

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: P853790

Luminaire Tested: SQ2-FA-100U-050D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853790
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-940-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

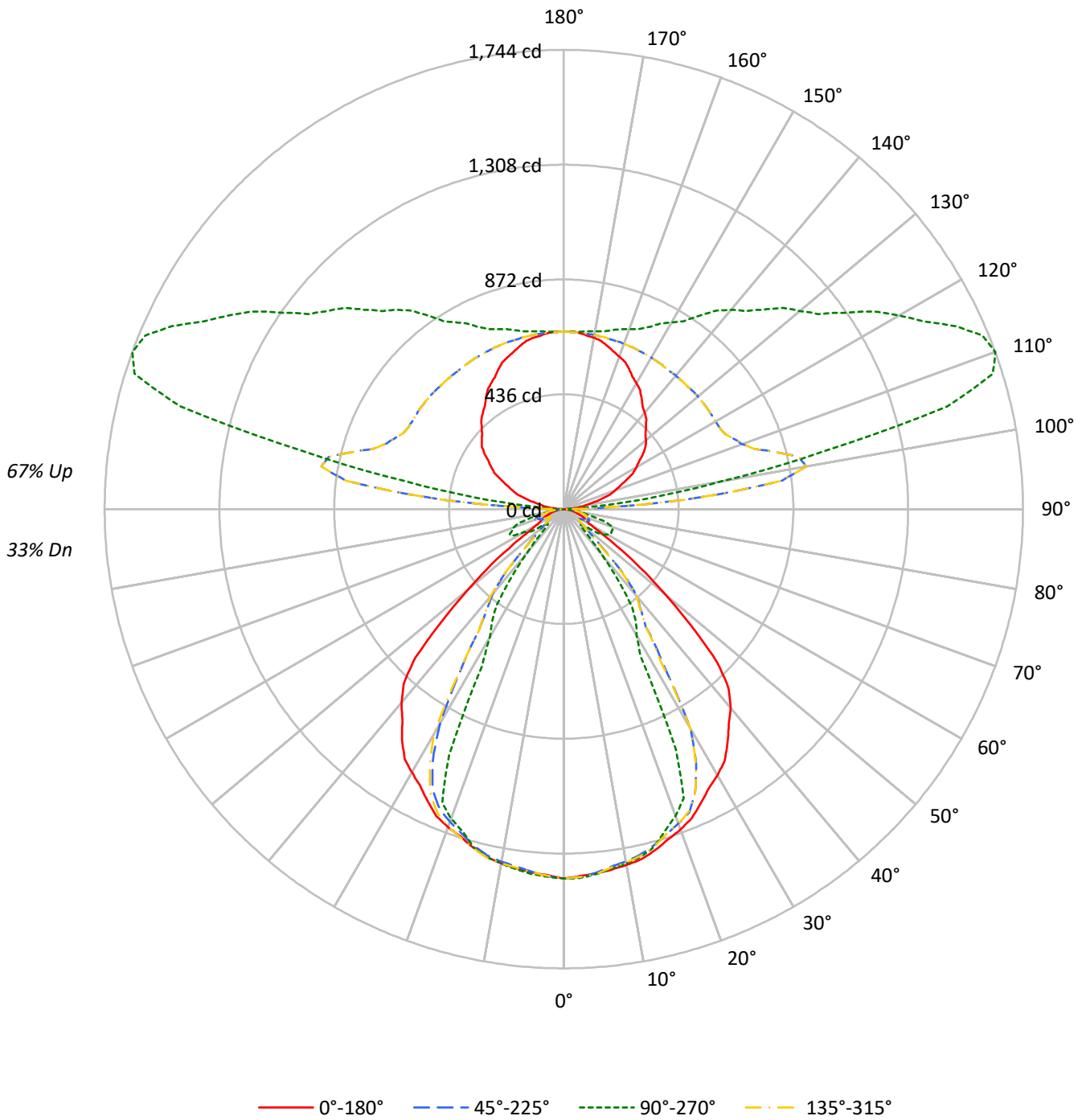
Lumens per Lamp: N/A
Luminaire Lumens: 6242.0 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

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°	22646	22646	22646	22646
5°	22527	22561	22441	22545
10°	22492	22405	22405	22405
15°	22420	22190	22243	22190
20°	22246	21301	22082	21500
25°	21953	17977	21802	18355
30°	21752	10314	21515	10452
35°	21370	8862	21100	8736
40°	20778	4660	20198	4616
45°	18888	2005	18212	2005
50°	12461	2419	11823	2258
55°	6967	4467	6609	4051
60°	3759	6284	3688	5635
65°	3312	7637	3477	8688
70°	3097	9139	2946	9640
75°	2901	7854	2969	8116
80°	2455	5607	2455	5904
85°	2149	3131	1964	3724

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18888 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.0	2.1
10°-20°	374.5	6.0
20°-30°	510.6	8.2
30°-40°	429.1	6.9
40°-50°	243.7	3.9
50°-60°	129.3	2.1
60°-70°	119.0	1.9
70°-80°	87.4	1.4
80°-90°	24.0	0.4
90°-100°	281.3	4.5
100°-110°	850.9	13.6
110°-120°	830.6	13.3
120°-130°	678.7	10.9
130°-140°	554.0	8.9
140°-150°	431.3	6.9
150°-160°	310.9	5.0
160°-170°	190.3	3.0
170°-180°	64.3	1.0
0°-30°	1017.0	16.3
0°-40°	1446.1	23.2
0°-60°	1819.1	29.1
0°-90°	2049.6	32.8
90°-120°	1962.8	31.4
90°-150°	3626.9	58.1
90°-180°	4192.0	67.2
0°-180°	6242.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1403	1403	1403	1403	1403	
5°	1390	1392	1385	1391	1390	132
15°	1341	1328	1331	1328	1341	378
25°	1232	1009	1224	1030	1232	568
35°	1084	450	1070	443	1084	677
45°	827	88	798	88	827	605
55°	248	159	235	144	248	238
65°	87	200	91	227	87	87
75°	46	126	48	130	46	48
85°	12	17	11	20	12	13
90°	0	6	0	6	0	2
95°	35	124	35	124	35	41
105°	148	1508	148	1508	148	155
115°	263	1642	263	1642	263	260
125°	368	1300	368	1300	368	327
135°	441	1071	441	1071	441	341
145°	515	896	515	896	515	323
155°	587	762	587	762	587	270
165°	642	703	642	703	642	181
175°	672	676	672	676	672	64
180°	674	674	674	674	674	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6
2.5°	1395.0	1415.7	1397.5	1395.2	1402.6	1401.0	1398.4	1408.2	1391.6	1408.2	1395.0
5°	1389.9	1413.7	1386.7	1379.6	1392.0	1383.8	1391.0	1405.3	1384.6	1403.2	1382.5
7.5°	1381.2	1402.3	1370.0	1365.4	1377.6	1370.4	1373.4	1393.3	1376.0	1388.2	1369.4
10°	1371.9	1390.6	1358.2	1355.3	1366.6	1359.4	1362.4	1383.2	1366.6	1378.0	1359.2
12.5°	1361.8	1376.3	1343.8	1342.5	1352.3	1347.5	1348.9	1366.3	1353.1	1364.5	1346.5
15°	1341.3	1354.7	1322.2	1317.2	1327.5	1323.4	1325.4	1341.0	1330.7	1337.9	1322.2
17.5°	1315.9	1326.6	1294.3	1279.1	1279.5	1284.7	1294.3	1313.1	1303.8	1313.3	1291.1
20°	1294.7	1307.1	1271.4	1241.8	1239.7	1244.9	1271.4	1290.4	1285.2	1295.5	1264.0
22.5°	1270.2	1278.4	1246.1	1196.0	1188.9	1194.1	1242.7	1265.1	1263.2	1270.2	1231.0
25°	1232.3	1240.6	1181.5	1109.4	1009.1	1103.2	1183.6	1223.8	1223.8	1230.1	1178.4
27.5°	1193.8	1194.0	1087.2	712.5	628.5	686.9	1085.7	1172.9	1182.8	1179.7	1078.1
30°	1166.7	1159.5	963.6	576.0	553.2	567.7	964.7	1137.5	1154.0	1142.7	939.3
32.5°	1135.4	1114.9	711.5	529.5	510.9	523.7	688.0	1095.5	1124.4	1099.8	738.7
35°	1084.2	1030.4	542.6	468.2	449.6	466.1	538.4	1012.5	1070.5	1004.3	560.6
37.5°	1029.0	819.0	477.7	372.9	332.8	364.8	475.4	810.3	1006.6	791.5	477.3
40°	985.8	643.5	429.5	272.8	221.1	257.3	426.3	613.9	958.3	660.5	418.9
42.5°	928.3	565.3	344.8	173.3	135.6	158.6	330.7	552.2	899.1	572.3	333.4
45°	827.2	485.9	204.2	95.0	87.8	91.9	188.3	476.9	797.6	466.6	208.4
47.5°	655.2	370.6	131.2	80.8	88.6	80.8	127.1	358.8	618.8	358.2	131.0
50°	496.1	289.2	101.5	81.8	96.3	81.8	98.4	279.4	470.7	305.2	100.5
52.5°	367.5	241.7	82.9	89.7	115.7	91.3	80.6	235.3	348.9	246.3	78.5
55°	247.5	189.6	66.6	118.3	158.7	121.4	66.6	184.1	234.8	182.1	64.5
57.5°	157.0	141.0	67.5	152.1	181.1	155.0	68.5	135.9	150.6	136.6	59.2
60°	116.4	111.2	75.1	161.5	194.6	163.6	76.2	107.0	114.2	106.0	63.5
62.5°	96.0	87.6	90.3	174.9	202.2	170.4	92.2	83.5	99.9	80.0	70.2
65°	86.7	56.7	106.8	177.2	199.9	177.2	107.9	53.7	91.0	57.9	95.2
67.5°	78.3	42.1	103.2	176.0	201.2	176.4	100.7	40.1	75.1	39.1	97.3
70°	65.6	37.7	97.3	179.1	193.6	172.9	97.3	36.6	62.4	35.5	114.2
72.5°	54.6	35.8	90.5	165.4	171.6	159.2	91.4	35.6	54.8	32.0	107.5
75°	46.5	35.2	86.7	132.1	125.9	125.9	84.6	34.2	47.6	32.1	83.6
77.5°	34.9	31.2	71.9	86.2	81.4	81.4	70.7	30.1	33.2	28.2	67.9
80°	26.4	28.5	59.2	63.4	60.3	60.3	57.1	27.5	26.4	26.4	56.1
82.5°	20.5	24.2	45.7	46.5	44.2	43.4	44.4	24.0	20.5	22.2	43.4
85°	11.6	16.8	24.3	20.0	16.9	15.9	23.3	15.7	10.6	15.7	23.3
87.5°	4.2	8.0	5.9	4.9	4.7	4.9	5.9	8.0	4.2	7.1	6.8
90°	0.0	2.1	12.7	7.4	6.3	7.4	12.7	2.1	0.0	2.1	12.7
92.5°	11.8	47.8	171.7	57.0	41.0	57.0	171.7	47.8	11.8	47.8	171.7
95°	34.9	110.4	530.9	196.1	123.7	196.1	530.9	110.4	34.9	110.4	530.9
97.5°	67.5	140.5	836.7	553.6	337.1	553.6	836.7	140.5	67.5	140.5	836.7
100°	87.8	159.1	934.8	903.8	607.0	903.8	934.8	159.1	87.8	159.1	934.8
102.5°	110.6	179.5	914.5	1267.6	1010.5	1267.6	914.5	179.5	110.6	179.5	914.5
105°	148.0	208.0	835.4	1586.6	1508.0	1586.6	835.4	208.0	148.0	208.0	835.4
107.5°	183.6	240.9	759.3	1618.1	1709.1	1618.1	759.3	240.9	183.6	240.9	759.3
110°	207.3	262.1	721.2	1578.4	1743.8	1578.4	721.2	262.1	207.3	262.1	721.2



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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°	230.1	283.3	698.4	1511.7	1721.0	1511.7	698.4	283.3	230.1	283.3	698.4
115°	263.3	314.0	675.7	1398.3	1642.3	1398.3	675.7	314.0	263.3	314.0	675.7
117.5°	296.3	344.3	667.7	1292.0	1541.8	1292.0	667.7	344.3	296.3	344.3	667.7
120°	318.3	363.8	665.2	1230.0	1469.9	1230.0	665.2	363.8	318.3	363.8	665.2
122.5°	338.6	381.6	665.2	1175.5	1397.1	1175.5	665.2	381.6	338.6	381.6	665.2
125°	368.0	408.3	666.2	1104.2	1299.6	1104.2	666.2	408.3	368.0	408.3	666.2
127.5°	391.9	433.7	665.2	1050.5	1217.2	1050.5	665.2	433.7	391.9	433.7	665.2
130°	407.1	450.6	665.2	1019.7	1170.6	1019.7	665.2	450.6	407.1	450.6	665.2
132.5°	420.7	464.9	664.3	991.5	1130.9	991.5	664.3	464.9	420.7	464.9	664.3
135°	441.0	487.5	662.0	952.3	1071.2	952.3	662.0	487.5	441.0	487.5	662.0
137.5°	463.6	507.9	662.0	910.5	1020.7	910.5	662.0	507.9	463.6	507.9	662.0
140°	478.0	521.4	662.0	883.3	987.7	883.3	662.0	521.4	478.0	521.4	662.0
142.5°	492.4	534.1	661.1	858.4	949.6	858.4	661.1	534.1	492.4	534.1	661.1
145°	515.0	553.3	662.0	819.2	895.7	819.2	662.0	553.3	515.0	553.3	662.0
147.5°	537.6	570.1	663.3	786.8	845.6	786.8	663.3	570.1	537.6	570.1	663.3
150°	552.0	582.0	664.1	768.9	818.5	768.9	664.1	582.0	552.0	582.0	664.1
152.5°	565.5	592.2	664.9	753.4	794.0	753.4	664.9	592.2	565.5	592.2	664.9
155°	586.9	606.5	666.2	734.5	762.4	734.5	666.2	606.5	586.9	606.5	666.2
157.5°	605.5	621.4	667.5	720.6	740.0	720.6	667.5	621.4	605.5	621.4	667.5
160°	616.5	630.0	668.3	712.0	726.5	712.0	668.3	630.0	616.5	630.0	668.3
162.5°	627.5	637.6	669.2	704.3	716.3	704.3	669.2	637.6	627.5	637.6	669.2
165°	641.9	649.1	669.4	695.0	703.2	695.0	669.4	649.1	641.9	649.1	669.4
167.5°	654.2	657.9	670.7	687.7	691.2	687.7	670.7	657.9	654.2	657.9	670.7
170°	660.9	663.0	671.5	684.2	685.3	684.2	671.5	663.0	660.9	663.0	671.5
172.5°	665.2	666.4	671.5	680.8	681.0	680.8	671.5	666.4	665.2	666.4	671.5
175°	671.5	671.5	672.6	677.8	675.7	677.8	672.6	671.5	671.5	671.5	672.6
177.5°	674.5	673.6	672.8	675.3	673.6	675.3	672.8	673.6	674.5	673.6	672.8
180°	673.6	673.6	673.6	673.6	673.6	673.6	673.6	673.6	673.6	673.6	673.6



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1402.6	1402.6	1402.6	1402.6	1402.6	1402.6
2.5°	1391.7	1397.5	1397.5	1394.1	1410.7	1395.0
5°	1377.5	1391.0	1384.8	1384.6	1405.4	1389.9
7.5°	1367.6	1380.2	1374.4	1373.2	1393.7	1381.2
10°	1357.3	1366.6	1362.5	1365.6	1384.3	1371.9
12.5°	1343.0	1354.0	1349.8	1354.6	1371.7	1361.8
15°	1318.2	1327.5	1329.6	1331.7	1351.6	1341.3
17.5°	1277.3	1281.8	1292.2	1306.8	1327.5	1315.9
20°	1245.1	1251.3	1257.6	1283.1	1307.1	1294.7
22.5°	1208.6	1206.5	1221.0	1250.9	1280.9	1270.2
25°	1109.9	1030.3	1118.2	1195.3	1235.4	1232.3
27.5°	772.8	670.6	761.0	1103.3	1187.6	1193.8
30°	608.2	560.6	607.2	984.8	1152.2	1166.7
32.5°	540.0	507.3	535.6	749.5	1107.7	1135.4
35°	466.0	443.2	466.0	560.6	1020.1	1084.2
37.5°	373.0	326.4	372.1	484.5	824.6	1029.0
40°	277.9	219.0	269.6	433.7	659.0	985.8
42.5°	185.2	141.1	175.2	341.4	570.0	928.3
45°	100.2	87.8	96.1	206.3	465.2	827.2
47.5°	78.6	83.1	78.6	130.1	355.9	655.2
50°	75.4	89.9	75.4	100.5	294.4	496.1
52.5°	82.2	97.5	81.4	79.3	240.3	367.5
55°	93.2	143.9	94.2	64.5	176.2	247.5
57.5°	132.7	161.8	134.1	61.1	135.7	157.0
60°	136.3	174.5	135.2	64.5	105.0	116.4
62.5°	161.2	216.0	161.0	73.8	78.0	96.0
65°	206.7	227.4	208.8	94.1	55.7	86.7
67.5°	196.2	210.9	194.2	100.9	38.4	78.3
70°	192.8	204.2	190.7	115.3	35.6	65.6
72.5°	179.9	181.3	176.1	106.8	32.0	54.6
75°	139.4	130.1	134.2	92.0	32.1	46.5
77.5°	86.7	82.9	83.6	70.2	28.3	34.9
80°	65.5	63.5	62.4	59.2	26.4	26.4
82.5°	48.6	46.5	45.5	45.7	22.2	20.5
85°	22.2	20.1	19.1	26.4	15.8	11.6
87.5°	5.7	5.5	4.9	6.8	6.3	4.2
90°	7.4	6.3	7.4	12.7	2.1	0.0
92.5°	57.0	41.0	57.0	171.7	47.8	11.8
95°	196.1	123.7	196.1	530.9	110.4	34.9
97.5°	553.6	337.1	553.6	836.7	140.5	67.5
100°	903.8	607.0	903.8	934.8	159.1	87.8
102.5°	1267.6	1010.5	1267.6	914.5	179.5	110.6
105°	1586.6	1508.0	1586.6	835.4	208.0	148.0
107.5°	1618.1	1709.1	1618.1	759.3	240.9	183.6
110°	1578.4	1743.8	1578.4	721.2	262.1	207.3



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CATALOG NUMBER: SQ2-FA-100U-050D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1511.7	1721.0	1511.7	698.4	283.3	230.1
115°	1398.3	1642.3	1398.3	675.7	314.0	263.3
117.5°	1292.0	1541.8	1292.0	667.7	344.3	296.3
120°	1230.0	1469.9	1230.0	665.2	363.8	318.3
122.5°	1175.5	1397.1	1175.5	665.2	381.6	338.6
125°	1104.2	1299.6	1104.2	666.2	408.3	368.0
127.5°	1050.5	1217.2	1050.5	665.2	433.7	391.9
130°	1019.7	1170.6	1019.7	665.2	450.6	407.1
132.5°	991.5	1130.9	991.5	664.3	464.9	420.7
135°	952.3	1071.2	952.3	662.0	487.5	441.0
137.5°	910.5	1020.7	910.5	662.0	507.9	463.6
140°	883.3	987.7	883.3	662.0	521.4	478.0
142.5°	858.4	949.6	858.4	661.1	534.1	492.4
145°	819.2	895.7	819.2	662.0	553.3	515.0
147.5°	786.8	845.6	786.8	663.3	570.1	537.6
150°	768.9	818.5	768.9	664.1	582.0	552.0
152.5°	753.4	794.0	753.4	664.9	592.2	565.5
155°	734.5	762.4	734.5	666.2	606.5	586.9
157.5°	720.6	740.0	720.6	667.5	621.4	605.5
160°	712.0	726.5	712.0	668.3	630.0	616.5
162.5°	704.3	716.3	704.3	669.2	637.6	627.5
165°	695.0	703.2	695.0	669.4	649.1	641.9
167.5°	687.7	691.2	687.7	670.7	657.9	654.2
170°	684.2	685.3	684.2	671.5	663.0	660.9
172.5°	680.8	681.0	680.8	671.5	666.4	665.2
175°	677.8	675.7	677.8	672.6	671.5	671.5
177.5°	675.3	673.6	675.3	672.8	673.6	674.5
180°	673.6	673.6	673.6	673.6	673.6	673.6



TEST NUMBER: P853790

CATALOG NUMBER: SQ2-FA-100U-050D-940-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	8.87	9.53	9.98	10.63	12.13	7.72	8.39	8.83	9.48	10.98
	3H	9.56	10.15	10.67	11.26	12.78	13.87	14.46	14.98	15.56	17.08
	4H	9.96	10.53	11.09	11.63	13.15	15.13	15.70	16.26	16.80	18.33
	6H	10.31	10.83	11.44	11.93	13.47	15.73	16.25	16.87	17.36	18.90
	8H	10.42	10.91	11.56	12.03	13.56	15.85	16.35	16.99	17.47	19.00
	12H	10.49	10.96	11.63	12.07	13.62	15.89	16.36	17.03	17.47	19.02
4H	2H	9.25	9.81	10.38	10.91	12.44	8.24	8.80	9.37	9.91	11.43
	3H	10.23	10.70	11.37	11.83	13.37	14.55	15.03	15.69	16.16	17.69
	4H	10.79	11.22	11.93	12.34	13.90	16.00	16.43	17.14	17.55	19.11
	6H	11.26	11.63	12.40	12.77	14.32	16.73	17.10	17.88	18.24	19.79
	8H	11.43	11.77	12.57	12.90	14.47	16.90	17.24	18.04	18.37	19.94
	12H	11.53	11.85	12.69	12.99	14.56	16.95	17.26	18.11	18.41	19.98
8H	4H	11.88	12.23	13.03	13.36	14.92	16.12	16.46	17.26	17.59	19.16
	6H	12.48	12.77	13.65	13.94	15.50	16.99	17.27	18.15	18.45	20.01
	8H	12.72	12.97	13.89	14.12	15.70	17.24	17.49	18.41	18.64	20.23
	12H	12.88	13.10	14.06	14.25	15.87	17.36	17.57	18.53	18.72	20.34
12H	4H	12.02	12.33	13.18	13.48	15.04	16.07	16.38	17.23	17.53	19.10
	6H	12.76	13.01	13.93	14.16	15.74	17.00	17.25	18.17	18.40	19.98
	8H	13.05	13.27	14.22	14.42	16.04	17.27	17.49	18.45	18.64	20.26