

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: P855039

Luminaire Tested: SQ2-FA-100U-050D-830-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855039
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-830-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

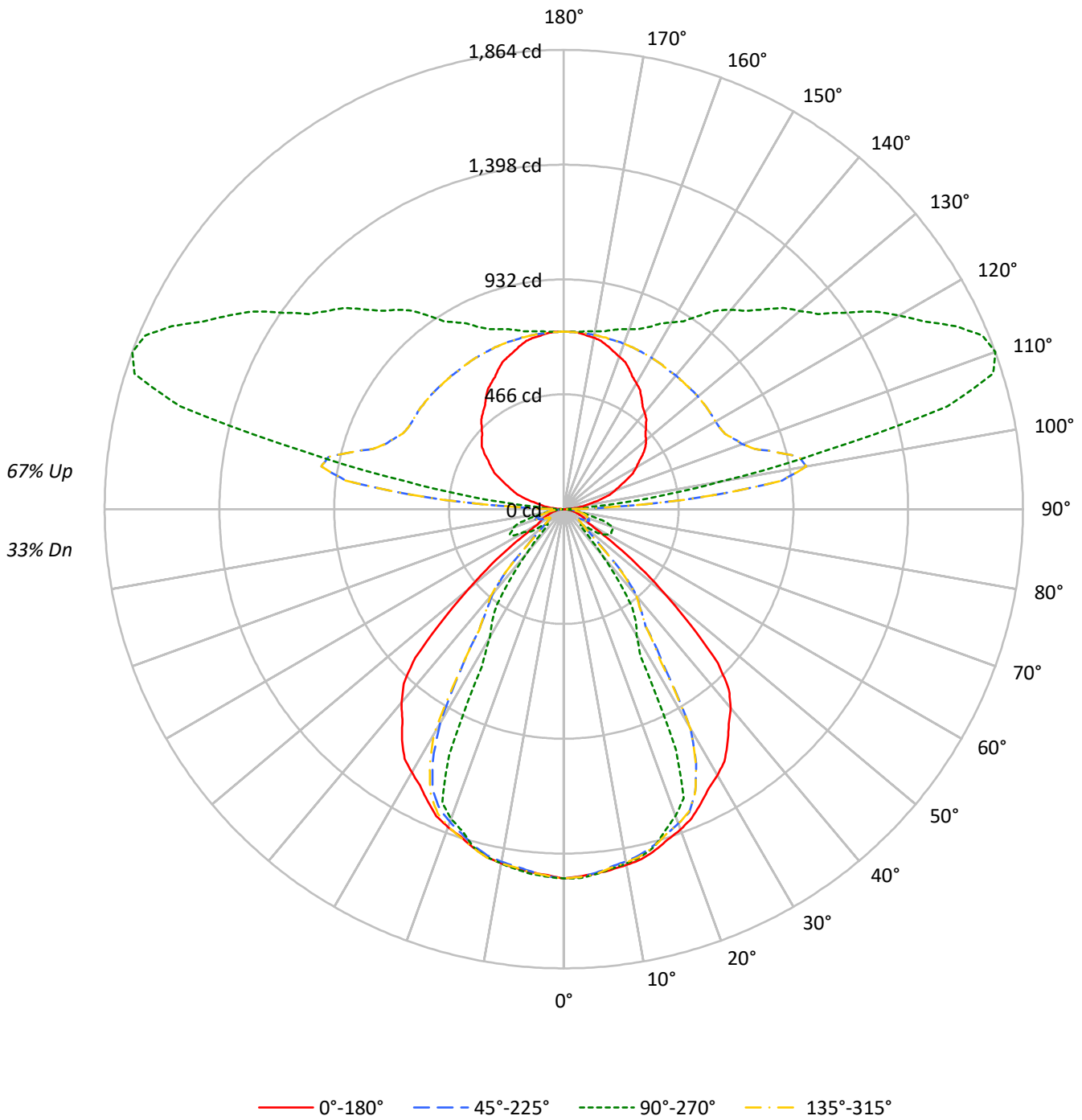
Lumens per Lamp: N/A
Luminaire Lumens: 6671.9 lumens
Efficiency: N/A
Efficacy: 132.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

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°	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	2.1
10°-20°	400.3	6.0
20°-30°	545.8	8.2
30°-40°	458.6	6.9
40°-50°	260.5	3.9
50°-60°	138.2	2.1
60°-70°	127.3	1.9
70°-80°	93.4	1.4
80°-90°	25.7	0.4
90°-100°	300.7	4.5
100°-110°	909.5	13.6
110°-120°	887.8	13.3
120°-130°	725.5	10.9
130°-140°	592.2	8.9
140°-150°	461.0	6.9
150°-160°	332.3	5.0
160°-170°	203.4	3.0
170°-180°	68.7	1.0
0°-30°	1087.1	16.3
0°-40°	1545.7	23.2
0°-60°	1944.4	29.1
0°-90°	2190.8	32.8
90°-120°	2098.0	31.4
90°-150°	3876.7	58.1
90°-180°	4481.0	67.2
0°-180°	6671.9	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	2
95°	37	132	37	132	37	44
105°	158	1612	158	1612	158	166
115°	281	1755	281	1755	281	278
125°	393	1389	393	1389	393	349
135°	471	1145	471	1145	471	365
145°	550	957	550	957	550	345
155°	627	815	627	815	627	289
165°	686	752	686	752	686	193
175°	718	722	718	722	718	68
180°	720	720	720	720	720	



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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	8.5	6.3	5.2	5.0	5.2	6.3	8.5	4.5	7.6	7.2
90°	0.0	2.3	13.6	7.9	6.8	7.9	13.6	2.3	0.0	2.3	13.6
92.5°	12.7	51.1	183.6	60.8	43.9	60.8	183.6	51.1	12.7	51.1	183.6
95°	37.3	117.9	567.5	209.6	132.3	209.6	567.5	117.9	37.3	117.9	567.5
97.5°	72.1	150.1	894.3	591.8	360.3	591.8	894.3	150.1	72.1	150.1	894.3
100°	93.8	170.0	999.3	966.0	648.8	966.0	999.3	170.0	93.8	170.0	999.3
102.5°	118.3	191.9	977.6	1355.0	1080.1	1355.0	977.6	191.9	118.3	191.9	977.6
105°	158.3	222.4	893.0	1695.9	1611.8	1695.9	893.0	222.4	158.3	222.4	893.0
107.5°	196.3	257.4	811.6	1729.5	1826.9	1729.5	811.6	257.4	196.3	257.4	811.6
110°	221.5	280.2	770.9	1687.1	1864.0	1687.1	770.9	280.2	221.5	280.2	770.9

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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°	245.9	302.8	746.5	1615.8	1839.6	1615.8	746.5	302.8	245.9	302.8	746.5
115°	281.4	335.6	722.3	1494.6	1755.4	1494.6	722.3	335.6	281.4	335.6	722.3
117.5°	316.7	368.0	713.7	1381.0	1648.0	1381.0	713.7	368.0	316.7	368.0	713.7
120°	340.2	388.8	710.9	1314.7	1571.1	1314.7	710.9	388.8	340.2	388.8	710.9
122.5°	361.9	407.9	710.9	1256.5	1493.4	1256.5	710.9	407.9	361.9	407.9	710.9
125°	393.4	436.4	712.1	1180.3	1389.2	1180.3	712.1	436.4	393.4	436.4	712.1
127.5°	418.9	463.6	710.9	1122.8	1301.0	1122.8	710.9	463.6	418.9	463.6	710.9
130°	435.2	481.7	710.9	1089.9	1251.3	1089.9	710.9	481.7	435.2	481.7	710.9
132.5°	449.7	496.9	710.0	1059.8	1208.8	1059.8	710.0	496.9	449.7	496.9	710.0
135°	471.4	521.1	707.6	1017.9	1145.0	1017.9	707.6	521.1	471.4	521.1	707.6
137.5°	495.6	542.8	707.6	973.1	1091.0	973.1	707.6	542.8	495.6	542.8	707.6
140°	510.9	557.3	707.6	944.1	1055.8	944.1	707.6	557.3	510.9	557.3	707.6
142.5°	526.3	571.0	706.7	917.5	1015.1	917.5	706.7	571.0	526.3	571.0	706.7
145°	550.5	591.3	707.6	875.6	957.4	875.6	707.6	591.3	550.5	591.3	707.6
147.5°	574.7	609.4	708.9	841.1	903.8	841.1	708.9	609.4	574.7	609.4	708.9
150°	590.1	622.1	709.8	821.9	874.9	821.9	709.8	622.1	590.1	622.1	709.8
152.5°	604.6	633.0	710.7	805.4	848.7	805.4	710.7	633.0	604.6	633.0	710.7
155°	627.4	648.3	712.1	785.1	815.0	785.1	712.1	648.3	627.4	648.3	712.1
157.5°	647.2	664.3	713.4	770.2	791.0	770.2	713.4	664.3	647.2	664.3	713.4
160°	658.9	673.4	714.3	761.0	776.5	761.0	714.3	673.4	658.9	673.4	714.3
162.5°	670.7	681.6	715.2	752.9	765.7	752.9	715.2	681.6	670.7	681.6	715.2
165°	686.1	693.9	715.5	742.8	751.7	742.8	715.5	693.9	686.1	693.9	715.5
167.5°	699.2	703.3	716.8	735.0	738.8	735.0	716.8	703.3	699.2	703.3	716.8
170°	706.4	708.7	717.7	731.3	732.4	731.3	717.7	708.7	706.4	708.7	717.7
172.5°	710.9	712.3	717.7	727.7	727.9	727.7	717.7	712.3	710.9	712.3	717.7
175°	717.7	717.7	718.9	724.5	722.3	724.5	718.9	717.7	717.7	717.7	718.9
177.5°	720.9	720.0	719.1	721.8	720.0	721.8	719.1	720.0	720.9	720.0	719.1
180°	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0	720.0



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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°	6.1	5.9	5.2	7.2	6.8	4.5
90°	7.9	6.8	7.9	13.6	2.3	0.0
92.5°	60.8	43.9	60.8	183.6	51.1	12.7
95°	209.6	132.3	209.6	567.5	117.9	37.3
97.5°	591.8	360.3	591.8	894.3	150.1	72.1
100°	966.0	648.8	966.0	999.3	170.0	93.8
102.5°	1355.0	1080.1	1355.0	977.6	191.9	118.3
105°	1695.9	1611.8	1695.9	893.0	222.4	158.3
107.5°	1729.5	1826.9	1729.5	811.6	257.4	196.3
110°	1687.1	1864.0	1687.1	770.9	280.2	221.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1615.8	1839.6	1615.8	746.5	302.8	245.9
115°	1494.6	1755.4	1494.6	722.3	335.6	281.4
117.5°	1381.0	1648.0	1381.0	713.7	368.0	316.7
120°	1314.7	1571.1	1314.7	710.9	388.8	340.2
122.5°	1256.5	1493.4	1256.5	710.9	407.9	361.9
125°	1180.3	1389.2	1180.3	712.1	436.4	393.4
127.5°	1122.8	1301.0	1122.8	710.9	463.6	418.9
130°	1089.9	1251.3	1089.9	710.9	481.7	435.2
132.5°	1059.8	1208.8	1059.8	710.0	496.9	449.7
135°	1017.9	1145.0	1017.9	707.6	521.1	471.4
137.5°	973.1	1091.0	973.1	707.6	542.8	495.6
140°	944.1	1055.8	944.1	707.6	557.3	510.9
142.5°	917.5	1015.1	917.5	706.7	571.0	526.3
145°	875.6	957.4	875.6	707.6	591.3	550.5
147.5°	841.1	903.8	841.1	708.9	609.4	574.7
150°	821.9	874.9	821.9	709.8	622.1	590.1
152.5°	805.4	848.7	805.4	710.7	633.0	604.6
155°	785.1	815.0	785.1	712.1	648.3	627.4
157.5°	770.2	791.0	770.2	713.4	664.3	647.2
160°	761.0	776.5	761.0	714.3	673.4	658.9
162.5°	752.9	765.7	752.9	715.2	681.6	670.7
165°	742.8	751.7	742.8	715.5	693.9	686.1
167.5°	735.0	738.8	735.0	716.8	703.3	699.2
170°	731.3	732.4	731.3	717.7	708.7	706.4
172.5°	727.7	727.9	727.7	717.7	712.3	710.9
175°	724.5	722.3	724.5	718.9	717.7	717.7
177.5°	721.8	720.0	721.8	719.1	720.0	720.9
180°	720.0	720.0	720.0	720.0	720.0	720.0



TEST NUMBER: P855039

CATALOG NUMBER: SQ2-FA-100U-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	9.10	9.76	10.21	10.86	12.36	7.95	8.62	9.06	9.71	11.22
	3H	9.79	10.38	10.90	11.49	13.01	14.10	14.69	15.21	15.79	17.31
	4H	10.19	10.76	11.32	11.86	13.38	15.37	15.93	16.49	17.03	18.56
	6H	10.54	11.06	11.67	12.16	13.70	15.97	16.49	17.10	17.59	19.13
	8H	10.65	11.15	11.79	12.27	13.80	16.09	16.58	17.22	17.70	19.23
	12H	10.72	11.19	11.86	12.30	13.85	16.12	16.59	17.26	17.70	19.26
4H	2H	9.48	10.04	10.61	11.14	12.67	8.47	9.04	9.60	10.14	11.66
	3H	10.46	10.93	11.60	12.06	13.60	14.79	15.26	15.92	16.39	17.92
	4H	11.02	11.45	12.16	12.57	14.13	16.23	16.67	17.37	17.78	19.34
	6H	11.49	11.86	12.64	13.00	14.55	16.96	17.33	18.11	18.47	20.02
	8H	11.66	12.01	12.80	13.14	14.70	17.13	17.47	18.27	18.61	20.17
	12H	11.77	12.08	12.93	13.22	14.79	17.18	17.49	18.34	18.64	20.21
8H	4H	12.11	12.46	13.26	13.59	15.15	16.35	16.69	17.49	17.83	19.39
	6H	12.72	13.00	13.88	14.18	15.74	17.22	17.51	18.39	18.68	20.24
	8H	12.95	13.20	14.12	14.35	15.94	17.47	17.72	18.64	18.87	20.46
	12H	13.12	13.33	14.29	14.48	16.10	17.59	17.80	18.76	18.95	20.57
12H	4H	12.25	12.56	13.41	13.71	15.28	16.30	16.61	17.46	17.76	19.33
	6H	12.99	13.24	14.16	14.39	15.98	17.23	17.48	18.40	18.63	20.22
	8H	13.28	13.50	14.46	14.65	16.27	17.51	17.72	18.68	18.87	20.49