

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: P236181

Luminaire Tested: **2SWLED-16SL-LC-UNV-L835-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236181  
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-L835-CD1-U  
Description: METALUX SWLED LINEAR LUMINAIRE  
2FT FIXTURE WITH 1 ROW LED, CLEAR LENS  
Light Source: (56) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

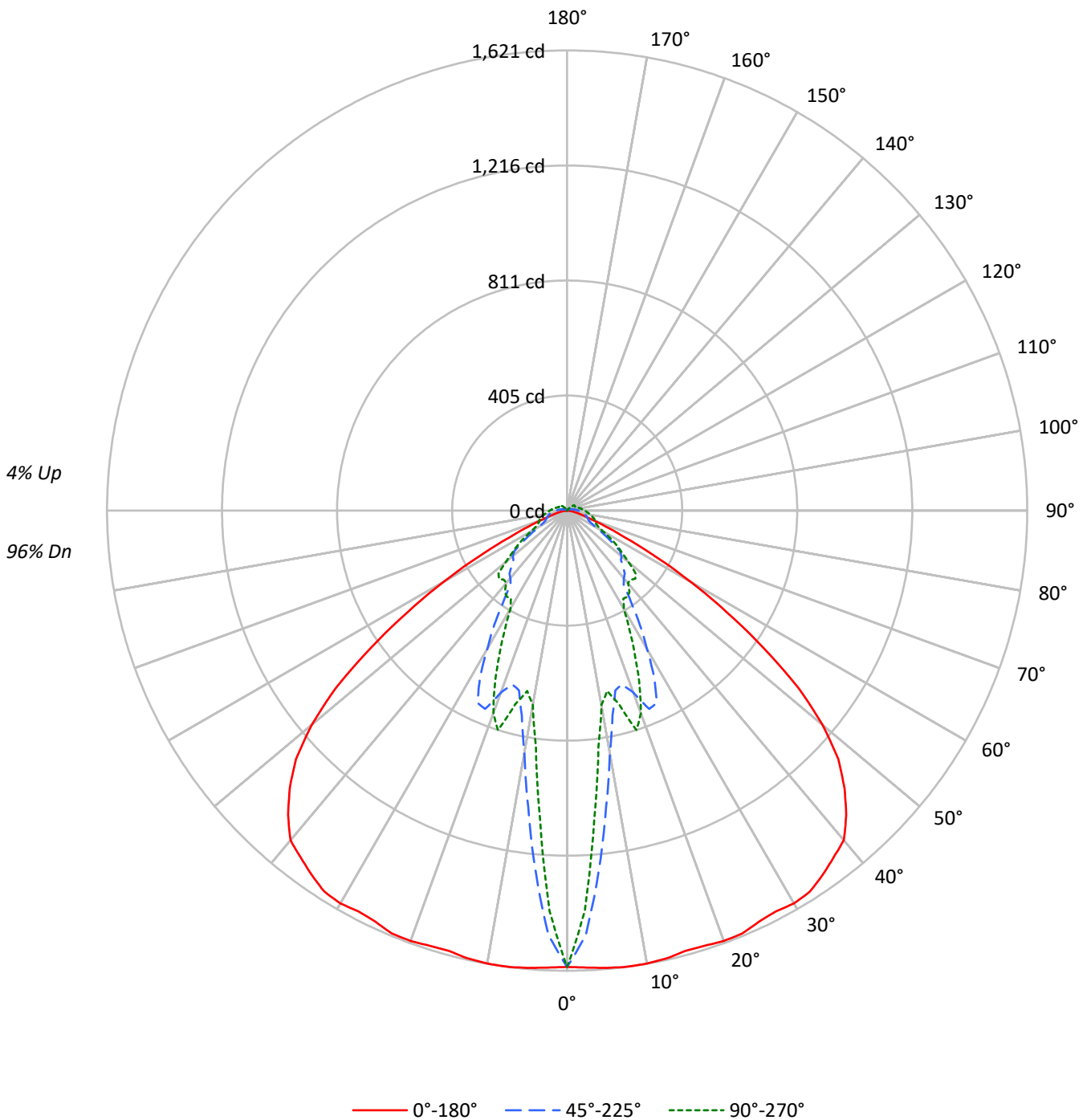
Lumens per Lamp: N/A  
Luminaire Lumens: 1906.0 lumens  
Efficiency: N/A  
Efficacy: 119.9 lumens/watt  
Spacing Criteria (0/90/45): 1.48 / 0.27 / 0.77  
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 2' x H: 0.15')  
CIE Type: Direct

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	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°	23069	23069	23069
5°	23147	17868	15205
10°	23309	11933	9478
15°	23402	8957	9500
20°	23997	9304	10163
25°	24473	10266	7604
30°	25412	7845	5407
35°	26138	5561	5099
40°	26765	4576	4708
45°	26130	4232	4963
50°	24102	4015	4304
55°	19195	3254	3422
60°	12791	2108	2501
65°	6619	1700	2102
70°	3332	1690	2110
75°	1922	1715	2140
80°	1199	1736	2132
85°	638	1726	2144



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.7	6.1
10°-20°	250.2	13.1
20°-30°	344.3	18.1
30°-40°	337.2	17.7
40°-50°	307.9	16.2
50°-60°	222.7	11.7
60°-70°	119.1	6.2
70°-80°	76.3	4.0
80°-90°	49.6	2.6
90°-100°	31.2	1.6
100°-110°	19.6	1.0
110°-120°	13.0	0.7
120°-130°	10.2	0.5
130°-140°	6.4	0.3
140°-150°	2.0	0.1
150°-160°	0.6	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	710.2	37.3
0°-40°	1047.4	55.0
0°-60°	1578.0	82.8
0°-90°	1823.0	95.6
90°-120°	63.8	3.3
90°-150°	82.4	4.3
90°-180°	83.0	4.4
0°-180°	1906.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1607	1607	1607	1607	1607	
5°	1617	1491	1276	1133	1091	154
15°	1606	985	656	664	706	457
25°	1598	630	747	616	567	741
35°	1568	664	390	353	370	982
45°	1381	318	277	311	340	1057
55°	847	170	191	202	213	752
65°	225	74	85	111	114	251
75°	44	43	69	93	95	51
85°	7	24	50	67	71	9
90°	1	16	39	55	61	1
95°	0	12	31	45	53	0
105°	0	6	18	29	39	0
115°	0	3	12	21	32	0
125°	0	2	8	21	31	0
135°	1	1	7	16	18	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°	1607.4	1607.4	1607.4	1607.4	1607.4	1607.4	1607.4	1607.4	1607.4	1607.4	1607.4
2.5°	1611.4	1605.8	1597.2	1591.7	1581.4	1575.1	1568.0	1553.8	1529.4	1517.6	1497.1
5°	1616.9	1605.1	1581.4	1557.0	1514.4	1490.8	1468.0	1420.7	1364.7	1323.8	1275.7
7.5°	1620.8	1602.7	1558.6	1498.7	1419.9	1378.1	1338.7	1260.7	1180.4	1117.3	1052.7
10°	1620.0	1590.9	1516.8	1418.3	1307.2	1251.3	1195.3	1094.5	1000.7	929.0	866.0
12.5°	1616.1	1575.1	1465.6	1330.1	1184.3	1120.5	1053.5	939.2	848.6	787.2	738.3
15°	1605.8	1546.7	1397.8	1223.7	1058.2	984.9	912.4	808.4	735.2	685.5	655.6
17.5°	1607.4	1527.8	1334.0	1126.8	935.3	862.0	795.0	704.4	652.4	637.5	641.4
20°	1612.9	1512.1	1271.8	1030.6	825.0	758.0	700.5	639.0	624.8	642.2	681.6
22.5°	1612.9	1484.5	1199.3	927.4	728.1	676.9	642.2	620.1	651.6	709.9	756.4
25°	1598.0	1442.0	1111.8	816.3	656.4	629.6	618.5	647.7	723.3	758.8	747.0
27.5°	1591.7	1401.8	1022.0	721.0	618.5	614.6	630.4	708.4	740.7	714.7	665.0
30°	1598.0	1365.5	929.8	656.4	615.4	639.0	680.0	714.7	678.4	619.3	562.6
32.5°	1591.7	1320.6	840.7	630.4	646.1	678.4	695.0	654.0	581.5	518.5	476.7
35°	1568.0	1253.6	762.7	628.8	661.1	664.2	639.8	561.8	486.2	431.8	390.0
37.5°	1541.2	1188.2	721.0	633.5	620.9	590.2	545.3	467.3	401.1	354.6	327.0
40°	1516.0	1134.7	704.4	610.7	542.9	492.5	446.8	379.8	329.4	306.5	311.2
42.5°	1455.3	1078.7	675.3	547.6	448.3	398.7	363.2	311.2	287.6	293.9	300.2
45°	1381.3	1036.9	624.8	456.2	353.8	317.5	294.7	269.5	268.7	275.0	276.6
47.5°	1295.4	996.0	554.7	365.6	277.4	257.7	249.8	245.8	248.2	249.0	256.9
50°	1173.3	929.0	464.1	281.3	226.1	222.2	222.2	223.0	224.6	234.8	249.8
52.5°	1028.3	851.0	380.6	219.1	194.6	195.4	195.4	199.4	211.2	226.1	234.0
55°	847.0	747.0	316.0	179.7	169.4	170.2	173.3	182.8	190.7	193.8	190.7
57.5°	667.4	630.4	279.7	152.9	148.1	149.7	154.4	156.0	153.7	148.9	147.3
60°	501.9	501.9	256.9	133.2	125.3	124.5	125.3	118.2	114.3	112.7	115.0
62.5°	352.2	385.3	236.4	114.3	98.5	94.6	93.0	89.0	89.0	90.6	94.6
65°	225.4	282.9	208.0	95.3	76.4	74.1	74.1	74.1	76.4	80.4	85.1
67.5°	146.6	195.4	171.8	81.9	63.8	63.0	63.0	66.2	70.1	74.9	80.4
70°	95.3	127.6	134.0	71.7	55.2	55.2	56.7	60.7	65.4	70.9	76.4
72.5°	63.8	82.7	100.1	61.5	48.9	48.9	50.4	55.2	60.7	67.0	72.5
75°	44.1	54.4	69.3	51.2	41.8	43.3	44.9	50.4	56.7	63.0	68.6
77.5°	29.9	35.5	46.5	40.2	35.5	37.8	40.2	45.7	52.0	58.3	64.6
80°	20.5	22.9	29.9	29.9	29.9	32.3	35.5	41.8	48.1	53.6	59.9
82.5°	12.6	14.2	18.9	21.3	25.2	27.6	30.7	37.0	43.3	48.9	54.4
85°	7.1	7.9	11.8	15.8	20.5	23.6	26.8	32.3	38.6	44.1	49.6
87.5°	3.2	4.7	7.1	11.0	17.3	19.7	22.9	28.4	34.7	39.4	44.9
90°	0.8	2.4	4.7	8.7	13.4	16.5	19.7	24.4	29.9	34.7	39.4
92.5°	0.0	0.8	3.2	6.3	11.0	14.2	16.5	21.3	26.0	30.7	34.7
95°	0.0	0.8	2.4	5.5	9.5	11.8	14.2	18.9	22.9	26.8	30.7
97.5°	0.0	0.0	1.6	3.9	7.9	10.2	11.8	15.8	19.7	23.6	26.8
100°	0.0	0.0	1.6	3.2	7.1	8.7	10.2	14.2	17.3	20.5	23.6
102.5°	0.0	0.0	0.8	3.2	5.5	7.1	8.7	12.6	15.0	18.1	20.5
105°	0.0	0.0	0.8	2.4	4.7	6.3	7.9	10.2	13.4	15.8	18.1
107.5°	0.0	0.0	0.8	2.4	3.9	5.5	7.1	9.5	11.8	14.2	16.5
110°	0.0	0.0	0.8	1.6	3.9	4.7	5.5	7.9	10.2	12.6	14.2



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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	3.2	3.9	5.5	7.1	9.5	11.0	12.6
115°	0.0	0.0	0.0	1.6	2.4	3.2	4.7	6.3	7.9	9.5	11.8
117.5°	0.0	0.0	0.0	0.8	2.4	3.2	3.9	5.5	7.1	8.7	10.2
120°	0.0	0.0	0.0	0.8	1.6	2.4	3.2	4.7	6.3	7.9	8.7
122.5°	0.0	0.0	0.0	0.8	1.6	1.6	2.4	3.9	5.5	7.1	7.9
125°	0.0	0.0	0.0	0.0	0.8	1.6	2.4	3.2	4.7	6.3	7.9
127.5°	0.0	0.0	0.0	0.8	0.8	1.6	1.6	3.2	3.9	5.5	7.1
130°	0.0	0.0	0.0	0.0	0.8	0.8	1.6	2.4	3.9	5.5	7.1
132.5°	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	3.9	5.5	7.1
135°	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	3.2	4.7	7.1
137.5°	0.0	0.8	0.8	0.8	0.8	0.8	0.8	1.6	3.2	3.9	5.5
140°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	3.2	4.7
142.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	3.9
145°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	3.2
147.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4
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°	1607.4	1607.4	1607.4	1607.4	1607.4	1607.4	1607.4	1607.4	1607.4	1607.4
2.5°	1487.7	1460.1	1453.8	1431.7	1425.4	1422.3	1422.3	1408.9	1403.3	1412.0
5°	1244.2	1199.3	1176.4	1142.5	1133.1	1122.8	1114.2	1103.1	1088.2	1091.3
7.5°	1006.2	955.0	918.8	890.4	880.1	871.5	861.2	850.2	841.5	841.5
10°	823.4	783.2	759.6	732.8	724.9	717.0	707.6	699.7	693.4	695.0
12.5°	702.1	671.3	657.2	649.3	649.3	646.9	646.9	650.1	652.4	650.8
15°	643.8	645.3	648.5	659.5	663.5	665.8	676.9	688.7	697.3	706.0
17.5°	655.6	678.4	713.1	750.9	759.6	776.1	792.7	799.0	806.1	810.8
20°	733.6	772.2	795.8	795.8	794.3	788.0	776.9	764.3	759.6	759.6
22.5°	776.1	763.5	743.8	720.2	713.9	704.4	688.7	675.3	669.0	666.6
25°	710.7	676.9	647.7	624.1	616.2	603.6	587.8	575.2	568.9	567.3
27.5°	614.6	577.6	551.6	531.1	521.6	513.0	495.6	483.8	478.3	477.5
30°	524.0	490.1	460.2	439.7	432.6	426.3	412.9	404.2	400.3	399.5
32.5°	434.2	405.0	382.2	369.5	366.4	363.2	360.9	363.2	365.6	368.0
35°	359.3	345.9	342.0	346.7	353.0	357.7	364.0	366.4	368.0	370.3
37.5°	325.4	333.3	342.8	349.1	351.4	354.6	358.5	359.3	360.1	360.9
40°	319.1	327.8	332.5	333.3	332.5	332.5	332.5	331.7	332.5	333.3
42.5°	302.6	305.7	304.1	304.9	307.3	310.5	317.5	323.8	327.0	330.2
45°	278.1	282.1	293.1	306.5	311.2	316.8	327.8	334.9	338.0	339.6
47.5°	267.9	282.1	296.3	307.3	310.5	314.4	322.3	327.0	327.8	327.8
50°	264.0	275.0	278.9	282.9	281.3	281.3	279.7	281.3	280.5	282.1
52.5°	238.0	237.2	235.6	237.2	237.2	237.2	239.5	241.9	241.9	243.5
55°	188.3	189.9	193.0	200.9	202.5	204.1	208.8	211.2	212.0	212.7
57.5°	149.7	155.2	162.3	169.4	171.8	174.1	175.7	177.3	177.3	178.9
60°	119.0	126.1	134.0	141.8	143.4	143.4	143.4	145.0	144.2	145.8
62.5°	99.3	107.9	115.8	121.3	122.1	122.1	121.3	122.1	122.9	123.7
65°	90.6	100.1	107.9	111.1	111.1	111.9	111.9	113.5	113.5	113.5
67.5°	87.5	96.9	103.2	105.6	105.6	106.4	107.2	107.2	107.2	107.2
70°	84.3	94.6	98.5	100.9	101.6	102.4	102.4	103.2	103.2	104.0
72.5°	81.9	90.6	93.8	96.1	97.7	98.5	98.5	100.1	100.1	100.9
75°	78.0	85.1	88.3	91.4	93.0	93.8	94.6	95.3	94.6	94.6
77.5°	72.5	78.8	82.7	85.9	86.7	87.5	88.3	88.3	88.3	88.3
80°	67.8	72.5	76.4	79.6	80.4	81.2	81.2	81.9	82.7	82.7
82.5°	61.5	66.2	70.1	72.5	73.3	74.1	74.9	76.4	77.2	77.2
85°	55.9	59.9	63.0	66.2	67.0	67.8	69.3	70.9	70.9	70.9
87.5°	49.6	53.6	56.7	59.9	61.5	62.2	63.8	65.4	65.4	66.2
90°	44.1	47.3	51.2	53.6	55.2	55.9	58.3	59.9	60.7	60.7
92.5°	38.6	41.8	45.7	48.1	49.6	51.2	52.8	55.2	55.9	56.7
95°	33.9	37.0	40.2	43.3	44.9	45.7	48.9	51.2	52.8	52.8
97.5°	29.2	32.3	35.5	38.6	40.2	41.8	44.1	47.3	48.9	49.6
100°	26.0	28.4	31.5	34.7	36.2	37.8	41.0	44.1	45.7	46.5
102.5°	22.9	25.2	27.6	30.7	32.3	33.9	37.0	40.2	41.8	42.5
105°	20.5	22.1	24.4	27.6	29.2	30.7	33.9	37.0	38.6	39.4
107.5°	18.1	20.5	22.1	25.2	26.8	27.6	30.7	33.9	35.5	36.2
110°	16.5	18.1	20.5	22.9	24.4	25.2	28.4	31.5	33.1	33.9





TEST NUMBER: P236181

CATALOG NUMBER: 2SWLED-16SL-LC-UNV-L835-CD1-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	15.0	16.5	18.9	21.3	22.1	23.6	26.8	29.2	31.5	32.3
115°	13.4	15.0	17.3	19.7	21.3	22.1	25.2	28.4	30.7	31.5
117.5°	11.8	13.4	15.8	18.9	20.5	22.1	25.2	28.4	29.9	30.7
120°	11.0	12.6	15.0	18.1	19.7	21.3	25.2	28.4	29.9	30.7
122.5°	10.2	11.8	15.0	18.9	20.5	22.1	25.2	28.4	30.7	31.5
125°	9.5	11.8	15.8	18.9	21.3	22.9	26.0	28.4	29.9	30.7
127.5°	9.5	12.6	15.8	19.7	21.3	22.9	26.0	28.4	29.2	29.9
130°	10.2	12.6	16.5	19.7	21.3	22.1	24.4	26.0	26.8	26.8
132.5°	10.2	12.6	15.8	18.1	18.9	19.7	21.3	22.1	22.9	22.9
135°	9.5	11.0	13.4	15.0	15.8	16.5	17.3	18.1	18.1	18.1
137.5°	7.9	9.5	11.0	11.8	12.6	12.6	13.4	13.4	14.2	14.2
140°	6.3	7.1	8.7	9.5	9.5	9.5	10.2	10.2	10.2	10.2
142.5°	4.7	5.5	6.3	7.1	7.1	7.1	7.1	7.1	7.9	7.9
145°	3.2	3.9	4.7	5.5	5.5	5.5	5.5	5.5	5.5	5.5
147.5°	2.4	3.2	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
150°	1.6	2.4	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
152.5°	1.6	1.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
155°	1.6	1.6	1.6	2.4	2.4	2.4	2.4	1.6	2.4	2.4
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)