

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: P685660

Luminaire Tested: **4CZL-7-UNV-LVR-L835-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685660
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-7-UNV-LVR-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @80 CRI and 3500K
Light Source: (392) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

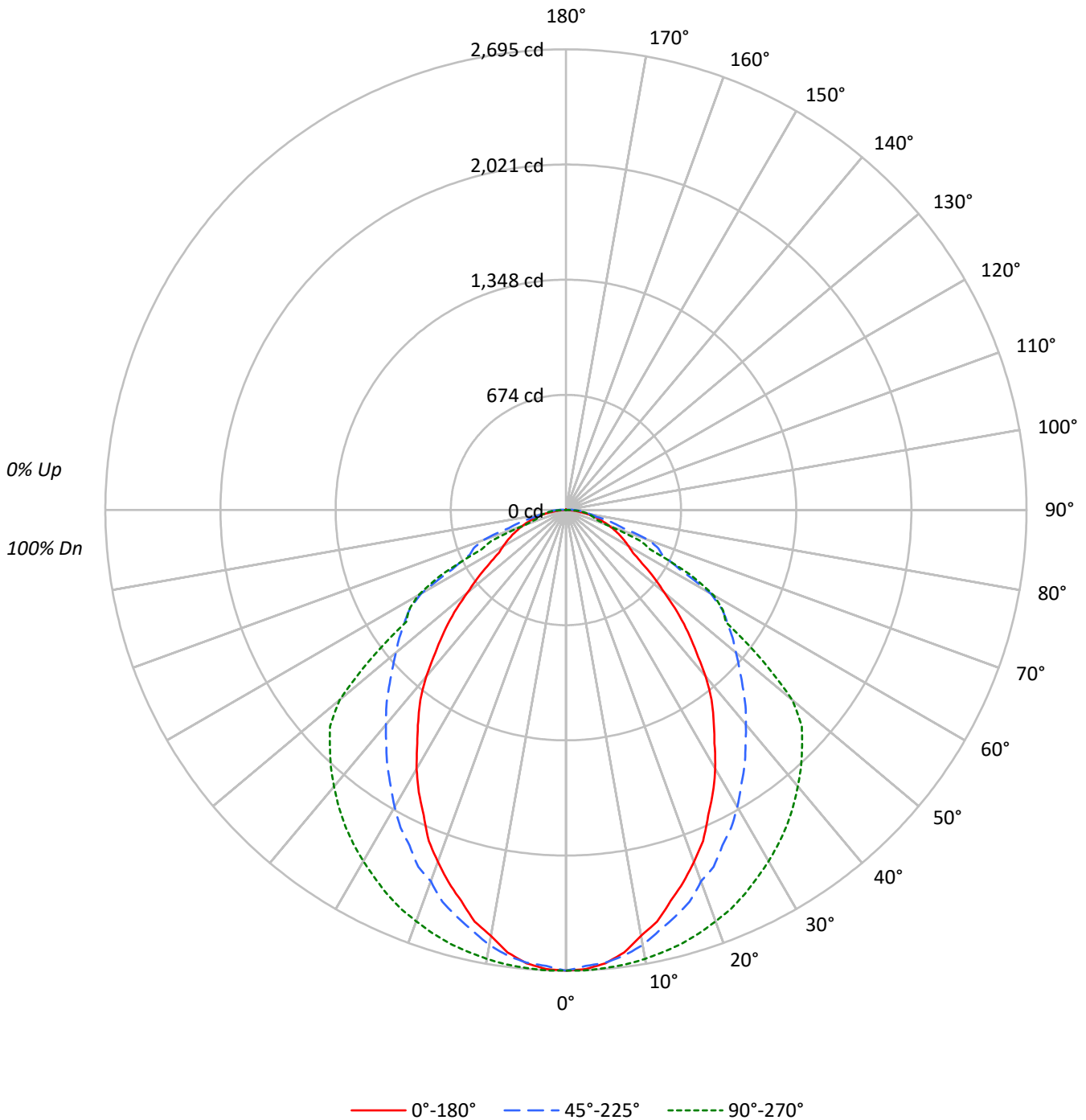
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6102.5 lumens
Efficiency: N/A
Efficacy: 138.7 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): 44
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

TEST NUMBER: P685660
CATALOG NUMBER: 4CZL-7-UNV-LVR-L835-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P685660
 CATALOG NUMBER: 4CZL-7-UNV-LVR-L835-CD-U

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	30	39	34	29	28	28	28	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8702	8702	8702
5°	8626	8614	8717
10°	8291	8474	8742
15°	7914	8236	8778
20°	7526	7944	8798
25°	7018	7715	8827
30°	6516	7478	8842
35°	5941	7184	8882
40°	5359	6905	8898
45°	4610	6683	8921
50°	3767	6526	8687
55°	3068	6500	8425
60°	2735	6319	8446
65°	2645	4742	4157
70°	2541	4860	2363
75°	2449	3425	2110
80°	2233	2786	2514
85°	2001	3472	3131



TEST NUMBER: P685660
 CATALOG NUMBER: 4CZL-7-UNV-LVR-L835-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.4	4.1
10°-20°	699.7	11.5
20°-30°	1012.3	16.6
30°-40°	1155.4	18.9
40°-50°	1135.3	18.6
50°-60°	905.6	14.8
60°-70°	570.4	9.3
70°-80°	252.7	4.1
80°-90°	96.9	1.6
90°-100°	19.2	0.3
100°-110°	1.3	0.0
110°-120°	0.1	0.0
120°-130°	0.2	0.0
130°-140°	0.3	0.0
140°-150°	0.3	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1964.4	32.2
0°-40°	3119.8	51.1
0°-60°	5160.7	84.6
0°-90°	6080.7	99.6
90°-120°	20.6	0.3
90°-150°	21.4	0.3
90°-180°	22.0	0.4
0°-180°	6102.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2695	2695	2695	2695	2695	
5°	2661	2667	2657	2680	2689	250
15°	2367	2391	2464	2579	2626	667
25°	1970	2034	2165	2364	2478	908
35°	1507	1598	1822	2091	2253	942
45°	1009	1156	1464	1791	1954	776
55°	545	738	1155	1245	1141	501
65°	346	471	621	661	544	343
75°	196	227	274	208	169	206
85°	54	66	94	121	84	57
90°	0	23	49	72	14	3
95°	0	3	20	35	5	0
105°	0	0	0	1	0	0
115°	0	0	0	0	0	0
125°	0	1	0	0	0	0
135°	0	1	0	0	0	0
145°	1	1	0	0	0	1
155°	1	1	0	0	0	0
165°	1	1	1	0	0	0
175°	1	1	1	0	0	0
180°	1	1	1	1	1	

TEST NUMBER: P685660

CATALOG NUMBER: 4CZL-7-UNV-LVR-L835-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2694.7	2694.7	2694.7	2694.7	2694.7
2.5°	2687.6	2685.9	2669.6	2692.6	2695.1
5°	2661.2	2667.1	2657.4	2679.6	2689.2
7.5°	2610.6	2616.8	2628.1	2668.7	2680.5
10°	2528.5	2544.4	2584.2	2641.1	2666.2
12.5°	2465.8	2485.4	2521.0	2617.7	2646.6
15°	2367.4	2390.9	2463.7	2579.2	2625.6
17.5°	2283.7	2326.4	2403.8	2530.6	2595.5
20°	2190.0	2224.3	2311.8	2482.9	2560.3
22.5°	2096.2	2139.8	2259.0	2419.3	2524.8
25°	1969.8	2033.5	2165.3	2363.7	2477.5
27.5°	1862.7	1943.1	2094.6	2297.9	2424.8
30°	1747.6	1810.0	2005.4	2231.0	2371.2
32.5°	1617.9	1715.8	1909.2	2154.4	2315.1
35°	1507.0	1598.2	1822.5	2091.2	2253.2
37.5°	1399.9	1485.7	1726.7	2019.6	2184.5
40°	1271.4	1384.4	1638.0	1938.0	2110.9
42.5°	1129.1	1267.6	1555.5	1861.0	2036.0
45°	1009.4	1156.3	1463.5	1791.2	1953.5
47.5°	885.1	1040.0	1377.3	1706.2	1871.9
50°	749.9	938.3	1299.0	1627.5	1729.2
52.5°	651.2	832.4	1228.7	1485.2	1457.6
55°	544.9	737.8	1154.6	1245.0	1141.2
57.5°	464.1	652.4	1085.2	977.6	1089.3
60°	423.5	584.2	978.4	930.7	998.1
62.5°	385.4	524.4	748.3	873.0	821.1
65°	346.1	471.2	620.6	661.2	544.0
67.5°	308.0	425.2	585.1	493.8	473.7
70°	269.1	389.6	514.7	421.0	250.3
72.5°	232.3	348.6	352.0	233.1	185.8
75°	196.3	226.8	274.5	208.0	169.1
77.5°	156.9	194.6	183.7	186.2	153.2
80°	120.1	133.9	149.8	166.6	135.2
82.5°	85.0	99.6	121.4	145.6	110.9
85°	54.0	65.7	93.7	120.9	84.5
87.5°	21.3	41.4	69.9	97.5	49.8
90°	0.4	22.6	49.4	72.0	13.8
92.5°	0.4	10.5	33.1	52.7	7.1
95°	0.4	3.3	20.5	35.2	4.6
97.5°	0.4	1.3	10.9	21.8	2.5
100°	0.4	0.4	4.6	11.7	1.3
102.5°	0.4	0.4	1.7	4.6	0.4
105°	0.4	0.4	0.4	1.3	0.0
107.5°	0.4	0.4	0.0	0.0	0.0
110°	0.4	0.4	0.0	0.0	0.0



TEST NUMBER: P685660
 CATALOG NUMBER: 4CZL-7-UNV-LVR-L835-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.4	0.4	0.0	0.0	0.0
115°	0.4	0.4	0.0	0.0	0.0
117.5°	0.4	0.4	0.0	0.0	0.0
120°	0.4	0.4	0.0	0.0	0.0
122.5°	0.4	0.4	0.0	0.0	0.0
125°	0.4	0.8	0.0	0.0	0.0
127.5°	0.4	0.4	0.0	0.0	0.0
130°	0.4	0.8	0.4	0.0	0.0
132.5°	0.4	0.8	0.4	0.0	0.0
135°	0.4	0.8	0.4	0.0	0.0
137.5°	0.4	0.8	0.4	0.0	0.0
140°	0.8	0.8	0.4	0.0	0.0
142.5°	0.8	0.8	0.4	0.0	0.0
145°	0.8	0.8	0.4	0.0	0.0
147.5°	0.8	0.8	0.4	0.0	0.0
150°	0.8	0.8	0.4	0.0	0.0
152.5°	0.8	0.8	0.4	0.0	0.0
155°	0.8	0.8	0.4	0.0	0.0
157.5°	0.8	1.3	0.4	0.0	0.0
160°	1.3	1.3	0.4	0.0	0.0
162.5°	1.3	1.3	0.8	0.4	0.0
165°	1.3	1.3	0.8	0.4	0.0
167.5°	1.3	1.3	0.8	0.4	0.0
170°	1.3	1.3	0.8	0.4	0.4
172.5°	1.3	1.3	0.8	0.4	0.4
175°	1.3	1.3	0.8	0.4	0.4
177.5°	1.3	1.3	0.8	0.4	0.4
180°	0.8	0.8	0.8	0.8	0.8

(END OF REPORT)