

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: P236320

Luminaire Tested: **4SWLED-60HL-LN-UNV-L840-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236320
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-60HL-LN-UNV-L840-CD1-U
Description: METALUX SWLED LINEAR LUMINAIRE
4FT FIXTURE WITH 2 ROW LED, NARROW LENS
Light Source: (224) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

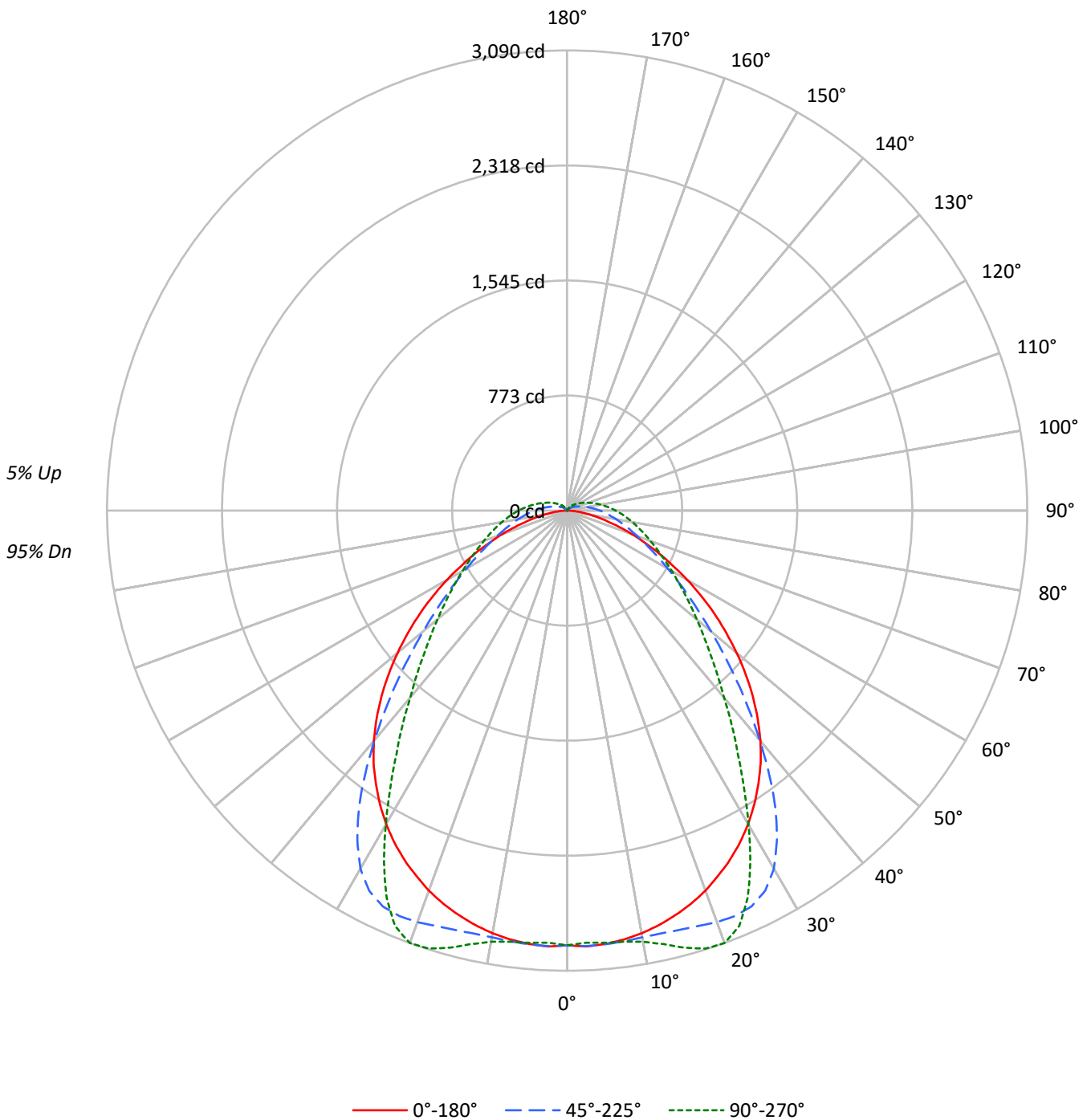
Lumens per Lamp: N/A
Luminaire Lumens: 7801.0 lumens
Efficiency: N/A
Efficacy: 136.4 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.21 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.15')
CIE Type: Direct

Input Watts (W): 57.2
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°	20946	20946	20946
5°	20975	20518	20298
10°	20870	20131	20041
15°	20689	20037	20442
20°	20467	20239	20672
25°	20144	20356	19226
30°	19722	19607	16480
35°	19125	17650	13766
40°	18348	15037	11565
45°	17260	12526	9927
50°	15900	10348	8661
55°	14365	8658	7694
60°	12604	7361	6957
65°	10733	6430	6399
70°	8853	5751	6033
75°	6931	5328	5812
80°	5181	5097	5737
85°	3406	5050	5787



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	277.8	3.6
10°-20°	825.4	10.6
20°-30°	1285.9	16.5
30°-40°	1418.0	18.2
40°-50°	1255.7	16.1
50°-60°	961.3	12.3
60°-70°	666.4	8.5
70°-80°	435.1	5.6
80°-90°	274.7	3.5
90°-100°	171.8	2.2
100°-110°	105.2	1.3
110°-120°	62.1	0.8
120°-130°	35.0	0.4
130°-140°	17.7	0.2
140°-150°	7.1	0.1
150°-160°	1.8	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	2389.1	30.6
0°-40°	3807.1	48.8
0°-60°	6024.1	77.2
0°-90°	7400.3	94.9
90°-120°	339.1	4.3
90°-150°	398.9	5.1
90°-180°	401.0	5.1
0°-180°	7801.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2919	2919	2919	2919	2919	
5°	2921	2901	2923	2913	2914	278
15°	2812	2814	2914	2998	3038	793
25°	2587	2673	2932	2920	2868	1191
35°	2239	2450	2439	2090	1999	1399
45°	1763	1957	1606	1382	1359	1356
55°	1208	1264	989	940	957	1078
65°	682	692	623	665	691	679
75°	284	333	408	488	514	309
85°	59	146	272	357	383	67
90°	1	97	220	302	326	4
95°	0	63	173	250	274	0
105°	0	29	104	165	189	0
115°	0	16	62	107	125	0
125°	0	8	39	68	79	0
135°	1	3	22	41	48	1
145°	1	1	10	21	25	0
155°	2	1	2	6	9	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°	2918.9	2918.9	2918.9	2918.9	2918.9
2.5°	2930.0	2907.8	2927.8	2916.7	2904.1
5°	2921.1	2901.1	2923.3	2913.0	2913.7
7.5°	2905.5	2887.7	2917.4	2913.7	2920.4
10°	2882.5	2867.0	2909.2	2927.0	2938.9
12.5°	2850.7	2841.0	2908.5	2951.5	2981.9
15°	2812.1	2814.3	2914.4	2998.2	3038.3
17.5°	2767.6	2781.7	2925.6	3039.8	3084.3
20°	2715.7	2749.1	2940.4	3057.6	3090.2
22.5°	2652.7	2712.0	2946.3	3024.2	3019.7
25°	2587.4	2672.7	2931.5	2920.4	2868.5
27.5°	2513.2	2628.9	2878.8	2750.5	2663.8
30°	2430.2	2579.2	2777.2	2537.7	2435.4
32.5°	2339.0	2519.9	2622.3	2310.8	2209.9
35°	2238.9	2449.5	2439.1	2090.5	1999.3
37.5°	2135.0	2351.6	2227.0	1884.4	1816.1
40°	2018.6	2241.1	2010.4	1696.8	1637.4
42.5°	1893.3	2112.0	1802.1	1529.2	1492.1
45°	1762.8	1957.0	1605.5	1381.6	1358.6
47.5°	1625.6	1785.0	1423.1	1249.6	1240.7
50°	1486.1	1612.2	1259.2	1133.9	1135.4
52.5°	1344.5	1430.5	1115.3	1032.3	1041.2
55°	1208.0	1264.4	989.3	940.3	956.6
57.5°	1067.1	1103.5	878.8	859.5	880.3
60°	933.7	953.7	780.1	787.6	811.3
62.5°	798.7	815.0	697.1	722.3	747.5
65°	681.5	691.9	622.9	665.2	691.2
67.5°	567.3	585.1	557.7	614.0	640.7
70°	464.2	488.7	500.6	568.8	594.8
72.5°	367.1	404.2	451.6	527.3	553.2
75°	284.0	333.0	407.9	488.0	513.9
77.5°	215.1	272.2	368.6	453.1	478.3
80°	151.3	221.7	333.7	419.7	445.0
82.5°	98.6	180.9	301.1	387.1	411.6
85°	58.6	146.1	272.2	356.7	382.7
87.5°	26.7	118.7	244.7	329.3	353.7
90°	0.7	97.1	219.5	301.8	325.6
92.5°	0.0	78.6	195.8	275.9	299.6
95°	0.0	63.0	172.8	249.9	274.4
97.5°	0.0	51.2	152.0	226.9	250.7
100°	0.0	42.3	134.2	205.4	229.2
102.5°	0.0	34.9	117.9	185.4	208.4
105°	0.0	28.9	103.8	165.4	189.1
107.5°	0.0	24.5	91.2	148.3	170.6
110°	0.0	20.8	80.1	132.7	153.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	18.5	70.5	119.4	138.7
115°	0.0	15.6	62.3	106.8	124.6
117.5°	0.0	14.1	54.9	95.7	112.0
120°	0.0	11.9	48.9	85.3	100.1
122.5°	0.0	10.4	43.0	75.6	89.0
125°	0.0	8.2	38.6	67.5	79.3
127.5°	0.0	6.7	34.1	60.1	70.5
130°	0.7	5.2	30.4	52.7	62.3
132.5°	0.7	3.7	26.0	46.7	54.1
135°	0.7	3.0	22.2	40.8	48.2
137.5°	0.7	1.5	18.5	35.6	41.5
140°	0.7	0.7	14.8	30.4	35.6
142.5°	0.7	0.7	11.9	26.0	30.4
145°	0.7	0.7	9.6	20.8	25.2
147.5°	0.7	0.7	6.7	16.3	20.8
150°	1.5	0.7	4.4	12.6	16.3
152.5°	1.5	0.7	3.0	8.9	12.6
155°	1.5	0.7	1.5	5.9	8.9
157.5°	1.5	1.5	0.7	3.7	5.2
160°	1.5	1.5	0.7	1.5	3.0
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)