

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: P855465

Luminaire Tested: SQ2-FA-025U-050D-840-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855465  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-9, G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-025U-050D-840-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 250 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

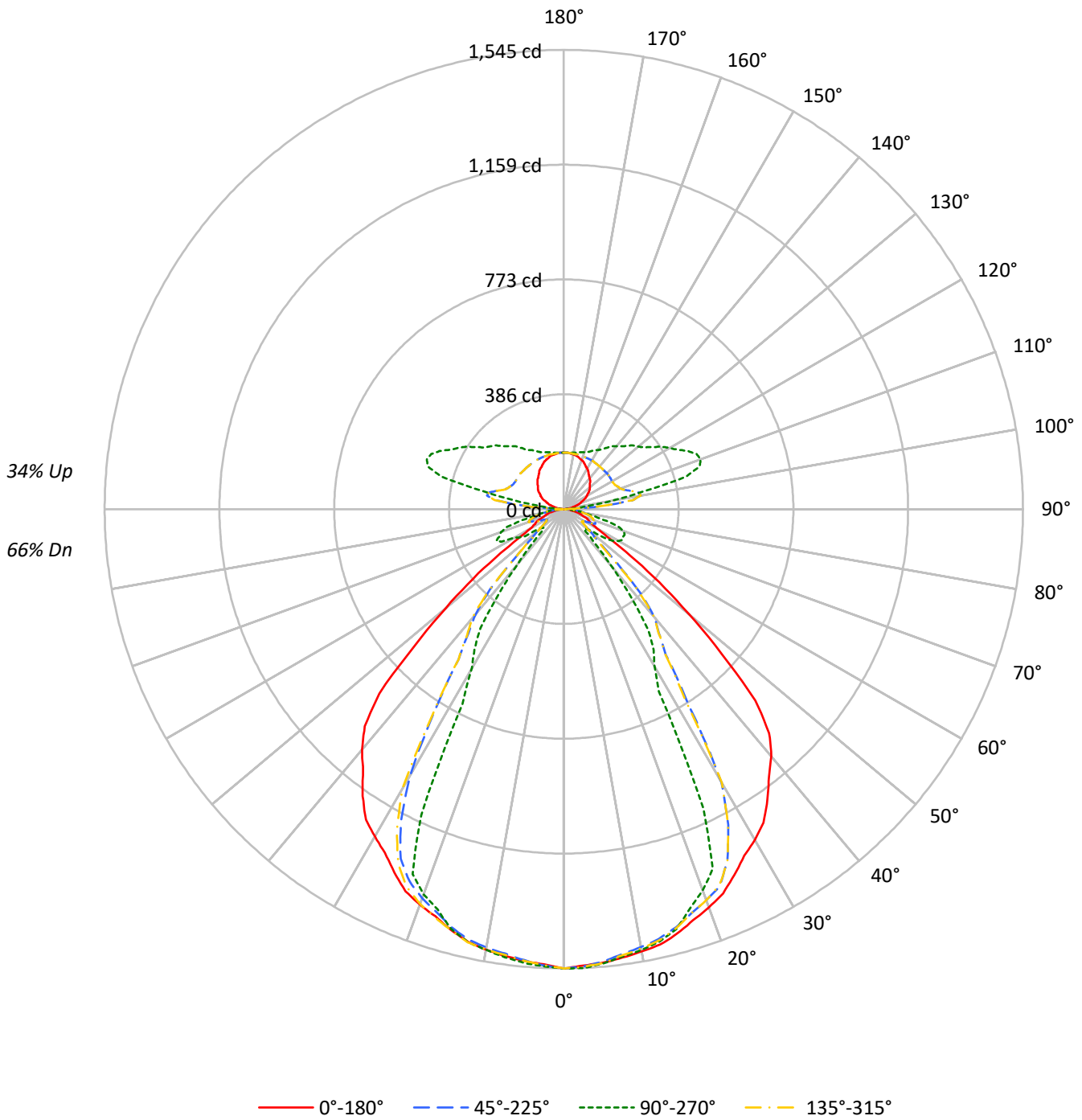
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3435.8 lumens  
Efficiency: N/A  
Efficacy: 136.3 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-Direct  
  
Input Watts (W): 25.2  
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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66
1	103	99	95	92	97	93	90	87	83	81	79	73	72	70	64	63	62	58
2	95	88	83	78	89	84	79	75	75	71	68	66	64	61	59	57	55	51
3	88	79	73	67	83	75	69	65	68	63	59	61	57	54	54	51	49	46
4	82	72	65	59	77	68	62	57	62	57	53	55	52	48	50	47	44	41
5	76	65	58	52	72	62	56	51	56	51	47	51	47	44	46	43	40	37
6	71	60	52	47	67	57	50	45	52	46	42	47	43	39	43	39	37	34
7	66	55	47	42	63	52	46	41	48	42	38	44	39	36	40	36	34	31
8	62	51	43	38	59	48	42	37	44	39	35	41	36	33	37	34	31	29
9	58	47	40	35	55	45	39	34	41	36	32	38	34	30	35	31	29	27
10	55	43	37	32	52	42	36	31	39	33	30	36	31	28	33	29	27	25

**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	4.2
10°-20°	412.6	12.0
20°-30°	562.5	16.4
30°-40°	472.7	13.8
40°-50°	268.5	7.8
50°-60°	142.5	4.1
60°-70°	131.2	3.8
70°-80°	96.3	2.8
80°-90°	25.6	0.7
90°-100°	76.8	2.2
100°-110°	239.0	7.0
110°-120°	233.8	6.8
120°-130°	190.9	5.6
130°-140°	156.2	4.5
140°-150°	121.9	3.5
150°-160°	88.0	2.6
160°-170°	53.8	1.6
170°-180°	18.1	0.5
0°-30°	1120.5	32.6
0°-40°	1593.2	46.4
0°-60°	2004.2	58.3
0°-90°	2257.3	65.7
90°-120°	549.7	16.0
90°-150°	1018.7	29.6
90°-180°	1179.0	34.3
0°-180°	3435.8	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	1
95°	10	34	10	34	10	12
105°	42	429	42	429	42	44
115°	75	461	75	461	75	74
125°	104	364	104	364	104	92
135°	125	301	125	301	125	97
145°	146	252	146	252	146	91
155°	167	214	167	214	167	77
165°	183	198	183	198	183	51
175°	190	190	190	190	190	18
180°	190	190	190	190	190	



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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°	3.7	13.1	44.5	14.6	11.9	14.6	44.5	13.1	3.7	13.1	44.5
95°	10.5	31.0	141.0	52.0	33.8	52.0	141.0	31.0	10.5	31.0	141.0
97.5°	19.1	40.3	233.4	145.3	91.6	145.3	233.4	40.3	19.1	40.3	233.4
100°	25.6	45.0	263.3	246.2	164.3	246.2	263.3	45.0	25.6	45.0	263.3
102.5°	32.2	50.6	257.7	351.7	276.1	351.7	257.7	50.6	32.2	50.6	257.7
105°	42.0	59.1	235.3	449.3	428.8	449.3	235.3	59.1	42.0	59.1	235.3
107.5°	51.7	67.7	213.9	456.7	479.3	456.7	213.9	67.7	51.7	67.7	213.9
110°	58.3	74.2	202.7	446.0	490.5	446.0	202.7	74.2	58.3	74.2	202.7



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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°	64.8	79.8	197.1	426.8	483.1	426.8	197.1	79.8	64.8	79.8	197.1
115°	74.6	88.2	191.0	394.1	461.4	394.1	191.0	88.2	74.6	88.2	191.0
117.5°	84.1	96.6	188.4	362.9	431.8	362.9	188.4	96.6	84.1	96.6	188.4
120°	89.7	102.2	187.5	345.2	411.3	345.2	187.5	102.2	89.7	102.2	187.5
122.5°	95.3	107.8	188.4	330.2	390.8	330.2	188.4	107.8	95.3	107.8	188.4
125°	103.7	115.0	188.7	310.0	363.5	310.0	188.7	115.0	103.7	115.0	188.7
127.5°	110.5	122.0	188.7	294.8	340.4	294.8	188.7	122.0	110.5	122.0	188.7
130°	114.2	126.7	188.7	286.3	327.4	286.3	188.7	126.7	114.2	126.7	188.7
132.5°	118.9	131.3	187.7	278.9	317.1	278.9	187.7	131.3	118.9	131.3	187.7
135°	124.7	138.3	187.5	267.6	300.6	267.6	187.5	138.3	124.7	138.3	187.5
137.5°	131.5	143.9	187.5	256.3	286.3	256.3	187.5	143.9	131.5	143.9	187.5
140°	135.2	147.7	187.5	248.8	276.1	248.8	187.5	147.7	135.2	147.7	187.5
142.5°	139.8	151.4	187.5	241.2	265.8	241.2	187.5	151.4	139.8	151.4	187.5
145°	145.7	157.0	187.5	231.1	251.6	231.1	187.5	157.0	145.7	157.0	187.5
147.5°	152.7	162.5	188.7	221.8	237.9	221.8	188.7	162.5	152.7	162.5	188.7
150°	157.3	165.3	188.7	217.0	229.5	217.0	188.7	165.3	157.3	165.3	188.7
152.5°	161.1	168.1	188.7	212.2	222.9	212.2	188.7	168.1	161.1	168.1	188.7
155°	166.7	172.2	188.7	207.6	214.3	207.6	188.7	172.2	166.7	172.2	188.7
157.5°	172.2	176.6	188.7	203.2	207.6	203.2	188.7	176.6	172.2	176.6	188.7
160°	176.0	179.4	188.7	200.4	203.8	200.4	188.7	179.4	176.0	179.4	188.7
162.5°	178.7	181.2	188.7	198.6	201.0	198.6	188.7	181.2	178.7	181.2	188.7
165°	182.9	184.0	189.8	195.8	198.0	195.8	189.8	184.0	182.9	184.0	189.8
167.5°	185.4	185.6	188.7	194.2	195.2	194.2	188.7	185.6	185.4	185.6	188.7
170°	186.3	187.5	188.7	192.3	193.3	192.3	188.7	187.5	186.3	187.5	188.7
172.5°	188.2	188.4	189.6	191.4	191.5	191.4	189.6	188.4	188.2	188.4	189.6
175°	189.8	189.8	189.8	191.0	189.8	191.0	189.8	189.8	189.8	189.8	189.8
177.5°	189.8	189.8	189.8	189.8	189.8	189.8	189.8	189.8	189.8	189.8	189.8
180°	189.8	189.8	189.8	189.8	189.8	189.8	189.8	189.8	189.8	189.8	189.8



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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°	14.6	11.9	14.6	44.5	13.1	3.7
95°	52.0	33.8	52.0	141.0	31.0	10.5
97.5°	145.3	91.6	145.3	233.4	40.3	19.1
100°	246.2	164.3	246.2	263.3	45.0	25.6
102.5°	351.7	276.1	351.7	257.7	50.6	32.2
105°	449.3	428.8	449.3	235.3	59.1	42.0
107.5°	456.7	479.3	456.7	213.9	67.7	51.7
110°	446.0	490.5	446.0	202.7	74.2	58.3





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	426.8	483.1	426.8	197.1	79.8	64.8
115°	394.1	461.4	394.1	191.0	88.2	74.6
117.5°	362.9	431.8	362.9	188.4	96.6	84.1
120°	345.2	411.3	345.2	187.5	102.2	89.7
122.5°	330.2	390.8	330.2	188.4	107.8	95.3
125°	310.0	363.5	310.0	188.7	115.0	103.7
127.5°	294.8	340.4	294.8	188.7	122.0	110.5
130°	286.3	327.4	286.3	188.7	126.7	114.2
132.5°	278.9	317.1	278.9	187.7	131.3	118.9
135°	267.6	300.6	267.6	187.5	138.3	124.7
137.5°	256.3	286.3	256.3	187.5	143.9	131.5
140°	248.8	276.1	248.8	187.5	147.7	135.2
142.5°	241.2	265.8	241.2	187.5	151.4	139.8
145°	231.1	251.6	231.1	187.5	157.0	145.7
147.5°	221.8	237.9	221.8	188.7	162.5	152.7
150°	217.0	229.5	217.0	188.7	165.3	157.3
152.5°	212.2	222.9	212.2	188.7	168.1	161.1
155°	207.6	214.3	207.6	188.7	172.2	166.7
157.5°	203.2	207.6	203.2	188.7	176.6	172.2
160°	200.4	203.8	200.4	188.7	179.4	176.0
162.5°	198.6	201.0	198.6	188.7	181.2	178.7
165°	195.8	198.0	195.8	189.8	184.0	182.9
167.5°	194.2	195.2	194.2	188.7	185.6	185.4
170°	192.3	193.3	192.3	188.7	187.5	186.3
172.5°	191.4	191.5	191.4	189.6	188.4	188.2
175°	191.0	189.8	191.0	189.8	189.8	189.8
177.5°	189.8	189.8	189.8	189.8	189.8	189.8
180°	189.8	189.8	189.8	189.8	189.8	189.8



TEST NUMBER: P855465

CATALOG NUMBER: SQ2-FA-025U-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	12.48	13.36	13.32	14.20	15.23	11.34	12.22	12.18	13.05	14.09
	3H	13.19	13.97	14.04	14.82	15.88	17.50	18.28	18.34	19.13	20.19
	4H	13.60	14.34	14.46	15.19	16.27	18.77	19.51	19.64	20.37	21.44
	6H	13.96	14.63	14.83	15.50	16.59	19.38	20.06	20.26	20.92	22.01
	8H	14.07	14.72	14.96	15.60	16.69	19.51	20.15	20.39	21.03	22.12
	12H	14.15	14.76	15.03	15.63	16.74	19.55	20.16	20.43	21.03	22.15
4H	2H	12.88	13.62	13.75	14.48	15.55	11.88	12.62	12.75	13.47	14.55
	3H	13.88	14.50	14.76	15.39	16.48	18.21	18.82	19.08	19.71	20.80
	4H	14.45	15.01	15.33	15.89	17.01	19.66	20.22	20.54	21.10	22.22
	6H	14.92	15.41	15.83	16.31	17.44	20.40	20.88	21.30	21.79	22.91
	8H	15.10	15.55	16.00	16.45	17.58	20.56	21.01	21.47	21.92	23.05
	12H	15.21	15.61	16.13	16.54	17.67	20.63	21.03	21.55	21.95	23.09
8H	4H	15.55	16.00	16.45	16.90	18.03	19.78	20.23	20.69	21.14	22.27
	6H	16.16	16.53	17.09	17.47	18.61	20.66	21.03	21.59	21.98	23.11
	8H	16.39	16.72	17.33	17.66	18.81	20.91	21.24	21.85	22.18	23.33
	12H	16.57	16.85	17.51	17.78	18.98	21.04	21.32	21.98	22.25	23.45
12H	4H	15.70	16.10	16.62	17.02	18.16	19.75	20.15	20.67	21.07	22.21
	6H	16.43	16.76	17.37	17.70	18.85	20.67	21.00	21.61	21.94	23.09
	8H	16.74	17.02	17.68	17.95	19.15	20.96	21.24	21.90	22.17	23.37