

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: P685739

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685739
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-N-LVR-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @80 CRI and 5000K
Light Source: (392) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

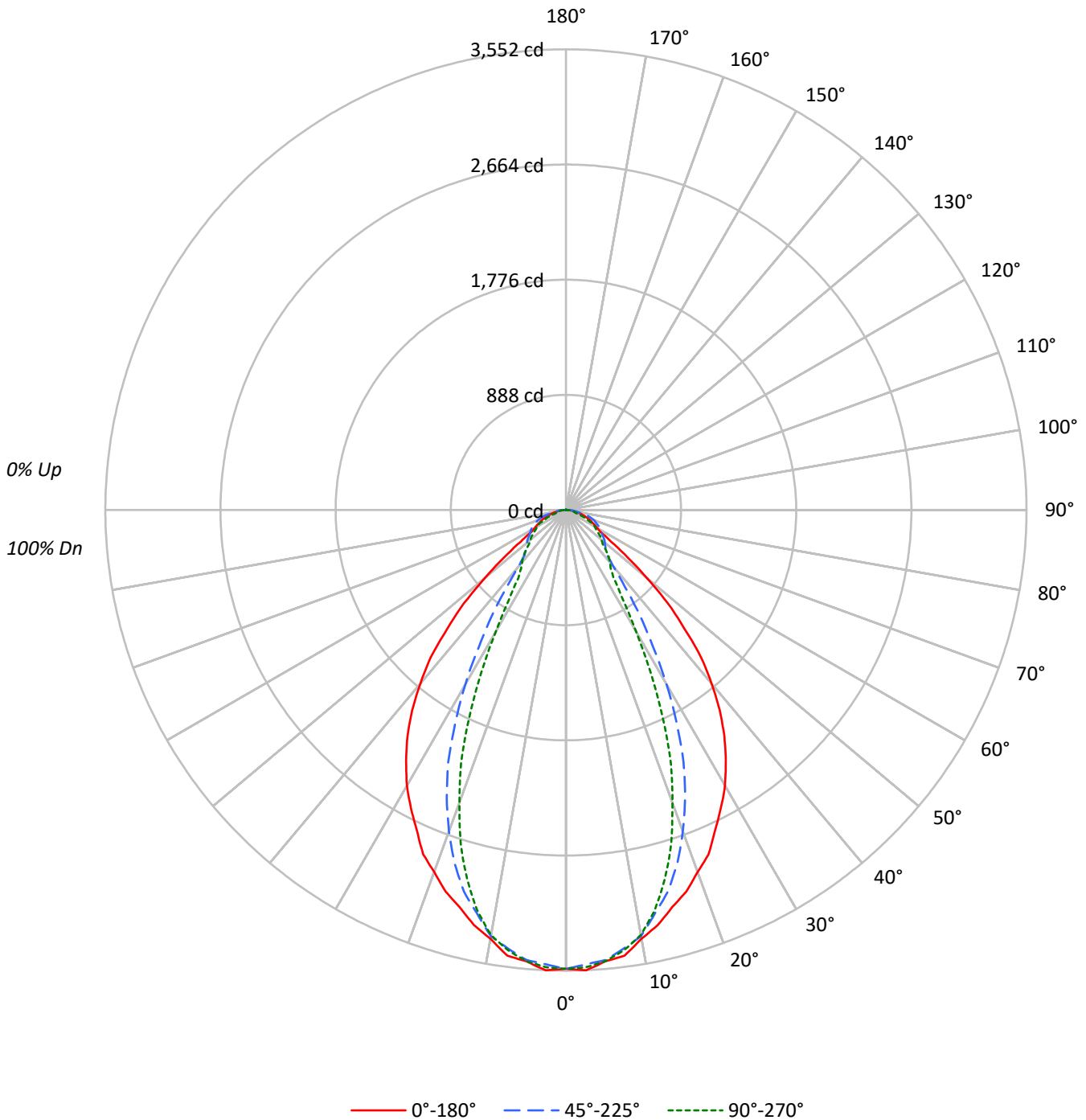
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4188.1 lumens
Efficiency: N/A
Efficacy: 135.1 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.8 / 0.85
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

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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	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	90	88
2	103	97	92	87	101	95	90	86	92	88	84	88	85	82	86	83	80	80	80	80	78
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	72	72	72	70
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	65	65	65	63
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	59	59	59	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55	55	55	55	53
7	75	64	57	51	73	63	56	51	62	55	51	60	55	51	59	54	50	50	50	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	47	47	47	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	43	43	43	43	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	41	41	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11423	11423	11423
5°	11321	11289	11318
10°	11002	10934	10908
15°	10594	10171	9849
20°	10204	9061	8248
25°	9697	7651	6289
30°	9147	5787	4018
35°	8395	3924	2525
40°	7363	2390	2215
45°	5899	1992	1985
50°	4079	1968	1791
55°	2403	1950	1687
60°	1790	2027	1666
65°	1695	2040	1466
70°	1630	2176	1107
75°	1537	2183	946
80°	1426	1811	1069
85°	1267	2197	1323



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.6	7.8
10°-20°	850.8	20.3
20°-30°	993.9	23.7
30°-40°	737.4	17.6
40°-50°	488.8	11.7
50°-60°	324.2	7.7
60°-70°	241.9	5.8
70°-80°	142.8	3.4
80°-90°	60.1	1.4
90°-100°	13.0	0.3
100°-110°	1.8	0.0
110°-120°	0.9	0.0
120°-130°	0.8	0.0
130°-140°	0.8	0.0
140°-150°	0.8	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	2173.3	51.9
0°-40°	2910.7	69.5
0°-60°	3723.8	88.9
0°-90°	4168.5	99.5
90°-120°	15.7	0.4
90°-150°	18.1	0.4
90°-180°	20.0	0.5
0°-180°	4188.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3537	3537	3537	3537	3537	
5°	3493	3490	3483	3495	3492	330
15°	3169	3131	3042	2990	2946	894
25°	2722	2526	2147	1842	1765	1254
35°	2130	1578	995	673	640	1322
45°	1292	762	436	452	435	994
55°	427	375	346	334	300	420
65°	222	248	267	261	192	221
75°	123	138	175	127	76	130
85°	34	42	59	79	36	37
90°	1	13	30	51	10	2
95°	0	2	12	26	5	0
105°	0	1	1	2	2	0
115°	0	1	1	1	1	0
125°	1	1	1	1	1	0
135°	1	1	1	1	1	0
145°	1	1	1	2	2	1
155°	1	2	2	2	2	1
165°	2	2	2	2	2	0
175°	2	2	2	2	3	0
180°	2	2	2	2	2	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3537.3	3537.3	3537.3	3537.3	3537.3
2.5°	3552.5	3533.4	3505.8	3530.7	3528.6
5°	3492.6	3489.6	3482.7	3495.3	3491.7
7.5°	3465.6	3449.5	3411.1	3440.8	3424.0
10°	3355.4	3336.5	3334.7	3328.7	3326.6
12.5°	3277.1	3254.4	3181.5	3177.6	3161.5
15°	3168.9	3131.2	3042.5	2990.0	2946.0
17.5°	3085.0	3002.9	2854.9	2757.2	2700.5
20°	2969.3	2878.8	2636.7	2466.2	2400.2
22.5°	2874.0	2713.7	2402.3	2161.1	2115.8
25°	2721.5	2525.8	2147.3	1841.9	1765.2
27.5°	2589.0	2319.0	1846.4	1511.3	1417.2
30°	2453.0	2087.4	1552.1	1187.1	1077.7
32.5°	2294.4	1853.9	1249.1	890.7	811.6
35°	2129.6	1577.9	995.3	672.8	640.4
37.5°	1948.0	1329.7	748.0	561.9	567.3
40°	1746.6	1113.4	567.0	515.2	525.4
42.5°	1545.8	931.1	471.7	484.6	487.6
45°	1291.7	762.1	436.1	452.5	434.6
47.5°	1069.6	622.8	410.9	409.1	383.6
50°	811.9	507.7	391.7	370.1	356.6
52.5°	601.2	428.3	373.4	349.7	336.0
55°	426.8	374.9	346.4	334.5	299.7
57.5°	320.7	337.2	325.8	298.8	274.5
60°	277.2	303.9	313.8	281.7	258.0
62.5°	250.2	275.4	294.3	271.5	236.2
65°	221.8	247.8	267.0	261.0	191.8
67.5°	196.9	226.0	249.6	223.9	156.7
70°	172.6	199.6	230.5	190.0	117.2
72.5°	146.5	166.9	204.1	147.7	85.4
75°	123.2	137.9	175.0	127.1	75.8
77.5°	98.6	110.9	119.9	115.7	66.8
80°	76.7	89.0	97.4	105.2	57.5
82.5°	55.7	63.8	77.3	93.2	48.0
85°	34.2	41.7	59.3	78.8	35.7
87.5°	14.7	25.5	43.5	65.3	23.4
90°	0.6	12.6	29.7	50.9	10.5
92.5°	0.3	5.4	19.2	37.5	6.9
95°	0.3	2.1	11.7	25.5	5.4
97.5°	0.3	0.9	6.0	16.5	3.9
100°	0.3	0.6	3.3	9.6	2.7
102.5°	0.3	0.6	1.5	4.8	2.1
105°	0.3	0.6	1.2	2.1	1.8
107.5°	0.3	0.6	0.9	1.5	1.5
110°	0.3	0.6	0.9	1.5	1.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.3	0.6	0.9	1.5	1.5
115°	0.3	0.6	0.9	1.2	1.2
117.5°	0.3	0.6	0.9	1.2	1.2
120°	0.3	0.6	0.9	1.2	1.2
122.5°	0.3	0.6	0.9	1.2	1.2
125°	0.6	0.6	0.9	1.2	1.2
127.5°	0.6	0.9	0.9	1.2	1.2
130°	0.6	0.9	0.9	1.2	1.2
132.5°	0.6	0.9	0.9	1.2	1.2
135°	0.6	0.9	0.9	1.2	1.2
137.5°	0.6	0.9	1.2	1.2	1.2
140°	0.9	1.2	1.2	1.2	1.2
142.5°	0.9	1.2	1.2	1.5	1.2
145°	0.9	1.2	1.2	1.5	1.5
147.5°	0.9	1.2	1.5	1.5	1.5
150°	0.9	1.2	1.5	1.8	1.8
152.5°	1.2	1.2	1.5	1.8	1.8
155°	1.2	1.5	1.5	1.8	1.8
157.5°	1.2	1.5	1.5	1.8	2.1
160°	1.2	1.5	1.8	2.1	2.1
162.5°	1.2	1.5	1.8	2.1	2.1
165°	1.5	1.8	1.8	2.1	2.1
167.5°	1.5	1.8	2.1	2.1	2.4
170°	1.5	1.8	2.1	2.4	2.4
172.5°	1.5	1.8	2.1	2.4	2.4
175°	1.5	1.8	2.1	2.4	2.7
177.5°	1.5	1.8	2.1	2.4	2.7
180°	2.1	2.1	2.1	2.1	2.1

(END OF REPORT)