791.5	766.6
47.5°	6978.2	2235.5	676.6	689.8	686.1
50°	6340.4	1673.9	620.2	617.3	641.4
52.5°	5551.8	1238.2	562.4	587.3	632.7
55°	4677.5	958.5	498.7	582.1	620.9
57.5°	3839.1	776.9	462.0	567.5	590.2
60°	3052.0	647.3	458.4	540.4	555.8
62.5°	2357.8	555.0	456.2	527.2	533.1
65°	1739.1	491.3	443.0	531.6	503.0
67.5°	1266.8	470.8	432.8	524.3	463.5
70°	893.3	413.7	437.1	484.0	418.8
72.5°	606.3	345.6	486.2	426.9	366.8
75°	407.9	279.0	492.8	361.0	316.3
77.5°	265.1	232.1	418.8	295.1	262.1
80°	166.9	193.3	295.1	227.0	197.7
82.5°	108.4	148.6	186.7	160.4	136.2
85°	54.2	108.4	95.9	85.7	68.1
87.5°	32.2	65.9	51.3	37.3	34.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)