

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: P853800

Luminaire Tested: SQ2-FA-125U-050D-930-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853800
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-13, G2-2308-131-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/12/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ2-FA-125U-050D-930-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 500 LUMENS PER FOOT
UPLIGHT 1250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

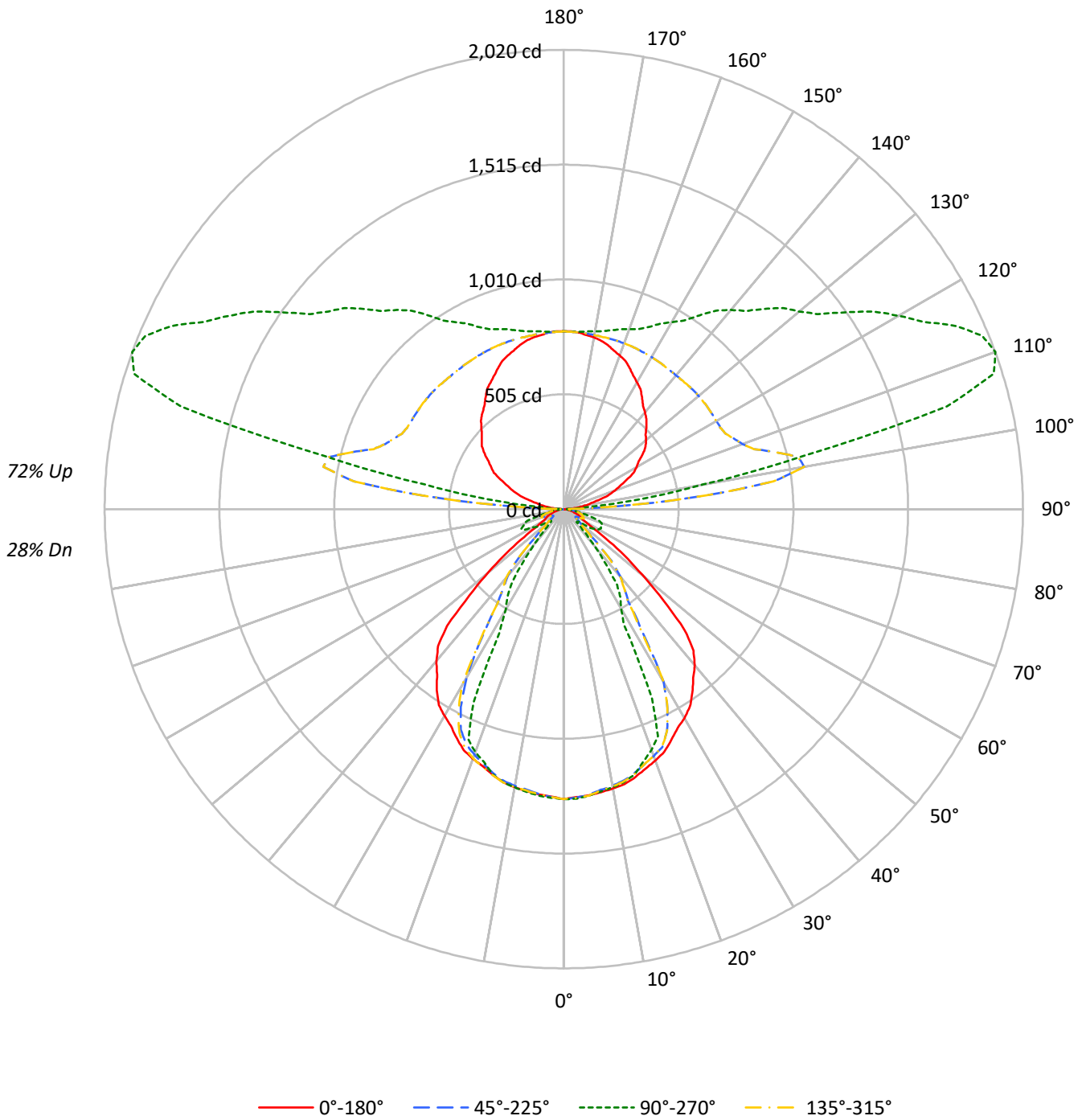
Lumens per Lamp: N/A
Luminaire Lumens: 6687.3 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 61.7
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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28				
1	93	89	86	83	83	80	77	75	63	61	59	47	46	45	32	32	31	25				
2	86	79	73	69	76	71	66	62	56	53	50	42	40	39	29	28	27	22				
3	79	70	63	58	70	63	58	53	50	46	43	38	36	34	27	25	24	19				
4	72	62	55	50	65	56	50	46	45	41	37	34	32	29	25	23	22	18				
5	67	56	49	43	60	51	44	40	41	36	33	31	28	26	23	21	20	16				
6	62	51	43	38	55	46	39	35	37	32	29	29	26	23	21	19	18	14				
7	57	46	39	33	51	42	35	31	34	29	26	26	23	21	19	18	16	13				
8	53	42	35	30	48	38	32	28	31	26	23	24	21	19	18	16	15	12				
9	49	38	31	27	45	35	29	25	28	24	21	22	19	17	17	15	14	11				
10	46	35	28	24	42	32	26	22	26	22	19	21	18	16	16	14	13	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	20592	20592	20592	20592
5°	20483	20514	20405	20499
10°	20453	20374	20374	20374
15°	20386	20177	20226	20177
20°	20227	19368	20079	19550
25°	19962	16347	19824	16689
30°	19779	9378	19563	9505
35°	19431	8058	19184	7943
40°	18893	4236	18366	4196
45°	17173	1822	16559	1822
50°	11331	2198	10751	2055
55°	6336	4062	6010	3682
60°	3416	5716	3355	5125
65°	3014	6946	3159	7901
70°	2814	8308	2677	8762
75°	2639	7143	2701	7380
80°	2232	5095	2232	5365
85°	1964	2853	1778	3390

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17173 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.0	1.8
10°-20°	340.5	5.1
20°-30°	464.3	6.9
30°-40°	390.1	5.8
40°-50°	221.6	3.3
50°-60°	117.6	1.8
60°-70°	108.3	1.6
70°-80°	79.5	1.2
80°-90°	21.6	0.3
90°-100°	299.1	4.5
100°-110°	973.7	14.6
110°-120°	963.2	14.4
120°-130°	787.1	11.8
130°-140°	643.3	9.6
140°-150°	501.1	7.5
150°-160°	361.2	5.4
160°-170°	220.8	3.3
170°-180°	74.5	1.1
0°-30°	924.8	13.8
0°-40°	1314.9	19.7
0°-60°	1654.1	24.7
0°-90°	1863.4	27.9
90°-120°	2236.0	33.4
90°-150°	4167.5	62.3
90°-180°	4824.0	72.1
0°-180°	6687.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1275	1275	1275	1275	1275	
5°	1264	1266	1259	1265	1264	120
15°	1220	1207	1210	1207	1220	344
25°	1120	918	1113	937	1120	517
35°	986	409	973	403	986	615
45°	752	80	725	80	752	550
55°	225	144	214	131	225	217
65°	79	182	83	207	79	79
75°	42	114	43	118	42	44
85°	11	15	10	18	11	12
90°	0	6	0	6	0	2
95°	40	120	40	120	40	47
105°	165	1744	165	1744	165	176
115°	306	1905	306	1905	306	303
125°	425	1507	425	1507	425	378
135°	514	1244	514	1244	514	397
145°	600	1040	600	1040	600	376
155°	685	883	685	883	685	315
165°	747	814	747	814	747	210
175°	779	783	779	783	779	74
180°	782	782	782	782	782	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4
2.5°	1268.4	1287.2	1270.7	1268.6	1275.4	1273.8	1271.5	1280.4	1265.4	1280.4	1268.4
5°	1263.8	1285.4	1260.9	1254.4	1265.7	1258.2	1264.8	1277.8	1259.0	1275.9	1257.1
7.5°	1255.9	1275.1	1245.7	1241.6	1252.7	1246.1	1248.8	1266.9	1251.1	1262.2	1245.2
10°	1247.5	1264.4	1235.0	1232.3	1242.7	1236.1	1238.8	1257.7	1242.7	1253.0	1235.9
12.5°	1238.2	1251.4	1221.9	1220.7	1229.6	1225.2	1226.5	1242.4	1230.3	1240.7	1224.4
15°	1219.6	1231.8	1202.3	1197.7	1207.1	1203.3	1205.1	1219.4	1210.0	1216.5	1202.3
17.5°	1196.5	1206.3	1176.9	1163.0	1163.4	1168.1	1176.9	1194.0	1185.5	1194.2	1174.0
20°	1177.2	1188.5	1156.1	1129.1	1127.2	1131.9	1156.1	1173.3	1168.6	1178.0	1149.4
22.5°	1154.9	1162.5	1133.0	1087.5	1081.1	1085.8	1129.9	1150.3	1148.6	1155.0	1119.3
25°	1120.5	1128.0	1074.3	1008.8	917.6	1003.1	1076.3	1112.8	1112.8	1118.5	1071.5
27.5°	1085.5	1085.7	988.5	647.9	571.5	624.5	987.2	1066.5	1075.5	1072.7	980.3
30°	1060.9	1054.3	876.2	523.7	503.0	516.2	877.2	1034.3	1049.3	1039.0	854.1
32.5°	1032.4	1013.8	646.9	481.5	464.6	476.2	625.6	996.1	1022.4	1000.0	671.7
35°	985.8	936.9	493.4	425.7	408.8	423.8	489.6	920.7	973.3	913.2	509.8
37.5°	935.6	744.7	434.4	339.1	302.6	331.7	432.2	736.8	915.3	719.6	434.0
40°	896.4	585.1	390.5	248.0	201.0	233.9	387.6	558.2	871.4	600.6	380.9
42.5°	844.1	514.0	313.5	157.5	123.3	144.2	300.7	502.1	817.5	520.4	303.2
45°	752.1	441.8	185.6	86.4	79.8	83.6	171.2	433.7	725.2	424.3	189.5
47.5°	595.7	336.9	119.3	73.5	80.6	73.5	115.6	326.2	562.7	325.7	119.1
50°	451.1	263.0	92.3	74.4	87.5	74.4	89.4	254.0	428.0	277.5	91.4
52.5°	334.1	219.8	75.4	81.5	105.2	83.0	73.3	213.9	317.2	223.9	71.4
55°	225.1	172.4	60.6	107.6	144.3	110.4	60.6	167.4	213.5	165.6	58.7
57.5°	142.7	128.2	61.4	138.3	164.7	141.0	62.3	123.6	137.0	124.2	53.9
60°	105.8	101.1	68.3	146.9	177.0	148.8	69.2	97.3	103.9	96.4	57.7
62.5°	87.3	79.6	82.1	159.1	183.9	154.9	83.9	75.9	90.8	72.7	63.9
65°	78.9	51.6	97.1	161.1	181.8	161.1	98.1	48.9	82.7	52.6	86.6
67.5°	71.2	38.3	93.9	160.0	182.9	160.4	91.6	36.5	68.3	35.6	88.5
70°	59.6	34.2	88.5	162.8	176.0	157.2	88.5	33.2	56.7	32.3	103.9
72.5°	49.6	32.5	82.3	150.4	156.0	144.7	83.1	32.3	49.8	29.1	97.7
75°	42.3	32.0	78.9	120.1	114.5	114.5	76.9	31.1	43.3	29.2	76.0
77.5°	31.7	28.4	65.4	78.4	74.1	74.1	64.2	27.4	30.2	25.7	61.7
80°	24.0	25.9	53.9	57.6	54.8	54.8	51.9	25.0	24.0	24.0	51.0
82.5°	18.7	22.0	41.5	42.3	40.2	39.5	40.4	21.9	18.7	20.2	39.4
85°	10.6	15.3	22.1	18.2	15.4	14.4	21.2	14.3	9.6	14.3	21.2
87.5°	3.8	7.4	4.4	4.2	4.2	4.2	4.4	7.4	3.8	6.7	5.2
90°	0.0	2.8	6.7	5.8	5.8	5.8	6.7	2.8	0.0	2.8	6.7
92.5°	13.8	49.8	159.1	52.4	40.4	52.4	159.1	49.8	13.8	49.8	159.1
95°	40.4	123.1	548.2	195.4	120.2	195.4	548.2	123.1	40.4	123.1	548.2
97.5°	76.0	160.2	930.3	566.6	345.8	566.6	930.3	160.2	76.0	160.2	930.3
100°	99.1	181.8	1074.2	957.9	621.3	957.9	1074.2	181.8	99.1	181.8	1074.2
102.5°	125.2	205.0	1056.5	1417.1	1077.5	1417.1	1056.5	205.0	125.2	205.0	1056.5
105°	165.4	238.8	964.6	1842.3	1744.5	1842.3	964.6	238.8	165.4	238.8	964.6
107.5°	208.9	277.9	877.3	1879.2	1982.8	1879.2	877.3	277.9	208.9	277.9	877.3
110°	240.4	303.4	835.7	1833.4	2020.5	1833.4	835.7	303.4	240.4	303.4	835.7



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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°	266.6	328.8	809.5	1750.8	1992.0	1750.8	809.5	328.8	266.6	328.8	809.5
115°	305.8	365.1	785.7	1619.2	1905.1	1619.2	785.7	365.1	305.8	365.1	785.7
117.5°	346.2	399.6	776.5	1498.8	1783.4	1498.8	776.5	399.6	346.2	399.6	776.5
120°	369.3	421.9	774.2	1424.8	1700.3	1424.8	774.2	421.9	369.3	421.9	774.2
122.5°	391.6	443.5	774.9	1360.5	1617.2	1360.5	774.9	443.5	391.6	443.5	774.9
125°	425.1	474.0	775.1	1278.5	1507.0	1278.5	775.1	474.0	425.1	474.0	775.1
127.5°	453.7	503.7	774.9	1217.0	1407.5	1217.0	774.9	503.7	453.7	503.7	774.9
130°	472.2	523.0	774.2	1181.9	1352.1	1181.9	774.2	523.0	472.2	523.0	774.2
132.5°	488.3	541.4	773.4	1149.4	1309.0	1149.4	773.4	541.4	488.3	541.4	773.4
135°	513.5	567.1	771.3	1103.4	1244.4	1103.4	771.3	567.1	513.5	567.1	771.3
137.5°	538.2	592.1	769.2	1056.7	1181.9	1056.7	769.2	592.1	538.2	592.1	769.2
140°	555.9	607.6	768.4	1025.0	1143.4	1025.0	768.4	607.6	555.9	607.6	768.4
142.5°	572.8	622.2	768.4	994.7	1100.4	994.7	768.4	622.2	572.8	622.2	768.4
145°	600.1	644.3	769.4	950.3	1040.5	950.3	769.4	644.3	600.1	644.3	769.4
147.5°	626.6	665.0	770.7	912.5	982.3	912.5	770.7	665.0	626.6	665.0	770.7
150°	644.3	678.2	772.2	889.9	949.2	889.9	772.2	678.2	644.3	678.2	772.2
152.5°	662.0	689.9	773.0	872.7	920.0	872.7	773.0	689.9	662.0	689.9	773.0
155°	684.7	707.3	774.2	850.9	882.8	850.9	774.2	707.3	684.7	707.3	774.2
157.5°	706.3	722.4	775.3	834.7	857.1	834.7	775.3	722.4	706.3	722.4	775.3
160°	719.3	732.5	776.1	824.6	842.4	824.6	776.1	732.5	719.3	732.5	776.1
162.5°	730.9	741.0	776.1	816.0	829.4	816.0	776.1	741.0	730.9	741.0	776.1
165°	747.2	753.8	776.1	805.1	814.5	805.1	776.1	753.8	747.2	753.8	776.1
167.5°	758.8	762.9	776.3	797.0	801.9	797.0	776.3	762.9	758.8	762.9	776.3
170°	766.5	768.3	777.0	791.5	793.4	791.5	777.0	768.3	766.5	768.3	777.0
172.5°	771.9	773.0	778.6	788.4	788.0	788.4	778.6	773.0	771.9	773.0	778.6
175°	779.0	779.0	779.0	784.7	782.8	784.7	779.0	779.0	779.0	779.0	779.0
177.5°	781.9	781.1	780.3	784.1	781.1	784.1	780.3	781.1	781.9	781.1	780.3
180°	781.9	781.9	781.9	781.9	781.9	781.9	781.9	781.9	781.9	781.9	781.9



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1275.4	1275.4	1275.4	1275.4	1275.4	1275.4
2.5°	1265.5	1270.7	1270.7	1267.7	1282.7	1268.4
5°	1252.5	1264.8	1259.1	1259.0	1277.9	1263.8
7.5°	1243.5	1255.0	1249.7	1248.6	1267.2	1255.9
10°	1234.2	1242.7	1238.9	1241.7	1258.7	1247.5
12.5°	1221.1	1231.1	1227.3	1231.7	1247.3	1238.2
15°	1198.6	1207.1	1208.9	1210.9	1229.0	1219.6
17.5°	1161.4	1165.5	1174.9	1188.2	1207.0	1196.5
20°	1132.2	1137.8	1143.5	1166.7	1188.5	1177.2
22.5°	1098.9	1097.0	1110.2	1137.4	1164.7	1154.9
25°	1009.2	936.8	1016.7	1086.8	1123.3	1120.5
27.5°	702.7	609.8	692.0	1003.2	1079.9	1085.5
30°	553.0	509.8	552.1	895.4	1047.7	1060.9
32.5°	491.0	461.3	487.0	681.5	1007.2	1032.4
35°	423.7	403.0	423.7	509.8	927.5	985.8
37.5°	339.1	296.8	338.4	440.5	749.8	935.6
40°	252.7	199.1	245.2	394.3	599.2	896.4
42.5°	168.4	128.3	159.3	310.5	518.3	844.1
45°	91.1	79.8	87.4	187.6	423.0	752.1
47.5°	71.5	75.6	71.5	118.3	323.6	595.7
50°	68.6	81.8	68.6	91.4	267.7	451.1
52.5°	74.8	88.7	74.0	72.1	218.5	334.1
55°	84.7	130.8	85.7	58.7	160.2	225.1
57.5°	120.6	147.2	122.0	55.6	123.4	142.7
60°	123.9	158.7	123.0	58.7	95.5	105.8
62.5°	146.6	196.4	146.4	67.1	71.0	87.3
65°	188.0	206.8	189.9	85.6	50.7	78.9
67.5°	178.4	191.8	176.5	91.8	34.9	71.2
70°	175.3	185.6	173.4	104.8	32.4	59.6
72.5°	163.5	164.9	160.2	97.1	29.1	49.6
75°	126.8	118.3	122.1	83.7	29.2	42.3
77.5°	78.8	75.4	76.0	63.9	25.7	31.7
80°	59.6	57.7	56.8	53.9	24.0	24.0
82.5°	44.2	42.3	41.4	41.5	20.2	18.7
85°	20.2	18.3	17.3	24.0	14.3	10.6
87.5°	5.0	5.0	4.2	5.2	5.9	3.8
90°	5.8	5.8	5.8	6.7	2.8	0.0
92.5°	52.4	40.4	52.4	159.1	49.8	13.8
95°	195.4	120.2	195.4	548.2	123.1	40.4
97.5°	566.6	345.8	566.6	930.3	160.2	76.0
100°	957.9	621.3	957.9	1074.2	181.8	99.1
102.5°	1417.1	1077.5	1417.1	1056.5	205.0	125.2
105°	1842.3	1744.5	1842.3	964.6	238.8	165.4
107.5°	1879.2	1982.8	1879.2	877.3	277.9	208.9
110°	1833.4	2020.5	1833.4	835.7	303.4	240.4



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CATALOG NUMBER: SQ2-FA-125U-050D-930-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1750.8	1992.0	1750.8	809.5	328.8	266.6
115°	1619.2	1905.1	1619.2	785.7	365.1	305.8
117.5°	1498.8	1783.4	1498.8	776.5	399.6	346.2
120°	1424.8	1700.3	1424.8	774.2	421.9	369.3
122.5°	1360.5	1617.2	1360.5	774.9	443.5	391.6
125°	1278.5	1507.0	1278.5	775.1	474.0	425.1
127.5°	1217.0	1407.5	1217.0	774.9	503.7	453.7
130°	1181.9	1352.1	1181.9	774.2	523.0	472.2
132.5°	1149.4	1309.0	1149.4	773.4	541.4	488.3
135°	1103.4	1244.4	1103.4	771.3	567.1	513.5
137.5°	1056.7	1181.9	1056.7	769.2	592.1	538.2
140°	1025.0	1143.4	1025.0	768.4	607.6	555.9
142.5°	994.7	1100.4	994.7	768.4	622.2	572.8
145°	950.3	1040.5	950.3	769.4	644.3	600.1
147.5°	912.5	982.3	912.5	770.7	665.0	626.6
150°	889.9	949.2	889.9	772.2	678.2	644.3
152.5°	872.7	920.0	872.7	773.0	689.9	662.0
155°	850.9	882.8	850.9	774.2	707.3	684.7
157.5°	834.7	857.1	834.7	775.3	722.4	706.3
160°	824.6	842.4	824.6	776.1	732.5	719.3
162.5°	816.0	829.4	816.0	776.1	741.0	730.9
165°	805.1	814.5	805.1	776.1	753.8	747.2
167.5°	797.0	801.9	797.0	776.3	762.9	758.8
170°	791.5	793.4	791.5	777.0	768.3	766.5
172.5°	788.4	788.0	788.4	778.6	773.0	771.9
175°	784.7	782.8	784.7	779.0	779.0	779.0
177.5°	784.1	781.1	784.1	780.3	781.1	781.9
180°	781.9	781.9	781.9	781.9	781.9	781.9

TEST NUMBER: P853800

CATALOG NUMBER: SQ2-FA-125U-050D-930-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	7.85	8.49	8.99	9.62	11.18	6.71	7.35	7.85	8.47	10.03
	3H	8.54	9.12	9.69	10.25	11.82	12.85	13.42	14.00	14.55	16.13
	4H	8.94	9.49	10.10	10.62	12.20	14.12	14.66	15.27	15.79	17.38
	6H	9.29	9.79	10.45	10.92	12.52	14.72	15.22	15.88	16.35	17.94
	8H	9.40	9.88	10.57	11.03	12.61	14.84	15.31	16.00	16.46	18.04
	12H	9.47	9.92	10.64	11.06	12.67	14.87	15.32	16.04	16.46	18.07
4H	2H	8.23	8.77	9.39	9.90	11.49	7.22	7.77	8.39	8.90	10.48
	3H	9.21	9.67	10.38	10.83	12.42	13.54	13.99	14.70	15.15	16.74
	4H	9.77	10.19	10.94	11.34	12.95	14.98	15.40	16.15	16.55	18.16
	6H	10.24	10.60	11.41	11.76	13.37	15.71	16.07	16.88	17.24	18.84
	8H	10.41	10.74	11.58	11.90	13.52	15.88	16.21	17.05	17.37	18.99
	12H	10.51	10.82	11.70	11.99	13.61	15.93	16.23	17.12	17.40	19.02
8H	4H	10.86	11.20	12.03	12.35	13.97	15.10	15.43	16.27	16.59	18.21
	6H	11.46	11.74	12.66	12.94	14.56	15.97	16.25	17.16	17.45	19.06
	8H	11.70	11.94	12.90	13.12	14.75	16.22	16.46	17.42	17.64	19.28
	12H	11.86	12.07	13.06	13.25	14.92	16.33	16.54	17.53	17.72	19.39
12H	4H	11.00	11.30	12.19	12.47	14.09	15.05	15.35	16.24	16.52	18.14
	6H	11.74	11.98	12.94	13.16	14.79	15.98	16.22	17.18	17.40	19.03
	8H	12.03	12.24	13.23	13.42	15.08	16.25	16.46	17.45	17.64	19.31