

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: P178706

Luminaire Tested: **24ALNG-LD4-31-UNV-EL7W-L830-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P178706
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-L830-CD1-U
Description: METALUX ARCLINE 2X4 TROFFER

Light Source: EATON LED 3000K
Ballast/Driver: OSRAM ELECTRONIC DRIVER

Summary

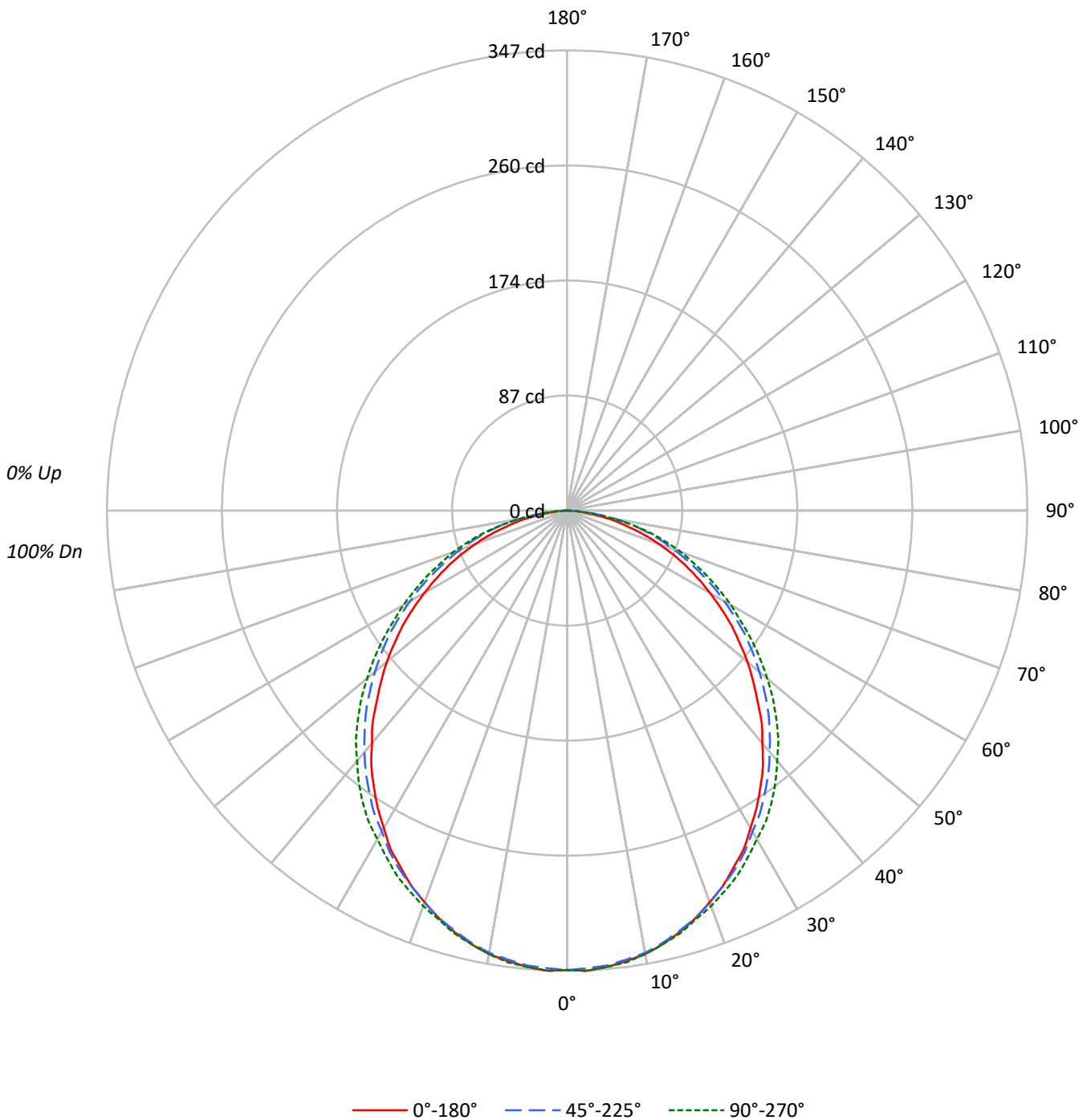
Lumens per Lamp: N/A
Luminaire Lumens: 922.0 lumens
Efficiency: N/A
Efficacy: 148.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 4' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 6.2
Input Voltage (V): NR
Input Current (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

TEST NUMBER: P178706

CATALOG NUMBER: 24ALNG-LD4-31-UNV-EL7W-L830-CD1-U

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°	466	466	466
5°	467	465	467
10°	464	463	464
15°	458	457	460
20°	450	450	454
25°	441	444	451
30°	430	434	445
35°	418	427	441
40°	402	417	433
45°	386	408	425
50°	372	396	412
55°	355	385	398
60°	334	368	384
65°	315	352	371
70°	290	336	359
75°	252	323	338
80°	211	293	278
85°	165	195	150



TEST NUMBER: P178706

CATALOG NUMBER: 24ALNG-LD4-31-UNV-EL7W-L830-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.7	3.6
10°-20°	92.7	10.1
20°-30°	138.0	15.0
30°-40°	163.0	17.7
40°-50°	165.0	17.9
50°-60°	144.8	15.7
60°-70°	108.1	11.7
70°-80°	62.8	6.8
80°-90°	14.8	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°	263.4	28.6
0°-40°	426.4	46.2
0°-60°	736.2	79.8
0°-90°	922.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	922.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	346	346	346	346	346	
5°	345	345	344	345	345	33
15°	329	329	328	329	330	93
25°	297	298	299	302	304	137
35°	254	255	260	267	269	159
45°	203	207	214	221	223	157
55°	151	155	164	169	170	135
65°	99	103	111	114	116	98
75°	48	55	62	65	65	52
85°	11	14	13	11	10	12
90°	0	0	0	0	0	



TEST NUMBER: P178706

CATALOG NUMBER: 24ALNG-LD4-31-UNV-EL7W-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4
2.5°	347.3	347.3	347.3	346.4	346.4	346.4	346.4	346.4	346.4	345.4	345.4
5°	345.4	345.4	345.4	345.4	345.4	345.4	345.4	344.4	344.4	344.4	344.4
7.5°	342.5	342.5	343.5	343.5	342.5	342.5	342.5	342.5	342.5	341.5	341.5
10°	339.6	339.6	339.6	339.6	339.6	339.6	339.6	338.6	338.6	338.6	338.6
12.5°	334.7	334.7	334.7	334.7	334.7	334.7	334.7	333.8	333.8	333.8	333.8
15°	328.9	328.9	328.9	328.9	328.9	328.9	328.9	327.9	327.9	327.9	327.9
17.5°	322.1	322.1	322.1	322.1	322.1	322.1	322.1	321.1	322.1	321.1	322.1
20°	314.3	314.3	314.3	314.3	314.3	314.3	314.3	314.3	314.3	314.3	314.3
22.5°	306.6	306.6	306.6	306.6	306.6	306.6	306.6	306.6	306.6	306.6	306.6
25°	296.9	297.9	297.9	297.9	296.9	297.9	297.9	297.9	297.9	297.9	298.8
27.5°	288.2	287.2	287.2	287.2	287.2	288.2	288.2	288.2	289.1	289.1	290.1
30°	276.5	276.5	276.5	276.5	276.5	277.5	277.5	278.4	278.4	279.4	279.4
32.5°	265.8	265.8	265.8	266.8	266.8	266.8	266.8	267.8	268.7	269.7	270.7
35°	254.2	254.2	254.2	254.2	255.2	255.2	256.1	257.1	258.1	259.0	260.0
37.5°	242.6	241.6	242.6	242.6	242.6	243.5	244.5	245.5	246.4	247.4	249.3
40°	229.0	229.0	229.9	229.9	230.9	230.9	231.9	232.8	234.8	235.8	237.7
42.5°	217.3	216.4	217.3	218.3	219.3	219.3	220.2	221.2	222.2	224.1	226.1
45°	202.8	203.7	204.7	205.7	205.7	206.7	207.6	208.6	210.5	212.5	214.4
47.5°	190.2	191.1	192.1	192.1	194.0	194.0	195.0	197.0	197.9	199.9	201.8
50°	177.5	177.5	177.5	178.5	179.5	181.4	181.4	183.4	185.3	187.2	189.2
52.5°	164.0	164.9	164.9	165.9	166.9	167.8	168.8	170.8	172.7	174.6	176.6
55°	151.4	151.4	151.4	153.3	154.3	155.2	156.2	158.1	160.1	162.0	164.0
57.5°	137.8	137.8	138.7	139.7	140.7	141.6	142.6	144.6	146.5	148.4	150.4
60°	124.2	125.2	125.2	126.1	128.1	129.0	130.0	131.9	133.9	135.8	136.8
62.5°	111.6	111.6	112.5	113.5	115.5	116.4	117.4	119.3	121.3	122.2	124.2
65°	99.0	99.0	99.9	100.9	102.8	102.8	104.8	106.7	108.7	109.6	110.6
67.5°	86.3	86.3	87.3	87.3	90.2	91.2	92.2	93.1	95.1	96.1	98.0
70°	73.7	73.7	74.7	75.7	77.6	78.6	79.6	81.5	83.4	84.4	85.4
72.5°	61.1	61.1	62.1	63.1	66.0	66.9	67.9	68.9	70.8	71.8	73.7
75°	48.5	49.5	50.5	52.4	54.3	55.3	55.3	57.2	59.2	61.1	62.1
77.5°	37.8	37.8	39.8	41.7	43.7	43.7	44.6	46.6	47.5	49.5	50.5
80°	27.2	27.2	29.1	31.0	32.0	33.0	34.0	35.9	36.9	37.8	37.8
82.5°	17.5	18.4	19.4	20.4	22.3	23.3	24.3	25.2	25.2	25.2	24.3
85°	10.7	10.7	11.6	12.6	13.6	13.6	13.6	13.6	13.6	12.6	12.6
87.5°	3.9	3.9	4.9	4.9	4.9	3.9	3.9	3.9	2.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P178706

CATALOG NUMBER: 24ALNG-LD4-31-UNV-EL7W-L830-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4
2.5°	345.4	345.4	346.4	346.4	346.4	346.4	346.4	347.3	347.3	347.3
5°	343.5	344.4	344.4	344.4	345.4	345.4	345.4	345.4	345.4	345.4
7.5°	341.5	341.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	343.5
10°	338.6	338.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6	339.6
12.5°	333.8	333.8	333.8	334.7	334.7	334.7	334.7	334.7	334.7	334.7
15°	327.9	327.9	328.9	328.9	328.9	329.9	329.9	329.9	328.9	329.9
17.5°	322.1	322.1	323.1	323.1	323.1	323.1	323.1	323.1	324.0	323.1
20°	314.3	315.3	315.3	316.3	316.3	316.3	316.3	316.3	317.3	317.3
22.5°	307.6	308.5	309.5	309.5	309.5	309.5	310.5	310.5	310.5	310.5
25°	299.8	299.8	300.8	301.7	301.7	302.7	302.7	302.7	302.7	303.7
27.5°	291.1	292.0	293.0	294.0	294.0	294.0	294.9	294.9	294.9	294.9
30°	281.4	282.3	283.3	284.3	285.2	285.2	286.2	286.2	286.2	286.2
32.5°	271.7	273.6	274.6	275.5	275.5	276.5	277.5	277.5	278.4	278.4
35°	262.0	262.9	264.9	265.8	266.8	266.8	267.8	267.8	267.8	268.7
37.5°	250.3	252.3	254.2	255.2	256.1	256.1	256.1	257.1	258.1	258.1
40°	239.6	241.6	242.6	244.5	244.5	245.5	246.4	246.4	246.4	246.4
42.5°	228.0	229.9	231.9	232.8	233.8	233.8	234.8	234.8	235.8	235.8
45°	216.4	218.3	220.2	221.2	221.2	222.2	222.2	223.1	223.1	223.1
47.5°	203.7	206.7	206.7	208.6	208.6	208.6	209.6	210.5	211.5	210.5
50°	191.1	193.1	194.0	196.0	196.0	196.0	197.0	197.0	197.9	197.0
52.5°	178.5	179.5	181.4	181.4	182.4	182.4	183.4	183.4	183.4	183.4
55°	165.9	166.9	167.8	168.8	168.8	168.8	169.8	168.8	169.8	169.8
57.5°	152.3	153.3	154.3	155.2	155.2	155.2	155.2	156.2	156.2	155.2
60°	138.7	139.7	140.7	140.7	141.6	141.6	141.6	141.6	142.6	142.6
62.5°	125.2	126.1	127.1	127.1	128.1	128.1	129.0	129.0	129.0	129.0
65°	111.6	112.5	114.5	114.5	114.5	115.5	115.5	115.5	116.4	116.4
67.5°	99.0	99.9	100.9	100.9	101.9	101.9	102.8	102.8	102.8	102.8
70°	87.3	87.3	88.3	89.3	89.3	89.3	90.2	90.2	90.2	91.2
72.5°	74.7	75.7	76.6	77.6	77.6	77.6	77.6	77.6	77.6	77.6
75°	63.1	64.0	64.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
77.5°	51.4	51.4	52.4	51.4	51.4	51.4	50.5	50.5	50.5	50.5
80°	37.8	36.9	36.9	36.9	35.9	35.9	35.9	35.9	34.9	35.9
82.5°	24.3	24.3	23.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
85°	11.6	11.6	10.7	10.7	10.7	9.7	9.7	9.7	9.7	9.7
87.5°	2.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)