

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P853812

Luminaire Tested: SQ2-FA-150U-050D-930-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853812
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-150U-050D-930-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 1500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

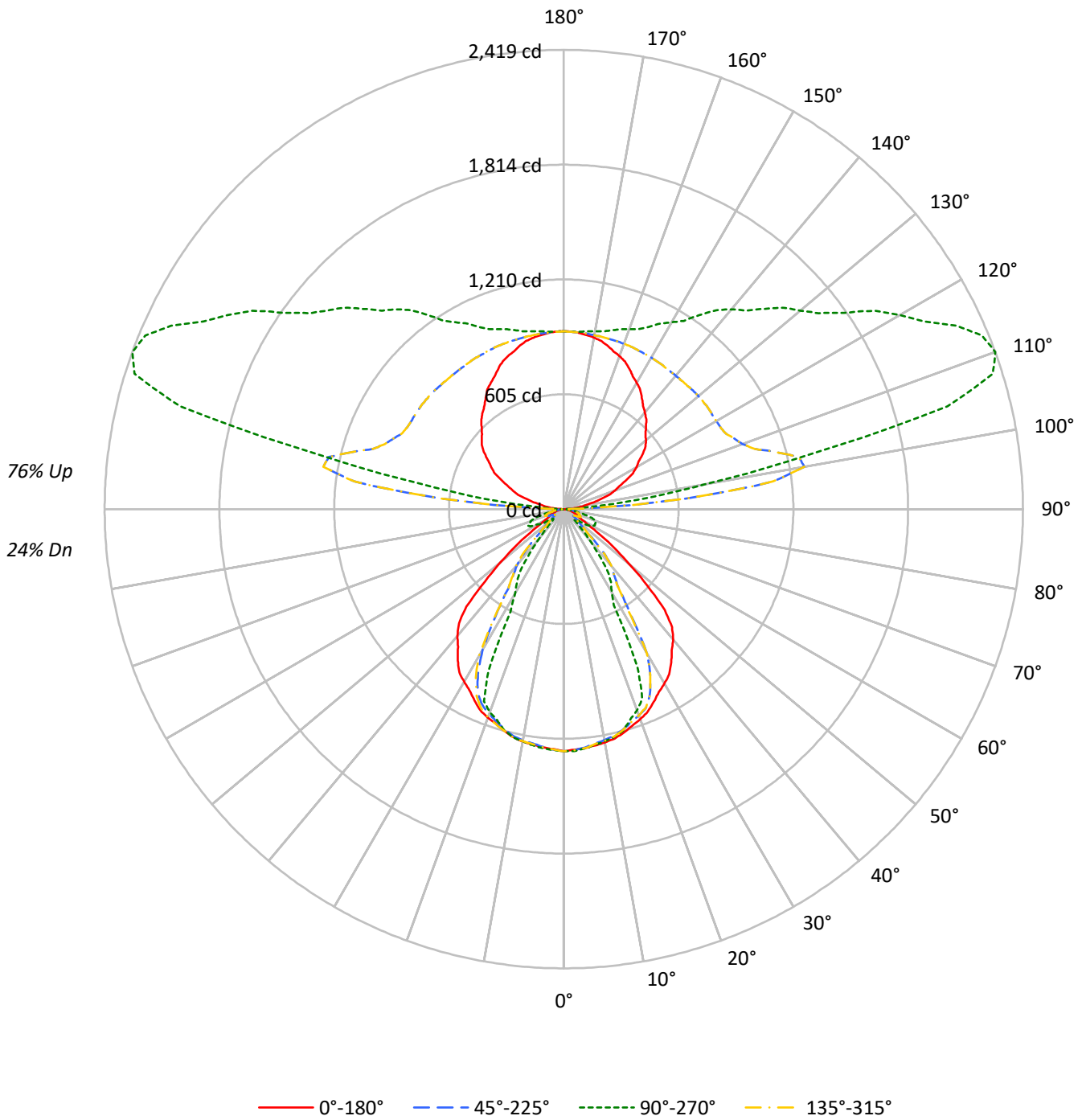
Lumens per Lamp: N/A
Luminaire Lumens: 7639.2 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 74.4
Input Voltage (V): 120
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: 24 FT

TEST NUMBER: P853812

CATALOG NUMBER: SQ2-FA-150U-050D-930-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P853812

CATALOG NUMBER: SQ2-FA-150U-050D-930-UNV-STD-W-4

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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	33	33	33	24
1	93	89	85	82	82	79	76	73	61	59	58	45	44	43	30	29	28	22
2	85	78	72	68	75	70	65	61	54	51	49	40	38	36	27	26	25	19
3	78	69	63	57	69	62	56	52	48	45	42	36	34	32	24	23	22	17
4	71	62	54	49	63	55	49	45	44	39	36	33	30	28	22	21	20	15
5	66	55	48	42	59	50	43	39	39	35	31	30	27	24	20	19	18	14
6	61	50	42	37	54	45	38	34	36	31	28	27	24	22	19	17	16	13
7	56	45	38	33	50	41	34	30	32	28	25	25	22	20	18	16	14	12
8	52	41	34	29	47	37	31	27	30	25	22	23	20	18	16	15	13	11
9	49	37	31	26	44	34	28	24	27	23	20	21	18	16	15	13	12	10
10	45	34	28	23	41	31	25	22	25	21	18	20	17	15	14	12	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	20592	20592	20592	20592
5°	20483	20514	20405	20499
10°	20453	20374	20374	20374
15°	20386	20177	20226	20177
20°	20227	19368	20079	19550
25°	19962	16347	19824	16689
30°	19779	9378	19563	9505
35°	19431	8058	19184	7943
40°	18893	4236	18366	4196
45°	17173	1822	16559	1822
50°	11331	2198	10751	2055
55°	6336	4062	6010	3682
60°	3416	5716	3355	5125
65°	3014	6946	3159	7901
70°	2814	8308	2677	8762
75°	2639	7143	2701	7380
80°	2232	5095	2232	5365
85°	1964	2853	1778	3390

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17173 cd/sqm



TEST NUMBER: P853812

CATALOG NUMBER: SQ2-FA-150U-050D-930-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.0	1.6
10°-20°	340.5	4.5
20°-30°	464.3	6.1
30°-40°	390.1	5.1
40°-50°	221.6	2.9
50°-60°	117.6	1.5
60°-70°	108.3	1.4
70°-80°	79.5	1.0
80°-90°	21.8	0.3
90°-100°	356.5	4.7
100°-110°	1167.5	15.3
110°-120°	1154.2	15.1
120°-130°	943.5	12.4
130°-140°	770.0	10.1
140°-150°	599.2	7.8
150°-160°	431.5	5.6
160°-170°	264.0	3.5
170°-180°	89.2	1.2
0°-30°	924.8	12.1
0°-40°	1314.9	17.2
0°-60°	1654.1	21.7
0°-90°	1863.6	24.4
90°-120°	2678.3	35.1
90°-150°	4991.1	65.3
90°-180°	5776.0	75.6
0°-180°	7639.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1275	1275	1275	1275	1275	
5°	1264	1266	1259	1265	1264	120
15°	1220	1207	1210	1207	1220	344
25°	1120	918	1113	937	1120	517
35°	986	409	973	403	986	615
45°	752	80	725	80	752	550
55°	225	144	214	131	225	217
65°	79	182	83	207	79	79
75°	42	114	43	118	42	44
85°	11	15	10	18	11	12
90°	1	8	1	8	1	3
95°	50	150	50	150	50	57
105°	203	2092	203	2092	203	214
115°	366	2284	366	2284	366	361
125°	509	1802	509	1802	509	453
135°	613	1492	613	1492	613	474
145°	716	1247	716	1247	716	449
155°	816	1058	816	1058	816	376
165°	892	974	892	974	892	251
175°	932	938	932	938	932	88
180°	936	936	936	936	936	



TEST NUMBER: P853812

CATALOG NUMBER: SQ2-FA-150U-050D-930-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4
2.5°	1268.4	1287.2	1270.7	1268.6	1275.4	1273.8	1271.5	1280.4	1265.4	1280.4	1268.4
5°	1263.8	1285.4	1260.9	1254.4	1265.7	1258.2	1264.8	1277.8	1259.0	1275.9	1257.1
7.5°	1255.9	1275.1	1245.7	1241.6	1252.7	1246.1	1248.8	1266.9	1251.1	1262.2	1245.2
10°	1247.5	1264.4	1235.0	1232.3	1242.7	1236.1	1238.8	1257.7	1242.7	1253.0	1235.9
12.5°	1238.2	1251.4	1221.9	1220.7	1229.6	1225.2	1226.5	1242.4	1230.3	1240.7	1224.4
15°	1219.6	1231.8	1202.3	1197.7	1207.1	1203.3	1205.1	1219.4	1210.0	1216.5	1202.3
17.5°	1196.5	1206.3	1176.9	1163.0	1163.4	1168.1	1176.9	1194.0	1185.5	1194.2	1174.0
20°	1177.2	1188.5	1156.1	1129.1	1127.2	1131.9	1156.1	1173.3	1168.6	1178.0	1149.4
22.5°	1154.9	1162.5	1133.0	1087.5	1081.1	1085.8	1129.9	1150.3	1148.6	1155.0	1119.3
25°	1120.5	1128.0	1074.3	1008.8	917.6	1003.1	1076.3	1112.8	1112.8	1118.5	1071.5
27.5°	1085.5	1085.7	988.5	647.9	571.5	624.5	987.2	1066.5	1075.5	1072.7	980.3
30°	1060.9	1054.3	876.2	523.7	503.0	516.2	877.2	1034.3	1049.3	1039.0	854.1
32.5°	1032.4	1013.8	646.9	481.5	464.6	476.2	625.6	996.1	1022.4	1000.0	671.7
35°	985.8	936.9	493.4	425.7	408.8	423.8	489.6	920.7	973.3	913.2	509.8
37.5°	935.6	744.7	434.4	339.1	302.6	331.7	432.2	736.8	915.3	719.6	434.0
40°	896.4	585.1	390.5	248.0	201.0	233.9	387.6	558.2	871.4	600.6	380.9
42.5°	844.1	514.0	313.5	157.5	123.3	144.2	300.7	502.1	817.5	520.4	303.2
45°	752.1	441.8	185.6	86.4	79.8	83.6	171.2	433.7	725.2	424.3	189.5
47.5°	595.7	336.9	119.3	73.5	80.6	73.5	115.6	326.2	562.7	325.7	119.1
50°	451.1	263.0	92.3	74.4	87.5	74.4	89.4	254.0	428.0	277.5	91.4
52.5°	334.1	219.8	75.4	81.5	105.2	83.0	73.3	213.9	317.2	223.9	71.4
55°	225.1	172.4	60.6	107.6	144.3	110.4	60.6	167.4	213.5	165.6	58.7
57.5°	142.7	128.2	61.4	138.3	164.7	141.0	62.3	123.6	137.0	124.2	53.9
60°	105.8	101.1	68.3	146.9	177.0	148.8	69.2	97.3	103.9	96.4	57.7
62.5°	87.3	79.6	82.1	159.1	183.9	154.9	83.9	75.9	90.8	72.7	63.9
65°	78.9	51.6	97.1	161.1	181.8	161.1	98.1	48.9	82.7	52.6	86.6
67.5°	71.2	38.3	93.9	160.0	182.9	160.4	91.6	36.5	68.3	35.6	88.5
70°	59.6	34.2	88.5	162.8	176.0	157.2	88.5	33.2	56.7	32.3	103.9
72.5°	49.6	32.5	82.3	150.4	156.0	144.7	83.1	32.3	49.8	29.1	97.7
75°	42.3	32.0	78.9	120.1	114.5	114.5	76.9	31.1	43.3	29.2	76.0
77.5°	31.7	28.4	65.4	78.4	74.1	74.1	64.2	27.4	30.2	25.7	61.7
80°	24.0	25.9	53.9	57.6	54.8	54.8	51.9	25.0	24.0	24.0	51.0
82.5°	18.7	22.0	41.5	42.3	40.2	39.5	40.4	21.9	18.7	20.2	39.4
85°	10.6	15.3	22.1	18.2	15.4	14.4	21.2	14.3	9.6	14.3	21.2
87.5°	4.0	7.4	4.6	4.4	4.6	4.4	4.6	7.4	4.0	6.7	5.4
90°	1.0	2.8	7.7	6.8	7.7	6.8	7.7	2.8	1.0	2.8	7.7
92.5°	16.3	59.6	183.1	59.6	47.7	59.6	183.1	59.6	16.3	59.6	183.1
95°	50.0	145.0	648.2	230.9	150.0	230.9	648.2	145.0	50.0	145.0	648.2
97.5°	90.8	191.2	1112.1	672.8	417.0	672.8	1112.1	191.2	90.8	191.2	1112.1
100°	119.3	215.2	1286.8	1149.1	761.7	1149.1	1286.8	215.2	119.3	215.2	1286.8
102.5°	151.6	245.2	1267.6	1693.2	1312.6	1693.2	1267.6	245.2	151.6	245.2	1267.6
105°	202.9	289.4	1158.9	2201.8	2091.8	2201.8	1158.9	289.4	202.9	289.4	1158.9
107.5°	253.5	332.9	1052.9	2249.3	2370.3	2249.3	1052.9	332.9	253.5	332.9	1052.9
110°	286.6	363.7	1002.1	2194.0	2418.7	2194.0	1002.1	363.7	286.6	363.7	1002.1



TEST NUMBER: P853812

CATALOG NUMBER: SQ2-FA-150U-050D-930-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	318.1	393.0	971.3	2097.7	2385.7	2097.7	971.3	393.0	318.1	393.0	971.3
115°	365.5	436.9	941.5	1945.6	2284.1	1945.6	941.5	436.9	365.5	436.9	941.5
117.5°	411.4	478.2	930.2	1796.0	2139.8	1796.0	930.2	478.2	411.4	478.2	930.2
120°	441.4	504.4	927.1	1708.9	2043.7	1708.9	927.1	504.4	441.4	504.4	927.1
122.5°	468.4	529.9	927.1	1633.7	1944.4	1633.7	927.1	529.9	468.4	529.9	927.1
125°	508.8	567.1	928.1	1534.3	1802.3	1534.3	928.1	567.1	508.8	567.1	928.1
127.5°	543.0	602.4	926.9	1461.0	1694.2	1461.0	926.9	602.4	543.0	602.4	926.9
130°	564.5	624.7	926.1	1416.6	1627.2	1416.6	926.1	624.7	564.5	624.7	926.1
132.5°	583.8	645.5	923.8	1378.5	1569.5	1378.5	923.8	645.5	583.8	645.5	923.8
135°	612.6	677.5	920.4	1323.3	1491.6	1323.3	920.4	677.5	612.6	677.5	920.4
137.5°	643.0	707.3	918.3	1265.8	1418.0	1265.8	918.3	707.3	643.0	707.3	918.3
140°	664.6	726.6	917.5	1229.5	1373.3	1229.5	917.5	726.6	664.6	726.6	917.5
142.5°	686.1	744.4	917.5	1190.7	1321.0	1190.7	917.5	744.4	686.1	744.4	917.5
145°	716.5	769.1	918.4	1138.3	1247.4	1138.3	918.4	769.1	716.5	769.1	918.4
147.5°	748.4	792.2	919.8	1092.7	1175.0	1092.7	919.8	792.2	748.4	792.2	919.8
150°	768.4	807.0	921.3	1066.2	1135.8	1066.2	921.3	807.0	768.4	807.0	921.3
152.5°	788.4	822.5	922.1	1044.4	1101.9	1044.4	922.1	822.5	788.4	822.5	922.1
155°	816.5	843.8	924.2	1018.4	1057.9	1018.4	924.2	843.8	816.5	843.8	924.2
157.5°	841.7	861.5	926.3	998.0	1026.5	998.0	926.3	861.5	841.7	861.5	926.3
160°	857.9	873.8	927.1	986.3	1008.9	986.3	927.1	873.8	857.9	873.8	927.1
162.5°	871.7	884.7	927.1	976.9	993.5	976.9	927.1	884.7	871.7	884.7	927.1
165°	891.5	900.0	928.1	963.9	974.2	963.9	928.1	900.0	891.5	900.0	928.1
167.5°	908.3	912.4	929.2	953.8	959.4	953.8	929.2	912.4	908.3	912.4	929.2
170°	917.5	919.4	930.0	948.3	950.2	948.3	930.0	919.4	917.5	919.4	930.0
172.5°	924.4	925.5	932.3	944.4	944.8	944.4	932.3	925.5	924.4	925.5	932.3
175°	931.9	931.9	932.9	939.6	937.7	939.6	932.9	931.9	931.9	931.9	932.9
177.5°	935.8	935.0	934.2	938.8	935.8	938.8	934.2	935.0	935.8	935.0	934.2
180°	935.8	935.8	935.8	935.8	935.8	935.8	935.8	935.8	935.8	935.8	935.8



TEST NUMBER: P853812

CATALOG NUMBER: SQ2-FA-150U-050D-930-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4
2.5°	1265.5	1270.7	1270.7	1267.7	1282.7	1268.4
5°	1252.5	1264.8	1259.1	1259.0	1277.9	1263.8
7.5°	1243.5	1255.0	1249.7	1248.6	1267.2	1255.9
10°	1234.2	1242.7	1238.9	1241.7	1258.7	1247.5
12.5°	1221.1	1231.1	1227.3	1231.7	1247.3	1238.2
15°	1198.6	1207.1	1208.9	1210.9	1229.0	1219.6
17.5°	1161.4	1165.5	1174.9	1188.2	1207.0	1196.5
20°	1132.2	1137.8	1143.5	1166.7	1188.5	1177.2
22.5°	1098.9	1097.0	1110.2	1137.4	1164.7	1154.9
25°	1009.2	936.8	1016.7	1086.8	1123.3	1120.5
27.5°	702.7	609.8	692.0	1003.2	1079.9	1085.5
30°	553.0	509.8	552.1	895.4	1047.7	1060.9
32.5°	491.0	461.3	487.0	681.5	1007.2	1032.4
35°	423.7	403.0	423.7	509.8	927.5	985.8
37.5°	339.1	296.8	338.4	440.5	749.8	935.6
40°	252.7	199.1	245.2	394.3	599.2	896.4
42.5°	168.4	128.3	159.3	310.5	518.3	844.1
45°	91.1	79.8	87.4	187.6	423.0	752.1
47.5°	71.5	75.6	71.5	118.3	323.6	595.7
50°	68.6	81.8	68.6	91.4	267.7	451.1
52.5°	74.8	88.7	74.0	72.1	218.5	334.1
55°	84.7	130.8	85.7	58.7	160.2	225.1
57.5°	120.6	147.2	122.0	55.6	123.4	142.7
60°	123.9	158.7	123.0	58.7	95.5	105.8
62.5°	146.6	196.4	146.4	67.1	71.0	87.3
65°	188.0	206.8	189.9	85.6	50.7	78.9
67.5°	178.4	191.8	176.5	91.8	34.9	71.2
70°	175.3	185.6	173.4	104.8	32.4	59.6
72.5°	163.5	164.9	160.2	97.1	29.1	49.6
75°	126.8	118.3	122.1	83.7	29.2	42.3
77.5°	78.8	75.4	76.0	63.9	25.7	31.7
80°	59.6	57.7	56.8	53.9	24.0	24.0
82.5°	44.2	42.3	41.4	41.5	20.2	18.7
85°	20.2	18.3	17.3	24.0	14.3	10.6
87.5°	5.2	5.4	4.4	5.4	5.9	4.0
90°	6.8	7.7	6.8	7.7	2.8	1.0
92.5°	59.6	47.7	59.6	183.1	59.6	16.3
95°	230.9	150.0	230.9	648.2	145.0	50.0
97.5°	672.8	417.0	672.8	1112.1	191.2	90.8
100°	1149.1	761.7	1149.1	1286.8	215.2	119.3
102.5°	1693.2	1312.6	1693.2	1267.6	245.2	151.6
105°	2201.8	2091.8	2201.8	1158.9	289.4	202.9
107.5°	2249.3	2370.3	2249.3	1052.9	332.9	253.5
110°	2194.0	2418.7	2194.0	1002.1	363.7	286.6



TEST NUMBER: P853812

CATALOG NUMBER: SQ2-FA-150U-050D-930-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	2097.7	2385.7	2097.7	971.3	393.0	318.1
115°	1945.6	2284.1	1945.6	941.5	436.9	365.5
117.5°	1796.0	2139.8	1796.0	930.2	478.2	411.4
120°	1708.9	2043.7	1708.9	927.1	504.4	441.4
122.5°	1633.7	1944.4	1633.7	927.1	529.9	468.4
125°	1534.3	1802.3	1534.3	928.1	567.1	508.8
127.5°	1461.0	1694.2	1461.0	926.9	602.4	543.0
130°	1416.6	1627.2	1416.6	926.1	624.7	564.5
132.5°	1378.5	1569.5	1378.5	923.8	645.5	583.8
135°	1323.3	1491.6	1323.3	920.4	677.5	612.6
137.5°	1265.8	1418.0	1265.8	918.3	707.3	643.0
140°	1229.5	1373.3	1229.5	917.5	726.6	664.6
142.5°	1190.7	1321.0	1190.7	917.5	744.4	686.1
145°	1138.3	1247.4	1138.3	918.4	769.1	716.5
147.5°	1092.7	1175.0	1092.7	919.8	792.2	748.4
150°	1066.2	1135.8	1066.2	921.3	807.0	768.4
152.5°	1044.4	1101.9	1044.4	922.1	822.5	788.4
155°	1018.4	1057.9	1018.4	924.2	843.8	816.5
157.5°	998.0	1026.5	998.0	926.3	861.5	841.7
160°	986.3	1008.9	986.3	927.1	873.8	857.9
162.5°	976.9	993.5	976.9	927.1	884.7	871.7
165°	963.9	974.2	963.9	928.1	900.0	891.5
167.5°	953.8	959.4	953.8	929.2	912.4	908.3
170°	948.3	950.2	948.3	930.0	919.4	917.5
172.5°	944.4	944.8	944.4	932.3	925.5	924.4
175°	939.6	937.7	939.6	932.9	931.9	931.9
177.5°	938.8	935.8	938.8	934.2	935.0	935.8
180°	935.8	935.8	935.8	935.8	935.8	935.8



TEST NUMBER: P853812

CATALOG NUMBER: SQ2-FA-150U-050D-930-UNV-STD-W-4

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	7.31	7.94	8.47	9.08	10.68	6.17	6.79	7.33	7.93	9.54
	3H	8.00	8.56	9.17	9.71	11.33	12.31	12.87	13.48	14.02	15.63
	4H	8.40	8.94	9.58	10.08	11.70	13.58	14.11	14.75	15.26	16.88
	6H	8.75	9.24	9.93	10.39	12.02	14.17	14.66	15.36	15.81	17.45
	8H	8.86	9.33	10.05	10.49	12.11	14.29	14.76	15.48	15.92	17.55
	12H	8.93	9.37	10.11	10.53	12.17	14.33	14.77	15.52	15.93	17.57
4H	2H	7.69	8.22	8.87	9.37	10.99	6.68	7.22	7.87	8.36	9.98
	3H	8.67	9.12	9.86	10.29	11.92	12.99	13.44	14.18	14.61	16.24
	4H	9.23	9.64	10.42	10.80	12.45	14.44	14.85	15.63	16.01	17.66
	6H	9.69	10.04	10.89	11.23	12.87	15.17	15.52	16.36	16.70	18.34
	8H	9.86	10.19	11.05	11.36	13.02	15.33	15.66	16.52	16.83	18.49
	12H	9.97	10.27	11.17	11.45	13.11	15.38	15.68	16.59	16.87	18.53
8H	4H	10.32	10.64	11.51	11.82	13.48	14.55	14.88	15.74	16.05	17.71
	6H	10.92	11.19	12.13	12.41	14.06	15.43	15.69	16.64	16.91	18.56
	8H	11.16	11.39	12.37	12.58	14.26	15.68	15.91	16.89	17.11	18.78
	12H	11.32	11.52	12.54	12.72	14.42	15.79	15.99	17.01	17.19	18.89
12H	4H	10.45	10.75	11.66	11.94	13.60	14.50	14.80	15.71	15.99	17.65
	6H	11.20	11.43	12.41	12.62	14.30	15.44	15.67	16.65	16.87	18.54
	8H	11.49	11.69	12.70	12.88	14.59	15.71	15.91	16.93	17.10	18.81