

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: P685833

Luminaire Tested: **4CZL-16-UNV-M-LVR-L950-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685833
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-M-LVR-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

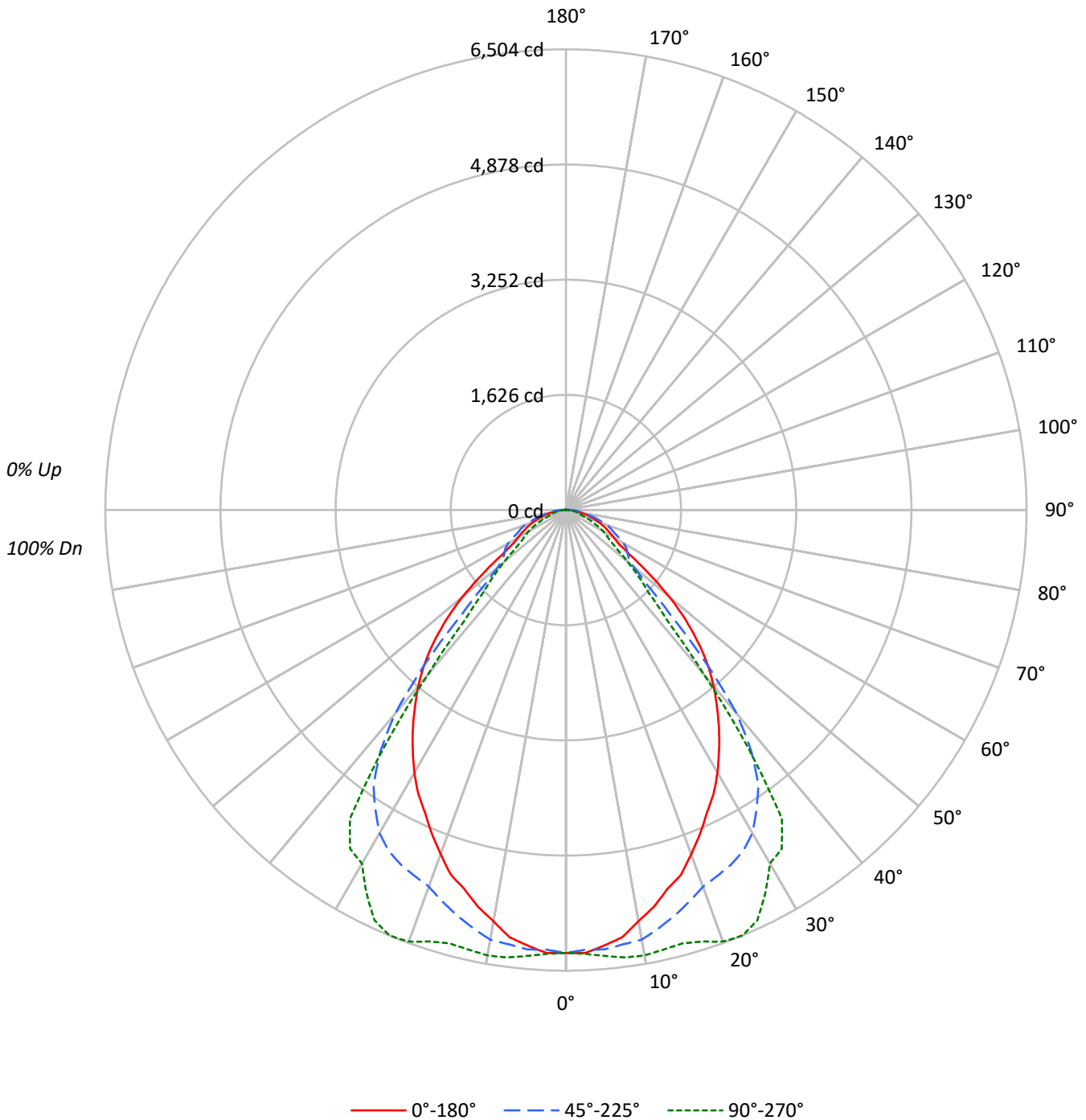
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11566.5 lumens
Efficiency: N/A
Efficacy: 112.3 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.34 / 1.2
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	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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88	88	88	88
2	103	96	90	86	100	94	89	84	91	86	83	87	84	81	84	81	79	77	77	77	77
3	95	87	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	68	68	68	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	70	66	62	60	60	60	60
5	83	72	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	54	54	54	54
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	49	49	49	49
7	72	60	53	47	70	59	52	47	58	51	47	57	51	46	55	50	46	44	44	44	44
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	40	40	40	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	37	37	37	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	35	34	34	34	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20191	20191	20191
5°	20004	20184	20485
10°	19326	20195	20933
15°	18513	19819	21179
20°	17766	19442	22280
25°	16785	19673	22775
30°	15955	19630	21482
35°	14856	18668	20946
40°	13676	15824	12765
45°	12049	9431	7566
50°	9564	6263	5710
55°	6192	5958	4333
60°	5055	6055	3981
65°	4816	5706	3252
70°	4573	5727	2571
75°	4343	5361	2391
80°	4019	5064	2683
85°	3594	6191	3294



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	593.4	5.1
10°-20°	1683.0	14.6
20°-30°	2537.9	21.9
30°-40°	2804.3	24.2
40°-50°	1758.3	15.2
50°-60°	946.7	8.2
60°-70°	642.9	5.6
70°-80°	384.0	3.3
80°-90°	166.8	1.4
90°-100°	36.6	0.3
100°-110°	4.2	0.0
110°-120°	1.5	0.0
120°-130°	1.3	0.0
130°-140°	1.6	0.0
140°-150°	1.5	0.0
150°-160°	1.2	0.0
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	4814.3	41.6
0°-40°	7618.7	65.9
0°-60°	10323.6	89.3
0°-90°	11517.4	99.6
90°-120°	42.2	0.4
90°-150°	46.7	0.4
90°-180°	49.0	0.4
0°-180°	11566.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6253	6253	6253	6253	6253	
5°	6171	6182	6227	6300	6320	581
15°	5538	5732	5928	6215	6335	1563
25°	4711	4997	5521	6110	6392	2175
35°	3768	4211	4736	5094	5314	2352
45°	2638	2872	2065	1684	1657	2013
55°	1100	1150	1058	916	770	1068
65°	630	693	747	607	426	624
75°	348	387	430	353	192	367
85°	97	119	167	220	89	105
90°	2	37	85	141	26	7
95°	1	6	33	73	13	1
105°	1	2	2	6	2	1
115°	1	2	2	2	2	1
125°	1	2	2	2	2	1
135°	2	2	2	2	2	1
145°	2	2	2	2	3	1
155°	2	2	2	2	2	1
165°	2	3	3	3	3	1
175°	3	3	3	4	4	0
180°	4	4	4	4	4	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6252.8	6252.8	6252.8	6252.8	6252.8
2.5°	6260.9	6243.8	6212.0	6269.1	6269.9
5°	6171.3	6181.9	6226.7	6300.1	6319.6
7.5°	6084.0	6124.8	6185.1	6362.0	6371.0
10°	5894.0	5978.8	6159.0	6329.4	6384.1
12.5°	5735.9	5861.4	6047.3	6271.5	6356.3
15°	5537.7	5731.8	5928.3	6215.3	6335.1
17.5°	5399.1	5554.9	5795.4	6189.2	6385.7
20°	5170.0	5389.4	5657.6	6207.1	6483.5
22.5°	4947.4	5214.1	5588.3	6213.7	6503.9
25°	4711.0	4997.2	5521.4	6110.1	6392.2
27.5°	4515.3	4755.0	5422.0	5894.0	6097.9
30°	4278.9	4561.0	5264.6	5563.8	5761.1
32.5°	4024.5	4382.4	5009.4	5311.1	5669.8
35°	3768.5	4211.2	4735.5	5094.2	5313.5
37.5°	3501.0	4070.1	4305.0	4362.8	4212.8
40°	3244.2	3873.6	3753.8	3193.7	3028.1
42.5°	2963.7	3451.3	2927.9	2197.3	2123.1
45°	2638.4	2872.4	2065.2	1683.7	1656.8
47.5°	2291.9	2224.2	1540.2	1407.3	1391.8
50°	1903.8	1778.2	1246.6	1241.8	1136.6
52.5°	1483.9	1412.2	1117.8	1077.1	909.9
55°	1099.9	1150.4	1058.3	915.6	769.7
57.5°	880.6	998.0	1016.7	799.8	688.1
60°	782.7	873.2	937.6	735.4	616.4
62.5°	702.0	773.8	839.8	682.4	531.6
65°	630.3	693.0	746.8	606.6	425.6
67.5°	554.4	619.7	685.7	521.0	362.0
70°	484.3	553.6	606.6	462.3	272.3
72.5°	411.7	483.5	507.1	386.5	217.7
75°	348.1	387.3	429.7	353.0	191.6
77.5°	281.3	314.7	331.8	323.7	168.8
80°	216.1	243.0	272.3	294.3	144.3
82.5°	158.2	177.7	217.7	259.3	115.8
85°	97.0	119.0	167.1	220.1	88.9
87.5°	43.2	70.9	123.1	181.8	57.1
90°	2.4	36.7	84.8	141.1	26.1
92.5°	0.8	16.3	55.4	104.4	17.9
95°	0.8	5.7	33.4	72.6	13.0
97.5°	0.8	2.4	18.8	46.5	8.2
100°	0.8	1.6	9.0	26.9	5.7
102.5°	0.8	1.6	4.1	13.0	4.1
105°	0.8	1.6	2.4	5.7	2.4
107.5°	0.8	1.6	1.6	2.4	1.6
110°	0.8	1.6	1.6	1.6	1.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.8	1.6	1.6	1.6	1.6
115°	0.8	1.6	1.6	1.6	1.6
117.5°	0.8	1.6	1.6	1.6	1.6
120°	0.8	1.6	1.6	1.6	1.6
122.5°	0.8	1.6	1.6	1.6	1.6
125°	0.8	1.6	1.6	1.6	1.6
127.5°	0.8	1.6	1.6	1.6	1.6
130°	0.8	1.6	1.6	1.6	1.6
132.5°	1.6	1.6	2.4	2.4	2.4
135°	1.6	1.6	2.4	2.4	2.4
137.5°	1.6	2.4	2.4	2.4	2.4
140°	1.6	2.4	2.4	2.4	2.4
142.5°	1.6	2.4	2.4	2.4	2.4
145°	1.6	2.4	2.4	2.4	3.3
147.5°	1.6	2.4	2.4	2.4	3.3
150°	1.6	2.4	2.4	2.4	2.4
152.5°	2.4	2.4	2.4	2.4	2.4
155°	2.4	2.4	2.4	2.4	2.4
157.5°	2.4	2.4	2.4	3.3	3.3
160°	2.4	3.3	3.3	3.3	3.3
162.5°	2.4	3.3	3.3	3.3	3.3
165°	2.4	3.3	3.3	3.3	3.3
167.5°	2.4	3.3	3.3	3.3	4.1
170°	3.3	3.3	3.3	4.1	4.1
172.5°	3.3	3.3	3.3	4.1	4.1
175°	3.3	3.3	3.3	4.1	4.1
177.5°	3.3	4.1	3.3	4.1	4.9
180°	4.1	4.1	4.1	4.1	4.1

(END OF REPORT)