

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: NEO-RAY

Report Number: 17287

Luminaire Tested: **S7/248R/3T8/ETG4/UEB-SI-S46**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: 17287  
Test Lab: LUMINAIRE TESTING LABORATORY, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S7/248R/3T8/ETG4/UEB-SI-S46  
Description: FORMED WHITE ENAMEL STEEL AND ALUMINUM HOUSING, FORMED WHITE ENAMEL STEEL REFLECTOR, TRANSLUCENT WHITE PLASTIC ENCLOSURE.  
Light Source: THREE 32 WATT T8 LINEAR FLUORESCENT LAMP RATED AT 2850 LUMENS EACH.  
PHILIPS F32T8/TL835/ALTO  
Ballast/Driver: ONE UNIVERSAL LIGHTING TECHNOLOGIES "TRIAD" B332IUNVHP-A

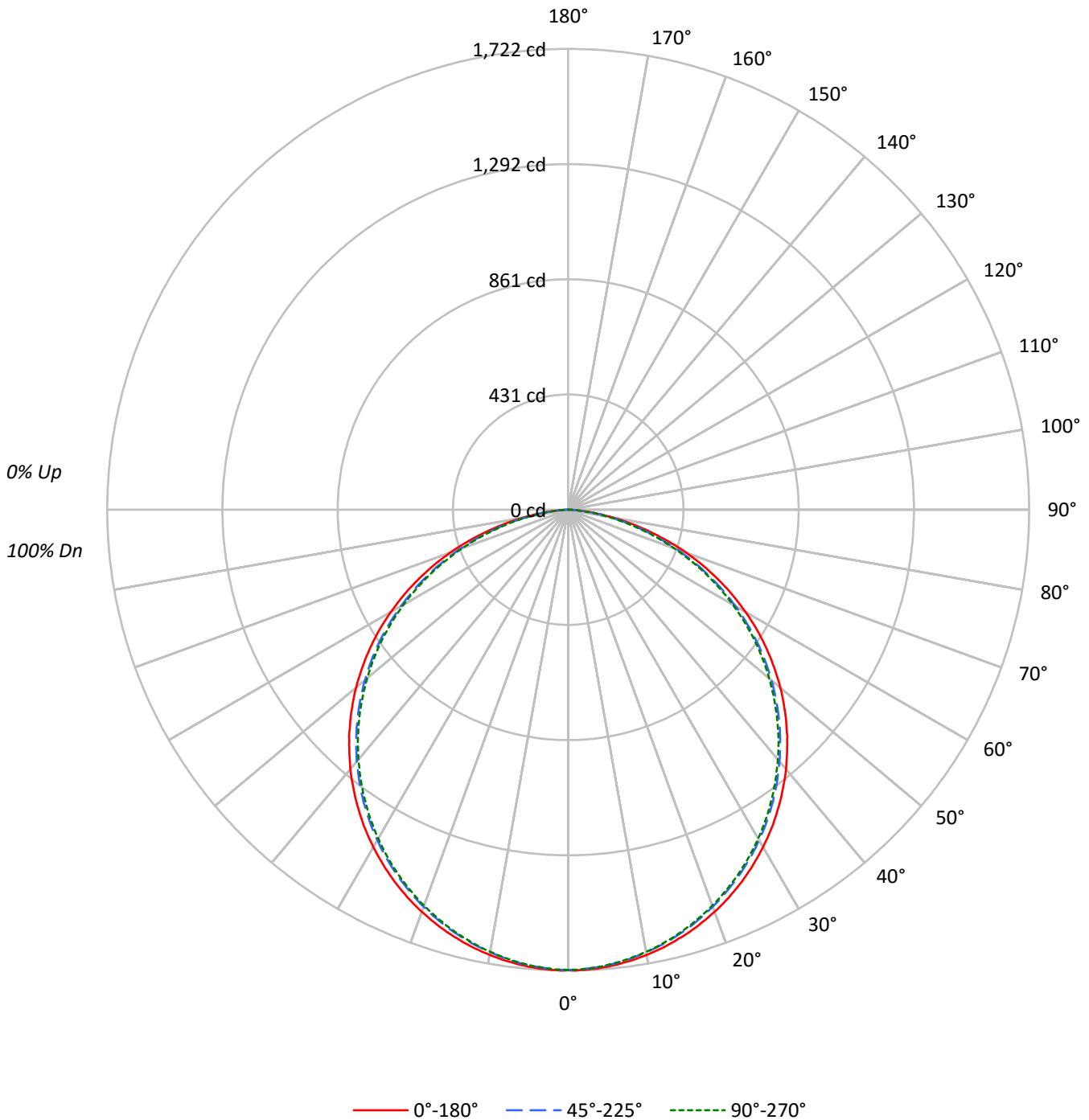
**Summary**

Lumens per Lamp: 2850 (3 lamps)  
Luminaire Lumens: 4747.5 lumens  
Efficiency: 55.5%  
Efficacy: 56.3 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.23 / 1.35  
Luminous Opening: Rectangular (W 1.92' x L: 3.92' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 84.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	65	65	65	65	62	62	62	59	59	59	57	57	57	56
1	61	58	56	53	59	57	55	53	54	53	51	52	51	49	50	49	48	47
2	55	51	47	44	54	49	46	43	48	45	42	46	43	41	44	42	40	39
3	50	44	40	36	49	44	39	36	42	38	35	40	37	35	39	36	34	33
4	46	39	34	31	45	39	34	31	37	33	30	36	32	30	35	32	29	28
5	42	35	30	26	41	35	30	26	33	29	26	32	29	26	31	28	25	24
6	39	32	27	23	38	31	26	23	30	26	23	29	25	23	28	25	22	21
7	36	29	24	20	35	28	24	20	27	23	20	27	23	20	26	22	20	19
8	34	26	21	18	33	26	21	18	25	21	18	24	21	18	24	20	18	17
9	31	24	19	16	31	24	19	16	23	19	16	22	19	16	22	19	16	15
10	30	22	18	15	29	22	18	15	21	17	15	21	17	15	20	17	15	14

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2466	2466	2466
5°	2466	2458	2456
10°	2459	2444	2441
15°	2450	2428	2423
20°	2439	2409	2401
25°	2426	2387	2377
30°	2410	2360	2349
35°	2390	2333	2317
40°	2369	2298	2281
45°	2339	2258	2238
50°	2306	2210	2186
55°	2259	2149	2122
60°	2193	2070	2038
65°	2100	1961	1923
70°	1962	1806	1760
75°	1745	1584	1540
80°	1420	1280	1247
85°	938	855	740



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	162.3	3.4	1.9
10°-20°	462.3	9.7	5.4
20°-30°	697.0	14.7	8.2
30°-40°	836.5	17.6	9.8
40°-50°	863.6	18.2	10.1
50°-60°	774.0	16.3	9.1
60°-70°	577.1	12.2	6.8
70°-80°	308.5	6.5	3.6
80°-90°	66.1	1.4	0.8
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	1321.6	27.8	15.5
0°-40°	2158.1	45.5	25.2
0°-60°	3795.7	80.0	44.4
0°-90°	4747.5	100.0	55.5
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°	4747.5	100.0	55.5

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1720	1720	1720	1720	1720	
5°	1714	1711	1708	1707	1707	163
15°	1651	1643	1636	1633	1633	466
25°	1534	1521	1509	1503	1503	707
35°	1366	1349	1333	1324	1324	855
45°	1154	1133	1114	1104	1104	890
55°	904	881	860	849	849	807
65°	619	598	578	567	567	612
75°	315	301	286	279	278	334
85°	57	55	52	47	45	70
90°	0	0	0	0	0	2
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1720	1720	1720	1720	1720
0.5°	1722	1720	1719	1719	1719
1°	1722	1720	1719	1719	1719
1.5°	1721	1719	1718	1718	1719
2°	1721	1719	1717	1717	1717
2.5°	1720	1718	1716	1716	1716
3°	1719	1717	1715	1715	1715
3.5°	1718	1716	1714	1713	1713
4°	1717	1714	1712	1711	1712
4.5°	1715	1713	1710	1709	1710
5°	1714	1711	1708	1707	1707
5.5°	1712	1709	1706	1705	1705
6°	1710	1707	1704	1703	1702
6.5°	1708	1704	1701	1700	1700
7°	1705	1702	1699	1697	1697
7.5°	1703	1699	1696	1694	1694
8°	1701	1697	1693	1692	1691
8.5°	1698	1694	1690	1688	1688
9°	1695	1691	1686	1685	1685
9.5°	1692	1688	1683	1681	1681
10°	1689	1684	1679	1678	1677
10.5°	1686	1681	1676	1674	1674
11°	1683	1677	1672	1670	1670
11.5°	1679	1674	1668	1666	1666
12°	1676	1670	1664	1661	1661
12.5°	1672	1666	1660	1657	1657
13°	1668	1661	1655	1652	1652
13.5°	1664	1657	1651	1648	1648
14°	1660	1653	1646	1643	1643
14.5°	1655	1648	1641	1638	1638
15°	1651	1643	1636	1633	1633
15.5°	1646	1639	1631	1628	1627
16°	1642	1634	1626	1622	1622
16.5°	1637	1628	1621	1617	1617
17°	1632	1623	1615	1611	1611
17.5°	1627	1618	1609	1605	1605
18°	1621	1612	1603	1599	1599
18.5°	1616	1607	1598	1593	1593
19°	1610	1601	1591	1587	1587
19.5°	1604	1595	1585	1581	1581
20°	1599	1589	1579	1575	1574
20.5°	1593	1582	1573	1568	1568
21°	1587	1576	1566	1561	1561
21.5°	1581	1570	1559	1554	1554
22°	1574	1563	1552	1547	1547



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
22.5°	1568	1556	1545	1540	1540
23°	1561	1550	1538	1533	1533
23.5°	1555	1543	1531	1525	1525
24°	1548	1536	1524	1518	1518
24.5°	1541	1529	1516	1510	1511
25°	1534	1521	1509	1503	1503
25.5°	1526	1514	1501	1495	1495
26°	1519	1506	1493	1487	1487
26.5°	1511	1498	1485	1479	1479
27°	1504	1490	1477	1470	1471
27.5°	1496	1482	1469	1462	1462
28°	1488	1474	1461	1454	1454
28.5°	1480	1466	1452	1445	1445
29°	1472	1458	1444	1437	1437
29.5°	1464	1449	1435	1428	1428
30°	1456	1441	1426	1419	1419
30.5°	1447	1432	1417	1410	1410
31°	1439	1423	1408	1401	1401
31.5°	1430	1414	1399	1391	1392
32°	1421	1405	1390	1382	1382
32.5°	1413	1396	1381	1373	1373
33°	1404	1387	1371	1363	1364
33.5°	1394	1378	1362	1354	1354
34°	1385	1368	1352	1344	1344
34.5°	1376	1358	1342	1334	1334
35°	1366	1349	1333	1324	1324
35.5°	1357	1339	1322	1314	1314
36°	1347	1329	1312	1303	1304
36.5°	1337	1319	1302	1293	1293
37°	1327	1309	1292	1283	1283
37.5°	1317	1299	1281	1272	1272
38°	1307	1288	1271	1262	1262
38.5°	1297	1278	1260	1251	1251
39°	1287	1267	1249	1240	1240
39.5°	1276	1257	1239	1230	1230
40°	1266	1246	1228	1218	1219
40.5°	1255	1235	1217	1207	1207
41°	1244	1224	1206	1196	1197
41.5°	1233	1214	1195	1185	1185
42°	1222	1202	1184	1174	1174
42.5°	1211	1191	1172	1162	1163
43°	1200	1180	1161	1151	1151
43.5°	1188	1168	1149	1139	1139
44°	1178	1157	1138	1128	1128
44.5°	1166	1145	1126	1116	1116



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
45°	1154	1133	1114	1104	1104
45.5°	1143	1122	1102	1092	1092
46°	1131	1110	1090	1080	1079
46.5°	1119	1098	1078	1067	1067
47°	1107	1086	1066	1055	1055
47.5°	1095	1074	1054	1043	1043
48°	1083	1061	1041	1030	1030
48.5°	1071	1050	1029	1018	1018
49°	1059	1037	1016	1005	1005
49.5°	1047	1024	1004	993	993
50°	1034	1012	991	980	980
50.5°	1022	999	978	967	968
51°	1009	986	966	955	955
51.5°	996	974	953	942	942
52°	983	961	940	928	929
52.5°	970	948	927	916	916
53°	957	935	914	902	902
53.5°	944	921	900	889	889
54°	931	908	887	876	876
54.5°	917	895	874	862	863
55°	904	881	860	849	849
55.5°	891	868	847	835	836
56°	877	854	833	822	822
56.5°	863	840	819	808	808
57°	850	827	806	794	794
57.5°	836	813	792	780	780
58°	822	799	778	766	767
58.5°	808	785	764	752	753
59°	794	771	750	739	739
59.5°	779	757	736	724	725
60°	765	743	722	710	711
60.5°	751	729	708	696	697
61°	736	714	694	682	682
61.5°	722	700	679	668	668
62°	707	686	665	653	653
62.5°	693	671	651	639	639
63°	679	657	636	625	624
63.5°	664	642	622	610	610
64°	649	628	607	596	596
64.5°	634	613	592	581	581
65°	619	598	578	567	567
65.5°	605	583	563	552	552
66°	590	568	549	538	537
66.5°	574	554	534	523	523
67°	559	539	519	509	508





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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
67.5°	544	524	505	494	494
68°	529	509	490	480	479
68.5°	514	494	475	465	464
69°	499	479	461	450	449
69.5°	483	464	446	436	435
70°	468	449	431	421	420
70.5°	453	434	416	406	406
71°	438	419	402	392	392
71.5°	422	404	387	378	377
72°	407	389	373	363	363
72.5°	391	374	358	349	349
73°	375	359	344	334	334
73.5°	361	345	329	320	320
74°	346	330	315	306	306
74.5°	330	315	300	292	292
75°	315	301	286	279	278
75.5°	300	287	272	265	264
76°	285	272	259	251	251
76.5°	271	258	245	238	237
77°	256	244	232	225	224
77.5°	241	230	218	212	211
78°	227	216	205	199	198
78.5°	213	202	192	187	187
79°	198	189	179	174	174
79.5°	185	176	167	162	162
80°	172	164	155	151	151
80.5°	158	151	143	139	139
81°	145	138	131	128	128
81.5°	133	127	120	117	116
82°	121	115	109	106	105
82.5°	109	104	99	95	94
83°	98	94	89	85	83
83.5°	87	83	79	75	73
84°	77	73	70	65	63
84.5°	67	64	61	56	54
85°	57	55	52	47	45
85.5°	49	46	44	39	37
86°	41	39	36	33	32
86.5°	32	31	29	28	27
87°	24	24	23	23	23
87.5°	17	18	18	18	18
88°	11	13	14	14	14
88.5°	8	8	9	9	9
89°	4	4	5	4	5
89.5°	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
90°	0	0	0	0	0
90.5°	0	0	0	0	0
91°	0	0	0	0	0
91.5°	0	0	0	0	0
92°	0	0	0	0	0
92.5°	0	0	0	0	0
93°	0	0	0	0	0
93.5°	0	0	0	0	0
94°	0	0	0	0	0
94.5°	0	0	0	0	0
95°	0	0	0	0	0
95.5°	0	0	0	0	0
96°	0	0	0	0	0
96.5°	0	0	0	0	0
97°	0	0	0	0	0
97.5°	0	0	0	0	0
98°	0	0	0	0	0
98.5°	0	0	0	0	0
99°	0	0	0	0	0
99.5°	0	0	0	0	0
100°	0	0	0	0	0
100.5°	0	0	0	0	0
101°	0	0	0	0	0
101.5°	0	0	0	0	0
102°	0	0	0	0	0
102.5°	0	0	0	0	0
103°	0	0	0	0	0
103.5°	0	0	0	0	0
104°	0	0	0	0	0
104.5°	0	0	0	0	0
105°	0	0	0	0	0
105.5°	0	0	0	0	0
106°	0	0	0	0	0
106.5°	0	0	0	0	0
107°	0	0	0	0	0
107.5°	0	0	0	0	0
108°	0	0	0	0	0
108.5°	0	0	0	0	0
109°	0	0	0	0	0
109.5°	0	0	0	0	0
110°	0	0	0	0	0
110.5°	0	0	0	0	0
111°	0	0	0	0	0
111.5°	0	0	0	0	0
112°	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0	0	0	0	0
113°	0	0	0	0	0
113.5°	0	0	0	0	0
114°	0	0	0	0	0
114.5°	0	0	0	0	0
115°	0	0	0	0	0
115.5°	0	0	0	0	0
116°	0	0	0	0	0
116.5°	0	0	0	0	0
117°	0	0	0	0	0
117.5°	0	0	0	0	0
118°	0	0	0	0	0
118.5°	0	0	0	0	0
119°	0	0	0	0	0
119.5°	0	0	0	0	0
120°	0	0	0	0	0
120.5°	0	0	0	0	0
121°	0	0	0	0	0
121.5°	0	0	0	0	0
122°	0	0	0	0	0
122.5°	0	0	0	0	0
123°	0	0	0	0	0
123.5°	0	0	0	0	0
124°	0	0	0	0	0
124.5°	0	0	0	0	0
125°	0	0	0	0	0
125.5°	0	0	0	0	0
126°	0	0	0	0	0
126.5°	0	0	0	0	0
127°	0	0	0	0	0
127.5°	0	0	0	0	0
128°	0	0	0	0	0
128.5°	0	0	0	0	0
129°	0	0	0	0	0
129.5°	0	0	0	0	0
130°	0	0	0	0	0
130.5°	0	0	0	0	0
131°	0	0	0	0	0
131.5°	0	0	0	0	0
132°	0	0	0	0	0
132.5°	0	0	0	0	0
133°	0	0	0	0	0
133.5°	0	0	0	0	0
134°	0	0	0	0	0
134.5°	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
135°	0	0	0	0	0
135.5°	0	0	0	0	0
136°	0	0	0	0	0
136.5°	0	0	0	0	0
137°	0	0	0	0	0
137.5°	0	0	0	0	0
138°	0	0	0	0	0
138.5°	0	0	0	0	0
139°	0	0	0	0	0
139.5°	0	0	0	0	0
140°	0	0	0	0	0
140.5°	0	0	0	0	0
141°	0	0	0	0	0
141.5°	0	0	0	0	0
142°	0	0	0	0	0
142.5°	0	0	0	0	0
143°	0	0	0	0	0
143.5°	0	0	0	0	0
144°	0	0	0	0	0
144.5°	0	0	0	0	0
145°	0	0	0	0	0
145.5°	0	0	0	0	0
146°	0	0	0	0	0
146.5°	0	0	0	0	0
147°	0	0	0	0	0
147.5°	0	0	0	0	0
148°	0	0	0	0	0
148.5°	0	0	0	0	0
149°	0	0	0	0	0
149.5°	0	0	0	0	0
150°	0	0	0	0	0
150.5°	0	0	0	0	0
151°	0	0	0	0	0
151.5°	0	0	0	0	0
152°	0	0	0	0	0
152.5°	0	0	0	0	0
153°	0	0	0	0	0
153.5°	0	0	0	0	0
154°	0	0	0	0	0
154.5°	0	0	0	0	0
155°	0	0	0	0	0
155.5°	0	0	0	0	0
156°	0	0	0	0	0
156.5°	0	0	0	0	0
157°	0	0	0	0	0



TEST NUMBER: 17287

CATALOG NUMBER: S7/248R/3T8/ETG4/UEB-SI-S46

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
157.5°	0	0	0	0	0
158°	0	0	0	0	0
158.5°	0	0	0	0	0
159°	0	0	0	0	0
159.5°	0	0	0	0	0
160°	0	0	0	0	0
160.5°	0	0	0	0	0
161°	0	0	0	0	0
161.5°	0	0	0	0	0
162°	0	0	0	0	0
162.5°	0	0	0	0	0
163°	0	0	0	0	0
163.5°	0	0	0	0	0
164°	0	0	0	0	0
164.5°	0	0	0	0	0
165°	0	0	0	0	0
165.5°	0	0	0	0	0
166°	0	0	0	0	0
166.5°	0	0	0	0	0
167°	0	0	0	0	0
167.5°	0	0	0	0	0
168°	0	0	0	0	0
168.5°	0	0	0	0	0
169°	0	0	0	0	0
169.5°	0	0	0	0	0
170°	0	0	0	0	0
170.5°	0	0	0	0	0
171°	0	0	0	0	0
171.5°	0	0	0	0	0
172°	0	0	0	0	0
172.5°	0	0	0	0	0
173°	0	0	0	0	0
173.5°	0	0	0	0	0
174°	0	0	0	0	0
174.5°	0	0	0	0	0
175°	0	0	0	0	0
175.5°	0	0	0	0	0
176°	0	0	0	0	0
176.5°	0	0	0	0	0
177°	0	0	0	0	0
177.5°	0	0	0	0	0
178°	0	0	0	0	0
178.5°	0	0	0	0	0
179°	0	0	0	0	0
179.5°	0	0	0	0	0



TEST NUMBER: 17287

CATALOG NUMBER: S7/248R/3T8/ETG4/UEB-SI-S46

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
180°	0	0	0	0	0

(END OF REPORT)