

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: 15625-RW-PRO

Luminaire Tested: **FHL-7L-56**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 15625-RW-PRO
Test Lab: CROUSE-HINDS, INC.
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FHL-7L-56
Description: CAST ALUMINUM HOUSING, EXTRUDED ALUMINUM HEATSINK, CLEAR
GLASS ENCLOSURE.
Light Source: SIX WHITE LEDS

Ballast/Driver: LED POWER SUPPLIES: TWO THOMAS RESEARCH PRODUCTS
EWC-050S110SS-50W

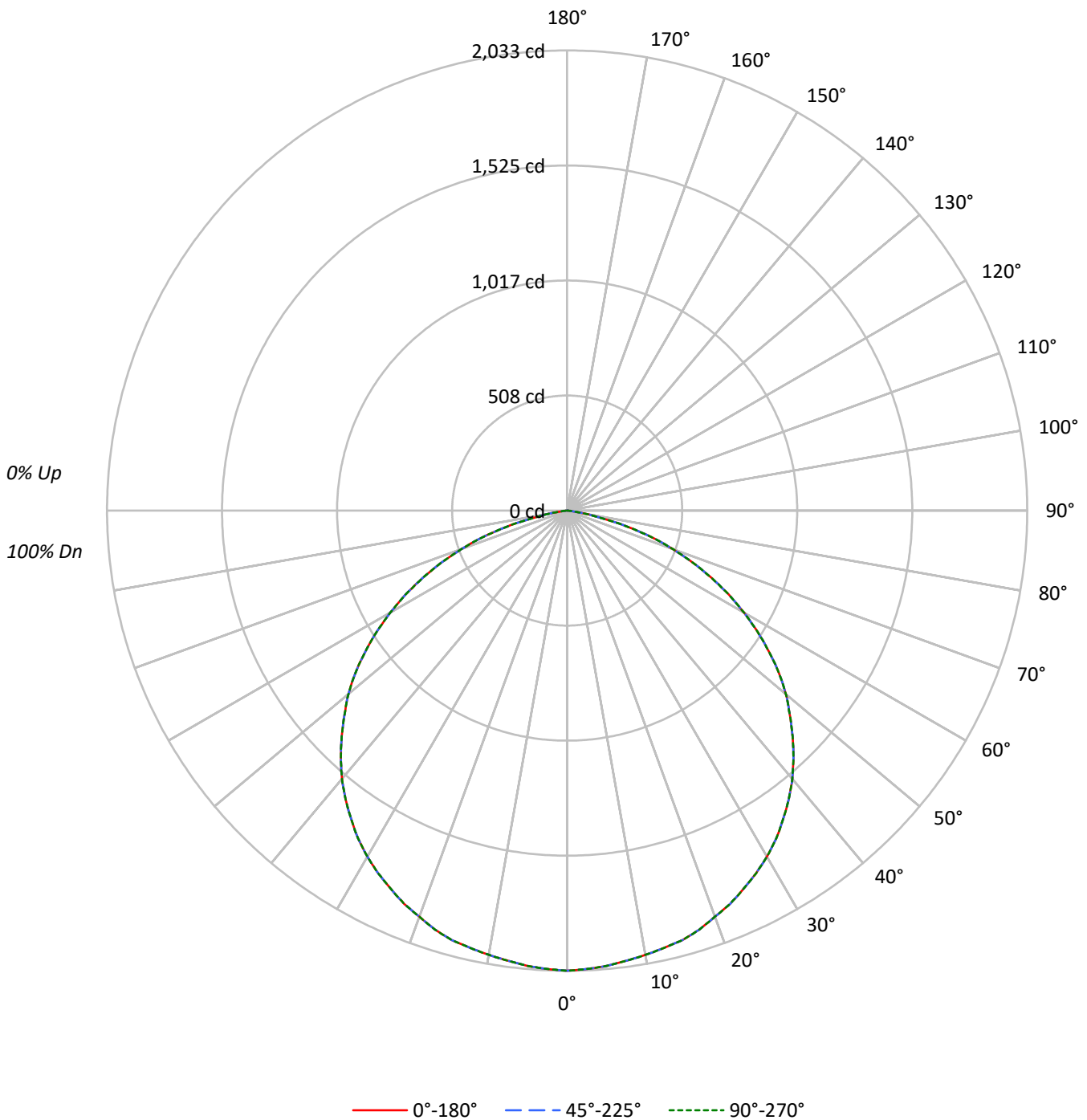
Summary

Lumens per Lamp: 5706 (1 lamp)
Luminaire Lumens: 5707.8 lumens
Efficiency: 100.0%
Efficacy: 58.3 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.4
Luminous Opening: Circular (Dia: 0.58' x H: 0')
CIE Type: Direct

Input Watts (W): 97.9
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85
2	100	92	86	80	97	90	84	79	87	82	77	83	79	75	80	77	74	72
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	81975	81975	81975
5°	81721	81721	81721
10°	81602	81602	81602
15°	82028	82028	82028
20°	81915	81915	81915
25°	82041	82041	82041
30°	82225	82225	82225
35°	81909	81909	81909
40°	81482	81482	81482
45°	80347	80347	80347
50°	79165	79165	79165
55°	76626	76626	76626
60°	72741	72741	72741
65°	67169	67169	67169
70°	58475	58475	58475
75°	43466	43466	43466
80°	18576	18576	18576
85°	2313	2313	2313



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	191.9	3.4	3.4	0°	2033	2033	2033	2033	2033	
10°-20°	554.1	9.7	9.7	5°	2019	2019	2019	2019	2019	192
20°-30°	850.8	14.9	14.9	15°	1965	1965	1965	1965	1965	554
30°-40°	1041.4	18.2	18.3	25°	1844	1844	1844	1844	1844	851
40°-50°	1086.6	19.0	19.0	35°	1664	1664	1664	1664	1664	1041
50°-60°	972.6	17.0	17.0	45°	1409	1409	1409	1409	1409	1087
60°-70°	694.8	12.2	12.2	55°	1090	1090	1090	1090	1090	973
70°-80°	294.8	5.2	5.2	65°	704	704	704	704	704	695
80°-90°	20.9	0.4	0.4	75°	279	279	279	279	279	295
90°-100°	0.0	0.0	0.0	85°	5	5	5	5	5	21
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	0
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	1596.8	28.0	28.0	165°	0	0	0	0	0	0
0°-40°	2638.2	46.2	46.2	175°	0	0	0	0	0	0
0°-60°	4697.4	82.3	82.3	180°	0	0	0	0	0	0
0°-90°	5707.8	100.0	100.0							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	5707.8	100.0	100.0							



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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033
2.5°	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027
5°	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019
7.5°	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
10°	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
12.5°	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979
15°	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965
17.5°	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941
20°	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909
22.5°	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881
25°	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844
27.5°	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
30°	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766
32.5°	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719
35°	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664
37.5°	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608
40°	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548
42.5°	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480
45°	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409
47.5°	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334
50°	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262
52.5°	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180
55°	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090
57.5°	998	998	998	998	998	998	998	998	998	998	998
60°	902	902	902	902	902	902	902	902	902	902	902
62.5°	805	805	805	805	805	805	805	805	805	805	805
65°	704	704	704	704	704	704	704	704	704	704	704
67.5°	602	602	602	602	602	602	602	602	602	602	602
70°	496	496	496	496	496	496	496	496	496	496	496
72.5°	392	392	392	392	392	392	392	392	392	392	392
75°	279	279	279	279	279	279	279	279	279	279	279
77.5°	162	162	162	162	162	162	162	162	162	162	162
80°	80	80	80	80	80	80	80	80	80	80	80
82.5°	31	31	31	31	31	31	31	31	31	31	31
85°	5	5	5	5	5	5	5	5	5	5	5
87.5°	1	1	1	1	1	1	1	1	1	1	1
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	47.5°	50°	52.5°
0°	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033
2.5°	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027
5°	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019
7.5°	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
10°	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
12.5°	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979
15°	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965
17.5°	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941
20°	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909
22.5°	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881
25°	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844
27.5°	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
30°	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766
32.5°	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719
35°	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664
37.5°	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608
40°	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548
42.5°	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480
45°	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409
47.5°	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334
50°	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262
52.5°	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180
55°	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090
57.5°	998	998	998	998	998	998	998	998	998	998	998
60°	902	902	902	902	902	902	902	902	902	902	902
62.5°	805	805	805	805	805	805	805	805	805	805	805
65°	704	704	704	704	704	704	704	704	704	704	704
67.5°	602	602	602	602	602	602	602	602	602	602	602
70°	496	496	496	496	496	496	496	496	496	496	496
72.5°	392	392	392	392	392	392	392	392	392	392	392
75°	279	279	279	279	279	279	279	279	279	279	279
77.5°	162	162	162	162	162	162	162	162	162	162	162
80°	80	80	80	80	80	80	80	80	80	80	80
82.5°	31	31	31	31	31	31	31	31	31	31	31
85°	5	5	5	5	5	5	5	5	5	5	5
87.5°	1	1	1	1	1	1	1	1	1	1	1
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	47.5°	50°	52.5°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°	77.5°	80°
0°	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033
2.5°	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027
5°	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019
7.5°	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
10°	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
12.5°	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979
15°	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965
17.5°	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941
20°	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909
22.5°	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881
25°	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844
27.5°	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
30°	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766
32.5°	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719
35°	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664
37.5°	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608
40°	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548
42.5°	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480
45°	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409
47.5°	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334
50°	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262
52.5°	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180
55°	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090
57.5°	998	998	998	998	998	998	998	998	998	998	998
60°	902	902	902	902	902	902	902	902	902	902	902
62.5°	805	805	805	805	805	805	805	805	805	805	805
65°	704	704	704	704	704	704	704	704	704	704	704
67.5°	602	602	602	602	602	602	602	602	602	602	602
70°	496	496	496	496	496	496	496	496	496	496	496
72.5°	392	392	392	392	392	392	392	392	392	392	392
75°	279	279	279	279	279	279	279	279	279	279	279
77.5°	162	162	162	162	162	162	162	162	162	162	162
80°	80	80	80	80	80	80	80	80	80	80	80
82.5°	31	31	31	31	31	31	31	31	31	31	31
85°	5	5	5	5	5	5	5	5	5	5	5
87.5°	1	1	1	1	1	1	1	1	1	1	1
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: 15625-RW-PRO
 CATALOG NUMBER: FHL-7L-56

CANDELA DISTRIBUTION (continued):

	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°	77.5°	80°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: 15625-RW-PRO
 CATALOG NUMBER: FHL-7L-56

CANDELA DISTRIBUTION (continued):

	82.5°	85°	87.5°	90°	92.5°	95°	97.5°	100°	102.5°	105°	107.5°
0°	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033
2.5°	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027
5°	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019
7.5°	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
10°	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
12.5°	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979
15°	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965
17.5°	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941
20°	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909
22.5°	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881
25°	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844
27.5°	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
30°	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766
32.5°	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719
35°	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664
37.5°	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608
40°	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548
42.5°	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480
45°	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409
47.5°	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334
50°	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262
52.5°	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180
55°	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090
57.5°	998	998	998	998	998	998	998	998	998	998	998
60°	902	902	902	902	902	902	902	902	902	902	902
62.5°	805	805	805	805	805	805	805	805	805	805	805
65°	704	704	704	704	704	704	704	704	704	704	704
67.5°	602	602	602	602	602	602	602	602	602	602	602
70°	496	496	496	496	496	496	496	496	496	496	496
72.5°	392	392	392	392	392	392	392	392	392	392	392
75°	279	279	279	279	279	279	279	279	279	279	279
77.5°	162	162	162	162	162	162	162	162	162	162	162
80°	80	80	80	80	80	80	80	80	80	80	80
82.5°	31	31	31	31	31	31	31	31	31	31	31
85°	5	5	5	5	5	5	5	5	5	5	5
87.5°	1	1	1	1	1	1	1	1	1	1	1
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: 15625-RW-PRO
 CATALOG NUMBER: FHL-7L-56

CANDELA DISTRIBUTION (continued):

	82.5°	85°	87.5°	90°	92.5°	95°	97.5°	100°	102.5°	105°	107.5°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: 15625-RW-PRO
 CATALOG NUMBER: FHL-7L-56

CANDELA DISTRIBUTION (continued):

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°
0°	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033
2.5°	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027
5°	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019
7.5°	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
10°	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
12.5°	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979
15°	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965
17.5°	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941
20°	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909
22.5°	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881
25°	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844
27.5°	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
30°	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766
32.5°	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719
35°	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664
37.5°	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608
40°	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548
42.5°	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480
45°	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409
47.5°	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334
50°	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262
52.5°	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180
55°	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090
57.5°	998	998	998	998	998	998	998	998	998	998	998
60°	902	902	902	902	902	902	902	902	902	902	902
62.5°	805	805	805	805	805	805	805	805	805	805	805
65°	704	704	704	704	704	704	704	704	704	704	704
67.5°	602	602	602	602	602	602	602	602	602	602	602
70°	496	496	496	496	496	496	496	496	496	496	496
72.5°	392	392	392	392	392	392	392	392	392	392	392
75°	279	279	279	279	279	279	279	279	279	279	279
77.5°	162	162	162	162	162	162	162	162	162	162	162
80°	80	80	80	80	80	80	80	80	80	80	80
82.5°	31	31	31	31	31	31	31	31	31	31	31
85°	5	5	5	5	5	5	5	5	5	5	5
87.5°	1	1	1	1	1	1	1	1	1	1	1
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: 15625-RW-PRO
 CATALOG NUMBER: FHL-7L-56

CANDELA DISTRIBUTION (continued):

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: 15625-RW-PRO
 CATALOG NUMBER: FHL-7L-56

CANDELA DISTRIBUTION (continued):

	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°
0°	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033
2.5°	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027	2027
5°	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019
7.5°	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
10°	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
12.5°	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979	1979
15°	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965
17.5°	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941	1941
20°	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909	1909
22.5°	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881	1881
25°	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844	1844
27.5°	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807	1807
30°	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766	1766
32.5°	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719
35°	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664	1664
37.5°	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608
40°	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548
42.5°	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480	1480
45°	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409
47.5°	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334
50°	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262	1262
52.5°	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180	1180
55°	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090	1090
57.5°	998	998	998	998	998	998	998	998	998	998	998
60°	902	902	902	902	902	902	902	902	902	902	902
62.5°	805	805	805	805	805	805	805	805	805	805	805
65°	704	704	704	704	704	704	704	704	704	704	704
67.5°	602	602	602	602	602	602	602	602	602	602	602
70°	496	496	496	496	496	496	496	496	496	496	496
72.5°	392	392	392	392	392	392	392	392	392	392	392
75°	279	279	279	279	279	279	279	279	279	279	279
77.5°	162	162	162	162	162	162	162	162	162	162	162
80°	80	80	80	80	80	80	80	80	80	80	80
82.5°	31	31	31	31	31	31	31	31	31	31	31
85°	5	5	5	5	5	5	5	5	5	5	5
87.5°	1	1	1	1	1	1	1	1	1	1	1
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: 15625-RW-PRO
 CATALOG NUMBER: FHL-7L-56

CANDELA DISTRIBUTION (continued):

	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	165°	167.5°	170°	172.5°	175°	177.5°	180°
0°	2033	2033	2033	2033	2033	2033	2033
2.5°	2027	2027	2027	2027	2027	2027	2027
5°	2019	2019	2019	2019	2019	2019	2019
7.5°	2006	2006	2006	2006	2006	2006	2006
10°	1993	1993	1993	1993	1993	1993	1993
12.5°	1979	1979	1979	1979	1979	1979	1979
15°	1965	1965	1965	1965	1965	1965	1965
17.5°	1941	1941	1941	1941	1941	1941	1941
20°	1909	1909	1909	1909	1909	1909	1909
22.5°	1881	1881	1881	1881	1881	1881	1881
25°	1844	1844	1844	1844	1844	1844	1844
27.5°	1807	1807	1807	1807	1807	1807	1807
30°	1766	1766	1766	1766	1766	1766	1766
32.5°	1719	1719	1719	1719	1719	1719	1719
35°	1664	1664	1664	1664	1664	1664	1664
37.5°	1608	1608	1608	1608	1608	1608	1608
40°	1548	1548	1548	1548	1548	1548	1548
42.5°	1480	1480	1480	1480	1480	1480	1480
45°	1409	1409	1409	1409	1409	1409	1409
47.5°	1334	1334	1334	1334	1334	1334	1334
50°	1262	1262	1262	1262	1262	1262	1262
52.5°	1180	1180	1180	1180	1180	1180	1180
55°	1090	1090	1090	1090	1090	1090	1090
57.5°	998	998	998	998	998	998	998
60°	902	902	902	902	902	902	902
62.5°	805	805	805	805	805	805	805
65°	704	704	704	704	704	704	704
67.5°	602	602	602	602	602	602	602
70°	496	496	496	496	496	496	496
72.5°	392	392	392	392	392	392	392
75°	279	279	279	279	279	279	279
77.5°	162	162	162	162	162	162	162
80°	80	80	80	80	80	80	80
82.5°	31	31	31	31	31	31	31
85°	5	5	5	5	5	5	5
87.5°	1	1	1	1	1	1	1
90°	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0



TEST NUMBER: 15625-RW-PRO
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CANDELA DISTRIBUTION (continued):

	165°	167.5°	170°	172.5°	175°	177.5°	180°
112.5°	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0

(END OF REPORT)