

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: P855054

Luminaire Tested: SQ2-FA-025U-050D-830-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P855054  
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-830-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 500 LUMENS PER FOOT  
UPLIGHT 250 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

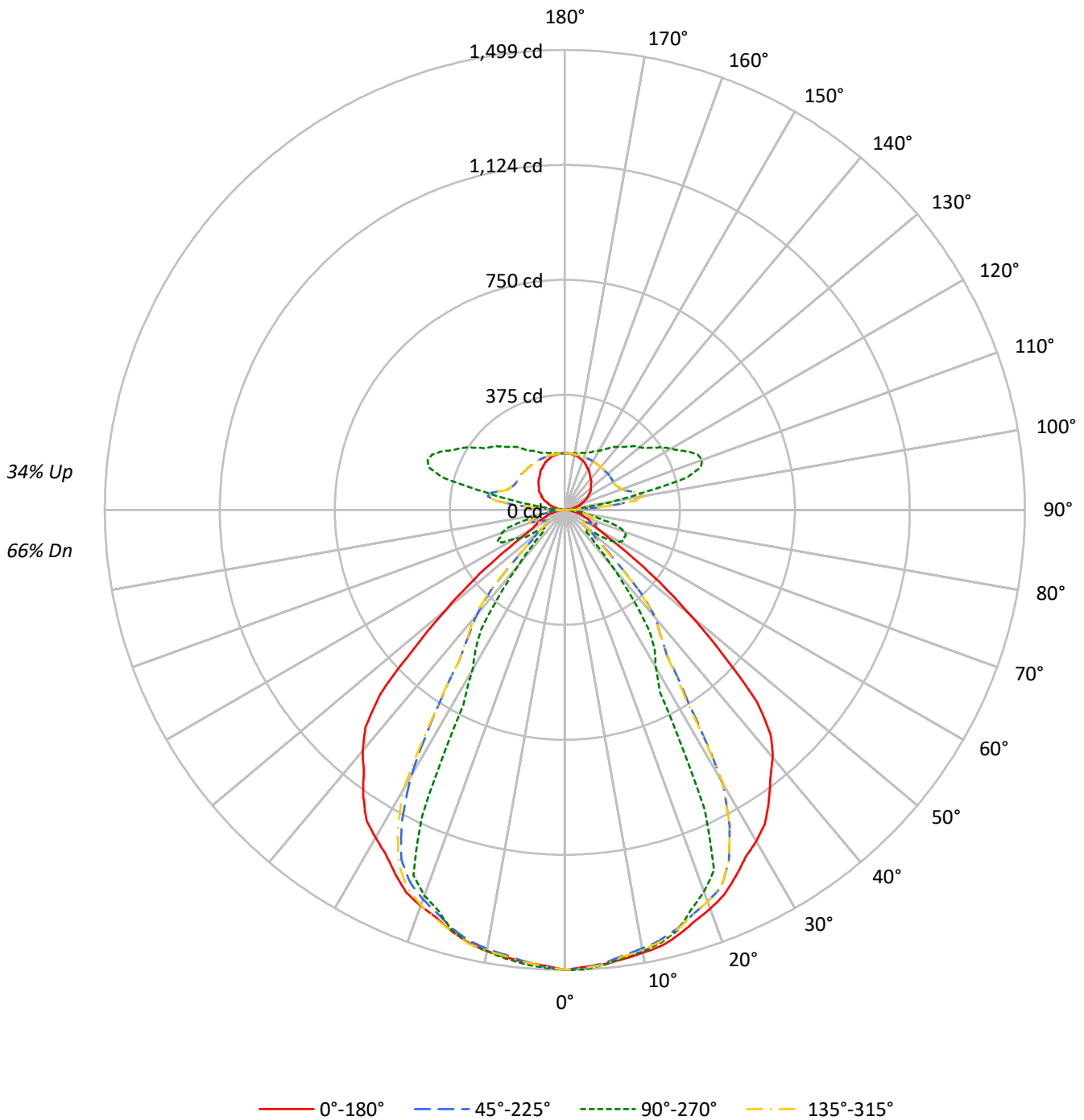
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3333.3 lumens  
Efficiency: N/A  
Efficacy: 132.3 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°	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	4.2
10°-20°	400.3	12.0
20°-30°	545.8	16.4
30°-40°	458.6	13.8
40°-50°	260.5	7.8
50°-60°	138.2	4.1
60°-70°	127.3	3.8
70°-80°	93.4	2.8
80°-90°	24.9	0.7
90°-100°	74.5	2.2
100°-110°	231.9	7.0
110°-120°	226.9	6.8
120°-130°	185.2	5.6
130°-140°	151.5	4.5
140°-150°	118.3	3.5
150°-160°	85.3	2.6
160°-170°	52.2	1.6
170°-180°	17.6	0.5
0°-30°	1087.1	32.6
0°-40°	1545.7	46.4
0°-60°	1944.4	58.3
0°-90°	2189.9	65.7
90°-120°	533.3	16.0
90°-150°	988.3	29.6
90°-180°	1143.0	34.3
0°-180°	3333.3	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	3	0	3	0	1
95°	10	33	10	33	10	12
105°	41	416	41	416	41	43
115°	72	448	72	448	72	71
125°	101	353	101	353	101	89
135°	121	292	121	292	121	94
145°	141	244	141	244	141	89
155°	162	208	162	208	162	75
165°	177	192	177	192	177	50
175°	184	184	184	184	184	17
180°	184	184	184	184	184	



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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	8.3	4.3	4.3	4.3	4.3	4.3	8.3	4.5	7.3	5.2
90°	0.0	1.1	3.4	3.4	3.4	3.4	3.4	1.1	0.0	1.1	3.4
92.5°	3.6	12.7	43.2	14.1	11.5	14.1	43.2	12.7	3.6	12.7	43.2
95°	10.2	30.1	136.8	50.4	32.8	50.4	136.8	30.1	10.2	30.1	136.8
97.5°	18.5	39.1	226.5	141.0	88.9	141.0	226.5	39.1	18.5	39.1	226.5
100°	24.9	43.6	255.4	238.9	159.4	238.9	255.4	43.6	24.9	43.6	255.4
102.5°	31.2	49.1	250.0	341.2	267.8	341.2	250.0	49.1	31.2	49.1	250.0
105°	40.7	57.3	228.3	435.9	416.0	435.9	228.3	57.3	40.7	57.3	228.3
107.5°	50.2	65.7	207.5	443.1	465.0	443.1	207.5	65.7	50.2	65.7	207.5
110°	56.5	72.0	196.6	432.7	475.9	432.7	196.6	72.0	56.5	72.0	196.6



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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°	62.9	77.4	191.2	414.0	468.7	414.0	191.2	77.4	62.9	77.4	191.2
115°	72.4	85.6	185.3	382.4	447.6	382.4	185.3	85.6	72.4	85.6	185.3
117.5°	81.6	93.7	182.8	352.1	418.9	352.1	182.8	93.7	81.6	93.7	182.8
120°	87.1	99.2	181.9	334.9	399.0	334.9	181.9	99.2	87.1	99.2	181.9
122.5°	92.5	104.6	182.8	320.3	379.1	320.3	182.8	104.6	92.5	104.6	182.8
125°	100.6	111.6	183.1	300.8	352.6	300.8	183.1	111.6	100.6	111.6	183.1
127.5°	107.2	118.4	183.1	286.1	330.3	286.1	183.1	118.4	107.2	118.4	183.1
130°	110.8	122.9	183.1	277.8	317.6	277.8	183.1	122.9	110.8	122.9	183.1
132.5°	115.3	127.4	182.1	270.6	307.6	270.6	182.1	127.4	115.3	127.4	182.1
135°	121.0	134.2	181.9	259.6	291.6	259.6	181.9	134.2	121.0	134.2	181.9
137.5°	127.5	139.6	181.9	248.6	277.8	248.6	181.9	139.6	127.5	139.6	181.9
140°	131.2	143.3	181.9	241.4	267.8	241.4	181.9	143.3	131.2	143.3	181.9
142.5°	135.7	146.9	181.9	234.0	257.9	234.0	181.9	146.9	135.7	146.9	181.9
145°	141.3	152.3	181.9	224.2	244.1	224.2	181.9	152.3	141.3	152.3	181.9
147.5°	148.1	157.6	183.1	215.2	230.8	215.2	183.1	157.6	148.1	157.6	183.1
150°	152.6	160.3	183.1	210.5	222.6	210.5	183.1	160.3	152.6	160.3	183.1
152.5°	156.3	163.0	183.1	205.9	216.3	205.9	183.1	163.0	156.3	163.0	183.1
155°	161.7	167.1	183.1	201.4	207.9	201.4	183.1	167.1	161.7	167.1	183.1
157.5°	167.1	171.3	183.1	197.2	201.4	197.2	183.1	171.3	167.1	171.3	183.1
160°	170.7	174.0	183.1	194.5	197.7	194.5	183.1	174.0	170.7	174.0	183.1
162.5°	173.3	175.8	183.1	192.7	195.0	192.7	183.1	175.8	173.3	175.8	183.1
165°	177.4	178.5	184.2	189.9	192.1	189.9	184.2	178.5	177.4	178.5	184.2
167.5°	179.9	180.1	183.1	188.4	189.4	188.4	183.1	180.1	179.9	180.1	183.1
170°	180.8	181.9	183.1	186.6	187.6	186.6	183.1	181.9	180.8	181.9	183.1
172.5°	182.6	182.8	184.0	185.7	185.8	185.7	184.0	182.8	182.6	182.8	184.0
175°	184.2	184.2	184.2	185.3	184.2	185.3	184.2	184.2	184.2	184.2	184.2
177.5°	184.2	184.2	184.2	184.2	184.2	184.2	184.2	184.2	184.2	184.2	184.2
180°	184.2	184.2	184.2	184.2	184.2	184.2	184.2	184.2	184.2	184.2	184.2



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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°	5.2	5.2	4.3	5.2	6.6	4.5
90°	3.4	3.4	3.4	3.4	1.1	0.0
92.5°	14.1	11.5	14.1	43.2	12.7	3.6
95°	50.4	32.8	50.4	136.8	30.1	10.2
97.5°	141.0	88.9	141.0	226.5	39.1	18.5
100°	238.9	159.4	238.9	255.4	43.6	24.9
102.5°	341.2	267.8	341.2	250.0	49.1	31.2
105°	435.9	416.0	435.9	228.3	57.3	40.7
107.5°	443.1	465.0	443.1	207.5	65.7	50.2
110°	432.7	475.9	432.7	196.6	72.0	56.5





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	414.0	468.7	414.0	191.2	77.4	62.9
115°	382.4	447.6	382.4	185.3	85.6	72.4
117.5°	352.1	418.9	352.1	182.8	93.7	81.6
120°	334.9	399.0	334.9	181.9	99.2	87.1
122.5°	320.3	379.1	320.3	182.8	104.6	92.5
125°	300.8	352.6	300.8	183.1	111.6	100.6
127.5°	286.1	330.3	286.1	183.1	118.4	107.2
130°	277.8	317.6	277.8	183.1	122.9	110.8
132.5°	270.6	307.6	270.6	182.1	127.4	115.3
135°	259.6	291.6	259.6	181.9	134.2	121.0
137.5°	248.6	277.8	248.6	181.9	139.6	127.5
140°	241.4	267.8	241.4	181.9	143.3	131.2
142.5°	234.0	257.9	234.0	181.9	146.9	135.7
145°	224.2	244.1	224.2	181.9	152.3	141.3
147.5°	215.2	230.8	215.2	183.1	157.6	148.1
150°	210.5	222.6	210.5	183.1	160.3	152.6
152.5°	205.9	216.3	205.9	183.1	163.0	156.3
155°	201.4	207.9	201.4	183.1	167.1	161.7
157.5°	197.2	201.4	197.2	183.1	171.3	167.1
160°	194.5	197.7	194.5	183.1	174.0	170.7
162.5°	192.7	195.0	192.7	183.1	175.8	173.3
165°	189.9	192.1	189.9	184.2	178.5	177.4
167.5°	188.4	189.4	188.4	183.1	180.1	179.9
170°	186.6	187.6	186.6	183.1	181.9	180.8
172.5°	185.7	185.8	185.7	184.0	182.8	182.6
175°	185.3	184.2	185.3	184.2	184.2	184.2
177.5°	184.2	184.2	184.2	184.2	184.2	184.2
180°	184.2	184.2	184.2	184.2	184.2	184.2



TEST NUMBER: P855054

CATALOG NUMBER: SQ2-FA-025U-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	12.38	13.26	13.22	14.09	15.13	11.24	12.11	12.07	12.95	13.99
	3H	13.08	13.87	13.93	14.71	15.78	17.39	18.17	18.24	19.02	20.09
	4H	13.49	14.23	14.36	15.09	16.16	18.67	19.41	19.53	20.26	21.34
	6H	13.85	14.53	14.72	15.39	16.48	19.28	19.96	20.15	20.82	21.91
	8H	13.97	14.61	14.85	15.49	16.58	19.40	20.05	20.28	20.93	22.01
	12H	14.04	14.66	14.93	15.53	16.64	19.44	20.06	20.33	20.93	22.04
4H	2H	12.78	13.52	13.65	14.37	15.45	11.77	12.51	12.64	13.37	14.44
	3H	13.78	14.39	14.65	15.28	16.37	18.10	18.72	18.98	19.60	20.69
	4H	14.34	14.90	15.23	15.78	16.90	19.55	20.11	20.44	21.00	22.11
	6H	14.82	15.30	15.72	16.21	17.33	20.29	20.77	21.19	21.68	22.80
	8H	14.99	15.44	15.89	16.34	17.47	20.46	20.91	21.36	21.81	22.94
	12H	15.11	15.51	16.03	16.43	17.57	20.52	20.93	21.44	21.85	22.98
8H	4H	15.44	15.89	16.35	16.80	17.93	19.68	20.13	20.58	21.03	22.16
	6H	16.05	16.42	16.98	17.37	18.50	20.56	20.93	21.49	21.87	23.01
	8H	16.29	16.61	17.23	17.55	18.70	20.81	21.13	21.75	22.07	23.22
	12H	16.46	16.75	17.40	17.68	18.88	20.93	21.22	21.87	22.15	23.35
12H	4H	15.59	15.99	16.51	16.91	18.05	19.64	20.04	20.56	20.97	22.10
	6H	16.33	16.65	17.27	17.59	18.74	20.57	20.89	21.51	21.83	22.98
	8H	16.63	16.92	17.57	17.84	19.05	20.85	21.14	21.79	22.06	23.27