

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P1213718

Luminaire Tested: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213718
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33524)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
METALIC FINISH REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

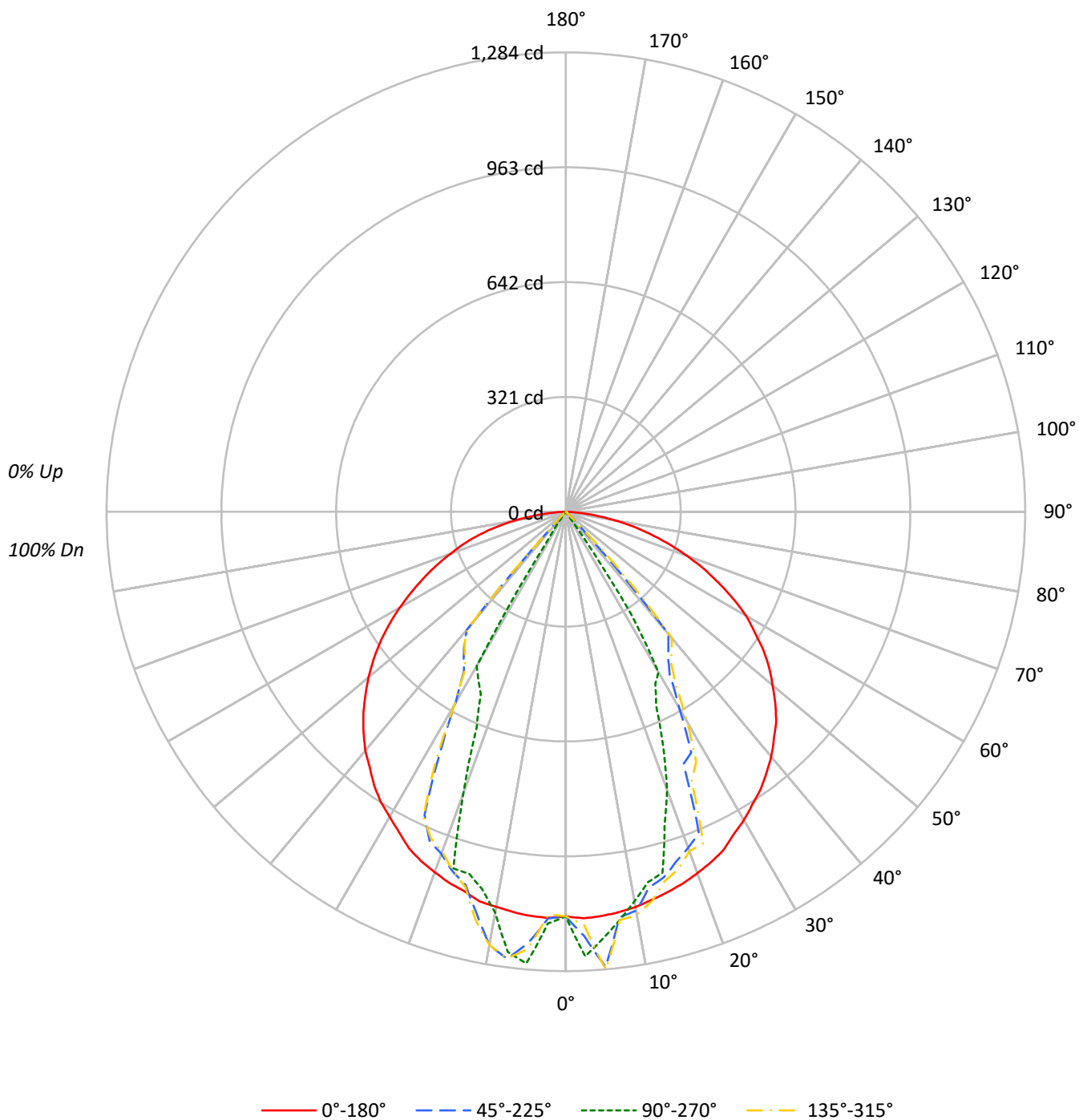
Lumens per Lamp: N/A
Luminaire Lumens: 1608.0 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 0.81 / 0.97
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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: 24 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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	9139	9139	9139	9139
5°	9176	9399	9173	9953
10°	9154	8505	9148	8751
15°	9129	7938	9106	7959
20°	9140	6252	9113	6330
25°	9166	4525	9121	4270
30°	9124	3970	9027	3816
35°	9151	87	9017	106
40°	9183	19	8963	19
45°	9215	12	8869	8
50°	9145	9	8726	9
55°	9090	6	8532	6
60°	8919	7	8221	7
65°	8455	11	7853	7
70°	7842	12	7466	12
75°	6937	13	7052	13
80°	5633	15	5957	15
85°	3313	18	3389	18

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 2°

Vertical Angle: 45°

Luminance: 9950 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.5	7.1
10°-20°	309.5	19.2
20°-30°	393.8	24.5
30°-40°	332.7	20.7
40°-50°	217.5	13.5
50°-60°	137.0	8.5
60°-70°	72.9	4.5
70°-80°	26.6	1.7
80°-90°	4.6	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°	816.7	50.8
0°-40°	1149.4	71.5
0°-60°	1503.9	93.5
0°-90°	1608.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1608.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1131	1131	1131	1131	1131	
5°	1134	1197	1134	1267	1134	108
15°	1100	1044	1098	1047	1100	311
25°	1043	596	1038	563	1043	480
35°	948	11	934	14	948	593
45°	832	1	800	1	832	639
55°	674	1	633	1	674	601
65°	472	1	438	1	472	467
75°	248	1	252	1	248	263
85°	48	1	50	1	48	61
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1137.3	1138.0	1138.3	1139.0	1140.0	1140.4	1141.0	1140.4	1140.4	1140.4	1140.4
5°	1134.3	1135.6	1136.6	1138.0	1140.4	1140.7	1143.4	1143.8	1145.1	1147.8	1149.9
7.5°	1129.2	1130.5	1132.6	1136.0	1139.4	1143.1	1147.8	1152.9	1160.1	1166.8	1175.3
10°	1121.7	1123.4	1125.8	1128.8	1145.5	1147.8	1158.4	1173.0	1177.0	1198.4	1214.4
12.5°	1110.8	1116.6	1122.7	1125.4	1141.4	1166.5	1201.8	1194.7	1186.9	1256.8	1255.8
15°	1100.3	1108.1	1105.1	1127.1	1141.7	1185.5	1170.6	1202.5	1260.9	1246.6	1247.3
17.5°	1089.1	1090.8	1107.8	1126.1	1152.2	1174.6	1193.0	1236.8	1248.3	1249.3	1236.8
20°	1074.9	1083.0	1107.8	1124.4	1168.5	1179.1	1218.8	1241.2	1236.4	1224.9	1203.5
22.5°	1060.3	1085.0	1110.2	1133.6	1164.5	1192.6	1212.3	1222.8	1198.1	1152.6	1128.2
25°	1043.0	1057.6	1090.5	1124.8	1163.4	1179.7	1191.3	1174.3	1142.1	1101.3	1060.3
27.5°	1016.2	1039.6	1081.7	1120.3	1155.3	1175.0	1156.3	1115.6	1063.7	1036.9	1018.2
30°	995.4	1026.0	1060.6	1097.9	1134.3	1145.8	1098.3	1051.8	1016.2	989.3	985.3
32.5°	970.3	1013.8	1046.7	1082.3	1112.9	1097.6	1051.4	991.4	961.8	951.7	955.7
35°	947.9	980.9	1024.0	1058.9	1081.0	1046.7	973.7	936.4	922.1	927.9	920.4
37.5°	921.1	964.6	1004.3	1034.5	1027.0	975.4	913.7	889.9	891.6	886.8	872.6
40°	893.3	934.7	976.1	1004.6	978.5	899.7	858.7	853.6	854.6	839.3	819.0
42.5°	860.7	898.4	939.8	965.6	909.2	847.8	820.0	820.7	811.8	790.5	779.6
45°	831.5	866.1	909.2	911.6	842.4	791.1	783.0	774.2	754.5	747.3	739.2
47.5°	794.2	832.5	868.2	855.3	776.9	745.0	738.9	719.5	709.7	704.2	697.5
50°	754.5	793.2	825.7	789.1	715.1	707.6	687.6	672.3	665.6	659.8	653.7
52.5°	716.8	748.7	782.0	718.8	667.6	660.5	637.7	628.9	622.1	615.7	614.3
55°	674.0	702.2	724.9	652.0	622.1	605.5	589.2	583.1	576.6	573.6	578.7
57.5°	625.5	657.4	654.0	586.1	572.9	548.8	542.7	538.6	533.9	535.9	493.5
60°	581.7	606.2	589.5	537.9	515.5	499.3	493.8	491.1	493.8	452.4	397.8
62.5°	527.8	555.3	521.7	481.6	457.8	450.0	445.3	449.0	409.3	363.8	350.6
65°	471.8	501.6	452.1	421.2	406.3	399.5	399.1	367.6	328.5	310.9	310.9
67.5°	417.8	448.7	384.9	359.1	353.3	354.0	334.3	286.4	275.6	263.7	229.4
70°	360.4	387.6	318.0	302.4	299.0	296.6	248.8	235.9	223.0	191.4	188.7
72.5°	303.4	316.7	255.6	251.8	251.2	208.7	199.2	177.2	162.2	158.5	156.8
75°	248.1	244.0	201.9	205.3	173.1	158.2	142.9	130.0	128.0	126.6	31.6
77.5°	195.8	175.5	159.2	138.5	123.9	105.2	102.2	100.1	65.8	23.8	19.3
80°	142.5	113.7	105.9	89.9	76.7	73.6	75.3	23.1	18.3	15.3	13.2
82.5°	90.6	72.6	59.4	51.9	50.6	22.1	16.3	13.2	11.5	9.8	8.1
85°	48.5	32.2	29.9	25.1	14.9	10.2	8.5	6.4	5.4	4.4	4.1
87.5°	15.3	12.9	10.5	8.5	5.1	3.4	2.7	2.4	2.0	1.7	1.7
90°	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):

	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°	25°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1139.7	1140.4	1140.0	1141.0	1141.0	1142.4	1143.4	1144.4	1146.5	1147.5	1155.3
5°	1154.3	1156.0	1161.1	1165.8	1171.6	1173.3	1183.1	1185.5	1197.0	1198.4	1236.4
7.5°	1186.9	1193.3	1205.5	1217.8	1230.0	1237.8	1251.4	1259.8	1269.0	1277.1	1307.4
10°	1226.2	1237.1	1249.0	1261.2	1268.3	1283.3	1291.4	1292.8	1290.4	1277.1	1228.3
12.5°	1264.9	1275.8	1270.7	1273.1	1281.6	1255.1	1258.8	1239.8	1253.0	1187.5	1139.0
15°	1259.5	1258.8	1246.3	1205.5	1212.3	1161.8	1141.4	1125.8	1138.3	1131.5	1124.1
17.5°	1243.2	1212.3	1190.6	1141.7	1121.0	1106.8	1107.1	1107.4	1101.3	1107.8	1088.8
20°	1174.3	1139.7	1107.4	1090.1	1084.0	1073.8	1078.9	1073.8	1074.2	1076.2	1047.0
22.5°	1082.7	1072.2	1053.5	1058.9	1056.9	1066.0	1059.3	1048.7	1052.1	1036.9	1014.8
25°	1045.7	1033.5	1032.8	1034.8	1031.8	1027.7	1021.6	1005.6	1004.6	999.9	989.7
27.5°	1008.3	1009.0	1011.1	1005.0	994.1	985.9	976.8	969.0	972.0	966.6	952.7
30°	982.6	982.2	970.0	964.6	944.5	944.9	942.5	937.7	934.7	935.0	926.2
32.5°	945.9	935.4	921.5	914.7	913.0	906.9	902.1	903.1	905.5	897.0	906.2
35°	908.2	886.5	884.5	878.7	873.3	869.2	870.9	864.1	863.8	862.7	788.1
37.5°	857.7	847.1	846.1	840.0	836.3	835.3	828.8	829.8	832.9	838.3	672.0
40°	815.9	806.4	804.0	803.7	795.5	794.9	796.6	803.0	807.4	773.5	640.4
42.5°	771.1	771.8	764.3	759.6	760.6	763.6	771.8	749.4	649.3	618.7	585.5
45°	732.8	729.4	725.3	723.9	732.8	726.6	637.0	587.8	576.0	574.6	481.3
47.5°	692.7	691.7	690.0	691.0	640.8	571.2	550.8	544.4	546.4	545.1	413.4
50°	652.3	653.7	653.7	570.9	524.0	512.5	514.2	520.0	484.0	451.7	385.2
52.5°	617.4	606.8	520.0	490.1	479.6	484.7	472.4	427.3	394.7	375.7	356.4
55°	552.5	475.2	455.8	451.1	454.8	409.7	381.8	352.6	344.1	342.1	330.9
57.5°	434.8	419.2	420.9	401.8	358.7	333.3	322.1	318.0	314.3	311.6	27.2
60°	384.5	388.9	356.0	315.3	298.0	294.6	291.9	288.1	287.5	282.7	17.3
62.5°	352.0	309.5	281.0	270.8	266.8	265.7	260.7	259.0	219.9	30.2	12.9
65°	265.4	248.1	242.7	240.3	235.9	235.9	195.8	30.9	25.1	21.7	11.5
67.5°	216.5	215.2	212.5	209.4	142.5	29.9	26.1	22.7	19.7	17.3	10.2
70°	183.3	182.6	166.3	30.5	25.5	22.4	19.7	17.6	16.3	14.6	9.2
72.5°	150.4	30.5	25.8	22.4	19.3	17.6	16.0	14.3	12.9	11.9	7.5
75°	23.4	20.7	18.3	16.6	15.3	13.6	12.2	11.2	10.9	9.5	5.1
77.5°	17.0	14.6	13.2	11.9	10.5	9.5	8.1	7.1	6.4	5.4	3.7
80°	11.9	10.5	9.5	7.8	6.8	5.8	5.1	4.4	4.1	3.4	1.7
82.5°	6.8	5.8	5.1	4.1	3.7	3.1	2.7	2.4	2.4	1.7	1.7
85°	3.1	3.1	2.4	2.0	1.7	1.7	1.7	1.4	1.4	1.0	1.0
87.5°	1.4	1.4	1.4	1.4	1.4	1.0	1.0	1.0	1.0	1.0	0.7
90°	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):

	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1166.2	1170.6	1179.1	1187.9	1178.0	1213.3	1210.6	1222.5	1229.0	1232.0	1239.1
5°	1270.0	1289.7	1296.2	1276.8	1265.6	1254.1	1227.9	1208.2	1210.6	1204.2	1180.8
7.5°	1268.0	1225.9	1169.2	1143.4	1141.4	1138.3	1146.5	1151.2	1151.9	1151.6	1150.9
10°	1160.7	1139.0	1135.3	1131.9	1133.2	1120.7	1114.9	1098.6	1107.4	1102.7	1104.4
12.5°	1128.2	1123.1	1103.0	1075.2	1091.8	1079.3	1072.2	1076.9	1071.5	1066.4	1064.7
15°	1108.8	1075.9	1064.7	1057.9	1053.1	1050.4	1052.8	1047.4	1045.7	1044.7	1047.0
17.5°	1068.8	1055.5	1043.3	1025.3	1025.7	1024.6	1031.4	1041.6	1042.3	990.0	942.8
20°	1037.2	1026.3	1010.7	999.5	1014.8	987.6	882.8	832.9	825.1	825.1	826.4
22.5°	1012.1	988.0	989.0	971.3	828.5	799.3	800.0	803.0	789.1	741.6	736.5
25°	977.8	974.1	899.7	777.6	778.6	755.8	720.9	671.7	618.4	618.4	609.6
27.5°	952.0	872.9	764.3	759.2	682.9	634.7	604.8	559.7	553.6	547.8	548.5
30°	929.9	738.5	741.2	634.7	578.3	538.3	535.9	528.4	524.7	523.7	520.0
32.5°	735.1	719.2	620.4	540.3	518.3	511.8	508.8	500.3	499.9	493.5	448.7
35°	689.3	631.3	519.3	497.6	491.1	485.0	479.9	322.1	38.0	15.3	13.2
37.5°	637.0	527.4	480.2	470.4	464.3	343.1	34.3	11.9	8.5	6.1	5.4
40°	540.0	471.1	456.1	445.3	183.6	11.9	7.5	5.8	3.4	3.1	2.7
42.5°	455.5	443.9	428.0	130.3	13.6	5.8	3.7	2.7	2.4	2.4	2.0
45°	426.3	416.1	172.4	12.9	8.5	2.7	2.4	2.4	2.0	1.4	1.4
47.5°	399.1	351.3	15.6	8.1	5.4	2.4	2.0	1.4	1.4	1.4	1.0
50°	370.3	19.3	10.9	6.1	3.4	1.4	1.4	1.4	1.4	1.0	1.0
52.5°	69.2	13.6	8.8	5.4	1.7	1.4	1.4	1.4	1.0	1.0	1.0
55°	16.3	10.9	8.1	4.8	1.4	1.4	1.4	1.0	1.0	1.0	0.7
57.5°	12.2	8.1	6.4	4.4	1.4	1.0	1.0	1.0	1.0	1.0	0.7
60°	10.2	5.8	5.1	4.1	1.0	1.0	1.0	1.0	1.0	1.0	0.7
62.5°	7.1	4.8	3.7	3.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
65°	5.8	3.7	3.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
67.5°	5.1	3.1	2.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
70°	4.1	1.0	1.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
72.5°	3.4	1.0	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
75°	3.4	1.7	0.7	0.7	1.0	1.0	1.4	1.4	1.0	1.0	1.0
77.5°	2.4	1.7	0.7	0.7	1.0	1.0	1.4	1.4	1.0	1.0	1.0
80°	1.4	1.7	0.7	1.0	1.0	2.0	2.4	1.4	1.0	1.0	1.0
82.5°	1.4	1.7	2.0	2.0	1.0	1.7	2.0	1.7	1.4	1.0	1.0
85°	1.4	1.0	1.4	1.7	1.0	1.7	1.7	1.4	1.4	1.0	1.0
87.5°	0.7	1.0	1.0	1.4	1.4	1.4	1.7	1.4	1.4	1.4	1.0
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: P1213718

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°	135°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1242.5	1243.9	1222.5	1215.0	1221.5	1220.1	1214.4	1193.0	1190.6	1176.3	1155.6
5°	1187.5	1196.7	1185.5	1204.9	1195.7	1204.9	1232.7	1245.6	1266.6	1279.5	1284.3
7.5°	1149.2	1151.2	1151.2	1152.9	1154.6	1155.0	1152.9	1151.6	1145.8	1138.7	1151.6
10°	1102.7	1105.1	1109.1	1108.5	1108.1	1115.3	1117.0	1131.5	1130.9	1133.6	1143.4
12.5°	1078.6	1060.3	1076.9	1072.5	1078.6	1069.1	1086.7	1083.7	1084.7	1092.9	1113.9
15°	1038.6	1044.3	1048.4	1048.4	1050.8	1048.7	1046.7	1060.6	1069.1	1069.4	1068.1
17.5°	961.5	917.7	962.5	951.0	1043.0	1045.3	1037.5	1031.1	1031.1	1036.2	1047.0
20°	825.4	826.4	826.8	831.2	836.6	836.3	836.6	970.3	1033.8	1019.2	1009.4
22.5°	723.6	711.0	734.5	732.8	761.9	794.2	825.1	822.0	824.1	918.4	1003.3
25°	580.0	596.3	583.1	588.9	621.8	660.1	683.9	746.0	813.5	808.8	830.8
27.5°	546.1	541.7	547.8	547.8	552.2	557.3	570.5	605.5	665.6	728.7	788.4
30°	513.8	517.6	518.3	524.4	527.8	531.2	533.2	546.4	560.0	603.8	677.4
32.5°	385.9	338.4	445.3	474.1	498.6	504.3	508.4	513.8	523.7	530.1	567.1
35°	11.2	11.2	11.9	13.6	17.3	116.8	444.6	490.1	496.5	504.7	511.5
37.5°	5.4	4.1	4.8	5.1	6.1	8.5	12.2	38.0	423.2	478.5	486.0
40°	2.4	2.4	2.4	2.4	2.7	3.4	5.1	8.5	12.9	340.4	459.2
42.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.4	3.1	6.1	14.6	241.0
45°	1.4	1.4	1.0	1.4	1.4	1.7	2.0	2.0	2.7	9.2	16.6
47.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.7	2.0	6.1	8.8
50°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4.8	6.1
52.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	5.4
55°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.0	1.0	1.4	4.8
57.5°	0.7	0.7	0.7	0.7	0.7	1.0	0.7	0.7	1.0	1.0	4.4
60°	0.7	0.7	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.0	4.1
62.5°	1.0	1.0	0.7	1.0	0.7	0.7	1.0	1.0	1.0	1.0	2.7
65°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	1.0
67.5°	1.0	1.0	1.0	1.0	0.7	1.0	0.7	1.0	1.0	0.7	0.7
70°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.7	0.7
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7	0.7	0.7
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.4	1.4	0.7	0.7	0.7
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.7	2.0	1.7	1.7	0.7
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.7	1.7	1.7	1.7	2.4
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.4	1.4	1.4	1.4	1.7
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.4	1.4	1.4	1.0	1.4
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.4	1.0	1.0	1.0
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: P1213718

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	140°	145°	150°	155°	160°	161°	162°	163°	164°	165°	166°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1157.3	1145.8	1142.1	1134.3	1133.6	1134.3	1132.6	1130.2	1131.5	1129.2	1127.1
5°	1287.0	1256.1	1236.1	1209.3	1172.3	1164.1	1162.1	1150.6	1146.5	1145.1	1139.7
7.5°	1182.1	1238.5	1272.4	1283.9	1240.5	1230.3	1218.4	1208.9	1199.8	1182.5	1171.9
10°	1135.6	1138.3	1170.9	1208.9	1270.7	1279.2	1285.6	1264.9	1259.2	1215.0	1205.5
12.5°	1124.8	1125.1	1128.8	1151.9	1200.4	1205.9	1228.6	1240.8	1255.8	1264.2	1257.5
15°	1075.2	1102.7	1123.1	1125.1	1129.5	1139.0	1145.8	1188.2	1206.2	1254.4	1251.7
17.5°	1052.1	1061.0	1090.5	1114.6	1110.5	1107.1	1112.5	1118.3	1135.6	1183.8	1183.1
20°	1013.8	1041.9	1057.9	1083.0	1105.8	1106.8	1100.7	1097.3	1090.5	1098.3	1105.4
22.5°	997.5	1001.9	1031.8	1049.4	1075.2	1084.4	1085.7	1086.1	1082.3	1078.3	1076.2
25°	995.8	981.9	997.1	1019.2	1038.2	1048.1	1059.3	1063.0	1061.6	1061.6	1059.6
27.5°	814.9	977.5	969.3	983.9	1007.0	1013.8	1019.5	1031.1	1038.2	1043.3	1045.7
30°	776.2	805.4	947.6	949.6	973.0	972.4	978.8	988.3	997.5	1009.4	1012.4
32.5°	686.6	758.2	867.5	915.3	939.8	942.2	945.6	948.3	956.8	970.0	981.5
35°	550.2	690.7	743.3	899.1	903.5	908.2	910.3	916.7	919.4	924.9	935.0
37.5°	497.9	570.9	713.1	777.6	861.7	865.8	876.7	879.4	883.8	888.2	896.0
40°	467.7	487.7	593.6	694.4	828.1	830.8	834.6	841.4	841.7	846.8	853.9
42.5°	443.6	456.5	487.4	663.2	804.4	804.0	795.2	799.6	801.7	807.1	816.9
45°	354.3	428.3	448.0	541.7	640.4	686.6	775.2	760.6	760.2	762.3	772.8
47.5°	18.0	402.9	416.8	447.0	604.8	606.5	618.0	715.1	730.0	725.3	726.3
50°	12.2	27.8	388.3	402.2	521.3	563.4	571.9	576.3	632.3	694.7	684.6
52.5°	9.5	16.0	237.9	373.3	423.6	454.5	509.1	540.3	543.7	568.8	654.0
55°	8.5	12.2	25.8	344.5	360.1	366.9	398.8	453.4	497.6	510.8	511.8
57.5°	7.5	11.2	17.6	155.8	327.5	328.9	334.3	353.3	393.0	429.3	470.4
60°	6.8	9.8	13.9	26.8	297.6	301.0	302.1	307.2	311.9	336.7	383.9
62.5°	4.1	7.8	12.2	19.3	235.5	270.5	270.2	273.6	278.0	280.7	290.2
65°	3.4	6.1	10.5	16.3	28.8	36.0	218.6	243.0	245.7	249.5	251.2
67.5°	3.1	5.4	7.8	12.9	21.7	24.8	28.5	35.3	192.8	217.2	220.6
70°	2.7	3.7	6.4	10.9	17.6	19.0	21.4	24.4	28.8	35.6	174.4
72.5°	1.7	2.7	4.4	7.8	13.6	15.3	16.6	18.7	20.7	24.8	28.5
75°	0.7	2.0	3.7	5.8	10.5	11.5	12.6	13.9	15.6	18.3	20.4
77.5°	0.7	1.7	3.1	4.1	6.8	7.8	9.2	10.2	11.5	12.9	14.9
80°	2.4	1.4	2.0	3.1	4.8	5.1	5.8	6.4	7.5	8.5	9.8
82.5°	1.7	2.0	2.4	2.0	2.4	3.1	3.4	4.1	4.4	5.1	5.4
85°	1.4	1.4	1.7	1.7	1.7	1.7	1.7	1.7	2.0	2.4	3.1
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.4	1.4
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: P1213718

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	167°	168°	169°	170°	171°	172°	173°	174°	175°	176°	177°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1127.1	1126.5	1124.4	1124.4	1124.1	1125.4	1126.5	1127.5	1127.1	1129.2	1127.1
5°	1135.6	1133.9	1130.9	1128.2	1127.1	1127.8	1126.8	1127.8	1126.5	1128.2	1125.1
7.5°	1159.0	1153.3	1141.4	1136.6	1130.5	1130.2	1127.1	1126.5	1124.4	1124.4	1120.7
10°	1200.4	1172.6	1169.2	1155.0	1149.9	1125.1	1130.5	1121.4	1120.3	1115.9	1114.2
12.5°	1234.4	1212.7	1206.2	1193.7	1179.4	1129.2	1140.4	1120.7	1119.7	1110.8	1101.7
15°	1235.1	1247.6	1230.0	1195.4	1192.3	1157.7	1134.9	1128.2	1119.3	1092.9	1097.3
17.5°	1195.4	1224.2	1232.7	1225.2	1203.5	1180.1	1148.2	1134.6	1108.1	1096.2	1088.1
20°	1130.9	1160.1	1196.4	1198.7	1212.3	1195.7	1153.9	1131.9	1100.0	1079.3	1072.5
22.5°	1079.6	1101.0	1142.7	1162.1	1178.7	1184.5	1158.0	1125.4	1085.7	1065.7	1061.6
25°	1052.5	1057.2	1069.8	1092.5	1129.2	1155.6	1159.4	1124.8	1104.1	1060.3	1037.2
27.5°	1042.6	1038.6	1033.5	1045.0	1072.5	1104.7	1126.1	1131.9	1080.3	1038.6	1015.5
30°	1017.5	1019.9	1012.1	1008.0	1026.0	1059.3	1097.3	1106.8	1067.1	1024.0	997.5
32.5°	986.6	990.7	992.1	984.9	981.2	1004.3	1045.3	1068.1	1066.0	1003.3	973.7
35°	947.9	959.5	962.5	962.9	956.8	953.0	976.8	1024.0	1041.9	993.8	951.0
37.5°	907.2	910.6	927.2	931.6	931.6	920.4	938.1	975.8	1000.9	972.4	923.2
40°	856.3	867.2	882.8	890.6	898.4	899.4	889.6	916.0	957.4	950.3	897.0
42.5°	819.3	826.4	835.9	846.5	862.4	866.5	856.3	861.0	904.1	922.8	863.1
45°	776.2	785.7	788.4	800.0	816.6	828.5	828.1	818.3	852.9	876.0	838.3
47.5°	732.1	741.2	746.0	751.8	764.0	779.3	787.7	783.3	790.1	835.3	805.4
50°	686.6	691.7	701.2	707.6	715.8	724.6	745.0	749.0	739.5	775.5	769.1
52.5°	643.5	645.2	651.6	658.1	668.9	675.4	691.7	703.9	703.2	713.7	728.7
55°	609.9	602.4	603.8	608.9	616.0	625.8	635.0	654.0	660.5	662.5	686.3
57.5°	476.5	553.2	560.0	559.7	568.1	572.6	581.0	593.6	616.7	611.6	638.1
60°	433.1	441.6	505.7	513.2	516.2	520.3	530.5	542.0	559.0	569.8	581.4
62.5°	330.2	381.8	401.2	457.8	466.7	469.0	475.8	481.3	498.9	523.7	518.9
65°	255.6	277.6	336.7	359.8	408.0	414.1	423.6	429.3	434.4	462.9	464.3
67.5°	220.9	224.3	240.3	284.8	315.3	362.5	368.2	373.3	381.1	401.5	414.1
70°	188.7	192.8	197.2	200.9	240.6	271.9	315.6	317.3	322.4	336.0	364.5
72.5°	35.6	161.2	163.9	166.3	170.7	191.4	233.2	267.1	269.1	275.6	301.7
75°	24.1	28.2	38.7	133.0	137.5	138.8	145.9	188.4	219.6	220.9	232.5
77.5°	17.3	19.3	23.4	27.8	70.9	106.6	108.3	116.1	148.3	171.7	173.8
80°	11.9	13.2	15.6	17.6	21.7	28.5	78.7	81.1	85.2	117.4	123.5
82.5°	6.8	7.8	9.2	11.2	12.9	16.3	21.0	27.2	55.3	59.1	78.4
85°	3.4	3.7	4.4	5.4	6.4	7.8	10.5	12.9	17.6	31.9	32.9
87.5°	1.7	1.7	1.7	1.7	2.7	3.1	3.7	4.8	6.1	9.2	11.9
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: P1213718

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	178°	179°	180°	181°	182°	183°	184°	185°	186°	187°	188°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1127.5	1132.2	1136.3	1137.3	1137.3	1138.0	1139.0	1139.7	1140.4	1141.0	1140.4
5°	1125.4	1130.5	1133.9	1134.9	1134.9	1137.0	1138.7	1140.7	1141.7	1141.7	1141.0
7.5°	1120.3	1124.1	1128.5	1131.2	1131.5	1134.9	1138.0	1137.7	1139.0	1139.7	1141.4
10°	1113.6	1113.6	1121.0	1123.1	1124.8	1128.5	1129.5	1131.5	1136.3	1137.0	1141.4
12.5°	1110.2	1106.8	1115.6	1116.6	1122.4	1117.6	1123.7	1125.8	1121.0	1127.5	1119.0
15°	1094.9	1099.0	1097.6	1100.7	1110.8	1105.4	1122.0	1116.6	1128.8	1114.2	1140.0
17.5°	1082.3	1081.7	1087.1	1089.8	1091.8	1103.4	1107.8	1113.9	1118.6	1114.6	1124.8
20°	1073.2	1067.7	1071.8	1074.9	1082.0	1090.8	1093.5	1084.4	1100.3	1127.5	1133.9
22.5°	1055.9	1052.1	1056.9	1056.9	1067.7	1066.4	1076.6	1070.8	1085.7	1117.3	1150.2
25°	1032.4	1032.8	1037.9	1044.0	1046.0	1061.3	1066.7	1074.2	1092.9	1130.5	1150.6
27.5°	1008.7	1006.6	1009.7	1022.3	1032.8	1044.0	1045.7	1071.1	1096.6	1122.4	1140.0
30°	984.9	982.9	984.9	994.1	1006.6	1014.1	1032.8	1066.7	1090.5	1108.1	1124.8
32.5°	959.5	957.4	962.2	969.0	991.0	992.1	1029.0	1061.0	1079.6	1092.5	1089.5
35°	932.3	929.6	934.0	944.5	964.9	972.4	1011.1	1034.8	1055.9	1062.0	1047.7
37.5°	899.7	895.0	900.4	915.0	936.4	958.1	990.4	1017.8	1029.0	1012.8	995.8
40°	865.8	862.4	871.9	879.4	904.5	934.7	971.7	991.0	983.9	965.2	946.6
42.5°	835.6	828.5	836.9	851.2	879.7	914.0	943.9	954.7	937.7	910.3	888.5
45°	798.6	790.1	800.3	819.3	849.8	888.9	912.3	908.6	879.7	856.0	826.1
47.5°	759.9	749.7	759.9	782.6	816.9	858.3	875.3	858.3	822.0	792.1	768.1
50°	721.9	710.0	719.9	754.1	787.7	819.6	819.3	786.4	764.7	732.1	711.0
52.5°	684.2	667.3	677.1	714.4	748.0	784.3	757.5	727.0	700.9	672.3	665.6
55°	637.7	619.4	632.6	686.9	712.7	734.1	691.3	664.5	638.7	624.5	616.0
57.5°	593.6	573.6	585.1	649.3	668.3	673.7	634.3	596.3	581.0	576.3	564.1
60°	548.1	525.4	536.2	610.2	623.5	601.4	562.7	533.2	530.1	520.6	511.1
62.5°	504.7	479.6	486.4	561.7	567.8	527.8	492.1	484.3	476.9	467.3	462.3
65°	454.8	428.7	438.2	510.1	504.3	452.8	432.7	431.0	421.2	413.4	420.9
67.5°	409.0	378.1	391.3	453.8	427.6	385.6	377.4	373.3	365.5	369.9	291.5
70°	358.7	325.1	343.1	393.0	354.3	326.5	323.4	317.3	317.7	252.5	212.8
72.5°	302.7	273.6	299.7	326.5	280.3	272.2	267.8	267.1	215.5	175.1	165.3
75°	253.5	224.0	252.2	262.4	223.3	217.9	217.6	179.9	141.5	135.1	132.0
77.5°	197.9	175.1	201.9	186.7	171.4	165.3	148.3	111.3	106.6	102.2	38.4
80°	133.4	135.1	150.7	128.6	122.2	104.2	82.1	78.7	67.9	27.2	21.4
82.5°	81.1	101.8	96.0	80.4	78.7	56.7	51.9	26.5	19.7	15.6	13.6
85°	42.1	51.6	49.6	43.8	32.6	29.2	16.3	12.6	10.2	7.8	6.4
87.5°	14.3	19.0	18.3	14.6	11.2	8.8	5.8	4.8	3.4	2.7	2.4
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: P1213718

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	189°	190°	191°	192°	193°	194°	195°	196°	197°	198°	199°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1139.7	1139.7	1139.0	1139.7	1140.0	1139.4	1139.4	1140.0	1140.4	1140.7	1142.4
5°	1141.4	1142.1	1143.1	1145.1	1145.5	1149.5	1151.2	1152.2	1153.3	1153.6	1151.2
7.5°	1145.1	1147.5	1149.5	1149.2	1146.8	1140.4	1138.3	1136.6	1139.7	1147.5	1156.7
10°	1148.5	1137.7	1117.3	1145.1	1136.6	1144.4	1167.5	1172.6	1188.2	1210.3	1216.7
12.5°	1125.1	1155.0	1161.4	1130.2	1187.9	1166.5	1192.0	1214.4	1220.8	1243.2	1229.6
15°	1150.2	1164.8	1174.6	1205.9	1202.5	1220.8	1227.9	1223.5	1224.5	1230.3	1245.6
17.5°	1149.9	1179.1	1185.5	1206.6	1220.8	1221.1	1219.1	1217.1	1222.5	1226.9	1217.8
20°	1169.6	1179.1	1191.6	1200.1	1202.8	1206.2	1212.7	1207.6	1197.4	1187.5	1183.5
22.5°	1159.7	1181.1	1192.0	1193.3	1191.6	1181.1	1171.6	1157.3	1152.6	1147.5	1149.2
25°	1161.8	1171.6	1170.2	1164.8	1157.7	1138.0	1133.2	1127.1	1118.0	1095.9	1075.9
27.5°	1147.2	1142.1	1136.0	1122.7	1109.8	1099.3	1087.4	1067.7	1051.4	1027.7	1018.9
30°	1122.7	1102.4	1087.4	1079.6	1067.1	1049.4	1031.4	1007.3	986.6	981.9	977.5
32.5°	1075.9	1055.9	1043.6	1024.6	1003.3	982.2	961.5	952.0	947.6	948.3	944.2
35°	1028.0	1010.4	992.1	963.5	947.6	926.5	919.1	917.0	913.0	908.6	903.8
37.5°	977.1	956.4	928.9	912.0	896.0	887.5	883.8	880.7	873.6	865.8	860.4
40°	927.9	890.6	875.3	858.7	853.9	850.2	844.8	837.3	827.4	826.1	823.7
42.5°	862.1	835.3	822.0	818.6	812.9	806.4	801.7	793.5	789.4	792.1	794.2
45°	799.6	786.0	781.6	777.6	766.7	757.5	754.5	751.8	755.2	770.1	734.5
47.5°	749.0	743.6	738.2	731.4	721.2	714.4	717.5	720.2	723.3	613.6	560.0
50°	705.3	697.8	689.3	681.8	675.7	675.1	691.0	643.2	538.6	535.9	481.6
52.5°	657.4	646.2	641.1	636.7	639.4	649.6	537.6	498.9	478.5	415.8	387.9
55°	605.8	596.0	596.0	600.1	585.5	474.5	468.7	405.2	366.9	356.0	351.6
57.5°	554.2	553.2	559.0	511.1	430.7	413.0	347.2	333.3	327.2	325.8	318.7
60°	507.1	516.6	432.4	397.8	345.8	311.9	302.4	300.7	294.3	291.9	285.4
62.5°	469.4	389.3	362.5	296.0	278.6	274.2	269.1	266.8	261.0	230.4	67.5
65°	339.1	320.4	260.0	248.8	247.4	241.0	238.9	214.8	50.6	33.9	28.8
67.5°	255.9	227.1	219.2	217.2	210.8	197.9	58.7	33.6	28.8	25.1	22.1
70°	196.5	191.4	185.6	180.9	53.3	33.3	28.8	24.4	21.0	18.7	17.0
72.5°	160.9	157.5	91.6	35.0	28.5	24.1	21.4	18.7	16.3	14.9	13.6
75°	125.9	35.0	28.8	24.1	20.7	17.6	15.6	13.9	12.6	11.5	10.5
77.5°	28.5	23.1	19.7	16.6	14.9	13.2	11.9	10.2	9.2	8.1	6.8
80°	17.6	15.3	12.9	11.9	10.2	8.5	7.5	6.8	5.4	5.1	4.4
82.5°	11.5	9.2	8.1	6.8	5.4	5.1	4.4	3.4	3.1	2.7	2.4
85°	5.1	4.4	3.7	3.1	2.4	2.0	1.7	1.4	1.4	1.4	1.4
87.5°	1.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.7
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: P1213718

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	200°	205°	210°	215°	220°	225°	230°	235°	240°	245°	250°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1143.1	1149.2	1155.0	1153.3	1147.2	1137.7	1134.9	1131.2	1133.9	1139.7	1142.1
5°	1151.2	1147.8	1160.1	1178.0	1207.2	1209.9	1230.3	1235.1	1251.4	1261.5	1261.2
7.5°	1162.8	1211.0	1231.0	1252.7	1262.6	1260.2	1263.2	1260.9	1257.1	1255.4	1253.4
10°	1221.5	1258.1	1265.6	1265.6	1250.3	1229.6	1220.8	1205.5	1175.0	1175.7	1170.6
12.5°	1255.8	1268.7	1251.0	1236.1	1174.6	1150.9	1125.1	1112.9	1105.8	1094.9	1099.0
15°	1237.8	1219.4	1208.9	1160.7	1123.1	1080.3	1081.0	1073.5	1065.7	1066.4	1061.3
17.5°	1211.3	1196.7	1122.0	1088.8	1070.5	1053.8	1050.8	1040.9	1035.8	1034.1	1033.8
20°	1175.0	1122.4	1066.7	1058.6	1036.5	1017.5	1014.5	1017.5	1033.1	1005.3	910.9
22.5°	1132.6	1056.9	1040.6	1017.5	1002.6	995.1	1013.8	928.9	800.6	816.2	799.6
25°	1060.6	1027.7	999.9	982.2	980.5	934.7	778.9	762.6	680.1	636.0	586.5
27.5°	1008.0	993.8	964.6	961.5	939.4	764.3	683.2	593.6	560.7	555.6	544.7
30°	976.1	955.7	938.1	861.0	749.7	615.3	548.1	535.6	529.8	523.7	514.2
32.5°	937.7	918.4	926.9	723.9	597.7	529.8	516.2	507.1	496.5	492.5	458.2
35°	898.7	889.9	724.3	608.5	513.8	497.6	487.4	477.9	380.1	92.0	31.2
37.5°	857.0	854.9	651.0	505.0	481.3	466.0	437.1	90.3	21.4	14.6	10.9
40°	824.4	651.3	514.5	473.5	454.1	430.0	60.4	14.9	9.5	5.8	3.7
42.5°	802.7	585.8	460.6	444.3	402.2	44.5	15.3	6.4	3.7	3.1	2.4
45°	618.7	462.6	430.4	413.4	50.9	15.3	8.8	3.1	2.4	2.0	1.4
47.5°	570.9	420.2	401.2	90.3	17.0	8.1	6.1	2.0	1.4	1.4	1.4
50°	432.4	388.3	319.4	22.1	10.9	5.8	4.4	1.4	1.4	1.4	1.0
52.5°	379.1	358.4	34.3	14.6	8.5	4.4	2.7	1.0	1.0	1.0	1.0
55°	346.5	227.4	20.4	11.2	7.1	4.1	1.7	1.0	1.0	1.0	0.7
57.5°	317.0	30.5	14.9	9.5	6.4	3.7	1.0	1.0	1.0	1.0	0.7
60°	268.8	22.1	12.2	8.5	6.1	3.4	1.0	1.0	1.0	1.0	1.0
62.5°	35.0	17.3	10.5	7.5	4.4	2.7	0.7	1.0	1.0	1.0	1.0
65°	25.5	13.6	9.5	5.1	2.7	1.0	0.7	1.0	1.0	1.0	1.0
67.5°	19.7	11.2	7.1	4.4	2.4	0.7	0.7	1.0	1.0	1.0	1.0
70°	15.6	9.5	5.8	3.7	2.0	0.7	0.7	1.0	1.0	1.0	1.0
72.5°	12.2	6.8	4.1	2.0	1.4	0.7	0.7	1.0	1.0	1.0	1.0
75°	9.2	5.4	3.1	1.7	0.7	0.7	0.7	1.0	1.0	1.0	1.0
77.5°	6.1	3.4	2.4	1.4	1.4	1.4	1.7	1.7	1.0	1.0	1.0
80°	4.1	2.4	1.7	1.7	1.7	1.4	1.7	1.7	1.0	1.7	1.0
82.5°	2.0	1.7	1.7	1.4	1.4	1.0	1.4	1.4	1.4	1.4	1.0
85°	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.4	1.4	1.0
87.5°	0.7	0.7	0.7	0.7	1.0	1.0	1.0	1.0	1.4	1.4	1.0
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: P1213718

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	255°	260°	265°	270°	275°	280°	285°	290°	295°	300°	305°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1139.0	1140.0	1137.3	1151.9	1144.4	1145.1	1148.2	1140.4	1142.1	1136.6	1132.9
5°	1262.6	1264.6	1266.6	1267.3	1268.7	1270.4	1268.3	1267.3	1265.3	1258.5	1251.4
7.5°	1243.2	1240.8	1239.8	1241.2	1243.5	1244.6	1242.9	1245.2	1254.1	1257.8	1260.2
10°	1141.4	1130.5	1138.0	1137.0	1128.5	1157.0	1149.2	1153.6	1156.7	1187.9	1206.9
12.5°	1092.9	1099.6	1086.7	1080.3	1088.8	1094.6	1100.3	1088.1	1105.1	1097.3	1122.4
15°	1052.1	1048.1	1046.7	1047.0	1045.3	1053.5	1055.5	1058.2	1060.6	1071.1	1075.2
17.5°	1033.8	1040.6	1043.3	1045.3	1041.9	1038.2	1034.5	1029.0	1030.7	1028.0	1035.8
20°	847.5	824.7	823.4	836.6	822.0	830.2	849.8	981.5	977.1	1028.4	1011.1
22.5°	707.3	685.9	667.6	651.6	674.4	683.9	720.5	761.9	829.1	818.6	891.6
25°	577.7	569.8	565.1	562.7	564.4	563.7	571.9	591.2	621.8	693.7	786.7
27.5°	540.3	536.6	534.9	529.5	533.5	532.2	538.6	542.7	551.9	559.0	589.2
30°	510.8	506.4	503.3	497.6	501.6	502.0	504.0	514.5	518.3	524.4	533.9
32.5°	186.7	110.0	103.2	98.1	107.2	139.8	245.4	429.0	489.4	494.2	505.0
35°	18.3	15.3	13.6	13.6	13.9	15.3	20.4	53.6	98.1	379.1	474.5
37.5°	7.1	6.1	5.1	4.8	5.1	5.8	7.8	10.2	13.9	28.8	128.6
40°	3.1	2.7	2.4	2.4	2.4	2.4	2.7	3.4	5.1	9.5	14.9
42.5°	2.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.4	3.1	6.1
45°	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.4	1.7	2.7
47.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.4
50°	1.0	1.0	1.0	1.0	0.7	1.0	0.7	1.0	1.0	1.0	1.0
52.5°	1.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.0	1.0
55°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.0
57.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
60°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
62.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.0	1.0	0.7
65°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.0	0.7
67.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
70°	1.0	1.0	0.7	1.0	0.7	0.7	1.0	1.0	1.0	0.7	0.7
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	1.4
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.7	2.0	1.7
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.7	1.7	1.7
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.4	1.4	1.4
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.4	1.4	1.4
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P1213718

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	310°	315°	320°	325°	330°	335°	340°	341°	342°	343°	344°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1126.5	1126.1	1133.2	1138.7	1136.6	1138.7	1141.0	1141.4	1142.1	1139.4	1138.3
5°	1237.8	1227.3	1206.9	1192.3	1175.3	1144.4	1129.2	1130.9	1131.2	1130.2	1131.5
7.5°	1259.2	1258.1	1251.0	1248.0	1236.4	1214.4	1179.1	1173.0	1158.0	1148.5	1140.7
10°	1205.5	1230.0	1236.4	1247.3	1254.1	1250.0	1220.1	1215.7	1206.2	1195.4	1197.7
12.5°	1147.5	1167.5	1168.5	1227.6	1240.8	1242.2	1230.6	1236.8	1238.1	1213.7	1199.4
15°	1076.2	1085.7	1105.8	1160.7	1200.8	1225.9	1233.4	1236.8	1220.1	1219.1	1213.3
17.5°	1045.0	1051.1	1060.3	1091.2	1151.9	1188.9	1220.5	1218.1	1224.5	1219.8	1205.2
20°	1005.6	1010.7	1027.0	1042.6	1072.5	1121.7	1180.8	1185.2	1193.7	1192.6	1196.7
22.5°	1005.0	987.0	989.7	1001.9	1033.1	1077.2	1140.0	1154.6	1160.1	1163.8	1168.2
25°	797.2	940.1	966.3	974.1	994.4	1020.2	1094.2	1099.6	1109.8	1126.5	1138.7
27.5°	690.7	787.7	892.3	946.6	959.5	980.9	1025.0	1033.1	1067.7	1071.8	1090.8
30°	545.1	620.1	776.2	906.9	928.2	943.2	974.4	990.7	1005.6	1021.9	1041.9
32.5°	512.8	524.7	611.3	750.4	916.7	905.5	928.6	938.4	954.7	969.0	983.6
35°	483.3	491.4	509.8	614.6	746.7	874.6	890.2	896.7	905.8	916.7	927.2
37.5°	452.4	464.6	477.2	505.4	690.7	850.2	849.8	857.3	862.7	871.9	880.7
40°	82.1	426.6	447.0	465.3	535.6	678.1	811.8	815.2	819.0	824.7	833.9
42.5°	13.2	71.3	418.8	436.5	456.5	607.2	794.5	780.6	778.2	782.3	790.5
45°	6.8	17.3	84.2	407.6	425.6	484.3	649.6	756.5	754.1	746.3	748.0
47.5°	5.1	10.9	20.7	140.8	398.5	415.8	599.4	592.9	638.1	724.6	711.4
50°	4.4	7.5	12.2	28.8	352.0	382.8	461.6	539.3	563.1	566.1	670.0
52.5°	4.1	5.1	8.8	18.7	74.0	354.0	375.4	402.5	442.6	528.4	526.4
55°	3.7	4.8	7.5	12.6	25.8	319.0	341.1	346.2	354.7	395.7	450.0
57.5°	2.0	4.4	7.1	10.9	19.3	58.4	309.5	313.6	320.4	322.1	341.4
60°	1.0	4.1	6.4	9.5	14.3	27.2	278.3	283.1	287.1	287.8	293.9
62.5°	0.7	3.7	5.4	8.8	11.9	19.3	65.8	134.4	255.6	255.6	262.7
65°	0.7	2.7	3.4	5.8	10.9	16.0	27.8	32.2	62.8	154.4	230.4
67.5°	0.7	1.0	3.1	4.8	8.1	12.2	20.4	23.8	28.5	32.6	60.4
70°	0.7	0.7	2.7	3.1	5.1	9.2	14.6	16.6	19.3	22.1	25.5
72.5°	0.7	0.7	2.4	2.4	3.4	6.1	11.2	12.2	13.9	15.6	18.0
75°	1.7	1.4	2.0	2.0	2.4	4.8	8.5	9.5	10.2	11.5	13.2
77.5°	1.7	1.7	1.7	1.7	1.7	3.1	5.4	6.1	7.1	7.8	9.2
80°	1.4	1.4	1.4	1.7	1.7	2.0	3.4	3.7	4.1	5.1	5.4
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.0	2.4	3.1
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.4	1.4	1.4	1.4
87.5°	1.0	1.0	1.0	0.7	0.7	1.0	1.0	1.0	1.0	1.0	1.0
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: P1213718

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	345°	346°	347°	348°	349°	350°	351°	352°	353°	354°	355°
0°	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1138.0	1136.0	1134.3	1135.3	1132.2	1130.9	1131.9	1132.2	1132.9	1134.6	1134.9
5°	1134.9	1134.3	1137.3	1139.0	1138.3	1139.0	1139.0	1137.7	1135.6	1137.0	1133.9
7.5°	1132.9	1128.5	1125.1	1125.8	1122.4	1126.5	1130.2	1135.6	1137.3	1137.3	1133.9
10°	1167.9	1163.1	1144.1	1131.2	1122.7	1115.3	1132.9	1114.9	1123.4	1091.2	1128.2
12.5°	1196.7	1203.2	1194.7	1159.4	1153.3	1130.9	1143.8	1121.7	1115.3	1078.3	1090.1
15°	1208.2	1196.0	1193.3	1183.5	1170.2	1163.8	1129.2	1125.4	1114.9	1119.0	1103.4
17.5°	1198.1	1204.2	1196.0	1189.6	1176.0	1160.7	1140.0	1121.7	1107.1	1074.5	1102.0
20°	1188.2	1196.4	1171.9	1176.0	1177.4	1159.7	1148.9	1133.6	1115.3	1084.7	1061.0
22.5°	1171.9	1166.2	1168.2	1162.1	1157.0	1159.4	1144.4	1133.9	1103.0	1089.1	1056.9
25°	1145.5	1143.4	1148.9	1148.2	1136.0	1131.9	1124.4	1113.2	1101.0	1078.6	1052.1
27.5°	1102.4	1112.9	1122.4	1126.8	1120.3	1109.5	1105.4	1099.0	1090.5	1067.7	1048.1
30°	1056.9	1068.8	1079.6	1089.1	1094.9	1090.1	1086.4	1082.7	1069.8	1054.8	1032.8
32.5°	1005.0	1020.6	1035.5	1047.0	1059.6	1063.3	1060.6	1057.6	1046.7	1033.1	1015.5
35°	944.9	966.3	988.0	1008.7	1014.1	1022.9	1031.8	1026.7	1020.9	1007.3	991.0
37.5°	894.0	909.2	924.9	951.0	970.0	981.2	996.8	998.8	989.0	982.6	961.2
40°	841.4	855.3	878.0	893.3	919.4	932.3	948.9	956.4	954.0	950.3	931.6
42.5°	800.0	806.7	821.7	835.3	861.0	887.5	902.1	910.3	918.7	915.7	906.2
45°	755.8	761.9	767.0	778.9	804.0	827.4	845.4	857.7	872.9	880.1	868.5
47.5°	712.1	713.7	719.9	729.7	744.6	762.6	792.8	811.2	825.4	839.3	831.9
50°	678.5	672.3	673.4	679.5	691.7	709.3	731.1	756.9	773.1	790.1	791.8
52.5°	592.9	642.5	630.6	634.0	640.4	648.9	671.7	697.1	717.1	731.7	746.3
55°	497.6	507.4	602.8	589.2	593.3	600.7	611.3	636.7	656.1	676.4	696.8
57.5°	385.9	459.2	462.9	551.2	549.1	549.8	558.6	573.2	592.6	618.0	635.3
60°	300.0	330.9	391.0	421.5	498.9	501.6	506.7	515.2	531.8	555.9	583.4
62.5°	264.7	268.8	290.2	336.0	386.2	447.0	457.8	459.2	466.7	490.8	522.7
65°	232.5	235.2	241.6	246.4	288.5	347.2	399.5	408.0	412.7	427.0	454.1
67.5°	160.2	202.6	208.4	211.8	215.9	243.0	307.8	350.9	356.4	368.9	392.7
70°	30.9	64.1	175.5	179.2	181.2	187.3	197.9	266.4	302.4	314.3	325.1
72.5°	21.0	24.8	29.9	70.6	149.3	152.7	155.1	163.9	224.7	259.3	265.1
75°	15.3	17.0	20.0	24.8	30.5	99.4	123.2	127.6	132.0	182.3	211.4
77.5°	10.9	12.2	13.6	16.0	18.7	24.1	34.6	95.4	99.8	102.2	144.2
80°	6.1	7.5	9.2	10.5	11.9	13.6	17.6	22.1	49.2	72.0	75.7
82.5°	3.4	4.1	4.8	5.8	6.4	8.1	9.8	11.9	15.6	23.1	48.9
85°	1.7	1.7	1.7	2.4	2.7	3.7	4.4	5.1	7.1	9.8	13.6
87.5°	1.0	1.0	1.4	1.4	1.4	1.7	1.7	1.7	2.0	3.1	4.4
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: P1213718

CATALOG NUMBER: 4SNLED-LD5-19SL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	356°	357°	358°	359°	360°
0°	1130.9	1130.9	1130.9	1130.9	1130.9
2.5°	1135.3	1134.3	1134.3	1138.3	1137.3
5°	1133.2	1132.2	1131.9	1136.3	1134.3
7.5°	1131.5	1127.8	1126.8	1130.9	1129.2
10°	1124.8	1122.0	1123.7	1122.4	1121.7
12.5°	1113.2	1111.5	1104.4	1105.1	1110.8
15°	1092.5	1099.3	1087.1	1097.9	1100.3
17.5°	1054.5	1069.8	1081.7	1088.1	1089.1
20°	1071.5	1076.6	1070.5	1070.8	1074.9
22.5°	1049.4	1051.8	1053.5	1051.4	1060.3
25°	1014.1	1005.0	1024.6	1028.7	1043.0
27.5°	1003.3	995.8	1005.0	1004.3	1016.2
30°	994.4	970.3	974.4	980.9	995.4
32.5°	981.9	943.9	939.8	954.0	970.3
35°	959.8	923.8	914.3	923.5	947.9
37.5°	941.1	896.0	877.0	889.2	921.1
40°	913.3	874.3	844.8	855.6	893.3
42.5°	880.1	855.6	810.1	817.6	860.7
45°	846.5	824.7	776.5	780.3	831.5
47.5°	812.2	792.1	741.6	742.3	794.2
50°	778.6	752.1	710.4	698.5	754.5
52.5°	734.8	710.4	678.8	659.4	716.8
55°	693.4	665.9	642.8	612.9	674.0
57.5°	653.0	622.5	606.8	568.5	625.5
60°	597.7	583.1	560.0	523.3	581.7
62.5°	541.0	536.2	512.8	474.8	527.8
65°	474.8	486.0	461.9	429.3	471.8
67.5°	412.4	432.4	405.9	385.9	417.8
70°	345.8	368.9	354.0	346.9	360.4
72.5°	280.3	302.7	304.1	299.0	303.4
75°	216.5	241.3	254.9	247.1	248.1
77.5°	164.3	176.1	191.1	197.2	195.8
80°	101.5	122.2	134.4	147.0	142.5
82.5°	51.2	68.6	83.5	97.1	90.6
85°	21.4	27.5	38.4	50.6	48.5
87.5°	6.4	10.9	11.5	16.3	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)