

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: P201264

Luminaire Tested: **8LBLED-LD4-16-SYMF-UNV-L850-CD2-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201264
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28138)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8LBLED-LD4-16-SYMF-UNV-L850-CD2-U
Description: 8 ft. Low Bay Linear, 16000 lm, Frst Sym lens, 5K
Light Source: (784) 5000K CCT, 80 CRI LEDS
2UT217098A8504C
Ballast/Driver: OSRAM
2x(OTi85W01280CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17603.8 lumens
Efficiency: N/A
Efficacy: 153.9 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.99 / 1.87
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 8' x H: 0.21')
CIE Type: Semi-Direct

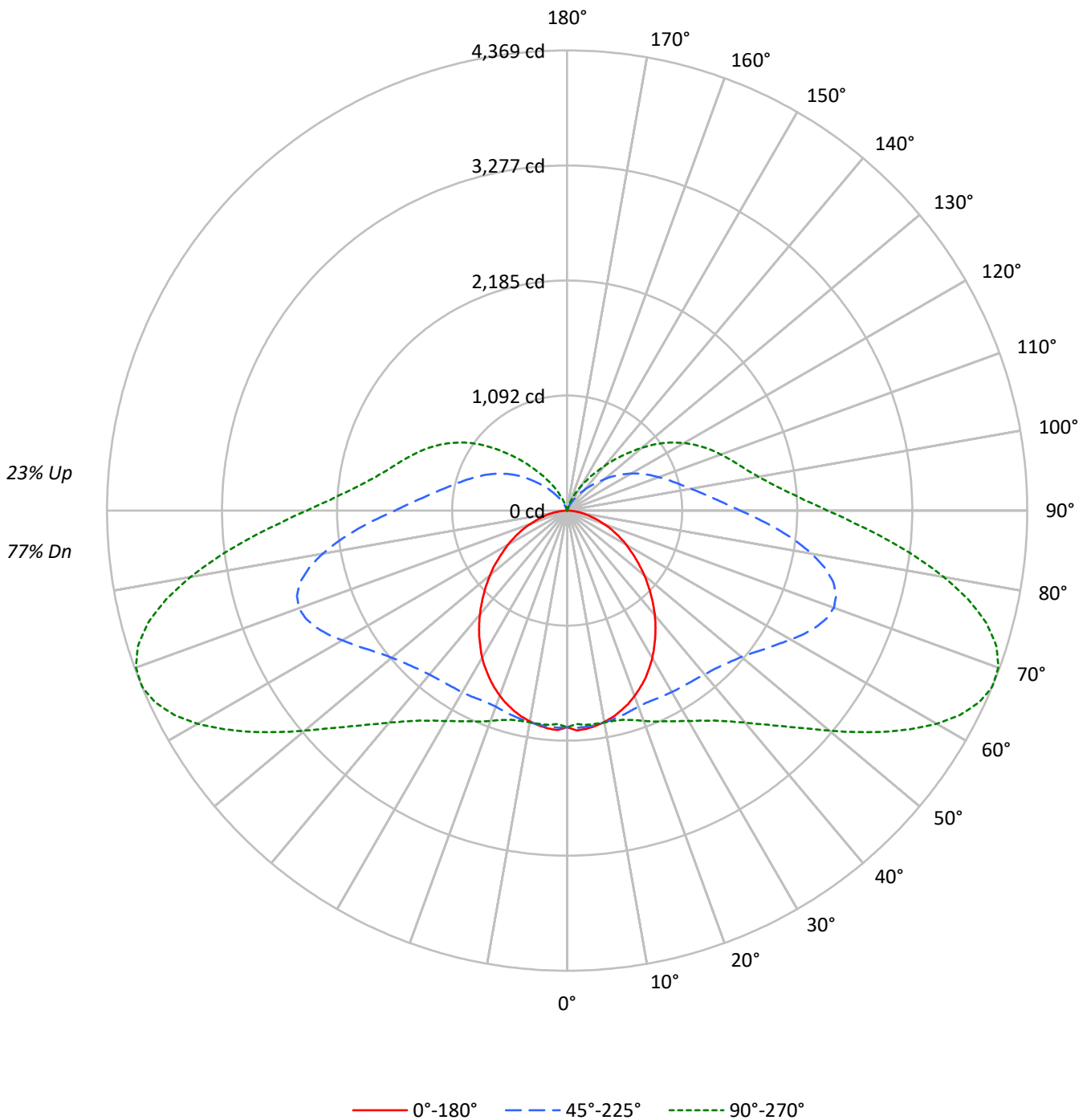
Input Watts (W): 114.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P201264

CATALOG NUMBER: 8LBLED-LD4-16-SYMF-UNV-L850-CD2-U

Luminous Intensity Polar Plot





TEST NUMBER: P201264

CATALOG NUMBER: 8LBLED-LD4-16-SYMF-UNV-L850-CD2-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	114	114	114	114	108	108	108	108	98	98	98	89	89	89	81	81	81	77
1	98	91	84	78	92	86	80	75	77	73	68	69	65	62	62	59	56	52
2	86	75	66	59	81	71	63	56	64	57	51	57	51	47	50	46	42	38
3	77	64	54	46	72	61	51	44	54	46	40	48	42	37	43	37	33	29
4	70	55	45	37	65	52	43	36	47	39	32	42	35	30	37	31	27	23
5	63	49	38	31	59	46	37	29	41	33	27	37	30	25	32	27	22	19
6	58	43	33	26	55	41	32	25	37	29	23	33	26	21	29	23	19	16
7	54	39	29	22	50	37	28	21	33	25	20	30	23	18	26	21	16	14
8	50	35	26	19	47	33	25	19	30	22	17	27	20	16	24	18	14	12
9	46	32	23	17	44	30	22	16	27	20	15	25	18	14	22	17	13	10
10	43	29	21	15	41	28	20	15	25	18	14	23	17	12	20	15	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	16570	16570	16570
5°	16789	14890	16753
10°	16591	13696	16554
15°	16293	12862	16268
20°	15907	12539	15881
25°	15438	12415	15372
30°	14809	12480	14795
35°	14092	12784	14063
40°	13323	13513	13261
45°	12482	14683	12449
50°	11630	16394	11593
55°	10770	18511	10750
60°	10002	20665	10026
65°	9150	22401	9177
70°	8249	23210	8249
75°	7168	22711	7125
80°	5984	20898	5924
85°	4475	18355	4262



TEST NUMBER: P201264

CATALOG NUMBER: 8LBLED-LD4-16-SYMF-UNV-L850-CD2-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.3	1.1
10°-20°	568.0	3.2
20°-30°	912.8	5.2
30°-40°	1236.0	7.0
40°-50°	1587.9	9.0
50°-60°	2043.0	11.6
60°-70°	2499.3	14.2
70°-80°	2526.8	14.4
80°-90°	1954.0	11.1
90°-100°	1357.6	7.7
100°-110°	1014.0	5.8
110°-120°	760.0	4.3
120°-130°	511.8	2.9
130°-140°	280.6	1.6
140°-150°	119.6	0.7
150°-160°	34.2	0.2
160°-170°	3.0	0.0
170°-180°	0.0	0.0
0°-30°	1676.1	9.5
0°-40°	2912.1	16.5
0°-60°	6543.0	37.2
0°-90°	13523.1	76.8
90°-120°	3131.5	17.8
90°-150°	4043.5	23.0
90°-180°	4081.0	23.2
0°-180°	17603.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2057	2057	2057	2057	2057	
5°	2081	2061	2042	2058	2076	197
15°	1967	2013	2057	2013	1964	554
25°	1758	1976	2208	1977	1750	807
35°	1459	2003	2433	2004	1456	912
45°	1124	2079	2894	2088	1121	867
55°	795	2291	3662	2302	794	712
65°	507	2611	4314	2628	508	503
75°	253	2616	4121	2625	251	270
85°	63	2000	3025	1994	60	69
90°	2	1643	2471	1634	0	4
95°	2	1386	2090	1380	0	1
105°	2	1048	1684	1048	0	2
115°	2	815	1426	815	0	1
125°	2	584	1118	581	0	2
135°	3	353	734	348	0	2
145°	3	179	404	172	0	2
155°	3	57	167	54	0	1
165°	3	3	16	8	0	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P201264

CATALOG NUMBER: 8LBLELD4-16-SYMF-UNV-L850-CD2-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6
2.5°	2089.5	2088.0	2079.1	2065.6	2059.6	2058.1	2056.6	2050.7	2049.2	2052.2	2064.1
5°	2080.6	2079.1	2070.1	2056.6	2052.2	2050.7	2049.2	2044.7	2044.7	2049.2	2061.1
7.5°	2062.6	2061.1	2052.2	2041.7	2037.2	2035.7	2035.7	2032.7	2032.7	2040.2	2053.6
10°	2037.2	2035.7	2028.2	2019.3	2016.3	2016.3	2016.3	2014.8	2017.8	2026.7	2041.7
12.5°	2007.3	2004.3	1998.3	1990.9	1990.9	1990.9	1992.4	1992.4	1996.9	2011.8	2029.7
15°	1967.0	1968.5	1962.5	1956.5	1959.5	1961.0	1964.0	1967.0	1974.4	1992.4	2013.3
17.5°	1925.1	1925.1	1920.6	1917.6	1923.6	1926.6	1931.1	1935.6	1949.0	1971.4	1995.4
20°	1872.8	1874.3	1872.8	1874.3	1881.8	1886.2	1892.2	1902.7	1920.6	1952.0	1980.4
22.5°	1816.0	1819.0	1819.0	1825.0	1836.9	1844.4	1851.9	1866.8	1892.2	1932.6	1972.9
25°	1757.7	1756.2	1763.7	1774.1	1786.1	1796.6	1805.5	1828.0	1865.3	1919.1	1975.9
27.5°	1687.5	1690.4	1700.9	1715.9	1733.8	1747.2	1760.7	1792.1	1845.9	1917.6	1983.4
30°	1615.7	1620.2	1633.7	1654.6	1680.0	1697.9	1712.9	1762.2	1835.4	1917.6	1989.4
32.5°	1538.0	1545.5	1563.4	1590.3	1626.2	1647.1	1671.0	1736.8	1826.5	1914.6	1995.4
35°	1458.8	1467.7	1491.7	1524.5	1566.4	1591.8	1629.2	1717.4	1814.5	1911.7	2002.8
37.5°	1378.1	1388.5	1415.4	1457.3	1511.1	1550.0	1594.8	1696.4	1805.5	1911.7	2013.3
40°	1294.4	1306.3	1340.7	1388.5	1457.3	1508.1	1561.9	1675.5	1796.6	1913.2	2029.7
42.5°	1209.2	1222.6	1264.5	1321.3	1410.9	1470.7	1530.5	1657.6	1790.6	1920.6	2050.7
45°	1124.0	1141.9	1188.2	1257.0	1369.1	1431.9	1500.6	1641.1	1787.6	1934.1	2079.1
47.5°	1038.8	1059.7	1113.5	1195.7	1325.8	1400.5	1472.2	1627.7	1790.6	1952.0	2116.4
50°	956.6	980.5	1040.3	1140.4	1285.4	1366.1	1445.3	1618.7	1796.6	1978.9	2161.3
52.5°	872.9	904.3	970.0	1091.1	1249.5	1334.7	1422.9	1612.7	1808.5	2014.8	2219.6
55°	795.2	828.0	904.3	1043.3	1215.2	1307.8	1402.0	1611.2	1829.5	2058.1	2291.3
57.5°	715.9	756.3	840.0	996.9	1179.3	1280.9	1385.5	1614.2	1854.9	2104.5	2364.5
60°	648.7	684.5	781.7	952.1	1147.9	1255.5	1370.6	1617.2	1881.8	2158.3	2449.7
62.5°	576.9	615.8	730.9	908.7	1116.5	1233.1	1355.6	1621.7	1910.2	2213.6	2536.4
65°	506.7	547.0	680.1	866.9	1085.1	1209.2	1337.7	1621.7	1932.6	2264.4	2611.2
67.5°	439.4	482.8	629.2	822.1	1049.2	1179.3	1315.3	1614.2	1946.0	2300.3	2669.4
70°	375.2	423.0	579.9	774.2	1010.4	1143.4	1283.9	1597.8	1944.5	2313.7	2694.9
72.5°	310.9	366.2	526.1	726.4	968.5	1103.1	1246.5	1566.4	1923.6	2297.3	2678.4
75°	252.6	312.4	478.3	678.6	920.7	1055.2	1200.2	1518.6	1877.3	2246.5	2615.6
77.5°	198.8	264.6	427.5	626.3	866.9	999.9	1141.9	1457.3	1804.0	2156.8	2505.0
80°	148.0	221.2	379.6	573.9	808.6	938.6	1076.1	1379.6	1708.4	2035.7	2357.1
82.5°	103.1	180.9	333.3	521.6	748.8	872.9	1004.4	1286.9	1597.8	1895.2	2186.7
85°	62.8	145.0	287.0	470.8	687.5	804.1	928.2	1189.7	1476.7	1742.8	1999.8
87.5°	26.9	112.1	246.6	421.5	626.3	736.9	850.5	1097.1	1348.2	1584.3	1813.0
90°	1.5	83.7	210.7	375.2	568.0	671.1	777.2	998.4	1230.1	1439.3	1642.6
92.5°	0.0	71.7	189.8	346.8	527.6	623.3	721.9	925.2	1134.4	1321.3	1502.1
95°	1.5	59.8	171.9	315.4	487.3	578.4	669.6	859.4	1047.7	1219.6	1385.5
97.5°	1.5	49.3	152.5	287.0	449.9	533.6	618.8	795.2	965.5	1128.5	1282.4
100°	1.5	38.9	134.5	260.1	411.0	488.8	569.5	735.4	895.3	1047.7	1192.7
102.5°	1.5	28.4	119.6	234.7	375.2	448.4	523.1	680.1	831.0	977.5	1115.0
105°	1.5	19.4	104.6	210.7	342.3	411.0	481.3	629.2	772.7	913.2	1047.7
107.5°	1.5	13.5	91.2	188.3	306.4	375.2	440.9	581.4	718.9	854.9	986.5
110°	1.5	12.0	79.2	168.9	278.0	340.8	403.6	536.6	668.1	798.1	926.7



TEST NUMBER: P201264

CATALOG NUMBER: 8LBLED-LD4-16-SYMF-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.5	10.5	67.3	151.0	249.6	306.4	367.7	493.2	621.8	747.3	869.9
115°	1.5	10.5	55.3	134.5	225.7	276.5	333.3	451.4	573.9	695.0	814.6
117.5°	1.5	10.5	44.8	119.6	203.3	249.6	298.9	412.5	526.1	644.2	760.8
120°	1.5	9.0	35.9	104.6	183.8	225.7	272.0	375.2	479.8	590.4	702.5
122.5°	1.5	9.0	29.9	91.2	164.4	203.3	245.1	336.3	436.4	538.1	642.7
125°	1.5	7.5	25.4	76.2	145.0	182.3	219.7	301.9	394.6	488.8	584.4
127.5°	3.0	7.5	20.9	62.8	125.6	158.4	194.3	269.0	349.7	434.9	526.1
130°	3.0	7.5	17.9	47.8	106.1	136.0	167.4	236.2	310.9	384.1	463.3
132.5°	3.0	6.0	16.4	37.4	88.2	115.1	143.5	204.8	270.5	336.3	405.1
135°	3.0	6.0	13.5	29.9	70.2	94.2	121.1	174.9	233.2	294.4	352.7
137.5°	3.0	4.5	12.0	23.9	53.8	76.2	100.1	148.0	198.8	251.1	304.9
140°	3.0	4.5	10.5	19.4	40.4	56.8	79.2	121.1	165.9	212.2	258.6
142.5°	3.0	4.5	9.0	16.4	31.4	43.3	59.8	98.6	137.5	176.4	216.7
145°	3.0	4.5	7.5	13.5	23.9	32.9	43.3	76.2	110.6	145.0	179.4
147.5°	3.0	4.5	7.5	12.0	19.4	25.4	32.9	55.3	86.7	115.1	145.0
150°	3.0	4.5	6.0	10.5	16.4	19.4	23.9	38.9	62.8	88.2	113.6
152.5°	3.0	3.0	6.0	9.0	12.0	14.9	17.9	28.4	43.3	62.8	85.2
155°	3.0	3.0	4.5	7.5	10.5	12.0	13.5	19.4	28.4	40.4	56.8
157.5°	3.0	3.0	4.5	6.0	7.5	9.0	10.5	13.5	19.4	25.4	34.4
160°	3.0	3.0	4.5	6.0	6.0	7.5	7.5	9.0	12.0	14.9	19.4
162.5°	3.0	3.0	4.5	4.5	4.5	6.0	6.0	6.0	7.5	7.5	9.0
165°	3.0	3.0	3.0	4.5	3.0	4.5	3.0	4.5	4.5	3.0	3.0
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: P201264

CATALOG NUMBER: 8LBLELD4-16-SYMF-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6
2.5°	2068.6	2058.1	2053.6	2047.7	2043.2	2040.2	2035.7	2032.7	2028.2	2028.2	2029.7
5°	2065.6	2055.1	2052.2	2046.2	2043.2	2041.7	2038.7	2040.2	2040.2	2041.7	2040.2
7.5°	2059.6	2050.7	2047.7	2044.7	2041.7	2040.2	2038.7	2041.7	2041.7	2043.2	2043.2
10°	2049.2	2043.2	2043.2	2040.2	2038.7	2037.2	2034.2	2038.7	2038.7	2041.7	2040.2
12.5°	2037.2	2035.7	2037.2	2038.7	2038.7	2037.2	2035.7	2041.7	2044.7	2044.7	2046.2
15°	2023.8	2026.7	2034.2	2038.7	2041.7	2041.7	2044.7	2050.7	2055.1	2056.6	2056.6
17.5°	2013.3	2020.8	2034.2	2046.2	2052.2	2055.1	2062.6	2074.6	2082.0	2083.5	2083.5
20°	2005.8	2023.8	2047.7	2070.1	2077.6	2083.5	2098.5	2113.4	2123.9	2125.4	2125.4
22.5°	2011.8	2041.7	2074.6	2100.0	2110.4	2117.9	2134.4	2153.8	2165.7	2167.2	2167.2
25°	2026.7	2062.6	2100.0	2131.4	2143.3	2152.3	2170.2	2191.2	2203.1	2207.6	2206.1
27.5°	2040.2	2083.5	2126.9	2162.8	2176.2	2188.2	2210.6	2234.5	2249.4	2253.9	2250.9
30°	2052.2	2103.0	2152.3	2195.6	2213.6	2227.0	2253.9	2282.3	2301.8	2306.2	2301.8
32.5°	2064.1	2125.4	2183.7	2234.5	2252.4	2271.9	2306.2	2339.1	2358.6	2364.5	2361.5
35°	2080.6	2152.3	2221.1	2279.3	2303.3	2325.7	2366.0	2404.9	2428.8	2433.3	2428.8
37.5°	2103.0	2186.7	2262.9	2336.1	2361.5	2392.9	2440.8	2487.1	2515.5	2521.5	2515.5
40°	2131.4	2230.0	2319.7	2404.9	2439.3	2472.2	2530.4	2585.7	2617.1	2627.6	2623.1
42.5°	2168.7	2283.8	2388.5	2490.1	2528.9	2570.8	2639.6	2703.8	2739.7	2751.7	2739.7
45°	2215.1	2351.1	2472.2	2590.2	2635.1	2685.9	2768.1	2841.3	2883.2	2893.6	2883.2
47.5°	2276.4	2430.3	2570.8	2706.8	2760.6	2820.4	2917.6	3001.3	3046.1	3058.1	3047.6
50°	2342.1	2526.0	2687.4	2842.8	2910.1	2972.9	3086.5	3179.1	3226.9	3249.4	3229.9
52.5°	2424.3	2630.6	2820.4	2993.8	3074.5	3149.2	3274.8	3376.4	3434.7	3454.1	3427.2
55°	2523.0	2756.1	2968.4	3168.7	3249.4	3333.1	3472.1	3579.7	3641.0	3661.9	3642.5
57.5°	2632.1	2889.2	3123.8	3334.6	3428.7	3513.9	3669.4	3781.5	3835.3	3862.2	3838.3
60°	2745.7	3026.7	3280.8	3505.0	3608.1	3696.3	3854.7	3965.3	4022.1	4049.0	4026.6
62.5°	2856.3	3159.7	3427.2	3660.4	3759.0	3856.2	4014.6	4120.8	4179.0	4203.0	4182.0
65°	2951.9	3271.8	3546.8	3787.4	3889.1	3984.7	4134.2	4235.8	4297.1	4313.6	4298.6
67.5°	3023.7	3348.0	3626.0	3863.7	3962.3	4058.0	4200.0	4294.1	4353.9	4368.9	4355.4
70°	3056.6	3377.9	3652.9	3884.6	3981.7	4066.9	4201.5	4291.1	4347.9	4356.9	4346.4
72.5°	3035.6	3348.0	3614.1	3835.3	3927.9	4002.7	4126.7	4211.9	4265.7	4273.2	4265.7
75°	2957.9	3256.8	3507.9	3714.2	3800.9	3863.7	3981.7	4061.0	4114.8	4120.8	4111.8
77.5°	2826.4	3104.4	3334.6	3533.4	3605.1	3666.4	3778.5	3848.7	3892.1	3901.0	3890.6
80°	2650.0	2905.6	3111.9	3289.7	3358.5	3410.8	3519.9	3596.1	3620.0	3632.0	3617.1
82.5°	2448.2	2676.9	2860.8	3022.2	3083.5	3147.7	3218.0	3288.2	3322.6	3333.1	3321.1
85°	2231.5	2434.8	2597.7	2742.7	2796.5	2854.8	2916.1	2984.8	3014.7	3025.2	3013.2
87.5°	2014.8	2194.1	2337.6	2466.2	2515.5	2567.8	2641.0	2676.9	2717.3	2729.2	2715.8
90°	1820.5	1981.9	2110.4	2227.0	2273.4	2321.2	2378.0	2422.8	2460.2	2470.7	2458.7
92.5°	1663.5	1808.5	1926.6	2031.2	2071.6	2116.4	2171.7	2215.1	2248.0	2258.4	2246.5
95°	1533.5	1666.5	1777.1	1874.3	1913.2	1955.0	2016.3	2050.7	2080.6	2089.5	2080.6
97.5°	1422.9	1548.5	1653.1	1747.2	1784.6	1823.5	1883.3	1917.6	1946.0	1953.5	1946.0
100°	1325.8	1448.3	1551.4	1641.1	1678.5	1715.9	1774.1	1808.5	1835.4	1844.4	1835.4
102.5°	1245.0	1363.1	1464.8	1555.9	1591.8	1629.2	1684.5	1724.8	1745.8	1756.2	1747.2
105°	1174.8	1289.9	1391.5	1481.2	1518.6	1554.4	1611.2	1648.6	1672.5	1684.5	1674.0
107.5°	1110.5	1224.1	1327.2	1413.9	1451.3	1487.2	1545.5	1582.8	1605.3	1618.7	1606.7
110°	1049.2	1161.3	1260.0	1349.7	1387.0	1424.4	1482.7	1520.1	1542.5	1554.4	1544.0



TEST NUMBER: P201264

CATALOG NUMBER: 8LBLED-LD4-16-SYMF-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	989.5	1098.6	1200.2	1286.9	1322.8	1360.1	1419.9	1458.8	1479.7	1493.2	1481.2
115°	929.7	1037.3	1135.9	1219.6	1255.5	1294.4	1352.7	1393.0	1415.4	1425.9	1413.9
117.5°	871.4	974.5	1068.7	1150.9	1186.8	1224.1	1280.9	1321.3	1345.2	1355.6	1343.7
120°	811.6	910.2	1002.9	1077.6	1115.0	1149.4	1207.7	1246.5	1270.5	1280.9	1269.0
122.5°	747.3	844.5	932.7	1005.9	1041.8	1074.7	1131.5	1170.3	1192.7	1203.2	1192.7
125°	681.6	772.7	857.9	931.2	961.1	992.4	1047.7	1085.1	1109.0	1118.0	1109.0
127.5°	615.8	699.5	778.7	843.0	875.9	905.8	958.1	993.9	1014.9	1025.3	1017.9
130°	550.0	629.2	701.0	759.3	787.7	816.1	863.9	896.8	917.7	926.7	919.2
132.5°	479.8	556.0	626.3	677.1	704.0	727.9	771.2	799.6	817.6	828.0	819.1
135°	417.0	479.8	545.5	597.9	624.8	645.7	684.5	708.5	724.9	733.9	724.9
137.5°	360.2	414.0	467.8	514.2	539.6	562.0	599.4	621.8	636.7	645.7	636.7
140°	307.9	354.2	402.1	439.4	461.8	479.8	514.2	533.6	547.0	554.5	545.5
142.5°	257.1	298.9	339.3	373.7	393.1	408.0	440.9	455.9	466.3	470.8	466.3
145°	213.7	248.1	282.5	313.9	328.8	340.8	373.7	390.1	399.1	403.6	399.1
147.5°	173.4	201.8	230.2	255.6	269.0	284.0	306.4	325.8	333.3	336.3	333.3
150°	136.0	161.4	183.8	204.8	215.2	225.7	245.1	264.6	272.0	276.5	272.0
152.5°	103.1	124.1	142.0	158.4	167.4	176.4	192.8	210.7	218.2	221.2	218.2
155°	74.7	89.7	106.1	118.1	125.6	131.5	143.5	155.4	167.4	167.4	167.4
157.5°	46.3	58.3	71.7	82.2	86.7	92.7	101.6	112.1	121.1	125.6	125.6
160°	23.9	31.4	40.4	47.8	52.3	56.8	62.8	71.7	77.7	82.2	79.2
162.5°	10.5	13.5	17.9	20.9	23.9	25.4	29.9	34.4	37.4	44.8	38.9
165°	3.0	3.0	4.5	6.0	6.0	6.0	7.5	9.0	10.5	16.4	12.0
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: P201264

CATALOG NUMBER: 8LBLELD4-16-SYMF-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6
2.5°	2032.7	2037.2	2043.2	2046.2	2050.7	2053.6	2061.1	2070.1	2062.6	2052.2	2053.6
5°	2040.2	2038.7	2043.2	2046.2	2049.2	2050.7	2058.1	2067.1	2058.1	2047.7	2047.7
7.5°	2043.2	2041.7	2043.2	2044.7	2046.2	2046.2	2053.6	2061.1	2052.2	2038.7	2035.7
10°	2038.7	2037.2	2038.7	2041.7	2041.7	2041.7	2046.2	2052.2	2041.7	2025.3	2019.3
12.5°	2041.7	2037.2	2037.2	2038.7	2038.7	2035.7	2037.2	2041.7	2028.2	2010.3	2001.3
15°	2052.2	2044.7	2041.7	2041.7	2038.7	2031.2	2028.2	2028.2	2013.3	1989.4	1977.4
17.5°	2077.6	2065.6	2056.6	2052.2	2046.2	2032.7	2022.3	2016.3	1996.9	1969.9	1950.5
20°	2116.4	2100.0	2086.5	2077.6	2070.1	2046.2	2025.3	2008.8	1981.9	1949.0	1923.6
22.5°	2155.3	2137.3	2117.9	2109.0	2098.5	2071.6	2043.2	2014.8	1974.4	1929.6	1895.2
25°	2192.7	2174.7	2152.3	2143.3	2129.9	2098.5	2062.6	2029.7	1977.4	1916.1	1866.8
27.5°	2236.0	2213.6	2189.7	2176.2	2161.3	2125.4	2085.0	2044.7	1986.4	1916.1	1847.4
30°	2285.3	2258.4	2227.0	2212.1	2194.1	2152.3	2103.0	2055.1	1992.4	1916.1	1836.9
32.5°	2342.1	2310.7	2273.4	2252.4	2231.5	2182.2	2123.9	2068.6	1996.9	1914.6	1828.0
35°	2407.9	2372.0	2327.2	2303.3	2277.8	2219.6	2150.8	2083.5	2004.3	1913.2	1816.0
37.5°	2490.1	2448.2	2394.4	2364.5	2334.6	2265.9	2186.7	2106.0	2016.3	1914.6	1807.0
40°	2588.7	2539.4	2476.6	2439.3	2403.4	2324.2	2230.0	2134.4	2032.7	1917.6	1798.1
42.5°	2705.3	2645.5	2575.3	2531.9	2490.1	2391.4	2283.8	2170.2	2055.1	1923.6	1793.6
45°	2844.3	2781.5	2691.9	2638.1	2591.7	2476.6	2352.6	2218.1	2088.0	1938.6	1792.1
47.5°	3004.2	2925.0	2827.9	2765.1	2709.8	2576.8	2433.3	2277.8	2125.4	1958.0	1795.1
50°	3183.6	3093.9	2981.8	2916.1	2847.3	2694.9	2528.9	2348.1	2173.2	1986.4	1802.5
52.5°	3380.9	3282.3	3161.2	3083.5	3007.2	2830.9	2636.6	2437.8	2228.5	2022.3	1816.0
55°	3585.7	3479.5	3345.0	3259.8	3174.6	2980.3	2763.6	2534.9	2301.8	2067.1	1838.4
57.5°	3784.5	3675.3	3527.4	3440.7	3345.0	3138.8	2899.6	2641.0	2381.0	2119.4	1863.8
60°	3968.3	3859.2	3709.7	3621.5	3516.9	3295.7	3038.6	2757.6	2463.2	2174.7	1893.7
62.5°	4123.7	4019.1	3869.6	3780.0	3672.4	3443.7	3171.6	2871.2	2552.9	2233.0	1922.1
65°	4238.8	4140.2	3995.2	3902.5	3799.4	3561.8	3283.7	2971.4	2627.6	2283.8	1947.5
67.5°	4297.1	4204.5	4064.0	3975.8	3874.1	3638.0	3360.0	3038.6	2684.4	2319.7	1964.0
70°	4291.1	4203.0	4071.4	3984.7	3887.6	3660.4	3386.9	3065.5	2709.8	2333.1	1961.0
72.5°	4213.4	4125.2	4007.2	3923.5	3830.8	3618.5	3349.5	3041.6	2690.4	2312.2	1937.1
75°	4059.5	3978.8	3859.2	3790.4	3706.7	3509.4	3252.4	2953.4	2624.6	2256.9	1887.7
77.5°	3838.3	3777.0	3660.4	3596.1	3513.9	3331.6	3089.4	2820.4	2509.5	2164.3	1811.5
80°	3567.7	3516.9	3403.3	3346.5	3265.8	3107.4	2898.1	2638.1	2357.1	2038.7	1712.9
82.5°	3271.8	3213.5	3123.8	3071.5	2995.3	2853.3	2654.5	2442.3	2180.7	1895.2	1597.8
85°	2965.4	2911.6	2829.4	2784.5	2717.3	2590.2	2412.4	2225.5	1993.9	1736.8	1473.7
87.5°	2673.9	2621.6	2543.9	2503.5	2442.3	2328.7	2173.2	2008.8	1804.0	1584.3	1342.2
90°	2421.3	2372.0	2298.8	2261.4	2206.1	2103.0	1962.5	1814.5	1633.7	1431.9	1224.1
92.5°	2213.6	2168.7	2100.0	2064.1	2014.8	1920.6	1793.6	1659.1	1496.1	1321.3	1128.5
95°	2049.2	2005.8	1944.5	1910.2	1863.8	1766.7	1654.6	1529.0	1379.6	1219.6	1041.8
97.5°	1916.1	1880.3	1813.0	1780.1	1742.8	1644.1	1542.5	1418.4	1279.4	1130.0	964.0
100°	1808.5	1768.2	1706.9	1675.5	1636.6	1544.0	1440.8	1324.3	1189.7	1047.7	893.8
102.5°	1724.8	1683.0	1626.2	1590.3	1552.9	1458.8	1357.1	1243.5	1115.0	977.5	829.5
105°	1650.1	1609.7	1552.9	1517.1	1479.7	1387.0	1289.9	1174.8	1047.7	914.7	771.2
107.5°	1579.8	1544.0	1487.2	1451.3	1413.9	1321.3	1224.1	1110.5	986.5	856.4	717.4
110°	1520.1	1481.2	1421.4	1387.0	1346.7	1258.5	1161.3	1050.7	926.7	799.6	666.6



TEST NUMBER: P201264

CATALOG NUMBER: 8LBLED-LD4-16-SYMF-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1460.3	1418.4	1358.6	1324.3	1283.9	1195.7	1100.1	991.0	869.9	747.3	618.8
115°	1394.5	1354.2	1291.4	1257.0	1216.6	1130.0	1037.3	931.2	814.6	695.0	571.0
117.5°	1324.3	1283.9	1221.1	1188.2	1149.4	1064.2	976.0	872.9	759.3	644.2	523.1
120°	1248.0	1209.2	1149.4	1116.5	1079.1	996.9	911.7	808.6	701.0	590.4	478.3
122.5°	1170.3	1132.9	1074.7	1041.8	1005.9	928.2	844.5	744.3	641.2	538.1	434.9
125°	1086.6	1049.2	993.9	962.6	926.7	852.0	771.2	677.1	581.4	488.8	390.1
127.5°	989.5	959.6	905.8	874.4	841.5	775.7	698.0	612.8	524.6	434.9	346.8
130°	896.8	865.4	814.6	786.2	757.8	698.0	629.2	547.0	460.4	382.6	303.4
132.5°	799.6	771.2	727.9	704.0	678.6	624.8	554.5	473.8	400.6	333.3	263.1
135°	708.5	684.5	645.7	624.8	599.4	542.6	476.8	409.5	348.3	288.5	225.7
137.5°	623.3	599.4	563.5	541.1	514.2	463.3	409.5	354.2	297.4	246.6	191.3
140°	533.6	514.2	481.3	461.8	437.9	394.6	349.7	297.4	252.6	206.3	158.4
142.5°	457.4	440.9	408.0	390.1	369.2	333.3	291.5	251.1	210.7	170.4	130.0
145°	391.6	375.2	339.3	325.8	306.4	275.0	240.6	204.8	171.9	137.5	104.6
147.5°	327.3	307.9	276.5	264.6	249.6	222.7	195.8	167.4	139.0	109.1	80.7
150°	267.5	245.1	219.7	212.2	197.3	176.4	153.9	130.0	107.6	83.7	58.3
152.5°	210.7	191.3	170.4	162.9	151.0	137.5	118.1	98.6	80.7	58.3	40.4
155°	156.9	142.0	125.6	121.1	112.1	101.6	85.2	70.2	53.8	38.9	28.4
157.5°	110.6	98.6	86.7	83.7	77.7	68.8	55.3	43.3	34.4	25.4	19.4
160°	68.8	61.3	52.3	49.3	44.8	38.9	29.9	25.4	20.9	16.4	12.0
162.5°	32.9	28.4	25.4	23.9	20.9	17.9	16.4	13.5	12.0	10.5	9.0
165°	12.0	12.0	12.0	10.5	10.5	10.5	10.5	9.0	7.5	7.5	6.0
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: P201264

CATALOG NUMBER: 8LBLED-LD4-16-SYMF-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6	2056.6
2.5°	2055.1	2058.1	2058.1	2059.6	2064.1	2073.1	2085.0	2086.5
5°	2049.2	2050.7	2050.7	2050.7	2055.1	2062.6	2074.6	2076.1
7.5°	2035.7	2035.7	2035.7	2035.7	2040.2	2046.2	2056.6	2058.1
10°	2017.8	2016.3	2016.3	2014.8	2017.8	2022.3	2034.2	2032.7
12.5°	1995.4	1992.4	1990.9	1990.9	1989.4	1993.9	2001.3	2002.8
15°	1969.9	1964.0	1961.0	1958.0	1956.5	1956.5	1965.5	1964.0
17.5°	1940.1	1931.1	1926.6	1922.1	1916.1	1916.1	1922.1	1920.6
20°	1905.7	1893.7	1886.2	1880.3	1871.3	1868.3	1871.3	1869.8
22.5°	1871.3	1851.9	1844.4	1835.4	1822.0	1816.0	1814.5	1813.0
25°	1830.9	1807.0	1796.6	1787.6	1768.2	1760.7	1753.2	1750.2
27.5°	1795.1	1760.7	1747.2	1732.3	1709.9	1699.4	1687.5	1684.5
30°	1763.7	1712.9	1691.9	1677.0	1648.6	1632.2	1617.2	1614.2
32.5°	1739.8	1669.5	1641.1	1623.2	1584.3	1561.9	1542.5	1533.5
35°	1718.8	1629.2	1591.8	1563.4	1517.1	1490.2	1463.3	1455.8
37.5°	1699.4	1594.8	1545.5	1506.6	1454.3	1415.4	1385.5	1373.6
40°	1680.0	1563.4	1503.6	1454.3	1385.5	1340.7	1303.3	1288.4
42.5°	1662.1	1532.0	1467.7	1408.0	1318.3	1264.5	1224.1	1203.2
45°	1645.6	1503.6	1433.4	1367.6	1252.5	1189.7	1140.4	1121.0
47.5°	1633.7	1476.7	1399.0	1327.2	1191.2	1113.5	1062.7	1037.3
50°	1624.7	1451.3	1366.1	1286.9	1137.4	1040.3	983.5	953.6
52.5°	1620.2	1428.9	1336.2	1251.0	1088.1	970.0	902.8	880.3
55°	1621.7	1410.9	1310.8	1218.1	1041.8	902.8	828.0	793.7
57.5°	1624.7	1394.5	1285.4	1185.3	995.4	837.0	753.3	717.4
60°	1630.7	1381.1	1263.0	1153.9	952.1	780.2	684.5	650.2
62.5°	1636.6	1369.1	1240.6	1124.0	910.2	727.9	615.8	576.9
65°	1638.1	1351.2	1216.6	1094.1	868.4	675.6	545.5	508.2
67.5°	1632.2	1328.7	1186.8	1059.7	825.0	624.8	479.8	440.9
70°	1614.2	1298.9	1152.4	1020.8	777.2	575.4	417.0	375.2
72.5°	1581.3	1260.0	1112.0	977.5	730.9	523.1	360.2	309.4
75°	1535.0	1212.2	1064.2	928.2	681.6	473.8	307.9	251.1
77.5°	1472.2	1150.9	1007.4	872.9	627.8	423.0	263.1	197.3
80°	1391.5	1086.6	944.6	813.1	575.4	376.7	219.7	146.5
82.5°	1295.9	1013.4	877.4	751.8	526.1	328.8	179.4	101.6
85°	1197.2	934.2	807.1	687.5	473.8	284.0	145.0	59.8
87.5°	1100.1	854.9	739.9	629.2	420.0	243.6	112.1	23.9
90°	1004.4	778.7	669.6	566.5	373.7	206.3	83.7	0.0
92.5°	925.2	721.9	623.3	524.6	343.8	186.8	71.7	0.0
95°	854.9	668.1	573.9	482.8	312.4	168.9	59.8	0.0
97.5°	790.7	617.3	530.6	443.9	284.0	149.5	49.3	0.0
100°	729.4	566.5	485.8	408.0	257.1	133.0	37.4	0.0
102.5°	675.6	521.6	445.4	369.2	230.2	116.6	26.9	0.0
105°	623.3	478.3	408.0	334.8	206.3	101.6	16.4	0.0
107.5°	576.9	437.9	370.7	303.4	183.8	88.2	10.5	0.0
110°	532.1	400.6	334.8	273.5	164.4	76.2	9.0	0.0



TEST NUMBER: P201264

CATALOG NUMBER: 8LBLED-LD4-16-SYMF-UNV-L850-CD2-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	490.2	364.7	303.4	245.1	148.0	64.3	9.0	0.0
115°	446.9	330.3	273.5	221.2	131.5	52.3	7.5	0.0
117.5°	409.5	297.4	246.6	201.8	115.1	41.9	7.5	0.0
120°	372.2	269.0	224.2	180.9	100.1	31.4	7.5	0.0
122.5°	334.8	243.6	200.3	161.4	86.7	25.4	6.0	0.0
125°	300.4	216.7	177.9	140.5	71.7	22.4	6.0	0.0
127.5°	266.0	189.8	153.9	121.1	56.8	19.4	4.5	0.0
130°	231.7	162.9	131.5	101.6	43.3	16.4	4.5	0.0
132.5°	200.3	137.5	110.6	83.7	34.4	13.5	3.0	0.0
135°	168.9	115.1	91.2	65.8	26.9	12.0	3.0	0.0
137.5°	142.0	94.2	71.7	49.3	22.4	9.0	3.0	0.0
140°	116.6	74.7	53.8	37.4	17.9	7.5	1.5	0.0
142.5°	92.7	55.3	40.4	28.4	14.9	6.0	1.5	0.0
145°	71.7	40.4	29.9	22.4	13.5	4.5	1.5	0.0
147.5°	52.3	31.4	23.9	19.4	10.5	4.5	1.5	0.0
150°	37.4	23.9	19.4	14.9	7.5	3.0	1.5	0.0
152.5°	28.4	17.9	14.9	12.0	6.0	3.0	1.5	0.0
155°	20.9	13.5	12.0	9.0	4.5	3.0	1.5	0.0
157.5°	14.9	10.5	9.0	6.0	4.5	3.0	1.5	0.0
160°	9.0	7.5	6.0	4.5	3.0	1.5	1.5	0.0
162.5°	7.5	4.5	4.5	4.5	3.0	1.5	1.5	0.0
165°	4.5	3.0	3.0	3.0	1.5	1.5	1.5	0.0
167.5°	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
172.5°	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
177.5°	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

(END OF REPORT)