

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: P236331

Luminaire Tested: **4SWLED-78HL-LN-UNV-L835-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236331
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1709-316-29)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SWLED-78HL-LN-UNV-L835-CD1-U
Description: METALUX SWLED LINEAR LUMINAIRE
4FT FIXTURE WITH 2 ROW LED, NARROW LENS
Light Source: (224) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

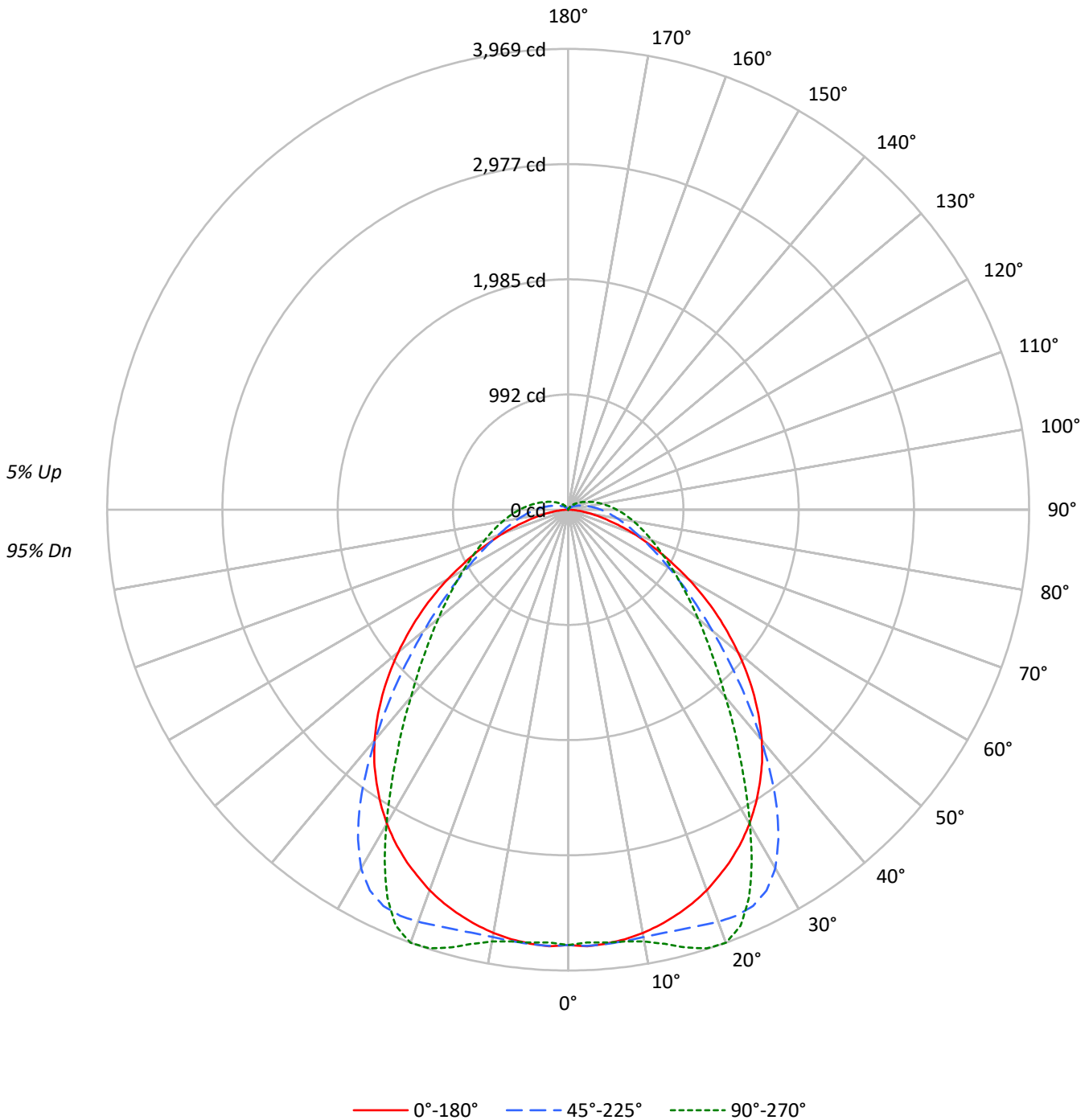
Lumens per Lamp: N/A
Luminaire Lumens: 10020.0 lumens
Efficiency: N/A
Efficacy: 126.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.21 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.15')
CIE Type: Direct

Input Watts (W): 79.4
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	50	30	10	0	
RCR																						
0	118	118	118	118	114	114	114	114	108	108	108	103	103	103	97	97	97	95				95
1	108	103	99	95	104	100	96	93	95	92	89	90	88	85	86	84	82	79				79
2	98	90	84	78	95	88	82	77	84	79	74	80	76	72	76	73	70	67				67
3	90	80	72	66	87	78	71	65	75	68	63	71	66	62	68	64	60	58				58
4	83	72	63	57	80	70	62	56	67	60	55	64	58	54	61	56	52	50				50
5	77	64	56	50	74	63	55	49	60	53	48	58	52	47	56	50	46	44				44
6	71	58	50	44	69	57	49	43	55	48	43	53	47	42	51	45	41	39				39
7	66	53	45	39	64	52	44	39	50	43	38	48	42	37	47	41	37	35				35
8	62	49	41	35	60	48	40	35	46	39	34	44	38	34	43	37	33	31				31
9	58	45	37	32	56	44	37	31	43	36	31	41	35	31	40	34	30	28				28
10	54	41	34	29	53	41	33	29	39	33	28	38	32	28	37	32	28	26				26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	26904	26904	26904
5°	26941	26354	26072
10°	26806	25857	25741
15°	26574	25736	26256
20°	26289	25996	26552
25°	25874	26147	24694
30°	25331	25185	21167
35°	24565	22670	17682
40°	23567	19315	14855
45°	22170	16089	12750
50°	20423	13292	11124
55°	18452	11121	9884
60°	16189	9456	8937
65°	13786	8259	8220
70°	11372	7387	7748
75°	8903	6844	7466
80°	6654	6546	7368
85°	4370	6486	7432



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	356.8	3.6
10°-20°	1060.2	10.6
20°-30°	1651.7	16.5
30°-40°	1821.4	18.2
40°-50°	1612.9	16.1
50°-60°	1234.8	12.3
60°-70°	856.0	8.5
70°-80°	558.8	5.6
80°-90°	352.8	3.5
90°-100°	220.6	2.2
100°-110°	135.1	1.3
110°-120°	79.8	0.8
120°-130°	45.0	0.4
130°-140°	22.8	0.2
140°-150°	9.2	0.1
150°-160°	2.3	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	3068.6	30.6
0°-40°	4890.0	48.8
0°-60°	7737.7	77.2
0°-90°	9505.3	94.9
90°-120°	435.5	4.3
90°-150°	512.4	5.1
90°-180°	515.0	5.1
0°-180°	10020.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3749	3749	3749	3749	3749	
5°	3752	3726	3755	3742	3742	357
15°	3612	3615	3743	3851	3902	1019
25°	3323	3433	3765	3751	3684	1530
35°	2876	3146	3133	2685	2568	1796
45°	2264	2514	2062	1775	1745	1742
55°	1552	1624	1271	1208	1229	1385
65°	875	889	800	854	888	872
75°	365	428	524	627	660	397
85°	75	188	350	458	492	86
90°	1	125	282	388	418	5
95°	0	81	222	321	352	0
105°	0	37	133	212	243	0
115°	0	20	80	137	160	0
125°	0	10	50	87	102	0
135°	1	4	29	52	62	1
145°	1	1	12	27	32	1
155°	2	1	2	8	11	1
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°	3749.2	3749.2	3749.2	3749.2	3749.2
2.5°	3763.5	3734.9	3760.6	3746.3	3730.1
5°	3752.0	3726.3	3754.9	3741.5	3742.5
7.5°	3732.0	3709.2	3747.3	3742.5	3751.1
10°	3702.5	3682.5	3736.8	3759.6	3774.9
12.5°	3661.5	3649.1	3735.8	3791.1	3830.1
15°	3612.0	3614.9	3743.4	3851.1	3902.5
17.5°	3554.8	3572.9	3757.7	3904.4	3961.6
20°	3488.2	3531.0	3776.8	3927.3	3969.2
22.5°	3407.2	3483.4	3784.4	3884.4	3878.7
25°	3323.4	3432.9	3765.4	3751.1	3684.4
27.5°	3228.1	3376.7	3697.7	3532.9	3421.5
30°	3121.4	3312.9	3567.2	3259.6	3128.1
32.5°	3004.3	3236.7	3368.2	2968.1	2838.5
35°	2875.7	3146.2	3132.9	2685.2	2568.0
37.5°	2742.3	3020.5	2860.5	2420.4	2332.7
40°	2592.8	2878.6	2582.3	2179.4	2103.2
42.5°	2431.8	2712.8	2314.7	1964.1	1916.5
45°	2264.2	2513.7	2062.2	1774.6	1745.0
47.5°	2087.9	2292.7	1827.9	1605.0	1593.6
50°	1908.9	2070.8	1617.4	1456.4	1458.3
52.5°	1726.9	1837.4	1432.6	1325.9	1337.4
55°	1551.7	1624.1	1270.7	1207.8	1228.8
57.5°	1370.7	1417.4	1128.7	1104.0	1130.7
60°	1199.2	1225.0	1002.1	1011.6	1042.1
62.5°	1025.9	1046.8	895.4	927.8	960.2
65°	875.4	888.7	800.1	854.4	887.8
67.5°	728.7	751.5	716.3	788.7	823.0
70°	596.3	627.7	643.0	730.6	763.9
72.5°	471.5	519.1	580.1	677.2	710.6
75°	364.8	427.7	523.9	626.8	660.1
77.5°	276.2	349.6	473.4	582.0	614.4
80°	194.3	284.8	428.6	539.1	571.5
82.5°	126.7	232.4	386.7	497.2	528.7
85°	75.2	187.6	349.6	458.2	491.5
87.5°	34.3	152.4	314.3	422.9	454.4
90°	1.0	124.8	281.9	387.7	418.2
92.5°	0.0	101.0	251.5	354.3	384.8
95°	0.0	81.0	221.9	321.0	352.4
97.5°	0.0	65.7	195.3	291.5	322.0
100°	0.0	54.3	172.4	263.9	294.3
102.5°	0.0	44.8	151.5	238.1	267.7
105°	0.0	37.1	133.4	212.4	242.9
107.5°	0.0	31.4	117.2	190.5	219.1
110°	0.0	26.7	102.9	170.5	197.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	23.8	90.5	153.4	178.1
115°	0.0	20.0	80.0	137.2	160.0
117.5°	0.0	18.1	70.5	122.9	143.8
120°	0.0	15.2	62.9	109.5	128.6
122.5°	0.0	13.3	55.2	97.2	114.3
125°	0.0	10.5	49.5	86.7	101.9
127.5°	0.0	8.6	43.8	77.2	90.5
130°	1.0	6.7	39.1	67.6	80.0
132.5°	1.0	4.8	33.3	60.0	69.5
135°	1.0	3.8	28.6	52.4	61.9
137.5°	1.0	1.9	23.8	45.7	53.3
140°	1.0	1.0	19.1	39.1	45.7
142.5°	1.0	1.0	15.2	33.3	39.1
145°	1.0	1.0	12.4	26.7	32.4
147.5°	1.0	1.0	8.6	21.0	26.7
150°	1.9	1.0	5.7	16.2	21.0
152.5°	1.9	1.0	3.8	11.4	16.2
155°	1.9	1.0	1.9	7.6	11.4
157.5°	1.9	1.9	1.0	4.8	6.7
160°	1.9	1.9	1.0	1.9	3.8
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)