

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P938417

Luminaire Tested: SQ4-FB-150U-100D-840-1D-UNV-STD-W-12

Issue Date: 12/17/2024

**Test Information**

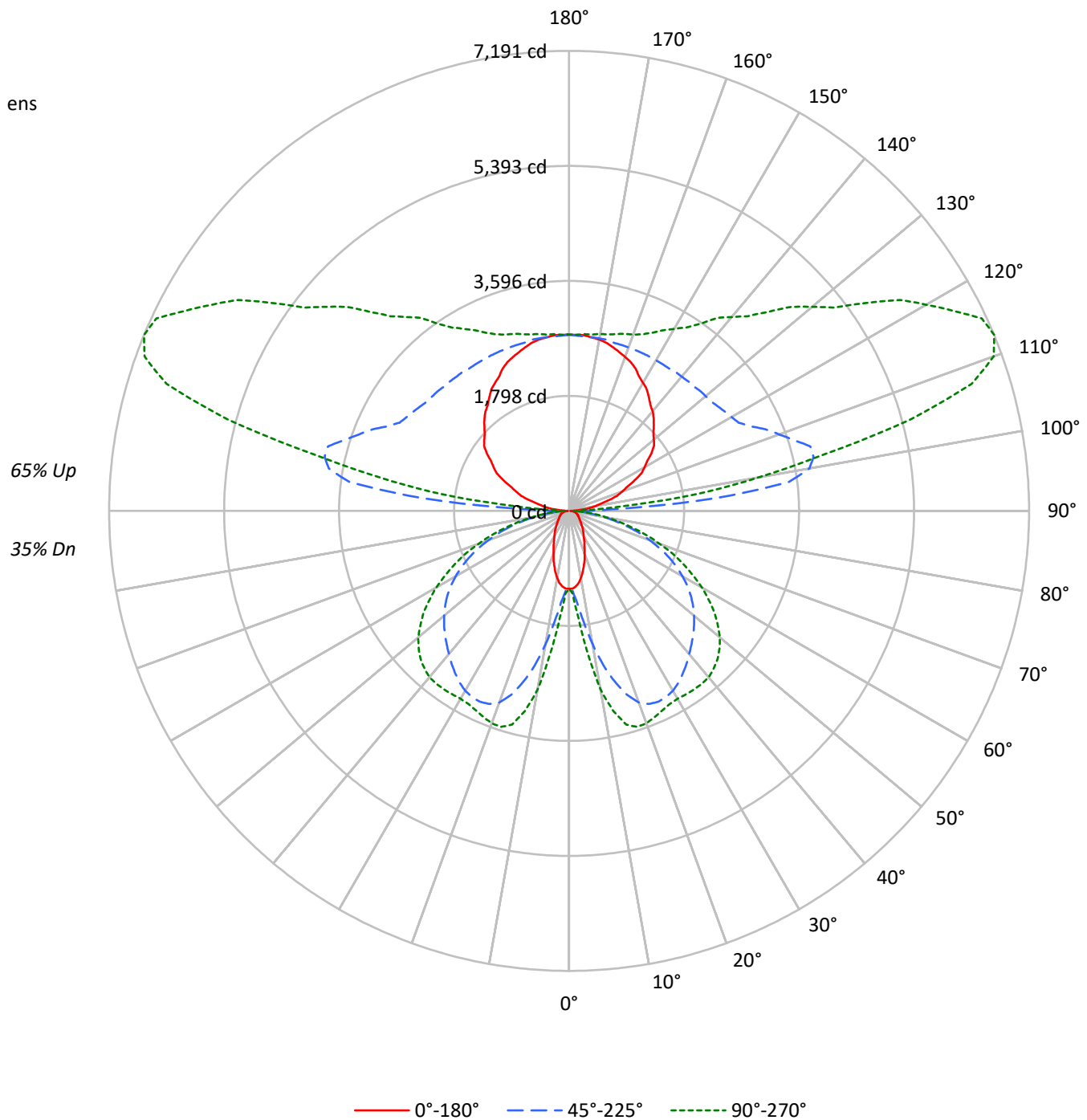
Test Method: LM-79-2019  
Report Number: P938417  
REPORT IS A COMBINATION OF REPORTS P933623 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-100D-840-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 27288.5 lumens  
Efficiency: N/A  
Efficacy: 125.6 lumens/watt  
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')  
CIE Type: Semi-Indirect  
  
Input Watts (W): 217.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P938417  
CATALOG NUMBER: SQ4-FB-150U-100D-840-1D-UNV-STD-W-12

### Luminous Intensity Polar Plot





TEST NUMBER: P938417

CATALOG NUMBER: SQ4-FB-150U-100D-840-1D-UNV-STD-W-12

**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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	42	42	42	35
1	94	90	86	82	85	81	78	75	65	63	60	50	49	47	36	35	35	36	35	35	28
2	85	78	72	66	77	70	65	61	56	53	49	43	41	39	32	30	29	32	30	29	23
3	77	68	61	55	69	61	55	50	49	45	41	38	35	32	28	26	24	28	26	24	19
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	24	22	20	16
5	64	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	22	19	17	14
6	59	47	39	33	53	43	36	30	34	29	25	27	23	20	19	17	15	19	17	15	12
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13	18	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	16	13	11	9
9	47	35	27	22	42	31	25	20	26	20	17	20	16	14	15	12	10	15	12	10	8
10	43	31	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	13	11	9	7

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

	0°	45°	90°
0°	3767	3767	3767
5°	3682	4355	5063
10°	3341	6350	8394
15°	2840	8298	10136
20°	2313	9618	10330
25°	1930	10067	10120
30°	1628	10134	10101
35°	1440	9968	10362
40°	1256	9752	10632
45°	1138	9595	10674
50°	1045	9454	10497
55°	1002	9246	10032
60°	1027	8844	9297
65°	1070	8231	8288
70°	1142	7183	7002
75°	1271	5862	5464
80°	1398	4071	3682
85°	1267	2163	1885

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10674 cd/sqm



TEST NUMBER: P938417

CATALOG NUMBER: SQ4-FB-150U-100D-840-1D-UNV-STD-W-12

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	157.5	0.6
10°-20°	698.2	2.6
20°-30°	1221.3	4.5
30°-40°	1572.2	5.8
40°-50°	1756.0	6.4
50°-60°	1681.9	6.2
60°-70°	1332.9	4.9
70°-80°	783.8	2.9
80°-90°	228.2	0.8
90°-100°	1342.7	4.9
100°-110°	3530.0	12.9
110°-120°	3660.2	13.4
120°-130°	2936.0	10.8
130°-140°	2303.7	8.4
140°-150°	1768.2	6.5
150°-160°	1273.4	4.7
160°-170°	779.1	2.9
170°-180°	263.2	1.0
0°-30°	2077.0	7.6
0°-40°	3649.2	13.4
0°-60°	7087.1	26.0
0°-90°	9432.1	34.6
90°-120°	8532.9	31.3
90°-150°	15540.7	56.9
90°-180°	17856.0	65.4
0°-180°	27288.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1187	1273	1433	1621	1680	110
15°	889	1641	2765	3352	3458	247
25°	568	1860	3293	3438	3442	262
35°	384	1778	3102	3278	3407	240
45°	262	1418	2741	3141	3282	203
55°	188	901	2326	2702	2776	171
65°	149	478	1727	1942	1970	147
75°	110	294	948	1042	1046	115
85°	39	90	235	258	262	42
90°	18	52	140	70	70	18
95°	177	695	2313	1192	812	197
105°	636	963	3902	5925	5528	674
115°	1130	1372	3126	6236	7117	1116
125°	1571	1762	2843	4805	5668	1395
135°	1873	2061	2754	3878	4398	1449
145°	2172	2311	2719	3309	3568	1361
155°	2455	2524	2719	2986	3072	1128
165°	2649	2684	2719	2827	2862	748
175°	2754	2754	2738	2773	2773	261
180°	2754	2754	2754	2754	2754	



TEST NUMBER: P938417

CATALOG NUMBER: SQ4-FB-150U-100D-840-1D-UNV-STD-W-12

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9
2.5°	1217.9	1217.9	1225.7	1229.7	1237.5	1241.4	1249.2	1257.0	1280.5	1284.5	1292.3
5°	1186.6	1202.2	1253.2	1272.7	1327.6	1402.0	1433.3	1484.2	1589.9	1621.2	1640.8
7.5°	1139.6	1174.8	1300.1	1331.4	1468.5	1664.3	1746.6	1856.2	2024.6	2106.8	2173.4
10°	1065.2	1139.6	1362.7	1437.1	1660.4	1958.0	2110.8	2263.5	2518.0	2631.5	2674.6
12.5°	983.0	1104.3	1429.3	1531.2	1852.3	2286.9	2471.0	2639.4	2929.2	3082.0	3105.4
15°	888.9	1053.4	1492.0	1640.8	2055.9	2561.1	2764.7	2972.3	3242.5	3352.1	3379.6
17.5°	806.7	1014.3	1550.8	1707.4	2212.5	2807.8	3015.4	3187.7	3406.9	3481.3	3501.0
20°	704.8	951.6	1589.9	1793.5	2377.0	2987.9	3187.7	3320.8	3469.6	3516.6	3524.4
22.5°	630.4	885.1	1613.4	1824.8	2486.7	3097.6	3265.9	3371.7	3473.5	3489.2	3493.1
25°	567.8	810.7	1609.5	1860.1	2580.7	3164.2	3293.4	3371.7	3430.4	3438.2	3438.2
27.5°	509.1	728.4	1593.8	1867.9	2651.2	3179.8	3281.6	3336.5	3363.8	3379.6	3379.6
30°	458.1	650.1	1554.6	1852.3	2682.5	3164.2	3246.4	3273.8	3301.2	3324.7	3336.5
32.5°	419.0	575.6	1495.9	1821.0	2686.4	3125.0	3183.7	3199.4	3238.6	3293.4	3313.0
35°	383.7	501.2	1429.3	1777.9	2662.9	3062.3	3101.5	3117.1	3195.5	3277.7	3305.2
37.5°	348.6	446.5	1343.2	1703.5	2627.7	2987.9	3015.4	3042.7	3164.2	3262.1	3293.4
40°	313.3	399.4	1241.4	1621.2	2572.9	2897.9	2921.3	2964.4	3125.0	3238.6	3269.9
42.5°	285.8	360.3	1131.8	1535.1	2502.3	2796.0	2831.3	2894.0	3078.0	3199.4	3234.6
45°	262.4	321.1	1014.3	1417.6	2412.3	2690.3	2741.2	2827.4	3023.2	3140.7	3172.0
47.5°	238.9	293.7	892.9	1296.3	2314.4	2584.6	2651.2	2749.0	2948.8	3062.3	3089.8
50°	219.3	266.3	771.4	1167.0	2208.7	2471.0	2549.3	2651.2	2854.8	2960.5	2995.8
52.5°	203.6	242.8	657.9	1037.8	2087.2	2353.5	2443.6	2549.3	2741.2	2843.1	2866.6
55°	188.0	223.2	560.0	900.7	1962.0	2228.2	2326.1	2427.9	2615.9	2702.1	2717.7
57.5°	180.1	207.6	477.8	771.4	1828.8	2087.2	2196.9	2290.9	2467.1	2533.6	2549.3
60°	168.4	195.8	415.1	661.8	1683.8	1954.1	2048.1	2142.1	2290.9	2345.7	2357.5
62.5°	156.6	188.0	368.1	556.0	1535.1	1797.5	1891.4	1977.6	2103.0	2142.1	2157.7
65°	148.8	180.1	332.9	477.8	1382.4	1633.0	1726.9	1801.4	1903.2	1942.3	1950.2
67.5°	141.0	172.3	305.5	411.2	1229.7	1468.5	1539.0	1609.5	1687.8	1726.9	1730.9
70°	129.2	164.5	282.0	364.2	1073.0	1280.5	1339.3	1413.7	1476.4	1495.9	1507.7
72.5°	121.4	152.7	266.3	328.9	912.4	1100.4	1155.3	1198.3	1253.2	1272.7	1272.7
75°	109.7	137.0	250.7	293.7	747.9	900.7	947.7	990.8	1033.8	1041.6	1029.9
77.5°	97.9	121.4	215.4	246.7	583.5	712.7	751.9	775.4	810.7	818.5	822.4
80°	82.2	105.7	168.4	191.9	423.0	524.7	552.2	571.8	603.1	603.1	610.9
82.5°	62.6	82.2	121.4	137.0	285.8	360.3	383.7	395.5	415.1	415.1	415.1
85°	39.1	50.9	78.3	90.1	172.3	219.3	234.9	238.9	254.5	258.5	258.5
87.5°	19.6	27.4	50.9	54.8	90.1	113.5	113.5	121.4	121.4	117.5	113.5
90°	18.5	33.3	48.1	51.8	81.3	120.7	140.5	124.9	93.7	70.2	70.2
92.5°	73.9	199.6	325.3	356.8	501.6	694.7	791.2	693.4	497.9	351.2	337.3
95°	177.4	407.5	637.6	695.1	1234.3	1953.3	2312.7	2063.7	1565.9	1192.4	1150.1
97.5°	306.9	509.8	712.7	763.5	1662.6	2861.3	3460.7	3303.4	2988.7	2752.7	2672.1
100°	406.7	590.7	774.8	820.8	1818.5	3148.7	3813.8	3825.2	3848.3	3865.6	3769.6
102.5°	491.7	663.4	835.2	878.1	1889.9	3239.1	3913.7	4114.1	4515.1	4815.8	4733.6
105°	636.0	781.4	926.8	963.2	1943.0	3249.3	3902.5	4351.9	5250.8	5924.9	5880.8
107.5°	783.9	919.4	1055.0	1088.9	1952.8	3104.7	3680.7	4307.6	5561.4	6501.7	6512.4
110°	883.7	1006.1	1128.5	1159.1	1938.1	2976.5	3495.8	4196.7	5598.4	6649.6	6695.7



TEST NUMBER: P938417

CATALOG NUMBER: SQ4-FB-150U-100D-840-1D-UNV-STD-W-12

**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	981.7	1098.4	1215.0	1244.2	1938.7	2864.6	3327.6	4044.9	5479.4	6555.4	6626.0
115°	1129.6	1237.2	1344.9	1371.7	1956.5	2736.3	3126.1	3817.1	5199.1	6235.6	6333.6
117.5°	1275.6	1373.3	1471.1	1495.5	1992.8	2655.8	2987.4	3611.0	4858.3	5793.7	5902.4
120°	1360.6	1452.7	1544.6	1567.7	2022.4	2628.8	2932.0	3501.8	4641.3	5496.0	5601.7
122.5°	1443.8	1536.6	1629.5	1652.7	2065.0	2614.6	2889.5	3402.6	4428.8	5198.5	5302.6
125°	1571.4	1656.0	1740.7	1761.8	2122.3	2603.0	2843.3	3279.2	4150.9	4804.6	4900.6
127.5°	1674.9	1760.3	1845.8	1867.1	2179.5	2596.2	2804.4	3178.7	3927.2	4488.6	4569.5
130°	1730.4	1822.4	1914.3	1937.4	2221.4	2600.2	2789.6	3122.8	3789.2	4288.9	4363.7
132.5°	1787.7	1879.7	1971.7	1994.7	2255.3	2602.9	2776.7	3075.0	3671.5	4118.9	4185.9
135°	1872.7	1956.4	2040.3	2061.3	2292.4	2600.5	2754.5	3004.3	3503.8	3878.5	3936.2
137.5°	1959.6	2042.6	2125.6	2146.3	2347.8	2616.4	2750.8	2961.9	3384.3	3701.0	3748.3
140°	2031.7	2108.1	2184.6	2203.6	2381.7	2619.1	2737.8	2920.2	3285.1	3558.7	3602.8
142.5°	2087.2	2157.8	2228.4	2246.1	2410.0	2628.6	2737.8	2898.1	3218.5	3458.9	3496.9
145°	2172.2	2233.9	2295.4	2310.8	2447.0	2628.6	2719.4	2850.4	3112.5	3309.1	3337.9
147.5°	2257.2	2317.2	2377.1	2392.1	2501.2	2646.7	2719.4	2822.5	3028.7	3183.4	3207.2
150°	2312.7	2367.0	2421.2	2434.7	2529.6	2656.1	2719.4	2806.5	2980.7	3111.3	3130.6
152.5°	2370.0	2411.1	2452.1	2462.4	2548.1	2662.3	2719.4	2793.8	2942.5	3054.0	3068.6
155°	2455.1	2485.5	2515.8	2523.5	2588.8	2675.8	2719.4	2778.6	2896.9	2985.6	2995.3
157.5°	2517.9	2547.5	2577.0	2584.4	2629.4	2689.3	2719.4	2765.4	2857.4	2926.5	2933.3
160°	2560.4	2583.4	2606.4	2612.2	2647.9	2695.6	2719.4	2758.8	2837.6	2896.8	2900.8
162.5°	2602.9	2620.2	2637.4	2641.7	2667.6	2702.1	2719.4	2752.7	2819.3	2869.2	2872.8
165°	2649.1	2664.7	2680.3	2684.3	2696.0	2711.6	2719.4	2743.2	2790.8	2826.6	2830.5
167.5°	2691.7	2699.1	2706.4	2708.3	2718.2	2731.3	2737.8	2753.5	2784.7	2808.1	2809.8
170°	2719.4	2726.8	2734.2	2736.1	2736.7	2737.5	2737.8	2753.5	2784.7	2808.1	2808.1
172.5°	2734.2	2735.8	2737.5	2737.8	2737.8	2737.8	2737.8	2750.2	2774.9	2793.4	2791.9
175°	2754.5	2754.5	2754.5	2754.5	2749.0	2741.6	2737.8	2745.7	2761.3	2773.0	2773.0
177.5°	2754.5	2754.5	2754.5	2754.5	2750.2	2744.5	2741.6	2747.7	2760.1	2769.3	2767.6
180°	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5	2754.5



TEST NUMBER: P938417

CATALOG NUMBER: SQ4-FB-150U-100D-840-1D-UNV-STD-W-12

**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1217.9	1217.9
2.5°	1300.1	1292.3
5°	1672.2	1680.0
7.5°	2251.8	2247.8
10°	2800.0	2835.2
12.5°	3199.4	3207.2
15°	3442.2	3457.9
17.5°	3536.2	3540.1
20°	3540.1	3532.3
22.5°	3497.0	3489.2
25°	3446.1	3442.2
27.5°	3399.1	3403.1
30°	3379.6	3391.3
32.5°	3379.6	3399.1
35°	3387.4	3406.9
37.5°	3383.4	3406.9
40°	3367.8	3395.2
42.5°	3324.7	3344.3
45°	3258.1	3281.6
47.5°	3172.0	3187.7
50°	3062.3	3078.0
52.5°	2925.3	2929.2
55°	2760.8	2776.5
57.5°	2584.6	2588.5
60°	2388.8	2400.5
62.5°	2181.2	2181.2
65°	1962.0	1969.8
67.5°	1734.8	1754.4
70°	1503.7	1507.7
72.5°	1276.6	1276.6
75°	1041.6	1045.6
77.5°	818.5	818.5
80°	607.0	610.9
82.5°	419.0	426.8
85°	262.4	262.4
87.5°	121.4	109.7
90°	70.2	70.2
92.5°	281.4	225.6
95°	980.8	811.5
97.5°	2350.1	2028.0
100°	3386.0	3002.2
102.5°	4405.0	4076.3
105°	5704.2	5527.6
107.5°	6555.2	6597.9
110°	6879.7	7063.8





TEST NUMBER: P938417

CATALOG NUMBER: SQ4-FB-150U-100D-840-1D-UNV-STD-W-12

**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	6908.7	7191.4
115°	6725.4	7117.4
117.5°	6337.0	6771.7
120°	6023.9	6446.3
122.5°	5719.2	6135.8
125°	5284.3	5668.1
127.5°	4893.3	5216.9
130°	4662.8	4961.8
132.5°	4453.6	4721.5
135°	4167.1	4398.0
137.5°	3937.3	4126.2
140°	3779.5	3956.1
142.5°	3648.9	3800.8
145°	3453.0	3568.0
147.5°	3302.6	3397.8
150°	3207.8	3285.1
152.5°	3126.9	3185.2
155°	3033.9	3072.5
157.5°	2960.3	2987.4
160°	2916.4	2932.0
162.5°	2887.6	2902.4
165°	2846.1	2861.7
167.5°	2816.3	2822.9
170°	2808.1	2808.1
172.5°	2786.2	2780.4
175°	2773.0	2773.0
177.5°	2761.1	2754.5
180°	2754.5	2754.5



TEST NUMBER: P938417  
 CATALOG NUMBER: SQ4-FB-150U-100D-840-1D-UNV-STD-W-12

**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	4.01	4.77	5.08	5.85	7.32	17.20	17.96	18.27	19.04	20.52
	3H	4.71	5.39	5.79	6.48	7.97	19.04	19.72	20.12	20.81	22.30
	4H	5.00	5.65	6.09	6.74	8.24	19.68	20.33	20.78	21.42	22.92
	6H	5.25	5.84	6.35	6.94	8.45	20.11	20.71	21.21	21.80	23.31
	8H	5.31	5.88	6.42	6.99	8.49	20.23	20.80	21.34	21.91	23.41
	12H	5.32	5.87	6.44	6.97	8.49	20.30	20.84	21.41	21.94	23.47
4H	2H	11.22	11.87	12.32	12.96	14.46	17.46	18.11	18.56	19.20	20.70
	3H	12.78	13.32	13.89	14.44	15.95	19.50	20.05	20.61	21.16	22.67
	4H	12.87	13.37	13.98	14.47	16.00	20.27	20.77	21.38	21.87	23.40
	6H	12.87	13.30	13.99	14.43	15.95	20.81	21.24	21.93	22.37	23.89
	8H	12.85	13.25	13.97	14.37	15.91	20.97	21.37	22.09	22.49	24.03
	12H	12.80	13.16	13.94	14.29	15.84	21.06	21.43	22.20	22.56	24.10
8H	4H	14.31	14.71	15.43	15.83	17.37	20.32	20.72	21.44	21.84	23.38
	6H	14.55	14.88	15.69	16.04	17.57	20.95	21.28	22.09	22.44	23.98
	8H	14.56	14.85	15.71	15.99	17.55	21.17	21.46	22.32	22.60	24.16
	12H	14.53	14.78	15.68	15.92	17.51	21.32	21.57	22.47	22.71	24.30
12H	4H	14.45	14.81	15.58	15.94	17.49	20.27	20.63	21.41	21.77	23.31
	6H	14.80	15.10	15.95	16.24	17.79	20.93	21.22	22.08	22.37	23.92
	8H	14.87	15.12	16.02	16.26	17.85	21.16	21.42	22.31	22.55	24.15