

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: P685870

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685870
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-7-UNV-W-LVR-L935-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @90 CRI and 3500K
Light Source: (392) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

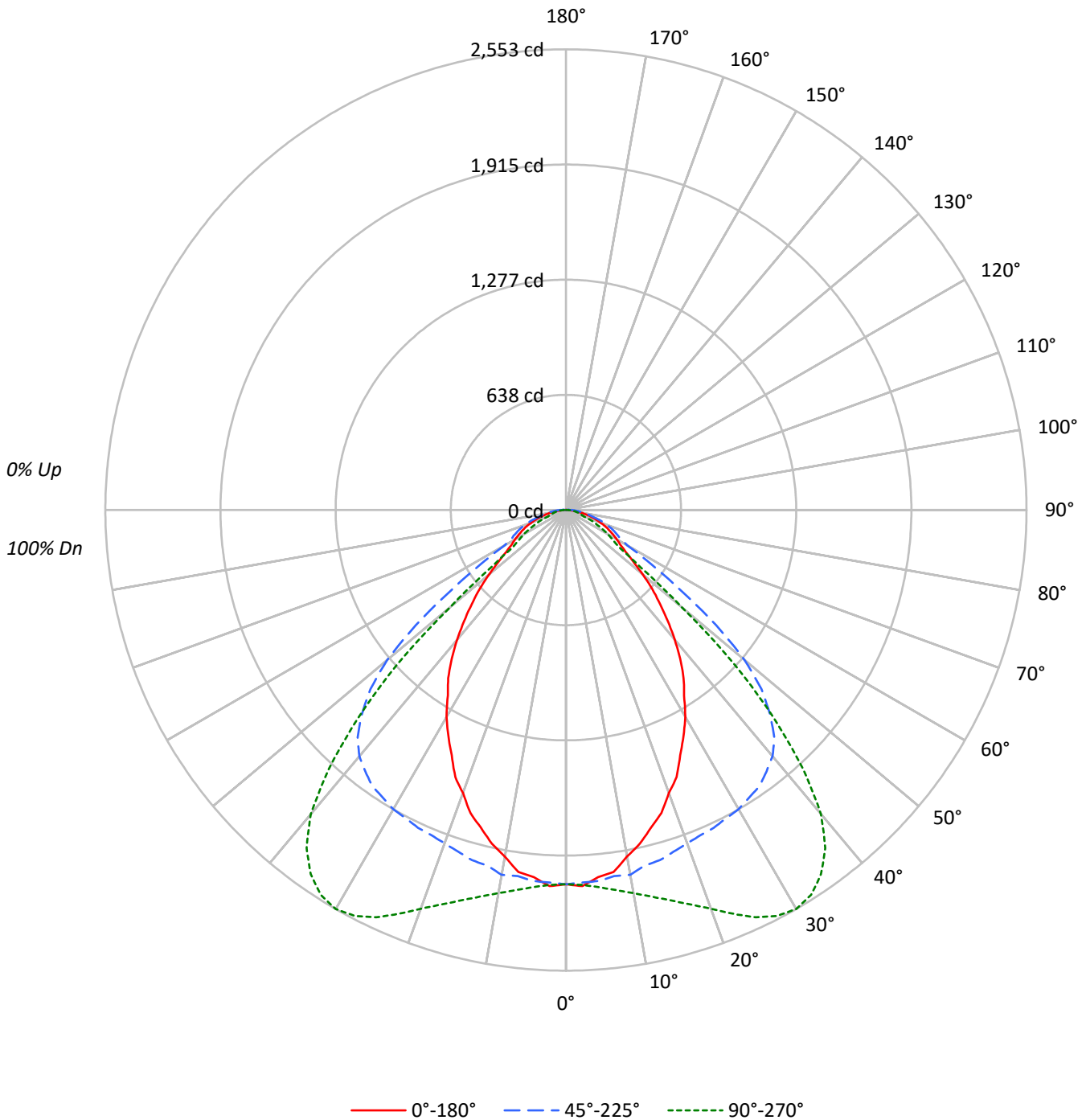
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4933.8 lumens
Efficiency: N/A
Efficacy: 112.1 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): 44
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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	89	89	89	87
2	102	95	89	84	99	93	88	83	89	85	81	86	82	79	83	80	77	77	77	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	68	68	68	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	59	59	59	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	53	53	53	51
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	47	47	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	42	42	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	38	38	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	34	34	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	31	31	31	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6697	6697	6697
5°	6620	6689	6798
10°	6392	6730	7069
15°	6091	6717	7485
20°	5733	6753	8079
25°	5338	6919	8873
30°	4935	7138	9518
35°	4484	7369	9717
40°	3953	7508	9271
45°	3370	7303	7433
50°	2793	6494	4218
55°	2274	4388	2018
60°	2100	2551	1742
65°	2025	2347	1417
70°	1911	2303	1012
75°	1778	2102	984
80°	1622	2064	1080
85°	1245	2475	1193



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.2	4.0
10°-20°	572.4	11.6
20°-30°	908.4	18.4
30°-40°	1134.5	23.0
40°-50°	1042.0	21.1
50°-60°	556.1	11.3
60°-70°	286.2	5.8
70°-80°	157.4	3.2
80°-90°	64.9	1.3
90°-100°	12.5	0.3
100°-110°	0.7	0.0
110°-120°	0.1	0.0
120°-130°	0.2	0.0
130°-140°	0.4	0.0
140°-150°	0.3	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1677.9	34.0
0°-40°	2812.5	57.0
0°-60°	4410.6	89.4
0°-90°	4919.1	99.7
90°-120°	13.3	0.3
90°-150°	14.2	0.3
90°-180°	15.0	0.3
0°-180°	4933.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2074	2074	2074	2074	2074	
5°	2042	2048	2063	2095	2097	193
15°	1822	1882	2009	2173	2239	512
25°	1498	1639	1942	2298	2490	690
35°	1137	1347	1869	2277	2465	706
45°	738	1064	1599	1657	1628	571
55°	404	724	779	437	358	373
65°	265	347	307	250	185	262
75°	142	158	168	150	79	151
85°	34	44	67	88	32	38
90°	0	12	33	53	7	1
95°	0	1	12	25	3	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	1	1	0	0	0
145°	0	1	1	0	0	0
155°	1	1	1	0	0	0
165°	1	1	1	0	0	0
175°	1	1	1	0	0	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2073.8	2073.8	2073.8	2073.8	2073.8
2.5°	2085.9	2081.4	2066.5	2080.0	2079.0
5°	2042.3	2047.5	2063.4	2095.2	2097.3
7.5°	2023.0	2037.1	2046.1	2115.0	2124.0
10°	1949.3	1971.4	2052.4	2124.0	2155.8
12.5°	1893.9	1938.5	2017.1	2138.5	2193.8
15°	1822.0	1881.5	2009.1	2172.7	2238.8
17.5°	1760.7	1821.6	1984.9	2198.7	2291.0
20°	1668.4	1778.7	1965.2	2225.7	2350.9
22.5°	1602.3	1714.0	1950.0	2249.5	2421.8
25°	1498.2	1639.0	1942.0	2297.6	2490.3
27.5°	1411.0	1575.7	1924.4	2328.4	2535.6
30°	1323.5	1498.2	1914.3	2333.9	2552.6
32.5°	1218.0	1435.2	1889.1	2321.1	2528.3
35°	1137.4	1347.4	1869.4	2277.2	2465.0
37.5°	1039.1	1278.2	1826.1	2197.6	2361.3
40°	937.8	1214.2	1781.2	2073.5	2199.4
42.5°	835.4	1142.2	1709.2	1907.8	1946.2
45°	737.9	1063.7	1599.2	1657.3	1627.6
47.5°	650.3	979.3	1469.1	1343.2	1273.3
50°	555.9	893.5	1292.7	1022.5	839.6
52.5°	470.8	821.9	1049.9	692.5	522.3
55°	404.0	724.4	779.4	436.6	358.4
57.5°	356.6	649.6	562.5	345.2	306.8
60°	325.2	556.2	395.0	316.9	269.8
62.5°	294.0	440.0	338.0	288.8	226.9
65°	265.0	347.3	307.2	250.4	185.4
67.5°	234.9	281.9	277.4	227.3	154.6
70°	202.4	231.8	243.9	190.3	107.2
72.5°	173.3	194.4	207.6	162.6	91.0
75°	142.5	158.1	168.5	149.8	78.9
77.5°	113.1	127.3	137.3	135.6	69.2
80°	87.2	96.5	111.0	121.4	58.1
82.5°	59.5	66.4	87.5	104.8	45.3
85°	33.6	43.9	66.8	87.9	32.2
87.5°	9.7	25.9	48.4	70.6	18.7
90°	0.0	12.5	32.9	53.3	6.9
92.5°	0.0	4.8	21.4	37.4	4.8
95°	0.0	1.4	12.5	24.6	3.1
97.5°	0.0	0.3	5.9	14.5	1.4
100°	0.0	0.3	2.1	6.9	0.3
102.5°	0.0	0.3	0.7	2.4	0.0
105°	0.0	0.3	0.3	0.3	0.0
107.5°	0.0	0.3	0.3	0.0	0.0
110°	0.0	0.3	0.3	0.0	0.0



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)