

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: P236341

Luminaire Tested: **4SWLED-48HL-LW-UNV-L840-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236341  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1709-316-27)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4SWLED-48HL-LW-UNV-L840-CD1-U  
Description: METALUX SWLED LINEAR LUMINAIRE  
4FT FIXTURE WITH 2 ROW LED, WIDE LENS  
Light Source: (224) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

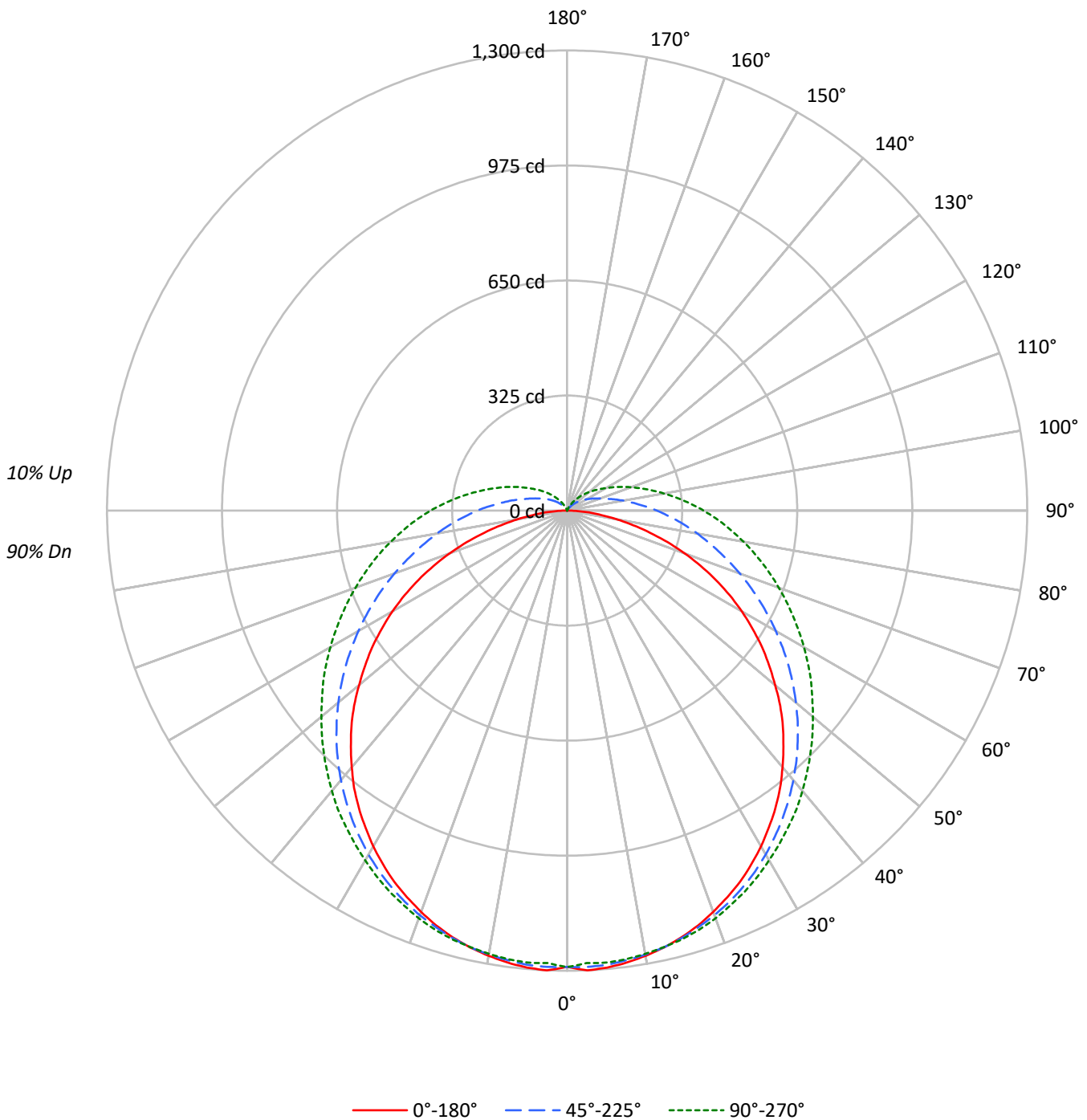
Lumens per Lamp: N/A  
Luminaire Lumens: 4899.0 lumens  
Efficiency: N/A  
Efficacy: 109.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.15')  
CIE Type: Direct

Input Watts (W): 44.6  
Input Voltage (V): 120  
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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	90
1	104	98	93	88	100	95	90	86	89	85	82	83	80	77	78	75	73	70
2	94	84	77	70	90	82	75	69	76	71	66	72	67	63	67	63	60	57
3	85	73	65	57	82	71	63	56	67	60	54	62	57	52	59	54	50	47
4	78	65	55	48	74	63	54	47	59	51	45	55	49	44	52	47	42	40
5	71	58	48	41	68	56	47	40	52	45	39	49	43	38	47	41	36	34
6	65	52	42	36	63	50	41	35	47	40	34	45	38	33	42	36	32	29
7	61	47	38	31	58	45	37	31	43	35	30	41	34	29	38	32	28	26
8	56	42	34	28	54	41	33	27	39	32	27	37	31	26	35	29	25	23
9	53	39	30	25	51	38	30	24	36	29	24	34	28	23	32	27	22	21
10	49	36	28	22	47	35	27	22	33	26	21	32	25	21	30	24	20	19

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

	0°	45°	90°
0°	9252	9252	9252
5°	9306	9041	8931
10°	9246	8812	8672
15°	9182	8597	8437
20°	9094	8372	8202
25°	9006	8155	7961
30°	8889	7922	7721
35°	8765	7680	7504
40°	8603	7434	7303
45°	8440	7189	7102
50°	8207	6934	6914
55°	7988	6682	6767
60°	7697	6424	6626
65°	7295	6180	6511
70°	6724	5957	6455
75°	5933	5780	6449
80°	4890	5700	6519
85°	3603	5751	6720



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.3	2.5
10°-20°	352.3	7.2
20°-30°	539.2	11.0
30°-40°	661.0	13.5
40°-50°	707.5	14.4
50°-60°	678.6	13.9
60°-70°	585.3	11.9
70°-80°	450.9	9.2
80°-90°	312.6	6.4
90°-100°	203.5	4.2
100°-110°	129.4	2.6
110°-120°	78.9	1.6
120°-130°	45.2	0.9
130°-140°	22.3	0.5
140°-150°	8.4	0.2
150°-160°	1.6	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1013.8	20.7
0°-40°	1674.8	34.2
0°-60°	3060.9	62.5
0°-90°	4409.7	90.0
90°-120°	411.8	8.4
90°-150°	487.7	10.0
90°-180°	489.0	10.0
0°-180°	4899.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1289	1289	1289	1289	1289	
5°	1296	1284	1288	1282	1282	123
15°	1248	1239	1250	1252	1254	352
25°	1157	1152	1174	1180	1188	533
35°	1026	1027	1061	1077	1090	641
45°	862	875	922	953	972	664
55°	672	700	764	815	841	600
65°	463	508	599	671	703	458
75°	243	319	442	534	570	258
85°	62	169	310	408	444	67
90°	1	115	254	350	385	4
95°	0	77	202	295	329	0
105°	0	38	126	204	232	0
115°	0	21	80	134	157	0
125°	1	10	50	88	103	0
135°	1	2	27	52	62	0
145°	1	1	10	25	31	0
155°	1	1	1	6	9	0
165°	0	0	0	0	0	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°	1289.3	1289.3	1289.3	1289.3	1289.3
2.5°	1300.2	1287.5	1290.5	1285.6	1279.6
5°	1296.0	1283.8	1288.1	1282.0	1282.0
7.5°	1288.1	1277.1	1281.4	1277.7	1278.3
10°	1277.1	1266.2	1273.5	1270.4	1271.7
12.5°	1264.4	1253.4	1263.8	1261.3	1263.1
15°	1248.0	1239.4	1250.4	1251.6	1254.0
17.5°	1229.1	1221.8	1234.0	1237.6	1241.3
20°	1206.6	1201.1	1216.3	1220.0	1226.1
22.5°	1182.3	1177.4	1196.9	1199.9	1206.6
25°	1156.8	1151.9	1174.4	1179.9	1187.8
27.5°	1127.0	1125.2	1149.5	1157.4	1165.3
30°	1095.4	1094.2	1122.1	1131.2	1141.0
32.5°	1060.7	1061.9	1092.3	1104.5	1116.0
35°	1026.1	1027.3	1061.3	1077.1	1089.9
37.5°	988.4	992.0	1028.5	1047.4	1063.8
40°	946.5	955.0	993.9	1017.0	1034.0
42.5°	904.5	916.1	958.6	985.4	1003.0
45°	862.0	874.7	921.5	953.1	972.0
47.5°	816.4	832.8	883.2	919.1	939.8
50°	767.1	789.6	843.7	885.7	906.3
52.5°	719.7	745.2	803.6	851.0	872.9
55°	671.7	700.3	763.5	815.2	841.3
57.5°	621.2	652.2	722.1	778.7	807.2
60°	570.2	605.4	680.8	743.4	772.6
62.5°	517.3	557.4	639.5	707.0	738.0
65°	463.2	508.2	598.7	671.1	703.3
67.5°	408.5	459.5	558.6	637.0	669.9
70°	352.6	411.5	518.5	602.4	636.4
72.5°	297.9	364.7	479.6	567.1	603.0
75°	243.1	319.1	442.5	534.3	570.2
77.5°	190.9	276.0	406.1	502.1	538.0
80°	142.8	236.5	373.2	469.9	505.7
82.5°	98.5	201.2	341.0	438.9	474.1
85°	62.0	169.0	310.0	407.9	444.4
87.5°	29.8	140.4	280.2	378.7	414.6
90°	1.2	114.9	253.5	350.1	385.4
92.5°	0.0	94.2	227.3	322.2	356.8
95°	0.0	77.2	202.4	295.4	328.9
97.5°	0.0	63.8	180.5	270.5	302.7
100°	0.0	52.3	161.1	246.8	277.8
102.5°	0.0	44.4	142.8	224.3	254.1
105°	0.0	38.3	125.8	203.6	232.2
107.5°	0.0	32.8	112.5	184.8	211.5
110°	0.0	28.0	100.3	166.6	192.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.6	24.3	89.4	150.8	174.5
115°	0.0	21.3	80.2	134.3	157.4
117.5°	0.0	17.6	71.7	121.0	141.6
120°	0.0	15.2	63.8	108.8	127.0
122.5°	0.6	12.8	56.5	97.9	114.3
125°	0.6	10.3	49.8	87.5	102.7
127.5°	0.6	7.9	43.8	77.8	91.8
130°	0.6	6.1	37.7	68.7	80.8
132.5°	0.6	4.3	32.2	60.2	71.7
135°	0.6	2.4	26.7	52.3	62.0
137.5°	0.6	1.2	21.9	44.4	53.5
140°	0.6	0.6	17.6	37.7	45.6
142.5°	0.6	0.0	13.4	31.6	37.7
145°	0.6	0.6	10.3	24.9	31.0
147.5°	0.6	0.6	7.3	19.5	24.9
150°	0.6	0.6	4.3	14.0	18.8
152.5°	0.6	0.6	1.8	9.7	14.0
155°	0.6	0.6	0.6	6.1	9.1
157.5°	0.6	0.6	0.0	2.4	4.9
160°	1.2	0.6	0.0	0.0	1.2
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
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)