

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: P685853

Luminaire Tested: **4CZL-16-UNV-W-LVR-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685853
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-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @80 CRI and 4000K
Light Source: (588) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

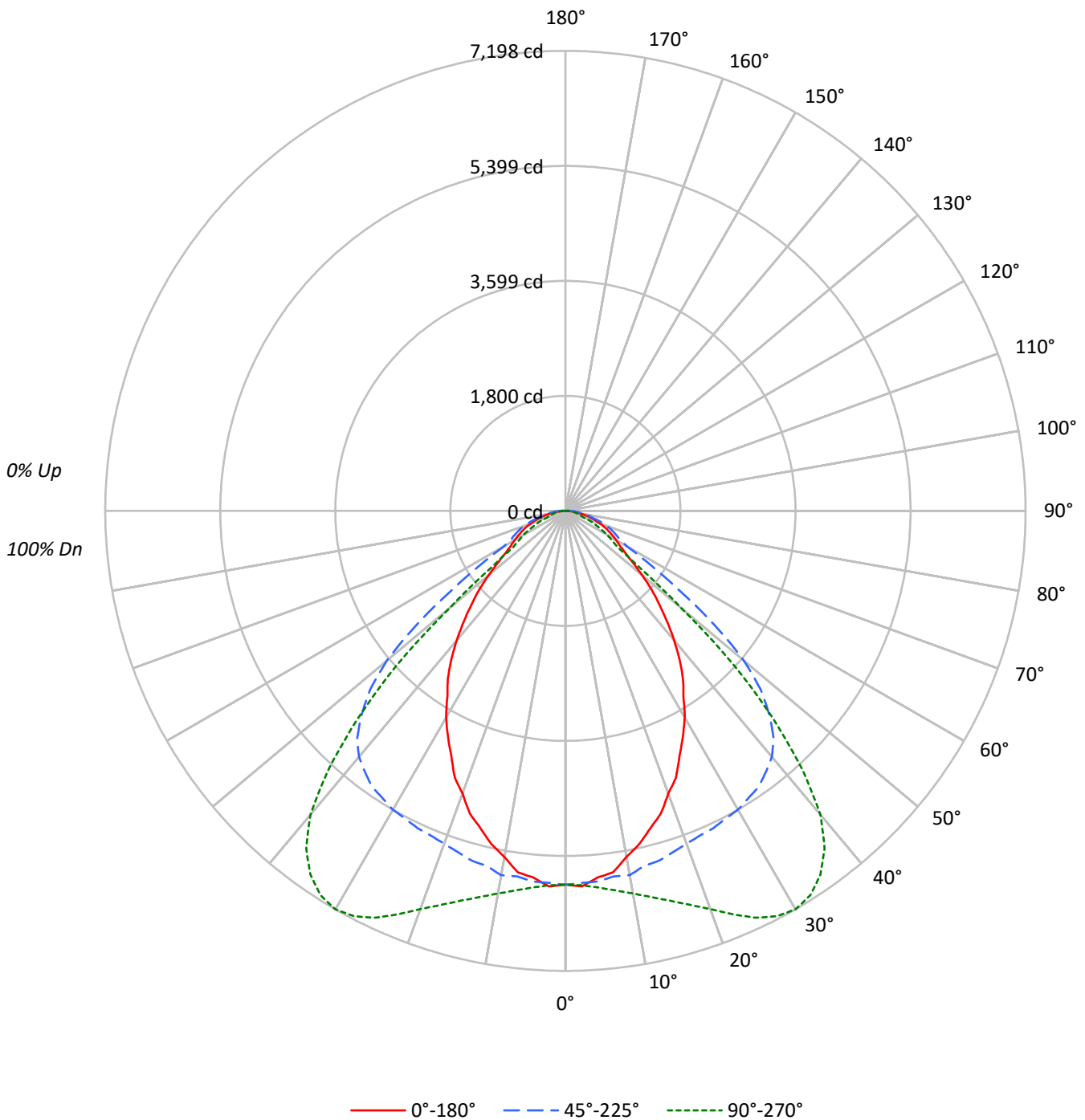
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13913.0 lumens
Efficiency: N/A
Efficacy: 135.1 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 (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	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°	18884	18884	18884
5°	18668	18861	19171
10°	18023	18977	19933
15°	17176	18940	21105
20°	16167	19043	22780
25°	15052	19511	25020
30°	13916	20128	26839
35°	12644	20780	27402
40°	11147	21172	26144
45°	9502	20594	20959
50°	7875	18312	11893
55°	6414	12373	5690
60°	5922	7195	4914
65°	5709	6619	3995
70°	5387	6493	2855
75°	5014	5926	2775
80°	4571	5822	3048
85°	3505	6977	3361



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	556.0	4.0
10°-20°	1614.1	11.6
20°-30°	2561.4	18.4
30°-40°	3199.2	23.0
40°-50°	2938.3	21.1
50°-60°	1568.1	11.3
60°-70°	807.1	5.8
70°-80°	443.8	3.2
80°-90°	183.1	1.3
90°-100°	35.3	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°	4731.5	34.0
0°-40°	7930.7	57.0
0°-60°	12437.1	89.4
0°-90°	13871.1	99.7
90°-120°	37.8	0.3
90°-150°	40.5	0.3
90°-180°	42.0	0.3
0°-180°	13913.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5848	5848	5848	5848	5848	
5°	5759	5774	5818	5908	5914	544
15°	5138	5305	5665	6127	6313	1445
25°	4225	4622	5476	6479	7022	1946
35°	3207	3799	5271	6421	6951	1991
45°	2081	3000	4510	4673	4590	1610
55°	1139	2043	2198	1231	1011	1052
65°	747	979	866	706	523	738
75°	402	446	475	422	222	427
85°	95	124	188	248	91	108
90°	0	35	93	150	20	4
95°	0	4	35	69	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°	5847.8	5847.8	5847.8	5847.8	5847.8
2.5°	5881.9	5869.2	5827.3	5865.3	5862.4
5°	5759.0	5773.6	5818.5	5908.3	5914.1
7.5°	5704.4	5744.4	5769.7	5963.9	5989.2
10°	5496.6	5559.0	5787.3	5989.2	6079.0
12.5°	5340.5	5466.4	5687.8	6030.2	6186.3
15°	5137.7	5305.4	5665.4	6126.8	6313.1
17.5°	4965.0	5136.7	5597.1	6199.9	6460.4
20°	4704.6	5015.7	5541.5	6276.0	6629.1
22.5°	4518.3	4833.3	5498.6	6343.3	6829.1
25°	4224.6	4621.6	5476.1	6478.9	7022.2
27.5°	3978.8	4443.1	5426.4	6565.7	7150.0
30°	3732.0	4224.6	5398.1	6581.3	7197.8
32.5°	3434.5	4047.1	5326.9	6545.2	7129.5
35°	3207.3	3799.3	5271.3	6421.3	6951.0
37.5°	2930.2	3604.3	5149.4	6197.0	6658.4
40°	2644.4	3423.8	5022.6	5846.8	6201.9
42.5°	2355.7	3220.9	4819.7	5379.6	5487.8
45°	2080.6	2999.5	4509.5	4673.3	4589.5
47.5°	1833.8	2761.5	4142.7	3787.6	3590.6
50°	1567.5	2519.6	3645.2	2883.4	2367.4
52.5°	1327.6	2317.7	2960.5	1952.8	1472.9
55°	1139.3	2042.6	2197.7	1231.0	1010.6
57.5°	1005.7	1831.9	1586.1	973.5	865.2
60°	916.9	1568.5	1114.0	893.5	760.8
62.5°	829.1	1240.8	953.0	814.5	639.9
65°	747.2	979.3	866.2	706.2	522.8
67.5°	662.3	795.0	782.3	640.9	436.0
70°	570.6	653.5	687.7	536.5	302.4
72.5°	488.7	548.2	585.3	458.5	256.5
75°	401.9	445.8	475.0	422.4	222.4
77.5°	319.0	359.0	387.3	382.4	195.1
80°	245.8	272.1	313.1	342.4	163.9
82.5°	167.8	187.3	246.8	295.6	127.8
85°	94.6	123.9	188.3	247.8	90.7
87.5°	27.3	73.2	136.6	199.0	52.7
90°	0.0	35.1	92.7	150.2	19.5
92.5°	0.0	13.7	60.5	105.3	13.7
95°	0.0	3.9	35.1	69.3	8.8
97.5°	0.0	1.0	16.6	41.0	3.9
100°	0.0	1.0	5.9	19.5	1.0
102.5°	0.0	1.0	2.0	6.8	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)