

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: P938009

Luminaire Tested: SQ4-FB-125U-100D-830-1D-UNV-STD-W-12

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P938009  
REPORT IS A COMBINATION OF REPORTS P933591 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-125U-100D-830-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

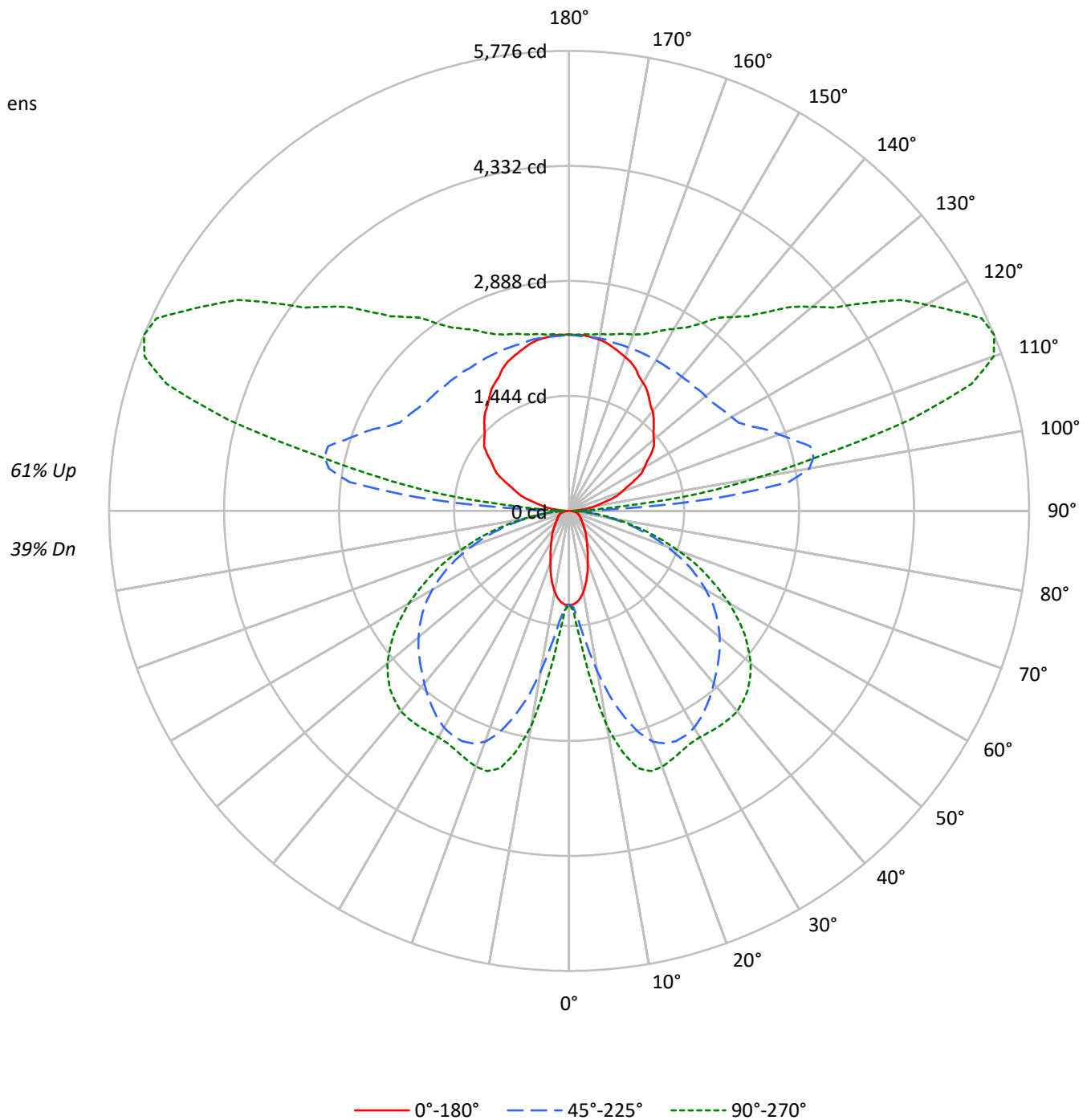
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 23467.9 lumens  
Efficiency: N/A  
Efficacy: 121.5 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): 193.2  
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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39				39
1	95	90	86	83	86	82	79	76	67	65	62	53	51	50	40	39	38	32				32
2	86	78	72	67	78	71	66	61	58	54	51	46	43	41	35	33	31	26				26
3	78	68	61	55	71	62	56	51	51	46	42	40	37	34	30	28	26	21				21
4	71	60	52	46	64	55	48	42	45	40	35	35	32	29	27	24	22	18				18
5	65	53	45	39	59	49	41	36	40	34	30	31	27	24	24	21	19	15				15
6	60	47	39	33	54	43	36	31	35	30	26	28	24	21	21	18	16	13				13
7	55	43	35	29	50	39	32	27	32	26	23	25	21	18	19	16	14	11				11
8	51	38	31	25	46	35	28	23	29	24	20	23	19	16	18	15	13	10				10
9	47	35	27	22	43	32	25	21	26	21	17	21	17	14	16	13	11	9				9
10	44	32	25	20	40	29	23	18	24	19	16	19	15	13	15	12	10	8				8

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

	0°	45°	90°
0°	3645	3645	3645
5°	3562	4214	4900
10°	3232	6144	8122
15°	2748	8029	9808
20°	2238	9307	9996
25°	1868	9741	9793
30°	1576	9805	9774
35°	1394	9645	10027
40°	1215	9436	10288
45°	1101	9284	10329
50°	1011	9148	10157
55°	969	8947	9707
60°	993	8558	8996
65°	1035	7965	8019
70°	1105	6951	6775
75°	1230	5672	5287
80°	1352	3939	3562
85°	1228	2093	1824

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10329 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.4	0.6
10°-20°	675.6	2.9
20°-30°	1181.7	5.0
30°-40°	1521.2	6.5
40°-50°	1699.2	7.2
50°-60°	1627.4	6.9
60°-70°	1289.7	5.5
70°-80°	758.4	3.2
80°-90°	219.1	0.9
90°-100°	1078.5	4.6
100°-110°	2835.5	12.1
110°-120°	2940.1	12.5
120°-130°	2358.3	10.0
130°-140°	1850.4	7.9
140°-150°	1420.3	6.1
150°-160°	1022.8	4.4
160°-170°	625.8	2.7
170°-180°	211.4	0.9
0°-30°	2009.8	8.6
0°-40°	3531.0	15.0
0°-60°	6857.6	29.2
0°-90°	9124.8	38.9
90°-120°	6854.0	29.2
90°-150°	12482.9	53.2
90°-180°	14343.0	61.1
0°-180°	23467.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1178	1178	1178	1178	1178	
5°	1148	1232	1387	1569	1626	106
15°	860	1588	2675	3244	3346	239
25°	549	1800	3187	3327	3331	253
35°	371	1720	3001	3172	3297	232
45°	254	1372	2652	3039	3175	196
55°	182	872	2251	2615	2687	166
65°	144	462	1671	1879	1906	143
75°	106	284	917	1008	1012	111
85°	38	87	227	250	254	40
90°	15	42	113	56	56	15
95°	142	558	1858	958	652	158
105°	511	774	3135	4759	4440	542
115°	907	1102	2511	5009	5717	896
125°	1262	1415	2284	3859	4553	1121
135°	1504	1656	2213	3115	3533	1164
145°	1745	1856	2184	2658	2866	1093
155°	1972	2027	2184	2398	2468	906
165°	2128	2156	2184	2270	2299	601
175°	2213	2213	2199	2227	2227	210
180°	2213	2213	2213	2213	2213	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1178.5	1178.5	1178.5	1178.5	1178.5	1178.5	1178.5	1178.5	1178.5	1178.5	1178.5
2.5°	1178.5	1178.5	1186.0	1189.8	1197.4	1201.2	1208.8	1216.3	1239.1	1242.9	1250.4
5°	1148.2	1163.3	1212.6	1231.5	1284.6	1356.6	1386.9	1436.1	1538.4	1568.7	1587.6
7.5°	1102.7	1136.8	1258.0	1288.3	1420.9	1610.4	1690.0	1796.0	1959.0	2038.6	2103.0
10°	1030.7	1102.7	1318.6	1390.6	1606.7	1894.6	2042.4	2190.2	2436.5	2546.3	2588.0
12.5°	951.1	1068.5	1383.0	1481.6	1792.3	2212.9	2391.0	2554.0	2834.3	2982.1	3004.8
15°	860.1	1019.3	1443.7	1587.6	1989.3	2478.1	2675.2	2876.0	3137.5	3243.5	3270.1
17.5°	780.6	981.4	1500.5	1652.1	2140.9	2716.9	2917.7	3084.4	3296.6	3368.6	3387.6
20°	682.0	920.8	1538.4	1735.4	2300.0	2891.1	3084.4	3213.2	3357.2	3402.7	3410.2
22.5°	610.0	856.4	1561.1	1765.7	2406.2	2997.3	3160.2	3262.5	3361.0	3376.2	3379.9
25°	549.4	784.4	1557.3	1799.9	2497.1	3061.7	3186.7	3262.5	3319.3	3326.9	3326.9
27.5°	492.6	704.8	1542.2	1807.4	2565.3	3076.8	3175.4	3228.4	3254.9	3270.1	3270.1
30°	443.3	629.0	1504.3	1792.3	2595.6	3061.7	3141.2	3167.8	3194.3	3217.0	3228.4
32.5°	405.4	557.0	1447.5	1762.0	2599.4	3023.8	3080.6	3095.8	3133.7	3186.7	3205.7
35°	371.3	485.0	1383.0	1720.3	2576.6	2963.1	3001.1	3016.2	3092.0	3171.5	3198.1
37.5°	337.3	432.0	1299.7	1648.3	2542.6	2891.1	2917.7	2944.2	3061.7	3156.4	3186.7
40°	303.1	386.5	1201.2	1568.7	2489.5	2804.0	2826.7	2868.4	3023.8	3133.7	3164.0
42.5°	276.6	348.7	1095.1	1485.3	2421.3	2705.5	2739.6	2800.2	2978.3	3095.8	3129.8
45°	253.9	310.7	981.4	1371.7	2334.2	2603.2	2652.4	2735.8	2925.3	3038.9	3069.2
47.5°	231.2	284.2	863.9	1254.3	2239.4	2500.9	2565.3	2660.0	2853.3	2963.1	2989.7
50°	212.2	257.6	746.4	1129.2	2137.1	2391.0	2466.8	2565.3	2762.4	2864.7	2898.8
52.5°	197.0	234.9	636.6	1004.2	2019.6	2277.3	2364.5	2466.8	2652.4	2751.0	2773.7
55°	181.9	216.0	541.9	871.5	1898.4	2156.1	2250.8	2349.3	2531.2	2614.6	2629.7
57.5°	174.3	200.9	462.3	746.4	1769.6	2019.6	2125.8	2216.7	2387.2	2451.6	2466.8
60°	162.9	189.5	401.6	640.3	1629.3	1890.8	1981.8	2072.7	2216.7	2269.7	2281.1
62.5°	151.5	181.9	356.2	538.0	1485.3	1739.3	1830.2	1913.5	2034.8	2072.7	2087.8
65°	144.0	174.3	322.1	462.3	1337.6	1580.1	1671.0	1743.1	1841.5	1879.4	1887.0
67.5°	136.4	166.7	295.6	397.9	1189.8	1420.9	1489.2	1557.3	1633.1	1671.0	1674.8
70°	125.0	159.2	272.8	352.4	1038.2	1239.1	1296.0	1367.9	1428.6	1447.5	1458.9
72.5°	117.5	147.8	257.6	318.3	882.9	1064.8	1117.9	1159.5	1212.6	1231.5	1231.5
75°	106.1	132.6	242.5	284.2	723.7	871.5	917.0	958.7	1000.4	1007.9	996.5
77.5°	94.7	117.5	208.4	238.7	564.6	689.7	727.5	750.3	784.4	792.0	795.8
80°	79.5	102.3	162.9	185.7	409.3	507.7	534.3	553.2	583.5	583.5	591.1
82.5°	60.6	79.5	117.5	132.6	276.6	348.7	371.3	382.7	401.6	401.6	401.6
85°	37.9	49.2	75.8	87.2	166.7	212.2	227.3	231.2	246.3	250.1	250.1
87.5°	18.9	26.5	49.2	53.1	87.2	109.8	109.8	117.5	117.5	113.7	109.8
90°	14.8	26.7	38.6	41.6	65.3	96.9	112.8	100.3	75.2	56.4	56.4
92.5°	59.4	160.3	261.4	286.6	403.0	558.0	635.5	557.0	399.9	282.1	270.9
95°	142.5	327.3	512.1	558.3	991.4	1568.9	1857.6	1657.6	1257.7	957.8	923.8
97.5°	246.5	409.5	572.5	613.3	1335.4	2298.3	2779.8	2653.4	2400.6	2211.0	2146.3
100°	326.7	474.6	622.4	659.4	1460.7	2529.2	3063.4	3072.7	3091.1	3105.0	3027.9
102.5°	395.0	533.0	670.8	705.3	1518.1	2601.8	3143.6	3304.6	3626.7	3868.3	3802.3
105°	510.8	627.6	744.4	773.7	1560.7	2610.0	3134.6	3495.6	4217.7	4759.2	4723.7
107.5°	629.6	738.5	847.4	874.6	1568.6	2493.9	2956.5	3460.1	4467.1	5222.4	5231.0
110°	709.8	808.1	906.5	931.0	1556.7	2390.9	2808.0	3371.0	4496.8	5341.3	5378.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	788.5	882.2	975.9	999.3	1557.1	2301.0	2672.9	3249.1	4401.3	5265.6	5322.3
115°	907.2	993.7	1080.2	1101.8	1571.6	2197.8	2511.0	3066.1	4176.1	5008.7	5087.4
117.5°	1024.6	1103.1	1181.7	1201.3	1600.7	2133.3	2399.7	2900.6	3902.4	4653.7	4741.0
120°	1092.9	1166.8	1240.8	1259.2	1624.5	2111.6	2355.1	2812.8	3728.2	4414.7	4499.5
122.5°	1159.7	1234.3	1308.9	1327.5	1658.7	2100.2	2321.0	2733.1	3557.4	4175.6	4259.3
125°	1262.2	1330.2	1398.1	1415.2	1704.7	2090.8	2283.8	2633.9	3334.1	3859.3	3936.3
127.5°	1345.4	1414.0	1482.7	1499.8	1750.7	2085.3	2252.6	2553.2	3154.4	3605.4	3670.4
130°	1389.9	1463.8	1537.7	1556.2	1784.4	2088.7	2240.8	2508.4	3043.6	3445.0	3505.1
132.5°	1435.9	1509.8	1583.8	1602.3	1811.6	2090.8	2230.3	2469.9	2949.1	3308.4	3362.3
135°	1504.3	1571.6	1638.9	1655.7	1841.4	2088.9	2212.6	2413.2	2814.5	3115.4	3161.8
137.5°	1574.1	1640.7	1707.3	1724.0	1885.8	2101.7	2209.6	2379.2	2718.4	2972.8	3010.7
140°	1631.9	1693.3	1754.6	1770.0	1913.1	2103.8	2199.2	2345.6	2638.7	2858.4	2893.9
142.5°	1676.4	1733.2	1790.0	1804.2	1935.8	2111.4	2199.2	2327.9	2585.3	2778.3	2808.8
145°	1744.8	1794.3	1843.8	1856.2	1965.5	2111.4	2184.4	2289.6	2500.1	2658.0	2681.1
147.5°	1813.1	1861.2	1909.4	1921.5	2009.1	2126.0	2184.4	2267.2	2432.8	2557.0	2576.1
150°	1857.6	1901.2	1944.8	1955.7	2031.9	2133.5	2184.4	2254.3	2394.2	2499.1	2514.6
152.5°	1903.7	1936.7	1969.7	1978.0	2046.8	2138.5	2184.4	2244.1	2363.5	2453.1	2464.9
155°	1971.9	1996.4	2020.8	2026.9	2079.4	2149.4	2184.4	2231.9	2326.9	2398.1	2405.9
157.5°	2022.5	2046.2	2070.0	2076.0	2112.1	2160.3	2184.4	2221.3	2295.2	2350.6	2356.1
160°	2056.6	2075.1	2093.6	2098.2	2126.9	2165.2	2184.4	2216.0	2279.4	2326.9	2330.1
162.5°	2090.8	2104.6	2118.5	2121.9	2142.8	2170.5	2184.4	2211.1	2264.6	2304.6	2307.6
165°	2127.9	2140.4	2152.9	2156.1	2165.5	2178.1	2184.4	2203.5	2241.7	2270.4	2273.6
167.5°	2162.1	2168.0	2173.9	2175.4	2183.3	2193.9	2199.2	2211.7	2236.8	2255.6	2256.9
170°	2184.4	2190.3	2196.2	2197.7	2198.1	2198.8	2199.2	2211.7	2236.8	2255.6	2255.6
172.5°	2196.2	2197.6	2198.9	2199.2	2199.2	2199.2	2199.2	2209.1	2228.9	2243.7	2242.6
175°	2212.6	2212.6	2212.6	2212.6	2208.1	2202.1	2199.2	2205.5	2218.0	2227.4	2227.4
177.5°	2212.6	2212.6	2212.6	2212.6	2209.1	2204.4	2202.1	2207.1	2217.0	2224.4	2223.1
180°	2212.6	2212.6	2212.6	2212.6	2212.6	2212.6	2212.6	2212.6	2212.6	2212.6	2212.6



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	1178.5	1178.5
2.5°	1258.0	1250.4
5°	1618.0	1625.6
7.5°	2178.8	2175.0
10°	2709.3	2743.3
12.5°	3095.8	3103.4
15°	3330.7	3345.9
17.5°	3421.6	3425.4
20°	3425.4	3417.9
22.5°	3383.8	3376.2
25°	3334.5	3330.7
27.5°	3289.0	3292.8
30°	3270.1	3281.5
32.5°	3270.1	3289.0
35°	3277.6	3296.6
37.5°	3273.8	3296.6
40°	3258.7	3285.2
42.5°	3217.0	3236.0
45°	3152.6	3175.4
47.5°	3069.2	3084.4
50°	2963.1	2978.3
52.5°	2830.5	2834.3
55°	2671.4	2686.6
57.5°	2500.9	2504.6
60°	2311.4	2322.8
62.5°	2110.6	2110.6
65°	1898.4	1906.0
67.5°	1678.6	1697.6
70°	1455.0	1458.9
72.5°	1235.2	1235.2
75°	1007.9	1011.7
77.5°	792.0	792.0
80°	587.4	591.1
82.5°	405.4	413.0
85°	253.9	253.9
87.5°	117.5	106.1
90°	56.4	56.4
92.5°	226.0	181.2
95°	787.8	651.9
97.5°	1887.6	1628.9
100°	2719.7	2411.5
102.5°	3538.3	3274.3
105°	4581.8	4440.0
107.5°	5265.4	5299.7
110°	5526.1	5673.9





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	5549.3	5776.3
115°	5402.2	5717.0
117.5°	5090.1	5439.3
120°	4838.7	5177.9
122.5°	4593.9	4928.5
125°	4244.5	4552.8
127.5°	3930.4	4190.4
130°	3745.3	3985.6
132.5°	3577.4	3792.5
135°	3347.1	3532.6
137.5°	3162.5	3314.4
140°	3035.9	3177.7
142.5°	2930.9	3053.0
145°	2773.5	2865.9
147.5°	2652.7	2729.3
150°	2576.7	2638.8
152.5°	2511.7	2558.5
155°	2436.9	2467.9
157.5°	2377.9	2399.7
160°	2342.6	2355.1
162.5°	2319.4	2331.3
165°	2286.1	2298.7
167.5°	2262.2	2267.4
170°	2255.6	2255.6
172.5°	2237.9	2233.3
175°	2227.4	2227.4
177.5°	2217.8	2212.6
180°	2212.6	2212.6



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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	4.39	5.19	5.43	6.24	7.66	17.59	18.38	18.62	19.43	20.85
	3H	5.09	5.81	6.14	6.87	8.31	19.42	20.14	20.47	21.20	22.64
	4H	5.39	6.07	6.45	7.13	8.57	20.07	20.75	21.13	21.81	23.26
	6H	5.64	6.26	6.71	7.33	8.78	20.50	21.13	21.57	22.19	23.65
	8H	5.70	6.30	6.78	7.38	8.83	20.62	21.22	21.70	22.30	23.75
	12H	5.72	6.28	6.80	7.36	8.84	20.69	21.26	21.77	22.33	23.81
4H	2H	11.61	12.29	12.68	13.35	14.79	17.85	18.53	18.92	19.59	21.04
	3H	13.17	13.74	14.25	14.83	16.28	19.90	20.46	20.97	21.55	23.01
	4H	13.26	13.78	14.34	14.86	16.34	20.66	21.18	21.75	22.26	23.74
	6H	13.27	13.72	14.36	14.82	16.29	21.20	21.65	22.29	22.75	24.23
	8H	13.24	13.66	14.33	14.76	16.25	21.37	21.79	22.46	22.88	24.37
	12H	13.20	13.58	14.31	14.68	16.18	21.46	21.84	22.57	22.95	24.44
8H	4H	14.70	15.12	15.80	16.22	17.71	20.72	21.14	21.81	22.23	23.72
	6H	14.94	15.29	16.06	16.43	17.91	21.35	21.70	22.46	22.83	24.32
	8H	14.96	15.26	16.08	16.38	17.89	21.57	21.87	22.69	22.99	24.50
	12H	14.92	15.19	16.05	16.31	17.85	21.71	21.98	22.84	23.10	24.64
12H	4H	14.85	15.23	15.95	16.33	17.83	20.67	21.05	21.78	22.16	23.65
	6H	15.20	15.51	16.32	16.63	18.13	21.33	21.64	22.45	22.75	24.26
	8H	15.27	15.54	16.39	16.65	18.19	21.56	21.83	22.69	22.94	24.49