

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: P685690

Luminaire Tested: **4CZL-7-UNV-LVR-L935-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685690
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-L935-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @90 CRI and 3500K
Light Source: (392) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

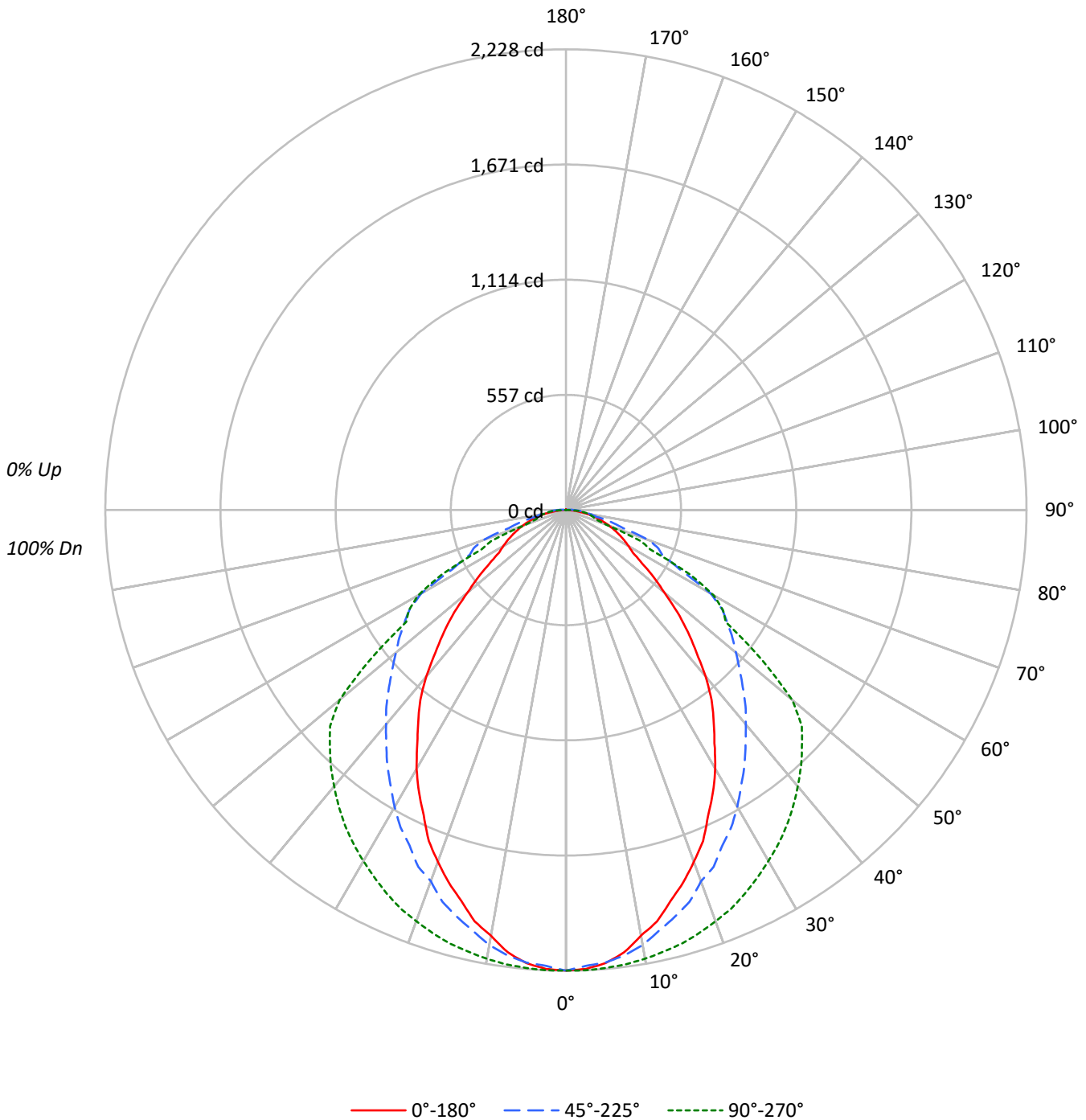
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5044.1 lumens
Efficiency: N/A
Efficacy: 114.6 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

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CATALOG NUMBER: 4CZL-7-UNV-LVR-L935-CD-U

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°	7192	7192	7192
5°	7130	7120	7205
10°	6853	7004	7226
15°	6542	6808	7256
20°	6221	6566	7273
25°	5801	6377	7296
30°	5386	6181	7308
35°	4910	5938	7342
40°	4430	5707	7355
45°	3810	5524	7374
50°	3114	5394	7180
55°	2536	5373	5311
60°	2261	5223	5328
65°	2186	3920	3436
70°	2100	4017	1953
75°	2024	2831	1743
80°	1847	2302	2077
85°	1652	2871	2590



TEST NUMBER: P685690
 CATALOG NUMBER: 4CZL-7-UNV-LVR-L935-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.6	4.1
10°-20°	578.4	11.5
20°-30°	836.7	16.6
30°-40°	955.0	18.9
40°-50°	938.4	18.6
50°-60°	748.5	14.8
60°-70°	471.5	9.3
70°-80°	208.9	4.1
80°-90°	80.1	1.6
90°-100°	15.9	0.3
100°-110°	1.0	0.0
110°-120°	0.1	0.0
120°-130°	0.1	0.0
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1623.7	32.2
0°-40°	2578.7	51.1
0°-60°	4265.6	84.6
0°-90°	5026.1	99.6
90°-120°	17.0	0.3
90°-150°	17.6	0.3
90°-180°	18.0	0.4
0°-180°	5044.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2227	2227	2227	2227	2227	
5°	2200	2204	2196	2215	2223	207
15°	1957	1976	2036	2132	2170	551
25°	1628	1681	1790	1954	2048	750
35°	1246	1321	1506	1728	1862	779
45°	834	956	1210	1480	1615	641
55°	450	610	954	1029	943	414
65°	286	390	513	546	450	283
75°	162	188	227	172	140	170
85°	45	54	78	100	70	47
90°	0	19	41	60	11	3
95°	0	3	17	29	4	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	0
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: P685690

CATALOG NUMBER: 4CZL-7-UNV-LVR-L935-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2227.3	2227.3	2227.3	2227.3	2227.3
2.5°	2221.4	2220.1	2206.6	2225.6	2227.7
5°	2199.7	2204.5	2196.5	2214.9	2222.8
7.5°	2157.8	2163.0	2172.3	2205.9	2215.6
10°	2090.0	2103.1	2136.0	2183.1	2203.8
12.5°	2038.1	2054.4	2083.8	2163.7	2187.5
15°	1956.8	1976.2	2036.4	2131.9	2170.3
17.5°	1887.6	1922.9	1986.9	2091.7	2145.3
20°	1810.2	1838.5	1910.8	2052.3	2116.3
22.5°	1732.7	1768.6	1867.2	1999.7	2086.9
25°	1628.2	1680.8	1789.7	1953.7	2047.8
27.5°	1539.7	1606.1	1731.3	1899.4	2004.2
30°	1444.5	1496.1	1657.6	1844.1	1959.9
32.5°	1337.3	1418.2	1578.1	1780.8	1913.6
35°	1245.6	1321.0	1506.4	1728.5	1862.4
37.5°	1157.1	1228.0	1427.2	1669.4	1805.7
40°	1050.9	1144.3	1353.9	1601.9	1744.8
42.5°	933.3	1047.8	1285.8	1538.3	1682.9
45°	834.3	955.8	1209.7	1480.5	1614.7
47.5°	731.6	859.6	1138.4	1410.3	1547.3
50°	619.9	775.5	1073.7	1345.3	1429.3
52.5°	538.2	688.0	1015.6	1227.6	1204.8
55°	450.4	609.8	954.4	1029.1	943.3
57.5°	383.6	539.3	896.9	808.1	900.4
60°	350.1	482.9	808.7	769.3	825.0
62.5°	318.6	433.4	618.5	721.6	678.7
65°	286.1	389.5	513.0	546.5	449.7
67.5°	254.6	351.4	483.6	408.2	391.6
70°	222.4	322.0	425.5	348.0	206.9
72.5°	192.0	288.1	290.9	192.7	153.6
75°	162.2	187.5	226.9	171.9	139.7
77.5°	129.7	160.8	151.9	153.9	126.6
80°	99.3	110.7	123.8	137.7	111.7
82.5°	70.2	82.3	100.3	120.4	91.7
85°	44.6	54.3	77.5	100.0	69.9
87.5°	17.6	34.2	57.8	80.6	41.2
90°	0.3	18.7	40.8	59.5	11.4
92.5°	0.3	8.6	27.3	43.6	5.9
95°	0.3	2.8	16.9	29.1	3.8
97.5°	0.3	1.0	9.0	18.0	2.1
100°	0.3	0.3	3.8	9.7	1.0
102.5°	0.3	0.3	1.4	3.8	0.3
105°	0.3	0.3	0.3	1.0	0.0
107.5°	0.3	0.3	0.0	0.0	0.0
110°	0.3	0.3	0.0	0.0	0.0



TEST NUMBER: P685690
CATALOG NUMBER: 4CZL-7-UNV-LVR-L935-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.3	0.3	0.0	0.0	0.0
115°	0.3	0.3	0.0	0.0	0.0
117.5°	0.3	0.3	0.0	0.0	0.0
120°	0.3	0.3	0.0	0.0	0.0
122.5°	0.3	0.3	0.0	0.0	0.0
125°	0.3	0.7	0.0	0.0	0.0
127.5°	0.3	0.3	0.0	0.0	0.0
130°	0.3	0.7	0.3	0.0	0.0
132.5°	0.3	0.7	0.3	0.0	0.0
135°	0.3	0.7	0.3	0.0	0.0
137.5°	0.3	0.7	0.3	0.0	0.0
140°	0.7	0.7	0.3	0.0	0.0
142.5°	0.7	0.7	0.3	0.0	0.0
145°	0.7	0.7	0.3	0.0	0.0
147.5°	0.7	0.7	0.3	0.0	0.0
150°	0.7	0.7	0.3	0.0	0.0
152.5°	0.7	0.7	0.3	0.0	0.0
155°	0.7	0.7	0.3	0.0	0.0
157.5°	0.7	1.0	0.3	0.0	0.0
160°	1.0	1.0	0.3	0.0	0.0
162.5°	1.0	1.0	0.7	0.3	0.0
165°	1.0	1.0	0.7	0.3	0.0
167.5°	1.0	1.0	0.7	0.3	0.0
170°	1.0	1.0	0.7	0.3	0.3
172.5°	1.0	1.0	0.7	0.3	0.3
175°	1.0	1.0	0.7	0.3	0.3
177.5°	1.0	1.0	0.7	0.3	0.3
180°	0.7	0.7	0.7	0.7	0.7

(END OF REPORT)