

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: P938501

Luminaire Tested: SQ4-FB-150U-100D-B40-1D-UNV-STD-W-12

Issue Date: 12/17/2024

**Test Information**

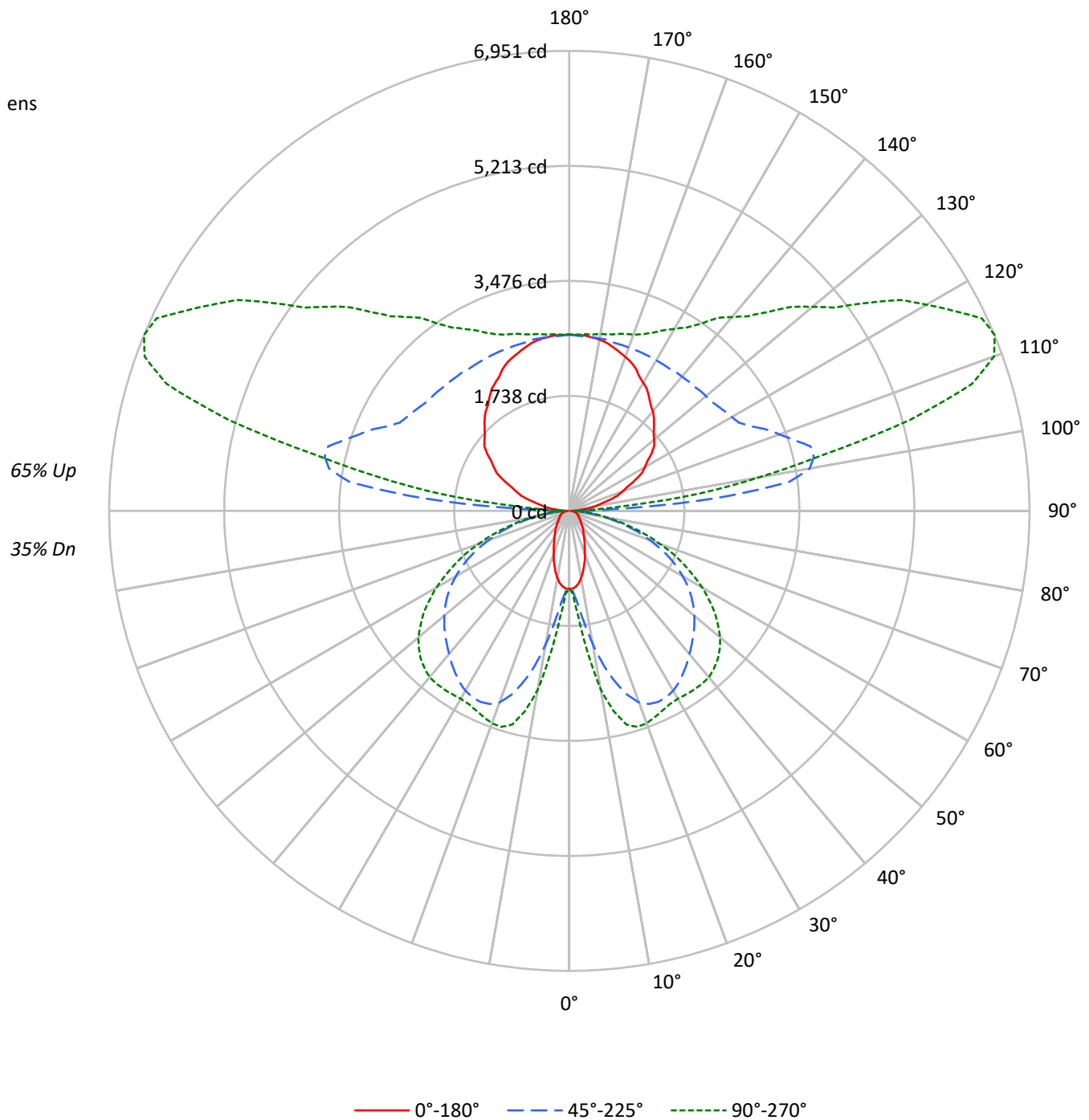
Test Method: LM-79-2019  
Report Number: P938501  
REPORT IS A COMBINATION OF REPORTS P933623 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-100D-B40-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 26377.1 lumens  
Efficiency: N/A  
Efficacy: 121.4 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

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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	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°	3641	3641	3641
5°	3559	4210	4894
10°	3229	6138	8114
15°	2745	8021	9798
20°	2236	9297	9985
25°	1866	9731	9782
30°	1574	9795	9764
35°	1392	9635	10016
40°	1214	9426	10277
45°	1100	9274	10317
50°	1010	9138	10147
55°	968	8938	9697
60°	992	8549	8987
65°	1034	7956	8011
70°	1104	6944	6768
75°	1229	5666	5282
80°	1352	3934	3559
85°	1225	2091	1821

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10317 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.3	0.6
10°-20°	674.9	2.6
20°-30°	1180.5	4.5
30°-40°	1519.6	5.8
40°-50°	1697.4	6.4
50°-60°	1625.7	6.2
60°-70°	1288.4	4.9
70°-80°	757.6	2.9
80°-90°	220.6	0.8
90°-100°	1297.8	4.9
100°-110°	3412.1	12.9
110°-120°	3538.0	13.4
120°-130°	2837.9	10.8
130°-140°	2226.7	8.4
140°-150°	1709.1	6.5
150°-160°	1230.8	4.7
160°-170°	753.1	2.9
170°-180°	254.4	1.0
0°-30°	2007.7	7.6
0°-40°	3527.3	13.4
0°-60°	6850.4	26.0
0°-90°	9117.0	34.6
90°-120°	8247.9	31.3
90°-150°	15021.7	56.9
90°-180°	17260.0	65.4
0°-180°	26377.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1177	1177	1177	1177	1177	
5°	1147	1230	1385	1567	1624	106
15°	859	1586	2672	3240	3342	239
25°	549	1798	3183	3323	3327	253
35°	371	1718	2998	3168	3293	232
45°	254	1370	2650	3036	3172	196
55°	182	871	2248	2612	2684	166
65°	144	462	1669	1877	1904	143
75°	106	284	916	1007	1011	111
85°	38	87	227	250	254	40
90°	18	50	136	68	68	17
95°	172	672	2236	1153	784	190
105°	615	931	3772	5727	5343	652
115°	1092	1326	3022	6027	6880	1078
125°	1519	1703	2748	4644	5479	1348
135°	1810	1992	2662	3749	4251	1401
145°	2100	2234	2628	3199	3449	1315
155°	2373	2439	2628	2886	2970	1090
165°	2561	2595	2628	2732	2766	723
175°	2662	2662	2646	2680	2680	253
180°	2662	2662	2662	2662	2662	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2
2.5°	1177.2	1177.2	1184.8	1188.6	1196.1	1200.0	1207.5	1215.0	1237.8	1241.6	1249.1
5°	1147.0	1162.0	1211.3	1230.2	1283.2	1355.1	1385.4	1434.6	1536.8	1567.1	1586.0
7.5°	1101.5	1135.6	1256.7	1287.0	1419.4	1608.7	1688.2	1794.2	1957.0	2036.4	2100.8
10°	1029.6	1101.5	1317.2	1389.1	1605.0	1892.6	2040.3	2187.9	2433.9	2543.6	2585.3
12.5°	950.1	1067.4	1381.6	1480.1	1790.4	2210.5	2388.5	2551.3	2831.4	2979.0	3001.7
15°	859.2	1018.2	1442.1	1586.0	1987.3	2475.6	2672.4	2873.0	3134.2	3240.1	3266.7
17.5°	779.8	980.4	1499.0	1650.3	2138.6	2714.0	2914.7	3081.2	3293.1	3365.0	3384.0
20°	681.3	919.9	1536.8	1733.6	2297.6	2888.1	3081.2	3209.9	3353.7	3399.1	3406.7
22.5°	609.4	855.5	1559.5	1763.9	2403.6	2994.1	3156.8	3259.1	3357.5	3372.7	3376.4
25°	548.8	783.6	1555.7	1798.0	2494.5	3058.5	3183.4	3259.1	3315.9	3323.4	3323.4
27.5°	492.1	704.0	1540.6	1805.5	2562.6	3073.6	3172.0	3225.0	3251.5	3266.7	3266.7
30°	442.8	628.4	1502.7	1790.4	2592.9	3058.5	3137.9	3164.5	3190.9	3213.7	3225.0
32.5°	405.0	556.4	1446.0	1760.2	2596.6	3020.7	3077.4	3092.6	3130.4	3183.4	3202.3
35°	370.9	484.5	1381.6	1718.5	2573.9	2960.0	2997.9	3013.0	3088.8	3168.2	3194.8
37.5°	336.9	431.6	1298.3	1646.6	2539.9	2888.1	2914.7	2941.1	3058.5	3153.1	3183.4
40°	302.8	386.1	1200.0	1567.1	2486.9	2801.1	2823.7	2865.4	3020.7	3130.4	3160.7
42.5°	276.3	348.3	1094.0	1483.8	2418.7	2702.6	2736.7	2797.3	2975.2	3092.6	3126.6
45°	253.6	310.4	980.4	1370.2	2331.7	2600.5	2649.6	2732.9	2922.2	3035.8	3066.0
47.5°	230.9	283.9	863.0	1253.0	2237.1	2498.3	2562.6	2657.2	2850.3	2960.0	2986.6
50°	212.0	257.4	745.7	1128.0	2134.9	2388.5	2464.2	2562.6	2759.5	2861.7	2895.8
52.5°	196.8	234.6	635.9	1003.1	2017.5	2274.9	2362.0	2464.2	2649.6	2748.1	2770.8
55°	181.7	215.7	541.3	870.6	1896.4	2153.8	2248.5	2346.8	2528.6	2611.8	2626.9
57.5°	174.1	200.6	461.8	745.7	1767.7	2017.5	2123.5	2214.4	2384.7	2449.0	2464.2
60°	162.7	189.3	401.2	639.7	1627.6	1888.8	1979.7	2070.5	2214.4	2267.4	2278.7
62.5°	151.4	181.7	355.8	537.5	1483.8	1737.4	1828.3	1911.5	2032.7	2070.5	2085.6
65°	143.8	174.1	321.7	461.8	1336.2	1578.4	1669.2	1741.3	1839.6	1877.4	1885.1
67.5°	136.3	166.6	295.3	397.5	1188.6	1419.4	1487.6	1555.7	1631.4	1669.2	1673.1
70°	124.9	159.0	272.6	352.0	1037.1	1237.8	1294.6	1366.5	1427.1	1446.0	1457.3
72.5°	117.4	147.6	257.4	317.9	881.9	1063.7	1116.7	1158.3	1211.3	1230.2	1230.2
75°	106.0	132.5	242.3	283.9	722.9	870.6	916.0	957.7	999.3	1006.9	995.5
77.5°	94.6	117.4	208.2	238.5	564.0	688.9	726.8	749.5	783.6	791.1	794.9
80°	79.5	102.2	162.7	185.5	408.8	507.2	533.7	552.7	582.9	582.9	590.5
82.5°	60.5	79.5	117.4	132.5	276.3	348.3	370.9	382.3	401.2	401.2	401.2
85°	37.8	49.2	75.7	87.1	166.6	212.0	227.1	230.9	246.0	249.8	249.8
87.5°	18.9	26.5	49.2	53.0	87.1	109.7	109.7	117.4	117.4	113.5	109.7
90°	17.9	32.2	46.5	50.0	78.6	116.7	135.8	120.7	90.5	67.9	67.9
92.5°	71.4	192.9	314.5	344.9	484.9	671.5	764.8	670.2	481.2	339.5	326.0
95°	171.5	393.8	616.3	671.8	1193.1	1888.0	2235.5	1994.8	1513.6	1152.6	1111.7
97.5°	296.6	492.8	688.9	738.0	1607.1	2765.8	3345.1	3193.0	2888.9	2660.7	2582.9
100°	393.1	571.0	748.9	793.4	1757.8	3043.5	3686.4	3697.5	3719.7	3736.4	3643.7
102.5°	475.3	641.3	807.3	848.8	1826.8	3130.9	3782.9	3976.7	4364.3	4655.0	4575.5
105°	614.7	755.3	895.9	931.0	1878.1	3140.8	3772.2	4206.6	5075.4	5727.0	5684.4
107.5°	757.7	888.7	1019.7	1052.5	1887.6	3001.0	3557.8	4163.7	5375.6	6284.6	6294.9
110°	854.2	972.5	1090.8	1120.4	1873.3	2877.1	3379.1	4056.6	5411.4	6427.5	6472.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	948.9	1061.7	1174.5	1202.6	1873.9	2768.9	3216.4	3909.8	5296.4	6336.4	6404.7
115°	1091.9	1195.9	1299.9	1325.9	1891.2	2644.9	3021.7	3689.6	5025.4	6027.3	6122.0
117.5°	1233.0	1327.4	1422.0	1445.6	1926.2	2567.1	2887.6	3490.4	4696.0	5600.2	5705.3
120°	1315.1	1404.1	1493.0	1515.3	1954.9	2541.0	2834.1	3384.8	4486.3	5312.5	5414.6
122.5°	1395.5	1485.3	1575.1	1597.5	1996.0	2527.3	2793.0	3288.9	4280.9	5024.8	5125.5
125°	1518.9	1600.7	1682.5	1703.0	2051.4	2516.0	2748.3	3169.6	4012.2	4644.2	4736.9
127.5°	1618.9	1701.5	1784.1	1804.8	2106.7	2509.5	2710.8	3072.5	3796.0	4338.7	4416.9
130°	1672.6	1761.5	1850.4	1872.7	2147.2	2513.4	2696.4	3018.5	3662.6	4145.7	4217.9
132.5°	1728.0	1816.9	1905.8	1928.0	2180.0	2515.9	2683.9	2972.2	3548.9	3981.3	4046.0
135°	1810.1	1891.1	1972.2	1992.4	2215.8	2513.7	2662.5	2904.0	3386.8	3748.9	3804.7
137.5°	1894.1	1974.4	2054.6	2074.6	2269.4	2529.0	2658.9	2863.0	3271.3	3577.4	3623.1
140°	1963.9	2037.7	2111.6	2130.0	2302.1	2531.6	2646.4	2822.7	3175.4	3439.8	3482.5
142.5°	2017.4	2085.7	2154.0	2171.1	2329.5	2540.8	2646.4	2801.3	3111.0	3343.4	3380.1
145°	2099.7	2159.3	2218.8	2233.6	2365.2	2540.8	2628.5	2755.2	3008.5	3198.6	3226.4
147.5°	2181.8	2239.8	2297.7	2312.2	2417.7	2558.3	2628.5	2728.2	2927.6	3077.1	3100.1
150°	2235.5	2287.9	2340.3	2353.4	2445.1	2567.4	2628.5	2712.8	2881.1	3007.4	3026.0
152.5°	2290.9	2330.6	2370.2	2380.1	2462.9	2573.3	2628.5	2700.5	2844.2	2952.0	2966.1
155°	2373.1	2402.5	2431.8	2439.2	2502.3	2586.4	2628.5	2685.7	2800.2	2885.9	2895.3
157.5°	2433.8	2462.4	2490.9	2498.1	2541.5	2599.5	2628.5	2673.0	2762.0	2828.7	2835.3
160°	2474.9	2497.1	2519.4	2524.9	2559.5	2605.5	2628.5	2666.6	2742.9	2800.1	2803.9
162.5°	2515.9	2532.7	2549.3	2553.5	2578.5	2611.8	2628.5	2660.7	2725.1	2773.3	2776.9
165°	2560.6	2575.7	2590.8	2594.6	2605.9	2621.0	2628.5	2651.6	2697.6	2732.2	2736.0
167.5°	2601.8	2609.0	2616.0	2617.8	2627.4	2640.1	2646.4	2661.5	2691.7	2714.3	2715.9
170°	2628.5	2635.7	2642.9	2644.7	2645.3	2646.0	2646.4	2661.5	2691.7	2714.3	2714.3
172.5°	2642.9	2644.4	2646.0	2646.4	2646.4	2646.4	2646.4	2658.3	2682.2	2700.1	2698.6
175°	2662.5	2662.5	2662.5	2662.5	2657.2	2650.0	2646.4	2653.9	2669.0	2680.4	2680.4
177.5°	2662.5	2662.5	2662.5	2662.5	2658.3	2652.8	2650.0	2656.0	2667.9	2676.8	2675.1
180°	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5	2662.5



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1177.2	1177.2
2.5°	1256.7	1249.1
5°	1616.3	1623.9
7.5°	2176.5	2172.7
10°	2706.5	2740.5
12.5°	3092.6	3100.1
15°	3327.2	3342.4
17.5°	3418.0	3421.9
20°	3421.9	3414.3
22.5°	3380.2	3372.7
25°	3331.0	3327.2
27.5°	3285.6	3289.4
30°	3266.7	3278.0
32.5°	3266.7	3285.6
35°	3274.2	3293.1
37.5°	3270.4	3293.1
40°	3255.3	3281.8
42.5°	3213.7	3232.6
45°	3149.3	3172.0
47.5°	3066.0	3081.2
50°	2960.0	2975.2
52.5°	2827.6	2831.4
55°	2668.6	2683.7
57.5°	2498.3	2502.0
60°	2309.0	2320.4
62.5°	2108.4	2108.4
65°	1896.4	1904.0
67.5°	1676.9	1695.8
70°	1453.5	1457.3
72.5°	1234.0	1234.0
75°	1006.9	1010.7
77.5°	791.1	791.1
80°	586.8	590.5
82.5°	405.0	412.6
85°	253.6	253.6
87.5°	117.4	106.0
90°	67.9	67.9
92.5°	272.0	218.0
95°	948.0	784.4
97.5°	2271.6	1960.2
100°	3272.9	2902.0
102.5°	4257.9	3940.1
105°	5513.7	5342.9
107.5°	6336.2	6377.5
110°	6650.0	6827.9





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	6677.9	6951.2
115°	6500.8	6879.6
117.5°	6125.4	6545.5
120°	5822.7	6231.0
122.5°	5528.2	5930.8
125°	5107.8	5478.7
127.5°	4729.8	5042.7
130°	4507.0	4796.1
132.5°	4304.9	4563.8
135°	4027.9	4251.1
137.5°	3805.8	3988.4
140°	3653.3	3824.0
142.5°	3527.0	3673.9
145°	3337.6	3448.8
147.5°	3192.3	3284.3
150°	3100.7	3175.4
152.5°	3022.5	3078.8
155°	2932.5	2969.9
157.5°	2861.5	2887.6
160°	2819.0	2834.1
162.5°	2791.2	2805.5
165°	2751.1	2766.2
167.5°	2722.2	2728.6
170°	2714.3	2714.3
172.5°	2693.1	2687.6
175°	2680.4	2680.4
177.5°	2668.8	2662.5
180°	2662.5	2662.5



TEST NUMBER: P938501  
 CATALOG NUMBER: SQ4-FB-150U-100D-B40-1D-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	3.89	4.65	4.96	5.73	7.21	17.08	17.85	18.16	18.92	20.40
	3H	4.59	5.27	5.67	6.36	7.85	18.92	19.60	20.00	20.69	22.18
	4H	4.88	5.53	5.98	6.62	8.12	19.57	20.21	20.66	21.30	22.80
	6H	5.13	5.73	6.23	6.82	8.33	19.99	20.59	21.10	21.68	23.19
	8H	5.19	5.76	6.30	6.87	8.37	20.11	20.68	21.22	21.79	23.30
	12H	5.21	5.75	6.32	6.85	8.38	20.18	20.72	21.29	21.82	23.35
4H	2H	11.10	11.75	12.20	12.84	14.34	17.35	17.99	18.45	19.08	20.58
	3H	12.66	13.20	13.77	14.32	15.83	19.39	19.93	20.49	21.04	22.55
	4H	12.75	13.25	13.86	14.35	15.88	20.15	20.65	21.26	21.76	23.29
	6H	12.76	13.18	13.87	14.31	15.83	20.69	21.12	21.81	22.25	23.77
	8H	12.73	13.13	13.85	14.25	15.79	20.85	21.25	21.97	22.37	23.91
	12H	12.68	13.04	13.82	14.18	15.72	20.94	21.31	22.08	22.44	23.98
8H	4H	14.19	14.59	15.31	15.71	17.25	20.20	20.60	21.32	21.72	23.26
	6H	14.43	14.76	15.57	15.92	17.46	20.83	21.16	21.97	22.33	23.86
	8H	14.44	14.73	15.59	15.88	17.43	21.05	21.34	22.20	22.49	24.04
	12H	14.41	14.66	15.56	15.80	17.39	21.20	21.45	22.35	22.59	24.18
12H	4H	14.33	14.69	15.47	15.83	17.37	20.15	20.52	21.29	21.65	23.19
	6H	14.69	14.98	15.83	16.12	17.67	20.82	21.11	21.96	22.25	23.80
	8H	14.75	15.01	15.90	16.14	17.74	21.04	21.30	22.19	22.44	24.03