

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: P201337

Luminaire Tested: **8LBLED-LD4-16-SYMW-UNV-L835-CD2-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201337
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-L835-CD2-U
Description: 8 ft. Low Bay Linear, 16000 lm, Wht Sym lens, 3.3.5K
Light Source: (784) 3500K CCT, 80 CRI LEDS
2UT217098A8354C
Ballast/Driver: OSRAM
2x(OTi85W01280CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15765.2 lumens
Efficiency: N/A
Efficacy: 137.8 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

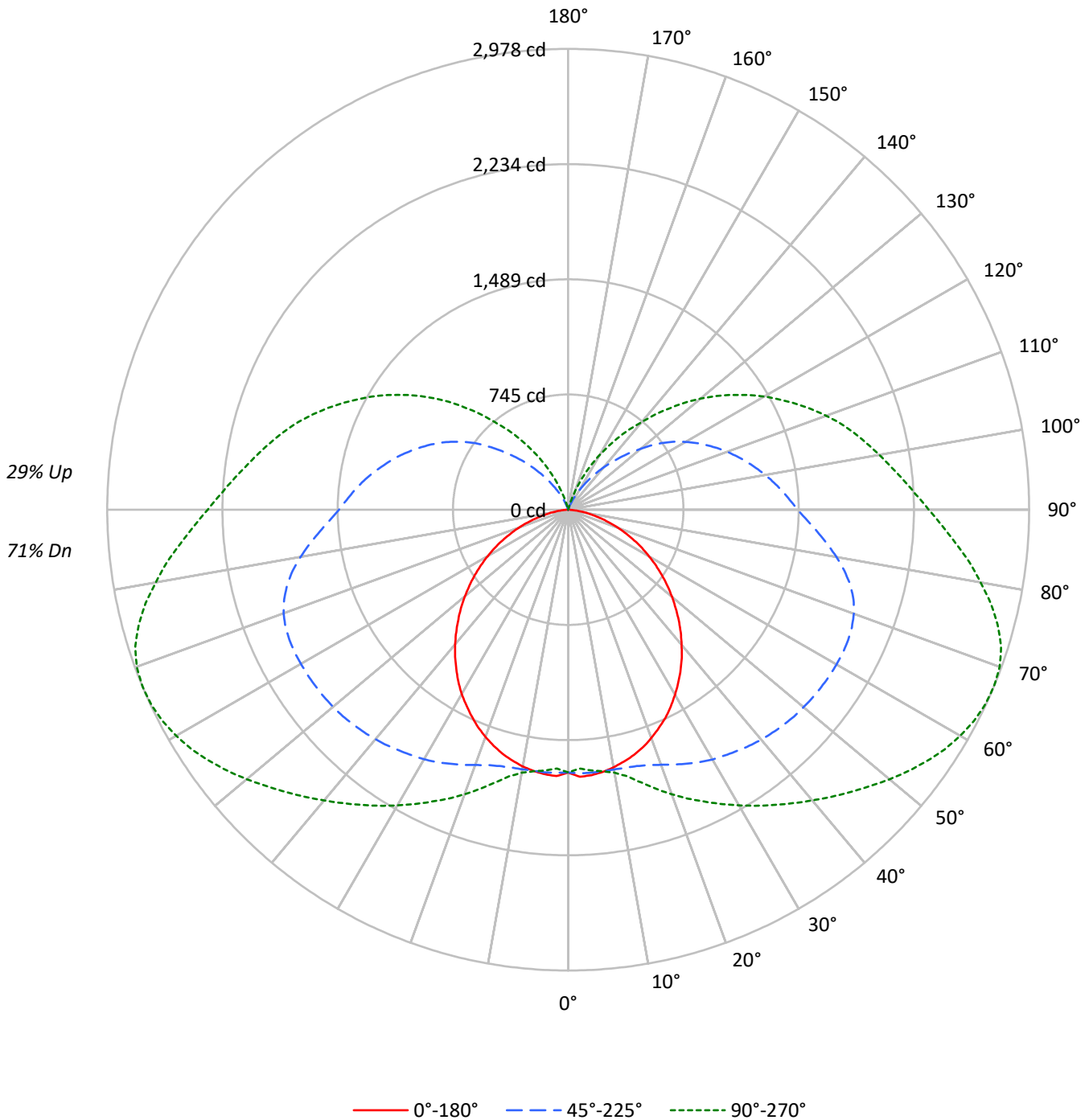
Input Watts (W): 114.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	75	75	75	71	
1	97	90	84	79	91	85	80	75	75	71	67	66	63	60	58	55	53	53	53	53	49	
2	86	76	67	60	81	71	64	57	63	57	51	55	50	46	48	44	40	40	40	40	36	
3	77	65	55	48	72	61	52	45	54	47	41	47	41	36	41	36	32	32	32	32	28	
4	70	56	46	39	65	53	44	37	47	39	33	41	35	30	35	30	26	26	26	26	23	
5	64	50	40	32	60	47	38	31	41	34	28	36	30	25	31	26	22	22	22	22	19	
6	59	44	34	27	55	42	33	26	37	29	24	32	26	21	28	23	19	19	19	19	16	
7	54	40	30	24	50	37	29	23	33	26	20	29	23	18	25	20	16	16	16	16	14	
8	50	36	27	21	47	34	25	20	30	23	18	26	20	16	23	18	14	14	14	14	12	
9	47	33	24	18	44	31	23	17	27	21	16	24	18	14	21	16	13	13	13	13	10	
10	43	30	22	16	41	28	21	15	25	19	14	22	17	13	20	15	11	11	11	11	9	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	13678	13678	13678
5°	13894	12329	13848
10°	13768	11578	13722
15°	13594	11414	13535
20°	13337	11544	13265
25°	13046	11705	12946
30°	12653	11938	12615
35°	12227	12237	12173
40°	11732	12612	11689
45°	11212	13090	11149
50°	10639	13673	10587
55°	10010	14308	9953
60°	9322	14923	9258
65°	8514	15442	8438
70°	7535	15802	7440
75°	6268	15833	6027
80°	4808	15569	4464
85°	2722	15257	2423



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.1	1.0
10°-20°	488.3	3.1
20°-30°	826.6	5.2
30°-40°	1155.9	7.3
40°-50°	1456.4	9.2
50°-60°	1710.1	10.8
60°-70°	1869.9	11.9
70°-80°	1847.4	11.7
80°-90°	1623.0	10.3
90°-100°	1381.5	8.8
100°-110°	1152.1	7.3
110°-120°	892.3	5.7
120°-130°	621.1	3.9
130°-140°	362.5	2.3
140°-150°	165.4	1.0
150°-160°	47.2	0.3
160°-170°	3.4	0.0
170°-180°	0.0	0.0
0°-30°	1477.1	9.4
0°-40°	2633.0	16.7
0°-60°	5799.4	36.8
0°-90°	11139.7	70.7
90°-120°	3425.9	21.7
90°-150°	4574.9	29.0
90°-180°	4625.0	29.3
0°-180°	15765.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1698	1698	1698	1698	1698	
5°	1722	1706	1691	1703	1716	163
15°	1641	1715	1825	1715	1634	462
25°	1485	1811	2081	1811	1474	683
35°	1266	1903	2329	1900	1260	791
45°	1010	1967	2580	1964	1004	778
55°	739	1996	2830	1991	735	662
65°	472	1995	2974	1988	467	467
75°	221	1887	2873	1879	212	237
85°	38	1614	2515	1610	34	48
90°	0	1481	2329	1481	0	2
95°	0	1388	2176	1389	0	1
105°	1	1194	1913	1198	0	1
115°	1	987	1621	990	1	1
125°	3	755	1293	755	1	2
135°	3	479	927	479	1	2
145°	4	245	575	242	3	2
155°	4	69	255	65	3	2
165°	4	7	18	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°	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7
2.5°	1727.4	1726.0	1718.9	1707.6	1703.4	1700.5	1699.1	1694.9	1693.5	1696.3	1704.8
5°	1721.8	1718.9	1713.3	1703.4	1699.1	1697.7	1696.3	1692.0	1690.6	1694.9	1706.2
7.5°	1709.0	1707.6	1702.0	1692.0	1690.6	1687.8	1687.8	1685.0	1685.0	1692.0	1704.8
10°	1690.6	1689.2	1683.6	1676.5	1675.1	1675.1	1675.1	1675.1	1677.9	1689.2	1704.8
12.5°	1666.6	1666.6	1662.3	1656.6	1658.1	1658.1	1659.5	1662.3	1670.8	1687.8	1707.6
15°	1641.1	1639.7	1635.4	1634.0	1638.2	1639.7	1643.9	1651.0	1665.1	1689.2	1714.7
17.5°	1608.5	1608.5	1604.3	1605.7	1614.2	1618.4	1625.5	1638.2	1660.9	1693.5	1730.3
20°	1570.3	1571.7	1570.3	1574.5	1588.7	1597.2	1605.7	1626.9	1659.5	1704.8	1754.3
22.5°	1527.8	1530.6	1530.6	1542.0	1560.4	1573.1	1585.9	1615.6	1662.3	1724.6	1782.7
25°	1485.3	1485.3	1489.6	1505.1	1530.6	1546.2	1566.0	1608.5	1672.2	1745.9	1811.0
27.5°	1434.3	1438.6	1445.7	1466.9	1502.3	1523.5	1547.6	1608.5	1683.6	1767.1	1839.3
30°	1380.5	1384.8	1396.1	1425.9	1471.2	1498.1	1532.0	1608.5	1693.5	1784.1	1863.4
32.5°	1323.9	1331.0	1346.6	1384.8	1440.0	1476.8	1520.7	1607.1	1702.0	1798.2	1883.2
35°	1265.8	1272.9	1297.0	1342.3	1414.5	1457.0	1508.0	1602.8	1706.2	1811.0	1903.0
37.5°	1205.0	1217.7	1244.6	1301.2	1389.0	1440.0	1493.8	1598.6	1710.5	1820.9	1922.8
40°	1139.8	1152.6	1190.8	1258.8	1363.5	1417.4	1476.8	1592.9	1713.3	1830.8	1939.8
42.5°	1076.1	1093.1	1137.0	1219.1	1338.1	1397.5	1459.8	1584.4	1711.9	1837.9	1954.0
45°	1009.6	1029.4	1083.2	1180.9	1309.7	1373.5	1440.0	1573.1	1709.0	1842.1	1966.7
47.5°	941.6	965.7	1029.4	1142.7	1281.4	1348.0	1420.2	1561.8	1704.8	1845.0	1978.1
50°	875.1	903.4	975.6	1104.4	1250.3	1321.1	1396.1	1549.0	1697.7	1846.4	1985.1
52.5°	808.5	839.7	924.6	1066.2	1217.7	1292.8	1372.0	1533.5	1689.2	1845.0	1992.2
55°	739.1	773.1	873.6	1025.1	1183.7	1261.6	1345.1	1513.6	1676.5	1839.3	1996.5
57.5°	672.6	710.8	825.5	985.5	1148.3	1230.5	1319.7	1492.4	1662.3	1835.1	2000.7
60°	604.6	648.5	775.9	940.2	1111.5	1196.5	1288.5	1468.3	1645.3	1825.1	2000.7
62.5°	538.1	587.6	727.8	899.1	1074.7	1162.5	1257.4	1441.4	1626.9	1815.2	2000.7
65°	471.5	528.1	678.2	853.8	1033.6	1125.7	1222.0	1413.1	1604.3	1801.1	1995.1
67.5°	406.4	471.5	627.3	807.1	991.2	1086.0	1185.1	1380.5	1578.8	1782.7	1983.7
70°	342.7	414.9	576.3	757.5	947.3	1040.7	1144.1	1345.1	1549.0	1758.6	1963.9
72.5°	278.9	361.1	522.5	708.0	900.5	996.8	1101.6	1304.1	1512.2	1726.0	1932.8
75°	220.9	307.3	471.5	657.0	852.4	950.1	1054.9	1258.8	1468.3	1683.6	1887.4
77.5°	168.5	257.7	421.9	607.4	801.4	903.4	1006.7	1209.2	1417.4	1629.7	1828.0
80°	118.9	209.6	372.4	556.5	750.4	851.0	952.9	1155.4	1363.5	1566.0	1760.0
82.5°	73.6	165.7	322.8	506.9	700.9	800.0	900.5	1101.6	1302.7	1499.5	1686.4
85°	38.2	124.6	276.1	460.2	652.7	750.4	849.6	1046.4	1240.4	1431.5	1614.2
87.5°	12.7	90.6	237.9	419.1	608.9	706.6	802.8	994.0	1182.3	1365.0	1543.4
90°	0.0	68.0	209.6	386.6	572.0	666.9	763.2	947.3	1131.3	1311.2	1481.1
92.5°	0.0	58.1	191.2	363.9	546.6	640.0	733.5	916.1	1093.1	1267.3	1432.9
95°	0.0	46.7	175.6	341.2	519.6	611.7	703.7	882.1	1056.3	1226.2	1387.6
97.5°	0.0	36.8	158.6	320.0	492.7	582.0	671.2	848.1	1018.1	1185.1	1340.9
100°	1.4	28.3	140.2	293.1	464.4	552.2	638.6	811.3	977.0	1138.4	1292.8
102.5°	1.4	19.8	123.2	270.4	434.7	519.6	604.6	773.1	935.9	1095.9	1243.2
105°	1.4	14.2	106.2	246.4	406.4	488.5	572.0	736.3	894.9	1049.2	1193.6
107.5°	1.4	9.9	90.6	223.7	378.1	455.9	536.6	696.6	852.4	1002.5	1144.1
110°	1.4	7.1	76.5	199.6	346.9	424.8	502.7	657.0	808.5	954.3	1093.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.4	5.7	62.3	177.0	315.8	392.2	467.3	617.3	764.6	906.2	1040.7
115°	1.4	5.7	49.6	155.8	284.6	358.2	430.4	577.7	717.9	856.6	986.9
117.5°	1.4	4.2	38.2	134.5	256.3	324.2	393.6	533.8	672.6	807.1	933.1
120°	1.4	4.2	28.3	113.3	226.6	290.3	358.2	491.3	624.4	754.7	875.1
122.5°	2.8	4.2	21.2	94.9	199.6	257.7	322.8	448.9	573.5	699.5	818.4
125°	2.8	2.8	17.0	76.5	171.3	225.1	283.2	405.0	518.2	638.6	754.7
127.5°	2.8	2.8	12.7	58.1	143.0	192.6	245.0	358.2	468.7	576.3	686.7
130°	2.8	2.8	11.3	42.5	116.1	160.0	208.1	310.1	413.5	512.6	613.1
132.5°	2.8	2.8	8.5	31.2	92.0	131.7	174.2	264.8	359.6	455.9	546.6
135°	2.8	2.8	7.1	22.7	69.4	104.8	141.6	222.3	308.7	399.3	478.6
137.5°	2.8	2.8	7.1	17.0	51.0	79.3	111.9	185.5	261.9	342.7	414.9
140°	2.8	2.8	5.7	14.2	35.4	58.1	85.0	148.7	213.8	288.9	358.2
142.5°	2.8	2.8	4.2	11.3	25.5	41.1	60.9	114.7	172.7	237.9	298.8
145°	4.2	2.8	4.2	9.9	18.4	28.3	42.5	86.4	133.1	191.2	245.0
147.5°	2.8	2.8	2.8	7.1	14.2	19.8	28.3	59.5	100.5	148.7	194.0
150°	4.2	2.8	2.8	5.7	11.3	14.2	19.8	39.6	69.4	109.0	148.7
152.5°	4.2	2.8	2.8	5.7	8.5	11.3	14.2	25.5	45.3	73.6	106.2
155°	4.2	2.8	2.8	4.2	7.1	8.5	11.3	17.0	26.9	45.3	69.4
157.5°	4.2	4.2	4.2	4.2	5.7	7.1	8.5	12.7	15.6	25.5	39.6
160°	4.2	4.2	2.8	2.8	4.2	4.2	5.7	8.5	11.3	14.2	19.8
162.5°	4.2	4.2	4.2	2.8	2.8	2.8	4.2	5.7	7.1	9.9	12.7
165°	4.2	4.2	2.8	2.8	2.8	2.8	2.8	2.8	4.2	5.7	7.1
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7
2.5°	1707.6	1700.5	1697.7	1692.0	1687.8	1685.0	1680.7	1677.9	1675.1	1673.6	1673.6
5°	1709.0	1702.0	1699.1	1694.9	1693.5	1690.6	1687.8	1690.6	1689.2	1690.6	1689.2
7.5°	1710.5	1704.8	1704.8	1703.4	1702.0	1702.0	1699.1	1702.0	1703.4	1704.8	1703.4
10°	1714.7	1713.3	1716.1	1717.5	1717.5	1717.5	1717.5	1720.4	1726.0	1726.0	1724.6
12.5°	1721.8	1726.0	1734.5	1741.6	1744.4	1744.4	1750.1	1755.8	1762.8	1764.3	1762.8
15°	1735.9	1748.7	1767.1	1782.7	1789.7	1794.0	1805.3	1815.2	1822.3	1825.1	1822.3
17.5°	1761.4	1785.5	1813.8	1836.5	1845.0	1850.6	1866.2	1876.1	1884.6	1891.7	1888.9
20°	1795.4	1828.0	1862.0	1888.9	1900.2	1907.3	1924.3	1942.7	1951.2	1956.8	1955.4
22.5°	1832.2	1870.5	1908.7	1941.3	1954.0	1962.5	1983.7	2000.7	2013.5	2020.5	2019.1
25°	1867.6	1911.5	1958.2	1993.6	2009.2	2019.1	2041.8	2061.6	2075.8	2081.4	2080.0
27.5°	1903.0	1954.0	2005.0	2046.0	2061.6	2074.4	2101.3	2122.5	2139.5	2143.7	2143.7
30°	1931.3	1990.8	2046.0	2092.8	2109.7	2126.7	2156.5	2184.8	2200.4	2206.0	2204.6
32.5°	1958.2	2024.8	2087.1	2139.5	2160.7	2177.7	2213.1	2244.3	2262.7	2268.3	2262.7
35°	1985.1	2058.8	2128.2	2184.8	2207.4	2228.7	2268.3	2303.7	2323.6	2329.2	2326.4
37.5°	2010.6	2092.8	2167.8	2230.1	2257.0	2279.7	2320.7	2363.2	2384.4	2390.1	2384.4
40°	2034.7	2123.9	2206.0	2274.0	2303.7	2330.6	2378.8	2421.3	2445.3	2452.4	2449.6
42.5°	2057.4	2155.1	2244.3	2319.3	2353.3	2381.6	2435.4	2482.1	2507.6	2516.1	2509.0
45°	2077.2	2186.2	2282.5	2363.2	2400.0	2432.6	2493.5	2544.4	2569.9	2579.8	2571.3
47.5°	2097.0	2214.5	2317.9	2407.1	2449.6	2483.6	2551.5	2605.3	2635.1	2643.6	2635.1
50°	2115.4	2242.8	2356.1	2452.4	2497.7	2535.9	2609.6	2667.6	2697.4	2710.1	2698.8
52.5°	2132.4	2269.7	2391.5	2494.9	2544.4	2586.9	2666.2	2728.5	2763.9	2772.4	2761.1
55°	2149.4	2295.2	2422.7	2534.5	2588.3	2633.6	2720.0	2785.2	2820.5	2830.5	2819.1
57.5°	2163.6	2317.9	2452.4	2572.8	2628.0	2680.4	2766.7	2834.7	2871.5	2882.9	2871.5
60°	2173.5	2336.3	2479.3	2603.9	2662.0	2715.8	2807.8	2875.8	2912.6	2923.9	2912.6
62.5°	2180.5	2350.5	2497.7	2628.0	2690.3	2745.5	2839.0	2905.5	2943.7	2955.1	2943.7
65°	2182.0	2356.1	2507.6	2643.6	2707.3	2762.5	2857.4	2923.9	2963.6	2973.5	2962.1
67.5°	2173.5	2350.5	2507.6	2646.4	2710.1	2766.7	2861.6	2928.2	2966.4	2977.7	2966.4
70°	2156.5	2333.5	2493.5	2635.1	2698.8	2755.4	2848.9	2916.8	2955.1	2966.4	2953.6
72.5°	2123.9	2303.7	2463.7	2608.2	2669.0	2724.3	2816.3	2882.9	2919.7	2932.4	2918.2
75°	2077.2	2257.0	2417.0	2555.8	2619.5	2670.5	2762.5	2827.6	2861.6	2872.9	2860.2
77.5°	2016.3	2197.5	2351.9	2489.2	2552.9	2599.7	2688.9	2752.6	2786.6	2796.5	2783.7
80°	1945.5	2125.3	2274.0	2409.9	2469.4	2513.3	2602.5	2663.4	2695.9	2705.9	2698.8
82.5°	1867.6	2043.2	2187.6	2320.7	2377.4	2421.3	2509.0	2568.5	2601.1	2615.2	2603.9
85°	1788.3	1956.8	2098.4	2227.3	2283.9	2330.6	2411.3	2470.8	2503.4	2514.7	2507.6
87.5°	1709.0	1871.9	2009.2	2133.8	2186.2	2234.4	2315.1	2374.5	2407.1	2418.4	2409.9
90°	1642.5	1798.2	1929.9	2053.1	2106.9	2150.8	2228.7	2285.3	2317.9	2329.2	2322.1
92.5°	1588.7	1737.4	1864.8	1978.1	2029.0	2075.8	2150.8	2206.0	2238.6	2248.5	2241.4
95°	1537.7	1682.1	1805.3	1915.8	1965.3	2010.6	2081.4	2135.2	2166.4	2176.3	2170.6
97.5°	1489.6	1628.3	1747.3	1854.9	1905.9	1946.9	2014.9	2065.9	2097.0	2105.5	2097.0
100°	1435.8	1575.9	1692.0	1798.2	1842.1	1883.2	1951.2	2002.1	2029.0	2040.4	2033.3
102.5°	1384.8	1519.3	1634.0	1738.8	1785.5	1826.6	1888.9	1938.4	1969.6	1976.7	1969.6
105°	1332.4	1462.7	1574.5	1677.9	1724.6	1764.3	1826.6	1874.7	1904.4	1912.9	1905.9
107.5°	1278.6	1404.6	1516.5	1614.2	1659.5	1696.3	1760.0	1806.7	1832.2	1847.8	1836.5
110°	1220.5	1345.1	1452.8	1547.6	1591.5	1626.9	1689.2	1735.9	1760.0	1774.2	1764.3



TEST NUMBER: P201337

CATALOG NUMBER: 8LBLED-LD4-16-SYMW-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	1166.7	1284.3	1387.6	1479.7	1520.7	1556.1	1617.0	1662.3	1685.0	1699.1	1689.2
115°	1110.1	1219.1	1321.1	1408.9	1449.9	1482.5	1543.4	1585.9	1608.5	1621.2	1612.8
117.5°	1049.2	1155.4	1251.7	1338.1	1376.3	1408.9	1466.9	1509.4	1530.6	1540.5	1532.0
120°	989.7	1093.1	1183.7	1265.8	1304.1	1335.2	1391.9	1431.5	1451.3	1462.7	1454.2
122.5°	927.4	1028.0	1110.1	1192.2	1227.6	1257.4	1308.3	1350.8	1369.2	1379.1	1373.5
125°	860.9	960.0	1039.3	1114.3	1148.3	1176.6	1226.2	1261.6	1282.8	1292.8	1287.1
127.5°	791.5	886.4	967.1	1036.5	1069.0	1100.2	1141.2	1180.9	1195.1	1206.4	1200.7
130°	713.6	808.5	883.5	954.3	985.5	1011.0	1056.3	1088.9	1107.3	1117.2	1112.9
132.5°	637.2	725.0	804.3	868.0	897.7	924.6	965.7	996.8	1022.3	1023.7	1018.1
135°	563.5	640.0	712.2	780.2	809.9	836.8	873.6	902.0	926.0	927.4	920.4
137.5°	492.7	563.5	625.8	689.6	720.7	749.0	783.0	809.9	832.6	836.8	826.9
140°	424.8	489.9	546.6	603.2	632.9	659.8	696.6	719.3	737.7	739.1	733.5
142.5°	359.6	419.1	468.7	521.1	548.0	572.0	613.1	635.8	652.7	657.0	648.5
145°	298.8	351.2	397.9	443.2	465.8	488.5	529.6	556.5	570.6	574.9	566.4
147.5°	240.7	284.6	325.7	366.7	386.6	407.8	441.8	475.8	488.5	491.3	484.3
150°	186.9	223.7	260.5	294.5	311.5	329.9	359.6	390.8	407.8	410.6	405.0
152.5°	137.3	168.5	198.2	226.6	240.7	254.9	280.4	310.1	331.3	332.7	327.1
155°	93.5	118.9	143.0	164.2	177.0	188.3	208.1	230.8	253.5	254.9	250.6
157.5°	56.6	73.6	93.5	110.4	118.9	128.9	143.0	160.0	179.8	184.1	179.8
160°	28.3	38.2	49.6	60.9	68.0	75.0	82.1	96.3	107.6	117.5	111.9
162.5°	14.2	17.0	19.8	25.5	28.3	32.6	38.2	43.9	49.6	59.5	52.4
165°	8.5	9.9	11.3	11.3	12.7	12.7	12.7	12.7	12.7	18.4	12.7
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: P201337

CATALOG NUMBER: 8LBLED-LD4-16-SYMW-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7
2.5°	1677.9	1680.7	1686.4	1689.2	1692.0	1694.9	1700.5	1709.0	1702.0	1694.9	1696.3
5°	1689.2	1689.2	1690.6	1694.9	1694.9	1696.3	1702.0	1710.5	1703.4	1693.5	1693.5
7.5°	1703.4	1702.0	1703.4	1704.8	1703.4	1703.4	1706.2	1710.5	1702.0	1690.6	1687.8
10°	1723.2	1718.9	1717.5	1718.9	1717.5	1713.3	1714.7	1714.7	1703.4	1686.4	1679.3
12.5°	1758.6	1751.5	1745.9	1744.4	1740.2	1733.1	1728.9	1723.2	1706.2	1686.4	1672.2
15°	1816.6	1805.3	1794.0	1789.7	1782.7	1765.7	1751.5	1738.8	1714.7	1686.4	1666.6
17.5°	1881.8	1867.6	1852.0	1846.4	1836.5	1812.4	1788.3	1764.3	1730.3	1690.6	1662.3
20°	1944.1	1927.1	1908.7	1898.8	1888.9	1859.1	1830.8	1799.7	1755.8	1703.4	1660.9
22.5°	2006.4	1986.6	1961.1	1952.6	1939.8	1905.9	1871.9	1836.5	1784.1	1721.8	1663.7
25°	2067.3	2044.6	2020.5	2006.4	1992.2	1954.0	1912.9	1870.5	1811.0	1743.0	1673.6
27.5°	2128.2	2102.7	2072.9	2057.4	2043.2	2000.7	1954.0	1905.9	1839.3	1762.8	1686.4
30°	2187.6	2159.3	2123.9	2106.9	2089.9	2041.8	1988.0	1934.2	1862.0	1779.8	1694.9
32.5°	2247.1	2215.9	2176.3	2156.5	2136.7	2081.4	2022.0	1961.1	1881.8	1795.4	1702.0
35°	2305.1	2271.2	2227.3	2203.2	2182.0	2122.5	2055.9	1988.0	1900.2	1808.2	1706.2
37.5°	2364.6	2326.4	2278.2	2251.3	2227.3	2162.1	2088.5	2012.0	1920.0	1818.1	1710.5
40°	2424.1	2383.0	2329.2	2300.9	2271.2	2200.4	2121.1	2036.1	1937.0	1828.0	1711.9
42.5°	2485.0	2439.7	2380.2	2349.0	2317.9	2238.6	2150.8	2057.4	1951.2	1835.1	1710.5
45°	2545.9	2494.9	2431.2	2395.8	2361.8	2275.4	2180.5	2075.8	1963.9	1839.3	1707.6
47.5°	2606.7	2552.9	2483.6	2445.3	2404.3	2312.2	2208.9	2095.6	1975.2	1840.7	1704.8
50°	2669.0	2611.0	2535.9	2493.5	2451.0	2347.6	2237.2	2112.6	1982.3	1842.1	1697.7
52.5°	2729.9	2667.6	2586.9	2541.6	2492.1	2383.0	2264.1	2129.6	1988.0	1840.7	1687.8
55°	2785.2	2720.0	2635.1	2586.9	2531.7	2415.6	2288.2	2143.7	1990.8	1836.5	1675.1
57.5°	2836.1	2769.6	2680.4	2626.6	2572.8	2446.7	2310.8	2159.3	1993.6	1829.4	1660.9
60°	2875.8	2809.2	2715.8	2662.0	2603.9	2472.2	2329.2	2167.8	1993.6	1819.5	1642.5
62.5°	2905.5	2839.0	2745.5	2688.9	2628.0	2493.5	2343.4	2176.3	1993.6	1809.6	1624.1
65°	2923.9	2858.8	2762.5	2705.9	2643.6	2503.4	2350.5	2177.7	1988.0	1795.4	1601.4
67.5°	2926.7	2861.6	2765.3	2710.1	2646.4	2503.4	2346.2	2170.6	1976.7	1777.0	1575.9
70°	2914.0	2848.9	2754.0	2697.4	2635.1	2490.6	2330.6	2153.6	1956.8	1752.9	1546.2
72.5°	2881.4	2814.9	2722.8	2664.8	2603.9	2460.9	2298.1	2122.5	1924.3	1718.9	1510.8
75°	2824.8	2759.7	2669.0	2615.2	2552.9	2412.8	2248.5	2077.2	1879.0	1676.5	1466.9
77.5°	2749.8	2686.0	2596.8	2543.0	2485.0	2347.6	2186.2	2016.3	1823.7	1624.1	1415.9
80°	2660.5	2599.7	2511.9	2459.5	2402.8	2269.7	2111.2	1945.5	1755.8	1561.8	1359.3
82.5°	2565.7	2506.2	2421.3	2367.4	2313.6	2184.8	2033.3	1869.0	1683.6	1495.2	1298.4
85°	2473.6	2409.9	2325.0	2275.4	2221.6	2095.6	1952.6	1789.7	1609.9	1427.3	1238.9
87.5°	2377.4	2315.1	2231.5	2184.8	2133.8	2006.4	1870.5	1711.9	1540.5	1366.4	1180.9
90°	2289.6	2228.7	2148.0	2101.3	2053.1	1929.9	1796.8	1646.7	1481.1	1312.6	1132.8
92.5°	2208.9	2152.2	2075.8	2030.5	1983.7	1866.2	1738.8	1592.9	1432.9	1270.1	1094.5
95°	2139.5	2084.3	2013.5	1969.6	1921.4	1809.6	1685.0	1542.0	1389.0	1230.5	1059.1
97.5°	2070.1	2017.7	1948.3	1905.9	1860.5	1751.5	1631.2	1493.8	1343.7	1186.6	1020.9
100°	2006.4	1955.4	1884.6	1846.4	1802.5	1697.7	1578.8	1444.3	1297.0	1142.7	979.8
102.5°	1944.1	1893.1	1825.1	1786.9	1744.4	1639.7	1523.5	1390.5	1247.4	1098.8	940.2
105°	1880.4	1830.8	1762.8	1724.6	1682.1	1580.2	1466.9	1338.1	1197.9	1053.5	899.1
107.5°	1811.0	1762.8	1697.7	1659.5	1619.8	1517.9	1408.9	1282.8	1148.3	1006.7	856.6
110°	1740.2	1692.0	1632.6	1591.5	1553.3	1454.2	1348.0	1227.6	1095.9	958.6	812.7



TEST NUMBER: P201337

CATALOG NUMBER: 8LBLED-LD4-16-SYMW-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1666.6	1619.8	1561.8	1523.5	1483.9	1389.0	1287.1	1171.0	1043.5	909.0	767.4
115°	1591.5	1544.8	1486.7	1448.5	1413.1	1322.5	1223.4	1112.9	989.7	859.5	722.1
117.5°	1509.4	1468.3	1413.1	1379.1	1342.3	1251.7	1159.7	1053.5	935.9	807.1	675.4
120°	1432.9	1393.3	1339.5	1302.7	1270.1	1183.7	1095.9	992.6	876.5	756.1	627.3
122.5°	1352.2	1309.7	1260.2	1229.0	1193.6	1114.3	1029.4	930.3	817.0	698.1	574.9
125°	1267.3	1227.6	1179.5	1149.7	1117.2	1042.1	961.4	862.3	754.7	640.0	521.1
127.5°	1180.9	1144.1	1097.4	1070.4	1039.3	965.7	887.8	791.5	683.9	576.3	465.8
130°	1093.1	1056.3	1013.8	985.5	955.8	886.4	809.9	715.0	613.1	512.6	412.0
132.5°	1001.1	965.7	923.2	897.7	870.8	804.3	726.4	634.3	543.7	453.1	359.6
135°	906.2	873.6	835.4	811.3	784.4	716.5	642.8	559.3	478.6	395.0	308.7
137.5°	814.2	784.4	747.6	723.5	693.8	630.1	565.0	489.9	416.3	338.4	257.7
140°	723.5	696.6	661.2	634.3	608.9	549.4	489.9	421.9	355.4	284.6	212.4
142.5°	638.6	614.5	574.9	549.4	525.3	472.9	420.5	356.8	297.3	233.6	171.3
145°	555.0	533.8	489.9	467.3	447.4	400.7	348.3	295.9	242.1	186.9	133.1
147.5°	474.3	448.9	407.8	388.0	369.6	328.5	284.6	236.5	192.6	144.4	97.7
150°	396.5	365.3	329.9	312.9	297.3	261.9	223.7	184.1	145.8	104.8	68.0
152.5°	315.8	283.2	259.1	242.1	228.0	199.6	168.5	134.5	103.4	70.8	42.5
155°	233.6	211.0	188.3	179.8	167.1	143.0	117.5	90.6	65.1	42.5	24.1
157.5°	161.4	144.4	130.3	121.8	111.9	93.5	72.2	52.4	36.8	22.7	11.3
160°	97.7	86.4	76.5	69.4	62.3	49.6	35.4	24.1	15.6	7.1	4.2
162.5°	43.9	36.8	32.6	28.3	24.1	18.4	11.3	5.7	2.8	1.4	1.4
165°	8.5	5.7	4.2	2.8	1.4	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: P201337

CATALOG NUMBER: 8LBLED-LD4-16-SYMW-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7	1697.7
2.5°	1697.7	1699.1	1700.5	1700.5	1704.8	1711.9	1721.8	1723.2
5°	1693.5	1694.9	1694.9	1696.3	1700.5	1706.2	1714.7	1716.1
7.5°	1686.4	1686.4	1686.4	1686.4	1689.2	1694.9	1702.0	1703.4
10°	1676.5	1673.6	1672.2	1670.8	1672.2	1677.9	1683.6	1685.0
12.5°	1665.1	1658.1	1655.2	1653.8	1653.8	1655.2	1660.9	1660.9
15°	1652.4	1641.1	1636.8	1634.0	1628.3	1628.3	1634.0	1634.0
17.5°	1639.7	1624.1	1615.6	1609.9	1601.4	1600.0	1602.8	1600.0
20°	1628.3	1604.3	1592.9	1583.0	1570.3	1566.0	1566.0	1561.8
22.5°	1617.0	1584.4	1568.9	1554.7	1534.9	1527.8	1523.5	1520.7
25°	1609.9	1563.2	1543.4	1526.4	1499.5	1483.9	1479.7	1474.0
27.5°	1608.5	1546.2	1519.3	1498.1	1461.2	1442.8	1431.5	1424.4
30°	1608.5	1529.2	1493.8	1464.1	1418.8	1390.5	1379.1	1376.3
32.5°	1607.1	1516.5	1474.0	1435.8	1377.7	1340.9	1323.9	1319.7
35°	1602.8	1503.7	1454.2	1407.4	1336.6	1289.9	1265.8	1260.2
37.5°	1597.2	1488.2	1435.8	1382.0	1294.2	1237.5	1207.8	1199.3
40°	1591.5	1472.6	1413.1	1355.1	1251.7	1183.7	1145.5	1135.6
42.5°	1581.6	1455.6	1393.3	1329.6	1212.0	1129.9	1086.0	1070.4
45°	1571.7	1435.8	1369.2	1301.2	1172.4	1074.7	1019.5	1003.9
47.5°	1558.9	1414.5	1345.1	1270.1	1135.6	1020.9	958.6	938.8
50°	1544.8	1393.3	1318.2	1240.4	1095.9	968.5	892.0	870.8
52.5°	1529.2	1369.2	1291.3	1209.2	1056.3	918.9	829.7	802.8
55°	1509.4	1342.3	1260.2	1173.8	1015.2	868.0	766.0	734.9
57.5°	1488.2	1315.4	1230.5	1141.2	974.2	819.8	703.7	668.3
60°	1462.7	1284.3	1193.6	1104.4	931.7	770.3	641.4	600.4
62.5°	1435.8	1253.1	1161.1	1066.2	889.2	722.1	580.5	533.8
65°	1407.4	1217.7	1124.3	1026.6	843.9	671.2	521.1	467.3
67.5°	1373.5	1179.5	1083.2	984.1	797.2	620.2	463.0	402.1
70°	1339.5	1138.4	1037.9	938.8	749.0	569.2	407.8	338.4
72.5°	1298.4	1094.5	992.6	892.0	699.5	519.6	354.0	274.7
75°	1253.1	1049.2	945.8	843.9	648.5	467.3	300.2	212.4
77.5°	1205.0	999.7	897.7	794.3	600.4	417.7	250.6	160.0
80°	1154.0	947.3	846.7	743.4	549.4	368.1	202.5	110.4
82.5°	1097.4	896.3	795.8	692.4	501.2	320.0	158.6	68.0
85°	1043.5	845.3	747.6	645.7	454.5	271.9	118.9	34.0
87.5°	991.2	798.6	703.7	603.2	414.9	235.0	86.4	9.9
90°	948.7	760.4	666.9	569.2	383.7	208.1	65.1	0.0
92.5°	914.7	730.6	638.6	543.7	361.1	189.7	55.2	0.0
95°	882.1	699.5	611.7	516.8	338.4	174.2	43.9	0.0
97.5°	846.7	669.7	582.0	489.9	315.8	157.2	35.4	0.0
100°	811.3	637.2	552.2	463.0	290.3	140.2	25.5	0.0
102.5°	773.1	603.2	519.6	433.3	267.6	121.8	17.0	0.0
105°	736.3	569.2	488.5	403.5	243.5	106.2	11.3	0.0
107.5°	696.6	535.2	455.9	375.2	219.5	89.2	7.1	0.0
110°	657.0	501.2	423.4	345.5	196.8	73.6	5.7	0.0



TEST NUMBER: P201337

CATALOG NUMBER: 8LBLED-LD4-16-SYMW-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	617.3	465.8	390.8	314.3	174.2	59.5	4.2	1.4
115°	574.9	429.0	356.8	283.2	151.5	46.7	4.2	1.4
117.5°	532.4	390.8	324.2	253.5	130.3	35.4	2.8	1.4
120°	488.5	356.8	288.9	225.1	110.4	25.5	2.8	1.4
122.5°	446.0	321.4	256.3	195.4	90.6	19.8	2.8	1.4
125°	402.1	280.4	223.7	168.5	72.2	15.6	2.8	1.4
127.5°	355.4	242.1	189.7	138.8	55.2	11.3	2.8	1.4
130°	307.3	203.9	157.2	113.3	39.6	8.5	2.8	1.4
132.5°	261.9	171.3	127.4	89.2	28.3	7.1	2.8	1.4
135°	220.9	138.8	100.5	66.5	19.8	5.7	1.4	1.4
137.5°	181.2	110.4	76.5	48.1	14.2	4.2	2.8	1.4
140°	145.8	83.5	55.2	34.0	9.9	2.8	2.8	1.4
142.5°	113.3	59.5	38.2	22.7	7.1	2.8	1.4	1.4
145°	83.5	39.6	25.5	14.2	5.7	2.8	2.8	2.8
147.5°	56.6	26.9	15.6	9.9	4.2	2.8	2.8	1.4
150°	36.8	17.0	9.9	7.1	2.8	2.8	2.8	1.4
152.5°	22.7	9.9	5.7	4.2	2.8	2.8	2.8	1.4
155°	11.3	5.7	4.2	2.8	2.8	2.8	2.8	2.8
157.5°	5.7	4.2	2.8	2.8	2.8	2.8	2.8	2.8
160°	2.8	2.8	1.4	1.4	2.8	2.8	2.8	2.8
162.5°	1.4	1.4	1.4	1.4	2.8	2.8	2.8	2.8
165°	0.0	1.4	1.4	1.4	2.8	2.8	2.8	2.8
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)