

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: P685710

Luminaire Tested: **4CZL-7-UNV-LVR-L950-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685710
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-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

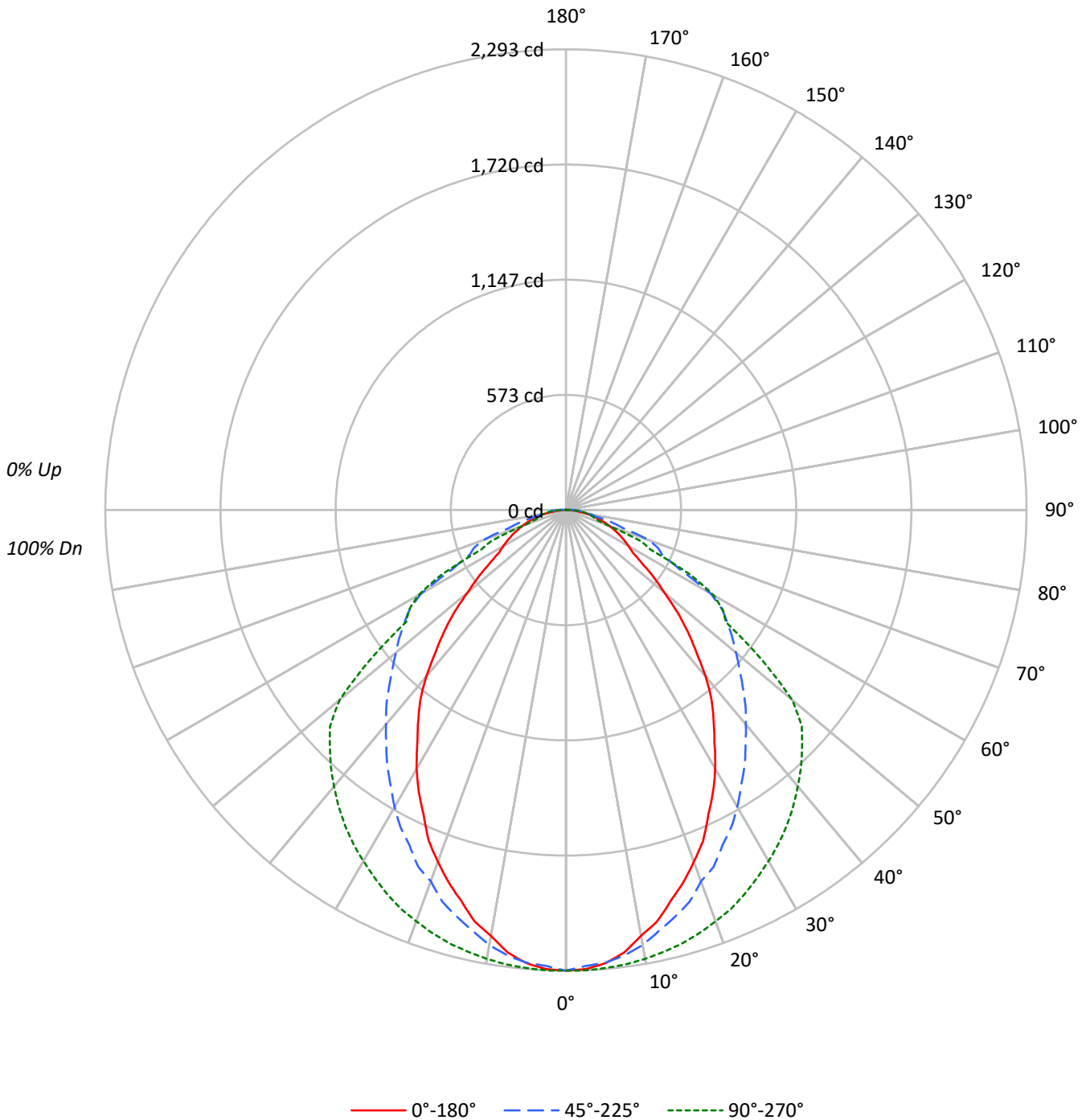
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5192.1 lumens
Efficiency: N/A
Efficacy: 118.0 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

TEST NUMBER: P685710
CATALOG NUMBER: 4CZL-7-UNV-LVR-L950-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P685710

CATALOG NUMBER: 4CZL-7-UNV-LVR-L950-CD-U

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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	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	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	75	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	65	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	56	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	49	49	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	44	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	39	39	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	35	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	32	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	29	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7403	7403	7403
5°	7339	7329	7417
10°	7054	7209	7438
15°	6734	7007	7468
20°	6403	6759	7486
25°	5971	6564	7510
30°	5544	6362	7522
35°	5054	6113	7557
40°	4560	5875	7570
45°	3922	5686	7590
50°	3205	5552	7391
55°	2610	5530	5466
60°	2327	5376	5484
65°	2250	4034	3537
70°	2161	4134	2010
75°	2084	2915	1794
80°	1901	2371	2139
85°	1701	2957	2664



TEST NUMBER: P685710
 CATALOG NUMBER: 4CZL-7-UNV-LVR-L950-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.7	4.1
10°-20°	595.3	11.5
20°-30°	861.3	16.6
30°-40°	983.0	18.9
40°-50°	965.9	18.6
50°-60°	770.4	14.8
60°-70°	485.3	9.3
70°-80°	215.0	4.1
80°-90°	82.4	1.6
90°-100°	16.4	0.3
100°-110°	1.1	0.0
110°-120°	0.1	0.0
120°-130°	0.2	0.0
130°-140°	0.3	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°	1671.3	32.2
0°-40°	2654.3	51.1
0°-60°	4390.7	84.6
0°-90°	5173.4	99.6
90°-120°	17.6	0.3
90°-150°	18.3	0.4
90°-180°	19.0	0.4
0°-180°	5192.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2293	2293	2293	2293	2293	
5°	2264	2269	2261	2280	2288	213
15°	2014	2034	2096	2194	2234	567
25°	1676	1730	1842	2011	2108	772
35°	1282	1360	1551	1779	1917	801
45°	859	984	1245	1524	1662	660
55°	464	628	982	1059	971	426
65°	294	401	528	563	463	292
75°	167	193	234	177	144	175
85°	46	56	80	103	72	49
90°	0	19	42	61	12	3
95°	0	3	17	30	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: P685710

CATALOG NUMBER: 4CZL-7-UNV-LVR-L950-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2292.6	2292.6	2292.6	2292.6	2292.6
2.5°	2286.6	2285.1	2271.2	2290.8	2293.0
5°	2264.1	2269.1	2260.9	2279.8	2288.0
7.5°	2221.0	2226.4	2236.0	2270.5	2280.5
10°	2151.3	2164.8	2198.6	2247.0	2268.4
12.5°	2097.8	2114.6	2144.8	2227.1	2251.7
15°	2014.2	2034.1	2096.1	2194.3	2233.9
17.5°	1943.0	1979.3	2045.1	2153.0	2208.2
20°	1863.2	1892.4	1966.8	2112.4	2178.3
22.5°	1783.5	1820.5	1922.0	2058.3	2148.0
25°	1675.9	1730.0	1842.2	2011.0	2107.8
27.5°	1584.8	1653.1	1782.0	1955.1	2063.0
30°	1486.9	1539.9	1706.2	1898.1	2017.4
32.5°	1376.5	1459.8	1624.3	1832.9	1969.7
35°	1282.1	1359.8	1550.6	1779.2	1917.0
37.5°	1191.0	1264.0	1469.1	1718.3	1858.6
40°	1081.7	1177.8	1393.6	1648.9	1795.9
42.5°	960.6	1078.5	1323.4	1583.4	1732.2
45°	858.8	983.8	1245.1	1523.9	1662.0
47.5°	753.0	884.8	1171.8	1451.6	1592.6
50°	638.0	798.3	1105.2	1384.7	1471.2
52.5°	554.0	708.2	1045.4	1263.6	1240.1
55°	463.6	627.7	982.3	1059.2	970.9
57.5°	394.9	555.1	923.2	831.7	926.8
60°	360.3	497.0	832.4	791.9	849.2
62.5°	327.9	446.1	636.6	742.7	698.6
65°	294.5	400.9	528.0	562.6	462.9
67.5°	262.1	361.7	497.8	420.1	403.0
70°	228.9	331.5	437.9	358.2	212.9
72.5°	197.6	296.6	299.4	198.3	158.1
75°	167.0	193.0	233.6	177.0	143.8
77.5°	133.5	165.6	156.3	158.4	130.3
80°	102.2	113.9	127.5	141.7	115.0
82.5°	72.3	84.7	103.3	123.9	94.4
85°	45.9	55.9	79.8	102.9	71.9
87.5°	18.2	35.2	59.5	83.0	42.4
90°	0.4	19.2	42.0	61.2	11.7
92.5°	0.4	8.9	28.1	44.9	6.1
95°	0.4	2.8	17.4	29.9	3.9
97.5°	0.4	1.1	9.3	18.5	2.1
100°	0.4	0.4	3.9	10.0	1.1
102.5°	0.4	0.4	1.4	3.9	0.4
105°	0.4	0.4	0.4	1.1	0.0
107.5°	0.4	0.4	0.0	0.0	0.0
110°	0.4	0.4	0.0	0.0	0.0



TEST NUMBER: P685710
 CATALOG NUMBER: 4CZL-7-UNV-LVR-L950-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.4	0.4	0.0	0.0	0.0
115°	0.4	0.4	0.0	0.0	0.0
117.5°	0.4	0.4	0.0	0.0	0.0
120°	0.4	0.4	0.0	0.0	0.0
122.5°	0.4	0.4	0.0	0.0	0.0
125°	0.4	0.7	0.0	0.0	0.0
127.5°	0.4	0.4	0.0	0.0	0.0
130°	0.4	0.7	0.4	0.0	0.0
132.5°	0.4	0.7	0.4	0.0	0.0
135°	0.4	0.7	0.4	0.0	0.0
137.5°	0.4	0.7	0.4	0.0	0.0
140°	0.7	0.7	0.4	0.0	0.0
142.5°	0.7	0.7	0.4	0.0	0.0
145°	0.7	0.7	0.4	0.0	0.0
147.5°	0.7	0.7	0.4	0.0	0.0
150°	0.7	0.7	0.4	0.0	0.0
152.5°	0.7	0.7	0.4	0.0	0.0
155°	0.7	0.7	0.4	0.0	0.0
157.5°	0.7	1.1	0.4	0.0	0.0
160°	1.1	1.1	0.4	0.0	0.0
162.5°	1.1	1.1	0.7	0.4	0.0
165°	1.1	1.1	0.7	0.4	0.0
167.5°	1.1	1.1	0.7	0.4	0.0
170°	1.1	1.1	0.7	0.4	0.4
172.5°	1.1	1.1	0.7	0.4	0.4
175°	1.1	1.1	0.7	0.4	0.4
177.5°	1.1	1.1	0.7	0.4	0.4
180°	0.7	0.7	0.7	0.7	0.7

(END OF REPORT)