

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: P685363

Luminaire Tested: **4CZL-16-UNV-N-L835-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685363  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-16-UNV-N-L835-CD-U  
Description: METALUX CRUZE LINEAR 4FT NARROW LENS MODEL @80 CRI and 3500K  
Light Source: (588) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

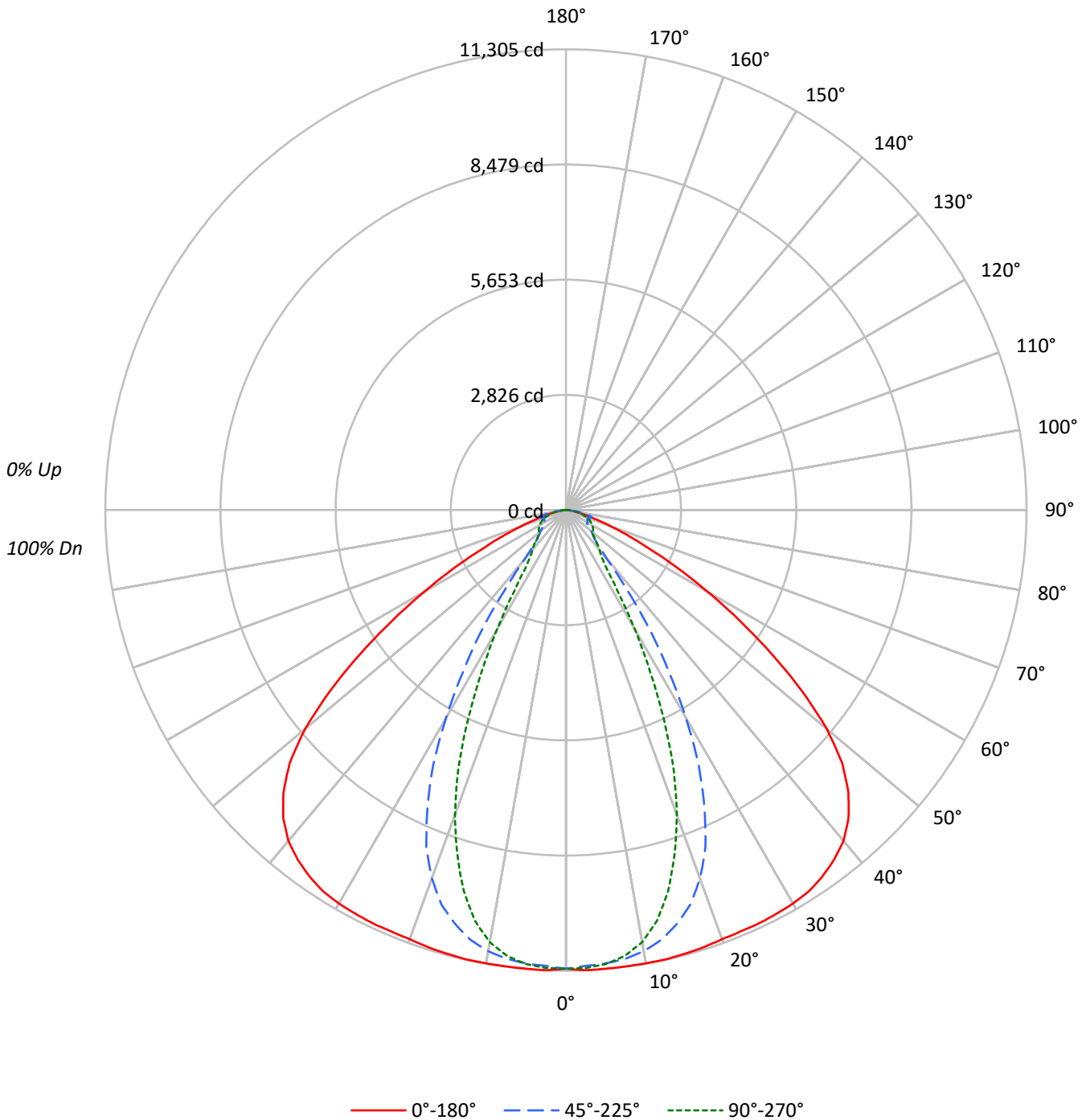
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15889.7 lumens  
Efficiency: N/A  
Efficacy: 154.3 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): 103  
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°	36344	36344	36344
5°	36627	36205	36261
10°	37034	36050	35304
15°	37681	35158	32368
20°	38511	33063	27363
25°	39895	28656	20333
30°	41564	21947	12614
35°	43273	14188	6767
40°	44674	6606	5418
45°	44771	4481	4614
50°	41975	4106	4247
55°	34702	3699	4607
60°	25974	3901	4730
65°	17511	4461	5065
70°	11115	5439	5211
75°	6706	8102	5200
80°	4091	7232	4844
85°	2645	4683	3323



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1065.5	6.7
10°-20°	2941.6	18.5
20°-30°	3756.9	23.6
30°-40°	3047.1	19.2
40°-50°	2156.0	13.6
50°-60°	1404.2	8.8
60°-70°	862.3	5.4
70°-80°	512.2	3.2
80°-90°	143.9	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°	7764.0	48.9
0°-40°	10811.1	68.0
0°-60°	14371.3	90.4
0°-90°	15889.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15889.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	11255	11255	11255	11255	11255	
5°	11299	11275	11169	11214	11186	1078
15°	11271	11119	10517	9970	9682	3192
25°	11197	10273	8043	6253	5707	5177
35°	10977	7452	3599	1931	1717	6865
45°	9804	3752	981	1043	1010	7478
55°	6164	1263	657	767	818	5508
65°	2292	648	584	700	663	2381
75°	538	368	649	476	417	627
85°	71	143	126	113	90	100
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	11254.9	11254.9	11254.9	11254.9	11254.9
2.5°	11305.0	11282.8	11197.0	11264.5	11245.2
5°	11299.2	11275.1	11169.0	11214.3	11186.3
7.5°	11295.4	11259.7	11109.2	11095.6	11037.7
10°	11294.4	11231.7	10994.3	10864.1	10766.6
12.5°	11296.3	11185.4	10806.2	10518.6	10320.8
15°	11271.3	11118.8	10516.7	9970.5	9682.0
17.5°	11248.1	10966.3	10152.0	9299.9	8866.7
20°	11206.6	10815.8	9621.2	8477.8	7962.5
22.5°	11195.0	10588.1	8950.6	7419.3	6908.8
25°	11197.0	10272.6	8042.6	6252.7	5706.6
27.5°	11175.7	9851.9	7053.6	5124.7	4478.2
30°	11146.8	9255.5	5886.0	3915.7	3383.0
32.5°	11095.6	8418.9	4690.5	2790.6	2348.6
35°	10977.0	7452.1	3599.2	1930.8	1716.6
37.5°	10812.0	6377.2	2426.8	1449.3	1414.6
40°	10597.7	5401.6	1567.0	1266.9	1285.3
42.5°	10265.8	4559.3	1144.4	1152.1	1154.0
45°	9803.6	3751.6	981.3	1043.1	1010.3
47.5°	9195.7	2945.9	891.6	909.0	904.1
50°	8355.3	2205.8	817.3	813.4	845.3
52.5°	7316.0	1631.7	741.1	773.9	833.7
55°	6163.9	1263.1	657.1	767.1	818.3
57.5°	5059.1	1023.8	608.9	747.8	777.7
60°	4021.8	853.0	604.0	712.1	732.4
62.5°	3107.1	731.4	601.1	694.7	702.5
65°	2291.7	647.5	583.8	700.5	662.9
67.5°	1669.3	620.4	570.3	690.9	610.8
70°	1177.2	545.2	576.1	637.8	551.9
72.5°	799.0	455.4	640.7	562.5	483.4
75°	537.5	367.6	649.4	475.7	416.8
77.5°	349.3	305.9	551.9	388.9	345.4
80°	220.0	254.7	388.9	299.1	260.5
82.5°	142.8	195.9	246.1	211.3	179.5
85°	71.4	142.8	126.4	112.9	89.7
87.5°	42.5	86.8	67.5	49.2	45.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)