

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: P178709

Luminaire Tested: **24ALNG-LD4-31-UNV-EL7W-L850-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P178709
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P34286)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24ALNG-LD4-31-UNV-EL7W-L850-CD1-U
Description: METALUX ARCLINE 2X4 TROFFER

Light Source: EATON LED 5000K
Ballast/Driver: OSRAM ELECTRONIC DRIVER

Summary

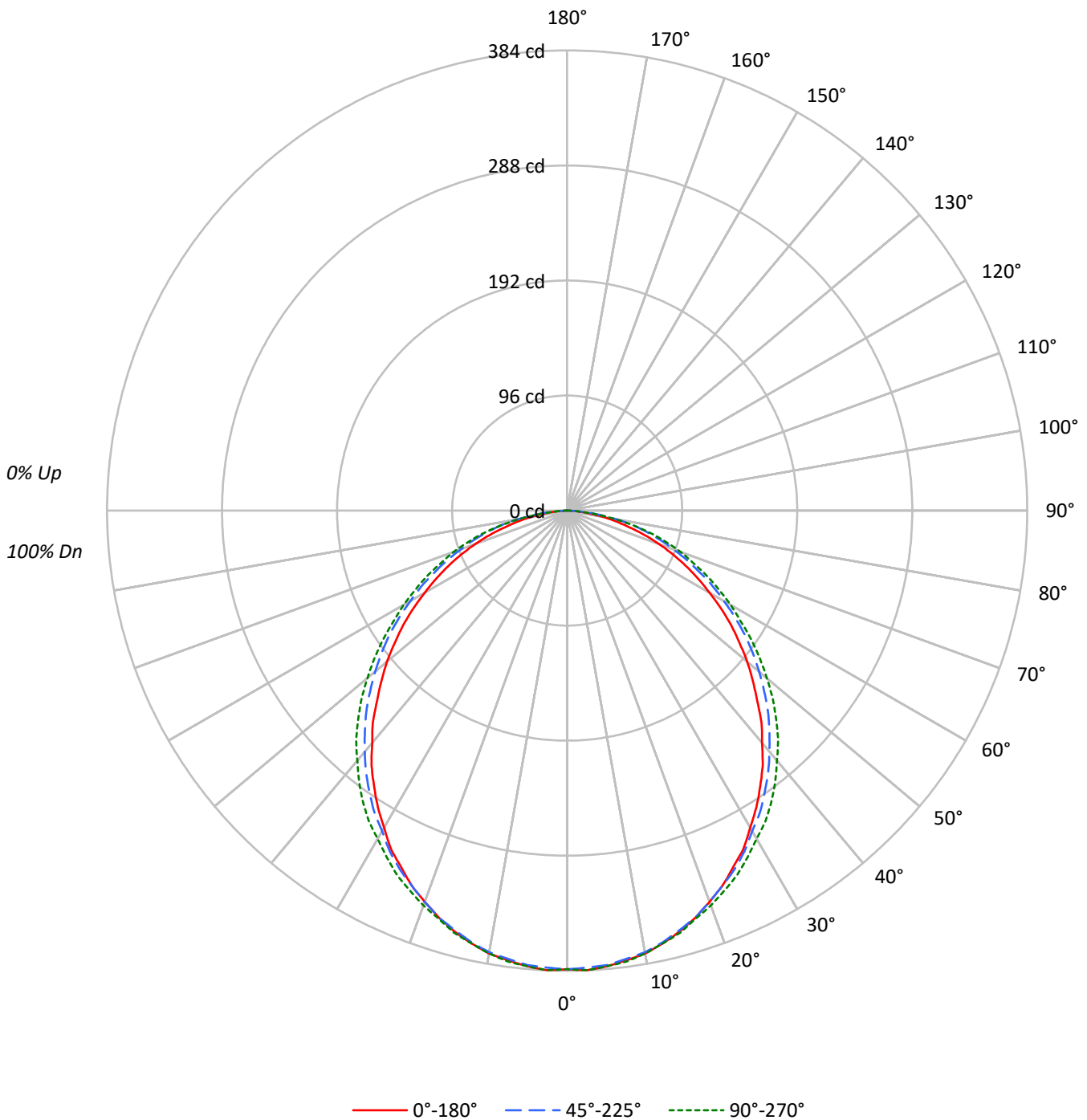
Lumens per Lamp: N/A
Luminaire Lumens: 1019.0 lumens
Efficiency: N/A
Efficacy: 164.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 4' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 6.2
Input Voltage (V): NR
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	515	515	515
5°	516	514	516
10°	513	511	513
15°	506	505	508
20°	497	497	502
25°	487	490	498
30°	475	480	491
35°	461	472	488
40°	445	461	478
45°	426	451	469
50°	411	438	456
55°	392	425	440
60°	369	407	424
65°	348	389	410
70°	321	371	397
75°	279	357	373
80°	232	324	308
85°	182	215	165



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.2	3.6
10°-20°	102.4	10.1
20°-30°	152.5	15.0
30°-40°	180.2	17.7
40°-50°	182.4	17.9
50°-60°	160.0	15.7
60°-70°	119.5	11.7
70°-80°	69.4	6.8
80°-90°	16.4	1.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	291.1	28.6
0°-40°	471.3	46.2
0°-60°	813.7	79.8
0°-90°	1019.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1019.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	383	383	383	383	383	
5°	382	382	381	382	382	36
15°	364	364	362	364	365	102
25°	328	329	330	334	336	151
35°	281	282	287	295	297	176
45°	224	228	237	244	247	173
55°	167	172	181	187	188	149
65°	109	114	122	126	129	108
75°	54	61	69	72	72	58
85°	12	15	14	12	11	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	382.8	382.8	382.8	382.8	382.8	382.8	382.8	382.8	382.8	382.8	382.8
2.5°	383.9	383.9	383.9	382.8	382.8	382.8	382.8	382.8	382.8	381.7	381.7
5°	381.7	381.7	381.7	381.7	381.7	381.7	381.7	380.7	380.7	380.7	380.7
7.5°	378.5	378.5	379.6	379.6	378.5	378.5	378.5	378.5	378.5	377.4	377.4
10°	375.3	375.3	375.3	375.3	375.3	375.3	375.3	374.2	374.2	374.2	374.2
12.5°	369.9	369.9	369.9	369.9	369.9	369.9	369.9	368.9	368.9	368.9	368.9
15°	363.5	363.5	363.5	363.5	363.5	363.5	363.5	362.4	362.4	362.4	362.4
17.5°	356.0	356.0	356.0	356.0	356.0	356.0	356.0	354.9	356.0	354.9	356.0
20°	347.4	347.4	347.4	347.4	347.4	347.4	347.4	347.4	347.4	347.4	347.4
22.5°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
25°	328.1	329.2	329.2	329.2	328.1	329.2	329.2	329.2	329.2	329.2	330.3
27.5°	318.5	317.4	317.4	317.4	317.4	318.5	318.5	318.5	319.5	319.5	320.6
30°	305.6	305.6	305.6	305.6	305.6	306.7	306.7	307.7	307.7	308.8	308.8
32.5°	293.8	293.8	293.8	294.9	294.9	294.9	294.9	295.9	297.0	298.1	299.2
35°	280.9	280.9	280.9	280.9	282.0	282.0	283.1	284.2	285.2	286.3	287.4
37.5°	268.1	267.0	268.1	268.1	268.1	269.1	270.2	271.3	272.4	273.4	275.6
40°	253.1	253.1	254.1	254.1	255.2	255.2	256.3	257.3	259.5	260.6	262.7
42.5°	240.2	239.1	240.2	241.3	242.3	242.3	243.4	244.5	245.6	247.7	249.8
45°	224.1	225.2	226.3	227.3	227.3	228.4	229.5	230.5	232.7	234.8	237.0
47.5°	210.2	211.2	212.3	212.3	214.5	214.5	215.5	217.7	218.7	220.9	223.0
50°	196.2	196.2	196.2	197.3	198.4	200.5	200.5	202.7	204.8	206.9	209.1
52.5°	181.2	182.3	182.3	183.4	184.4	185.5	186.6	188.7	190.9	193.0	195.2
55°	167.3	167.3	167.3	169.4	170.5	171.6	172.6	174.8	176.9	179.1	181.2
57.5°	152.3	152.3	153.3	154.4	155.5	156.6	157.6	159.8	161.9	164.1	166.2
60°	137.3	138.3	138.3	139.4	141.5	142.6	143.7	145.8	148.0	150.1	151.2
62.5°	123.3	123.3	124.4	125.5	127.6	128.7	129.7	131.9	134.0	135.1	137.3
65°	109.4	109.4	110.4	111.5	113.7	113.7	115.8	118.0	120.1	121.2	122.2
67.5°	95.4	95.4	96.5	96.5	99.7	100.8	101.9	102.9	105.1	106.2	108.3
70°	81.5	81.5	82.6	83.6	85.8	86.9	87.9	90.1	92.2	93.3	94.4
72.5°	67.6	67.6	68.6	69.7	72.9	74.0	75.1	76.1	78.3	79.3	81.5
75°	53.6	54.7	55.8	57.9	60.0	61.1	61.1	63.3	65.4	67.6	68.6
77.5°	41.8	41.8	44.0	46.1	48.3	48.3	49.3	51.5	52.5	54.7	55.8
80°	30.0	30.0	32.2	34.3	35.4	36.5	37.5	39.7	40.7	41.8	41.8
82.5°	19.3	20.4	21.4	22.5	24.7	25.7	26.8	27.9	27.9	27.9	26.8
85°	11.8	11.8	12.9	13.9	15.0	15.0	15.0	15.0	15.0	13.9	13.9
87.5°	4.3	4.3	5.4	5.4	5.4	4.3	4.3	4.3	3.2	3.2	3.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	382.8	382.8	382.8	382.8	382.8	382.8	382.8	382.8	382.8	382.8
2.5°	381.7	381.7	382.8	382.8	382.8	382.8	382.8	383.9	383.9	383.9
5°	379.6	380.7	380.7	380.7	381.7	381.7	381.7	381.7	381.7	381.7
7.5°	377.4	377.4	378.5	378.5	378.5	378.5	378.5	378.5	378.5	379.6
10°	374.2	374.2	375.3	375.3	375.3	375.3	375.3	375.3	375.3	375.3
12.5°	368.9	368.9	368.9	369.9	369.9	369.9	369.9	369.9	369.9	369.9
15°	362.4	362.4	363.5	363.5	363.5	364.6	364.6	364.6	363.5	364.6
17.5°	356.0	356.0	357.1	357.1	357.1	357.1	357.1	357.1	358.1	357.1
20°	347.4	348.5	348.5	349.6	349.6	349.6	349.6	349.6	350.6	350.6
22.5°	339.9	341.0	342.1	342.1	342.1	342.1	343.1	343.1	343.1	343.1
25°	331.3	331.3	332.4	333.5	333.5	334.5	334.5	334.5	334.5	335.6
27.5°	321.7	322.8	323.8	324.9	324.9	324.9	326.0	326.0	326.0	326.0
30°	311.0	312.0	313.1	314.2	315.2	315.2	316.3	316.3	316.3	316.3
32.5°	300.2	302.4	303.5	304.5	304.5	305.6	306.7	306.7	307.7	307.7
35°	289.5	290.6	292.7	293.8	294.9	294.9	295.9	295.9	295.9	297.0
37.5°	276.6	278.8	280.9	282.0	283.1	283.1	283.1	284.2	285.2	285.2
40°	264.9	267.0	268.1	270.2	270.2	271.3	272.4	272.4	272.4	272.4
42.5°	252.0	254.1	256.3	257.3	258.4	258.4	259.5	259.5	260.6	260.6
45°	239.1	241.3	243.4	244.5	244.5	245.6	245.6	246.6	246.6	246.6
47.5°	225.2	228.4	228.4	230.5	230.5	230.5	231.6	232.7	233.8	232.7
50°	211.2	213.4	214.5	216.6	216.6	216.6	217.7	217.7	218.7	217.7
52.5°	197.3	198.4	200.5	200.5	201.6	201.6	202.7	202.7	202.7	202.7
55°	183.4	184.4	185.5	186.6	186.6	186.6	187.6	186.6	187.6	187.6
57.5°	168.3	169.4	170.5	171.6	171.6	171.6	171.6	172.6	172.6	171.6
60°	153.3	154.4	155.5	155.5	156.6	156.6	156.6	156.6	157.6	157.6
62.5°	138.3	139.4	140.5	140.5	141.5	141.5	142.6	142.6	142.6	142.6
65°	123.3	124.4	126.5	126.5	126.5	127.6	127.6	127.6	128.7	128.7
67.5°	109.4	110.4	111.5	111.5	112.6	112.6	113.7	113.7	113.7	113.7
70°	96.5	96.5	97.6	98.6	98.6	98.6	99.7	99.7	99.7	100.8
72.5°	82.6	83.6	84.7	85.8	85.8	85.8	85.8	85.8	85.8	85.8
75°	69.7	70.8	70.8	71.8	71.8	71.8	71.8	71.8	71.8	71.8
77.5°	56.8	56.8	57.9	56.8	56.8	56.8	55.8	55.8	55.8	55.8
80°	41.8	40.7	40.7	40.7	39.7	39.7	39.7	39.7	38.6	39.7
82.5°	26.8	26.8	25.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7
85°	12.9	12.9	11.8	11.8	11.8	10.7	10.7	10.7	10.7	10.7
87.5°	3.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)