

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: P938356

Luminaire Tested: SQ4-FB-150U-075D-93050-1D-UNV-STD-W-12-5000K

Issue Date: 12/17/2024

**Test Information**

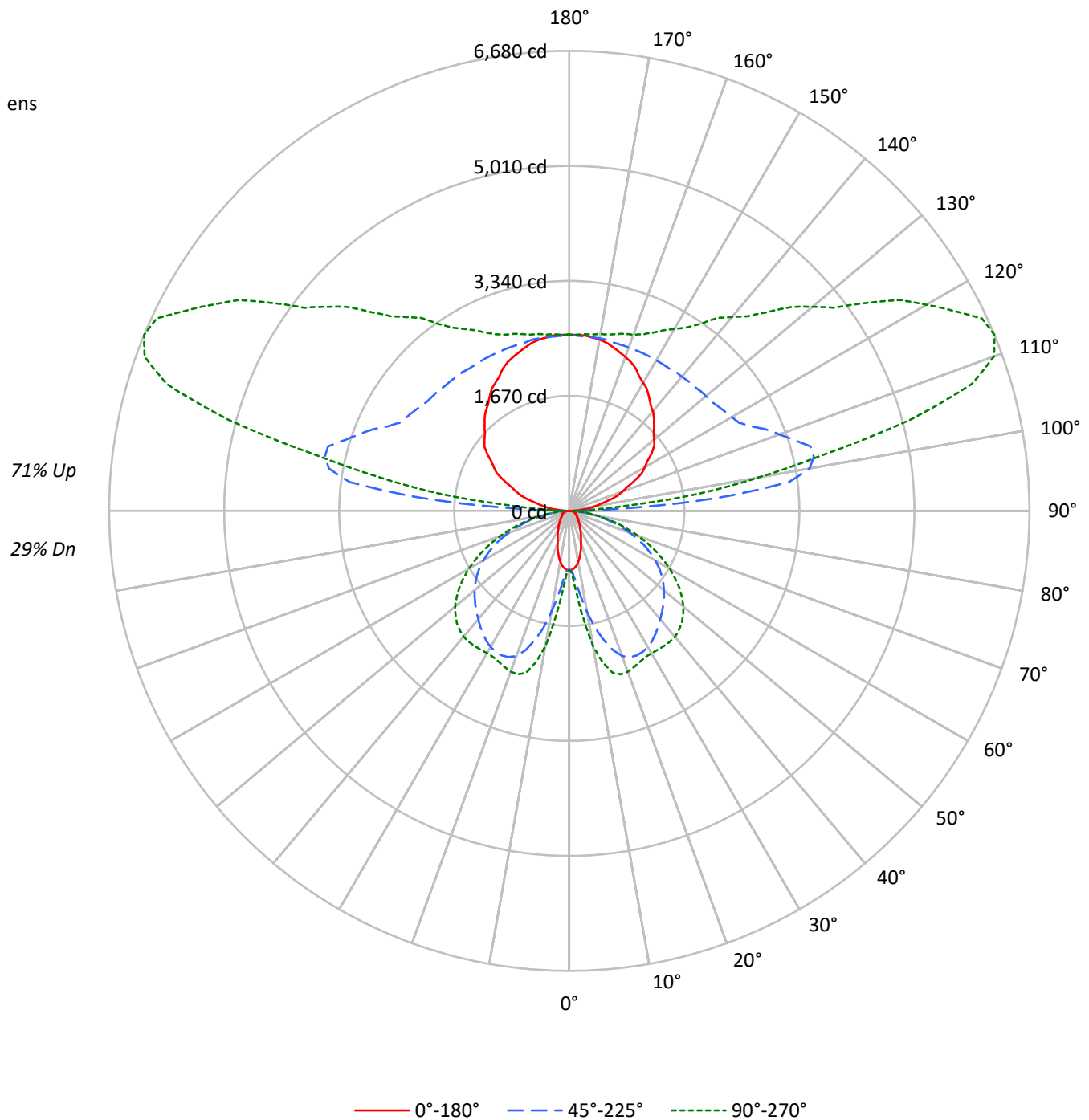
Test Method: LM-79-2019  
Report Number: P938356  
REPORT IS A COMBINATION OF REPORTS P933622 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-150U-075D-93050-1D-UNV-STD-W-12-5000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 23219.5 lumens  
Efficiency: N/A  
Efficacy: 121.7 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): 190.8  
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
RCR																				
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	29		
1	93	88	84	81	83	79	76	73	62	60	58	46	45	43	32	31	30	23		
2	84	77	71	66	75	69	64	59	54	50	47	40	38	36	27	26	25	19		
3	76	67	60	54	68	60	54	49	47	43	39	35	32	30	24	22	21	16		
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	21	19	17	13		
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15	11		
6	58	47	39	33	52	42	35	30	33	28	24	25	21	18	17	15	13	10		
7	54	42	34	28	48	38	31	26	30	25	21	22	19	16	15	13	11	8		
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10	7		
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	10	9	6		
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6		

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

	0°	45°	90°
0°	2648	2648	2648
5°	2588	3062	3560
10°	2348	4464	5902
15°	1997	5834	7126
20°	1626	6762	7263
25°	1357	7078	7115
30°	1145	7125	7102
35°	1013	7008	7285
40°	883	6856	7475
45°	800	6746	7505
50°	735	6647	7380
55°	704	6501	7053
60°	722	6218	6536
65°	752	5787	5827
70°	804	5050	4923
75°	894	4121	3841
80°	983	2862	2588
85°	891	1521	1325

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7505 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.8	0.5
10°-20°	490.9	2.1
20°-30°	858.6	3.7
30°-40°	1105.3	4.8
40°-50°	1234.6	5.3
50°-60°	1182.5	5.1
60°-70°	937.1	4.0
70°-80°	551.0	2.4
80°-90°	162.8	0.7
90°-100°	1247.1	5.4
100°-110°	3278.8	14.1
110°-120°	3399.8	14.6
120°-130°	2727.0	11.7
130°-140°	2139.7	9.2
140°-150°	1642.3	7.1
150°-160°	1182.8	5.1
160°-170°	723.7	3.1
170°-180°	244.5	1.1
0°-30°	1460.3	6.3
0°-40°	2565.6	11.0
0°-60°	4982.7	21.5
0°-90°	6633.7	28.6
90°-120°	7925.7	34.1
90°-150°	14434.9	62.2
90°-180°	16586.0	71.4
0°-180°	23219.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	856	856	856	856	856	
5°	834	895	1008	1140	1181	77
15°	625	1154	1944	2357	2431	174
25°	399	1308	2315	2417	2420	184
35°	270	1250	2180	2304	2395	168
45°	184	997	1927	2208	2307	143
55°	132	633	1635	1900	1952	120
65°	105	336	1214	1366	1385	104
75°	77	206	666	732	735	81
85°	28	63	165	182	184	29
90°	17	48	130	65	65	16
95°	165	646	2148	1108	754	183
105°	591	895	3625	5503	5134	626
115°	1049	1274	2904	5792	6611	1036
125°	1460	1636	2641	4463	5265	1296
135°	1739	1915	2558	3602	4085	1346
145°	2018	2146	2526	3074	3314	1264
155°	2280	2344	2526	2773	2854	1048
165°	2461	2493	2526	2625	2658	694
175°	2558	2558	2543	2576	2576	243
180°	2558	2558	2558	2558	2558	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	856.2	856.2	856.2	856.2	856.2	856.2	856.2	856.2	856.2	856.2	856.2
2.5°	856.2	856.2	861.7	864.5	870.0	872.7	878.2	883.7	900.3	903.0	908.5
5°	834.2	845.2	881.0	894.8	933.3	985.6	1007.6	1043.5	1117.8	1139.9	1153.6
7.5°	801.1	825.9	914.0	936.0	1032.4	1170.2	1228.0	1305.1	1423.4	1481.3	1528.1
10°	748.8	801.1	958.1	1010.4	1167.4	1376.6	1484.0	1591.4	1770.3	1850.2	1880.4
12.5°	691.0	776.4	1004.9	1076.5	1302.3	1607.9	1737.3	1855.7	2059.4	2166.8	2183.3
15°	625.0	740.6	1049.0	1153.6	1445.5	1800.6	1943.8	2089.7	2279.6	2356.7	2376.0
17.5°	567.1	713.0	1090.3	1200.4	1555.6	1974.1	2120.0	2241.1	2395.3	2447.6	2461.3
20°	495.6	669.0	1117.8	1261.0	1671.2	2100.7	2241.1	2334.7	2439.3	2472.4	2477.9
22.5°	443.2	622.2	1134.4	1283.0	1748.3	2177.8	2296.2	2370.5	2442.1	2453.1	2455.8
25°	399.2	569.9	1131.6	1307.8	1814.4	2224.6	2315.4	2370.5	2411.8	2417.3	2417.3
27.5°	357.9	512.1	1120.6	1313.3	1863.9	2235.6	2307.2	2345.7	2365.0	2376.0	2376.0
30°	322.1	457.0	1093.1	1302.3	1886.0	2224.6	2282.4	2301.7	2320.9	2337.5	2345.7
32.5°	294.6	404.7	1051.8	1280.3	1888.7	2197.1	2238.3	2249.4	2276.9	2315.4	2329.2
35°	269.8	352.4	1004.9	1250.0	1872.2	2153.0	2180.5	2191.5	2246.6	2304.4	2323.7
37.5°	245.0	313.9	944.3	1197.7	1847.4	2100.7	2120.0	2139.2	2224.6	2293.4	2315.4
40°	220.2	280.8	872.7	1139.9	1808.9	2037.4	2053.9	2084.2	2197.1	2276.9	2298.9
42.5°	201.0	253.3	795.6	1079.3	1759.3	1965.8	1990.6	2034.6	2164.0	2249.4	2274.1
45°	184.5	225.8	713.0	996.6	1696.0	1891.5	1927.3	1987.8	2125.5	2208.1	2230.1
47.5°	167.9	206.5	627.7	911.3	1627.2	1817.1	1863.9	1932.8	2073.2	2153.0	2172.3
50°	154.2	187.2	542.4	820.4	1552.8	1737.3	1792.4	1863.9	2007.1	2081.4	2106.2
52.5°	143.2	170.7	462.5	729.6	1467.5	1654.7	1718.0	1792.4	1927.3	1998.8	2015.3
55°	132.1	156.9	393.7	633.2	1379.4	1566.6	1635.4	1707.0	1839.2	1899.7	1910.7
57.5°	126.6	145.9	335.9	542.4	1285.8	1467.5	1544.6	1610.6	1734.5	1781.3	1792.4
60°	118.4	137.7	291.8	465.3	1183.9	1373.9	1440.0	1506.0	1610.6	1649.2	1657.4
62.5°	110.1	132.1	258.8	390.9	1079.3	1263.8	1329.8	1390.4	1478.5	1506.0	1517.0
65°	104.6	126.6	234.0	335.9	971.8	1148.1	1214.2	1266.5	1338.1	1365.6	1371.1
67.5°	99.1	121.1	214.7	289.1	864.5	1032.4	1082.1	1131.6	1186.7	1214.2	1217.0
70°	90.9	115.6	198.2	256.0	754.3	900.3	941.6	993.9	1037.9	1051.8	1060.0
72.5°	85.3	107.4	187.2	231.3	641.5	773.6	812.2	842.4	881.0	894.8	894.8
75°	77.1	96.4	176.2	206.5	525.8	633.2	666.2	696.5	726.8	732.3	724.1
77.5°	68.8	85.3	151.4	173.4	410.2	501.1	528.6	545.1	569.9	575.4	578.1
80°	57.8	74.3	118.4	134.9	297.3	368.9	388.2	402.0	424.0	424.0	429.5
82.5°	44.0	57.8	85.3	96.4	201.0	253.3	269.8	278.1	291.8	291.8	291.8
85°	27.5	35.8	55.1	63.3	121.1	154.2	165.2	167.9	179.0	181.7	181.7
87.5°	13.8	19.3	35.8	38.5	63.3	79.8	79.8	85.3	85.3	82.6	79.8
90°	17.2	30.9	44.7	48.1	75.5	112.1	130.5	116.0	87.0	65.2	65.2
92.5°	68.6	185.4	302.2	331.4	465.9	645.2	734.9	644.0	462.4	326.2	313.3
95°	164.8	378.5	592.2	645.6	1146.5	1814.3	2148.1	1916.9	1454.5	1107.6	1068.3
97.5°	285.0	473.5	662.0	709.2	1544.3	2657.7	3214.4	3068.3	2776.0	2556.8	2482.0
100°	377.7	548.7	719.7	762.4	1689.1	2924.6	3542.4	3553.0	3574.4	3590.5	3501.4
102.5°	456.7	616.2	775.7	815.6	1755.5	3008.6	3635.2	3821.4	4193.8	4473.1	4396.8
105°	590.7	725.8	860.9	894.7	1804.7	3018.1	3624.8	4042.3	4877.2	5503.3	5462.3
107.5°	728.1	854.0	979.9	1011.4	1813.8	2883.8	3418.8	4001.1	5165.6	6039.1	6049.0
110°	820.8	934.5	1048.2	1076.6	1800.2	2764.7	3247.1	3898.1	5200.0	6176.5	6219.2



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	911.8	1020.2	1128.6	1155.7	1800.7	2660.8	3090.8	3757.0	5089.5	6088.9	6154.5
115°	1049.2	1149.1	1249.2	1274.1	1817.3	2541.6	2903.7	3545.5	4829.1	5791.8	5882.9
117.5°	1184.8	1275.6	1366.4	1389.1	1851.0	2466.9	2774.8	3354.1	4512.6	5381.5	5482.4
120°	1263.8	1349.3	1434.7	1456.1	1878.5	2441.7	2723.4	3252.6	4311.1	5105.0	5203.1
122.5°	1341.0	1427.3	1513.6	1535.1	1918.1	2428.6	2683.9	3160.4	4113.7	4828.5	4925.3
125°	1459.6	1538.1	1616.8	1636.4	1971.3	2417.8	2640.9	3045.8	3855.5	4462.8	4551.9
127.5°	1555.7	1635.1	1714.4	1734.3	2024.4	2411.4	2604.9	2952.5	3647.7	4169.2	4244.3
130°	1607.3	1692.7	1778.1	1799.5	2063.3	2415.2	2591.1	2900.6	3519.5	3983.7	4053.2
132.5°	1660.5	1745.9	1831.4	1852.7	2094.8	2417.7	2579.1	2856.1	3410.2	3825.8	3888.0
135°	1739.4	1817.2	1895.1	1914.6	2129.2	2415.5	2558.5	2790.5	3254.5	3602.5	3656.1
137.5°	1820.2	1897.2	1974.3	1993.6	2180.7	2430.2	2555.0	2751.2	3143.5	3437.7	3481.6
140°	1887.1	1958.1	2029.1	2046.8	2212.2	2432.7	2543.0	2712.4	3051.3	3305.4	3346.5
142.5°	1938.6	2004.2	2069.9	2086.3	2238.5	2441.5	2543.0	2691.9	2989.5	3212.8	3248.1
145°	2017.6	2074.9	2132.1	2146.4	2272.9	2441.5	2525.9	2647.6	2891.0	3073.6	3100.3
147.5°	2096.6	2152.3	2208.0	2221.9	2323.2	2458.3	2525.9	2621.7	2813.2	2956.9	2979.0
150°	2148.1	2198.5	2248.9	2261.5	2349.6	2467.1	2525.9	2606.8	2768.6	2889.9	2907.8
152.5°	2201.4	2239.5	2277.6	2287.2	2366.7	2472.8	2525.9	2595.0	2733.1	2836.7	2850.3
155°	2280.4	2308.6	2336.8	2343.9	2404.5	2485.4	2525.9	2580.8	2690.8	2773.2	2782.2
157.5°	2338.7	2366.2	2393.6	2400.5	2442.3	2498.0	2525.9	2568.6	2654.1	2718.2	2724.5
160°	2378.2	2399.6	2421.0	2426.3	2459.5	2503.7	2525.9	2562.5	2635.7	2690.7	2694.4
162.5°	2417.7	2433.7	2449.7	2453.7	2477.8	2509.8	2525.9	2556.8	2618.6	2665.0	2668.4
165°	2460.6	2475.1	2489.6	2493.3	2504.1	2518.6	2525.9	2548.0	2592.2	2625.4	2629.1
167.5°	2500.2	2507.1	2513.8	2515.6	2524.8	2537.0	2543.0	2557.5	2586.5	2608.3	2609.8
170°	2525.9	2532.7	2539.6	2541.4	2541.9	2542.7	2543.0	2557.5	2586.5	2608.3	2608.3
172.5°	2539.6	2541.1	2542.7	2543.0	2543.0	2543.0	2543.0	2554.5	2577.4	2594.6	2593.2
175°	2558.5	2558.5	2558.5	2558.5	2553.4	2546.5	2543.0	2550.3	2564.8	2575.7	2575.7
177.5°	2558.5	2558.5	2558.5	2558.5	2554.5	2549.2	2546.5	2552.2	2563.7	2572.2	2570.6
180°	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	856.2	856.2
2.5°	914.0	908.5
5°	1175.7	1181.2
7.5°	1583.1	1580.4
10°	1968.5	1993.3
12.5°	2249.4	2254.9
15°	2420.1	2431.1
17.5°	2486.1	2488.9
20°	2488.9	2483.4
22.5°	2458.6	2453.1
25°	2422.8	2420.1
27.5°	2389.8	2392.5
30°	2376.0	2384.3
32.5°	2376.0	2389.8
35°	2381.5	2395.3
37.5°	2378.8	2395.3
40°	2367.7	2387.0
42.5°	2337.5	2351.2
45°	2290.7	2307.2
47.5°	2230.1	2241.1
50°	2153.0	2164.0
52.5°	2056.6	2059.4
55°	1941.0	1952.0
57.5°	1817.1	1819.9
60°	1679.5	1687.7
62.5°	1533.6	1533.6
65°	1379.4	1384.9
67.5°	1219.7	1233.5
70°	1057.3	1060.0
72.5°	897.5	897.5
75°	732.3	735.1
77.5°	575.4	575.4
80°	426.7	429.5
82.5°	294.6	300.1
85°	184.5	184.5
87.5°	85.3	77.1
90°	65.2	65.2
92.5°	261.4	209.5
95°	911.0	753.8
97.5°	2182.8	1883.7
100°	3145.0	2788.6
102.5°	4091.5	3786.2
105°	5298.3	5134.2
107.5°	6088.7	6128.4
110°	6390.2	6561.2





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	6417.1	6679.6
115°	6246.8	6610.9
117.5°	5886.1	6289.8
120°	5595.3	5987.6
122.5°	5312.3	5699.2
125°	4908.3	5264.7
127.5°	4545.1	4845.7
130°	4331.0	4608.8
132.5°	4136.7	4385.5
135°	3870.6	4085.0
137.5°	3657.1	3832.6
140°	3510.6	3674.6
142.5°	3389.2	3530.4
145°	3207.3	3314.1
147.5°	3067.6	3156.0
150°	2979.6	3051.3
152.5°	2904.4	2958.6
155°	2818.0	2853.8
157.5°	2749.7	2774.8
160°	2708.9	2723.4
162.5°	2682.1	2695.9
165°	2643.6	2658.1
167.5°	2615.9	2622.0
170°	2608.3	2608.3
172.5°	2587.9	2582.6
175°	2575.7	2575.7
177.5°	2564.6	2558.5
180°	2558.5	2558.5



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**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	2.00	2.72	3.12	3.83	5.38	15.20	15.91	16.31	17.03	18.57
	3H	2.70	3.34	3.82	4.46	6.02	17.03	17.67	18.15	18.80	20.36
	4H	2.99	3.60	4.12	4.72	6.29	17.67	18.28	18.81	19.41	20.97
	6H	3.23	3.79	4.37	4.92	6.50	18.10	18.66	19.24	19.79	21.37
	8H	3.30	3.83	4.44	4.97	6.54	18.22	18.75	19.36	19.89	21.47
	12H	3.31	3.82	4.46	4.95	6.55	18.28	18.79	19.43	19.93	21.52
4H	2H	9.21	9.82	10.35	10.94	12.51	15.45	16.06	16.59	17.19	18.75
	3H	10.76	11.27	11.91	12.42	14.00	17.49	18.00	18.64	19.15	20.73
	4H	10.85	11.32	12.00	12.46	14.06	18.25	18.72	19.40	19.86	21.46
	6H	10.85	11.26	12.01	12.42	14.01	18.79	19.19	19.95	20.35	21.94
	8H	10.83	11.20	11.98	12.35	13.96	18.95	19.33	20.11	20.48	22.08
	12H	10.77	11.12	11.95	12.28	13.89	19.04	19.38	20.21	20.54	22.15
8H	4H	12.29	12.66	13.44	13.82	15.42	18.30	18.68	19.46	19.83	21.44
	6H	12.52	12.83	13.70	14.03	15.63	18.93	19.24	20.10	20.43	22.04
	8H	12.54	12.81	13.72	13.98	15.61	19.15	19.42	20.33	20.59	22.22
	12H	12.50	12.74	13.69	13.91	15.56	19.29	19.53	20.48	20.70	22.35
12H	4H	12.42	12.77	13.60	13.93	15.54	18.25	18.59	19.42	19.75	21.36
	6H	12.78	13.05	13.96	14.22	15.85	18.91	19.18	20.09	20.35	21.98
	8H	12.84	13.08	14.03	14.25	15.91	19.13	19.37	20.32	20.54	22.20