

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: P201326

Luminaire Tested: **8LBLED-LD4-22-SYMF-UNV-L835-CD2-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201326
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-LD4-22-SYMF-UNV-L835-CD2-U
Description: 8 ft. Low Bay Linear, 22000 lm, Frst Sym lens, 3.5K
Light Source: (784) 3500K CCT, 80 CRI LEDS
2UT217098A8354C
Ballast/Driver: OSRAM
2x(OTi85W01920CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23277.2 lumens
Efficiency: N/A
Efficacy: 132.0 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

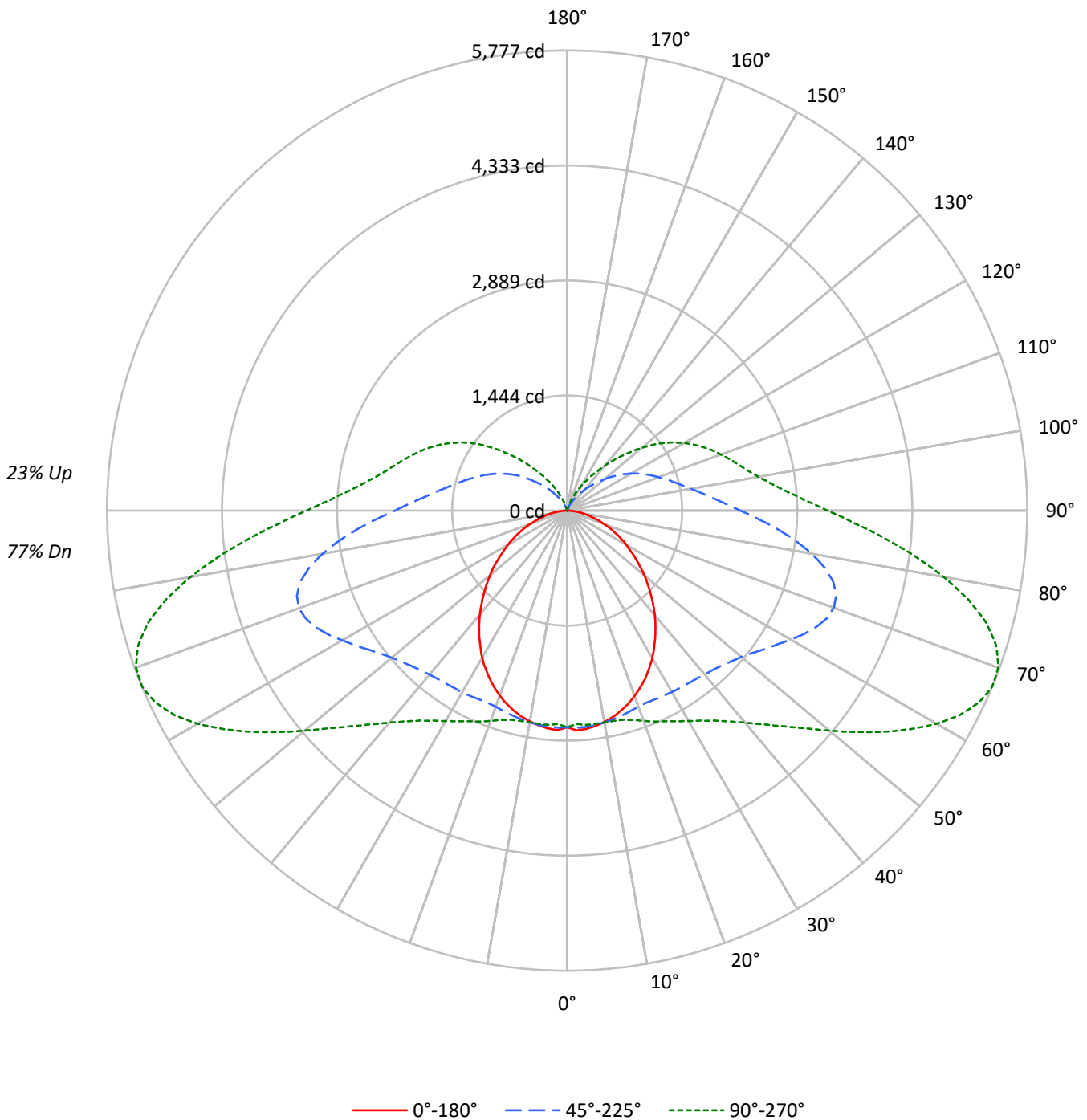
Input Watts (W): 176.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	21911	21911	21911
5°	22199	19689	22152
10°	21938	18109	21889
15°	21544	17007	21511
20°	21033	16580	20999
25°	20414	16416	20327
30°	19581	16503	19564
35°	18633	16904	18595
40°	17616	17868	17535
45°	16505	19415	16461
50°	15378	21678	15329
55°	14240	24477	14213
60°	13225	27324	13256
65°	12098	29621	12134
70°	10907	30690	10907
75°	9478	30030	9421
80°	7913	27633	7832
85°	5915	24270	5637



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	258.2	1.1
10°-20°	751.0	3.2
20°-30°	1207.0	5.2
30°-40°	1634.4	7.0
40°-50°	2099.7	9.0
50°-60°	2701.4	11.6
60°-70°	3304.8	14.2
70°-80°	3341.2	14.4
80°-90°	2583.8	11.1
90°-100°	1795.1	7.7
100°-110°	1340.7	5.8
110°-120°	1004.9	4.3
120°-130°	676.7	2.9
130°-140°	371.1	1.6
140°-150°	158.2	0.7
150°-160°	45.2	0.2
160°-170°	3.9	0.0
170°-180°	0.0	0.0
0°-30°	2216.2	9.5
0°-40°	3850.6	16.5
0°-60°	8651.7	37.2
0°-90°	17881.4	76.8
90°-120°	4140.7	17.8
90°-150°	5346.7	23.0
90°-180°	5396.0	23.2
0°-180°	23277.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2720	2720	2720	2720	2720	
5°	2751	2725	2700	2721	2745	261
15°	2601	2662	2720	2662	2597	733
25°	2324	2613	2919	2615	2314	1067
35°	1929	2648	3218	2650	1925	1205
45°	1486	2749	3826	2761	1482	1147
55°	1051	3030	4842	3044	1049	942
65°	670	3453	5704	3474	672	665
75°	334	3459	5449	3470	332	357
85°	83	2644	4000	2636	79	91
90°	2	2172	3267	2160	0	5
95°	2	1832	2763	1824	0	1
105°	2	1385	2227	1385	0	2
115°	2	1077	1885	1077	0	2
125°	2	773	1478	769	0	2
135°	4	466	970	460	0	3
145°	4	237	534	227	0	3
155°	4	75	221	71	0	2
165°	4	4	22	10	0	1
175°	0	0	0	0	0	0
180°	0	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°	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5
2.5°	2762.9	2761.0	2749.1	2731.3	2723.4	2721.4	2719.5	2711.6	2709.6	2713.5	2729.3
5°	2751.1	2749.1	2737.2	2719.5	2713.5	2711.6	2709.6	2703.7	2703.7	2709.6	2725.4
7.5°	2727.4	2725.4	2713.5	2699.7	2693.8	2691.8	2691.8	2687.8	2687.8	2697.7	2715.5
10°	2693.8	2691.8	2681.9	2670.1	2666.1	2666.1	2666.1	2664.1	2668.1	2679.9	2699.7
12.5°	2654.2	2650.3	2642.4	2632.5	2632.5	2632.5	2634.5	2634.5	2640.4	2660.2	2683.9
15°	2600.9	2602.9	2595.0	2587.0	2591.0	2593.0	2596.9	2600.9	2610.8	2634.5	2662.1
17.5°	2545.5	2545.5	2539.6	2535.7	2543.6	2547.5	2553.4	2559.4	2577.2	2606.8	2638.4
20°	2476.4	2478.3	2476.4	2478.3	2488.2	2494.2	2502.1	2515.9	2539.6	2581.1	2618.7
22.5°	2401.3	2405.2	2405.2	2413.1	2428.9	2438.8	2448.7	2468.5	2502.1	2555.4	2608.8
25°	2324.2	2322.2	2332.1	2345.9	2361.7	2375.6	2387.4	2417.1	2466.5	2537.6	2612.7
27.5°	2231.3	2235.3	2249.1	2268.9	2292.6	2310.4	2328.1	2369.6	2440.8	2535.7	2622.6
30°	2136.4	2142.4	2160.2	2187.8	2221.4	2245.1	2264.9	2330.1	2427.0	2535.7	2630.5
32.5°	2033.7	2043.5	2067.3	2102.8	2150.3	2177.9	2209.6	2296.5	2415.1	2531.7	2638.4
35°	1928.9	1940.8	1972.4	2015.9	2071.2	2104.8	2154.2	2270.8	2399.3	2527.8	2648.3
37.5°	1822.2	1836.0	1871.6	1926.9	1998.1	2049.5	2108.8	2243.2	2387.4	2527.8	2662.1
40°	1711.5	1727.3	1772.8	1836.0	1926.9	1994.1	2065.3	2215.5	2375.6	2529.7	2683.9
42.5°	1598.9	1616.7	1672.0	1747.1	1865.7	1944.7	2023.8	2191.8	2367.7	2539.6	2711.6
45°	1486.2	1509.9	1571.2	1662.1	1810.3	1893.3	1984.3	2170.0	2363.7	2557.4	2749.1
47.5°	1373.6	1401.2	1472.4	1581.1	1753.0	1851.8	1946.7	2152.2	2367.7	2581.1	2798.5
50°	1264.9	1296.5	1375.5	1508.0	1699.7	1806.4	1911.1	2140.4	2375.6	2616.7	2857.8
52.5°	1154.2	1195.7	1282.7	1442.7	1652.2	1764.9	1881.5	2132.5	2391.4	2664.1	2934.9
55°	1051.4	1094.9	1195.7	1379.5	1606.8	1729.3	1853.8	2130.5	2419.1	2721.4	3029.7
57.5°	946.7	1000.0	1110.7	1318.2	1559.3	1693.7	1832.1	2134.5	2452.7	2782.7	3126.6
60°	857.7	905.2	1033.6	1258.9	1517.8	1660.1	1812.3	2138.4	2488.2	2853.9	3239.2
62.5°	762.9	814.3	966.4	1201.6	1476.3	1630.5	1792.6	2144.3	2525.8	2927.0	3353.9
65°	670.0	723.3	899.2	1146.3	1434.8	1598.9	1768.8	2144.3	2555.4	2994.2	3452.7
67.5°	581.0	638.4	832.0	1087.0	1387.4	1559.3	1739.2	2134.5	2573.2	3041.6	3529.8
70°	496.1	559.3	766.8	1023.8	1336.0	1511.9	1697.7	2112.7	2571.2	3059.4	3563.4
72.5°	411.1	484.2	695.7	960.5	1280.7	1458.5	1648.3	2071.2	2543.6	3037.7	3541.6
75°	334.0	413.1	632.4	897.3	1217.4	1395.3	1587.0	2008.0	2482.3	2970.5	3458.6
77.5°	262.9	349.8	565.2	828.1	1146.3	1322.2	1509.9	1926.9	2385.5	2851.9	3312.4
80°	195.7	292.5	502.0	758.9	1069.2	1241.1	1423.0	1824.2	2259.0	2691.8	3116.7
82.5°	136.4	239.1	440.7	689.7	990.2	1154.2	1328.1	1701.6	2112.7	2506.0	2891.4
85°	83.0	191.7	379.5	622.6	909.1	1063.3	1227.3	1573.2	1952.6	2304.4	2644.4
87.5°	35.6	148.2	326.1	557.3	828.1	974.3	1124.5	1450.6	1782.7	2094.9	2397.3
90°	2.0	110.7	278.7	496.1	751.0	887.4	1027.7	1320.2	1626.5	1903.2	2172.0
92.5°	0.0	94.9	251.0	458.5	697.7	824.1	954.6	1223.4	1500.1	1747.1	1986.2
95°	2.0	79.1	227.3	417.0	644.3	764.8	885.4	1136.4	1385.4	1612.7	1832.1
97.5°	2.0	65.2	201.6	379.5	594.9	705.6	818.2	1051.4	1276.7	1492.1	1695.7
100°	2.0	51.4	177.9	343.9	543.5	646.3	753.0	972.4	1183.8	1385.4	1577.1
102.5°	2.0	37.6	158.1	310.3	496.1	592.9	691.7	899.2	1098.9	1292.5	1474.4
105°	2.0	25.7	138.3	278.7	452.6	543.5	636.4	832.0	1021.8	1207.6	1385.4
107.5°	2.0	17.8	120.6	249.0	405.2	496.1	583.0	768.8	950.6	1130.5	1304.4
110°	2.0	15.8	104.7	223.3	367.6	450.6	533.6	709.5	883.4	1055.4	1225.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	2.0	13.8	88.9	199.6	330.1	405.2	486.2	652.2	822.2	988.2	1150.2
115°	2.0	13.8	73.1	177.9	298.4	365.6	440.7	596.9	758.9	919.0	1077.1
117.5°	2.0	13.8	59.3	158.1	268.8	330.1	395.3	545.5	695.7	851.8	1006.0
120°	2.0	11.9	47.4	138.3	243.1	298.4	359.7	496.1	634.4	780.7	928.9
122.5°	2.0	11.9	39.5	120.6	217.4	268.8	324.1	444.7	577.1	711.5	849.8
125°	2.0	9.9	33.6	100.8	191.7	241.1	290.5	399.2	521.8	646.3	772.8
127.5°	4.0	9.9	27.7	83.0	166.0	209.5	256.9	355.7	462.5	575.1	695.7
130°	4.0	9.9	23.7	63.2	140.3	179.8	221.4	312.3	411.1	507.9	612.7
132.5°	4.0	7.9	21.7	49.4	116.6	152.2	189.7	270.8	357.7	444.7	535.6
135°	4.0	7.9	17.8	39.5	92.9	124.5	160.1	231.2	308.3	389.3	466.4
137.5°	4.0	5.9	15.8	31.6	71.1	100.8	132.4	195.7	262.9	332.0	403.2
140°	4.0	5.9	13.8	25.7	53.4	75.1	104.7	160.1	219.4	280.6	341.9
142.5°	4.0	5.9	11.9	21.7	41.5	57.3	79.1	130.4	181.8	233.2	286.6
145°	4.0	5.9	9.9	17.8	31.6	43.5	57.3	100.8	146.3	191.7	237.2
147.5°	4.0	5.9	9.9	15.8	25.7	33.6	43.5	73.1	114.6	152.2	191.7
150°	4.0	5.9	7.9	13.8	21.7	25.7	31.6	51.4	83.0	116.6	150.2
152.5°	4.0	4.0	7.9	11.9	15.8	19.8	23.7	37.6	57.3	83.0	112.7
155°	4.0	4.0	5.9	9.9	13.8	15.8	17.8	25.7	37.6	53.4	75.1
157.5°	4.0	4.0	5.9	7.9	9.9	11.9	13.8	17.8	25.7	33.6	45.5
160°	4.0	4.0	5.9	7.9	7.9	9.9	9.9	11.9	15.8	19.8	25.7
162.5°	4.0	4.0	5.9	5.9	5.9	7.9	7.9	7.9	9.9	9.9	11.9
165°	4.0	4.0	4.0	5.9	4.0	5.9	4.0	5.9	5.9	4.0	4.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5
2.5°	2735.3	2721.4	2715.5	2707.6	2701.7	2697.7	2691.8	2687.8	2681.9	2681.9	2683.9
5°	2731.3	2717.5	2713.5	2705.6	2701.7	2699.7	2695.7	2697.7	2697.7	2699.7	2697.7
7.5°	2723.4	2711.6	2707.6	2703.7	2699.7	2697.7	2695.7	2699.7	2699.7	2701.7	2701.7
10°	2709.6	2701.7	2701.7	2697.7	2695.7	2693.8	2689.8	2695.7	2695.7	2699.7	2697.7
12.5°	2693.8	2691.8	2693.8	2695.7	2695.7	2693.8	2691.8	2699.7	2703.7	2703.7	2705.6
15°	2676.0	2679.9	2689.8	2695.7	2699.7	2699.7	2703.7	2711.6	2717.5	2719.5	2719.5
17.5°	2662.1	2672.0	2689.8	2705.6	2713.5	2717.5	2727.4	2743.2	2753.1	2755.0	2755.0
20°	2652.3	2676.0	2707.6	2737.2	2747.1	2755.0	2774.8	2794.6	2808.4	2810.4	2810.4
22.5°	2660.2	2699.7	2743.2	2776.8	2790.6	2800.5	2822.2	2847.9	2863.7	2865.7	2865.7
25°	2679.9	2727.4	2776.8	2818.3	2834.1	2845.9	2869.7	2897.3	2913.1	2919.1	2917.1
27.5°	2697.7	2755.0	2812.3	2859.8	2877.6	2893.4	2923.0	2954.6	2974.4	2980.3	2976.4
30°	2713.5	2780.7	2845.9	2903.3	2927.0	2944.8	2980.3	3017.9	3043.6	3049.5	3043.6
32.5°	2729.3	2810.4	2887.5	2954.6	2978.4	3004.1	3049.5	3093.0	3118.7	3126.6	3122.6
35°	2751.1	2845.9	2936.9	3013.9	3045.6	3075.2	3128.6	3180.0	3211.6	3217.5	3211.6
37.5°	2780.7	2891.4	2992.2	3089.0	3122.6	3164.1	3227.4	3288.7	3326.2	3334.1	3326.2
40°	2818.3	2948.7	3067.3	3180.0	3225.4	3268.9	3346.0	3419.1	3460.6	3474.4	3468.5
42.5°	2867.7	3019.9	3158.2	3292.6	3344.0	3399.3	3490.2	3575.2	3622.7	3638.5	3622.7
45°	2929.0	3108.8	3268.9	3425.0	3484.3	3551.5	3660.2	3757.0	3812.4	3826.2	3812.4
47.5°	3010.0	3213.5	3399.3	3579.2	3650.3	3729.4	3857.8	3968.5	4027.8	4043.6	4029.8
50°	3096.9	3340.0	3553.5	3759.0	3848.0	3931.0	4081.2	4203.7	4266.9	4296.6	4270.9
52.5°	3205.6	3478.4	3729.4	3958.6	4065.4	4164.2	4330.2	4464.6	4541.7	4567.4	4531.8
55°	3336.1	3644.4	3925.0	4189.9	4296.6	4407.3	4591.1	4733.4	4814.4	4842.1	4816.4
57.5°	3480.4	3820.3	4130.6	4409.2	4533.8	4646.4	4851.9	5000.2	5071.3	5106.9	5075.3
60°	3630.6	4002.1	4338.1	4634.5	4770.9	4887.5	5097.0	5243.3	5318.4	5353.9	5324.3
62.5°	3776.8	4178.0	4531.8	4840.1	4970.5	5099.0	5308.5	5448.8	5525.9	5557.5	5529.8
65°	3903.3	4326.2	4689.9	5008.1	5142.5	5269.0	5466.6	5601.0	5682.0	5703.8	5684.0
67.5°	3998.2	4427.0	4794.6	5108.9	5239.3	5365.8	5553.6	5678.1	5757.1	5776.9	5759.1
70°	4041.6	4466.6	4830.2	5136.5	5265.0	5377.7	5555.5	5674.1	5749.2	5761.1	5747.2
72.5°	4014.0	4427.0	4778.8	5071.3	5193.9	5292.7	5456.7	5569.4	5640.5	5650.4	5640.5
75°	3911.2	4306.5	4638.5	4911.2	5025.9	5108.9	5265.0	5369.7	5440.9	5448.8	5436.9
77.5°	3737.3	4104.9	4409.2	4672.1	4767.0	4848.0	4996.2	5089.1	5146.4	5158.3	5144.4
80°	3504.1	3842.0	4114.8	4350.0	4440.9	4510.0	4654.3	4755.1	4786.7	4802.5	4782.8
82.5°	3237.3	3539.6	3782.7	3996.2	4077.2	4162.2	4255.1	4348.0	4393.4	4407.3	4391.5
85°	2950.7	3219.5	3434.9	3626.6	3697.8	3774.8	3855.9	3946.8	3986.3	4000.1	3984.3
87.5°	2664.1	2901.3	3091.0	3261.0	3326.2	3395.4	3492.2	3539.6	3593.0	3608.8	3591.0
90°	2407.2	2620.6	2790.6	2944.8	3006.0	3069.3	3144.4	3203.7	3253.1	3266.9	3251.1
92.5°	2199.7	2391.4	2547.5	2685.9	2739.2	2798.5	2871.6	2929.0	2972.4	2986.3	2970.5
95°	2027.7	2203.6	2349.9	2478.3	2529.7	2585.1	2666.1	2711.6	2751.1	2762.9	2751.1
97.5°	1881.5	2047.5	2185.8	2310.4	2359.8	2411.2	2490.2	2535.7	2573.2	2583.1	2573.2
100°	1753.0	1915.1	2051.5	2170.0	2219.4	2268.9	2345.9	2391.4	2427.0	2438.8	2427.0
102.5°	1646.3	1802.4	1936.8	2057.4	2104.8	2154.2	2227.3	2280.7	2308.4	2322.2	2310.4
105°	1553.4	1705.6	1840.0	1958.6	2008.0	2055.4	2130.5	2179.9	2211.5	2227.3	2213.5
107.5°	1468.4	1618.6	1755.0	1869.6	1919.0	1966.5	2043.5	2093.0	2122.6	2140.4	2124.6
110°	1387.4	1535.6	1666.1	1784.6	1834.1	1883.5	1960.5	2010.0	2039.6	2055.4	2041.6



TEST NUMBER: P201326

CATALOG NUMBER: 8LBLED-LD4-22-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	1308.3	1452.6	1587.0	1701.6	1749.1	1798.5	1877.5	1928.9	1956.6	1974.4	1958.6
115°	1229.3	1371.6	1502.0	1612.7	1660.1	1711.5	1788.6	1842.0	1871.6	1885.4	1869.6
117.5°	1152.2	1288.6	1413.1	1521.8	1569.2	1618.6	1693.7	1747.1	1778.7	1792.6	1776.7
120°	1073.2	1203.6	1326.1	1425.0	1474.4	1519.8	1596.9	1648.3	1679.9	1693.7	1677.9
122.5°	988.2	1116.6	1233.2	1330.1	1377.5	1421.0	1496.1	1547.5	1577.1	1591.0	1577.1
125°	901.2	1021.8	1134.4	1231.3	1270.8	1312.3	1385.4	1434.8	1466.5	1478.3	1466.5
127.5°	814.3	924.9	1029.7	1114.7	1158.1	1197.7	1266.8	1314.3	1341.9	1355.8	1345.9
130°	727.3	832.0	926.9	1004.0	1041.5	1079.1	1142.3	1185.8	1213.5	1225.3	1215.5
132.5°	634.4	735.2	828.1	895.3	930.9	962.5	1019.8	1057.3	1081.1	1094.9	1083.0
135°	551.4	634.4	721.4	790.5	826.1	853.8	905.2	936.8	958.5	970.4	958.5
137.5°	476.3	547.4	618.6	679.9	713.5	743.1	792.5	822.2	841.9	853.8	841.9
140°	407.1	468.4	531.6	581.0	610.7	634.4	679.9	705.6	723.3	733.2	721.4
142.5°	339.9	395.3	448.6	494.1	519.8	539.5	583.0	602.8	616.6	622.6	616.6
145°	282.6	328.1	373.5	415.0	434.8	450.6	494.1	515.8	527.7	533.6	527.7
147.5°	229.3	266.8	304.4	338.0	355.7	375.5	405.2	430.8	440.7	444.7	440.7
150°	179.8	213.4	243.1	270.8	284.6	298.4	324.1	349.8	359.7	365.6	359.7
152.5°	136.4	164.0	187.8	209.5	221.4	233.2	254.9	278.7	288.5	292.5	288.5
155°	98.8	118.6	140.3	156.1	166.0	173.9	189.7	205.5	221.4	221.4	221.4
157.5°	61.3	77.1	94.9	108.7	114.6	122.5	134.4	148.2	160.1	166.0	166.0
160°	31.6	41.5	53.4	63.2	69.2	75.1	83.0	94.9	102.8	108.7	104.7
162.5°	13.8	17.8	23.7	27.7	31.6	33.6	39.5	45.5	49.4	59.3	51.4
165°	4.0	4.0	5.9	7.9	7.9	7.9	9.9	11.9	13.8	21.7	15.8
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: P201326

CATALOG NUMBER: 8LBLELD4-22-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5
2.5°	2687.8	2693.8	2701.7	2705.6	2711.6	2715.5	2725.4	2737.2	2727.4	2713.5	2715.5
5°	2697.7	2695.7	2701.7	2705.6	2709.6	2711.6	2721.4	2733.3	2721.4	2707.6	2707.6
7.5°	2701.7	2699.7	2701.7	2703.7	2705.6	2705.6	2715.5	2725.4	2713.5	2695.7	2691.8
10°	2695.7	2693.8	2695.7	2699.7	2699.7	2699.7	2705.6	2713.5	2699.7	2678.0	2670.1
12.5°	2699.7	2693.8	2693.8	2695.7	2695.7	2691.8	2693.8	2699.7	2681.9	2658.2	2646.3
15°	2713.5	2703.7	2699.7	2699.7	2695.7	2685.9	2681.9	2681.9	2662.1	2630.5	2614.7
17.5°	2747.1	2731.3	2719.5	2713.5	2705.6	2687.8	2674.0	2666.1	2640.4	2604.8	2579.1
20°	2798.5	2776.8	2759.0	2747.1	2737.2	2705.6	2678.0	2656.2	2620.6	2577.2	2543.6
22.5°	2849.9	2826.2	2800.5	2788.6	2774.8	2739.2	2701.7	2664.1	2610.8	2551.5	2506.0
25°	2899.3	2875.6	2845.9	2834.1	2816.3	2774.8	2727.4	2683.9	2614.7	2533.7	2468.5
27.5°	2956.6	2927.0	2895.4	2877.6	2857.8	2810.4	2757.0	2703.7	2626.6	2533.7	2442.8
30°	3021.8	2986.3	2944.8	2925.0	2901.3	2845.9	2780.7	2717.5	2634.5	2533.7	2428.9
32.5°	3096.9	3055.4	3006.0	2978.4	2950.7	2885.5	2808.4	2735.3	2640.4	2531.7	2417.1
35°	3183.9	3136.5	3077.2	3045.6	3012.0	2934.9	2844.0	2755.0	2650.3	2529.7	2401.3
37.5°	3292.6	3237.3	3166.1	3126.6	3087.1	2996.2	2891.4	2784.7	2666.1	2531.7	2389.4
40°	3423.0	3357.8	3274.8	3225.4	3178.0	3073.2	2948.7	2822.2	2687.8	2535.7	2377.6
42.5°	3577.2	3498.1	3405.3	3347.9	3292.6	3162.2	3019.9	2869.7	2717.5	2543.6	2371.6
45°	3761.0	3678.0	3559.4	3488.3	3427.0	3274.8	3110.8	2932.9	2761.0	2563.3	2369.6
47.5°	3972.5	3867.7	3739.3	3656.3	3583.1	3407.2	3217.5	3012.0	2810.4	2589.0	2373.6
50°	4209.6	4091.0	3942.8	3855.9	3765.0	3563.4	3344.0	3104.8	2873.6	2626.6	2383.5
52.5°	4470.5	4340.1	4180.0	4077.2	3976.4	3743.2	3486.3	3223.4	2946.7	2674.0	2401.3
55°	4741.3	4600.9	4423.1	4310.4	4197.8	3940.8	3654.3	3351.9	3043.6	2733.3	2430.9
57.5°	5004.1	4859.9	4664.2	4549.6	4423.1	4150.3	3834.1	3492.2	3148.3	2802.5	2464.5
60°	5247.2	5102.9	4905.3	4788.7	4650.4	4357.9	4017.9	3646.4	3257.0	2875.6	2504.0
62.5°	5452.8	5314.4	5116.8	4998.2	4855.9	4553.5	4193.8	3796.6	3375.6	2952.7	2541.6
65°	5604.9	5474.5	5282.8	5160.3	5023.9	4709.6	4342.0	3929.0	3474.4	3019.9	2575.2
67.5°	5682.0	5559.5	5373.7	5257.1	5122.7	4810.4	4442.8	4017.9	3549.5	3067.3	2596.9
70°	5674.1	5557.5	5383.6	5269.0	5140.5	4840.1	4478.4	4053.5	3583.1	3085.1	2593.0
72.5°	5571.3	5454.7	5298.6	5187.9	5065.4	4784.7	4429.0	4021.9	3557.4	3057.4	2561.4
75°	5367.8	5261.1	5102.9	5012.0	4901.4	4640.5	4300.5	3905.3	3470.5	2984.3	2496.1
77.5°	5075.3	4994.2	4840.1	4755.1	4646.4	4405.3	4085.1	3729.4	3318.3	2861.8	2395.3
80°	4717.6	4650.4	4500.2	4425.1	4318.3	4108.8	3832.1	3488.3	3116.7	2695.7	2264.9
82.5°	4326.2	4249.2	4130.6	4061.4	3960.6	3772.9	3510.0	3229.4	2883.5	2506.0	2112.7
85°	3921.1	3849.9	3741.2	3681.9	3593.0	3425.0	3189.8	2942.8	2636.5	2296.5	1948.7
87.5°	3535.7	3466.5	3363.8	3310.4	3229.4	3079.2	2873.6	2656.2	2385.5	2094.9	1774.8
90°	3201.7	3136.5	3039.6	2990.2	2917.1	2780.7	2595.0	2399.3	2160.2	1893.3	1618.6
92.5°	2927.0	2867.7	2776.8	2729.3	2664.1	2539.6	2371.6	2193.8	1978.3	1747.1	1492.1
95°	2709.6	2652.3	2571.2	2525.8	2464.5	2336.0	2187.8	2021.8	1824.2	1612.7	1377.5
97.5°	2533.7	2486.3	2397.3	2353.8	2304.4	2174.0	2039.6	1875.6	1691.8	1494.1	1274.7
100°	2391.4	2338.0	2257.0	2215.5	2164.1	2041.6	1905.2	1751.0	1573.2	1385.4	1181.9
102.5°	2280.7	2225.4	2150.3	2102.8	2053.4	1928.9	1794.5	1644.3	1474.4	1292.5	1096.9
105°	2181.9	2128.5	2053.4	2006.0	1956.6	1834.1	1705.6	1553.4	1385.4	1209.5	1019.8
107.5°	2089.0	2041.6	1966.5	1919.0	1869.6	1747.1	1618.6	1468.4	1304.4	1132.5	948.6
110°	2010.0	1958.6	1879.5	1834.1	1780.7	1664.1	1535.6	1389.4	1225.3	1057.3	881.5



TEST NUMBER: P201326

CATALOG NUMBER: 8LBLED-LD4-22-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1930.9	1875.6	1796.5	1751.0	1697.7	1581.1	1454.6	1310.3	1150.2	988.2	818.2
115°	1843.9	1790.6	1707.6	1662.1	1608.8	1494.1	1371.6	1231.3	1077.1	919.0	755.0
117.5°	1751.0	1697.7	1614.7	1571.2	1519.8	1407.2	1290.6	1154.2	1004.0	851.8	691.7
120°	1650.3	1598.9	1519.8	1476.3	1426.9	1318.2	1205.6	1069.2	926.9	780.7	632.4
122.5°	1547.5	1498.1	1421.0	1377.5	1330.1	1227.3	1116.6	984.2	847.9	711.5	575.1
125°	1436.8	1387.4	1314.3	1272.8	1225.3	1126.5	1019.8	895.3	768.8	646.3	515.8
127.5°	1308.3	1268.8	1197.7	1156.2	1112.7	1025.7	923.0	810.3	693.7	575.1	458.5
130°	1185.8	1144.3	1077.1	1039.6	1002.0	923.0	832.0	723.3	608.7	505.9	401.2
132.5°	1057.3	1019.8	962.5	930.9	897.3	826.1	733.2	626.5	529.7	440.7	347.8
135°	936.8	905.2	853.8	826.1	792.5	717.4	630.5	541.5	460.5	381.4	298.4
137.5°	824.1	792.5	745.1	715.4	679.9	612.7	541.5	468.4	393.3	326.1	253.0
140°	705.6	679.9	636.4	610.7	579.1	521.8	462.5	393.3	334.0	272.7	209.5
142.5°	604.8	583.0	539.5	515.8	488.2	440.7	385.4	332.0	278.7	225.3	171.9
145°	517.8	496.1	448.6	430.8	405.2	363.6	318.2	270.8	227.3	181.8	138.3
147.5°	432.8	407.1	365.6	349.8	330.1	294.5	258.9	221.4	183.8	144.3	106.7
150°	353.8	324.1	290.5	280.6	260.9	233.2	203.6	171.9	142.3	110.7	77.1
152.5°	278.7	253.0	225.3	215.4	199.6	181.8	156.1	130.4	106.7	77.1	53.4
155°	207.5	187.8	166.0	160.1	148.2	134.4	112.7	92.9	71.1	51.4	37.6
157.5°	146.3	130.4	114.6	110.7	102.8	90.9	73.1	57.3	45.5	33.6	25.7
160°	90.9	81.0	69.2	65.2	59.3	51.4	39.5	33.6	27.7	21.7	15.8
162.5°	43.5	37.6	33.6	31.6	27.7	23.7	21.7	17.8	15.8	13.8	11.9
165°	15.8	15.8	15.8	13.8	13.8	13.8	13.8	11.9	9.9	9.9	7.9
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: P201326

CATALOG NUMBER: 8LBLED-LD4-22-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5	2719.5
2.5°	2717.5	2721.4	2721.4	2723.4	2729.3	2741.2	2757.0	2759.0
5°	2709.6	2711.6	2711.6	2711.6	2717.5	2727.4	2743.2	2745.2
7.5°	2691.8	2691.8	2691.8	2691.8	2697.7	2705.6	2719.5	2721.4
10°	2668.1	2666.1	2666.1	2664.1	2668.1	2674.0	2689.8	2687.8
12.5°	2638.4	2634.5	2632.5	2632.5	2630.5	2636.5	2646.3	2648.3
15°	2604.8	2596.9	2593.0	2589.0	2587.0	2587.0	2598.9	2596.9
17.5°	2565.3	2553.4	2547.5	2541.6	2533.7	2533.7	2541.6	2539.6
20°	2519.8	2504.0	2494.2	2486.3	2474.4	2470.4	2474.4	2472.4
22.5°	2474.4	2448.7	2438.8	2427.0	2409.2	2401.3	2399.3	2397.3
25°	2421.0	2389.4	2375.6	2363.7	2338.0	2328.1	2318.3	2314.3
27.5°	2373.6	2328.1	2310.4	2290.6	2260.9	2247.1	2231.3	2227.3
30°	2332.1	2264.9	2237.2	2217.5	2179.9	2158.2	2138.4	2134.5
32.5°	2300.5	2207.6	2170.0	2146.3	2094.9	2065.3	2039.6	2027.7
35°	2272.8	2154.2	2104.8	2067.3	2006.0	1970.4	1934.8	1925.0
37.5°	2247.1	2108.8	2043.5	1992.2	1923.0	1871.6	1832.1	1816.3
40°	2221.4	2067.3	1988.2	1923.0	1832.1	1772.8	1723.4	1703.6
42.5°	2197.7	2025.8	1940.8	1861.7	1743.1	1672.0	1618.6	1591.0
45°	2176.0	1988.2	1895.3	1808.4	1656.2	1573.2	1508.0	1482.3
47.5°	2160.2	1952.6	1849.9	1755.0	1575.2	1472.4	1405.2	1371.6
50°	2148.3	1919.0	1806.4	1701.6	1504.0	1375.5	1300.4	1260.9
52.5°	2142.4	1889.4	1766.9	1654.2	1438.8	1282.7	1193.7	1164.1
55°	2144.3	1865.7	1733.3	1610.7	1377.5	1193.7	1094.9	1049.4
57.5°	2148.3	1843.9	1699.7	1567.2	1316.3	1106.8	996.1	948.6
60°	2156.2	1826.1	1670.0	1525.7	1258.9	1031.7	905.2	859.7
62.5°	2164.1	1810.3	1640.4	1486.2	1203.6	962.5	814.3	762.9
65°	2166.1	1786.6	1608.8	1446.7	1148.3	893.3	721.4	672.0
67.5°	2158.2	1757.0	1569.2	1401.2	1090.9	826.1	634.4	583.0
70°	2134.5	1717.5	1523.8	1349.8	1027.7	760.9	551.4	496.1
72.5°	2091.0	1666.1	1470.4	1292.5	966.4	691.7	476.3	409.1
75°	2029.7	1602.8	1407.2	1227.3	901.2	626.5	407.1	332.0
77.5°	1946.7	1521.8	1332.1	1154.2	830.1	559.3	347.8	260.9
80°	1840.0	1436.8	1249.1	1075.1	760.9	498.0	290.5	193.7
82.5°	1713.5	1340.0	1160.1	994.1	695.7	434.8	237.2	134.4
85°	1583.1	1235.2	1067.2	909.1	626.5	375.5	191.7	79.1
87.5°	1454.6	1130.5	978.3	832.0	555.4	322.1	148.2	31.6
90°	1328.1	1029.7	885.4	749.0	494.1	272.7	110.7	0.0
92.5°	1223.4	954.6	824.1	693.7	454.6	247.0	94.9	0.0
95°	1130.5	883.4	758.9	638.4	413.1	223.3	79.1	0.0
97.5°	1045.5	816.2	701.6	587.0	375.5	197.6	65.2	0.0
100°	964.5	749.0	642.3	539.5	339.9	175.9	49.4	0.0
102.5°	893.3	689.7	589.0	488.2	304.4	154.2	35.6	0.0
105°	824.1	632.4	539.5	442.7	272.7	134.4	21.7	0.0
107.5°	762.9	579.1	490.1	401.2	243.1	116.6	13.8	0.0
110°	703.6	529.7	442.7	361.7	217.4	100.8	11.9	0.0



TEST NUMBER: P201326

CATALOG NUMBER: 8LBLED-LD4-22-SYMF-UNV-L835-CD2-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	648.2	482.2	401.2	324.1	195.7	85.0	11.9	0.0
115°	590.9	436.8	361.7	292.5	173.9	69.2	9.9	0.0
117.5°	541.5	393.3	326.1	266.8	152.2	55.3	9.9	0.0
120°	492.1	355.7	296.5	239.1	132.4	41.5	9.9	0.0
122.5°	442.7	322.1	264.8	213.4	114.6	33.6	7.9	0.0
125°	397.2	286.6	235.2	185.8	94.9	29.6	7.9	0.0
127.5°	351.8	251.0	203.6	160.1	75.1	25.7	5.9	0.0
130°	306.3	215.4	173.9	134.4	57.3	21.7	5.9	0.0
132.5°	264.8	181.8	146.3	110.7	45.5	17.8	4.0	0.0
135°	223.3	152.2	120.6	87.0	35.6	15.8	4.0	0.0
137.5°	187.8	124.5	94.9	65.2	29.6	11.9	4.0	0.0
140°	154.2	98.8	71.1	49.4	23.7	9.9	2.0	0.0
142.5°	122.5	73.1	53.4	37.6	19.8	7.9	2.0	0.0
145°	94.9	53.4	39.5	29.6	17.8	5.9	2.0	0.0
147.5°	69.2	41.5	31.6	25.7	13.8	5.9	2.0	0.0
150°	49.4	31.6	25.7	19.8	9.9	4.0	2.0	0.0
152.5°	37.6	23.7	19.8	15.8	7.9	4.0	2.0	0.0
155°	27.7	17.8	15.8	11.9	5.9	4.0	2.0	0.0
157.5°	19.8	13.8	11.9	7.9	5.9	4.0	2.0	0.0
160°	11.9	9.9	7.9	5.9	4.0	2.0	2.0	0.0
162.5°	9.9	5.9	5.9	5.9	4.0	2.0	2.0	0.0
165°	5.9	4.0	4.0	4.0	2.0	2.0	2.0	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)