

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: P685722

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685722
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-N-LVR-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @80 CRI and 3500K
Light Source: (588) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

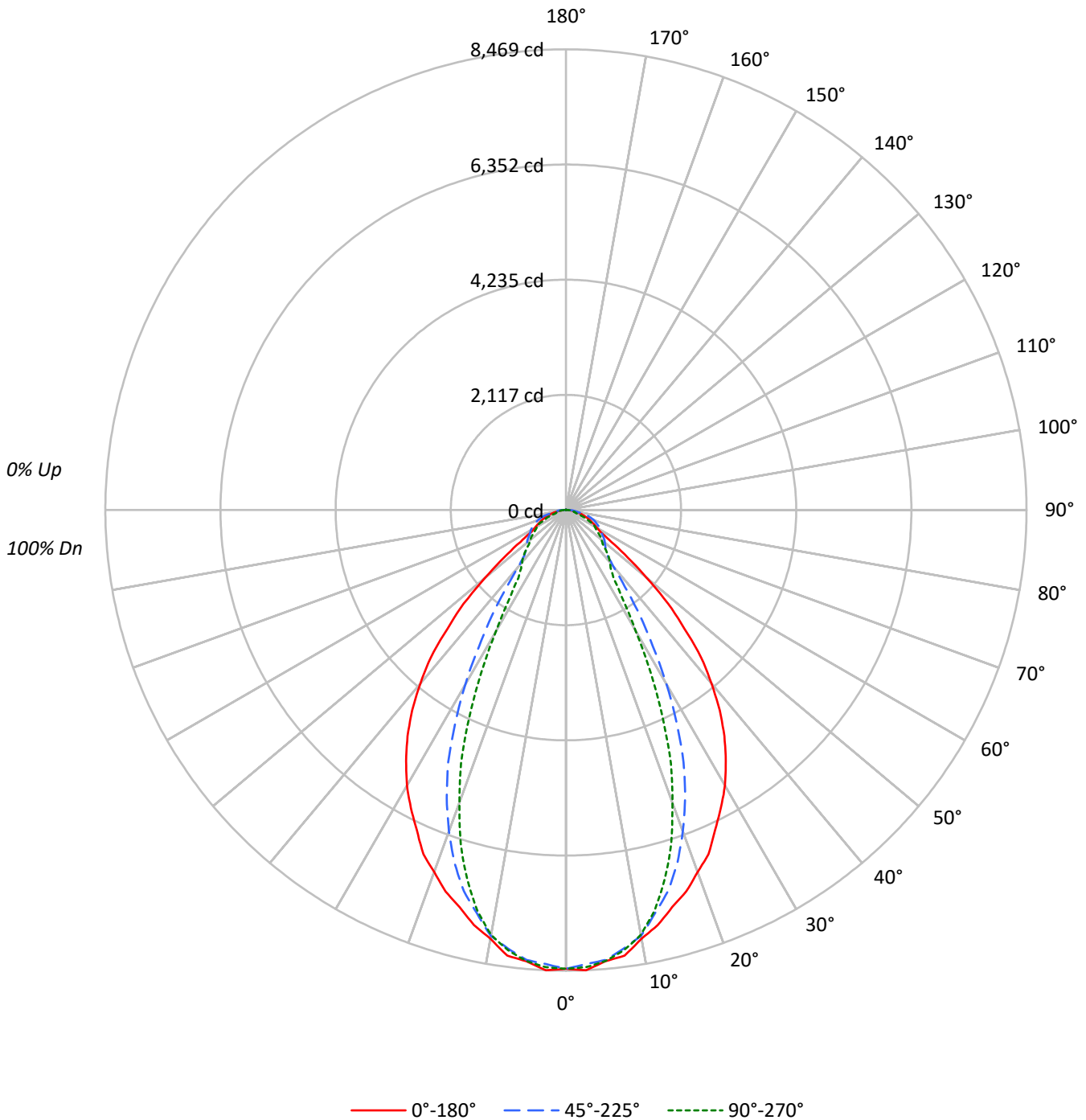
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9984.2 lumens
Efficiency: N/A
Efficacy: 129.7 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.8 / 0.85
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 (A_{in}): 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	108	105	102	99	101	98	96	97	95	93	93	92	90	93	92	90	88
2	103	97	92	87	101	95	90	86	92	88	84	88	85	82	86	83	80	86	83	80	78
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	79	75	72	70
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	73	69	65	63
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	68	63	59	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55	63	58	55	53
7	75	64	57	51	73	63	56	51	62	55	51	60	55	51	59	54	50	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	55	50	47	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	43	52	47	43	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	49	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27231	27231	27231
5°	26990	26913	26983
10°	26229	26067	26004
15°	25256	24248	23479
20°	24326	21601	19664
25°	23117	18239	14994
30°	21805	13797	9580
35°	20014	9353	6019
40°	17553	5698	5279
45°	14062	4747	4731
50°	9723	4691	4271
55°	5728	4650	4023
60°	4268	4831	3973
65°	4040	4864	3494
70°	3885	5187	2638
75°	3663	5205	2256
80°	3401	4318	2551
85°	3016	5243	3149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	783.3	7.8
10°-20°	2028.3	20.3
20°-30°	2369.5	23.7
30°-40°	1757.9	17.6
40°-50°	1165.4	11.7
50°-60°	772.9	7.7
60°-70°	576.7	5.8
70°-80°	340.3	3.4
80°-90°	143.3	1.4
90°-100°	31.0	0.3
100°-110°	4.2	0.0
110°-120°	2.1	0.0
120°-130°	1.9	0.0
130°-140°	1.9	0.0
140°-150°	1.9	0.0
150°-160°	1.7	0.0
160°-170°	1.3	0.0
170°-180°	0.5	0.0
0°-30°	5181.2	51.9
0°-40°	6939.1	69.5
0°-60°	8877.4	88.9
0°-90°	9937.7	99.5
90°-120°	37.3	0.4
90°-150°	43.0	0.4
90°-180°	47.0	0.5
0°-180°	9984.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8433	8433	8433	8433	8433	
5°	8326	8319	8303	8333	8324	788
15°	7555	7465	7253	7128	7023	2131
25°	6488	6021	5119	4391	4208	2988
35°	5077	3762	2373	1604	1527	3151
45°	3079	1817	1040	1079	1036	2370
55°	1017	894	826	797	714	1001
65°	529	591	637	622	457	527
75°	294	329	417	303	181	310
85°	81	99	142	188	85	88
90°	1	30	71	122	25	5
95°	1	5	28	61	13	1
105°	1	1	3	5	4	1
115°	1	1	2	3	3	1
125°	1	1	2	3	3	1
135°	1	2	2	3	3	1
145°	2	3	3	4	4	1
155°	3	4	4	4	4	1
165°	4	4	4	5	5	1
175°	4	4	5	6	6	0
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8432.7	8432.7	8432.7	8432.7	8432.7
2.5°	8469.2	8423.4	8357.7	8417.0	8412.0
5°	8326.3	8319.1	8302.7	8332.7	8324.1
7.5°	8262.0	8223.4	8131.9	8202.7	8162.7
10°	7999.1	7954.0	7949.8	7935.5	7930.5
12.5°	7812.6	7758.3	7584.7	7575.4	7536.8
15°	7554.7	7464.6	7253.2	7128.1	7023.1
17.5°	7354.6	7158.9	6805.9	6573.0	6438.0
20°	7078.8	6863.1	6285.8	5879.3	5722.1
22.5°	6851.6	6469.4	5727.1	5151.9	5044.1
25°	6488.0	6021.4	5119.1	4391.0	4208.1
27.5°	6172.2	5528.5	4401.8	3603.0	3378.7
30°	5847.8	4976.2	3700.2	2830.0	2569.2
32.5°	5469.9	4419.6	2977.9	2123.4	1934.7
35°	5076.9	3761.6	2372.7	1604.0	1526.8
37.5°	4644.0	3170.0	1783.3	1339.6	1352.5
40°	4163.9	2654.2	1351.8	1228.2	1252.4
42.5°	3685.2	2219.8	1124.6	1155.3	1162.4
45°	3079.3	1816.9	1039.5	1078.8	1036.0
47.5°	2549.9	1484.6	979.5	975.2	914.5
50°	1935.5	1210.3	933.8	882.4	850.2
52.5°	1433.2	1021.0	890.2	833.8	800.9
55°	1017.4	893.8	825.9	797.3	714.5
57.5°	764.5	803.8	776.6	712.3	654.4
60°	660.9	724.5	748.0	671.6	615.1
62.5°	596.6	656.6	701.6	647.3	563.0
65°	528.7	590.9	636.6	622.3	457.3
67.5°	469.4	538.7	595.1	533.7	373.7
70°	411.5	475.8	549.4	453.0	279.4
72.5°	349.4	398.0	486.5	352.2	203.6
75°	293.6	328.6	417.2	302.9	180.8
77.5°	235.1	264.3	285.8	275.8	159.3
80°	182.9	212.2	232.2	250.8	137.2
82.5°	132.9	152.2	184.3	222.2	114.3
85°	81.4	99.3	141.5	187.9	85.0
87.5°	35.0	60.7	103.6	155.8	55.7
90°	1.4	30.0	70.7	121.5	25.0
92.5°	0.7	12.9	45.7	89.3	16.4
95°	0.7	5.0	27.9	60.7	12.9
97.5°	0.7	2.1	14.3	39.3	9.3
100°	0.7	1.4	7.9	22.9	6.4
102.5°	0.7	1.4	3.6	11.4	5.0
105°	0.7	1.4	2.9	5.0	4.3
107.5°	0.7	1.4	2.1	3.6	3.6
110°	0.7	1.4	2.1	3.6	3.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.7	1.4	2.1	3.6	3.6
115°	0.7	1.4	2.1	2.9	2.9
117.5°	0.7	1.4	2.1	2.9	2.9
120°	0.7	1.4	2.1	2.9	2.9
122.5°	0.7	1.4	2.1	2.9	2.9
125°	1.4	1.4	2.1	2.9	2.9
127.5°	1.4	2.1	2.1	2.9	2.9
130°	1.4	2.1	2.1	2.9	2.9
132.5°	1.4	2.1	2.1	2.9	2.9
135°	1.4	2.1	2.1	2.9	2.9
137.5°	1.4	2.1	2.9	2.9	2.9
140°	2.1	2.9	2.9	2.9	2.9
142.5°	2.1	2.9	2.9	3.6	2.9
145°	2.1	2.9	2.9	3.6	3.6
147.5°	2.1	2.9	3.6	3.6	3.6
150°	2.1	2.9	3.6	4.3	4.3
152.5°	2.9	2.9	3.6	4.3	4.3
155°	2.9	3.6	3.6	4.3	4.3
157.5°	2.9	3.6	3.6	4.3	5.0
160°	2.9	3.6	4.3	5.0	5.0
162.5°	2.9	3.6	4.3	5.0	5.0
165°	3.6	4.3	4.3	5.0	5.0
167.5°	3.6	4.3	5.0	5.0	5.7
170°	3.6	4.3	5.0	5.7	5.7
172.5°	3.6	4.3	5.0	5.7	5.7
175°	3.6	4.3	5.0	5.7	6.4
177.5°	3.6	4.3	5.0	5.7	6.4
180°	5.0	5.0	5.0	5.0	5.0

(END OF REPORT)