

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: 17285

Luminaire Tested: **S7/248R/2T8/STG4D/UBE-SI-S46**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 17285
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/2T8/STG4D/UBE-SI-S46
Description: FORMED WHITE ENAMEL STEEL AND ALUMINUM HOUSING, FORMED
WHITE ENAMEL STEEL REFLECTOR, TRANSLUCENT WHITE PLASTIC
ENCLOSURE.
Light Source: TWO 32 WATT T8 LINEAR FLUORESCENT LAMPS RATED AT 2850 LUMENS
EACH.
PHILIPS F32T8/TL835/ALTO
Ballast/Driver: ONE ADVANCE "CENTIUM" ICN-2P32-N

Summary

Lumens per Lamp: 2850 (2 lamps)
Luminaire Lumens: 3317.2 lumens
Efficiency: 58.2%
Efficacy: 56.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.23 / 1.36
Luminous Opening: Rectangular (W 1.92' x L: 3.92' x H: 0')
CIE Type: Direct

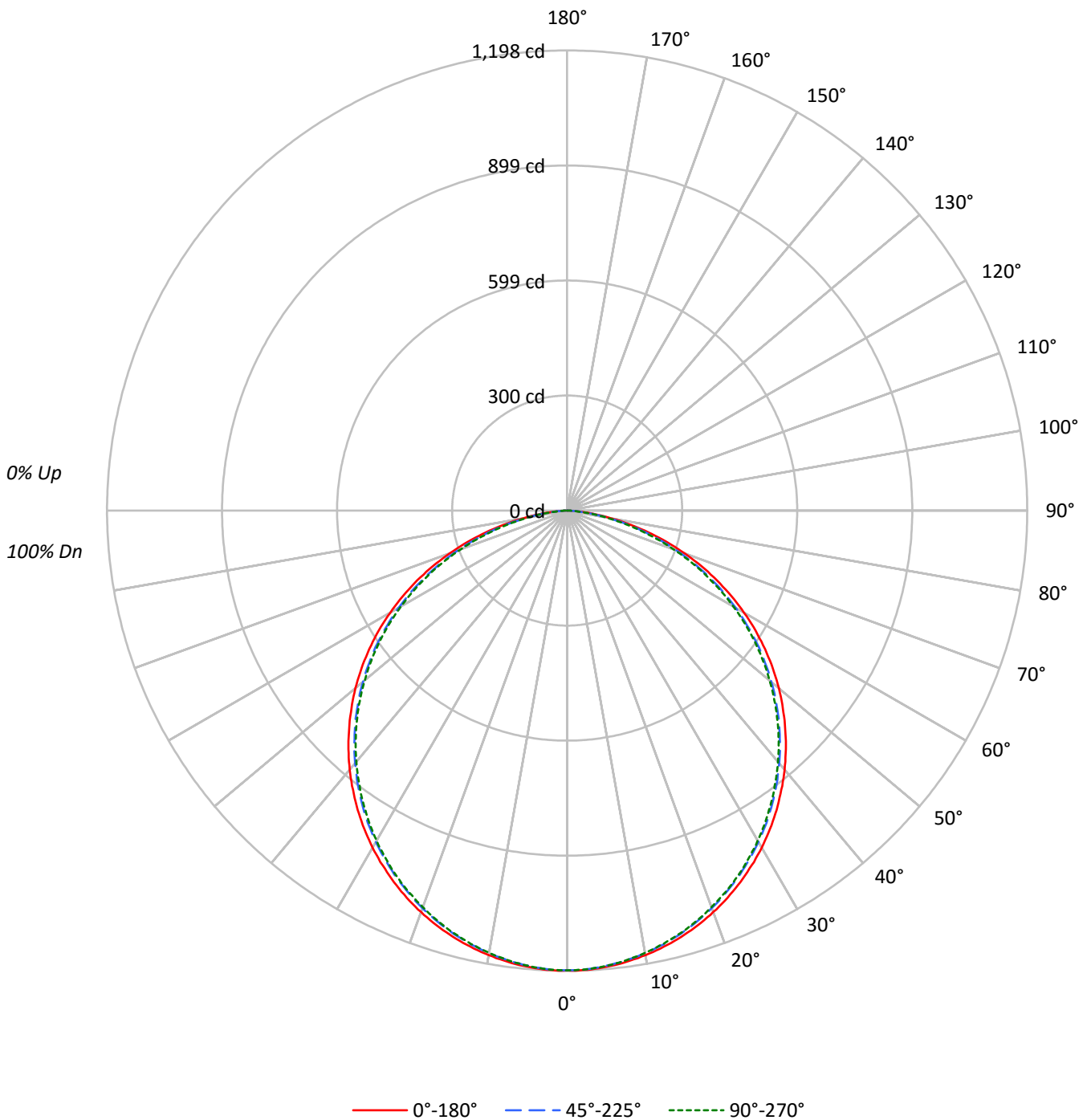
Input Watts (W): 58.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	69	69	69	69	68	68	68	68	65	65	65		62	62	62		59	59	59	58
1	63	61	58	56	62	59	57	55	57	55	53		55	53	52		53	51	50	49
2	58	53	49	46	56	52	48	45	50	47	44		48	45	43		46	44	42	41
3	53	47	42	38	51	46	41	38	44	40	37		42	39	36		41	38	36	34
4	48	41	36	32	47	40	36	32	39	35	32		38	34	31		36	33	31	29
5	44	37	32	28	43	36	31	28	35	31	27		34	30	27		33	29	27	25
6	41	33	28	24	40	33	28	24	32	27	24		31	27	24		30	26	23	22
7	38	30	25	21	37	30	25	21	29	24	21		28	24	21		27	24	21	20
8	35	27	22	19	34	27	22	19	26	22	19		26	22	19		25	21	19	18
9	33	25	20	17	32	25	20	17	24	20	17		24	20	17		23	19	17	16
10	31	23	19	16	30	23	18	16	22	18	15		22	18	15		21	18	15	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1716	1716	1716
5°	1715	1711	1711
10°	1710	1703	1702
15°	1705	1693	1690
20°	1696	1680	1677
25°	1688	1666	1661
30°	1677	1649	1642
35°	1664	1629	1622
40°	1649	1607	1598
45°	1628	1581	1569
50°	1606	1548	1534
55°	1572	1507	1492
60°	1525	1454	1433
65°	1462	1377	1353
70°	1362	1270	1236
75°	1213	1113	1074
80°	974	883	842
85°	658	576	477



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	113.0	3.4	2.0
10°-20°	322.2	9.7	5.7
20°-30°	486.3	14.7	8.5
30°-40°	584.3	17.6	10.3
40°-50°	604.1	18.2	10.6
50°-60°	542.1	16.3	9.5
60°-70°	404.7	12.2	7.1
70°-80°	215.4	6.5	3.8
80°-90°	45.0	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°	921.5	27.8	16.2
0°-40°	1505.8	45.4	26.4
0°-60°	2652.0	79.9	46.5
0°-90°	3317.2	100.0	58.2
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°	3317.2	100.0	58.2

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1197	1197	1197	1197	1197	
5°	1192	1191	1189	1189	1189	113
15°	1149	1145	1141	1139	1139	324
25°	1067	1060	1053	1050	1050	492
35°	951	941	931	927	927	595
45°	803	791	780	774	774	619
55°	629	616	603	596	597	562
65°	431	419	406	399	399	425
75°	219	211	201	194	194	232
85°	40	38	35	31	29	48
90°	0	0	0	0	0	1
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°	1197	1197	1197	1197	1197
0.5°	1198	1197	1197	1197	1197
1°	1198	1197	1197	1197	1197
1.5°	1198	1197	1196	1196	1196
2°	1197	1196	1196	1196	1196
2.5°	1197	1196	1195	1195	1195
3°	1196	1195	1194	1194	1194
3.5°	1195	1194	1193	1193	1193
4°	1194	1193	1192	1192	1192
4.5°	1193	1192	1191	1191	1191
5°	1192	1191	1189	1189	1189
5.5°	1191	1189	1188	1188	1188
6°	1190	1188	1186	1186	1186
6.5°	1188	1186	1185	1184	1185
7°	1187	1185	1183	1183	1183
7.5°	1185	1183	1181	1181	1181
8°	1183	1181	1179	1179	1178
8.5°	1181	1179	1177	1177	1176
9°	1180	1177	1175	1174	1174
9.5°	1177	1175	1172	1172	1172
10°	1175	1173	1170	1170	1169
10.5°	1173	1170	1167	1167	1167
11°	1171	1168	1165	1164	1164
11.5°	1168	1165	1162	1161	1161
12°	1166	1163	1159	1158	1158
12.5°	1163	1160	1157	1155	1156
13°	1160	1157	1153	1152	1152
13.5°	1158	1154	1151	1149	1149
14°	1155	1151	1147	1146	1146
14.5°	1152	1148	1144	1142	1142
15°	1149	1145	1141	1139	1139
15.5°	1145	1141	1137	1136	1136
16°	1142	1138	1133	1132	1132
16.5°	1139	1134	1130	1128	1128
17°	1135	1131	1126	1124	1124
17.5°	1132	1127	1122	1120	1120
18°	1128	1123	1118	1116	1116
18.5°	1124	1119	1114	1112	1112
19°	1120	1115	1110	1108	1108
19.5°	1117	1111	1106	1103	1103
20°	1112	1107	1101	1099	1099
20.5°	1109	1103	1097	1094	1094
21°	1104	1098	1093	1090	1090
21.5°	1100	1094	1088	1085	1085
22°	1096	1089	1083	1081	1080



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
22.5°	1091	1085	1078	1075	1076
23°	1086	1080	1073	1071	1071
23.5°	1082	1075	1068	1065	1066
24°	1077	1070	1063	1060	1061
24.5°	1072	1065	1058	1055	1055
25°	1067	1060	1053	1050	1050
25.5°	1062	1055	1048	1044	1045
26°	1057	1050	1042	1039	1040
26.5°	1052	1044	1037	1033	1034
27°	1046	1039	1031	1028	1028
27.5°	1041	1033	1026	1022	1022
28°	1036	1028	1020	1016	1016
28.5°	1030	1022	1014	1010	1010
29°	1024	1016	1008	1004	1005
29.5°	1019	1010	1002	998	999
30°	1013	1005	996	992	992
30.5°	1007	998	990	986	986
31°	1001	992	984	979	980
31.5°	995	986	977	973	973
32°	989	980	971	967	967
32.5°	983	974	965	960	961
33°	977	967	958	954	954
33.5°	970	961	952	947	947
34°	964	954	945	940	940
34.5°	957	947	938	933	934
35°	951	941	931	927	927
35.5°	944	934	924	919	920
36°	937	927	917	912	913
36.5°	930	920	910	905	906
37°	923	913	903	898	898
37.5°	916	906	896	891	891
38°	910	899	889	884	884
38.5°	902	892	881	876	876
39°	895	884	874	869	869
39.5°	888	877	866	861	862
40°	881	869	859	854	854
40.5°	873	862	851	846	846
41°	866	854	844	838	839
41.5°	858	847	836	830	831
42°	850	839	828	822	823
42.5°	843	831	820	815	815
43°	835	823	812	807	807
43.5°	827	815	804	799	799
44°	819	808	796	791	791
44.5°	811	799	788	782	783



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
45°	803	791	780	774	774
45.5°	795	783	772	766	766
46°	787	775	763	757	758
46.5°	779	767	755	749	749
47°	770	758	746	740	741
47.5°	762	750	738	732	732
48°	754	741	729	723	723
48.5°	745	733	721	714	715
49°	737	724	712	706	706
49.5°	728	716	703	697	697
50°	720	707	694	688	688
50.5°	710	698	686	679	679
51°	702	689	677	670	670
51.5°	693	680	668	661	662
52°	684	671	658	652	652
52.5°	675	662	649	643	643
53°	666	653	640	634	634
53.5°	657	644	631	625	625
54°	647	634	622	615	615
54.5°	638	625	613	606	606
55°	629	616	603	596	597
55.5°	619	607	594	587	587
56°	610	597	584	578	578
56.5°	600	587	575	568	568
57°	591	578	565	558	559
57.5°	582	568	555	549	549
58°	572	559	546	539	539
58.5°	562	549	536	529	529
59°	552	539	527	520	520
59.5°	542	529	517	510	510
60°	532	519	507	500	500
60.5°	522	510	497	490	490
61°	512	499	487	480	480
61.5°	502	490	477	470	470
62°	493	480	467	460	460
62.5°	482	470	457	450	450
63°	472	459	447	440	440
63.5°	461	449	437	430	429
64°	451	439	426	419	419
64.5°	441	429	416	409	409
65°	431	419	406	399	399
65.5°	420	408	396	389	389
66°	409	398	386	378	379
66.5°	400	387	375	368	368
67°	389	377	365	358	358



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
67.5°	378	367	355	348	347
68°	368	356	344	337	337
68.5°	357	346	334	327	326
69°	346	335	324	317	316
69.5°	336	325	313	306	305
70°	325	314	303	296	295
70.5°	314	304	293	286	285
71°	304	294	283	275	275
71.5°	293	283	272	265	264
72°	282	273	262	255	254
72.5°	272	262	251	245	244
73°	261	252	241	234	234
73.5°	250	241	231	224	223
74°	240	231	221	215	213
74.5°	229	221	211	204	203
75°	219	211	201	194	194
75.5°	209	201	191	185	184
76°	198	190	181	175	174
76.5°	187	180	171	165	164
77°	178	171	162	156	155
77.5°	167	161	152	147	146
78°	157	151	143	137	137
78.5°	148	142	133	129	128
79°	138	132	125	120	119
79.5°	128	123	116	111	110
80°	118	114	107	103	102
80.5°	109	105	98	95	94
81°	100	97	90	87	86
81.5°	92	88	82	79	79
82°	83	80	75	72	71
82.5°	75	72	67	64	63
83°	68	65	60	57	55
83.5°	60	58	53	50	48
84°	53	51	47	43	41
84.5°	46	44	41	37	35
85°	40	38	35	31	29
85.5°	34	32	29	26	25
86°	28	26	24	22	21
86.5°	22	21	19	19	18
87°	17	16	15	15	15
87.5°	12	12	12	12	12
88°	8	9	9	9	9
88.5°	5	6	6	6	6
89°	2	3	3	3	3
89.5°	0	0	0	0	1



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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



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CATALOG NUMBER: S7/248R/2T8/STG4D/UBE-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: 17285

CATALOG NUMBER: S7/248R/2T8/STG4D/UBE-SI-S46

CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)