

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: P189446

Luminaire Tested: **4SWLED-LD4-48HL-LW-UNV-L840-CD2-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P189446  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26866)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4SWLED-LD4-48HL-LW-UNV-L840-CD2-U  
Description: [LUMINAIRE]METALUX LED STAIRWELL WITH FROSTED LENS  
  
Light Source: EATON LED 4000K  
Ballast/Driver: ELECTRONIC DRIVER

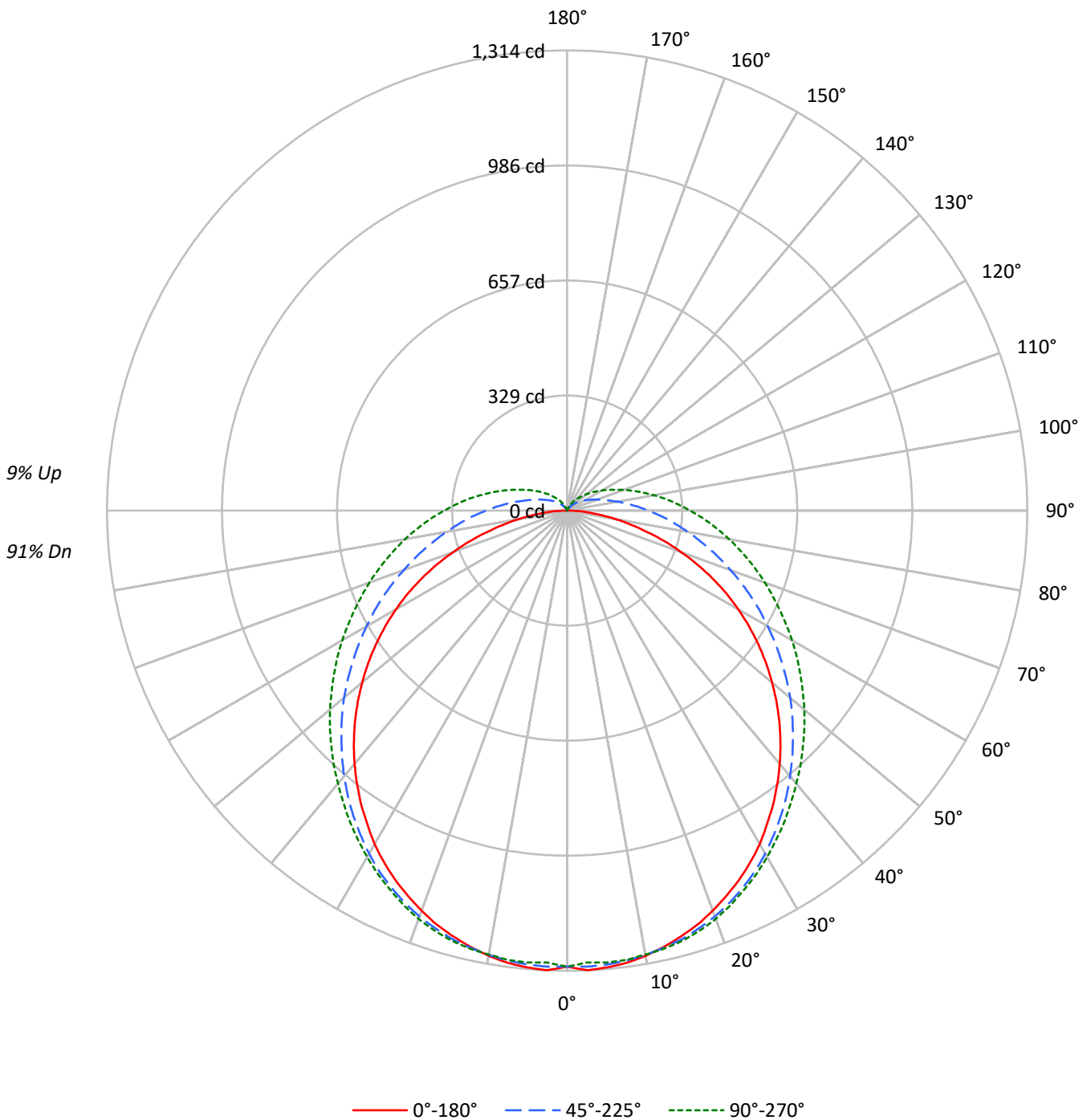
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4782.0 lumens  
Efficiency: N/A  
Efficacy: 114.1 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 3.75' x H: 0.17')  
CIE Type: Direct  
  
Input Watts (W): 41.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	91
1	104	99	94	89	101	95	91	87	89	86	82	84	81	78	79	76	74	71
2	94	85	77	71	91	82	75	69	77	71	66	72	68	63	68	64	61	58
3	85	74	65	58	82	72	64	57	67	60	55	63	57	53	59	55	51	48
4	78	65	56	49	75	63	55	48	59	52	46	56	50	45	53	47	43	40
5	72	58	49	42	69	56	48	41	53	45	40	50	44	38	47	42	37	35
6	66	52	43	36	63	51	42	36	48	40	35	45	39	33	43	37	32	30
7	61	47	38	32	59	46	37	31	43	36	30	41	34	30	39	33	29	26
8	57	43	34	28	55	42	34	28	40	32	27	38	31	26	36	30	26	24
9	53	39	31	25	51	38	30	25	36	29	24	35	28	24	33	27	23	21
10	50	36	28	23	48	35	28	23	34	27	22	32	26	21	31	25	21	19

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9966	9966	9966
5°	10021	9704	9580
10°	9955	9436	9278
15°	9855	9186	9006
20°	9746	8925	8700
25°	9622	8640	8361
30°	9476	8335	8034
35°	9291	8006	7715
40°	9096	7672	7408
45°	8886	7335	7137
50°	8640	7014	6881
55°	8367	6667	6633
60°	8024	6328	6417
65°	7570	6017	6210
70°	6913	5694	6052
75°	6012	5426	5935
80°	4922	5205	5880
85°	3518	5105	5901



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.5	2.6
10°-20°	356.3	7.5
20°-30°	543.6	11.4
30°-40°	660.6	13.8
40°-50°	699.7	14.6
50°-60°	664.2	13.9
60°-70°	566.0	11.8
70°-80°	429.1	9.0
80°-90°	290.4	6.1
90°-100°	185.4	3.9
100°-110°	116.9	2.4
110°-120°	71.6	1.5
120°-130°	41.7	0.9
130°-140°	21.5	0.4
140°-150°	8.9	0.2
150°-160°	2.4	0.0
160°-170°	0.3	0.0
170°-180°	0.0	0.0
0°-30°	1023.5	21.4
0°-40°	1684.1	35.2
0°-60°	3048.0	63.7
0°-90°	4333.4	90.6
90°-120°	373.9	7.8
90°-150°	445.9	9.3
90°-180°	449.0	9.4
0°-180°	4782.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1302	1302	1302	1302	1302	
5°	1309	1295	1301	1295	1295	124
15°	1258	1249	1267	1270	1272	355
25°	1163	1161	1188	1190	1195	536
35°	1025	1032	1064	1072	1083	641
45°	857	874	912	935	952	661
55°	667	693	746	790	812	596
65°	458	499	578	643	670	452
75°	237	310	420	504	534	253
85°	60	158	288	378	408	66
90°	3	106	231	321	350	5
95°	0	70	185	269	300	0
105°	0	35	115	183	209	0
115°	0	21	73	121	141	0
125°	0	12	46	80	93	0
135°	0	5	26	49	57	0
145°	1	3	12	25	31	0
155°	1	1	4	8	11	0
165°	1	1	1	2	2	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1302.0	1302.0	1302.0	1302.0	1302.0
2.5°	1313.7	1298.3	1303.4	1298.3	1291.7
5°	1309.3	1294.6	1301.2	1295.3	1295.3
7.5°	1302.7	1288.0	1296.1	1292.4	1293.9
10°	1290.9	1277.7	1288.0	1286.5	1287.2
12.5°	1276.2	1264.4	1278.4	1278.4	1281.4
15°	1258.5	1249.0	1266.6	1269.6	1271.8
17.5°	1239.4	1230.6	1251.2	1255.6	1257.8
20°	1215.8	1210.0	1233.5	1235.7	1240.9
22.5°	1190.1	1186.4	1212.2	1213.6	1219.5
25°	1162.9	1160.6	1187.9	1190.1	1195.2
27.5°	1132.7	1131.9	1161.4	1163.6	1170.2
30°	1099.6	1101.0	1131.2	1134.9	1142.2
32.5°	1062.0	1067.9	1098.1	1103.2	1112.8
35°	1025.2	1031.9	1064.2	1071.6	1082.6
37.5°	985.5	995.8	1028.2	1037.7	1050.3
40°	944.3	956.8	990.6	1003.9	1017.9
42.5°	901.6	915.6	951.6	970.0	986.2
45°	857.4	873.6	911.9	934.7	952.4
47.5°	811.1	830.9	872.1	898.6	918.5
50°	764.0	785.3	831.7	862.6	883.9
52.5°	716.1	739.7	789.0	826.5	847.9
55°	666.8	693.3	746.3	790.4	812.5
57.5°	616.0	644.7	704.3	752.9	777.9
60°	564.5	596.9	660.9	716.1	741.9
62.5°	512.2	548.3	620.4	680.1	705.1
65°	457.8	499.0	578.5	643.3	669.7
67.5°	402.6	449.7	537.3	607.2	634.4
70°	346.6	401.1	496.1	573.3	600.6
72.5°	291.5	354.7	457.8	538.0	566.7
75°	237.0	309.8	420.2	504.1	533.6
77.5°	188.4	266.4	383.4	472.5	501.2
80°	139.8	225.9	349.6	440.1	469.6
82.5°	97.2	189.9	317.9	408.5	438.6
85°	60.4	158.2	287.8	377.6	408.5
87.5°	28.7	130.3	258.3	348.1	379.8
90°	2.9	106.0	231.1	320.9	350.3
92.5°	0.0	86.1	207.5	294.4	324.6
95°	0.0	69.9	184.7	269.4	299.5
97.5°	0.0	57.4	164.1	245.8	275.3
100°	0.0	47.8	145.7	223.7	251.7
102.5°	0.0	40.5	128.8	202.4	229.6
105°	0.0	34.6	114.8	183.3	209.0
107.5°	0.0	30.2	102.3	165.6	189.9
110°	0.0	26.5	91.3	149.4	172.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	22.8	81.7	134.7	156.0
115°	0.0	20.6	72.9	121.4	140.6
117.5°	0.0	17.7	65.5	109.7	127.3
120°	0.0	15.5	58.1	98.6	114.8
122.5°	0.0	14.0	52.3	89.1	103.8
125°	0.0	11.8	46.4	79.5	92.7
127.5°	0.0	9.6	40.5	70.7	82.4
130°	0.0	8.1	35.3	63.3	73.6
132.5°	0.0	6.6	30.2	55.9	65.5
135°	0.0	5.2	25.8	48.6	57.4
137.5°	0.7	4.4	22.1	42.7	50.0
140°	0.0	3.7	18.4	36.1	42.7
142.5°	0.7	2.9	14.7	30.2	36.8
145°	0.7	2.9	11.8	25.0	30.9
147.5°	0.7	2.2	8.8	19.9	25.0
150°	0.7	1.5	6.6	15.5	19.9
152.5°	0.7	1.5	5.2	11.0	15.5
155°	0.7	0.7	3.7	8.1	11.0
157.5°	0.7	0.7	2.9	5.9	7.4
160°	0.7	0.7	2.2	3.7	5.2
162.5°	0.7	0.7	1.5	2.2	3.7
165°	0.7	0.7	0.7	1.5	2.2
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)