

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-LD5-64HL-LC-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 (P33518)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
CLEAR LENSED
Light Source: -
Ballast/Driver: -

Summary

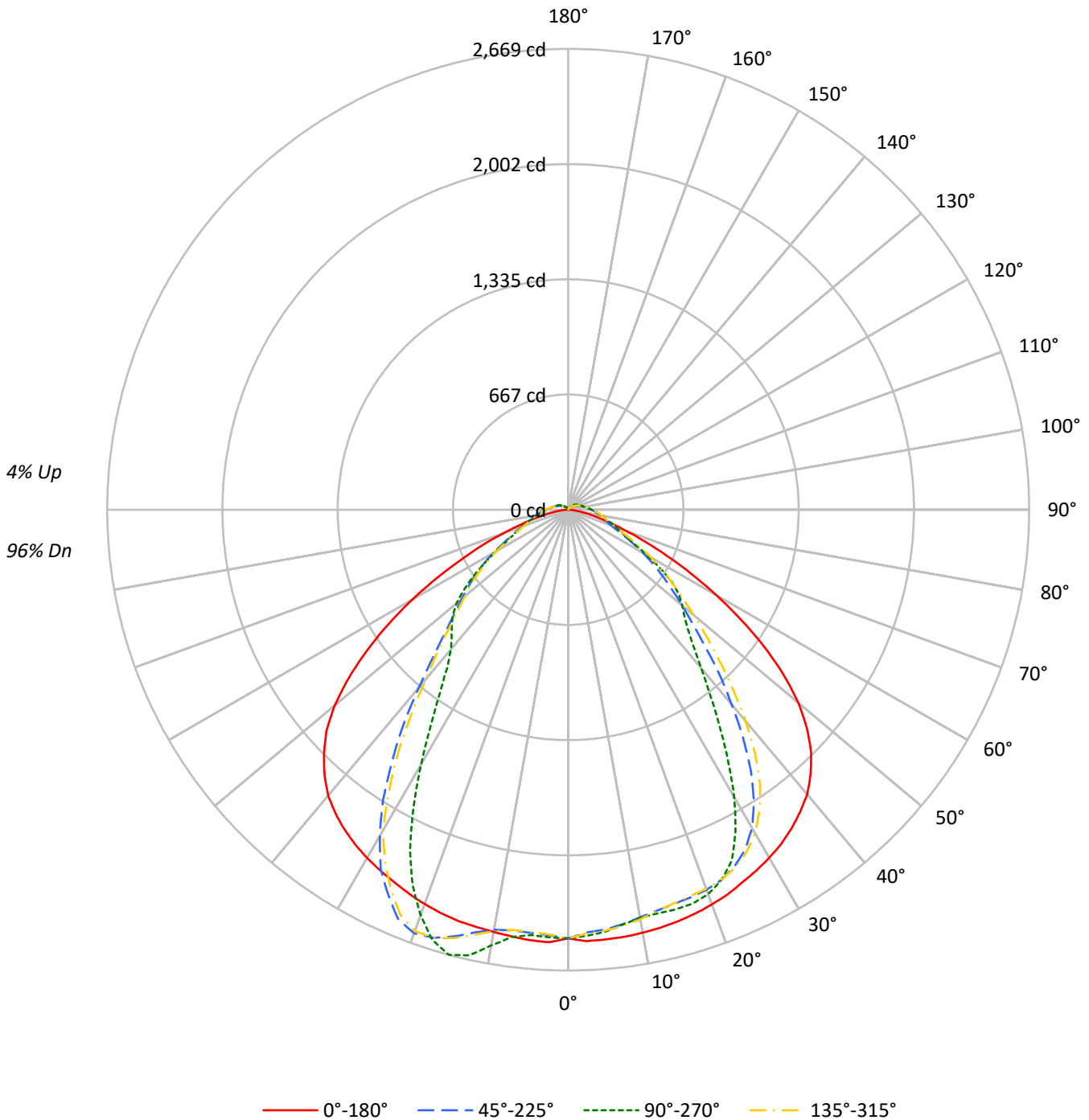
Lumens per Lamp: N/A
Luminaire Lumens: 5919.0 lumens
Efficiency: N/A
Efficacy: 123.3 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.12 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 48
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-LD5-64HL-LC-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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96				
1	109	104	100	97	106	102	98	95	97	94	91	92	90	88	88	86	84	82				
2	100	93	86	81	97	90	85	80	86	82	77	82	79	75	79	76	73	71				
3	92	83	75	69	89	81	74	68	77	71	67	74	69	65	71	67	63	61				
4	85	74	66	60	83	73	65	59	70	63	58	67	61	57	64	60	56	54				
5	79	67	59	52	76	66	58	52	63	56	51	61	55	50	59	53	49	47				
6	73	61	52	46	71	60	52	46	57	51	45	55	49	45	54	48	44	42				
7	68	55	47	42	66	54	47	41	53	46	41	51	45	40	49	44	40	38				
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	45	40	36	34				
9	60	47	39	34	58	46	39	34	45	38	33	43	37	33	42	37	33	31				
10	56	43	36	31	54	43	36	31	42	35	30	40	34	30	39	34	30	28				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	20064	20064	20064	20064
5°	20211	19269	20252	19420
10°	20304	18467	20262	19721
15°	20461	18220	20450	20287
20°	20687	17931	20665	18902
25°	20941	17011	20930	16437
30°	21335	14743	21347	13061
35°	21753	11922	21815	10089
40°	22121	9599	22214	8457
45°	22043	8131	22157	7918
50°	21093	7486	21389	7319
55°	18714	6728	19182	6117
60°	15180	5150	15987	4723
65°	11284	3940	12157	3736
70°	7674	3401	8651	3252
75°	5019	3069	5844	2903
80°	3245	2862	3803	2633
85°	1667	2855	2193	2608



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.8	4.0
10°-20°	701.7	11.9
20°-30°	1066.8	18.0
30°-40°	1144.4	19.3
40°-50°	993.2	16.8
50°-60°	736.1	12.4
60°-70°	421.8	7.1
70°-80°	233.6	3.9
80°-90°	142.2	2.4
90°-100°	92.5	1.6
100°-110°	61.9	1.0
110°-120°	41.8	0.7
120°-130°	25.7	0.4
130°-140°	13.5	0.2
140°-150°	6.2	0.1
150°-160°	1.8	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2004.4	33.9
0°-40°	3148.8	53.2
0°-60°	4878.1	82.4
0°-90°	5675.6	95.9
90°-120°	196.2	3.3
90°-150°	241.6	4.1
90°-180°	243.0	4.1
0°-180°	5919.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2483	2483	2483	2483	2483	
5°	2498	2453	2503	2473	2498	238
15°	2466	2397	2465	2669	2466	698
25°	2383	2242	2382	2166	2383	1101
35°	2253	1526	2260	1292	2253	1410
45°	1989	978	1999	953	1989	1523
55°	1388	734	1422	667	1388	1231
65°	630	372	678	353	630	635
75°	180	236	209	223	180	205
85°	24	163	32	149	24	32
90°	0	136	3	126	0	1
95°	1	112	0	106	1	1
105°	1	83	1	80	1	1
115°	1	68	1	62	1	1
125°	1	51	1	42	1	1
135°	1	32	1	27	1	1
145°	1	19	3	15	1	1
155°	3	9	3	8	3	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	



TEST NUMBER: P#

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9
2.5°	2500.8	2494.4	2491.8	2486.7	2490.6	2506.0	2495.7	2479.0	2480.3	2450.8	2466.2
5°	2498.3	2490.6	2486.7	2481.6	2484.2	2498.3	2488.0	2471.3	2470.0	2440.5	2454.7
7.5°	2494.4	2486.7	2480.3	2476.5	2477.7	2489.3	2476.5	2457.2	2453.4	2421.3	2434.1
10°	2488.0	2482.9	2473.9	2467.5	2466.2	2479.0	2458.5	2439.3	2430.3	2396.9	2409.8
12.5°	2479.0	2471.3	2462.4	2450.8	2449.5	2457.2	2440.5	2413.6	2404.6	2377.7	2391.8
15°	2466.2	2457.2	2447.0	2434.1	2427.7	2432.9	2412.3	2388.0	2386.7	2363.6	2382.8
17.5°	2452.1	2439.3	2427.7	2409.8	2400.8	2404.6	2388.0	2366.2	2368.7	2354.6	2376.4
20°	2432.9	2418.7	2400.8	2382.8	2370.0	2376.4	2364.9	2348.2	2352.1	2341.8	2361.0
22.5°	2411.1	2391.8	2370.0	2349.5	2339.2	2348.2	2339.2	2325.1	2326.4	2320.0	2331.5
25°	2382.8	2361.0	2335.4	2309.7	2304.6	2311.0	2305.9	2294.3	2289.2	2279.0	2284.1
27.5°	2357.2	2332.8	2300.8	2273.8	2264.8	2277.7	2266.1	2246.9	2232.8	2218.7	2208.4
30°	2327.7	2298.2	2262.3	2231.5	2223.8	2228.9	2212.3	2182.8	2145.6	2127.6	2099.4
32.5°	2295.6	2257.2	2212.3	2177.6	2172.5	2168.7	2137.9	2095.6	2037.9	2001.9	1958.3
35°	2253.3	2211.0	2157.1	2114.8	2107.1	2085.3	2035.3	1978.9	1904.5	1842.9	1768.5
37.5°	2205.9	2155.8	2099.4	2043.0	2021.2	1977.6	1907.0	1848.0	1735.2	1660.8	1571.0
40°	2152.0	2091.7	2022.5	1954.5	1918.6	1848.0	1767.2	1680.0	1571.0	1471.0	1395.3
42.5°	2077.6	2013.5	1931.4	1855.7	1794.2	1700.6	1605.7	1482.5	1382.5	1297.9	1220.9
45°	1989.1	1912.2	1817.3	1726.2	1648.0	1536.4	1424.8	1301.7	1218.4	1119.6	1067.0
47.5°	1875.0	1791.6	1690.3	1589.0	1486.4	1363.3	1246.6	1128.6	1045.2	974.7	936.2
50°	1740.3	1663.4	1551.8	1431.2	1318.4	1190.1	1073.4	984.9	904.1	860.5	831.0
52.5°	1573.6	1501.8	1387.6	1256.8	1147.8	1022.1	915.7	843.9	786.2	754.1	743.8
55°	1387.6	1324.8	1211.9	1090.1	978.5	863.1	782.3	719.5	682.3	663.0	664.3
57.5°	1188.9	1140.1	1033.7	924.7	819.5	732.3	659.2	609.2	581.0	579.7	583.5
60°	990.1	954.2	861.8	768.2	675.9	605.3	551.5	516.8	498.9	500.2	498.9
62.5°	800.3	766.9	700.2	623.3	550.2	502.7	454.0	439.9	424.5	423.2	423.2
65°	629.7	604.0	550.2	495.0	439.9	409.1	384.7	368.1	356.5	354.0	355.2
67.5°	473.2	463.0	425.8	388.6	354.0	334.7	314.2	310.4	301.4	301.4	303.9
70°	352.7	345.0	324.5	302.7	288.6	275.7	265.5	265.5	264.2	262.9	269.3
72.5°	255.2	256.5	250.1	233.4	232.1	229.6	227.0	230.8	232.1	236.0	243.7
75°	179.5	183.4	183.4	180.8	186.0	192.4	196.2	202.6	210.3	215.5	224.4
77.5°	127.0	127.0	133.4	141.1	151.3	162.9	173.1	182.1	192.4	198.8	206.5
80°	82.1	85.9	96.2	110.3	124.4	139.8	153.9	165.4	175.7	186.0	191.1
82.5°	48.7	55.1	68.0	85.9	103.9	123.1	137.2	151.3	162.9	173.1	177.0
85°	24.4	33.3	48.7	68.0	87.2	107.7	125.7	138.5	151.3	160.3	165.4
87.5°	7.7	18.0	34.6	52.6	73.1	93.6	112.9	127.0	138.5	146.2	151.3
90°	0.0	9.0	24.4	43.6	62.8	83.4	101.3	116.7	128.2	134.7	138.5
92.5°	0.0	5.1	19.2	35.9	53.9	74.4	92.3	106.4	116.7	123.1	125.7
95°	1.3	3.8	14.1	29.5	47.5	66.7	83.4	96.2	106.4	112.9	114.1
97.5°	1.3	2.6	11.5	24.4	41.0	59.0	75.7	88.5	96.2	102.6	103.9
100°	1.3	2.6	9.0	21.8	35.9	52.6	68.0	79.5	88.5	93.6	94.9
102.5°	1.3	1.3	7.7	18.0	32.1	46.2	60.3	71.8	79.5	84.6	87.2
105°	1.3	1.3	6.4	15.4	28.2	41.0	53.9	65.4	71.8	76.9	79.5
107.5°	1.3	1.3	5.1	12.8	24.4	35.9	48.7	57.7	65.4	70.5	73.1
110°	1.3	1.3	3.8	11.5	20.5	32.1	42.3	51.3	59.0	64.1	66.7



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.3	1.3	3.8	10.3	18.0	28.2	37.2	46.2	52.6	57.7	61.6
115°	1.3	1.3	3.8	9.0	16.7	24.4	33.3	41.0	47.5	52.6	56.4
117.5°	1.3	1.3	3.8	7.7	14.1	21.8	29.5	37.2	42.3	47.5	51.3
120°	1.3	1.3	2.6	6.4	12.8	19.2	25.6	32.1	38.5	43.6	47.5
122.5°	1.3	1.3	2.6	6.4	10.3	16.7	23.1	28.2	34.6	38.5	42.3
125°	1.3	1.3	2.6	5.1	9.0	15.4	20.5	25.6	29.5	34.6	38.5
127.5°	1.3	1.3	2.6	5.1	7.7	12.8	18.0	23.1	26.9	30.8	33.3
130°	1.3	1.3	2.6	3.8	6.4	10.3	15.4	19.2	24.4	26.9	29.5
132.5°	1.3	1.3	1.3	3.8	5.1	7.7	11.5	16.7	20.5	24.4	25.6
135°	1.3	1.3	1.3	2.6	5.1	6.4	9.0	12.8	16.7	20.5	23.1
137.5°	1.3	1.3	1.3	2.6	3.8	6.4	7.7	10.3	14.1	16.7	20.5
140°	1.3	1.3	1.3	2.6	3.8	5.1	6.4	9.0	11.5	14.1	16.7
142.5°	1.3	1.3	1.3	2.6	2.6	3.8	5.1	7.7	9.0	11.5	14.1
145°	1.3	1.3	1.3	2.6	2.6	3.8	5.1	6.4	7.7	9.0	11.5
147.5°	1.3	1.3	1.3	2.6	2.6	2.6	3.8	5.1	6.4	7.7	9.0
150°	2.6	2.6	2.6	2.6	2.6	2.6	3.8	3.8	5.1	6.4	7.7
152.5°	2.6	2.6	2.6	2.6	2.6	2.6	3.8	3.8	3.8	5.1	6.4
155°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.8	3.8	5.1	5.1
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9
2.5°	2461.1	2463.6	2479.0	2477.7	2475.2	2472.6	2472.6	2470.0	2472.6	2479.0	2476.5
5°	2448.2	2452.1	2463.6	2462.4	2459.8	2458.5	2457.2	2453.4	2455.9	2464.9	2462.4
7.5°	2425.2	2429.0	2439.3	2434.1	2430.3	2432.9	2426.4	2422.6	2427.7	2436.7	2435.4
10°	2400.8	2403.4	2416.2	2413.6	2407.2	2408.5	2402.1	2399.5	2405.9	2411.1	2412.3
12.5°	2384.1	2393.1	2404.6	2403.4	2402.1	2403.4	2396.9	2394.4	2398.2	2403.4	2402.1
15°	2380.3	2391.8	2404.6	2404.6	2405.9	2407.2	2400.8	2396.9	2400.8	2404.6	2403.4
17.5°	2376.4	2390.5	2402.1	2400.8	2402.1	2404.6	2394.4	2391.8	2396.9	2402.1	2399.5
20°	2363.6	2376.4	2384.1	2381.6	2381.6	2382.8	2370.0	2370.0	2377.7	2381.6	2382.8
22.5°	2327.7	2343.1	2343.1	2336.7	2336.7	2331.5	2327.7	2320.0	2329.0	2335.4	2340.5
25°	2273.8	2280.2	2272.5	2258.4	2250.7	2244.3	2226.4	2241.8	2241.8	2261.0	2267.4
27.5°	2198.2	2184.1	2162.3	2132.8	2126.3	2105.8	2094.3	2098.1	2104.5	2131.5	2152.0
30°	2073.8	2031.4	1994.2	1981.4	1953.2	1932.7	1912.2	1922.4	1934.0	1949.4	1991.7
32.5°	1909.6	1868.6	1808.3	1786.5	1757.0	1731.3	1707.0	1722.4	1742.9	1753.1	1799.3
35°	1721.1	1672.3	1617.2	1580.0	1549.2	1535.1	1504.3	1526.1	1547.9	1555.6	1595.4
37.5°	1521.0	1471.0	1422.3	1390.2	1360.7	1351.7	1331.2	1346.6	1363.3	1374.8	1408.2
40°	1331.2	1285.0	1247.8	1226.0	1205.5	1197.8	1190.1	1196.5	1209.4	1218.4	1244.0
42.5°	1168.3	1131.1	1105.5	1092.7	1078.6	1068.3	1069.6	1072.1	1078.6	1097.8	1109.3
45°	1026.0	1004.2	987.5	984.9	976.0	974.7	973.4	978.5	982.4	993.9	1002.9
47.5°	911.8	902.9	899.0	904.1	908.0	902.9	905.4	911.8	919.5	919.5	918.3
50°	822.1	824.6	829.8	841.3	849.0	851.6	854.1	861.8	863.1	865.7	861.8
52.5°	749.0	751.5	765.6	783.6	792.6	796.4	801.5	809.2	809.2	811.8	806.7
55°	674.6	678.4	692.5	710.5	718.2	723.3	728.4	733.6	737.4	742.6	738.7
57.5°	592.5	604.0	613.0	618.2	623.3	627.1	631.0	632.3	640.0	641.2	647.6
60°	505.3	507.9	516.8	515.6	511.7	522.0	516.8	525.8	534.8	546.3	547.6
62.5°	421.9	423.2	429.6	427.1	432.2	430.9	434.8	434.8	441.2	446.3	452.7
65°	356.5	357.8	362.9	362.9	361.7	365.5	369.4	371.9	371.9	375.8	380.9
67.5°	307.8	311.6	316.8	319.3	321.9	321.9	325.7	327.0	329.6	330.9	333.4
70°	274.4	279.6	284.7	287.3	288.6	291.1	292.4	292.4	295.0	296.3	298.8
72.5°	250.1	255.2	259.1	259.1	261.6	262.9	262.9	264.2	265.5	268.0	270.6
75°	229.6	233.4	236.0	234.7	234.7	234.7	236.0	236.0	238.5	241.1	243.7
77.5°	210.3	214.2	214.2	211.6	211.6	211.6	211.6	212.9	214.2	216.7	219.3
80°	196.2	196.2	194.9	194.9	192.4	191.1	191.1	192.4	192.4	194.9	198.8
82.5°	180.8	180.8	179.5	178.3	177.0	175.7	175.7	177.0	178.3	179.5	182.1
85°	166.7	166.7	164.2	164.2	162.9	162.9	162.9	162.9	164.2	165.4	168.0
87.5°	152.6	151.3	150.0	148.8	148.8	148.8	148.8	148.8	150.0	152.6	153.9
90°	138.5	137.2	135.9	135.9	134.7	134.7	135.9	135.9	137.2	138.5	139.8
92.5°	125.7	124.4	123.1	123.1	121.8	121.8	123.1	121.8	124.4	124.4	125.7
95°	114.1	112.9	111.6	111.6	111.6	111.6	111.6	111.6	112.9	112.9	114.1
97.5°	103.9	102.6	101.3	101.3	102.6	101.3	102.6	102.6	102.6	103.9	105.2
100°	94.9	93.6	93.6	94.9	93.6	93.6	94.9	94.9	94.9	94.9	96.2
102.5°	87.2	87.2	87.2	87.2	87.2	87.2	88.5	88.5	88.5	88.5	89.8
105°	79.5	80.8	80.8	80.8	82.1	82.1	82.1	83.4	83.4	83.4	83.4
107.5°	74.4	75.7	75.7	76.9	76.9	78.2	78.2	78.2	78.2	79.5	79.5
110°	69.3	70.5	71.8	73.1	73.1	74.4	74.4	74.4	74.4	74.4	74.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	64.1	65.4	66.7	69.3	70.5	70.5	70.5	70.5	71.8	71.8	70.5
115°	59.0	61.6	62.8	65.4	66.7	66.7	68.0	68.0	68.0	68.0	66.7
117.5°	53.9	57.7	59.0	61.6	62.8	62.8	64.1	64.1	64.1	64.1	62.8
120°	50.0	52.6	55.1	56.4	57.7	59.0	59.0	60.3	60.3	60.3	59.0
122.5°	46.2	48.7	51.3	52.6	53.9	55.1	55.1	55.1	55.1	55.1	55.1
125°	41.0	43.6	46.2	47.5	48.7	50.0	50.0	51.3	51.3	51.3	50.0
127.5°	37.2	39.8	41.0	43.6	44.9	44.9	46.2	46.2	46.2	46.2	44.9
130°	32.1	34.6	37.2	38.5	39.8	39.8	41.0	41.0	41.0	41.0	41.0
132.5°	28.2	30.8	32.1	34.6	34.6	35.9	35.9	37.2	37.2	37.2	35.9
135°	25.6	26.9	28.2	30.8	30.8	32.1	32.1	32.1	32.1	32.1	32.1
137.5°	23.1	24.4	25.6	26.9	26.9	28.2	28.2	28.2	28.2	29.5	28.2
140°	19.2	21.8	23.1	23.1	24.4	24.4	24.4	25.6	25.6	25.6	24.4
142.5°	16.7	18.0	19.2	20.5	21.8	21.8	21.8	21.8	23.1	21.8	21.8
145°	12.8	15.4	16.7	18.0	19.2	19.2	19.2	19.2	19.2	19.2	19.2
147.5°	10.3	11.5	14.1	15.4	15.4	16.7	16.7	16.7	16.7	16.7	16.7
150°	9.0	9.0	11.5	12.8	14.1	14.1	14.1	14.1	14.1	14.1	14.1
152.5°	6.4	7.7	9.0	10.3	11.5	11.5	11.5	11.5	11.5	11.5	11.5
155°	6.4	6.4	7.7	7.7	9.0	9.0	9.0	9.0	10.3	9.0	9.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9
2.5°	2472.6	2471.3	2476.5	2471.3	2445.7	2455.9	2452.1	2466.2	2467.5	2471.3	2484.2
5°	2459.8	2459.8	2466.2	2461.1	2436.7	2447.0	2445.7	2459.8	2462.4	2464.9	2479.0
7.5°	2434.1	2435.4	2444.4	2440.5	2414.9	2430.3	2429.0	2445.7	2450.8	2455.9	2468.8
10°	2409.8	2408.5	2418.7	2414.9	2390.5	2408.5	2407.2	2423.9	2431.6	2440.5	2455.9
12.5°	2396.9	2393.1	2396.9	2393.1	2366.2	2380.3	2381.6	2400.8	2409.8	2421.3	2439.3
15°	2396.9	2390.5	2390.5	2382.8	2352.1	2361.0	2362.3	2375.1	2386.7	2398.2	2420.0
17.5°	2394.4	2388.0	2386.7	2380.3	2346.9	2346.9	2345.6	2354.6	2361.0	2372.6	2395.7
20°	2380.3	2377.7	2376.4	2372.6	2341.8	2336.7	2334.1	2334.1	2338.0	2341.8	2364.9
22.5°	2343.1	2345.6	2348.2	2350.8	2326.4	2317.4	2318.7	2316.1	2312.3	2312.3	2331.5
25°	2273.8	2286.7	2296.9	2308.5	2294.3	2287.9	2295.6	2291.8	2285.4	2280.2	2296.9
27.5°	2163.5	2190.5	2212.3	2240.5	2241.8	2236.6	2257.2	2254.6	2253.3	2245.6	2258.4
30°	2010.9	2053.2	2082.7	2123.8	2158.4	2163.5	2198.2	2203.3	2208.4	2204.6	2217.4
32.5°	1826.2	1884.0	1934.0	1998.1	2031.4	2060.9	2109.7	2130.2	2150.7	2157.1	2171.2
35°	1624.9	1690.3	1749.3	1819.8	1872.4	1936.5	1995.5	2026.3	2072.5	2090.4	2111.0
37.5°	1433.8	1495.4	1553.1	1623.6	1708.3	1774.9	1848.0	1917.3	1980.1	2005.8	2036.6
40°	1264.5	1314.5	1369.7	1431.2	1508.2	1595.4	1674.9	1771.1	1845.5	1896.8	1941.7
42.5°	1136.3	1160.6	1208.1	1263.2	1324.8	1413.3	1494.1	1601.8	1691.6	1764.7	1839.1
45°	1022.1	1033.7	1068.3	1097.8	1160.6	1238.9	1324.8	1430.0	1523.6	1617.2	1707.0
47.5°	924.7	938.8	955.4	973.4	1018.3	1083.7	1158.1	1253.0	1346.6	1455.6	1558.2
50°	859.3	863.1	865.7	873.4	900.3	945.2	1005.5	1086.3	1176.0	1292.7	1401.7
52.5°	801.5	801.5	793.9	790.0	800.3	828.5	863.1	920.8	1013.2	1120.9	1236.3
55°	740.0	728.4	725.9	713.1	715.6	728.4	745.1	790.0	865.7	958.0	1069.6
57.5°	654.1	648.9	648.9	643.8	633.5	640.0	643.8	675.9	729.7	809.2	906.7
60°	555.3	552.7	559.2	560.4	551.5	555.3	554.0	573.3	611.7	675.9	756.7
62.5°	456.6	468.1	469.4	474.5	469.4	468.1	474.5	491.2	510.4	559.2	622.0
65°	383.5	389.9	391.2	397.6	395.0	395.0	400.1	413.0	424.5	457.8	506.6
67.5°	336.0	333.4	334.7	338.6	334.7	333.4	337.3	345.0	354.0	374.5	409.1
70°	298.8	296.3	296.3	296.3	291.1	287.3	288.6	291.1	295.0	306.5	328.3
72.5°	270.6	270.6	266.8	262.9	259.1	256.5	253.9	251.4	250.1	253.9	265.5
75°	245.0	246.2	245.0	241.1	236.0	230.8	225.7	220.6	214.2	211.6	212.9
77.5°	221.9	223.2	224.4	223.2	218.0	211.6	203.9	196.2	187.2	178.3	173.1
80°	201.3	203.9	205.2	203.9	200.1	194.9	186.0	177.0	164.2	152.6	139.8
82.5°	183.4	187.2	188.5	188.5	186.0	180.8	170.6	160.3	146.2	130.8	114.1
85°	169.3	171.9	174.4	174.4	173.1	168.0	157.7	146.2	132.1	114.1	96.2
87.5°	155.2	156.5	159.0	161.6	159.0	153.9	144.9	132.1	118.0	100.0	79.5
90°	141.1	142.4	144.9	147.5	146.2	141.1	133.4	121.8	106.4	87.2	66.7
92.5°	127.0	129.5	130.8	132.1	133.4	129.5	123.1	111.6	96.2	76.9	57.7
95°	116.7	116.7	119.3	120.6	121.8	118.0	112.9	101.3	87.2	69.3	50.0
97.5°	106.4	106.4	109.0	109.0	110.3	107.7	102.6	92.3	78.2	61.6	42.3
100°	96.2	97.5	98.8	100.0	100.0	98.8	93.6	83.4	70.5	55.1	37.2
102.5°	89.8	89.8	91.1	91.1	92.3	89.8	84.6	75.7	62.8	48.7	32.1
105°	83.4	83.4	84.6	84.6	83.4	80.8	75.7	68.0	56.4	42.3	28.2
107.5°	78.2	78.2	78.2	78.2	76.9	74.4	69.3	60.3	50.0	38.5	25.6
110°	74.4	73.1	73.1	71.8	70.5	66.7	61.6	53.9	44.9	33.3	21.8



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	70.5	69.3	68.0	66.7	64.1	60.3	55.1	48.7	39.8	29.5	19.2
115°	66.7	65.4	64.1	61.6	59.0	55.1	50.0	43.6	34.6	25.6	16.7
117.5°	62.8	61.6	59.0	56.4	53.9	50.0	44.9	38.5	30.8	23.1	15.4
120°	57.7	56.4	55.1	52.6	50.0	44.9	39.8	34.6	26.9	20.5	12.8
122.5°	53.9	52.6	50.0	48.7	44.9	41.0	35.9	30.8	24.4	18.0	11.5
125°	48.7	47.5	46.2	43.6	41.0	35.9	32.1	26.9	21.8	15.4	9.0
127.5°	44.9	43.6	41.0	38.5	35.9	32.1	28.2	24.4	19.2	12.8	9.0
130°	39.8	38.5	37.2	34.6	32.1	28.2	25.6	20.5	16.7	11.5	7.7
132.5°	34.6	34.6	33.3	30.8	28.2	25.6	21.8	18.0	14.1	10.3	6.4
135°	32.1	30.8	29.5	26.9	25.6	21.8	19.2	15.4	11.5	9.0	5.1
137.5°	28.2	26.9	25.6	24.4	21.8	19.2	16.7	12.8	10.3	7.7	5.1
140°	24.4	23.1	23.1	20.5	19.2	16.7	14.1	11.5	9.0	6.4	3.8
142.5°	21.8	20.5	19.2	18.0	16.7	14.1	11.5	9.0	7.7	5.1	3.8
145°	19.2	18.0	16.7	15.4	14.1	11.5	10.3	7.7	6.4	5.1	3.8
147.5°	15.4	15.4	14.1	12.8	11.5	10.3	9.0	7.7	5.1	3.8	2.6
150°	12.8	12.8	11.5	10.3	10.3	9.0	7.7	6.4	5.1	3.8	2.6
152.5°	11.5	10.3	10.3	9.0	9.0	7.7	6.4	5.1	3.8	3.8	2.6
155°	9.0	9.0	9.0	7.7	7.7	6.4	5.1	5.1	3.8	2.6	2.6
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9
2.5°	2486.7	2471.3	2484.2	2507.2	2504.7	2502.1	2499.5	2504.7	2521.3	2512.4	2498.3
5°	2482.9	2467.5	2481.6	2503.4	2502.1	2498.3	2495.7	2500.8	2517.5	2508.5	2493.1
7.5°	2475.2	2461.1	2471.3	2493.1	2493.1	2490.6	2488.0	2493.1	2508.5	2500.8	2485.4
10°	2462.4	2452.1	2462.4	2482.9	2484.2	2479.0	2476.5	2482.9	2498.3	2494.4	2481.6
12.5°	2452.1	2441.8	2453.4	2473.9	2475.2	2470.0	2466.2	2473.9	2494.4	2497.0	2493.1
15°	2438.0	2429.0	2443.1	2464.9	2464.9	2461.1	2461.1	2471.3	2499.5	2511.1	2517.5
17.5°	2417.5	2411.1	2427.7	2449.5	2450.8	2448.2	2449.5	2470.0	2507.2	2535.5	2553.4
20°	2391.8	2389.2	2407.2	2430.3	2434.1	2435.4	2441.8	2472.6	2523.9	2562.4	2580.3
22.5°	2361.0	2362.3	2382.8	2407.2	2412.3	2416.2	2429.0	2472.6	2536.7	2577.8	2585.5
25°	2326.4	2330.3	2352.1	2381.6	2388.0	2395.7	2417.5	2473.9	2540.6	2567.5	2554.7
27.5°	2289.2	2296.9	2325.1	2355.9	2363.6	2376.4	2404.6	2466.2	2522.6	2523.9	2476.5
30°	2250.7	2259.7	2293.1	2329.0	2341.8	2354.6	2389.2	2448.2	2479.0	2438.0	2354.6
32.5°	2207.1	2220.0	2253.3	2296.9	2312.3	2329.0	2363.6	2413.6	2402.1	2313.6	2194.3
35°	2152.0	2169.9	2208.4	2259.7	2273.8	2295.6	2320.0	2331.5	2280.2	2154.6	2019.9
37.5°	2084.0	2111.0	2155.8	2214.8	2230.2	2244.3	2250.7	2218.7	2116.1	1980.1	1840.4
40°	2005.8	2046.8	2095.6	2161.0	2176.4	2176.4	2153.3	2085.3	1955.8	1777.5	1622.3
42.5°	1910.9	1960.9	2022.5	2087.9	2103.3	2085.3	2030.2	1910.9	1763.4	1564.6	1400.5
45°	1795.5	1862.2	1931.4	1999.4	2007.1	1967.3	1868.6	1717.2	1535.1	1350.4	1194.0
47.5°	1658.2	1745.4	1821.1	1898.1	1887.8	1821.1	1689.0	1517.2	1324.8	1150.4	1024.7
50°	1504.3	1606.9	1691.6	1764.7	1742.9	1650.5	1495.4	1315.8	1124.7	976.0	872.1
52.5°	1340.2	1458.2	1542.8	1601.8	1572.3	1462.0	1291.5	1119.6	963.1	827.2	757.9
55°	1169.6	1288.9	1376.1	1422.3	1383.8	1264.5	1096.5	940.1	792.6	704.1	663.0
57.5°	1004.2	1115.8	1197.8	1235.0	1186.3	1067.0	911.8	779.7	673.3	598.9	578.4
60°	845.2	936.2	1014.4	1042.7	990.1	879.8	746.4	641.2	563.0	511.7	501.4
62.5°	697.7	772.0	833.6	855.4	804.1	718.2	602.8	524.5	469.4	443.7	430.9
65°	575.8	619.4	682.3	678.4	647.6	568.1	483.5	428.3	392.4	375.8	368.1
67.5°	452.7	492.5	532.2	537.4	498.9	443.7	388.6	348.8	329.6	320.6	316.8
70°	350.1	379.6	404.0	397.6	377.0	342.4	307.8	286.0	278.3	274.4	274.4
72.5°	271.9	287.3	298.8	291.1	278.3	260.3	243.7	234.7	236.0	238.5	241.1
75°	210.3	214.2	216.7	209.0	206.5	194.9	193.7	194.9	202.6	210.3	214.2
77.5°	161.6	156.5	152.6	144.9	146.2	144.9	151.3	161.6	173.1	184.7	194.9
80°	124.4	112.9	103.9	96.2	100.0	106.4	119.3	134.7	150.0	162.9	175.7
82.5°	96.2	79.5	66.7	59.0	66.7	76.9	93.6	112.9	130.8	144.9	159.0
85°	74.4	55.1	39.8	32.1	39.8	55.1	73.1	94.9	114.1	129.5	143.6
87.5°	57.7	39.8	21.8	12.8	21.8	38.5	59.0	79.5	98.8	116.7	130.8
90°	46.2	26.9	10.3	2.6	11.5	26.9	46.2	66.7	85.9	105.2	119.3
92.5°	37.2	19.2	5.1	0.0	6.4	20.5	38.5	57.7	76.9	94.9	109.0
95°	30.8	15.4	3.8	0.0	5.1	15.4	30.8	50.0	68.0	85.9	97.5
97.5°	25.6	11.5	2.6	0.0	2.6	12.8	25.6	42.3	60.3	76.9	88.5
100°	21.8	10.3	2.6	0.0	2.6	10.3	21.8	37.2	52.6	68.0	79.5
102.5°	18.0	7.7	1.3	1.3	1.3	7.7	19.2	32.1	46.2	60.3	71.8
105°	16.7	6.4	1.3	1.3	1.3	6.4	16.7	28.2	41.0	53.9	64.1
107.5°	14.1	5.1	1.3	1.3	1.3	5.1	14.1	24.4	37.2	48.7	57.7
110°	11.5	5.1	1.3	1.3	1.3	5.1	11.5	21.8	32.1	42.3	51.3



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	10.3	3.8	1.3	1.3	1.3	3.8	10.3	19.2	28.2	38.5	46.2
115°	9.0	3.8	1.3	1.3	1.3	3.8	9.0	16.7	24.4	33.3	41.0
117.5°	7.7	3.8	1.3	1.3	1.3	2.6	7.7	14.1	21.8	29.5	37.2
120°	6.4	2.6	1.3	1.3	1.3	2.6	6.4	12.8	19.2	25.6	32.1
122.5°	6.4	2.6	1.3	1.3	1.3	2.6	5.1	10.3	16.7	21.8	28.2
125°	5.1	2.6	1.3	1.3	1.3	1.3	5.1	9.0	14.1	19.2	24.4
127.5°	5.1	2.6	1.3	1.3	1.3	1.3	3.8	7.7	11.5	16.7	21.8
130°	3.8	2.6	1.3	1.3	1.3	1.3	2.6	6.4	10.3	14.1	18.0
132.5°	3.8	2.6	1.3	1.3	1.3	1.3	2.6	5.1	7.7	11.5	15.4
135°	3.8	1.3	1.3	1.3	1.3	1.3	1.3	3.8	6.4	9.0	11.5
137.5°	2.6	1.3	1.3	1.3	1.3	1.3	1.3	2.6	5.1	6.4	10.3
140°	2.6	1.3	1.3	1.3	1.3	1.3	1.3	2.6	3.8	5.1	7.7
142.5°	2.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.6	3.8	6.4
145°	2.6	1.3	1.3	2.6	2.6	1.3	1.3	2.6	2.6	3.8	5.1
147.5°	2.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.6	2.6	3.8
150°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.8
152.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
155°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9
2.5°	2495.7	2466.2	2481.6	2476.5	2481.6	2494.4	2493.1	2489.3	2491.8	2485.4	2479.0
5°	2490.6	2461.1	2476.5	2470.0	2476.5	2489.3	2486.7	2482.9	2486.7	2479.0	2472.6
7.5°	2484.2	2457.2	2475.2	2473.9	2485.4	2502.1	2503.4	2503.4	2512.4	2500.8	2495.7
10°	2484.2	2470.0	2494.4	2503.4	2532.9	2554.7	2557.3	2562.4	2577.8	2575.2	2562.4
12.5°	2511.1	2508.5	2544.4	2566.2	2593.2	2623.9	2640.6	2645.7	2656.0	2648.3	2643.2
15°	2545.7	2558.5	2598.3	2622.7	2652.2	2675.2	2679.1	2681.7	2689.3	2677.8	2668.8
17.5°	2591.9	2599.6	2631.6	2641.9	2661.1	2665.0	2659.9	2647.0	2647.0	2621.4	2613.7
20°	2613.7	2609.8	2622.7	2606.0	2598.3	2575.2	2553.4	2529.0	2527.8	2500.8	2498.3
22.5°	2594.4	2568.8	2541.9	2500.8	2482.9	2449.5	2420.0	2405.9	2396.9	2362.3	2353.3
25°	2526.5	2463.6	2423.9	2375.1	2331.5	2293.1	2264.8	2235.4	2207.1	2178.9	2166.1
27.5°	2408.5	2349.5	2285.4	2217.4	2157.1	2098.1	2050.7	2021.2	1994.2	1957.1	1937.8
30°	2263.6	2181.5	2111.0	2045.5	1946.8	1875.0	1835.2	1776.2	1755.7	1739.0	1703.1
32.5°	2093.0	1994.2	1898.1	1809.6	1708.3	1641.6	1589.0	1545.4	1532.6	1489.0	1478.7
35°	1904.5	1774.9	1665.9	1578.7	1505.6	1424.8	1381.2	1351.7	1326.1	1296.6	1291.5
37.5°	1682.6	1565.9	1442.8	1365.8	1308.1	1238.9	1205.5	1185.0	1173.5	1151.7	1147.8
40°	1459.5	1342.8	1258.1	1181.2	1145.2	1108.1	1083.7	1074.7	1069.6	1061.9	1054.2
42.5°	1256.8	1154.2	1094.0	1042.7	1027.3	1009.3	1002.9	1008.0	1002.9	1000.3	999.0
45°	1085.0	1006.7	964.4	949.0	945.2	940.1	945.2	954.2	955.4	952.9	952.9
47.5°	928.5	891.3	873.4	875.9	882.3	886.2	895.2	906.7	909.3	902.9	905.4
50°	825.9	804.1	800.3	810.5	824.6	829.8	840.0	849.0	847.7	845.2	842.6
52.5°	729.7	723.3	733.6	743.8	759.2	761.8	765.6	769.5	768.2	763.1	760.5
55°	648.9	654.1	663.0	666.9	678.4	677.1	678.4	678.4	673.3	670.7	666.9
57.5°	575.8	577.1	582.2	583.5	589.9	587.4	586.1	583.5	575.8	574.5	570.7
60°	501.4	498.9	510.4	501.4	506.6	501.4	500.2	493.8	486.1	484.8	482.2
62.5°	430.9	425.8	433.5	429.6	432.2	427.1	424.5	416.8	410.4	409.1	407.8
65°	368.1	365.5	373.2	371.9	374.5	368.1	365.5	360.4	355.2	354.0	352.7
67.5°	315.5	321.9	325.7	325.7	328.3	327.0	320.6	319.3	318.1	312.9	312.9
70°	277.0	280.9	288.6	289.8	288.6	291.1	286.0	284.7	283.4	280.9	279.6
72.5°	246.2	251.4	259.1	260.3	259.1	259.1	256.5	255.2	255.2	251.4	251.4
75°	221.9	228.3	234.7	234.7	234.7	232.1	229.6	229.6	227.0	225.7	223.2
77.5°	201.3	209.0	214.2	212.9	211.6	209.0	209.0	205.2	201.3	201.3	198.8
80°	186.0	191.1	194.9	193.7	192.4	188.5	187.2	183.4	180.8	177.0	177.0
82.5°	169.3	175.7	178.3	177.0	174.4	170.6	169.3	166.7	164.2	162.9	160.3
85°	155.2	161.6	162.9	160.3	157.7	155.2	153.9	152.6	151.3	148.8	148.8
87.5°	141.1	147.5	147.5	146.2	143.6	142.4	141.1	139.8	138.5	137.2	135.9
90°	129.5	134.7	134.7	133.4	132.1	130.8	129.5	128.2	127.0	125.7	125.7
92.5°	118.0	123.1	123.1	121.8	120.6	119.3	119.3	118.0	116.7	115.4	114.1
95°	107.7	112.9	112.9	112.9	111.6	110.3	110.3	109.0	107.7	107.7	106.4
97.5°	97.5	102.6	102.6	102.6	101.3	100.0	100.0	98.8	98.8	98.8	97.5
100°	88.5	92.3	93.6	93.6	92.3	92.3	92.3	91.1	91.1	91.1	89.8
102.5°	79.5	83.4	85.9	85.9	85.9	84.6	84.6	84.6	84.6	84.6	83.4
105°	71.8	75.7	78.2	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5
107.5°	65.4	69.3	71.8	73.1	74.4	74.4	75.7	75.7	75.7	75.7	75.7
110°	59.0	62.8	66.7	68.0	69.3	70.5	70.5	71.8	70.5	70.5	70.5



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	52.6	57.7	60.3	62.8	64.1	65.4	66.7	66.7	66.7	66.7	66.7
115°	47.5	52.6	55.1	57.7	60.3	61.6	61.6	62.8	62.8	62.8	61.6
117.5°	42.3	47.5	50.0	52.6	53.9	56.4	57.7	57.7	57.7	57.7	56.4
120°	38.5	42.3	44.9	47.5	50.0	51.3	52.6	52.6	52.6	52.6	52.6
122.5°	33.3	37.2	41.0	43.6	44.9	46.2	47.5	47.5	47.5	47.5	47.5
125°	29.5	33.3	35.9	38.5	39.8	42.3	42.3	42.3	42.3	42.3	42.3
127.5°	25.6	29.5	32.1	34.6	35.9	37.2	38.5	38.5	38.5	38.5	38.5
130°	21.8	25.6	28.2	30.8	32.1	33.3	33.3	34.6	34.6	34.6	34.6
132.5°	19.2	21.8	24.4	26.9	28.2	29.5	29.5	30.8	30.8	30.8	30.8
135°	15.4	19.2	20.5	23.1	24.4	25.6	25.6	26.9	26.9	26.9	26.9
137.5°	12.8	15.4	18.0	20.5	21.8	21.8	23.1	23.1	24.4	24.4	24.4
140°	10.3	11.5	15.4	16.7	18.0	19.2	20.5	20.5	20.5	20.5	20.5
142.5°	7.7	10.3	11.5	14.1	15.4	16.7	18.0	18.0	18.0	18.0	18.0
145°	6.4	7.7	9.0	11.5	12.8	14.1	15.4	15.4	15.4	15.4	15.4
147.5°	5.1	6.4	7.7	9.0	10.3	11.5	12.8	12.8	12.8	12.8	12.8
150°	3.8	5.1	6.4	6.4	7.7	9.0	10.3	11.5	11.5	11.5	11.5
152.5°	3.8	3.8	5.1	5.1	6.4	7.7	9.0	9.0	9.0	9.0	9.0
155°	2.6	3.8	3.8	3.8	5.1	5.1	6.4	7.7	7.7	7.7	7.7
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9
2.5°	2482.9	2488.0	2485.4	2481.6	2480.3	2486.7	2480.3	2450.8	2462.4	2463.6	2472.6
5°	2479.0	2482.9	2480.3	2477.7	2473.9	2481.6	2473.9	2443.1	2454.7	2455.9	2464.9
7.5°	2504.7	2506.0	2506.0	2499.5	2489.3	2493.1	2482.9	2448.2	2454.7	2454.7	2461.1
10°	2568.8	2571.4	2575.2	2558.5	2545.7	2535.5	2521.3	2479.0	2477.7	2467.5	2467.5
12.5°	2652.2	2645.7	2639.3	2631.6	2621.4	2608.6	2588.0	2538.0	2521.3	2504.7	2488.0
15°	2676.5	2674.0	2672.7	2668.8	2662.4	2658.6	2643.2	2593.2	2568.8	2548.3	2518.8
17.5°	2612.4	2617.5	2634.2	2635.5	2643.2	2658.6	2656.0	2621.4	2599.6	2590.6	2554.7
20°	2497.0	2498.3	2518.8	2527.8	2561.1	2586.8	2606.0	2602.1	2597.0	2607.3	2580.3
22.5°	2358.5	2367.4	2389.2	2403.4	2435.4	2464.9	2495.7	2512.4	2539.3	2581.6	2576.5
25°	2169.9	2181.5	2212.3	2235.4	2280.2	2325.1	2366.2	2395.7	2427.7	2508.5	2535.5
27.5°	1944.2	1962.2	2001.9	2025.0	2087.9	2134.0	2193.0	2250.7	2295.6	2388.0	2443.1
30°	1707.0	1722.4	1764.7	1796.7	1850.6	1913.5	1987.8	2069.9	2144.3	2237.9	2307.2
32.5°	1485.1	1501.8	1536.4	1564.6	1624.9	1677.5	1759.6	1860.9	1930.1	2059.7	2152.0
35°	1291.5	1306.8	1331.2	1355.6	1405.6	1459.5	1530.0	1628.7	1717.2	1851.9	1968.6
37.5°	1155.5	1158.1	1172.2	1186.3	1223.5	1264.5	1319.7	1406.9	1489.0	1633.9	1762.1
40°	1058.0	1058.0	1065.7	1069.6	1086.3	1110.6	1145.2	1213.2	1281.2	1391.5	1547.9
42.5°	997.8	995.2	995.2	996.5	995.2	1006.7	1027.3	1059.3	1119.6	1210.7	1332.5
45°	952.9	947.7	943.9	934.9	929.8	929.8	931.1	942.6	977.2	1036.2	1135.0
47.5°	902.9	901.6	895.2	884.9	875.9	869.5	859.3	855.4	865.7	899.0	965.7
50°	845.2	838.7	832.3	824.6	814.4	808.0	788.7	790.0	781.0	796.4	831.0
52.5°	760.5	755.4	752.8	746.4	742.6	740.0	724.6	709.2	705.4	707.9	720.8
55°	666.9	669.5	659.2	664.3	663.0	651.5	645.1	633.5	629.7	628.4	634.8
57.5°	569.4	572.0	565.6	570.7	570.7	564.3	560.4	560.4	551.5	543.8	552.7
60°	480.9	475.8	479.6	486.1	486.1	482.2	479.6	479.6	473.2	470.7	477.1
62.5°	409.1	404.0	407.8	414.2	415.5	413.0	410.4	410.4	402.7	402.7	407.8
65°	354.0	355.2	354.0	359.1	359.1	360.4	357.8	355.2	346.3	350.1	348.8
67.5°	314.2	312.9	312.9	318.1	316.8	319.3	316.8	312.9	306.5	301.4	300.1
70°	280.9	279.6	279.6	282.1	283.4	283.4	282.1	279.6	270.6	265.5	261.6
72.5°	251.4	250.1	251.4	252.6	253.9	255.2	253.9	251.4	243.7	237.3	230.8
75°	224.4	223.2	227.0	227.0	228.3	228.3	229.6	228.3	221.9	214.2	206.5
77.5°	197.5	198.8	202.6	203.9	206.5	207.8	209.0	209.0	202.6	196.2	186.0
80°	175.7	178.3	180.8	182.1	184.7	188.5	189.8	191.1	186.0	179.5	168.0
82.5°	160.3	161.6	164.2	165.4	169.3	170.6	171.9	174.4	171.9	165.4	152.6
85°	147.5	148.8	151.3	151.3	153.9	156.5	157.7	159.0	157.7	151.3	138.5
87.5°	135.9	137.2	138.5	139.8	141.1	142.4	143.6	144.9	143.6	137.2	125.7
90°	125.7	125.7	127.0	127.0	128.2	129.5	132.1	132.1	130.8	125.7	114.1
92.5°	114.1	115.4	115.4	116.7	118.0	119.3	120.6	120.6	119.3	114.1	103.9
95°	106.4	106.4	107.7	107.7	109.0	109.0	110.3	110.3	109.0	103.9	93.6
97.5°	97.5	97.5	97.5	97.5	98.8	98.8	100.0	100.0	98.8	93.6	84.6
100°	89.8	89.8	89.8	89.8	89.8	91.1	91.1	91.1	89.8	84.6	75.7
102.5°	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	80.8	76.9	68.0
105°	79.5	79.5	79.5	78.2	78.2	78.2	76.9	76.9	73.1	69.3	61.6
107.5°	74.4	74.4	74.4	73.1	73.1	71.8	70.5	70.5	66.7	62.8	55.1
110°	70.5	70.5	70.5	69.3	68.0	66.7	65.4	64.1	60.3	55.1	48.7



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	66.7	66.7	65.4	65.4	64.1	62.8	60.3	59.0	55.1	50.0	43.6
115°	61.6	61.6	61.6	60.3	59.0	57.7	56.4	53.9	50.0	44.9	38.5
117.5°	56.4	56.4	56.4	55.1	53.9	52.6	51.3	48.7	44.9	39.8	34.6
120°	51.3	51.3	51.3	50.0	48.7	47.5	46.2	43.6	39.8	35.9	29.5
122.5°	47.5	47.5	46.2	44.9	43.6	42.3	41.0	38.5	35.9	30.8	25.6
125°	42.3	42.3	41.0	41.0	39.8	38.5	37.2	34.6	30.8	26.9	23.1
127.5°	38.5	37.2	37.2	37.2	35.9	34.6	32.1	30.8	26.9	23.1	19.2
130°	33.3	33.3	33.3	32.1	32.1	30.8	28.2	25.6	23.1	20.5	16.7
132.5°	29.5	29.5	29.5	29.5	28.2	26.9	24.4	23.1	20.5	16.7	14.1
135°	26.9	26.9	25.6	25.6	24.4	23.1	21.8	19.2	16.7	14.1	11.5
137.5°	23.1	23.1	23.1	21.8	21.8	20.5	18.0	16.7	15.4	12.8	10.3
140°	20.5	20.5	19.2	19.2	18.0	18.0	16.7	14.1	12.8	10.3	9.0
142.5°	18.0	18.0	16.7	16.7	15.4	15.4	14.1	12.8	10.3	9.0	6.4
145°	15.4	15.4	14.1	14.1	14.1	12.8	11.5	10.3	9.0	7.7	6.4
147.5°	12.8	12.8	12.8	11.5	11.5	10.3	10.3	9.0	7.7	6.4	5.1
150°	11.5	11.5	10.3	10.3	10.3	9.0	7.7	7.7	6.4	5.1	3.8
152.5°	9.0	9.0	9.0	9.0	7.7	7.7	6.4	6.4	5.1	3.8	3.8
155°	7.7	7.7	7.7	6.4	6.4	6.4	5.1	5.1	3.8	3.8	2.6
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9	2482.9
2.5°	2468.8	2467.5	2479.0	2477.7	2462.4	2485.4	2500.8
5°	2462.4	2461.1	2471.3	2473.9	2457.2	2481.6	2498.3
7.5°	2457.2	2455.9	2467.5	2471.3	2454.7	2476.5	2494.4
10°	2458.5	2452.1	2462.4	2464.9	2449.5	2472.6	2488.0
12.5°	2467.5	2452.1	2455.9	2455.9	2441.8	2462.4	2479.0
15°	2489.3	2457.2	2452.1	2448.2	2430.3	2449.5	2466.2
17.5°	2513.6	2470.0	2452.1	2439.3	2417.5	2434.1	2452.1
20°	2538.0	2484.2	2454.7	2434.1	2404.6	2420.0	2432.9
22.5°	2549.6	2497.0	2457.2	2426.4	2389.2	2396.9	2411.1
25°	2534.2	2491.8	2452.1	2414.9	2370.0	2371.3	2382.8
27.5°	2477.7	2466.2	2440.5	2403.4	2354.6	2348.2	2357.2
30°	2381.6	2413.6	2414.9	2388.0	2336.7	2323.8	2327.7
32.5°	2246.9	2318.7	2361.0	2355.9	2311.0	2293.1	2295.6
35°	2091.7	2181.5	2273.8	2304.6	2272.5	2258.4	2253.3
37.5°	1905.8	2026.3	2149.4	2225.1	2220.0	2211.0	2205.9
40°	1700.6	1845.5	1991.7	2112.2	2149.4	2149.4	2152.0
42.5°	1481.3	1650.5	1810.9	1963.5	2050.7	2069.9	2077.6
45°	1269.6	1440.2	1614.6	1790.3	1907.0	1967.3	1989.1
47.5°	1077.3	1249.1	1414.6	1606.9	1762.1	1840.4	1875.0
50°	913.1	1041.4	1215.8	1406.9	1576.2	1672.3	1740.3
52.5°	777.2	877.2	1029.8	1208.1	1378.7	1510.8	1573.6
55°	663.0	731.0	860.5	1014.4	1177.3	1314.5	1387.6
57.5°	566.9	620.7	709.2	837.5	974.7	1110.6	1188.9
60°	482.2	519.4	579.7	681.0	797.7	914.4	990.1
62.5°	409.1	433.5	473.2	547.6	638.7	729.7	800.3
65°	352.7	362.9	384.7	430.9	500.2	569.4	629.7
67.5°	297.5	303.9	320.6	348.8	383.5	433.5	473.2
70°	256.5	256.5	257.8	274.4	292.4	324.5	352.7
72.5°	223.2	219.3	211.6	215.5	219.3	237.3	255.2
75°	196.2	187.2	174.4	169.3	166.7	169.3	179.5
77.5°	173.1	160.3	144.9	132.1	121.8	118.0	127.0
80°	153.9	138.5	120.6	103.9	87.2	78.2	82.1
82.5°	138.5	119.3	100.0	80.8	61.6	48.7	48.7
85°	121.8	103.9	83.4	62.8	43.6	26.9	24.4
87.5°	110.3	91.1	69.3	50.0	30.8	14.1	7.7
90°	98.8	79.5	59.0	39.8	21.8	6.4	0.0
92.5°	88.5	70.5	51.3	32.1	15.4	3.8	0.0
95°	79.5	62.8	43.6	26.9	12.8	2.6	1.3
97.5°	70.5	55.1	38.5	21.8	9.0	2.6	1.3
100°	64.1	48.7	33.3	18.0	7.7	1.3	1.3
102.5°	56.4	43.6	28.2	15.4	6.4	1.3	1.3
105°	50.0	38.5	24.4	12.8	5.1	1.3	1.3
107.5°	44.9	33.3	21.8	11.5	5.1	1.3	1.3
110°	39.8	29.5	19.2	10.3	3.8	1.3	1.3



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	35.9	25.6	16.7	9.0	2.6	1.3	1.3
115°	30.8	23.1	14.1	7.7	2.6	1.3	1.3
117.5°	26.9	19.2	12.8	6.4	2.6	1.3	1.3
120°	23.1	16.7	10.3	5.1	1.3	1.3	1.3
122.5°	20.5	14.1	9.0	5.1	1.3	1.3	1.3
125°	18.0	12.8	7.7	3.8	1.3	1.3	1.3
127.5°	15.4	10.3	6.4	2.6	1.3	1.3	1.3
130°	12.8	9.0	5.1	2.6	1.3	1.3	1.3
132.5°	10.3	7.7	5.1	2.6	1.3	1.3	1.3
135°	9.0	6.4	3.8	2.6	1.3	1.3	1.3
137.5°	7.7	5.1	2.6	2.6	2.6	1.3	1.3
140°	6.4	3.8	2.6	2.6	2.6	2.6	1.3
142.5°	5.1	3.8	2.6	2.6	2.6	2.6	1.3
145°	3.8	2.6	2.6	2.6	2.6	2.6	1.3
147.5°	3.8	2.6	2.6	2.6	2.6	2.6	1.3
150°	2.6	2.6	2.6	2.6	2.6	2.6	2.6
152.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6
155°	2.6	2.6	2.6	2.6	2.6	2.6	2.6
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)