

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: P#

Luminaire Tested: **4SNLED-LD5-19SL-RM-UNV-L930-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33524)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
METALIC FINISH REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

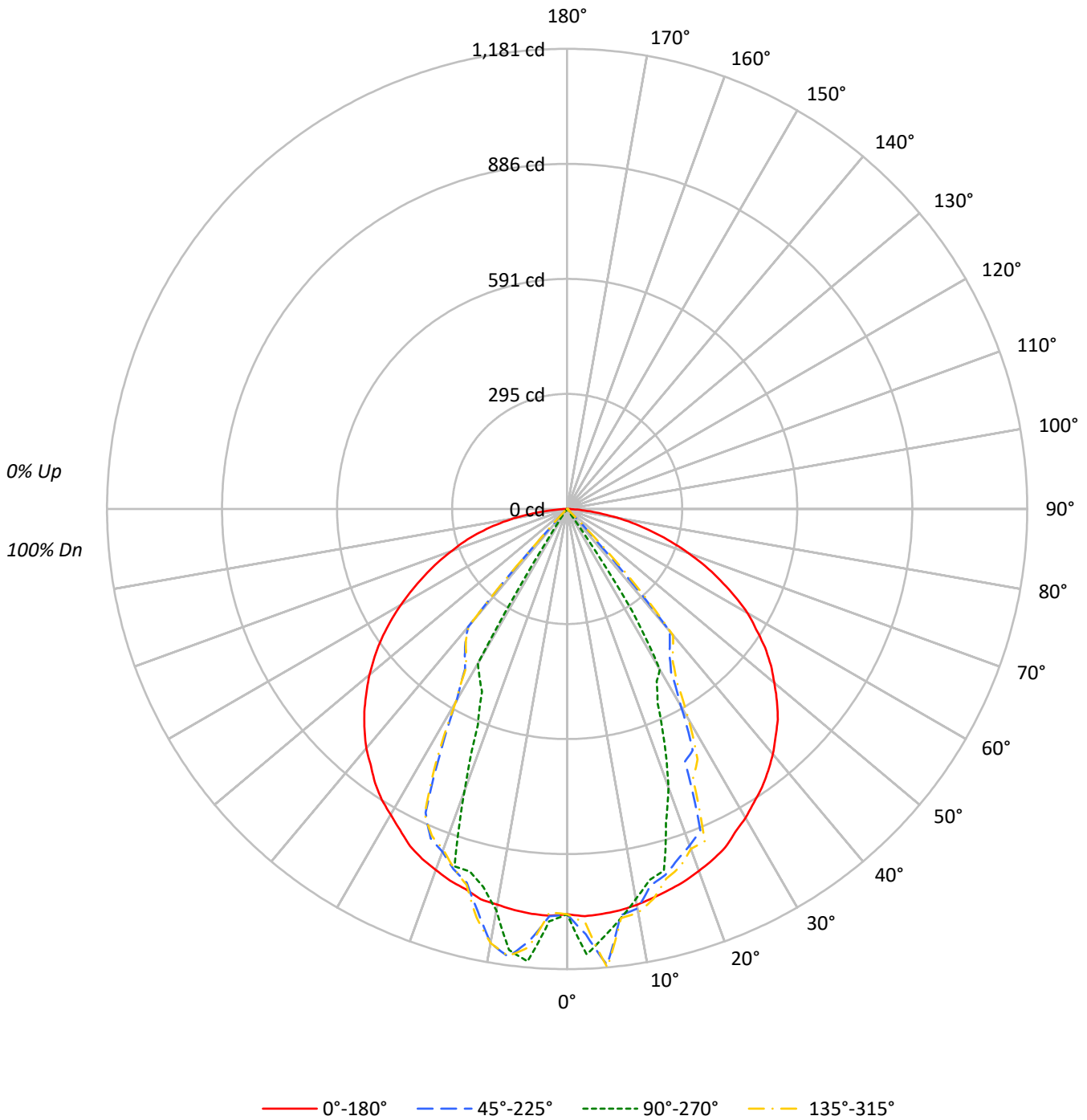
Lumens per Lamp: N/A
Luminaire Lumens: 1478.9 lumens
Efficiency: N/A
Efficacy: 113.8 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 0.81 / 0.97
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 13
Input Voltage (V): NR
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: P#
CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	103	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81
3	98	90	83	78	95	88	82	78	85	80	76	83	79	75	80	77	74	72
4	91	82	75	70	89	81	74	69	78	73	69	76	72	68	74	70	67	65
5	85	75	68	63	84	74	68	63	72	66	62	71	65	61	69	64	61	59
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	60	53	48	70	59	52	48	58	52	47	57	51	47	56	51	47	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	8405	8405	8405	8405
5°	8440	8645	8438	9155
10°	8419	7822	8415	8049
15°	8396	7301	8376	7320
20°	8406	5751	8382	5822
25°	8431	4162	8389	3928
30°	8392	3651	8303	3509
35°	8417	80	8294	98
40°	8446	18	8244	18
45°	8475	10	8157	7
50°	8410	8	8025	8
55°	8362	6	7848	6
60°	8204	6	7562	6
65°	7776	10	7222	6
70°	7213	10	6867	10
75°	6381	12	6484	12
80°	5182	13	5479	13
85°	3047	16	3115	16



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	7.1
10°-20°	284.6	19.2
20°-30°	362.2	24.5
30°-40°	306.0	20.7
40°-50°	200.0	13.5
50°-60°	126.0	8.5
60°-70°	67.1	4.5
70°-80°	24.4	1.7
80°-90°	4.2	0.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	751.2	50.8
0°-40°	1057.2	71.5
0°-60°	1383.2	93.5
0°-90°	1478.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1478.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1040	1040	1040	1040	1040	
5°	1043	1101	1043	1166	1043	99
15°	1012	960	1010	963	1012	286
25°	959	548	955	518	959	441
35°	872	10	859	12	872	545
45°	765	1	736	1	765	588
55°	620	1	582	1	620	552
65°	434	1	403	1	434	430
75°	228	1	232	1	228	242
85°	45	1	46	1	45	56
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1046.1	1046.7	1047.0	1047.6	1048.6	1048.9	1049.5	1048.9	1048.9	1048.9	1048.9
5°	1043.3	1044.5	1045.5	1046.7	1048.9	1049.2	1051.7	1052.0	1053.3	1055.8	1057.6
7.5°	1038.6	1039.8	1041.7	1044.8	1047.9	1051.4	1055.8	1060.4	1067.0	1073.2	1081.0
10°	1031.7	1033.3	1035.5	1038.3	1053.6	1055.8	1065.4	1078.9	1082.6	1102.3	1116.9
12.5°	1021.7	1027.0	1032.7	1035.1	1049.8	1072.9	1105.4	1098.8	1091.7	1156.0	1155.0
15°	1012.0	1019.2	1016.4	1036.7	1050.1	1090.4	1076.7	1106.0	1159.7	1146.6	1147.2
17.5°	1001.7	1003.3	1018.9	1035.8	1059.8	1080.4	1097.3	1137.5	1148.2	1149.1	1137.5
20°	988.6	996.1	1018.9	1034.2	1074.8	1084.5	1121.0	1141.6	1137.2	1126.6	1106.9
22.5°	975.2	998.0	1021.1	1042.6	1071.0	1097.0	1115.1	1124.7	1102.0	1060.1	1037.6
25°	959.3	972.7	1003.0	1034.5	1070.1	1085.1	1095.7	1080.1	1050.4	1013.0	975.2
27.5°	934.6	956.2	994.9	1030.5	1062.6	1080.7	1063.6	1026.1	978.3	953.7	936.5
30°	915.6	943.7	975.5	1009.9	1043.3	1053.9	1010.2	967.4	934.6	910.0	906.2
32.5°	892.5	932.4	962.7	995.5	1023.6	1009.6	967.1	911.8	884.7	875.3	879.1
35°	871.9	902.2	941.8	974.0	994.3	962.7	895.6	861.3	848.2	853.5	846.6
37.5°	847.2	887.2	923.7	951.5	944.6	897.2	840.4	818.5	820.1	815.7	802.6
40°	821.6	859.7	897.8	924.0	900.0	827.6	789.8	785.1	786.0	772.0	753.3
42.5°	791.7	826.3	864.4	888.1	836.3	779.8	754.2	754.8	746.7	727.0	717.0
45°	764.8	796.7	836.3	838.5	774.8	727.7	720.2	712.1	693.9	687.4	679.9
47.5°	730.5	765.7	798.5	786.7	714.6	685.2	679.6	661.8	652.7	647.7	641.5
50°	693.9	729.5	759.5	725.8	657.7	650.9	632.5	618.4	612.2	606.9	601.2
52.5°	659.3	688.6	719.2	661.2	614.0	607.5	586.6	578.4	572.2	566.3	565.0
55°	620.0	645.9	666.8	599.7	572.2	556.9	541.9	536.3	530.4	527.6	532.2
57.5°	575.3	604.7	601.5	539.1	526.9	504.8	499.2	495.4	491.0	492.9	453.9
60°	535.1	557.5	542.2	494.8	474.2	459.2	454.2	451.7	454.2	416.1	365.9
62.5°	485.4	510.7	479.8	443.0	421.1	413.9	409.6	413.0	376.5	334.6	322.5
65°	433.9	461.4	415.8	387.4	373.7	367.4	367.1	338.1	302.2	285.9	285.9
67.5°	384.3	412.7	354.0	330.3	325.0	325.6	307.5	263.5	253.5	242.6	211.0
70°	331.5	356.5	292.5	278.1	275.0	272.8	228.8	217.0	205.1	176.1	173.6
72.5°	279.1	291.3	235.1	231.6	231.0	192.0	183.2	163.0	149.2	145.8	144.2
75°	228.2	224.4	185.7	188.9	159.2	145.5	131.4	119.6	117.7	116.4	29.0
77.5°	180.1	161.4	146.4	127.4	113.9	96.8	94.0	92.1	60.6	21.9	17.8
80°	131.1	104.6	97.4	82.7	70.5	67.7	69.3	21.2	16.9	14.0	12.2
82.5°	83.3	66.8	54.6	47.8	46.5	20.3	15.0	12.2	10.6	9.1	7.5
85°	44.6	29.7	27.5	23.1	13.7	9.4	7.8	5.9	5.0	4.1	3.7
87.5°	14.0	11.9	9.7	7.8	4.7	3.1	2.5	2.2	1.9	1.6	1.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°	25°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1048.3	1048.9	1048.6	1049.5	1049.5	1050.8	1051.7	1052.6	1054.5	1055.4	1062.6
5°	1061.7	1063.2	1067.9	1072.3	1077.6	1079.2	1088.2	1090.4	1101.0	1102.3	1137.2
7.5°	1091.7	1097.6	1108.8	1120.1	1131.3	1138.5	1151.0	1158.8	1167.2	1174.7	1202.5
10°	1127.9	1137.9	1148.8	1160.0	1166.6	1180.3	1187.8	1189.0	1186.9	1174.7	1129.7
12.5°	1163.4	1173.4	1168.8	1170.9	1178.7	1154.4	1157.8	1140.3	1152.5	1092.3	1047.6
15°	1158.5	1157.8	1146.3	1108.8	1115.1	1068.6	1049.8	1035.5	1047.0	1040.8	1033.9
17.5°	1143.5	1115.1	1095.1	1050.1	1031.1	1018.0	1018.3	1018.6	1013.0	1018.9	1001.4
20°	1080.1	1048.3	1018.6	1002.7	997.1	987.7	992.4	987.7	988.0	989.9	963.0
22.5°	995.8	986.1	969.0	974.0	972.1	980.5	974.3	964.6	967.7	953.7	933.4
25°	961.8	950.6	949.9	951.8	949.0	945.2	939.6	925.0	924.0	919.6	910.3
27.5°	927.5	928.1	929.9	924.3	914.3	906.8	898.4	891.2	894.0	889.1	876.3
30°	903.7	903.4	892.2	887.2	868.8	869.1	866.9	862.5	859.7	860.0	851.9
32.5°	870.0	860.3	847.5	841.3	839.7	834.1	829.7	830.7	832.9	825.1	833.5
35°	835.4	815.4	813.5	808.2	803.2	799.5	801.0	794.8	794.5	793.5	724.9
37.5°	788.8	779.2	778.2	772.6	769.2	768.2	762.3	763.3	766.1	771.1	618.1
40°	750.5	741.7	739.5	739.2	731.7	731.1	732.7	738.6	742.6	711.4	589.1
42.5°	709.2	709.9	703.0	698.6	699.6	702.4	709.9	689.3	597.2	569.1	538.5
45°	674.0	670.8	667.1	665.9	674.0	668.4	585.9	540.7	529.7	528.5	442.7
47.5°	637.1	636.2	634.6	635.6	589.4	525.4	506.6	500.7	502.6	501.3	380.2
50°	600.0	601.2	601.2	525.1	482.0	471.4	472.9	478.2	445.2	415.5	354.3
52.5°	567.8	558.2	478.2	450.8	441.1	445.8	434.5	393.0	363.1	345.6	327.8
55°	508.2	437.0	419.2	414.9	418.3	376.8	351.2	324.3	316.5	314.7	304.4
57.5°	399.9	385.5	387.1	369.6	330.0	306.5	296.2	292.5	289.1	286.6	25.0
60°	353.7	357.7	327.5	290.0	274.1	271.0	268.5	265.0	264.4	260.0	15.9
62.5°	323.7	284.7	258.5	249.1	245.4	244.4	239.7	238.2	202.3	27.8	11.9
65°	244.1	228.2	223.2	221.0	217.0	217.0	180.1	28.4	23.1	20.0	10.6
67.5°	199.2	197.9	195.4	192.6	131.1	27.5	24.0	20.9	18.1	15.9	9.4
70°	168.6	167.9	153.0	28.1	23.4	20.6	18.1	16.2	15.0	13.4	8.4
72.5°	138.3	28.1	23.7	20.6	17.8	16.2	14.7	13.1	11.9	10.9	6.9
75°	21.5	19.0	16.9	15.3	14.0	12.5	11.2	10.3	10.0	8.7	4.7
77.5°	15.6	13.4	12.2	10.9	9.7	8.7	7.5	6.6	5.9	5.0	3.4
80°	10.9	9.7	8.7	7.2	6.2	5.3	4.7	4.1	3.7	3.1	1.6
82.5°	6.2	5.3	4.7	3.7	3.4	2.8	2.5	2.2	2.2	1.6	1.6
85°	2.8	2.8	2.2	1.9	1.6	1.6	1.6	1.2	1.2	0.9	0.9
87.5°	1.2	1.2	1.2	1.2	1.2	0.9	0.9	0.9	0.9	0.9	0.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1072.6	1076.7	1084.5	1092.6	1083.5	1116.0	1113.5	1124.4	1130.4	1133.2	1139.7
5°	1168.1	1186.2	1192.2	1174.4	1164.1	1153.5	1129.4	1111.3	1113.5	1107.6	1086.0
7.5°	1166.3	1127.6	1075.4	1051.7	1049.8	1047.0	1054.5	1058.9	1059.5	1059.2	1058.6
10°	1067.6	1047.6	1044.2	1041.1	1042.3	1030.8	1025.5	1010.5	1018.6	1014.2	1015.8
12.5°	1037.6	1033.0	1014.5	988.9	1004.2	992.7	986.1	990.5	985.5	980.8	979.3
15°	1019.9	989.6	979.3	973.0	968.7	966.2	968.3	963.4	961.8	960.9	963.0
17.5°	983.0	970.8	959.6	943.1	943.4	942.4	948.7	958.0	958.7	910.6	867.2
20°	954.0	944.0	929.6	919.3	933.4	908.4	811.9	766.1	758.9	758.9	760.1
22.5°	930.9	908.7	909.7	893.4	762.0	735.2	735.8	738.6	725.8	682.1	677.4
25°	899.4	895.9	827.6	715.2	716.1	695.2	663.0	617.8	568.8	568.8	560.7
27.5°	875.6	802.9	703.0	698.3	628.1	583.8	556.3	514.8	509.1	503.8	504.5
30°	855.3	679.3	681.8	583.8	531.9	495.1	492.9	486.0	482.6	481.7	478.2
32.5°	676.2	661.5	570.6	497.0	476.7	470.7	467.9	460.1	459.8	453.9	412.7
35°	634.0	580.6	477.6	457.6	451.7	446.1	441.4	296.2	35.0	14.0	12.2
37.5°	585.9	485.1	441.7	432.7	427.0	315.6	31.5	10.9	7.8	5.6	5.0
40°	496.7	433.3	419.6	409.6	168.9	10.9	6.9	5.3	3.1	2.8	2.5
42.5°	418.9	408.3	393.6	119.9	12.5	5.3	3.4	2.5	2.2	2.2	1.9
45°	392.1	382.7	158.6	11.9	7.8	2.5	2.2	2.2	1.9	1.2	1.2
47.5°	367.1	323.1	14.4	7.5	5.0	2.2	1.9	1.2	1.2	1.2	0.9
50°	340.6	17.8	10.0	5.6	3.1	1.2	1.2	1.2	1.2	0.9	0.9
52.5°	63.7	12.5	8.1	5.0	1.6	1.2	1.2	1.2	0.9	0.9	0.9
55°	15.0	10.0	7.5	4.4	1.2	1.2	1.2	0.9	0.9	0.9	0.6
57.5°	11.2	7.5	5.9	4.1	1.2	0.9	0.9	0.9	0.9	0.9	0.6
60°	9.4	5.3	4.7	3.7	0.9	0.9	0.9	0.9	0.9	0.9	0.6
62.5°	6.6	4.4	3.4	2.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9
65°	5.3	3.4	2.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
67.5°	4.7	2.8	1.9	0.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9
70°	3.7	0.9	0.9	0.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9
72.5°	3.1	0.9	0.6	0.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9
75°	3.1	1.6	0.6	0.6	0.9	0.9	1.2	1.2	0.9	0.9	0.9
77.5°	2.2	1.6	0.6	0.6	0.9	0.9	1.2	1.2	0.9	0.9	0.9
80°	1.2	1.6	0.6	0.9	0.9	1.9	2.2	1.2	0.9	0.9	0.9
82.5°	1.2	1.6	1.9	1.9	0.9	1.6	1.9	1.6	1.2	0.9	0.9
85°	1.2	0.9	1.2	1.6	0.9	1.6	1.6	1.2	1.2	0.9	0.9
87.5°	0.6	0.9	0.9	1.2	1.2	1.2	1.6	1.2	1.2	1.2	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°	135°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1142.8	1144.1	1124.4	1117.6	1123.5	1122.2	1116.9	1097.3	1095.1	1082.0	1062.9
5°	1092.3	1100.7	1090.4	1108.2	1099.8	1108.2	1133.8	1145.7	1165.0	1176.9	1181.2
7.5°	1057.0	1058.9	1058.9	1060.4	1062.0	1062.3	1060.4	1059.2	1053.9	1047.3	1059.2
10°	1014.2	1016.4	1020.2	1019.5	1019.2	1025.8	1027.3	1040.8	1040.1	1042.6	1051.7
12.5°	992.1	975.2	990.5	986.5	992.1	983.3	999.6	996.8	997.7	1005.2	1024.5
15°	955.2	960.5	964.3	964.3	966.5	964.6	962.7	975.5	983.3	983.6	982.4
17.5°	884.4	844.1	885.3	874.7	959.3	961.5	954.3	948.4	948.4	953.0	963.0
20°	759.2	760.1	760.4	764.5	769.5	769.2	769.5	892.5	950.9	937.4	928.4
22.5°	665.5	654.0	675.5	674.0	700.8	730.5	758.9	756.1	757.9	844.7	922.8
25°	533.5	548.5	536.3	541.6	571.9	607.2	629.0	686.1	748.3	743.9	764.2
27.5°	502.3	498.2	503.8	503.8	507.9	512.6	524.8	556.9	612.2	670.2	725.2
30°	472.6	476.1	476.7	482.3	485.4	488.5	490.4	502.6	515.1	555.3	623.1
32.5°	354.9	311.2	409.6	436.1	458.6	463.9	467.6	472.6	481.7	487.6	521.6
35°	10.3	10.3	10.9	12.5	15.9	107.4	408.9	450.8	456.7	464.2	470.4
37.5°	5.0	3.7	4.4	4.7	5.6	7.8	11.2	35.0	389.3	440.2	447.0
40°	2.2	2.2	2.2	2.2	2.5	3.1	4.7	7.8	11.9	313.1	422.4
42.5°	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.8	5.6	13.4	221.6
45°	1.2	1.2	0.9	1.2	1.2	1.6	1.9	1.9	2.5	8.4	15.3
47.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.6	1.9	5.6	8.1
50°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	4.4	5.6
52.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.9	5.0
55°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.9	0.9	1.2	4.4
57.5°	0.6	0.6	0.6	0.6	0.6	0.9	0.6	0.6	0.9	0.9	4.1
60°	0.6	0.6	0.6	0.6	0.6	0.9	0.9	0.9	0.9	0.9	3.7
62.5°	0.9	0.9	0.6	0.9	0.6	0.6	0.9	0.9	0.9	0.9	2.5
65°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.6	0.9
67.5°	0.9	0.9	0.9	0.9	0.6	0.9	0.6	0.9	0.9	0.6	0.6
70°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.6	0.6	0.6	0.6
72.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.6	0.6	0.6	0.6
75°	0.9	0.9	0.9	0.9	0.9	0.9	1.2	1.2	0.6	0.6	0.6
77.5°	0.9	0.9	0.9	0.9	0.9	0.9	1.6	1.9	1.6	1.6	0.6
80°	0.9	0.9	0.9	0.9	0.9	0.9	1.6	1.6	1.6	1.6	2.2
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.6
85°	0.9	0.9	0.9	0.9	0.9	0.9	1.2	1.2	1.2	0.9	1.2
87.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	140°	145°	150°	155°	160°	161°	162°	163°	164°	165°	166°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1064.5	1053.9	1050.4	1043.3	1042.6	1043.3	1041.7	1039.5	1040.8	1038.6	1036.7
5°	1183.7	1155.3	1136.9	1112.3	1078.2	1070.7	1068.9	1058.2	1054.5	1053.3	1048.3
7.5°	1087.3	1139.1	1170.3	1180.9	1141.0	1131.6	1120.7	1111.9	1103.5	1087.6	1077.9
10°	1044.5	1047.0	1077.0	1111.9	1168.8	1176.6	1182.5	1163.4	1158.1	1117.6	1108.8
12.5°	1034.5	1034.8	1038.3	1059.5	1104.1	1109.1	1130.0	1141.3	1155.0	1162.8	1156.6
15°	988.9	1014.2	1033.0	1034.8	1038.9	1047.6	1053.9	1092.9	1109.4	1153.8	1151.3
17.5°	967.7	975.8	1003.0	1025.2	1021.4	1018.3	1023.3	1028.6	1044.5	1088.8	1088.2
20°	932.4	958.4	973.0	996.1	1017.0	1018.0	1012.4	1009.2	1003.0	1010.2	1016.7
22.5°	917.5	921.5	949.0	965.2	988.9	997.4	998.6	998.9	995.5	991.8	989.9
25°	915.9	903.1	917.1	937.4	954.9	964.0	974.3	977.7	976.5	976.5	974.6
27.5°	749.5	899.0	891.6	905.0	926.2	932.4	937.8	948.4	954.9	959.6	961.8
30°	713.9	740.8	871.6	873.4	895.0	894.4	900.3	909.0	917.5	928.4	931.2
32.5°	631.5	697.4	797.9	841.9	864.4	866.6	869.7	872.2	880.0	892.2	902.8
35°	506.0	635.3	683.6	826.9	831.0	835.4	837.2	843.2	845.7	850.7	860.0
37.5°	458.0	525.1	655.9	715.2	792.6	796.3	806.3	808.8	812.9	816.9	824.1
40°	430.2	448.6	546.0	638.7	761.7	764.2	767.6	773.9	774.2	778.9	785.4
42.5°	408.0	419.9	448.3	610.0	739.8	739.5	731.4	735.5	737.3	742.3	751.4
45°	325.9	394.0	412.1	498.2	589.1	631.5	713.0	699.6	699.3	701.1	710.8
47.5°	16.5	370.5	383.3	411.1	556.3	557.8	568.5	657.7	671.5	667.1	668.0
50°	11.2	25.6	357.1	369.9	479.5	518.2	526.0	530.1	581.6	639.0	629.6
52.5°	8.7	14.7	218.8	343.4	389.6	418.0	468.3	497.0	500.1	523.2	601.5
55°	7.8	11.2	23.7	316.9	331.2	337.5	366.8	417.1	457.6	469.8	470.7
57.5°	6.9	10.3	16.2	143.3	301.2	302.5	307.5	325.0	361.5	394.9	432.7
60°	6.2	9.1	12.8	24.7	273.8	276.9	277.8	282.5	286.9	309.7	353.1
62.5°	3.7	7.2	11.2	17.8	216.6	248.8	248.5	251.6	255.7	258.2	266.9
65°	3.1	5.6	9.7	15.0	26.5	33.1	201.0	223.5	226.0	229.4	231.0
67.5°	2.8	5.0	7.2	11.9	20.0	22.8	26.2	32.5	177.3	199.8	202.9
70°	2.5	3.4	5.9	10.0	16.2	17.5	19.7	22.5	26.5	32.8	160.5
72.5°	1.6	2.5	4.1	7.2	12.5	14.0	15.3	17.2	19.0	22.8	26.2
75°	0.6	1.9	3.4	5.3	9.7	10.6	11.6	12.8	14.4	16.9	18.7
77.5°	0.6	1.6	2.8	3.7	6.2	7.2	8.4	9.4	10.6	11.9	13.7
80°	2.2	1.2	1.9	2.8	4.4	4.7	5.3	5.9	6.9	7.8	9.1
82.5°	1.6	1.9	2.2	1.9	2.2	2.8	3.1	3.7	4.1	4.7	5.0
85°	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.6	1.9	2.2	2.8
87.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	1.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	167°	168°	169°	170°	171°	172°	173°	174°	175°	176°	177°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1036.7	1036.1	1034.2	1034.2	1033.9	1035.1	1036.1	1037.0	1036.7	1038.6	1036.7
5°	1044.5	1043.0	1040.1	1037.6	1036.7	1037.3	1036.4	1037.3	1036.1	1037.6	1034.8
7.5°	1066.1	1060.7	1049.8	1045.5	1039.8	1039.5	1036.7	1036.1	1034.2	1034.2	1030.8
10°	1104.1	1078.5	1075.4	1062.3	1057.6	1034.8	1039.8	1031.4	1030.5	1026.4	1024.8
12.5°	1135.4	1115.4	1109.4	1097.9	1084.8	1038.6	1048.9	1030.8	1029.8	1021.7	1013.3
15°	1136.0	1147.5	1131.3	1099.5	1096.6	1064.8	1043.9	1037.6	1029.5	1005.2	1009.2
17.5°	1099.5	1126.0	1133.8	1126.9	1106.9	1085.4	1056.1	1043.6	1019.2	1008.3	1000.8
20°	1040.1	1067.0	1100.4	1102.6	1115.1	1099.8	1061.4	1041.1	1011.7	992.7	986.5
22.5°	993.0	1012.7	1051.1	1068.9	1084.2	1089.5	1065.1	1035.1	998.6	980.2	976.5
25°	968.0	972.4	984.0	1004.9	1038.6	1062.9	1066.4	1034.5	1015.5	975.2	954.0
27.5°	959.0	955.2	950.6	961.2	986.5	1016.1	1035.8	1041.1	993.6	955.2	934.0
30°	935.9	938.1	930.9	927.1	943.7	974.3	1009.2	1018.0	981.5	941.8	917.5
32.5°	907.5	911.2	912.5	905.9	902.5	923.7	961.5	982.4	980.5	922.8	895.6
35°	871.9	882.5	885.3	885.6	880.0	876.6	898.4	941.8	958.4	914.0	874.7
37.5°	834.4	837.5	852.8	856.9	856.9	846.6	862.8	897.5	920.6	894.4	849.1
40°	787.6	797.6	811.9	819.1	826.3	827.2	818.2	842.5	880.6	874.1	825.1
42.5°	753.6	760.1	768.9	778.5	793.2	797.0	787.6	792.0	831.6	848.8	793.8
45°	713.9	722.7	725.2	735.8	751.1	762.0	761.7	752.6	784.5	805.7	771.1
47.5°	673.3	681.8	686.1	691.5	702.7	716.7	724.5	720.5	726.7	768.2	740.8
50°	631.5	636.2	644.9	650.9	658.4	666.5	685.2	689.0	680.2	713.3	707.4
52.5°	591.9	593.4	599.4	605.3	615.3	621.2	636.2	647.4	646.8	656.5	670.2
55°	561.0	554.1	555.3	560.0	566.6	575.6	584.1	601.5	607.5	609.4	631.2
57.5°	438.3	508.8	515.1	514.8	522.6	526.6	534.4	546.0	567.2	562.5	586.9
60°	398.3	406.1	465.1	472.0	474.8	478.6	487.9	498.5	514.1	524.1	534.7
62.5°	303.7	351.2	369.0	421.1	429.2	431.4	437.7	442.7	458.9	481.7	477.3
65°	235.1	255.4	309.7	330.9	375.2	380.8	389.6	394.9	399.6	425.8	427.0
67.5°	203.2	206.3	221.0	261.9	290.0	333.4	338.7	343.4	350.6	369.3	380.8
70°	173.6	177.3	181.4	184.8	221.3	250.0	290.3	291.9	296.6	309.0	335.3
72.5°	32.8	148.3	150.8	153.0	157.0	176.1	214.5	245.7	247.5	253.5	277.5
75°	22.2	25.9	35.6	122.4	126.4	127.7	134.2	173.3	202.0	203.2	213.8
77.5°	15.9	17.8	21.5	25.6	65.2	98.0	99.6	106.8	136.4	158.0	159.8
80°	10.9	12.2	14.4	16.2	20.0	26.2	72.4	74.6	78.4	108.0	113.6
82.5°	6.2	7.2	8.4	10.3	11.9	15.0	19.4	25.0	50.9	54.3	72.1
85°	3.1	3.4	4.1	5.0	5.9	7.2	9.7	11.9	16.2	29.3	30.3
87.5°	1.6	1.6	1.6	1.6	2.5	2.8	3.4	4.4	5.6	8.4	10.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	178°	179°	180°	181°	182°	183°	184°	185°	186°	187°	188°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1037.0	1041.4	1045.1	1046.1	1046.1	1046.7	1047.6	1048.3	1048.9	1049.5	1048.9
5°	1035.1	1039.8	1043.0	1043.9	1043.9	1045.8	1047.3	1049.2	1050.1	1050.1	1049.5
7.5°	1030.5	1033.9	1038.0	1040.5	1040.8	1043.9	1046.7	1046.4	1047.6	1048.3	1049.8
10°	1024.2	1024.2	1031.1	1033.0	1034.5	1038.0	1038.9	1040.8	1045.1	1045.8	1049.8
12.5°	1021.1	1018.0	1026.1	1027.0	1032.3	1028.0	1033.6	1035.5	1031.1	1037.0	1029.2
15°	1007.1	1010.8	1009.6	1012.4	1021.7	1016.7	1032.0	1027.0	1038.3	1024.8	1048.6
17.5°	995.5	994.9	999.9	1002.4	1004.2	1014.9	1018.9	1024.5	1028.9	1025.2	1034.5
20°	987.1	982.1	985.8	988.6	995.2	1003.3	1005.8	997.4	1012.0	1037.0	1043.0
22.5°	971.2	967.7	972.1	972.1	982.1	980.8	990.2	984.9	998.6	1027.7	1057.9
25°	949.6	949.9	954.6	960.2	962.1	976.1	981.1	988.0	1005.2	1039.8	1058.2
27.5°	927.8	925.9	928.7	940.2	949.9	960.2	961.8	985.2	1008.6	1032.3	1048.6
30°	905.9	904.0	905.9	914.3	925.9	932.8	949.9	981.1	1003.0	1019.2	1034.5
32.5°	882.5	880.6	885.0	891.2	911.5	912.5	946.5	975.8	993.0	1004.9	1002.1
35°	857.5	855.0	859.1	868.8	887.5	894.4	929.9	951.8	971.2	976.8	963.7
37.5°	827.6	823.2	828.2	841.6	861.3	881.2	910.9	936.2	946.5	931.5	915.9
40°	796.3	793.2	802.0	808.8	831.9	859.7	893.7	911.5	905.0	887.8	870.6
42.5°	768.6	762.0	769.8	782.9	809.1	840.7	868.1	878.1	862.5	837.2	817.3
45°	734.5	726.7	736.1	753.6	781.7	817.6	839.1	835.7	809.1	787.3	759.8
47.5°	698.9	689.6	698.9	719.9	751.4	789.5	805.1	789.5	756.1	728.6	706.4
50°	664.0	653.1	662.1	693.6	724.5	753.9	753.6	723.3	703.3	673.3	654.0
52.5°	629.3	613.7	622.8	657.1	688.0	721.4	696.8	668.7	644.6	618.4	612.2
55°	586.6	569.7	581.9	631.8	655.6	675.2	635.9	611.2	587.5	574.4	566.6
57.5°	546.0	527.6	538.2	597.2	614.7	619.7	583.4	548.5	534.4	530.1	518.8
60°	504.2	483.2	493.2	561.3	573.5	553.2	517.6	490.4	487.6	478.9	470.1
62.5°	464.2	441.1	447.3	516.6	522.3	485.4	452.6	445.5	438.6	429.9	425.2
65°	418.3	394.3	403.0	469.2	463.9	416.4	398.0	396.5	387.4	380.2	387.1
67.5°	376.2	347.8	359.9	417.4	393.3	354.6	347.1	343.4	336.2	340.3	268.2
70°	330.0	299.1	315.6	361.5	325.9	300.3	297.5	291.9	292.2	232.3	195.7
72.5°	278.5	251.6	275.6	300.3	257.9	250.4	246.3	245.7	198.2	161.1	152.0
75°	233.2	206.0	231.9	241.3	205.4	200.4	200.1	165.4	130.2	124.2	121.4
77.5°	182.0	161.1	185.7	171.7	157.6	152.0	136.4	102.4	98.0	94.0	35.3
80°	122.7	124.2	138.6	118.3	112.4	95.8	75.5	72.4	62.4	25.0	19.7
82.5°	74.6	93.7	88.3	74.0	72.4	52.1	47.8	24.3	18.1	14.4	12.5
85°	38.7	47.4	45.6	40.3	30.0	26.8	15.0	11.6	9.4	7.2	5.9
87.5°	13.1	17.5	16.9	13.4	10.3	8.1	5.3	4.4	3.1	2.5	2.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	189°	190°	191°	192°	193°	194°	195°	196°	197°	198°	199°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1048.3	1048.3	1047.6	1048.3	1048.6	1047.9	1047.9	1048.6	1048.9	1049.2	1050.8
5°	1049.8	1050.4	1051.4	1053.3	1053.6	1057.3	1058.9	1059.8	1060.7	1061.1	1058.9
7.5°	1053.3	1055.4	1057.3	1057.0	1054.8	1048.9	1047.0	1045.5	1048.3	1055.4	1063.9
10°	1056.4	1046.4	1027.7	1053.3	1045.5	1052.6	1073.9	1078.5	1092.9	1113.2	1119.1
12.5°	1034.8	1062.3	1068.2	1039.5	1092.6	1072.9	1096.3	1116.9	1122.9	1143.5	1131.0
15°	1057.9	1071.4	1080.4	1109.1	1106.0	1122.9	1129.4	1125.4	1126.3	1131.6	1145.7
17.5°	1057.6	1084.5	1090.4	1109.8	1122.9	1123.2	1121.3	1119.4	1124.4	1128.5	1120.1
20°	1075.7	1084.5	1096.0	1103.8	1106.3	1109.4	1115.4	1110.7	1101.3	1092.3	1088.5
22.5°	1066.7	1086.3	1096.3	1097.6	1096.0	1086.3	1077.6	1064.5	1060.1	1055.4	1057.0
25°	1068.6	1077.6	1076.4	1071.4	1064.8	1046.7	1042.3	1036.7	1028.3	1008.0	989.6
27.5°	1055.1	1050.4	1044.8	1032.7	1020.8	1011.1	1000.2	982.1	967.1	945.2	937.1
30°	1032.7	1013.9	1000.2	993.0	981.5	965.2	948.7	926.5	907.5	903.1	899.0
32.5°	989.6	971.2	959.9	942.4	922.8	903.4	884.4	875.6	871.6	872.2	868.5
35°	945.6	929.3	912.5	886.2	871.6	852.2	845.4	843.5	839.7	835.7	831.3
37.5°	898.7	879.7	854.4	838.8	824.1	816.3	812.9	810.1	803.5	796.3	791.3
40°	853.5	819.1	805.1	789.8	785.4	782.0	777.0	770.1	761.1	759.8	757.6
42.5°	792.9	768.2	756.1	752.9	747.6	741.7	737.3	729.8	726.1	728.6	730.5
45°	735.5	723.0	718.9	715.2	705.2	696.8	693.9	691.5	694.6	708.3	675.5
47.5°	689.0	684.0	679.0	672.7	663.4	657.1	659.9	662.4	665.2	564.4	515.1
50°	648.7	641.8	634.0	627.1	621.5	620.9	635.6	591.6	495.4	492.9	443.0
52.5°	604.7	594.4	589.7	585.6	588.1	597.5	494.5	458.9	440.2	382.4	356.8
55°	557.2	548.2	548.2	551.9	538.5	436.4	431.1	372.7	337.5	327.5	323.4
57.5°	509.8	508.8	514.1	470.1	396.1	379.9	319.3	306.5	300.9	299.7	293.1
60°	466.4	475.1	397.7	365.9	318.1	286.9	278.1	276.6	270.6	268.5	262.5
62.5°	431.7	358.1	333.4	272.2	256.3	252.2	247.5	245.4	240.1	212.0	62.1
65°	311.9	294.7	239.1	228.8	227.6	221.6	219.8	197.6	46.5	31.2	26.5
67.5°	235.4	208.8	201.7	199.8	193.9	182.0	54.0	30.9	26.5	23.1	20.3
70°	180.7	176.1	170.8	166.4	49.0	30.6	26.5	22.5	19.4	17.2	15.6
72.5°	148.0	144.8	84.3	32.2	26.2	22.2	19.7	17.2	15.0	13.7	12.5
75°	115.8	32.2	26.5	22.2	19.0	16.2	14.4	12.8	11.6	10.6	9.7
77.5°	26.2	21.2	18.1	15.3	13.7	12.2	10.9	9.4	8.4	7.5	6.2
80°	16.2	14.0	11.9	10.9	9.4	7.8	6.9	6.2	5.0	4.7	4.1
82.5°	10.6	8.4	7.5	6.2	5.0	4.7	4.1	3.1	2.8	2.5	2.2
85°	4.7	4.1	3.4	2.8	2.2	1.9	1.6	1.2	1.2	1.2	1.2
87.5°	1.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.6	0.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	200°	205°	210°	215°	220°	225°	230°	235°	240°	245°	250°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1051.4	1057.0	1062.3	1060.7	1055.1	1046.4	1043.9	1040.5	1043.0	1048.3	1050.4
5°	1058.9	1055.8	1067.0	1083.5	1110.4	1112.9	1131.6	1136.0	1151.0	1160.3	1160.0
7.5°	1069.5	1113.8	1132.2	1152.2	1161.3	1159.1	1161.9	1159.7	1156.3	1154.7	1152.8
10°	1123.5	1157.2	1164.1	1164.1	1150.0	1131.0	1122.9	1108.8	1080.7	1081.3	1076.7
12.5°	1155.0	1166.9	1150.7	1136.9	1080.4	1058.6	1034.8	1023.6	1017.0	1007.1	1010.8
15°	1138.5	1121.6	1111.9	1067.6	1033.0	993.6	994.3	987.4	980.2	980.8	976.1
17.5°	1114.1	1100.7	1032.0	1001.4	984.6	969.3	966.5	957.4	952.7	951.2	950.9
20°	1080.7	1032.3	981.1	973.7	953.4	935.9	933.1	935.9	950.2	924.6	837.9
22.5°	1041.7	972.1	957.1	935.9	922.1	915.3	932.4	854.4	736.4	750.8	735.5
25°	975.5	945.2	919.6	903.4	901.9	859.7	716.4	701.4	625.6	585.0	539.4
27.5°	927.1	914.0	887.2	884.4	864.1	703.0	628.4	546.0	515.7	511.0	501.0
30°	897.8	879.1	862.8	792.0	689.6	566.0	504.2	492.6	487.3	481.7	472.9
32.5°	862.5	844.7	852.5	665.9	549.7	487.3	474.8	466.4	456.7	453.0	421.4
35°	826.6	818.5	666.2	559.7	472.6	457.6	448.3	439.5	349.6	84.6	28.7
37.5°	788.2	786.4	598.7	464.5	442.7	428.6	402.1	83.0	19.7	13.4	10.0
40°	758.3	599.1	473.2	435.5	417.7	395.5	55.6	13.7	8.7	5.3	3.4
42.5°	738.3	538.8	423.6	408.6	369.9	40.9	14.0	5.9	3.4	2.8	2.2
45°	569.1	425.5	395.8	380.2	46.8	14.0	8.1	2.8	2.2	1.9	1.2
47.5°	525.1	386.5	369.0	83.0	15.6	7.5	5.6	1.9	1.2	1.2	1.2
50°	397.7	357.1	293.7	20.3	10.0	5.3	4.1	1.2	1.2	1.2	0.9
52.5°	348.7	329.6	31.5	13.4	7.8	4.1	2.5	0.9	0.9	0.9	0.9
55°	318.7	209.2	18.7	10.3	6.6	3.7	1.6	0.9	0.9	0.9	0.6
57.5°	291.6	28.1	13.7	8.7	5.9	3.4	0.9	0.9	0.9	0.9	0.6
60°	247.2	20.3	11.2	7.8	5.6	3.1	0.9	0.9	0.9	0.9	0.9
62.5°	32.2	15.9	9.7	6.9	4.1	2.5	0.6	0.9	0.9	0.9	0.9
65°	23.4	12.5	8.7	4.7	2.5	0.9	0.6	0.9	0.9	0.9	0.9
67.5°	18.1	10.3	6.6	4.1	2.2	0.6	0.6	0.9	0.9	0.9	0.9
70°	14.4	8.7	5.3	3.4	1.9	0.6	0.6	0.9	0.9	0.9	0.9
72.5°	11.2	6.2	3.7	1.9	1.2	0.6	0.6	0.9	0.9	0.9	0.9
75°	8.4	5.0	2.8	1.6	0.6	0.6	0.6	0.9	0.9	0.9	0.9
77.5°	5.6	3.1	2.2	1.2	1.2	1.2	1.6	1.6	0.9	0.9	0.9
80°	3.7	2.2	1.6	1.6	1.6	1.2	1.6	1.6	0.9	1.6	0.9
82.5°	1.9	1.6	1.6	1.2	1.2	0.9	1.2	1.2	1.2	1.2	0.9
85°	1.2	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	1.2	0.9
87.5°	0.6	0.6	0.6	0.6	0.9	0.9	0.9	0.9	1.2	1.2	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	255°	260°	265°	270°	275°	280°	285°	290°	295°	300°	305°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1047.6	1048.6	1046.1	1059.5	1052.6	1053.3	1056.1	1048.9	1050.4	1045.5	1042.0
5°	1161.3	1163.1	1165.0	1165.6	1166.9	1168.4	1166.6	1165.6	1163.8	1157.5	1151.0
7.5°	1143.5	1141.3	1140.3	1141.6	1143.8	1144.7	1143.2	1145.3	1153.5	1156.9	1159.1
10°	1049.8	1039.8	1046.7	1045.8	1038.0	1064.2	1057.0	1061.1	1063.9	1092.6	1110.1
12.5°	1005.2	1011.4	999.6	993.6	1001.4	1006.7	1012.0	1000.8	1016.4	1009.2	1032.3
15°	967.7	964.0	962.7	963.0	961.5	969.0	970.8	973.3	975.5	985.2	988.9
17.5°	950.9	957.1	959.6	961.5	958.4	954.9	951.5	946.5	948.1	945.6	952.7
20°	779.5	758.6	757.3	769.5	756.1	763.6	781.7	902.8	898.7	945.9	929.9
22.5°	650.6	630.9	614.0	599.4	620.3	629.0	662.7	700.8	762.6	752.9	820.1
25°	531.3	524.1	519.8	517.6	519.1	518.5	526.0	543.8	571.9	638.1	723.6
27.5°	497.0	493.5	492.0	487.0	490.7	489.5	495.4	499.2	507.6	514.1	541.9
30°	469.8	465.8	462.9	457.6	461.4	461.7	463.6	473.2	476.7	482.3	491.0
32.5°	171.7	101.1	94.9	90.2	98.6	128.6	225.7	394.6	450.1	454.5	464.5
35°	16.9	14.0	12.5	12.5	12.8	14.0	18.7	49.3	90.2	348.7	436.4
37.5°	6.6	5.6	4.7	4.4	4.7	5.3	7.2	9.4	12.8	26.5	118.3
40°	2.8	2.5	2.2	2.2	2.2	2.2	2.5	3.1	4.7	8.7	13.7
42.5°	1.9	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.2	2.8	5.6
45°	1.2	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	1.6	2.5
47.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2
50°	0.9	0.9	0.9	0.9	0.6	0.9	0.6	0.9	0.9	0.9	0.9
52.5°	0.9	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.9	0.9
55°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.9
57.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
60°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
62.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.9	0.9	0.6
65°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.9	0.6
67.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
70°	0.9	0.9	0.6	0.9	0.6	0.6	0.9	0.9	0.9	0.6	0.6
72.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.9	1.9	1.2
75°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.6	1.9	1.6
77.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.6	1.6	1.6
80°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	1.2	1.2
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	1.2	1.2
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
87.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	310°	315°	320°	325°	330°	335°	340°	341°	342°	343°	344°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1036.1	1035.8	1042.3	1047.3	1045.5	1047.3	1049.5	1049.8	1050.4	1047.9	1047.0
5°	1138.5	1128.8	1110.1	1096.6	1081.0	1052.6	1038.6	1040.1	1040.5	1039.5	1040.8
7.5°	1158.1	1157.2	1150.7	1147.8	1137.2	1116.9	1084.5	1078.9	1065.1	1056.4	1049.2
10°	1108.8	1131.3	1137.2	1147.2	1153.5	1149.7	1122.2	1118.2	1109.4	1099.5	1101.6
12.5°	1055.4	1073.9	1074.8	1129.1	1141.3	1142.5	1131.9	1137.5	1138.8	1116.3	1103.2
15°	989.9	998.6	1017.0	1067.6	1104.5	1127.6	1134.4	1137.5	1122.2	1121.3	1116.0
17.5°	961.2	966.8	975.2	1003.6	1059.5	1093.5	1122.6	1120.4	1126.3	1121.9	1108.5
20°	925.0	929.6	944.6	959.0	986.5	1031.7	1086.0	1090.1	1097.9	1097.0	1100.7
22.5°	924.3	907.8	910.3	921.5	950.2	990.8	1048.6	1062.0	1067.0	1070.4	1074.5
25°	733.3	864.7	888.7	895.9	914.7	938.4	1006.4	1011.4	1020.8	1036.1	1047.3
27.5°	635.3	724.5	820.7	870.6	882.5	902.2	942.7	950.2	982.1	985.8	1003.3
30°	501.3	570.3	713.9	834.1	853.8	867.5	896.2	911.2	925.0	939.9	958.4
32.5°	471.7	482.6	562.2	690.2	843.2	832.9	854.1	863.1	878.1	891.2	904.7
35°	444.5	452.0	468.9	565.3	686.8	804.5	818.8	824.7	833.2	843.2	852.8
37.5°	416.1	427.4	438.9	464.8	635.3	782.0	781.7	788.5	793.5	802.0	810.1
40°	75.5	392.4	411.1	428.0	492.6	623.7	746.7	749.8	753.3	758.6	767.0
42.5°	12.2	65.6	385.2	401.4	419.9	558.5	730.8	718.0	715.8	719.5	727.0
45°	6.2	15.9	77.4	374.9	391.5	445.5	597.5	695.8	693.6	686.5	688.0
47.5°	4.7	10.0	19.0	129.5	366.5	382.4	551.3	545.4	586.9	666.5	654.3
50°	4.1	6.9	11.2	26.5	323.7	352.1	424.5	496.0	517.9	520.7	616.2
52.5°	3.7	4.7	8.1	17.2	68.1	325.6	345.3	370.2	407.1	486.0	484.2
55°	3.4	4.4	6.9	11.6	23.7	293.4	313.7	318.4	326.2	364.0	413.9
57.5°	1.9	4.1	6.6	10.0	17.8	53.7	284.7	288.4	294.7	296.2	314.0
60°	0.9	3.7	5.9	8.7	13.1	25.0	256.0	260.3	264.1	264.7	270.3
62.5°	0.6	3.4	5.0	8.1	10.9	17.8	60.6	123.6	235.1	235.1	241.6
65°	0.6	2.5	3.1	5.3	10.0	14.7	25.6	29.7	57.8	142.0	212.0
67.5°	0.6	0.9	2.8	4.4	7.5	11.2	18.7	21.9	26.2	30.0	55.6
70°	0.6	0.6	2.5	2.8	4.7	8.4	13.4	15.3	17.8	20.3	23.4
72.5°	0.6	0.6	2.2	2.2	3.1	5.6	10.3	11.2	12.8	14.4	16.5
75°	1.6	1.2	1.9	1.9	2.2	4.4	7.8	8.7	9.4	10.6	12.2
77.5°	1.6	1.6	1.6	1.6	1.6	2.8	5.0	5.6	6.6	7.2	8.4
80°	1.2	1.2	1.2	1.6	1.6	1.9	3.1	3.4	3.7	4.7	5.0
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.9	2.2	2.8
85°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.2	1.2	1.2	1.2
87.5°	0.9	0.9	0.9	0.6	0.6	0.9	0.9	0.9	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	345°	346°	347°	348°	349°	350°	351°	352°	353°	354°	355°
0°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1046.7	1044.8	1043.3	1044.2	1041.4	1040.1	1041.1	1041.4	1042.0	1043.6	1043.9
5°	1043.9	1043.3	1046.1	1047.6	1047.0	1047.6	1047.6	1046.4	1044.5	1045.8	1043.0
7.5°	1042.0	1038.0	1034.8	1035.5	1032.3	1036.1	1039.5	1044.5	1046.1	1046.1	1043.0
10°	1074.2	1069.8	1052.3	1040.5	1032.7	1025.8	1042.0	1025.5	1033.3	1003.6	1037.6
12.5°	1100.7	1106.6	1098.8	1066.4	1060.7	1040.1	1052.0	1031.7	1025.8	991.8	1002.7
15°	1111.3	1100.1	1097.6	1088.5	1076.4	1070.4	1038.6	1035.1	1025.5	1029.2	1014.9
17.5°	1102.0	1107.6	1100.1	1094.1	1081.7	1067.6	1048.6	1031.7	1018.3	988.3	1013.6
20°	1092.9	1100.4	1077.9	1081.7	1082.9	1066.7	1056.7	1042.6	1025.8	997.7	975.8
22.5°	1077.9	1072.6	1074.5	1068.9	1064.2	1066.4	1052.6	1043.0	1014.5	1001.7	972.1
25°	1053.6	1051.7	1056.7	1056.1	1044.8	1041.1	1034.2	1023.9	1012.7	992.1	967.7
27.5°	1013.9	1023.6	1032.3	1036.4	1030.5	1020.5	1016.7	1010.8	1003.0	982.1	964.0
30°	972.1	983.0	993.0	1001.7	1007.1	1002.7	999.2	995.8	984.0	970.2	949.9
32.5°	924.3	938.7	952.4	963.0	974.6	978.0	975.5	972.7	962.7	950.2	934.0
35°	869.1	888.7	908.7	927.8	932.8	940.9	949.0	944.3	939.0	926.5	911.5
37.5°	822.3	836.3	850.7	874.7	892.2	902.5	916.8	918.7	909.7	903.7	884.1
40°	773.9	786.7	807.6	821.6	845.7	857.5	872.8	879.7	877.5	874.1	856.9
42.5°	735.8	742.0	755.8	768.2	792.0	816.3	829.7	837.2	845.0	842.2	833.5
45°	695.2	700.8	705.5	716.4	739.5	761.1	777.6	788.8	802.9	809.5	798.8
47.5°	654.9	656.5	662.1	671.2	684.9	701.4	729.2	746.1	759.2	772.0	765.1
50°	624.0	618.4	619.3	625.0	636.2	652.4	672.4	696.1	711.1	726.7	728.3
52.5°	545.4	590.9	580.0	583.1	589.1	596.9	617.8	641.2	659.6	673.0	686.5
55°	457.6	466.7	554.4	541.9	545.7	552.5	562.2	585.6	603.4	622.2	640.9
57.5°	354.9	422.4	425.8	507.0	505.1	505.7	513.8	527.3	545.0	568.5	584.4
60°	276.0	304.4	359.6	387.7	458.9	461.4	466.1	473.9	489.2	511.3	536.6
62.5°	243.5	247.2	266.9	309.0	355.2	411.1	421.1	422.4	429.2	451.4	480.7
65°	213.8	216.3	222.3	226.6	265.3	319.3	367.4	375.2	379.6	392.7	417.7
67.5°	147.3	186.4	191.7	194.8	198.5	223.5	283.1	322.8	327.8	339.3	361.2
70°	28.4	59.0	161.4	164.8	166.7	172.3	182.0	245.1	278.1	289.1	299.1
72.5°	19.4	22.8	27.5	64.9	137.4	140.5	142.7	150.8	206.7	238.5	243.8
75°	14.0	15.6	18.4	22.8	28.1	91.5	113.3	117.4	121.4	167.6	194.5
77.5°	10.0	11.2	12.5	14.7	17.2	22.2	31.8	87.7	91.8	94.0	132.7
80°	5.6	6.9	8.4	9.7	10.9	12.5	16.2	20.3	45.3	66.2	69.6
82.5°	3.1	3.7	4.4	5.3	5.9	7.5	9.1	10.9	14.4	21.2	45.0
85°	1.6	1.6	1.6	2.2	2.5	3.4	4.1	4.7	6.6	9.1	12.5
87.5°	0.9	0.9	1.2	1.2	1.2	1.6	1.6	1.6	1.9	2.8	4.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	356°	357°	358°	359°	360°
0°	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1044.2	1043.3	1043.3	1047.0	1046.1
5°	1042.3	1041.4	1041.1	1045.1	1043.3
7.5°	1040.8	1037.3	1036.4	1040.1	1038.6
10°	1034.5	1032.0	1033.6	1032.3	1031.7
12.5°	1023.9	1022.3	1015.8	1016.4	1021.7
15°	1004.9	1011.1	999.9	1009.9	1012.0
17.5°	969.9	984.0	994.9	1000.8	1001.7
20°	985.5	990.2	984.6	984.9	988.6
22.5°	965.2	967.4	969.0	967.1	975.2
25°	932.8	924.3	942.4	946.2	959.3
27.5°	922.8	915.9	924.3	923.7	934.6
30°	914.7	892.5	896.2	902.2	915.6
32.5°	903.1	868.1	864.4	877.5	892.5
35°	882.8	849.7	841.0	849.4	871.9
37.5°	865.6	824.1	806.6	817.9	847.2
40°	840.0	804.1	777.0	787.0	821.6
42.5°	809.5	787.0	745.1	752.0	791.7
45°	778.5	758.6	714.2	717.7	764.8
47.5°	747.0	728.6	682.1	682.7	730.5
50°	716.1	691.8	653.4	642.4	693.9
52.5°	675.8	653.4	624.3	606.5	659.3
55°	637.8	612.5	591.2	563.8	620.0
57.5°	600.6	572.5	558.2	522.9	575.3
60°	549.7	536.3	515.1	481.4	535.1
62.5°	497.6	493.2	471.7	436.7	485.4
65°	436.7	447.0	424.9	394.9	433.9
67.5°	379.3	397.7	373.4	354.9	384.3
70°	318.1	339.3	325.6	319.0	331.5
72.5°	257.9	278.5	279.7	275.0	279.1
75°	199.2	222.0	234.4	227.3	228.2
77.5°	151.1	162.0	175.8	181.4	180.1
80°	93.3	112.4	123.6	135.2	131.1
82.5°	47.1	63.1	76.8	89.3	83.3
85°	19.7	25.3	35.3	46.5	44.6
87.5°	5.9	10.0	10.6	15.0	14.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)