

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-LD5-54HL-LW-UNV-L940-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-LD5-54HL-LW-UNV-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WIDE FROSTED LENS
Light Source: -
Ballast/Driver: -

Summary

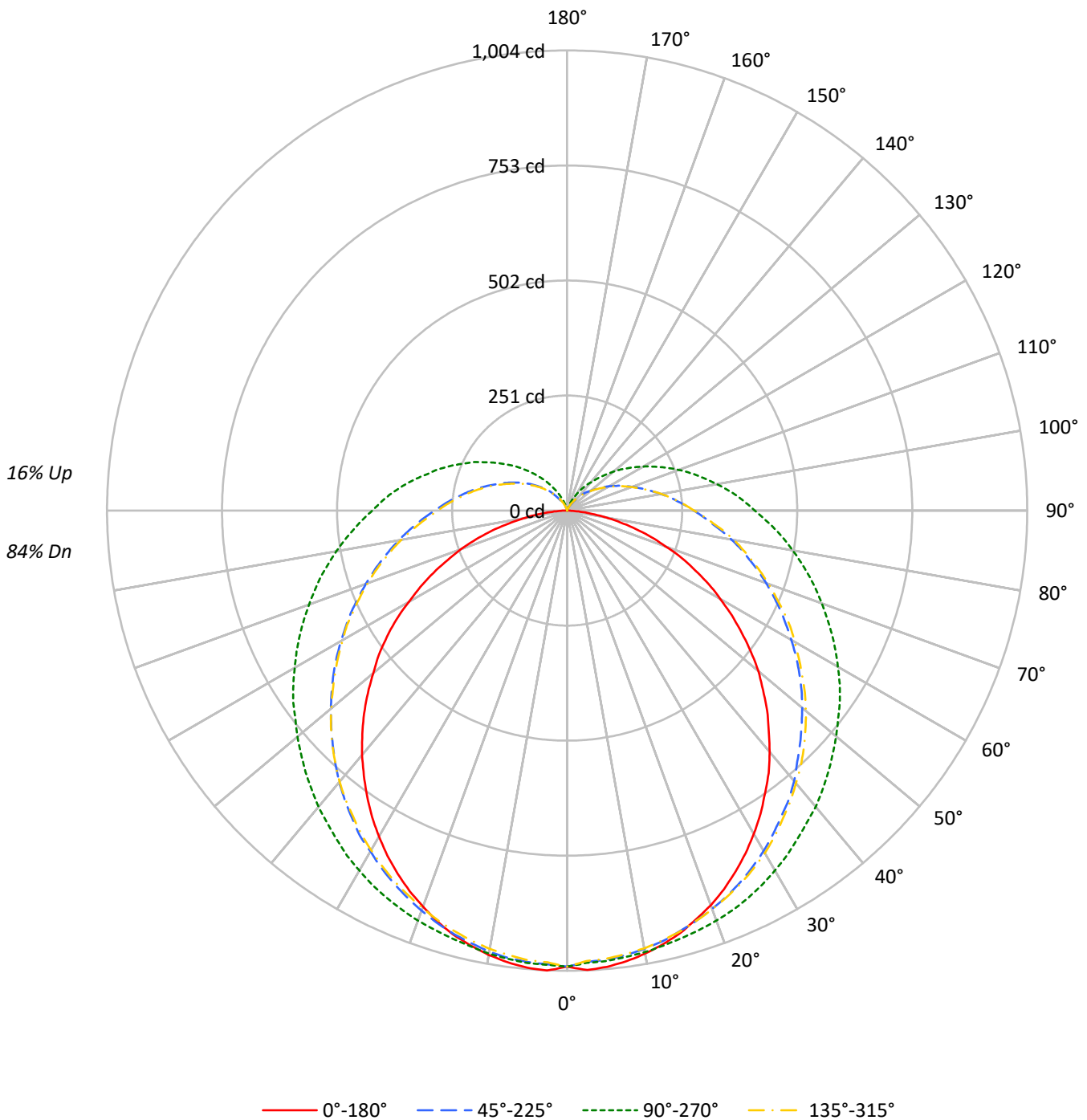
Lumens per Lamp: N/A
Luminaire Lumens: 4322.9 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.36 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Semi-Direct

Input Watts (W): 43
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



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	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°	8041	8041	8041	8041
5°	8083	7749	8100	7782
10°	8009	7528	8034	7553
15°	7916	7340	7951	7348
20°	7791	7203	7818	7203
25°	7638	7081	7684	7073
30°	7466	6955	7523	6955
35°	7265	6838	7347	6846
40°	7067	6770	7153	6770
45°	6840	6698	6944	6706
50°	6602	6655	6692	6674
55°	6271	6662	6470	6691
60°	5923	6682	6116	6723
65°	5530	6749	5774	6816
70°	4978	6873	5368	6971
75°	4342	7098	4753	7234
80°	3360	7431	3819	7603
85°	2009	7965	2507	8186



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.3	2.2
10°-20°	270.9	6.3
20°-30°	415.4	9.6
30°-40°	512.4	11.9
40°-50°	555.9	12.9
50°-60°	547.9	12.7
60°-70°	495.4	11.5
70°-80°	412.7	9.5
80°-90°	319.7	7.4
90°-100°	242.4	5.6
100°-110°	179.4	4.1
110°-120°	124.8	2.9
120°-130°	79.6	1.8
130°-140°	44.7	1.0
140°-150°	20.4	0.5
150°-160°	6.3	0.1
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	780.5	18.1
0°-40°	1292.9	29.9
0°-60°	2396.8	55.4
0°-90°	3624.5	83.8
90°-120°	546.6	12.6
90°-150°	691.3	16.0
90°-180°	698.0	16.1
0°-180°	4322.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	995	995	995	995	995	
5°	999	987	1001	991	999	95
15°	954	966	958	967	954	269
25°	869	933	874	932	869	400
35°	753	875	761	876	753	471
45°	617	806	627	807	617	475
55°	465	726	480	730	465	416
65°	309	637	322	643	309	306
75°	155	546	170	556	155	164
85°	29	454	37	467	29	36
90°	1	409	2	425	1	2
95°	1	372	1	389	1	1
105°	1	295	1	313	1	1
115°	1	225	1	245	1	1
125°	1	162	1	180	1	1
135°	1	105	1	124	1	1
145°	1	61	1	74	1	1
155°	1	25	1	35	1	0
165°	1	4	1	6	1	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0
2.5°	1003.4	1003.4	1002.4	1000.3	1001.3	1004.5	1002.4	997.1	994.0	985.6	987.7
5°	999.2	999.2	998.2	996.1	997.1	1001.3	999.2	995.0	990.8	983.5	986.6
7.5°	991.9	991.9	990.8	988.7	990.8	995.0	992.9	988.7	985.6	978.2	981.4
10°	981.4	982.4	981.4	978.2	982.4	986.6	985.6	980.3	977.2	970.9	974.0
12.5°	968.8	969.8	968.8	967.7	969.8	976.1	974.0	969.8	967.7	962.5	965.6
15°	954.1	955.1	953.0	953.0	955.1	961.4	961.4	957.2	955.1	949.9	956.2
17.5°	935.2	936.2	935.2	935.2	937.3	943.6	944.6	942.5	940.4	938.3	944.6
20°	916.3	915.3	915.3	914.2	918.4	927.9	926.8	926.8	924.7	924.7	932.1
22.5°	894.3	894.3	893.2	893.2	898.5	906.9	906.9	909.0	906.9	911.1	917.4
25°	869.1	870.1	869.1	871.2	875.4	884.8	885.9	889.0	890.1	894.3	901.6
27.5°	842.8	843.9	842.8	844.9	852.3	859.6	864.9	869.1	870.1	876.4	885.9
30°	814.5	814.5	815.5	817.6	826.0	837.6	841.8	847.0	847.0	857.5	867.0
32.5°	785.1	785.1	785.1	789.3	798.8	812.4	817.6	823.9	826.0	836.5	847.0
35°	752.6	753.6	753.6	756.8	769.4	783.0	790.4	797.7	801.9	814.5	825.0
37.5°	722.1	724.2	721.1	725.3	743.1	754.7	763.1	770.4	777.8	794.6	802.9
40°	687.5	689.6	688.5	696.9	711.6	726.3	735.8	743.1	753.6	770.4	779.9
42.5°	650.8	652.9	655.0	664.4	680.1	694.8	706.4	715.8	728.4	743.1	758.9
45°	617.2	617.2	620.3	631.9	648.7	664.4	678.0	688.5	703.2	719.0	734.7
47.5°	579.4	580.4	584.6	598.3	616.1	635.0	647.6	661.3	677.0	693.8	711.6
50°	544.7	544.7	551.0	565.7	582.5	603.5	617.2	632.9	649.7	669.6	687.5
52.5°	504.9	507.0	516.4	530.1	552.1	571.0	586.7	603.5	623.5	644.5	664.4
55°	465.0	469.2	476.5	495.4	518.5	536.3	555.2	576.2	595.1	618.2	641.3
57.5°	426.1	429.3	440.8	459.7	483.9	505.9	525.9	545.8	568.9	592.0	616.1
60°	386.3	390.5	404.1	423.0	449.2	472.3	495.4	516.4	540.5	564.7	589.9
62.5°	348.5	351.6	367.4	389.4	415.6	440.8	463.9	489.1	515.4	538.4	563.6
65°	308.6	313.8	331.7	351.6	382.1	407.2	433.5	460.8	488.1	513.3	537.4
67.5°	271.8	275.0	293.9	317.0	347.4	375.8	403.0	432.4	460.8	487.0	511.2
70°	228.8	239.3	258.2	282.3	314.9	344.3	373.7	404.1	434.5	461.8	484.9
72.5°	193.1	201.5	222.5	248.8	280.2	314.9	345.3	377.9	408.3	436.6	460.8
75°	155.3	163.7	187.9	217.3	249.8	286.5	318.0	351.6	383.1	411.4	436.6
77.5°	118.6	129.1	155.3	185.8	221.5	259.3	291.8	325.4	357.9	388.4	413.5
80°	85.0	96.6	124.9	159.5	194.2	232.0	267.6	301.2	333.8	364.2	390.5
82.5°	54.6	67.2	97.6	132.3	169.0	206.8	243.5	277.1	309.6	340.1	367.4
85°	29.4	43.0	74.5	109.2	145.9	183.7	220.4	256.1	287.6	315.9	345.3
87.5°	8.4	25.2	55.6	90.3	128.1	162.7	198.4	234.1	265.6	296.0	322.2
90°	1.0	14.7	42.0	74.5	111.3	144.8	180.5	214.1	245.6	276.0	302.3
92.5°	1.0	9.4	32.5	61.9	95.5	130.2	165.8	198.4	227.8	258.2	284.4
95°	1.0	7.3	26.2	52.5	84.0	116.5	150.1	181.6	212.0	240.4	266.6
97.5°	1.0	5.2	21.0	45.1	73.5	103.9	136.4	167.9	197.3	224.6	248.8
100°	1.0	4.2	16.8	38.8	64.0	93.4	122.8	153.2	181.6	207.8	233.0
102.5°	1.0	3.1	14.7	32.5	56.7	82.9	111.3	139.6	166.9	192.1	217.3
105°	1.0	3.1	12.6	28.3	50.4	74.5	100.8	128.1	153.2	177.4	200.5
107.5°	1.0	2.1	10.5	24.1	44.1	67.2	91.3	117.6	140.6	163.7	185.8
110°	1.0	2.1	8.4	22.0	38.8	59.8	82.9	107.1	129.1	151.1	172.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.0	2.1	7.3	18.9	33.6	53.5	74.5	96.6	117.6	139.6	158.5
115°	1.0	2.1	6.3	16.8	31.5	46.2	67.2	87.1	108.1	128.1	145.9
117.5°	1.0	2.1	5.2	13.6	27.3	42.0	58.8	78.7	97.6	116.5	133.3
120°	1.0	2.1	4.2	12.6	24.1	37.8	52.5	70.3	88.2	106.0	123.9
122.5°	1.0	1.0	4.2	10.5	21.0	33.6	48.3	61.9	78.7	95.5	111.3
125°	1.0	1.0	4.2	9.4	17.8	30.4	43.0	55.6	70.3	85.0	98.7
127.5°	1.0	1.0	3.1	7.3	15.7	26.2	37.8	51.4	61.9	75.6	89.2
130°	1.0	1.0	3.1	6.3	13.6	22.0	33.6	45.1	57.7	67.2	78.7
132.5°	1.0	1.0	3.1	5.2	10.5	17.8	28.3	38.8	50.4	60.9	70.3
135°	1.0	1.0	2.1	4.2	8.4	14.7	23.1	32.5	44.1	54.6	64.0
137.5°	1.0	1.0	2.1	4.2	6.3	12.6	17.8	26.2	36.7	46.2	55.6
140°	1.0	1.0	2.1	3.1	5.2	9.4	14.7	21.0	29.4	37.8	48.3
142.5°	1.0	1.0	1.0	3.1	4.2	7.3	11.5	16.8	23.1	30.4	38.8
145°	1.0	1.0	1.0	3.1	4.2	5.2	9.4	13.6	17.8	23.1	30.4
147.5°	1.0	1.0	1.0	2.1	3.1	4.2	7.3	10.5	13.6	17.8	22.0
150°	1.0	1.0	1.0	2.1	3.1	4.2	5.2	7.3	10.5	14.7	17.8
152.5°	1.0	1.0	1.0	2.1	2.1	3.1	4.2	5.2	7.3	10.5	12.6
155°	1.0	1.0	1.0	1.0	2.1	3.1	4.2	4.2	5.2	7.3	9.4
157.5°	1.0	1.0	1.0	1.0	2.1	2.1	3.1	3.1	4.2	4.2	6.3
160°	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1	3.1	3.1	3.1
162.5°	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	2.1	3.1	3.1
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	2.1
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0
2.5°	987.7	988.7	991.9	991.9	989.8	989.8	988.7	987.7	988.7	990.8	990.8
5°	985.6	986.6	989.8	990.8	988.7	987.7	987.7	986.6	987.7	989.8	989.8
7.5°	981.4	982.4	985.6	986.6	984.5	984.5	983.5	982.4	984.5	985.6	985.6
10°	975.1	976.1	980.3	981.4	980.3	979.3	979.3	978.2	979.3	981.4	981.4
12.5°	966.7	968.8	974.0	974.0	974.0	973.0	973.0	971.9	973.0	975.1	974.0
15°	957.2	961.4	965.6	967.7	967.7	967.7	966.7	965.6	967.7	968.8	967.7
17.5°	946.7	952.0	958.3	960.4	960.4	961.4	960.4	959.3	961.4	961.4	960.4
20°	936.2	941.5	947.8	949.9	952.0	953.0	953.0	952.0	953.0	954.1	953.0
22.5°	922.6	928.9	936.2	939.4	941.5	943.6	943.6	943.6	944.6	945.7	943.6
25°	907.9	915.3	923.7	926.8	931.0	932.1	933.1	933.1	934.2	935.2	932.1
27.5°	892.2	900.6	909.0	914.2	917.4	919.5	919.5	920.5	921.6	922.6	919.5
30°	873.3	885.9	893.2	897.4	901.6	904.8	905.8	906.9	907.9	909.0	905.8
32.5°	856.5	867.0	876.4	881.7	886.9	891.1	892.2	892.2	894.3	894.3	891.1
35°	836.5	849.1	858.6	863.8	870.1	873.3	875.4	875.4	877.5	877.5	874.3
37.5°	816.6	829.2	839.7	846.0	853.3	857.5	858.6	858.6	860.7	860.7	856.5
40°	795.6	809.2	820.8	828.1	834.4	839.7	840.7	843.9	843.9	842.8	838.6
42.5°	774.6	787.2	799.8	808.2	816.6	821.8	823.9	825.0	825.0	823.9	820.8
45°	751.5	766.2	777.8	788.3	796.7	801.9	805.0	806.1	806.1	804.0	800.9
47.5°	729.5	744.2	755.7	767.3	775.7	782.0	785.1	786.2	785.1	784.1	780.9
50°	706.4	723.2	734.7	746.3	754.7	759.9	765.2	766.2	765.2	764.1	757.8
52.5°	682.2	700.1	712.7	724.2	733.7	740.0	744.2	745.2	745.2	743.1	738.9
55°	658.1	673.8	689.6	702.2	712.7	719.0	724.2	726.3	724.2	722.1	716.9
57.5°	636.1	650.8	666.5	680.1	690.6	699.0	703.2	705.3	703.2	700.1	694.8
60°	609.8	625.6	643.4	656.0	667.6	675.9	678.0	682.2	680.1	677.0	671.7
62.5°	584.6	603.5	619.3	635.0	644.5	653.9	658.1	660.2	658.1	655.0	649.7
65°	558.4	579.4	595.1	610.9	621.4	630.8	636.1	637.1	635.0	631.9	626.6
67.5°	534.3	554.2	571.0	587.8	597.2	606.7	611.9	614.0	611.9	607.7	602.5
70°	510.1	530.1	550.0	562.6	574.1	584.6	587.8	590.9	588.8	584.6	578.3
72.5°	486.0	507.0	526.9	539.5	552.1	561.5	565.7	568.9	566.8	562.6	555.2
75°	460.8	482.8	502.8	516.4	529.0	538.4	542.6	545.8	543.7	539.5	531.1
77.5°	437.7	459.7	478.6	493.3	505.9	514.3	521.7	522.7	520.6	516.4	508.0
80°	413.5	435.6	455.5	470.2	482.8	491.2	496.5	499.6	497.5	493.3	484.9
82.5°	392.6	412.5	432.4	447.1	459.7	470.2	474.4	477.6	476.5	470.2	463.9
85°	369.5	392.6	408.3	424.0	436.6	447.1	450.3	454.5	453.4	448.2	439.8
87.5°	346.4	369.5	388.4	404.1	415.6	424.0	429.3	431.4	430.3	425.1	415.6
90°	327.5	348.5	367.4	384.2	393.6	403.0	408.3	409.3	409.3	403.0	395.7
92.5°	309.6	329.6	348.5	364.2	375.8	384.2	388.4	390.5	389.4	384.2	375.8
95°	289.7	311.7	329.6	345.3	356.9	365.3	369.5	371.6	370.5	365.3	356.9
97.5°	272.9	292.8	310.7	325.4	336.9	345.3	349.5	351.6	351.6	346.4	338.0
100°	256.1	276.0	292.8	307.5	318.0	326.4	330.6	331.7	330.6	326.4	318.0
102.5°	239.3	258.2	275.0	288.6	300.2	307.5	311.7	312.8	312.8	307.5	299.1
105°	222.5	241.4	257.2	271.8	281.3	288.6	291.8	294.9	293.9	289.7	281.3
107.5°	206.8	225.7	240.4	254.0	263.5	270.8	273.9	277.1	276.0	271.8	263.5
110°	192.1	209.9	223.6	237.2	245.6	253.0	258.2	259.3	257.2	253.0	245.6



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	178.4	194.2	207.8	220.4	229.9	235.1	239.3	241.4	239.3	235.1	229.9
115°	163.7	179.5	193.1	204.7	213.1	219.4	222.5	224.6	222.5	218.3	213.1
117.5°	150.1	164.8	178.4	190.0	197.3	202.6	205.7	207.8	205.7	202.6	197.3
120°	138.5	151.1	163.7	174.2	182.6	186.8	190.0	192.1	191.0	186.8	181.6
122.5°	124.9	138.5	150.1	160.6	167.9	172.1	174.2	176.3	175.3	172.1	166.9
125°	113.4	124.9	136.4	145.9	153.2	157.4	159.5	161.6	160.6	157.4	151.1
127.5°	100.8	113.4	122.8	132.3	137.5	143.8	144.8	146.9	145.9	142.7	137.5
130°	91.3	100.8	110.2	118.6	124.9	129.1	131.2	132.3	130.2	128.1	122.8
132.5°	79.8	90.3	98.7	106.0	110.2	114.4	116.5	117.6	117.6	114.4	110.2
135°	71.4	78.7	86.1	93.4	97.6	101.8	103.9	105.0	103.9	101.8	97.6
137.5°	64.0	70.3	75.6	81.9	87.1	89.2	91.3	91.3	90.3	89.2	86.1
140°	55.6	63.0	68.2	72.4	76.6	77.7	79.8	79.8	78.7	77.7	75.6
142.5°	47.2	53.5	58.8	64.0	67.2	69.3	70.3	71.4	70.3	69.3	66.1
145°	37.8	45.1	50.4	53.5	57.7	58.8	59.8	60.9	59.8	58.8	55.6
147.5°	29.4	35.7	40.9	45.1	48.3	49.3	50.4	51.4	50.4	48.3	47.2
150°	21.0	26.2	32.5	36.7	38.8	40.9	40.9	40.9	42.0	39.9	37.8
152.5°	16.8	18.9	23.1	27.3	30.4	31.5	32.5	32.5	31.5	31.5	29.4
155°	11.5	13.6	16.8	19.9	23.1	24.1	25.2	25.2	24.1	24.1	23.1
157.5°	7.3	9.4	11.5	13.6	16.8	17.8	18.9	18.9	18.9	17.8	16.8
160°	4.2	5.2	6.3	8.4	10.5	11.5	12.6	12.6	12.6	12.6	11.5
162.5°	3.1	3.1	3.1	4.2	5.2	6.3	7.3	7.3	7.3	7.3	6.3
165°	2.1	2.1	2.1	2.1	2.1	3.1	4.2	4.2	4.2	4.2	4.2
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-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0
2.5°	989.8	989.8	990.8	988.7	982.4	983.5	983.5	987.7	989.8	990.8	996.1
5°	987.7	987.7	989.8	986.6	981.4	981.4	981.4	985.6	986.6	988.7	992.9
7.5°	984.5	984.5	985.6	982.4	976.1	976.1	975.1	979.3	981.4	982.4	986.6
10°	979.3	979.3	980.3	977.2	969.8	969.8	968.8	971.9	973.0	975.1	978.2
12.5°	971.9	971.9	971.9	968.8	961.4	960.4	959.3	962.5	962.5	963.5	966.7
15°	965.6	963.5	963.5	960.4	953.0	950.9	948.8	949.9	952.0	950.9	953.0
17.5°	958.3	956.2	954.1	950.9	941.5	938.3	936.2	937.3	936.2	935.2	937.3
20°	949.9	946.7	945.7	940.4	931.0	925.8	921.6	919.5	920.5	917.4	918.4
22.5°	940.4	936.2	934.2	927.9	918.4	912.1	906.9	902.7	901.6	897.4	898.5
25°	928.9	923.7	920.5	915.3	904.8	897.4	891.1	884.8	881.7	876.4	875.4
27.5°	915.3	910.0	905.8	900.6	890.1	880.6	873.3	864.9	860.7	854.4	851.2
30°	901.6	895.3	889.0	884.8	873.3	862.8	851.2	843.9	837.6	830.2	825.0
32.5°	884.8	878.5	872.2	865.9	855.4	842.8	833.4	821.8	814.5	806.1	799.8
35°	868.0	859.6	853.3	844.9	835.5	820.8	809.2	797.7	788.3	778.8	771.5
37.5°	849.1	842.8	833.4	826.0	814.5	799.8	787.2	772.5	764.1	751.5	742.1
40°	831.3	823.9	814.5	805.0	793.5	776.7	763.1	746.3	736.8	722.1	712.7
42.5°	813.4	802.9	793.5	783.0	770.4	754.7	737.9	721.1	708.5	694.8	681.2
45°	793.5	782.0	770.4	758.9	746.3	730.5	712.7	694.8	679.1	666.5	649.7
47.5°	772.5	761.0	747.3	734.7	721.1	705.3	686.4	667.6	650.8	636.1	618.2
50°	751.5	740.0	725.3	711.6	695.9	680.1	660.2	638.2	620.3	601.4	585.7
52.5°	729.5	717.9	704.3	686.4	669.6	653.9	632.9	609.8	589.9	574.1	554.2
55°	707.4	695.9	680.1	662.3	645.5	625.6	605.6	582.5	560.5	541.6	521.7
57.5°	684.3	673.8	656.0	641.3	620.3	599.3	578.3	556.3	532.2	510.1	487.0
60°	661.3	649.7	632.9	615.1	594.1	573.1	551.0	526.9	501.7	477.6	456.6
62.5°	640.3	625.6	609.8	590.9	568.9	548.9	523.8	497.5	472.3	447.1	421.9
65°	616.1	600.4	585.7	566.8	543.7	520.6	495.4	469.2	441.9	414.6	389.4
67.5°	592.0	576.2	560.5	541.6	517.5	493.3	467.1	440.8	410.4	384.2	354.8
70°	567.8	555.2	535.3	515.4	493.3	467.1	440.8	412.5	381.0	352.7	322.2
72.5°	543.7	531.1	511.2	490.2	469.2	441.9	413.5	385.2	355.8	323.3	290.7
75°	520.6	504.9	487.0	467.1	445.0	416.7	388.4	359.0	324.3	293.9	260.3
77.5°	498.6	483.9	466.0	444.0	419.8	392.6	363.2	332.7	298.1	265.6	228.8
80°	474.4	459.7	441.9	419.8	395.7	369.5	338.0	306.5	272.9	237.2	199.4
82.5°	451.3	437.7	417.7	397.8	371.6	345.3	313.8	282.3	246.7	212.0	175.3
85°	427.2	413.5	394.7	373.7	348.5	320.1	290.7	259.3	223.6	187.9	151.1
87.5°	406.2	390.5	371.6	350.6	325.4	298.1	269.7	236.2	201.5	166.9	129.1
90°	384.2	369.5	350.6	329.6	304.4	277.1	247.7	216.2	182.6	146.9	111.3
92.5°	365.3	349.5	331.7	310.7	285.5	259.3	229.9	198.4	165.8	131.2	96.6
95°	346.4	330.6	313.8	292.8	267.6	241.4	212.0	181.6	150.1	116.5	84.0
97.5°	325.4	311.7	294.9	275.0	249.8	224.6	196.3	166.9	136.4	103.9	73.5
100°	308.6	292.8	277.1	256.1	233.0	208.9	180.5	152.2	122.8	92.4	64.0
102.5°	289.7	275.0	259.3	239.3	216.2	192.1	165.8	138.5	111.3	82.9	55.6
105°	271.8	258.2	241.4	222.5	200.5	177.4	152.2	127.0	100.8	73.5	49.3
107.5°	254.0	240.4	224.6	206.8	185.8	162.7	139.6	114.4	90.3	66.1	44.1
110°	236.2	223.6	208.9	191.0	171.1	150.1	128.1	105.0	80.8	58.8	38.8



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	220.4	207.8	193.1	176.3	157.4	137.5	116.5	94.5	72.4	52.5	33.6
115°	204.7	193.1	178.4	163.7	144.8	126.0	106.0	85.0	65.1	47.2	29.4
117.5°	188.9	177.4	163.7	149.0	132.3	114.4	95.5	75.6	58.8	42.0	26.2
120°	173.2	162.7	150.1	136.4	121.8	103.9	85.0	68.2	52.5	36.7	23.1
122.5°	158.5	149.0	137.5	124.9	109.2	92.4	76.6	61.9	47.2	32.5	18.9
125°	144.8	135.4	124.9	112.3	97.6	82.9	69.3	55.6	40.9	28.3	15.7
127.5°	131.2	121.8	111.3	99.7	88.2	74.5	61.9	49.3	36.7	25.2	13.6
130°	117.6	109.2	99.7	90.3	78.7	66.1	55.6	43.0	31.5	19.9	11.5
132.5°	103.9	97.6	89.2	79.8	69.3	59.8	48.3	37.8	27.3	17.8	10.5
135°	92.4	86.1	78.7	70.3	61.9	52.5	42.0	32.5	23.1	14.7	8.4
137.5°	81.9	76.6	69.3	61.9	54.6	45.1	36.7	27.3	18.9	12.6	6.3
140°	72.4	67.2	60.9	53.5	47.2	38.8	30.4	22.0	16.8	10.5	5.2
142.5°	63.0	57.7	52.5	46.2	39.9	32.5	25.2	18.9	13.6	8.4	5.2
145°	53.5	49.3	44.1	38.8	32.5	26.2	21.0	15.7	10.5	6.3	4.2
147.5°	44.1	40.9	35.7	31.5	26.2	21.0	16.8	12.6	8.4	5.2	3.1
150°	35.7	32.5	28.3	24.1	21.0	16.8	13.6	9.4	6.3	5.2	3.1
152.5°	27.3	25.2	22.0	19.9	16.8	12.6	9.4	7.3	5.2	4.2	2.1
155°	22.0	19.9	17.8	14.7	12.6	9.4	7.3	5.2	4.2	3.1	2.1
157.5°	15.7	14.7	12.6	10.5	8.4	6.3	5.2	5.2	3.1	2.1	1.0
160°	10.5	9.4	8.4	6.3	5.2	5.2	4.2	3.1	2.1	2.1	1.0
162.5°	6.3	5.2	5.2	5.2	4.2	4.2	3.1	2.1	2.1	1.0	1.0
165°	4.2	4.2	4.2	3.1	3.1	3.1	2.1	1.0	1.0	1.0	1.0
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: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0
2.5°	996.1	992.9	997.1	1004.5	1005.5	1004.5	1002.4	1005.5	1009.7	1008.7	1001.3
5°	994.0	989.8	994.0	1001.3	1001.3	1000.3	999.2	1002.4	1006.6	1005.5	999.2
7.5°	987.7	983.5	987.7	994.0	995.0	992.9	992.9	996.1	1000.3	999.2	994.0
10°	979.3	975.1	977.2	984.5	986.6	984.5	984.5	987.7	992.9	991.9	985.6
12.5°	966.7	963.5	965.6	971.9	974.0	973.0	971.9	976.1	981.4	981.4	975.1
15°	953.0	948.8	950.9	958.3	959.3	957.2	958.3	961.4	967.7	967.7	962.5
17.5°	937.3	932.1	935.2	940.4	941.5	941.5	941.5	945.7	953.0	952.0	947.8
20°	919.5	912.1	914.2	919.5	921.6	921.6	921.6	928.9	934.2	934.2	930.0
22.5°	898.5	893.2	893.2	898.5	901.6	900.6	900.6	906.9	914.2	913.2	913.2
25°	874.3	870.1	868.0	874.3	875.4	876.4	878.5	884.8	893.2	893.2	894.3
27.5°	849.1	844.9	843.9	849.1	850.2	851.2	853.3	860.7	869.1	870.1	872.2
30°	825.0	818.7	816.6	820.8	822.9	823.9	823.9	835.5	842.8	846.0	850.2
32.5°	796.7	790.4	785.1	792.5	793.5	795.6	796.7	808.2	816.6	821.8	828.1
35°	768.3	757.8	755.7	761.0	763.1	764.1	766.2	778.8	790.4	794.6	802.9
37.5°	736.8	729.5	723.2	728.4	730.5	731.6	737.9	749.4	761.0	767.3	775.7
40°	707.4	698.0	692.7	695.9	698.0	699.0	706.4	719.0	732.6	740.0	750.5
42.5°	674.9	662.3	658.1	661.3	662.3	665.5	671.7	688.5	702.2	712.7	721.1
45°	642.4	632.9	623.5	626.6	627.7	629.8	639.2	657.1	671.7	684.3	693.8
47.5°	608.8	597.2	587.8	589.9	594.1	595.1	605.6	626.6	640.3	653.9	666.5
50°	575.2	559.4	552.1	552.1	554.2	559.4	573.1	594.1	608.8	624.5	638.2
52.5°	540.5	525.9	517.5	518.5	520.6	526.9	539.5	560.5	577.3	594.1	610.9
55°	505.9	490.2	481.8	479.7	481.8	490.2	504.9	526.9	543.7	563.6	581.5
57.5°	471.3	452.4	445.0	441.9	444.0	454.5	469.2	492.3	513.3	532.2	553.1
60°	433.5	418.8	406.2	398.9	404.1	417.7	433.5	457.6	479.7	500.7	523.8
62.5°	401.0	382.1	368.4	361.1	366.3	377.9	399.9	423.0	447.1	471.3	494.4
65°	364.2	345.3	329.6	322.2	327.5	341.1	363.2	388.4	414.6	438.7	466.0
67.5°	328.5	308.6	289.7	282.3	288.6	303.3	327.5	355.8	384.2	409.3	438.7
70°	293.9	271.8	251.9	246.7	250.9	270.8	293.9	322.2	351.6	381.0	411.4
72.5°	262.4	235.1	214.1	207.8	213.1	235.1	261.4	290.7	322.2	353.7	386.3
75°	225.7	200.5	177.4	170.0	176.3	196.3	228.8	260.3	293.9	327.5	357.9
77.5°	196.3	166.9	142.7	131.2	141.7	166.9	198.4	232.0	266.6	301.2	335.9
80°	165.8	135.4	109.2	96.6	108.1	135.4	166.9	203.6	242.5	277.1	308.6
82.5°	138.5	106.0	78.7	65.1	77.7	108.1	142.7	179.5	217.3	251.9	288.6
85°	113.4	79.8	51.4	36.7	54.6	81.9	118.6	156.4	195.2	230.9	266.6
87.5°	92.4	59.8	31.5	15.7	33.6	64.0	98.7	136.4	175.3	211.0	244.6
90°	75.6	43.0	16.8	2.1	19.9	48.3	81.9	118.6	155.3	192.1	225.7
92.5°	61.9	32.5	9.4	1.0	12.6	38.8	70.3	105.0	140.6	176.3	208.9
95°	51.4	25.2	6.3	1.0	9.4	30.4	59.8	93.4	127.0	161.6	194.2
97.5°	44.1	21.0	5.2	1.0	7.3	26.2	51.4	82.9	115.5	148.0	179.5
100°	37.8	16.8	4.2	1.0	6.3	22.0	45.1	73.5	103.9	135.4	165.8
102.5°	32.5	13.6	3.1	1.0	5.2	18.9	39.9	66.1	93.4	123.9	153.2
105°	28.3	11.5	3.1	1.0	4.2	16.8	35.7	58.8	86.1	113.4	141.7
107.5°	24.1	9.4	2.1	1.0	3.1	13.6	31.5	53.5	77.7	103.9	130.2
110°	21.0	8.4	2.1	1.0	3.1	12.6	27.3	48.3	70.3	94.5	119.7



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	17.8	6.3	2.1	1.0	2.1	10.5	24.1	43.0	64.0	86.1	110.2
115°	15.7	5.2	1.0	1.0	2.1	9.4	22.0	38.8	57.7	78.7	100.8
117.5°	12.6	4.2	1.0	1.0	1.0	7.3	18.9	34.6	52.5	72.4	92.4
120°	10.5	4.2	1.0	1.0	1.0	6.3	16.8	30.4	47.2	65.1	84.0
122.5°	9.4	3.1	1.0	1.0	1.0	5.2	14.7	27.3	42.0	58.8	76.6
125°	8.4	3.1	1.0	1.0	1.0	4.2	12.6	24.1	37.8	52.5	69.3
127.5°	6.3	3.1	1.0	1.0	1.0	3.1	11.5	21.0	33.6	47.2	61.9
130°	5.2	2.1	1.0	1.0	1.0	3.1	9.4	18.9	29.4	42.0	55.6
132.5°	4.2	2.1	1.0	1.0	1.0	2.1	7.3	14.7	25.2	36.7	49.3
135°	4.2	2.1	1.0	1.0	1.0	2.1	5.2	12.6	21.0	31.5	42.0
137.5°	4.2	1.0	1.0	1.0	1.0	2.1	4.2	9.4	16.8	25.2	34.6
140°	3.1	1.0	1.0	1.0	1.0	1.0	3.1	7.3	13.6	21.0	29.4
142.5°	3.1	1.0	1.0	1.0	1.0	1.0	3.1	5.2	10.5	16.8	23.1
145°	2.1	1.0	1.0	1.0	1.0	1.0	2.1	4.2	8.4	12.6	18.9
147.5°	2.1	1.0	1.0	1.0	1.0	1.0	2.1	3.1	6.3	10.5	14.7
150°	2.1	1.0	1.0	1.0	1.0	1.0	2.1	3.1	4.2	7.3	11.5
152.5°	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1	5.2	7.3
155°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1	4.2	5.2
157.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1	4.2
160°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1
162.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0
2.5°	998.2	990.8	992.9	991.9	994.0	997.1	997.1	996.1	996.1	994.0	991.9
5°	996.1	988.7	991.9	990.8	992.9	996.1	996.1	995.0	995.0	991.9	990.8
7.5°	989.8	984.5	986.6	986.6	988.7	991.9	991.9	990.8	990.8	987.7	986.6
10°	983.5	977.2	980.3	980.3	982.4	986.6	986.6	985.6	985.6	982.4	981.4
12.5°	973.0	966.7	971.9	973.0	975.1	979.3	978.2	978.2	978.2	975.1	974.0
15°	960.4	956.2	961.4	962.5	965.6	970.9	970.9	970.9	970.9	967.7	966.7
17.5°	946.7	943.6	948.8	950.9	955.1	960.4	960.4	961.4	962.5	960.4	959.3
20°	931.0	928.9	934.2	938.3	944.6	949.9	952.0	953.0	955.1	953.0	952.0
22.5°	913.2	913.2	920.5	924.7	932.1	937.3	940.4	943.6	945.7	943.6	942.5
25°	893.2	896.4	903.7	911.1	919.5	924.7	927.9	932.1	934.2	933.1	932.1
27.5°	874.3	878.5	888.0	895.3	902.7	911.1	914.2	919.5	921.6	921.6	920.5
30°	852.3	858.6	869.1	877.5	886.9	895.3	899.5	904.8	907.9	905.8	906.9
32.5°	831.3	841.8	850.2	859.6	870.1	878.5	883.8	890.1	893.2	892.2	893.2
35°	808.2	818.7	830.2	839.7	852.3	860.7	868.0	873.3	877.5	876.4	876.4
37.5°	783.0	796.7	808.2	820.8	832.3	841.8	849.1	855.4	859.6	859.6	859.6
40°	758.9	773.6	785.1	799.8	814.5	822.9	831.3	837.6	841.8	842.8	843.9
42.5°	732.6	748.4	762.0	777.8	792.5	802.9	812.4	819.7	823.9	826.0	825.0
45°	708.5	723.2	738.9	756.8	770.4	780.9	792.5	800.9	805.0	806.1	807.1
47.5°	681.2	698.0	715.8	733.7	747.3	761.0	771.5	779.9	784.1	787.2	787.2
50°	655.0	672.8	692.7	711.6	726.3	740.0	750.5	759.9	765.2	767.3	768.3
52.5°	630.8	647.6	668.6	687.5	702.2	715.8	729.5	740.0	745.2	747.3	747.3
55°	601.4	622.4	645.5	663.4	679.1	694.8	708.5	719.0	724.2	727.4	729.5
57.5°	574.1	596.2	620.3	639.2	658.1	672.8	685.4	699.0	703.2	707.4	708.5
60°	547.9	569.9	593.0	614.0	632.9	648.7	663.4	674.9	682.2	684.3	686.4
62.5°	520.6	543.7	567.8	588.8	608.8	627.7	641.3	651.8	660.2	663.4	665.5
65°	494.4	518.5	542.6	564.7	585.7	604.6	618.2	628.7	637.1	642.4	643.4
67.5°	466.0	492.3	517.5	540.5	561.5	581.5	595.1	605.6	614.0	620.3	621.4
70°	439.8	467.1	492.3	517.5	538.4	558.4	573.1	583.6	593.0	597.2	599.3
72.5°	414.6	442.9	469.2	494.4	515.4	535.3	551.0	561.5	571.0	576.2	577.3
75°	390.5	418.8	447.1	471.3	493.3	513.3	529.0	540.5	548.9	554.2	556.3
77.5°	366.3	395.7	424.0	448.2	471.3	491.2	504.9	518.5	526.9	533.2	533.2
80°	342.2	372.6	402.0	426.1	449.2	467.1	482.8	496.5	504.9	511.2	511.2
82.5°	321.2	350.6	378.9	403.0	426.1	446.1	461.8	474.4	483.9	488.1	489.1
85°	297.0	329.6	355.8	382.1	404.1	423.0	438.7	452.4	460.8	465.0	467.1
87.5°	277.1	308.6	336.9	360.0	382.1	401.0	418.8	430.3	438.7	444.0	446.1
90°	258.2	288.6	317.0	340.1	363.2	381.0	397.8	409.3	418.8	423.0	425.1
92.5°	241.4	271.8	299.1	322.2	344.3	364.2	380.0	391.5	399.9	404.1	407.2
95°	225.7	255.1	281.3	306.5	327.5	345.3	362.1	373.7	383.1	386.3	389.4
97.5°	209.9	238.3	264.5	288.6	310.7	327.5	343.2	354.8	362.1	367.4	370.5
100°	196.3	223.6	248.8	271.8	292.8	308.6	325.4	335.9	343.2	347.4	351.6
102.5°	181.6	208.9	233.0	255.1	277.1	291.8	307.5	318.0	324.3	331.7	331.7
105°	169.0	194.2	218.3	239.3	258.2	276.0	289.7	300.2	307.5	312.8	312.8
107.5°	155.3	180.5	203.6	225.7	243.5	260.3	272.9	282.3	290.7	293.9	297.0
110°	144.8	166.9	190.0	211.0	227.8	243.5	256.1	266.6	273.9	277.1	279.2



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	132.3	155.3	176.3	196.3	213.1	227.8	240.4	248.8	256.1	260.3	261.4
115°	121.8	143.8	162.7	181.6	199.4	212.0	223.6	232.0	239.3	242.5	244.6
117.5°	112.3	132.3	151.1	166.9	183.7	197.3	208.9	216.2	222.5	226.7	228.8
120°	102.9	121.8	138.5	154.3	170.0	182.6	193.1	200.5	207.8	211.0	211.0
122.5°	93.4	111.3	127.0	141.7	156.4	167.9	179.5	185.8	192.1	195.2	195.2
125°	85.0	101.8	116.5	130.2	143.8	154.3	163.7	171.1	177.4	179.5	179.5
127.5°	76.6	92.4	106.0	118.6	130.2	140.6	150.1	157.4	162.7	164.8	164.8
130°	69.3	82.9	95.5	108.1	119.7	128.1	137.5	143.8	146.9	150.1	151.1
132.5°	61.9	74.5	86.1	96.6	108.1	116.5	123.9	130.2	133.3	136.4	137.5
135°	54.6	66.1	76.6	87.1	96.6	105.0	111.3	116.5	120.7	122.8	123.9
137.5°	46.2	58.8	68.2	76.6	87.1	93.4	100.8	103.9	108.1	110.2	110.2
140°	38.8	48.3	58.8	67.2	75.6	81.9	88.2	93.4	96.6	97.6	97.6
142.5°	31.5	39.9	48.3	58.8	66.1	71.4	77.7	81.9	84.0	85.0	86.1
145°	25.2	31.5	38.8	48.3	56.7	63.0	66.1	70.3	72.4	73.5	74.5
147.5°	18.9	25.2	31.5	37.8	46.2	52.5	55.6	59.8	61.9	63.0	63.0
150°	14.7	18.9	23.1	29.4	35.7	43.0	47.2	50.4	51.4	52.5	52.5
152.5°	10.5	14.7	17.8	22.0	26.2	32.5	38.8	40.9	42.0	43.0	43.0
155°	7.3	10.5	12.6	15.7	18.9	24.1	29.4	32.5	33.6	34.6	34.6
157.5°	5.2	7.3	8.4	11.5	13.6	15.7	19.9	25.2	26.2	26.2	26.2
160°	3.1	4.2	5.2	7.3	8.4	10.5	12.6	15.7	18.9	18.9	18.9
162.5°	2.1	3.1	3.1	4.2	4.2	6.3	7.3	8.4	11.5	12.6	12.6
165°	1.0	2.1	2.1	2.1	2.1	2.1	3.1	3.1	5.2	6.3	6.3
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-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0	995.0
2.5°	992.9	995.0	994.0	994.0	994.0	996.1	994.0	984.5	986.6	988.7	990.8
5°	991.9	992.9	992.9	991.9	991.9	994.0	991.9	982.4	984.5	986.6	987.7
7.5°	987.7	988.7	988.7	988.7	987.7	989.8	986.6	978.2	978.2	980.3	981.4
10°	982.4	984.5	983.5	982.4	982.4	982.4	980.3	970.9	970.9	971.9	973.0
12.5°	976.1	976.1	976.1	975.1	974.0	974.0	971.9	962.5	961.4	963.5	962.5
15°	967.7	969.8	967.7	966.7	964.6	964.6	961.4	952.0	949.9	950.9	949.9
17.5°	960.4	961.4	959.3	957.2	955.1	954.1	950.9	940.4	937.3	938.3	936.2
20°	953.0	953.0	950.9	948.8	945.7	942.5	938.3	927.9	922.6	922.6	918.4
22.5°	943.6	943.6	941.5	938.3	935.2	931.0	926.8	916.3	907.9	905.8	902.7
25°	933.1	932.1	931.0	927.9	921.6	917.4	913.2	901.6	892.2	888.0	882.7
27.5°	920.5	920.5	917.4	914.2	907.9	902.7	897.4	886.9	874.3	869.1	861.7
30°	906.9	906.9	903.7	899.5	893.2	886.9	880.6	868.0	855.4	848.1	839.7
32.5°	893.2	892.2	889.0	884.8	878.5	869.1	863.8	851.2	836.5	828.1	816.6
35°	876.4	875.4	872.2	867.0	858.6	851.2	842.8	831.3	814.5	804.0	791.4
37.5°	859.6	858.6	856.5	849.1	840.7	832.3	821.8	810.3	794.6	780.9	768.3
40°	842.8	841.8	837.6	832.3	821.8	811.3	800.9	789.3	772.5	756.8	743.1
42.5°	825.0	823.9	818.7	812.4	800.9	790.4	777.8	765.2	748.4	729.5	715.8
45°	807.1	805.0	799.8	792.5	779.9	768.3	755.7	741.0	724.2	706.4	688.5
47.5°	788.3	785.1	779.9	769.4	758.9	746.3	731.6	715.8	699.0	679.1	660.2
50°	767.3	765.2	758.9	749.4	736.8	724.2	707.4	691.7	671.7	652.9	629.8
52.5°	747.3	743.1	737.9	727.4	714.8	701.1	683.3	664.4	644.5	626.6	602.5
55°	726.3	724.2	716.9	708.5	692.7	677.0	660.2	640.3	618.2	597.2	574.1
57.5°	706.4	702.2	695.9	684.3	670.7	655.0	637.1	616.1	592.0	569.9	544.7
60°	686.4	680.1	672.8	662.3	647.6	630.8	611.9	589.9	565.7	541.6	515.4
62.5°	664.4	659.2	650.8	640.3	625.6	607.7	587.8	564.7	541.6	516.4	488.1
65°	642.4	637.1	628.7	618.2	603.5	583.6	562.6	539.5	513.3	489.1	458.7
67.5°	620.3	615.1	605.6	594.1	579.4	560.5	538.4	514.3	488.1	461.8	430.3
70°	598.3	592.0	583.6	571.0	556.3	536.3	514.3	489.1	462.9	434.5	403.0
72.5°	576.2	571.0	560.5	548.9	533.2	513.3	491.2	466.0	438.7	409.3	377.9
75°	554.2	547.9	540.5	526.9	510.1	491.2	468.1	442.9	413.5	385.2	352.7
77.5°	532.2	526.9	517.5	503.8	488.1	468.1	445.0	419.8	390.5	361.1	326.4
80°	510.1	503.8	496.5	483.9	466.0	446.1	421.9	396.8	367.4	336.9	302.3
82.5°	488.1	481.8	473.4	460.8	444.0	424.0	401.0	373.7	344.3	312.8	280.2
85°	466.0	460.8	451.3	438.7	420.9	401.0	377.9	353.7	322.2	290.7	258.2
87.5°	444.0	438.7	429.3	416.7	399.9	380.0	356.9	331.7	301.2	271.8	236.2
90°	423.0	418.8	409.3	396.8	380.0	360.0	339.0	311.7	282.3	253.0	219.4
92.5°	404.1	399.9	391.5	378.9	364.2	342.2	321.2	294.9	265.6	235.1	202.6
95°	387.3	382.1	373.7	362.1	344.3	325.4	304.4	278.1	249.8	219.4	187.9
97.5°	368.4	363.2	354.8	342.2	327.5	307.5	286.5	261.4	233.0	204.7	173.2
100°	349.5	344.3	334.8	324.3	309.6	289.7	269.7	244.6	218.3	191.0	160.6
102.5°	330.6	325.4	317.0	306.5	291.8	273.9	254.0	229.9	203.6	176.3	148.0
105°	312.8	307.5	299.1	288.6	275.0	257.2	236.2	215.2	190.0	163.7	136.4
107.5°	294.9	289.7	282.3	271.8	258.2	241.4	221.5	199.4	176.3	151.1	124.9
110°	277.1	272.9	264.5	255.1	241.4	224.6	206.8	185.8	162.7	139.6	114.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	260.3	256.1	247.7	237.2	225.7	209.9	192.1	172.1	150.1	128.1	103.9
115°	243.5	238.3	230.9	221.5	209.9	195.2	178.4	160.6	138.5	117.6	95.5
117.5°	226.7	222.5	215.2	205.7	195.2	180.5	164.8	148.0	127.0	107.1	87.1
120°	209.9	206.8	199.4	191.0	180.5	166.9	152.2	135.4	116.5	97.6	78.7
122.5°	194.2	191.0	183.7	176.3	165.8	153.2	139.6	123.9	107.1	89.2	72.4
125°	179.5	175.3	169.0	161.6	152.2	140.6	127.0	112.3	96.6	80.8	65.1
127.5°	163.7	160.6	156.4	148.0	138.5	128.1	115.5	102.9	88.2	73.5	58.8
130°	151.1	146.9	141.7	135.4	127.0	116.5	105.0	92.4	79.8	66.1	51.4
132.5°	136.4	132.3	128.1	121.8	114.4	105.0	94.5	82.9	71.4	58.8	46.2
135°	122.8	119.7	115.5	109.2	101.8	94.5	84.0	73.5	63.0	51.4	40.9
137.5°	110.2	107.1	102.9	98.7	91.3	84.0	74.5	65.1	55.6	45.1	35.7
140°	97.6	95.5	91.3	87.1	80.8	73.5	65.1	56.7	48.3	38.8	30.4
142.5°	85.0	82.9	79.8	75.6	70.3	64.0	56.7	49.3	40.9	33.6	26.2
145°	73.5	72.4	69.3	65.1	60.9	54.6	48.3	42.0	34.6	28.3	21.0
147.5°	61.9	60.9	58.8	55.6	51.4	46.2	40.9	34.6	29.4	23.1	16.8
150°	51.4	50.4	49.3	45.1	43.0	37.8	33.6	28.3	24.1	17.8	13.6
152.5°	42.0	42.0	39.9	36.7	34.6	30.4	27.3	23.1	18.9	14.7	10.5
155°	33.6	32.5	31.5	29.4	27.3	24.1	21.0	17.8	14.7	10.5	7.3
157.5°	26.2	25.2	24.1	22.0	19.9	18.9	15.7	12.6	9.4	7.3	5.2
160°	18.9	17.8	16.8	15.7	14.7	12.6	10.5	8.4	6.3	4.2	3.1
162.5°	12.6	11.5	11.5	10.5	9.4	7.3	6.3	5.2	4.2	3.1	2.1
165°	6.3	6.3	5.2	5.2	4.2	3.1	3.1	3.1	2.1	2.1	1.0
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: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	995.0	995.0	995.0	995.0	995.0	995.0	995.0
2.5°	989.8	989.8	994.0	992.9	989.8	996.1	1003.4
5°	986.6	986.6	989.8	989.8	986.6	992.9	999.2
7.5°	981.4	980.3	983.5	983.5	979.3	984.5	991.9
10°	971.9	970.9	974.0	974.0	969.8	975.1	981.4
12.5°	961.4	959.3	962.5	961.4	957.2	962.5	968.8
15°	947.8	946.7	948.8	946.7	942.5	947.8	954.1
17.5°	934.2	931.0	932.1	932.1	924.7	930.0	935.2
20°	916.3	912.1	913.2	912.1	906.9	910.0	916.3
22.5°	898.5	892.2	892.2	891.1	884.8	889.0	894.3
25°	876.4	869.1	869.1	868.0	860.7	863.8	869.1
27.5°	854.4	847.0	843.9	842.8	835.5	835.5	842.8
30°	831.3	820.8	818.7	815.5	808.2	808.2	814.5
32.5°	809.2	794.6	790.4	786.2	778.8	777.8	785.1
35°	779.9	768.3	761.0	756.8	748.4	746.3	752.6
37.5°	755.7	741.0	730.5	725.3	716.9	713.7	722.1
40°	729.5	713.7	700.1	696.9	684.3	680.1	687.5
42.5°	700.1	683.3	669.6	663.4	653.9	649.7	650.8
45°	670.7	652.9	638.2	629.8	620.3	613.0	617.2
47.5°	640.3	624.5	606.7	594.1	582.5	577.3	579.4
50°	609.8	590.9	574.1	560.5	546.8	540.5	544.7
52.5°	579.4	559.4	540.5	525.9	510.1	503.8	504.9
55°	550.0	529.0	507.0	491.2	476.5	467.1	465.0
57.5°	520.6	497.5	474.4	456.6	437.7	429.3	426.1
60°	489.1	465.0	440.8	419.8	399.9	390.5	386.3
62.5°	459.7	433.5	406.2	384.2	364.2	351.6	348.5
65°	431.4	401.0	373.7	348.5	326.4	312.8	308.6
67.5°	401.0	369.5	340.1	312.8	291.8	273.9	271.8
70°	372.6	339.0	306.5	278.1	255.1	237.2	228.8
72.5°	344.3	309.6	276.0	245.6	216.2	199.4	193.1
75°	317.0	281.3	245.6	214.1	181.6	161.6	155.3
77.5°	291.8	255.1	217.3	182.6	152.2	127.0	118.6
80°	267.6	229.9	190.0	154.3	121.8	94.5	85.0
82.5°	242.5	206.8	165.8	128.1	94.5	66.1	54.6
85°	220.4	184.7	143.8	106.0	72.4	42.0	29.4
87.5°	202.6	163.7	127.0	89.2	54.6	24.1	8.4
90°	184.7	146.9	110.2	73.5	40.9	13.6	1.0
92.5°	169.0	133.3	96.6	63.0	31.5	9.4	1.0
95°	154.3	119.7	85.0	52.5	25.2	6.3	1.0
97.5°	140.6	108.1	75.6	45.1	21.0	5.2	1.0
100°	129.1	97.6	67.2	39.9	17.8	4.2	1.0
102.5°	117.6	88.2	59.8	34.6	15.7	3.1	1.0
105°	108.1	79.8	53.5	31.5	13.6	3.1	1.0
107.5°	98.7	72.4	48.3	27.3	11.5	2.1	1.0
110°	89.2	66.1	43.0	24.1	10.5	2.1	1.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	81.9	59.8	38.8	22.0	8.4	2.1	1.0
115°	74.5	53.5	34.6	18.9	7.3	1.0	1.0
117.5°	67.2	48.3	30.4	16.8	6.3	1.0	1.0
120°	60.9	43.0	27.3	14.7	5.2	1.0	1.0
122.5°	54.6	38.8	24.1	12.6	4.2	1.0	1.0
125°	49.3	34.6	21.0	10.5	3.1	1.0	1.0
127.5°	44.1	30.4	18.9	9.4	3.1	1.0	1.0
130°	38.8	27.3	15.7	7.3	2.1	1.0	1.0
132.5°	34.6	23.1	13.6	6.3	2.1	1.0	1.0
135°	30.4	19.9	11.5	4.2	2.1	1.0	1.0
137.5°	26.2	16.8	9.4	3.1	1.0	1.0	1.0
140°	22.0	14.7	7.3	3.1	1.0	1.0	1.0
142.5°	18.9	11.5	5.2	2.1	1.0	1.0	1.0
145°	14.7	9.4	4.2	2.1	1.0	1.0	1.0
147.5°	11.5	7.3	3.1	2.1	1.0	1.0	1.0
150°	8.4	5.2	3.1	1.0	1.0	1.0	1.0
152.5°	6.3	4.2	2.1	1.0	1.0	1.0	1.0
155°	4.2	3.1	2.1	1.0	1.0	1.0	1.0
157.5°	3.1	2.1	1.0	1.0	1.0	1.0	1.0
160°	2.1	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)