

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: P685719

Luminaire Tested: **4CZL-5-UNV-N-LVR-L835-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685719
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-N-LVR-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @80 CRI and 3500K
Light Source: (392) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

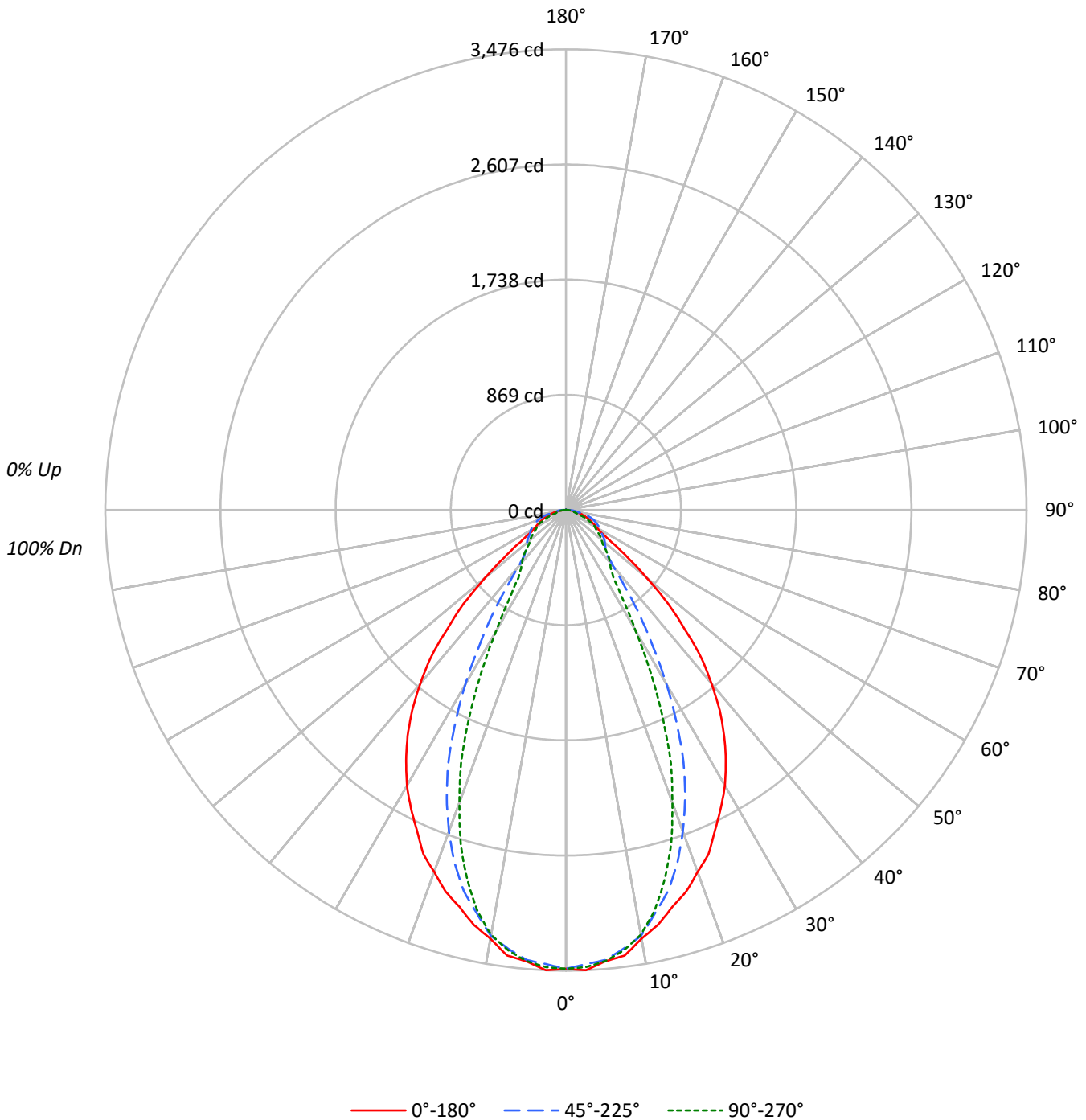
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4097.7 lumens
Efficiency: N/A
Efficacy: 132.2 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): 31
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	90	90	90	88
2	103	97	92	87	101	95	90	86	92	88	84	88	85	82	86	83	80	80	80	80	78
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	72	72	72	70
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	65	65	65	63
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	59	59	59	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55	55	55	55	53
7	75	64	57	51	73	63	56	51	62	55	51	60	55	51	59	54	50	50	50	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	47	47	47	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	43	43	43	43	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	41	41	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11176	11176	11176
5°	11077	11045	11074
10°	10764	10698	10672
15°	10365	9951	9636
20°	9984	8865	8070
25°	9487	7486	6153
30°	8949	5662	3932
35°	8214	3839	2470
40°	7204	2339	2167
45°	5771	1948	1942
50°	3990	1925	1753
55°	2350	1909	1651
60°	1752	1983	1631
65°	1658	1997	1434
70°	1595	2129	1082
75°	1503	2136	926
80°	1397	1772	1047
85°	1237	2153	1293



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	321.5	7.8
10°-20°	832.4	20.3
20°-30°	972.5	23.7
30°-40°	721.5	17.6
40°-50°	478.3	11.7
50°-60°	317.2	7.7
60°-70°	236.7	5.8
70°-80°	139.7	3.4
80°-90°	58.8	1.4
90°-100°	12.7	0.3
100°-110°	1.7	0.0
110°-120°	0.9	0.0
120°-130°	0.8	0.0
130°-140°	0.8	0.0
140°-150°	0.8	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	2126.4	51.9
0°-40°	2847.8	69.5
0°-60°	3643.3	88.9
0°-90°	4078.5	99.5
90°-120°	15.3	0.4
90°-150°	17.8	0.4
90°-180°	19.0	0.5
0°-180°	4097.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3461	3461	3461	3461	3461	
5°	3417	3414	3408	3420	3416	323
15°	3100	3064	2977	2925	2882	875
25°	2663	2471	2101	1802	1727	1226
35°	2084	1544	974	658	627	1293
45°	1264	746	427	443	425	973
55°	418	367	339	327	293	411
65°	217	242	261	255	188	216
75°	120	135	171	124	74	127
85°	33	41	58	77	35	36
90°	1	12	29	50	10	2
95°	0	2	11	25	5	0
105°	0	1	1	2	2	0
115°	0	1	1	1	1	0
125°	1	1	1	1	1	0
135°	1	1	1	1	1	0
145°	1	1	1	2	2	1
155°	1	2	2	2	2	1
165°	2	2	2	2	2	0
175°	2	2	2	2	3	0
180°	2	2	2	2	2	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3460.8	3460.8	3460.8	3460.8	3460.8
2.5°	3475.8	3457.0	3430.0	3454.4	3452.3
5°	3417.1	3414.2	3407.5	3419.8	3416.3
7.5°	3390.7	3374.9	3337.4	3366.4	3350.0
10°	3282.8	3264.4	3262.6	3256.7	3254.7
12.5°	3206.3	3184.0	3112.8	3109.0	3093.1
15°	3100.5	3063.5	2976.7	2925.4	2882.3
17.5°	3018.4	2938.0	2793.2	2697.6	2642.2
20°	2905.2	2816.6	2579.7	2412.9	2348.4
22.5°	2811.9	2655.1	2350.4	2114.4	2070.1
25°	2662.7	2471.2	2100.9	1802.1	1727.0
27.5°	2533.1	2268.9	1806.5	1478.7	1386.6
30°	2400.0	2042.2	1518.6	1161.4	1054.4
32.5°	2244.9	1813.8	1222.1	871.4	794.0
35°	2083.6	1543.8	973.8	658.3	626.6
37.5°	1905.9	1301.0	731.9	549.8	555.1
40°	1708.9	1089.3	554.8	504.0	514.0
42.5°	1512.4	911.0	461.5	474.1	477.1
45°	1263.8	745.6	426.6	442.8	425.2
47.5°	1046.5	609.3	402.0	400.2	375.3
50°	794.3	496.7	383.2	362.1	348.9
52.5°	588.2	419.0	365.3	342.2	328.7
55°	417.5	366.8	339.0	327.2	293.2
57.5°	313.7	329.9	318.7	292.3	268.6
60°	271.2	297.3	307.0	275.6	252.5
62.5°	244.8	269.5	287.9	265.7	231.1
65°	217.0	242.5	261.3	255.4	187.7
67.5°	192.6	221.1	244.2	219.0	153.4
70°	168.9	195.3	225.5	185.9	114.6
72.5°	143.4	163.3	199.7	144.6	83.6
75°	120.5	134.9	171.2	124.3	74.2
77.5°	96.5	108.5	117.3	113.2	65.4
80°	75.1	87.1	95.3	102.9	56.3
82.5°	54.5	62.5	75.6	91.2	46.9
85°	33.4	40.8	58.1	77.1	34.9
87.5°	14.4	24.9	42.5	63.9	22.9
90°	0.6	12.3	29.0	49.8	10.3
92.5°	0.3	5.3	18.8	36.7	6.7
95°	0.3	2.1	11.4	24.9	5.3
97.5°	0.3	0.9	5.9	16.1	3.8
100°	0.3	0.6	3.2	9.4	2.6
102.5°	0.3	0.6	1.5	4.7	2.1
105°	0.3	0.6	1.2	2.1	1.8
107.5°	0.3	0.6	0.9	1.5	1.5
110°	0.3	0.6	0.9	1.5	1.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.3	0.6	0.9	1.5	1.5
115°	0.3	0.6	0.9	1.2	1.2
117.5°	0.3	0.6	0.9	1.2	1.2
120°	0.3	0.6	0.9	1.2	1.2
122.5°	0.3	0.6	0.9	1.2	1.2
125°	0.6	0.6	0.9	1.2	1.2
127.5°	0.6	0.9	0.9	1.2	1.2
130°	0.6	0.9	0.9	1.2	1.2
132.5°	0.6	0.9	0.9	1.2	1.2
135°	0.6	0.9	0.9	1.2	1.2
137.5°	0.6	0.9	1.2	1.2	1.2
140°	0.9	1.2	1.2	1.2	1.2
142.5°	0.9	1.2	1.2	1.5	1.2
145°	0.9	1.2	1.2	1.5	1.5
147.5°	0.9	1.2	1.5	1.5	1.5
150°	0.9	1.2	1.5	1.8	1.8
152.5°	1.2	1.2	1.5	1.8	1.8
155°	1.2	1.5	1.5	1.8	1.8
157.5°	1.2	1.5	1.5	1.8	2.1
160°	1.2	1.5	1.8	2.1	2.1
162.5°	1.2	1.5	1.8	2.1	2.1
165°	1.5	1.8	1.8	2.1	2.1
167.5°	1.5	1.8	2.1	2.1	2.3
170°	1.5	1.8	2.1	2.3	2.3
172.5°	1.5	1.8	2.1	2.3	2.3
175°	1.5	1.8	2.1	2.3	2.6
177.5°	1.5	1.8	2.1	2.3	2.6
180°	2.1	2.1	2.1	2.1	2.1

(END OF REPORT)