

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: P234517

Luminaire Tested: **4WSNLED-LD4-52HL-F-UNV-L835-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P234517  
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-LD4-52HL-F-UNV-L835-CD1-U  
Description: 4FT WSNLED WRAPAROUND  
Light Source: (224) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

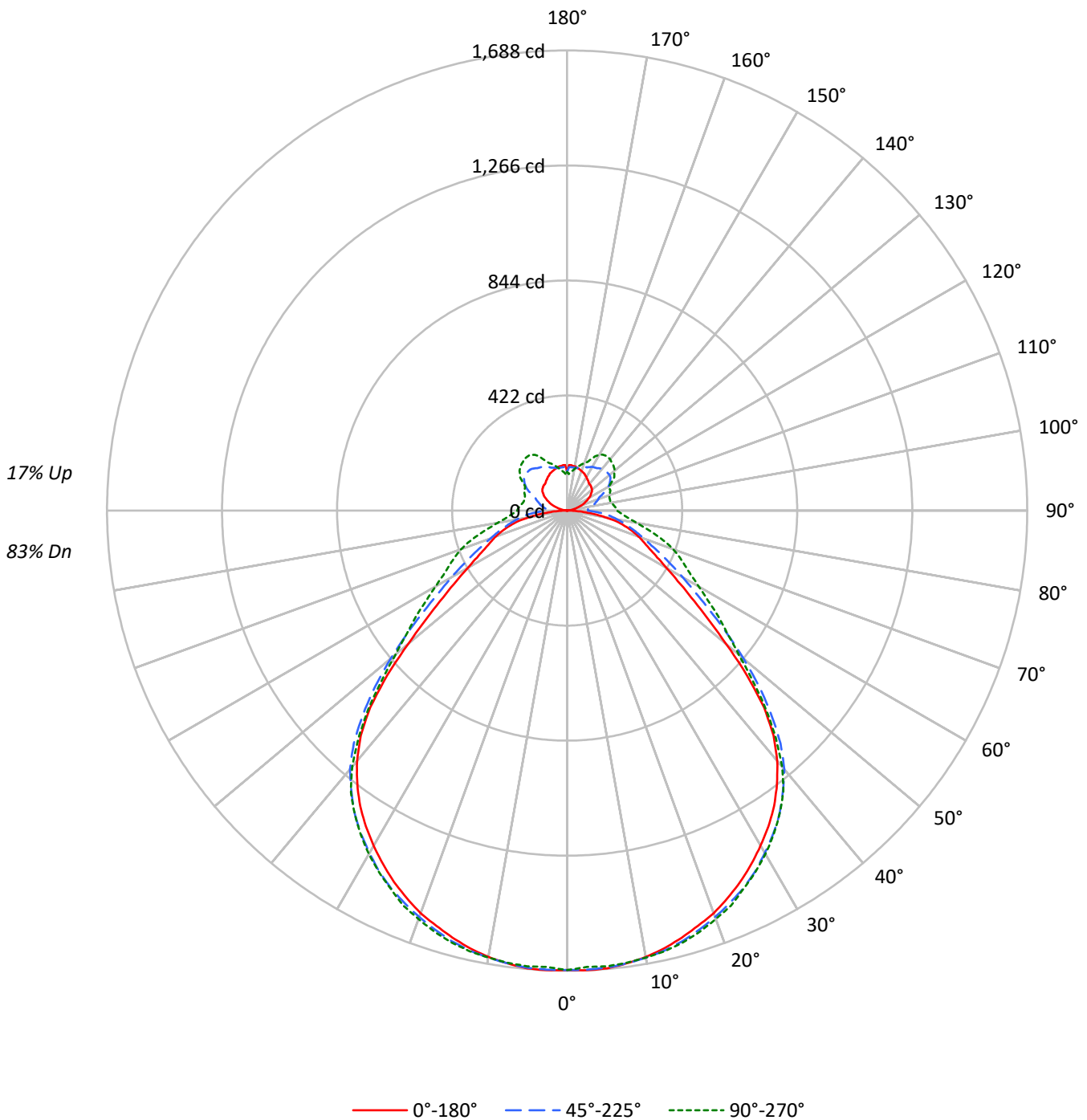
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5235.0 lumens  
Efficiency: N/A  
Efficacy: 107.3 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): 48.8  
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°	4536	4536	4536
5°	4541	4503	4484
10°	4519	4463	4452
15°	4482	4424	4421
20°	4450	4368	4367
25°	4399	4316	4295
30°	4332	4235	4216
35°	4253	4143	4104
40°	4104	3985	3900
45°	3770	3631	3490
50°	3069	3123	2992
55°	2493	2588	2694
60°	2148	2210	2467
65°	1997	1957	2393
70°	2020	1805	2420
75°	2053	1754	2354
80°	1902	1787	2344
85°	1383	1868	2675



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.9	3.1
10°-20°	460.5	8.8
20°-30°	700.6	13.4
30°-40°	840.2	16.0
40°-50°	799.8	15.3
50°-60°	569.5	10.9
60°-70°	387.2	7.4
70°-80°	261.2	5.0
80°-90°	149.8	2.9
90°-100°	96.7	1.8
100°-110°	108.9	2.1
110°-120°	135.3	2.6
120°-130°	155.2	3.0
130°-140°	147.5	2.8
140°-150°	119.4	2.3
150°-160°	82.2	1.6
160°-170°	46.3	0.9
170°-180°	14.8	0.3
0°-30°	1320.9	25.2
0°-40°	2161.1	41.3
0°-60°	3530.4	67.4
0°-90°	4328.6	82.7
90°-120°	340.9	6.5
90°-150°	763.0	14.6
90°-180°	906.0	17.3
0°-180°	5235.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1686	1686	1686	1686	1686	
5°	1686	1675	1683	1680	1678	160
15°	1622	1620	1635	1642	1640	458
25°	1503	1506	1528	1534	1531	692
35°	1323	1331	1359	1359	1359	825
45°	1022	1047	1060	1060	1032	773
55°	555	611	639	644	677	507
65°	335	357	380	403	476	337
75°	220	185	238	284	332	230
85°	61	86	137	190	210	68
90°	0	38	76	144	182	4
95°	5	36	79	147	175	7
105°	36	53	106	147	162	38
115°	74	117	144	162	175	73
125°	106	142	193	208	210	96
135°	124	150	203	233	238	96
145°	134	150	190	233	246	84
155°	150	152	175	203	208	69
165°	160	160	162	165	170	45
175°	167	167	160	139	142	16
180°	142	142	142	142	142	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1685.6	1685.6	1685.6	1685.6	1685.6
2.5°	1688.1	1680.5	1685.6	1685.6	1675.4
5°	1685.6	1675.4	1683.0	1680.5	1678.0
7.5°	1675.4	1667.8	1675.4	1678.0	1672.9
10°	1662.8	1655.2	1665.3	1667.8	1665.3
12.5°	1645.0	1640.0	1652.6	1657.7	1655.2
15°	1622.2	1619.7	1634.9	1642.5	1640.0
17.5°	1596.9	1594.3	1612.1	1622.2	1619.7
20°	1571.5	1569.0	1586.7	1594.3	1594.3
22.5°	1538.6	1538.6	1558.8	1566.4	1569.0
25°	1503.1	1505.6	1528.4	1533.5	1531.0
27.5°	1462.5	1465.1	1492.9	1495.5	1495.5
30°	1419.4	1424.5	1449.9	1452.4	1454.9
32.5°	1373.8	1378.9	1406.8	1406.8	1409.3
35°	1323.1	1330.7	1358.6	1358.6	1358.6
37.5°	1264.8	1275.0	1300.3	1300.3	1302.8
40°	1198.9	1214.1	1239.5	1236.9	1226.8
42.5°	1120.3	1140.6	1158.4	1155.8	1133.0
45°	1021.5	1046.8	1059.5	1059.5	1031.6
47.5°	894.8	932.8	955.6	945.4	922.6
50°	760.4	816.2	844.1	839.0	821.2
52.5°	646.4	709.7	737.6	735.1	740.1
55°	555.1	610.9	638.7	643.8	676.8
57.5°	481.6	532.3	555.1	570.3	610.9
60°	420.8	466.4	489.2	504.4	557.6
62.5°	372.6	408.1	430.9	448.6	512.0
65°	334.6	357.4	380.2	403.0	476.5
67.5°	304.2	309.2	334.6	367.5	446.1
70°	278.8	261.1	299.1	337.1	413.2
72.5°	250.9	220.5	268.7	306.7	375.1
75°	220.5	185.0	238.3	283.9	332.0
77.5°	187.6	154.6	212.9	258.5	291.5
80°	144.5	131.8	187.6	235.7	258.5
82.5°	101.4	109.0	162.2	215.5	230.7
85°	60.8	86.2	136.9	190.1	210.4
87.5°	27.9	63.4	103.9	164.8	195.2
90°	0.0	38.0	76.0	144.5	182.5
92.5°	2.5	38.0	76.0	147.0	180.0
95°	5.1	35.5	78.6	147.0	174.9
97.5°	10.1	35.5	86.2	144.5	169.8
100°	17.7	38.0	93.8	144.5	164.8
102.5°	25.3	40.6	101.4	147.0	162.2
105°	35.5	53.2	106.5	147.0	162.2
107.5°	45.6	71.0	114.1	149.5	162.2
110°	55.8	91.2	121.7	152.1	164.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	65.9	106.5	126.7	159.7	169.8
115°	73.5	116.6	144.5	162.2	174.9
117.5°	83.6	124.2	162.2	164.8	174.9
120°	91.2	131.8	174.9	174.9	177.4
122.5°	101.4	136.9	185.0	195.2	192.6
125°	106.5	141.9	192.6	207.8	210.4
127.5°	114.1	144.5	200.2	215.5	218.0
130°	119.1	147.0	202.8	223.1	228.1
132.5°	121.7	147.0	202.8	228.1	233.2
135°	124.2	149.5	202.8	233.2	238.3
137.5°	126.7	147.0	202.8	235.7	240.8
140°	126.7	147.0	200.2	235.7	245.9
142.5°	129.3	147.0	195.2	235.7	245.9
145°	134.3	149.5	190.1	233.2	245.9
147.5°	136.9	149.5	187.6	228.1	243.3
150°	141.9	149.5	185.0	220.5	235.7
152.5°	144.5	149.5	180.0	212.9	225.6
155°	149.5	152.1	174.9	202.8	207.8
157.5°	152.1	152.1	172.4	192.6	192.6
160°	154.6	154.6	167.3	182.5	185.0
162.5°	157.2	157.2	164.8	172.4	177.4
165°	159.7	159.7	162.2	164.8	169.8
167.5°	162.2	162.2	159.7	154.6	162.2
170°	164.8	164.8	159.7	147.0	154.6
172.5°	164.8	167.3	159.7	141.9	147.0
175°	167.3	167.3	159.7	139.4	141.9
177.5°	167.3	167.3	159.7	134.3	134.3
180°	141.9	141.9	141.9	141.9	141.9

(END OF REPORT)