

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: P236186

Luminaire Tested: **2SWLED-20SL-LC-UNV-L850-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236186
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1709-316-4)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2SWLED-20SL-LC-UNV-L850-CD1-U
Description: METALUX SWLED LINEAR LUMINAIRE
2FT FIXTURE WITH 1 ROW LED, CLEAR LENS
Light Source: (56) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

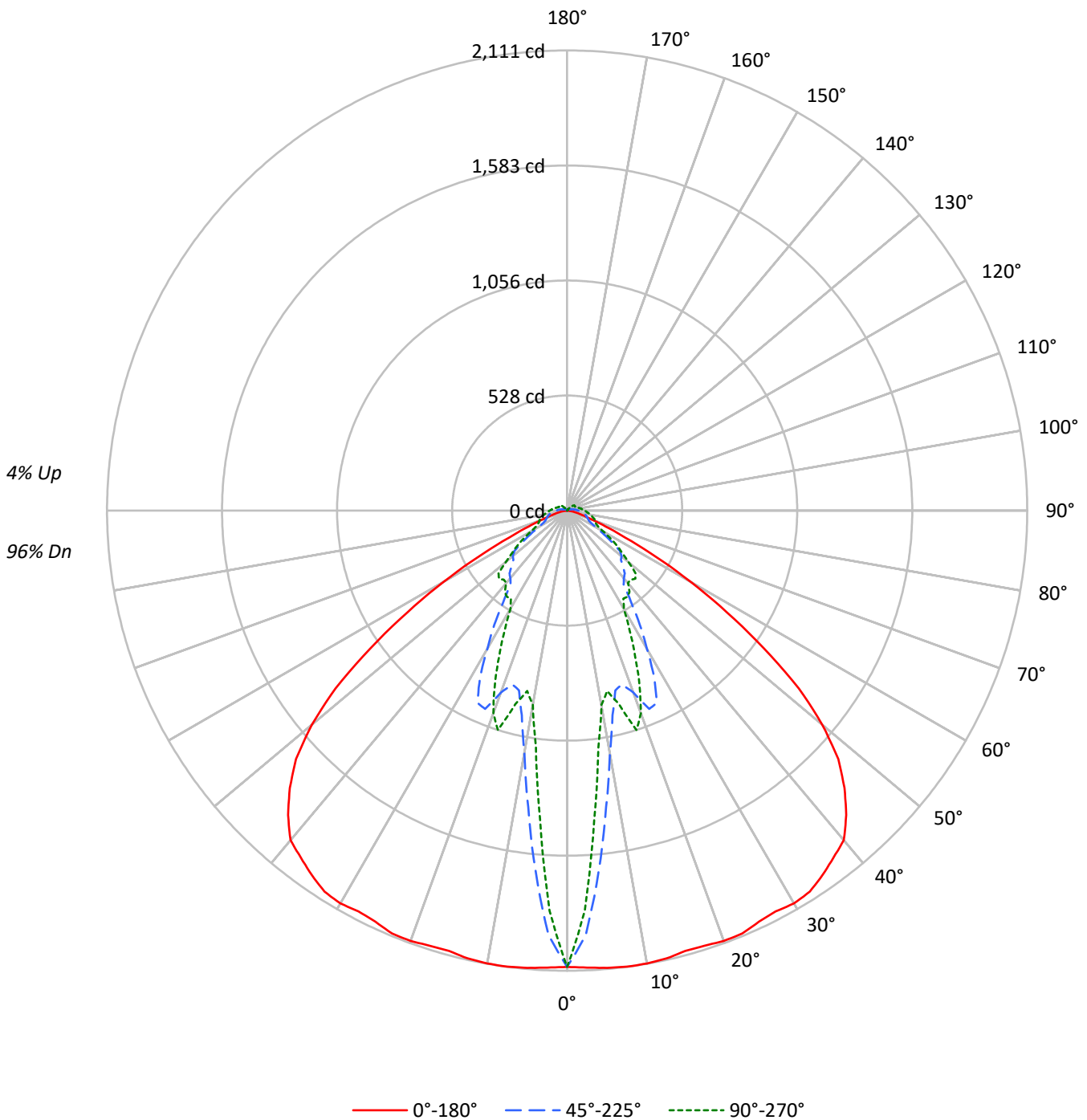
Lumens per Lamp: N/A
Luminaire Lumens: 2482.0 lumens
Efficiency: N/A
Efficacy: 120.5 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 0.27 / 0.77
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 2' x H: 0.15')
CIE Type: Direct

Input Watts (W): 20.6
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	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	109	105	101	97	106	102	98	95	97	94	91	92	90	88	88	86	85	82
2	100	93	87	82	97	91	85	81	87	82	78	83	79	76	79	76	74	71
3	93	83	76	70	90	82	75	70	78	72	68	75	70	66	72	68	65	62
4	86	75	67	61	83	74	66	61	71	64	60	68	63	58	65	61	57	55
5	80	68	60	54	78	67	59	54	64	58	53	62	56	52	60	55	51	49
6	74	62	54	48	72	61	54	48	59	52	47	57	51	47	55	50	46	44
7	69	57	49	44	68	56	49	43	54	48	43	53	47	42	51	46	42	40
8	65	53	45	40	63	52	45	39	50	44	39	49	43	38	47	42	38	36
9	61	49	41	36	60	48	41	36	47	40	36	45	40	35	44	39	35	33
10	58	45	38	33	56	45	38	33	44	37	33	42	37	33	41	36	32	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	30041	30041	30041
5°	30141	23268	19800
10°	30354	15540	12342
15°	30475	11664	12371
20°	31250	12116	13233
25°	31869	13368	9903
30°	33092	10215	7040
35°	34037	7243	6642
40°	34854	5960	6131
45°	34026	5511	6462
50°	31385	5228	5604
55°	24996	4237	4456
60°	16657	2746	3255
65°	8619	2213	2737
70°	4342	2201	2747
75°	2506	2232	2785
80°	1561	2260	2777
85°	826	2248	2791



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.6	6.1
10°-20°	325.8	13.1
20°-30°	448.3	18.1
30°-40°	439.2	17.7
40°-50°	401.0	16.2
50°-60°	290.0	11.7
60°-70°	155.1	6.2
70°-80°	99.3	4.0
80°-90°	64.6	2.6
90°-100°	40.6	1.6
100°-110°	25.5	1.0
110°-120°	16.9	0.7
120°-130°	13.2	0.5
130°-140°	8.3	0.3
140°-150°	2.6	0.1
150°-160°	0.8	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	924.8	37.3
0°-40°	1363.9	55.0
0°-60°	2054.9	82.8
0°-90°	2373.9	95.6
90°-120°	83.0	3.3
90°-150°	107.2	4.3
90°-180°	108.0	4.4
0°-180°	2482.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2093	2093	2093	2093	2093	
5°	2106	1941	1661	1476	1421	201
15°	2091	1283	854	864	919	595
25°	2081	820	973	802	739	965
35°	2042	865	508	460	482	1278
45°	1799	414	360	405	442	1376
55°	1103	222	248	264	277	980
65°	294	96	111	145	148	327
75°	58	56	89	121	123	67
85°	9	31	65	87	92	11
90°	1	22	51	72	79	1
95°	0	15	40	58	69	0
105°	0	8	24	38	51	0
115°	0	4	15	28	41	0
125°	0	2	10	28	40	0
135°	1	1	9	20	24	0
145°	1	1	4	7	7	1
155°	1	1	1	3	3	0
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°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2093.2	2093.2	2093.2	2093.2	2093.2	2093.2	2093.2	2093.2	2093.2	2093.2	2093.2
2.5°	2098.3	2091.1	2079.9	2072.7	2059.3	2051.1	2041.9	2023.4	1991.6	1976.2	1949.5
5°	2105.5	2090.1	2059.3	2027.5	1972.1	1941.3	1911.6	1850.0	1777.2	1723.8	1661.2
7.5°	2110.6	2087.0	2029.6	1951.6	1849.0	1794.6	1743.3	1641.7	1537.1	1455.0	1370.8
10°	2109.6	2071.6	1975.2	1846.9	1702.3	1629.4	1556.6	1425.2	1303.1	1209.7	1127.7
12.5°	2104.5	2051.1	1908.5	1732.0	1542.2	1459.1	1371.9	1223.1	1105.1	1025.0	961.4
15°	2091.1	2014.2	1820.3	1593.5	1378.0	1282.6	1188.2	1052.8	957.3	892.7	853.7
17.5°	2093.2	1989.6	1737.1	1467.3	1217.9	1122.5	1035.3	917.3	849.6	830.1	835.2
20°	2100.4	1969.0	1656.1	1342.1	1074.3	987.1	912.2	832.1	813.7	836.3	887.6
22.5°	2100.4	1933.1	1561.7	1207.7	948.1	881.4	836.3	807.5	848.6	924.5	985.0
25°	2080.9	1877.7	1447.8	1063.0	854.7	819.8	805.5	843.4	941.9	988.1	972.7
27.5°	2072.7	1825.4	1330.8	938.9	805.5	800.3	820.9	922.4	964.5	930.6	866.0
30°	2080.9	1778.2	1210.8	854.7	801.4	832.1	885.5	930.6	883.4	806.5	732.6
32.5°	2072.7	1719.7	1094.8	820.9	841.4	883.4	905.0	851.6	757.2	675.2	620.8
35°	2041.9	1632.5	993.2	818.8	860.9	865.0	833.2	731.6	633.1	562.3	507.9
37.5°	2007.0	1547.3	938.9	825.0	808.5	768.5	710.0	608.5	522.3	461.7	425.8
40°	1974.2	1477.5	917.3	795.2	707.0	641.3	581.8	494.6	428.9	399.1	405.3
42.5°	1895.2	1404.7	879.3	713.1	583.8	519.2	473.0	405.3	374.5	382.7	390.9
45°	1798.7	1350.3	813.7	594.1	460.7	413.5	383.8	350.9	349.9	358.1	360.2
47.5°	1686.9	1297.0	722.4	476.1	361.2	335.5	325.3	320.1	323.2	324.2	334.5
50°	1527.8	1209.7	604.4	366.3	294.5	289.4	289.4	290.4	292.4	305.8	325.3
52.5°	1339.0	1108.2	495.6	285.2	253.4	254.5	254.5	259.6	275.0	294.5	304.7
55°	1103.0	972.7	411.5	233.9	220.6	221.6	225.7	238.0	248.3	252.4	248.3
57.5°	869.1	820.9	364.3	199.1	192.9	195.0	201.1	203.2	200.1	193.9	191.9
60°	653.6	653.6	334.5	173.4	163.1	162.1	163.1	153.9	148.8	146.7	149.8
62.5°	458.7	501.8	307.8	148.8	128.3	123.1	121.1	115.9	115.9	118.0	123.1
65°	293.5	368.4	270.9	124.2	99.5	96.5	96.5	96.5	99.5	104.7	110.8
67.5°	190.8	254.5	223.7	106.7	83.1	82.1	82.1	86.2	91.3	97.5	104.7
70°	124.2	166.2	174.4	93.4	71.8	71.8	73.9	79.0	85.2	92.3	99.5
72.5°	83.1	107.7	130.3	80.0	63.6	63.6	65.7	71.8	79.0	87.2	94.4
75°	57.5	70.8	90.3	66.7	54.4	56.4	58.5	65.7	73.9	82.1	89.3
77.5°	39.0	46.2	60.5	52.3	46.2	49.3	52.3	59.5	67.7	75.9	84.1
80°	26.7	29.8	39.0	39.0	39.0	42.1	46.2	54.4	62.6	69.8	78.0
82.5°	16.4	18.5	24.6	27.7	32.8	35.9	40.0	48.2	56.4	63.6	70.8
85°	9.2	10.3	15.4	20.5	26.7	30.8	34.9	42.1	50.3	57.5	64.6
87.5°	4.1	6.2	9.2	14.4	22.6	25.7	29.8	36.9	45.1	51.3	58.5
90°	1.0	3.1	6.2	11.3	17.4	21.5	25.7	31.8	39.0	45.1	51.3
92.5°	0.0	1.0	4.1	8.2	14.4	18.5	21.5	27.7	33.9	40.0	45.1
95°	0.0	1.0	3.1	7.2	12.3	15.4	18.5	24.6	29.8	34.9	40.0
97.5°	0.0	0.0	2.1	5.1	10.3	13.3	15.4	20.5	25.7	30.8	34.9
100°	0.0	0.0	2.1	4.1	9.2	11.3	13.3	18.5	22.6	26.7	30.8
102.5°	0.0	0.0	1.0	4.1	7.2	9.2	11.3	16.4	19.5	23.6	26.7
105°	0.0	0.0	1.0	3.1	6.2	8.2	10.3	13.3	17.4	20.5	23.6
107.5°	0.0	0.0	1.0	3.1	5.1	7.2	9.2	12.3	15.4	18.5	21.5
110°	0.0	0.0	1.0	2.1	5.1	6.2	7.2	10.3	13.3	16.4	18.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.0	0.0	1.0	2.1	4.1	5.1	7.2	9.2	12.3	14.4	16.4
115°	0.0	0.0	0.0	2.1	3.1	4.1	6.2	8.2	10.3	12.3	15.4
117.5°	0.0	0.0	0.0	1.0	3.1	4.1	5.1	7.2	9.2	11.3	13.3
120°	0.0	0.0	0.0	1.0	2.1	3.1	4.1	6.2	8.2	10.3	11.3
122.5°	0.0	0.0	0.0	1.0	2.1	2.1	3.1	5.1	7.2	9.2	10.3
125°	0.0	0.0	0.0	0.0	1.0	2.1	3.1	4.1	6.2	8.2	10.3
127.5°	0.0	0.0	0.0	1.0	1.0	2.1	2.1	4.1	5.1	7.2	9.2
130°	0.0	0.0	0.0	0.0	1.0	1.0	2.1	3.1	5.1	7.2	9.2
132.5°	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1	5.1	7.2	9.2
135°	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1	4.1	6.2	9.2
137.5°	0.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	4.1	5.1	7.2
140°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1	4.1	6.2
142.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1	5.1
145°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1	4.1
147.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1
150°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1
152.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
155°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
157.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
160°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	2093.2	2093.2	2093.2	2093.2	2093.2	2093.2	2093.2	2093.2	2093.2	2093.2
2.5°	1937.2	1901.3	1893.1	1864.4	1856.2	1852.1	1852.1	1834.6	1827.4	1838.7
5°	1620.2	1561.7	1531.9	1487.8	1475.5	1462.2	1450.9	1436.5	1417.0	1421.1
7.5°	1310.3	1243.6	1196.4	1159.5	1146.1	1134.8	1121.5	1107.1	1095.8	1095.8
10°	1072.2	1019.9	989.1	954.2	944.0	933.7	921.4	911.2	902.9	905.0
12.5°	914.2	874.2	855.7	845.5	845.5	842.4	842.4	846.5	849.6	847.5
15°	838.3	840.4	844.5	858.8	864.0	867.0	881.4	896.8	908.1	919.4
17.5°	853.7	883.4	928.6	977.8	989.1	1010.7	1032.2	1040.4	1049.7	1055.8
20°	955.3	1005.6	1036.3	1036.3	1034.3	1026.1	1011.7	995.3	989.1	989.1
22.5°	1010.7	994.3	968.6	937.8	929.6	917.3	896.8	879.3	871.1	868.1
25°	925.5	881.4	843.4	812.7	802.4	786.0	765.5	749.0	740.8	738.8
27.5°	800.3	752.1	718.3	691.6	679.3	668.0	645.4	630.0	622.8	621.8
30°	682.3	638.2	599.2	572.5	563.3	555.1	537.7	526.4	521.2	520.2
32.5°	565.4	527.4	497.6	481.2	477.1	473.0	469.9	473.0	476.1	479.2
35°	467.9	450.4	445.3	451.5	459.7	465.8	474.0	477.1	479.2	482.3
37.5°	423.8	434.0	446.3	454.6	457.6	461.7	466.9	467.9	468.9	469.9
40°	415.6	426.8	433.0	434.0	433.0	433.0	433.0	432.0	433.0	434.0
42.5°	394.0	398.1	396.1	397.1	400.2	404.3	413.5	421.7	425.8	429.9
45°	362.2	367.3	381.7	399.1	405.3	412.5	426.8	436.1	440.2	442.2
47.5°	348.9	367.3	385.8	400.2	404.3	409.4	419.7	425.8	426.8	426.8
50°	343.7	358.1	363.2	368.4	366.3	366.3	364.3	366.3	365.3	367.3
52.5°	309.9	308.8	306.8	308.8	308.8	308.8	311.9	315.0	315.0	317.1
55°	245.2	247.3	251.4	261.6	263.7	265.8	271.9	275.0	276.0	277.0
57.5°	195.0	202.1	211.4	220.6	223.7	226.8	228.8	230.9	230.9	232.9
60°	154.9	164.2	174.4	184.7	186.7	186.7	186.7	188.8	187.8	189.8
62.5°	129.3	140.6	150.8	158.0	159.0	159.0	158.0	159.0	160.1	161.1
65°	118.0	130.3	140.6	144.7	144.7	145.7	145.7	147.8	147.8	147.8
67.5°	113.9	126.2	134.4	137.5	137.5	138.5	139.5	139.5	139.5	139.5
70°	109.8	123.1	128.3	131.3	132.4	133.4	133.4	134.4	134.4	135.4
72.5°	106.7	118.0	122.1	125.2	127.2	128.3	128.3	130.3	130.3	131.3
75°	101.6	110.8	114.9	119.0	121.1	122.1	123.1	124.2	123.1	123.1
77.5°	94.4	102.6	107.7	111.8	112.9	113.9	114.9	114.9	114.9	114.9
80°	88.2	94.4	99.5	103.6	104.7	105.7	105.7	106.7	107.7	107.7
82.5°	80.0	86.2	91.3	94.4	95.4	96.5	97.5	99.5	100.6	100.6
85°	72.9	78.0	82.1	86.2	87.2	88.2	90.3	92.3	92.3	92.3
87.5°	64.6	69.8	73.9	78.0	80.0	81.1	83.1	85.2	85.2	86.2
90°	57.5	61.6	66.7	69.8	71.8	72.9	75.9	78.0	79.0	79.0
92.5°	50.3	54.4	59.5	62.6	64.6	66.7	68.7	71.8	72.9	73.9
95°	44.1	48.2	52.3	56.4	58.5	59.5	63.6	66.7	68.7	68.7
97.5°	38.0	42.1	46.2	50.3	52.3	54.4	57.5	61.6	63.6	64.6
100°	33.9	36.9	41.0	45.1	47.2	49.3	53.4	57.5	59.5	60.5
102.5°	29.8	32.8	35.9	40.0	42.1	44.1	48.2	52.3	54.4	55.4
105°	26.7	28.7	31.8	35.9	38.0	40.0	44.1	48.2	50.3	51.3
107.5°	23.6	26.7	28.7	32.8	34.9	35.9	40.0	44.1	46.2	47.2
110°	21.5	23.6	26.7	29.8	31.8	32.8	36.9	41.0	43.1	44.1



TEST NUMBER: P236186

CATALOG NUMBER: 2SWLED-20SL-LC-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	19.5	21.5	24.6	27.7	28.7	30.8	34.9	38.0	41.0	42.1
115°	17.4	19.5	22.6	25.7	27.7	28.7	32.8	36.9	40.0	41.0
117.5°	15.4	17.4	20.5	24.6	26.7	28.7	32.8	36.9	39.0	40.0
120°	14.4	16.4	19.5	23.6	25.7	27.7	32.8	36.9	39.0	40.0
122.5°	13.3	15.4	19.5	24.6	26.7	28.7	32.8	36.9	40.0	41.0
125°	12.3	15.4	20.5	24.6	27.7	29.8	33.9	36.9	39.0	40.0
127.5°	12.3	16.4	20.5	25.7	27.7	29.8	33.9	36.9	38.0	39.0
130°	13.3	16.4	21.5	25.7	27.7	28.7	31.8	33.9	34.9	34.9
132.5°	13.3	16.4	20.5	23.6	24.6	25.7	27.7	28.7	29.8	29.8
135°	12.3	14.4	17.4	19.5	20.5	21.5	22.6	23.6	23.6	23.6
137.5°	10.3	12.3	14.4	15.4	16.4	16.4	17.4	17.4	18.5	18.5
140°	8.2	9.2	11.3	12.3	12.3	12.3	13.3	13.3	13.3	13.3
142.5°	6.2	7.2	8.2	9.2	9.2	9.2	9.2	9.2	10.3	10.3
145°	4.1	5.1	6.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
147.5°	3.1	4.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
150°	2.1	3.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
152.5°	2.1	2.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
155°	2.1	2.1	2.1	3.1	3.1	3.1	3.1	2.1	3.1	3.1
157.5°	1.0	1.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
160°	1.0	1.0	2.1	2.1	2.1	2.1	1.0	1.0	1.0	1.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)