

Scaled data based on original data using
LM-66-11 Electrical and Photometric Measurements of Single-Ended Compact
Fluorescent Lamps

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: SHAPER

Report Number: 19363

Luminaire Tested: **672-WP-CF2/27**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 19363
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 672-WP-CF2/27
Description: EXTERIOR WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC LENS
Light Source: TWO SYLVANIA 27 WATT CPFL LAMPS

FT24DL/835. LUMEN RATING = 3600 LMS.

Ballast/Driver: -

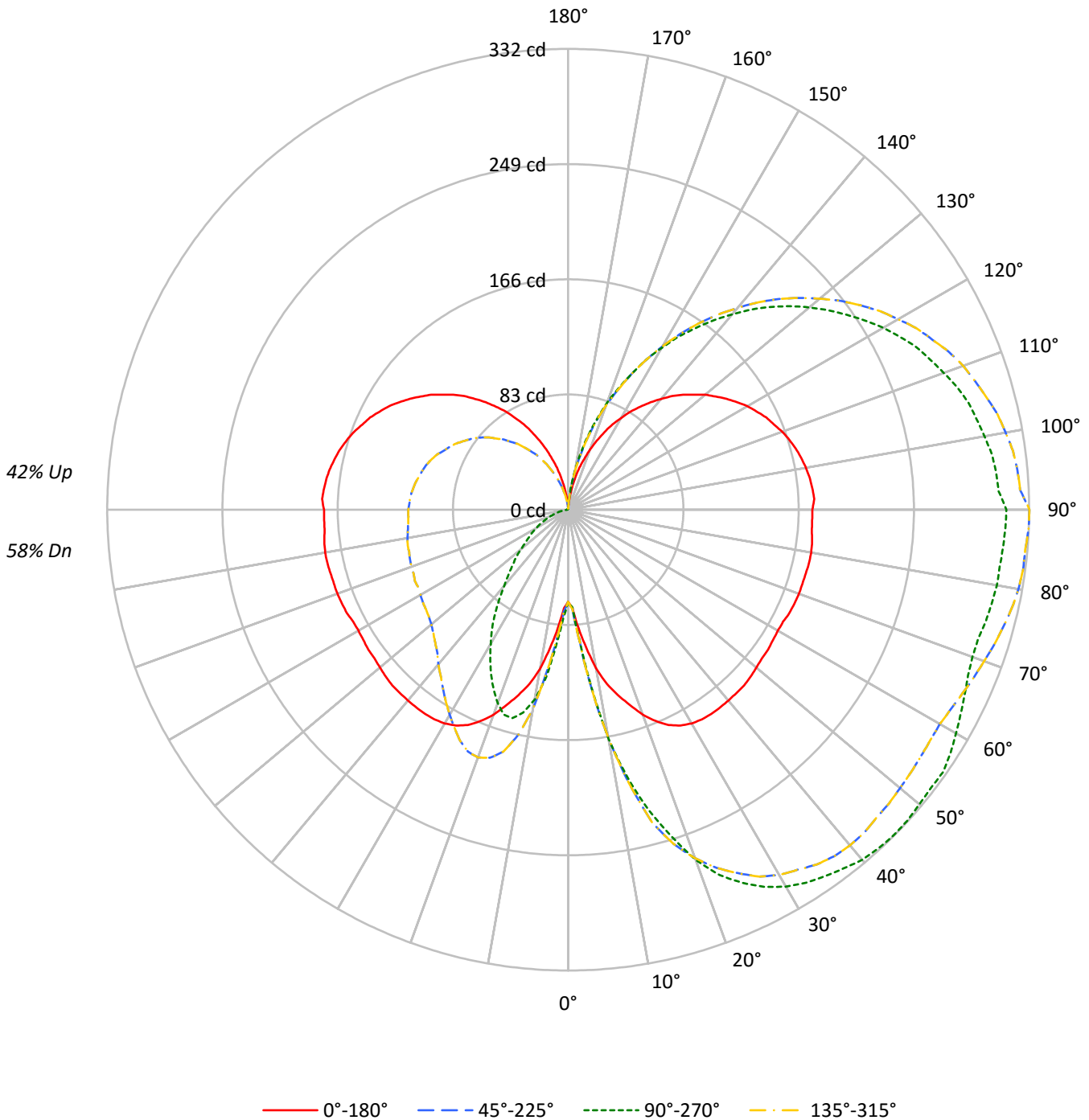
Summary

Lumens per Lamp: 3600 (1 lamp)
Luminaire Lumens: 2192.7 lumens
Efficiency: 60.9%
Efficacy: 44.7 lumens/watt
Spacing Criteria (0/90/45): 2.85 / 2.9 / 2.98
Luminous Opening: Rectangular w/ Sides (W: 0.35' x L: 0.46' x H: 1.23')
CIE Type: General Diffuse

Input Watts (W): 49
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

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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	66	66	66	66	62	62	62	62	53	53	53	46	46	46	39	39	39	35
1	58	54	50	47	53	50	47	44	42	40	38	36	34	32	29	28	27	24
2	51	45	40	36	47	42	38	34	36	32	29	30	27	25	24	22	20	18
3	46	39	33	29	42	36	31	27	31	27	23	25	22	20	21	18	16	14
4	42	34	28	24	39	31	26	22	27	22	19	22	19	16	18	15	13	11
5	38	30	24	20	35	28	23	19	24	19	16	20	16	14	16	13	11	9
6	35	27	21	17	32	25	20	16	21	17	14	18	14	12	14	12	9	8
7	32	24	18	15	30	22	17	14	19	15	12	16	12	10	13	10	8	7
8	30	22	16	13	28	20	15	12	17	13	10	14	11	9	12	9	7	6
9	28	20	15	11	26	18	14	10	16	12	9	13	10	8	11	8	6	5
10	26	18	13	10	24	17	12	9	14	11	8	12	9	7	10	7	6	4

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	4439	4439	4439	4439
5°	4656	4866	4656	4984
10°	5356	7021	5356	5814
15°	5569	7985	5569	5543
20°	5668	8382	5668	4630
25°	5617	8292	5617	3668
30°	5396	7990	5396	2842
35°	5103	7601	5103	2170
40°	4830	7278	4830	1582
45°	4609	6945	4609	1185
50°	4395	6618	4395	888
55°	4250	6381	4250	662
60°	4141	6085	4141	502
65°	4132	5839	4132	360
70°	4143	5683	4143	249
75°	4169	5697	4169	152
80°	4233	5767	4233	81
85°	4280	5856	4280	28



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	10.6	0.5	0.3
10°-20°	52.5	2.4	1.5
20°-30°	100.1	4.6	2.8
30°-40°	136.0	6.2	3.8
40°-50°	161.5	7.4	4.5
50°-60°	180.7	8.2	5.0
60°-70°	196.9	9.0	5.5
70°-80°	210.5	9.6	5.8
80°-90°	217.5	9.9	6.0
90°-100°	214.0	9.8	5.9
100°-110°	199.1	9.1	5.5
110°-120°	172.9	7.9	4.8
120°-130°	138.1	6.3	3.8
130°-140°	99.5	4.5	2.8
140°-150°	62.0	2.8	1.7
150°-160°	30.5	1.4	0.8
160°-170°	9.5	0.4	0.3
170°-180°	0.9	0.0	0.0
0°-30°	163.1	7.4	4.5
0°-40°	299.1	13.6	8.3
0°-60°	641.3	29.2	17.8
0°-90°	1266.2	57.7	35.2
90°-120°	586.0	26.7	16.3
90°-150°	885.5	40.4	24.6
90°-180°	926.0	42.2	25.7
0°-180°	2192.7	100.0	60.9

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	66	66	66	66	66	
5°	86	95	86	97	86	9
15°	138	224	138	156	138	40
25°	171	297	171	131	171	79
35°	180	322	180	92	180	113
45°	179	332	179	57	179	138
55°	176	330	176	34	176	157
65°	176	315	176	19	176	174
75°	177	311	177	8	177	188
85°	176	314	176	2	176	144
90°	176	316	176	0	176	97
95°	176	309	176	0	176	144
105°	170	298	170	0	170	179
115°	157	277	157	0	157	156
125°	139	245	139	0	139	125
135°	117	207	117	0	117	91
145°	90	160	90	0	90	57
155°	62	108	62	0	62	29
165°	31	55	31	0	31	9
175°	5	9	5	0	5	1
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	66.4	66.4	66.4	66.4	66.4	66.4	66.4	66.4	66.4	66.4	66.4
2.5°	71.0	71.6	71.9	71.4	70.6	71.4	71.9	71.6	71.0	71.9	73.7
5°	85.6	89.1	95.9	97.5	94.8	97.5	95.9	89.1	85.6	87.4	92.8
7.5°	100.5	112.5	130.9	132.5	129.2	132.5	130.9	112.5	100.5	107.4	117.3
10°	116.1	138.5	167.0	174.5	167.5	174.5	167.0	138.5	116.1	127.8	145.1
12.5°	128.6	160.7	201.2	209.8	197.9	209.8	201.2	160.7	128.6	143.6	166.0
15°	138.1	181.4	233.1	235.8	224.0	235.8	233.1	181.4	138.1	159.0	180.4
17.5°	147.5	197.5	252.4	257.5	246.5	257.5	252.4	197.5	147.5	171.3	187.4
20°	157.2	211.3	267.2	278.2	268.5	278.2	267.2	211.3	157.2	181.4	189.9
22.5°	164.8	219.9	279.3	296.6	284.9	296.6	279.3	219.9	164.8	188.7	188.7
25°	171.1	227.1	288.9	309.2	296.6	309.2	288.9	227.1	171.1	192.0	183.9
27.5°	175.3	232.5	298.0	318.8	306.3	318.8	298.0	232.5	175.3	191.7	177.2
30°	177.8	236.0	303.8	326.3	313.5	326.3	303.8	236.0	177.8	189.9	170.6
32.5°	179.1	239.7	307.6	332.2	318.7	332.2	307.6	239.7	179.1	187.4	164.0
35°	179.6	241.7	312.0	335.7	322.3	335.7	312.0	241.7	179.6	183.9	157.2
37.5°	179.6	241.5	314.7	338.0	325.8	338.0	314.7	241.5	179.6	181.4	150.8
40°	179.5	240.7	315.7	339.8	329.3	339.8	315.7	240.7	179.5	178.0	145.5
42.5°	179.2	241.3	315.6	342.7	330.8	342.7	315.6	241.3	179.2	174.3	139.5
45°	179.1	241.1	313.9	343.9	331.6	343.9	313.9	241.1	179.1	171.2	135.4
47.5°	178.2	240.9	313.3	343.5	331.4	343.5	313.3	240.9	178.2	167.9	131.7
50°	176.9	241.1	312.0	342.7	330.1	342.7	312.0	241.1	176.9	165.9	128.6
52.5°	175.9	241.3	311.0	341.5	329.3	341.5	311.0	241.3	175.9	163.8	126.5
55°	175.7	241.7	310.0	339.8	329.5	339.8	310.0	241.7	175.7	161.3	125.1
57.5°	174.8	242.4	309.2	340.0	326.4	340.0	309.2	242.4	174.8	159.9	124.1
60°	174.4	244.2	309.0	339.0	322.5	339.0	309.0	244.2	174.4	159.5	122.8
62.5°	174.5	245.6	310.8	337.4	318.7	337.4	310.8	245.6	174.5	158.6	121.6
65°	175.9	247.5	313.3	335.3	315.1	335.3	313.3	247.5	175.9	159.6	121.8
67.5°	176.4	249.1	316.1	334.4	311.7	334.4	316.1	249.1	176.4	159.2	120.5
70°	176.9	251.4	318.8	334.1	309.8	334.1	318.8	251.4	176.9	159.5	120.0
72.5°	176.9	253.5	322.0	335.3	309.6	335.3	322.0	253.5	176.9	160.1	119.5
75°	177.2	255.3	324.6	337.5	311.3	337.5	324.6	255.3	177.2	159.6	118.5
77.5°	177.7	256.3	327.3	340.0	312.4	340.0	327.3	256.3	177.7	159.9	118.4
80°	177.7	257.5	329.3	341.7	313.5	341.7	329.3	257.5	177.7	159.2	117.5
82.5°	177.2	258.4	330.4	342.3	313.5	342.3	330.4	258.4	177.2	158.9	116.5
85°	176.1	258.4	330.4	342.9	314.3	342.9	330.4	258.4	176.1	157.6	115.7
87.5°	175.9	258.4	331.8	344.4	315.1	344.4	331.8	258.4	175.9	157.8	115.2
90°	175.9	258.4	332.2	344.8	315.6	344.8	332.2	258.4	175.9	157.6	115.2
92.5°	177.4	255.7	325.8	337.4	310.2	337.4	325.8	255.7	177.4	157.0	114.4
95°	176.5	254.5	324.8	335.7	309.4	335.7	324.8	254.5	176.5	155.9	114.0
97.5°	175.5	253.2	323.1	333.8	307.7	333.8	323.1	253.2	175.5	155.2	112.8
100°	173.9	250.2	319.9	331.6	304.4	331.6	319.9	250.2	173.9	153.5	111.7
102.5°	171.9	247.2	316.8	327.7	301.3	327.7	316.8	247.2	171.9	151.5	110.1
105°	169.8	244.4	312.0	324.2	298.3	324.2	312.0	244.4	169.8	149.4	108.7
107.5°	167.1	240.1	307.3	319.3	293.7	319.3	307.3	240.1	167.1	146.1	107.2
110°	164.1	236.2	302.8	313.1	288.0	313.1	302.8	236.2	164.1	143.8	105.0



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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°	160.4	231.2	296.9	307.3	282.2	307.3	296.9	231.2	160.4	140.1	102.9
115°	157.3	225.8	289.6	301.0	276.9	301.0	289.6	225.8	157.3	137.5	99.6
117.5°	153.1	220.1	282.9	292.7	269.5	292.7	282.9	220.1	153.1	133.8	97.0
120°	149.1	213.5	274.4	284.7	262.1	284.7	274.4	213.5	149.1	129.8	94.4
122.5°	144.1	206.4	266.2	275.0	253.6	275.0	266.2	206.4	144.1	125.7	91.1
125°	139.2	199.6	256.8	266.2	244.8	266.2	256.8	199.6	139.2	120.5	87.9
127.5°	133.9	190.9	247.1	255.7	236.0	255.7	247.1	190.9	133.9	116.2	84.8
130°	128.8	183.1	236.5	245.4	226.7	245.4	236.5	183.1	128.8	111.1	80.9
132.5°	122.5	174.3	225.8	233.3	217.0	233.3	225.8	174.3	122.5	106.0	77.2
135°	117.1	165.2	214.6	221.5	206.6	221.5	214.6	165.2	117.1	100.4	72.3
137.5°	111.0	156.3	202.7	209.4	195.7	209.4	202.7	156.3	111.0	95.5	68.7
140°	104.1	146.1	189.7	196.7	183.6	196.7	189.7	146.1	104.1	89.5	63.6
142.5°	97.6	136.4	177.2	183.7	172.0	183.7	177.2	136.4	97.6	83.7	59.7
145°	90.5	125.9	163.8	169.7	159.5	169.7	163.8	125.9	90.5	77.4	54.6
147.5°	83.9	116.1	150.0	156.8	147.8	156.8	150.0	116.1	83.9	70.8	49.9
150°	76.2	105.0	136.0	142.4	134.4	142.4	136.0	105.0	76.2	64.2	45.5
152.5°	69.4	95.1	121.6	128.6	122.1	128.6	121.6	95.1	69.4	57.2	39.9
155°	61.5	84.2	107.7	113.8	107.7	113.8	107.7	84.2	61.5	50.0	35.6
157.5°	53.7	73.0	93.0	99.0	94.7	99.0	93.0	73.0	53.7	44.1	29.9
160°	46.3	63.0	80.3	84.2	82.1	84.2	80.3	63.0	46.3	36.9	25.4
162.5°	38.3	51.7	65.9	70.0	68.1	70.0	65.9	51.7	38.3	30.1	20.2
165°	31.4	42.2	52.7	55.6	55.2	55.6	52.7	42.2	31.4	22.7	16.3
167.5°	23.8	31.5	39.6	41.8	41.6	41.8	39.6	31.5	23.8	16.3	11.8
170°	16.8	23.8	28.0	30.1	29.6	30.1	28.0	23.8	16.8	10.9	7.7
172.5°	10.9	15.7	17.5	18.2	18.6	18.2	17.5	15.7	10.9	5.6	5.0
175°	5.3	8.3	8.7	9.8	8.9	9.8	8.7	8.3	5.3	2.8	2.1
177.5°	2.2	3.4	2.9	2.9	2.9	2.9	2.9	3.4	2.2	0.7	1.5
180°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	66.4	66.4	66.4	66.4	66.4	66.4
2.5°	75.7	77.8	75.7	73.7	71.9	71.0
5°	95.1	97.1	95.1	92.8	87.4	85.6
7.5°	122.6	121.6	122.6	117.3	107.4	100.5
10°	145.6	138.7	145.6	145.1	127.8	116.1
12.5°	159.9	149.6	159.9	166.0	143.6	128.6
15°	167.3	155.5	167.3	180.4	159.0	138.1
17.5°	169.5	154.7	169.5	187.4	171.3	147.5
20°	166.5	148.3	166.5	189.9	181.4	157.2
22.5°	161.5	140.3	161.5	188.7	188.7	164.8
25°	153.5	131.2	153.5	183.9	192.0	171.1
27.5°	144.2	121.6	144.2	177.2	191.7	175.3
30°	134.9	111.5	134.9	170.6	189.9	177.8
32.5°	126.9	102.1	126.9	164.0	187.4	179.1
35°	118.9	92.0	118.9	157.2	183.9	179.6
37.5°	109.7	81.7	109.7	150.8	181.4	179.6
40°	102.1	71.6	102.1	145.5	178.0	179.5
42.5°	95.7	63.8	95.7	139.5	174.3	179.2
45°	90.1	56.6	90.1	135.4	171.2	179.1
47.5°	86.0	50.9	86.0	131.7	167.9	178.2
50°	81.3	44.3	81.3	128.6	165.9	176.9
52.5°	77.8	38.9	77.8	126.5	163.8	175.9
55°	75.1	34.2	75.1	125.1	161.3	175.7
57.5°	72.3	30.7	72.3	124.1	159.9	174.8
60°	70.4	26.6	70.4	122.8	159.5	174.4
62.5°	68.1	23.3	68.1	121.6	158.6	174.5
65°	66.0	19.4	66.0	121.8	159.6	175.9
67.5°	64.4	16.5	64.4	120.5	159.2	176.4
70°	62.6	13.6	62.6	120.0	159.5	176.9
72.5°	60.7	10.4	60.7	119.5	160.1	176.9
75°	59.3	8.3	59.3	118.5	159.6	177.2
77.5°	57.0	6.4	57.0	118.4	159.9	177.7
80°	56.4	4.4	56.4	117.5	159.2	177.7
82.5°	54.2	2.9	54.2	116.5	158.9	177.2
85°	53.6	1.5	53.6	115.7	157.6	176.1
87.5°	52.7	0.5	52.7	115.2	157.8	175.9
90°	52.5	0.5	52.5	115.2	157.6	175.9
92.5°	53.9	0.5	53.9	114.4	157.0	177.4
95°	53.6	0.5	53.6	114.0	155.9	176.5
97.5°	52.5	0.5	52.5	112.8	155.2	175.5
100°	52.1	0.5	52.1	111.7	153.5	173.9
102.5°	50.9	0.5	50.9	110.1	151.5	171.9
105°	50.5	0.5	50.5	108.7	149.4	169.8
107.5°	49.2	0.5	49.2	107.2	146.1	167.1
110°	47.8	0.5	47.8	105.0	143.8	164.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	47.2	0.5	47.2	102.9	140.1	160.4
115°	45.9	0.5	45.9	99.6	137.5	157.3
117.5°	44.3	0.5	44.3	97.0	133.8	153.1
120°	42.0	0.5	42.0	94.4	129.8	149.1
122.5°	40.3	0.5	40.3	91.1	125.7	144.1
125°	38.9	0.5	38.9	87.9	120.5	139.2
127.5°	36.9	0.5	36.9	84.8	116.2	133.9
130°	35.2	0.5	35.2	80.9	111.1	128.8
132.5°	32.8	0.5	32.8	77.2	106.0	122.5
135°	31.3	0.5	31.3	72.3	100.4	117.1
137.5°	29.5	0.5	29.5	68.7	95.5	111.0
140°	27.0	0.5	27.0	63.6	89.5	104.1
142.5°	24.8	0.5	24.8	59.7	83.7	97.6
145°	22.5	0.5	22.5	54.6	77.4	90.5
147.5°	19.8	0.5	19.8	49.9	70.8	83.9
150°	17.8	0.5	17.8	45.5	64.2	76.2
152.5°	15.1	0.5	15.1	39.9	57.2	69.4
155°	12.4	0.5	12.4	35.6	50.0	61.5
157.5°	11.4	0.5	11.4	29.9	44.1	53.7
160°	9.1	0.5	9.1	25.4	36.9	46.3
162.5°	7.2	0.5	7.2	20.2	30.1	38.3
165°	5.0	0.5	5.0	16.3	22.7	31.4
167.5°	3.8	0.5	3.8	11.8	16.3	23.8
170°	2.5	0.5	2.5	7.7	10.9	16.8
172.5°	1.5	0.5	1.5	5.0	5.6	10.9
175°	0.5	0.5	0.5	2.1	2.8	5.3
177.5°	0.9	0.5	0.9	1.5	0.7	2.2
180°	0.8	0.8	0.8	0.8	0.8	0.8

(END OF REPORT)