

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: P234486

Luminaire Tested: **4WSNLED-LD4-20SL-F-UNV-L840-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P234486  
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-LD4-20SL-F-UNV-L840-CD1-U  
Description: 4FT WSNLED WRAPAROUND  
Light Source: (224) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

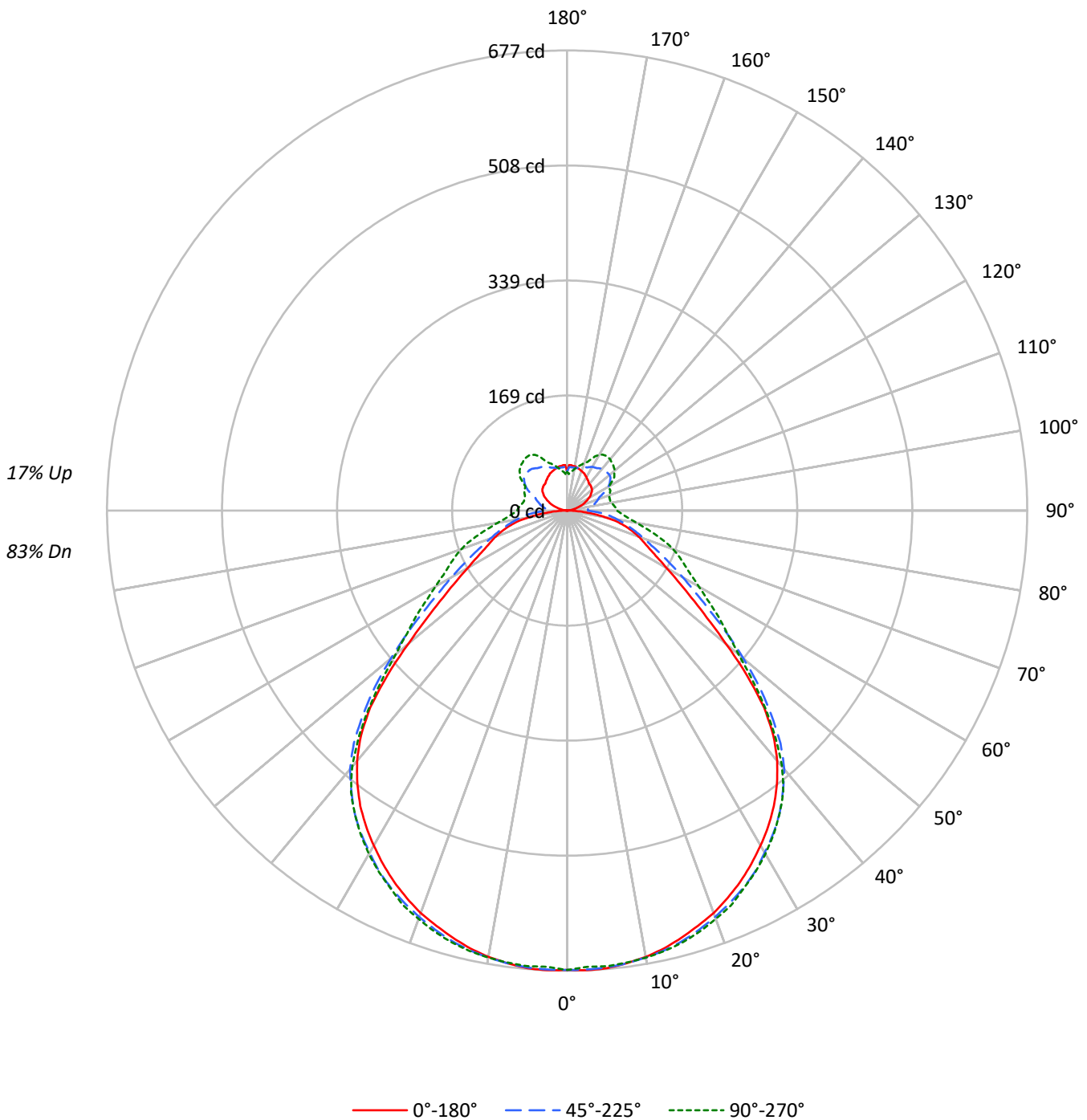
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2099.0 lumens  
Efficiency: N/A  
Efficacy: 117.3 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): 17.9  
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				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	50	30	10	0
RCR																					
0	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	86	86	86	83
1	105	100	96	92	100	96	93	89	89	86	83	82	80	78	76	74	72	76	74	72	69
2	96	88	82	76	92	85	79	74	78	74	70	73	69	65	67	64	62	67	64	62	59
3	88	78	70	64	84	75	68	62	70	64	59	65	60	56	60	56	53	60	56	53	50
4	81	69	61	55	77	67	59	53	62	56	51	58	53	48	54	50	46	54	50	46	43
5	74	62	54	47	71	60	52	46	56	49	44	52	47	42	49	44	40	49	44	40	38
6	69	56	48	42	66	54	46	41	51	44	39	48	42	37	44	40	36	44	40	36	33
7	64	51	43	37	61	49	42	36	46	40	35	43	38	33	41	36	32	41	36	32	30
8	59	47	38	33	57	45	38	32	42	36	31	40	34	30	38	32	29	38	32	29	27
9	56	43	35	30	53	41	34	29	39	33	28	37	31	27	35	30	26	35	30	26	24
10	52	39	32	27	50	38	31	26	36	30	25	34	29	25	32	27	24	32	27	24	22

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

	0°	45°	90°
0°	1819	1819	1819
5°	1821	1805	1798
10°	1812	1790	1785
15°	1797	1774	1772
20°	1784	1751	1751
25°	1764	1730	1722
30°	1737	1698	1691
35°	1705	1661	1645
40°	1645	1598	1564
45°	1512	1456	1399
50°	1231	1252	1200
55°	1000	1038	1080
60°	861	886	989
65°	801	785	960
70°	810	724	970
75°	823	703	944
80°	762	716	940
85°	555	749	1073



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.1	3.1
10°-20°	184.6	8.8
20°-30°	280.9	13.4
30°-40°	336.9	16.0
40°-50°	320.7	15.3
50°-60°	228.4	10.9
60°-70°	155.3	7.4
70°-80°	104.7	5.0
80°-90°	60.1	2.9
90°-100°	38.8	1.8
100°-110°	43.7	2.1
110°-120°	54.2	2.6
120°-130°	62.2	3.0
130°-140°	59.1	2.8
140°-150°	47.9	2.3
150°-160°	33.0	1.6
160°-170°	18.6	0.9
170°-180°	6.0	0.3
0°-30°	529.6	25.2
0°-40°	866.5	41.3
0°-60°	1415.5	67.4
0°-90°	1735.6	82.7
90°-120°	136.6	6.5
90°-150°	305.9	14.6
90°-180°	363.0	17.3
0°-180°	2099.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	676	676	676	676	676	
5°	676	672	675	674	673	64
15°	650	649	656	659	658	184
25°	603	604	613	615	614	278
35°	530	534	545	545	545	331
45°	410	420	425	425	414	310
55°	223	245	256	258	271	203
65°	134	143	152	162	191	135
75°	88	74	96	114	133	92
85°	24	35	55	76	84	27
90°	0	15	30	58	73	2
95°	2	14	32	59	70	3
105°	14	21	43	59	65	15
115°	30	47	58	65	70	29
125°	43	57	77	83	84	38
135°	50	60	81	94	96	38
145°	54	60	76	94	99	34
155°	60	61	70	81	83	28
165°	64	64	65	66	68	18
175°	67	67	64	56	57	6
180°	57	57	57	57	57	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	675.8	675.8	675.8	675.8	675.8
2.5°	676.9	673.8	675.8	675.8	671.8
5°	675.8	671.8	674.8	673.8	672.8
7.5°	671.8	668.7	671.8	672.8	670.8
10°	666.7	663.6	667.7	668.7	667.7
12.5°	659.6	657.5	662.6	664.7	663.6
15°	650.4	649.4	655.5	658.6	657.5
17.5°	640.3	639.3	646.4	650.4	649.4
20°	630.1	629.1	636.2	639.3	639.3
22.5°	616.9	616.9	625.0	628.1	629.1
25°	602.7	603.7	612.8	614.9	613.8
27.5°	586.4	587.4	598.6	599.6	599.6
30°	569.1	571.2	581.3	582.3	583.4
32.5°	550.8	552.9	564.0	564.0	565.1
35°	530.5	533.6	544.7	544.7	544.7
37.5°	507.1	511.2	521.4	521.4	522.4
40°	480.7	486.8	497.0	496.0	491.9
42.5°	449.2	457.3	464.5	463.4	454.3
45°	409.6	419.7	424.8	424.8	413.6
47.5°	358.8	374.0	383.1	379.1	369.9
50°	304.9	327.2	338.4	336.4	329.3
52.5°	259.2	284.6	295.7	294.7	296.8
55°	222.6	244.9	256.1	258.1	271.4
57.5°	193.1	213.4	222.6	228.7	244.9
60°	168.7	187.0	196.1	202.2	223.6
62.5°	149.4	163.6	172.8	179.9	205.3
65°	134.2	143.3	152.4	161.6	191.1
67.5°	122.0	124.0	134.2	147.4	178.9
70°	111.8	104.7	119.9	135.2	165.7
72.5°	100.6	88.4	107.7	123.0	150.4
75°	88.4	74.2	95.5	113.8	133.1
77.5°	75.2	62.0	85.4	103.7	116.9
80°	57.9	52.8	75.2	94.5	103.7
82.5°	40.7	43.7	65.0	86.4	92.5
85°	24.4	34.6	54.9	76.2	84.4
87.5°	11.2	25.4	41.7	66.1	78.3
90°	0.0	15.2	30.5	57.9	73.2
92.5°	1.0	15.2	30.5	58.9	72.2
95°	2.0	14.2	31.5	58.9	70.1
97.5°	4.1	14.2	34.6	57.9	68.1
100°	7.1	15.2	37.6	57.9	66.1
102.5°	10.2	16.3	40.7	58.9	65.0
105°	14.2	21.3	42.7	58.9	65.0
107.5°	18.3	28.5	45.7	60.0	65.0
110°	22.4	36.6	48.8	61.0	66.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	26.4	42.7	50.8	64.0	68.1
115°	29.5	46.7	57.9	65.0	70.1
117.5°	33.5	49.8	65.0	66.1	70.1
120°	36.6	52.8	70.1	70.1	71.1
122.5°	40.7	54.9	74.2	78.3	77.2
125°	42.7	56.9	77.2	83.3	84.4
127.5°	45.7	57.9	80.3	86.4	87.4
130°	47.8	58.9	81.3	89.4	91.5
132.5°	48.8	58.9	81.3	91.5	93.5
135°	49.8	60.0	81.3	93.5	95.5
137.5°	50.8	58.9	81.3	94.5	96.5
140°	50.8	58.9	80.3	94.5	98.6
142.5°	51.8	58.9	78.3	94.5	98.6
145°	53.9	60.0	76.2	93.5	98.6
147.5°	54.9	60.0	75.2	91.5	97.6
150°	56.9	60.0	74.2	88.4	94.5
152.5°	57.9	60.0	72.2	85.4	90.5
155°	60.0	61.0	70.1	81.3	83.3
157.5°	61.0	61.0	69.1	77.2	77.2
160°	62.0	62.0	67.1	73.2	74.2
162.5°	63.0	63.0	66.1	69.1	71.1
165°	64.0	64.0	65.0	66.1	68.1
167.5°	65.0	65.0	64.0	62.0	65.0
170°	66.1	66.1	64.0	58.9	62.0
172.5°	66.1	67.1	64.0	56.9	58.9
175°	67.1	67.1	64.0	55.9	56.9
177.5°	67.1	67.1	64.0	53.9	53.9
180°	56.9	56.9	56.9	56.9	56.9

(END OF REPORT)