

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: P685709

Luminaire Tested: **4CZL-5-UNV-LVR-L950-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685709
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-LVR-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @90 CRI and 5000K
Light Source: (392) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

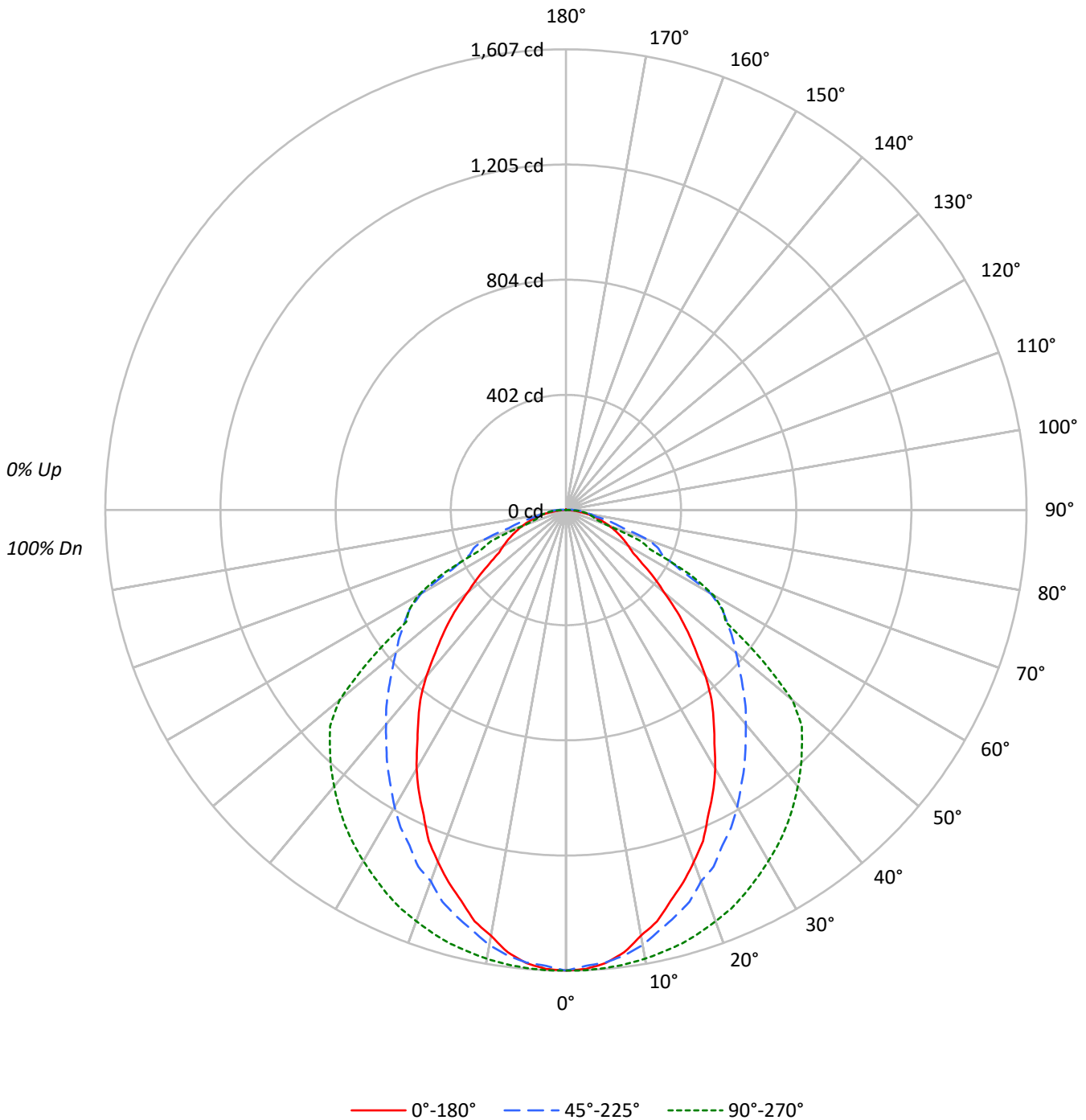
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3637.9 lumens
Efficiency: N/A
Efficacy: 117.4 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): 31
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

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Luminous Intensity Polar Plot





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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	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	88	88	88	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	75	75	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	65	65	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	56	56	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	49	49	49	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	44	44	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	39	39	39	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	35	35	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	32	32	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29	29	29	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5187	5187	5187
5°	5143	5135	5197
10°	4943	5052	5212
15°	4718	4910	5233
20°	4487	4736	5245
25°	4184	4599	5263
30°	3885	4458	5271
35°	3542	4283	5295
40°	3195	4116	5305
45°	2748	3984	5318
50°	2246	3890	5179
55°	1829	3875	3830
60°	1631	3767	3843
65°	1576	2827	2478
70°	1514	2898	1409
75°	1460	2042	1258
80°	1331	1661	1499
85°	1193	2071	1867



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.5	4.1
10°-20°	417.1	11.5
20°-30°	603.5	16.6
30°-40°	688.8	18.9
40°-50°	676.8	18.6
50°-60°	539.8	14.8
60°-70°	340.0	9.3
70°-80°	150.6	4.1
80°-90°	57.8	1.6
90°-100°	11.4	0.3
100°-110°	0.7	0.0
110°-120°	0.1	0.0
120°-130°	0.1	0.0
130°-140°	0.2	0.0
140°-150°	0.1	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	1171.1	32.2
0°-40°	1859.9	51.1
0°-60°	3076.5	84.6
0°-90°	3625.0	99.6
90°-120°	12.2	0.3
90°-150°	12.6	0.3
90°-180°	13.0	0.4
0°-180°	3637.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1606	1606	1606	1606	1606	
5°	1586	1590	1584	1598	1603	149
15°	1411	1425	1469	1538	1565	397
25°	1174	1212	1291	1409	1477	541
35°	898	953	1086	1247	1343	562
45°	602	689	872	1068	1165	462
55°	325	440	688	742	680	299
65°	206	281	370	394	324	204
75°	117	135	164	124	101	123
85°	32	39	56	72	50	34
90°	0	14	29	43	8	2
95°	0	2	12	21	3	0
105°	0	0	0	1	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	1	1	0	0	0	0
175°	1	1	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1606.4	1606.4	1606.4	1606.4	1606.4
2.5°	1602.2	1601.2	1591.5	1605.2	1606.7
5°	1586.5	1590.0	1584.2	1597.5	1603.2
7.5°	1556.3	1560.0	1566.8	1591.0	1598.0
10°	1507.4	1516.9	1540.6	1574.5	1589.5
12.5°	1470.0	1481.7	1502.9	1560.5	1577.7
15°	1411.3	1425.3	1468.7	1537.6	1565.3
17.5°	1361.4	1386.9	1433.0	1508.6	1547.3
20°	1305.6	1326.0	1378.2	1480.2	1526.4
22.5°	1249.7	1275.6	1346.7	1442.3	1505.1
25°	1174.3	1212.3	1290.8	1409.1	1477.0
27.5°	1110.5	1158.4	1248.7	1369.9	1445.5
30°	1041.9	1079.0	1195.5	1330.0	1413.6
32.5°	964.5	1022.9	1138.2	1284.4	1380.2
35°	898.4	952.8	1086.5	1246.7	1343.2
37.5°	834.5	885.7	1029.4	1204.0	1302.3
40°	757.9	825.3	976.5	1155.4	1258.4
42.5°	673.1	755.7	927.3	1109.5	1213.7
45°	601.8	689.3	872.5	1067.8	1164.6
47.5°	527.7	620.0	821.1	1017.2	1115.9
50°	447.1	559.3	774.4	970.2	1030.9
52.5°	388.2	496.2	732.5	885.4	869.0
55°	324.8	439.8	688.3	742.2	680.3
57.5°	276.7	388.9	646.9	582.8	649.4
60°	252.5	348.3	583.3	554.9	595.0
62.5°	229.8	312.6	446.1	520.4	489.5
65°	206.3	280.9	370.0	394.2	324.3
67.5°	183.6	253.5	348.8	294.4	282.4
70°	160.4	232.3	306.9	251.0	149.2
72.5°	138.5	207.8	209.8	139.0	110.8
75°	117.0	135.2	163.7	124.0	100.8
77.5°	93.6	116.0	109.5	111.0	91.3
80°	71.6	79.8	89.3	99.3	80.6
82.5°	50.6	59.4	72.4	86.8	66.1
85°	32.2	39.2	55.9	72.1	50.4
87.5°	12.7	24.7	41.7	58.1	29.7
90°	0.2	13.5	29.4	42.9	8.2
92.5°	0.2	6.2	19.7	31.4	4.2
95°	0.2	2.0	12.2	21.0	2.7
97.5°	0.2	0.7	6.5	13.0	1.5
100°	0.2	0.2	2.7	7.0	0.7
102.5°	0.2	0.2	1.0	2.7	0.2
105°	0.2	0.2	0.2	0.7	0.0
107.5°	0.2	0.2	0.0	0.0	0.0
110°	0.2	0.2	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.2	0.2	0.0	0.0	0.0
115°	0.2	0.2	0.0	0.0	0.0
117.5°	0.2	0.2	0.0	0.0	0.0
120°	0.2	0.2	0.0	0.0	0.0
122.5°	0.2	0.2	0.0	0.0	0.0
125°	0.2	0.5	0.0	0.0	0.0
127.5°	0.2	0.2	0.0	0.0	0.0
130°	0.2	0.5	0.2	0.0	0.0
132.5°	0.2	0.5	0.2	0.0	0.0
135°	0.2	0.5	0.2	0.0	0.0
137.5°	0.2	0.5	0.2	0.0	0.0
140°	0.5	0.5	0.2	0.0	0.0
142.5°	0.5	0.5	0.2	0.0	0.0
145°	0.5	0.5	0.2	0.0	0.0
147.5°	0.5	0.5	0.2	0.0	0.0
150°	0.5	0.5	0.2	0.0	0.0
152.5°	0.5	0.5	0.2	0.0	0.0
155°	0.5	0.5	0.2	0.0	0.0
157.5°	0.5	0.7	0.2	0.0	0.0
160°	0.7	0.7	0.2	0.0	0.0
162.5°	0.7	0.7	0.5	0.2	0.0
165°	0.7	0.7	0.5	0.2	0.0
167.5°	0.7	0.7	0.5	0.2	0.0
170°	0.7	0.7	0.5	0.2	0.2
172.5°	0.7	0.7	0.5	0.2	0.2
175°	0.7	0.7	0.5	0.2	0.2
177.5°	0.7	0.7	0.5	0.2	0.2
180°	0.5	0.5	0.5	0.5	0.5

(END OF REPORT)