

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: P178731

Luminaire Tested: **24ALNG-LD4-45-UNV-EL7W-L835-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P178731  
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-LD4-45-UNV-EL7W-L835-CD1-U  
Description: METALUX ARCLINE 2X4 TROFFER  
  
Light Source: EATON LED 3500K  
Ballast/Driver: OSRAM ELECTRONIC DRIVER

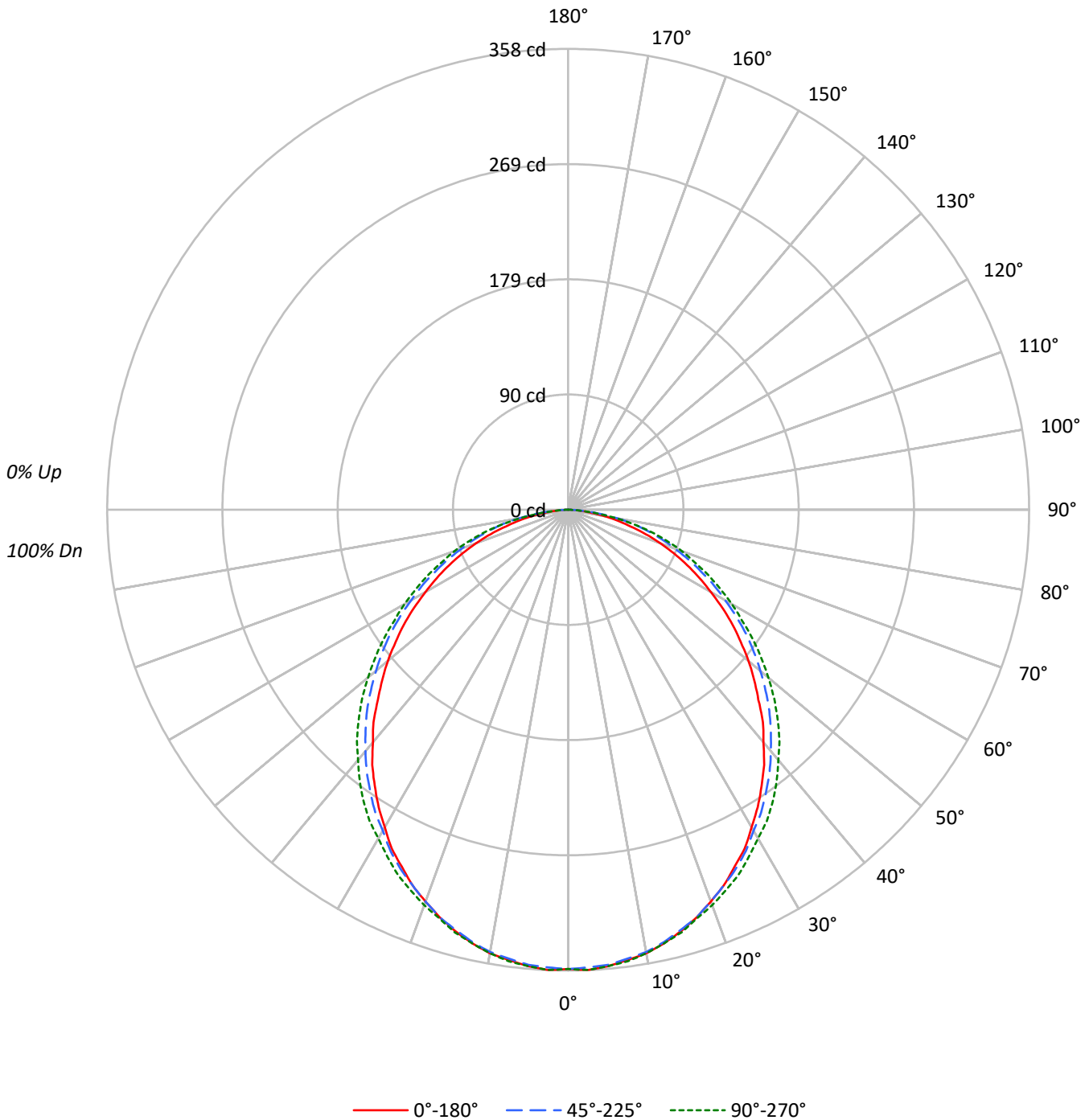
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 950.0 lumens  
Efficiency: N/A  
Efficacy: 153.2 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°	480	480	480
5°	481	479	481
10°	478	477	478
15°	472	471	473
20°	464	464	468
25°	454	457	465
30°	443	447	458
35°	430	440	455
40°	414	430	446
45°	397	420	437
50°	383	408	425
55°	366	396	410
60°	344	379	396
65°	325	363	382
70°	299	346	370
75°	260	333	348
80°	217	302	287
85°	170	201	154



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.7	3.6
10°-20°	95.5	10.1
20°-30°	142.2	15.0
30°-40°	167.9	17.7
40°-50°	170.0	17.9
50°-60°	149.2	15.7
60°-70°	111.5	11.7
70°-80°	64.7	6.8
80°-90°	15.3	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°	271.4	28.6
0°-40°	439.4	46.2
0°-60°	758.5	79.8
0°-90°	950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	950.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	357	357	357	357	357	
5°	356	356	355	356	356	34
15°	339	339	338	339	340	95
25°	306	307	308	311	313	141
35°	262	263	268	275	277	164
45°	209	213	221	228	230	162
55°	156	160	169	174	175	139
65°	102	106	114	118	120	101
75°	50	57	64	67	67	54
85°	11	14	13	11	10	13
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°	356.9	356.9	356.9	356.9	356.9	356.9	356.9	356.9	356.9	356.9	356.9
2.5°	357.9	357.9	357.9	356.9	356.9	356.9	356.9	356.9	356.9	355.9	355.9
5°	355.9	355.9	355.9	355.9	355.9	355.9	355.9	354.9	354.9	354.9	354.9
7.5°	352.9	352.9	353.9	353.9	352.9	352.9	352.9	352.9	352.9	351.9	351.9
10°	349.9	349.9	349.9	349.9	349.9	349.9	349.9	348.9	348.9	348.9	348.9
12.5°	344.9	344.9	344.9	344.9	344.9	344.9	344.9	343.9	343.9	343.9	343.9
15°	338.9	338.9	338.9	338.9	338.9	338.9	338.9	337.9	337.9	337.9	337.9
17.5°	331.9	331.9	331.9	331.9	331.9	331.9	331.9	330.9	331.9	330.9	331.9
20°	323.9	323.9	323.9	323.9	323.9	323.9	323.9	323.9	323.9	323.9	323.9
22.5°	315.9	315.9	315.9	315.9	315.9	315.9	315.9	315.9	315.9	315.9	315.9
25°	305.9	306.9	306.9	306.9	305.9	306.9	306.9	306.9	306.9	306.9	307.9
27.5°	296.9	295.9	295.9	295.9	295.9	296.9	296.9	296.9	297.9	297.9	298.9
30°	284.9	284.9	284.9	284.9	284.9	285.9	285.9	286.9	286.9	287.9	287.9
32.5°	273.9	273.9	273.9	274.9	274.9	274.9	274.9	275.9	276.9	277.9	278.9
35°	261.9	261.9	261.9	261.9	262.9	262.9	263.9	264.9	265.9	266.9	267.9
37.5°	249.9	248.9	249.9	249.9	249.9	250.9	251.9	252.9	253.9	254.9	256.9
40°	235.9	235.9	236.9	236.9	237.9	237.9	238.9	239.9	241.9	242.9	244.9
42.5°	223.9	222.9	223.9	224.9	225.9	225.9	226.9	227.9	228.9	230.9	232.9
45°	208.9	209.9	210.9	211.9	211.9	212.9	213.9	214.9	216.9	218.9	220.9
47.5°	195.9	196.9	197.9	197.9	199.9	199.9	200.9	202.9	203.9	205.9	207.9
50°	182.9	182.9	182.9	183.9	184.9	186.9	186.9	188.9	190.9	192.9	194.9
52.5°	168.9	169.9	169.9	170.9	171.9	172.9	173.9	175.9	177.9	179.9	181.9
55°	155.9	155.9	155.9	157.9	158.9	159.9	160.9	162.9	164.9	166.9	168.9
57.5°	142.0	142.0	143.0	144.0	145.0	146.0	147.0	149.0	150.9	152.9	154.9
60°	128.0	129.0	129.0	130.0	132.0	133.0	134.0	136.0	138.0	140.0	141.0
62.5°	115.0	115.0	116.0	117.0	119.0	120.0	121.0	123.0	125.0	126.0	128.0
65°	102.0	102.0	103.0	104.0	106.0	106.0	108.0	110.0	112.0	113.0	114.0
67.5°	89.0	89.0	90.0	90.0	93.0	94.0	95.0	96.0	98.0	99.0	101.0
70°	76.0	76.0	77.0	78.0	80.0	81.0	82.0	84.0	86.0	87.0	88.0
72.5°	63.0	63.0	64.0	65.0	68.0	69.0	70.0	71.0	73.0	74.0	76.0
75°	50.0	51.0	52.0	54.0	56.0	57.0	57.0	59.0	61.0	63.0	64.0
77.5°	39.0	39.0	41.0	43.0	45.0	45.0	46.0	48.0	49.0	51.0	52.0
80°	28.0	28.0	30.0	32.0	33.0	34.0	35.0	37.0	38.0	39.0	39.0
82.5°	18.0	19.0	20.0	21.0	23.0	24.0	25.0	26.0	26.0	26.0	25.0
85°	11.0	11.0	12.0	13.0	14.0	14.0	14.0	14.0	14.0	13.0	13.0
87.5°	4.0	4.0	5.0	5.0	5.0	4.0	4.0	4.0	3.0	3.0	3.0
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°	356.9	356.9	356.9	356.9	356.9	356.9	356.9	356.9	356.9	356.9
2.5°	355.9	355.9	356.9	356.9	356.9	356.9	356.9	357.9	357.9	357.9
5°	353.9	354.9	354.9	354.9	355.9	355.9	355.9	355.9	355.9	355.9
7.5°	351.9	351.9	352.9	352.9	352.9	352.9	352.9	352.9	352.9	353.9
10°	348.9	348.9	349.9	349.9	349.9	349.9	349.9	349.9	349.9	349.9
12.5°	343.9	343.9	343.9	344.9	344.9	344.9	344.9	344.9	344.9	344.9
15°	337.9	337.9	338.9	338.9	338.9	339.9	339.9	339.9	338.9	339.9
17.5°	331.9	331.9	332.9	332.9	332.9	332.9	332.9	332.9	333.9	332.9
20°	323.9	324.9	324.9	325.9	325.9	325.9	325.9	325.9	326.9	326.9
22.5°	316.9	317.9	318.9	318.9	318.9	318.9	319.9	319.9	319.9	319.9
25°	308.9	308.9	309.9	310.9	310.9	311.9	311.9	311.9	311.9	312.9
27.5°	299.9	300.9	301.9	302.9	302.9	302.9	303.9	303.9	303.9	303.9
30°	289.9	290.9	291.9	292.9	293.9	293.9	294.9	294.9	294.9	294.9
32.5°	279.9	281.9	282.9	283.9	283.9	284.9	285.9	285.9	286.9	286.9
35°	269.9	270.9	272.9	273.9	274.9	274.9	275.9	275.9	275.9	276.9
37.5°	257.9	259.9	261.9	262.9	263.9	263.9	263.9	264.9	265.9	265.9
40°	246.9	248.9	249.9	251.9	251.9	252.9	253.9	253.9	253.9	253.9
42.5°	234.9	236.9	238.9	239.9	240.9	240.9	241.9	241.9	242.9	242.9
45°	222.9	224.9	226.9	227.9	227.9	228.9	228.9	229.9	229.9	229.9
47.5°	209.9	212.9	212.9	214.9	214.9	214.9	215.9	216.9	217.9	216.9
50°	196.9	198.9	199.9	201.9	201.9	201.9	202.9	202.9	203.9	202.9
52.5°	183.9	184.9	186.9	186.9	187.9	187.9	188.9	188.9	188.9	188.9
55°	170.9	171.9	172.9	173.9	173.9	173.9	174.9	173.9	174.9	174.9
57.5°	156.9	157.9	158.9	159.9	159.9	159.9	159.9	160.9	160.9	159.9
60°	143.0	144.0	145.0	145.0	146.0	146.0	146.0	146.0	147.0	147.0
62.5°	129.0	130.0	131.0	131.0	132.0	132.0	133.0	133.0	133.0	133.0
65°	115.0	116.0	118.0	118.0	118.0	119.0	119.0	119.0	120.0	120.0
67.5°	102.0	103.0	104.0	104.0	105.0	105.0	106.0	106.0	106.0	106.0
70°	90.0	90.0	91.0	92.0	92.0	92.0	93.0	93.0	93.0	94.0
72.5°	77.0	78.0	79.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
75°	65.0	66.0	66.0	67.0	67.0	67.0	67.0	67.0	67.0	67.0
77.5°	53.0	53.0	54.0	53.0	53.0	53.0	52.0	52.0	52.0	52.0
80°	39.0	38.0	38.0	38.0	37.0	37.0	37.0	37.0	36.0	37.0
82.5°	25.0	25.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
85°	12.0	12.0	11.0	11.0	11.0	10.0	10.0	10.0	10.0	10.0
87.5°	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)