

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: P938017

Luminaire Tested: SQ4-FB-125U-100D-840-1D-UNV-STD-W-12

Issue Date: 12/17/2024

**Test Information**

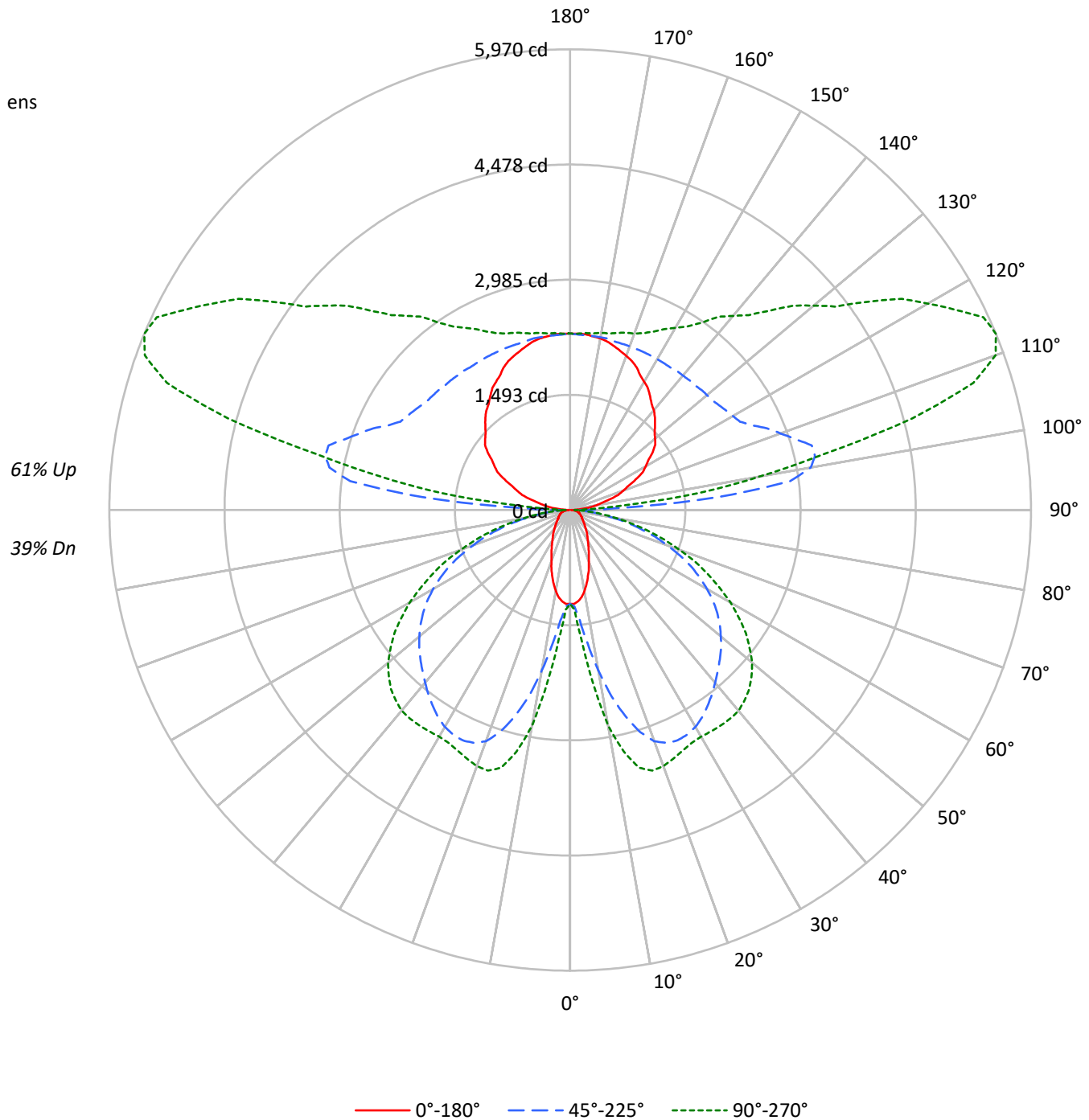
Test Method: LM-79-2019  
Report Number: P938017  
REPORT IS A COMBINATION OF REPORTS P933591 AND P933786  
Test Lab: INNOVATION CENTER  
Issue Date: 12/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: SQ4-FB-125U-100D-840-1D-UNV-STD-W-12  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24253.4 lumens  
Efficiency: N/A  
Efficacy: 125.5 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			
1	95	90	86	83	86	82	79	76	67	65	62	53	51	50	40	39	38	32			
2	86	78	72	67	78	71	66	61	58	54	51	46	43	41	35	33	31	26			
3	78	68	61	55	71	62	56	51	51	46	42	40	37	34	30	28	26	21			
4	71	60	52	46	64	55	48	42	45	40	35	35	32	29	27	24	22	18			
5	65	53	45	39	59	49	41	36	40	34	30	31	27	24	24	21	19	15			
6	60	47	39	33	54	43	36	31	35	30	26	28	24	21	21	18	16	13			
7	55	43	35	29	50	39	32	27	32	26	23	25	21	18	19	16	14	11			
8	51	38	31	25	46	35	28	23	29	24	20	23	19	16	18	15	13	10			
9	47	35	27	22	43	32	25	21	26	21	17	21	17	14	16	13	11	9			
10	44	32	25	20	40	29	23	18	24	19	16	19	15	13	15	12	10	8			

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	157.5	0.6
10°-20°	698.2	2.9
20°-30°	1221.3	5.0
30°-40°	1572.2	6.5
40°-50°	1756.0	7.2
50°-60°	1681.9	6.9
60°-70°	1332.9	5.5
70°-80°	783.8	3.2
80°-90°	226.5	0.9
90°-100°	1114.6	4.6
100°-110°	2930.4	12.1
110°-120°	3038.5	12.5
120°-130°	2437.2	10.0
130°-140°	1912.4	7.9
140°-150°	1467.8	6.1
150°-160°	1057.1	4.4
160°-170°	646.8	2.7
170°-180°	218.5	0.9
0°-30°	2077.0	8.6
0°-40°	3649.2	15.0
0°-60°	7087.1	29.2
0°-90°	9430.3	38.9
90°-120°	7083.4	29.2
90°-150°	12900.8	53.2
90°-180°	14823.0	61.1
0°-180°	24253.4	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°	15	43	117	58	58	15
95°	147	577	1920	990	674	164
105°	528	800	3240	4918	4589	560
115°	938	1139	2595	5176	5908	926
125°	1304	1462	2360	3988	4705	1158
135°	1555	1711	2287	3220	3651	1203
145°	1803	1918	2258	2747	2962	1130
155°	2038	2095	2258	2478	2550	936
165°	2199	2228	2258	2346	2376	621
175°	2287	2287	2273	2302	2302	217
180°	2287	2287	2287	2287	2287	



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**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°	15.3	27.6	39.9	43.0	67.5	100.2	116.6	103.6	77.8	58.3	58.3
92.5°	61.4	165.7	270.1	296.2	416.4	576.7	656.8	575.6	413.3	291.6	280.0
95°	147.3	338.3	529.3	577.0	1024.6	1621.4	1919.8	1713.1	1299.8	989.9	954.7
97.5°	254.7	423.2	591.7	633.8	1380.1	2375.3	2872.8	2742.2	2481.0	2285.0	2218.2
100°	337.6	490.4	643.2	681.4	1509.6	2613.9	3165.9	3175.5	3194.6	3208.9	3129.3
102.5°	408.2	550.8	693.3	728.9	1568.9	2688.8	3248.8	3415.2	3748.1	3997.7	3929.6
105°	527.9	648.6	769.4	799.6	1612.9	2697.3	3239.6	3612.6	4358.9	4918.5	4881.8
107.5°	650.7	763.2	875.8	903.9	1621.1	2577.4	3055.5	3575.9	4616.6	5397.2	5406.1
110°	733.6	835.2	936.8	962.2	1608.8	2470.9	2902.0	3483.8	4647.4	5520.1	5558.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	814.9	911.7	1008.6	1032.8	1609.3	2378.0	2762.3	3357.8	4548.7	5441.8	5500.5
115°	937.6	1026.9	1116.3	1138.7	1624.2	2271.4	2595.1	3168.7	4315.9	5176.3	5257.6
117.5°	1058.9	1140.1	1221.3	1241.5	1654.3	2204.7	2480.0	2997.7	4033.0	4809.5	4899.7
120°	1129.5	1205.9	1282.3	1301.4	1678.9	2182.3	2433.9	2907.0	3853.0	4562.5	4650.1
122.5°	1198.5	1275.6	1352.7	1371.9	1714.2	2170.5	2398.7	2824.6	3676.4	4315.4	4401.8
125°	1304.5	1374.7	1445.0	1462.5	1761.8	2160.8	2360.2	2722.0	3445.7	3988.5	4068.1
127.5°	1390.4	1461.4	1532.3	1550.0	1809.3	2155.1	2328.0	2638.7	3260.0	3726.0	3793.2
130°	1436.5	1512.8	1589.2	1608.3	1844.1	2158.6	2315.8	2592.3	3145.5	3560.4	3622.4
132.5°	1484.0	1560.3	1636.8	1655.9	1872.3	2160.8	2305.0	2552.6	3047.8	3419.2	3474.8
135°	1554.6	1624.2	1693.7	1711.1	1903.0	2158.8	2286.6	2494.0	2908.7	3219.7	3267.6
137.5°	1626.7	1695.6	1764.5	1781.7	1948.9	2172.0	2283.6	2458.8	2809.4	3072.3	3111.5
140°	1686.5	1749.9	1813.4	1829.3	1977.1	2174.2	2272.8	2424.2	2727.0	2954.1	2990.8
142.5°	1732.6	1791.2	1849.9	1864.6	2000.6	2182.1	2272.8	2405.8	2671.8	2871.3	2902.8
145°	1803.2	1854.4	1905.6	1918.3	2031.3	2182.1	2257.5	2366.3	2583.8	2746.9	2770.8
147.5°	1873.7	1923.5	1973.3	1985.8	2076.4	2197.1	2257.5	2343.0	2514.3	2642.6	2662.4
150°	1919.8	1964.8	2009.9	2021.2	2099.9	2204.9	2257.5	2329.8	2474.3	2582.7	2598.7
152.5°	1967.4	2001.5	2035.7	2044.2	2115.3	2210.1	2257.5	2319.2	2442.6	2535.2	2547.4
155°	2037.9	2063.2	2088.4	2094.8	2149.0	2221.3	2257.5	2306.6	2404.8	2478.4	2486.4
157.5°	2090.2	2114.7	2139.3	2145.4	2182.8	2232.6	2257.5	2295.6	2372.0	2429.3	2434.9
160°	2125.5	2144.6	2163.7	2168.5	2198.1	2237.7	2257.5	2290.2	2355.7	2404.8	2408.1
162.5°	2160.8	2175.1	2189.4	2193.0	2214.5	2243.2	2257.5	2285.1	2340.4	2381.8	2384.8
165°	2199.1	2212.0	2225.0	2228.2	2238.0	2251.0	2257.5	2277.2	2316.8	2346.4	2349.7
167.5°	2234.5	2240.6	2246.7	2248.2	2256.4	2267.4	2272.8	2285.7	2311.6	2331.1	2332.5
170°	2257.5	2263.6	2269.7	2271.2	2271.7	2272.4	2272.8	2285.7	2311.6	2331.1	2331.1
172.5°	2269.7	2271.1	2272.5	2272.8	2272.8	2272.8	2272.8	2283.1	2303.5	2318.8	2317.7
175°	2286.6	2286.6	2286.6	2286.6	2282.0	2275.9	2272.8	2279.3	2292.3	2301.9	2301.9
177.5°	2286.6	2286.6	2286.6	2286.6	2283.1	2278.2	2275.9	2281.0	2291.2	2298.9	2297.5
180°	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6



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**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°	58.3	58.3
92.5°	233.6	187.2
95°	814.2	673.7
97.5°	1950.8	1683.5
100°	2810.8	2492.2
102.5°	3656.7	3383.9
105°	4735.2	4588.6
107.5°	5441.6	5477.1
110°	5711.0	5863.8





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	5735.0	5969.7
115°	5583.0	5908.3
117.5°	5260.5	5621.3
120°	5000.7	5351.2
122.5°	4747.6	5093.4
125°	4386.6	4705.2
127.5°	4062.0	4330.7
130°	3870.7	4119.0
132.5°	3697.1	3919.4
135°	3459.2	3650.9
137.5°	3268.4	3425.3
140°	3137.5	3284.1
142.5°	3029.0	3155.2
145°	2866.3	2961.8
147.5°	2741.5	2820.6
150°	2663.0	2727.1
152.5°	2595.8	2644.2
155°	2518.5	2550.5
157.5°	2457.5	2480.0
160°	2421.0	2433.9
162.5°	2397.1	2409.3
165°	2362.6	2375.6
167.5°	2337.9	2343.3
170°	2331.1	2331.1
172.5°	2312.8	2308.1
175°	2301.9	2301.9
177.5°	2292.1	2286.6
180°	2286.6	2286.6



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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	4.51	5.31	5.55	6.36	7.77	17.70	18.50	18.74	19.55	20.97
	3H	5.21	5.92	6.26	6.98	8.42	19.54	20.25	20.59	21.31	22.75
	4H	5.50	6.18	6.56	7.24	8.69	20.18	20.86	21.25	21.93	23.37
	6H	5.75	6.38	6.82	7.44	8.90	20.62	21.24	21.69	22.31	23.76
	8H	5.82	6.41	6.89	7.49	8.95	20.74	21.33	21.81	22.42	23.87
	12H	5.83	6.40	6.91	7.47	8.95	20.81	21.37	21.89	22.45	23.92
4H	2H	11.72	12.40	12.79	13.46	14.91	17.96	18.64	19.03	19.71	21.15
	3H	13.28	13.85	14.36	14.94	16.40	20.01	20.58	21.09	21.67	23.12
	4H	13.38	13.90	14.46	14.98	16.46	20.78	21.30	21.86	22.38	23.86
	6H	13.38	13.83	14.47	14.93	16.41	21.32	21.77	22.41	22.87	24.34
	8H	13.36	13.78	14.45	14.87	16.36	21.48	21.90	22.57	22.99	24.48
	12H	13.31	13.69	14.42	14.80	16.29	21.57	21.95	22.68	23.06	24.56
8H	4H	14.82	15.24	15.91	16.33	17.82	20.83	21.25	21.92	22.35	23.84
	6H	15.06	15.40	16.17	16.54	18.03	21.46	21.81	22.58	22.95	24.43
	8H	15.07	15.38	16.19	16.50	18.00	21.68	21.99	22.80	23.11	24.61
	12H	15.04	15.31	16.16	16.42	17.96	21.83	22.10	22.95	23.21	24.75
12H	4H	14.96	15.34	16.07	16.45	17.94	20.78	21.16	21.89	22.27	23.76
	6H	15.32	15.62	16.44	16.74	18.25	21.44	21.75	22.57	22.87	24.37
	8H	15.38	15.65	16.51	16.77	18.31	21.67	21.94	22.80	23.06	24.60