

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: FAIL-SAFE

Report Number: P834540

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6HI-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834540
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-6HI-27-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

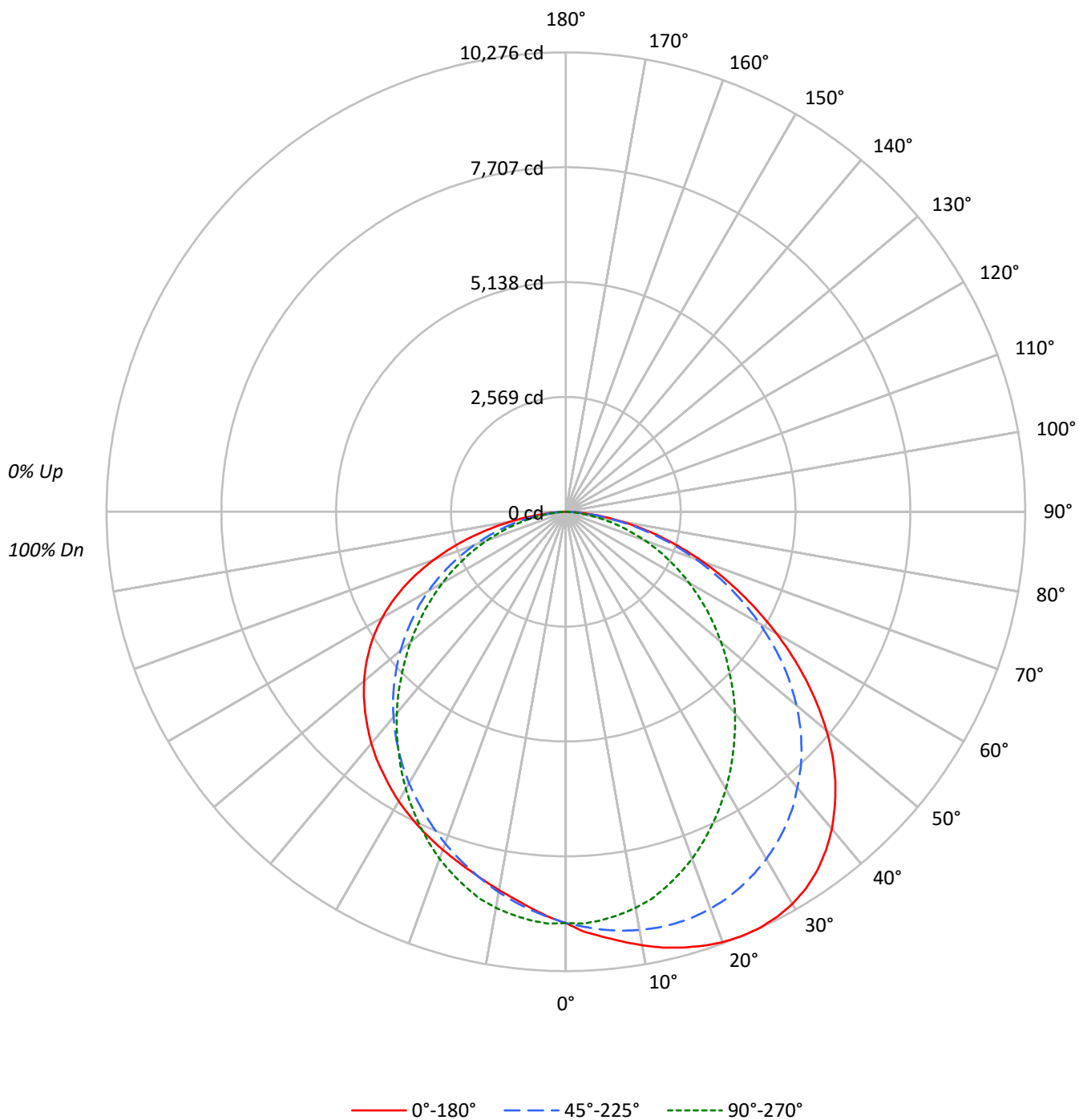
Lumens per Lamp: N/A
Luminaire Lumens: 27063.0 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 264
Input Voltage (V): 120
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: 28.75 FT

TEST NUMBER: P834540

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-27-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834540

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-27-120-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	12379	12379	12379
5°	12888	12385	12019
10°	13452	12292	11740
15°	14057	12096	11572
20°	14671	11829	11523
25°	15247	11485	11542
30°	15744	11126	11616
35°	16103	10729	11713
40°	16265	10332	11886
45°	16221	9895	12080
50°	15933	9480	12329
55°	15388	9043	12586
60°	14638	8577	12777
65°	13746	8054	12760
70°	12792	7428	12381
75°	11615	6524	11416
80°	9972	5360	9630
85°	7606	3663	6612

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834540

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-27-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	872.6	3.2
10°-20°	2519.9	9.3
20°-30°	3860.4	14.3
30°-40°	4711.1	17.4
40°-50°	4926.8	18.2
50°-60°	4459.1	16.5
60°-70°	3377.1	12.5
70°-80°	1882.0	7.0
80°-90°	454.0	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	7252.9	26.8
0°-40°	11964.0	44.2
0°-60°	21349.9	78.9
0°-90°	27063.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	27063.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	9200	9200	9200	9200	9200	
5°	9542	9383	9170	8945	8899	920
15°	10091	9530	8684	8279	8307	2862
25°	10270	9261	7736	7463	7774	4738
35°	9804	8575	6532	6524	7131	6122
45°	8525	7457	5200	5430	6349	6559
55°	6560	5922	3855	4195	5365	5854
65°	4318	4060	2530	2876	4008	4283
75°	2234	2110	1255	1498	2196	2370
85°	493	434	237	318	428	593
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834540

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-27-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3
2.5°	9403.4	9359.2	9323.0	9337.0	9345.1	9316.9	9292.8	9296.8	9272.7	9318.9	9210.3
5°	9542.2	9501.9	9459.7	9475.8	9459.7	9417.5	9383.3	9373.2	9308.9	9335.0	9224.4
7.5°	9697.0	9652.8	9590.4	9608.5	9574.3	9495.9	9451.7	9425.5	9327.0	9329.0	9206.3
10°	9845.8	9807.6	9723.1	9735.2	9672.9	9568.3	9497.9	9461.7	9323.0	9302.9	9176.2
12.5°	9984.6	9932.3	9841.8	9847.8	9757.3	9618.6	9528.1	9475.8	9294.8	9234.5	9109.8
15°	10091.2	10040.9	9932.3	9930.3	9813.6	9632.7	9530.1	9457.7	9228.4	9133.9	9003.2
17.5°	10181.7	10135.4	10000.7	9996.6	9855.9	9626.6	9504.0	9413.5	9131.9	9015.3	8870.5
20°	10246.0	10199.8	10048.9	10034.9	9865.9	9596.5	9449.7	9335.0	9005.2	8866.5	8705.6
22.5°	10276.2	10229.9	10059.0	10038.9	9841.8	9536.1	9371.2	9236.5	8860.4	8679.4	8512.5
25°	10270.1	10225.9	10032.8	10012.7	9795.5	9445.6	9260.6	9105.8	8677.4	8464.3	8299.4
27.5°	10219.9	10185.7	9982.6	9956.4	9711.1	9323.0	9125.9	8955.0	8474.3	8237.0	8058.0
30°	10133.4	10107.2	9892.1	9867.9	9606.5	9188.2	8969.0	8771.9	8255.1	7987.7	7806.7
32.5°	9994.6	9970.5	9753.3	9731.2	9465.7	9015.3	8786.0	8582.9	8015.8	7720.2	7539.2
35°	9803.6	9789.5	9578.4	9554.2	9284.8	8818.2	8574.9	8351.7	7766.5	7432.6	7259.7
37.5°	9552.2	9552.2	9349.1	9323.0	9059.5	8576.9	8337.6	8100.3	7484.9	7131.0	6960.0
40°	9260.6	9286.8	9079.6	9053.5	8798.1	8317.5	8056.0	7806.7	7181.3	6813.2	6646.3
42.5°	8910.7	8934.8	8761.9	8737.8	8498.5	8017.8	7774.5	7503.0	6863.5	6489.5	6316.5
45°	8524.6	8556.8	8401.9	8383.8	8160.6	7690.0	7456.8	7181.3	6531.7	6151.6	5982.7
47.5°	8094.2	8136.5	8001.7	7991.7	7784.6	7354.2	7110.9	6831.3	6183.8	5799.7	5640.8
50°	7611.6	7671.9	7561.3	7561.3	7376.3	6948.0	6736.8	6457.3	5821.8	5437.7	5280.9
52.5°	7094.8	7171.2	7088.7	7090.8	6939.9	6555.8	6336.6	6063.1	5443.8	5065.7	4920.9
55°	6559.9	6634.3	6582.0	6590.0	6471.4	6121.5	5922.4	5650.9	5057.6	4689.6	4552.9
57.5°	6000.8	6081.2	6047.1	6063.1	5980.7	5667.0	5459.8	5222.5	4659.5	4295.5	4178.8
60°	5439.7	5516.2	5498.1	5520.2	5467.9	5196.4	5007.4	4762.0	4259.3	3909.4	3806.8
62.5°	4872.6	4943.0	4939.0	4963.1	4935.0	4709.7	4540.8	4331.7	3845.0	3523.3	3428.7
65°	4317.6	4377.9	4373.9	4400.1	4394.0	4213.0	4060.2	3869.1	3430.8	3135.1	3052.7
67.5°	3778.7	3828.9	3814.9	3845.0	3853.1	3708.3	3575.5	3404.6	3036.6	2749.0	2678.6
70°	3251.8	3286.0	3267.9	3288.0	3306.1	3197.5	3084.9	2934.0	2616.3	2362.9	2304.6
72.5°	2734.9	2759.1	2730.9	2751.0	2767.1	2688.7	2596.2	2465.5	2202.0	1982.8	1934.6
75°	2234.2	2268.4	2210.1	2230.2	2242.3	2163.8	2109.5	2002.9	1775.7	1606.8	1574.6
77.5°	1749.6	1769.7	1737.5	1729.5	1737.5	1681.2	1639.0	1556.5	1385.6	1246.8	1226.7
80°	1287.0	1299.1	1266.9	1258.9	1264.9	1224.7	1192.5	1132.2	1011.5	907.0	898.9
82.5°	862.7	868.7	840.6	832.6	836.6	824.5	786.3	744.1	687.8	599.3	597.3
85°	492.7	492.7	472.6	464.5	468.6	448.5	434.4	412.3	390.1	329.8	333.8
87.5°	181.0	181.0	170.9	168.9	189.0	166.9	160.9	150.8	156.9	124.7	132.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834540

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-27-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3	9200.3
2.5°	9240.5	9220.4	9202.3	9140.0	9166.1	9101.8	9097.7	9073.6	9055.5	9021.3	9065.6
5°	9210.3	9170.1	9117.8	9043.4	9065.6	8989.1	8973.0	8944.9	8920.8	8876.5	8910.7
7.5°	9162.1	9095.7	9013.3	8918.8	8948.9	8854.4	8830.3	8800.1	8780.0	8727.7	8757.9
10°	9091.7	8997.2	8900.7	8786.0	8808.1	8705.6	8675.4	8643.2	8625.1	8578.9	8609.1
12.5°	8983.1	8868.5	8737.8	8613.1	8637.2	8540.7	8500.5	8466.3	8460.2	8422.0	8458.2
15°	8842.3	8683.5	8548.7	8416.0	8444.2	8331.5	8313.4	8279.3	8289.3	8263.2	8307.4
17.5°	8663.4	8480.4	8333.6	8190.8	8218.9	8124.4	8110.3	8094.2	8104.3	8100.3	8148.5
20°	8462.3	8261.2	8092.2	7951.5	7967.6	7893.1	7899.2	7895.2	7915.3	7937.4	8003.8
22.5°	8235.0	8007.8	7830.8	7686.0	7710.1	7645.8	7673.9	7682.0	7716.2	7766.5	7850.9
25°	7979.6	7736.3	7551.3	7414.5	7436.7	7394.4	7442.7	7462.8	7517.1	7601.6	7688.0
27.5°	7712.2	7454.7	7257.7	7127.0	7169.2	7127.0	7199.4	7239.6	7322.0	7414.5	7521.1
30°	7428.6	7161.1	6958.0	6841.4	6881.6	6843.4	6960.0	7014.3	7096.8	7223.5	7350.2
32.5°	7131.0	6849.4	6650.4	6559.9	6588.0	6582.0	6712.7	6773.0	6883.6	7028.4	7163.2
35°	6825.3	6531.7	6330.6	6254.2	6288.4	6296.4	6453.3	6523.7	6644.3	6819.3	6964.1
37.5°	6509.6	6209.9	6012.9	5950.5	5980.7	6010.9	6193.9	6264.2	6401.0	6592.0	6750.9
40°	6181.8	5882.2	5689.1	5638.8	5669.0	5701.2	5900.3	5996.8	6145.6	6352.7	6525.7
42.5°	5850.0	5550.3	5363.3	5327.1	5357.3	5419.6	5630.8	5721.3	5878.1	6107.4	6298.4
45°	5512.1	5200.4	5037.5	5009.4	5041.6	5114.0	5321.1	5429.7	5596.6	5848.0	6053.1
47.5°	5170.3	4866.6	4711.8	4693.7	4725.8	4806.3	5035.5	5134.1	5311.0	5578.5	5799.7
50°	4824.4	4528.8	4379.9	4373.9	4404.1	4490.5	4709.7	4826.4	5009.4	5309.0	5536.3
52.5°	4474.5	4190.9	4056.2	4056.2	4084.3	4172.8	4394.0	4514.7	4703.7	5019.4	5270.8
55°	4124.5	3855.1	3726.4	3736.4	3776.6	3853.1	4068.2	4194.9	4386.0	4713.8	4979.2
57.5°	3774.6	3519.2	3402.6	3416.7	3454.9	3531.3	3742.5	3885.2	4058.2	4398.0	4669.5
60°	3428.7	3187.4	3084.9	3101.0	3135.1	3211.6	3430.8	3553.4	3726.4	4072.3	4343.7
62.5°	3078.8	2859.6	2763.1	2783.2	2813.4	2889.8	3096.9	3215.6	3386.5	3726.4	3999.9
65°	2732.9	2529.8	2447.4	2467.5	2495.6	2566.0	2761.1	2875.7	3038.6	3370.4	3631.9
67.5°	2391.1	2206.1	2137.7	2157.8	2179.9	2246.3	2407.2	2531.8	2684.7	3000.4	3247.8
70°	2053.2	1888.3	1828.0	1848.1	1868.2	1928.5	2069.3	2183.9	2324.7	2614.3	2843.5
72.5°	1719.4	1558.5	1528.4	1546.5	1562.5	1614.8	1749.6	1840.1	1962.7	2220.1	2417.2
75°	1393.6	1254.9	1234.7	1252.8	1266.9	1307.1	1419.8	1498.2	1600.8	1824.0	1984.8
77.5°	1079.9	963.3	955.2	969.3	983.4	1011.5	1100.0	1182.5	1262.9	1427.8	1570.6
80°	786.3	691.8	691.8	705.9	701.8	736.0	798.4	864.7	923.0	1041.7	1146.3
82.5°	518.8	444.4	454.5	464.5	470.6	484.6	522.9	573.1	609.3	681.7	750.1
85°	287.6	237.3	247.4	255.4	251.4	267.5	287.6	317.7	335.8	370.0	406.2
87.5°	106.6	88.5	90.5	96.5	100.5	108.6	108.6	126.7	128.7	132.7	140.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834540

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-27-120-EDD

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	9200.3	9200.3	9200.3
2.5°	8981.1	9029.4	9065.6
5°	8826.2	8866.5	8898.6
7.5°	8675.4	8711.6	8739.8
10°	8532.6	8572.9	8593.0
12.5°	8385.8	8432.1	8448.2
15°	8241.0	8287.3	8307.4
17.5°	8092.2	8152.6	8174.7
20°	7953.5	8029.9	8048.0
22.5°	7812.7	7891.1	7913.3
25°	7659.9	7752.4	7774.5
27.5°	7497.0	7607.6	7629.7
30°	7334.1	7454.7	7476.9
32.5°	7159.1	7289.8	7310.0
35°	6976.1	7106.8	7131.0
37.5°	6773.0	6915.8	6964.1
40°	6561.9	6716.7	6767.0
42.5°	6340.7	6509.6	6561.9
45°	6103.4	6288.4	6348.7
47.5°	5864.1	6073.2	6125.5
50°	5604.6	5827.9	5890.2
52.5°	5333.2	5576.5	5638.8
55°	5051.6	5297.0	5365.3
57.5°	4745.9	4999.3	5071.7
60°	4426.2	4679.6	4748.0
62.5°	4098.4	4327.7	4394.0
65°	3732.4	3947.6	4007.9
67.5°	3344.3	3541.4	3591.6
70°	2932.0	3103.0	3147.2
72.5°	2501.7	2620.3	2678.6
75°	2057.2	2151.8	2196.0
77.5°	1610.8	1677.2	1713.4
80°	1174.4	1212.6	1242.8
82.5°	768.2	784.3	806.4
85°	414.3	414.3	428.3
87.5°	140.8	134.7	140.8
90°	0.0	0.0	0.0

(END OF REPORT)