

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: 253P137

Luminaire Tested: **1200-OB-26-CFL/6/27**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 253P137
Test Lab: METALUX LABORATORIES
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 1200-OB-26-CFL/6/27
Description: SHAPER 26 INCH 1200 SERIES DIRECT/INDIRECT INDOOR PENDANT FIXTURE
Light Source: SIX - FT24DL - 1800 LUMENS - 24 WATTS
SIX GX24 T4 COMPACT FLUORESCENT LAMPS
Ballast/Driver: SWB-26-2-120

Summary

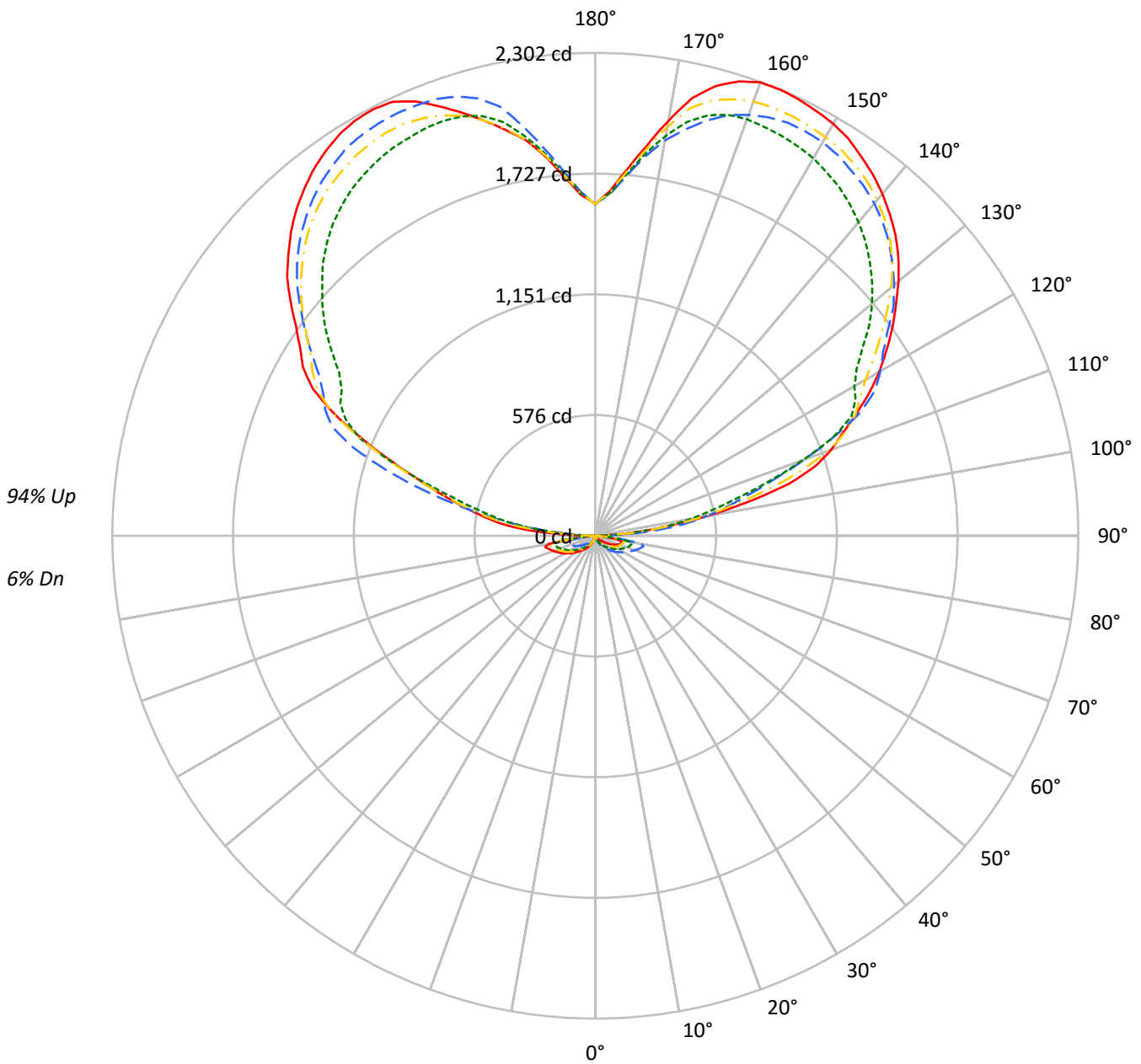
Lumens per Lamp: 1800 (6 lamps)
Luminaire Lumens: 9167.4 lumens
Efficiency: 84.9%
Efficacy: 155.4 lumens/watt
Spacing Criteria (0/90/45): 6.49 / 6.52 / 5.92
Luminous Opening: Circular (Dia: 2.17' x H: 0')
CIE Type: Indirect

Input Watts (W): 59
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



— 0°-180° — 45°-225° - - 90°-270° - - 135°-315°



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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	82	82	82	82	71	71	71	71	50	50	50	31	31	31	14	14	14	5
1	74	71	67	64	64	61	58	56	43	41	40	26	26	25	11	11	10	4
2	67	61	56	52	58	53	49	45	37	35	32	23	21	20	9	9	8	2
3	61	53	47	43	52	46	41	37	32	29	27	20	18	16	8	7	7	2
4	56	47	40	36	48	40	35	31	28	25	22	17	15	14	7	6	5	1
5	51	41	35	30	43	36	30	26	25	22	19	15	13	12	6	5	4	1
6	46	37	30	26	40	32	26	22	22	19	16	14	12	10	5	5	4	1
7	43	33	26	22	37	28	23	19	20	16	14	12	10	9	5	4	3	1
8	39	30	23	19	34	26	20	17	18	15	12	11	9	7	4	3	3	0
9	37	27	21	17	31	23	18	15	16	13	11	10	8	6	4	3	2	0
10	34	24	19	15	29	21	16	13	15	12	9	9	7	6	4	3	2	0

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	26	26	26	26
5°	26	23	26	26
10°	24	27	27	27
15°	30	30	27	27
20°	43	31	47	40
25°	32	93	132	106
30°	57	138	196	148
35°	96	182	257	200
40°	99	248	335	267
45°	124	322	429	351
50°	173	413	559	441
55°	280	555	743	601
60°	455	747	993	806
65°	691	995	1313	1085
70°	1024	1366	1818	1494
75°	1478	1951	2639	2177
80°	1849	2925	3732	3329
85°	134	536	167	1306



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.8	0.0	0.0
10°-20°	2.9	0.0	0.0
20°-30°	13.1	0.1	0.1
30°-40°	32.5	0.4	0.3
40°-50°	58.9	0.6	0.5
50°-60°	98.0	1.1	0.9
60°-70°	145.7	1.6	1.3
70°-80°	185.4	2.0	1.7
80°-90°	55.9	0.6	0.5
90°-100°	260.0	2.8	2.4
100°-110°	846.2	9.2	7.8
110°-120°	1339.6	14.6	12.4
120°-130°	1496.5	16.3	13.9
130°-140°	1514.9	16.5	14.0
140°-150°	1337.8	14.6	12.4
150°-160°	1012.1	11.0	9.4
160°-170°	594.7	6.5	5.5
170°-180°	172.3	1.9	1.6
0°-30°	16.9	0.2	0.2
0°-40°	49.4	0.5	0.5
0°-60°	206.3	2.3	1.9
0°-90°	593.3	6.5	5.5
90°-120°	2445.8	26.7	22.6
90°-150°	6795.0	74.1	62.9
90°-180°	8574.0	93.5	79.4
0°-180°	9167.4	100.0	84.9

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	9	9	9	9	9	
5°	9	8	9	9	9	1
15°	10	10	9	9	10	3
25°	10	29	41	33	10	6
35°	27	51	72	56	27	15
45°	30	78	104	85	30	24
55°	55	109	146	118	55	51
65°	100	144	190	157	100	99
75°	131	173	234	193	131	134
85°	4	16	5	39	4	29
90°	7	3	18	5	7	10
95°	189	187	335	200	189	230
105°	954	707	755	699	954	966
115°	1370	1346	1371	1313	1370	1361
125°	1729	1552	1741	1533	1729	1546
135°	2024	1850	2051	1836	2024	1560
145°	2208	2028	2239	2021	2208	1384
155°	2295	2103	2283	2095	2295	1060
165°	2220	2075	2049	2071	2220	627
175°	1754	1733	1720	1734	1754	175
180°	1581	1581	1581	1581	1581	



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CANDELA DISTRIBUTION (FULL):

	0°	20°	30°	40°	60°	80°	90°	100°	120°	140°	150°
0°	9	9	9	9	9	9	9	9	9	9	9
2.5°	10	9	9	9	8	9	10	10	10	9	9
5°	9	8	9	9	9	9	8	8	9	8	9
7.5°	9	9	9	10	10	8	8	8	9	9	9
10°	8	9	9	9	9	9	9	7	8	9	9
12.5°	9	9	9	9	9	9	9	9	9	9	9
15°	10	9	9	10	9	10	10	10	10	9	9
17.5°	11	9	11	11	10	11	16	9	11	9	11
20°	14	11	13	14	15	15	10	13	14	11	13
22.5°	11	8	25	30	32	28	24	8	11	8	25
25°	10	22	33	37	41	35	29	22	10	22	33
27.5°	17	31	37	44	48	42	34	25	17	31	37
30°	17	35	44	50	58	51	41	32	17	35	44
32.5°	13	39	51	59	64	58	44	35	13	39	51
35°	27	43	56	64	72	63	51	38	27	43	56
37.5°	30	47	63	73	80	70	58	43	30	47	63
40°	26	54	70	80	88	77	65	48	26	54	70
42.5°	26	60	76	88	95	86	73	56	26	60	76
45°	30	66	85	98	104	93	78	62	30	66	85
47.5°	33	72	89	106	114	101	86	66	33	72	89
50°	38	79	97	114	123	110	91	73	38	79	97
52.5°	47	89	110	125	135	120	101	79	47	89	110
55°	55	98	118	134	146	128	109	90	55	98	118
57.5°	65	106	127	144	155	138	119	96	65	106	127
60°	78	115	138	157	170	149	128	106	78	115	138
62.5°	89	122	149	166	180	159	136	113	89	122	149
65°	100	126	157	175	190	167	144	116	100	126	157
67.5°	111	128	167	186	201	177	152	121	111	128	167
70°	120	132	175	197	213	186	160	123	120	132	175
72.5°	127	134	187	210	223	196	169	127	127	134	187
75°	131	137	193	221	234	207	173	128	131	137	193
77.5°	132	141	199	231	246	213	179	128	132	141	199
80°	110	139	198	224	222	203	174	122	110	139	198
82.5°	48	101	139	128	101	103	111	82	48	101	139
85°	4	32	39	21	5	8	16	15	4	32	39
87.5°	1	1	1	2	2	8	6	2	1	1	1
90°	7	5	5	12	18	4	3	3	7	5	5
92.5°	60	61	68	112	156	76	54	55	60	61	68
95°	189	201	200	265	335	227	187	185	189	201	200
97.5°	355	353	351	414	461	393	336	334	355	353	351
100°	544	508	469	535	549	518	461	495	544	508	469
102.5°	743	643	574	642	644	630	575	644	743	643	574
105°	954	819	699	756	755	751	707	826	954	819	699
107.5°	1097	1001	865	897	879	890	874	1031	1097	1001	865
110°	1195	1178	1040	1068	1028	1049	1051	1238	1195	1178	1040



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CANDELA DISTRIBUTION (continued):

	0°	20°	30°	40°	60°	80°	90°	100°	120°	140°	150°
112.5°	1275	1294	1215	1240	1198	1212	1227	1384	1275	1294	1215
115°	1370	1367	1313	1403	1371	1378	1346	1437	1370	1367	1313
117.5°	1470	1405	1370	1499	1518	1480	1398	1459	1470	1405	1370
120°	1562	1461	1396	1555	1609	1538	1426	1502	1562	1461	1396
122.5°	1645	1547	1447	1612	1668	1590	1476	1582	1645	1547	1447
125°	1729	1639	1533	1686	1741	1661	1552	1671	1729	1639	1533
127.5°	1805	1732	1621	1777	1830	1735	1645	1757	1805	1732	1621
130°	1886	1825	1697	1840	1917	1805	1721	1844	1886	1825	1697
132.5°	1959	1908	1765	1898	1984	1867	1789	1917	1959	1908	1765
135°	2024	1975	1836	1956	2051	1926	1850	1981	2024	1975	1836
137.5°	2078	2030	1894	1999	2109	1977	1905	2035	2078	2030	1894
140°	2128	2077	1944	2038	2159	2018	1951	2084	2128	2077	1944
142.5°	2172	2115	1985	2067	2204	2051	1992	2124	2172	2115	1985
145°	2208	2141	2021	2088	2239	2074	2028	2155	2208	2141	2021
147.5°	2244	2161	2046	2112	2269	2096	2053	2183	2244	2161	2046
150°	2268	2170	2069	2126	2287	2110	2078	2194	2268	2170	2069
152.5°	2282	2176	2086	2132	2292	2122	2093	2201	2282	2176	2086
155°	2295	2181	2095	2135	2283	2126	2103	2201	2295	2181	2095
157.5°	2302	2178	2105	2131	2241	2125	2109	2195	2302	2178	2105
160°	2300	2172	2106	2120	2179	2116	2113	2188	2300	2172	2106
162.5°	2271	2152	2097	2098	2115	2096	2104	2170	2271	2152	2097
165°	2220	2124	2071	2049	2049	2050	2075	2138	2220	2124	2071
167.5°	2138	2072	2020	1984	1982	1989	2021	2080	2138	2072	2020
170°	2009	1968	1934	1914	1916	1918	1936	1973	2009	1968	1934
172.5°	1875	1852	1838	1824	1824	1830	1838	1857	1875	1852	1838
175°	1754	1742	1734	1724	1720	1730	1733	1742	1754	1742	1734
177.5°	1647	1639	1637	1632	1629	1636	1637	1641	1647	1639	1637
180°	1581	1581	1581	1581	1581	1581	1581	1581	1581	1581	1581



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CANDELA DISTRIBUTION (continued):

	160°	180°	200°	210°	220°	240°	260°	270°	280°	300°	320°
0°	9	9	9	9	9	9	9	9	9	9	9
2.5°	9	8	9	10	10	10	9	9	9	8	9
5°	9	9	9	8	8	9	8	9	9	9	9
7.5°	10	10	8	8	8	9	9	9	10	10	8
10°	9	9	9	9	7	8	9	9	9	9	9
12.5°	9	9	9	9	9	9	9	9	9	9	9
15°	10	9	10	10	10	10	9	9	10	9	10
17.5°	11	10	11	16	9	11	9	11	11	10	11
20°	14	15	15	10	13	14	11	13	14	15	15
22.5°	30	32	28	24	8	11	8	25	30	32	28
25°	37	41	35	29	22	10	22	33	37	41	35
27.5°	44	48	42	34	25	17	31	37	44	48	42
30°	50	58	51	41	32	17	35	44	50	58	51
32.5°	59	64	58	44	35	13	39	51	59	64	58
35°	64	72	63	51	38	27	43	56	64	72	63
37.5°	73	80	70	58	43	30	47	63	73	80	70
40°	80	88	77	65	48	26	54	70	80	88	77
42.5°	88	95	86	73	56	26	60	76	88	95	86
45°	98	104	93	78	62	30	66	85	98	104	93
47.5°	106	114	101	86	66	33	72	89	106	114	101
50°	114	123	110	91	73	38	79	97	114	123	110
52.5°	125	135	120	101	79	47	89	110	125	135	120
55°	134	146	128	109	90	55	98	118	134	146	128
57.5°	144	155	138	119	96	65	106	127	144	155	138
60°	157	170	149	128	106	78	115	138	157	170	149
62.5°	166	180	159	136	113	89	122	149	166	180	159
65°	175	190	167	144	116	100	126	157	175	190	167
67.5°	186	201	177	152	121	111	128	167	186	201	177
70°	197	213	186	160	123	120	132	175	197	213	186
72.5°	210	223	196	169	127	127	134	187	210	223	196
75°	221	234	207	173	128	131	137	193	221	234	207
77.5°	231	246	213	179	128	132	141	199	231	246	213
80°	224	222	203	174	122	110	139	198	224	222	203
82.5°	128	101	103	111	82	48	101	139	128	101	103
85°	21	5	8	16	15	4	32	39	21	5	8
87.5°	2	2	8	6	2	1	1	1	2	2	8
90°	12	18	4	3	3	7	5	5	12	18	4
92.5°	112	156	76	54	55	60	61	68	112	156	76
95°	265	335	227	187	185	189	201	200	265	335	227
97.5°	414	461	393	336	334	355	353	351	414	461	393
100°	535	549	518	461	495	544	508	469	535	549	518
102.5°	642	644	630	575	644	743	643	574	642	644	630
105°	756	755	751	707	826	954	819	699	756	755	751
107.5°	897	879	890	874	1031	1097	1001	865	897	879	890
110°	1068	1028	1049	1051	1238	1195	1178	1040	1068	1028	1049



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CANDELA DISTRIBUTION (continued):

	160°	180°	200°	210°	220°	240°	260°	270°	280°	300°	320°
112.5°	1240	1198	1212	1227	1384	1275	1294	1215	1240	1198	1212
115°	1403	1371	1378	1346	1437	1370	1367	1313	1403	1371	1378
117.5°	1499	1518	1480	1398	1459	1470	1405	1370	1499	1518	1480
120°	1555	1609	1538	1426	1502	1562	1461	1396	1555	1609	1538
122.5°	1612	1668	1590	1476	1582	1645	1547	1447	1612	1668	1590
125°	1686	1741	1661	1552	1671	1729	1639	1533	1686	1741	1661
127.5°	1777	1830	1735	1645	1757	1805	1732	1621	1777	1830	1735
130°	1840	1917	1805	1721	1844	1886	1825	1697	1840	1917	1805
132.5°	1898	1984	1867	1789	1917	1959	1908	1765	1898	1984	1867
135°	1956	2051	1926	1850	1981	2024	1975	1836	1956	2051	1926
137.5°	1999	2109	1977	1905	2035	2078	2030	1894	1999	2109	1977
140°	2038	2159	2018	1951	2084	2128	2077	1944	2038	2159	2018
142.5°	2067	2204	2051	1992	2124	2172	2115	1985	2067	2204	2051
145°	2088	2239	2074	2028	2155	2208	2141	2021	2088	2239	2074
147.5°	2112	2269	2096	2053	2183	2244	2161	2046	2112	2269	2096
150°	2126	2287	2110	2078	2194	2268	2170	2069	2126	2287	2110
152.5°	2132	2292	2122	2093	2201	2282	2176	2086	2132	2292	2122
155°	2135	2283	2126	2103	2201	2295	2181	2095	2135	2283	2126
157.5°	2131	2241	2125	2109	2195	2302	2178	2105	2131	2241	2125
160°	2120	2179	2116	2113	2188	2300	2172	2106	2120	2179	2116
162.5°	2098	2115	2096	2104	2170	2271	2152	2097	2098	2115	2096
165°	2049	2049	2050	2075	2138	2220	2124	2071	2049	2049	2050
167.5°	1984	1982	1989	2021	2080	2138	2072	2020	1984	1982	1989
170°	1914	1916	1918	1936	1973	2009	1968	1934	1914	1916	1918
172.5°	1824	1824	1830	1838	1857	1875	1852	1838	1824	1824	1830
175°	1724	1720	1730	1733	1742	1754	1742	1734	1724	1720	1730
177.5°	1632	1629	1636	1637	1641	1647	1639	1637	1632	1629	1636
180°	1581	1581	1581	1581	1581	1581	1581	1581	1581	1581	1581



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CANDELA DISTRIBUTION (continued):

	330°	340°	360°
0°	9	9	9
2.5°	10	10	10
5°	8	8	9
7.5°	8	8	9
10°	9	7	8
12.5°	9	9	9
15°	10	10	10
17.5°	16	9	11
20°	10	13	14
22.5°	24	8	11
25°	29	22	10
27.5°	34	25	17
30°	41	32	17
32.5°	44	35	13
35°	51	38	27
37.5°	58	43	30
40°	65	48	26
42.5°	73	56	26
45°	78	62	30
47.5°	86	66	33
50°	91	73	38
52.5°	101	79	47
55°	109	90	55
57.5°	119	96	65
60°	128	106	78
62.5°	136	113	89
65°	144	116	100
67.5°	152	121	111
70°	160	123	120
72.5°	169	127	127
75°	173	128	131
77.5°	179	128	132
80°	174	122	110
82.5°	111	82	48
85°	16	15	4
87.5°	6	2	1
90°	3	3	7
92.5°	54	55	60
95°	187	185	189
97.5°	336	334	355
100°	461	495	544
102.5°	575	644	743
105°	707	826	954
107.5°	874	1031	1097
110°	1051	1238	1195



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CANDELA DISTRIBUTION (continued):

	330°	340°	360°
112.5°	1227	1384	1275
115°	1346	1437	1370
117.5°	1398	1459	1470
120°	1426	1502	1562
122.5°	1476	1582	1645
125°	1552	1671	1729
127.5°	1645	1757	1805
130°	1721	1844	1886
132.5°	1789	1917	1959
135°	1850	1981	2024
137.5°	1905	2035	2078
140°	1951	2084	2128
142.5°	1992	2124	2172
145°	2028	2155	2208
147.5°	2053	2183	2244
150°	2078	2194	2268
152.5°	2093	2201	2282
155°	2103	2201	2295
157.5°	2109	2195	2302
160°	2113	2188	2300
162.5°	2104	2170	2271
165°	2075	2138	2220
167.5°	2021	2080	2138
170°	1936	1973	2009
172.5°	1838	1857	1875
175°	1733	1742	1754
177.5°	1637	1641	1647
180°	1581	1581	1581

(END OF REPORT)