

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: P938355

Luminaire Tested: SQ4-FB-150U-075D-93050-1D-UNV-STD-W-12-4000K

Issue Date: 12/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P938355  
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-12-4000K  
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L  
Light Source: -  
Ballast/Driver: -

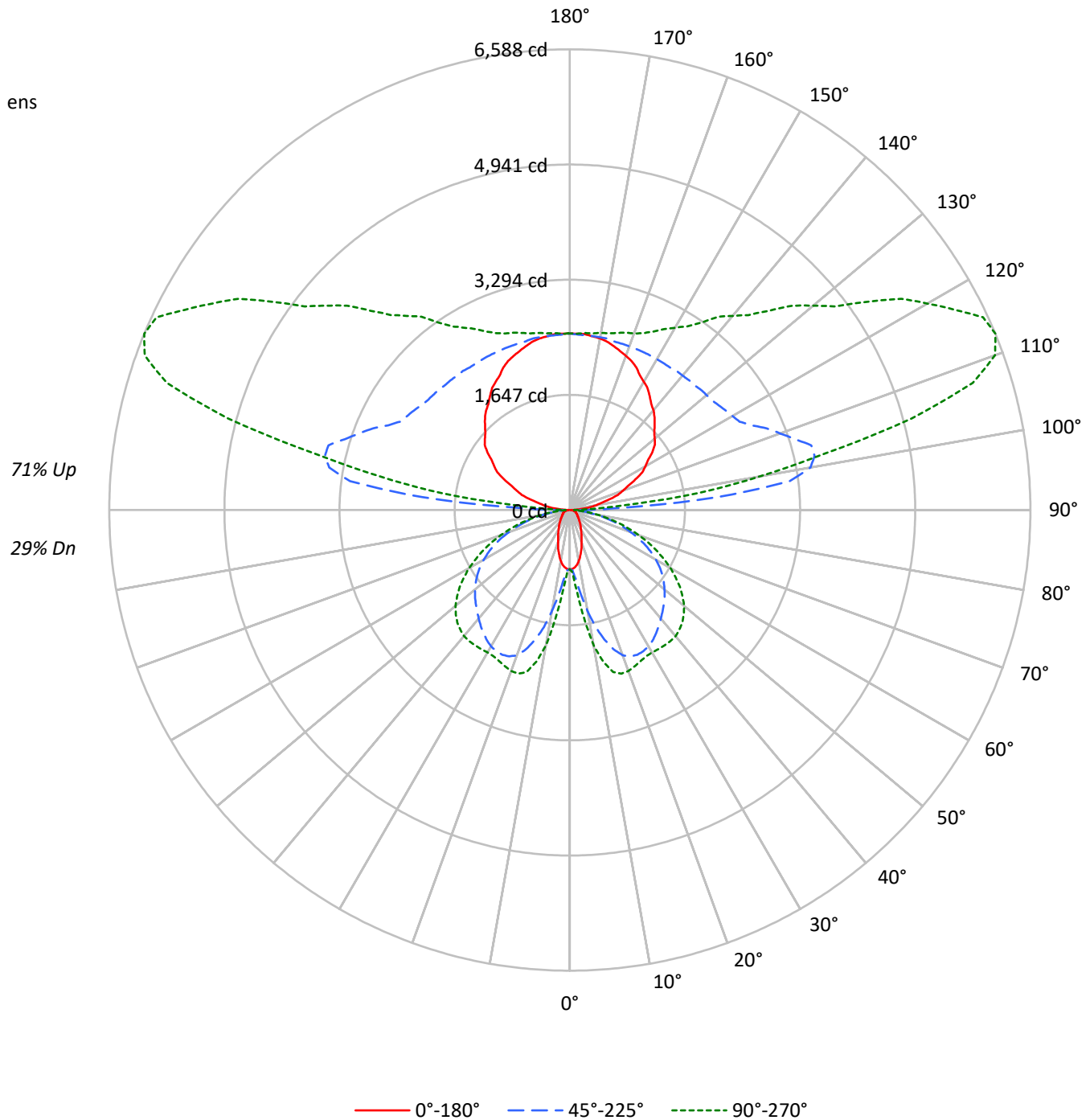
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22902.3 lumens  
Efficiency: N/A  
Efficacy: 120.0 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

TEST NUMBER: P938355  
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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	0
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°	2612	2612	2612
5°	2553	3020	3511
10°	2316	4403	5821
15°	1969	5754	7029
20°	1604	6670	7164
25°	1338	6981	7018
30°	1129	7027	7005
35°	999	6913	7186
40°	871	6763	7373
45°	789	6654	7402
50°	725	6556	7280
55°	694	6412	6957
60°	712	6133	6447
65°	742	5708	5747
70°	792	4981	4856
75°	881	4065	3789
80°	969	2823	2553
85°	881	1500	1306

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7402 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.2	0.5
10°-20°	484.2	2.1
20°-30°	846.9	3.7
30°-40°	1090.2	4.8
40°-50°	1217.7	5.3
50°-60°	1166.3	5.1
60°-70°	924.3	4.0
70°-80°	543.5	2.4
80°-90°	160.6	0.7
90°-100°	1230.1	5.4
100°-110°	3234.0	14.1
110°-120°	3353.3	14.6
120°-130°	2689.8	11.7
130°-140°	2110.5	9.2
140°-150°	1619.9	7.1
150°-160°	1166.6	5.1
160°-170°	713.8	3.1
170°-180°	241.2	1.1
0°-30°	1440.3	6.3
0°-40°	2530.6	11.0
0°-60°	4914.6	21.5
0°-90°	6543.1	28.6
90°-120°	7817.5	34.1
90°-150°	14237.7	62.2
90°-180°	16359.0	71.4
0°-180°	22902.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	844	844	844	844	844	
5°	823	882	994	1124	1165	76
15°	616	1138	1917	2324	2398	172
25°	394	1290	2284	2384	2387	181
35°	266	1233	2151	2273	2363	166
45°	182	983	1901	2178	2276	141
55°	130	625	1613	1874	1925	119
65°	103	331	1198	1347	1366	102
75°	76	204	657	722	725	80
85°	27	62	163	179	182	29
90°	17	47	129	64	64	16
95°	163	637	2119	1092	744	181
105°	583	882	3575	5428	5064	618
115°	1035	1257	2864	5713	6521	1022
125°	1440	1614	2605	4402	5193	1278
135°	1716	1888	2524	3553	4029	1327
145°	1990	2117	2491	3032	3269	1247
155°	2249	2312	2491	2735	2815	1033
165°	2427	2459	2491	2590	2622	685
175°	2524	2524	2508	2540	2540	240
180°	2524	2524	2524	2524	2524	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	844.5	844.5	844.5	844.5	844.5	844.5	844.5	844.5	844.5	844.5	844.5
2.5°	844.5	844.5	849.9	852.7	858.1	860.8	866.2	871.7	888.0	890.7	896.1
5°	822.8	833.7	869.0	882.5	920.5	972.1	993.9	1029.3	1102.6	1124.3	1137.9
7.5°	790.2	814.6	901.5	923.3	1018.3	1154.2	1211.2	1287.2	1404.0	1461.0	1507.2
10°	738.6	790.2	945.0	996.6	1151.5	1357.8	1463.7	1569.6	1746.1	1824.9	1854.8
12.5°	681.6	765.8	991.2	1061.8	1284.5	1585.9	1713.6	1830.3	2031.3	2137.2	2153.5
15°	616.4	730.5	1034.7	1137.9	1425.7	1776.0	1917.2	2061.1	2248.5	2324.5	2343.6
17.5°	559.4	703.3	1075.4	1184.0	1534.3	1947.1	2091.0	2210.5	2362.6	2414.2	2427.7
20°	488.8	659.9	1102.6	1243.8	1648.4	2072.0	2210.5	2302.8	2406.0	2438.6	2444.0
22.5°	437.2	613.7	1118.9	1265.5	1724.4	2148.0	2264.8	2338.1	2408.7	2419.6	2422.3
25°	393.7	562.1	1116.2	1289.9	1789.6	2194.2	2283.8	2338.1	2378.9	2384.3	2384.3
27.5°	353.0	505.1	1105.3	1295.4	1838.5	2205.1	2275.7	2313.7	2332.7	2343.6	2343.6
30°	317.7	450.8	1078.1	1284.5	1860.2	2194.2	2251.2	2270.2	2289.2	2305.5	2313.7
32.5°	290.6	399.2	1037.4	1262.8	1862.9	2167.0	2207.8	2218.6	2245.8	2283.8	2297.4
35°	266.1	347.6	991.2	1232.9	1846.6	2123.6	2150.8	2161.6	2215.9	2272.9	2292.0
37.5°	241.7	309.6	931.4	1181.3	1822.2	2072.0	2091.0	2110.0	2194.2	2262.1	2283.8
40°	217.2	277.0	860.8	1124.3	1784.2	2009.5	2025.8	2055.7	2167.0	2245.8	2267.5
42.5°	198.2	249.8	784.8	1064.6	1735.3	1938.9	1963.4	2006.8	2134.5	2218.6	2243.1
45°	181.9	222.7	703.3	983.0	1672.8	1865.6	1900.9	1960.7	2096.4	2177.9	2199.6
47.5°	165.6	203.7	619.1	898.8	1604.9	1792.3	1838.5	1906.4	2044.8	2123.6	2142.6
50°	152.1	184.7	535.0	809.2	1531.6	1713.6	1767.9	1838.5	1979.7	2053.0	2077.4
52.5°	141.2	168.4	456.2	719.6	1447.4	1632.1	1694.6	1767.9	1900.9	1971.5	1987.8
55°	130.3	154.8	388.3	624.6	1360.5	1545.2	1613.1	1683.7	1814.0	1873.8	1884.6
57.5°	124.9	143.9	331.3	535.0	1268.2	1447.4	1523.5	1588.6	1710.8	1757.0	1767.9
60°	116.8	135.8	287.8	458.9	1167.7	1355.1	1420.3	1485.5	1588.6	1626.7	1634.8
62.5°	108.6	130.3	255.3	385.6	1064.6	1246.5	1311.7	1371.4	1458.3	1485.5	1496.3
65°	103.2	124.9	230.8	331.3	958.6	1132.4	1197.6	1249.2	1319.8	1347.0	1352.4
67.5°	97.8	119.5	211.8	285.1	852.7	1018.3	1067.3	1116.2	1170.5	1197.6	1200.3
70°	89.6	114.1	195.5	252.5	744.0	888.0	928.7	980.3	1023.7	1037.4	1045.6
72.5°	84.2	105.9	184.7	228.1	632.7	763.1	801.1	830.9	869.0	882.5	882.5
75°	76.0	95.0	173.8	203.7	518.7	624.6	657.1	687.0	716.9	722.3	714.2
77.5°	67.9	84.2	149.4	171.1	404.6	494.2	521.4	537.7	562.1	567.5	570.3
80°	57.0	73.3	116.8	133.1	293.3	363.9	382.9	396.5	418.2	418.2	423.6
82.5°	43.4	57.0	84.2	95.0	198.2	249.8	266.1	274.3	287.8	287.8	287.8
85°	27.2	35.3	54.3	62.5	119.5	152.1	162.9	165.6	176.5	179.2	179.2
87.5°	13.6	19.0	35.3	38.0	62.5	78.7	78.7	84.2	84.2	81.5	78.7
90°	16.9	30.5	44.1	47.4	74.5	110.6	128.7	114.4	85.8	64.4	64.4
92.5°	67.7	182.8	298.1	326.9	459.6	636.4	724.9	635.2	456.1	321.8	309.0
95°	162.6	373.3	584.1	636.8	1130.8	1789.5	2118.8	1890.7	1434.6	1092.4	1053.7
97.5°	281.1	467.1	653.0	699.5	1523.2	2621.4	3170.5	3026.4	2738.1	2521.9	2448.1
100°	372.6	541.2	709.8	752.0	1666.0	2884.7	3494.0	3504.5	3525.6	3541.4	3453.6
102.5°	450.5	607.8	765.1	804.5	1731.5	2967.5	3585.5	3769.2	4136.5	4412.0	4336.7
105°	582.7	715.9	849.1	882.4	1780.1	2976.9	3575.3	3987.1	4810.6	5428.2	5387.7
107.5°	718.2	842.3	966.5	997.6	1789.1	2844.4	3372.1	3946.4	5095.1	5956.6	5966.4
110°	809.6	921.7	1033.9	1061.9	1775.6	2727.0	3202.7	3844.9	5129.0	6092.1	6134.3



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	899.4	1006.3	1113.2	1139.9	1776.1	2624.4	3048.6	3705.7	5020.0	6005.7	6070.5
115°	1034.9	1133.4	1232.1	1256.7	1792.5	2506.8	2864.0	3497.1	4763.1	5712.7	5802.5
117.5°	1168.7	1258.2	1347.8	1370.1	1825.7	2433.2	2736.9	3308.3	4450.9	5308.0	5407.5
120°	1246.5	1330.9	1415.1	1436.2	1852.9	2408.4	2686.2	3208.2	4252.2	5035.2	5132.0
122.5°	1322.7	1407.8	1492.9	1514.2	1891.9	2395.4	2647.2	3117.3	4057.5	4762.6	4858.0
125°	1439.7	1517.1	1594.7	1614.1	1944.4	2384.7	2604.9	3004.2	3802.9	4401.8	4489.7
127.5°	1534.4	1612.7	1691.0	1710.6	1996.8	2378.5	2569.3	2912.2	3597.9	4112.2	4186.4
130°	1585.3	1669.6	1753.8	1774.9	2035.2	2382.2	2555.7	2860.9	3471.5	3929.3	3997.8
132.5°	1637.8	1722.1	1806.3	1827.4	2066.2	2384.6	2543.9	2817.1	3363.7	3773.5	3834.9
135°	1715.6	1792.4	1869.2	1888.4	2100.2	2382.5	2523.6	2752.4	3210.1	3553.3	3606.2
137.5°	1795.3	1871.3	1947.4	1966.4	2150.9	2397.0	2520.1	2713.6	3100.5	3390.7	3434.0
140°	1861.4	1931.3	2001.4	2018.9	2182.0	2399.5	2508.3	2675.4	3009.7	3260.3	3300.8
142.5°	1912.2	1976.9	2041.6	2057.8	2208.0	2408.2	2508.3	2655.1	2948.7	3168.9	3203.7
145°	1990.1	2046.6	2103.0	2117.1	2241.8	2408.2	2491.4	2611.4	2851.5	3031.7	3058.0
147.5°	2067.9	2122.9	2177.8	2191.6	2291.5	2424.7	2491.4	2585.9	2774.8	2916.5	2938.3
150°	2118.8	2168.5	2218.2	2230.6	2317.5	2433.4	2491.4	2571.2	2730.8	2850.4	2868.1
152.5°	2171.3	2209.0	2246.5	2255.9	2334.4	2439.0	2491.4	2559.5	2695.8	2797.9	2811.3
155°	2249.2	2277.1	2304.9	2311.9	2371.7	2451.4	2491.4	2545.6	2654.0	2735.3	2744.2
157.5°	2306.8	2333.9	2360.9	2367.7	2408.9	2463.8	2491.4	2533.5	2617.8	2681.1	2687.3
160°	2345.7	2366.8	2387.9	2393.2	2425.9	2469.6	2491.4	2527.5	2599.7	2653.9	2657.6
162.5°	2384.6	2400.5	2416.2	2420.2	2443.9	2475.5	2491.4	2521.9	2582.9	2628.6	2631.9
165°	2427.0	2441.3	2455.6	2459.2	2469.9	2484.2	2491.4	2513.2	2556.8	2589.6	2593.2
167.5°	2466.0	2472.8	2479.5	2481.2	2490.3	2502.3	2508.3	2522.6	2551.2	2572.6	2574.2
170°	2491.4	2498.2	2504.9	2506.7	2507.2	2507.9	2508.3	2522.6	2551.2	2572.6	2572.6
172.5°	2504.9	2506.4	2507.9	2508.3	2508.3	2508.3	2508.3	2519.6	2542.2	2559.2	2557.8
175°	2523.6	2523.6	2523.6	2523.6	2518.5	2511.7	2508.3	2515.4	2529.7	2540.5	2540.5
177.5°	2523.6	2523.6	2523.6	2523.6	2519.6	2514.4	2511.7	2517.3	2528.7	2537.1	2535.5
180°	2523.6	2523.6	2523.6	2523.6	2523.6	2523.6	2523.6	2523.6	2523.6	2523.6	2523.6



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**CANDELA DISTRIBUTION (continued):**

	80°	90°
0°	844.5	844.5
2.5°	901.5	896.1
5°	1159.6	1165.0
7.5°	1561.5	1558.8
10°	1941.7	1966.1
12.5°	2218.6	2224.1
15°	2387.0	2397.9
17.5°	2452.2	2454.9
20°	2454.9	2449.5
22.5°	2425.0	2419.6
25°	2389.7	2387.0
27.5°	2357.1	2359.8
30°	2343.6	2351.7
32.5°	2343.6	2357.1
35°	2349.0	2362.6
37.5°	2346.3	2362.6
40°	2335.4	2354.4
42.5°	2305.5	2319.1
45°	2259.4	2275.7
47.5°	2199.6	2210.5
50°	2123.6	2134.5
52.5°	2028.6	2031.3
55°	1914.5	1925.4
57.5°	1792.3	1795.0
60°	1656.5	1664.7
62.5°	1512.6	1512.6
65°	1360.5	1366.0
67.5°	1203.0	1216.6
70°	1042.8	1045.6
72.5°	885.2	885.2
75°	722.3	725.0
77.5°	567.5	567.5
80°	420.9	423.6
82.5°	290.6	296.0
85°	181.9	181.9
87.5°	84.2	76.0
90°	64.4	64.4
92.5°	257.8	206.6
95°	898.6	743.5
97.5°	2153.0	1857.9
100°	3102.1	2750.5
102.5°	4035.7	3734.5
105°	5225.9	5064.1
107.5°	6005.6	6044.7
110°	6302.9	6471.5





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**CANDELA DISTRIBUTION (continued):**

	80°	90°
112.5°	6329.4	6588.4
115°	6161.5	6520.6
117.5°	5805.7	6203.9
120°	5518.9	5905.8
122.5°	5239.7	5621.3
125°	4841.3	5192.8
127.5°	4483.0	4779.5
130°	4271.8	4545.8
132.5°	4080.2	4325.6
135°	3817.7	4029.2
137.5°	3607.2	3780.2
140°	3462.6	3624.4
142.5°	3342.9	3482.2
145°	3163.4	3268.8
147.5°	3025.7	3112.9
150°	2938.9	3009.7
152.5°	2864.7	2918.1
155°	2779.5	2814.9
157.5°	2712.1	2736.9
160°	2671.9	2686.2
162.5°	2645.5	2659.1
165°	2607.5	2621.8
167.5°	2580.2	2586.2
170°	2572.6	2572.6
172.5°	2552.6	2547.3
175°	2540.5	2540.5
177.5°	2529.6	2523.6
180°	2523.6	2523.6



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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	1.96	2.67	3.07	3.79	5.33	15.15	15.87	16.27	16.98	18.52
	3H	2.65	3.29	3.78	4.42	5.98	16.98	17.62	18.11	18.75	20.31
	4H	2.94	3.55	4.08	4.68	6.24	17.62	18.23	18.76	19.36	20.92
	6H	3.18	3.75	4.33	4.87	6.45	18.05	18.61	19.19	19.74	21.32
	8H	3.25	3.78	4.39	4.92	6.50	18.17	18.71	19.32	19.85	21.42
	12H	3.26	3.77	4.41	4.90	6.50	18.24	18.74	19.39	19.88	21.47
4H	2H	9.16	9.77	10.30	10.90	12.46	15.40	16.02	16.55	17.14	18.70
	3H	10.72	11.23	11.86	12.37	13.95	17.44	17.95	18.59	19.10	20.68
	4H	10.80	11.27	11.95	12.41	14.01	18.21	18.68	19.36	19.81	21.41
	6H	10.81	11.21	11.96	12.37	13.96	18.74	19.14	19.90	20.30	21.89
	8H	10.78	11.15	11.93	12.31	13.91	18.90	19.28	20.06	20.43	22.04
	12H	10.73	11.07	11.90	12.23	13.84	18.99	19.33	20.16	20.50	22.11
8H	4H	12.24	12.62	13.40	13.77	15.37	18.25	18.63	19.41	19.78	21.39
	6H	12.47	12.79	13.65	13.98	15.58	18.88	19.19	20.06	20.39	21.99
	8H	12.49	12.76	13.67	13.93	15.56	19.10	19.37	20.28	20.54	22.17
	12H	12.45	12.69	13.64	13.86	15.52	19.24	19.48	20.43	20.65	22.31
12H	4H	12.38	12.72	13.55	13.88	15.49	18.20	18.54	19.37	19.70	21.31
	6H	12.73	13.00	13.91	14.18	15.80	18.86	19.13	20.04	20.31	21.93
	8H	12.79	13.03	13.98	14.20	15.86	19.09	19.32	20.27	20.50	22.15