

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: P685799

Luminaire Tested: **4CZL-5-UNV-M-LVR-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685799
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-M-LVR-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @80 CRI and 5000K
Light Source: (392) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

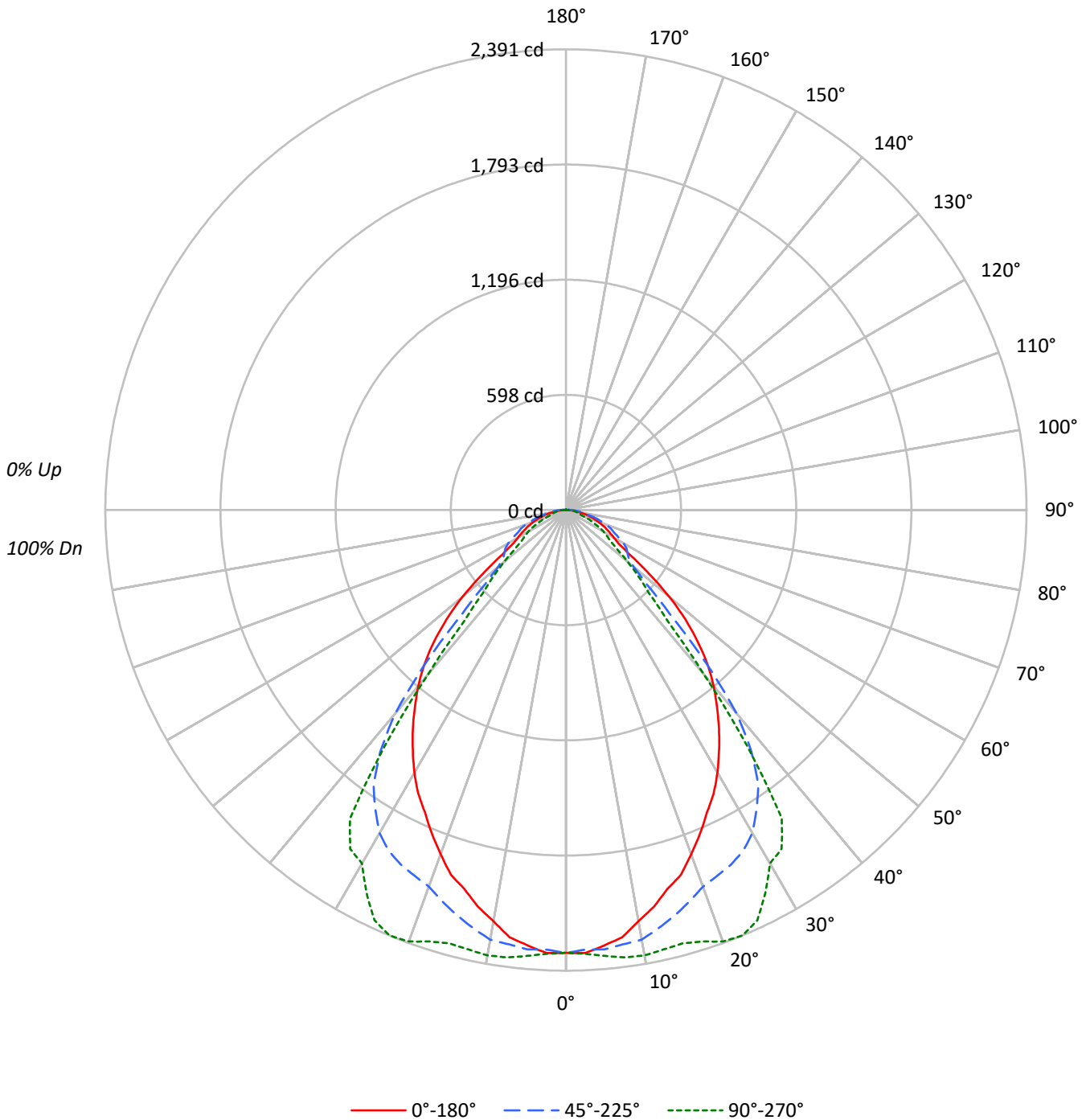
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4251.9 lumens
Efficiency: N/A
Efficacy: 137.2 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.34 / 1.2
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

TEST NUMBER: P685799
CATALOG NUMBER: 4CZL-5-UNV-M-LVR-L850-CD-U

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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	93	91	90	88
2	103	96	90	86	100	94	89	84	91	86	83	87	84	81	84	81	79	84	81	79	77
3	95	87	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	70	66	62	70	66	62	60
5	83	72	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	65	60	56	54
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	60	55	51	49
7	72	60	53	47	70	59	52	47	58	51	47	57	51	46	55	50	46	55	50	46	44
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	51	46	42	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	48	42	39	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	35	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7422	7422	7422
5°	7353	7420	7530
10°	7104	7424	7695
15°	6805	7285	7785
20°	6531	7147	8190
25°	6170	7231	8372
30°	5865	7216	7897
35°	5461	6862	7700
40°	5027	5817	4692
45°	4429	3467	2781
50°	3516	2302	2099
55°	2276	2190	1593
60°	1858	2226	1463
65°	1770	2097	1195
70°	1681	2105	945
75°	1597	1970	878
80°	1477	1861	986
85°	1323	2275	1212



TEST NUMBER: P685799
 CATALOG NUMBER: 4CZL-5-UNV-M-LVR-L850-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.1	5.1
10°-20°	618.7	14.6
20°-30°	932.9	21.9
30°-40°	1030.9	24.2
40°-50°	646.3	15.2
50°-60°	348.0	8.2
60°-70°	236.3	5.6
70°-80°	141.2	3.3
80°-90°	61.3	1.4
90°-100°	13.5	0.3
100°-110°	1.5	0.0
110°-120°	0.6	0.0
120°-130°	0.5	0.0
130°-140°	0.6	0.0
140°-150°	0.6	0.0
150°-160°	0.4	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	1769.7	41.6
0°-40°	2800.6	65.9
0°-60°	3794.9	89.3
0°-90°	4233.7	99.6
90°-120°	15.6	0.4
90°-150°	17.2	0.4
90°-180°	18.0	0.4
0°-180°	4251.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2298	2298	2298	2298	2298	
5°	2268	2272	2289	2316	2323	214
15°	2036	2107	2179	2285	2329	575
25°	1732	1837	2030	2246	2350	799
35°	1385	1548	1741	1873	1953	865
45°	970	1056	759	619	609	740
55°	404	423	389	337	283	393
65°	232	255	274	223	156	229
75°	128	142	158	130	70	135
85°	36	44	61	81	33	38
90°	1	14	31	52	10	2
95°	0	2	12	27	5	0
105°	0	1	1	2	1	0
115°	0	1	1	1	1	0
125°	0	1	1	1	1	0
135°	1	1	1	1	1	0
145°	1	1	1	1	1	0
155°	1	1	1	1	1	0
165°	1	1	1	1	1	0
175°	1	1	1	2	2	0
180°	2	2	2	2	2	



TEST NUMBER: P685799

CATALOG NUMBER: 4CZL-5-UNV-M-LVR-L850-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2298.5	2298.5	2298.5	2298.5	2298.5
2.5°	2301.5	2295.2	2283.5	2304.5	2304.8
5°	2268.5	2272.4	2288.9	2315.9	2323.1
7.5°	2236.4	2251.4	2273.6	2338.6	2341.9
10°	2166.6	2197.8	2264.0	2326.7	2346.7
12.5°	2108.5	2154.6	2223.0	2305.4	2336.5
15°	2035.6	2107.0	2179.2	2284.7	2328.8
17.5°	1984.7	2041.9	2130.3	2275.1	2347.3
20°	1900.5	1981.1	2079.7	2281.7	2383.3
22.5°	1818.6	1916.7	2054.2	2284.1	2390.8
25°	1731.7	1836.9	2029.6	2246.0	2349.7
27.5°	1659.8	1747.9	1993.1	2166.6	2241.5
30°	1572.9	1676.6	1935.2	2045.2	2117.8
32.5°	1479.4	1610.9	1841.4	1952.3	2084.2
35°	1385.3	1548.0	1740.7	1872.6	1953.2
37.5°	1287.0	1496.2	1582.5	1603.8	1548.6
40°	1192.6	1423.9	1379.9	1174.0	1113.1
42.5°	1089.4	1268.7	1076.3	807.7	780.4
45°	969.9	1055.9	759.2	618.9	609.0
47.5°	842.5	817.6	566.2	517.3	511.6
50°	699.8	653.7	458.3	456.5	417.8
52.5°	545.5	519.1	410.9	395.9	334.5
55°	404.3	422.9	389.0	336.6	282.9
57.5°	323.7	366.8	373.7	294.0	253.0
60°	287.7	321.0	344.7	270.3	226.6
62.5°	258.1	284.4	308.7	250.9	195.4
65°	231.7	254.8	274.5	223.0	156.4
67.5°	203.8	227.8	252.1	191.5	133.1
70°	178.0	203.5	223.0	169.9	100.1
72.5°	151.4	177.7	186.4	142.1	80.0
75°	128.0	142.4	157.9	129.8	70.4
77.5°	103.4	115.7	122.0	119.0	62.0
80°	79.4	89.3	100.1	108.2	53.0
82.5°	58.1	65.3	80.0	95.3	42.6
85°	35.7	43.8	61.4	80.9	32.7
87.5°	15.9	26.1	45.3	66.8	21.0
90°	0.9	13.5	31.2	51.9	9.6
92.5°	0.3	6.0	20.4	38.4	6.6
95°	0.3	2.1	12.3	26.7	4.8
97.5°	0.3	0.9	6.9	17.1	3.0
100°	0.3	0.6	3.3	9.9	2.1
102.5°	0.3	0.6	1.5	4.8	1.5
105°	0.3	0.6	0.9	2.1	0.9
107.5°	0.3	0.6	0.6	0.9	0.6
110°	0.3	0.6	0.6	0.6	0.6



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 CATALOG NUMBER: 4CZL-5-UNV-M-LVR-L850-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.3	0.6	0.6	0.6	0.6
115°	0.3	0.6	0.6	0.6	0.6
117.5°	0.3	0.6	0.6	0.6	0.6
120°	0.3	0.6	0.6	0.6	0.6
122.5°	0.3	0.6	0.6	0.6	0.6
125°	0.3	0.6	0.6	0.6	0.6
127.5°	0.3	0.6	0.6	0.6	0.6
130°	0.3	0.6	0.6	0.6	0.6
132.5°	0.6	0.6	0.9	0.9	0.9
135°	0.6	0.6	0.9	0.9	0.9
137.5°	0.6	0.9	0.9	0.9	0.9
140°	0.6	0.9	0.9	0.9	0.9
142.5°	0.6	0.9	0.9	0.9	0.9
145°	0.6	0.9	0.9	0.9	1.2
147.5°	0.6	0.9	0.9	0.9	1.2
150°	0.6	0.9	0.9	0.9	0.9
152.5°	0.9	0.9	0.9	0.9	0.9
155°	0.9	0.9	0.9	0.9	0.9
157.5°	0.9	0.9	0.9	1.2	1.2
160°	0.9	1.2	1.2	1.2	1.2
162.5°	0.9	1.2	1.2	1.2	1.2
165°	0.9	1.2	1.2	1.2	1.2
167.5°	0.9	1.2	1.2	1.2	1.5
170°	1.2	1.2	1.2	1.5	1.5
172.5°	1.2	1.2	1.2	1.5	1.5
175°	1.2	1.2	1.2	1.5	1.5
177.5°	1.2	1.5	1.2	1.5	1.8
180°	1.5	1.5	1.5	1.5	1.5

(END OF REPORT)