

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-LD5-48HL-LW-UNV-L950-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-LD5-48HL-LW-UNV-L950-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WIDE FROSTED LENS
Light Source: -
Ballast/Driver: -

Summary

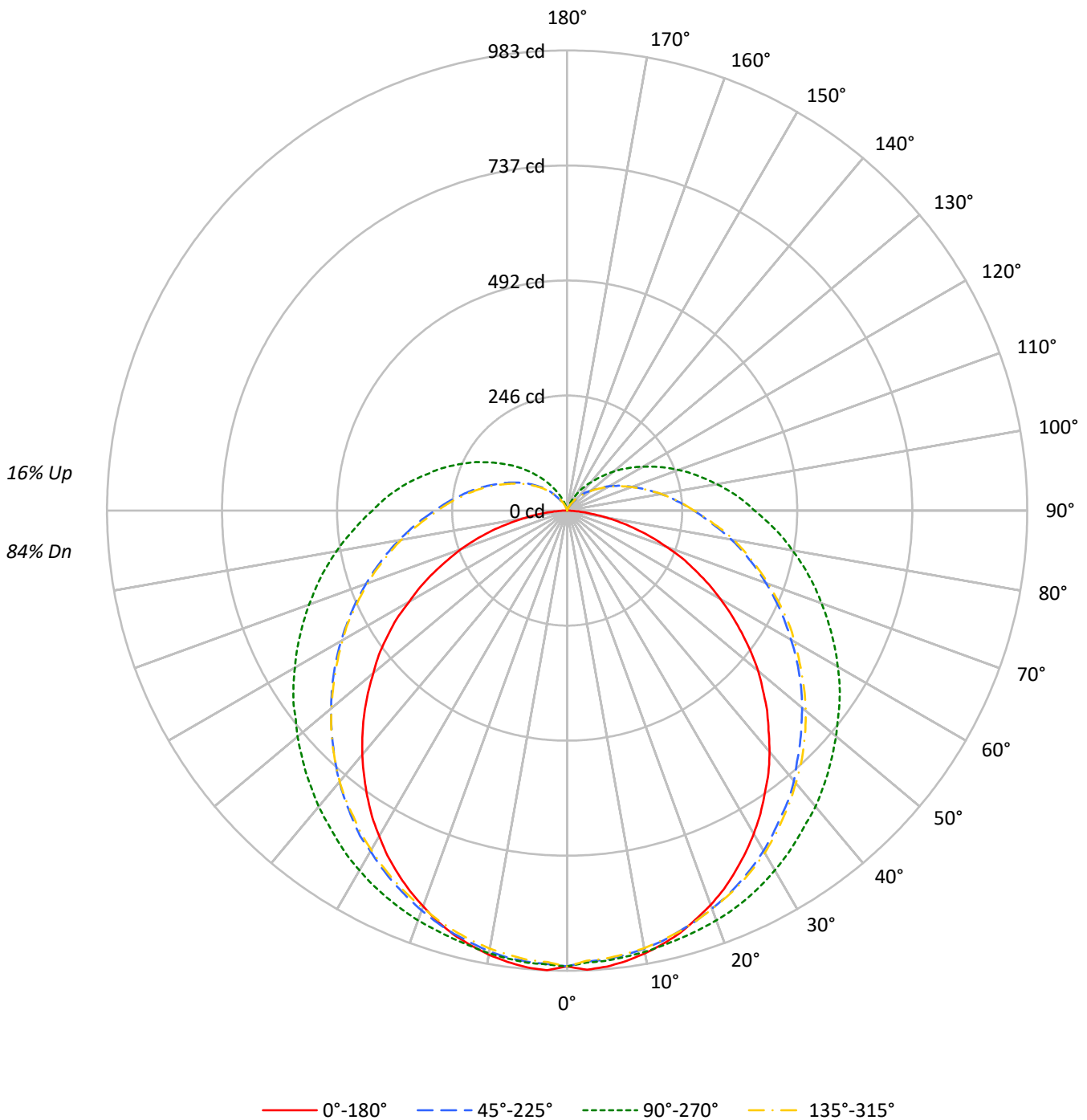
Lumens per Lamp: N/A
Luminaire Lumens: 4230.0 lumens
Efficiency: N/A
Efficacy: 108.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.36 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Semi-Direct

Input Watts (W): 39
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-LD5-48HL-LW-UNV-L950-CD1-U

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	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°	7868	7868	7868	7868
5°	7909	7582	7926	7614
10°	7837	7367	7862	7391
15°	7746	7183	7780	7190
20°	7624	7048	7650	7048
25°	7474	6928	7518	6920
30°	7305	6806	7361	6806
35°	7109	6691	7188	6699
40°	6915	6624	6999	6624
45°	6692	6554	6794	6563
50°	6460	6512	6547	6530
55°	6137	6518	6331	6547
60°	5794	6539	5984	6579
65°	5410	6604	5650	6670
70°	4872	6725	5253	6821
75°	4250	6946	4653	7078
80°	3289	7272	3736	7440
85°	1968	7794	2453	8009



TEST NUMBER: P#

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.2	2.2
10°-20°	265.1	6.3
20°-30°	406.4	9.6
30°-40°	501.4	11.9
40°-50°	544.0	12.9
50°-60°	536.1	12.7
60°-70°	484.7	11.5
70°-80°	403.8	9.5
80°-90°	312.8	7.4
90°-100°	237.2	5.6
100°-110°	175.5	4.1
110°-120°	122.1	2.9
120°-130°	77.9	1.8
130°-140°	43.7	1.0
140°-150°	20.0	0.5
150°-160°	6.2	0.1
160°-170°	0.8	0.0
170°-180°	0.0	0.0
0°-30°	763.7	18.1
0°-40°	1265.1	29.9
0°-60°	2345.2	55.4
0°-90°	3546.6	83.8
90°-120°	534.9	12.6
90°-150°	676.4	16.0
90°-180°	683.0	16.1
0°-180°	4230.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	974	974	974	974	974	
5°	978	965	980	970	978	93
15°	934	945	938	946	934	263
25°	850	913	856	912	850	392
35°	736	856	745	858	736	461
45°	604	789	613	790	604	465
55°	455	711	469	714	455	407
65°	302	623	315	630	302	299
75°	152	534	166	544	152	161
85°	29	445	36	457	29	35
90°	1	400	2	416	1	2
95°	1	364	1	381	1	1
105°	1	289	1	306	1	1
115°	1	220	1	239	1	1
125°	1	158	1	176	1	1
135°	1	103	1	121	1	1
145°	1	60	1	73	1	1
155°	1	25	1	34	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-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6
2.5°	981.8	981.8	980.8	978.8	979.8	982.9	980.8	975.7	972.6	964.4	966.4
5°	977.7	977.7	976.7	974.6	975.7	979.8	977.7	973.6	969.5	962.3	965.4
7.5°	970.5	970.5	969.5	967.5	969.5	973.6	971.6	967.5	964.4	957.2	960.3
10°	960.3	961.3	960.3	957.2	961.3	965.4	964.4	959.2	956.2	950.0	953.1
12.5°	947.9	949.0	947.9	946.9	949.0	955.1	953.1	949.0	946.9	941.8	944.9
15°	933.6	934.6	932.5	932.5	934.6	940.8	940.8	936.6	934.6	929.5	935.6
17.5°	915.1	916.1	915.1	915.1	917.1	923.3	924.3	922.3	920.2	918.2	924.3
20°	896.6	895.6	895.6	894.5	898.6	907.9	906.9	906.9	904.8	904.8	912.0
22.5°	875.0	875.0	874.0	874.0	879.1	887.4	887.4	889.4	887.4	891.5	897.6
25°	850.4	851.4	850.4	852.4	856.5	865.8	866.8	869.9	870.9	875.0	882.2
27.5°	824.7	825.7	824.7	826.8	833.9	841.1	846.3	850.4	851.4	857.6	866.8
30°	797.0	797.0	798.0	800.1	808.3	819.6	823.7	828.8	828.8	839.1	848.3
32.5°	768.2	768.2	768.2	772.3	781.6	794.9	800.1	806.2	808.3	818.5	828.8
35°	736.4	737.4	737.4	740.5	752.8	766.2	773.4	780.5	784.6	797.0	807.2
37.5°	706.6	708.6	705.6	709.7	727.1	738.4	746.6	753.8	761.0	777.5	785.7
40°	672.7	674.8	673.7	681.9	696.3	710.7	719.9	727.1	737.4	753.8	763.1
42.5°	636.8	638.8	640.9	650.1	665.5	679.9	691.2	700.4	712.8	727.1	742.5
45°	603.9	603.9	607.0	618.3	634.7	650.1	663.5	673.7	688.1	703.5	718.9
47.5°	566.9	567.9	572.1	585.4	602.9	621.4	633.7	647.0	662.4	678.9	696.3
50°	533.0	533.0	539.2	553.6	570.0	590.5	603.9	619.3	635.7	655.2	672.7
52.5°	494.0	496.1	505.3	518.6	540.2	558.7	574.1	590.5	610.1	630.6	650.1
55°	455.0	459.1	466.3	484.8	507.4	524.8	543.3	563.8	582.3	604.9	627.5
57.5°	417.0	420.1	431.4	449.8	473.5	495.0	514.5	534.1	556.6	579.2	602.9
60°	377.9	382.1	395.4	413.9	439.6	462.2	484.8	505.3	528.9	552.5	577.2
62.5°	341.0	344.1	359.5	381.0	406.7	431.4	453.9	478.6	504.3	526.9	551.5
65°	301.9	307.1	324.5	344.1	373.8	398.5	424.2	450.9	477.6	502.2	525.8
67.5°	266.0	269.1	287.6	310.2	339.9	367.7	394.4	423.1	450.9	476.5	500.2
70°	223.9	234.2	252.6	276.3	308.1	336.9	365.6	395.4	425.2	451.9	474.5
72.5°	189.0	197.2	217.7	243.4	274.2	308.1	337.9	369.7	399.5	427.2	450.9
75°	152.0	160.2	183.8	212.6	244.4	280.4	311.2	344.1	374.9	402.6	427.2
77.5°	116.1	126.3	152.0	181.8	216.7	253.7	285.5	318.4	350.2	380.0	404.6
80°	83.2	94.5	122.2	156.1	190.0	227.0	261.9	294.8	326.6	356.4	382.1
82.5°	53.4	65.7	95.5	129.4	165.4	202.3	238.3	271.1	303.0	332.8	359.5
85°	28.8	42.1	72.9	106.8	142.8	179.7	215.7	250.6	281.4	309.1	337.9
87.5°	8.2	24.6	54.4	88.3	125.3	159.2	194.1	229.0	259.8	289.6	315.3
90°	1.0	14.4	41.1	72.9	108.9	141.7	176.6	209.5	240.3	270.1	295.8
92.5°	1.0	9.2	31.8	60.6	93.5	127.4	162.3	194.1	222.9	252.6	278.3
95°	1.0	7.2	25.7	51.4	82.2	114.0	146.9	177.7	207.5	235.2	260.9
97.5°	1.0	5.1	20.5	44.2	71.9	101.7	133.5	164.3	193.1	219.8	243.4
100°	1.0	4.1	16.4	38.0	62.6	91.4	120.2	149.9	177.7	203.4	228.0
102.5°	1.0	3.1	14.4	31.8	55.5	81.1	108.9	136.6	163.3	187.9	212.6
105°	1.0	3.1	12.3	27.7	49.3	72.9	98.6	125.3	149.9	173.6	196.2
107.5°	1.0	2.1	10.3	23.6	43.1	65.7	89.4	115.0	137.6	160.2	181.8
110°	1.0	2.1	8.2	21.6	38.0	58.5	81.1	104.8	126.3	147.9	168.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.0	2.1	7.2	18.5	32.9	52.4	72.9	94.5	115.0	136.6	155.1
115°	1.0	2.1	6.2	16.4	30.8	45.2	65.7	85.2	105.8	125.3	142.8
117.5°	1.0	2.1	5.1	13.4	26.7	41.1	57.5	77.0	95.5	114.0	130.4
120°	1.0	2.1	4.1	12.3	23.6	37.0	51.4	68.8	86.3	103.7	121.2
122.5°	1.0	1.0	4.1	10.3	20.5	32.9	47.2	60.6	77.0	93.5	108.9
125°	1.0	1.0	4.1	9.2	17.5	29.8	42.1	54.4	68.8	83.2	96.5
127.5°	1.0	1.0	3.1	7.2	15.4	25.7	37.0	50.3	60.6	73.9	87.3
130°	1.0	1.0	3.1	6.2	13.4	21.6	32.9	44.2	56.5	65.7	77.0
132.5°	1.0	1.0	3.1	5.1	10.3	17.5	27.7	38.0	49.3	59.6	68.8
135°	1.0	1.0	2.1	4.1	8.2	14.4	22.6	31.8	43.1	53.4	62.6
137.5°	1.0	1.0	2.1	4.1	6.2	12.3	17.5	25.7	35.9	45.2	54.4
140°	1.0	1.0	2.1	3.1	5.1	9.2	14.4	20.5	28.8	37.0	47.2
142.5°	1.0	1.0	1.0	3.1	4.1	7.2	11.3	16.4	22.6	29.8	38.0
145°	1.0	1.0	1.0	3.1	4.1	5.1	9.2	13.4	17.5	22.6	29.8
147.5°	1.0	1.0	1.0	2.1	3.1	4.1	7.2	10.3	13.4	17.5	21.6
150°	1.0	1.0	1.0	2.1	3.1	4.1	5.1	7.2	10.3	14.4	17.5
152.5°	1.0	1.0	1.0	2.1	2.1	3.1	4.1	5.1	7.2	10.3	12.3
155°	1.0	1.0	1.0	1.0	2.1	3.1	4.1	4.1	5.1	7.2	9.2
157.5°	1.0	1.0	1.0	1.0	2.1	2.1	3.1	3.1	4.1	4.1	6.2
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



TEST NUMBER: P#

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6
2.5°	966.4	967.5	970.5	970.5	968.5	968.5	967.5	966.4	967.5	969.5	969.5
5°	964.4	965.4	968.5	969.5	967.5	966.4	966.4	965.4	966.4	968.5	968.5
7.5°	960.3	961.3	964.4	965.4	963.4	963.4	962.3	961.3	963.4	964.4	964.4
10°	954.1	955.1	959.2	960.3	959.2	958.2	958.2	957.2	958.2	960.3	960.3
12.5°	945.9	947.9	953.1	953.1	953.1	952.1	952.1	951.0	952.1	954.1	953.1
15°	936.6	940.8	944.9	946.9	946.9	946.9	945.9	944.9	946.9	947.9	946.9
17.5°	926.4	931.5	937.7	939.7	939.7	940.8	939.7	938.7	940.8	940.8	939.7
20°	916.1	921.2	927.4	929.5	931.5	932.5	932.5	931.5	932.5	933.6	932.5
22.5°	902.8	908.9	916.1	919.2	921.2	923.3	923.3	923.3	924.3	925.4	923.3
25°	888.4	895.6	903.8	906.9	911.0	912.0	913.0	913.0	914.1	915.1	912.0
27.5°	873.0	881.2	889.4	894.5	897.6	899.7	899.7	900.7	901.7	902.8	899.7
30°	854.5	866.8	874.0	878.1	882.2	885.3	886.3	887.4	888.4	889.4	886.3
32.5°	838.1	848.3	857.6	862.7	867.8	871.9	873.0	873.0	875.0	875.0	871.9
35°	818.5	830.9	840.1	845.2	851.4	854.5	856.5	856.5	858.6	858.6	855.5
37.5°	799.0	811.4	821.6	827.8	835.0	839.1	840.1	840.1	842.2	842.2	838.1
40°	778.5	791.8	803.1	810.3	816.5	821.6	822.6	825.7	825.7	824.7	820.6
42.5°	757.9	770.3	782.6	790.8	799.0	804.2	806.2	807.2	807.2	806.2	803.1
45°	735.4	749.7	761.0	771.3	779.5	784.6	787.7	788.8	788.8	786.7	783.6
47.5°	713.8	728.2	739.5	750.8	759.0	765.1	768.2	769.2	768.2	767.2	764.1
50°	691.2	707.6	718.9	730.2	738.4	743.6	748.7	749.7	748.7	747.7	741.5
52.5°	667.6	685.0	697.4	708.6	717.9	724.1	728.2	729.2	729.2	727.1	723.0
55°	643.9	659.4	674.8	687.1	697.4	703.5	708.6	710.7	708.6	706.6	701.5
57.5°	622.4	636.8	652.2	665.5	675.8	684.0	688.1	690.2	688.1	685.0	679.9
60°	596.7	612.1	629.6	641.9	653.2	661.4	663.5	667.6	665.5	662.4	657.3
62.5°	572.1	590.5	605.9	621.4	630.6	639.8	643.9	646.0	643.9	640.9	635.7
65°	546.4	566.9	582.3	597.7	608.0	617.2	622.4	623.4	621.4	618.3	613.1
67.5°	522.8	542.3	558.7	575.1	584.4	593.6	598.8	600.8	598.8	594.6	589.5
70°	499.1	518.6	538.2	550.5	561.8	572.1	575.1	578.2	576.2	572.1	565.9
72.5°	475.5	496.1	515.6	527.9	540.2	549.5	553.6	556.6	554.6	550.5	543.3
75°	450.9	472.4	491.9	505.3	517.6	526.9	531.0	534.1	532.0	527.9	519.7
77.5°	428.3	449.8	468.3	482.7	495.0	503.2	510.4	511.5	509.4	505.3	497.1
80°	404.6	426.2	445.7	460.1	472.4	480.6	485.8	488.9	486.8	482.7	474.5
82.5°	384.1	403.6	423.1	437.5	449.8	460.1	464.2	467.3	466.3	460.1	453.9
85°	361.5	384.1	399.5	414.9	427.2	437.5	440.6	444.7	443.7	438.5	430.3
87.5°	338.9	361.5	380.0	395.4	406.7	414.9	420.1	422.1	421.1	415.9	406.7
90°	320.4	341.0	359.5	375.9	385.1	394.4	399.5	400.5	400.5	394.4	387.2
92.5°	303.0	322.5	341.0	356.4	367.7	375.9	380.0	382.1	381.0	375.9	367.7
95°	283.5	305.0	322.5	337.9	349.2	357.4	361.5	363.6	362.5	357.4	349.2
97.5°	267.0	286.5	304.0	318.4	329.7	337.9	342.0	344.1	344.1	338.9	330.7
100°	250.6	270.1	286.5	300.9	311.2	319.4	323.5	324.5	323.5	319.4	311.2
102.5°	234.2	252.6	269.1	282.4	293.7	300.9	305.0	306.1	306.1	300.9	292.7
105°	217.7	236.2	251.6	266.0	275.2	282.4	285.5	288.6	287.6	283.5	275.2
107.5°	202.3	220.8	235.2	248.5	257.8	265.0	268.1	271.1	270.1	266.0	257.8
110°	187.9	205.4	218.8	232.1	240.3	247.5	252.6	253.7	251.6	247.5	240.3



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	174.6	190.0	203.4	215.7	224.9	230.1	234.2	236.2	234.2	230.1	224.9
115°	160.2	175.6	189.0	200.3	208.5	214.6	217.7	219.8	217.7	213.6	208.5
117.5°	146.9	161.2	174.6	185.9	193.1	198.2	201.3	203.4	201.3	198.2	193.1
120°	135.6	147.9	160.2	170.5	178.7	182.8	185.9	187.9	186.9	182.8	177.7
122.5°	122.2	135.6	146.9	157.1	164.3	168.4	170.5	172.5	171.5	168.4	163.3
125°	110.9	122.2	133.5	142.8	149.9	154.1	156.1	158.2	157.1	154.1	147.9
127.5°	98.6	110.9	120.2	129.4	134.5	140.7	141.7	143.8	142.8	139.7	134.5
130°	89.4	98.6	107.8	116.1	122.2	126.3	128.4	129.4	127.4	125.3	120.2
132.5°	78.1	88.3	96.5	103.7	107.8	111.9	114.0	115.0	115.0	111.9	107.8
135°	69.8	77.0	84.2	91.4	95.5	99.6	101.7	102.7	101.7	99.6	95.5
137.5°	62.6	68.8	73.9	80.1	85.2	87.3	89.4	89.4	88.3	87.3	84.2
140°	54.4	61.6	66.8	70.9	75.0	76.0	78.1	78.1	77.0	76.0	73.9
142.5°	46.2	52.4	57.5	62.6	65.7	67.8	68.8	69.8	68.8	67.8	64.7
145°	37.0	44.2	49.3	52.4	56.5	57.5	58.5	59.6	58.5	57.5	54.4
147.5°	28.8	34.9	40.1	44.2	47.2	48.3	49.3	50.3	49.3	47.2	46.2
150°	20.5	25.7	31.8	35.9	38.0	40.1	40.1	40.1	41.1	39.0	37.0
152.5°	16.4	18.5	22.6	26.7	29.8	30.8	31.8	31.8	30.8	30.8	28.8
155°	11.3	13.4	16.4	19.5	22.6	23.6	24.6	24.6	23.6	23.6	22.6
157.5°	7.2	9.2	11.3	13.4	16.4	17.5	18.5	18.5	18.5	17.5	16.4
160°	4.1	5.1	6.2	8.2	10.3	11.3	12.3	12.3	12.3	12.3	11.3
162.5°	3.1	3.1	3.1	4.1	5.1	6.2	7.2	7.2	7.2	7.2	6.2
165°	2.1	2.1	2.1	2.1	2.1	3.1	4.1	4.1	4.1	4.1	4.1
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



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6
2.5°	968.5	968.5	969.5	967.5	961.3	962.3	962.3	966.4	968.5	969.5	974.6
5°	966.4	966.4	968.5	965.4	960.3	960.3	960.3	964.4	965.4	967.5	971.6
7.5°	963.4	963.4	964.4	961.3	955.1	955.1	954.1	958.2	960.3	961.3	965.4
10°	958.2	958.2	959.2	956.2	949.0	949.0	947.9	951.0	952.1	954.1	957.2
12.5°	951.0	951.0	951.0	947.9	940.8	939.7	938.7	941.8	941.8	942.8	945.9
15°	944.9	942.8	942.8	939.7	932.5	930.5	928.4	929.5	931.5	930.5	932.5
17.5°	937.7	935.6	933.6	930.5	921.2	918.2	916.1	917.1	916.1	915.1	917.1
20°	929.5	926.4	925.4	920.2	911.0	905.8	901.7	899.7	900.7	897.6	898.6
22.5°	920.2	916.1	914.1	907.9	898.6	892.5	887.4	883.2	882.2	878.1	879.1
25°	908.9	903.8	900.7	895.6	885.3	878.1	871.9	865.8	862.7	857.6	856.5
27.5°	895.6	890.4	886.3	881.2	870.9	861.7	854.5	846.3	842.2	836.0	832.9
30°	882.2	876.1	869.9	865.8	854.5	844.2	832.9	825.7	819.6	812.4	807.2
32.5°	865.8	859.6	853.5	847.3	837.0	824.7	815.5	804.2	797.0	788.8	782.6
35°	849.4	841.1	835.0	826.8	817.5	803.1	791.8	780.5	771.3	762.1	754.9
37.5°	830.9	824.7	815.5	808.3	797.0	782.6	770.3	755.9	747.7	735.4	726.1
40°	813.4	806.2	797.0	787.7	776.4	760.0	746.6	730.2	721.0	706.6	697.4
42.5°	795.9	785.7	776.4	766.2	753.8	738.4	722.0	705.6	693.2	679.9	666.5
45°	776.4	765.1	753.8	742.5	730.2	714.8	697.4	679.9	664.5	652.2	635.7
47.5°	755.9	744.6	731.2	718.9	705.6	690.2	671.7	653.2	636.8	622.4	604.9
50°	735.4	724.1	709.7	696.3	680.9	665.5	646.0	624.4	607.0	588.5	573.1
52.5°	713.8	702.5	689.1	671.7	655.2	639.8	619.3	596.7	577.2	561.8	542.3
55°	692.2	680.9	665.5	648.1	631.6	612.1	592.6	570.0	548.4	529.9	510.4
57.5°	669.6	659.4	641.9	627.5	607.0	586.4	565.9	544.3	520.7	499.1	476.5
60°	647.0	635.7	619.3	601.8	581.3	560.8	539.2	515.6	490.9	467.3	446.8
62.5°	626.5	612.1	596.7	578.2	556.6	537.1	512.5	486.8	462.2	437.5	412.9
65°	602.9	587.5	573.1	554.6	532.0	509.4	484.8	459.1	432.4	405.7	381.0
67.5°	579.2	563.8	548.4	529.9	506.3	482.7	457.0	431.4	401.6	375.9	347.1
70°	555.6	543.3	523.8	504.3	482.7	457.0	431.4	403.6	372.8	345.1	315.3
72.5°	532.0	519.7	500.2	479.6	459.1	432.4	404.6	376.9	348.2	316.3	284.5
75°	509.4	494.0	476.5	457.0	435.5	407.7	380.0	351.2	317.4	287.6	254.7
77.5°	487.8	473.5	456.0	434.4	410.8	384.1	355.4	325.6	291.7	259.8	223.9
80°	464.2	449.8	432.4	410.8	387.2	361.5	330.7	299.9	267.0	232.1	195.1
82.5°	441.6	428.3	408.8	389.2	363.6	337.9	307.1	276.3	241.4	207.5	171.5
85°	418.0	404.6	386.2	365.6	341.0	313.2	284.5	253.7	218.8	183.8	147.9
87.5°	397.5	382.1	363.6	343.0	318.4	291.7	263.9	231.1	197.2	163.3	126.3
90°	375.9	361.5	343.0	322.5	297.8	271.1	242.4	211.6	178.7	143.8	108.9
92.5°	357.4	342.0	324.5	304.0	279.4	253.7	224.9	194.1	162.3	128.4	94.5
95°	338.9	323.5	307.1	286.5	261.9	236.2	207.5	177.7	146.9	114.0	82.2
97.5°	318.4	305.0	288.6	269.1	244.4	219.8	192.1	163.3	133.5	101.7	71.9
100°	301.9	286.5	271.1	250.6	228.0	204.4	176.6	148.9	120.2	90.4	62.6
102.5°	283.5	269.1	253.7	234.2	211.6	187.9	162.3	135.6	108.9	81.1	54.4
105°	266.0	252.6	236.2	217.7	196.2	173.6	148.9	124.3	98.6	71.9	48.3
107.5°	248.5	235.2	219.8	202.3	181.8	159.2	136.6	111.9	88.3	64.7	43.1
110°	231.1	218.8	204.4	186.9	167.4	146.9	125.3	102.7	79.1	57.5	38.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	215.7	203.4	189.0	172.5	154.1	134.5	114.0	92.4	70.9	51.4	32.9
115°	200.3	189.0	174.6	160.2	141.7	123.2	103.7	83.2	63.7	46.2	28.8
117.5°	184.9	173.6	160.2	145.8	129.4	111.9	93.5	73.9	57.5	41.1	25.7
120°	169.5	159.2	146.9	133.5	119.1	101.7	83.2	66.8	51.4	35.9	22.6
122.5°	155.1	145.8	134.5	122.2	106.8	90.4	75.0	60.6	46.2	31.8	18.5
125°	141.7	132.5	122.2	109.9	95.5	81.1	67.8	54.4	40.1	27.7	15.4
127.5°	128.4	119.1	108.9	97.6	86.3	72.9	60.6	48.3	35.9	24.6	13.4
130°	115.0	106.8	97.6	88.3	77.0	64.7	54.4	42.1	30.8	19.5	11.3
132.5°	101.7	95.5	87.3	78.1	67.8	58.5	47.2	37.0	26.7	17.5	10.3
135°	90.4	84.2	77.0	68.8	60.6	51.4	41.1	31.8	22.6	14.4	8.2
137.5°	80.1	75.0	67.8	60.6	53.4	44.2	35.9	26.7	18.5	12.3	6.2
140°	70.9	65.7	59.6	52.4	46.2	38.0	29.8	21.6	16.4	10.3	5.1
142.5°	61.6	56.5	51.4	45.2	39.0	31.8	24.6	18.5	13.4	8.2	5.1
145°	52.4	48.3	43.1	38.0	31.8	25.7	20.5	15.4	10.3	6.2	4.1
147.5°	43.1	40.1	34.9	30.8	25.7	20.5	16.4	12.3	8.2	5.1	3.1
150°	34.9	31.8	27.7	23.6	20.5	16.4	13.4	9.2	6.2	5.1	3.1
152.5°	26.7	24.6	21.6	19.5	16.4	12.3	9.2	7.2	5.1	4.1	2.1
155°	21.6	19.5	17.5	14.4	12.3	9.2	7.2	5.1	4.1	3.1	2.1
157.5°	15.4	14.4	12.3	10.3	8.2	6.2	5.1	5.1	3.1	2.1	1.0
160°	10.3	9.2	8.2	6.2	5.1	5.1	4.1	3.1	2.1	2.1	1.0
162.5°	6.2	5.1	5.1	5.1	4.1	4.1	3.1	2.1	2.1	1.0	1.0
165°	4.1	4.1	4.1	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-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6
2.5°	974.6	971.6	975.7	982.9	983.9	982.9	980.8	983.9	988.0	987.0	979.8
5°	972.6	968.5	972.6	979.8	979.8	978.8	977.7	980.8	984.9	983.9	977.7
7.5°	966.4	962.3	966.4	972.6	973.6	971.6	971.6	974.6	978.8	977.7	972.6
10°	958.2	954.1	956.2	963.4	965.4	963.4	963.4	966.4	971.6	970.5	964.4
12.5°	945.9	942.8	944.9	951.0	953.1	952.1	951.0	955.1	960.3	960.3	954.1
15°	932.5	928.4	930.5	937.7	938.7	936.6	937.7	940.8	946.9	946.9	941.8
17.5°	917.1	912.0	915.1	920.2	921.2	921.2	921.2	925.4	932.5	931.5	927.4
20°	899.7	892.5	894.5	899.7	901.7	901.7	901.7	908.9	914.1	914.1	909.9
22.5°	879.1	874.0	874.0	879.1	882.2	881.2	881.2	887.4	894.5	893.5	893.5
25°	855.5	851.4	849.4	855.5	856.5	857.6	859.6	865.8	874.0	874.0	875.0
27.5°	830.9	826.8	825.7	830.9	831.9	832.9	835.0	842.2	850.4	851.4	853.5
30°	807.2	801.1	799.0	803.1	805.2	806.2	806.2	817.5	824.7	827.8	831.9
32.5°	779.5	773.4	768.2	775.4	776.4	778.5	779.5	790.8	799.0	804.2	810.3
35°	751.8	741.5	739.5	744.6	746.6	747.7	749.7	762.1	773.4	777.5	785.7
37.5°	721.0	713.8	707.6	712.8	714.8	715.8	722.0	733.3	744.6	750.8	759.0
40°	692.2	683.0	677.8	680.9	683.0	684.0	691.2	703.5	716.9	724.1	734.3
42.5°	660.4	648.1	643.9	647.0	648.1	651.1	657.3	673.7	687.1	697.4	705.6
45°	628.5	619.3	610.1	613.1	614.2	616.2	625.5	642.9	657.3	669.6	678.9
47.5°	595.7	584.4	575.1	577.2	581.3	582.3	592.6	613.1	626.5	639.8	652.2
50°	562.8	547.4	540.2	540.2	542.3	547.4	560.8	581.3	595.7	611.1	624.4
52.5°	528.9	514.5	506.3	507.4	509.4	515.6	527.9	548.4	564.9	581.3	597.7
55°	495.0	479.6	471.4	469.4	471.4	479.6	494.0	515.6	532.0	551.5	569.0
57.5°	461.1	442.6	435.5	432.4	434.4	444.7	459.1	481.7	502.2	520.7	541.2
60°	424.2	409.8	397.5	390.3	395.4	408.8	424.2	447.8	469.4	489.9	512.5
62.5°	392.3	373.8	360.5	353.3	358.4	369.7	391.3	413.9	437.5	461.1	483.7
65°	356.4	337.9	322.5	315.3	320.4	333.8	355.4	380.0	405.7	429.3	456.0
67.5°	321.5	301.9	283.5	276.3	282.4	296.8	320.4	348.2	375.9	400.5	429.3
70°	287.6	266.0	246.5	241.4	245.5	265.0	287.6	315.3	344.1	372.8	402.6
72.5°	256.8	230.1	209.5	203.4	208.5	230.1	255.7	284.5	315.3	346.1	377.9
75°	220.8	196.2	173.6	166.4	172.5	192.1	223.9	254.7	287.6	320.4	350.2
77.5°	192.1	163.3	139.7	128.4	138.6	163.3	194.1	227.0	260.9	294.8	328.6
80°	162.3	132.5	106.8	94.5	105.8	132.5	163.3	199.2	237.2	271.1	301.9
82.5°	135.6	103.7	77.0	63.7	76.0	105.8	139.7	175.6	212.6	246.5	282.4
85°	110.9	78.1	50.3	35.9	53.4	80.1	116.1	153.0	191.0	225.9	260.9
87.5°	90.4	58.5	30.8	15.4	32.9	62.6	96.5	133.5	171.5	206.4	239.3
90°	73.9	42.1	16.4	2.1	19.5	47.2	80.1	116.1	152.0	187.9	220.8
92.5°	60.6	31.8	9.2	1.0	12.3	38.0	68.8	102.7	137.6	172.5	204.4
95°	50.3	24.6	6.2	1.0	9.2	29.8	58.5	91.4	124.3	158.2	190.0
97.5°	43.1	20.5	5.1	1.0	7.2	25.7	50.3	81.1	113.0	144.8	175.6
100°	37.0	16.4	4.1	1.0	6.2	21.6	44.2	71.9	101.7	132.5	162.3
102.5°	31.8	13.4	3.1	1.0	5.1	18.5	39.0	64.7	91.4	121.2	149.9
105°	27.7	11.3	3.1	1.0	4.1	16.4	34.9	57.5	84.2	110.9	138.6
107.5°	23.6	9.2	2.1	1.0	3.1	13.4	30.8	52.4	76.0	101.7	127.4
110°	20.5	8.2	2.1	1.0	3.1	12.3	26.7	47.2	68.8	92.4	117.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	17.5	6.2	2.1	1.0	2.1	10.3	23.6	42.1	62.6	84.2	107.8
115°	15.4	5.1	1.0	1.0	2.1	9.2	21.6	38.0	56.5	77.0	98.6
117.5°	12.3	4.1	1.0	1.0	1.0	7.2	18.5	33.9	51.4	70.9	90.4
120°	10.3	4.1	1.0	1.0	1.0	6.2	16.4	29.8	46.2	63.7	82.2
122.5°	9.2	3.1	1.0	1.0	1.0	5.1	14.4	26.7	41.1	57.5	75.0
125°	8.2	3.1	1.0	1.0	1.0	4.1	12.3	23.6	37.0	51.4	67.8
127.5°	6.2	3.1	1.0	1.0	1.0	3.1	11.3	20.5	32.9	46.2	60.6
130°	5.1	2.1	1.0	1.0	1.0	3.1	9.2	18.5	28.8	41.1	54.4
132.5°	4.1	2.1	1.0	1.0	1.0	2.1	7.2	14.4	24.6	35.9	48.3
135°	4.1	2.1	1.0	1.0	1.0	2.1	5.1	12.3	20.5	30.8	41.1
137.5°	4.1	1.0	1.0	1.0	1.0	2.1	4.1	9.2	16.4	24.6	33.9
140°	3.1	1.0	1.0	1.0	1.0	1.0	3.1	7.2	13.4	20.5	28.8
142.5°	3.1	1.0	1.0	1.0	1.0	1.0	3.1	5.1	10.3	16.4	22.6
145°	2.1	1.0	1.0	1.0	1.0	1.0	2.1	4.1	8.2	12.3	18.5
147.5°	2.1	1.0	1.0	1.0	1.0	1.0	2.1	3.1	6.2	10.3	14.4
150°	2.1	1.0	1.0	1.0	1.0	1.0	2.1	3.1	4.1	7.2	11.3
152.5°	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1	5.1	7.2
155°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1	4.1	5.1
157.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1	4.1
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-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6
2.5°	976.7	969.5	971.6	970.5	972.6	975.7	975.7	974.6	974.6	972.6	970.5
5°	974.6	967.5	970.5	969.5	971.6	974.6	974.6	973.6	973.6	970.5	969.5
7.5°	968.5	963.4	965.4	965.4	967.5	970.5	970.5	969.5	969.5	966.4	965.4
10°	962.3	956.2	959.2	959.2	961.3	965.4	965.4	964.4	964.4	961.3	960.3
12.5°	952.1	945.9	951.0	952.1	954.1	958.2	957.2	957.2	957.2	954.1	953.1
15°	939.7	935.6	940.8	941.8	944.9	950.0	950.0	950.0	950.0	946.9	945.9
17.5°	926.4	923.3	928.4	930.5	934.6	939.7	939.7	940.8	941.8	939.7	938.7
20°	911.0	908.9	914.1	918.2	924.3	929.5	931.5	932.5	934.6	932.5	931.5
22.5°	893.5	893.5	900.7	904.8	912.0	917.1	920.2	923.3	925.4	923.3	922.3
25°	874.0	877.1	884.3	891.5	899.7	904.8	907.9	912.0	914.1	913.0	912.0
27.5°	855.5	859.6	868.9	876.1	883.2	891.5	894.5	899.7	901.7	901.7	900.7
30°	833.9	840.1	850.4	858.6	867.8	876.1	880.2	885.3	888.4	886.3	887.4
32.5°	813.4	823.7	831.9	841.1	851.4	859.6	864.8	870.9	874.0	873.0	874.0
35°	790.8	801.1	812.4	821.6	833.9	842.2	849.4	854.5	858.6	857.6	857.6
37.5°	766.2	779.5	790.8	803.1	814.4	823.7	830.9	837.0	841.1	841.1	841.1
40°	742.5	756.9	768.2	782.6	797.0	805.2	813.4	819.6	823.7	824.7	825.7
42.5°	716.9	732.3	745.6	761.0	775.4	785.7	794.9	802.1	806.2	808.3	807.2
45°	693.2	707.6	723.0	740.5	753.8	764.1	775.4	783.6	787.7	788.8	789.8
47.5°	666.5	683.0	700.4	717.9	731.2	744.6	754.9	763.1	767.2	770.3	770.3
50°	640.9	658.3	677.8	696.3	710.7	724.1	734.3	743.6	748.7	750.8	751.8
52.5°	617.2	633.7	654.2	672.7	687.1	700.4	713.8	724.1	729.2	731.2	731.2
55°	588.5	609.0	631.6	649.1	664.5	679.9	693.2	703.5	708.6	711.7	713.8
57.5°	561.8	583.4	607.0	625.5	643.9	658.3	670.6	684.0	688.1	692.2	693.2
60°	536.1	557.7	580.3	600.8	619.3	634.7	649.1	660.4	667.6	669.6	671.7
62.5°	509.4	532.0	555.6	576.2	595.7	614.2	627.5	637.8	646.0	649.1	651.1
65°	483.7	507.4	531.0	552.5	573.1	591.6	604.9	615.2	623.4	628.5	629.6
67.5°	456.0	481.7	506.3	528.9	549.5	569.0	582.3	592.6	600.8	607.0	608.0
70°	430.3	457.0	481.7	506.3	526.9	546.4	560.8	571.0	580.3	584.4	586.4
72.5°	405.7	433.4	459.1	483.7	504.3	523.8	539.2	549.5	558.7	563.8	564.9
75°	382.1	409.8	437.5	461.1	482.7	502.2	517.6	528.9	537.1	542.3	544.3
77.5°	358.4	387.2	414.9	438.5	461.1	480.6	494.0	507.4	515.6	521.7	521.7
80°	334.8	364.6	393.4	417.0	439.6	457.0	472.4	485.8	494.0	500.2	500.2
82.5°	314.3	343.0	370.8	394.4	417.0	436.5	451.9	464.2	473.5	477.6	478.6
85°	290.6	322.5	348.2	373.8	395.4	413.9	429.3	442.6	450.9	455.0	457.0
87.5°	271.1	301.9	329.7	352.3	373.8	392.3	409.8	421.1	429.3	434.4	436.5
90°	252.6	282.4	310.2	332.8	355.4	372.8	389.2	400.5	409.8	413.9	415.9
92.5°	236.2	266.0	292.7	315.3	336.9	356.4	371.8	383.1	391.3	395.4	398.5
95°	220.8	249.6	275.2	299.9	320.4	337.9	354.3	365.6	374.9	377.9	381.0
97.5°	205.4	233.1	258.8	282.4	304.0	320.4	335.8	347.1	354.3	359.5	362.5
100°	192.1	218.8	243.4	266.0	286.5	301.9	318.4	328.6	335.8	339.9	344.1
102.5°	177.7	204.4	228.0	249.6	271.1	285.5	300.9	311.2	317.4	324.5	324.5
105°	165.4	190.0	213.6	234.2	252.6	270.1	283.5	293.7	300.9	306.1	306.1
107.5°	152.0	176.6	199.2	220.8	238.3	254.7	267.0	276.3	284.5	287.6	290.6
110°	141.7	163.3	185.9	206.4	222.9	238.3	250.6	260.9	268.1	271.1	273.2



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	129.4	152.0	172.5	192.1	208.5	222.9	235.2	243.4	250.6	254.7	255.7
115°	119.1	140.7	159.2	177.7	195.1	207.5	218.8	227.0	234.2	237.2	239.3
117.5°	109.9	129.4	147.9	163.3	179.7	193.1	204.4	211.6	217.7	221.8	223.9
120°	100.6	119.1	135.6	151.0	166.4	178.7	189.0	196.2	203.4	206.4	206.4
122.5°	91.4	108.9	124.3	138.6	153.0	164.3	175.6	181.8	187.9	191.0	191.0
125°	83.2	99.6	114.0	127.4	140.7	151.0	160.2	167.4	173.6	175.6	175.6
127.5°	75.0	90.4	103.7	116.1	127.4	137.6	146.9	154.1	159.2	161.2	161.2
130°	67.8	81.1	93.5	105.8	117.1	125.3	134.5	140.7	143.8	146.9	147.9
132.5°	60.6	72.9	84.2	94.5	105.8	114.0	121.2	127.4	130.4	133.5	134.5
135°	53.4	64.7	75.0	85.2	94.5	102.7	108.9	114.0	118.1	120.2	121.2
137.5°	45.2	57.5	66.8	75.0	85.2	91.4	98.6	101.7	105.8	107.8	107.8
140°	38.0	47.2	57.5	65.7	73.9	80.1	86.3	91.4	94.5	95.5	95.5
142.5°	30.8	39.0	47.2	57.5	64.7	69.8	76.0	80.1	82.2	83.2	84.2
145°	24.6	30.8	38.0	47.2	55.5	61.6	64.7	68.8	70.9	71.9	72.9
147.5°	18.5	24.6	30.8	37.0	45.2	51.4	54.4	58.5	60.6	61.6	61.6
150°	14.4	18.5	22.6	28.8	34.9	42.1	46.2	49.3	50.3	51.4	51.4
152.5°	10.3	14.4	17.5	21.6	25.7	31.8	38.0	40.1	41.1	42.1	42.1
155°	7.2	10.3	12.3	15.4	18.5	23.6	28.8	31.8	32.9	33.9	33.9
157.5°	5.1	7.2	8.2	11.3	13.4	15.4	19.5	24.6	25.7	25.7	25.7
160°	3.1	4.1	5.1	7.2	8.2	10.3	12.3	15.4	18.5	18.5	18.5
162.5°	2.1	3.1	3.1	4.1	4.1	6.2	7.2	8.2	11.3	12.3	12.3
165°	1.0	2.1	2.1	2.1	2.1	2.1	3.1	3.1	5.1	6.2	6.2
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-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6	973.6
2.5°	971.6	973.6	972.6	972.6	972.6	974.6	972.6	963.4	965.4	967.5	969.5
5°	970.5	971.6	971.6	970.5	970.5	972.6	970.5	961.3	963.4	965.4	966.4
7.5°	966.4	967.5	967.5	967.5	966.4	968.5	965.4	957.2	957.2	959.2	960.3
10°	961.3	963.4	962.3	961.3	961.3	961.3	959.2	950.0	950.0	951.0	952.1
12.5°	955.1	955.1	955.1	954.1	953.1	953.1	951.0	941.8	940.8	942.8	941.8
15°	946.9	949.0	946.9	945.9	943.8	943.8	940.8	931.5	929.5	930.5	929.5
17.5°	939.7	940.8	938.7	936.6	934.6	933.6	930.5	920.2	917.1	918.2	916.1
20°	932.5	932.5	930.5	928.4	925.4	922.3	918.2	907.9	902.8	902.8	898.6
22.5°	923.3	923.3	921.2	918.2	915.1	911.0	906.9	896.6	888.4	886.3	883.2
25°	913.0	912.0	911.0	907.9	901.7	897.6	893.5	882.2	873.0	868.9	863.7
27.5°	900.7	900.7	897.6	894.5	888.4	883.2	878.1	867.8	855.5	850.4	843.2
30°	887.4	887.4	884.3	880.2	874.0	867.8	861.7	849.4	837.0	829.8	821.6
32.5°	874.0	873.0	869.9	865.8	859.6	850.4	845.2	832.9	818.5	810.3	799.0
35°	857.6	856.5	853.5	848.3	840.1	832.9	824.7	813.4	797.0	786.7	774.4
37.5°	841.1	840.1	838.1	830.9	822.6	814.4	804.2	792.9	777.5	764.1	751.8
40°	824.7	823.7	819.6	814.4	804.2	793.9	783.6	772.3	755.9	740.5	727.1
42.5°	807.2	806.2	801.1	794.9	783.6	773.4	761.0	748.7	732.3	713.8	700.4
45°	789.8	787.7	782.6	775.4	763.1	751.8	739.5	725.1	708.6	691.2	673.7
47.5°	771.3	768.2	763.1	752.8	742.5	730.2	715.8	700.4	684.0	664.5	646.0
50°	750.8	748.7	742.5	733.3	721.0	708.6	692.2	676.8	657.3	638.8	616.2
52.5°	731.2	727.1	722.0	711.7	699.4	686.1	668.6	650.1	630.6	613.1	589.5
55°	710.7	708.6	701.5	693.2	677.8	662.4	646.0	626.5	604.9	584.4	561.8
57.5°	691.2	687.1	680.9	669.6	656.3	640.9	623.4	602.9	579.2	557.7	533.0
60°	671.7	665.5	658.3	648.1	633.7	617.2	598.8	577.2	553.6	529.9	504.3
62.5°	650.1	645.0	636.8	626.5	612.1	594.6	575.1	552.5	529.9	505.3	477.6
65°	628.5	623.4	615.2	604.9	590.5	571.0	550.5	527.9	502.2	478.6	448.8
67.5°	607.0	601.8	592.6	581.3	566.9	548.4	526.9	503.2	477.6	451.9	421.1
70°	585.4	579.2	571.0	558.7	544.3	524.8	503.2	478.6	452.9	425.2	394.4
72.5°	563.8	558.7	548.4	537.1	521.7	502.2	480.6	456.0	429.3	400.5	369.7
75°	542.3	536.1	528.9	515.6	499.1	480.6	458.1	433.4	404.6	376.9	345.1
77.5°	520.7	515.6	506.3	493.0	477.6	458.1	435.5	410.8	382.1	353.3	319.4
80°	499.1	493.0	485.8	473.5	456.0	436.5	412.9	388.2	359.5	329.7	295.8
82.5°	477.6	471.4	463.2	450.9	434.4	414.9	392.3	365.6	336.9	306.1	274.2
85°	456.0	450.9	441.6	429.3	411.8	392.3	369.7	346.1	315.3	284.5	252.6
87.5°	434.4	429.3	420.1	407.7	391.3	371.8	349.2	324.5	294.8	266.0	231.1
90°	413.9	409.8	400.5	388.2	371.8	352.3	331.7	305.0	276.3	247.5	214.6
92.5°	395.4	391.3	383.1	370.8	356.4	334.8	314.3	288.6	259.8	230.1	198.2
95°	379.0	373.8	365.6	354.3	336.9	318.4	297.8	272.2	244.4	214.6	183.8
97.5°	360.5	355.4	347.1	334.8	320.4	300.9	280.4	255.7	228.0	200.3	169.5
100°	342.0	336.9	327.6	317.4	303.0	283.5	263.9	239.3	213.6	186.9	157.1
102.5°	323.5	318.4	310.2	299.9	285.5	268.1	248.5	224.9	199.2	172.5	144.8
105°	306.1	300.9	292.7	282.4	269.1	251.6	231.1	210.5	185.9	160.2	133.5
107.5°	288.6	283.5	276.3	266.0	252.6	236.2	216.7	195.1	172.5	147.9	122.2
110°	271.1	267.0	258.8	249.6	236.2	219.8	202.3	181.8	159.2	136.6	111.9



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	254.7	250.6	242.4	232.1	220.8	205.4	187.9	168.4	146.9	125.3	101.7
115°	238.3	233.1	225.9	216.7	205.4	191.0	174.6	157.1	135.6	115.0	93.5
117.5°	221.8	217.7	210.5	201.3	191.0	176.6	161.2	144.8	124.3	104.8	85.2
120°	205.4	202.3	195.1	186.9	176.6	163.3	148.9	132.5	114.0	95.5	77.0
122.5°	190.0	186.9	179.7	172.5	162.3	149.9	136.6	121.2	104.8	87.3	70.9
125°	175.6	171.5	165.4	158.2	148.9	137.6	124.3	109.9	94.5	79.1	63.7
127.5°	160.2	157.1	153.0	144.8	135.6	125.3	113.0	100.6	86.3	71.9	57.5
130°	147.9	143.8	138.6	132.5	124.3	114.0	102.7	90.4	78.1	64.7	50.3
132.5°	133.5	129.4	125.3	119.1	111.9	102.7	92.4	81.1	69.8	57.5	45.2
135°	120.2	117.1	113.0	106.8	99.6	92.4	82.2	71.9	61.6	50.3	40.1
137.5°	107.8	104.8	100.6	96.5	89.4	82.2	72.9	63.7	54.4	44.2	34.9
140°	95.5	93.5	89.4	85.2	79.1	71.9	63.7	55.5	47.2	38.0	29.8
142.5°	83.2	81.1	78.1	73.9	68.8	62.6	55.5	48.3	40.1	32.9	25.7
145°	71.9	70.9	67.8	63.7	59.6	53.4	47.2	41.1	33.9	27.7	20.5
147.5°	60.6	59.6	57.5	54.4	50.3	45.2	40.1	33.9	28.8	22.6	16.4
150°	50.3	49.3	48.3	44.2	42.1	37.0	32.9	27.7	23.6	17.5	13.4
152.5°	41.1	41.1	39.0	35.9	33.9	29.8	26.7	22.6	18.5	14.4	10.3
155°	32.9	31.8	30.8	28.8	26.7	23.6	20.5	17.5	14.4	10.3	7.2
157.5°	25.7	24.6	23.6	21.6	19.5	18.5	15.4	12.3	9.2	7.2	5.1
160°	18.5	17.5	16.4	15.4	14.4	12.3	10.3	8.2	6.2	4.1	3.1
162.5°	12.3	11.3	11.3	10.3	9.2	7.2	6.2	5.1	4.1	3.1	2.1
165°	6.2	6.2	5.1	5.1	4.1	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-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	973.6	973.6	973.6	973.6	973.6	973.6	973.6
2.5°	968.5	968.5	972.6	971.6	968.5	974.6	981.8
5°	965.4	965.4	968.5	968.5	965.4	971.6	977.7
7.5°	960.3	959.2	962.3	962.3	958.2	963.4	970.5
10°	951.0	950.0	953.1	953.1	949.0	954.1	960.3
12.5°	940.8	938.7	941.8	940.8	936.6	941.8	947.9
15°	927.4	926.4	928.4	926.4	922.3	927.4	933.6
17.5°	914.1	911.0	912.0	912.0	904.8	909.9	915.1
20°	896.6	892.5	893.5	892.5	887.4	890.4	896.6
22.5°	879.1	873.0	873.0	871.9	865.8	869.9	875.0
25°	857.6	850.4	850.4	849.4	842.2	845.2	850.4
27.5°	836.0	828.8	825.7	824.7	817.5	817.5	824.7
30°	813.4	803.1	801.1	798.0	790.8	790.8	797.0
32.5°	791.8	777.5	773.4	769.2	762.1	761.0	768.2
35°	763.1	751.8	744.6	740.5	732.3	730.2	736.4
37.5°	739.5	725.1	714.8	709.7	701.5	698.4	706.6
40°	713.8	698.4	685.0	681.9	669.6	665.5	672.7
42.5°	685.0	668.6	655.2	649.1	639.8	635.7	636.8
45°	656.3	638.8	624.4	616.2	607.0	599.8	603.9
47.5°	626.5	611.1	593.6	581.3	570.0	564.9	566.9
50°	596.7	578.2	561.8	548.4	535.1	528.9	533.0
52.5°	566.9	547.4	528.9	514.5	499.1	493.0	494.0
55°	538.2	517.6	496.1	480.6	466.3	457.0	455.0
57.5°	509.4	486.8	464.2	446.8	428.3	420.1	417.0
60°	478.6	455.0	431.4	410.8	391.3	382.1	377.9
62.5°	449.8	424.2	397.5	375.9	356.4	344.1	341.0
65°	422.1	392.3	365.6	341.0	319.4	306.1	301.9
67.5°	392.3	361.5	332.8	306.1	285.5	268.1	266.0
70°	364.6	331.7	299.9	272.2	249.6	232.1	223.9
72.5°	336.9	303.0	270.1	240.3	211.6	195.1	189.0
75°	310.2	275.2	240.3	209.5	177.7	158.2	152.0
77.5°	285.5	249.6	212.6	178.7	148.9	124.3	116.1
80°	261.9	224.9	185.9	151.0	119.1	92.4	83.2
82.5°	237.2	202.3	162.3	125.3	92.4	64.7	53.4
85°	215.7	180.8	140.7	103.7	70.9	41.1	28.8
87.5°	198.2	160.2	124.3	87.3	53.4	23.6	8.2
90°	180.8	143.8	107.8	71.9	40.1	13.4	1.0
92.5°	165.4	130.4	94.5	61.6	30.8	9.2	1.0
95°	151.0	117.1	83.2	51.4	24.6	6.2	1.0
97.5°	137.6	105.8	73.9	44.2	20.5	5.1	1.0
100°	126.3	95.5	65.7	39.0	17.5	4.1	1.0
102.5°	115.0	86.3	58.5	33.9	15.4	3.1	1.0
105°	105.8	78.1	52.4	30.8	13.4	3.1	1.0
107.5°	96.5	70.9	47.2	26.7	11.3	2.1	1.0
110°	87.3	64.7	42.1	23.6	10.3	2.1	1.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-48HL-LW-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	80.1	58.5	38.0	21.6	8.2	2.1	1.0
115°	72.9	52.4	33.9	18.5	7.2	1.0	1.0
117.5°	65.7	47.2	29.8	16.4	6.2	1.0	1.0
120°	59.6	42.1	26.7	14.4	5.1	1.0	1.0
122.5°	53.4	38.0	23.6	12.3	4.1	1.0	1.0
125°	48.3	33.9	20.5	10.3	3.1	1.0	1.0
127.5°	43.1	29.8	18.5	9.2	3.1	1.0	1.0
130°	38.0	26.7	15.4	7.2	2.1	1.0	1.0
132.5°	33.9	22.6	13.4	6.2	2.1	1.0	1.0
135°	29.8	19.5	11.3	4.1	2.1	1.0	1.0
137.5°	25.7	16.4	9.2	3.1	1.0	1.0	1.0
140°	21.6	14.4	7.2	3.1	1.0	1.0	1.0
142.5°	18.5	11.3	5.1	2.1	1.0	1.0	1.0
145°	14.4	9.2	4.1	2.1	1.0	1.0	1.0
147.5°	11.3	7.2	3.1	2.1	1.0	1.0	1.0
150°	8.2	5.1	3.1	1.0	1.0	1.0	1.0
152.5°	6.2	4.1	2.1	1.0	1.0	1.0	1.0
155°	4.1	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)