

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: P235483

Luminaire Tested: **4WSNLED-LD4-28SL-F-UNV-L830-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P235483  
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-LD4-28SL-F-UNV-L830-CD1-U  
Description: 4FT WSNLED WRAPAROUND  
Light Source: (224) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

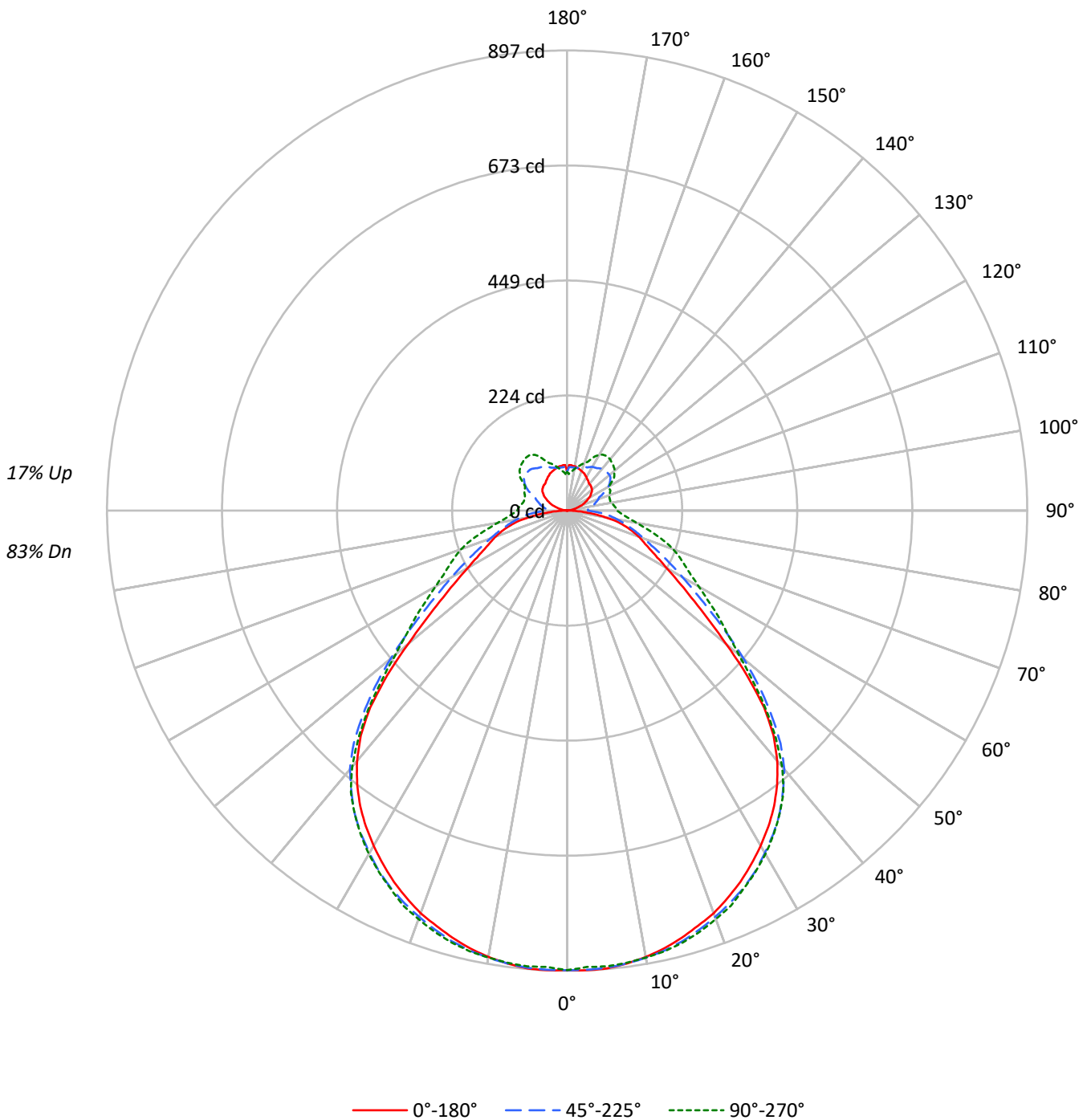
Lumens per Lamp: N/A  
Luminaire Lumens: 2782.0 lumens  
Efficiency: N/A  
Efficacy: 112.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.28 / 1.35  
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 4' x H: 0.12')  
CIE Type: Semi-Direct

Input Watts (W): 24.8  
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°	2411	2411	2411
5°	2413	2393	2383
10°	2401	2372	2366
15°	2382	2351	2349
20°	2365	2321	2321
25°	2338	2293	2283
30°	2302	2251	2241
35°	2260	2202	2181
40°	2181	2118	2073
45°	2003	1929	1854
50°	1631	1660	1590
55°	1325	1375	1432
60°	1142	1175	1311
65°	1061	1040	1271
70°	1074	959	1286
75°	1091	932	1251
80°	1011	950	1246
85°	735	992	1421



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.0	3.1
10°-20°	244.7	8.8
20°-30°	372.3	13.4
30°-40°	446.5	16.0
40°-50°	425.0	15.3
50°-60°	302.7	10.9
60°-70°	205.8	7.4
70°-80°	138.8	5.0
80°-90°	79.6	2.9
90°-100°	51.4	1.8
100°-110°	57.9	2.1
110°-120°	71.9	2.6
120°-130°	82.5	3.0
130°-140°	78.4	2.8
140°-150°	63.5	2.3
150°-160°	43.7	1.6
160°-170°	24.6	0.9
170°-180°	7.9	0.3
0°-30°	702.0	25.2
0°-40°	1148.5	41.3
0°-60°	1876.1	67.4
0°-90°	2300.3	82.7
90°-120°	181.2	6.5
90°-150°	405.5	14.6
90°-180°	482.0	17.3
0°-180°	2782.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	896	890	894	893	892	85
15°	862	861	869	873	872	243
25°	799	800	812	815	814	368
35°	703	707	722	722	722	438
45°	543	556	563	563	548	411
55°	295	325	339	342	360	269
65°	178	190	202	214	253	179
75°	117	98	127	151	176	122
85°	32	46	73	101	112	36
90°	0	20	40	77	97	2
95°	3	19	42	78	93	4
105°	19	28	57	78	86	20
115°	39	62	77	86	93	39
125°	57	75	102	110	112	51
135°	66	80	108	124	127	51
145°	71	80	101	124	131	45
155°	80	81	93	108	110	36
165°	85	85	86	88	90	24
175°	89	89	85	74	75	8
180°	75	75	75	75	75	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	895.8	895.8	895.8	895.8	895.8
2.5°	897.1	893.1	895.8	895.8	890.4
5°	895.8	890.4	894.4	893.1	891.7
7.5°	890.4	886.3	890.4	891.7	889.0
10°	883.6	879.6	885.0	886.3	885.0
12.5°	874.2	871.5	878.2	880.9	879.6
15°	862.1	860.7	868.8	872.9	871.5
17.5°	848.6	847.3	856.7	862.1	860.7
20°	835.1	833.8	843.2	847.3	847.3
22.5°	817.6	817.6	828.4	832.4	833.8
25°	798.8	800.1	812.2	814.9	813.6
27.5°	777.2	778.6	793.4	794.7	794.7
30°	754.3	757.0	770.5	771.8	773.2
32.5°	730.1	732.8	747.6	747.6	748.9
35°	703.1	707.2	722.0	722.0	722.0
37.5°	672.2	677.5	691.0	691.0	692.4
40°	637.1	645.2	658.7	657.3	651.9
42.5°	595.4	606.2	615.6	614.2	602.1
45°	542.8	556.3	563.0	563.0	548.2
47.5°	475.5	495.7	507.8	502.4	490.3
50°	404.1	433.7	448.6	445.9	436.4
52.5°	343.5	377.2	392.0	390.6	393.3
55°	295.0	324.6	339.4	342.1	359.6
57.5°	255.9	282.9	295.0	303.1	324.6
60°	223.6	247.8	260.0	268.1	296.3
62.5°	198.0	216.9	229.0	238.4	272.1
65°	177.8	189.9	202.1	214.2	253.2
67.5°	161.6	164.3	177.8	195.3	237.1
70°	148.2	138.7	158.9	179.2	219.6
72.5°	133.4	117.2	142.8	163.0	199.4
75°	117.2	98.3	126.6	150.9	176.5
77.5°	99.7	82.2	113.1	137.4	154.9
80°	76.8	70.0	99.7	125.3	137.4
82.5°	53.9	57.9	86.2	114.5	122.6
85°	32.3	45.8	72.7	101.0	111.8
87.5°	14.8	33.7	55.2	87.6	103.7
90°	0.0	20.2	40.4	76.8	97.0
92.5°	1.3	20.2	40.4	78.1	95.6
95°	2.7	18.9	41.8	78.1	92.9
97.5°	5.4	18.9	45.8	76.8	90.2
100°	9.4	20.2	49.8	76.8	87.6
102.5°	13.5	21.6	53.9	78.1	86.2
105°	18.9	28.3	56.6	78.1	86.2
107.5°	24.2	37.7	60.6	79.5	86.2
110°	29.6	48.5	64.7	80.8	87.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	35.0	56.6	67.4	84.9	90.2
115°	39.1	62.0	76.8	86.2	92.9
117.5°	44.5	66.0	86.2	87.6	92.9
120°	48.5	70.0	92.9	92.9	94.3
122.5°	53.9	72.7	98.3	103.7	102.4
125°	56.6	75.4	102.4	110.5	111.8
127.5°	60.6	76.8	106.4	114.5	115.8
130°	63.3	78.1	107.8	118.5	121.2
132.5°	64.7	78.1	107.8	121.2	123.9
135°	66.0	79.5	107.8	123.9	126.6
137.5°	67.4	78.1	107.8	125.3	128.0
140°	67.4	78.1	106.4	125.3	130.7
142.5°	68.7	78.1	103.7	125.3	130.7
145°	71.4	79.5	101.0	123.9	130.7
147.5°	72.7	79.5	99.7	121.2	129.3
150°	75.4	79.5	98.3	117.2	125.3
152.5°	76.8	79.5	95.6	113.1	119.9
155°	79.5	80.8	92.9	107.8	110.5
157.5°	80.8	80.8	91.6	102.4	102.4
160°	82.2	82.2	88.9	97.0	98.3
162.5°	83.5	83.5	87.6	91.6	94.3
165°	84.9	84.9	86.2	87.6	90.2
167.5°	86.2	86.2	84.9	82.2	86.2
170°	87.6	87.6	84.9	78.1	82.2
172.5°	87.6	88.9	84.9	75.4	78.1
175°	88.9	88.9	84.9	74.1	75.4
177.5°	88.9	88.9	84.9	71.4	71.4
180°	75.4	75.4	75.4	75.4	75.4

(END OF REPORT)