

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-LD5-54SL-RW-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 (P33525)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WHITE REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

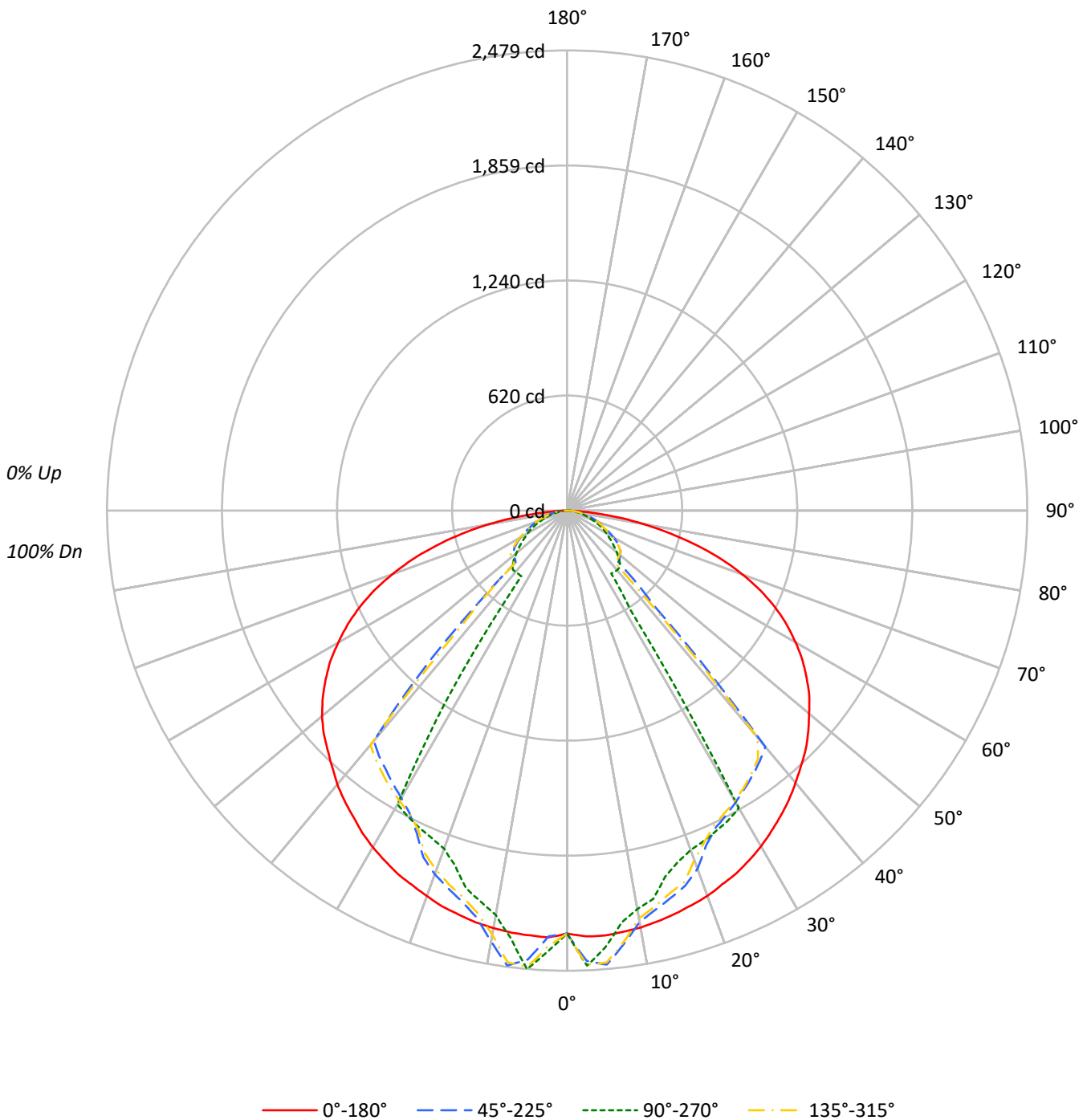
Lumens per Lamp: N/A
Luminaire Lumens: 4563.0 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.16 / 1.2
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 46
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	101	98	100	97	94	96	94	92	92	91	89	87
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75
3	94	84	77	72	91	83	76	71	80	74	70	77	73	69	75	71	67	65
4	87	76	68	62	85	75	67	62	72	66	61	70	65	60	68	63	59	57
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41
8	66	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37
9	62	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	18413	18413	18413	18413
5°	18594	18553	18585	19471
10°	18612	16773	18638	17031
15°	18654	15519	18697	16011
20°	18789	14720	18789	14664
25°	18952	14438	18979	14303
30°	19144	14183	19191	14015
35°	19367	3230	19407	3369
40°	19677	3360	19795	3468
45°	20148	3341	20218	3462
50°	20619	3020	20897	3102
55°	21253	2682	21423	2720
60°	21792	2383	21839	2414
65°	22176	2080	22121	2047
70°	21859	1676	21792	1616
75°	20295	1290	20440	1235
80°	16472	916	17133	839
85°	8915	549	9414	421



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.2	4.9
10°-20°	616.4	13.5
20°-30°	913.0	20.0
30°-40°	920.0	20.2
40°-50°	718.6	15.7
50°-60°	555.1	12.2
60°-70°	372.7	8.2
70°-80°	190.1	4.2
80°-90°	52.9	1.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1753.6	38.4
0°-40°	2673.6	58.6
0°-60°	3947.3	86.5
0°-90°	4563.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4563.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2279	2279	2279	2279	2279	
5°	2298	2362	2297	2479	2298	219
15°	2248	2042	2254	2106	2248	636
25°	2156	1903	2160	1885	2156	995
35°	2006	414	2010	431	2006	1257
45°	1818	402	1824	417	1818	1402
55°	1576	292	1588	297	1576	1407
65°	1238	196	1234	193	1238	1217
75°	726	99	731	95	726	759
85°	130	31	138	24	130	180
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2296.4	2304.8	2311.0	2315.2	2317.3	2317.3	2318.3	2319.4	2332.9	2339.2	2343.4
5°	2298.5	2306.8	2319.4	2336.1	2350.7	2363.2	2373.7	2388.3	2402.9	2418.6	2423.8
7.5°	2289.1	2299.5	2324.6	2354.9	2383.1	2402.9	2416.5	2425.9	2433.2	2434.2	2439.5
10°	2280.7	2299.5	2334.0	2373.7	2409.2	2433.2	2433.2	2428.0	2435.3	2407.1	2378.9
12.5°	2266.1	2287.0	2334.0	2386.2	2419.6	2429.0	2424.8	2404.0	2361.1	2326.7	2311.0
15°	2248.4	2276.6	2335.0	2393.5	2421.7	2424.8	2385.2	2331.9	2299.5	2278.6	2252.5
17.5°	2228.5	2266.1	2336.1	2394.6	2405.0	2390.4	2315.2	2281.8	2248.4	2199.3	2163.8
20°	2209.7	2246.3	2327.7	2379.9	2386.2	2320.4	2261.9	2226.4	2170.0	2127.2	2111.6
22.5°	2180.5	2223.3	2320.4	2360.1	2336.1	2259.8	2203.5	2147.1	2095.9	2083.4	2064.6
25°	2156.5	2201.4	2303.7	2336.1	2272.4	2204.5	2138.7	2072.9	2048.9	2031.1	2014.4
27.5°	2124.1	2179.4	2281.8	2292.2	2204.5	2145.0	2048.9	2019.7	1997.7	1977.9	1970.6
30°	2088.6	2156.5	2251.5	2231.7	2148.1	2060.4	1989.4	1962.2	1946.6	1925.7	1917.3
32.5°	2047.9	2122.0	2218.1	2161.7	2087.5	1977.9	1931.9	1911.1	1890.2	1874.5	1822.3
35°	2006.1	2091.7	2178.4	2094.8	2014.4	1915.2	1874.5	1855.7	1835.9	1778.4	1724.1
37.5°	1963.3	2058.3	2130.4	2022.8	1917.3	1850.5	1816.0	1795.1	1750.2	1677.1	1650.0
40°	1914.2	2017.6	2068.7	1948.6	1832.7	1784.7	1752.3	1731.4	1630.1	1597.8	1589.4
42.5°	1865.1	1977.9	1993.6	1876.6	1762.8	1714.7	1687.6	1618.7	1549.7	1533.0	1536.2
45°	1818.1	1935.1	1911.1	1774.3	1689.7	1650.0	1604.0	1509.0	1472.5	1480.8	1482.9
47.5°	1761.7	1883.9	1824.4	1671.9	1614.5	1574.8	1472.5	1415.0	1409.8	1421.3	1427.5
50°	1701.2	1826.5	1732.5	1579.0	1533.0	1486.0	1370.1	1340.9	1347.1	1358.6	1365.9
52.5°	1644.8	1761.7	1637.4	1492.3	1452.6	1345.0	1266.7	1271.9	1282.4	1296.0	1300.1
55°	1575.8	1683.4	1536.2	1404.6	1367.0	1226.0	1190.5	1203.0	1213.5	1225.0	1233.3
57.5°	1503.8	1593.6	1416.1	1306.4	1245.8	1120.5	1123.7	1132.0	1139.3	1152.9	476.2
60°	1421.3	1491.2	1284.5	1215.6	1095.5	1037.0	1040.1	1054.7	1062.0	593.2	327.9
62.5°	1335.6	1372.2	1165.4	1112.2	957.6	953.4	968.1	974.3	663.1	313.3	307.0
65°	1237.5	1230.2	1048.5	963.9	863.6	867.8	883.5	852.1	293.4	293.4	291.4
67.5°	1128.9	1085.0	934.6	797.8	772.8	782.2	798.9	278.8	271.5	273.6	266.3
70°	1004.6	943.0	816.6	675.7	684.0	693.4	269.4	252.7	249.6	244.4	229.7
72.5°	873.0	788.4	668.3	586.9	592.1	371.8	236.0	227.7	217.2	206.8	191.1
75°	725.8	616.1	490.8	490.8	498.1	212.0	205.7	192.1	180.7	167.1	157.7
77.5°	569.1	474.1	381.2	395.8	193.2	177.5	166.0	151.4	142.0	133.7	128.4
80°	416.7	331.0	287.2	256.9	150.4	134.7	123.2	114.9	110.7	105.5	99.2
82.5°	273.6	199.5	199.5	121.1	105.5	92.9	89.8	83.5	79.4	76.2	73.1
85°	130.5	115.9	87.7	74.1	65.8	59.5	57.4	54.3	54.3	53.3	52.2
87.5°	48.0	52.2	38.6	37.6	35.5	34.5	35.5	35.5	36.6	35.5	34.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	47.5°	50°	52.5°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2353.8	2362.2	2368.5	2378.9	2392.5	2404.0	2414.4	2429.0	2452.0	2458.3	2463.5
5°	2423.8	2426.9	2434.2	2442.6	2444.7	2449.9	2448.9	2455.1	2458.3	2465.6	2449.9
7.5°	2428.0	2411.3	2391.4	2373.7	2361.1	2349.7	2342.3	2353.8	2360.1	2365.3	2349.7
10°	2340.3	2320.4	2308.9	2298.5	2286.0	2268.2	2244.2	2249.4	2247.3	2247.3	2242.1
12.5°	2284.9	2256.7	2227.5	2201.4	2189.9	2188.8	2189.9	2201.4	2201.4	2200.3	2194.1
15°	2198.2	2171.1	2156.5	2150.2	2150.2	2147.1	2147.1	2159.6	2156.5	2156.5	2153.3
17.5°	2140.8	2122.0	2111.6	2104.2	2101.1	2106.3	2112.6	2117.8	2118.9	2114.7	2098.0
20°	2093.8	2076.1	2063.5	2065.6	2064.6	2067.7	2070.8	2053.1	2031.1	2001.9	1988.3
22.5°	2044.7	2031.1	2021.7	2021.7	2009.2	1989.4	1960.1	1953.9	1950.7	1937.2	1925.7
25°	1997.7	1982.1	1968.5	1926.7	1900.6	1903.7	1898.5	1888.1	1887.0	1886.0	1890.2
27.5°	1950.7	1910.0	1857.8	1851.5	1841.1	1840.0	1846.3	1851.5	1851.5	1855.7	1860.9
30°	1853.6	1806.6	1797.2	1785.7	1789.9	1804.5	1807.7	1815.0	1817.1	1824.4	1828.6
32.5°	1764.9	1744.0	1735.6	1740.8	1754.4	1766.9	1774.3	1777.4	1782.6	1788.9	1794.1
35°	1692.8	1686.5	1693.8	1705.3	1718.9	1729.3	1735.6	1741.9	1747.1	1752.3	1756.5
37.5°	1639.5	1643.7	1654.2	1668.8	1682.4	1690.7	1695.9	1703.2	1710.6	1716.8	1691.8
40°	1589.4	1599.9	1611.3	1627.0	1638.5	1646.8	1652.1	1661.5	1598.8	723.7	396.8
42.5°	1545.6	1557.0	1565.4	1577.9	1590.5	1596.7	1550.8	692.4	391.6	389.5	394.7
45°	1492.3	1501.7	1515.3	1524.7	1536.2	1008.8	385.3	389.5	383.3	387.4	389.5
47.5°	1438.0	1452.6	1459.9	1393.1	414.6	383.3	379.1	383.3	379.1	384.3	381.2
50°	1376.4	1394.1	992.1	374.9	371.8	369.7	373.9	371.8	374.9	379.1	370.7
52.5°	1313.7	813.5	363.4	361.3	363.4	361.3	368.6	363.4	364.5	360.3	349.8
55°	444.9	351.9	348.8	347.7	354.0	354.0	354.0	345.7	340.4	330.0	322.7
57.5°	340.4	340.4	339.4	340.4	338.4	336.3	326.9	319.6	312.2	297.6	293.4
60°	322.7	322.7	322.7	322.7	313.3	309.1	294.5	288.2	275.7	268.4	264.2
62.5°	308.1	306.0	296.6	293.4	283.0	271.5	263.2	256.9	244.4	240.2	237.1
65°	287.2	279.9	268.4	255.9	250.6	238.1	233.9	224.5	218.3	215.1	213.0
67.5°	252.7	242.3	232.9	224.5	215.1	210.9	205.7	198.4	194.2	192.1	190.1
70°	216.2	208.9	199.5	194.2	188.0	184.8	177.5	175.4	172.3	169.2	166.0
72.5°	180.7	176.5	172.3	165.0	162.9	160.8	153.5	149.3	145.2	141.0	138.9
75°	151.4	148.3	146.2	139.9	136.8	130.5	125.3	122.2	119.0	115.9	113.8
77.5°	124.3	122.2	115.9	111.7	109.7	104.4	102.3	103.4	101.3	97.1	95.0
80°	97.1	95.0	89.8	89.8	87.7	85.6	83.5	81.5	79.4	76.2	74.1
82.5°	74.1	72.1	70.0	67.9	65.8	64.7	63.7	61.6	59.5	57.4	56.4
85°	52.2	51.2	50.1	49.1	48.0	47.0	45.9	43.9	41.8	40.7	39.7
87.5°	35.5	34.5	33.4	32.4	31.3	30.3	29.2	28.2	26.1	25.1	24.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°	77.5°	80°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2463.5	2468.7	2463.5	2452.0	2444.7	2441.6	2447.8	2447.8	2452.0	2457.2	2458.3
5°	2424.8	2412.3	2397.7	2383.1	2375.8	2371.6	2360.1	2362.2	2365.3	2367.4	2369.5
7.5°	2328.8	2312.1	2292.2	2273.4	2266.1	2259.8	2246.3	2246.3	2246.3	2247.3	2253.6
10°	2230.6	2223.3	2214.9	2202.4	2193.0	2189.9	2178.4	2181.5	2179.4	2182.6	2189.9
12.5°	2184.7	2176.3	2169.0	2156.5	2146.0	2141.8	2136.6	2139.8	2138.7	2143.9	2150.2
15°	2142.9	2138.7	2130.4	2121.0	2111.6	2103.2	2084.4	2078.1	2074.0	2068.7	2076.1
17.5°	2074.0	2044.7	2024.9	2010.3	1999.8	1992.5	1987.3	1987.3	1990.4	1993.6	1999.8
20°	1980.0	1971.6	1962.2	1946.6	1936.1	1931.9	1928.8	1928.8	1934.0	1938.2	1949.7
22.5°	1915.2	1914.2	1911.1	1903.7	1898.5	1898.5	1899.6	1901.7	1909.0	1915.2	1926.7
25°	1884.9	1889.1	1887.0	1882.9	1879.7	1880.8	1878.7	1880.8	1888.1	1894.3	1903.7
27.5°	1860.9	1867.2	1865.1	1858.8	1853.6	1855.7	1858.8	1856.8	1863.0	1870.3	1877.6
30°	1828.6	1829.6	1833.8	1826.5	1824.4	1827.5	1828.6	1830.6	1836.9	1842.1	1848.4
32.5°	1792.0	1800.4	1799.3	1792.0	1792.0	1795.1	1796.2	1726.2	1595.7	1374.3	1313.7
35°	1756.5	1765.9	1750.2	1475.6	1021.3	545.1	420.8	406.2	409.4	411.5	413.5
37.5°	1299.1	616.1	392.7	395.8	398.9	402.1	405.2	408.3	411.5	414.6	415.6
40°	390.6	389.5	392.7	396.8	400.0	402.1	406.2	409.4	412.5	415.6	416.7
42.5°	386.4	388.5	391.6	395.8	400.0	404.1	407.3	411.5	413.5	415.6	416.7
45°	384.3	388.5	392.7	395.8	398.9	401.0	403.1	404.1	403.1	403.1	405.2
47.5°	381.2	385.3	386.4	385.3	386.4	385.3	385.3	385.3	382.2	381.2	381.2
50°	369.7	369.7	367.6	363.4	362.4	361.3	359.2	358.2	354.0	353.0	353.0
52.5°	345.7	344.6	341.5	336.3	334.2	332.1	331.0	330.0	325.8	323.7	324.8
55°	317.5	315.4	312.2	306.0	304.9	302.8	301.8	300.8	296.6	298.7	295.5
57.5°	291.4	287.2	283.0	282.0	277.8	276.7	275.7	274.6	271.5	272.6	270.5
60°	260.0	259.0	256.9	252.7	252.7	251.7	251.7	249.6	247.5	246.5	246.5
62.5°	237.1	233.9	231.8	231.8	228.7	228.7	228.7	226.6	224.5	225.6	224.5
65°	212.0	210.9	209.9	207.8	207.8	206.8	206.8	204.7	201.5	202.6	200.5
67.5°	191.1	189.0	186.9	185.9	181.7	179.6	178.6	177.5	173.4	174.4	172.3
70°	165.0	161.9	159.8	157.7	154.6	152.5	152.5	150.4	147.2	148.3	146.2
72.5°	137.8	135.8	133.7	132.6	129.5	128.4	127.4	126.4	123.2	124.3	123.2
75°	114.9	114.9	113.8	112.8	109.7	106.5	104.4	103.4	101.3	102.3	100.3
77.5°	95.0	92.9	90.9	90.9	87.7	85.6	83.5	83.5	83.5	82.5	81.5
80°	74.1	72.1	72.1	71.0	68.9	66.8	65.8	65.8	64.7	64.7	63.7
82.5°	56.4	54.3	53.3	53.3	51.2	50.1	49.1	48.0	48.0	48.0	47.0
85°	39.7	37.6	36.6	36.6	34.5	33.4	33.4	32.4	32.4	31.3	31.3
87.5°	24.0	23.0	21.9	21.9	19.8	18.8	18.8	18.8	17.8	17.8	16.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	82.5°	85°	87.5°	90°	92.5°	95°	97.5°	100°	102.5°	105°	107.5°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2458.3	2458.3	2451.0	2453.0	2449.9	2454.1	2448.9	2448.9	2455.1	2455.1	2459.3
5°	2370.5	2365.3	2364.3	2362.2	2351.7	2355.9	2350.7	2345.5	2352.8	2352.8	2362.2
7.5°	2250.4	2241.1	2245.2	2239.0	2232.7	2223.3	2226.4	2222.3	2227.5	2234.8	2244.2
10°	2188.8	2180.5	2185.7	2179.4	2182.6	2169.0	2170.0	2171.1	2176.3	2178.4	2186.7
12.5°	2149.2	2147.1	2145.0	2142.9	2145.0	2137.7	2133.5	2134.5	2136.6	2137.7	2143.9
15°	2065.6	2052.0	2056.2	2041.6	2042.6	2043.7	2035.3	2043.7	2042.6	2056.2	2068.7
17.5°	1997.7	1997.7	1990.4	1984.2	1980.0	1978.9	1972.7	1976.8	1972.7	1981.0	1984.2
20°	1950.7	1949.7	1948.6	1945.5	1935.1	1936.1	1939.2	1929.9	1928.8	1927.8	1934.0
22.5°	1928.8	1929.9	1925.7	1925.7	1916.3	1918.4	1919.4	1909.0	1910.0	1906.9	1910.0
25°	1905.8	1907.9	1902.7	1902.7	1900.6	1899.6	1894.3	1896.4	1890.2	1884.9	1890.2
27.5°	1878.7	1882.9	1878.7	1880.8	1876.6	1874.5	1871.4	1869.3	1863.0	1862.0	1865.1
30°	1853.6	1855.7	1854.7	1849.4	1848.4	1842.1	1845.3	1839.0	1832.7	1833.8	1835.9
32.5°	950.3	907.5	699.7	631.8	625.5	648.5	768.6	935.7	1212.4	1480.8	1674.0
35°	414.6	414.6	414.6	413.5	413.5	412.5	411.5	410.4	409.4	408.3	407.3
37.5°	416.7	416.7	416.7	416.7	415.6	414.6	414.6	412.5	411.5	410.4	409.4
40°	417.7	418.8	418.8	418.8	417.7	417.7	416.7	414.6	413.5	411.5	409.4
42.5°	416.7	417.7	417.7	416.7	416.7	415.6	415.6	414.6	413.5	412.5	411.5
45°	403.1	404.1	402.1	402.1	401.0	401.0	401.0	401.0	401.0	402.1	402.1
47.5°	379.1	379.1	378.0	377.0	377.0	375.9	377.0	375.9	378.0	379.1	381.2
50°	350.9	350.9	348.8	347.7	347.7	347.7	347.7	348.8	349.8	351.9	354.0
52.5°	321.6	321.6	320.6	319.6	318.5	318.5	321.6	320.6	321.6	322.7	325.8
55°	293.4	294.5	292.4	292.4	291.4	291.4	291.4	292.4	293.4	294.5	297.6
57.5°	269.4	269.4	267.3	267.3	267.3	266.3	269.4	267.3	268.4	269.4	271.5
60°	245.4	244.4	244.4	243.3	243.3	243.3	245.4	244.4	244.4	245.4	247.5
62.5°	223.5	223.5	222.4	222.4	221.4	221.4	223.5	222.4	222.4	223.5	224.5
65°	198.4	198.4	197.4	196.3	199.5	196.3	199.5	197.4	199.5	200.5	202.6
67.5°	170.2	170.2	170.2	169.2	169.2	171.3	172.3	170.2	171.3	173.4	174.4
70°	145.2	145.2	144.1	144.1	144.1	146.2	147.2	145.2	146.2	147.2	149.3
72.5°	123.2	121.1	121.1	120.1	122.2	122.2	123.2	122.2	123.2	123.2	125.3
75°	101.3	99.2	99.2	99.2	101.3	100.3	101.3	100.3	101.3	101.3	102.3
77.5°	81.5	80.4	79.4	79.4	81.5	81.5	81.5	80.4	81.5	82.5	83.5
80°	63.7	62.7	61.6	61.6	63.7	63.7	63.7	64.7	63.7	64.7	65.8
82.5°	47.0	45.9	44.9	47.0	47.0	47.0	47.0	48.0	47.0	48.0	49.1
85°	31.3	30.3	29.2	31.3	31.3	31.3	31.3	32.4	31.3	32.4	33.4
87.5°	16.7	15.7	15.7	16.7	16.7	16.7	17.8	17.8	17.8	18.8	18.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2465.6	2468.7	2467.7	2461.4	2455.1	2447.8	2442.6	2443.6	2454.1	2457.2	2447.8
5°	2362.2	2382.0	2382.0	2395.6	2388.3	2382.0	2386.2	2409.2	2420.7	2438.4	2444.7
7.5°	2255.7	2265.1	2264.0	2277.6	2275.5	2275.5	2278.6	2308.9	2323.5	2338.2	2342.3
10°	2196.1	2205.5	2204.5	2205.5	2202.4	2195.1	2195.1	2208.7	2221.2	2228.5	2230.6
12.5°	2153.3	2158.6	2157.5	2157.5	2155.4	2149.2	2148.1	2159.6	2173.2	2182.6	2183.6
15°	2089.6	2104.2	2107.4	2121.0	2117.8	2109.5	2111.6	2121.0	2129.3	2137.7	2134.5
17.5°	1994.6	2001.9	2003.0	2008.2	2006.1	2006.1	2018.6	2053.1	2076.1	2095.9	2098.0
20°	1940.3	1945.5	1943.4	1954.9	1949.7	1948.6	1951.8	1966.4	1976.8	1986.2	2003.0
22.5°	1914.2	1918.4	1915.2	1916.3	1906.9	1898.5	1896.4	1907.9	1919.4	1931.9	1931.9
25°	1892.3	1895.4	1894.3	1892.3	1884.9	1873.5	1871.4	1873.5	1877.6	1878.7	1871.4
27.5°	1866.1	1868.2	1868.2	1869.3	1859.9	1849.4	1847.4	1845.3	1849.4	1848.4	1836.9
30°	1839.0	1835.9	1836.9	1838.0	1829.6	1820.2	1816.0	1815.0	1819.2	1818.1	1806.6
32.5°	1774.3	1798.3	1800.4	1802.4	1795.1	1786.8	1782.6	1779.5	1781.6	1780.5	1770.1
35°	406.2	413.5	506.5	1146.6	1557.0	1724.1	1741.9	1737.7	1738.7	1738.7	1730.4
37.5°	407.3	406.2	405.2	402.1	398.9	396.8	686.1	1463.1	1694.9	1695.9	1688.6
40°	407.3	406.2	405.2	403.1	398.9	395.8	390.6	386.4	395.8	870.9	1593.6
42.5°	409.4	407.3	405.2	403.1	398.9	394.7	390.6	385.3	388.5	386.4	381.2
45°	403.1	402.1	402.1	401.0	398.9	394.7	389.5	383.3	380.1	383.3	378.0
47.5°	383.3	384.3	387.4	388.5	388.5	389.5	386.4	382.2	377.0	380.1	373.9
50°	356.1	358.2	359.2	364.5	366.5	370.7	371.8	371.8	370.7	374.9	370.7
52.5°	326.9	329.0	334.2	336.3	338.4	344.6	346.7	349.8	351.9	358.2	362.4
55°	298.7	299.7	301.8	306.0	309.1	314.3	317.5	320.6	325.8	329.0	341.5
57.5°	272.6	273.6	277.8	278.8	280.9	285.1	288.2	292.4	296.6	298.7	313.3
60°	247.5	248.5	251.7	252.7	253.8	257.9	261.1	264.2	267.3	269.4	279.9
62.5°	225.6	225.6	228.7	228.7	229.7	232.9	235.0	237.1	240.2	241.2	246.5
65°	203.6	204.7	206.8	206.8	207.8	209.9	210.9	212.0	215.1	215.1	219.3
67.5°	176.5	177.5	180.7	182.8	183.8	188.0	189.0	190.1	192.1	193.2	195.3
70°	150.4	151.4	154.6	155.6	156.6	159.8	161.9	165.0	168.1	171.3	173.4
72.5°	126.4	127.4	130.5	130.5	133.7	134.7	136.8	137.8	141.0	143.1	146.2
75°	103.4	104.4	107.6	107.6	110.7	111.7	112.8	113.8	115.9	118.0	120.1
77.5°	84.6	84.6	88.8	90.9	92.9	92.9	94.0	94.0	94.0	95.0	97.1
80°	66.8	66.8	70.0	72.1	74.1	74.1	75.2	76.2	77.3	77.3	78.3
82.5°	50.1	50.1	53.3	54.3	56.4	56.4	56.4	57.4	58.5	57.4	59.5
85°	34.5	34.5	36.6	37.6	39.7	39.7	39.7	40.7	41.8	40.7	41.8
87.5°	19.8	20.9	21.9	23.0	24.0	25.1	25.1	25.1	26.1	26.1	27.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2437.4	2424.8	2423.8	2409.2	2405.0	2406.0	2394.6	2390.4	2371.6	2367.4	2347.6
5°	2446.8	2453.0	2449.9	2448.9	2452.0	2449.9	2441.6	2437.4	2434.2	2425.9	2409.2
7.5°	2343.4	2347.6	2350.7	2364.3	2375.8	2395.6	2416.5	2430.1	2440.5	2442.6	2429.0
10°	2237.9	2257.8	2271.3	2292.2	2308.9	2320.4	2332.9	2344.4	2374.7	2405.0	2422.8
12.5°	2183.6	2188.8	2187.8	2199.3	2210.8	2241.1	2270.3	2287.0	2310.0	2323.5	2355.9
15°	2137.7	2138.7	2141.8	2150.2	2156.5	2166.9	2180.5	2205.5	2251.5	2272.4	2290.1
17.5°	2095.9	2095.9	2098.0	2105.3	2113.6	2123.0	2131.4	2141.8	2164.8	2199.3	2243.1
20°	2029.1	2058.3	2061.4	2060.4	2064.6	2082.3	2084.4	2103.2	2114.7	2128.3	2171.1
22.5°	1929.9	1947.6	1972.7	2011.3	2025.9	2034.3	2040.5	2048.9	2066.7	2082.3	2100.1
25°	1875.5	1887.0	1894.3	1905.8	1936.1	1985.2	1994.6	2004.0	2015.5	2027.0	2048.9
27.5°	1827.5	1826.5	1831.7	1842.1	1850.5	1876.6	1922.5	1959.1	1961.2	1977.9	1996.7
30°	1793.0	1786.8	1779.5	1777.4	1788.9	1802.4	1816.0	1873.5	1913.1	1921.5	1941.3
32.5°	1760.7	1750.2	1739.8	1731.4	1724.1	1735.6	1744.0	1769.0	1820.2	1868.2	1878.7
35°	1721.0	1710.6	1698.0	1688.6	1677.1	1676.1	1675.0	1699.1	1715.8	1773.2	1823.3
37.5°	1680.3	1668.8	1658.3	1647.9	1636.4	1628.1	1622.8	1629.1	1644.8	1669.8	1753.4
40°	1637.4	1623.9	1613.4	1605.1	1589.4	1583.1	1572.7	1568.5	1569.6	1591.5	1635.4
42.5°	978.5	1560.2	1565.4	1556.0	1542.4	1534.1	1522.6	1517.4	1506.9	1517.4	1542.4
45°	377.0	381.2	1141.4	1508.0	1491.2	1480.8	1470.4	1465.1	1453.7	1445.3	1468.3
47.5°	369.7	373.9	365.5	518.0	1423.4	1426.5	1414.0	1408.7	1397.3	1391.0	1384.7
50°	364.5	367.6	361.3	363.4	356.1	1304.3	1356.5	1350.3	1337.7	1330.4	1317.9
52.5°	359.2	359.2	355.1	349.8	347.7	348.8	1097.6	1290.7	1276.1	1268.8	1252.1
55°	342.5	344.6	348.8	340.4	338.4	337.3	334.2	1045.3	1208.2	1199.9	1185.3
57.5°	317.5	321.6	333.1	331.0	331.0	322.7	320.6	320.6	970.1	1129.9	1115.3
60°	288.2	292.4	304.9	309.1	312.2	310.2	308.1	307.0	302.8	1022.4	1041.2
62.5°	257.9	262.1	266.3	279.9	284.0	289.3	295.5	292.4	288.2	288.2	962.8
65°	225.6	231.8	233.9	246.5	251.7	261.1	266.3	273.6	271.5	270.5	275.7
67.5°	197.4	204.7	205.7	210.9	220.3	224.5	230.8	244.4	250.6	252.7	254.8
70°	173.4	177.5	180.7	182.8	189.0	190.1	201.5	210.9	220.3	230.8	233.9
72.5°	149.3	152.5	158.7	156.6	158.7	162.9	169.2	175.4	184.8	199.5	208.9
75°	122.2	124.3	128.4	130.5	134.7	137.8	142.0	147.2	155.6	162.9	175.4
77.5°	98.2	99.2	102.3	103.4	107.6	110.7	118.0	121.1	126.4	131.6	138.9
80°	79.4	79.4	80.4	80.4	83.5	86.7	91.9	95.0	101.3	105.5	105.5
82.5°	60.6	60.6	63.7	63.7	65.8	65.8	68.9	68.9	72.1	74.1	76.2
85°	42.8	43.9	45.9	44.9	47.0	45.9	48.0	50.1	51.2	50.1	49.1
87.5°	28.2	28.2	30.3	29.2	30.3	30.3	32.4	32.4	33.4	33.4	32.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	167.5°	170°	172.5°	175°	177.5°	180°	182.5°	185°	187.5°	190°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2340.3	2324.6	2315.2	2303.7	2300.6	2297.4	2301.6	2301.6	2295.4	2290.1	2280.7
5°	2394.6	2377.9	2360.1	2341.3	2323.5	2304.8	2297.4	2296.4	2284.9	2278.6	2275.5
7.5°	2422.8	2414.4	2394.6	2368.5	2341.3	2307.9	2293.3	2284.9	2273.4	2271.3	2271.3
10°	2425.9	2416.5	2406.0	2387.3	2355.9	2312.1	2283.9	2267.2	2256.7	2264.0	2277.6
12.5°	2395.6	2413.4	2404.0	2391.4	2366.4	2313.1	2272.4	2247.3	2244.2	2263.0	2298.5
15°	2318.3	2370.5	2396.6	2384.1	2364.3	2311.0	2253.6	2224.3	2224.3	2263.0	2308.9
17.5°	2259.8	2300.6	2364.3	2374.7	2351.7	2306.8	2235.8	2201.4	2210.8	2267.2	2316.2
20°	2211.8	2236.9	2298.5	2357.0	2335.0	2297.4	2209.7	2174.2	2193.0	2260.9	2326.7
22.5°	2136.6	2186.7	2224.3	2311.0	2318.3	2279.7	2183.6	2140.8	2178.4	2260.9	2321.5
25°	2063.5	2124.1	2163.8	2248.4	2293.3	2257.8	2159.6	2105.3	2162.7	2257.8	2317.3
27.5°	2012.4	2040.5	2112.6	2173.2	2255.7	2228.5	2127.2	2066.7	2142.9	2241.1	2293.3
30°	1958.0	1976.8	2047.9	2105.3	2205.5	2195.1	2093.8	2023.8	2117.8	2225.4	2230.6
32.5°	1898.5	1919.4	1956.0	2039.5	2135.6	2163.8	2056.2	1981.0	2090.7	2201.4	2157.5
35°	1838.0	1853.6	1882.9	1972.7	2054.1	2116.8	2010.3	1931.9	2071.9	2164.8	2087.5
37.5°	1777.4	1794.1	1819.2	1894.3	1968.5	2072.9	1970.6	1882.9	2037.4	2100.1	2014.4
40°	1719.9	1729.3	1755.5	1802.4	1897.5	2028.0	1925.7	1831.7	2001.9	2017.6	1915.2
42.5°	1614.5	1661.5	1685.5	1723.1	1817.1	1966.4	1873.5	1777.4	1962.2	1935.1	1816.0
45°	1500.6	1603.0	1613.4	1651.0	1746.1	1900.6	1824.4	1724.1	1924.6	1864.1	1722.0
47.5°	1407.7	1481.9	1542.4	1573.7	1661.5	1823.3	1778.4	1679.2	1868.2	1774.3	1630.1
50°	1325.2	1364.9	1474.5	1497.5	1560.2	1730.4	1724.1	1627.0	1789.9	1661.5	1540.3
52.5°	1244.8	1273.0	1372.2	1421.3	1472.5	1630.1	1659.4	1575.8	1704.3	1548.7	1449.5
55°	1174.8	1184.2	1238.5	1341.9	1387.9	1528.8	1588.4	1516.3	1595.7	1441.1	1361.8
57.5°	1102.8	1094.4	1134.1	1266.7	1300.1	1425.5	1513.2	1455.7	1508.0	1331.5	1270.9
60°	1027.6	1016.1	1032.8	1120.5	1207.2	1323.1	1424.4	1388.9	1401.4	1222.9	1169.6
62.5°	949.3	937.8	932.6	987.9	1116.3	1217.6	1334.6	1314.8	1270.9	1123.7	1044.3
65°	867.8	856.3	848.0	869.9	1016.1	1080.8	1234.4	1229.1	1127.8	1019.2	879.3
67.5°	264.2	779.0	761.3	760.2	856.3	956.6	1125.7	1117.4	983.7	907.5	757.1
70°	238.1	631.8	671.5	662.1	703.9	830.2	1001.5	995.2	843.8	727.9	669.4
72.5°	218.3	223.5	593.2	582.7	592.1	705.9	872.0	855.3	715.3	574.4	578.5
75°	186.9	196.3	204.7	491.9	479.3	584.8	731.0	704.9	590.0	474.1	483.5
77.5°	152.5	164.0	170.2	358.2	387.4	416.7	583.8	549.3	406.2	379.1	180.7
80°	113.8	123.2	133.7	143.1	294.5	291.4	433.4	398.9	283.0	236.0	141.0
82.5°	83.5	86.7	92.9	103.4	117.0	195.3	278.8	245.4	196.3	107.6	97.1
85°	52.2	56.4	59.5	62.7	71.0	117.0	137.8	109.7	82.5	65.8	61.6
87.5°	33.4	33.4	32.4	33.4	34.5	41.8	47.0	44.9	35.5	33.4	33.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	192.5°	195°	197.5°	200°	202.5°	205°	207.5°	210°	212.5°	215°	217.5°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2270.3	2255.7	2255.7	2251.5	2254.6	2254.6	2253.6	2254.6	2261.9	2266.1	2273.4
5°	2269.2	2265.1	2274.5	2286.0	2299.5	2316.2	2320.4	2335.0	2348.6	2366.4	2385.2
7.5°	2282.8	2297.4	2315.2	2334.0	2361.1	2381.0	2398.7	2416.5	2429.0	2445.7	2456.2
10°	2302.7	2331.9	2362.2	2386.2	2415.4	2432.2	2443.6	2445.7	2428.0	2399.8	2376.8
12.5°	2330.9	2365.3	2393.5	2416.5	2430.1	2423.8	2390.4	2355.9	2336.1	2306.8	2266.1
15°	2354.9	2386.2	2415.4	2406.0	2369.5	2335.0	2308.9	2268.2	2228.5	2201.4	2183.6
17.5°	2365.3	2395.6	2385.2	2336.1	2301.6	2261.9	2208.7	2177.3	2151.2	2130.4	2119.9
20°	2371.6	2366.4	2310.0	2274.5	2207.6	2171.1	2136.6	2107.4	2087.5	2077.1	2075.0
22.5°	2354.9	2291.2	2243.1	2179.4	2130.4	2100.1	2072.9	2048.9	2035.3	2027.0	2021.7
25°	2299.5	2225.4	2154.4	2104.2	2062.5	2036.4	2015.5	1995.6	1978.9	1974.8	1964.3
27.5°	2222.3	2161.7	2067.7	2029.1	1992.5	1980.0	1957.0	1937.2	1922.5	1910.0	1876.6
30°	2158.6	2062.5	1994.6	1959.1	1937.2	1922.5	1896.4	1875.5	1850.5	1804.5	1785.7
32.5°	2080.2	1985.2	1920.5	1900.6	1873.5	1860.9	1831.7	1785.7	1747.1	1728.3	1727.3
35°	1978.9	1900.6	1853.6	1835.9	1813.9	1793.0	1732.5	1690.7	1671.9	1674.0	1689.7
37.5°	1894.3	1824.4	1794.1	1769.0	1744.0	1690.7	1639.5	1619.7	1624.9	1635.4	1642.7
40°	1808.7	1755.5	1721.0	1701.2	1644.8	1592.5	1565.4	1572.7	1582.1	1589.4	1598.8
42.5°	1725.2	1687.6	1653.1	1614.5	1537.2	1509.0	1515.3	1524.7	1533.0	1543.5	1552.9
45°	1645.8	1612.4	1572.7	1485.0	1446.3	1453.7	1463.1	1470.4	1482.9	1490.2	1499.6
47.5°	1570.6	1535.1	1465.1	1387.9	1383.7	1398.3	1406.7	1416.1	1425.5	1406.7	775.9
50°	1486.0	1449.5	1343.0	1313.7	1323.1	1336.7	1347.1	1356.5	1208.2	480.4	369.7
52.5°	1402.5	1309.5	1241.7	1250.0	1259.4	1275.1	1282.4	952.4	379.1	361.3	362.4
55°	1309.5	1190.5	1170.7	1181.1	1189.4	1205.1	798.9	349.8	347.7	346.7	355.1
57.5°	1163.3	1091.3	1099.6	1110.1	1118.4	789.5	340.4	338.4	339.4	340.4	341.5
60°	1032.8	1017.1	1026.5	1035.9	733.1	329.0	322.7	323.7	327.9	324.8	316.4
62.5°	929.4	942.0	951.3	833.3	312.2	309.1	312.2	309.1	301.8	296.6	286.1
65°	850.1	862.6	869.9	293.4	292.4	296.6	293.4	283.0	271.5	256.9	253.8
67.5°	766.5	779.0	278.8	271.5	275.7	270.5	257.9	245.4	237.1	224.5	219.3
70°	679.8	291.4	252.7	251.7	244.4	236.0	222.4	209.9	199.5	194.2	189.0
72.5°	490.8	230.8	227.7	219.3	206.8	195.3	183.8	176.5	171.3	168.1	165.0
75°	204.7	200.5	191.1	176.5	164.0	158.7	150.4	145.2	143.1	136.8	134.7
77.5°	171.3	162.9	149.3	138.9	131.6	128.4	122.2	115.9	112.8	111.7	107.6
80°	131.6	120.1	113.8	108.6	106.5	99.2	91.9	88.8	86.7	85.6	82.5
82.5°	89.8	85.6	81.5	74.1	74.1	71.0	67.9	65.8	63.7	63.7	61.6
85°	58.5	55.3	54.3	51.2	51.2	49.1	48.0	47.0	45.9	44.9	43.9
87.5°	33.4	33.4	34.5	33.4	33.4	32.4	31.3	30.3	29.2	29.2	27.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	222.5°	225°	227.5°	230°	232.5°	235°	237.5°	240°	242.5°	245°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2282.8	2293.3	2295.4	2330.9	2350.7	2349.7	2343.4	2362.2	2350.7	2344.4	2350.7
5°	2404.0	2416.5	2426.9	2465.6	2479.1	2485.4	2484.4	2494.8	2486.5	2479.1	2479.1
7.5°	2463.5	2467.7	2471.8	2462.4	2456.2	2445.7	2430.1	2407.1	2395.6	2383.1	2367.4
10°	2365.3	2351.7	2357.0	2338.2	2322.5	2311.0	2296.4	2277.6	2261.9	2250.4	2232.7
12.5°	2245.2	2244.2	2246.3	2249.4	2233.7	2224.3	2212.9	2199.3	2187.8	2175.3	2160.6
15°	2172.1	2173.2	2181.5	2178.4	2173.2	2167.9	2155.4	2151.2	2140.8	2127.2	2118.9
17.5°	2119.9	2125.1	2133.5	2129.3	2121.0	2115.7	2106.3	2096.9	2087.5	2077.1	2064.6
20°	2074.0	2079.2	2084.4	2079.2	2063.5	2056.2	2043.7	2014.4	1993.6	1972.7	1953.9
22.5°	2023.8	2027.0	2022.8	2006.1	1966.4	1947.6	1933.0	1924.6	1906.9	1895.4	1883.9
25°	1961.2	1943.4	1916.3	1897.5	1881.8	1873.5	1867.2	1866.1	1864.1	1862.0	1856.8
27.5°	1858.8	1852.6	1838.0	1830.6	1831.7	1834.8	1835.9	1839.0	1835.9	1831.7	1827.5
30°	1782.6	1785.7	1786.8	1788.9	1794.1	1797.2	1798.3	1802.4	1800.4	1797.2	1795.1
32.5°	1734.6	1741.9	1746.1	1752.3	1755.5	1760.7	1760.7	1766.9	1760.7	1759.6	1757.5
35°	1694.9	1701.2	1703.2	1712.6	1715.8	1721.0	1721.0	1726.2	1721.0	1667.7	1316.9
37.5°	1655.2	1661.5	1665.6	1674.0	1675.0	1678.2	1548.7	1133.1	731.0	566.0	432.3
40°	1608.2	1615.5	1619.7	1622.8	1140.4	723.7	498.1	405.2	405.2	408.3	411.5
42.5°	1558.1	1563.3	1089.2	633.9	394.7	393.7	396.8	400.0	403.1	407.3	411.5
45°	1225.0	618.2	392.7	383.3	386.4	390.6	394.7	398.9	404.1	408.3	410.4
47.5°	402.1	377.0	382.2	378.0	383.3	388.5	392.7	396.8	397.9	398.9	397.9
50°	371.8	371.8	374.9	374.9	379.1	381.2	381.2	381.2	377.0	375.9	372.8
52.5°	359.2	367.6	363.4	365.5	363.4	360.3	357.1	354.0	347.7	345.7	341.5
55°	353.0	356.1	345.7	342.5	338.4	330.0	325.8	321.6	316.4	314.3	309.1
57.5°	338.4	331.0	319.6	314.3	307.0	298.7	294.5	291.4	286.1	284.0	280.9
60°	311.2	296.6	289.3	283.0	274.6	267.3	264.2	262.1	257.9	256.9	253.8
62.5°	277.8	265.3	259.0	250.6	244.4	240.2	237.1	236.0	231.8	231.8	229.7
65°	241.2	235.0	229.7	221.4	218.3	214.1	213.0	212.0	209.9	208.9	206.8
67.5°	212.0	207.8	200.5	196.3	194.2	191.1	189.0	186.9	182.8	180.7	177.5
70°	185.9	182.8	175.4	172.3	168.1	162.9	159.8	157.7	154.6	152.5	149.3
72.5°	160.8	151.4	146.2	143.1	139.9	134.7	133.7	131.6	128.4	127.4	124.3
75°	129.5	122.2	119.0	117.0	113.8	110.7	110.7	110.7	107.6	106.5	105.5
77.5°	103.4	99.2	97.1	95.0	94.0	91.9	88.8	87.7	84.6	84.6	83.5
80°	79.4	77.3	75.2	74.1	73.1	71.0	68.9	67.9	64.7	64.7	63.7
82.5°	58.5	57.4	56.4	55.3	54.3	53.3	50.1	49.1	47.0	47.0	45.9
85°	41.8	40.7	38.6	37.6	37.6	36.6	33.4	32.4	30.3	30.3	30.3
87.5°	26.1	25.1	24.0	23.0	21.9	20.9	18.8	17.8	17.8	15.7	14.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	247.5°	250°	252.5°	255°	257.5°	260°	262.5°	265°	267.5°	270°	272.5°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2338.2	2355.9	2353.8	2366.4	2369.5	2375.8	2377.9	2378.9	2363.2	2375.8	2376.8
5°	2476.0	2479.1	2481.2	2486.5	2491.7	2492.7	2487.5	2481.2	2483.3	2479.1	2468.7
7.5°	2365.3	2349.7	2346.5	2342.3	2340.3	2338.2	2328.8	2337.1	2327.7	2323.5	2308.9
10°	2229.6	2214.9	2213.9	2213.9	2217.0	2216.0	2213.9	2209.7	2218.1	2212.9	2209.7
12.5°	2158.6	2153.3	2156.5	2154.4	2162.7	2164.8	2162.7	2162.7	2160.6	2156.5	2158.6
15°	2115.7	2111.6	2114.7	2111.6	2117.8	2118.9	2113.6	2116.8	2111.6	2106.3	2104.2
17.5°	2059.3	2049.9	2042.6	2032.2	2033.2	2031.1	2024.9	2024.9	2019.7	2006.1	2007.1
20°	1950.7	1941.3	1937.2	1937.2	1942.4	1944.5	1943.4	1945.5	1940.3	1938.2	1929.9
22.5°	1882.9	1881.8	1883.9	1889.1	1897.5	1909.0	1910.0	1910.0	1910.0	1909.0	1898.5
25°	1858.8	1858.8	1860.9	1868.2	1874.5	1882.9	1884.9	1887.0	1884.9	1884.9	1875.5
27.5°	1831.7	1829.6	1833.8	1841.1	1848.4	1854.7	1859.9	1860.9	1857.8	1857.8	1860.9
30°	1798.3	1797.2	1802.4	1809.8	1816.0	1822.3	1827.5	1831.7	1827.5	1827.5	1824.4
32.5°	1763.8	1763.8	1765.9	1722.0	1596.7	1438.0	1441.1	1349.2	1285.5	1205.1	1311.6
35°	1100.7	801.0	688.2	582.7	508.6	460.5	459.5	443.8	436.5	431.3	430.2
37.5°	415.6	417.7	421.9	424.0	427.1	429.2	430.2	430.2	430.2	430.2	429.2
40°	414.6	418.8	421.9	425.0	428.2	430.2	430.2	431.3	432.3	432.3	432.3
42.5°	415.6	419.8	424.0	427.1	429.2	430.2	431.3	432.3	432.3	432.3	432.3
45°	414.6	416.7	416.7	417.7	417.7	417.7	418.8	418.8	417.7	416.7	418.8
47.5°	398.9	398.9	395.8	394.7	393.7	391.6	392.7	391.6	390.6	389.5	391.6
50°	371.8	367.6	365.5	363.4	362.4	360.3	361.3	360.3	359.2	357.1	360.3
52.5°	339.4	338.4	334.2	332.1	331.0	332.1	330.0	329.0	327.9	326.9	327.9
55°	308.1	303.9	302.8	300.8	299.7	300.8	299.7	298.7	297.6	296.6	297.6
57.5°	279.9	276.7	275.7	273.6	273.6	273.6	273.6	272.6	271.5	270.5	271.5
60°	252.7	250.6	249.6	249.6	248.5	248.5	248.5	247.5	246.5	246.5	247.5
62.5°	229.7	229.7	226.6	225.6	225.6	226.6	225.6	224.5	223.5	222.4	224.5
65°	205.7	201.5	200.5	198.4	196.3	197.4	196.3	195.3	194.2	193.2	195.3
67.5°	176.5	175.4	171.3	169.2	168.1	169.2	168.1	167.1	166.0	165.0	167.1
70°	148.3	148.3	144.1	143.1	142.0	142.0	141.0	141.0	139.9	138.9	141.0
72.5°	123.2	123.2	122.2	120.1	119.0	118.0	117.0	115.9	115.9	117.0	117.0
75°	102.3	100.3	96.1	97.1	96.1	95.0	95.0	94.0	92.9	95.0	94.0
77.5°	80.4	79.4	76.2	77.3	76.2	75.2	75.2	74.1	73.1	74.1	74.1
80°	60.6	60.6	59.5	58.5	58.5	57.4	56.4	56.4	55.3	56.4	56.4
82.5°	43.9	43.9	42.8	41.8	40.7	40.7	39.7	39.7	39.7	39.7	39.7
85°	28.2	27.2	27.2	25.1	25.1	25.1	24.0	24.0	24.0	24.0	24.0
87.5°	13.6	13.6	12.5	12.5	11.5	10.4	10.4	9.4	9.4	10.4	10.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	277.5°	280°	282.5°	285°	287.5°	290°	292.5°	295°	297.5°	300°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2358.0	2371.6	2360.1	2365.3	2366.4	2384.1	2383.1	2387.3	2379.9	2371.6	2360.1
5°	2478.1	2471.8	2463.5	2483.3	2472.9	2485.4	2489.6	2497.9	2497.9	2496.9	2487.5
7.5°	2324.6	2311.0	2321.5	2328.8	2331.9	2323.5	2340.3	2359.1	2374.7	2384.1	2385.2
10°	2204.5	2208.7	2207.6	2210.8	2218.1	2217.0	2227.5	2237.9	2242.1	2248.4	2250.4
12.5°	2148.1	2147.1	2149.2	2156.5	2160.6	2159.6	2170.0	2176.3	2178.4	2179.4	2178.4
15°	2103.2	2095.9	2101.1	2102.2	2105.3	2105.3	2117.8	2127.2	2131.4	2133.5	2131.4
17.5°	2018.6	2000.9	2017.6	2017.6	2029.1	2027.0	2046.8	2062.5	2070.8	2077.1	2077.1
20°	1935.1	1926.7	1933.0	1930.9	1939.2	1938.2	1950.7	1961.2	1968.5	1973.7	1980.0
22.5°	1901.7	1903.7	1894.3	1895.4	1895.4	1894.3	1900.6	1905.8	1907.9	1911.1	1909.0
25°	1879.7	1881.8	1878.7	1873.5	1871.4	1873.5	1876.6	1882.9	1883.9	1881.8	1874.5
27.5°	1857.8	1851.5	1856.8	1847.4	1845.3	1849.4	1853.6	1854.7	1855.7	1855.7	1849.4
30°	1824.4	1819.2	1824.4	1820.2	1816.0	1820.2	1823.3	1823.3	1825.4	1826.5	1819.2
32.5°	1275.1	1285.5	1454.7	1557.0	1701.2	1774.3	1787.8	1787.8	1789.9	1789.9	1783.7
35°	434.4	435.5	471.0	510.7	595.2	699.7	836.5	907.5	1147.7	1434.9	1712.6
37.5°	429.2	428.2	427.1	426.1	425.0	424.0	421.9	420.8	427.1	506.5	687.1
40°	431.3	430.2	428.2	427.1	426.1	424.0	422.9	420.8	418.8	416.7	414.6
42.5°	431.3	430.2	429.2	428.2	427.1	426.1	424.0	421.9	419.8	416.7	413.5
45°	416.7	416.7	417.7	417.7	418.8	418.8	418.8	417.7	417.7	416.7	412.5
47.5°	389.5	389.5	392.7	392.7	394.7	396.8	396.8	398.9	402.1	404.1	405.2
50°	358.2	358.2	361.3	362.4	364.5	367.6	370.7	371.8	374.9	379.1	383.3
52.5°	326.9	326.9	330.0	330.0	332.1	335.2	338.4	339.4	343.6	347.7	353.0
55°	297.6	297.6	299.7	300.8	301.8	303.9	307.0	307.0	311.2	314.3	319.6
57.5°	271.5	273.6	273.6	273.6	274.6	276.7	278.8	278.8	282.0	285.1	289.3
60°	246.5	248.5	248.5	248.5	249.6	250.6	252.7	252.7	254.8	256.9	261.1
62.5°	223.5	225.6	225.6	226.6	226.6	227.7	229.7	228.7	230.8	231.8	235.0
65°	194.2	196.3	197.4	198.4	199.5	201.5	204.7	203.6	206.8	208.9	212.0
67.5°	166.0	168.1	168.1	169.2	170.2	172.3	174.4	174.4	177.5	179.6	183.8
70°	139.9	142.0	142.0	143.1	144.1	146.2	148.3	147.2	150.4	152.5	155.6
72.5°	115.9	118.0	118.0	119.0	119.0	121.1	123.2	125.3	125.3	127.4	129.5
75°	94.0	95.0	96.1	96.1	97.1	98.2	100.3	102.3	103.4	104.4	106.5
77.5°	74.1	75.2	76.2	76.2	77.3	78.3	79.4	83.5	85.6	86.7	86.7
80°	56.4	57.4	57.4	57.4	58.5	59.5	61.6	61.6	65.8	65.8	66.8
82.5°	39.7	40.7	40.7	40.7	41.8	43.9	44.9	45.9	48.0	49.1	49.1
85°	24.0	25.1	25.1	25.1	26.1	27.2	29.2	30.3	31.3	31.3	32.4
87.5°	9.4	10.4	11.5	11.5	12.5	13.6	14.6	15.7	16.7	16.7	17.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	302.5°	305°	307.5°	310°	312.5°	315°	317.5°	320°	322.5°	325°	327.5°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2347.6	2354.9	2347.6	2351.7	2357.0	2347.6	2325.6	2317.3	2314.2	2301.6	2293.3
5°	2478.1	2478.1	2475.0	2483.3	2482.3	2467.7	2444.7	2434.2	2423.8	2410.2	2399.8
7.5°	2385.2	2393.5	2398.7	2431.1	2452.0	2454.1	2468.7	2471.8	2476.0	2471.8	2465.6
10°	2251.5	2248.4	2263.0	2293.3	2311.0	2320.4	2348.6	2362.2	2373.7	2396.6	2420.7
12.5°	2176.3	2180.5	2186.7	2208.7	2225.4	2221.2	2232.7	2242.1	2255.7	2278.6	2313.1
15°	2126.2	2130.4	2136.6	2153.3	2163.8	2158.6	2164.8	2171.1	2180.5	2192.0	2212.9
17.5°	2071.9	2079.2	2086.5	2104.2	2113.6	2112.6	2117.8	2119.9	2123.0	2130.4	2145.0
20°	1987.3	2010.3	2024.9	2048.9	2062.5	2060.4	2069.8	2072.9	2077.1	2084.4	2090.7
22.5°	1910.0	1916.3	1923.6	1949.7	1972.7	2000.9	2007.1	2015.5	2025.9	2033.2	2039.5
25°	1866.1	1862.0	1865.1	1882.9	1895.4	1897.5	1906.9	1934.0	1962.2	1974.8	1989.4
27.5°	1840.0	1835.9	1834.8	1843.2	1845.3	1840.0	1838.0	1846.3	1867.2	1888.1	1931.9
30°	1811.8	1806.6	1802.4	1809.8	1812.9	1805.6	1792.0	1784.7	1797.2	1802.4	1820.2
32.5°	1778.4	1773.2	1771.1	1775.3	1777.4	1771.1	1756.5	1748.1	1746.1	1741.9	1746.1
35°	1740.8	1735.6	1732.5	1733.5	1737.7	1732.5	1719.9	1709.5	1704.3	1692.8	1684.4
37.5°	897.0	1270.9	1650.0	1689.7	1693.8	1692.8	1680.3	1668.8	1663.6	1650.0	1645.8
40°	410.4	458.4	688.2	899.1	1297.0	1647.9	1636.4	1624.9	1615.5	1611.3	1595.7
42.5°	409.4	410.4	411.5	406.2	503.3	857.4	1265.7	1580.0	1573.7	1563.3	1551.8
45°	409.4	404.1	408.3	402.1	404.1	403.1	502.3	810.4	1442.2	1506.9	1501.7
47.5°	405.2	402.1	406.2	401.0	394.7	397.9	393.7	398.9	622.4	1055.8	1446.3
50°	386.4	388.5	395.8	394.7	389.5	393.7	386.4	392.7	387.4	425.0	818.7
52.5°	358.2	362.4	369.7	375.9	378.0	383.3	381.2	383.3	379.1	380.1	381.2
55°	324.8	330.0	336.3	345.7	349.8	358.2	364.5	367.6	372.8	371.8	363.4
57.5°	293.4	298.7	303.9	313.3	322.7	326.9	338.4	344.6	358.2	355.1	353.0
60°	264.2	268.4	273.6	275.7	287.2	294.5	304.9	311.2	329.0	333.1	339.4
62.5°	238.1	240.2	244.4	247.5	254.8	262.1	267.3	277.8	287.2	300.8	310.2
65°	214.1	216.2	219.3	221.4	222.4	232.9	236.0	247.5	250.6	265.3	273.6
67.5°	186.9	191.1	195.3	197.4	199.5	205.7	207.8	213.0	220.3	226.6	237.1
70°	158.7	161.9	166.0	169.2	173.4	177.5	183.8	186.9	192.1	196.3	204.7
72.5°	132.6	135.8	137.8	141.0	144.1	147.2	152.5	159.8	164.0	171.3	173.4
75°	107.6	110.7	112.8	114.9	118.0	120.1	122.2	129.5	133.7	139.9	146.2
77.5°	88.8	88.8	90.9	97.1	96.1	96.1	98.2	102.3	105.5	109.7	115.9
80°	68.9	70.0	71.0	76.2	77.3	78.3	77.3	80.4	83.5	84.6	88.8
82.5°	51.2	52.2	52.2	55.3	58.5	58.5	58.5	59.5	62.7	63.7	65.8
85°	34.5	35.5	36.6	37.6	39.7	40.7	41.8	41.8	43.9	44.9	45.9
87.5°	18.8	20.9	21.9	23.0	24.0	25.1	26.1	27.2	28.2	29.2	30.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	332.5°	335°	337.5°	340°	342.5°	345°	347.5°	350°	352.5°	355°
0°	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2290.1	2284.9	2281.8	2273.4	2271.3	2257.8	2259.8	2257.8	2257.8	2260.9	2271.3
5°	2388.3	2363.2	2357.0	2339.2	2324.6	2299.5	2283.9	2275.5	2263.0	2257.8	2265.1
7.5°	2455.1	2436.3	2420.7	2405.0	2384.1	2354.9	2332.9	2307.9	2287.0	2267.2	2261.9
10°	2443.6	2464.5	2464.5	2455.1	2435.3	2406.0	2379.9	2348.6	2312.1	2280.7	2261.9
12.5°	2346.5	2383.1	2412.3	2434.2	2454.1	2434.2	2408.1	2383.1	2342.3	2296.4	2261.9
15°	2240.0	2277.6	2314.2	2360.1	2408.1	2428.0	2426.9	2397.7	2361.1	2313.1	2265.1
17.5°	2164.8	2190.9	2210.8	2260.9	2319.4	2370.5	2405.0	2407.1	2371.6	2328.8	2266.1
20°	2108.4	2127.2	2143.9	2172.1	2223.3	2286.0	2349.7	2385.2	2378.9	2331.9	2269.2
22.5°	2057.3	2070.8	2084.4	2105.3	2146.0	2186.7	2260.9	2334.0	2365.3	2326.7	2266.1
25°	2006.1	2020.7	2031.1	2045.8	2078.1	2111.6	2163.8	2254.6	2324.6	2322.5	2259.8
27.5°	1945.5	1965.4	1977.9	1997.7	2019.7	2044.7	2080.2	2165.9	2266.1	2301.6	2243.1
30°	1872.4	1901.7	1920.5	1942.4	1961.2	1983.1	2011.3	2063.5	2187.8	2260.9	2225.4
32.5°	1766.9	1819.2	1860.9	1881.8	1902.7	1921.5	1946.6	1990.4	2091.7	2205.5	2205.5
35°	1691.8	1715.8	1753.4	1813.9	1840.0	1858.8	1881.8	1916.3	1981.0	2139.8	2173.2
37.5°	1633.3	1642.7	1661.5	1721.0	1770.1	1800.4	1823.3	1845.3	1909.0	2049.9	2131.4
40°	1589.4	1586.3	1584.2	1612.4	1682.4	1730.4	1756.5	1778.4	1827.5	1942.4	2076.1
42.5°	1538.2	1535.1	1524.7	1532.0	1566.4	1646.8	1686.5	1710.6	1751.3	1829.6	2015.5
45°	1485.0	1479.8	1475.6	1468.3	1480.8	1525.7	1607.2	1642.7	1665.6	1735.6	1939.2
47.5°	1430.7	1423.4	1418.1	1411.9	1404.6	1425.5	1502.7	1566.4	1606.1	1650.0	1847.4
50°	1353.4	1362.8	1356.5	1349.2	1343.0	1338.8	1371.2	1475.6	1524.7	1560.2	1735.6
52.5°	638.1	1240.6	1292.8	1285.5	1277.2	1269.9	1277.2	1356.5	1445.3	1473.5	1600.9
55°	363.4	552.4	1149.8	1215.6	1208.2	1197.8	1191.5	1218.7	1351.3	1388.9	1477.7
57.5°	349.8	350.9	507.5	1095.5	1136.2	1126.8	1119.5	1125.7	1238.5	1302.2	1370.1
60°	338.4	338.4	338.4	484.6	1047.4	1050.6	1041.2	1030.7	1079.8	1205.1	1261.5
62.5°	313.3	319.6	322.7	322.7	478.3	970.1	960.7	957.6	959.7	1088.2	1152.9
65°	280.9	295.5	301.8	306.0	306.0	502.3	878.2	873.0	865.7	914.8	1043.2
67.5°	245.4	260.0	273.6	282.0	283.0	292.4	524.2	786.4	775.9	777.0	926.3
70°	208.9	221.4	236.0	248.5	260.0	265.3	273.6	652.7	687.1	672.5	793.7
72.5°	180.7	185.9	196.3	208.9	222.4	235.0	242.3	260.0	596.3	580.6	603.6
75°	150.4	154.6	161.9	170.2	180.7	195.3	207.8	220.3	316.4	486.6	483.5
77.5°	117.0	124.3	132.6	137.8	143.1	153.5	170.2	182.8	195.3	329.0	387.4
80°	89.8	95.0	99.2	104.4	110.7	118.0	124.3	138.9	153.5	165.0	296.6
82.5°	66.8	70.0	73.1	75.2	77.3	81.5	92.9	98.2	107.6	118.0	139.9
85°	47.0	49.1	51.2	52.2	53.3	54.3	58.5	59.5	68.9	71.0	84.6
87.5°	30.3	31.3	33.4	34.5	34.5	35.5	36.6	36.6	36.6	34.5	41.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54SL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	357.5°	360°
0°	2278.6	2278.6
2.5°	2279.7	2296.4
5°	2276.6	2298.5
7.5°	2268.2	2289.1
10°	2255.7	2280.7
12.5°	2242.1	2266.1
15°	2230.6	2248.4
17.5°	2218.1	2228.5
20°	2201.4	2209.7
22.5°	2184.7	2180.5
25°	2165.9	2156.5
27.5°	2141.8	2124.1
30°	2119.9	2088.6
32.5°	2099.0	2047.9
35°	2070.8	2006.1
37.5°	2041.6	1963.3
40°	2007.1	1914.2
42.5°	1970.6	1865.1
45°	1924.6	1818.1
47.5°	1883.9	1761.7
50°	1827.5	1701.2
52.5°	1758.6	1644.8
55°	1677.1	1575.8
57.5°	1589.4	1503.8
60°	1495.4	1421.3
62.5°	1381.6	1335.6
65°	1247.9	1237.5
67.5°	1073.5	1128.9
70°	880.3	1004.6
72.5°	736.2	873.0
75°	603.6	725.8
77.5°	478.3	569.1
80°	298.7	416.7
82.5°	200.5	273.6
85°	121.1	130.5
87.5°	47.0	48.0
90°	0.0	0.0

(END OF REPORT)