

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: P685503

Luminaire Tested: **4CZL-16-UNV-W-L850-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685503  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-16-UNV-W-L850-CD-U  
Description: METALUX CRUZE LINEAR 4FT WIDE LENS MODEL @80 CRI and 5000K  
Light Source: (588) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

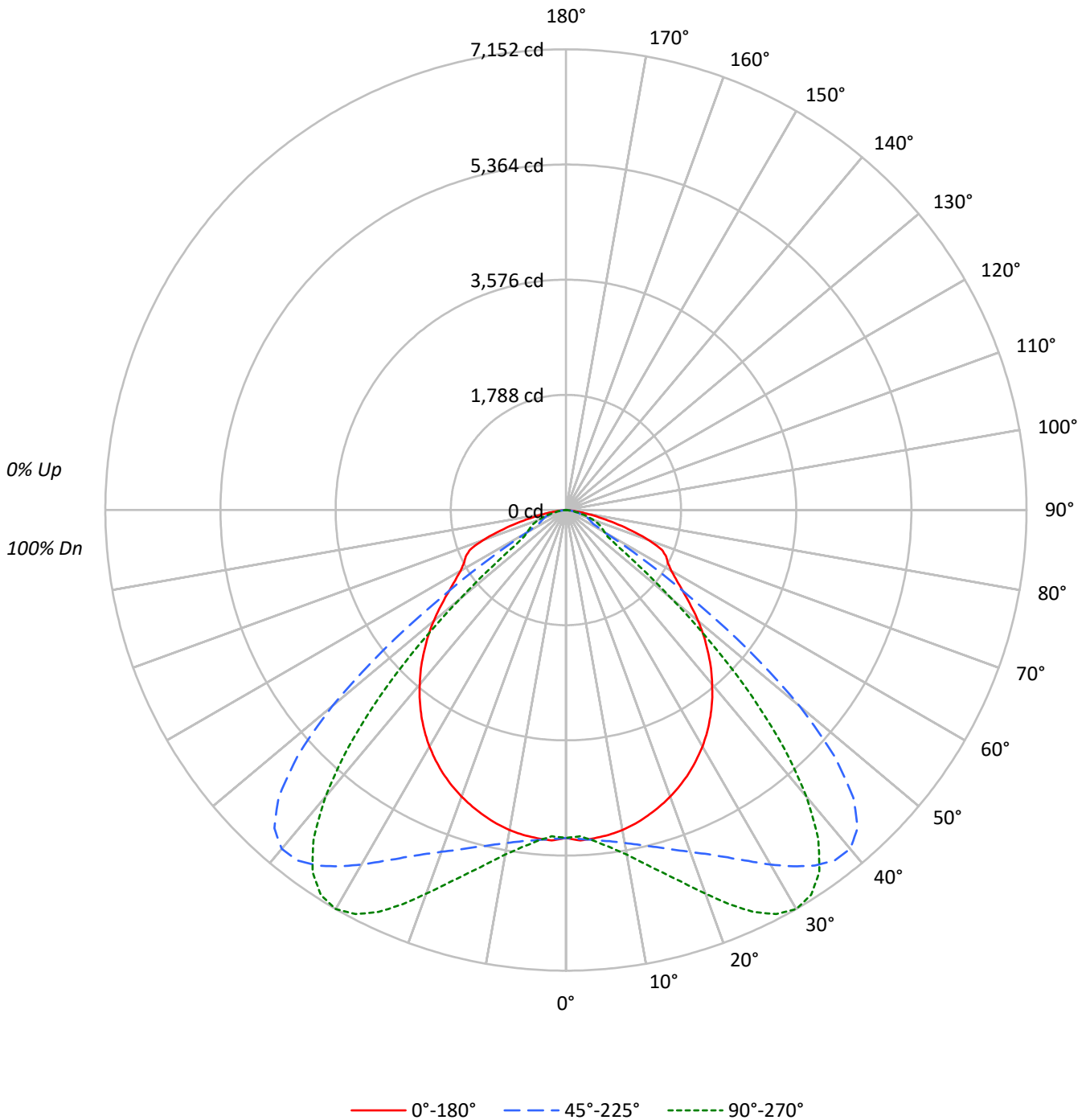
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16280.3 lumens  
Efficiency: N/A  
Efficacy: 158.1 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.69 / 1.65  
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	100	100	100	100
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87	87	87	87
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75	75	75	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65
4	86	75	67	61	84	73	66	60	71	65	59	69	63	59	67	62	58	56	56	56	56
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	51	49	49	49	49
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	43	43	43	43
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	38	38	38	38
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33	33	33	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30	30	30	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27	27	27	27

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

	0°	45°	90°
0°	16438	16438	16438
5°	16581	16667	16719
10°	16541	17202	17806
15°	16420	18113	19491
20°	16276	19403	21775
25°	16081	21202	24526
30°	15807	23693	26669
35°	15420	26556	27037
40°	14885	28934	24495
45°	14242	28824	18591
50°	13471	23821	10715
55°	12556	13104	5511
60°	12186	4573	4492
65°	13132	3327	4504
70°	12968	3409	4345
75°	9805	2981	3490
80°	5925	2436	2468
85°	2949	1245	526



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	492.7	3.0
10°-20°	1531.9	9.4
20°-30°	2691.1	16.5
30°-40°	3738.6	23.0
40°-50°	3791.4	23.3
50°-60°	2433.1	14.9
60°-70°	1138.0	7.0
70°-80°	394.6	2.4
80°-90°	68.8	0.4
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°	4715.7	29.0
0°-40°	8454.4	51.9
0°-60°	14678.9	90.2
0°-90°	16280.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16280.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5090	5090	5090	5090	5090	
5°	5115	5079	5142	5158	5158	486
15°	4912	5028	5418	5709	5830	1386
25°	4513	4976	5951	6647	6883	2077
35°	3912	5018	6736	6968	6859	2443
45°	3119	5371	6312	4708	4071	2404
55°	2230	5548	2328	1120	979	2013
65°	1719	1773	435	545	589	1672
75°	786	272	239	275	280	851
85°	80	72	34	19	14	120
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5090.4	5090.4	5090.4	5090.4	5090.4	5090.4	5090.4	5090.4	5090.4	5090.4	5090.4
2.5°	5134.7	5118.7	5092.2	5081.6	5086.9	5113.4	5122.3	5102.8	5097.5	5083.3	5069.2
5°	5115.2	5101.0	5081.6	5078.0	5097.5	5141.7	5161.2	5155.9	5164.7	5166.5	5157.7
7.5°	5086.9	5074.5	5058.5	5074.5	5115.2	5186.0	5230.2	5244.4	5276.3	5283.3	5281.6
10°	5044.4	5033.8	5028.5	5069.2	5140.0	5246.2	5324.0	5363.0	5409.0	5424.9	5430.2
12.5°	4987.7	4977.1	4991.3	5062.1	5173.6	5325.8	5440.9	5509.9	5575.4	5609.0	5619.6
15°	4911.6	4908.1	4943.5	5056.8	5216.1	5417.9	5577.1	5685.1	5778.9	5816.1	5830.3
17.5°	4828.5	4830.2	4893.9	5055.0	5267.4	5525.8	5729.4	5883.4	5998.4	6051.5	6067.4
20°	4736.4	4741.7	4837.3	5053.2	5331.1	5646.2	5897.5	6099.3	6242.7	6313.5	6336.5
22.5°	4628.4	4639.1	4775.4	5055.0	5398.4	5784.2	6095.7	6336.5	6508.1	6593.1	6621.4
25°	4513.4	4529.3	4711.6	5063.9	5483.3	5950.6	6322.3	6603.7	6777.2	6851.5	6883.4
27.5°	4380.7	4407.2	4642.6	5076.2	5584.2	6143.5	6554.2	6825.0	6986.0	7042.7	7071.0
30°	4239.1	4269.1	4575.3	5101.0	5715.2	6354.2	6768.3	6996.7	7104.6	7136.5	7152.4
32.5°	4083.3	4132.9	4508.1	5141.7	5869.2	6557.7	6925.9	7062.1	7088.7	7078.1	7083.4
35°	3911.6	3964.7	4444.4	5209.0	6044.4	6736.5	6987.8	6987.8	6909.9	6862.1	6858.6
37.5°	3729.3	3796.6	4380.7	5286.9	6248.0	6855.1	6920.5	6745.3	6555.9	6453.3	6437.3
40°	3531.1	3621.3	4336.4	5393.1	6432.0	6863.9	6679.8	6318.8	5996.6	5830.3	5810.8
42.5°	3334.6	3446.1	4316.9	5531.1	6570.1	6701.1	6226.7	5669.2	5232.0	5035.5	5014.3
45°	3118.7	3265.6	4324.0	5720.5	6607.3	6311.7	5552.4	4830.2	4339.9	4092.1	4070.9
47.5°	2904.5	3086.8	4341.7	5934.7	6444.4	5651.5	4655.0	3819.6	3332.8	3072.7	3069.1
50°	2681.5	2918.7	4384.2	6109.9	6003.7	4741.7	3552.3	2736.4	2347.0	2148.7	2132.8
52.5°	2449.6	2771.8	4476.2	6141.8	5219.6	3573.6	2410.7	1826.6	1573.5	1447.8	1423.0
55°	2230.2	2647.9	4626.7	5855.0	4092.1	2327.5	1518.6	1152.2	1024.8	973.5	978.8
57.5°	2040.8	2555.8	4801.9	5106.3	2656.7	1369.9	879.7	766.4	762.9	768.2	769.9
60°	1886.8	2499.2	4879.8	3830.2	1458.4	708.0	614.2	639.0	672.6	692.1	695.6
62.5°	1785.9	2469.1	4642.6	2219.5	647.8	493.8	536.3	582.3	621.3	639.0	640.7
65°	1718.6	2389.4	3798.3	1097.4	396.5	435.4	488.5	536.3	571.7	585.9	589.4
67.5°	1614.2	2164.7	2603.6	454.9	348.7	392.9	444.3	490.3	520.4	531.0	532.8
70°	1373.5	1812.4	1513.3	302.7	315.1	361.1	401.8	437.2	456.6	462.0	460.2
72.5°	1072.6	1435.4	764.6	274.3	292.0	316.8	339.8	359.3	369.9	375.2	375.2
75°	785.9	1049.6	359.3	242.5	217.7	238.9	262.0	274.3	277.9	279.7	279.7
77.5°	527.4	723.9	214.2	187.6	168.1	185.8	194.7	189.4	185.8	189.4	189.4
80°	318.6	446.0	187.6	136.3	129.2	131.0	123.9	123.9	131.0	134.5	132.7
82.5°	171.7	253.1	164.6	99.1	86.7	79.6	77.9	74.3	70.8	69.0	69.0
85°	79.6	129.2	106.2	60.2	46.0	33.6	26.5	19.5	17.7	14.2	14.2
87.5°	31.9	49.6	31.9	19.5	10.6	7.1	5.3	3.5	1.8	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)