

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: P236183

Luminaire Tested: **2SWLED-16SL-LC-UNV-L850-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236183
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-16SL-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

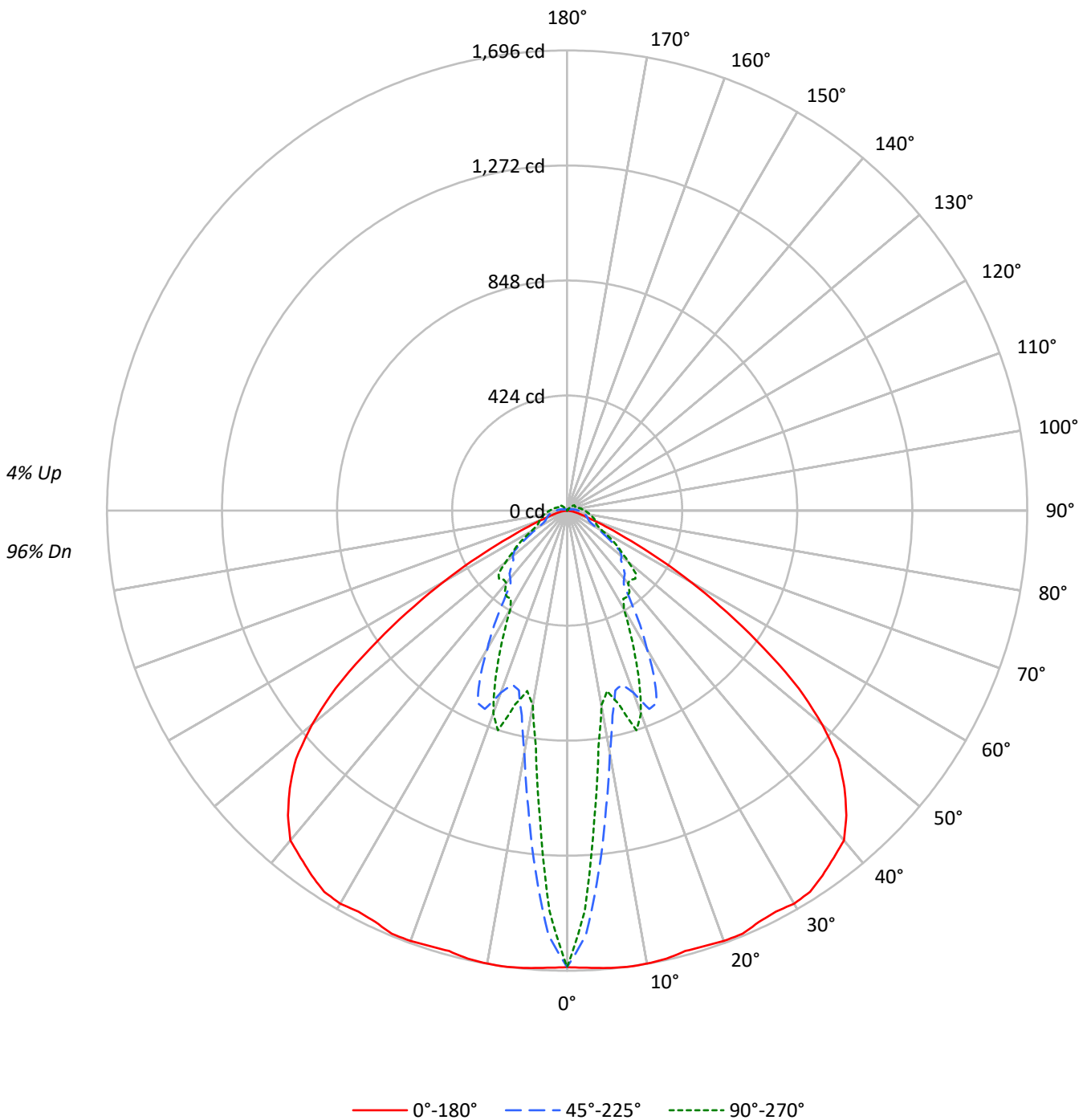
Lumens per Lamp: N/A
Luminaire Lumens: 1995.0 lumens
Efficiency: N/A
Efficacy: 125.5 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 0.27 / 0.77
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 2' x H: 0.15')
CIE Type: Direct

Input Watts (W): 15.9
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°	24147	24147	24147
5°	24227	18703	15915
10°	24398	12490	9920
15°	24495	9375	9944
20°	25119	9738	10638
25°	25616	10746	7960
30°	26599	8211	5658
35°	27358	5821	5338
40°	28015	4791	4928
45°	27351	4429	5195
50°	25226	4201	4505
55°	20092	3406	3583
60°	13390	2207	2617
65°	6928	1780	2200
70°	3489	1769	2209
75°	2014	1794	2239
80°	1251	1817	2233
85°	665	1809	2244



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.1	6.1
10°-20°	261.9	13.1
20°-30°	360.4	18.1
30°-40°	353.0	17.7
40°-50°	322.3	16.2
50°-60°	233.1	11.7
60°-70°	124.7	6.2
70°-80°	79.8	4.0
80°-90°	51.9	2.6
90°-100°	32.7	1.6
100°-110°	20.5	1.0
110°-120°	13.6	0.7
120°-130°	10.6	0.5
130°-140°	6.7	0.3
140°-150°	2.1	0.1
150°-160°	0.6	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	743.3	37.3
0°-40°	1096.3	55.0
0°-60°	1651.7	82.8
0°-90°	1908.1	95.6
90°-120°	66.7	3.3
90°-150°	86.2	4.3
90°-180°	87.0	4.4
0°-180°	1995.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1682	1682	1682	1682	1682	
5°	1692	1560	1335	1186	1142	162
15°	1681	1031	686	694	739	478
25°	1673	659	782	645	594	776
35°	1641	695	408	370	388	1028
45°	1446	332	290	326	356	1106
55°	887	178	200	212	223	787
65°	236	78	89	116	119	263
75°	46	45	72	97	99	54
85°	7	25	52	70	74	9
90°	1	17	41	58	64	1
95°	0	12	32	47	55	0
105°	0	7	19	30	41	0
115°	0	3	12	22	33	0
125°	0	2	8	22	32	0
135°	1	1	7	16	19	0
145°	1	1	3	6	6	1
155°	1	1	1	2	2	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°	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5
2.5°	1686.6	1680.8	1671.8	1666.0	1655.3	1648.7	1641.2	1626.4	1600.8	1588.5	1567.0
5°	1692.4	1680.0	1655.3	1629.7	1585.2	1560.4	1536.5	1487.0	1428.5	1385.6	1335.3
7.5°	1696.5	1677.5	1631.3	1568.7	1486.2	1442.5	1401.2	1319.6	1235.5	1169.5	1101.9
10°	1695.7	1665.2	1587.6	1484.5	1368.3	1309.7	1251.1	1145.6	1047.4	972.4	906.4
12.5°	1691.6	1648.7	1534.0	1392.2	1239.6	1172.8	1102.7	983.1	888.3	823.9	772.8
15°	1680.8	1619.0	1463.1	1280.8	1107.6	1030.9	955.1	846.2	769.5	717.5	686.2
17.5°	1682.5	1599.2	1396.3	1179.4	979.0	902.3	832.2	737.3	682.9	667.2	671.3
20°	1688.3	1582.7	1331.1	1078.8	863.5	793.4	733.2	668.9	654.0	672.2	713.4
22.5°	1688.3	1553.8	1255.3	970.7	762.1	708.5	672.2	649.1	682.1	743.1	791.8
25°	1672.6	1509.3	1163.7	854.4	687.0	659.0	647.4	677.9	757.1	794.2	781.9
27.5°	1666.0	1467.2	1069.7	754.6	647.4	643.3	659.8	741.4	775.3	748.0	696.1
30°	1672.6	1429.3	973.2	687.0	644.1	668.9	711.8	748.0	710.1	648.2	588.9
32.5°	1666.0	1382.3	880.0	659.8	676.3	710.1	727.4	684.5	608.7	542.7	499.0
35°	1641.2	1312.2	798.4	658.1	692.0	695.3	669.7	588.0	508.9	452.0	408.2
37.5°	1613.2	1243.7	754.6	663.1	649.9	617.7	570.7	489.1	419.8	371.1	342.3
40°	1586.8	1187.6	737.3	639.2	568.2	515.5	467.6	397.5	344.7	320.8	325.8
42.5°	1523.3	1129.1	706.8	573.2	469.3	417.3	380.2	325.8	301.0	307.6	314.2
45°	1445.8	1085.4	654.0	477.5	370.3	332.4	308.5	282.1	281.2	287.8	289.5
47.5°	1355.9	1042.5	580.6	382.7	290.3	269.7	261.4	257.3	259.8	260.6	268.9
50°	1228.0	972.4	485.8	294.4	236.7	232.6	232.6	233.4	235.1	245.8	261.4
52.5°	1076.3	890.7	398.4	229.3	203.7	204.5	204.5	208.7	221.0	236.7	244.9
55°	886.6	781.9	330.7	188.0	177.3	178.1	181.4	191.3	199.6	202.9	199.6
57.5°	698.6	659.8	292.8	160.0	155.1	156.7	161.7	163.3	160.8	155.9	154.2
60°	525.4	525.4	268.9	139.4	131.1	130.3	131.1	123.7	119.6	117.9	120.4
62.5°	368.7	403.3	247.4	119.6	103.1	99.0	97.3	93.2	93.2	94.8	99.0
65°	235.9	296.1	217.7	99.8	80.0	77.5	77.5	77.5	80.0	84.1	89.1
67.5°	153.4	204.5	179.8	85.8	66.8	66.0	66.0	69.3	73.4	78.4	84.1
70°	99.8	133.6	140.2	75.1	57.7	57.7	59.4	63.5	68.5	74.2	80.0
72.5°	66.8	86.6	104.7	64.3	51.1	51.1	52.8	57.7	63.5	70.1	75.9
75°	46.2	56.9	72.6	53.6	43.7	45.4	47.0	52.8	59.4	66.0	71.8
77.5°	31.3	37.1	48.7	42.1	37.1	39.6	42.1	47.8	54.4	61.0	67.6
80°	21.4	23.9	31.3	31.3	31.3	33.8	37.1	43.7	50.3	56.1	62.7
82.5°	13.2	14.8	19.8	22.3	26.4	28.9	32.2	38.8	45.4	51.1	56.9
85°	7.4	8.2	12.4	16.5	21.4	24.7	28.0	33.8	40.4	46.2	52.0
87.5°	3.3	4.9	7.4	11.5	18.1	20.6	23.9	29.7	36.3	41.2	47.0
90°	0.8	2.5	4.9	9.1	14.0	17.3	20.6	25.6	31.3	36.3	41.2
92.5°	0.0	0.8	3.3	6.6	11.5	14.8	17.3	22.3	27.2	32.2	36.3
95°	0.0	0.8	2.5	5.8	9.9	12.4	14.8	19.8	23.9	28.0	32.2
97.5°	0.0	0.0	1.6	4.1	8.2	10.7	12.4	16.5	20.6	24.7	28.0
100°	0.0	0.0	1.6	3.3	7.4	9.1	10.7	14.8	18.1	21.4	24.7
102.5°	0.0	0.0	0.8	3.3	5.8	7.4	9.1	13.2	15.7	19.0	21.4
105°	0.0	0.0	0.8	2.5	4.9	6.6	8.2	10.7	14.0	16.5	19.0
107.5°	0.0	0.0	0.8	2.5	4.1	5.8	7.4	9.9	12.4	14.8	17.3
110°	0.0	0.0	0.8	1.6	4.1	4.9	5.8	8.2	10.7	13.2	14.8



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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	0.8	1.6	3.3	4.1	5.8	7.4	9.9	11.5	13.2
115°	0.0	0.0	0.0	1.6	2.5	3.3	4.9	6.6	8.2	9.9	12.4
117.5°	0.0	0.0	0.0	0.8	2.5	3.3	4.1	5.8	7.4	9.1	10.7
120°	0.0	0.0	0.0	0.8	1.6	2.5	3.3	4.9	6.6	8.2	9.1
122.5°	0.0	0.0	0.0	0.8	1.6	1.6	2.5	4.1	5.8	7.4	8.2
125°	0.0	0.0	0.0	0.0	0.8	1.6	2.5	3.3	4.9	6.6	8.2
127.5°	0.0	0.0	0.0	0.8	0.8	1.6	1.6	3.3	4.1	5.8	7.4
130°	0.0	0.0	0.0	0.0	0.8	0.8	1.6	2.5	4.1	5.8	7.4
132.5°	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.5	4.1	5.8	7.4
135°	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.5	3.3	4.9	7.4
137.5°	0.0	0.8	0.8	0.8	0.8	0.8	0.8	1.6	3.3	4.1	5.8
140°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.5	3.3	4.9
142.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.5	4.1
145°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.5	3.3
147.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.5
150°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6
152.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
155°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
157.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
160°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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°	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5	1682.5
2.5°	1557.1	1528.3	1521.7	1498.6	1492.0	1488.7	1488.7	1474.6	1468.9	1477.9
5°	1302.3	1255.3	1231.3	1195.9	1186.0	1175.3	1166.2	1154.6	1139.0	1142.3
7.5°	1053.2	999.6	961.7	932.0	921.2	912.2	901.4	889.9	880.8	880.8
10°	861.9	819.8	795.1	767.0	758.8	750.5	740.6	732.4	725.8	727.4
12.5°	734.8	702.7	687.8	679.6	679.6	677.1	677.1	680.4	682.9	681.2
15°	673.8	675.5	678.8	690.3	694.4	696.9	708.5	720.8	729.9	739.0
17.5°	686.2	710.1	746.4	786.0	795.1	812.4	829.7	836.3	843.7	848.7
20°	767.8	808.3	833.0	833.0	831.3	824.7	813.2	800.0	795.1	795.1
22.5°	812.4	799.2	778.6	753.8	747.2	737.3	720.8	706.8	700.2	697.7
25°	743.9	708.5	677.9	653.2	645.0	631.8	615.3	602.1	595.5	593.8
27.5°	643.3	604.5	577.3	555.9	546.0	536.9	518.8	506.4	500.6	499.8
30°	548.5	513.0	481.7	460.2	452.8	446.2	432.2	423.1	419.0	418.1
32.5°	454.4	423.9	400.0	386.8	383.5	380.2	377.7	380.2	382.7	385.2
35°	376.1	362.1	357.9	362.9	369.5	374.4	381.0	383.5	385.2	387.6
37.5°	340.6	348.9	358.8	365.4	367.8	371.1	375.3	376.1	376.9	377.7
40°	334.0	343.1	348.0	348.9	348.0	348.0	348.0	347.2	348.0	348.9
42.5°	316.7	320.0	318.4	319.2	321.7	324.9	332.4	339.0	342.3	345.6
45°	291.1	295.3	306.8	320.8	325.8	331.5	343.1	350.5	353.8	355.5
47.5°	280.4	295.3	310.1	321.7	324.9	329.1	337.3	342.3	343.1	343.1
50°	276.3	287.8	292.0	296.1	294.4	294.4	292.8	294.4	293.6	295.3
52.5°	249.1	248.2	246.6	248.2	248.2	248.2	250.7	253.2	253.2	254.8
55°	197.1	198.8	202.1	210.3	212.0	213.6	218.6	221.0	221.9	222.7
57.5°	156.7	162.5	169.9	177.3	179.8	182.3	183.9	185.6	185.6	187.2
60°	124.5	132.0	140.2	148.5	150.1	150.1	150.1	151.8	150.9	152.6
62.5°	103.9	113.0	121.2	127.0	127.8	127.8	127.0	127.8	128.7	129.5
65°	94.8	104.7	113.0	116.3	116.3	117.1	117.1	118.8	118.8	118.8
67.5°	91.5	101.4	108.0	110.5	110.5	111.3	112.2	112.2	112.2	112.2
70°	88.2	99.0	103.1	105.6	106.4	107.2	107.2	108.0	108.0	108.9
72.5°	85.8	94.8	98.1	100.6	102.3	103.1	103.1	104.7	104.7	105.6
75°	81.6	89.1	92.4	95.7	97.3	98.1	99.0	99.8	99.0	99.0
77.5°	75.9	82.5	86.6	89.9	90.7	91.5	92.4	92.4	92.4	92.4
80°	70.9	75.9	80.0	83.3	84.1	84.9	84.9	85.8	86.6	86.6
82.5°	64.3	69.3	73.4	75.9	76.7	77.5	78.4	80.0	80.8	80.8
85°	58.6	62.7	66.0	69.3	70.1	70.9	72.6	74.2	74.2	74.2
87.5°	52.0	56.1	59.4	62.7	64.3	65.2	66.8	68.5	68.5	69.3
90°	46.2	49.5	53.6	56.1	57.7	58.6	61.0	62.7	63.5	63.5
92.5°	40.4	43.7	47.8	50.3	52.0	53.6	55.3	57.7	58.6	59.4
95°	35.5	38.8	42.1	45.4	47.0	47.8	51.1	53.6	55.3	55.3
97.5°	30.5	33.8	37.1	40.4	42.1	43.7	46.2	49.5	51.1	52.0
100°	27.2	29.7	33.0	36.3	37.9	39.6	42.9	46.2	47.8	48.7
102.5°	23.9	26.4	28.9	32.2	33.8	35.5	38.8	42.1	43.7	44.5
105°	21.4	23.1	25.6	28.9	30.5	32.2	35.5	38.8	40.4	41.2
107.5°	19.0	21.4	23.1	26.4	28.0	28.9	32.2	35.5	37.1	37.9
110°	17.3	19.0	21.4	23.9	25.6	26.4	29.7	33.0	34.6	35.5



TEST NUMBER: P236183

CATALOG NUMBER: 2SWLED-16SL-LC-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	15.7	17.3	19.8	22.3	23.1	24.7	28.0	30.5	33.0	33.8
115°	14.0	15.7	18.1	20.6	22.3	23.1	26.4	29.7	32.2	33.0
117.5°	12.4	14.0	16.5	19.8	21.4	23.1	26.4	29.7	31.3	32.2
120°	11.5	13.2	15.7	19.0	20.6	22.3	26.4	29.7	31.3	32.2
122.5°	10.7	12.4	15.7	19.8	21.4	23.1	26.4	29.7	32.2	33.0
125°	9.9	12.4	16.5	19.8	22.3	23.9	27.2	29.7	31.3	32.2
127.5°	9.9	13.2	16.5	20.6	22.3	23.9	27.2	29.7	30.5	31.3
130°	10.7	13.2	17.3	20.6	22.3	23.1	25.6	27.2	28.0	28.0
132.5°	10.7	13.2	16.5	19.0	19.8	20.6	22.3	23.1	23.9	23.9
135°	9.9	11.5	14.0	15.7	16.5	17.3	18.1	19.0	19.0	19.0
137.5°	8.2	9.9	11.5	12.4	13.2	13.2	14.0	14.0	14.8	14.8
140°	6.6	7.4	9.1	9.9	9.9	9.9	10.7	10.7	10.7	10.7
142.5°	4.9	5.8	6.6	7.4	7.4	7.4	7.4	7.4	8.2	8.2
145°	3.3	4.1	4.9	5.8	5.8	5.8	5.8	5.8	5.8	5.8
147.5°	2.5	3.3	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
150°	1.6	2.5	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
152.5°	1.6	1.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
155°	1.6	1.6	1.6	2.5	2.5	2.5	2.5	1.6	2.5	2.5
157.5°	0.8	0.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
160°	0.8	0.8	1.6	1.6	1.6	1.6	0.8	0.8	0.8	0.8
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)