

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: P392640

Luminaire Tested: **MWL-4-26-25-UNV-L930-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392640  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-1 &  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-4-26-25-UNV-L930-EDD  
Description: MWL 4FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

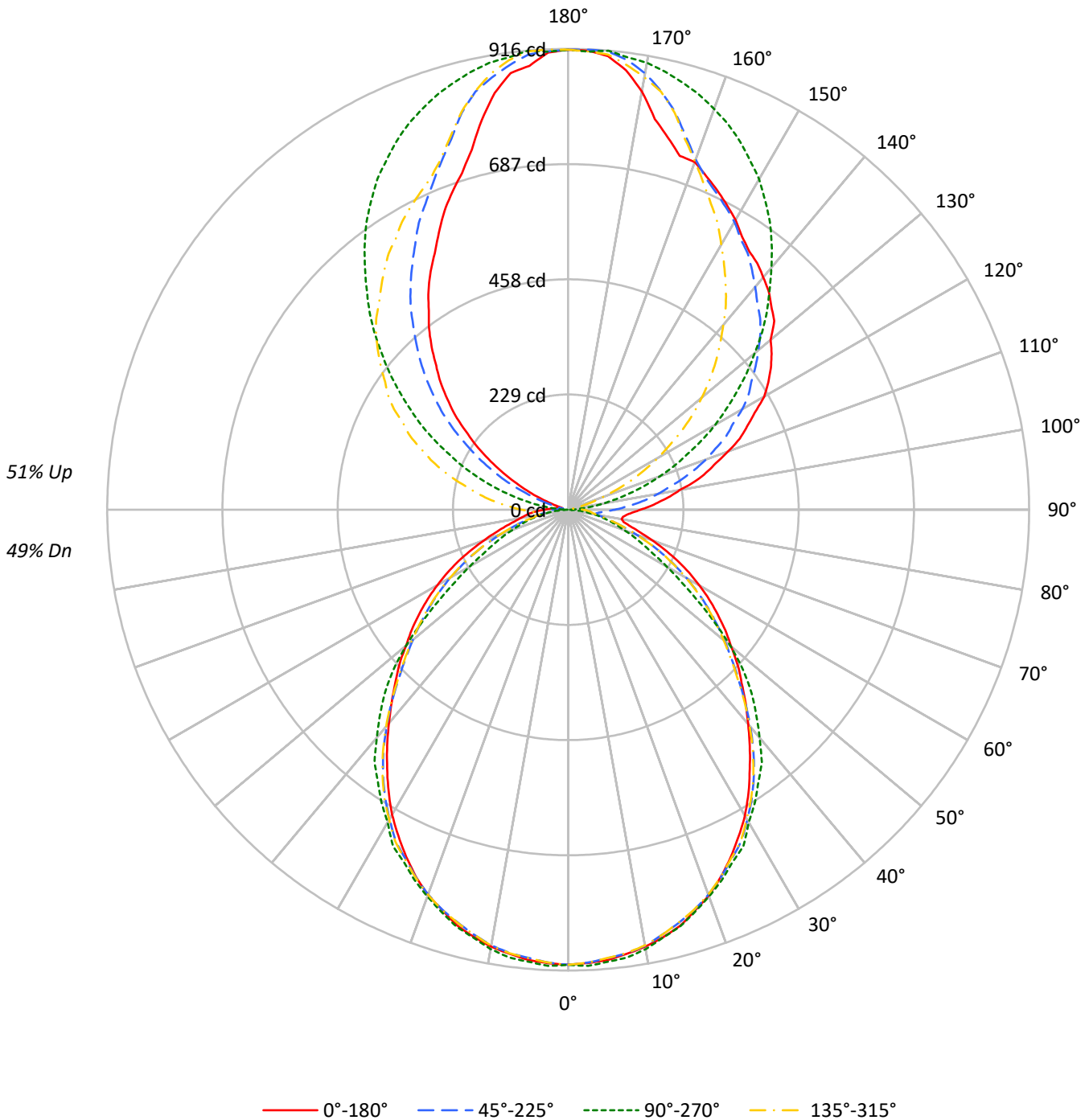
Lumens per Lamp: N/A  
Luminaire Lumens: 4321.5 lumens  
Efficiency: N/A  
Efficacy: 92.0 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.19 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')  
CIE Type: General Diffuse

Input Watts (W): 46.965  
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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49
1	98	93	90	86	90	86	83	80	73	70	68	60	59	57	49	48	47	42
2	89	82	76	71	82	76	70	66	64	60	57	53	51	48	44	42	40	35
3	82	72	65	59	75	67	61	56	57	52	48	48	44	41	39	36	34	30
4	75	64	56	50	69	59	53	47	51	45	41	43	39	36	35	32	30	26
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	32	29	26	23
6	63	51	43	38	58	48	41	36	41	36	31	35	31	27	29	26	23	20
7	59	47	39	33	54	43	36	31	37	32	28	32	27	24	26	23	21	18
8	54	42	35	29	50	39	33	28	34	29	25	29	25	22	24	21	19	16
9	51	39	31	26	47	36	29	25	31	26	22	27	23	20	22	19	17	15
10	47	35	28	24	44	33	27	22	29	24	20	25	21	18	21	18	15	13

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	5842	5842	5842	5842
5°	5772	5377	5772	5377
10°	5680	4944	5680	4944
15°	5574	4523	5561	4523
20°	5405	4123	5393	4123
25°	5187	3755	5174	3755
30°	4941	3393	4923	3393
35°	4622	3057	4609	3057
40°	4314	2711	4294	2711
45°	4031	2354	4014	2354
50°	3774	1926	3757	1926
55°	3552	1447	3539	1447
60°	3294	1072	3286	1072
65°	2990	795	2990	795
70°	2600	594	2610	594
75°	2286	436	2321	436
80°	2523	282	2235	282
85°	3934	125	2517	125



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.3	2.0
10°-20°	240.6	5.6
20°-30°	353.4	8.2
30°-40°	401.6	9.3
40°-50°	377.9	8.7
50°-60°	303.0	7.0
60°-70°	201.3	4.7
70°-80°	105.5	2.4
80°-90°	61.5	1.4
90°-100°	79.4	1.8
100°-110°	143.2	3.3
110°-120°	243.2	5.6
120°-130°	330.4	7.6
130°-140°	376.6	8.7
140°-150°	375.6	8.7
150°-160°	327.0	7.6
160°-170°	230.0	5.3
170°-180°	85.7	2.0
0°-30°	679.3	15.7
0°-40°	1081.0	25.0
0°-60°	1761.9	40.8
0°-90°	2130.3	49.3
90°-120°	465.8	10.8
90°-150°	1548.5	35.8
90°-180°	2191.0	50.7
0°-180°	4321.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	904	904	904	904	904	
5°	898	902	898	902	898	85
15°	857	858	855	858	857	241
25°	763	773	761	773	763	351
35°	629	659	627	659	629	394
45°	487	515	485	515	487	377
55°	362	312	361	312	362	324
65°	239	164	239	164	239	237
75°	127	83	129	83	127	141
85°	116	21	74	21	116	94
90°	144	1	47	1	144	79
95°	182	27	29	27	182	158
105°	284	128	12	128	284	298
115°	393	261	91	261	393	390
125°	492	410	224	410	492	439
135°	571	559	359	559	571	441
145°	627	699	483	699	627	395
155°	701	808	608	808	701	323
165°	766	879	741	879	766	217
175°	905	916	886	916	905	84
180°	914	914	914	914	914	



TEST NUMBER: P392640

CATALOG NUMBER: MWL-4-26-25-UNV-L930-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5
2.5°	901.9	901.5	901.0	911.0	907.6	910.3	901.0	901.5	902.4	901.5	901.0
5°	898.5	898.0	895.1	902.7	901.9	902.7	894.4	898.0	898.5	898.0	894.4
7.5°	890.6	890.2	889.3	895.1	897.7	894.4	888.8	889.6	890.6	889.6	888.8
10°	882.0	881.7	880.1	885.1	886.8	884.6	879.4	880.5	882.0	880.5	879.4
12.5°	870.6	872.5	865.1	870.2	871.2	870.2	865.1	871.2	869.3	871.2	865.1
15°	856.9	852.1	849.9	857.5	857.7	856.8	849.2	850.9	855.0	850.9	849.2
17.5°	835.8	836.9	833.8	838.2	838.2	838.2	833.1	836.4	833.8	836.4	833.1
20°	816.3	815.6	814.4	818.8	818.2	818.2	813.7	814.4	814.4	814.4	813.7
22.5°	791.1	793.7	791.6	795.1	797.0	794.6	790.9	792.4	789.9	792.4	790.9
25°	763.2	764.1	766.8	772.3	772.6	771.7	765.5	762.2	761.3	762.2	765.5
27.5°	732.8	736.2	744.0	751.0	754.0	750.4	742.7	734.2	730.9	734.2	742.7
30°	702.4	702.4	711.7	718.7	717.6	717.3	709.8	700.4	699.8	700.4	709.8
32.5°	666.9	666.9	679.6	691.5	690.3	690.3	677.6	664.3	664.3	664.3	677.6
35°	629.0	631.6	643.4	660.3	659.3	658.4	641.5	629.7	627.2	629.7	641.5
37.5°	592.7	591.0	604.6	624.0	632.0	622.1	602.7	589.1	590.8	589.1	602.7
40°	556.4	553.0	563.1	585.4	591.4	584.1	560.6	550.4	553.8	550.4	560.6
42.5°	521.7	515.8	521.1	544.0	553.4	542.7	519.1	513.2	519.1	513.2	519.1
45°	487.3	480.6	478.8	503.4	515.4	502.1	476.3	478.6	485.3	478.6	476.3
47.5°	456.9	447.6	440.9	456.2	471.4	455.7	438.2	445.6	455.0	445.6	438.2
50°	422.2	414.6	405.3	412.3	420.1	411.0	402.7	412.0	420.3	412.0	402.7
52.5°	393.5	384.2	370.9	371.7	365.2	370.4	368.9	381.6	391.6	381.6	368.9
55°	362.4	354.0	337.8	328.0	312.1	326.7	335.9	352.0	361.1	352.0	335.9
57.5°	331.9	326.0	304.9	284.9	264.8	283.5	303.0	324.1	330.7	324.1	303.0
60°	301.0	295.1	271.4	239.4	226.7	238.8	270.0	293.6	300.3	293.6	270.0
62.5°	270.5	266.3	238.4	202.3	190.5	201.5	237.0	264.9	269.9	264.9	237.0
65°	239.4	232.6	206.5	169.3	163.5	168.6	205.8	232.0	239.4	232.0	205.8
67.5°	207.4	200.6	174.3	142.4	141.6	142.4	173.6	199.9	207.4	199.9	173.6
70°	177.1	166.9	143.3	117.9	117.9	117.9	143.3	167.6	177.8	167.6	143.3
72.5°	150.0	137.4	117.0	97.6	100.4	97.0	117.0	138.0	151.4	138.0	117.0
75°	127.2	111.1	92.8	78.5	82.7	78.5	93.4	111.8	129.2	111.8	93.4
77.5°	112.9	93.5	72.6	61.5	66.6	61.5	73.1	91.6	110.4	91.6	73.1
80°	107.9	86.5	58.4	46.3	50.5	46.3	57.1	76.2	95.6	76.2	57.1
82.5°	109.8	88.0	55.9	32.8	35.3	32.8	48.3	64.7	85.2	64.7	48.3
85°	116.3	97.2	62.5	28.0	21.0	26.6	43.8	57.8	74.4	57.8	43.8
87.5°	127.7	113.4	74.6	31.7	6.8	22.6	37.7	51.5	61.3	51.5	37.7
90°	143.6	131.2	92.6	40.2	0.7	15.7	28.8	40.2	46.8	40.2	28.8
92.5°	163.5	153.2	111.5	54.2	11.2	9.7	23.1	33.9	37.0	33.9	23.1
95°	182.0	177.2	134.1	70.5	26.6	6.0	18.0	27.5	29.0	27.5	18.0
97.5°	204.5	202.0	157.4	91.2	46.7	8.6	14.9	24.6	23.8	24.6	14.9
100°	225.3	223.9	181.5	119.0	71.1	22.1	10.4	21.2	22.1	21.2	10.4
102.5°	257.1	247.6	203.7	145.4	97.6	40.9	11.4	15.3	17.0	15.3	11.4
105°	283.8	273.0	234.5	173.2	127.9	66.0	26.1	13.6	12.1	13.6	26.1
107.5°	307.3	299.2	262.8	201.5	160.3	95.1	47.9	25.6	18.2	25.6	47.9
110°	337.8	330.2	290.7	230.0	193.8	126.0	73.1	46.2	35.9	46.2	73.1



TEST NUMBER: P392640

CATALOG NUMBER: MWL-4-26-25-UNV-L930-EDD

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	368.9	363.1	316.5	259.7	228.6	159.5	104.2	72.0	62.3	72.0	104.2
115°	392.7	389.5	346.9	287.3	260.9	197.7	139.1	102.3	90.8	102.3	139.1
117.5°	417.9	417.4	368.9	316.6	299.6	232.7	170.8	132.7	120.5	132.7	170.8
120°	449.5	444.4	399.2	345.0	337.3	268.8	205.6	167.5	155.2	167.5	205.6
122.5°	471.5	468.3	425.0	372.1	372.1	305.6	239.1	201.0	188.3	201.0	239.1
125°	491.5	490.2	444.4	399.2	409.5	339.9	276.7	237.9	223.7	237.9	276.7
127.5°	509.5	511.5	469.6	428.9	447.6	374.7	313.4	270.8	256.0	270.8	313.4
130°	525.1	531.5	493.5	456.0	483.7	412.8	346.3	303.8	294.0	303.8	346.3
132.5°	555.4	551.5	518.0	483.7	522.5	447.6	381.2	336.6	325.6	336.6	381.2
135°	570.9	572.1	539.3	507.7	558.7	482.5	414.0	370.2	359.2	370.2	414.0
137.5°	589.6	585.7	556.0	536.7	592.2	516.1	446.3	405.6	388.3	405.6	446.3
140°	603.1	602.5	578.0	562.6	628.3	548.9	479.3	438.0	421.8	438.0	479.3
142.5°	617.4	622.0	599.9	590.9	664.4	583.9	514.7	470.5	454.1	470.5	514.7
145°	627.0	635.4	621.9	626.4	698.7	622.5	545.7	499.9	483.0	499.9	545.7
147.5°	643.1	654.1	638.0	651.5	728.3	656.7	576.7	531.5	516.7	531.5	576.7
150°	665.1	670.3	660.6	686.4	758.7	694.8	608.3	561.8	547.0	561.8	608.3
152.5°	682.6	689.0	678.0	724.5	782.5	729.6	643.1	591.5	574.1	591.5	643.1
155°	700.6	703.2	695.5	761.2	807.7	763.8	670.9	624.5	607.6	624.5	670.9
157.5°	717.3	722.5	713.5	789.0	829.7	793.5	702.6	657.4	642.5	657.4	702.6
160°	735.5	735.5	740.6	821.3	847.7	819.4	736.1	693.6	672.8	693.6	736.1
162.5°	737.4	749.7	777.4	843.9	865.2	841.9	772.2	719.3	701.2	719.3	772.2
165°	765.8	776.8	818.7	863.9	878.7	861.9	816.8	761.9	740.6	761.9	816.8
167.5°	795.4	818.7	852.2	886.5	891.6	880.7	851.0	812.9	793.5	812.9	851.0
170°	843.9	863.9	880.7	894.9	901.9	895.6	872.3	853.6	841.2	853.6	872.3
172.5°	881.0	894.9	901.3	910.3	906.7	903.2	891.6	882.6	875.3	882.6	891.6
175°	905.0	908.3	914.2	911.0	915.7	907.8	908.3	912.9	885.6	912.9	908.3
177.5°	913.3	918.8	915.5	909.7	911.1	909.0	911.7	914.2	909.5	914.2	911.7
180°	914.2	914.2	914.2	914.2	914.2	914.2	914.2	914.2	914.2	914.2	914.2



TEST NUMBER: P392640

CATALOG NUMBER: MWL-4-26-25-UNV-L930-EDD

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	904.5	904.5	904.5	904.5	904.5	904.5
2.5°	910.3	907.6	911.0	901.0	901.5	901.9
5°	902.7	901.9	902.7	895.1	898.0	898.5
7.5°	894.4	897.7	895.1	889.3	890.2	890.6
10°	884.6	886.8	885.1	880.1	881.7	882.0
12.5°	870.2	871.2	870.2	865.1	872.5	870.6
15°	856.8	857.7	857.5	849.9	852.1	856.9
17.5°	838.2	838.2	838.2	833.8	836.9	835.8
20°	818.2	818.2	818.8	814.4	815.6	816.3
22.5°	794.6	797.0	795.1	791.6	793.7	791.1
25°	771.7	772.6	772.3	766.8	764.1	763.2
27.5°	750.4	754.0	751.0	744.0	736.2	732.8
30°	717.3	717.6	718.7	711.7	702.4	702.4
32.5°	690.3	690.3	691.5	679.6	666.9	666.9
35°	658.4	659.3	660.3	643.4	631.6	629.0
37.5°	622.1	632.0	624.0	604.6	591.0	592.7
40°	584.1	591.4	585.4	563.1	553.0	556.4
42.5°	542.7	553.4	544.0	521.1	515.8	521.7
45°	502.1	515.4	503.4	478.8	480.6	487.3
47.5°	455.7	471.4	456.2	440.9	447.6	456.9
50°	411.0	420.1	412.3	405.3	414.6	422.2
52.5°	370.4	365.2	371.7	370.9	384.2	393.5
55°	326.7	312.1	328.0	337.8	354.0	362.4
57.5°	283.5	264.8	284.9	304.9	326.0	331.9
60°	238.8	226.7	239.4	271.4	295.1	301.0
62.5°	201.5	190.5	202.3	238.4	266.3	270.5
65°	168.6	163.5	169.3	206.5	232.6	239.4
67.5°	142.4	141.6	142.4	174.3	200.6	207.4
70°	117.9	117.9	117.9	143.3	166.9	177.1
72.5°	97.0	100.4	97.6	117.0	137.4	150.0
75°	78.5	82.7	78.5	92.8	111.1	127.2
77.5°	61.5	66.6	61.5	72.6	93.5	112.9
80°	46.3	50.5	46.3	58.4	86.5	107.9
82.5°	32.8	35.3	32.8	55.9	88.0	109.8
85°	26.6	21.0	28.0	62.5	97.2	116.3
87.5°	22.6	6.8	31.7	74.6	113.4	127.7
90°	15.7	0.7	40.2	92.6	131.2	143.6
92.5°	9.7	11.2	54.2	111.5	153.2	163.5
95°	6.0	26.6	70.5	134.1	177.2	182.0
97.5°	8.6	46.7	91.2	157.4	202.0	204.5
100°	22.1	71.1	119.0	181.5	223.9	225.3
102.5°	40.9	97.6	145.4	203.7	247.6	257.1
105°	66.0	127.9	173.2	234.5	273.0	283.8
107.5°	95.1	160.3	201.5	262.8	299.2	307.3
110°	126.0	193.8	230.0	290.7	330.2	337.8





TEST NUMBER: P392640

CATALOG NUMBER: MWL-4-26-25-UNV-L930-EDD

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	159.5	228.6	259.7	316.5	363.1	368.9
115°	197.7	260.9	287.3	346.9	389.5	392.7
117.5°	232.7	299.6	316.6	368.9	417.4	417.9
120°	268.8	337.3	345.0	399.2	444.4	449.5
122.5°	305.6	372.1	372.1	425.0	468.3	471.5
125°	339.9	409.5	399.2	444.4	490.2	491.5
127.5°	374.7	447.6	428.9	469.6	511.5	509.5
130°	412.8	483.7	456.0	493.5	531.5	525.1
132.5°	447.6	522.5	483.7	518.0	551.5	555.4
135°	482.5	558.7	507.7	539.3	572.1	570.9
137.5°	516.1	592.2	536.7	556.0	585.7	589.6
140°	548.9	628.3	562.6	578.0	602.5	603.1
142.5°	583.9	664.4	590.9	599.9	622.0	617.4
145°	622.5	698.7	626.4	621.9	635.4	627.0
147.5°	656.7	728.3	651.5	638.0	654.1	643.1
150°	694.8	758.7	686.4	660.6	670.3	665.1
152.5°	729.6	782.5	724.5	678.0	689.0	682.6
155°	763.8	807.7	761.2	695.5	703.2	700.6
157.5°	793.5	829.7	789.0	713.5	722.5	717.3
160°	819.4	847.7	821.3	740.6	735.5	735.5
162.5°	841.9	865.2	843.9	777.4	749.7	737.4
165°	861.9	878.7	863.9	818.7	776.8	765.8
167.5°	880.7	891.6	886.5	852.2	818.7	795.4
170°	895.6	901.9	894.9	880.7	863.9	843.9
172.5°	903.2	906.7	910.3	901.3	894.9	881.0
175°	907.8	915.7	911.0	914.2	908.3	905.0
177.5°	909.0	911.1	909.7	915.5	918.8	913.3
180°	914.2	914.2	914.2	914.2	914.2	914.2

(END OF REPORT)