

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: P853754

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

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853754
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-940-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

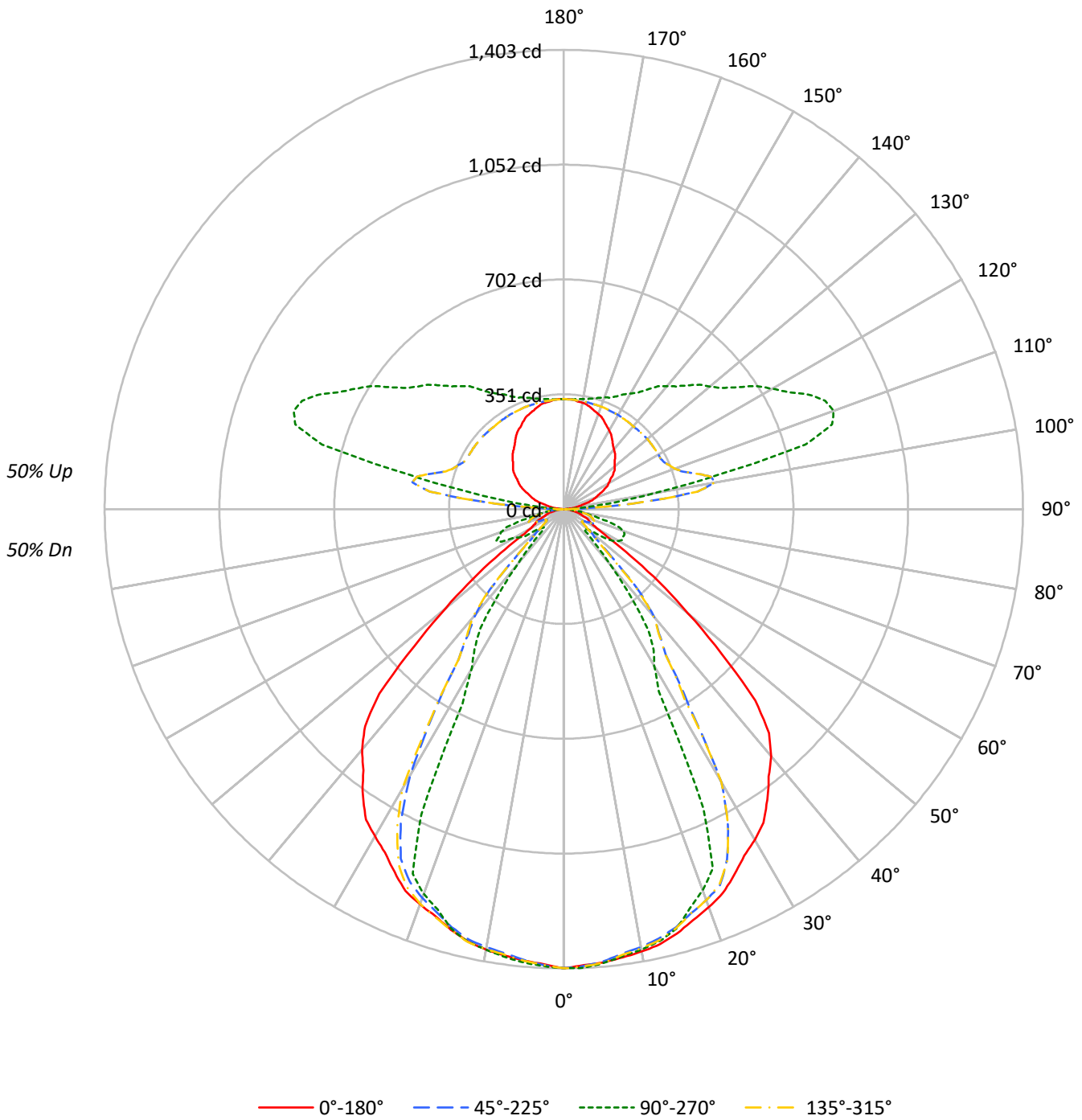
Lumens per Lamp: N/A
Luminaire Lumens: 4137.5 lumens
Efficiency: N/A
Efficacy: 126.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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

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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	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°	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	3.2
10°-20°	374.5	9.1
20°-30°	510.6	12.3
30°-40°	429.1	10.4
40°-50°	243.7	5.9
50°-60°	129.3	3.1
60°-70°	119.0	2.9
70°-80°	87.4	2.1
80°-90°	23.2	0.6
90°-100°	134.0	3.2
100°-110°	424.9	10.3
110°-120°	416.6	10.1
120°-130°	339.0	8.2
130°-140°	276.4	6.7
140°-150°	215.5	5.2
150°-160°	155.3	3.8
160°-170°	94.9	2.3
170°-180°	32.0	0.8
0°-30°	1017.0	24.6
0°-40°	1446.1	35.0
0°-60°	1819.1	44.0
0°-90°	2048.8	49.5
90°-120°	975.5	23.6
90°-150°	1806.5	43.7
90°-180°	2089.0	50.5
0°-180°	4137.5	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	3	0	3	0	1
95°	18	58	18	58	18	21
105°	74	765	74	765	74	78
115°	132	827	132	827	132	131
125°	183	649	183	649	183	163
135°	221	534	221	534	221	171
145°	258	445	258	445	258	162
155°	294	380	294	380	294	136
165°	320	349	320	349	320	90
175°	335	336	335	336	335	32
180°	336	336	336	336	336	



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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	7.7	4.0	4.0	4.0	4.0	4.0	7.7	4.2	6.9	4.9
90°	0.0	1.0	3.2	3.2	3.2	3.2	3.2	1.0	0.0	1.0	3.2
92.5°	5.9	23.5	75.1	25.0	17.6	25.0	75.1	23.5	5.9	23.5	75.1
95°	18.0	54.2	243.3	90.2	58.2	90.2	243.3	54.2	18.0	54.2	243.3
97.5°	33.4	70.2	412.1	257.5	158.0	257.5	412.1	70.2	33.4	70.2	412.1
100°	44.4	79.6	469.6	428.1	278.2	428.1	469.6	79.6	44.4	79.6	469.6
102.5°	56.3	89.8	459.5	628.7	481.2	628.7	459.5	89.8	56.3	89.8	459.5
105°	74.0	104.0	418.8	797.8	764.7	797.8	418.8	104.0	74.0	104.0	418.8
107.5°	91.8	119.5	380.1	815.4	860.1	815.4	380.1	119.5	91.8	119.5	380.1
110°	103.7	130.5	360.7	795.1	877.9	795.1	360.7	130.5	103.7	130.5	360.7



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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°	115.5	140.7	349.7	760.1	865.2	760.1	349.7	140.7	115.5	140.7	349.7
115°	132.2	157.0	338.5	703.0	827.1	703.0	338.5	157.0	132.2	157.0	338.5
117.5°	148.5	172.1	334.0	648.0	773.2	648.0	334.0	172.1	148.5	172.1	334.0
120°	158.7	181.4	333.2	614.1	735.1	614.1	333.2	181.4	158.7	181.4	333.2
122.5°	168.8	190.7	333.2	586.8	699.5	586.8	333.2	190.7	168.8	190.7	333.2
125°	183.0	204.7	333.2	551.2	649.4	551.2	333.2	204.7	183.0	204.7	333.2
127.5°	195.5	216.3	333.2	523.5	607.3	523.5	333.2	216.3	195.5	216.3	333.2
130°	203.1	224.8	333.2	507.3	582.8	507.3	333.2	224.8	203.1	224.8	333.2
132.5°	210.7	232.4	332.3	494.4	562.5	494.4	332.3	232.4	210.7	232.4	332.3
135°	221.1	242.8	331.1	474.1	534.1	474.1	331.1	242.8	221.1	242.8	331.1
137.5°	231.2	254.0	330.8	454.7	508.3	454.7	330.8	254.0	231.2	254.0	330.8
140°	238.0	260.7	330.0	441.1	489.7	441.1	330.0	260.7	238.0	260.7	330.0
142.5°	246.4	268.4	330.8	427.5	472.8	427.5	330.8	268.4	246.4	268.4	330.8
145°	258.1	277.7	331.1	409.1	445.3	409.1	331.1	277.7	258.1	277.7	331.1
147.5°	269.7	286.5	331.3	392.9	422.4	392.9	331.3	286.5	269.7	286.5	331.3
150°	278.2	291.6	332.1	383.4	407.2	383.4	332.1	291.6	278.2	291.6	332.1
152.5°	284.9	296.7	332.1	375.7	395.4	375.7	332.1	296.7	284.9	296.7	332.1
155°	294.0	304.4	332.1	365.2	379.7	365.2	332.1	304.4	294.0	304.4	332.1
157.5°	303.8	310.8	333.2	358.8	368.7	358.8	333.2	310.8	303.8	310.8	333.2
160°	308.8	315.0	333.2	354.5	362.8	354.5	333.2	315.0	308.8	315.0	333.2
162.5°	313.9	318.5	333.2	351.1	356.9	351.1	333.2	318.5	313.9	318.5	333.2
165°	320.5	323.6	333.2	345.9	349.0	345.9	333.2	323.6	320.5	323.6	333.2
167.5°	326.6	327.4	334.2	342.3	345.0	342.3	334.2	327.4	326.6	327.4	334.2
170°	330.0	330.0	334.2	340.6	341.6	340.6	334.2	330.0	330.0	330.0	334.2
172.5°	331.7	332.5	334.2	338.9	339.1	338.9	334.2	332.5	331.7	332.5	334.2
175°	335.3	334.2	335.3	337.4	336.3	337.4	335.3	334.2	335.3	334.2	335.3
177.5°	336.3	335.5	335.5	337.1	335.5	337.1	335.5	335.5	336.3	335.5	335.5
180°	336.3	336.3	336.3	336.3	336.3	336.3	336.3	336.3	336.3	336.3	336.3



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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°	4.9	4.9	4.0	4.9	6.1	4.2
90°	3.2	3.2	3.2	3.2	1.0	0.0
92.5°	25.0	17.6	25.0	75.1	23.5	5.9
95°	90.2	58.2	90.2	243.3	54.2	18.0
97.5°	257.5	158.0	257.5	412.1	70.2	33.4
100°	428.1	278.2	428.1	469.6	79.6	44.4
102.5°	628.7	481.2	628.7	459.5	89.8	56.3
105°	797.8	764.7	797.8	418.8	104.0	74.0
107.5°	815.4	860.1	815.4	380.1	119.5	91.8
110°	795.1	877.9	795.1	360.7	130.5	103.7



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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	760.1	865.2	760.1	349.7	140.7	115.5
115°	703.0	827.1	703.0	338.5	157.0	132.2
117.5°	648.0	773.2	648.0	334.0	172.1	148.5
120°	614.1	735.1	614.1	333.2	181.4	158.7
122.5°	586.8	699.5	586.8	333.2	190.7	168.8
125°	551.2	649.4	551.2	333.2	204.7	183.0
127.5°	523.5	607.3	523.5	333.2	216.3	195.5
130°	507.3	582.8	507.3	333.2	224.8	203.1
132.5°	494.4	562.5	494.4	332.3	232.4	210.7
135°	474.1	534.1	474.1	331.1	242.8	221.1
137.5°	454.7	508.3	454.7	330.8	254.0	231.2
140°	441.1	489.7	441.1	330.0	260.7	238.0
142.5°	427.5	472.8	427.5	330.8	268.4	246.4
145°	409.1	445.3	409.1	331.1	277.7	258.1
147.5°	392.9	422.4	392.9	331.3	286.5	269.7
150°	383.4	407.2	383.4	332.1	291.6	278.2
152.5°	375.7	395.4	375.7	332.1	296.7	284.9
155°	365.2	379.7	365.2	332.1	304.4	294.0
157.5°	358.8	368.7	358.8	333.2	310.8	303.8
160°	354.5	362.8	354.5	333.2	315.0	308.8
162.5°	351.1	356.9	351.1	333.2	318.5	313.9
165°	345.9	349.0	345.9	333.2	323.6	320.5
167.5°	342.3	345.0	342.3	334.2	327.4	326.6
170°	340.6	341.6	340.6	334.2	330.0	330.0
172.5°	338.9	339.1	338.9	334.2	332.5	331.7
175°	337.4	336.3	337.4	335.3	334.2	335.3
177.5°	337.1	335.5	337.1	335.5	335.5	336.3
180°	336.3	336.3	336.3	336.3	336.3	336.3



TEST NUMBER: P853754

CATALOG NUMBER: SQ2-FA-050U-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	10.71	11.47	11.70	12.45	13.74	9.57	10.32	10.55	11.30	12.59
	3H	11.41	12.08	12.40	13.07	14.38	15.72	16.39	16.71	17.38	18.69
	4H	11.81	12.45	12.82	13.45	14.77	16.99	17.63	17.99	18.62	19.94
	6H	12.17	12.75	13.18	13.75	15.08	17.59	18.18	18.61	19.18	20.51
	8H	12.28	12.84	13.30	13.85	15.18	17.71	18.27	18.74	19.29	20.61
	12H	12.35	12.88	13.37	13.89	15.24	17.75	18.28	18.78	19.29	20.64
4H	2H	11.10	11.74	12.11	12.73	14.05	10.09	10.73	11.11	11.73	13.04
	3H	12.09	12.63	13.11	13.65	14.98	16.41	16.95	17.43	17.97	19.30
	4H	12.65	13.14	13.68	14.15	15.51	17.86	18.35	18.89	19.37	20.72
	6H	13.12	13.54	14.16	14.58	15.93	18.60	19.01	19.63	20.05	21.40
	8H	13.29	13.68	14.33	14.71	16.08	18.76	19.15	19.80	20.18	21.55
	12H	13.40	13.76	14.46	14.80	16.17	18.82	19.17	19.87	20.22	21.59
8H	4H	13.75	14.14	14.78	15.17	16.53	17.98	18.37	19.02	19.40	20.77
	6H	14.35	14.67	15.41	15.75	17.11	18.86	19.18	19.92	20.25	21.61
	8H	14.59	14.87	15.65	15.93	17.31	19.11	19.39	20.18	20.45	21.83
	12H	14.76	15.00	15.82	16.05	17.48	19.23	19.47	20.30	20.53	21.95
12H	4H	13.89	14.24	14.94	15.29	16.65	17.94	18.29	18.99	19.34	20.70
	6H	14.63	14.91	15.69	15.97	17.35	18.87	19.15	19.94	20.21	21.59
	8H	14.92	15.17	15.99	16.22	17.65	19.15	19.39	20.21	20.44	21.87