

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: P853819

Luminaire Tested: SQ2-FA-150U-100D-935-UNV-STD-W-4

Issue Date: 7/12/2024

**Test Information**

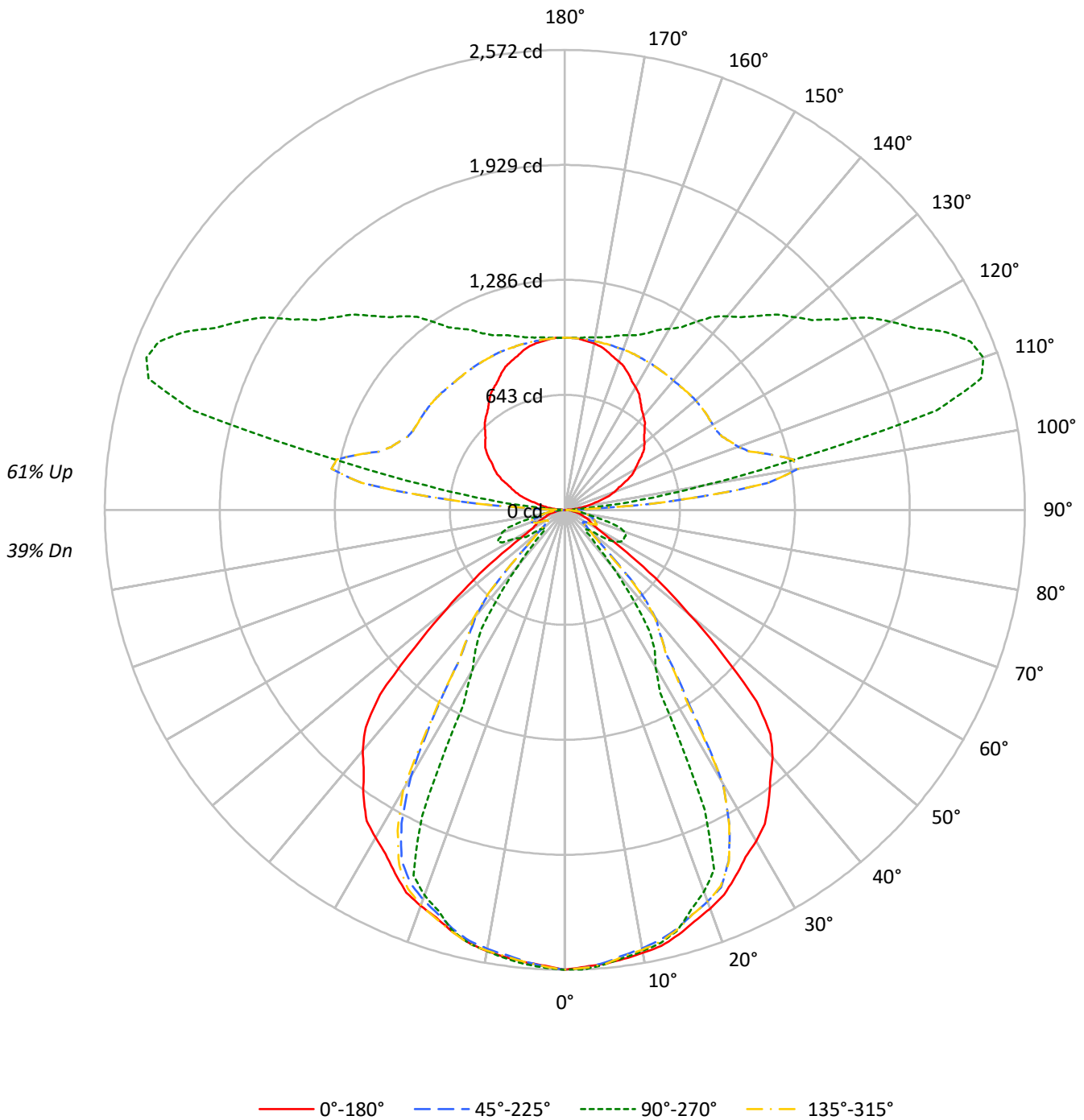
Test Method: LM-79-2019  
Report Number: P853819  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2104-222-14, G2-2308-131-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/12/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ2-FA-150U-100D-935-UNV-STD-W-4  
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT  
UPLIGHT 1500 LUMENS PER FOOT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9702.9 lumens  
Efficiency: N/A  
Efficacy: 103.0 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): 94.2  
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

TEST NUMBER: P853819  
CATALOG NUMBER: SQ2-FA-150U-100D-935-UNV-STD-W-4

### Luminous Intensity Polar Plot





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CATALOG NUMBER: SQ2-FA-150U-100D-935-UNV-STD-W-4

**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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	96	92	89	85	87	84	81	78	69	67	65	55	53	52	42	41	40	34
2	88	82	76	71	80	75	70	66	61	58	55	49	47	45	38	37	35	30
3	81	73	66	61	74	67	61	56	55	51	48	44	42	39	35	33	31	27
4	75	65	58	52	68	60	54	49	50	45	42	40	37	35	32	30	28	24
5	69	59	51	46	63	54	48	43	45	40	37	37	34	31	29	27	25	22
6	64	53	46	40	58	49	43	38	41	36	33	34	31	28	27	25	23	20
7	60	48	41	36	54	45	38	34	38	33	29	31	28	25	25	23	21	18
8	56	44	37	32	51	41	35	30	35	30	27	29	26	23	24	21	19	17
9	52	41	34	29	48	38	32	27	32	27	24	27	23	21	22	20	18	16
10	49	38	31	26	45	35	29	25	30	25	22	25	22	19	21	18	17	15

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	41525	41525	41525	41525
5°	41306	41370	41149	41337
10°	41243	41084	41084	41084
15°	41110	40689	40786	40689
20°	40790	39058	40491	39424
25°	40255	32963	39979	33654
30°	39884	18912	39452	19166
35°	39186	16247	38688	16019
40°	38101	8545	37036	8462
45°	34632	3676	33392	3676
50°	22850	4433	21680	4142
55°	12777	8189	12121	7426
60°	6891	11525	6765	10333
65°	6074	14006	6372	15931
70°	5679	16754	5401	17670
75°	5321	14398	5446	14885
80°	4510	10284	4510	10823
85°	3946	5743	3594	6836

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 34632 cd/sqm



TEST NUMBER: P853819

CATALOG NUMBER: SQ2-FA-150U-100D-935-UNV-STD-W-4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	242.0	2.5
10°-20°	686.6	7.1
20°-30°	936.2	9.6
30°-40°	786.7	8.1
40°-50°	446.8	4.6
50°-60°	237.1	2.4
60°-70°	218.3	2.2
70°-80°	160.3	1.7
80°-90°	42.9	0.4
90°-100°	367.1	3.8
100°-110°	1201.9	12.4
110°-120°	1188.3	12.2
120°-130°	971.3	10.0
130°-140°	792.7	8.2
140°-150°	616.9	6.4
150°-160°	444.2	4.6
160°-170°	271.7	2.8
170°-180°	91.8	0.9
0°-30°	1864.9	19.2
0°-40°	2651.6	27.3
0°-60°	3335.6	34.4
0°-90°	3757.0	38.7
90°-120°	2757.3	28.4
90°-150°	5138.2	53.0
90°-180°	5946.0	61.3
0°-180°	9702.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2572	2572	2572	2572	2572	
5°	2549	2552	2539	2550	2549	242
15°	2459	2434	2440	2434	2459	693
25°	2260	1850	2244	1889	2260	1042
35°	1988	824	1963	813	1988	1241
45°	1517	161	1462	161	1517	1109
55°	454	291	431	264	454	437
65°	159	367	167	417	159	160
75°	85	231	87	239	85	88
85°	21	31	19	37	21	24
90°	1	8	1	8	1	4
95°	52	154	52	154	52	58
105°	209	2153	209	2153	209	220
115°	376	2351	376	2351	376	372
125°	524	1855	524	1855	524	466
135°	631	1536	631	1536	631	488
145°	738	1284	738	1284	738	462
155°	841	1089	841	1089	841	387
165°	918	1003	918	1003	918	259
175°	959	965	959	965	959	91
180°	963	963	963	963	963	



TEST NUMBER: P853819

CATALOG NUMBER: SQ2-FA-150U-100D-935-UNV-STD-W-4

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9
2.5°	2557.9	2595.8	2562.6	2558.2	2571.9	2568.8	2564.1	2582.0	2551.7	2582.0	2557.9
5°	2548.6	2592.2	2542.8	2529.7	2552.5	2537.3	2550.5	2576.8	2538.9	2573.0	2535.0
7.5°	2532.7	2571.4	2512.1	2503.7	2526.1	2512.8	2518.3	2554.8	2523.0	2545.4	2511.0
10°	2515.6	2549.7	2490.4	2485.1	2505.9	2492.6	2498.2	2536.3	2505.9	2526.8	2492.3
12.5°	2497.0	2523.5	2464.0	2461.7	2479.5	2470.8	2473.3	2505.4	2481.1	2502.0	2469.1
15°	2459.4	2484.0	2424.5	2415.2	2434.2	2426.6	2430.3	2458.9	2440.0	2453.2	2424.5
17.5°	2412.8	2432.5	2373.2	2345.3	2346.1	2355.6	2373.2	2407.8	2390.7	2408.2	2367.4
20°	2374.0	2396.8	2331.4	2277.0	2273.2	2282.7	2331.4	2366.1	2356.6	2375.5	2317.8
22.5°	2329.0	2344.2	2284.8	2193.0	2180.1	2189.6	2278.6	2319.6	2316.2	2329.1	2257.3
25°	2259.6	2274.8	2166.5	2034.3	1850.3	2022.9	2170.4	2244.1	2244.1	2255.5	2160.7
27.5°	2189.0	2189.4	1993.5	1306.5	1152.5	1259.4	1990.8	2150.6	2168.8	2163.1	1976.8
30°	2139.3	2126.1	1766.9	1056.1	1014.4	1040.9	1768.9	2085.7	2116.1	2095.2	1722.3
32.5°	2081.9	2044.4	1304.6	970.9	936.8	960.3	1261.5	2008.7	2061.8	2016.6	1354.6
35°	1988.1	1889.4	995.0	858.5	824.3	854.7	987.2	1856.6	1962.8	1841.5	1028.0
37.5°	1886.8	1501.8	875.9	683.8	610.2	669.0	871.6	1485.7	1845.7	1451.2	875.1
40°	1807.7	1179.9	787.5	500.2	405.4	471.7	781.6	1125.7	1757.2	1211.1	768.1
42.5°	1702.2	1036.5	632.3	317.7	248.7	290.8	606.3	1012.6	1648.6	1049.3	611.4
45°	1516.7	890.9	374.3	174.3	161.0	168.6	345.2	874.5	1462.4	855.6	382.1
47.5°	1201.4	679.5	240.5	148.1	162.5	148.1	233.1	657.9	1134.6	656.7	240.1
50°	909.7	530.4	186.2	149.9	176.5	149.9	180.4	512.3	863.1	559.7	184.3
52.5°	673.8	443.2	152.1	164.4	212.2	167.4	147.8	431.4	639.7	451.5	143.9
55°	453.9	347.7	122.2	217.0	290.9	222.7	122.2	337.7	430.6	333.9	118.3
57.5°	287.8	258.6	123.7	279.0	332.1	284.3	125.7	249.3	276.2	250.4	108.6
60°	213.4	203.9	137.7	296.2	356.9	300.0	139.6	196.2	209.5	194.3	116.4
62.5°	176.1	160.6	165.6	320.8	370.8	312.4	169.1	153.1	183.1	146.7	128.8
65°	159.0	104.0	195.9	324.9	366.6	324.9	197.8	98.5	166.8	106.1	174.6
67.5°	143.5	77.2	189.3	322.6	368.9	323.4	184.6	73.6	137.7	71.7	178.4
70°	120.3	69.0	178.4	328.4	354.9	317.0	178.4	67.0	114.4	65.1	209.5
72.5°	100.1	65.6	166.0	303.2	314.6	291.8	167.6	65.2	100.5	58.7	197.1
75°	85.3	64.5	159.0	242.2	230.8	230.8	155.2	62.6	87.3	58.8	153.2
77.5°	64.0	57.2	131.9	158.1	149.3	149.3	129.6	55.2	60.9	51.8	124.5
80°	48.5	52.3	108.6	116.2	110.6	110.6	104.7	50.4	48.5	48.5	102.8
82.5°	37.6	44.5	83.8	85.2	81.1	79.6	81.5	44.1	37.6	40.7	79.5
85°	21.3	30.8	44.6	36.7	31.0	29.1	42.7	28.9	19.4	28.9	42.7
87.5°	8.0	14.4	7.8	7.6	7.8	7.6	7.8	14.4	8.0	12.9	9.3
90°	1.0	2.9	7.9	7.0	7.9	7.0	7.9	2.9	1.0	2.9	7.9
92.5°	16.8	61.4	188.5	61.3	49.1	61.3	188.5	61.4	16.8	61.4	188.5
95°	51.5	149.3	667.3	237.7	154.5	237.7	667.3	149.3	51.5	149.3	667.3
97.5°	93.5	196.9	1144.9	692.6	429.3	692.6	1144.9	196.9	93.5	196.9	1144.9
100°	122.8	221.5	1324.7	1183.0	784.1	1183.0	1324.7	221.5	122.8	221.5	1324.7
102.5°	156.0	252.5	1304.9	1743.1	1351.3	1743.1	1304.9	252.5	156.0	252.5	1304.9
105°	208.9	298.0	1193.0	2266.7	2153.4	2266.7	1193.0	298.0	208.9	298.0	1193.0
107.5°	261.0	342.7	1083.9	2315.6	2440.1	2315.6	1083.9	342.7	261.0	342.7	1083.9
110°	295.0	374.4	1031.7	2258.7	2490.0	2258.7	1031.7	374.4	295.0	374.4	1031.7



TEST NUMBER: P853819

CATALOG NUMBER: SQ2-FA-150U-100D-935-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	327.5	404.6	1000.0	2159.5	2456.0	2159.5	1000.0	404.6	327.5	404.6	1000.0
115°	376.2	449.8	969.3	2002.9	2351.4	2002.9	969.3	449.8	376.2	449.8	969.3
117.5°	423.6	492.3	957.6	1849.0	2202.9	1849.0	957.6	492.3	423.6	492.3	957.6
120°	454.4	519.3	954.4	1759.3	2103.9	1759.3	954.4	519.3	454.4	519.3	954.4
122.5°	482.2	545.5	954.4	1681.9	2001.7	1681.9	954.4	545.5	482.2	545.5	954.4
125°	523.7	583.8	955.4	1579.5	1855.4	1579.5	955.4	583.8	523.7	583.8	955.4
127.5°	559.0	620.2	954.2	1504.0	1744.1	1504.0	954.2	620.2	559.0	620.2	954.2
130°	581.2	643.1	953.4	1458.4	1675.2	1458.4	953.4	643.1	581.2	643.1	953.4
132.5°	601.0	664.5	951.1	1419.1	1615.8	1419.1	951.1	664.5	601.0	664.5	951.1
135°	630.7	697.5	947.5	1362.3	1535.6	1362.3	947.5	697.5	630.7	697.5	947.5
137.5°	662.0	728.2	945.3	1303.1	1459.8	1303.1	945.3	728.2	662.0	728.2	945.3
140°	684.1	748.0	944.5	1265.7	1413.8	1265.7	944.5	748.0	684.1	748.0	944.5
142.5°	706.3	766.3	944.5	1225.8	1360.0	1225.8	944.5	766.3	706.3	766.3	944.5
145°	737.6	791.8	945.5	1171.8	1284.1	1171.8	945.5	791.8	737.6	791.8	945.5
147.5°	770.5	815.6	946.9	1124.9	1209.7	1124.9	946.9	815.6	770.5	815.6	946.9
150°	791.1	830.8	948.5	1097.6	1169.3	1097.6	948.5	830.8	791.1	830.8	948.5
152.5°	811.7	846.7	949.3	1075.2	1134.4	1075.2	949.3	846.7	811.7	846.7	949.3
155°	840.6	868.6	951.5	1048.4	1089.1	1048.4	951.5	868.6	840.6	868.6	951.5
157.5°	866.5	886.8	953.6	1027.4	1056.8	1027.4	953.6	886.8	866.5	886.8	953.6
160°	883.1	899.6	954.4	1015.4	1038.6	1015.4	954.4	899.6	883.1	899.6	954.4
162.5°	897.4	910.8	954.4	1005.7	1022.7	1005.7	954.4	910.8	897.4	910.8	954.4
165°	917.8	926.5	955.4	992.3	1002.9	992.3	955.4	926.5	917.8	926.5	955.4
167.5°	935.0	939.3	956.6	981.9	987.7	981.9	956.6	939.3	935.0	939.3	956.6
170°	944.5	946.5	957.4	976.3	978.2	976.3	957.4	946.5	944.5	946.5	957.4
172.5°	951.7	952.8	959.8	972.3	972.6	972.3	959.8	952.8	951.7	952.8	959.8
175°	959.4	959.4	960.4	967.3	965.3	967.3	960.4	959.4	959.4	959.4	960.4
177.5°	963.3	962.6	961.8	966.4	963.3	966.4	961.8	962.6	963.3	962.6	961.8
180°	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3



TEST NUMBER: P853819

CATALOG NUMBER: SQ2-FA-150U-100D-935-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2571.9	2571.9	2571.9	2571.9	2571.9	2571.9
2.5°	2551.9	2562.6	2562.6	2556.3	2586.7	2557.9
5°	2525.9	2550.5	2539.1	2538.9	2577.0	2548.6
7.5°	2507.6	2530.7	2520.1	2517.9	2555.4	2532.7
10°	2488.8	2505.9	2498.3	2504.0	2538.4	2515.6
12.5°	2462.5	2482.6	2475.1	2483.8	2515.2	2497.0
15°	2417.1	2434.2	2437.9	2441.9	2478.3	2459.4
17.5°	2342.0	2350.4	2369.3	2396.1	2434.1	2412.8
20°	2283.1	2294.5	2305.9	2352.7	2396.8	2374.0
22.5°	2216.1	2212.3	2238.8	2293.7	2348.8	2329.0
25°	2035.2	1889.1	2050.3	2191.7	2265.3	2259.6
27.5°	1417.1	1229.7	1395.4	2023.0	2177.6	2189.0
30°	1115.2	1028.0	1113.3	1805.7	2112.8	2139.3
32.5°	990.1	930.2	982.2	1374.4	2031.1	2081.9
35°	854.4	812.7	854.4	1028.0	1870.5	1988.1
37.5°	683.9	598.5	682.4	888.3	1512.1	1886.8
40°	509.6	401.5	494.4	795.2	1208.4	1807.7
42.5°	339.5	258.7	321.3	626.1	1045.2	1702.2
45°	183.7	161.0	176.2	378.2	853.0	1516.7
47.5°	144.1	152.4	144.1	238.6	652.5	1201.4
50°	138.3	164.9	138.3	184.3	539.8	909.7
52.5°	150.8	178.8	149.2	145.5	440.5	673.8
55°	170.9	263.8	172.8	118.3	323.0	453.9
57.5°	243.3	296.8	245.9	112.1	248.8	287.8
60°	249.9	320.0	248.0	118.3	192.5	213.4
62.5°	295.5	396.1	295.2	135.4	143.1	176.1
65°	379.1	417.0	382.9	172.6	102.2	159.0
67.5°	359.8	386.7	356.0	185.0	70.3	143.5
70°	353.5	374.3	349.7	211.4	65.3	120.3
72.5°	329.8	332.4	323.0	195.9	58.7	100.1
75°	255.6	238.6	246.2	168.7	58.8	85.3
77.5°	158.9	152.1	153.2	128.8	51.9	64.0
80°	120.2	116.4	114.5	108.6	48.5	48.5
82.5°	89.1	85.3	83.4	83.8	40.7	37.6
85°	40.6	36.9	35.0	48.5	28.9	21.3
87.5°	9.1	9.3	7.6	9.3	11.4	8.0
90°	7.0	7.9	7.0	7.9	2.9	1.0
92.5°	61.3	49.1	61.3	188.5	61.4	16.8
95°	237.7	154.5	237.7	667.3	149.3	51.5
97.5°	692.6	429.3	692.6	1144.9	196.9	93.5
100°	1183.0	784.1	1183.0	1324.7	221.5	122.8
102.5°	1743.1	1351.3	1743.1	1304.9	252.5	156.0
105°	2266.7	2153.4	2266.7	1193.0	298.0	208.9
107.5°	2315.6	2440.1	2315.6	1083.9	342.7	261.0
110°	2258.7	2490.0	2258.7	1031.7	374.4	295.0





TEST NUMBER: P853819

CATALOG NUMBER: SQ2-FA-150U-100D-935-UNV-STD-W-4

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	2159.5	2456.0	2159.5	1000.0	404.6	327.5
115°	2002.9	2351.4	2002.9	969.3	449.8	376.2
117.5°	1849.0	2202.9	1849.0	957.6	492.3	423.6
120°	1759.3	2103.9	1759.3	954.4	519.3	454.4
122.5°	1681.9	2001.7	1681.9	954.4	545.5	482.2
125°	1579.5	1855.4	1579.5	955.4	583.8	523.7
127.5°	1504.0	1744.1	1504.0	954.2	620.2	559.0
130°	1458.4	1675.2	1458.4	953.4	643.1	581.2
132.5°	1419.1	1615.8	1419.1	951.1	664.5	601.0
135°	1362.3	1535.6	1362.3	947.5	697.5	630.7
137.5°	1303.1	1459.8	1303.1	945.3	728.2	662.0
140°	1265.7	1413.8	1265.7	944.5	748.0	684.1
142.5°	1225.8	1360.0	1225.8	944.5	766.3	706.3
145°	1171.8	1284.1	1171.8	945.5	791.8	737.6
147.5°	1124.9	1209.7	1124.9	946.9	815.6	770.5
150°	1097.6	1169.3	1097.6	948.5	830.8	791.1
152.5°	1075.2	1134.4	1075.2	949.3	846.7	811.7
155°	1048.4	1089.1	1048.4	951.5	868.6	840.6
157.5°	1027.4	1056.8	1027.4	953.6	886.8	866.5
160°	1015.4	1038.6	1015.4	954.4	899.6	883.1
162.5°	1005.7	1022.7	1005.7	954.4	910.8	897.4
165°	992.3	1002.9	992.3	955.4	926.5	917.8
167.5°	981.9	987.7	981.9	956.6	939.3	935.0
170°	976.3	978.2	976.3	957.4	946.5	944.5
172.5°	972.3	972.6	972.3	959.8	952.8	951.7
175°	967.3	965.3	967.3	960.4	959.4	959.4
177.5°	966.4	963.3	966.4	961.8	962.6	963.3
180°	963.3	963.3	963.3	963.3	963.3	963.3



TEST NUMBER: P853819

CATALOG NUMBER: SQ2-FA-150U-100D-935-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	11.69	12.38	12.76	13.44	14.87	10.54	11.24	11.61	12.30	13.73
	3H	12.38	13.00	13.46	14.07	15.52	16.69	17.31	17.76	18.38	19.83
	4H	12.79	13.37	13.87	14.44	15.90	17.96	18.55	19.05	19.62	21.07
	6H	13.13	13.68	14.23	14.75	16.21	18.56	19.10	19.65	20.17	21.64
	8H	13.25	13.76	14.35	14.85	16.31	18.68	19.20	19.78	20.28	21.74
	12H	13.32	13.81	14.42	14.88	16.37	18.72	19.21	19.82	20.29	21.77
4H	2H	12.07	12.66	13.16	13.73	15.18	11.06	11.65	12.16	12.72	14.18
	3H	13.06	13.55	14.16	14.64	16.11	17.38	17.87	18.48	18.97	20.43
	4H	13.62	14.07	14.72	15.15	16.64	18.83	19.28	19.93	20.36	21.85
	6H	14.09	14.47	15.20	15.58	17.06	19.56	19.95	20.67	21.05	22.54
	8H	14.26	14.62	15.37	15.72	17.21	19.73	20.09	20.83	21.19	22.68
	12H	14.37	14.69	15.49	15.80	17.30	19.78	20.11	20.91	21.22	22.72
8H	4H	14.71	15.07	15.82	16.17	17.67	18.94	19.30	20.05	20.40	21.90
	6H	15.31	15.61	16.44	16.75	18.25	19.82	20.12	20.95	21.26	22.75
	8H	15.55	15.81	16.69	16.93	18.45	20.07	20.33	21.21	21.45	22.97
	12H	15.72	15.94	16.85	17.06	18.61	20.19	20.41	21.33	21.53	23.08
12H	4H	14.85	15.17	15.97	16.29	17.79	18.90	19.22	20.02	20.34	21.84
	6H	15.59	15.85	16.73	16.97	18.49	19.83	20.09	20.97	21.21	22.73
	8H	15.88	16.11	17.02	17.23	18.78	20.11	20.33	21.24	21.45	23.00