

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: P855261

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

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855261
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-10, G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-050U-050D-835-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

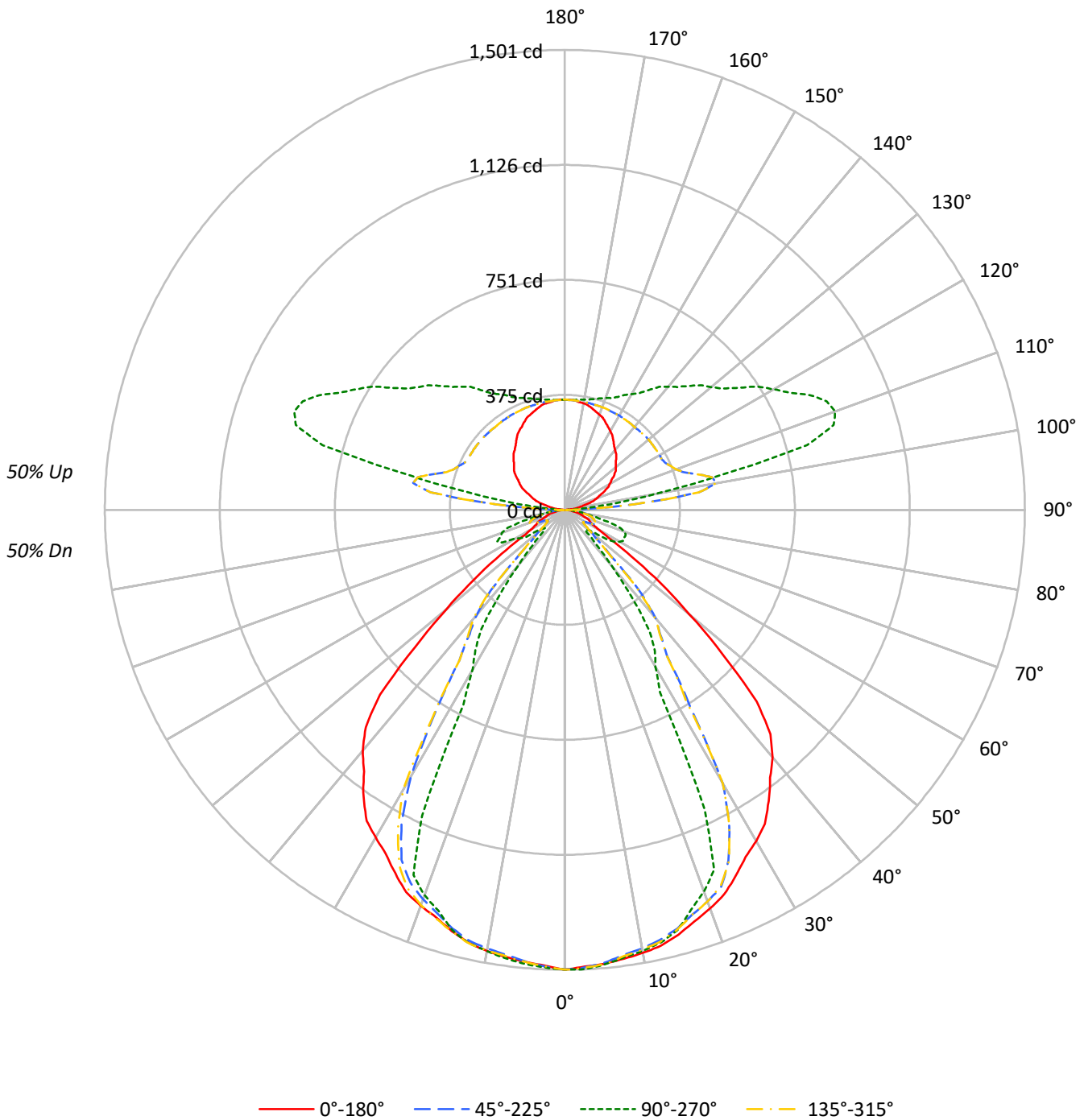
Lumens per Lamp: N/A
Luminaire Lumens: 4426.5 lumens
Efficiency: N/A
Efficacy: 135.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.6
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: P855261

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

Luminous Intensity Polar Plot





TEST NUMBER: P855261

CATALOG NUMBER: SQ2-FA-050U-050D-835-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	50	30	10	0	
RCR																						
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50				
1	99	95	91	88	91	88	85	82	74	72	70	62	61	59	51	50	49	44				
2	91	84	79	74	84	78	73	69	67	63	60	56	54	52	46	45	43	39				
3	84	75	69	63	77	70	64	60	60	56	52	51	48	45	42	40	39	35				
4	78	68	61	55	72	63	57	52	55	50	46	46	43	40	39	37	35	31				
5	72	61	54	48	66	57	51	46	50	45	41	43	39	36	36	33	31	28				
6	67	56	48	43	62	52	46	41	46	40	37	39	35	33	33	31	28	26				
7	62	51	44	39	58	48	41	37	42	37	33	36	32	30	31	28	26	24				
8	58	47	40	35	54	44	38	33	39	34	30	34	30	27	29	26	24	22				
9	54	43	36	31	51	41	34	30	36	31	27	31	28	25	27	24	22	20				
10	51	40	33	29	48	38	32	28	33	29	25	29	25	23	25	23	21	19				

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



TEST NUMBER: P855261

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.2	3.2
10°-20°	400.6	9.1
20°-30°	546.2	12.3
30°-40°	459.0	10.4
40°-50°	260.7	5.9
50°-60°	138.3	3.1
60°-70°	127.4	2.9
70°-80°	93.5	2.1
80°-90°	24.9	0.6
90°-100°	143.3	3.2
100°-110°	454.6	10.3
110°-120°	445.8	10.1
120°-130°	362.7	8.2
130°-140°	295.8	6.7
140°-150°	230.6	5.2
150°-160°	166.1	3.8
160°-170°	101.5	2.3
170°-180°	34.3	0.8
0°-30°	1088.1	24.6
0°-40°	1547.1	35.0
0°-60°	1946.2	44.0
0°-90°	2191.9	49.5
90°-120°	1043.6	23.6
90°-150°	1932.7	43.7
90°-180°	2235.0	50.5
0°-180°	4426.5	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	3	0	3	0	1
95°	19	62	19	62	19	22
105°	79	818	79	818	79	84
115°	142	885	142	885	142	140
125°	196	695	196	695	196	174
135°	236	572	236	572	236	183
145°	276	476	276	476	276	173
155°	315	406	315	406	315	145
165°	343	373	343	373	343	97
175°	359	360	359	360	359	34
180°	360	360	360	360	360	



TEST NUMBER: P855261

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

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	8.3	4.3	4.3	4.3	4.3	4.3	8.3	4.5	7.4	5.2
90°	0.0	1.1	3.4	3.4	3.4	3.4	3.4	1.1	0.0	1.1	3.4
92.5°	6.3	25.1	80.3	26.7	18.8	26.7	80.3	25.1	6.3	25.1	80.3
95°	19.2	57.9	260.3	96.5	62.2	96.5	260.3	57.9	19.2	57.9	260.3
97.5°	35.8	75.1	440.9	275.4	169.1	275.4	440.9	75.1	35.8	75.1	440.9
100°	47.5	85.1	502.5	458.0	297.6	458.0	502.5	85.1	47.5	85.1	502.5
102.5°	60.2	96.1	491.6	672.7	514.9	672.7	491.6	96.1	60.2	96.1	491.6
105°	79.2	111.2	448.1	853.5	818.1	853.5	448.1	111.2	79.2	111.2	448.1
107.5°	98.2	127.9	406.7	872.4	920.2	872.4	406.7	127.9	98.2	127.9	406.7
110°	110.9	139.6	385.9	850.7	939.2	850.7	385.9	139.6	110.9	139.6	385.9



TEST NUMBER: P855261

CATALOG NUMBER: SQ2-FA-050U-050D-835-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°	123.6	150.5	374.1	813.2	925.6	813.2	374.1	150.5	123.6	150.5	374.1
115°	141.5	168.1	362.1	752.1	884.8	752.1	362.1	168.1	141.5	168.1	362.1
117.5°	158.9	184.1	357.4	693.3	827.1	693.3	357.4	184.1	158.9	184.1	357.4
120°	169.7	194.1	356.5	656.9	786.4	656.9	356.5	194.1	169.7	194.1	356.5
122.5°	180.6	204.0	356.5	627.8	748.4	627.8	356.5	204.0	180.6	204.0	356.5
125°	195.8	219.0	356.5	589.7	694.7	589.7	356.5	219.0	195.8	219.0	356.5
127.5°	209.1	231.4	356.5	560.2	649.7	560.2	356.5	231.4	209.1	231.4	356.5
130°	217.3	240.5	356.5	542.7	623.4	542.7	356.5	240.5	217.3	240.5	356.5
132.5°	225.4	248.6	355.6	528.9	601.8	528.9	355.6	248.6	225.4	248.6	355.6
135°	236.5	259.7	354.2	507.2	571.5	507.2	354.2	259.7	236.5	259.7	354.2
137.5°	247.4	271.7	354.0	486.5	543.9	486.5	354.0	271.7	247.4	271.7	354.0
140°	254.6	279.0	353.1	471.9	524.0	471.9	353.1	279.0	254.6	279.0	353.1
142.5°	263.7	287.1	354.0	457.3	505.9	457.3	354.0	287.1	263.7	287.1	354.0
145°	276.1	297.2	354.2	437.6	476.4	437.6	354.2	297.2	276.1	297.2	354.2
147.5°	288.6	306.5	354.4	420.3	452.0	420.3	354.4	306.5	288.6	306.5	354.4
150°	297.6	312.0	355.3	410.2	435.7	410.2	355.3	312.0	297.6	312.0	355.3
152.5°	304.9	317.4	355.3	402.0	423.0	402.0	355.3	317.4	304.9	317.4	355.3
155°	314.6	325.7	355.3	390.8	406.3	390.8	355.3	325.7	314.6	325.7	355.3
157.5°	325.0	332.5	356.5	383.9	394.5	383.9	356.5	332.5	325.0	332.5	356.5
160°	330.4	337.0	356.5	379.2	388.2	379.2	356.5	337.0	330.4	337.0	356.5
162.5°	335.9	340.7	356.5	375.6	381.8	375.6	356.5	340.7	335.9	340.7	356.5
165°	342.9	346.2	356.5	370.1	373.4	370.1	356.5	346.2	342.9	346.2	356.5
167.5°	349.5	350.4	357.6	366.2	369.1	366.2	357.6	350.4	349.5	350.4	357.6
170°	353.1	353.1	357.6	364.4	365.5	364.4	357.6	353.1	353.1	353.1	357.6
172.5°	354.9	355.8	357.6	362.6	362.8	362.6	357.6	355.8	354.9	355.8	357.6
175°	358.7	357.6	358.7	360.9	359.9	360.9	358.7	357.6	358.7	357.6	358.7
177.5°	359.9	359.0	359.0	360.7	359.0	360.7	359.0	359.0	359.9	359.0	359.0
180°	359.9	359.9	359.9	359.9	359.9	359.9	359.9	359.9	359.9	359.9	359.9



TEST NUMBER: P855261

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

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°	5.2	5.2	4.3	5.2	6.6	4.5
90°	3.4	3.4	3.4	3.4	1.1	0.0
92.5°	26.7	18.8	26.7	80.3	25.1	6.3
95°	96.5	62.2	96.5	260.3	57.9	19.2
97.5°	275.4	169.1	275.4	440.9	75.1	35.8
100°	458.0	297.6	458.0	502.5	85.1	47.5
102.5°	672.7	514.9	672.7	491.6	96.1	60.2
105°	853.5	818.1	853.5	448.1	111.2	79.2
107.5°	872.4	920.2	872.4	406.7	127.9	98.2
110°	850.7	939.2	850.7	385.9	139.6	110.9



TEST NUMBER: P855261

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	813.2	925.6	813.2	374.1	150.5	123.6
115°	752.1	884.8	752.1	362.1	168.1	141.5
117.5°	693.3	827.1	693.3	357.4	184.1	158.9
120°	656.9	786.4	656.9	356.5	194.1	169.7
122.5°	627.8	748.4	627.8	356.5	204.0	180.6
125°	589.7	694.7	589.7	356.5	219.0	195.8
127.5°	560.2	649.7	560.2	356.5	231.4	209.1
130°	542.7	623.4	542.7	356.5	240.5	217.3
132.5°	528.9	601.8	528.9	355.6	248.6	225.4
135°	507.2	571.5	507.2	354.2	259.7	236.5
137.5°	486.5	543.9	486.5	354.0	271.7	247.4
140°	471.9	524.0	471.9	353.1	279.0	254.6
142.5°	457.3	505.9	457.3	354.0	287.1	263.7
145°	437.6	476.4	437.6	354.2	297.2	276.1
147.5°	420.3	452.0	420.3	354.4	306.5	288.6
150°	410.2	435.7	410.2	355.3	312.0	297.6
152.5°	402.0	423.0	402.0	355.3	317.4	304.9
155°	390.8	406.3	390.8	355.3	325.7	314.6
157.5°	383.9	394.5	383.9	356.5	332.5	325.0
160°	379.2	388.2	379.2	356.5	337.0	330.4
162.5°	375.6	381.8	375.6	356.5	340.7	335.9
165°	370.1	373.4	370.1	356.5	346.2	342.9
167.5°	366.2	369.1	366.2	357.6	350.4	349.5
170°	364.4	365.5	364.4	357.6	353.1	353.1
172.5°	362.6	362.8	362.6	357.6	355.8	354.9
175°	360.9	359.9	360.9	358.7	357.6	358.7
177.5°	360.7	359.0	360.7	359.0	359.0	359.9
180°	359.9	359.9	359.9	359.9	359.9	359.9

TEST NUMBER: P855261

CATALOG NUMBER: SQ2-FA-050U-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	10.94	11.70	11.93	12.68	13.97	9.80	10.56	10.78	11.54	12.82
	3H	11.64	12.32	12.63	13.31	14.62	15.95	16.63	16.94	17.62	18.92
	4H	12.05	12.69	13.05	13.68	15.00	17.22	17.86	18.23	18.86	20.17
	6H	12.40	12.99	13.42	13.99	15.32	17.83	18.41	18.84	19.41	20.74
	8H	12.52	13.07	13.54	14.09	15.41	17.95	18.51	18.97	19.52	20.85
	12H	12.58	13.12	13.61	14.12	15.47	17.99	18.52	19.01	19.53	20.87
4H	2H	11.33	11.97	12.34	12.97	14.28	10.33	10.97	11.34	11.96	13.28
	3H	12.32	12.86	13.34	13.88	15.21	16.65	17.18	17.67	18.20	19.53
	4H	12.88	13.37	13.91	14.39	15.74	18.10	18.58	19.12	19.60	20.95
	6H	13.36	13.78	14.39	14.82	16.17	18.83	19.25	19.87	20.29	21.64
	8H	13.53	13.92	14.56	14.95	16.31	19.00	19.39	20.03	20.42	21.78
	12H	13.64	13.99	14.69	15.04	16.41	19.06	19.41	20.11	20.45	21.82
8H	4H	13.98	14.37	15.02	15.40	16.77	18.22	18.61	19.25	19.64	21.00
	6H	14.59	14.91	15.65	15.98	17.34	19.09	19.42	20.15	20.49	21.85
	8H	14.83	15.11	15.89	16.16	17.54	19.34	19.63	20.41	20.68	22.06
	12H	14.99	15.24	16.06	16.29	17.72	19.46	19.71	20.53	20.76	22.19
12H	4H	14.12	14.48	15.18	15.52	16.89	18.17	18.53	19.23	19.57	20.94
	6H	14.86	15.15	15.93	16.20	17.58	19.10	19.39	20.17	20.44	21.82
	8H	15.16	15.41	16.23	16.46	17.88	19.38	19.63	20.45	20.68	22.10