

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: P392577

Luminaire Tested: **MWL-3-30-25-UNV-L930-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392577  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-13 &  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-3-30-25-UNV-L930-EDD  
Description: MWL 3FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

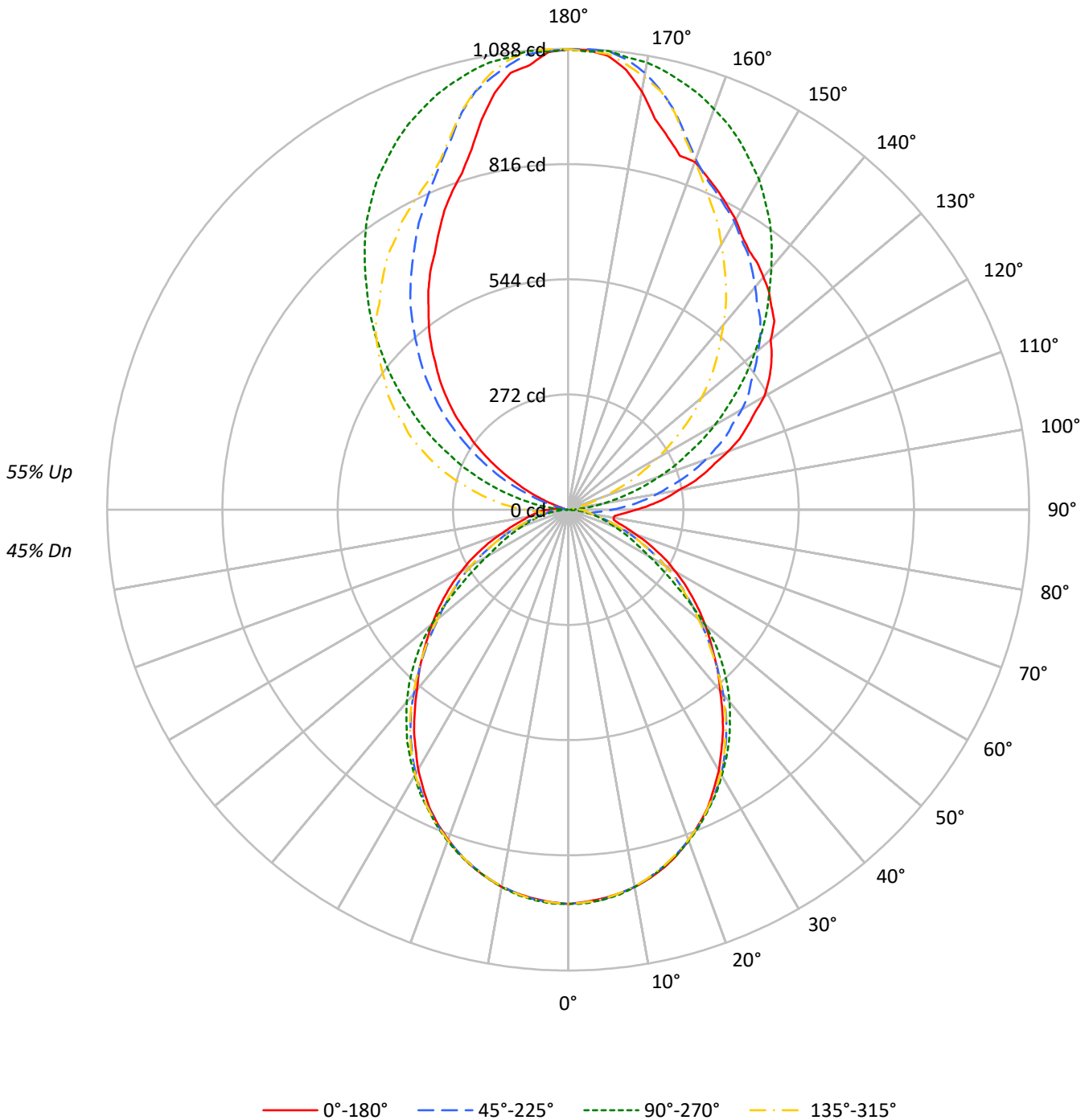
Lumens per Lamp: N/A  
Luminaire Lumens: 4733.5 lumens  
Efficiency: N/A  
Efficacy: 88.8 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')  
CIE Type: General Diffuse

Input Watts (W): 53.328  
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			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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45
1	97	93	89	85	89	85	82	79	71	68	66	58	56	55	46	45	44	38
2	88	81	75	70	81	75	69	65	62	59	55	51	48	46	41	39	37	32
3	81	72	64	59	74	66	60	55	55	51	47	45	42	39	36	34	32	28
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28	24
5	68	57	49	43	62	52	45	40	44	39	35	37	33	30	30	27	25	21
6	63	51	43	37	57	47	40	35	40	35	31	33	29	26	27	24	22	19
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	19	17
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	17	15
9	50	38	31	26	46	36	29	24	30	25	22	26	22	19	21	18	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	19	17	14	12

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

	0°	90°	180°	270°
0°	8015	8015	8015	8015
5°	7871	7351	7871	7351
10°	7720	6723	7720	6723
15°	7520	6135	7499	6135
20°	7248	5590	7228	5590
25°	6940	5063	6919	5063
30°	6545	4568	6515	4568
35°	6100	4099	6077	4099
40°	5619	3623	5588	3623
45°	5208	3131	5184	3131
50°	4841	2565	4815	2565
55°	4462	1911	4444	1911
60°	4055	1399	4044	1399
65°	3605	1061	3605	1061
70°	3078	783	3091	783
75°	2682	570	2733	570
80°	3013	369	2608	369
85°	4727	161	2822	161



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.6	1.8
10°-20°	245.7	5.2
20°-30°	358.6	7.6
30°-40°	405.1	8.6
40°-50°	379.1	8.0
50°-60°	299.2	6.3
60°-70°	195.7	4.1
70°-80°	102.1	2.2
80°-90°	63.2	1.3
90°-100°	90.4	1.9
100°-110°	168.9	3.6
110°-120°	288.7	6.1
120°-130°	392.1	8.3
130°-140°	447.3	9.4
140°-150°	446.3	9.4
150°-160°	388.5	8.2
160°-170°	273.4	5.8
170°-180°	101.8	2.2
0°-30°	691.9	14.6
0°-40°	1097.0	23.2
0°-60°	1775.3	37.5
0°-90°	2136.3	45.1
90°-120°	548.0	11.6
90°-150°	1833.6	38.7
90°-180°	2597.0	54.9
0°-180°	4733.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	931	931	931	931	931	
5°	922	925	922	925	922	87
15°	875	873	872	873	875	246
25°	778	781	775	781	778	357
35°	637	663	634	663	637	397
45°	487	514	485	514	487	377
55°	356	309	355	309	356	319
65°	230	164	230	164	230	228
75°	122	81	125	81	122	136
85°	124	20	74	20	124	98
90°	160	1	45	1	160	89
95°	212	32	30	32	212	184
105°	333	152	10	152	333	352
115°	467	310	108	310	467	463
125°	584	486	266	486	584	522
135°	678	663	427	663	678	524
145°	745	830	574	830	745	470
155°	833	959	722	959	833	384
165°	910	1044	880	1044	910	258
175°	1076	1087	1053	1087	1076	100
180°	1087	1087	1087	1087	1087	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	930.8	930.8	930.8	930.8	930.8	930.8	930.8	930.8	930.8	930.8	930.8
2.5°	926.7	929.9	928.1	929.7	930.6	929.0	928.1	929.9	927.5	929.9	928.1
5°	921.6	924.9	923.9	923.9	924.8	923.9	923.2	924.9	921.6	924.9	923.2
7.5°	914.0	916.4	914.8	916.3	917.1	915.5	913.9	915.5	914.0	915.5	913.9
10°	904.5	904.5	903.7	904.5	904.5	903.7	902.9	903.0	904.5	903.0	902.9
12.5°	891.0	889.4	888.5	890.2	889.5	890.2	888.5	887.7	889.4	887.7	888.5
15°	874.9	873.3	871.6	873.3	872.6	872.6	870.9	871.7	872.5	871.7	870.9
17.5°	854.5	853.0	852.1	854.0	854.0	854.0	851.4	852.1	852.1	852.1	851.4
20°	830.9	831.8	830.2	832.9	832.1	832.1	829.4	830.2	828.6	830.2	829.4
22.5°	804.8	806.4	806.5	808.3	808.4	807.6	805.8	804.9	803.2	804.9	805.8
25°	777.7	776.9	780.4	783.8	781.4	783.0	778.7	774.5	775.4	774.5	778.7
27.5°	743.9	749.0	752.5	756.7	756.0	755.9	750.9	746.7	741.6	746.7	750.9
30°	711.0	713.5	721.9	727.1	724.7	725.5	719.6	711.2	707.8	711.2	719.6
32.5°	673.0	678.0	687.3	695.9	694.3	694.3	684.9	674.9	669.8	674.9	684.9
35°	636.7	638.4	650.2	662.0	663.0	659.7	647.9	636.0	634.3	636.0	647.9
37.5°	597.0	598.7	612.2	626.6	626.7	624.2	609.8	596.3	594.6	596.3	609.8
40°	558.1	558.9	569.9	588.5	592.8	587.0	566.8	555.8	555.0	555.8	566.8
42.5°	524.2	518.4	526.0	547.9	554.8	546.4	523.7	515.3	521.2	515.3	523.7
45°	487.1	480.3	484.5	504.9	514.2	503.3	481.5	478.0	484.8	478.0	481.5
47.5°	453.3	444.8	444.0	458.5	471.9	457.7	441.0	442.5	451.0	442.5	441.0
50°	421.2	411.0	403.4	413.7	419.6	412.2	400.4	408.0	418.9	408.0	400.4
52.5°	389.1	379.0	367.2	369.7	363.0	368.2	364.9	375.9	386.8	375.9	364.9
55°	356.2	347.7	333.4	325.0	309.1	323.5	331.1	345.5	354.7	345.5	331.1
57.5°	324.9	318.2	300.4	281.9	262.6	280.4	298.1	315.9	323.4	315.9	298.1
60°	292.1	288.7	265.0	238.1	222.0	237.3	263.5	287.1	291.3	287.1	263.5
62.5°	262.5	256.6	231.2	200.0	189.1	199.3	229.7	255.1	261.7	255.1	229.7
65°	229.6	225.4	196.6	168.8	163.8	168.0	195.9	224.6	229.6	224.6	195.9
67.5°	200.0	191.6	167.9	138.4	138.4	138.4	167.1	190.8	200.0	190.8	167.1
70°	168.9	160.4	138.4	115.6	116.5	115.6	138.4	161.1	169.6	161.1	138.4
72.5°	144.3	131.6	113.1	94.5	97.1	93.7	113.1	132.4	145.9	132.4	113.1
75°	122.4	107.2	89.5	76.8	81.0	76.8	90.3	107.9	124.7	107.9	90.3
77.5°	110.0	89.1	70.1	59.9	65.0	59.9	70.8	86.8	106.8	86.8	70.8
80°	108.6	84.7	57.1	45.5	49.7	45.5	55.6	72.4	94.0	72.4	55.6
82.5°	110.9	90.5	56.2	32.8	34.6	32.8	47.0	62.9	81.8	62.9	47.0
85°	123.8	104.3	65.5	26.7	20.2	25.2	43.2	57.5	73.9	57.5	43.2
87.5°	140.4	125.9	81.8	33.2	5.9	22.4	38.1	52.2	61.4	52.2	38.1
90°	160.2	149.2	104.3	43.3	0.8	14.2	28.4	40.9	45.2	40.9	28.4
92.5°	186.3	175.5	127.7	62.1	13.1	9.2	22.5	33.5	35.9	33.5	22.5
95°	212.0	205.8	155.7	81.4	31.5	4.8	17.5	27.7	30.2	27.7	17.5
97.5°	239.9	234.3	183.5	108.2	55.4	10.0	13.8	23.3	25.0	23.3	13.8
100°	263.9	261.5	213.0	141.3	84.5	26.2	9.6	20.5	22.2	20.5	9.6
102.5°	302.5	290.8	241.0	172.8	116.0	48.4	12.3	14.6	17.2	14.6	12.3
105°	333.4	320.2	278.6	205.7	152.1	78.4	30.7	11.7	10.5	11.7	30.7
107.5°	363.0	355.5	312.3	239.5	190.4	112.9	56.9	30.1	19.4	30.1	56.9
110°	401.4	392.2	345.4	273.2	230.3	149.7	86.8	54.6	42.4	54.6	86.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	438.2	431.4	376.1	308.5	271.7	189.7	123.6	85.3	73.8	85.3	123.6
115°	466.7	462.9	411.4	341.5	310.0	234.8	164.3	121.3	107.6	121.3	164.3
117.5°	496.6	495.8	437.4	375.3	356.2	275.5	201.9	157.4	142.9	157.4	201.9
120°	534.2	528.1	473.5	409.0	399.8	318.5	243.3	198.8	184.3	198.8	243.3
122.5°	560.3	556.5	504.2	441.3	441.3	362.2	283.2	238.8	223.5	238.8	283.2
125°	584.0	582.5	527.2	473.5	485.8	402.9	327.7	282.6	265.6	282.6	327.7
127.5°	605.6	607.9	557.2	508.8	531.0	444.4	371.4	321.6	303.9	321.6	371.4
130°	624.0	631.6	585.5	541.1	574.0	489.6	410.6	360.7	349.3	360.7	410.6
132.5°	660.0	655.4	615.6	574.0	620.0	531.0	452.8	399.9	386.9	399.9	452.8
135°	678.4	679.9	640.8	602.4	663.0	572.5	492.0	439.8	426.8	439.8	492.0
137.5°	700.7	696.1	659.9	637.0	702.9	612.4	529.5	482.1	461.3	482.1	529.5
140°	716.8	716.0	686.9	668.5	745.9	652.4	569.5	520.4	501.2	520.4	569.5
142.5°	733.7	738.3	713.0	701.4	788.9	693.0	611.7	558.0	539.6	558.0	611.7
145°	745.2	755.2	739.0	744.5	829.5	739.9	648.5	594.0	574.1	594.0	648.5
147.5°	764.4	777.4	758.2	774.3	864.8	780.6	685.4	631.6	614.0	631.6	685.4
150°	790.5	796.6	785.1	815.8	900.8	825.7	723.0	667.7	650.1	667.7	723.0
152.5°	811.2	818.9	805.0	860.2	929.3	866.4	763.6	703.0	682.3	703.0	763.6
155°	832.7	835.7	826.6	904.0	959.2	907.0	797.4	742.2	722.2	742.2	797.4
157.5°	852.6	858.8	848.0	936.9	985.3	942.4	835.0	781.3	763.7	781.3	835.0
160°	874.1	874.1	880.2	976.1	1006.8	973.9	875.0	824.2	799.7	824.2	875.0
162.5°	876.4	890.1	924.0	1003.1	1028.3	1000.8	917.8	854.1	833.4	854.1	917.8
165°	910.2	922.4	973.1	1026.8	1044.4	1024.5	970.8	904.7	880.2	904.7	970.8
167.5°	945.5	972.2	1013.0	1053.7	1059.9	1046.7	1011.5	965.4	943.2	965.4	1011.5
170°	1002.2	1026.0	1046.7	1063.6	1072.1	1064.3	1036.8	1013.7	999.1	1013.7	1036.8
172.5°	1047.4	1062.8	1071.3	1082.0	1076.7	1073.6	1059.9	1048.2	1040.6	1048.2	1059.9
175°	1075.8	1079.0	1086.6	1082.8	1087.4	1079.0	1079.8	1084.2	1052.8	1084.2	1079.8
177.5°	1085.7	1091.2	1088.2	1081.3	1082.0	1080.5	1083.5	1085.7	1081.2	1085.7	1083.5
180°	1086.6	1086.6	1086.6	1086.6	1086.6	1086.6	1086.6	1086.6	1086.6	1086.6	1086.6



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CATALOG NUMBER: MWL-3-30-25-UNV-L930-EDD

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	930.8	930.8	930.8	930.8	930.8	930.8
2.5°	929.0	930.6	929.7	928.1	929.9	926.7
5°	923.9	924.8	923.9	923.9	924.9	921.6
7.5°	915.5	917.1	916.3	914.8	916.4	914.0
10°	903.7	904.5	904.5	903.7	904.5	904.5
12.5°	890.2	889.5	890.2	888.5	889.4	891.0
15°	872.6	872.6	873.3	871.6	873.3	874.9
17.5°	854.0	854.0	854.0	852.1	853.0	854.5
20°	832.1	832.1	832.9	830.2	831.8	830.9
22.5°	807.6	808.4	808.3	806.5	806.4	804.8
25°	783.0	781.4	783.8	780.4	776.9	777.7
27.5°	755.9	756.0	756.7	752.5	749.0	743.9
30°	725.5	724.7	727.1	721.9	713.5	711.0
32.5°	694.3	694.3	695.9	687.3	678.0	673.0
35°	659.7	663.0	662.0	650.2	638.4	636.7
37.5°	624.2	626.7	626.6	612.2	598.7	597.0
40°	587.0	592.8	588.5	569.9	558.9	558.1
42.5°	546.4	554.8	547.9	526.0	518.4	524.2
45°	503.3	514.2	504.9	484.5	480.3	487.1
47.5°	457.7	471.9	458.5	444.0	444.8	453.3
50°	412.2	419.6	413.7	403.4	411.0	421.2
52.5°	368.2	363.0	369.7	367.2	379.0	389.1
55°	323.5	309.1	325.0	333.4	347.7	356.2
57.5°	280.4	262.6	281.9	300.4	318.2	324.9
60°	237.3	222.0	238.1	265.0	288.7	292.1
62.5°	199.3	189.1	200.0	231.2	256.6	262.5
65°	168.0	163.8	168.8	196.6	225.4	229.6
67.5°	138.4	138.4	138.4	167.9	191.6	200.0
70°	115.6	116.5	115.6	138.4	160.4	168.9
72.5°	93.7	97.1	94.5	113.1	131.6	144.3
75°	76.8	81.0	76.8	89.5	107.2	122.4
77.5°	59.9	65.0	59.9	70.1	89.1	110.0
80°	45.5	49.7	45.5	57.1	84.7	108.6
82.5°	32.8	34.6	32.8	56.2	90.5	110.9
85°	25.2	20.2	26.7	65.5	104.3	123.8
87.5°	22.4	5.9	33.2	81.8	125.9	140.4
90°	14.2	0.8	43.3	104.3	149.2	160.2
92.5°	9.2	13.1	62.1	127.7	175.5	186.3
95°	4.8	31.5	81.4	155.7	205.8	212.0
97.5°	10.0	55.4	108.2	183.5	234.3	239.9
100°	26.2	84.5	141.3	213.0	261.5	263.9
102.5°	48.4	116.0	172.8	241.0	290.8	302.5
105°	78.4	152.1	205.7	278.6	320.2	333.4
107.5°	112.9	190.4	239.5	312.3	355.5	363.0
110°	149.7	230.3	273.2	345.4	392.2	401.4





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	189.7	271.7	308.5	376.1	431.4	438.2
115°	234.8	310.0	341.5	411.4	462.9	466.7
117.5°	275.5	356.2	375.3	437.4	495.8	496.6
120°	318.5	399.8	409.0	473.5	528.1	534.2
122.5°	362.2	441.3	441.3	504.2	556.5	560.3
125°	402.9	485.8	473.5	527.2	582.5	584.0
127.5°	444.4	531.0	508.8	557.2	607.9	605.6
130°	489.6	574.0	541.1	585.5	631.6	624.0
132.5°	531.0	620.0	574.0	615.6	655.4	660.0
135°	572.5	663.0	602.4	640.8	679.9	678.4
137.5°	612.4	702.9	637.0	659.9	696.1	700.7
140°	652.4	745.9	668.5	686.9	716.0	716.8
142.5°	693.0	788.9	701.4	713.0	738.3	733.7
145°	739.9	829.5	744.5	739.0	755.2	745.2
147.5°	780.6	864.8	774.3	758.2	777.4	764.4
150°	825.7	900.8	815.8	785.1	796.6	790.5
152.5°	866.4	929.3	860.2	805.0	818.9	811.2
155°	907.0	959.2	904.0	826.6	835.7	832.7
157.5°	942.4	985.3	936.9	848.0	858.8	852.6
160°	973.9	1006.8	976.1	880.2	874.1	874.1
162.5°	1000.8	1028.3	1003.1	924.0	890.1	876.4
165°	1024.5	1044.4	1026.8	973.1	922.4	910.2
167.5°	1046.7	1059.9	1053.7	1013.0	972.2	945.5
170°	1064.3	1072.1	1063.6	1046.7	1026.0	1002.2
172.5°	1073.6	1076.7	1082.0	1071.3	1062.8	1047.4
175°	1079.0	1087.4	1082.8	1086.6	1079.0	1075.8
177.5°	1080.5	1082.0	1081.3	1088.2	1091.2	1085.7
180°	1086.6	1086.6	1086.6	1086.6	1086.6	1086.6

(END OF REPORT)