

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: P853748

Luminaire Tested: SQ2-FA-025U-100D-940-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P853748
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-100D-940-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 250 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

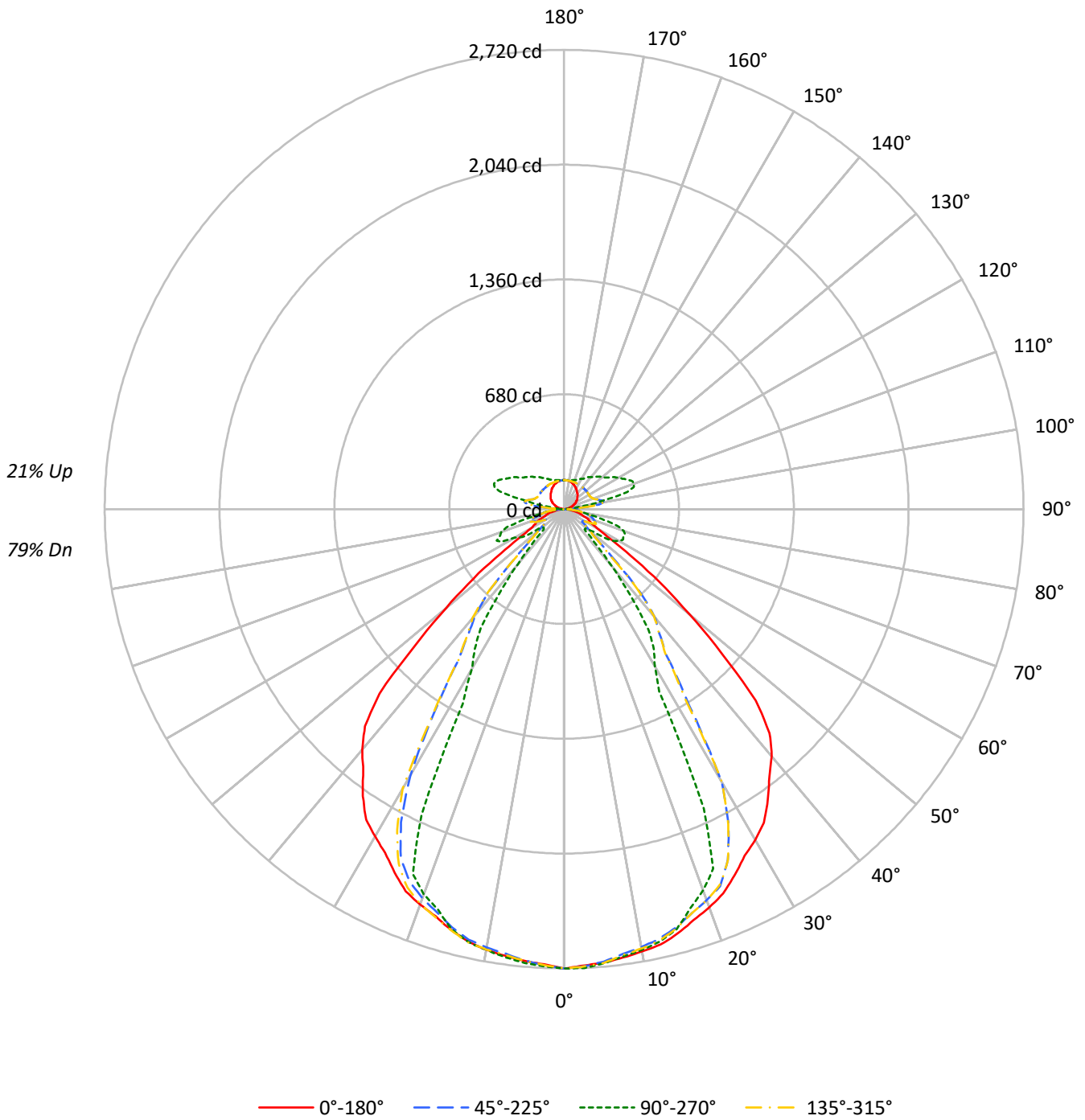
Lumens per Lamp: N/A
Luminaire Lumens: 5034.3 lumens
Efficiency: N/A
Efficacy: 111.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 45
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: P853748

CATALOG NUMBER: SQ2-FA-025U-100D-940-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P853748

CATALOG NUMBER: SQ2-FA-025U-100D-940-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	50	30	10	0	
RCR																						
0	114	114	114	114	109	109	109	109	99	99	99	91	91	91	83	83	83	79				79
1	106	102	99	95	101	98	95	92	90	87	85	82	81	79	76	74	73				70	
2	98	92	86	81	94	88	83	79	81	77	74	75	72	69	69	67	65				62	
3	91	83	76	71	87	80	74	69	74	69	65	68	65	61	63	60	58				55	
4	85	75	68	62	81	72	66	61	67	62	58	63	58	55	58	55	52				50	
5	79	69	61	56	76	66	59	54	62	56	52	58	53	50	54	50	47				45	
6	74	63	55	50	71	61	54	49	57	51	47	54	49	45	50	46	43				41	
7	69	58	51	45	66	56	49	45	53	47	43	50	45	41	47	43	40				38	
8	65	54	46	41	63	52	45	41	49	43	39	46	41	38	44	40	37				35	
9	61	50	43	38	59	48	42	37	46	40	36	43	38	35	41	37	34				32	
10	58	46	40	35	56	45	39	35	43	37	33	41	36	32	39	34	31				30	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	43923	43923	43923	43923
5°	43692	43759	43527	43726
10°	43625	43458	43458	43458
15°	43483	43039	43141	43039
20°	43148	41314	42830	41701
25°	42580	34867	42287	35600
30°	42189	20005	41730	20273
35°	41449	17186	40923	16943
40°	40301	9038	39178	8951
45°	36634	3889	35321	3889
50°	24169	4690	22933	4381
55°	13515	8662	12822	7854
60°	7288	12190	7156	10931
65°	6426	14816	6739	16852
70°	6005	17722	5712	18694
75°	5633	15228	5758	15739
80°	4770	10869	4770	11446
85°	4187	6076	3798	7225

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 36634 cd/sqm

TEST NUMBER: P853748

CATALOG NUMBER: SQ2-FA-025U-100D-940-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.0	5.1
10°-20°	726.3	14.4
20°-30°	990.3	19.7
30°-40°	832.2	16.5
40°-50°	472.7	9.4
50°-60°	250.8	5.0
60°-70°	230.9	4.6
70°-80°	169.5	3.4
80°-90°	44.7	0.9
90°-100°	69.2	1.4
100°-110°	215.2	4.3
110°-120°	210.5	4.2
120°-130°	171.8	3.4
130°-140°	140.6	2.8
140°-150°	109.7	2.2
150°-160°	79.2	1.6
160°-170°	48.4	1.0
170°-180°	16.3	0.3
0°-30°	1972.6	39.2
0°-40°	2804.8	55.7
0°-60°	3528.2	70.1
0°-90°	3973.3	78.9
90°-120°	494.8	9.8
90°-150°	917.0	18.2
90°-180°	1061.0	21.1
0°-180°	5034.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2720	2720	2720	2720	2720	
5°	2696	2700	2686	2698	2696	256
15°	2601	2575	2581	2575	2601	733
25°	2390	1957	2374	1998	2390	1102
35°	2103	872	2076	860	2103	1313
45°	1604	170	1547	170	1604	1173
55°	480	308	456	279	480	462
65°	168	388	176	441	168	169
75°	90	244	92	252	90	93
85°	23	33	20	39	23	25
90°	0	3	0	3	0	2
95°	9	30	9	30	9	11
105°	38	386	38	386	38	40
115°	67	415	67	415	67	66
125°	93	327	93	327	93	83
135°	112	271	112	271	112	87
145°	131	226	131	226	131	82
155°	150	193	150	193	150	69
165°	165	178	165	178	165	46
175°	171	171	171	171	171	16
180°	171	171	171	171	171	



TEST NUMBER: P853748

CATALOG NUMBER: SQ2-FA-025U-100D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4
2.5°	2705.7	2745.8	2710.6	2706.0	2720.4	2717.2	2712.2	2731.2	2699.1	2731.2	2705.7
5°	2695.8	2741.9	2689.7	2675.8	2699.9	2683.9	2697.9	2725.7	2685.6	2721.7	2681.4
7.5°	2679.0	2719.9	2657.2	2648.3	2672.0	2658.0	2663.8	2702.4	2668.7	2692.4	2656.0
10°	2660.9	2697.0	2634.3	2628.6	2650.7	2636.6	2642.5	2682.8	2650.7	2672.7	2636.3
12.5°	2641.2	2669.3	2606.4	2603.9	2622.8	2613.5	2616.2	2650.1	2624.4	2646.5	2611.7
15°	2601.4	2627.5	2564.5	2554.7	2574.8	2566.7	2570.7	2601.0	2580.9	2595.0	2564.5
17.5°	2552.2	2573.1	2510.3	2480.8	2481.6	2491.7	2510.3	2546.9	2528.8	2547.3	2504.2
20°	2511.2	2535.2	2466.0	2408.5	2404.5	2414.5	2466.0	2502.7	2492.7	2512.8	2451.7
22.5°	2463.6	2479.6	2416.8	2319.6	2306.0	2316.0	2410.2	2453.6	2450.0	2463.7	2387.7
25°	2390.1	2406.2	2291.6	2151.8	1957.2	2139.8	2295.7	2373.7	2373.7	2385.7	2285.5
27.5°	2315.4	2315.8	2108.6	1382.0	1219.1	1332.2	2105.8	2274.8	2294.1	2288.1	2091.0
30°	2262.9	2248.9	1869.0	1117.1	1073.0	1101.1	1871.1	2206.2	2238.3	2216.2	1821.8
32.5°	2202.2	2162.5	1379.9	1027.0	990.9	1015.8	1334.4	2124.7	2180.9	2133.1	1432.8
35°	2102.9	1998.6	1052.5	908.0	871.9	904.0	1044.3	1963.9	2076.2	1947.8	1087.4
37.5°	1995.8	1588.6	926.5	723.3	645.4	707.6	922.0	1571.6	1952.3	1535.1	925.7
40°	1912.1	1248.1	833.0	529.1	428.8	499.0	826.8	1190.8	1858.8	1281.0	812.4
42.5°	1800.5	1096.4	668.8	336.0	263.0	307.5	641.3	1071.0	1743.9	1110.0	646.7
45°	1604.4	942.4	396.0	184.3	170.3	178.3	365.2	925.0	1546.9	905.0	404.2
47.5°	1270.8	718.7	254.4	156.7	171.9	156.7	246.6	695.9	1200.2	694.7	254.0
50°	962.2	561.0	197.0	158.6	186.7	158.6	190.8	541.9	913.0	592.0	194.9
52.5°	712.7	468.8	160.8	173.9	224.4	177.1	156.3	456.4	676.6	477.6	152.2
55°	480.1	367.7	129.3	229.5	307.7	235.5	129.3	357.2	455.5	353.1	125.1
57.5°	304.5	273.6	130.9	295.1	351.2	300.7	132.9	263.7	292.1	264.9	114.9
60°	225.7	215.6	145.7	313.3	377.5	317.3	147.7	207.5	221.6	205.5	123.1
62.5°	186.3	169.8	175.2	339.3	392.3	330.5	178.9	162.0	193.7	155.2	136.2
65°	168.2	110.1	207.2	343.6	387.8	343.6	209.3	104.2	176.4	112.2	184.6
67.5°	151.8	81.6	200.2	341.3	390.2	342.1	195.3	77.9	145.7	75.9	188.7
70°	127.2	73.0	188.7	347.4	375.4	335.3	188.7	70.9	121.0	68.9	221.6
72.5°	105.9	69.4	175.6	320.7	332.8	308.7	177.3	69.0	106.3	62.1	208.4
75°	90.3	68.2	168.2	256.2	244.1	244.1	164.1	66.2	92.3	62.2	162.1
77.5°	67.7	60.5	139.5	167.2	158.0	158.0	137.0	58.4	64.4	54.8	131.7
80°	51.3	55.3	114.9	123.0	116.9	116.9	110.8	53.3	51.3	51.3	108.7
82.5°	39.8	47.0	88.6	90.2	85.8	84.2	86.2	46.6	39.8	43.0	84.1
85°	22.6	32.6	47.2	38.8	32.8	30.8	45.1	30.5	20.5	30.5	45.1
87.5°	8.2	14.8	7.2	7.2	7.2	7.2	7.2	14.8	8.2	13.2	8.8
90°	0.0	1.0	3.1	3.1	3.1	3.1	3.1	1.0	0.0	1.0	3.1
92.5°	3.4	11.8	40.1	13.2	10.7	13.2	40.1	11.8	3.4	11.8	40.1
95°	9.4	27.9	126.9	46.8	30.4	46.8	126.9	27.9	9.4	27.9	126.9
97.5°	17.2	36.3	210.2	130.8	82.4	130.8	210.2	36.3	17.2	36.3	210.2
100°	23.1	40.5	237.0	221.7	147.9	221.7	237.0	40.5	23.1	40.5	237.0
102.5°	28.9	45.6	232.0	316.6	248.5	316.6	232.0	45.6	28.9	45.6	232.0
105°	37.8	53.1	211.8	404.4	385.9	404.4	211.8	53.1	37.8	53.1	211.8
107.5°	46.6	60.9	192.5	411.1	431.4	411.1	192.5	60.9	46.6	60.9	192.5
110°	52.4	66.8	182.5	401.5	441.5	401.5	182.5	66.8	52.4	66.8	182.5



TEST NUMBER: P853748

CATALOG NUMBER: SQ2-FA-025U-100D-940-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°	58.3	71.8	177.4	384.1	434.8	384.1	177.4	71.8	58.3	71.8	177.4
115°	67.1	79.4	172.0	354.8	415.3	354.8	172.0	79.4	67.1	79.4	172.0
117.5°	75.7	87.0	169.7	326.7	388.7	326.7	169.7	87.0	75.7	87.0	169.7
120°	80.8	92.0	168.8	310.7	370.2	310.7	168.8	92.0	80.8	92.0	168.8
122.5°	85.8	97.1	169.7	297.2	351.7	297.2	169.7	97.1	85.8	97.1	169.7
125°	93.3	103.6	169.9	279.0	327.2	279.0	169.9	103.6	93.3	103.6	169.9
127.5°	99.4	109.9	169.9	265.4	306.4	265.4	169.9	109.9	99.4	109.9	169.9
130°	102.8	114.1	169.9	257.8	294.7	257.8	169.9	114.1	102.8	114.1	169.9
132.5°	107.0	118.2	169.1	251.0	285.5	251.0	169.1	118.2	107.0	118.2	169.1
135°	112.2	124.5	168.8	240.8	270.6	240.8	168.8	124.5	112.2	124.5	168.8
137.5°	118.3	129.6	168.8	230.7	257.8	230.7	168.8	129.6	118.3	129.6	168.8
140°	121.7	132.9	168.8	223.9	248.5	223.9	168.8	132.9	121.7	132.9	168.8
142.5°	125.8	136.3	168.8	217.2	239.3	217.2	168.8	136.3	125.8	136.3	168.8
145°	131.1	141.3	168.8	208.1	226.5	208.1	168.8	141.3	131.1	141.3	168.8
147.5°	137.4	146.2	169.9	199.6	214.1	199.6	169.9	146.2	137.4	146.2	169.9
150°	141.6	148.8	169.9	195.3	206.6	195.3	169.9	148.8	141.6	148.8	169.9
152.5°	144.9	151.3	169.9	191.1	200.7	191.1	169.9	151.3	144.9	151.3	169.9
155°	150.0	155.1	169.9	186.8	193.0	186.8	169.9	155.1	150.0	155.1	169.9
157.5°	155.0	158.9	169.9	183.0	186.9	183.0	169.9	158.9	155.0	158.9	169.9
160°	158.4	161.4	169.9	180.5	183.5	180.5	169.9	161.4	158.4	161.4	169.9
162.5°	160.9	163.1	169.9	178.8	181.0	178.8	169.9	163.1	160.9	163.1	169.9
165°	164.7	165.7	170.9	176.2	178.3	176.2	170.9	165.7	164.7	165.7	170.9
167.5°	167.0	167.2	169.9	174.7	175.8	174.7	169.9	167.2	167.0	167.2	169.9
170°	167.8	168.8	169.9	173.1	174.1	173.1	169.9	168.8	167.8	168.8	169.9
172.5°	169.5	169.7	170.7	172.2	172.4	172.2	170.7	169.7	169.5	169.7	170.7
175°	170.9	170.9	170.9	172.0	170.9	172.0	170.9	170.9	170.9	170.9	170.9
177.5°	170.9	170.9	170.9	170.9	170.9	170.9	170.9	170.9	170.9	170.9	170.9
180°	170.9	170.9	170.9	170.9	170.9	170.9	170.9	170.9	170.9	170.9	170.9



TEST NUMBER: P853748

CATALOG NUMBER: SQ2-FA-025U-100D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2720.4	2720.4	2720.4	2720.4	2720.4	2720.4
2.5°	2699.3	2710.6	2710.6	2704.0	2736.1	2705.7
5°	2671.8	2697.9	2685.8	2685.6	2725.9	2695.8
7.5°	2652.5	2676.9	2665.7	2663.4	2703.1	2679.0
10°	2632.6	2650.7	2642.7	2648.6	2685.0	2660.9
12.5°	2604.8	2626.1	2618.0	2627.3	2660.5	2641.2
15°	2556.7	2574.8	2578.8	2583.0	2621.5	2601.4
17.5°	2477.3	2486.1	2506.2	2534.6	2574.7	2552.2
20°	2415.0	2427.0	2439.1	2488.6	2535.2	2511.2
22.5°	2344.1	2340.1	2368.1	2426.2	2484.4	2463.6
25°	2152.7	1998.3	2168.8	2318.3	2396.1	2390.1
27.5°	1498.9	1300.7	1476.0	2139.8	2303.4	2315.4
30°	1179.6	1087.4	1177.6	1910.0	2234.8	2262.9
32.5°	1047.3	984.0	1038.9	1453.8	2148.4	2202.2
35°	903.8	859.6	903.8	1087.4	1978.5	2102.9
37.5°	723.4	633.1	721.8	939.6	1599.4	1995.8
40°	539.0	424.7	523.0	841.2	1278.2	1912.1
42.5°	359.1	273.7	339.9	662.3	1105.6	1800.5
45°	194.4	170.3	186.3	400.1	902.3	1604.4
47.5°	152.4	161.3	152.4	252.3	690.2	1270.8
50°	146.3	174.4	146.3	194.9	571.0	962.2
52.5°	159.5	189.2	157.9	153.9	466.0	712.7
55°	180.7	279.0	182.7	125.1	341.7	480.1
57.5°	257.3	313.9	260.1	118.6	263.1	304.5
60°	264.3	338.5	262.3	125.1	203.6	225.7
62.5°	312.6	418.9	312.2	143.2	151.4	186.3
65°	401.0	441.1	405.0	182.6	108.1	168.2
67.5°	380.6	409.1	376.6	195.7	74.4	151.8
70°	373.9	396.0	369.9	223.6	69.0	127.2
72.5°	348.8	351.6	341.6	207.2	62.1	105.9
75°	270.4	252.3	260.4	178.5	62.2	90.3
77.5°	168.1	160.8	162.0	136.2	54.9	67.7
80°	127.1	123.1	121.1	114.9	51.3	51.3
82.5°	94.3	90.3	88.3	88.6	43.0	39.8
85°	43.0	39.0	37.0	51.3	30.6	22.6
87.5°	8.8	8.8	7.2	8.8	11.6	8.2
90°	3.1	3.1	3.1	3.1	1.0	0.0
92.5°	13.2	10.7	13.2	40.1	11.8	3.4
95°	46.8	30.4	46.8	126.9	27.9	9.4
97.5°	130.8	82.4	130.8	210.2	36.3	17.2
100°	221.7	147.9	221.7	237.0	40.5	23.1
102.5°	316.6	248.5	316.6	232.0	45.6	28.9
105°	404.4	385.9	404.4	211.8	53.1	37.8
107.5°	411.1	431.4	411.1	192.5	60.9	46.6
110°	401.5	441.5	401.5	182.5	66.8	52.4



TEST NUMBER: P853748

CATALOG NUMBER: SQ2-FA-025U-100D-940-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	384.1	434.8	384.1	177.4	71.8	58.3
115°	354.8	415.3	354.8	172.0	79.4	67.1
117.5°	326.7	388.7	326.7	169.7	87.0	75.7
120°	310.7	370.2	310.7	168.8	92.0	80.8
122.5°	297.2	351.7	297.2	169.7	97.1	85.8
125°	279.0	327.2	279.0	169.9	103.6	93.3
127.5°	265.4	306.4	265.4	169.9	109.9	99.4
130°	257.8	294.7	257.8	169.9	114.1	102.8
132.5°	251.0	285.5	251.0	169.1	118.2	107.0
135°	240.8	270.6	240.8	168.8	124.5	112.2
137.5°	230.7	257.8	230.7	168.8	129.6	118.3
140°	223.9	248.5	223.9	168.8	132.9	121.7
142.5°	217.2	239.3	217.2	168.8	136.3	125.8
145°	208.1	226.5	208.1	168.8	141.3	131.1
147.5°	199.6	214.1	199.6	169.9	146.2	137.4
150°	195.3	206.6	195.3	169.9	148.8	141.6
152.5°	191.1	200.7	191.1	169.9	151.3	144.9
155°	186.8	193.0	186.8	169.9	155.1	150.0
157.5°	183.0	186.9	183.0	169.9	158.9	155.0
160°	180.5	183.5	180.5	169.9	161.4	158.4
162.5°	178.8	181.0	178.8	169.9	163.1	160.9
165°	176.2	178.3	176.2	170.9	165.7	164.7
167.5°	174.7	175.8	174.7	169.9	167.2	167.0
170°	173.1	174.1	173.1	169.9	168.8	167.8
172.5°	172.2	172.4	172.2	170.7	169.7	169.5
175°	172.0	170.9	172.0	170.9	170.9	170.9
177.5°	170.9	170.9	170.9	170.9	170.9	170.9
180°	170.9	170.9	170.9	170.9	170.9	170.9



TEST NUMBER: P853748

CATALOG NUMBER: SQ2-FA-025U-100D-940-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	15.51	16.52	16.20	17.20	17.99	14.37	15.37	15.05	16.05	16.85
	3H	16.22	17.12	16.92	17.81	18.64	20.53	21.43	21.23	22.12	22.95
	4H	16.64	17.48	17.36	18.19	19.03	21.81	22.66	22.53	23.36	24.21
	6H	17.00	17.78	17.73	18.49	19.35	22.43	23.20	23.15	23.92	24.77
	8H	17.12	17.86	17.86	18.59	19.45	22.55	23.29	23.29	24.02	24.88
	12H	17.20	17.90	17.94	18.63	19.51	22.60	23.30	23.34	24.03	24.91
4H	2H	15.92	16.77	16.64	17.47	18.32	14.92	15.76	15.64	16.47	17.31
	3H	16.93	17.63	17.66	18.38	19.23	21.25	21.95	21.98	22.70	23.56
	4H	17.50	18.13	18.24	18.88	19.77	22.71	23.34	23.45	24.09	24.98
	6H	17.98	18.53	18.74	19.30	20.20	23.45	24.00	24.21	24.77	25.67
	8H	18.15	18.67	18.92	19.43	20.34	23.62	24.13	24.39	24.90	25.81
	12H	18.27	18.73	19.06	19.52	20.44	23.69	24.15	24.47	24.94	25.85
8H	4H	18.61	19.12	19.37	19.88	20.79	22.84	23.35	23.61	24.12	25.03
	6H	19.22	19.64	20.01	20.45	21.36	23.72	24.14	24.52	24.95	25.87
	8H	19.45	19.83	20.26	20.64	21.56	23.97	24.35	24.78	25.16	26.08
	12H	19.63	19.96	20.44	20.76	21.75	24.10	24.43	24.91	25.23	26.22
12H	4H	18.76	19.21	19.54	20.00	20.92	22.81	23.27	23.59	24.05	24.97
	6H	19.49	19.87	20.30	20.68	21.60	23.73	24.11	24.54	24.91	25.84
	8H	19.80	20.13	20.61	20.92	21.91	24.02	24.35	24.83	25.14	26.13