

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: P685889

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685889
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-W-LVR-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @90 CRI and 5000K
Light Source: (392) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

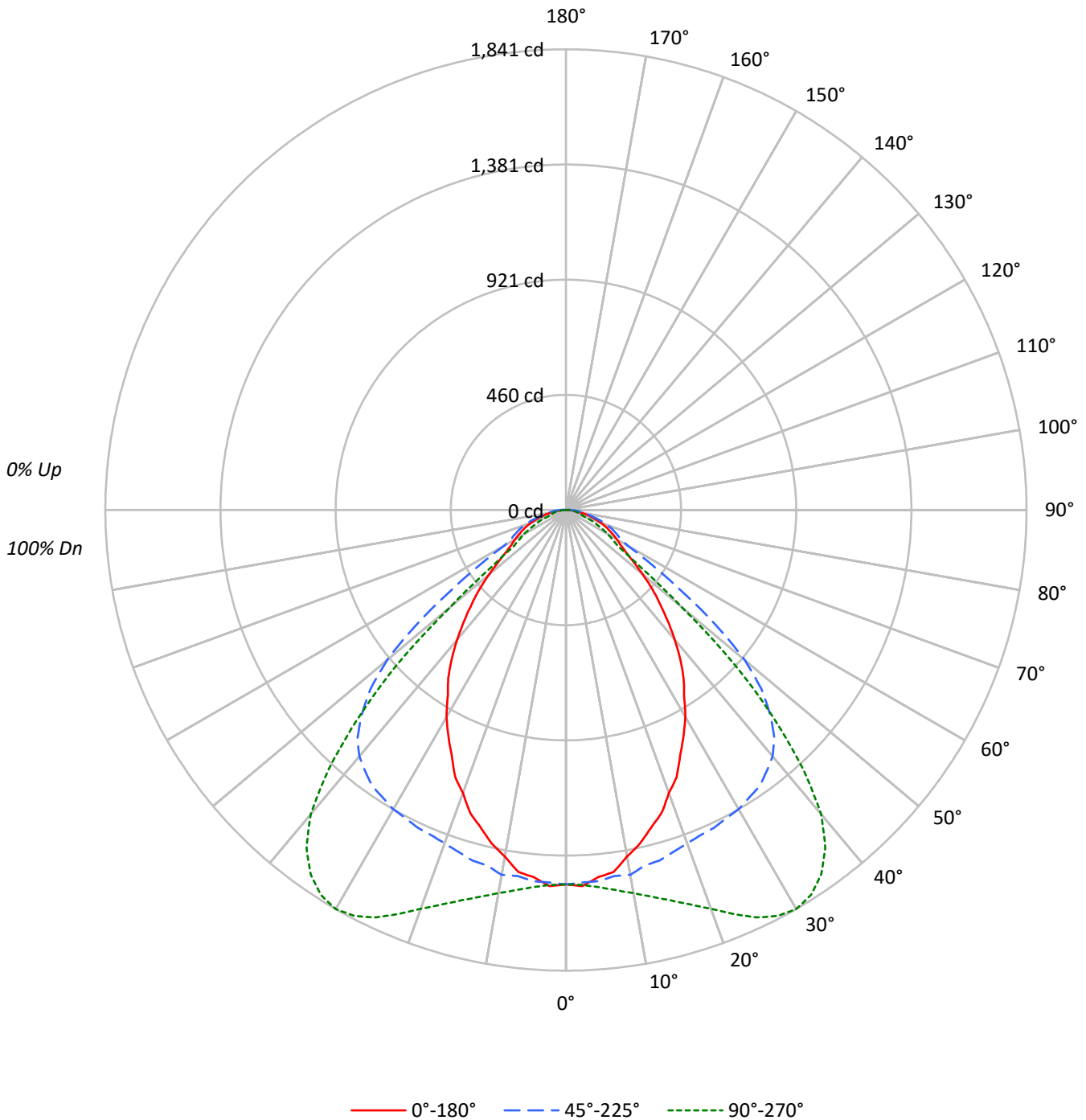
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3558.4 lumens
Efficiency: N/A
Efficacy: 114.8 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.64 / 1.46
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87
2	102	95	89	84	99	93	88	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	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	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4830	4830	4830
5°	4775	4824	4903
10°	4610	4854	5098
15°	4393	4844	5398
20°	4135	4871	5827
25°	3850	4991	6400
30°	3559	5148	6865
35°	3234	5315	7009
40°	2851	5415	6687
45°	2430	5267	5361
50°	2014	4684	3042
55°	1641	3165	1455
60°	1514	1840	1257
65°	1460	1692	1022
70°	1378	1661	730
75°	1283	1516	710
80°	1170	1490	779
85°	897	1786	860



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.2	4.0
10°-20°	412.8	11.6
20°-30°	655.2	18.4
30°-40°	818.3	23.0
40°-50°	751.5	21.1
50°-60°	401.1	11.3
60°-70°	206.4	5.8
70°-80°	113.5	3.2
80°-90°	46.8	1.3
90°-100°	9.0	0.3
100°-110°	0.5	0.0
110°-120°	0.1	0.0
120°-130°	0.1	0.0
130°-140°	0.3	0.0
140°-150°	0.2	0.0
150°-160°	0.2	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	1210.2	34.0
0°-40°	2028.5	57.0
0°-60°	3181.1	89.4
0°-90°	3547.9	99.7
90°-120°	9.6	0.3
90°-150°	10.2	0.3
90°-180°	11.0	0.3
0°-180°	3558.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1496	1496	1496	1496	1496	
5°	1473	1477	1488	1511	1513	139
15°	1314	1357	1449	1567	1615	370
25°	1081	1182	1401	1657	1796	498
35°	820	972	1348	1642	1778	509
45°	532	767	1153	1195	1174	412
55°	291	522	562	315	258	269
65°	191	250	222	181	134	189
75°	103	114	122	108	57	109
85°	24	32	48	63	23	28
90°	0	9	24	38	5	1
95°	0	1	9	18	2	0
105°	0	0	0	0	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°	0	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°	1495.7	1495.7	1495.7	1495.7	1495.7
2.5°	1504.4	1501.2	1490.5	1500.2	1499.5
5°	1473.0	1476.7	1488.2	1511.2	1512.7
7.5°	1459.0	1469.3	1475.7	1525.4	1531.9
10°	1405.9	1421.9	1480.2	1531.9	1554.8
12.5°	1366.0	1398.2	1454.8	1542.4	1582.3
15°	1314.1	1357.0	1449.1	1567.1	1614.7
17.5°	1269.9	1313.8	1431.6	1585.8	1652.4
20°	1203.3	1282.9	1417.4	1605.2	1695.6
22.5°	1155.7	1236.2	1406.4	1622.5	1746.7
25°	1080.6	1182.1	1400.7	1657.1	1796.1
27.5°	1017.7	1136.4	1387.9	1679.3	1828.8
30°	954.6	1080.6	1380.7	1683.3	1841.0
32.5°	878.5	1035.1	1362.5	1674.1	1823.5
35°	820.3	971.8	1348.3	1642.4	1777.9
37.5°	749.5	921.9	1317.1	1585.0	1703.0
40°	676.4	875.7	1284.6	1495.5	1586.3
42.5°	602.5	823.8	1232.7	1376.0	1403.6
45°	532.2	767.2	1153.4	1195.3	1173.9
47.5°	469.0	706.3	1059.6	968.8	918.4
50°	400.9	644.4	932.4	737.5	605.5
52.5°	339.6	592.8	757.2	499.5	376.7
55°	291.4	522.4	562.1	314.9	258.5
57.5°	257.2	468.5	405.7	249.0	221.3
60°	234.5	401.2	284.9	228.5	194.6
62.5°	212.1	317.4	243.8	208.3	163.7
65°	191.1	250.5	221.5	180.6	133.7
67.5°	169.4	203.3	200.1	163.9	111.5
70°	146.0	167.2	175.9	137.2	77.3
72.5°	125.0	140.2	149.7	117.3	65.6
75°	102.8	114.0	121.5	108.0	56.9
77.5°	81.6	91.8	99.0	97.8	49.9
80°	62.9	69.6	80.1	87.6	41.9
82.5°	42.9	47.9	63.1	75.6	32.7
85°	24.2	31.7	48.2	63.4	23.2
87.5°	7.0	18.7	34.9	50.9	13.5
90°	0.0	9.0	23.7	38.4	5.0
92.5°	0.0	3.5	15.5	26.9	3.5
95°	0.0	1.0	9.0	17.7	2.2
97.5°	0.0	0.2	4.2	10.5	1.0
100°	0.0	0.2	1.5	5.0	0.2
102.5°	0.0	0.2	0.5	1.7	0.0
105°	0.0	0.2	0.2	0.2	0.0
107.5°	0.0	0.2	0.2	0.0	0.0
110°	0.0	0.2	0.2	0.0	0.0



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)