

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: P236333

Luminaire Tested: **4SWLED-78HL-LN-UNV-L850-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236333
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-L850-CD1-U
Description: METALUX SWLED LINEAR LUMINAIRE
4FT FIXTURE WITH 2 ROW LED, NARROW LENS
Light Source: (224) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

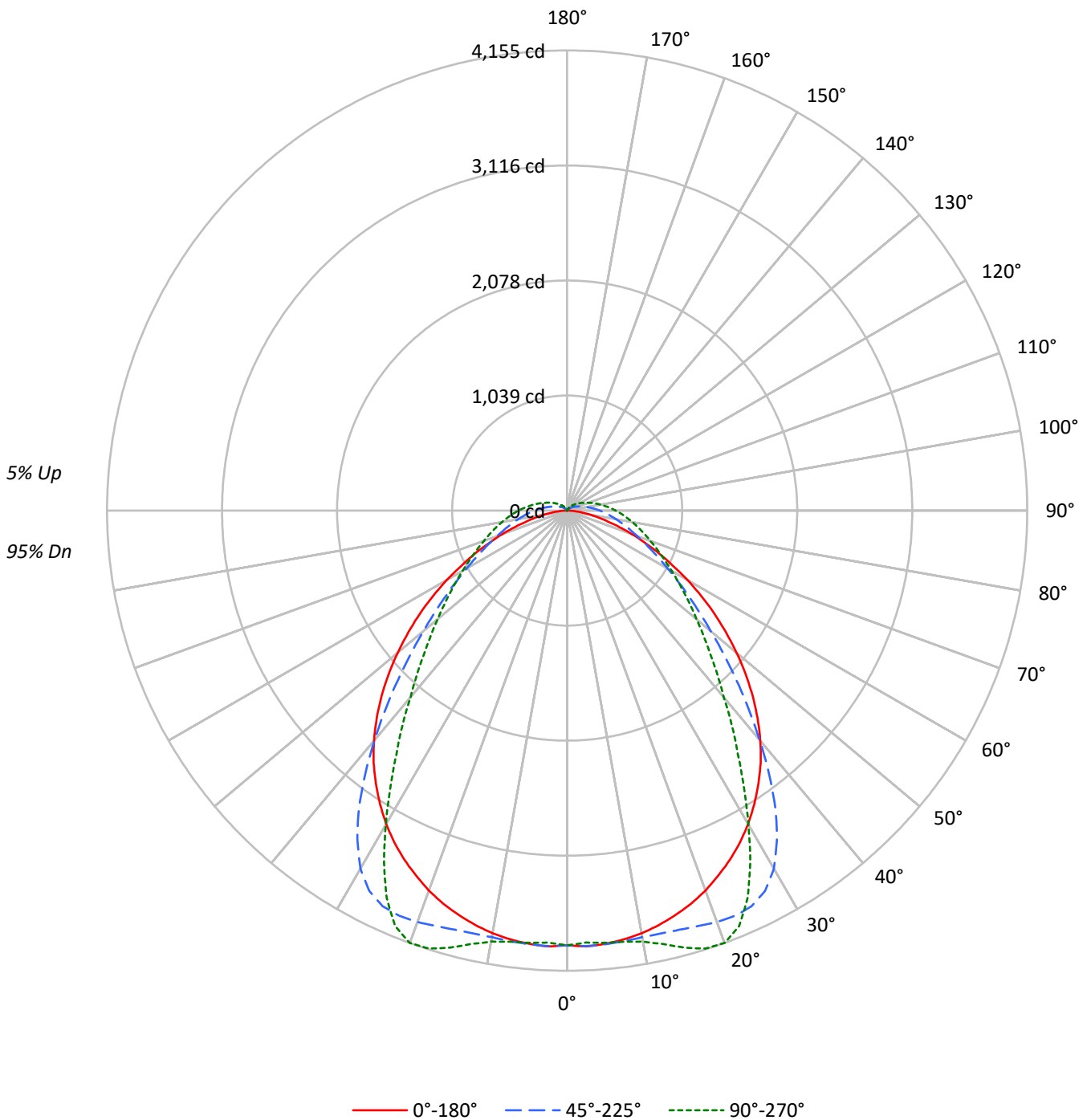
Lumens per Lamp: N/A
Luminaire Lumens: 10488.0 lumens
Efficiency: N/A
Efficacy: 132.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.21 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.15')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	28161	28161	28161
5°	28200	27585	27289
10°	28058	27065	26943
15°	27815	26938	27483
20°	27516	27210	27793
25°	27082	27367	25848
30°	26514	26361	22156
35°	25712	23729	18508
40°	24668	20217	15548
45°	23204	16841	13346
50°	21376	13912	11644
55°	19313	11640	10346
60°	16944	9898	9353
65°	14430	8645	8603
70°	11902	7731	8111
75°	9320	7164	7814
80°	6965	6853	7712
85°	4580	6789	7780



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	373.4	3.6
10°-20°	1109.7	10.6
20°-30°	1728.8	16.5
30°-40°	1906.4	18.2
40°-50°	1688.2	16.1
50°-60°	1292.5	12.3
60°-70°	896.0	8.5
70°-80°	584.9	5.6
80°-90°	369.3	3.5
90°-100°	230.9	2.2
100°-110°	141.4	1.3
110°-120°	83.5	0.8
120°-130°	47.1	0.4
130°-140°	23.8	0.2
140°-150°	9.6	0.1
150°-160°	2.4	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	3212.0	30.6
0°-40°	5118.4	48.8
0°-60°	8099.1	77.2
0°-90°	9949.3	94.9
90°-120°	455.8	4.3
90°-150°	536.3	5.1
90°-180°	539.0	5.1
0°-180°	10488.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3924	3924	3924	3924	3924	
5°	3927	3900	3930	3916	3917	373
15°	3781	3784	3918	4031	4085	1067
25°	3479	3593	3941	3926	3856	1601
35°	3010	3293	3279	2811	2688	1880
45°	2370	2631	2159	1858	1826	1823
55°	1624	1700	1330	1264	1286	1450
65°	916	930	838	894	929	912
75°	382	448	548	656	691	416
85°	79	196	366	480	514	90
90°	1	131	295	406	438	5
95°	0	85	232	336	369	0
105°	0	39	140	222	254	0
115°	0	21	84	144	168	0
125°	0	11	52	91	107	0
135°	1	4	30	55	65	1
145°	1	1	13	28	34	1
155°	2	1	2	8	12	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°	3924.3	3924.3	3924.3	3924.3	3924.3
2.5°	3939.2	3909.3	3936.2	3921.3	3904.3
5°	3927.3	3900.3	3930.3	3916.3	3917.3
7.5°	3906.3	3882.4	3922.3	3917.3	3926.3
10°	3875.4	3854.5	3911.3	3935.2	3951.2
12.5°	3832.5	3819.6	3910.3	3968.1	4009.0
15°	3780.7	3783.7	3918.3	4031.0	4084.8
17.5°	3720.9	3739.8	3933.2	4086.8	4146.6
20°	3651.1	3696.0	3953.2	4110.7	4154.6
22.5°	3566.3	3646.1	3961.2	4065.9	4059.9
25°	3478.6	3593.3	3941.2	3926.3	3856.5
27.5°	3378.9	3534.4	3870.4	3698.0	3581.3
30°	3267.2	3467.6	3733.8	3411.8	3274.2
32.5°	3144.6	3387.9	3525.5	3106.7	2971.1
35°	3010.0	3293.2	3279.2	2810.6	2688.0
37.5°	2870.4	3161.6	2994.1	2533.4	2441.7
40°	2713.9	3013.0	2702.9	2281.2	2201.4
42.5°	2545.4	2839.5	2422.8	2055.9	2006.0
45°	2369.9	2631.1	2158.6	1857.5	1826.5
47.5°	2185.5	2399.8	1913.3	1680.0	1668.0
50°	1998.0	2167.5	1692.9	1524.4	1526.4
52.5°	1807.6	1923.3	1499.5	1387.9	1399.8
55°	1624.1	1699.9	1330.0	1264.2	1286.2
57.5°	1434.7	1483.6	1181.5	1155.5	1183.5
60°	1255.2	1282.2	1048.9	1058.8	1090.7
62.5°	1073.8	1095.7	937.2	971.1	1005.0
65°	916.3	930.2	837.5	894.3	929.2
67.5°	762.7	786.6	749.8	825.5	861.4
70°	624.1	657.0	673.0	764.7	799.6
72.5°	493.5	543.4	607.2	708.9	743.8
75°	381.9	447.7	548.4	656.0	690.9
77.5°	289.1	365.9	495.5	609.2	643.1
80°	203.4	298.1	448.7	564.3	598.2
82.5°	132.6	243.3	404.8	520.4	553.3
85°	78.8	196.4	365.9	479.6	514.5
87.5°	35.9	159.5	329.0	442.7	475.6
90°	1.0	130.6	295.1	405.8	437.7
92.5°	0.0	105.7	263.2	370.9	402.8
95°	0.0	84.7	232.3	336.0	368.9
97.5°	0.0	68.8	204.4	305.1	337.0
100°	0.0	56.8	180.5	276.2	308.1
102.5°	0.0	46.9	158.5	249.3	280.2
105°	0.0	38.9	139.6	222.3	254.2
107.5°	0.0	32.9	122.6	199.4	229.3
110°	0.0	27.9	107.7	178.5	206.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	24.9	94.7	160.5	186.4
115°	0.0	20.9	83.7	143.6	167.5
117.5°	0.0	18.9	73.8	128.6	150.6
120°	0.0	16.0	65.8	114.7	134.6
122.5°	0.0	14.0	57.8	101.7	119.6
125°	0.0	11.0	51.8	90.7	106.7
127.5°	0.0	9.0	45.9	80.8	94.7
130°	1.0	7.0	40.9	70.8	83.7
132.5°	1.0	5.0	34.9	62.8	72.8
135°	1.0	4.0	29.9	54.8	64.8
137.5°	1.0	2.0	24.9	47.9	55.8
140°	1.0	1.0	19.9	40.9	47.9
142.5°	1.0	1.0	16.0	34.9	40.9
145°	1.0	1.0	13.0	27.9	33.9
147.5°	1.0	1.0	9.0	21.9	27.9
150°	2.0	1.0	6.0	16.9	21.9
152.5°	2.0	1.0	4.0	12.0	16.9
155°	2.0	1.0	2.0	8.0	12.0
157.5°	2.0	2.0	1.0	5.0	7.0
160°	2.0	2.0	1.0	2.0	4.0
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)