

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: P855259

Luminaire Tested: SQ2-FA-050U-100D-835-UNV-STD-W-4

Issue Date: 7/12/2024

Test Information

Test Method: LM-79-2019
Report Number: P855259
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-100D-835-UNV-STD-W-4
Description: CORELITE SQ2 SUSPENDED LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT
UPLIGHT 500 LUMENS PER FOOT
Light Source: -
Ballast/Driver: -

Summary

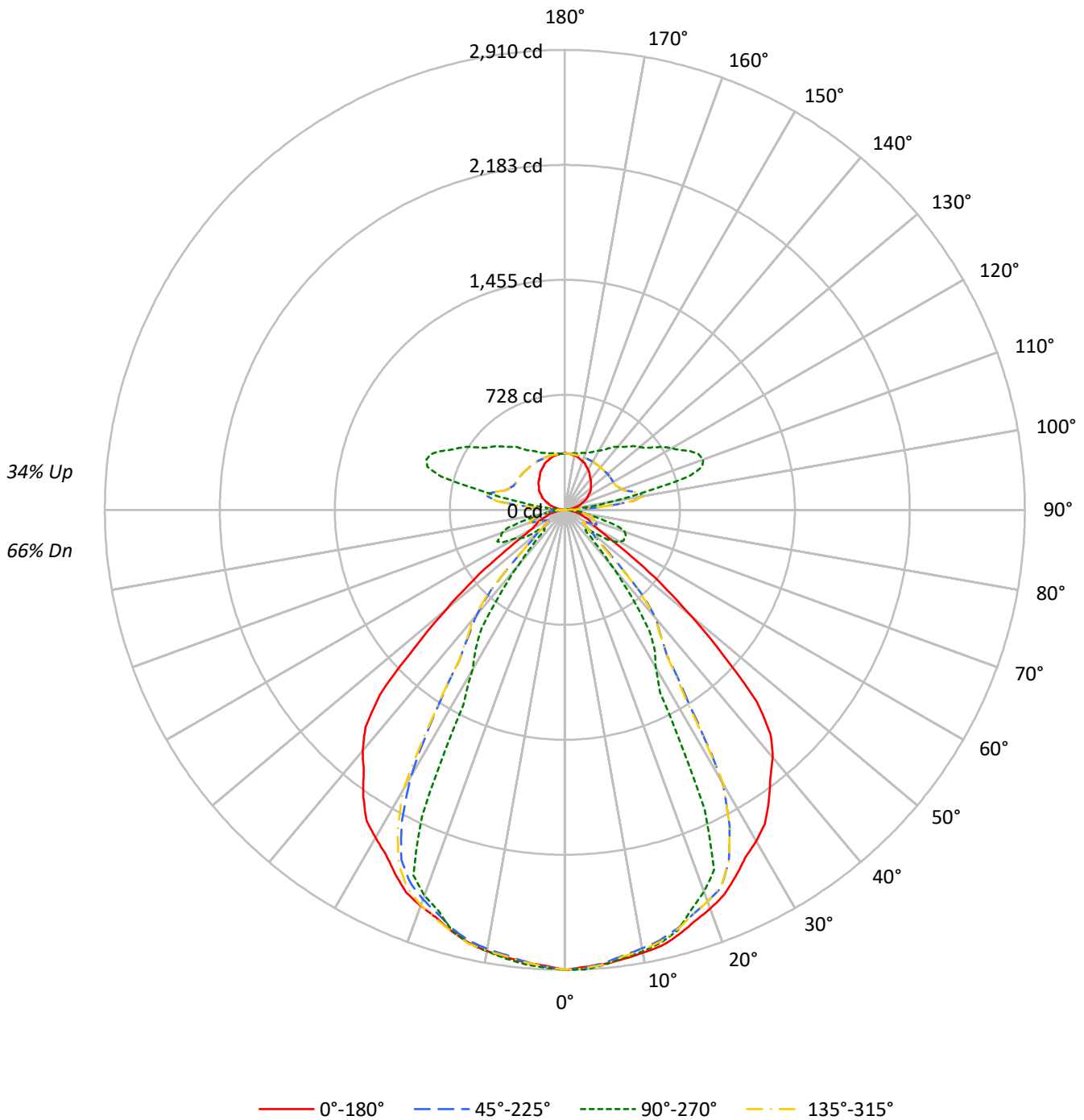
Lumens per Lamp: N/A
Luminaire Lumens: 6465.3 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 0.95 / 0.95
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 52.4
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: P855259

CATALOG NUMBER: SQ2-FA-050U-100D-835-UNV-STD-W-4

Luminous Intensity Polar Plot





TEST NUMBER: P855259

CATALOG NUMBER: SQ2-FA-050U-100D-835-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	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	65	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	68	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	39	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	44	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°	46992	46992	46992	46992
5°	46746	46817	46567	46780
10°	46673	46493	46493	46493
15°	46522	46046	46156	46046
20°	46161	44201	45823	44615
25°	45555	37303	45243	38085
30°	45136	21403	44646	21690
35°	44346	18386	43781	18128
40°	43117	9670	41914	9577
45°	39192	4160	37787	4160
50°	25859	5016	24533	4687
55°	14460	9267	13717	8403
60°	7798	13043	7656	11693
65°	6873	15851	7213	18029
70°	6425	18958	6113	19997
75°	6020	16294	6163	16843
80°	5105	11641	5105	12245
85°	4465	6502	4076	7744

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 39192 cd/sqm



TEST NUMBER: P855259

CATALOG NUMBER: SQ2-FA-050U-100D-835-UNV-STD-W-4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.9	4.2
10°-20°	777.0	12.0
20°-30°	1059.5	16.4
30°-40°	890.3	13.8
40°-50°	505.7	7.8
50°-60°	268.3	4.2
60°-70°	247.0	3.8
70°-80°	181.4	2.8
80°-90°	47.8	0.7
90°-100°	142.0	2.2
100°-110°	450.5	7.0
110°-120°	441.7	6.8
120°-130°	359.4	5.6
130°-140°	293.1	4.5
140°-150°	228.5	3.5
150°-160°	164.6	2.5
160°-170°	100.6	1.6
170°-180°	33.9	0.5
0°-30°	2110.4	32.6
0°-40°	3000.7	46.4
0°-60°	3774.7	58.4
0°-90°	4251.0	65.8
90°-120°	1034.2	16.0
90°-150°	1915.2	29.6
90°-180°	2214.0	34.2
0°-180°	6465.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2910	2910	2910	2910	2910	
5°	2884	2889	2873	2886	2884	274
15°	2783	2755	2761	2755	2783	785
25°	2557	2094	2540	2138	2557	1179
35°	2250	933	2221	920	2250	1405
45°	1716	182	1655	182	1716	1255
55°	514	329	487	298	514	495
65°	180	415	189	472	180	181
75°	96	261	99	270	96	100
85°	24	35	22	42	24	27
90°	0	3	0	3	0	2
95°	19	62	19	62	19	22
105°	78	811	78	811	78	83
115°	140	877	140	877	140	138
125°	194	688	194	688	194	173
135°	234	566	234	566	234	181
145°	274	472	274	472	274	171
155°	312	402	312	402	312	144
165°	340	370	340	370	340	96
175°	356	357	356	357	356	34
180°	357	357	357	357	357	



TEST NUMBER: P855259

CATALOG NUMBER: SQ2-FA-050U-100D-835-UNV-STD-W-4

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5
2.5°	2894.7	2937.6	2900.0	2895.0	2910.5	2907.0	2901.7	2922.0	2887.7	2922.0	2894.7
5°	2884.2	2933.5	2877.6	2862.8	2888.6	2871.4	2886.3	2916.1	2873.2	2911.8	2868.8
7.5°	2866.2	2910.0	2842.9	2833.3	2858.7	2843.6	2849.9	2891.2	2855.2	2880.5	2841.6
10°	2846.8	2885.4	2818.3	2812.3	2835.8	2820.8	2827.1	2870.2	2835.8	2859.5	2820.4
12.5°	2825.8	2855.8	2788.4	2785.8	2806.0	2796.1	2798.9	2835.3	2807.8	2831.4	2794.2
15°	2783.2	2811.1	2743.7	2733.2	2754.7	2746.1	2750.3	2782.6	2761.3	2776.2	2743.7
17.5°	2730.5	2752.8	2685.7	2654.1	2655.0	2665.7	2685.7	2724.8	2705.5	2725.3	2679.1
20°	2686.6	2712.4	2638.4	2576.8	2572.5	2583.2	2638.4	2677.6	2666.9	2688.3	2623.0
22.5°	2635.6	2652.8	2585.6	2481.7	2467.1	2477.9	2578.6	2625.0	2621.2	2635.8	2554.5
25°	2557.1	2574.3	2451.7	2302.1	2093.9	2289.2	2456.2	2539.6	2539.6	2552.5	2445.2
27.5°	2477.2	2477.7	2256.0	1478.5	1304.2	1425.2	2252.9	2433.8	2454.4	2447.9	2237.1
30°	2421.0	2406.0	1999.5	1195.2	1148.0	1177.9	2001.8	2360.3	2394.7	2371.1	1949.1
32.5°	2356.0	2313.6	1476.4	1098.7	1060.1	1086.7	1427.6	2273.2	2333.3	2282.1	1533.0
35°	2249.9	2138.2	1126.0	971.5	932.8	967.2	1117.2	2101.0	2221.2	2084.0	1163.4
37.5°	2135.2	1699.5	991.2	773.8	690.5	757.1	986.4	1681.3	2088.7	1642.3	990.3
40°	2045.7	1335.3	891.2	566.1	458.8	533.8	884.5	1273.9	1988.6	1370.6	869.2
42.5°	1926.3	1173.0	715.6	359.5	281.4	329.1	686.1	1145.9	1865.7	1187.5	691.9
45°	1716.4	1008.2	423.6	197.2	182.2	190.8	390.7	989.6	1654.9	968.3	432.4
47.5°	1359.6	769.0	272.2	167.6	183.9	167.6	263.8	744.5	1284.0	743.2	271.7
50°	1029.5	600.2	210.7	169.6	199.7	169.6	204.2	579.8	976.7	633.4	208.6
52.5°	762.5	501.6	172.1	186.0	240.1	189.4	167.3	488.2	723.9	510.9	162.8
55°	513.7	393.5	138.3	245.6	329.2	252.0	138.3	382.2	487.3	377.9	133.9
57.5°	325.7	292.6	140.0	315.7	375.8	321.7	142.3	282.1	312.6	283.4	122.9
60°	241.5	230.7	155.8	335.2	403.9	339.5	158.0	222.0	237.1	219.9	131.7
62.5°	199.3	181.7	187.4	363.0	419.6	353.5	191.4	173.3	207.2	166.0	145.8
65°	179.9	117.7	221.7	367.7	414.9	367.7	223.8	111.5	188.8	120.1	197.6
67.5°	162.4	87.4	214.2	365.1	417.5	366.0	208.9	83.3	155.8	81.1	201.9
70°	136.1	78.1	201.9	371.6	401.6	358.7	201.9	75.8	129.5	73.7	237.1
72.5°	113.3	74.2	187.9	343.1	356.0	330.2	189.7	73.8	113.7	66.4	223.1
75°	96.5	73.0	179.9	274.1	261.2	261.2	175.6	70.8	98.8	66.5	173.4
77.5°	72.4	64.7	149.3	178.9	169.0	169.0	146.7	62.5	68.9	58.6	140.9
80°	54.9	59.2	122.9	131.5	125.2	125.2	118.5	57.0	54.9	54.9	116.3
82.5°	42.6	50.4	94.8	96.4	91.8	90.1	92.2	49.9	42.6	46.1	90.0
85°	24.1	34.9	50.5	41.5	35.1	32.9	48.3	32.7	22.0	32.7	48.3
87.5°	8.8	15.8	7.7	7.7	7.7	7.7	7.7	15.8	8.8	14.1	9.5
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°	6.2	24.9	79.7	26.5	18.6	26.5	79.7	24.9	6.2	24.9	79.7
95°	19.0	57.5	257.9	95.6	61.7	95.6	257.9	57.5	19.0	57.5	257.9
97.5°	35.4	74.5	436.8	273.0	167.5	273.0	436.8	74.5	35.4	74.5	436.8
100°	47.1	84.4	497.8	453.9	294.9	453.9	497.8	84.4	47.1	84.4	497.8
102.5°	59.6	95.2	487.1	666.5	510.2	666.5	487.1	95.2	59.6	95.2	487.1
105°	78.5	110.3	444.1	845.8	810.7	845.8	444.1	110.3	78.5	110.3	444.1
107.5°	97.3	126.7	403.0	864.5	911.9	864.5	403.0	126.7	97.3	126.7	403.0
110°	109.9	138.4	382.4	843.0	930.7	843.0	382.4	138.4	109.9	138.4	382.4



TEST NUMBER: P855259

CATALOG NUMBER: SQ2-FA-050U-100D-835-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°	122.4	149.2	370.7	805.9	917.2	805.9	370.7	149.2	122.4	149.2	370.7
115°	140.2	166.5	358.9	745.3	876.9	745.3	358.9	166.5	140.2	166.5	358.9
117.5°	157.4	182.4	354.1	687.0	819.7	687.0	354.1	182.4	157.4	182.4	354.1
120°	168.2	192.3	353.2	651.0	779.4	651.0	353.2	192.3	168.2	192.3	353.2
122.5°	178.9	202.2	353.2	622.2	741.7	622.2	353.2	202.2	178.9	202.2	353.2
125°	194.0	217.1	353.2	584.4	688.5	584.4	353.2	217.1	194.0	217.1	353.2
127.5°	207.2	229.4	353.2	555.1	643.9	555.1	353.2	229.4	207.2	229.4	353.2
130°	215.2	238.3	353.2	537.8	617.9	537.8	353.2	238.3	215.2	238.3	353.2
132.5°	223.4	246.4	352.3	524.2	596.3	524.2	352.3	246.4	223.4	246.4	352.3
135°	234.4	257.3	350.9	502.7	566.3	502.7	350.9	257.3	234.4	257.3	350.9
137.5°	245.1	269.2	350.7	482.1	538.9	482.1	350.7	269.2	245.1	269.2	350.7
140°	252.2	276.5	349.9	467.6	519.2	467.6	349.9	276.5	252.2	276.5	349.9
142.5°	261.3	284.5	350.7	453.2	501.2	453.2	350.7	284.5	261.3	284.5	350.7
145°	273.6	294.5	350.9	433.7	472.1	433.7	350.9	294.5	273.6	294.5	350.9
147.5°	286.0	303.7	351.2	416.5	447.9	416.5	351.2	303.7	286.0	303.7	351.2
150°	294.9	309.2	352.1	406.5	431.7	406.5	352.1	309.2	294.9	309.2	352.1
152.5°	302.0	314.6	352.1	398.3	419.2	398.3	352.1	314.6	302.0	314.6	352.1
155°	311.8	322.8	352.1	387.3	402.5	387.3	352.1	322.8	311.8	322.8	352.1
157.5°	322.1	329.5	353.2	380.4	390.9	380.4	353.2	329.5	322.1	329.5	353.2
160°	327.4	334.0	353.2	375.8	384.7	375.8	353.2	334.0	327.4	334.0	353.2
162.5°	332.8	337.7	353.2	372.2	378.3	372.2	353.2	337.7	332.8	337.7	353.2
165°	339.7	343.0	353.2	366.8	370.1	366.8	353.2	343.0	339.7	343.0	353.2
167.5°	346.3	347.2	354.3	362.9	365.8	362.9	354.3	347.2	346.3	347.2	354.3
170°	349.9	349.9	354.3	361.1	362.2	361.1	354.3	349.9	349.9	349.9	354.3
172.5°	351.6	352.5	354.3	359.3	359.5	359.3	354.3	352.5	351.6	352.5	354.3
175°	355.5	354.3	355.5	357.7	356.6	357.7	355.5	354.3	355.5	354.3	355.5
177.5°	356.6	355.7	355.7	357.5	355.7	357.5	355.7	355.7	356.6	355.7	355.7
180°	356.6	356.6	356.6	356.6	356.6	356.6	356.6	356.6	356.6	356.6	356.6



TEST NUMBER: P855259

CATALOG NUMBER: SQ2-FA-050U-100D-835-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2910.5	2910.5	2910.5	2910.5	2910.5	2910.5
2.5°	2887.9	2900.0	2900.0	2892.9	2927.3	2894.7
5°	2858.5	2886.3	2873.4	2873.2	2916.3	2884.2
7.5°	2837.8	2863.9	2851.9	2849.4	2891.9	2866.2
10°	2816.5	2835.8	2827.2	2833.7	2872.6	2846.8
12.5°	2786.7	2809.5	2801.0	2810.8	2846.4	2825.8
15°	2735.3	2754.7	2758.9	2763.4	2804.6	2783.2
17.5°	2650.4	2659.9	2681.3	2711.6	2754.6	2730.5
20°	2583.7	2596.6	2609.5	2662.5	2712.4	2686.6
22.5°	2507.9	2503.6	2533.6	2595.7	2658.1	2635.6
25°	2303.2	2137.8	2320.3	2480.3	2563.6	2557.1
27.5°	1603.7	1391.6	1579.1	2289.4	2464.3	2477.2
30°	1262.0	1163.4	1259.9	2043.4	2391.0	2421.0
32.5°	1120.5	1052.7	1111.5	1555.4	2298.5	2356.0
35°	966.9	919.7	966.9	1163.4	2116.8	2249.9
37.5°	773.9	677.3	772.2	1005.3	1711.2	2135.2
40°	576.7	454.4	559.5	899.9	1367.5	2045.7
42.5°	384.2	292.8	363.6	708.5	1182.8	1926.3
45°	207.9	182.2	199.4	428.0	965.3	1716.4
47.5°	163.1	172.5	163.1	270.0	738.4	1359.6
50°	156.5	186.6	156.5	208.6	610.9	1029.5
52.5°	170.7	202.3	168.8	164.7	498.5	762.5
55°	193.4	298.5	195.6	133.9	365.5	513.7
57.5°	275.3	335.9	278.3	126.9	281.6	325.7
60°	282.8	362.1	280.7	133.9	217.8	241.5
62.5°	334.4	448.3	334.1	153.2	161.9	199.3
65°	429.0	471.9	433.3	195.3	115.7	179.9
67.5°	407.2	437.6	402.9	209.4	79.6	162.4
70°	400.0	423.6	395.7	239.2	73.9	136.1
72.5°	373.2	376.2	365.5	221.7	66.4	113.3
75°	289.3	270.0	278.6	190.9	66.5	96.5
77.5°	179.8	172.1	173.4	145.8	58.7	72.4
80°	136.0	131.7	129.6	122.9	54.9	54.9
82.5°	100.8	96.5	94.4	94.8	46.1	42.6
85°	45.9	41.8	39.6	54.9	32.7	24.1
87.5°	9.5	9.5	7.7	9.5	12.4	8.8
90°	3.4	3.4	3.4	3.4	1.1	0.0
92.5°	26.5	18.6	26.5	79.7	24.9	6.2
95°	95.6	61.7	95.6	257.9	57.5	19.0
97.5°	273.0	167.5	273.0	436.8	74.5	35.4
100°	453.9	294.9	453.9	497.8	84.4	47.1
102.5°	666.5	510.2	666.5	487.1	95.2	59.6
105°	845.8	810.7	845.8	444.1	110.3	78.5
107.5°	864.5	911.9	864.5	403.0	126.7	97.3
110°	843.0	930.7	843.0	382.4	138.4	109.9



TEST NUMBER: P855259

CATALOG NUMBER: SQ2-FA-050U-100D-835-UNV-STD-W-4

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	805.9	917.2	805.9	370.7	149.2	122.4
115°	745.3	876.9	745.3	358.9	166.5	140.2
117.5°	687.0	819.7	687.0	354.1	182.4	157.4
120°	651.0	779.4	651.0	353.2	192.3	168.2
122.5°	622.2	741.7	622.2	353.2	202.2	178.9
125°	584.4	688.5	584.4	353.2	217.1	194.0
127.5°	555.1	643.9	555.1	353.2	229.4	207.2
130°	537.8	617.9	537.8	353.2	238.3	215.2
132.5°	524.2	596.3	524.2	352.3	246.4	223.4
135°	502.7	566.3	502.7	350.9	257.3	234.4
137.5°	482.1	538.9	482.1	350.7	269.2	245.1
140°	467.6	519.2	467.6	349.9	276.5	252.2
142.5°	453.2	501.2	453.2	350.7	284.5	261.3
145°	433.7	472.1	433.7	350.9	294.5	273.6
147.5°	416.5	447.9	416.5	351.2	303.7	286.0
150°	406.5	431.7	406.5	352.1	309.2	294.9
152.5°	398.3	419.2	398.3	352.1	314.6	302.0
155°	387.3	402.5	387.3	352.1	322.8	311.8
157.5°	380.4	390.9	380.4	353.2	329.5	322.1
160°	375.8	384.7	375.8	353.2	334.0	327.4
162.5°	372.2	378.3	372.2	353.2	337.7	332.8
165°	366.8	370.1	366.8	353.2	343.0	339.7
167.5°	362.9	365.8	362.9	354.3	347.2	346.3
170°	361.1	362.2	361.1	354.3	349.9	349.9
172.5°	359.3	359.5	359.3	354.3	352.5	351.6
175°	357.7	356.6	357.7	355.5	354.3	355.5
177.5°	357.5	355.7	357.5	355.7	355.7	356.6
180°	356.6	356.6	356.6	356.6	356.6	356.6

TEST NUMBER: P855259

CATALOG NUMBER: SQ2-FA-050U-100D-835-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	14.69	15.57	15.53	16.40	17.44	13.55	14.42	14.38	15.26	16.30
	3H	15.39	16.18	16.24	17.02	18.09	19.70	20.48	20.55	21.33	22.40
	4H	15.80	16.54	16.67	17.40	18.47	20.98	21.72	21.84	22.57	23.65
	6H	16.16	16.84	17.03	17.70	18.79	21.59	22.27	22.46	23.13	24.22
	8H	16.28	16.92	17.16	17.80	18.89	21.71	22.36	22.59	23.24	24.32
	12H	16.35	16.97	17.24	17.84	18.95	21.75	22.37	22.64	23.24	24.35
4H	2H	15.09	15.83	15.96	16.68	17.76	14.08	14.82	14.95	15.68	16.75
	3H	16.09	16.70	16.96	17.59	18.68	20.41	21.03	21.29	21.91	23.00
	4H	16.65	17.21	17.54	18.09	19.21	21.86	22.42	22.75	23.31	24.42
	6H	17.13	17.61	18.03	18.52	19.64	22.60	23.08	23.50	23.99	25.11
	8H	17.30	17.75	18.20	18.65	19.78	22.77	23.22	23.67	24.12	25.25
	12H	17.42	17.82	18.34	18.74	19.88	22.83	23.24	23.75	24.16	25.29
8H	4H	17.75	18.20	18.66	19.10	20.24	21.99	22.44	22.89	23.34	24.47
	6H	18.36	18.73	19.29	19.68	20.81	22.87	23.24	23.80	24.18	25.31
	8H	18.60	18.92	19.54	19.86	21.01	23.12	23.45	24.06	24.38	25.53
	12H	18.77	19.06	19.71	19.99	21.19	23.24	23.53	24.18	24.46	25.66
12H	4H	17.90	18.30	18.82	19.22	20.36	21.95	22.35	22.87	23.28	24.41
	6H	18.64	18.96	19.58	19.90	21.05	22.88	23.20	23.82	24.14	25.29
	8H	18.94	19.23	19.88	20.15	21.35	23.16	23.45	24.10	24.37	25.58