

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: P234514

Luminaire Tested: **4WSNLED-LD4-48HL-F-UNV-L840-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P234514  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-169-11)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4WSNLED-LD4-48HL-F-UNV-L840-CD1-U  
Description: 4FT WSNLED WRAPAROUND  
Light Source: (224) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

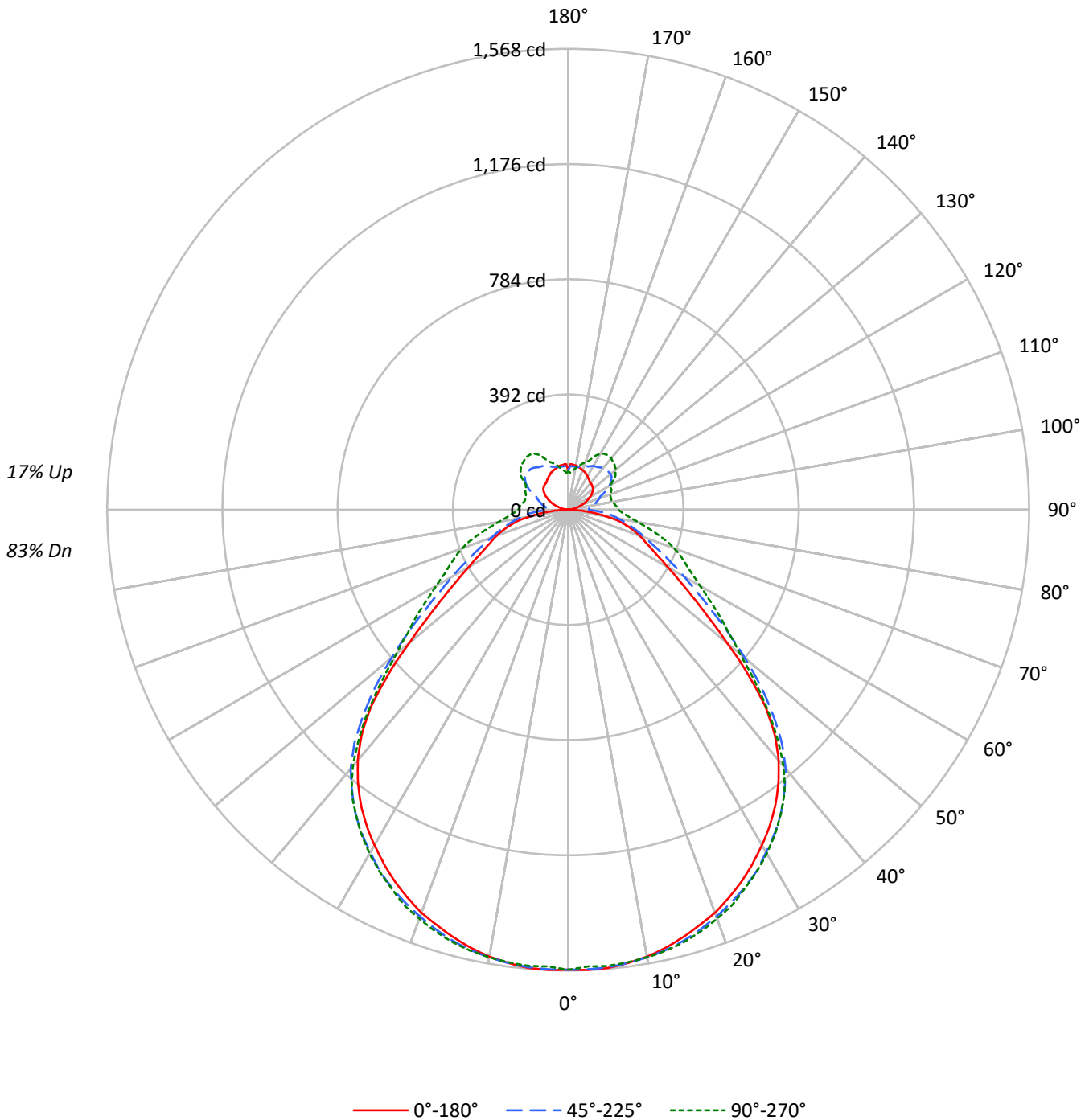
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4861.0 lumens  
Efficiency: N/A  
Efficacy: 111.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.28 / 1.35  
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 4' x H: 0.12')  
CIE Type: Semi-Direct  
  
Input Watts (W): 43.7  
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	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	83
1	105	100	96	92	100	96	93	89	89	86	83	82	80	78	76	74	72	69
2	96	88	82	76	92	85	79	74	78	74	70	73	69	65	67	64	62	59
3	88	78	70	64	84	75	68	62	70	64	59	65	60	56	60	56	53	50
4	81	69	61	55	77	67	59	53	62	56	51	58	53	48	54	50	46	43
5	74	62	54	47	71	60	52	46	56	49	44	52	47	42	49	44	40	38
6	69	56	48	42	66	54	46	41	51	44	39	48	42	37	44	40	36	33
7	64	51	43	37	61	49	42	36	46	40	35	43	38	33	41	36	32	30
8	59	47	38	33	57	45	38	32	42	36	31	40	34	30	38	32	29	27
9	56	43	35	30	53	41	34	29	39	33	28	37	31	27	35	30	26	24
10	52	39	32	27	50	38	31	26	36	30	25	34	29	25	32	27	24	22

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

	0°	45°	90°
0°	4212	4212	4212
5°	4216	4181	4163
10°	4196	4145	4134
15°	4162	4108	4105
20°	4132	4056	4055
25°	4085	4007	3988
30°	4023	3932	3915
35°	3950	3847	3811
40°	3811	3700	3622
45°	3500	3371	3240
50°	2850	2900	2779
55°	2315	2403	2502
60°	1995	2052	2291
65°	1854	1817	2222
70°	1876	1676	2247
75°	1907	1628	2186
80°	1767	1660	2177
85°	1285	1734	2484



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.4	3.1
10°-20°	427.6	8.8
20°-30°	650.5	13.4
30°-40°	780.2	16.0
40°-50°	742.7	15.3
50°-60°	528.9	10.9
60°-70°	359.5	7.4
70°-80°	242.6	5.0
80°-90°	139.1	2.9
90°-100°	89.8	1.8
100°-110°	101.1	2.1
110°-120°	125.6	2.6
120°-130°	144.1	3.0
130°-140°	137.0	2.8
140°-150°	110.9	2.3
150°-160°	76.4	1.6
160°-170°	43.0	0.9
170°-180°	13.8	0.3
0°-30°	1226.5	25.2
0°-40°	2006.7	41.3
0°-60°	3278.2	67.4
0°-90°	4019.4	82.7
90°-120°	316.5	6.5
90°-150°	708.5	14.6
90°-180°	842.0	17.3
0°-180°	4861.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1565	1565	1565	1565	1565	
5°	1565	1556	1563	1560	1558	149
15°	1506	1504	1518	1525	1523	425
25°	1396	1398	1419	1424	1422	643
35°	1229	1236	1262	1262	1262	766
45°	948	972	984	984	958	718
55°	515	567	593	598	628	471
65°	311	332	353	374	442	313
75°	205	172	221	264	308	213
85°	56	80	127	176	195	63
90°	0	35	71	134	170	4
95°	5	33	73	136	162	6
105°	33	49	99	136	151	35
115°	68	108	134	151	162	68
125°	99	132	179	193	195	89
135°	115	139	188	216	221	89
145°	125	139	176	216	228	78
155°	139	141	162	188	193	64
165°	148	148	151	153	158	42
175°	155	155	148	129	132	15
180°	132	132	132	132	132	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1565.2	1565.2	1565.2	1565.2	1565.2
2.5°	1567.5	1560.5	1565.2	1565.2	1555.7
5°	1565.2	1555.7	1562.8	1560.5	1558.1
7.5°	1555.7	1548.7	1555.7	1558.1	1553.4
10°	1544.0	1536.9	1546.3	1548.7	1546.3
12.5°	1527.5	1522.8	1534.6	1539.3	1536.9
15°	1506.3	1504.0	1518.1	1525.1	1522.8
17.5°	1482.8	1480.4	1496.9	1506.3	1504.0
20°	1459.2	1456.9	1473.4	1480.4	1480.4
22.5°	1428.6	1428.6	1447.5	1454.5	1456.9
25°	1395.7	1398.1	1419.2	1423.9	1421.6
27.5°	1358.0	1360.4	1386.3	1388.6	1388.6
30°	1318.0	1322.7	1346.3	1348.6	1351.0
32.5°	1275.7	1280.4	1306.3	1306.3	1308.6
35°	1228.6	1235.7	1261.5	1261.5	1261.5
37.5°	1174.5	1183.9	1207.4	1207.4	1209.8
40°	1113.3	1127.4	1150.9	1148.6	1139.2
42.5°	1040.3	1059.1	1075.6	1073.3	1052.1
45°	948.5	972.0	983.8	983.8	957.9
47.5°	830.8	866.1	887.3	877.9	856.7
50°	706.1	757.9	783.8	779.0	762.6
52.5°	600.2	659.0	684.9	682.6	687.3
55°	515.4	567.2	593.1	597.8	628.4
57.5°	447.2	494.3	515.4	529.6	567.2
60°	390.7	433.1	454.2	468.4	517.8
62.5°	346.0	378.9	400.1	416.6	475.4
65°	310.7	331.9	353.0	374.2	442.5
67.5°	282.4	287.1	310.7	341.3	414.2
70°	258.9	242.4	277.7	313.0	383.6
72.5°	233.0	204.8	249.5	284.8	348.3
75°	204.8	171.8	221.2	263.6	308.3
77.5°	174.2	143.6	197.7	240.1	270.7
80°	134.2	122.4	174.2	218.9	240.1
82.5°	94.1	101.2	150.6	200.1	214.2
85°	56.5	80.0	127.1	176.5	195.4
87.5°	25.9	58.8	96.5	153.0	181.2
90°	0.0	35.3	70.6	134.2	169.5
92.5°	2.4	35.3	70.6	136.5	167.1
95°	4.7	33.0	73.0	136.5	162.4
97.5°	9.4	33.0	80.0	134.2	157.7
100°	16.5	35.3	87.1	134.2	153.0
102.5°	23.5	37.7	94.1	136.5	150.6
105°	33.0	49.4	98.9	136.5	150.6
107.5°	42.4	65.9	105.9	138.9	150.6
110°	51.8	84.7	113.0	141.2	153.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	61.2	98.9	117.7	148.3	157.7
115°	68.3	108.3	134.2	150.6	162.4
117.5°	77.7	115.3	150.6	153.0	162.4
120°	84.7	122.4	162.4	162.4	164.8
122.5°	94.1	127.1	171.8	181.2	178.9
125°	98.9	131.8	178.9	193.0	195.4
127.5°	105.9	134.2	185.9	200.1	202.4
130°	110.6	136.5	188.3	207.1	211.8
132.5°	113.0	136.5	188.3	211.8	216.5
135°	115.3	138.9	188.3	216.5	221.2
137.5°	117.7	136.5	188.3	218.9	223.6
140°	117.7	136.5	185.9	218.9	228.3
142.5°	120.0	136.5	181.2	218.9	228.3
145°	124.7	138.9	176.5	216.5	228.3
147.5°	127.1	138.9	174.2	211.8	225.9
150°	131.8	138.9	171.8	204.8	218.9
152.5°	134.2	138.9	167.1	197.7	209.5
155°	138.9	141.2	162.4	188.3	193.0
157.5°	141.2	141.2	160.0	178.9	178.9
160°	143.6	143.6	155.3	169.5	171.8
162.5°	145.9	145.9	153.0	160.0	164.8
165°	148.3	148.3	150.6	153.0	157.7
167.5°	150.6	150.6	148.3	143.6	150.6
170°	153.0	153.0	148.3	136.5	143.6
172.5°	153.0	155.3	148.3	131.8	136.5
175°	155.3	155.3	148.3	129.4	131.8
177.5°	155.3	155.3	148.3	124.7	124.7
180°	131.8	131.8	131.8	131.8	131.8

(END OF REPORT)