

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: P855461

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

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855461
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-840-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

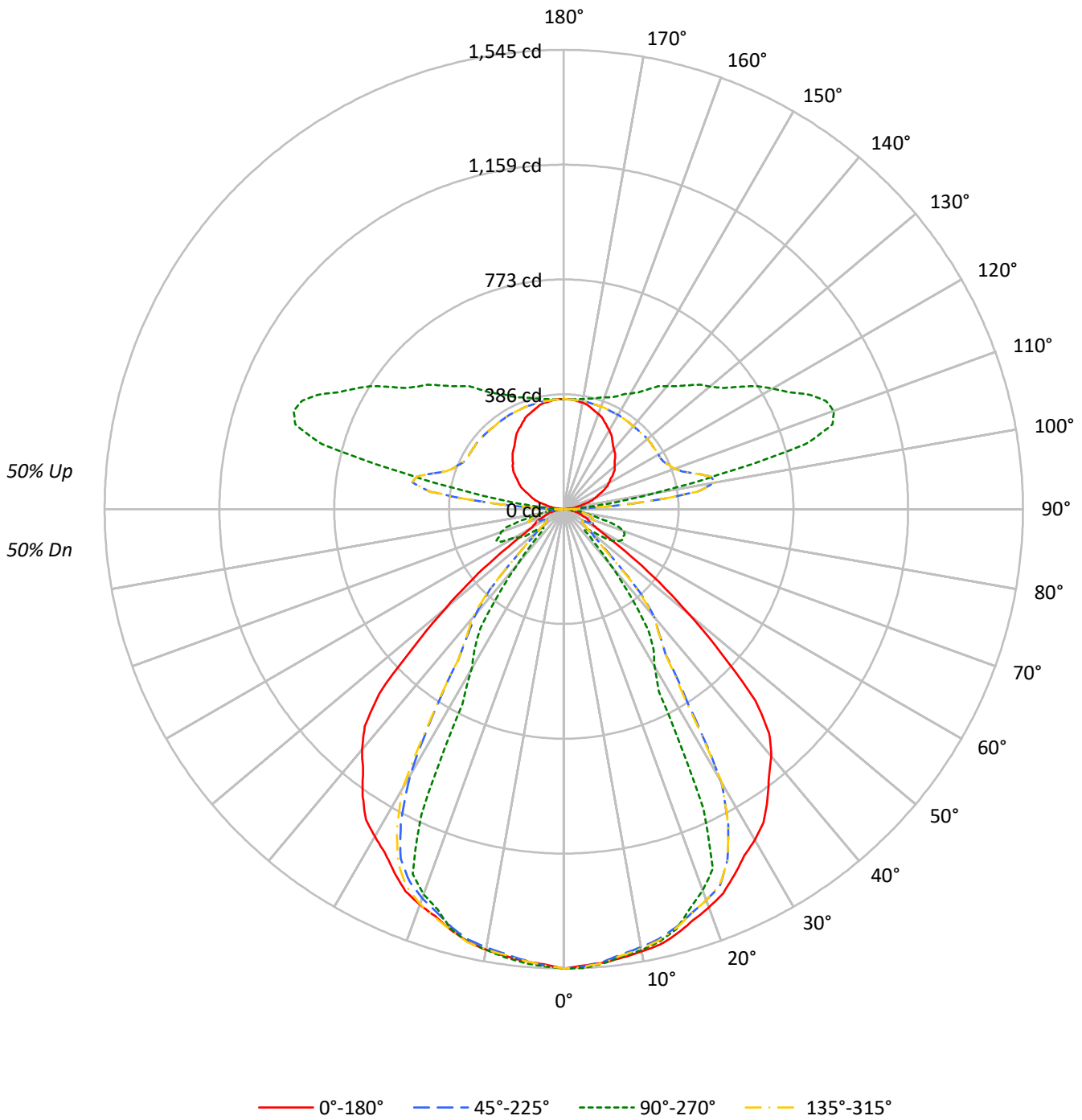
Lumens per Lamp: N/A
Luminaire Lumens: 4558.5 lumens
Efficiency: N/A
Efficacy: 139.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	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°	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	3.2
10°-20°	412.6	9.1
20°-30°	562.5	12.3
30°-40°	472.7	10.4
40°-50°	268.5	5.9
50°-60°	142.5	3.1
60°-70°	131.2	2.9
70°-80°	96.3	2.1
80°-90°	25.6	0.6
90°-100°	147.6	3.2
100°-110°	468.1	10.3
110°-120°	459.0	10.1
120°-130°	373.5	8.2
130°-140°	304.6	6.7
140°-150°	237.5	5.2
150°-160°	171.1	3.8
160°-170°	104.5	2.3
170°-180°	35.3	0.8
0°-30°	1120.5	24.6
0°-40°	1593.2	35.0
0°-60°	2004.2	44.0
0°-90°	2257.3	49.5
90°-120°	1074.7	23.6
90°-150°	1990.3	43.7
90°-180°	2301.0	50.5
0°-180°	4558.5	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	4	0	4	0	2
95°	20	64	20	64	20	23
105°	82	842	82	842	82	86
115°	146	911	146	911	146	144
125°	202	715	202	715	202	179
135°	244	588	244	588	244	188
145°	284	491	284	491	284	178
155°	324	418	324	418	324	149
165°	353	385	353	385	353	100
175°	369	371	369	371	369	35
180°	371	371	371	371	371	



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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	8.5	4.4	4.4	4.4	4.4	4.4	8.5	4.7	7.6	5.4
90°	0.0	1.2	3.5	3.5	3.5	3.5	3.5	1.2	0.0	1.2	3.5
92.5°	6.5	25.9	82.7	27.5	19.3	27.5	82.7	25.9	6.5	25.9	82.7
95°	19.8	59.7	268.0	99.4	64.1	99.4	268.0	59.7	19.8	59.7	268.0
97.5°	36.8	77.4	454.0	283.7	174.1	283.7	454.0	77.4	36.8	77.4	454.0
100°	48.9	87.6	517.4	471.6	306.5	471.6	517.4	87.6	48.9	87.6	517.4
102.5°	62.0	98.9	506.3	692.7	530.3	692.7	506.3	98.9	62.0	98.9	506.3
105°	81.6	114.6	461.5	878.9	842.5	878.9	461.5	114.6	81.6	114.6	461.5
107.5°	101.2	131.7	418.8	898.4	947.6	898.4	418.8	131.7	101.2	131.7	418.8
110°	114.2	143.8	397.4	876.0	967.2	876.0	397.4	143.8	114.2	143.8	397.4



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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°	127.3	155.0	385.3	837.5	953.2	837.5	385.3	155.0	127.3	155.0	385.3
115°	145.7	173.1	372.9	774.5	911.2	774.5	372.9	173.1	145.7	173.1	372.9
117.5°	163.6	189.6	368.0	713.9	851.8	713.9	368.0	189.6	163.6	189.6	368.0
120°	174.8	199.9	367.1	676.5	809.8	676.5	367.1	199.9	174.8	199.9	367.1
122.5°	186.0	210.1	367.1	646.6	770.7	646.6	367.1	210.1	186.0	210.1	367.1
125°	201.6	225.5	367.1	607.3	715.4	607.3	367.1	225.5	201.6	225.5	367.1
127.5°	215.4	238.3	367.1	576.9	669.1	576.9	367.1	238.3	215.4	238.3	367.1
130°	223.8	247.6	367.1	558.9	642.0	558.9	367.1	247.6	223.8	247.6	367.1
132.5°	232.1	256.0	366.2	544.7	619.8	544.7	366.2	256.0	232.1	256.0	366.2
135°	243.6	267.5	364.8	522.3	588.5	522.3	364.8	267.5	243.6	267.5	364.8
137.5°	254.8	279.8	364.5	501.0	560.1	501.0	364.5	279.8	254.8	279.8	364.5
140°	262.2	287.3	363.6	486.0	539.6	486.0	363.6	287.3	262.2	287.3	363.6
142.5°	271.5	295.7	364.5	470.9	520.9	470.9	364.5	295.7	271.5	295.7	364.5
145°	284.4	306.0	364.8	450.7	490.6	450.7	364.8	306.0	284.4	306.0	364.8
147.5°	297.2	315.6	365.0	432.8	465.5	432.8	365.0	315.6	297.2	315.6	365.0
150°	306.5	321.3	365.9	422.5	448.7	422.5	365.9	321.3	306.5	321.3	365.9
152.5°	314.0	326.9	365.9	414.0	435.6	414.0	365.9	326.9	314.0	326.9	365.9
155°	324.0	335.4	365.9	402.4	418.4	402.4	365.9	335.4	324.0	335.4	365.9
157.5°	334.7	342.4	367.1	395.3	406.3	395.3	367.1	342.4	334.7	342.4	367.1
160°	340.3	347.1	367.1	390.5	399.7	390.5	367.1	347.1	340.3	347.1	367.1
162.5°	345.9	350.9	367.1	386.8	393.2	386.8	367.1	350.9	345.9	350.9	367.1
165°	353.1	356.5	367.1	381.1	384.6	381.1	367.1	356.5	353.1	356.5	367.1
167.5°	359.9	360.8	368.3	377.1	380.2	377.1	368.3	360.8	359.9	360.8	368.3
170°	363.6	363.6	368.3	375.3	376.4	375.3	368.3	363.6	363.6	363.6	368.3
172.5°	365.5	366.4	368.3	373.4	373.6	373.4	368.3	366.4	365.5	366.4	368.3
175°	369.4	368.3	369.4	371.6	370.6	371.6	369.4	368.3	369.4	368.3	369.4
177.5°	370.6	369.7	369.7	371.4	369.7	371.4	369.7	369.7	370.6	369.7	369.7
180°	370.6	370.6	370.6	370.6	370.6	370.6	370.6	370.6	370.6	370.6	370.6



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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°	5.4	5.4	4.4	5.4	6.8	4.7
90°	3.5	3.5	3.5	3.5	1.2	0.0
92.5°	27.5	19.3	27.5	82.7	25.9	6.5
95°	99.4	64.1	99.4	268.0	59.7	19.8
97.5°	283.7	174.1	283.7	454.0	77.4	36.8
100°	471.6	306.5	471.6	517.4	87.6	48.9
102.5°	692.7	530.3	692.7	506.3	98.9	62.0
105°	878.9	842.5	878.9	461.5	114.6	81.6
107.5°	898.4	947.6	898.4	418.8	131.7	101.2
110°	876.0	967.2	876.0	397.4	143.8	114.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	837.5	953.2	837.5	385.3	155.0	127.3
115°	774.5	911.2	774.5	372.9	173.1	145.7
117.5°	713.9	851.8	713.9	368.0	189.6	163.6
120°	676.5	809.8	676.5	367.1	199.9	174.8
122.5°	646.6	770.7	646.6	367.1	210.1	186.0
125°	607.3	715.4	607.3	367.1	225.5	201.6
127.5°	576.9	669.1	576.9	367.1	238.3	215.4
130°	558.9	642.0	558.9	367.1	247.6	223.8
132.5°	544.7	619.8	544.7	366.2	256.0	232.1
135°	522.3	588.5	522.3	364.8	267.5	243.6
137.5°	501.0	560.1	501.0	364.5	279.8	254.8
140°	486.0	539.6	486.0	363.6	287.3	262.2
142.5°	470.9	520.9	470.9	364.5	295.7	271.5
145°	450.7	490.6	450.7	364.8	306.0	284.4
147.5°	432.8	465.5	432.8	365.0	315.6	297.2
150°	422.5	448.7	422.5	365.9	321.3	306.5
152.5°	414.0	435.6	414.0	365.9	326.9	314.0
155°	402.4	418.4	402.4	365.9	335.4	324.0
157.5°	395.3	406.3	395.3	367.1	342.4	334.7
160°	390.5	399.7	390.5	367.1	347.1	340.3
162.5°	386.8	393.2	386.8	367.1	350.9	345.9
165°	381.1	384.6	381.1	367.1	356.5	353.1
167.5°	377.1	380.2	377.1	368.3	360.8	359.9
170°	375.3	376.4	375.3	368.3	363.6	363.6
172.5°	373.4	373.6	373.4	368.3	366.4	365.5
175°	371.6	370.6	371.6	369.4	368.3	369.4
177.5°	371.4	369.7	371.4	369.7	369.7	370.6
180°	370.6	370.6	370.6	370.6	370.6	370.6



TEST NUMBER: P855461

CATALOG NUMBER: SQ2-FA-050U-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	11.05	11.80	12.03	12.78	14.07	9.90	10.66	10.89	11.64	12.93
	3H	11.74	12.42	12.74	13.41	14.72	16.05	16.73	17.04	17.72	19.03
	4H	12.15	12.79	13.16	13.78	15.10	17.32	17.96	18.33	18.96	20.27
	6H	12.50	13.09	13.52	14.09	15.42	17.93	18.52	18.94	19.51	20.84
	8H	12.62	13.18	13.64	14.19	15.51	18.05	18.61	19.07	19.62	20.95
	12H	12.69	13.22	13.71	14.22	15.57	18.09	18.62	19.11	19.63	20.97
4H	2H	11.43	12.07	12.45	13.07	14.38	10.43	11.07	11.44	12.06	13.38
	3H	12.43	12.96	13.45	13.98	15.31	16.75	17.28	17.77	18.31	19.63
	4H	12.99	13.48	14.01	14.49	15.84	18.20	18.69	19.22	19.70	21.05
	6H	13.46	13.88	14.50	14.92	16.27	18.93	19.35	19.97	20.39	21.74
	8H	13.63	14.02	14.67	15.05	16.41	19.10	19.49	20.13	20.52	21.88
	12H	13.74	14.09	14.79	15.14	16.51	19.16	19.51	20.21	20.55	21.92
8H	4H	14.08	14.48	15.12	15.51	16.87	18.32	18.71	19.35	19.74	21.10
	6H	14.69	15.01	15.75	16.08	17.45	19.20	19.52	20.25	20.59	21.95
	8H	14.93	15.21	15.99	16.27	17.65	19.45	19.73	20.51	20.79	22.17
	12H	15.09	15.34	16.16	16.39	17.82	19.56	19.81	20.63	20.86	22.29
12H	4H	14.23	14.58	15.28	15.62	16.99	18.28	18.63	19.33	19.67	21.04
	6H	14.97	15.25	16.03	16.31	17.69	19.21	19.49	20.27	20.55	21.93
	8H	15.26	15.51	16.33	16.56	17.98	19.48	19.73	20.55	20.78	22.20