

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: P855252

Luminaire Tested: SQ2-FA-100U-050D-835-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855252  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-12, G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-100U-050D-835-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 1000 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

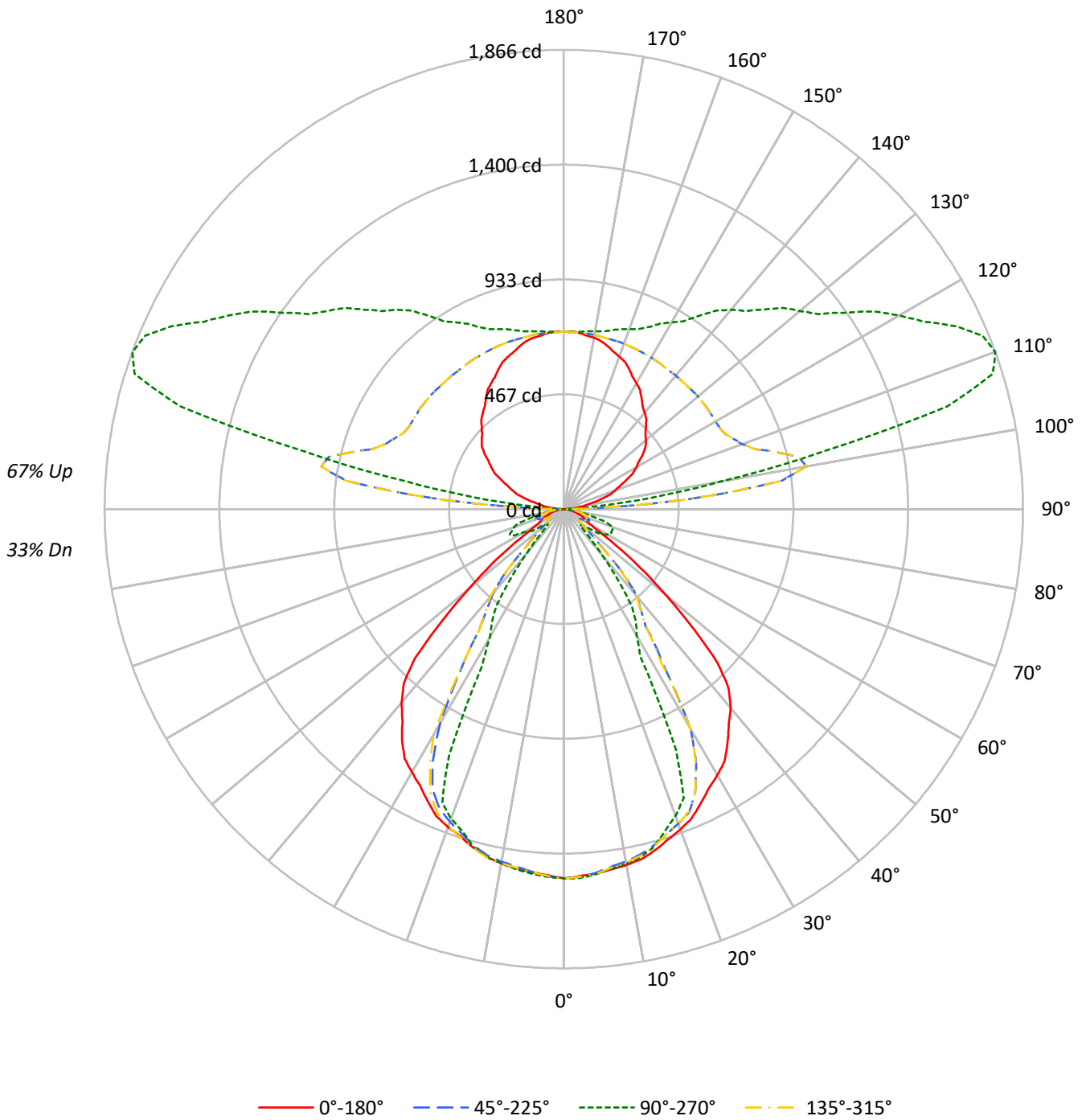
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6678.0 lumens  
Efficiency: N/A  
Efficacy: 132.5 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): 50.4  
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

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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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33
1	95	91	87	84	85	82	79	76	66	64	62	51	49	48	37	36	35	29
2	87	80	75	70	78	73	68	64	58	55	52	45	43	42	33	32	31	26
3	80	71	65	59	72	65	59	55	52	48	45	41	38	36	30	29	28	23
4	73	64	57	51	66	58	52	47	47	43	39	37	34	32	28	26	25	21
5	68	57	50	44	61	52	46	41	43	38	35	34	31	28	26	24	22	19
6	63	52	44	39	57	47	41	36	39	34	31	31	28	25	24	22	20	17
7	58	47	40	35	53	43	37	32	36	31	28	29	25	23	22	20	18	16
8	54	43	36	31	49	39	33	29	33	28	25	26	23	21	21	18	17	14
9	51	39	32	28	46	36	30	26	30	26	22	25	21	19	19	17	16	13
10	47	36	30	25	43	33	27	24	28	23	20	23	20	17	18	16	14	12

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

	0°	90°	180°	270°
0°	24228	24228	24228	24228
5°	24101	24138	24008	24118
10°	24064	23971	23971	23971
15°	23985	23739	23796	23739
20°	23801	22789	23625	23003
25°	23487	19233	23325	19636
30°	23271	11035	23017	11182
35°	22864	9481	22572	9347
40°	22230	4985	21610	4938
45°	20208	2144	19484	2144
50°	13333	2587	12650	2416
55°	7454	4777	7071	4332
60°	4020	6723	3946	6029
65°	3545	8172	3717	9295
70°	3314	9777	3153	10310
75°	3107	8403	3175	8684
80°	2631	5997	2631	6313
85°	2297	3353	2093	3983

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 20208 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.2	2.1
10°-20°	400.6	6.0
20°-30°	546.2	8.2
30°-40°	459.0	6.9
40°-50°	260.7	3.9
50°-60°	138.3	2.1
60°-70°	127.4	1.9
70°-80°	93.5	1.4
80°-90°	25.7	0.4
90°-100°	301.0	4.5
100°-110°	910.3	13.6
110°-120°	888.6	13.3
120°-130°	726.1	10.9
130°-140°	592.7	8.9
140°-150°	461.4	6.9
150°-160°	332.6	5.0
160°-170°	203.6	3.0
170°-180°	68.8	1.0
0°-30°	1088.1	16.3
0°-40°	1547.1	23.2
0°-60°	1946.2	29.1
0°-90°	2192.8	32.8
90°-120°	2099.9	31.4
90°-150°	3880.2	58.1
90°-180°	4485.0	67.2
0°-180°	6678.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1501	1501	1501	1501	1501	
5°	1487	1489	1481	1488	1487	141
15°	1435	1420	1424	1420	1435	405
25°	1318	1080	1309	1102	1318	608
35°	1160	481	1145	474	1160	724
45°	885	94	853	94	885	647
55°	265	170	251	154	265	255
65°	93	214	97	243	93	93
75°	50	135	51	139	50	51
85°	12	18	11	22	12	14
90°	0	7	0	7	0	2
95°	37	132	37	132	37	44
105°	158	1613	158	1613	158	166
115°	282	1757	282	1757	282	279
125°	394	1390	394	1390	394	350
135°	472	1146	472	1146	472	365
145°	551	958	551	958	551	345
155°	628	816	628	816	628	289
165°	687	752	687	752	687	194
175°	718	723	718	723	718	68
180°	721	721	721	721	721	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1500.6	1500.6	1500.6	1500.6	1500.6	1500.6	1500.6	1500.6	1500.6	1500.6	1500.6
2.5°	1492.4	1514.6	1495.2	1492.7	1500.6	1498.8	1496.1	1506.6	1488.8	1506.6	1492.4
5°	1487.0	1512.5	1483.6	1476.0	1489.3	1480.4	1488.1	1503.5	1481.3	1501.3	1479.1
7.5°	1477.7	1500.4	1465.7	1460.9	1473.9	1466.2	1469.4	1490.6	1472.1	1485.1	1465.1
10°	1467.8	1487.7	1453.1	1450.0	1462.1	1454.4	1457.6	1479.9	1462.1	1474.3	1454.2
12.5°	1456.9	1472.4	1437.7	1436.3	1446.7	1441.6	1443.1	1461.8	1447.6	1459.8	1440.6
15°	1434.9	1449.3	1414.6	1409.1	1420.2	1415.8	1418.0	1434.7	1423.6	1431.4	1414.6
17.5°	1407.8	1419.3	1384.7	1368.4	1368.9	1374.4	1384.7	1404.8	1394.9	1405.1	1381.3
20°	1385.2	1398.4	1360.3	1328.6	1326.3	1331.9	1360.3	1380.5	1375.0	1386.1	1352.3
22.5°	1358.9	1367.7	1333.1	1279.6	1272.0	1277.5	1329.5	1353.5	1351.4	1359.0	1317.0
25°	1318.4	1327.2	1264.1	1187.0	1079.6	1180.3	1266.3	1309.3	1309.3	1316.0	1260.7
27.5°	1277.2	1277.4	1163.1	762.3	672.4	734.9	1161.5	1254.8	1265.4	1262.1	1153.4
30°	1248.2	1240.5	1030.9	616.2	591.9	607.4	1032.1	1217.0	1234.6	1222.5	1004.9
32.5°	1214.7	1192.8	761.2	566.5	546.6	560.3	736.0	1172.0	1203.0	1176.6	790.4
35°	1160.0	1102.5	580.5	500.9	481.0	498.6	576.0	1083.3	1145.2	1074.4	599.8
37.5°	1100.9	876.2	511.1	398.9	356.0	390.3	508.6	866.9	1076.9	846.7	510.6
40°	1054.7	688.5	459.5	291.9	236.5	275.2	456.1	656.8	1025.3	706.6	448.1
42.5°	993.1	604.8	368.9	185.4	145.1	169.6	353.8	590.8	961.9	612.2	356.7
45°	885.0	519.8	218.4	101.6	93.9	98.3	201.4	510.3	853.3	499.2	222.9
47.5°	701.0	396.4	140.3	86.5	94.8	86.5	136.0	383.9	662.0	383.2	140.1
50°	530.8	309.4	108.6	87.5	103.0	87.5	105.2	298.9	503.6	326.6	107.5
52.5°	393.1	258.6	88.7	96.0	123.8	97.7	86.2	251.7	373.2	263.5	84.0
55°	264.8	202.8	71.3	126.6	169.7	129.9	71.3	197.0	251.2	194.8	69.0
57.5°	167.9	150.9	72.2	162.7	193.7	165.9	73.3	145.4	161.1	146.1	63.4
60°	124.5	118.9	80.3	172.8	208.2	175.1	81.5	114.5	122.2	113.4	67.9
62.5°	102.8	93.7	96.6	187.2	216.4	182.3	98.7	89.4	106.8	85.6	75.1
65°	92.8	60.7	114.3	189.6	213.9	189.6	115.4	57.5	97.3	61.9	101.8
67.5°	83.7	45.0	110.5	188.2	215.2	188.6	107.7	43.0	80.3	41.9	104.1
70°	70.2	40.3	104.1	191.6	207.1	184.9	104.1	39.2	66.8	38.0	122.2
72.5°	58.4	38.3	96.9	176.9	183.6	170.3	97.8	38.0	58.6	34.3	115.0
75°	49.8	37.6	92.8	141.3	134.7	134.7	90.5	36.6	50.9	34.3	89.4
77.5°	37.3	33.4	77.0	92.2	87.1	87.1	75.6	32.3	35.5	30.2	72.7
80°	28.3	30.6	63.4	67.8	64.5	64.5	61.1	29.4	28.3	28.3	60.0
82.5°	22.0	25.9	48.9	49.8	47.3	46.4	47.5	25.7	22.0	23.8	46.4
85°	12.4	18.0	26.0	21.4	18.1	17.0	24.9	16.9	11.3	16.9	24.9
87.5°	4.5	8.5	6.3	5.2	5.0	5.2	6.3	8.5	4.5	7.6	7.2
90°	0.0	2.3	13.6	7.9	6.8	7.9	13.6	2.3	0.0	2.3	13.6
92.5°	12.7	51.2	183.8	60.9	43.9	60.9	183.8	51.2	12.7	51.2	183.8
95°	37.3	118.0	568.0	209.8	132.4	209.8	568.0	118.0	37.3	118.0	568.0
97.5°	72.2	150.3	895.1	592.3	360.7	592.3	895.1	150.3	72.2	150.3	895.1
100°	93.9	170.2	1000.2	966.9	649.3	966.9	1000.2	170.2	93.9	170.2	1000.2
102.5°	118.4	192.0	978.4	1356.2	1081.1	1356.2	978.4	192.0	118.4	192.0	978.4
105°	158.4	222.6	893.8	1697.4	1613.3	1697.4	893.8	222.6	158.4	222.6	893.8
107.5°	196.5	257.7	812.3	1731.1	1828.5	1731.1	812.3	257.7	196.5	257.7	812.3
110°	221.7	280.4	771.6	1688.7	1865.7	1688.7	771.6	280.4	221.7	280.4	771.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	246.1	303.1	747.1	1617.3	1841.2	1617.3	747.1	303.1	246.1	303.1	747.1
115°	281.7	335.9	722.9	1495.9	1757.0	1495.9	722.9	335.9	281.7	335.9	722.9
117.5°	317.0	368.4	714.3	1382.2	1649.5	1382.2	714.3	368.4	317.0	368.4	714.3
120°	340.5	389.2	711.6	1315.9	1572.6	1315.9	711.6	389.2	340.5	389.2	711.6
122.5°	362.2	408.3	711.6	1257.6	1494.7	1257.6	711.6	408.3	362.2	408.3	711.6
125°	393.7	436.8	712.7	1181.3	1390.5	1181.3	712.7	436.8	393.7	436.8	712.7
127.5°	419.3	464.0	711.6	1123.9	1302.2	1123.9	711.6	464.0	419.3	464.0	711.6
130°	435.6	482.1	711.6	1090.9	1252.4	1090.9	711.6	482.1	435.6	482.1	711.6
132.5°	450.1	497.4	710.7	1060.7	1209.9	1060.7	710.7	497.4	450.1	497.4	710.7
135°	471.8	521.6	708.2	1018.8	1146.0	1018.8	708.2	521.6	471.8	521.6	708.2
137.5°	496.0	543.3	708.2	974.0	1091.9	974.0	708.2	543.3	496.0	543.3	708.2
140°	511.4	557.8	708.2	944.9	1056.7	944.9	708.2	557.8	511.4	557.8	708.2
142.5°	526.8	571.5	707.3	918.3	1016.0	918.3	707.3	571.5	526.8	571.5	707.3
145°	551.0	591.9	708.2	876.4	958.3	876.4	708.2	591.9	551.0	591.9	708.2
147.5°	575.2	610.0	709.6	841.8	904.7	841.8	709.6	610.0	575.2	610.0	709.6
150°	590.6	622.6	710.5	822.6	875.7	822.6	710.5	622.6	590.6	622.6	710.5
152.5°	605.1	633.6	711.4	806.1	849.4	806.1	711.4	633.6	605.1	633.6	711.4
155°	628.0	648.9	712.7	785.8	815.7	785.8	712.7	648.9	628.0	648.9	712.7
157.5°	647.8	664.9	714.1	770.9	791.7	770.9	714.1	664.9	647.8	664.9	714.1
160°	659.5	674.0	715.0	761.7	777.2	761.7	715.0	674.0	659.5	674.0	715.0
162.5°	671.3	682.2	715.9	753.6	766.4	753.6	715.9	682.2	671.3	682.2	715.9
165°	686.7	694.5	716.1	743.5	752.3	743.5	716.1	694.5	686.7	694.5	716.1
167.5°	699.8	703.9	717.5	735.7	739.4	735.7	717.5	703.9	699.8	703.9	717.5
170°	707.1	709.3	718.4	732.0	733.1	732.0	718.4	709.3	707.1	709.3	718.4
172.5°	711.6	712.9	718.4	728.3	728.6	728.3	718.4	712.9	711.6	712.9	718.4
175°	718.4	718.4	719.5	725.2	722.9	725.2	719.5	718.4	718.4	718.4	719.5
177.5°	721.5	720.6	719.7	722.5	720.6	722.5	719.7	720.6	721.5	720.6	719.7
180°	720.6	720.6	720.6	720.6	720.6	720.6	720.6	720.6	720.6	720.6	720.6



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1500.6	1500.6	1500.6	1500.6	1500.6	1500.6
2.5°	1488.9	1495.2	1495.2	1491.5	1509.3	1492.4
5°	1473.8	1488.1	1481.5	1481.3	1503.6	1487.0
7.5°	1463.1	1476.6	1470.4	1469.1	1491.0	1477.7
10°	1452.2	1462.1	1457.7	1461.0	1481.0	1467.8
12.5°	1436.8	1448.5	1444.1	1449.2	1467.5	1456.9
15°	1410.3	1420.2	1422.5	1424.8	1446.0	1434.9
17.5°	1366.5	1371.4	1382.4	1398.1	1420.2	1407.8
20°	1332.1	1338.8	1345.4	1372.7	1398.4	1385.2
22.5°	1293.0	1290.8	1306.3	1338.3	1370.4	1358.9
25°	1187.5	1102.2	1196.3	1278.8	1321.7	1318.4
27.5°	826.8	717.5	814.2	1180.3	1270.5	1277.2
30°	650.7	599.8	649.6	1053.6	1232.7	1248.2
32.5°	577.7	542.7	573.1	801.9	1185.1	1214.7
35°	498.5	474.2	498.5	599.8	1091.4	1160.0
37.5°	399.0	349.2	398.1	518.3	882.2	1100.9
40°	297.3	234.3	288.5	464.0	705.0	1054.7
42.5°	198.2	151.0	187.5	365.3	609.9	993.1
45°	107.2	93.9	102.8	220.7	497.7	885.0
47.5°	84.1	88.9	84.1	139.2	380.7	701.0
50°	80.7	96.2	80.7	107.5	314.9	530.8
52.5°	87.9	104.3	87.0	84.9	257.0	393.1
55°	99.7	153.9	100.8	69.0	188.4	264.8
57.5°	141.9	173.1	143.5	65.4	145.2	167.9
60°	145.8	186.7	144.6	69.0	112.3	124.5
62.5°	172.5	231.1	172.2	79.0	83.5	102.8
65°	221.1	243.3	223.4	100.7	59.6	92.8
67.5°	209.9	225.7	207.8	108.0	41.1	83.7
70°	206.2	218.4	204.0	123.4	38.0	70.2
72.5°	192.4	194.0	188.4	114.3	34.3	58.4
75°	149.2	139.2	143.6	98.5	34.3	49.8
77.5°	92.7	88.7	89.4	75.1	30.2	37.3
80°	70.2	67.9	66.8	63.4	28.3	28.3
82.5°	52.1	49.8	48.7	48.9	23.8	22.0
85°	23.8	21.5	20.4	28.3	16.9	12.4
87.5°	6.1	5.9	5.2	7.2	6.8	4.5
90°	7.9	6.8	7.9	13.6	2.3	0.0
92.5°	60.9	43.9	60.9	183.8	51.2	12.7
95°	209.8	132.4	209.8	568.0	118.0	37.3
97.5°	592.3	360.7	592.3	895.1	150.3	72.2
100°	966.9	649.3	966.9	1000.2	170.2	93.9
102.5°	1356.2	1081.1	1356.2	978.4	192.0	118.4
105°	1697.4	1613.3	1697.4	893.8	222.6	158.4
107.5°	1731.1	1828.5	1731.1	812.3	257.7	196.5
110°	1688.7	1865.7	1688.7	771.6	280.4	221.7





TEST NUMBER: P855252

CATALOG NUMBER: SQ2-FA-100U-050D-835-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1617.3	1841.2	1617.3	747.1	303.1	246.1
115°	1495.9	1757.0	1495.9	722.9	335.9	281.7
117.5°	1382.2	1649.5	1382.2	714.3	368.4	317.0
120°	1315.9	1572.6	1315.9	711.6	389.2	340.5
122.5°	1257.6	1494.7	1257.6	711.6	408.3	362.2
125°	1181.3	1390.5	1181.3	712.7	436.8	393.7
127.5°	1123.9	1302.2	1123.9	711.6	464.0	419.3
130°	1090.9	1252.4	1090.9	711.6	482.1	435.6
132.5°	1060.7	1209.9	1060.7	710.7	497.4	450.1
135°	1018.8	1146.0	1018.8	708.2	521.6	471.8
137.5°	974.0	1091.9	974.0	708.2	543.3	496.0
140°	944.9	1056.7	944.9	708.2	557.8	511.4
142.5°	918.3	1016.0	918.3	707.3	571.5	526.8
145°	876.4	958.3	876.4	708.2	591.9	551.0
147.5°	841.8	904.7	841.8	709.6	610.0	575.2
150°	822.6	875.7	822.6	710.5	622.6	590.6
152.5°	806.1	849.4	806.1	711.4	633.6	605.1
155°	785.8	815.7	785.8	712.7	648.9	628.0
157.5°	770.9	791.7	770.9	714.1	664.9	647.8
160°	761.7	777.2	761.7	715.0	674.0	659.5
162.5°	753.6	766.4	753.6	715.9	682.2	671.3
165°	743.5	752.3	743.5	716.1	694.5	686.7
167.5°	735.7	739.4	735.7	717.5	703.9	699.8
170°	732.0	733.1	732.0	718.4	709.3	707.1
172.5°	728.3	728.6	728.3	718.4	712.9	711.6
175°	725.2	722.9	725.2	719.5	718.4	718.4
177.5°	722.5	720.6	722.5	719.7	720.6	721.5
180°	720.6	720.6	720.6	720.6	720.6	720.6



TEST NUMBER: P855252

CATALOG NUMBER: SQ2-FA-100U-050D-835-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	9.10	9.77	10.21	10.86	12.36	7.96	8.62	9.06	9.71	11.22
	3H	9.79	10.39	10.91	11.49	13.01	14.10	14.69	15.22	15.80	17.32
	4H	10.19	10.76	11.32	11.86	13.39	15.37	15.93	16.49	17.04	18.56
	6H	10.54	11.06	11.68	12.17	13.70	15.97	16.49	17.10	17.59	19.13
	8H	10.66	11.15	11.79	12.27	13.80	16.09	16.58	17.23	17.70	19.23
	12H	10.72	11.19	11.86	12.30	13.86	16.13	16.59	17.26	17.71	19.26
4H	2H	9.48	10.04	10.61	11.15	12.67	8.47	9.04	9.61	10.14	11.67
	3H	10.47	10.94	11.60	12.07	13.60	14.79	15.26	15.93	16.39	17.93
	4H	11.02	11.46	12.16	12.58	14.13	16.24	16.67	17.37	17.79	19.34
	6H	11.49	11.86	12.64	13.00	14.55	16.97	17.34	18.11	18.48	20.03
	8H	11.66	12.01	12.81	13.14	14.71	17.13	17.48	18.28	18.61	20.17
	12H	11.77	12.08	12.93	13.23	14.80	17.19	17.50	18.35	18.64	20.21
8H	4H	12.12	12.46	13.26	13.59	15.16	16.35	16.70	17.49	17.83	19.39
	6H	12.72	13.01	13.88	14.18	15.74	17.23	17.51	18.39	18.68	20.25
	8H	12.96	13.20	14.13	14.36	15.94	17.48	17.72	18.65	18.88	20.46
	12H	13.12	13.34	14.29	14.49	16.11	17.59	17.81	18.76	18.96	20.58
12H	4H	12.25	12.57	13.41	13.71	15.28	16.30	16.62	17.46	17.76	19.33
	6H	13.00	13.24	14.17	14.40	15.98	17.24	17.48	18.41	18.64	20.22
	8H	13.29	13.51	14.46	14.66	16.27	17.51	17.73	18.68	18.88	20.49