

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: P685333

Luminaire Tested: **4CZL-16-UNV-L935-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685333
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-L935-CD-U
Description: METALUX CRUZE LINEAR 4FT BASE MODEL @90 CRI and 3500K
Light Source: (588) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

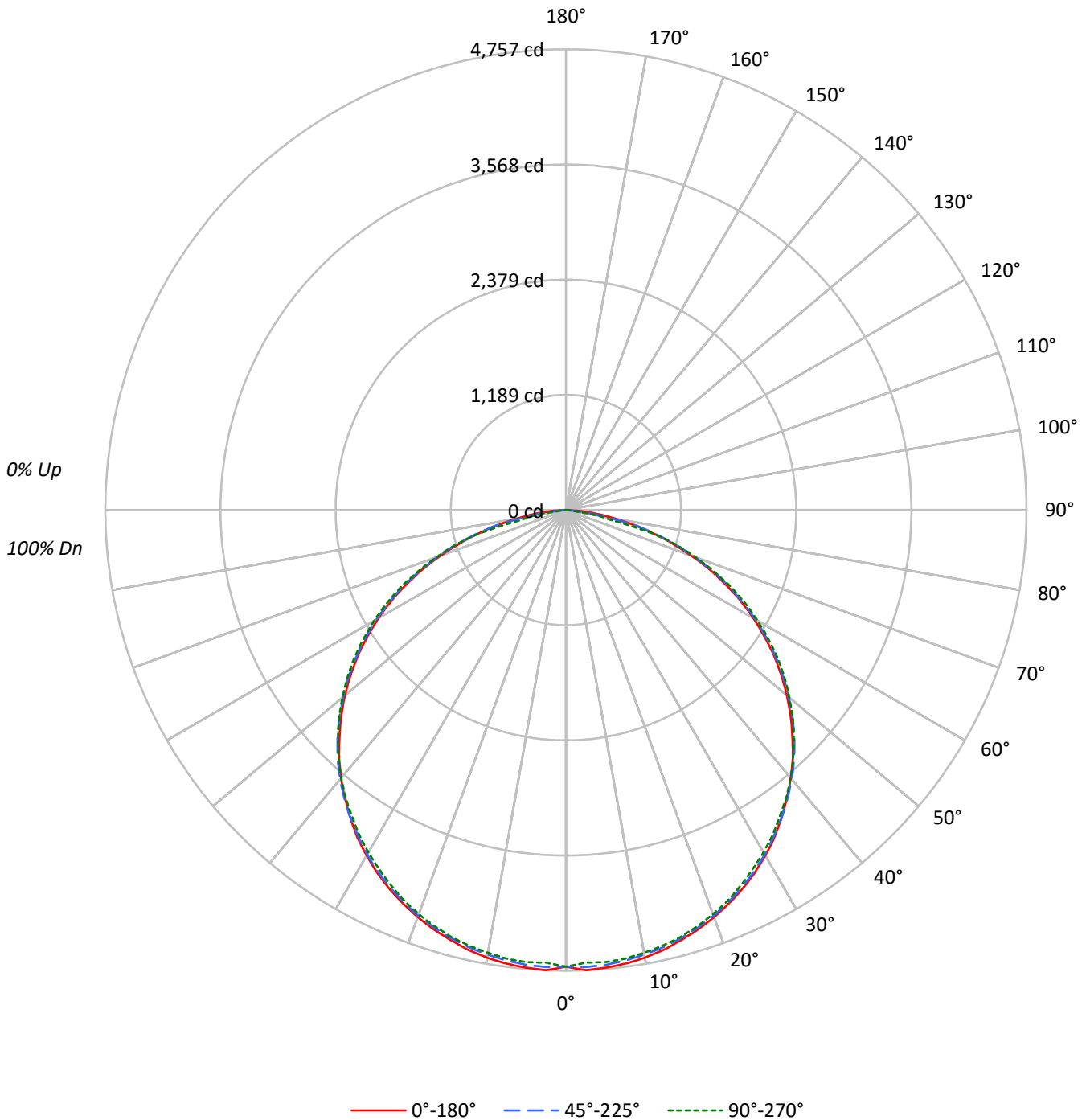
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13986.7 lumens
Efficiency: N/A
Efficacy: 135.8 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): 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				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°	15226	15226	15226
5°	15377	15279	15186
10°	15390	15286	15220
15°	15369	15306	15258
20°	15373	15319	15259
25°	15376	15315	15238
30°	15357	15314	15218
35°	15301	15301	15194
40°	15229	15290	15217
45°	15100	15232	15199
50°	14973	15081	15132
55°	14773	14878	15024
60°	14451	14580	14757
65°	13912	14110	14351
70°	13011	13269	13392
75°	11708	11923	11314
80°	9782	7963	6200
85°	7295	1916	693



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	447.3	3.2
10°-20°	1289.7	9.2
20°-30°	1974.9	14.1
30°-40°	2417.9	17.3
40°-50°	2558.0	18.3
50°-60°	2358.8	16.9
60°-70°	1819.6	13.0
70°-80°	971.8	6.9
80°-90°	148.7	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°	3711.9	26.5
0°-40°	6129.8	43.8
0°-60°	11046.6	79.0
0°-90°	13986.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13986.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4715	4715	4715	4715	4715	
5°	4744	4688	4714	4693	4685	451
15°	4597	4548	4578	4563	4564	1299
25°	4316	4271	4298	4267	4277	1989
35°	3882	3858	3882	3848	3854	2429
45°	3307	3305	3335	3312	3328	2552
55°	2624	2621	2643	2658	2669	2341
65°	1821	1821	1847	1861	1878	1798
75°	938	937	956	963	907	993
85°	197	141	52	22	19	242
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4715.0	4715.0	4715.0	4715.0	4715.0
2.5°	4756.6	4700.6	4723.6	4706.3	4677.6
5°	4743.7	4687.7	4713.5	4693.4	4684.8
7.5°	4723.6	4666.1	4692.0	4676.2	4673.3
10°	4693.4	4634.5	4661.8	4644.5	4641.7
12.5°	4653.2	4595.7	4625.9	4605.7	4608.6
15°	4597.1	4548.3	4578.4	4562.6	4564.1
17.5°	4541.1	4490.8	4522.4	4506.6	4508.0
20°	4473.5	4424.7	4457.7	4433.3	4440.5
22.5°	4397.4	4354.3	4383.0	4351.4	4365.8
25°	4315.5	4270.9	4298.2	4266.6	4276.7
27.5°	4222.1	4180.4	4207.7	4174.6	4178.9
30°	4118.6	4081.2	4107.1	4074.0	4081.2
32.5°	4007.9	3974.9	3995.0	3964.8	3974.9
35°	3881.5	3858.5	3881.5	3848.4	3854.2
37.5°	3749.3	3726.3	3757.9	3729.1	3739.2
40°	3612.7	3591.2	3627.1	3598.4	3609.9
42.5°	3467.6	3451.8	3487.7	3459.0	3473.3
45°	3306.6	3305.2	3335.4	3312.4	3328.2
47.5°	3147.1	3144.3	3174.4	3158.6	3177.3
50°	2980.4	2977.6	3002.0	3000.6	3012.1
52.5°	2802.2	2806.6	2829.5	2833.9	2846.8
55°	2624.1	2621.2	2642.7	2658.5	2668.6
57.5°	2430.0	2435.8	2453.0	2471.7	2478.9
60°	2237.5	2234.6	2257.6	2273.4	2284.9
62.5°	2033.4	2033.4	2052.1	2075.1	2086.6
65°	1820.7	1820.7	1846.6	1861.0	1878.2
67.5°	1603.7	1599.4	1622.4	1654.0	1651.2
70°	1378.1	1379.6	1405.4	1421.2	1418.4
72.5°	1154.0	1158.3	1185.6	1192.8	1199.9
75°	938.4	937.0	955.6	962.8	906.8
77.5°	724.3	725.7	737.2	540.3	474.2
80°	526.0	528.8	428.2	333.4	333.4
82.5°	347.8	342.0	219.9	129.3	94.8
85°	196.9	140.8	51.7	21.6	18.7
87.5°	80.5	25.9	14.4	10.1	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)