

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: P1213012

Luminaire Tested: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213012
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33519)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

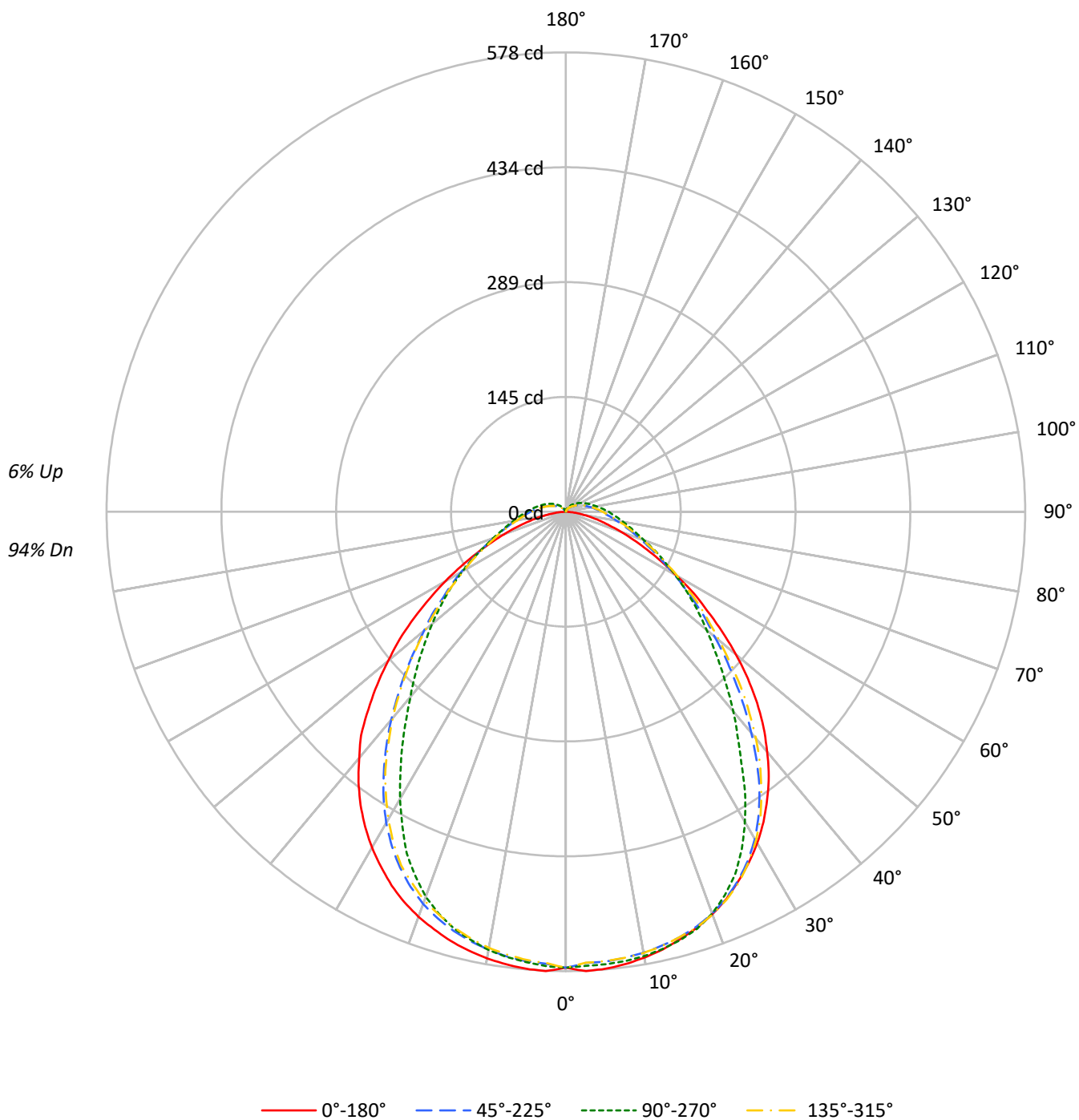
Lumens per Lamp: N/A
Luminaire Lumens: 1452.0 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

Luminous Intensity Polar Plot



TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

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
RCR																	
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96
1	107	103	98	95	104	100	96	92	94	91	88	89	87	85	85	83	81
2	98	90	84	78	95	88	82	77	83	78	74	79	75	72	75	72	69
3	90	80	72	66	87	78	71	65	74	68	63	71	66	61	67	63	60
4	83	72	63	57	80	70	62	56	67	60	55	64	58	53	61	56	52
5	77	64	56	50	74	63	55	49	60	53	48	58	52	47	55	50	46
6	71	58	50	44	69	57	49	43	55	48	42	52	46	42	50	45	41
7	66	53	45	39	64	52	44	39	50	43	38	48	42	37	46	41	37
8	62	49	41	35	60	48	40	35	46	39	34	44	38	34	43	37	33
9	58	45	37	32	56	44	37	31	42	36	31	41	35	30	40	34	30
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	37	31	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	4636	4636	4636	4636
5°	4669	4489	4669	4469
10°	4648	4369	4657	4309
15°	4619	4239	4639	4128
20°	4583	4071	4610	3899
25°	4510	3822	4559	3597
30°	4414	3456	4472	3200
35°	4265	3008	4347	2801
40°	4052	2630	4159	2440
45°	3770	2287	3893	2155
50°	3385	2009	3534	1908
55°	2928	1775	3141	1685
60°	2462	1558	2686	1468
65°	2020	1377	2222	1278
70°	1606	1222	1799	1131
75°	1261	1129	1420	1038
80°	909	1089	1071	995
85°	560	1095	751	1006

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 3893 cd/sqm

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	3.7
10°-20°	156.0	10.7
20°-30°	231.2	15.9
30°-40°	256.8	17.7
40°-50°	232.8	16.0
50°-60°	180.4	12.4
60°-70°	122.5	8.4
70°-80°	77.9	5.4
80°-90°	49.8	3.4
90°-100°	33.6	2.3
100°-110°	23.0	1.6
110°-120°	15.4	1.1
120°-130°	9.5	0.7
130°-140°	5.3	0.4
140°-150°	2.5	0.2
150°-160°	0.9	0.1
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	441.5	30.4
0°-40°	698.3	48.1
0°-60°	1111.5	76.6
0°-90°	1361.8	93.8
90°-120°	72.0	5.0
90°-150°	89.3	6.1
90°-180°	90.0	6.2
0°-180°	1452.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	574	574	574	574	574	
5°	577	572	577	569	577	55
15°	557	558	559	543	557	157
25°	513	504	519	474	513	236
35°	442	385	450	358	442	276
45°	340	275	351	259	340	261
55°	217	194	233	184	217	195
65°	113	130	124	121	113	113
75°	45	87	51	80	45	49
85°	8	62	11	57	8	10
90°	0	54	1	49	0	0
95°	0	46	0	43	0	0
105°	0	34	0	32	0	0
115°	0	26	0	24	0	0
125°	0	19	0	17	0	0
135°	0	13	0	11	0	0
145°	0	8	0	6	0	0
155°	0	5	0	2	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7
2.5°	578.5	577.8	577.2	576.3	577.2	579.7	578.2	574.7	574.1	568.4	570.9
5°	577.2	576.3	575.6	574.7	576.0	579.1	577.5	574.4	573.4	568.1	570.9
7.5°	574.1	573.4	572.5	572.5	573.7	576.9	575.6	572.2	571.5	566.2	569.3
10°	569.6	569.3	568.7	568.7	570.0	573.7	572.2	569.0	568.4	563.3	566.8
12.5°	564.0	564.3	563.3	563.3	565.2	569.0	567.7	564.3	563.6	559.2	562.7
15°	556.7	557.0	556.4	556.7	558.6	563.0	561.4	558.3	557.7	554.2	557.0
17.5°	548.5	548.8	548.8	548.5	550.7	555.1	553.9	551.0	550.1	547.2	550.7
20°	539.0	539.0	539.0	539.0	541.6	546.0	544.4	542.2	540.3	538.1	540.9
22.5°	527.4	527.0	527.4	528.3	530.8	534.3	533.4	530.8	528.0	526.7	528.9
25°	513.2	514.1	514.4	515.4	518.5	521.4	520.4	517.9	513.5	512.5	513.2
27.5°	498.3	499.0	499.9	499.6	504.0	506.8	504.9	502.7	496.4	495.5	494.8
30°	481.6	482.5	483.2	482.9	486.3	489.5	487.6	484.7	476.2	475.6	470.5
32.5°	462.7	463.6	464.2	464.2	469.3	470.5	467.1	463.0	453.8	451.6	447.2
35°	441.8	442.8	443.1	443.1	448.1	447.8	443.4	437.7	427.6	424.8	417.2
37.5°	419.4	420.1	420.4	422.3	424.5	422.6	416.9	409.6	402.1	394.2	386.0
40°	394.2	395.1	395.8	397.0	399.2	397.0	388.8	380.0	371.8	362.9	354.7
42.5°	368.3	371.1	370.5	370.2	371.5	365.5	359.1	349.0	340.8	331.7	323.5
45°	340.2	339.9	341.5	342.1	341.8	336.7	327.9	318.7	310.5	301.1	294.1
47.5°	310.5	310.2	311.5	312.1	310.2	304.9	297.9	287.5	280.6	272.4	267.0
50°	279.3	279.3	281.2	279.3	278.4	273.0	267.3	256.9	251.5	244.3	241.1
52.5°	248.1	250.9	249.0	248.4	247.4	242.1	237.6	229.1	224.7	221.5	217.8
55°	217.1	220.3	219.0	218.1	217.8	213.3	209.2	202.9	200.1	197.9	195.7
57.5°	190.9	190.6	190.0	189.0	189.4	185.9	181.8	178.3	177.0	176.1	176.7
60°	160.6	163.2	162.2	162.5	162.8	162.2	158.7	156.5	156.8	157.2	158.1
62.5°	135.7	137.9	139.5	138.2	138.9	139.8	137.9	137.3	138.5	139.8	141.1
65°	112.7	114.9	116.5	116.1	118.0	119.9	119.6	120.2	123.1	124.7	126.2
67.5°	91.8	94.0	96.3	96.6	99.4	102.3	103.5	105.7	108.9	111.1	113.0
70°	73.8	75.7	78.3	79.8	83.6	87.4	89.6	94.0	95.9	99.1	100.4
72.5°	57.8	59.3	62.8	66.6	69.7	74.5	78.9	82.7	85.5	89.0	90.6
75°	45.1	45.8	49.5	54.0	58.4	63.7	68.5	72.6	76.4	79.8	82.4
77.5°	33.1	34.1	37.6	43.6	48.6	54.3	59.6	64.1	68.2	71.6	75.1
80°	23.0	24.9	28.7	34.7	40.4	46.7	51.8	56.8	61.2	64.7	68.2
82.5°	14.8	16.4	21.8	27.8	33.8	40.1	45.4	50.5	55.2	59.0	62.2
85°	8.2	10.4	15.8	22.1	28.1	34.4	40.1	45.1	49.9	53.3	56.5
87.5°	3.2	6.3	11.4	17.4	23.4	29.4	35.3	40.1	44.8	48.6	51.4
90°	0.0	3.8	8.5	14.5	20.5	26.5	32.2	37.2	41.7	45.1	48.3
92.5°	0.3	2.5	6.6	11.7	17.4	23.0	28.4	33.5	37.9	41.3	44.2
95°	0.3	1.9	5.4	10.1	15.1	20.5	25.6	30.3	34.4	37.9	40.7
97.5°	0.3	1.3	4.4	8.8	13.3	18.6	23.4	27.8	31.6	35.0	37.2
100°	0.3	1.3	3.8	7.6	12.0	16.7	21.1	25.6	29.0	31.9	34.4
102.5°	0.3	0.9	3.2	6.6	10.7	14.8	19.3	23.4	26.5	29.4	31.9
105°	0.3	0.9	2.8	5.7	9.5	13.6	17.4	21.1	24.6	27.1	29.4
107.5°	0.3	0.6	2.5	4.7	8.2	12.3	16.1	19.3	22.4	24.9	27.1
110°	0.3	0.6	2.2	4.4	7.3	11.0	14.5	17.7	20.5	23.0	24.9

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.3	0.6	1.9	4.1	6.6	9.8	13.3	16.1	18.9	21.1	23.0
115°	0.3	0.6	1.9	3.8	6.0	8.5	11.7	14.8	17.0	19.6	21.1
117.5°	0.3	0.6	1.6	3.2	5.7	7.9	10.7	13.3	15.8	18.0	19.6
120°	0.3	0.6	1.6	2.8	5.0	7.3	9.5	12.0	14.5	16.1	17.7
122.5°	0.3	0.6	1.3	2.8	4.4	6.6	8.5	10.7	12.9	14.8	16.4
125°	0.3	0.6	1.3	2.5	4.1	6.0	7.9	9.5	11.7	13.3	14.8
127.5°	0.3	0.6	1.3	2.2	3.8	5.4	7.3	8.8	10.4	12.0	13.3
130°	0.3	0.6	0.9	1.9	3.5	4.7	6.3	8.2	9.5	10.7	12.0
132.5°	0.3	0.6	0.9	1.9	2.8	4.1	5.7	7.3	8.5	9.8	10.7
135°	0.3	0.6	0.9	1.6	2.5	3.8	4.7	6.3	7.6	8.8	9.8
137.5°	0.3	0.6	0.9	1.6	2.2	3.2	4.1	5.4	6.6	7.6	8.8
140°	0.3	0.6	0.9	1.3	1.9	2.8	3.8	4.4	5.7	6.6	7.6
142.5°	0.3	0.6	0.9	1.3	1.9	2.5	3.2	3.8	4.7	5.7	6.6
145°	0.3	0.6	0.9	1.3	1.6	2.2	2.8	3.5	3.8	4.7	5.4
147.5°	0.3	0.6	0.9	1.3	1.3	1.9	2.5	2.8	3.5	3.8	4.4
150°	0.3	0.6	0.9	0.9	1.3	1.6	2.2	2.5	2.8	3.5	3.8
152.5°	0.3	0.6	0.9	0.9	1.3	1.6	1.9	2.2	2.5	2.8	3.2
155°	0.3	0.6	0.9	0.9	0.9	1.3	1.6	1.9	2.2	2.5	2.8
157.5°	0.6	0.6	0.6	0.9	0.9	1.3	1.3	1.6	1.9	1.9	2.2
160°	0.6	0.6	0.6	0.9	0.9	0.9	1.3	1.3	1.6	1.6	1.9
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

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7
2.5°	570.3	571.2	574.1	574.1	573.4	572.8	572.8	571.9	572.5	573.7	573.1
5°	570.3	571.2	574.1	574.1	573.4	572.8	572.5	571.5	572.5	573.7	573.1
7.5°	568.4	569.6	572.5	572.5	571.9	571.5	570.9	570.3	571.2	572.5	571.9
10°	565.9	567.1	570.0	570.0	569.3	569.3	568.4	567.7	569.0	570.0	569.6
12.5°	562.1	563.6	566.2	565.9	565.2	565.5	564.6	563.3	564.6	565.5	565.9
15°	556.7	558.6	561.1	560.5	559.5	560.2	558.6	557.7	558.6	560.5	560.2
17.5°	549.8	551.0	552.9	552.9	552.0	551.3	550.7	549.8	550.4	551.7	552.0
20°	540.0	541.6	542.5	541.6	541.2	540.3	539.0	538.1	539.3	541.2	541.6
22.5°	527.0	527.4	529.6	527.4	525.8	525.5	524.2	522.3	524.2	525.8	526.1
25°	510.9	512.5	511.6	507.8	507.8	505.3	504.6	503.7	504.0	506.8	508.1
27.5°	490.4	491.1	488.5	485.4	482.5	481.0	478.8	479.1	479.1	482.9	484.1
30°	468.0	464.6	462.3	457.3	455.1	451.3	450.7	450.7	450.0	451.9	457.6
32.5°	441.2	436.5	433.0	428.3	424.5	420.7	418.8	419.7	419.4	424.2	426.0
35°	411.8	409.0	401.7	395.8	393.5	387.9	387.9	385.0	386.9	392.3	394.5
37.5°	380.9	376.5	370.5	363.9	362.3	357.9	356.3	354.7	358.8	359.8	362.0
40°	349.4	345.3	339.6	333.3	333.3	327.9	327.9	327.9	328.2	330.1	334.2
42.5°	319.4	315.0	309.9	305.5	304.9	300.8	300.8	300.4	301.1	302.7	306.4
45°	290.3	286.9	281.5	279.3	279.6	275.2	276.1	275.2	276.5	278.0	279.3
47.5°	263.5	261.3	259.1	255.9	255.0	254.7	253.1	251.8	254.1	254.1	255.9
50°	238.6	237.3	236.1	234.2	234.5	233.2	231.3	231.3	232.9	233.2	234.5
52.5°	216.8	215.2	213.7	214.0	214.3	213.7	212.7	211.8	212.7	213.3	214.9
55°	195.0	193.8	195.4	194.7	195.4	194.7	194.1	193.5	195.0	194.1	195.7
57.5°	175.5	176.7	177.4	176.1	177.0	176.4	176.7	175.8	177.0	177.7	177.4
60°	157.5	159.4	158.4	158.7	160.0	159.4	158.1	159.1	160.3	160.6	160.3
62.5°	141.1	143.3	144.2	143.6	143.9	143.3	144.2	143.0	144.5	145.2	144.2
65°	126.2	128.8	129.4	129.4	129.4	128.8	129.7	130.0	130.7	130.7	130.0
67.5°	113.6	115.8	116.5	117.1	116.5	115.8	115.8	116.1	117.4	118.0	117.4
70°	102.3	104.5	104.8	104.8	105.1	105.7	104.5	105.1	106.0	106.4	106.0
72.5°	92.5	94.7	95.3	95.0	95.3	95.6	95.6	95.0	95.9	96.6	96.6
75°	84.6	85.8	86.5	86.5	86.8	87.1	87.1	86.8	87.4	87.7	88.1
77.5°	77.3	78.3	79.2	79.2	79.5	79.2	79.8	79.8	80.2	80.5	80.8
80°	70.1	71.3	72.0	72.3	72.9	73.2	73.2	73.2	73.5	73.8	73.8
82.5°	64.4	65.3	66.3	67.2	67.2	67.5	67.5	67.5	67.9	67.9	68.2
85°	58.7	60.0	60.9	61.5	61.9	62.2	62.2	62.5	62.5	62.5	62.8
87.5°	53.7	55.2	55.9	56.5	56.8	57.4	57.4	57.4	57.8	57.8	57.8
90°	50.2	51.8	52.4	53.0	53.3	53.7	53.7	54.0	54.0	54.3	54.3
92.5°	46.1	47.7	48.9	48.9	49.2	49.9	49.5	49.5	49.9	50.2	50.2
95°	42.9	44.2	45.1	45.4	45.8	45.8	45.8	46.1	45.8	46.1	46.1
97.5°	39.1	40.4	41.3	42.0	42.3	42.3	42.3	42.6	42.3	42.6	42.6
100°	36.0	37.2	38.2	38.5	39.1	39.1	39.1	39.1	39.1	39.1	39.4
102.5°	33.5	34.7	35.3	35.7	36.0	36.3	36.3	36.3	36.3	36.6	36.6
105°	30.9	32.2	32.8	33.1	33.5	33.8	33.8	33.8	34.1	34.1	33.8
107.5°	28.7	29.7	30.3	30.9	31.2	31.2	31.6	31.6	31.6	31.6	31.6
110°	26.5	27.5	28.4	29.0	29.0	29.4	29.4	29.7	29.7	29.4	29.7

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	24.3	25.6	26.2	26.8	27.1	27.5	27.5	27.5	27.5	27.5	27.5
115°	22.4	23.7	24.3	24.9	25.2	25.6	25.6	25.6	25.6	25.6	25.6
117.5°	20.8	22.1	22.7	23.0	23.4	23.7	24.0	24.0	24.0	24.0	23.7
120°	19.3	20.2	20.8	21.5	21.8	22.1	22.1	22.1	22.1	22.1	22.1
122.5°	17.7	18.6	19.3	19.9	20.2	20.5	20.5	20.5	20.5	20.5	20.5
125°	16.1	17.0	17.7	18.3	18.6	18.9	18.9	18.9	18.9	18.9	18.9
127.5°	14.5	15.5	16.4	16.7	17.0	17.4	17.4	17.4	17.7	17.4	17.4
130°	12.9	13.9	14.8	15.1	15.5	15.8	16.1	16.1	16.1	16.1	15.8
132.5°	11.7	12.6	13.3	13.6	14.2	14.2	14.5	14.5	14.5	14.5	14.2
135°	10.7	11.4	12.0	12.3	12.9	12.9	12.9	13.3	13.3	12.9	12.6
137.5°	9.5	10.1	10.7	11.0	11.4	11.7	11.7	12.0	11.7	11.7	11.7
140°	8.8	9.2	9.8	10.1	10.4	10.4	10.4	10.7	10.7	10.4	10.4
142.5°	7.6	8.2	8.8	9.2	9.5	9.5	9.5	9.5	9.5	9.5	9.5
145°	6.3	7.3	7.6	8.2	8.2	8.5	8.5	8.5	8.5	8.5	8.2
147.5°	5.4	6.0	6.9	7.3	7.3	7.6	7.6	7.6	7.6	7.6	7.3
150°	4.1	4.7	5.7	6.3	6.3	6.6	6.6	6.6	6.6	6.3	6.3
152.5°	3.5	4.1	4.4	5.0	5.4	5.4	5.4	5.7	5.4	5.4	5.4
155°	3.2	3.5	3.8	4.1	4.4	4.7	4.7	4.7	4.7	4.4	4.4
157.5°	2.5	2.8	3.2	3.5	3.8	4.1	4.1	4.1	4.1	4.1	3.8
160°	1.9	2.2	2.5	2.5	2.8	3.2	3.5	3.2	3.2	3.2	3.2
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

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7
2.5°	572.5	572.2	573.1	571.5	566.8	568.1	567.4	570.3	570.9	571.5	574.4
5°	572.5	572.2	572.8	571.5	566.5	567.4	566.8	569.6	570.3	570.6	573.4
7.5°	571.2	570.9	571.9	570.3	564.9	566.2	565.2	568.1	568.4	568.7	571.2
10°	568.7	568.4	569.0	567.7	562.4	563.6	562.4	565.2	565.2	565.9	567.7
12.5°	564.9	564.3	565.5	564.0	558.0	559.5	558.9	560.8	561.1	561.4	563.3
15°	559.5	558.9	559.9	558.9	553.5	553.9	552.9	555.8	556.1	555.4	557.3
17.5°	551.7	551.0	552.9	552.3	546.9	548.2	547.9	548.5	549.4	547.9	550.4
20°	541.9	542.5	543.1	543.4	539.3	539.3	539.0	540.3	541.2	540.0	541.9
22.5°	527.4	528.9	530.8	531.5	528.6	528.3	530.2	529.6	530.5	529.9	531.1
25°	509.0	512.2	514.1	516.0	514.4	515.0	517.9	518.5	518.5	518.2	519.5
27.5°	486.3	490.4	493.9	498.0	496.4	497.7	502.4	503.1	504.3	503.1	505.6
30°	459.2	463.0	469.6	475.6	476.2	478.1	484.7	485.4	488.9	487.6	488.5
32.5°	432.0	433.9	441.5	447.5	451.3	456.0	463.3	464.6	469.3	470.2	470.2
35°	398.0	403.3	410.3	418.8	423.5	428.6	438.4	440.3	447.2	449.4	451.9
37.5°	369.2	374.3	378.7	387.5	396.1	401.7	409.6	414.4	421.6	425.7	428.9
40°	338.6	342.7	347.5	356.3	363.6	372.1	380.0	385.7	394.8	399.5	403.6
42.5°	309.6	312.8	317.8	324.1	331.7	341.2	348.7	355.4	365.1	371.8	376.5
45°	283.7	285.6	290.0	294.8	301.4	311.2	318.4	327.0	334.8	341.8	347.5
47.5°	259.4	261.9	264.2	267.3	273.3	279.3	287.8	296.0	303.9	311.5	317.2
50°	237.0	237.0	240.5	242.7	246.8	252.2	258.8	264.5	274.2	279.6	286.9
52.5°	215.2	216.5	218.4	219.7	222.8	226.3	231.6	236.4	244.6	249.6	256.6
55°	196.0	197.2	198.2	198.8	200.7	204.8	206.7	210.5	216.2	220.3	226.3
57.5°	177.7	178.3	179.3	179.6	179.9	182.4	184.0	184.9	190.6	194.7	199.8
60°	161.0	161.0	161.9	161.6	161.3	162.5	162.2	163.2	166.6	169.2	171.4
62.5°	145.2	145.2	145.5	144.9	144.5	144.5	143.3	144.2	145.2	145.5	147.1
65°	130.7	132.2	131.0	131.3	129.4	128.8	128.1	126.2	125.9	124.7	125.3
67.5°	117.7	119.0	117.7	117.7	116.1	114.9	113.3	110.1	109.2	106.7	106.0
70°	107.3	106.4	107.0	106.0	104.1	102.6	100.4	97.8	94.7	91.5	89.3
72.5°	97.2	97.2	96.6	95.6	94.7	91.5	89.0	86.2	82.4	78.3	75.1
75°	87.4	87.7	87.7	86.8	85.2	82.4	79.5	75.4	71.3	66.6	62.5
77.5°	80.5	80.5	80.5	78.9	77.3	74.8	71.3	66.9	62.5	56.8	52.1
80°	73.8	73.5	73.5	71.6	70.1	67.2	63.7	59.3	54.6	48.6	43.2
82.5°	68.5	68.2	67.5	66.0	63.7	60.9	57.4	52.7	47.7	42.3	35.7
85°	62.8	62.5	61.9	60.3	58.1	55.5	51.8	47.0	42.0	36.0	29.7
87.5°	57.8	57.4	56.5	55.5	53.0	50.2	46.4	42.0	36.6	30.9	24.6
90°	54.3	53.7	53.0	51.8	49.5	46.4	42.6	37.9	32.5	26.8	20.5
92.5°	50.2	49.9	48.9	47.7	45.8	42.6	38.8	34.4	29.0	23.7	17.7
95°	46.1	45.8	45.1	43.9	42.0	39.1	35.7	31.2	26.2	20.8	15.5
97.5°	42.3	42.3	41.3	40.4	38.2	36.0	32.5	28.4	23.7	18.9	13.9
100°	39.1	39.1	38.2	36.9	35.3	33.1	29.7	25.9	21.5	17.0	12.0
102.5°	36.3	36.0	35.3	34.1	32.5	30.3	27.1	23.7	19.6	15.1	10.7
105°	33.8	33.5	32.8	31.6	30.3	27.8	25.2	21.8	17.7	13.6	9.5
107.5°	31.2	30.9	30.6	29.4	27.8	25.6	23.0	19.6	16.1	12.3	8.5
110°	29.0	28.7	28.1	26.8	25.2	23.4	20.8	18.0	14.5	11.0	7.6

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	27.1	26.8	26.2	24.9	23.7	21.5	19.3	16.1	13.3	10.1	6.6
115°	25.2	24.9	24.3	23.0	21.5	19.6	17.4	14.8	11.7	8.8	6.0
117.5°	23.4	23.0	22.4	21.5	19.9	18.0	15.8	13.3	10.4	8.2	5.4
120°	21.8	21.1	20.5	19.6	18.0	16.4	14.2	12.0	9.5	7.3	4.7
122.5°	20.2	19.6	18.9	18.0	16.4	14.8	12.6	10.7	8.8	6.6	4.4
125°	18.3	18.0	17.4	16.4	14.8	13.3	11.7	9.8	7.9	6.0	3.8
127.5°	16.7	16.4	15.8	14.5	13.3	12.0	10.4	8.8	6.9	5.0	3.5
130°	15.5	14.8	14.2	13.3	12.3	11.0	9.5	7.9	6.3	4.4	3.2
132.5°	13.9	13.3	12.6	12.0	11.0	9.8	8.5	6.9	5.7	4.1	2.8
135°	12.6	12.0	11.4	10.7	9.8	8.8	7.6	6.3	5.0	3.8	2.5
137.5°	11.0	10.7	10.4	9.8	8.8	7.9	6.9	5.4	4.4	3.5	2.2
140°	10.1	9.8	9.5	8.5	7.9	6.9	6.0	4.7	3.8	2.8	1.9
142.5°	9.2	8.8	8.2	7.6	6.9	6.3	5.0	4.4	3.5	2.5	1.9
145°	7.9	7.6	7.3	6.6	6.0	5.0	4.4	3.8	3.2	2.2	1.6
147.5°	7.3	6.9	6.3	5.7	5.0	4.4	4.1	3.5	2.5	1.9	1.3
150°	6.0	5.7	5.4	4.7	4.4	4.1	3.5	2.8	2.2	1.6	1.3
152.5°	5.0	4.7	4.4	4.4	3.8	3.5	2.8	2.5	1.9	1.6	0.9
155°	4.4	4.4	4.1	3.8	3.2	2.8	2.5	1.9	1.6	1.3	0.9
157.5°	3.8	3.5	3.2	3.2	2.8	2.5	1.9	1.6	1.3	1.3	0.9
160°	3.2	2.8	2.8	2.5	2.2	1.9	1.6	1.6	1.3	0.9	0.9
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

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7
2.5°	574.7	571.2	574.4	578.5	578.5	577.8	577.2	578.5	581.6	580.4	576.6
5°	573.7	570.3	573.1	577.2	577.2	576.3	575.6	576.6	580.1	578.5	575.0
7.5°	571.9	568.7	570.6	574.4	574.4	573.4	572.8	574.1	576.9	575.3	571.5
10°	568.4	564.9	567.1	570.6	570.3	569.6	568.7	570.3	572.8	570.6	566.2
12.5°	564.0	560.5	562.4	565.5	565.2	564.0	563.3	564.3	566.5	565.2	560.5
15°	558.0	554.5	556.1	559.2	558.3	557.3	556.1	556.4	559.2	557.0	552.0
17.5°	550.7	546.9	548.2	551.0	550.1	549.1	547.6	547.9	551.0	547.9	542.5
20°	541.9	537.8	538.7	542.2	540.6	539.0	537.5	537.5	540.6	537.1	531.1
22.5°	532.4	528.3	528.9	531.5	530.2	527.4	525.8	526.7	528.3	523.9	517.6
25°	520.7	515.4	516.3	518.8	517.9	514.1	512.5	513.2	512.5	509.0	502.4
27.5°	507.2	501.5	502.1	503.7	502.4	499.0	497.1	497.4	496.1	491.7	484.1
30°	490.1	487.3	487.0	487.9	486.0	482.5	480.3	479.7	479.4	473.1	463.9
32.5°	472.8	470.2	468.7	469.9	467.7	464.2	460.4	460.4	457.3	451.3	443.4
35°	455.1	451.0	449.4	450.3	447.8	443.4	440.3	438.7	433.9	426.4	417.8
37.5°	432.4	429.5	427.6	428.6	425.7	422.6	416.6	415.0	410.0	399.5	388.8
40°	407.7	405.5	403.6	404.6	401.4	396.7	391.3	388.8	383.1	371.5	362.9
42.5°	381.2	380.3	378.1	381.6	375.2	370.5	365.1	361.0	355.4	342.7	332.9
45°	353.1	355.4	350.3	351.3	347.2	343.0	337.4	331.4	325.7	313.7	302.7
47.5°	323.5	325.1	321.6	322.2	317.8	314.0	309.0	301.4	295.1	284.7	274.9
50°	292.9	292.2	292.2	291.6	288.1	283.4	278.4	271.4	265.1	255.6	247.4
52.5°	260.4	261.6	262.3	263.8	259.4	256.6	248.7	242.7	238.0	228.2	221.2
55°	229.1	233.5	232.3	232.9	227.9	225.6	219.3	214.6	207.7	202.0	197.6
57.5°	200.7	201.7	202.3	203.2	201.0	196.6	191.6	187.8	182.4	177.7	174.5
60°	173.3	173.3	173.6	175.2	172.9	169.2	165.4	162.5	158.7	155.9	154.0
62.5°	147.4	149.6	149.9	148.6	145.8	143.9	141.4	139.8	137.3	136.3	135.7
65°	123.4	123.4	123.4	124.0	122.4	121.2	119.6	119.3	120.2	119.0	119.6
67.5°	103.2	102.3	101.6	101.9	101.3	100.7	100.4	101.3	103.2	103.2	104.8
70°	85.8	83.9	82.7	82.7	82.7	83.0	83.9	85.8	89.0	90.3	92.5
72.5°	71.6	67.5	65.6	65.6	66.0	67.2	70.1	73.5	76.4	78.9	81.7
75°	58.1	54.0	51.1	50.8	51.4	53.3	57.4	60.6	65.3	68.8	72.3
77.5°	47.0	42.0	38.5	38.2	39.1	42.0	47.0	51.1	56.5	60.3	64.1
80°	37.6	31.9	29.0	27.1	28.7	32.2	37.9	42.9	48.0	53.0	57.8
82.5°	30.0	24.6	20.2	18.3	20.2	24.9	30.3	36.3	41.3	46.7	51.4
85°	23.7	18.0	12.9	11.0	13.3	18.3	24.3	30.3	36.0	41.3	46.1
87.5°	18.6	12.9	7.9	5.4	8.2	13.6	19.3	25.2	31.2	36.6	41.3
90°	14.5	9.2	4.4	0.6	4.7	9.8	15.5	21.1	27.1	32.5	37.2
92.5°	12.3	6.9	2.5	0.0	2.8	7.3	12.6	18.3	23.7	29.0	33.8
95°	10.4	5.7	1.9	0.0	1.9	5.7	10.4	15.5	20.8	26.2	30.9
97.5°	8.8	4.4	1.3	0.0	1.3	4.4	8.5	13.6	18.3	23.4	27.8
100°	7.6	3.8	0.9	0.0	0.9	3.5	7.3	11.7	16.4	21.1	25.2
102.5°	6.6	3.2	0.6	0.0	0.6	2.8	6.0	10.1	14.2	18.6	22.7
105°	5.7	2.5	0.6	0.0	0.3	2.2	5.0	8.8	12.6	16.7	20.5
107.5°	5.0	2.2	0.6	0.0	0.3	1.9	4.4	7.6	11.4	14.8	18.3
110°	4.4	1.9	0.6	0.0	0.3	1.3	3.8	6.6	9.8	13.3	16.7

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	3.8	1.6	0.3	0.0	0.0	0.9	3.2	5.7	8.5	12.0	14.8
115°	3.5	1.6	0.3	0.0	0.0	0.6	2.5	5.0	7.6	10.7	13.3
117.5°	3.2	1.3	0.3	0.0	0.3	0.6	2.2	4.4	6.6	9.2	12.0
120°	2.8	1.3	0.3	0.0	0.3	0.3	1.6	3.8	5.7	8.2	10.4
122.5°	2.5	1.3	0.3	0.0	0.3	0.3	1.3	3.2	5.0	7.3	9.2
125°	2.2	0.9	0.6	0.3	0.3	0.3	0.9	2.5	4.4	6.0	8.2
127.5°	2.2	0.9	0.6	0.3	0.3	0.3	0.6	2.2	3.5	5.4	7.3
130°	1.9	0.9	0.6	0.3	0.3	0.3	0.3	1.6	3.2	4.4	6.0
132.5°	1.6	0.9	0.6	0.3	0.3	0.3	0.3	0.9	2.2	3.8	5.0
135°	1.6	0.9	0.6	0.3	0.3	0.3	0.3	0.6	1.6	2.8	4.1
137.5°	1.3	0.6	0.6	0.3	0.3	0.3	0.3	0.3	1.3	2.2	3.2
140°	1.3	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.9	1.6	2.5
142.5°	0.9	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.6	1.3	1.9
145°	0.9	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.6	1.3
147.5°	0.9	0.9	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.9
150°	0.9	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6
152.5°	0.9	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6
155°	0.9	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.6
157.5°	0.9	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6
160°	0.9	0.6	0.6	0.3	0.6	0.3	0.6	0.6	0.6	0.6	0.6
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

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7
2.5°	575.3	569.3	572.5	571.5	572.8	575.3	575.0	574.4	574.4	573.4	572.2
5°	573.4	567.7	570.6	569.0	570.6	572.8	572.5	571.5	572.2	570.6	569.0
7.5°	569.6	564.6	567.1	565.9	567.1	569.3	568.4	568.1	568.7	566.2	565.2
10°	565.2	559.5	562.4	560.8	562.4	564.0	563.3	562.1	563.3	560.8	559.9
12.5°	558.3	553.5	555.4	554.8	555.8	557.3	556.1	555.1	555.8	553.5	551.7
15°	550.7	546.0	547.6	546.6	547.2	549.1	546.9	546.6	546.0	543.8	543.1
17.5°	540.9	536.5	538.1	536.5	537.5	536.8	536.5	534.9	534.9	532.4	530.5
20°	528.9	525.1	524.2	522.9	524.2	522.9	521.0	519.8	519.5	516.9	515.4
22.5°	515.0	510.6	511.3	507.8	508.1	506.2	503.1	501.8	500.5	497.7	495.5
25°	498.3	493.9	490.7	488.5	485.7	485.4	481.3	478.1	477.8	474.3	474.0
27.5°	479.4	474.3	471.8	466.4	463.0	460.1	456.7	453.5	451.9	448.1	445.6
30°	457.6	451.9	445.6	441.8	436.5	434.3	428.3	424.5	423.2	419.1	417.2
32.5°	433.0	427.0	421.9	414.7	408.7	405.5	399.5	395.8	394.2	389.8	387.2
35°	406.2	399.5	393.5	386.6	381.9	376.5	369.2	365.5	362.0	360.4	358.5
37.5°	378.1	370.8	363.9	356.9	352.8	346.5	340.2	337.7	333.6	332.0	330.1
40°	349.0	341.8	335.2	328.5	323.8	318.1	312.4	311.5	307.1	305.5	304.2
42.5°	320.3	312.8	305.2	300.4	297.0	291.3	287.5	286.6	282.8	281.8	281.8
45°	294.4	285.0	278.7	274.6	271.7	267.0	263.8	263.2	260.0	259.4	259.4
47.5°	266.7	257.8	253.1	250.6	248.1	244.6	242.7	242.7	239.5	238.9	238.6
50°	240.8	232.6	229.1	226.6	226.3	223.8	222.2	221.5	221.5	219.3	219.7
52.5°	216.2	212.1	209.2	207.7	205.8	204.2	202.9	202.9	202.0	200.4	201.0
55°	193.5	188.7	189.0	187.8	186.8	185.9	186.2	184.3	184.0	182.7	183.7
57.5°	170.7	170.7	170.1	169.2	167.6	168.2	168.2	168.2	166.6	165.7	166.6
60°	151.5	152.4	150.9	151.8	151.2	151.5	150.9	150.9	149.9	149.6	149.9
62.5°	134.4	136.0	135.4	136.7	136.0	136.3	137.0	135.7	135.1	134.4	135.1
65°	119.3	121.2	120.9	121.8	122.1	122.4	122.8	122.1	121.5	120.9	120.6
67.5°	106.0	107.9	109.2	109.5	109.8	110.8	110.5	109.8	109.2	108.2	107.9
70°	94.0	96.6	98.1	98.8	100.0	99.4	99.4	99.1	98.5	97.5	97.2
72.5°	83.9	86.8	88.4	89.0	90.3	90.3	89.9	89.6	89.0	88.1	87.7
75°	75.1	77.6	79.8	81.1	82.1	82.1	81.7	81.4	80.8	80.2	79.8
77.5°	68.2	70.4	72.3	73.8	74.5	74.8	74.5	73.8	73.8	73.5	73.2
80°	61.2	63.7	65.6	67.2	68.2	68.2	67.9	68.2	67.5	67.2	66.9
82.5°	55.2	58.1	60.3	61.9	62.5	62.8	62.5	62.8	62.2	62.2	62.2
85°	49.9	52.7	55.2	56.5	57.4	57.8	57.8	57.8	57.4	57.4	57.4
87.5°	45.4	48.3	50.8	52.1	53.0	53.3	53.3	53.7	53.0	53.0	53.0
90°	41.3	44.2	46.7	48.0	48.9	49.5	49.5	49.9	49.5	49.2	49.2
92.5°	37.6	40.7	43.2	44.5	45.4	46.4	46.4	46.7	46.1	46.1	46.1
95°	34.4	37.6	39.8	41.3	42.3	42.9	43.2	43.2	42.9	42.9	42.9
97.5°	31.6	34.4	36.6	38.2	39.1	39.4	39.8	40.1	39.8	39.8	39.8
100°	28.7	31.6	33.8	35.0	36.3	36.6	36.9	37.2	37.2	36.9	36.9
102.5°	26.2	29.0	30.9	32.5	33.5	34.1	34.4	34.4	34.4	34.4	34.4
105°	23.7	26.5	28.4	30.0	30.9	31.6	31.9	32.2	32.2	31.9	31.9
107.5°	21.5	24.0	26.2	27.5	28.7	29.4	29.7	29.7	30.0	29.7	29.7
110°	19.3	22.1	24.0	25.2	26.5	27.1	27.5	27.8	27.8	27.8	27.8



TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	17.7	19.9	21.8	23.0	24.3	24.9	25.2	25.6	25.9	25.6	25.6
115°	15.8	18.0	19.9	21.1	22.1	22.7	23.4	23.7	23.7	24.0	23.7
117.5°	14.2	16.1	18.0	19.3	20.2	21.1	21.5	21.8	22.1	21.8	21.8
120°	12.6	14.5	16.1	17.4	18.3	19.3	19.6	19.9	20.2	19.9	19.9
122.5°	11.4	12.9	14.5	15.8	16.7	17.4	18.0	18.0	18.3	18.3	18.3
125°	10.1	11.7	12.9	14.2	15.1	15.8	16.1	16.4	16.4	16.7	16.7
127.5°	8.8	10.1	11.7	12.6	13.6	14.2	14.5	14.8	14.8	15.1	15.1
130°	7.6	8.8	10.1	11.0	12.0	12.6	12.9	13.3	13.6	13.6	13.6
132.5°	6.6	7.9	8.8	9.8	10.4	11.0	11.7	12.0	12.0	12.0	12.0
135°	5.4	6.6	7.6	8.5	9.2	9.8	10.1	10.7	10.7	10.7	10.7
137.5°	4.4	5.7	6.6	7.3	7.9	8.5	8.8	9.2	9.5	9.5	9.5
140°	3.5	4.4	5.4	6.3	6.9	7.3	7.9	7.9	8.2	8.2	8.2
142.5°	2.5	3.5	4.1	5.0	5.7	6.3	6.6	6.9	6.9	6.9	6.9
145°	1.9	2.5	3.2	3.8	4.7	5.0	5.4	5.7	6.0	6.0	6.0
147.5°	1.3	1.9	2.2	2.8	3.5	4.1	4.4	4.7	5.0	5.0	5.0
150°	0.9	1.3	1.9	2.2	2.5	3.2	3.8	3.8	4.1	4.1	3.8
152.5°	0.6	0.9	1.3	1.6	1.9	2.2	2.8	2.8	3.2	3.2	3.2
155°	0.6	0.6	0.6	0.9	1.3	1.6	1.9	2.2	2.2	2.2	2.2
157.5°	0.6	0.6	0.6	0.6	0.6	0.9	1.3	1.6	1.6	1.6	1.6
160°	0.6	0.6	0.3	0.3	0.6	0.6	0.6	0.6	0.9	0.9	0.9
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

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7	573.7
2.5°	573.1	573.7	573.7	573.1	572.8	574.1	572.5	566.5	568.4	569.0	570.9
5°	570.3	570.9	570.9	570.9	570.3	571.5	570.0	564.0	566.2	567.1	568.4
7.5°	566.2	566.5	567.1	566.8	566.2	568.1	566.5	560.5	562.1	563.6	565.2
10°	560.8	560.8	561.1	561.8	561.1	562.7	561.1	555.8	557.3	558.3	560.2
12.5°	553.5	554.2	554.5	554.2	553.9	555.1	554.5	549.4	550.1	552.0	553.9
15°	543.8	543.8	545.3	544.7	544.7	546.0	546.6	540.9	541.9	544.7	546.6
17.5°	531.8	532.1	533.4	534.0	533.7	535.9	536.2	531.8	531.5	534.9	536.8
20°	516.3	516.9	518.5	519.8	519.8	522.3	523.3	520.4	520.7	524.5	525.1
22.5°	497.4	497.4	500.2	502.1	503.7	505.3	508.1	505.6	505.6	510.6	513.5
25°	474.0	476.2	477.2	481.0	483.2	487.6	490.1	490.4	490.7	495.5	497.4
27.5°	448.1	448.8	451.6	456.0	458.6	462.7	467.4	468.3	469.9	476.2	479.1
30°	418.8	420.7	421.9	428.3	431.7	437.1	443.1	445.3	446.6	455.1	458.6
32.5°	388.8	389.4	394.8	398.3	402.4	408.1	415.0	419.1	421.6	430.5	435.5
35°	358.8	360.1	364.5	368.9	373.0	378.7	386.0	391.6	396.1	404.0	410.6
37.5°	331.4	334.5	335.5	339.9	343.0	348.7	353.8	362.0	366.4	374.6	383.1
40°	306.8	307.7	308.3	312.8	315.0	320.3	327.6	332.9	338.9	344.9	355.0
42.5°	282.5	283.1	284.0	286.6	289.1	292.9	298.2	303.6	309.9	318.7	325.4
45°	260.0	260.7	261.3	262.9	265.1	268.6	272.0	275.8	282.1	289.7	296.7
47.5°	239.2	240.5	240.5	240.8	242.4	245.2	247.7	252.5	255.9	260.0	267.9
50°	219.3	220.3	220.6	220.6	221.5	223.4	224.1	227.2	230.4	234.2	239.8
52.5°	200.7	200.7	200.4	201.7	201.7	202.9	203.2	205.1	207.3	211.4	214.0
55°	183.0	183.0	184.0	183.4	183.4	184.0	183.7	184.0	185.9	188.4	190.6
57.5°	166.0	165.7	166.6	166.0	165.7	166.3	166.9	165.7	166.0	168.5	168.5
60°	149.0	149.3	150.2	149.6	149.6	149.6	149.0	148.3	147.7	149.3	149.9
62.5°	135.4	134.4	135.4	134.4	135.1	134.8	134.1	132.9	133.2	132.5	131.9
65°	121.2	121.2	121.5	120.6	121.2	121.2	120.2	119.9	118.0	117.4	115.8
67.5°	108.9	108.9	109.2	108.6	108.6	108.9	107.9	107.0	105.1	104.1	101.9
70°	98.1	98.1	98.1	97.8	97.8	97.8	97.2	95.9	94.0	92.5	89.6
72.5°	88.4	88.7	88.4	88.4	89.3	88.4	87.4	86.2	84.6	81.4	78.9
75°	80.5	80.8	80.5	80.5	80.5	80.2	79.8	78.0	76.1	73.5	69.7
77.5°	73.5	73.5	73.8	73.5	73.5	73.2	72.3	70.7	68.5	66.3	61.9
80°	66.9	67.2	67.5	67.9	67.2	66.9	66.0	64.7	61.9	59.3	54.9
82.5°	62.2	61.9	62.2	62.5	61.9	61.5	60.6	59.0	56.8	53.3	48.9
85°	57.4	57.1	57.1	57.4	57.1	56.5	55.5	54.0	51.8	48.3	43.9
87.5°	52.7	53.0	53.3	53.0	52.7	52.1	51.1	49.5	47.0	44.2	39.4
90°	49.2	49.2	49.2	49.2	48.9	48.3	47.3	45.4	43.2	39.8	35.7
92.5°	46.1	46.1	46.1	46.1	45.8	44.8	43.9	42.3	39.8	36.3	32.5
95°	42.9	43.2	42.9	42.9	42.3	42.0	40.4	38.8	36.6	33.1	29.0
97.5°	39.4	39.8	39.4	39.4	39.1	38.5	37.6	35.7	33.5	30.3	26.5
100°	36.9	36.9	36.6	36.6	36.3	35.7	34.4	32.8	30.6	27.5	23.7
102.5°	34.1	34.4	34.1	34.1	33.5	32.8	31.9	30.3	28.1	24.9	21.5
105°	31.9	31.9	31.6	31.6	30.9	30.3	29.4	27.5	25.6	22.7	19.3
107.5°	29.7	29.7	29.4	29.4	28.7	28.1	26.8	25.2	23.4	20.5	17.4
110°	27.5	27.5	27.5	27.1	26.5	25.6	24.6	23.0	21.1	18.6	15.5

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	25.9	25.6	25.2	24.9	24.3	23.7	22.4	20.8	18.9	16.7	13.9
115°	23.7	23.7	23.4	23.0	22.4	21.5	20.5	19.3	17.4	14.8	12.3
117.5°	21.8	21.8	21.5	21.1	20.5	19.6	18.6	17.4	15.5	13.3	11.0
120°	19.9	19.9	19.6	19.3	18.6	17.7	17.0	15.5	13.9	11.7	9.8
122.5°	18.3	18.0	18.0	17.4	17.0	16.1	15.1	13.9	12.3	10.4	8.5
125°	16.4	16.4	16.1	15.8	15.5	14.5	13.6	12.3	10.7	9.2	7.6
127.5°	14.8	14.8	14.5	14.2	13.9	12.9	12.0	11.0	9.5	7.9	6.3
130°	13.3	13.3	12.9	12.6	12.3	11.4	10.7	9.5	8.2	6.9	5.4
132.5°	12.0	12.0	11.7	11.4	10.7	10.1	9.5	8.2	7.3	6.0	4.7
135°	10.7	10.4	10.4	10.1	9.5	8.8	8.2	7.3	6.0	5.0	3.8
137.5°	9.5	9.2	8.8	8.5	8.2	7.6	6.9	6.3	5.4	4.1	3.2
140°	8.2	7.9	7.9	7.6	6.9	6.6	6.0	5.0	4.4	3.5	2.5
142.5°	6.9	6.9	6.6	6.3	6.0	5.7	5.0	4.4	3.5	2.8	1.9
145°	6.0	5.7	5.7	5.4	5.0	4.4	4.1	3.5	2.8	2.2	1.6
147.5°	4.7	4.7	4.7	4.4	4.1	3.8	3.5	2.8	2.2	1.6	0.9
150°	3.8	3.8	3.8	3.5	3.2	2.8	2.5	2.2	1.6	0.9	0.6
152.5°	3.2	3.2	2.8	2.8	2.5	2.2	1.9	1.6	0.9	0.6	0.6
155°	2.2	2.2	2.2	1.9	1.9	1.6	1.3	0.9	0.6	0.6	0.6
157.5°	1.6	1.6	1.6	1.3	1.3	0.9	0.9	0.6	0.6	0.6	0.6
160°	0.9	0.9	0.9	0.9	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	573.7	573.7	573.7	573.7	573.7	573.7	573.7
2.5°	570.0	569.6	572.2	572.2	569.3	573.7	578.5
5°	568.1	567.7	570.3	570.3	567.7	572.2	577.2
7.5°	564.3	564.6	567.1	567.7	564.6	568.7	574.1
10°	560.2	559.9	562.7	563.3	560.8	564.6	569.6
12.5°	553.5	553.5	556.4	557.3	554.8	559.2	564.0
15°	546.6	546.6	548.5	550.1	547.9	552.0	556.7
17.5°	537.8	537.5	539.3	541.2	539.0	543.4	548.5
20°	526.4	526.4	528.6	530.8	529.2	533.4	539.0
22.5°	514.4	513.2	516.9	518.5	517.6	521.7	527.4
25°	499.3	499.0	502.7	504.9	503.7	508.1	513.2
27.5°	482.9	482.5	486.3	489.2	488.5	492.6	498.3
30°	463.0	464.6	468.0	472.8	471.2	475.6	481.6
32.5°	442.1	443.7	447.8	452.9	453.2	456.7	462.7
35°	417.2	421.3	424.2	430.8	432.0	435.5	441.8
37.5°	391.0	395.8	401.7	406.8	409.3	412.2	419.4
40°	361.7	368.6	375.2	381.2	384.4	387.2	394.2
42.5°	335.2	340.5	346.8	352.8	358.5	361.0	368.3
45°	305.2	311.5	317.2	324.4	330.1	332.9	340.2
47.5°	275.8	282.1	289.7	294.8	300.8	303.6	310.5
50°	247.7	253.4	259.7	265.7	270.8	273.3	279.3
52.5°	220.0	226.0	232.0	235.7	241.1	243.0	248.1
55°	195.4	199.5	204.8	207.0	212.4	213.7	217.1
57.5°	171.7	174.5	176.4	180.2	184.0	186.8	190.9
60°	150.2	151.5	152.7	155.0	158.1	159.1	160.6
62.5°	131.0	130.7	133.2	133.8	134.1	137.3	135.7
65°	113.9	114.2	112.0	111.1	112.4	113.3	112.7
67.5°	99.7	97.8	95.9	93.7	91.8	92.8	91.8
70°	85.8	84.3	81.1	78.0	76.7	74.8	73.8
72.5°	74.8	71.0	67.9	63.7	61.5	59.3	57.8
75°	66.3	60.9	56.5	52.1	48.9	45.8	45.1
77.5°	57.4	52.4	47.3	42.6	37.9	34.4	33.1
80°	50.5	45.8	39.8	34.1	29.0	24.6	23.0
82.5°	44.2	39.1	33.1	27.1	21.5	16.7	14.8
85°	38.8	33.5	27.5	21.5	15.8	10.7	8.2
87.5°	34.7	28.7	22.7	17.0	11.0	6.0	3.2
90°	30.9	25.2	19.6	13.6	7.9	3.2	0.0
92.5°	27.5	22.1	16.4	11.0	6.0	1.9	0.3
95°	24.3	19.6	13.9	8.8	4.4	1.3	0.3
97.5°	21.8	17.0	12.0	7.3	3.5	0.9	0.3
100°	19.6	14.8	10.4	6.0	2.8	0.6	0.3
102.5°	17.4	13.3	8.8	5.0	2.2	0.3	0.3
105°	15.5	11.7	7.6	4.4	1.9	0.3	0.3
107.5°	13.9	10.4	6.6	3.8	1.3	0.3	0.3
110°	12.3	8.8	5.7	3.2	0.9	0.3	0.3

TEST NUMBER: P1213012

CATALOG NUMBER: 4SNLED-LD5-18SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	11.0	7.9	5.0	2.5	0.6	0.3	0.3
115°	9.8	6.9	4.4	2.2	0.6	0.3	0.3
117.5°	8.5	6.0	3.8	1.6	0.3	0.3	0.3
120°	7.6	5.4	3.2	1.3	0.3	0.3	0.3
122.5°	6.6	4.4	2.5	0.9	0.3	0.3	0.3
125°	5.7	3.8	2.2	0.6	0.3	0.3	0.3
127.5°	4.7	3.2	1.6	0.6	0.3	0.3	0.3
130°	4.1	2.5	1.3	0.3	0.3	0.3	0.3
132.5°	3.5	1.9	0.9	0.3	0.3	0.3	0.3
135°	2.8	1.6	0.6	0.3	0.3	0.3	0.3
137.5°	2.2	1.3	0.6	0.3	0.3	0.3	0.3
140°	1.6	0.9	0.3	0.3	0.3	0.3	0.3
142.5°	1.3	0.6	0.3	0.3	0.3	0.3	0.3
145°	0.9	0.6	0.3	0.3	0.3	0.3	0.3
147.5°	0.6	0.6	0.6	0.6	0.3	0.3	0.3
150°	0.6	0.6	0.3	0.3	0.6	0.3	0.3
152.5°	0.6	0.3	0.3	0.3	0.6	0.3	0.3
155°	0.6	0.6	0.6	0.6	0.6	0.6	0.3
157.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6
160°	0.6	0.6	0.6	0.6	0.6	0.6	0.6
162.5°	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
167.5°	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
172.5°	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
177.5°	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

(END OF REPORT)