

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: P392641

Luminaire Tested: **MWL-4-26-25-UNV-L835-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392641
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-L835-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

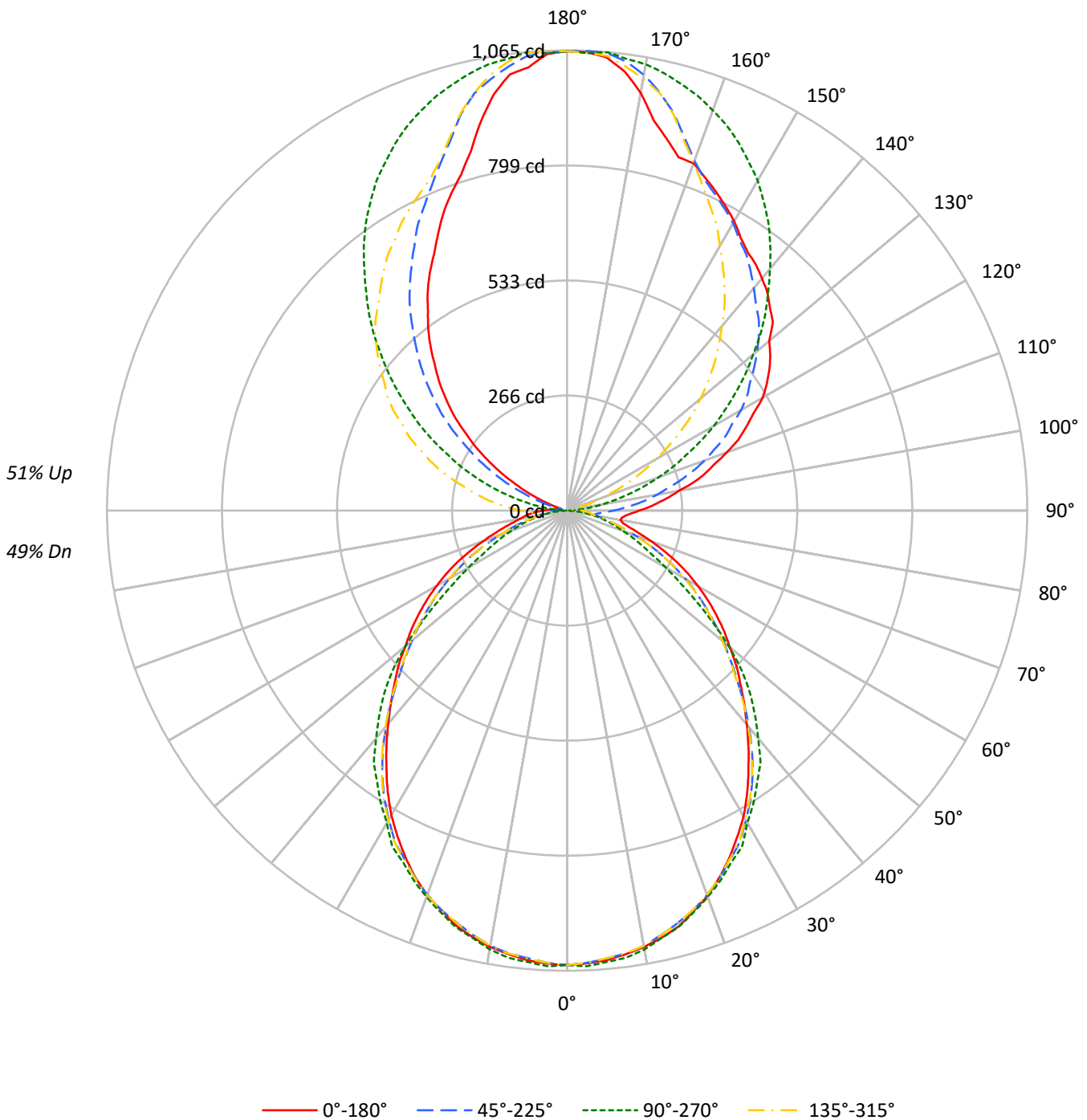
Lumens per Lamp: N/A
Luminaire Lumens: 5025.0 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: General Diffuse

Input Watts (W): 46.5
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°	6793	6793	6793	6793
5°	6712	6252	6712	6252
10°	6605	5749	6605	5749
15°	6481	5259	6466	5259
20°	6285	4794	6271	4794
25°	6031	4366	6016	4366
30°	5745	3945	5725	3945
35°	5374	3555	5359	3555
40°	5015	3153	4993	3153
45°	4687	2737	4669	2737
50°	4388	2239	4368	2239
55°	4130	1683	4116	1683
60°	3829	1247	3821	1247
65°	3478	924	3478	924
70°	3023	691	3035	691
75°	2657	507	2699	507
80°	2932	328	2598	328
85°	4573	145	2926	145



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.2	2.0
10°-20°	279.8	5.6
20°-30°	411.0	8.2
30°-40°	467.0	9.3
40°-50°	439.5	8.7
50°-60°	352.4	7.0
60°-70°	234.1	4.7
70°-80°	122.7	2.4
80°-90°	71.5	1.4
90°-100°	92.3	1.8
100°-110°	166.5	3.3
110°-120°	282.8	5.6
120°-130°	384.2	7.6
130°-140°	438.0	8.7
140°-150°	436.8	8.7
150°-160°	380.3	7.6
160°-170°	267.5	5.3
170°-180°	99.6	2.0
0°-30°	789.9	15.7
0°-40°	1256.9	25.0
0°-60°	2048.8	40.8
0°-90°	2477.1	49.3
90°-120°	541.6	10.8
90°-150°	1800.5	35.8
90°-180°	2548.0	50.7
0°-180°	5025.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1052	1052	1052	1052	1052	
5°	1045	1049	1045	1049	1045	99
15°	996	997	994	997	996	280
25°	888	898	885	898	888	408
35°	731	767	729	767	731	458
45°	567	599	564	599	567	439
55°	421	363	420	363	421	377
65°	278	190	278	190	278	275
75°	148	96	150	96	148	163
85°	135	24	86	24	135	109
90°	167	1	54	1	167	92
95°	212	31	34	31	212	184
105°	330	149	14	149	330	347
115°	457	303	106	303	457	453
125°	572	476	260	476	572	510
135°	664	650	418	650	664	512
145°	729	812	562	812	729	460
155°	815	939	707	939	815	376
165°	890	1022	861	1022	890	253
175°	1052	1065	1030	1065	1052	98
180°	1063	1063	1063	1063	1063	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1051.8	1051.8	1051.8	1051.8	1051.8	1051.8	1051.8	1051.8	1051.8	1051.8	1051.8
2.5°	1048.7	1048.2	1047.7	1059.3	1055.4	1058.5	1047.7	1048.2	1049.4	1048.2	1047.7
5°	1044.7	1044.2	1040.8	1049.7	1048.7	1049.7	1040.0	1044.2	1044.7	1044.2	1040.0
7.5°	1035.6	1035.1	1034.1	1040.8	1043.8	1040.0	1033.4	1034.4	1035.6	1034.4	1033.4
10°	1025.6	1025.3	1023.3	1029.2	1031.2	1028.5	1022.6	1023.8	1025.6	1023.8	1022.6
12.5°	1012.3	1014.5	1005.9	1011.8	1013.0	1011.8	1005.9	1013.0	1010.8	1013.0	1005.9
15°	996.4	990.9	988.2	997.1	997.3	996.3	987.4	989.4	994.1	989.4	987.4
17.5°	971.8	973.2	969.6	974.7	974.7	974.7	968.8	972.5	969.6	972.5	968.8
20°	949.2	948.4	947.0	952.1	951.4	951.4	946.2	947.0	947.0	947.0	946.2
22.5°	919.9	922.9	920.4	924.6	926.8	923.9	919.6	921.4	918.5	921.4	919.6
25°	887.5	888.5	891.6	898.0	898.3	897.3	890.2	886.2	885.2	886.2	890.2
27.5°	852.1	856.1	865.1	873.3	876.7	872.5	863.6	853.8	849.9	853.8	863.6
30°	816.7	816.7	827.6	835.6	834.4	834.1	825.3	814.5	813.8	814.5	825.3
32.5°	775.5	775.5	790.2	804.2	802.7	802.7	788.0	772.5	772.5	772.5	788.0
35°	731.4	734.4	748.2	767.8	766.6	765.6	746.0	732.2	729.3	732.2	746.0
37.5°	689.2	687.2	702.9	725.5	734.9	723.4	700.8	685.1	687.0	685.1	700.8
40°	646.9	643.0	654.8	680.6	687.7	679.2	651.8	640.1	644.0	640.1	651.8
42.5°	606.6	599.8	606.0	632.5	643.5	631.0	603.7	596.8	603.7	596.8	603.7
45°	566.6	558.8	556.8	585.3	599.3	583.8	553.8	556.5	564.4	556.5	553.8
47.5°	531.3	520.5	512.6	530.5	548.2	529.8	509.5	518.2	529.0	518.2	509.5
50°	491.0	482.1	471.3	479.4	488.5	477.9	468.3	479.1	488.7	479.1	468.3
52.5°	457.6	446.7	431.2	432.2	424.6	430.7	429.0	443.7	455.3	443.7	429.0
55°	421.4	411.6	392.9	381.4	362.9	379.8	390.6	409.3	419.9	409.3	390.6
57.5°	386.0	379.1	354.6	331.3	307.9	329.7	352.3	376.9	384.5	376.9	352.3
60°	349.9	343.1	315.6	278.4	263.7	277.6	314.0	341.5	349.2	341.5	314.0
62.5°	314.6	309.7	277.2	235.2	221.6	234.4	275.7	308.1	313.8	308.1	275.7
65°	278.4	270.5	240.1	196.8	190.2	196.1	239.3	269.8	278.4	269.8	239.3
67.5°	241.1	233.2	202.7	165.6	164.6	165.6	202.0	232.4	241.1	232.4	202.0
70°	205.9	194.1	166.6	137.1	137.1	137.1	166.6	194.9	206.7	194.9	166.6
72.5°	174.4	159.7	136.1	113.5	116.7	112.8	136.1	160.5	176.0	160.5	136.1
75°	147.9	129.2	107.9	91.2	96.1	91.2	108.6	130.0	150.2	130.0	108.6
77.5°	131.3	108.7	84.3	71.5	77.4	71.5	85.0	106.4	128.3	106.4	85.0
80°	125.4	100.5	67.9	53.9	58.8	53.9	66.3	88.5	111.1	88.5	66.3
82.5°	127.7	102.3	65.1	38.1	41.1	38.1	56.1	75.3	99.2	75.3	56.1
85°	135.2	113.0	72.7	32.5	24.4	31.0	51.0	67.2	86.5	67.2	51.0
87.5°	148.5	131.9	86.7	36.9	7.9	26.3	43.8	59.8	71.2	59.8	43.8
90°	167.0	152.5	107.7	46.7	0.8	18.2	33.5	46.8	54.3	46.8	33.5
92.5°	190.2	178.2	129.6	63.1	13.0	11.3	26.8	39.4	43.0	39.4	26.8
95°	211.6	206.1	156.0	82.0	31.0	7.0	20.9	31.9	33.7	31.9	20.9
97.5°	237.7	234.9	183.1	106.0	54.2	10.0	17.3	28.6	27.6	28.6	17.3
100°	262.0	260.3	211.0	138.3	82.7	25.7	12.1	24.7	25.6	24.7	12.1
102.5°	298.9	287.9	236.8	169.0	113.5	47.5	13.3	17.8	19.8	17.8	13.3
105°	330.0	317.5	272.6	201.4	148.8	76.8	30.3	15.9	14.1	15.9	30.3
107.5°	357.3	347.9	305.6	234.4	186.3	110.6	55.7	29.8	21.2	29.8	55.7
110°	392.9	384.0	338.0	267.4	225.3	146.5	85.0	53.8	41.8	53.8	85.0



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CATALOG NUMBER: MWL-4-26-25-UNV-L835-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	429.0	422.2	367.9	301.9	265.8	185.5	121.1	83.7	72.5	83.7	121.1
115°	456.7	452.9	403.4	334.1	303.4	229.9	161.8	119.0	105.5	119.0	161.8
117.5°	486.0	485.3	429.0	368.1	348.4	270.6	198.6	154.3	140.0	154.3	198.6
120°	522.7	516.7	464.2	401.2	392.2	312.6	239.1	194.8	180.5	194.8	239.1
122.5°	548.3	544.5	494.2	432.7	432.7	355.4	278.1	233.8	218.9	233.8	278.1
125°	571.6	570.0	516.7	464.2	476.2	395.2	321.6	276.6	260.1	276.6	321.6
127.5°	592.5	594.7	546.0	498.7	520.5	435.7	364.4	314.9	297.7	314.9	364.4
130°	610.6	618.0	573.8	530.3	562.5	480.0	402.7	353.2	341.9	353.2	402.7
132.5°	645.8	641.3	602.3	562.5	607.5	520.5	443.2	391.4	378.6	391.4	443.2
135°	663.8	665.3	627.1	590.3	649.6	561.0	481.4	430.4	417.7	430.4	481.4
137.5°	685.6	681.0	646.5	624.0	688.6	600.1	519.0	471.7	451.5	471.7	519.0
140°	701.4	700.6	672.1	654.1	730.6	638.3	557.3	509.3	490.5	509.3	557.3
142.5°	717.9	723.3	697.5	687.1	772.6	678.9	598.6	547.0	528.0	547.0	598.6
145°	729.1	738.8	723.1	728.4	812.4	723.9	634.5	581.3	561.7	581.3	634.5
147.5°	747.9	760.6	741.9	757.6	846.9	763.6	670.6	618.0	600.7	618.0	670.6
150°	773.4	779.4	768.1	798.2	882.2	807.9	707.4	653.3	636.0	653.3	707.4
152.5°	793.7	801.1	788.3	842.4	909.9	848.4	747.9	687.8	667.6	687.8	747.9
155°	814.7	817.6	808.7	885.1	939.2	888.2	780.1	726.1	706.6	726.1	780.1
157.5°	834.1	840.1	829.6	917.5	964.7	922.7	816.9	764.4	747.1	764.4	816.9
160°	855.2	855.2	861.2	955.0	985.8	952.8	856.0	806.4	782.4	806.4	856.0
162.5°	857.4	871.7	903.9	981.3	1006.0	979.0	897.9	836.4	815.4	836.4	897.9
165°	890.5	903.2	952.0	1004.5	1021.7	1002.3	949.7	885.9	861.2	885.9	949.7
167.5°	924.9	952.0	991.0	1030.8	1036.8	1024.0	989.5	945.2	922.7	945.2	989.5
170°	981.3	1004.5	1024.0	1040.5	1048.8	1041.3	1014.3	992.5	978.2	992.5	1014.3
172.5°	1024.5	1040.5	1048.0	1058.5	1054.3	1050.2	1036.8	1026.3	1017.8	1026.3	1036.8
175°	1052.3	1056.2	1063.0	1059.3	1064.8	1055.5	1056.2	1061.5	1029.8	1061.5	1056.2
177.5°	1062.0	1068.3	1064.5	1057.8	1059.5	1057.0	1060.1	1063.0	1057.5	1063.0	1060.1
180°	1063.0	1063.0	1063.0	1063.0	1063.0	1063.0	1063.0	1063.0	1063.0	1063.0	1063.0



TEST NUMBER: P392641

CATALOG NUMBER: MWL-4-26-25-UNV-L835-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1051.8	1051.8	1051.8	1051.8	1051.8	1051.8
2.5°	1058.5	1055.4	1059.3	1047.7	1048.2	1048.7
5°	1049.7	1048.7	1049.7	1040.8	1044.2	1044.7
7.5°	1040.0	1043.8	1040.8	1034.1	1035.1	1035.6
10°	1028.5	1031.2	1029.2	1023.3	1025.3	1025.6
12.5°	1011.8	1013.0	1011.8	1005.9	1014.5	1012.3
15°	996.3	997.3	997.1	988.2	990.9	996.4
17.5°	974.7	974.7	974.7	969.6	973.2	971.8
20°	951.4	951.4	952.1	947.0	948.4	949.2
22.5°	923.9	926.8	924.6	920.4	922.9	919.9
25°	897.3	898.3	898.0	891.6	888.5	887.5
27.5°	872.5	876.7	873.3	865.1	856.1	852.1
30°	834.1	834.4	835.6	827.6	816.7	816.7
32.5°	802.7	802.7	804.2	790.2	775.5	775.5
35°	765.6	766.6	767.8	748.2	734.4	731.4
37.5°	723.4	734.9	725.5	702.9	687.2	689.2
40°	679.2	687.7	680.6	654.8	643.0	646.9
42.5°	631.0	643.5	632.5	606.0	599.8	606.6
45°	583.8	599.3	585.3	556.8	558.8	566.6
47.5°	529.8	548.2	530.5	512.6	520.5	531.3
50°	477.9	488.5	479.4	471.3	482.1	491.0
52.5°	430.7	424.6	432.2	431.2	446.7	457.6
55°	379.8	362.9	381.4	392.9	411.6	421.4
57.5°	329.7	307.9	331.3	354.6	379.1	386.0
60°	277.6	263.7	278.4	315.6	343.1	349.9
62.5°	234.4	221.6	235.2	277.2	309.7	314.6
65°	196.1	190.2	196.8	240.1	270.5	278.4
67.5°	165.6	164.6	165.6	202.7	233.2	241.1
70°	137.1	137.1	137.1	166.6	194.1	205.9
72.5°	112.8	116.7	113.5	136.1	159.7	174.4
75°	91.2	96.1	91.2	107.9	129.2	147.9
77.5°	71.5	77.4	71.5	84.3	108.7	131.3
80°	53.9	58.8	53.9	67.9	100.5	125.4
82.5°	38.1	41.1	38.1	65.1	102.3	127.7
85°	31.0	24.4	32.5	72.7	113.0	135.2
87.5°	26.3	7.9	36.9	86.7	131.9	148.5
90°	18.2	0.8	46.7	107.7	152.5	167.0
92.5°	11.3	13.0	63.1	129.6	178.2	190.2
95°	7.0	31.0	82.0	156.0	206.1	211.6
97.5°	10.0	54.2	106.0	183.1	234.9	237.7
100°	25.7	82.7	138.3	211.0	260.3	262.0
102.5°	47.5	113.5	169.0	236.8	287.9	298.9
105°	76.8	148.8	201.4	272.6	317.5	330.0
107.5°	110.6	186.3	234.4	305.6	347.9	357.3
110°	146.5	225.3	267.4	338.0	384.0	392.9



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	185.5	265.8	301.9	367.9	422.2	429.0
115°	229.9	303.4	334.1	403.4	452.9	456.7
117.5°	270.6	348.4	368.1	429.0	485.3	486.0
120°	312.6	392.2	401.2	464.2	516.7	522.7
122.5°	355.4	432.7	432.7	494.2	544.5	548.3
125°	395.2	476.2	464.2	516.7	570.0	571.6
127.5°	435.7	520.5	498.7	546.0	594.7	592.5
130°	480.0	562.5	530.3	573.8	618.0	610.6
132.5°	520.5	607.5	562.5	602.3	641.3	645.8
135°	561.0	649.6	590.3	627.1	665.3	663.8
137.5°	600.1	688.6	624.0	646.5	681.0	685.6
140°	638.3	730.6	654.1	672.1	700.6	701.4
142.5°	678.9	772.6	687.1	697.5	723.3	717.9
145°	723.9	812.4	728.4	723.1	738.8	729.1
147.5°	763.6	846.9	757.6	741.9	760.6	747.9
150°	807.9	882.2	798.2	768.1	779.4	773.4
152.5°	848.4	909.9	842.4	788.3	801.1	793.7
155°	888.2	939.2	885.1	808.7	817.6	814.7
157.5°	922.7	964.7	917.5	829.6	840.1	834.1
160°	952.8	985.8	955.0	861.2	855.2	855.2
162.5°	979.0	1006.0	981.3	903.9	871.7	857.4
165°	1002.3	1021.7	1004.5	952.0	903.2	890.5
167.5°	1024.0	1036.8	1030.8	991.0	952.0	924.9
170°	1041.3	1048.8	1040.5	1024.0	1004.5	981.3
172.5°	1050.2	1054.3	1058.5	1048.0	1040.5	1024.5
175°	1055.5	1064.8	1059.3	1063.0	1056.2	1052.3
177.5°	1057.0	1059.5	1057.8	1064.5	1068.3	1062.0
180°	1063.0	1063.0	1063.0	1063.0	1063.0	1063.0

(END OF REPORT)