

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: P201312

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201312
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28136)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8LBLED-LD4-16-SYMW-UNV-L850-CD2-U
Description: 8 ft. Low Bay Linear, 16000 lm, Wht 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: 16641.2 lumens
Efficiency: N/A
Efficacy: 145.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 2.12 / 1.93
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 8' x H: 0.21')
CIE Type: Semi-Direct

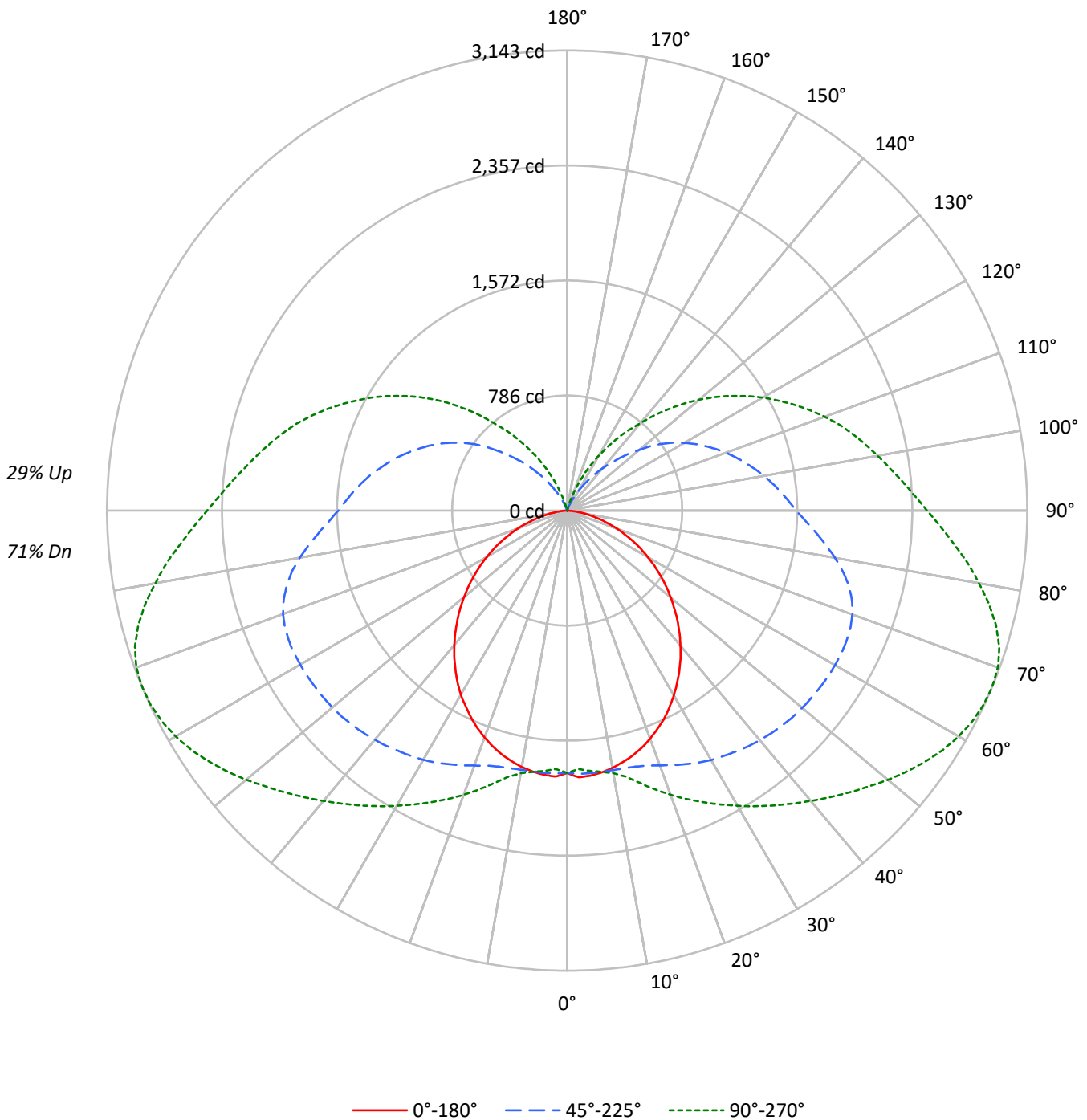
Input Watts (W): 114.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	71
1	97	90	84	79	91	85	80	75	75	71	67	66	63	60	58	55	53	49
2	86	76	67	60	81	71	64	57	63	57	51	55	50	46	48	44	40	36
3	77	65	55	48	72	61	52	45	54	47	41	47	41	36	41	36	32	28
4	70	56	46	39	65	53	44	37	47	39	33	41	35	30	35	30	26	23
5	64	50	40	32	60	47	38	31	41	34	28	36	30	25	31	26	22	19
6	59	44	34	27	55	42	33	26	37	29	24	32	26	21	28	23	19	16
7	54	40	30	24	50	37	29	23	33	26	20	29	23	18	25	20	16	14
8	50	36	27	21	47	34	25	20	30	23	18	26	20	16	23	18	14	12
9	47	33	24	18	44	31	23	17	27	21	16	24	18	14	21	16	13	10
10	43	30	22	16	41	28	21	15	25	19	14	22	17	13	20	15	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	14438	14438	14438
5°	14666	13015	14617
10°	14533	12221	14485
15°	14349	12049	14287
20°	14078	12186	14002
25°	13771	12356	13666
30°	13357	12602	13316
35°	12907	12917	12849
40°	12384	13313	12338
45°	11835	13818	11768
50°	11230	14433	11175
55°	10567	15103	10506
60°	9841	15752	9771
65°	8987	16300	8906
70°	7952	16680	7853
75°	6617	16713	6362
80°	5075	16434	4715
85°	2879	16105	2558



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.1	1.0
10°-20°	515.5	3.1
20°-30°	872.6	5.2
30°-40°	1220.1	7.3
40°-50°	1537.3	9.2
50°-60°	1805.1	10.8
60°-70°	1973.8	11.9
70°-80°	1950.1	11.7
80°-90°	1713.1	10.3
90°-100°	1458.2	8.8
100°-110°	1216.1	7.3
110°-120°	941.9	5.7
120°-130°	655.6	3.9
130°-140°	382.7	2.3
140°-150°	174.6	1.0
150°-160°	49.8	0.3
160°-170°	3.6	0.0
170°-180°	0.0	0.0
0°-30°	1559.2	9.4
0°-40°	2779.3	16.7
0°-60°	6121.7	36.8
0°-90°	11758.7	70.7
90°-120°	3616.2	21.7
90°-150°	4829.1	29.0
90°-180°	4883.0	29.3
0°-180°	16641.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1792	1792	1792	1792	1792	
5°	1818	1801	1785	1798	1812	172
15°	1732	1810	1927	1810	1725	488
25°	1568	1912	2197	1912	1556	721
35°	1336	2009	2459	2006	1330	835
45°	1066	2076	2723	2073	1060	822
55°	780	2107	2988	2101	776	698
65°	498	2106	3139	2098	493	493
75°	233	1992	3033	1983	224	250
85°	40	1704	2654	1699	36	51
90°	0	1563	2459	1563	0	2
95°	0	1465	2297	1466	0	1
105°	2	1260	2019	1264	0	2
115°	2	1042	1711	1045	2	1
125°	3	797	1365	797	2	3
135°	3	505	979	505	2	2
145°	4	259	607	256	3	2
155°	4	73	269	69	3	2
165°	4	8	19	0	3	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0
2.5°	1823.4	1821.9	1814.5	1802.5	1798.0	1795.0	1793.5	1789.1	1787.6	1790.6	1799.5
5°	1817.5	1814.5	1808.5	1798.0	1793.5	1792.0	1790.6	1786.1	1784.6	1789.1	1801.0
7.5°	1804.0	1802.5	1796.5	1786.1	1784.6	1781.6	1781.6	1778.6	1778.6	1786.1	1799.5
10°	1784.6	1783.1	1777.1	1769.6	1768.1	1768.1	1768.1	1768.1	1771.1	1783.1	1799.5
12.5°	1759.2	1759.2	1754.7	1748.7	1750.2	1750.2	1751.7	1754.7	1763.6	1781.6	1802.5
15°	1732.3	1730.8	1726.3	1724.8	1729.3	1730.8	1735.2	1742.7	1757.7	1783.1	1810.0
17.5°	1697.9	1697.9	1693.4	1694.9	1703.9	1708.3	1715.8	1729.3	1753.2	1787.6	1826.4
20°	1657.5	1659.0	1657.5	1662.0	1677.0	1685.9	1694.9	1717.3	1751.7	1799.5	1851.8
22.5°	1612.7	1615.7	1615.7	1627.6	1647.1	1660.5	1674.0	1705.4	1754.7	1820.4	1881.7
25°	1567.9	1567.9	1572.3	1588.8	1615.7	1632.1	1653.0	1697.9	1765.1	1842.9	1911.6
27.5°	1514.0	1518.5	1526.0	1548.4	1585.8	1608.2	1633.6	1697.9	1777.1	1865.3	1941.5
30°	1457.3	1461.7	1473.7	1505.1	1552.9	1581.3	1617.2	1697.9	1787.6	1883.2	1966.9
32.5°	1397.5	1404.9	1421.4	1461.7	1520.0	1558.9	1605.2	1696.4	1796.5	1898.2	1987.8
35°	1336.2	1343.7	1369.1	1416.9	1493.1	1538.0	1591.8	1691.9	1801.0	1911.6	2008.8
37.5°	1271.9	1285.4	1313.8	1373.6	1466.2	1520.0	1576.8	1687.4	1805.5	1922.1	2029.7
40°	1203.2	1216.6	1257.0	1328.7	1439.3	1496.1	1558.9	1681.4	1808.5	1932.5	2047.6
42.5°	1135.9	1153.8	1200.2	1286.9	1412.4	1475.2	1540.9	1672.5	1807.0	1940.0	2062.6
45°	1065.7	1086.6	1143.4	1246.5	1382.5	1449.8	1520.0	1660.5	1804.0	1944.5	2076.0
47.5°	993.9	1019.3	1086.6	1206.2	1352.6	1422.9	1499.1	1648.6	1799.5	1947.5	2088.0
50°	923.7	953.6	1029.8	1165.8	1319.7	1394.5	1473.7	1635.1	1792.0	1949.0	2095.5
52.5°	853.4	886.3	976.0	1125.4	1285.4	1364.6	1448.3	1618.7	1783.1	1947.5	2102.9
55°	780.2	816.1	922.2	1082.1	1249.5	1331.7	1419.9	1597.7	1769.6	1941.5	2107.4
57.5°	709.9	750.3	871.4	1040.3	1212.1	1298.8	1393.0	1575.3	1754.7	1937.0	2111.9
60°	638.2	684.5	819.0	992.4	1173.3	1263.0	1360.1	1549.9	1736.7	1926.6	2111.9
62.5°	568.0	620.3	768.2	949.1	1134.4	1227.1	1327.2	1521.5	1717.3	1916.1	2111.9
65°	497.7	557.5	715.9	901.3	1091.1	1188.2	1289.9	1491.6	1693.4	1901.2	2105.9
67.5°	429.0	497.7	662.1	851.9	1046.2	1146.4	1251.0	1457.3	1666.5	1881.7	2094.0
70°	361.7	437.9	608.3	799.6	999.9	1098.5	1207.6	1419.9	1635.1	1856.3	2073.0
72.5°	294.4	381.1	551.5	747.3	950.6	1052.2	1162.8	1376.5	1596.3	1821.9	2040.2
75°	233.2	324.3	497.7	693.5	899.8	1002.9	1113.5	1328.7	1549.9	1777.1	1992.3
77.5°	177.9	272.0	445.4	641.2	846.0	953.6	1062.7	1276.4	1496.1	1720.3	1929.5
80°	125.5	221.2	393.1	587.4	792.1	898.3	1005.9	1219.6	1439.3	1653.0	1857.8
82.5°	77.7	174.9	340.8	535.1	739.8	844.5	950.6	1162.8	1375.0	1582.8	1780.1
85°	40.4	131.5	291.5	485.8	689.0	792.1	896.8	1104.5	1309.3	1511.1	1703.9
87.5°	13.5	95.7	251.1	442.4	642.7	745.8	847.4	1049.2	1248.0	1440.8	1629.1
90°	0.0	71.7	221.2	408.0	603.8	704.0	805.6	999.9	1194.2	1384.0	1563.4
92.5°	0.0	61.3	201.8	384.1	576.9	675.6	774.2	967.0	1153.8	1337.7	1512.6
95°	0.0	49.3	185.3	360.2	548.5	645.7	742.8	931.1	1115.0	1294.3	1464.7
97.5°	0.0	38.9	167.4	337.8	520.1	614.3	708.4	895.3	1074.6	1251.0	1415.4
100°	1.5	29.9	148.0	309.4	490.2	582.9	674.1	856.4	1031.3	1201.7	1364.6
102.5°	1.5	20.9	130.0	285.5	458.8	548.5	638.2	816.1	987.9	1156.8	1312.3
105°	1.5	14.9	112.1	260.1	429.0	515.6	603.8	777.2	944.6	1107.5	1260.0
107.5°	1.5	10.5	95.7	236.1	399.1	481.3	566.5	735.4	899.8	1058.2	1207.6
110°	1.5	7.5	80.7	210.7	366.2	448.4	530.6	693.5	853.4	1007.4	1153.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.5	6.0	65.8	186.8	333.3	414.0	493.2	651.7	807.1	956.6	1098.5
115°	1.5	6.0	52.3	164.4	300.4	378.1	454.4	609.8	757.8	904.2	1041.7
117.5°	1.5	4.5	40.4	142.0	270.5	342.3	415.5	563.5	709.9	851.9	985.0
120°	1.5	4.5	29.9	119.6	239.1	306.4	378.1	518.6	659.1	796.6	923.7
122.5°	3.0	4.5	22.4	100.1	210.7	272.0	340.8	473.8	605.3	738.3	863.9
125°	3.0	3.0	17.9	80.7	180.8	237.6	298.9	427.5	547.0	674.1	796.6
127.5°	3.0	3.0	13.5	61.3	151.0	203.3	258.6	378.1	494.7	608.3	724.9
130°	3.0	3.0	12.0	44.8	122.6	168.9	219.7	327.3	436.4	541.1	647.2
132.5°	3.0	3.0	9.0	32.9	97.2	139.0	183.8	279.5	379.6	481.3	576.9
135°	3.0	3.0	7.5	23.9	73.2	110.6	149.5	234.7	325.8	421.5	505.2
137.5°	3.0	3.0	7.5	17.9	53.8	83.7	118.1	195.8	276.5	361.7	437.9
140°	3.0	3.0	6.0	14.9	37.4	61.3	89.7	156.9	225.7	304.9	378.1
142.5°	3.0	3.0	4.5	12.0	26.9	43.3	64.3	121.1	182.3	251.1	315.4
145°	4.5	3.0	4.5	10.5	19.4	29.9	44.8	91.2	140.5	201.8	258.6
147.5°	3.0	3.0	3.0	7.5	14.9	20.9	29.9	62.8	106.1	156.9	204.8
150°	4.5	3.0	3.0	6.0	12.0	14.9	20.9	41.8	73.2	115.1	156.9
152.5°	4.5	3.0	3.0	6.0	9.0	12.0	14.9	26.9	47.8	77.7	112.1
155°	4.5	3.0	3.0	4.5	7.5	9.0	12.0	17.9	28.4	47.8	73.2
157.5°	4.5	4.5	4.5	4.5	6.0	7.5	9.0	13.5	16.4	26.9	41.8
160°	4.5	4.5	3.0	3.0	4.5	4.5	6.0	9.0	12.0	14.9	20.9
162.5°	4.5	4.5	4.5	3.0	3.0	3.0	4.5	6.0	7.5	10.5	13.5
165°	4.5	4.5	3.0	3.0	3.0	3.0	3.0	3.0	4.5	6.0	7.5
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0
2.5°	1802.5	1795.0	1792.0	1786.1	1781.6	1778.6	1774.1	1771.1	1768.1	1766.6	1766.6
5°	1804.0	1796.5	1793.5	1789.1	1787.6	1784.6	1781.6	1784.6	1783.1	1784.6	1783.1
7.5°	1805.5	1799.5	1799.5	1798.0	1796.5	1796.5	1793.5	1796.5	1798.0	1799.5	1798.0
10°	1810.0	1808.5	1811.5	1813.0	1813.0	1813.0	1813.0	1816.0	1821.9	1821.9	1820.4
12.5°	1817.5	1821.9	1830.9	1838.4	1841.4	1841.4	1847.3	1853.3	1860.8	1862.3	1860.8
15°	1832.4	1845.9	1865.3	1881.7	1889.2	1893.7	1905.6	1916.1	1923.6	1926.6	1923.6
17.5°	1859.3	1884.7	1914.6	1938.5	1947.5	1953.5	1969.9	1980.4	1989.3	1996.8	1993.8
20°	1895.2	1929.5	1965.4	1993.8	2005.8	2013.2	2031.2	2050.6	2059.6	2065.6	2064.1
22.5°	1934.0	1974.4	2014.7	2049.1	2062.6	2071.5	2094.0	2111.9	2125.3	2132.8	2131.3
25°	1971.4	2017.7	2067.1	2104.4	2120.9	2131.3	2155.2	2176.2	2191.1	2197.1	2195.6
27.5°	2008.8	2062.6	2116.4	2159.7	2176.2	2189.6	2218.0	2240.4	2258.4	2262.8	2262.8
30°	2038.7	2101.4	2159.7	2209.0	2227.0	2244.9	2276.3	2306.2	2322.6	2328.6	2327.1
32.5°	2067.1	2137.3	2203.1	2258.4	2280.8	2298.7	2336.1	2369.0	2388.4	2394.4	2388.4
35°	2095.5	2173.2	2246.4	2306.2	2330.1	2352.5	2394.4	2431.7	2452.7	2458.6	2455.7
37.5°	2122.4	2209.0	2288.3	2354.0	2382.4	2406.3	2449.7	2494.5	2516.9	2522.9	2516.9
40°	2147.8	2241.9	2328.6	2400.4	2431.7	2460.1	2511.0	2555.8	2581.2	2588.7	2585.7
42.5°	2171.7	2274.8	2369.0	2448.2	2484.1	2513.9	2570.7	2620.1	2647.0	2655.9	2648.5
45°	2192.6	2307.7	2409.3	2494.5	2533.4	2567.8	2632.0	2685.8	2712.7	2723.2	2714.2
47.5°	2213.5	2337.6	2446.7	2540.8	2585.7	2621.6	2693.3	2750.1	2781.5	2790.4	2781.5
50°	2233.0	2367.5	2487.0	2588.7	2636.5	2676.9	2754.6	2815.9	2847.2	2860.7	2848.7
52.5°	2250.9	2395.9	2524.4	2633.5	2685.8	2730.7	2814.4	2880.1	2917.5	2926.5	2914.5
55°	2268.8	2422.8	2557.3	2675.4	2732.2	2780.0	2871.2	2939.9	2977.3	2987.7	2975.8
57.5°	2283.8	2446.7	2588.7	2715.7	2774.0	2829.3	2920.5	2992.2	3031.1	3043.0	3031.1
60°	2294.2	2466.1	2617.1	2748.6	2809.9	2866.7	2963.8	3035.6	3074.4	3086.4	3074.4
62.5°	2301.7	2481.1	2636.5	2774.0	2839.8	2898.1	2996.7	3067.0	3107.3	3119.3	3107.3
65°	2303.2	2487.0	2647.0	2790.4	2857.7	2916.0	3016.1	3086.4	3128.2	3138.7	3126.7
67.5°	2294.2	2481.1	2647.0	2793.4	2860.7	2920.5	3020.6	3090.9	3131.2	3143.2	3131.2
70°	2276.3	2463.1	2632.0	2781.5	2848.7	2908.5	3007.2	3078.9	3119.3	3131.2	3117.8
72.5°	2241.9	2431.7	2600.6	2753.1	2817.4	2875.6	2972.8	3043.0	3081.9	3095.4	3080.4
75°	2192.6	2382.4	2551.3	2697.8	2765.0	2818.8	2916.0	2984.7	3020.6	3032.6	3019.1
77.5°	2128.3	2319.6	2482.6	2627.5	2694.8	2744.1	2838.3	2905.5	2941.4	2951.9	2938.4
80°	2053.6	2243.4	2400.4	2543.8	2606.6	2652.9	2747.1	2811.4	2845.7	2856.2	2848.7
82.5°	1971.4	2156.7	2309.2	2449.7	2509.5	2555.8	2648.5	2711.2	2745.6	2760.6	2748.6
85°	1887.7	2065.6	2215.0	2351.0	2410.8	2460.1	2545.3	2608.1	2642.5	2654.4	2647.0
87.5°	1804.0	1975.9	2120.9	2252.4	2307.7	2358.5	2443.7	2506.5	2540.8	2552.8	2543.8
90°	1733.8	1898.2	2037.2	2167.2	2224.0	2270.3	2352.5	2412.3	2446.7	2458.6	2451.2
92.5°	1677.0	1833.9	1968.4	2088.0	2141.8	2191.1	2270.3	2328.6	2363.0	2373.5	2366.0
95°	1623.2	1775.6	1905.6	2022.2	2074.5	2122.4	2197.1	2253.9	2286.8	2297.2	2291.2
97.5°	1572.3	1718.8	1844.4	1957.9	2011.8	2055.1	2126.8	2180.6	2213.5	2222.5	2213.5
100°	1515.5	1663.5	1786.1	1898.2	1944.5	1987.8	2059.6	2113.4	2141.8	2153.7	2146.3
102.5°	1461.7	1603.7	1724.8	1835.4	1884.7	1928.1	1993.8	2046.1	2079.0	2086.5	2079.0
105°	1406.4	1543.9	1662.0	1771.1	1820.4	1862.3	1928.1	1978.9	2010.3	2019.2	2011.8
107.5°	1349.6	1482.7	1600.7	1703.9	1751.7	1790.6	1857.8	1907.1	1934.0	1950.5	1938.5
110°	1288.4	1419.9	1533.5	1633.6	1679.9	1717.3	1783.1	1832.4	1857.8	1872.8	1862.3



TEST NUMBER: P201312

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	1231.6	1355.6	1464.7	1561.9	1605.2	1642.6	1706.9	1754.7	1778.6	1793.5	1783.1
115°	1171.8	1286.9	1394.5	1487.1	1530.5	1564.9	1629.1	1674.0	1697.9	1711.3	1702.4
117.5°	1107.5	1219.6	1321.2	1412.4	1452.8	1487.1	1548.4	1593.3	1615.7	1626.1	1617.2
120°	1044.7	1153.8	1249.5	1336.2	1376.5	1409.4	1469.2	1511.1	1532.0	1543.9	1535.0
122.5°	979.0	1085.1	1171.8	1258.5	1295.8	1327.2	1381.0	1425.9	1445.3	1455.8	1449.8
125°	908.7	1013.3	1097.0	1176.3	1212.1	1242.0	1294.3	1331.7	1354.1	1364.6	1358.6
127.5°	835.5	935.6	1020.8	1094.1	1128.4	1161.3	1204.7	1246.5	1261.5	1273.4	1267.4
130°	753.3	853.4	932.6	1007.4	1040.3	1067.2	1115.0	1149.4	1168.8	1179.3	1174.8
132.5°	672.6	765.2	848.9	916.2	947.6	976.0	1019.3	1052.2	1079.1	1080.6	1074.6
135°	594.9	675.6	751.8	823.5	854.9	883.3	922.2	952.1	977.5	979.0	971.5
137.5°	520.1	594.9	660.6	727.9	760.8	790.7	826.5	854.9	878.8	883.3	872.9
140°	448.4	517.1	576.9	636.7	668.1	696.5	735.4	759.3	778.7	780.2	774.2
142.5°	379.6	442.4	494.7	550.0	578.4	603.8	647.2	671.1	689.0	693.5	684.5
145°	315.4	370.7	420.0	467.8	491.7	515.6	559.0	587.4	602.3	606.8	597.8
147.5°	254.1	300.4	343.8	387.1	408.0	430.4	466.3	502.2	515.6	518.6	511.2
150°	197.3	236.1	275.0	310.9	328.8	348.2	379.6	412.5	430.4	433.4	427.5
152.5°	145.0	177.9	209.2	239.1	254.1	269.0	295.9	327.3	349.7	351.2	345.3
155°	98.6	125.5	151.0	173.4	186.8	198.8	219.7	243.6	267.5	269.0	264.5
157.5°	59.8	77.7	98.6	116.6	125.5	136.0	151.0	168.9	189.8	194.3	189.8
160°	29.9	40.4	52.3	64.3	71.7	79.2	86.7	101.6	113.6	124.1	118.1
162.5°	14.9	17.9	20.9	26.9	29.9	34.4	40.4	46.3	52.3	62.8	55.3
165°	9.0	10.5	12.0	12.0	13.5	13.5	13.5	13.5	13.5	19.4	13.5
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: P201312

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

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0
2.5°	1771.1	1774.1	1780.1	1783.1	1786.1	1789.1	1795.0	1804.0	1796.5	1789.1	1790.6
5°	1783.1	1783.1	1784.6	1789.1	1789.1	1790.6	1796.5	1805.5	1798.0	1787.6	1787.6
7.5°	1798.0	1796.5	1798.0	1799.5	1798.0	1798.0	1801.0	1805.5	1796.5	1784.6	1781.6
10°	1818.9	1814.5	1813.0	1814.5	1813.0	1808.5	1810.0	1810.0	1798.0	1780.1	1772.6
12.5°	1856.3	1848.8	1842.9	1841.4	1836.9	1829.4	1824.9	1818.9	1801.0	1780.1	1765.1
15°	1917.6	1905.6	1893.7	1889.2	1881.7	1863.8	1848.8	1835.4	1810.0	1780.1	1759.2
17.5°	1986.3	1971.4	1955.0	1949.0	1938.5	1913.1	1887.7	1862.3	1826.4	1784.6	1754.7
20°	2052.1	2034.2	2014.7	2004.3	1993.8	1962.4	1932.5	1899.7	1853.3	1798.0	1753.2
22.5°	2117.9	2096.9	2070.0	2061.1	2047.6	2011.8	1975.9	1938.5	1883.2	1817.5	1756.2
25°	2182.1	2158.2	2132.8	2117.9	2102.9	2062.6	2019.2	1974.4	1911.6	1839.9	1766.6
27.5°	2246.4	2219.5	2188.1	2171.7	2156.7	2111.9	2062.6	2011.8	1941.5	1860.8	1780.1
30°	2309.2	2279.3	2241.9	2224.0	2206.1	2155.2	2098.4	2041.6	1965.4	1878.7	1789.1
32.5°	2372.0	2339.1	2297.2	2276.3	2255.4	2197.1	2134.3	2070.0	1986.3	1895.2	1796.5
35°	2433.2	2397.4	2351.0	2325.6	2303.2	2240.4	2170.2	2098.4	2005.8	1908.6	1801.0
37.5°	2496.0	2455.7	2404.8	2376.4	2351.0	2282.3	2204.6	2123.8	2026.7	1919.1	1805.5
40°	2558.8	2515.4	2458.6	2428.8	2397.4	2322.6	2238.9	2149.3	2044.6	1929.5	1807.0
42.5°	2623.1	2575.2	2512.4	2479.6	2446.7	2363.0	2270.3	2171.7	2059.6	1937.0	1805.5
45°	2687.3	2633.5	2566.3	2528.9	2493.0	2401.8	2301.7	2191.1	2073.0	1941.5	1802.5
47.5°	2751.6	2694.8	2621.6	2581.2	2537.9	2440.7	2331.6	2212.0	2085.0	1943.0	1799.5
50°	2817.4	2756.1	2676.9	2632.0	2587.2	2478.1	2361.5	2230.0	2092.5	1944.5	1792.0
52.5°	2881.6	2815.9	2730.7	2682.8	2630.5	2515.4	2389.9	2247.9	2098.4	1943.0	1781.6
55°	2939.9	2871.2	2781.5	2730.7	2672.4	2549.8	2415.3	2262.8	2101.4	1938.5	1768.1
57.5°	2993.7	2923.5	2829.3	2772.5	2715.7	2582.7	2439.2	2279.3	2104.4	1931.0	1753.2
60°	3035.6	2965.3	2866.7	2809.9	2748.6	2609.6	2458.6	2288.3	2104.4	1920.6	1733.8
62.5°	3067.0	2996.7	2898.1	2838.3	2774.0	2632.0	2473.6	2297.2	2104.4	1910.1	1714.3
65°	3086.4	3017.6	2916.0	2856.2	2790.4	2642.5	2481.1	2298.7	2098.4	1895.2	1690.4
67.5°	3089.4	3020.6	2919.0	2860.7	2793.4	2642.5	2476.6	2291.2	2086.5	1875.7	1663.5
70°	3075.9	3007.2	2907.0	2847.2	2781.5	2629.0	2460.1	2273.3	2065.6	1850.3	1632.1
72.5°	3041.5	2971.3	2874.1	2812.9	2748.6	2597.6	2425.8	2240.4	2031.2	1814.5	1594.8
75°	2981.8	2913.0	2817.4	2760.6	2694.8	2546.8	2373.5	2192.6	1983.4	1769.6	1548.4
77.5°	2902.5	2835.3	2741.1	2684.3	2623.1	2478.1	2307.7	2128.3	1925.1	1714.3	1494.6
80°	2808.4	2744.1	2651.4	2596.1	2536.4	2395.9	2228.5	2053.6	1853.3	1648.6	1434.8
82.5°	2708.2	2645.5	2555.8	2499.0	2442.2	2306.2	2146.3	1972.9	1777.1	1578.3	1370.6
85°	2611.1	2543.8	2454.2	2401.8	2345.1	2212.0	2061.1	1889.2	1699.4	1506.6	1307.8
87.5°	2509.5	2443.7	2355.5	2306.2	2252.4	2117.9	1974.4	1807.0	1626.1	1442.3	1246.5
90°	2416.8	2352.5	2267.3	2218.0	2167.2	2037.2	1896.7	1738.2	1563.4	1385.5	1195.7
92.5°	2331.6	2271.8	2191.1	2143.3	2094.0	1969.9	1835.4	1681.4	1512.6	1340.7	1155.3
95°	2258.4	2200.1	2125.3	2079.0	2028.2	1910.1	1778.6	1627.6	1466.2	1298.8	1118.0
97.5°	2185.1	2129.8	2056.6	2011.8	1963.9	1848.8	1721.8	1576.8	1418.4	1252.5	1077.6
100°	2117.9	2064.1	1989.3	1949.0	1902.6	1792.0	1666.5	1524.5	1369.1	1206.2	1034.3
102.5°	2052.1	1998.3	1926.6	1886.2	1841.4	1730.8	1608.2	1467.7	1316.8	1159.8	992.4
105°	1984.9	1932.5	1860.8	1820.4	1775.6	1668.0	1548.4	1412.4	1264.4	1112.0	949.1
107.5°	1911.6	1860.8	1792.0	1751.7	1709.8	1602.2	1487.1	1354.1	1212.1	1062.7	904.2
110°	1836.9	1786.1	1723.3	1679.9	1639.6	1535.0	1422.9	1295.8	1156.8	1011.9	857.9



TEST NUMBER: P201312

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

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1759.2	1709.8	1648.6	1608.2	1566.4	1466.2	1358.6	1236.0	1101.5	959.5	810.1
115°	1679.9	1630.6	1569.3	1529.0	1491.6	1396.0	1291.3	1174.8	1044.7	907.2	762.3
117.5°	1593.3	1549.9	1491.6	1455.8	1416.9	1321.2	1224.1	1112.0	987.9	851.9	712.9
120°	1512.6	1470.7	1413.9	1375.0	1340.7	1249.5	1156.8	1047.7	925.2	798.1	662.1
122.5°	1427.4	1382.5	1330.2	1297.3	1260.0	1176.3	1086.6	982.0	862.4	736.8	606.8
125°	1337.7	1295.8	1245.0	1213.6	1179.3	1100.0	1014.8	910.2	796.6	675.6	550.0
127.5°	1246.5	1207.6	1158.3	1129.9	1097.0	1019.3	937.1	835.5	721.9	608.3	491.7
130°	1153.8	1115.0	1070.1	1040.3	1008.9	935.6	854.9	754.8	647.2	541.1	434.9
132.5°	1056.7	1019.3	974.5	947.6	919.2	848.9	766.7	669.6	573.9	478.3	379.6
135°	956.6	922.2	881.8	856.4	828.0	756.3	678.6	590.4	505.2	417.0	325.8
137.5°	859.4	828.0	789.2	763.7	732.4	665.1	596.4	517.1	439.4	357.2	272.0
140°	763.7	735.4	698.0	669.6	642.7	579.9	517.1	445.4	375.1	300.4	224.2
142.5°	674.1	648.7	606.8	579.9	554.5	499.2	443.9	376.6	313.9	246.6	180.8
145°	585.9	563.5	517.1	493.2	472.3	423.0	367.7	312.4	255.6	197.3	140.5
147.5°	500.7	473.8	430.4	409.5	390.1	346.8	300.4	249.6	203.3	152.5	103.1
150°	418.5	385.6	348.2	330.3	313.9	276.5	236.1	194.3	153.9	110.6	71.7
152.5°	333.3	298.9	273.5	255.6	240.6	210.7	177.9	142.0	109.1	74.7	44.8
155°	246.6	222.7	198.8	189.8	176.4	151.0	124.1	95.7	68.8	44.8	25.4
157.5°	170.4	152.5	137.5	128.5	118.1	98.6	76.2	55.3	38.9	23.9	12.0
160°	103.1	91.2	80.7	73.2	65.8	52.3	37.4	25.4	16.4	7.5	4.5
162.5°	46.3	38.9	34.4	29.9	25.4	19.4	12.0	6.0	3.0	1.5	1.5
165°	9.0	6.0	4.5	3.0	1.5	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: P201312

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0	1792.0
2.5°	1792.0	1793.5	1795.0	1795.0	1799.5	1807.0	1817.5	1818.9
5°	1787.6	1789.1	1789.1	1790.6	1795.0	1801.0	1810.0	1811.5
7.5°	1780.1	1780.1	1780.1	1780.1	1783.1	1789.1	1796.5	1798.0
10°	1769.6	1766.6	1765.1	1763.6	1765.1	1771.1	1777.1	1778.6
12.5°	1757.7	1750.2	1747.2	1745.7	1745.7	1747.2	1753.2	1753.2
15°	1744.2	1732.3	1727.8	1724.8	1718.8	1718.8	1724.8	1724.8
17.5°	1730.8	1714.3	1705.4	1699.4	1690.4	1688.9	1691.9	1688.9
20°	1718.8	1693.4	1681.4	1671.0	1657.5	1653.0	1653.0	1648.6
22.5°	1706.9	1672.5	1656.0	1641.1	1620.2	1612.7	1608.2	1605.2
25°	1699.4	1650.1	1629.1	1611.2	1582.8	1566.4	1561.9	1555.9
27.5°	1697.9	1632.1	1603.7	1581.3	1542.4	1523.0	1511.1	1503.6
30°	1697.9	1614.2	1576.8	1545.4	1497.6	1467.7	1455.8	1452.8
32.5°	1696.4	1600.7	1555.9	1515.5	1454.3	1415.4	1397.5	1393.0
35°	1691.9	1587.3	1535.0	1485.6	1410.9	1361.6	1336.2	1330.2
37.5°	1685.9	1570.8	1515.5	1458.7	1366.1	1306.3	1274.9	1265.9
40°	1679.9	1554.4	1491.6	1430.3	1321.2	1249.5	1209.1	1198.7
42.5°	1669.5	1536.5	1470.7	1403.4	1279.4	1192.7	1146.4	1129.9
45°	1659.0	1515.5	1445.3	1373.6	1237.5	1134.4	1076.1	1059.7
47.5°	1645.6	1493.1	1419.9	1340.7	1198.7	1077.6	1011.9	990.9
50°	1630.6	1470.7	1391.5	1309.3	1156.8	1022.3	941.6	919.2
52.5°	1614.2	1445.3	1363.1	1276.4	1115.0	970.0	875.8	847.4
55°	1593.3	1416.9	1330.2	1239.0	1071.6	916.2	808.6	775.7
57.5°	1570.8	1388.5	1298.8	1204.7	1028.3	865.4	742.8	705.5
60°	1543.9	1355.6	1260.0	1165.8	983.5	813.1	677.1	633.7
62.5°	1515.5	1322.7	1225.6	1125.4	938.6	762.3	612.8	563.5
65°	1485.6	1285.4	1186.7	1083.6	890.8	708.4	550.0	493.2
67.5°	1449.8	1245.0	1143.4	1038.8	841.5	654.6	488.7	424.5
70°	1413.9	1201.7	1095.6	990.9	790.7	600.8	430.4	357.2
72.5°	1370.6	1155.3	1047.7	941.6	738.3	548.5	373.7	290.0
75°	1322.7	1107.5	998.4	890.8	684.5	493.2	316.9	224.2
77.5°	1271.9	1055.2	947.6	838.5	633.7	440.9	264.5	168.9
80°	1218.1	999.9	893.8	784.7	579.9	388.6	213.7	116.6
82.5°	1158.3	946.1	840.0	730.9	529.1	337.8	167.4	71.7
85°	1101.5	892.3	789.2	681.5	479.8	287.0	125.5	35.9
87.5°	1046.2	843.0	742.8	636.7	437.9	248.1	91.2	10.5
90°	1001.4	802.6	704.0	600.8	405.0	219.7	68.8	0.0
92.5°	965.5	771.2	674.1	573.9	381.1	200.3	58.3	0.0
95°	931.1	738.3	645.7	545.5	357.2	183.8	46.3	0.0
97.5°	893.8	707.0	614.3	517.1	333.3	165.9	37.4	0.0
100°	856.4	672.6	582.9	488.7	306.4	148.0	26.9	0.0
102.5°	816.1	636.7	548.5	457.4	282.5	128.5	17.9	0.0
105°	777.2	600.8	515.6	426.0	257.1	112.1	12.0	0.0
107.5°	735.4	565.0	481.3	396.1	231.7	94.2	7.5	0.0
110°	693.5	529.1	446.9	364.7	207.8	77.7	6.0	0.0



TEST NUMBER: P201312

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	651.7	491.7	412.5	331.8	183.8	62.8	4.5	1.5
115°	606.8	452.9	376.6	298.9	159.9	49.3	4.5	1.5
117.5°	562.0	412.5	342.3	267.5	137.5	37.4	3.0	1.5
120°	515.6	376.6	304.9	237.6	116.6	26.9	3.0	1.5
122.5°	470.8	339.3	270.5	206.3	95.7	20.9	3.0	1.5
125°	424.5	295.9	236.1	177.9	76.2	16.4	3.0	1.5
127.5°	375.1	255.6	200.3	146.5	58.3	12.0	3.0	1.5
130°	324.3	215.2	165.9	119.6	41.8	9.0	3.0	1.5
132.5°	276.5	180.8	134.5	94.2	29.9	7.5	3.0	1.5
135°	233.2	146.5	106.1	70.2	20.9	6.0	1.5	1.5
137.5°	191.3	116.6	80.7	50.8	14.9	4.5	3.0	1.5
140°	153.9	88.2	58.3	35.9	10.5	3.0	3.0	1.5
142.5°	119.6	62.8	40.4	23.9	7.5	3.0	1.5	1.5
145°	88.2	41.8	26.9	14.9	6.0	3.0	3.0	3.0
147.5°	59.8	28.4	16.4	10.5	4.5	3.0	3.0	1.5
150°	38.9	17.9	10.5	7.5	3.0	3.0	3.0	1.5
152.5°	23.9	10.5	6.0	4.5	3.0	3.0	3.0	1.5
155°	12.0	6.0	4.5	3.0	3.0	3.0	3.0	3.0
157.5°	6.0	4.5	3.0	3.0	3.0	3.0	3.0	3.0
160°	3.0	3.0	1.5	1.5	3.0	3.0	3.0	3.0
162.5°	1.5	1.5	1.5	1.5	3.0	3.0	3.0	3.0
165°	0.0	1.5	1.5	1.5	3.0	3.0	3.0	3.0
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)