

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: 20441B

Luminaire Tested: **664-CFL/1/18**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 20441B
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 664-CFL/1/18
Description: INTERIOR WALL MOUNT LUMINAIRE WITH WHITE PLASTIC LENS AND SHADE

Light Source: ONE 18 WATT CPFL LAMP. LUMEN RATING = 1250 LMS.

Ballast/Driver: -

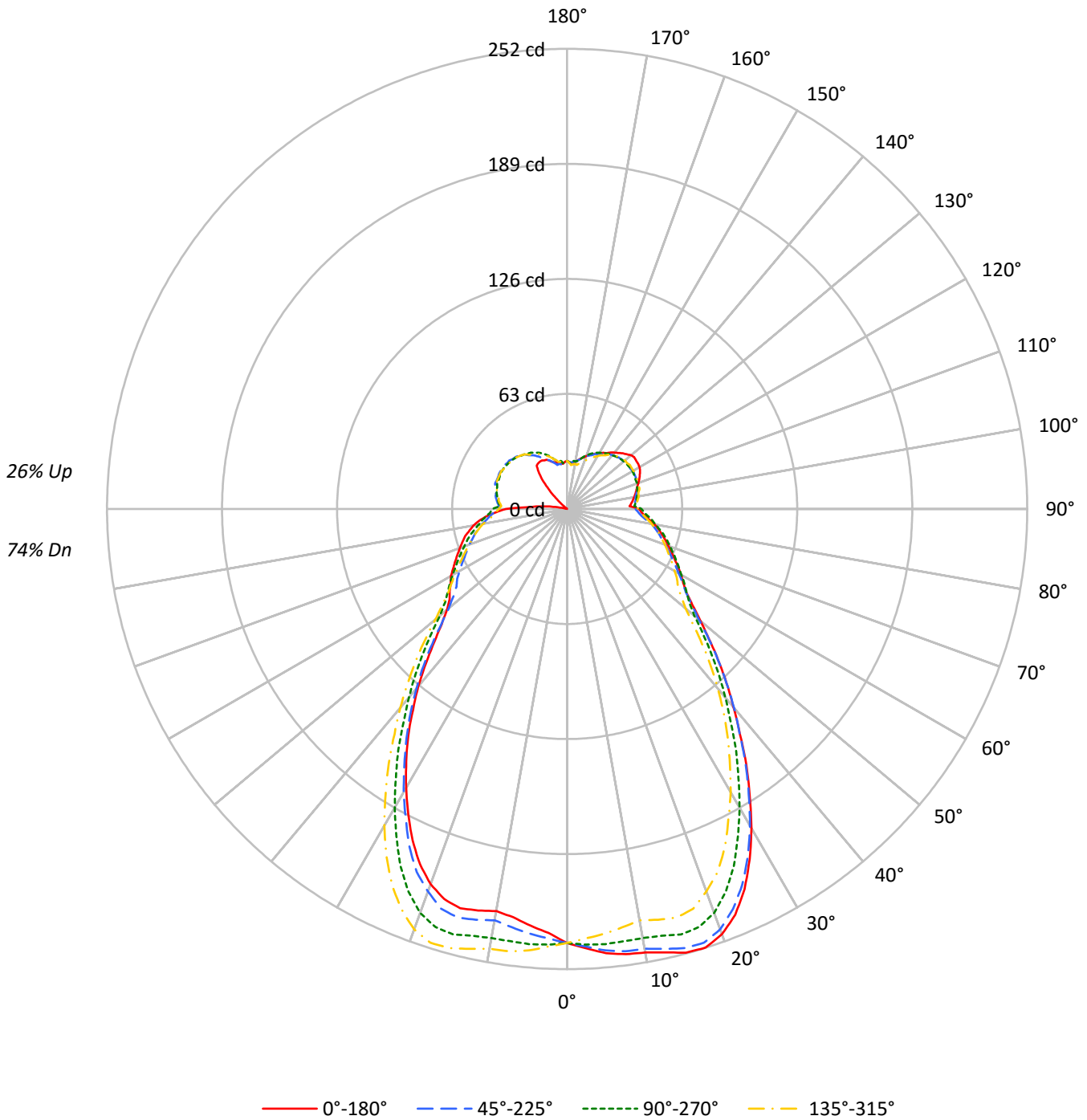
Summary

Lumens per Lamp: 1250 (1 lamp)
Luminaire Lumens: 838.5 lumens
Efficiency: 67.1%
Efficacy: -
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.2
Luminous Opening: (L: 0 ' x W: -1.17 ' x H: 0 '
CIE Type: Semi-Direct

Input Watts (W): 0
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	76	76	76	76	72	72	72	72	65	65	65	58	58	58	52	52	52	49
1	68	64	61	58	64	61	58	56	55	53	51	49	48	46	44	43	42	39
2	62	56	51	47	58	53	49	45	48	45	42	43	40	38	39	37	35	32
3	56	49	44	40	53	47	42	38	42	38	35	38	35	32	34	32	30	27
4	52	44	38	34	49	42	37	33	38	34	30	34	31	28	31	28	26	24
5	48	39	33	29	45	38	32	28	34	30	26	31	27	24	28	25	23	21
6	44	36	30	26	42	34	29	25	31	27	23	28	25	22	26	23	20	18
7	41	32	27	23	39	31	26	22	28	24	21	26	22	19	24	20	18	17
8	38	30	24	20	36	28	23	20	26	22	19	24	20	17	22	19	16	15
9	36	27	22	18	34	26	21	18	24	20	17	22	18	16	20	17	15	14
10	34	25	20	17	32	24	19	16	22	18	15	21	17	14	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	Luminous shape not found, reference photometric report, or contact the photometric lab for calculations.			
5°				
10°				
15°				
20°				
25°				
30°				
35°				
40°				
45°				
50°				
55°				
60°				
65°				
70°				
75°				
80°				
85°				



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	22.7	2.7	1.8
10°-20°	67.6	8.1	5.4
20°-30°	98.5	11.8	7.9
30°-40°	100.9	12.0	8.1
40°-50°	85.8	10.2	6.9
50°-60°	71.3	8.5	5.7
60°-70°	64.9	7.7	5.2
70°-80°	57.8	6.9	4.6
80°-90°	48.1	5.7	3.8
90°-100°	38.8	4.6	3.1
100°-110°	37.6	4.5	3.0
110°-120°	36.0	4.3	2.9
120°-130°	32.7	3.9	2.6
130°-140°	28.2	3.4	2.3
140°-150°	22.2	2.7	1.8
150°-160°	14.8	1.8	1.2
160°-170°	7.9	0.9	0.6
170°-180°	2.4	0.3	0.2
0°-30°	188.8	22.5	15.1
0°-40°	289.8	34.6	23.2
0°-60°	446.9	53.3	35.8
0°-90°	617.7	73.7	49.4
90°-120°	112.5	13.4	9.0
90°-150°	195.7	23.3	15.7
90°-180°	221.0	26.4	17.7
0°-180°	838.5	100.0	67.1

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	238	238	238	238	238	
5°	244	239	229	239	244	23
15°	252	241	226	241	252	71
25°	230	216	200	216	230	105
35°	171	161	152	161	171	107
45°	117	111	103	111	117	90
55°	80	80	78	80	80	73
65°	65	66	68	66	65	65
75°	54	55	58	55	54	57
85°	43	44	44	44	43	36
90°	39	41	34	41	39	21
95°	35	38	16	38	35	29
105°	39	40	1	40	39	42
115°	44	41	0	41	44	43
125°	46	41	0	41	46	41
135°	43	40	11	40	43	33
145°	37	37	29	37	37	24
155°	33	34	29	34	33	15
165°	29	28	26	28	29	8
175°	25	25	25	25	25	2
180°	26	26	26	26	26	



TEST NUMBER: 20441B
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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	237.7	237.7	237.7	237.7	237.7	237.7	237.7	237.7	237.7	237.7	237.7
2.5°	240.8	240.8	239.9	239.3	238.8	236.9	235.4	233.5	232.4	233.5	235.4
5°	244.2	244.3	242.7	241.5	239.2	235.8	233.5	230.7	229.1	230.7	233.5
7.5°	245.9	246.2	244.3	241.9	238.7	234.0	231.1	227.8	225.5	227.8	231.1
10°	246.6	247.1	244.5	242.7	238.6	233.1	228.7	225.5	223.6	225.5	228.7
12.5°	248.7	249.3	246.7	243.5	239.4	235.4	230.4	227.3	225.2	227.3	230.4
15°	251.5	252.6	249.0	245.2	241.2	236.4	231.6	228.1	226.3	228.1	231.6
17.5°	251.9	253.2	249.1	244.7	240.0	234.2	229.5	225.9	224.0	225.9	229.5
20°	247.8	250.0	245.0	241.4	235.4	228.3	222.9	220.2	218.6	220.2	222.9
22.5°	240.5	242.4	237.2	233.5	226.9	218.9	215.2	211.8	210.6	211.8	215.2
25°	229.8	231.9	227.0	223.0	215.9	208.4	204.3	201.2	200.2	201.2	204.3
27.5°	216.4	217.9	214.3	210.1	202.4	194.4	191.3	189.2	188.4	189.2	191.3
30°	201.9	203.4	200.2	196.8	188.8	181.2	179.0	176.6	176.3	176.6	179.0
32.5°	186.0	187.5	185.1	182.4	174.6	167.9	165.8	163.4	164.0	163.4	165.8
35°	171.1	172.3	170.3	168.5	161.2	154.6	153.4	151.1	151.8	151.1	153.4
37.5°	155.5	157.1	155.3	154.7	147.1	141.6	140.8	139.5	138.6	139.5	140.8
40°	141.8	143.0	142.1	141.8	134.7	129.3	128.4	127.5	126.8	127.5	128.4
42.5°	129.1	130.1	129.1	128.8	122.9	116.3	116.4	114.8	114.2	114.8	116.4
45°	117.0	117.8	116.8	116.8	111.3	104.9	104.4	103.1	102.7	103.1	104.4
47.5°	105.2	106.1	105.1	105.4	100.6	94.7	93.4	93.4	93.1	93.4	93.4
50°	95.2	94.6	94.1	95.2	90.9	87.1	84.6	85.8	85.8	85.8	84.6
52.5°	86.5	85.9	85.7	87.3	84.4	81.2	78.5	81.4	81.2	81.4	78.5
55°	79.6	80.1	79.3	82.3	79.8	77.6	74.0	78.8	78.5	78.8	74.0
57.5°	75.4	76.0	74.8	78.6	76.2	73.7	71.4	75.9	75.6	75.9	71.4
60°	72.0	72.3	70.6	74.8	72.3	70.4	68.0	73.7	73.5	73.7	68.0
62.5°	68.4	68.5	66.8	71.1	68.9	66.8	64.9	70.5	70.3	70.5	64.9
65°	64.9	65.7	63.3	67.9	65.8	63.9	61.9	67.9	67.6	67.9	61.9
67.5°	61.9	62.7	60.1	64.6	62.8	61.3	59.4	64.8	64.9	64.8	59.4
70°	58.9	60.0	57.2	61.3	59.9	59.1	57.0	62.1	62.5	62.1	57.0
72.5°	56.4	57.0	54.3	59.2	57.5	56.6	54.3	60.1	60.1	60.1	54.3
75°	53.7	54.7	51.9	56.7	54.8	54.3	52.3	57.5	57.9	57.5	52.3
77.5°	51.3	52.3	49.4	53.7	51.9	51.6	49.2	55.4	54.8	55.4	49.2
80°	48.6	49.5	46.7	51.0	49.1	49.1	47.1	52.7	52.0	52.7	47.1
82.5°	45.5	46.8	43.2	47.4	46.9	46.5	44.4	50.0	48.5	50.0	44.4
85°	42.6	44.3	40.6	45.3	44.3	44.4	42.2	47.1	43.9	47.1	42.2
87.5°	40.7	41.5	38.9	43.1	42.1	42.5	39.9	43.9	38.7	43.9	39.9
90°	39.4	40.1	37.4	41.6	40.8	41.4	38.9	41.0	33.5	41.0	38.9
92.5°	34.2	36.7	36.1	35.5	36.8	37.0	37.3	30.4	21.5	30.4	37.3
95°	35.3	37.3	37.0	37.1	37.6	37.5	38.3	29.9	16.0	29.9	38.3
97.5°	36.2	38.3	37.9	37.8	38.3	37.7	39.0	28.6	10.8	28.6	39.0
100°	37.3	39.9	38.0	38.6	38.9	38.6	39.8	27.4	5.4	27.4	39.8
102.5°	38.3	40.7	38.9	39.2	39.5	39.0	39.9	25.1	1.7	25.1	39.9
105°	39.2	41.6	39.9	39.2	39.9	39.8	41.0	23.5	0.7	23.5	41.0
107.5°	40.2	42.3	40.4	39.9	40.2	39.6	41.4	22.0	0.0	22.0	41.4
110°	41.5	43.1	41.1	40.8	40.8	40.4	41.9	20.1	0.0	20.1	41.9



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 CATALOG NUMBER: 664-CFL/1/18

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	42.8	43.9	41.4	41.1	40.7	40.2	41.6	19.4	0.0	19.4	41.6
115°	43.9	44.0	41.4	40.8	40.9	40.8	41.6	18.4	0.0	18.4	41.6
117.5°	45.0	45.1	41.4	41.4	41.2	40.4	42.0	17.8	0.0	17.8	42.0
120°	45.8	45.3	41.6	41.4	41.3	41.0	41.9	17.3	0.0	17.3	41.9
122.5°	46.1	45.2	41.0	41.0	41.3	40.8	41.8	17.5	0.0	17.5	41.8
125°	46.1	45.2	41.3	41.1	41.0	40.8	42.0	18.1	0.0	18.1	42.0
127.5°	46.4	44.4	40.6	40.4	40.8	40.3	41.3	19.6	0.3	19.6	41.3
130°	45.8	43.9	40.3	40.2	40.6	40.2	41.4	21.0	1.7	21.0	41.4
132.5°	44.3	42.8	40.3	39.5	40.2	39.2	40.4	23.2	5.7	23.2	40.4
135°	43.1	41.9	39.9	39.0	39.7	39.0	40.1	24.9	10.6	24.9	40.1
137.5°	41.6	41.0	39.1	38.6	39.2	38.6	39.5	26.8	16.0	26.8	39.5
140°	40.3	40.2	38.5	38.3	38.3	37.7	38.3	28.7	21.5	28.7	38.3
142.5°	39.0	39.0	37.7	37.1	38.0	37.4	37.4	29.8	25.8	29.8	37.4
145°	37.3	37.9	36.2	36.5	37.1	36.2	35.9	30.5	29.0	30.5	35.9
147.5°	36.5	36.8	35.5	35.5	36.6	35.9	34.9	29.9	29.6	29.9	34.9
150°	35.1	35.6	34.4	34.6	35.5	34.7	33.5	30.1	29.9	30.1	33.5
152.5°	34.2	34.7	34.0	33.7	34.8	34.1	32.0	29.3	29.9	29.3	32.0
155°	33.0	33.5	32.6	32.6	33.7	32.5	30.2	28.7	29.4	28.7	30.2
157.5°	31.9	32.3	31.7	31.7	32.6	31.3	29.3	28.1	29.2	28.1	29.3
160°	30.8	30.7	30.8	31.1	31.3	29.5	28.3	27.5	28.2	27.5	28.3
162.5°	29.5	29.5	29.6	29.9	30.0	28.3	27.1	27.1	27.0	27.1	27.1
165°	28.6	29.0	28.2	28.2	28.3	26.6	25.9	25.8	26.5	25.8	25.9
167.5°	27.4	27.8	27.2	27.5	27.1	25.1	24.7	25.1	25.7	25.1	24.7
170°	26.1	26.8	26.1	26.3	26.4	25.0	25.1	25.3	25.7	25.3	25.1
172.5°	25.9	26.6	26.1	26.9	26.6	24.9	24.7	24.4	24.9	24.4	24.7
175°	25.1	25.8	25.6	25.6	25.1	24.4	24.1	24.7	24.9	24.7	24.1
177.5°	25.8	25.7	25.6	25.7	25.6	25.4	25.4	25.4	25.9	25.4	25.4
180°	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3



TEST NUMBER: 20441B
 CATALOG NUMBER: 664-CFL/1/18

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	237.7	237.7	237.7	237.7	237.7	237.7
2.5°	236.9	238.8	239.3	239.9	240.8	240.8
5°	235.8	239.2	241.5	242.7	244.3	244.2
7.5°	234.0	238.7	241.9	244.3	246.2	245.9
10°	233.1	238.6	242.7	244.5	247.1	246.6
12.5°	235.4	239.4	243.5	246.7	249.3	248.7
15°	236.4	241.2	245.2	249.0	252.6	251.5
17.5°	234.2	240.0	244.7	249.1	253.2	251.9
20°	228.3	235.4	241.4	245.0	250.0	247.8
22.5°	218.9	226.9	233.5	237.2	242.4	240.5
25°	208.4	215.9	223.0	227.0	231.9	229.8
27.5°	194.4	202.4	210.1	214.3	217.9	216.4
30°	181.2	188.8	196.8	200.2	203.4	201.9
32.5°	167.9	174.6	182.4	185.1	187.5	186.0
35°	154.6	161.2	168.5	170.3	172.3	171.1
37.5°	141.6	147.1	154.7	155.3	157.1	155.5
40°	129.3	134.7	141.8	142.1	143.0	141.8
42.5°	116.3	122.9	128.8	129.1	130.1	129.1
45°	104.9	111.3	116.8	116.8	117.8	117.0
47.5°	94.7	100.6	105.4	105.1	106.1	105.2
50°	87.1	90.9	95.2	94.1	94.6	95.2
52.5°	81.2	84.4	87.3	85.7	85.9	86.5
55°	77.6	79.8	82.3	79.3	80.1	79.6
57.5°	73.7	76.2	78.6	74.8	76.0	75.4
60°	70.4	72.3	74.8	70.6	72.3	72.0
62.5°	66.8	68.9	71.1	66.8	68.5	68.4
65°	63.9	65.8	67.9	63.3	65.7	64.9
67.5°	61.3	62.8	64.6	60.1	62.7	61.9
70°	59.1	59.9	61.3	57.2	60.0	58.9
72.5°	56.6	57.5	59.2	54.3	57.0	56.4
75°	54.3	54.8	56.7	51.9	54.7	53.7
77.5°	51.6	51.9	53.7	49.4	52.3	51.3
80°	49.1	49.1	51.0	46.7	49.5	48.6
82.5°	46.5	46.9	47.4	43.2	46.8	45.5
85°	44.4	44.3	45.3	40.6	44.3	42.6
87.5°	42.5	42.1	43.1	38.9	41.5	40.7
90°	41.4	40.8	41.6	37.4	40.1	39.4
92.5°	37.0	36.8	35.5	36.1	36.7	34.2
95°	37.5	37.6	37.1	37.0	37.3	35.3
97.5°	37.7	38.3	37.8	37.9	38.3	36.2
100°	38.6	38.9	38.6	38.0	39.9	37.3
102.5°	39.0	39.5	39.2	38.9	40.7	38.3
105°	39.8	39.9	39.2	39.9	41.6	39.2
107.5°	39.6	40.2	39.9	40.4	42.3	40.2
110°	40.4	40.8	40.8	41.1	43.1	41.5



TEST NUMBER: 20441B
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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	40.2	40.7	41.1	41.4	43.9	42.8
115°	40.8	40.9	40.8	41.4	44.0	43.9
117.5°	40.4	41.2	41.4	41.4	45.1	45.0
120°	41.0	41.3	41.4	41.6	45.3	45.8
122.5°	40.8	41.3	41.0	41.0	45.2	46.1
125°	40.8	41.0	41.1	41.3	45.2	46.1
127.5°	40.3	40.8	40.4	40.6	44.4	46.4
130°	40.2	40.6	40.2	40.3	43.9	45.8
132.5°	39.2	40.2	39.5	40.3	42.8	44.3
135°	39.0	39.7	39.0	39.9	41.9	43.1
137.5°	38.6	39.2	38.6	39.1	41.0	41.6
140°	37.7	38.3	38.3	38.5	40.2	40.3
142.5°	37.4	38.0	37.1	37.7	39.0	39.0
145°	36.2	37.1	36.5	36.2	37.9	37.3
147.5°	35.9	36.6	35.5	35.5	36.8	36.5
150°	34.7	35.5	34.6	34.4	35.6	35.1
152.5°	34.1	34.8	33.7	34.0	34.7	34.2
155°	32.5	33.7	32.6	32.6	33.5	33.0
157.5°	31.3	32.6	31.7	31.7	32.3	31.9
160°	29.5	31.3	31.1	30.8	30.7	30.8
162.5°	28.3	30.0	29.9	29.6	29.5	29.5
165°	26.6	28.3	28.2	28.2	29.0	28.6
167.5°	25.1	27.1	27.5	27.2	27.8	27.4
170°	25.0	26.4	26.3	26.1	26.8	26.1
172.5°	24.9	26.6	26.9	26.1	26.6	25.9
175°	24.4	25.1	25.6	25.6	25.8	25.1
177.5°	25.4	25.6	25.7	25.6	25.7	25.8
180°	26.3	26.3	26.3	26.3	26.3	26.3

(END OF REPORT)