

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: P236182

Luminaire Tested: **2SWLED-16SL-LC-UNV-L840-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236182
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-L840-CD1-U
Description: METALUX SWLED LINEAR LUMINAIRE
2FT FIXTURE WITH 1 ROW LED, CLEAR LENS
Light Source: (56) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

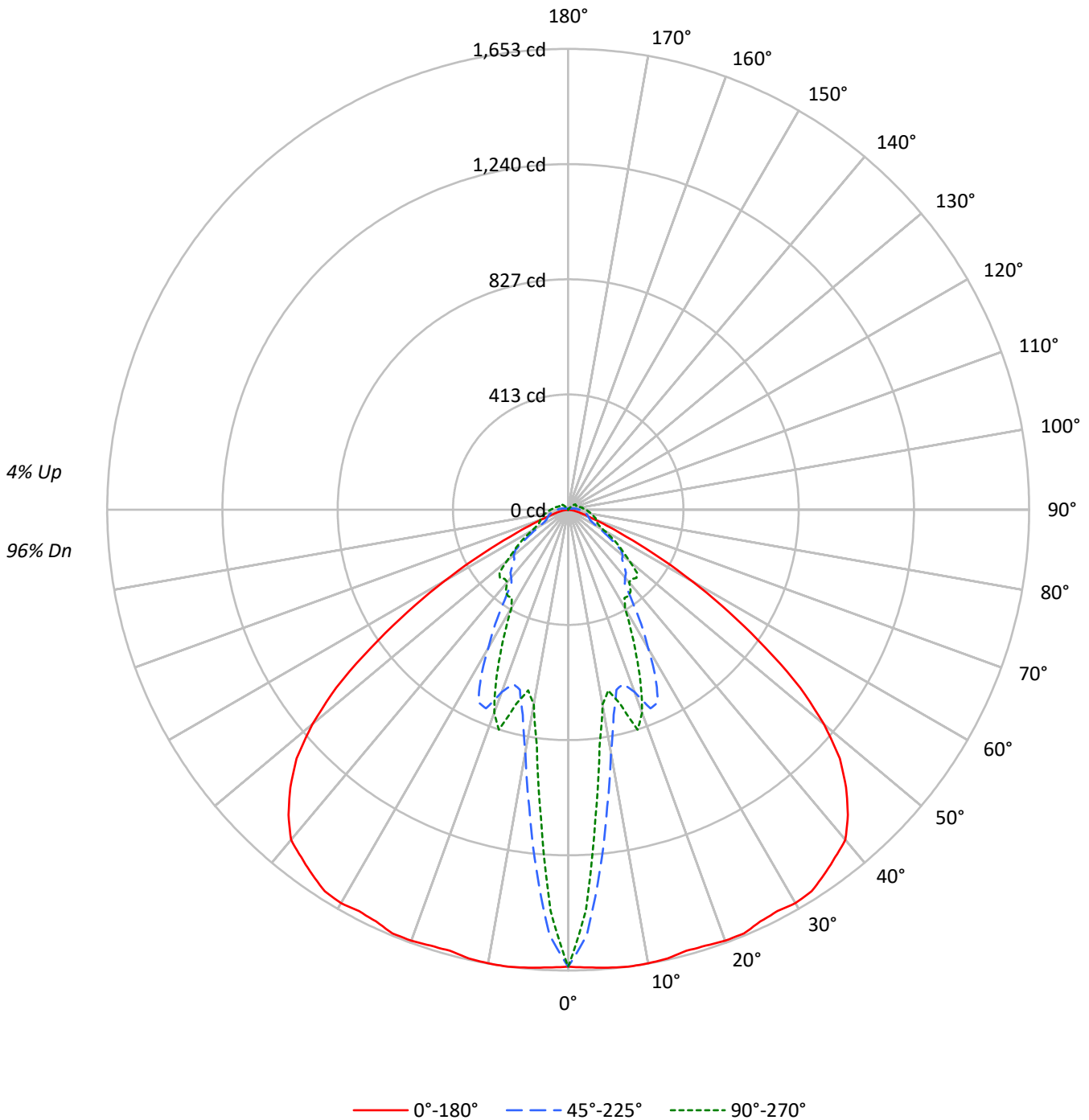
Lumens per Lamp: N/A
Luminaire Lumens: 1944.0 lumens
Efficiency: N/A
Efficacy: 122.3 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 0.27 / 0.77
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 2' x H: 0.15')
CIE Type: Direct

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°	23530	23530	23530
5°	23608	18224	15508
10°	23774	12170	9667
15°	23870	9135	9690
20°	24476	9490	10365
25°	24960	10471	7756
30°	25918	8001	5515
35°	26659	5673	5201
40°	27298	4668	4801
45°	26651	4316	5062
50°	24583	4095	4389
55°	19578	3319	3491
60°	13046	2151	2550
65°	6749	1734	2142
70°	3398	1725	2152
75°	1962	1747	2181
80°	1222	1771	2176
85°	647	1761	2187



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.0	6.1
10°-20°	255.2	13.1
20°-30°	351.2	18.1
30°-40°	344.0	17.7
40°-50°	314.1	16.2
50°-60°	227.1	11.7
60°-70°	121.5	6.2
70°-80°	77.8	4.0
80°-90°	50.6	2.6
90°-100°	31.8	1.6
100°-110°	20.0	1.0
110°-120°	13.2	0.7
120°-130°	10.3	0.5
130°-140°	6.5	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°	724.3	37.3
0°-40°	1068.3	55.0
0°-60°	1609.5	82.8
0°-90°	1859.3	95.6
90°-120°	65.0	3.3
90°-150°	84.0	4.3
90°-180°	85.0	4.4
0°-180°	1944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1640	1640	1640	1640	1640	
5°	1649	1520	1301	1156	1113	158
15°	1638	1005	669	677	720	466
25°	1630	642	762	628	579	756
35°	1599	678	398	360	378	1001
45°	1409	324	282	317	346	1078
55°	864	174	194	206	217	767
65°	230	76	87	113	116	256
75°	45	44	70	95	96	53
85°	7	24	51	68	72	9
90°	1	17	40	56	62	1
95°	0	12	31	46	54	0
105°	0	6	18	30	40	0
115°	0	3	12	22	32	0
125°	0	2	8	22	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°	1639.5	1639.5	1639.5	1639.5	1639.5	1639.5	1639.5	1639.5	1639.5	1639.5	1639.5
2.5°	1643.5	1637.9	1629.0	1623.4	1612.9	1606.5	1599.3	1584.8	1559.9	1547.9	1527.0
5°	1649.1	1637.1	1612.9	1588.0	1544.6	1520.5	1497.2	1449.0	1391.9	1350.2	1301.1
7.5°	1653.1	1634.6	1589.6	1528.6	1448.2	1405.6	1365.4	1285.9	1203.9	1139.6	1073.7
10°	1652.3	1622.6	1547.0	1446.6	1333.3	1276.2	1219.2	1116.3	1020.6	947.5	883.2
12.5°	1648.3	1606.5	1494.8	1356.6	1207.9	1142.8	1074.5	958.0	865.5	802.9	753.0
15°	1637.9	1577.6	1425.7	1248.1	1079.3	1004.6	930.6	824.6	749.8	699.2	668.6
17.5°	1639.5	1558.3	1360.6	1149.2	953.9	879.2	810.9	718.5	665.4	650.2	654.2
20°	1645.1	1542.2	1297.1	1051.2	841.4	773.1	714.5	651.8	637.3	655.0	695.2
22.5°	1645.1	1514.1	1223.2	945.9	742.6	690.3	655.0	632.5	664.6	724.1	771.5
25°	1629.8	1470.7	1134.0	832.6	669.4	642.1	630.9	660.6	737.8	773.9	761.9
27.5°	1623.4	1429.7	1042.3	735.4	630.9	626.9	642.9	722.5	755.4	728.9	678.3
30°	1629.8	1392.7	948.3	669.4	627.7	651.8	693.6	728.9	692.0	631.7	573.8
32.5°	1623.4	1346.9	857.5	642.9	659.0	692.0	708.8	667.0	593.1	528.8	486.2
35°	1599.3	1278.6	777.9	641.3	674.3	677.5	652.6	573.0	495.9	440.4	397.8
37.5°	1572.0	1211.9	735.4	646.1	633.3	601.9	556.1	476.6	409.1	361.6	333.5
40°	1546.2	1157.3	718.5	622.8	553.7	502.3	455.7	387.4	335.9	312.6	317.4
42.5°	1484.4	1100.2	688.7	558.5	457.3	406.7	370.5	317.4	293.3	299.8	306.2
45°	1408.8	1057.6	637.3	465.3	360.8	323.9	300.6	274.9	274.0	280.5	282.1
47.5°	1321.2	1015.8	565.8	372.9	282.9	262.8	254.8	250.7	253.2	254.0	262.0
50°	1196.7	947.5	473.4	286.9	230.7	226.6	226.6	227.4	229.0	239.5	254.8
52.5°	1048.8	868.0	388.2	223.4	198.5	199.3	199.3	203.3	215.4	230.7	238.7
55°	863.9	761.9	322.3	183.2	172.8	173.6	176.8	186.4	194.5	197.7	194.5
57.5°	680.7	642.9	285.3	155.9	151.1	152.7	157.5	159.1	156.7	151.9	150.3
60°	511.9	511.9	262.0	135.8	127.8	127.0	127.8	120.5	116.5	114.9	117.3
62.5°	359.2	393.0	241.1	116.5	100.5	96.4	94.8	90.8	90.8	92.4	96.4
65°	229.8	288.5	212.2	97.2	78.0	75.5	75.5	75.5	78.0	82.0	86.8
67.5°	149.5	199.3	175.2	83.6	65.1	64.3	64.3	67.5	71.5	76.3	82.0
70°	97.2	130.2	136.6	73.1	56.3	56.3	57.9	61.9	66.7	72.3	78.0
72.5°	65.1	84.4	102.1	62.7	49.8	49.8	51.4	56.3	61.9	68.3	73.9
75°	45.0	55.5	70.7	52.2	42.6	44.2	45.8	51.4	57.9	64.3	69.9
77.5°	30.5	36.2	47.4	41.0	36.2	38.6	41.0	46.6	53.0	59.5	65.9
80°	20.9	23.3	30.5	30.5	30.5	33.0	36.2	42.6	49.0	54.6	61.1
82.5°	12.9	14.5	19.3	21.7	25.7	28.1	31.3	37.8	44.2	49.8	55.5
85°	7.2	8.0	12.1	16.1	20.9	24.1	27.3	33.0	39.4	45.0	50.6
87.5°	3.2	4.8	7.2	11.3	17.7	20.1	23.3	28.9	35.4	40.2	45.8
90°	0.8	2.4	4.8	8.8	13.7	16.9	20.1	24.9	30.5	35.4	40.2
92.5°	0.0	0.8	3.2	6.4	11.3	14.5	16.9	21.7	26.5	31.3	35.4
95°	0.0	0.8	2.4	5.6	9.6	12.1	14.5	19.3	23.3	27.3	31.3
97.5°	0.0	0.0	1.6	4.0	8.0	10.4	12.1	16.1	20.1	24.1	27.3
100°	0.0	0.0	1.6	3.2	7.2	8.8	10.4	14.5	17.7	20.9	24.1
102.5°	0.0	0.0	0.8	3.2	5.6	7.2	8.8	12.9	15.3	18.5	20.9
105°	0.0	0.0	0.8	2.4	4.8	6.4	8.0	10.4	13.7	16.1	18.5
107.5°	0.0	0.0	0.8	2.4	4.0	5.6	7.2	9.6	12.1	14.5	16.9
110°	0.0	0.0	0.8	1.6	4.0	4.8	5.6	8.0	10.4	12.9	14.5



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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	0.8	1.6	3.2	4.0	5.6	7.2	9.6	11.3	12.9
115°	0.0	0.0	0.0	1.6	2.4	3.2	4.8	6.4	8.0	9.6	12.1
117.5°	0.0	0.0	0.0	0.8	2.4	3.2	4.0	5.6	7.2	8.8	10.4
120°	0.0	0.0	0.0	0.8	1.6	2.4	3.2	4.8	6.4	8.0	8.8
122.5°	0.0	0.0	0.0	0.8	1.6	1.6	2.4	4.0	5.6	7.2	8.0
125°	0.0	0.0	0.0	0.0	0.8	1.6	2.4	3.2	4.8	6.4	8.0
127.5°	0.0	0.0	0.0	0.8	0.8	1.6	1.6	3.2	4.0	5.6	7.2
130°	0.0	0.0	0.0	0.0	0.8	0.8	1.6	2.4	4.0	5.6	7.2
132.5°	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	4.0	5.6	7.2
135°	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	3.2	4.8	7.2
137.5°	0.0	0.8	0.8	0.8	0.8	0.8	0.8	1.6	3.2	4.0	5.6
140°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	3.2	4.8
142.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	4.0
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°	1639.5	1639.5	1639.5	1639.5	1639.5	1639.5	1639.5	1639.5	1639.5	1639.5
2.5°	1517.3	1489.2	1482.8	1460.3	1453.8	1450.6	1450.6	1436.9	1431.3	1440.2
5°	1269.0	1223.2	1199.9	1165.3	1155.7	1145.2	1136.4	1125.1	1109.9	1113.1
7.5°	1026.3	974.0	937.1	908.1	897.7	888.8	878.4	867.2	858.3	858.3
10°	839.8	798.8	774.7	747.4	739.4	731.3	721.7	713.7	707.2	708.8
12.5°	716.1	684.7	670.3	662.2	662.2	659.8	659.8	663.0	665.4	663.8
15°	656.6	658.2	661.4	672.7	676.7	679.1	690.3	702.4	711.2	720.1
17.5°	668.6	692.0	727.3	765.9	774.7	791.6	808.5	814.9	822.1	827.0
20°	748.2	787.6	811.7	811.7	810.1	803.7	792.4	779.6	774.7	774.7
22.5°	791.6	778.7	758.7	734.5	728.1	718.5	702.4	688.7	682.3	679.9
25°	724.9	690.3	660.6	636.5	628.5	615.6	599.5	586.7	580.2	578.6
27.5°	626.9	589.1	562.6	541.7	532.0	523.2	505.5	493.4	487.8	487.0
30°	534.4	499.9	469.3	448.4	441.2	434.8	421.1	412.3	408.3	407.5
32.5°	442.8	413.1	389.8	376.9	373.7	370.5	368.1	370.5	372.9	375.3
35°	366.5	352.8	348.8	353.6	360.0	364.9	371.3	373.7	375.3	377.7
37.5°	331.9	339.9	349.6	356.0	358.4	361.6	365.7	366.5	367.3	368.1
40°	325.5	334.3	339.1	339.9	339.1	339.1	339.1	338.3	339.1	339.9
42.5°	308.6	311.8	310.2	311.0	313.4	316.6	323.9	330.3	333.5	336.7
45°	283.7	287.7	299.0	312.6	317.4	323.1	334.3	341.6	344.8	346.4
47.5°	273.2	287.7	302.2	313.4	316.6	320.7	328.7	333.5	334.3	334.3
50°	269.2	280.5	284.5	288.5	286.9	286.9	285.3	286.9	286.1	287.7
52.5°	242.7	241.9	240.3	241.9	241.9	241.9	244.3	246.7	246.7	248.3
55°	192.1	193.7	196.9	204.9	206.5	208.1	213.0	215.4	216.2	217.0
57.5°	152.7	158.3	165.6	172.8	175.2	177.6	179.2	180.8	180.8	182.4
60°	121.4	128.6	136.6	144.7	146.3	146.3	146.3	147.9	147.1	148.7
62.5°	101.3	110.1	118.1	123.8	124.6	124.6	123.8	124.6	125.4	126.2
65°	92.4	102.1	110.1	113.3	113.3	114.1	114.1	115.7	115.7	115.7
67.5°	89.2	98.9	105.3	107.7	107.7	108.5	109.3	109.3	109.3	109.3
70°	86.0	96.4	100.5	102.9	103.7	104.5	104.5	105.3	105.3	106.1
72.5°	83.6	92.4	95.6	98.0	99.7	100.5	100.5	102.1	102.1	102.9
75°	79.6	86.8	90.0	93.2	94.8	95.6	96.4	97.2	96.4	96.4
77.5°	73.9	80.4	84.4	87.6	88.4	89.2	90.0	90.0	90.0	90.0
80°	69.1	73.9	78.0	81.2	82.0	82.8	82.8	83.6	84.4	84.4
82.5°	62.7	67.5	71.5	73.9	74.7	75.5	76.3	78.0	78.8	78.8
85°	57.1	61.1	64.3	67.5	68.3	69.1	70.7	72.3	72.3	72.3
87.5°	50.6	54.6	57.9	61.1	62.7	63.5	65.1	66.7	66.7	67.5
90°	45.0	48.2	52.2	54.6	56.3	57.1	59.5	61.1	61.9	61.9
92.5°	39.4	42.6	46.6	49.0	50.6	52.2	53.8	56.3	57.1	57.9
95°	34.6	37.8	41.0	44.2	45.8	46.6	49.8	52.2	53.8	53.8
97.5°	29.7	33.0	36.2	39.4	41.0	42.6	45.0	48.2	49.8	50.6
100°	26.5	28.9	32.1	35.4	37.0	38.6	41.8	45.0	46.6	47.4
102.5°	23.3	25.7	28.1	31.3	33.0	34.6	37.8	41.0	42.6	43.4
105°	20.9	22.5	24.9	28.1	29.7	31.3	34.6	37.8	39.4	40.2
107.5°	18.5	20.9	22.5	25.7	27.3	28.1	31.3	34.6	36.2	37.0
110°	16.9	18.5	20.9	23.3	24.9	25.7	28.9	32.1	33.8	34.6



TEST NUMBER: P236182

CATALOG NUMBER: 2SWLED-16SL-LC-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	15.3	16.9	19.3	21.7	22.5	24.1	27.3	29.7	32.1	33.0
115°	13.7	15.3	17.7	20.1	21.7	22.5	25.7	28.9	31.3	32.1
117.5°	12.1	13.7	16.1	19.3	20.9	22.5	25.7	28.9	30.5	31.3
120°	11.3	12.9	15.3	18.5	20.1	21.7	25.7	28.9	30.5	31.3
122.5°	10.4	12.1	15.3	19.3	20.9	22.5	25.7	28.9	31.3	32.1
125°	9.6	12.1	16.1	19.3	21.7	23.3	26.5	28.9	30.5	31.3
127.5°	9.6	12.9	16.1	20.1	21.7	23.3	26.5	28.9	29.7	30.5
130°	10.4	12.9	16.9	20.1	21.7	22.5	24.9	26.5	27.3	27.3
132.5°	10.4	12.9	16.1	18.5	19.3	20.1	21.7	22.5	23.3	23.3
135°	9.6	11.3	13.7	15.3	16.1	16.9	17.7	18.5	18.5	18.5
137.5°	8.0	9.6	11.3	12.1	12.9	12.9	13.7	13.7	14.5	14.5
140°	6.4	7.2	8.8	9.6	9.6	9.6	10.4	10.4	10.4	10.4
142.5°	4.8	5.6	6.4	7.2	7.2	7.2	7.2	7.2	8.0	8.0
145°	3.2	4.0	4.8	5.6	5.6	5.6	5.6	5.6	5.6	5.6
147.5°	2.4	3.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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)