

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: P685863

Luminaire Tested: **4CZL-16-UNV-W-LVR-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685863
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-W-LVR-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @80 CRI and 5000K
Light Source: (588) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

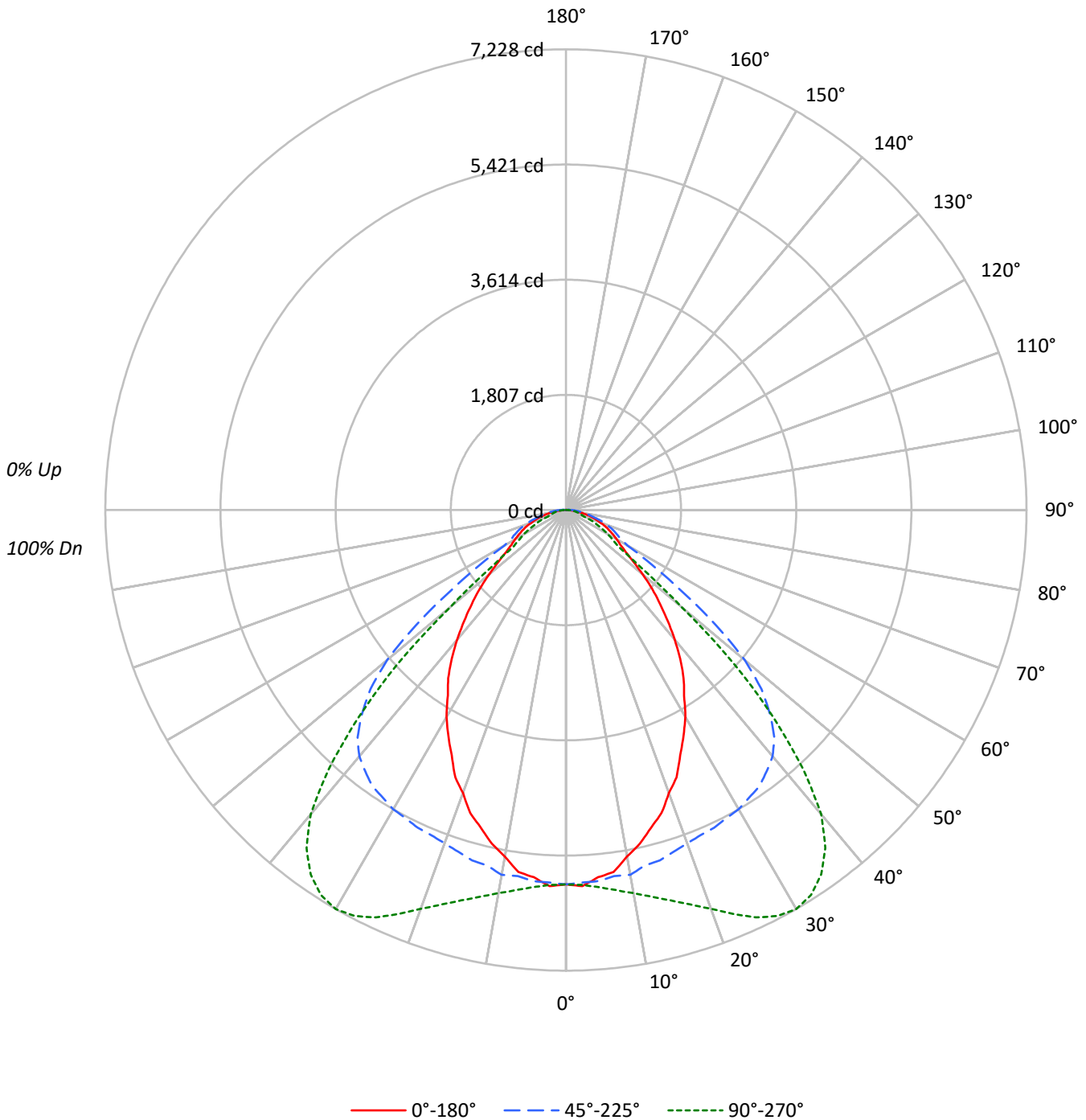
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13971.4 lumens
Efficiency: N/A
Efficacy: 135.6 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): 103
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	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	87	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°	18963	18963	18963
5°	18746	18940	19251
10°	18099	19056	20017
15°	17248	19020	21194
20°	16235	19123	22876
25°	15116	19593	25125
30°	13974	20213	26951
35°	12696	20867	27517
40°	11194	21261	26253
45°	9542	20680	21047
50°	7908	18389	11943
55°	6441	12425	5713
60°	5947	7224	4934
65°	5733	6646	4011
70°	5410	6520	2867
75°	5036	5951	2786
80°	4590	5847	3061
85°	3520	7006	3375



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	558.4	4.0
10°-20°	1620.8	11.6
20°-30°	2572.2	18.4
30°-40°	3212.6	23.0
40°-50°	2950.7	21.1
50°-60°	1574.7	11.3
60°-70°	810.5	5.8
70°-80°	445.6	3.2
80°-90°	183.8	1.3
90°-100°	35.5	0.3
100°-110°	2.0	0.0
110°-120°	0.5	0.0
120°-130°	0.6	0.0
130°-140°	1.1	0.0
140°-150°	0.9	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	4751.4	34.0
0°-40°	7964.0	57.0
0°-60°	12489.4	89.4
0°-90°	13929.3	99.7
90°-120°	37.9	0.3
90°-150°	40.6	0.3
90°-180°	42.0	0.3
0°-180°	13971.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5872	5872	5872	5872	5872	
5°	5783	5798	5843	5933	5939	546
15°	5159	5328	5689	6152	6340	1451
25°	4242	4641	5499	6506	7052	1955
35°	3221	3815	5293	6448	6980	1999
45°	2089	3012	4528	4693	4609	1617
55°	1144	2051	2207	1236	1015	1056
65°	750	984	870	709	525	741
75°	404	448	477	424	223	428
85°	95	124	189	249	91	109
90°	0	35	93	151	20	4
95°	0	4	35	70	9	0
105°	0	1	1	1	0	0
115°	0	1	1	0	0	0
125°	0	1	1	0	0	1
135°	1	2	2	1	1	1
145°	1	2	2	1	1	1
155°	2	2	2	1	1	1
165°	2	3	2	1	1	1
175°	3	3	2	1	1	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5872.3	5872.3	5872.3	5872.3	5872.3
2.5°	5906.6	5893.9	5851.8	5890.0	5887.0
5°	5783.2	5797.9	5843.0	5933.1	5938.9
7.5°	5728.3	5768.5	5794.0	5988.9	6014.4
10°	5519.7	5582.4	5811.6	6014.4	6104.5
12.5°	5363.0	5489.3	5711.7	6055.5	6212.2
15°	5159.2	5327.7	5689.2	6152.5	6339.6
17.5°	4985.9	5158.3	5620.6	6226.0	6487.5
20°	4724.3	5036.8	5564.8	6302.4	6657.0
22.5°	4537.2	4853.6	5521.7	6369.9	6857.8
25°	4242.4	4641.1	5499.1	6506.1	7051.7
27.5°	3995.5	4461.8	5449.2	6593.3	7180.0
30°	3747.7	4242.4	5420.8	6609.0	7228.0
32.5°	3449.0	4064.1	5349.3	6572.7	7159.5
35°	3220.7	3815.3	5293.4	6448.3	6980.2
37.5°	2942.5	3619.4	5171.0	6223.0	6686.3
40°	2655.5	3438.2	5043.6	5871.4	6227.9
42.5°	2365.6	3234.4	4839.9	5402.2	5510.9
45°	2089.4	3012.1	4528.4	4693.0	4608.7
47.5°	1841.5	2773.1	4160.1	3803.6	3605.7
50°	1574.1	2530.2	3660.5	2895.5	2377.3
52.5°	1333.2	2327.4	2972.9	1961.0	1479.1
55°	1144.1	2051.2	2206.9	1236.2	1014.8
57.5°	1009.9	1839.6	1592.7	977.6	868.9
60°	920.8	1575.1	1118.6	897.3	764.0
62.5°	832.6	1246.0	957.0	817.9	642.6
65°	750.3	983.5	869.8	709.2	525.0
67.5°	665.1	798.3	785.6	643.6	437.9
70°	573.0	656.3	690.6	538.7	303.7
72.5°	490.7	550.5	587.7	460.4	257.6
75°	403.6	447.6	477.0	424.1	223.3
77.5°	320.3	360.5	388.9	384.0	195.9
80°	246.8	273.3	314.4	343.8	164.6
82.5°	168.5	188.1	247.8	296.8	128.3
85°	95.0	124.4	189.1	248.8	91.1
87.5°	27.4	73.5	137.1	199.8	52.9
90°	0.0	35.3	93.1	150.8	19.6
92.5°	0.0	13.7	60.7	105.8	13.7
95°	0.0	3.9	35.3	69.5	8.8
97.5°	0.0	1.0	16.7	41.1	3.9
100°	0.0	1.0	5.9	19.6	1.0
102.5°	0.0	1.0	2.0	6.9	0.0
105°	0.0	1.0	1.0	1.0	0.0
107.5°	0.0	1.0	1.0	0.0	0.0
110°	0.0	1.0	1.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	1.0	1.0	0.0	0.0
115°	0.0	1.0	1.0	0.0	0.0
117.5°	0.0	1.0	1.0	0.0	0.0
120°	0.0	1.0	1.0	0.0	0.0
122.5°	0.0	1.0	1.0	0.0	0.0
125°	0.0	1.0	1.0	0.0	0.0
127.5°	1.0	1.0	1.0	1.0	0.0
130°	1.0	2.0	2.0	1.0	0.0
132.5°	1.0	2.0	2.0	1.0	0.0
135°	1.0	2.0	2.0	1.0	1.0
137.5°	1.0	2.0	2.0	1.0	1.0
140°	1.0	2.0	2.0	1.0	1.0
142.5°	1.0	2.0	2.0	1.0	1.0
145°	1.0	2.0	2.0	1.0	1.0
147.5°	1.0	2.0	2.0	1.0	1.0
150°	1.0	2.0	2.0	1.0	1.0
152.5°	2.0	2.0	2.0	1.0	1.0
155°	2.0	2.0	2.0	1.0	1.0
157.5°	2.0	2.0	2.0	1.0	1.0
160°	2.0	2.0	2.0	1.0	1.0
162.5°	2.0	2.9	2.0	1.0	1.0
165°	2.0	2.9	2.0	1.0	1.0
167.5°	2.0	2.9	2.0	1.0	1.0
170°	2.0	2.9	2.0	1.0	1.0
172.5°	2.0	2.9	2.0	1.0	1.0
175°	2.9	2.9	2.0	1.0	1.0
177.5°	2.9	2.9	2.0	2.0	2.0
180°	2.0	2.0	2.0	2.0	2.0

(END OF REPORT)