

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: P855449

Luminaire Tested: SQ2-FA-100U-050D-840-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855449
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-840-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

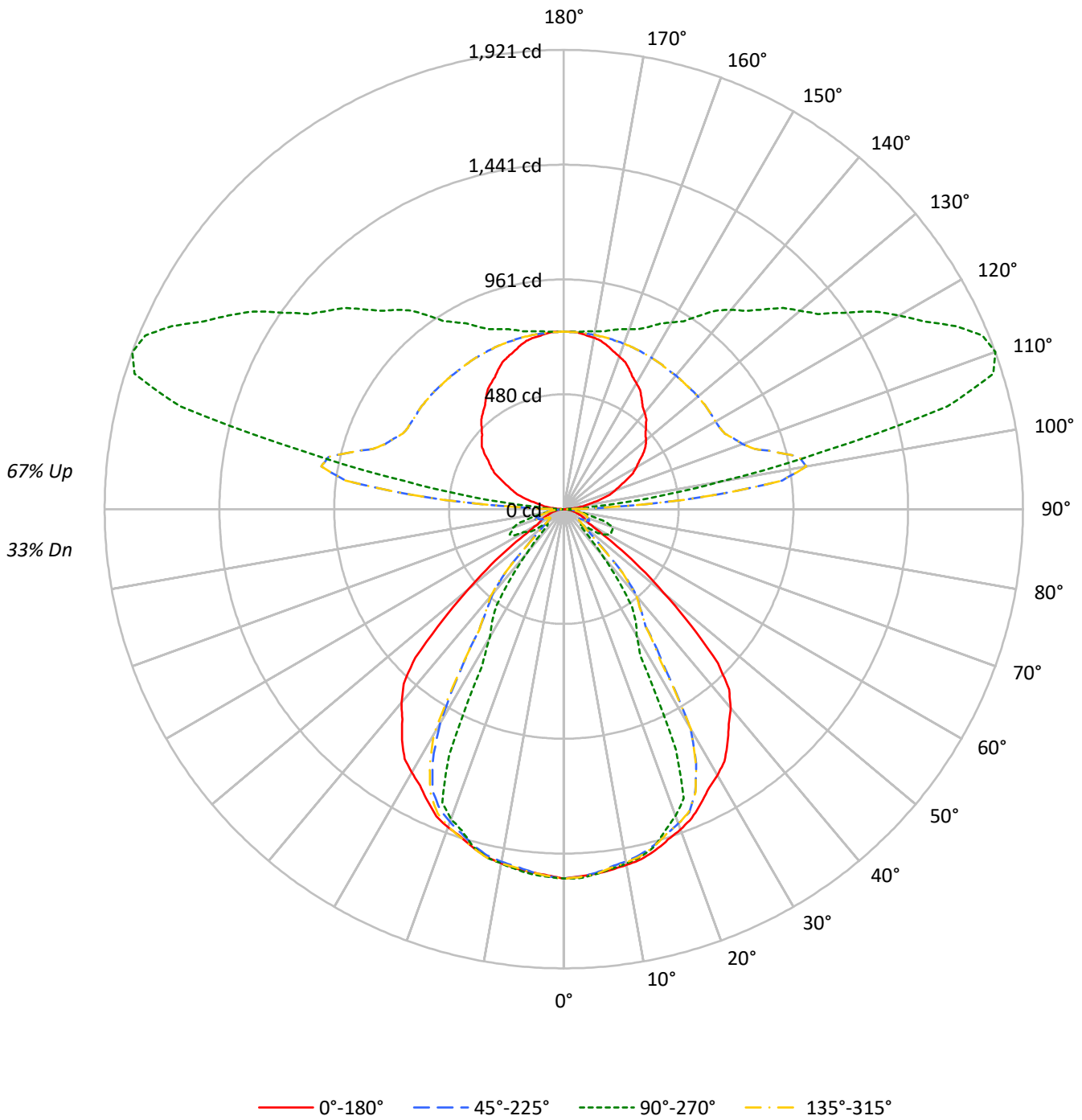
Lumens per Lamp: N/A
Luminaire Lumens: 6877.1 lumens
Efficiency: N/A
Efficacy: 136.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 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°	24950	24950	24950	24950
5°	24819	24857	24725	24838
10°	24781	24686	24686	24686
15°	24700	24448	24506	24448
20°	24510	23469	24330	23689
25°	24187	19807	24022	20222
30°	23964	11363	23705	11516
35°	23544	9763	23246	9625
40°	22894	5134	22255	5084
45°	20808	2208	20064	2208
50°	13730	2665	13026	2489
55°	7676	4921	7282	4462
60°	4140	6923	4066	6210
65°	3652	8416	3828	9574
70°	3413	10069	3248	10617
75°	3200	8652	3269	8939
80°	2706	6174	2706	6499
85°	2371	3446	2167	4094

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20808 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.4	2.1
10°-20°	412.6	6.0
20°-30°	562.5	8.2
30°-40°	472.7	6.9
40°-50°	268.5	3.9
50°-60°	142.5	2.1
60°-70°	131.2	1.9
70°-80°	96.3	1.4
80°-90°	26.5	0.4
90°-100°	310.0	4.5
100°-110°	937.4	13.6
110°-120°	915.1	13.3
120°-130°	747.8	10.9
130°-140°	610.4	8.9
140°-150°	475.2	6.9
150°-160°	342.6	5.0
160°-170°	209.7	3.0
170°-180°	70.8	1.0
0°-30°	1120.5	16.3
0°-40°	1593.2	23.2
0°-60°	2004.2	29.1
0°-90°	2258.1	32.8
90°-120°	2162.5	31.4
90°-150°	3995.9	58.1
90°-180°	4619.0	67.2
0°-180°	6877.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1545	1545	1545	1545	1545	
5°	1531	1534	1526	1532	1531	146
15°	1478	1463	1466	1463	1478	417
25°	1358	1112	1348	1135	1358	626
35°	1194	495	1179	488	1194	746
45°	911	97	879	97	911	666
55°	273	175	259	158	273	263
65°	96	220	100	251	96	96
75°	51	139	52	143	51	53
85°	13	19	12	22	13	14
90°	0	7	0	7	0	2
95°	38	136	38	136	38	46
105°	163	1661	163	1661	163	171
115°	290	1809	290	1809	290	287
125°	405	1432	405	1432	405	360
135°	486	1180	486	1180	486	376
145°	567	987	567	987	567	355
155°	647	840	647	840	647	298
165°	707	775	707	775	707	199
175°	740	744	740	744	740	70
180°	742	742	742	742	742	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1545.3	1545.3	1545.3	1545.3	1545.3	1545.3	1545.3	1545.3	1545.3	1545.3	1545.3
2.5°	1536.9	1559.8	1539.7	1537.2	1545.3	1543.5	1540.7	1551.5	1533.2	1551.5	1536.9
5°	1531.3	1557.6	1527.8	1520.0	1533.7	1524.6	1532.5	1548.4	1525.5	1546.0	1523.2
7.5°	1521.8	1545.1	1509.4	1504.4	1517.8	1509.9	1513.2	1535.1	1516.0	1529.4	1508.7
10°	1511.5	1532.0	1496.4	1493.2	1505.7	1497.8	1501.0	1524.0	1505.7	1518.3	1497.5
12.5°	1500.3	1516.3	1480.5	1479.1	1489.8	1484.6	1486.1	1505.3	1490.8	1503.4	1483.6
15°	1477.7	1492.5	1456.8	1451.2	1462.6	1458.0	1460.2	1477.5	1466.1	1474.1	1456.8
17.5°	1449.8	1461.6	1426.0	1409.2	1409.7	1415.4	1426.0	1446.7	1436.5	1447.0	1422.5
20°	1426.5	1440.1	1400.8	1368.2	1365.9	1371.6	1400.8	1421.7	1416.0	1427.4	1392.7
22.5°	1399.4	1408.5	1372.8	1317.7	1309.9	1315.6	1369.1	1393.8	1391.7	1399.5	1356.3
25°	1357.7	1366.8	1301.8	1222.4	1111.8	1215.5	1304.1	1348.4	1348.4	1355.2	1298.3
27.5°	1315.3	1315.5	1197.8	785.0	692.5	756.8	1196.2	1292.2	1303.2	1299.8	1187.8
30°	1285.4	1277.5	1061.7	634.6	609.5	625.5	1062.8	1253.3	1271.5	1259.0	1034.9
32.5°	1250.9	1228.3	783.8	583.4	562.9	577.0	758.0	1206.9	1238.8	1211.7	813.9
35°	1194.5	1135.3	597.9	515.8	495.3	513.5	593.2	1115.6	1179.4	1106.4	617.7
37.5°	1133.7	902.4	526.3	410.8	366.6	401.9	523.7	892.7	1109.0	872.0	525.8
40°	1086.2	709.0	473.2	300.6	243.6	283.4	469.7	676.4	1055.9	727.7	461.5
42.5°	1022.8	622.8	379.9	190.9	149.4	174.7	364.3	608.5	990.6	630.5	367.3
45°	911.3	535.3	224.9	104.7	96.7	101.3	207.4	525.5	878.7	514.1	229.6
47.5°	721.8	408.2	144.5	89.0	97.7	89.0	140.1	395.3	681.8	394.6	144.3
50°	546.6	318.6	111.9	90.1	106.1	90.1	108.4	307.8	518.6	336.3	110.7
52.5°	404.9	266.3	91.4	98.8	127.5	100.6	88.8	259.2	384.3	271.3	86.5
55°	272.7	208.8	73.4	130.4	174.8	133.8	73.4	202.9	258.7	200.6	71.1
57.5°	172.9	155.3	74.4	167.6	199.5	170.8	75.5	149.8	166.0	150.5	65.3
60°	128.2	122.5	82.7	178.0	214.4	180.3	83.9	117.9	125.9	116.8	69.9
62.5°	105.8	96.5	99.5	192.8	222.8	187.7	101.6	92.1	110.0	88.1	77.4
65°	95.6	62.5	117.7	195.2	220.3	195.2	118.9	59.2	100.2	63.7	104.9
67.5°	86.2	46.4	113.7	193.8	221.7	194.3	110.9	44.3	82.7	43.1	107.2
70°	72.3	41.5	107.2	197.3	213.3	190.4	107.2	40.3	68.8	39.2	125.9
72.5°	60.1	39.4	99.8	182.2	189.0	175.4	100.7	39.2	60.4	35.3	118.4
75°	51.3	38.7	95.6	145.6	138.7	138.7	93.2	37.6	52.4	35.3	92.1
77.5°	38.5	34.4	79.2	95.0	89.7	89.7	77.8	33.2	36.6	31.1	74.8
80°	29.1	31.5	65.3	69.8	66.4	66.4	62.9	30.3	29.1	29.1	61.8
82.5°	22.6	26.7	50.3	51.3	48.7	47.8	48.9	26.5	22.6	24.5	47.8
85°	12.8	18.5	26.8	22.0	18.6	17.5	25.6	17.4	11.7	17.4	25.6
87.5°	4.7	8.7	6.5	5.4	5.1	5.4	6.5	8.7	4.7	7.8	7.5
90°	0.0	2.3	14.0	8.2	7.0	8.2	14.0	2.3	0.0	2.3	14.0
92.5°	13.1	52.7	189.3	62.7	45.2	62.7	189.3	52.7	13.1	52.7	189.3
95°	38.5	121.6	584.9	216.1	136.4	216.1	584.9	121.6	38.5	121.6	584.9
97.5°	74.4	154.8	921.8	610.0	371.4	610.0	921.8	154.8	74.4	154.8	921.8
100°	96.7	175.3	1030.0	995.7	668.7	995.7	1030.0	175.3	96.7	175.3	1030.0
102.5°	121.9	197.8	1007.6	1396.6	1113.3	1396.6	1007.6	197.8	121.9	197.8	1007.6
105°	163.2	229.2	920.4	1748.0	1661.4	1748.0	920.4	229.2	163.2	229.2	920.4
107.5°	202.3	265.4	836.5	1782.7	1883.1	1782.7	836.5	265.4	202.3	265.4	836.5
110°	228.3	288.8	794.6	1739.0	1921.3	1739.0	794.6	288.8	228.3	288.8	794.6



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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°	253.5	312.1	769.4	1665.5	1896.1	1665.5	769.4	312.1	253.5	312.1	769.4
115°	290.1	345.9	744.5	1540.5	1809.4	1540.5	744.5	345.9	290.1	345.9	744.5
117.5°	326.4	379.3	735.6	1423.4	1698.7	1423.4	735.6	379.3	326.4	379.3	735.6
120°	350.7	400.8	732.8	1355.1	1619.4	1355.1	732.8	400.8	350.7	400.8	732.8
122.5°	373.0	420.5	732.8	1295.1	1539.3	1295.1	732.8	420.5	373.0	420.5	732.8
125°	405.4	449.8	734.0	1216.6	1431.9	1216.6	734.0	449.8	405.4	449.8	734.0
127.5°	431.8	477.8	732.8	1157.4	1341.0	1157.4	732.8	477.8	431.8	477.8	732.8
130°	448.6	496.5	732.8	1123.4	1289.7	1123.4	732.8	496.5	448.6	496.5	732.8
132.5°	463.5	512.2	731.9	1092.3	1245.9	1092.3	731.9	512.2	463.5	512.2	731.9
135°	485.9	537.1	729.3	1049.2	1180.2	1049.2	729.3	537.1	485.9	537.1	729.3
137.5°	510.8	559.5	729.3	1003.1	1124.5	1003.1	729.3	559.5	510.8	559.5	729.3
140°	526.6	574.4	729.3	973.1	1088.3	973.1	729.3	574.4	526.6	574.4	729.3
142.5°	542.5	588.5	728.4	945.7	1046.3	945.7	728.4	588.5	542.5	588.5	728.4
145°	567.4	609.5	729.3	902.5	986.9	902.5	729.3	609.5	567.4	609.5	729.3
147.5°	592.4	628.2	730.7	866.9	931.6	866.9	730.7	628.2	592.4	628.2	730.7
150°	608.2	641.2	731.6	847.1	901.8	847.1	731.6	641.2	608.2	641.2	731.6
152.5°	623.1	652.5	732.6	830.1	874.8	830.1	732.6	652.5	623.1	652.5	732.6
155°	646.7	668.2	734.0	809.3	840.0	809.3	734.0	668.2	646.7	668.2	734.0
157.5°	667.1	684.7	735.4	793.9	815.3	793.9	735.4	684.7	667.1	684.7	735.4
160°	679.2	694.1	736.3	784.4	800.4	784.4	736.3	694.1	679.2	694.1	736.3
162.5°	691.3	702.5	737.2	776.0	789.2	776.0	737.2	702.5	691.3	702.5	737.2
165°	707.2	715.2	737.5	765.7	774.8	765.7	737.5	715.2	707.2	715.2	737.5
167.5°	720.7	724.9	738.9	757.6	761.5	757.6	738.9	724.9	720.7	724.9	738.9
170°	728.1	730.5	739.8	753.8	754.9	753.8	739.8	730.5	728.1	730.5	739.8
172.5°	732.8	734.2	739.8	750.1	750.3	750.1	739.8	734.2	732.8	734.2	739.8
175°	739.8	739.8	741.0	746.8	744.5	746.8	741.0	739.8	739.8	739.8	741.0
177.5°	743.1	742.1	741.2	744.0	742.1	744.0	741.2	742.1	743.1	742.1	741.2
180°	742.1	742.1	742.1	742.1	742.1	742.1	742.1	742.1	742.1	742.1	742.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1545.3	1545.3	1545.3	1545.3	1545.3	1545.3
2.5°	1533.3	1539.7	1539.7	1536.0	1554.3	1536.9
5°	1517.7	1532.5	1525.6	1525.5	1548.5	1531.3
7.5°	1506.7	1520.6	1514.2	1512.9	1535.4	1521.8
10°	1495.4	1505.7	1501.2	1504.5	1525.2	1511.5
12.5°	1479.6	1491.7	1487.2	1492.4	1511.3	1500.3
15°	1452.3	1462.6	1464.9	1467.2	1489.1	1477.7
17.5°	1407.2	1412.2	1423.7	1439.7	1462.6	1449.8
20°	1371.8	1378.7	1385.5	1413.6	1440.1	1426.5
22.5°	1331.6	1329.3	1345.2	1378.2	1411.3	1399.4
25°	1222.9	1135.1	1231.9	1316.9	1361.1	1357.7
27.5°	851.4	738.9	838.5	1215.5	1308.4	1315.3
30°	670.1	617.7	668.9	1085.0	1269.5	1285.4
32.5°	594.9	558.9	590.2	825.8	1220.4	1250.9
35°	513.4	488.3	513.4	617.7	1123.9	1194.5
37.5°	410.9	359.6	410.0	533.8	908.5	1133.7
40°	306.2	241.2	297.1	477.8	726.0	1086.2
42.5°	204.1	155.5	193.1	376.2	628.0	1022.8
45°	110.4	96.7	105.8	227.3	512.5	911.3
47.5°	86.6	91.6	86.6	143.3	392.0	721.8
50°	83.1	99.1	83.1	110.7	324.3	546.6
52.5°	90.6	107.4	89.6	87.4	264.7	404.9
55°	102.7	158.5	103.8	71.1	194.0	272.7
57.5°	146.1	178.3	147.8	67.4	149.5	172.9
60°	150.1	192.3	148.9	71.1	115.6	128.2
62.5°	177.6	238.0	177.4	81.3	86.0	105.8
65°	227.7	250.6	230.1	103.7	61.4	95.6
67.5°	216.2	232.4	214.0	111.2	42.3	86.2
70°	212.3	224.9	210.1	127.0	39.2	72.3
72.5°	198.1	199.7	194.0	117.7	35.3	60.1
75°	153.6	143.3	147.9	101.4	35.3	51.3
77.5°	95.4	91.4	92.1	77.4	31.1	38.5
80°	72.3	69.9	68.8	65.3	29.1	29.1
82.5°	53.6	51.3	50.1	50.3	24.5	22.6
85°	24.5	22.1	21.0	29.1	17.4	12.8
87.5°	6.3	6.1	5.4	7.5	7.0	4.7
90°	8.2	7.0	8.2	14.0	2.3	0.0
92.5°	62.7	45.2	62.7	189.3	52.7	13.1
95°	216.1	136.4	216.1	584.9	121.6	38.5
97.5°	610.0	371.4	610.0	921.8	154.8	74.4
100°	995.7	668.7	995.7	1030.0	175.3	96.7
102.5°	1396.6	1113.3	1396.6	1007.6	197.8	121.9
105°	1748.0	1661.4	1748.0	920.4	229.2	163.2
107.5°	1782.7	1883.1	1782.7	836.5	265.4	202.3
110°	1739.0	1921.3	1739.0	794.6	288.8	228.3



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1665.5	1896.1	1665.5	769.4	312.1	253.5
115°	1540.5	1809.4	1540.5	744.5	345.9	290.1
117.5°	1423.4	1698.7	1423.4	735.6	379.3	326.4
120°	1355.1	1619.4	1355.1	732.8	400.8	350.7
122.5°	1295.1	1539.3	1295.1	732.8	420.5	373.0
125°	1216.6	1431.9	1216.6	734.0	449.8	405.4
127.5°	1157.4	1341.0	1157.4	732.8	477.8	431.8
130°	1123.4	1289.7	1123.4	732.8	496.5	448.6
132.5°	1092.3	1245.9	1092.3	731.9	512.2	463.5
135°	1049.2	1180.2	1049.2	729.3	537.1	485.9
137.5°	1003.1	1124.5	1003.1	729.3	559.5	510.8
140°	973.1	1088.3	973.1	729.3	574.4	526.6
142.5°	945.7	1046.3	945.7	728.4	588.5	542.5
145°	902.5	986.9	902.5	729.3	609.5	567.4
147.5°	866.9	931.6	866.9	730.7	628.2	592.4
150°	847.1	901.8	847.1	731.6	641.2	608.2
152.5°	830.1	874.8	830.1	732.6	652.5	623.1
155°	809.3	840.0	809.3	734.0	668.2	646.7
157.5°	793.9	815.3	793.9	735.4	684.7	667.1
160°	784.4	800.4	784.4	736.3	694.1	679.2
162.5°	776.0	789.2	776.0	737.2	702.5	691.3
165°	765.7	774.8	765.7	737.5	715.2	707.2
167.5°	757.6	761.5	757.6	738.9	724.9	720.7
170°	753.8	754.9	753.8	739.8	730.5	728.1
172.5°	750.1	750.3	750.1	739.8	734.2	732.8
175°	746.8	744.5	746.8	741.0	739.8	739.8
177.5°	744.0	742.1	744.0	741.2	742.1	743.1
180°	742.1	742.1	742.1	742.1	742.1	742.1



TEST NUMBER: P855449

CATALOG NUMBER: SQ2-FA-100U-050D-840-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	9.20	9.87	10.31	10.96	12.46	8.06	8.72	9.17	9.82	11.32
	3H	9.89	10.49	11.01	11.59	13.11	14.20	14.80	15.32	15.90	17.42
	4H	10.30	10.86	11.42	11.96	13.49	15.47	16.04	16.60	17.14	18.66
	6H	10.64	11.16	11.78	12.27	13.81	16.07	16.59	17.20	17.70	19.23
	8H	10.76	11.25	11.89	12.37	13.90	16.19	16.68	17.33	17.80	19.33
	12H	10.82	11.29	11.96	12.41	13.96	16.23	16.69	17.37	17.81	19.36
4H	2H	9.58	10.15	10.71	11.25	12.77	8.58	9.14	9.71	10.24	11.77
	3H	10.57	11.04	11.71	12.17	13.71	14.89	15.36	16.03	16.49	18.03
	4H	11.13	11.56	12.27	12.68	14.24	16.34	16.77	17.48	17.89	19.45
	6H	11.59	11.97	12.74	13.11	14.66	17.07	17.44	18.21	18.58	20.13
	8H	11.76	12.11	12.91	13.24	14.81	17.23	17.58	18.38	18.71	20.28
	12H	11.87	12.18	13.03	13.33	14.90	17.29	17.60	18.45	18.74	20.31
8H	4H	12.22	12.56	13.36	13.70	15.26	16.45	16.80	17.60	17.93	19.49
	6H	12.82	13.11	13.99	14.28	15.84	17.33	17.61	18.49	18.79	20.35
	8H	13.06	13.31	14.23	14.46	16.04	17.58	17.83	18.75	18.98	20.56
	12H	13.22	13.44	14.39	14.59	16.21	17.69	17.91	18.86	19.06	20.68
12H	4H	12.36	12.67	13.52	13.81	15.38	16.41	16.72	17.57	17.86	19.43
	6H	13.10	13.35	14.27	14.50	16.08	17.34	17.59	18.51	18.74	20.32
	8H	13.39	13.61	14.56	14.76	16.37	17.61	17.83	18.78	18.98	20.60