

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: P855035

Luminaire Tested: SQ2-FA-125U-050D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855035  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-13, G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-125U-050D-830-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 1250 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

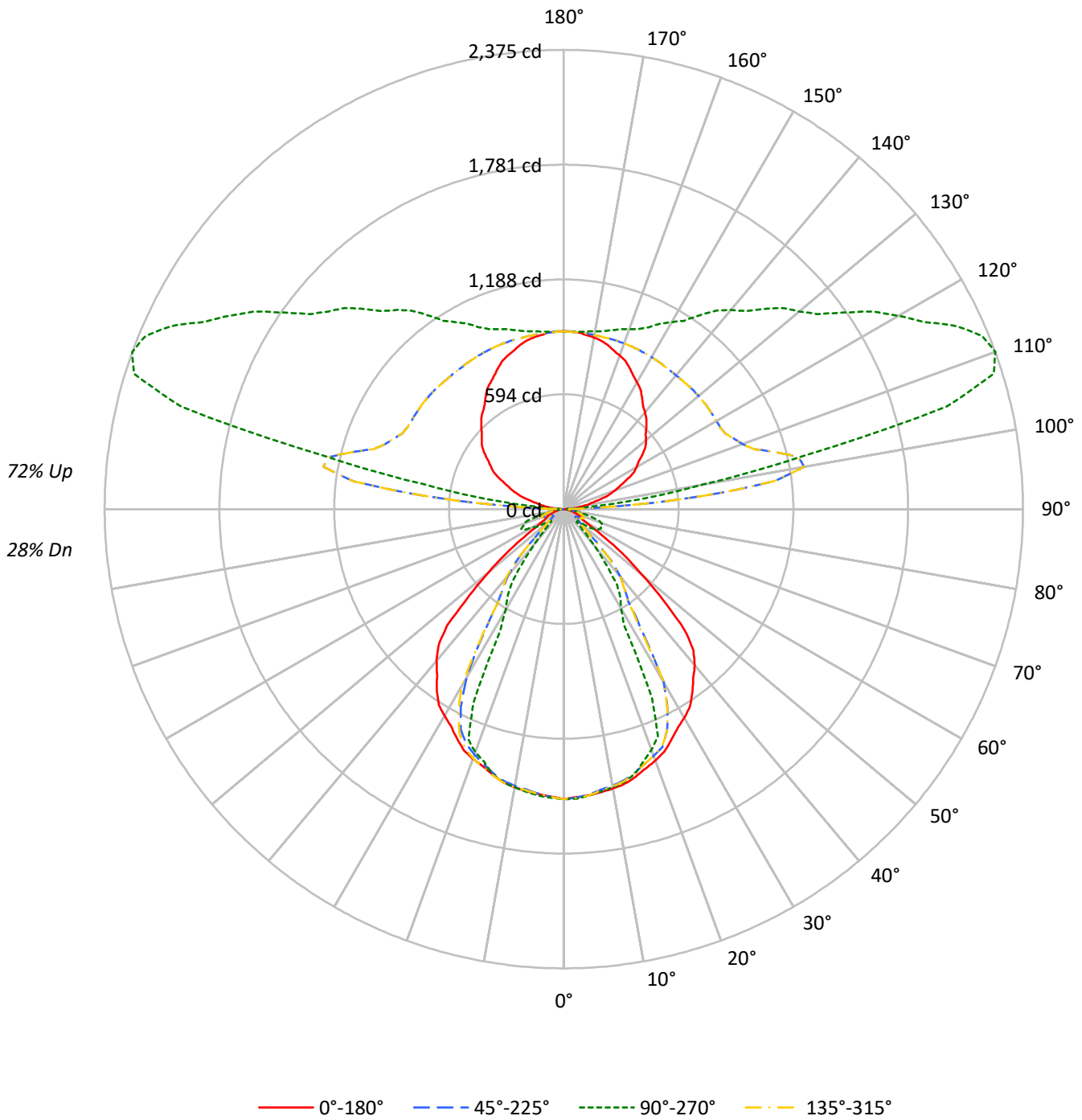
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7861.2 lumens  
Efficiency: N/A  
Efficacy: 127.4 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): 61.7  
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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CATALOG NUMBER: SQ2-FA-125U-050D-830-UNV-STD-W-4

### 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	50	30	10	0	
RCR																						
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	93	89	86	83	83	80	77	75	63	61	59	47	46	45	32	32	31	25				
2	86	79	73	69	76	71	66	62	56	53	50	42	40	39	29	28	27	22				
3	79	70	63	58	70	63	58	53	50	46	43	38	36	34	27	25	24	19				
4	72	62	55	50	65	56	50	46	45	41	37	34	32	29	25	23	22	18				
5	67	56	49	43	60	51	44	40	41	36	33	31	28	26	23	21	20	16				
6	62	51	43	38	55	46	39	35	37	32	29	29	26	23	21	19	18	14				
7	57	46	39	33	51	42	35	31	34	29	26	26	23	21	19	18	16	13				
8	53	42	35	30	48	38	32	28	31	26	23	24	21	19	18	16	15	12				
9	49	38	31	27	45	35	29	25	28	24	21	22	19	17	17	15	14	11				
10	46	35	28	24	42	32	26	22	26	22	19	21	18	16	16	14	13	10				

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

	0°	90°	180°	270°
0°	24206	24206	24206	24206
5°	24080	24115	23987	24097
10°	24042	23950	23950	23950
15°	23965	23719	23774	23719
20°	23778	22768	23603	22983
25°	23466	19215	23306	19618
30°	23250	11024	22997	11171
35°	22842	9471	22553	9337
40°	22211	4980	21591	4932
45°	20190	2142	19466	2142
50°	13320	2585	12637	2414
55°	7448	4774	7066	4329
60°	4017	6717	3943	6026
65°	3542	8164	3713	9287
70°	3309	9767	3149	10301
75°	3100	8390	3175	8677
80°	2631	5988	2631	6304
85°	2297	3353	2093	3983

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 20190 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.1	1.8
10°-20°	400.3	5.1
20°-30°	545.8	6.9
30°-40°	458.6	5.8
40°-50°	260.5	3.3
50°-60°	138.2	1.8
60°-70°	127.3	1.6
70°-80°	93.4	1.2
80°-90°	25.4	0.3
90°-100°	351.6	4.5
100°-110°	1144.6	14.6
110°-120°	1132.3	14.4
120°-130°	925.3	11.8
130°-140°	756.2	9.6
140°-150°	589.0	7.5
150°-160°	424.6	5.4
160°-170°	259.5	3.3
170°-180°	87.6	1.1
0°-30°	1087.1	13.8
0°-40°	1545.7	19.7
0°-60°	1944.4	24.7
0°-90°	2190.5	27.9
90°-120°	2628.5	33.4
90°-150°	4899.1	62.3
90°-180°	5671.0	72.1
0°-180°	7861.2	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1499	1499	1499	1499	1499	
5°	1486	1488	1480	1487	1486	141
15°	1434	1419	1422	1419	1434	404
25°	1317	1079	1308	1101	1317	607
35°	1159	480	1144	474	1159	723
45°	884	94	852	94	884	646
55°	265	170	251	154	265	255
65°	93	214	97	243	93	93
75°	50	134	51	139	50	51
85°	12	18	11	22	12	14
90°	0	7	0	7	0	3
95°	48	141	48	141	48	55
105°	194	2051	194	2051	194	207
115°	360	2240	360	2240	360	356
125°	500	1772	500	1772	500	445
135°	604	1463	604	1463	604	466
145°	705	1223	705	1223	705	442
155°	805	1038	805	1038	805	371
165°	878	958	878	958	878	247
175°	916	920	916	920	916	87
180°	919	919	919	919	919	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1499.2	1499.2	1499.2	1499.2	1499.2	1499.2	1499.2	1499.2	1499.2	1499.2	1499.2
2.5°	1491.1	1513.3	1493.8	1491.3	1499.2	1497.4	1494.7	1505.2	1487.5	1505.2	1491.1
5°	1485.7	1511.1	1482.3	1474.7	1487.9	1479.1	1486.8	1502.2	1480.0	1499.9	1477.8
7.5°	1476.4	1499.0	1464.4	1459.5	1472.5	1464.9	1468.0	1489.3	1470.7	1483.7	1463.7
10°	1466.4	1486.3	1451.7	1448.7	1460.8	1453.1	1456.3	1478.5	1460.8	1473.0	1452.9
12.5°	1455.6	1471.1	1436.4	1435.0	1445.4	1440.3	1441.8	1460.5	1446.3	1458.5	1439.3
15°	1433.7	1448.0	1413.3	1407.9	1419.0	1414.5	1416.7	1433.4	1422.3	1430.2	1413.3
17.5°	1406.5	1418.1	1383.5	1367.2	1367.6	1373.2	1383.5	1403.6	1393.6	1403.8	1380.1
20°	1383.9	1397.1	1359.0	1327.4	1325.1	1330.7	1359.0	1379.3	1373.7	1384.8	1351.1
22.5°	1357.7	1366.5	1331.9	1278.4	1270.8	1276.4	1328.3	1352.2	1350.2	1357.8	1315.8
25°	1317.2	1326.0	1262.9	1185.9	1078.6	1179.3	1265.2	1308.2	1308.2	1314.8	1259.5
27.5°	1276.0	1276.3	1162.1	761.6	671.8	734.2	1160.5	1253.7	1264.3	1261.0	1152.4
30°	1247.1	1239.4	1030.0	615.6	591.3	606.8	1031.1	1215.9	1233.5	1221.4	1004.0
32.5°	1213.6	1191.7	760.5	566.0	546.1	559.8	735.4	1170.9	1201.9	1175.5	789.6
35°	1158.9	1101.5	580.0	500.4	480.5	498.2	575.5	1082.4	1144.2	1073.4	599.2
37.5°	1099.9	875.5	510.6	398.6	355.7	390.0	508.1	866.1	1075.9	845.9	510.1
40°	1053.8	687.9	459.0	291.6	236.3	275.0	455.6	656.2	1024.4	706.0	447.7
42.5°	992.3	604.2	368.6	185.2	144.9	169.5	353.4	590.3	961.0	611.7	356.4
45°	884.2	519.3	218.2	101.5	93.8	98.3	201.3	509.8	852.5	498.7	222.7
47.5°	700.3	396.1	140.2	86.4	94.7	86.4	135.9	383.5	661.4	382.8	140.0
50°	530.3	309.1	108.5	87.4	102.9	87.4	105.1	298.6	503.1	326.3	107.4
52.5°	392.8	258.4	88.6	95.9	123.7	97.6	86.2	251.5	372.9	263.2	83.9
55°	264.6	202.6	71.2	126.5	169.6	129.8	71.2	196.8	251.0	194.6	69.0
57.5°	167.8	150.7	72.1	162.6	193.6	165.8	73.3	145.3	161.0	146.0	63.3
60°	124.4	118.8	80.3	172.6	208.0	174.9	81.4	114.4	122.1	113.3	67.8
62.5°	102.7	93.6	96.6	187.0	216.2	182.1	98.6	89.3	106.7	85.5	75.1
65°	92.7	60.6	114.2	189.4	213.7	189.4	115.3	57.4	97.2	61.8	101.8
67.5°	83.7	45.0	110.4	188.0	215.0	188.5	107.6	43.0	80.3	41.8	104.0
70°	70.1	40.3	104.0	191.4	206.9	184.7	104.0	39.1	66.7	38.0	122.1
72.5°	58.3	38.2	96.8	176.7	183.4	170.2	97.7	38.0	58.6	34.3	114.9
75°	49.7	37.5	92.7	141.2	134.5	134.5	90.5	36.5	50.9	34.3	89.3
77.5°	37.3	33.4	76.9	92.1	87.1	87.1	75.5	32.2	35.5	30.2	72.6
80°	28.3	30.5	63.3	67.7	64.4	64.4	61.1	29.4	28.3	28.3	59.9
82.5°	21.9	25.9	48.8	49.7	47.3	46.4	47.5	25.7	21.9	23.7	46.4
85°	12.4	18.0	26.0	21.4	18.1	17.0	24.9	16.8	11.3	16.8	24.9
87.5°	4.5	8.7	5.2	5.0	5.0	5.0	5.2	8.7	4.5	7.8	6.1
90°	0.0	3.3	7.9	6.8	6.8	6.8	7.9	3.3	0.0	3.3	7.9
92.5°	16.3	58.5	187.0	61.6	47.5	61.6	187.0	58.5	16.3	58.5	187.0
95°	47.5	144.7	644.4	229.7	141.3	229.7	644.4	144.7	47.5	144.7	644.4
97.5°	89.3	188.4	1093.7	666.1	406.6	666.1	1093.7	188.4	89.3	188.4	1093.7
100°	116.5	213.7	1262.8	1126.0	730.3	1126.0	1262.8	213.7	116.5	213.7	1262.8
102.5°	147.2	240.9	1242.0	1665.9	1266.7	1665.9	1242.0	240.9	147.2	240.9	1242.0
105°	194.5	280.6	1133.9	2165.7	2050.8	2165.7	1133.9	280.6	194.5	280.6	1133.9
107.5°	245.6	326.6	1031.3	2209.1	2330.9	2209.1	1031.3	326.6	245.6	326.6	1031.3
110°	282.7	356.7	982.4	2155.2	2375.3	2155.2	982.4	356.7	282.7	356.7	982.4



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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°	313.4	386.6	951.7	2058.1	2341.8	2058.1	951.7	386.6	313.4	386.6	951.7
115°	359.5	429.2	923.6	1903.6	2239.6	1903.6	923.6	429.2	359.5	429.2	923.6
117.5°	407.0	469.8	912.8	1761.9	2096.4	1761.9	912.8	469.8	407.0	469.8	912.8
120°	434.2	496.0	910.1	1674.8	1998.8	1674.8	910.1	496.0	434.2	496.0	910.1
122.5°	460.4	521.3	911.0	1599.3	1901.1	1599.3	911.0	521.3	460.4	521.3	911.0
125°	499.6	557.2	911.2	1502.9	1771.5	1502.9	911.2	557.2	499.6	557.2	911.2
127.5°	533.3	592.2	911.0	1430.7	1654.6	1430.7	911.0	592.2	533.3	592.2	911.0
130°	555.0	614.7	910.1	1389.4	1589.5	1389.4	910.1	614.7	555.0	614.7	910.1
132.5°	574.0	636.4	909.2	1351.1	1538.8	1351.1	909.2	636.4	574.0	636.4	909.2
135°	603.7	666.7	906.7	1297.1	1462.9	1297.1	906.7	666.7	603.7	666.7	906.7
137.5°	632.6	696.1	904.2	1242.1	1389.4	1242.1	904.2	696.1	632.6	696.1	904.2
140°	653.4	714.2	903.3	1204.9	1344.2	1204.9	903.3	714.2	653.4	714.2	903.3
142.5°	673.3	731.5	903.3	1169.3	1293.6	1169.3	903.3	731.5	673.3	731.5	903.3
145°	705.4	757.4	904.4	1117.1	1223.2	1117.1	904.4	757.4	705.4	757.4	904.4
147.5°	736.6	781.7	906.0	1072.6	1154.7	1072.6	906.0	781.7	736.6	781.7	906.0
150°	757.4	797.2	907.8	1046.2	1115.8	1046.2	907.8	797.2	757.4	797.2	907.8
152.5°	778.2	811.0	908.7	1025.9	1081.5	1025.9	908.7	811.0	778.2	811.0	908.7
155°	804.9	831.5	910.1	1000.3	1037.8	1000.3	910.1	831.5	804.9	831.5	910.1
157.5°	830.2	849.2	911.4	981.2	1007.5	981.2	911.4	849.2	830.2	849.2	911.4
160°	845.6	861.1	912.3	969.3	990.3	969.3	912.3	861.1	845.6	861.1	912.3
162.5°	859.2	871.2	912.3	959.2	975.0	959.2	912.3	871.2	859.2	871.2	912.3
165°	878.4	886.2	912.3	946.5	957.5	946.5	912.3	886.2	878.4	886.2	912.3
167.5°	892.0	896.8	912.5	936.9	942.6	936.9	912.5	896.8	892.0	896.8	912.5
170°	901.0	903.3	913.4	930.5	932.7	930.5	913.4	903.3	901.0	903.3	913.4
172.5°	907.3	908.7	915.3	926.8	926.3	926.8	915.3	908.7	907.3	908.7	915.3
175°	915.7	915.7	915.7	922.5	920.2	922.5	915.7	915.7	915.7	915.7	915.7
177.5°	919.1	918.2	917.3	921.7	918.2	921.7	917.3	918.2	919.1	918.2	917.3
180°	919.1	919.1	919.1	919.1	919.1	919.1	919.1	919.1	919.1	919.1	919.1



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1499.2	1499.2	1499.2	1499.2	1499.2	1499.2
2.5°	1487.6	1493.8	1493.8	1490.2	1507.9	1491.1
5°	1472.4	1486.8	1480.1	1480.0	1502.3	1485.7
7.5°	1461.8	1475.3	1469.0	1467.8	1489.6	1476.4
10°	1450.8	1460.8	1456.4	1459.7	1479.7	1466.4
12.5°	1435.5	1447.2	1442.8	1447.9	1466.2	1455.6
15°	1409.0	1419.0	1421.2	1423.5	1444.7	1433.7
17.5°	1365.3	1370.1	1381.2	1396.8	1419.0	1406.5
20°	1330.9	1337.6	1344.2	1371.5	1397.1	1383.9
22.5°	1291.9	1289.6	1305.1	1337.1	1369.2	1357.7
25°	1186.4	1101.2	1195.2	1277.6	1320.5	1317.2
27.5°	826.0	716.8	813.5	1179.3	1269.4	1276.0
30°	650.1	599.2	649.0	1052.6	1231.6	1247.1
32.5°	577.2	542.3	572.6	801.2	1184.0	1213.6
35°	498.0	473.7	498.0	599.2	1090.4	1158.9
37.5°	398.7	348.9	397.8	517.8	881.4	1099.9
40°	297.0	234.0	288.2	463.6	704.4	1053.8
42.5°	198.0	150.8	187.3	365.0	609.3	992.3
45°	107.1	93.8	102.7	220.5	497.3	884.2
47.5°	84.0	88.9	84.0	139.1	380.3	700.3
50°	80.6	96.1	80.6	107.4	314.7	530.3
52.5°	87.9	104.2	86.9	84.8	256.8	392.8
55°	99.6	153.8	100.7	69.0	188.3	264.6
57.5°	141.8	173.0	143.4	65.4	145.1	167.8
60°	145.6	186.6	144.5	69.0	112.2	124.4
62.5°	172.3	230.9	172.1	78.9	83.4	102.7
65°	220.9	243.1	223.2	100.6	59.6	92.7
67.5°	209.7	225.5	207.6	107.9	41.0	83.7
70°	206.0	218.2	203.9	123.2	38.0	70.1
72.5°	192.2	193.8	188.3	114.2	34.3	58.3
75°	149.0	139.1	143.5	98.4	34.3	49.7
77.5°	92.6	88.6	89.3	75.1	30.2	37.3
80°	70.1	67.8	66.7	63.3	28.3	28.3
82.5°	52.0	49.7	48.6	48.8	23.7	21.9
85°	23.7	21.5	20.4	28.3	16.8	12.4
87.5°	5.9	5.9	5.0	6.1	7.0	4.5
90°	6.8	6.8	6.8	7.9	3.3	0.0
92.5°	61.6	47.5	61.6	187.0	58.5	16.3
95°	229.7	141.3	229.7	644.4	144.7	47.5
97.5°	666.1	406.6	666.1	1093.7	188.4	89.3
100°	1126.0	730.3	1126.0	1262.8	213.7	116.5
102.5°	1665.9	1266.7	1665.9	1242.0	240.9	147.2
105°	2165.7	2050.8	2165.7	1133.9	280.6	194.5
107.5°	2209.1	2330.9	2209.1	1031.3	326.6	245.6
110°	2155.2	2375.3	2155.2	982.4	356.7	282.7





TEST NUMBER: P855035

CATALOG NUMBER: SQ2-FA-125U-050D-830-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	2058.1	2341.8	2058.1	951.7	386.6	313.4
115°	1903.6	2239.6	1903.6	923.6	429.2	359.5
117.5°	1761.9	2096.4	1761.9	912.8	469.8	407.0
120°	1674.8	1998.8	1674.8	910.1	496.0	434.2
122.5°	1599.3	1901.1	1599.3	911.0	521.3	460.4
125°	1502.9	1771.5	1502.9	911.2	557.2	499.6
127.5°	1430.7	1654.6	1430.7	911.0	592.2	533.3
130°	1389.4	1589.5	1389.4	910.1	614.7	555.0
132.5°	1351.1	1538.8	1351.1	909.2	636.4	574.0
135°	1297.1	1462.9	1297.1	906.7	666.7	603.7
137.5°	1242.1	1389.4	1242.1	904.2	696.1	632.6
140°	1204.9	1344.2	1204.9	903.3	714.2	653.4
142.5°	1169.3	1293.6	1169.3	903.3	731.5	673.3
145°	1117.1	1223.2	1117.1	904.4	757.4	705.4
147.5°	1072.6	1154.7	1072.6	906.0	781.7	736.6
150°	1046.2	1115.8	1046.2	907.8	797.2	757.4
152.5°	1025.9	1081.5	1025.9	908.7	811.0	778.2
155°	1000.3	1037.8	1000.3	910.1	831.5	804.9
157.5°	981.2	1007.5	981.2	911.4	849.2	830.2
160°	969.3	990.3	969.3	912.3	861.1	845.6
162.5°	959.2	975.0	959.2	912.3	871.2	859.2
165°	946.5	957.5	946.5	912.3	886.2	878.4
167.5°	936.9	942.6	936.9	912.5	896.8	892.0
170°	930.5	932.7	930.5	913.4	903.3	901.0
172.5°	926.8	926.3	926.8	915.3	908.7	907.3
175°	922.5	920.2	922.5	915.7	915.7	915.7
177.5°	921.7	918.2	921.7	917.3	918.2	919.1
180°	919.1	919.1	919.1	919.1	919.1	919.1



TEST NUMBER: P855035

CATALOG NUMBER: SQ2-FA-125U-050D-830-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	8.41	9.06	9.55	10.18	11.74	7.27	7.91	8.41	9.03	10.59
	3H	9.10	9.68	10.25	10.81	12.38	13.41	13.99	14.56	15.12	16.69
	4H	9.50	10.05	10.66	11.18	12.76	14.68	15.23	15.84	16.36	17.94
	6H	9.85	10.35	11.02	11.49	13.08	15.28	15.78	16.44	16.91	18.51
	8H	9.96	10.44	11.13	11.59	13.17	15.40	15.87	16.56	17.02	18.61
	12H	10.03	10.48	11.20	11.62	13.23	15.43	15.89	16.60	17.03	18.63
4H	2H	8.79	9.34	9.95	10.47	12.05	7.78	8.33	8.95	9.46	11.04
	3H	9.78	10.23	10.94	11.39	12.98	14.10	14.55	15.27	15.71	17.30
	4H	10.33	10.75	11.50	11.90	13.51	15.54	15.96	16.71	17.11	18.72
	6H	10.80	11.16	11.97	12.33	13.93	16.27	16.63	17.45	17.80	19.40
	8H	10.97	11.30	12.14	12.46	14.08	16.44	16.77	17.61	17.93	19.55
	12H	11.08	11.38	12.26	12.55	14.17	16.49	16.79	17.68	17.96	19.59
8H	4H	11.42	11.76	12.59	12.91	14.53	15.66	15.99	16.83	17.15	18.77
	6H	12.03	12.30	13.22	13.50	15.12	16.53	16.81	17.72	18.01	19.62
	8H	12.26	12.50	13.46	13.68	15.32	16.78	17.02	17.98	18.20	19.84
	12H	12.43	12.63	13.62	13.81	15.48	16.90	17.10	18.10	18.28	19.95
12H	4H	11.56	11.86	12.75	13.03	14.65	15.61	15.91	16.80	17.08	18.71
	6H	12.30	12.54	13.50	13.72	15.36	16.54	16.78	17.74	17.96	19.60
	8H	12.59	12.80	13.79	13.98	15.65	16.81	17.02	18.01	18.20	19.87