

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: P685903

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685903
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-LVRF-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @80 CRI and 3500K
Light Source: (588) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

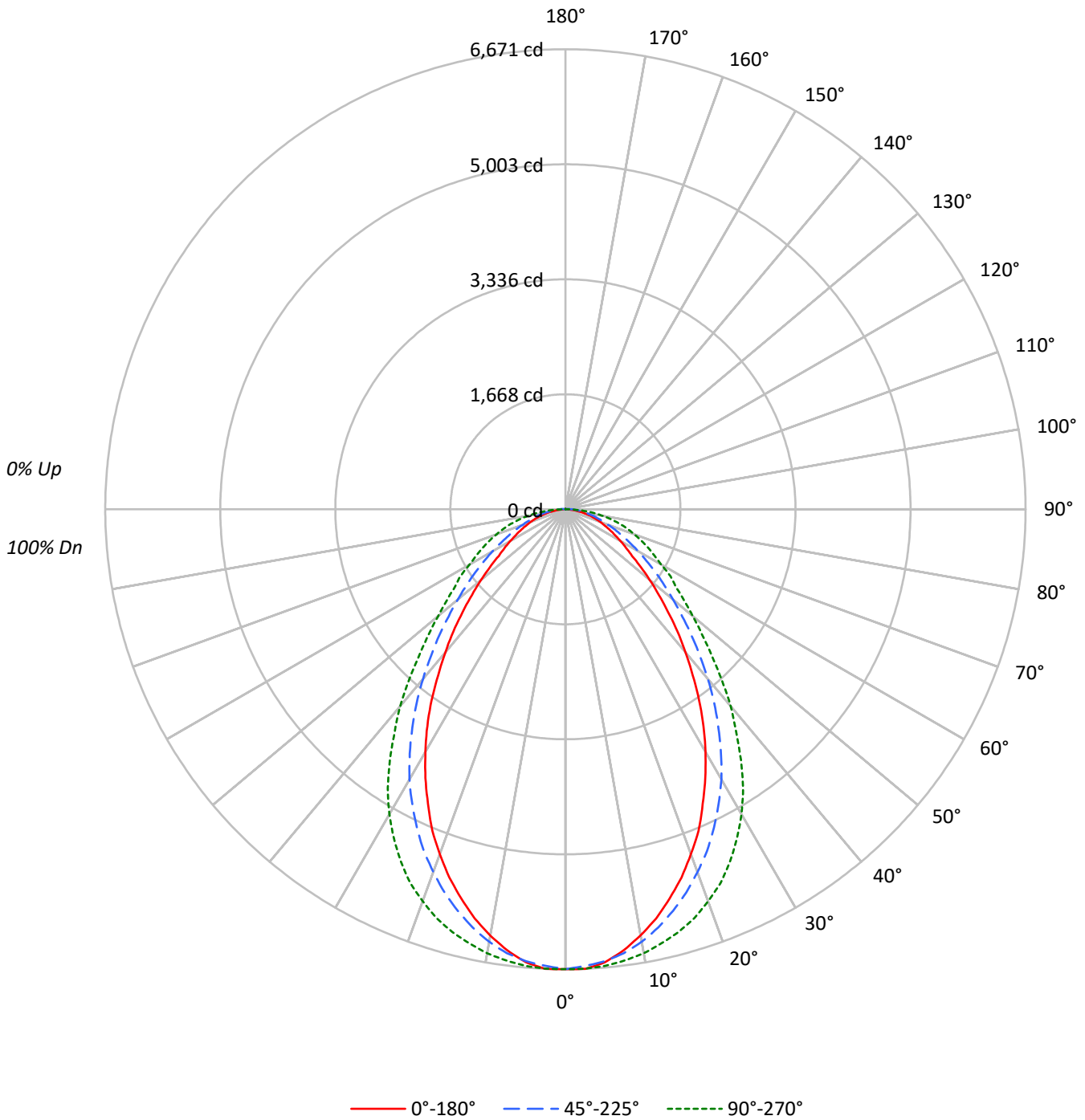
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12300.7 lumens
Efficiency: N/A
Efficacy: 119.4 lumens/watt
Spacing Criteria (0/90/45): 0.97 / 1.15 / 1.12
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 (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	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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86													
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	82	79	76	74													
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	74	70	67	65													
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57													
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51													
6	75	63	55	49	73	62	54	48	60	53	48	58	52	48	57	51	47	45													
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	41													
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37													
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34													
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31													

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21533	21533	21533
5°	21376	21326	21540
10°	20576	20881	21434
15°	19524	20152	21209
20°	18284	19233	20787
25°	16790	18145	20098
30°	15133	16863	19032
35°	13328	15251	17480
40°	11409	13542	15719
45°	9611	11803	13690
50°	8026	10231	12104
55°	6642	8989	10974
60°	5985	7879	10348
65°	5440	6934	10120
70°	5067	6225	10044
75°	4699	5812	10247
80°	4259	5756	10265
85°	3657	6747	10156



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	623.9	5.1
10°-20°	1705.1	13.9
20°-30°	2356.0	19.2
30°-40°	2423.6	19.7
40°-50°	1986.9	16.2
50°-60°	1425.7	11.6
60°-70°	958.9	7.8
70°-80°	559.7	4.6
80°-90°	215.7	1.8
90°-100°	37.4	0.3
100°-110°	3.2	0.0
110°-120°	0.6	0.0
120°-130°	0.6	0.0
130°-140°	0.8	0.0
140°-150°	1.0	0.0
150°-160°	0.8	0.0
160°-170°	0.6	0.0
170°-180°	0.3	0.0
0°-30°	4685.0	38.1
0°-40°	7108.6	57.8
0°-60°	10521.2	85.5
0°-90°	12255.5	99.6
90°-120°	41.2	0.3
90°-150°	43.5	0.4
90°-180°	45.0	0.4
0°-180°	12300.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6668	6668	6668	6668	6668	
5°	6594	6599	6579	6640	6645	619
15°	5840	5900	6028	6262	6344	1638
25°	4712	4822	5093	5447	5641	2163
35°	3381	3537	3869	4231	4434	2107
45°	2104	2268	2585	2839	2998	1633
55°	1180	1321	1597	1815	1949	1086
65°	712	754	908	1165	1324	709
75°	377	390	466	647	821	400
85°	99	123	182	272	274	107
90°	1	41	93	142	30	6
95°	1	7	39	68	12	0
105°	0	1	2	4	2	0
115°	1	1	1	0	0	1
125°	1	1	1	0	0	1
135°	1	2	1	1	0	1
145°	2	2	2	1	1	1
155°	2	3	2	1	1	1
165°	3	3	3	2	1	1
175°	3	4	3	2	2	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6668.1	6668.1	6668.1	6668.1	6668.1
2.5°	6671.0	6665.3	6627.9	6671.0	6669.1
5°	6594.3	6599.1	6579.0	6640.3	6645.1
7.5°	6451.6	6470.7	6492.8	6582.8	6599.1
10°	6275.2	6304.0	6368.2	6502.3	6536.8
12.5°	6076.8	6108.5	6212.9	6397.9	6445.8
15°	5840.1	5899.5	6028.0	6261.8	6344.2
17.5°	5595.8	5668.6	5827.7	6104.6	6215.8
20°	5320.7	5393.5	5596.7	5905.3	6049.0
22.5°	5044.7	5115.6	5363.8	5692.5	5871.8
25°	4712.2	4822.4	5092.6	5447.2	5640.8
27.5°	4394.0	4510.9	4811.8	5192.3	5384.9
30°	4058.6	4195.6	4522.4	4885.6	5104.1
32.5°	3726.0	3865.0	4198.5	4577.0	4793.6
35°	3381.0	3537.2	3868.8	4231.1	4434.2
37.5°	3031.2	3201.8	3543.0	3899.5	4063.4
40°	2706.4	2874.1	3212.4	3531.5	3728.9
42.5°	2406.4	2571.2	2884.6	3174.0	3351.3
45°	2104.5	2268.4	2584.6	2838.6	2997.7
47.5°	1834.3	2002.0	2296.2	2553.0	2686.2
50°	1597.6	1749.9	2036.5	2269.4	2409.3
52.5°	1381.0	1519.9	1803.6	2029.8	2164.9
55°	1179.7	1320.6	1596.6	1815.1	1949.3
57.5°	1044.6	1145.2	1393.4	1635.9	1808.4
60°	926.7	989.0	1220.0	1507.5	1602.3
62.5°	806.9	863.5	1053.2	1306.2	1453.8
65°	712.0	754.2	907.5	1165.3	1324.4
67.5°	618.1	649.8	781.0	1029.3	1190.3
70°	536.7	556.8	659.3	895.1	1063.8
72.5°	459.0	469.6	561.6	772.4	940.1
75°	376.6	390.0	465.8	646.9	821.3
77.5°	298.0	317.2	384.3	539.5	685.2
80°	229.0	244.4	309.5	443.7	552.0
82.5°	159.1	180.2	241.5	350.8	422.6
85°	98.7	122.7	182.1	272.2	274.1
87.5°	41.2	76.7	133.2	201.3	139.9
90°	1.0	41.2	93.0	141.8	29.7
92.5°	0.0	19.2	63.3	101.6	17.3
95°	1.0	6.7	39.3	68.0	12.5
97.5°	0.0	1.9	21.1	43.1	7.7
100°	0.0	1.0	8.6	24.0	4.8
102.5°	0.0	1.0	3.8	10.5	2.9
105°	0.0	1.0	1.9	3.8	1.9
107.5°	0.0	1.0	1.0	1.0	1.0
110°	1.0	1.0	1.0	1.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	1.0	1.0	0.0	0.0
115°	1.0	1.0	1.0	0.0	0.0
117.5°	1.0	1.0	1.0	0.0	0.0
120°	1.0	1.0	1.0	0.0	0.0
122.5°	1.0	1.0	1.0	0.0	0.0
125°	1.0	1.0	1.0	0.0	0.0
127.5°	1.0	1.0	1.0	0.0	0.0
130°	1.0	1.0	1.0	0.0	0.0
132.5°	1.0	1.9	1.0	1.0	0.0
135°	1.0	1.9	1.0	1.0	0.0
137.5°	1.0	1.9	1.0	1.0	0.0
140°	1.0	1.9	1.0	1.0	1.0
142.5°	1.9	1.9	1.9	1.0	1.0
145°	1.9	1.9	1.9	1.0	1.0
147.5°	1.9	1.9	1.9	1.0	1.0
150°	1.9	1.9	1.9	1.0	1.0
152.5°	1.9	2.9	1.9	1.0	1.0
155°	1.9	2.9	1.9	1.0	1.0
157.5°	1.9	2.9	1.9	1.0	1.0
160°	1.9	2.9	1.9	1.0	1.0
162.5°	2.9	2.9	1.9	1.9	1.0
165°	2.9	2.9	2.9	1.9	1.0
167.5°	2.9	2.9	2.9	1.9	1.0
170°	2.9	2.9	2.9	1.9	1.9
172.5°	2.9	2.9	2.9	1.9	1.9
175°	2.9	3.8	2.9	1.9	1.9
177.5°	2.9	3.8	2.9	1.9	1.9
180°	2.9	2.9	2.9	2.9	2.9

(END OF REPORT)