

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-LD5-23SL-LW-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 (P33520)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WIDE FROSTED LENS
Light Source: -
Ballast/Driver: -

Summary

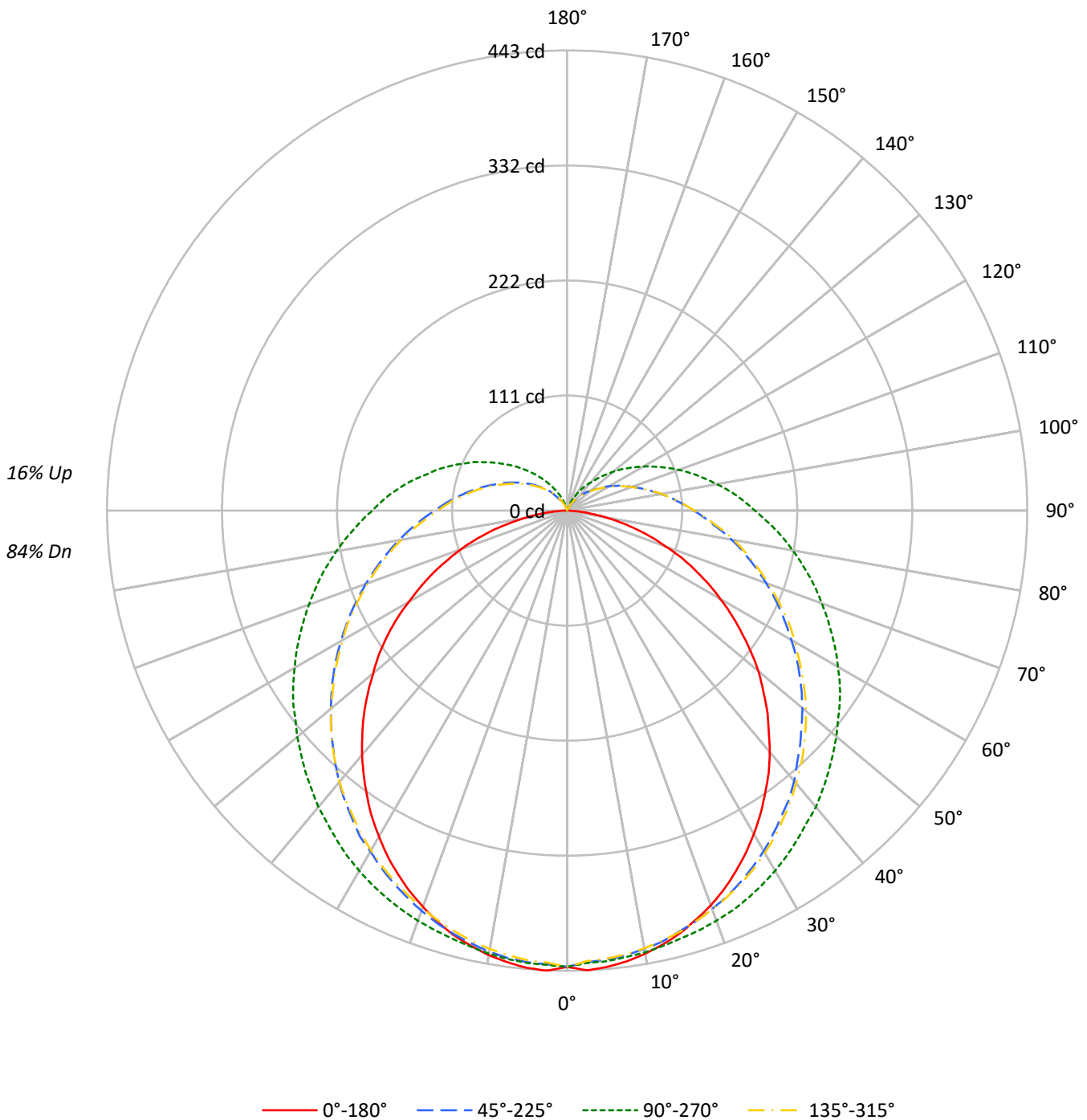
Lumens per Lamp: N/A
Luminaire Lumens: 1908.0 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.36 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Semi-Direct

Input Watts (W): 18
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-LD5-23SL-LW-UNV-L930-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

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	115	115	115	115	111	111	111	111	102	102	102	94	94	94	87	87	87	84
1	102	96	91	86	98	92	87	83	85	81	77	78	75	72	72	70	67	64
2	92	82	74	68	87	79	72	66	73	67	62	67	62	58	62	58	54	51
3	83	71	62	55	79	69	60	54	63	56	51	58	52	48	54	49	45	42
4	76	63	53	46	72	60	52	45	56	48	42	51	45	40	47	42	38	35
5	69	56	46	39	66	54	45	38	50	42	36	46	39	34	42	37	33	30
6	64	50	41	34	61	48	39	33	45	37	31	41	35	30	38	33	28	26
7	59	45	36	30	56	43	35	29	40	33	28	38	31	26	35	29	25	23
8	55	41	32	26	52	40	31	26	37	30	24	34	28	23	32	26	22	20
9	51	37	29	23	49	36	28	23	34	27	22	32	25	21	30	24	20	18
10	48	34	26	21	46	33	26	21	31	24	20	29	23	19	27	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	3549	3549	3549	3549
5°	3568	3420	3575	3435
10°	3534	3323	3546	3333
15°	3494	3240	3509	3244
20°	3439	3179	3450	3179
25°	3371	3125	3391	3122
30°	3295	3070	3321	3070
35°	3207	3018	3243	3022
40°	3119	2988	3157	2988
45°	3019	2956	3065	2960
50°	2914	2938	2954	2945
55°	2768	2940	2855	2953
60°	2614	2949	2698	2968
65°	2441	2979	2548	3009
70°	2198	3033	2370	3077
75°	1918	3133	2097	3193
80°	1482	3280	1684	3355
85°	888	3516	1107	3612



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.6	2.2
10°-20°	119.6	6.3
20°-30°	183.3	9.6
30°-40°	226.2	11.9
40°-50°	245.4	12.9
50°-60°	241.8	12.7
60°-70°	218.7	11.5
70°-80°	182.2	9.5
80°-90°	141.1	7.4
90°-100°	107.0	5.6
100°-110°	79.2	4.1
110°-120°	55.1	2.9
120°-130°	35.1	1.8
130°-140°	19.7	1.0
140°-150°	9.0	0.5
150°-160°	2.8	0.1
160°-170°	0.4	0.0
170°-180°	0.0	0.0
0°-30°	344.5	18.1
0°-40°	570.6	29.9
0°-60°	1057.8	55.4
0°-90°	1599.7	83.8
90°-120°	241.3	12.6
90°-150°	305.1	16.0
90°-180°	308.0	16.1
0°-180°	1908.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	439	439	439	439	439	
5°	441	436	442	437	441	42
15°	421	426	423	427	421	119
25°	384	412	386	411	384	177
35°	332	386	336	387	332	208
45°	272	356	277	356	272	210
55°	205	321	212	322	205	184
65°	136	281	142	284	136	135
75°	69	241	75	246	69	73
85°	13	201	16	206	13	16
90°	0	181	1	188	0	1
95°	0	164	0	172	0	0
105°	0	130	0	138	0	1
115°	0	99	0	108	0	0
125°	0	71	0	79	0	0
135°	0	46	0	55	0	0
145°	0	27	0	33	0	0
155°	0	11	0	15	0	0
165°	0	2	0	3	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2
2.5°	442.9	442.9	442.4	441.5	441.9	443.3	442.4	440.1	438.7	435.0	435.9
5°	441.0	441.0	440.6	439.6	440.1	441.9	441.0	439.2	437.3	434.1	435.5
7.5°	437.8	437.8	437.3	436.4	437.3	439.2	438.2	436.4	435.0	431.8	433.1
10°	433.1	433.6	433.1	431.8	433.6	435.5	435.0	432.7	431.3	428.5	429.9
12.5°	427.6	428.0	427.6	427.1	428.0	430.8	429.9	428.0	427.1	424.8	426.2
15°	421.1	421.6	420.6	420.6	421.6	424.3	424.3	422.5	421.6	419.2	422.0
17.5°	412.8	413.2	412.8	412.8	413.7	416.5	416.9	416.0	415.1	414.1	416.9
20°	404.4	404.0	404.0	403.5	405.3	409.5	409.1	409.1	408.1	408.1	411.4
22.5°	394.7	394.7	394.2	394.2	396.5	400.3	400.3	401.2	400.3	402.1	404.9
25°	383.6	384.0	383.6	384.5	386.4	390.5	391.0	392.4	392.8	394.7	397.9
27.5°	372.0	372.5	372.0	372.9	376.2	379.4	381.7	383.6	384.0	386.8	391.0
30°	359.5	359.5	359.9	360.9	364.6	369.7	371.5	373.8	373.8	378.5	382.6
32.5°	346.5	346.5	346.5	348.4	352.5	358.6	360.9	363.7	364.6	369.2	373.8
35°	332.2	332.6	332.6	334.0	339.6	345.6	348.8	352.1	353.9	359.5	364.1
37.5°	318.7	319.6	318.3	320.1	328.0	333.1	336.8	340.0	343.3	350.7	354.4
40°	303.4	304.4	303.9	307.6	314.1	320.6	324.7	328.0	332.6	340.0	344.2
42.5°	287.2	288.1	289.1	293.2	300.2	306.7	311.8	315.9	321.5	328.0	334.9
45°	272.4	272.4	273.8	278.9	286.3	293.2	299.3	303.9	310.4	317.3	324.3
47.5°	255.7	256.2	258.0	264.1	271.9	280.3	285.8	291.9	298.8	306.2	314.1
50°	240.4	240.4	243.2	249.7	257.1	266.4	272.4	279.3	286.8	295.6	303.4
52.5°	222.8	223.8	227.9	233.9	243.7	252.0	259.0	266.4	275.2	284.4	293.2
55°	205.2	207.1	210.3	218.7	228.8	236.7	245.1	254.3	262.7	272.9	283.0
57.5°	188.1	189.5	194.6	202.9	213.6	223.3	232.1	240.9	251.1	261.3	271.9
60°	170.5	172.3	178.4	186.7	198.3	208.5	218.7	227.9	238.6	249.2	260.3
62.5°	153.8	155.2	162.1	171.9	183.4	194.6	204.8	215.9	227.5	237.6	248.8
65°	136.2	138.5	146.4	155.2	168.6	179.7	191.3	203.4	215.4	226.5	237.2
67.5°	120.0	121.4	129.7	139.9	153.3	165.8	177.9	190.9	203.4	215.0	225.6
70°	101.0	105.6	114.0	124.6	139.0	151.9	164.9	178.4	191.8	203.8	214.0
72.5°	85.2	88.9	98.2	109.8	123.7	139.0	152.4	166.8	180.2	192.7	203.4
75°	68.6	72.3	82.9	95.9	110.3	126.5	140.4	155.2	169.1	181.6	192.7
77.5°	52.3	57.0	68.6	82.0	97.7	114.4	128.8	143.6	158.0	171.4	182.5
80°	37.5	42.6	55.1	70.4	85.7	102.4	118.1	133.0	147.3	160.7	172.3
82.5°	24.1	29.6	43.1	58.4	74.6	91.3	107.5	122.3	136.7	150.1	162.1
85°	13.0	19.0	32.9	48.2	64.4	81.1	97.3	113.0	126.9	139.4	152.4
87.5°	3.7	11.1	24.6	39.8	56.5	71.8	87.6	103.3	117.2	130.6	142.2
90°	0.5	6.5	18.5	32.9	49.1	63.9	79.7	94.5	108.4	121.8	133.4
92.5°	0.5	4.2	14.4	27.3	42.2	57.4	73.2	87.6	100.5	114.0	125.5
95°	0.5	3.2	11.6	23.2	37.1	51.4	66.2	80.1	93.6	106.1	117.7
97.5°	0.5	2.3	9.3	19.9	32.4	45.9	60.2	74.1	87.1	99.1	109.8
100°	0.5	1.9	7.4	17.1	28.3	41.2	54.2	67.6	80.1	91.7	102.8
102.5°	0.5	1.4	6.5	14.4	25.0	36.6	49.1	61.6	73.7	84.8	95.9
105°	0.5	1.4	5.6	12.5	22.2	32.9	44.5	56.5	67.6	78.3	88.5
107.5°	0.5	0.9	4.6	10.7	19.5	29.6	40.3	51.9	62.1	72.3	82.0
110°	0.5	0.9	3.7	9.7	17.1	26.4	36.6	47.3	57.0	66.7	76.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.5	0.9	3.2	8.3	14.8	23.6	32.9	42.6	51.9	61.6	70.0
115°	0.5	0.9	2.8	7.4	13.9	20.4	29.6	38.5	47.7	56.5	64.4
117.5°	0.5	0.9	2.3	6.0	12.0	18.5	25.9	34.7	43.1	51.4	58.8
120°	0.5	0.9	1.9	5.6	10.7	16.7	23.2	31.0	38.9	46.8	54.7
122.5°	0.5	0.5	1.9	4.6	9.3	14.8	21.3	27.3	34.7	42.2	49.1
125°	0.5	0.5	1.9	4.2	7.9	13.4	19.0	24.6	31.0	37.5	43.5
127.5°	0.5	0.5	1.4	3.2	6.9	11.6	16.7	22.7	27.3	33.4	39.4
130°	0.5	0.5	1.4	2.8	6.0	9.7	14.8	19.9	25.5	29.6	34.7
132.5°	0.5	0.5	1.4	2.3	4.6	7.9	12.5	17.1	22.2	26.9	31.0
135°	0.5	0.5	0.9	1.9	3.7	6.5	10.2	14.4	19.5	24.1	28.3
137.5°	0.5	0.5	0.9	1.9	2.8	5.6	7.9	11.6	16.2	20.4	24.6
140°	0.5	0.5	0.9	1.4	2.3	4.2	6.5	9.3	13.0	16.7	21.3
142.5°	0.5	0.5	0.5	1.4	1.9	3.2	5.1	7.4	10.2	13.4	17.1
145°	0.5	0.5	0.5	1.4	1.9	2.3	4.2	6.0	7.9	10.2	13.4
147.5°	0.5	0.5	0.5	0.9	1.4	1.9	3.2	4.6	6.0	7.9	9.7
150°	0.5	0.5	0.5	0.9	1.4	1.9	2.3	3.2	4.6	6.5	7.9
152.5°	0.5	0.5	0.5	0.9	0.9	1.4	1.9	2.3	3.2	4.6	5.6
155°	0.5	0.5	0.5	0.5	0.9	1.4	1.9	1.9	2.3	3.2	4.2
157.5°	0.5	0.5	0.5	0.5	0.9	0.9	1.4	1.4	1.9	1.9	2.8
160°	0.5	0.5	0.5	0.5	0.5	0.9	0.9	1.4	1.4	1.4	1.4
162.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.9	0.9	0.9	1.4	1.4
165°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	0.9	0.9
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: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2
2.5°	435.9	436.4	437.8	437.8	436.8	436.8	436.4	435.9	436.4	437.3	437.3
5°	435.0	435.5	436.8	437.3	436.4	435.9	435.9	435.5	435.9	436.8	436.8
7.5°	433.1	433.6	435.0	435.5	434.5	434.5	434.1	433.6	434.5	435.0	435.0
10°	430.4	430.8	432.7	433.1	432.7	432.2	432.2	431.8	432.2	433.1	433.1
12.5°	426.7	427.6	429.9	429.9	429.9	429.4	429.4	429.0	429.4	430.4	429.9
15°	422.5	424.3	426.2	427.1	427.1	427.1	426.7	426.2	427.1	427.6	427.1
17.5°	417.9	420.2	423.0	423.9	423.9	424.3	423.9	423.4	424.3	424.3	423.9
20°	413.2	415.5	418.3	419.2	420.2	420.6	420.6	420.2	420.6	421.1	420.6
22.5°	407.2	410.0	413.2	414.6	415.5	416.5	416.5	416.5	416.9	417.4	416.5
25°	400.7	404.0	407.7	409.1	410.9	411.4	411.8	411.8	412.3	412.8	411.4
27.5°	393.8	397.5	401.2	403.5	404.9	405.8	405.8	406.3	406.7	407.2	405.8
30°	385.4	391.0	394.2	396.1	397.9	399.3	399.8	400.3	400.7	401.2	399.8
32.5°	378.0	382.6	386.8	389.1	391.5	393.3	393.8	393.8	394.7	394.7	393.3
35°	369.2	374.8	378.9	381.3	384.0	385.4	386.4	386.4	387.3	387.3	385.9
37.5°	360.4	366.0	370.6	373.4	376.6	378.5	378.9	378.9	379.9	379.9	378.0
40°	351.1	357.2	362.3	365.5	368.3	370.6	371.1	372.5	372.5	372.0	370.1
42.5°	341.9	347.4	353.0	356.7	360.4	362.7	363.7	364.1	364.1	363.7	362.3
45°	331.7	338.2	343.3	347.9	351.6	353.9	355.3	355.8	355.8	354.9	353.5
47.5°	322.0	328.4	333.5	338.6	342.3	345.1	346.5	347.0	346.5	346.1	344.7
50°	311.8	319.2	324.3	329.4	333.1	335.4	337.7	338.2	337.7	337.2	334.5
52.5°	301.1	309.0	314.6	319.6	323.8	326.6	328.4	328.9	328.9	328.0	326.1
55°	290.5	297.4	304.4	309.9	314.6	317.3	319.6	320.6	319.6	318.7	316.4
57.5°	280.7	287.2	294.2	300.2	304.8	308.5	310.4	311.3	310.4	309.0	306.7
60°	269.2	276.1	284.0	289.5	294.6	298.3	299.3	301.1	300.2	298.8	296.5
62.5°	258.0	266.4	273.3	280.3	284.4	288.6	290.5	291.4	290.5	289.1	286.8
65°	246.5	255.7	262.7	269.6	274.2	278.4	280.7	281.2	280.3	278.9	276.6
67.5°	235.8	244.6	252.0	259.4	263.6	267.8	270.1	271.0	270.1	268.2	265.9
70°	225.1	233.9	242.7	248.3	253.4	258.0	259.4	260.8	259.9	258.0	255.3
72.5°	214.5	223.8	232.6	238.1	243.7	247.8	249.7	251.1	250.2	248.3	245.1
75°	203.4	213.1	221.9	227.9	233.5	237.6	239.5	240.9	240.0	238.1	234.4
77.5°	193.2	202.9	211.2	217.7	223.3	227.0	230.2	230.7	229.8	227.9	224.2
80°	182.5	192.3	201.1	207.5	213.1	216.8	219.1	220.5	219.6	217.7	214.0
82.5°	173.3	182.1	190.9	197.3	202.9	207.5	209.4	210.8	210.3	207.5	204.8
85°	163.1	173.3	180.2	187.2	192.7	197.3	198.7	200.6	200.1	197.8	194.1
87.5°	152.9	163.1	171.4	178.4	183.4	187.2	189.5	190.4	189.9	187.6	183.4
90°	144.5	153.8	162.1	169.6	173.7	177.9	180.2	180.7	180.7	177.9	174.6
92.5°	136.7	145.5	153.8	160.7	165.8	169.6	171.4	172.3	171.9	169.6	165.8
95°	127.9	137.6	145.5	152.4	157.5	161.2	163.1	164.0	163.5	161.2	157.5
97.5°	120.4	129.2	137.1	143.6	148.7	152.4	154.3	155.2	155.2	152.9	149.2
100°	113.0	121.8	129.2	135.7	140.4	144.1	145.9	146.4	145.9	144.1	140.4
102.5°	105.6	114.0	121.4	127.4	132.5	135.7	137.6	138.0	138.0	135.7	132.0
105°	98.2	106.5	113.5	120.0	124.2	127.4	128.8	130.2	129.7	127.9	124.2
107.5°	91.3	99.6	106.1	112.1	116.3	119.5	120.9	122.3	121.8	120.0	116.3
110°	84.8	92.7	98.7	104.7	108.4	111.6	114.0	114.4	113.5	111.6	108.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	78.8	85.7	91.7	97.3	101.5	103.8	105.6	106.5	105.6	103.8	101.5
115°	72.3	79.2	85.2	90.3	94.0	96.8	98.2	99.1	98.2	96.4	94.0
117.5°	66.2	72.7	78.8	83.8	87.1	89.4	90.8	91.7	90.8	89.4	87.1
120°	61.1	66.7	72.3	76.9	80.6	82.5	83.8	84.8	84.3	82.5	80.1
122.5°	55.1	61.1	66.2	70.9	74.1	76.0	76.9	77.8	77.4	76.0	73.7
125°	50.0	55.1	60.2	64.4	67.6	69.5	70.4	71.3	70.9	69.5	66.7
127.5°	44.5	50.0	54.2	58.4	60.7	63.5	63.9	64.9	64.4	63.0	60.7
130°	40.3	44.5	48.6	52.3	55.1	57.0	57.9	58.4	57.4	56.5	54.2
132.5°	35.2	39.8	43.5	46.8	48.6	50.5	51.4	51.9	51.9	50.5	48.6
135°	31.5	34.7	38.0	41.2	43.1	44.9	45.9	46.3	45.9	44.9	43.1
137.5°	28.3	31.0	33.4	36.1	38.5	39.4	40.3	40.3	39.8	39.4	38.0
140°	24.6	27.8	30.1	32.0	33.8	34.3	35.2	35.2	34.7	34.3	33.4
142.5°	20.8	23.6	25.9	28.3	29.6	30.6	31.0	31.5	31.0	30.6	29.2
145°	16.7	19.9	22.2	23.6	25.5	25.9	26.4	26.9	26.4	25.9	24.6
147.5°	13.0	15.8	18.1	19.9	21.3	21.8	22.2	22.7	22.2	21.3	20.8
150°	9.3	11.6	14.4	16.2	17.1	18.1	18.1	18.1	18.5	17.6	16.7
152.5°	7.4	8.3	10.2	12.0	13.4	13.9	14.4	14.4	13.9	13.9	13.0
155°	5.1	6.0	7.4	8.8	10.2	10.7	11.1	11.1	10.7	10.7	10.2
157.5°	3.2	4.2	5.1	6.0	7.4	7.9	8.3	8.3	8.3	7.9	7.4
160°	1.9	2.3	2.8	3.7	4.6	5.1	5.6	5.6	5.6	5.6	5.1
162.5°	1.4	1.4	1.4	1.9	2.3	2.8	3.2	3.2	3.2	3.2	2.8
165°	0.9	0.9	0.9	0.9	0.9	1.4	1.9	1.9	1.9	1.9	1.9
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: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2
2.5°	436.8	436.8	437.3	436.4	433.6	434.1	434.1	435.9	436.8	437.3	439.6
5°	435.9	435.9	436.8	435.5	433.1	433.1	433.1	435.0	435.5	436.4	438.2
7.5°	434.5	434.5	435.0	433.6	430.8	430.8	430.4	432.2	433.1	433.6	435.5
10°	432.2	432.2	432.7	431.3	428.0	428.0	427.6	429.0	429.4	430.4	431.8
12.5°	429.0	429.0	429.0	427.6	424.3	423.9	423.4	424.8	424.8	425.3	426.7
15°	426.2	425.3	425.3	423.9	420.6	419.7	418.8	419.2	420.2	419.7	420.6
17.5°	423.0	422.0	421.1	419.7	415.5	414.1	413.2	413.7	413.2	412.8	413.7
20°	419.2	417.9	417.4	415.1	410.9	408.6	406.7	405.8	406.3	404.9	405.3
22.5°	415.1	413.2	412.3	409.5	405.3	402.6	400.3	398.4	397.9	396.1	396.5
25°	410.0	407.7	406.3	404.0	399.3	396.1	393.3	390.5	389.1	386.8	386.4
27.5°	404.0	401.6	399.8	397.5	392.8	388.7	385.4	381.7	379.9	377.1	375.7
30°	397.9	395.2	392.4	390.5	385.4	380.8	375.7	372.5	369.7	366.4	364.1
32.5°	390.5	387.7	385.0	382.2	377.6	372.0	367.8	362.7	359.5	355.8	353.0
35°	383.1	379.4	376.6	372.9	368.8	362.3	357.2	352.1	347.9	343.7	340.5
37.5°	374.8	372.0	367.8	364.6	359.5	353.0	347.4	341.0	337.2	331.7	327.5
40°	366.9	363.7	359.5	355.3	350.2	342.8	336.8	329.4	325.2	318.7	314.6
42.5°	359.0	354.4	350.2	345.6	340.0	333.1	325.7	318.3	312.7	306.7	300.7
45°	350.2	345.1	340.0	334.9	329.4	322.4	314.6	306.7	299.7	294.2	286.8
47.5°	341.0	335.9	329.8	324.3	318.3	311.3	303.0	294.6	287.2	280.7	272.9
50°	331.7	326.6	320.1	314.1	307.1	300.2	291.4	281.7	273.8	265.4	258.5
52.5°	322.0	316.9	310.8	303.0	295.6	288.6	279.3	269.2	260.3	253.4	244.6
55°	312.2	307.1	300.2	292.3	284.9	276.1	267.3	257.1	247.4	239.0	230.2
57.5°	302.0	297.4	289.5	283.0	273.8	264.5	255.3	245.5	234.9	225.1	215.0
60°	291.9	286.8	279.3	271.5	262.2	252.9	243.2	232.6	221.4	210.8	201.5
62.5°	282.6	276.1	269.2	260.8	251.1	242.3	231.2	219.6	208.5	197.3	186.2
65°	271.9	265.0	258.5	250.2	240.0	229.8	218.7	207.1	195.0	183.0	171.9
67.5°	261.3	254.3	247.4	239.0	228.4	217.7	206.1	194.6	181.1	169.6	156.6
70°	250.6	245.1	236.3	227.5	217.7	206.1	194.6	182.1	168.2	155.7	142.2
72.5°	240.0	234.4	225.6	216.3	207.1	195.0	182.5	170.0	157.0	142.7	128.3
75°	229.8	222.8	215.0	206.1	196.4	183.9	171.4	158.4	143.1	129.7	114.9
77.5°	220.0	213.6	205.7	196.0	185.3	173.3	160.3	146.9	131.6	117.2	101.0
80°	209.4	202.9	195.0	185.3	174.6	163.1	149.2	135.3	120.4	104.7	88.0
82.5°	199.2	193.2	184.4	175.6	164.0	152.4	138.5	124.6	108.9	93.6	77.4
85°	188.5	182.5	174.2	164.9	153.8	141.3	128.3	114.4	98.7	82.9	66.7
87.5°	179.3	172.3	164.0	154.7	143.6	131.6	119.1	104.2	88.9	73.7	57.0
90°	169.6	163.1	154.7	145.5	134.3	122.3	109.3	95.4	80.6	64.9	49.1
92.5°	161.2	154.3	146.4	137.1	126.0	114.4	101.5	87.6	73.2	57.9	42.6
95°	152.9	145.9	138.5	129.2	118.1	106.5	93.6	80.1	66.2	51.4	37.1
97.5°	143.6	137.6	130.2	121.4	110.3	99.1	86.6	73.7	60.2	45.9	32.4
100°	136.2	129.2	122.3	113.0	102.8	92.2	79.7	67.2	54.2	40.8	28.3
102.5°	127.9	121.4	114.4	105.6	95.4	84.8	73.2	61.1	49.1	36.6	24.6
105°	120.0	114.0	106.5	98.2	88.5	78.3	67.2	56.1	44.5	32.4	21.8
107.5°	112.1	106.1	99.1	91.3	82.0	71.8	61.6	50.5	39.8	29.2	19.5
110°	104.2	98.7	92.2	84.3	75.5	66.2	56.5	46.3	35.7	25.9	17.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	97.3	91.7	85.2	77.8	69.5	60.7	51.4	41.7	32.0	23.2	14.8
115°	90.3	85.2	78.8	72.3	63.9	55.6	46.8	37.5	28.7	20.8	13.0
117.5°	83.4	78.3	72.3	65.8	58.4	50.5	42.2	33.4	25.9	18.5	11.6
120°	76.4	71.8	66.2	60.2	53.7	45.9	37.5	30.1	23.2	16.2	10.2
122.5°	70.0	65.8	60.7	55.1	48.2	40.8	33.8	27.3	20.8	14.4	8.3
125°	63.9	59.8	55.1	49.6	43.1	36.6	30.6	24.6	18.1	12.5	6.9
127.5°	57.9	53.7	49.1	44.0	38.9	32.9	27.3	21.8	16.2	11.1	6.0
130°	51.9	48.2	44.0	39.8	34.7	29.2	24.6	19.0	13.9	8.8	5.1
132.5°	45.9	43.1	39.4	35.2	30.6	26.4	21.3	16.7	12.0	7.9	4.6
135°	40.8	38.0	34.7	31.0	27.3	23.2	18.5	14.4	10.2	6.5	3.7
137.5°	36.1	33.8	30.6	27.3	24.1	19.9	16.2	12.0	8.3	5.6	2.8
140°	32.0	29.6	26.9	23.6	20.8	17.1	13.4	9.7	7.4	4.6	2.3
142.5°	27.8	25.5	23.2	20.4	17.6	14.4	11.1	8.3	6.0	3.7	2.3
145°	23.6	21.8	19.5	17.1	14.4	11.6	9.3	6.9	4.6	2.8	1.9
147.5°	19.5	18.1	15.8	13.9	11.6	9.3	7.4	5.6	3.7	2.3	1.4
150°	15.8	14.4	12.5	10.7	9.3	7.4	6.0	4.2	2.8	2.3	1.4
152.5°	12.0	11.1	9.7	8.8	7.4	5.6	4.2	3.2	2.3	1.9	0.9
155°	9.7	8.8	7.9	6.5	5.6	4.2	3.2	2.3	1.9	1.4	0.9
157.5°	6.9	6.5	5.6	4.6	3.7	2.8	2.3	2.3	1.4	0.9	0.5
160°	4.6	4.2	3.7	2.8	2.3	2.3	1.9	1.4	0.9	0.9	0.5
162.5°	2.8	2.3	2.3	2.3	1.9	1.9	1.4	0.9	0.9	0.5	0.5
165°	1.9	1.9	1.9	1.4	1.4	1.4	0.9	0.5	0.5	0.5	0.5
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: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2
2.5°	439.6	438.2	440.1	443.3	443.8	443.3	442.4	443.8	445.7	445.2	441.9
5°	438.7	436.8	438.7	441.9	441.9	441.5	441.0	442.4	444.3	443.8	441.0
7.5°	435.9	434.1	435.9	438.7	439.2	438.2	438.2	439.6	441.5	441.0	438.7
10°	432.2	430.4	431.3	434.5	435.5	434.5	434.5	435.9	438.2	437.8	435.0
12.5°	426.7	425.3	426.2	429.0	429.9	429.4	429.0	430.8	433.1	433.1	430.4
15°	420.6	418.8	419.7	423.0	423.4	422.5	423.0	424.3	427.1	427.1	424.8
17.5°	413.7	411.4	412.8	415.1	415.5	415.5	415.5	417.4	420.6	420.2	418.3
20°	405.8	402.6	403.5	405.8	406.7	406.7	406.7	410.0	412.3	412.3	410.4
22.5°	396.5	394.2	394.2	396.5	397.9	397.5	397.5	400.3	403.5	403.0	403.0
25°	385.9	384.0	383.1	385.9	386.4	386.8	387.7	390.5	394.2	394.2	394.7
27.5°	374.8	372.9	372.5	374.8	375.2	375.7	376.6	379.9	383.6	384.0	385.0
30°	364.1	361.3	360.4	362.3	363.2	363.7	363.7	368.8	372.0	373.4	375.2
32.5°	351.6	348.8	346.5	349.8	350.2	351.1	351.6	356.7	360.4	362.7	365.5
35°	339.1	334.5	333.5	335.9	336.8	337.2	338.2	343.7	348.8	350.7	354.4
37.5°	325.2	322.0	319.2	321.5	322.4	322.9	325.7	330.8	335.9	338.6	342.3
40°	312.2	308.1	305.7	307.1	308.1	308.5	311.8	317.3	323.4	326.6	331.2
42.5°	297.9	292.3	290.5	291.9	292.3	293.7	296.5	303.9	309.9	314.6	318.3
45°	283.5	279.3	275.2	276.6	277.0	278.0	282.1	290.0	296.5	302.0	306.2
47.5°	268.7	263.6	259.4	260.3	262.2	262.7	267.3	276.6	282.6	288.6	294.2
50°	253.9	246.9	243.7	243.7	244.6	246.9	252.9	262.2	268.7	275.6	281.7
52.5°	238.6	232.1	228.4	228.8	229.8	232.6	238.1	247.4	254.8	262.2	269.6
55°	223.3	216.3	212.6	211.7	212.6	216.3	222.8	232.6	240.0	248.8	256.6
57.5°	208.0	199.7	196.4	195.0	196.0	200.6	207.1	217.3	226.5	234.9	244.1
60°	191.3	184.8	179.3	176.0	178.4	184.4	191.3	202.0	211.7	221.0	231.2
62.5°	177.0	168.6	162.6	159.4	161.7	166.8	176.5	186.7	197.3	208.0	218.2
65°	160.7	152.4	145.5	142.2	144.5	150.6	160.3	171.4	183.0	193.6	205.7
67.5°	145.0	136.2	127.9	124.6	127.4	133.9	144.5	157.0	169.6	180.7	193.6
70°	129.7	120.0	111.2	108.9	110.7	119.5	129.7	142.2	155.2	168.2	181.6
72.5°	115.8	103.8	94.5	91.7	94.0	103.8	115.4	128.3	142.2	156.1	170.5
75°	99.6	88.5	78.3	75.0	77.8	86.6	101.0	114.9	129.7	144.5	158.0
77.5°	86.6	73.7	63.0	57.9	62.5	73.7	87.6	102.4	117.7	133.0	148.2
80°	73.2	59.8	48.2	42.6	47.7	59.8	73.7	89.9	107.0	122.3	136.2
82.5°	61.1	46.8	34.7	28.7	34.3	47.7	63.0	79.2	95.9	111.2	127.4
85°	50.0	35.2	22.7	16.2	24.1	36.1	52.3	69.0	86.2	101.9	117.7
87.5°	40.8	26.4	13.9	6.9	14.8	28.3	43.5	60.2	77.4	93.1	107.9
90°	33.4	19.0	7.4	0.9	8.8	21.3	36.1	52.3	68.6	84.8	99.6
92.5°	27.3	14.4	4.2	0.5	5.6	17.1	31.0	46.3	62.1	77.8	92.2
95°	22.7	11.1	2.8	0.5	4.2	13.4	26.4	41.2	56.1	71.3	85.7
97.5°	19.5	9.3	2.3	0.5	3.2	11.6	22.7	36.6	51.0	65.3	79.2
100°	16.7	7.4	1.9	0.5	2.8	9.7	19.9	32.4	45.9	59.8	73.2
102.5°	14.4	6.0	1.4	0.5	2.3	8.3	17.6	29.2	41.2	54.7	67.6
105°	12.5	5.1	1.4	0.5	1.9	7.4	15.8	25.9	38.0	50.0	62.5
107.5°	10.7	4.2	0.9	0.5	1.4	6.0	13.9	23.6	34.3	45.9	57.4
110°	9.3	3.7	0.9	0.5	1.4	5.6	12.0	21.3	31.0	41.7	52.8



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	7.9	2.8	0.9	0.5	0.9	4.6	10.7	19.0	28.3	38.0	48.6
115°	6.9	2.3	0.5	0.5	0.9	4.2	9.7	17.1	25.5	34.7	44.5
117.5°	5.6	1.9	0.5	0.5	0.5	3.2	8.3	15.3	23.2	32.0	40.8
120°	4.6	1.9	0.5	0.5	0.5	2.8	7.4	13.4	20.8	28.7	37.1
122.5°	4.2	1.4	0.5	0.5	0.5	2.3	6.5	12.0	18.5	25.9	33.8
125°	3.7	1.4	0.5	0.5	0.5	1.9	5.6	10.7	16.7	23.2	30.6
127.5°	2.8	1.4	0.5	0.5	0.5	1.4	5.1	9.3	14.8	20.8	27.3
130°	2.3	0.9	0.5	0.5	0.5	1.4	4.2	8.3	13.0	18.5	24.6
132.5°	1.9	0.9	0.5	0.5	0.5	0.9	3.2	6.5	11.1	16.2	21.8
135°	1.9	0.9	0.5	0.5	0.5	0.9	2.3	5.6	9.3	13.9	18.5
137.5°	1.9	0.5	0.5	0.5	0.5	0.9	1.9	4.2	7.4	11.1	15.3
140°	1.4	0.5	0.5	0.5	0.5	0.5	1.4	3.2	6.0	9.3	13.0
142.5°	1.4	0.5	0.5	0.5	0.5	0.5	1.4	2.3	4.6	7.4	10.2
145°	0.9	0.5	0.5	0.5	0.5	0.5	0.9	1.9	3.7	5.6	8.3
147.5°	0.9	0.5	0.5	0.5	0.5	0.5	0.9	1.4	2.8	4.6	6.5
150°	0.9	0.5	0.5	0.5	0.5	0.5	0.9	1.4	1.9	3.2	5.1
152.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.9	0.9	1.4	2.3	3.2
155°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	1.4	1.9	2.3
157.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	0.9	1.4	1.9
160°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	0.9	1.4
162.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	0.9
165°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2
2.5°	440.6	437.3	438.2	437.8	438.7	440.1	440.1	439.6	439.6	438.7	437.8
5°	439.6	436.4	437.8	437.3	438.2	439.6	439.6	439.2	439.2	437.8	437.3
7.5°	436.8	434.5	435.5	435.5	436.4	437.8	437.8	437.3	437.3	435.9	435.5
10°	434.1	431.3	432.7	432.7	433.6	435.5	435.5	435.0	435.0	433.6	433.1
12.5°	429.4	426.7	429.0	429.4	430.4	432.2	431.8	431.8	431.8	430.4	429.9
15°	423.9	422.0	424.3	424.8	426.2	428.5	428.5	428.5	428.5	427.1	426.7
17.5°	417.9	416.5	418.8	419.7	421.6	423.9	423.9	424.3	424.8	423.9	423.4
20°	410.9	410.0	412.3	414.1	416.9	419.2	420.2	420.6	421.6	420.6	420.2
22.5°	403.0	403.0	406.3	408.1	411.4	413.7	415.1	416.5	417.4	416.5	416.0
25°	394.2	395.6	398.9	402.1	405.8	408.1	409.5	411.4	412.3	411.8	411.4
27.5°	385.9	387.7	391.9	395.2	398.4	402.1	403.5	405.8	406.7	406.7	406.3
30°	376.2	378.9	383.6	387.3	391.5	395.2	397.0	399.3	400.7	399.8	400.3
32.5°	366.9	371.5	375.2	379.4	384.0	387.7	390.1	392.8	394.2	393.8	394.2
35°	356.7	361.3	366.4	370.6	376.2	379.9	383.1	385.4	387.3	386.8	386.8
37.5°	345.6	351.6	356.7	362.3	367.4	371.5	374.8	377.6	379.4	379.4	379.4
40°	334.9	341.4	346.5	353.0	359.5	363.2	366.9	369.7	371.5	372.0	372.5
42.5°	323.4	330.3	336.3	343.3	349.8	354.4	358.6	361.8	363.7	364.6	364.1
45°	312.7	319.2	326.1	334.0	340.0	344.7	349.8	353.5	355.3	355.8	356.2
47.5°	300.7	308.1	315.9	323.8	329.8	335.9	340.5	344.2	346.1	347.4	347.4
50°	289.1	296.9	305.7	314.1	320.6	326.6	331.2	335.4	337.7	338.6	339.1
52.5°	278.4	285.8	295.1	303.4	309.9	315.9	322.0	326.6	328.9	329.8	329.8
55°	265.4	274.7	284.9	292.8	299.7	306.7	312.7	317.3	319.6	321.0	322.0
57.5°	253.4	263.1	273.8	282.1	290.5	296.9	302.5	308.5	310.4	312.2	312.7
60°	241.8	251.5	261.7	271.0	279.3	286.3	292.8	297.9	301.1	302.0	303.0
62.5°	229.8	240.0	250.6	259.9	268.7	277.0	283.0	287.7	291.4	292.8	293.7
65°	218.2	228.8	239.5	249.2	258.5	266.8	272.9	277.5	281.2	283.5	284.0
67.5°	205.7	217.3	228.4	238.6	247.8	256.6	262.7	267.3	271.0	273.8	274.2
70°	194.1	206.1	217.3	228.4	237.6	246.5	252.9	257.6	261.7	263.6	264.5
72.5°	183.0	195.5	207.1	218.2	227.5	236.3	243.2	247.8	252.0	254.3	254.8
75°	172.3	184.8	197.3	208.0	217.7	226.5	233.5	238.6	242.3	244.6	245.5
77.5°	161.7	174.6	187.2	197.8	208.0	216.8	222.8	228.8	232.6	235.3	235.3
80°	151.0	164.5	177.4	188.1	198.3	206.1	213.1	219.1	222.8	225.6	225.6
82.5°	141.8	154.7	167.2	177.9	188.1	196.9	203.8	209.4	213.6	215.4	215.9
85°	131.1	145.5	157.0	168.6	178.4	186.7	193.6	199.7	203.4	205.2	206.1
87.5°	122.3	136.2	148.7	158.9	168.6	177.0	184.8	189.9	193.6	196.0	196.9
90°	114.0	127.4	139.9	150.1	160.3	168.2	175.6	180.7	184.8	186.7	187.6
92.5°	106.5	120.0	132.0	142.2	151.9	160.7	167.7	172.8	176.5	178.4	179.7
95°	99.6	112.6	124.2	135.3	144.5	152.4	159.8	164.9	169.1	170.5	171.9
97.5°	92.7	105.2	116.7	127.4	137.1	144.5	151.5	156.6	159.8	162.1	163.5
100°	86.6	98.7	109.8	120.0	129.2	136.2	143.6	148.2	151.5	153.3	155.2
102.5°	80.1	92.2	102.8	112.6	122.3	128.8	135.7	140.4	143.1	146.4	146.4
105°	74.6	85.7	96.4	105.6	114.0	121.8	127.9	132.5	135.7	138.0	138.0
107.5°	68.6	79.7	89.9	99.6	107.5	114.9	120.4	124.6	128.3	129.7	131.1
110°	63.9	73.7	83.8	93.1	100.5	107.5	113.0	117.7	120.9	122.3	123.2



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	58.4	68.6	77.8	86.6	94.0	100.5	106.1	109.8	113.0	114.9	115.4
115°	53.7	63.5	71.8	80.1	88.0	93.6	98.7	102.4	105.6	107.0	107.9
117.5°	49.6	58.4	66.7	73.7	81.1	87.1	92.2	95.4	98.2	100.1	101.0
120°	45.4	53.7	61.1	68.1	75.0	80.6	85.2	88.5	91.7	93.1	93.1
122.5°	41.2	49.1	56.1	62.5	69.0	74.1	79.2	82.0	84.8	86.2	86.2
125°	37.5	44.9	51.4	57.4	63.5	68.1	72.3	75.5	78.3	79.2	79.2
127.5°	33.8	40.8	46.8	52.3	57.4	62.1	66.2	69.5	71.8	72.7	72.7
130°	30.6	36.6	42.2	47.7	52.8	56.5	60.7	63.5	64.9	66.2	66.7
132.5°	27.3	32.9	38.0	42.6	47.7	51.4	54.7	57.4	58.8	60.2	60.7
135°	24.1	29.2	33.8	38.5	42.6	46.3	49.1	51.4	53.3	54.2	54.7
137.5°	20.4	25.9	30.1	33.8	38.5	41.2	44.5	45.9	47.7	48.6	48.6
140°	17.1	21.3	25.9	29.6	33.4	36.1	38.9	41.2	42.6	43.1	43.1
142.5°	13.9	17.6	21.3	25.9	29.2	31.5	34.3	36.1	37.1	37.5	38.0
145°	11.1	13.9	17.1	21.3	25.0	27.8	29.2	31.0	32.0	32.4	32.9
147.5°	8.3	11.1	13.9	16.7	20.4	23.2	24.6	26.4	27.3	27.8	27.8
150°	6.5	8.3	10.2	13.0	15.8	19.0	20.8	22.2	22.7	23.2	23.2
152.5°	4.6	6.5	7.9	9.7	11.6	14.4	17.1	18.1	18.5	19.0	19.0
155°	3.2	4.6	5.6	6.9	8.3	10.7	13.0	14.4	14.8	15.3	15.3
157.5°	2.3	3.2	3.7	5.1	6.0	6.9	8.8	11.1	11.6	11.6	11.6
160°	1.4	1.9	2.3	3.2	3.7	4.6	5.6	6.9	8.3	8.3	8.3
162.5°	0.9	1.4	1.4	1.9	1.9	2.8	3.2	3.7	5.1	5.6	5.6
165°	0.5	0.9	0.9	0.9	0.9	0.9	1.4	1.4	2.3	2.8	2.8
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: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2
2.5°	438.2	439.2	438.7	438.7	438.7	439.6	438.7	434.5	435.5	436.4	437.3
5°	437.8	438.2	438.2	437.8	437.8	438.7	437.8	433.6	434.5	435.5	435.9
7.5°	435.9	436.4	436.4	436.4	435.9	436.8	435.5	431.8	431.8	432.7	433.1
10°	433.6	434.5	434.1	433.6	433.6	433.6	432.7	428.5	428.5	429.0	429.4
12.5°	430.8	430.8	430.8	430.4	429.9	429.9	429.0	424.8	424.3	425.3	424.8
15°	427.1	428.0	427.1	426.7	425.7	425.7	424.3	420.2	419.2	419.7	419.2
17.5°	423.9	424.3	423.4	422.5	421.6	421.1	419.7	415.1	413.7	414.1	413.2
20°	420.6	420.6	419.7	418.8	417.4	416.0	414.1	409.5	407.2	407.2	405.3
22.5°	416.5	416.5	415.5	414.1	412.8	410.9	409.1	404.4	400.7	399.8	398.4
25°	411.8	411.4	410.9	409.5	406.7	404.9	403.0	397.9	393.8	391.9	389.6
27.5°	406.3	406.3	404.9	403.5	400.7	398.4	396.1	391.5	385.9	383.6	380.3
30°	400.3	400.3	398.9	397.0	394.2	391.5	388.7	383.1	377.6	374.3	370.6
32.5°	394.2	393.8	392.4	390.5	387.7	383.6	381.3	375.7	369.2	365.5	360.4
35°	386.8	386.4	385.0	382.6	378.9	375.7	372.0	366.9	359.5	354.9	349.3
37.5°	379.4	378.9	378.0	374.8	371.1	367.4	362.7	357.6	350.7	344.7	339.1
40°	372.0	371.5	369.7	367.4	362.7	358.1	353.5	348.4	341.0	334.0	328.0
42.5°	364.1	363.7	361.3	358.6	353.5	348.8	343.3	337.7	330.3	322.0	315.9
45°	356.2	355.3	353.0	349.8	344.2	339.1	333.5	327.1	319.6	311.8	303.9
47.5°	347.9	346.5	344.2	339.6	334.9	329.4	322.9	315.9	308.5	299.7	291.4
50°	338.6	337.7	334.9	330.8	325.2	319.6	312.2	305.3	296.5	288.1	278.0
52.5°	329.8	328.0	325.7	321.0	315.5	309.5	301.6	293.2	284.4	276.6	265.9
55°	320.6	319.6	316.4	312.7	305.7	298.8	291.4	282.6	272.9	263.6	253.4
57.5°	311.8	309.9	307.1	302.0	296.0	289.1	281.2	271.9	261.3	251.5	240.4
60°	303.0	300.2	296.9	292.3	285.8	278.4	270.1	260.3	249.7	239.0	227.5
62.5°	293.2	290.9	287.2	282.6	276.1	268.2	259.4	249.2	239.0	227.9	215.4
65°	283.5	281.2	277.5	272.9	266.4	257.6	248.3	238.1	226.5	215.9	202.4
67.5°	273.8	271.5	267.3	262.2	255.7	247.4	237.6	227.0	215.4	203.8	189.9
70°	264.1	261.3	257.6	252.0	245.5	236.7	227.0	215.9	204.3	191.8	177.9
72.5°	254.3	252.0	247.4	242.3	235.3	226.5	216.8	205.7	193.6	180.7	166.8
75°	244.6	241.8	238.6	232.6	225.1	216.8	206.6	195.5	182.5	170.0	155.7
77.5°	234.9	232.6	228.4	222.4	215.4	206.6	196.4	185.3	172.3	159.4	144.1
80°	225.1	222.4	219.1	213.6	205.7	196.9	186.2	175.1	162.1	148.7	133.4
82.5°	215.4	212.6	208.9	203.4	196.0	187.2	177.0	164.9	151.9	138.0	123.7
85°	205.7	203.4	199.2	193.6	185.8	177.0	166.8	156.1	142.2	128.3	114.0
87.5°	196.0	193.6	189.5	183.9	176.5	167.7	157.5	146.4	133.0	120.0	104.2
90°	186.7	184.8	180.7	175.1	167.7	158.9	149.6	137.6	124.6	111.6	96.8
92.5°	178.4	176.5	172.8	167.2	160.7	151.0	141.8	130.2	117.2	103.8	89.4
95°	170.9	168.6	164.9	159.8	151.9	143.6	134.3	122.8	110.3	96.8	82.9
97.5°	162.6	160.3	156.6	151.0	144.5	135.7	126.5	115.4	102.8	90.3	76.4
100°	154.3	151.9	147.8	143.1	136.7	127.9	119.1	107.9	96.4	84.3	70.9
102.5°	145.9	143.6	139.9	135.3	128.8	120.9	112.1	101.5	89.9	77.8	65.3
105°	138.0	135.7	132.0	127.4	121.4	113.5	104.2	95.0	83.8	72.3	60.2
107.5°	130.2	127.9	124.6	120.0	114.0	106.5	97.7	88.0	77.8	66.7	55.1
110°	122.3	120.4	116.7	112.6	106.5	99.1	91.3	82.0	71.8	61.6	50.5



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	114.9	113.0	109.3	104.7	99.6	92.7	84.8	76.0	66.2	56.5	45.9
115°	107.5	105.2	101.9	97.7	92.7	86.2	78.8	70.9	61.1	51.9	42.2
117.5°	100.1	98.2	95.0	90.8	86.2	79.7	72.7	65.3	56.1	47.3	38.5
120°	92.7	91.3	88.0	84.3	79.7	73.7	67.2	59.8	51.4	43.1	34.7
122.5°	85.7	84.3	81.1	77.8	73.2	67.6	61.6	54.7	47.3	39.4	32.0
125°	79.2	77.4	74.6	71.3	67.2	62.1	56.1	49.6	42.6	35.7	28.7
127.5°	72.3	70.9	69.0	65.3	61.1	56.5	51.0	45.4	38.9	32.4	25.9
130°	66.7	64.9	62.5	59.8	56.1	51.4	46.3	40.8	35.2	29.2	22.7
132.5°	60.2	58.4	56.5	53.7	50.5	46.3	41.7	36.6	31.5	25.9	20.4
135°	54.2	52.8	51.0	48.2	44.9	41.7	37.1	32.4	27.8	22.7	18.1
137.5°	48.6	47.3	45.4	43.5	40.3	37.1	32.9	28.7	24.6	19.9	15.8
140°	43.1	42.2	40.3	38.5	35.7	32.4	28.7	25.0	21.3	17.1	13.4
142.5°	37.5	36.6	35.2	33.4	31.0	28.3	25.0	21.8	18.1	14.8	11.6
145°	32.4	32.0	30.6	28.7	26.9	24.1	21.3	18.5	15.3	12.5	9.3
147.5°	27.3	26.9	25.9	24.6	22.7	20.4	18.1	15.3	13.0	10.2	7.4
150°	22.7	22.2	21.8	19.9	19.0	16.7	14.8	12.5	10.7	7.9	6.0
152.5°	18.5	18.5	17.6	16.2	15.3	13.4	12.0	10.2	8.3	6.5	4.6
155°	14.8	14.4	13.9	13.0	12.0	10.7	9.3	7.9	6.5	4.6	3.2
157.5°	11.6	11.1	10.7	9.7	8.8	8.3	6.9	5.6	4.2	3.2	2.3
160°	8.3	7.9	7.4	6.9	6.5	5.6	4.6	3.7	2.8	1.9	1.4
162.5°	5.6	5.1	5.1	4.6	4.2	3.2	2.8	2.3	1.9	1.4	0.9
165°	2.8	2.8	2.3	2.3	1.9	1.4	1.4	1.4	0.9	0.9	0.5
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: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	439.2	439.2	439.2	439.2	439.2	439.2	439.2
2.5°	436.8	436.8	438.7	438.2	436.8	439.6	442.9
5°	435.5	435.5	436.8	436.8	435.5	438.2	441.0
7.5°	433.1	432.7	434.1	434.1	432.2	434.5	437.8
10°	429.0	428.5	429.9	429.9	428.0	430.4	433.1
12.5°	424.3	423.4	424.8	424.3	422.5	424.8	427.6
15°	418.3	417.9	418.8	417.9	416.0	418.3	421.1
17.5°	412.3	410.9	411.4	411.4	408.1	410.4	412.8
20°	404.4	402.6	403.0	402.6	400.3	401.6	404.4
22.5°	396.5	393.8	393.8	393.3	390.5	392.4	394.7
25°	386.8	383.6	383.6	383.1	379.9	381.3	383.6
27.5°	377.1	373.8	372.5	372.0	368.8	368.8	372.0
30°	366.9	362.3	361.3	359.9	356.7	356.7	359.5
32.5°	357.2	350.7	348.8	347.0	343.7	343.3	346.5
35°	344.2	339.1	335.9	334.0	330.3	329.4	332.2
37.5°	333.5	327.1	322.4	320.1	316.4	315.0	318.7
40°	322.0	315.0	309.0	307.6	302.0	300.2	303.4
42.5°	309.0	301.6	295.6	292.8	288.6	286.8	287.2
45°	296.0	288.1	281.7	278.0	273.8	270.5	272.4
47.5°	282.6	275.6	267.8	262.2	257.1	254.8	255.7
50°	269.2	260.8	253.4	247.4	241.4	238.6	240.4
52.5°	255.7	246.9	238.6	232.1	225.1	222.4	222.8
55°	242.7	233.5	223.8	216.8	210.3	206.1	205.2
57.5°	229.8	219.6	209.4	201.5	193.2	189.5	188.1
60°	215.9	205.2	194.6	185.3	176.5	172.3	170.5
62.5°	202.9	191.3	179.3	169.6	160.7	155.2	153.8
65°	190.4	177.0	164.9	153.8	144.1	138.0	136.2
67.5°	177.0	163.1	150.1	138.0	128.8	120.9	120.0
70°	164.5	149.6	135.3	122.8	112.6	104.7	101.0
72.5°	151.9	136.7	121.8	108.4	95.4	88.0	85.2
75°	139.9	124.2	108.4	94.5	80.1	71.3	68.6
77.5°	128.8	112.6	95.9	80.6	67.2	56.1	52.3
80°	118.1	101.5	83.8	68.1	53.7	41.7	37.5
82.5°	107.0	91.3	73.2	56.5	41.7	29.2	24.1
85°	97.3	81.5	63.5	46.8	32.0	18.5	13.0
87.5°	89.4	72.3	56.1	39.4	24.1	10.7	3.7
90°	81.5	64.9	48.6	32.4	18.1	6.0	0.5
92.5°	74.6	58.8	42.6	27.8	13.9	4.2	0.5
95°	68.1	52.8	37.5	23.2	11.1	2.8	0.5
97.5°	62.1	47.7	33.4	19.9	9.3	2.3	0.5
100°	57.0	43.1	29.6	17.6	7.9	1.9	0.5
102.5°	51.9	38.9	26.4	15.3	6.9	1.4	0.5
105°	47.7	35.2	23.6	13.9	6.0	1.4	0.5
107.5°	43.5	32.0	21.3	12.0	5.1	0.9	0.5
110°	39.4	29.2	19.0	10.7	4.6	0.9	0.5



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-23SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	36.1	26.4	17.1	9.7	3.7	0.9	0.5
115°	32.9	23.6	15.3	8.3	3.2	0.5	0.5
117.5°	29.6	21.3	13.4	7.4	2.8	0.5	0.5
120°	26.9	19.0	12.0	6.5	2.3	0.5	0.5
122.5°	24.1	17.1	10.7	5.6	1.9	0.5	0.5
125°	21.8	15.3	9.3	4.6	1.4	0.5	0.5
127.5°	19.5	13.4	8.3	4.2	1.4	0.5	0.5
130°	17.1	12.0	6.9	3.2	0.9	0.5	0.5
132.5°	15.3	10.2	6.0	2.8	0.9	0.5	0.5
135°	13.4	8.8	5.1	1.9	0.9	0.5	0.5
137.5°	11.6	7.4	4.2	1.4	0.5	0.5	0.5
140°	9.7	6.5	3.2	1.4	0.5	0.5	0.5
142.5°	8.3	5.1	2.3	0.9	0.5	0.5	0.5
145°	6.5	4.2	1.9	0.9	0.5	0.5	0.5
147.5°	5.1	3.2	1.4	0.9	0.5	0.5	0.5
150°	3.7	2.3	1.4	0.5	0.5	0.5	0.5
152.5°	2.8	1.9	0.9	0.5	0.5	0.5	0.5
155°	1.9	1.4	0.9	0.5	0.5	0.5	0.5
157.5°	1.4	0.9	0.5	0.5	0.5	0.5	0.5
160°	0.9	0.5	0.5	0.5	0.5	0.5	0.5
162.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5
165°	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)