

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: P938497

Luminaire Tested: SQ4-FB-150U-100D-B35-1D-UNV-STD-W-12

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P938497  
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-B35-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

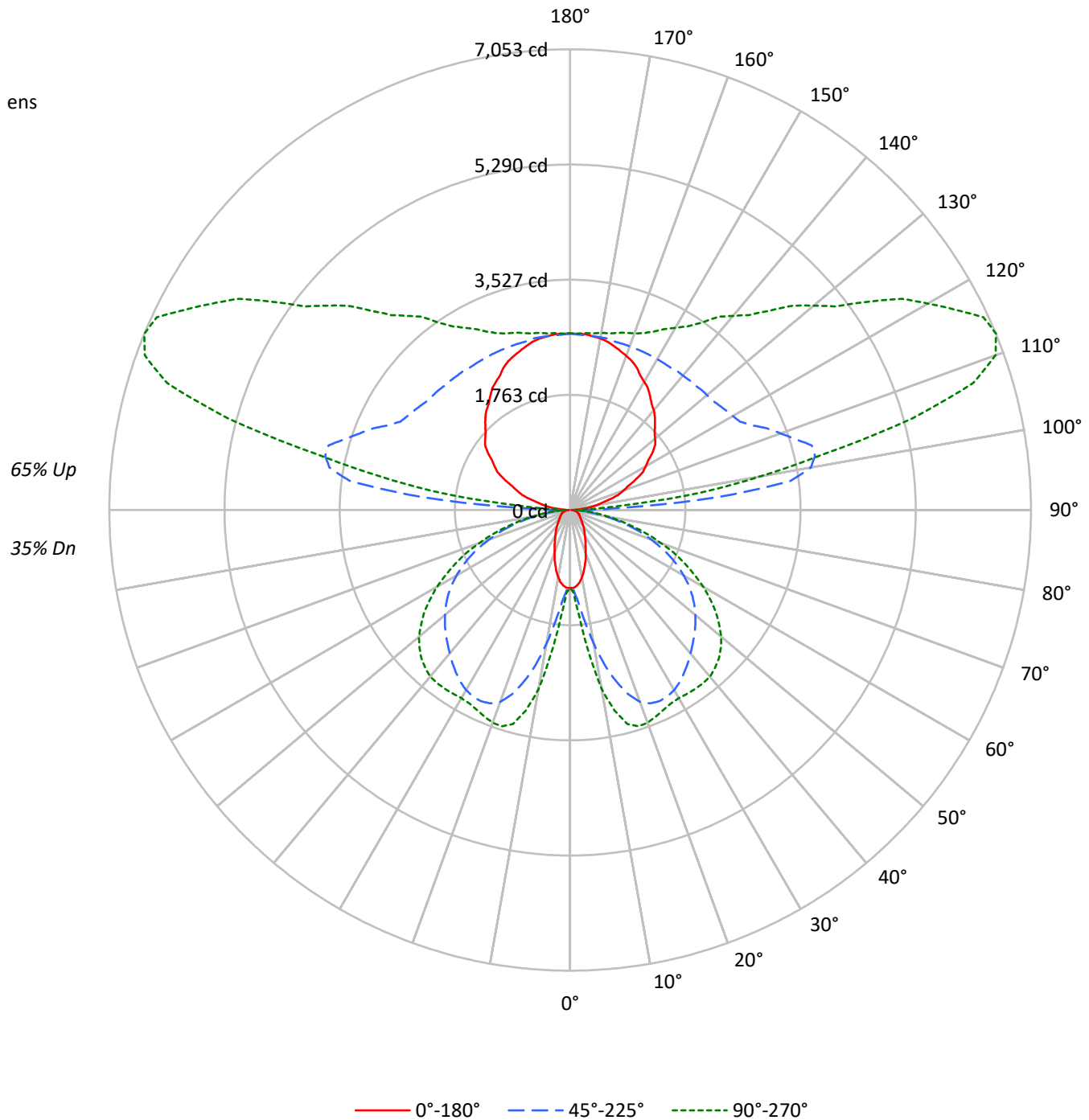
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 26763.8 lumens  
Efficiency: N/A  
Efficacy: 123.2 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				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°	3695	3695	3695
5°	3611	4271	4966
10°	3276	6228	8233
15°	2785	8138	9941
20°	2269	9433	10132
25°	1893	9874	9926
30°	1597	9939	9907
35°	1413	9777	10163
40°	1232	9564	10428
45°	1117	9410	10469
50°	1025	9272	10295
55°	983	9069	9839
60°	1007	8674	9119
65°	1049	8073	8128
70°	1120	7046	6867
75°	1247	5750	5359
80°	1371	3993	3611
85°	1244	2121	1849

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10469 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.5	0.6
10°-20°	684.8	2.6
20°-30°	1197.8	4.5
30°-40°	1541.9	5.8
40°-50°	1722.3	6.4
50°-60°	1649.5	6.2
60°-70°	1307.3	4.9
70°-80°	768.7	2.9
80°-90°	223.9	0.8
90°-100°	1316.9	4.9
100°-110°	3462.1	12.9
110°-120°	3589.9	13.4
120°-130°	2879.5	10.8
130°-140°	2259.4	8.4
140°-150°	1734.2	6.5
150°-160°	1248.9	4.7
160°-170°	764.1	2.9
170°-180°	258.2	1.0
0°-30°	2037.1	7.6
0°-40°	3579.0	13.4
0°-60°	6950.9	26.0
0°-90°	9250.7	34.6
90°-120°	8368.8	31.3
90°-150°	15241.9	56.9
90°-180°	17513.0	65.4
0°-180°	26763.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1194	1194	1194	1194	1194	
5°	1164	1248	1406	1590	1648	107
15°	872	1609	2712	3288	3391	243
25°	557	1824	3230	3372	3376	257
35°	376	1744	3042	3215	3341	235
45°	257	1390	2688	3080	3218	199
55°	184	883	2281	2650	2723	168
65°	146	469	1694	1905	1932	145
75°	108	288	930	1022	1026	113
85°	38	88	230	254	257	41
90°	18	51	138	69	69	18
95°	174	682	2268	1170	796	193
105°	624	945	3828	5811	5421	661
115°	1108	1345	3066	6116	6980	1094
125°	1541	1728	2789	4712	5559	1368
135°	1837	2022	2702	3804	4313	1421
145°	2130	2266	2667	3246	3499	1335
155°	2408	2475	2667	2928	3013	1106
165°	2598	2633	2667	2772	2807	733
175°	2702	2702	2685	2720	2720	256
180°	2702	2702	2702	2702	2702	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1194.5	1194.5	1194.5	1194.5	1194.5	1194.5	1194.5	1194.5	1194.5	1194.5	1194.5
2.5°	1194.5	1194.5	1202.1	1206.0	1213.7	1217.5	1225.2	1232.9	1255.9	1259.8	1267.5
5°	1163.8	1179.1	1229.1	1248.3	1302.0	1375.0	1405.7	1455.6	1559.3	1590.0	1609.2
7.5°	1117.6	1152.2	1275.1	1305.8	1440.2	1632.3	1713.0	1820.5	1985.7	2066.3	2131.6
10°	1044.7	1117.6	1336.5	1409.5	1628.5	1920.4	2070.2	2220.0	2469.6	2580.9	2623.2
12.5°	964.1	1083.1	1401.9	1501.8	1816.7	2242.9	2423.5	2588.7	2872.9	3022.7	3045.7
15°	871.8	1033.1	1463.3	1609.2	2016.4	2511.8	2711.6	2915.1	3180.2	3287.6	3314.6
17.5°	791.2	994.8	1520.9	1674.5	2170.0	2753.8	2957.4	3126.4	3341.4	3414.4	3433.7
20°	691.3	933.3	1559.3	1759.0	2331.3	2930.4	3126.4	3256.9	3402.8	3449.0	3456.6
22.5°	618.3	868.0	1582.4	1789.7	2438.9	3038.0	3203.1	3306.9	3406.7	3422.1	3425.9
25°	556.9	795.1	1578.5	1824.3	2531.0	3103.3	3230.1	3306.9	3364.5	3372.1	3372.1
27.5°	499.3	714.3	1563.2	1832.0	2600.2	3118.6	3218.5	3272.3	3299.2	3314.6	3314.6
30°	449.3	637.6	1524.7	1816.7	2630.9	3103.3	3183.9	3210.9	3237.7	3260.8	3272.3
32.5°	411.0	564.5	1467.2	1786.0	2634.7	3064.9	3122.5	3137.9	3176.3	3230.1	3249.3
35°	376.4	491.6	1401.9	1743.7	2611.6	3003.4	3041.9	3057.2	3134.0	3214.7	3241.6
37.5°	341.9	437.9	1317.4	1670.7	2577.2	2930.4	2957.4	2984.2	3103.3	3199.3	3230.1
40°	307.3	391.8	1217.5	1590.0	2523.4	2842.2	2865.1	2907.4	3064.9	3176.3	3207.0
42.5°	280.3	353.4	1110.0	1505.5	2454.2	2742.3	2776.9	2838.3	3018.8	3137.9	3172.4
45°	257.4	314.9	994.8	1390.3	2365.9	2638.6	2688.5	2773.0	2965.0	3080.3	3111.0
47.5°	234.3	288.1	875.7	1271.3	2269.9	2534.9	2600.2	2696.1	2892.1	3003.4	3030.4
50°	215.1	261.1	756.6	1144.6	2166.2	2423.5	2500.3	2600.2	2799.9	2903.6	2938.2
52.5°	199.7	238.1	645.3	1017.8	2047.1	2308.3	2396.6	2500.3	2688.5	2788.4	2811.5
55°	184.4	218.9	549.2	883.3	1924.2	2185.4	2281.4	2381.2	2565.6	2650.1	2665.4
57.5°	176.6	203.6	468.6	756.6	1793.6	2047.1	2154.7	2246.8	2419.7	2484.9	2500.3
60°	165.1	192.1	407.1	649.0	1651.5	1916.5	2008.7	2100.9	2246.8	2300.6	2312.1
62.5°	153.6	184.4	361.0	545.4	1505.5	1762.9	1855.1	1939.6	2062.5	2100.9	2116.2
65°	145.9	176.6	326.5	468.6	1355.8	1601.6	1693.7	1766.8	1866.6	1905.0	1912.7
67.5°	138.3	169.0	299.6	403.3	1206.0	1440.2	1509.4	1578.5	1655.3	1693.7	1697.6
70°	126.7	161.3	276.6	357.2	1052.3	1255.9	1313.6	1386.5	1448.0	1467.2	1478.7
72.5°	119.1	149.8	261.1	322.6	894.9	1079.3	1133.1	1175.3	1229.1	1248.3	1248.3
75°	107.6	134.4	245.8	288.1	733.5	883.3	929.5	971.7	1014.0	1021.6	1010.1
77.5°	96.0	119.1	211.2	242.0	572.3	699.0	737.4	760.5	795.1	802.7	806.6
80°	80.6	103.7	165.1	188.2	414.8	514.6	541.6	560.8	591.5	591.5	599.1
82.5°	61.4	80.6	119.1	134.4	280.3	353.4	376.4	387.9	407.1	407.1	407.1
85°	38.4	49.9	76.8	88.4	169.0	215.1	230.4	234.3	249.6	253.5	253.5
87.5°	19.2	26.8	49.9	53.8	88.4	111.3	111.3	119.1	119.1	115.2	111.3
90°	18.1	32.7	47.2	50.8	79.7	118.4	137.8	122.5	91.9	68.9	68.9
92.5°	72.5	195.7	319.1	349.9	492.0	681.3	776.0	680.0	488.3	344.5	330.8
95°	174.0	399.6	625.3	681.7	1210.6	1915.7	2268.2	2024.0	1535.8	1169.5	1128.0
97.5°	301.0	500.0	699.0	748.8	1630.6	2806.3	3394.1	3239.9	2931.2	2699.7	2620.8
100°	398.8	579.4	759.9	805.0	1783.5	3088.1	3740.4	3751.7	3774.3	3791.2	3697.1
102.5°	482.3	650.7	819.1	861.2	1853.6	3176.8	3838.4	4035.0	4428.2	4723.2	4642.6
105°	623.7	766.4	909.0	944.7	1905.6	3186.8	3827.5	4268.3	5149.8	5811.0	5767.7
107.5°	768.8	901.8	1034.7	1067.9	1915.2	3045.0	3609.9	4224.7	5454.4	6376.7	6387.2
110°	866.7	986.7	1106.8	1136.8	1900.8	2919.3	3428.6	4116.0	5490.7	6521.8	6566.9



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	962.8	1077.2	1191.7	1220.3	1901.4	2809.5	3263.6	3967.1	5374.1	6429.3	6498.6
115°	1107.9	1213.4	1319.0	1345.4	1918.9	2683.6	3066.0	3743.7	5099.1	6115.6	6211.8
117.5°	1251.1	1346.9	1442.8	1466.8	1954.5	2604.8	2930.0	3541.6	4764.9	5682.3	5788.9
120°	1334.4	1424.7	1514.9	1537.5	1983.5	2578.2	2875.6	3434.4	4552.1	5390.4	5493.9
122.5°	1416.0	1507.1	1598.2	1620.9	2025.3	2564.4	2833.9	3337.1	4343.6	5098.5	5200.6
125°	1541.2	1624.1	1707.2	1727.9	2081.5	2552.9	2788.6	3216.1	4071.1	4712.2	4806.3
127.5°	1642.6	1726.5	1810.3	1831.2	2137.6	2546.2	2750.5	3117.6	3851.7	4402.3	4481.6
130°	1697.1	1787.3	1877.5	1900.1	2178.7	2550.2	2736.0	3062.7	3716.3	4206.4	4279.8
132.5°	1753.3	1843.5	1933.7	1956.3	2211.9	2552.8	2723.3	3015.8	3600.9	4039.7	4105.4
135°	1836.6	1918.8	2001.1	2021.6	2248.3	2550.5	2701.6	2946.5	3436.5	3803.9	3860.5
137.5°	1921.9	2003.3	2084.7	2105.1	2302.6	2566.1	2697.9	2905.0	3319.2	3629.9	3676.2
140°	1992.7	2067.6	2142.6	2161.3	2335.9	2568.7	2685.2	2864.1	3221.9	3490.2	3533.6
142.5°	2047.0	2116.3	2185.6	2202.9	2363.7	2578.0	2685.2	2842.4	3156.6	3392.4	3429.7
145°	2130.4	2190.9	2251.3	2266.4	2399.9	2578.0	2667.1	2795.6	3052.6	3245.5	3273.7
147.5°	2213.8	2272.6	2331.4	2346.1	2453.1	2595.8	2667.1	2768.2	2970.5	3122.2	3145.6
150°	2268.2	2321.4	2374.6	2387.9	2480.9	2605.1	2667.1	2752.5	2923.4	3051.5	3070.4
152.5°	2324.4	2364.7	2405.0	2415.0	2499.1	2611.1	2667.1	2740.0	2885.9	2995.3	3009.6
155°	2407.9	2437.7	2467.5	2474.9	2539.0	2624.3	2667.1	2725.1	2841.2	2928.2	2937.7
157.5°	2469.5	2498.5	2527.4	2534.7	2578.8	2637.6	2667.1	2712.2	2802.4	2870.2	2876.9
160°	2511.2	2533.7	2556.3	2561.9	2597.0	2643.7	2667.1	2705.7	2783.1	2841.1	2845.0
162.5°	2552.8	2569.8	2586.6	2590.9	2616.3	2650.1	2667.1	2699.7	2765.0	2814.0	2817.6
165°	2598.2	2613.5	2628.8	2632.7	2644.1	2659.4	2667.1	2690.4	2737.1	2772.2	2776.1
167.5°	2639.9	2647.2	2654.4	2656.2	2665.9	2678.8	2685.2	2700.5	2731.1	2754.1	2755.7
170°	2667.1	2674.3	2681.6	2683.5	2684.0	2684.8	2685.2	2700.5	2731.1	2754.1	2754.1
172.5°	2681.6	2683.2	2684.8	2685.2	2685.2	2685.2	2685.2	2697.3	2721.5	2739.7	2738.2
175°	2701.6	2701.6	2701.6	2701.6	2696.1	2688.9	2685.2	2692.9	2708.2	2719.7	2719.7
177.5°	2701.6	2701.6	2701.6	2701.6	2697.3	2691.7	2688.9	2694.9	2707.0	2716.0	2714.4
180°	2701.6	2701.6	2701.6	2701.6	2701.6	2701.6	2701.6	2701.6	2701.6	2701.6	2701.6



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1194.5	1194.5
2.5°	1275.1	1267.5
5°	1640.0	1647.7
7.5°	2208.4	2204.6
10°	2746.1	2780.6
12.5°	3137.9	3145.6
15°	3376.0	3391.4
17.5°	3468.1	3472.0
20°	3472.0	3464.4
22.5°	3429.8	3422.1
25°	3379.9	3376.0
27.5°	3333.7	3337.6
30°	3314.6	3326.1
32.5°	3314.6	3333.7
35°	3322.2	3341.4
37.5°	3318.3	3341.4
40°	3303.0	3329.9
42.5°	3260.8	3280.0
45°	3195.5	3218.5
47.5°	3111.0	3126.4
50°	3003.4	3018.8
52.5°	2869.0	2872.9
55°	2707.7	2723.1
57.5°	2534.9	2538.7
60°	2342.8	2354.4
62.5°	2139.3	2139.3
65°	1924.2	1931.9
67.5°	1701.5	1720.7
70°	1474.8	1478.7
72.5°	1252.0	1252.0
75°	1021.6	1025.5
77.5°	802.7	802.7
80°	595.4	599.1
82.5°	411.0	418.6
85°	257.4	257.4
87.5°	119.1	107.6
90°	68.9	68.9
92.5°	276.0	221.2
95°	961.9	795.9
97.5°	2304.9	1989.0
100°	3320.9	2944.5
102.5°	4320.3	3997.9
105°	5594.5	5421.3
107.5°	6429.1	6471.0
110°	6747.4	6928.0





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	6775.8	7053.1
115°	6596.1	6980.5
117.5°	6215.2	6641.4
120°	5908.1	6322.3
122.5°	5609.3	6017.8
125°	5182.7	5559.1
127.5°	4799.2	5116.6
130°	4573.1	4866.4
132.5°	4368.0	4630.7
135°	4087.0	4313.4
137.5°	3861.6	4046.8
140°	3706.8	3880.1
142.5°	3578.7	3727.7
145°	3386.6	3499.3
147.5°	3239.1	3332.5
150°	3146.1	3221.9
152.5°	3066.8	3124.0
155°	2975.5	3013.4
157.5°	2903.4	2930.0
160°	2860.3	2875.6
162.5°	2832.1	2846.6
165°	2791.4	2806.7
167.5°	2762.1	2768.6
170°	2754.1	2754.1
172.5°	2732.6	2727.0
175°	2719.7	2719.7
177.5°	2708.0	2701.6
180°	2701.6	2701.6



TEST NUMBER: P938497  
 CATALOG NUMBER: SQ4-FB-150U-100D-B35-1D-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	3.94	4.70	5.02	5.78	7.26	17.13	17.90	18.21	18.97	20.45
	3H	4.64	5.32	5.72	6.41	7.90	18.97	19.66	20.05	20.74	22.23
	4H	4.93	5.58	6.03	6.67	8.17	19.62	20.26	20.71	21.35	22.85
	6H	5.18	5.78	6.28	6.87	8.38	20.05	20.64	21.15	21.73	23.24
	8H	5.24	5.81	6.35	6.92	8.42	20.17	20.74	21.27	21.84	23.35
	12H	5.26	5.80	6.37	6.90	8.43	20.23	20.77	21.34	21.88	23.40
4H	2H	11.15	11.80	12.25	12.89	14.39	17.40	18.05	18.50	19.13	20.63
	3H	12.71	13.25	13.82	14.37	15.88	19.44	19.98	20.54	21.10	22.61
	4H	12.80	13.30	13.91	14.41	15.94	20.20	20.70	21.32	21.81	23.34
	6H	12.81	13.23	13.93	14.36	15.88	20.74	21.17	21.86	22.30	23.82
	8H	12.78	13.18	13.90	14.30	15.84	20.90	21.30	22.02	22.42	23.96
	12H	12.73	13.09	13.87	14.23	15.77	20.99	21.36	22.13	22.49	24.03
8H	4H	14.24	14.64	15.36	15.76	17.30	20.25	20.66	21.37	21.78	23.31
	6H	14.48	14.81	15.62	15.97	17.51	20.88	21.22	22.02	22.38	23.91
	8H	14.49	14.78	15.64	15.93	17.48	21.10	21.40	22.25	22.54	24.09
	12H	14.46	14.71	15.61	15.85	17.44	21.25	21.50	22.40	22.64	24.23
12H	4H	14.38	14.74	15.52	15.88	17.42	20.20	20.57	21.34	21.70	23.24
	6H	14.74	15.03	15.88	16.17	17.73	20.87	21.16	22.01	22.30	23.85
	8H	14.80	15.06	15.95	16.20	17.79	21.09	21.35	22.25	22.49	24.08