

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: P685422

Luminaire Tested: **4CZL-12-UNV-M-L835-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685422
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-M-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT MEDIUM LENS MODEL @80 CRI and 3500K
Light Source: (588) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

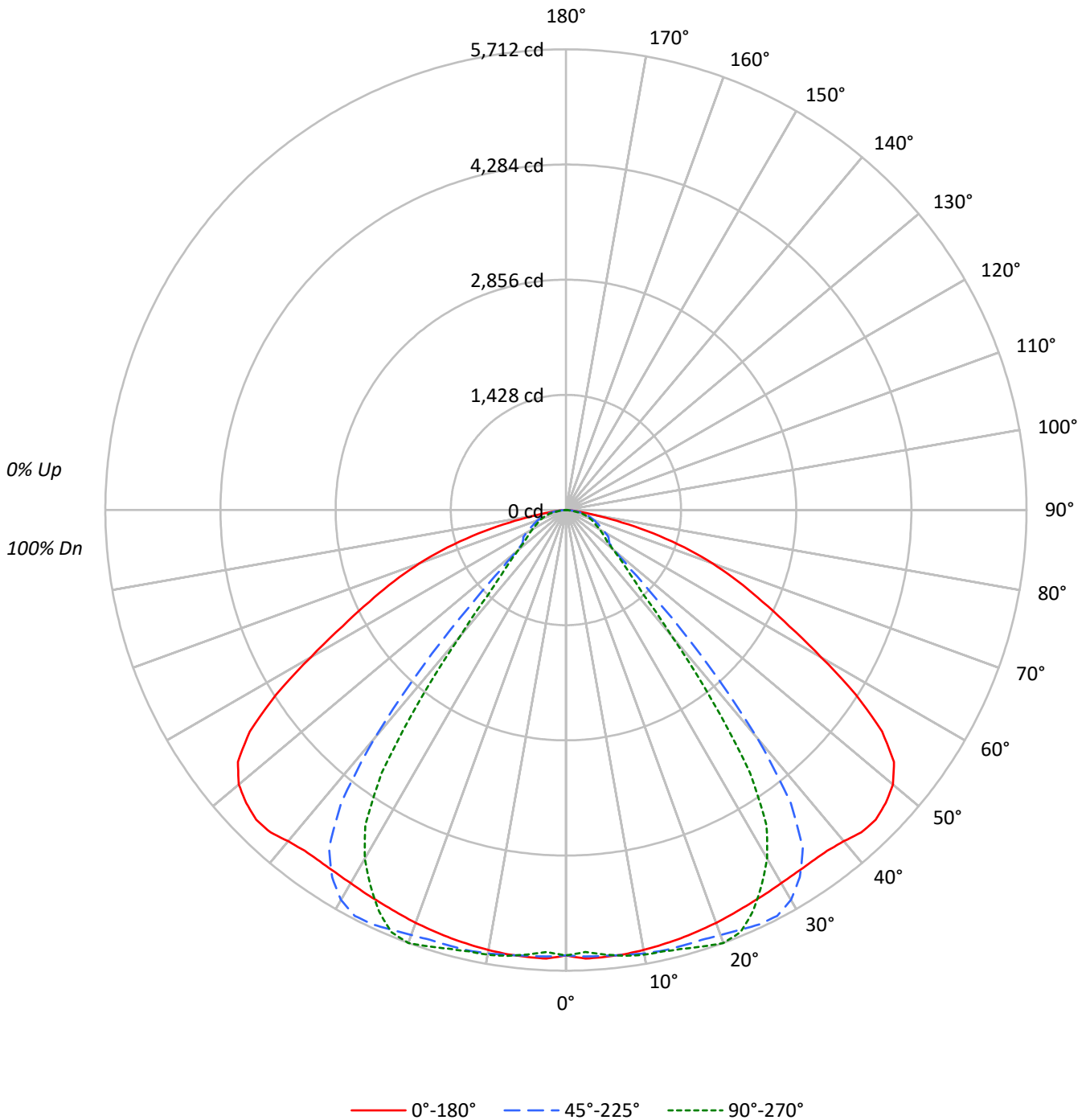
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11930.9 lumens
Efficiency: N/A
Efficacy: 154.9 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 1.28 / 1.22
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	90	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77
3	95	86	80	74	93	85	79	73	82	77	72	79	75	71	77	73	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	53
6	76	65	57	51	75	64	56	51	62	55	51	61	55	50	59	54	50	48
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	33

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17833	17833	17833
5°	18032	17981	17931
10°	18164	18305	18357
15°	18379	18694	18825
20°	18717	19265	19629
25°	19196	20203	19555
30°	19919	20811	18603
35°	20966	20188	15709
40°	22596	15569	8592
45°	24808	7654	5135
50°	26600	4000	3829
55°	26939	3651	3305
60°	23625	3639	3116
65°	20559	3496	3017
70°	18244	3542	3036
75°	13995	3637	3083
80°	7124	3695	2553
85°	2808	2082	726



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	529.1	4.4
10°-20°	1577.1	13.2
20°-30°	2545.2	21.3
30°-40°	2980.8	25.0
40°-50°	2029.2	17.0
50°-60°	1175.0	9.8
60°-70°	671.8	5.6
70°-80°	345.7	2.9
80°-90°	77.0	0.6
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°	4651.4	39.0
0°-40°	7632.2	64.0
0°-60°	10836.4	90.8
0°-90°	11930.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11930.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5522	5522	5522	5522	5522	
5°	5563	5508	5547	5541	5532	530
15°	5498	5489	5592	5606	5631	1556
25°	5388	5464	5670	5583	5488	2494
35°	5318	5581	5121	4319	3985	3348
45°	5432	4042	1676	1129	1124	4173
55°	4785	1387	648	604	587	4169
65°	2691	495	458	404	395	2698
75°	1122	306	292	254	247	1192
85°	76	92	56	26	20	128
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°	5522.4	5522.4	5522.4	5522.4	5522.4	5522.4	5522.4	5522.4	5522.4	5522.4	5522.4
2.5°	5566.9	5551.2	5519.8	5506.7	5506.7	5540.7	5545.9	5525.0	5521.1	5502.8	5485.8
5°	5562.9	5547.2	5517.2	5505.4	5509.3	5547.2	5556.4	5539.4	5544.6	5539.4	5531.6
7.5°	5555.1	5538.1	5510.6	5502.8	5514.6	5562.9	5578.6	5569.5	5581.2	5578.6	5576.0
10°	5539.4	5526.3	5500.2	5498.9	5522.4	5582.5	5602.2	5590.4	5594.3	5593.0	5598.2
12.5°	5518.5	5506.7	5484.5	5496.3	5530.2	5594.3	5607.4	5589.1	5594.3	5595.6	5604.8
15°	5497.6	5483.2	5468.8	5496.3	5531.6	5591.7	5604.8	5602.2	5617.8	5619.2	5630.9
17.5°	5471.4	5462.3	5458.3	5494.9	5522.4	5589.1	5619.2	5634.8	5655.8	5661.0	5672.8
20°	5446.6	5438.7	5447.9	5488.4	5518.5	5606.1	5647.9	5671.4	5693.7	5700.2	5712.0
22.5°	5416.5	5411.3	5436.1	5479.3	5525.0	5632.2	5679.3	5681.9	5672.8	5655.8	5663.6
25°	5387.7	5387.7	5424.4	5476.6	5544.6	5670.1	5674.1	5599.5	5532.9	5488.4	5488.4
27.5°	5364.2	5369.4	5415.2	5488.4	5582.5	5672.8	5564.2	5416.5	5318.5	5254.4	5250.5
30°	5342.0	5351.1	5415.2	5521.1	5610.0	5581.2	5370.7	5191.6	5055.7	4994.2	4989.0
32.5°	5326.3	5340.7	5438.7	5570.8	5577.3	5396.9	5122.3	4896.2	4735.4	4643.8	4628.2
35°	5318.5	5335.4	5483.2	5613.9	5445.3	5121.0	4731.4	4382.4	4127.4	4009.8	3984.9
37.5°	5323.7	5353.8	5544.6	5577.3	5114.5	4578.5	4018.9	3518.2	3167.8	3056.7	2979.5
40°	5360.3	5411.3	5593.0	5279.2	4420.3	3693.4	2952.1	2413.4	2171.6	2091.8	2038.2
42.5°	5421.7	5472.7	5466.2	4596.8	3452.8	2623.9	1902.2	1579.3	1461.7	1448.6	1423.7
45°	5432.2	5451.8	5055.7	3703.8	2511.5	1676.1	1225.0	1129.6	1127.0	1136.1	1124.4
47.5°	5377.3	5339.4	4463.4	2833.1	1729.7	1083.8	921.7	937.4	945.2	938.7	929.6
50°	5294.9	5155.0	3799.3	2082.7	1153.1	796.2	804.0	818.4	791.0	772.7	762.2
52.5°	5127.6	4855.6	3061.9	1476.0	797.5	679.8	742.6	700.8	661.5	651.1	649.8
55°	4785.0	4411.1	2355.9	1064.2	609.2	648.5	660.2	606.6	594.9	589.6	587.0
57.5°	4263.4	3858.1	1771.5	768.7	534.7	626.2	573.9	553.0	541.3	537.3	533.4
60°	3658.1	3239.7	1320.5	564.8	519.0	563.5	520.3	500.7	487.7	482.4	482.4
62.5°	3122.0	2681.5	976.6	458.9	515.1	508.6	469.4	448.4	440.6	438.0	435.4
65°	2690.6	2157.2	704.7	424.9	481.1	457.6	419.7	405.3	400.1	394.8	394.8
67.5°	2306.2	1689.1	519.0	417.1	441.9	411.8	383.1	371.3	364.8	363.5	362.1
70°	1932.3	1244.6	394.8	407.9	419.7	375.2	347.8	333.4	325.5	321.6	321.6
72.5°	1538.8	853.7	315.1	375.2	384.4	332.1	304.6	294.2	287.6	283.7	282.4
75°	1121.7	536.0	277.2	315.1	330.8	291.5	264.1	254.9	252.3	248.4	247.1
77.5°	713.8	320.3	236.6	257.6	270.6	245.8	224.9	213.1	211.8	207.9	206.6
80°	383.1	205.3	189.6	202.6	210.5	198.7	173.9	150.3	143.8	138.6	137.3
82.5°	177.8	130.7	141.2	153.0	156.9	126.8	104.6	94.1	87.6	81.1	77.1
85°	75.8	70.6	87.6	94.1	77.1	56.2	36.6	27.5	22.2	20.9	19.6
87.5°	27.5	27.5	32.7	22.2	13.1	10.5	10.5	9.2	7.8	6.5	6.5
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)