

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: SHAPER

Report Number: 19153

Luminaire Tested: **604-36-F2/21**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 19153
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 604-36-F2/21
Description: INTERIOR WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC LENS
Light Source: TWO 21 WATT T5 LAMPS

FP21/830. LUMEN RATING = 1900 LMS.

Ballast/Driver: -

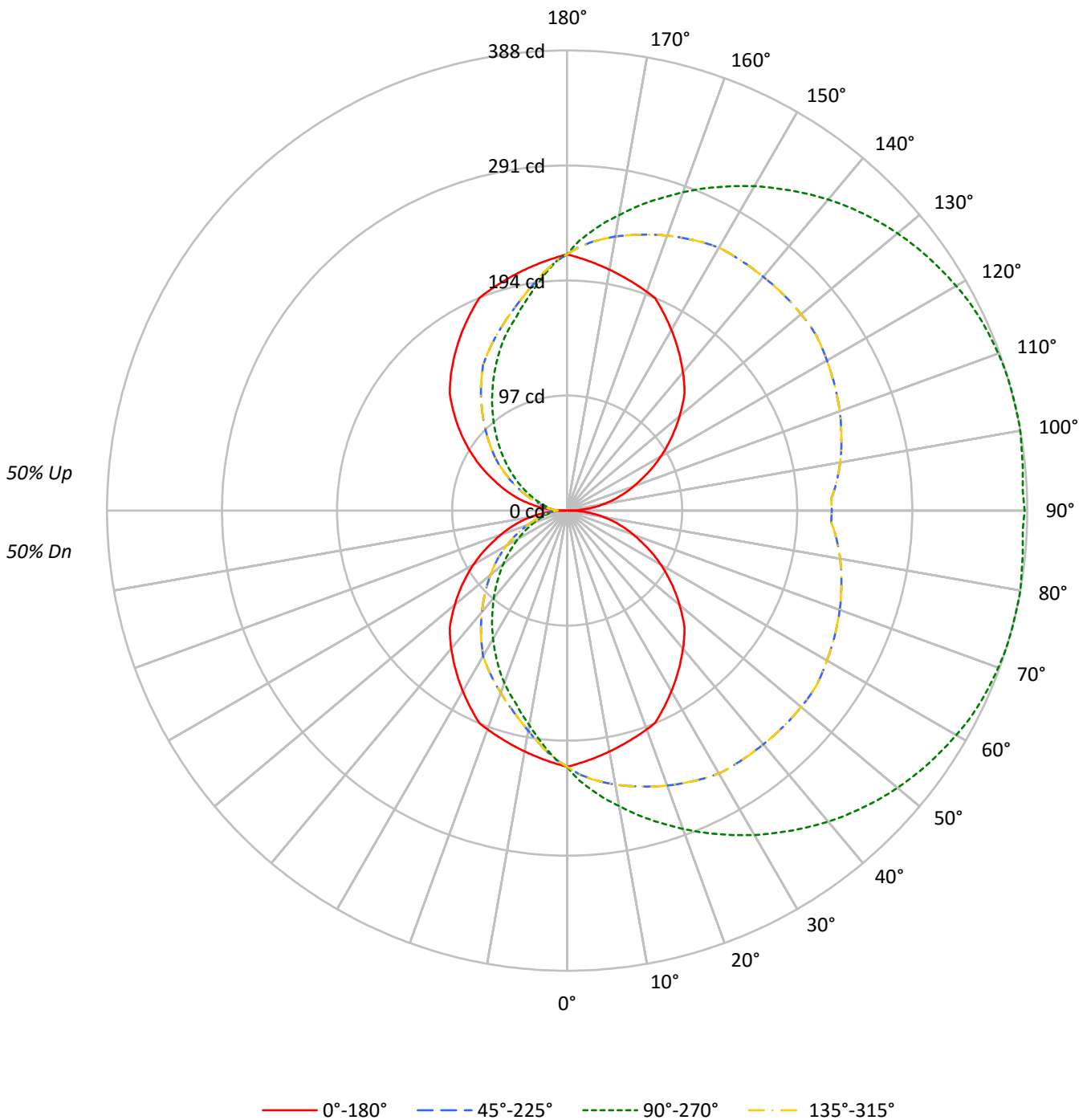
Summary

Lumens per Lamp: 1900 (2 lamps)
Luminaire Lumens: 1968.2 lumens
Efficiency: 51.8%
Efficacy: 45.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.55 / 1.54
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 2.33' x H: 0.32')
CIE Type: General Diffuse

Input Watts (W): 43
Input Voltage (V): NR
Input Current (A_{in}): 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

TEST NUMBER: 19153
CATALOG NUMBER: 604-36-F2/21

Luminous Intensity Polar Plot





TEST NUMBER: 19153
 CATALOG NUMBER: 604-36-F2/21

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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	55	55	55	55	51	51	51	51	43	43	43	36	36	36	29	29	29	26																												
1	49	46	44	41	45	42	40	38	36	34	32	29	28	27	23	22	21	19																												
2	44	39	36	32	40	36	33	30	30	28	26	25	23	21	20	18	17	14																												
3	40	34	30	26	36	31	28	25	26	23	21	21	19	17	17	15	14	12																												
4	36	30	25	22	33	28	24	20	23	20	17	19	16	14	15	13	12	10																												
5	33	27	22	19	30	24	20	17	20	17	15	17	14	12	13	11	10	8																												
6	30	24	19	16	28	22	18	15	18	15	13	15	12	11	12	10	8	7																												
7	28	21	17	14	26	20	16	13	17	13	11	14	11	9	11	9	7	6																												
8	26	19	15	12	24	18	14	11	15	12	10	12	10	8	10	8	7	5																												
9	24	18	13	11	22	16	12	10	14	11	9	11	9	7	9	7	6	5																												
10	23	16	12	9	21	15	11	9	13	10	8	10	8	6	8	7	5	4																												

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	4341	4341	4341	4341
5°	4206	4247	4206	3622
10°	4106	4144	4106	3009
15°	4035	4085	4035	2543
20°	3996	4052	3996	2197
25°	3912	4046	3912	1880
30°	3780	4063	3780	1605
35°	3666	4091	3666	1370
40°	3574	4142	3574	1165
45°	3497	4201	3497	985
50°	3322	4276	3322	826
55°	3147	4361	3147	687
60°	2960	4463	2960	563
65°	2750	4581	2750	457
70°	2541	4711	2541	363
75°	2324	4864	2324	283
80°	2016	5048	2016	221
85°	1498	5259	1498	180



TEST NUMBER: 19153
 CATALOG NUMBER: 604-36-F2/21

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	20.4	1.0	0.5
10°-20°	59.2	3.0	1.6
20°-30°	93.6	4.8	2.5
30°-40°	120.0	6.1	3.2
40°-50°	137.9	7.0	3.6
50°-60°	145.6	7.4	3.8
60°-70°	144.3	7.3	3.8
70°-80°	137.3	7.0	3.6
80°-90°	125.8	6.4	3.3
90°-100°	125.8	6.4	3.3
100°-110°	137.3	7.0	3.6
110°-120°	144.3	7.3	3.8
120°-130°	145.6	7.4	3.8
130°-140°	137.9	7.0	3.6
140°-150°	120.0	6.1	3.2
150°-160°	93.6	4.8	2.5
160°-170°	59.2	3.0	1.6
170°-180°	20.4	1.0	0.5
0°-30°	173.3	8.8	4.6
0°-40°	293.3	14.9	7.7
0°-60°	576.7	29.3	15.2
0°-90°	984.1	50.0	25.9
90°-120°	407.4	20.7	10.7
90°-150°	810.9	41.2	21.3
90°-180°	984.0	50.0	25.9
0°-180°	1968.2	100.0	51.8

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	216	216	216	216	216	
5°	211	236	211	202	211	20
15°	201	270	201	168	201	57
25°	188	301	188	140	188	86
35°	164	329	164	110	164	103
45°	140	354	140	83	140	107
55°	108	372	108	59	108	96
65°	75	384	75	38	75	74
75°	45	388	45	23	45	48
85°	17	386	17	13	17	17
90°	0	386	0	12	0	3
95°	17	386	17	13	17	17
105°	45	388	45	23	45	48
115°	75	384	75	38	75	74
125°	108	372	108	59	108	96
135°	140	354	140	83	140	107
145°	164	329	164	110	164	103
155°	188	301	188	140	188	86
165°	201	270	201	168	201	57
175°	211	236	211	202	211	20
180°	216	216	216	216	216	



TEST NUMBER: 19153
 CATALOG NUMBER: 604-36-F2/21

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1
2.5°	213.6	218.0	222.2	225.5	227.5	225.5	222.2	218.0	213.6	211.6	210.3
5°	211.1	219.7	227.0	232.7	236.3	232.7	227.0	219.7	211.1	207.1	203.4
7.5°	208.7	220.8	230.9	239.5	245.1	239.5	230.9	220.8	208.7	202.3	195.9
10°	206.2	221.3	234.6	245.6	253.0	245.6	234.6	221.3	206.2	197.2	188.6
12.5°	203.7	221.6	237.8	251.8	261.6	251.8	237.8	221.6	203.7	192.3	181.7
15°	201.2	221.8	240.9	257.9	269.7	257.9	240.9	221.8	201.2	187.5	175.3
17.5°	198.8	221.8	243.9	263.7	277.5	263.7	243.9	221.8	198.8	182.9	169.4
20°	196.3	221.6	246.7	269.3	285.6	269.3	246.7	221.6	196.3	178.5	163.6
22.5°	193.8	221.3	249.3	274.9	293.5	274.9	249.3	221.3	193.8	174.4	158.0
25°	187.8	220.1	251.7	280.1	301.0	280.1	251.7	220.1	187.8	169.2	152.6
27.5°	181.8	217.4	254.0	285.0	308.5	285.0	254.0	217.4	181.8	162.0	147.1
30°	175.9	214.6	256.0	289.8	315.9	289.8	256.0	214.6	175.9	154.9	141.7
32.5°	169.9	211.8	256.5	294.4	322.6	294.4	256.5	211.8	169.9	147.8	134.2
35°	163.9	209.0	256.8	298.8	329.4	298.8	256.8	209.0	163.9	140.9	126.6
37.5°	157.9	206.0	257.1	303.1	336.0	303.1	257.1	206.0	157.9	133.9	119.1
40°	152.0	203.0	257.3	307.2	342.4	307.2	257.3	203.0	152.0	127.0	111.8
42.5°	146.0	199.9	257.6	311.1	348.3	311.1	257.6	199.9	146.0	120.2	104.7
45°	140.0	196.8	257.7	314.8	353.7	314.8	257.7	196.8	140.0	113.5	97.7
47.5°	131.9	193.4	257.8	318.2	358.9	318.2	257.8	193.4	131.9	106.9	90.9
50°	123.7	188.5	257.6	320.0	363.7	320.0	257.6	188.5	123.7	99.0	84.3
52.5°	115.6	183.6	257.4	321.5	368.0	321.5	257.4	183.6	115.6	91.3	78.0
55°	107.5	178.6	256.8	323.0	372.0	323.0	256.8	178.6	107.5	83.8	71.8
57.5°	99.3	173.4	254.9	324.4	375.5	324.4	254.9	173.4	99.3	76.3	65.1
60°	91.2	168.2	253.0	325.6	378.8	325.6	253.0	168.2	91.2	68.9	58.7
62.5°	83.1	162.8	251.0	326.8	381.9	326.8	251.0	162.8	83.1	61.6	52.5
65°	74.9	157.4	249.0	328.0	384.0	328.0	249.0	157.4	74.9	54.4	46.6
67.5°	66.8	151.8	246.9	329.1	385.7	329.1	246.9	151.8	66.8	47.4	40.9
70°	59.6	146.7	244.6	329.5	386.9	329.5	244.6	146.7	59.6	41.2	35.5
72.5°	52.5	142.4	242.1	328.3	387.9	328.3	242.1	142.4	52.5	36.4	30.2
75°	45.3	137.9	239.4	327.3	388.1	327.3	239.4	137.9	45.3	31.6	26.0
77.5°	38.2	133.2	236.7	326.5	388.1	326.5	236.7	133.2	38.2	26.9	22.8
80°	31.0	128.3	233.8	325.2	388.0	325.2	233.8	128.3	31.0	22.3	19.7
82.5°	23.9	123.3	230.5	322.8	386.6	322.8	230.5	123.3	23.9	17.7	16.7
85°	16.7	118.1	226.9	319.8	385.7	319.8	226.9	118.1	16.7	13.2	13.7
87.5°	9.6	112.6	222.8	316.1	384.5	316.1	222.8	112.6	9.6	8.7	10.8
90°	0.5	113.0	223.2	315.5	385.7	315.5	223.2	113.0	0.5	4.2	7.9
92.5°	9.6	112.6	222.8	316.1	384.5	316.1	222.8	112.6	9.6	8.7	10.8
95°	16.7	118.1	226.9	319.8	385.7	319.8	226.9	118.1	16.7	13.2	13.7
97.5°	23.9	123.3	230.5	322.8	386.6	322.8	230.5	123.3	23.9	17.7	16.7
100°	31.0	128.3	233.8	325.2	388.0	325.2	233.8	128.3	31.0	22.3	19.7
102.5°	38.2	133.2	236.7	326.5	388.1	326.5	236.7	133.2	38.2	26.9	22.8
105°	45.3	137.9	239.4	327.3	388.1	327.3	239.4	137.9	45.3	31.6	26.0
107.5°	52.5	142.4	242.1	328.3	387.9	328.3	242.1	142.4	52.5	36.4	30.2
110°	59.6	146.7	244.6	329.5	386.9	329.5	244.6	146.7	59.6	41.2	35.5



TEST NUMBER: 19153
 CATALOG NUMBER: 604-36-F2/21

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	66.8	151.8	246.9	329.1	385.7	329.1	246.9	151.8	66.8	47.4	40.9
115°	74.9	157.4	249.0	328.0	384.0	328.0	249.0	157.4	74.9	54.4	46.6
117.5°	83.1	162.8	251.0	326.8	381.9	326.8	251.0	162.8	83.1	61.6	52.5
120°	91.2	168.2	253.0	325.6	378.8	325.6	253.0	168.2	91.2	68.9	58.7
122.5°	99.3	173.4	254.9	324.4	375.5	324.4	254.9	173.4	99.3	76.3	65.1
125°	107.5	178.6	256.8	323.0	372.0	323.0	256.8	178.6	107.5	83.8	71.8
127.5°	115.6	183.6	257.4	321.5	368.0	321.5	257.4	183.6	115.6	91.3	78.0
130°	123.7	188.5	257.6	320.0	363.7	320.0	257.6	188.5	123.7	99.0	84.3
132.5°	131.9	193.4	257.8	318.2	358.9	318.2	257.8	193.4	131.9	106.9	90.9
135°	140.0	196.8	257.7	314.8	353.7	314.8	257.7	196.8	140.0	113.5	97.7
137.5°	146.0	199.9	257.6	311.1	348.3	311.1	257.6	199.9	146.0	120.2	104.7
140°	152.0	203.0	257.3	307.2	342.4	307.2	257.3	203.0	152.0	127.0	111.8
142.5°	157.9	206.0	257.1	303.1	336.0	303.1	257.1	206.0	157.9	133.9	119.1
145°	163.9	209.0	256.8	298.8	329.4	298.8	256.8	209.0	163.9	140.9	126.6
147.5°	169.9	211.8	256.5	294.4	322.6	294.4	256.5	211.8	169.9	147.8	134.2
150°	175.9	214.6	256.0	289.8	315.9	289.8	256.0	214.6	175.9	154.9	141.7
152.5°	181.8	217.4	254.0	285.0	308.5	285.0	254.0	217.4	181.8	162.0	147.1
155°	187.8	220.1	251.7	280.1	301.0	280.1	251.7	220.1	187.8	169.2	152.6
157.5°	193.8	221.3	249.3	274.9	293.5	274.9	249.3	221.3	193.8	174.4	158.0
160°	196.3	221.6	246.7	269.3	285.6	269.3	246.7	221.6	196.3	178.5	163.6
162.5°	198.8	221.8	243.9	263.7	277.5	263.7	243.9	221.8	198.8	182.9	169.4
165°	201.2	221.8	240.9	257.9	269.7	257.9	240.9	221.8	201.2	187.5	175.3
167.5°	203.7	221.6	237.8	251.8	261.6	251.8	237.8	221.6	203.7	192.3	181.7
170°	206.2	221.3	234.6	245.6	253.0	245.6	234.6	221.3	206.2	197.2	188.6
172.5°	208.7	220.8	230.9	239.5	245.1	239.5	230.9	220.8	208.7	202.3	195.9
175°	211.1	219.7	227.0	232.7	236.3	232.7	227.0	219.7	211.1	207.1	203.4
177.5°	213.6	218.0	222.2	225.5	227.5	225.5	222.2	218.0	213.6	211.6	210.3
180°	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1



TEST NUMBER: 19153
 CATALOG NUMBER: 604-36-F2/21

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	216.1	216.1	216.1	216.1	216.1	216.1
2.5°	209.8	210.3	209.8	210.3	211.6	213.6
5°	201.2	201.5	201.2	203.4	207.1	211.1
7.5°	192.3	192.5	192.3	195.9	202.3	208.7
10°	183.8	183.7	183.8	188.6	197.2	206.2
12.5°	176.0	175.9	176.0	181.7	192.3	203.7
15°	168.5	167.9	168.5	175.3	187.5	201.2
17.5°	161.6	161.6	161.6	169.4	182.9	198.8
20°	155.1	154.8	155.1	163.6	178.5	196.3
22.5°	148.3	147.5	148.3	158.0	174.4	193.8
25°	141.4	139.9	141.4	152.6	169.2	187.8
27.5°	134.5	132.3	134.5	147.1	162.0	181.8
30°	127.7	124.8	127.7	141.7	154.9	175.9
32.5°	121.0	117.5	121.0	134.2	147.8	169.9
35°	114.4	110.3	114.4	126.6	140.9	163.9
37.5°	108.0	103.0	108.0	119.1	133.9	157.9
40°	101.6	96.3	101.6	111.8	127.0	152.0
42.5°	95.3	89.4	95.3	104.7	120.2	146.0
45°	89.3	82.9	89.3	97.7	113.5	140.0
47.5°	83.3	76.6	83.3	90.9	106.9	131.9
50°	76.3	70.3	76.3	84.3	99.0	123.7
52.5°	69.8	64.5	69.8	78.0	91.3	115.6
55°	63.5	58.6	63.5	71.8	83.8	107.5
57.5°	57.5	53.1	57.5	65.1	76.3	99.3
60°	51.9	47.8	51.9	58.7	68.9	91.2
62.5°	46.6	42.9	46.6	52.5	61.6	83.1
65°	41.7	38.3	41.7	46.6	54.4	74.9
67.5°	37.2	33.9	37.2	40.9	47.4	66.8
70°	32.8	29.8	32.8	35.5	41.2	59.6
72.5°	28.5	26.0	28.5	30.2	36.4	52.5
75°	24.6	22.6	24.6	26.0	31.6	45.3
77.5°	21.0	19.6	21.0	22.8	26.9	38.2
80°	17.8	17.0	17.8	19.7	22.3	31.0
82.5°	15.5	14.8	15.5	16.7	17.7	23.9
85°	13.9	13.2	13.9	13.7	13.2	16.7
87.5°	12.4	12.4	12.4	10.8	8.7	9.6
90°	10.9	11.8	10.9	7.9	4.2	0.5
92.5°	12.4	12.4	12.4	10.8	8.7	9.6
95°	13.9	13.2	13.9	13.7	13.2	16.7
97.5°	15.5	14.8	15.5	16.7	17.7	23.9
100°	17.8	17.0	17.8	19.7	22.3	31.0
102.5°	21.0	19.6	21.0	22.8	26.9	38.2
105°	24.6	22.6	24.6	26.0	31.6	45.3
107.5°	28.5	26.0	28.5	30.2	36.4	52.5
110°	32.8	29.8	32.8	35.5	41.2	59.6



TEST NUMBER: 19153
 CATALOG NUMBER: 604-36-F2/21

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	37.2	33.9	37.2	40.9	47.4	66.8
115°	41.7	38.3	41.7	46.6	54.4	74.9
117.5°	46.6	42.9	46.6	52.5	61.6	83.1
120°	51.9	47.8	51.9	58.7	68.9	91.2
122.5°	57.5	53.1	57.5	65.1	76.3	99.3
125°	63.5	58.6	63.5	71.8	83.8	107.5
127.5°	69.8	64.5	69.8	78.0	91.3	115.6
130°	76.3	70.3	76.3	84.3	99.0	123.7
132.5°	83.3	76.6	83.3	90.9	106.9	131.9
135°	89.3	82.9	89.3	97.7	113.5	140.0
137.5°	95.3	89.4	95.3	104.7	120.2	146.0
140°	101.6	96.3	101.6	111.8	127.0	152.0
142.5°	108.0	103.0	108.0	119.1	133.9	157.9
145°	114.4	110.3	114.4	126.6	140.9	163.9
147.5°	121.0	117.5	121.0	134.2	147.8	169.9
150°	127.7	124.8	127.7	141.7	154.9	175.9
152.5°	134.5	132.3	134.5	147.1	162.0	181.8
155°	141.4	139.9	141.4	152.6	169.2	187.8
157.5°	148.3	147.5	148.3	158.0	174.4	193.8
160°	155.1	154.8	155.1	163.6	178.5	196.3
162.5°	161.6	161.6	161.6	169.4	182.9	198.8
165°	168.5	167.9	168.5	175.3	187.5	201.2
167.5°	176.0	175.9	176.0	181.7	192.3	203.7
170°	183.8	183.7	183.8	188.6	197.2	206.2
172.5°	192.3	192.5	192.3	195.9	202.3	208.7
175°	201.2	201.5	201.2	203.4	207.1	211.1
177.5°	209.8	210.3	209.8	210.3	211.6	213.6
180°	216.1	216.1	216.1	216.1	216.1	216.1

(END OF REPORT)