

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: P685663

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685663
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-LVR-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @80 CRI and 3500K
Light Source: (588) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

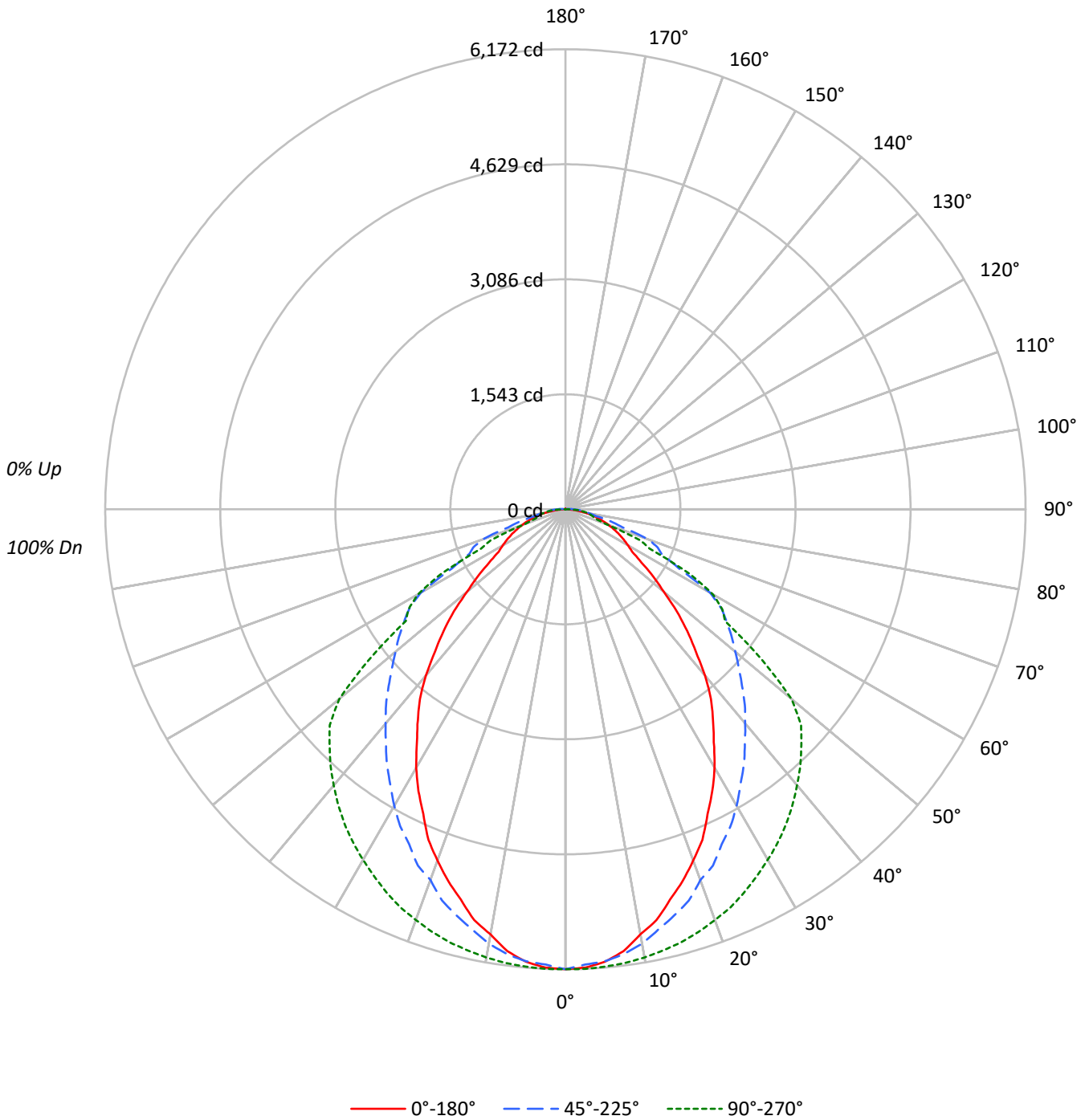
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13974.9 lumens
Efficiency: N/A
Efficacy: 135.7 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1.31 / 1.26
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	100	100	100	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85	85	85	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	73	73	73	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63	63	63	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54	54	54	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	47	47	47	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42	42	42	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37	37	37	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34	34	34	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30	30	30	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28	28	28	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19927	19927	19927
5°	19754	19726	19962
10°	18986	19404	20020
15°	18124	18861	20101
20°	17234	18192	20148
25°	16072	17667	20214
30°	14922	17124	20247
35°	13604	16453	20340
40°	12273	15812	20377
45°	10556	15305	20430
50°	8628	14944	19893
55°	7025	14886	14713
60°	6263	14471	14762
65°	6056	10859	9519
70°	5818	11130	5411
75°	5608	7844	4831
80°	5114	6380	5756
85°	4579	7955	7173



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	578.0	4.1
10°-20°	1602.3	11.5
20°-30°	2318.2	16.6
30°-40°	2645.9	18.9
40°-50°	2599.8	18.6
50°-60°	2073.7	14.8
60°-70°	1306.2	9.3
70°-80°	578.7	4.1
80°-90°	221.9	1.6
90°-100°	44.0	0.3
100°-110°	2.9	0.0
110°-120°	0.4	0.0
120°-130°	0.4	0.0
130°-140°	0.7	0.0
140°-150°	0.6	0.0
150°-160°	0.5	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	4498.5	32.2
0°-40°	7144.4	51.1
0°-60°	11817.9	84.6
0°-90°	13924.7	99.6
90°-120°	47.3	0.3
90°-150°	49.1	0.4
90°-180°	50.0	0.4
0°-180°	13974.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6171	6171	6171	6171	6171	
5°	6094	6108	6086	6136	6158	572
15°	5421	5475	5642	5906	6013	1526
25°	4511	4657	4958	5413	5673	2079
35°	3451	3660	4174	4789	5160	2157
45°	2312	2648	3351	4102	4474	1776
55°	1248	1690	2644	2851	2613	1147
65°	793	1079	1421	1514	1246	785
75°	450	519	629	476	387	471
85°	124	150	215	277	194	131
90°	1	52	113	165	32	7
95°	1	8	47	80	10	1
105°	1	1	1	3	0	1
115°	1	1	0	0	0	1
125°	1	2	0	0	0	1
135°	1	2	1	0	0	1
145°	2	2	1	0	0	1
155°	2	2	1	0	0	1
165°	3	3	2	1	0	1
175°	3	3	2	1	1	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6170.8	6170.8	6170.8	6170.8	6170.8
2.5°	6154.5	6150.7	6113.3	6166.0	6171.7
5°	6094.1	6107.5	6085.5	6136.3	6158.3
7.5°	5978.2	5992.5	6018.4	6111.4	6138.2
10°	5790.3	5826.7	5917.8	6048.1	6105.6
12.5°	5646.6	5691.6	5773.1	5994.4	6060.6
15°	5421.4	5475.0	5641.8	5906.3	6012.7
17.5°	5229.7	5327.4	5504.7	5795.1	5943.7
20°	5015.0	5093.6	5293.9	5685.9	5863.2
22.5°	4800.4	4900.0	5173.1	5540.2	5781.7
25°	4510.9	4656.6	4958.5	5412.7	5673.4
27.5°	4265.6	4449.6	4796.5	5262.3	5552.7
30°	4002.0	4144.8	4592.4	5108.9	5430.0
32.5°	3705.0	3929.2	4372.0	4933.6	5301.6
35°	3451.0	3659.9	4173.6	4788.9	5159.7
37.5°	3205.7	3402.1	3954.1	4625.0	5002.6
40°	2911.5	3170.2	3751.0	4438.1	4833.9
42.5°	2585.6	2902.8	3562.2	4261.8	4662.3
45°	2311.5	2647.9	3351.3	4101.7	4473.6
47.5°	2026.9	2381.5	3153.9	3907.2	4286.7
50°	1717.4	2148.6	2974.7	3727.0	3959.9
52.5°	1491.2	1906.1	2813.7	3401.2	3337.9
55°	1247.8	1689.6	2644.1	2851.1	2613.4
57.5°	1062.8	1494.1	2485.0	2238.7	2494.6
60°	969.8	1337.8	2240.6	2131.4	2285.7
62.5°	882.6	1200.8	1713.5	1999.1	1880.3
65°	792.6	1079.1	1421.2	1514.2	1245.8
67.5°	705.3	973.7	1339.8	1130.8	1084.8
70°	616.2	892.2	1178.8	964.1	573.1
72.5°	531.9	798.3	806.0	533.8	425.5
75°	449.5	519.4	628.7	476.3	387.2
77.5°	359.4	445.6	420.7	426.5	350.8
80°	275.0	306.7	343.1	381.4	309.5
82.5°	194.5	228.1	277.9	333.5	254.0
85°	123.6	150.5	214.7	277.0	193.6
87.5°	48.9	94.9	160.0	223.3	114.0
90°	1.0	51.8	113.1	164.8	31.6
92.5°	1.0	24.0	75.7	120.8	16.3
95°	1.0	7.7	47.0	80.5	10.5
97.5°	1.0	2.9	24.9	49.8	5.8
100°	1.0	1.0	10.5	26.8	2.9
102.5°	1.0	1.0	3.8	10.5	1.0
105°	1.0	1.0	1.0	2.9	0.0
107.5°	1.0	1.0	0.0	0.0	0.0
110°	1.0	1.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	1.0	0.0	0.0	0.0
115°	1.0	1.0	0.0	0.0	0.0
117.5°	1.0	1.0	0.0	0.0	0.0
120°	1.0	1.0	0.0	0.0	0.0
122.5°	1.0	1.0	0.0	0.0	0.0
125°	1.0	1.9	0.0	0.0	0.0
127.5°	1.0	1.0	0.0	0.0	0.0
130°	1.0	1.9	1.0	0.0	0.0
132.5°	1.0	1.9	1.0	0.0	0.0
135°	1.0	1.9	1.0	0.0	0.0
137.5°	1.0	1.9	1.0	0.0	0.0
140°	1.9	1.9	1.0	0.0	0.0
142.5°	1.9	1.9	1.0	0.0	0.0
145°	1.9	1.9	1.0	0.0	0.0
147.5°	1.9	1.9	1.0	0.0	0.0
150°	1.9	1.9	1.0	0.0	0.0
152.5°	1.9	1.9	1.0	0.0	0.0
155°	1.9	1.9	1.0	0.0	0.0
157.5°	1.9	2.9	1.0	0.0	0.0
160°	2.9	2.9	1.0	0.0	0.0
162.5°	2.9	2.9	1.9	1.0	0.0
165°	2.9	2.9	1.9	1.0	0.0
167.5°	2.9	2.9	1.9	1.0	0.0
170°	2.9	2.9	1.9	1.0	1.0
172.5°	2.9	2.9	1.9	1.0	1.0
175°	2.9	2.9	1.9	1.0	1.0
177.5°	2.9	2.9	1.9	1.0	1.0
180°	1.9	1.9	1.9	1.9	1.9

(END OF REPORT)