

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: P236362

Luminaire Tested: **4SWLED-78HL-LW-UNV-L840-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236362
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1709-316-27)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SWLED-78HL-LW-UNV-L840-CD1-U
Description: METALUX SWLED LINEAR LUMINAIRE
4FT FIXTURE WITH 2 ROW LED, WIDE LENS
Light Source: (224) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

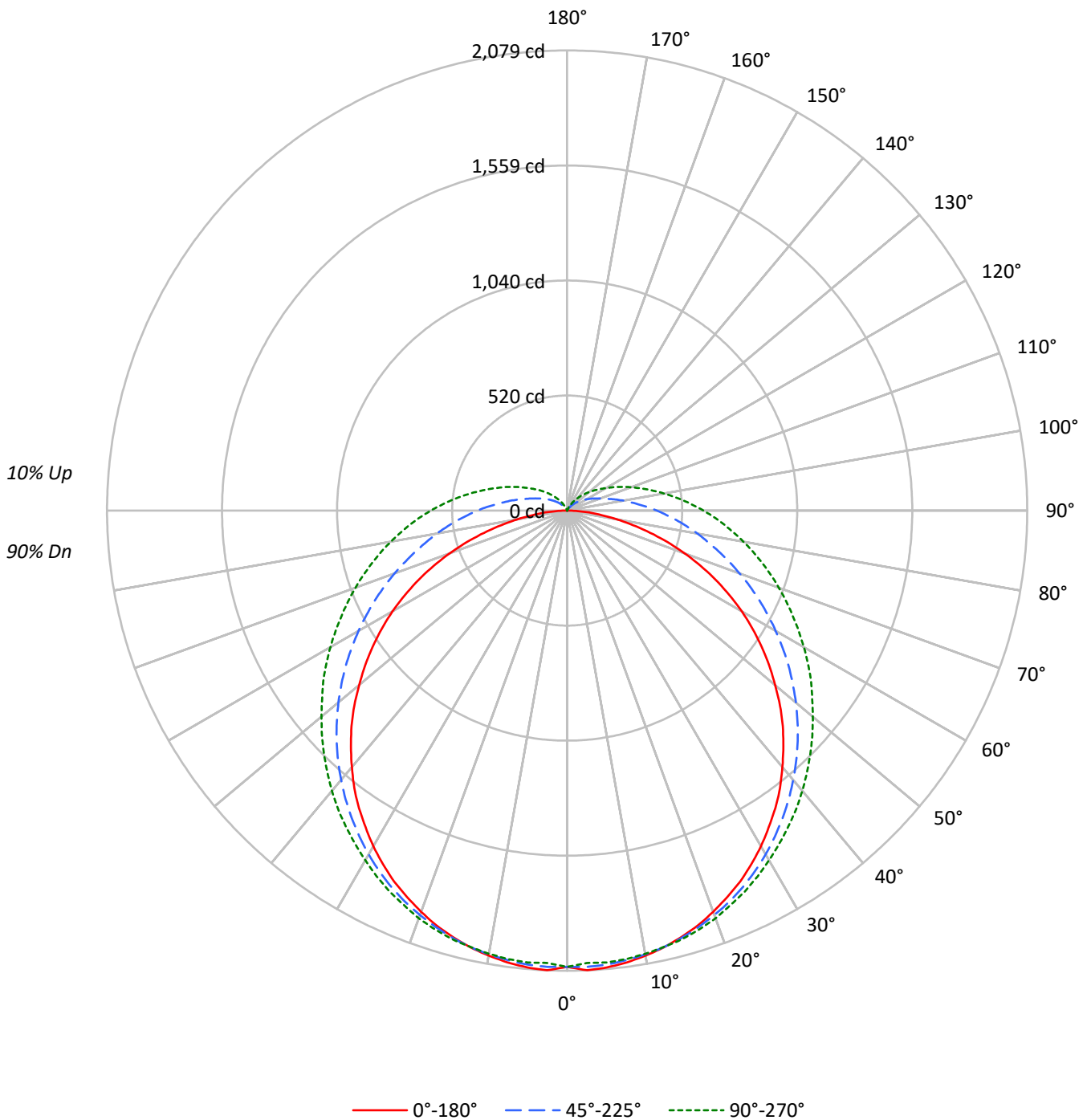
Lumens per Lamp: N/A
Luminaire Lumens: 7832.0 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.15')
CIE Type: Direct

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

TEST NUMBER: P236362

CATALOG NUMBER: 4SWLED-78HL-LW-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P236362

CATALOG NUMBER: 4SWLED-78HL-LW-UNV-L840-CD1-U

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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	90
1	104	98	93	88	100	95	90	86	89	85	82	83	80	77	78	75	73	70
2	94	84	77	70	90	82	75	69	76	71	66	72	67	63	67	63	60	57
3	85	73	65	57	82	71	63	56	67	60	54	62	57	52	59	54	50	47
4	78	65	55	48	74	63	54	47	59	51	45	55	49	44	52	47	42	40
5	71	58	48	41	68	56	47	40	52	45	39	49	43	38	47	41	36	34
6	65	52	42	36	63	50	41	35	47	40	34	45	38	33	42	36	32	29
7	61	47	38	31	58	45	37	31	43	35	30	41	34	29	38	32	28	26
8	56	42	34	28	54	41	33	27	39	32	27	37	31	26	35	29	25	23
9	53	39	30	25	51	38	30	24	36	29	24	34	28	23	32	27	22	21
10	49	36	28	22	47	35	27	22	33	26	21	32	25	21	30	24	20	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14791	14791	14791
5°	14877	14453	14278
10°	14782	14088	13863
15°	14678	13743	13488
20°	14538	13385	13112
25°	14398	13037	12727
30°	14211	12665	12343
35°	14013	12278	11997
40°	13753	11885	11675
45°	13492	11494	11354
50°	13121	11085	11053
55°	12769	10682	10819
60°	12305	10270	10593
65°	11662	9880	10410
70°	10748	9522	10321
75°	9486	9242	10309
80°	7821	9113	10423
85°	5759	9195	10742



TEST NUMBER: P236362

CATALOG NUMBER: 4SWLED-78HL-LW-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.5	2.5
10°-20°	563.2	7.2
20°-30°	862.1	11.0
30°-40°	1056.8	13.5
40°-50°	1131.0	14.4
50°-60°	1084.9	13.9
60°-70°	935.7	11.9
70°-80°	720.8	9.2
80°-90°	499.8	6.4
90°-100°	325.4	4.2
100°-110°	206.8	2.6
110°-120°	126.2	1.6
120°-130°	72.2	0.9
130°-140°	35.6	0.5
140°-150°	13.4	0.2
150°-160°	2.6	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1620.8	20.7
0°-40°	2677.6	34.2
0°-60°	4893.5	62.5
0°-90°	7049.8	90.0
90°-120°	658.4	8.4
90°-150°	779.7	10.0
90°-180°	782.0	10.0
0°-180°	7832.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2061	2061	2061	2061	2061	
5°	2072	2052	2059	2050	2050	197
15°	1995	1982	1999	2001	2005	563
25°	1849	1842	1878	1886	1899	852
35°	1640	1642	1697	1722	1742	1026
45°	1378	1398	1473	1524	1554	1062
55°	1074	1120	1221	1303	1345	959
65°	740	812	957	1073	1124	732
75°	389	510	708	854	912	413
85°	99	270	496	652	710	107
90°	2	184	405	560	616	7
95°	0	123	324	472	526	0
105°	0	61	201	326	371	0
115°	0	34	128	215	252	0
125°	1	16	80	140	164	1
135°	1	4	43	84	99	1
145°	1	1	16	40	50	1
155°	1	1	1	10	15	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P236362

CATALOG NUMBER: 4SWLED-78HL-LW-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2061.2	2061.2	2061.2	2061.2	2061.2
2.5°	2078.7	2058.3	2063.1	2055.3	2045.6
5°	2071.9	2052.4	2059.2	2049.5	2049.5
7.5°	2059.2	2041.7	2048.5	2042.7	2043.7
10°	2041.7	2024.2	2035.9	2031.1	2033.0
12.5°	2021.3	2003.8	2020.4	2016.5	2019.4
15°	1995.1	1981.5	1999.0	2000.9	2004.8
17.5°	1965.0	1953.3	1972.7	1978.6	1984.4
20°	1929.0	1920.3	1944.6	1950.4	1960.1
22.5°	1890.1	1882.4	1913.5	1918.3	1929.0
25°	1849.3	1841.6	1877.5	1886.3	1898.9
27.5°	1801.7	1798.8	1837.7	1850.3	1862.9
30°	1751.2	1749.2	1793.9	1808.5	1824.1
32.5°	1695.8	1697.7	1746.3	1765.8	1784.2
35°	1640.4	1642.3	1696.8	1722.0	1742.4
37.5°	1580.1	1586.0	1644.3	1674.4	1700.6
40°	1513.1	1526.7	1588.9	1625.8	1653.0
42.5°	1446.0	1464.5	1532.5	1575.3	1603.5
45°	1378.0	1398.4	1473.2	1523.8	1553.9
47.5°	1305.1	1331.4	1412.0	1469.4	1502.4
50°	1226.4	1262.4	1348.9	1415.9	1448.9
52.5°	1150.6	1191.4	1284.7	1360.5	1395.5
55°	1073.8	1119.5	1220.6	1303.2	1345.0
57.5°	993.2	1042.7	1154.5	1244.9	1290.5
60°	911.5	967.9	1088.4	1188.5	1235.2
62.5°	827.0	891.1	1022.3	1130.2	1179.8
65°	740.5	812.4	957.2	1072.9	1124.4
67.5°	653.0	734.7	893.1	1018.4	1070.9
70°	563.6	657.9	828.9	963.0	1017.5
72.5°	476.2	583.1	766.7	906.7	964.0
75°	388.7	510.2	707.5	854.2	911.5
77.5°	305.1	441.2	649.2	802.7	860.0
80°	228.4	378.0	596.7	751.2	808.5
82.5°	157.4	321.7	545.2	701.6	758.0
85°	99.1	270.2	495.6	652.1	710.4
87.5°	47.6	224.5	448.0	605.4	662.8
90°	1.9	183.7	405.2	559.8	616.1
92.5°	0.0	150.6	363.5	515.1	570.4
95°	0.0	123.4	323.6	472.3	525.7
97.5°	0.0	102.0	288.6	432.4	484.0
100°	0.0	83.6	257.5	394.5	444.1
102.5°	0.0	70.9	228.4	358.6	406.2
105°	0.0	61.2	201.2	325.6	371.2
107.5°	0.0	52.5	179.8	295.4	338.2
110°	0.0	44.7	160.3	266.3	308.1



TEST NUMBER: P236362

CATALOG NUMBER: 4SWLED-78HL-LW-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	38.9	142.9	241.0	278.9
115°	0.0	34.0	128.3	214.8	251.7
117.5°	0.0	28.2	114.7	193.4	226.4
120°	0.0	24.3	102.0	174.0	203.1
122.5°	1.0	20.4	90.4	156.5	182.7
125°	1.0	16.5	79.7	139.9	164.2
127.5°	1.0	12.6	70.0	124.4	146.7
130°	1.0	9.7	60.3	109.8	129.2
132.5°	1.0	6.8	51.5	96.2	114.7
135°	1.0	3.9	42.8	83.6	99.1
137.5°	1.0	1.9	35.0	70.9	85.5
140°	1.0	1.0	28.2	60.3	72.9
142.5°	1.0	0.0	21.4	50.5	60.3
145°	1.0	1.0	16.5	39.8	49.6
147.5°	1.0	1.0	11.7	31.1	39.8
150°	1.0	1.0	6.8	22.4	30.1
152.5°	1.0	1.0	2.9	15.5	22.4
155°	1.0	1.0	1.0	9.7	14.6
157.5°	1.0	1.0	0.0	3.9	7.8
160°	1.9	1.0	0.0	0.0	1.9
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)