

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: P685789

Luminaire Tested: **4CZL-5-UNV-M-LVR-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685789
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-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @80 CRI and 4000K
Light Source: (392) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

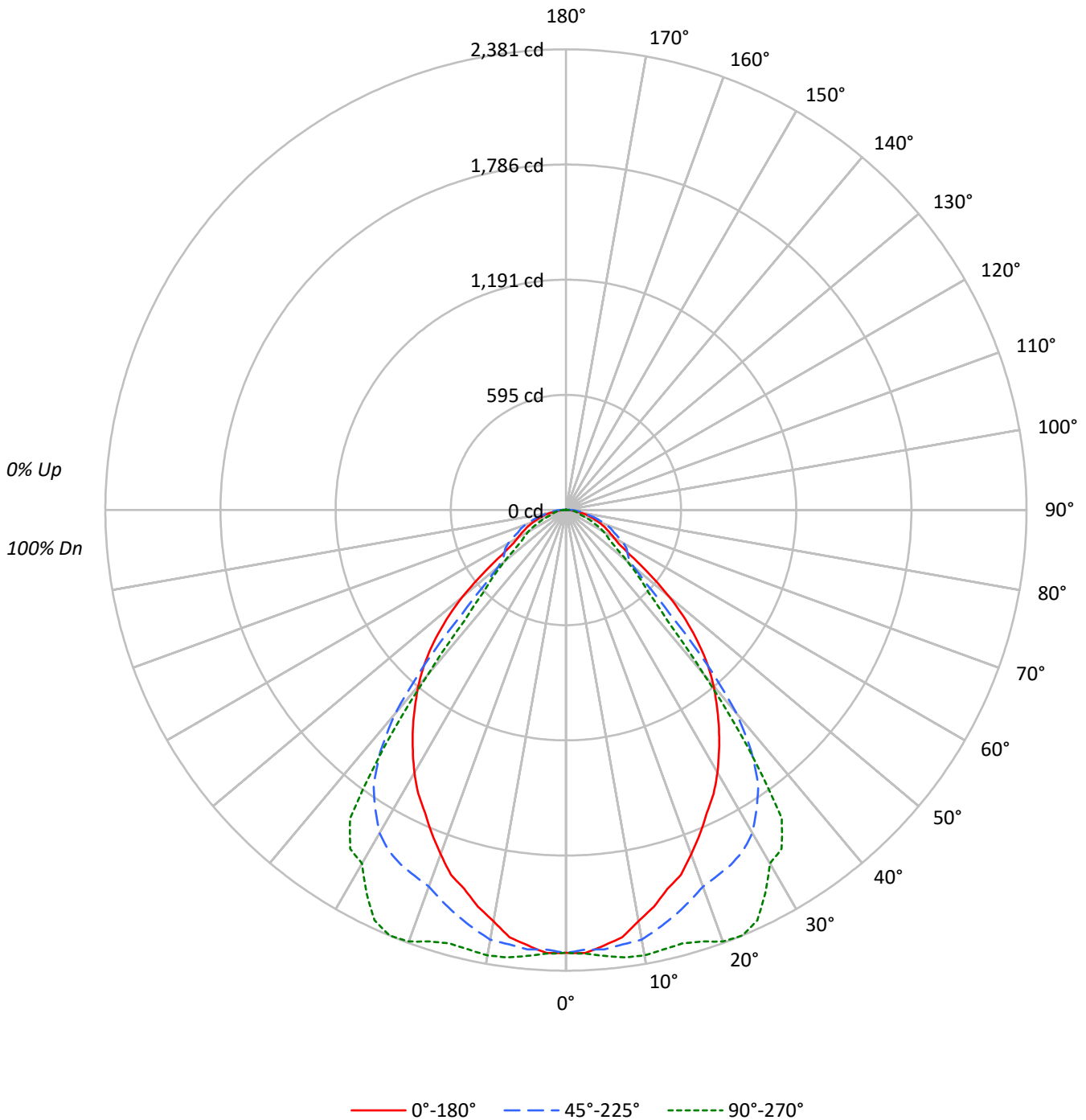
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4234.1 lumens
Efficiency: N/A
Efficacy: 136.6 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 (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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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°	7391	7391	7391
5°	7323	7388	7499
10°	7074	7393	7663
15°	6777	7255	7753
20°	6503	7117	8156
25°	6144	7202	8337
30°	5840	7186	7864
35°	5438	6833	7667
40°	5006	5792	4673
45°	4411	3452	2770
50°	3501	2292	2090
55°	2267	2181	1586
60°	1850	2217	1457
65°	1763	2089	1190
70°	1674	2097	941
75°	1590	1963	875
80°	1471	1854	982
85°	1315	2268	1204



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.2	5.1
10°-20°	616.1	14.6
20°-30°	929.0	21.9
30°-40°	1026.5	24.2
40°-50°	643.6	15.2
50°-60°	346.5	8.2
60°-70°	235.3	5.6
70°-80°	140.6	3.3
80°-90°	61.1	1.4
90°-100°	13.4	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°	1762.3	41.6
0°-40°	2788.9	65.9
0°-60°	3779.0	89.3
0°-90°	4216.0	99.6
90°-120°	15.5	0.4
90°-150°	17.2	0.4
90°-180°	18.0	0.4
0°-180°	4234.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2289	2289	2289	2289	2289	
5°	2259	2263	2279	2306	2313	213
15°	2027	2098	2170	2275	2319	572
25°	1724	1829	2021	2237	2340	796
35°	1380	1542	1733	1865	1945	861
45°	966	1052	756	616	606	737
55°	403	421	387	335	282	391
65°	231	254	273	222	156	228
75°	127	142	157	129	70	134
85°	36	44	61	81	32	38
90°	1	13	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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2288.9	2288.9	2288.9	2288.9	2288.9
2.5°	2291.9	2285.6	2273.9	2294.8	2295.1
5°	2259.0	2262.9	2279.3	2306.2	2313.3
7.5°	2227.1	2242.0	2264.1	2328.9	2332.1
10°	2157.5	2188.6	2254.5	2316.9	2336.9
12.5°	2099.6	2145.6	2213.7	2295.7	2326.8
15°	2027.1	2098.2	2170.1	2275.1	2319.0
17.5°	1976.4	2033.4	2121.4	2265.6	2337.5
20°	1892.5	1972.8	2071.0	2272.2	2373.3
22.5°	1811.0	1908.6	2045.6	2274.5	2380.8
25°	1724.5	1829.2	2021.2	2236.6	2339.9
27.5°	1652.9	1740.6	1984.7	2157.5	2232.2
30°	1566.3	1669.6	1927.1	2036.7	2108.9
32.5°	1473.2	1604.2	1833.7	1944.2	2075.5
35°	1379.5	1541.5	1733.4	1864.8	1945.0
37.5°	1281.6	1489.9	1575.9	1597.0	1542.1
40°	1187.6	1418.0	1374.1	1169.1	1108.5
42.5°	1084.9	1263.4	1071.8	804.3	777.2
45°	965.8	1051.5	756.0	616.3	606.5
47.5°	839.0	814.2	563.8	515.1	509.5
50°	696.9	650.9	456.3	454.6	416.0
52.5°	543.2	516.9	409.2	394.3	333.1
55°	402.6	421.1	387.4	335.2	281.7
57.5°	322.3	365.3	372.2	292.8	251.9
60°	286.5	319.6	343.2	269.2	225.6
62.5°	257.0	283.2	307.4	249.8	194.6
65°	230.7	253.7	273.4	222.1	155.8
67.5°	203.0	226.8	251.0	190.7	132.5
70°	177.3	202.7	222.1	169.2	99.7
72.5°	150.7	177.0	185.6	141.5	79.7
75°	127.4	141.8	157.3	129.2	70.1
77.5°	103.0	115.2	121.5	118.5	61.8
80°	79.1	88.9	99.7	107.7	52.8
82.5°	57.9	65.1	79.7	94.9	42.4
85°	35.5	43.6	61.2	80.6	32.5
87.5°	15.8	26.0	45.1	66.6	20.9
90°	0.9	13.4	31.0	51.6	9.6
92.5°	0.3	6.0	20.3	38.2	6.6
95°	0.3	2.1	12.2	26.6	4.8
97.5°	0.3	0.9	6.9	17.0	3.0
100°	0.3	0.6	3.3	9.8	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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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)